appviewx

ADC+ Guides

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Preface

Revision History

Revision	Description	Date
1.1	Updated document for Release 2023.1.0 FP1.	November 2023
1.0	Initial release of document for Release 2023.1.0.	September 2023

About the Documentation

Welcome to the ADC guide, which explains the capabilities of AppViewX's multi-vendor Application Delivery Controller (ADC) platform and provides step-by-step instructions to manage, automate, orchestrate, and monitor the application delivery services.

Documentation Conventions

This section defines the Notice icon and text convention used in this guide.

Notice Icons

Convention	Description
Note	Indicates readers to take note. Notes contain helpful suggestions or references to material not covered in the document.
Tip	Indicates readers that they can save time by performing the action described in the paragraph affixed to this icon.
Warning	Indicates readers that they can save time by performing the action described in the paragraph affixed to this icon.
Best Practice	Alerts readers to a recommended use or implementation.
	Indicates that the feature or functionality available only on AppViewX On-Prem.
	Indicates that the feature or functionality available only on AppViewX Software as a Service (SaaS).

Audience

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This document is intended for:

- Application teams
- Network Operations (NetOps)
- NetDevOps
- Traffic Management
- Automation and DevOps

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Chapter 1: ADC+ User Guide

- Introduction
- Demo Mode
- Insights
- Traffic Management
- Asset Management
- Config Management
- Automation
- Alerts & Logs
- Account
- Studio
- Settings
- Glossary

Introduction

- About AppViewX
- ADC Overview
- Types of ADC/Load Balancer
- Need for Centralised ADC Service Lifecycle Management Console/Interface etc.
- AppViewX ADC+ Introduction
- Accessing ADC+

About AppViewX

The AppViewX Platform is the industry's first product category that offers Multi-vendor load balancer-centric Management, Automate and Orchestrate best-in-class and open-source application delivery services, and enables Self Servicing capabilities. It supports both traditional and non-traditional ADCs from leading vendors:

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- A10 Networks
- Akamai Technologies
- Amazon Web Services (Elastic Load Balancers)
- Brocade
- Cisco
- Citrix
- F5 Networks
- HA Proxy
- NGINX
- Radware
- AVI

ADC Overview

Application Delivery Controllers (ADC)/Load balancer distributes network traffic across servers. It acts as a reverse proxy to increase the reliability of the applications by distributing incoming traffic from clients across multiple server resources.

Three core functions of load balancers are:

- Efficiently distribute Network Load or Client's Request across servers.
- Sending requests to the server available, enabling high application availability.
- Increase and decrease the number of servers based on traffic.

Types of ADC/Load Balancer

On a high level, there are 3 types of Load Balancer based on appliance:

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- Hardware-based Load Balancer
- Cloud-Based Load Balancer
- Software-based Load Balancer

Hardware-based Load Balancer

A Hardware-based load balancer typically has a dedicated hardware appliance with relevant features. These are expensive to purchase and maintain, but gives users the full control and comes in different hardware configuration based on traffic requirement.

Popular hardware-based load balancer :

- F5
- Citrix Netscaler
- A10
- AVI
- Nginx Plus

Cloud-Based Load Balancer

A Cloud-Based Load Balancer is available on the cloud with full features, without the headache of purchasing and maintaining the costly hardware. It gives the user the option of "Pay as you use".

Popular cloud-based load balancer:

- Amazon Web Services (AWS)
- Google Cloud (GC)
- Microsoft Azure

Software-based Load Balancer

A software-based load balancer id is available as a code. It can be installed on the server to turn them into load balancers. It also gives you the flexibility of choosing your own platforms like Windows, Linux, or Docker.

Popular software-based load balancer:

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- HAProxy
- Nginx
- AVI

Need for Centralised ADC Service Lifecycle Management Console/ Interface etc.

The Growth of IT Infrastructure is directly proportional to the growth of Business. As the IT Infrastructure grows it eventually includes the need for load balancers from many different vendors. The decision to include multiple vendors might be the relic of time, cost, and requirement of a specific application. Managing and maintaining it requires lots of resources and a comprehensive long-term plan.

The advantage of having diverse load balancer vendors is, your entire infrastructure is not vulnerable to specific network attacks or viruses. The disadvantage is managing different vendor products requires complex and costly support. Most of the time various product services come with different management tools, making IT infrastructure management complicated and unorganized.

AppViewX is Set to change all that, It is a modular, low-code software application that enables the automation and orchestration of network infrastructure using an intuitive, context-aware, visual workflow. It is closed-loop and state-aware, capable of verifying that intent has been achieved and providing actionable insights and automated remediation.

AppViewX ADC+ Introduction

AppViewX enables NetOps & SecOps teams to support ever-increasing business demands with greater agility. It offers state-of-the-art management capabilities that map to the needs of application owners, network engineers, and network operations.

ADC is an intuitive platform for Management, Automation, Orchestration, and Observability for application delivery services across Hybrid multi-cloud environments. With ADC+, you can gain application-centric insights, visibility into application services, and simplify application delivery infrastructure operations. It offers a single pane of glass/Interface and a holistic view of your application delivery across hybrid multi-cloud environments.

- ADC+ Lifecycle Management
- Device Management
- App Service Visibility and Monitoring
- Configuration Management
- Service Catalog

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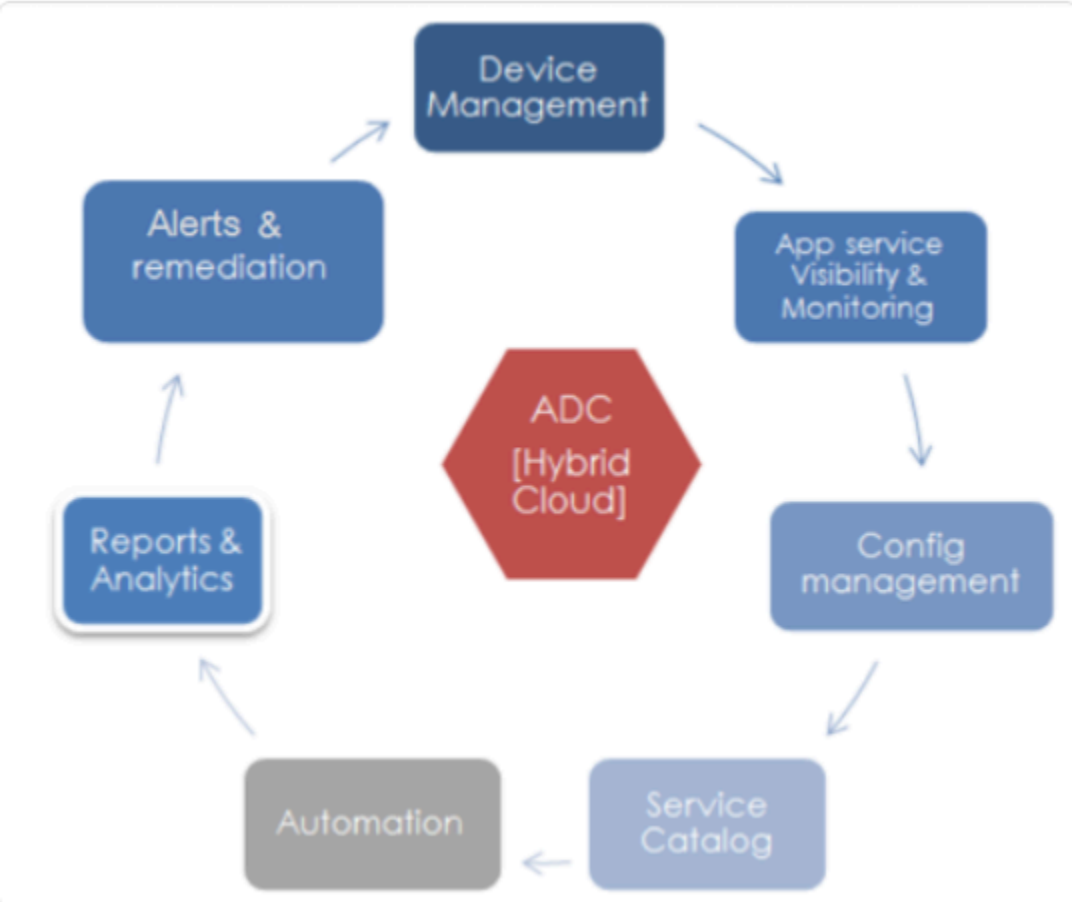
- Automation
- Alert and Remediate

ADC+ Lifecycle Management

The ADC+ lifecycle defines the processes by which a Device or an Application is Discovered, Managed, Monitored, Automated, and Remediated. The multi-vendor (Cloud, On-prem) and intent-based load balancer application lifecycle management solution continuously aligns itself to required service levels, security, and compliance policies.



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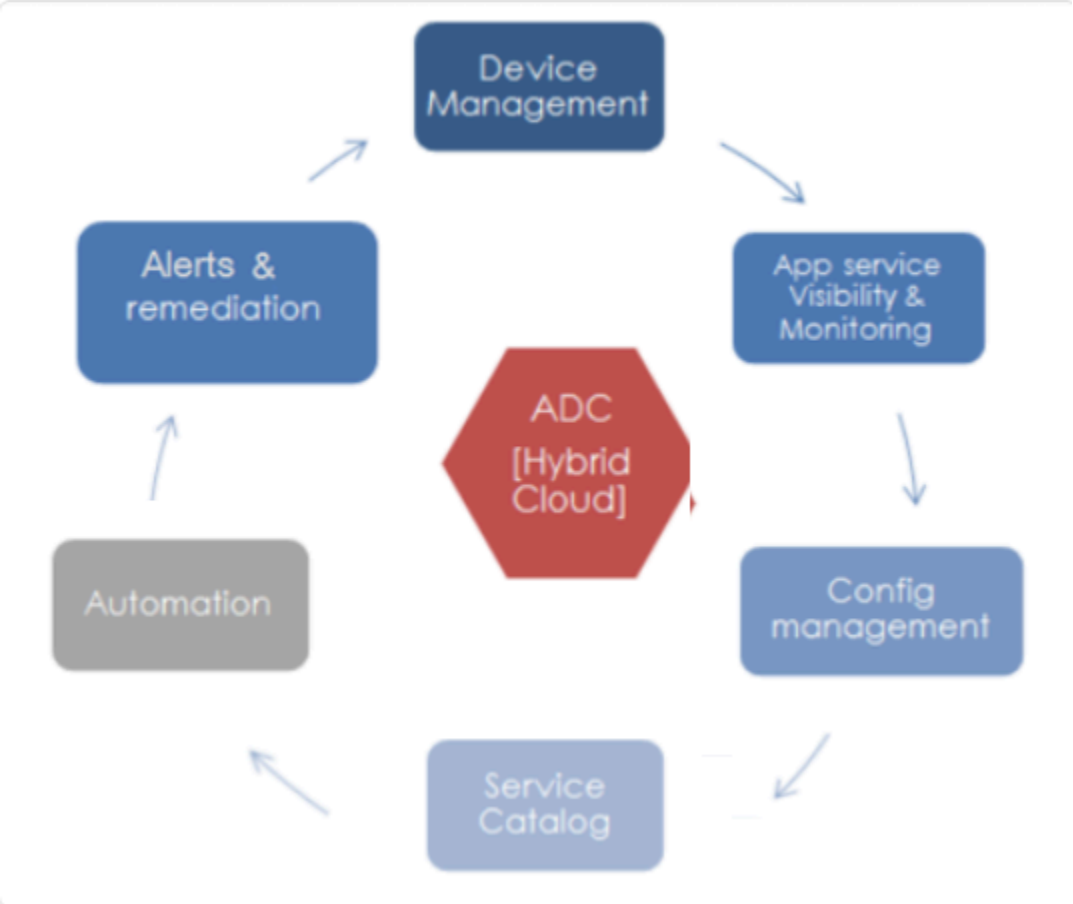

Device Management

- AppViewX's centralized multi-vendor Inventory Management allows you to onboard the supported ADC vendor devices (Hardware, Cloud, and Software) into the AppViewX inventory using the IP Address/ FQDN.
- AppViewX will initiate communication using the provided credentials and Discover the Applications/ Objects along with their configuration that is hosted on the devices. The Discovered Applications can be accessed within the product.

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- Access to each device and its application objects can be controlled using access control policies. The AppViewX Platform applies granular access control to application objects, certificates, and configuration templates.
- The solution makes it easy to control access and delegate tasks and integrates with external directory service systems such as AD, RADIUS, TACACS, and LDAP. Roles can be easily created, changed, or discontinued per the needs of the organization.

To know more, refer to the Asset Management section.

App Service Visibility and Monitoring

- ADC provides App-centric visibility for your ADC infrastructure in a single window.
- The Search engine allows you to look for any application and recreates the topological view starting from the Global load balancer to the end server. This provides the network team visibility into the infrastructure to troubleshoot application-related issues faster.
- Get better insights into your Application health, state, status, utilization, and performance through pre-built dashboards.
  - Monitor and Manage Application Traffic through Custom Dashboards and Widgets that allow Traffic routing
  - Monitor live traffic
  - Distributes traffic ratio across data centers
- Enables self-servicing and launch automation from application-centric views.

To know more, refer to the Dashboard section and App Search section.

Configuration Management

- Manage your network configuration by automating the backups, track and report network changes and ensure they are compliant with the defined policies.
- Audit the configuration drift and prevent unauthorized or unwanted changes by comparing the configuration across devices visually and restore the changes to adhere to the standards.

To know more, refer to the Configuration Management section.

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Service Catalog

- ADC offers an intuitive self-service catalog to access service offerings for Line of Business (LOB), employees, and partners via customized pages.
- ADC ships out-of-the-box self-service catalog pages by persona for NetOps, Application Teams, SecOps based on the permissions assigned.

To know more, refer to Service Catalog User Guide.

Automation

- AppViewX's Application Delivery Automation solution abstracts application infrastructure and business applications to automate changes on your ADC infrastructure.
- The Visual Workflow tool provides an intuitive system for designing self-serviceable, event-driven and intelligent automation workflows. It leverages best-in-class automation and orchestration methodologies to ensure faster application deployments in brownfield and greenfield environments.
- It offers prepackaged automation workflows to provision application delivery and Infra and error-free application deployment and orchestration.

To know more, refer to the Automation section.

Alert and Remediate

- Track all the activities that take place within AppViewX or any external entity that is connected to the AppViewX system in the form of logs and alerts.
- Periodically monitor your Application Services or Devices to get notified and automate remediation in the event of any critical changes.

To know more, refer to the Alerts & Logs section.

Accessing ADC+

Steps to access the ADC+ are:

1. Log into AppViewX with a valid credential (URL provided by AppViewX).
   The AppViewX Landing page appears.

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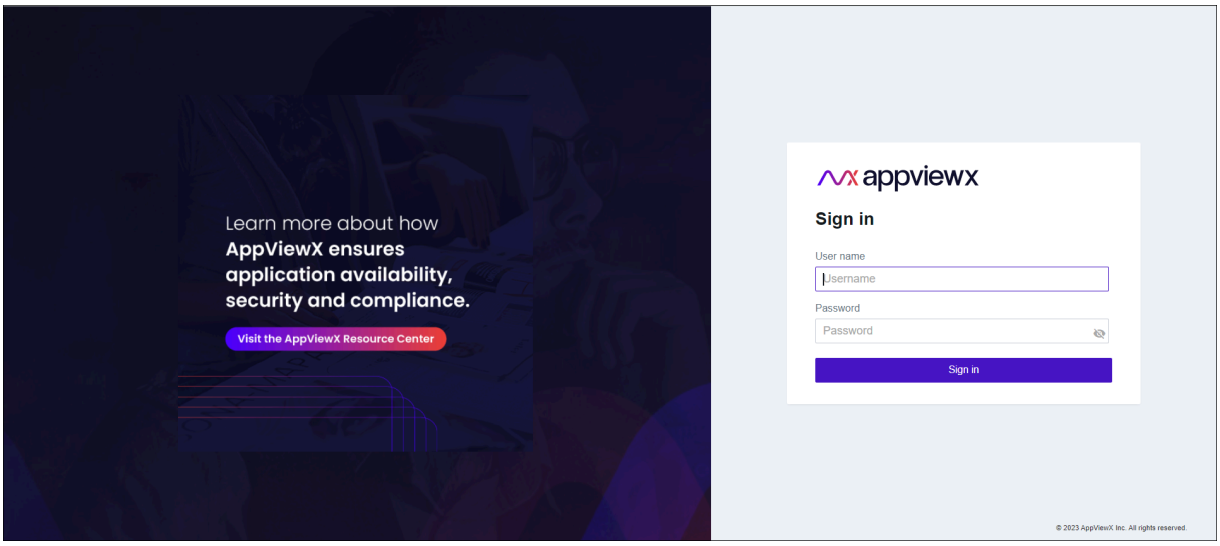

2. Click the menu button located in the upper-left corner of the screen.
3. Click **ADC+** on the left navigation bar.

Demo Mode

Demo Mode is a state in which the ADC system operates to showcase its capabilities and features in a controlled environment. In Demo Mode, you can explore all ADC features with sample data, but you will not be able to perform any actions.

The Demo Mode feature option can be found within the left navigation panel. You have the flexibility to enable or disable this feature according to your requirements. Availability of other ADC features in Demo Mode might vary depending on the permissions set by the Access Control Framework (ACF).

To access the Demo Mode, Navigate to **Menu** > **ADC+** and, then click the **DEMO MODE** toggle button. While in Demo Mode, you will notice that the Demo Mode option in the left navigation panel is highlighted. Additionally, there will be a banner displaying content indicating that you are currently in Demo Mode.

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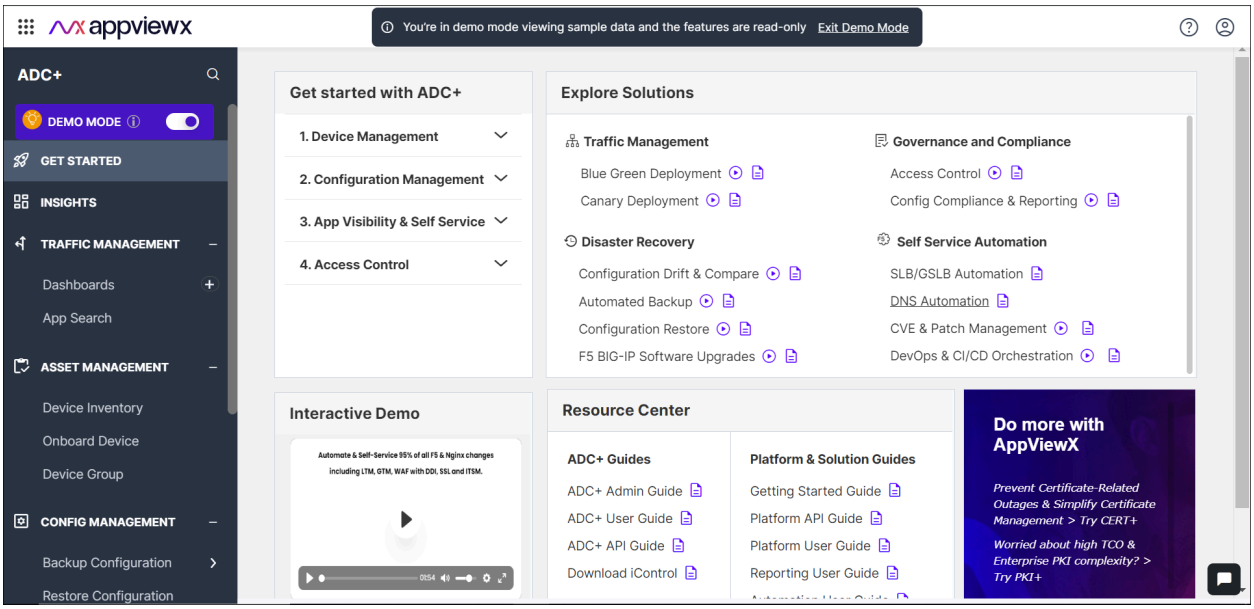

- Enable Demo Mode
- Understanding Features in Demo Mode
- Exit from Demo Mode

Enable Demo Mode

To enable the Demo Mode:

1. Go to **Menu** > **ADC+**.
2. Click the Demo Mode toggle button.

   The Demo Mode option in the left navigation panel is highlighted and a notification message displayed on the banner, indicating that the Demo Mode has been enabled.

Understanding Features in Demo Mode

Though you can not perform any actions within ADC+ while in Demo mode, you can still experience how the output appears for each action performed on the device/object.

Get Started

Getting Started page provides quick links to explore ADC+ features, solutions provided by ADC+, documentation for assistance, and links to other AppViewX offers. You can simply click on the links to be redirected to specific features, guided videos, or help documents.

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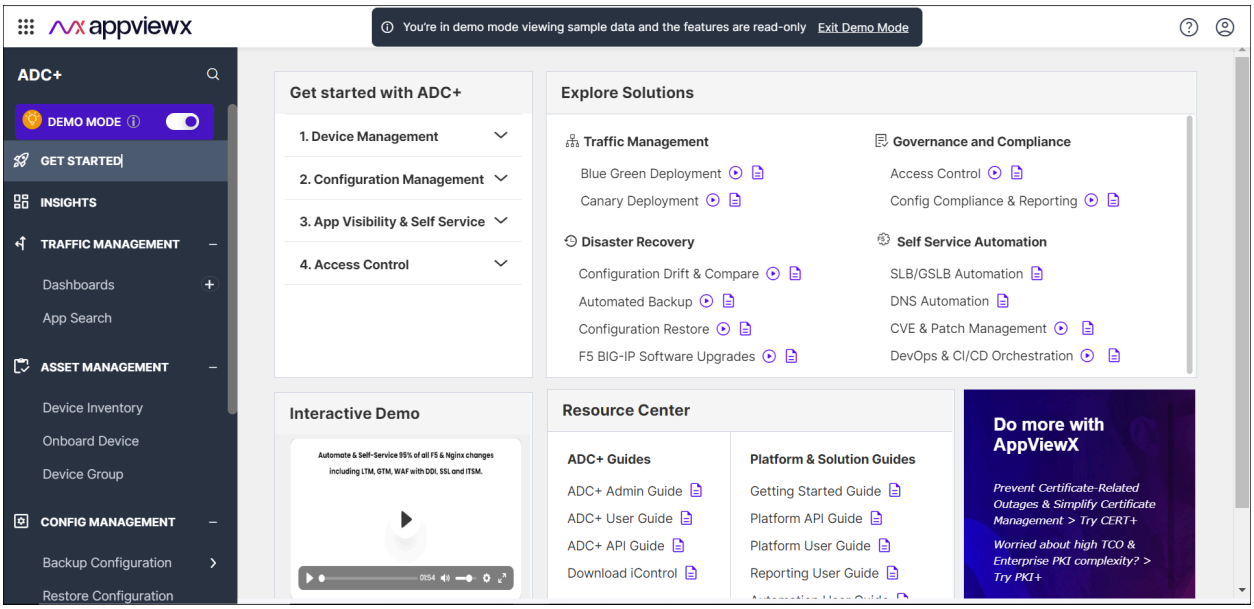
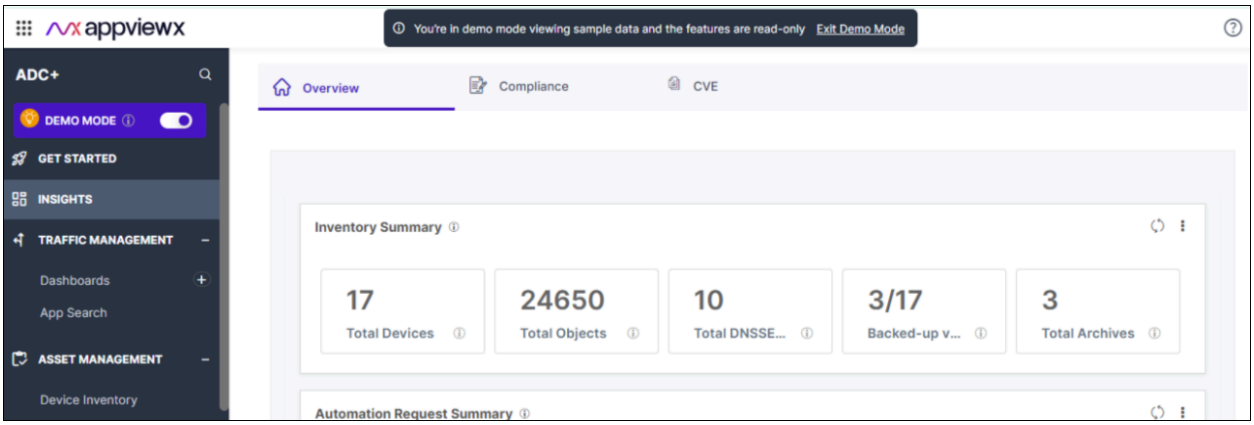


Insights

Similar to the behavior observed in the ADC+'s live data, the Insights menu demonstrates comprehensive analytics using the sample data.



Traffic Management

Dashboard

In the Dashboard menu, configured applications and their respective objects are presented through dashboard widgets. In Demo Mode, you can only showcase the data populated within the dashboard widgets and view all applications along with their associated objects.

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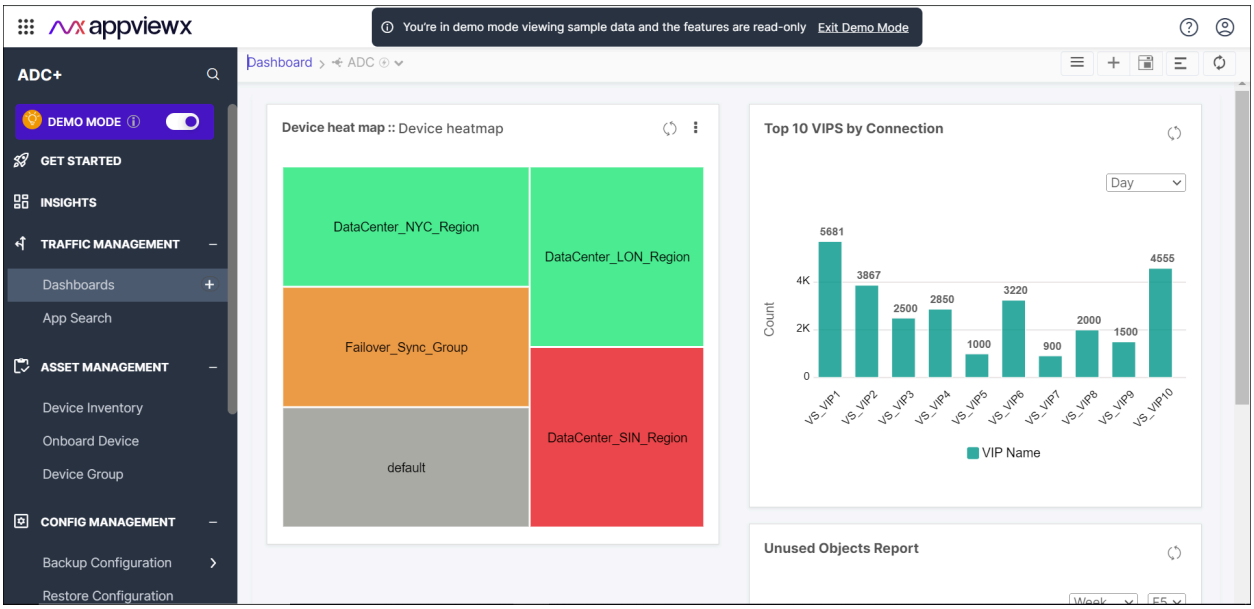
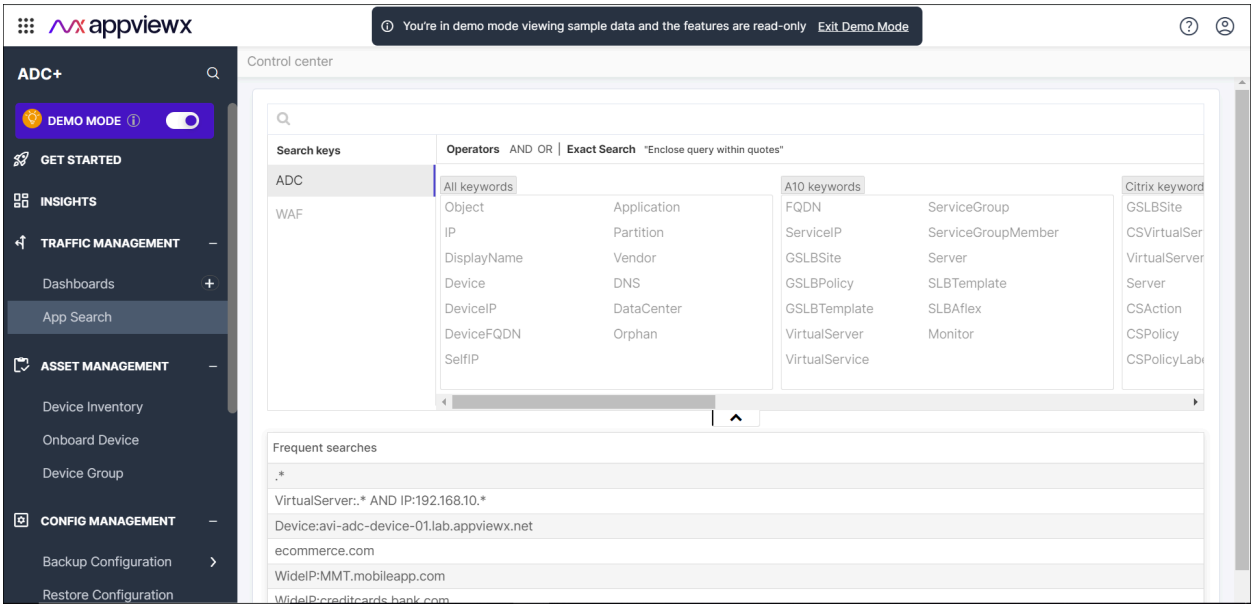


App Search

In the App Search menu, you can access and view predefined keywords, vendor-specific keywords, and frequently searched terms. Frequent searches allow you to locate all entities, configurations, or objects related to ADC devices. This search results matching applications in your infrastructure.



Upon reaching the search results page, you have the option to,

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- filter applications by status. These statuses include All, Active, and Standby.
- view the parent object and its details.
- switch between the Application view and infrastructure view.

Asset Management

Device Inventory

Within the Device Inventory page, you have the ability to interact with device information in a seamless manner. By clicking on any device link located in the **Name** column, you can instantly access comprehensive device details. Furthermore, you can also click on the status link found within the **Status** column to promptly view the device's status log.

Onboard Device

On the **Device Details** tab, you can only view the screen intended for onboarding a device associated with the select vendor. It is important to note that onboarding devices in the Demo Mode is not supported through this tab.

Device Group

The Device Group page provides access only to view the device groups along with their respective descriptions.

Config Management

Backup Configuration

- Within the Manage Backup page, you have access only to view the device backups that have been created.
- Within the Create Backup page, you have access to view the create backup screen. It is important to note that creating device backup in the Demo Mode is not supported.

Restore Configuration

Within the Restore Configuration page, you have the access to select a device or object, proceed with the restore functionality, and subsequently review the logs related to the restoration process. However, it is important to note that the capability to perform a rollback action is not supported in this context.

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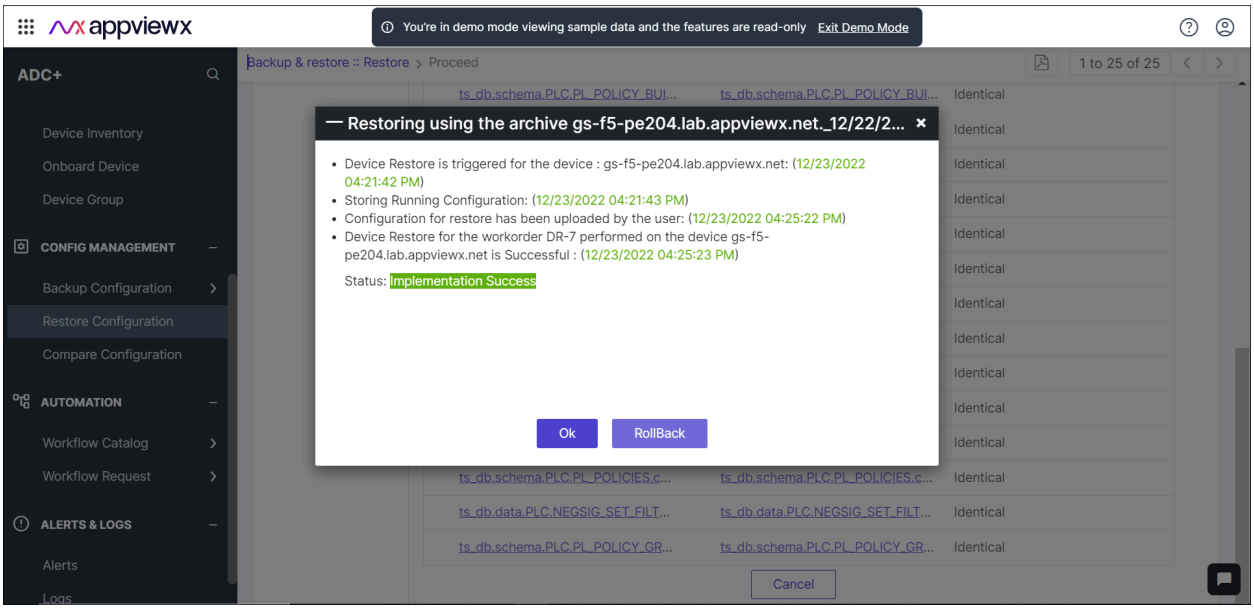
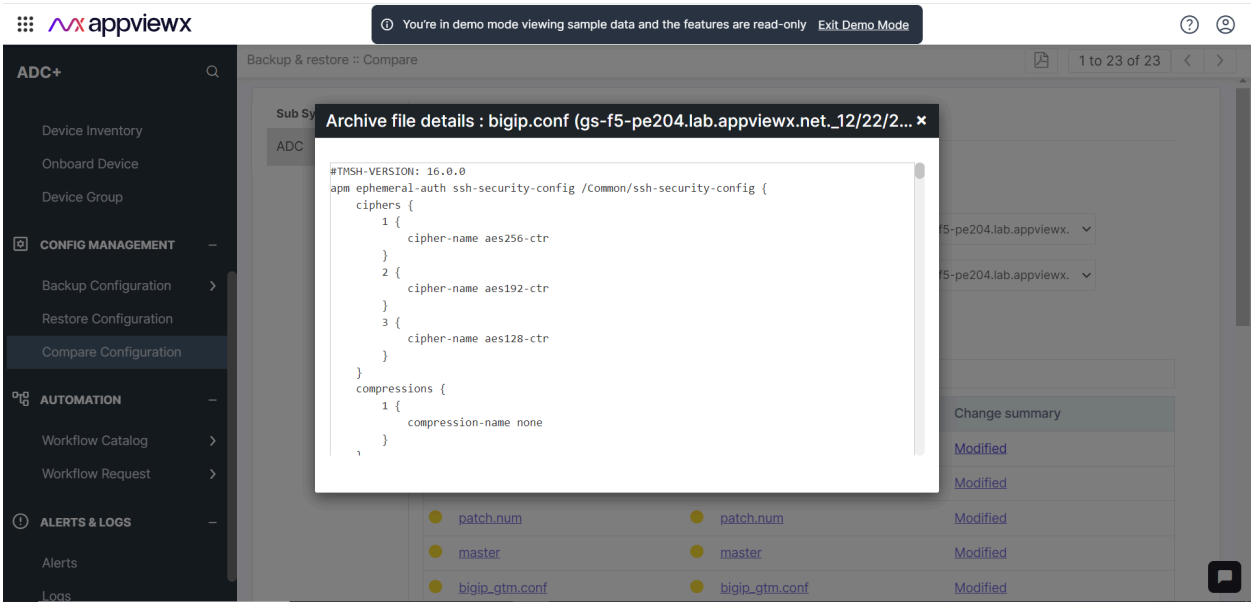


Compare Configuration

Within the Compare Configuration page, you have the access to select devices or objects, compare the configurations, and verify the archive details.



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Automation

- **Workflow Catalog**
  - Within the **View/Run** page, you can only view the available list of automation workflows organized into their respective categories. It is important to note that you will not be able to execute any of the workflows in the Demo Mode.
  - Within the Scheduled Jobs page, you can only view the list of scheduled requests.
- **Workflow Request**
  - On the Workflow Request page, you have the capability to view all triggered automation workflows categorized by their respective statuses. By clicking on a specific request number, you can access a detailed view of the stages comprising the executed workflow. This functionality enables you to gain insights into the progress and outcomes of each workflow instance.

Alerts and Logs

Within the Alerts inventory and Logs inventory page, you have the ability to only view the alerts and logs that have been triggered for the associated devices respectively. These pages provide a comprehensive overview of the notifications and recorded events related to your devices.

Exit from Demo Mode

To exit from the Demo Mode:

1. Go to **Menu** > **ADC+**.
2. Click the Demo Mode toggle button.
   The highlight indication on the Demo Mode option in the left navigation panel disappears and the notification message displayed on the banner also disappears.

Insights

The INSIGHTS menu provides comprehensive information and analytics regarding the overall device/object/application summary, compliance, and security of applications/devices delivered through the ADC infrastructure. The INSIGHTS menu populates with relevant data, once the devices have been successfully onboarded and the applications have been discovered. Each reports within the INSIGHTS menu refreshes every 2 hours at regular intervals. To access the INSIGHTS page, navigate to **menu** > **ADC** > **INSIGHTS**. These insights are organized into the following tabs:

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- Overview
- Compliance

  On **Compliance Report & Remediations** section, you can

  - search for or apply filters to the devices based on Device type, Policy, or Device to refine your results.
  - initiate the remediation process for the non-compliant devices by clicking the **Remediate** button.
  - download the list of devices in the .csv format by clicking the **Download CSV** button.
- **CVE** - The interactive chart displays a summary of Common Vulnerabilities and Exposures (CVE) as well as an overall risk summary. To view the most recent data in the CVE Summary, click the refresh button. For additional details about the grid, click on the information button.

- Overview Tab
- Compliance Tab
- CVE Tab

Overview Tab

The high-level summary provides an overview of device inventory, automation requests, device/object status, and more. To access additional information about the grid, simply click on the information button.

- Inventory Summary
- Automation Request Summary
- Device Snapshot
- Object Snapshot
- Device CVE
- Device Compliance
- Unused VIPs and WIPs
- KSK Expiration

Inventory Summary

The Inventory Summary report presents a concise overview of the devices, applications, backups, and F5 DNS secondary keys managed within AppViewX. Click on any widget to access detailed information specific to that particular summary on the respective widgets popup. Within the popup window, you can

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view all the entries and download the content in the desired format if needed. The Widgets within the Inventory Summary report are:

Widgets in the Inventory Summary

Widgets Name	Description
Total Devices	The count of devices that are managed within AppViewX.
Total Objects	The count of applications that are managed within AppViewX.
Backed-up vs Overall Devices	The count of devices with backed up configurations vs devices without backed up configurations.
Total Archives	The count of all archived devices.

Automation Request Summary

Automation Request Summary presents an overview of the status and trend of automation workflow requests. Click on any widget to access detailed information specific to that particular summary on the respective widgets popup. Within the popup window, you have the ability to view all entries, switch between **Request Details** and **By Workflow** views, and download the content in the desired format if needed. The Widgets within the Automation Request Summary report are:

Widgets in the Automation Request Summary

Widgets Name	Description
All Request	The count of workflow automation requests with all the status (open, closed, failed).
Open Request	The count of open workflow automation requests.
Close Request	The count of close workflow automation requests.
Failed Request	The count of failed workflow automation requests.

Device Snapshot

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The Device Snapshot provides a visual representation of the Device Inventory in the form of a graphical display. click on the corresponding area, and a popup window will appear with the relevant details. Within the popup window, you have the ability to device details by switching between **Status**, **Vendor**, and **Device Details** views, and download the content in the desired format if needed. The Device Snapshot visual representation includes areas that display the total number of devices and the breakdown of devices based on different categories or criteria.

Object Snapshot

The Object Snapshot provides a visual representation of the Application Inventory in the form of a graphical display. Click on the corresponding area, and a popup window will appear with the relevant details. Within the popup window, you have the ability to object details by switching between **Vendor**, and **Object Details** views, and download the content in the desired format if needed. The Object Snapshot visual representation includes areas that display the total number of object and the breakdown of objects based on object types.

Device CVE

The Device CVE snapshot provides a visual representation of the summary of the discovered CVEs in the form of a graphical display. Click on the corresponding area, and a popup window will appear with the relevant details. Within the popup window, you have the ability to view the list of discovered CVEs and download the content in the desired format if needed. The Device CVE visual representation includes areas that display the total number of discovered CVEs and the breakdown of CVEs based on severity.

Supported Vendor: F5

Device Compliance

The Device Compliance snapshot provides a visual representation of the summary of the compliant and non-compliant in the form of a graphical display. Click on the corresponding area, and a popup window will appear with the relevant details. Within the popup window, you have the ability to view the list of devices pertaining to the selected area and download the content in the desired format if needed. The Device Compliance visual representation includes areas that display the total number of devices categorized by their compliance status. It also provides a breakdown of devices based on their compliance status, showing how many are compliant, non-compliant, or pending.

Supported Vendor: F5, Citrix

Unused VIPs and WIPs

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The Unused VIPs and WIPs block provides a visual representation of the unused VIPS and WIPs. Click on the corresponding block, and a popup window will appear with the relevant details. Within the popup window, you have the ability to view the list of unused VIPs/WIPs pertaining to the selected block and download the content in the desired format if needed. The Unused VIPs and WIPs visual representation presents a graphical display illustrating the count of the unused VIPs and WIPs for easy understanding and analysis.

Supported Vendor: F5

KSK Expiration

The KSK Expiration snapshot provides a visual representation of the summary of the keys with their expiration dates in the form of a graphical display. This snapshot helps for a quick overview and analysis of key expiration information. Click on the corresponding area, and a popup window will appear with the relevant details. Within the popup window, you have the ability to view the list of keys pertaining to the selected area and download the content in the desired format if needed. The KSK Expiration visual representation includes areas that display the total number of keys and provides a breakdown based on their expiration details. This breakdown helps to understand the distribution of keys according to their expiration dates, allowing for better visibility and analysis.

Supported Vendor: F5

Compliance Tab

Ensuring compliance of F5 BIG-IP device configurations with organizational standards is crucial. AppViewX offers a comprehensive solution that encompasses compliance enforcement, reporting, and closed-loop remediation to achieve this objective. In general, you have the flexibility to utilize pre-built golden configurations provided by AppViewX or define your own compliance policies. By conducting compliance checks, you can easily identify non-compliant configurations and initiate automated remediation with a single click.

AppViewX offers a policy inventory that centralizes the management of all compliance policies. Within this inventory, you will find a collection of pre-built policies as well as custom policies created by users. You have the flexibility to select and run any of these policies against your F5 devices. The rules within each policy represent the specific parameters and their expected values configured for compliance. They help ensure that your F5 devices adhere to the desired configurations and standards defined by the policies.

Pre-built Compliance Policy

The pre-built compliance policy ensures that the basic system configurations of F5 are inherently compliant. For example, Banner, Device group auto sync , DNS Server, NTP Server, Gateway IP,

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Timezone, remote syslog servers, etc. Since this is a default policy, all device commands and remediation commands are handled in the background. You will only see the parameter and its expected default value, which can be modified as needed. For more details on the Automation Workflow, see Golden Config Compliance.

Custom Compliance Policy

You also have the ability to define custom compliance policies. These policies can encompass various aspects such as ensuring standard profile configurations, monitoring configurations, password policies, and more for LTM. When it comes to custom policies, it is necessary to formulate the validation command, condition, and remediation command for each rule. This information proves valuable when conducting the compliance check and ensuring adherence to the defined policies.

Device Validation Against Policy

After defining policies successfully, you can view the compliance status of devices, indicating the number of rules that are compliant versus non-compliant. Non-compliance signifies that a rule is not configured on the device as per the expected value. You have the option to switch to other custom policies and check their respective compliance status. This report offers an overall view of the compliance status of your ADC infrastructure in accordance with your organization's standards.

Use Case

If you want to receive a comprehensive report that includes detailed information about each compliance parameter, along with remediation recommendations, you can opt for the report presents the information in a tabular format, covering all the relevant details.

Solution: AppViewX offers a closed-loop remediation mechanism to ensure device compliance. By reviewing the report, you can identify values that require remediation. With a single click, the device configuration can be modified to meet compliance standards. Additionally, you have the option to incorporate ServiceNow approvals to review and approve changes, as well as set specific change windows as needed.

- Device Compliance By Policy
- Compliance Report & Remediations

Device Compliance By Policy

Within this section, you can assess the compliance of devices according to the selected policy and/or device. You have the option to view a graphical representation of the compliance status and also download it in the .png image format if desired. Click on the desired area to access the compliance details

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within the popup window. On the popup window, you have the ability to sort the list by clicking on each column. This allows you to arrange the data in ascending or descending order based on the selected column.

Compliance Report & Remediations

Within this section, you can evaluate the compliance of devices based on various criteria such as device type, policy, device selection, and search parameters. The devices are presented in a tabular format, allowing you to review their compliance status. If needed, you can download the device list in the .csv format for further analysis. By clicking the **Remediate** button, you can initiate the remediation process for non-compliant devices. This action redirects you to the automation workflow, where you can continue with the necessary steps to address the compliance issues and resolve them accordingly.

CVE Tab

CVEs serve as the primary source for vulnerability management by identifying potential vulnerabilities. As a standard practice, F5 discloses security vulnerabilities and exposures related to their products to assess the impact on devices. AppViewX, on the other hand, collects details of these Common CVE on a daily basis and maintains a CVE database within its platform. Currently, the source of information for AppViewX is the CVE Mitre site, where publicly disclosed information about security vulnerabilities and exposures can be obtained.

All the collected CVEs and their impact on F5 versions are cross-verified against the F5 devices managed in the inventory. AppViewX then proceeds to publish the vulnerabilities in the form of reports, providing valuable insights on the affected devices. The CVE summary report provides an overview of the number of CVEs detected across all F5 devices, categorizing them by severity (such as critical, high, medium, and low). Based on the severity of these CVEs, the overall risk summary of the ADC infrastructure is calculated. In this specific data set, the risk rating falls within grade D, as indicated here.

Each grade, ranging from A to D, in AppViewX has a predefined definition. The legend provided explains the logic behind these grades. For example, if there are 5 or fewer High CVEs, it falls under Grade A, which represents the safest grade. With 10 High CVEs, the grade would be B, while 30 would fall under Grade C. Anything beyond that would be classified as Grade D. It's important to note that this logic can be customized according to specific requirements. This report provides valuable insights into the security posture of your infrastructure.

You will receive a comprehensive report that includes detailed information about each CVE, along with remediation recommendations. This report ensures that you have a clear understanding of the vulnerabilities and offers guidance on how to address them effectively. The report provides information on each CVE, including the CVE name, its score, the affected version, and the recommended version

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with the available fix. Let's consider one specific CVE as an example. This CVE addresses the xxx issue, and F5 recommends upgrading to version 15.x to resolve it. AppViewX offers a closed-loop remediation option to seamlessly perform this upgrade on the F5 devices in a quick and simplified manner. After the upgrade, the device's version will be updated from 14 to 15, ensuring that the device is free of vulnerabilities.

- CVE Summary
- Overall Risk Summary
- Recommendations & Remediations

CVE Summary

Within this section, you can view the complete list of CVEs that impact the infrastructure. These CVEs are displayed and categorized by severity for a clear overview. By clicking on the corresponding area, a popup window will provide you with detailed information related to the CVEs. Within the popup window, you can view the list of discovered CVEs and download the information in the preferred format if required. The Device CVE visual representation includes sections that display the total count of discovered CVEs and further breakdowns based on their severity levels. This breakdown helps in understanding the distribution and severity of the CVEs present in the devices.

Overall Risk Summary

Within this section, you can view the risk summary of the devices based on the severity of CVE's in the form of graphs.

Supported vendor: F5

Recommendations & Remediations

Within this section, you can view report containing recommendations and remedial actions.

Traffic Management

- Dashboard Overview
- Default Dashboard
- Custom Dashboard

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- Launch Automation from Application-Centric View through Rules
- App Search

Dashboard Overview

AppViewX Platform helps Enterprise IT manage, automate, and orchestrate application delivery services providing an application-centric view into the state of the application delivery infrastructure running in multi-cloud environments. Application, network and security engineers may self-service and initiate automation workflows in a single click that deliver compliance and true business agility. This gives application and operation teams a topology view of the application delivery infrastructure with better insights into application health, state, status, utilization, and performance.

The Dashboard module enables the user to manage, monitor, and interpret all the configured applications and their objects. It uses customizable widgets for managing ADC objects. The dashboard comes with a variety of pre-made dashboard widgets (components) that you can use to build a specific dashboard view that meets the different needs of your business.

It has been categorized into Default Dashboard and Custom Dashboard.

- Change the Settings for a Dashboard
- Create a Dashboard
- Delete a Dashboard
- Export a Dashboard
- Import a Dashboard
- Rename a Dashboard
- Save the Dashboard
- Search for a Dashboard, Object, or Widget
- Share a Dashboard
- Switch Between Dashboards

Change the Settings for a Dashboard

- AppViewX recommends to enable Syslog based configuration update so that any changes on the end devices with regards to state/status will be reflected in AppViewX on a near real-time basis ensuring a seamless experience.
- The ‘Last Refresh time’ on the widget displays the last time the widget is updated with the latest State/ Status information.

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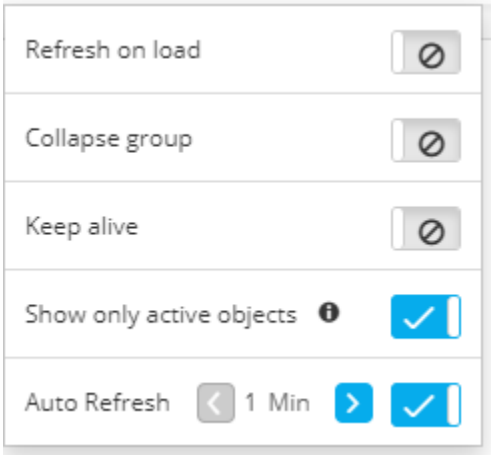
- Click on the ‘Refresh’ button on the widget to perform on-demand State/Status information. Each Object will contain a last refresh time on the tooltip, you can also trigger a refresh for a particular object from the tooltip.
- Enable ‘Auto refresh’ from the ⚙ (**Settings**) of the dashboard page with a particular interval (1 - 5 mins) which will automatically refresh the state/status information of the objects.
- Enable ‘Refresh on load’ from the ⚙ (**Settings**) of the dashboard page to get the latest state/status information on loading the dashboard.
- ‘Keep Alive’ option on the dashboard **Settings** ⚙ if enabled will ensure the session is not timeout by refreshing the dashboard every 15 mins.

To change the settings for a dashboard:

1. Go to **Menu** > **ADC+** > **TRAFFIC MANAGEMENT** > **Dashboards**.
2. If you have more than one dashboard, in the dashboard list, click the name of the one whose settings you want to view and/or update.
3. In the Command bar for the dashboard, click the ⚙ (**Settings**) button.
4. A dropdown menu appears, listing the settings you can change:



- **Refresh on load** - If this setting is enabled, each time the dashboard loads, it displays the latest data in the system.
- **Collapse group** - If this setting is enabled, each time the dashboard loads, all groups within widgets on the dashboard display in a collapsed state by default.
- **Keep alive** - If this setting is enabled, the dashboard expiry function is disabled, allowing users to monitor all objects on the dashboard without interruptions caused by session timeouts.

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- **Show only active** - If this setting is enabled, the objects of an active device are displayed in run time. This functionality is applicable only for Application View widgets.
- **Auto Refresh** - If this setting is enabled and refresh time is configured, the Dashboard data will be automatically refreshed at the specified time interval.

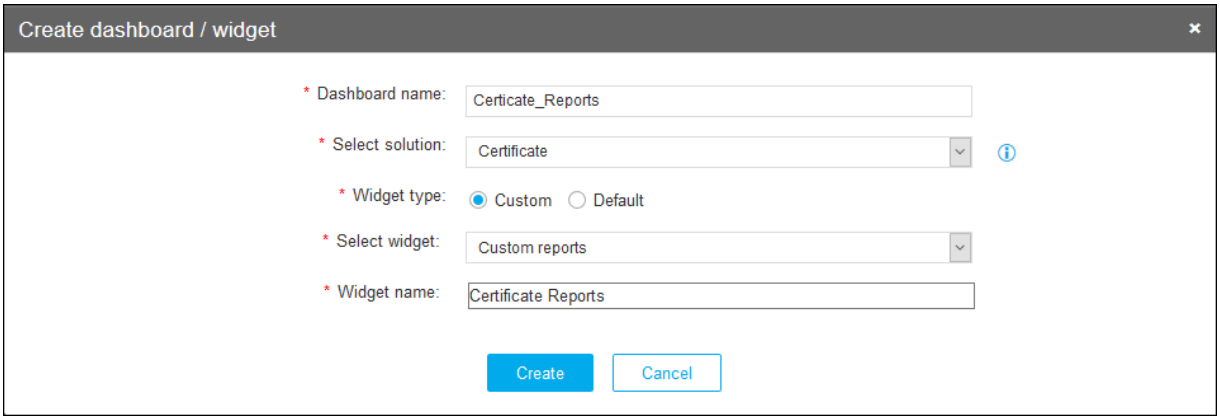
5. If the setting is currently disabled, a (**Disabled**) button appears.
6. If the setting is currently enabled, an (**Enabled**) button appears.
7. To change a setting, click the corresponding button and the opposite setting appears.

Create a Dashboard

The custom dashboard allows you to manage, monitor, and interpret all the configured applications and their objects. It provides customizable widgets to get an overview of all the ADC Applications within the AppViewX platform and manage/monitor traffic from a single screen. Customize your Application dashboard with predefined and custom widgets as per the business need. You can create dashboard using any of the following method:

To create a dashboard:

1. Go to **Menu** > **ADC+** > **TRAFFIC MANAGEMENT** > **Dashboards**.
2. If this is the first dashboard you are creating in the system, click the Create Dashboard button that appears in the center of the screen. If you have already created at least one dashboard, click (**Create**) icon on the top-right or click (**Create**) icon.
3. On the **Create Dashboard/Widget** pop-up window, enter a name for the new dashboard. The name must not contain spaces in it.



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4. Select a solution from the **Select Solution** dropdown to which you want the widget to be created: ADC, Firewall, Certificate, SSH or WAF. Select the solution from the dropdown to which you want the corresponding widgets to be managed: Certificate.
5. Select the **Widget Type** as **Custom** or **Default**.
6. If the **Custom** radio button is selected in Step 5, then choose any one of the below options from the **Select Widget** dropdown:
   - **Application view** – Allows you to group the service objects of a single application. The widget displays the health of these objects and the number of current connections that the services are receiving.
   - **Traffic statistics** – Displays a chart showing live and historic performance statistics for individual device objects.
   - **Script execution** – Saves script files on a local machine and provides easy access to maintain and execute script commands from within the widget.
   - **Traffic grid** – Allows you to monitor and control the Traffic Percentage of the Applications across data centers. The status, state, and statistics for applications can be viewed through this widget.
   - **Class management** – Allows you to view and modify the classes associated with iRules.
   - **HeatMap** – Allows you to view statistics for managed, failed, and unresolved devices or device groups.
7. If the default radio button is selected in Step 5, choose the default widgets you want to manage/ monitor in the custom dashboard. Select the default widgets you want to manage/monitor in the custom dashboard.
8. Enter a name for the new widget that you will be creating on the dashboard.
9. Click **Create**.
   You are redirected to the widget configuration screen, which varies according to the widget selected.

Note:

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- The Settings screen for the new dashboard/widget appears. The contents of the Settings screen vary depending on the type of widget you are adding to your new dashboard.
- All the default dashboards and custom dashboards created are listed in the dashboard inventory.
- If the Auto Sort Dashboards Alphabetically is enabled the dashboards are listed in alphabetical order, if disabled dashboards are listed based on the created order.

Delete a Dashboard

To delete a dashboard:

1. Go to **Menu** > **ADC+** > **TRAFFIC MANAGEMENT** > **Dashboards**.
2. If you have more than one dashboard, in the dashboard list, click the name of the one you want to delete.
3. When the dashboard opens, click the (**Delete**) button in the Command bar at the top of the screen. A screen pops up, warning you that deleting a dashboard also deletes all widgets on the dashboard.
4. Click **Yes** to continue.

Export a Dashboard

To export a dashboard from AppViewX:

1. Go to **Menu** > **ADC+** > **TRAFFIC MANAGEMENT** > **Dashboards**.
2. Go to the top-level of the Dashboard module by clicking the Dashboard link in the breadcrumb field or click the (**Dashboard inventory**) button in the Command bar.
3. In the dashboard table, select the checkbox beside the dashboard you want to export.
4. Click the (**Export**) button in the Command bar at the top of the screen.
5. On the **Export Dashboard** screen that pops up, select one of the following radio buttons:
   - **Report (.csv)** - Select this option if you want to view the dashboard as a CSV file and do not plan to import it into another build of the AppViewX platform.
   - **Import dashboard (.json)** - Select this option if you are downloading the dashboard with the intention of importing it into another build of the AppViewX platform.
6. Click **Export** to export the dashboard.

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Import a Dashboard

To import a dashboard, the contents must be zipped and must contain single checksum .text files and/or .json files. This functionality is applicable only for the Dashboard that contains the Application View widget.

To import a dashboard into AppViewX:

1. Go to **Menu** > **ADC+** > **TRAFFIC MANAGEMENT** > **Dashboards**.
2. Go to the top-level of the Dashboard module by clicking the Dashboard link in the breadcrumb field or click the (**Dashboard inventory)** button in the Command bar..
3. Click the (**Import**) button in the Command bar at the top of the screen. The Import screen appears.
4. Click the **Browse** button and then locate and select the zip file you are importing.
5. Click **Upload**.
   The import function then checks to make sure the imported file and filename are valid.

6. After the zip file is successfully uploaded, select the checkbox in the column beside the dashboard name.

> **Note:** If the dashboard has the same name as an existing dashboard, use the Dashboard name field on the Import screen to enter a new name for the dashboard you are importing.

7. Click the **Submit** button.
8. On the Confirmation screen that appears, click **Proceed**.
9. Click the Dashboard link in the breadcrumb field to return to the top-level *Dashboard* screen.
   The new dashboard appears in the list.

Rename a Dashboard

To rename a dashboard:

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1. Go to **Menu** > **ADC+** > **TRAFFIC MANAGEMENT** > **Dashboards**.
2. If you have more than one dashboard, in the dashboard list, click the name of the one you want to rename.
3. When the dashboard opens, click the (**Rename dashboard**) button in the Command bar at the top of the screen.
4. On the Rename dashboard screen that pops up, enter a new name for the dashboard.
5. Click **Update** to finish.

Save the Dashboard

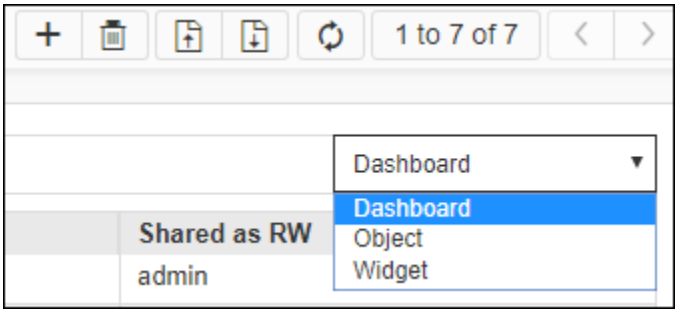
When you drag and drop the widgets to organize them in the dashboard, complete the following steps to save the changes:

1. Go to **Menu** > **ADC+** > **TRAFFIC MANAGEMENT** > **Dashboards**.
2. After making necessary changes in the dashboard, click the (**Save Dashboard**) button in the Command bar.
   A pop-up message appears at the top of the dashboard, "**Dashboard saved successfully**."

Search for a Dashboard, Object, or Widget

To search for a dashboard, object, or widget from the Dashboard screen:

1. Go to **Menu** > **ADC+** > **TRAFFIC MANAGEMENT** > **Dashboards**.
2. Click **Dashboard** in the breadcrumbs trails at the top of the screen to go to the top-level Dashboard screen or click the **menu** button in the Command bar.
3. On the Dashboard screen that appears, enter the word or phrase you want to search by in the Search field.
4. Click the dropdown list at the right of the Search field and select the one you want to search for: Dashboard, Object, or Widget.



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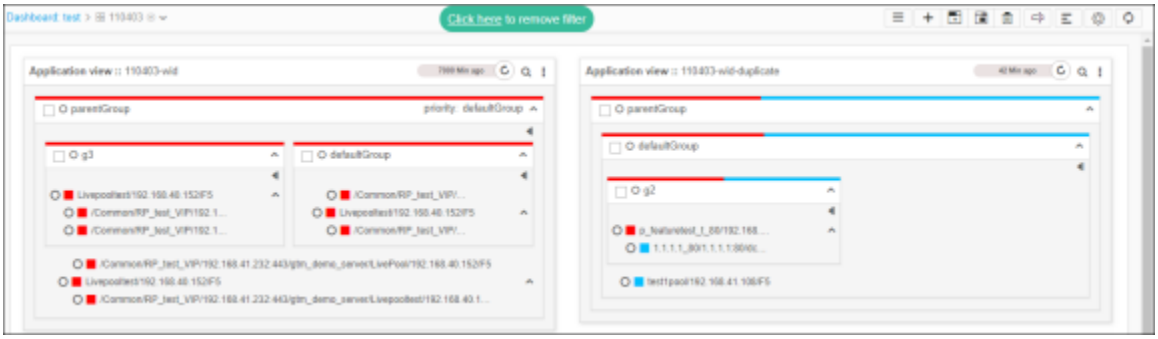
5. Click Enter on your keyboard to run the search. The results appear in a table below the search field.
6. Click one of the Dashboard name links in the search results field to open a filtered view of the corresponding dashboard, which shows only the widget or object within a widget that you searched for. In the image below, an Object search was run using the search phrase testvserver.



Share a Dashboard

Based on your permissions, you may be able to share a dashboard.

To share a dashboard:

1. Go to **Menu** > **ADC+** > **TRAFFIC MANAGEMENT** > **Dashboards**.
2. If you have more than one dashboard, in the dashboard table, click the name of the one you want to share.
3. When the dashboard opens, click the (**Share**) button in the Command bar at the top of the screen. The Share screen appears.
4. Begin the assignment process by clicking the R (**Read-Only**) button. Each role you assign next will have read-only permissions within the dashboard.
5. In the Roles field, click the » (**Assign item**) icon beside each role you want to share the dashboard with on a read-only basis.
6. Click the R/W (**Read-Write**) button. Each role you assign next will have read/write permissions within the dashboard.
7. In the Roles field, click the » (**Assign item**) icon beside each role you want to share the dashboard with on a read/write basis.
8. Click the **Share** button to finish.

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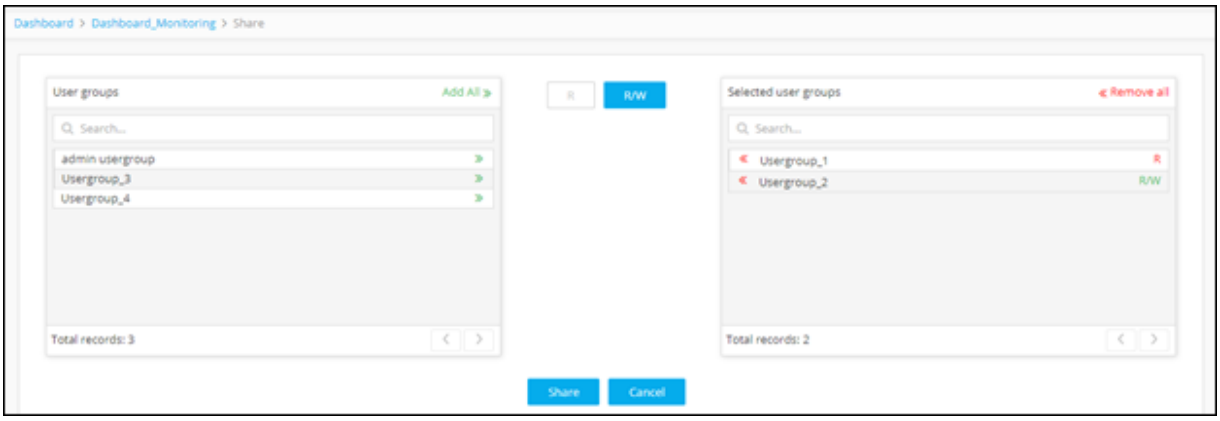
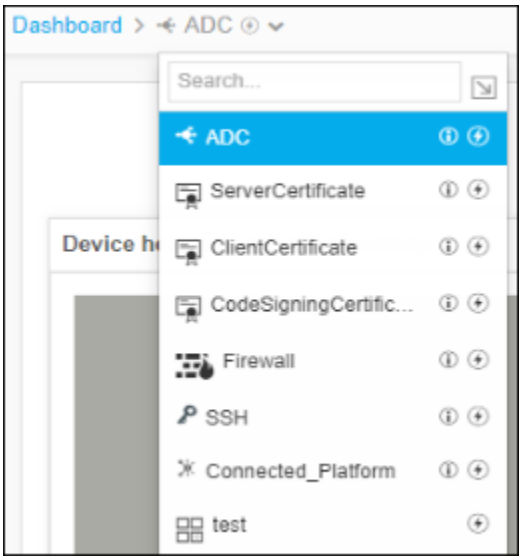


Switch Between Dashboards

To switch from one dashboard to another:

1. Go to **Menu** > **ADC+** > **TRAFFIC MANAGEMENT** > **Dashboards**.
2. Move your cursor to the breadcrumbs field of the current dashboard.
3. Click the current dashboard name.
4. In the dropdown list that appears, click the name of the dashboard you want to switch to.



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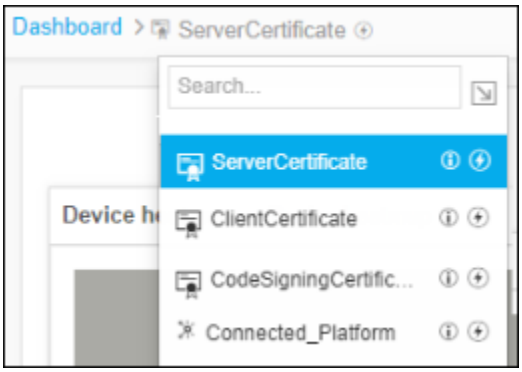
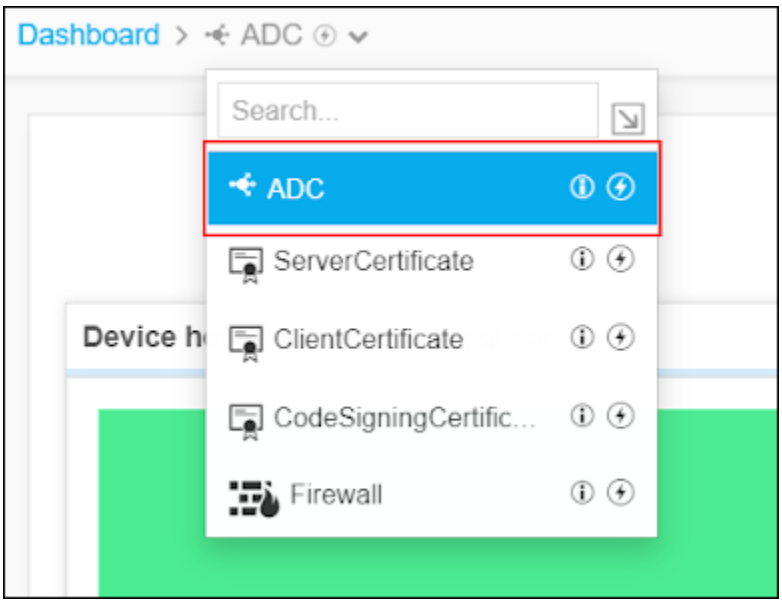


Note: You can also click the (**Dashboard inventory**) button in the Command Bar and click the name of the dashboard you want to switch to.

Default Dashboard

Users can get access to a pre-built Insights dashboard to monitor key application services KPI's/metrics.

Displays the pre-defined widgets to provide the usage reports and up-to-the-minute reports containing statuses and statistics for devices and certificates managed within the AppViewX platform.



The purpose of the key widgets is to:

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- Monitor Device and Application health
- Monitor Top Applications Serving Maximum Traffic
- Monitor Unused Objects to Optimize LB Config
- Monitor App-centric Reports

AppViewX ships default dashboard called ADC available in dashboard inventory for monitoring the load balancing application managed in AppViewX.

This default dashboard is the landing dashboard screen by default. You can change the landing dashboard screen by clicking the icon beside its name.

Monitor Device and Application health on a Pre-Built Dashboard. Get better insights into the Device and Application health based on the statistical data configured for a specific interval.

To view the reports related to ADC, go to **Menu** > **ADC+** > **ADC+** > **TRAFFIC MANAGEMENT** > **Dashboards**. A pre-built ADC Dashboard appears by default.

The following reports are segregated and displayed as widgets on the ADC screen:

- Monitor Device and Application health
- Monitor Top Applications Serving Maximum Traffic
- Monitor Unused Objects to Optimize LB Config
- Monitor App-centric Reports

Note: The default widgets can be viewed, aligned, and/or refreshed and not editable.

- Monitor App-centric
- Monitor Device and Application Health
- Monitor Top Applications Serving Maximum Traffic
- Monitor Unused Objects to Optimize LB Config

Monitor App-centric

Applications that contain traffic, bandwidth, status, success, and object count statistics are shown in the App-centric report. You can get to the App-centric report through either of the following paths:

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- By entering the application name in the search bar of the ADC dashboard page. The App- centric report appears when you click one of the search results.
- By clicking any individual component (bar, pie wedge, grid square) in one of the following reports: Application heatmap, Top 10 applications by connections, and Top 25 applications by connections.

The App-centric report contains the following statistical widgets:

- **DNS Success Rate** - Displays statistics on the DNS success rate of applications based on the load balancing method.
- **Server Status Report** - Displays the status of all LTM pools.
- **Application Object Count** - Provides a pie chart showing the status of each object in the application.
- **Application Bandwidth Report** - Displays the overall bandwidth consumed by the application on an odometer.
- **Traffic Statistics Summary** - Displays the Virtual Server (VIP) level traffic statistics of a particular application for the period you choose. It provides the total traffic/connection served by the application.
- **VIP Level Traffic Statistics** - Displays the individual Virtual Server (VIP) level traffic details for the period (day/week/month/quarter) you choose. It is used to determine the highest traffic served per Virtual Server (VIP) and all the traffic/connections served by the Virtual Server (VIP) in that application.

Monitor Device and Application Health

The following heat map reports are used to monitor device and application Health:

- Device Heat Map
- Application Heatmap

Device Heat Map

The device heat map is a graphical representation of the health of individual devices. The heatmap widget within the ADC dashboard displays each device group as a separate color block. When you hover your cursor over any device group block, a screen will pop up showing the number of Critical, Warning, Safe, and Not reachable devices available within the device group.

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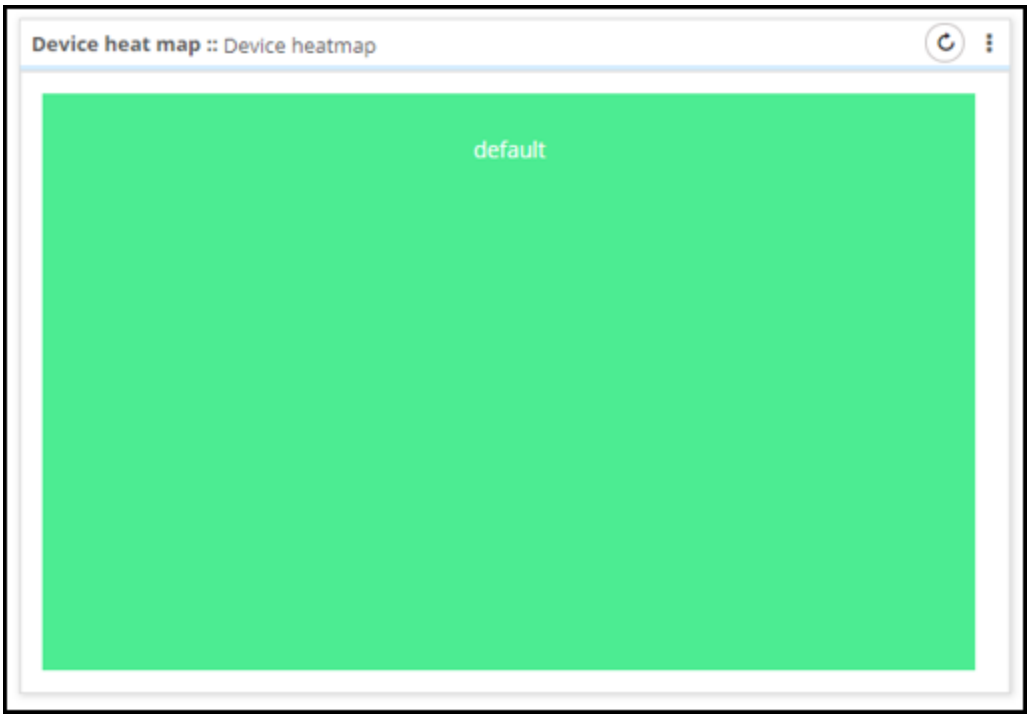
- If a device does not belong to any of the device groups in AppViewX, it appears in the default group block.
- When you click a device group block, the screen refreshes and displays all of the ADC devices available within the group as individual blocks.
- When you click on any device block, a screen appears displaying the memory, CPU, and bandwidth utilization, device info, logs, reports, and alarms for the respective device.



Application Heatmap

The application heatmap is a graphical representation of the status of an individual application, with each application displayed as a separate color block.

- When you click on any of the blocks, the respective App-centric report is displayed.
- When you hover your cursor over any of the blocks, the Application/Device name, State, Status, Success rate, and Object count are displayed.

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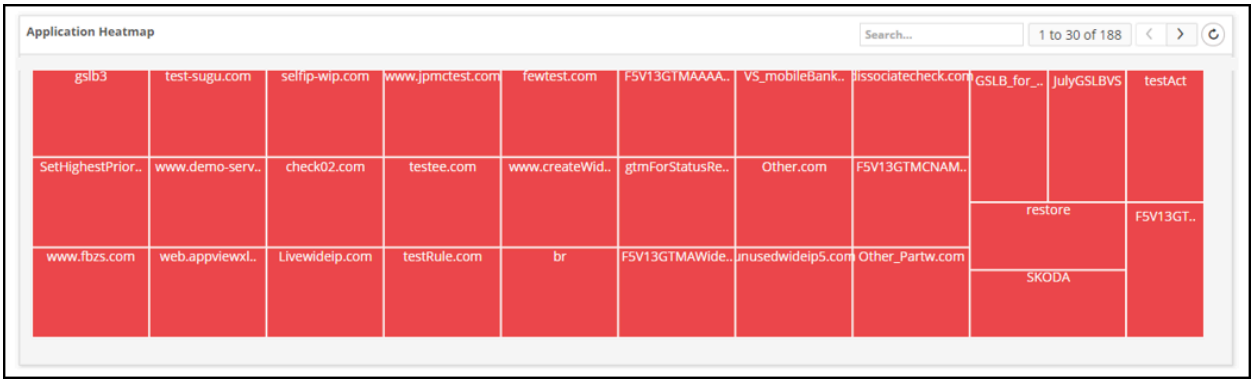

Monitor Top Applications Serving Maximum Traffic

The top applications and their connections are monitored by the following reports:

- Top 10 VIPS by Connection
- Top 25 Applications by Connection

Top 10 VIPS by Connection

A bar chart that shows the top 10 VIPs that currently has a maximum number of connections for a period (day/week/month/3 months) you choose.

- When you click on any of the bars, the app search view of the ADC object is displayed.
- Application Heatmap - A graphical representation of the status of an individual application, with each application displayed as a separate color block.
- When you click on any of the blocks, the respective App-centric report is displayed.
- When you hover your cursor over any of the blocks, the Application/Device name, State,Status, Success rate, and Object count are displayed.

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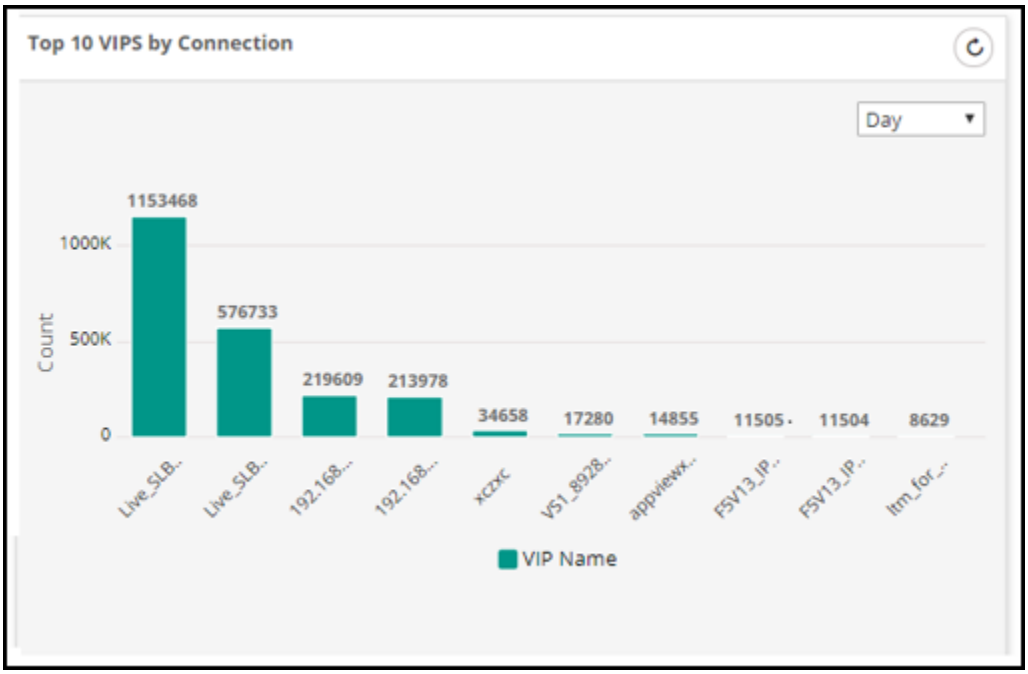
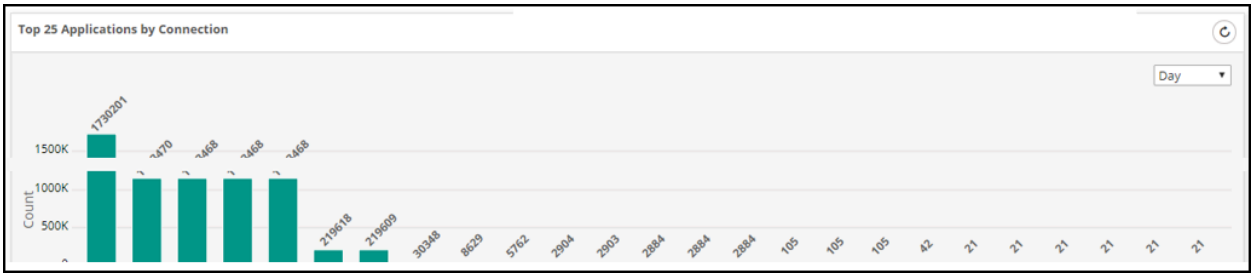


Top 25 Applications by Connection

A bar chart that shows the top 25 applications that currently have maximum connections for a period (day/ week/month/3 months) you choose. Each bar in the chart represents an application. When you click on any of the bars, the respective Appcentric report is displayed.



Monitor Unused Objects to Optimize LB Config

The following reports are used to monitor the unused objects in order to optimize LB configuration:

- Number of Objects
- Unused Objects Report

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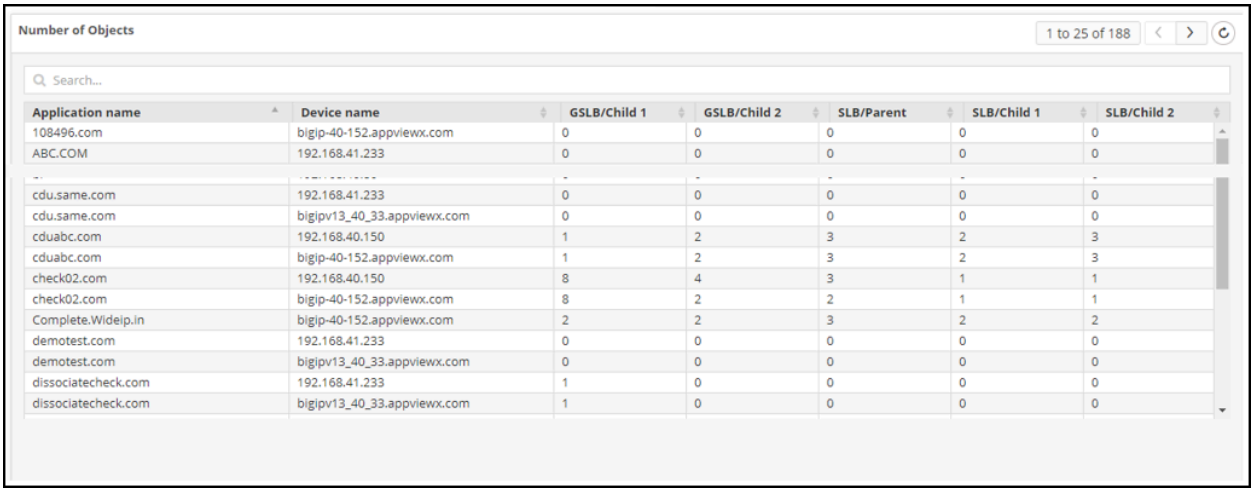
Number of Objects

It displays the total number of objects available in each application. It provides the number of children available for each object based on their hierarchy. When you click on any application name, the topological view of the object is displayed.



Unused Objects Report

A bar chart that shows the unused objects across all the active F5, Citrix, and A10 devices for a period (Week/Month/Quarter) you choose. This report helps users to scavenge unnecessary configurations of the device and manage configurations on the devices.

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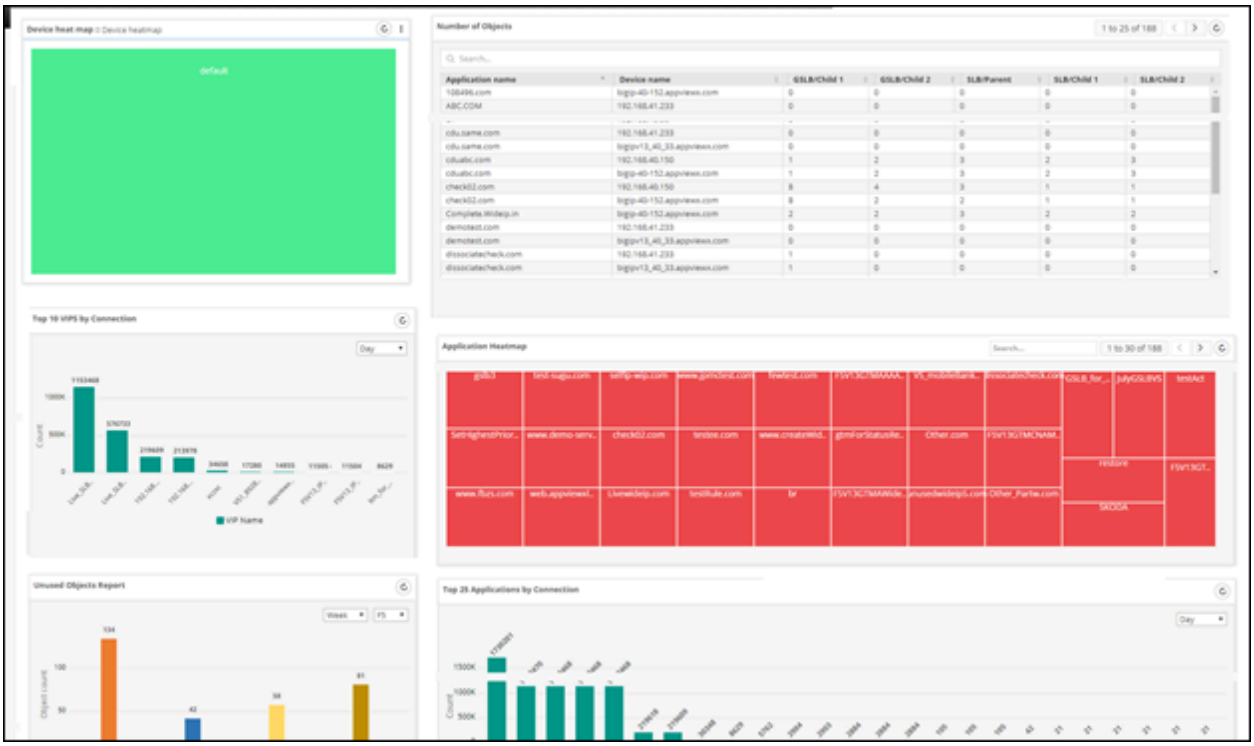

Custom Dashboard

The Netops users can design custom dashboard/app widgets in order to provide an overview of all the ADC devices and their objects within the AppViewX platform. A user can manage both the custom widgets and the default widgets that belong to multiple solutions (such as ADC, Certificate, Firewall, WAF, SSH, Visual Workflow, and AppVision) in the Dashboard that are created.

Manage and Monitor Application Traffic on Custom Dashboards and Widgets

The custom dashboard allows you to manage, monitor, and interpret all the configured applications and their objects. It provides customizable widgets to get an overview of all the ADC Applications within the AppViewX platform and manage/monitor traffic from a single screen. Customize your Application dashboard with predefined and custom widgets as per the business need. It is highly flexible and enables you to create your own dashboards and share with selected users.

- Application View Widget
- Traffic Statistics Widget - Application Traffic Monitoring
- Traffic Grid Widget
- Script Execution (SE) Widget
- Class Management Widget
- Heatmap Widget

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- Copy a Widget to Another Dashboard
- Move a Widget to Another Dashboard
- Delete a Widget
- Custom Widget

Application View Widget

- AppView Widget Overview
- Configure an Application View Widget
- Monitor and Manage Application Traffic
- Monitor Near Real-Time State/Status
- Search for an Object in an Application View Widget
- Modify an Application View Widget
- Enable or Disable Objects (appl.services) Displayed in a Widget
- Perform Bulk Actions on Objects in a Widget
- Force LTM Servers Offline Within a Widget
- View the Different Statuses and States for a Widget

AppView Widget Overview

An Application View widget allows users to group the service objects of a single application. The widget allows the user to manage and monitor the applications by displaying the health of their objects and the number of current connections that the services are receiving.

You can configure Application view widget on your dashboard by using any of the following method:

Configure an Application View Widget

- Configure an Application View Widget Using Predefined Layout
- Configure an Application View Widget Using a Custom Method

Configure an Application View Widget Using Predefined Layout

Using Predefined Layout, you can configure application view widget by performing the following quick steps:

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1. choose the widget Layout/Application grouping format.
2. configure Application patterns
3. tag Widgets to a Dashboard

Gain instant visibility into your Applications across Devices, Data centers, Sync groups etc., in less than 30 seconds. With frequent change in addition and removal of applications, AppViewX ensures that the Dashboards are dynamic in nature and updates any change in the Application configuration instantly.

With AppViewX's granular and renewed RBAC, this becomes even more efficient as you can simply tag the rbac resources to the Dashboards. Application dashboards get dynamically created and updated exclusively for the users sharing the tagged resources.

Note: Even custom flavours can be created from this page using custom layout.

To configure an Application view widget using predefined layout:

1. Go to **Menu** > **ADC+**.
   The ADC+ left navigation pane appears.
2. In the left navigation pane, click the add icon located beside **Dashboards**.
   The **Configure Dashboard** page appears. In this page, the layouts are categorized as follows:
   - SLB Management & Monitoring
   - GSLB Management & Monitoring

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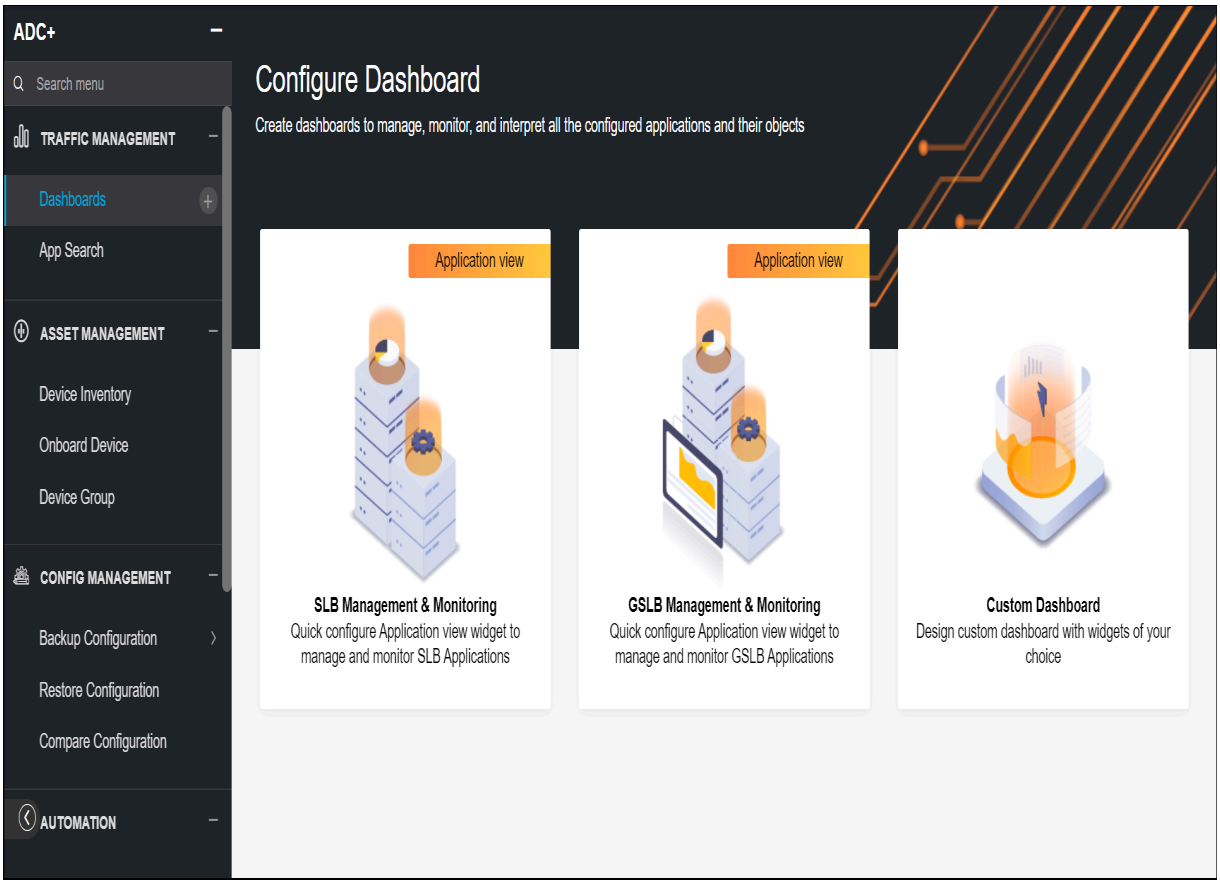

3. Hover the mouse over the desired layout category.
4. Click the **Use** button.

   The configuration page opens.
5. Select the field information in the **Application Layout** section:

Field and Description Table for Application Layout Section

Field	Description
Object Type*	Object type of the application. Select the kind of object you want to add. The options that appear in this field vary based on the selected option in the previous screen.
Select Object Grouping Format*	Choose how the applications should be grouped within the widget. The above image depicts how the applications will be grouped within the widget. The options are as follows:

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Field	Description
	• **Data Center View** - select this option to group the applications based on the value given while adding the device. • **Device View** - select this option to group the applications based on device name.
Note: Fields marked with * are mandatory.	

6. Enter or select the field information in the **Add Objects** section.

Field and Description Table for Add Objects Section

Field	Description
Name	Name of the widget.
Add Resource (or) Add Objects	**Add Resource** - Click this button to configure the widget with a resource, which is already configured within AppViewX in **Accounts** > **Resource** page. By doing this, any updates made to the resources will automatically be seen in the widget as well. **Add Objects** - Click this button to add objects manually or use specific regex patterns so that any new applications matching the given regex will automatically be added to the widget. **Note:** Only 1000 objects can be included in each widget.
Add Widget	Click this button to configure one more widget with the same layout selected. Maximum of three widgets can be created for a layout.

7. Select the field information in the **Dashboard Allocation** section.

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Field and Description Table for Dashboard Allocation Section

Dashboard*	Select the **New**/**Existing** option to either create a new dashboard or select an existing dashboard into which newly created widget(s) to be added. **Note:** When you select **New** dashboard option, you need to provide name for the Dashboard.

8. Click **Create**.

   The widgets are created and you will be landed in the dashboard. You can see the widgets created with the input applications grouped based on the layout selected.

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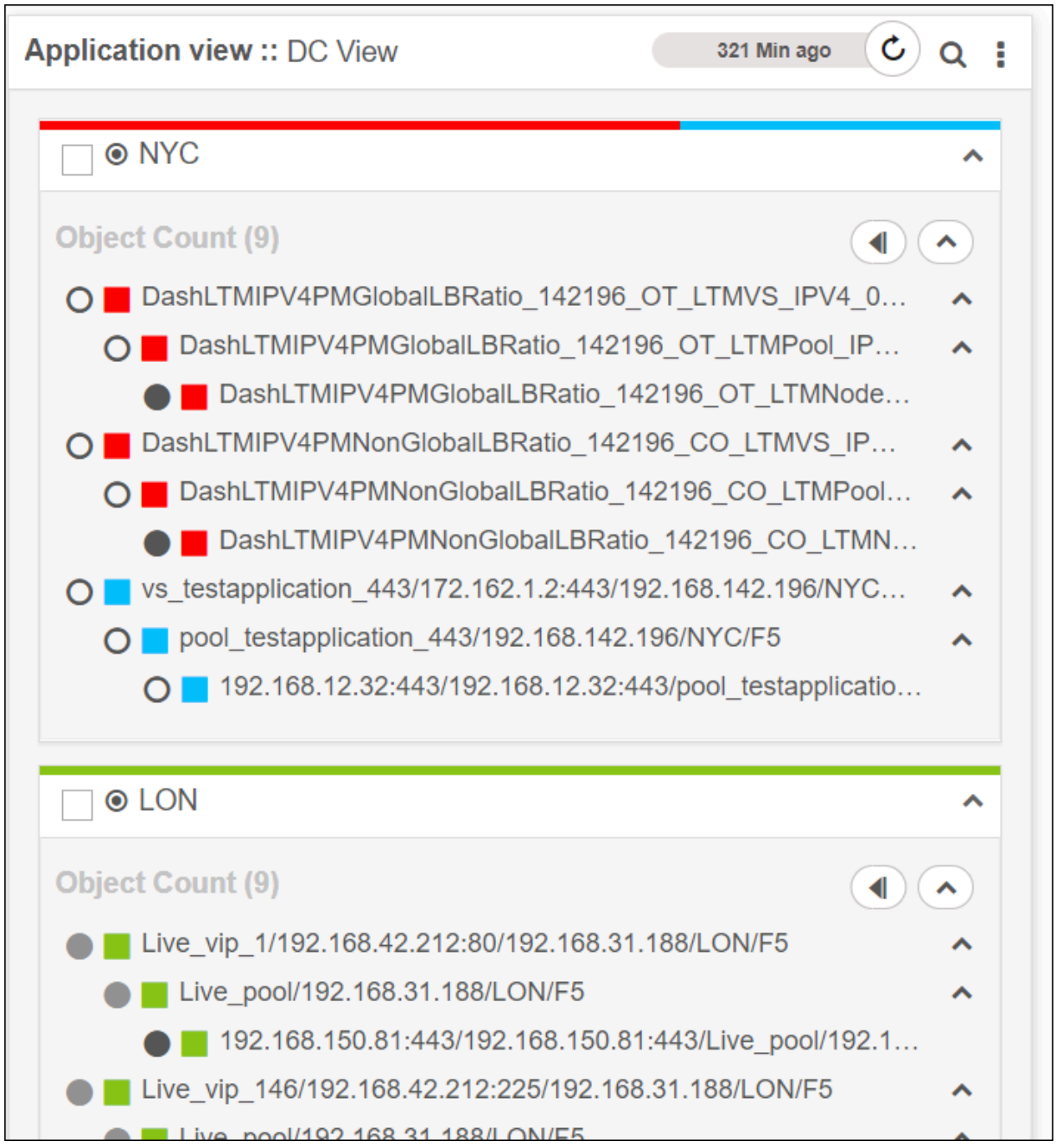

9. To reconfigure the applications or to change the layout,

Note: For a widget configured with layout, you cannot add/delete objects or perform any group level actions from the below screen as the groups are updated dynamically based on layout selected.

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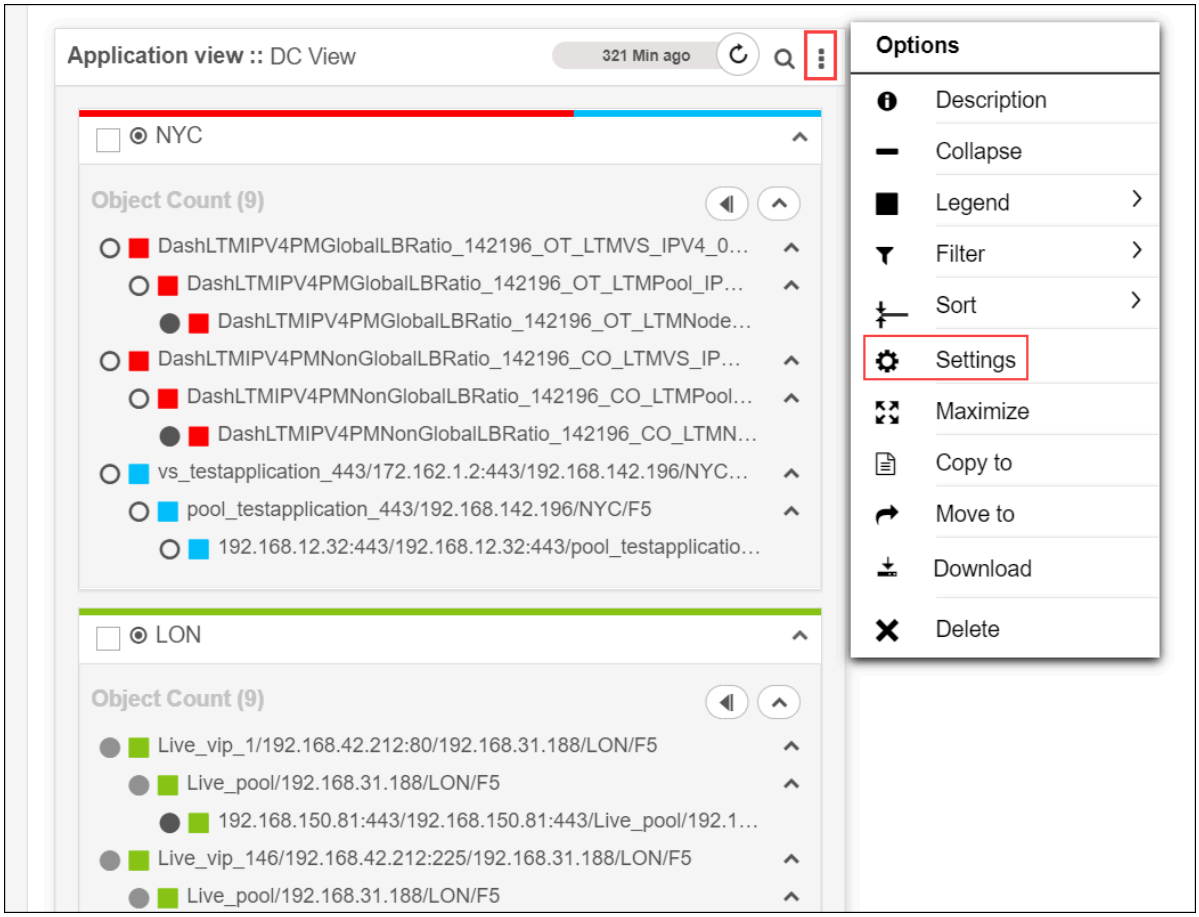
- Select the **Setting** icon from the dashboard options.



- To change the layout,

  a. Click the edit icon located next to the layout name.

     The configuration page opens.

  b. Change the layout in the configuration page, and then click the **Update** button.

- To remove the applied layout, click the delete icon locate next to the layout name, and then click **Proceed** in the confirmation pop-up.

> **Note:** Removing the layout converts the widget to a custom layout and the associated widget group will no longer update dynamically.

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Configure an Application View Widget Using a Custom Method

AppViewX offers Standard predefined templates for GSLB and SLB Applications management that allows you to create Instant Application Dashboards. By using the templates, the grouping of objects will be handled dynamically upon scaling of applications. This reduces the widget configuring time. Along with this the maintenance of the widget is also automated as the widget will be grouped automatically based on the layout selected. Follow three simple steps to create an App Dashboard quickly for your Application teams that enables seamless self servicing.

To configure an Application view widget using standard method:

1. If you are creating an Application view widget as part of creating a new dashboard, complete the steps in the Create a Dashboard topic, then jump to Step 5 below. If you are creating an Application view widget for an existing dashboard, click the (**Add widget**) button in the Command bar of the dashboard.
2. On the **Create** widget screen that pops up, select the solution ADC from the dropdown list.
3. Select the **Custom** radio button as the type of widget.
4. Select the Application view as the widget you will be creating.
5. Enter a unique name for the widget.
6. Click **Create**.
7. The **Settings** screen for the Application view widget opens, displaying an empty DefaultGroup where the user can add the objects.
   For example, In order to Monitor SLB objects of specific applications, start creating groups in the name of the Application and add SLB objects into required groups.
8. Modify the widget name, group name, and add a description by clicking the corresponding fields. It will then become a text-entry field that allows you to make changes.
9. Add objects to the group for the widget one of the following ways:
   - manually
   - using regex
10. Add objects manually to the group for the widget as follows:

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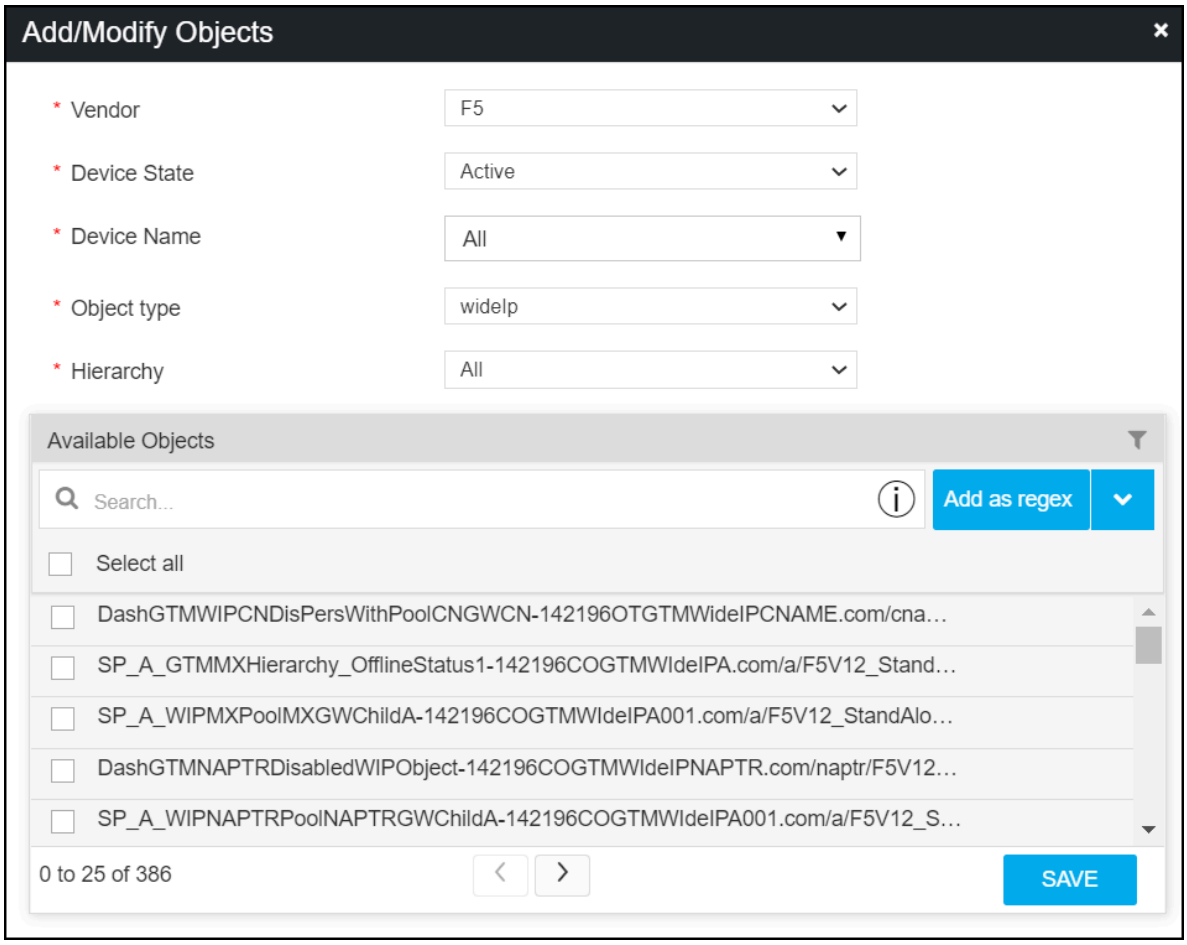
a. Click the **Add/Modify Objects** button to add the objects at the group level. Select the vendor from the **Vendor** dropdown list.



b. In the **Device State** field, select whether you want to include devices in the widget that have a status of Active, Standby, or All, where "All" means devices with a status of either Active or Standby.

c. In the **Device Name** field, select the device name whose objects you want to add to in the widget.

d. In the **Object type** field, select the kind of object you are adding. The options that appear in this field vary depending on the vendor you selected.

e. In the **Hierarchy** field, select the required level of hierarchy that should be displayed in the dashboard. The options that appear in this field vary depending on the vendor and the object type you selected. The objects based on your selection will be displayed in the Available Objects table at the bottom of the screen.

   For example, A WideIP object will have the following hierarchical types,

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- **All** - WideIP along with all hierarchical objects like Pools and Pool members.
- **All Pools** - WideIP along with the Pools.
- **All Pool Members** - WideIP along with the Pool Members.
- **WideipOnly** - WideIP only without any hierarchy.
- **None** - No objects will be explicitly listed on the widget. Instead, only the state/status of the objects will be represented on the widget for monitoring.

f. Select the checkbox beside the object name and click **SAVE** to add the objects to the group.

11. Add objects via regex to the group for the widget as follows:

a. Click the **Add/Modify Objects** button to add the objects at the group level. Select the object filter details such as **Vendor**, **Device State**, **Device Name**, **Object type**, **Hierarchy**.

The objects that match the filter details are displayed.

b. Add regex in the Search field, and then press Enter.

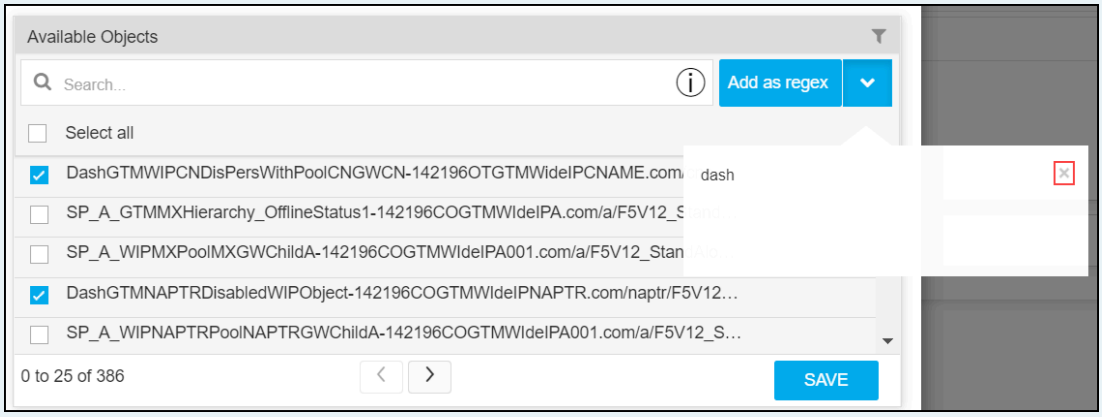
The objects that match regex are displayed.

c. Click the **Add as regex** button.

The displayed objects are added to the group, the regex is added to the list, and it can be used whenever it is needed.

Note:

- You can add any number of regex. To view the list of regex, click the **Add as regex** dropdown option.
- The regex(s) is specific to a widget, dashboard, group, and filters.
- To delete a regex from the list, click the close button against the regex in the list.



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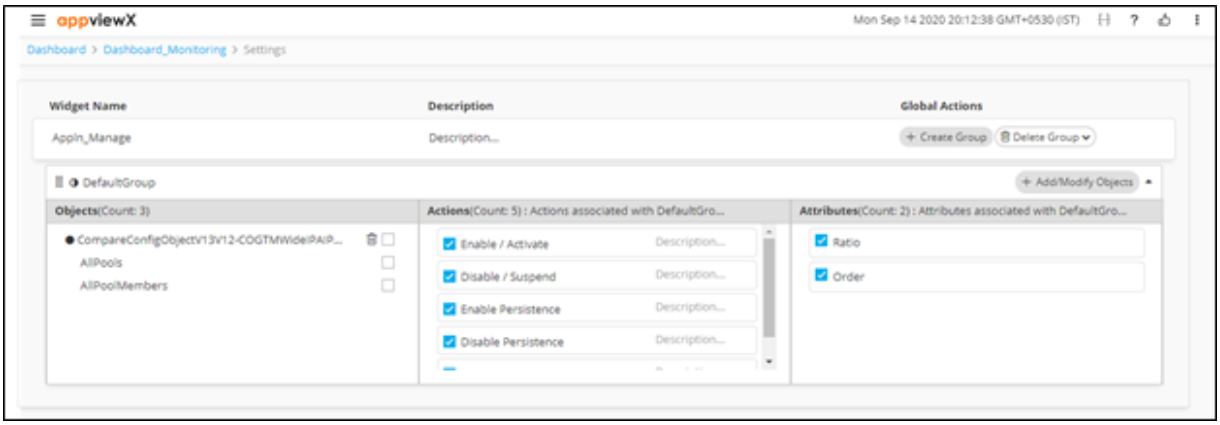
- To view sample regex, click the information button.
- When new objects are added and matched with the regex the objects are added to the widget automatically.

12. By default, access to the actions and attributes applies to all objects within that group. You can customize these permissions manually by selecting or deselecting permissions for individual objects.
13. For example, you might grant group members actions (such as Enable, Disable, ForceDown, and so on) and attributes (such as Ratio, Order, Weight, Connections, and Priority) permissions to one object in a group, but only Enable, Disable, and Ratio permissions to another object in the group and no permissions to objects in a sub-group of the group.
14. When the widget appears on the dashboard, the full list of actions you created can be accessed by right-clicking any object within the widget.
15. Click on the or (**Show/Hide Attributes**) button to view or hide the full list of attributes you created for a group.
16. When you have finished, click **Save**.
    The Application traffic can be managed and monitored.



17. The dashboard screen reappears, displaying the widget you just created.

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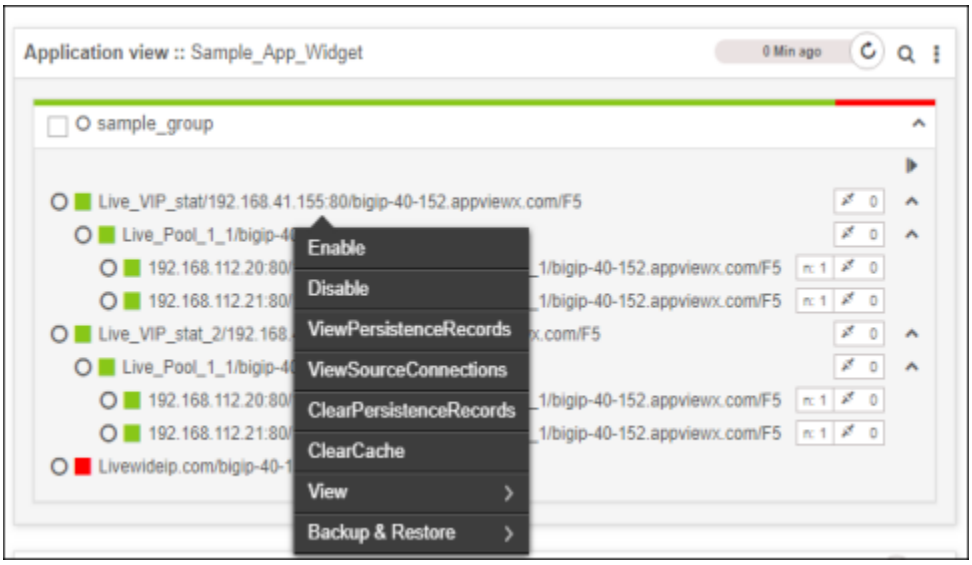

18. To create a new group,
    a. Click the **Create Group** button under Global Actions.
    b. On the pop-up that appears, enter a group name to help the users identify it.
    c. Select the parent that you want to associate with the group from the dropdown list.
    d. Click **Save**.
    e. Repeat steps 7-15 to include the group in the dashboard.
19. To delete a group, complete the following steps:
    a. Click the **Delete Group** dropdown menu under Global Actions.
    b. Select the groups that you want to remove from the widget and click **Delete**.

Monitor and Manage Application Traffic

The widget with the configured Application along with its hierarchy will be rendered onto your dashboard and start monitoring the Applications State/Status. The following Legend helps to identify the state/status definition, click the ⋮ (**Options**) button and select legend in the Command bar at the top of the widget.

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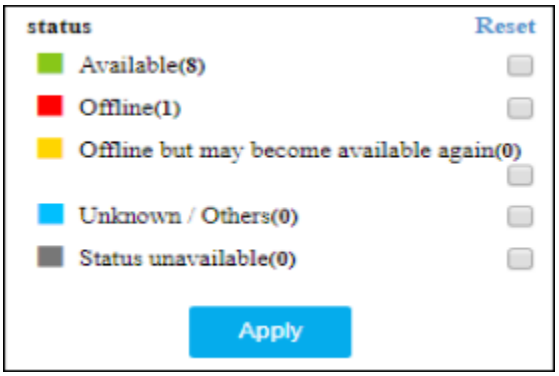
The applications can be,

- Filter the Applications
- Sort the Applications

Filter the Applications

To filter the applications based on the status:

1. Click the ⋮ (**Options**) button and select the ▼ (**Filter**) icon in the Command bar at the top of the widget.
2. In the Status field that appears, select the checkboxes beside the Status info that you would like to filter.



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The applications that match the filtered status appear on the screen.

Sort the Applications

To sort the applications in ascending/descending order:

1. Click the (**Options**) button and select the (**Sort**) icon > Ascending/ Descending in the Command bar at the top of the widget.
   The objects are arranged and displayed in the corresponding order.
2. Click the **Save Dashboard** icon to retain the sorting.

Monitor Near Real-Time State/Status

Monitor the near real-time state/status of your applications from the Application view widgets ensuring a seamless experience.

> **Note:**
> AppViewX recommends to enable Syslog-based configuration updates for near real-time monitoring. Refer to Installation Guide for enabling Syslog configuration.

You can enable the below options in the Dashboard settings for near real-time monitoring. For Dashboard setting, see Dashboard Setting section.

- **Refresh on load** - Enables Refresh on load from the ⚙ (**Settings**) of the dashboard page to get the latest state/status information on loading the dashboard.
- **Last Refresh time** - Displays the last time the widget is updated with the latest State/Status information.
- **Refresh** - Click the **Refresh** button on the widget to perform on-demand State/Status information. Each Object contains a last refresh time on the tooltip, you can also trigger a refresh for a particular object from the tooltip.
- **Collapse group** - If this setting is enabled, each time the dashboard loads, all groups within widgets on the dashboard display in a collapsed state by default.
- **Collapse hierarchy** - If this setting is enabled, each time the dashboard loads, all object hierarchy within widgets on the dashboard display in a collapsed state by default.

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- **Keep Alive** - This option is available in the dashboard **settings** . If this option is enabled, it ensures the session is not timeout by refreshing the dashboard every 15 mins.
- **Show only active objects** - If this option is enabled, only the active objects are displayed within the widget.
- **Auto Refresh** - Enables Auto-refresh from the (**Settings**) of the dashboard page with a particular interval (1 - 5 mins), which automatically refreshes the state/status information of the objects.
- **Inactivity popup** - When the **Auto Refresh** enabled the Inactivity popup option will also be enabled by default. Enabling the **Auto Refresh** and **Inactivity popup** options will notify the user about the inactivity (no mouse or keyboard events) of the screen through Confirmation popup, if there is no activity in the screen for last 15 minutes. In the Confirmation popup, user can choose **Yes** or **No** option. When user selects,
  - **Yes** - the **Auto Refresh** and **Inactivity popup** options will be disabled immediately and will result reduced the device calls.
  - **No** - the Confirmation popup will be closed without any change in the auto refresh and the popup will be notified after 15 mins. If the **Do not ask me again** checkbox is selected and the **No** button clicked, the Confirmation popup will not be notified until user enables and there will no change in the auto refresh.

Note: After 15 minutes, in case user don't choose any option in the Confirmation popup, the popup will stay for 1 more minutes for user to choose option in Confirmation popup. Then the timer will be shown for 15 seconds. After that the Auto Refresh option will be temporarily disabled for this session due to inactivity.

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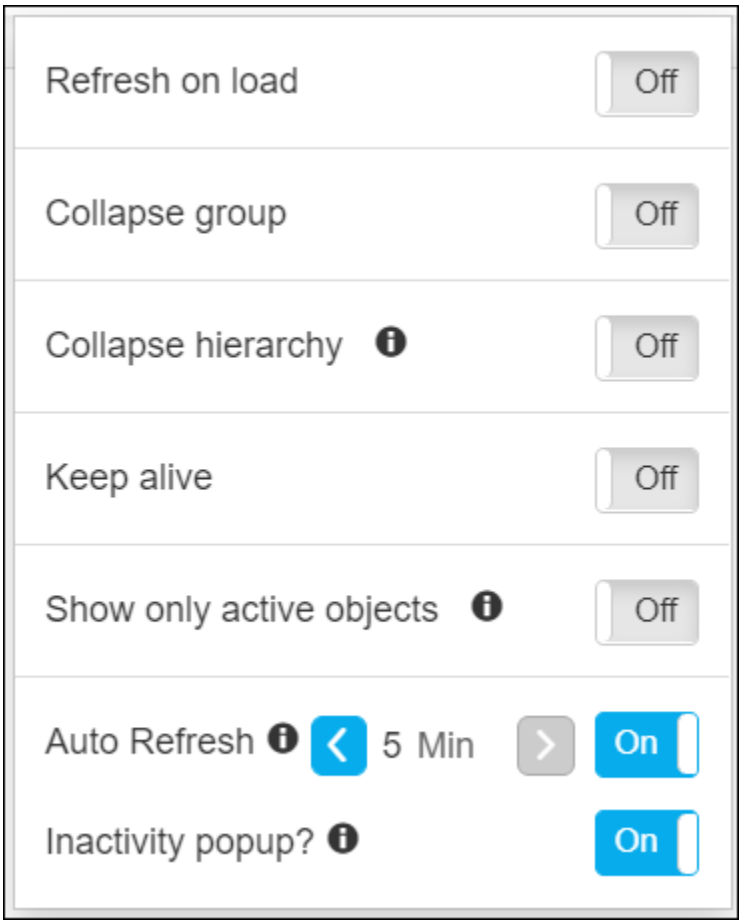

Example, in the following sample application widget,

- all of the objects in the widget show that they are in an Enabled state-they all have hollow circles beside their names
- one of the InternalDMZ-Members objects is offline, so it shows a red square beside its name, indicating its Offline status.
- Three of the other objects display gray squares, indicating their Unlicensed/None/Failure States status.

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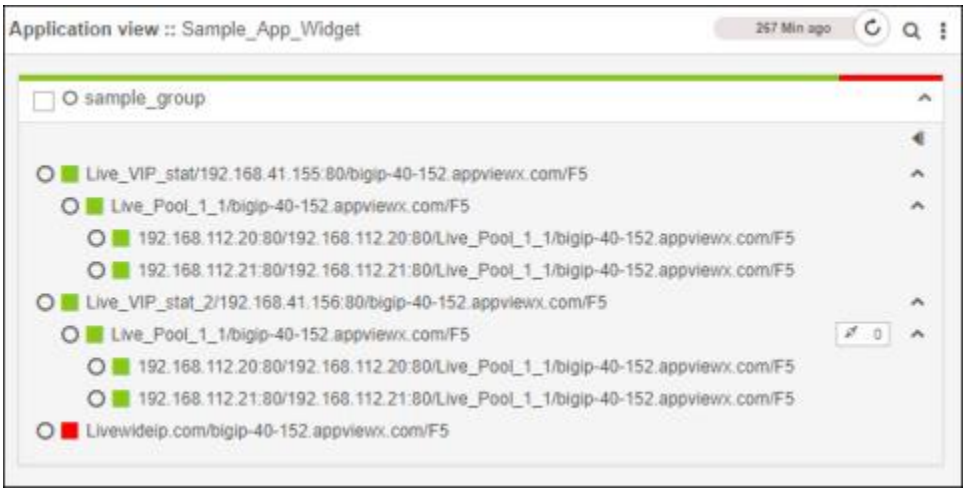

- The temperature bar, which is the colored bar at the top of each group or object name, displays the overall status of all components within the widget. In the example above, note that the virtual server group shows a solid green temperature bar because all components under it are Available, whereas the Members group shows a mostly green bar transitioning to red, to indicate that some of the components within it are Unavailable. Hover your cursor over the color in the temperature bar to see the number of components that have the corresponding status.

Search for an Object in an Application View Widget

To search for an object in an Application view widget:

1. Go to **Menu** > **ADC+** > **TRAFFIC MANAGEMENT** > **Dashboards**.
2. If you have more than one dashboard, in the dashboard list, click the name of the one containing the widget you want to search.
3. In the widget Command bar, click the (**Search object**) icon.
4. In the search field that pops up, begin entering the name or number of the object you want to find.
5. As you enter text in the search field, the contents of the widget update dynamically to display only those objects that match the characters or numbers entered so far. In the example below, the only objects remaining in the widget are those that contain the letters entered into the search field: best. All other objects have been filtered out.

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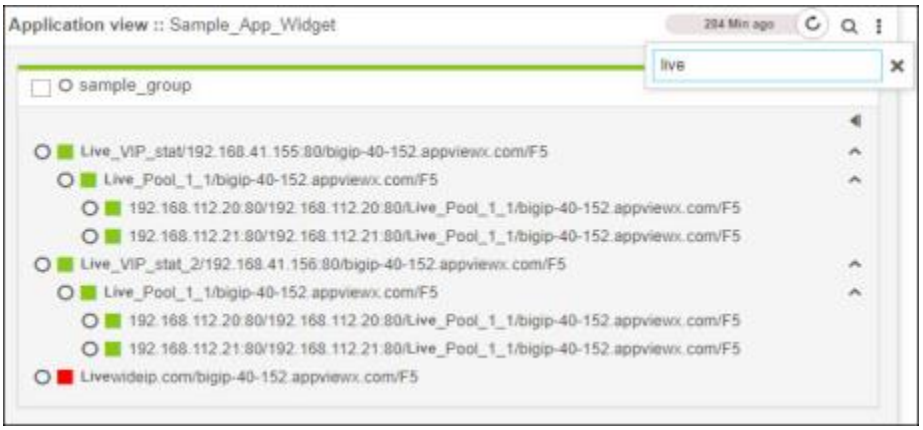


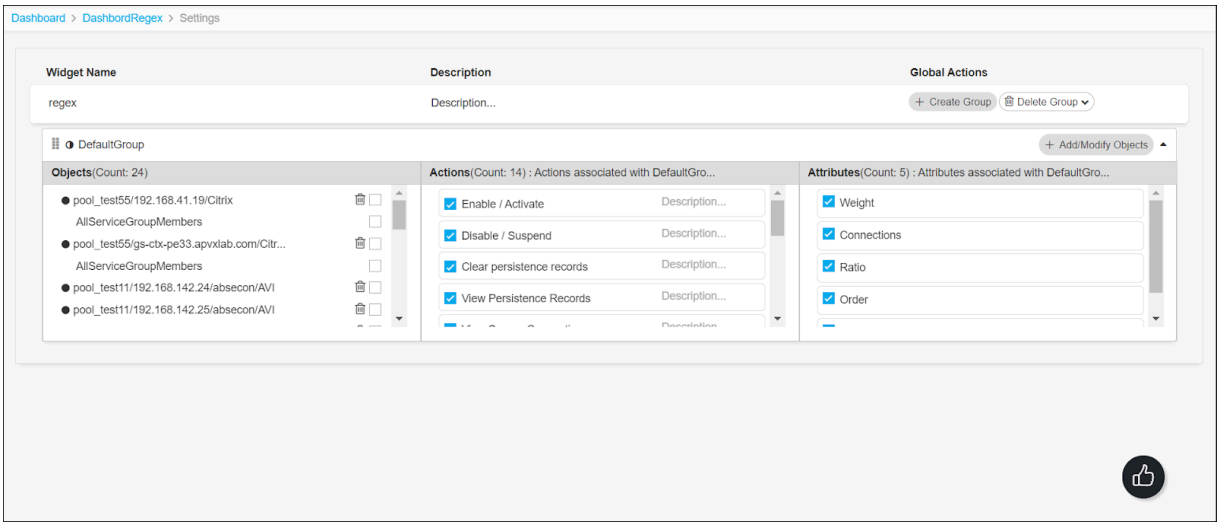
Modify an Application View Widget

The Application view widget contains the objects under the group. By default, the DefaultGroup is available. Either you can add objects to the DefaultGroup or create a new group of objects. The details of the Application view widget can be modified as needed.

To modify an Application view widget:

1. Go to **Menu** > **ADC+** > **TRAFFIC MANAGEMENT** > **Dashboards**.
2. If you have more than one dashboard, in the dashboard list, click the name of the one containing the widget whose contents you want to make changes to.
3. Click the (**Options**) button and select the (**Settings**) icon in the Command bar at the top of the widget.

   The Settings screen appears:



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4. You can modify the Application view widget as follows:

Field	Description
Widget Name	Update the name of the widget.
Description	Update the description of the widget.
Global Actions	There are two Global Actions. Click, • to create a new Application view widget group. • to select the desired group from the drop-down list and delete.
Add/Modify Objects	• Click to add and modify an object. • In the **Add/Modify Objects** popup, provide the object details, such as vendor, Device State, Device Nam, etc., search for objects, and/or filter the objects to get the desired objects. • Select or unselect the objects by clicking the objects checkbox. • Alternatively, you can add objects to the group by creating regex for the object details to get the desired objects. To add objects using regex, • After providing the object details in the **Add/Modify Objects** popup, add the desired regex in the search field. • Click the **Add as regex** button. The objects that match the regex are added to the group and the regex is added to the regex list. **Note:** • You can add any number of regex. • To view the regex list, click **Add as regex** dropdown option.

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Field	Description
	• The regex(s) is specific to a widget, dashboard, group, and filters. • To view sample regex, click the information button. • When new objects are added and matched with the regex the objects are added to the widget automatically. • Click **Save** to add the objects to the group.
Objects section	To delete an object, click against a particular object and then click **Yes** in the confirmation modal.
Actions section	Enable or disable action(s) for the objects by selecting the checkbox of the respective action. The enabled actions will be updated in the action list. By default, access to the actions applies to all objects within that group.
Attributes section	Enable or disable attribute(s) for the objects by selecting the checkbox of the respective attribute. By default, access to the attributes applies to all objects within that group.

5. The modified details will be updated in the Application view widget.

- One-Touch Action Provisioning and Self Servicing
- Actions on HA Devices and Device Failover

One-Touch Action Provisioning and Self Servicing

- The app-centric dashboard/widget allows you to self-service, monitor, and troubleshoot application issues in a single pane.
- One-touch/click application provisioning and Traffic management actions through a simplified RBAC.

The configured objects along with their hierarchy are rendered in the form of a widget.

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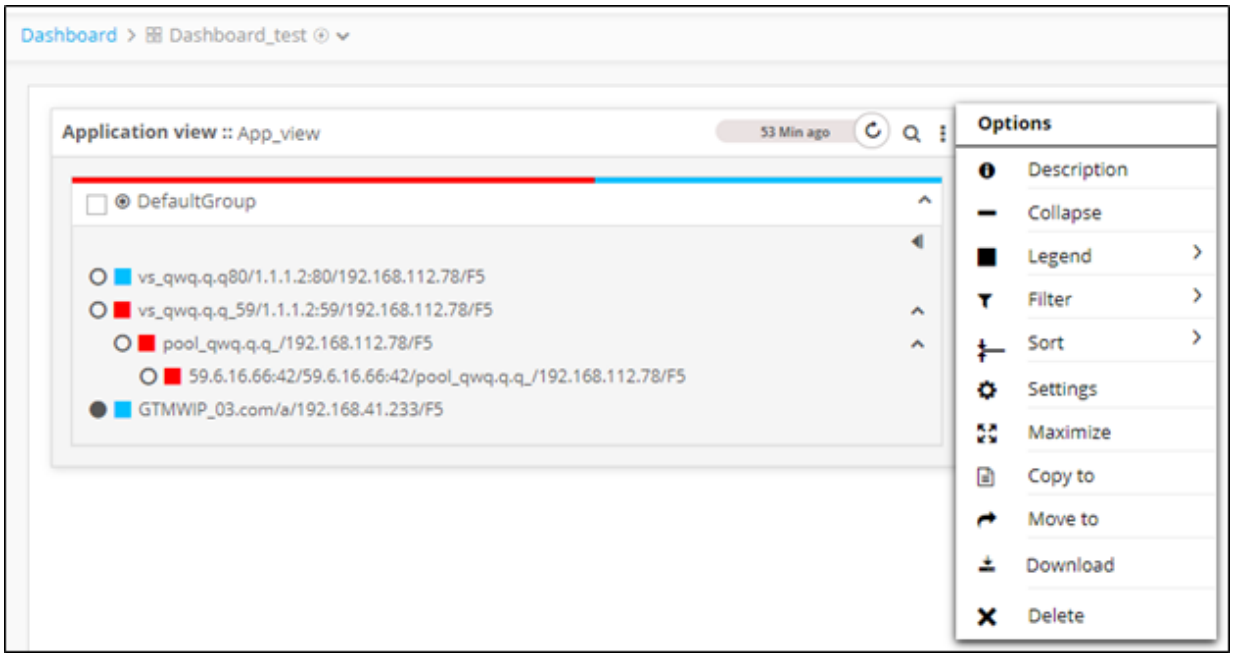
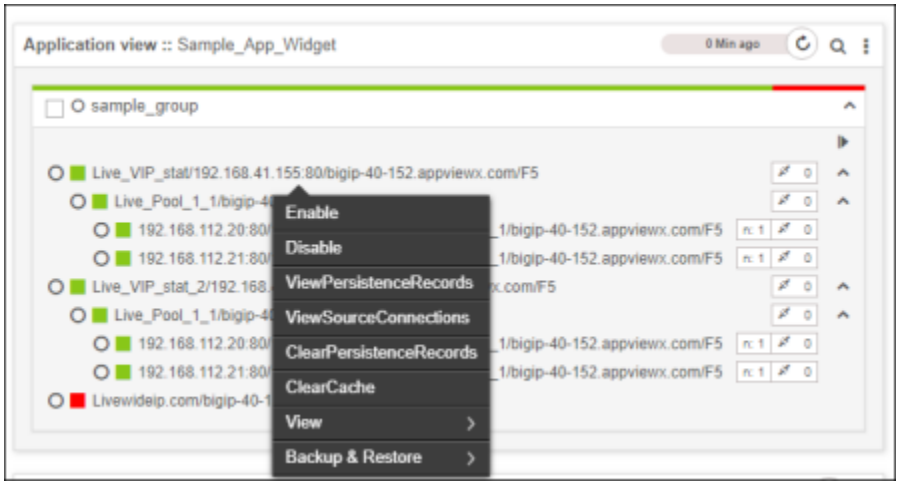
- Users can Expand and Collapse the group by Clicking the ⋮ (**Options**) button.



- Execute Server Rotation or Route/Swing traffic between your environments and perform various other operations on a single click.



The following actions can be performed (**Individual or bulk**) on an Application View widget by right-clicking the Group/Individual object and accessing the Actions menu:

- **Enable** - Enable an object
- **Disable** - Disable an object and terminate all active connections

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- **Graceful disable** (AVI devices only) - Disable an object only when all the currently active client connections are closed by either the server or the client
- **Drain** (NGINX only) - To put the server into the draining mode
- **Backup & Restore**
  - **Backup device** - Create a backup of the device associated with the object. For more details refer to the Create a Device Backup Group section of this guide.
  - **Restore object** - Restore object configuration to a previous state. For more details refer to the Restore an Object section of this guide.
  - **Compare** - Compare current and/or archived configurations of similar objects or across devices to ensure compliance. For more details, refer to the Compare ADC Objects section of this guide.
- **View**
  - **View graph** - View the timeline statistics of an object. For more details, refer to the View Timeline Statistics for an Object section of this guide.
  - **View config** - View the current configuration of all levels of the device object. For more details, refer to the View Configuration Details section of this guide.
  - **View log/history** - View the log history of the object.
  - **View alerts** - View any alerts related to the object.
- **Clear persistence records** (F5 devices and Citrix SLB Virtual Server only) - Clear the persistence records for Virtual Server (VIP) and pools
- **View persistence records** (F5 devices only and Citrix SLB Virtual Server) - View the persistence records for Virtual Server (VIP) and pools
- **Advanced**
  - **Enable/Disable persistence** (F5 devices only) - Turn on or off the tracking and storing of session data, which is used to ensure that client requests are directed to the same pool member throughout the life of a session or during subsequent sessions.
  - **Enable/Disable all** (F5 devices only) - Turn on or off the object available across all the pools.
  - **Forcedown all** (F5 devices only) - Force shutdown of the object available across all the pools.
- **View source connections** (F5 devices only) - View the source connection IPs for Virtual Server (VIP) and pools
- **Forcedown** (F5 devices only) - Force shutdown of the object

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- **FD clear active connections** (F5 devices only) - Clear active connections to the object
- **View Topology** - Display the topology view of the selected object in a new window

The following are the additional attributes that can be monitored on the widget,

- **Ratio** - To view the ratio of the pool member from widget level
- **Weight** - To view the real server weight for the applicable objects from widget level

Actions on HA Devices and Device Failover

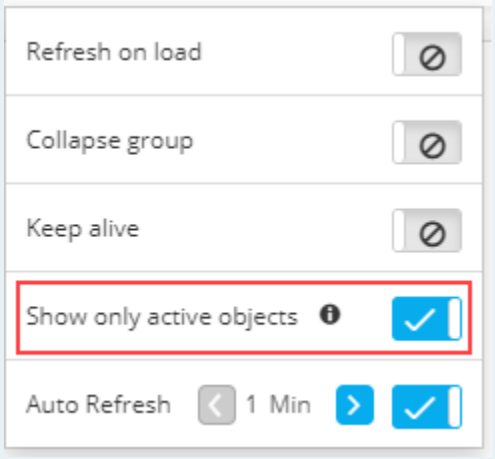
AppViewX recommends to enable Syslog-based configuration updates to reflect the device flip over on a near real-time basis.

To enable the Syslog based configuration updates,

- Enable **Show only active objects** option from the Dashboard settings.

  It ensures the widget is always updated with the latest active device objects whenever a device failover is identified.

Note: By default, this option is enabled.



- To disable this option, click the ⚙ (**Settings**) icon on the dashboard page.

Note: In addition to this, any actions that are executed on an application hosted on a HA device will always be reflected on the current active device to ensure the active devices are up to date

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and no changes are overwritten during device synchronization. AppViewX also ensures the Active and Standby devices are synchronized at a regular interval.

Following are other actions that can be performed by clicking the **Options** on the widget,

- Maximize
- Minimize
- Copy to - a copy of the widget can be placed from one dashboard to another dashboard by selecting the (**Copy to**) icon under (**Options**).
- Move to - any widget can be moved from one dashboard to another dashboard by selecting the (**Move to**) icon under (**Options**).
- Download - contents of an Application view widget can be downloaded in .csv format to your local system by selecting the (Download) icon under (**Options**).
- Delete - a group, object, or action can be deleted from an Application view widget by selecting (**Options**) > (**Settings**) > **Groups**/**Objects**/**Actions**, and then click **Delete**.

Note: Every Group must have at least one action associated with it, so if there is only one action listed, the Delete button will not be enabled.

Enable or Disable Objects (appl.services) Displayed in a Widget

Application teams can quickly perform provisioning, server rotation as part of a standard change window by enabling or disabling the objects.

Note: This process can be integrated into ITSM change management.

Objects that are enabled within a widget contain an open circle beside their names and display the word ENABLED when you hover your cursor over the circle. Objects that are disabled contain a filled black circle beside their names and display the word DISABLED when you hover over them.

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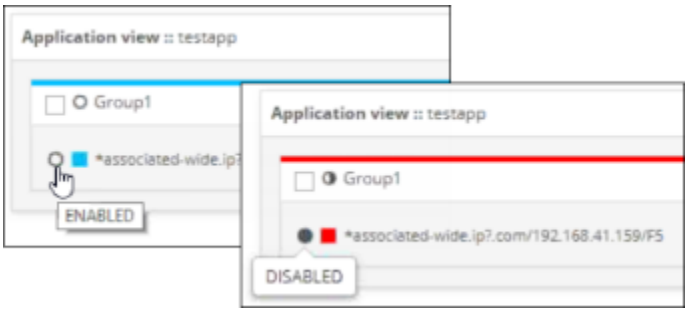
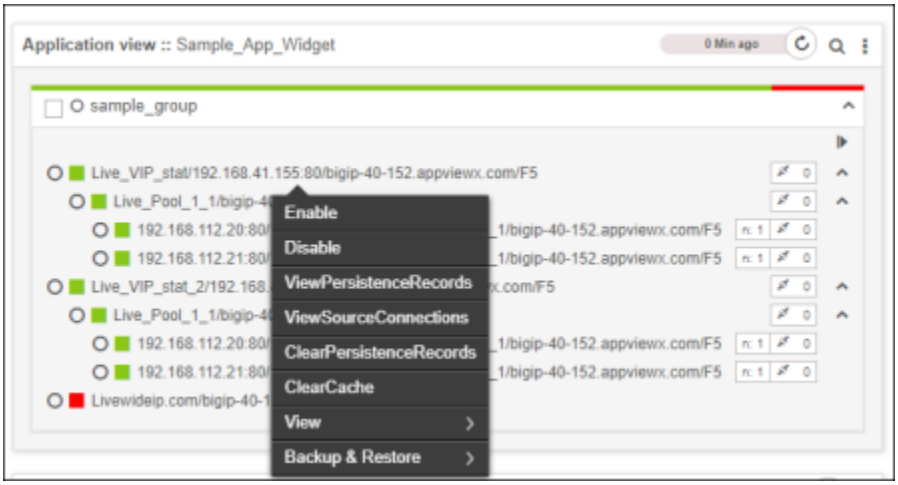


To enable or disable objects displayed in a widget,

1. Go to **Menu** > **ADC+** > **TRAFFIC MANAGEMENT** > **Dashboards**.
2. If the specific dashboard you want to access is not displayed on the screen, move your cursor to the breadcrumbs field of the current dashboard.
3. Click the current dashboard name.
4. In the dropdown list that appears, click the name of the dashboard you want to switch to.
5. When the dashboard opens, locate the widget that contains the object whose status you want to change.
6. Right-click the object and select **Enable** or **Disable** from the dropdown menu that appears.



7. On the Confirmation screen that pops up, enter comments relating to the enable or disable action, then click **Yes**.
8. Click the ↻ (**Refresh**) icon in the widget Command bar to see the updated view of the widget.

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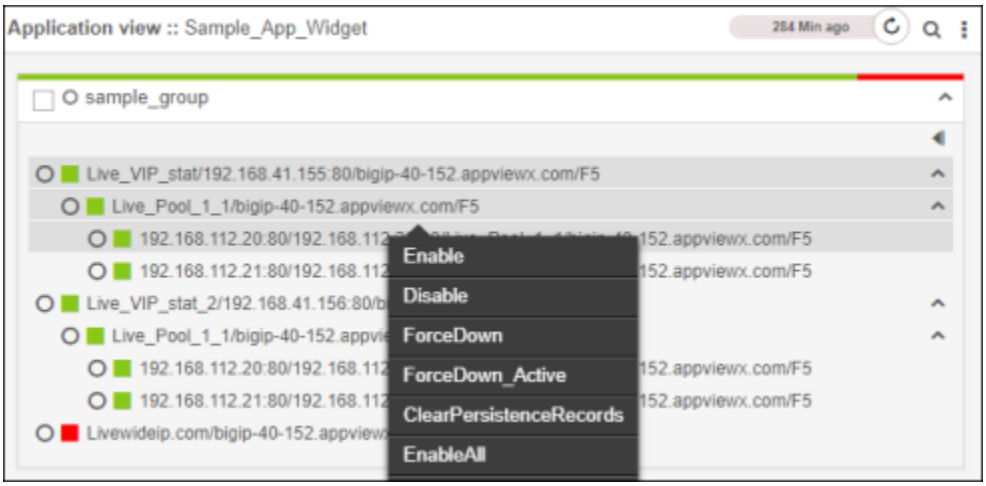
Perform Bulk Actions on Objects in a Widget

The Dashboard module allows you to perform the same action on multiple objects within the same widget simultaneously.

To perform bulk actions on objects in a widget:

1. Go to **Menu** > **ADC+** > **TRAFFIC MANAGEMENT** > **Dashboards**.
2. If the specific dashboard you want to access is not displayed on the screen, move your cursor to the breadcrumbs field of the current dashboard.
3. Click the current dashboard name.
4. In the dropdown list that appears, click the name of the dashboard you want to switch to.
5. When the dashboard opens, locate the widget containing the objects that you want to perform bulk actions on.
6. Click on each object within the widget that you want to perform a bulk action on. If you want all objects in the group to be included, select the check beside the group name.
7. Right-click anywhere in the widget and select the action you want to perform from the dropdown menu.



8. On the Confirmation screen that pops up, enter comments related to the action you are performing, then click **Yes**.
9. Click the ↻ (**Refresh**) icon in the widget Command bar to see the updated view of the widget.

Force LTM Servers Offline Within a Widget

During server maintenance, it is sometimes necessary to force a Local Traffic Management (LTM) server within a widget. When this is done, the server is still able to serve existing active connections, but no new connections are processed.

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To force an LTM server offline within a widget, complete the following steps:

1. Go to **Menu** > **ADC+** > **TRAFFIC MANAGEMENT** > **Dashboards**.
2. If the specific dashboard you want to access is not displayed on the screen, move your cursor to the breadcrumbs field of the current dashboard.
3. Click the current dashboard name.
4. In the dropdown list that appears, click the name of the dashboard you want to switch to.
5. When the dashboard opens, locate the widget that contains the LTM server you want to force offline.
6. Click the LTM server name in the widget, then right-click and select Forcedown from the dropdown menu that appears.

7. On the Confirmation screen that pops up, enter comments relating to the force-down action, then click **Yes**.
8. Click the ↻ (**Refresh**) icon in the widget Command bar to see the updated view of the widget.

View the Different Statuses and States for a Widget

To see a list of all of the statuses an Application view or Traffic grid widget can have, complete the following steps:

1. Go to **Menu** > **ADC+** > **TRAFFIC MANAGEMENT** > **Dashboards**.
2. Select a dashboard that has an Application view or Traffic grid widget.
3. Click the ⋮ (**Options**) button and select ■ (Legend) icon in the Command bar at the top of the widget.
4. A legend appears, listing each of the possible widget statuses and states. For Application view widgets, there are five possible statuses and four possible states, as shown below.

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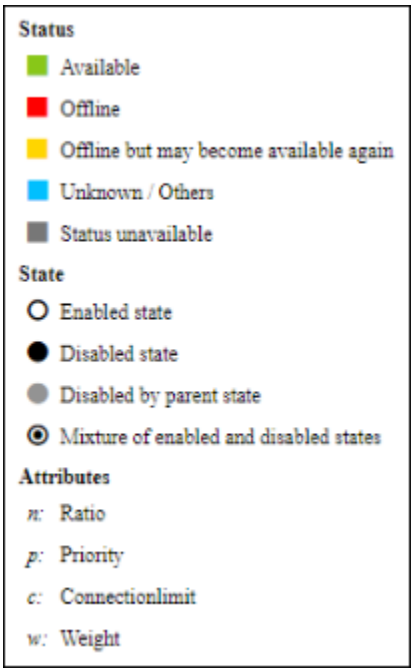

5. The list for Traffic grid widgets is larger, with a total of 9 possible statuses and 6 possible states, as shown below.

6. Using this legend, you can tell at a glance the current status and state of each component of the widget. In the Application view widget example below, all of the objects in the widget show that they are in an Enabled state-they all have hollow circles beside their names-but one of the InternalDMZ-

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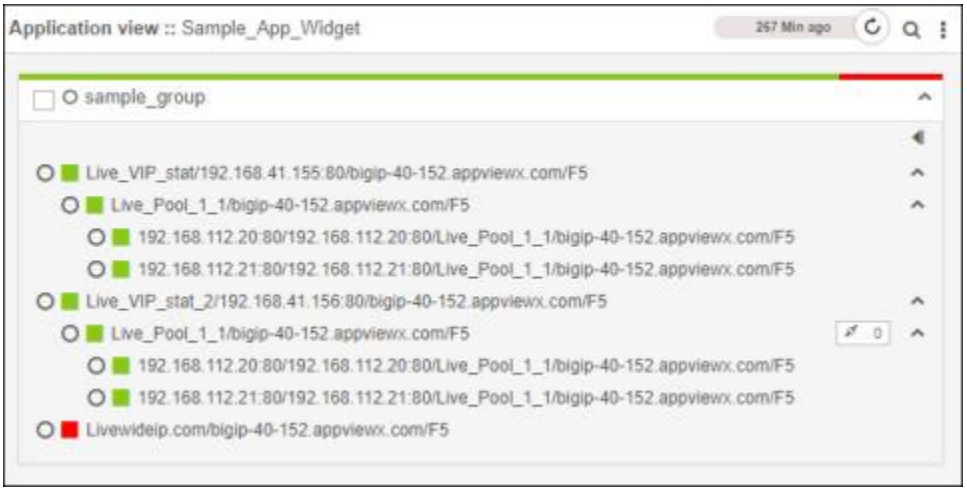
Members objects is offline, so it shows a red square beside its name, indicating its Offline status. Three of the other objects display gray squares, indicating their Unlicensed/None/Failure States status.



7. The temperature bar, which is the colored bar at the top of each group or object name, displays the overall status of all components within the widget. In the example above, note that the virtual server group shows a solid green temperature bar because all components under it are Available, whereas the Members group shows a mostly green bar transitioning to red, to indicate that some of the components within it are Unavailable. Hover your cursor over color in the temperature bar to see the number of components that have the corresponding status.

Traffic Statistics Widget - Application Traffic Monitoring

With the Traffic statistics widget, you can monitor the live and historic statistics of devices/ objects including the number of requests being received, the load on each of the load balancers, and peak request times. The widget helps to perform an in-depth analysis of your network traffic. It will benefit traffic monitoring to track down network problems and use the information to guarantee bandwidth and quality of service for business applications.

You can perform the following actions:

- Configure traffic statistics widget
- Monitor live and historic traffic flow
- Configure Traffic Statistics Widget
- Monitor Live and Historic Traffic Flow

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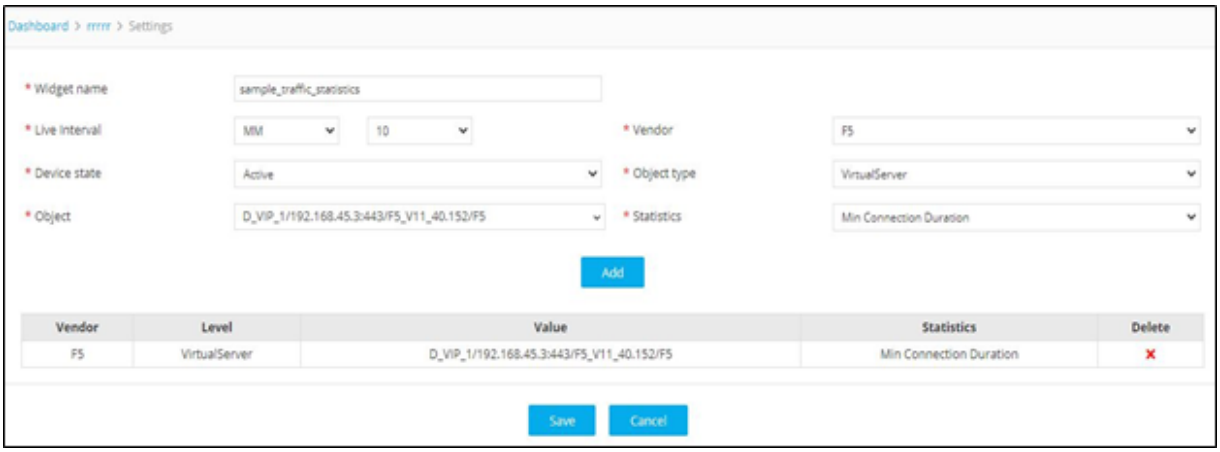
Configure Traffic Statistics Widget

To configure a Traffic statistics widget on your dashboard:

1. If you are creating a Traffic statistics widget as part of creating a new dashboard, complete the steps in the Create a Dashboard topic above, then jump to Step 5 below. If you are creating a Traffic statistics widget for an existing dashboard, click the (**Add widget**) button in the Command bar of the dashboard.
2. On the Create widget screen that pops up, select Traffic statistics as the widget type.
3. Enter a name for the widget.
4. Click **Create**.
5. On the Settings screen that appears, enter the time interval in minutes and seconds for collecting statistics from the devices.



6. In the **Live Interval** field, set how often you want to collect the live performance statistics of an object.
7. In the **Vendor** field, select the vendor whose devices you want to collect statistics for A10, AVI, Citrix, or F5.
8. In the **Device state** field, select whether you want to include devices in the widget that have a status of Active, Standby, or All, where "All" means devices with a status of either Active or Standby.
9. In the **Object type** field, select the kind of object you are adding. The options that appear in this field vary depending on the vendor you selected in Step 6.
10. In the **Object** field, select an object you want to gather statistics for. The list of objects that appear varies depending on the object type you selected in Step 8.
11. In the **Statistics** field, enter the kind of statistics you want to gather. The list of statistics varies depending on the object you selected in Step 9 and can include both live and historical data within the same widget.
12. Click **Add** to add the object to the widget.

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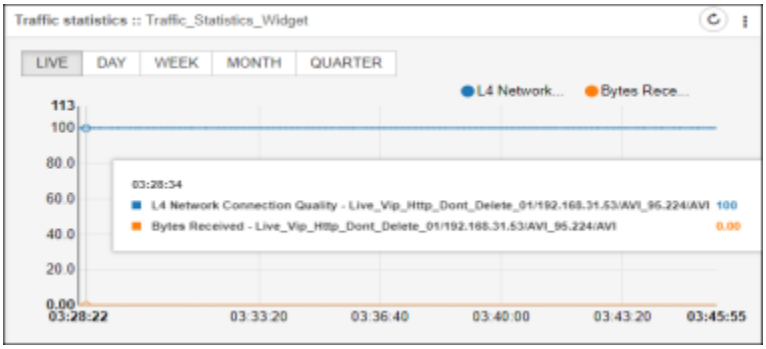
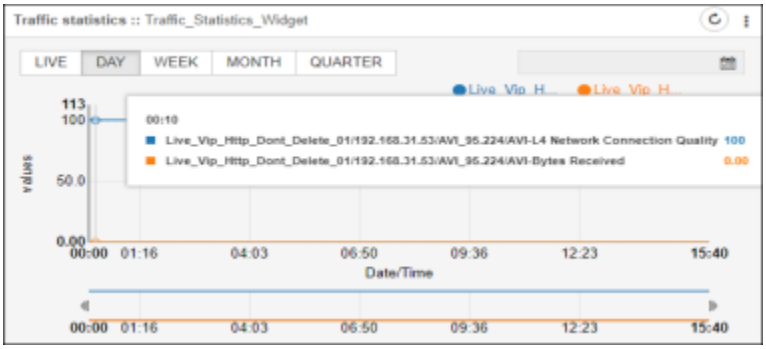
13. Repeat steps 6-11 for each vendor, device, and object you want to include in the widget.
14. When you are done adding objects, click **Save** to create the widget.
15. The dashboard screen reappears, displaying the widget (Live performance statistics) you just created.



16. The historic performance statistics will be collected and displayed based on the time interval you configured in the **Settings** > **ADC** > **Statistics**. For detailed information, refer to the Statistics Settings section in the ADC Settings topic of this guide.
17. Click on Day/Week/Month/Quarter tab within the widget to view the historic performance statistics.



Monitor Live and Historic Traffic Flow

- The line graph represents the Live, Day, Week, Month, and Quarter data.
- The Live tab will collect the real-time statistics from the device and plot as per the interval.
- Refresh on the widget to get the latest data on-demand basis.

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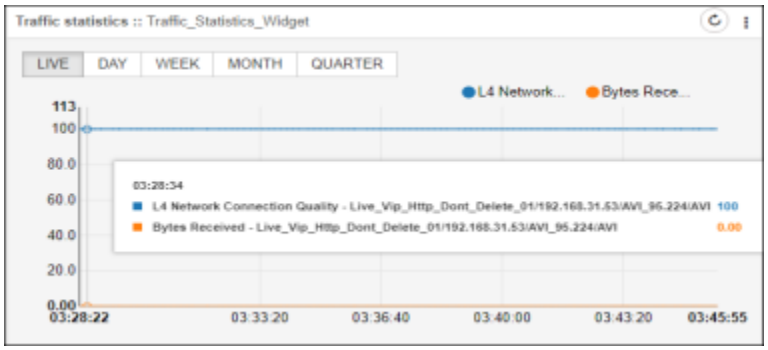
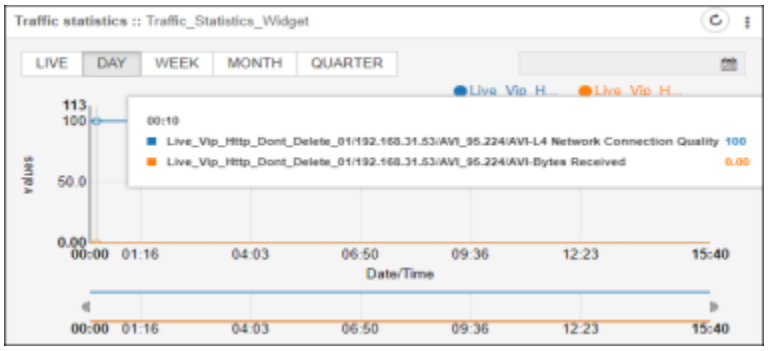


- The historic statistics interval should have been configured globally in the Settings menu. To configure the statistics interval, see the oxy_ex-1/ADC%20User%20Guide/output/settings.ditamap section.
- The historical data will be collected on a regular interval, aggregated, and plotted in the form of line graphs under respective tabs.
- Click on Day/Week/Month/Quarter tab within the widget to view the historic performance statistics.
- You also have the provision to pick a date or select a range using the sliding bar and narrow it down to a particular timeline.
- Hover over the graph to get the statistics value of a particular object.



Traffic Grid Widget

With this widget, you can monitor and control the amount of application traffic that flows across the various data centers hosting the application. Rules created within the widget define what percentage of traffic goes to which data center, making it possible to maximize dispersed resources from a single location.

You can perform the following actions:

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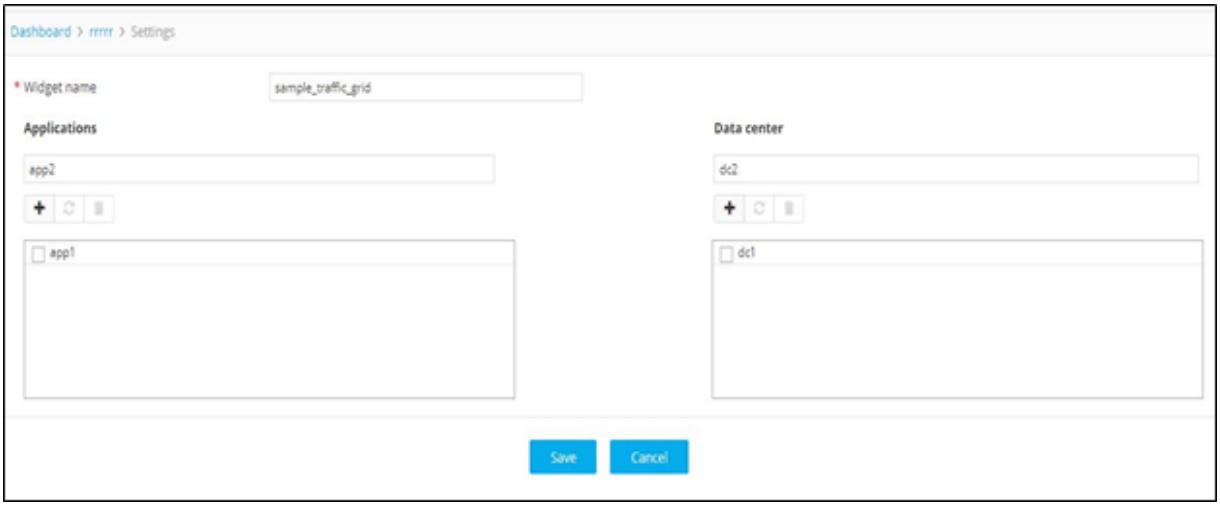
- Configure a Traffic Grid Widget
- Monitor and Distribute Traffic Across Datacenter
- Change the Percentage Values Within a Traffic Grid Widget

Configure a Traffic Grid Widget

To configure a Traffic grid widget on your dashboard:

1. If you are creating a Traffic grid widget as part of creating a new dashboard, complete the steps in the Create a Dashboard topic above, then jump to Step 5 below. If you are creating a Traffic grid widget for an existing dashboard, click the + (**Add widget**) button in the Command bar of the dashboard.
2. On the Create widget screen that pops up, select the Traffic grid as the widget type.
3. Enter a name for the widget.
4. Click **Create**.
5. On the Settings screen, enter the name of the application you want to monitor traffic for.
6. Click the + (**Add**) button to add the application to the list.
7. Enter the names of the data center you want to configure traffic flows for.
8. Click the + (**Add**) button to add the data center to the list.
9. Repeat steps 5-8 for each additional application and/or data center you want to include in the widget.
10. Click **Save**.



11. The widget then appears as a grid on the dashboard. Note that the applications and data centers display NA instead of statistics because they have not yet been configured.

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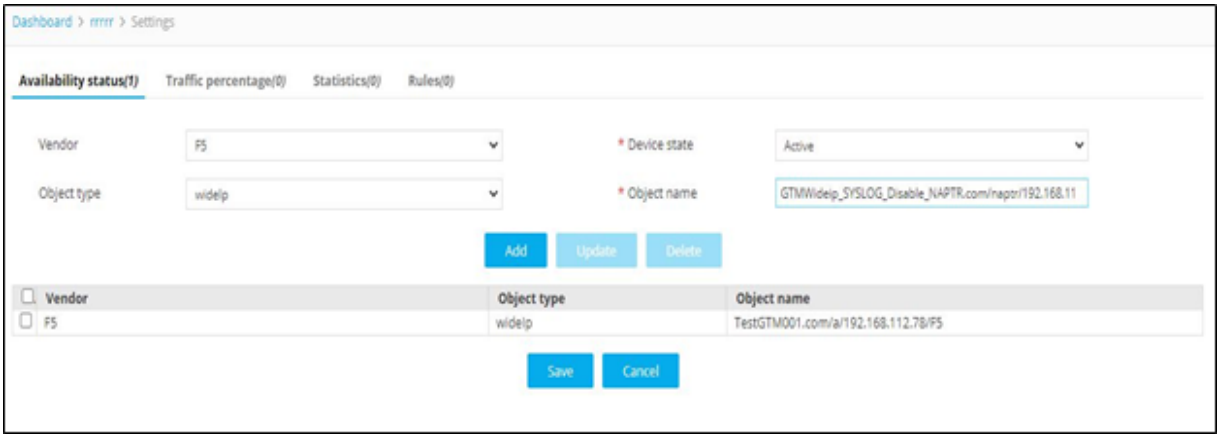
12. Click the ⚙ (**Settings**) icon inside each Application/Datacenter cell of the grid to configure it.
13. The Settings screen appears, with the Availability status tab displayed by default.



14. Select the vendor whose object you want to monitor availability in each data center.
15. In the Device state field, select whether you want to monitor the traffic for a device that has a status of Active, Standby, or All, where "All" means devices with a status of either Active or Standby. In the Object type field, select the kind of object you are adding. The options that appear in this field vary depending on the vendor you selected in Step 12. In the Object Name field, start typing to see a list of named objects whose traffic you can monitor. When you see the one you want, move your cursor over it and click it.
16. Click **Add**.
17. Repeat steps 15-16 for any other objects you want to monitor.
18. When you have finished adding all of the object types whose availability you want to monitor, click Save.
19. Click the **Traffic Percentage** tab.

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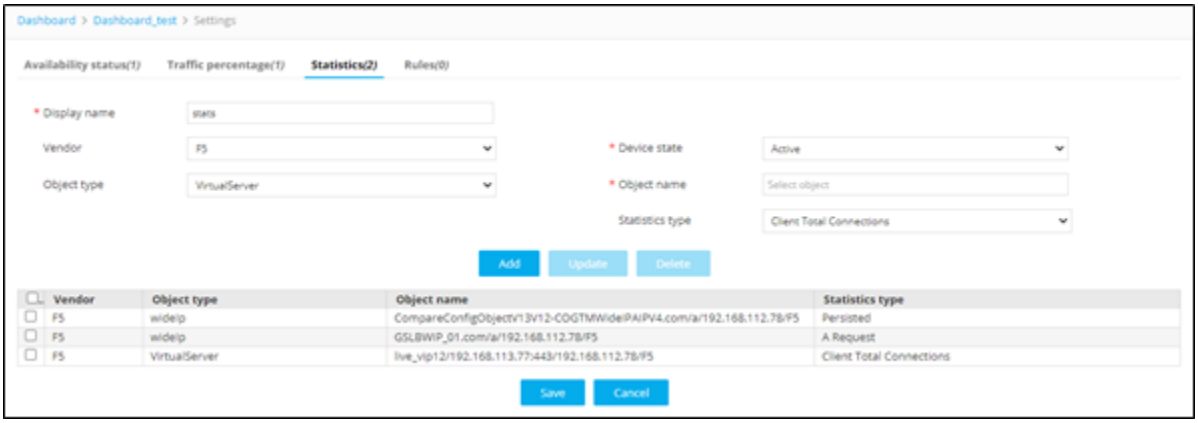
20. Select the vendor whose object you want to monitor traffic across all data centers.
21. In the Device state field, select whether you want to monitor the traffic for a device that has a status of Active, Standby, or All.
22. In the Object type field, select the kind of object you are adding: wideIp Pool, wideIp PoolMember, or ItmPoolMember.
23. In the Object Name field, start typing to see a list of named objects whose traffic you can monitor. When you see the one you want, move your cursor over it and click it.
24. Click **Add**.
25. Repeat steps 23-24 for any other objects you want to monitor.
26. When you have finished adding all of the object types whose traffic percentages you want to monitor, click Save.
27. Click the **Statistics** tab.



28. In the Display name field, enter the text you want to pop up when a user hovers over the (**Pie**) icon within a table cell of the widget. Note that only 10 characters can be entered in the field, so the name must be brief, but descriptive.

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29. In the **Vendor** field, select the vendor whose object you want to generate statistics across all data centers.
30. In the **Device state** field, select whether you want to generate statistics for a device that has a status of Active, Standby, or All.
31. In the **Object type** field, select the kind of object you are adding: wideIp PoolMember or ItmPoolMember.
32. In the **Object Name** field, start typing to see a list of named objects whose statistics you can generate. When you see the one you want, move your cursor over it and click it.
33. Click **Add**.
34. Repeat steps 32-33 for any other objects you want to generate statistics for.
35. Click **Save**.
36. Click the **Rules** tab if you want to create rules that govern traffic percentages for the widget.

37. In the **Rule type** field, select one of the following options:

> **Warning:** Warning - A warning rule causes a popup text box to appear if the user violates the restrictions defined by the rule, but the user can still complete the action. For example, if you create a rule that says a data center cannot receive more than 60% of the traffic on a device and a user tries to set the percentage for that data center to 65%, a warning pops up on the screen when the user clicks the (Enter) icon in the table cell, as shown below. Despite the warning, the value 65 remains in the cell after the user closes the popup screen.

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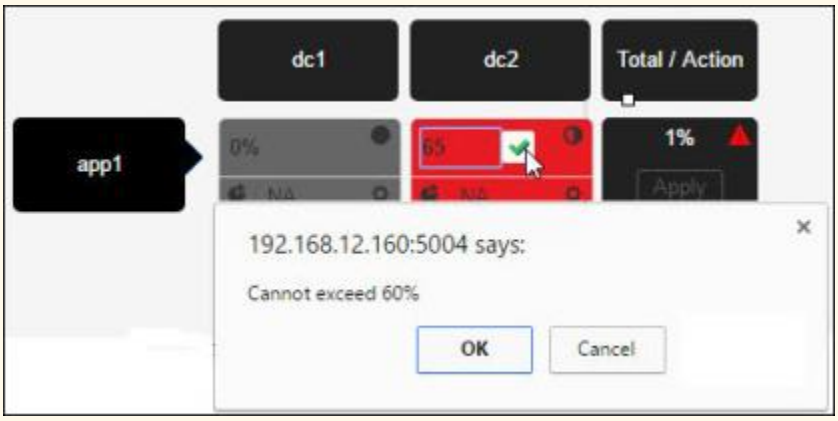

- **Restriction** - A restriction rule causes a popup text box to appear if the user violates the restrictions defined by the rule. In this case, the user is unable to complete the action. For example, if you create a rule that says a data center cannot receive more than 60% of the traffic on a device and a user tries to set the percentage for that data center to 65%, a restriction screen pops up on the screen when the user clicks the (Enter) icon in the table cell. When the user clicks OK to dismiss the popup, the percentage in the cell automatically reverts to its original value, erasing the user's entry of 65%.
- **Action** - An action rule causes an event that you define to happen when the traffic percentage for a data center reaches a level or range that you define. The two main event types are Enable and Disable, so when the level you set is reached, an object or set of objects you selected is automatically enabled or disabled.

38. When you are finished creating rules for the widget, click **Save**.
    For instructions on how to change the percentage values within the Traffic grid widget cells, refer to Change the Percentage Values Within a Traffic Grid Widget.

Monitor and Distribute Traffic Across Datacenter

- The availability status (Up/Down/Offline etc.,) of the Application will be represented in appropriate color code along with the statistics value that is configured.
- The current Traffic percentage can be reviewed and distributed to other data centers accordingly. Distribute the traffic that equals to 100% and click Apply.
- Applying the changes will modify the ratio of the members on the end device.
- If the traffic percentage applied is not successful, the user will be indicated with a red triangle alert icon against the applications.

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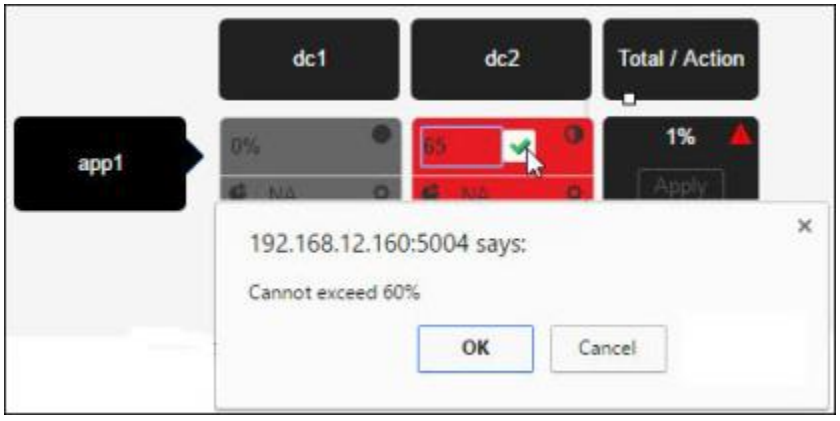
- During Maintenance, if a particular data center should not be receiving any traffic, it can be made 0 and the rest of the data centers can distribute the load.
- The traffic distributions are always reflected on current active devices.

- If a Rule is configured, before executing the traffic percentage changes, the rule condition will be validated.
  - In case of a Warning rule, the end-user will be prompted with a warning message to not proceed. Users can choose to Terminate or proceed with the changes.
  - In case of a Restriction rule, the end-user will not be able to proceed with the changes on exceeding the threshold limit.
  - When an Action rule is configured and if the traffic percentage meets the condition, the configured objects will be automatically Enabled/Disabled accordingly.



Change the Percentage Values Within a Traffic Grid Widget

To change the traffic percentages listed for each data center in a Traffic Grid widget, complete the following steps:

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1. Open the dashboard containing the Traffic Grid widget you want to update.
2. Click the current percentage value for the first data center.
3. The cell then becomes a text-entry field, as shown in the bottom-right cell in the image below.

4. Enter the new percentage in the text field.
5. Click the (**Enter**) icon to save your changes.
6. Repeat the process for each of the other data centers, ensuring that the total equals 100%.
   For an explanation of the different colors and symbols displayed in the cells, refer to View the Different Statuses and States for a Widget for a Widget.

Script Execution (SE) Widget

A Script execution widget saves script files on a local machine and provides easy access to maintain and execute script commands from within the widget. The script files (shell or python) are pre-written files existing in the AppViewX server. It allows the user to enable/disable actions that are performed through the action widgets and also, to write custom scripts that can be remotely run on the ADC devices.

You can perform the following actions on the widget:

- Configure a script execution widget
- Execution of script
- Configure a Script Execution Widget
- Execution of Scripts

Configure a Script Execution Widget

To configure a Script execution widget on your dashboard:

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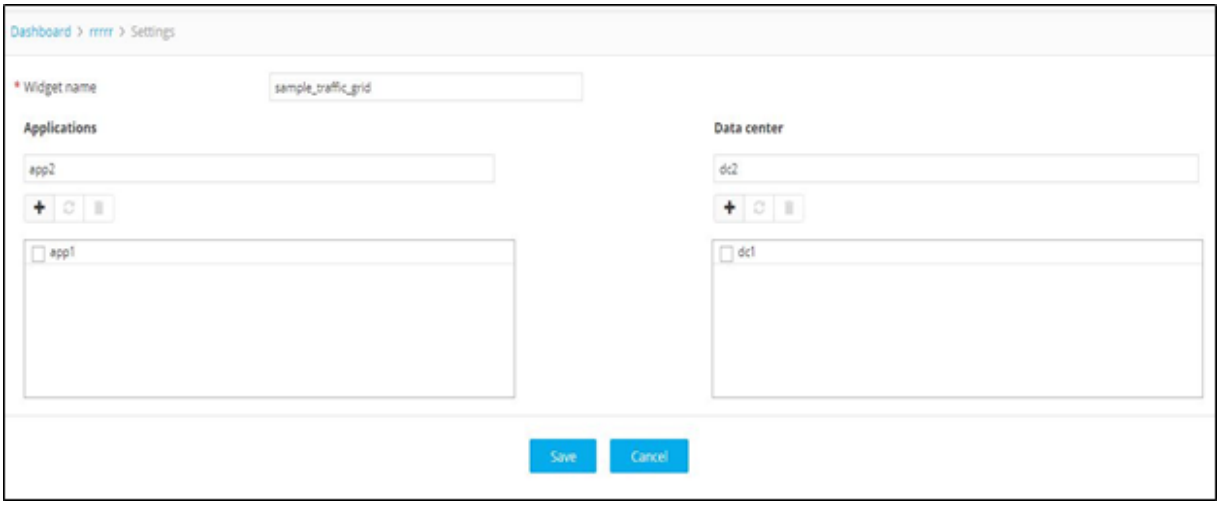
1. If you are creating a Script execution widget as part of creating a new dashboard, complete the steps in the Create a Dashboard topic above, then jump to Step 5 below. If you are creating a Script execution widget for an existing dashboard, click the (**Add widget**) button in the Command bar of the dashboard.
2. On the **Create widget** screen that pops up, select **Script execution** as the widget type.
3. Enter a name for the widget.
4. Click **Create**.
5. On the **Settings** screen that appears, enter a description of what the script does so that it can be readily identified when viewed through the widget.



6. Enter a label for the script bar you will be adding to the widget. The **Label** should help identify what sort of script you are adding so that it can be readily identified when viewed through the widget.
7. In the **Action Name** field, enter the action that you want to perform using the script execution widget.
8. Select the **Browse file** or **Manual** radio button based on how you want to upload the scripts.
9. In the **Execution script** field, do the following:
   - If the *Browse file* radio button is selected in Step 8, click the **Browse** button and navigate to the file you want to add, then click **Open**. Below are the designated executable locations to be used for shell and Python files:
     - For Shell files, #! /bin/sh.
     - For Python files, #! /appviewx/dependencies/appviewx_addons/Python/bin/python.
   - If *Manual* is selected in Step 8, enter the full path of the script. These scripts will need manual intervention to execute.

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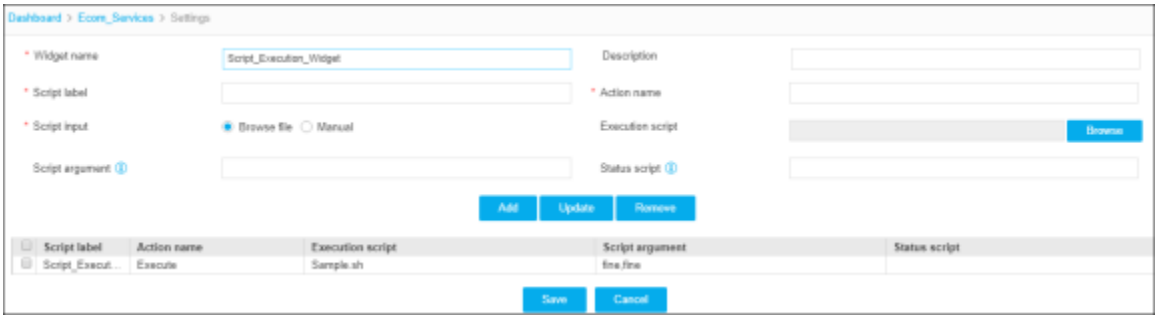
10. In the **Script argument** field, enter any information for the script with a comma as delimiters. Upon script execution, the mentioned arguments are passed to the script provided that the script is capable of receiving arguments (through variables).
11. (Optional) In the **Status script** field, enter the full path of the script to update the color and status message of the bar. The status and result of the script are updated simply by loading or refreshing the widget.
12. Click **Add** to add the details in the table at the bottom of the screen.

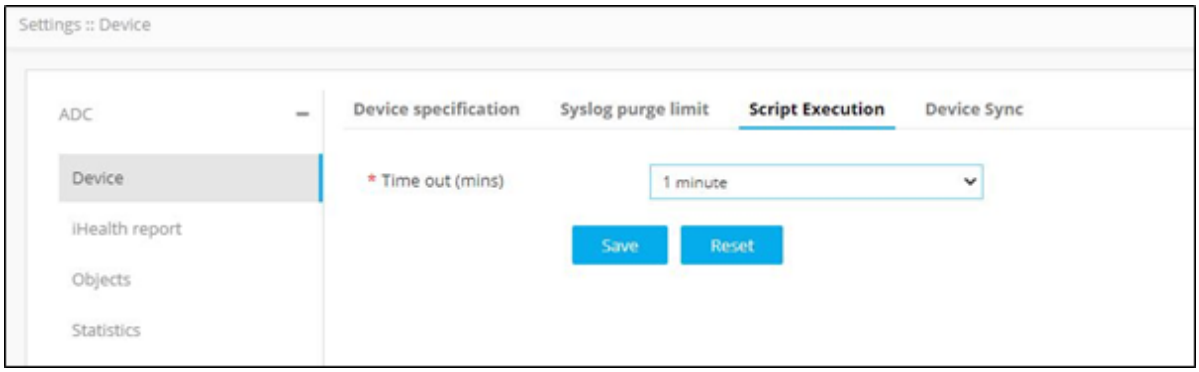


13. Repeat steps 5-12 for each additional script you want to add.
14. Select the checkbox beside the script label column and then, click Save.
15. Configure script timeout to avoid prolonged script execution. To configure the script timeout,

    • Go to **Menu** > **Settings** > **ADC** > **Device** > **Script Execution** > **Time out**.

    • Mention the time out from 60 seconds to 5 minutes. The default timeout is 60 seconds (1 min).

> **Note:** For more detail, see Script Execution in the Device Settings.



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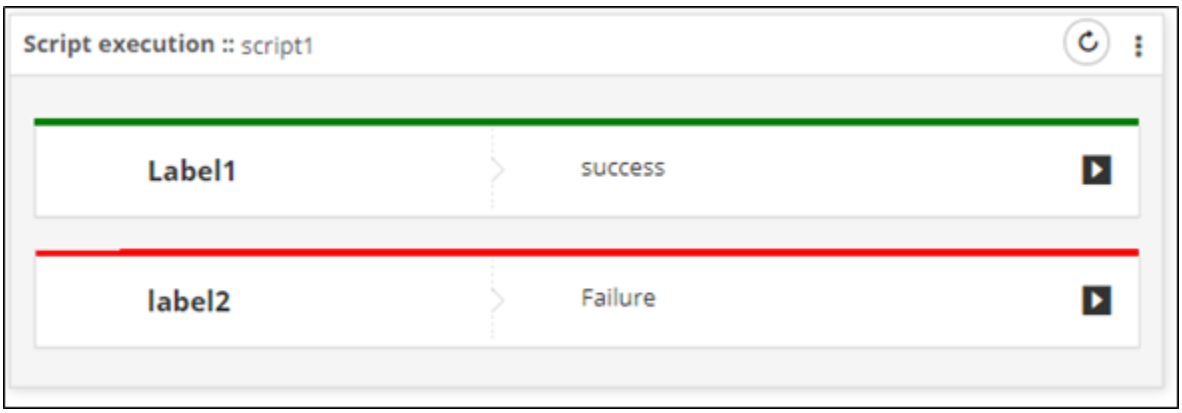
Execution of Scripts

On the successful configuration of widget for script execution, the scripts can be executed on a need basis.

To execute the script:

1. Click (**Play**) on the widget.



2. The color and message on the bar is determined by the following return message of the status script:

echo Color:Green,Response:"Pool failover_pool_web is up"
Color: Green - to update the color of the bar to green
Response:"Pool failover_pool_web is up" - to show the string inside "" as status
Color: Red - to update the color of the bar to red

3. The status script will update or run on every refresh of the widget, to get the latest status.

> **Note:** Frequent use cases like Device Memory check, CPU check, etc., can be executed quickly on demand, which will provide the run time data from the device.

4. To run the execution script, click the Play button and select one of the following:
   - **Action name**: To internally trigger the execution from the AppViewX server CLI.
   - **View Logs**: To check the previous logs of the script that are executed.
5. When it finishes, a popup screen appears listing the script execution logs, as shown in the following example:

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6. Click the **Download file** button if you want to download an output file.
7. The file is downloaded to your computer.
8. Navigate to the location where you want the file to go, then click **Save**.

Class Management Widget

A Class management widget allows you to view and modify the classes associated with iRules for devices. By grouping objects into classes and assigning actions to the classes, users are able to configure ADC devices within AppViewX. There is no need to access the ADC devices directly, which eliminates the chance of crashing a box with syntactically incorrect commands.

iRule is a flexible feature that lets the user manage or customize their application traffic. Classes are usually defined within an iRule. String, Address, Integer are different kinds of classes. The following section explains data group/classes and their types.

Data Group/Classes

A data group is a simple group of related elements like a set of IP addresses of a class.

Data groups can be one of the following types:

- **Address**: An address data group consists of a collection of IP addresses.
- **String**: A string address group consists of a group of strings, such as *.jpg.
- **Integer**: An integer data group consists of a group of integers.
- **External File**: You have the option to store data groups in an external file. The benefit of storing data groups in an external file is the data does not need to be sorted by the system when it is loaded

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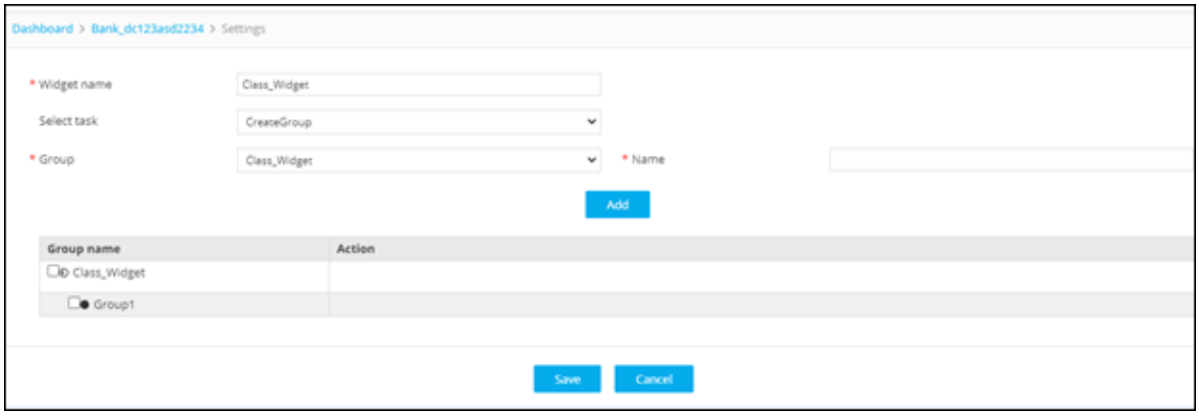
because it is stored outside of the **bigip.conf** file. The elements in the external data group file should be stored in comma-separated lists with a newline character after each entry. Refer to the *BIG-IP Configuration Guide* for more details about Data Groups.

- Configure a Class Management Widget

Configure a Class Management Widget

To configure a Class management widget on your dashboard:

1. If you are creating a Class management widget as part of creating a new dashboard, complete the steps in the Create a Dashboard topic above, then jump to Step 5 below. If you are creating a Class management widget for an existing dashboard, click the (**Add widget**) button in the Command bar of the dashboard.
2. On the **Create widget** screen that pops up, select Class management as the widget type.
3. Enter a unique name for the widget.
4. Click **Create**.
5. On the Settings screen, configure Actions to any of the following as per the need:
   - **View class** - to configure view class, see Configure View Class section.
   - **Modify class** - to configure modify class, see Configure Modify Class section.



- Configure View Class (Internal/External)
- Configure Modify Class (Internal/External)

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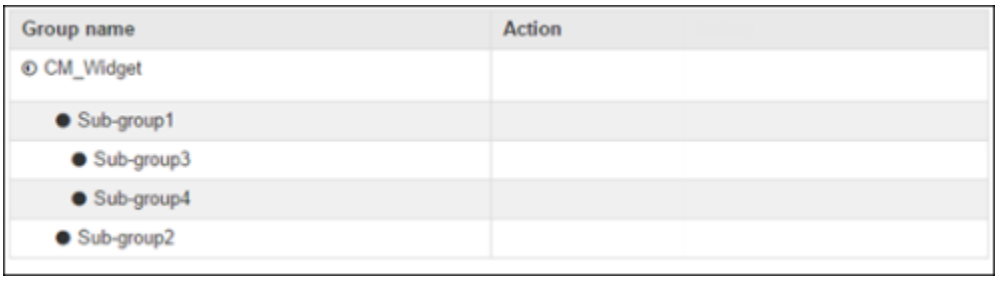
Configure View Class (Internal/External)

View class action retrieves the configured class attributes from the device and allows to view the latest configuration.

To create a view class:

1. Leave the Select task field set to CreateGroup.The Group field automatically uses the widget name as the default group.
2. Enter a name for the group.
3. Click Add to add the group to the widget.
4. (Optional) If you want to create a sub-group, enter another group name in the Name field and click Add. The new group is added under the original one.
5. (Optional) If you want to create a sub-group of a sub-group, select the sub-group in the Group dropdown list, then enter the sub-sub-group name in the Name field before clicking Add.
6. In the example below, CM_Widget is the group, Sub-group1 and Sub-group2 are created as sub-groups of CM_Widget, and Sub-group3 and Sub-group4 are created as sub-groups of Sub-group1.



7. After you have finished creating groups and sub-groups, select CreateAction from the Select task dropdown menu.
8. The screen refreshes to display new fields on the screen.
9. In the **Actions** field, select **View Class**.
10. In the **Group** field, select the group you are creating the action for.
11. In the **Name** field, give the action a name that clearly identifies what action the user can take.
12. In the **Class** field, start typing the name of the class that you are creating a view or modify action for. As you start to type, all classes that match the characters you have entered so far appear in a list. Select the class you want to add.

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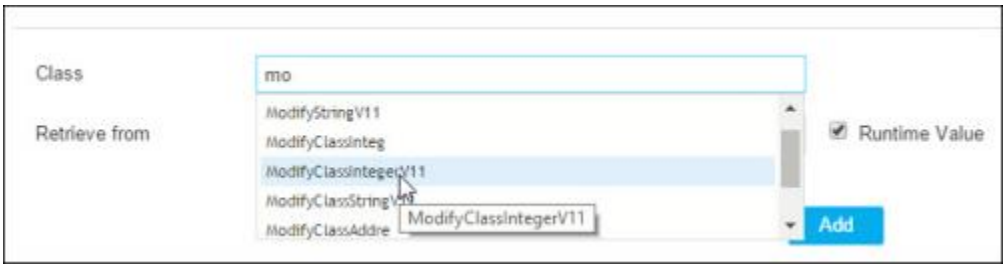
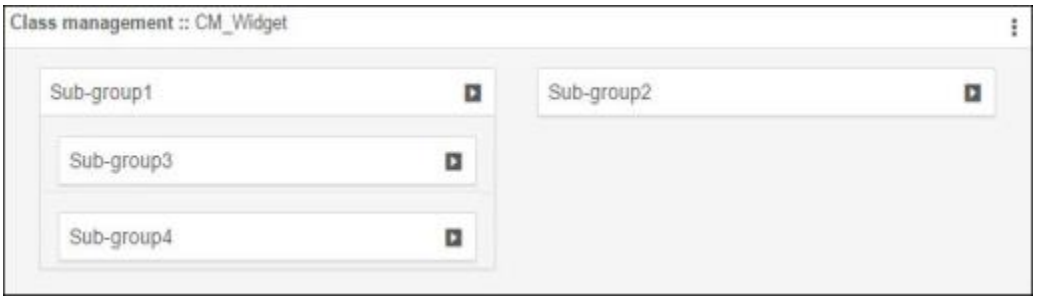


Note: For F5 devices, the classes are controlled by the permission provided in the Resource section. Based on the permission given for the classes, they appear in the **Class** field dropdown list for the selection. If no permission has been given for the classes, they do not appear in the **Class** field dropdown list. In case the permission has been removed for the classes while you manage a class in the dashboard, the "Permission Denied" notification will be displayed.

13. The Retrieve from field populates automatically with the location of the class that you selected in Step 15.
14. Enabling the Run time value option, allows the end-user/consumer to change the class name during the execution.
15. Click Add to add the class to the group.
16. The group and all sub-groups you just created appear in a hierarchical structure within the widget.
17. Click the (**Actions**) icon to access the list of available actions for the corresponding group or sub-group.



Note: If needed modify the configured Group/Action.

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Configure Modify Class (Internal/External)

Modifying class action allows you to view and change the details of a class.

To create a modify class:

1. Leave the **Select task** field set to CreateGroup.The Group field automatically uses the widget name as the default group.
2. Enter a name for the group.
3. Click **Add** to add the group to the widget.
4. (Optional) If you want to create a sub-group, enter another group name in the Name field and click Add. The new group is added under the original one.

Heatmap Widget

A Heatmap widget allows you to view statistics for managed, failed, and unresolved devices or device groups. Widget will collect the statistical data for Inprogress, queued, failed, and managed devices as long as the objects are available in the database. The heatmap reports are not viewed for unmanaged devices.

In the Heatmap widget, ADC device groups appear as color-coded blocks, with the colors representing the following:

- **Green** - All devices in the group are healthy
- **Red** - At least one device in the group is in a critical state
- **Gray** - Statistics have not been collected for the device group.
- **Orange** - One or more devices in the group have reached a warning limit

Copy a Widget to Another Dashboard

To copy a widget to another dashboard:

1. Go to **Menu** > **ADC+** > **TRAFFIC MANAGEMENT** > **Dashboards**.
2. If you have more than one dashboard, in the dashboard list, click the name of the one containing the widget that you want to copy.
3. Click the (**Options**) button and select the (**Copy to**) icon in the Command bar at the top of the widget.

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4. On the Copy widget screen that pops up, select the dashboard you want to copy the widget.
5. Click **Copy to Finish**.

Move a Widget to Another Dashboard

To move a widget to another dashboard:

1. Go to **Menu** > **ADC+** > **TRAFFIC MANAGEMENT** > **Dashboards**.
2. If you have more than one dashboard, in the dashboard list, click the name of the one containing the widget that you want to move.
3. Click the (**Options**) button and select the (**Move to**) icon in the Command bar at the top of the widget.
4. On the Move widget screen that pops up, select the dashboard you want to move the widget to.
5. Click **Move to Finish**.

Delete a Widget

Deleting a widget removes it from the current dashboard, but does not remove it from any other dashboards it has been copied to.

To delete a widget, complete the following steps:

1. Go to **Menu** > **ADC+** > **TRAFFIC MANAGEMENT** > **Dashboards**.
2. If you have more than one dashboard, in the dashboard list, click the name of the one containing the widget you want to delete.
3. Click the (**Options**) button and select the (**Delete**) icon in the Command bar of the widget.
4. On the confirmation screen that pops up, click **Yes**.
5. The dashboard refreshes and no longer displays the widget.

Custom Widget

Custom reports are used for monitoring the usage of the device and application metrics, which are configured by existing workflows.

- Configure a Custom Widget Using Workflow

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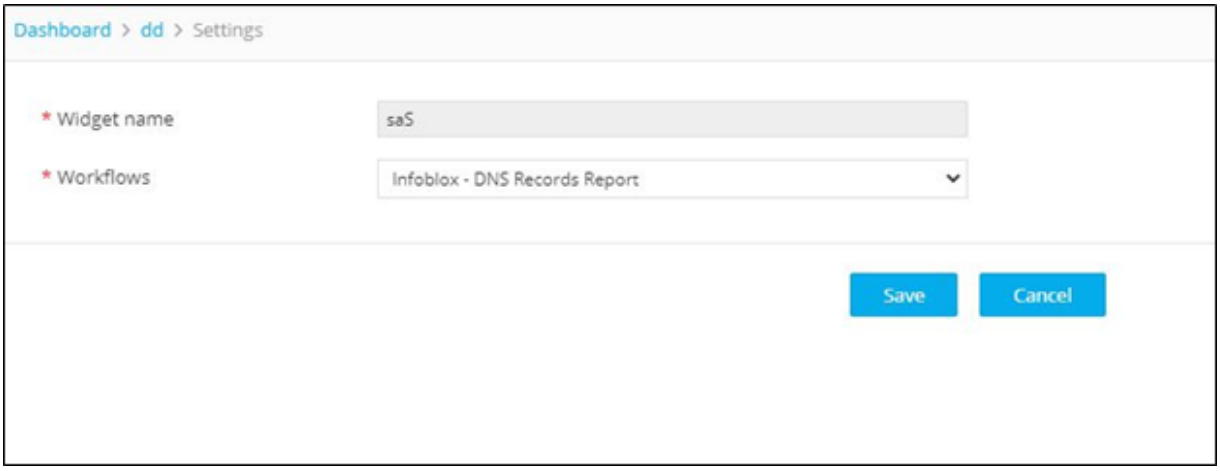
Configure a Custom Widget Using Workflow

To configure a customreports widget on your dashboard:

1. In the Dashboard, click the (**Add widget**) button in the Command bar of the dashboard.
2. On the **Create** widget screen that pops up, select **Custom reports** as the widget type.
3. Enter a name for the widget, and then click **Create**.
4. Custom reports configuration screen appears.



5. In the **Workflows** field, select the workflow that you want to monitor the usage of the device and application metrics.
6. When you are done configuring the Custom reports settings, click **Save**.
7. The custom reports widget is displayed on the dashboard, with configured workflow reports.

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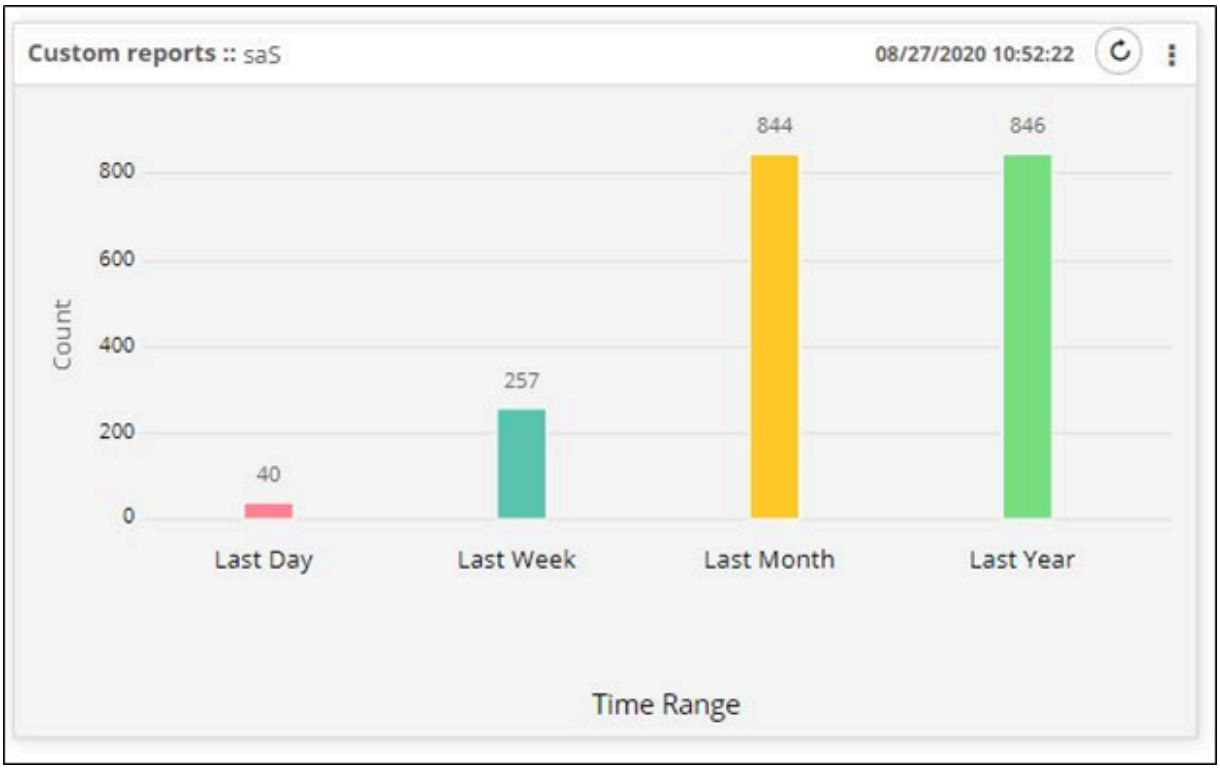

Launch Automation from Application-Centric View through Rules

- Enforce business process and launch automation from App-centric views through the Rule configuration.
- Actions that are triggered from App-centric views will look for Rules configured and execute an appropriate workflow in the background.
- Upon executing any action, a request ID will be generated and a stage view will be displayed representing the action status.
- The request ID could be used to track progress at any point in time.
- Sample use cases
  - Service NOW integration for any action triggered from AppViewX.
  - Prevent users from taking all servers out of rotation as this might lead to an application-level outage.
  - Email notification for any Server Rotation action performed by the team member.

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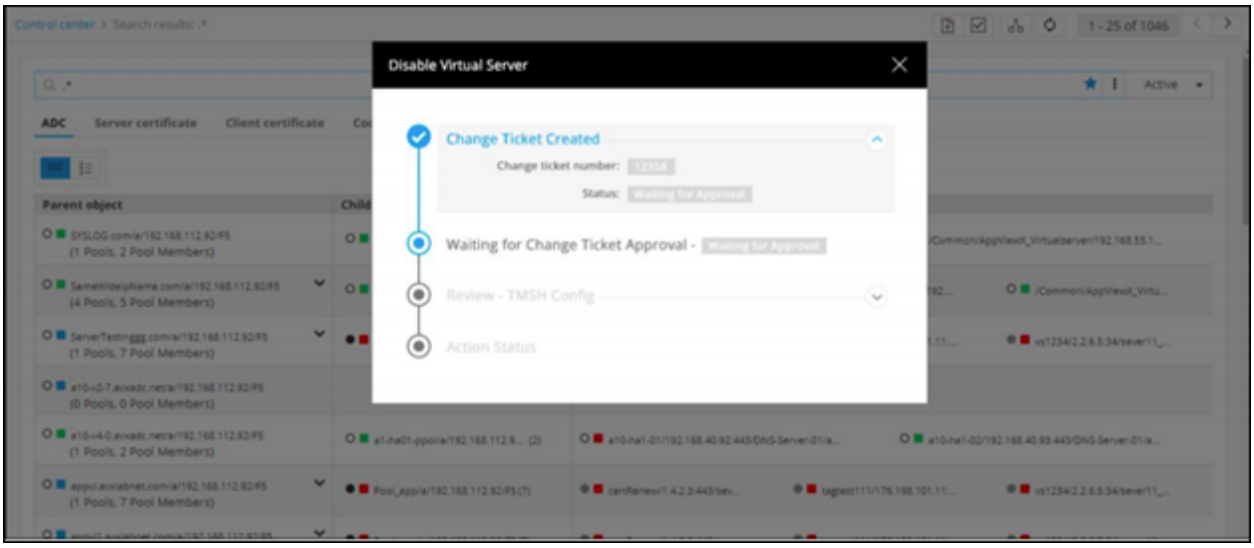

App Search

- App Search - Overview
- Run a Search
- Create a Bookmark
- View Basic Details of ADC Search Results
- View Additional Details of Search Results
- Filter ADC Search Results
- Export Search Results
- Access the Actions Menu for Objects on the ADC Search Results and Topology Screens
- Compare ADC Objects
- Filter the Information Displayed in an ADC Topology
- View Configuration Details
- View Timeline Statistics for an Object

App Search - Overview

The App Search module displays a centralized object repository from the Control Center that allows you to search for and then monitor and manage all the entities, configurations, or objects of the ADC devices. Control Center provides a holistic NOC overview for app teams and network teams to quickly search and monitor application services based on RBAC in a visual intuitive topology view.

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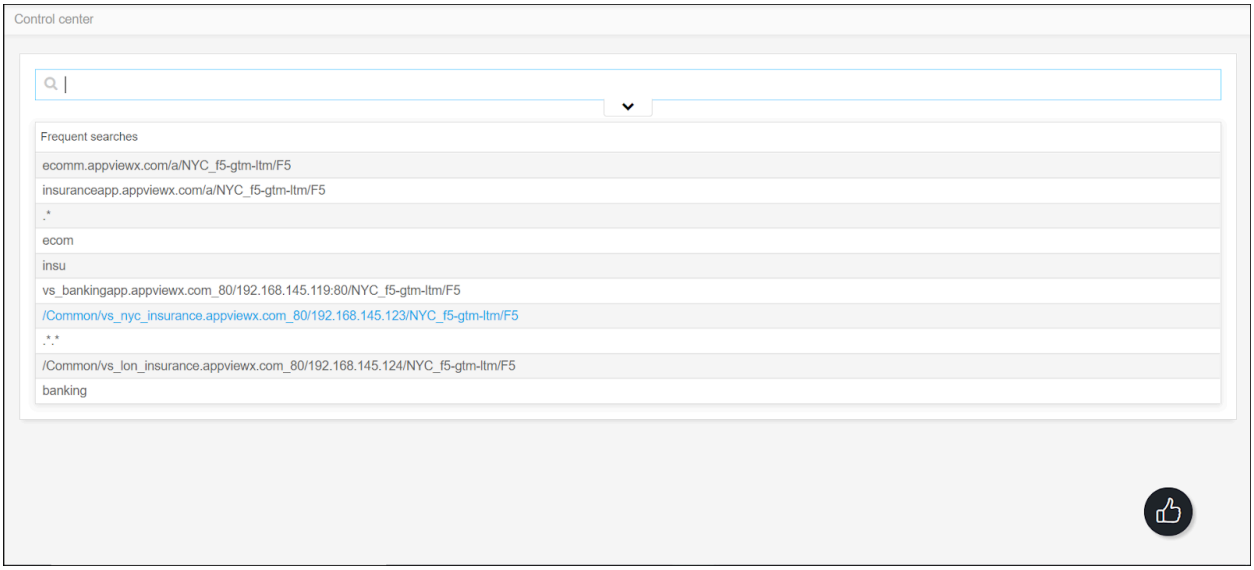

In App Search module, the Control Center acts as a search engine inside the AppViewX to search and monitor any Application in your infrastructure. From the app search, any application-related details can be searched/found the complete infrastructure details and services supporting the application. The Control Center within the App Search module also provides better insights into the configuration, state, and performance of the application and helps to troubleshoot application outages more effectively.

To use the Control Center within the App Search module, the following prerequisites must be met:

- Each device you want to control must have been a managed entity in AppViewX.
- A role and resource must have been assigned with the appropriate device/object level that you want to control. However, for the orphan and secondary objects, global access must have been provided.

Run a Search

To run a search within the Control Center:

1. Go to **Menu** > **ADC+** > **App Search**.
2. In the App Search module, the Control Center search screen is displayed by default. The ways to search the ADC devices are:

- Search Using Free Text Entries
- Search Using Frequent Search Links

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• Search Using Predefined Search Keys
• Search Using Regular Expression (Regex)

Search Using Free Text Entries

This is the most common type of search. You can enter text in the search field and press Enter on your keyboard. The following search features and functionalities are supported:

- Case insensitive keyword and string matching. For example, the search result for F5 would be **f5_86.appviewx.com**.
- Exact match search strings through the use of double quotation marks around search terms. For example, "**gs-f5-pe21.lab.appviewx.net**".
- Entering only the application name in the search field is enough to find all the hierarchical details related to it.
- Boolean AND and OR operators:
  - **AND Operator** - search results contain both terms that existed in the search query. For example, **gs-f5-pe21.lab.appviewx.net AND default**.
  - **OR Operator** - search results contain one or both terms that existed in the search query. For example, **gs-f5-pe21.lab.appviewx.net OR default**.
  - **AND** and **OR** - When a Boolean AND operator and an OR operator exist in the same search string, the AND operator is executed first by default. For example, **gs-f5-pe21.lab.appviewx.net AND gs-f5-pe51.lab.appviewx.net OR default.**

If parentheses appear in a Boolean query, the query components within the parentheses are executed first, followed by the query components outside the parentheses. For example, **(gs-f5-pe21.lab.appviewx.net AND default) OR 3.4.5.6**.

For example, typing only the application name in the search bar is enough to find all the hierarchical details related to it:

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Search Using Frequent Search Links

The App Search screen displays a list of frequent searches immediately below the search field. Click any of the items in the Frequent searches list to search the AppViewX platform for that word, phrase, or character set.

In the ADC search results screen, click the vertical ellipse button next to the search bar and select **Frequent Searches** to view a list of frequent searches.

Search Using Predefined Search Keys

AppViewX provides a set of predefined keys specific to each ADC vendor to help the search operation. The types of predefined keywords are:

- All keywords
- Vendor-specific keywords
- Logical operator with keywords

The predefined search keywords can be used to create highly targeted search queries. To create a search query, see create a search query.

- All Keywords
- Vendor-Specific Keywords
- Logical Operator with Keywords
- Create a Search Query

All Keywords

These keywords are generic to all ADC vendors and help searching objects irrespective of vendors.

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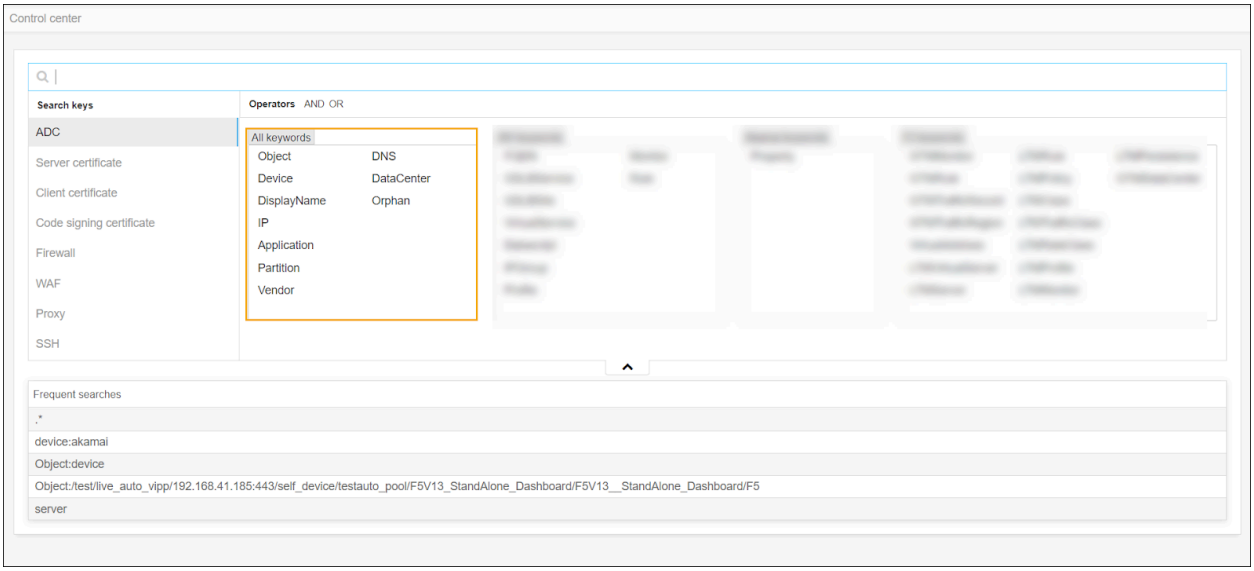

Sample Search Keywords

Common Keywords	Description
Object:	Search for objects using the name.
Device:	Search for objects from a particular device managed in the ADC inventory.
Displayname:	Search for objects using the Displayname. Displayname represents the naming format of your objects that needs to be followed throughout the application. Refer <displayname section>
IP:	Search for objects using the IP address. Eg: Objects like Virtual Servers, Pool members that belong to a particular IP can be searched.
Application:	Search for objects associated with an Application name. AppViewX tags all the hierarchical objects of an Application using the WideIP name as a tag during every config fetch.
Partition:	Search for objects from a device partition or tenant or context.
Vendor:	Search for objects from a particular vendor (F5, AVI, etc.,)
DNS:	Search for objects using their DNS name.

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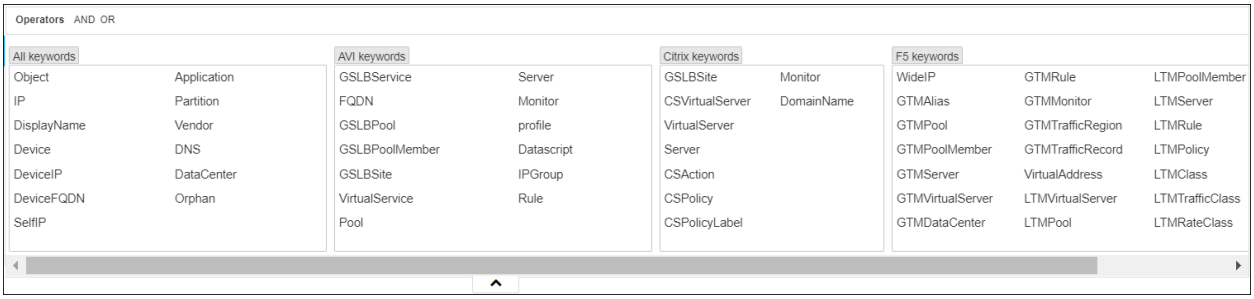
Common Keywords	Description
	AppViewX performs a scheduled (twice a day) reverse lookup for the objects that contain an IP address in it and persists the DNS name of the objects.
Datacenter:	Search for objects from a particular Datacenter. Datacenter name information should have been provided at the time of device addition.
Orphan:	Search for objects that do not have Parent association. Objects like GTM/LTM pools that are not associated with WideIP/Virtual Server will be considered as Orphans.

Vendor-Specific Keywords

ADC vendor-specific keywords are available to search for objects from a particular ADC vendor. The keywords are grouped as per the vendors managed in the inventory.



Sample Search Queries

Vendor-Specific Keywords	Description
vendor:Citrix AND CSVirtualServer:.*	The list of all the CS Virtual Server applications from Citrix devices managed in AppViewX.
vendor:Citrix AND CSVirtualServer:Test.*	The list of all the CS Virtual Server applications from Citrix devices containing Test in it.
vendor:AVI AND FQDN:.*	The list of all the applications with FQDN from all the AVI devices managed into AppViewX.
vendor:AVI AND FQDN:Test.*	The list of applications with FQDN containing “Test” in it, from all the AVI devices managed into AppViewX.

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Logical Operator with Keywords

The common keywords and Vendor specific keywords can be combined with any Logical operator.

Sample Keywords

Keywords	Description
virtual server:* AND device: F5_v11	The list of virtual servers available in the F5_v11 device.
device: F5_v11 AND virtual server:* AND IP:192.168.96.101	The list of virtual servers in the F5_v11 device that uses the IP address 192.168.96.101 is identified.

Create a Search Query

To create a search query:

1. On the **Search** screen, click the (**Expand**) tab at the bottom of the search field.
2. The field expands to display a list of search keys available for the ADC.
3. For each metadata type, you add to the search query, enter a value or partial value to search for. If you enter no text after the search key, the search engine automatically searches for "all values."
4. (Optional) Click the AND and OR operators at the top of the Search keys field to create Boolean searches.
5. When you are finished creating the search query, click inside the search field, then click Enter on your keyboard to run the search.

Search Using Regular Expression (Regex)

You can enter regex (such as * or .*) or the object/certificate name followed by the regex (.*) in the search field and click Enter on your keyboard. The search results will be displayed as follows:

- .* - All the device objects/certificates along with their hierarchy are displayed in their respective tabs.
- (searchstring).*- This RegEx results in the objects, whose name starts with the search string..
- The search results that are matched with the text entered will be highlighted.

Examples

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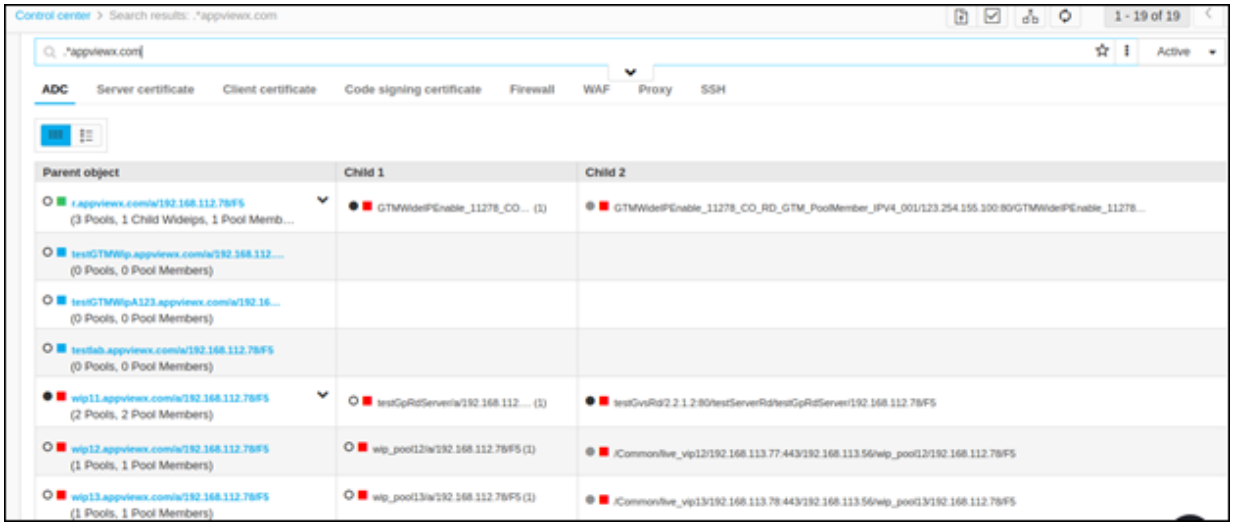
• For the RegEx **gs-f5-pe.***, the search results that are matched with the text entered will be highlighted:

• If all the subdomains of a DNS are needed to be searched, then .*DNSName shows all the subdomain:



Create a Bookmark

If any search strings or search queries are repeatedly used, it can be bookmarked for future access.

To create a bookmark for the ADC frequent search items,

1. Click the **Menu** > **ADC+** > **TRAFFIC MANAGEMENT** > **App Search**.
   The Control Center search screen appears.
2. Run a search.
3. On the search results screen, click the button next to the search bar.
4. Click the button to create a bookmark folder.

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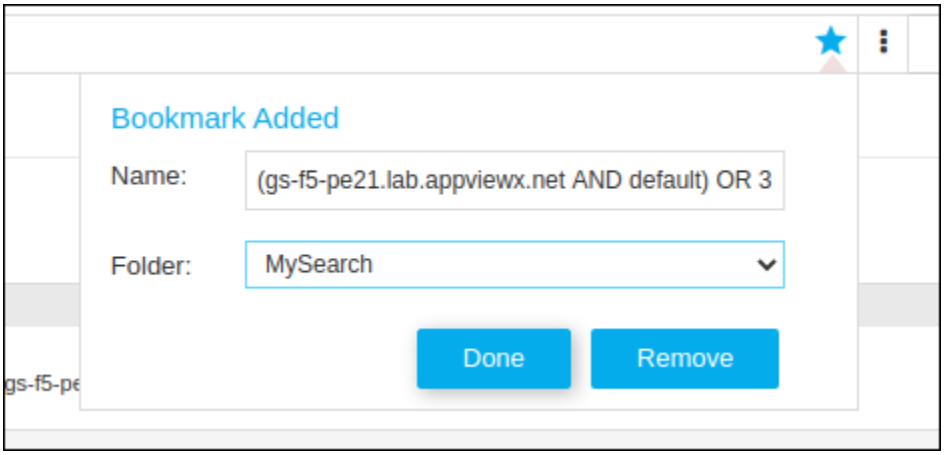
5. Click the button on the search bar. A pop-up message will be displayed at the top of the screen, **Bookmark(s) created successfully**.
6. On the **Bookmark Added** pop-up screen, enter a name for the bookmark to help the users identify it.



7. Select the folder to which you want to add this bookmark from the dropdown list and click **Done**.

> **Note:** If you want to delete the bookmark, click the Remove button. A pop-up message will be displayed at the top of the screen, Bookmark(s) deleted successfully.

Queries that are frequently used are added to the frequent searches by default and the top 10 queries can be accessed in a single click as below:

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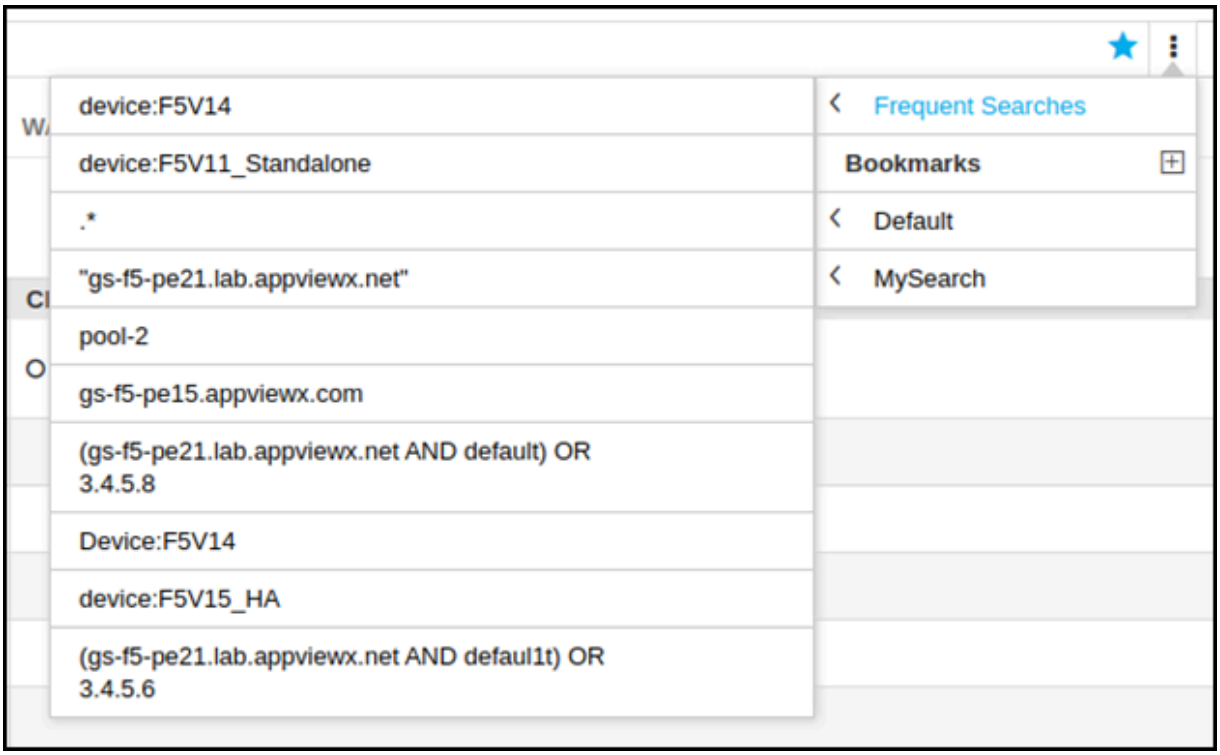

View Basic Details of ADC Search Results

In the App Search module, the Control Center is designed to display the ADC search results in both the Application and Infrastructure View. Although each view displays the search results in a different manner, the same search query is used. In order to view the search results, ensure that you have been assigned to a role that has access to Application View and/or Infrastructure View along with the set of actions you want to perform on the objects.

- Application View
- Infrastructure View

Application View

This is the default search result landing page. The parent objects are listed in the left-most column and related first-level children and second-level children appearing in subsequent columns.

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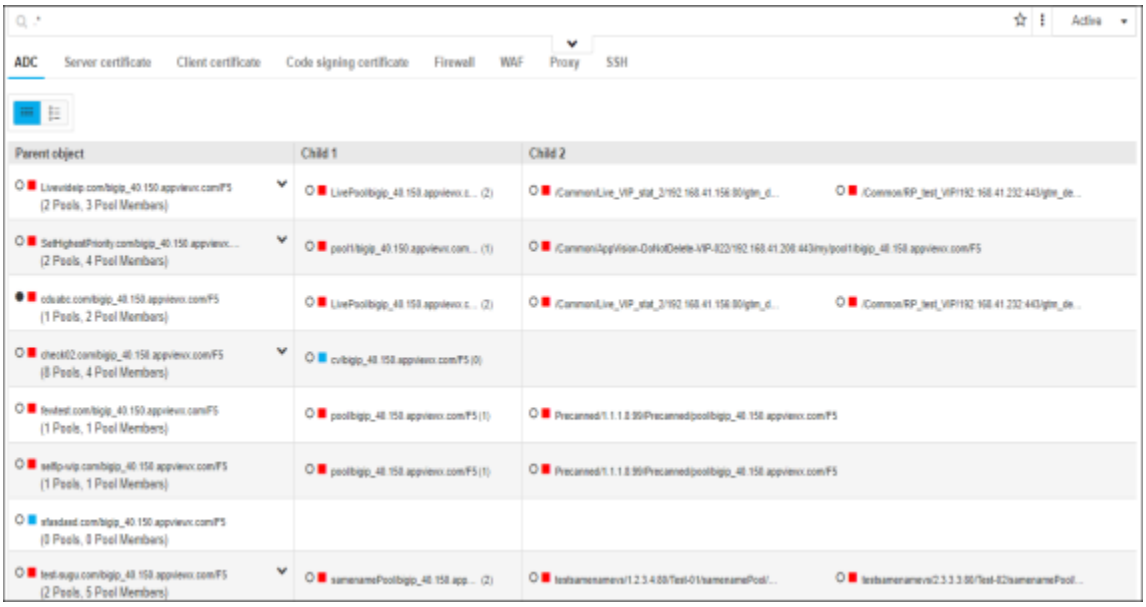

To view the basic details of search results within the Control Center,

1. Run a search.
   By default, search results are displayed in the Application view.
2. Each object has a series of symbols that appear before its name. You can hover over the icon to identify the State/Status of the objects.
   - **Circles (State)**
     - ● A solid black circle indicates that the object is disabled.
     - ○ A hollow circle indicates that it is enabled.
     - ● A solid grey circle indicates that the object is parent disabled or none when the object state is unknown.
   - **Squares (Status)**
     - ■ A green square indicates that the object is available and enabled.
     - ■ A blue square indicates that the object is unknown and disabled/draining (Nginx only).
     - ■ A red square indicates that the object is offline and enabled/down (Nginx only).
     - ■ An orange square indicates that the object is offline/mixed (Nginx) but might become available again and enabled.
     - ■ A solid grey square indicates that status of the object is unknown.

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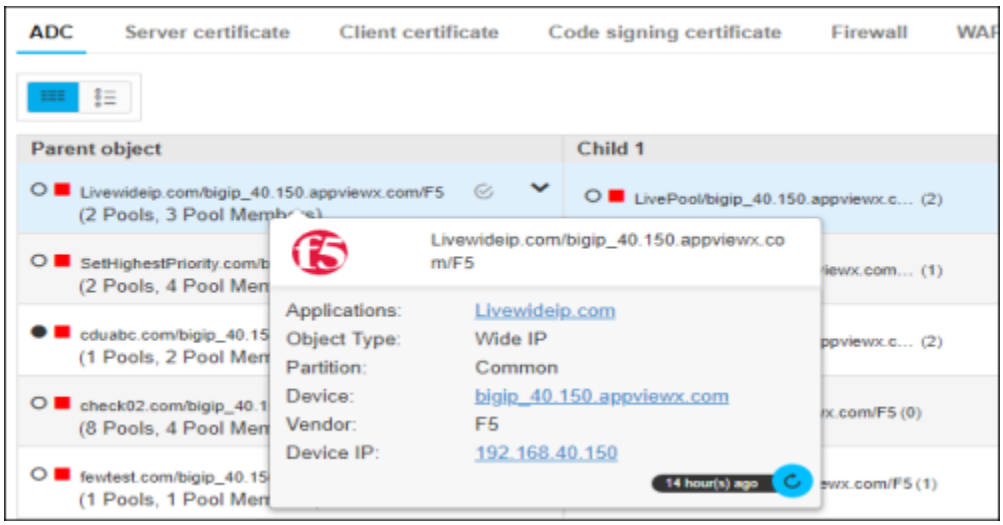
- Get additional information about the object on hovering. An actionable tooltip will be available that represents the object's details, last refresh time, etc.
- In the search results field, hover your cursor over the result whose basic details you want to view.
- A popup box appears, listing the details for the object.



- The DNS name of an object (applicable only for F5 device objects) will be displayed in the pop-up box only if DNS is configured during AppViewX installation.

Infrastructure View

Only the ADC objects corresponding to your search criteria are displayed and not its hierarchy (such as a parent, child 1, and child 2). By clicking the (**Infrastructure view**) button to switch from the Application view.

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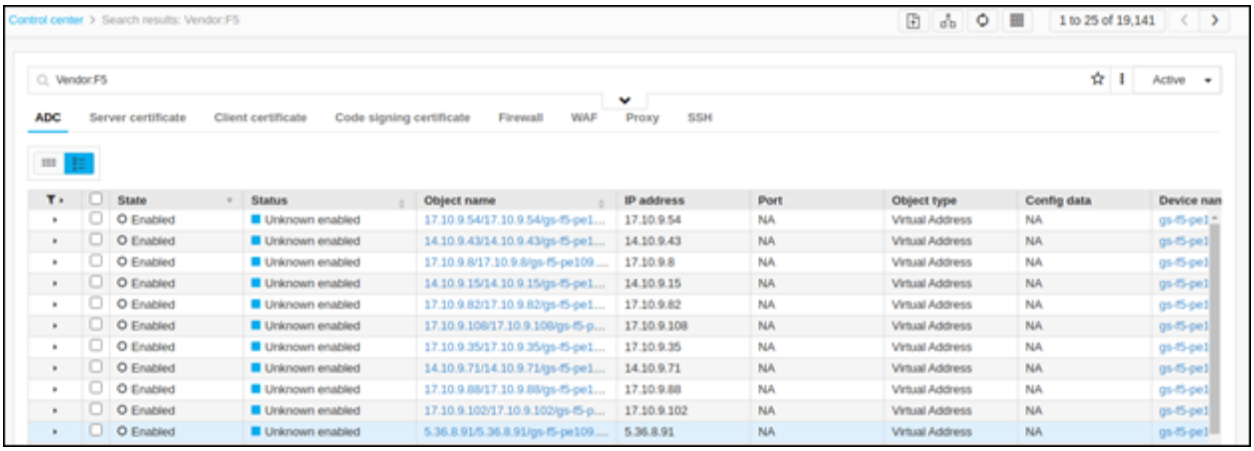

- View the Object Details
- Filter the Objects

View the Object Details

1. The object details are represented in the form of a tabular with additional information as follows:

Column name	Description	Default?
State	State of the objects.	Yes
Status	Status of the objects.	Yes
Object name	Based on the display name configured.	Yes (mandatory)
IP address	The IP address of the objects.	Yes
Port	Port of the IP address.	Yes
Object type	Type of object.	Yes
Config data	Configuration of the objects is displayed in a Pop upon clicking the link.	Yes
Device name	The device name of the object. On clicking, the user is redirected to the device addition page.	Yes
Vendor	Vendor of the object.	Yes

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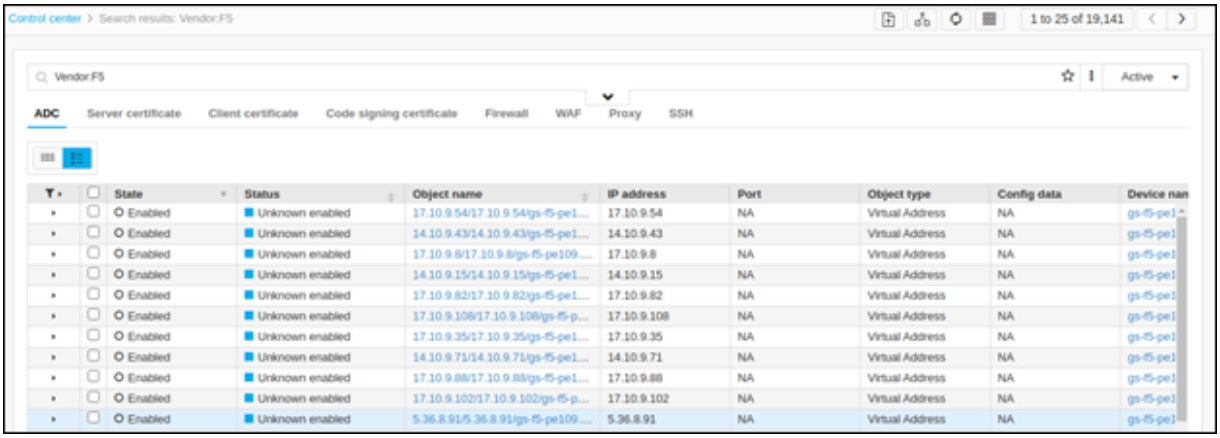
Column name	Description	Default?
Device IP/FQDN	IP or FQDN of the device. The user is redirected to the device login on clicking.	No
Connection count	Display the live connection count of the objects if applicable.	No
Partition	Partition/tenant/context of the objects if applicable	No
DNS name	DNS resolution of the objects if applicable.	No

2. In the search results field, hover your cursor over the result whose basic details you want to view.



Filter the Objects

To filter the objects in the Infrastructure view:

1. Run a search.
2. Click the filter icon located at the first cell of the table.
3. The filter options are enabled in the header of the table.
4. Select and/or enter the criteria to filter the objects.

   The objects that match the filter criteria are displayed.

Note:

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- To remove the filter option, click again the filter icon.
- To reset the filter criteria that have been applied, select and/or remove the text that has been applied for filtering the objects.

View Additional Details of Search Results

There are two ways to view additional details about search results and the method varies depending on the type of object you are viewing:

- **Topology View**: Clicking the object takes you to topological screens that provide much more information about the corresponding object than is displayed on the search results screen.
- **ADC Topology Actions**: ADC primary and secondary object search results can be right-clicked to view the list of actions available for them.

- Topology View

Topology View

When you click a search result for a primary ADC object either from the **Application** or **Infrastructure** view, a topology view opens, providing a detailed, hierarchical map of the structure of the ADC. The following are the sample ADC topologies within the Control Center.

For example, read the topology view: GTM > LTM > Pool > Pool mem...

- Virtual Server (VIP)/SLB Topology
- Wide IP/GSLB Topology
- Server Load Balancing (SLB) Virtual Server Topology
- Virtual Server (VIP) under Wide IP Topology
- Virtual Server IP (VIP) under VIP Topology

Virtual Server (VIP)/SLB Topology

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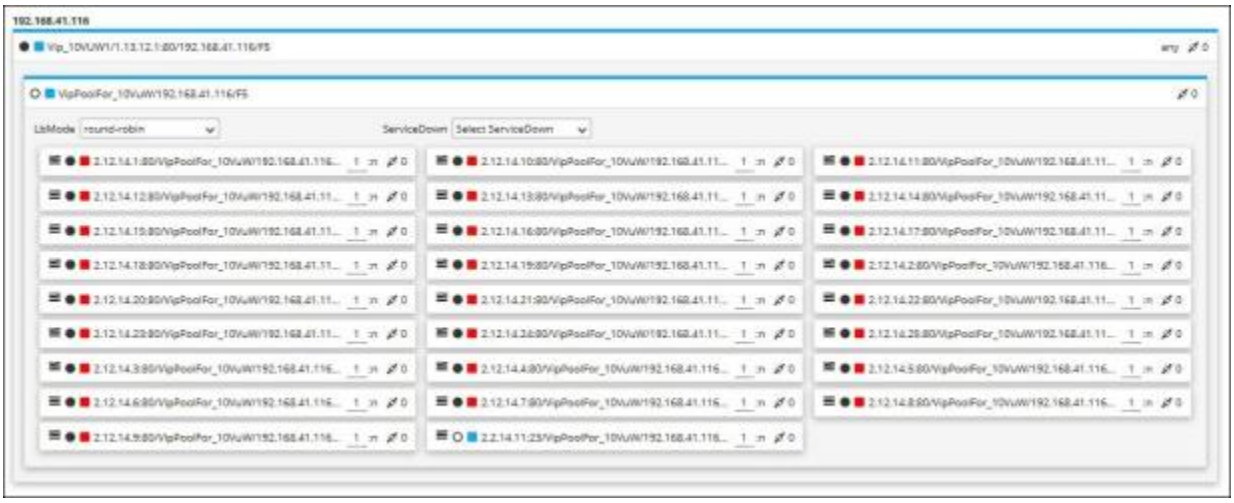
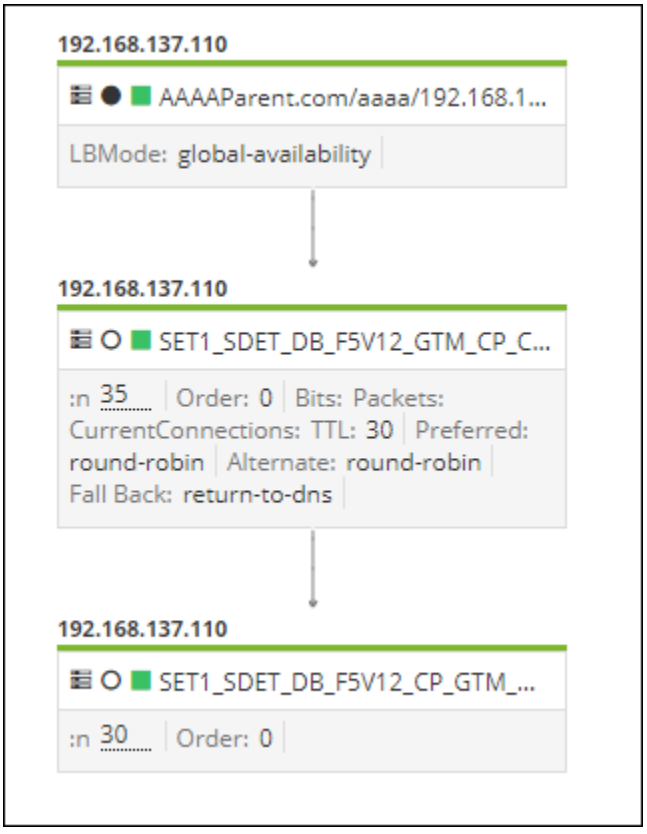


Wide IP/GSLB Topology



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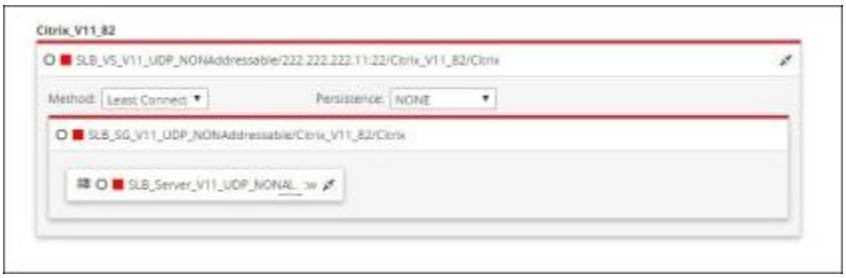
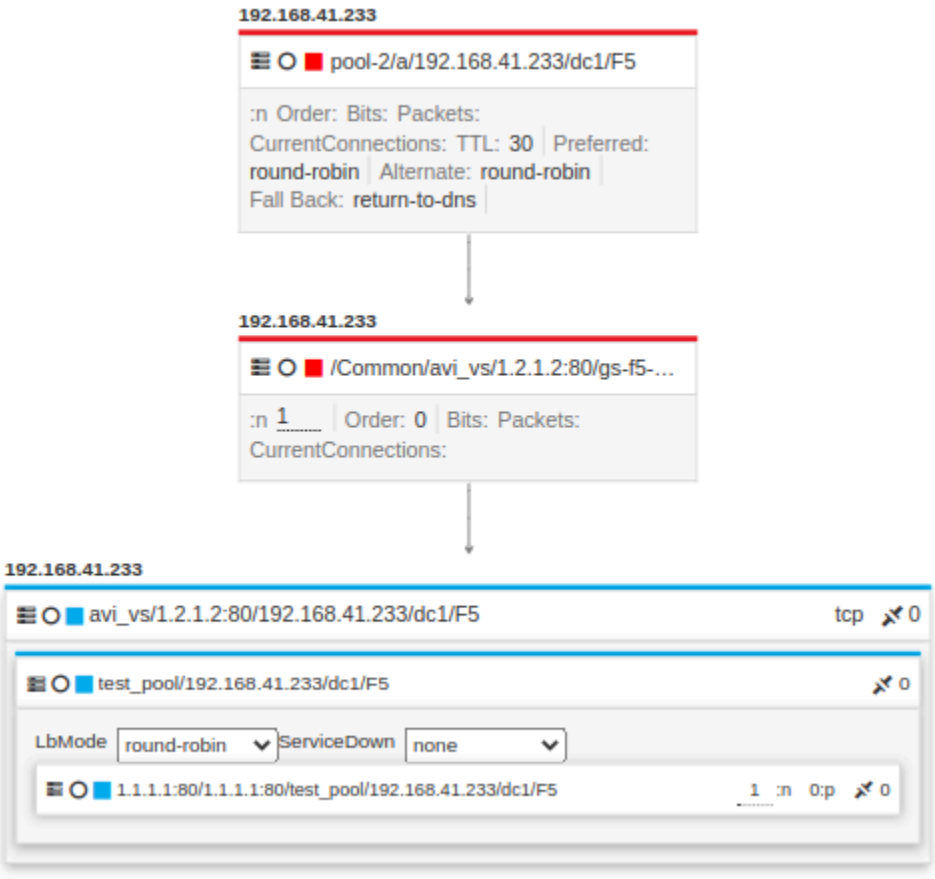
Server Load Balancing (SLB) Virtual Server Topology



Virtual Server (VIP) under Wide IP Topology



Virtual Server IP (VIP) under VIP Topology

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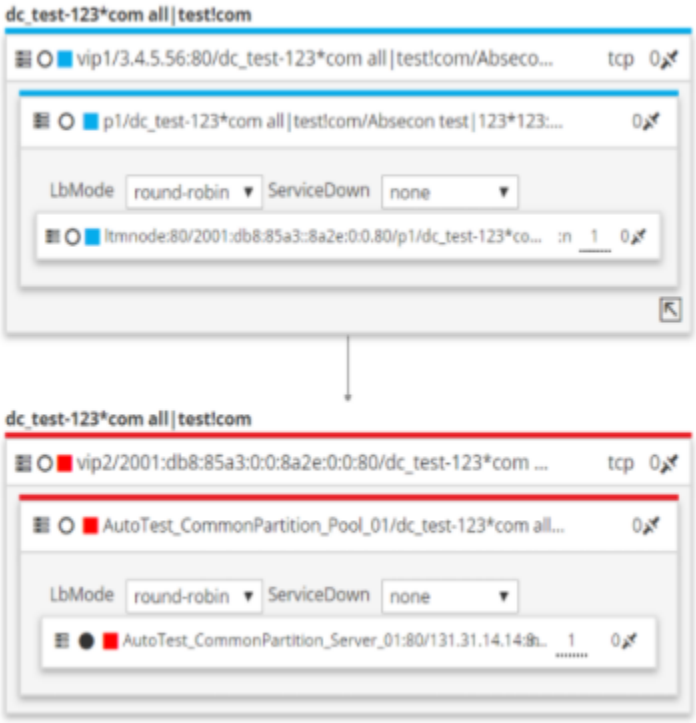

Filter ADC Search Results

To filter ADC search results within the Control Center:

1. Run a search.
2. On the search results screen, click the **Active** drop-down option.

3. Select one of the three filter options in the dropdown list that appears:

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- **All** - View all search results, regardless of status.
- **Active** - View search results for objects with a status of Active.
- **Stand by** - View search results for objects with a status of Standby.

4. The screen then refreshes and filters the results on both the Application view and Infrastructure view based on the filter you selected.

Export Search Results

When you search for the objects in the Control Center, the objects that match the search keyword are displayed in the Application view. The resulting objects can be exported. You can export the selected objects or all the resulting objects.

To export objects search results within the Control Center:

1. Run a search.

   By default, the search results are displayed in the (**Application view**) page.
2. Click the checkboxes beside the object name to select the object details that you want to export from the grid or select all of the ADC objects by clicking the (**Select all**) button in the Command bar.
3. All of the search results on the screen display with a blue background to indicate that they have been selected.
4. Click the (**Export**) button in the Command bar.
   The .csv file is downloaded to your computer.
5. If you want to export the search results displayed on the infrastructure view, (**Infrastructure view**) button to switch from the Application view search result page and do the following:
   - Select the checkboxes beside the first column of the grid to select the object details that you want to export from the grid. You can select all of the objects from the search results screen by selecting the first checkbox in the grid.
   - Click the (**Export**) button in the Command bar.
   - On the **Export** screen that pops up, select either the **All columns** or the **Displayed columns** radio button based on what you want to export from the grid.

     The `.csv` file is downloaded to your computer.

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Access the Actions Menu for Objects on the ADC Search Results and Topology Screens

To access the actions menus for objects that appear on the ADC search results and Topology screens:

1. Go to **Menu** > **ADC+** > **TRAFFIC MANAGEMENT** > **App Search**.
   The Control Center search screen appears.
2. Search for the ADC object whose actions menu you want to access.
3. In the search results field, you can do the following:
   - **Application View** - Right-click the object or one of its first or second-level children to view the list of actions you can perform.
   - You can multi-select or select all of the objects from the grid either by clicking the (**Select**) button beside the object or the (**Select all**) button in the Command bar.
   - **Infrastructure View** - Select the checkboxes beside the first column of the grid and then, click Actions to view the list of actions you can perform.
   - You can select all of the objects from the inventory by selecting the first checkbox in the grid.
   - Click the object's name in the search results field either from the Application view or Infrastructure view. The topology screen corresponding to the object you selected appears, right-click any of the components in the topology to view the list of actions you can perform.
     - The actions that appear in the list vary depending on the type of object you right-click as well as whether it is a parent or child, but the most common actions are listed below. To initiate any of the actions, scroll down in the list and click the corresponding action button.

Actions	Description
Enable	Enable an object.
Disable	Disable an object and terminate all active connections.
Graceful disable (AVI devices only)	Disable an object only when all the currently active client connections are closed by either the server or the client.

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Actions	Description
Backup & Restore	• **Backup device** - Create a backup of the device associated with the object. For more details refer to the Create a Device Backup Group section of this guide. • **Restore object** - Restore object configuration to a previous state. For more details refer to the Restore an Object section of this guide. • **Compare** - To compare the objects with their associated devices. For more details, refer to the Compare ADC Objects section of this guide.
View	• **View graph** - View the timeline statistics of an object. For more details, refer to the View Timeline Statistics for an Object section of this guide. • **View config** - View the current configuration of all levels of the device object. For more details, refer to the View Configuration details section of this guide. • **View log/history** - View the log history of the object. • **View alerts** - View any alerts related to the object.
Compare config	Compare current and/or archived configurations of similar objects or the same object over time.
Clear persistence records (F5 devices only)	Clear the persistence records for VIP and pools.
View persistence records (F5 devices only)	View the persistence records for VIP and pools.
Advanced	• **Enable/Disable persistence** (F5 devices only) - Turn on or off the tracking and storing of session data, which is used to ensure that client requests are directed to the same pool member throughout the life of a session or during subsequent sessions. • **Enable/Disable all** (F5 devices only) - Turn on or off the object available across all the pools. • **Forcedown all** (F5 devices only) - Force shutdown of the object available across all the pools.

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Actions	Description
View source connections (F5 devices only)	View the source connection IPs for VIP and pools.
Forcedown (F5 devices only)	Force shutdown of the object.
FD clear active connections (F5 devices only)	Clear active connections to the object.
Open in a new window	To display the topology view of the selected object in a new window.
Additional Actions on the Topology View	• **Ratio** - To modify the ratio of the pool member. • **Address Resolution Protocol (ARP)** - To enable/disable the ARP for the virtual address. • **Load Balancing (LB) mode** - To modify the load balancing method for the pools and service groups. • **Service down** - To control the connection management behavior of the pool. The following are the service-down settings that you can perform on the pool: Reselect, Reject, Drop, and None. • **Weight** - To modify the real server weight.
Drain	Put the server into the draining mode.

Compare ADC Objects

Comparisons are only possible for F5 ADC objects. Comparisons are also possible for multiple objects. You can select up to 5 devices to compare with the original device you selected.

To compare ADC devices from the Control Center results within the App Search:

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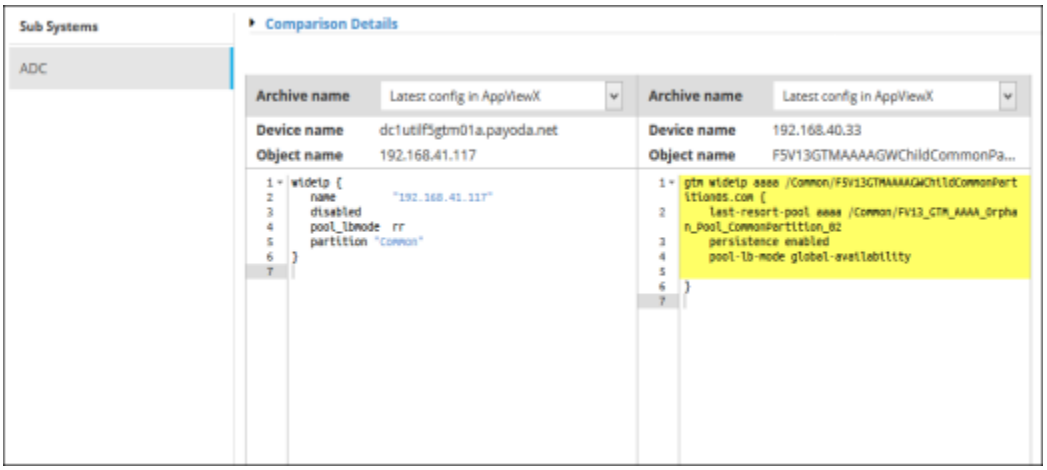
1. Go to **Menu** > **ADC+** > **TRAFFIC MANAGEMENT** > **App Search**.
   The Control Center search screen appears.
2. Run a search.
   By default, the search results are displayed in the (**Application view**) page.
3. Click the (**Select**) button beside each object in the list that you want to use in the comparison.
4. Right-click the selected objects and click **Compare config** from the dropdown list that appears.
5. If you want to compare configurations for the search results displayed on the infrastructure view, click the (**Infrastructure view**) button to switch from the Application view search result page.
6. Select the checkboxes beside the first column of each object you want to use in the comparison and then, navigate to **Actions** > **Compare Config**.
7. The screen refreshes and displays the archived configurations side-by-side:



Filter the Information Displayed in an ADC Topology

To filter the information displayed in an ADC topology:

1. Open the ADC topology that you want to filter.
2. In the Command bar, click the (**Filter**) button.
3. In the dropdown list that appears, deselect the type of information you want to filter out of the topology.
   Note that the abbreviation LB in the "LB configuration" filter refers to load balancing.

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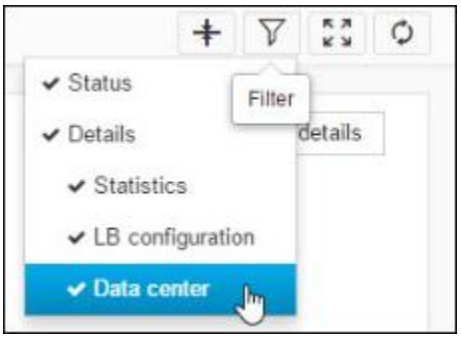

4. The topology updates and no longer displays the information you filtered out.

> **Note:** To turn off filters, repeat the steps above, but select, rather than deselect, the type of information you want to view.

View Configuration Details

To view the configuration details of the ADC device objects:

1. Go to **Menu** > **ADC+** > **TRAFFIC MANAGEMENT** > **App Search**.
   The Control Center search screen appears.
2. Run a search.
   By default, the search results are displayed in the (**Application view**) page.
3. Right-click the device name and select **View** > **View config** from the dropdown list that appears.
4. If you want to view the statistics for the search results displayed on the infrastructure view, click the (**Infrastructure view**) button to switch from the Application view search result page.
5. Select the checkboxes beside the first column of each object details and then, navigate to **Actions** > **View** > **View config**. A popup screen appears, displaying the object's configuration as shown in the image below:

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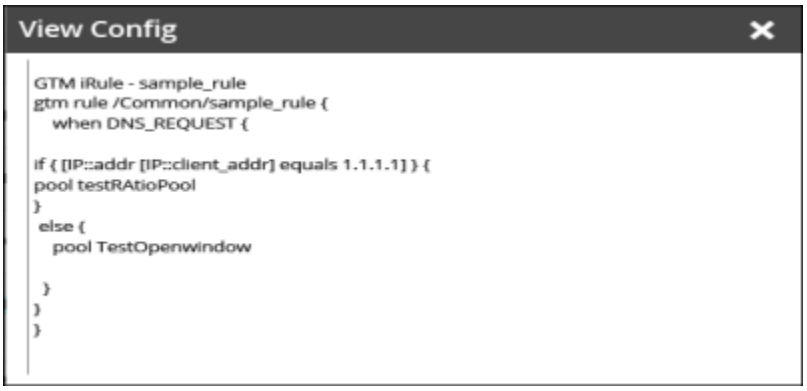

View Timeline Statistics for an Object

To view a customizable graph that displays timeline statistics for an F5, Citrix or A10 object visible through the App Search module:

1. Go to **Menu** > **ADC+** > **TRAFFIC MANAGEMENT** > **App Search**.
   The Control Center search screen appears.
2. Run a search.
3. By default, the search results are displayed in the (**Application view**) page. Right-click the device name and select **View** > **View graph** from the dropdown list that appears.
4. If you want to view the statistics for the search results displayed on the infrastructure view, click the (**Infrastructure view**) button to switch from the Application view search result page.
5. Select the checkboxes beside the first column of each object details and then, navigate to **Actions** > **View** > **View graph**. A statistics chart appears, displaying the following two fields at the top:
   - **Statistics** - The entries in this list vary depending on the device you selected. As you select different entries, the graph below updates to display the statistics related to the item you chose.
   - **Interval** - The following time intervals can be selected: **Day**, **Week**, **Month**, or **3 Months**. As you select different intervals, the graph below updates to display the statistics for the corresponding time frame.

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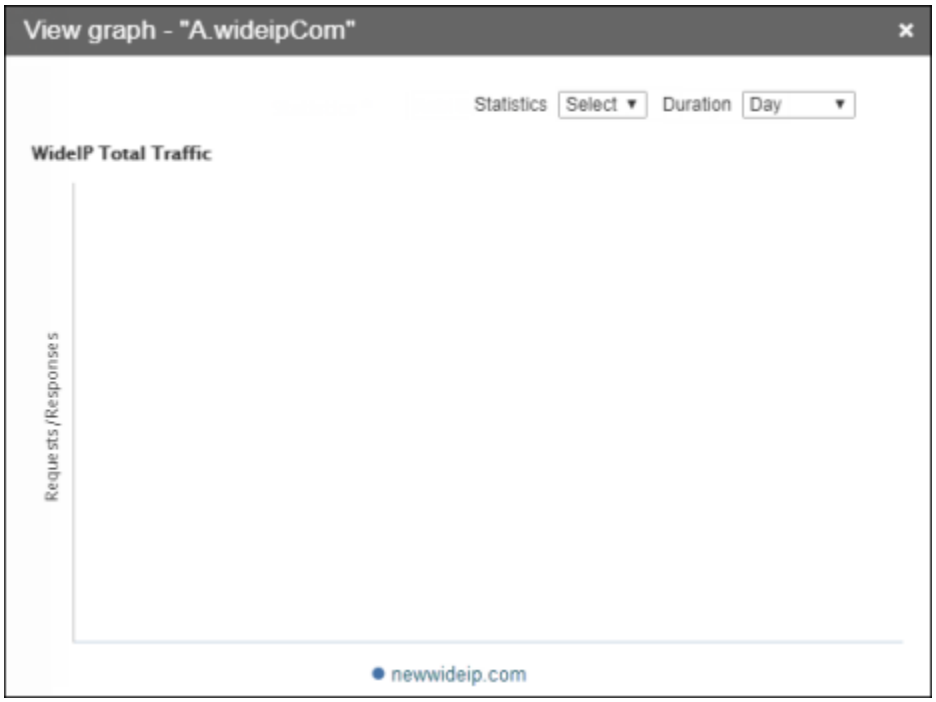

Asset Management

- Asset Management Overview
- Device Inventory
- Onboard Device
- Device Group

Asset Management Overview

AppViewX's ADC solution provides a single-pane-of-glass view of complex ADC infrastructure, supporting physical and virtual devices from the industry's leading ADC providers. It provides application-centric, customizable reports to help monitor application utilization and enable efficient capacity planning on the ADCs. It gives application and operation teams a topology view of the application delivery infrastructure for better visibility of their application. AppViewX can also project better insights into application health, state, status, utilization, and performance of applications from the managed network assets.

The ADC devices are managed/monitored under the following tabs within the Inventory:

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- Device
- Groups
- Back-up & Restore

Supported ADC Vendors and Prerequisites

To manage the Application Delivery Controller (ADC) devices on AppViewX, there are certain prerequisites. In the following tables, you can find the prerequisites for the supported vendors.

Prerequisites for Managing A10, AVI, and Akamai

Vendors Supported	A10*	AVI***	Akamai**
Version Supported	v2.7.x , v4.0.1, v4.1.x, and v5.1.x	16.2.x, 16.3.x, 17.1.x,17.2.x,18.2.x, 20.1.x, 22	
IP Address/FQDN	IP address and FQDN	IP address and FQDN **Note:** Device should not be added with Cluster IP	
User Privilege	CLI/WEB/xapi access and Read/Write access is required	System Admin Role for all tenants. **Note:** SuperUser Access is required only to verify terminal check, not mandatory.	
Enable Password	Required	Not applicable	Not applicable
License Check	No	No	Not applicable

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Vendors Supported	A10*	AVI***	Akamai**
Services and Ports for AppViewX Communication	22, 80, and 443	22, 443, 5514 (To receive syslog on AppViewX from AVI)	443 Outbound access from AppViewX is needed to manage the device and Perform Akamai Actions
Internet Access/Proxy if Required	Not required	Not required	Not required
Location from which Certificates are discovered if managed	No specific location	No specific location (we use API's to get certificate details)	Not applicable

Prerequisites for Managing Amazon ELB, BigIQ, Cisco, and Citrix

Vendors Supported	Amazon ELB**	BigIQ**	Cisco ACE**	Citrix*
Version Supported	Only Classic and Application ELB is supported	5.x (5.2/5.3)	5	v9.x, v10.x , V11.x, v12.x, v13.x, v14.x
IP Address/FQDN	Not applicable	IP address	IP address	IP address and FQDN
User Privilege	Access Key, Secret Key, and Region information is required.	{ Role : Admin , tmsh access is required } Username / Password, Credential List AppViewx/ CyberArk/Thycotic	Username / Password, Credential List AppViewx/CyberArc	Username / Password, Credential List AppViewx/CyberArk Role:(Superuser access)
Enable Password	Not applicable	Not applicable	Not applicable	Not applicable
License Check	Not applicable	Yes	No	No
Services and Ports for	Port 443, Outbound Internet access is required	Port 22 SSH	Outbound Access from AppViewX is needed for	Outbound Access from AppViewX for SSH and HTTPS

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Vendors Supported	Amazon ELB**	BigIQ**	Cisco ACE**	Citrix*
AppViewX Communication	to manage the ELB in AWS		SSH service and HTTPS service	service (Default/ Custom Port Information) is required Outbound access to port 5514 is required for Citrix Device to forward the syslog to AppViewX
Internet Access/ Proxy if Required	Required	Not applicable	Yes, if the needs be accessed with Public IP address.	Yes, if the needs be accessed with Public IP address.
Location from which Certificates are discovered if managed	Not applicable (Certificates that are assigned to the listeners will be discovered by AppViewX)	Certificate Discovery is not supported	Certificate Discovery is not supported	Certificates are parsed only from the /flash/nsconfig/ ssl/ directory

Prerequisites for Managing F5, HAproxy, NginxPlux, and Infoblox LBDN

Vendors Supported	F5***	HAproxy*	NginxPlux***	Infoblox LBDN**
Version Supported	v10.x , v11.x , v12.x , v13.x, v14.x, v15.x, v16.x, v17	1.4,x, 1.5.x, 1.6.x	R11, 18, 19, 20, 21, 22, 23, 24, 25,26, 27, 28, 29	v8.2 and wapi v2.7.1
IP Address/FQDN	IP address or FQDN	IP address	IP address	IP address or FQDN
User Privilege	{ Role : Admin , tmsh access	Username / Password,	Access to Nginx installed	Superuser or access to LBDN

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Vendors Supported	F5***	HAproxy*	NginxPlux***	Infoblox LBDN**
	is required } Username / Password, Credential List AppViewx/ CyberArk	Credential List AppViewx/ CyberArc/Thycotic	configuration location and access to check syntax of niginx.conf and restart nginx service to apply the changes	objects that needs to be managed from AppViewX
Enable Password	Not applicable	Not applicable	Not applicable	Not applicable
License Check	Yes	Yes	Yes	Not applicable
Services and Ports for AppViewX Communication	22 and 443	Port 22 SSH	22 and any custom port for stats	443 or custom port to access API calls
Internet Access/ Proxy if Required	Not applicable	Not applicable	Not applicable	Not applicable
Location from which Certificates are discovered if managed	/config/ filestore/files_d/ <partition>_d/ certificate_d/ /etc/httpd/conf/ ssl.crt/ /etc/pki/tls/certs/ V10 /config/ssl/ssl.crt/ /etc/httpd/conf/ ssl.crt/ /etc/pki/tls/certs	/config/filestore/ fil es_d/_d / certificate_d/ /etc/ httpd/conf/ssl. crt/ / etc/pki/tls/certs/ V10 /config/ssl/ssl.crt/ / etc/httpd/conf/ssl. crt/ /etc/pki/tls/ certs/	/etc/nginx/conf.d/ or any custom location	Not applicable

Note:

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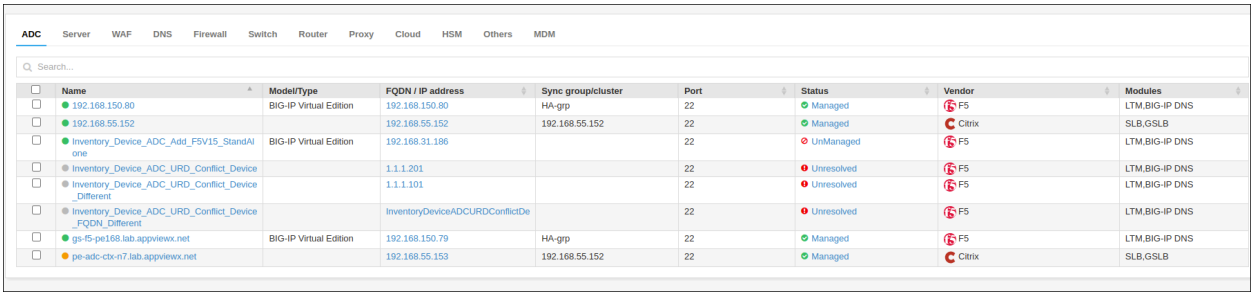
- * - The vendors are supported for certificate management and automation only.
- ** - The vendors are supported only for automation.
- *** - The vendors are supported for device/application end-to-end management, certification management, and automation.

Device Inventory

- Device Inventory Overview
- Import Devices
- Search for ADC Devices
- Deleting ADC Device(s)
- Manage and Unmanage Devices
- Export Device Details
- Manually Fetch the Configuration for a Device
- Subscribe and Unsubscribe to Syslog
- Generate and Download an iHealth Report
- Customizing Columns
- Configuration Sync between AppViewX and Device

Device Inventory Overview

Device inventory provides a birds-eye view of all the ADC devices onboarded into AppViewX. It is the single console where all the information about ADC devices such as number of objects, current status, Group Name, and version number will be displayed.



The ADC devices can be onboarded and managed from the Device Inventory. The complete details of the devices are available in the device Inventory for easy access and monitoring. Device Inventory gives you

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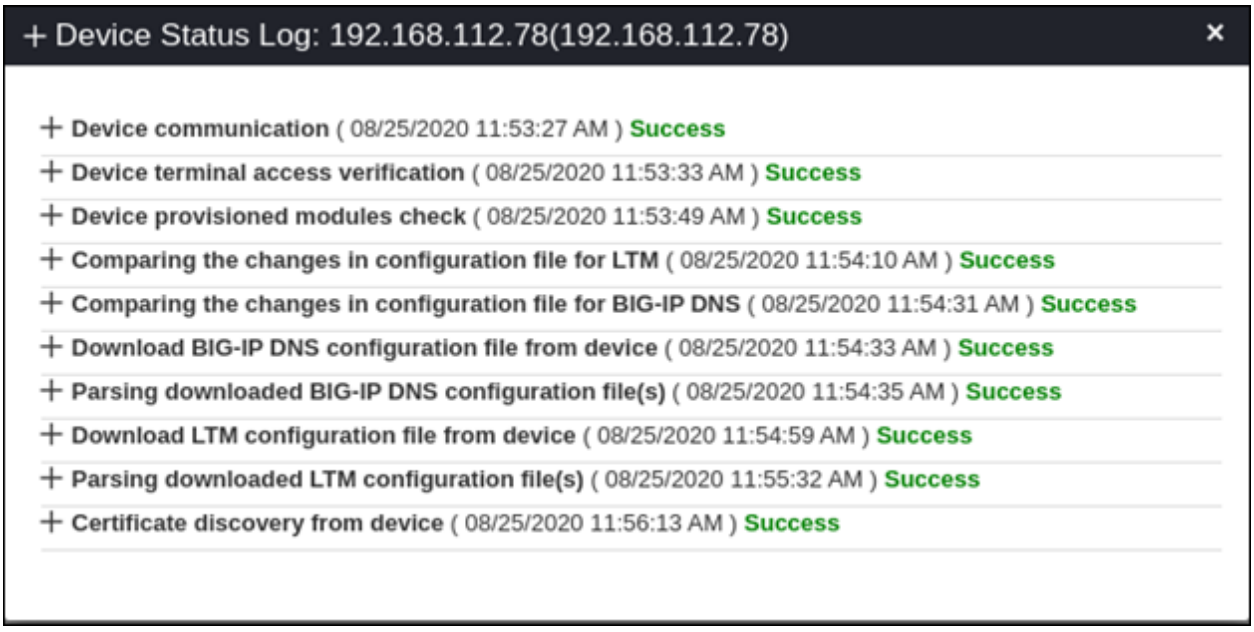
detailed information like name, model/type, IP, port, number of devices, current state and status, version, ADC provider, modules, and sync group name of the device.

Once the ADC device details are onboarded, devices must successfully go through the following setup process to be Managed into AppViewX,

- AppViewX tries to establish a connection with the device with the provided username and password. The communication protocol varies based on the ADC device providers.
- If the connection gets established, the required access is validated. For example, If any F5 ADC device gets added, Terminal access verification happens from AppViewX.
- The requested module is validated in the ADC Device. For example, if an ADC device is added as GSLB, then the appropriate provision is validated.
- The version of ADC device is fetched and validated for the supported version.
- The configuration is fetched from the device through REST or any other supported protocol by the ADC device provider. The configurations are made available in AppViewX.
- If the certificate discovery is enabled, then appropriate certificates from the ADC device are discovered.
- If secondary device detection is enabled, then failover/standby device information is fetched.

The progress of these steps can be viewed in the inventory by clicking the status column of the device. By clicking the (+) button, detailed information will be available for each step.



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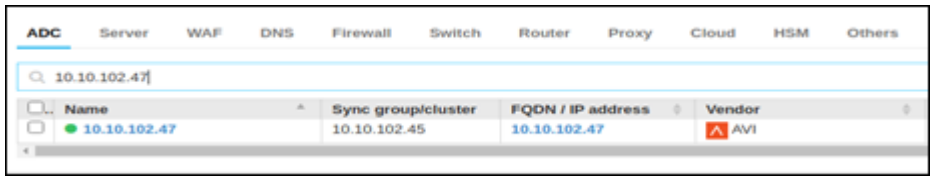
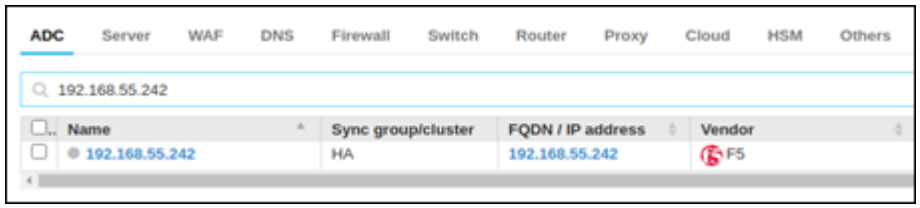
• Device State
• Device Status

Device State

High Availability of the applications can be ensured by configuring ADC devices in Active-Standby mode. This type of configuration will be planned for disaster recovery. In some cases, the devices in the group will be in active-active mode for handling the traffic efficiently. In AppViewX, the current mode of the device is called state and it will be displayed along with the device name in the inventory page. The device will be in any one of the following states,

State	Color Code	Description
Active	Green Circle	The device is currently processing the traffic of the application in the Active-Standby setup. 
StandBy	Orange Circle	The device will be ideal and ready to take over whenever the failover occurs in the Setup.
Offline	Grey Circle	The device is taken down for maintenance and in this state, the traffic will not be passed through the device. 

To know the current state, mouse over the color icon available before the device name.

This state will get updated in a particular time interval during configuration fetch from the device.

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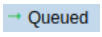
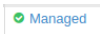
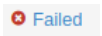
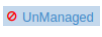
For F5 and Citrix, if Syslog is enabled, it will get a near real-time update whenever there is a flip in the device.

Device Status

On adding the ADC device into AppViewX, the status defines the current stage of device configuration parsing in AppViewX. This data will be available as a separate column in the device inventory page. The device will be in any of the following statuses in the inventory and the detailed progress can be viewed by clicking the status image,

Status	Symbol	Description
Queued		The device details are added in AppViewX and waiting for configuration fetch to start from the ADC device.
Inprogress		It states that the communication to the device is successful and configuration fetch from the device is yet to be completed.
Managed		All the configurations from the added device are pulled, parsed, and available in AppViewX. This stage states that the device is successfully onboarded into AppViewX.
Unresolved		AppViewX could not connect to the device due to communication or credentials issues.
Failed		AppViewX established a connection with the device but the device configuration parsing was failed due to some exceptions. The detailed reason for failure can be known by clicking the Failed icon itself.
Unmanaged		If any maintenance activity needs to perform on a device, then the device can be moved to this stage in AppViewX by clicking the ( ) button on the top right corner of the inventory page. In this stage, AppViewX will not trigger any communication to the device. Whenever required, the device can be managed again by clicking ( ).

Import Devices

Device import provides a hassle-free experience in onboarding multiple ADC devices into AppViewX in one single step. For onboarding multiple devices, the details should be filled in the excel sheet in the

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predefined format and can be uploaded to AppViewX and from there AppViewX will dynamically onboard all the devices available in the sheet.

To import devices using a `.csv` file:

1. Go to **Menu** > **ADC+** > **ASSET MANAGEMENT** > **Device Inventory**.
   By default, the **ADC** tab opens.
2. Click the **Import** button in the Command bar.
3. On the Import screen that appears, navigate to the location of the import file, then select it.
4. Click **Import** to add the devices and their details to the Inventory.

> **Note:** When the file is uploaded with improper structure or incorrect data, the import process will terminate with the errors highlighted.

Search for ADC Devices

Devices that are added to AppViewX can be found in the inventory by searching it by name in the search bar.

To search for objects:

1. Go to **Menu** > **ADC+** > **ASSET MANAGEMENT** > **Device Inventory**.
   By default, the **ADC** tab opens.
2. Enter the search keyword in the **Search** field.
   The devices that match the search keyword are displayed.
3. The search term can be any of the device details like name, IP, provider, version, status of the device, sync group name, etc.
4. You can also search based on sync group or custom group name to see the devices available in a particular group.

Deleting ADC Device(s)

To delete ADC device(s):

1. Go to **Menu** > **ADC+** > **ASSET MANAGEMENT** > **Device Inventory**.
   By default, the **ADC** tab opens.
2. Select the desired ADC device(s) to delete.

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3. Click the **Delete** button in the Command bar.
   The **Delete** confirmation modal appears.
4. Click **Yes** to delete the selected ADC device(s).

> **Note:** To discard the deletion, click **No**. Note: The device details and configurations will be permanently deleted from AppViewX. Note: If the deleted device is onboarded again, it will be considered as onboarding a new device.

Manage and Unmanage Devices

To manage or unmanage devices:

1. Go to **Menu** > **ADC+** > **ASSET MANAGEMENT** > **Device Inventory**.
   By default, the **ADC** tab opens.
2. If the device you want to manage or unmanage is not listed on the screen, run a search to locate it.

> **Note:** If you try to manage a device that is already in managed state or unmanage a device that is already in unmanaged state, an error message appears at the top of the screen.

3. Click the checkbox beside the device name.
4. To start managing the device, click the **Manage** button in the Command bar at the top of the screen. To stop managing a device, click the **Unmanage** button.

Export Device Details

The device details, which are available in the Device Inventory page can be exported into an Excel file.

To export the details of one or more devices:

1. Go to **Menu** > **ADC+** > **ASSET MANAGEMENT** > **Device Inventory**.
   By default, the **ADC** tab opens.
2. If the device you want to export is not listed on the screen, run a search to locate it.
3. Click the checkbox beside the device name. If you are exporting details of multiple devices of the same kind, select the checkboxes for each one.
4. Click the **Export** button in the Command bar at the upper right of the screen.

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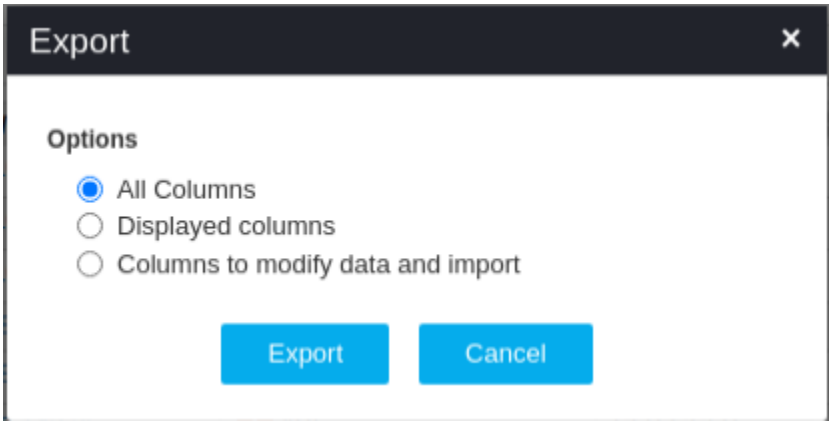
5. On the **Export** pop-up screen that appears, select the type of information you want to export:



   - **All Columns** - Select this option if you want to export all information about the device.
   - **Displayed columns** - Select this option if you want to export only the information that is visible on the Device screen. This is useful if you need to compare values or settings for different devices and do not have any need to see the less important data.
   - **Columns to modify data and import** - Select this option if you are exporting device details to make modifications and then re-import the data into the Device Inventory.
6. On the screen that opens, select the location where you want the device details file to go, then click **Save**.
7. The details are then downloaded as an Excel (`.xls`) file.

Manually Fetch the Configuration for a Device

If the latest configuration in the device needs to be pulled into AppViewX, those devices can be selected and fetch config can be triggered. AppViewX will communicate with the device and pull the latest configuration available in the device and persist in AppViewX.

To manually get the configuration for a device:

1. Go to **Menu** > **ADC+** > **ASSET MANAGEMENT** > **Device Inventory**.
   By default, the **ADC** tab opens.
2. If the device is not listed on the screen, run a search to locate it.
3. Click the checkbox beside the device name. If you want to fetch configurations for multiple devices of the same type, select their checkboxes, too.

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4. Click the **Fetch Config** button in the Command bar.
5. A notification appears at the top of the screen stating, "**Fetch config has been triggered for the device(s).**".

Subscribe and Unsubscribe to Syslog

Subscribing to Syslog for a device enables receiving near real-time configuration updates. The Subscribing Syslog option is supported only for devices that are in the Managed and Failed status.

Supported Vendor: F5

Supports near real time updates for state and status of the objects.

Prerequisites:

- During installation, enable the flag for Syslog receiver. For setting the flag, see AppViewX Cloud Connector guide.
- Ensure Syslog reception is enabled in Platform. See Platform user guide for enabling the Syslog reception.
- Ensure the device is managed.

To Subscribe/unsubscribe Syslog for a device:

1. Go to **Menu** > **ADC+** > **ASSET MANAGEMENT** > **Device Inventory**.
   By default, the **ADC** tab opens.
2. Select the checkbox of a preferred device.
3. Select the **Actions** dropdown menu from the menu bar.
4. Select **Subscribe Syslog** from the dropdown list.
   The process of subscribing to Syslog may take some time, and once completed, the status in the Syslog column is updated to **Subscribed** along with a timestamp.

> **Note:**
> To cancel the subscription to Syslog, choose the **Unsubscribe Syslog** option from **Actions** dropdown menu. The unubscription option is supported for the devices that are in the Managed, Failed, or Unresolved status.

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Generate and Download an iHealth Report

BIG -IP iHealth is a diagnostic tool developed by F5 to manage local traffic manager (LTM) and global traffic manager (GTM) devices. The iHealth report provides tailored diagnostic information that gives you valuable, actionable insight into the efficiency of the hardware and software running in your BIG-IP system.

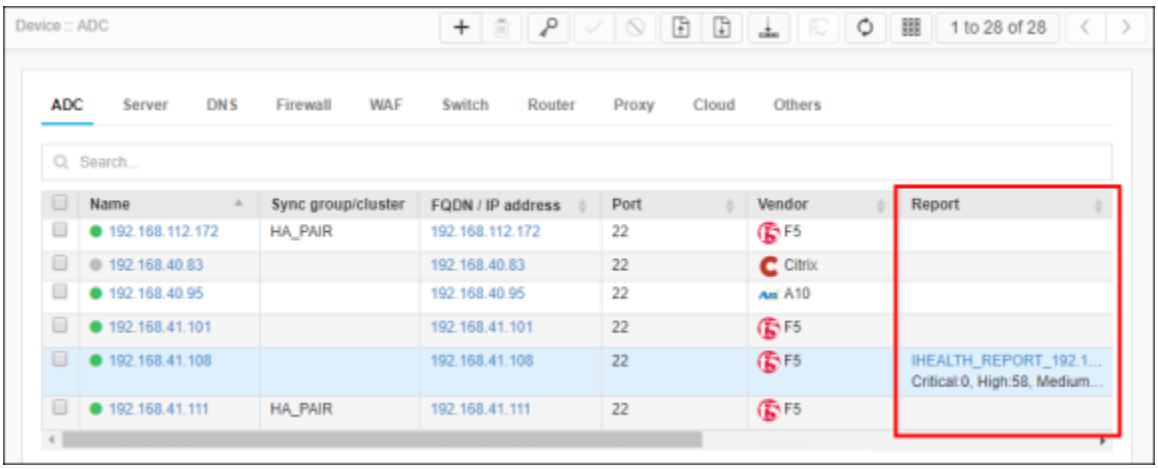
- iHealth reports can be generated at the time you want to view or schedule it in advance through the Workflow.
- To generate an iHealth report, ensure that the proxy is configured in the Settings module. For detailed information, refer to the Proxy Settings section of Platform User guide.

To generate and download an iHealth report:

1. Go to **Menu** > **ADC+** > **ASSET MANAGEMENT** > **Device Inventory**
   By default, the **ADC** tab opens.
2. Select the checkbox beside the ADC device for which you want to generate an iHealth report.
3. Click the **Generate iHealth Report** button in the Command bar.

> **Note:** You might need to scroll to the right to see the Report column.

4. On the iHealth Report Generate screen that pops up, enter the case number for the report, then click Generate.
5. When the report is generated, it appears as a link in the Report column on the Device: ADC screen.
6. Click the IHEALTH_REPORT link.



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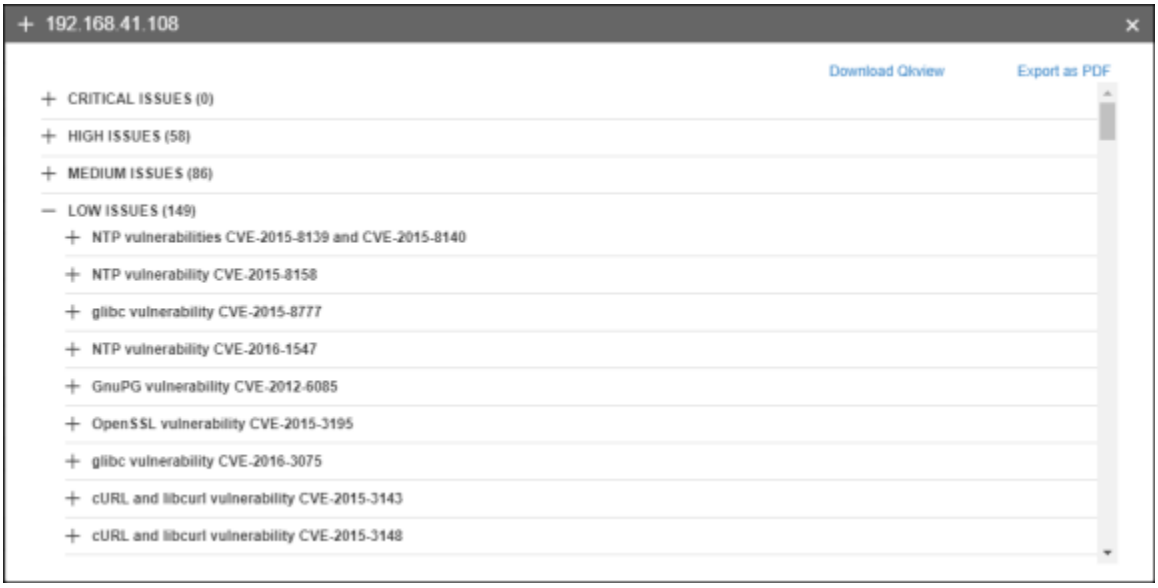
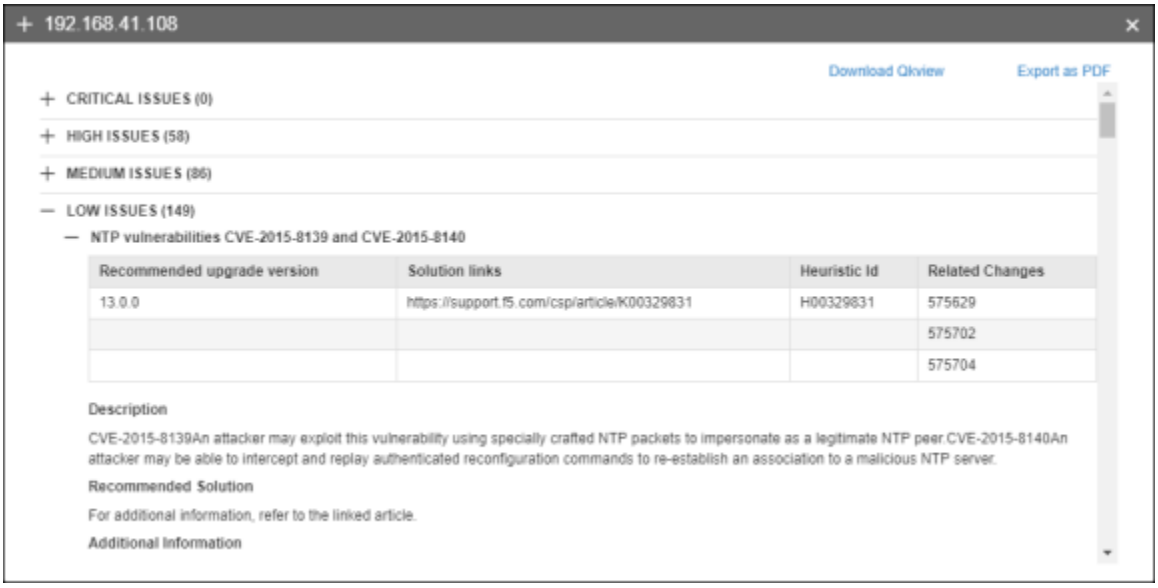
7. The iHealth report screen that pops up lists all of the current issues with the device, classified by their severity: critical, high, medium, or low.
8. Click any of the + (**Expand**) icons beside a severity level to view the issues within the corresponding category.



9. Within each severity level, click the name of a specific issue to view complete details, a recommended solution, and additional information about it.



10. (Optional) Download the entire iHealth report as a Qkview file by clicking the **Download Qkview** link or as a PDF file by clicking the **Export as PDF** link, both of which appear in the top right corner of the screen.

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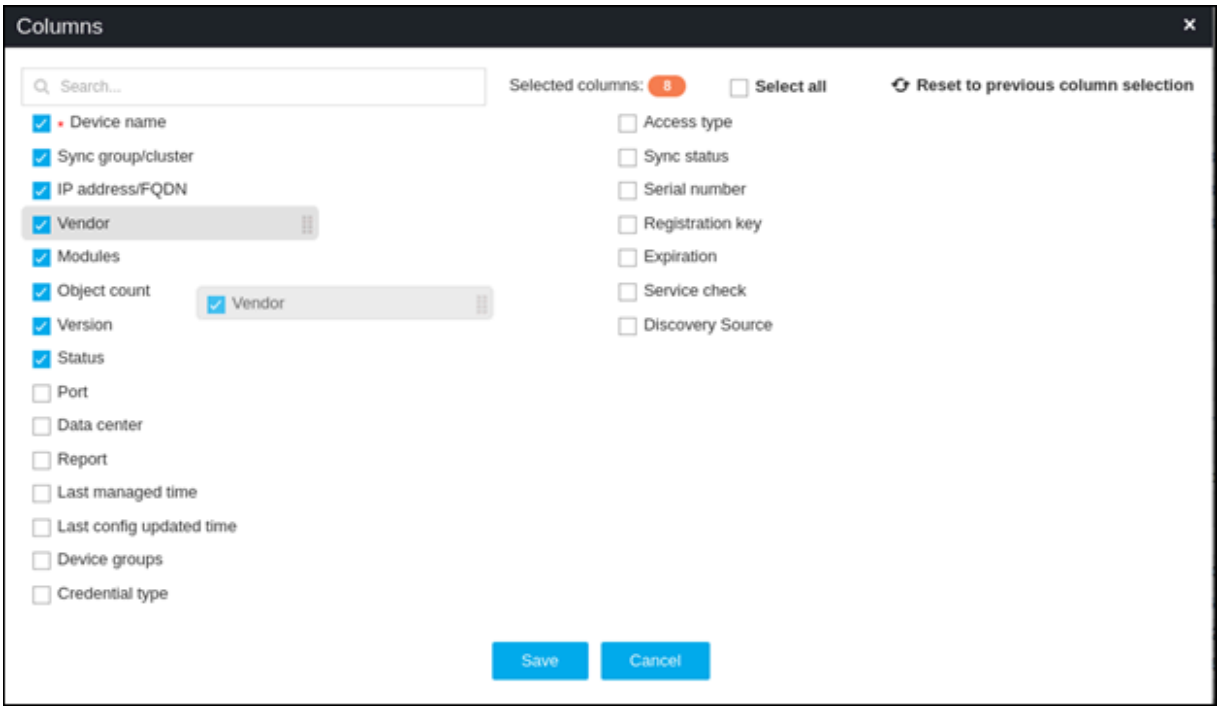
Customizing Columns

The columns in the Device Inventory page are highly customizable as per the user's convenience. Any column can be hidden, added, or alter the order of the columns.

To customize columns:

1. Go to **Menu** > **ADC+** > **ASSET MANAGEMENT** > **Device Inventory**.
   By default, the **ADC** tab opens.
2. Click the **Columns** button in the Command bar.
   The **Columns** pop-up opens.



3. In the Columns pop-up, you can modify the columns by doing any of the following or in the combination:
   a. Select or deselect the desired columns to be displayed in the **ADC** tab.
   b. Alter the order of the column by dragging the column name to the desired order.
   c. Select all the available columns by clicking the **Select all** checkbox.
   d. Reset to the previous column selection by clicking the "**Reset to previous column selection**".

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4. Click the **Save** button.

> **Note:** To discard the changes, click the **Cancel** button.

Configuration Sync between AppViewX and Device

The device configuration will be fetched into AppViewX periodically. By default, this process happens automatically at 12:00 AM everyday. The time and days can be configured as per the custom demand. For more detail, see Settings.

Onboard Device

- Discover/Onboard an ADC Device
- Discover/Onboard a DNS Vendor Device
- Discover/Onboard a WAF Vendor Device
- Discover/Onboard an Other Network Device
- Vendor Specific Discover/Onboard ADC Device

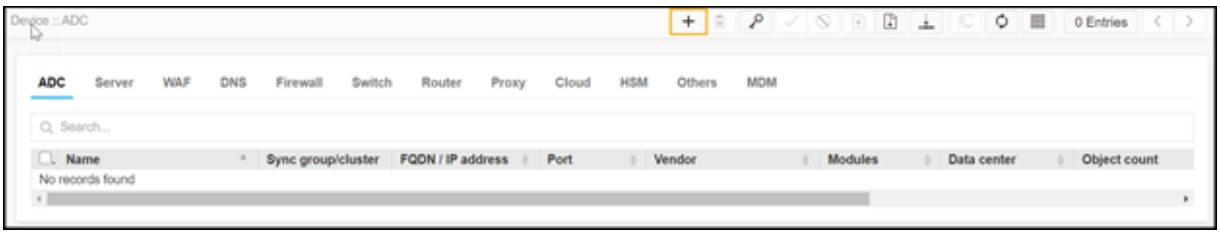
Discover/Onboard an ADC Device

Onboard the supported ADC vendor devices (Hardware, Cloud, and Software) into the AppViewX inventory using the IP Address/FQDN. AppViewX will initiate the communication using the provided credentials and Discover the Applications/Objects along with their configuration that are hosted on the devices. The Discovered Applications can be accessed within the product.

For vendor-specific device addition, refer to Discover/Onboard ADC Device for Vendor.

To onboard a device into Device Inventory:

1. Go to **Menu** > **ADC+** > **ASSET MANAGEMENT** > **Device Inventory**.
   By default, the **ADC** tab opens.
2. In the **ADC** tab, click add + button located upper right corner.



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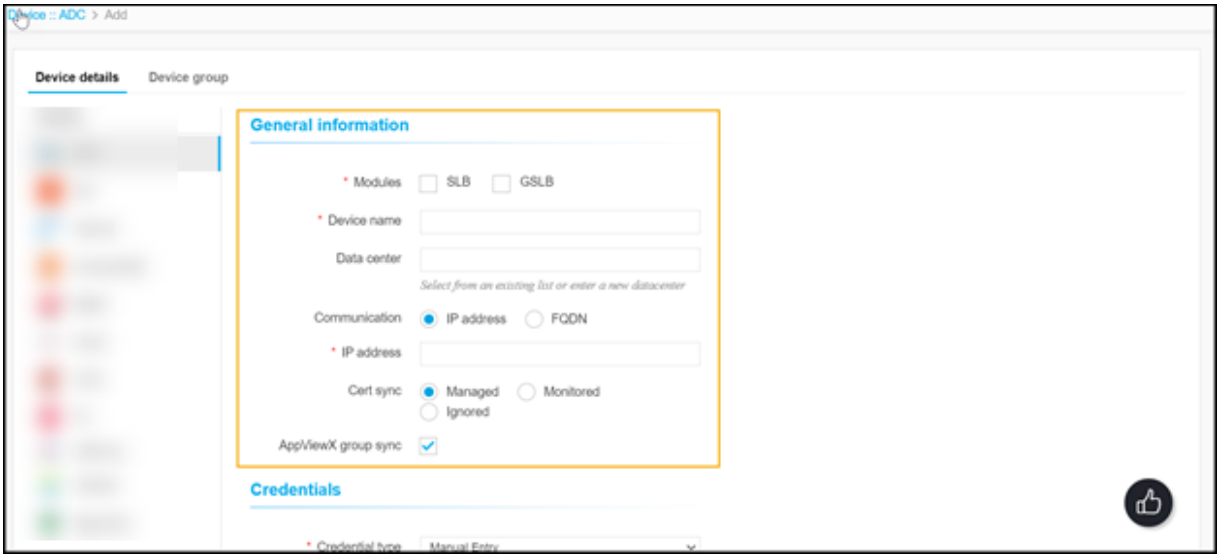
The **Add** page appears.

3. Enter or select the field information in the **General Information** section.



Field and Description Table

Field	Description
***Modules**	Select one of the following or both for ADC device in AppViewX: • **GSLB** - Global Server Load Balancing is the process of distributing application traffic among a large number of connected servers available across the world at multiple geographic locations. • **SLB** - Server load balancing distributes traffic locally from GSLBs to appropriate servers to ensure consistent, high-performance application delivery. Based on this module selection, the respective configuration of the device will be fetched into AppViewX.
***Device name**	Unique custom identifier of your device.
Data center	The data center on which the device has been hosted. Select a Datacenter from the drop-down list or enter a data center name.
Communication	The communication mode that ADC devices can be added to AppViewX. The possible communication modes are:

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Field	Description
	• **IP Address** - The IP Address can be IPV4 and it can be either management IP or Self IP of the ADC device. By default, the IP address has been selected. • **FQDN** - On adding the device with FQDN, it will be resolved to an IP address and communication to the device will be made through it. If the FQDN is resolved to more than one device IP, AppViewX will choose a random IP for communication. • **Port** - A custom-enabled port of the Device, through which the communication will happen from AppViewX.
***IP address/ FQDN**	Enter the IP address or FQDN based on the selected communication mode.
Cert sync	Provision to discover and manage the SSL certificates from the ADC devices. The possible Cert syncs are: • **Managed** - All SSL certificates will be discovered and added to AppViewX certificate inventory and used for certificate lifecycle management like renew, revoke, etc. • **Monitored** - All SSL certificates will be discovered and will not have any CA-related communication. • **Ignored** - No SSL certificates will be discovered from the ADC device. **Note:** Add a note. The certification sync is based on the license applied.
AppViewX group sync	Select this checkbox to enable the group sync. AppViewX Group Sync ensures configurations are in sync between active/primary and secondary/failover devices. This sync interval can be configured at AppViewX's Settings page.

Note: The asterisk (*) symbol indicates mandatory fields.

4. Enter or select the field information in the **Credentials** section:

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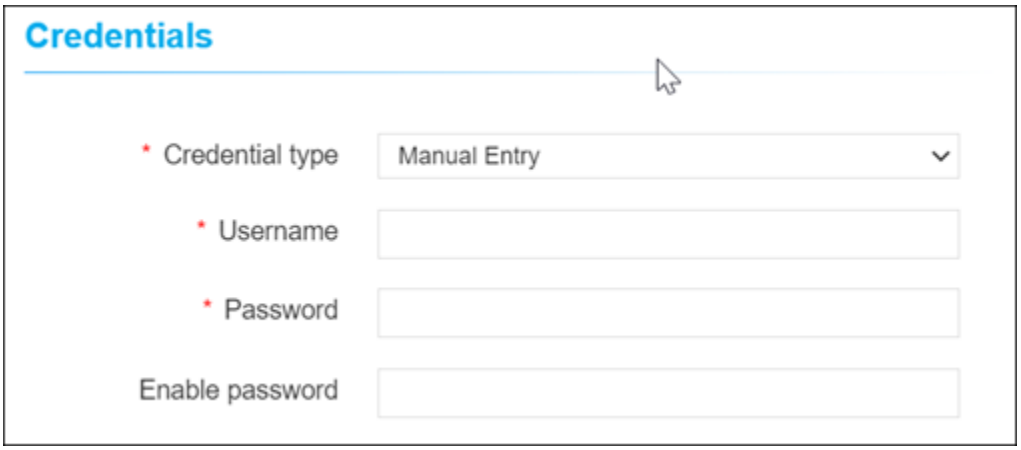

Field and Description Table

Field	Description
***Credential type**	Credentials can be manually provided or stored as a one-time entry onto the credential library and referred at the time of device addition. Select one of the following credential types from the drop-down list: • **Manual Entry** - The user name and password of the device need to be entered with device details. By default, the Manual Entry option is selected. • **AppViewX Credential List** - The user name and password can be added to the List and that entry can be referred to during device addition. The credential lists are integrated within AppViewX application for the secured authentication. The available credential lists are: • Credential List - AppViewX • Credential List - CyberArk • Credential List - Thycotic • Credential List - HashiCorp To create a credential list, see Creating Credential List in the *Platform User Guide*.
***Username**	Username for the ADC device when you select the **Manual Entry** credential type.
***Password**	Valid password for the ADC device when you select the **Manual Entry** credential type. **Note:** Use strong passwords for secure device communication. Your Passwords can be of any length with a combination of alpha-numerical, symbols, and special characters.

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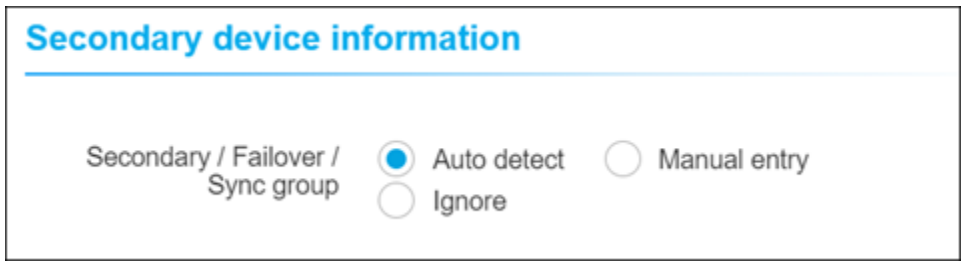
Field	Description
Enable password	For the **AppViewX Credential List** credential type, select your credential list with a CYBERARK username and app ID from the dropdown list.

Note: The asterisk (*) symbol indicates mandatory fields.

5. Enter or select the field information in the **Secondary device information** section as follows:



- **Auto-Detect** - This option will automatically detect the corresponding secondary devices and add it as a new entry into AppViewX inventory using the Primary device's credential.
- **Manual Entry** - This selection will enable you to manually add Secondary devices with a Sync-group name entered for reference. This name will be used to identify the pairs in the inventory. Follow similar steps.
- **Ignore** - This option can be enabled if you need to ignore the detection of the secondary device associated with the current device.

Note:

- In a typical network configuration, Application traffic will be handled by multiple ADC devices for ensuring the high availability of the application. This distribution of ADC servers will be meaningful during any disaster recovery and avoid a single point of failure. To achieve this, multiple ADC devices will be configured in Active/Standby or in failover groups. In this grouping, one ADC device will be serving the traffic and the rest of the devices in the group will act as a backup in case of a failure. The configuration will be in sync between these devices. At the same time, devices in a sync group can be in active-active mode also. You can manage one or more such Secondary devices (Failover/Standby devices) in inventory.

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- By clicking the Add button, multiple devices can be added as secondary devices and all the devices will be available in the grid.
- By managing the Primary and Secondary devices in AppViewX during the device flips, traffic routing and management can be seamlessly handled in AppViewX.

6. Click the **Save** button to add an ADC device.

Note:
- To discard the changes, click the Cancel button.
- Repeat the same steps to add more ADC device(s).

Discover/Onboard a DNS Vendor Device

Onboard the supported DNS vendor devices to the AppViewX inventory using the IP Address/FQDN. AppViewX will initiate the communication using the provided credentials and subsequently manage them within the DNS Inventory. This functionality is particularly useful for DNS automation use cases.

Supported DNS Vendors: BIND, Infoblox, and QIP

To onboard a DNS vendor device into Device Inventory:

1. Go to **Menu** > **ADC+** > **ASSET MANAGEMENT** > **Device Inventory**.
   By default, the **ADC** tab opens.
2. Click the **DNS** tab, click add + button located upper right corner.
   The **Add** page appears.
3. Select a preferred vendor from the **Vendors** list on the left side.
4. Enter or select the field information in the **Add** page on the various sections.
5. Click the **Save** button to add a DNS device.

Note:
- To discard the onboarding of DNS device, click the **Cancel** button.
- Repeat the same steps to add more DNS device(s).

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Discover/Onboard a WAF Vendor Device

Onboard the supported WAF vendor devices to the AppViewX inventory using the IP Address/FQDN. AppViewX will initiate the communication using the provided credentials and subsequently manage them within the WAF Inventory. This functionality is particularly useful for WAF automation use cases.

On-Prem:

- If an ADC+ license is present, parsing of objects will occur.
- If there is no ADC+ license, parsing of objects will be skipped.

SaaS:

- Parsing of objects will be skipped regardless of the license status.

Supported DNS Vendors: Barracuda, F5, Imperva, and Cloudflare

To onboard a WAF vendor device into Device Inventory:

1. Go to **Menu** > **ADC+** > **ASSET MANAGEMENT** > **Device Inventory**.
   By default, the **ADC** tab opens.
2. Click the **WAF** tab, click add + button located upper right corner.
   The **Add** page appears.
3. Select a preferred vendor from the **Vendors** list on the left side.
4. Enter or select the field information in the **Add** page on the various sections.
5. Click the **Save** button to add a WAF device.

> **Note:**
> - To discard the onboarding of WAF device, click the **Cancel** button.
> - Repeat the same steps to add more WAF device(s).

Discover/Onboard an Other Network Device

Onboard the supported DNS vendor devices to the AppViewX inventory using the IP Address/FQDN. AppViewX will initiate the communication using the provided credentials and subsequently manage them within the DNS Inventory. This functionality is particularly useful for DNS automation use cases.

Onboard any supported network devices to the AppViewX inventory using their IP Address or FQDN. AppViewX will initiate communication with the devices using the provided credentials and manage them

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within the Others Inventory. This functionality is applicable for automating tasks involving various types of network devices.

To onboard a DNS vendor device into Device Inventory:

1. Go to **Menu** > **ADC+** > **ASSET MANAGEMENT** > **Device Inventory**.
   By default, the **ADC** tab opens.
2. Click the **Others** tab, click add + button located upper right corner.
   The **Add** page appears.
3. Enter or select the field information in the **Add** page on the various sections.
4. Click the **Save** button to add an other network device.

> **Note:**
> • To discard the onboarding of other network device, click the **Cancel** button.
> • Repeat the same steps to add more other network device(s).

Vendor Specific Discover/Onboard ADC Device

- A10
- AVI
- Akamai
- Amazon ELB
- BigIQ
- Cisco
- Citrix
- F5
- HAProxy
- InfoBlox
- NginxPlus

A10

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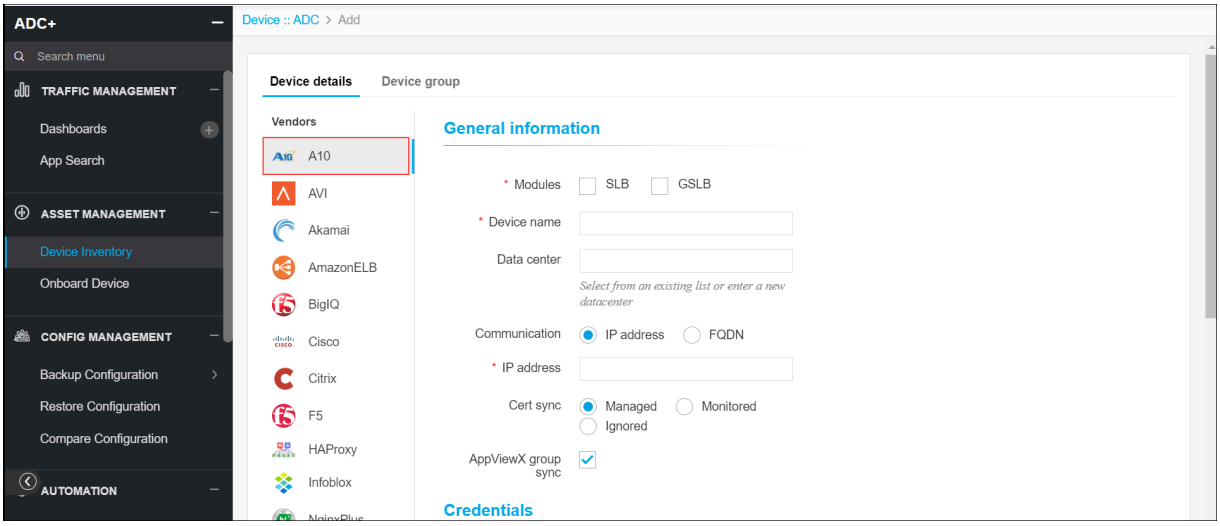
• Adding A10 Device
• Validating the A10 Device Addition

Adding A10 Device

To add an A10 device:

1. Go to **Menu** > **ADC+** > **ASSET MANAGEMENT**.
2. Perform one of the followings:
   - Click **Device Inventory**, and then select **Add (+)** icon to navigate to the Device details page.
   - Click **Onboard Device** in the left navigation panel.
3. In the **Device details** page, select **A10** from the left sidebar.



4. Enter or select the field information in the **General information** section.

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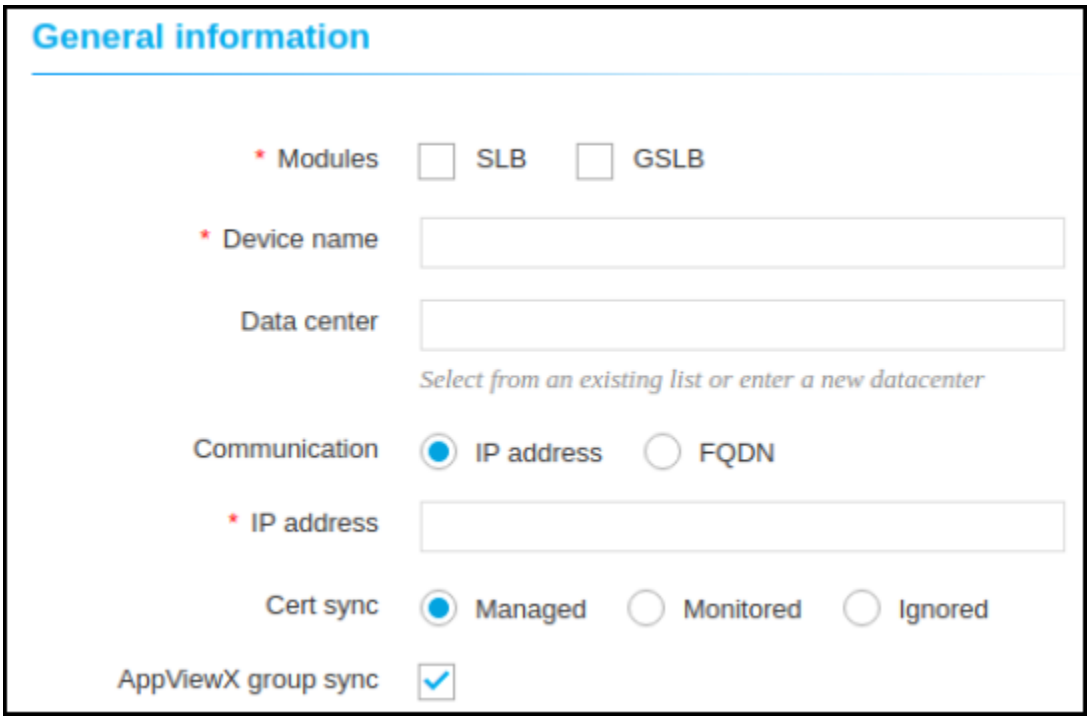

Field and Description Table

Name	Type	Mandatory	Description	Validation
Module	Check box	Yes	SLB / GSLB Module.	NA
Device name	Text	Yes	Unique name of the device to be added.	Device names can only contain alphanumeric characters, '-' , '_' , '.' , '*' , '|' , '!' and spaces.
Data center	Text	No	Datacenter name where the device is configured. The default value is Absecon.	Data center name can only contain alphanumeric characters, '-' , '_' , '.' , '*' , ':' , '|' and spaces.
Communication	Radio button	Yes	Devices can be accessed using an IP address or FQDN.	NA
IP Address	Text	Yes	The ipv4 address of the device.	The IP address should be in the right format.

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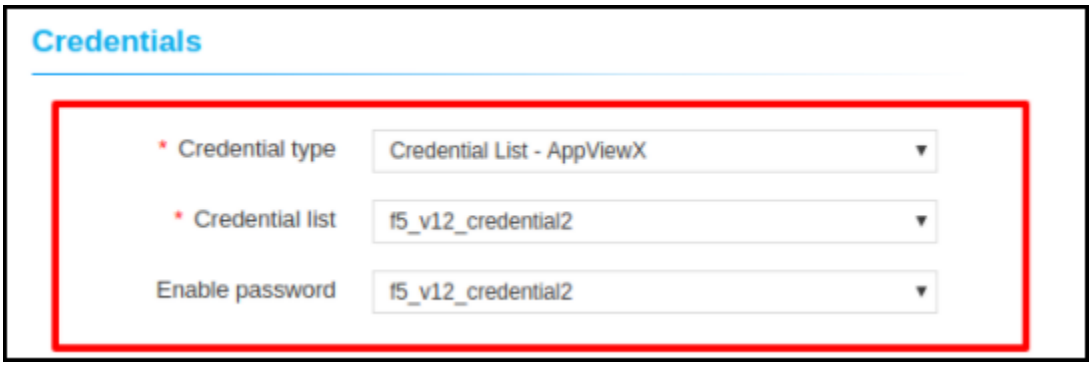
Name	Type	Mandatory	Description	Validation
FQDN	Text	Yes	The FQDN of the device.	the FQDN should be in a valid format.
Cert Sync	Radio button	Yes	Managed: The certificates of the device can be managed. Monitored: The certificates of the device can be monitored. Ignored: The certificate sync can be ignored.	NA
AppViewX Group Sync	Check box	No	This should be enabled if the user wants to sync the devices within the device group.	NA

5. Enter or select the field information in the **Credentials** section. You can select **Manual Entry** or **Credential List**.



Field and Description Table

Name	Type	Mandatory	Description	Validation
Credential type	Dropdown	Yes	Manual entry: The user should enter the username and password.	NA

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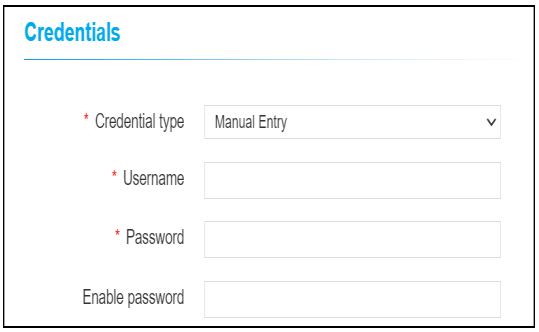
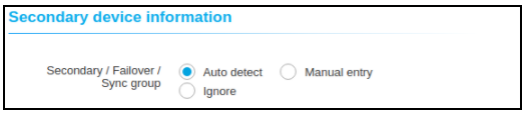
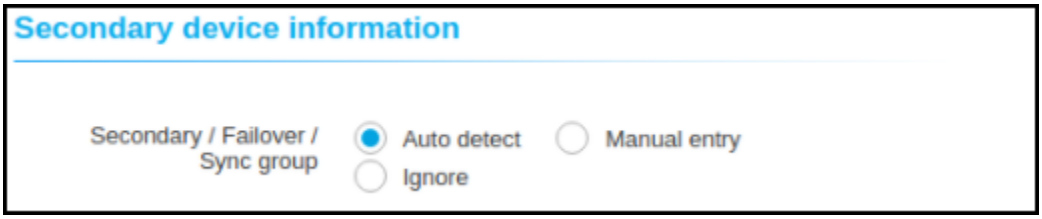
Name	Type	Mandatory	Description	Validation
			 Credential List: The user can select the credential details which are already stored in the credential inventory page. 	
Username	Text	Yes	If manual entry is selected, the user name should be entered by the user.	NA
Password	Text	Yes	If manual entry is selected, the password should be entered by the user.	NA
Enable password	Text	No	Enable password of the A10 device.	NA

6. Enter or select the field information in the **Secondary device information** section.



7. The following table provides the field description for adding ADC device details in the **Secondary device information** section:

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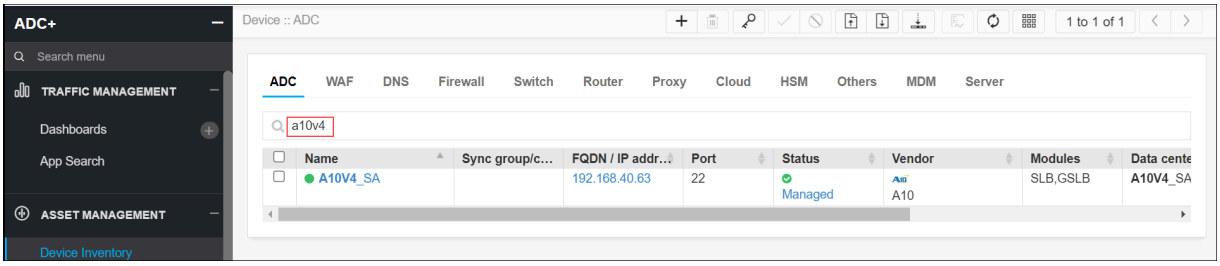
Field and Description Table

Name	Type	Mandatory	Description	Validation
Secondary device information	Radio button	Yes	**Auto detect**: The user should select this option to auto-detect and add the peer devices in the inventory page. **Manual entry**: The user can use this option to add the peer devices manually. **Ignore**: The user can use this option to ignore the auto-detection of the peer devices.	NA

8. Click **Save**.

Validating the A10 Device Addition

1. Go to **Menu** > **ADC+** > **ASSET MANAGEMENT** > **Device Inventory**.
2. Search the device name and validate whether the device is added successfully.



AVI

- Adding AVI Device
- Validating the AVI Device Addition

Adding AVI Device

To add an AVI device:

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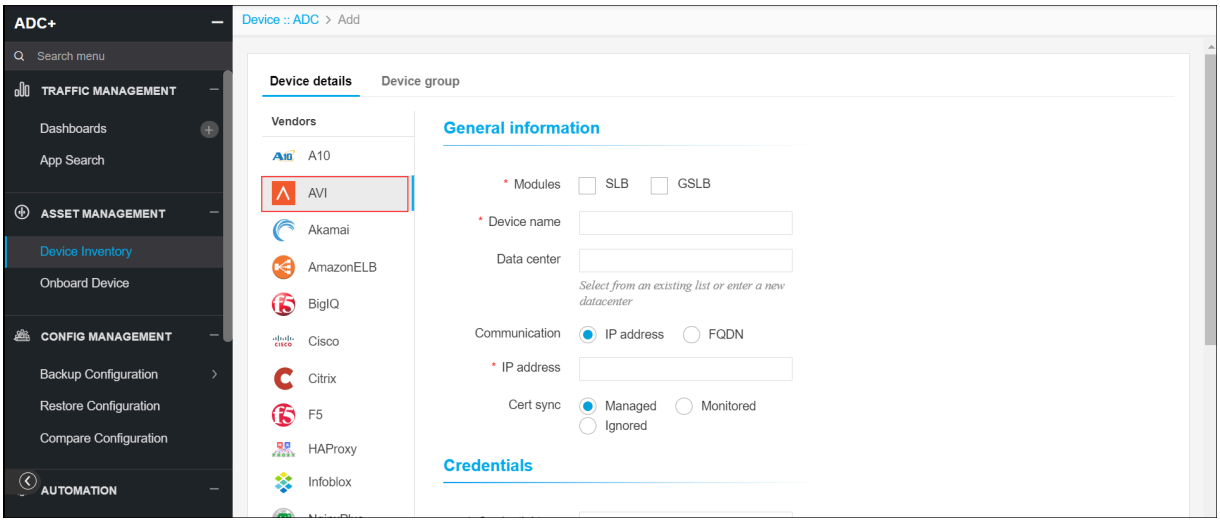
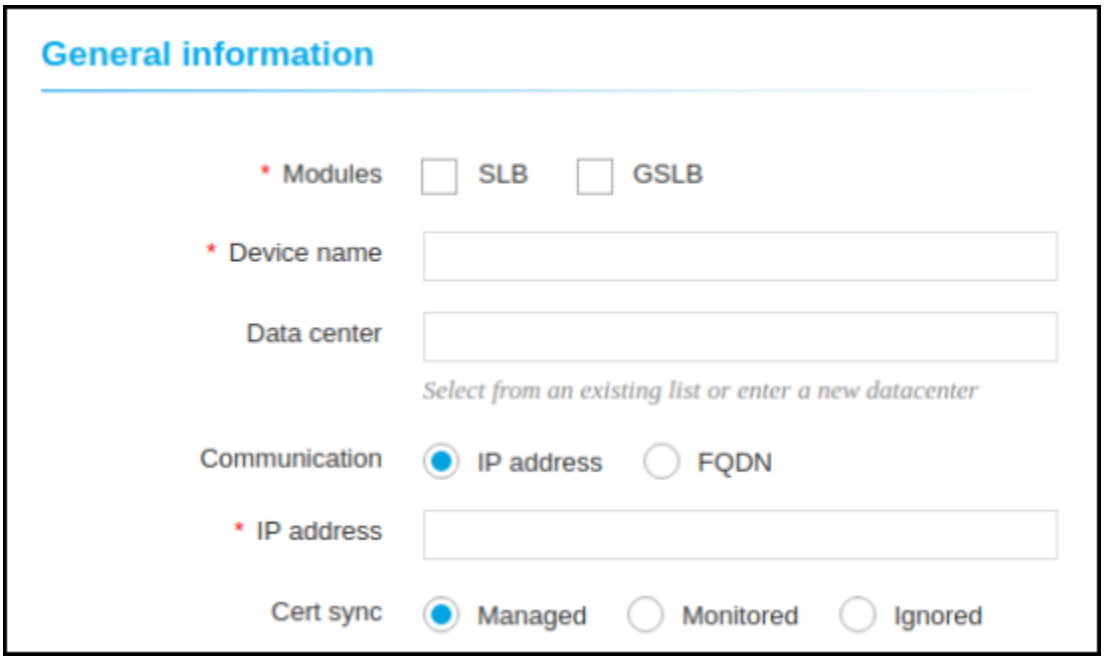
1. Go to **Menu** > **ADC+** > **ASSET MANAGEMENT**.
2. Perform one of the followings:
   - Click **Device Inventory**, and then select **Add (+)** icon to navigate to the Device details page.
   - Click **Onboard Device** in the left navigation panel.
3. In the **Device details** page, select **AVI** from the left sidebar.



4. Enter or select the field information in the **General information** section.



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Field and Description Table

Name	Type	Mandatory	Description	Validation
Module	Check box	Yes	SLB / GSLB Module.	NA
Device name	Text	Yes	Unique name of the device to be added.	Device name can only contain alphanumeric characters, '-' , '_' , '.' , '*' , '|' , '!' and spaces.
Data center	Text	No	Datacenter name where the device is configured. The default value is Absecon.	Data center name can only contain alphanumeric characters, '-' , '_' , '.' , '*' , ':' , '|' and spaces.
Communication	Radio button	Yes	Devices can be accessed using an IP address or FQDN.	NA
IP Address	Text	Yes	The ipv4 address of the device.	The IP address should be in the right format.
FQDN	Text	Yes	The FQDN of the device.	the FQDN should be in a valid format.
Cert Sync	Radio button	Yes	**Managed**: The certificates of the device can be managed. **Monitored**: The certificates of the device can be discovered and can only be monitored. **Ignored**: The certificate sync can be ignored.	NA

5. Enter or select the field information in the **Credentials** section.

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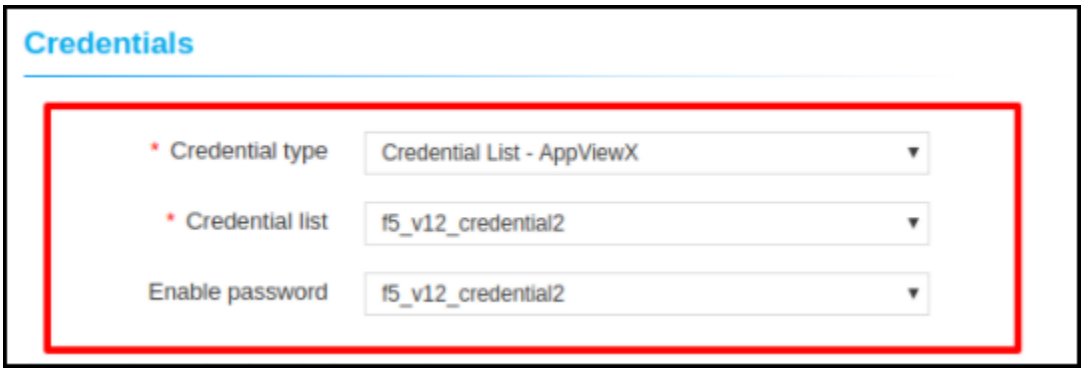
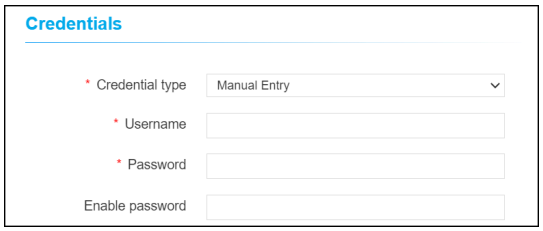
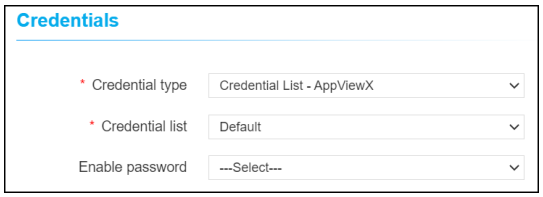


Field and Description Table

Name	Type	Mandatory	Description	Validation
Credential type	Dropdown	Yes	**Manual entry**: The user should enter the username and password.  **Credential List**: The user can select the credential details which are already stored in the credential inventory page. 	NA
Username	Text	Yes	If manual entry is selected, the user name should be entered by the user.	NA
Password	Text	Yes	If manual entry is selected, the password should be entered by the user.	NA

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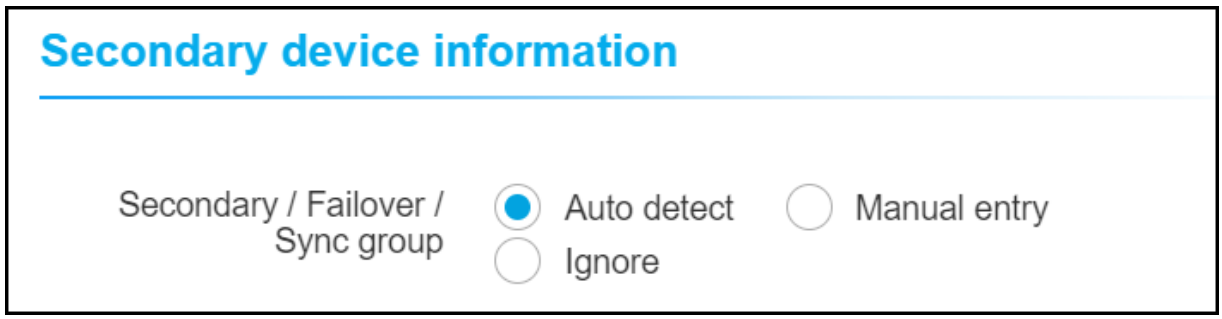
Name	Type	Mandatory	Description	Validation
Enable password	Text	No	Enable password of the A10 device.	NA

6. Enter or select the field information in the Secondary device information section.



Field and Description Table

Name	Type	Mandatory	Description	Validation
Secondary device information	Radio button	Yes	**Auto detect**: The user should select this option to auto-detect and add the peer devices in the inventory page. **Manual entry**: The user can use this option to add the peer devices manually. **Ignore**: The user can use this option to ignore the auto-detection of the peer devices.	NA

7. Click **Save**.

Validating the AVI Device Addition

After adding the device, you can validate the device by searching the device in the device inventory.

1. Go to **Menu** > **ADC+** > **ASSET MANAGEMENT** > **Device Inventory**.
2. Search the device name and validate whether the device is added successfully.

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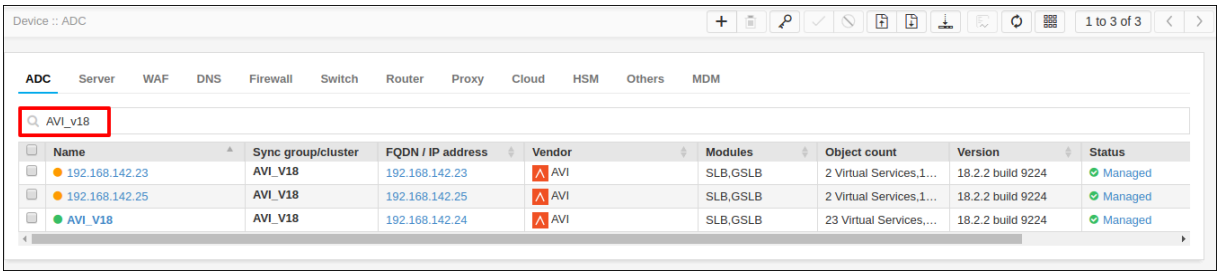


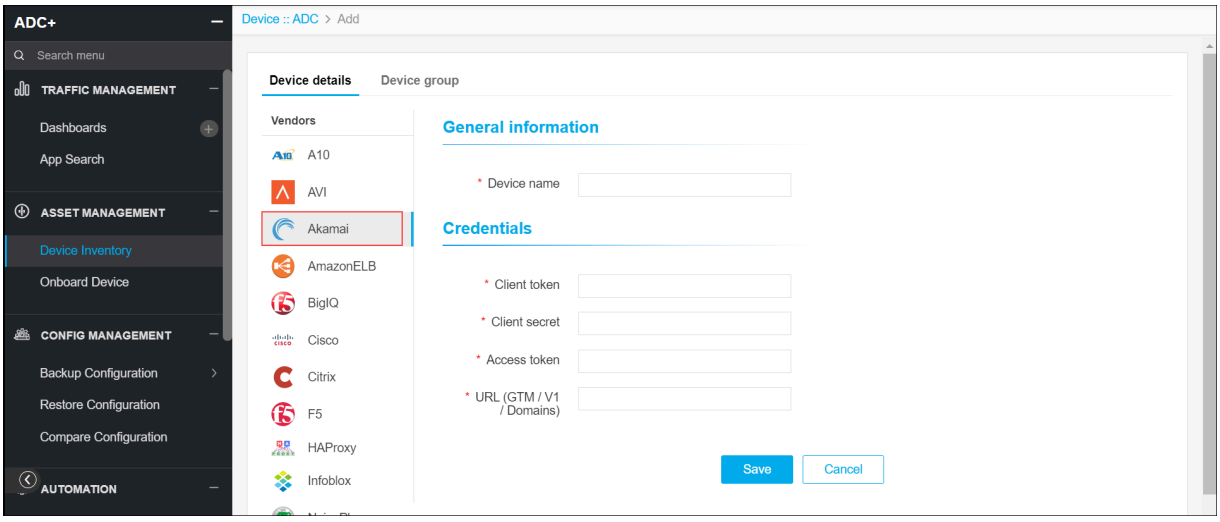
Akamai

- Adding Akamai Device
- Validating the Akamai Device Addition

Adding Akamai Device

To add an Akamai device:

1. Go to **Menu** > **ADC+** > **ASSET MANAGEMENT**
2. Perform one of the followings:
   - Click **Device Inventory**, and then select **Add (+)** icon to navigate to the Device details page.
   - Click **Onboard Device** in the left navigation panel.
3. In the **Device details** page, select **Akamai** from the left sidebar.



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4. Enter the required details for the device addition.

Field and Description Table

Name	Type	Mandatory	Description	Validation
*Device name	Text	Yes	Unique name of the device to be added.	Device name can only contain alphanumeric characters, '-' , '_' , '.' , '*' , '|' , '!' and spaces.
*Client token	Text	Yes	Client token of the Akamai device.	NA
*Client secret	Text	Yes	Client secret of the Akamai device.	NA
*Access token	Text	Yes	Access token of the device.	NA
*URL	Text	Yes	Valid URL of the Akamai device.	NA

5. Click **Save**.

Validating the Akamai Device Addition

After adding the device, you can validate the device by searching device in the device inventory.

1. Go to **Menu** > **ADC+** > **ASSET MANAGEMENT** > **Device Inventory**.
2. Search the device name and validate whether the device is added successfully.

Amazon ELB

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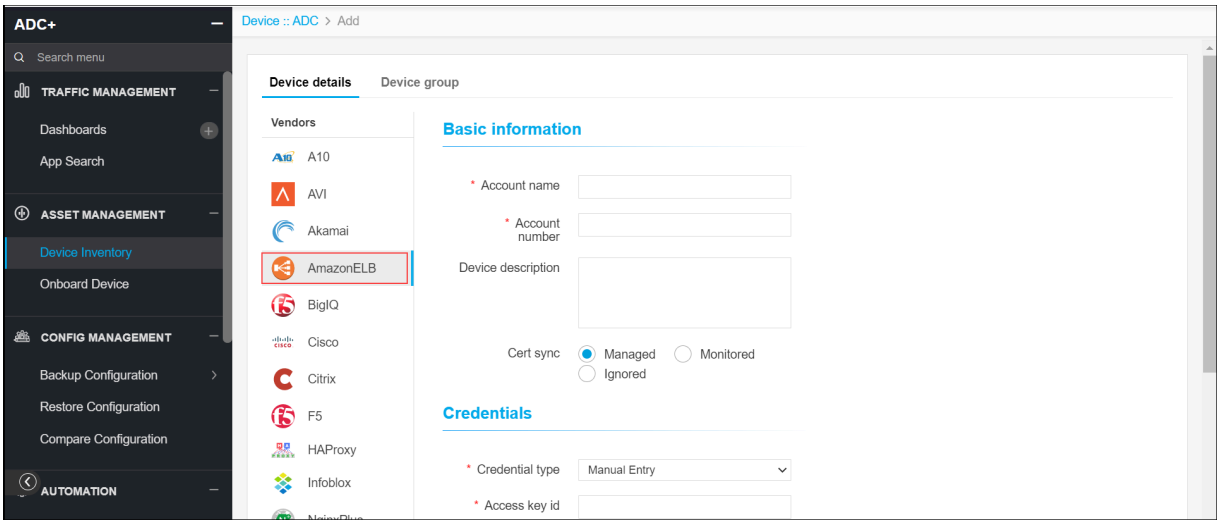
• Adding Amazon ELB
• Validating the Amazon ELB Device Addition

Adding Amazon ELB

To add an Amazon ELB:

1. Go to **Menu** > **ADC+** > **ASSET MANAGEMENT**.
2. Perform one of the followings:
   - Click **Device Inventory**, and then select **Add (+)** icon to navigate to the Device details page.
   - Click **Onboard Device** in the left navigation panel.
3. In the **Device details** page, select Amazon ELB from the left sidebar.



4. Enter or select the field information in the **Basic information** section.

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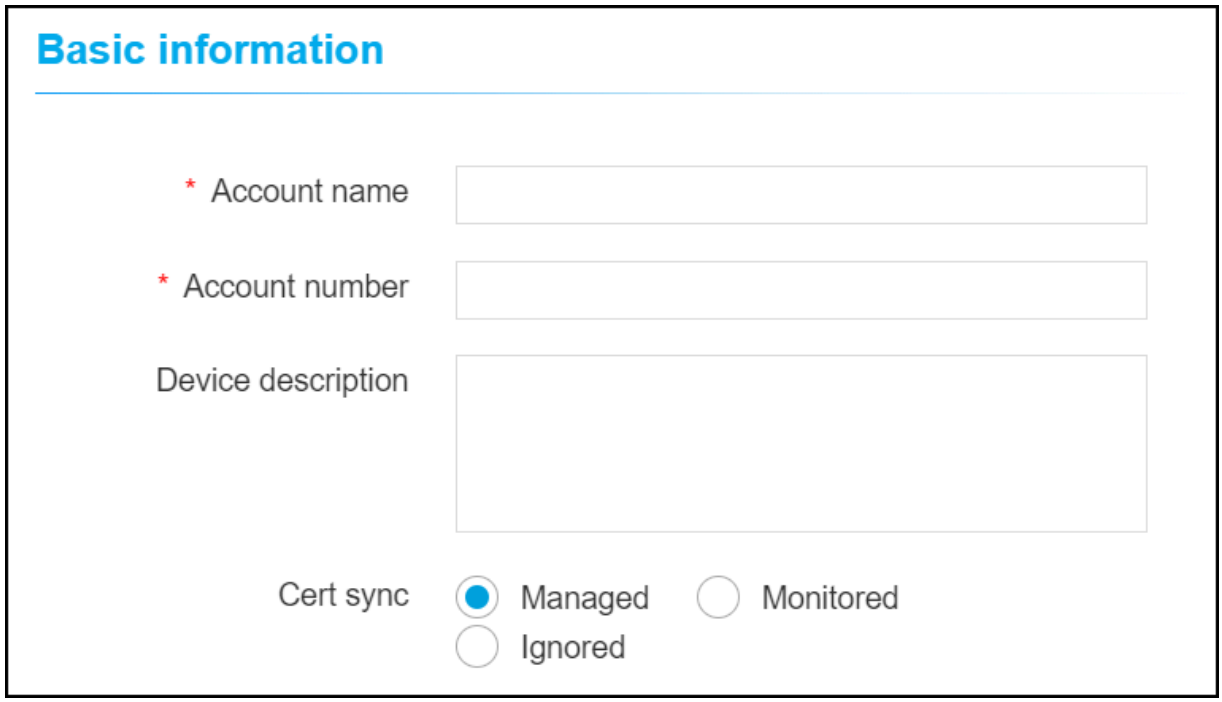

Field and Description Table

Name	Type	Mandatory	Description	Validation
Account name	Text	Yes	The account name of the AmazonELB device.	NA
Account number	Text	Yes	Account number of the AmazonEB device.	Numbers only.
Device description	Text	No	Description about the AmazonELB account.	NA
Cert Sync	Radio button	Yes	**Managed**: The certificates of the device can be managed. **Monitored**: The certificates of the device can be discovered and can only be monitored. **Ignored**: The certificate sync can be ignored.	NA

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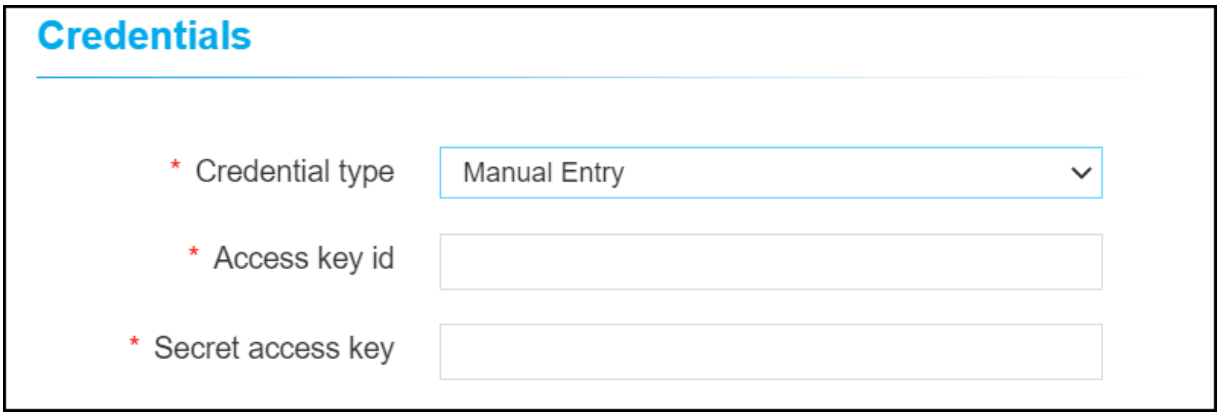
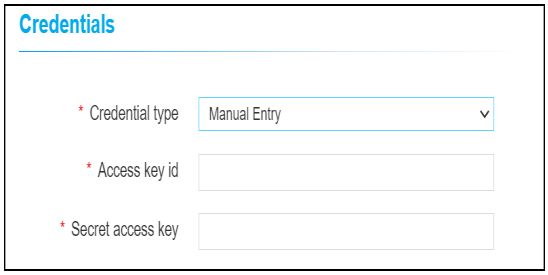
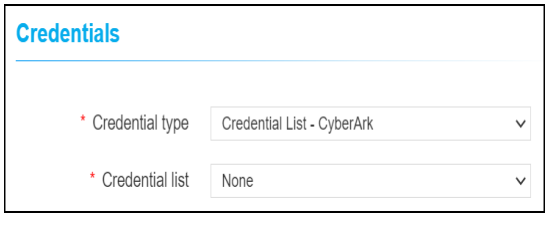
5. Enter or select the field information in the **Credentials** section. You can select **Manual Entry** or **Credentials List**.



Field and Description Table

Name	Type	Mandatory	Description	Validation
Credential type	Dropdown	Yes	**Manual entry**: The user should enter the Access key ID and Secret access key.  **Credential List**: The user can select the credential details which are already stored in the credential inventory page. 	NA

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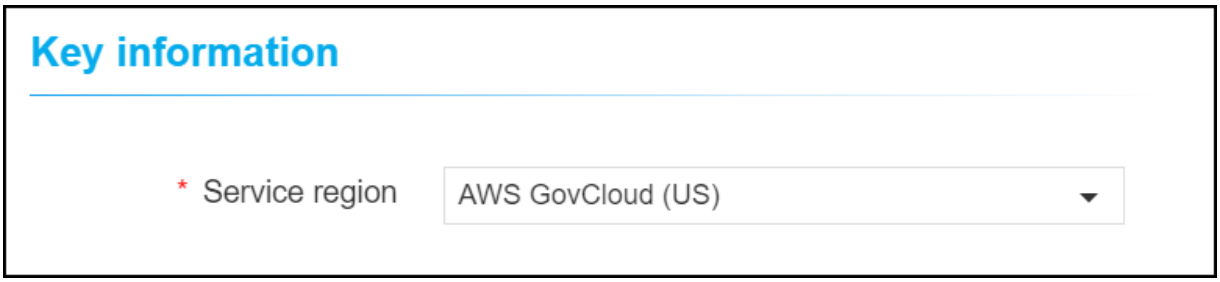
Name	Type	Mandatory	Description	Validation
Access key id *	Text	Yes	Access key id of the AmazonELB device.	NA
Secret access key *	Text	Yes	Secret access key of the AmazonELB device.	NA

6. Enter or select the field information in the **Key information** section.



Field and Description Table

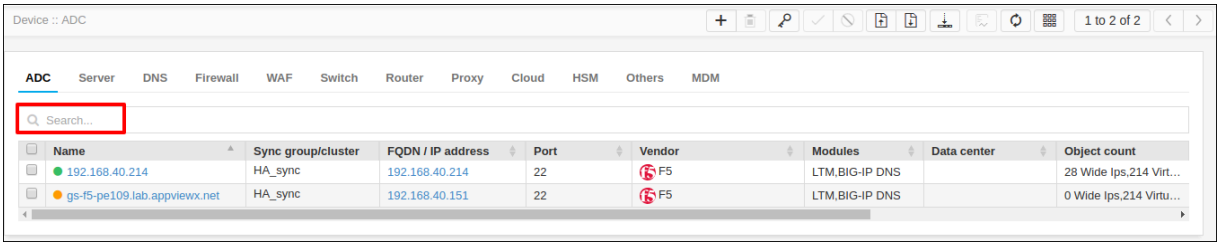
Name	Type	Mandatory	Description	Validation
Service region *	Dropdown	Yes	Service region of the AmazonELB device.	NA

7. Click **Save**.

Validating the Amazon ELB Device Addition

After adding the device, you can validate the device by searching device in the device inventory.

1. Go to **Menu** > **ADC+** > **ASSET MANAGEMENT** > **Device Inventory**.
2. Search the device name and validate whether the device is added successfully.



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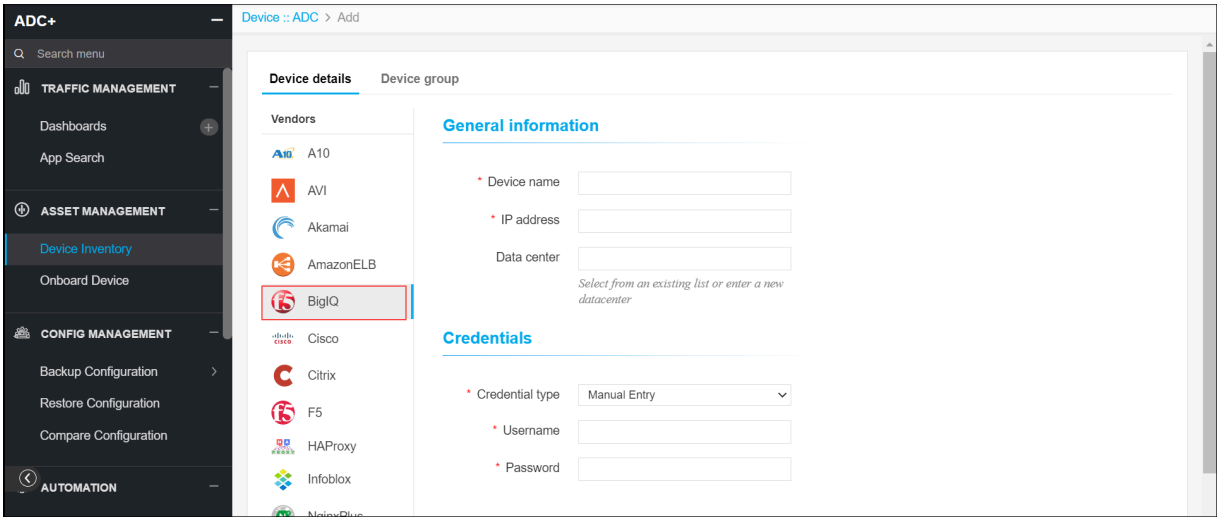
BigIQ

- Adding BigIQ Device
- Validating the BigIQ Device Addition

Adding BigIQ Device

To add a BigIQ device:

1. Go to **Menu** > **ADC+** > **ASSET MANAGEMENT**.
2. Perform one of the followings:
   - Click **Device Inventory**, and then select **Add (+)** icon to navigate to the Device details page.
   - Click **Onboard Device** in the left navigation panel.
3. In the **Device details** page, select **BigIQ** from the left sidebar.



4. Enter or select the field information in the **General information** section.

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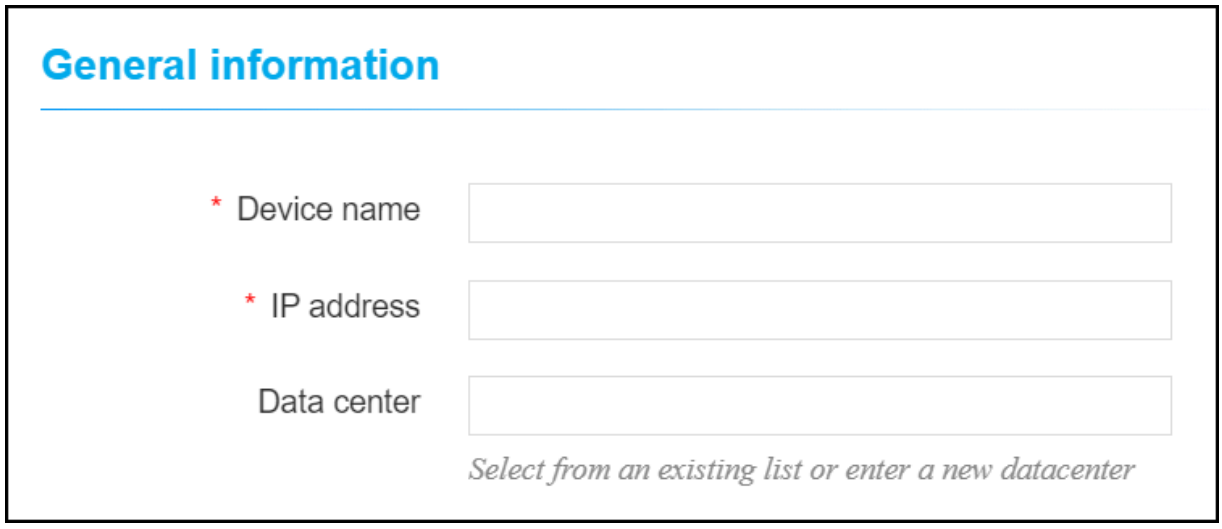
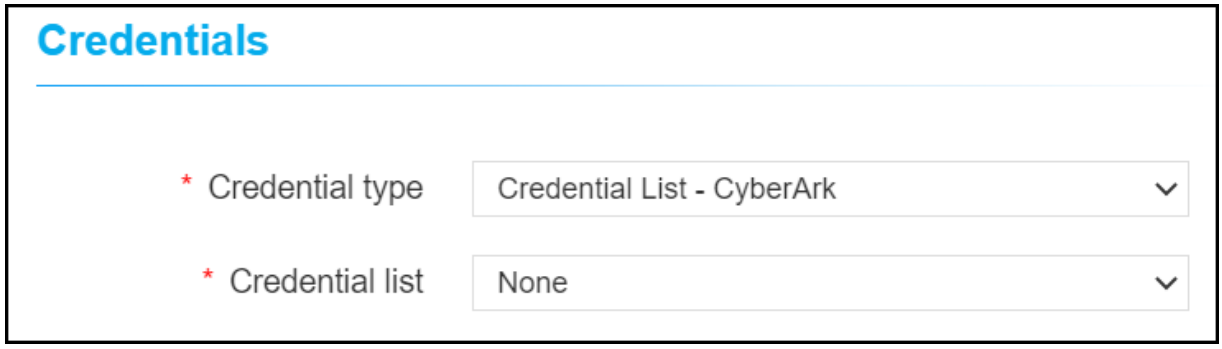


Field and Description Table

Name	Type	Mandatory	Description	Validation
*Device name	Text	Yes	Unique name of the device to be added.	Device name can only contain alphanumeric characters, '-' , '_' , '.' , '*' , '|' , '!' and spaces.
*IP Address	Text	Yes	IP Address of the BigIQ device.	IP address should be in IPv4 format.
Data center	Text	No	Datacenter name where the device is configured. Default value is Absecon.	Data center name can only contain alphanumeric characters, '-' , '_' , '.' , '*' , ':' , '|' and spaces.

5. Enter or select the field information in the **Credentials** section. You can select **Manual Entry** or **Credentials List**.



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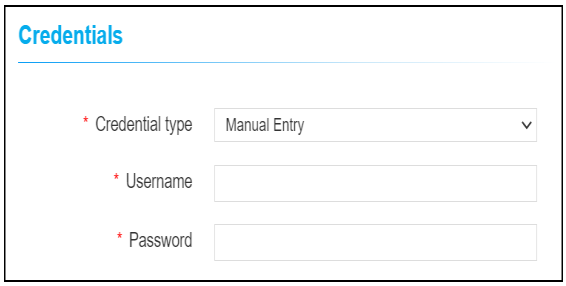
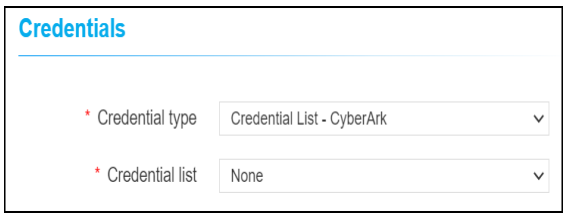
Field and Description Table

Name	Type	Mandatory	Description	Validation
*Credential type	Dropdown	Yes	**Manual entry**: The user should enter the username and password.  **Credential List**: The user can select the credential details which are already stored in the credential inventory page. 	NA
*Username	Text	Yes	Username of the BigIQ device.	NA
*Password	Text	Yes	Password of the BigIQ device.	NA

6. Click **Save**.

Validating the BigIQ Device Addition

After adding the device, you can validate the device by searching device in the device inventory.

1. Go to **Menu** > **ADC+** > **ASSET MANAGEMENT** > **Device Inventory**.
2. Search the device name and validate whether the device is added successfully.

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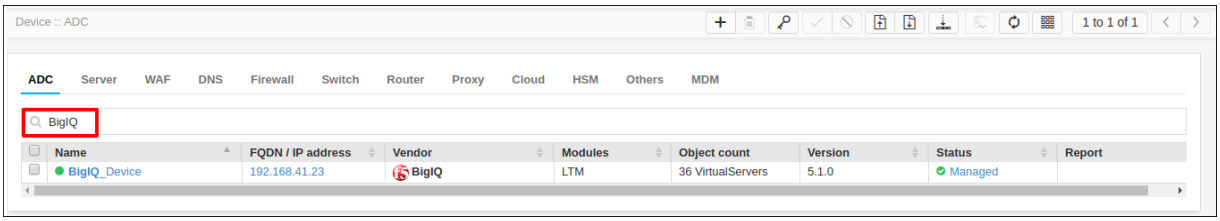


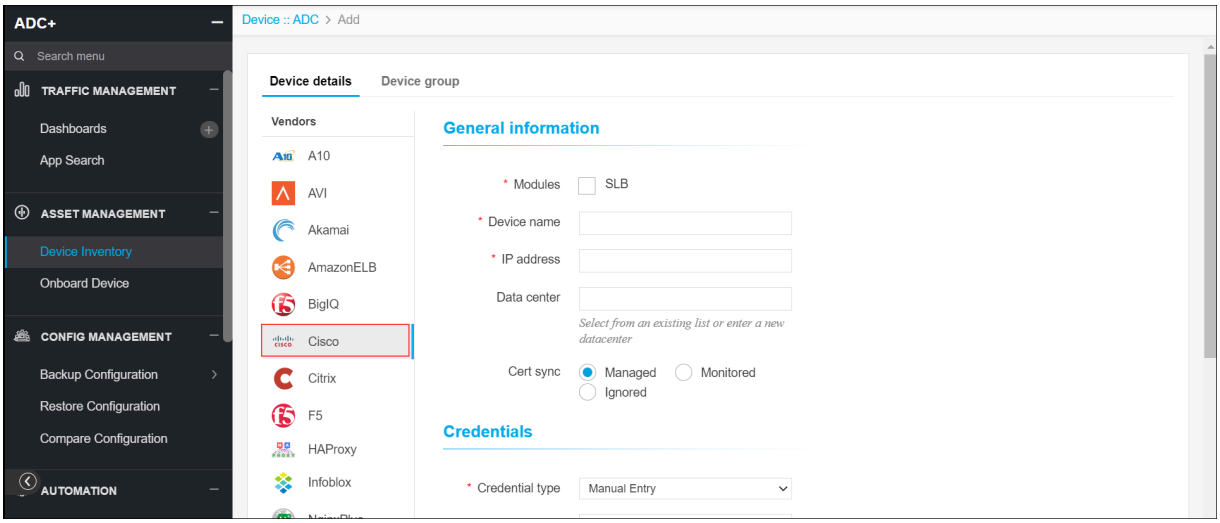
Cisco

- Adding Cisco Device
- Validating the Cisco Device Addition

Adding Cisco Device

To add a Cisco device:

1. Go to **Menu** > **ADC+** > **ASSET MANAGEMENT**.
2. Perform one of the followings:
   - Click **Device Inventory**, and then select **Add (+)** icon to navigate to the Device details page.
   - Click **Onboard Device** in the left navigation panel.
3. In the **Device details** page, select **Cisco** from the left sidebar.



4. Enter or select the field information in the **General information** section.

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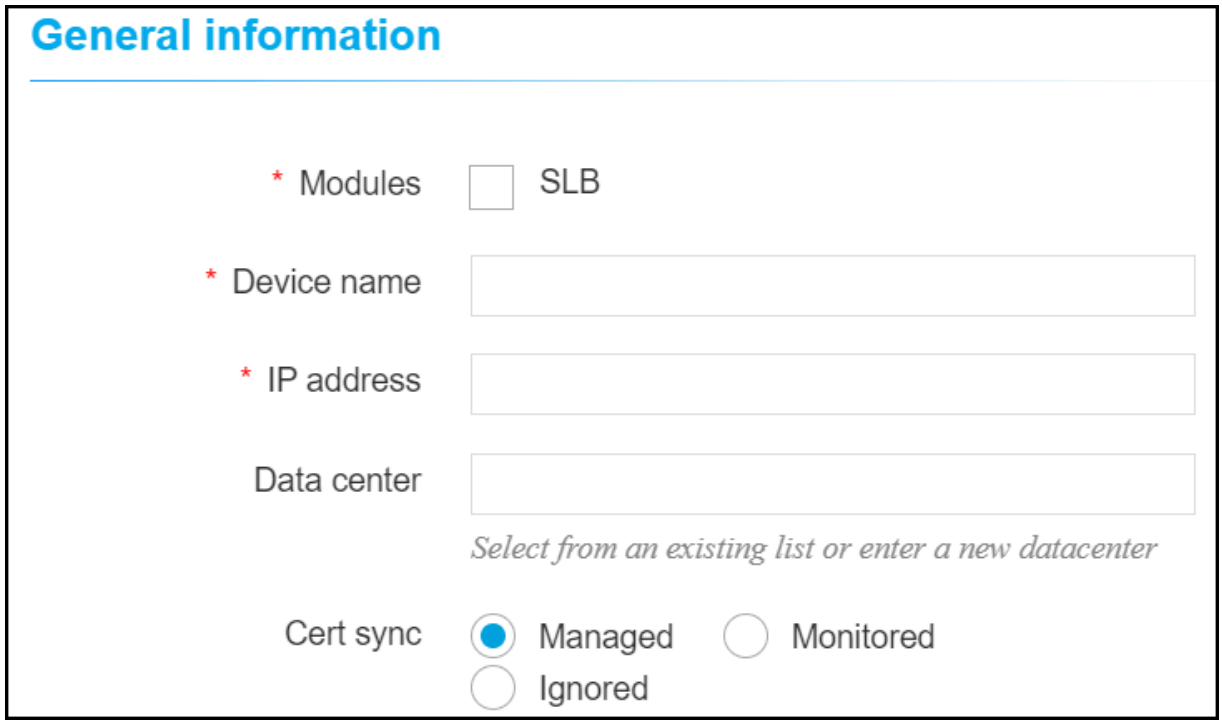

Field and Description Table

Name	Type	Mandatory	Description	Validation
*Module	Check box	Yes	SLB Module.	NA
*Device name	Text	Yes	Unique name of the device to be added.	Device name can only contain alphanumeric characters, '-' , '_' , '.' , '*' , '|' , '!' and spaces.
*IP Address	Text	Yes	IP Address of the BigIQ device.	IP address should be in IPv4 format.
Data center	Text	No	Datacenter name where the device is configured. The default value is Absecon.	Data center name can only contain alphanumeric characters, '-' , '_' , '.' , '*' , ':' , '|' and spaces.
*Cert Sync	Radio button	Yes	**Managed**: The certificates of the device can be managed. **Monitored**:	NA

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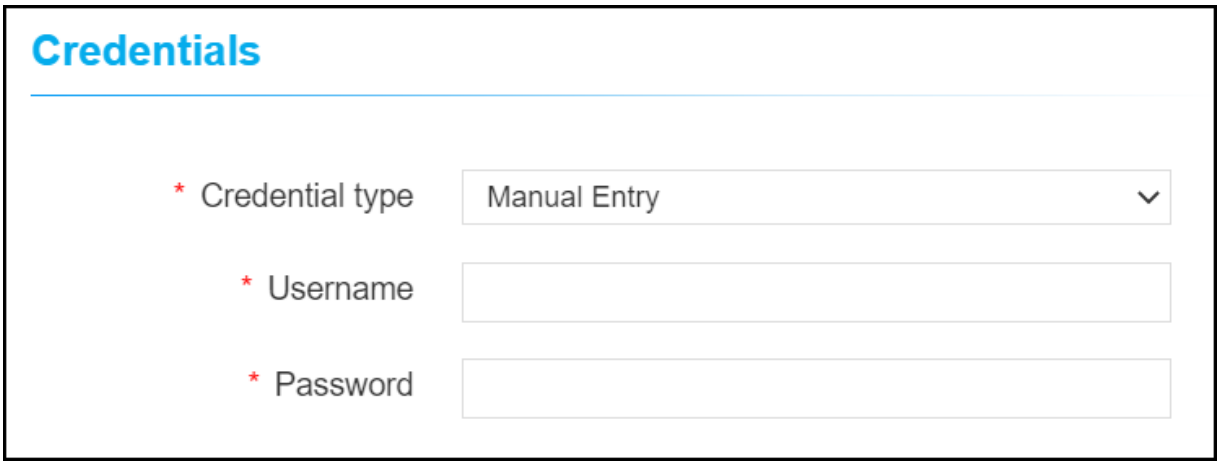
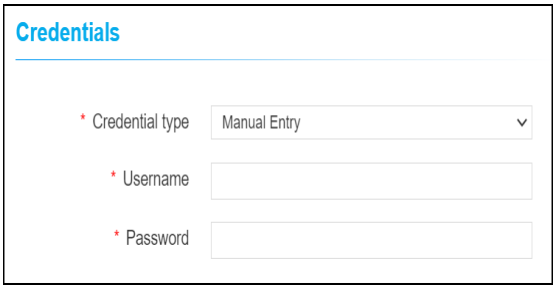
Name	Type	Mandatory	Description	Validation
			The certificates of the device can be discovered and can only be monitored. **Ignored**: The certificate sync can be ignored.	

5. Enter or select the field information in the **Credentials** section. You can select **Manual Entry** or **Credentials List**.



Field and Description Table

Name	Type	Mandatory	Description	Validation
*Credential type	Dropdown	Yes	**Manual entry**: The user should enter the username and password. 	NA

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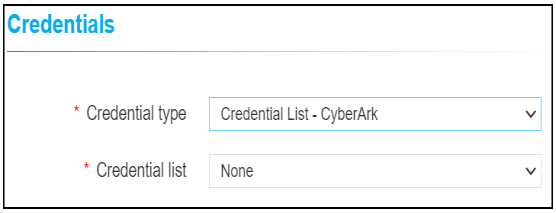
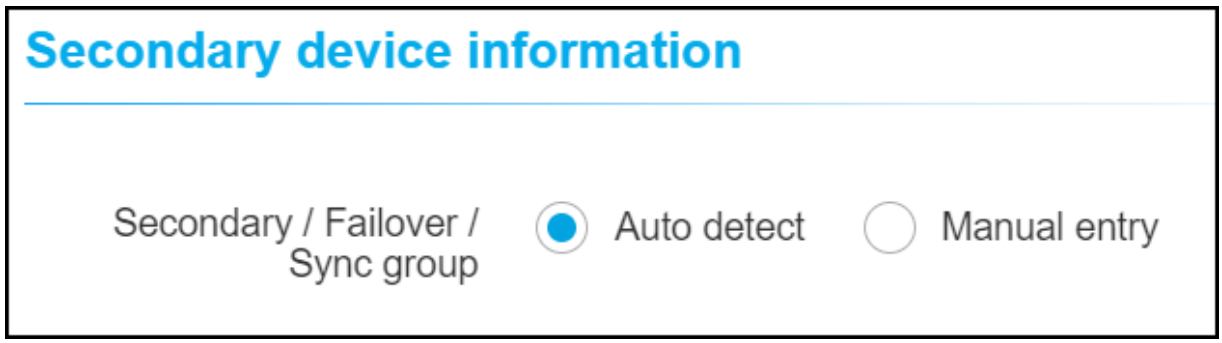
Name	Type	Mandatory	Description	Validation
			Credential List: The user can select the credential details which are already stored in the credential inventory page. 	
*Username	Text	Yes	Username of the Cisco device.	NA
*Password	Text	Yes	The password of the Cisco device.	NA

6. Enter or select the field information in the **Secondary device information** section.



Field and Description Table

Name	Type	Mandatory	Description	Validation
*Secondary device information	Radio button	Yes	**Auto detect**: The user should select this option to auto-detect and add the peer devices in the inventory. **Manual entry**: The user can use this option to add the peer devices manually.	NA

7. Click **Save**.

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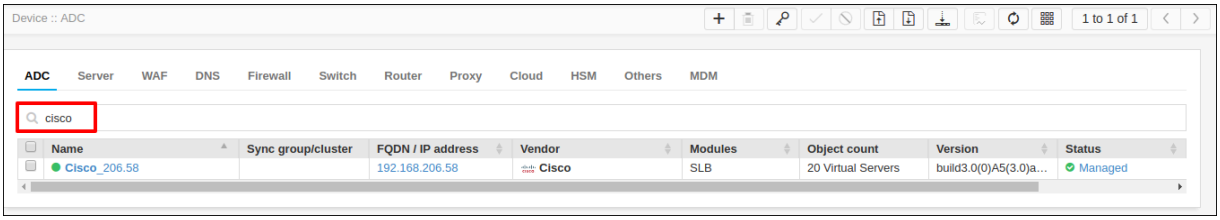
Validating the Cisco Device Addition

After adding the device, you can validate the device by searching device in the device inventory.

1. Go to **Menu** > **ADC+** > **ASSET MANAGEMENT** > **Device Inventory**.
2. Search the device name and validate whether the device is added successfully.



Citrix

- Adding Citrix Device
- Validating the Citrix Device Addition

Adding Citrix Device

To add a Citrix device:

1. Go to **Menu** > **ADC+** > **ASSET MANAGEMENT**.
2. Perform one of the followings:
   - Click **Device Inventory**, and then select **Add (+)** icon to navigate to the Device details page.
   - Click **Onboard Device** in the left navigation panel.
3. In the **Device details** page, select **Citrix** from the left sidebar.

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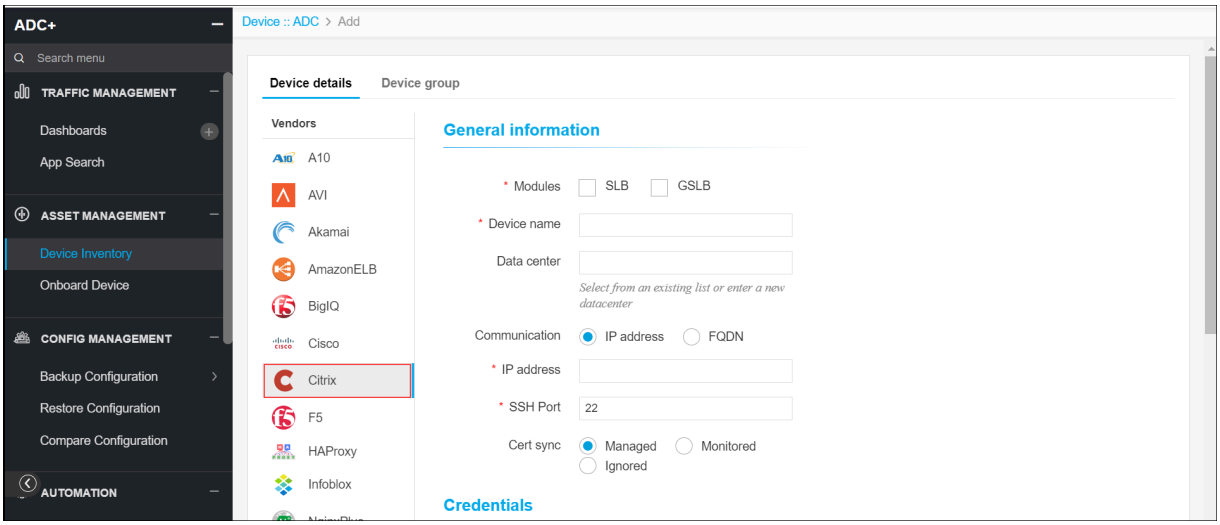
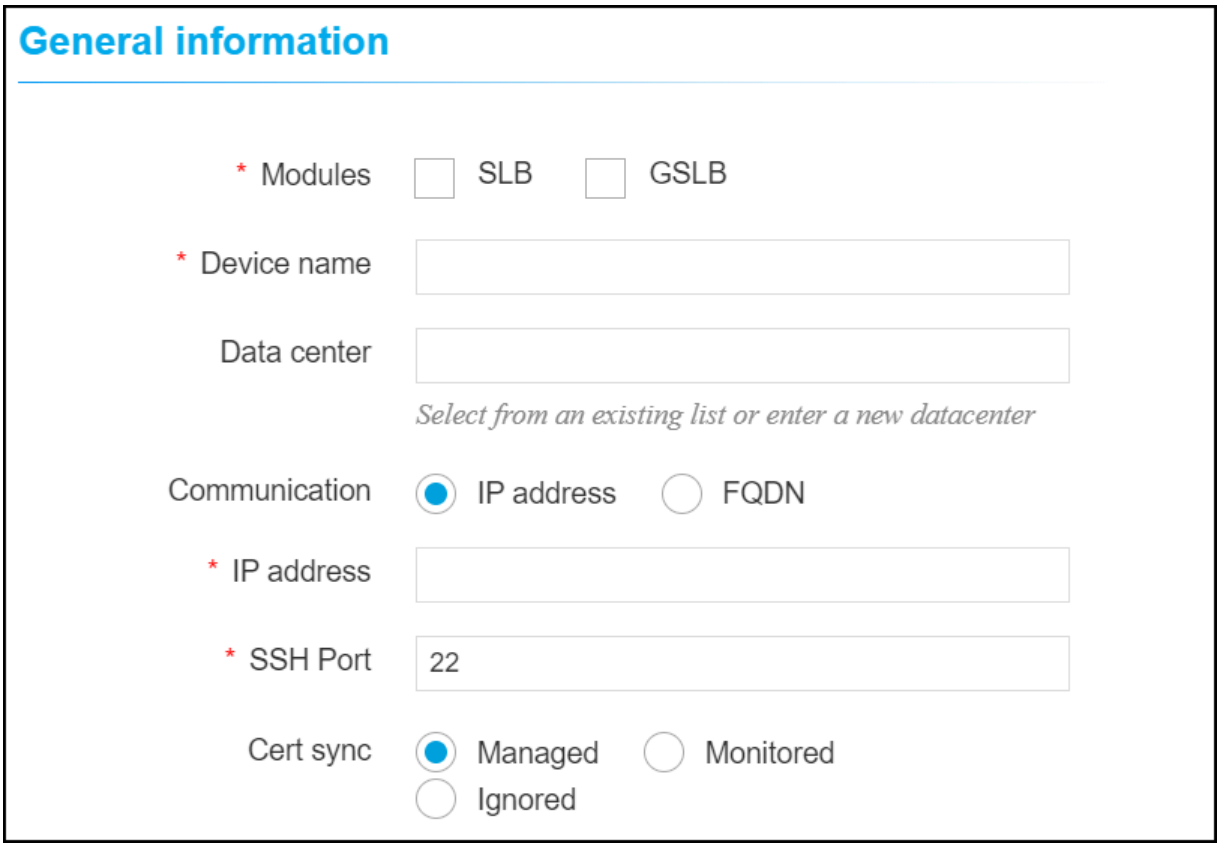


4. Enter or select the field information in the **General information** section.



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Field and Description Table

Name	Type	Mandatory	Description	Validation
*Module	Check box	Yes	SLB / GSLB Module.	NA
*Device name	Text	Yes	Unique name of the device to be added.	Device names can only contain alphanumeric characters, '-' , '_' , '.' , '*' , '|' , '!' and spaces.
Data center	Text	No	Datacenter name where the device is configured. The default value is Absecon.	Data center name can only contain alphanumeric characters, '-' , '_' , '.' , '*' , ':' , '|' and spaces.
*Communication	Radio button	Yes	Devices can be accessed using an IP address or FQDN.	NA
*IP Address	Text	Yes	The ipv4 address of the device.	The IP address should be in the right format.
*FQDN	Text	Yes	The FQDN of the device.	the FQDN should be in a valid format.
*SSH Port	Text	Yes	Communication port of the device.	Numbers only.
*Cert Sync	Radio button	Yes	**Managed**: The certificates of the device can be managed. **Monitored**: The certificates of the device can be monitored. **Ignored**: The certificate sync can be ignored.	NA

5. Enter or select the field information in the **Credentials** section. You can select **Manual Entry** or **Credentials List**.

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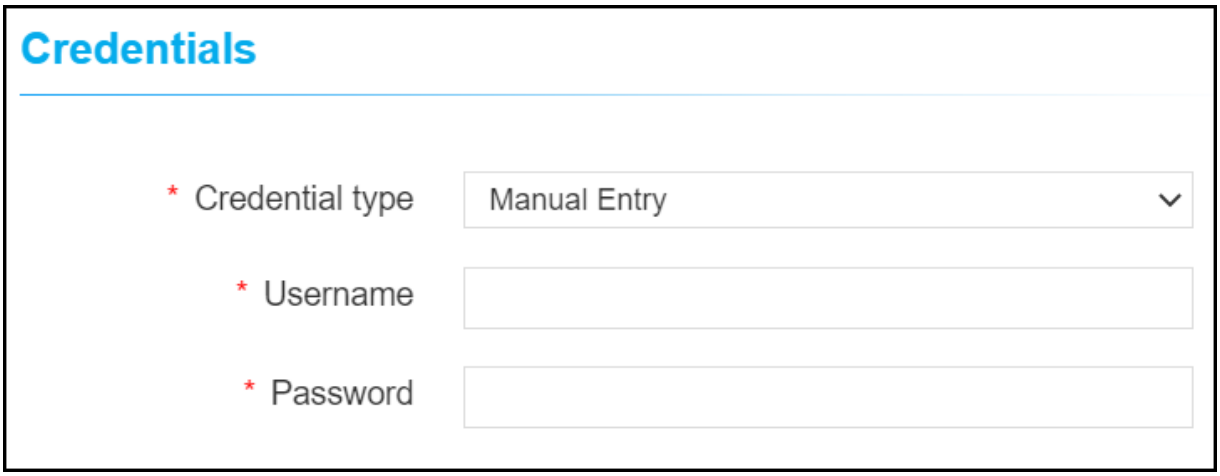
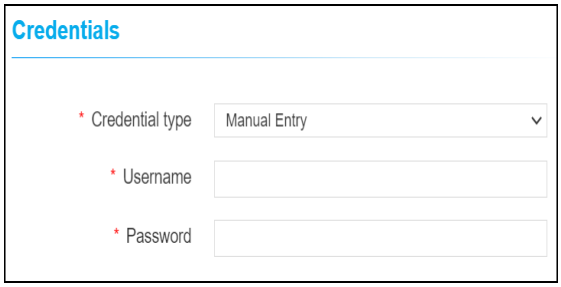
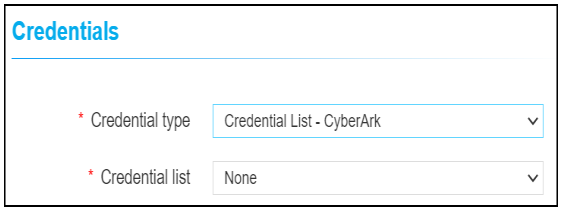


Field and Description Table

Name	Type	Mandatory	Description	Validation
*Credential type	Dropdown	Yes	**Manual entry**: The user should enter the username and password.  **Credential List**: The user can select the credential details which are already stored in the credential inventory page. 	NA
*Username	Text	Yes	The user name of the device.	NA
*Password	Text	Yes	The password of the device.	NA

6. Enter or select the field information in the **Secondary device information** section.

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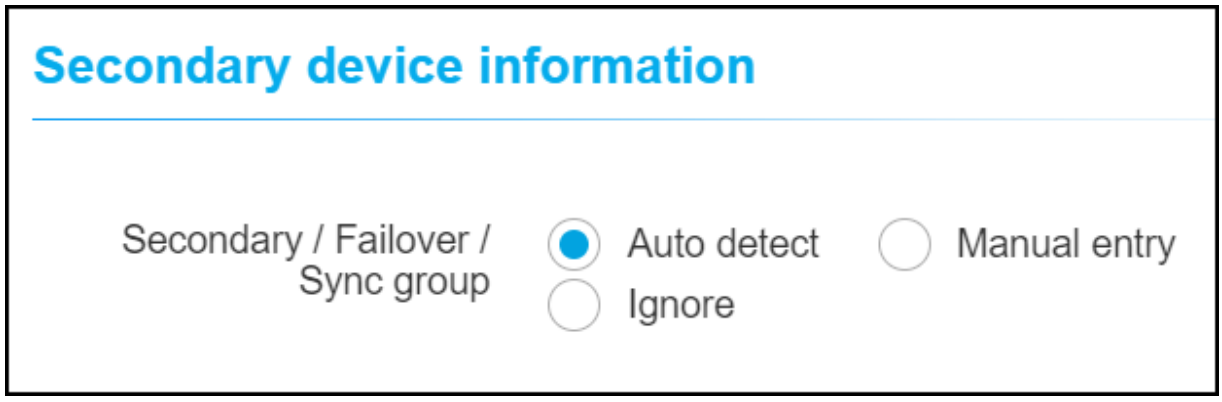

Field and Description Table

Name	Type	Mandatory	Description	Validation
Secondary device information	Radio button	Yes	**Auto detect**: The user should select this option to auto-detect and add the peer devices in the inventory page. **Manual entry**: The user can use this option to add the peer devices manually. **Ignore**: The user can use this option to ignore the auto-detection of the peer devices.	NA

7. Click **Save**.

Validating the Citrix Device Addition

After adding the device, you can validate the device by searching device in the device inventory.

1. Go to **Menu** > **ADC+** > **ASSET MANAGEMENT** > **Device Inventory**.
2. Search the device name and validate whether the device is added successfully.

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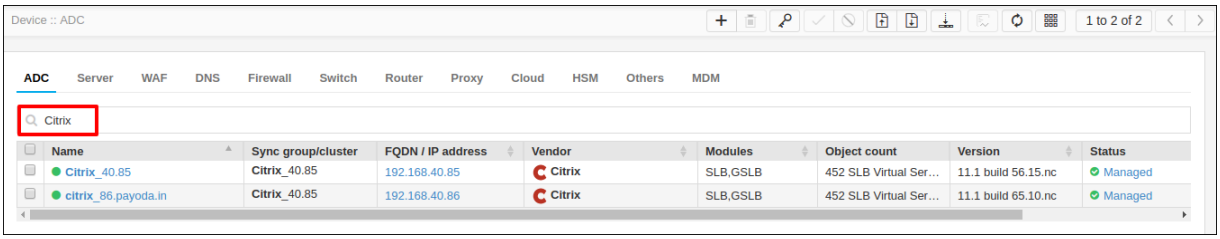


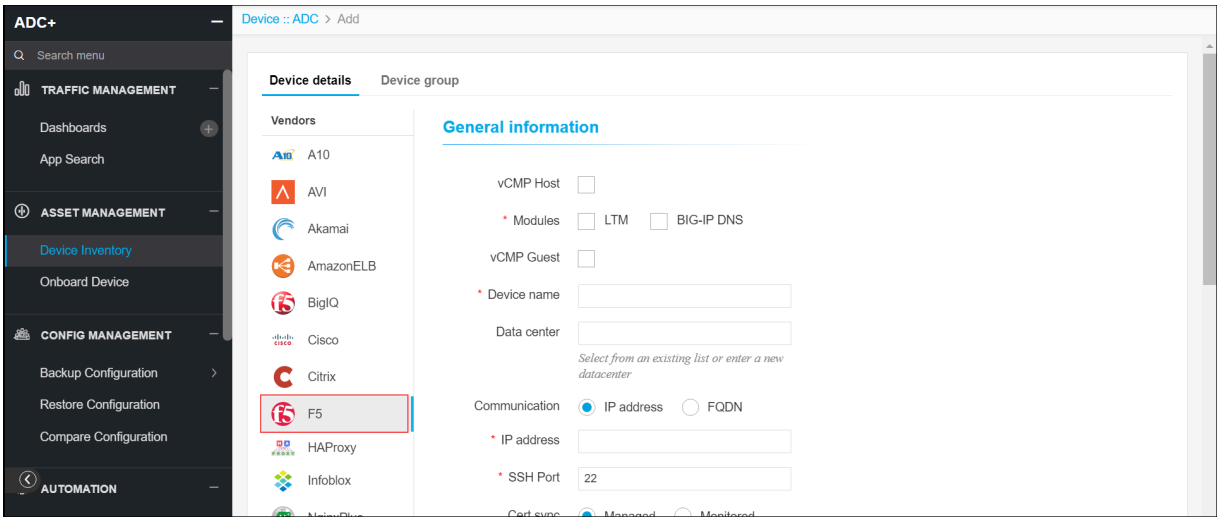
F5

- Adding F5 Device
- Validating F5 Device Addition

Adding F5 Device

To add a F5 device:

1. Go to **Menu** > **ADC+** > **ASSET MANAGEMENT**.
2. Perform one of the followings:
   - Click **Device Inventory**, and then select **Add (+)** icon to navigate to the Device details page.
   - Click **Onboard Device** in the left navigation panel.
3. In the **Device details** page, click on the **F5** icon.



4. Enter or select the field information in the **General information** section.

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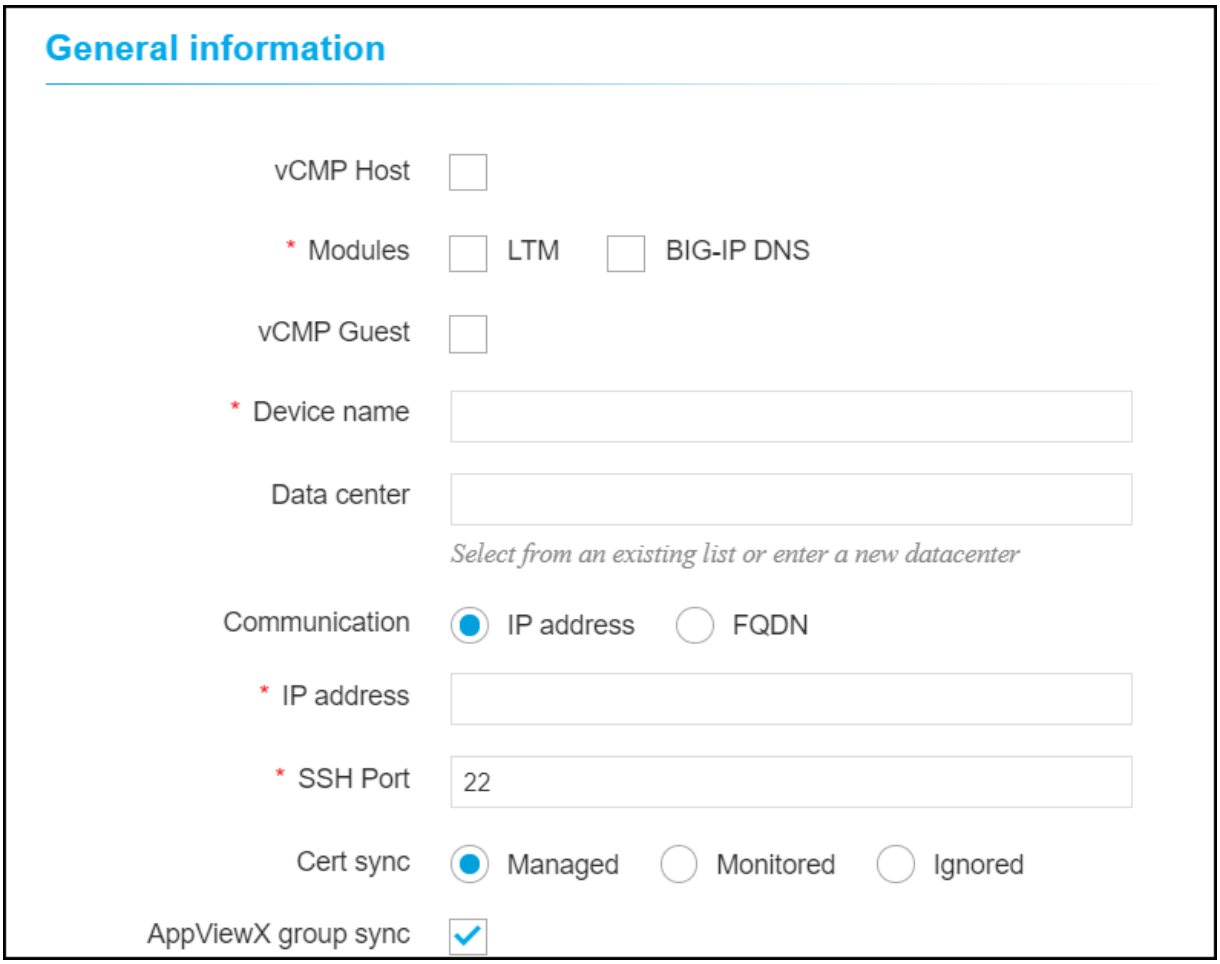

Field and Description Table

Name	Type	Mandatory	Description	Validation
VCMP Host	Check box	No	To add a device as a vcmb host, this checkbox should be checked.	NA
*Module	Check box	Yes	LTM / BIG-IP DNS Module.	NA
VCMP Guest	Check box	No	To add a device as a vcmp guest, this checkbox should be checked.	NA

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Name	Type	Mandatory	Description	Validation
*Device name	Text	Yes	Unique name of the device to be added.	Device names can only contain alphanumeric characters, '-' , '_' , '.' , '*' , '|' , '!' and spaces.
Data center	Text	No	Data center name where the device is configured. The default value is Absecon.	Data center name can only contain alphanumeric characters, '-' , '_' , '.' , '*' , ':' , '|' and spaces.
*Communication	Radio button	Yes	Devices can be accessed using an IP address or FQDN.	NA
*IP Address	Text	Yes	The ipv4 address of the device.	The IP address should be a valid IPv4 format.
*FQDN	Text	Yes	The FQDN of the device.	the FQDN should be in a valid format.
*SSH Port	Text	Yes	Communication port of the device.	Numbers only.
*Cert Sync	Radio button	Yes	**Managed**: The certificates of the device can be managed. **Monitored**: The certificates of the device can be monitored. **Ignored**: The certificate sync can be ignored.	NA
AppViewX Group Sync	Check box	No	This should be enabled if the user wants to sync the devices within the device group.	NA

5. Enter or select the field information in the **Credentials** section. You can select **Manual Entry** or **Credentials List**.

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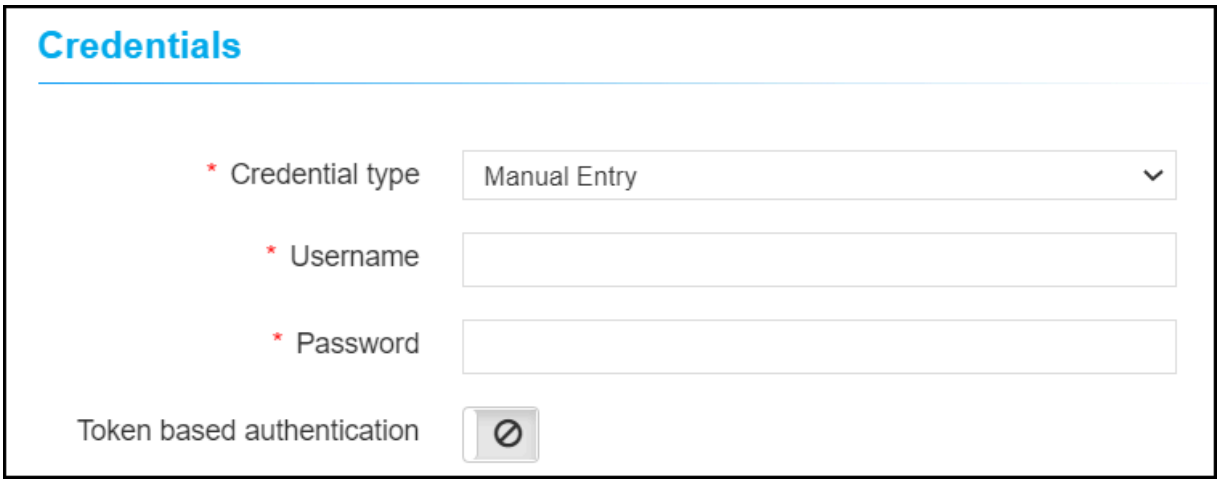
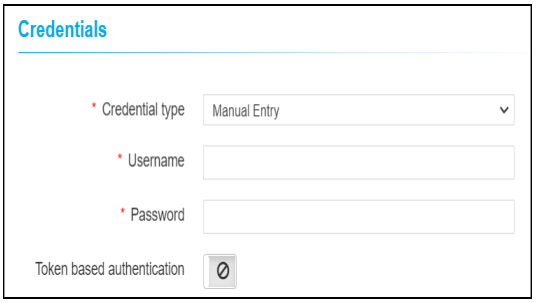
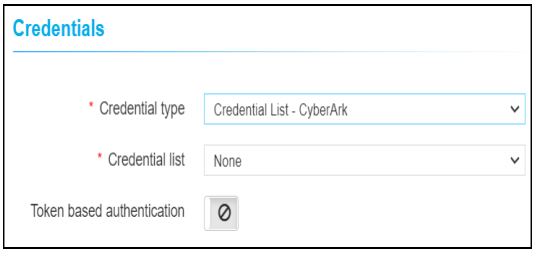


Field and Description Table

Name	Type	Mandatory	Description	Validation
*Credential type	Dropdown	Yes	**Manual entry**: The user should enter the username and password.  **Credential List**: The user can select the credential details which are already stored in the credential inventory page. For more details on secure authentication, refer to Platform User Guide. 	NA
*Username	Text	Yes	The user name of the device.	NA

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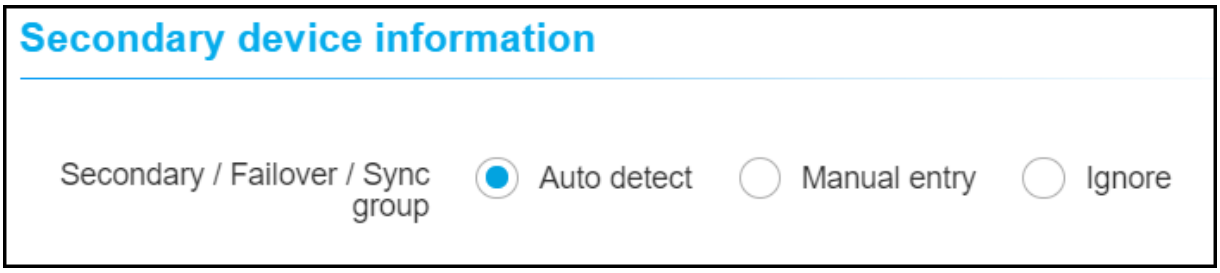
Name	Type	Mandatory	Description	Validation
*Password	Text	Yes	The password of the device.	NA
Token based authentication	Toggle button	No	To access the device REST API using token.	NA

6. Enter or select the field information in the **Secondary device information** section.



Field and Description Table

Name	Type	Mandatory	Description	Validation
Secondary device information	Radio button	Yes	**Auto detect**: The user should select this option to auto-detect and add the peer devices in the inventory page. **Manual entry**: The user can use this option to add the peer devices manually. **Ignore**: The user can use this option to ignore the auto-detection of the peer devices.	NA

7. Click **Save**.

Validating F5 Device Addition

After adding the device, you can validate the device by searching the device in the device inventory.

1. Go to **Menu** > **ADC+** > **ASSET MANAGEMENT** > **Device Inventory**.
2. From the device inventory page, search for the added F5 device name.

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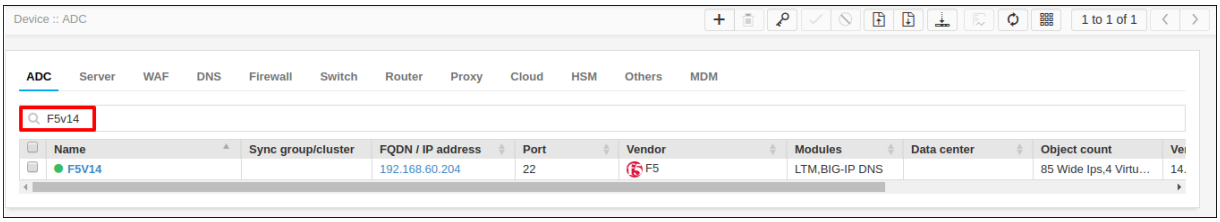


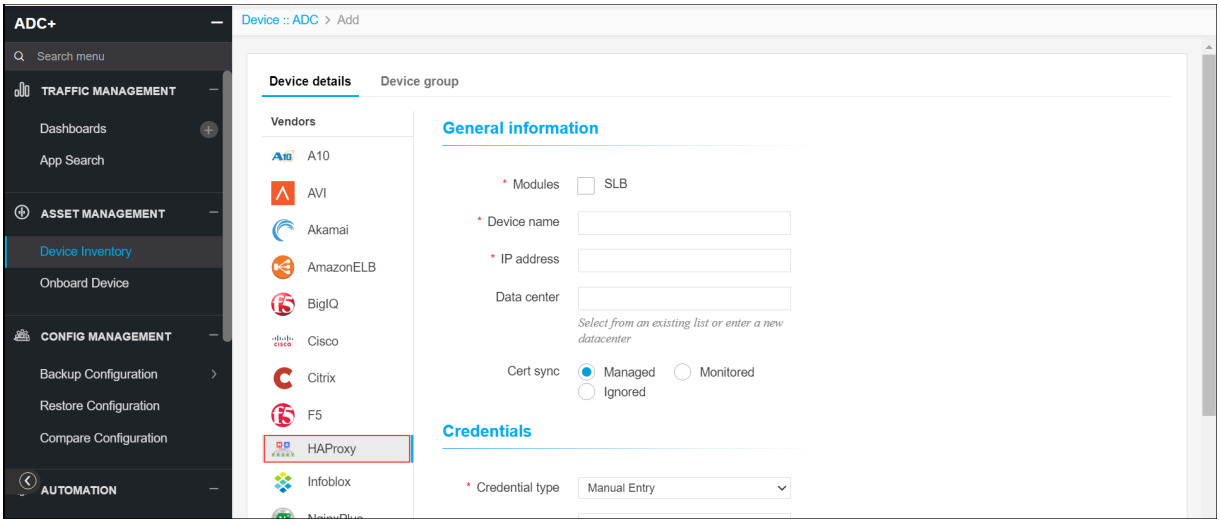
HAProxy

- Adding HAProxy Device
- Validating the HAProxy Device Addition

Adding HAProxy Device

To add a HAProxy device:

1. Go to **Menu** > **ADC+** > **ASSET MANAGEMENT**.
2. Perform one of the followings:
   - Click **Device Inventory**, and then select **Add (+)** icon to navigate to the Device details page.
   - Click **Onboard Device** in the left navigation panel.
3. In the **Device details** page, select **HAProxy** from the left sidebar.



4. Enter or select the field information in the **General information** section.

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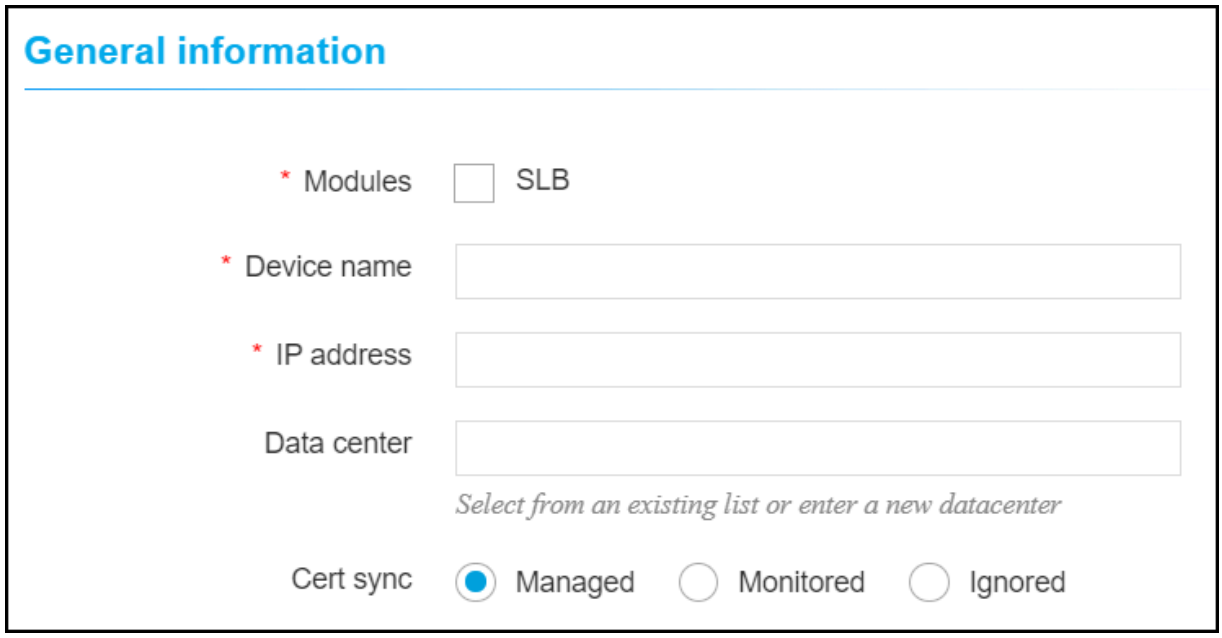

5. The following table provides the field description for adding ADC device details in the **General information** section:

Name	Type	Mandatory	Description	Validation
Device name *	Text	Yes	Unique name of the device to be added.	Device names can only contain alphanumeric characters, '-' , '_' , '.' , '*' , '|' , '!' and spaces.
IP Address *	Text	Yes	The ipv4 address of the device.	The IP address should be in the right format.
Data center	Text	No	Datacenter name where the device is configured. The default value is Absecon.	Data center name can only contain alphanumeric characters, '-' , '_' , '.' , '*' , ':' , '|' and spaces.
Cert Sync *	Radio button	Yes	Managed: The certificates of the device can be managed. Monitored: The certificates of the device can be monitored. Ignored:	NA

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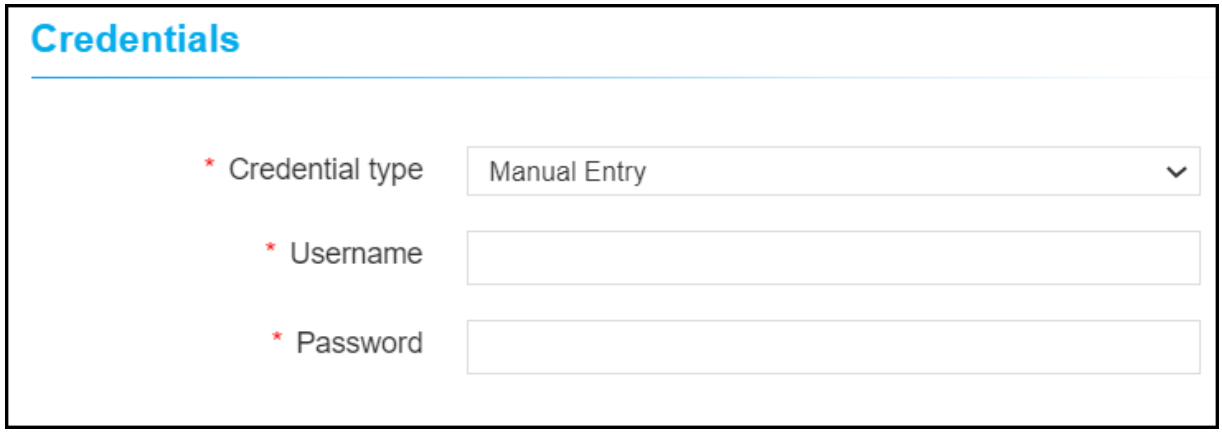
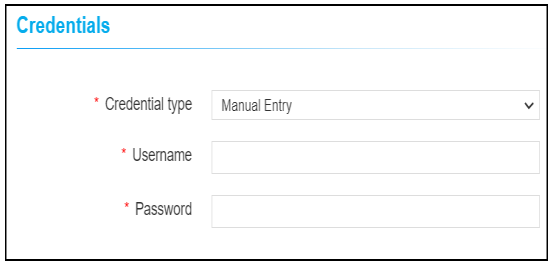
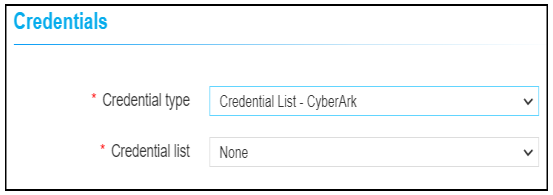
Name	Type	Mandatory	Description	Validation
			The certificate sync can be ignored.	

6. Enter or select the field information in the **Credentials** section. You can select **Manual Entry** or **Credentials List**.



Field and Description Table

Name	Type	Mandatory	Description	Validation
*Credential type	Dropdown	Yes	**Manual entry**: The user should enter the username and password.  **Credential List**: The user can select the credential details which are already stored in the credential inventory page. 	NA

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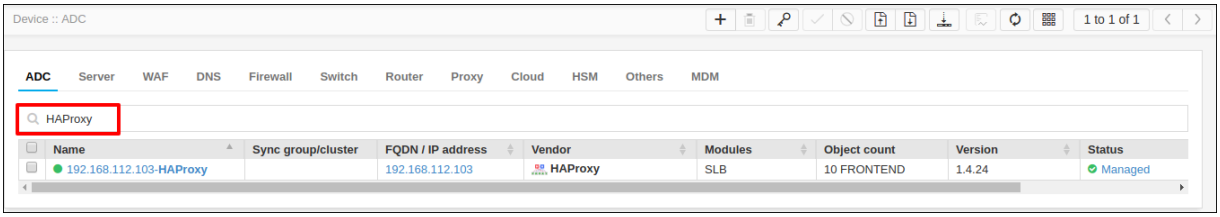
Name	Type	Mandatory	Description	Validation
*Username	Text	Yes	The user name of the device.	NA
*Password	Text	Yes	The password of the device.	NA

7. Click **Save**.

Validating the HAProxy Device Addition

After adding the device, you can validate the device by searching device in the device inventory.

1. Go to **Menu** > **ADC+** > **ASSET MANAGEMENT** > **Device Inventory**.
2. Search the device name and validate whether the device is added successfully.



InfoBlox

- Adding InfoBlox Device
- Validating the Infoblox Device Addition

Adding InfoBlox Device

To add an InfoBlox device:

1. Go to **Menu** > **ADC+** > **ASSET MANAGEMENT**.
2. Perform one of the followings:
   - Click **Device Inventory**, and then select **Add (+)** icon to navigate to the Device details page.
   - Click **Onboard Device** in the left navigation panel.
3. In the **Device details** page, select **Infoblox** from the left sidebar.

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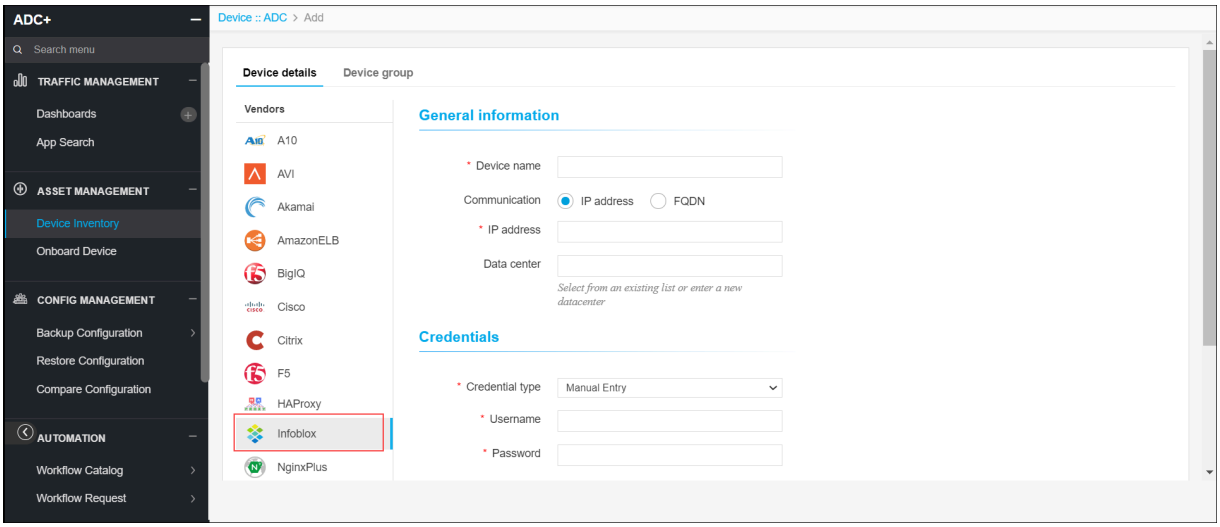
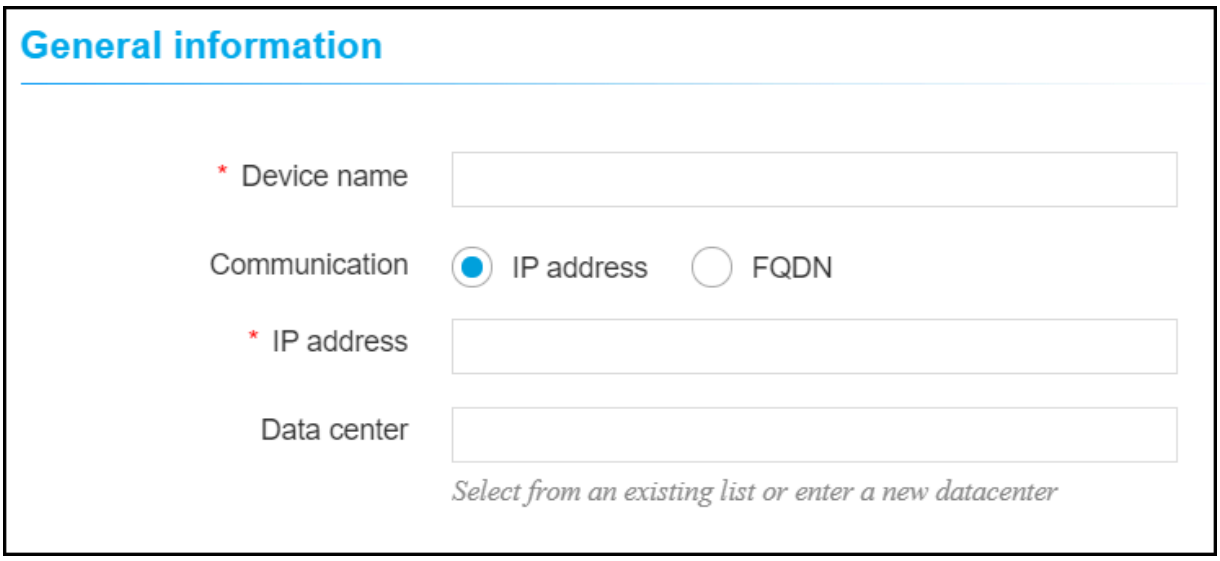


4. Enter or select the field information in the **General information** section.



Field and Description Table

Name	Type	Mandatory	Description	Validation
*Device name	Text	Yes	Unique name of the device to be added.	Device names can only contain alphanumeric characters, '-' , '_' , '.' , '*' , '|' , '!' and spaces.
Data center	Text	No	Datacenter name where the device is configured.	Data center names can only contain alphanumeric

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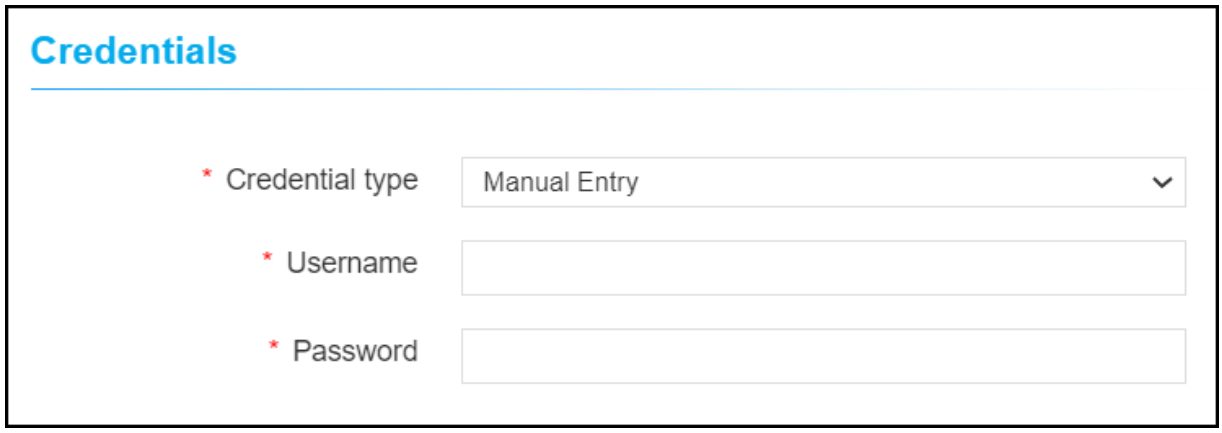
Name	Type	Mandatory	Description	Validation
			The default value is Absecon.	characters, '-' , '_' , '.' , '*' , ':' , '|' and spaces.
*Communication	Radio button	Yes	Devices can be accessed using an IP address or FQDN.	NA
*IP Address	Text	Yes	The ipv4 address of the device.	The IP address should be in the right format.
*FQDN	Text	Yes	The FQDN of the device.	the FQDN should be in a valid format.

5. Enter or select the field information in the **Credentials** section. You can select **Manual Entry** or **Credentials List**.



Field and Description Table

Name	Type	Mandatory	Description	Validation
*Credential type	Dropdown	Yes	**Manual entry**: The user should enter the username and password. **Credential List**: The user can select the credential details which are already stored in the credential inventory page.	NA
*Username	Text	Yes	The user name of the device.	NA
*Password	Text	Yes	The password of the device.	NA

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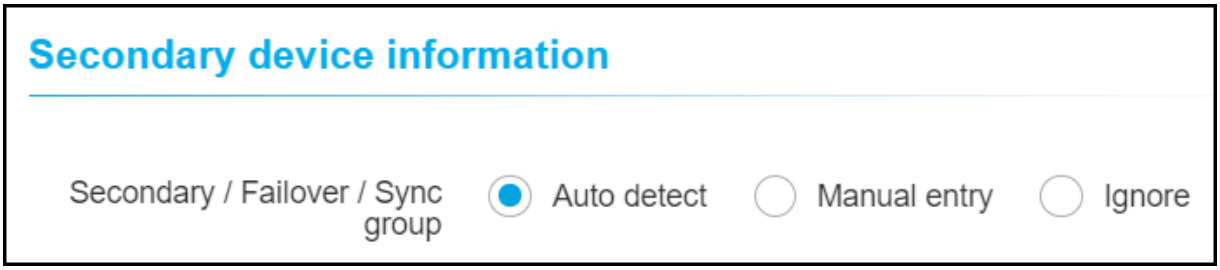
6. Enter or select the field information in the **Secondary device information** section.



Field and Description Table

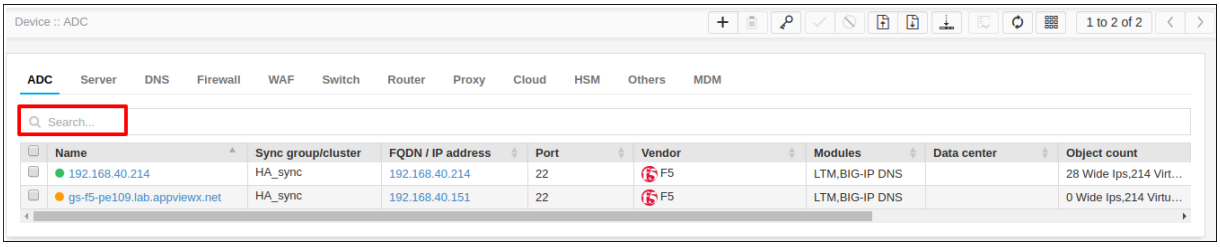
Name	Type	Mandatory	Description	Validation
Secondary / Failover / Sync group	Radio button	Yes	**Auto detect**: The user should select this option to auto-detect and add the peer devices in the inventory page. **Manual entry**: The user can use this option to add the peer devices manually. **Ignore**: The user can use this option to ignore the auto-detection of the peer devices.	NA

7. Click **Save**.

Validating the Infoblox Device Addition

After adding the device, you can validate the device by searching device in the device inventory.

1. Go to **Menu** > **ADC+** > **ASSET MANAGEMENT** > **Device Inventory**.
2. Search the device name and validate whether the device is added successfully.



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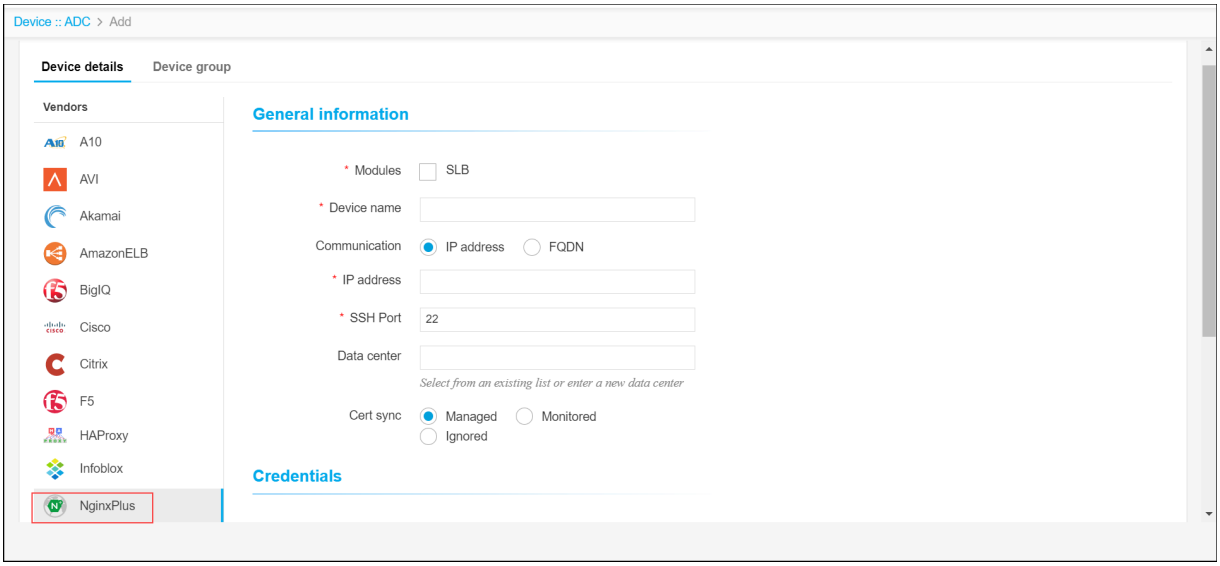
NginxPlus

- Adding NginxPlus Device
- Validating the NginxPlus Device Addition

Adding NginxPlus Device

To add an NginxPlus device:

1. Go to **Menu** > **ADC+** > **ASSET MANAGEMENT**.
2. Perform one of the followings:
   - Click **Device Inventory**, and then select **Add (+)** icon to navigate to the Device details page.
   - Click **Onboard Device** in the left navigation panel.
3. In the **Device details** page, select **NginxPlus** from the left sidebar.



4. Enter or select the field information in the **General information** section.

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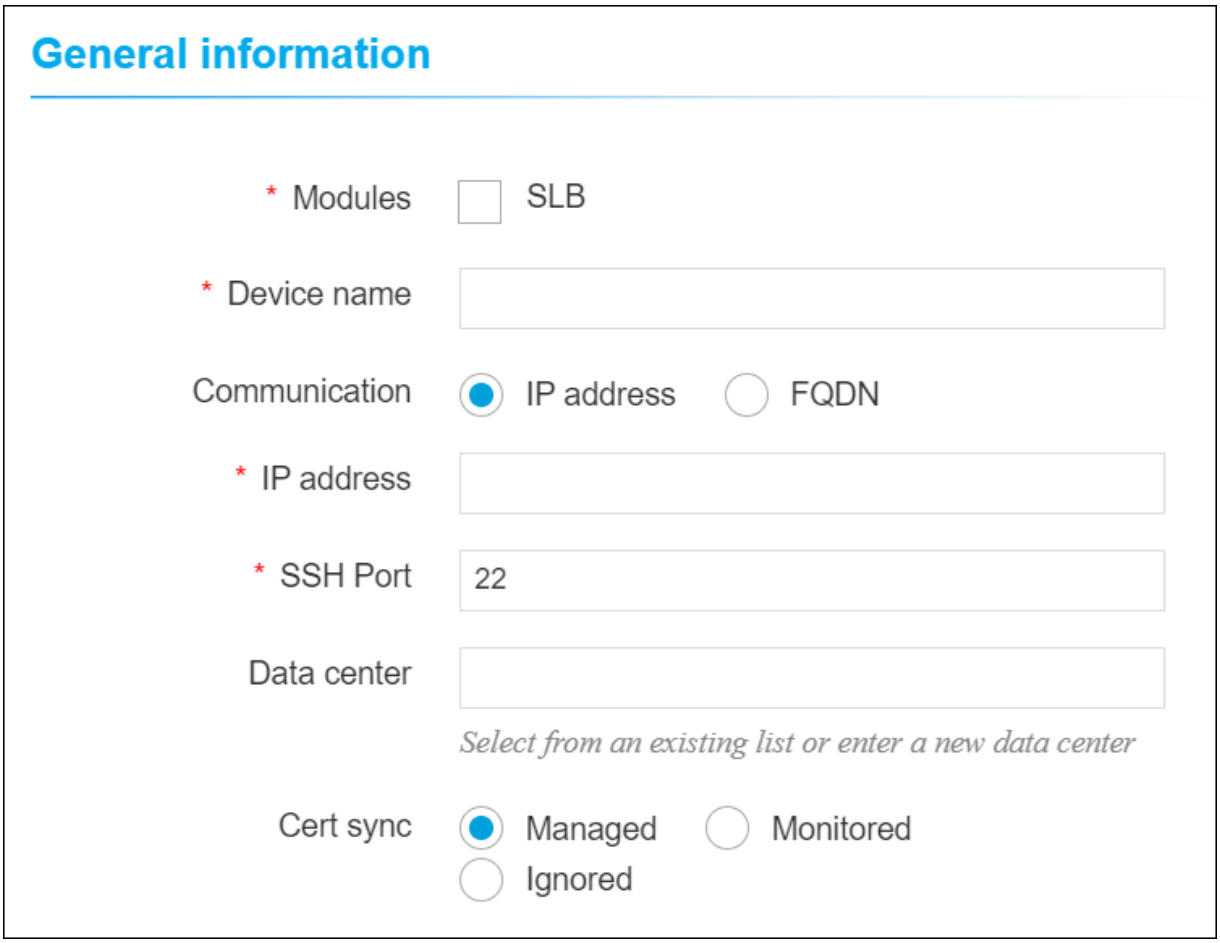

Field and Description Table

Name	Type	Mandatory	Description	Validation
Modules	Check box	Yes	SLB	NA
Device name	Text	Yes	Unique name of the device to be added.	Device names can only contain alphanumeric characters, '-' , '_' , '.' , '*' , '|' , '!' and spaces.
Communication	Radio button	No	Devices can be accessed using an IP address or FQDN.	No
IP Address	Text	Yes	The IPv4 address of the device.	The IP address should be in the right format.

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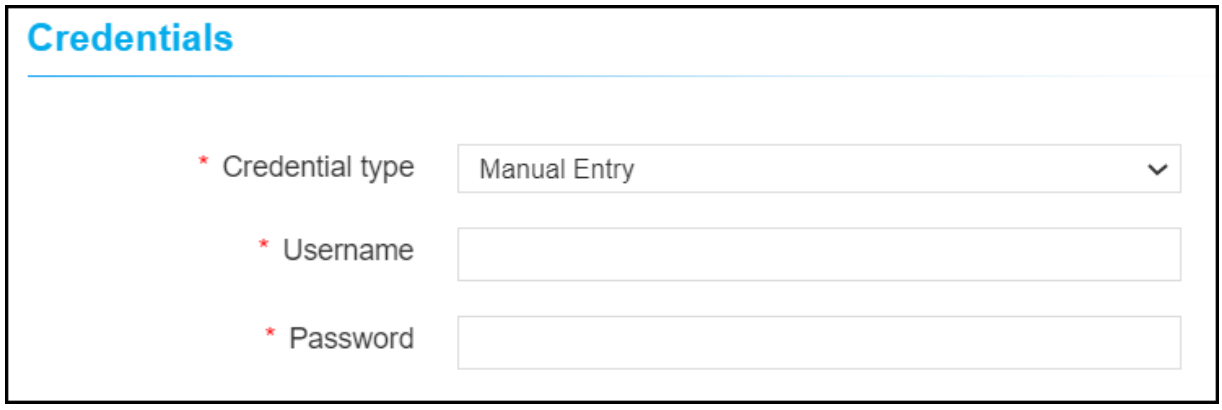
Name	Type	Mandatory	Description	Validation
SSH Port	Text	Yes	Communication port of the device.	Numbers only.
Data center	Text	No	Datacenter name where the device is configured. The default value is Absecon.	Data center name can only contain alphanumeric characters, '-' , '_' , '.' , '*' , ':' , '|' and spaces.
Cert Sync	Radio button	Yes	**Managed**: The certificates of the device can be managed. **Monitored**: The certificates of the device can be monitored. **Ignored**: The certificate sync can be ignored.	NA

5. Enter or select the field information in the **Credentials** section. You can select **Manual Entry** or **Credentials List**.



Field and Description Table

Name	Type	Mandatory	Description	Validation
Credential type	Dropdown	Yes	Manual entry: The user should enter the username and password.	NA

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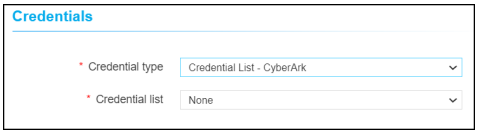
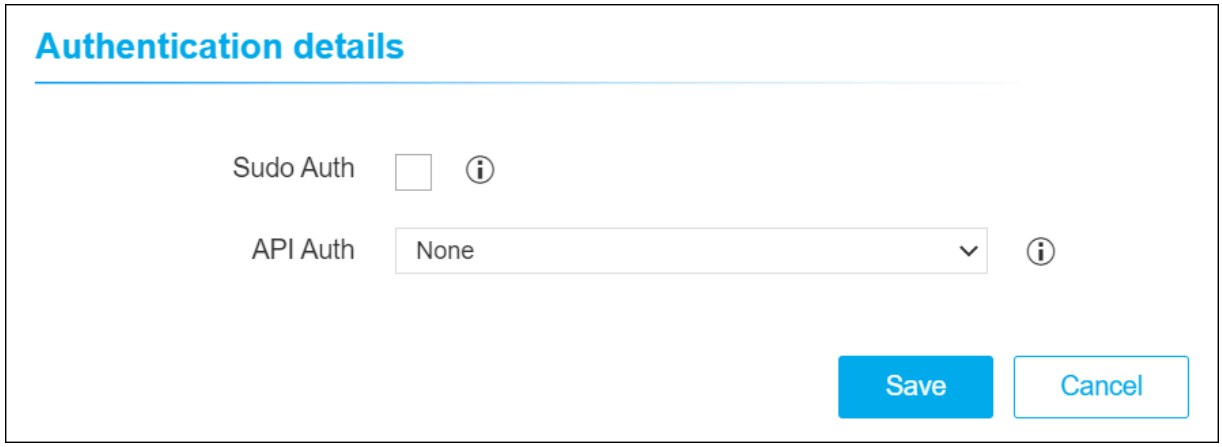
Name	Type	Mandatory	Description	Validation
			 Credential List: The user can select the credential details which are already stored in the credential inventory page. 	
Username	Text	Yes	The user name of the device.	NA
Password	Text	Yes	The password of the device.	NA

6. Enter or select the field information in the **Authenticaion details** section.



Field and Description Table

Name	Type	Mandatory	Description	Validation
Sudo Auth	Checkbox	No	select the **Sudo Auth** checkbox in the to enable the Sudo authentication for a non-root user credentials.	

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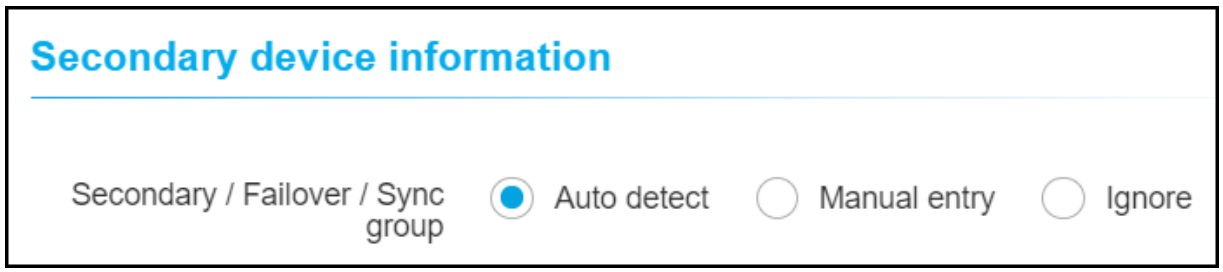
Name	Type	Mandatory	Description	Validation
API Auth	Dropdown	No	This option allows the basic or token based authentication for API enabled devices. The options are: • **Basic Auth** - select this option to configure HTTP authentication with password. You can choose device credentials or manual entry. • **Token Auth** - select this option to enter the JSON Web tokens for token based authentication.	

7. Enter or select the field information in the **Secondary device information** section.



Field and Description Table

Name	Type	Mandatory	Description	Validation
Secondary / Failover / Sync group	Radio button	Yes	**Auto detect**: The user should select this option to auto-detect and add the peer devices in the inventory page. **Manual entry**: The user can use this option to add the peer devices manually. **Ignore**: The user can use this option to ignore the auto-detection of the peer devices.	NA

8. Click **Save**.

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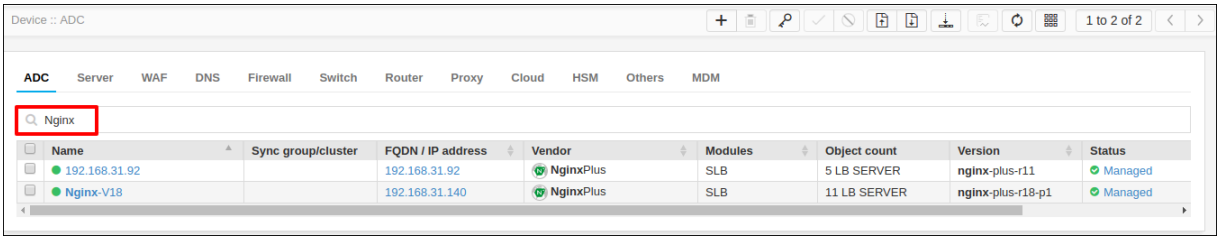
Validating the NginxPlus Device Addition

After adding the device, you can validate the device by searching device in the device inventory.

1. Go to **Menu** > **ADC+** > **ASSET MANAGEMENT** > **Device Inventory**.
2. Search the device name and validate whether the device is added successfully.



Device Group

- Group Overview
- Add an ADC Group
- Modify an ADC Group
- Delete an ADC Group

Group Overview

Device group functionality enables categorizing the ADC devices as per custom demands. For example, ADC devices can be grouped based on business units, data centers, global locations, users, or custom needs. This will be helpful in accessing devices of similar types. These custom device groups are efficiently used while scheduling group-based backups and configuring a Heatmap Widgets for monitoring health and triggering automation changes.

Add an ADC Group

To add an ADC group to AppViewX:

1. Go to **Menu** > **ADC+** > **Asset Management** > **Device Group**.
   The **Group** screen opens.
2. In the **ADC** tab, click the + (**Add**) button in the Command bar.

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3. On the **Add** screen, enter the name of the new group. (Recommended) Enter a description of the group to help users identify it.
4. In the Device selection field, click the » (**Assign item**) icon beside each device you want to include in the group.
5. When you have finished assigning devices to the group, click **Save** to add them to the system.

> **Note:** Rather than adding devices manually, you can click the Add search string link and create a search string that automatically assigns all existing devices that match the filter criteria to the ADC group. The benefit of using a search string rather than selecting devices manually is that the search string continues to work in the background, auto-assigning all new devices to the ADC group if the devices match the search criteria you set up.

Modify an ADC Group

To modify an ADC group to AppViewX:

1. Go to the **Menu** > **ADC+** > **ASSET MANAGEMENT** > **Device Group**.
   The **Group** screen opens.
2. If the ADC group whose details you want to modify is not displayed on the screen, use the search field to locate it.
3. In the **ADC** tab, select the checkbox beside the name of the ADC group.
4. Click the **Modify** button in the Command bar.
5. On the Modify screen that appears, make whatever changes you want to the content.
6. Click **Update** to save your changes.

Delete an ADC Group

To delete an ADC group to AppViewX:

1. Go to the **Menu** > **ADC+** > **ASSET MANAGEMENT** > **Device Group**.
   The Group screen opens.
2. Select the checkbox beside the group you want to delete.
3. Click the (**Delete**) button in the Command bar.
4. On the confirmation screen that pops up asking you if you are sure you want to proceed, click **Yes**.
5. The group is then removed from the AppViewX system.

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Config Management

- Backup Configuration
- Restore Configuration
- Compare Configuration

Backup Configuration

- Overview
- Backup Configuration Management - Overview
- Benefits of Configuring Backup
- Create a Device Backup Group
- Delete a Device Backup Group
- Edit the Details of a Backup Group
- Initiate Instant Device Backup
- Schedule a Device Backup
- View the Backup Schedule for a Device
- Delete the Backup and Restore History for a Device
- Download the Backup and Restore History for a Device
- View the Backup and Restore History for a Device
- Edit the Settings of the Backup Screen

Overview

Manage the complete backup of your devices stored in a central repository in AppViewX. Define your own groups as per the business unit or data center and scheduled backups as needed.

The Backup groups are listed with the devices and their respective archives (with timestamp). Click on the device name to get into the details - A detailed Archive management screen appears that allows you to do the following:

- Click on the Archive to view the file/config within the archive.
- Download the complete archive or individual files.

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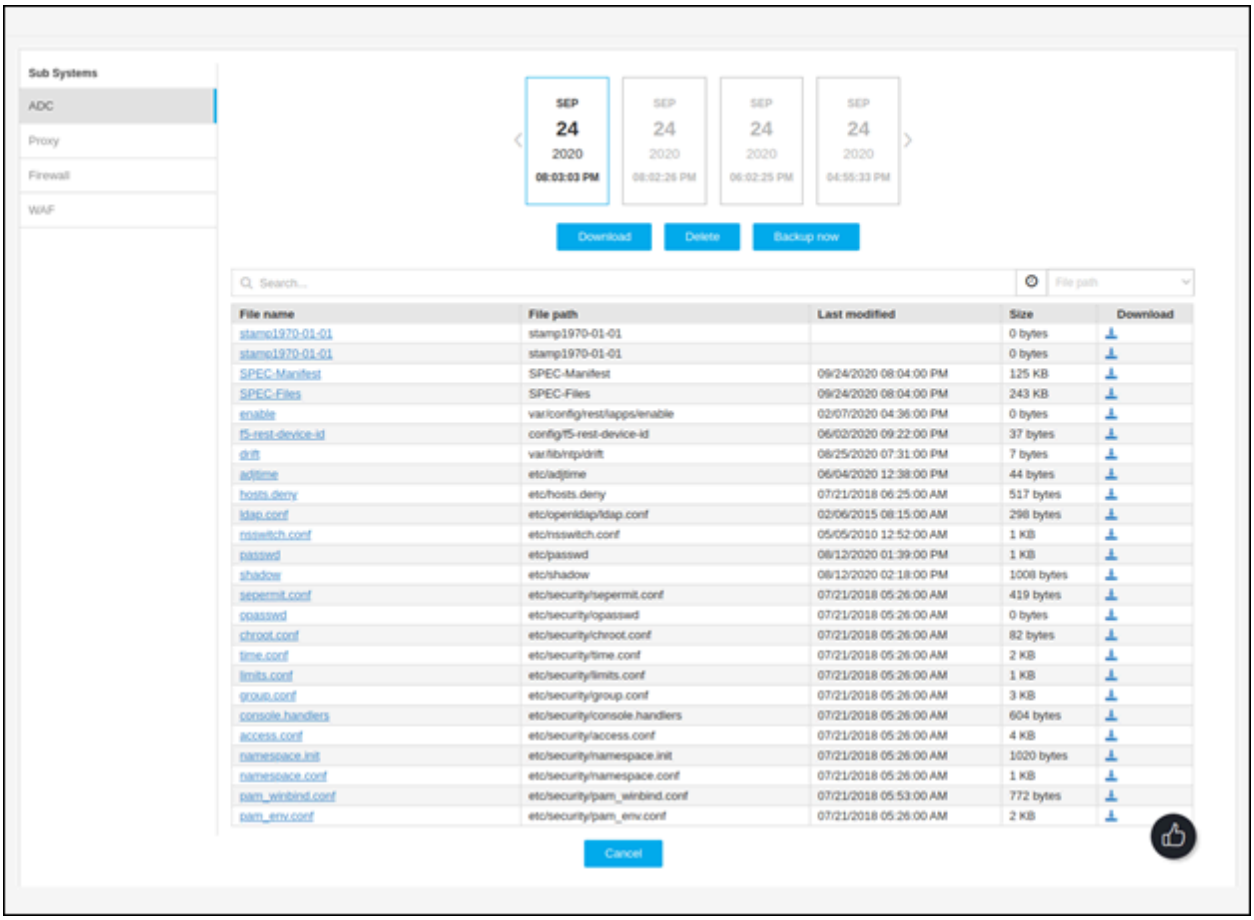
- Delete the selected archives
- Generate Instant backup



Backup Configuration Management - Overview

Application Delivery Controller solution enables periodical backups to be done on a manual basis or with a scheduling system, which ensures that the entire config archives of all devices are added and managed in a central repository with AppViewX. Along with the ability to perform the backup, you can also restore the archive back to the device either complete archive of device or object level (Virtual Server, Wideip, Monitor, policy, etc.) based on the requirement (for example, restore only one virtual server that was misconfigured during modifications).

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Benefits of Configuring Backup

- Ability to compare between two archives to see exactly what changes have taken place between the time frame of archive 1 (vs) archive 2.
- Essential details can be viewed and downloaded as pdf such as the files within the backup folder bigip, conf, etc. for your reference
- If the backup is scheduled on a regular basis, whatever misconfigurations or misbehavior of network outage or power failure on the device can be recovered and restored for valid configuration data.
- Manage your network configuration by automating the backups, track and report network changes and ensure they are compliant with the defined policies.
- Audit the configuration drift and prevent unauthorized or unwanted changes by comparing the configuration across devices visually and restore the changes to adhere to the standards.

Create a Device Backup Group

A device backup group is a container used to store all of the backups and restore records for a particular group within the AppViewX system.

To create a device backup group:

1. Go to **Menu** > **ADC+** > **CONFIG MANAGEMENT** > **Backup Configuration** > **Create Backup**.
   The **Create** screen opens.

   Note: Rather than adding devices manually, you can click the Add search string link and create a search string that automatically assigns all existing devices that match the filter criteria to the backup group. The benefit of using a search string rather than selecting devices manually is that the search string continues to work in the background, auto-assigning all new devices to the backup group if the devices match the search criteria you set up.

2. Enter a name for the backup group.
3. (Recommended) Enter a description of the group that makes it easy for users to determine what sort of device backups are found within the group.
4. Select the **Device** or **Device Group** radio button based on how you want to define the device backup.
5. In the Available devices field, click the » (**Assign item**) icon beside each device whose backups and restores you want to include in the group.

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6. In the **scheduling** field, select either the **Scheduler** radio button and then set the frequency, starting date, and time for the backups, or select the **Generate** now radio button to start the backup as soon as you click Save.
7. In the **Email configuration** field, enter the email addresses, separated by commas, of all users who should be sent a copy of the backup.
8. (Recommended) Enter a short, clear description in the **Subject** field so that it will help the recipients understand why they are receiving the email: for example, "Weekly backup of ADC devices."
9. Click **Save**.

> **Note:** You can customize the archive count for storing the daily, weekly, monthly, and yearly backups individually. Using this feature, you can maintain scheduled archives without it being overwritten by instant backups.

Delete a Device Backup Group

To remove a device backup group from the AppViewX system:

1. Go to **Menu** > **ADC+** > **CONFIG MANAGEMENT** > **Backup Configuration** > **Manage Backups**.
   The **Backup** tab opens.
2. Click the (**Delete**) icon against the device backup group that you want to delete.
   The Confirmation pop-up opens.
3. In the Confirmation pop-up, you have an option to enable Retain the generated backups. This option is enabled by default.

> **Note:** The retained backups will be moved to the Default group for later references.

4. Click **Yes** to confirm that you want to delete the device backup group.

> **Note:** To discard the deletion, click **No**.

Edit the Details of a Backup Group

To edit the details of a device backup group:

1. Go to **Menu** > **ADC+** > **CONFIG MANAGEMENT** > **Backup Configuration** > **Manage Backups**.
   The **Backup** tab opens.

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2. In the list of backup groups on the screen, click the (**Edit**) icon for the device backup group you want to modify.
   The **Modify** screen opens.
3. In the **Modify** screen, update description, add/remove devices, change scheduler interval, and Email options.
4. Click **Save**.

Initiate Instant Device Backup

A device backup group is a container used to store all of the backups and restore records for a particular group within the AppViewX system.

To create an instant device backup group:

1. Go to **Menu** > **ADC+** > **CONFIG MANAGEMENT** > **Backup Configuration** > **Manage Backups**.
   The **Backup** tab opens.
2. If the **Backup** tab is not displayed by default, click to open it.
3. In the list of backup groups on the screen, click the (**Expand**) icon for the device you want to back up immediately.
4. Click the **Device name** link in the table that appears.
5. On the **Archive details** screen that appears, click **Backup Now**.

Schedule a Device Backup

To schedule a device backup:

1. Go to **Menu** > **ADC+** > **CONFIG MANAGEMENT** > **Backup Configuration** > **Manage Backups**.
   The **Backup** tab opens.
2. Click the **Create** button in the Command bar.
3. On the **Create** screen that opens, enter a name for the backup you are about to schedule.
4. (Optional) Enter a description of the backup.
5. In the **Available devices** field, click the **Assign** icon beside each device you want to add to include in the backup.
6. Select the **Scheduler** radio button.
7. Depending on how often you want to schedule a backup, select the Daily, Weekly, Monthly, or Yearly radio button.

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8. Type the starting date of the backup or click the (**Starting date**) icon and select the date from the popup screen that appears.
9. Type the starting time for the backup or click the (**Time**) icon and select a start time using the sliding bars for Hour and Minute. When you are finished, click Done to close the popup screen.
10. (Optional) If you want certain users to be notified of the backup generation status (success or failure) via an email, enter their email addresses separated by commas in the To field of the Email configuration section, then enter a subject that will help the recipients understand why they are receiving the email: for example, "Weekly backup of ADC devices."

> **Note:** Email notifications will be sent for each device within the backup group. The successful backup notification will have the archive attachment in .ucs format via email.

11. Click **Save** to finish scheduling the backup.

> **Note:**
> - Rather than adding components manually, you can click the Add search string link and create a search string that automatically assigns all existing devices that match the search criteria. The benefit of using a search string rather than selecting devices manually is that the search string continues to work in the background, auto-assigning all new devices to the backup if the devices match the search criteria you set up.
> - The minute bar has only two settings: to the left, representing the top of the hour (:00) and to the right, representing half-past the hour (:30).

View the Backup Schedule for a Device

To view the backup schedule for a device:

1. Go to **Menu** > **ADC+** > **CONFIG MANAGEMENT** > **Backup Configuration** > **Manage Backups**. The **Backup** tab opens.
2. In the **Backup** tab, Hover your mouse over the Calendar icon of the device whose backup schedule you want to view.
3. A popup box appears, listing the frequency, start date, and start time of backups for the selected device.

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Note: If a device has no backups scheduled, no calendar icon appears in its row in the device table, as is the case for the a10 device that appears in the image above.

Delete the Backup and Restore History for a Device

To delete the Backup and Restore history:

1. Go to **Menu** > **ADC+** > **CONFIG MANAGEMENT** > **Restore Configuration**.
   The **Restore** tab opens.
2. In the list of backup groups on the screen, click the ✚ (**Expand**) icon for the device backup group whose backup and restore history you want to delete.
3. In the table that appears, click the Device Name link for the device whose history you want to delete.
4. On the **Archive details** screen that appears, click the **Delete** button.
5. On the popup screen that appears, click **Yes** to confirm that you want to delete the backup and restore history for the device group.

Download the Backup and Restore History for a Device

To download the Backup and Restore history:

1. Go to **Menu** > **ADC+** > **CONFIG MANAGEMENT** > **Restore Configuration**.
   The **Restore** tab opens.
2. In the list of backup groups on the screen, click the ✚ (**Expand**) icon for the device backup group that contains the device whose history you want to download.
3. In the table that appears, click the Device name link for the device whose history you want to download. The Archive details screen appears, listing all of the back-ups and restore events for the device.

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4. Perform one or both of the following download actions:
   - Scroll through the date range at the top of the screen, click on a specific date, then click the Download button to download all backup and restore events that occurred on that date for the device.
   - Use the search field and calendar filter to locate specific backups or restore events based on filename, file path, or date range, then click the (**Download**) icon for each result you want to download.

View the Backup and Restore History for a Device

To view the Backup and Restore history:

1. Go to **Menu** > **ADC+** > **CONFIG MANAGEMENT** > **Restore Configuration**.
   The **Restore** tab opens.
2. In the list of backup groups on the screen, click the (**Expand**) icon for the device backup group that contains the device whose history you want to view.
3. In the table that appears, click the Device name link for the device whose history you want to view.
4. The Archive details screen appears, listing all of the back-ups and restore events for the device.
5. (Optional) Use the search field and calendar filter to locate specific backup or restore events based on filename, file path, or date range.

Edit the Settings of the Backup Screen

The device backups are referred to as Archives. Customize the Archives limits per device (maximum of 80 archives per device can be configured) through the customization option. Upon crossing the limit, the oldest archive will be overwritten automatically. You can also distribute the archive count against Daily, Weekly, Monthly, and Yearly flags so that scheduled archives are not overwritten soon. Save the changes upon configuration.

To edit the settings of the Backup screen, complete the following steps:

1. Go to **Menu** > **ADC+** > **CONFIG MANAGEMENT** > **Restore Configuration**.
   The **Restore** tab opens.
2. In the Sub Systems column on the left, click ADC (default tab).
3. Click the (**Settings**) button in the Command bar.
4. On the Settings popup screen that appears, select the number of archives you want to keep for each device: you can choose to keep anywhere from 1 to 80.

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5. Select the Display warning messages when overwriting the archives checkbox if you want users to be warned whenever they are about to overwrite an archive.
6. Click **Submit** to save the settings.

Restore Configuration

- Restore Configuration - Overview
- Restore and Rollback a Device
- Restore and Rollback an Object

Restore Configuration - Overview

AppViewX allows you to restore configuration backups on ADC devices. It supports,

- device-level to overwrite the complete device config
- object-level restoration to restore a particular Application that is failing or detected with an unwanted change.

Restore and Rollback a Device

Restore the configuration of the ADC device from current config to a preferred config. AppViewX enables to compare the configuration before proceeding with the restoration. During a restore, AppViewX will take a backup of the current configuration that is to be used during rollback.

On proceeding with restore, a Work order will be generated in AppViewX to track progress. On a successful restore, required configurations will be updated in the device. In case of failure, an automatic rollback will be initiated by AppViewX.

To restore a device, complete the following steps:

1. Go to **Menu** > **ADC+** > **CONFIG MANAGEMENT** > **Restore Configuration**.
   The **Restore** tab opens.
2. Select the **Restore Type**: Device.
3. Enter the **Device name**.
4. In the date range field that appears below the **Device name** field, click the date you want to restore the device or object to.
5. Leave the default value in the **Restore to** field.

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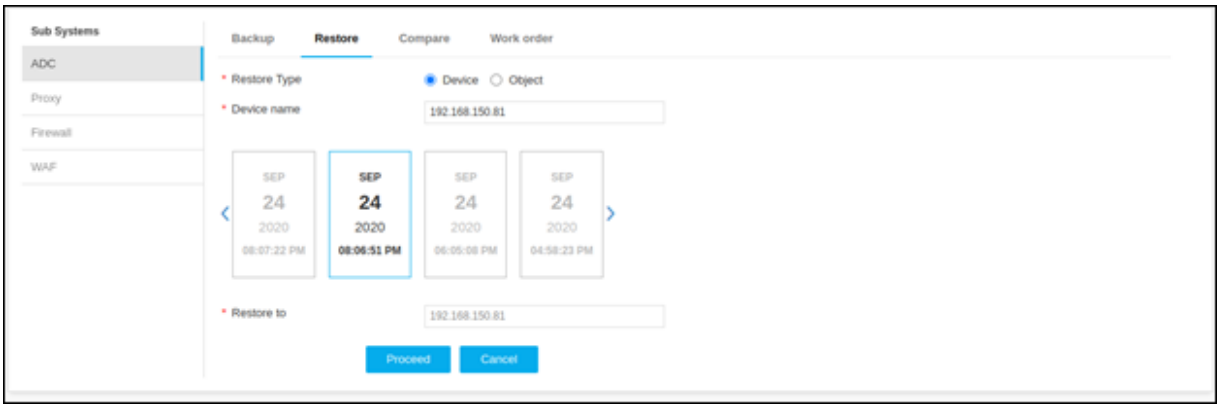
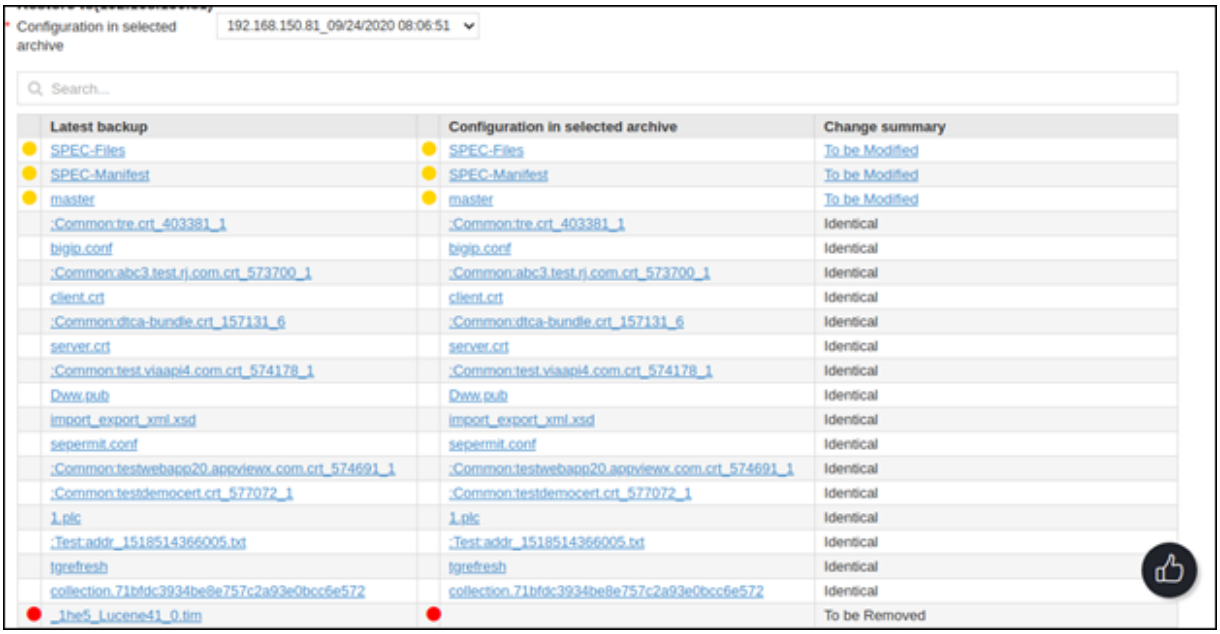


6. Click **Proceed**.
7. The screen refreshes and displays a Configuration in the latest archive field, which should show the backup you selected. The table below shows all of the files contained in the backup and displays yellow circles beside each file that has been modified since the backup was taken and red circles beside each file that has been removed since the backup date.



8. At the bottom of the screen, enter a reason for restoring to the backup.
9. Click **Restore**.
10. Validate the changes against the latest backup and the configuration that is going to be restored. Enter a reason for restore and proceed.
11. AppViewX will proceed with restoring the entire configuration file or the particular configuration of the objects in a step-by-step manner.

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12. A Work Order ID will be generated to track the progress at anytime. (Track the IDs in the Work order tab)
13. During restoration, if AppViewX identifies any issues, an automatic configuration Rollback will be triggered, which can be tracked in the work order.
14. A manual Rollback can also be initiated on a need basis.

Restore and Rollback an Object

Restore one or more Application services configurations from the current config to a preferred config and apply it on multiple devices. AppViewX enables to compare the configuration before proceeding with the restoration. During the restoration, the complete hierarchy of the selected object(s) will be restored in a step-by-step manner. AppViewX will consider the recent device backup as the source to roll back the configurations. On successful restore, configurations will be updated in the device. In case of failure, an automatic rollback will be initiated by AppViewX.

To restore an object, complete the following steps:

1. Go to **Menu** > **ADC+** > **CONFIG MANAGEMENT** > **Restore Configuration**.
   The **Restore** tab opens.
2. Select the **Restore Type**: Object.
3. Select the Source device, Archive to be used for restore.
4. Select the objects that need to be restored.
5. Select the destination devices (it could be one or more devices), and then click **Proceed**.

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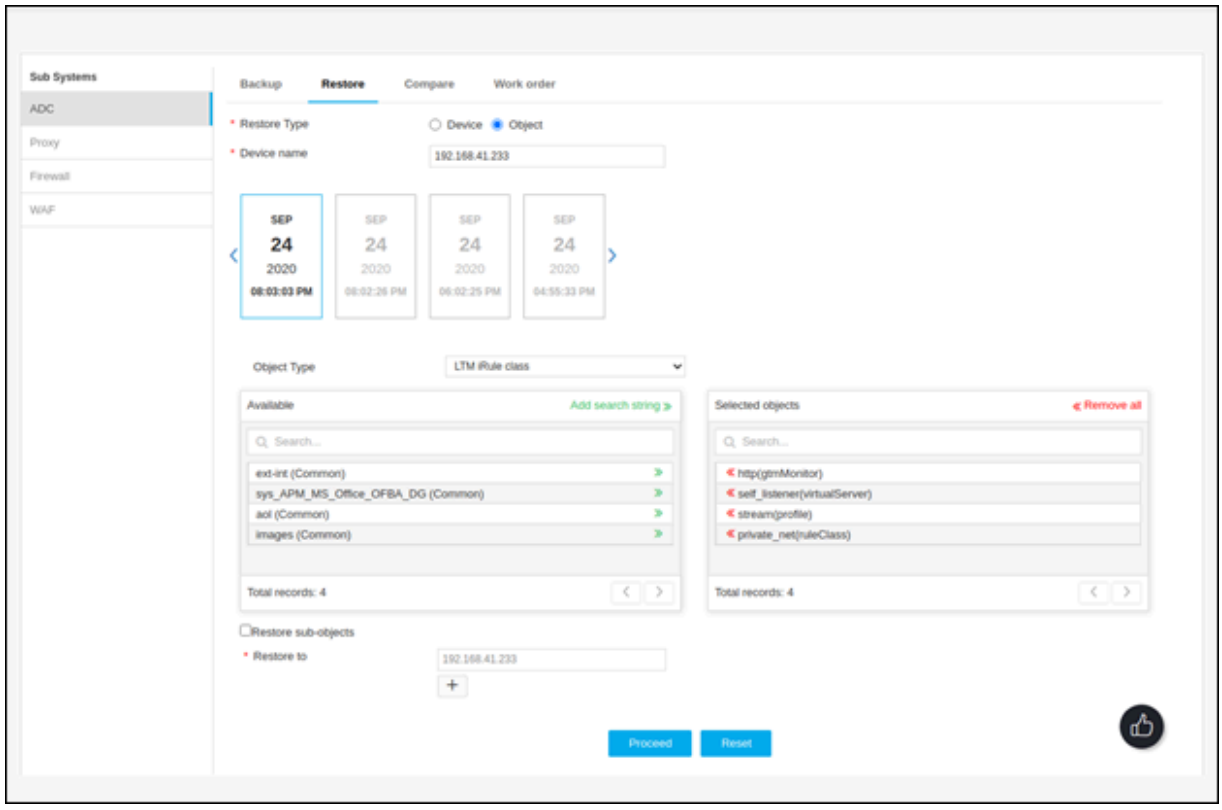

6. The screen refreshes and displays a table that compares the latest device backup and the selected archive configuration with change highlighted. Each object can be expanded and viewed:
   - Yellow - Modified line
   - Green - Added line
   - Reg - Deleted line

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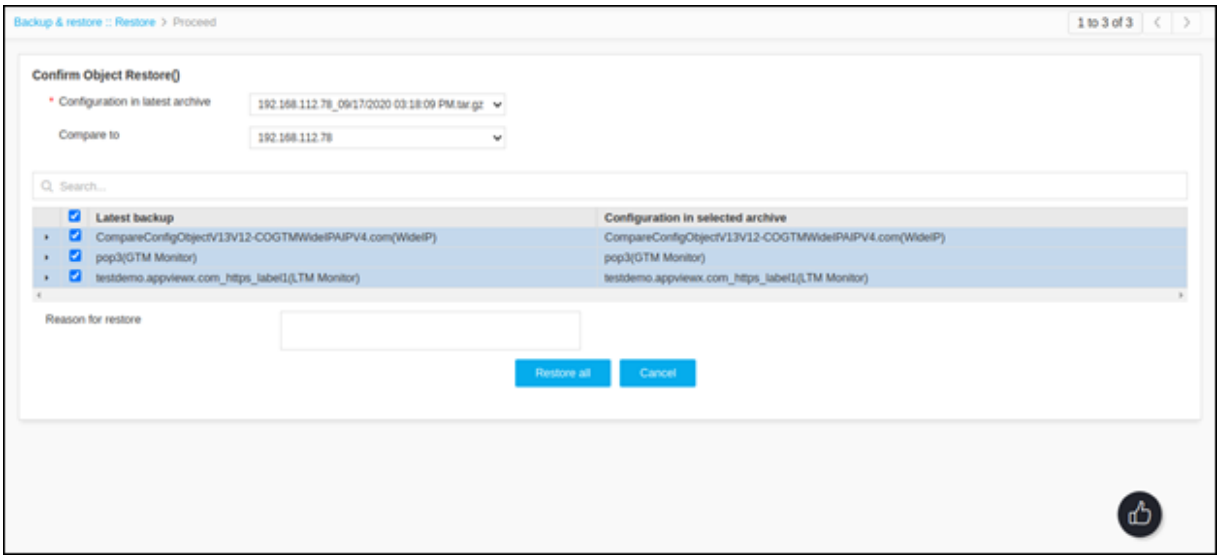
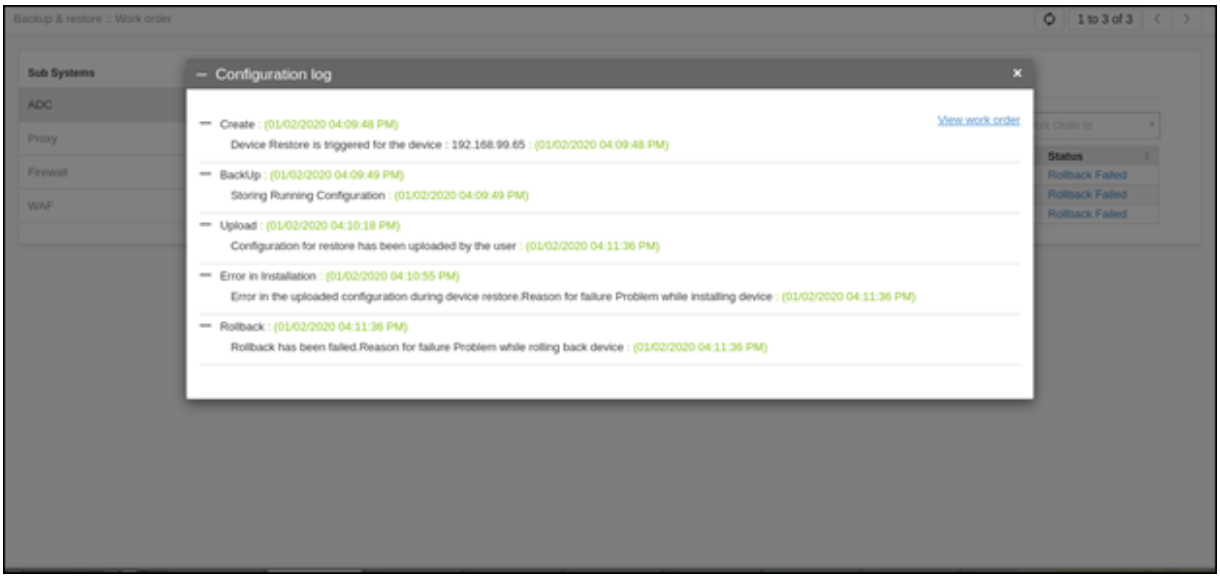


7. Validate the changes against the latest backup and the configuration that is going to be restored. Enter a reason for restore and proceed.
8. AppViewX will proceed with restoring the particular configuration of the objects selected in a step-by-step manner.
9. A Work Order ID will be generated to track the progress anytime. (Track the IDs in the Work order tab)
10. During restoration, if AppViewX identifies any issues with respect to even one of the objects, an automatic configuration Rollback will be triggered, which can be tracked in the work order.
11. A manual Rollback can also be initiated on a need basis.



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Compare Configuration

- Compare Configuration - Overview
- Compare Device Backups
- Compare Multiple Configurations of an Object
- Compare Configurations of Custom Environments
- Enforce Golden Config Compliance

Compare Configuration - Overview

AppViewX platform enables you to compare the complete configuration of load balancers within or across multiple devices through previous backups. It indicates the files that are modified and also provides an option to drill down into the actual configuration change. Ensure the changes are validated and generate reports out of it.

AppViewX allows the configuration to be compared for the entire Device, Specific object within the device, or a custom Environment as per the need.

Compare Device Backups

To compare backups for the same or different devices:

1. Go to **Menu** > **ADC+** > **CONFIG MANAGEMENT** > **Compare Configuration**.
   The **Compare** tab opens.
2. On the **Compare** screen that opens, select the **Compare Type**: Device, Object, or Environment.
3. Select the Device names for which the configuration needs to be compared. The devices that have valid backups generated will be listed here.
4. In the **Device name** field, enter the name of the first device whose backup you want to compare.
5. In the **Archive 1** field, select the first backup in the comparison.
6. In the second **Device name** field, enter the name of the second device in the comparison. If you want to compare backups from the same device, enter the same name you entered in Step 4.
7. In the **Archive 2** field, select the second backup in the comparison.
8. Click **Compare**.

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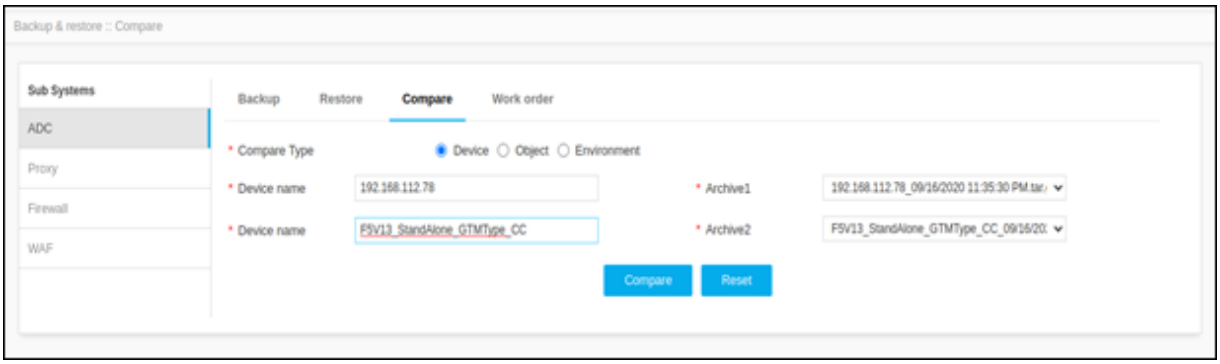
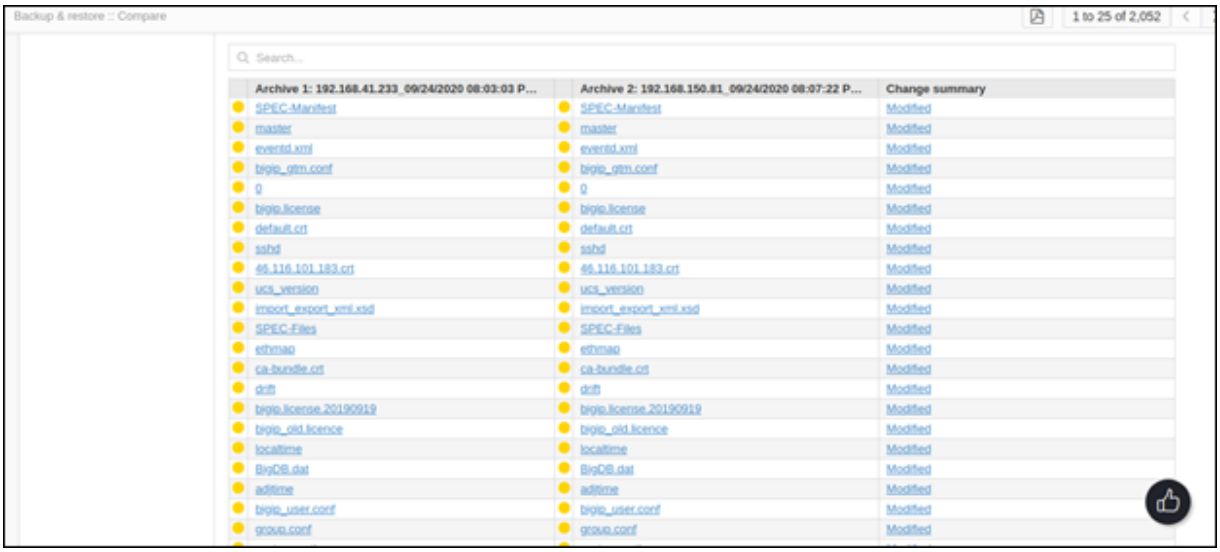


9. A table appears at the bottom of the screen, showing all of the files contained in the two backups you selected. The files are compared globally and a change summary is listed,

   - **Yellow** - Denotes the modifications
   - **Green** - Denotes the new additions
   - **Red** - Denotes the deletions

   Note: Click on the **Modified summary** for a line-by-line comparison of a particular file that is labeled as modified. This will help us to which line of the configuration is modified exactly thus helps to troubleshoot changes faster.

10. Click on the File name to get the configuration details.
11. Change the **Archive name** to compare against a different configuration backup.
12. Get the high-level device file summary and it can be exported using the Export as PDF option.



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Compare Multiple Configurations of an Object

Compare the object-level configuration of load balancer devices using previous backups or the latest configuration in AppViewX. Ensure a particular object (Say iRule) config is compliant across all the devices in a business unit. You can also track the exact configuration changes on your application by comparing them against all the recent archives.

To compare multiple configurations of an object:

1. Go to **Menu** > **ADC+** > **CONFIG MANAGEMENT** > **Compare Configuration**.
   The **Compare** tab opens.
2. Select the vendor whose objects you want to compare.
3. Select the object type you want to compare. The possible object types are WideIp, GTM Pool, GTM Server, GTM Monitor, GTM iRule, VirtualServer, LTM Pool, LTM Monitor, Profile, LTM iRule, LTM iRule Class, LTM Policy, LTM Persistence, Traffic Record, Traffic Region.
4. Click the **Object Name** dropdown list and select the name of the object whose configurations you want to compare.
5. In the List of Devices field that appears, click the first Device Name dropdown list and select the first device you want to use in the comparison.
6. If you want to compare configurations of the same device over time, choose the device you selected in Step 8.
7. In the **Archive Name** field, select the first configuration you want to use in the comparison.
8. In the second Device Name dropdown list, select the second device you want to use in the comparison.
9. In the second Archive Name field, select the configuration you want to compare the first configuration to.
10. Click the **Add** button to add more configurations of an object.
11. Click **Compare**.

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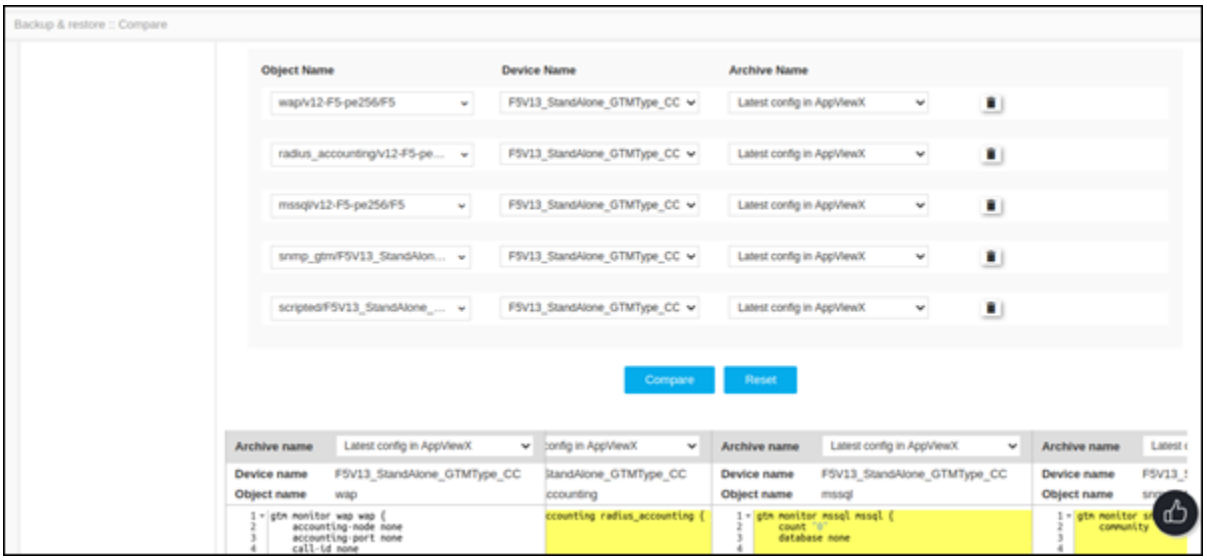
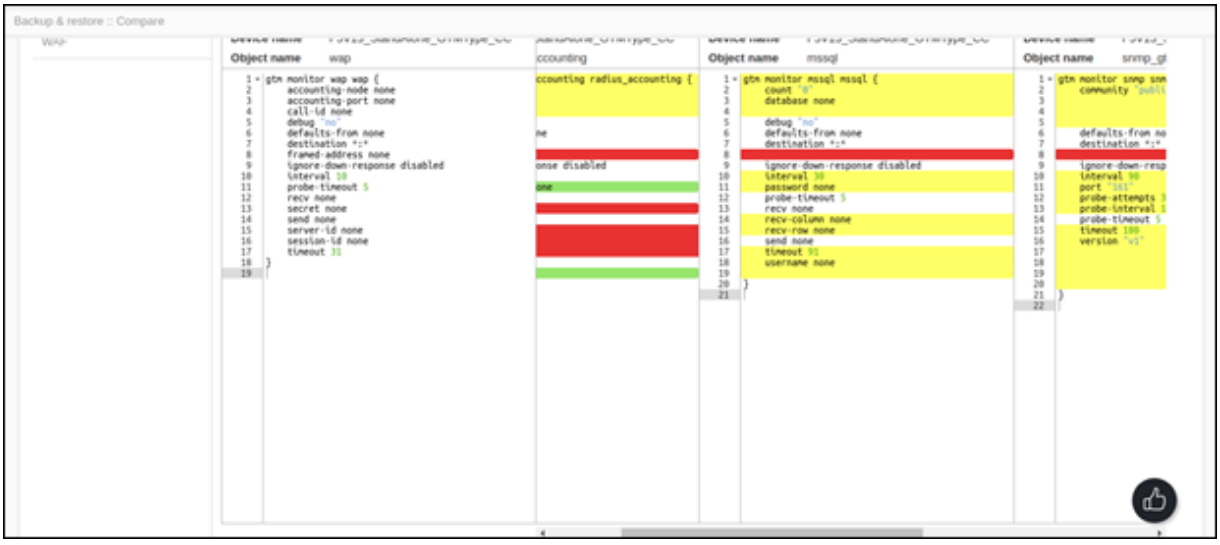


12. The screen refreshes and displays the two archived configurations side-by-side.
13. A maximum of five archives can be compared.



Compare Configurations of Custom Environments

AppViewX allows you to compare the custom environment configuration. A custom environment could be specific to a business unit comprising specific devices and objects. You can import the custom environment details (devices and objects) into AppViewX in the form of an Excel file and compare the source and destination environment configuration of F5.

To compare configurations of custom environments:

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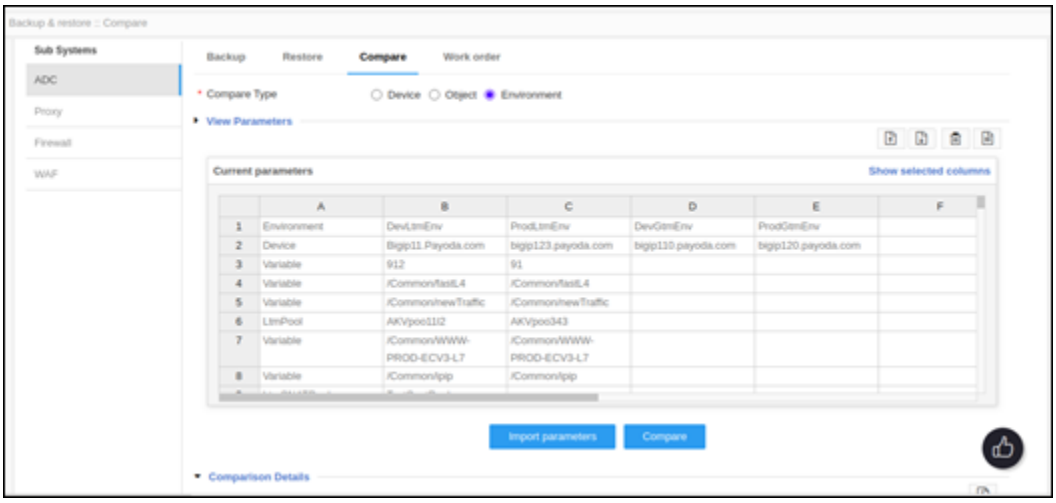
1. Go to **Menu** > **ADC+** > **CONFIG MANAGEMENT** > **Compare Configuration**.
   The **Compare** tab opens.
2. In the **Compare Type** field, select the Environment radio button.
3. Click the icon beside **View Parameters** section to expand it.
   The **Current Parameters** table is displayed.
4. In the table, you can export, import, or delete parameters; download the sample using the buttons on the top-left corner. You can also right-click inside the table to delete a row; select, delete or unselect a column.



5. Click **Import Parameters**.
6. Click **Compare** to compare the source and destination environments.
7. Select the environment names, device names, and object names to be compared from the respective dropdown lists in source and destination environments. A line-by-line comparison will be displayed below each environment with the following color coding:
   - **Green** - Denotes the new additions
   - **Yellow** - Denotes the modifications
   - **Red** - Denotes the deletions
8. If required, you can click the (**Export to PDF**) button to download the comparison report to your computer.

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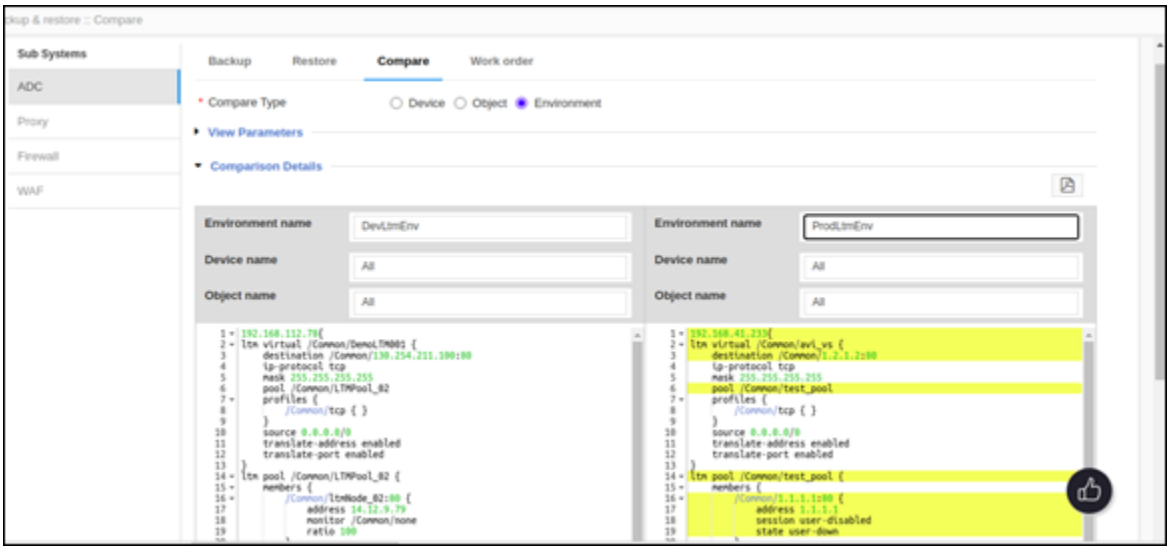

Enforce Golden Config Compliance

A “golden” configuration is a configuration version that can be used as a standard configuration for error-free and rapid deployment. Automation workflows help you create golden configurations adhering to organizational policies.

For more details, see the Enforce Golden Config Compliance in the Workflow section.

Automation

- Workflow Catalog
- Workflow Request

Workflow Catalog

The AppViewX Platform helps Enterprise IT manage, automate, and orchestrate application delivery services.

Key Advantages:

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- Abstract hardware, software, open-source, and cloud solutions from end-users requesting application delivery services
- Orchestrate how GSLB, DNS, load-balancing, firewall, WAF, certificate, network, ITSM, and notification services are leveraged in the multi-cloud infrastructure.
- Integrate industry-leading ITSM and notification services into automation workflows.

- Expose network infrastructure services to DevOps tools like Ansible, Terraform, Chef, and Puppet.
- Build repeatable and compliant infrastructure with workflows that map to your business process.
- Use the business process to enforce how compliance is achieved in multi-cloud data centers.
- Automate how unused resources are returned back to the application delivery infrastructure.

- Enable end-users to self-service and launch automation from application-centric views.

- Enable common load-balancer and DNS service requests to be self-serviced by application and operation teams.
- Minimize the operational expense of maintaining automation workflows when changing vendors or versions.

- Automate and Self-Serve ADC deployments with Pre-packaged Workflows
- Orchestrate Changes in App Delivery and Enforce Deployment Standards
- Self-Servicing through Custom Workflows
- Self Service App Catalog

Automate and Self-Serve ADC deployments with Pre-packaged Workflows

AppViewX is a true multi-vendor platform for managing the ever-evolving complex enterprise infrastructure. As your application delivery infrastructure becomes progressively more complex, enterprises must turn to network infrastructure management and automation solutions to ensure successful deployments. AppViewX offers a suite of tools for organizations striving to become true digital enterprises.

The AppViewX platform will help you automate third-party, best-of-breed, and open-source network services like those provided by application delivery controllers, security devices, certificate authorities, DNS servers, routers/switches, and more.

The AppViewX platform integrates with other best-in-class IT service management solutions to govern and record service requests in the larger automated workflow. It can be leveraged to help users move faster, eliminate errors, and reduce costs, making it the best choice for enterprises working to adapt to new technologies, processes, and application delivery expectations.

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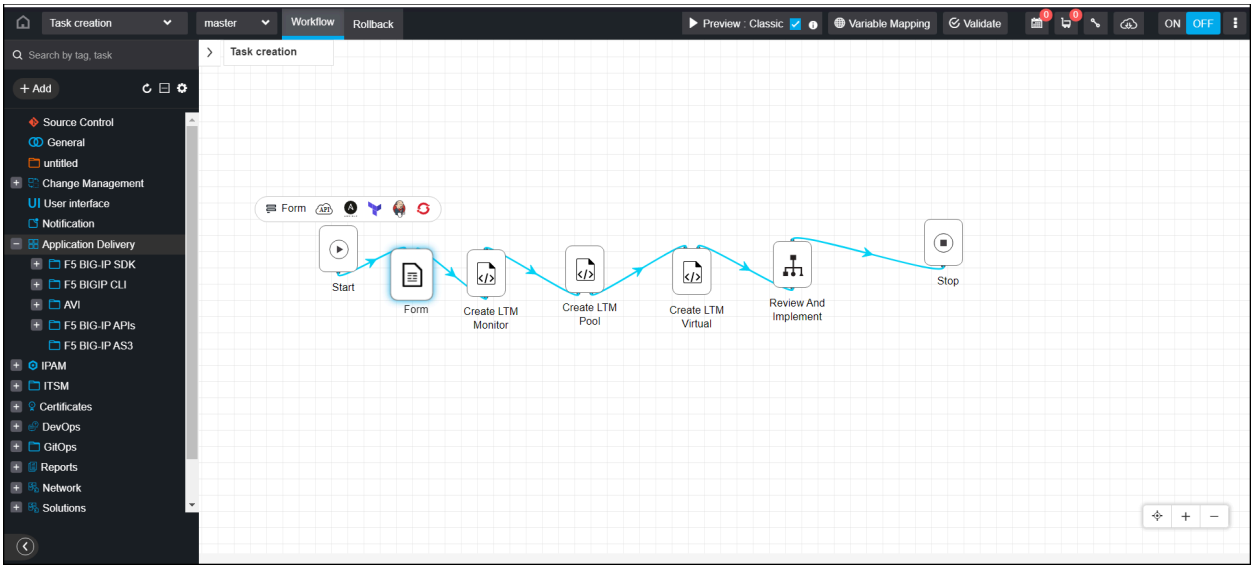

- Workflow Catalog Page
- Multi-vendor ADC Application Deployment
- Enforce Golden Config Compliance and Migrate Configurations
- Optimize Load Balancer with Unused Object Decommissioning
- Upgrade of Load Balancers
- CVE Reporting

Workflow Catalog Page

AppViewX offers Visibility on the One-touch Automation solution offerings to address network and application service requests. The offerings are available in the Request catalog page. Click **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**. The automation offerings (workflows) are controlled by AppViewX's modern RBAC control feature, thus providing individuals groups to maintain and access their own workflows.

Multi-vendor ADC Application Deployment

As the application deployment in enterprises is complex, time-consuming, and cumbersome, AppViewX's automation solution helps in speeding up the process to bridge the isolation across multiple teams that are involved in application deployment. AppViewX also integrates with leading technology and best-in-class IT service management solutions to govern and record service requests in the larger automated workflow. It can be leveraged to help users move faster, eliminate errors and reduce costs.

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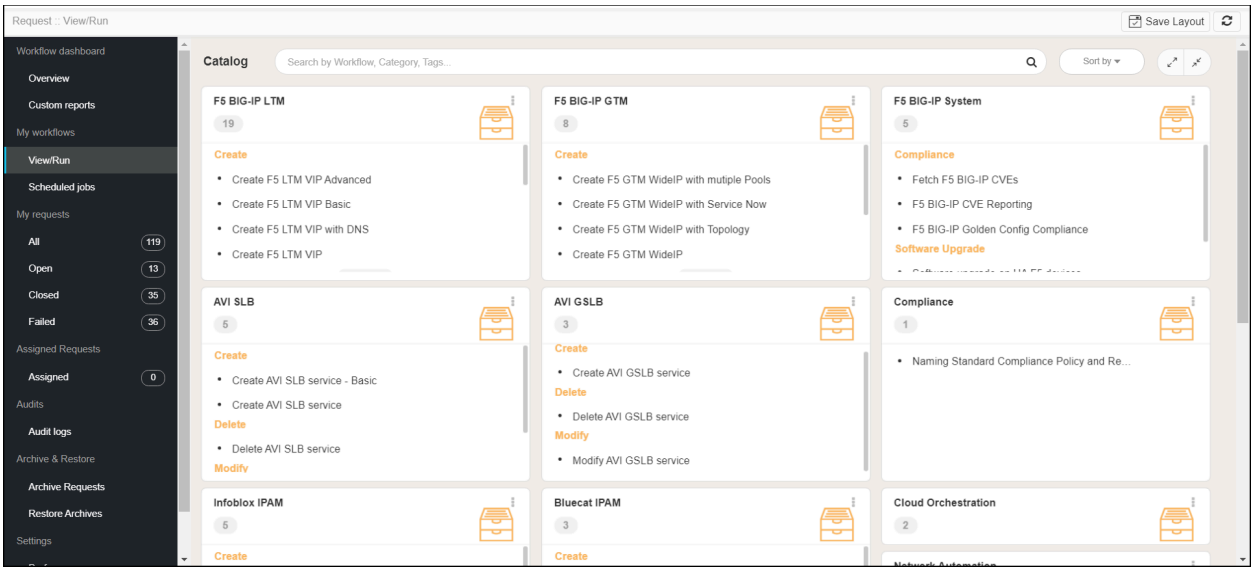
The prebuilt automation workflows deliver the following when it comes to Application deployments,

- Creation/Modification/Deletion of WideIPs and Virtual Servers on AppViewX managed ADC devices through simple, self-service forms.
- Integration with DDI (Bluecat, InfoBlox), and ITSM (ServiceNow) enabling a consistent change management control and governance.
- Integration with AS3 (declarative approach) for faster Application deployment by enabling Creation/ Modification/Deletion of BIG IP Application Services.

To access the prepackaged workflows, click **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run.** The workflows are grouped as per the vendors, select the required flow and invoke the required flow to deploy/manage an application.



Refer to Visual Workflow Guide for creating workflows

https://pages.appviewx.com/rs/249-TWN-899/images/Guide_App_Provisioning_Automation%20Workflow_AppViewX.pdf.

- Process Flow for Create Virtual Server (sample)

Process Flow for Create Virtual Server (sample)

The Create Virtual Server workflow creates a virtual server and associates it with profiles, monitors, pool, and pool members in F5 LTM using Infoblox and ServiceNow integration. It uses a simple, self-service based approach to gather application-provisioning requirements and generate vendor-specific

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configurations or REST APIs. This self-service workflow filters F5 ADC devices based on the user's access permissions, defined by Role-Based Access Control (RBAC). The platform integrates with IPAM systems like Infoblox, which allows users to reserve a free IP address from the available address pools and create DNS binding for the new virtual server in Infoblox.

The workflow also includes an option to create or bind existing profiles and monitors to the virtual server and allows users to create change request tickets in ITSM systems ¬like ServiceNow for approvals and tracking. The service request change ID is associated with the work order and is updated based on the implementation status.

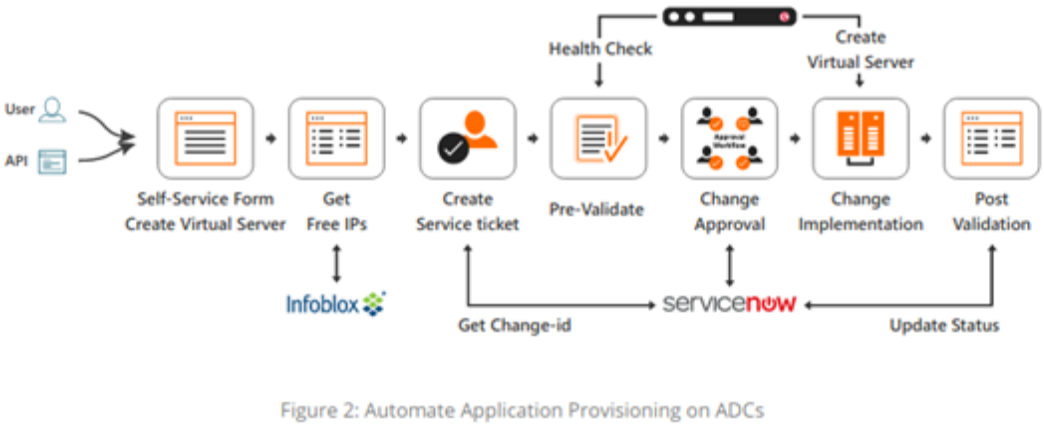

Figure 2: Automate Application Provisioning on ADCs

Refer to Automation Guide for more detail.

Enforce Golden Config Compliance and Migrate Configurations

In this digital world, organizations depend on the continuous availability of applications and networks for business success. The advent of digitalization has changed the way the network is being managed. In heterogeneous networks, network leaders face various challenges in properly managing configurations, carrying out changes, ensuring compliance to regulations, and minimizing network downtime triggered by human errors.

AppViewX offers a Prepackaged 'Golden Configuration Compliance on F5 BIG-IP' workflow to run a compliance check across all the managed F5 BIG-IP devices. The workflow is designed to validate the system-wide configurations on F5 Devices for configuration standardization or compliance purposes. Thus maintaining the Integrity and security of an enterprise-level infrastructure.

Click **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run** > **F5 BIG-IP System** > **Compliance**. Invoke the workflow 'F5 BIG-IP Golden Config Compliance'.

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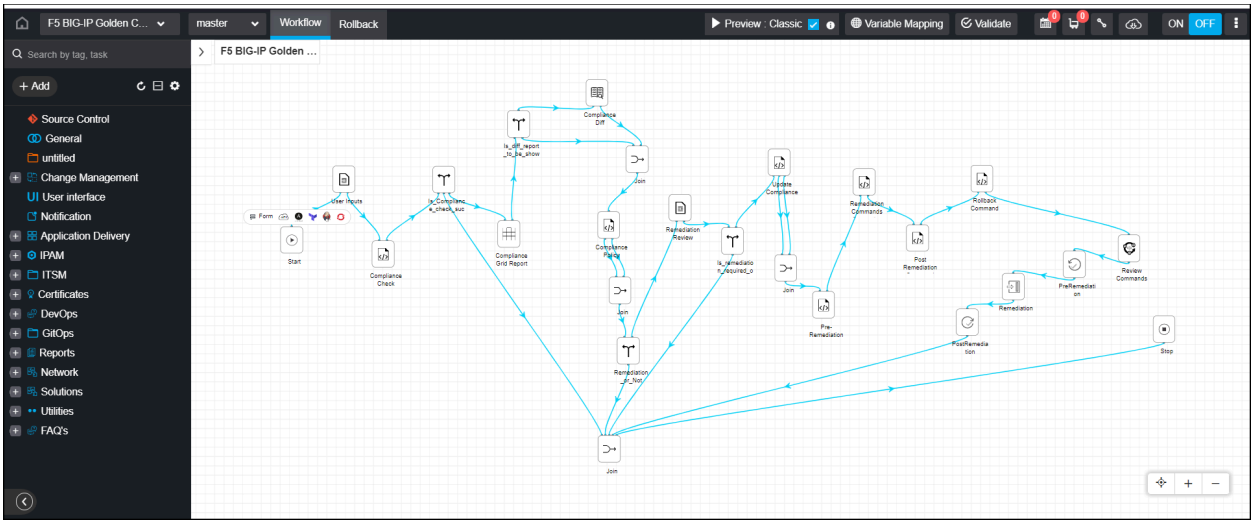

- Create golden configurations adhering to your organizational policies and store different file variants in the AppViewX collection module.
- Execute the workflow by selecting the Golden configlet file (Choose an existing file or create new) and the devices on which it needs to be applied. AppViewX validates the system-wide configurations on F5 Devices for configuration standardization or compliance purposes.
- AppViewX generates a standard config and pushes it to the end devices based on approvals.

Refer to Automation Guide for more details.

- Compare Configurations in workflows

Compare Configurations in workflows

AppViewX provides a flexible component (Diff checker) to validate the configuration changes over time. As avoiding configuration drift is a major challenge, AppViewX's visual comparison tool that could be integrated into the workflows helps to overcome this scenario and ensures devices are compliant. Access the component by navigating to **Menu** > **Studio** > **Workflow** > **Create** > **Diff checker component.** Drag and Drop the component into the required workflow wherever comparison is needed.

It allows static and dynamic comparison of configurations across two to five devices and objects. Diff View provides a side-by-side comparison of configuration files in a single view. And, it also highlights the configurations that are added, modified, or deleted in different color codes.

With Diff Checker, the AppViewX platform helps to perform compliance configuration checks across devices and allows the configurations to adhere to standards.

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- Validate configuration changes between pre-validation and post-validation stages
- Validate for configuration changes between implementation and rollback stages
- Validate for configuration changes between multiple peer reviews within an automation process
- Validate if device configurations are compliant with the standard golden configurations

Optimize Load Balancer with Unused Object Decommissioning

Manage unused configurations during hardware replacement or version upgrades to optimize your load balancers. Set of Virtual Servers/Objects that do not handle traffic for a certain period of time (three months or more) are often referred to as unused objects. Unintentionally maintaining these inactive objects leaves many unwanted IP ports open and their IPs unused and also incur overhead costs for the enterprises. With AppViewX's Application Delivery Automation solution, decommissioning virtual servers can be done in a standardized and automated way.

- Automate the Decommissioning of Virtual Servers

Automate the Decommissioning of Virtual Servers

Invoke AppViewX's Prepackaged workflow solution or customize it accordingly to automate the decommissioning of the virtual IPs identified either individually or in bulk. The unused or free IPs are then moved to IPAM systems.

- AppViewX generates the list of unused objects, Disable and Decommission them automatically based on approvals resulting in,
  - More efficient allocation of IP resources. Unused IPs can be used elsewhere
  - Reduced service costs
  - The elimination of unnecessary management and monitoring overhead

Click **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**. Search for the workflow Get Unused LTM VIP and Delete, Get Unused LTM VIP and Notify, Disable F5 LTM VIP, or Disable and Delete F5 LTM VIP.

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Refer to Automation Guide for more Details.

Upgrade of Load Balancers

AppViewX simplifies patch upgrades and version upgrades to the latest F5 version with minimum application downtime. Using AppViewX, you can migrate configurations across different platforms, such as BIG-IP virtual editions and BIG-IP hardware, including the new iSeries platform. Migration through AppViewX ensures clean installation and eliminates errors.

Upgrading F5 BIG-IP devices to their latest versions is a complex, multi-step process involving pre-migration validation checks, UCS back-ups, storing and managing UCS files, updating configurations, and post-migration validation checks. With the phase-out of F5 BIG-IP v10, AppViewX is offering a way to seamlessly transition to F5's latest platforms. By enabling end-to-end automation, organizations can now take advantage of the new features software enhancements can bring, without undergoing a tedious, error-prone migration process.

Click **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run** > **F5 BIG-IP System** > **System**. Invoke the workflows **Software upgrade on HA BIG-IP devices** or **Software upgrade** on Standalone BIG-IP devices.

The workflow will do necessary Pre checks, Transfer the required software image to the end device, Install the Image, Reboot & Reactivate the license and perform the post validation checks to ensure device configuration is not disturbed. If required, you can customize the steps with a simple drag and drop option and create your own custom flow or add additional approvals.

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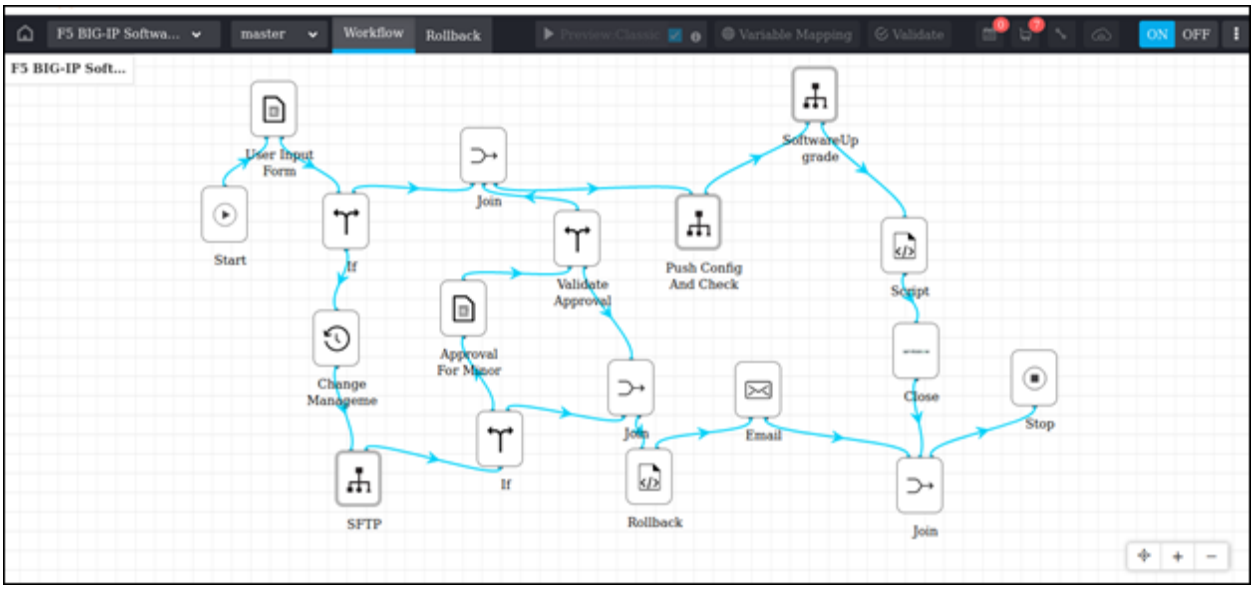

Refer to Automation Guide for more details.

CVE Reporting

The vulnerabilities are informed in the form of reports known as Common Vulnerabilities and Exposures (CVE). At AppViewX, we have designed industry-leading methods where the entire process of validating the CVEs and upgrading an ADC to patch the vulnerabilities is automated from end to end.

You can manage and automate your ADC upgrades with simple task flows which can also be customized as per your requirements. The methods employed by AppViewX are verified, reviewed, and are updated every time we come across something better. Our product allows you to get timely updates from official sources on the latest vulnerabilities that can be obtained whenever you want them. We deliver better than the age-old method of manually checking for vulnerabilities for every single device that you use with just one workflow that brings all that information right to you with ease. To keep track of insecure devices, the discovered vulnerabilities are validated against the ADCs handled in AppViewX, and timely/intuitive reports with severity and suggestions are provided. Post this, upgrades are made to the recommended path version using AppViewX's seamless upgrade flows to resolve the discovered vulnerabilities.

To access the prepackaged workflows, click **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run.** The workflows are grouped as per the vendors, select the required flow and invoke the required flow to deploy/manage an application.

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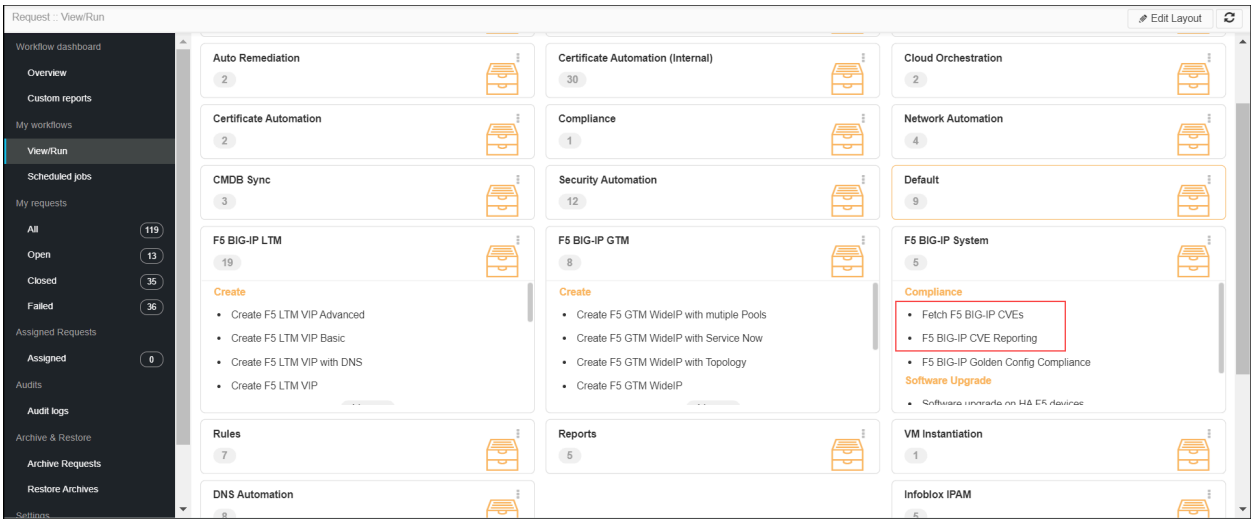

Orchestrate Changes in App Delivery and Enforce Deployment Standards

- Orchestrate Application Delivery in Multi-Cloud Environments
- Orchestrate Application Delivery with DevOps Integration Tools
- Connecting AppViewX with Ansible
- Orchestrate with Ansible Integration

Orchestrate Application Delivery in Multi-Cloud Environments

AppViewX accurately abstracts hardware, software, open-source, and cloud solutions from end-users requesting application delivery services and can be used by business processes to enforce how compliance is achieved in multi-cloud data centers. It can be efficiently used to orchestrate how GSLB, DNS, load-balancing, firewall, WAF, certificate, network, ITSM, and notification services are leveraged in the multi-cloud infrastructure. Through the pre-packaged solutions, enforce deployment standards defined by an organization and orchestrate changes without compromising on security.

Build your own end-to-end orchestration services through the pre-defined solution components available in the Workflow module. Click **Menu > Studio > Workflow > Create Flow**. Drag and drop the components as needed to build your own service.

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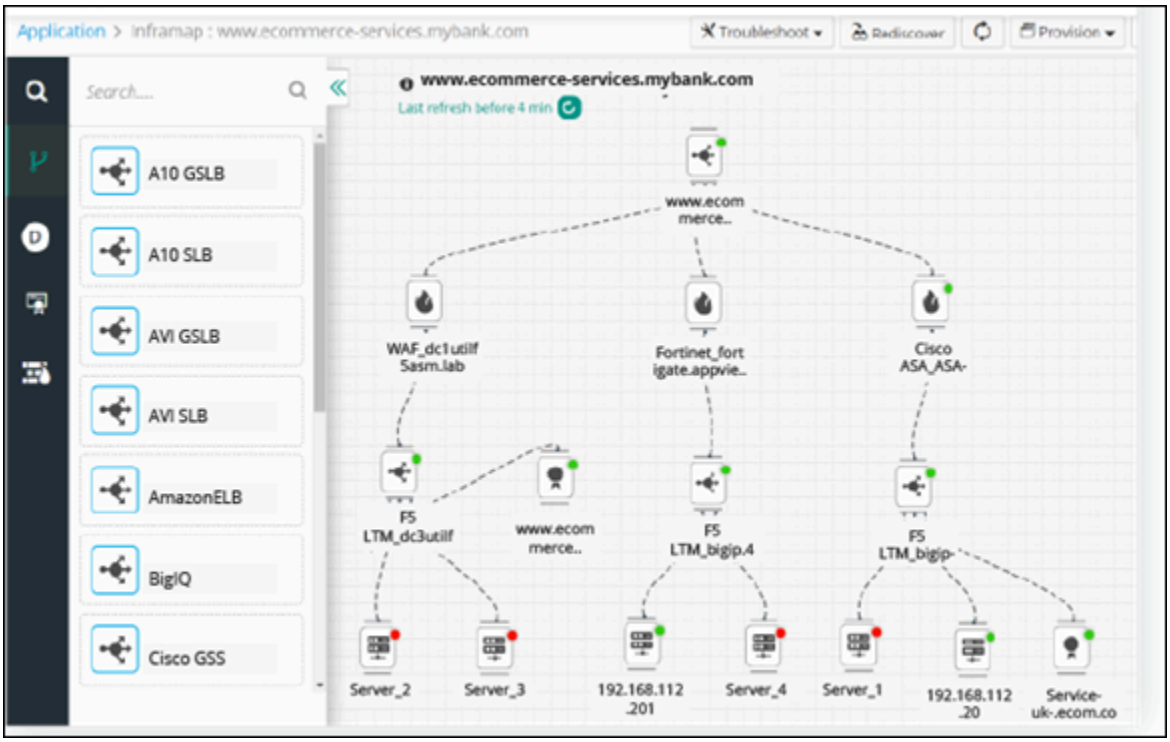

Refer to ADC Automation Guide for more detail.

Orchestrate Application Delivery with DevOps Integration Tools

AppViewX exposes the network infrastructure services to DevOps tools like Ansible, Terraform, Chef, and Puppet. It integrates with the tools to build repeatable and compliant infrastructure with workflows that map to your business process. Enable end-users to self-service and launch automation from application-centric views and Automate the ticketing and governance of DevOps service requests with ITSM tools.

Advantages of using DevOps tools with AppViewX:

- Highly scalable and adaptive
- Zero learning curve
- Define once, deploy everywhere
- DevSecOps-friendly
- Application-centric visibility
- Context-aware troubleshooting and auto-remediation
- Centralized management and extensive integrations
- Comprehensive network and application security management

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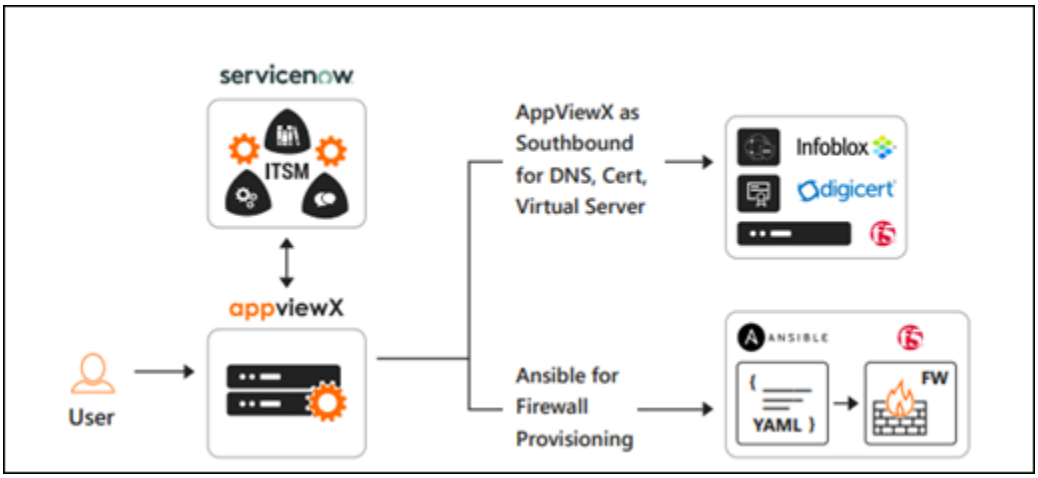

For more information, click here.

Connecting AppViewX with Ansible

AppViewX can be run on the same control node where Ansible is installed. AppViewX can function as both Northbound and Southbound for Ansible.

AppViewX as the automation controller; Ansible as Southbound:

- You can import Ansible playbooks into AppViewX and call the appropriate ones to construct workflows in the Visual Workflow builder. You can also view and edit the playbook contents from inside AppViewX.

Examples:

- Application provisioning across F5 BIG-IP LTM, AFM using Ansible playbook.
- Instantiate a new server on AWS using AppViewX and Ansible

AppViewX as the orchestration controller; Ansible as Northbound:

- You can download an Ansible module file and a sample YAML file for the required AppViewX workflow on demand. Upload the Ansible module files onto the Ansible Server, provide input using the sample YAML file and execute the module file (playbook) on the Ansible server.

Examples:

- Application provisioning across F5 BIG-IP LTM and AFM
- Automating server instantiation and pool member addition using Ansible

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Refer to Automation Guide for more detail.

Orchestrate with Ansible Integration

AppViewX integration with Ansible playbooks makes end-to-end network automation more intuitive, flexible, and user-driven.

- Integrated automation approach to aligning and achieving business goals
- Implement automation with AppViewX and Ansible for continuous delivery

Ansible - Ansible can be used to automate specific instances in the network, like configuring switches ad-hoc and opening firewall ports. Ansible's CLI-based automation has the capability to drill deep into the network, and since it's agentless, can be used on any device from any vendor.

AppViewX - AppViewX is an end-to-end low-code network orchestration and security solution. It handles high-level network operations like real-time monitoring and reporting, key/certificate provisioning and management, context-aware troubleshooting and auto-remediation, and self-servicing capabilities. While Ansible (Core) is CLI-based, AppViewX is GUI-based. It uses REST API to connect with third-party tools and cloud platforms

Self-Servicing through Custom Workflows

Increase the operational efficiencies of your organizations by enabling self-servicing through AppViewX's custom workflow capabilities. The workflow-centric automation leverages various components of the network infrastructure and helps in defining a logical flow of activities or tasks needed to deliver a service from start to finish.

The workflow studio is a repository that contains all the pre-packaged and custom workflow solutions. Manage your workflows from this studio and Create, Delete, Edit, Enable, Disable, or Clone the workflows as needed.

- Design Custom Workflows

Design Custom Workflows

Automate your network infrastructure business process and enable Self Servicing for Application teams through the creation of custom workflows.

AppViewX's Visual Workflow tool provides an intuitive system for designing self-serviceable, event-driven, intelligent, and automation workflows. It enables operational agility and service efficiency in the various

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stages of network and application service delivery. It helps to accelerate time-to-value by providing everything needed for the complete automation of application delivery network infrastructure.

Click **Menu > Studio > Workflow**. Start to design your custom workflows. Following are some of the capabilities available in the workflow studio.

- Design workflows using the library of tasks supporting multi-vendor ecosystem on F5, AVI, A10, Citrix - Solutions, and Libraries
- Intelligent work order execution - execute tasks sequentially or in parallel
- Build custom Email tasks in each stage with required parameters
- Validate configuration changes using Pre and Post validation checks
- Configure Reviews/Approvals at each stage to execute a change
- Plug and Play integrations into ITSM systems - Service NOW, Jira, etc.,
- Plug and Play integrations into DDI systems - Infoblox, Bluecat, QIP, etc.,
- Design Rollback workflows in case of execution failure or on a need basis.

Key Advantage:

- Build custom, event-driven automation using pre-built tasks and workflows
- Integrate with ITSM tools for ticketing and governance or send an email and Slack messages
- Expose a catalog of service requests for network security management
- Enable self-service to automation workflows with user-friendly forms

Self Service App Catalog

AppViewX provides a one-stop portal with all the service offerings in the form of low code pages to enable self-servicing for the end-users (like App owners, Network Engineers, CA, Admin, etc.) in a simplified and intuitive manner. There are Out of the Box catalogs and as well option to customize catalogs as per the organization standards. Access the opinion through **Menu** > **Studio** > **Pages**.

Benefits

- An intuitive self-service portal to access all service offerings for employees, and partners via Single Pane of Glass.
- Customer Experience – Users only see services that are available to them, described in business terms they understand.
- Build your own App catalog/portal.

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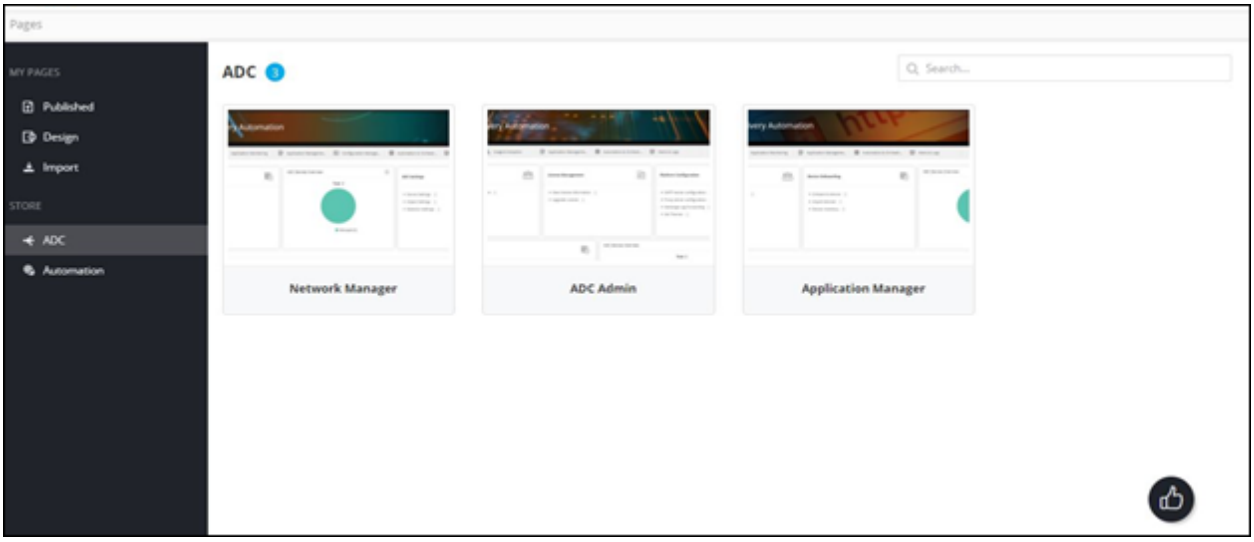
- Configurable Catalog page that allows for personalized task views.
- Low Code designer portal – Low Code and configurable toolsets, allowing users to brand Catalog solution so it feels familiar and intuitive for the end-users.

- Self Service Catalog for ADC Roles
- Design Your Own App Catalog
- Publish and Share the Catalogs to End-users

Self Service Catalog for ADC Roles

AppViewX provides out of the box self-service catalog page for the ADC Roles based on the permissions assigned. Refer Role for more details about the out of the box roles.

Access the catalog through, **Menu** > **Studio** > **Pages** > **ADC store**.



The catalogs comprise all following relevant functions and the life cycle of Application delivery presented in the form of a journey thus enabling a seamless self-servicing experience to the end-users. The catalogs could be cloned to achieve any sort of customization.

Design Your Own App Catalog

On clicking design, you will have options to design a custom app catalog. Define a name and description for the catalog. Drag and Drop some of the following components to build a catalog,

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- Custom Branding
- Drag and Drop Reports/Workflows
- Enable Quick links to the solutions
- Configure External links
- Embed Page/Logo/Widget
- Design custom section using HTML editor palette
- Tab menu component for Horizontal, Vertical tab menus

Publish and Share the Catalogs to End-users

Assign/Share the custom catalog page/workspace to specific user groups, users. The users with the shared pages can start accessing the functions available in the pages based on their RBAC.

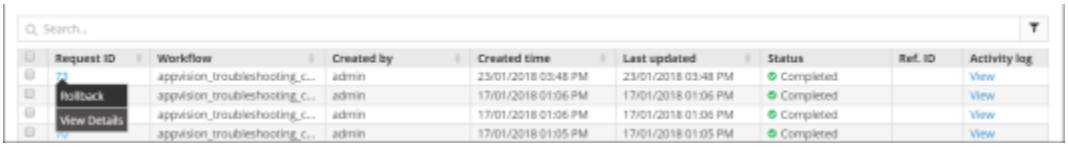
The catalog page could also be set as a landing/home page to enable a simplified journey to your end-users.

Refer to Service Catalog Guide for more detail.

Workflow Request

You can group your workflows accordingly and create a workflow catalog. The list of grouped workflows in the catalog will be displayed in this section.

- The **Workflow Request** section displays the total number of **All**, **Open**, **Closed**, and **Failed** requests, clicking upon these tabs displays the corresponding workflow details in a table.
- You can also perform the following tasks:
  - Right-click the **Request ID** and select one of the following options from the pop up that appears:
    - **Rollback** - Triggers an alternative rollback workflow that you have added or imported for the workflow.
    - **View details** - Displays all the tooltips configured in the Global variables.



  - From the **Request ID** column, you can click on the request for which you want to view the details. On the tabs in this screen, you can perform the following tasks:

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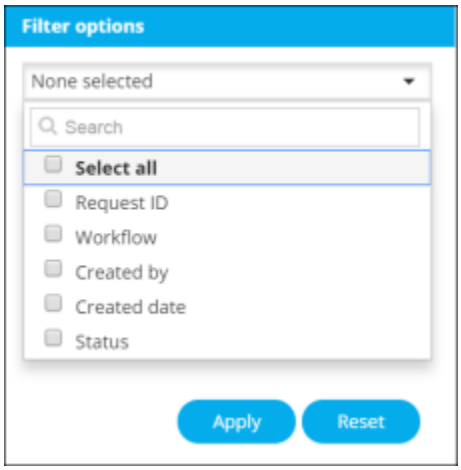
For the workflow(s) containing grid component(s) and script(s) to generate data, you can click the (**Download**) button to save the data to PC in XLS or CSV file format.

- Search for a request using the **Search** field.
- Click the (**Filter**) button to select the options you want to use to sort the requests.



Alerts & Logs

- Alerts
- Logs

Alerts

- Alerts Overview
- Types of Alert
- Alerts Inventory
- Email/SNMP Alert Notifications
- Configure an Alert from AppViewX

Alerts Overview

Alerts are a construct intended to inform administrators of significant events or complications that occur within the application. AppViewX provisions Proactive Application Service Monitoring & Alerting for quick remediation.

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Alerts could be raised based on various metrics. In AppViewX, alerts are Device and Application based and each has its severity level. Severity levels are as follows:

- **Critical** - For issues that are causing disastrous results or impacts on functionality. These are top priorities and must be resolved immediately.
- **Fatal** - For issues that can cause disastrous results or impacts on functionality. These are a major priority and should be resolved soon.
- **Major** - For issues that are important and require a resolution, but that is not the highest priority.
- **Minor** - For issues that are of low priority and need a resolution.
- **Notification** - For issues that are not alerts or warnings, but which must eventually be addressed.

AppViewX receives alerts only for devices that have been subscribed to AppViewX.

Types of Alert

The types of thee alerts are as follows:

- **Application Alert** - ADC specific Application actions executed from AppViewX (Control Center or Dashboards) will be raised as an alert captured in the alerts inventory. These alerts are focused on the behavior and performance of applications being delivered through the ADC.

  ADC Application alerts include:

Event Type	Description	Scenario	Message
Statistics	The statistics data collection to monitor the historic statistics for object level.	device statistics failure	Statistics collection for the device <"device name"> configured in alerts/alert <"alert names"> failed due to <"error reason">.
Restore/Rollback	Restore or rollback of an object configuration to a previous state.	Object Restore	Successful : Object <object name> restore action successful for the workorder <workOrderId>
Dashboard import	Status of the Dashboard import.	Dashboard import	<ObjectsName> association to

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Event Type	Description	Scenario	Message
			<dashboardName> failed, as they are not associated to <deviceName>
Any action	Any action performed at the application level. The actions include: • Enable • Disable	GTM sync setting (gtm flush)	Action Enable executed successfully on object <ObjectDisplayname> by the user admin. GTM sync setting is enabled and hence the action is executed on the Master device <device name>. The actual triggered Peer device is <device name>

For configuring Application alert notification, see Configuring an Application Alert Notification.

- **Device Alert** - ADC specific Device actions executed from AppViewX (Control Center or Dashboards) will be raised as an alert captured in the alerts inventory. The administrator receives notifications for events performed at the device level.

  ADC Device alerts include:

Event Type	Description	Scenario	Message
Status change	Device status changes between any of the following: • Managed • Unmanaged • Failed • Unresolved Other status changes of the device are also captured under	Device status change (Managed ->Unmanaged, Failed, Unresolved)	Device status modified from Manged to "Unmanaged/ Failed / Unresolved" on device:<device name>

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Event Type	Description	Scenario	Message
	this event type. For example, modification of the Device status from x to y.		
Auto-detect	Automatic detection of the secondary Device status.	Device auto-detect failure	Secondary device auto detect failed for the device <device name> due to <error message>
State change	Success/failure message for the Device state.	Device state flip	Device flip action was sucessfull on device < device name>. Modified properties{} via syslog
Device import	Success/failure message for the Device import.	Device import failure	Device Import from the file <fileName> failed due to <error message/ invalid column headers>
DNS_lookup	A scheduled reverse lookup for the objects that contain an IP address in it and persists the DNS name of the objects.	DNS lookup	DNS Reverse lookup failed for device <deviceName> due to <reason>
Any Action	Any action performed at device level. The actions include:	SSL Handshake failure (key exchange)	Communication failed for device <deviceName> due to <SSL handshake error>
Backup	Creation of the device backup.	Device backup success	Backup/Scheduled Backup has been generated successfully for the device <deviceName>

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Event Type	Description	Scenario	Message
Restore/Rollback	Device-level to overwrite the complete device config.	Device Rollback	Successful : Device <device name> rollback action successful for the workorder <workOrderId>
Ihealth	iHealth report generation for the device.	Ihealth generation success	IHealth Report for <deviceName> is generated successfully
Statistics	The statistics data collection to monitor the historic statistics for devices.	Device statistcs failure	Action <Updating live statistics> on <device Name> failed due to error <errorMessage>

For configuring Device alert notification, see Configure a Device Alert Notification.

- **Threshold Alert** - notification or warning generated by an ADC when a statistic threshold of application/ device. threshold or limit is exceeded. These alerts are designed to inform administrators about certain conditions that may require attention or action. This alert helps the administrator to take proactive measures to monitor and prevent outages or application issues. The administrator receives alert notifications based on the configured settings in the Threshold alert settings.

  Threshold alerts include:

Event Type	Description	Scenario	Message
Statistics	The conditions that will generate an alert notification.	Threshold Statistics collection	Threshold level reached for the object <object name>. <Statistics name – current value> is <operator> the threshold <configured value> AND < Statistics name – current value > is <operator > the threshold <configured value>.

For configuring Threshold alert notification, see Configuring Threshold Alert Notification.

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- **Syslog Alert** - a notification or warning generated by an ADC that is sent as a log message to a Syslog server. These alerts are designed to provide information about specific events or conditions related to the ADC's operation, performance, or security. Any changes occurring in the device can be detected and patterned through Syslog alerts.

  Some examples of Syslog alerts include:
  - Syslog based updates for Object state change eg: Enabled, Disabled etc.,
    - Real time updates are supported only for F5. The other vendor object state will be updated at an interval of 15 mins.
  - Syslog based updates for Object status change eg: Available, Offline etc.,
    - Real time updates are supported only for F5. The other vendor object status will be updated at an interval of 15 mins.
  - Syslog based updates for Device failover state within 5 to 10 mins (Active, Standby) -
    - Applicable only for F5 and Citrix devices.
  - Syslog based updates for Creation/Modification/Deletion of Primary objects eg: WideIP, Virtual Server, etc., and Secondary objects eg: Monitor, Profile, etc., at an interval of 15 mins in light weight config sync (Grok filters not restricted to particular object type but configurable)
    - When there are configuration updates on the objects like a new member added/removed/modified, it will be automatically reflected in AppViewX database with respective object mapping.
    - If those hierarchy objects are configured in ACL/Dashboard, the permission and actions will be automatically assigned respectively.

For configuring Syslog alert notification, see Configuring Syslog Alert Notification.

Alerts Inventory

Alert inventory lists ADC alerts that are available within AppViewX. It provides an overview of all the different types of alerts that can be generated or triggered, along with their corresponding details and configurations. The alert inventory helps in effectively managing and monitoring various events, incidents, or issues by providing a centralized reference for understanding and handling alerts. It allows you to have a clear understanding of the alerts they can expect and facilitates efficient alert management and response.

For the ADC Alert Inventory, navigate to **Menu** > **ADC+** > **ALERTS & LOGS** > **Alerts** > **ADC** tab.

On the Alert page, you can:

- Search for alerts.

  set the rows displayed on the page by hovering the mouse over the **Entries**.

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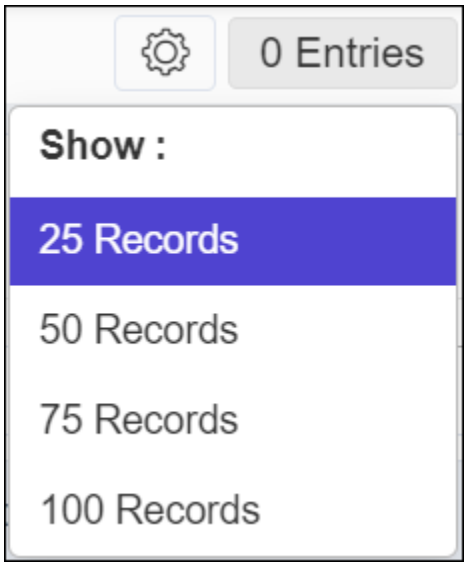

- Filter the alerts based on the date range by clicking and/or column name by clicking

.

The Alert inventory page consists the following columns:

Column Name	Description
Timestamp	Date and time when the alert generation.
ID	Unique identification of the alert.
Event type	Type of event for which the alert notification is configured refers to the specific category that triggers the alert.
Severity	The severity assigned to the alert. The severity levels are: • Critical • Fatal • Major • Minor • Notification
Category	Category of the alert notification. The categories are:

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Column Name	Description
	• Application • Device • Threshold • Syslog
Devices	IP address of the device for which the alert notification has been configured.
Applications	Name of the application.
Purpose/Usage	The message for which the alert notification is created for.
Alert detail	The message for the alert notification typically includes essential information about the triggered event. It provides enough details to help administrators quickly understand the nature of the alert. Sample message: `Device status modified from x to y on device <device name>`

Email/SNMP Alert Notifications

AppViewX supports notifications via Email and SNMP based on the configuration to improve the chances of remedial action.

To get notified via Email, **SMTP** must be configured. To configure For SMTP configuration, refer to Platform User Guide. You can provide multiple Email addresses with Subject lines to receive the alert.

To get notified via SNMP (Simple Network Management Protocol), following information are required:

- Destination IP and Port
- SNMP version (v1 or v2)
- Community String - The string is similar to a user ID or password

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Configure an Alert from AppViewX

- Configuring an Application Alert Notification
- Configure a Device Alert Notification
- Configuring Threshold Alert Notification
- Configuring Syslog Alert Notification
- Monitor Critical Applications/Devices and Receive Notification

Configuring an Application Alert Notification

When ADC specific Application actions are executed from AppViewX, whether through Control Center or Dashboards, any resulting events or changes will be raised as alerts and captured in the alerts inventory. These alerts serve as notifications of the actions taken and their outcomes, allowing administrators to monitor and respond to the Application's behavior effectively.

To get the application alert notification, administrator has to configure as follows:

1. Go to **Menu** > **ADC+** > **ALERTS & LOGS** > **Alerts** > **ADC** tab.
2. All the successful and failure events are captured in the alerts inventory along with the user comments. This enabled an Admin to track end-user actions.
3. Every alert contains the following information:
    - Alert ID
    - Alert Event type
    - Severity
    - Category
    - Devices
    - Applications
    - Alert Detail
4. Search for any alert by the Application, Device name or message etc.,
5. All Successful actions are tagged as Notification and Failure as Critical alerts respectively.
6. Event type helps to identify the type of event - An action event or Restore event or Backup event etc.,
7. An example of Object Enable Alert:

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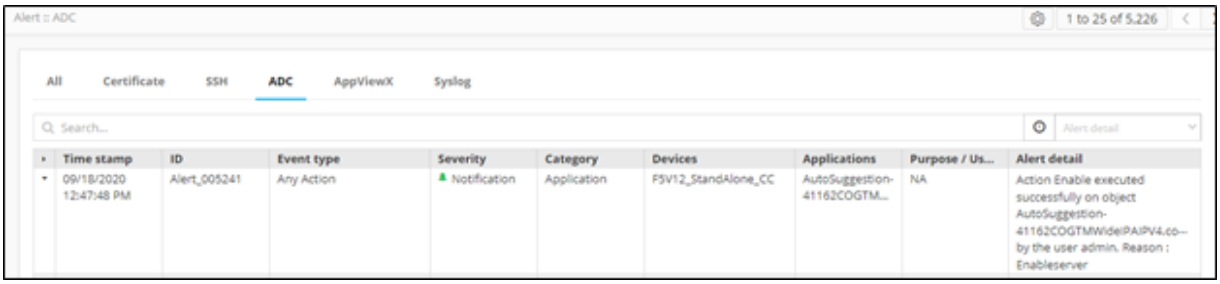
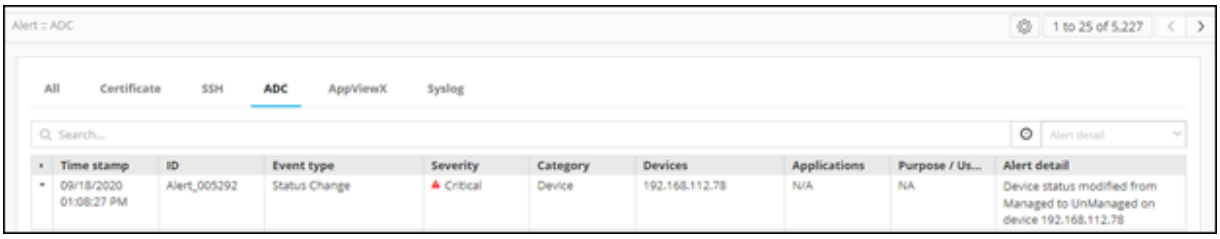


8. An example of Device status change alert (Managed to Unmananged):



Configure a Device Alert Notification

When ADC specific device actions are executed from AppViewX, whether through Control Center or Dashboards, any resulting events or changes will be raised as alerts and captured in the alerts inventory. These alerts serve as notifications of the actions taken and their outcomes, allowing administrators to monitor and respond to the Device's behavior effectively.

To get the device alert notification, administrator has to configure as follows:

1. Go to **Menu** > **ADC+** > **ALERTS & LOGS** > **Alerts** > **ADC** tab.
2. All the successful and failure events are captured in the alerts inventory along with the user comments. This enabled an Admin to track end-user actions.
3. Every alert contains the following information:
   - Alert ID
   - Alert Event type
   - Severity
   - Category
   - Devices
   - Applications
   - Alert Detail

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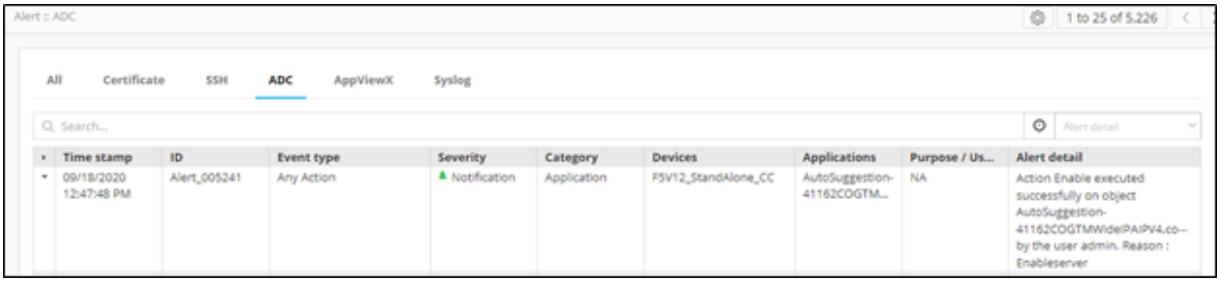
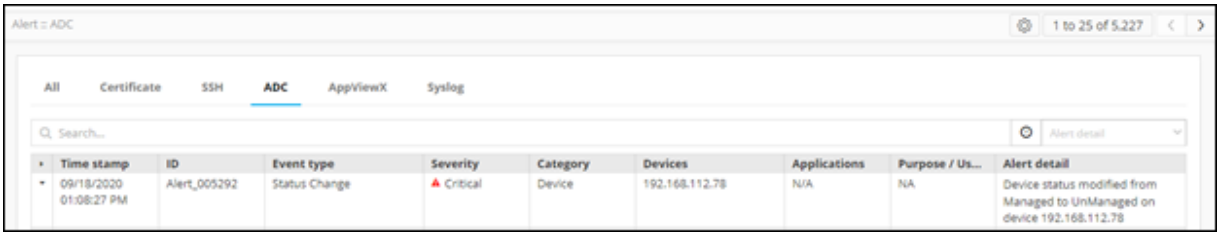
4. Search for any alert by the Device name or message etc.,
5. All Successful actions are tagged as Notification and Failure as Critical alerts respectively.
6. Event type helps to identify the type of event - An action event or Restore event or Backup event etc.,
7. An example of Object Enable Alert:



8. An example of Device status change alert (Managed to Unmananged):



Configuring Threshold Alert Notification

AppViewX allows near real-time monitoring of Critical Applications/Devices that breaches statistical thresholds like CPU, Memory, Number of requests, etc. Customize the threshold limits as per your organization, monitor Apps on real-time, and get notified via Email or SNMP.

To configure a Threshold alert notification,

1. Go to **Menu** > **ADC+** > **ALERTS & LOGS** > **Alerts**.
2. Click (**Settings**) icon, and then ADC.
3. Enter an **Alert Name**, **Message**, and **Category** as Threshold.
4. Configure the critical Devices/Applications that need to be monitored.
5. Set an Alert monitoring interval from 10 secs to 60 secs that fetches the run time data from the device to validate against the threshold.
6. Set a Cool off period like 10, 20, or 30 mins. The cool-off period prevents the user from getting bombarded with notification alerts for the same event.
7. Configure the Statistics that need to be monitored and set a value ie >=,<=,<,>,==.

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8. Create an Alert with multiple conditions with Logic AND and OR by clicking .
9. Define a Severity for your event based on the threshold conditions (Critical, Fatal, Major or Minor).
10. Configure the notification type as Email or SNMP.
11. Configure multiple Alerts as needed and Add them to the Grid. The configured Alerts could be modified or deleted anytime by selecting the Alert from the grid.
12. Following are some of the alerts that can be configured:
    - A Virtual server’s Current connection exceeded 100
    - A critical Device’s CPU breaches 60
    - A server’s Number of Requests is lesser than expected.
13. The configured events will be notified to the end user via Email or SNMP and as well captured in the Alerts inventory for tracking.

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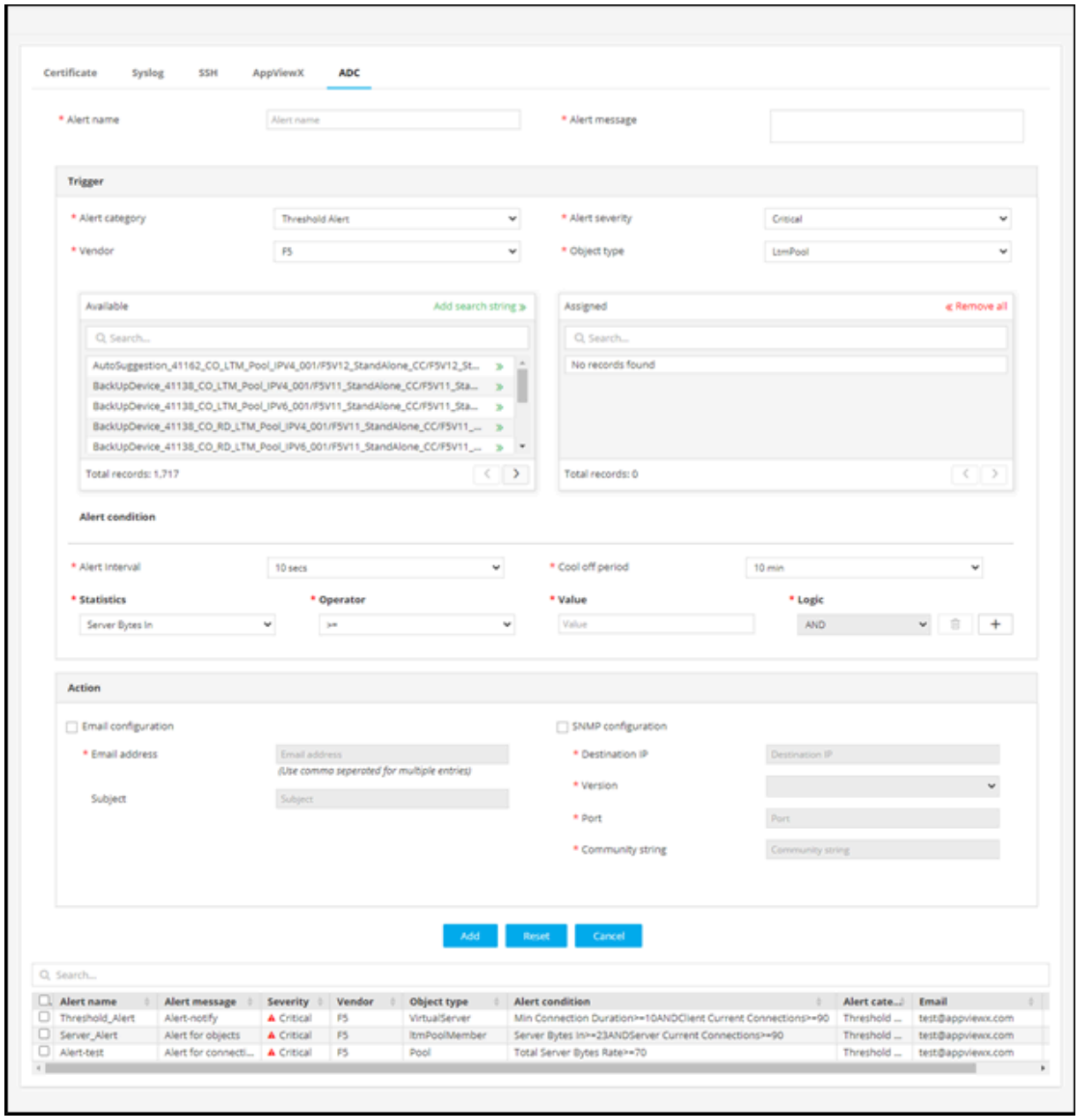

Configuring Syslog Alert Notification

AppViewX subscribes to all device-level logs, where it acts as a Syslog listener. The logs of any devices added in AppViewX can be viewed as Syslog by navigating to **Logging** > **Syslog**. However, devices tend to generate huge amounts of data, a Syslog alert is a convenient way to get notified about

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a specific event that is of importance to you. It also allows for a closed-loop remediation by associating workflows.

To configure a Syslog alert notification:

1. Go to **Menu** > **ADC+** > **ALERTS & LOGS** > **Alerts**.
2. Click (**Settings**) icon, and then ADC.
3. Enter an Alert name and Alert message.
4. Select the **Alert Category** from the drop-down list. The options are **Application Alert** and **Device Alert**.
5. Select the **Alert Severity** from the drop-down list.
6. Configure the critical **Device/Applications** that need to be monitored.

> **Note:** Rather than adding devices manually, you can click the Add search string link and create a search string that automatically assigns all existing objects or devices that match the filter criteria. The benefit of using a search string rather than selecting devices manually is that the search string continues to work in the background and auto-assign all new devices if the devices match the search criteria you set up.

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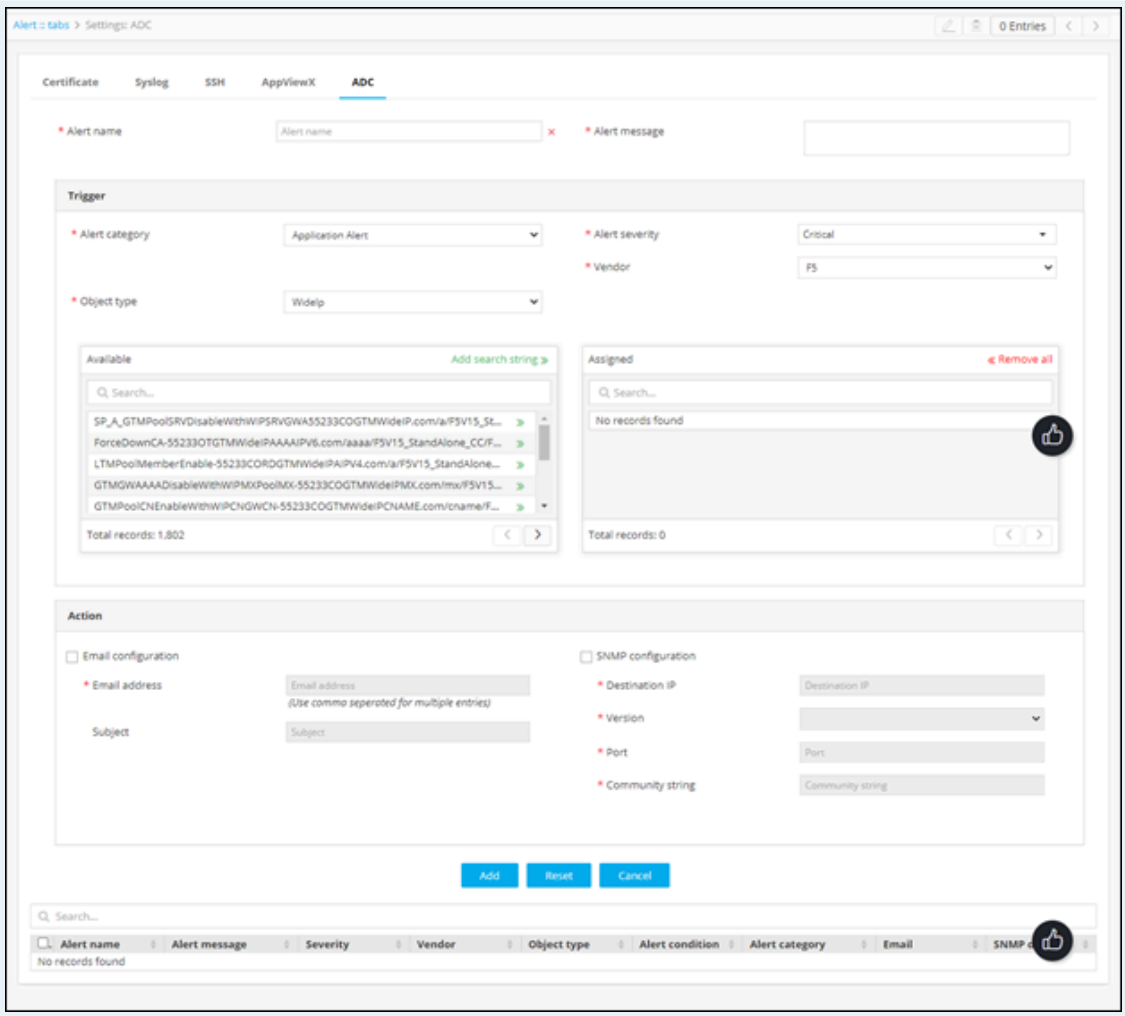

7. Add the Pattern/Regex that needs to be monitored on the Syslog received. Multiple strings can be provided with comma-separated, which will be considered as Boolean AND operator.
8. Following are some of the alerts that can be configured,

   - **Sample syslog** - <133>Sep 19 04:24:38 bigip-40-152 notice mcpd[6046]: 01070417:5: AUDIT - user admin - transaction #84153993-4 - object 0 - create { virtual_server_profile { virtual_server_profile_vs_name \"/Common/testVs\" virtual_server_profile_profile_name \"/Common/tcp\" virtual_server_profile_profile_type 5 virtual_server_profile_profile_context 0 } } [Status=Command OK]\n

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- For instance, if the Syslog alert is configured for the object and Regex pattern is given as “create” Whenever an object is created and a Syslog is received for that object as above. An alert will be raised for the same and notified to the user.
- You can also pass certain metadata from the alert to the workflow. In the Metadata section, enter a key and its associated value in the respective fields. This is the additional information that will be used by the workflow that is going to be associated with.

9. Associate any out of the box or custom workflow that needs to be executed on the occurrence of a configured Syslog event.
10. Configure multiple Alerts as needed and Add it to the Grid. The configured Alerts could be modified or deleted anytime by selecting the Alert from the grid.

Monitor Critical Applications/Devices and Receive Notification

Alert settings can be configured to trigger Email/SNMP alerts when any action is executed on configured Application(s) or Device(s).

To configure Application/Device alerts:

1. Go to **Menu** > **ADC+** > **ALERTS & LOGS** > **Alerts**.
2. Click (**Settings**) icon, and then ADC.
3. Enter an **Alert name** and **Alert message**.
4. Select the **Alert Category** from the drop-down list. The options are **Application Alert** and **Device Alert**.
5. Select the **Alert Severity** from the drop-down list.
6. Configure the critical Devices/Applications that need to be monitored.

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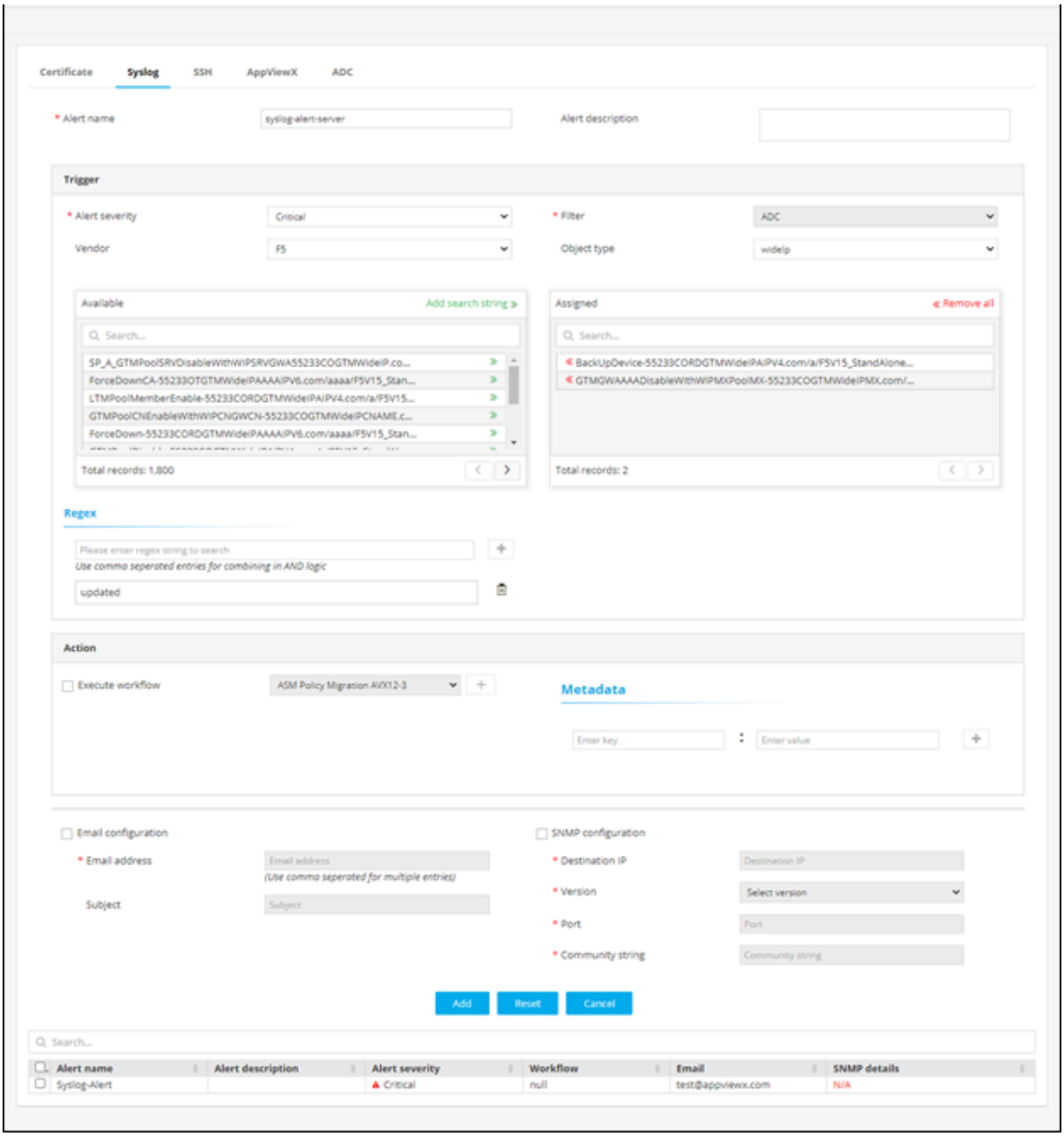

7. In the **Action** section, select the checkbox of Email or SNMP.
8. (Optional) Configure multiple Alerts as needed and Add it to the Grid. The configured Alerts can be modified or deleted anytime by selecting the Alert from the grid.
9. Following are some of the alerts that are notified upon configuration:
   - A critical Application is Disabled or Forced down (Event - Any Action)
   - A critical Device is Restored to a different configuration (Event - Restore)

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- Device Flipped from Active to Standby (Event - State change)
- A critical Device is Failed during a config fetch (Event - Status change)
- Device Backup failed (Event - Backup)

Logs

- Logs Overview
- View Details of a Log
- Schedule Log Reports
- Forward a Log

Logs Overview

Logs keep track of all activities that take place within AppViewX or any external entity that is connected to the AppViewX system. The Logging functionality in AppViewX tracks user activities and creates the device and object-level event logs.

The Logging screen allows you to view logs, which are grouped into the following categories:

- **All** - All category logs are displayed in this section. The logs listed are based on the latest user actions.
- **Audit** - All user-related changes
- **Self-audit** - Logged in user changes
- **ADC** - ADC specific logs
- **AppViewX** - AppViewX infrastructure level logs
- **Syslog** - End device level logs

Syslogs

- AppViewX subscribes to all device-level logs, where it acts as a Syslog listener. AppViewX registers for Syslog notifications with the devices managed in AppViewX or with external servers (like Kafka) and receives notifications when a change is identified on the device. Based on the notifications, the AppViewX system shall automatically update the configurations based on a configured interval ensuring device changes are up-to-date.

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- Syslogs received from the devices and the changes that are processed in AppViewX based on the Syslogs will be captured in the logging module.
- Following are the events handled by AppViewX:
  - Syslog-based updates for Object state change eg: Enabled, Disabled, etc.,
  - Syslog-based updates for Object status change eg: Available, Offline, etc.,
  - Syslog-based updates for Device failover state eg: Active, Standby, etc.,
  - Syslog-based updates for Creation/Modification/Deletion of Primary objects eg: WideIP, Virtual Server, etc., and Secondary objects eg: Monitor, Profile, etc., at an interval of 15 mins.
    - When there are configuration updates on the objects like a new member added/removed/modified, it will be automatically reflected in the AppViewX database with respective object mapping.
    - If those hierarchy objects are configured in ACL/Dashboard, the permission and actions will be automatically assigned respectively.
- Refer to Install, Upgrade, and Maintenance Guide for more details and Syslog configuration in AppViewX.

- AppViewX can either handle logs directly from the device (Lostash IP registration directly on the device) or through external servers. If the user has enabled Kafka properties, the Logstash registration will be automatically removed from the device.
- AppViewX integrates with external log servers like KAFKA when the Syslogs are not allowed to be received from load balancers directly.
- Kafka is a cluster that runs on one or more servers used to store real-time logs for a device. Ensure that the external log server details are configured in AppViewX to fetch the device logs.
- Refer to Platform User Guide for more details and Kafka configuration in AppViewX.

Within the Logging screen, you can perform any of the following actions:

- View details of a log
- Configure logging for ADC object types
- Export logs

View Details of a Log

To view log details:

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1. Go to **Menu** > **ALERTS & LOGS** > **Logs**.
   The **Logging** screen opens.
2. All the logs are displayed by default.
3. Click the tab that corresponds to the type of log you want to view.
4. On the log screen, view all details for a log by hovering your cursor over each column of data or click the ▸ (**Expand**) icon for the log you want to view. The table row expands to display all details for the log.

> **Note:** Search for any logs from the logging list based on User, Device name, log message, object details, source IP, AppViewX node, Method of login also search based on a particular column.

Schedule Log Reports

In addition to providing scheduled logging activities, AppViewX allows you to set up logging tasks for specific ADC object types and have the log results emailed automatically to designated recipients.

To schedule the log reports:

1. Go to **Menu** > **ADC+** > **ALERTS & LOGS** > **Logs**.
   The **Logging** screen opens.
2. Click the (**Settings**) button on the top.
3. At the top of the **Settings** screen, select the User Group or User radio button and then enter the name of the user or group that the log report relates to.
4. In the **Vendor** field, select the vendor whose object or objects you want to generate a log report for.
   In the **Object Type** field, select the object that you want to generate a log report for.
5. In the **Available** field, click the » (Assign item) icon beside each object you want to include in the log report.
6. In the **Repeats** field, select how often you want the log report to be generated: Daily, Weekly, or Monthly.
   From the **Log severity** dropdown list, select one of the following:
   - Critical
   - Fatal
   - Major
   - Minor
   - Notification

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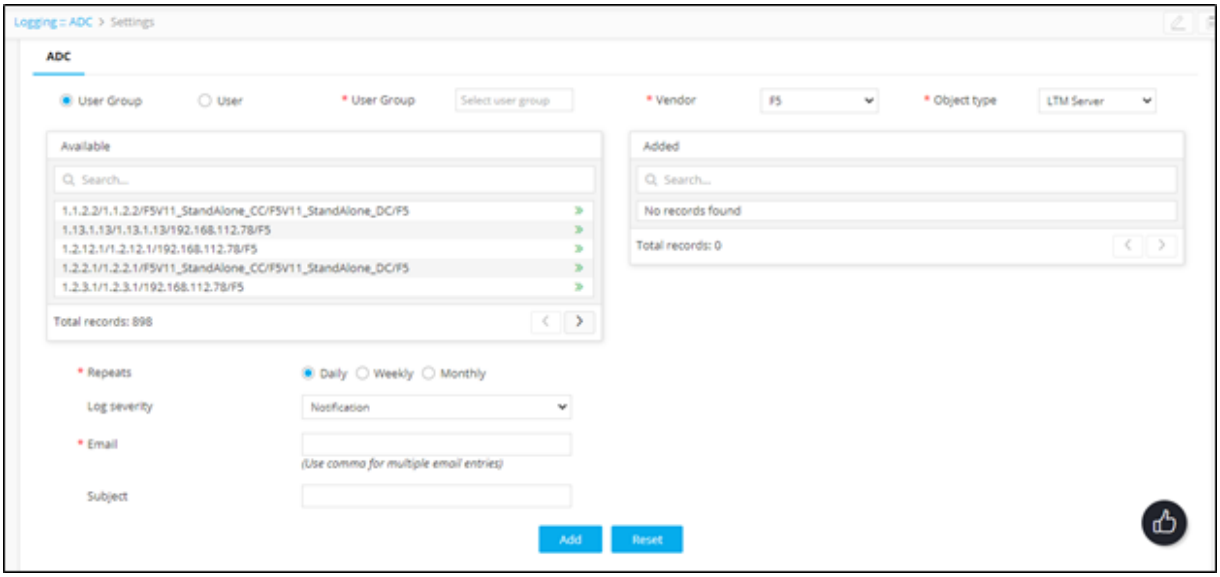
7. This is to let the user know the severity of the log reports that have been sent.
8. In the **Email** field, enter the email addresses of users receiving the log report.
9. (Recommended) In the **Subject** field, enter a short, clear description of the log report so that the email recipients can tell at a glance what the message contains.
10. Click **Add** to add the log report generation task to the table at the bottom of the screen.



Forward a Log

Log forwarding implies forwarding log data from our AppViewX log servers to external hosts like (splunk, elastic) to backup up the data or to process, reporting, monitoring in an external system. The user has to define which type of log data needs to be forwarded and in which format. Audit, AppViewX, and ADC logs can be forwarded. Supported protocol - TCP, UDP.

For more details and Kafka configuration in AppViewX, see Platform User Guide.

Account

- Account Overview
- Role-Based Access Control
- Accessing the Quick Config Option
- Authentication
- User
- User Group

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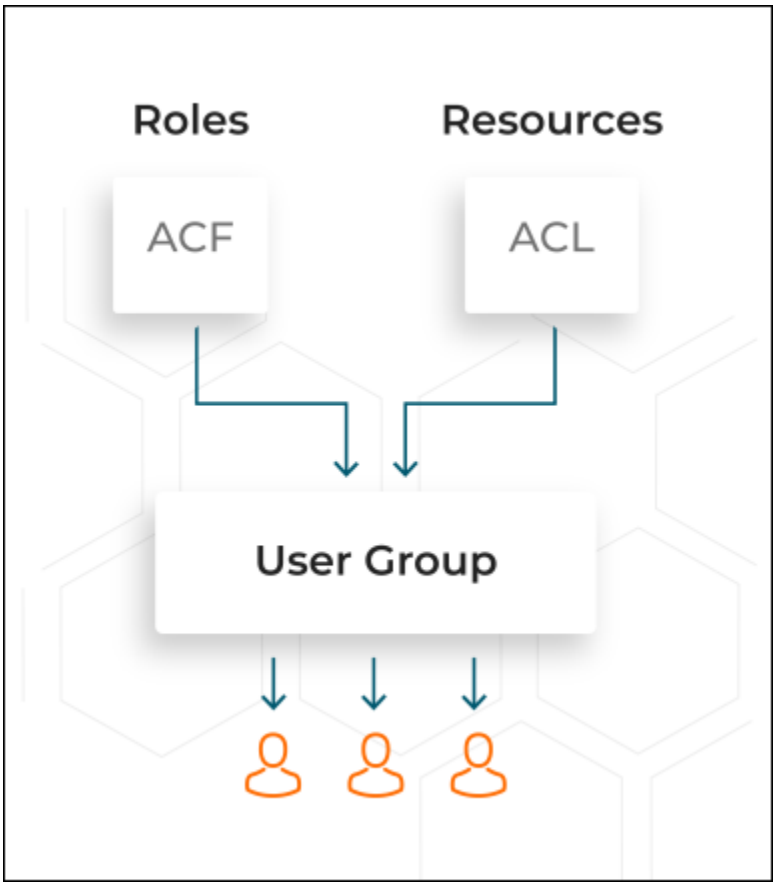
- Role
- Resources

Account Overview

AppViewX offers comprehensive support for Role and Resource-Based Access Control (RBAC). It allows you to integrate with the existing identity stores such as Active Directory (AD) and Lightweight Directory Access Protocol (LDAP) to enforce authorization policies. Roles and Resources can be customized to suit any organizational structure and user requirements.



Role-Based Access Control

Role-Based Access Control (RBAC) is key to eliminating working in silos. AppViewX advanced ADC automation and orchestration platform customizes roles at a very granular level, assigns authorized functions to a specific role, and specifies device and application access to users.

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Once you have deployed the ADC in your infrastructure, you have to onboard users with different levels of permissions to control the operations. ADC helps you with a completely customizable Account module to create users, roles, user groups, and resources. Also, it provides the default recommended roles and permissions as per industry standards that can be cloned and customized as required.

Accessing the Quick Config Option

To configure RBAC using Quick Config option,

- Click **Menu** > **Settings** > **General** > **Authentication** > **Quick Config** option.
- The Authentication stage opens in a wizard flow with the LDAP sub-tab displayed by default. On the same screen as part of the wizard flow, user groups, roles, and resources stages are displayed at the top. Click on the respective stage for configuration.

Ways to Access Quick Config Wizard Flow

- Click **Menu** > **Account** > **User group** > **Quick Config** option.

(or)

- Click **Account** > **Role** > **Quick Config** option

(or)

- Click **Account** > **Resource** > **Quick Config** option.

The Authentication stage opens in a wizard flow with the LDAP sub-tab displayed by default. On the same screen as part of the wizard flow, user groups, roles, and resources stages are displayed at the top. Click on the respective stage for configuration.

For detailed instructions to perform the above-mentioned actions, see Platform User Guide.

To configure role-based access control, the user should have ACF permissions. With ACF permission, you can:

- Assign devices to resource
- Assign objects to resource

Authentication

The **Settings** > **General** tab enables you to configure and manage authentication for

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1. **Lightweight Directory Access Protocol (LDAP)**: LDAP stands for Lightweight Directory Access Protocol. As the name suggests, it is a lightweight client-server protocol for accessing directory services, specifically X. 500-based directory services. LDAP runs over TCP/IP or other connection-oriented transfer services.
2. **LDAPS (LDAP over SSL)**: Also known as LDAP over TLS and LDAP over SSL, LDAPS allows for the encryption of LDAP data (which includes user credentials) in transit when a directory bind is being established, thereby protecting against credential theft.
3. **TACACS**: TACAS is a CISCO proprietary system utilizing a transmission control protocol (TCP). In TACAS, the entire authentication packet is fully encrypted and allows us to set up our own CISCO independent servers and databases. The AppViewX system allows you to add more than one Terminal Access Controller Access-Control System (TACACS) server for authentication.
4. **RADIUS**: RADIUS, which stands for "Remote Authentication Dial-In User Service", is a network protocol that controls user network access via authentication and accounting. The AppViewX system allows you to add more than one Remote Authentication Dial-In User Service (RADIUS) server for authentication.
5. **SAML**: SAML stands for Security Assertion Markup Language. It is an XML-based open-standard for transferring identity data between two parties: an identity provider (IdP) and a service provider (SP). The AppViewX system allows you to add more than one Security Assertion Markup Language (SAML) server for authentication.

For detailed configuration, refer to Platform User Guide.

On the successful configuration of Authentication protocol in AppViewX, start importing user groups from AD or create manual user groups.

User

A user is an individual who has access to AppViewX using a unique username and password maintained internally or by an external enterprise server such as Active Directories (AD).

Note:

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- Administrators can define how users should be authenticated to AppViewX. User authentication can either be an internal authentication or external authentication via LDAP, RADIUS, TACACS, and Single Sign-on.
- To create user accounts, you must be assigned the Administrator role.
- You must add a user to the user group as the roles and resources cannot be directly associated with the user.

In the User page, the following actions can be performed:

- **Create a User**: Create new users and associate them with user groups.
- **Modify a User**: Modify the existing user.
- **Delete a User**: Delete the existing user.
- **Enable a User**: Enable an existing user to activate the user.
- **Disable a User**: Disable the existing user to temporarily deactivate the login.
- **Import User**: Import the list of existing users. if needed the sample template file can be downloaded, which is in .csv format.

For detailed instructions to perform the above-mentioned actions, see Platform Userguide.

User Group

A user group is a group of individuals that have access to the same roles and resources. User Groups can be created manually or synced from an active directory or can be bulk uploaded using a spreadsheet.

When you associate a role and resource with a user group, the users within that user group are granted all of the role's and resource's corresponding privileges and permissions.

You can associate roles and resources only with user groups

In the User group page, the following actions can be performed:

- Create a User Group: Create a user group with basic information and associate Roles and Resources to it.
- Modify a User Group: Modify a user group by adding, removing, or modifying the Roles and Resources on demand. The associated users of the user group will be reflected with the changes made to the user group.

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- Delete a User Group: Select the required user group and delete the same. You cannot delete a user group that has active users in it. Users belonging to the deleted user group cannot log into AppViewX.
- Clone a User Group: The clone user group option allows you to create an exact copy of an existing user group with a different name. You can modify the roles and resources association while cloning a user group.
- Enable a User Group: Enable the required user group.
- Disable a User Group: Disable the required user group temporarily. You cannot disable a user group that has active users in it and users who are associated with a disabled user group cannot log in to AppViewX.

For detailed instructions to perform the above-mentioned actions, see Platform Userguide.

AppViewX encourages users to use the “quick config “option made available to import user groups seamlessly from AD. Following are the Action that can be performed on the User Group:

- Add New User GroupAdd New User Group by Sync Groups from LDAP option:
  1. Click on the Menu Button and Navigate to **Account** > **User Group** > **Quick Config** option.
  2. Authentication stage part of RBAC Configuration wizard flow displayed by default.
  3. Navigate to the User group stage as part of the RBAC Configuration wizard flow.
  4. Click the **Add new group** button.
  5. Select ‘Sync groups from LDAP’ option.
  6. Click **Proceed**.
- Add New User Group by TACACS/RADIUS/SAML/AppViewX option:
  1. Click on the Menu Button and Navigate to **Account** > **User Group** > **Quick Config** option.
  2. Authentication stage part of RBAC Configuration wizard flow displayed by default.
  3. Navigate to the User group stage as part of the RBAC Configuration wizard flow.
  4. Click the **Add new group** button.
  5. Select ‘TACACS/RADIUS/SAML/AppViewX’ option.
- Add New User Group by clicking the Bulk Import option:

1. Click on the Menu Button and navigate to **Account** > **User Group** > **Quick Config** option.
2. Authentication stage part of RBAC Configuration wizard flow displayed by default.
3. Navigate to the User group stage as part of the RBAC Configuration wizard flow.

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4. Click the **Add new group** button.
5. Select **Bulk Import** option

Role

Each role assigns a specific set of permissions relating to the modules that can be accessed and the tasks that can be performed in each AppViewX module. The roles can be assigned only to a user group. The user groups that are assigned with a role will automatically inherit all the associated permissions. User groups can be assigned with more than a role.

The Roles management of Inventory comprises some of the Out of the Box (OOB) roles available for ADC. The OOB roles can be cloned, enabled, and disabled. It can not be updated or deleted. Administrators can also create custom roles. Custom roles can be updated, deleted, enabled, and disabled. Users can either use OOB roles (if match their needs) or custom roles to map to user groups. The available roles are:

- **Application Manager ADC**: The application manager will have complete/partial (complete access will not be given to Shared devices) insight on all the application-related devices. The application manager gets “write” access to all the objects of application objects.
- **Auditor ADC**: Auditor access is predominantly for archived logs and the backed-up data along with the current reports and log data which would be used for all kinds of activity tracing.
- **DevOps ADC**: The user can automate, execute workflows, perform plugin management and upgrade.
- **Executive Director ADC**: Executive access is more towards business-level operational smoothness. The success rate of the changes and the monitoring data for the critical devices in report form ensure adequate details to have respective vendors communicate more data-oriented. This role would also help in understanding failure patterns.
- **Network Manager**: Access to complete infrastructure as the responsibility of access provisioning to users and the limited device access provisioning is also handled by this user only. It would require almost admin level of access on the infrastructure, would only not include core system-level access.
- **Traffic Manager**: The traffic manager can manipulate the state and status of any object/device to which he has been given access, there are possibilities that users may not have access to all the objects in the device as most devices are based on a shared network infrastructure basis.

In the **Roles** page, the following actions can be performed:

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- **Create a Custom Role**: Create a custom role. Note that to assign functions at a more granular level, click the expand icon beside a function checkbox and then select individual sub-options within that function. In the image below, for example, you can select ADC, which automatically assigns all six sub-options and the sub-sub-options within them, or you can expand the ADC function and select only the sub-options or sub-sub-options you want to assign.
- **Modify a Role**: Modify a role in AppViewX.

> **Note:** The Out of the box role functions can not be edited. Only custom roles functions can be edited.

- **Delete a Role**: To delete a role from AppViewX.

> **Note:** You can not delete a role that has active users in it. Also Out of the box (OOB) roles cannot be deleted. Only custom roles can be deleted.

- **Clone a role**: The Clone a role option allows you to create an exact copy of an existing role with a different name. The user can modify the permissions and tasks that can be performed while cloning a role.
- **Enable a Role**: Enable a role in AppViewX.
- **Disable a Role**: Disable a role in AppViewX. Note that You cannot disable a role that has active users in it and The users associated with a disabled role through a user group will not be allowed to log in to AppViewX.
- **Role Mapping to User groups**: To map a role to user groups.

For detailed instructions to perform above-mentioned actions, see Platform Userguide.

Resources

All the devices and objects that are configured within AppViewX are termed as Resources. The resource allows you to specify access at a granular level across all the devices and modules of AppViewX listed in this section, where the permission definitions are independent of each other. The resources can be assigned only to a User group. The users that are assigned to the user groups will automatically inherit the permissions associated with that resource. User groups can be assigned with more than one resource.

In the **Resources** page, the following actions can be performed:

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- **Create Resources**: Create Resources with ADC devices and objects in R or RW permissions
- **Modify Resources**: Modify Resources by adding, removing, or modifying permissions on devices and objects.
- **Delete Resources**: Delete Resources. Users associated with the deleted resources will not be able to access the Application.

AppViewX can be configured to not only provide permission to specific devices in the inventory but also to specific objects (Virtual server, Pool, Servers) within the device. This helps you to create custom user roles according to their need limiting the access by making sure the unauthorized access to critical objects is limited.

AppViewX gives you the flexibility to create users with various permission levels to access devices and objects. One is **Read only (R)** where users are allowed to access devices or objects to only view the configuration without permission to modify it. The second level of permission is **Read & Write (RW)**, where users have the access to both views and modify the device or object configuration.

AppViewX encourages users to use the **quick config** option made available to streamline the user creation process and help users identify the true potential of RBAC.

Using the **Quick config** option, you can perform the following actions:

- Dynamic rule-based resource tagging of newly discovered ADC objects, Certificates based on Query using object/Certificate fields available within AppViewX.
- Dynamic rule-based resource tagging of newly discovered ADC objects, Certificates using a script to tag based on data available with external tools (SNOW, Other CMDB, etc.).
- Rule templates are pre-shipped to ease the rule creation to dynamically tag resources
- Dynamically created resources can be assigned to user groups dynamically by mapping the respective rule to the required user groups as part of the Rules in Use inventory in the wizard flow.
- Manage the order of execution for the RBAC rules.
- Manage short circuit options to dynamically tag ADC objects.

For assigning the devices or objects to resource, refer to the following sections:

- Assign Devices to Resource
- Assign Objects to Resource

You can also check the following video link for more details:

https://www.appviewx.com/use-rbac-eliminate-working-silos/

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• Assign Devices to Resource
• Assign Objects to Resource

Assign Devices to Resource

1. Go to **Menu** > **Account** > **Resource**.
2. Click on the Add (+) icon to navigate to the resource addition page.

3. From the Resource Add page, configure the group details as given below and click Save.

Field	Type	Mandatory	Description	Validation
Name	Text	Yes	Name of the resource to be added.	Resource name cannot be empty.
Description	Text	No	Description of the resource.	A maximum of 255 alphanumeric characters and space are allowed.

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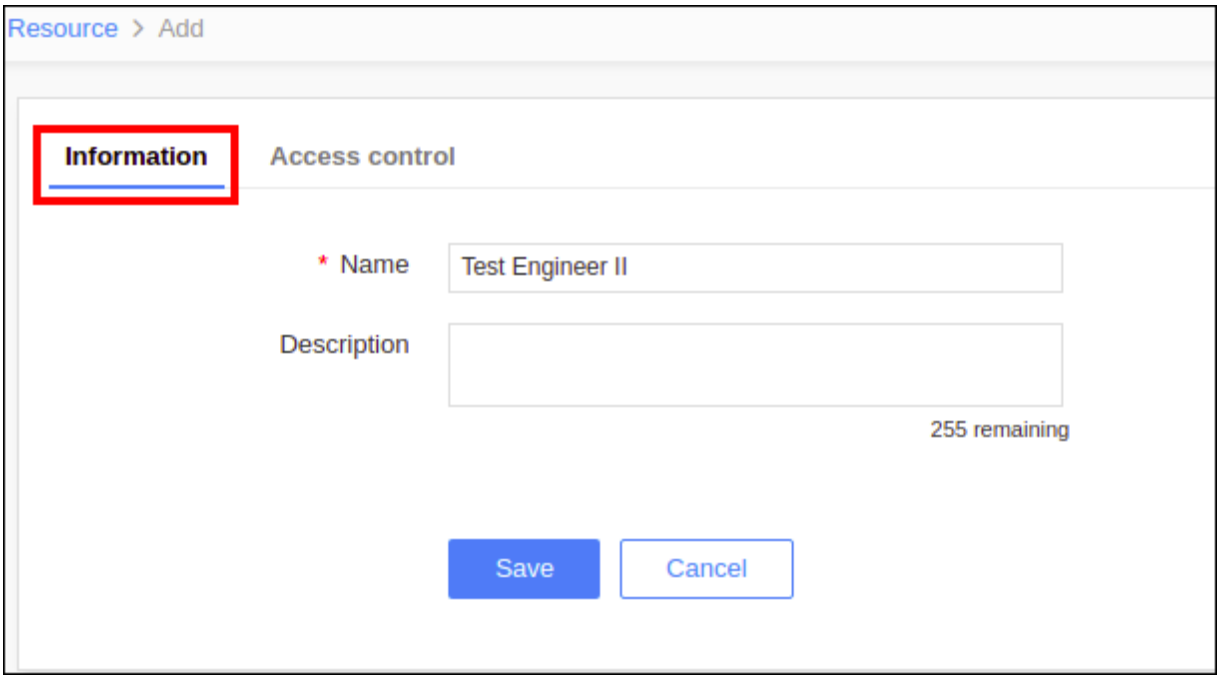
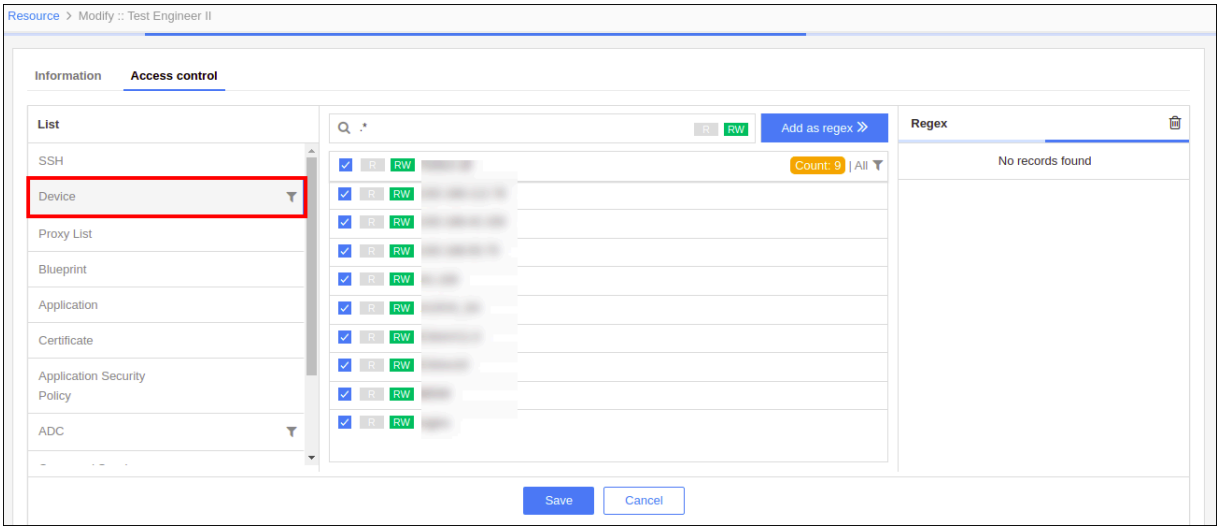


4. From the Resource Access control page, select Device from the list in the left panel.



5. Select the filter icon, select ADC in the filter list and then click **Apply Filter**.

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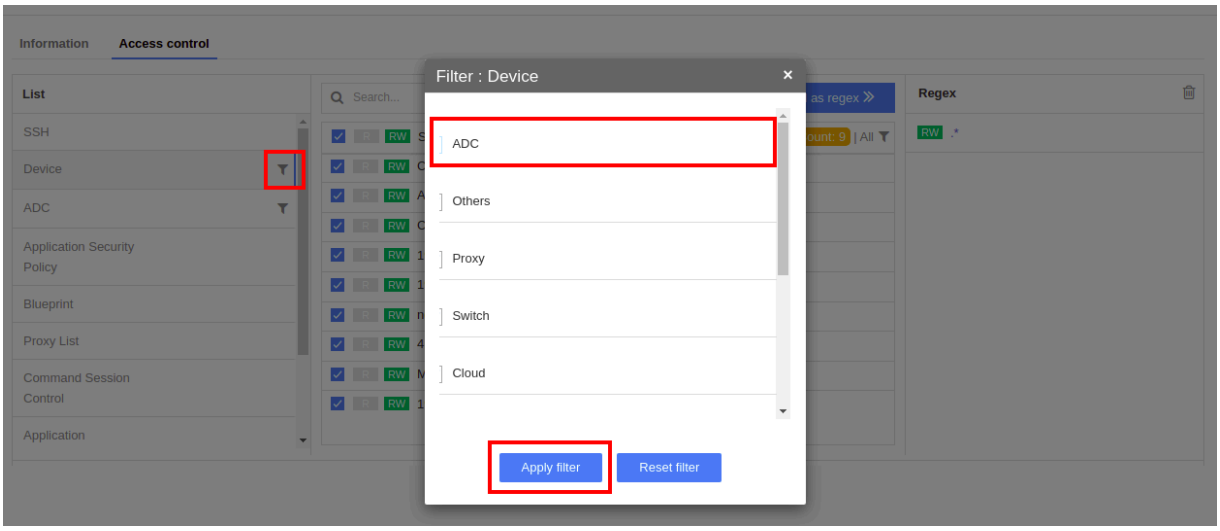
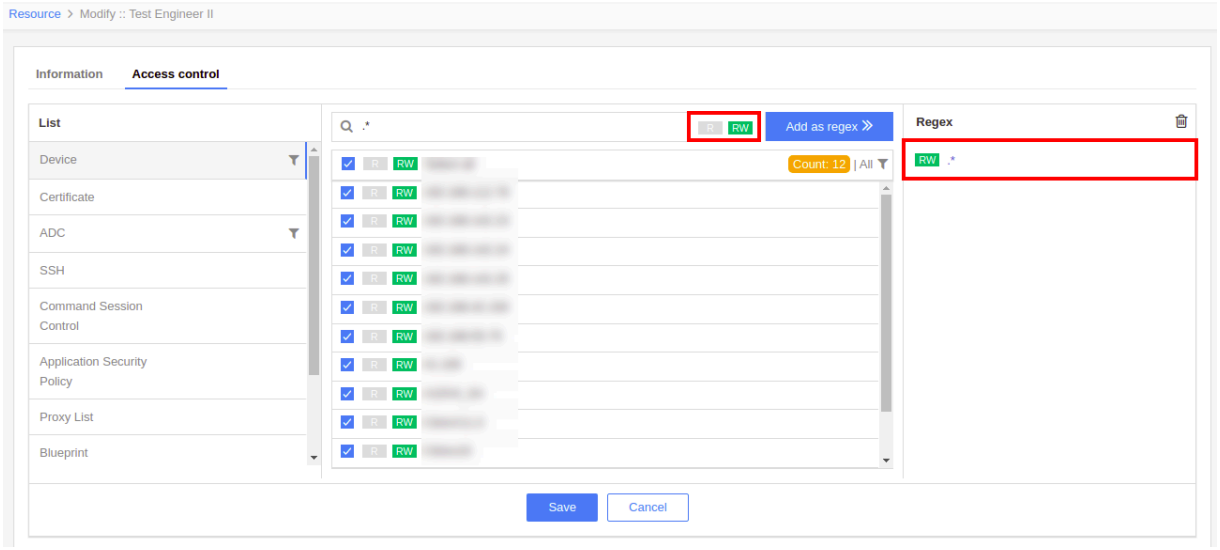


6. Search for the regex of the device name(s), provide R/RW permission, and click Add as Regex to assign the device(s) to the resource.



7. Click **Save**.

Assign Objects to Resource

1. Go to **Menu** > **Account** > **Resource**.
2. Click on the **Add** (+) icon to navigate to the resource addition page.

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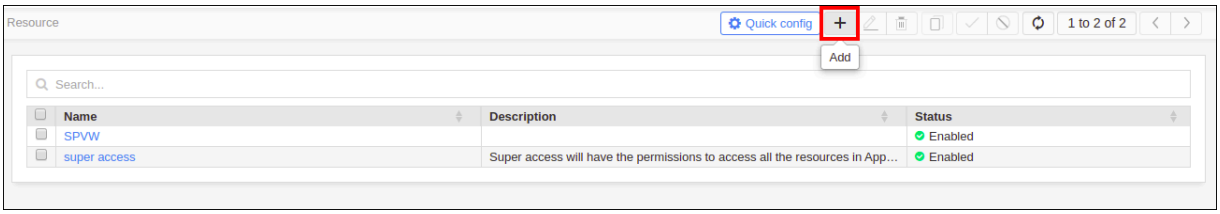
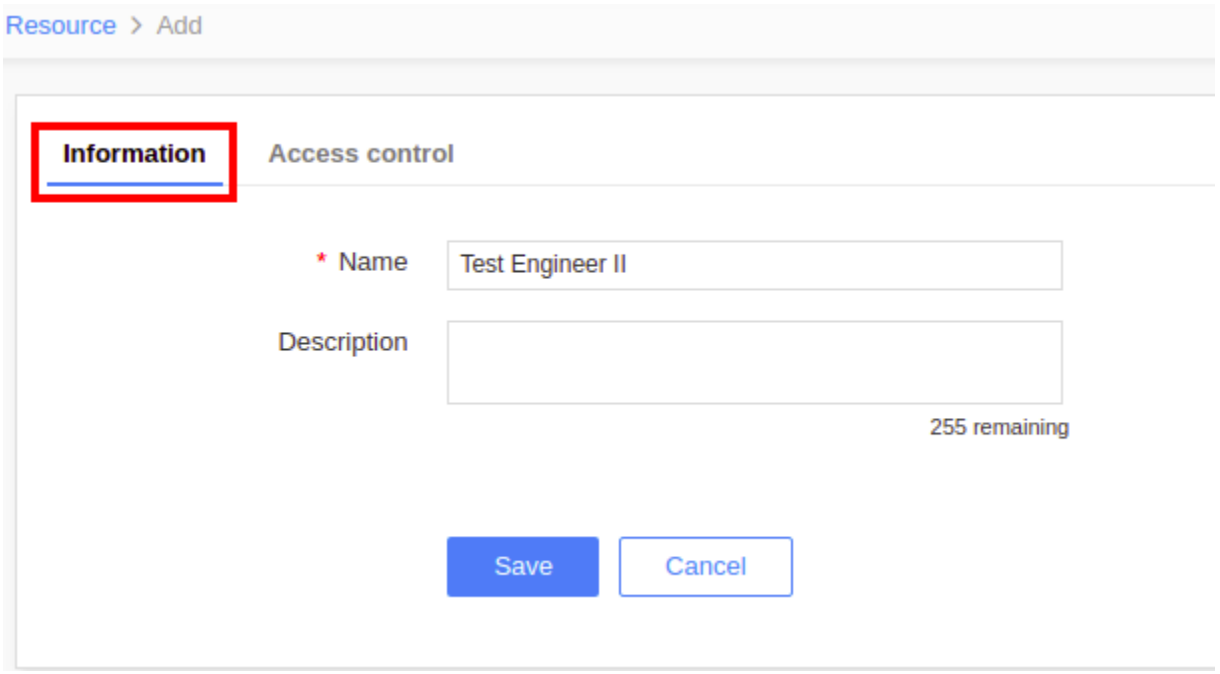


3. From the Resource Add page, configure the group details as given below and click **Save**.

Field	Type	Mandatory	Description	Validation
Name	Text	Yes	Name of the resource to be added.	Resource name cannot be empty.
Description	Text	No	Description of the resource.	A maximum of 255 alphanumeric characters and space are allowed.



4. From the Resource Access control page, select ADC from the list in the left panel.

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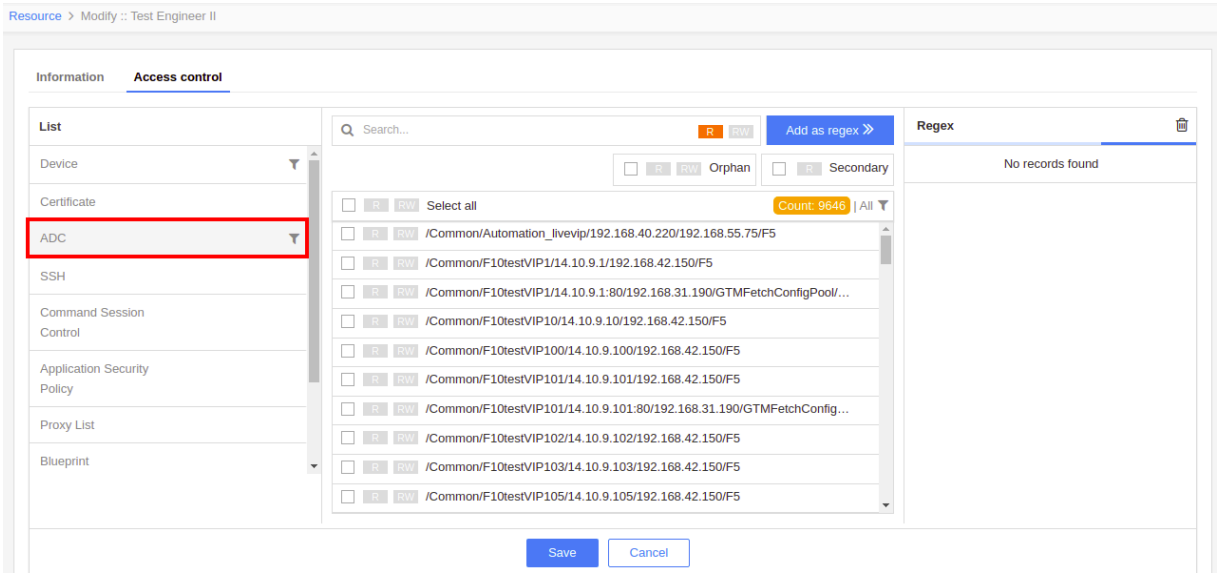
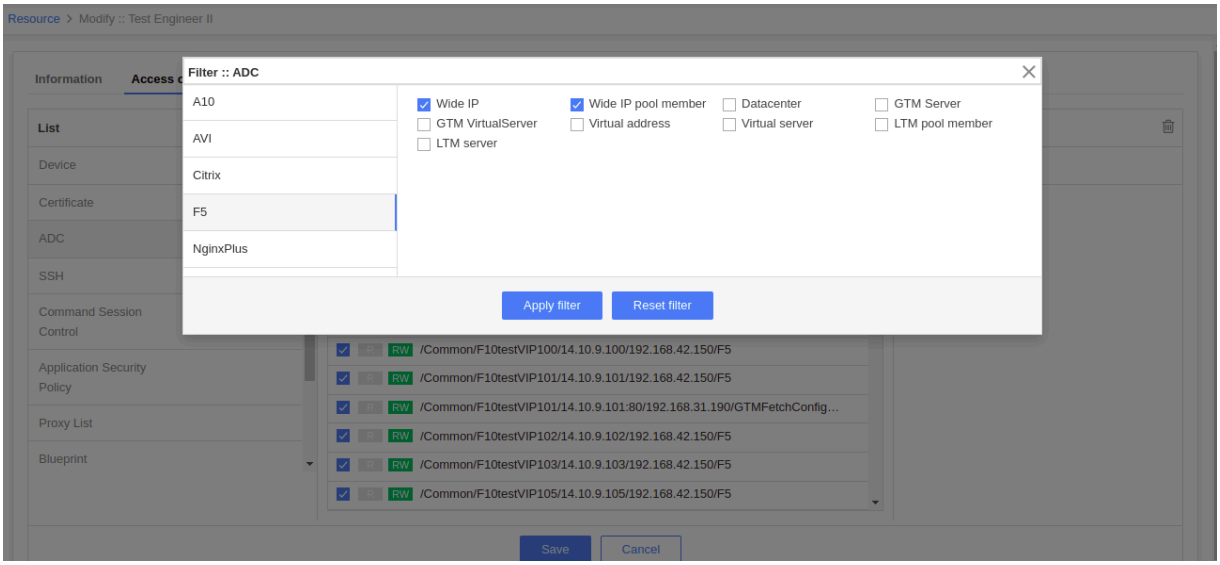


5. Select the filter icon, select the ADC vendor in the filter list and the object type(s), and then click **Apply Filter**.



Note: For F5 devices, the LTM Class object type is also displayed and by selecting this object type, the permission for class objects can be managed. The applied permission for the class objects from here will reflect in Dashboard, Control Center, and Restore/Compare.

6. Search for the regex of the object display name(s).

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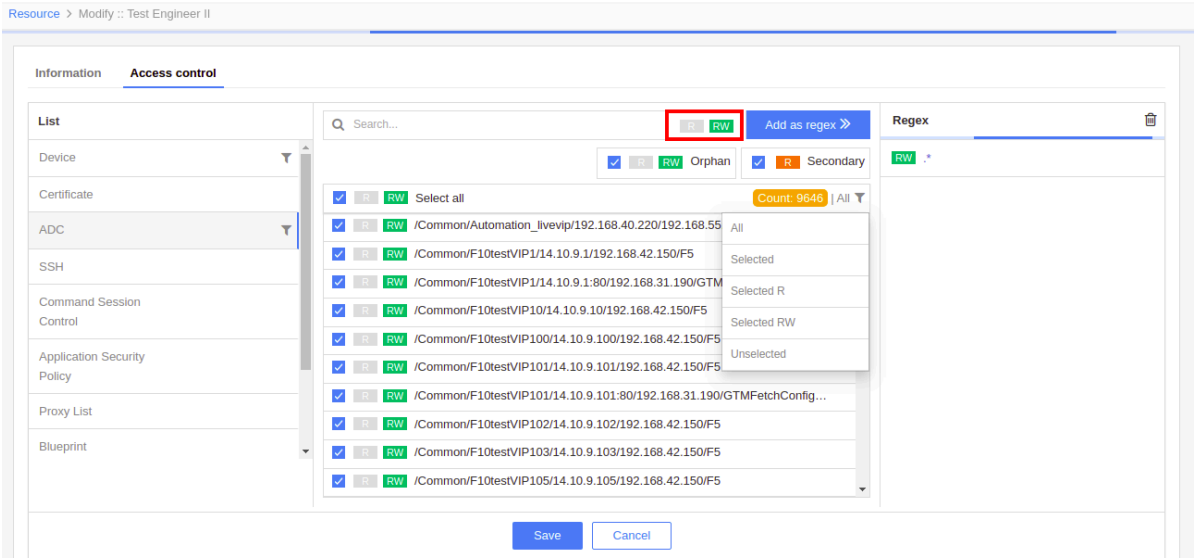
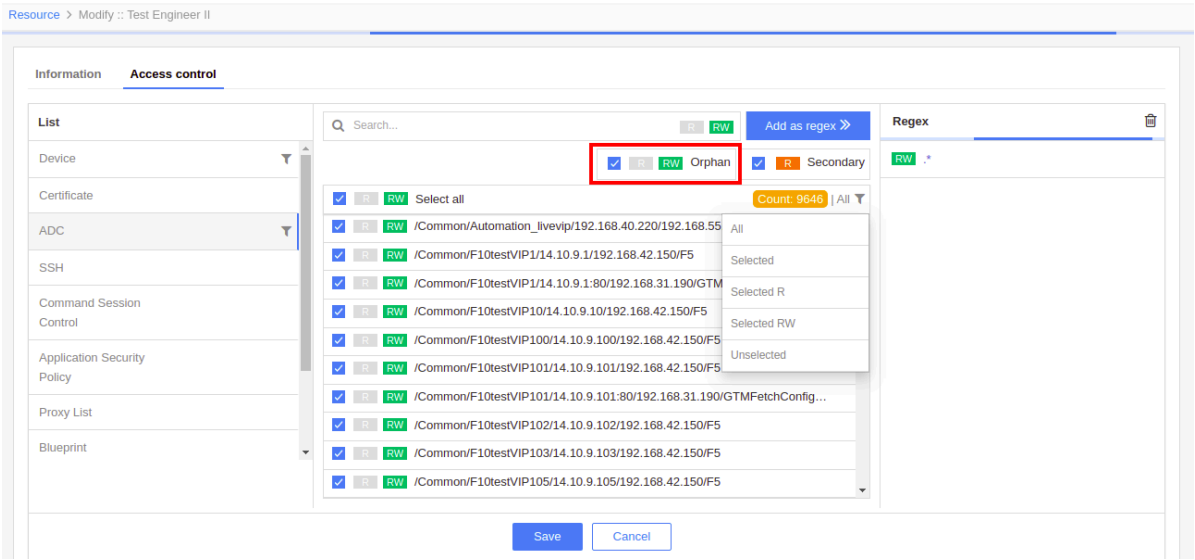
- Select R/RW permission for the object(s).



- Select R/RW permission for the orphan object(s)(optional).



- Select R permission for the secondary object(s)(optional).

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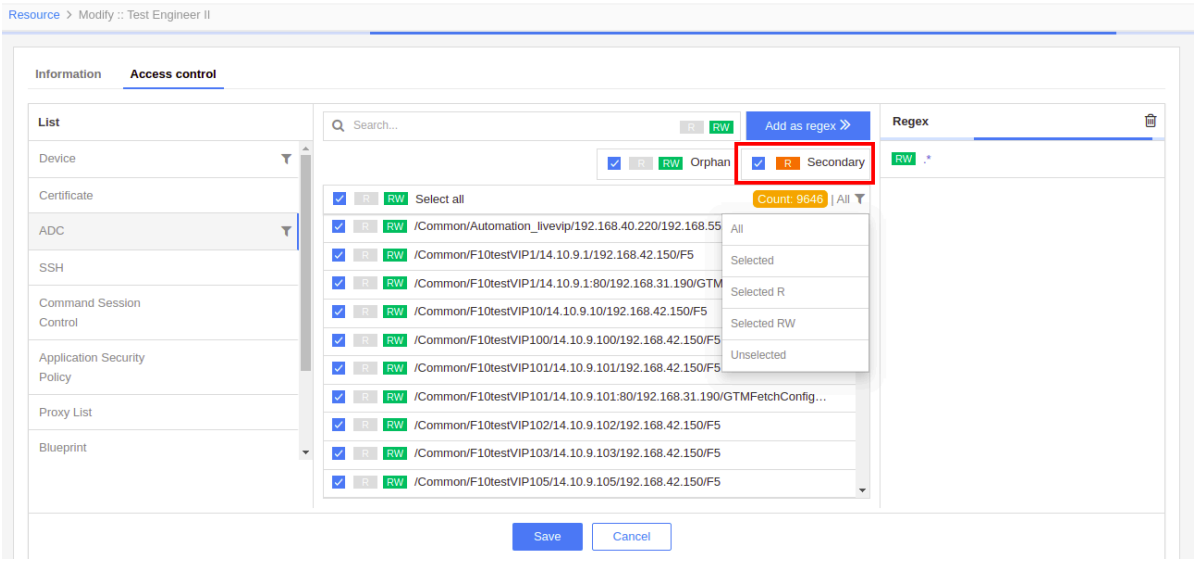
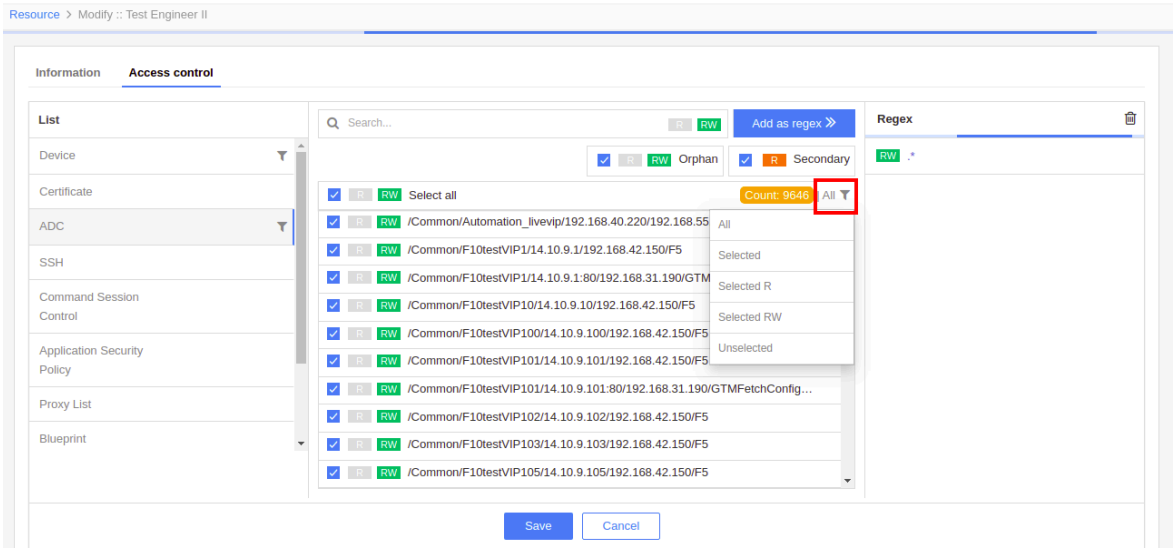


- Click the ALL filter icon to filter the objects based on the given permission.
  - Click All to get all the objects.
  - Click Selected to get the objects with any permission.
  - Click Selected R to get the objects with Read permission.
  - Click Selected RW to get the objects with Read/Write permission.
  - Click Unselected to get the objects without any permission.



- Click Add as Regex to assign the objects(s) to the resource.

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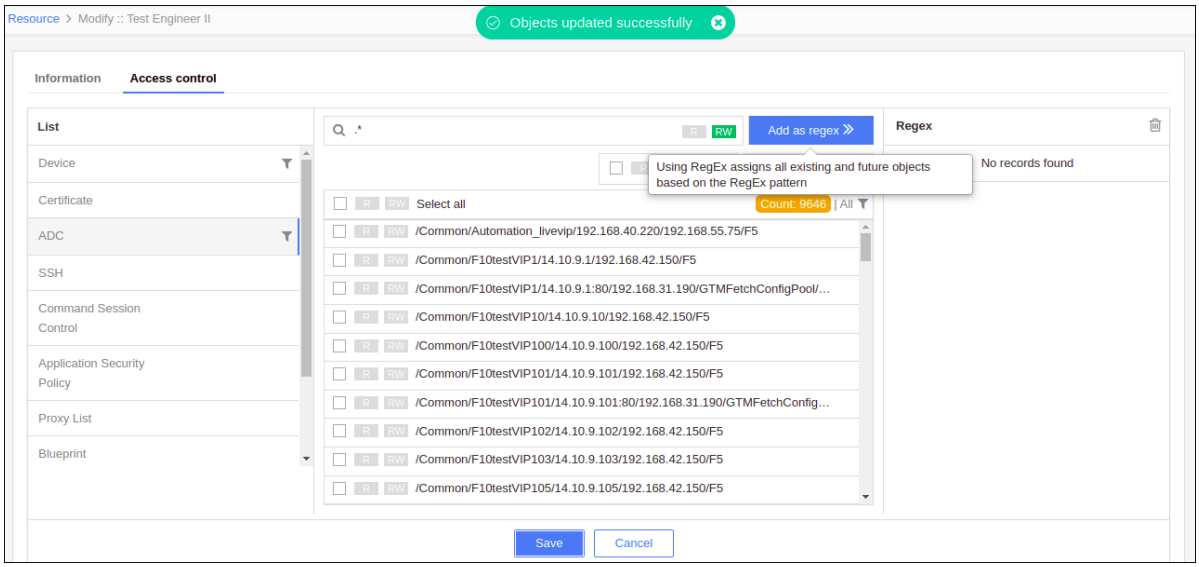
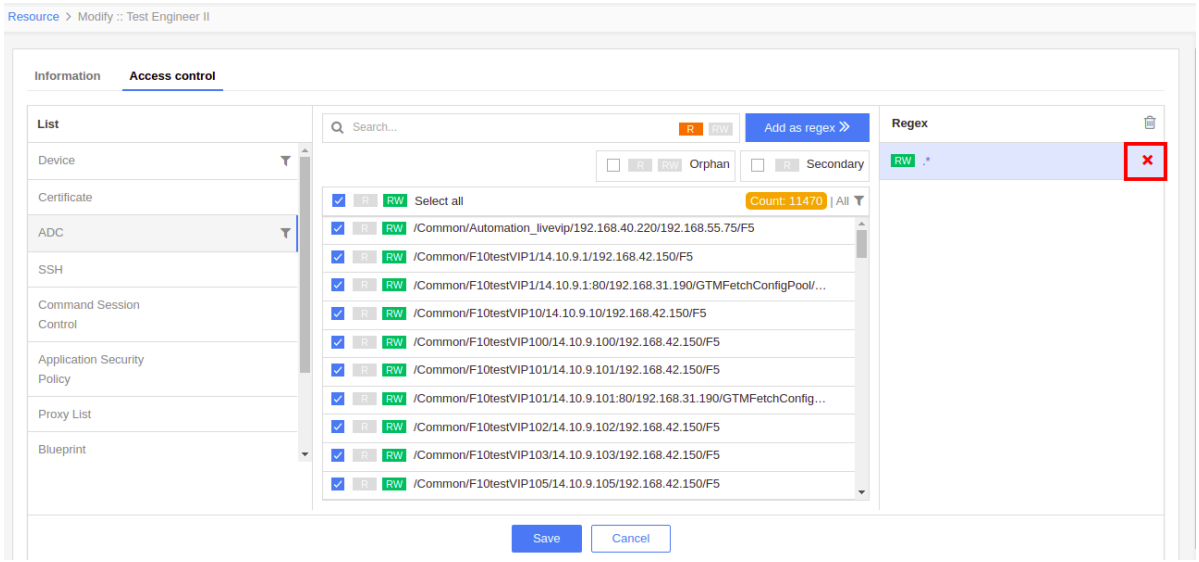


- Click the cross icon to delete any regex from the resource.



- Click the delete icon to delete all the regex from the resource.

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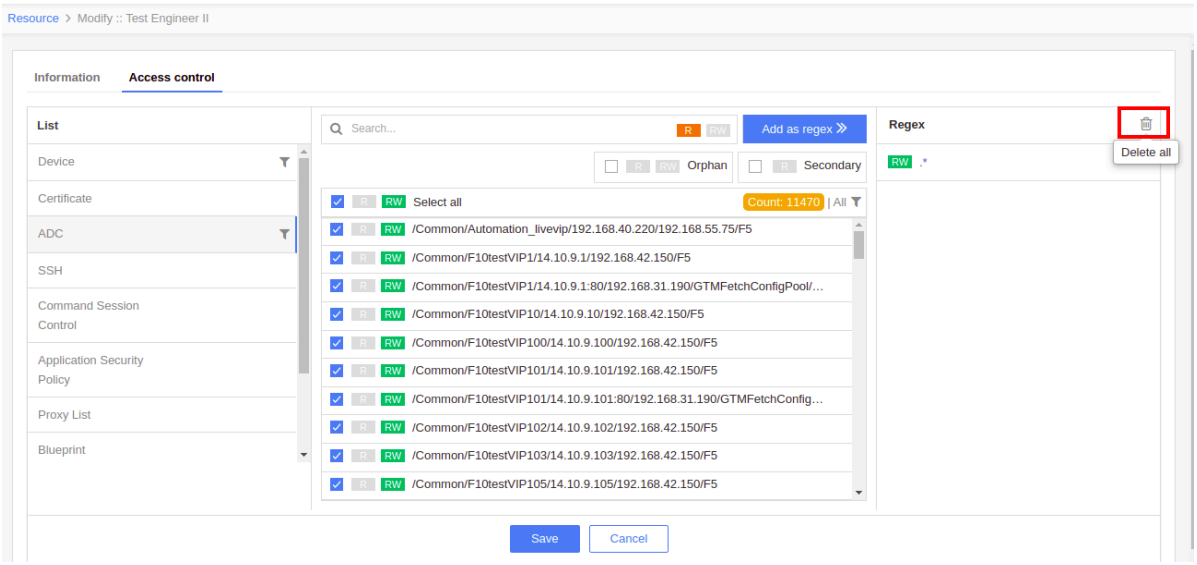

7. Click **Save**.

Studio

- Studio Overview
- Rules
- Reports

Studio Overview

This chapter covers the major features and functionality of the AppViewX Studio module, which is a platform that can be used for the following purposes:

- Building custom workflows and tasks to make network operations agile
- Performing decision-based automation to achieve single or zero-touch provisioning
- Automating tasks using a third-party integration
- mention the OOB workflows for ADC that are available.

The Studio module is divided into three sub-systems, each of which has its own set of tasks you can perform:

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- **Workflow** - It comprises of the following:
  - **Design** a custom workflow using a drag and drop UI or Import an existing workflow.
  - **Variables & Hooks** - Execute custom REST or script codes on top of the existing code using the **Hooks** section. You can define **Magicvariables** (static or dynamic), which are similar to the global variables. The only difference is that the global variables can be used only within one workflow, whereas magic variables can be used across workflows. The hooks can also be mapped with the magic variables.
  - **General** - Add/manage Python codes and regular expressions using the **Helper script** and **Regex Library sections** respectively. You can access the AppViewX **GitHub** repository containing various reusable workflows.

For more detail, refer to Visual Workflow Guide (link).

- **Reports** - It comprises of the following tabs:
  - **My reports** contain all the reports created by you or all the reports that have been created, depending on the permissions you have been assigned. It allows you to create, clone, or delete report(s).
  - **Store** allows you to view or clone 31 (6 samples and 25 certificates) pre-built reports.

For more detail, refer to Reports Guide.

- **Rules** - Allows you to create an action (force down, enable, and disable) related rule(s) to trigger workflows for the ADC objects.

For more detail, refer to Visual Workflow Guide (link).

- **Pages** - AppViewX provides a one-stop portal with all the service offerings in the form of low code pages to enable self-servicing for the end-users (like App owners, Network Engineers, CA, Admin, etc.) in a simplified and intuitive manner. There are Out of the Box catalogs and as well option to customize catalogs as per the organization standards. Access the opinion through **Menu** > **Studio** > **Pages**.
  - **Benefits**

- An intuitive self-service portal to access all service offerings for employees, and partners via Single Pane of Glass.
- Customer Experience – Users only see services that are available to them, described in business terms they understand.

- Build your own App catalog/portal.

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- Configurable Catalog page that allows for personalized task views
- Low Code designer portal – Low Code and configurable toolsets, allowing users to brand Catalog solution so it feels familiar and intuitive for the end-users.

For more detail, refer to Service Catalog User Guide.

Rules

Rules Inventory helps to define custom business rule(s) for specific actions and workflow(s) can be invoked for closed-loop automation.

Users can customize any action as per the business use case using workflow and associate it with the actions. The workflow will be triggered for a Rule-based on the criteria configured.

Key Features:

- A common Rule Inventory integrating key platforms (i.e., Control Center, Device Management, Alerts, Insight, etc.).
- Provision to define custom business rule(s) for module-specific actions.
- Provision to define the trigger, rule criteria for module-specific actions.
- Provision to define one or many workflow actions against a rule.
- Provision to execute the specific action defined based on the pre-defined rule.
- Provision to trigger workflow requests/token ID, and indicate the relevant status.
- Provision for a common notification center for actioning workflow requests.

Why Rules, Policy in AppViewX?

A policy is a condition that when met causes the system to perform a specific set of actions.

Policies can be used for event-driven automation and to automate network change and configuration tasks such as:

- A comprehensive policy/rule inventory to define, manage policies, and triggers.
- Web interface to configure business data objects without changing code.
- Eliminates hard coding of complex business logic; enables faster policy-driven GTM solutions.
- Define internal rules across modules – Certificate, Alert, Control Center, Dashboard, Device Management, Reports, etc.
- Perform event-driven orchestration based on internal and external event(s).

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- Provision to map Business processes to specific actions across AppViewX.
- Detecting and collecting configuration changes made by external users.
- Notifying users and systems when a configuration change is detected.
- Auto-remediating critical compliance violations.
- A rule can be a server-side, client-side logic that runs when any CRUD operation is performed.

The Rules sub-system within the Studio module allows you to perform the following tasks:

- Create a rule
- Clone a rule
- Delete a rule

- Clone a Rule
- Create a Rule
- Delete a Rule

Clone a Rule

To clone a rule:

1. Go to **Menu** > **Studio** > **Rules**.
2. The **Rules** screen displays a list of all the rules.
3. Select the rule you want to clone.
4. From the **Actions** dropdown, click **Clone**.
5. In the screen that appears, enter a **Name** for the cloned rule.
6. Click **Enable** to clone the rule in an enabled state. Alternatively, you can click **Save As Draft** to save the cloned rule to the AppViewX system and enable it later on.

Create a Rule

To create a rule using the Rules sub-system in the Studio module:

1. Go to **Menu** > **Studio** > **Rules**.
   A list of rules is displayed.
2. Click **Create Rule**.
3. In the **Rule Name** box, enter a name for the rule.

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4. (Optional) In the **Description** box, enter additional information about the rule.
5. (Optional) Select the location/entity where the rule must run and the action upon which the rule must be triggered.
6. (Optional) Select the specific action on a page where the rule has to be executed. The action could be Enable or Disable.
7. Associate a workflow against the Rule. AppViewX provides default Action execution workflows that integrate with Service NOW for change management. You can associate a default workflow or custom workflows.
8. (Optional) Define the **Rule criteria**.

> **Note:** The default workflows are available in the Studio >Workflows> Rules category. AppViewX allows to clone and customize the default workflows.

Delete a Rule

To delete one or more rule(s):

1. Go to **Menu** > **Studio** > **Rules**.
2. The **Rules** screen displays a list of all the rules.
3. Select the rule(s) you want to delete.
4. From the **Actions** dropdown, click **Delete**.
5. In the Confirmation dialog box that appears, click **Yes**.

Reports

The Reports sub-system within the Studio module allows you to perform the following tasks:

> **Note:**
> For more details about the report, refer to the Reporting User Guide.

- Clone a Report
- Create a Report
- Delete a Report

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Clone a Report

To clone a report:

1. Go to **Menu** > **Studio** > **Reports**.
   The Reports screen appears.
2. In the **My Reports** tab, all the reports are displayed based on the permissions that you have been assigned. Select the report you want to clone.
3. From the **Actions** dropdown, click **Clone**.
4. In the **Clone report** screen that appears, enter a **Name** for the cloned report.
5. Click **Save**.

Create a Report

To create a report using the Reports sub-system in the Studio module:

1. Go to **Menu** > **Studio** > **Reports**.
2. The **Reports** screen appears. In the **My Reports** tab, all the reports are displayed based on the permissions that you have been assigned.
3. Click **Create New Report**.
4. In the **BASIC INFO** screen of the report creation wizard,
   - Enter a **Name** for your report.
   - (Optional) In the **Description** field, type additional information related to the report.
   - Click **Yes** if you want to control access to the report using different permissions for different users.
   - Click **Save** to resume the chart creation later or click **Next** to proceed with the chart creation.
5. In the **DATA SOURCE** screen,
   - From the **Select data source** dropdown, choose one of the following sources to query data, and build the report:
     - **Query builder** - Allows you to select one of the existing queries or create a new query.
     - **Hooks** - Allows you to select one of the pre-built OOB hooks or create a new hook (Script or REST).
   - Click **Save** resume the chart creation later or click Next to proceed with the chart creation.
6. In the **CHART CONFIGURATION** screen,

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- Click on one of the following reports to **Select chart type - PIE**, **DONUT**, **BAR**, **STACKED BAR**, **GRID**, **LINE**, and **METRIC**.
- The fields that appear vary for each chart type, at a minimum, fill in all the mandatory fields.
- Click **Save** to resume the chart creation later or click **Next** to proceed with the chart creation.

7. In the **CHART DRILLDOWN** screen, select the checkbox to view more specific layers of the data or information being analyzed.
8. Select one of the following drill-down types for the chart:
   - **Set redirect URL** to configure the URL to any page to which the redirection from the chart must happen.
   - **Grid** to associate the chart to a hook and a workflow.
9. Click **Save & Enable** to save the report to the AppViewX system.
10. The report is added to the **My reports** tab, it can be enabled or disabled using the toggle button in the **Status** column.
11. After the report is created, you can perform one of the following actions on the left-hand pane:
    - **Pin** the report to a new or an existing dashboard.
    - Set the **Interval** during which the chart data must be collected. This can be customized to happen once or recursively.
    - **Share** the report with the various recipients at a specific point of time once or repeatedly.
    - Enable or disable the report using the toggle button.

Delete a Report

To delete one or more reports:

1. Go to **Menu** > **Studio** > **Reports**.
   The **Reports** screen appears.
   In the **My Reports** tab, all the reports are displayed based on the permissions that you have been assigned.
2. Select the report(s) you want to delete.
3. From the **Actions** dropdown, click **Delete**.
4. In the **Confirm delete** dialog box that appears, click **Yes**.

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Settings

- Settings Overview
- Device Settings
- Object Settings
- iHealth Report
- Statistics Settings

Settings Overview

AppViewX's ADC Settings helps manage the Device and Object specifications related to Configuration synchronization, Report, and Statistics.

Device Settings

The device settings can be configured in the following tabs:

- Device Specification Tab
- Syslog Purge Limit
- Script Execution
- Device Sync

Device Specification Tab

Save the changes of device specification configuration on the F5 device after config fetch. This enables all the changes to be reflected on the F5 file.

To configure a device specification:

1. Go to **Menu** > **ADC+** > **SETTINGS** > **Module Settings** > **ADC** > **Device** > **Device Specification** tab.
2. Click the toggle icon to enable Save Configuration to the device.

Note: In this example, F5 device specification is shown.

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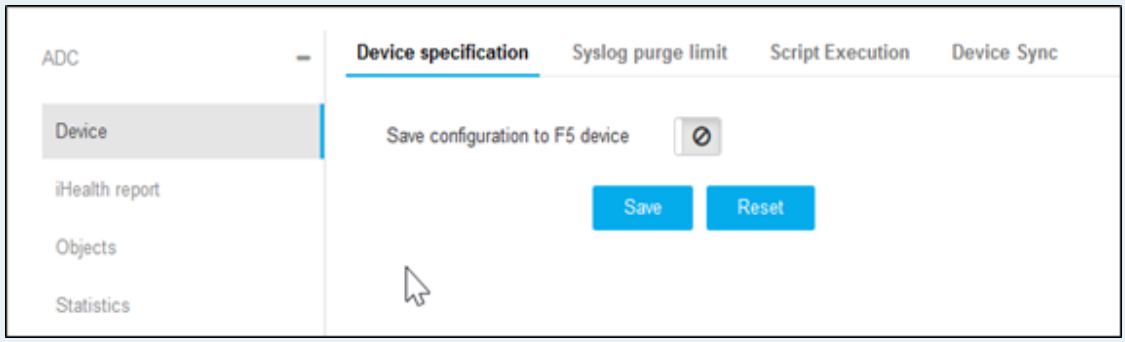

3. Click **Save**.

Note: To reset the changes, click Reset.

Syslog Purge Limit

Syslog purge limit enables to limit of the number of Syslog persisted against a device. The oldest logs will be automatically deleted on exceeding the limit.

To configure the Syslog purge limit:

1. Go to **Menu** >**ADC+** > **SETTINGS** > **Module Settings** > **ADC** > **Device** > **Syslog purge limit** tab.
2. On the Syslog purge limit tab, specify the syslog limit per device. By default, the limit is set to 1000 and can be extended till 5000.

3. Click **Save**.

Note: To reset the changes, click Reset.

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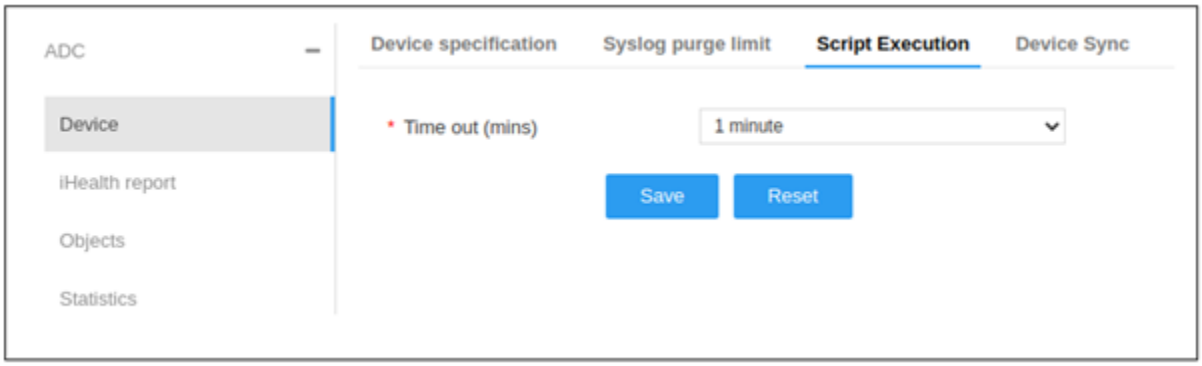
Script Execution

Script Execution setting allows you to specify the time-out limit of script execution. If the script execution exceeds the specified time, AppViewX will automatically terminate the script.

To configure script execution:

1. Go to **Menu** > **ADC+** > **SETTINGS** > **Module Settings** > **ADC** > **Device** > **Script Execution** tab.
2. On the Script Execution tab, specify the timeout limit.



3. Click **Save**.

Note: To reset the changes, click **Reset**.

Device Sync

The device Sync feature allows to customize the configuration sync operations.

To customize the configuration sync operations:

1. Go to **Menu** > **ADC+** > **SETTINGS** > **Module Settings** > **ADC** > **Device** > **Device Sync** tab.
2. On the Device Sync tab, specify the following:
   - **Config fetch** - Allows to schedule the config fetch process at a specific time for selected days. Ensures device changes are reflected in AppViewX.
   - **HA - Sync** - Ensures the HA devices are synchronized in specified intervals.

     Note: To set device sync, the AppViewX Group Sync flag must be enabled while adding a device to run HA sync as per configured interval.

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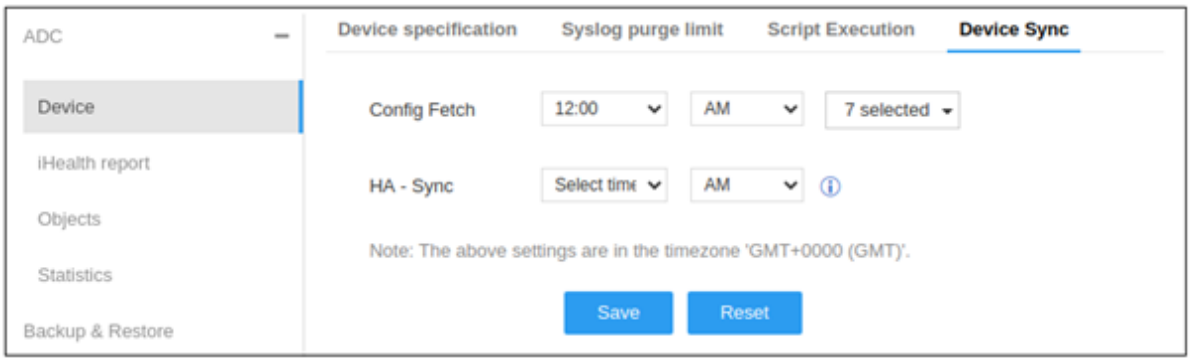

3. Click **Save**.

Note: To reset the changes, click **Reset**.

Object Settings

The object settings can be configured under the following tabs:

- Actions Tab
- Naming Format Tab
- Configuration Drift Tab

Actions Tab

On the Actions tab, you can customize the actions execution as needed

To customize the actions:

1. Go to **Menu** > **ADC+** > **SETTINGS** > **Module Settings** > **ADC** > **Objects**.
   By default, the **Actions** tab appears.

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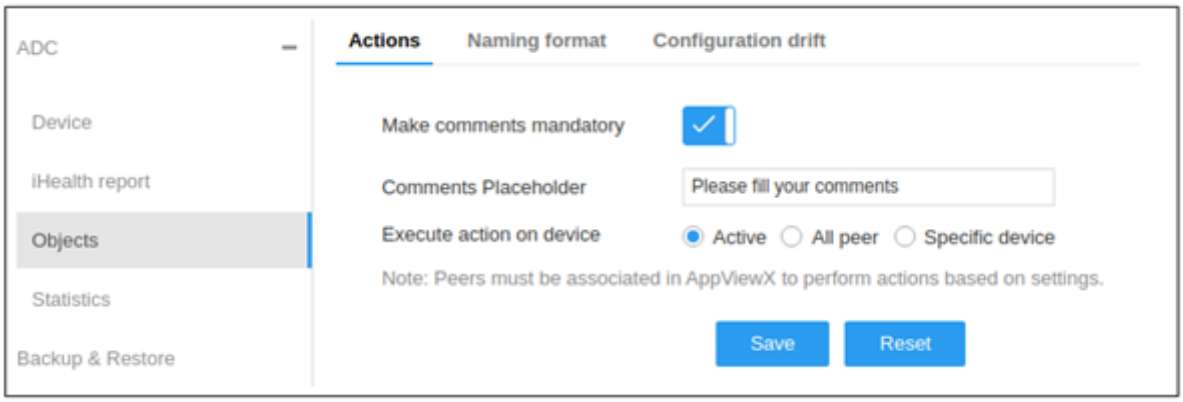

2. Enable the **Make Comments Mandatory** toggle button to set the comments option mandatory while executing an action from the Control Center or dashboard. This ensures end users are mandated to mention the reason for their actions.
3. Enter comments in the **Comments Placeholder**, such as SNOW ID, Enter Application impacted, etc. to impose a standard to be followed upon action execution.
4. Select **Active**, **All Peer**, or **Specific Device** radio buttons for **Execute Action on Device**. By default, AppViewX actions are triggered on current Active devices. This can be modified as needed.
5. Ensure Peers are associated in AppViewX for seamless execution.
6. Click **Save**.

> **Note:** To discard the changes, click **Reset**.

Naming Format Tab

On the Naming Format tab, you can customize the display name format of your objects that needs to be followed throughout the application.

To customize the naming format:

1. Go to **Menu** > **ADC+** > **SETTINGS** > **Module Settings** > **ADC** > **Objects**.
2. Click the **Naming Format** tab.

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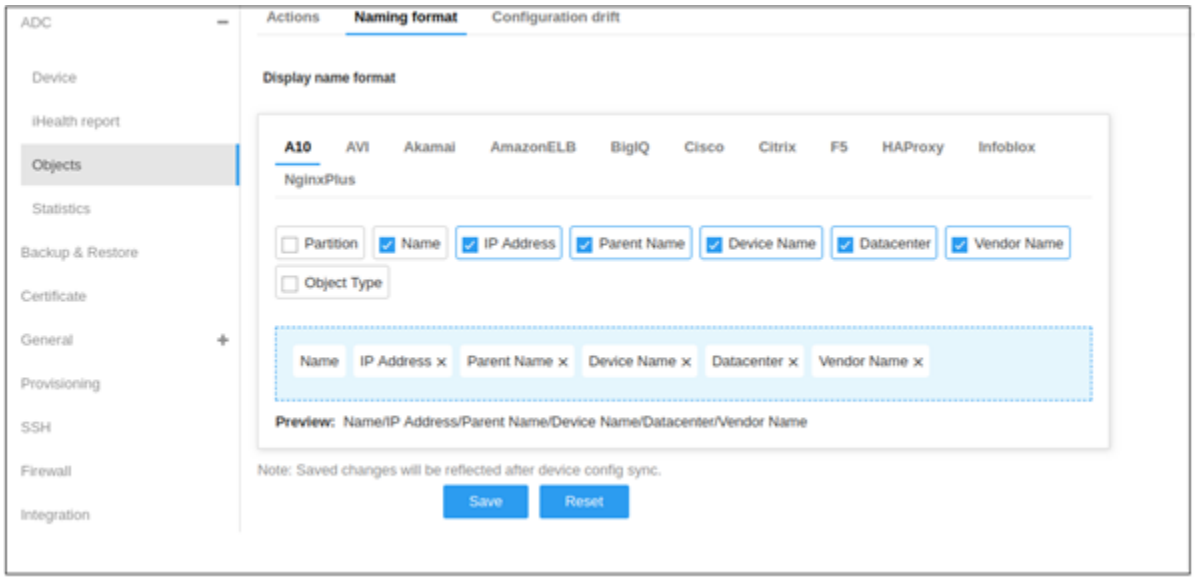

3. On the **Display Name Format** page, choose the vendor to be modified and select the respective Property, reorder the fields as needed.
4. Click **Save**.

> **Note:** To discard the changes, click **Reset**.

Configuration Drift Tab

AppViewX identifies the object configuration changes (as part of config fetch, Syslog notification, etc.,) and stores the drift to generate reports, governance, and rollbacks. You can customize the number of days the drift must be persisted.

To customize the number of days for the configuration drift:

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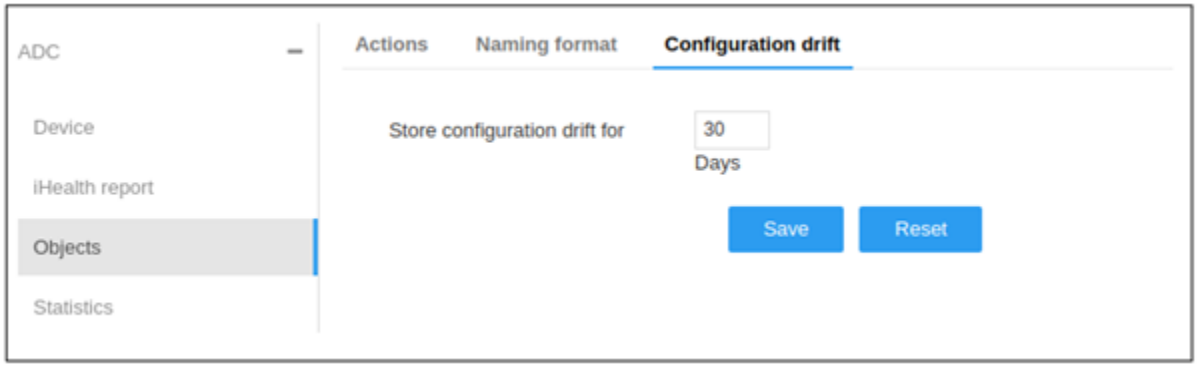
1. Go to **Menu** > **ADC+** > **SETTINGS** > **Module Settings** > **ADC** > **Objects**.
2. Click the **Configuration Drift** tab.



3. Enter the store configuration drift value up till 90 days in the Store Configuration Drift for the field.
4. Click **Save**.

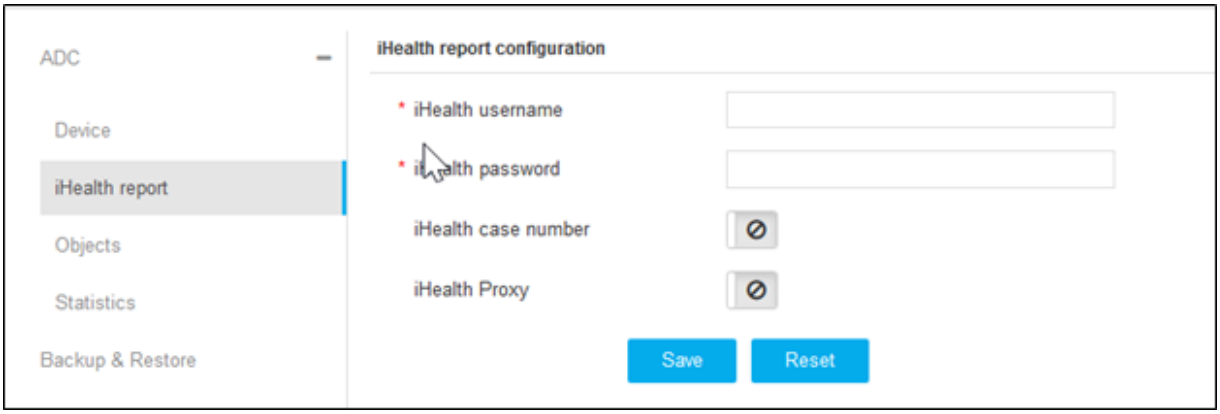
> **Note:** To discard the changes, click Reset.

iHealth Report

Configure health portal information for a vendor to generate iHealth reports of devices.

To configure the iHealth report:

1. Go to **Menu** > **ADC+** > **SETTINGS** > **Module Settings** > **ADC** > **iHealth Report**.



2. On the **iHealth Report Configuration** page, enter the **iHealth username** and **password**.
3. Enable the **iHealth case number** and **iHealth Proxy** toggle buttons to upload the generated qkview file against the mentioned case number for future reference.

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4. Click **Save**.

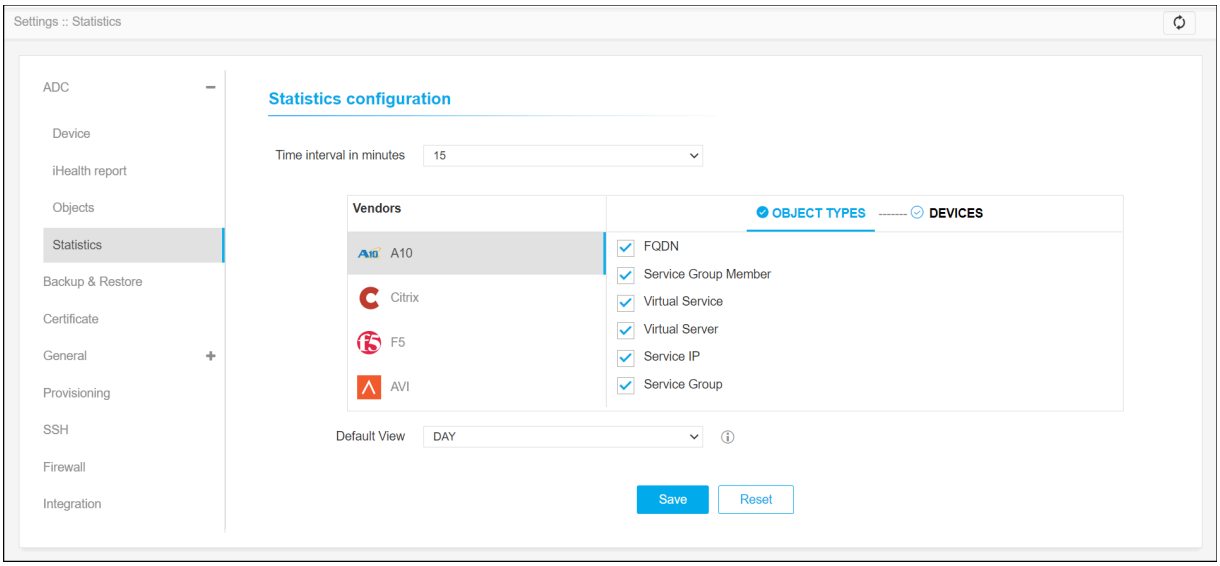
> **Note:** To discard the changes, click **Reset**.

Statistics Settings

Configures the statistics data collection to monitor the historic statistics with respect to the vendors and object types. Statistics plugin has to be deployed in the node for collecting statistics data.

To configure statistics:

1. Go to **Menu** > **ADC+** > **SETTINGS** > **Module Settings** > **ADC** > **Statistics**.



2. On the **Statistics Configuration** details page, choose the time from the **Time Interval in Minutes** drop-down.
3. Select the vendor, and then choose the object types and devices from the list for which statistics must be fetched.
4. For the device selection, click the **DEVICES** tab, and then,
   - Select the **Type** of device selection as **Device** or **Device Groups**.
   - When you select the **Device** radio button, you get the option to select the devices from the list either by searching or using regex.

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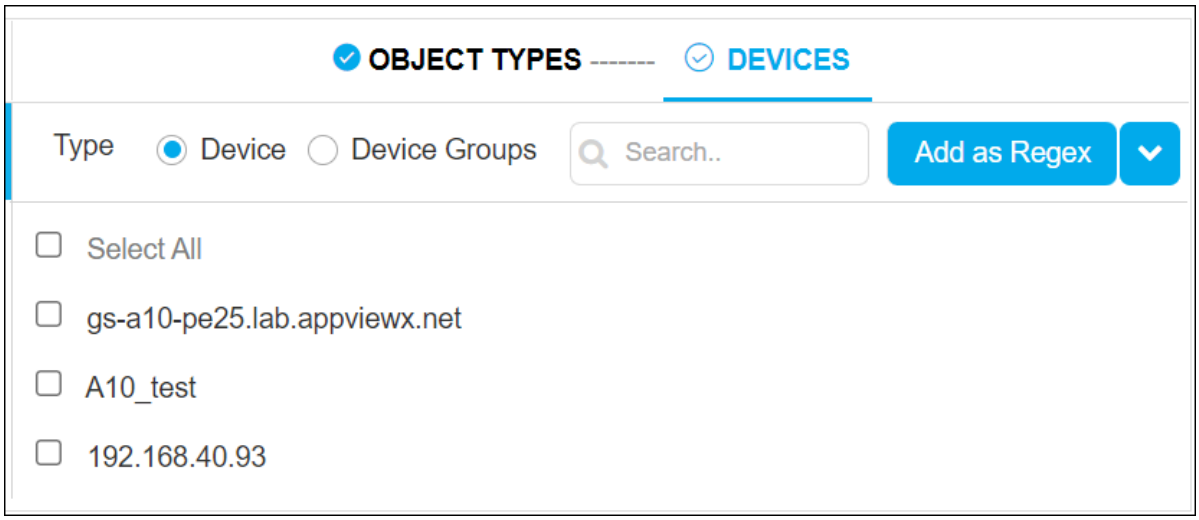
Note: If Regex is added for filtering the device, the statistics will be configured for the newly added devices as well, which match the regex.



- When you select the **Device Groups** radio button, you get the option to select the device groups from the list.

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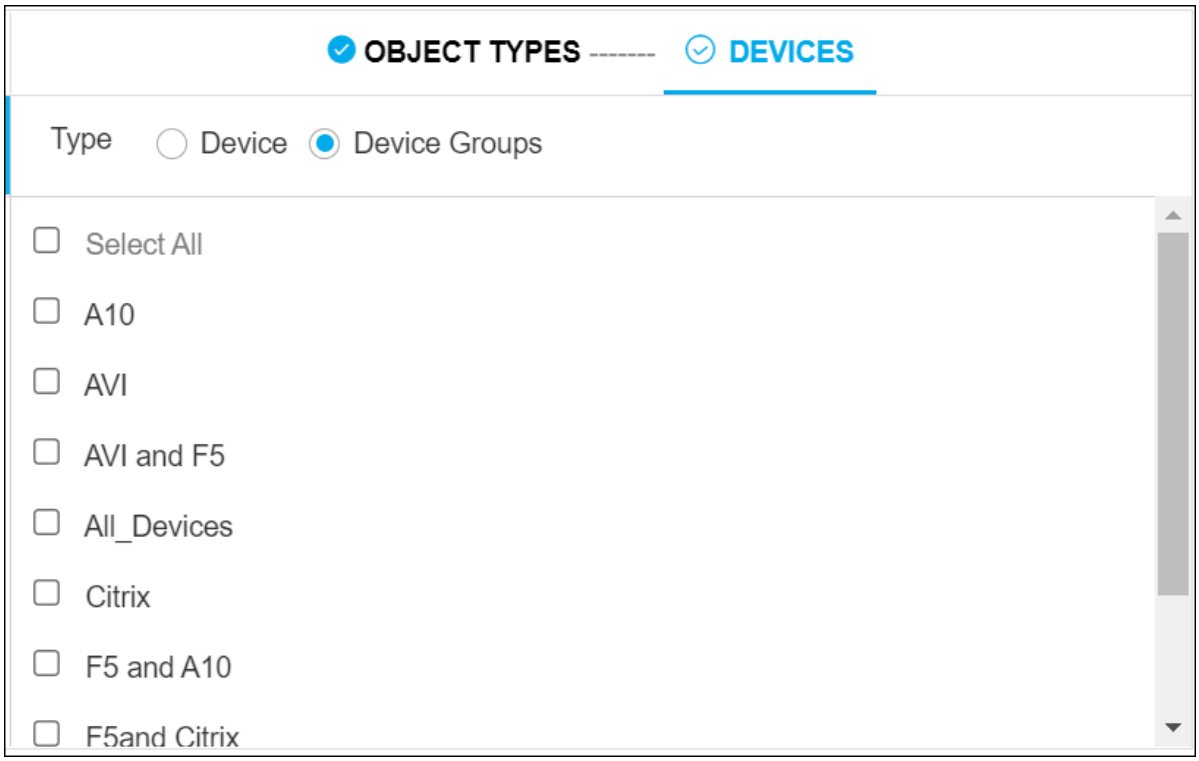

5. Select the default view for the Traffic statistics widget from the **Default View** dropdown. The possible options for default view are:
   - Day (default)
   - Live
   - Week
   - Month
   - Quater
6. Click **Save**.
   AppViewX collects the stats, aggregates them, and provides out-of-the-box reports in the form of dashboards.

> **Note:** To discard the changes, click **Reset**.

Glossary

This table describes the common terms used in this guide.

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Terms	Definition
LDAP	LDAP stands for Lightweight Directory Access Protocol. As the name suggests, it is a lightweight client-server protocol for accessing directory services, specifically X. 500-based directory services.
Object	Objects are traffic management entities configured in the devices that are responsible for load balancing the traffic. Eg: A virtual server is a traffic-management object on the BIG-IP system that is represented by an IP address and a service. For a given network, there are usually multiple objects functioning. Some object types - WideIP, Virtual Server, Pool, Pool Member, Irule, Monitor, Profile, Policy, etc.,
OOB Workflow	A workflow defines a logical flow of activities or tasks from a Start event to an End event to execute a specific service. AppViewX ships predefined Out of the Box (OOB) workflows that allow application teams to take ownership and self-service their applications.
Resource	Resources are the devices and objects that are configured within AppViewX.

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Chapter 2: ADC+ Admin Guide

- Getting Started
- Inventory Actions
- Device Group
- Backup and restore
- Role Based Access Control
- Control Center
- Configuring Dashboards
- System Settings
- Schedulers Used by ADC+

Getting Started

Overview

Use this guide to set up and manage ADC+ administrative functionality. Also learn about the new features and capabilities that make it easier for you to configure and administer your ADC+ deployment. Setup of the AppViewX Cloud Connector is necessary to enable the connectivity between AppViewX Cloud and the Enterprise Network. For AppViewX SaaS deployment, refer to AppViewX Cloud Connector User Guide. The documents helps to configure below functionalities:

- AppViewX provides App centric visibility of your ADC infrastructure in a single window.
- Onboard the supported ADC vendor devices (Hardware, Cloud and Software) into the AppViewX inventory using the IP Address/FQDN.
- Helps to configure credentials and Discover the Applications/Objects along with its configuration that are hosted on the devices. The Discovered Applications can be accessed within the product.
- Steps to configure the access control policies to access devices and its application objects. The AppViewX Platform applies granular access control to application objects, certificates and configuration templates.
- Explains possible Search engine patterns that allows to look for any application and also visualize the topological view starting from the Global load balancer to the end server. This provides the network teams visibility into the infrastructure to troubleshoot application-related issues faster.

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- Steps to configure dashboard to monitor Application health, state, status, utilization and performance through pre built dashboards. Monitor and Manage Application Traffic through Custom Dashboards and Widgets that allows Traffic routing, Monitor live traffic and Distributes traffic ratio across data centers.
- Steps to manage network configuration by automating the backups, track and report network changes and ensure they are compliant with the defined policies.
- Helps to understand/configure the Settings to periodically monitor your Application Services or Devices to get notified of any critical changes via alerting module.

Supported Web Browsers

Browser	Version	Notes
Firefox	Till latest (Version 84.0.4147.135)	
Chrome	Till latest (Version 80.0)	
IE	Limited support in 9, Full support from 10+	No support for IE9 post AppViewX Version 11.0
Safari	Till latest (Windows - Version 5.1.7, macOS - Version 13.1.2)	From AppViewX Version 11.1
Opera	Till latest (Version 70)	From AppViewX Version 11.1

Inventory Actions

- Before You Begin
- Importing Devices
- Managing Devices
- Exporting Device Details
- Deleting ADC Device(s)
- Subscribing and Unsubscribing to Syslog
- Using Config Fetch
- Generating and Downloading an iHealth Report

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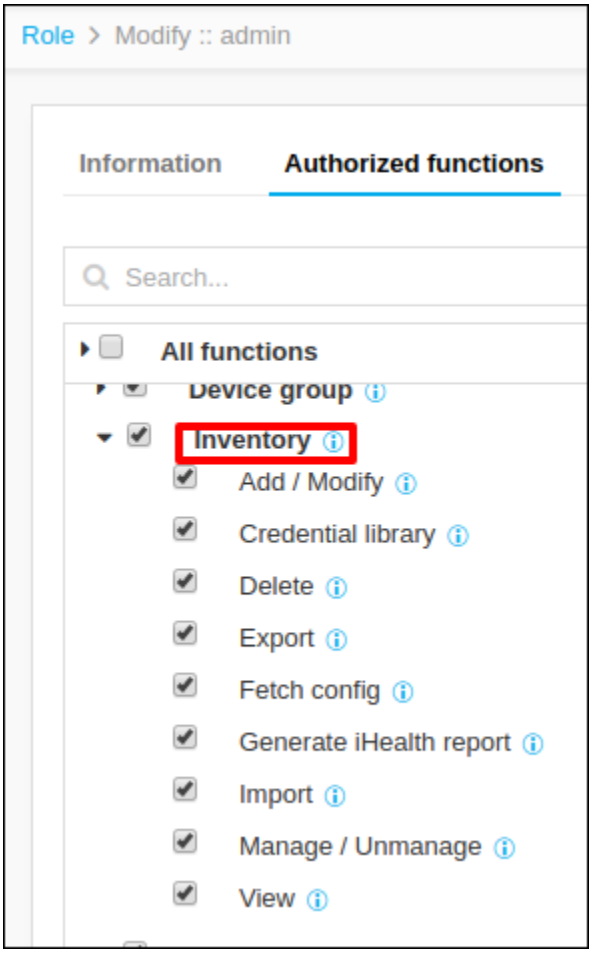
- Selecting Inventory Columns
- Using Pagination

Before You Begin

To do any actions in the ADC-inventory, the user should have ACF permissions to access the inventory page and its various actions as mentioned in the screenshot.



Importing Devices

Device import provides a hassle-free experience in onboarding multiple ADC devices into AppViewX in one single step. For onboarding multiple devices, the details should be filled in the excel sheet in the predefined format and can be uploaded to AppViewX and from there AppViewX will dynamically onboard all the devices available in the sheet.

To import devices using a `.csv` file,

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1. Go to **Menu** > **ADC+** > **ASSET MANAGEMENT** > **Device Inventory**.
   By default, the **ADC** tab opens.
2. Click the **Import** icon in the Command bar.
3. On the Import screen that appears, navigate to the location of the import file, then select it.
4. Click **Import** to add the devices and their details to the Inventory.

> **Note:** When the file is uploaded with improper structure or incorrect data, the import process will terminate with the errors highlighted.

Related information
Managing Devices

Managing Devices

Manage and Unmanage Devices

To manage or unmanage devices,

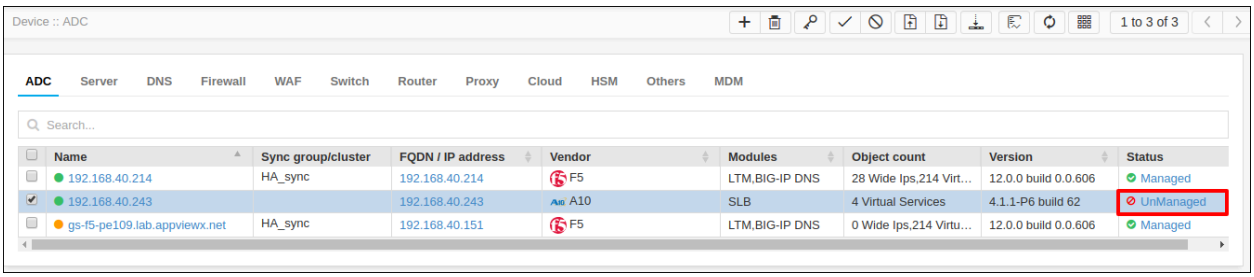
1. Go to **Menu** > **ADC+** > **ASSET MANAGEMENT** > **Device Inventory**. By default, the **ADC** tab opens.
2. If the device you want to manage or unmanage is not listed on the screen, run a search to locate it.

> **Note:** If you try to manage a device that is already in managed state or unmanage a device that is already in unmanaged state, an error message appears at the top of the screen.

3. Click the checkbox beside the device name.
4. To start managing the device, click the (**Manage**) icon in the Command bar at the top of the screen. To stop managing a device, click the (**Unmanage**) icon.

Validating the Unmanage Action

The selected devices will be moved to **Unmanaged** status.



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Related information
Exporting Device Details
Deleting ADC Device(s)

Exporting Device Details

The device details, which are available in the Device Inventory page can be exported into an Excel file.

To export the details of one or more devices,

1. Go to **Menu** > **ADC+** > **ASSET MANAGEMENT** > **Device Inventory**.
   By default, the **ADC** tab opens.
2. If the device you want to export is not listed on the screen, run a search to locate it.
3. Click the checkbox beside the device name. If you are exporting details of multiple devices of the same kind, select the checkboxes for each one.
4. Click the **Export** icon in the Command bar at the upper right of the screen.
5. On the **Export** pop-up screen that appears, select the type of information you want to export:
   - **All Columns** - Select this option if you want to export all information about the device.
   - **Displayed columns** - Select this option if you want to export only the information that is visible on the Device screen. This is useful if you need to compare values or settings for different devices and do not have any need to see the less important data.
   - **Columns to modify data and import** - Select this option if you are exporting device details to make modifications and then re-import the data into the Device Inventory.
6. On the screen that opens, select the location where you want the device details file to go, then click **Save**.
7. The details are then downloaded as an Excel (**.xls**) file.

Related information
Deleting ADC Device(s)

Deleting ADC Device(s)

To delete ADC device(s),

1. Go to **Menu** > **ADC+** > **ASSET MANAGEMENT** > **Device Inventory**.
   By default, the **ADC** tab opens.
2. Select the desired ADC device(s) to delete.
3. Click the (**Delete**) icon in the Command bar.

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The **Delete** confirmation modal appears.

4. Click **Yes** to delete the selected ADC device(s).

> **Note:** To discard the deletion, click **No**. The device details and configurations will be permanently deleted from AppViewX. If the deleted device is onboarded again, it will be considered as onboarding a new device.

Subscribing and Unsubscribing to Syslog

Subscribing to Syslog for a device enables receiving near real-time configuration updates. The Subscribing Syslog option is supported only for devices that are in the Managed and Failed status.

Supported Vendor: F5

Supports near real time updates for state and status of the objects.

Prerequisites:

- During installation, enable the flag for Syslog receiver. For setting the flag, see AppViewX Cloud Connector guide.
- Ensure Syslog reception is enabled in Platform. See Platform user guide for enabling the Syslog reception.
- Ensure the device is managed.

To Subscribe/unsubscribe Syslog for a device,

1. Go to **Menu** > **ADC+** > **ASSET MANAGEMENT** > **Device Inventory**.
   By default, the **ADC** tab opens.
2. Select the checkbox of a preferred device.
3. Select the **Actions** dropdown menu from the menu bar.
4. Select **Subscribe Syslog** from the dropdown list.
   The process of subscribing to Syslog may take some time, and once completed, the status in the Syslog column is updated to **Subscribed** along with a timestamp.

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Note:

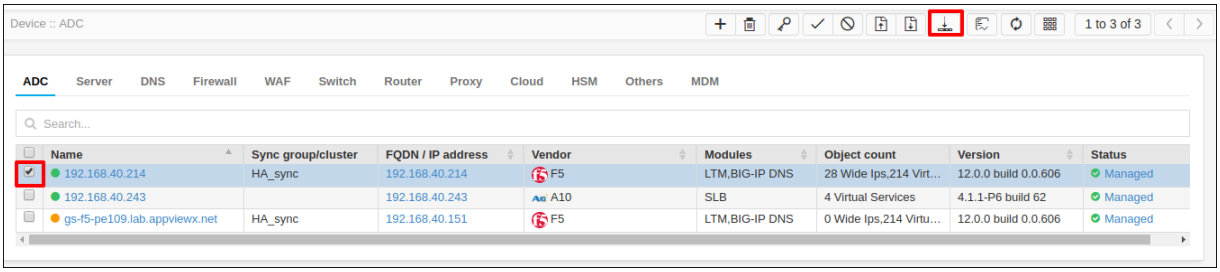
To cancel the subscription to Syslog, choose the **Unsubscribe Syslog** option from **Actions** dropdown menu. The unubscription option is supported for the devices that are in the Managed, Failed, or Unresolved status.

Using Config Fetch

Config Fetch

This action is being used to fetch and update the device configuration in AppViewX.

1. Log in to the AppViewX application with valid credentials.
2. Select **Menu** > **ADC+** > **ASSET MANAGEMENT** > **Device Inventory**.
3. Select the devices from the **Device Inventory** page.



4. Click the **Config fetch** icon.

Validating the Config fetch action

Once the config fetch is triggered, the device will be moved to **Queued** status and then **InProgress** status. Eventually, the device status will be updated to **Managed** once the device configuration is downloaded and parsed successfully in the AppViewX.

Generating and Downloading an iHealth Report

BIG -IP iHealth is a diagnostic tool developed by F5 to manage local traffic manager (LTM) and global traffic manager (GTM) devices. The iHealth report provides tailored diagnostic information that gives you valuable, actionable insight into the efficiency of the hardware and software running in your BIG-IP system.

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- iHealth reports can be generated at the time you want to view or schedule it in advance through the Workflow.
- To generate an iHealth report, ensure that the proxy is configured in the Settings module. For detailed information, refer to the Proxy Settings section of Platform User guide.

To generate and download an iHealth report,

1. Go to **Menu** > **ADC+** > **ASSET MANAGEMENT** > **Device Inventory**.
   By default, the **ADC** tab opens.
2. Select the checkbox beside the ADC device for which you want to generate an iHealth report.
3. Click the **Generate iHealth Report** button ( ) in the Command bar.

   Note: You might need to scroll to the right to see the Report column.

4. On the iHealth Report Generate screen that pops up, enter the case number for the report, then click Generate.
5. When the report is generated, it appears as a link in the Report column on the Device: ADC screen.
6. Click the IHEALTH_REPORT link.
7. The iHealth report screen that pops up lists all of the current issues with the device, classified by their severity: critical, high, medium, or low.
8. Click any of the + (**Expand**) icons beside a severity level to view the issues within the corresponding category.
9. Within each severity level, click the name of a specific issue to view complete details, a recommended solution, and additional information about it.
10. (Optional) Download the entire iHealth report as a Qkview file by clicking the **Download Qkview** link or as a PDF file by clicking the **Export as PDF** link, both of which appear in the top right corner of the screen.

Related information
Selecting Inventory Columns
Using Pagination

Selecting Inventory Columns

Selecting Inventory Columns

The user can select or unselect the list of columns to be displayed in the inventory page using this action.

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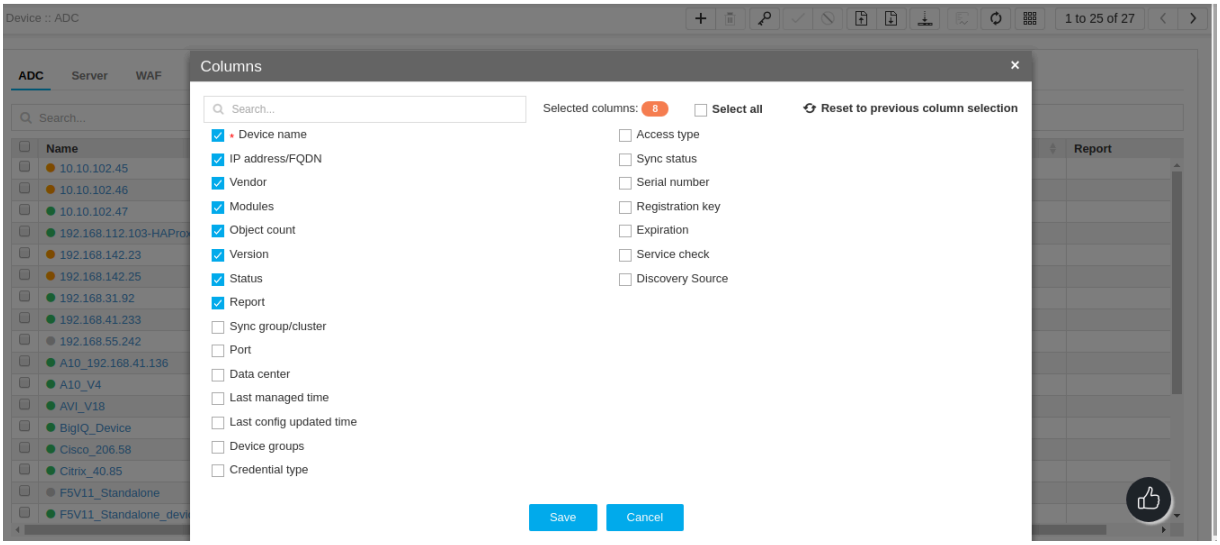
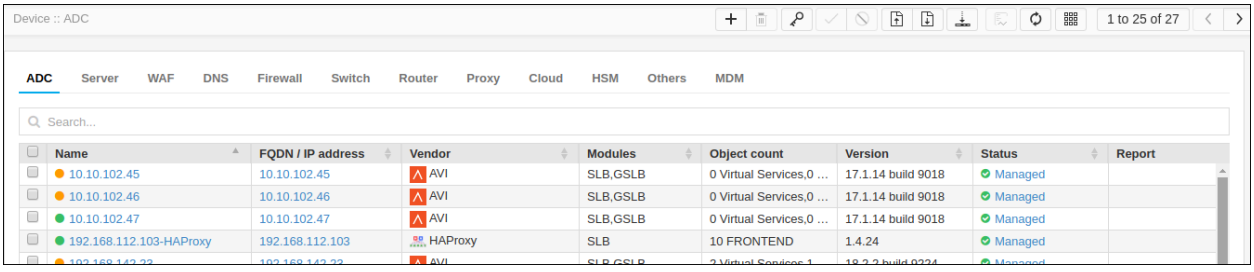
1. Log in to the AppViewX application with valid credentials.
2. Select **Menu** > **ADC+** > **ASSET MANAGEMENT** > **Device Inventory**.
3. Click on the **Columns** icon.
4. In the popup window, select or unselect the columns to be displayed in the inventory page.



5. Click **Save**.

Validating the column selection

Once the user selects the columns to be displayed in the inventory page and saves the data, the device inventory page will be reloaded again with the selected columns.



Related information
Using Pagination

Using Pagination

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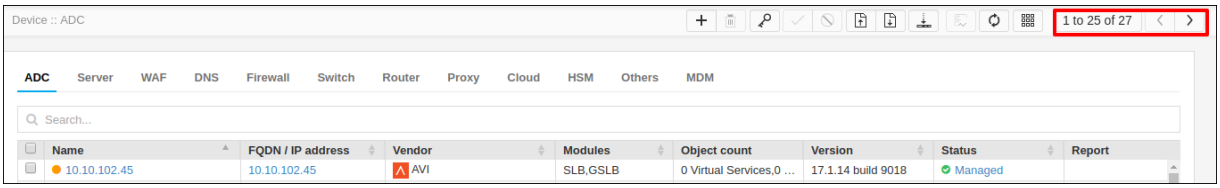
Pagination is being used to display many devices into the discrete pages. So The user can configure the number of device details to be displayed in a page and he can navigate to the previous and the next page using the previous and the next icon.

1. Login to the AppViewX application with valid credentials.
2. Select **Menu** > **ADC+** > **ASSET MANAGEMENT** > **Device Inventory**.
3. Hover the mouse pointer over on the device count and select the number of records to be displayed in the device inventory page.



4. Select the Previous or Next icon to move to the previous or next page.

Related information
Generating and Downloading an iHealth Report
Selecting Inventory Columns

Device Group

- Adding Device Group
- Modifying Device Group
- Deleting Device Group
- Assigning a Device to Group(s)
- Assigning/unassigning Devices
- Unassigning a Device from Group(s)

Adding Device Group

To add an ADC group to AppViewX:

1. Click the **Menu** > **ADC+** > **ASSET MANAGEMENT** > **Device Group**.
   The **Group** screen opens.
2. In the **ADC** tab, click the + (**Add**) icon in the Command bar.
3. On the **Add** screen, enter the name of the new group. (Recommended) Enter a description of the group to help users identify it.

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4. In the Device selection field, click the » (**Assign item**) icon beside each device you want to include in the group.
5. When you have finished assigning devices to the group, click **Save** to add them to the system.

> **Note:** Rather than adding devices manually, you can click the Add search string link and create a search string that automatically assigns all existing devices that match the filter criteria to the ADC group. The benefit of using a search string rather than selecting devices manually is that the search string continues to work in the background, auto-assigning all new devices to the ADC group if the devices match the search criteria you set up.

Related information
Modifying Device Group
Deleting Device Group

Modifying Device Group

To modify an ADC group to AppViewX:

1. Click the **Menu** > **ADC+** > **ASSET MANAGEMENT** > **Device Group**.
   The **Group** screen opens.
2. If the ADC group whose details you want to modify is not displayed on the screen, use the search field to locate it.
3. In the **ADC** tab, select the checkbox beside the name of the ADC group.
4. Click the (**Modify**) icon in the Command bar.
5. On the Modify screen that appears, make whatever changes you want to the content.
6. Click **Update** to save your changes.

Related information
Deleting Device Group

Deleting Device Group

To delete an ADC group to AppViewX:

1. Click the **Menu** > **ADC+** > **ASSET MANAGEMENT** > **Device Group**.
   The Group screen opens.
2. Select the checkbox beside the group you want to delete.
3. Click the (**Delete**) icon in the Command bar.

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4. On the confirmation screen that pops up asking you if you are sure you want to proceed, click **Yes**.
5. The group is then removed from the AppViewX system.

Related information
Adding Device Group

Assigning a Device to Group(s)

1. Login to the AppViewX application with valid credentials.
2. Select **Menu** > **ADC+** > **ASSET MANAGEMENT** > **Device Group**.
3. Search for the device to be added to device group(s) and select the respective device and navigate to the **Device group** page.
4. Select the device group(s).

5. Click **Save**.

Related information
Assigning/unassigning Devices
Unassigning a Device from Group(s)

Assigning/unassigning Devices

1. Login to the AppViewX application with valid credentials.
2. Select **Menu** > **ADC+** > **ASSET MANAGEMENT** > **Device Group**.
3. From the **Group** page, select the device group to be modified and click the **Modify** icon to navigate to the Group Modification page.
4. To assign devices in the group, search for the device and select the devices under the **Available** list.

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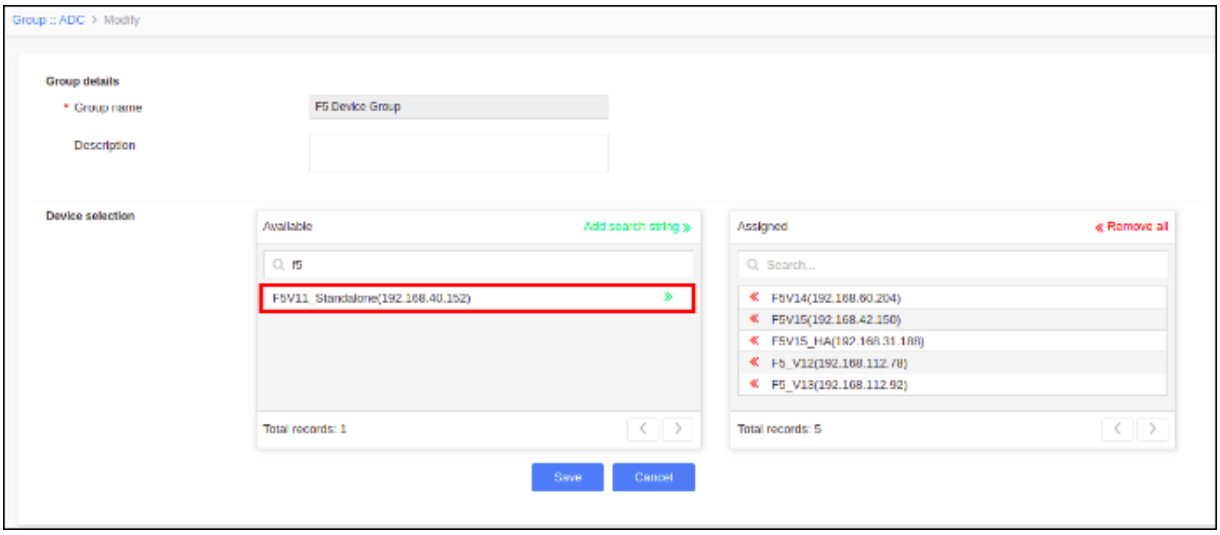

5. To unassign devices in the group, search for the device and select the devices under the **Assigned** list.
6. Click **Save**.

Related information
Assigning a Device to Group(s)
Unassigning a Device from Group(s)

Unassigning a Device from Group(s)

1. Login to the AppViewX application with valid credentials.
2. Select **Menu** > **ADC+** > **ASSET MANAGEMENT** > **Device Group**.
3. Search for the device to be removed from device group(s) and select the respective device and navigate to the **Device group** page.
4. Unselect the device group(s).

5. Click **Save**.

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Related information
Assigning a Device to Group(s)
Assigning/unassigning Devices

Backup and restore

- Backup and Restore
- Vendors Supported in AppViewX for BackUp
- Configuring Device Backup
- Restore
- Configuring Backup Settings
- Archive Setting Customization
- Compare Backup
- Comparing Between Two Backup Generated

Backup and Restore

Overview

Configuring devices for Backup and Restore required the users to have added the devices whose backup is to be taken in the Inventory.

User should also have the ACF permission for Backup and restore.

Vendors Supported in AppViewX for BackUp

Vendors	BackUp	Restore
F5	Device	Device & Object
Citrix	Device	Device & Object
A10	Device	Device & Object
Avi	Device	Device

Related information
Configuring Device Backup
Restore
Configuring Backup Settings
Archive Setting Customization
Compare Backup

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Vendors Supported in AppViewX for BackUp

Vendors	BackUp	Restore
F5	Device	Device & Object
Citrix	Device	Device & Object
A10	Device	Device & Object
Avi	Device	Device

Configuring Device Backup

1. Log in to the AppViewX application with valid credentials.
2. Select **Menu** > **ADC+** > **CONFIG MANAGEMENT** > **Backup Configuration** > **Manage Backups**.
3. Click the **+** (**Add**) icon to navigate to the BackUp configuration page.
4. Users can select individual devices or device groups for BackUp
5. Provide the required details

Name	Type	Mandatory	Description
Device Type	Text	Yes	Type of device to be selected (ADC,Proxy,WAF,Firewall)
BackUp Name	Text	Yes	BackUp name accepts only alphanumeric characters, '-' , '_' , '.'. Also should not start or end with a special character.
Description	Text	No	NA
Configure	Radio Button	Yes	Device or Device Group
Device or Device Group selection	Search Box and select from the search window	Yes	NA
Scheduler/ Generate now	Radio Button	Yes	NA
Email configuration to	Text box	No	NA

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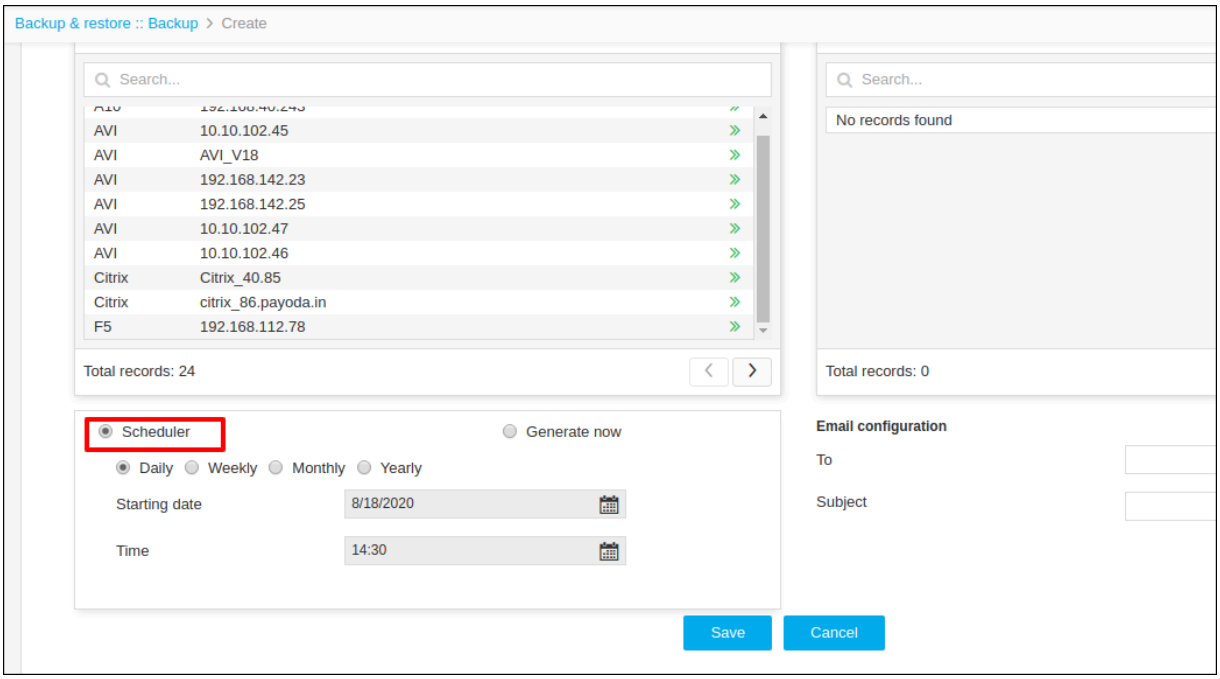
Name	Type	Mandatory	Description
Email configuration subject	Text box	No	NA

6. Schedule the BackUp by clicking **Scheduler** or **Generate now**.
7. Users can select the scheduler on Daily/Weekly/Monthly or Yearly basis and provide the date and time appropriately.



8. Click **Save**
9. To view BackUps generated in a particular group, click the **+** (**Add**) icon on the tab that has the backup group name.
10. To edit the already created BackUp group, click the pencil icon on the tab mentioned with the backup group name.

Related information
Backup and Restore
Restore
Configuring Backup Settings
Archive Setting Customization
Compare Backup

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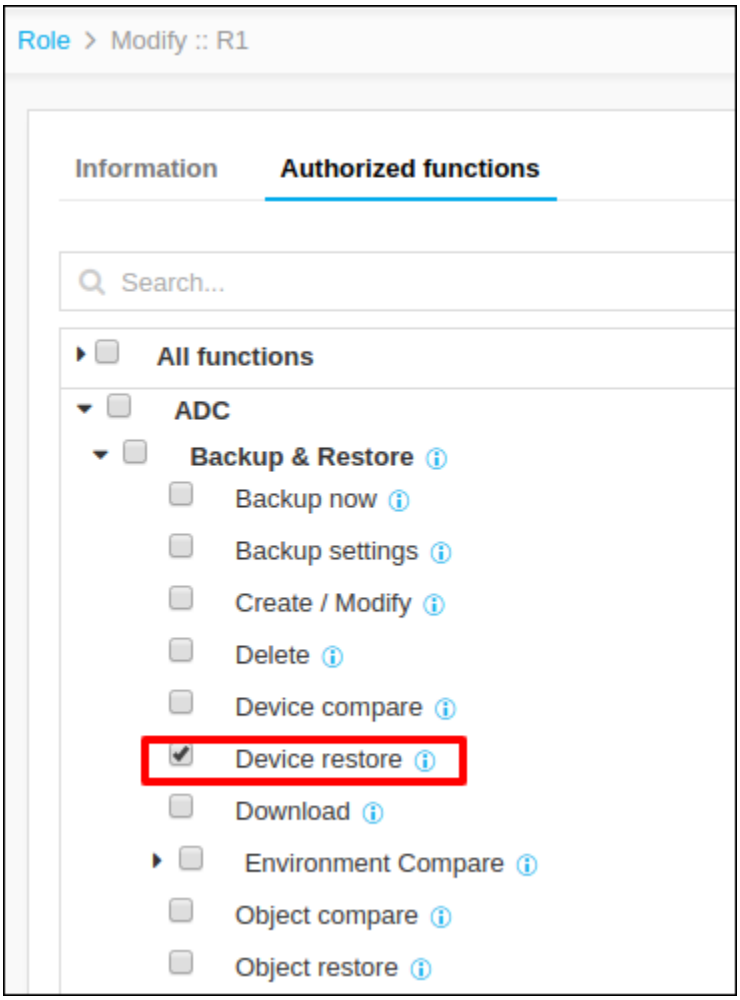
Restore

Restore from Backup

Users can restore the device/objects added in AppViewX from the Backup generated. The users should have ACF permission for Restore and ACL permission on those devices for which restore has to be performed.



Restore Device/Object with the Backup Generated

1. Log in to the AppViewX application with valid credentials.
2. Select **Menu** > **ADC+** > **CONFIG MANAGEMENT** > **Restore Configuration**.
3. Click the **Restore** tab to navigate to the Restore page.

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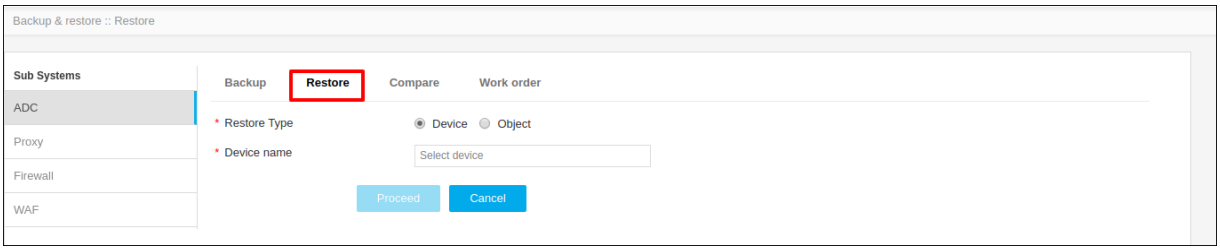
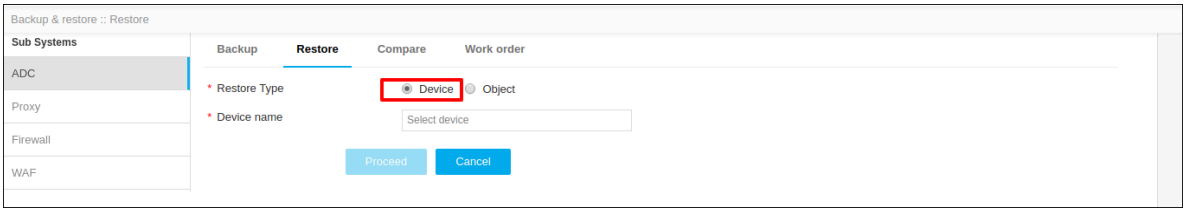


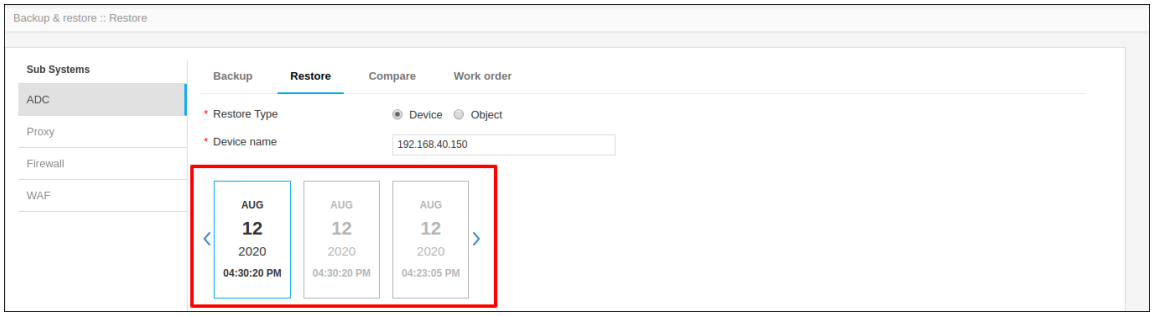
4. Click the **Device** or **Object** that needs to be restored.

a. **Device Restore:**



i. Provide the device name whose backup is to be restored in the **Device Name** text box.

ii. All the Backups generated for this particular device will be listed below.

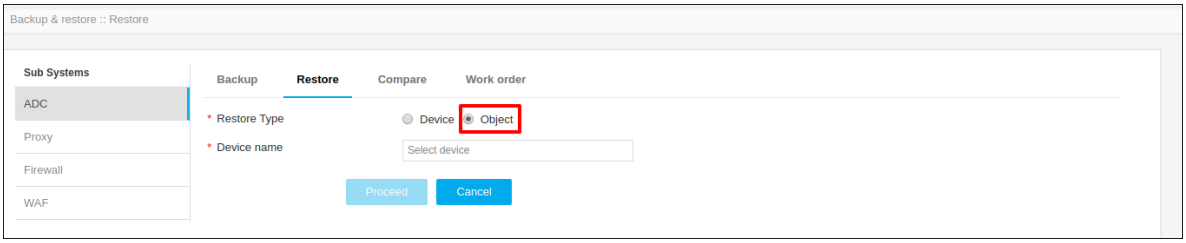


iii. Select which backup to be used and provide the device name to which the restore needs to be performed.

iv. Click **Proceed** to navigate to the next page, where the Reason for restore is to be provided.

v. Click **Restore**.

b. **Object Restore:**



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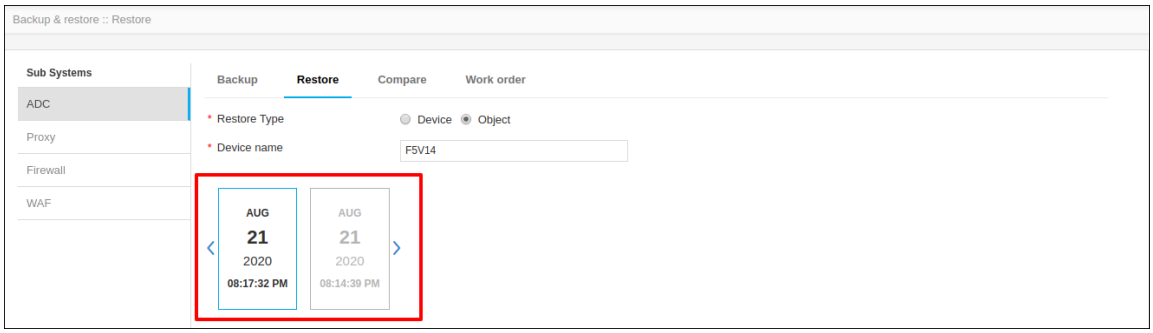
i. Provide the device name whose object is to be taken for restore in the **Device Name** text box.

ii. All the Backups generated for this particular device will be listed below.



iii. Select which backup to be used for restoring the object.

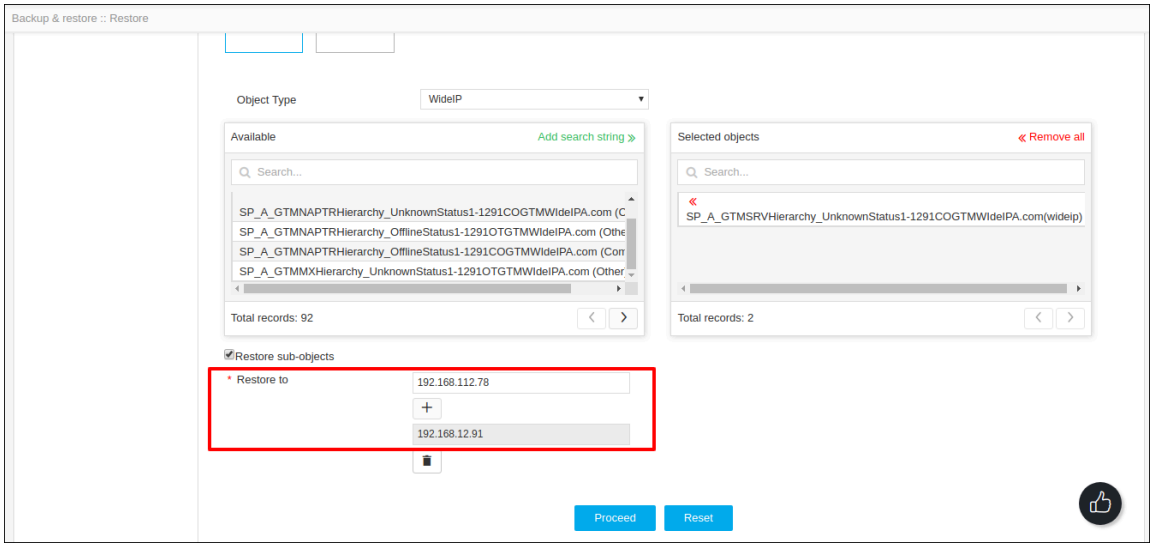
iv. Select which type of object is to be restored by clicking on the drop down menu for **Object Type**.

v. All the objects pertaining to the selected object type will be listed below. Users can select which all objects to be restored by moving the objects from the available object list to selected object list.

vi. If the restore needs to be performed on sub-objects as well, then the user can check the checkbox provided to **Restore sub-objects**.

vii. Provide the device name to which the back up objects need to be restored.

viii. Users can restore an object to a single/many devices. Restoring more than one device can be done by clicking **+** (**Add**) sign and providing the device name.



ix. Click proceed to navigate to the next page where Confirmation to Object Restore is requested.

x. Users can check or compare the configuration of objects from the back up and the current object and cross verify the same.

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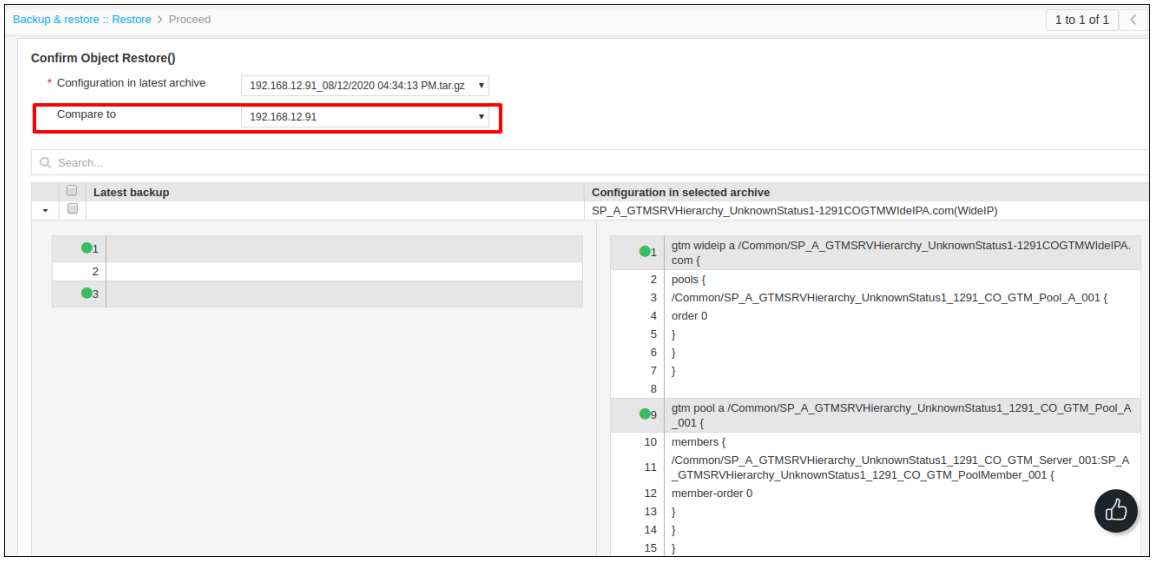
xi. Provide the reason for restore, and then click **Restore all**.



xii. Users can view the restore success message on the screen once restore is successful.

Related information
Backup and Restore
Configuring Device Backup
Configuring Backup Settings
Archive Setting Customization
Compare Backup

Configuring Backup Settings

Configuring Backup Settings

To configure Backup & Restore settings, the user should have ACF permissions to Backup settings.

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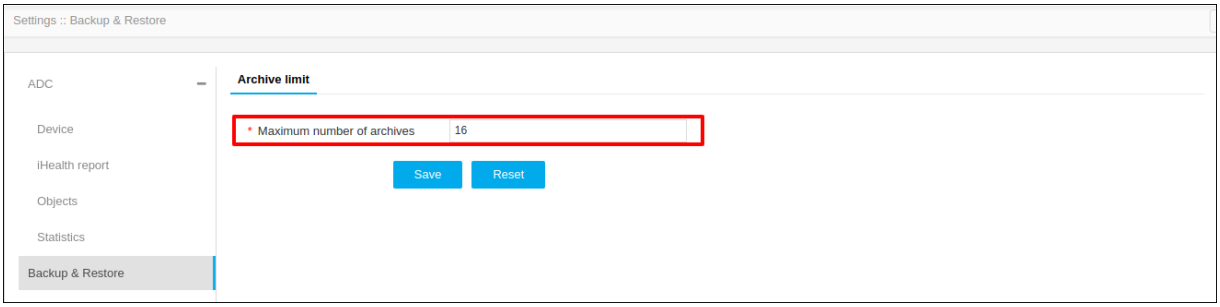
Configuring the Maximum Number of Archives Saved

1. Log in to the AppViewX application with valid credentials
2. Select **Menu** > **ADC+** > **SETTINGS** > **Module Settings** > **Device** > **Backup & Restore**.
3. Enter the maximum number of archives to be stored in AppViewX in Maximum number of archives test box. The default value will be 16.



4. Click **Save**

Related information
Backup and Restore
Configuring Device Backup
Restore
Archive Setting Customization
Compare Backup

Archive Setting Customization

Users can customize the number of archives stored for devices based on daily/weekly/monthly/yearly.

1. Log in to the AppViewX application with valid credentials.
2. Select **Menu** > **CONFIG MANAGEMENT** > **Backup Configuration** > **Manage Backups**.
3. Click the Settings (Gear) icon on the top right corner.
4. Enable the **Archive setting customization** button.
5. Here the users can provide how many archives are to be stored for devices on a daily/weekly/monthly/yearly basis.
6. Users also can enable the radio button to display the warning message when archives are overridden. Enabling this will show a pop up if the number of archives configured by the user causes any removal/deletion of archives.

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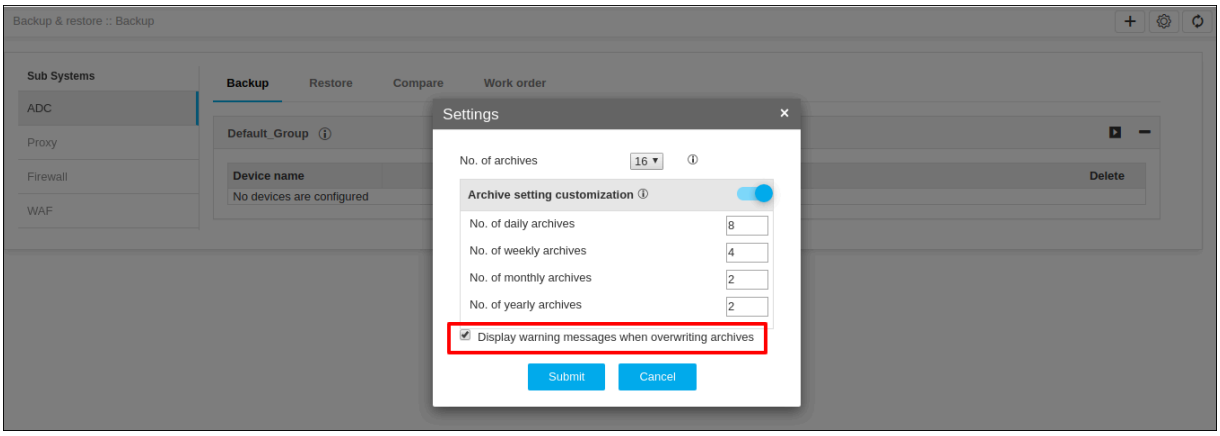


7. Click **Submit**.

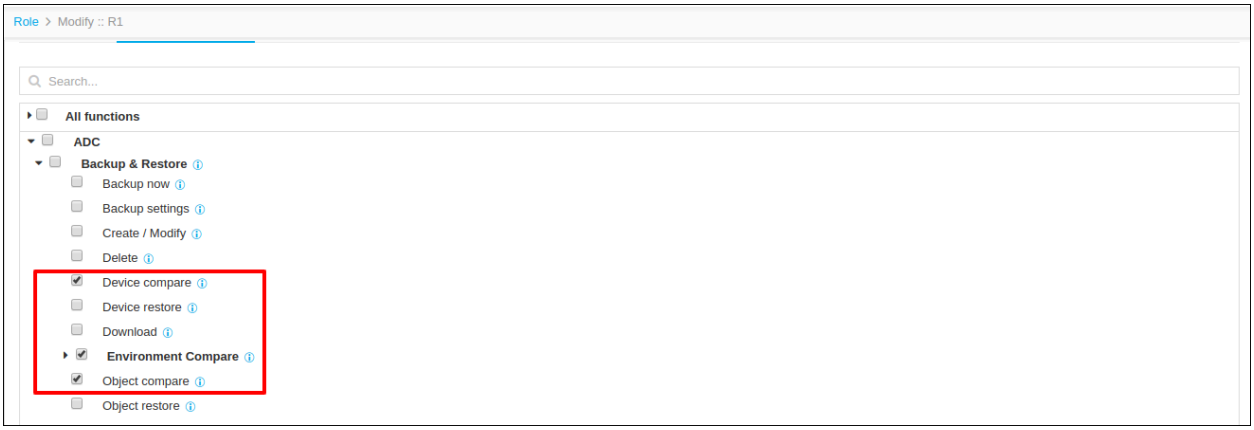
Related information
Backup and Restore
Configuring Device Backup
Restore
Configuring Backup Settings
Compare Backup

Compare Backup

Overview

Users can compare between two archives generated. They can compare between both the devices as well as objects.

To compare the backup, the user should have ACF permissions to Device compare, Object compare and environment compare.



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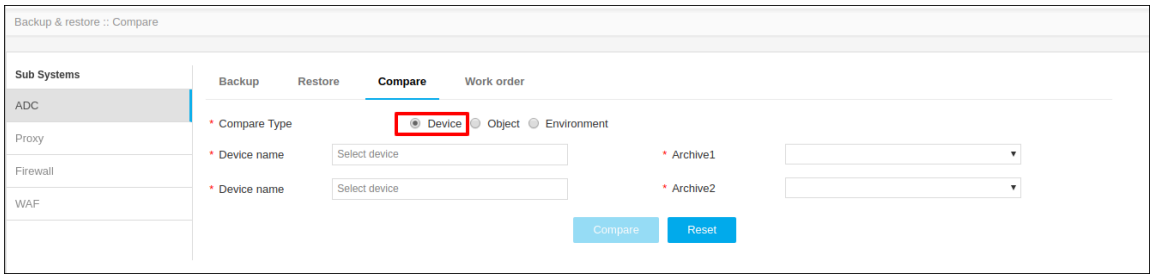
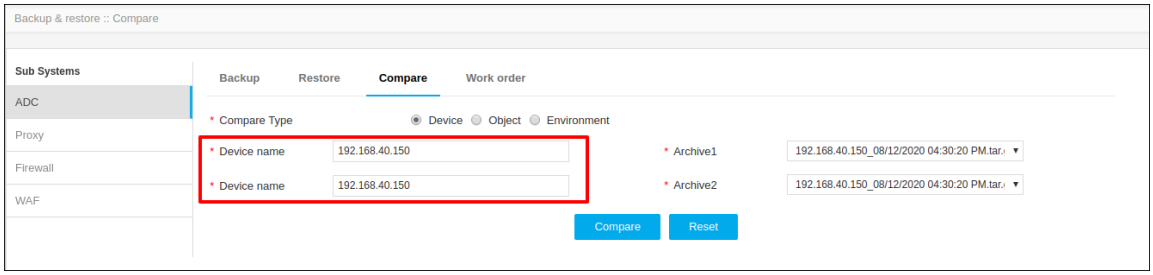
Comparing Between Two Backup Generated

1. Log in to the AppViewX application with valid credentials.
2. Select **Menu** > **CONFIG MANAGEMENT** > **Compare Configuration**.
3. Click on the Compare tab to navigate to the Restore page.
   a. **Device compare:**
      i. Select the **Device** radio button in Compare type.

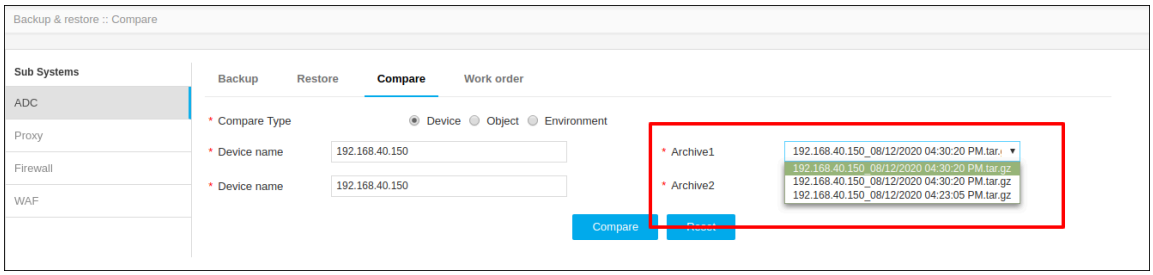


      ii. Provide the device names across which the backup is to be compared. Users can compare the backup between the same devices or different devices as well.



      iii. After the device is selected, the backups generated for that particular device will be brought up in the archive list.

      iv. Select which archive is to be compared from the drop down list.



      v. Click Compare

      vi. The two archives along with the change summary will be displayed in the same page below.

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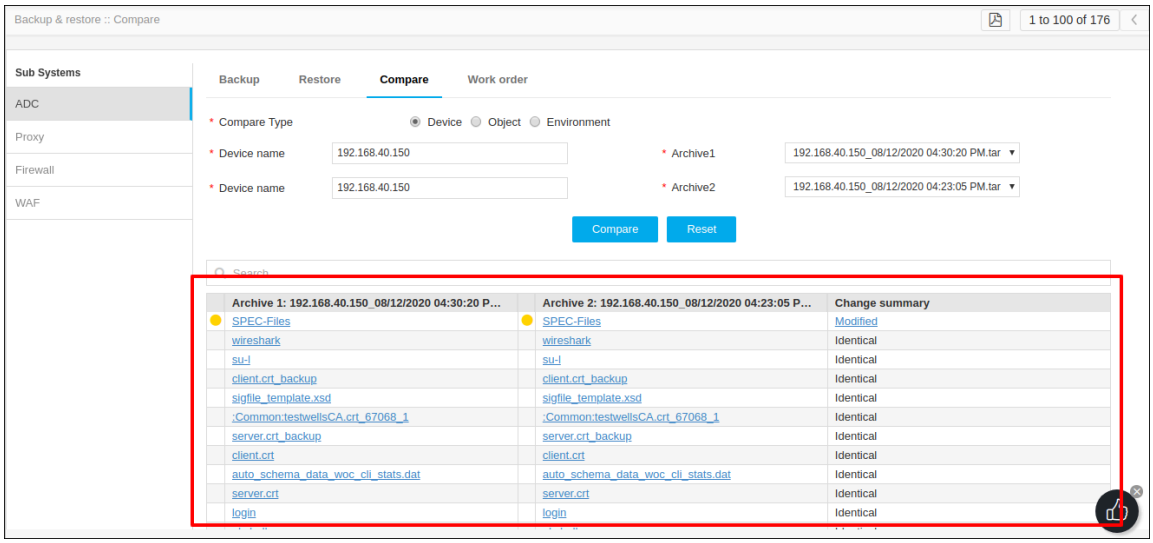


b. **Object compare:**

i. Select the **Object** radio button in Compare type.

ii. Select the **Vendor** and **Object type** to be compared from the drop down menu.

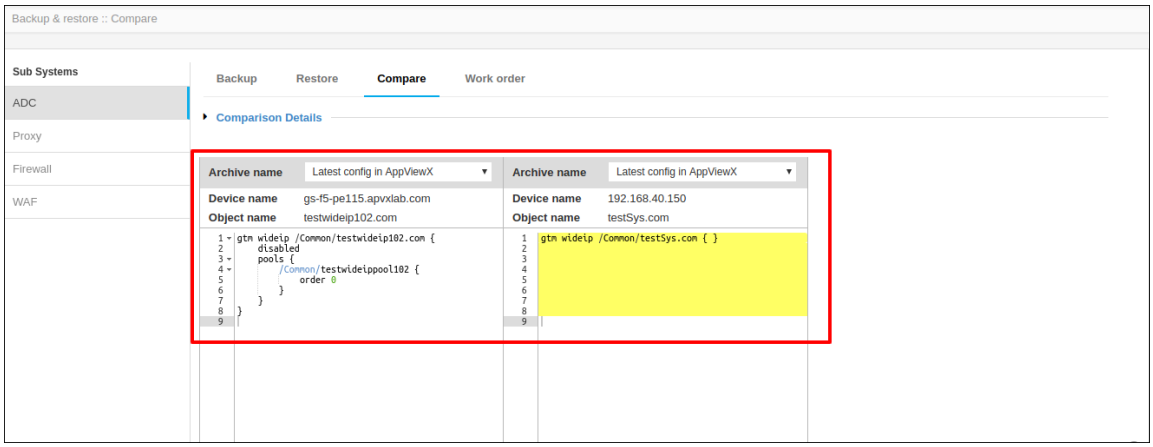
iii. Select the object name to be compared from the drop down menu of **Object Name**. This will automatically populate the device name tab corresponding to this object.

iv. From the menu of Archive names, select which archive to be compared. Users can either select the latest archive generated or select any of the archives generated earlier for the object.

v. Similarly users can add other objects to be compared.

vi. Users can add more than two objects to be compared by clicking the **+** (**Add**) icon near the Archive names. Users can add maximum of five objects to compare.

vii. Click **Compare**.



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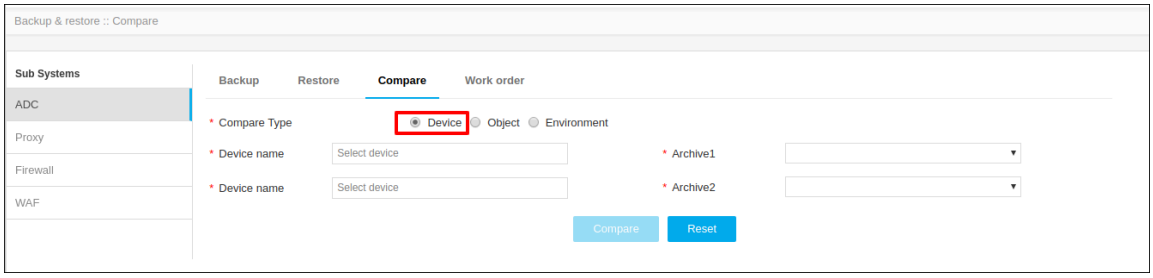
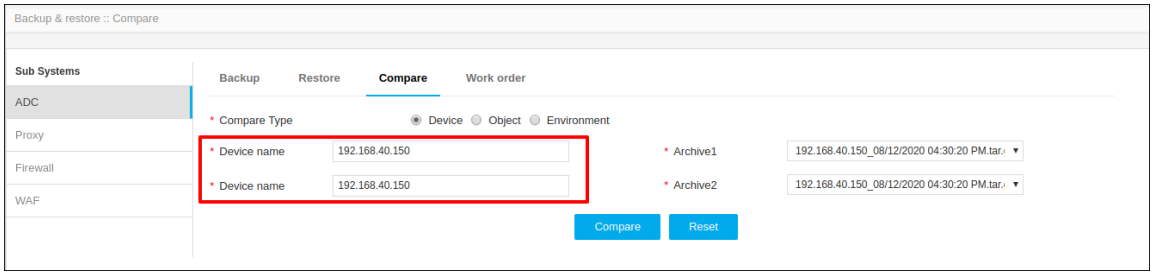
Comparing Between Two Backup Generated

1. Log in to the AppViewX application with valid credentials.
2. Select **Menu** > **CONFIG MANAGEMENT** > **Compare Configuration**.
3. Click on the Compare tab to navigate to the Restore page.
   a. **Device compare:**
      i. Select the **Device** radio button in Compare type.

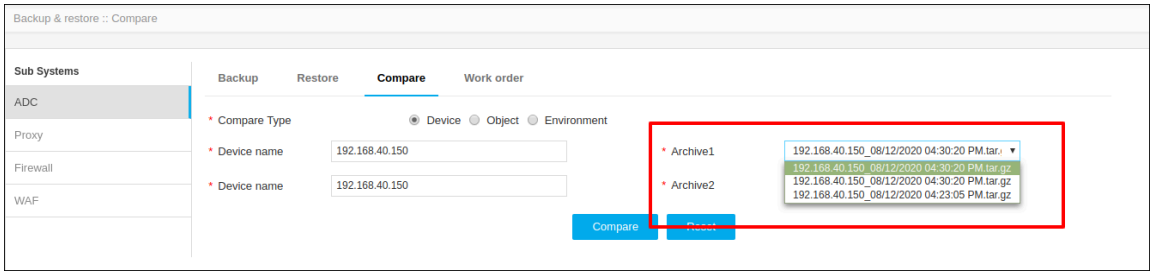


      ii. Provide the device names across which the backup is to be compared. Users can compare the backup between the same devices or different devices as well.



      iii. After the device is selected, the backups generated for that particular device will be brought up in the archive list.

      iv. Select which archive is to be compared from the drop down list.



      v. Click Compare

      vi. The two archives along with the change summary will be displayed in the same page below.

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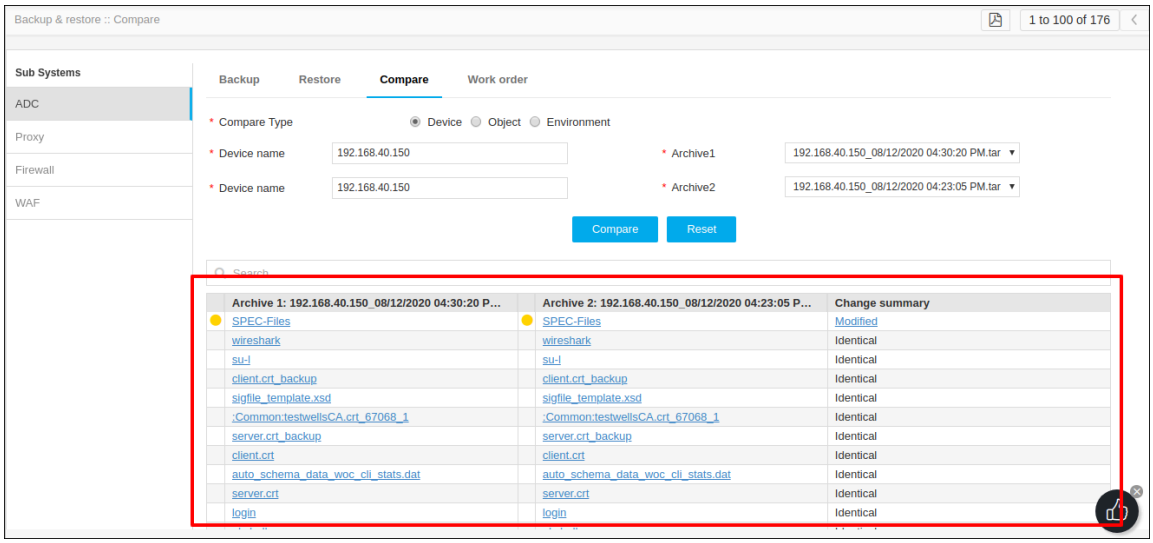
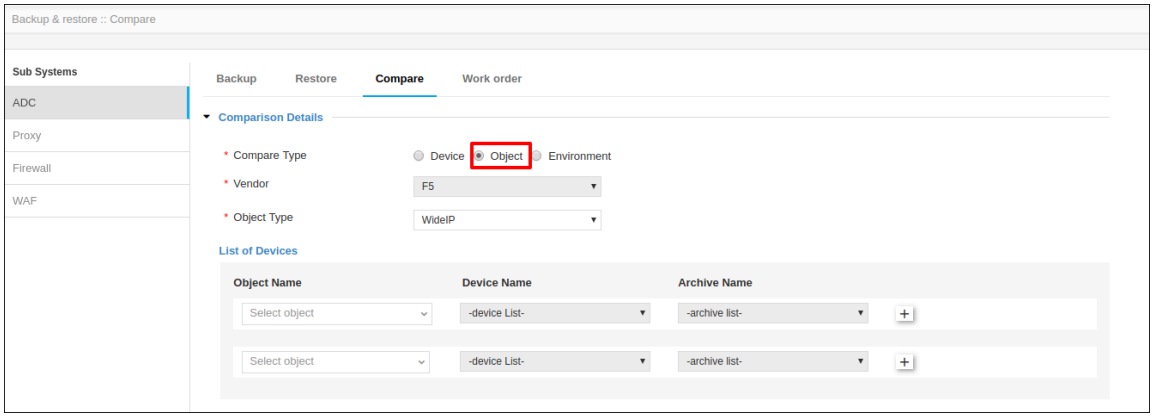


b. **Object compare:**

i. Select the **Object** radio button in Compare type.



ii. Select the Vendor and Object type to be compared from the drop down menu.

iii. Select the object name to be compared from the drop down menu of Object Name. This will automatically populate the device name tab corresponding to this object.

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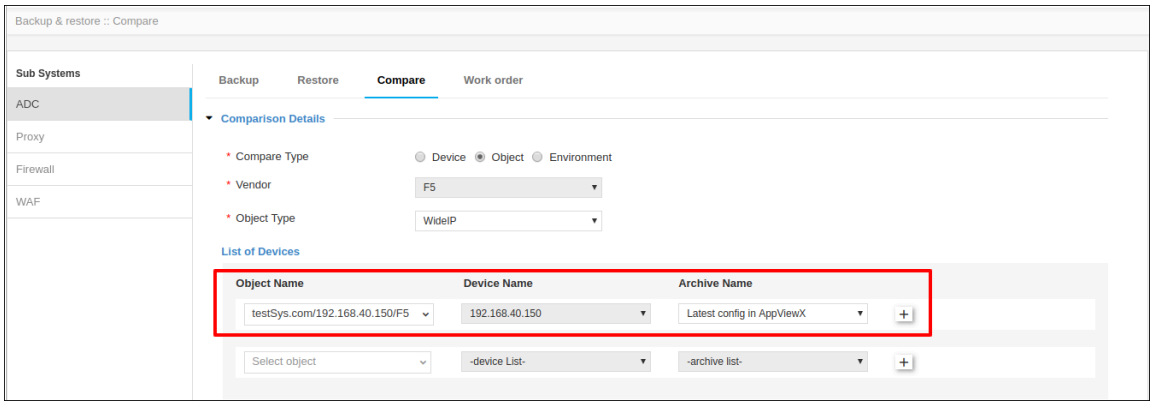
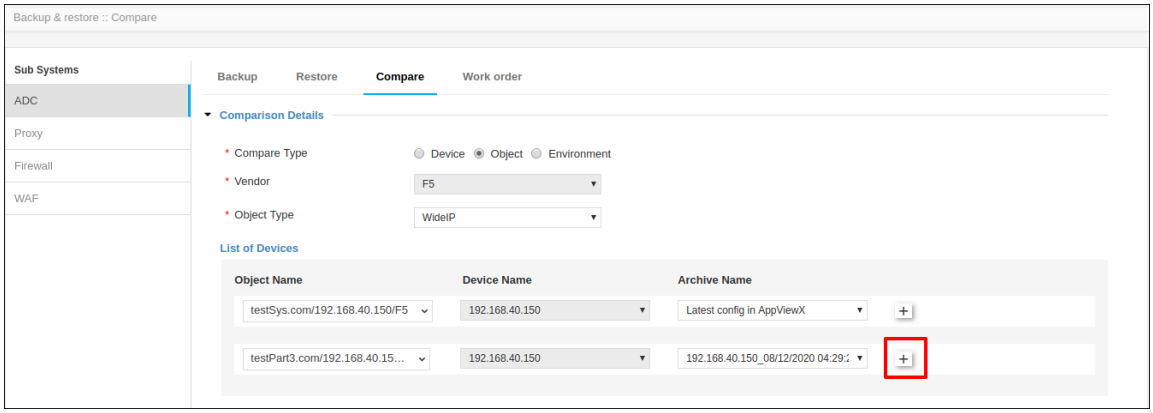


iv. From the menu of Archive names, select which archive to be compared. Users can either select the latest archive generated or select any of the archives generated earlier for the object.

v. Similarly users can add other objects to be compared.

vi. Users can add more than 2 objects to be compared by clicking the (+) icon near the Archive names. Users can add maximum of 5 objects to compare.



vii. Click Compare.

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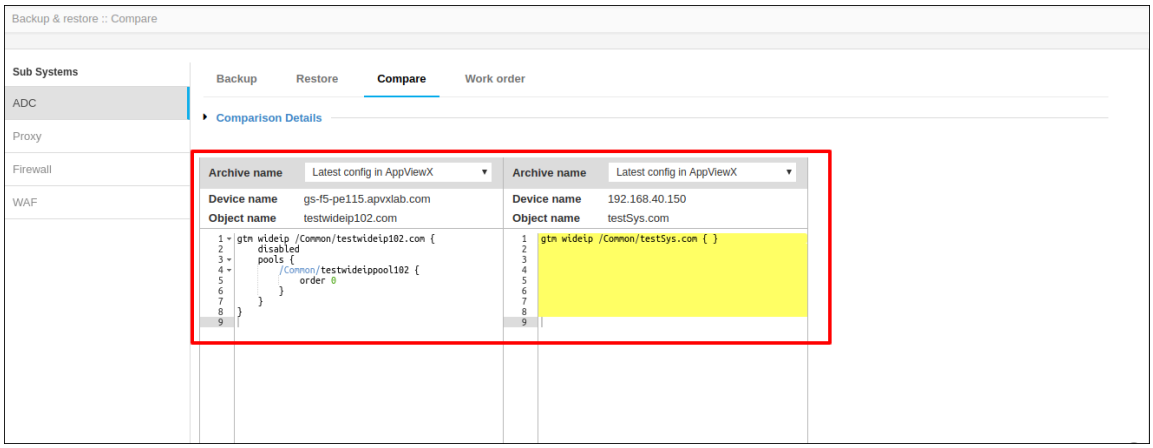

4.

Role Based Access Control

- About Role Based Access Control
- Simplified RBAC Configuration in AppViewX
- Accessing Quick Config option
- Authentication
- LDAP
- TACACS

About Role Based Access Control

Overview

Role based access control (RBAC) is a method of restricting AppViewX functions, network resources which can be managed and monitored in AppViewX based on the roles of individual users within an enterprise. RBAC lets employees have access rights only to the AppViewX functions and network resources they need to do their jobs and prevents them from accessing information that doesn't pertain to them.

Benefits of RBAC

Using RBAC should improve operational efficiency, enhance compliance, provide administrators increased visibility, reduction in costs, decrease in risk of breaches and data leakage.

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Simplified RBAC Configuration in AppViewX

To simplify existing RBAC Configuration in AppViewX for the Account Administrator, “Quick Config” wizard flow option has been introduced in the existing Authentication, User groups, Roles and Resources. Using “Quick Config” option, users should be able to perform all the following actions in the same wizard flow:

- Configure external authentication or single-sign on for users to login to AppViewX
- Add users groups into AppViewX by pulling specific user groups from AD into AppViewX based on specific patterns/keywords/codes and support Bulk Export/Import option to onboard user groups
- Pre-packaged roles for ADC, Cert, Security and Automation modules to assign permissions to user groups
- Simplifying custom role creation by providing information help against each ACF explaining the significance of the functionality
- Dynamic rule based resource tagging of newly discovered ADC objects, Certificates based on Query or using script and assigning permissions to user groups dynamically.

Accessing Quick Config option

To configure RBAC using Quick Config option,

- Click **Menu** > **Settings** > **General** > **Authentication** > **Quick Config** option.
- The Authentication stage opens in a wizard flow with the LDAP sub-tab displayed by default. On the same screen as part of the wizard flow, user groups, roles, and resources stages are displayed at the top. Click on the respective stage for configuration.

Ways to Access Quick Config Wizard Flow

- Click **Menu** > **Account** > **User group** > **Quick Config** option.

(or)

- Click **Account** > **Role** > **Quick Config** option

(or)

- Click **Account** > **Resource** > **Quick Config** option.

The Authentication stage opens in a wizard flow with the LDAP sub-tab displayed by default. On the same screen as part of the wizard flow, user groups, roles, and resources stages are displayed at the top. Click on the respective stage for configuration.

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For detailed instructions to perform the above-mentioned actions, see Platform User Guide.

Authentication

The Quick Config option in Authentication sub-tab within the Settings > General tab enables you to configure and manage authentication for Lightweight Directory Access Protocol (LDAP), LDAPS (LDAP over SSL), TACACS, RADIUS, and Single-Sign on accounts. It also allows you to set the order levels for the three different types of authentication and to restrict users to a single session, if necessary.

Related information
LDAP
TACACS

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The Authentication stage opens in a wizard flow with the LDAP sub-tab displayed by default. On the same screen as part of the wizard flow, user groups, roles, and resources stages are displayed at the top. Click on the respective stage for configuration.

For detailed instructions to perform the above-mentioned actions, see Platform User Guide.

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LDAP

To configure the settings for LDAP or LDAPS authentication, complete the following steps:

1. Click **Menu** > **Settings** > **General** > **Authentication** > **Quick Config** option.
   The Authentication screen opens with the LDAP sub-tab displayed by default.
2. Click on Configure LDAP and configure LDAP form appears in a popup.

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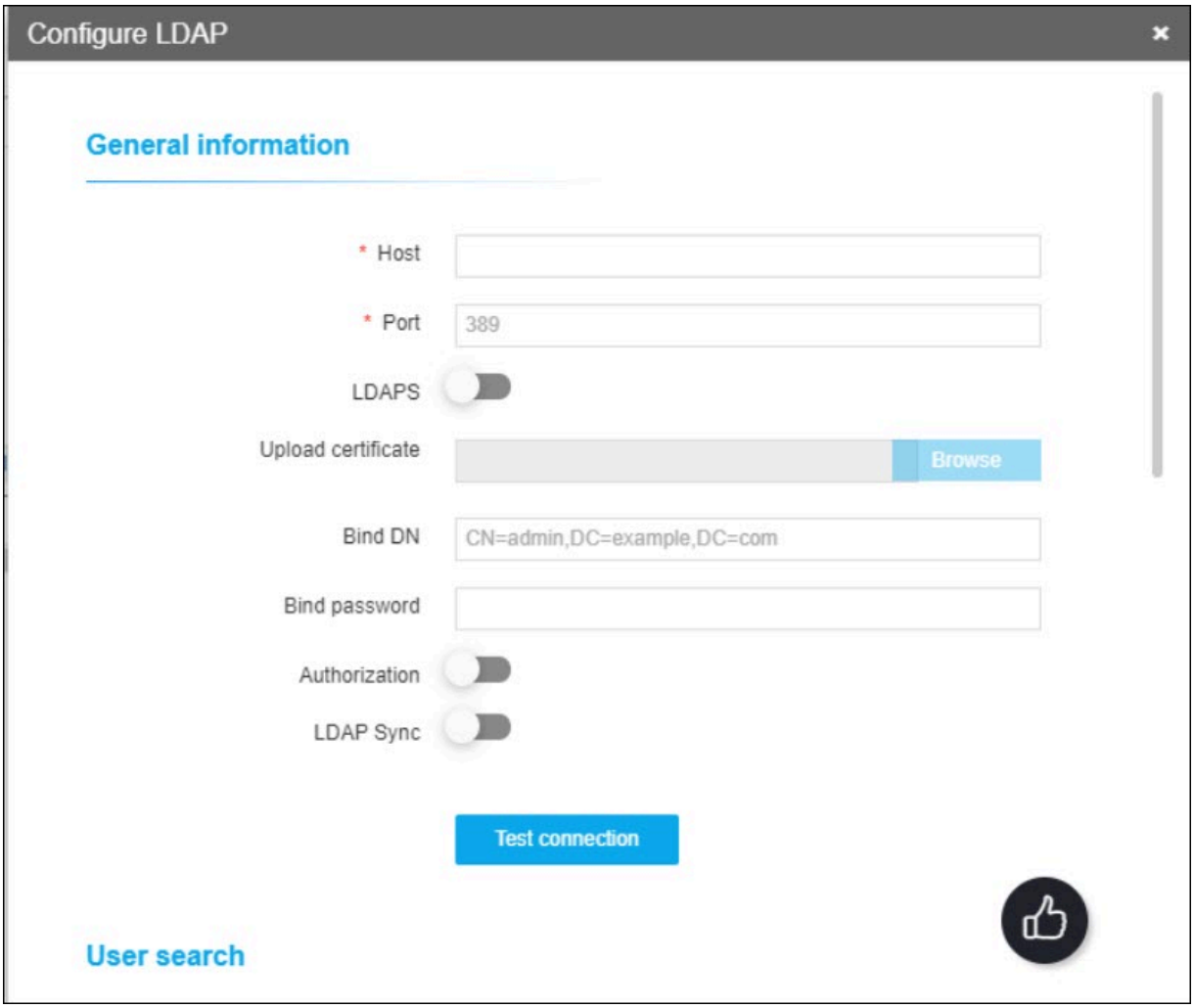

3. In the **Host** field, enter the host address of the Active Directory (AD) server.
   The port for LDAP is displayed by default. It can be modified if necessary.
4. If you want to configure LDAPS, enable it by clicking the (Enabled) button. The port for LDAPS will be displayed automatically. You can modify it if necessary.
5. The **Upload certificate** field enabled only when the LDAPS is enabled, and then click the Browse button for the certificate you want to import.
6. In the **Bind DN** field, enter the full distinguished name (DN), including common name (CN), of an Active Directory user account that has privileges to search for users. For example: cn=manager,dc=sample,dc=com The Bind DN user, such as Administrator, is the username associated with the Bind DN user account. The Connector creates a corresponding user account as an administrative user in Application Manager. You use the username for this account to log in to Application Manager as an administrator. In AD DS, the Bind DN entry must be located in the same branch and below the Base DN.

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7. In the **Bind password** field, enter the password associated with the Bind DN user account.
8. You can enable Authorization to perform the validation on LDAP, leave it disabled if you want to perform the validation locally.
9. Click the **Test connection** button to ensure that the given host address is reachable and the port is valid for configuring either an LDAP or LDAPS. If the connection is successful, the following message is displayed: Test connection Success.

> **Note:**
> • You can test the connection of LDAPS only when you save all of the configuration details.
> • Bind DN and Bind password details cannot be validated through a test connection.

10. In the **Search base** field within the User search region, enter the name of the search base object that defines the location in the directory from which the LDAP search begins. For example: ou=APPVIEWX,dc=sample,dc=com An LDAP search has the potential to retrieve information about all objects within a specific scope that have certain characteristics.
11. In the **Search filter** field, enter the filters you want to use to select the entries to be returned for a search operation. These are most commonly used with the LDAP search command-line utility. For example: uid={0} The difference between uid and sAMAccountName is that uid should be unique throughout the directory name space, while sAMAccountName is only guaranteed unique within the domain. If the AD tree has several domains, there is no guarantee of uniqueness across domains.
12. In the **User return attribute** field, enter any special user attributes, such as displayID, that you want to synchronize between the local and global catalogs. Attributes associated with this type of entry can be specified, such as using the common name (CN) attribute to search for people with a specific common name.
13. Click the **Test query** button.
14. On the Test query input screen that appears,enter the following to perform the search query validation:
    • In the Test username field, enter any username available in the LDAP or LDAPS server that you are trying to configure.
    • In the **Test password** field, enter the password associated with the username.
    • Click **Proceed** to check if it is a valid user.

> **Note:** You are allowed to check the query response for User search and Group search only when the connection is valid.

15. The next three fields on the tab, Group search base, Group search filter, and Group return attribute, are related to those in steps 6–8 above. The difference is that they search and fetch group membership details and also provide authorization for the group the user is associated with.

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For example, enter ou=secgrp,dc=sample,dc=com for the Group search base, 'member=*' for the Group search filter, and cn for the Group return attribute.

> **Note:**
> The search filter 'member=*' matches any entry in the directory. Since every entry is a member, and the member attribute is always indexed, this is a useful search filter to return every entry.

16. Click the **Test query** button to check if it is a valid group.
17. In the **Authorization map** field, select how you want to map the return attribute:
    - Select the **User group** radio button to map the attribute to the user group.
    - Select the **Role** radio button to map the attribute to the role.
18. Click **Save** to save the LDAP or LDAPS configuration and have it added to the list at the LDAP Inventory table.

> **Note:**
> - To delete an existing configuration in the LDAP inventory table, select the required LDAP configuration using the **Select** checkbox nearby the respective configuration → click on **More Actions** and from the drop down options click the (Delete) button for the configuration.
> - To update an existing configuration in the LDAP inventory table, click on the Host Hyperlink, modify LDAP popup appears → update the required details → then click on **Update**.

19. In the table, click **Fetch user groups** which exist as second column to view the user groups available in the AD and create or map them with the existing user groups in AppViewX.
20. In the popup screen that appears, fetch user groups specific to a user option selected by default, then type the username of an AD user.
21. To pull specific user groups by user group name from AD into AppViewX based on specific patterns/ keywords/code, select Fetch User groups option, then type the user group name in AD.
    - Either an exact group name or using a wild character search(asterisk (*) - Matches any number of characters. You can use * anywhere in a character string)
    - Example: To search User groups names containing ‘admin’, type user group name as ‘admin*’ in the search text box. All the user groups names containing admin in AD will be retrieved.
22. Click **Fetch**. A table containing the AD group names and their corresponding AppViewX user group names is displayed.

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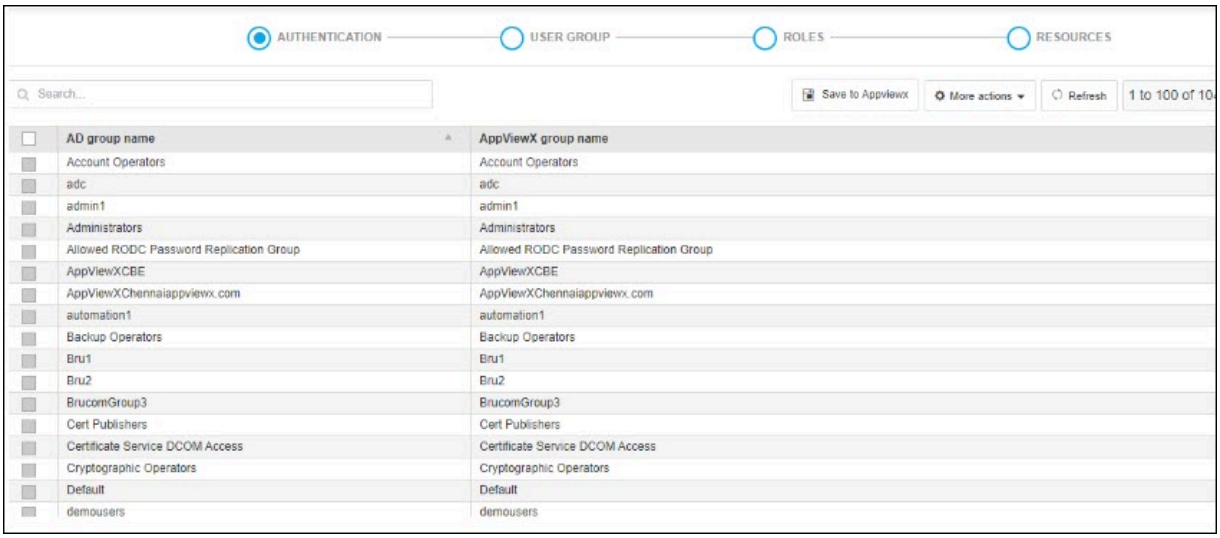

23. Select the AD user group(s) that must be created with the same name in AppViewX and click the **Save to AppViewX** button.
24. You can also select the AD user group(s) to be mapped with the existing AppViewX user group and click the **More Actions** → **Create Map** option in the dropdown → select the required existing AppViewX user group to be mapped from the Mapping user group popup → then click on **Save**. Selected AD user group(s) will be now mapped to the existing AppViewX user group and the same mapping will be reflecting AD group names table.
25. You can also export the specific fetched AD groups by selecting specific AD groups → click on **More Options** → **Export**→ From the export user groups popup, select **Selected group(s)** option and click **Yes** → selected user group(s) should be automatically exported in `.csv` format.
26. You can also export all the fetched AD groups by clicking on **More Options** → **Export**→ from the export user groups popup, select **All user group(s)** option and click **Yes** → All user group(s) should be automatically exported in `.csv` format.

Related information
About Role Based Access Control
TACACS

TACACS

The AppViewX system allows you to add more than one Terminal Access Controller Access-Control System (TACACS) server for authentication.

To configure the settings for TACACS authentication,

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1. Navigate to **Settings** > **General** > **Authentication** > **Quick Config**.
2. Click the **TACACS sub-tab**, and then click **Configure TACACS** button.
3. Enter the name of the TACACS authentication server in the configuration popup.
4. Enter the IP address for the TACACS authentication server.
5. Enter the port for the TACACS authentication server.
6. Click the **Test connection** button to ensure that the given host address is reachable and the port is valid for configuring TACACS.
7. Enter the secret key text string that is shared between the TACACS server and AppViewX.
8. Enter the kind of network service that will be used: for example, PPP.
9. Enter the kind of protocol that will be used. In most cases, this is IP.
10. Enter the role key, which is the return attribute from the TACACS server: for example, Role.
11. Click **Add** to save the TACACS configuration in the AppViewX system and have it added to the list at the TACACS Inventory table.

> **Note:**
> - To delete an existing configuration in the TACACS inventory table,
>   - Select the required TACACS configuration using the Select checkbox nearby the respective configuration.
>   - Click **More Actions**.
>   - Click the (Delete) icon from the drop down option.
> - To update an existing configuration in the TACACS inventory table,
>   - Click the **Server Name Hyperlink**.
>   - Modify TACACS popup appears.
>   - Update the required details.
>   - Click **Update**.

12. To disable a server configured,
    - Select the required TACACS configuration.
    - Click **More Options**.
    - Select the **Disable** option from the dropdown to disable a configuration, which is currently in enabled status.
13. To enable a server configured,
    - Select the required TACACS configuration.
    - Click **More Options**.
    - Select the **Enable** option from the dropdown to enable a configuration which is currently in disabled status.
14. (Optional) Repeat steps 2 through 11 to add more TACACS servers to the system.

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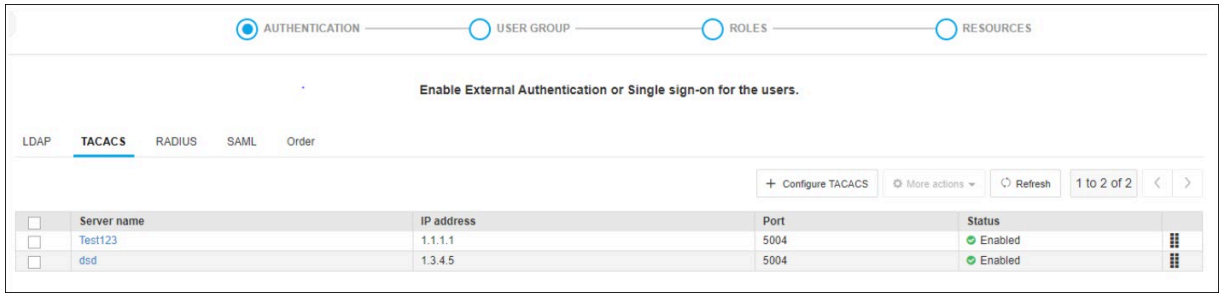
15. (Optional) In the servers inventory table, click and hold a server name and drag it up or down to change the order of TACACS servers in use in the system.
    Order will be automatically saved.



Related information
About Role Based Access Control
LDAP

Control Center

- About Control Center
- Search
- View the Object Details
- View Additional Details
- Bookmarks
- Filter ADC Search Results
- Export Search Results
- Orphan Objects
- Right click actions

About Control Center

Overview

Control center module is a centralized object repository which allows the user to manage and monitor the objects. To manage and monitor the objects AppViewX provides some basic action in right click of object in control center. The objects will be categorized into three types based on which the right click actions may vary.

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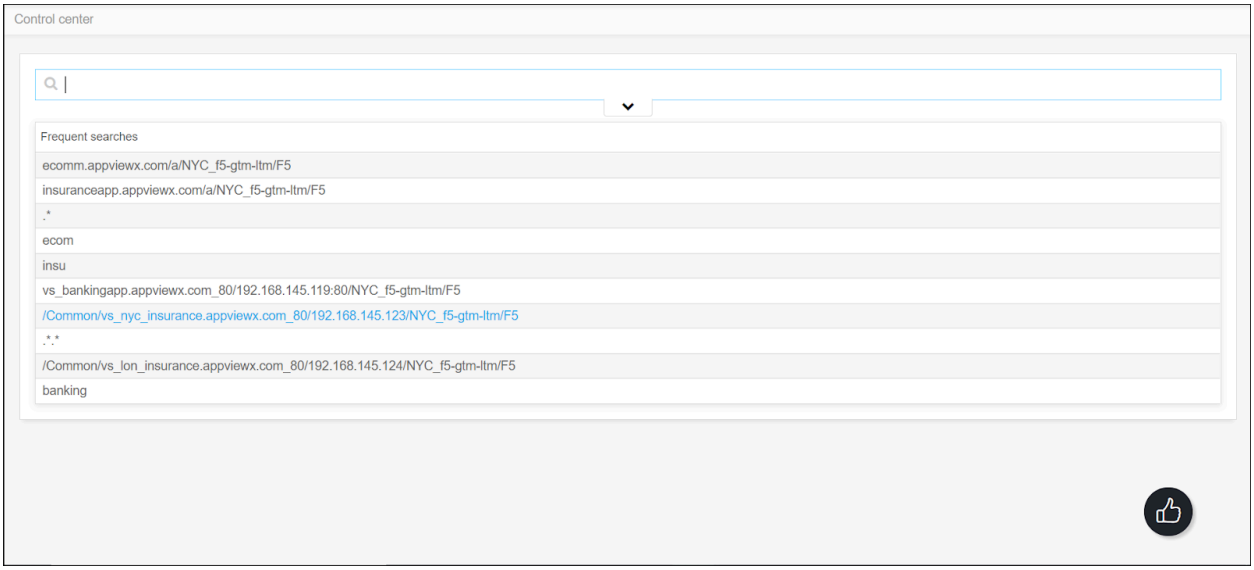
- **Primary objects** - Objects that are used in load balancing. These objects have access permission at individual level. For example in F5 objects like wide ip, pool, pool member, server are considered as primary objects.
- **Orphan objects** - Objects without parents will be considered as orphan objects. For orphan objects AppViewX allows the user to provide access in global level not at individual level. For example, an F5 pool that is not associated with wide ip will be considered an orphan pool.
- **Secondary objects** - Objects that are associated with primary objects but which do not directly participate in load balancing are called secondary objects. AppViewX provides global level access permissions for secondary objects. For example monitors, profiles, etc., Where monitors are used to monitor the health of the servers.

Related information
Search

Search

The App Search module displays a centralized object repository from the Control Center that allows you to search for and then monitor and manage all the entities, configurations, or objects of the ADC devices. Control Center provides a holistic NOC overview for app teams and network teams to quickly search and monitor application services based on RBAC in a visual intuitive topology view.



In App Search module, the Control Center acts as a search engine inside the AppViewX to search and monitor any Application in your infrastructure. From the app search, any application-related details can be searched/found the complete infrastructure details and services supporting the application. The Control

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Center within the App Search module also provides better insights into the configuration, state, and performance of the application and helps to troubleshoot application outages more effectively.

To use the Control Center within the App Search module, the following prerequisites must be met:

- Each device you want to control must have been a managed entity in AppViewX.
- A role and resource must have been assigned with the appropriate device/object level that you want to control. However, for the orphan and secondary objects, global access must have been provided.

- Search Using Free Text Entries
- Search Using Frequent Search Links
- Search Using Predefined Search Keys

Search Using Free Text Entries

This is the most common type of search. You can enter text in the search field and press Enter on your keyboard. The following search features and functionalities are supported:

- Case insensitive keyword and string matching. For example, the search result for F5 would be **f5_86.appviewx.com**.
- Exact match search strings through the use of double quotation marks around search terms. For example, "**gs-f5-pe21.lab.appviewx.net**".
- Entering only the application name in the search field is enough to find all the hierarchical details related to it.
- Boolean AND and OR operators:
  - **AND Operator** - search results contain both terms that existed in the search query. For example, **gs-f5-pe21.lab.appviewx.net AND default**.
  - **OR Operator** - search results contain one or both terms that existed in the search query. For example, **gs-f5-pe21.lab.appviewx.net OR default**.
  - **AND** and **OR** - When a Boolean AND operator and an OR operator exist in the same search string, the AND operator is executed first by default. For example, **gs-f5-pe21.lab.appviewx.net AND gs-f5-pe51.lab.appviewx.net OR default.**

If parentheses appear in a Boolean query, the query components within the parentheses are executed first, followed by the query components outside the parentheses. For example, **(gs-f5-pe21.lab.appviewx.net AND default) OR 3.4.5.6**.

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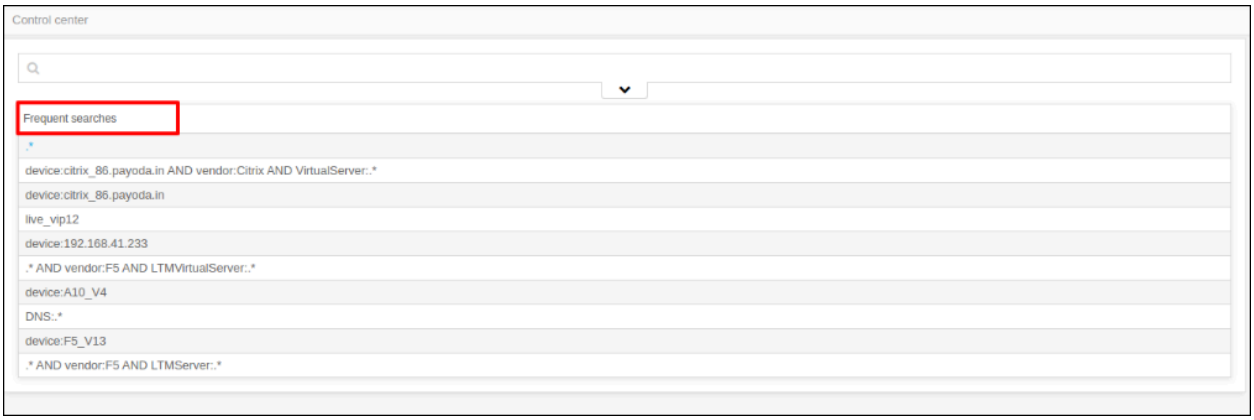
For example, typing only the application name in the search bar is enough to find all the hierarchical details related to it:

Related information
Search Using Frequent Search Links
Search Using Predefined Search Keys

Search Using Frequent Search Links

The App Search screen displays a list of frequent searches immediately below the search field. Click any of the items in the Frequent searches list to search the AppViewX platform for that word, phrase, or character set.

In the ADC search results screen, click the vertical ellipse button next to the search bar and select **Frequent Searches** to view a list of frequent searches.



Related information
Search Using Free Text Entries
Search Using Predefined Search Keys

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Search Using Predefined Search Keys

AppViewX provides a set of predefined keys specific to each ADC vendor to help the search operation. The types of predefined keywords are:

- All keywords
- Vendor-specific keywords
- Logical operator with keywords

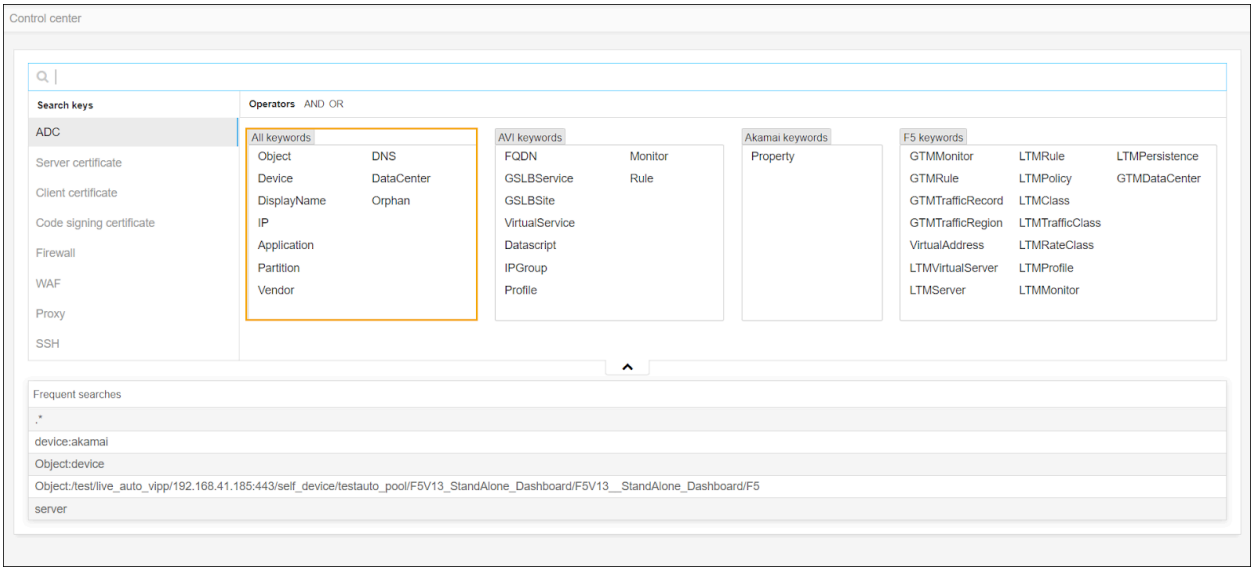
The predefined search keywords can be used to create highly targeted search queries. To create a search query, see create a search query.

- All Keywords
- Logical Operator with Keywords
- Create a Search Query

Related information
Search Using Free Text Entries
Search Using Frequent Search Links

All Keywords

These keywords are generic to all ADC vendors and help searching objects irrespective of vendors.



Sample Search Keywords

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Common Keywords	Description
Object:	Search for objects using the name.
Device:	Search for objects from a particular device managed in the ADC inventory.
Displayname:	Search for objects using the Displayname. Displayname represents the naming format of your objects that needs to be followed throughout the application. Refer <displayname section>
IP:	Search for objects using the IP address. Eg: Objects like Virtual Servers, Pool members that belong to a particular IP can be searched.
Application:	Search for objects associated with an Application name. AppViewX tags all the hierarchical objects of an Application using the WideIP name as a tag during every config fetch.
Partition:	Search for objects from a device partition or tenant or context.
Vendor:	Search for objects from a particular vendor (F5, AVI, etc.,)
DNS:	Search for objects using their DNS name. AppViewX performs a scheduled (twice a day) reverse lookup for the objects that contain an IP address in it and persists the DNS name of the objects.
Datacenter:	Search for objects from a particular Datacenter. Datacenter name information should have been provided at the time of device addition.
Orphan:	Search for objects that do not have Parent association. Objects like GTM/LTM pools that are not associated with WideIP/Virtual Server will be considered as Orphans.

Logical Operator with Keywords

The common keywords and Vendor specific keywords can be combined with any Logical operator.

Sample Keywords

Keywords	Description
virtual server:* AND device: F5_v11	The list of virtual servers available in the F5_v11 device.

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device: F5_v11 AND virtual server:* AND IP:192.168.96.101	The list of virtual servers in the F5_v11 device that uses the IP address 192.168.96.101 is identified.

Create a Search Query

To create a search query:

1. On the **Search** screen, click the (**Expand**) tab at the bottom of the search field.
2. The field expands to display a list of search keys available for the ADC.
3. For each metadata type, you add to the search query, enter a value or partial value to search for. If you enter no text after the search key, the search engine automatically searches for "all values."
4. (Optional) Click the AND and OR operators at the top of the Search keys field to create Boolean searches.
5. When you are finished creating the search query, click inside the search field, then click Enter on your keyboard to run the search.

View the Object Details

1. The object details are represented in the form of a tabular with additional information as follows:

Column name	Description	Default?
State	State of the objects.	Yes
Status	Status of the objects.	Yes
Object name	Based on the display name configured.	Yes (mandatory)
IP address	The IP address of the objects.	Yes
Port	Port of the IP address.	Yes
Object type	Type of object.	Yes
Config data	Configuration of the objects is displayed in a Pop upon clicking the link.	Yes
Device name	The device name of the object. On clicking, the user is redirected to the device addition page.	Yes

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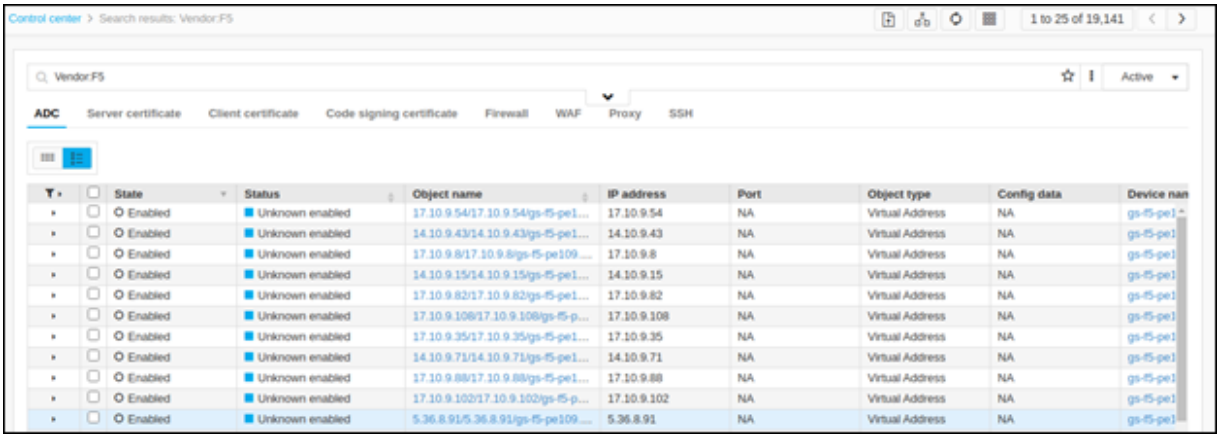
Column name	Description	Default?
Vendor	Vendor of the object.	Yes
Device IP/FQDN	IP or FQDN of the device. The user is redirected to the device login on clicking.	No
Connection count	Display the live connection count of the objects if applicable.	No
Partition	Partition/tenant/context of the objects if applicable	No
DNS name	DNS resolution of the objects if applicable.	No

2. In the search results field, hover your cursor over the result whose basic details you want to view.



- Filter the Objects
- About Infrastructure

Related information
Search Using Free Text Entries
Search Using Frequent Search Links
Search Using Predefined Search Keys
Filter the Objects
About Infrastructure

Filter the Objects

To filter the objects in the Infrastructure view,

1. Run a search.
2. Click the filter icon located at the first cell of the table.
3. The filter options are enabled in the header of the table.

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4. Select and/or enter the criteria to filter the objects. The objects that match the filter criteria are displayed.

> **Note:**
> - To remove the filter option, click again the filter icon.
> - To reset the filter criteria that have been applied, select and/or remove the text that has been applied for filtering the objects.

Related information
Search Using Free Text Entries
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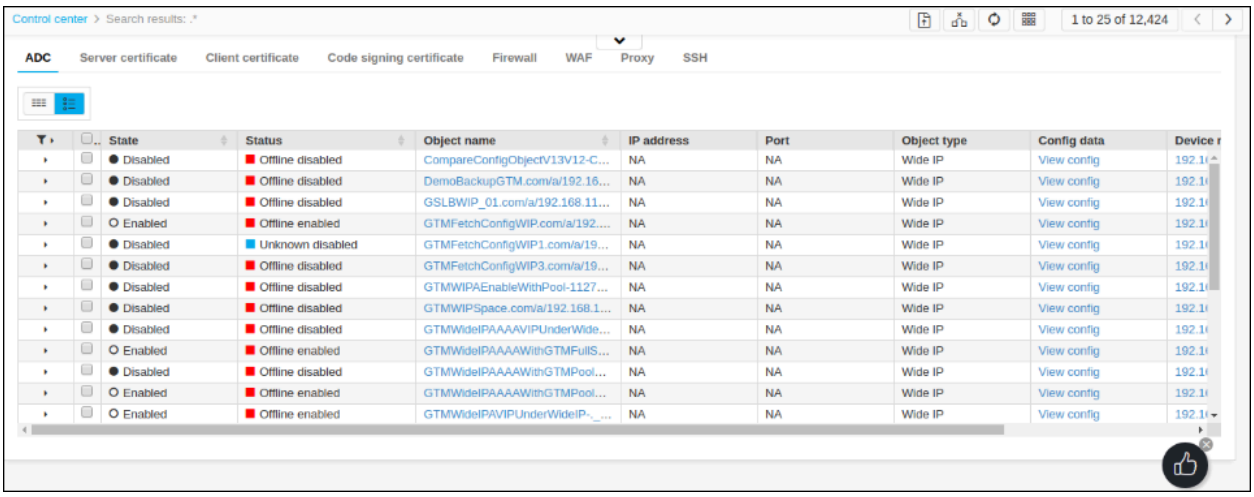
About Infrastructure

Infrastructure View

Only the ADC objects corresponding to your search criteria are displayed and not its hierarchy (such as a parent, child 1, and child 2). By clicking the (**Infrastructure view**) icon to switch from the Application view.



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4. Select and/or enter the criteria to filter the objects. The objects that match the filter criteria are displayed.

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- To reset the filter criteria that have been applied, select and/or remove the text that has been applied for filtering the objects.

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Status	Status of the objects.	Yes
Object name	Based on the display name configured.	Yes (mandatory)
IP address	The IP address of the objects.	Yes
Port	Port of the IP address.	Yes
Object type	Type of object.	Yes
Config data	Configuration of the objects is displayed in a Pop upon clicking the link.	Yes
Device name	The device name of the object. On clicking, the user is redirected to the device addition page.	Yes
Vendor	Vendor of the object.	Yes
Device IP/FQDN	IP or FQDN of the device. The user is redirected to the device login on clicking.	No
Connection count	Display the live connection count of the objects if applicable.	No

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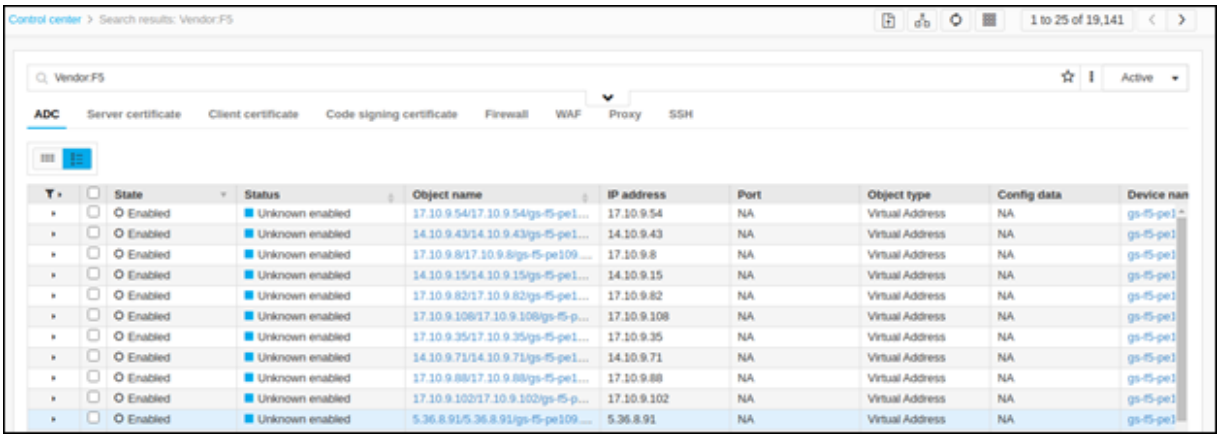
Column name	Description	Default?
Partition	Partition/tenant/context of the objects if applicable	No
DNS name	DNS resolution of the objects if applicable.	No

2. In the search results field, hover your cursor over the result whose basic details you want to view.



Related information
Search Using Free Text Entries
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Filter the Objects

View Additional Details

View Additional Details of Search Results

There are two ways to view additional details about search results and the method varies depending on the type of object you are viewing:

- **Topology View**: Clicking the object takes you to topological screens that provide much more information about the corresponding object than is displayed on the search results screen.
- **ADC Topology Actions**: ADC primary and secondary object search results can be right-clicked to view the list of actions available for them.

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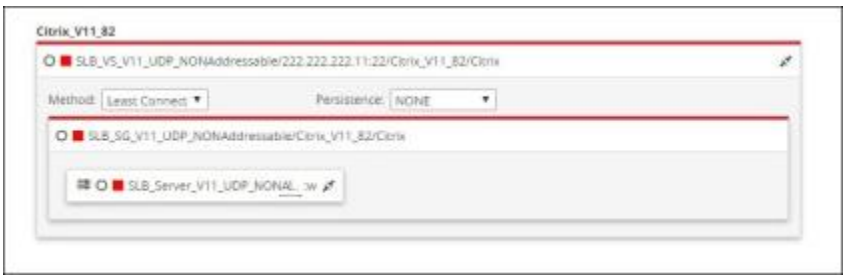
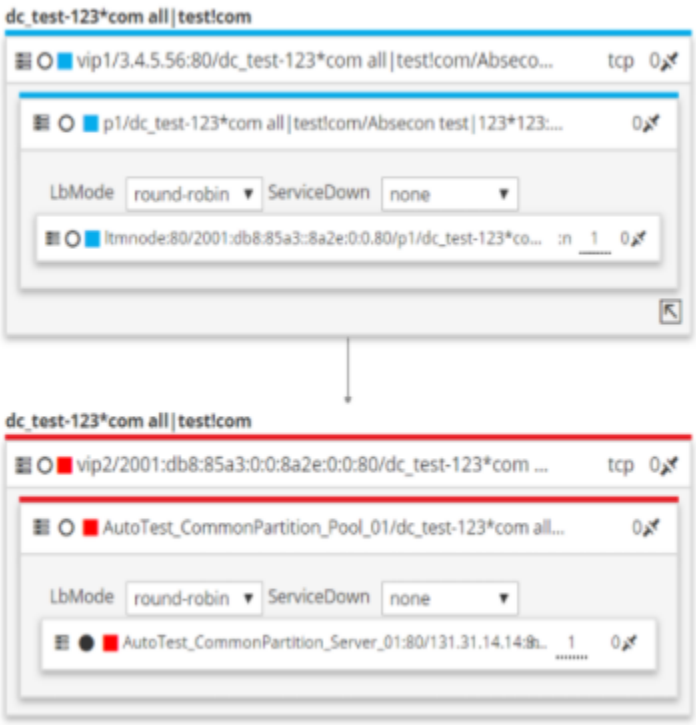
Topology View

- When you click a search result for a primary ADC object either from the **Application** or **Infrastructure** view, a topology view opens, providing a detailed, hierarchical map of the structure of the ADC. The following are the sample ADC topologies within the Control Center.
- For example, read the topology view: **GTM** > **LTM** > **Pool** > **Pool mem...**

Server Load Balancing (SLB) Virtual Server Topology



Virtual Server IP (VIP) under VIP Topology



Virtual Server (VIP) under Wide IP Topology

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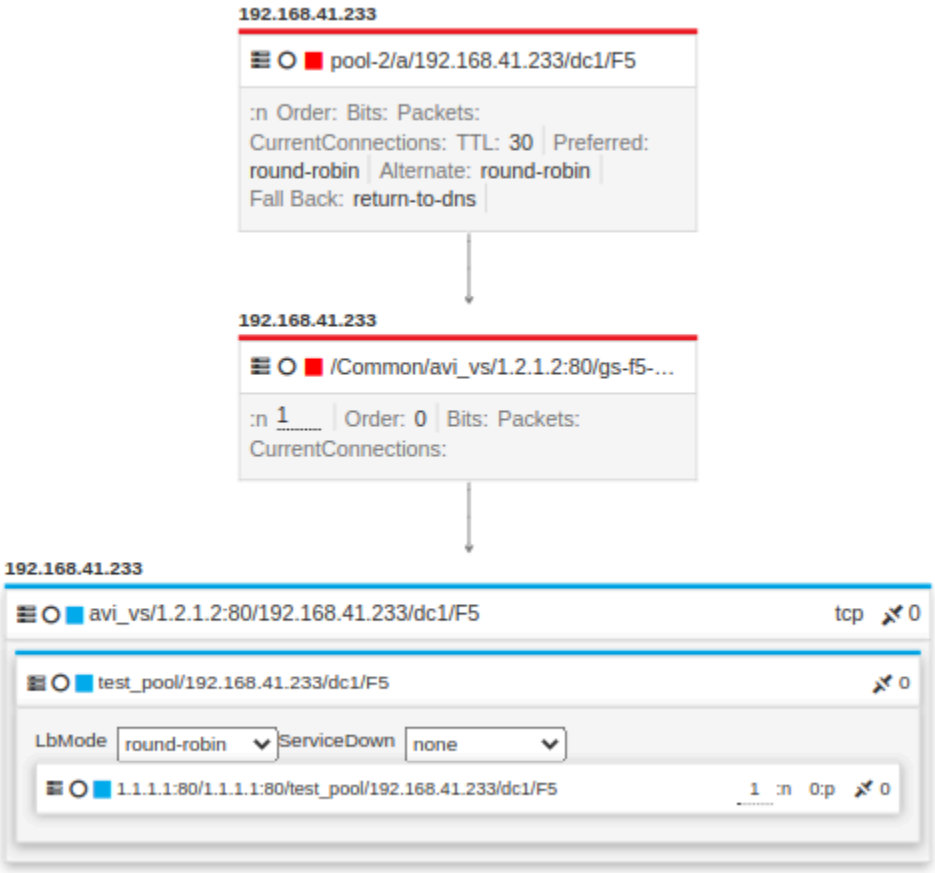
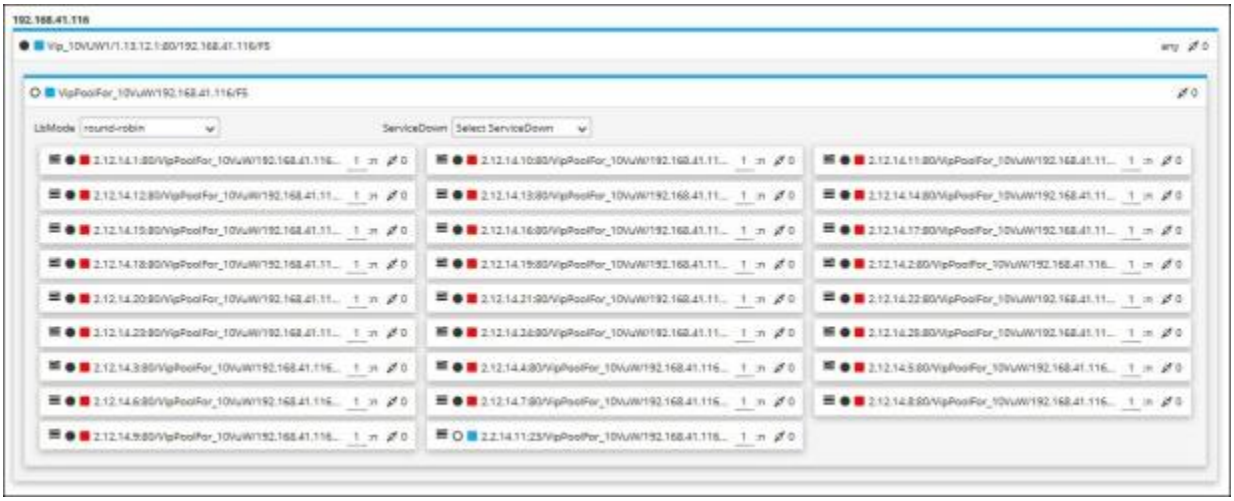


Virtual Server (VIP)/SLB Topology



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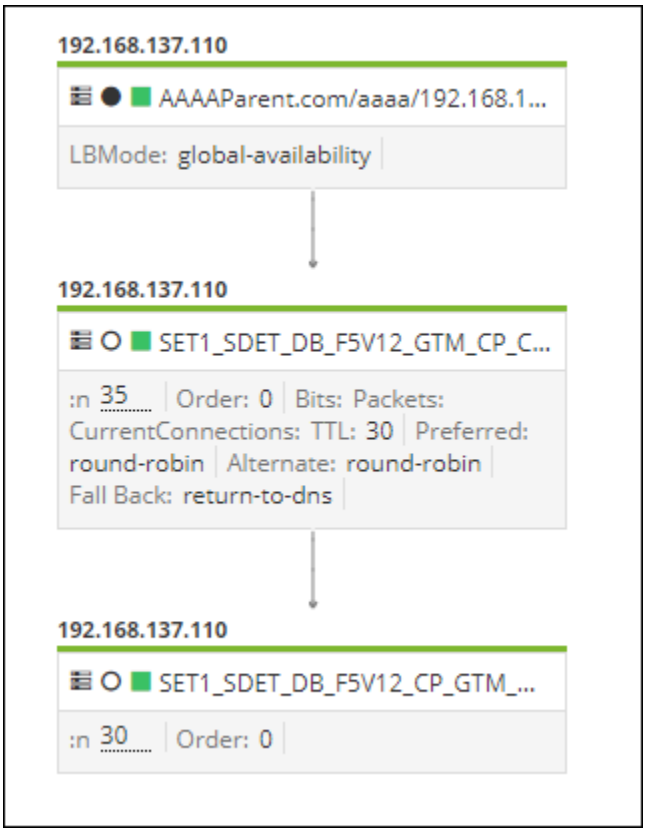
Wide IP/GSLB Topology



Related information
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About Infrastructure

Bookmarks

AppViewX allows the user to bookmark the frequently used search items.

Create a Bookmark

If any search strings or search queries are repeatedly used, it can be bookmarked for future access.

To create a bookmark for the ADC frequent search items,

1. Click **Menu** > **ADC+** > **TRAFFIC MANAGEMENT** > **App Search**. The Control Center search screen appears.
2. Run a search.

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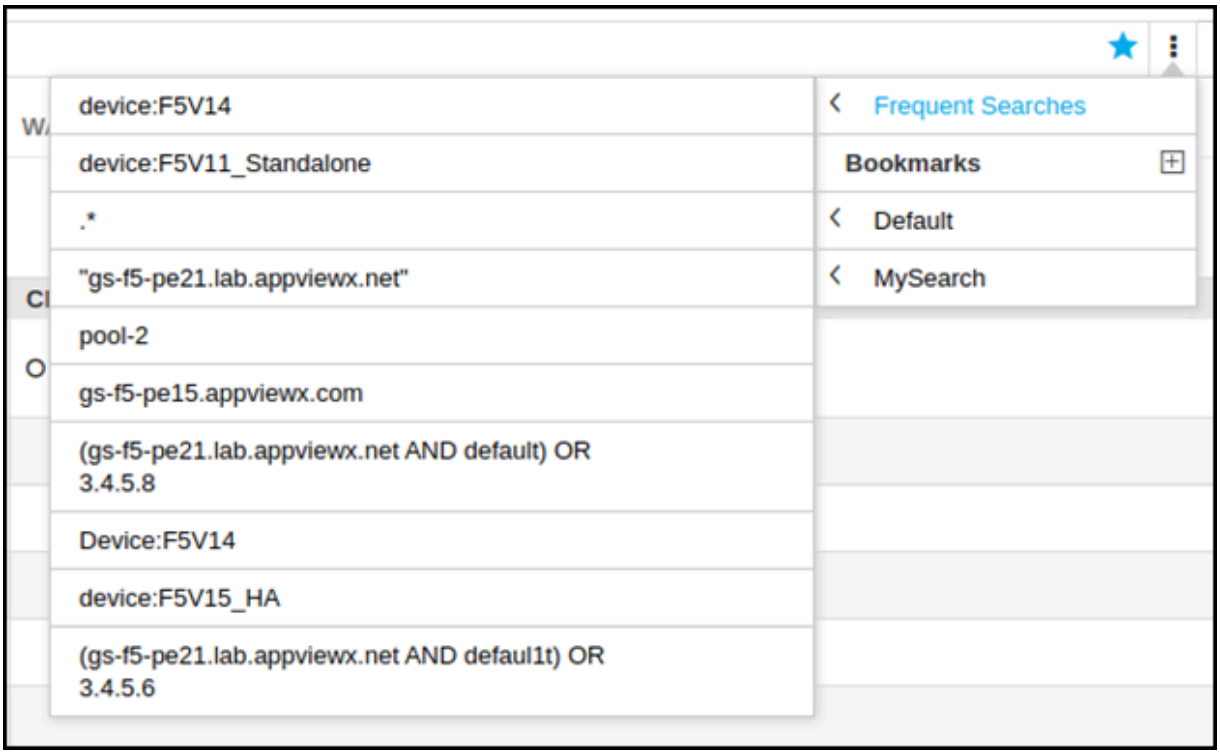
3. On the search results screen, click the icon next to the search bar.
4. Click the (Add) icon to create a bookmark folder.
5. Click the (Star) icon on the search bar. A pop-up message will be displayed at the top of the screen, **Bookmark(s) created successfully**.
6. On the **Bookmark Added** pop-up screen, enter a name for the bookmark to help the users identify it.
7. Select the folder to which you want to add this bookmark from the dropdown list and click **Done**.

> **Note:** If you want to delete the bookmark, click the Remove button. A pop-up message will be displayed at the top of the screen, Bookmark(s) deleted successfully.

Queries that are frequently used are added to the frequent searches by default and the top 10 queries can be accessed in a single click as below:



Delete Bookmark

Follow the below steps to delete a bookmark.

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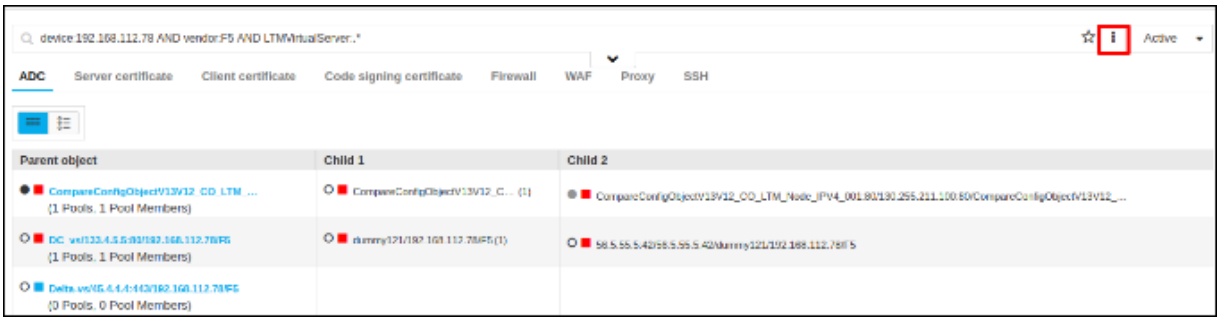
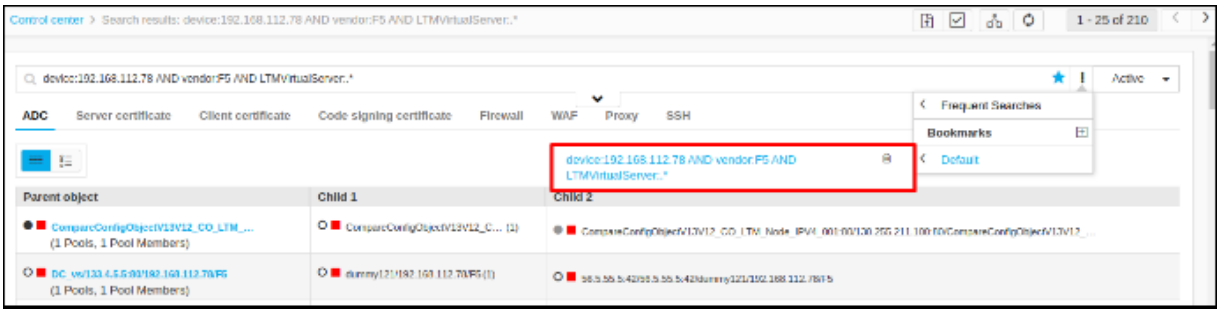
1. Log in to the AppViewX application with valid credentials.
2. Select **Menu** > **ADC+** > **TRAFFIC MANAGEMENT** > **App Search**.
3. Run a search.
4. In the grid / infrastructure view click on **More Options** button (3 vertical dots) next to the search bar.



5. Mouse hover the folder name under the bookmarks menu.

All the bookmarks under the folder will be displayed.



6. Mouse hover on the bookmark name and the delete button will be displayed.

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7. Click **Delete**.

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Search Using Free Text Entries
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Filter the Objects
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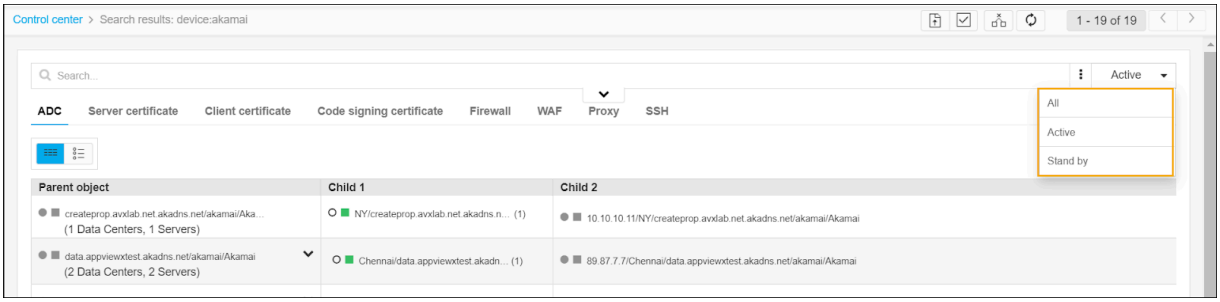
Filter ADC Search Results

To filter ADC search results within the Control Center:

1. Run a search.
2. On the search results screen, click the **Active** drop-down option.



3. Select one of the three filter options in the dropdown list that appears:
   - **All** - View all search results, regardless of status.
   - **Active** - View search results for objects with a status of Active.
   - **Stand by** - View search results for objects with a status of Standby.
4. The screen then refreshes and filters the results on both the Application view and Infrastructure view based on the filter you selected.

Related information
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Export Search Results

When you search for the objects in the Control Center, the objects that match the search keyword are displayed in the Application view. The resulting objects can be exported. You can export the selected objects or all the resulting objects.

To export objects search results within the Control Center,

1. Run a search.

   By default, the search results are displayed in the (**Application view**) page.
2. Click the checkboxes beside the object name to select the object details that you want to export from the grid or select all of the ADC objects by clicking the (**Select all**) icon in the Command bar.
3. All of the search results on the screen display with a blue background to indicate that they have been selected.
4. Click the (**Export**) icon in the Command bar.
   The `.csv` file is downloaded to your computer.
5. If you want to export the search results displayed on the infrastructure view, (**Infrastructure view**) icon to switch from the Application view search result page and do the following:
   - Select the checkboxes beside the first column of the grid to select the object details that you want to export from the grid. You can select all of the objects from the search results screen by selecting the first checkbox in the grid.
   - Click the (**Export**) icon in the Command bar.
   - On the **Export** screen that pops up, select either the **All columns** or the **Displayed columns** radio button based on what you want to export from the grid.

     The `.csv` file is downloaded to your computer.

Related information
Search Using Free Text Entries
Search Using Frequent Search Links
Search Using Predefined Search Keys
Filter the Objects
About Infrastructure

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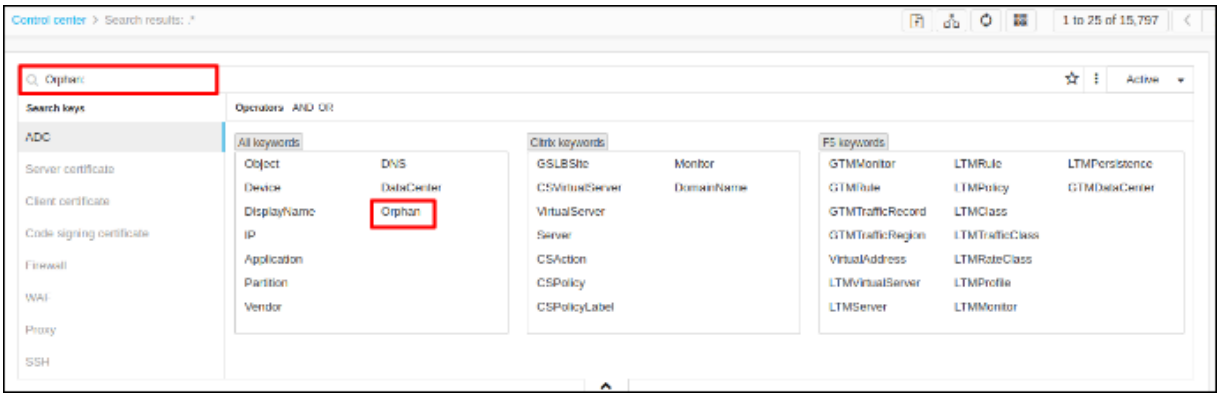
Orphan Objects

Objects without parents will be considered as orphan objects. For example, an F5 pool that is not associated with wide ip will be considered an orphan pool.

There are two ways to view the orphan objects in the Control Center.

Using Orphan Keyword

1. Log in to the AppViewX application with valid credentials.
2. Select **Menu** > **ADC+** > **TRAFFIC MANAGEMENT** > **App Search**.
3. Expand the keywords tab.
4. Click on **Orphan** keyword from the all keywords section and click enter.



Using Orphan Objects Button

1. Log in to the AppViewX application with valid credentials.
2. Select **Menu** > **ADC+** > **TRAFFIC MANAGEMENT** > **App Search**.
3. Run a search.
4. From the grid / infrastructure view click the **Orphan Objects** icon.

5. In the grid view, the parent column will always be empty for the orphan object.

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Right click actions

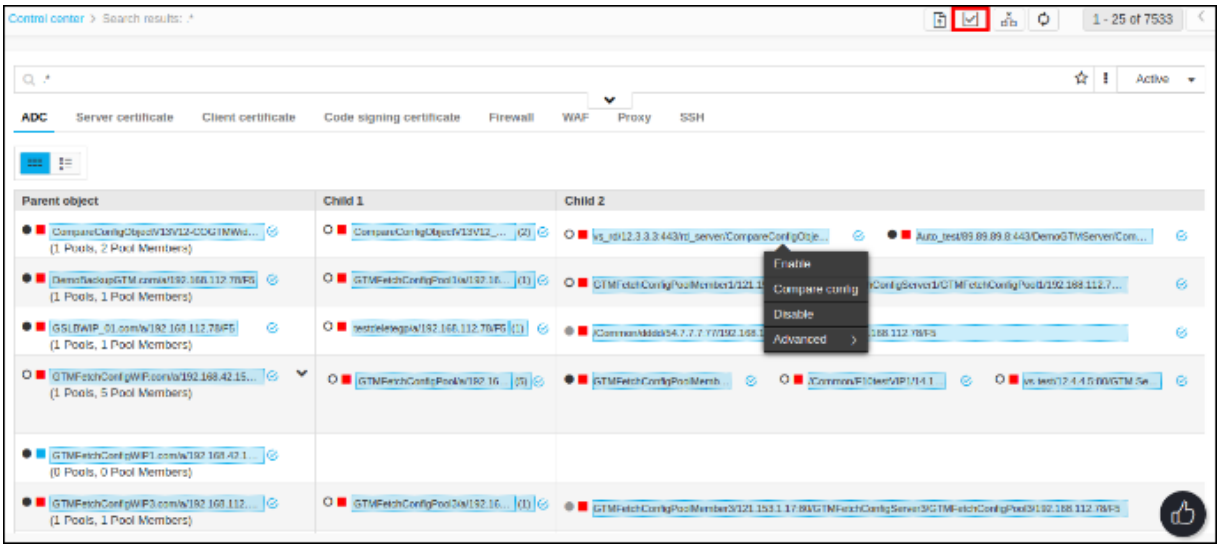
AppViewX provides some right click actions for objects in all the views. Users can do right click action on individual / multiple objects. The actions that appear on the list may vary depending on the object type and the vendor.

1. Log in to the AppViewX application with valid credentials.
2. Select **Menu** > **ADC+** > **TRAFFIC MANAGEMENT** > **App Search**.
3. Run a search.

• Actions

Executing From Application View

- Users can do right click actions on individual object level in grid view. To do an action on an individual object right click on the object.
- Users can do right click actions on multiple objects level by selecting the objects using the Select button near the object. After selecting the objects do a right click. When the user clicks on a particular action the actions will be applied only for the applicable actions from the selected objects.
- Users can do right click actions on all the objects in the page. When the user clicks on the Select All button in the top right corner and then right click on the objects. When the user clicks on a particular action the actions will be applied only for the applicable objects from the selected objects.



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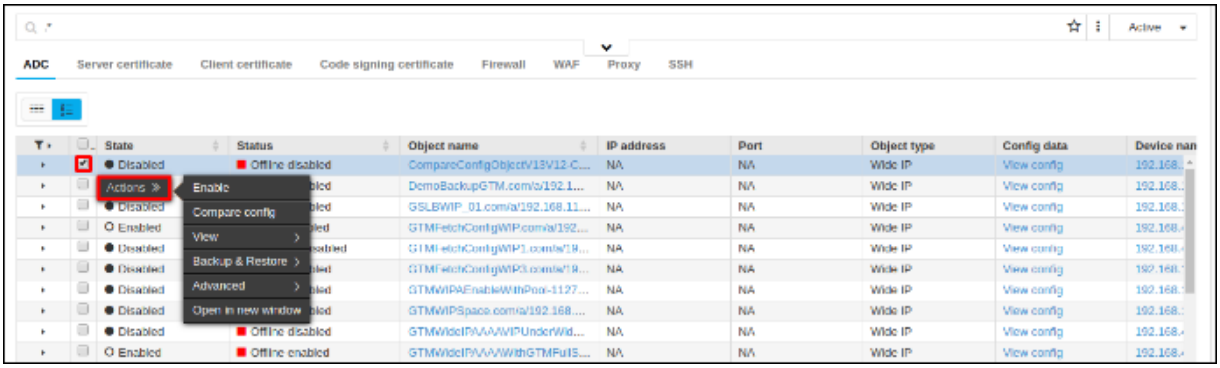
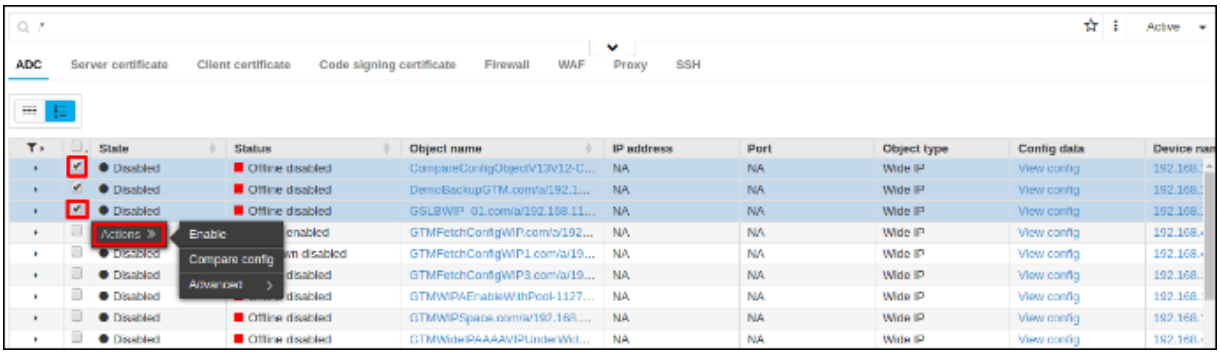
Executing From Infrastructure View

- Users can do right click actions on individual object level in grid view. To do an action on an individual object, select a single object and hover on **Actions**.



- Users can do right click actions on multiple objects level by selecting the checkboxes of the object. After selecting the objects hover on **Actions**. When the user clicks on a particular action the actions will be applied only for the applicable actions from the selected objects.



- Users can do right click actions on all the objects in the page. Users can select all the objects by selecting the **Select all** checkbox (first checkbox in the grid). When the user clicks on a particular action the actions will be applied only for the applicable objects from the selected objects.

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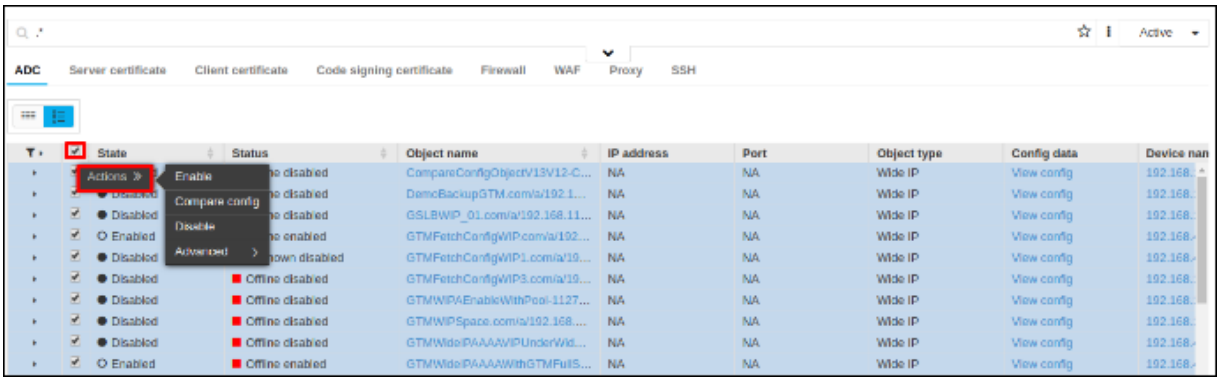
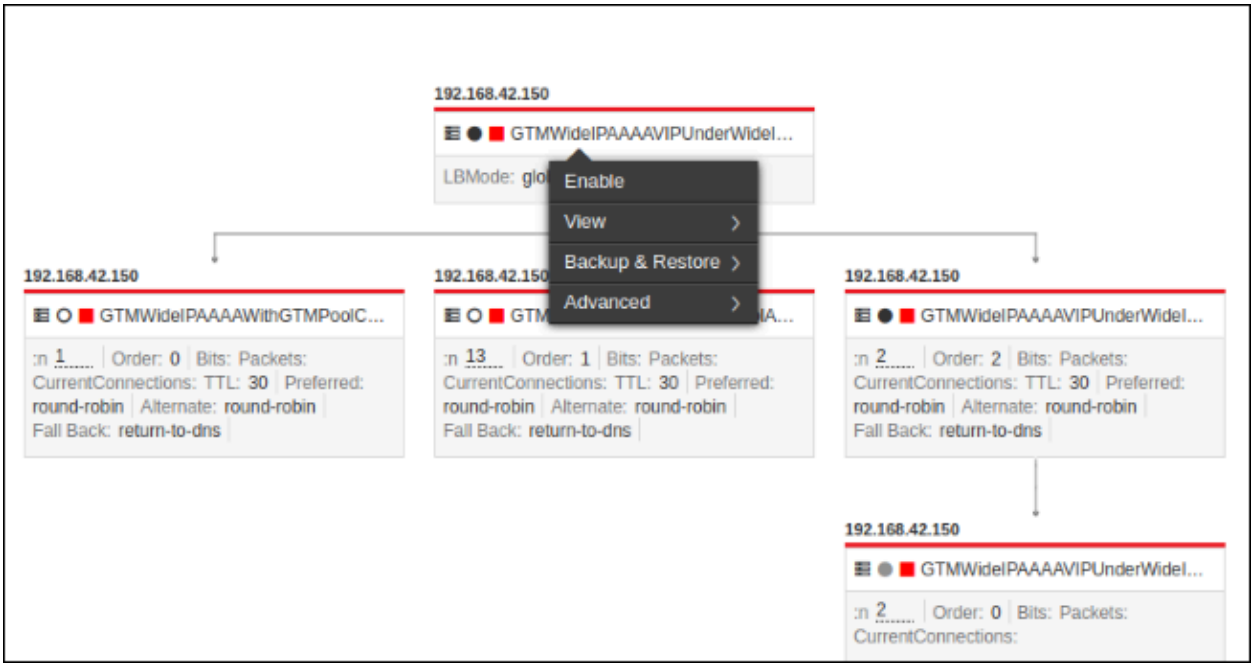


Executing From Topology View

From topology view users can do right click actions on individual objects. To do an action on an individual object right click on the object and click the required action.



Below are the right click actions supported in AppViewX. Basically they fall under two categories.

- **Write actions** : These actions will change the configuration of the object in the device and the respective changes will get updated in AppViewX also. Whenever the user triggers the below actions user will get a **Comments box** for most of the actions, where the entered comments will be maintained in auditlog. To perform the action users should enter a valid comment in that and then click **Yes.**
  - Enable
  - Disable

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- Force down
- FD clear active connections
- Enable all
- Disable All
- Forcedown all
- Enable persistence
- Disable persistence
- Restore object
- Clear persistence

- **Read actions** : These are the view actions. This will not modify any configuration.
  - Compare config
  - View source connections
  - View persistence
  - Backup device
  - View graph
  - View config
  - View log
  - View Alerts

Related information
Actions

Actions

Action	Description
Enable	Enables the Object.
Disable	Disables the Object.
Force Down (Specific for F5)	Force down the object.
FD Clear Active Connections (Specific for F5)	Force down the object and terminate all the current connections.
Graceful disable (Specific for AVI)	Disable the object only when all the current active connections are closed either by server or client.
Compare Config	Compare current and /or archived configurations of objects with the same name.

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Action		Description
View Source Connections (Specific for F5)		View the active connections for VIP and LTM Pool.
View Persistence (Specific for F5)		View the persistence for VIP and LTM Pool.
Clear source Connections (Specific for F5)		Clear the persistence for VIP and LTM Pool.
Open in New Window (Grid / Infrastructre View)		Displays the topology view of the selected object in the new window.
Backup & Restore	Backup Device	Create the backup of the device associated with the object. Backup will be available in the Default backup group.
	Restore Object	Restore the object configuration to a previous state.
Advanced (Specific for F5)	Enable All	Enable all the LTM pool members with the same ip port on the same device.
	Disable All	Disable all the LTM pool members with the same ip port on the same device.
	Force Down All	Force down all the LTM pool members with the same ip port on the same device.
	Enable Persistence	Enable or Disable the tracking and storing of session data, which is used to ensure that client requests are directed to the same pool member throughout the life of a session or during subsequent sessions.
	Disable Persistence	
View	View Config	View the configuration of the object and its child objects.
	View Graph	View the timeline statistics for the object.
	View Log	View the log history specific to this object.
	View Alerts	View the alerts related to this object.

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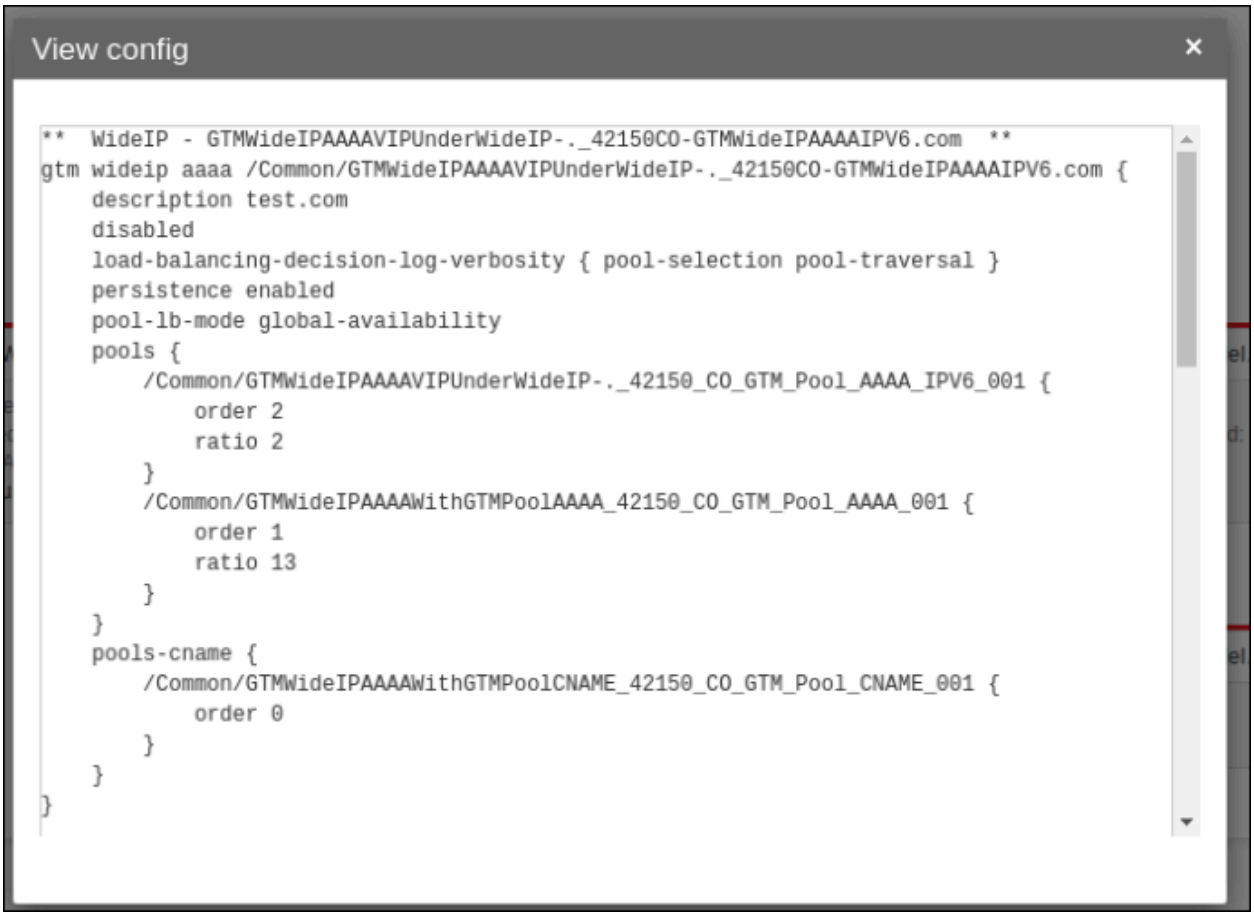
View Config

Shows the configuration of the selected object and its child.



View Graph

Shows the timeline statistics for the selected object. Graph will be available only if the statistics is configured in the Settings. For more details on settings refer Configuring statistics collection.

When the user clicks on the view graph pop-up will be displayed.

- **Statistics** - The entries in this list vary depending on the object. when the user selects the different stat parameters the corresponding graph will be updated.
- **Interval** - The following time intervals can be selected: **Day**, **Week**, **Month**, or **3 Months**. When the user selects different intervals the graph displayed will be updated to the selected time frame.

View Log

When the user applies the view log action on particular objects, the audit logs related to that particular object alone will be filtered and displayed.

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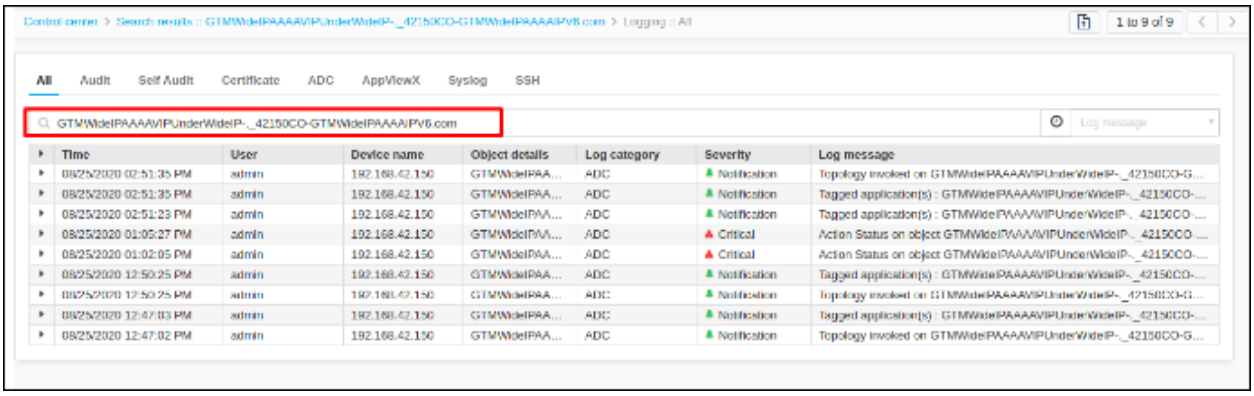
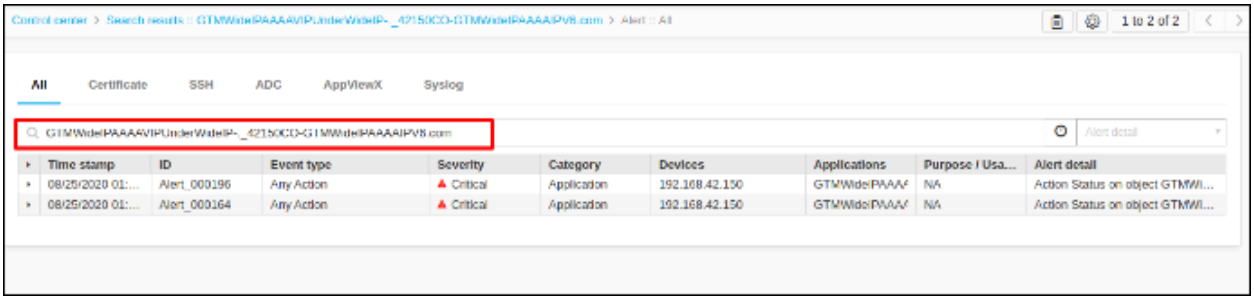


View Alert

When the user applies the view alert action on particular objects, the alerts related to that particular object alone will be filtered and displayed.



Related information
Right click actions

Configuring Dashboards

Dashboards help to organize various resources at a single place and monitor them in a single window. AppViewX supports four different custom widgets for managing ADC objects. Application view Widget, Class Management Widget, Traffic statistics Widget,Traffic Grid Widget and Script execution Widget.

- About Dashboard
- Default Dashboard
- Create a Dashboard/Widget
- Add Widgets

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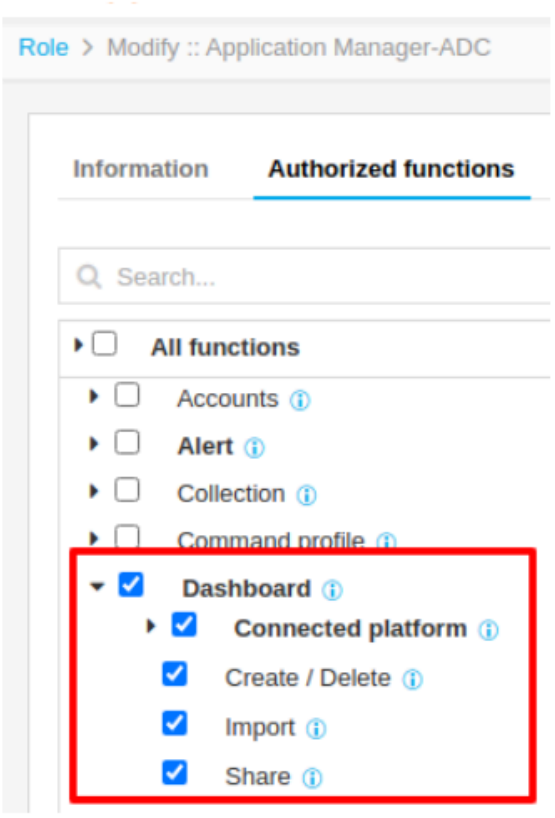
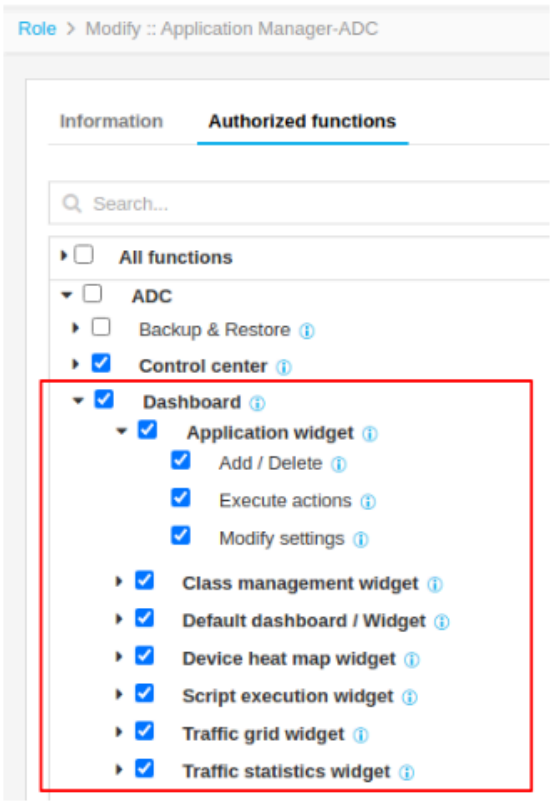
• Dashboard Actions
• Alert Management

About Dashboard

Before you begin

• To configure dashboards and widgets, the user should have ACF permissions.

Access for Dashboard:	Access for ADC Widgets:
	

• For adding objects in the widgets, the device should be Managed in the inventory and the user should have object level access (ACL) in the resources. For performing actions on the object, RW permission should be provided.

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Default Dashboard

TheDefault ADC Dashboard is pre-configured and has a default set of widgets. The widgets are Device heat map, Top 10 VIPS by Connection, Application Heatmap, Number of Objects, Top 25 Applications by Connection and Unused Objects Report.

To view the reports related to ADC,

1. Go to **Menu** > **ADC+** > **TRAFFIC MANAGEMENT** > **Dashboards**.

   A pre-built ADC Dashboard appears by default.

2. From **Dashboard Inventory** click on ADC dashboard.

Note: The default widgets can be viewed, aligned, and/or refreshed and not editable.

Widgets in Default Dashboard

- **Device heat map**

  Device heat map widget shows the CPU utilization, Bandwidth Utilization and Memory Utilization of each device managed in Device Inventory.

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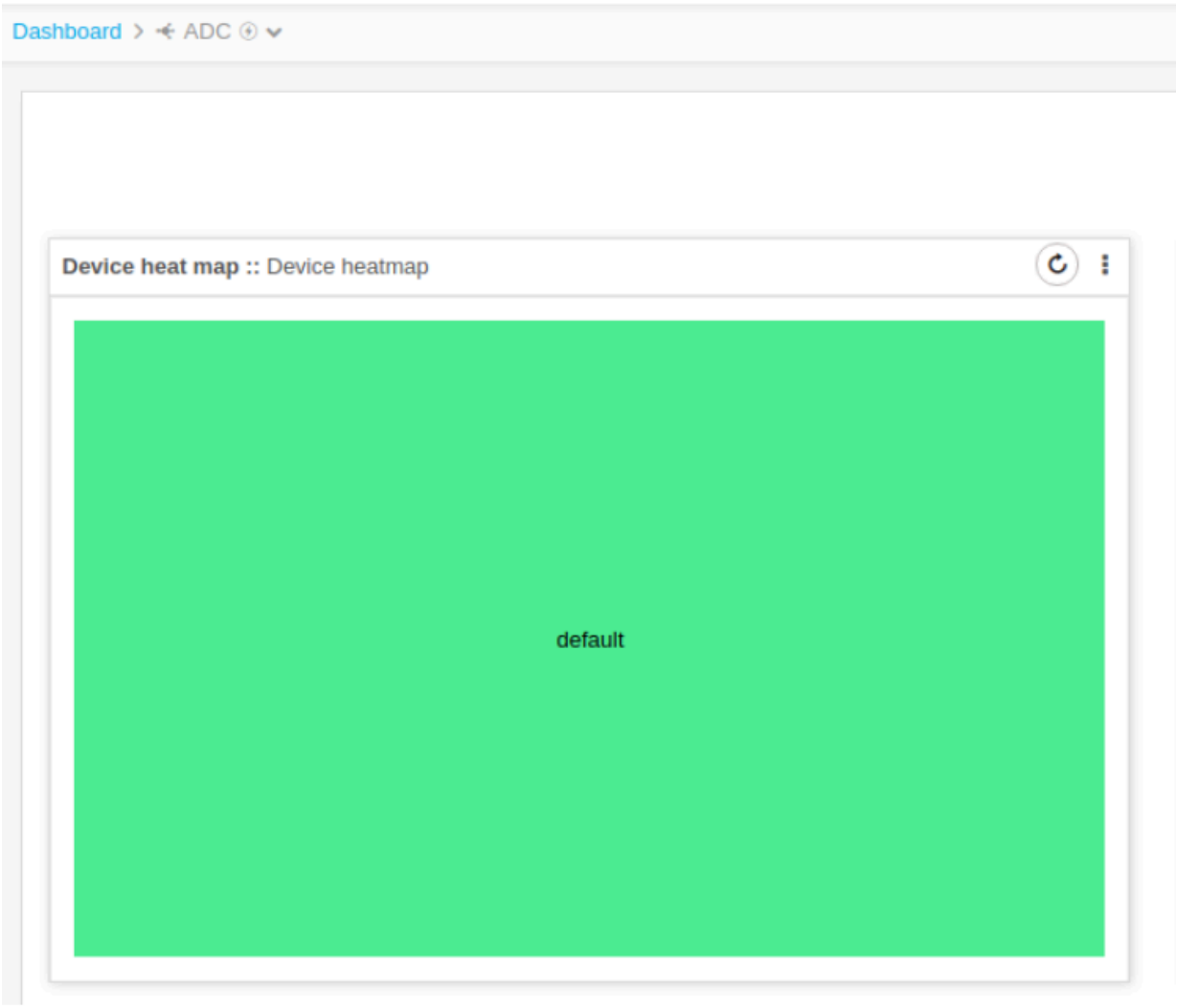

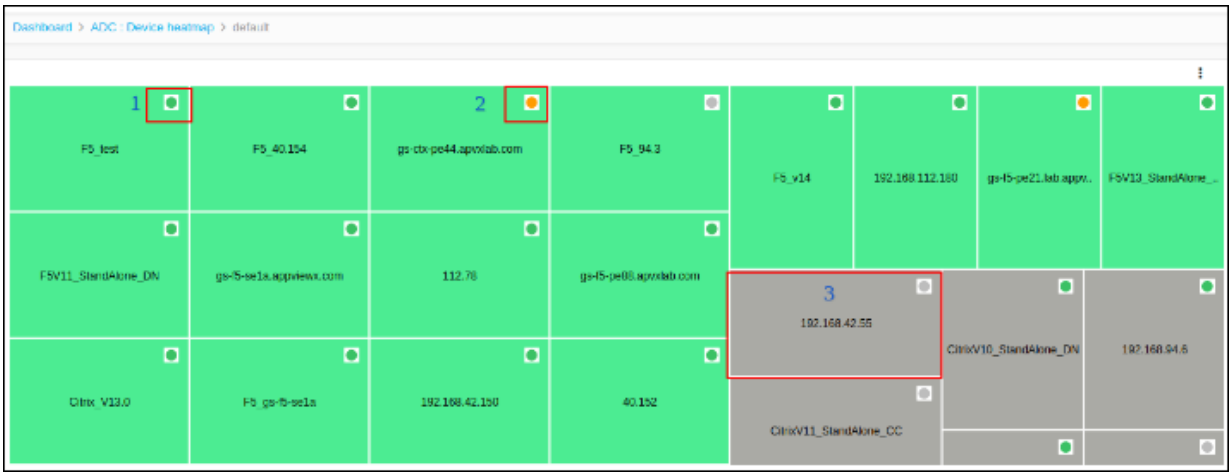

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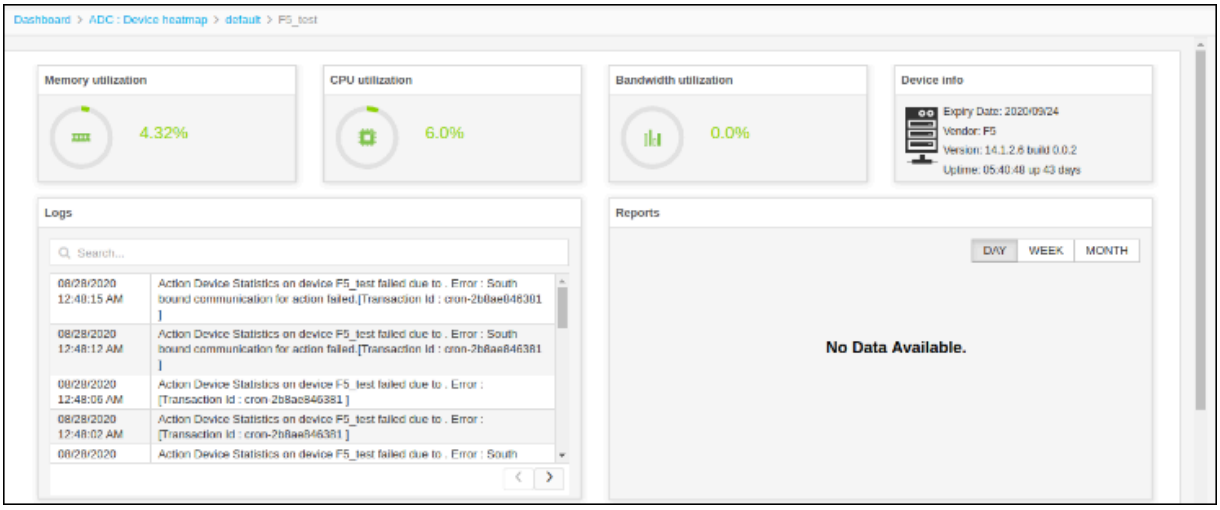
1. Active Device
2. Standby Device
3. Unreachable devices are shown as Grey.
4. Click on the Device and to get detailed information about CPU utilization.



Unused Object Report

Unused Object Report shows the number of unused objects over a period of time. Supported vendors are F5, A10, and Citrix.

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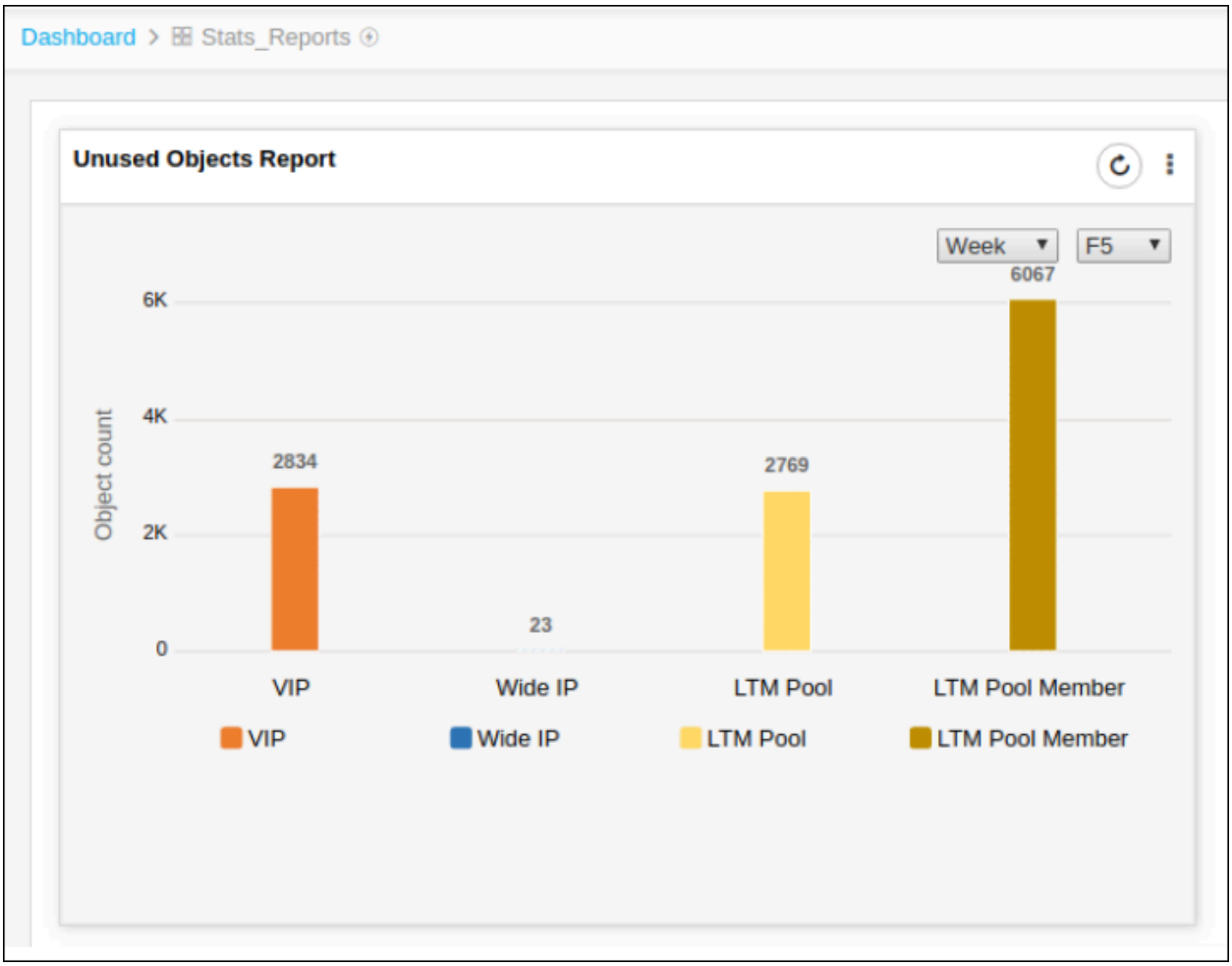

Top 10 VIPS by Connection

This widget shows the details about the top 10 VIPs.

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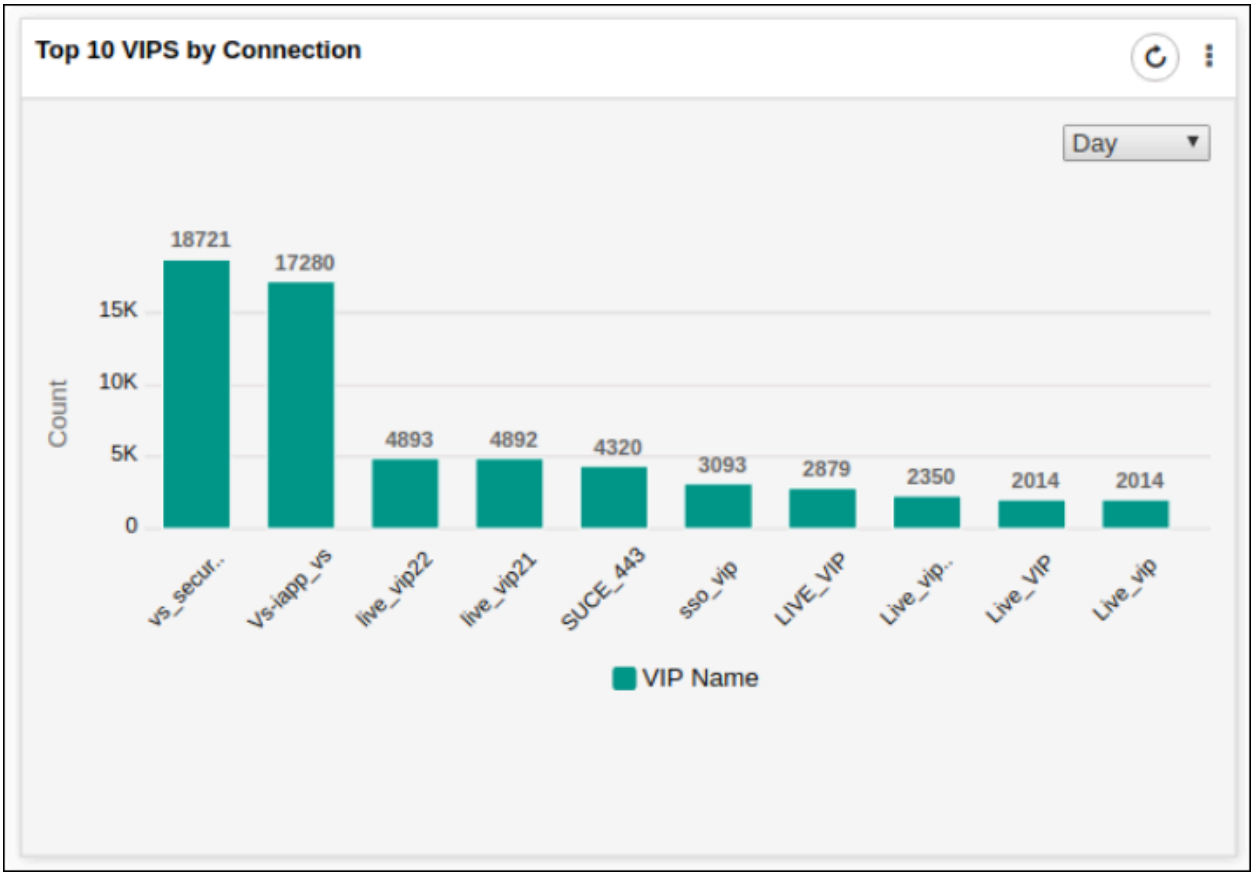

Related information
Create a Dashboard/Widget
Add Widgets

Default Dashboard

TheDefault ADC Dashboard is pre-configured and has a default set of widgets. The widgets are Device heat map, Top 10 VIPS by Connection, Application Heatmap, Number of Objects, Top 25 Applications by Connection and Unused Objects Report.

To view the reports related to ADC,

1. Go to **Menu** > **ADC+** > **TRAFFIC MANAGEMENT** > **Dashboards**.

   A pre-built ADC Dashboard appears by default.

2. From **Dashboard Inventory** click on ADC dashboard.

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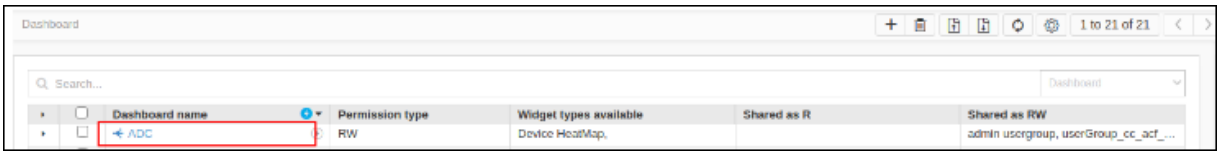
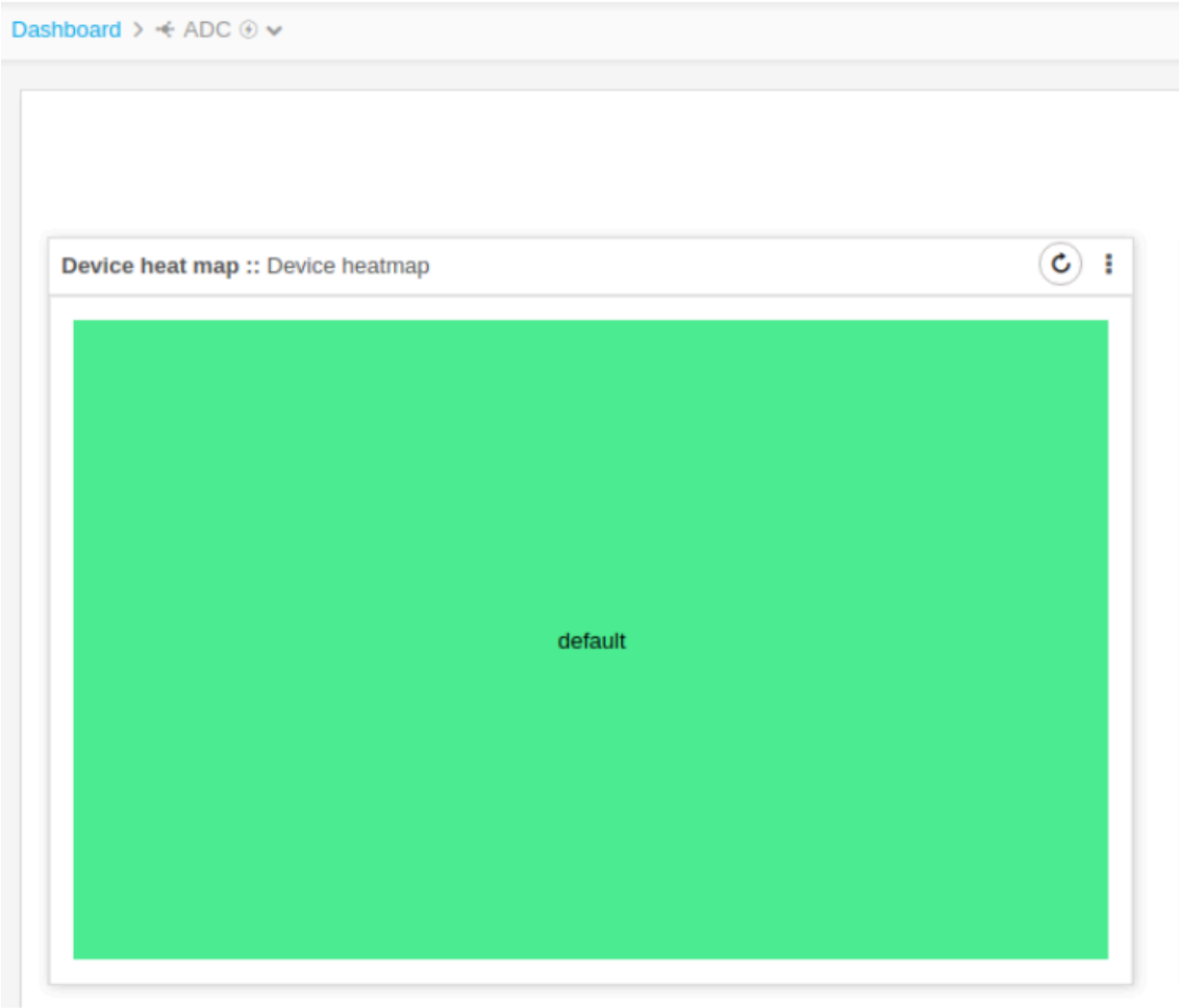


Note: The default widgets can be viewed, aligned, and/or refreshed and not editable.

Widgets in Default Dashboard

- **Device heat map**

  Device heat map widget shows the CPU utilization, Bandwidth Utilization and Memory Utilization of each device managed in Device Inventory.



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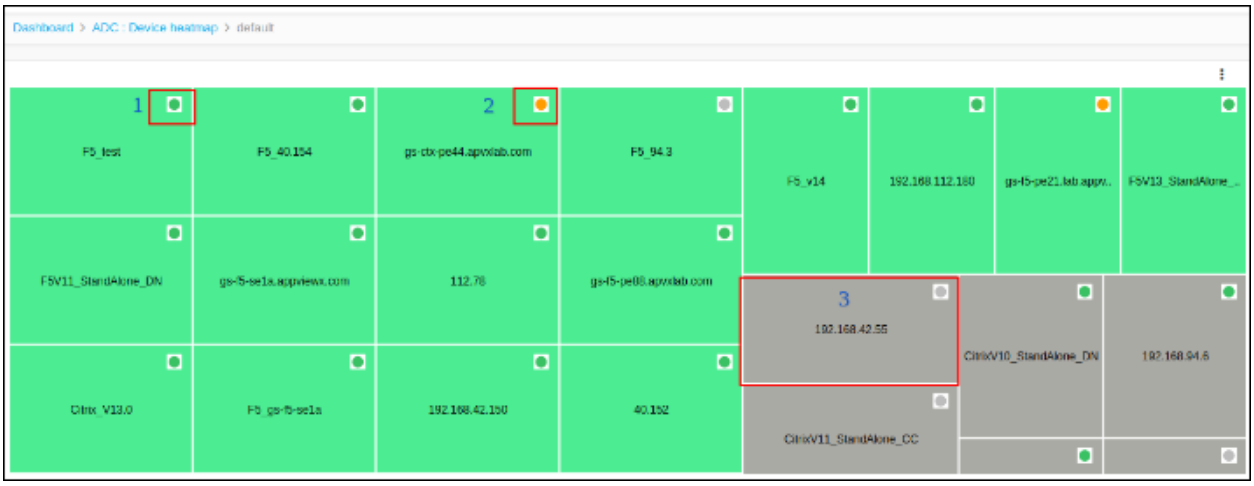
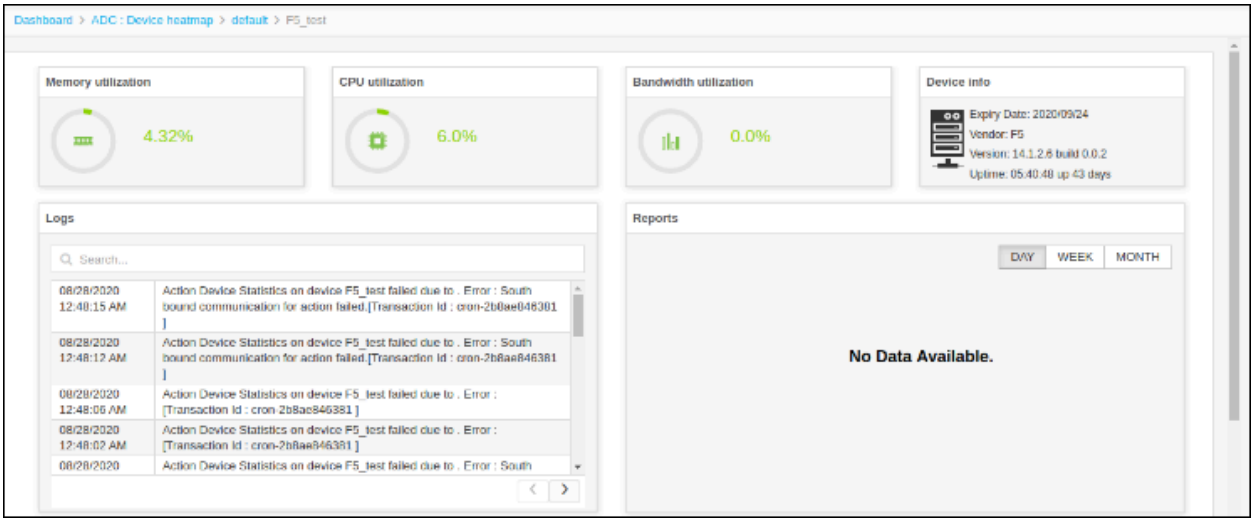


1. Active Device
2. Standby Device
3. Unreachable devices are shown as Grey.
4. Click on the Device and to get detailed information about CPU utilization.



Unused Object Report

Unused Object Report shows the number of unused objects over a period of time. Supported vendors are F5, A10, and Citrix.

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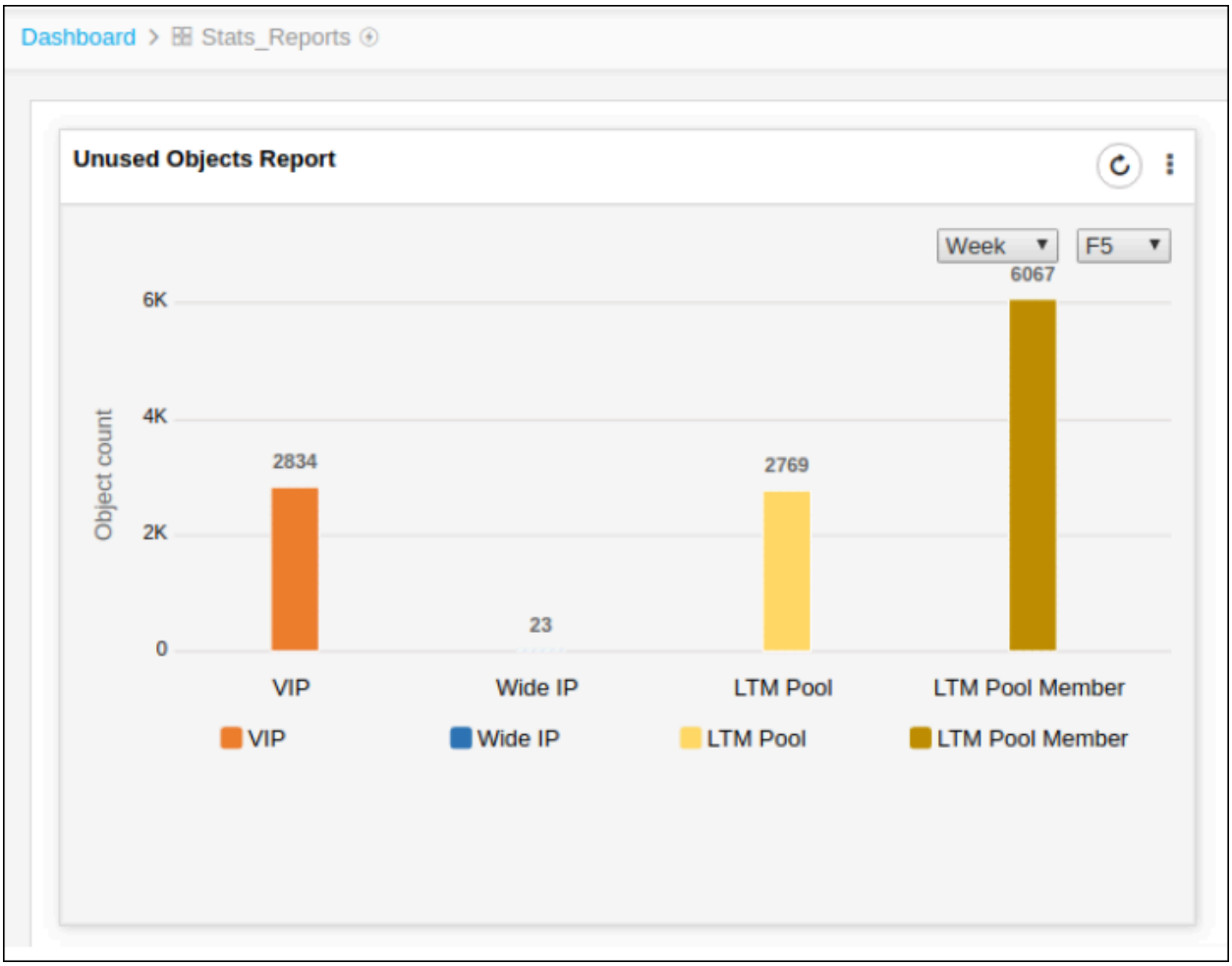

Top 10 VIPS by Connection

This widget shows the details about the top 10 VIPs.

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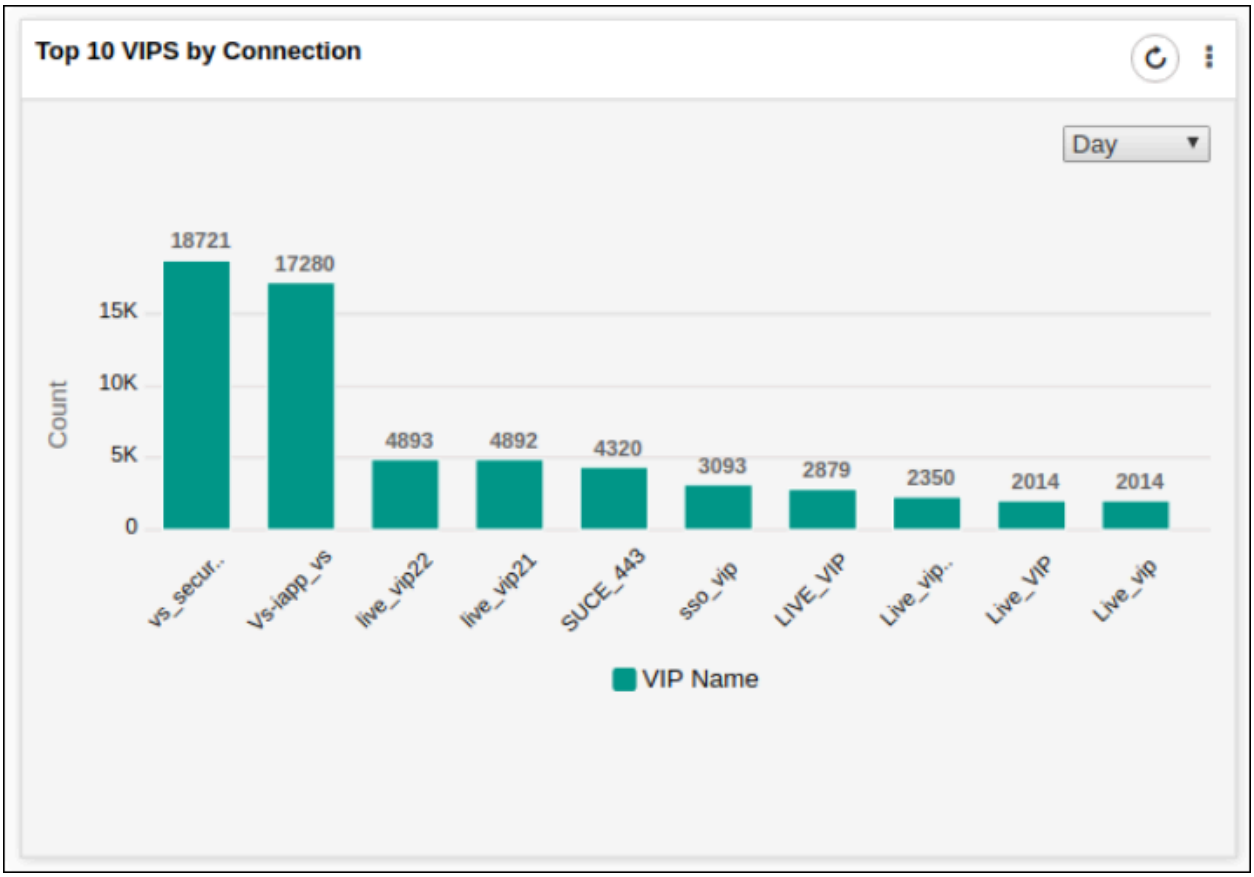

Create a Dashboard/Widget

The custom dashboard allows you to manage, monitor, and interpret all the configured applications and their objects. It provides customizable widgets to get an overview of all the ADC Applications within the AppViewX platform and manage/monitor traffic from a single screen. Customize your Application dashboard with predefined and custom widgets as per the business need. You can create dashboard using any of the following method:

To create a dashboard:

1. Go to **Menu** > **ADC+** > **TRAFFIC MANAGEMENT** > **Dashboards**.
2. If this is the first dashboard you are creating in the system, click the Create Dashboard button that appears in the center of the screen. If you have already created at least one dashboard, click + (**Create**) icon on the top-right or click + (**Create**) icon.
3. On the Create Dashboard/Widget pop-up window, enter a name for the new dashboard. The name must not contain spaces in it.

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4. Select a solution from the **Select Solution** dropdown to which you want the widget to be created: ADC, Firewall, Certificate, SSH or WAF. Select the solution from the dropdown to which you want the corresponding widgets to be managed: Certificate.
5. Select the **Widget Type** as Custom or Default.
6. If the Custom radio button is selected in Step 5, then choose any one of the below options from the Select Widget dropdown:
   - **Application view** – Allows you to group the service objects of a single application. The widget displays the health of these objects and the number of current connections that the services are receiving.
   - **Traffic statistics** – Displays a chart showing live and historic performance statistics for individual device objects.
   - **Script execution** – Saves script files on a local machine and provides easy access to maintain and execute script commands from within the widget.
   - **Traffic grid** – Allows you to monitor and control the Traffic Percentage of the Applications across data centers. The status, state, and statistics for applications can be viewed through this widget.
   - **Class management** – Allows you to view and modify the classes associated with iRules.
   - **HeatMap** – Allows you to view statistics for managed, failed, and unresolved devices or device groups.
7. If the default radio button is selected in Step 5, choose the default widgets you want to manage/monitor in the custom dashboard. Select the default widgets you want to manage/monitor in the custom dashboard.
8. Enter a name for the new widget that you will be creating on the dashboard.
9. Click **Create**.

   You are redirected to the widget configuration screen, which varies according to the widget selected.

> **Note:**
> - The Settings screen for the new dashboard/widget appears. The contents of the Settings screen vary depending on the type of widget you are adding to your new dashboard.
> - All the default dashboards and custom dashboards created are listed in the dashboard inventory.
> - If the Auto Sort Dashboards Alphabetically is enabled the dashboards are listed in alphabetical order, if disabled dashboards are listed based on the created order.

Related information
Add Widgets

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Add Widgets

Widget can be created in a new Dashboard or existing Dashboard**.**

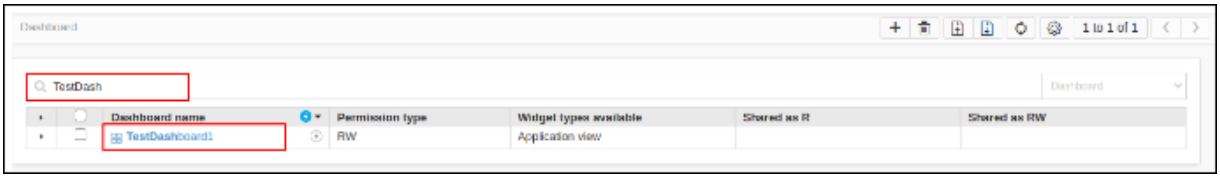
- Application View Widget
- Traffic Statistics Widget
- Script Execution Widget
- Traffic Grid Widget
- Class Management Widget

Add Widget in New Dashboard

1. Log in to the AppViewX application with valid credentials.
2. Select **Menu** > **ADC+** > **TRAFFIC MANAGEMENT** > **Dashboards** > Click the **+** (**Add**) icon.

Add Widget in Existing Dashboard

1. Log in to the AppViewX application with valid credentials.
2. Select **Menu** > **Dashboard**.
3. Search for the Dashboard from dashboard inventory and Click on the dashboard name add a new widget.



4. Click the Add Widget icon.

5. Select Widget Type and provide Widget name.

   Based on the selected widget type, the corresponding widget settings page is loaded.

Related information
Create a Dashboard/Widget
Dashboard Actions

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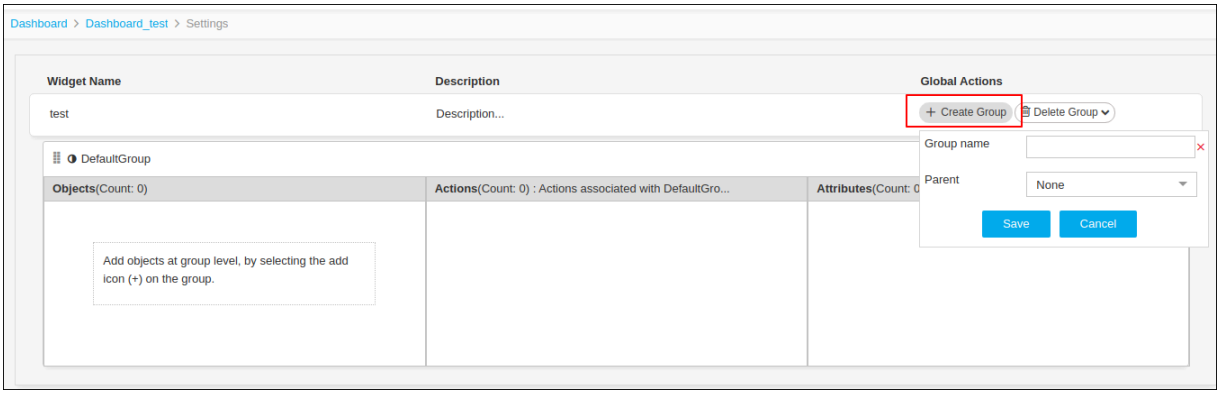
Application View Widget

Using Application View Widget , the ADC Primary objects like Wideip, GTM Pool, Virtual servers, LTM Pool and nodes can be monitored for state and status change and Actions can be performed. The actions for each object is predefined and can be selected accordingly.

To Create a Group

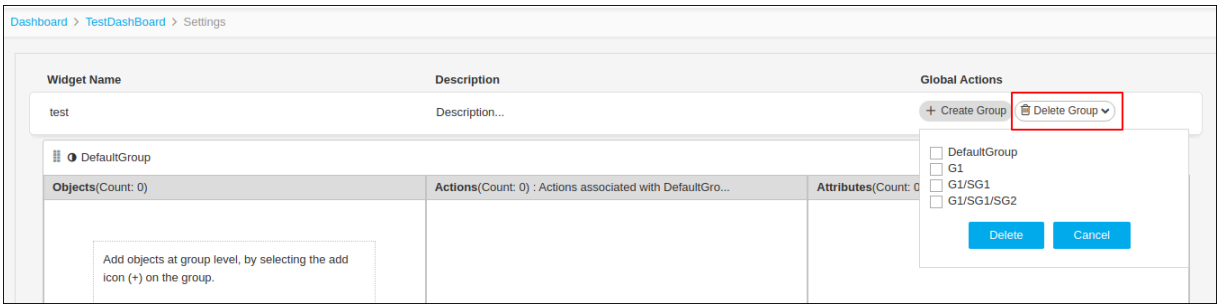
1. Click on Create Group
2. Provide a user defined group name
3. Parent group can also be selected from the list of available groups added in the widget.
4. Maximum group hierarchy allowed is four.



To Delete a Group

1. Click Delete Group and select the groups to be deleted.

> **CAUTION:** The groups will be deleted with all subgroups and it's configured objects.



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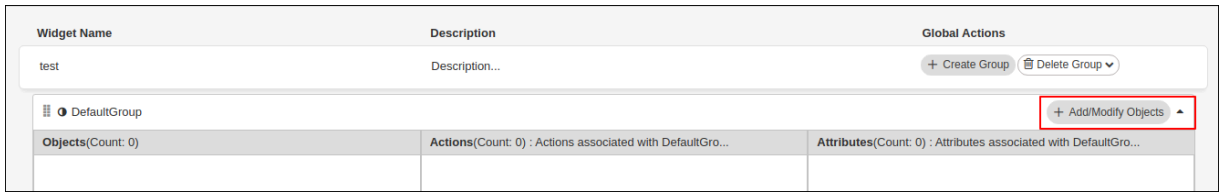
2. Click yes on the confirmation to proceed the deletion.

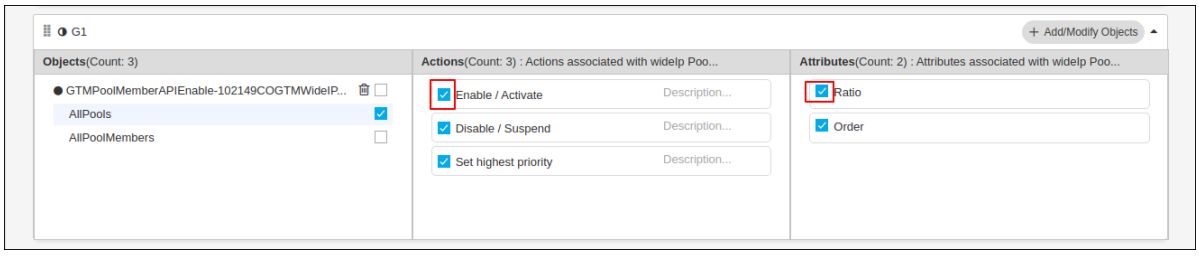
To Add/Modify Objects in a Group

1. Click Add/Modify objects on the Default/Created Group



Name	Type	Mandatory	Description	Validation
Vendor	Drop Down	Yes	Vendors of Managed devices from the inventory are listed in Alphabetical order.	NA
Device State	Drop down	Yes	Available options: **Active** : Active devices are listed. **Standby** : Standby devices are listed. **All** : All Managed devices are listed.	NA
Device Name	Drop Down	Yes	Based on vendor and device state, available devices are listed.	NA
Object Type	Drop Down	Yes	Based on the vendor, all supported object types are listed.	NA
Hierarchy	Drop Down	Yes	Based on the Object Type selected the hierarchy is listed.	NA

- Based on the objects added, Default actions are selected. Users can deselect the actions



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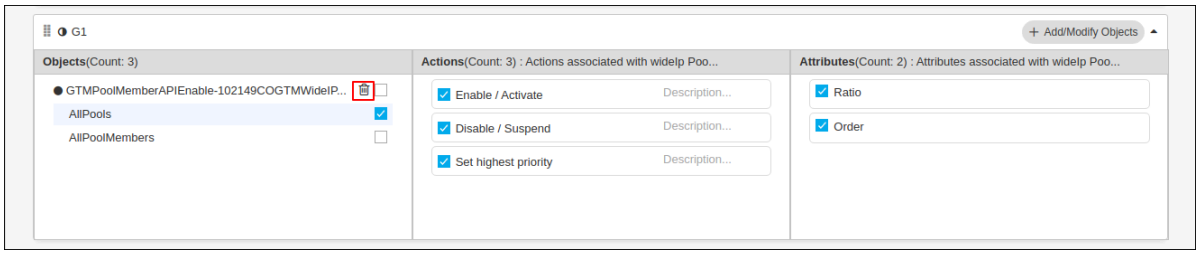
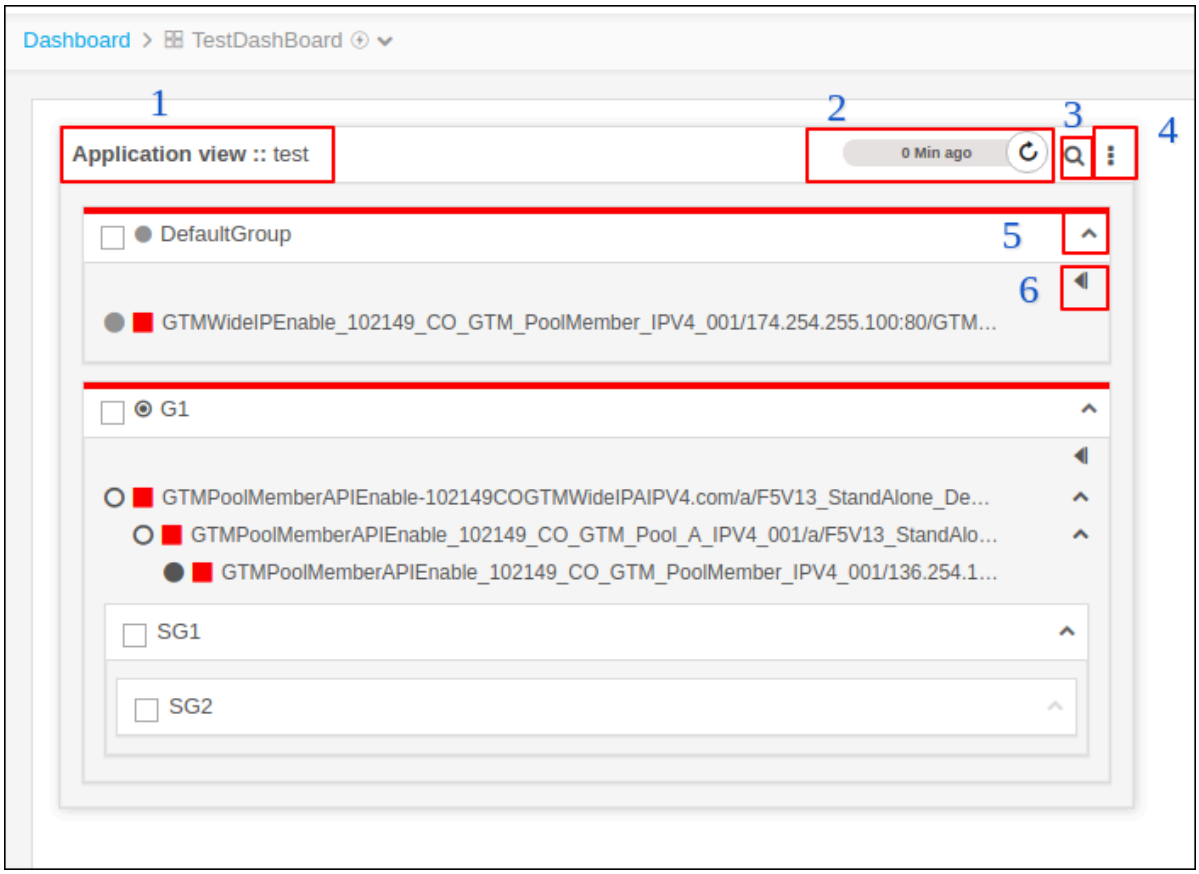
- To Delete added objects in a Group, click on the delete symbol next to the object.



- Once the configuration is completed an Test Widget would displayed. The test widget contains the following:



a. Widget Name

b. Last refresh time, when the widget is refreshed,the current state and status are fetched from the device and updated in the widget

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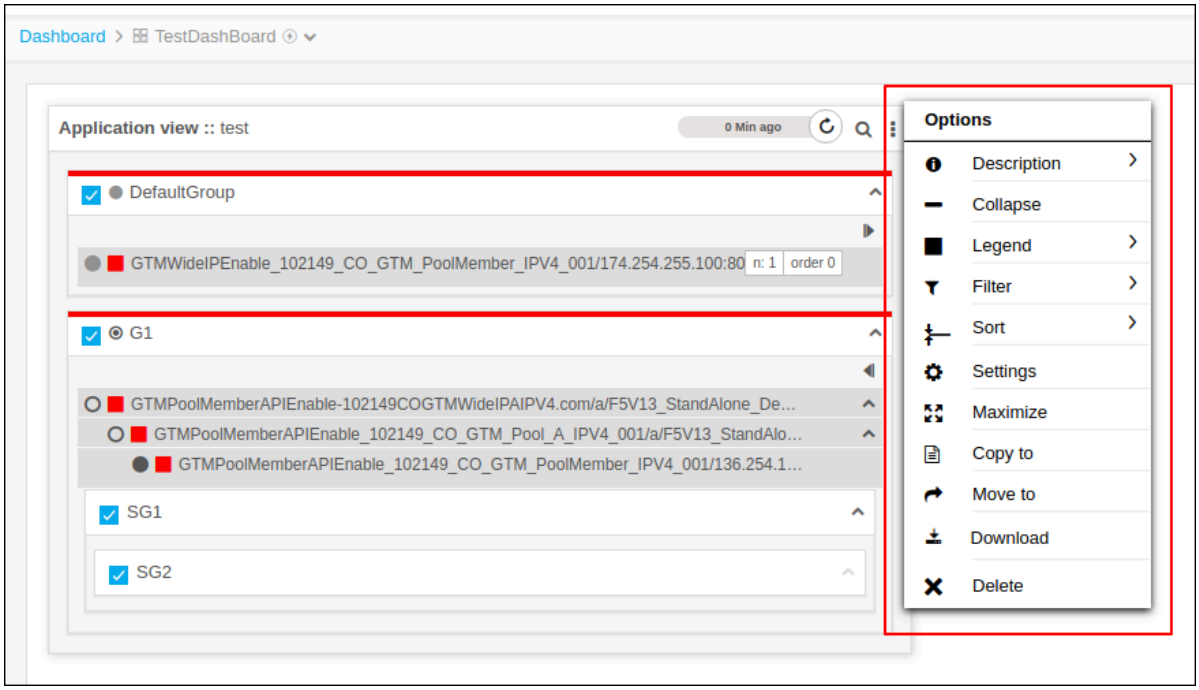
c. To search for an object added in the widget

d. Settings options

e. Collapse/Expand the Group

f. To display the attributes of the objects

Widget Settings:



a. Description - Description provided for the widget while creating it.

b. Collapse/Expand the Widget

c. Legend - Gives information about representations used in Widget.

d. Filter - Filter the objects to be shown based on status and Click Apply.

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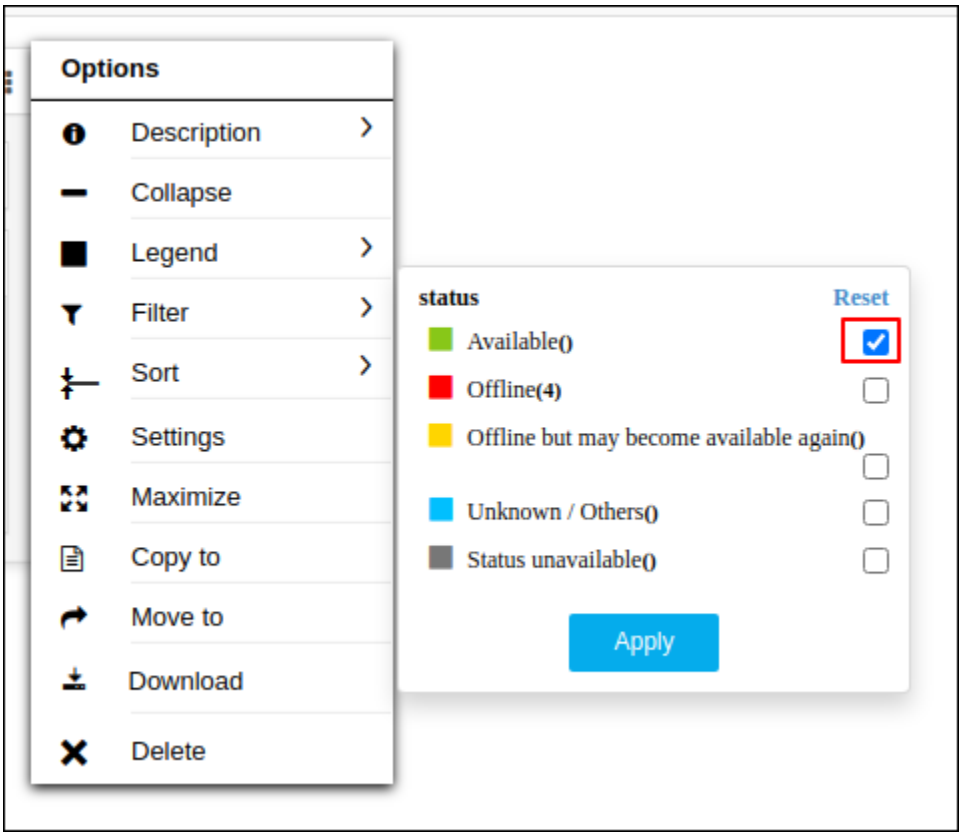

e. Sort - To Sort the objects in Ascending/Descending order

f. Settings - Settings page of the widget

g. Maximize - To Maximize the widget

h. Copy to - The widget is copied to another Dashboard.

i. Move to - The widget is moved to another Dashboard.

j. Download - Download the widget as csv file

k. Delete -to delete the widget

2. Based on the above filters, available objects are listed. Specific objects can also be searched and added.
3. Select the objects to be added and click ADD.

Actions on Objects/Groups

Right click on Object/Groups and actions are displayed based on the object type and ACF permissions assigned to the user.

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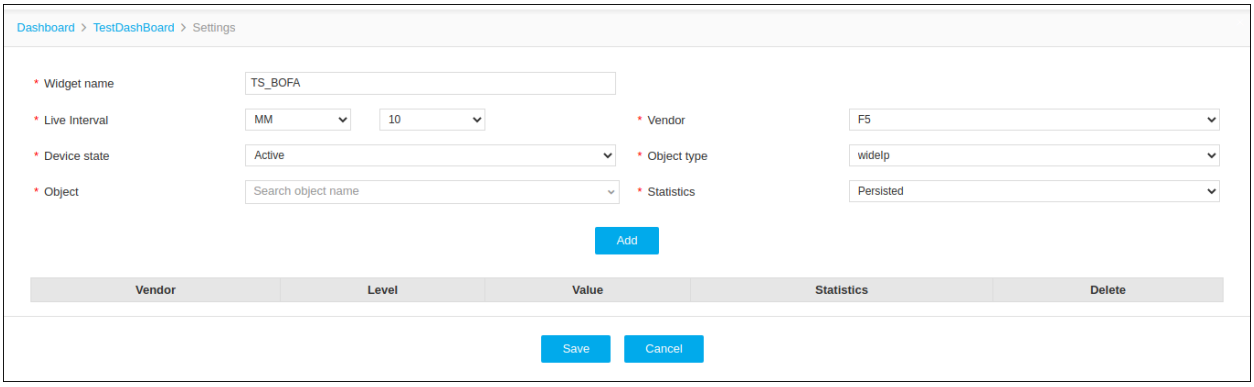
Related information
Traffic Statistics Widget
Script Execution Widget
Traffic Grid Widget
Class Management Widget

Traffic Statistics Widget

Traffic statistics widget is used to monitor live/historic statistics of objects.



1. Add objects

Name	Type	Mandatory	Description	Validation
Widget Name	Text box	Yes	User defined Name for the Widget	No special characters are allowed, except '_' , '.' , '-' , '|' , ':'. The name should not start with a special character.
Live Interval	Drop Down	Yes	Set time interval for live statistics collection.	NA
Vendor	Drop Down	Yes	Statistics supported Vendors are listed	NA
Device State	Drop down	Yes	Available options: **Active** : Active devices are listed. **Standby** : Standby devices are listed.	NA

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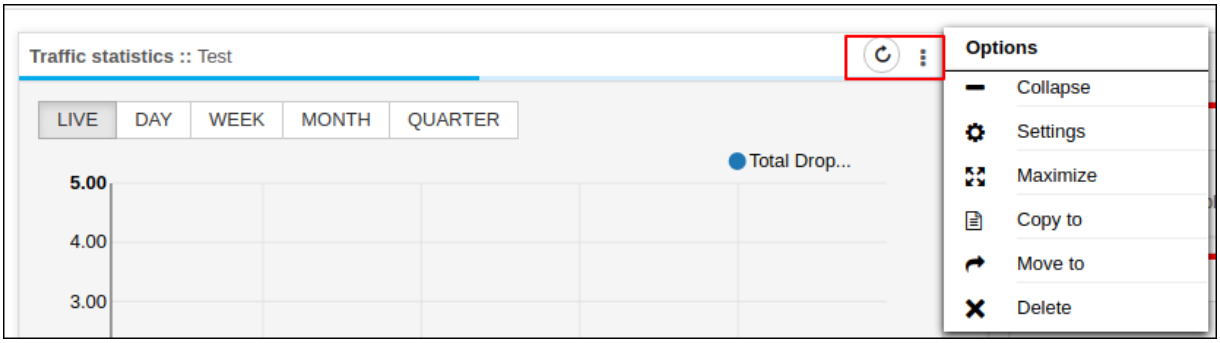
Name	Type	Mandatory	Description	Validation
			All : All Managed devices are listed.	
Object Type	Drop Down	Yes	Based on the vendor, all supported object types are listed.	NA
Object	Drop Down	Yes	Based on vendor and object type filter available objects are listed.	NA
Statistics	Drop Down	Yes	Based on vendor and object type filter supported statistics parameters are listed.	NA
Alias Name	Text	No	Custom name for the object name.	NA

2. Provide the required information and click **Add**.
3. Click **Save**.

   By default Live stats are collected. If Insight is enabled then historic statistics are shown.

   Widget Setting:



   a. Refresh - Refreshing the widget will get live stats for the configured objects.

   b. Collapse/Expand - Collapse and expand the widget screen

   c. Settings - Configure the settings

   d. Maximize - To maximize the widget size

   e. Copy to - The widget is copied to another dashboard

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f. Move to - The widget is moved to another dashboard.

g. Delete - Delete the widget

Related information
Application View Widget
Script Execution Widget
Traffic Grid Widget
Class Management Widget

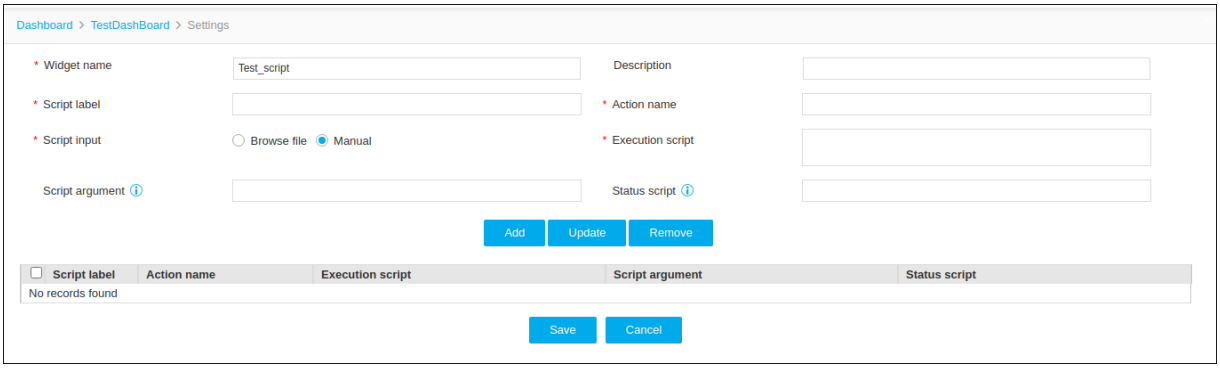
Script Execution Widget

Using Script Execution Widget, scripts which can be executed within 5 minutes can be configured and executed.

Before you begin: Set Timeout in system Settings. Refer Configuring Script Execution Settings

Configuring Script Execution Widget

1. Add Scripts



2. Provide information

Name	Type	Mandatory	Description	Validation
Widget Name	Text box	Yes	User defined Name for the Widget	No special characters are allowed, except '_' , '.' , '-' , '|' , ':'. The name should not start with a special character.
Description	Text box	No	Description for the Widget	-

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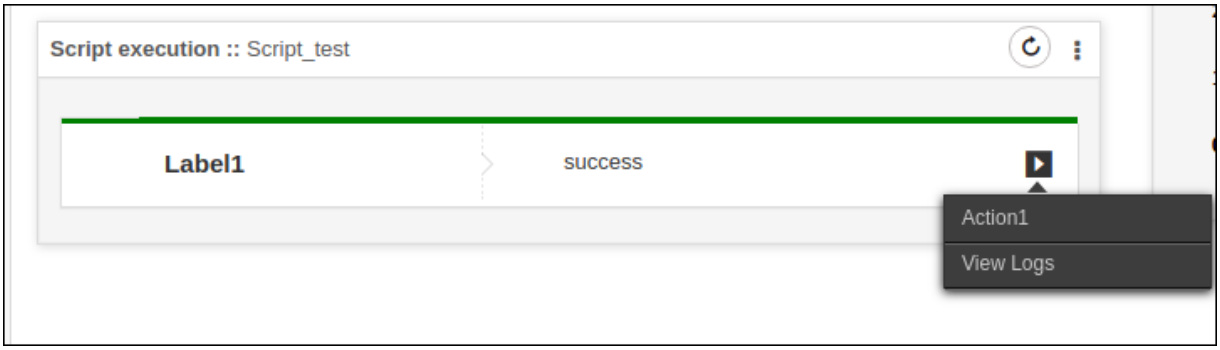
Name	Type	Mandatory	Description	Validation
Script label	Text box	Yes	-	-
Action Name	Text box	Yes	-	-
Script Input	Radio button	Yes	**Browse file:** Script file can be uploaded. **Manual:** Script can be typed in the text box.	NA
Execution Script	Text box	Yes	1.File can be uploaded. or 2. Manual script input can be added.	NA
Script argument	Text box	No	Arguments for the script can be mentioned with space as delimiters.	-
Status script	Text box	No	The full path of the scripts in AppViewX servers to update the color and status message of the bar. This functionality is used to get the status/ result of a script.	-

3. After adding all information, click **Add** and **Save**.

Execution of Scripts

1. Click the **Play** icon, and then click the **Action Name** configured.



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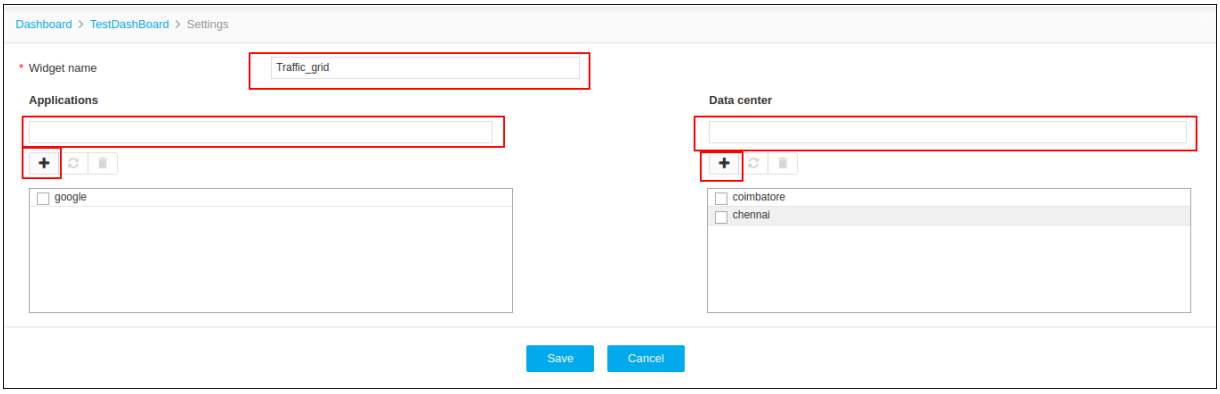
2. Output logs can be verified using **View Logs** option.

Related information
Application View Widget
Traffic Statistics Widget
Traffic Grid Widget
Class Management Widget

Traffic Grid Widget

Configuration Steps:

1. Provide widget name



2. Add **Application Name** and **Data Centers** and click the **+** (**Add**) icon.

> **Note:** As required, rearrange the application and data center lists using a drag-and-drop method.

3. Click **Save**.

   Sample Widget

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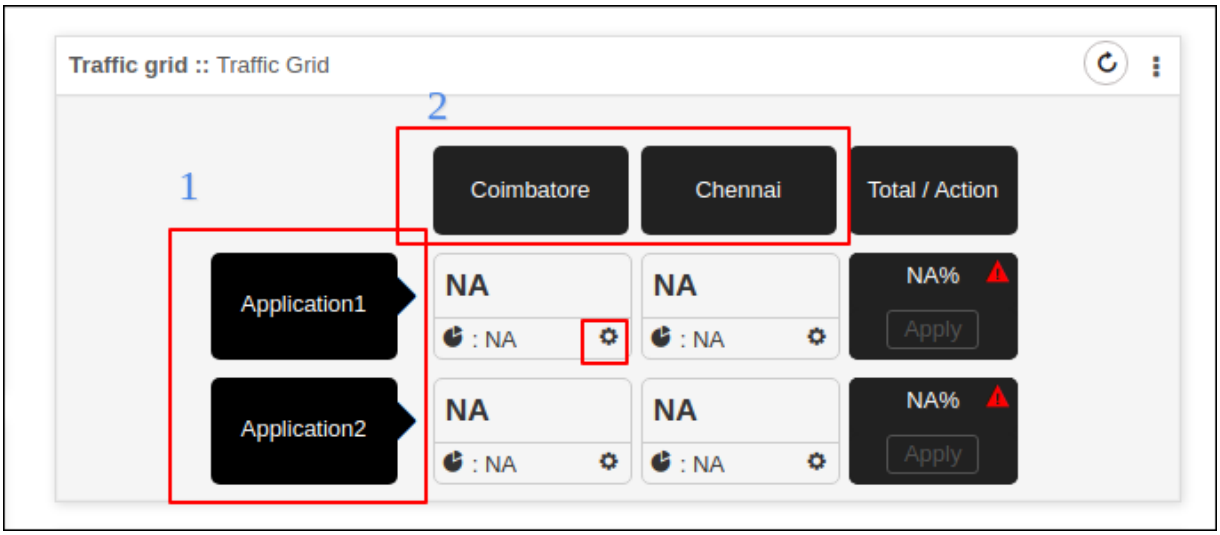

a. Applications Configured

b. Data Centers added

c. Click on Settings icon to configure objects and rules

1. Configure Availability Status

1. Provide required information

Name	Type	Mandatory	Description	Validation
Vendor	Drop Down	Yes	Select vendor	NA
Device State	Drop Down	Yes	Available options: **Active** : Active devices are listed. **Standby** : Standby devices are listed. **All** : All Managed devices are listed.	NA
Object type	Drop Down	Yes	All Primary ADC objects are listed.	NA
Object Name	Drop Down	Yes	Object names can be searched and selected.	NA

2. Click **Add** and **Save**.
3. Added objects can also be updated by selecting the object in the list and **Update**
4. Added Objects can be deleted by selecting the object in the list and **Delete**

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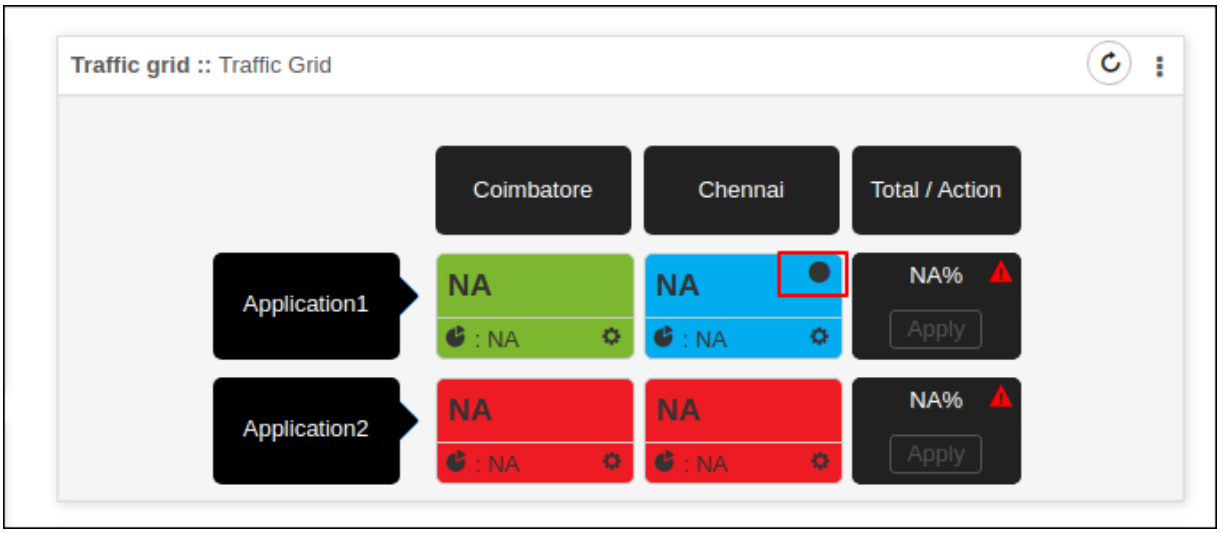
After configuring the objects the color representation changes according to status of the objects and State of the objects are also represented at top right corner of every application.



2. Configure Traffic Percentage

By adding objects in traffic percentage, users can route the traffic by changing the traffic percentage.

1. Provide required information

Name	Type	Mandatory	Description	Validation
Vendor	Drop Down	Yes	Select vendor	NA
Device State	Drop Down	Yes	Available options: **Active** : Active devices are listed. **Standby** : Standby devices are listed. **All** : All Managed devices are listed.	NA
Object type	Drop Down	Yes	Only traffic controllable objects like pool members are listed	NA
Object Name	Drop Down	Yes	Object names can be searched and selected.	NA

2. Select the objects, and then Click Add.
3. After adding the traffic percentage value is shown on the widget.

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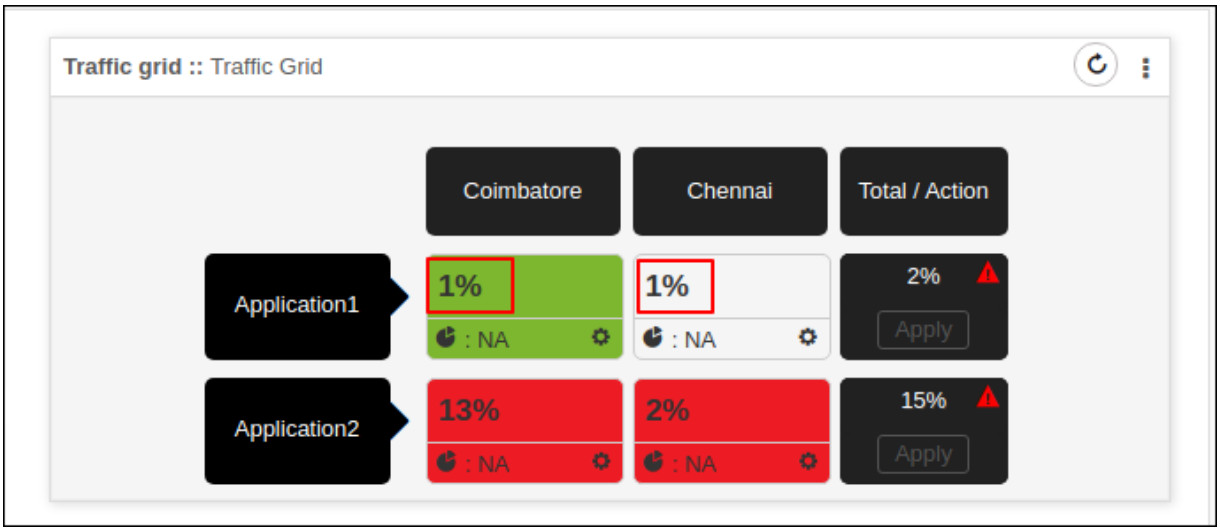
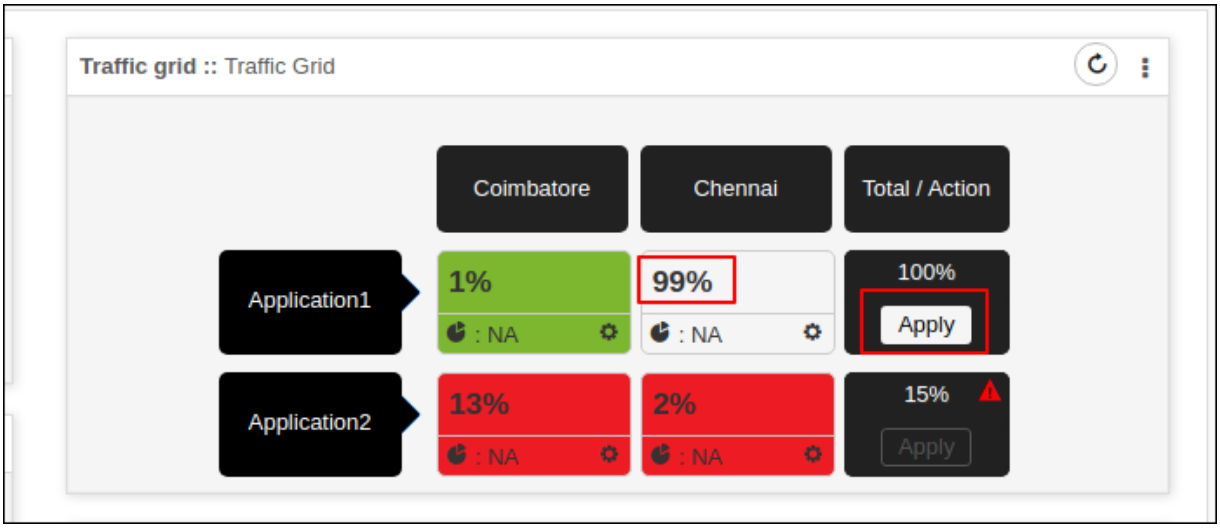


4. Traffic percentage values can be altered and Applied on the objects.



5. Modify the traffic percentage and click Apply to execute action on the objects added.

Note: The sum of all traffic percentages should be 100.

3. Configure the Statistics

By adding objects in the statistics tab, stats for added objects can be monitored.

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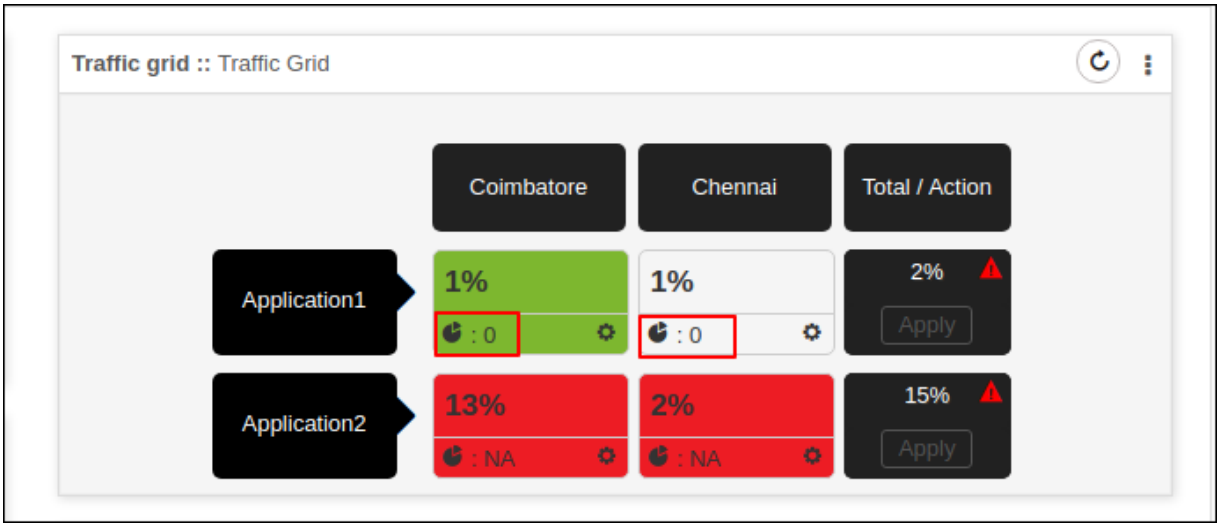
1. Provide required information

Name	Type	Mandatory	Description	Validation
Display Name	Text Box	Yes	User defined name for stats to be displayed	Only 10 characters are allowed.
Vendor	Drop Down	Yes	Select vendor	NA
Device State	Drop Down	Yes	Available options: **Active** : Active devices are listed. **Standby** : Standby devices are listed. **All** : All Managed devices are listed.	NA
Object type	Drop Down	Yes	All Primary ADC objects are listed.	NA
Object Name	Drop Down	Yes	Object names can be searched and selected.	NA
Statistics Type	Drop Down	Yes	Statistics parameters for selected object type are listed.	NA

2. Stats collected for the configured objects are displayed in the widget



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4. Add Rules For Action

1. **Configure Warning for an action**

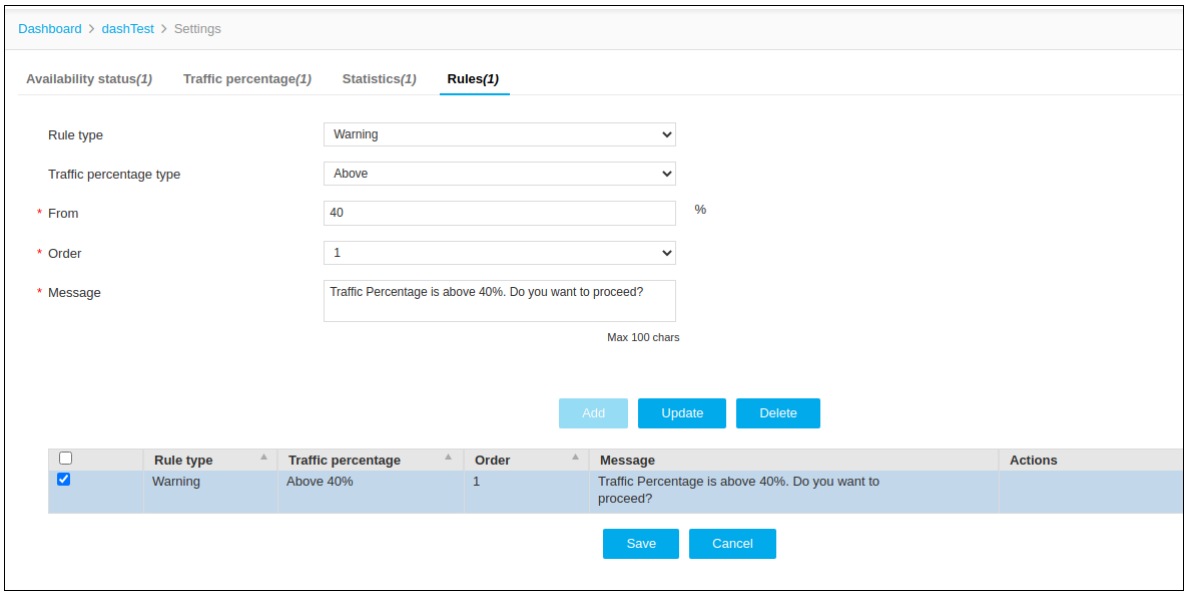
   a. Select Rule type as Warning.

   b. Set the condition to be checked.

   c. Set the order of execution. Maximum 10 rules can be configured.

   d. Provide a warning message to be displayed when the condition becomes true.

   e. Click **Add** and **Save**.



   On performing action , the warning message is displayed when the condition is true.

2. Configure Restriction for an action.

   a. Select Rule type as Restriction.

   b. Set the condition to be checked.

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c. Set the order of execution. Maximum 10 rules can be configured.

d. Provide a Restriction message to be displayed when the condition becomes true.

e. Click **Add** and **Save**.

Adding restrictions will not allow the user to perform the action.

3. Configure action when certain condition met.

a. Select Rule type as Action.

b. Set the condition to be checked.

c. Configure Enable/Disable action on objects.

d. Select the Action Type and the object on which action has to be executed.

e. Click **Add** and **Save**.

When the condition becomes true, the configured action is executed on the object.

Related information
Application View Widget
Traffic Statistics Widget
Script Execution Widget
Class Management Widget

Class Management Widget

Class management widget is used to execute actions on the Data group of F5 devices. The data group values can be Viewed and Modified.

Configuration

Provide the information

Name	Type	Mandatory	Description	Validation
Widget Name	Text box	Yes	User defined Name for the Widget	No special characters are allowed, except '_' , '.' , '-' , '|' , ':'. The name should not start with a special character.
Select task	Drop Down	Yes	**1.Create Group** Create a new Group.Default Group	NA

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Name	Type	Mandatory	Description	Validation
			would be the Widget name. **2.Modify Group** Modify the groups added. **3.Create Action** Create View/Modify action **4.Modify Action** Modify the configured actions.	
Group	Drop Down	Yes	List of groups added in the Widget.	NA
Name	Text box	Yes	User defined name for Groups/Actions.	NA

Create Group

Select task as Create Group and Provide a Group name and Click **Add**.

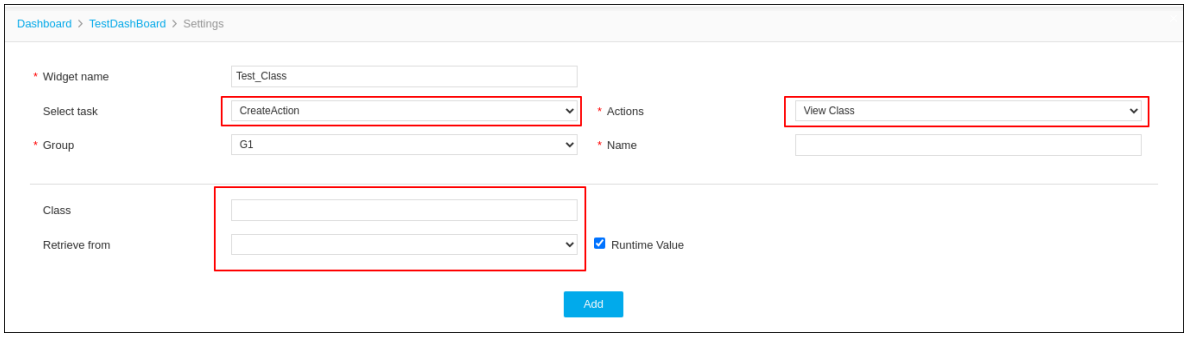
Create Action

1. **View Class**

   a. Select task as Create Action.

   b. Select View Class in Actions.

   c. Select the group and provide Action Name.



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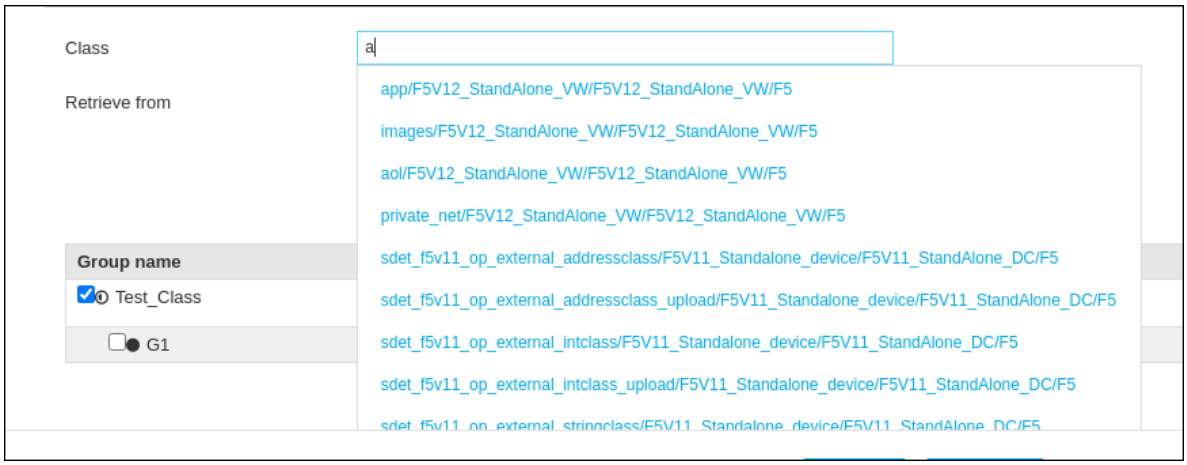
d. Search the data group name in Field Class.

The list of devices are listed in Retrieve From.



e. Select the data group and Click **Add** and **Save**.

2. **Modify Class**

a. Select task as Create Action

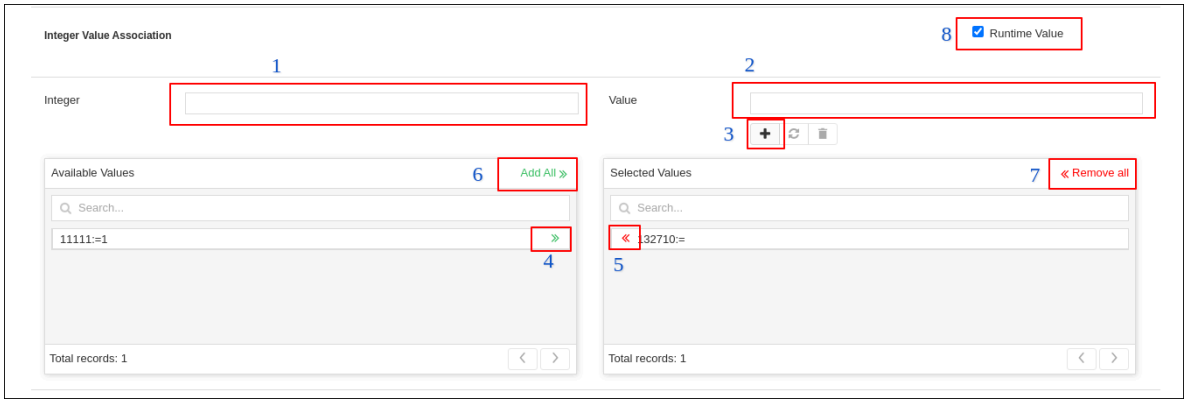
b. Select Modify Class in Actions.

c. Select the group and Provide Action name.

d. Search the data group name in Field Class.

The list of devices are listed in Retrieve From.

e. Add Attributes to be added in the datagroup.



f. Add Key

g. Add Value

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h. Click on the Add icon. The added pair is moved to Available Values.

i. In Selected Values, attributes available in the device are listed.

j. Using Add/Remove and AddAll/Remove All Arrows, attributes can be modified.

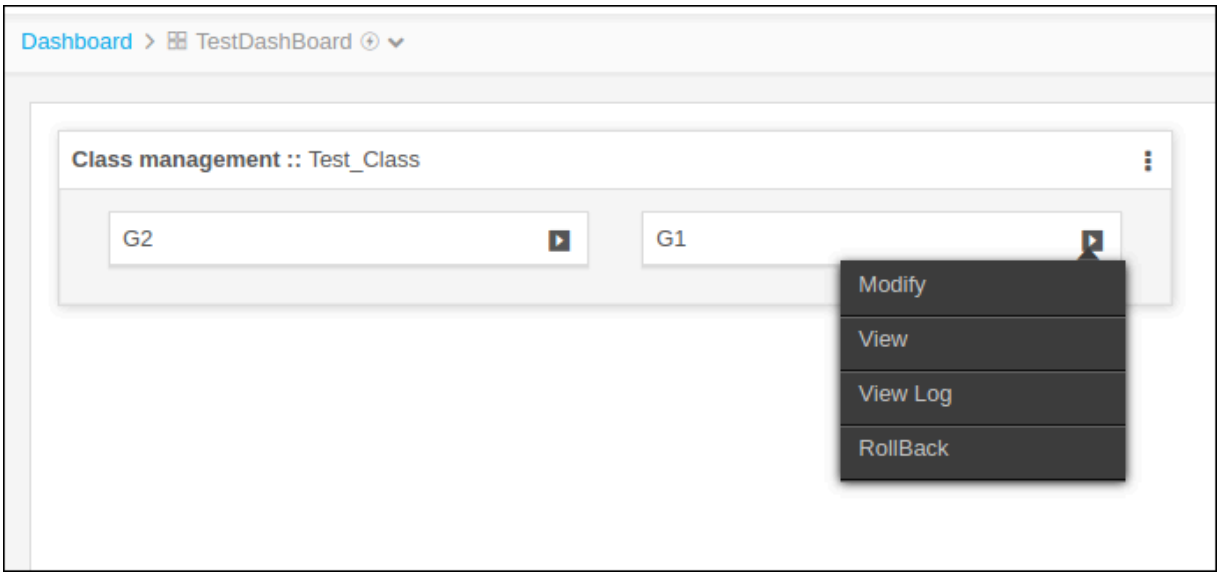
k. Selecting Runtime value allows to modify the attributes at the time of execution.

l. Select the devices on which the action has to be executed.

m. Click **Add** and **Save**.

Execution of Configured Actions

1. Click the Play icon on the Group.



2. Click the Action name to be Executed.

View Action Execution

View Action will get the data group attributes from the device.Click on Fetch to get current values from the device.

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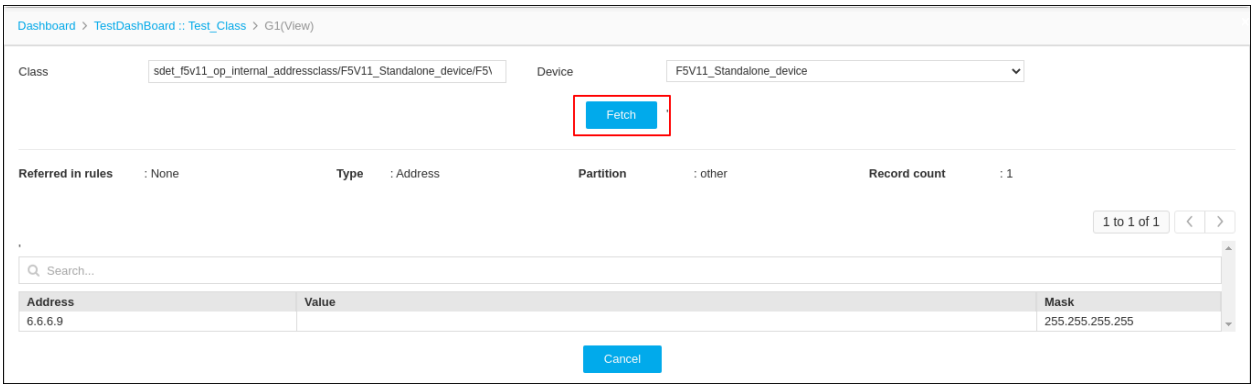
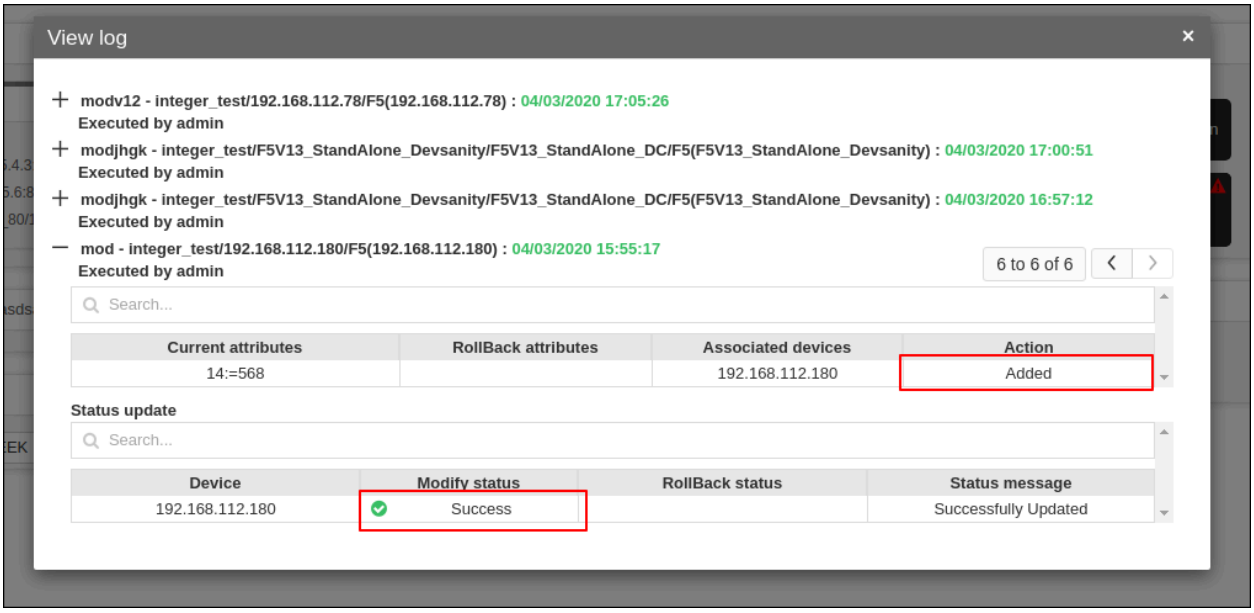


Modify Action Execution

1. Add/Modify the attributes and push it to Device Values.
2. Push the devices on which the action has to be executed.
3. Click **Execute**.

View Logs

For a particular group each Action Execution logs are maintained. Newly added attributes are easily identified. Action status is also updated. For any failure in action, the failure logs are updated in status message.



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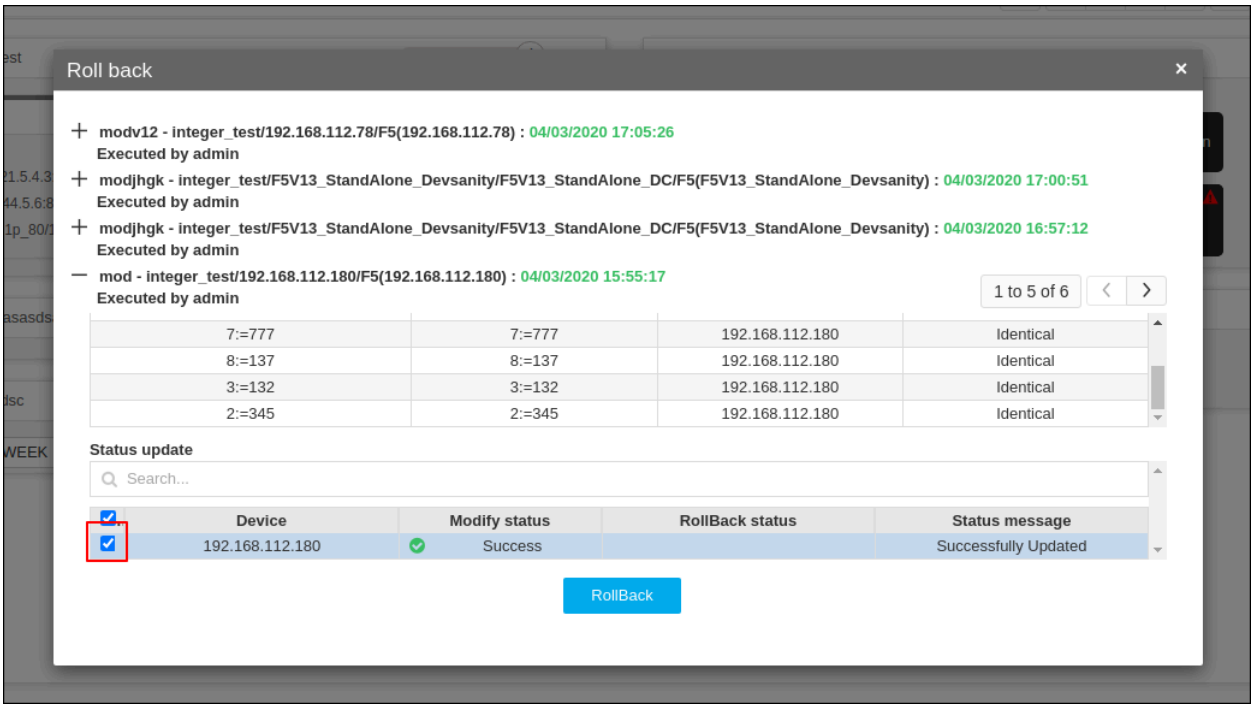
Rollback

The last action executed can be rolled back. Select the action and Click Rollback.



Related information
Application View Widget
Traffic Statistics Widget
Script Execution Widget
Traffic Grid Widget

Dashboard Actions

This section elaborates on dashboard actions and their corresponding functionalities.

Sharing a Dashboard

Based on your permissions, you may be able to share a dashboard.

To share a dashboard:

1. Go to **Menu** > **ADC+** > **TRAFFIC MANAGEMENT** > **Dashboards**.
2. If you have more than one dashboard, in the dashboard table, click the name of the one you want to share.

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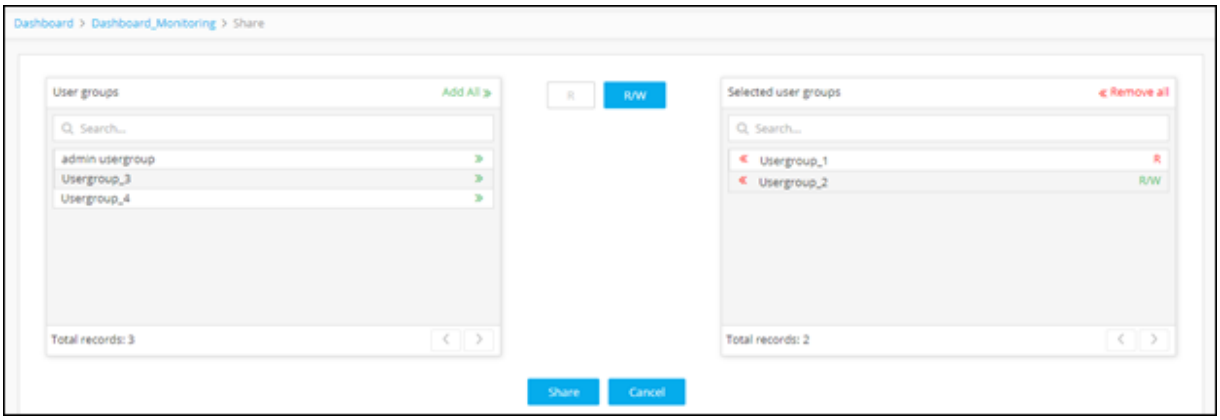
3. When the dashboard opens, click the (**Share**) button in the Command bar at the top of the screen. The Share screen appears.
4. Begin the assignment process by clicking the R (**Read-Only**) button. Each role you assign next will have read-only permissions within the dashboard.
5. In the Roles field, click the (**Assign item**) icon beside each role you want to share the dashboard with on a read-only basis.
6. Click the R/W (**Read-Write**) button. Each role you assign next will have read/write permissions within the dashboard.
7. In the Roles field, click the (**Assign item**) icon beside each role you want to share the dashboard with on a read/write basis.
8. Click the **Share** button to finish.



Delete a Dashboard

To delete a dashboard:

1. Go to **Menu** > **ADC+** > **TRAFFIC MANAGEMENT** > **Dashboards**.
2. If you have more than one dashboard, in the dashboard list, click the name of the one you want to delete.
3. When the dashboard opens, click the (**Delete**) button in the Command bar at the top of the screen. A screen pops up, warning you that deleting a dashboard also deletes all widgets on the dashboard.
4. Click **Yes** to continue.

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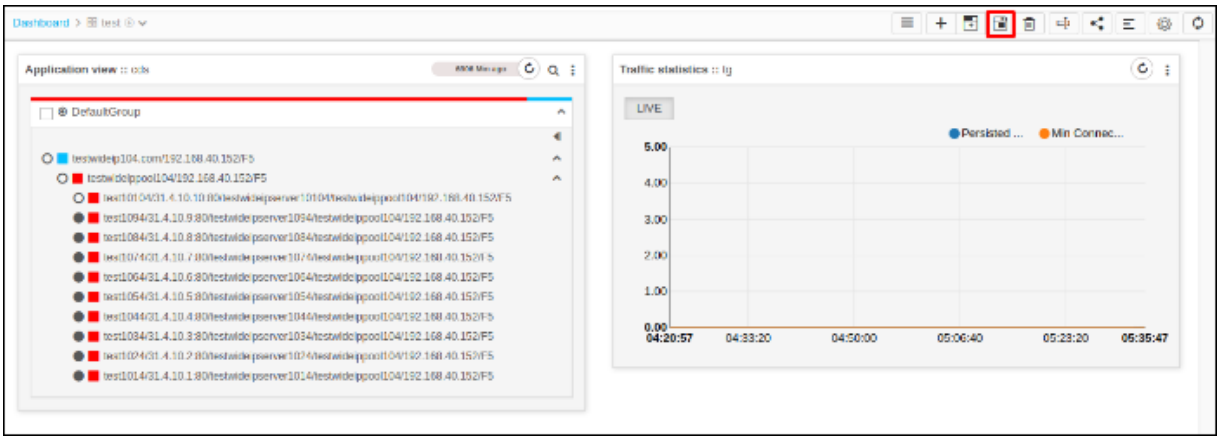
Save a Widget

By default last created widgets will be displayed first in dashboards. This option can be used when the user wants to organize the widgets in the customized order.

1. Log in to the AppViewX application with valid credentials.
2. Click the menu button.
3. Select **Menu** > **ADC+** > **TRAFFIC MANAGEMENT** > **Dashboards**.
4. Go to any user defined dashboard.
5. Users can change the order of the widgets by drag and drop.
6. Click **Save Widgets.**



Rename a Dashboard

To rename a dashboard:

1. Go to **Menu** > **ADC+** > **TRAFFIC MANAGEMENT** > **Dashboards**.
2. If you have more than one dashboard, in the dashboard list, click the name of the one you want to rename.
3. When the dashboard opens, click the (**Rename dashboard**) button in the Command bar at the top of the screen.
4. On the Rename dashboard screen that pops up, enter a new name for the dashboard.
5. Click **Update** to finish.

Align Widget

AppViewX gives an option to align the widgets if it gets misplaced.

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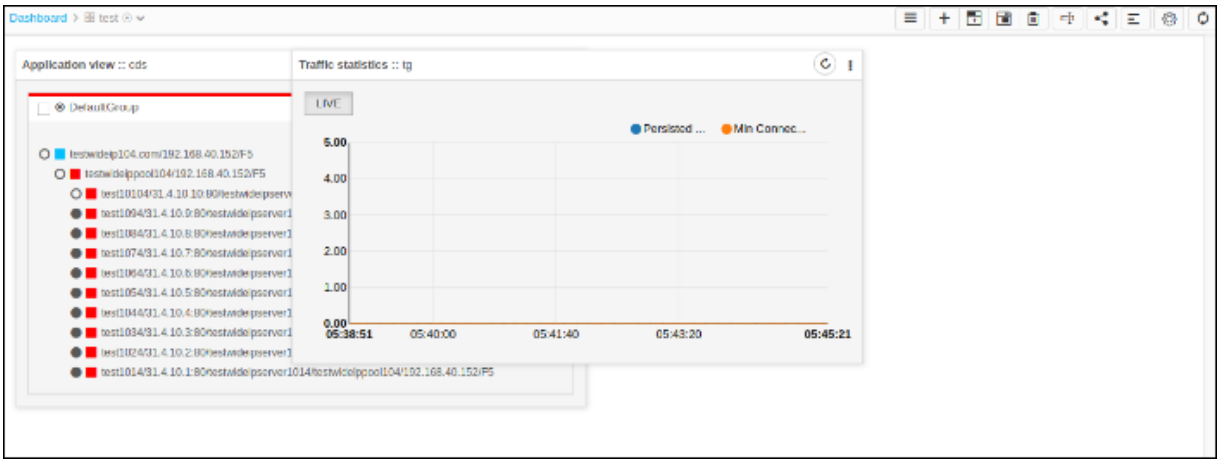
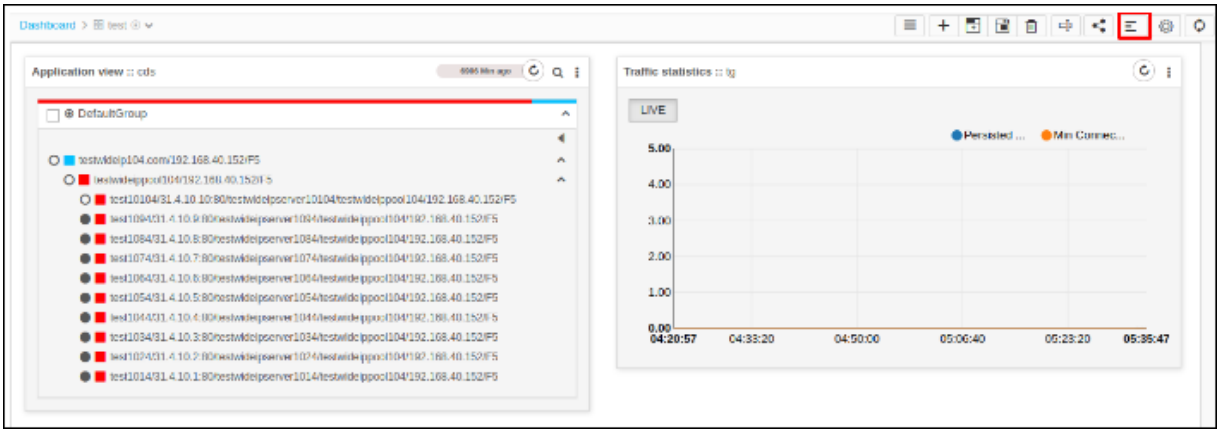
1. Log in to the AppViewX application with valid credentials.
2. Click the menu button.
3. Select **Menu** > **ADC+** > **TRAFFIC MANAGEMENT** > **Dashboards**.

   Consider the widget in the dashboard is misplaced.



4. To align dashboards in their place click the **Align** icon.



Settings

1. Log in to the AppViewX application with valid credentials.
2. Click the menu button.
3. Select **Menu** > **ADC+** > **TRAFFIC MANAGEMENT** > **Dashboards**.
4. Click the **Settings** icon.
5. Users can change the setting by clicking the corresponding slider.

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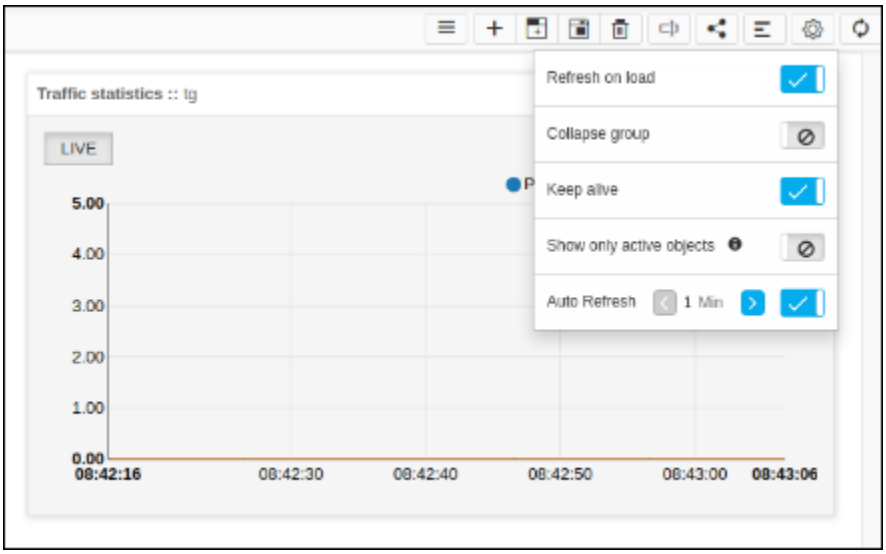

- **Refresh on load** - If this setting is enabled, each time the dashboard loads, it will trigger the refresh call automatically to load the latest data.
- **Collapse group** - If this setting is enabled, all the groups inside the widgets on the dashboard will display in collapsed format by default.
- **Keep alive** - If this setting is enabled, the auto session expiry function will be disabled. Using this user can monitor the objects without session timeout interruptions.
- **Show only active** - If this setting is enabled, the objects of an active device alone be displayed from the configured objects. It is applicable only for **Application view widget**.
- **Auto refresh** - If this setting is enabled, dashboard refresh call will be triggered automatically in the given interval. Users can configure the auto refresh interval.

Related information
Alert Management
Add Widgets
Create a Dashboard/Widget

Alert Management

To view / configure alerts, the users should have the ACF permissions.

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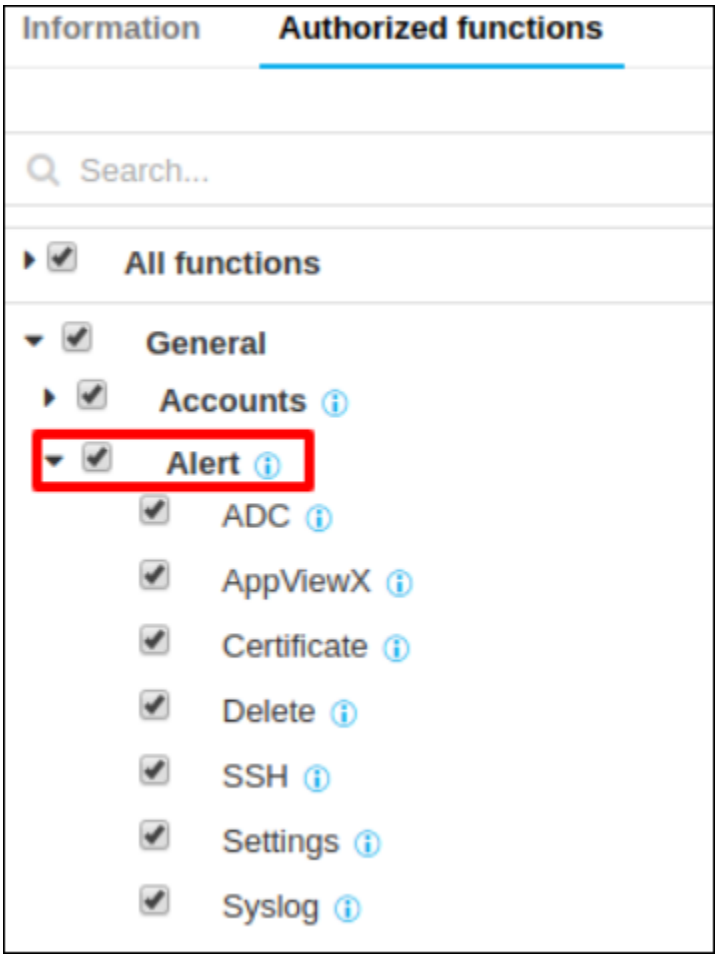

Create an ADC Alert

To create an ADC alert,

1. Go to **Menu** > **ADC+** > **ALERTS & LOGS** > **Alerts**.
2. Click (**Settings**) icon on the top.
3. On the **Settings** screen that opens, click the ADC tab if it is not already open.
4. In the **Alert name** box, enter a name for the alert.
5. In the **Alert message** field, enter the message that users will receive for the alert.
6. In the **Trigger** region, in the **Alert category** field, you can choose from **Threshold Alert**, **Application Alert**, and **Device Alert**.

> **Note:** Rather than adding objects manually, you can click the Add search string link and create a search string that automatically assigns all existing objects that match the filter criteria to

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the alert. The benefit of using a search string rather than selecting objects manually is that the search string continues to work in the background, auto-assigning all new objects to the alert if the objects match the search criteria you set up.

7. From the **Alert severity** dropdown list, select one of the following options:
   - **Critical** - For issues that are causing disastrous results or impacts on functionality. These are top priorities and must be resolved immediately.
   - **Fatal** - For issues that can cause disastrous results or impacts on functionality. These are a major priority and should be resolved soon.
   - **Major** - For issues that are important and require a resolution, but that is not the highest priority.
   - **Minor** - For issues that are of low priority and need a resolution.
   - **Notification** - For issues that are not alerts or warnings, but which must eventually be addressed.
8. In the **Vendor** field, select from the vendor whose device or devices you want to set an alert for.
9. In the **Object type** field, select the vendor object that you want to set an alert for. The contents of this field vary depending on the vendor you selected in the previous step.
10. In the **Available** field, click the » (**Assign**) icon beside each object/device you want to add to the alert. The following Alert conditions are applicable only for the Threshold alert.

Note: To add another condition to the alert, click the (**Add**) button, then in the **Logic** field select **AND** or **OR** to define the relationship between the first condition and the second. AND relationships require both conditions to be met for an alert to be sent, OR relationships require that only one condition be met for an alert to be sent. Only based on the above user-defined conditions, threshold alerts will be raised in AppViewX.

   - In the **Alert interval** field, select how often you want the system to check for breaches of the threshold levels that you are about to define. Checks can be set to occur every 10, 20, 30, 40, 50, or 60 seconds.
   - In the Cool off the period field, select how much time the system should wait before sending another alert about a continuing threshold breach: 10, 20, or 30 minutes.
   - In the **Statistics** field, define the conditions that will generate an alert by selecting values in the **Statistics**, **Operator**, and **Value fields**.
11. To send an email alert, **SMTP** must be configured. Refer to the Configure SMTP for Email Alerting topic for details on how to do this. When you have finished, complete the following steps to use email as an alert method:

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- Select the **Email Configuration** checkbox.
- In the **Email Address** field, enter email addresses to send the alert. Use commas to separate the addresses.
- In the **Subject** field, leave the default text or enter the text that briefly describes the kind of alert the user is receiving in their Inbox.

12. To use the **Simple Network Management Protocol (SNMP)** to send the alert, complete the following steps:
    - Enter the **Destination IP** for the alert.
    - Select the **Version** of SNMP you want to use: V1 or V2.
    - Enter the port of the alert that should be used for the alert.
    - Enter the **Community String** for the alert. The string is similar to a user ID or password and allows users to access the requested information on the device.
13. Click **Add** to save the alert to the AppViewX system.

> **Note:** For the Application and Device alert, when any user executes changes on the configured application/device(s), AppViewX sends a notification based on the appropriate actions associated with the alert (Email/SNMP). Only the changes that are executed via AppViewX will be tracked and notified.

Create a Syslog Alert

AppViewX subscribes to all device-level logs, where it acts as a syslog listener. The logs of any devices added in AppViewX can be viewed as syslog by navigating to Logging->Syslog. However, devices tend to generate huge amounts of data, a Syslog alert is a convenient way to get notified about a specific event that is of importance to you. It also allows for a closed loop remediation by associating workflows.

To create a syslog alert,

1. Go to **Menu** > **ADC+** > **ALERTS & LOGS** > **Alerts**.
2. Click on (**Settings**) icon, and then **Syslog** tab.
3. Provide an **Alert Name** and **Message**.
4. Mention the **Severity**, it could be one or multiple.
5. Configure the critical Device/Applications that need to be monitored.

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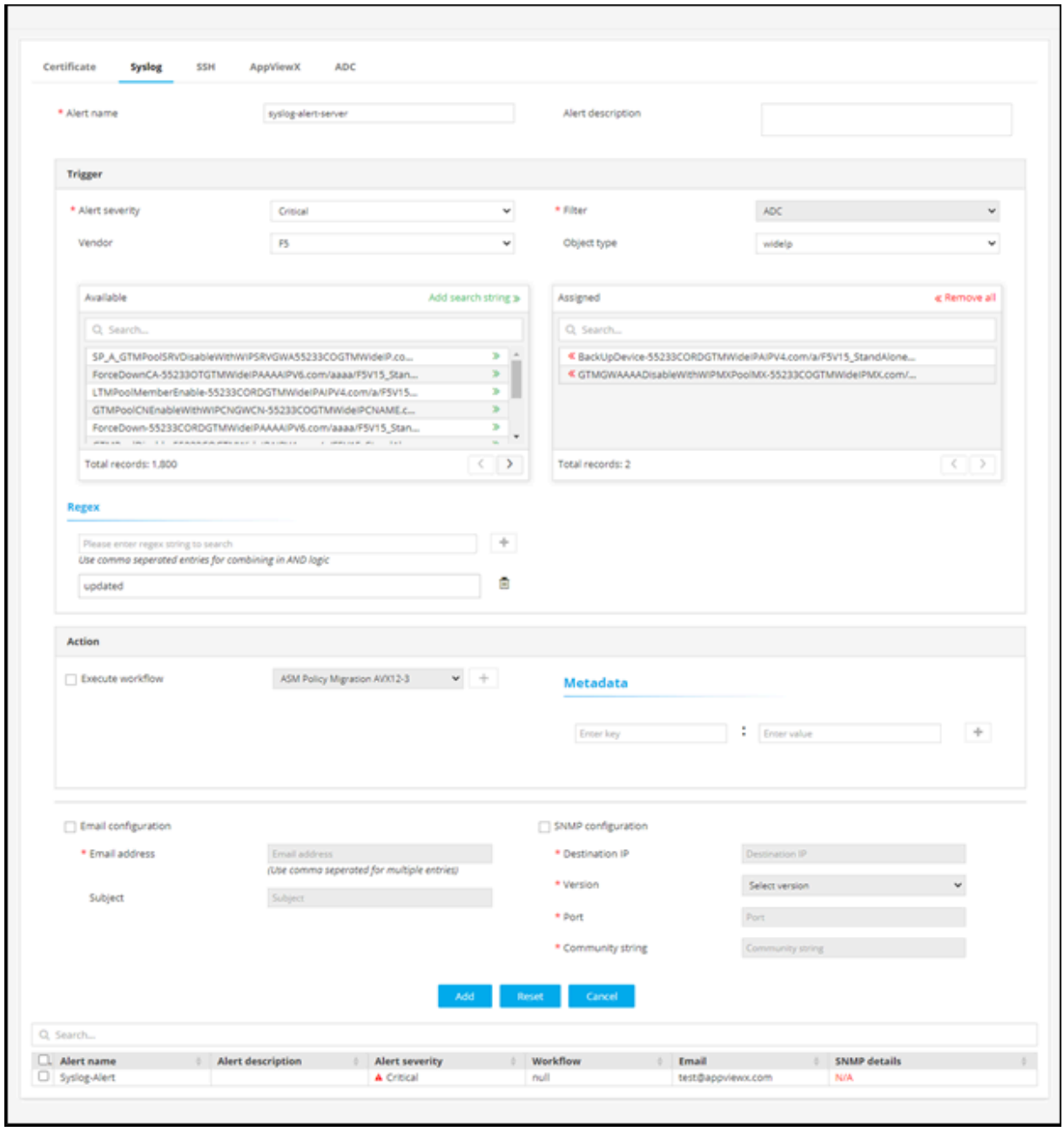

6. Add the Pattern/Regex that needs to be monitored on the Syslog received. Multiple strings can be provided with comma-separated, which will be considered as Boolean AND operator.
7. Following are some of the alerts that can be configured,

   • Sample syslog - <133>Sep 19 04:24:38 bigip-40-152 notice mcpd[6046]: 01070417:5: AUDIT - user admin - transaction #84153993-4 - object 0 - create { virtual_server_profile { virtual_server_profile_vs_name \"/Common/testVs\" virtual_server_profile_profile_name

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\"/Common/tcp\" virtual_server_profile_profile_type 5 virtual_server_profile_profile_context 0 } } [Status=Command OK]\n

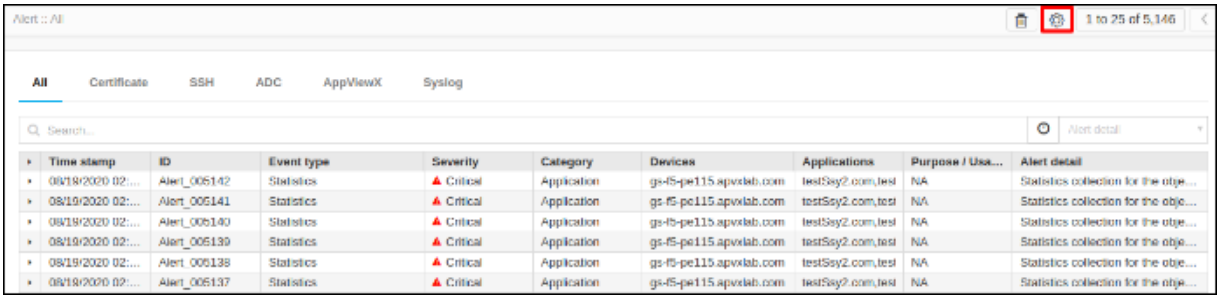
- For instance, if the Syslog alert is configured for the object and the Regex pattern is given as “create” Whenever an object is created and a Syslog is received for that object as above. An alert will be raised for the same and notified to the user.

8. You can also pass certain metadata from the alert to the workflow. In the Metadata section, enter a key and its associated value in the respective fields. This is the additional information that will be used by the workflow that is going to be associated with.
9. Associate any out of the box or custom workflow that needs to be executed on the occurrence of a configured Syslog event.
10. Configure multiple Alerts as needed and Add it to the Grid. The configured Alerts could be modified or deleted anytime by selecting the Alert from the grid.

Change alert settings

Fields in alert settings may differ based on the alert type, but the process for modifying the alert settings is identical. To modify the alert settings use the below steps:

1. Log in to the AppViewX application with valid credentials.
2. Select **Menu** > **ADC+** > **ALERTS & LOGS** > **Alerts**.
3. Click on the **Settings** button.



4. To modify the alert settings of a particular alert type click on the corresponding tab. For example ADC or Syslog.
5. Select an alert from the table and the modify button in the top right cornea will be enabled.
6. Click on the **Modify** button and make the required changes.

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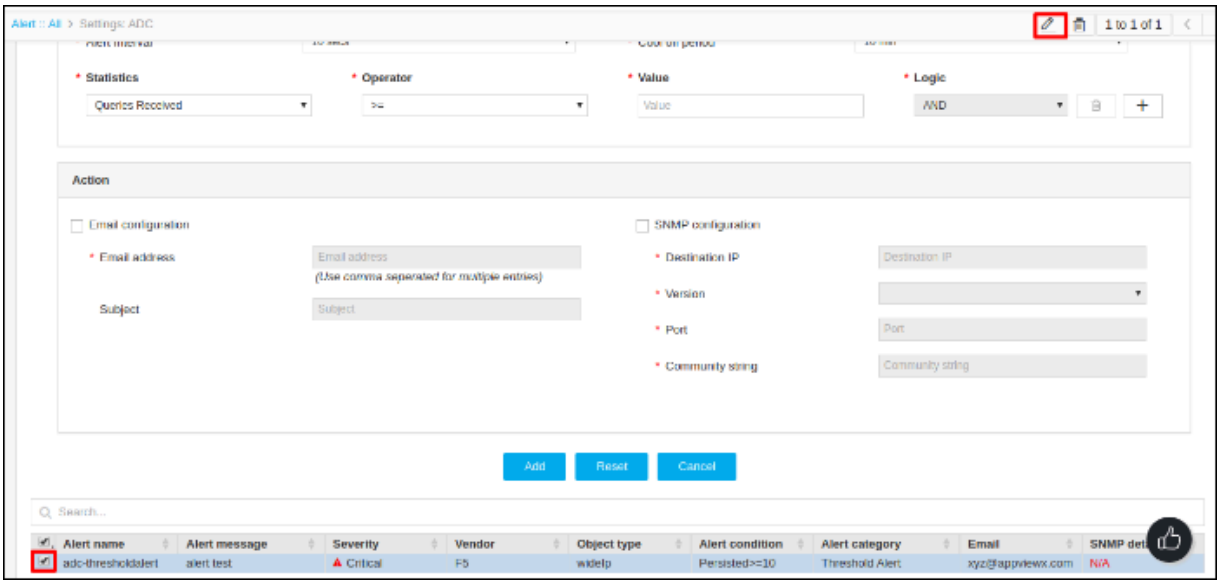
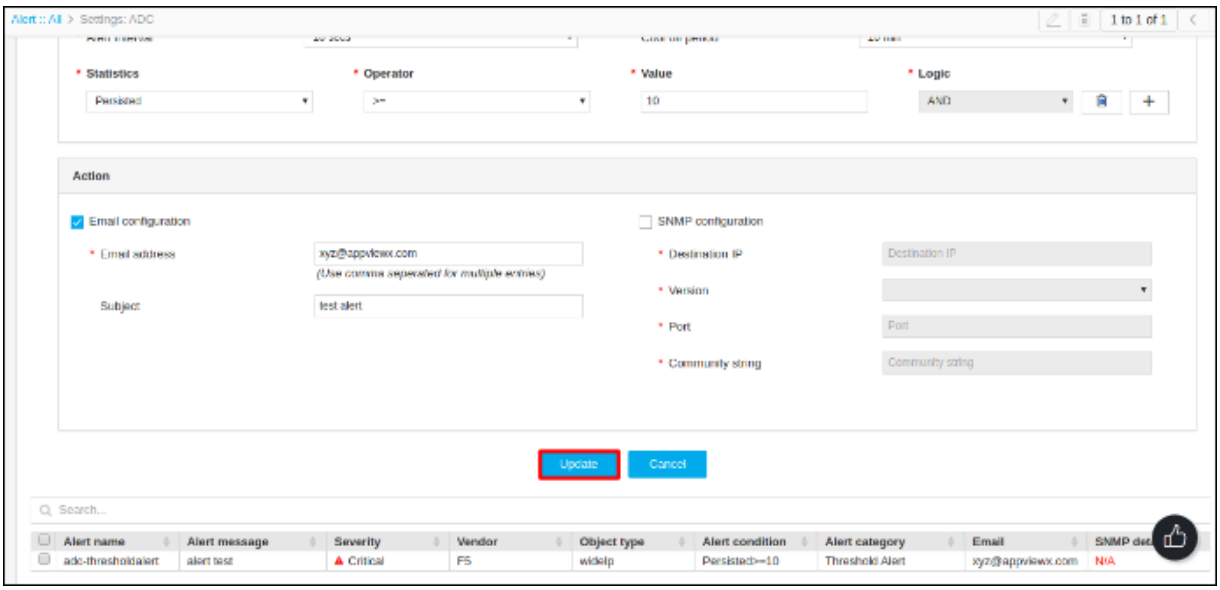


7. Click **Update**.



Deleting alerts

Fields in alert settings may differ based on the alert type, but the process for deleting the alert settings is identical. To delete the alert settings use the below steps:

1. Log in to the AppViewX application with valid credentials.
2. Select **Menu** > **ADC+** > **ALERTS & LOGS** > **Alerts**.
3. Click on the **Settings** button.

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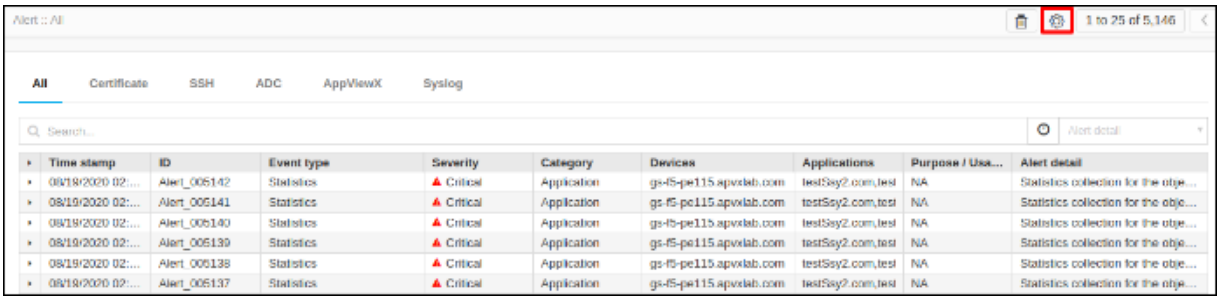
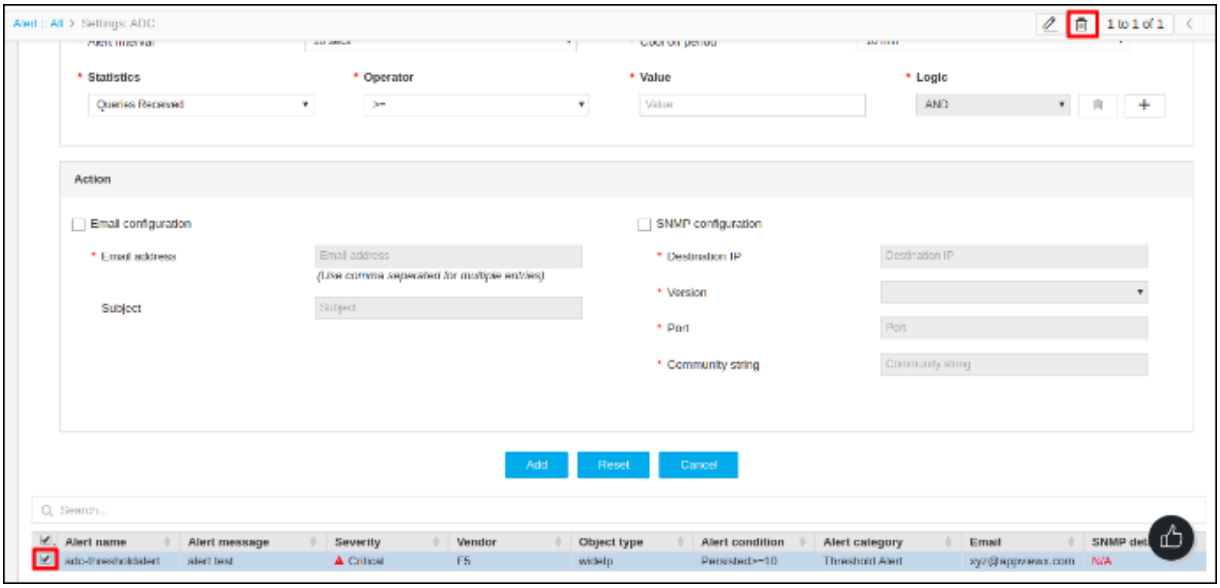


4. To delete the alert settings of a particular alert type click on the corresponding tab. For example ADC or Syslog.
5. Select an alert from the table and the delete button in the top right corner will be enabled.
6. Click **Delete**.



Related information
Create a Dashboard/Widget
Add Widgets
Dashboard Actions

System Settings

- Device Settings
- Object Settings
- Configuring F5 iHealth Report Settings

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- Configuring Statistics Collection
- Configuration Updates through Syslog

Device Settings

The device settings can be configured in the following tabs:

- Device specification
- Syslog purge limit
- Script Execution
- Device Sync
- Configuration for Device Settings

Related information
Configuration for Device Settings
Object Settings
Object Settings Configuration

Configuration for Device Settings

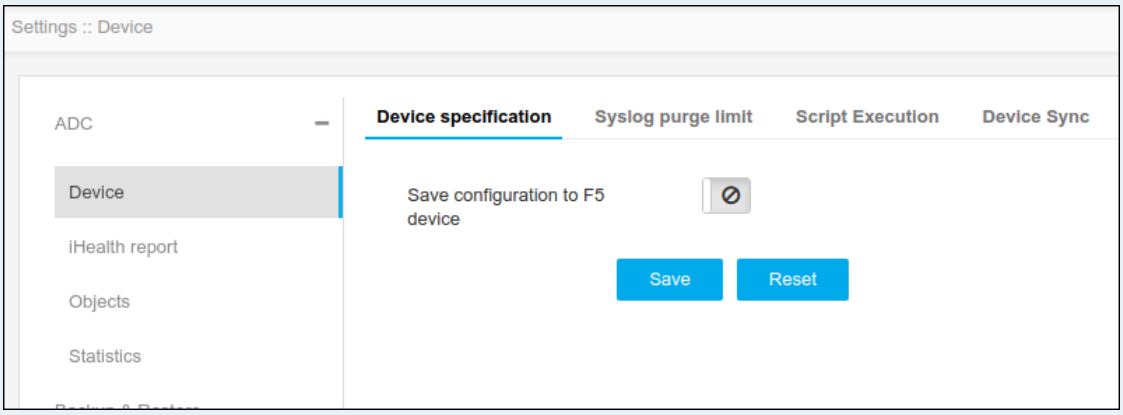
Configuring Device Specification

Save the changes of device specification configuration on the F5 device after config fetch. This enables all the changes to be reflected on the F5 file.

To configure a device specification,

1. Click **Menu** > **ADC+** > **SETTINGS** > **Module Settings** > **ADC** > **Device** > **Device Specification** tab.
2. Click the toggle icon to enable Save Configuration to the device.

Note: In this example, F5 device specification is shown.



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3. Click **Save**.

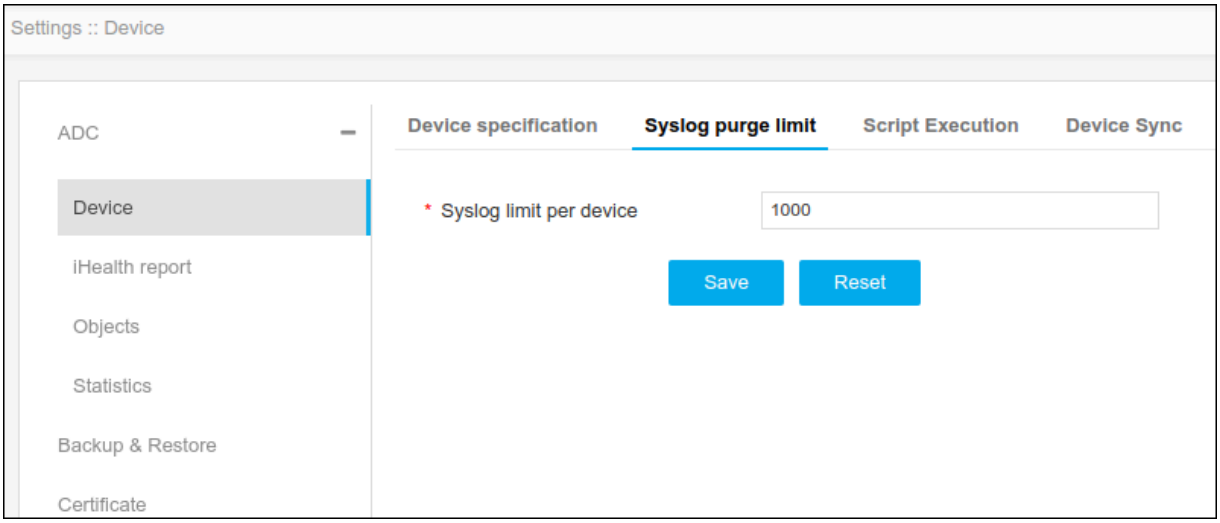
Note: To reset the changes, click Reset.

Configuring Syslog Purge Limit

Syslog purge limit enables to limit of the number of Syslog persisted against a device. The oldest logs will be automatically deleted on exceeding the limit.

To configure the Syslog purge limit,

1. Click **Menu** >**ADC+** > **SETTINGS** > **Module Settings** > **ADC** > **Device** > **Syslog purge limit** tab.
2. On the Syslog purge limit tab, specify the syslog limit per device. By default, the limit is set to 1000 and can be extended till 5000.



3. Click **Save**.

Note: To reset the changes, click **Reset**.

Configuring Script Execution

Script Execution setting allows you to specify the time-out limit of script execution. If the script execution exceeds the specified time, AppViewX will automatically terminate the script.

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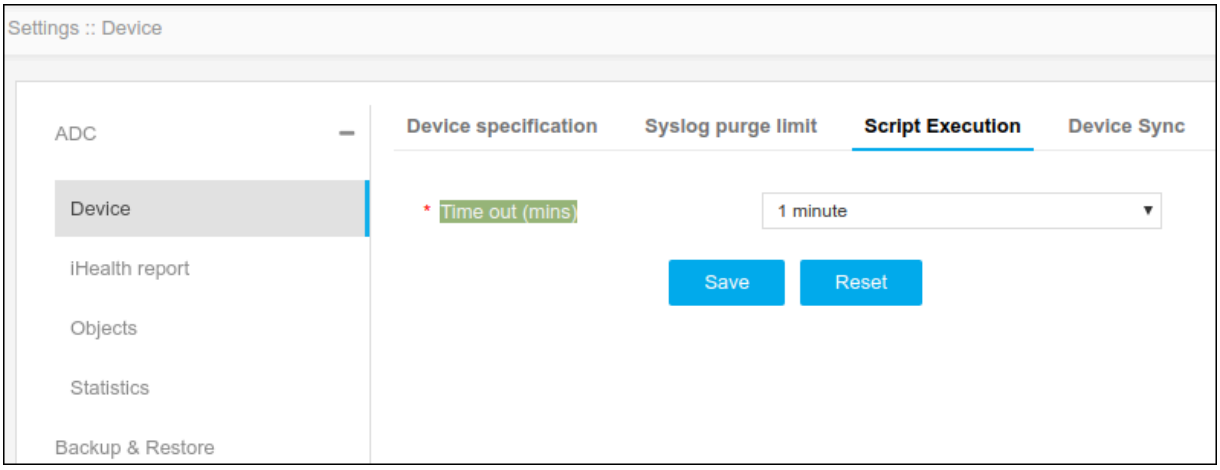
To configure script execution,

1. Click **Menu** > **ADC+** > **SETTINGS** > **Module Settings** > **ADC** > **Device** > **Script Execution** tab.
2. On the Script Execution tab, specify the timeout limit.



3. Click **Save**.

> **Note:** To reset the changes, click **Reset**.

Configuring Device Sync

The device Sync feature allows to customize the configuration sync operations.

To customize the configuration sync operations,

1. Click **Menu** > **ADC+** > **SETTINGS** > **Module Settings** > **ADC** > **Device** > **Device Sync** tab.
2. On the Device Sync tab, specify the following:
   - **Config fetch** - Allows to schedule the config fetch process at a specific time for selected days. Ensures device changes are reflected in AppViewX.
   - **HA - Sync** - Ensures the HA devices are synchronized in specified intervals.

     Note: To set device sync, the AppViewX Group Sync flag must be enabled while adding a device to run HA sync as per configured interval.

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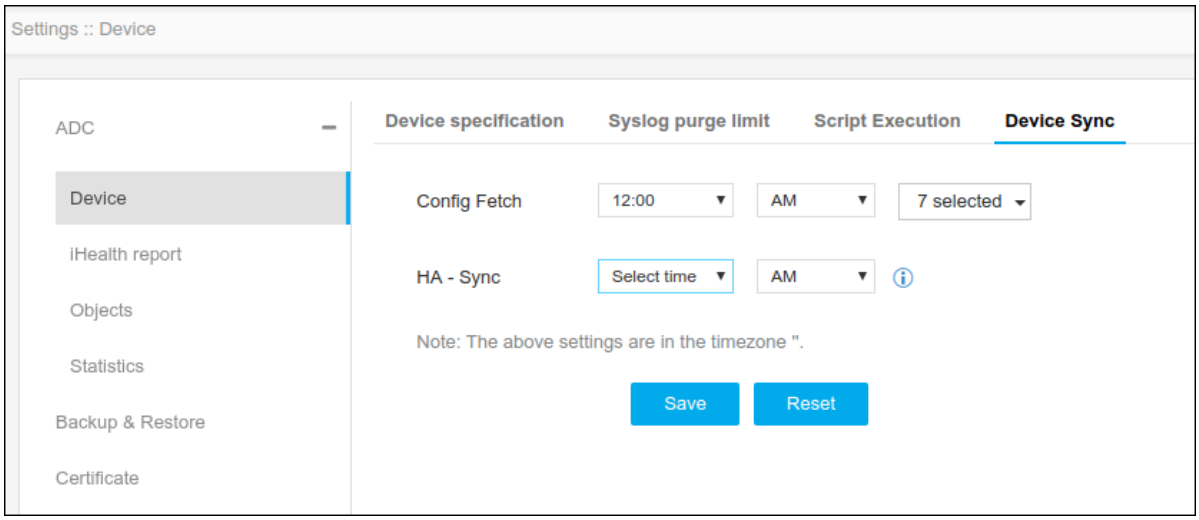

3. Click **Save**.

Note: To reset the changes, click **Reset**.

Related information
Device Settings
Object Settings
Object Settings Configuration

Object Settings

The object settings can be configured under the following tabs:

- Actions
- Naming Format
- Configuration drift
- Object Settings Configuration

Related information
Device Settings
Configuration for Device Settings
Object Settings Configuration

Object Settings Configuration

Configuring of Object Settings

On the Actions tab, you can customize the actions execution as needed

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To customize the actions,

1. Click **Menu** > **ADC+** > **SETTINGS** > **Module Settings** > **ADC** > **Objects**.
   By default, the **Actions** tab appears.

2. Enable the **Make Comments Mandatory** toggle button to set the comments option mandatory while executing an action from the Control Center or dashboard. This ensures end users are mandated to mention the reason for their actions.
3. Enter comments in the **Comments Placeholder**, such as SNOW ID, Enter Application impacted, etc. to impose a standard to be followed upon action execution.
4. Select **Active**, **All Peer**, or **Specific Device** radio buttons for **Execute Action on Device**. By default, AppViewX actions are triggered on current Active devices. This can be modified as needed.
5. Ensure peers are associated in AppViewX for seamless execution.
6. Click **Save**.

> **Note:** To discard the changes, click **Reset**.

Configuring Object Naming Format

On the Naming Format tab, you can customize the display name format of your objects that needs to be followed throughout the application.

To customize the naming format,

1. Click **Menu** > **ADC+** > **SETTINGS** > **Module Settings** > **ADC** > **Objects**.
2. Click the **Naming Format** tab.

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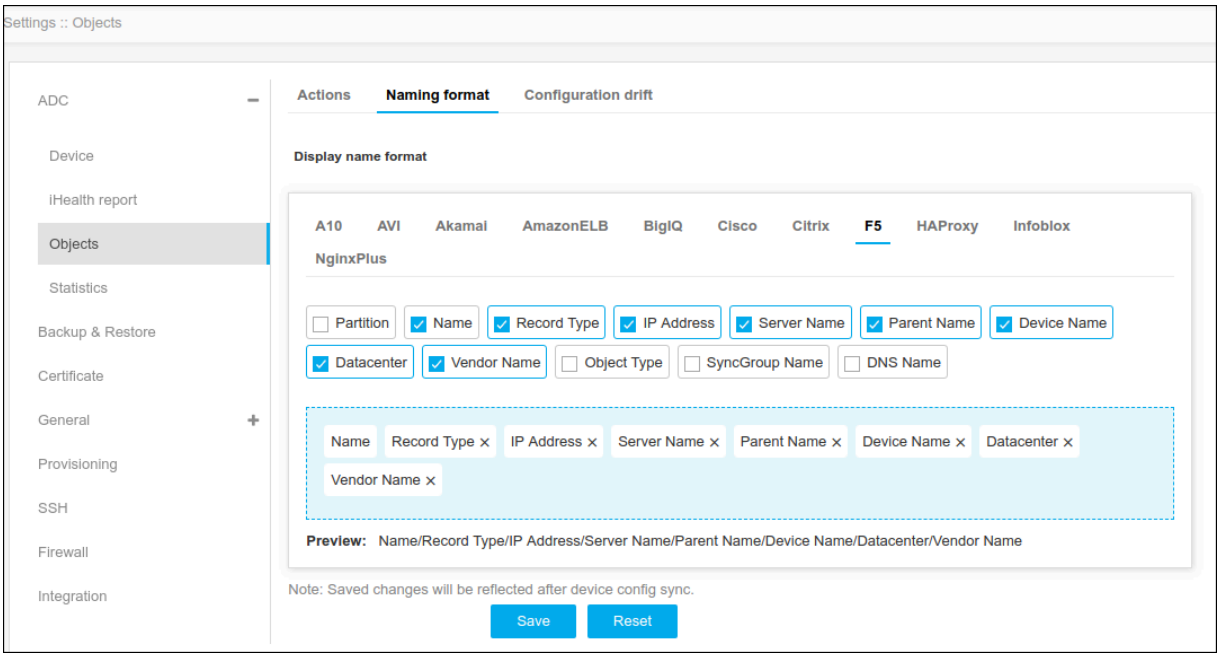

3. On the **Display Name Format** page, choose the vendor to be modified and select the respective Property, reorder the fields as needed.
4. Click **Save**.

> **Note:** To discard the changes, click **Reset**.

Configuration of the Drift Storage Limit

AppViewX identifies the object configuration changes (as part of config fetch, Syslog notification, etc.,) and stores the drift to generate reports, governance, and rollbacks. You can customize the number of days the drift must be persisted.

To customize the number of days for the configuration drift,

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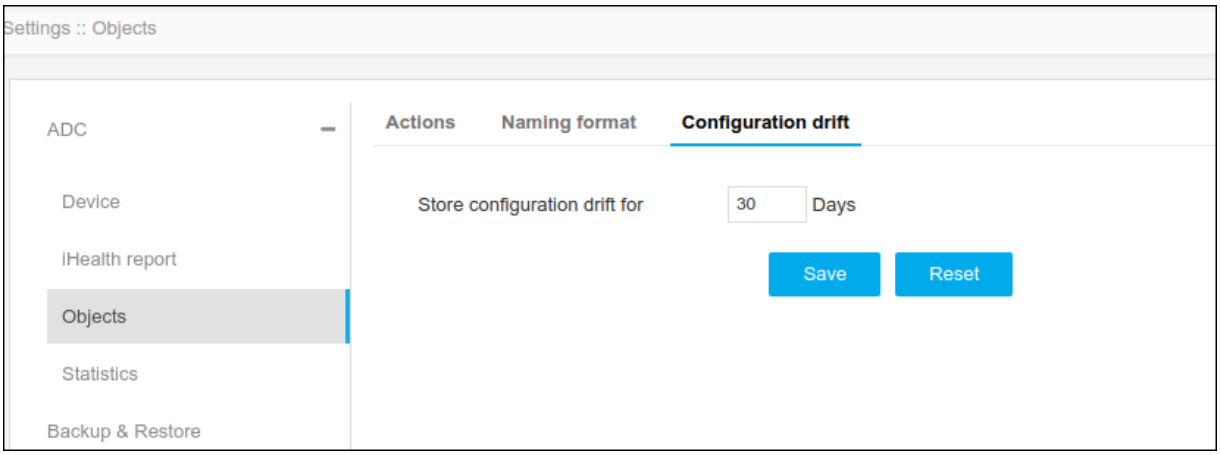
1. Click **Menu** > **ADC+** > **SETTINGS** > **Module Settings** > **ADC** > **Objects**.
2. Click the **Configuration Drift** tab.



3. Enter the store configuration drift value up till 90 days in the Store Configuration Drift for the field.
4. Click **Save**.

Note: To discard the changes, click Reset.

Related information
Device Settings
Configuration for Device Settings
Object Settings

Configuring F5 iHealth Report Settings

Users can configure the F5 iHealth related setting on this page. iHealth is the feature in F5 used to diagnose health of the F5 device. In AppViewX, we collect the qkview file from the F5 device, push to the iHealth site and generate an iHealth report and that will be shown in the device inventory page under the iHealth report column. On this page, users can configure the username and password to be used for logging into iHealth site. In addition to that, users can also enable/disable whether proxy is to be used for iHealth login and whether a case number is mandatory for iHealth report

To configure the iHealth report,

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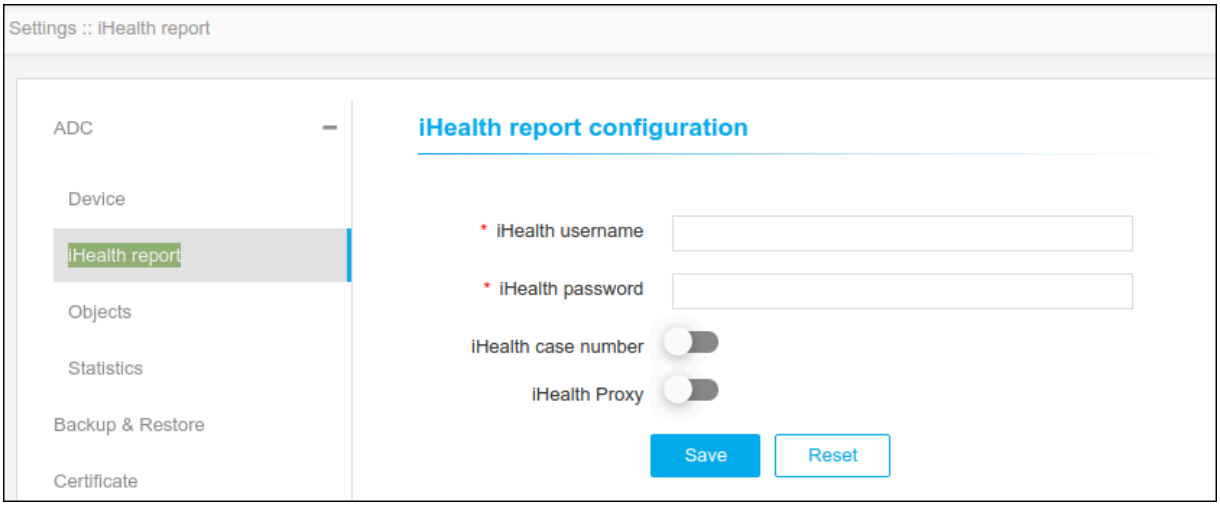
1. Click **Menu** > **ADC+** > **SETTINGS** > **Module Settings** > **ADC** > **iHealth Report**.



2. On the **iHealth Report Configuration** page, enter the **iHealth username** and **password**.
3. Enable the **iHealth case number** and **iHealth Proxy** toggle buttons to upload the generated qkview file against the mentioned case number for future reference.
4. Click **Save**.

> **Note:** To discard the changes, click **Reset**.

Configuring Statistics Collection

In the statistics module, AppViewX collects the statistics of the LTM and GTM objects. It used to monitor the Load and performance of LTM and GTM Objects and devices. Users configure types of objects that need to collect statistics and time intervals at which statistics need to collect.

- Configures the statistics data collection to monitor the historic statistics with respect to the vendors and object types.
- Statistics plugin has to be deployed in the node for collecting statistics data.
- AppViewX will collect the stats, aggregate them and provide out of the box reports in the form of dashboards.

To configure statistics,

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1. Click **Menu** > **ADC+** > **SETTINGS** > **Module Settings** > **ADC** > **Statistics**.
2. On the **Statistics Configuration** details page, choose the time from the **Time Interval in Minutes** drop-down.
3. Select the vendor, and then choose the object types and devices from the list for which statistics must be fetched.
4. For the device selection, click the **DEVICES** tab, and then,
   - Select the **Type** of device selection as **Device** or **Device Groups**.
   - When you select the **Device** radio button, you get the option to select the devices from the list either by searching or using regex.

     Note: If Regex is added for filtering the device, the statistics will be configured for the newly added devices as well, which match the regex.

   - When you select the **Device Groups** radio button, you get the option to select the device groups from the list.
5. Select the default view for the Traffic statistics widget from the **Default View** dropdown. The possible options for default view are:
   - Day (default)
   - Live
   - Week
   - Month
   - Quater
6. Click **Save**.
   AppViewX collects the stats, aggregates them, and provides out-of-the-box reports in the form of dashboards.

   Note: To discard the changes, click **Reset**.

Configuration Updates through Syslog

AppViewX functions as a Syslog listener, subscribing to device-level logs. It establishes Syslog notifications with the devices managed within its system, allowing it to detect any changes occurring on these devices. These notifications trigger automatic configuration updates in AppViewX at specified intervals, ensuring that device changes are promptly reflected.

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The received Syslog from the devices and the subsequent changes processed by AppViewX in response to these Syslog are meticulously recorded within the logging module.

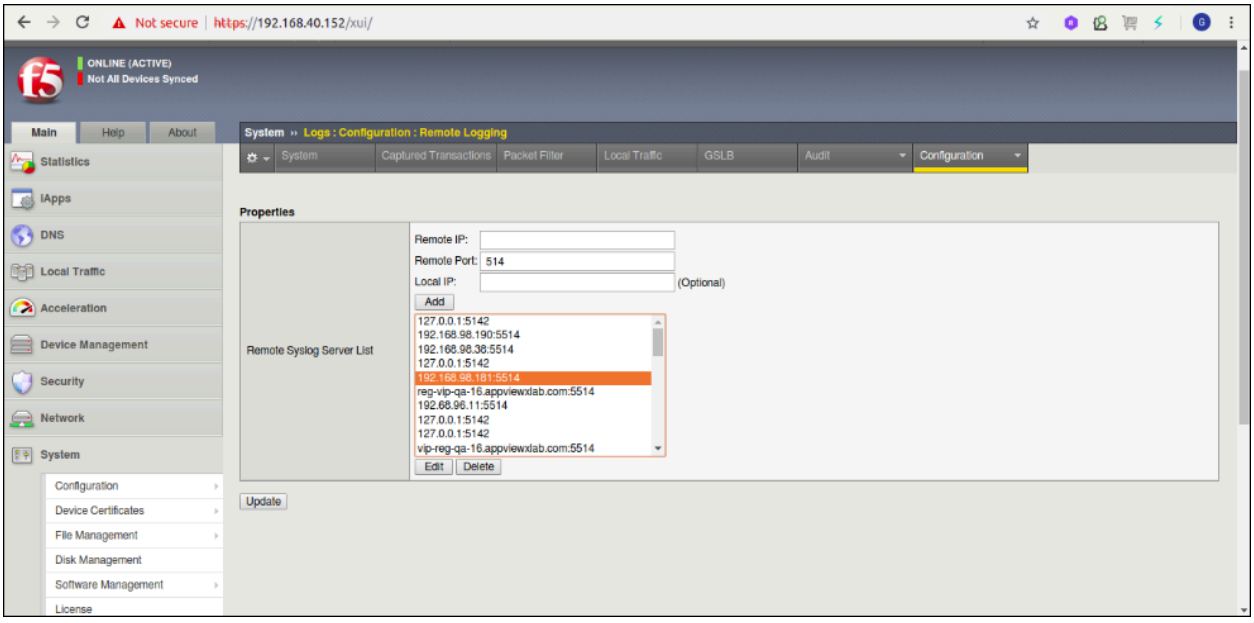
Syslog Configuration in AppViewX

To successfully subscribe the device to Syslog, it is important to follow the configuration steps in the specified sequence below:

1. Enable the Syslog receiver flag during the cloud connector installation. For instructions on how to set the flag, see AppViewX Cloud Connector guide.
2. Enable **avx_platform_syslog** plugins.
3. Set up the IP address or port for Syslog reception within the Platform. For instructions on how to configure the Syslog reception, see Platform user guide.
4. In case you have an older version of AppViewX and want to make use of Syslog capabilities for ADC SaaS, you must manually activate the Syslog flag by setting SYSLOG_ENABLED=`true` in the path ccpath/deps/properties.

Device Syslog Subscription Example (F5 Sample)

Devices will be subscribed for Syslog only when Syslog flag enabled in settings and is set to true, and designated hosts and port are provided. Syslog subscription for a device is initiated when you select the device and click subscribe in device inventory page. The IP address and port which is Cloud connector IP or VIP IP that is configured in the Platform settings can be subscribed on the device. This can be verified manually in F5 device by navigating to **Main** > **System** > **Logs** > **Remote Logging** window > **Configuration** tab.



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In addition to the above mentioned F5 configuration, execute the following commands on each F5 device to enable F5 to transmit the complete FQDN in logs. AppViewX is capable of processing only those Syslogs that contain the entire FQDN of the F5 device, as Host Names could be identical across multiple load balancers.

```
tmsh modify sys syslog include "options {use_fqdn(yes); keep_hostname(no); };"
tmsh save sys config
tmsh restart sys service syslog-ng
```

Vendors Supported

Device Version/Vendor	Object Types
F5 v12 - 17	LTM objects: LTM VirtualServer,LTM Pool,LTM PoolMember,Virtual Address,LTM Node and secondary objects. GTM objects: GTM WideIP,GTM Pool,GTM Server,GTM Datacenter,GTM Virtual Server and secondary objects. State and Status

Syslog Processing

A new Node.js component has been introduced within the cloud connector to handle Syslog processing. This component initiates its processing by loading predefined information from a configmap.

The preset information is composed of two key components:

1. **mid-server-syslog-grok-patterns-config**: This segment comprises the grok patterns that correspond to the log messages sent from the device to the Syslog component.
2. **mid-server-syslog-grok-filter-config**: The second part contains metadata information. This information outlines the grok patterns that will be applied to the received log messages, specifying the details that should be extracted from these messages. Furthermore, it defines the content that should be forwarded to the subsystem responsible for parsing the message.

Once the preset information has been integrated into the Syslog component, the component will initiate the receiver function within the Kubernetes pod, operating on port 5514. Externally, incoming Syslog messages will be directed to the designated host on port 30025. Following receipt on port 30025, the message will then be forwarded to port 5514 for further processing.

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Logs originating from the device will undergo filtration according to the grok filters established within the "mid-server-syslog-grok-filter-config" configmap in the Kubernetes environment. Grok serves as a method to compare a line with a regular expression, map specific parts of the line into metadata fields, and push the matched Syslog message along with metadata field information to avx-platform Syslog pod in Compute cluster for subsystem based parsing.

Based on the filters applied, messages or events are directed to the avx-platform-syslog component. In response to this, log messages are stored within the logging collection. Concurrently, event details are sent to the avx-subsystem-adc. This enables the parsing of real-time updates pertaining to the state and status of an object.

Syslogs can be retained for up to 5000 entries per device. When this limit is exceeded, the logs will be automatically cleared. You can adjust this configuration within the settings.

Scenarios

The following scenarios have been taken into consideration:

- Syslog based updates for Object state change For example: Enabled, Disabled etc.,
  - Real time updates are supported only for F5.
- Syslog based updates for Object status change For example: Available, Offline etc.,
  - Real time updates are supported only for F5.

Real-time State/Status Processing for F5

The node-js syslog component filters the state/status Syslog of F5 and forwards the message to the Syslog_Receiver which subsequently transmits them to subsystem adc plugin along with the Syslog details. Within the subsystem_adc plugin, the message undergoes parsing, leading to updates in the state/status of the respective object within the 'me_adc' and 'ro' collections. After the update, Syslog_Receiver adds the Syslog message with a ‘Picked’ status in logging collection. Grok filters are restricted to only the managed object types in AppViewX, which is configurable. The changes will be reflected in the control center/dashboard or other modules wherever the objects are configured which will enable near real time monitoring.

Database Operations for Processing a Syslog Message

- Retrieve device information using the FQDN.
- Update the state of the object in the 'me_adc' collection.
- Update the state of the object in the 'ro' collection.
- Include the Syslog message with a selected status in the Logging collection.

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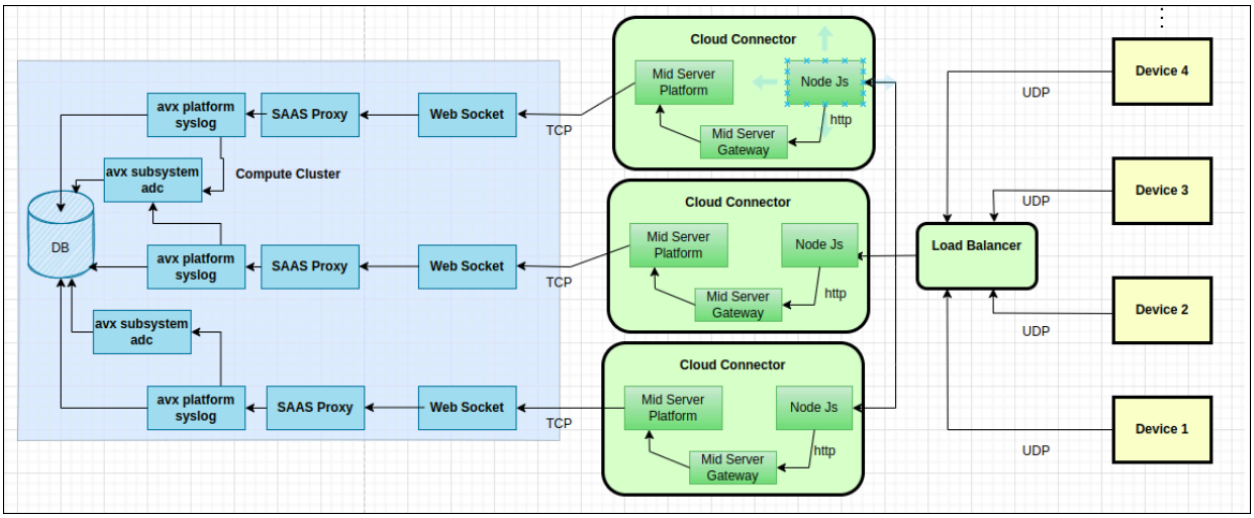
Technical Flow Diagram



Syslog Based Alerting

As devices often produce substantial data volumes, employing a Syslog alert offers a user-friendly approach to receive notifications regarding critical Syslog information. Users can set up Syslog alerts for specific events or Syslog patterns that hold significance. In the event of a triggered Syslog alert, actions such as sending an email or initiating a workflow can be activated for prompt response.

For Configuring Syslog Alert notification, see Configuring Syslog Alert Notification.

Performance Metrics

Vendors Tested: F5

Load:

1. 300 device and 33lk objects in RO collection
2. 2700 valid Syslog message in 10 seconds send from cc to compute cluster

Observation:

1. No Pod restart observed cloud connecter and Compute cluster
2. Observed CPU utilization 60 to 65% in Database

Recommendation:

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1. 1.5 GB of memory is required for Syslogs pod in cloud connector.
2. One Syslog pod in cc, able to process approximately 270 logs per second.

Limitations

- The state status drift functionality will be non-functional as the session ID is not being provided by the node-js component.
- On the Syslog alert configuration, users can only select a maximum of 10 devices or objects from the list of available devices or objects.

Sample Logs

StateChange:

```
<133>Sep 19 04:29:30 bigip-40-152 notice mcpd[6046]: 01070417:5: AUDIT - user admin - transaction #84197177-2 - object 0 - modify { virtual_server { virtual_server_name \"/Common/testVs\" virtual_server_enabled 0 virtual_server_update_status 1 } } [Status=Command OK]\n
```

StatusChange:

```
<133>Sep 19 04:30:59 bigip-40-152 notice mcpd[6046]: 01071682:5: SNMP_TRAP: Virtual /Common/testVs has become unavailable\n

<133>Sep 19 04:30:41 bigip-40-152 notice mcpd[6046]: 0107183a:5: Virtual Address /Common/1.2.3.16 general status changed from RED to YELLOW.\n
```

Troubleshooting Steps

1. To verify the reception of UDP packets, run the command `tcpdump -ni any port 30025` within the cloud connector.
2. To ensure that the Device VIP is receiving packets, run the command `tcpdump -ni any host VIP_IP_address port 5514` on the F5 device.
3. For confirming if logs are passing through the filters, check the logs within the Syslog pod in the cloud connector environment.

Frequently Asked Questions (FAQ)

1. **How many Syslogs are being received & processed per second in AppViewX?**

   The performance testing of the Syslog components in our local testing environment has confirmed their capability to handle 300 logs per second.

2. **How the processing of Syslog and TRAP events in AppViewX is implemented for actions such as enabling, disabling, and performing forcedowns in F5 devices?**

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Traps are not supported in AppViewX. However, the mentioned actions triggers modifications within the device, subsequently triggering a Syslog event. The processing procedures remain consistent with those outlined in #3.

3. **How AppViewX manages the processing of Syslog and TRAP events for state and status changes in F5 objects?**

   Syslog messages received from the device are grouped into batches and subsequently relayed to the subsystem plugins. Within these Syslog messages, we extract key information including the hostname, object details, and its state and status information. Utilizing the object information obtained, we locate the corresponding entry in our database where a change in state or status occurred. This information is then updated in the database accordingly.

4. **Under what circumstances does the state and status of an object not get updated, even after the Syslog message has been parsed?**

   If the hostname is not configured for a device, even when logs are received, it becomes impossible to identify the device where these changes are occurring. Consequently, the state and status of the object won't be updated within AppViewX.

Schedulers Used by ADC+

By deployment, the scheduler below will be activated for ADC specific functionality monitoring purposes. On demand these schedulers can be modified with the help of a support team

Scheduler Name	Description	Frequency
AdcBackUpDeviceJob	BackUpDeviceJob for Adc	Every 30 Minutes
AdcDownloadConfigJob	DownloadConfigJob for Adc	Every day at 00:00:00 AM
AdcDeviceSyncJob	Device sync Job for Adc	Every 15 Minutes
AdcDNSReverseLookupJob	Dns reverse lookup Job for Adc	Every day 6AM & 6PM
SyslogPushJob	Syslog Push for Subsystems	Every 5 Minutes
SyslogCDUJob	Syslog CDU Trigger	Every 1 Minutes
StatAggregationJob	Statistics Aggregation Job.	Every 6 Hrs Start from 00:00:00 Hrs
PurgeRawStatisticsJob	Purge Raw Statistics Job	Every day at 1 AM

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Scheduler Name	Description	Frequency
PurgeAggregateStatisticsJob	Purge Aggregate Statistics Job	At 01:00:00am, on the 1st day, every month starting in January
UnusedObjectsReportAggregationJob	Unused Objects Report Aggregation Job	Every day at 00:30:00 AM
ADCDashboardStatisticsCollect	Statistics collection for Heatmap and traffic statistics widget	Every 5 seconds
AdcConfigFetchValidatorJob	Validate ConfigJob for Adc in given Interval	Every 15 Minutes
ADCConfigDriftPurgeJob	Purge job for config drift logs	Every day at 00:00:00 AM
ADCVipTrafficAggregator	Aggregator job for calculating total traffic served	Every 1 hour
ADCVipTrafficAggregator	Aggregator job for calculating total traffic served	Every day at 00:00:00 AM
ADCApplicationTrafficHourAggregator	Aggregator job for calculating total traffic served by an application	Every 1 hour
ADCApplicationTrafficDayAggregator	Aggregator job for calculating total traffic served by an application	Every day at 00:00:00 AM
AVRLogsProcessingJob	Aggregator job for calculating top talkers to VIP	Every 15 Minutes
PurgeAvrLogsJob	Purge job for top talkers to VIP	At 01:00:00am, on the 1st day, every month starting in January
AdcDeviceHASyncConfigurableJob	Device ha sync configurable Job for Adc	Every day at 10:00:00 PM
AdcBackUpDeviceMonitorJob	Monitor BackUpDeviceJob Scheduler for Adc	Every day at 11:45:00 PM

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Scheduler Name	Description	Frequency
ADCStateStatusDriftPersist	Persist adc object state status drift	Every day at 03:00:00 AM
ADCStateStatusDriftPurge	Purge adc object state status drift	Every Sunday at 03:00:00 PM

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Chapter 3: ADC+ API Guide

- Getting Started
- Object
- Device
- Dashboard

Getting Started

- About AppViewX
- ADC+ API Guide
- Log Into AppViewX

About AppViewX

The AppViewX Platform is the industry's first product category that offers Multi-vendor load balancer centric Management, Automate and Orchestrate best-in-class and open-source application delivery services, and enables Self Servicing capabilities. It supports both traditional and non-traditional ADCs from leading vendors,

- A10 Networks
- Akamai Technologies
- Amazon Web Services (Elastic Load Balancers)
- Brocade
- Cisco
- Citrix
- F5 Networks
- HA Proxy

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- NGINX
- Radware
- AVI

ADC+ API Guide

The AppViewX ADC API guide covers management and configuring APIs across the following categories:

- Getting Started
- Object
- Device
- Dashboard

Log Into AppViewX

Authenticate into the AppViewX application with the username and password.

Request Structure

URL: /login

Type: POST

Parameters

Parameter Details

Param Type	Name	Description	Field Type	Constraints
Header	`username`	AppViewX login username	`String`	
Header	`password`	AppViewX login password	`String`	
Header	`Content-Type`	Specifies the nature of the data in the payload.	`String`	Value of the param should be `application/json`
Query	`gwkey`	Tenant Key. Needed only in case of multi tenant installations		
Query	`gwsource`	Source from which the request is triggered (Eg: web, external)	`String`	

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Response Structure

200 OK, returns a string of type application/JSON with the following body parameters:

Name	Description	Field Type
response	Contains the response for the session activation with the authentication/ session ID.	Key Value Pair
message	Success message along with the objectIds or failure description in case of error.	String
appStatusCode	Application specific status code for the response. Will be non-null for failure response.	String
tags	More info in case of failure response.	Key value pair

Status Codes

HTTP Status Code	appStatusCode	Message	Possible Remediation
200 OK	-	Login successful	-
400 Bad request		Username or password cannot be null or empty	Check and ensure if a non-null/non-empty value is given in the header field for username or password
401 Unauthorized		Login failed. Invalid credentials.	Check and ensure if the username and password provided are valid and correct.

Sample Request/Response

Use Case

Login to the application with the user name, **appviewxuser**, and password, **appviewxpassword**. The session id received as response in the example below is ce7f1a14-2bf9-4e4a-89a8-bc780a255813.

Sample Request

```
{

}
```

Sample Response

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```
{
"response":{
"status":"SUCCESS",
"appStatusCode":null,
"statusDescription":null,
"sessionId":"ce7f1a14-2bf9-4e4a-89a8-bc780a255813",
"availableLoginAttemptCount":null
},

"message":null,
"appStatusCode":null,
"tags":null,
"headers":null
}
```


- Request Structure
- Response Structure
- Status Codes
- Sample Request/Response

Request Structure

URL: /login

Type: POST

Param Type	Name	Description	Field Type	Constraints
Header	`username`	AppViewX login username	`String`	
Header	`password`	AppViewX login password	`String`	
Header	`Content-Type`	Specifies the nature of the data in the payload.	`String`	Value of the param should be `application/json`
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Sample Request

```
{

}
```

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Sample Response


```
{
"response":{
"status":"SUCCESS",
"appStatusCode":null,
"statusDescription":null,
"sessionId":"ce7f1a14-2bf9-4e4a-89a8-bc780a255813",
"availableLoginAttemptCount":null
},

"message":null,
"appStatusCode":null,
"tags":null,
"headers":null
}
```


Object

- Overview: Object
- Search for Object
- Get Object Hierarchy
- Composite Keys for F5 WideIp
- Get Object Configuration
- Action - Enable an Object
- Action - Disable an Object
- Action - Forcedown Object
- Action - Forcedown Active Object
- Action - Graceful Disable Object
- Action - Enable Persistence for Object
- Action - Disable Persistence for Object
- Action - Clear Persistence Record
- Action – InService (Activate) Object
- Action - OutOfService (Suspend) Object
- Action - Set Service Down Value
- Get Objects in Constant Status

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• Get Objects in Constant State
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• Action - Set Loadbalancing Method
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• Action - Set Weight
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• Get Transaction Status
• Search - LTM and GTM Pool

Overview: Object

The objects of the devices can be grouped related to the application to understand the hierarchy and traffic flow of the application. By using the object APIs, you can search, view, manage all the entities, configurations, or objects.

Search for Object

Search for objects that are already discovered in AppViewX to monitor or to perform actions on it. This API will return results based on the resources assigned to the user.

Before you begin

Before attempting to search for objects with this API, users must ensure the ACF permission **ADC** > **ControlCenter** > **Infrastructure view** is available. This can be checked under **Accounts** > **Role** > **Authorized Functions**.

Request Structure

URL: /adc-objects-search

Type: POST

Parameters

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Parameter Details

Param Type	Name	Description	Field Type	Constraints
Header	sessionId	Session ID received after login.	String	Required when username and password are not provided for login.
Header	username	Username of the user to log in to AppViewX.	String	Required if session ID is not provided for login.
Header	password	Password of the user to log in to AppViewX.	String	Required if session ID is not provided for login.
Header	Content-Type	Specifies the nature of the data in the payload.	String	Value of the param should be ‘application/json’.
Query	gwkey	Enter the Tenant Key. Needed only in case of multi tenant installations.	String	
Query	gwsource	Source from which the request is triggered. For example, web, external, etc.	String	
Body	payload	Contains all the params to be sent in the request body for the post request	Payload	

Payload

Name	Mandatory	Description	Field Type	Constraints
input	Yes	Input filter key and value to perform the search. Multiple key and value pairs can also be mentioned.	Key value pair	Possible values: Input
filter	No	Filter params to be applied on response such as start,limit and sort.	Key value pair	Possible value: Filter

Response Structure

200 OK, returns string of type application/json with the following body params:

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Name	Description	Field Type
response	Contains the response params for the search object request.	response
message	Success message or failure description in case of error.	String
appStatusCode	Application-specific status code for the response. Will be non-null for failure response.	String
tags	More info in case of failure response.	

Response

Name	Description	Field Type
objects	List of objects from the database, that matches the input query.	Object[]
totalRecords	Total no of records matching the search query.	Integer
obtainedRecords	Total no of records returned considering the filter query.	Integer
obtainedRecordRange.start	Start index for the range of records returned considering the filter query.	Integer
obtainedRecordRange.end	End index for the range of records returned considering the filter query.	Integer

Status Codes

HTTP Status Code	appStatusCode	Message	Possible Remediation
200 OK	-	Matching results found for the given input.	-
400 Bad request	ADC_OBJECT_SEARCH_001	Invalid search input.	Check and ensure if a valid value is given in the request payload field - input.

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HTTP Status Code	appStatusCode	Message	Possible Remediation
400 Bad Request	ADC_OBJECT_SEARCH_003	Invalid object type.	Given object type value under request payload field ‘objectType’ is not supported.
400 Not Found	ADC_OBJECT_SEARCH_005	Device not found.	Check if the device name given in the payload request field - deviceName is valid and is available in inventory.
404 Not Found	ADC_OBJECT_SEARCH_004	No matching records found.	No results were found for the given search query. Refine the search query.

Input Keys

The following are the most commonly used keys to search for an object managed in AppViewX. Apart from these, there are more keys that are available in the database parsed against each object, that can be used as a search param.

Name	Mandatory	Description	Field Type
deviceName	No	Name of the device added in inventory. It can contain only alphanumeric characters, ‘-’ , ’_’ , ‘.’ , ‘*’ , ‘|’, ‘!’.	String
objectType	No	ObjectType to query. Possible values of objectTypes can be found here.	String
vendor	No	Vendor of the device. Eg.:F5, AVI, etc.	String
destinationIp	No	Field denoting the IP of the virtual server object in F5. The IP address must be in IPV4 format.	String
destinationPort	No	Field denoting the port of virtual server object in F5. It must be between 1 and 65535.	String
partition	No	Partition of the object. It must contain alphanumeric values, ‘-’ ,’.’, ‘_’ and space.	String
name	No	Name of the object.	String

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Name	Mandatory	Description	Field Type
ip	No	IP value of the object. The IP address must be in IPV4 format.	String

Filter Keys

Name	Mandatory	Description	Field Type
start	No	Start index of the response to the display. The default value is taken as 0.	Integer
max	No	Number of entries from a start index to display. The default value is taken as 99. Max = 100	Integer
sortColumn	No	Column on which sort is to be applied. Possible Values are "displayName", "name", and "sortLevel".	String
sortOrder	No	Sorting order. Possible values: asc,desc.	String

Sample Request/Response

Use Case

View all the Wide IPs in the system with the name testGw.com.

Sample Request

```
{


  "payload": {
    "input": {
      "objectType": "WideIp",
      "name": "testGw.com"
    },
    "filter": {
      "start": 1,
      "max": 100,
      "sortColumn": "displayName",
      "sortOrder": "asc"
```

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```
  }
 }
}
```

Sample Response


```
{


 "response": {
  "objects": [
   {
    "alias": "",
    "code": "gw",
    "color": "AVAILABILITY_STATUS_BLUE",
    "configData": "gtm wideip /Common/testGw.com {\n    pools {\n        /Common/asdf {\n            order 0\n            ratio 4\n        }\n    }\n}\n",
    "dashboardObjectName": "testGw.com(192.168.40.150)",
    "description": "",
    "deviceId": "5f36bed67620c40e97e30348",
    "displayName": "testGw.com/192.168.40.150/F5",
    "gp": [
     "gp:@5f36bed67620c40e97e30348:@asdf:@Common"
    ],
    "ipv6NoErrorNegTtl": "",
    "ipv6NoErrorResponse": "disabled",
    "last-resort-pool": "none",
    "lbmode": "round-robin",
    "name": "testGw.com",
    "partition": "Common",
    "persistCidrIpv4": "",
    "persistCidrIpv6": "",
    "persistence": "DISABLED_PERSISTENCE",
    "persistenceTtl": "",
    "poolPropertyMap": {


    },
    "status": "ENABLED",
    "statusCode": "UNKNOWN ENABLED",
    "vendor": "F5",
    "resource_id": "gw:@5f36bed67620c40e97e30348:@testGw.com:@Common"
```


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```
    }
  ],
  "totalRecords": 1,
  "obtainedRecords": 1,
  "obtainedRecordRange": {
    "start": 1,
    "end": 1
  }
 },
 "message": "Matching results found for the given input.",
 "appStatusCode": null,
 "tags": null,
 "headers": null
}
```


Get Object Hierarchy

Search for objects that are already discovered in AppViewX to monitor or to perform actions on it. This API will return results based on the resources assigned to the user.

Before you begin

Before attempting to get an object hierarchy with this API, users must ensure any one of the ACF permission “ADC > ControlCenter > Infrastructure view”,”ADC > ControlCenter > Application view” is available. This can be checked under Accounts > Role > Authorized Functions.

Request Structure

URL: /adc-object-hierarchy

Type: POST

Parameters

Parameter Details

Param Type	Name	Description	Field Type	Constraints
Header	sessionId	Session ID received after login.	String	Required if username and password are not provided.

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Parameter Details (continued)

Param Type	Name	Description	Field Type	Constraints
Header	username	AppViewX login username.	String	Required if sessionId is not provided.
Header	password	AppViewX login password.	String	Required if sessionId is not provided.
Header	Content-Type	Specifies the nature of the data in the payload.	String	Value of the param should be ‘application/json’.
Query	gwkey	Tenant Key. Needed only in case of multi tenant installations.	String	
Query	gwsource	Source from which the request is triggered (Eg: web, external).	String	
Body	payload	Contains all the params to be sent in the request body for the post request.	Payload	

Payload

Name	Mandatory	Description	Field Type	Constraints
object	Yes	The composite key values that have to be given to identify an object.	Key-value pair Composite key	-

Response Structure

200 OK, returns string of type application/json with the following body params

Name	Description	Field Type
response	Contains the response object along with the hierarchy of the object mapped in field children.	Key value pair
message	Success message or failure description in case of error.	String
appStatusCode	Application specific status code for the response. Will be non-null for failure response.	String

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Name	Description	Field Type
tags	More info in case of failure response.	

Status Codes

HTTP Status Code	appStatusCode	Message	Possible remediation
200 OK	-	Topology successfully retrieved for the given object.	-
400 Bad Request	ADC_CC_0514	Invalid object details	Check and ensure if a valid value is given in payload request field - ‘object’.
400 Bad Request	ADC_DASH_0528	Invalid device name	Check and ensure if payload request field ‘object.deviceName’ is given.
400 Bad Request	ADC_DASH_0526	Invalid Vendor	The vendor is not supported. Check for possible valid vendors under field ‘tags.validVendors’ in the response.
400 Bad Request	ADC_DASH_0512	Exception: Invalid Object type	Check if a valid non-null/non-empty value is given in the payload request field ‘object.objectType’. If a valid value is given, the given object type might not be supported. Check for possible valid object types under field ‘tags’ in the response.
404 Not Found	ADC_INV_0010	Device not found.	Device not found in database. Check if the device name given under field deviceName of the object property is available in the inventory.
404 Not Found	ADC_INV_2003	No Object Found for the request	Check the composite keys and values given under the payload field ‘object’.
403 Forbidden	ADC_CC_0006	Permission is not	Check if the requested object has either Read/Read Write permission.

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HTTP Status Code	appStatusCode	Message	Possible remediation
		available for given objects.	

Sample Request/Response

Use Case

Get Hierarchy of the wide ip object www.appviewx.com from partition Common on device 192.168.112.78.

Sample Request


```
{


 "payload": {
  "object": {
   "deviceName": "192.168.xxx.xx",
   "objectType": "wideIp",
   "partition": "Common",
   "objectName": "www.appviewx.com",
   "recordType": "a"
  }
 }
}
```


Sample Response


```
{


 "response": {
  "_id": "gw:@5ea9637de0dc314883cbd04f:@www.appviewx.com:@Common:@a",
  "alias": "",
  "code": "gw",
  "color": "AVAILABILITY_STATUS_RED",
  "configData": "gtm wideip a /Common/www.appviewx.com {\n    pools {\n        /Common/gtm_pool_ipv6 {\n            order 0\n            ratio 99\n        }\n    }\n}\n",
  "dashboardObjectName": "www.appviewx.com(192.168.xxx.xx)",
  "description": "",
```


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```
"deviceId": "5ea9637de0dc314883cbd04f",
"displayName": "www.appviewx.com/a/192.168.xxx.xx",
"gp": [
  "gp:@5ea9637de0dc314883cbd04f:@gtm_pool_ipv6:@Common:@a"
],
"gr": [
],
"ipv6NoErrorNegTtl": "",
"ipv6NoErrorResponse": "disabled",
"last-resort-pool": "none",
"lbmode": "round-robin",
"name": "www.appviewx.com",
"partition": "Common",
"persistCidrIpv4": "",
"persistCidrIpv6": "",
"persistence": "DISABLED_PERSISTENCE",
"persistenceTtl": "",
"poolPropertyMap": {
},
"recordType": "a",
"status": "ENABLED",
"statusCode": "OFFLINE ENABLED",
"vendor": "F5",
"lastStatusSyncTime": 1597830719934,
"children": [
 {
   "_id": "gp:@5ea9637de0dc314883cbd04f:@gtm_pool_ipv6:@Common:@a",
   "alternate": "round-robin",
   "avaiablityValue": "",
   "avaliablityRequirement": "all",
   "cname": "",
   "code": "gp",
   "color": "AVAILABILITY_STATUS_RED",
   "configData": "gtm pool a /Common/gtm_pool_ipv6 { }\n",
   "dashboardObjectName": "gtm_pool_ipv6(192.168.xxx.xx)",
   "deviceId": "5ea9637de0dc314883cbd04f",
   "deviceName": "192.168.xxx.xx",
```


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```
"displayName": "gtm_pool_ipv6/a/192.168.xxx.xx",
"dynamicRatio": "disabled",
"fallback": "return-to-dns",
"fallbackIp": "0.0.0.0",
"gm": [
],
"gpm": [
],
"gtr": [
],
"gw": [
  "gw:@5ea9637de0dc314883cbd04f:@www.appviewx.com:@Common:@a"
],
"gwChild": [
],
"limitConnections": "",
"limitbps": "",
"limitpps": "",
"manualResume": "disabled",
"maxAddrReturned": "1",
"monitors": [

],
"name": "gtm_pool_ipv6",
"parentName": [
  "www.appviewx.com"
],
"partition": "Common",
"preferred": "round-robin",
"qualityofService": {
  "qos-lcs": "30",
  "qos-hit-ratio": "5",
  "qos-hops": "0",
  "qos-packet-rate": "1",
  "qos-topology": "0",
  "qos-vs-score": "0",
  "qos-kilobytes-second": "3",
```


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```
        "qos-vs-capacity": "0",
        "qos-rtt": "50"
      },
      "ratioMap": [
        {
          "partition": "Common",
          "recordType": "a",
          "name": "www.appviewx.com",
          "_id": "gw:@5ea9637de0dc314883cbd04f:@www.appviewx.com:@Common:@a",
          "order": "0",
          "ratio": "99"
        }
      ],
      "recordType": "a",
      "status": "ENABLED",
      "statusCode": "OFFLINE ENABLED",
      "ttl": "30",
      "vendor": "F5",
      "verifyMemberAvailability": "enabled",
      "lastStatusSyncTime": 1597830719934,
      "ratio": "99",
      "order": "0",
      "children": [

      ]
    }
  ]
 },
 "message": "Topology successfully retrieved for the given object.",
 "appStatusCode": null,
 "tags": null,
 "headers": null
}
```


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Composite Keys for F5 WideIp

Name	Mandatory	Description	Field Type
deviceName	Yes	Name of the device added in inventory. It can contain only alphanumeric characters, '-' , '_' , '.' , '*' , '|', '!'.	String
objectType	Yes	ObjectType to query. It accepts alphanumeric characters and spaces.	String
partition	Yes	Partition of the wide IP object. It accepts alphanumeric characters, '-' , '.' , '_' and space.	String
objectName	Yes	Name of the wide IP object	String
recordType	Yes	Record type of the Wideip object (Needed only for F5 versions above v12). Possible values.: A,AAAA,CNAME, etc.	String

Get Object Configuration

This API retrieves the configuration of an object as stored in the AppViewX inventory. It can retrieve the latest configuration and also the configuration is known at a given time if any.

Note: The configuration is not fetched from the device in real-time but from the AppViewX inventory.

Before You Begin

Before attempting to get an object configuration with this API, users must ensure any of the ACF permission from **ADC** > **Control Center**, **ADC** > **Dashboard** > A**pplication Widget**, or **ADC** > **Orphan objects** is available. This can be checked under **Accounts** > **Role** > **Authorized Functions**.

Request Structure

URL: /adc-object-configuration

Type: POST

Parameters

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Parameter Details

Param Type	Name	Description	Field Type	Constraints
Header	sessionId	Session ID received after login	String	Required if username and password are not provided
Header	username	AppViewX login username	String	Required if sessionId is not provided
Header	password	AppViewX login password	String	Required if sessionId is not provided
Header	Content-Type	Specifies the nature of the data in the payload.	String	Value of the param should be ‘application/json’
Query	gwkey	Tenant Key. Needed only in case of multi-tenant installations	String	
Query	gwsource	Source from which the request is triggered (Eg: web, external)	String	
Body	payload	Contains all the params to be sent in the request body for the post request	payload	

Payload

Name	Mandatory	Description	Field Type	Constraints
objectId	Yes	Resource ID of the objects. Use the search API to search/get the resource ID.	String	-
timeStamp	No	To get the known configuration at the given time, mention the time stamp as well. If not mentioned, the latest known configuration will be returned.	Long	-

Response Structure

200 OK, returns string of type application/json with the following body params:

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Name	Description	Field Type
response	Contains the requested objects config data	String
message	Success message or failure description in case of error	String
appStatusCode	Application-specific status code for the response. Will be non-null for failure response.	String
tags	More info in case of failure response	

Status Codes

HTTP Status Code	appStatusCode	Message	Possible remediation
200 OK	-	Configuration found for the given object.	-
404 Not Found	ADC_INV_1554	Config data not found for given object details	Check if given timeStamp and objectId is valid
403 Forbidden	ADC_INV_1558	Cannot access resource, permission not available.	Check if Read/Read Write permission is available for the requested object
404 Not Found	ADC_INV_2003	No Object Found for the request	Check the resource id given under field ‘objectId’ is valid

Sample Request/Response

Use Case

Get the known object configuration available at the time 1549362738957(time in milliseconds) for the GTM WideIP object with resource id - **gw:@5f36bed67620c40e97e30348:@testGw.com:@Commo**

Sample Request

```
{

 "payload": {

  "objectId": "gw:@5f36bed67620c40e97e30348:@testGw.com:@Common",
```

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```
  "timeStamp": 1549362738957

 }

}
```


Sample Response


```
{

 "response": "**  WideIP - testGw.com  **\ngtm wideip /Common/testGw.com {\n    pools {\n        /Common/asdf {\n
order 0\n            ratio 4\n        }\n    }\n}\n\n**  GTM Pool - asdf  **\ngtm pool /Common/asdf {\n
disabled\n    members {\n        /Common/server123:gvs1 {\n            order 0\n        }\n    }\n}\n\n**  GTM
Server - server123  **\ngtm server /Common/server123 {\n    addresses {\n        146.125.206.132 {\n
device-name server123\n        }\n    }\n    datacenter /Common/cbe\n    monitor /Common/bigip \n    virtual-servers
{\n        gvs1 {\n            destination 146.125.206.133:80\n        }\n        gvs2 {\n            destination
146.125.206.133:443\n        }\n        gvss {\n            destination 146.125.206.133:443\n        }\n        vs1
{\n            destination 2.2.3.4:50\n        }\n    }\n}\n\n**  GTM Monitor - bigip  **\ngtm monitor bigip bigip
{\n    aggregate-dynamic-ratios \"none\"\n    defaults-from none\n    destination *:*\n    ignore-down-response
disabled\n    interval 30\n    timeout 90\n}\n\n",

 "message": "Configuration found for the given object.",

 "appStatusCode": null,

 "tags": null,

 "headers": null

}
```


Action - Enable an Object

This API initiates action Enable one or more ADC objects for which the action applies to. Enable action is supported on the following object types:

- F5 -WideIP, WideIP pool, WideIP pool member, vip, vip pool member, LTM node, GTM server, virtual address
- A10 - Fqdn, ServiceIP, SLB_VSV, SLB Server, SLB VS

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- AVI - Virtual service
- Cisco - GSLB Answer, SLB virtual server, SLB real server
- Citrix - GSLB virtual server, GSLB services, SLB virtual servers, SLB service group, SLB service
- Akamai - Datacenter

Before you begin

Before attempting to initiate enable action with this API, users must ensure the ACF permission “ADC > ControlCenter > Actions > Enable/Disable/ForceDown” is available. This can be checked under Accounts > Role > Authorized Functions.

Request Structure

URL: /adc-device-object-action-enable

Type: PUT

Parameters

Parameter Details

Param Type	Name	Description	Field Type	Constraints
Header	sessionId	Session ID received after login.	String	Required if username and password are not provided.
Header	username	AppViewX login username.	String	Required if sessionId is not provided.
Header	password	AppViewX login password.	String	Required if sessionId is not provided.
Header	Content-Type	Specifies the nature of the data in the payload.	String	Value of the param should be ‘application/json’.
Query	gwkey	Tenant Key. Needed only in case of multi tenant installations.	String	
Query	gwsource	Source from which the request is triggered (Eg: web, external).	String	

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Parameter Details (continued)

Param Type	Name	Description	Field Type	Constraints
Body	payload	Contains all the params to be sent in the request body for the put request.	Key value pair Payload	

Payload

Name	Mandatory	Description	Field Type	Constraints
objectIds	Yes	Resource ID of the objects. Use the search API to search/get the resource ID.	String[]	-

Response Structure

On 202 Accepted, the action will be initiated and string of type application/json will be returned with the following body params:

Name	Description	Field Type
response	Success message or failure description in case of error.	String
message	Success message along with the objectIds or failure description in case of error.	String
appStatusCode	Application specific status code for the response. Will be non-null for failure response.	String
tags	More info in case of failure response.	Key value pair

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Status Codes

HTTP Status Code	appStatusCode	Message	Possible remediation
202 Accepted	-	Action triggered for the following <n> objects : <resourceIds>	-
400 Bad Request	ADC_OBJ_ACTION_003	Mandatory param 'objectIds' is missing or empty	Check if a non-null/non-empty value is given in the payload field - “objectIds”.
400 Bad Request	ADC_OBJ_ACTION_004	Action is invalid for the given objects.	Check for supported objects for the action and change the request objectId.
404 Not Found	ADC_CC_0501	No Objects found for performing the given action.	Check and ensure if the requested objectId is available and not deleted.
403 Forbidden	ADC_DASH_0029	No given object(s) have Write permission.	Check and ensure if the requested object has Read Write permission.

Sample Request/Response

Use Case

Trigger enables action on objects with resource id gw:@5f369cba0ca9846e86a13e82:@192.168.112.63:@Common,gw:@5f369cba0ca9846e86a13e82:@192.168.55.248:@

Sample Request

```
{
  "payload": {
    "objectIds": [
      "gw:@5f369cba0ca9846e86a13e82:@192.168.112.63:@Common",
      "gw:@5f369cba0ca9846e86a13e82:@192.168.55.248:@Common"
```

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```
  ]

 }

}
```

Sample Response

```
{

 "response": "Action triggered successfully.",

 "message": "Action triggered for the following 2 objects : gw:@5f369cba0ca9846e86a13e82:@192.168.112.63:@Common,
gw:@5f369cba0ca9846e86a13e82:@192.168.55.248:@Common",

 "appStatusCode": null,

 "tags": null,

 "headers": null

}
```

Action - Disable an Object

This API initiates action Disable on one or more ADC objects for which the action applies to. Disable action disables the object and terminate all active connections. Disable action is supported on the following object types:

- F5 - WideIP, WideIP pool, WideIP pool member, vip, vip pool member, LTM node, GTM server, virtual address
- A10 - Fqdn, ServiceIP, SLB_VSV, SLB Server, SLB VS
- AVI - Virtual Service
- Cisco - GSLB Answer, SLB virtual server, SLB real server

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- Citrix - GSLB virtual server, GSLB services, SLB virtual servers, SLB service group, SLB service
- Akamai - Datacenter

Before you begin

Before attempting to initiate enable action with this API, users must ensure the ACF permission “ADC > ControlCenter > Actions > Enable/Disable/ForceDown” is available. This can be checked under Accounts > Role > Authorized Functions.

Request Structure

URL: /adc-device-object-action-disable

Type: PUT

Parameters

Parameter Details

Param Type	Name	Description	Field Type	Constraints
Header	sessionId	Session ID received after login.	String	Required if username and password are not provided.
Header	username	AppViewX login username.	String	Required if sessionId is not provided.
Header	password	AppViewX login password.	String	Required if sessionId is not provided.
Header	Content-Type	Specifies the nature of the data in the payload.	String	Value of the param should be ‘application/json’.
Query	gwkey	Tenant Key. Needed only in case of multi tenant installations.	String	
Query	gwsource	Source from which the request is triggered (Eg: web, external).	String	
Body	payload	Contains all the params to be sent in the request body for the put request.	Key value pair Payload	

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Payload

Name	Mandatory	Description	Field Type	Constraints
objectIds	Yes	Resource ID of the objects. Use the search API to search/get the resource ID.	String[]	-

Response Structure

On 202 Accepted, the action will be initiated and string of type application/json will be returned with the following body params:

Name	Description	Field Type
response	Success message or failure description in case of error	String
message	Success message along with the objectIds or failure description in case of error	String
appStatusCode	Application specific status code for the response. Will be non-null for failure response.	String
tags	More info in case of failure response	Key value pair

Status Codes

HTTP Status Code	appStatusCode	Message	Possible remediation
202 Accepted	-	Action triggered for the following <n> objects : <resourceIds>	-
400 Bad Request	ADC_OBJ_ACTION_003	No object(s) not found to perform action.	Check if non-null/non-empty value is given in the payload field - “objectIds”.
400 Bad Request	ADC_OBJ_ACTION_004	Action is invalid for the given objects.	Check for supported objects for the action and change the request objectId.

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404 Not Found	ADC_CC_0501	No Objects found for performing the given action.	Check and ensure if the requested objectId is available and not deleted.
403 Forbidden	ADC_DASH_0029	No given object(s) have Write permission.	Check and ensure if the requested object has Read Write permission

Sample Request/Response

Use Case

Trigger disable action on objects with resource id gw:@5f369cba0ca9846e86a13e82:@192.168.112.63:@Common,gw:@5f369cba0ca9846e86a13e82:@192.168.55.248:@

Sample Request


```
{

 "payload": {

  "objectIds": [

   "gw:@5f369cba0ca9846e86a13e82:@192.168.112.63:@Common",

   "gw:@5f369cba0ca9846e86a13e82:@192.168.55.248:@Common"

  ]

 }

}
```


Sample Response


```
{

 "response": "Action triggered successfully.",

 "message": "Action triggered for the following 2 objects : gw:@5f369cba0ca9846e86a13e82:@192.168.112.63:@Common,
gw:@5f369cba0ca9846e86a13e82:@192.168.55.248:@Common",

 "appStatusCode": null,
```


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```
 "tags": null,

 "headers": null

}
```

Action - Forcedown Object

This API initiates action Forcedown on one or more ADC objects for which the action applies to. Forcedown action is supported on the following object types:

- F5 - LTM pool member,LTM Server

Before you begin

Before attempting to initiate forcedown action with this API, users must ensure the ACF permission “ADC Accounts > Role > Authorized Functions > ControlCenter > Actions > Enable/Disable/ForceDown” is available. This can be checked under Accounts > Role > Authorized Functions.

Request Structure

URL: /adc-device-object-action-forcedown

Type: PUT

Parameters

Parameter Details

Param Type	Name	Description	Field Type	Constraints
Header	sessionId	Session ID received after login.	String	Required if username and password are not provided.
Header	username	AppViewX login username.	String	Required if sessionId is not provided.
Header	password	AppViewX login password.	String	Required if sessionId is not provided.
Header	Content-Type	Specifies the nature of the data in the payload.	String	Value of the param should be ‘application/json’.

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Parameter Details (continued)

Param Type	Name	Description	Field Type	Constraints
Query	gwkey	Tenant Key. Needed only in case of multi tenant installations.	String	
Query	gwsource	Source fro.m which the request is triggered (Eg: web, external).	String	
Body	payload	Contains all the params to be sent in the request body for the put request.	Key value pair Payload	

Payload

Name	Mandatory	Description	Field Type	Constraints
objectIds	Yes	Resource ID of the objects. Use the search API to search/get the resource ID.	String[]	-

Response Structure

On 202 Accepted, the action will be initiated and string of type application/json will be returned with the following body params:

Name	Description	Field Type
response	Success message or failure description in case of error.	String
message	Success message along with the objectIds or failure description in case of error.	String
appStatusCode	Application specific status code for the response. Will be non-null for failure response.	String
tags	More info in case of failure response.	Key value pair

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Status Codes

HTTP Status Code	appStatusCode	Message	Possible remediation
202 Accepted	-	Action triggered for the following <n> objects : <resourceIds>	-
400 Bad Request	ADC_OBJ_ACTION_003	No object(s) not found to perform action.	Check if non-null/non-empty value is given in the payload field - “objectIds”.
400 Bad Request	ADC_OBJ_ACTION_004	Action is invalid for the given objects.	Check for supported objects for the action and change the request objectId.
404 Not Found	ADC_CC_0501	No Objects found for performing the given action.	Check and ensure if the requested objectId is available and not deleted.
403 Forbidden	ADC_DASH_0029	No given object(s) have Write permission.	Check and ensure if the requested object has Read Write permission.

Sample Request/Response

Use Case

Trigger disable action on objects with resource id lpm:@5f369cba0ca9846e86a13e82:@appviewx_pool:@Common::1.1.1.10:12:@Common

Sample Request

```
{
  "payload": {
    "objectIds": [
      "lpm:@5f369cba0ca9846e86a13e82:@appviewx_pool:@Common::1.1.1.10:12:@Common"
    ]
```

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```
 }

}
```

Sample Response

```
{

 "response": "Action triggered successfully.",

 "message": "Action triggered for the following 1 objects :
lpm:@5f369cba0ca9846e86a13e82:@appviewx_pool:@Common::1.1.1.10:12:@Common",

 "appStatusCode": null,

 "tags": null,

 "headers": null

}
```

Action - Forcedown Active Object

This API initiates action Forcedown active on one or more ADC objects for which the action applies to. Forcedown active action is supported on the following object types:

- F5 - LTM pool member
- A10 - Virtual Service, Service Group Member
- Citrix - SLB Virtual Server

Before you begin

Before attempting to initiate enable action with this API, users must ensure the ACF permission “ADC > ControlCenter > Actions > ForceDown active” is available. This can be checked under Accounts > Role > Authorized Functions.

Request Structure

URL: /adc-device-object-action-forcedown_active

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Type: PUT

Parameters

Parameter Details

Param Type	Name	Description	Field Type	Constraints
Header	sessionId	Session IDreceived after login.	String	Required if username and password are not provided.
Header	username	AppViewX login username.	String	Required if sessionId is not provided.
Header	password	AppViewX login password.	String	Required if sessionId is not provided.
Header	Content-Type	Specifies the nature of the data in the payload.	String	Value of the param should be ‘application/json’.
Query	gwkey	Tenant Key. Needed only in case of mu.lti tenant installations.	String	
Query	gwsource	Source from which the request is triggered (Eg: web, external)	String	
Body	payload	Contains all the params to be sent in the request body for the put request.	Key value pair Payload	

Payload

Name	Mandatory	Description	Field Type	Constraints
objectIds	Yes	Resource ID of the objects. Use the search API to search/get the resource ID.	String[]	-

Response Structure

On 202 Accepted, the action will be initiated and string of type application/json will be returned with the following body params:

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Name	Description	Field Type
response	Success message or failure description in case of error.	String
message	Success message along with the objectIds or failure description in case of error.	String
appStatusCode	Application specific status code for the response. Will be non-null for failure response.	String
tags	More info in case of failure response.	Key value pair

Status Codes

HTTP Status Code	appStatusCode	Message	Possible remediation
202 Accepted	-	Action triggered for the following <n> objects : <resourceIds>	-
400 Bad Request	ADC_OBJ_ACTION_003	No object(s) not found to perform action.	Check if non-null/non-empty value is given in the payload field - “objectIds”.
400 Bad Request	ADC_OBJ_ACTION_004	Action is invalid for the given objects.	Check for supported objects for the action and change the request objectId.
404 Not Found	ADC_CC_0501	No Objects found for performing the given action.	Check and ensure if the requested objectId is available and not deleted.
403 Forbidden	ADC_DASH_0029	No given object(s) have Write permission.	Check and ensure if the requested object has Read Write permission.

Sample Request/Response

Use Case

Trigger disable action on objects with resource id lpm:@5f369cba0ca9846e86a13e82:@appviewx_pool:@Common::1.1.1.10:12:@Common

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Sample Request

```
{

  "payload": {

    "objectIds": [

      "lpm:@5f369cba0ca9846e86a13e82:@appviewx_pool:@Common::1.1.1.10:12:@Common"

    ]

  }

}
```

Sample Response

```
{

  "response": "Action triggered successfully.",

  "message": "Action triggered for the following 1 objects :
lpm:@5f369cba0ca9846e86a13e82:@appviewx_pool:@Common::1.1.1.10:12:@Common",

  "appStatusCode": null,

  "tags": null,

  "headers": null

}
```

Action - Graceful Disable Object

This API initiates action Graceful disable on one or more ADC objects to which the action applies to. Graceful disable is used to disable an object only when all the currently active client connections are closed by either the server or the client. Graceful disable action is supported on the following object types:

- AVI - AVI Server

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Before you begin

Before attempting to initiate graceful disable action with this API, users must ensure the ACF permission “ADC > ControlCenter > Actions > Enable/Disable/ForceDown” is available. This can be checked under Accounts > Role > Authorized Functions.

Request Structure

URL: /adc-device-object-action-gracefuldisable

Type: PUT

Parameters

Parameter Details

Param Type	Name	Description	Field Type	Constraints
Header	sessionId	Session ID received after login.	String	Required if username and password are not provided
Header	username	AppViewX login username.	String	Required if sessionId is not provided
Header	password	AppViewX login password.	String	Required if sessionId is not provided
Header	Content-Type	Specifies the nature of the data in the payload.	String	Value of the param should be ‘application/json’.
Query	gwkey	Tenant Key. Needed only in case of multi tenant installations.	String	
Query	gwsource	Source from which the request is triggered (Eg: web, external).	String	
Body	payload	Contains all the params to be sent in the request body for the put request.	Key value pair Payload	

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Payload

Name	Mandatory	Description	Field Type	Constraints
objectIds	Yes	Resource ID of the objects. Use the search API to search/get the resource ID.	String[]	-

Response Structure

On 202 Accepted, the action will be initiated and string of type application/json will be returned with the following body params:

Name	Description	Field Type
response	Success message or failure description in case of error.	String
message	Success message along with the objectIds or failure description in case of error.	String
appStatusCode	Application specific status code for the response. Will be non-null for failure response.	String
tags	More info in case of failure response.	Key value pair

Status Codes

HTTP Status Code	appStatusCode	Message	Possible remediation
202 Accepted	-	Action triggered for the following <n> objects : <resourceIds>	-
400 Bad Request	ADC_OBJ_ACTION_003	No object(s) not found to perform action.	Check if non-null/non-empty value is given in the payload field - “objectIds”.
400 Bad Request	ADC_OBJ_ACTION_004	Action is invalid for the given objects.	Check for supported objects for the action and change the request objectId.

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HTTP Status Code	appStatusCode	Message	Possible remediation
404 Not Found	ADC_CC_0501	No Objects found for performing the given action.	Check and ensure if the requested objectId is available and not deleted.
403 Forbidden	ADC_DASH_0029	No given object(s) have Write permission.	Check and ensure if the requested object has Read Write permission.

Sample Request/Response

Use Case

Trigger graceful disable action on objects with resource id - aviserver:@5f369d260ca9846e86a13f30:@Pool_Other:@0.0.0.0:80:@aviserver:@Other:@0.0.0.0:@Default-Cloud

Sample Request

```
{

 "payload": {

  "objectIds": [  "aviserver:@5f369d260ca9846e86a13f30:@Pool_Other:@0.0.0.0:80:@aviserver:@Other:@0.0.0.0:@Default-Cloud"

  ]

 }

}
```

Sample Response

```
{

 "response": "Action triggered successfully.",

 "message": "Action triggered for the following 1 objects :
aviserver:@5f369d260ca9846e86a13f30:@Pool_Other:@0.0.0.0:80:@aviserver:@Other:@0.0.0.0:@Default-Cloud",

 "appStatusCode": null,
```

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```
 "tags": null,

 "headers": null

}
```

Action - Enable Persistence for Object

This API initiates action Enable persistence on one or more ADC objects for which the action applies to. Enable persistence is used to turn on the tracking and storing of session data, which is used to ensure that client requests are directed to the same pool member throughout the life of a session or during subsequent sessions. Enable persistence action is supported on the following object types:

- F5 – Wideip

Before you begin

Before attempting to initiate enable persistence action with this API, users must ensure the ACF permission “ADC > ControlCenter > Actions > Enable / Disable persistence” is available. This can be checked under Accounts > Role > Authorized Functions.

Request Structure

URL: */adc-device-object-action-enablepersistence*

Type: PUT

Parameters

Parameter Details

Param Type	Name	Description	Field Type	Constraints
Header	sessionId	Session ID received after login.	String	Required if username and password are not provided.
Header	username	AppViewX login username.	String	Required if sessionId is not provided.
Header	password	AppViewX login password.	String	Required if sessionId is not provided.

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Parameter Details (continued)

Param Type	Name	Description	Field Type	Constraints
Header	Content-Type	Specifies the nature of the data in the payload.	String	Value of the param should be ‘application/json’.
Query	gwkey	Tenant Key. Needed only in case of multi tenant installations.	String	
Query	gwsource	Source from which the request is triggered (Eg: web, external).	String	
Body	payload	Contains all the params to be sent in the request body for the put request.	Key value pair Payload	

Payload

Name	Mandatory	Description	Field Type	Constraints
objectIds	Yes	Resource ID of the objects. Use the search API to search/get the resource ID.	String[]	-

Response Structure

On 202 Accepted, the action will be initiated and string of type application/json will be returned with the following body params:

Name	Description	Field Type
response	Success message or failure description in case of error.	String
message	Success message along with the objectIds or failure description in case of error.	String
appStatusCode	Application specific status code for the response. Will be non-null for failure response.	String
tags	More info in case of failure response.	Key value pair

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Status Codes

HTTP Status Code	appStatusCode	Message	Possible remediation
202 Accepted	-	Action triggered for the following <n> objects : <resourceIds>	-
400 Bad Request	ADC_OBJ_ACTION_003	No object(s) not found to perform action.	Check if non-null/non-empty value is given in the payload field - “objectIds”.
400 Bad Request	ADC_OBJ_ACTION_004	Action is invalid for the given objects.	Check for supported objects for the action and change the request objectId.
404 Not Found	ADC_CC_0501	No Objects found for performing the given action.	Check and ensure if the requested objectId is available and not deleted.
403 Forbidden	ADC_DASH_0029	No given object(s) have Write permission.	Check and ensure if the requested object has Read Write permission.

Sample Request/Response

Use Case

Trigger enable persistence action on objects with resource id gw:@5f369cba0ca9846e86a13e82:@192.168.112.63:@Common,gw:@5f369cba0ca9846e86a13e82:@192.168.55.248:@

Sample Request

```
{
  "payload": {
    "objectIds": [
      "gw:@5f369cba0ca9846e86a13e82:@192.168.112.63:@Common",
      "gw:@5f369cba0ca9846e86a13e82:@192.168.55.248:@Common"
```

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```
  ]

 }

}
```

Sample Response

```
{

 "response": "Action triggered successfully.",

 "message": "Action triggered for the following 2 objects :
gw:@5f369cba0ca9846e86a13e82:@192.168.112.63:@Common,gw:@5f369cba0ca9846e86a13e82:@192.168.55.248:@Common",

 "appStatusCode": null,

 "tags": null,

 "headers": null

}
```

Action - Disable Persistence for Object

This API initiates action Disable persistence on one or more ADC objects for which the action applies to. Disable persistence is used to turn off the tracking and storing of session data, which is used to ensure that client requests are directed to the same pool member throughout the life of a session or during subsequent sessions. Enable persistence action is supported on the following object types:

- F5 – Wideip

Before you begin

Before attempting to initiate disable persistence action with this API, users must ensure the ACF permission “ADC > ControlCenter > Actions > Enable / Disable persistence” is available. This can be checked under Accounts > Role > Authorized Functions.

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Request Structure

URL: */adc-device-object-action-disablepersistence*

Type: PUT

Parameters

Parameter Details

Param Type	Name	Description	Field Type	Constraints
Header	sessionId	Session ID received after login.	String	Required if username and password are not provided.
Header	username	AppViewX login username.	String	Required if sessionId is not provided.
Header	password	AppViewX login password.	String	Required if sessionId is not provided
Header	Content-Type	Specifies the nature of the data in the payload.	String	Value of the param should be ‘application/json’.
Query	gwkey	Tenant Key. Needed only in case of multi tenant installations.	String	
Query	gwsource	Source from which the request is triggered (Eg: web, external).	String	
Body	payload	Contains all the params to be sent in the request body for the put request.	Key value pair Payload	

Payload

Name	Mandatory	Description	Field Type	Constraints
objectIds	Yes	Resource ID of the objects. Use the search API to search/get the resource ID.	String[]	-

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Response Structure

On 202 Accepted, the action will be initiated and string of type application/json will be returned with the following body params:

Name	Description	Field Type
response	Success message or failure description in case of error.	String
message	Success message along with the objectIds or failure description in case of error.	String
appStatusCode	Application specific status code for the response. Will be non-null for failure response.	String
tags	More info in case of failure response.	Key value pair

Status Codes

HTTP Status Code	appStatusCode	Message	Possible remediation
202 Accepted	-	Action triggered for the following <n> objects : <resourceIds>	-
400 Bad Request	ADC_OBJ_ACTION_003	No object(s) not found to perform action.	Check if non-null/non-empty value is given in the payload field - “objectIds”.
400 Bad Request	ADC_OBJ_ACTION_004	Action is invalid for the given objects.	Check for supported objects for the action and change the request objectId.
404 Not Found	ADC_CC_0501	No Objects found for performing the given action.	Check and ensure if the requested objectId is available and not deleted.
403 Forbidden	ADC_DASH_0029	No given object(s) have Write permission.	Check and ensure if the requested object has Read Write permission.

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Sample Request/Response

Use Case

Trigger disable persistence action on objects with resource id gw:@<objectid>:@192.168.112.63:@Common,gw:@5f369cba0ca9846e86a13e82:@192.168.55.248:@Common

Note: <objectid> represents your object ID.

Sample Request

```
{

 "payload": {

  "objectIds": [

   "gw:@5f369cba0ca9846e86a13e82:@192.168.112.63:@Common",

   "gw:@5f369cba0ca9846e86a13e82:@192.168.55.248:@Common"

  ]

 }

}
```

Sample Response

```
{

 "response": "Action triggered successfully.",

 "message": "Action triggered for the following 2 objects :
gw:@5f369cba0ca9846e86a13e82:@192.168.112.63:@Common,gw:@5f369cba0ca9846e86a13e82:@192.168.55.248:@Common",

 "appStatusCode": null,

 "tags": null,

 "headers": null
```

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```
}
```


- Before you begin
- Request Structure
- Payload
- Response Structure
- Status Codes
- Sample Request/Response

Before you begin

Before attempting to initiate disable persistence action with this API, users must ensure the ACF permission “ADC > ControlCenter > Actions > Enable / Disable persistence” is available. This can be checked under Accounts > Role > Authorized Functions.

Request Structure

URL: */adc-device-object-action-disablepersistence*

Type: PUT

Param Type	Name	Description	Field Type	Constraints
Header	sessionId	Session ID received after login.	String	Required if username and password are not provided.
Header	username	AppViewX login username.	String	Required if sessionId is not provided.
Header	password	AppViewX login password.	String	Required if sessionId is not provided
Header	Content-Type	Specifies the nature of the data in the payload.	String	Value of the param should be ‘application/json’.
Query	gwkey	Tenant Key. Needed only in case of multi tenant installations.	String	

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Param Type	Name	Description	Field Type	Constraints
Query	gwsource	Source from which the request is triggered (Eg: web, external).	String	
Body	payload	Contains all the params to be sent in the request body for the put request.	Key value pair Payload	

Payload

Name	Mandatory	Description	Field Type	Constraints
objectIds	Yes	Resource ID of the objects. Use the search API to search/get the resource ID.	String[]	-

Response Structure

On 202 Accepted, the action will be initiated and string of type application/json will be returned with the following body params

Name	Description	Field Type
response	Success message or failure description in case of error.	String
message	Success message along with the objectIds or failure description in case of error.	String
appStatusCode	Application specific status code for the response. Will be non-null for failure response.	String
tags	More info in case of failure response.	Key value pair

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Status Codes

HTTP Status Code	appStatusCode	Message	Possible remediation
202 Accepted	-	Action triggered for the following <n> objects : <resourceIds>	-
400 Bad Request	ADC_OBJ_ACTION_003	No object(s) not found to perform action.	Check if non-null/non-empty value is given in the payload field - “objectIds”.
400 Bad Request	ADC_OBJ_ACTION_004	Action is invalid for the given objects.	Check for supported objects for the action and change the request objectId.
404 Not Found	ADC_CC_0501	No Objects found for performing the given action.	Check and ensure if the requested objectId is available and not deleted.
403 Forbidden	ADC_DASH_0029	No given object(s) have Write permission.	Check and ensure if the requested object has Read Write permission.

Sample Request/Response

- Use Case
- Sample Request
- Sample Response

Use Case

Trigger disable persistence action on objects with resource id gw:@<objectid>:@192.168.112.63:@Common,gw:@5f369cba0ca9846e86a13e82:@192.168.55.248:@Common

Note: <objectid> represents your object ID.

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Sample Request


```
{

  "payload": {

    "objectIds": [

      "gw:@5f369cba0ca9846e86a13e82:@192.168.112.63:@Common",

      "gw:@5f369cba0ca9846e86a13e82:@192.168.55.248:@Common"

    ]

  }

}
```


Sample Response


```
{

  "response": "Action triggered successfully.",

  "message": "Action triggered for the following 2 objects :
gw:@5f369cba0ca9846e86a13e82:@192.168.112.63:@Common,gw:@5f369cba0ca9846e86a13e82:@192.168.55.248:@Common",

  "appStatusCode": null,

  "tags": null,

  "headers": null

}
```


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Action - Clear Persistence Record

This API initiates action Clear persistence records on one or more ADC objects for which the action applies to. Clear persistence action is supported on the following object types:

• F5 – Virtual Server, LTM pool

Before you begin

Before attempting to initiate Clear persistence records action with this API, users must ensure the ACF permission “ADC > ControlCenter > Actions > Clear persistence connections” is available. This can be checked under Accounts > Role > Authorized Functions.

Request Structure

URL: */adc-device-object-action-clearpersistencerecords*

Type: PUT

Parameters

Parameter Details

Param Type	Name	Description	Field Type	Constraints
Header	sessionId	Session ID received after login.	String	Required if username and password are not provided.
Header	username	AppViewX login username.	String	Required if .sessionId is not provided
Header	password	AppViewX login password.	String	Required if sessionId is not provided.
Header	Content-Type	Specifies the nature of the data in the payload.	String	Value of the param should be ‘application/json’.
Query	gwkey	Tenant Key. Needed only in case of multi tenant installations.	String	
Query	gwsource	Source from which the request is triggered (Eg: web, external).	String	
Body	payload	Contains all the params to be sent in the request body for the put request	Key value pair	

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Parameter Details (continued)

Param Type	Name	Description	Field Type	Constraints
			Payload	

Payload

Name	Mandatory	Description	Field Type	Constraints
objectIds	Yes	Resource ID of the objects. Use the search API to search/get the resource ID.	String[]	-

Response Structure

On 202 Accepted, the action will be initiated and string of type application/json will be returned with the following body params:

Name	Description	Field Type
response	Success message or failure description in case of error.	String
message	Success message along with the objectIds or failure description in case of error.	String
appStatusCode	Application specific status code for the response. Will be non-null for failure response.	String
tags	More info in case of failure response.	Key value pair

Status Codes

HTTP Status Code	appStatusCode	Message	Possible Remediation
202 Accepted	-	Action triggered for the following <n> objects : <resourceIds>	-

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HTTP Status Code	appStatusCode	Message	Possible Remediation
400 Bad Request	ADC_OBJ_ACTION_003	No object(s) not found to perform action.	Check if a non-null/non-empty value is given in the payload field - “objectIds”.
400 Bad Request	ADC_OBJ_ACTION_004	Action is invalid for the given objects.	Check for supported objects for the action and change the request objectId.
404 Not Found	ADC_CC_0501	No Objects found for performing the given action.	Check and ensure if the requested objectId is available and not deleted.
403 Forbidden	ADC_DASH_0029	No given object(s) have Write permission.	Check and ensure if the requested object has Read Write permission.

Sample Request/Response

Use Case

Trigger clear persistence record action on objects with resource id - vs:@5f369cc20ca9846e86a13e99:@ACLTest:@Common

Sample Request

```
{

 "payload": {

  "objectIds": [

   "vs:@5f369cc20ca9846e86a13e99:@ACLTest:@Common"

  ]

 }

}
```

Sample Response

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```
{

 "response": "Action triggered successfully.",

 "message": "Action triggered for the following 1 objects : vs:@5f369cc20ca9846e86a13e99:@ACLTest:@Common",

 "appStatusCode": null,

 "tags": null,

 "headers": null

}
```


Action – InService (Activate) Object

This API initiates action InService(Activate) on one or more ADC objects for which the action applies to. InService(Activate) action is supported on the following object types:

- Cisco – GSLB Answer, SLB virtual server, SLB real server

Before you begin

Before attempting to initiate InService(Activate) action with this API, users must ensure the ACF permission “ADC > ControlCenter > Actions > Enable / Disable persistence” is available. This can be checked under Accounts > Role > Authorized Functions.

Request Structure

URL: */adc-device-object-action-activate*

Type: PUT

Parameters

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Parameter Details

Param Type	Name	Description	Field Type	Constraints
Header	sessionId	Session ID received after login.	String	Required if username and password are not provided.
Header	username	AppViewX login username.	String	Required if sessionId is not provided.
Header	password	AppViewX login password.	String	Required if sessionId is not provided.
Header	Content-Type	Specifies the nature of the data in the payload.	String	Value of the param should be 'application/json'.
Query	gwkey	Tenant Key. Needed only in case of multi tenant installations.	String	
Query	gwsource	Source from which the request is triggered (Eg: web, external).	String	
Body	payload	Contains all the params to be sent in the request body for the put request.	Key value pair Payload	

Payload

Name	Mandatory	Description	Field Type	Constraints
objectIds	Yes	Resource ID of the objects. Use the search API to search/get the resource ID.	String[]	-

Response Structure

On 202 Accepted, the action will be initiated and string of type application/json will be returned with the following body params:

Name	Description	Field Type
response	Success message or failure description in case of error.	String

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Name	Description	Field Type
message	Success message along with the objectIds or failure description in case of error.	String
appStatusCode	Application specific status code for the response. Will be non-null for failure response.	String
tags	More info in case of failure response.	Key value pair

Status Codes

HTTP Status Code	appStatusCode	Message	Possible remediation
202 Accepted	-	Action triggered for the following <n> objects : <resourceIds>	-
400 Bad Request	ADC_OBJ_ACTION_003	No object(s) not found to perform action.	Check if a non-null/non-empty value is given in the payload field - “objectIds”.
400 Bad Request	ADC_OBJ_ACTION_004	Action is invalid for the given objects.	Check for supported objects for the action and change the request objectId.
404 Not Found	ADC_CC_0501	No Objects found for performing the given action.	Check and ensure if the requested objectId is available and not deleted.
403 Forbidden	ADC_DASH_0029	No given object(s) have Write permission.	Check and ensure if the requested object has Read Write permission.

Sample Request/Response

Use Case

Trigger activate action on objects with resource id - slbrs:@5f369cb20ca9846e86a13e72:@ipv6_server-farm_82::DemoRealServers:@Admin

Sample Request

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```
{

  "payload": {

    "objectIds": [

      "slbrs:@5f369cb20ca9846e86a13e72:@ipv6_server-farm_82::DemoRealServers:@Admin"

    ]

  }

}
```

Sample Response

```
{

  "response": "Action triggered successfully.",

  "message": "Action triggered for the following 1 objects : slbrs:@5f369cb20ca9846e86a13e72:@ipv6_server-
farm_82::DemoRealServers:@Admin",

  "appStatusCode": null,

  "tags": null,

  "headers": null

}
```

Action - OutOfService (Suspend) Object

This API initiates action OutOfService(Suspend) on one or more ADC objects for which the action applies to. Suspend action is supported on the following object types:

- Cisco – GSLB Answer, SLB virtual server, SLB real server

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Before you begin

Before attempting to initiate suspend action with this API, users must ensure the ACF permission “ADC > ControlCenter > Actions > Enable / Disable persistence” is available. This can be checked under Accounts > Role > Authorized Functions.

Request Structure

URL: */adc-device-object-action-suspend*

Type: PUT

Parameters

Parameter Details

Param Type	Name	Description	Field Type	Constraints
Header	sessionId	Session ID received after login.	String	Required if username and password are not provided.
Header	username	AppViewX login username.	String	Required if sessionId is not provided.
Header	password	AppViewX login password.	String	Required if sessionId is not provided.
Header	Content-Type	Specifies the nature of the data in the payload.	String	Value of the param should be ‘application/json’.
Query	gwkey	Tenant Key. Needed only in case of multi tenant installations.	String	
Query	gwsource	Source from which the request is triggered (Eg: web, external)	String	
Body	payload	Contains all the params to be sent in the request body for the put request.	Key value pair Payload	

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Payload

Name	Mandatory	Description	Field Type	Constraints
objectIds	Yes	Resource ID of the objects. Use the search API to search/get the resource ID.	String[]	-

Response Structure

On 202 Accepted, the action will be initiated and string of type application/json will be returned with the following body params:

Name	Description	Field Type
response	Success message or failure description in case of error.	String
message	Success mes.sage along with the objectIds or failure description in case of error.	String
appStatusCode	Application specific status code for the response. Will be non-null for failure response.	String
tags	More info in case of failure response	Key value pair

Status Codes

HTTP Status Code	appStatusCode	Message	Possible remediation
202 Accepted	-	Action triggered for the following <n> objects : <resourceIds>	-
400 Bad Request	ADC_OBJ_ACTION_003	No object(s) not found to perform action.	Check if non-null/non-empty value is given in the payload field - “objectIds”.
400 Bad Request	ADC_OBJ_ACTION_004	Action is invalid for the given objects.	Check for supported objects for the action and change the request objectId.

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HTTP Status Code	appStatusCode	Message	Possible remediation
404 Not Found	ADC_CC_0501	No Objects found for performing the given action.	Check and ensure if the requested objectId is available and not deleted.
403 Forbidden	ADC_DASH_0029	No given object(s) have Write permission.	Check and ensure if the requested object has Read Write permission.

Sample Request/Response

Use Case

Trigger suspend action on objects with resource id - slbrs:@5f369cb20ca9846e86a13e72:@ipv6_server-farm_82::DemoRealServers:@Admin

Sample Request


```
{

 "payload": {

  "objectIds": [

   "slbrs:@5f369cb20ca9846e86a13e72:@ipv6_server-farm_82::DemoRealServers:@Admin"

  ]

 }

}
```


Sample Response


```
{

 "response": "Action triggered successfully.",

 "message": "Action triggered for the following 1 objects : slbrs:@5f369cb20ca9846e86a13e72:@ipv6_server-
farm_82::DemoRealServers:@Admin",
```


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```
 "appStatusCode": null,

 "tags": null,

 "headers": null

}
```


- Before you begin
- Request Structure
- Payload
- Response Structure
- Status Codes
- Sample Request/Response

Before you begin

Before attempting to initiate suspend action with this API, users must ensure the ACF permission “ADC > ControlCenter > Actions > Enable / Disable persistence” is available. This can be checked under Accounts > Role > Authorized Functions.

Request Structure

URL: */adc-device-object-action-suspend*

Type: PUT

Param Type	Name	Description	Field Type	Constraints
Header	sessionId	Session ID received after login.	String	Required if username and password are not provided.
Header	username	AppViewX login username.	String	Required if sessionId is not provided.
Header	password	AppViewX login password.	String	Required if sessionId is not provided.

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Param Type	Name	Description	Field Type	Constraints
Header	Content-Type	Specifies the nature of the data in the payload.	String	Value of the param should be ‘application/json’.
Query	gwkey	Tenant Key. Needed only in case of multi tenant installations.	String	
Query	gwsource	Source from which the request is triggered (Eg: web, external)	String	
Body	payload	Contains all the params to be sent in the request body for the put request.	Key value pair Payload	

Payload

Name	Mandatory	Description	Field Type	Constraints
objectIds	Yes	Resource ID of the objects. Use the search API to search/get the resource ID.	String[]	-

Response Structure

On 202 Accepted, the action will be initiated and string of type application/json will be returned with the following body params:

Name	Description	Field Type
response	Success message or failure description in case of error.	String
message	Success mes.sage along with the objectIds or failure description in case of error.	String
appStatusCode	Application specific status code for the response. Will be non-null for failure response.	String
tags	More info in case of failure response	Key value pair

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Status Codes

HTTP Status Code	appStatusCode	Message	Possible remediation
202 Accepted	-	Action triggered for the following <n> objects : <resourceIds>	-
400 Bad Request	ADC_OBJ_ACTION_003	No object(s) not found to perform action.	Check if non-null/non-empty value is given in the payload field - “objectIds”.
400 Bad Request	ADC_OBJ_ACTION_004	Action is invalid for the given objects.	Check for supported objects for the action and change the request objectId.
404 Not Found	ADC_CC_0501	No Objects found for performing the given action.	Check and ensure if the requested objectId is available and not deleted.
403 Forbidden	ADC_DASH_0029	No given object(s) have Write permission.	Check and ensure if the requested object has Read Write permission.

Sample Request/Response

- Use Case
- Sample Request
- Sample Response

Use Case

Trigger suspend action on objects with resource id - slbrs:@5f369cb20ca9846e86a13e72:@ipv6_server-farm_82::DemoRealServers:@Admin

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Sample Request


```
{

 "payload": {

  "objectIds": [

   "slbrs:@5f369cb20ca9846e86a13e72:@ipv6_server-farm_82::DemoRealServers:@Admin"

  ]

 }

}
```


Sample Response


```
{

 "response": "Action triggered successfully.",

 "message": "Action triggered for the following 1 objects : slbrs:@5f369cb20ca9846e86a13e72:@ipv6_server-
farm_82::DemoRealServers:@Admin",

 "appStatusCode": null,

 "tags": null,

 "headers": null

}
```


Action - Set Service Down Value

This API initiates action Set service down on one or more ADC objects for which the action applies to. Action Service Down is supported on the following object types:

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• F5 - LTM pool

Before you begin

Before attempting to initiate set service down action with this API, users must ensure the ACF permission “ADC > ControlCenter > Actions > Service down” is available. This can be checked under Accounts > Role > Authorized Functions.

Request Structure

URL: */adc-device-object-action-servicedown*

Type: PUT

Parameters

Parameter Details

Param Type	Name	Description	Field Type	Constraints
Header	sessionId	Session ID received after login.	String	Required if username and password are not provided.
Header	username	AppViewX login username	String	Required if sessionId is not provided.
Header	password	AppViewX login password.	String	Required if sessionId is not provided.
Header	Content-Type	Specifies the nature of the data in the payload.	String	Value of the param should be ‘application/json’.
Query	gwkey	Tenant Key. Needed only in case of multi tenant installations.	String	
Query	gwsource	Source from which the request is triggered (Eg: web, external)	String	
Body	payload	Contains all the params to be sent in the request body for the put request	Key value pair Payload	

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Payload

Name	Mandatory	Description.	Field Type	Constraints
objects	Yes	Object information containing resource ID and parent resource ID.	Key value pair[] Object Details	-
serviceDown	Yes	Service down value to set. Possible service down values - none,reset,reselect,drop.	String	It accepts only alphanumeric characters, '-' , '.', '_', '(', ')'.

Response Structure

On 202 Accepted, the action will be initiated and string of type application/json will be returned with the following body params:

Name	Description	Field Type
response	Success message or failure description in case of error.	String
message	Success message along with the objectIds or failure description in case of error.	String
appStatusCode	Application specific status code for the response. Will be non-null for failure response.	String
tags	More info in case of failure response.	Key value pair

Status Codes

HTTP Status Code	appStatusCode	Message	Possible Remediation
202 Accepted	-	Action triggered for the following <n> object(s) : <resourceIds>	-

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HTTP Status Code	appStatusCode	Message	Possible Remediation
400 Bad Request	ADC_CC_05014	Invalid input. Please provide 'serviceDown' to perform action!	Check and ensure if a non-null/non-empty value is given in payload field - ‘serviceDown’.
400 Bad Request	ADC_OBJ_ACTION_001	Object id not found.	Check and ensure if a non-null/non-empty value is given in payload field - ‘objects._id’.
400 Bad Request	ADC_OBJ_ACTION_002	parent object id not found.	Check and ensure if a non-null/non-empty value is given in the payload field - ‘objects.parent_id’.
400 Bad Request	ADC_OBJ_ACTION_003	No object(s) not found to perform action.	Check and ensure if a non-null/non-empty value is given in the payload field - ‘objects’.
400 Bad Request	ADC_OBJ_ACTION_004	Action is invalid for the given objects.	Check for supported objects for the action and change the request objectId.
403 Forbidden	ADC_DASH_0029	No given object(s) have Write permission.	Check and ensure if the requested object has Read Write permission.
403 Forbidden	ADC_INV_1077	Action cannot be performed on unmanaged device object(s).	-

Sample Request/Response

Use Case

Set service down value to reselect on object with resource id - lp:@5f4393cd80d9c82e890183ce:@tets.avx.com_pool:@Common with parent object - vs:@5f4393cd80d9c82e890183ce:@DC_vs:@Common

Sample Request

```
{
```

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```
 "payload": {

  "objects": [

   {

    "_id": "lp:@5f4393cd80d9c82e890183ce:@tets.avx.com_pool:@Common",

    "parent_id": "vs:@5f4393cd80d9c82e890183ce:@DC_vs:@Common"

   }

  ],

  "serviceDown": "reselect"

 }

}
```


Sample Response


```
{

 "response": "Action triggered successfully.",

 "message": "Action triggered for the following 1 object(s) : lp:@5f4393cd80d9c82e890183ce:@tets.avx.com_pool:@Common",

 "appStatusCode": null,

 "tags": null,

 "headers": null

}
```


- Before you begin
- Request Structure
- Payload

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• Response Structure
• Status Codes
• Sample Request/Response

Before you begin

Before attempting to initiate set service down action with this API, users must ensure the ACF permission “ADC > ControlCenter > Actions > Service down” is available. This can be checked under Accounts > Role > Authorized Functions.

Request Structure

URL: */adc-device-object-action-servicedown*

Type: PUT

Param Type	Name	Description	Field Type	Constraints
Header	sessionId	Session ID received after login.	String	Required if username and password are not provided.
Header	username	AppViewX login username	String	Required if sessionId is not provided.
Header	password	AppViewX login password.	String	Required if sessionId is not provided.
Header	Content-Type	Specifies the nature of the data in the payload.	String	Value of the param should be ‘application/json’.
Query	gwkey	Tenant Key. Needed only in case of multi tenant installations.	String	
Query	gwsource	Source from which the request is triggered (Eg: web, external)	String	
Body	payload	Contains all the params to be sent in the request body for the put request	Key value pair Payload	

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Payload

Name	Mandatory	Description.	Field Type	Constraints
objects	Yes	Object information containing resource ID and parent resource ID.	Key value pair[] Object Details	-
serviceDown	Yes	Service down value to set. Possible service down values - none,reset,reselect,drop.	String	It accepts only alphanumeric characters, ‘-’ , ‘.’, ‘_’, ‘(‘, ‘)’.

Response Structure

On 202 Accepted, the action will be initiated and string of type application/json will be returned with the following body params

Name	Description	Field Type
response	Success message or failure description in case of error.	String
message	Success message along with the objectIds or failure description in case of error.	String
appStatusCode	Application specific status code for the response. Will be non-null for failure response.	String
tags	More info in case of failure response.	Key value pair

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Status Codes

HTTP Status Code	appStatusCode	Message	Possible Remediation
202 Accepted	-	Action triggered for the following <n> object(s) : <resourceIds>	-
400 Bad Request	ADC_CC_05014	Invalid input. Please provide 'serviceDown' to perform action!	Check and ensure if a non-null/non-empty value is given in payload field - ‘serviceDown’.
400 Bad Request	ADC_OBJ_ACTION_001	Object id not found.	Check and ensure if a non-null/non-empty value is given in payload field - ‘objects._id’.
400 Bad Request	ADC_OBJ_ACTION_002	parent object id not found.	Check and ensure if a non-null/non-empty value is given in the payload field - ‘objects.parent_id’.
400 Bad Request	ADC_OBJ_ACTION_003	No object(s) not found to perform action.	Check and ensure if a non-null/non-empty value is given in the payload field - ‘objects’.
400 Bad Request	ADC_OBJ_ACTION_004	Action is invalid for the given objects.	Check for supported objects for the action and change the request objectId.
403 Forbidden	ADC_DASH_0029	No given object(s) have Write permission.	Check and ensure if the requested object has Read Write permission.
403 Forbidden	ADC_INV_1077	Action cannot be performed on unmanaged device object(s).	-

Sample Request/Response

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- Use Case
- Sample Request
- Sample Response

Use Case

Set service down value to reselect on object with resource id - lp:@5f4393cd80d9c82e890183ce:@tets.avx.com_pool:@Common with parent object - vs:@5f4393cd80d9c82e890183ce:@DC_vs:@Common

Sample Request


```
{

 "payload": {

  "objects": [

   {

    "_id": "lp:@5f4393cd80d9c82e890183ce:@tets.avx.com_pool:@Common",

    "parent_id": "vs:@5f4393cd80d9c82e890183ce:@DC_vs:@Common"

   }

  ],

  "serviceDown": "reselect"

 }

}
```


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Sample Response


```
{

 "response": "Action triggered successfully.",

 "message": "Action triggered for the following 1 object(s) : lp:@5f4393cd80d9c82e890183ce:@tets.avx.com_pool:@Common",

 "appStatusCode": null,

 "tags": null,

 "headers": null

}
```


Get Objects in Constant Status

This API fetches the ADC objects that remain in a constant status for Last N days.In the response lastFlipDate fields gives the details of last state flip occurred date from which object state of the object was not flipped.

Supported Vendor : F5

Before you begin

Before attempting to get objects in the constant state with this API, users must ensure any of the ACF permission from **ADC** > **Control Center**, **ADC** > **Dashboard** > **Application Widget**, or **ADC** > **Orphan objects** is available. This can be checked under **Accounts** > **Role** > **Authorized Functions**.

Request Structure

URL: /adc-constant-object-status-fetch

Type: POST

Parameters

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Parameter Details

Param Type	Name	Description	Field Type	Constraints
Header	sessionId	Session ID received after login.	String	Required if username and password are not provided.
Header	username	AppViewX login username.	String	Required if sessionId is not provided.
Header	password	AppViewX login password.	String	Required if sessionId is not provided.
Header	Content-Type	Specifies the nature of the data in the payload.	String	Value of the param should be ‘application/json’.
Query	gwkey	Tenant Key. Needed only in case of multi tenant installations.	String	
Query	gwsource	Source from which the request is triggered (Eg: web, external).	String	
Body	payload	Contains all the params to be sent in the request body for the put request.	Key value pair Payload	

Payload

Name	Mandatory	Description	Field Type	Constraints
objectType	Yes	Object Types. Should be left empty if object type is not needed to include in query.	String[]	Possible values : wideIp, wideIp Pool, wideIp PoolMember, childWideIp, server,VirtualServer, Pool, ltmPoolMember, VirtualAddress, LTM Server.
deviceName	No	Name of the device(s).	String[]	It can contain only alphanumeric characters, ‘-’ , ’_’ , ‘.’ , ‘*’ , ‘|’, ‘!’.
status	Yes	Status of the object.	String	Possible Values: "OFFLINE", "UNKNOWN", "AVAILABLE",

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Name	Mandatory	Description	Field Type	Constraints
				“OFFLINE (But may become available again)” .
lastNDays	Yes	Last ‘N’ no. of days for which an object remained in constant state.	Integer	-
vendor	No	Vendor of the devce. For example, F5, NginxPlus, etc.	String[]	-

Response Structure

200 OK, returns string of type application/json with the following body params:

Name	Description	Field Type
response	Contains the response for objects in requested status for lastNDays requested.	Key Value Pair[] State Status Drift Response
message	Success message along with the objectIds or failure description in case of error.	String
appStatusCode	Application specific status code for the response. Will be non-null for failure response.	String
tags	More info in case of failure response.	Key value pair

Status Codes

HTTP Status Code	appStatusCode	Message	Possible Remediation
200 OK	-	-	-
400 Bad Request	ADC_DASH_1604	Invalid Input: Mandatory fields 'status' is missing	Check and ensure if a non-null/non-empty value is given in payload field - ‘status’.

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HTTP Status Code	appStatusCode	Message	Possible Remediation
400 Bad Request	ADC_DASH_1605	Invalid Input: Mandatory field 'lastNDays' is missing	Check and ensure if a non-null and a valid integer value is given in the field - ‘lastNDays’.
400 Bad Request	ADC_DASH_0002	Invalid Input	Check the type of the request fields - objectType,deviceName and lastNDays. Expected field types: • lastNDays - Integer • deviceName - String[] • objectType - String[]
404 Not Found	ADC_DASH_1608	No objects found for the given input.	• Check if the requested objects have Read or ReadWrite permission. • Refine the search query.

Sample Request/Response

Use Case

Get Ltm pool member objects which remained in status - “OFFLINE” for the last 2 days.

Sample Request

```
{
 "payload": {
  "objectType": [
   "ltmPoolMember"
  ],
  "status": "OFFLINE",
  "lastNDays": 2
```

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```
 }

}
```

Sample Response


```
{

 "response": [

  {

   "objectId": "lpm:@5f4e3423fcbb9809756c6b82:@testweb:@Common::test:443:@Common",

   "objectName": "test:443",

   "objectType": "LTM Pool Member",

   "deviceId": "5f4e3423fcbb9809756c6b82",

   "deviceName": "192.168.41.233",

   "vendor": "F5",

   "state": null,

   "status": "OFFLINE",

   "displayName": "test:443/one.appviewx.com:443/testweb/192.168.41.233/F5",

   "effectiveDays": 0,

   "lastFlipDate": "2020-09-01"

  }

 ],
```


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```
 "message": null,

 "appStatusCode": null,

 "tags": null,

 "headers": null

}
```


- Before You Begin
- Request Structure
- Payload
- Response Structure
- Status Codes
- Sample Request/Response

Before You Begin

Before attempting to get objects in the constant state with this API, users must ensure any of the ACF permission from **ADC** > **Control Center**, **ADC** > **Dashboard** > **Application Widget**, or **ADC** > **Orphan objects** is available. This can be checked under **Accounts** > **Role** > **Authorized Functions**.

Request Structure

URL: /adc-constant-object-status-fetch

Type: POST

Param Type	Name	Description	Field Type	Constraints
Header	sessionId	Session ID received after login.	String	Required if username and password are not provided.
Header	username	AppViewX login username.	String	Required if sessionId is not provided.

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Param Type	Name	Description	Field Type	Constraints
Header	password	AppViewX login password.	String	Required if sessionId is not provided.
Header	Content-Type	Specifies the nature of the data in the payload.	String	Value of the param should be ‘application/json’.
Query	gwkey	Tenant Key. Needed only in case of multi tenant installations.	String	
Query	gwsource	Source from which the request is triggered (Eg: web, external).	String	
Body	payload	Contains all the params to be sent in the request body for the put request.	Key value pair Payload	

Payload

Name	Mandatory	Description	Field Type	Constraints
objectType	Yes	Object Types. Should be left empty if object type is not needed to include in query.	String[]	Possible values : wideIp, wideIp Pool, wideIp PoolMember, childWideIp, server,VirtualServer, Pool, ltmPoolMember, VirtualAddress, LTM Server.
deviceName	No	Name of the device(s).	String[]	It can contain only alphanumeric characters, ‘-’ , ’_’ , ‘.’ , ‘*’ , ‘|’, ‘!’.
status	Yes	Status of the object.	String	Possible Values: "OFFLINE", "UNKNOWN", "AVAILABLE", “OFFLINE (But may become available again)” .
lastNDays	Yes	Last ‘N’ no. of days for which an object	Integer	-

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Name	Mandatory	Description	Field Type	Constraints
		remained in constant state.		
vendor	No	Vendor of the devce. For example, F5, NginxPlus, etc.	String[]	-

Response Structure

200 OK, returns string of type application/json with the following body params

Name	Description	Field Type
response	Contains the response for objects in requested status for lastNDays requested.	Key Value Pair[] State Status Drift Response
message	Success message along with the objectIds or failure description in case of error.	String
appStatusCode	Application specific status code for the response. Will be non-null for failure response.	String
tags	More info in case of failure response.	Key value pair

Status Codes

HTTP Status Code	appStatusCode	Message	Possible Remediation
200 OK	-	-	-
400 Bad Request	ADC_DASH_1604	Invalid Input: Mandatory fields 'status' is missing	Check and ensure if a non-null/non-empty value is given in payload field - ‘status’.
400 Bad Request	ADC_DASH_1605	Invalid Input: Mandatory field 'lastNDays' is missing	Check and ensure if a non-null and a valid integer value is given in the field - ‘lastNDays’.

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HTTP Status Code	appStatusCode	Message	Possible Remediation
400 Bad Request	ADC_DASH_0002	Invalid Input	Check the type of the request fields - objectType,deviceName and lastNDays. Expected field types: • lastNDays - Integer • deviceName - String[] • objectType - String[]
404 Not Found	ADC_DASH_1608	No objects found for the given input.	• Check if the requested objects have Read or ReadWrite permission. • Refine the search query.

Sample Request/Response

- Use Case
- Sample Request
- Sample Response

Use Case

Get Ltm pool member objects which remained in status - “OFFLINE” for the last 2 days.

Sample Request

```
{

 "payload": {

  "objectType": [

   "ltmPoolMember"
```

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```
  ],
  "status": "OFFLINE",
  "lastNDays": 2
 }
}
```

Sample Response

```
{
 "response": [
  {
   "objectId": "lpm:@5f4e3423fcbb9809756c6b82:@testweb:@Common::test:443:@Common",
   "objectName": "test:443",
   "objectType": "LTM Pool Member",
   "deviceId": "5f4e3423fcbb9809756c6b82",
   "deviceName": "192.168.41.233",
   "vendor": "F5",
   "state": null,
   "status": "OFFLINE",
   "displayName": "test:443/one.appviewx.com:443/testweb/192.168.41.233/F5",
   "effectiveDays": 0,
```

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```
    "lastFlipDate": "2020-09-01"
   }
 ],
 "message": null,
 "appStatusCode": null,
 "tags": null,
 "headers": null
}
```


Get Objects in Constant State

This API fetches the ADC objects that remain in a constant state for Last N days. In the response lastFlipDate fields gives the details of the last state flip occurred date from which object state of the object was not flipped.

Supported Vendor : F5

Before you begin

Before attempting to get objects in the constant state with this API, users must ensure any of the ACF permission from **ADC** > **Control Center**, **ADC** > **Dashboard** > **Application Widget**, or **ADC** > **Orphan objects** is available. This can be checked under **Accounts** > **Role** > **Authorized Functions**.

Request Structure

URL: /adc-constant-object-state-fetch

Type: POST

Parameters

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Parameter Details

Param Type	Name	Description	Field Type	Constraints
Header	sessionId	Session ID received after login.	String	Required if username and password are not provided.
Header	username	AppViewX login username.	String	Required if sessionId is not provided.
Header	password	AppViewX login password.	String	Required if sessionId is not provided.
Header	Content-Type	Specifies the nature of the data in the payload.	String	Value of the param should be ‘application/json’.
Query	gwkey	Tenant Key. Needed only in case of multi tenant installations.	String	
Query	gwsource	Source from which the request is triggered (Eg: web, external).	String	
Body	payload	Contains all the params to be sent in the request body for the put request.	Key value pair Payload	

Payload

Name	Mandatory	Description	Field Type	Constraints
objectType	Yes	Object Types. Should be left empty if object type is not needed to include in query.	String[]	Possible values : wideIp, wideIp Pool, wideIp PoolMember, childWideIp, server,VirtualServer, Pool, ltmPoolMember, VirtualAddress, LTM Server.
deviceName	No	Name of the device(s).	String[]	It can contain only alphanumeric characters, ‘-’ , ’_’ , ‘.’ , ‘*’ , ‘|’, ‘!’.
state	Yes	State of the object.	String	Possible Values: ‘ENABLED’, ‘DISABLED’, ‘DISABLED_BY_PARENT’.

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Name	Mandatory	Description	Field Type	Constraints
lastNDays	Yes	Last ‘N’ no. of days for which an object remained in constant state.	Integer	-
vendor	No	Vendor of the devce. For example, F5, NginxPlus, etc.	String[]	-

Response Structure

200 OK, returns string of type application/json with the following body params:

Name	Description	Field Type
response	Contains the response for objects in requested state for lastNDays requested.	Key Value Pair[] Status Drift Response
message	Success message along with the objectIds or failure description in case of error.	String
appStatusCode	Application specific status code for the response. Will be non-null for failure response.	String
tags	More info in case of failure response.	Key value pair

Status Codes

HTTP Status Code	appStatusCode	Message	Possible remediation
200 OK	-	-	-
400 Bad Request	ADC_DASH_1607	Invalid Input: Mandatory fields 'state' is missing.	Check and ensure if a non-null/non-empty value is given in payload field - ‘state’.
400 Bad Request	ADC_DASH_1605	Invalid Input: Mandatory field 'lastNDays' is missing.	Check and ensure if a non-null and a valid integer value is given in field - ‘lastNDays’

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HTTP Status Code	appStatusCode	Message	Possible remediation
400 Bad Request	ADC_DASH_0002	Invalid Input	Check the type of the request fields - objectType,deviceName and lastNDays. Expected field types: • lastNDays - Integer • deviceName - String[] • objectType - String[]
404 Not Found	ADC_DASH_1608	No objects found for the given input.	• Check if the requested objects have Read or ReadWrite permission. • Refine the search query.

Sample Request/Response

Use Case

Get Ltm pool member objects which remained in state - “ENABLED” for the last 2 days.

Sample Request

```
{
 "payload": {
  "objectType": [
   "ltmPoolMember"
  ],
  "state": "ENABLED",
  "lastNDays": 2
 }
```

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```
}
```

Sample Response


```
{

 "response": [

  {

   "objectId": "lpm:@5f4e2ffafcbb9809756c6b4d:@perf56testpool77:@Common::15.1.77.3:80:@Common",

   "objectName": "15.1.77.3:80",

   "objectType": "LTM Pool Member",

   "deviceId": "5f4e2ffafcbb9809756c6b4d",

   "deviceName": "192.168.40.214",

   "vendor": "F5",

   "state": "ENABLED",

   "status": null,

   "displayName": "15.1.77.3:80/15.1.77.3:80/perf56testpool77/192.168.40.214/F5",

   "effectiveDays": 0,

   "lastFlipDate": "2020-09-01"

  }

 ],

 "message": null,
```


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```
 "appStatusCode": null,

 "tags": null,

 "headers": null

}
```


- Before You Begin
- Request Structure
- Payload
- Response Structure
- Status Codes
- Sample Request/Response

Before You Begin

Before attempting to get objects in the constant state with this API, users must ensure any of the ACF permission from **ADC** > **Control Center**, **ADC** > **Dashboard** > **Application Widget**, or **ADC** > **Orphan objects** is available. This can be checked under **Accounts** > **Role** > **Authorized Functions**.

Request Structure

URL: /adc-constant-object-state-fetch

Type: POST

Param Type	Name	Description	Field Type	Constraints
Header	sessionId	Session ID received after login.	String	Required if username and password are not provided.
Header	username	AppViewX login username.	String	Required if sessionId is not provided.
Header	password	AppViewX login password.	String	Required if sessionId is not provided.

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Param Type	Name	Description	Field Type	Constraints
Header	Content-Type	Specifies the nature of the data in the payload.	String	Value of the param should be ‘application/json’.
Query	gwkey	Tenant Key. Needed only in case of multi tenant installations.	String	
Query	gwsource	Source from which the request is triggered (Eg: web, external).	String	
Body	payload	Contains all the params to be sent in the request body for the put request.	Key value pair Payload	

Payload

Name	Mandatory	Description	Field Type	Constraints
objectType	Yes	Object Types. Should be left empty if object type is not needed to include in query.	String[]	Possible values : wideIp, wideIp Pool, wideIp PoolMember, childWideIp, server,VirtualServer, Pool, ltmPoolMember, VirtualAddress, LTM Server.
deviceName	No	Name of the device(s).	String[]	It can contain only alphanumeric characters, ‘-’ , ’_’ , ‘.’ , ‘*’ , ‘|’, ‘!’.
state	Yes	State of the object.	String	Possible Values: ‘ENABLED’, ‘DISABLED’, ‘DISABLED_BY_PARENT’.
lastNDays	Yes	Last ‘N’ no. of days for which an object remained in constant state.	Integer	-
vendor	No	Vendor of the devce. For example, F5, NginxPlus, etc.	String[]	-

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Response Structure

200 OK, returns string of type application/json with the following body params

Name	Description	Field Type
response	Contains the response for objects in requested state for lastNDays requested.	Key Value Pair[] Status Drift Response
message	Success message along with the objectIds or failure description in case of error.	String
appStatusCode	Application specific status code for the response. Will be non-null for failure response.	String
tags	More info in case of failure response.	Key value pair

Status Codes

HTTP Status Code	appStatusCode	Message	Possible remediation
200 OK	-	-	-
400 Bad Request	ADC_DASH_1607	Invalid Input: Mandatory fields 'state' is missing.	Check and ensure if a non-null/non-empty value is given in payload field - ‘state’.
400 Bad Request	ADC_DASH_1605	Invalid Input: Mandatory field 'lastNDays' is missing.	Check and ensure if a non-null and a valid integer value is given in field - ‘lastNDays’
400 Bad Request	ADC_DASH_0002	Invalid Input	Check the type of the request fields - objectType,deviceName and lastNDays. Expected field types: • lastNDays - Integer • deviceName - String[] • objectType - String[]

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HTTP Status Code	appStatusCode	Message	Possible remediation
404 Not Found	ADC_DASH_1608	No objects found for the given input.	• Check if the requested objects have Read or ReadWrite permission. • Refine the search query.

Sample Request/Response

- Use Case
- Sample Request
- Sample Response

Use Case

Get Ltm pool member objects which remained in state - “ENABLED” for the last 2 days.

Sample Request

```
{

 "payload": {

  "objectType": [

   "ltmPoolMember"

  ],

  "state": "ENABLED",

  "lastNDays": 2

 }
```

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```
}
```

Sample Response


```
{

 "response": [

  {

   "objectId": "lpm:@5f4e2ffafcbb9809756c6b4d:@perf56testpool77:@Common::15.1.77.3:80:@Common",

   "objectName": "15.1.77.3:80",

   "objectType": "LTM Pool Member",

   "deviceId": "5f4e2ffafcbb9809756c6b4d",

   "deviceName": "192.168.40.214",

   "vendor": "F5",

   "state": "ENABLED",

   "status": null,

   "displayName": "15.1.77.3:80/15.1.77.3:80/perf56testpool77/192.168.40.214/F5",

   "effectiveDays": 0,

   "lastFlipDate": "2020-09-01"

  }

 ],
```


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```
 "message": null,

 "appStatusCode": null,

 "tags": null,

 "headers": null

}
```


Get Object Status Trend

This API fetches the status flip history of the given object. It will respond with the last N status flip history of an object.By default N is configured as 100 based on the usage and N can be configured.

Supported Vendor : F5

Before you begin

Before attempting to get an object status trend with this API, users must ensure any of the ACF permission from ADC > Control Center, ADC > Dashboard > Application Widget, or ADC > Orphan objects is available. This can be checked under Accounts > Role > Authorized Functions.

Request Structure

URL: /adc-object-status-trend-fetch

Type: GET

Parameters

Parameter Details

Param Type	Name	Description	Field Type	Constraints
Header	sessionId	Session ID received after login.	String	Required if username and password are not provided.
Header	username	AppViewX login username.	String	Required if sessionId is not provided.

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Parameter Details (continued)

Param Type	Name	Description	Field Type	Constraints
Header	password	AppViewX login password.	String	Required if sessionId is not provided.
Query	gwkey	Tenant Key. Needed only in case of multi tenant installations.	String	
Query	gwsource	Source from which the request is triggered (Eg: web, external)	String	
Query	objectId	Resource ID of the object. Use the search API to search/get the resource ID.	String	
Query	lastNCounts	Optional. Last no of flip records to fetch. Maximum value supported is 100. Default value will be 100.	Integer	

Response Structure

200 OK, returns string of type application/json with the following body params:

Name	Description	Field Type
response	Contains the response for requested objects last 'N' flip history .	Key Value Pair[] State Status Drift Response
message	Success message along with the objectIds or failure description in case of error.	String
appStatusCode	Application specific status code for the response. Will be non-null for failure response.	String
tags	More info in case of failure response.	Key value pair

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Status Codes

HTTP Status Code	appStatusCode	Message	Possible remediation
200 OK	-	-	-
400 Bad Request	ADC_DASH_1606	Invalid Input: Mandatory fields 'objectId' is missing	Check and ensure if a non-null/non-empty value is given in the query param field - ‘objectId’.
400 Bad Request	ADC_DASH_0035	Invalid Input	Check the type of the query param field - lastNCounts. Expected type is Integer.
404 Not Found	ADC_DASH_1608	No objects found for the given input	• Check if the requested objects have Read or ReadWrite permission. • Refine the search query.

Sample Request/Response

Use Case

Get last 5 status flip trend for objectId - lpm:@5f4e3091a7452e427bcede52:@newltmpool:@Common::12.9.1.0:21:@Common

Request URL

http://192.168.95.147:5300/avxapi/adc-object-status-trend-fetch?objectId=lpm:@5f4e3091a7452e427bcede52:@newltmpool:@Common::12.9.1.0:21:@Common&lastNCounts=5&gwkey=

Sample Request

```
NA
```

Sample Response


```
{

 "response": [

  {

   "objectId": "lpm:@5f4e3091a7452e427bcede52:@newltmpool:@Common::12.9.1.0:21:@Common",
```


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```
    "objectName": "12.9.1.0:21",
    "objectType": "LTM Pool Member",
    "deviceId": "5f4e3091a7452e427bcede52",
    "deviceName": "gs-f5-pe109.lab.appviewx.net",
    "vendor": "F5",
    "state": null,
    "status": "OFFLINE",
    "displayName": "12.9.1.0:21/12.9.1.0:21/newltmpool/gs-f5-pe109.lab.appviewx.net/F5",
    "effectiveDays": 0,
    "lastFlipDate": "2020-09-01"
   }
 ],
 "message": null,
 "appStatusCode": null,
 "tags": null,
 "headers": null
}
```


- Before You Begin
- Request Structure
- Response Structure

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- Status Codes
- Sample Request/Response

Before You Begin

Before attempting to get an object status trend with this API, users must ensure any of the ACF permission from ADC > Control Center, ADC > Dashboard > Application Widget, or ADC > Orphan objects is available. This can be checked under Accounts > Role > Authorized Functions.

Request Structure

URL: /adc-object-status-trend-fetch

Type: GET

Param Type	Name	Description	Field Type	Constraints
Header	sessionId	Session ID received after login.	String	Required if username and password are not provided.
Header	username	AppViewX login username.	String	Required if sessionId is not provided.
Header	password	AppViewX login password.	String	Required if sessionId is not provided.
Query	gwkey	Tenant Key. Needed only in case of multi tenant installations.	String	
Query	gwsource	Source from which the request is triggered (Eg: web, external)	String	
Query	objectId	Resource ID of the object. Use the search API to search/get the resource ID.	String	
Query	lastNCounts	Optional. Last no of flip records to fetch. Maximum value supported is 100. Default value will be 100.	Integer	

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Response Structure

200 OK, returns string of type application/json with the following body params

Name	Description	Field Type
response	Contains the response for requested objects last ‘N’ flip history .	Key Value Pair[] State Status Drift Response
message	Success message along with the objectIds or failure description in case of error.	String
appStatusCode	Application specific status code for the response. Will be non-null for failure response.	String
tags	More info in case of failure response.	Key value pair

Status Codes

HTTP Status Code	appStatusCode	Message	Possible remediation
200 OK	-	-	-
400 Bad Request	ADC_DASH_1606	Invalid Input: Mandatory fields 'objectId' is missing	Check and ensure if a non-null/non-empty value is given in the query param field - ‘objectId’.
400 Bad Request	ADC_DASH_0035	Invalid Input	Check the type of the query param field - lastNCounts. Expected type is Integer.
404 Not Found	ADC_DASH_1608	No objects found for the given input	• Check if the requested objects have Read or ReadWrite permission. • Refine the search query.

Sample Request/Response

- Use Case
- Request URL

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• Sample Request
• Sample Response

Use Case

Get last 5 status flip trend for objectId - lpm:@5f4e3091a7452e427bcede52:@newltmpool:@Common::12.9.1.0:21:@Common

Request URL

http://192.168.95.147:5300/avxapi/adc-object-status-trend-fetch?objectId=lpm:@5f4e3091a7452e427bcede52:@newltmpool:@Common::12.9.1.0:21:@Common&lastNCounts=5&gwkey=

Sample Request

NA

Sample Response


```
{

 "response": [

  {

   "objectId": "lpm:@5f4e3091a7452e427bcede52:@newltmpool:@Common::12.9.1.0:21:@Common",

   "objectName": "12.9.1.0:21",

   "objectType": "LTM Pool Member",

   "deviceId": "5f4e3091a7452e427bcede52",

   "deviceName": "gs-f5-pe109.lab.appviewx.net",

   "vendor": "F5",

   "state": null,
```


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```
    "status": "OFFLINE",
    "displayName": "12.9.1.0:21/12.9.1.0:21/newltmpool/gs-f5-pe109.lab.appviewx.net/F5",
    "effectiveDays": 0,
    "lastFlipDate": "2020-09-01"
   }
 ],
 "message": null,
 "appStatusCode": null,
 "tags": null,
 "headers": null
}
```


State Status Drift Response

Name	Description	Field Type
objectName	Name of the object.	String
objectId	Resource Id of the object in AppViewX.	String
objectType	Object type as mentioned in AppViewX.	String
deviceId	Resource ID of the device to which the object belongs.	String
deviceName	Name of the device to which the object belongs.	String
vendor	Vendor of the device to which the object belongs.	String
displayName	DisplayName given for the object in AppViewX.	String

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Name	Description	Field Type
status	Status of the object.	String
state	State of the object.	String
effectiveDays	No of days the object remained in a state/status. Effective days will be 0 for the latest record (i.e) the active record.	Integer
lastFlipDate	Date on which the state/status of the object flipped to its current state/status. Date Format:YYYY-MM-DD.	String

- Possible LoadBalancing Modes
- Input Keys For Device
- Supported Object Type/Object Code

Possible LoadBalancing Modes

Vendor list with LoadBalancing Modes

Vendor	ObjectType	Possible LB Modes
F5	LTM Pool	'round-robin','ratio-member','least-connections-member','observed-member','predictive-member','ratio-node','least-connections-node','fastest-node','observed-node','predictive-node','dynamic-ratio-node','fastest-app-response','least-sessions','dynamic-ratio-member','weighted-least-connections-member','weighted-least-connections-node','ratio-session','ratio-least-connections-member','ratio-least-connections-node'

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Vendor list with LoadBalancing Modes (continued)

Vendor	ObjectType	Possible LB Modes
Citrix	GSLB Virtual Server	'Round Robin','Least Connection','Least Response Time','Source IP Hash','Least Bandwidth','Least Packets','Custom Load','Dynamic Method(RTT)','Static Proximity'
Citrix	SLB Virtual Server	'Round Robin','Least Connection','Least Response Time','URL HASH','Domain Hash','Destination IP Hash','Source IP Hash','Least Bandwidth','Least Packets','Source IP Destination IP Hash','LRTM','Source IP Source Port Hash','Call ID Hash','Custom Load','Token','Least Request'
A10	FQDN	’forward response’,’forward query’,’forward both’,’drop’,’reject’
A10	SLB Service Group	'round-robin','least-connection','service-least-connection','weighted-rr','weighted-least-connection','service-weighted-least-connection','fastest-response','least-request','round-robin-strict','stateless-src-ip-hash', 'stateless-dst-ip-hash','stateless-src-dst-ip-hash','stateless-per-pkt-round-robin','stateless-src-ip-only-hash','src-ip-only-hash','src-ip-

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Vendor list with LoadBalancing Modes (continued)

Vendor	ObjectType	Possible LB Modes
		hash','dst-ip-only-hash','dst-ip-hash'
AVI	SLB Pool	'LB_ALGORITHM_CONSISTENT_HASH','LB_ALG
Infoblox	LBDN	'GLOBAL_AVAILABILITY','RATIO','ROUND_ROBI
Infoblox	Pool	'ALL_AVAILABLE','GLOBAL_AVAILABILITY','RAT

Input Keys For Device

Name	Mandatory	Description	Field Type	Constraints
name	No	Name of the device.	String	It can contain only alphanumeric characters, ‘-’ , ’_’ , ‘.’ , ‘*’ , ‘|’, ‘!’.
ip	No	IP of the device.	String	-
vendor	No	Vendor of the device. Eg.:F5, AVI,etc.	String	-
version	No	Version of the device.	String	It only accepts alphanumeric characters, ‘-’, ‘:’, ‘.’, ‘_’ and space.
dataCenter	No	Data center of the device.	String	-
status	No	Status of the device in inventory.	String	Possible values are: Managed","UnManaged", "Unresolved", "Failed","Inprogress", "Queued".
haActive	No	Ha state of the device. Active/ StandBy.	String	-

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Name	Mandatory	Description	Field Type	Constraints
syncFailoverGroupName	No	Failover group name of the device.	String	-

Supported Object Type/Object Code

Vendor codes and Description

Vendor	Object Code	Object Type	Description
F5	vs	Virtual Server	LTM Virtual server
F5	lpm	Pool Member	LTM pool member
F5	lm	LTM Monitor	LTM Monitor
F5	lpr	Profile	Profile
F5	lr	LTM iRule	LTM i-rule
F5	ltmpersistence	LTM Persistence	LTM Persistence
F5	gw	WideIP	GTM Wide IP
F5	gpm	Pool Member	GTM pool member
F5	gp	GTM Pool	GTM pool
F5	gm	GTM Monitor	GTM monitor
F5	gs	GTM Server	GTM Server
F5	gr	GTM iRule	GTM i-rule
Citrix	citrixvs	SLB Virtual Server	SLB virtual server
Citrix	citrixsv	SLB Service	SLB Service
Citrix	citrixslbsg	SLB Service Group	Service Group
Citrix	citrixslbsgm	SLB Service Group Member	Service Group Member
Citrix	citrixcsvs	CS Virtual Server	CS Virtual Server

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Vendor codes and Description (continued)

Vendor	Object Code	Object Type	Description
Citrix	citrixcspolicylabel	CS Policy Label	CS Policy Label
Citrix	citrixcspolicy	CS Policy	CS Policy
Citrix	citrixcsaction	CS Action	CS Action
Citrix	citrixmonitor	Monitor	Monitor
Citrix	citrixserver	Server	Server
Citrix	citrixgslbvs	GSLB Virtual Server	GSLB Virtual Server
Citrix	citrixgslbsv	GSLB Service	GSLB Service
Citrix	citrixgslbsg	GSLB Service Group	GSLB Service Group
Citrix	citrixgslbsgm	GSLB Service Group Member	GSLB Service Group Member
Citrix	citrixgslbsite	GSLB Site	GSLB Site
Akamai	akagp	akagp	akagp
Akamai	akadc	akadc	akadc
Akamai	akags	akags	akags
A10	a10vs	Virtual Server	Virtual Server
A10	a10sg	Service Group	Service Group
A10	a10sr	Service Group Member	Service Group Member
A10	a10hm	SLB Health Monitor	SLB Health Monitor
A10	a10fx	aFlex	aFlex
A10	a10cl	Class	Class
A10	a10tm	Template	Template
A10	a10node	Server	Server
A10	a10snatpool	SnatPool	A10 SNAT pool
A10	a10zn	FQDN	FQDN

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Vendor codes and Description (continued)

Vendor	Object Code	Object Type	Description
A10	a10sip	Service IP	Service IP
A10	a10hm	GSLB Health Monitor	GSLB Health Monitor
A10	a10p	Policy	Policy
AVI	avivsv	Virtual Service	Virtual Service
AVI	avipool	Pool	Pool
AVI	aviserver	Server	Server
AVI	aviAppProfile	Application Profile	Application Profile
AVI	aviNwProfile	Network Profile	Network Profile
AVI	aviAnlProfile	Analytical Profile	Analytical Profile
AVI	aviSslProfile	Ssl Profile	Ssl Profile
AVI	aviAppPerProfile	Application Persistence Profile	Application Persistence Profile
AVI	aviPkiProfile	Pki Profile	Pki Profile
AVI	aviMonitor	Monitor	Monitor
AVI	aviIpGroup	Ip Group	Ip Group
AVI	aviNsRule	Network Security Rule	Network Security Rule
AVI	aviHttpSecRule	Http Security Rule	Http Security Rule
AVI	aviHttpReqRule	Http Request Rule	Http Request Rule
AVI	aviHttpResRule	Http Response Rule	Http Response Rule
AVI	aviDataScript	Data Script	Data Script
Cisco	slbvs	Virtual Server	Virtual Server
Cisco	slbsf	Server Farm	Server Farm
Cisco	Slbrs	Real Server	Real Server
NginxPlus	nserver	LB Server	LB Server
NginxPlus	nupstream	Upstream	Upstream
NginxPlus	nbackendserver	Upstream Server	Upstream Server

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Action - Set Loadbalancing Method

This API is used to initiate action Set load balancing method on one or more ADC objects for which the action applies to. Suspend action is supported on the following object types:

- F5 – LTM pools
- Citrix – GSLB Virtual Server, SLB Virtual Server
- A10 - FQDN,SLB Service Group
- AVI - SLB Pool
- Infoblox - LBDN,Pool

Before you begin

Before attempting to initiate suspend action with this API, users must ensure the ACF permission “ADC > ControlCenter > Actions > LB mode” is available. This can be checked under Accounts > Role > Authorized Functions.

Request Structure

URL: */adc-device-object-action-lbmethod*

Type: PUT

Parameters

Parameter Details

Param Type	Name	Description	Field Type	Constraints
Header	sessionId	Session ID received after login.	String	Required if username and password are not provided.
Header	username	AppViewX login username.	String	Required if sessionId is not provided.
Header	password	AppViewX login password.	String	Required if sessionId is not provided.
Header	Content-Type	Specifies the nature of the data in the payload.	String	Value of the param should be ‘application/json’.

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Parameter Details (continued)

Param Type	Name	Description	Field Type	Constraints
Query	gwkey	Tenant Key. Needed only in case of multi tenant installations.	String	
Query	gwsource	Source from which the request is triggered (Eg: web, external).	String	
Body	payload	Contains all the params to be sent in the request body for the put request.	Key value pair Payload	

Payload

Name	Mandatory	Description	Field Type	Constraints
objects	Yes	Object information containing resource id and parent resource id.	Key value pair[] Object details	-
lbMode	Yes	Load balancing mode to set. Possibles values for lbMode can be found here.	String	-

Response Structure

On 202 Accepted, the action will be initiated and string of type application/json will be returned with the following body params:

Name	Description	Field Type
response	Success message or failure description in case of error.	String
message	Success message along with the objectIds or failure description in case of error.	String
appStatusCode	Application specific status code for the response. Will be non-null for failure response.	String

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Name	Description	Field Type
tags	More info in case of failure response.	Key value pair

Status Codes

HTTP Status Code	appStatusCode	Message	Possible remediation
202 Accepted	-	Action triggered for the following <n> object(s) : <resourceIds>	-
400 Bad Request	ADC_CC_05014	Invalid input. Please provide 'lbMode' to perform action!	Check and ensure if a non-null/non-empty value is given in the payload field - ‘lbMode’.
400 Bad Request	ADC_OBJ_ACTION_001	Object id not found.	Check and ensure if a non-null/non-empty value is given in paylo.ad field - ‘objects._id’.
400 Bad Request	ADC_OBJ_ACTION_002	parent object id not found.	Check and ensure if a non-null/non-empty value is given in the payload field - ‘objects.parent_id’.
400 Bad Request	ADC_OBJ_ACTION_003	No object(s) not found to perform action.	Check and ensure if a non-null/non-empty value is given in the payload field - ‘objects’.
400 Bad Request	ADC_OBJ_ACTION_004	Action is invalid for the given objects.	Check for supported objects for the action and chan.ge the request objectId.
403 Forbidden	ADC_DASH_0029	No given object(s) have Write permission.	Check and ensure if the requested object has Read Write permission.
403 Forbidden	ADC_INV_1077	Action cannot be performed on unmanaged device object(s)	-

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Sample Request/Response

Use Case

Trigger set load balancing mode action on object with resource id - lp:@5f369cc10ca9846e86a13e95:@ms_pool_1:@Common

Sample Request


```
{

 "payload": {

  "objects": [

   {

    "_id": "lp:@5f369cc10ca9846e86a13e95:@ms_pool_1:@Common",

    "parent_id": "vs:@5f369cc10ca9846e86a13e95:@CVS:@Common"

   }

  ],

  "lbMode": "round-robin"

 }

}
```


Sample Response


```
{

 "response": "Action triggered successfully.",

 "message": "Action triggered for the following 1 object(s) : lp:@5f369cc10ca9846e86a13e95:@ms_pool_1:@Common",

 "appStatusCode": null,
```


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```
 "tags": null,

 "headers": null

}
```

Action - Set Connection Limit

This API initiates action Set connection limit on one or more ADC objects for which the action applies to. Set connection limit action is supported on the following object types:

- F5 - LTM servers

Before you begin

Before attempting to initiate a set connection limit action with this API, users must ensure the ACF permission “ADC > ControlCenter” is available. This can be checked under Accounts > Role > Authorized Functions.

Request Structure

URL: */adc-device-object-action-connectionlimit*

Type: PUT

Parameters

Parameter Details

Param Type	Name	Description	Field Type	Constraints
Header	sessionId	Session ID received after login.	String	Required if username and password are not provided.
Header	username	AppViewX login username.	String	Required if sessionId is not provided.
Header	password	AppViewX login password.	String	Required if sessionId is not provided.
Header	Content-Type	Specifies the nature of the data in the payload.	String	Value of the param should be ‘application/json’.

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Parameter Details (continued)

Param Type	Name	Description	Field Type	Constraints
Query	gwkey	Tenant Key. Needed only in case of multi tenant installations.	String	
Query	gwsource	Source from which the request is triggered (Eg: web, external).	String	
Body	payload	Contains all the params to be sent in the request body for the put request.	Key value pair Payload	

Payload

Name	Mandatory	Description	Field Type	Constraints
objectIds	Yes	Resource ID of the objects. Use the search API to search/get the resource ID.	String[]	-
connectionLimit	Yes	Connection limit to set.	String	Allows only numerical values. For example, 4.

Response Structure

On 202 Accepted, the action will be initiated and string of type application/json will be returned with the following body params:

Name	Description	Field Type
response	Success message or failure description in case of error.	String
message	Success message along with the objectIds or failure description in case of error.	String
appStatusCode	Application specific status code for the response. Will be non-null for failure response.	String

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Name	Description	Field Type
tags	More info in case of failure response.	Key value pair

Status Codes

HTTP Status Code	appStatusCode	Message	Possible remediation
202 Accepted	-	Action triggered for the following <n> object(s) : <resourceIds>	-
400 Bad Request	ADC_CC_05011	Invalid input. Please provide 'connectionLimit' to perform action!	Check and ensure if a non-null/non-empty value is given in the payload field - ‘‘connectionLimit’’.
400 Bad Request	ADC_OBJ_ACTION_003	No object(s) not found to perform action	• Check and ensure if a non-null/non-empty value is given in the payload field - ‘objectIds’. • Check if the requested object is available and not deleted.
400 Bad Request	ADC_OBJ_ACTION_004	Action is invalid for the given objects.	Check for supported objects for the action and change the request objectId
403 Forbidden	ADC_DASH_0029	No given object(s) have Write permission.	Check and ensure if the requested object has Read Write permission
403 Forbidden	ADC_INV_1077	Action cannot be performed on unmanaged device object(s)	-

Sample Request/Response

Use Case

Trigger set connection limit action on object with resource id - ln:@5f369cba0ca9846e86a13e82:@1.1.1.1:@Common

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Sample Request


```
{

  "payload": {

    "objectIds": [

      "ln:@5f369cba0ca9846e86a13e82:@1.1.1.1:@Common"

    ],

    "connectionLimit": "4"

  }

}
```


Sample Response


```
{

  "response": "Action triggered successfully.",

  "message": "Action triggered for the following 1 object(s) : ln:@5f369cba0ca9846e86a13e82:@1.1.1.1:@Common",

  "appStatusCode": null,

  "tags": null,

  "headers": null

}
```


Action - Set Ratio

This API initiates action Set ratio on one or more ADC objects for which the action applies to. Set ratio action is supported on the following object types:

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- F5 – GTM pool, GTM pool member, LTM pool member
- AVI - GSLB Pool Member, Server
- Akamai - Datacenter

Before you begin

Before attempting to initiate set ratio action with this API, users must ensure the ACF permission “ADC > ControlCenter > Actions > Ratio” is available. This can be checked under Accounts > Role > Authorized Functions.

Request Structure

URL: */adc-device-object-action-ratio*

Type: PUT

Parameters

Parameter Details

Param Type	Name	Description	Field Type	Constraints
Header	sessionId	Session ID received after login.	String	Required if username and password are not provided.
Header	username	AppViewX login username.	String	Required if sessionId is not provided.
Header	password	AppViewX login password.	String	Required if sessionId is not provided.
Header	Content-Type	Specifies the nature of the data in the payload.	String	Value of the param should be ‘application/json’.
Query	gwkey	Tenant Key. Needed only in case of multi tenant installations.	String	
Query	gwsource	Source from which the request is triggered (Eg: web, external).	String	
Body	payload	Contains all the params to be sent in the request body for the put request.	Key value pair	

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Parameter Details (continued)

Param Type	Name	Description	Field Type	Constraints
			Payload	

Payload

Name	Mandatory	Description	Field Type	Constraints
objects	Yes	Object information containing resource ID and parent resource ID.	Key value pair[] Object details	-
ratio	Yes	Ratio to set.	String	Allows only numerical values.

Response Structure

On 202 Accepted, the action will be initiated and string of type application/json will be returned with the following body params:

Name	Description	Field Type
response	Success message or failure description in case of error.	String
message	Success message along with the objectIds or failure description in case of error.	String
appStatusCode	Application specific status code for the response. Will be non-null for failure response.	String
tags	More info in case of failure response.	Key value pair

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Status Codes

HTTP Status Code	appStatusCode	Message	Possible remediation
202 Accepted	-	Action triggered for the following <n> object(s) : <resourceIds>	-
400 Bad Request	ADC_CC_05012	Invalid input. Please provide 'ratio' to perform action!	Check and ensure if a non-null/non-empty value is given in payload field - ‘ratio’.
400 Bad Request	ADC_OBJ_ACTION_001	Object id not found.	Check and en..sure if a non-null/non-empty value is given in payload field - ‘objects._id’
400 Bad Request	ADC_OBJ_ACTION_002	parent object id not found.	Check and ensure if a non-null/non-empty value is given in payload field - ‘objects.parent_id’
400 Bad Request	ADC_OBJ_ACTION_003	No object(s) not found to perform action.	Check and ensure if a non-null/non-empty value is given in payload field - ‘objects’.
400 Bad Request	ADC_OBJ_ACTION_004	Action is invalid for the given objects.	Check for supported objects for the action and change the request objectId.
403 Forbidden	ADC_DASH_0029	No given object(s) have Write permission.	Check and ensure if the requested object has Read Write permission.
403 Forbidden	ADC_INV_1077	Action cannot be performed on unmanaged device object(s)	-

Sample Request/Response

Use Case

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Set a ratio of 1 on object with resource id - lpm:@5f369cc10ca9846e86a13e95:@ms_pool_1:@Common::ms_serv:443:@Common with parent object - lp:@5f369cc10ca9846e86a13e95:@ms_pool_1:@Common

Sample Request


```
{

 "payload": {

  "objects": [

   {

    "_id": "lpm:@5f369cc10ca9846e86a13e95:@ms_pool_1:@Common::ms_serv:443:@Common",

    "parent_id": "lp:@5f369cc10ca9846e86a13e95:@ms_pool_1:@Common"

   }

  ],

  "ratio": "1"

 }

}
```


Sample Response


```
{

 "response": "Action triggered successfully.",

 "message": "Action triggered for the following 1 object(s) : lpm:@5f369cc10ca9846e86a13e95:@ms_pool_1:@Common::ms_serv:443:@Common",

 "appStatusCode": null,

 "tags": null,
```


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```
  "headers": null


}
```


- Before you begin
- Request Structure
- Payload
- Response Structure
- Status Codes
- Sample Request/Response

Before you begin

Before attempting to initiate set ratio action with this API, users must ensure the ACF permission “ADC > ControlCenter > Actions > Ratio” is available. This can be checked under Accounts > Role > Authorized Functions.

Request Structure

URL: */adc-device-object-action-ratio*

Type: PUT

Param Type	Name	Description	Field Type	Constraints
Header	sessionId	Session ID received after login.	String	Required if username and password are not provided.
Header	username	AppViewX login username.	String	Required if sessionId is not provided.
Header	password	AppViewX login password.	String	Required if sessionId is not provided.
Header	Content-Type	Specifies the nature of the data in the payload.	String	Value of the param should be ‘application/json’.
Query	gwkey	Tenant Key. Needed only in case of multi tenant installations.	String	

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Param Type	Name	Description	Field Type	Constraints
Query	gwsource	Source from which the request is triggered (Eg: web, external).	String	
Body	payload	Contains all the params to be sent in the request body for the put request.	Key value pair Payload	

Payload

Name	Mandatory	Description	Field Type	Constraints
objects	Yes	Object information containing resource ID and parent resource ID.	Key value pair[] Object details	-
ratio	Yes	Ratio to set.	String	Allows only numerical values.

Response Structure

On 202 Accepted, the action will be initiated and string of type application/json will be returned with the following body params

Name	Description	Field Type
response	Success message or failure description in case of error.	String
message	Success message along with the objectIds or failure description in case of error.	String
appStatusCode	Application specific status code for the response. Will be non-null for failure response.	String
tags	More info in case of failure response.	Key value pair

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Status Codes

HTTP Status Code	appStatusCode	Message	Possible remediation
202 Accepted	-	Action triggered for the following <n> object(s) : <resourceIds>	-
400 Bad Request	ADC_CC_05012	Invalid input. Please provide 'ratio' to perform action!	Check and ensure if a non-null/non-empty value is given in payload field - ‘ratio’.
400 Bad Request	ADC_OBJ_ACTION_001	Object id not found.	Check and en..sure if a non-null/non-empty value is given in payload field - ‘objects._id’
400 Bad Request	ADC_OBJ_ACTION_002	parent object id not found.	Check and ensure if a non-null/non-empty value is given in payload field - ‘objects.parent_id’
400 Bad Request	ADC_OBJ_ACTION_003	No object(s) not found to perform action.	Check and ensure if a non-null/non-empty value is given in payload field - ‘objects’.
400 Bad Request	ADC_OBJ_ACTION_004	Action is invalid for the given objects.	Check for supported objects for the action and change the request objectId.
403 Forbidden	ADC_DASH_0029	No given object(s) have Write permission.	Check and ensure if the requested object has Read Write permission.
403 Forbidden	ADC_INV_1077	Action cannot be performed on unmanaged device object(s)	-

Sample Request/Response

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- Use Case
- Sample Request
- Sample Response

Use Case

Set a ratio of 1 on object with resource id - lpm:@5f369cc10ca9846e86a13e95:@ms_pool_1:@Common::ms_serv:443:@Common with parent object - lp:@5f369cc10ca9846e86a13e95:@ms_pool_1:@Common

Sample Request


```
{

 "payload": {

  "objects": [

   {

    "_id": "lpm:@5f369cc10ca9846e86a13e95:@ms_pool_1:@Common::ms_serv:443:@Common",

    "parent_id": "lp:@5f369cc10ca9846e86a13e95:@ms_pool_1:@Common"

   }

  ],

  "ratio": "1"

 }

}
```


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Sample Response


```
{

 "response": "Action triggered successfully.",

 "message": "Action triggered for the following 1 object(s) : lpm:@5f369cc10ca9846e86a13e95:@ms_pool_1:@Common::ms_serv:443:@Common",

 "appStatusCode": null,

 "tags": null,

 "headers": null

}
```


Action - ARP Enable/Disable

This API initiates action ARP enable/disable on one or more ADC objects for which the action applies to. Set ARP action is supported on the following object types:

- **F5** - Virtual address
- **A10** - Virtual server

Before you begin

Before attempting to initiate a set ARP action with this API, users must ensure the ACF permission **ADC** > **Control Center** > **Actions** > **ARP** is available. This can be checked under **Accounts** > **Role** > **Authorized Functions**.

Request Structure

URL: /adc-device-object-action-arp

Type: PUT

Parameters

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Parameter Details

Param Type	Name	Description	Field Type	Constraints
Header	sessionId	Session ID received after login.	String	Required if username and password are not provided.
Header	username	AppViewX login username.	String	Required if sessionId is not provided.
Header	password	AppViewX login password.	String	Required if sessionId is not provided.
Header	Content-Type	Specifies the nature of the data in the payload.	String	The value of the param should be '**application/json**'.
Query	gwkey	Tenant Key. Needed only in case of multi-tenant installations.	String	
Query	gwsource	Source from which the request is triggered (Eg: web, external).	String	
Body	payload	Contains all the params to be sent in the request body for the put request.	Key value pair Payload	

Payload

Name	Mandatory	Description	Field Type	Constraints
objectIds	Yes	Resource ID of the objects. Note: Use the search API to search/get the resource ID.	String[]	-
arp	Yes	Action. Possible values are 'ENABLE, DISABLE' .	String	-

Response Structure

On 202 Accepted, the action will be initiated and string of type application/json will be returned with the following body params:

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Name	Description	Field Type
response	Success message or failure description in case of error	String
message	Success message along with the objectIds or failure description in case of error	String
appStatusCode	Application-specific status code for the response. Will be non-null for failure response.	String
tags	More info in case of failure response	Key value pair

Status Codes

HTTP Status Code	appStatusCode	Message	Possible remediation
202 Accepted	-	Action triggered for the following <n> object(s) : <resourceIds>	-
400 Bad Request	ADC_CC_05010	Invalid input. Please provide 'arp' to perform action!	Check and ensure if a non-null/non-empty value is given in the payload field - ‘arp’’.
400 Bad Request	ADC_OBJ_ACTION_003	No object(s) not found to perform action.	• Check and ensure if a non-null/ non-empty value is given in the payload field - ‘objectIds’. • Check if the requested object is available and not deleted.
400 Bad Request	ADC_OBJ_ACTION_004	Action is invalid for the given objects.	Check for supported objects for the action and change the request objectId.
403 Forbidden	ADC_DASH_0029	No given object(s) have Write permission.	Check and ensure if the requested object has Read-Write permission.
403 Forbidden	ADC_INV_1077	Action cannot be performed on unmanaged device object(s)	-

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Sample Request/Response

Use Case

Trigger ARP disable action on objects with resource id - va:@5f4393db80d9c82e890183ef:@5.36.8.91:@Common

Sample Request


```
{

 "payload": {

  "objectIds": [

   "va:@5f4393db80d9c82e890183ef:@5.36.8.91:@Common"

  ],

  "arp": "DISABLED"

 }

}
```


Sample Response


```
{

 "response": "Action triggered successfully.",

 "message": "Action triggered for the following 1 object(s) : va:@5f4393db80d9c82e890183ef:@5.36.8.91:@Common",

 "appStatusCode": null,

 "tags": null,

 "headers": null

}
```


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- Before you begin
- Request Structure
- Payload
- Response Structure
- Status Codes
- Sample Request/Response

Before you begin

Before attempting to initiate a set ARP action with this API, users must ensure the ACF permission **ADC** > **Control Center** > **Actions** > **ARP** is available. This can be checked under **Accounts** > **Role** > **Authorized Functions**.

Request Structure

URL: /adc-device-object-action-arp

Type: PUT

Param Type	Name	Description	Field Type	Constraints
Header	sessionId	Session ID received after login.	String	Required if username and password are not provided.
Header	username	AppViewX login username.	String	Required if sessionId is not provided.
Header	password	AppViewX login password.	String	Required if sessionId is not provided.
Header	Content-Type	Specifies the nature of the data in the payload.	String	The value of the param should be '**application/json**'.
Query	gwkey	Tenant Key. Needed only in case of multi-tenant installations.	String	
Query	gwsource	Source from which the request is triggered (Eg: web, external).	String	

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Param Type	Name	Description	Field Type	Constraints
Body	payload	Contains all the params to be sent in the request body for the put request.	Key value pair Payload	

Payload

Name	Mandatory	Description	Field Type	Constraints
objectIds	Yes	Resource ID of the objects. Note: Use the search API to search/get the resource ID.	String[]	-
arp	Yes	Action. Possible values are 'ENABLE, DISABLE' .	String	-

Response Structure

On 202 Accepted, the action will be initiated and string of type application/json will be returned with the following body params

Name	Description	Field Type
response	Success message or failure description in case of error	String
message	Success message along with the objectIds or failure description in case of error	String
appStatusCode	Application-specific status code for the response. Will be non-null for failure response.	String
tags	More info in case of failure response	Key value pair

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Status Codes

HTTP Status Code	appStatusCode	Message	Possible remediation
202 Accepted	-	Action triggered for the following <n> object(s) : <resourceIds>	-
400 Bad Request	ADC_CC_05010	Invalid input. Please provide 'arp' to perform action!	Check and ensure if a non-null/non-empty value is given in the payload field - ‘arp’’.
400 Bad Request	ADC_OBJ_ACTION_003	No object(s) not found to perform action.	• Check and ensure if a non-null/ non-empty value is given in the payload field - ‘objectIds’. • Check if the requested object is available and not deleted.
400 Bad Request	ADC_OBJ_ACTION_004	Action is invalid for the given objects.	Check for supported objects for the action and change the request objectId.
403 Forbidden	ADC_DASH_0029	No given object(s) have Write permission.	Check and ensure if the requested object has Read-Write permission.
403 Forbidden	ADC_INV_1077	Action cannot be performed on unmanaged device object(s)	-

Sample Request/Response

- Use Case
- Sample Request
- Sample Response

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Use Case

Trigger ARP disable action on objects with resource id - va:@5f4393db80d9c82e890183ef:@5.36.8.91:@Common

Sample Request


```
{

 "payload": {

  "objectIds": [

   "va:@5f4393db80d9c82e890183ef:@5.36.8.91:@Common"

  ],

  "arp": "DISABLED"

 }

}
```


Sample Response


```
{

 "response": "Action triggered successfully.",

 "message": "Action triggered for the following 1 object(s) : va:@5f4393db80d9c82e890183ef:@5.36.8.91:@Common",

 "appStatusCode": null,

 "tags": null,

 "headers": null
```


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```
}
```

Action - Set Weight

This API initiates action Set weight on one or more ADC objects for which the action applies to. Set weight action is supported on the following object types:

- Citrix - SLB service group member, SLB service, Service
- A10 - Service group member, Server

Before you begin

Before attempting to initiate a set weight action with this API, users must ensure the ACF permission “ADC > ControlCenter > Actions > Ratio” is available. This can be checked under Accounts > Role > Authorized Functions.

Request Structure

URL: /adc-device-object-action-weight

Type: PUT

Parameters

Parameter Details

Param Type	Name	Description	Field Type	Constraints
Header	sessionId	Session ID received after login.	String	Required if username and password are not provided.
Header	username	AppViewX login username.	String	Required if sessionId is not provided.
Header	password	AppViewX login password.	String	Required if sessionId is not provided.
Header	Content-Type	Specifies the nature of the data in the payload.	String	Value of the param should be ‘application/json’.
Query	gwkey	Tenant Key. Needed only in case of multi tenant installations.	String	

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Parameter Details (continued)

Param Type	Name	Description	Field Type	Constraints
Query	gwsource	Source from which the request is triggered (Eg: web, external).	String	
Body	payload	Contains all the params to be sent in the request body for the put request.	Key value pair Payload	

Payload

Name	Mandatory	Description	Field Type	Constraints
objectIds	Yes	Resource ID of the objects. Use the search API to search/get the resource ID.	String[]	-
weight	Yes	Weight to set.	String	Allows only numerical values.

Response Structure

On 202 Accepted, the action will be initiated and string of type application/json will be returned with the following body params:

Name	Description	Field Type
response	Success message or failure description in case of error.	String
message	Success message along with the objectIds or failure description in case of error.	String
appStatusCode	Application specific status code for the response. Will be non-null for failure response.	String
tags	More info in case of failure response.	Key value pair

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Status Codes

HTTP Status Code	appStatusCode	Message	Possible remediation.
202 Accepted	-	Action triggered for the following <n> object(s) : <resourceIds>	-
400 Bad Request	ADC_CC_0506	Invalid input. Please provide 'weight' to perform action!	Check and ensure if a non-null/non-empty value is given in the payload field - ‘weight’.
400 Bad Request	ADC_OBJ_ACTION_003	No object(s) not found to perform action.	• Check and ensure if a non-null/non-empty value is given in the payload field - ‘objectIds’. • Check if the requested object is available and not deleted.
400 Bad Request	ADC_OBJ_ACTION_004	Action is invalid for the given objects.	Check for supported objects for the action and change the request objectId.
403 Forbidden	ADC_DASH_0029	No given object(s) have Write permission.	Check and ensure if the requested object has Read Write permission.
403 Forbidden	ADC_INV_1077	Action cannot be performed on unmanaged device object(s)	-

Sample Request/Response

Use Case

Set weight of 2 on objects with resource id - citrixsv:@5f4393c580d9c82e890183c1:@mytest::test:80

Sample Request

```
{

 "payload": {
```

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```
  "objectIds": [

    "citrixsv:@5f4393c580d9c82e890183c1:@mytest::test:80"

  ],

  "weight": "2"

 }

}
```


Sample Response


```
{

 "response": "Action triggered successfully.",

 "message": "Action triggered for the following 1 object(s) : citrixsv:@5f4393c580d9c82e890183c1:@mytest::test:80",

 "appStatusCode": null,

 "tags": null,

 "headers": null

}
```


- Before you begin
- Request Structure
- Payload
- Response Structure
- Status Codes
- Sample Request/Response

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Before you begin

Before attempting to initiate a set weight action with this API, users must ensure the ACF permission “ADC > ControlCenter > Actions > Ratio” is available. This can be checked under Accounts > Role > Authorized Functions.

Request Structure

URL: /adc-device-object-action-weight

Type: PUT

Param Type	Name	Description	Field Type	Constraints
Header	sessionId	Session ID received after login.	String	Required if username and password are not provided.
Header	username	AppViewX login username.	String	Required if sessionId is not provided.
Header	password	AppViewX login password.	String	Required if sessionId is not provided.
Header	Content-Type	Specifies the nature of the data in the payload.	String	Value of the param should be ‘application/json’.
Query	gwkey	Tenant Key. Needed only in case of multi tenant installations.	String	
Query	gwsource	Source from which the request is triggered (Eg: web, external).	String	
Body	payload	Contains all the params to be sent in the request body for the put request.	Key value pair Payload	

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Payload

Name	Mandatory	Description	Field Type	Constraints
objectIds	Yes	Resource ID of the objects. Use the search API to search/get the resource ID.	String[]	-
weight	Yes	Weight to set.	String	Allows only numerical values.

Response Structure

On 202 Accepted, the action will be initiated and string of type application/json will be returned with the following body params

Name	Description	Field Type
response	Success message or failure description in case of error.	String
message	Success message along with the objectIds or failure description in case of error.	String
appStatusCode	Application specific status code for the response. Will be non-null for failure response.	String
tags	More info in case of failure response.	Key value pair

Status Codes

HTTP Status Code	appStatusCode	Message	Possible remediation.
202 Accepted	-	Action triggered for the following <n> object(s) : <resourceIds>	-
400 Bad Request	ADC_CC_0506	Invalid input. Please provide 'weight' to perform action!	Check and ensure if a non-null/non-empty value is given in the payload field - ‘weight’.

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HTTP Status Code	appStatusCode	Message	Possible remediation.
400 Bad Request	ADC_OBJ_ACTION_003	No object(s) not found to perform action.	• Check and ensure if a non-null/non-empty value is given in the payload field - 'objectIds'. • Check if the requested object is available and not deleted.
400 Bad Request	ADC_OBJ_ACTION_004	Action is invalid for the given objects.	Check for supported objects for the action and change the request objectId.
403 Forbidden	ADC_DASH_0029	No given object(s) have Write permission.	Check and ensure if the requested object has Read Write permission.
403 Forbidden	ADC_INV_1077	Action cannot be performed on unmanaged device object(s)	-

Sample Request/Response

• Use Case
• Sample Request
• Sample Response

Use Case

Set weight of 2 on objects with resource id - citrixsv:@5f4393c580d9c82e890183c1:@mytest::test:80

Sample Request

```
{

 "payload": {
```

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```
  "objectIds": [
    "citrixsv:@5f4393c580d9c82e890183c1:@mytest::test:80"
  ],
  "weight": "2"
 }
}
```


Sample Response


```
{
 "response": "Action triggered successfully.",
 "message": "Action triggered for the following 1 object(s) : citrixsv:@5f4393c580d9c82e890183c1:@mytest::test:80",
 "appStatusCode": null,
 "tags": null,
 "headers": null
}
```


Action - Set CNAME

This API initiates action Set CNAME on one or more ADC objects for which the action applies to. Set CNAME action is supported on the following object types:

- Akamai - Property

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Before you begin

Before attempting to initiate a set CNAME action with this API, users must ensure the ACF permission “ADC > ControlCenter > Actions > CNAME” is available. This can be checked under Accounts > Role > Authorized Functions.

Request Structure

URL: */adc-device-object-action-cname*

Type: PUT

Parameters

Parameter Details

Param Type	Name	Descrip.tion	Field Type	Constraints
Header	sessionId	Session ID received after login.	String	Required if username and password are not provided.
Header	username	AppViewX login username.	String	Required if sessionId is not provided.
Header	password	AppViewX login password	String	Required if sessionId is not provided.
Header	Content-Type	Specifies the nature of the data in the payload.	String	Value of the param should be ‘application/json’.
Query	gwkey	Tenant Key. Needed only in case of multi tenant installations.	String	
Query	gwsource	Source from which the request is triggered (Eg: web, external).	String	
Body	payload	Contains all the params to be sent in the request body for the put request.	Key value pair Payload	

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Payload

Name	Mandatory	Description	Field Type	Constraints
objectIds	Yes	Resource ID of the objects. Use the search API to search/get the resource ID.	String[]	-
cname	Yes	CNAME to set.	String	-

Response Structure

On 202 Accepted, the action will be initiated and string of type application/json will be returned with the following body params:

Name	Description	Field Type
response	Success message or failure description in case of error.	String
message	Success message along with the objectIds or failure description in case of error.	String
appStatusCode	Application specific status code for the response. Will be non-null for failure response.	String
tags	More info in case of failure response.	Key value pair

Status Codes

HTTP Status Code	appStatusCode	Message	Possible remediation
202 Accepted	-	Action triggered for the following <n> object(s) : <resourceIds>	-
400 Bad Request	ADC_CC_05013	Invalid input. Please provide 'cname' to perform action!	Check and ensure. if a non-null/non-empty value is given in payload field - ‘weight’.

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HTTP Status Code	appStatusCode	Message	Possible remediation
400 Bad Request	ADC_OBJ_ACTION_003	No object(s) not found to perform action.	• Check and ensure if a non-null/ non-empty value is given in payload field - 'objectIds' • Check if the requested object is available and not deleted.
400 Bad Request	ADC_OBJ_ACTION_004	Action is invalid for the given objects.	Check for supported objects for the action and change the request objectId
403 Forbidden	ADC_DASH_0029	No given object(s) have Write permission.	Check and ensure if the requested object has Read Write permission.
403 Forbidden	ADC_INV_1077	Action cannot be performed on unmanaged device object(s)	-

Sample Request/Response

Use Case

Set cname value 'www.test.com' on objects with resource id - akagp:@5c59407cdd342b6c9431f609:@support.avxlab.net.akadns.net

Sample Request

```
{
 "payload": {
  "objectIds": [
   "akagp:@5c59407cdd342b6c9431f609:@support.avxlab.net.akadns.net"
  ],
  "cname": "www.test.com"
```

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```
 }

}
```

Sample Response

```
{

 "response": "Action triggered successfully.",

 "message": "Action triggered for the following 1 object(s) : akagp:@5c59407cdd342b6c9431f609:@support.avxlab.net.akadns.net",

 "appStatusCode": null,

 "tags": null,

 "headers": null

}
```

Get Transaction Status

This API fetches the status of the actions for objects involved in a transaction. This support is available for all object-level actions like Enable, Disable, etc. Transaction ID received from the response of these APIs can be sent as input to get the status.

Request Structure

URL: / adc-get-transaction-status

Type: POST

Parameters

Parameter Details

Param Type	Name	Field Type	Description	Constraints
Header	Sessionid	String	Session ID received after login.	Required if username and password are not provided.

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Parameter Details (continued)

Param Type	Name	Field Type	Description	Constraints
Header	username	String	AppViewX login username.	Required if the session ID is not provided.
Header	password	String	AppViewX login password.	Required if the session ID is not provided.
Header	Content-Type	String	Specifies the nature of the data in the payload.	The value of the param should be ‘application/json’.
Query	gwkey	String	Tenant Key. Needed only in the case of multi-tenant installations.	
Query	gwsource	String	Source from which the request is triggered (Eg: web, external)	
Body	payload	Payload	Contains all the params to be sent in the request body for the post request.	

Payload

Name	Mandatory	Description	Field Type	Constraints
transactionId	Yes	Transaction ID of action triggered. It can be found in the response of the action APIs under the tags field in the name ‘transactionId’.	String	
Status	No	Transaction Status to be searched.	String	
Objects	No	Transaction status of objects to be searched.	Array	
deviceNames	No	Transaction status of the device to be searched.	Array	

Response Structure

200 OK, returns string of type application/json with the following body params:

Name	Description	Field Type
response	Contains the requested pool objects and pool members.	Response

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Name	Description	Field Type
message	Failure description in case of error	String
appStatusCode	Application-specific status code for the response. It will be non-null for failure response.	String
tags	More info in case of a failed response.	Key-value pair

Status Codes

HTTP Status Code	appStatusCode	Message	Possible remediation
200 Ok	-	Refer to sample response	
404 Not Found	AVX_GW_009	Resource not found, reason - Invalid apiid	
400	avx-common-028	Invalid/ Incorrect payload	

Sample Request


```
{
  "payload": {
    "transactionId": "external-17631fj9h1",
    "objects": [{
      "objectType": "ltmPoolMember",
      "deviceName": "gs-f5-pe55.apvxlab.com",
      "objectName": "livepool",
      "partition": "Common",
      "recordType": "Common",
      "vendor": "F5"
    }, {
      "objectType": "ltmPoolMember",
      "deviceName": "192.168.31.188",
      "objectName": "livepool",
      "partition": "Common",
      "recordType": "Common",
      "vendor": "F5"
```


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```
    }]
  }
 }
```

Use Case

To fetch the action status of the object/device for the transaction.

Sample Response

```
{

  "response": {

    "transactionId": "external-17631fj9h1",

     "action": "Enable",

     "user": "admin",

     "comments": "action",

     "deviceObjects": [{

         "code": "go",

         "partition": "Common",

         "displayName": "livpool/a/gs-f5-pe55.apvxlab.com/F5",

         "vendor": "F5",

          "logMessage": "Action Disable executed successfully on object livpool/a/gs-f5-pe55.apvxlab.com/F5 by the user admin Reason: perform disable. The action is executed on a Standby device as an Active peer is not identified in AppViewX",

          "objectName": "livpool",

          "objectId": "gp:@5fa5305656aaf54f67a001f7:@livpool:@Common:@a",

  "status": "success"
```

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```
        }, {
          "code": "go",
          "partition": "Common",
          "displayName": "livepool/a/192.168.31.188/F5",
          "vendor": "F5",
          "logMessage": "Action Disable executed successfully on object livepool/a/192.168.31.188/F5 by the user admin Reason : perform disable.The action is executed on a Standby device as an Active peer is not identified in AppViewX",
          "objectName": "livepool",
          "objectId":
"gp:@5fa5305656aaf54f67a002ca:@livpool:@Common:@a",
          "status": "success"
          } ],
  "timeStamp": 1606722095762
  }
}
```


Search - LTM and GTM Pool

This API searches for LTM and GTM pools and associated pool members. LTM and GTM Pool Search action is supported on the following object types:

- F5 - LTM pool
- F5 - GTM pool

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Search - LTM and GTM Pool Before You Begin

Before attempting to search for the pool(s) and associated pool members with this API, users must ensure any of the ACF permission from ADC > Control Center, ADC > Dashboard > Application Widget, or ADC > Orphan objects is available. This can be checked under Accounts > Role > Authorized Functions.

Request Structure

URL: adc-controlcenter-pool-object-search

Method: Post

Parameters

Parameter Details

Param Type	Name	Field Type	Description	Constraints
Header	Sessionid	String	Session ID received after login.	Required if username and password are not provided.
Header	username	String	AppViewX login username.	Required if the session ID is not provided.
Header	password	String	AppViewX login password.	Required if the session ID is not provided.
Header	Content-Type	String	Specifies the nature of the data in the payload.	The value of the param should be ‘application/json’.
Query	gwkey	String	Tenant Key. Needed only in the case of multi-tenant installations.	
Query	gwsource	String	Source from which the request is triggered (Eg: web, external)	
Body	payload	Payload	Contains all the params to be sent in the request body for the post request.	

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Payload

Name	Mandatory	Description	Field Type	Constraints
deviceName	Yes	Device name of the pool to be searched for.	String	
objectName	Yes	Object name to be searched.	String	
objectType	Yes	GTM pool and LTM pool have to be searched.	String	Value of param should be TM pool or WideIP Pool or both.
partition	No	Partition in which the pool lies.	String	
recordType	No	Pool record type.	String	
orphan	No	Flag to get orphan objects.	Boolean	

Response Structure

200 OK, returns string of type application/json with the following body params:

Name	Description	Field Type
response	Contains the requested pool objects and pool members.	Response
message	Failure description in case of error	String
appStatusCode	Application-specific status code for the response. It will be non-null for failure response.	String
tags	More info in case of a failed response.	Key value pair

Response

Name	Description	Field Type
result	Contains result object	Object

Object

Name	Description	Field Type
Object	List of objects from the database that match the input query.	Object[]

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Status Codes

HTTP Status Code	appStatusCode	Message	Possible remediation
200 Ok	-	Refer to sample response	
404 Not Found	AVX_GW_009	Resource not found, reason - Invalid apiid	
400	avx-common-028	Invalid/ Incorrect payload	

Sample Request/Response

Use Case

Search pool object with mandatory and optional parameters.

Sample Request

```
{
  "payload": {
    "objects": [
      {
        "objectType": "ltm Pool",
        "deviceName": "192.168.42.150",
        "objectName": "pool_demo36_80",
        "orphan" : true
      }
    ]
  }
}
```

Sample Response

```
{
  "response": {
    "result": {
      "objects": [
        {
          "id": "lp:@60518caecc48a15dda15a673:@pool_demo36_80:@Common",
          "name": "pool_demo36_80",
          "deviceName": "192.168.42.150",
```

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```
                "objectType": "ltm Pool",
                "code": "lp",
                "displayName": "pool_demo36_80/192.168.42.150/F5",
                "orphan": true,
                "recordType": null,
                "status": "ENABLED",
                "statusCode": "UNKNOWN ENABLED",
                "childs": [
                  {
"id":"lpm:@6051da15a73:@pool_demo36_80:@Common::192.168.40.31:80:@Common",
                    "name": "192.168.40.31:80",
                    "code": "lpm",
                     "displayName": "192.168.40.31:80/192.168.40.31:80/pool_demo36_80/192.168.42.150/F5",
                    "partition": "Common",
                    "ip": "192.168.40.31",
                    "port": "80",
                    "status": "DISABLED",
                    "statusCode": "UNKNOWN DISABLED",
                    "memberName": "/Common/192.168.40.31",
                    "parentName": "pool_demo36_80",
                    "parentPartion": "Common"
                  }
   ]
     }
  },
  "message": null,
  "appStatusCode": null,
  "tags": null,
  "headers": null
}
```


Device

- Overview: Device
- Generate Device Backup
- Get Backup Details for a Device
- Add Device

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• Delete Device
• Sync Configuration
• Manage Device
• Unmanage a Device

Overview: Device

The Devices can be added into AppViewX and monitored. By using the APIs, the devices can be added, searched, and/or managed within AppViewX.

Generate Device Backup

This API triggers backup for a device. The generated backups are stored in the device inventory under the mentioned backup group name. If a backup group doesn't exist, a new backup group will be created.

Before you begin

Before attempting to initiate device backup with this API, users must ensure any one of the ACF permission **ADC** > **Backup & Restore** > **Backup now** is available. This can be checked under **Accounts** > **Role** > **Authorized Functions**.

Request Structure

URL: /adc-device-backup

Type: POST

Parameters

Parameter Details

Param Type	Name	Description	Field Type	Constraints
Header	`sessionId`	Session ID received after login	String	Required if username and password are not provided
Header	`username`	AppViewX login username	String	Required if sessionId is not provided
Header	`password`	AppViewX login password	String	Required if sessionId is not provided

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Parameter Details (continued)

Param Type	Name	Description	Field Type	Constraints
Header	Content-Type	Specifies the nature of the data in the payload.	String	Value of the param should be ‘application/json’
Query	gwkey	Tenant Key. Needed only in case of multi-tenant installations.	String	
Query	gwsource	Source from which the request is triggered (Eg: web, external).	String	
Body	payload	Contains all the params to be sent in the request body for the post request.	payload	

Response Structure

On 202 Accepted, device backup will be initiated on request device under given backup group name and string of type application/json will be returned with the following body params:

Name	Description	Field Type
response	Success message with device name or failure description in case of error.	String
message	Success message or failure description in case of error.	String
appStatusCode	Application-specific status code for the response. Will be non-null for failure response.	String
tags	More info in case of failure response.	

Payload

Name	Mandatory	Description	Field Type	Constraints
deviceName	Yes	Name of the device added in inventory.	String	It can contain only alphanumeric characters, ‘-’ , ’ _ ’ , ‘.’ , ‘*’ , ‘|’, ‘!’.

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Name	Mandatory	Description	Field Type	Constraints
backupName	Yes	The name of the backup group. A backup group will be created in this name if it isn't available. If the backup group is already existing in the system then backup will be triggered only if one of the following conditions are met. • The existing backup group is of device type. In this case, the device will be added to the backup group if it isn't available. • The existing backup group is of device group type and any of the configured device groups contain the requested device.	String	It can contain only Alphanumeric characters , '-', '_', '.' ,'*' , ':' , '|' , and space.
passphrase	No	PassPhrase key to encrypt the backup.	String	Passphrase is supported only for vendor F5.

Status Codes

HTTP Status Code	appStatusCode	Message	Possible remediation
202 Accepted	-	Device backup triggered successfully.	-
400 Bad Request	ADC_INV_2006	Invalid input.	Check if a non-null/non-empty value is given under field 'payload'.
400 Bad Request	ADC_INV_1117	Invalid backup name. Backup name accepts only '_','-','.' as special characters and should not start or end with special characters.	Check if the value given under field 'backupName' is valid. Backup name accepts only '_','-','.' as special characters and should not start or end with special characters.
400 Bad Request	ADC_INV_1116	Backup name cannot be null or empty.	Check if a non-null/non-empty value is given under the payload field - 'backupName'.

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HTTP Status Code	appStatusCode	Message	Possible remediation
400 Bad Request	ADC_INV_1092	Device Name cannot be null or empty.	Check if a non-null/non-empty value is given under payload field - ‘deviceName’.
400 Bad Request	ERR_OBJECT_023	Respective vendor's device is not supported. Action cannot be performed.	Request only devices of vendor - A10,AVI,Citrix,F5.
400 Bad Request	ADC_INV_1115	Mismatch in backup type, cannot add device to existing group as it already has a devicegroup configured.	• Change the request backupName for which device is configured and not device group. • Give a new backupName to be created and the requested device will be added in that backup group.
403 Forbidden	ADC_INV_1098	Cannot access resource, permission not available.	Check if Read/Read Write permission is available for the requested device.
403 Forbidden	ADC_INV_1077	Action cannot be performed on unmanaged device object(s).	Check if the requested device is in unmanaged state. If required, the device should be moved to managed state for performing backup.
404 Not Found	ADC_INV_1076	Device not available for the given details.	Check if the requested device is available in inventory.

Sample Request/Response

Use Case

Get the list of backups available for the device testdevice.

Sample Request

```
{

 "payload": {

  "backupName": "test",
```

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```
    "deviceName": "testDevice"
  }
}
```

Sample Response

```
{
  "response": "Backup triggered for device testDevice",
  "message": "Device backup triggered successfully.",
  "appStatusCode": null,
  "tags": null,
  "headers": null
}
```

Get Backup Details for a Device

This API retrieves a list of device backups available in Device Inventory against any particular ADC device.

Before you begin

Before attempting to get back up details with this API, users must ensure any one of the ACF permission **ADC** > **Backup & Restore** > **Object compare** is available. This can be checked under **Accounts** > **Role** > **Authorized Functions**.

Request Structure

URL: `/adc-device-archives`

Type: `GET`

Parameters

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Parameter Details

Param Type	Name	Description	Field Type	Constraints
Header	sessionId	Session ID received after login.	String	Required if username and password are not provided.
Header	username	AppViewX login username.	String	Required if sessionId is not provided.
Header	password	AppViewX login password.	String	Required if sessionId is not provided.
Query	gwkey	Tenant Key. Needed only in case of multi .tenant installations	String	-
Query	gwsource	Source from which the request is triggered (Eg: web, external).	String	-
Query	deviceName	Name of the device.	String	Mandatory. It can contain only alphanumeric characters, '-' , '_' , '.' , '*' , '|', '!'.

Response Structure

On 202 Accepted, device backup will be initiated on request device under given backup group name and string of type application/json will be returned with the following body params:

Name	Description	Field Type
response	Contains the response params for the get backup details request.	response
message	Success message or failure description in case of error.	String
appStatusCode	Application-specific status code for the response. Will be non-null for failure response.	String
tags	More info in case of failure response.	

Response

Name	Description	Field Type
<deviceName>	Device name given in request will be the key and the value is an object that contains the backup details.	Key value pair. backupFileDetail

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Backup File Details

Name	Description	Field Type
filename	Device name given in request will be the key and the value is an object that contains the backup details.	String
metadata	Metadata field denoting the backup details.	Key value pair. BackupFileMetadata
chunkSize	Size of the backup.	Integer
length	Length of the backup chunk stored in the database.	Integer
md5	MD5 sum of the device backup.	String
_id	Resource id denoting the backup file metadata stored in the database.	String

Backup File Metadata

Name	Description	Field Type
timeStamp	Time Stamp denoting the time on which the backup file is added to the database.	String
groupName	Group settings name in which the backup resides.	String[]
isEncrypted	Boolean value denoting whether the device backup is encrypted or not.	boolean
deviceId	Resource ID of the device for which backup is retrieved.	String

Status Codes

HTTP Status Code	appStatusCode	Message	Possible remediation
200 OK	-	Archive details retrieved successfully.	-
400 Bad Request	ADC_INV_1084	Device name is mandatory.	Check and ensure if a non-null/non-empty value is given in query param field - ‘deviceName’.

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HTTP Status Code	appStatusCode	Message	Possible remediation
404 Not Found	ADC_INV_1076	Device not available for the given details.	Check if the requested device is added in the inventory.

Sample Request/Response

Use Case

Get the list of archives for the device with name testDevice.

Request URL

https://192.168.98.27:31443/avxapi/adc-device-archives?deviceName=testDevice&gwkey=f000ca01&gwsource=external

Sample Request

```
NA
```

Sample Response


```
{

 "response": {

  "testDevice": [

   {

    "name": null,

    "chunkSize": 261120,

    "length": 1192434,

    "md5": "f2663fdf65d3db4644bd074fd6306de1",

    "filename": "testDevice_1597903384000.tar.gz",

    "metadata": {
```


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```
        "timeStamp": "1597903439000",
        "mode": "daily",
        "groupName": [
          "test"
        ],
        "isEncrypted": "false",
        "deviceId": "5f36bed67620c40e97e30348"
      },
      "_id": "5f3e124f25ac8a2582b08e57"
    }
  ]
},
"message": "Archive details retrieved successfully.",
"appStatusCode": null,
"tags": null,
"headers": null
}
```


- Before you begin
- Request Structure
- Response Structure

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• Response
• Backup File Details
• Backup File Metadata
• Status Codes
• Sample Request/Response

Before you begin

Before attempting to get back up details with this API, users must ensure any one of the ACF permission **ADC** > **Backup & Restore** > **Object compare** is available. This can be checked under **Accounts** > **Role** > **Authorized Functions**.

Request Structure

URL: `/adc-device-archives`

Type: `GET`

Param Type	Name	Description	Field Type	Constraints
Header	`sessionId`	Session ID received after login.	String	Required if username and password are not provided.
Header	`username`	AppViewX login username.	String	Required if sessionId is not provided.
Header	`password`	AppViewX login password.	String	Required if sessionId is not provided.
Query	`gwkey`	Tenant Key. Needed only in case of multi .tenant installations	String	-
Query	`gwsource`	Source from which the request is triggered (Eg: web, external).	String	-
Query	`deviceName`	Name of the device.	String	Mandatory. It can contain only alphanumeric characters, ‘-’ , ’_’ , ‘.’ , ‘*’ , ‘|’, ‘!’.

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Response Structure

On 202 Accepted, device backup will be initiated on request device under given backup group name and string of type application/json will be returned with the following body params

Name	Description	Field Type
response	Contains the response params for the get backup details request.	response
message	Success message or failure description in case of error.	String
appStatusCode	Application-specific status code for the response. Will be non-null for failure response.	String
tags	More info in case of failure response.	

Response

Name	Description	Field Type
<deviceName>	Device name given in request will be the key and the value is an object that contains the backup details.	Key value pair. backupFileDetail

Backup File Details

Name	Description	Field Type
filename	Device name given in request will be the key and the value is an object that contains the backup details.	String
metadata	Metadata field denoting the backup details.	Key value pair. BackupFileMetadata
chunkSize	Size of the backup.	Integer
length	Length of the backup chunk stored in the database.	Integer
md5	MD5 sum of the device backup.	String
_id	Resource id denoting the backup file metadata stored in the database.	String

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Backup File Metadata

Name	Description	Field Type
timeStamp	Time Stamp denoting the time on which the backup file is added to the database.	String
groupName	Group settings name in which the backup resides.	String[]
isEncrypted	Boolean value denoting whether the device backup is encrypted or not.	boolean
deviceId	Resource ID of the device for which backup is retrieved.	String

Status Codes

HTTP Status Code	appStatusCode	Message	Possible remediation
200 OK	-	Archive details retrieved successfully.	-
400 Bad Request	ADC_INV_1084	Device name is mandatory.	Check and ensure if a non-null/non-empty value is given in query param field - ‘deviceName’.
404 Not Found	ADC_INV_1076	Device not available for the given details.	Check if the requested device is added in the inventory.

Sample Request/Response

- Use Case
- Request URL
- Sample Request
- Sample Response

Use Case

Get the list of archives for the device with name testDevice.

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Request URL

https://192.168.98.27:31443/avxapi/adc-device-archives?deviceName=testDevice&gwkey=f000ca01&gwsource=external

Sample Request

NA

Sample Response


```
{

 "response": {

  "testDevice": [

   {

    "name": null,

    "chunkSize": 261120,

    "length": 1192434,

    "md5": "f2663fdf65d3db4644bd074fd6306de1",

    "filename": "testDevice_1597903384000.tar.gz",

    "metadata": {

     "timeStamp": "1597903439000",

     "mode": "daily",

     "groupName": [

      "test"
```


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```
        ],
        "isEncrypted": "false",
        "deviceId": "5f36bed67620c40e97e30348"
      },
      "_id": "5f3e124f25ac8a2582b08e57"
    }
  ]
},
"message": "Archive details retrieved successfully.",
"appStatusCode": null,
"tags": null,
"headers": null
}
```


Add Device

The API adds an ADC device to the Device Inventory.

- Before you begin
- Request Structure
- F5
- Citrix
- A10
- AVI

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- Cisco
- Amazon ELB
- Infoblox
- BigIQ
- HAProxy
- Nginx Plus
- Status Codes

Before you begin

Before attempting to add a device with this API, users must ensure ACF permission **ADC** > **Device group** > **Add / Modify** is available. This can be checked under **Accounts** > **Role** > **Authorized Functions**.

Request Structure

URL: /adc-device-add

Type: POST

Parameters

Parameter Details

Param Type	Name	Description	Field Type	Constraints
Header	`sessionId`	Session ID received after login.	String	Required if username and password are not provided.
Header	`username`	AppViewX login username.	String	Required if sessionId is not provided.
Header	`password`	AppViewX login password.	String	Required if sessionId is not provided.
Header	`Content-Type`	Specifies the nature of the data in the payload.	String	Value of the param should be ‘application/json’.
Query	`gwkey`	Tenant Key. Needed only in case of multi-tenant installations.	String	

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Parameter Details (continued)

Param Type	Name	Description	Field Type	Constraints
Query	gwsource	Source from which the request is triggered (Eg: web, external).	String	
Body	payload	Contains all the params to be sent in the request body for the post request.	Any one of the following: • F5 Payload • Citrix Payload • A10 payload • AVI Payload • Cisco Payload • AmazonELB Payload • Infoblox Payload • BigIQ Payload • HAProxy Payload • NginxPlus Payload	-

F5

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• F5 Payload
• Use Case for Sample Request/Response
• Use Case for Sample Request/Response

F5 Payload

Name	Mandatory	Description	Field Type	Constraints
name	Yes	Name of the device.	String	• Accepted special characters: '-' , '_' , '.' , '*' , '|' , '!' and space only. • Length 2 - 64 characters.
vendor	Yes	Vendor of the device - F5.	String	-
communicationAddressType	Yes	Communication type to the device.	String	Possible Values: IP,FQDN.
ip	Yes	IP of the device.	String	Required only if communicationAddressType is IP.
fqdn	Yes	FQDN of the device.	String	Required only if communicationAddressType is FQDN.
credentialType	Yes	Type of credential to be associated for the device.	String	Possible Values: ‘Manual Entry’,"Credential List - AppViewX’,’Credential List - CyberArk’, "Credential List -BeyondTrust".
userName	Yes	User name of the device.	String	Required only if credential Type is Manual entry. It will not accept ‘,”,<,>.
password	Yes	Encoded value of the	String	Required only if credential Type is Manual entry.

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Name	Mandatory	Description	Field Type	Constraints
		password to authenticate with the device.		
credentialName	Yes	Name of the credential to be associated with the device.	String	• Required only if credential type is 'Credential List - AppViewX or 'Credential List - CyberArk'. • Credential of the requested name should be added in AppViewX already. • Accepted special characters: '-' , '_' , '.' , '*' , '|' , '!' and space only. • Length 2 - 64 characters.
module	Yes	Modules with which the device is to be added.	String[]	Possible Values: LTM, BIG-IP DNS, vCMP Host, rSeries Host.
sshPort	No	Device communication port.	String	Default value: 22
certSync	No	Certificate sync mode.	String	Possible values: Managed,Monitored,Ignored Default Value: Ignored.
isAppViewXSyncRequired	No	Boolean value to denote whether AppViewX group is required. Only	Boolean	Default value: False

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Name	Mandatory	Description	Field Type	Constraints
		for applicable vendors.		
isAutoDetectSecondary	No	Boolean value to denote whether secondary devices should be automatically discovered and added to AppViewX.	Boolean	Default value: False
isAutoDetectTenants	No	Applicable only for module - rSeries Host. Boolean value to denote whether tenant devices should be automatically discovered and added to AppViewX.	Boolean	Default value: True
tokenBasedAuthentication	No	Token Based authentication. The possible values are True/False.	Boolean	-
dataCenter	No	Data center with which the device is to be added.	String	• Accepted special characters: '-' , '_' , '.' , '*' , '|' , '!' and space only. • Length 2 - 64 characters.

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Name	Mandatory	Description	Field Type	Constraints
tenantProperties.credentialType	Yes	Type of credential to be associated for the tenant device. Applicable only for device with module rSeries Host.	String	Possible Values: 'Credential List - AppViewX','Credential List - CyberArk',"Credential List - Thycotic","Credential List - HashiCorp"
tenantProperties.credentialName	Yes	Name of the credential to be associated with the tenant device. Applicable only for device with module rSeries Host.	String	• Required only if credential type is 'Credential List - AppViewX or 'Credential List - CyberArk'. • Credential of the requested name should be added in AppViewX already. • Accepted special characters: '-' , '_' , '.' , '*' , '|' and space only. • Length 2 - 64 characters.
tenantProperties.module	Yes	Modules with which the tenant device is to be added. Applicable only for devices with module rSeries Host.	String[]	Possible Values: LTM, BIG-IP DNS
tenantProperties.sshPort	No	Device communication port for the tenant device.	String	Default value: 22

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Name	Mandatory	Description	Field Type	Constraints
		Applicable only for devices with module rSeries Host.		
tenantProperties.certSync	No	Certificate sync mode for the tenant device. Applicable only for devices with module rSeries Host.	String	Possible values: Managed,Monitored,Ignored Default Value: Ignored.
tenantProperties.isAppViewXSyncRequired	No	Boolean value to denote whether the AppViewX group is required for the tenant device. Only for applicable vendors. Applicable only for devices with module rSeries Host.	Boolean	Default value: False

Use Case for Sample Request/Response

Add an F5 device of name testF5Device,with IP address 192.168.xxx.xx with both LTM and BIG-IP DNS modules with username and password.

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- Sample Request
- Sample Response

Sample Request


```
{

 "payload": {

  "name": "testF5Device",

  "communicationAddressType": "ip",

  "ip": "192.168.112.93",

  "vendor": "F5",

  "module": [

   "LTM",

   "BIG-IP DNS"

  ],

  "credentialType": "Manual Entry",

  "userName": "admin",

  "password": "YXBwdGFnQDEyMw=="

 }

}
```


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Sample Response


```
{

 "response": "Device is added to the inventory.",

 "message": "Device has been successfully added and configuration parse is triggered.",

 "appStatusCode": null,

 "tags": null,

 "headers": null

}
```


Use Case for Sample Request/Response

Add an F5 rSeries Host device of name testF5Device,with IP address 192.168.xxx.xx and auto detect all the tenants with LTM module.

Sample Request


```
{

 "payload": {

  "name": "testF5Device",

  "communicationAddressType": "ip",

  "ip": "192.168.2.10",

  "isAutoDetectTenants": true,

  "vendor": "F5",

  "module": [
```


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```
    "rSeries Host"

  ],

  "credentialType": "Manual Entry",

  "userName": "admin",

  "password": "QVZYIUY1VEVTVA==",

  "tenantProperties": {

    "credentialType": "Credential List - AppViewX",

    "module": [

      "LTM"

    ],

    "credentialName": "avx"

  }

 }

}
```


Sample Response


```
{

 "response": "Device is added to the inventory.",

 "message": "Device has been successfully added and configuration parse is triggered.",

 "appStatusCode": null,
```


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```
 "tags": null,

 "headers": null

}
```

Citrix

- Citrix Payload
- Use Case for Sample Request/Response
- Sample Request
- Sample Response

Citrix Payload

Name	Mandatory	Description	Field Type	Constraints
name	Yes	Name of the device .	String	• Accepted special characters: '-' , '_' , '.' , '*' , '|' , '!' and space only. • Length 2 - 64 characters.
vendor	Yes	Vendor of the device - Citrix.	String	-
communicationAddressType	Yes	Communication type to the device.	String	Possible Values: IP,FQDN
ip	Yes	IP of the device.	String	Required only if communicationAddressType is IP. The IP address must be in IPV4 format.

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Name	Mandatory	Description	Field Type	Constraints
fqdn	Yes	FQDN of the device.	String	Required only if communicationAddressType is FQDN.
credentialType	Yes	Type of credential to be associated for the device.	String	Possible Values: ‘Manual Entry’,’Credential List - AppViewX’,’Credential List - CyberArk’.
userName	Yes	User name of the device.	String	Required only if credential Type is Manual entry. It will not accept ‘,”,<,>.
password	Yes	Encoded value of the password to authenticate with the device	String	Required only if credential Type is Manual entry
credentialName	Yes	Name of the credential to be associated with the device.	String	• Required only if credential type is ’Credential List - AppViewX or ’Credential List - CyberArk’. • Credential of the requested name should be added in AppViewX already. • Accepted special characters: '-' , '_' , '.' , '*' , '|' , '!' and space only. • Length 2 - 64 characters.
module	Yes	Modules with which the device is to be added.	String[]	Possible Values: SLB,GSLB.
sshPort	No	Device communication port.	String	Default value: 22

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Name	Mandatory	Description	Field Type	Constraints
				It must be between 1 and 65535.
certSync	No	Certificate sync mode.	String	Possible values: Managed,Monitored,Ignored Default Value: Ignored.
isAutoDetectSecondary	No	Boolean value to denote whether secondary devices should be automatically discovered and added to AppViewX.	Boolean	Default value: False
dataCenter	No	Data center with which the device is to be added.	String	-

Use Case for Sample Request/Response

Add a Citrix device of name testF5Device,with IP address 192.168.xxx.xx with both SLB and GSLB modules, with username and password.

Sample Request

```
{

 "payload": {

  "name": "testCitrixDevice",

  "communicationAddressType": "ip",

  "ip": "192.168.112.86",
```

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```
  "vendor": "Citrix",
  "module": [
    "SLB",
    "GSLB"
  ],
  "certSync": "Monitored",
  "credentialType": "Manual Entry",
  "userName": "admin",
  "password": "YXBwdGFnQDEyMw=="
 }
}
```


Sample Response


```
{
 "response": "Device is added to the inventory.",
 "message": "Device has been successfully added and configuration parse is triggered.",
 "appStatusCode": null,
 "tags": null,
 "headers": null
}
```


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A10

- A10 Payload
- Use Case for Sample Request/Response
- Sample Request
- Sample Response

A10 Payload

Name	Mandatory	Description	Field Type	Constraints
name	Yes	Name of the device .	String	• Accepted special characters: '-' , '_' , '.' , '*' , '|' , '!' and space only. • Length 2 - 64 characters.
vendor	Yes	Vendor of the device.	String	-
communicationAddressType	Yes	Communication type to the device.	String	Possible Values: IP,FQDN
ip	Yes	IP of the device.	String	Required only if communicationAddressType is IP. The IP address must be in IPV4 format.
fqdn	Yes	FQDN of the device.	String	Required only if communicationAddressType is FQDN.
credentialType	Yes	Type of credential to be associated for the device.	String	Possible Values: ‘Manual Entry’,’Credential List - AppViewX’.
userName	Yes	User name of the device.	String	Required only if credential Type is Manual entry. It will not accept ‘,”,<,>.

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Name	Mandatory	Description	Field Type	Constraints
password	Yes	Encoded value of the password to authenticate with the device.	String	Required only if credential Type is Manual entry.
credentialName	Yes	Name of the credential to be associated with the device.	String	• Required only if credential type is 'Credential List - AppViewX or 'Credential List - CyberArk'. • Credential of the requested name should be added in AppViewX already. • Accepted special characters: '-' , '_' , '.' , '*' , '|' , '!' and space only. • Length 2 - 64 characters.
module	Yes	Modules with which the device is to be added.	String[]	-
sshPort	No	Device communication port.	String	Default value: 22 It must be between 1 and 65535.
certSync	No	Certificate sync mode.	String	Possible values: Managed,Monitored,Ignored Default Value: Ignored.
isAppViewXSyncRequired	No	Boolean value to denote whether AppViewX group is required. Only for applicable vendors.	String	Default value: False

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Name	Mandatory	Description	Field Type	Constraints
isAutoDetectSecondary	No	Boolean value to denote whether secondary devices should be automatically discovered and added to AppViewX.	String	Default value: False
dataCenter	No	Data center with which the device is to be added.	String	• Accepted special characters: '-' , '_' , '.' , '*' , '|' , '!' and space only. • Length 2 - 64 characters.

Use Case for Sample Request/Response

Add an A10 device of name testA10Device,with IP address 192.168.xx.xxxx with both SLB and GSLB modules, with username and password.

Sample Request

```
{

 "payload": {

  "name": "testA10Device",

  "communicationAddressType": "ip",

  "ip": "192.168.xx.xxx",

  "vendor": "A10",

  "module": [

   "SLB",
```

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```
    "GSLB"

  ],

  "certSync": "Monitored",

  "credentialType": "Manual Entry",

  "userName": "admin",

  "password": "YTEw",

  "enablePassword": "YTEw"

 }

}
```


Sample Response


```
{

 "response": "Device is added to the inventory.",

 "message": "Device has been successfully added and configuration parse is triggered.",

 "appStatusCode": null,

 "tags": null,

 "headers": null

}
```


AVI

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• AVI Payload
• Use Case for Sample Request/Response
• Sample Request
• Sample Response

AVI Payload

Name	Mandatory	Description	Field Type	Constraints
name	Yes	Name of the device.	String	• Accepted special characters: '-' , '_' , '.' , '*' , '|' , '!' and space only. • Length 2 - 64 characters.
vendor	Yes	Vendor of the device - AVI.	String	-
communicationAddressType	Yes	Communication type to the device.	String	Possible Values: IP,FQDN.
ip	Yes	IP of the device.	String	Required only if communicationAddressType is IP. The IP address must be in IPV4 format.
fqdn	Yes	FQDN of the device.	String	.Required only if communicationAddressType is FQDN
credentialType	Yes	Type of credential to be associated for the device.	String	Possible Values: ‘Manual Entry’,’Credential List - AppViewX’,’Credential List - CyberArk’.
userName	Yes	User name of the device.	String	Required only if credential Type is Manual entry. It will not accept ‘,”,<,>.

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Name	Mandatory	Description	Field Type	Constraints
password	Yes	Encoded value of the password to authenticate with the device.	String	Required only if credential Type is Manual entry.
credentialName	Yes	Name of the credential to be associated to the device.	String	• Required only if credential type is 'Credential List - AppViewX or 'Credential List - CyberArk'. • Credential of the requested name should be added in AppViewX already. • Accepted special characters: '-' , '_' , '.' , '*' , '|' , '!' and space only. • Length 2 - 64 characters.
module	Yes	Modules with which the device is to be added.	String[]	Possible Values; SLB,GSLB.
certSync	No	Certificate sync mode.	String	Possible values: Managed,Monitored,Ignored Default Value: Ignored.
isAutoDetectSecondary	No	Boolean value to denote whether secondary devices should be .automatically discovered and added to AppViewX	String	Default value: False

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Name	Mandatory	Description	Field Type	Constraints
dataCenter	No	Data center with which the device is to be added.	String	• Accepted special characters: '-' , '_' , '.' , '*' , '|' , '!' and space only. • Length 2 - 64 characters.

Use Case for Sample Request/Response

Add an AVI device of name testAVIDevice,with IP address 192.168.xx.xx with both SLB and GSLB modules, with username and password.

Sample Request

```
{

 "payload": {

  "name": "testAVIDevice",

  "communicationAddressType": "ip",

  "ip": "192.168.xx.xx",

  "vendor": "AVI",

  "module": [

   "SLB",

   "GSLB"

  ],

  "certSync": "Monitored",
```

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```
  "credentialType": "Manual Entry",

  "userName": "admin",

  "password": "YXBwdGFnQDEyMw=="

 }

}
```


Sample Response


```
{

 "response": "Device is added to the inventory.",

 "message": "Device has been successfully added and configuration parse is triggered.",

 "appStatusCode": null,

 "tags": null,

 "headers": null

}
```


Cisco

- Cisco Payload
- Use Case for Sample Request/Response
- Sample Request
- Sample Response

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Cisco Payload

Name	Mandatory	Description	Field Type	Constraints
name	Yes	Name of the device.	String	• Accepted special characters: '-' , '_' , '.' , '*' , '|' , '!' and space only. • Length 2 - 64 characters.
vendor	Yes	Vendor of the device - Cisco.	String	-
communicationAddressType	Yes	Communication type to the device.	String	Possible Value: IP
ip	Yes	IP of the device.	String	The IP address must be in IPV4 format.
credentialType	Yes	Type of credential to be associated for the device.	String	Possible Values: ‘Manual Entry’,’Credential List - AppViewX’,’Credential List - CyberArk’.
userName	Yes	User name of the device.	String	Required only if credential Type is Manual entry. It will not accept ‘,”,<,>.
password	Yes	Encoded value of the password to authenticate with the device.	String	Required only if credential Type is Manual entry.
credentialName	Yes	Name of the credential to be associated to the device.	String	• Required only if credential type is ’Credential List - AppViewX or ’Credential List - CyberArk’. • Credential of the requested name should be added in AppViewX already .

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Name	Mandatory	Description	Field Type	Constraints
				• Accepted special characters: '-' , '_' , '.' , '*' , '|' , '!' and space only. • Length 2 - 64 characters.
module	Yes	Modules with which the device is to be added.	String[]	Possible Value: SLB
certSync	No	Certificate sync mode.	String	Possible values: Managed,Monitored,Ignored Default Value: Ignored.
isAutoDetectSecondary	No	Boolean value to denote whether secondary devices should be automatically discovered and added to AppViewX.	String	Default value: False
dataCenter	No	Data center with which the device is to be added.	String	• Accepted special characters: '-' , '_' , '.' , '*' , '|' , '!' and space only. • Length 2 - 64 characters.

Use Case for Sample Request/Response

Add a Cisco device of name testCiscoDevice,with IP address 192.168.41.26 with SLB module, with username and password.

Sample Request

```
{

 "payload": {
```

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```
  "name": "testCiscoDevice",
  "communicationAddressType": "IP",
  "ip": "192.168.41.26",
  "vendor": "Cisco",
  "module": [
    "SLB"
  ],
  "certSync": "Monitored",
  "credentialType": "Manual Entry",
  "userName": "admin",
  "password": "YXBwdGFnQDEyMw=="
 }
}
```


Sample Response


```
{
 "response": "Device is added to the inventory.",
 "message": "Device has been successfully added and configuration parse is triggered.",
 "appStatusCode": null,
```


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```
 "tags": null,

 "headers": null

}
```

Amazon ELB

- AmazonELB Payload
- Use Case for Sample Request/Response
- Sample Request
- Sample Response

AmazonELB Payload

Name	Mandatory	Description	Field Type	Constraints
name	Yes	Name of the device .	String	• Accepted special characters: '-' , '_' , '.' , '*' , '|' , '!' and space only. • Length 2 - 64 characters.
vendor	Yes	Vendor of the device.	String	-
communicationAddressType	Yes	Communication type to the device.	String	Possible Values: IP,FQDN
ip	Yes	IP of the device.	String	Required only if communicationAddressType is IP. The IP address must be in IPV4 format.
fqdn	Yes	FQDN of the device.	String	Required only if communicationAddressType is FQDN.

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credentialType	Yes	Type of credential to be associated for the device.	String	Possible Values: ‘Manual Entry’,’Credential List - AppViewX’,’Credential List - CyberArk’.
userName	Yes	User name of the device.	String	Required only if credential Type is Manual entry.
password	Yes	Encoded value of the password to authenticate with the device.	String	Required only if credential Type is Manual entry.
credentialName	Yes	Name of the credential to be associated with the device.	String	• Required only if credential type is ’Credential List - AppViewX or ’Credential List - CyberArk’. • Credential of the requested name should be added in AppViewX already. • Accepted special characters: '-' , '_' , '.' , '*' , '|' , '!' and space only. • Length 2 - 64 characters.
module	Yes	Modules with which the device is to be added.	String[]	-
sshPort	No	Device communication port.	String	Default value: 22 It must be between 1 and 65535.
certSync	No	Certificate sync mode.	String	Possible values: Managed,Monitored,Ignored Default Value: Ignored.
isAppViewXSyncRequired	No	Boolean value to denote whether	String	Default value: False

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		AppViewX group is required. Only for applicable vendors.		
isAutoDetectSecondary	No	Boolean value to denote whether secondary devices should be automatically discovered and added to AppViewX.	String	Default value: False
dataCenter	No	Data center with which the device is to be added.	String	-

Use Case for Sample Request/Response

NA

Sample Request

NA

Sample Response

NA

Infoblox

- Infoblox Payload
- Use Case for Sample Request/Response
- Sample Request
- Sample Response

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Infoblox Payload

Name	Mandatory	Description	Field Type	Constraints
name	Yes	Name of the device .	String	• Accepted special characters: '-' , '_' , '.' , '*' , '|' , '!' and space only. • Length 2 - 64 characters.
vendor	Yes	Vendor of the device - Infoblox.	String	-
communicationAddressType	Yes	Communication type to the device.	String	Possible Values: IP, FQDN.
ip	Yes	IP of the device.	String	Required only if communicationAddressType is IP. The IP address must be in IPV4 format.
fqdn	Yes	FQDN of the device.	String	Required only if communicationAddressType is FQDN.
credentialType	Yes	Type of credential to be associated for the device.	String	Possible Values: ‘Manual Entry’,’Credential List - AppViewX’.
userName	Yes	User name of the device.	String	Required only if credential Type is Manual entry. It will not accept ‘,”,<,>.
password	Yes	Encoded value of the password to authenticate with the device.	String	Required only if credential Type is Manual entry.

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Name	Mandatory	Description	Field Type	Constraints
credentialName	Yes	Name of the credential to be associated with the device.	String	• Required only if credential type is 'Credential List - AppViewX. • Credential of the requested name should be added in AppViewX already . • Accepted special characters: '-' , '_' , '.' , '*' , '|' , '!' and space only. • Length 2 - 64 characters.
isAutoDetectSecondary	No	Boolean value to denote whether secondary devices should be automatically discovered and added to AppViewX.	String	Default value: False
dataCenter	No	Data center with which the device is to be added.	String	• Accepted special characters: '-' , '_' , '.' , '*' , '|' , '!' and space only. • Length 2 - 64 characters.

Use Case for Sample Request/Response

Add an Infoblox device of name testInfobloxDevice,with IP address 192.168.41.30 with username and password.

Sample Request

```
{
```

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```
 "payload": {

  "name": "testInfobloxDevice",

  "communicationAddressType": "IP",

  "ip": "192.168.41.30",

  "vendor": "Infoblox",

  "credentialType": "Manual Entry",

  "userName": "admin",

  "password": "YXBwdGFnQDEyMw=="

 }

}
```


Sample Response


```
{

 "response": "Device is added to the inventory.",

 "message": "Device has been successfully added and configuration parse is triggered.",

 "appStatusCode": null,

 "tags": null,

 "headers": null

}
```


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BigIQ

- BigIQ Payload
- Use Case for Sample Request/Response
- Sample Request
- Sample Response

BigIQ Payload

Name	Mandatory	Description	Field Type	Constraints
name	Yes	Name of the device.	String	• Accepted special characters: '-' , '_' , '.' , '*' , '|' , '!' and space only. • Length 2 - 64 characters.
vendor	Yes	Vendor of the device - BigIQ.	String	-
communicationAddressType	Yes	Communication type to the device.	String	Possible Values: IP
ip	Yes	IP of the device.	String	Required only if communicationAddressType is IP.
credentialType	Yes	Type of credential to be associated for the device.	String	Possible Values: ‘Manual Entry’,’Credential List - AppViewX’,’Credential List - CyberArk’.
userName	Yes	User name of the device.	String	Required only if credential Type is Manual entry.
password	Yes	Encoded value of the password to authenticate with the device.	String	Required only if credential Type is Manual entry.

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Name	Mandatory	Description	Field Type	Constraints
credentialName	Yes	Name of the credential to be associated with the device.	String	• Required only if credential type is 'Credential List - AppViewX or 'Credential List - CyberArk'. • Credential of the requested name should be added in AppViewX already . • Accepted special characters: '-' , '_' , '.' , '*' , '|' , '!' and space only. • Length 2 - 64 characters.
dataCenter	No	Data center with which the device is to be added.	String	• Accepted special characters: '-' , '_' , '.' , '*' , '|' , '!' and space only. • Length 2 - 64 characters.

Use Case for Sample Request/Response

Add a BigIQ device of name testBigIQDevice,with IP address 192.168.41.28 with username and password.

Sample Request

```
{

 "payload": {

  "name": "testBigIQDevice",

  "communicationAddressType": "IP",

  "ip": "192.168.41.29",
```

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```
  "vendor": "BigIQ",

  "credentialType": "Manual Entry",

  "userName": "admin",

  "password": "YXBwdGFnQDEyMw=="

 }

}
```


Sample Response


```
{

 "response": "Device is added to the inventory.",

 "message": "Device has been successfully added and configuration parse is triggered.",

 "appStatusCode": null,

 "tags": null,

 "headers": null

}
```


HAProxy

- HAProxy Payload
- Use Case for Sample Request/Response
- Sample Request
- Sample Response

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HAProxy Payload

Name	Mandatory	Description	Field Type	Constraints
name	Yes	Name of the device.	String	• Accepted special characters: '-' , '_' , '.' , '*' , '|' , '!' and space only. • Length 2 - 64 characters.
vendor	Yes	Vendor of the device - HAProxy.	String	-
communicationAddressType	Yes	Communication type to the device.	String	Possible Values: IP
ip	Yes	IP of the device.	String	The IP address must be in IPV4 format.
credentialType	Yes	Type of credential to be associated for the device.	String	Possible Values: ‘Manual Entry’,’Credential List - AppViewX’,’Credential List - CyberArk’, "Credential List -BeyondTrust".
userName	Yes	User name of the device.	String	Required only if credential Type is Manual entry. It will not accept ‘,”,<,>.
password	Yes	Encoded value of the password to authenticate with the device.	String	Required only if credential Type is Manual entry.

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Name	Mandatory	Description	Field Type	Constraints
credentialName	Yes	Name of the credential to be associated to the device.	String	• Required only if credential type is 'Credential List - AppViewX or 'Credential List - CyberArk'. • Credential of the requested name should be added in AppViewX already. • Accepted special characters: '-' , '_' , '.' , '*' , '|' , '!' and space only. • Length 2 - 64 characters.
module	Yes	Modules with which the device is to be added.	String[]	Possible Value: SLB
certSync	No	Certificate sync mode.	String	Possible values: Managed,Monitored,Ignored Default Value: Ignored.
dataCenter	No	Data center with which the device is to be added.	String	• Accepted special characters: '-' , '_' , '.' , '*' , '|' , '!' and space only. • Length 2 - 64 characters.

Use Case for Sample Request/Response

Add a HAProxy device of name testHAProxyDevice,with IP address 192.168.41.27 with SLB module, with username and password.

Sample Request

```
{

 "payload": {
```

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```
  "name": "testHAProxyDevice",
  "communicationAddressType": "IP",
  "ip": "192.168.41.27",
  "vendor": "HAProxy",
  "module": [
    "SLB"
  ],
  "certSync": "Monitored",
  "credentialType": "Manual Entry",
  "userName": "admin",
  "password": "YXBwdGFnQDEyMw=="
 }
}
```


Sample Response


```
{
 "response": "Device is added to the inventory.",
 "message": "Device has been successfully added and configuration parse is triggered.",
 "appStatusCode": null,
 "tags": null,
```


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```
 "headers": null

}
```

Nginx Plus

- NginxPlus Payload
- Use Case for Sample Request/Response
- Sample Request
- Sample Response

NginxPlus Payload

Name	Mandatory	Description	Field Type	Constraints
name	Yes	Name of the device.	String	• Accepted special characters: '-' , '_' , '.' , '*' , '|' , '!' and space only. • Length 2 - 64 characters.
vendor	Yes	Vendor of the device - NginxPlus.	String	-
communicationAddressType	Yes	Communication type to the device.	String	Possible Values: IP
ip	Yes	IP of the device.	String	The IP address must be in IPV4 format.
credentialType	Yes	Type of credential to be associated for the device.	String	Possible Values: 'Manual Entry','Credential List - AppViewX','Credential List - CyberArk'.
userName	Yes	User name of the device.	String	Required only if credential Type is Manual entry. It will not accept ',",<,>.

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Name	Mandatory	Description	Field Type	Constraints
password	Yes	Encoded value of the password to authenticate with the device.	String	Required only if credential Type is Manual entry.
credentialName	Yes	Name of the credential to be associated with the device.	String	• Required only if credential type is 'Credential List - AppViewX or 'Credential List - CyberArk'. • Credential of the requested name should be added in AppViewX already. • Accepted special characters: '-' , '_' , '.' , '*' , '|' , '!' and space only. • Length 2 - 64 characters.
module	Yes	Modules with which the device is to be added.	String[]	Possible Value: SLB
certSync	No	Certificate sync mode.	String	Possible values: Managed, Monitored, Ignored Default Value: Ignored.
dataCenter	No	Data center with which the device is to be added.	String	• Accepted special characters: '-' , '_' , '.' , '*' , '|' , '!' and space only. • Length 2 - 64 characters.

Use Case for Sample Request/Response

Add an NginxPlus device of name testNginxPlusDevice,with IP address 192.168.41.28 with SLB module, with username and password.

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Sample Request


```
{

 "payload": {

  "name": "testNginxPlusDevice",

  "communicationAddressType": "IP",

  "ip": "192.168.41.28",

  "vendor": "NginxPlus",

  "module": [

   "SLB"

  ],

  "certSync": "Monitored",

  "credentialType": "Manual Entry",

  "userName": "admin",

  "password": "YXBwdGFnQDEyMw=="

 }

}
```


Sample Response


```
{

 "response": "Device is added to the inventory.",
```


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```
  "message": "Device has been successfully added and configuration parse is triggered.",

  "appStatusCode": null,

  "tags": null,

  "headers": null

}
```


Status Codes

HTTP Status Code	appStatusCode	Message	Possible remediation
202 Accepted	-	Device has been successfully added and configuration parse is triggered	-
400 Bad Request	ADC_INV_0004	Validation error	One or more fields are invalid. Reason for validation failure and possible remediation will be available in ‘tags’ field of response.
409 Conflict	ADC_INV_0001	Device(s) Already Exists	Device already exists in AppViewX. Change the name of the device and ip/fqdn.
409 Conflict	ADC_INV_0006	Device Name Already Exists.	Change the name of the device and retry adding.
409 Conflict	ADC_INV_0007	IP Already Exists	Change the ip of the device and retry adding.
409 Conflict	ADC_INV_0027	FQDN already exists	Change the fqdn field of the device and retry adding.
404 Not Found	ADC_INV_1076	Device not available for the given details.	Check if the requested device is added in the inventory.

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Delete Device

This API deletes any device that is available in inventory.

Before you begin

Before attempting to delete devices with this API, users must ensure the ACF permission **ADC** > **Inventory** > **Delete** is available. This can be checked under **Accounts** > **Role** > **Authorized Functions**.

Request Structure

URL: /adc-device

Type: DELETE

Parameters

Parameter Details

Param Type	Name	Description	Field Type	Constraints
Header	sessionId	Session ID received after login.	String	Required if username and password are not provided.
Header	username	AppViewX login username.	String	Required if sessionId is not provided.
Header	password	AppViewX login password.	String	Required if sessionId is not provided.
Header	Content-Type	Specifies the nature of the data in the payload.	String	Value of the param should be ‘application/json’.
Query	gwkey	Tenant Key. Needed only in case of multi-tenant installations.	String	
Query	gwsource	Source from which the request is triggered (Eg: web, external).	String	
Query	deviceName	Name of the device to be deleted	String	Mandatory. It can contain only alphanumeric characters, ‘-’ , ’_’ , ‘.’ , ‘*’ , ‘|’, ‘!’.

Response Structure

On 200 OK, valid device(s) from the request will be deleted from the ADC inventory.

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Name	Description	Field Type
response	Success message with device name or failure description in case of error.	String
message	Success message or failure description in case of error.	String
appStatusCode	Application-specific status code for the response. Will be non-null for failure response.	String
tags	More info in case of failure response, contains information of deleted and invalid device(s)	

Status Codes

HTTP Status Code	appStatusCode	Message	Possible remediation
200 OK	-	Device(s) deleted succesfully.	-
400 Bad Request	ADC_INV_1562	Invalid Device Name. Device name cannot be null or empty.	Device name is not given/empty value is given. Give a valid device name in query param field - ‘deviceName’
400 Bad Request	ADC_INV_1561	All the given devices are invalid.	All the given device(s) are invalid. Check if the device is already added in the ADC inventory, Check if the requesting user has RW permission for the device.
404 Not Found	ADC_INV_1559	All the given devices are not found.	Check if the device is already added in the ADC inventory.
403 Forbidden	ADC_INV_1560	All the given devices doesn't have sufficient permission.	Check if the requesting user has RW permission for the device. This can be verified by navigating to Account -> Resource page and checking under Device tab for the user’s resource

Sample Request/Response

Use Case

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Delete two devices, 192.168.40.150 and test available in the ADC inventory.

Request URL

https://192.168.98.27:31443/avxapi/adc-device?deviceName=192.168.40.150,test&gwkey=f000ca01&gwsource=api

Sample Request

```
NA
```

Sample Response


```
    {
 "appStatusCode": null,
 "headers": null,
 "message": "Device(s) deleted succesfully.",
 "response": "Device(s) deleted succesfully.",
 "tags": {
  "Deleted Device(s)": [
   "Inventory_Device_ADC_Delete_F5V13_StandAlone"
  ],
  "Invalid Device(s)": []
 }
}
```


Sync Configuration

This API triggers configuration sync for a device available in Device Inventory.

Before you begin

Before attempting to initiate configuration sync with this API, users must ensure any one of the ACF permission “ADC > Inventory > Fetch config” is available. This can be checked under Accounts > Role > Authorized Functions.

Request Structure

URL: /adc-device-config-sync

Type: POST

Parameters

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Parameter Details

Param Type	Name	Description	Field Type	Constraints
Header	sessionId	Session ID received after login.	String	Required if username and password are not provided.
Header	username	AppViewX login username.	String	Required if sessionId is not provided.
Header	password	AppViewX login password.	String	Required if sessionId is not provided
Header	Content-Type	Specifies the nature of the data in the payload.	String	Value of the param should be ‘application/json’.
Query	gwkey	Tenant Key. Needed only in case of multi tenant installations.	String	
Query	gwsource	Source from which the request is triggered (Eg: web, external).	String	
Body	payload	Contains all the params to be sent in the request body for the post request.	Key value pair. Payload	

Payload

Name	Mandatory	Description	Field Type	Constraints
deviceName	Yes	Name of the device.	String	It can contain only alphanumeric characters, ‘-’ , ’_’ , ‘.’ , ‘*’ , ‘|’, ‘!’.

Response Structure

On 202 Accepted, configuration sync will be initiated on requested device and string of type application/ json will be returned with the following body params:

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Name	Description	Field Type
response	Success message with device name or failure description in case of error.	String
message	Success message or failure description in case of error.	String
appStatusCode	Application specific status code for the response. Will be non-null for failure response.	String
tags	More info in case of failure response.	Key value pair

Status Codes

HTTP Status Code	appStatusCode	Message	Possible remediation
202 Accepted	-	Config sync triggered succesfully.	-
400 Bad Request	ADC_INV_1559	Invalid Device Name. Device name cannot be null or empty.	• Check and ensure if non-null/non-empty value is given in field - ‘payload’. • Check and ensure if non-null/non-empty value is given under payload field - ‘deviceName’.
400 Bad Request	AVX-VLDTN-001	Invalid payload data.	Requested value in the deviceName field does not match the accepted pattern.
404 Not Found	ADC_INV_0010	Device not found.	Check if the requested device is added in the inventory.
403 Forbidden	ADC_INV_0005	Config fetch not allowed for Unmanaged/ Queued devices and Device(s) on which other operations are already in progress.	-

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HTTP Status Code	appStatusCode	Message	Possible remediation
403 Forbidden	ADC_INV_1558	Cannot access resource, permission not available.	Check if Read/Read Write permission is available for the requested device.

Sample Request/Response

Use Case

Trigger configuration sync for the device - testDevice.

Sample Request

```
{

 "payload": {

  "deviceName": "192.168.42.150"

 }

}
```

Sample Response

```
{

 "response": "Config sync triggered for given device - 192.168.42.150",

 "message": "Config sync triggered successfully.",

 "appStatusCode": null,

 "tags": null,

 "headers": null

}
```

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Manage Device

This API changes the unmanaged state to managed state. Before the state of the device changed to managed state, the device configuration sync process was triggered.

Before you begin

Before attempting to manage devices with this API, users must ensure any one of the ACF permission **ADC** > **Inventory** > **Manage / Unmanage** is available. This can be checked under **Accounts** > **Role** > **Authorized Functions**.

Request Structure

URL: /adc-device-manage

Type: PUT

Parameters

Parameter Details

Param Type	Name	Description	Field Type	Constraints
Header	`sessionId`	Session ID received after login.	String	Required if username and password are not provided.
Header	`username`	AppViewX login username.	String	Required if sessionId is not provided.
Header	`password`	AppViewX login password.	String	Required if sessionId is not provided.
Header	`Content-Type`	Specifies the nature of the data in the payload.	String	Value of the param should be ‘application/json’.
Query	`gwkey`	Tenant Key. Needed only in case of multi-tenant installations.	String	
Query	`gwsource`	Source from which the request is triggered (Eg: web, external).	String	
Body	`payload`	Contains all the params to be sent in the request body for the put request.	Key value pair Payload	

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Payload

Name	Mandatory	Description	Field Type	Constraints
deviceName	Yes	Name of the device(s) to manage.	String[]	It can contain only alphanumeric characters, ‘-’ , ’ _’ , ‘.’ , ‘*’ , ‘|’, ‘!’.

Response Structure

On 202 Accepted, manage device action will be initiated on requested device and string of type application/json will be returned with the following body params:

Name	Description	Field Type
response	Success message or failure description in case of error.	String
message	Success message or failure description in case of error.	String
appStatusCode	Application-specific status code for the response. Will be non-null for failure response.	String
tags	More info in case of failure response.	Key value pair

Status Codes

HTTP Status Code	appStatusCode	Message	Possible Remediation
202 Accepted	-	State change to manage the device has been initiated.	-
400 Bad Request	ADC_INV_0234	Device name is mandatory.Value cannot be null or empty.	Check and ensure a valid value is provided in field deviceName.
400 Bad Request	AVX-VLDTN-001	Invalid payload data.	Check and ensure a valid value is provided in field payload.

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HTTP Status Code	appStatusCode	Message	Possible Remediation
404 Not Found	ADC_INV_0010	Device not found.	Any of the given devices is not found in the database. Ensure if all the requested devices are added in inventory.
403 Forbidden	ADC_INV_0008	Selected device(s) are not in un-managed state. Operation cannot be performed.	All the requested devices are not in unmanaged state. Requested devices should be in unmanaged state to perform manage action.

Sample Request/Response

Use Case

Change the state of device ADC_DEVICE_1 from unmanaged to managed.

Sample Request

```
{

 "payload": {

  "deviceName": [

   "ADC_DEVICE_1"

  ]

 }

}
```

Sample Response

```
{

 "response": "State change to manage the device has been initiated",

 "message": "State change to manage the device has been initiated",
```

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```
 "appStatusCode": null,

 "tags": null,

 "headers": null

}
```


- Before you begin
- Request Structure
- Payload
- Response Structure
- Status Codes
- Sample Request/Response

Before you begin

Before attempting to manage devices with this API, users must ensure any one of the ACF permission **ADC** > **Inventory** > **Manage / Unmanage** is available. This can be checked under **Accounts** > **Role** > **Authorized Functions**.

Request Structure

URL: /adc-device-manage

Type: PUT

Param Type	Name	Description	Field Type	Constraints
Header	sessionId	Session ID received after login.	String	Required if username and password are not provided.
Header	username	AppViewX login username.	String	Required if sessionId is not provided.
Header	password	AppViewX login password.	String	Required if sessionId is not provided.

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Param Type	Name	Description	Field Type	Constraints
Header	Content-Type	Specifies the nature of the data in the payload.	String	Value of the param should be ‘application/json’.
Query	gwkey	Tenant Key. Needed only in case of multi-tenant installations.	String	
Query	gwsource	Source from which the request is triggered (Eg: web, external).	String	
Body	payload	Contains all the params to be sent in the request body for the put request.	Key value pair Payload	

Payload

Name	Mandatory	Description	Field Type	Constraints
deviceName	Yes	Name of the device(s) to manage.	String[]	It can contain only alphanumeric characters, ‘-’ , ’_’ , ‘.’ , ‘*’ , ‘|’, ‘!’.

Response Structure

On 202 Accepted, manage device action will be initiated on requested device and string of type application/json will be returned with the following body params

Name	Description	Field Type
response	Success message or failure description in case of error.	String
message	Success message or failure description in case of error.	String
appStatusCode	Application-specific status code for the response. Will be non-null for failure response.	String
tags	More info in case of failure response.	Key value pair

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Status Codes

HTTP Status Code	appStatusCode	Message	Possible Remediation
202 Accepted	-	State change to manage the device has been initiated.	-
400 Bad Request	ADC_INV_0234	Device name is mandatory.Value cannot be null or empty.	Check and ensure a valid value is provided in field deviceName.
400 Bad Request	AVX-VLDTN-001	Invalid payload data.	Check and ensure a valid value is provided in field payload.
404 Not Found	ADC_INV_0010	Device not found.	Any of the given devices is not found in the database. Ensure if all the requested devices are added in inventory.
403 Forbidden	ADC_INV_0008	Selected device(s) are not in un-managed state. Operation cannot be performed.	All the requested devices are not in unmanaged state. Requested devices should be in unmanaged state to perform manage action.

Sample Request/Response

- Use Case
- Sample Request
- Sample Response

Use Case

Change the state of device ADC_DEVICE_1 from unmanaged to managed.

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Sample Request

```
{

 "payload": {

  "deviceName": [

   "ADC_DEVICE_1"

  ]

 }

}
```

Sample Response

```
{

 "response": "State change to manage the device has been initiated",

 "message": "State change to manage the device has been initiated",

 "appStatusCode": null,

 "tags": null,

 "headers": null

}
```

Unmanage a Device

This API changes the state of ADC devices from managed state to unmanaged state. No action can be performed on the device(s), which are in the unmanaged state and its objects/applications.

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Before you begin

Before attempting to manage devices with this API, users must ensure any one of the ACF permission **ADC** > **Inventory** > **Manage / Unmanage** is available. This can be checked under **Accounts** > **Role** > **Authorized Functions**.

Request Structure

URL: /adc-device-unmanage

Type: PUT

Parameters

Parameter Details

Param Type	Name	Description	Field Type	Constraints
Header	sessionId	Session ID received after login.	String	Required if username and password are not provided.
Header	username	AppViewX login username.	String	Required if sessionId is not provided.
Header	password	AppViewX login password.	String	Required if sessionId is not provided.
Header	Content-Type	Specifies the nature of the data in the payload.	String	Value of the param should be ‘application/json’.
Query	gwkey	Tenant Key. Needed only in case of multi-tenant installations.	String	
Query	gwsource	Source from which the request is triggered (Eg: web, external).	String	
Body	payload	Contains all the params to be sent in the request body for the put request.	Key value pair Payload	

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Payload

Name	Mandatory	Description	Field Type	Constraints
deviceName	Yes	Name of the device(s) to manage.	String[]	It can contain only alphanumeric characters, ‘-’ , ’_’ , ‘.’ , ‘*’ , ‘|’, ‘!’.

Response Structure

On 202 Accepted, unmanage device action will be initiated on requested device and string of type application/json will be returned with the following body params:

Name	Description	Field Type
response	Success message or failure description in case of error.	String
message	Success message or failure description in case of error.	String
appStatusCode	Application specific status code for the response. Will be non-null for failure response.	String
tags	More info in case of failure response.	Key value pair

Status Codes

HTTP Status Code	appStatusCode	Message	Possible remediation
202 Accepted	-	State change to unmanage the device has been initiated.	-
400 Bad Request	ADC_INV_0234	Device name is mandatory.Value cannot be null or empty.	Check and ensure a valid value is provided in field deviceName.
400 Bad Request	AVX-VLDTN-001	Invalid payload data.	Check and ensure a valid value is provided in field payload.
404 Not Found	ADC_INV_0010	Device not found.	Any of the given devices are not found in the database. Ensure if all the requested devices are added in inventory

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HTTP Status Code	appStatusCode	Message	Possible remediation
403 Forbidden	ADC_INV_0009	Selected device(s) are in in-progress/un-managed state. Operation cannot be performed.	All the requested devices are in unmanaged/inprogress state. Requested devices should not be in Inprogress/ unmanaged state.

Sample Request/Response

Use Case

Change the state of device ADC_DEVICE_1 from managed to unmanaged.

Sample Request

```
{

 "payload": {

  "deviceName": [

   "ADC_DEVICE_1"

  ]

 }

}
```

Sample Response

```
{

 "response": "State change to unmanage the device has been initiated.",

 "message": "State change to unmanage the device has been initiated.",

 "appStatusCode": null,

 "tags": null,
```

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```
 "headers": null

}
```


Dashboard

• Overview: Dashboard

• Create an Application Widget

• Get Class Management Widget Details

• Delete a Widget

Overview: Dashboard

By using the following APIs, you can manage, monitor, and interpret all the configured applications and their objects.

Create an Application Widget

This API creates an Application widget and configures objects.

Before you begin

Before attempting to create an application widget with this API, users must ensure ACF permission **ADC** > **Dashboard Application widget** > **Add /Delete** is available. This can be checked under **Accounts** > **Role** > **Authorized Functions**.

Request Structure

URL: /dashboard-widget-applicationview

Type: POST

Parameters

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Parameter Details

Param Type	Name	Description	Field Type	Constraints
Header	sessionId	Session ID received after login.	String	Required if username and password are not provided.
Header	username	AppViewX login username.	String	Required if sessionId is not provided.
Header	password	AppViewX login password.	String	Required if sessionId is not provided.
Header	Content-Type	Specifies the nature of the data in the payload.	String	Value of the param should be ‘application/json’
Query	gwkey	Tenant Key. Needed only in case of multi-tenant installations.	String	
Query	gwsource	Source from which the request is triggered (Eg: web, external)	String	
Query	dashboardName	Name of the dashboard in which a widget is to be created. If the given dashboard is not available a new dashboard will be created in the given name.	String	Mandatory. Accepts only '_', '-', ':', '.', '|'(Should not be empty and not start with special characters).
Body	payload	Contains all the params to be sent in the request body for the put request.	Key value pair Payload	-

The input supports up to three hierarchical levels of groups. group, subGroup1, subGroup2, subGroup3 are static keys.

Payload

Name	Mandatory	Description	Field Type	Constraints
name	Yes	Name of the widget.	String	Accepts only '_', '-', ':', '.', '|'(Should not be empty and not start with special characters).

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Name	Mandatory	Description	Field Type	Constraints
group	No	Contains attributes denoting the group to be created.	Key value pair[] Group	-

Widget Group

Name	Mandatory	Description	Field Type	Constraints
name	Yes	Name of the group.	String	Accepts only '_', '-', ':', '.', '|'(Should not be empty and not start with special characters).
action	No	Contains a list of attributes denoting the actions to be added in the group.	Key value pair[] Action	-
objects	No	Contains a list of attributes related to the object to be added in the group such as hierarchy,vendor,objectType.	Key value pair[] ObjectInfo	-
subGroup1	No	Subgroups to be added within this group. Only three levels of groups are possible. Groups can be mentioned with static keys group,subGroup1,subGroup2 within one another.	Key value pair[] Group	-

ObjectInfo

Name	Mandatory	Description	Field Type	Constraints
vendor	No	Device vendor.	String	-
objectType	No	Object Type as mentioned in AppViewX.	String	-
hierarchy	No	Hierarchy to display.	String	-

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Name	Mandatory	Description	Field Type	Constraints
selectedList	No	List of objects along with actions to be associated with the object.	Key value pair[] Object	-

Object

Name	Mandatory	Description	Field Type	Constraints
resourceId	No	Resource id of the object to be added in the widget group. Note: Use the search API to search/get the resource ID.	String	-
actions	No	List of actions to be associated with this object. Action name should be the custom action name defined under 'action.name' property of the group.	String[]	-

Action

Name	Mandatory	Description	Field Type	Constraints
name	No	Name to be given for the particular action in this group.	String	-
type	No	Type of action. Limited to the actions that are supported in AppViewX.	String	-

Response Structure

200 OK, returns string of type application/json with the following body params:

Name	Description	Field Type
response	Success message or failure description in case of error	String
message	Success message or failure description in case of error	String
appStatusCode	Application-specific status code for the response. Will be non-null for failure response.	String

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Name	Description	Field Type
tags	More info in case of failure response	Key value pair

Status Codes

HTTP Status Code	appStatusCode	Message	Possible remediation
200 OK	-		-
400 Bad Request	DASH_WID_APPVIEW_0001	Mandatory field 'dashboardName' is missing	Check and ensure if a non-null/ non-empty value is given in query param field - ‘dashboardName’
400 Bad Request	ADC_DASH_0511	Exception : Invalid Widget name	Check and ensure if a valid value for widget name is given in payload field - ‘name’. Field accepts only '_', '-', ':', '.', '|'(Should not be empty and not start with special characters).
400 Bad Request	ADC_DASH_0517	Exception : Invalid Action	Check the action name given in the group field - ‘action.type’. Limited to actions supported in AppViewX
400 Bad Request	ADC_DASH_0518	Exception : Invalid hierarchy	Check the value given under the object field - ‘hierarchy’ is supported. Valid hierarchies for requested vendor and objectType can be found in tags field of response also
400 Bad Request	ADC_DASH_0014	Invalid dashboard name.	Change the value given in the query param field - ‘dashboardName’ and retry. dashboardName field accepts only '_', '-', ':', '.', '|'(Should not be

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HTTP Status Code	appStatusCode	Message	Possible remediation
			empty and not start with special characters).
400 Bad Request	ADC_DASH_0516	Exception : Duplicate Action	Check if any of the action is already configured in the group or parentGroup. Group name in which duplicate is found will be available in tags field of response
403 Forbidden	ADC_DASH_0005	Permission not available for dashboard.	Check if the logged in user has access to the requested dashboard
409 Conflict	ADC_DASH_0010	Widget name already exists.	Change the widget name in the request and retry
404 Not Found	DASH_WID_APPVIEW_0003	Object not found	Check if requested objects are available in AppViewX. Missing objects resourceIds will be available under tags field of response.
500 Internal Server Error	ADC_DASH_0507	Exception occured while adding Application widget	• Check if given value under object field ‘vendor’ is support by AppViewX • Check if given value under object field ‘objectType’ is support by AppViewX
409 Conflict	ADC_DASH_0607	Object Count of the Widget exceeds threshold limit {thresholdLimit}. Currently added Object count : {CurrentCountInRequest}	Remove input objects so the input count should be within allowed threshold limit(1000)

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Sample Request/Response

Use Case

- Create an application widget with a name appwidget and with a group group_1.
- group_1 to have two actions configured – enable and disable.
- group_1 to have two virtual servers – ‘vs:@5f4e2ffafcbb9809756c6b4d:@ACLTest:@Common’ and ‘vs:@5f4e2ffafcbb9809756c6b4d:@ACLTest1:@Common’ configured in it.
- Both the virtual servers to display all the hierarchical children in the group (hierarchy: all) ‘vs:@5f4e2ffafcbb9809756c6b4d:@ACLTest:@Common’ and ‘vs:@5f4e2ffafcbb9809756c6b4d:@ACLTest1:@Common’ to have actions - enable(en) and disable(dis) configured. group_1 to have child group ‘grp_sub1’ inside it .
- ‘grp_sub1’ to have two wide IP inside – ‘gw:@5f4e3423fcbb9809756c6b82:@test.com:@Common:@a’ and ‘gw:@5f4e3423fcbb9809756c6b82:@AppViewXSyslog.com:@Common:@a’.
- Both the wide IPs to display all the hierarchal children in the group (hierarchy: all)
- Both the wide IPs to be configured with actions enable persistence(enPer) and disable persistence(disPer).
- ‘grp_sub1’ to be configured with actions enable persistence(enPer) and disable persistence(disPer).

Sample Request


```
{

 "payload": {

  "name": "appwidget",

  "group": [

   {

    "name": "group_1",

    "action": [

     {
```


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```
      "name": "en",
      "type": "Enable"
    },
    {
      "name": "dis",
      "type": "Disable"
    }
  ],
  "objects": [
    {
      "vendor": "F5",
      "objectType": "VirtualServer",
      "hierarchy": "All",
      "selectedList": [
        {
          "resourceId": "vs:@5f4e2ffafcbb9809756c6b4d:@ACLTest:@Common",
          "actions": [
            "en",
            "dis"
```


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```
        ]
      },
      {
        "resourceId": "vs:@5f4e2ffafcbb9809756c6b4d:@ACLTest1:@Common",
        "actions": [
          "en",
          "dis"
        ]
      }
    ]
  }
],
"subGroup1": [
  {
    "name": "grp_sub1",
    "action": [
      {
        "name": "enPer",
```

```
    "type": "EnablePersistence"
   },
   {
    "name": "disPer",
    "type": "DisablePersistence"
   }
  ],
  "objects": [
   {
    "vendor": "F5",
    "objectType": "wideIp",
    "hierarchy": "All",
    "selectedList": [
     {
      "resourceId": "gw:@5f4e3423fcbb9809756c6b82:@gowthamTest.com:@Common:@a",
      "actions": [
       "enPer",
       "disPer"
      ]
```


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```
            },
            {
              "resourceId": "gw:@5f4e3423fcbb9809756c6b82:@AppViewXSyslog.com:@Common:@a",
              "actions": [
                "enPer",
                "disPer"
              ]
            }
          ]
        }
      ]
    }
  ]
}
```

Sample Response

```
{
```

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```
"response": "Application widget is created under the given dashboard.",

"message": "Application widget is created under the given dashboard.",

"appStatusCode": null,

"tags": null,

"headers": null

}
```


Get Class Management Widget Details

This API gets the details for a given class management widget.

Before you begin

Before attempting to get class management widget with this API, user must ensure any one of the ACF permission **ADC** > **Dashboard** > C**lass management widget** > **Add / Delete**, **ADC** > **Dashboard** > **Class management widget** > **Execute actions**, **ADC** > **Dashboard** > **Class management widget** > **Modify settings** is available. This can be checked under **Accounts** > **Role** > **Authorized Functions**.

Request Structure

URL: /dashboard-widget

Type: GET

Parameters

Parameter Details

Param Type	Name	Description	Field Type	Constraints
Header	sessionId	Session ID received after login.	String	Required if username and password are not provided.
Header	username	AppViewX login username.	String	Required if sessionId is not provided.
Header	password	AppViewX login password.	String	Required if sessionId is not provided.

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Parameter Details (continued)

Param Type	Name	Description	Field Type	Constraints
Query	gwkey	Tenant Key. Needed only in case of multi-tenant installations.	String	
Query	gwsource	Source from which the request is triggered (Eg: web, external).	String	
Query	dashboardName	Name of the dashboard.	String	Mandatory. Allowed special characters : '_', '-', ':', '.', '|' (Should not be empty and not start with special characters).
Query	widgetName	Name of the class management widget.	String	Mandatory. Allowed special characters : ‘-’ ,’_’ , ‘.’ , ‘:’ , ’|’

Response Structure

200 OK, returns string of type application/json with the following body params:

Name	Description	Field Type
response	Contains the requested class management widget details.	Key value pair
message	Success message or failure description in case of error.	String
appStatusCode	Application specific status code for the response. Will be non-null for failure response.	String
tags	More info in case of failure response.	Key value pair

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Status Codes

HTTP Status Code	appStatusCode	Message	Possible remediation
200 OK	-	Widget details retrieved successfully.	-
400 Bad Request	ADC_DASH_0601	Dashboard name is mandatory	Check and ensure if a valid value is given in query param field - dashboardName
400 Bad Request	ADC_DASH_0602	Widget name is mandatory	Check and ensure if a valid value is given in the query param field - widgetName.
400 Bad Request	ADC_DASH_0014	Invalid dashboard name.	Requested dashboard name is invalid. Dashboard name accepts only '_', '-', ':', '.', '|'(Should not be empty and not start with special characters).
400 Bad Request	ADC_DASH_0008	Widget name accepts only - , _ , . , : , |.	Requested widget name is invalid.Widget name accepts only - , _ , . , : , |.
400 Bad Request	ADC_DASH_0009	Widget name cannot exceed 50 characters.	Requested widget name is invalid. Check the widget name length.
404 Not Found	ADC_DASH_0001	Dashboard not available for given name.	Requested dashboard is not found in the database. Check if the dashboard is deleted.
404 Not Found	ADC_DASH_2507	Class Management Exception : Widget detail not available in db for given name.	Check if the widget is deleted or if the widget is available in a different dashboard.
403 Forbidden	ADC_DASH_0005	Permission not available for dashboard.	Check if the user has Read or Read/Write access for the requested dashboard.

Sample Request/Response

Use Case

Get the details of the class management widget with name classWgt under the dashboard test.

Request URL

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https://192.168.98.27:31443/avxapi/dashboard-widget?dashboardName=test&widgetName=classWgt&gwkey=f000ca01&gwsource=external

Sample Request

```
NA
```

Sample Response


```
{

 "response": {

  "name": "classWgt",

  "subsystem": "adc",

  "userDefined": true,

  "applicableFor": null,

  "disabled": false,

  "size": {

   "width": 634,

   "height": 69

  },

  "keywords": [

  ],

  "componentName": "classWgt",

  "description": null,
```


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```
"addedGroups": [
  "classWgt/g1"
],
"removedGroups": [

],
"addedActions": [
  {
    "groupName": "g1",
    "action": "view"
  }
],
"removedActions": [

],
"settings": {
  "actionlist": {
    "g1": {
```


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```
    "view": {
      "action": "ViewClass",
      "hostProfile": "",
      "actionGroupName": "g1",
      "className": "test_data_group/gs-f5-pe115.apvxlab.com/F5",
      "classId": "lc:@5f36c1567620c40e97e30350:@test_data_group:@Common",
      "deviceId": "gs-f5-pe115.apvxlab.com(5f36c1567620c40e97e30350)",
      "stringValueAssociationCheck": false,
      "selectedStringValueObject": null,
      "availableStringValueObject": null,
      "deviceAssociationCheck": false,
      "selectedDeviceObject": null,
      "availableDeviceObject": null,
      "defaultExecuted": false,
      "msg": "",
      "isRuntimeCheck": true
    }
  }
},
```


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```
"settings": [
 {
   "name": "classWgt",
   "parent": "",
   "hierarchy": "",
   "level": "group",
   "nodeLevel": 0,
   "actions": [
   ],
   "children": [
   ],
   "actionStatus": null,
   "classActionName": null,
   "id": "classWgt"
 },
 {
```


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```
      "name": "g1",
      "parent": "classWgt",
      "hierarchy": "",
      "level": "group",
      "nodeLevel": 1,
      "actions": [
        "view"
      ],
      "children": [
      ],
      "actionStatus": null,
      "classActionName": null,
      "id": "g1"
    }
  ]
},
"classLog": null,
"viaImport": false,
```


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```
    "StdCustomFlag": "ClassManagement",
    "_id": "5f3f97be25ac8a2582b0b2f2"
  },
  "message": "Widget details retrieved successfully.",
  "appStatusCode": null,
  "tags": null,
  "headers": null
}
```


Delete a Widget

This API deletes any widget that is created by the AppViewX user.

Before you begin

Before attempting to delete a widget with this API, user must ensure any one of the below ACF permissions is available,

- General > Dashboard > Create / Delete
- ADC > Dashboard > Application widget > Add / Delete
- ADC > Dashboard > Class management widget > Add / Delete
- ADC > Dashboard > Device heat map widget > Add / Delete
- ADC > Dashboard > Script execution widget > Add / Delete
- ADC > Dashboard > Traffic grid widget > Add / Delete
- ADC > Dashboard > Traffic statistics widget > Add / Delete

This can be checked under Accounts > Role > Authorized Functions.

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Request Structure

URL: /dashboard-widget

Type: DELETE

Parameters

Parameter Details

Param Type	Name	Description	Field Type	Constraints
Header	sessionId	Session ID received after login.	String	Required if username and password are not provided.
Header	username	AppViewX login username.	String	Required if sessionId is not provided.
Header	password	AppViewX login password.	String	Required if sessionId is not provided.
Query	gwkey	Tenant Key. Needed only in case of multi tenant installations.	String	
Query	gwsource	Source from which the request is triggered (Eg: web, external).	String	
Query	dashboardName	Name of the dashboard.	String	Mandatory. Allowed special characters : '_', '-', ':', '.', '|' (Should not be empty and not start with special characters).
Query	widgetName	Name of the class management widget.	String	Mandatory. Allowed special characters : ‘-’ , ’_’ , ‘.’ , ‘:’ , ’|’

Response Structure

On 200 OK, the requested widget will be deleted and string of type application/json will be returned with the following body params:

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Name	Description	Field Type
response	Success message or failure. description in case of error.	String
message	Success message or failure description in case of error	String
appStatusCode	Application specific status code for the response. Will be non-null for failure response.	String
tags	More info in case of failure response.	Key value pair

Status Codes

HTTP Status Code	appStatusCode	Message	Possible Remediation
200 OK	-	Widget deleted successfully.	-
400 Bad Request	ADC_DASH_8791	Dashboard name is mandatory.	Check and ensure if a valid value is given in the query param field - dashboardName.
400 Bad Request	ADC_DASH_8792	Widget name is mandatory.	Check and ensure if a valid value is given in query param field - widgetName
404 Not Found	ADC_DASH_0045	Dashboard not available for given name.	Requested dashboard not available in database. Check if the dashboard is deleted.
404 Not Found	ADC_DASH_3010	Widget not found.	Check if the widget is deleted or if the widget is available in a different dashboard.
403 Forbidden	ADC_DASH_0048	Permission not available for dashboard.	Check if the user has Read Write access for the requested dashboard.

Sample Request/Response

Use Case

Delete a widget named widget_1 from the dashboard dashboard_1.

Request URL

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https://192.168.98.27:31443/avxapi/dashboard-widget?dashboardName=dashboard_1&widgetName=widget_1&gwkey=f000ca01&gwsource=external

Sample Request

```
NA
```

Sample Response

```
{

  "response": "Widget deleted successfully.",

  "message": "Widget deleted successfully.",

  "appStatusCode": null,

  "tags": null,

  "headers": null

}
```

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Chapter 4: ADC+ Automation Workflow Guide

- Introduction
- Accessing ADC Predefined Workflow
- F5 BIG-IP LTM
- F5 BIG-IP GTM
- F5 BIG-IP AS3
- F5 BIG IP ASM
- AVI SLB/GSLB
- Infoblox IPAM
- Bluecat IPAM
- F5 BIG-IP System
- F5 BIG-IP ZTP
- GITOps
- Nginx Plus
- Citrix SLB
- Citrix GSLB
- Citrix Context Switch
- Citrix NetScaler System
- Reports
- Sample Workflow Creation

Introduction

- Overview
- Application Delivery Automation
- Self-service and Automate Application Delivery services

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Overview

This guide describes AppViewX's ADC predefined workflows to automate and self-service deployments and helps you to integrate with third-party, best-of-breed, and open-source network services like those provided by application delivery controllers, security devices, certificate authorities, DNS servers, routers/switches, and more.

Application Delivery Automation

As your application delivery infrastructure becomes progressively more complex, enterprises must turn to network infrastructure management and automation solutions to ensure successful deployments.

ADC offers predefined workflows to automate and self-service deployments and helps you to integrate with third-party, best-of-breed, and open-source network services like those provided by application delivery controllers, security devices, certificate authorities, DNS servers, routers/switches, and more.

The workflows can integrate with other best-in-class IT service management solutions to govern and record service requests in the larger automated workflow. It can be leveraged to help users move faster, eliminate errors, and reduce costs.

Self-service and Automate Application Delivery services

AppViewX is a true multi-vendor platform for managing the ever-evolving complex enterprise infrastructure. As your application delivery infrastructure becomes progressively more complex, enterprises must turn to network infrastructure management and automation solutions to ensure successful deployments. AppViewX offers a suite of tools for organizations striving to become true digital enterprises.

The AppViewX platform will help you automate third-party, best-of-breed, and open-source network services like those provided by application delivery controllers, security devices, certificate authorities, DNS servers, routers/switches, and more.

The AppViewX platform integrates with other best-in-class IT service management solutions to govern and record service requests in the larger automated workflow. It can be leveraged to help users to move faster, eliminate errors, and reduce costs, making it the best choice for enterprises working to adapt to new technologies, processes, and application delivery expectations.

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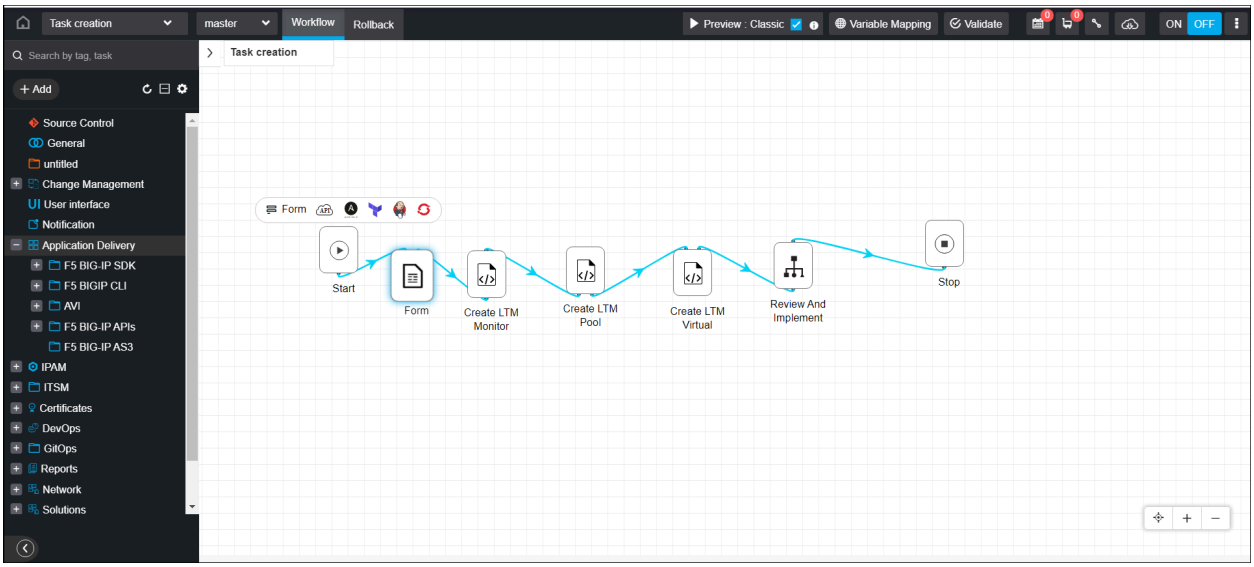

Accessing ADC Predefined Workflow

offers Visibility into the One-touch Automation solution offerings to address network and application service requests. Automation solution offerings are available in the **View/Run Workflows** catalog page.

To access Predefined workflow,

1. Log into the application with valid credentials.
2. Go to .

   The predefined workflows are listed. The automation offerings (workflows) are controlled by ’s modern RBAC control feature, thus providing individuals groups to maintain and access their own workflows.

   On the page, you can:

   - View the workflows grouped under the categories.
   - Edit the workflow by selecting the **Edit** option from .
   - Edit the layout.
   - Refresh the by clicking the .
   - Sort the workflows by ascending, descending, or user preference order.
   - Run the workflows.
   - Schedule to run a workflow.

- Viewing Workflows (Application Provisioning Catalog)

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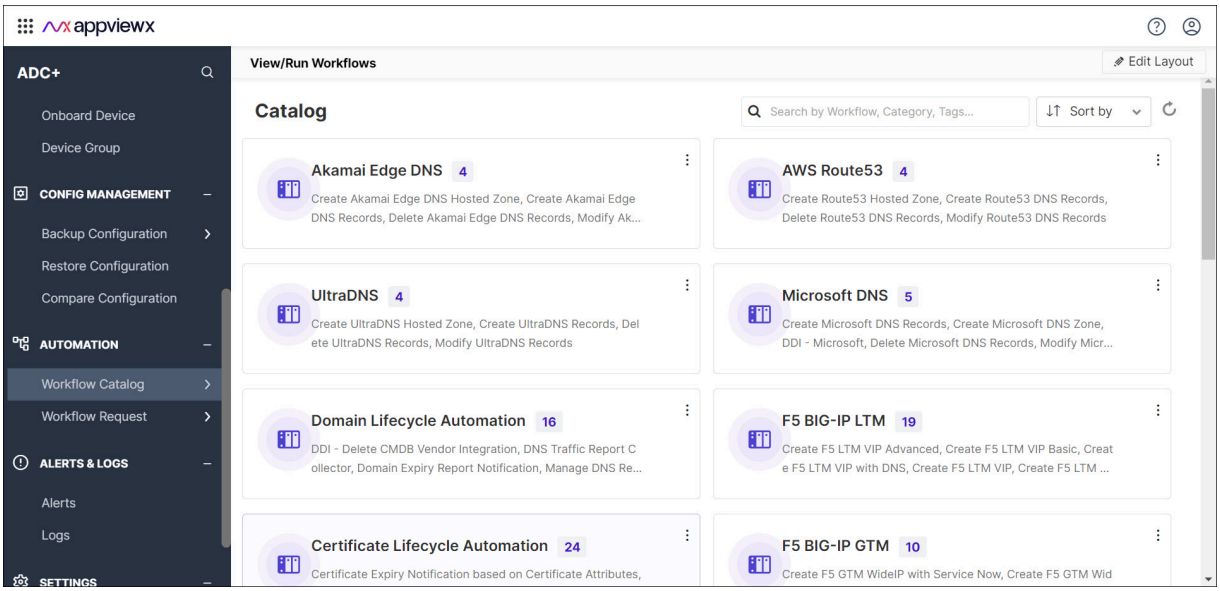
Viewing Workflows (Application Provisioning Catalog)

All the ADC Predefined workflows can be viewed in the Workflow Catalog page.

To view the workflows,

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**.
   The workflows are displayed within their respective categories.
2. Select a workflow category of your choice.
   A popup window opens, displaying the workflows organized within the selected category.

> **Note:** You can scroll down to see all the workflows within this category. Additionally, you can use the search function to locate specific workflows within this window.



F5 BIG-IP LTM

- Create F5 LTM VIP – Basic
- Create F5 LTM VIP
- Create F5 LTM VIP with DNS
- Create F5 LTM VIP with Service Now
- Create F5 LTM VIP Advanced

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- Create F5 LTM VIP with Partition
- Delete F5 LTM VIP - Basic
- Delete F5 LTM VIP - Advanced
- Disable Unused F5 LTM VIP
- Disable and Delete Unused F5 LTM VIP
- Get Unused LTM VIP and Delete
- Get Unused LTM VIP and Notify
- Disable and Delete Unused VIP-State/Status
- Delete F5 LTM VIP with Service Now
- Manage F5 LTM Pool Members
- Manage F5 LTM Pool members with Service Now
- Modify F5 LTM VIP Advanced
- Create F5 LTM Multiple VIP
- Create F5 LTM Monitors - Multiple Devices
- Create F5 LTM Monitors

Create F5 LTM VIP – Basic

This workflow automates the creation of a basic F5 LTM VIP with a Single Pool and a Single Monitor.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG-IP LTM** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Create F5 LTM VIP – Basic** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click

.
   The **Request > Create F5 LTM VIP Basic :: FormBuilder** page is displayed.
5. Enter/select **Device Details**.

Device Details Section - Field and Description Table

Field	Description
***Datacenter**	Displays the datacenter list for devices created in the Device Inventory. Select the relevant datacenter from the drop-down menu to associate with the device for this

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Field	Description
	request. If a device has been created in the Device Inventory without a specified datacenter, select **None** as the datacenter.
***Device Name**	Displays a list of devices linked to the selected datacenter. If the datacenter is set as **None**, it lists devices created without specific datacenter details. Select the desired device from the available drop-down options.

6. Enter/select **Virtual Details** for the workflow.

Virtual Details Section - Field and Description Table

Field	Description
***Application Name**	Enter the application name of the virtual server.
***Virtual Server Type**	The attributes of this virtual server. • **Standard** (default) - A virtual server that directs client traffic to a load balancing pool and is the most basic type of virtual server. When you first create the virtual server, you assign an existing default pool to it. From then on, the virtual server automatically directs traffic to that default pool. • **Performance (Layer 4)** - A virtual server that shares the same IP address as a node in an associated VLAN.
***Destination Address**	Enter the destination IP address for the virtual server.
***Service Port**	Enter a valid port number.

7. Enter/select **Pool Details** for the workflow.

Pool Details Section - Field and Description Table

Field	Description
Load Balancing Method	The load balancing method is used to select a pool in this virtual server. The methods are: • **round-robin** (default) - the system selects the pools sequentially. • **least-connection-node** - The system directs a new connection to the node with the fewest current connections among all pools to which the node belongs. This method is most effective when load-balanced servers or equipment have comparable

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Field	Description
	capabilities. It operates as a dynamic load balancing method, distributing connections based on real-time analysis of server performance metrics, such as the current connections per node or the quickest node response time. • **least-connection-member** -The system directs a new connection to the node with the fewest current connections in the pool. This method is most effective when load-balanced servers or other equipment have similar capabilities. It operates as a dynamic load balancing method, distributing connections based on various aspects of real-time server performance analysis, such as the current number of connections per node or the fastest node response time. • **ratio-member** - The number of connections that each machine receives over time is directly related to a ratio weight that you define for each machine within the pool.
***Address**	Enter the IP address of the pool.
***Service Port**	Enter a service port.
State	The current state of the pool members. The statuses are: • **user-enabled** (default) - when you select this option, the system sends traffic to this pool member regardless of the pool member's state. • **user-disabled** - when this option is selected, the pool member can handle only persistent or active connections.
Pool Members	This table contains all the pools added after clicking the (**Add**) button. You can add any number of pool entries to this table. Once the pools are added, you can then manage them accordingly.

8. Enter/select **Snat Details** for the workflow.

Snat Details Section -Field and Description Table

Field	Description
Snat Choice	Select the SNAT choice for any connections using this pool. The options are: • **AutoMap** - This option allows you to select a translation address from the available self IP address. • **SNAT** - This option allows you to select a floating self IP as a translation address.

9. Enter/select **Monitor Details** for the workflow.

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Monitor Details Section - Field and Description Table

Field	Description
Monitor Type	Select the health monitors that are available to add for the pool: • HTTP • HTTPS • TCP • TCPHALFOPEN • Gatewaylcmp
Send String	The text string that the monitor sends to the target object. You must include \r\n at the end of a non-empty **Send String**. To retrieve a specific page from a website, specify a fully qualified path name.
Receive String	The regular expression representing the text string that the monitor looks for in the returned resource. The most common receive expressions contain a text string that is included in an HTML file on your site. The text string can be regular text, HTML tags, or image names, and the associated operation is not case-sensitive.

10. Click **Submit**.
    The **Confirmation** dialog box is displayed.

> **Note:**
> • If you want to save this form and edit it later, click **Save Draft**, and then click **Ok** in the Confirmation popup window. The form will be saved as Open request under **Request** > **My Request**.
> • If you want to cancel this form, click **Cancel**.

11. Click **OK** to submit the form.
    The validation starts automatically and reaches the **Review** stage.

> **Note:**
> • If there is any failure at this stage, start a new request by providing the correct data.
> • Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

12. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs:

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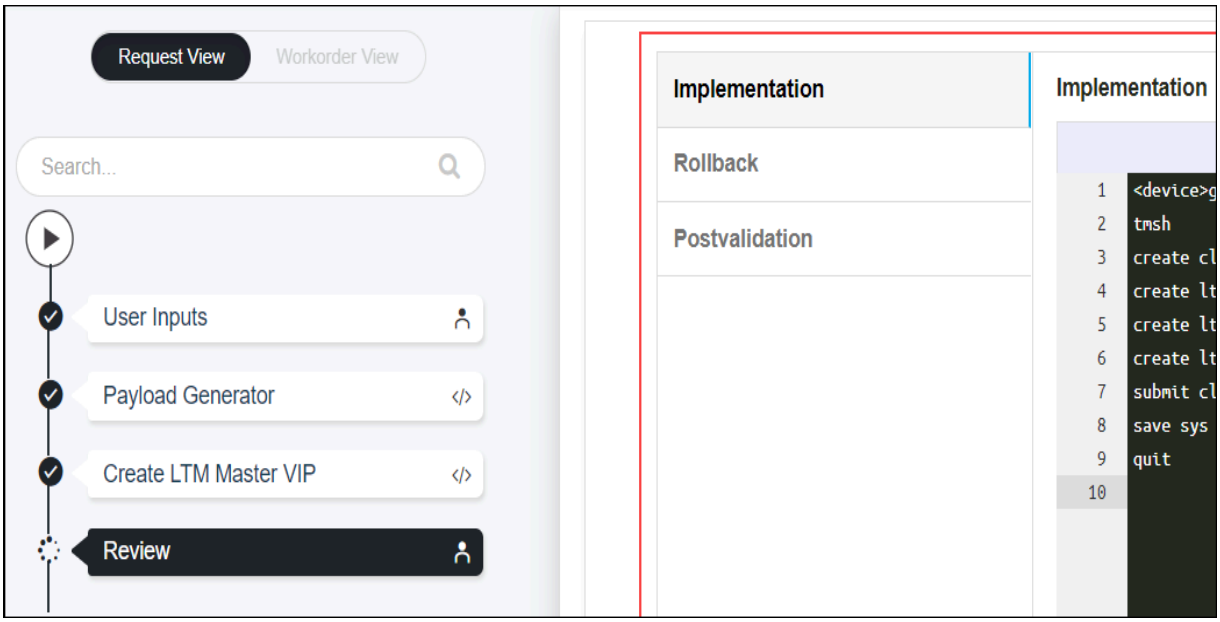
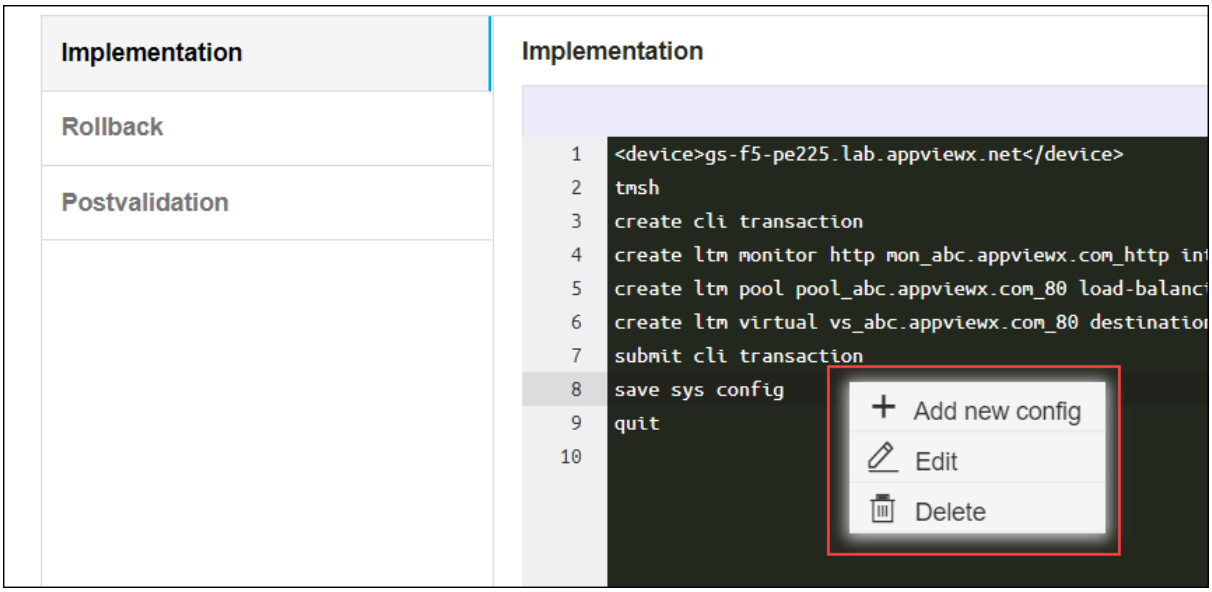


13. (Optional) If you need to update any data at this stage, click the right mouse button and select the required option.



14. After the review, click **Submit**.

    The Confirmation dialog box is displayed.

> **Note:** To stop running the workflow creation, click **Cancel**.

15. Click **OK** to continue the workflow creation.

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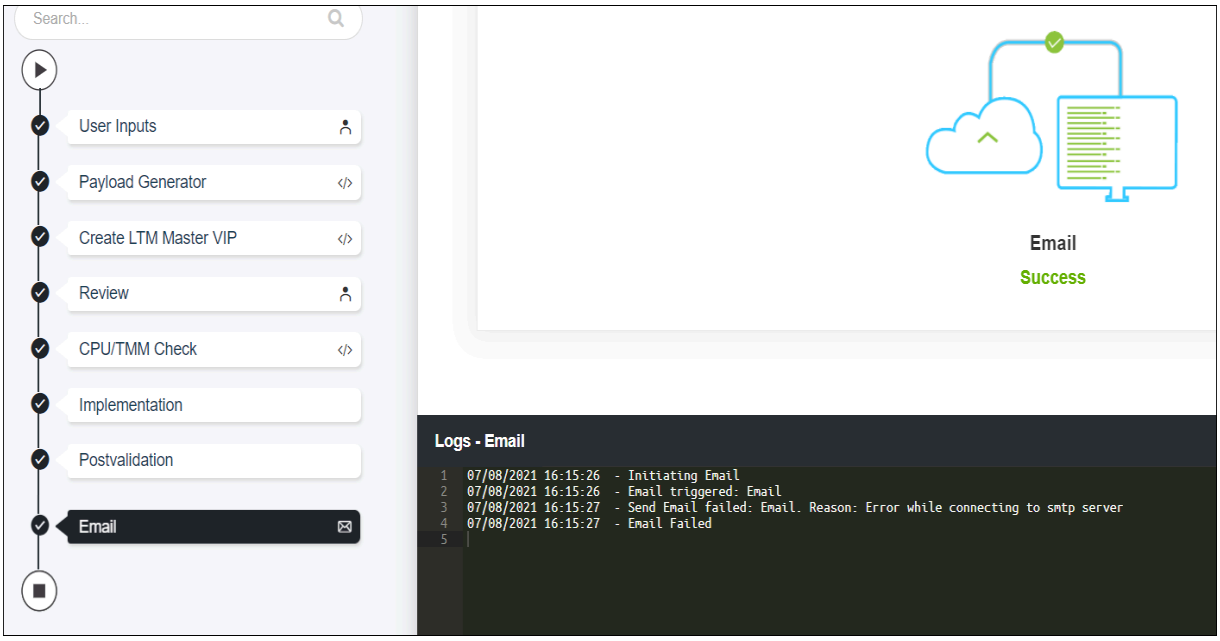
Note: It takes a while to complete the request.

The workflow is created and the email is triggered to the configured email IDs, if email IDs are configured.



Note: The stages of the request are shown on the left of the screen. To view a specific stage of the request, click on the corresponding stage.

Create F5 LTM VIP

This workflow creates App Owner Centric VIP.

With this workflow, Application Teams can independently manage F5 LTM through self-service capabilities.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG-IP LTM** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Create F5 LTM VIP** workflow.
   The **Run** and **Schedule** buttons are displayed.

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4. Click Run.

   The **Request > Create F5 LTM VIP :: FormBuilder** page is displayed.

5. Enter/select **Device Details**.

Device Details Section - Field and Description Table

Field	Description
***Datacenter**	Displays the datacenter list for devices created in the Device Inventory. Select the relevant datacenter from the drop-down menu to associate with the device for this request. If a device has been created in the Device Inventory without a specified datacenter, select **None** as the datacenter.
***Device Name**	Displays a list of devices linked to the selected datacenter. If the datacenter is set as **None**, it lists devices created without specific datacenter details. Select the desired device from the available drop-down options.

6. Enter/select **Virtual Details**.

Virtual Details Section - Field and Description Table

Field	Description
Application Name	Enter the FQDN of the virtual server.
Do you need to Enable SSL Certificates?	Select any of the following options to enable SSL certificates. The default option is No-InSecure Site. • **No-InSecure Site** • **Yes** - Only the servers will have SSL certificates • **No** – Only Client will have an SSL Certificate. • **Yes** - Both Client and Servers will have SSL certificates.
Destination Address	Enter the destination IP address information for the virtual server.
Service Port	Enter a service port.

7. Enter/select the **Pool Details**.

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Field descriptions for the Pool Details section

Field	Description
Load Balancing Method	The load balancing method used to select a pool in this WideIP. The default is round-robin.The methods are: • **round-robin** - the system selects the pools sequentially. • **least-connection-node** - The system passes a new connection to the node that has the least number of current connections out of all pools of which a node is a member. This method works best in environments where the servers or other equipment you are load balancing have similar capabilities. This is a dynamic load balancing method, distributing connections based on various aspects of real-time server performance analysis, such as the number of current connections per node, or the fastest node response time. • **least-connection-member** - The system passes a new connection to the node that has the least number of current connections in the pool. This method works best in environments where the servers or other equipment you are load balancing have similar capabilities. This is a dynamic load balancing method, distributing connections based on various aspects of real-time server performance analysis, such as the current number of connections per node or the fastest node response time. • **ratio-member** - The number of connections that each machine receives over time is proportionate to a ratio weight you define for each machine within the pool.
Address	Enter the IP address of the pool.

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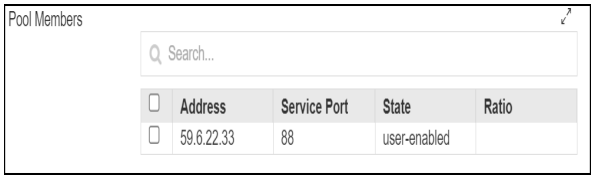
Field	Description
Service Port	Enter a service port.
State	The current state of the pool members. The states are: • user-enabled - when you select this option, the system sends traffic to this pool member regardless of the pool member's state. • user-disabled - when this option is selected, the pool member can handle only persistent or active connections.
Pool Members	Enter the IP address of the pool member. And then click the Add button. Any number of pool numbers can be added to the pool. After adding the pool, you can manage them. 

8. Enter/select the **Monitor Details**.

Field	Description
Monitor / Health Check Type	Select the health monitors that are available to add for the pool: • **HTTP** • **TCP**
Request Method and URI	The text string that the monitor sends to the target object. You must include \r\n at the end of a non-empty Send String. The default setting is GET /\r\n, which retrieves a default HTML file for a website. To retrieve a specific page from a website, specify a fully qualified path name
Expected Response	The regular expression representing the text string that the monitor looks for in the returned resource. The most common receive expressions contain a text string that is

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Field	Description
	included in an HTML file on your site. The text string can be regular text, HTML tags, or image names, and the associated operation is not case-sensitive.

9. Enter/select the **Snat Pool Details**.

Field descriptions for the Snat Pool Details section

Field	Description
Snat Choice	Select the SNAT choice for any connections using this pool. The options are: • **AutoMap** -This option allows you to select a translation address from the available self-IP address. • **SNAT** - This option allows you to select a floating self IP as a translation address. When this option is selected, the Snat Pool field appears. Select the Snat pool from the drop-down option:

10. Enter/select the **Persistence Details**.

Field descriptions for the Persistence Details section

Field	Description
Persistence	This option allows you to use a pre-configured object that automatically enables persistence when you assign the profile to a virtual server. • **None** • **Create New** - create a new persistence by providing persistence details: • **Existing** - select the existing persistence details:

11. Click **Submit**.

The **Confirmation** dialog box is displayed.

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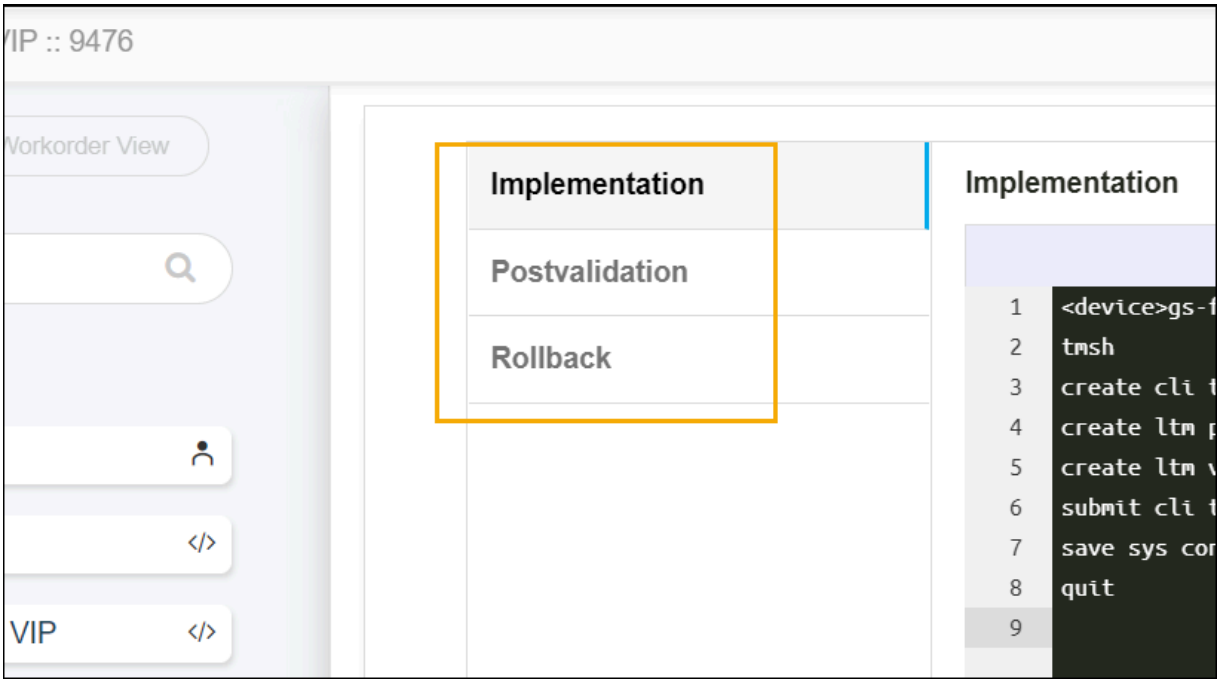
12. To save this form so you can edit it later, click **Save Draft** and then click **OK**.
    The form will be saved as **Open request** under **Request** > **My Request**.

    OR

    To submit the form, click **OK**.

    The pre-validation starts automatically and reaches the **Review** stage.
13. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs.



> **Note:** If you need to change any data at this stage, right-click in the data window and click **Edit**.

14. (Optional) If you need to change any data at this stage, you can update by clicking the right mouse button.

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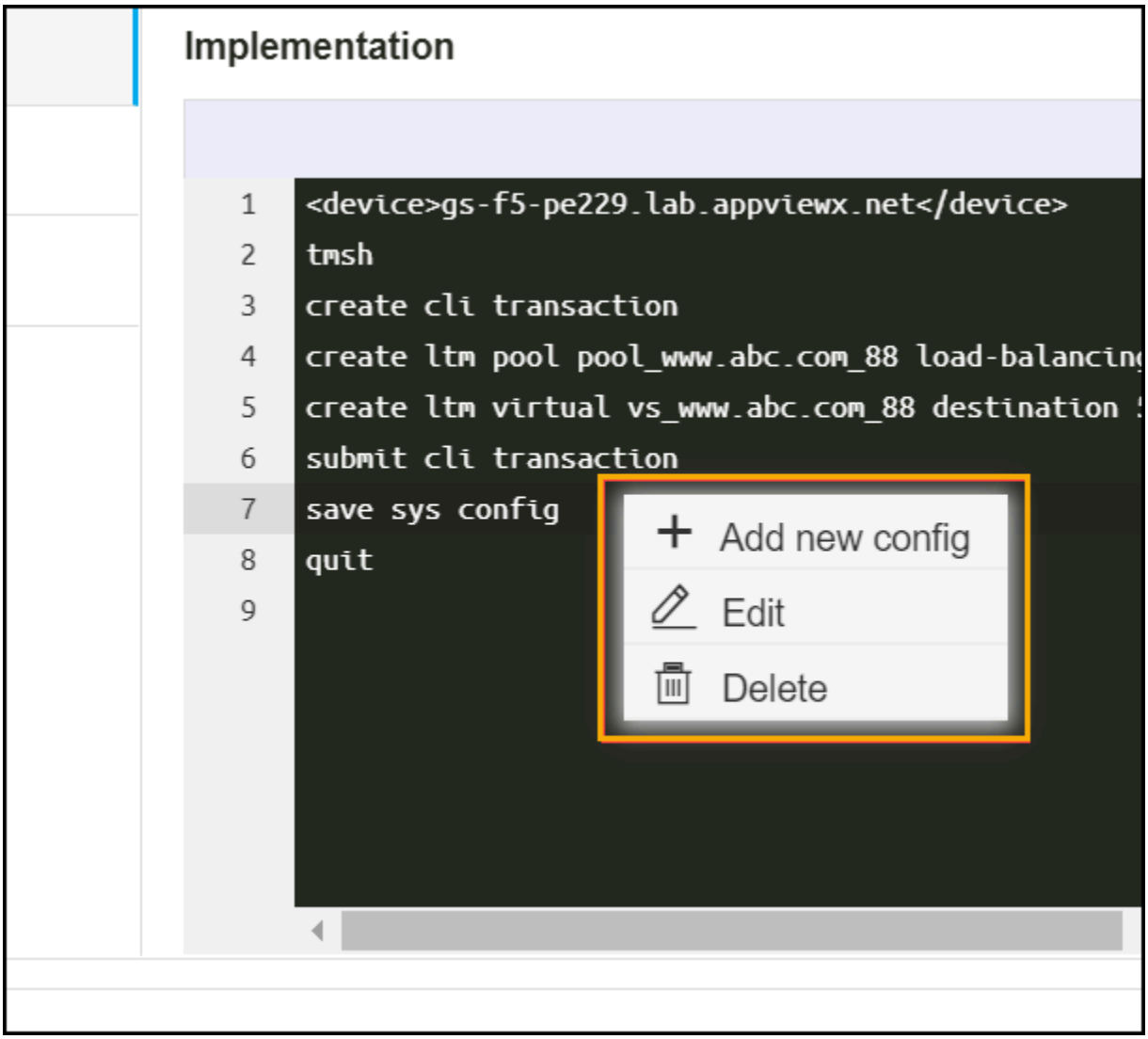

15. After the review, click **Submit**.

    The **Confirmation** dialog box is displayed.
16. To continue with the workflow creation, click **Ok**

    OR

    To abort the workflow creation, click **Cancel**.

    It takes a while to complete the post-validation.

    After the post-validation is successful, the workflow is created and an email triggered to all the configured email IDs.

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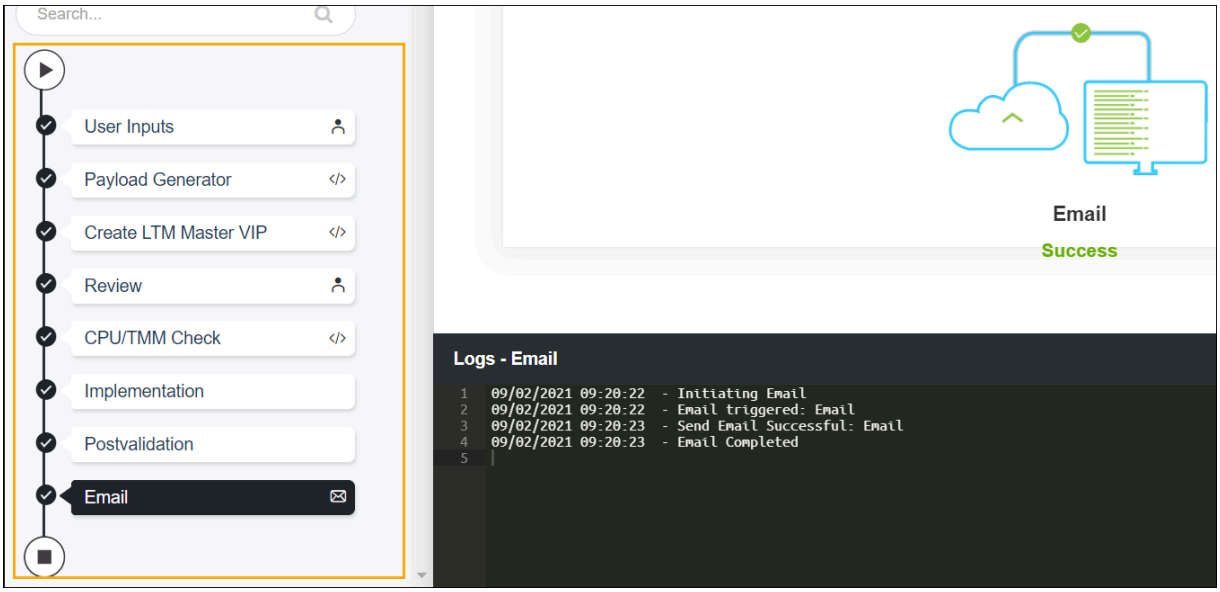

Note: The validation stages are shown in the left side of the screen. To view any validation stage, click on the respective stage.

Create F5 LTM VIP with DNS

This workflow creates App Owner Centric VIP and integrates with DNS - Infoblox/Bluecat for A record creation.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG-IP LTM** category on the **View/Run Workflows** page.
3. On the popup window, hover over the **Create F5 LTM VIP with DNS** workflow.
4. Click the Run Run button.
   The **Request > Create F5 LTM VIP with DNS :: FormBuilder** page is displayed.
5. Enter/select the **Device Details**.

Device Details Section - Field and Description Table

Field	Description
***Datacenter**	Displays the list of datacenters of the devices, which are created in the Device Inventory. Select the datacenter of a device from the drop-down option for which this

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Field	Description
	request is to be added. For the devices which are created without a datacenter in the Device Inventory, select the datacenter as **None**.
***Device Name**	Displays the list of devices associated with the selected datacenter. If the datacenter is selected as **None**, the devices that are created without datacenter details are listed. Select the desired device from the drop-down option.

6. Enter/select the **DNS Record Details**.

DNS Record Details Section - Field and Description Table

Field	Description
Do you want to create A record?	The default option is **No**. To create A record in DNS select **Yes** and enter the **Vendor**, **DNS Device**, **Network View**, and **Subnet** details.

7. Enter/select the **Virtual Details**.

Virtual Details Section - Field and Description Table

Field	Description
FQDN/Application Name	Enter the FQDN or application name of the virtual server.

Do you need to Enable SSL Certificates?	Select any of the following options to enable SSL certificates. The default option is No-InSecure Site.
	• **No-InSecure Site**
	• **Yes** - Only the servers will have SSL certificates
	  • **No** – The only Client will have an SSL Certificate
	  • **Yes** - Both Client and Servers will have SSL certificates

IP Choice	This option is applicable when a DNS record is to be created. Select any of the following IP choices: • **Manual** - allows to give the IP manually. • **Next Available IP from IPAM** - allows to fetch the next available IP from IPAM. To get the IP, click the Fetch Next Available IP and Reserve button.
Destination Address	Enter the destination IP address information for the virtual server.
Service Port	Enter a service port.

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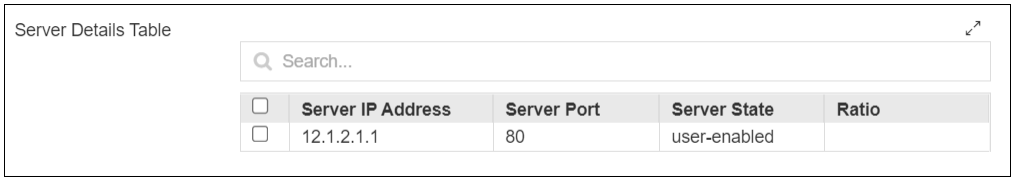
8. Enter/select the **Pool and Monitor Details**.

Field descriptions for the Pool and Monitor Details section

Field	Description
Load Balancing Method	The load balancing method is used to select a pool in this WideIP. The default is round-robin. The methods are: • round-robin - the system selects the pools sequentially. • least-connection-node - The system passes a new connection to the node that has the least number of current connections out of all pools of which a node is a member. This method works best in environments where the servers or other equipment you are load balancing have similar capabilities. This is a dynamic load balancing method, distributing connections based on various aspects of real-time server performance analysis, such as the number of current connections per node, or the fastest node response time. • least-connection-member - The system passes a new connection to the node that has the least number of current connections in the pool. This method works best in environments where the servers or other equipment you are load balancing have similar capabilities. This is a dynamic load balancing method, distributing connections based on various aspects of real-time server performance analysis, such as the current number of connections per node or the fastest node response time. • ratio-member - The number of connections that each machine receives over time is proportionate to a ratio weight you define for each machine within the pool.
Address	Enter the IP address of the pool.
Service Port	Enter a service port.
State	The current state of the pool members. The states are: • **user-enabled** - when you select this option, the system sends traffic to this pool member regardless of the pool member's state. • **user-disabled** - when this option is selected, the pool member can handle only persistent or active connections.
Pool Members	Enter the IP address of the pool member. And then click the Add button. Any number of pool numbers can be added to the pool. After adding the pool, you can manage them. 

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Field	Description
Monitor / Health Check Type	Select the health monitors that are available to add for the pool: • **HTTP** • **TCP**
Request Method and URI	The text string that the monitor sends to the target object. You must include \r\n at the end of a non-empty Send String. The default setting is GET /\r\n, which retrieves a default HTML file for a website. To retrieve a specific page from a website, specify a fully qualified path name.
Expected Response	The regular expression representing the text string that the monitor looks for in the returned resource. The most common receive expressions contain a text string that is included in an HTML file on your site. The text string can be regular text, HTML tags, or image names, and the associated operation is not case-sensitive.

9. Enter/select the **Snat Pool Details**.

Snat Pool Details Section - Field and Description Table

Field	Description
Snat Choice	Select the SNAT choice for any connections using this pool. The options are: • **AutoMap** -This option allows you to select a translation address from the available self-IP address. • **SNAT** - This option allows you to select a floating self IP as a translation address. When this option is selected, the Snat Pool field appears. Select the Snat pool from the drop-down option:

10. Enter/select the **Persistence Details**.

Persistence Details Section - Field Description Table

Field	Description
Persistence	This option allows you to use a pre-configured object that automatically enables persistence when you assign the profile to a virtual server.

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Field	Description
	• **None** • **Create New** - create a new persistence by providing persistence details: • **Existing** - select the existing persistence details:

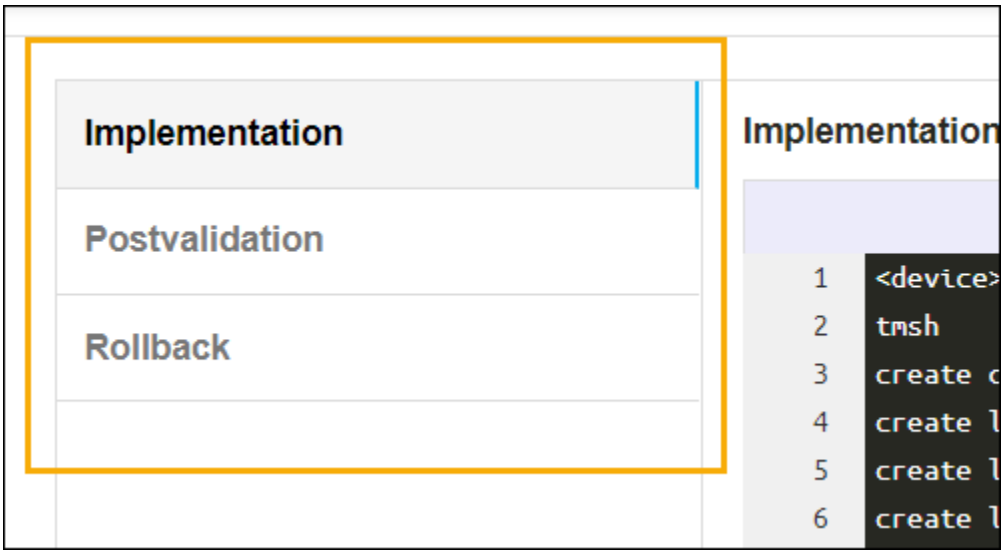
Note: If you need to cancel the request, make sure that you unreserve the IP.
To unreserve the IP, click **Un-reserve IP**.

11. Click **Submit**.
    The Confirmation popup opens.
12. To save this form so you can edit it later, click **Save Draft** and then click **OK**.
    The form will be saved as **Open request** under **Request** > **My Request**.

    OR

    To submit the form, click **OK**.

    The pre-validation starts automatically and reaches the **Review** stage.
13. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs.



14. (Optional) If you need to change any data at this stage, you can update by clicking the right mouse button.

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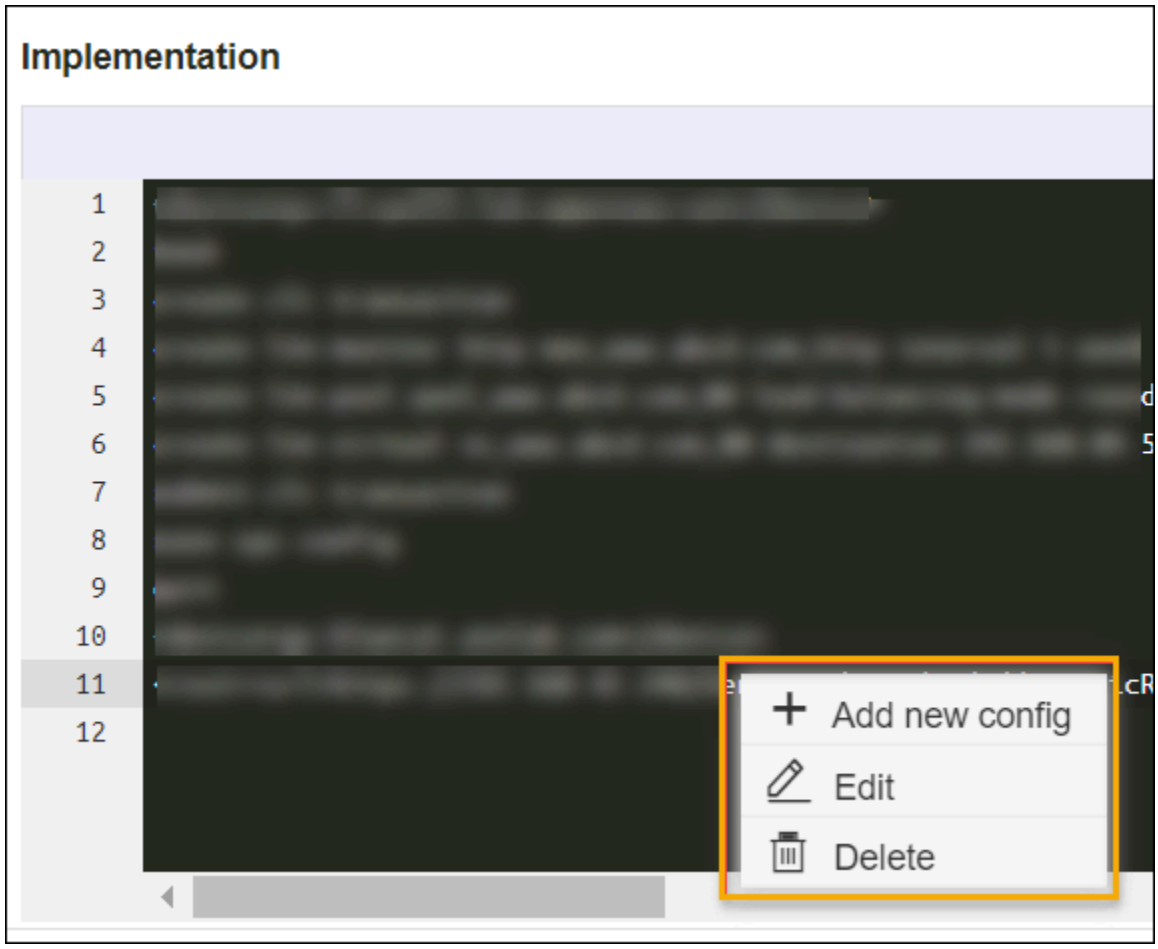

15. After the review, click **Submit**.
    The **Confirmation** dialog box is displayed.
16. To continue with the workflow creation, click **Ok**
    OR
    To abort the workflow creation, click **Cancel**.
    It takes a while to complete the post-validation.
    After the post-validation is successful, the workflow is created and an email triggered to all the configured email IDs.

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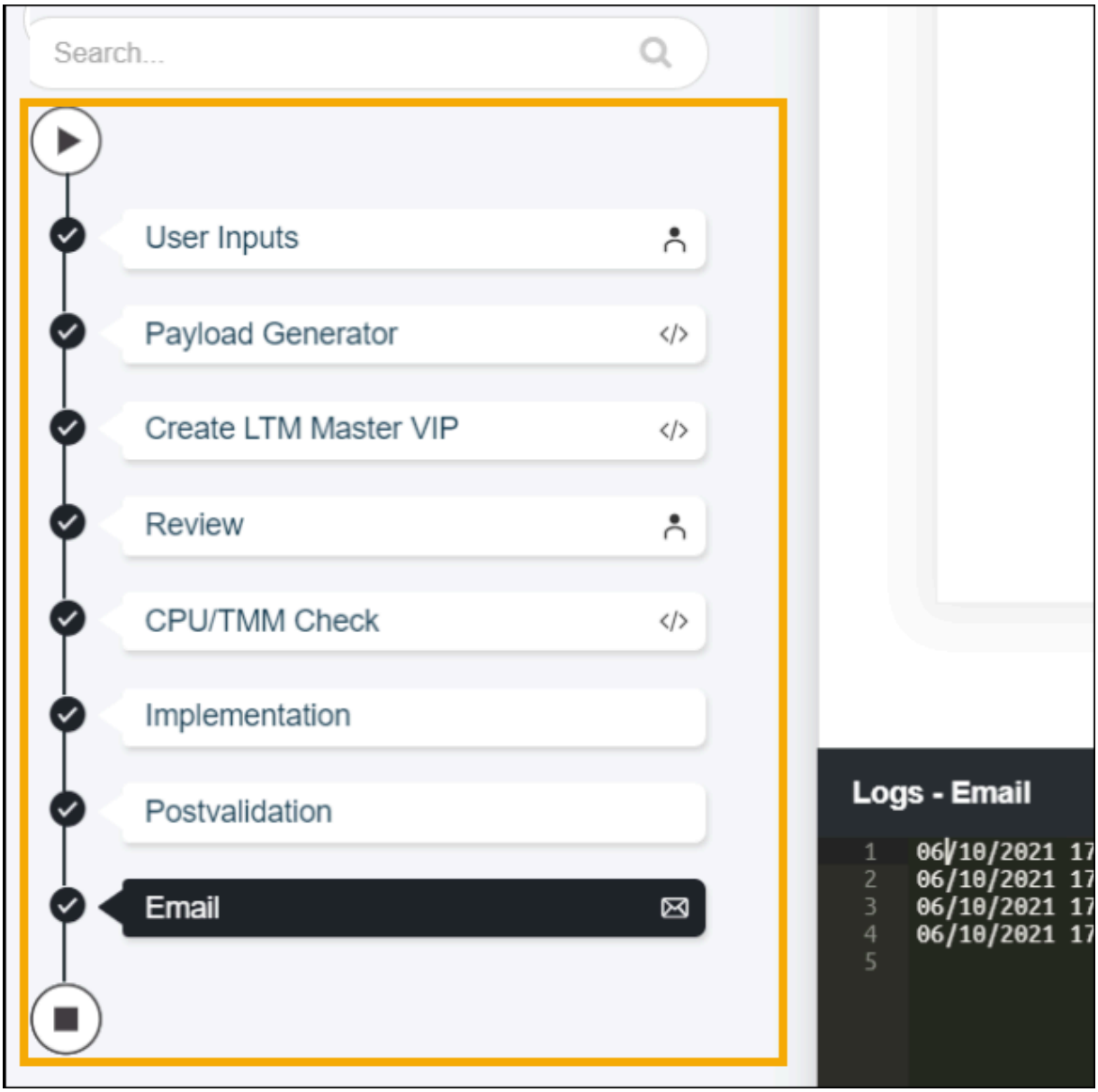

Note: The validation stages are shown in the left side of the screen. To view a validation stage, click on the respective stage.

Create F5 LTM VIP with Service Now

By running this workflow, you can create App Owner Centric VIP and integrate with ITSM – Service Now, where users can set Time Zone, Start time and End time for the ticket creation.

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To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG-IP LTM** category on the **View/Run Workflows** page.
3. On the popup window, hover over the **Create F5 LTM VIP with Service Now** workflow.
4. Click the Run button.

   The **Request > Create F5 LTM VIP with Service Now :: FormBuilder** page is displayed.
5. Enter/select the **Device Details**.

Device Details Section - Field and Description Table

Field	Description
***Datacenter**	Displays the list of datacenters of the devices, which are created in the Device Inventory. Select the datacenter of a device from the drop-down option for which this request is to be added. For the devices which are created without a datacenter in the Device Inventory, select the datacenter as **None**.
***Device Name**	Displays the list of devices associated with the selected datacenter. If the datacenter is selected as **None**, the devices that are created without datacenter details are listed. Select the desired device from the drop-down option.

6. Enter/select the **Virtual Details**.

Virtual Details Section - Field and Description Table

Field	Description
Application Name	Enter the FQDN of the virtual server.

Do you need to Enable SSL Certificates?	Select any of the following options to enable SSL certificates. The default option is No-InSecure Site.
	• **No-InSecure Site**
	• **Yes** - Only the servers will have SSL certificates
	  • **No** – The only Client will have an SSL Certificate
	  • **Yes** - Both Client and Servers will have SSL certificates

Destination Address	Enter the destination IP address information for the virtual server.
Service Port	Enter a service port.

7. Enter/select the **Pool Details**.

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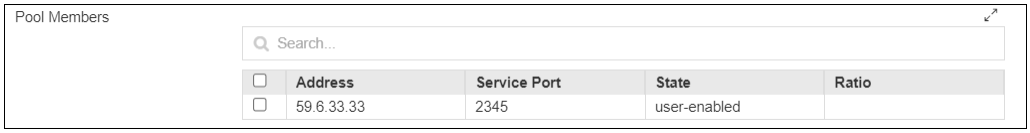
Pool Details Section - Field and Description Table

Field	Description
Load Balancing Method	The load balancing method used to select a pool in this WideIP. The default is round-robin.The methods are: • **round-robin** - the system selects the pools sequentially. • **least-connection-node** - The system passes a new connection to the node that has the least number of current connections out of all pools of which a node is a member. This method works best in environments where the servers or other equipment you are load balancing have similar capabilities. This is a dynamic load balancing method, distributing connections based on various aspects of real-time server performance analysis, such as the number of current connections per node, or the fastest node response time. • **least-connection-member** - The system passes a new connection to the node that has the least number of current connections in the pool. This method works best in environments where the servers or other equipment you are load balancing have similar capabilities. This is a dynamic load balancing method, distributing connections based on various aspects of real-time server performance analysis, such as the current number of connections per node or the fastest node response time. • **ratio-member** - The number of connections that each machine receives over time is proportionate to a ratio weight you define for each machine within the pool.
***Address**	Enter the IP address of the pool.
***Service Port**	Enter a service port.
State	The current state of the pool members. The states are: • user-enabled - when you select this option, the system sends traffic to this pool member regardless of the pool member's state. • user-disabled - when this option is selected, the pool member can handle only persistent or active connections.
Pool Members	Enter the IP address of the pool member. And then click the Add button. Any number of pool numbers can be added to the pool. After adding the pool, you can manage them. 

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Field	Description

8. Enter/select the **Monitor Details**.

Monitor Details Section - Field and Description Table

Field	Description
Monitor / Health Check Type	Select the health monitors that are available to add for the pool: • **HTTP** • **TCP**
Request Method and URI	The text string that the monitor sends to the target object. You must include \r\n at the end of a non-empty Send String. The default setting is GET /\r\n, which retrieves a default HTML file for a website. To retrieve a specific page from a website, specify a fully qualified path name.
Expected Response	The regular expression representing the text string that the monitor looks for in the returned resource. The most common receive expressions contain a text string that is included in an HTML file on your site. The text string can be regular text, HTML tags, or image names, and the associated operation is not case-sensitive.

9. Enter/select the **Snat Pool Details**.

Snat Pool Details Section - Field and Description Table

Field	Description
Snat Choice	Select the SNAT choice for any connections using this pool. The options are: • **AutoMap** -This option allows you to select a translation address from the available self-IP address. • **SNAT** - This option allows you to select a floating self IP as a translation address. When this option is selected, the Snat Pool field appears. Select the Snat pool from the drop-down option:

10. Enter/select the **Persistence Details**.

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Persistence Details Section - Field and Description Table

Field	Description
Persistence	This option allows you to use a pre-configured object that automatically enables persistence when you assign the profile to a virtual server. • **None** • **Create New** - create a new persistence by providing persistence details: • **Existing** - select the existing persistence details:

11. Select the **Change Management** details.

Change Management Section - Field and Description Table

Field	Description
***Do you want to integrate ServiceNow?**	By default, the No option is selected. If you want to integrate with ServiceNow, select Yes and provide the following details: • **Timezone** – select the timezone from the drop-down list. • ***Start Time** – select the start date and time from the calendar. • ***End Time** – select the end date and time from the calendar.

12. Click **Submit**.
    The Confirmation popup opens.
13. To save this form so you can edit it later, click **Save Draft** and then click **OK**.
    The form will be saved as **Open request** under **Request** > **My Request**.

    OR

    To submit the form, click **OK**.

    The validation starts automatically and reaches the **Review** stage.

Note:

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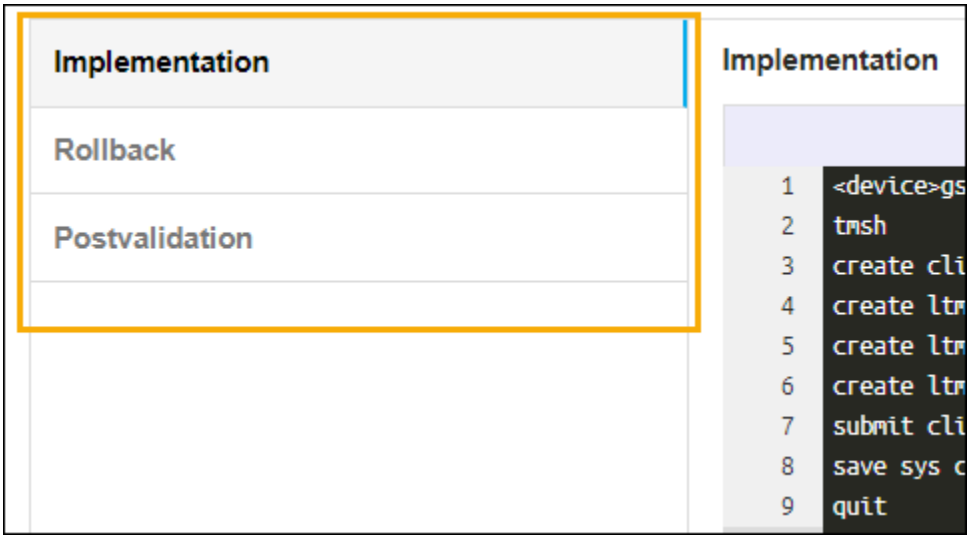
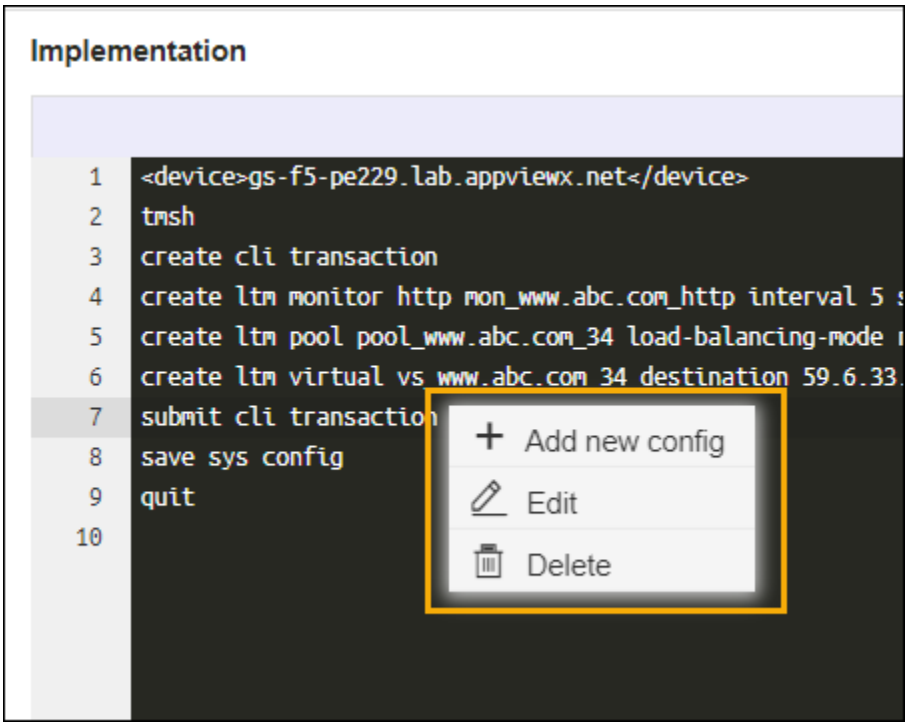
- If there is any failure at this stage, start a new request by providing the correct data.
- Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

14. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs.



15. (Optional) If you need to update any data at this stage, you can do so by clicking the right mouse button.



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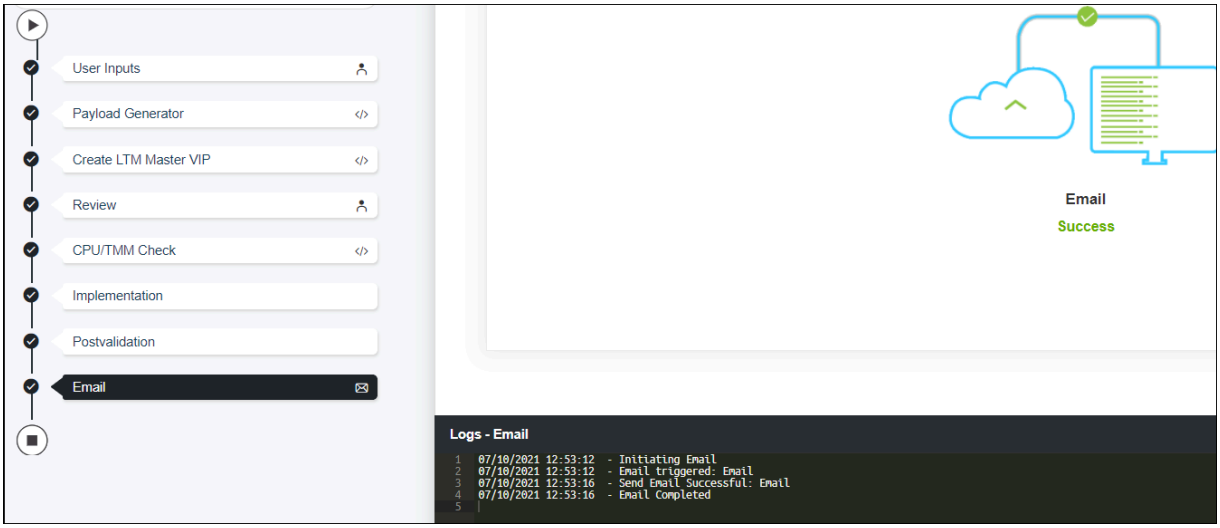
16. After the review, click the **Submit** button.
    The **Confirmation** dialog box is displayed.
17. To continue with the workflow creation, click **Ok**
    OR
    To abort the workflow creation, click **Cancel**.
    It takes a while to complete the post-validation.
    After the post-validation is successful, the workflow is created and an email triggered to all the configured email IDs.



Note: The validation stages are shown in the left side of the screen. To view a validation stage, click on the respective stage.

Create F5 LTM VIP Advanced

This workflow creates Extensive VIP with all basic objects in an F5 device and integrates with DNS - Infoblox/Bluecat for A record creation.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG-IP LTM** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Create F5 LTM VIP Advanced** workflow.

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The **Run** and **Schedule** buttons are displayed.

4. Click

.

   The **Request > Create F5 LTM VIP Advanced :: FormBuilder** page is displayed.

5. Enter/select the **Device Details**.

Device Details Section - Field and Description Table

Field	Description
***Datacenter**	Displays the list of datacenters of the devices, which are created in the Device Inventory. Select the datacenter of a device from the drop-down option for which this request is to be created. For the devices which are created without a datacenter in the Device Inventory, select the datacenter as **None**.
***Device Name**	Displays the list of devices associated with the selected datacenter. If the datacenter is selected as **None**, the devices that are created without datacenter details are listed. Select the desired device from the drop-down option.
***Partition**	Partition in which objects will be created. If you want to create a new partition then click **Create New Partition** from the dropdown list and then provide a partition name.

6. Enter/select the **DNS Record Details**.

DNS Record Details Section - Field and Description Table

Field	Description
Do you want to create A record ?	The default option is **No**. To create A record in DNS select **Yes** and enter the **Vendor**, **DNS Device**, **Network View**, and **Subnet** details.

7. Enter/select the **Virtual Details**.

Virtual Details Section - Field and Description Table

Field	Description
FQDN/ Application Name	Enter the FQDN or application name of the virtual server.
Virtual Server Type	Select the virtual server type.

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Field	Description
Redirect VIP	An IP forwarding virtual server accepts traffic that matches the virtual server address and forwards it to the destination IP address that is specified in the request rather than load balancing the traffic to a pool. • **No** (default) • **Yes** - select Yes to redirect VIP.
Destination Address	Enter the destination IP address information for the virtual server.
Service Port	Enter a service port.

8. Enter/select the **Pool and Monitor Details**.

Pool and Monitor Details Section - Field and Description Table

Field	Description
Pool	You can create a pool by providing the details for the pool or select an existing pool. Select the desired option: • **Create New** - this is the default option. When you select this option, you need to provide a Load Balancing Method, Address, Service Port, State, Priority Group, Pool Members, and Monitor. • **Existing** - when you select this option, the Select Pool field appears to select the existing pool from the drop-down option:
Load Balancing Method	The load balancing method is used to select a pool in this WideIP. The default is a round-robin. The methods are: • **round-robin** - the system selects the pools sequentially. • **least-connection-node** - The system passes a new connection to the node that has the least number of current connections out of all pools of which a node is a member. This method works best in environments where the servers or other equipment you are load balancing have similar capabilities. This is a dynamic load balancing method, distributing connections based on various aspects of real-time server performance analysis, such as the number of current connections per node, or the fastest node response time. • **least-connection-member** - The system passes a new connection to the node that has the least number of current connections in the pool. This method works best in environments where the servers or other equipment you are load balancing have

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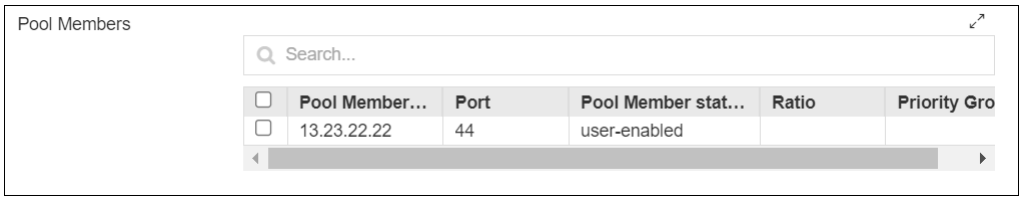
Field	Description
	similar capabilities. This is a dynamic load balancing method, distributing connections based on various aspects of real-time server performance analysis, such as the current number of connections per node or the fastest node response time. • **ratio-member** - The number of connections that each machine receives over time is proportionate to a ratio weight you define for each machine within the pool.
Address	Enter the IP address of the pool.
Service Port	Enter a service port.
State	The current state of the pool members. The states are: • user-enabled - when you select this option, the system sends traffic to this pool member regardless of the pool member's state. • user-disabled - when this option is selected, the pool member can handle only persistent or active connections.
Priority Group	A number representing the priority group for the pool members. To specify a priority, you must activate priority group usage when you create a new pool or when adding or removing pool members. When activated, the system load balances traffic according to the priority group number assigned to the pool member.
Pool Members	Enter the IP address of the pool member. And then click the Add button. Any number of pool numbers can be added to the pool. After adding the pool, you can manage them. 
Monitor	An association between a health monitor and an entire pool. Select the desired Monitor option: • **No** - this option does not allow you to monitor the pool. • **Create New** - select this option to create a monitor. Input the Type, Interval, Interval, Timeout, and Monitor Destination. • **Existing** - select this option to choose the existing monitor option.

9. Enter/select the **Persistence Details**.

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Persistence Details Section - Field and Description Table

Field	Description
Persistence	This option allows you to use a pre-configured object that automatically enables persistence when you assign the profile to a virtual server. • **None** • **Create New** - create a new persistence by providing persistence details: • **Existing** - select the existing persistence details:
Fallback Persistence	It is a secondary persistence record for each connection. Select the desired following option: • **No** • **Yes**

10. Enter/select the **Snat Pool Details**.

Snat Pool Details Section - Field and Description Table

Field	Description
Snat Pool	Select the SNAT pool for any connections using this pool. The options are: • **Auto-Map**p -This option allows you to select a translation address from the available self-IP address. • **SNAT** - This option allows you to select a floating self IP as a translation address. When this option is selected, the Snat Pool field appears. Select the Snat pool from the drop-down option:

11. Enter/select the **Client SSL Details**.

Client SSL Details Section - Field and Description Table

Field	Description
Client SSL	Select the Client SSL options. The options are: • **No** (default) • **Create New** - This option allows you to upload a new Client SSL certificate. • **Existing** - This option allows you to select a Client SSL certificate from the drop-down option.

12. Enter/select the **Server SSL Details**.

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Server SSL Details Section - Field and Description Table

Field	Description
Server SSL	Select the Client SSL options. The options are: • **No** (default) • **Create New** -This option allows you to upload a new Server SSL certificate. • **Existing**- This option allows you to select a Server SSL certificate from the drop-down option:

13. Enter/select the **Irule Details**.

Irule Details - Field and Description Table

Field	Description
IRule	Select the IRule options. The options are: • **No** (default) • **Create New** -This option allows you to upload a new IRule file. • **Existing**- This option allows you to select a IRule file from the drop-down option:

14. Enter/select the **Other profile Details**.
15. Click **Submit**.

    The **Confirmation** dialog box is displayed.
16. To save this form so you can edit it later, click **Save Draft** and then click **OK**.

    The form will be saved as **Open request** under **Request** > **My Request**.

    OR

    To submit the form, click **OK**.

    The pre-validation starts automatically and reaches the **Review** stage.
17. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs.

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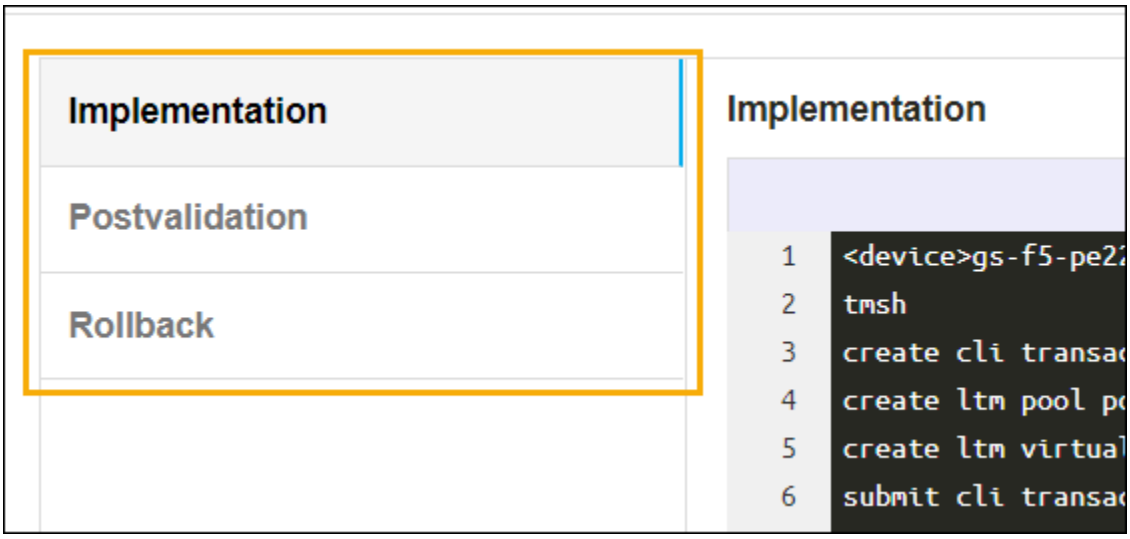
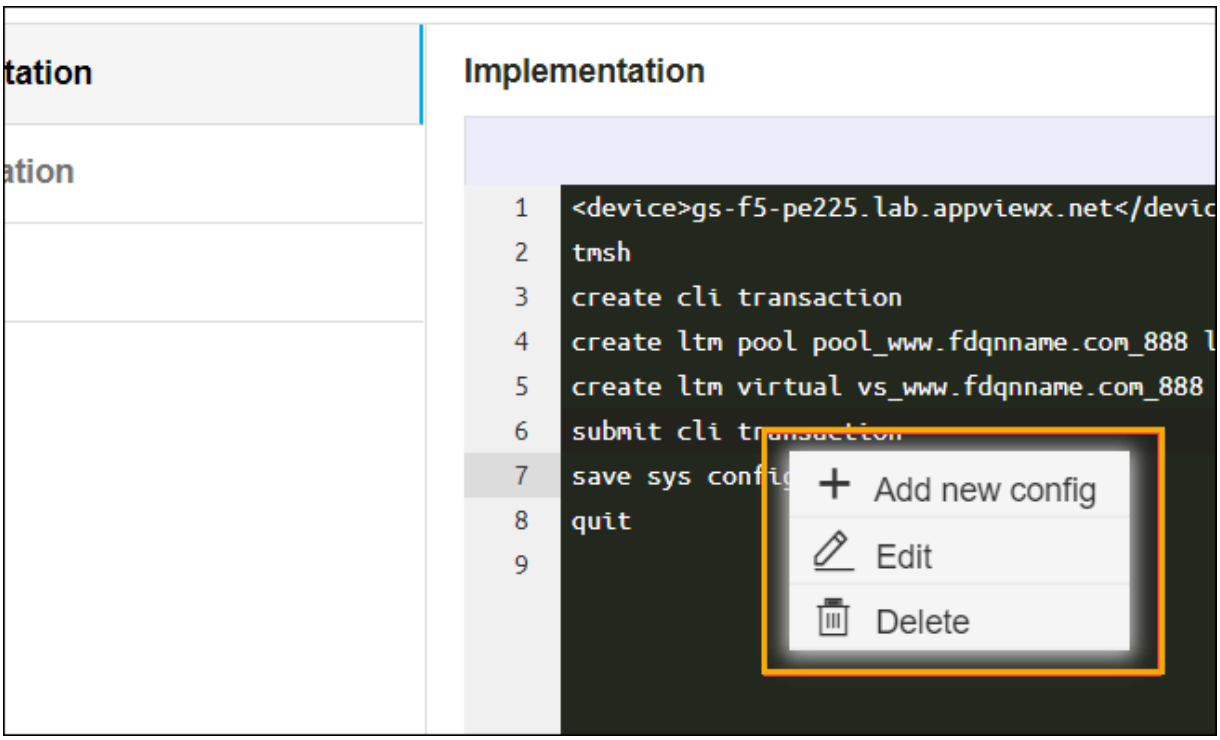


18. (Optional) If you need to change any data at this stage, right click, as shown in the image below, and select the required option.



19. After the review, click **Submit**.
    The **Confirmation** dialog box is displayed.
20. To continue with the workflow creation, click **Ok**
    OR

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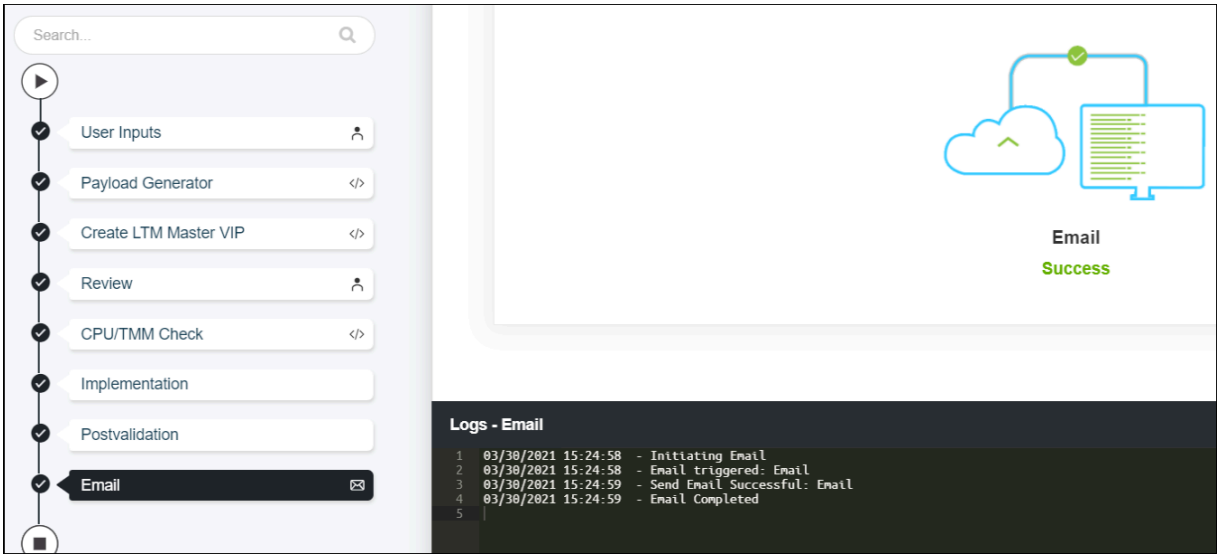
To abort the workflow creation, click **Cancel**.

It takes a while to complete the post-validation.

After the post-validation is successful, the workflow is created and an email triggered to all the configured email IDs.



Note: The validation stages are shown in the left side of the screen. To view a validation stage, click on the respective stage.

Create F5 LTM VIP with Partition

This workflow creates Extensive VIP with all basic objects in a F5 device on a selected Partition and integrates with DNS - Infoblox/Bluecat for A record creation.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG-IP LTM** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Create F5 LTM VIP with Partition** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click Run.
   The **Request > Create F5 LTM VIP with Partition :: FormBuilder** page is displayed.

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5. Enter/select the **Device Details**.

Device Details Section - Field and Description Table

Field	Description
***Datacenter**	Displays the list of datacenters of the devices, which are created in the Device Inventory. Select the datacenter of a device from the drop-down option for which this request is to be created. For the devices which are created without a datacenter in the Device Inventory, select the datacenter as **None**.
***Device Name**	Displays the list of devices associated with the selected datacenter. If the datacenter is selected as **None**, the devices that are created without datacenter details are listed. Select the desired device from the drop-down option.
***Partition**	Partition in which objects will be created. If you want to create a new partition then click **Create New Partition** from the dropdown list and then provide a partition name.

6. Enter/select the **Virtual Details**.

Virtual Details Section - Field and Description Table

Field	Description
***Application Name**	Enter the FQDN of the virtual server.

***Do you need to Enable SSL Certificates?**	Select any of the following options to enable SSL certificates. The default option is No-InSecure Site.
	• **No-InSecure Site**
	• **Yes** - Only the servers will have SSL certificates
	  • **No** – The only Client will have an SSL Certificate
	  • **Yes** - Both Client and Servers will have SSL certificates

***Destination Address**	Enter the destination IP address information for the virtual server.
***Service Port**	Enter a service port.

7. Enter/select the **Pool Details**.

Pool Details Section - Field and Description Table

Field	Description
Load Balancing Method	The load balancing method is used to select a pool in this WideIP. The default is a round-robin. The methods are:

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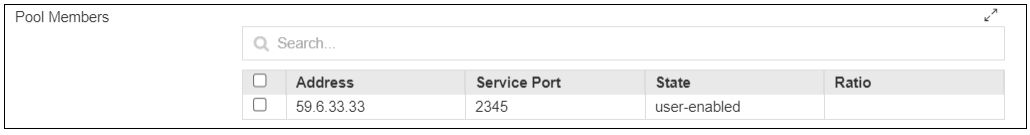
Field	Description
	• **round-robin** - the system selects the pools sequentially. • **least-connection-node** - The system passes a new connection to the node that has the least number of current connections out of all pools of which a node is a member. This method works best in environments where the servers or other equipment you are load balancing have similar capabilities. This is a dynamic load balancing method, distributing connections based on various aspects of real-time server performance analysis, such as the number of current connections per node, or the fastest node response time. • **least-connection-member** - The system passes a new connection to the node that has the least number of current connections in the pool. This method works best in environments where the servers or other equipment you are load balancing have similar capabilities. This is a dynamic load balancing method, distributing connections based on various aspects of real-time server performance analysis, such as the current number of connections per node or the fastest node response time. • **ratio-member** - The number of connections that each machine receives over time is proportionate to a ratio weight you define for each machine within the pool.
***Address**	Enter the IP address of the pool.
***Service Port**	Enter a service port.
State	The current state of the pool members. The states are: • user-enabled - when you select this option, the system sends traffic to this pool member regardless of the pool member's state. • user-disabled - when this option is selected, the pool member can handle only persistent or active connections.
Pool Members	Enter the IP address of the pool member. And then click the Add button. Any number of pool numbers can be added to the pool. After adding the pool, you can manage them. 

8. Enter/select the **Monitor Details**.

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Monitor Details Section - Field and Description Table

Field	Description
Monitor / Health Check Type	Select the health monitors that are available to add for the pool: • **HTTP** • **TCP**
Request Method and URI	The text string that the monitor sends to the target object. You must include \r\n at the end of a non-empty Send String. The default setting is GET /\r\n, which retrieves a default HTML file for a website. To retrieve a specific page from a website, specify a fully qualified path name
Expected Response	The regular expression representing the text string that the monitor looks for in the returned resource. The most common receive expressions contain a text string that is included in an HTML file on your site. The text string can be regular text, HTML tags, or image names, and the associated operation is not case-sensitive.

9. Enter/select the **Snat Pool Details**.

Snat Pool Details Section - Field and Description Table

Field	Description
Snat Choice	Select the SNAT choice for any connections using this pool. The options are: • **AutoMap** -This option allows you to select a translation address from the available self-IP address. • **SNAT** - This option allows you to select a floating self IP as a translation address. When this option is selected, the Snat Pool field appears. Select the Snat pool from the drop-down option:

10. Enter/select the **Persistence Details**.

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Persistence Details Section - Field and Description Table

Field	Description
Persistence	This option allows you to use a pre-configured object that automatically enables persistence when you assign the profile to a virtual server. The options for persistence are: • **None** • **Create New** - create a new persistence by providing persistence details: • **Existing** - select the existing persistence details:

11. Click **Submit**.
    The Confirmation popup opens.
12. To save this form so you can edit it later, click **Save Draft** and then click **OK**.
    The form will be saved as **Open request** under **Request** > **My Request**.

    OR

    To submit the form, click **OK**.

    The pre-validation starts automatically and reaches the **Review** stage.
13. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs.

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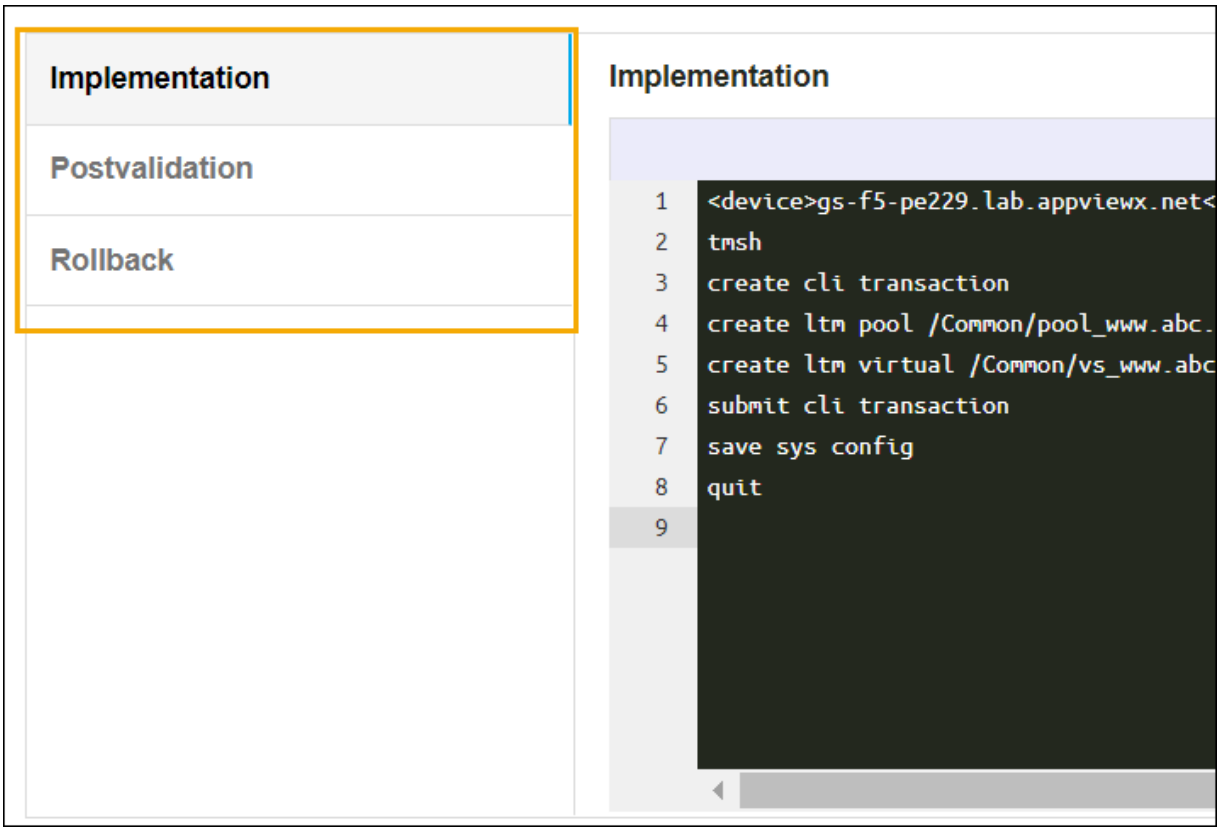

14. (Optional) If you need to change any data at this stage, you can update by clicking the right mouse button.

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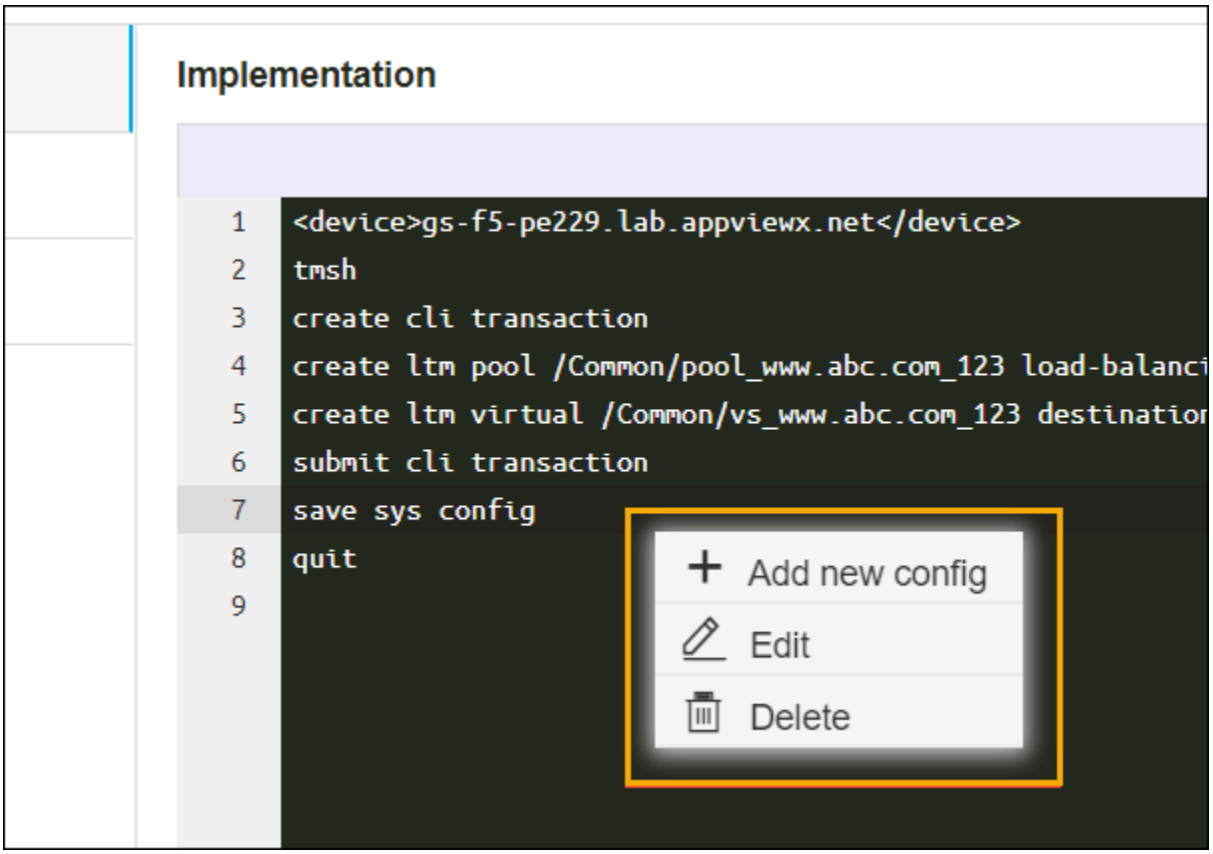

15. After the review, click **Submit**.

    The **Confirmation** dialog box is displayed.

16. To continue with the workflow creation, click **Ok**

    OR

    To abort the workflow creation, click **Cancel**.

    It takes a while to complete the post-validation.

    After the post-validation is successful, the workflow is created and an email triggered to all the configured email IDs.

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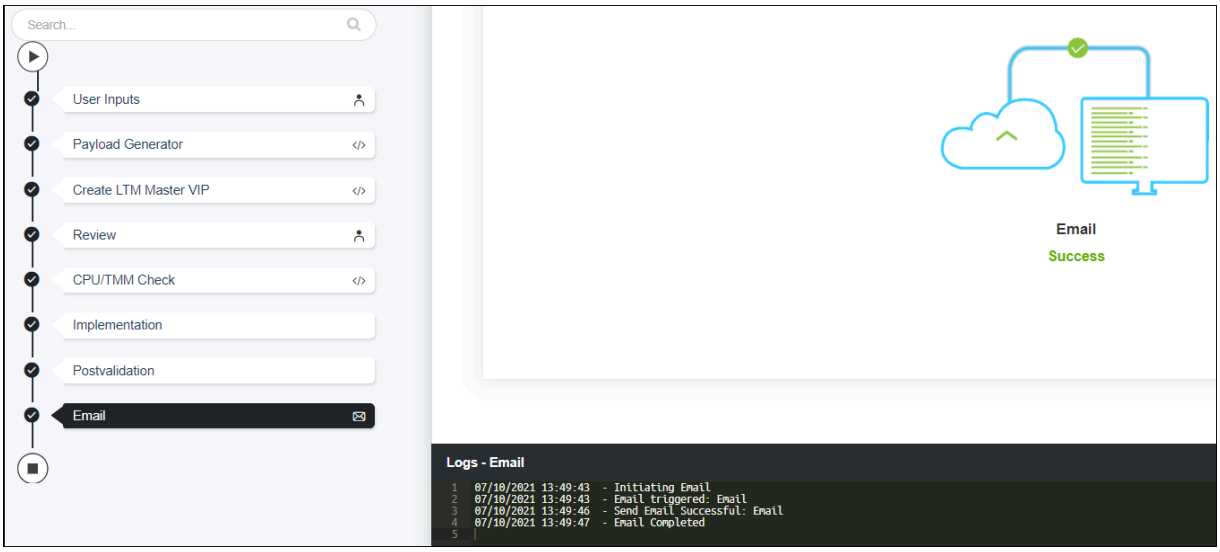

Note: The validation stages are shown in the left side of the screen. To view a validation stage, click on the respective stage.

Delete F5 LTM VIP - Basic

This workflow deletes VIP along with its associated objects (Pool, Monitor, IRule, Profiles, Persistence, Snatpool, Policy) by searching the VIP using the Destination IP and Port across Managed Devices in AppViewX.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG-IP LTM** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Delete F5 LTM VIP - Basic** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click Run.
   The **Request > Delete F5 LTM VIP - Basic :: FormBuilder** page is displayed.
5. Enter the **Virtual Destination IP** and **Virtual Destination Port**, and then click **Fetch Virtual Servers**.
   The virtual server details are fetched for the given **Virtual Destination IP** and **Virtual Destination Port** and auto-populated in the rest of the fields.

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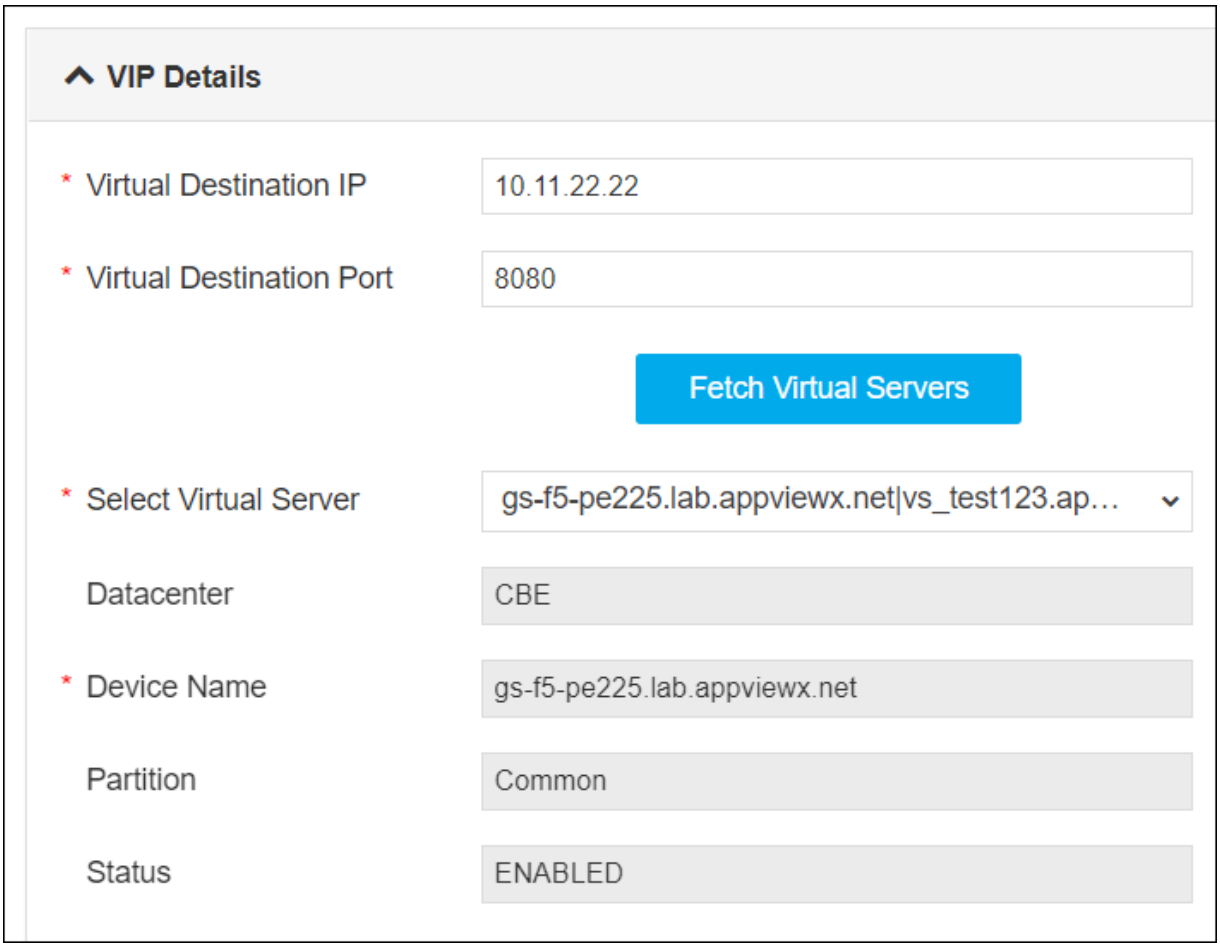

6. Click **Submit**.
   The Confirmation dialog box is displayed.
7. To save this form so you can edit it later, click **Save Draft** and then click **OK**.
   The form will be saved as **Open request** under **Request** > **My Request**.

   OR

   To submit the form, click **OK**.

   The validation starts automatically and reaches the **Review** stage.

> **Note:**
> - If there is any failure at this stage, start a new request by providing the correct data.
> - Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

8. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs.

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9. (Optional) If you need to change any data at this stage, you can update by clicking the right mouse button.

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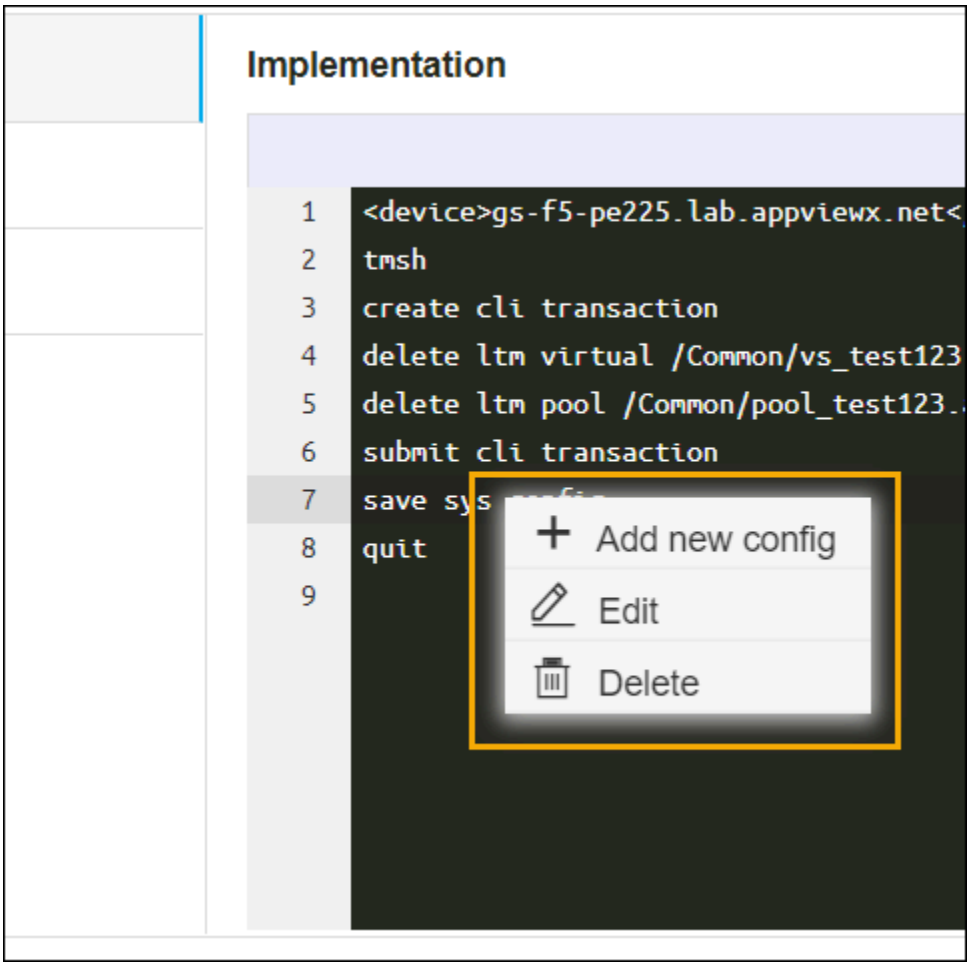

10. After the review, click **Submit**.

    The **Confirmation** dialog box is displayed.

11. To continue with the workflow creation, click **Ok**

    OR

    To abort the workflow creation, click **Cancel**.

    It takes a while to complete the post-validation.

    After the post-validation is successful, the workflow is created and an email triggered to all the configured email IDs.

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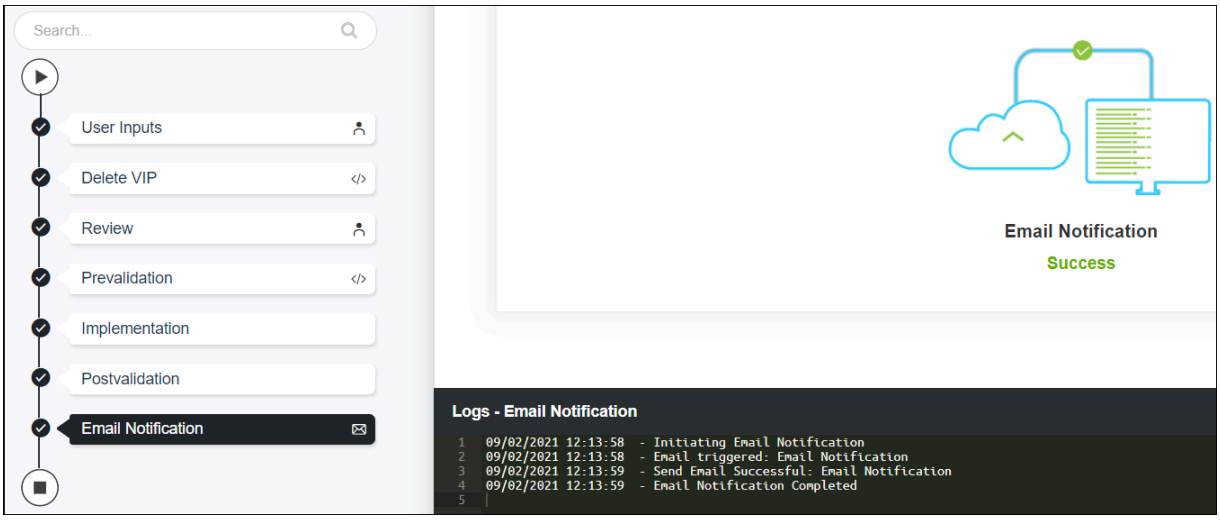

Note: The validation stages are shown in the left side of the screen. To view a validation stage, click on the respective stage.

Delete F5 LTM VIP - Advanced

This workflow deletes VIP along with its associated objects (Pool, Monitor, IRule, Profiles, Persistence, Snatpool, Policy) and multi-select the associated object types to consider for deletion.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG-IP LTM** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Delete F5 LTM VIP - Advanced** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click Run.
   The **Request > Delete F5 LTM VIP - Advanced :: FormBuilder** page is displayed.
5. From their respective dropdown lists, select the **Datacenter**, the **Device Name**, the **Partition**, and the **Virtual Server**.
   The services that are associated with the selected device are populated in the **Services to be Deleted** dropdown list.

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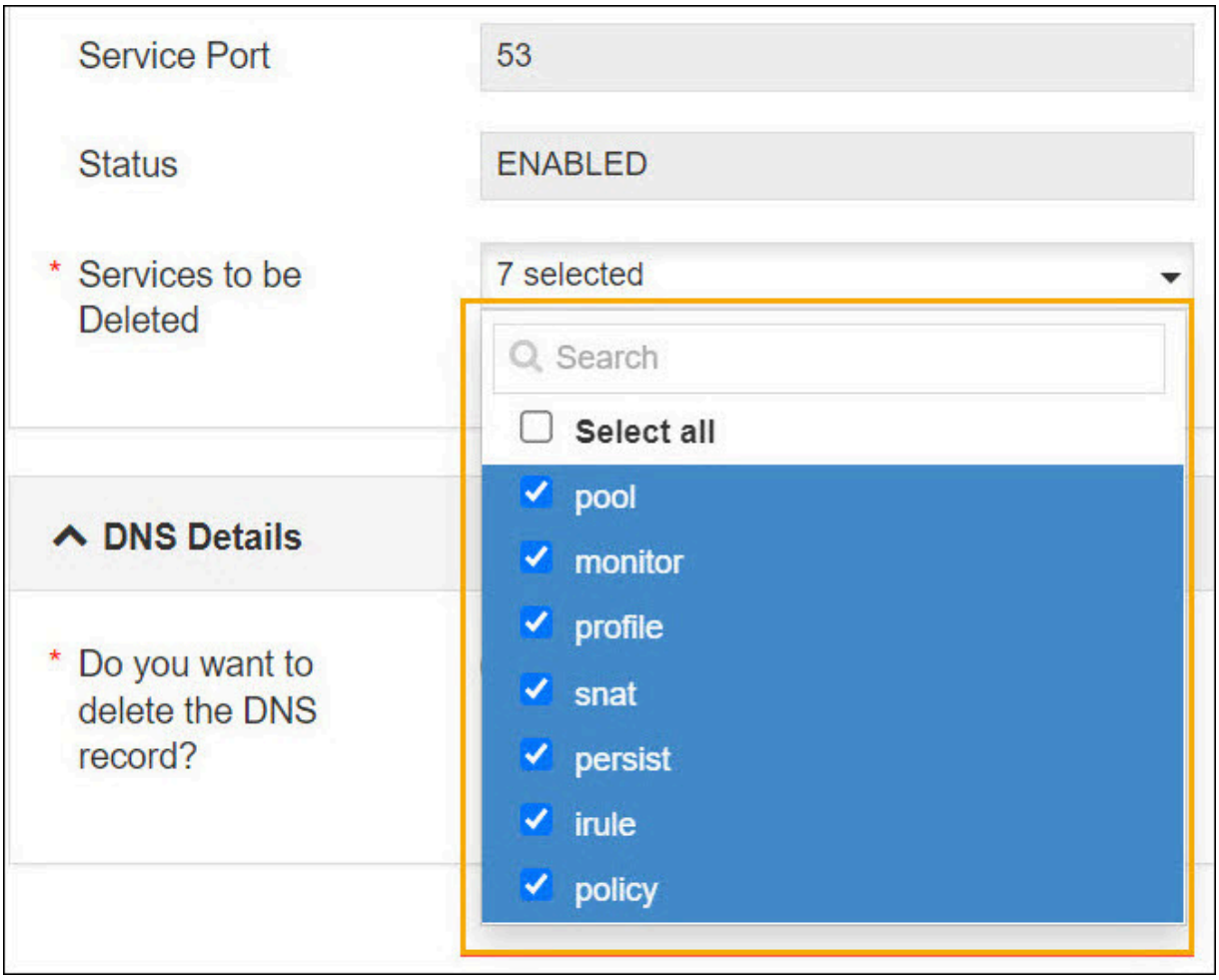

6. Select all the services of the device or select/clear only the services of the devices that are to be deleted.
7. (Optional) Select the **DNS details** of the device, if DNS details of the device are required to be deleted.
8. Click **Submit**.
   The Confirmation dialog box is displayed.
9. To save this form so you can edit it later, click **Save Draft** and then click **OK**.
   The form will be saved as **Open request** under **Request** > **My Request**.

   OR

   To submit the form, click **OK**.

   The pre-validation starts automatically and reaches the **Disable Review** stage.

Note:

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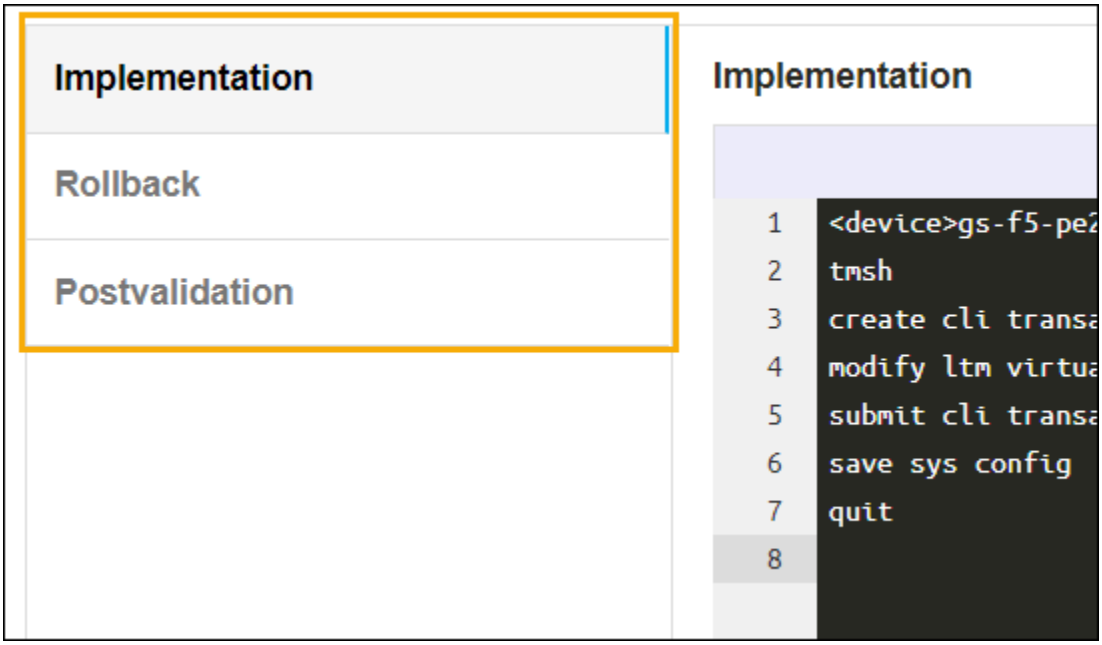
- If there is any failure at this stage, start a new request by providing the correct data.
- Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

10. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs.



11. (Optional) If you need to change any data at this stage, you can update by clicking the right mouse button.

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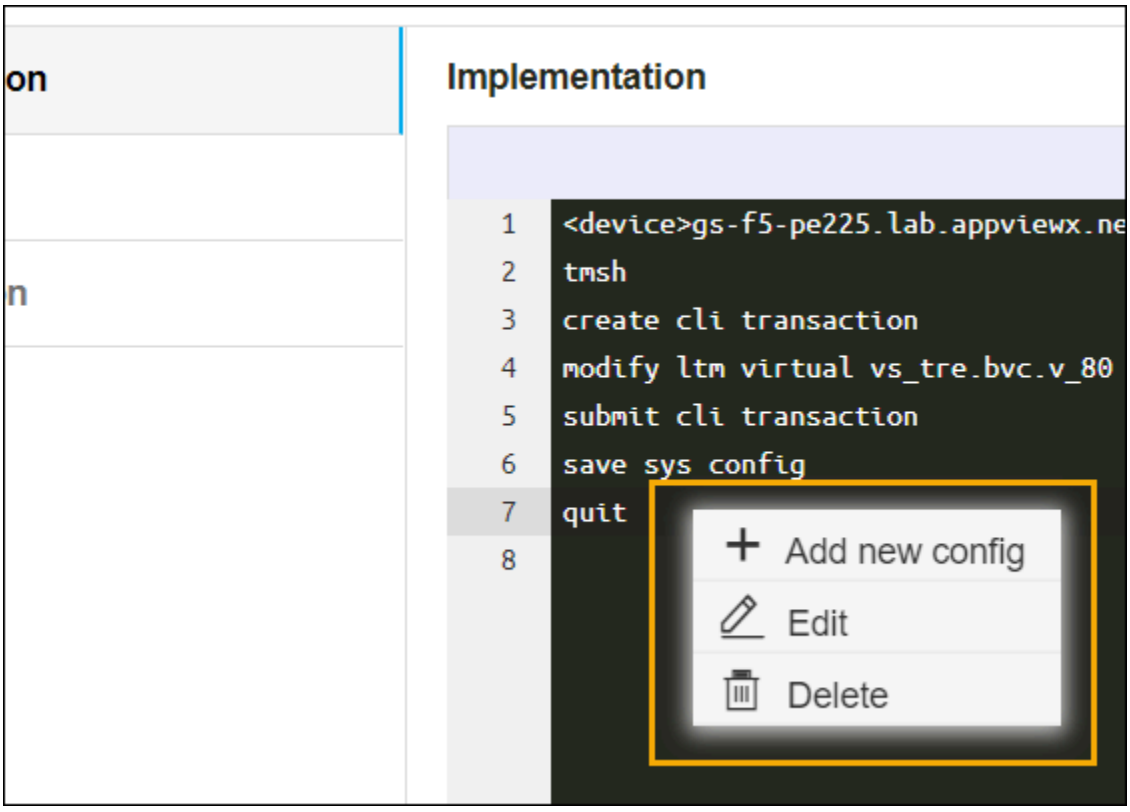

12. After the review, click **Submit**.
    The **Confirmation** dialog box is displayed.
13. To continue with the workflow creation, click **Ok**
    OR
    To abort the workflow creation, click **Cancel**.
    It takes a while to complete the post-validation.
    After the post-validation is successful, the workflow is created and an email triggered to all the configured email IDs.

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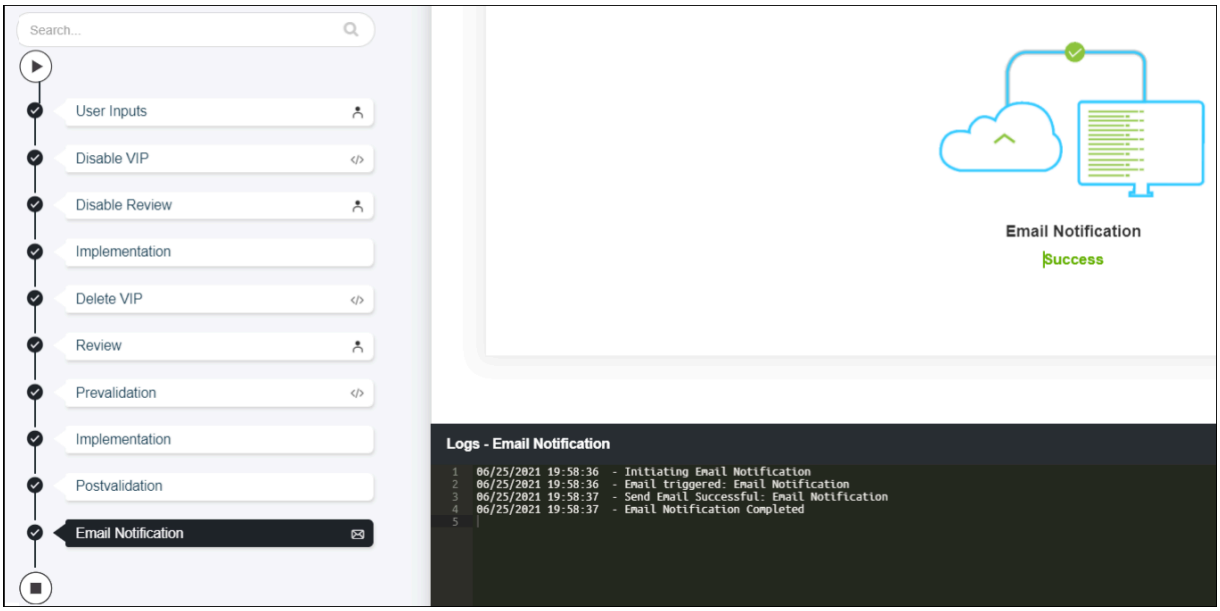

Note: The validation stages are shown in the left side of the screen. To view a validation stage, click on the respective stage.

Disable Unused F5 LTM VIP

This workflow disables VIPs that are unused for ‘n’ number of days.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG-IP LTM** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Disable Unused F5 LTM VIP** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click Run.
   The **Request > Disable Unused F5 LTM VIP :: FormBuilder** page is displayed.
5. Enter/select the **Device Details**.

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Device Details Section - Field and Description Table

Field	Description
***Datacenter**	Displays the list of datacenters of the devices, which are created in the Device Inventory. Select the datacenter of a device from the drop-down option for which this request is to be created. For the devices which are created without a datacenter in the Device Inventory, select the datacenter as **None**.
***Device Name**	Displays the list of devices associated with the selected datacenter. If the datacenter is selected as **None**, the devices that are created without datacenter details are listed. Select the desired devices from the drop-down option. **Note:** Selecting multiple devices is possible.
No of Days	Enter the no. of days to disable the virtual server.

6. Click **Submit**.

   The Confirmation dialog box is displayed.

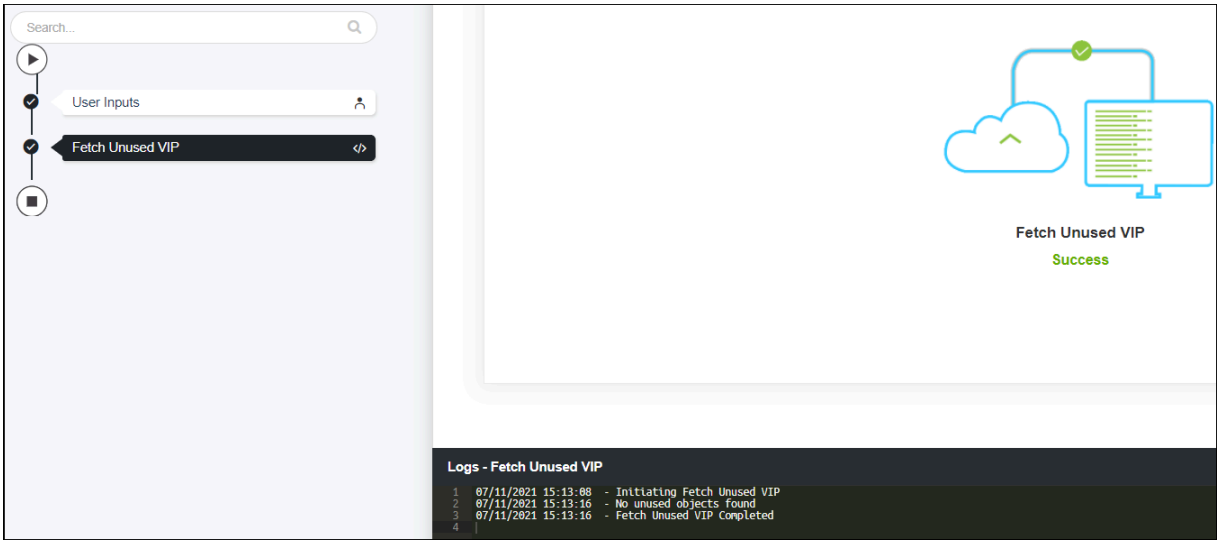
7. To save this form so you can edit it later, click **Save Draft** and then click **OK**.

   The form will be saved as **Open request** under **Request** > **My Request**.

   OR

   To submit the form, click **OK**.

   The workflow is successfully completed.



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Note: The stages of the request are shown in the left side of the screen. To view a particular stage of the request, click the respective stage.

Disable and Delete Unused F5 LTM VIP

This workflow disables and deletes the VIPs that are unused for 'n' number of days.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG-IP LTM** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Disable and Delete Unused F5 LTM VIP** workflow. The **Run** and **Schedule** buttons are displayed.
4. Click

. The **Request > Disable and Delete Unused F5 LTM VIP :: FormBuilder** page is displayed.
5. Enter/select the **Device Details**.

Device Details Section - Field and Description Table

Field	Description
***Datacenter**	Displays the list of datacenters of the devices, which are created in the Device Inventory. Select the datacenter of a device from the drop-down option for which this request is to be created. For the devices which are created without a datacenter in the Device Inventory, select the datacenter as **None**.
***Device Name**	Displays the list of devices associated with the selected datacenter. If the datacenter is selected as **None**, the devices that are created without datacenter details are listed. Select the desired devices from the drop-down option. **Note:** Selecting multiple devices is possible.
No of Days	Enter the no. of days for which the virtual server is not used.

6. Click **Submit**. The Confirmation dialog box is displayed.

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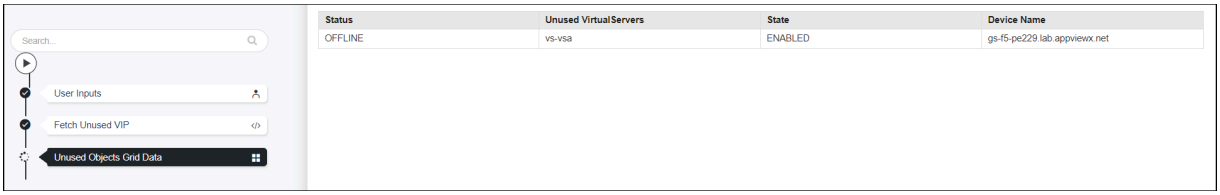
7. To save this form so you can edit it later, click **Save Draft** and then click **OK**.
   The form will be saved as **Open request** under **Request** > **My Request**.

   OR

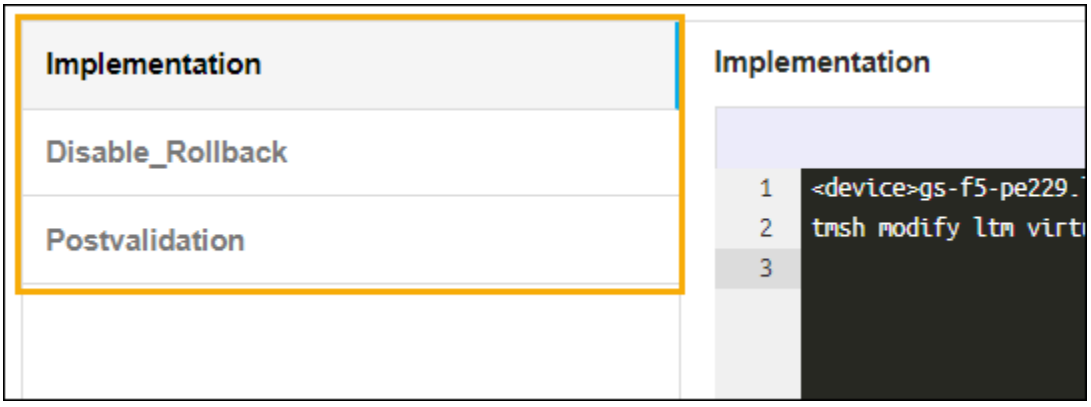
   To submit the form, click **OK**.

   The fetching unused VIPs starts automatically and reaches the **Unused Objects Grid Data** stage.



> **Note:**
> - If there is any failure at this stage, start a new request by providing the correct data.
> - Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.
> - To download the Unused Objects Grid Data report, click the Download ( ) button.

8. Click **Submit**.
   The **Confirmation** dialog box is displayed.
9. Click **Ok** to submit the form.
   The validation starts automatically and reaches the **Review** stage.
10. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs.



11. (Optional) If you need to change any data at this stage, you can update by clicking the right mouse button.

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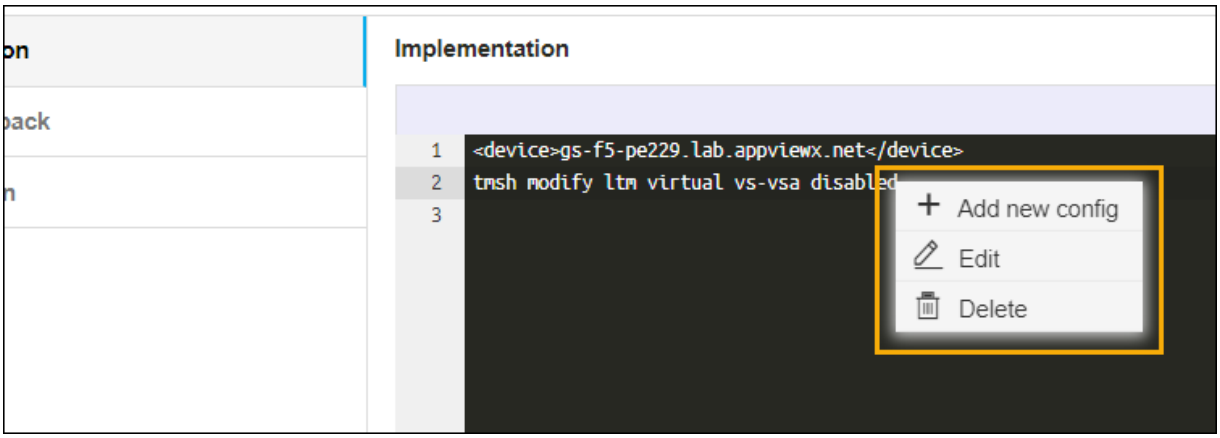
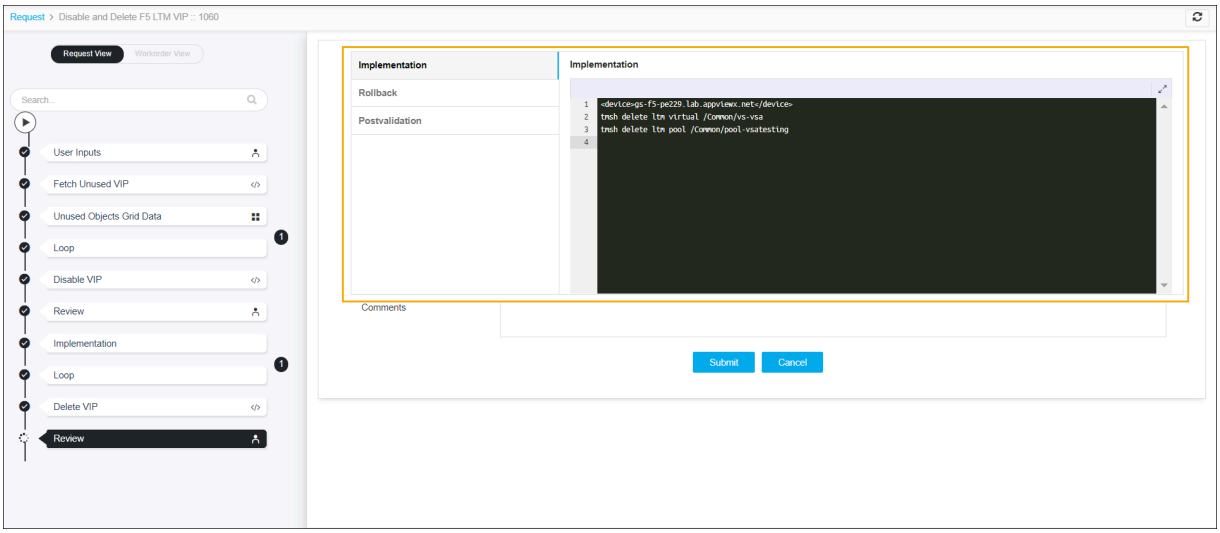


12. After the review, click **Submit**.

    The implementation process starts and reaches the **Review** stage.

13. Review the data, and then click **Submit** to implement the changes.

    The implementation starts.



14. (Optional) If you need to change any data at this stage, you can update by clicking the right mouse button.

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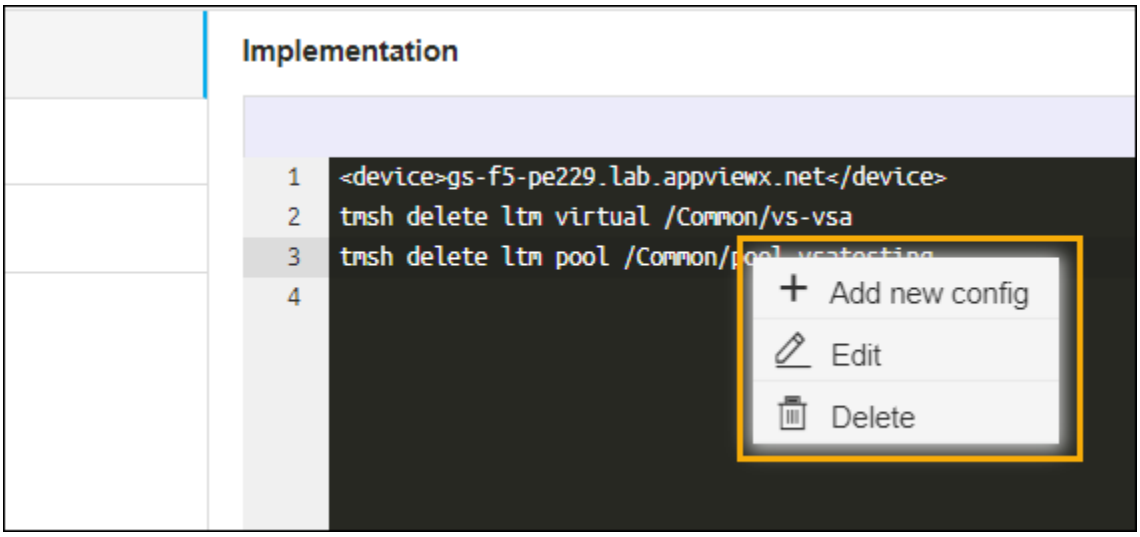
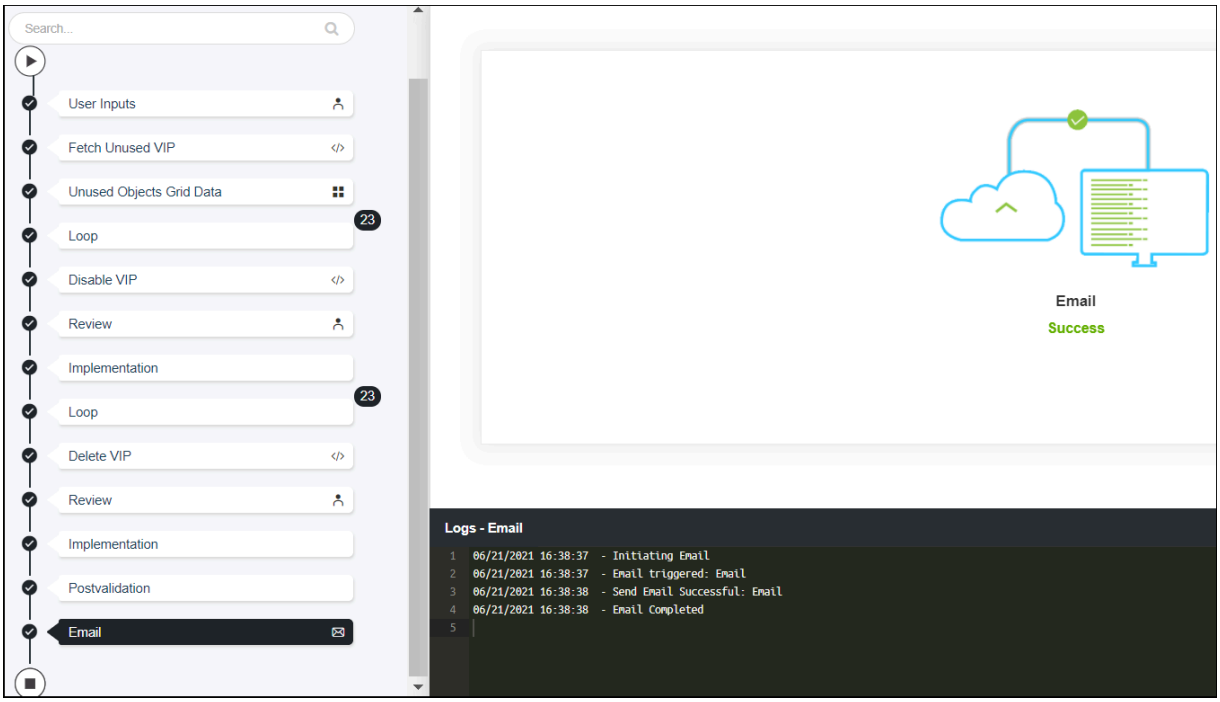


The workflow is created and the email is triggered to the configured email IDs.



Note: The stages of the request are shown in the left-side of the screen. To view a particular stage of the request, click the respective stage.

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Get Unused LTM VIP and Delete

By running this workflow, you can delete VIPs that are unused for ‘n’ number of days.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG-IP LTM** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Get Unused LTM VIP and Delete** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click

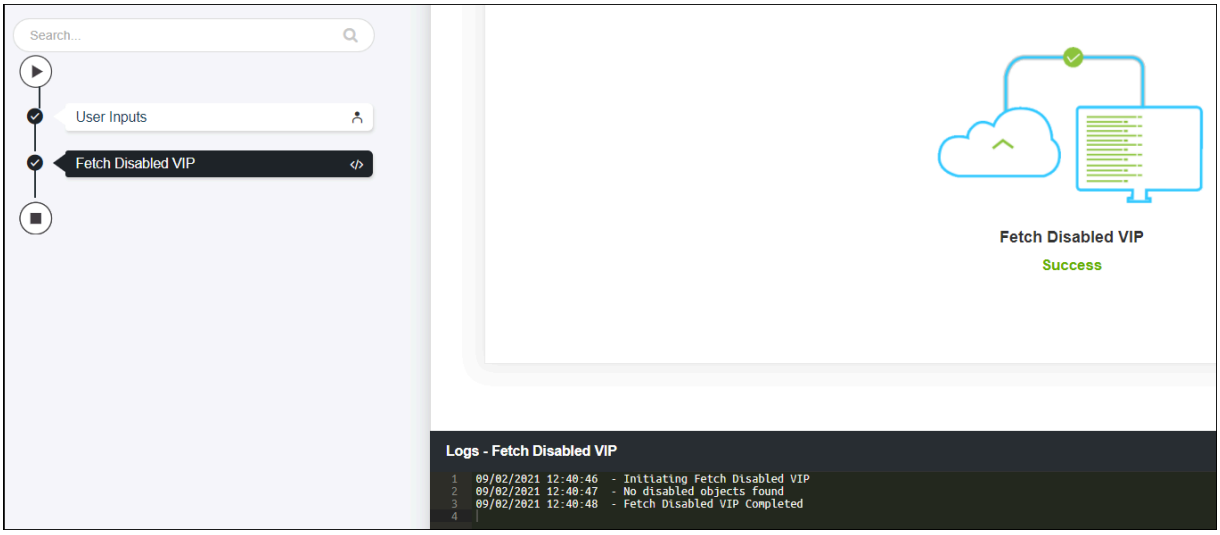
.
   The **Request > Get Unused LTM VIP and Delete :: FormBuilder** page is displayed.
5. Under **Device Details**, select the **Device Name**, and enter the **No of Days**.
6. Click **Submit**.
   The **Confirmation** dialog box is displayed.
7. To save this form so you can edit it later, click **Save Draft** and then click **OK**.
   The form will be saved as **Open request** under **Request** > **My Request**.

   OR

   To submit the form, click **OK**.

   The fetching process is automatically.

   The unused LTM VIP for the given days is deleted.



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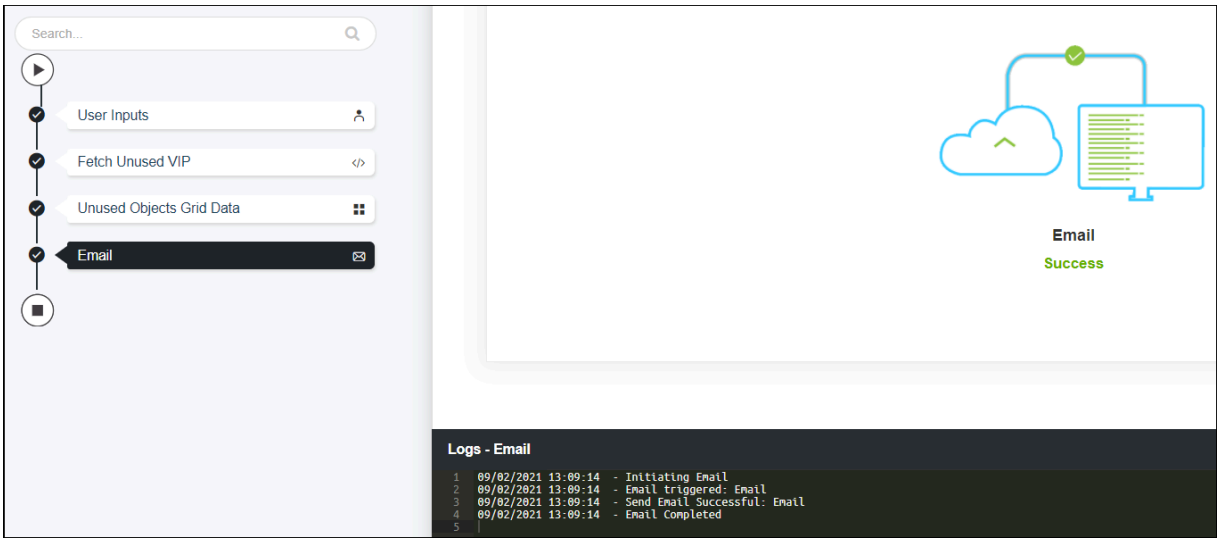
Get Unused LTM VIP and Notify

This workflow fetches the report of VIPs that are unused for ‘n’ number of days.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG-IP LTM** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Get Unused LTM VIP and Notify** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click Run.
   The **Request > Get Unused LTM VIP and Notify :: FormBuilder** page is displayed.
5. Under **Device Details**, select the **Device Name**, and enter the **No of Days**.
6. Click **Submit**.
   The fetching process is automatically.
   The unused LTM VIP for the given days is fetched and sent reports via configured email addresses.



Disable and Delete Unused VIP-State/Status

This workflow fetches the unused VIPs' state and status and then disables or disables and deletes them.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG-IP LTM** category on the **View/Run Workflows** page.

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3. On the popup window, hover the mouse over the **Disable and Delete Unused VIP-State/Status** workflow.

   The **Run** and **Schedule** buttons are displayed.

4. Click

.

   The **Request > Disable and Delete Unused VIP-State/Status :: FormBuilder** page is displayed.

5. Enter/select the workflow details.

Worflow Details - Field and Description Table

Field	Description
***Datacenter**	Displays the list of datacenters of the devices, which are created in the Device Inventory. Select the datacenter of a device from the drop-down option for which this request is to be created. For the devices which are created without a datacenter in the Device Inventory, select the datacenter as **None**.
***Device Name**	Displays the list of devices associated with the selected datacenter. If the datacenter is selected as **None**, the devices that are created without datacenter details are listed. Select the desired devices from the drop-down option. **Note:** Selecting multiple devices is possible.
No of Days	Enter the no. of days for which the virtual server's state and status is not used.
***Action on VIPs**	The options are: • **Disable** - Choose this option to disable the unused VIPs. • **Disable and Delete** - Choose this option to disable and delete the unused VIPs.
***Unused VIP Metrics**	Choose the VIP's metrics for which the unused VIP has to be fetched.

6. To save this form so you can edit it later, click **Save Draft** and then click **OK**.

   The form will be saved as **Open request** under **Request** > **My Request**.

   OR

   To submit the form, click **OK**.

   The fetching unused VIPs starts automatically and reaches the **Unused Objects Grid Data** stage.

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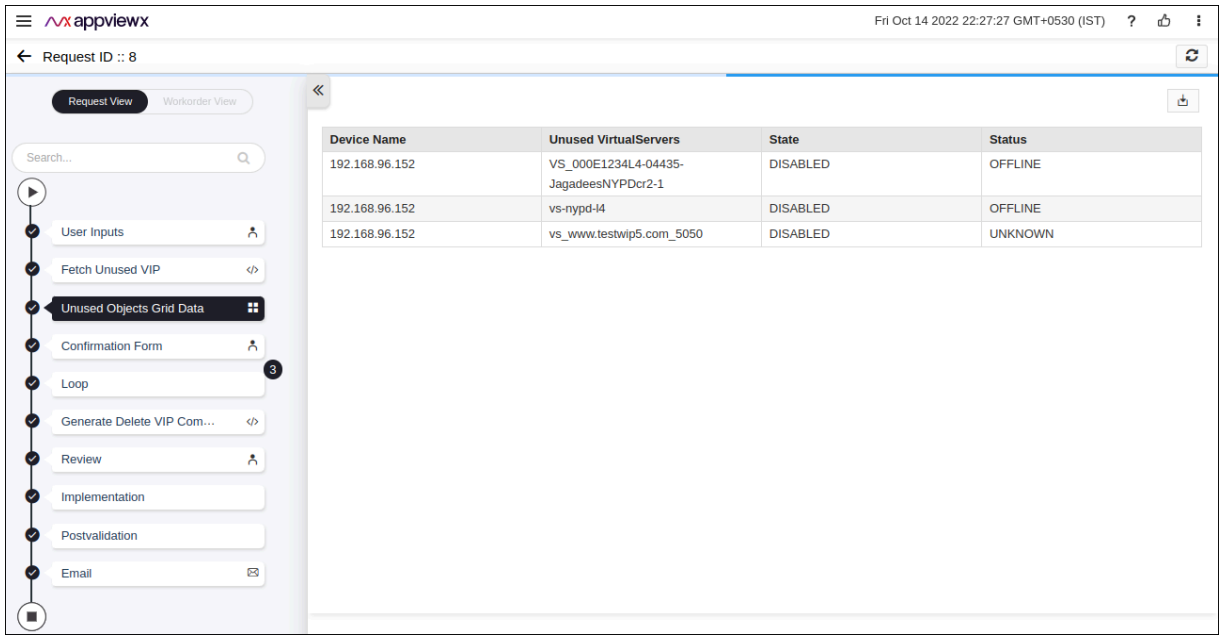

Note:

- If there is any failure at this stage, start a new request by providing the correct data.
- Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.
- To download the Unused Objects Grid Data report, click .

7. Click **Submit**.

   The **Confirmation** dialog box is displayed.
8. Click **Ok** to submit the form.

   The validation starts automatically and reaches the **Review** stage.
9. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs.

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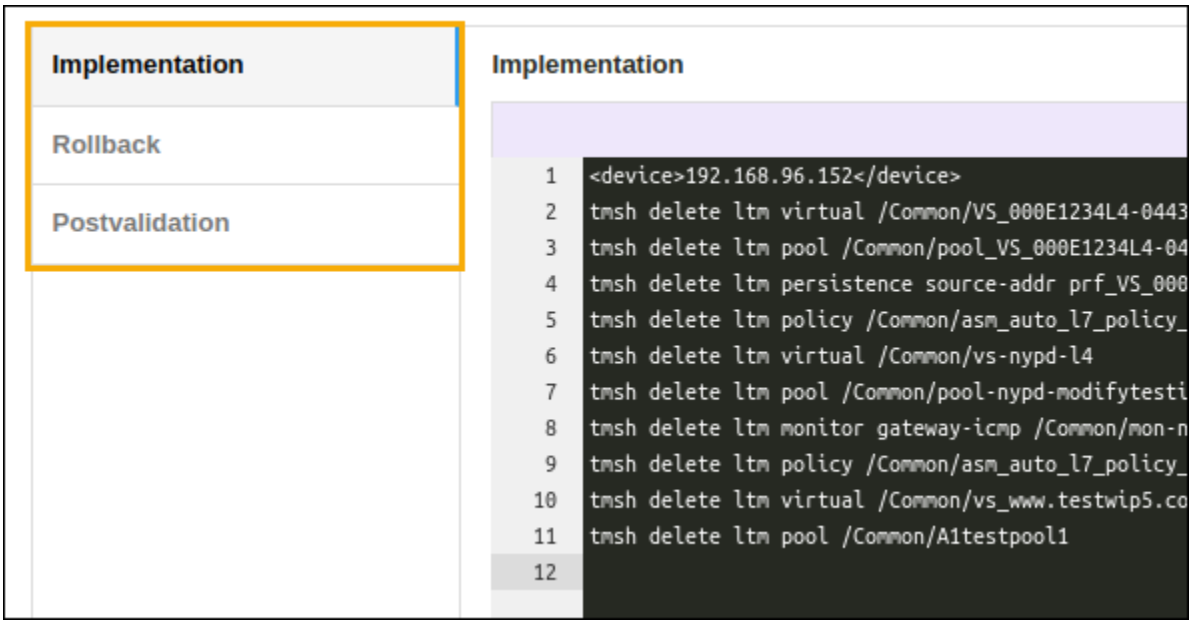
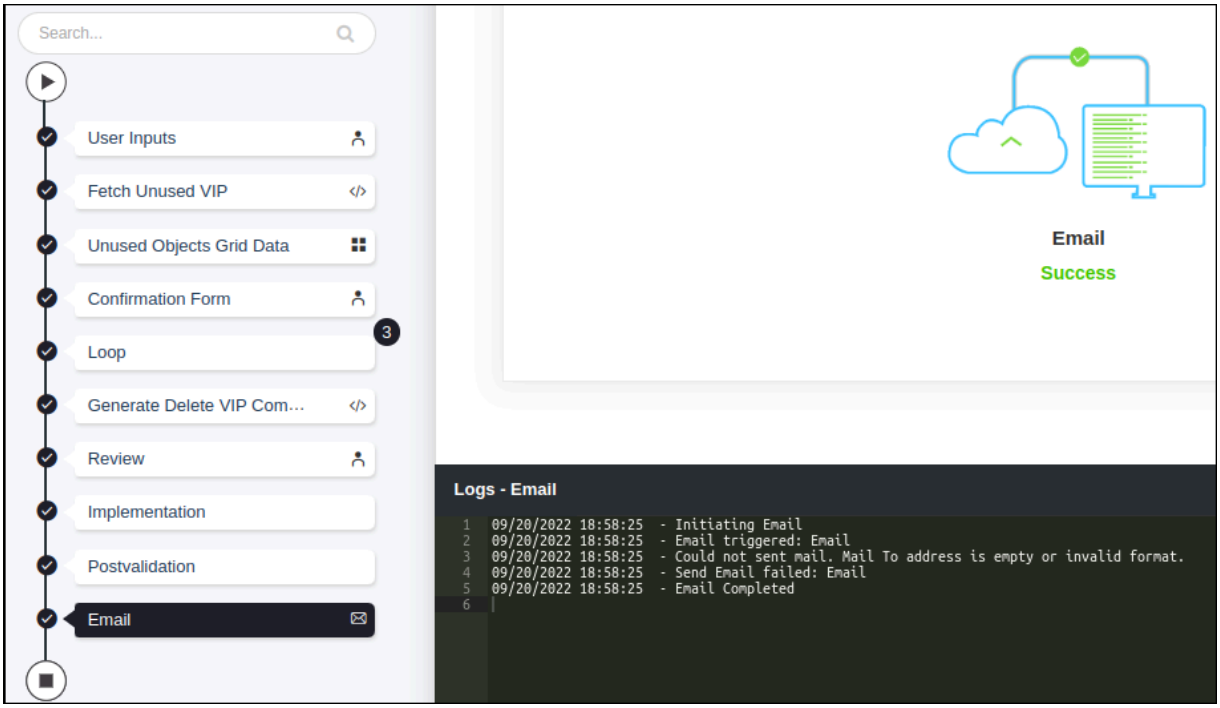


10. (Optional) If you need to update any data at this stage, right click the mouse button and select the required option.
11. After the review, click **Submit**.

    The implementation process starts and reaches the **Review** stage.

    The workflow is created and the email is triggered to the configured email IDs.



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Note: The stages of the request are shown in the left-side of the screen. To view a particular stage of the request, click the respective stage.

Delete F5 LTM VIP with Service Now

This workflow deletes VIP along with its associated objects(Pool, Monitor, IRule, Profiles, Persistence, Snatpool, Policy) and multi-select the associated object types to consider for deletion.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG-IP LTM** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Delete F5 LTM VIP with Service Now** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click

.
   The **Request > Delete F5 LTM VIP with Service Now :: FormBuilder** page is displayed.
5. Select the **Datacenter**, the **Device Name**, and the **Virtual Server** from the dropdown list.
   The services associated with the selected device are displayed.

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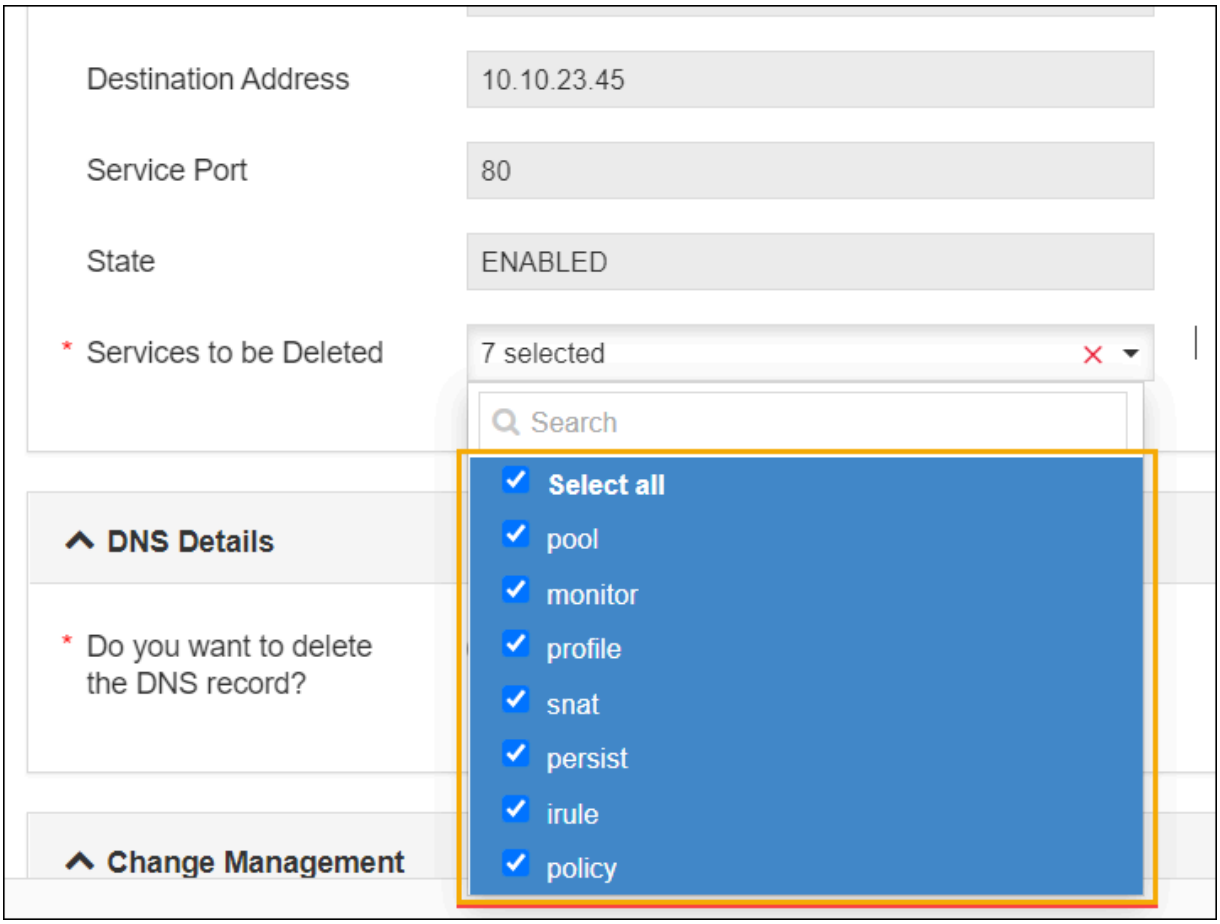

6. Select all the services of the device or select/clear only the services of the devices that are to be deleted.
7. Select the **DNS Details** and **Change Management** details of the device, if DNS details and change management details of the device are required to be deleted.
8. Click **Submit**.
   The **Confirmation** dialog box is displayed.
9. To save this form so you can edit it later, click **Save Draft** and then click **OK**.
   The form will be saved as **Open request** under **Request** > **My Request**.

   OR

   To submit the form, click **OK**.

   The validation starts automatically and reaches the **Disable Review** stage.

Note:

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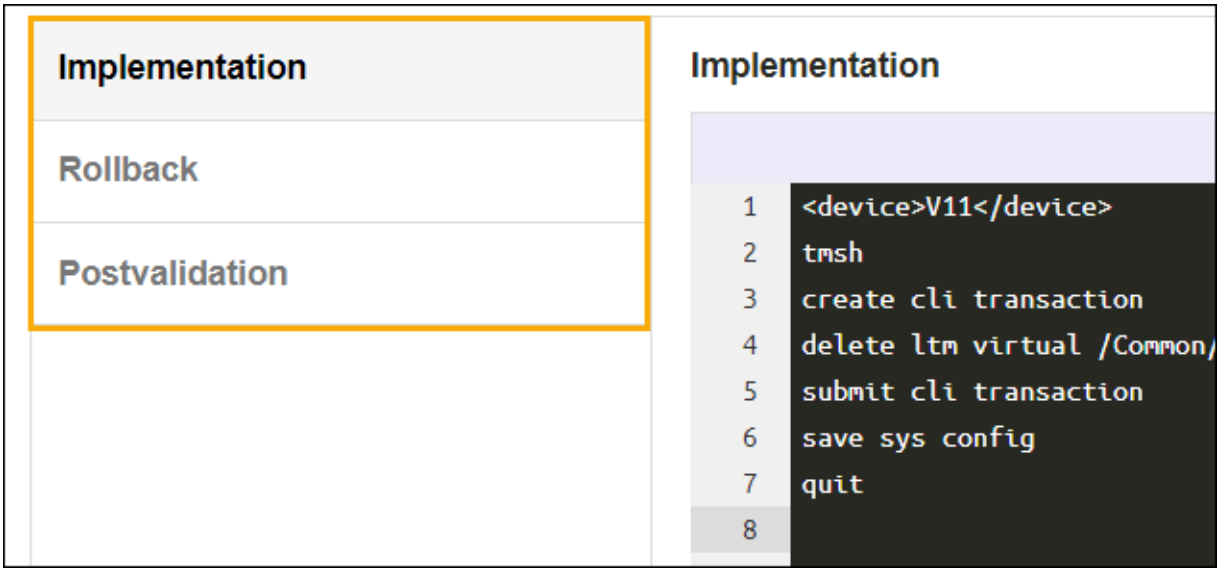
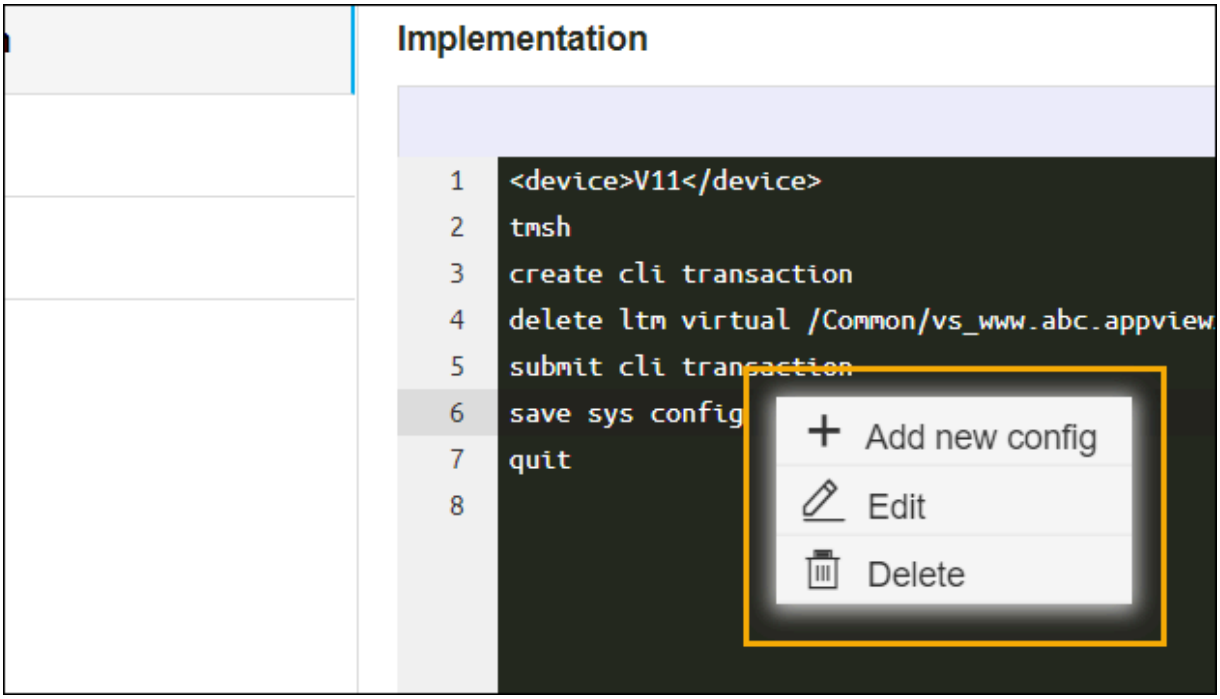
- If there is any failure at this stage, start a new request by providing the correct data.
- Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

10. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs.



11. (Optional) If you need to change any data at this stage, right click and select the required option.



12. After the review, click **Submit**.

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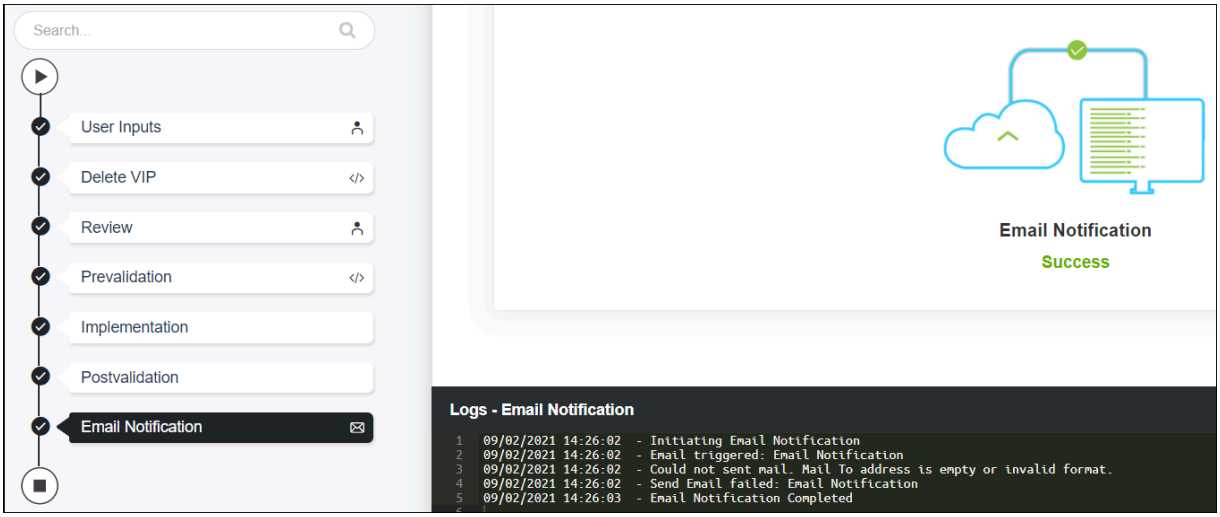
The **Confirmation** dialog box is displayed.

> **Note:** To stop running the workflow creation, Click **Cancel**.

13. Click **Ok** to continue workflow creation.
    It takes a while to complete the request.
    The workflow is created and the email is triggered to the configured email IDs.



> **Note:** The stages of the request are shown in the left side of the screen. To view a particular stage of the request, click the respective stage.

Manage F5 LTM Pool Members

This workflow selects VIP in a device and modifies (add/delete) associated pool members.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG-IP LTM** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Manage F5 LTM Pool Members** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click Run.
   The **Request > Manage F5 LTM Pool Members :: FormBuilder** page is displayed.

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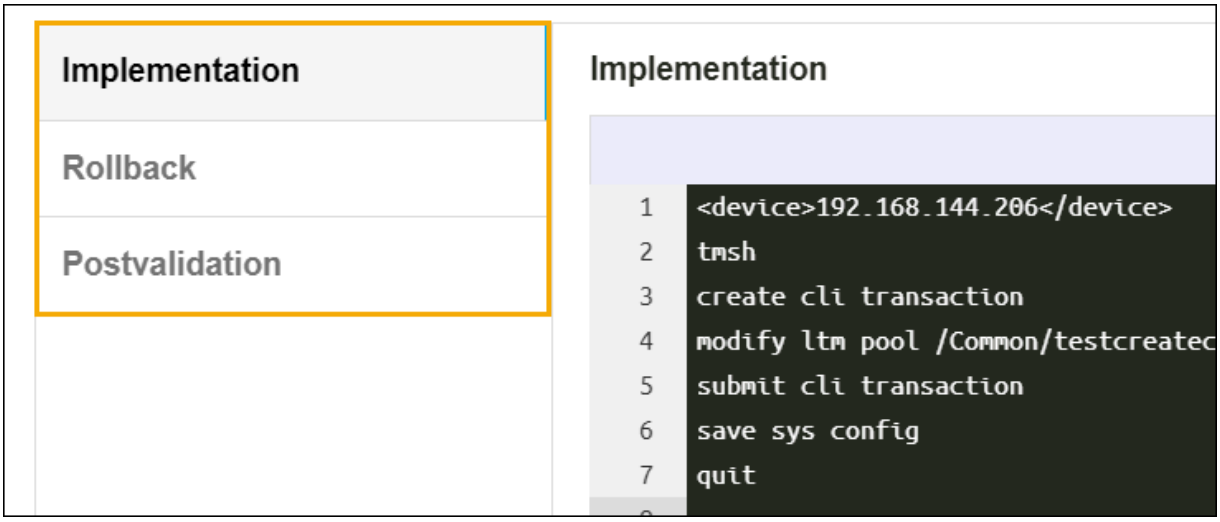
5. Enter a valid IP address and port number in the **Destination Address** and **Service Port** field in the **Virtual Server Details** section.
6. Click **Get Virtual Server Details**.
   The devices are loaded.
7. Select the device name from the **Device Name** dropdown list.
   The other details of the device are retrieved automatically.
8. Click **Fetch Pool Members** to get the pool member of the selected device or manually enter the pool member details.
9. Click **Submit**.
   The **Confirmation** dialog box is displayed.
10. To save this form so you can edit it later, click **Save Draft** and then click **OK**.
    The form will be saved as **Open request** under **Request** > **My Request**.

    OR

    To submit the form, click **OK**.

    The pre-validation starts automatically and reaches the **Review** stage.
11. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs.



12. (Optional) If you need to change any data at this stage, right click and select the required option.

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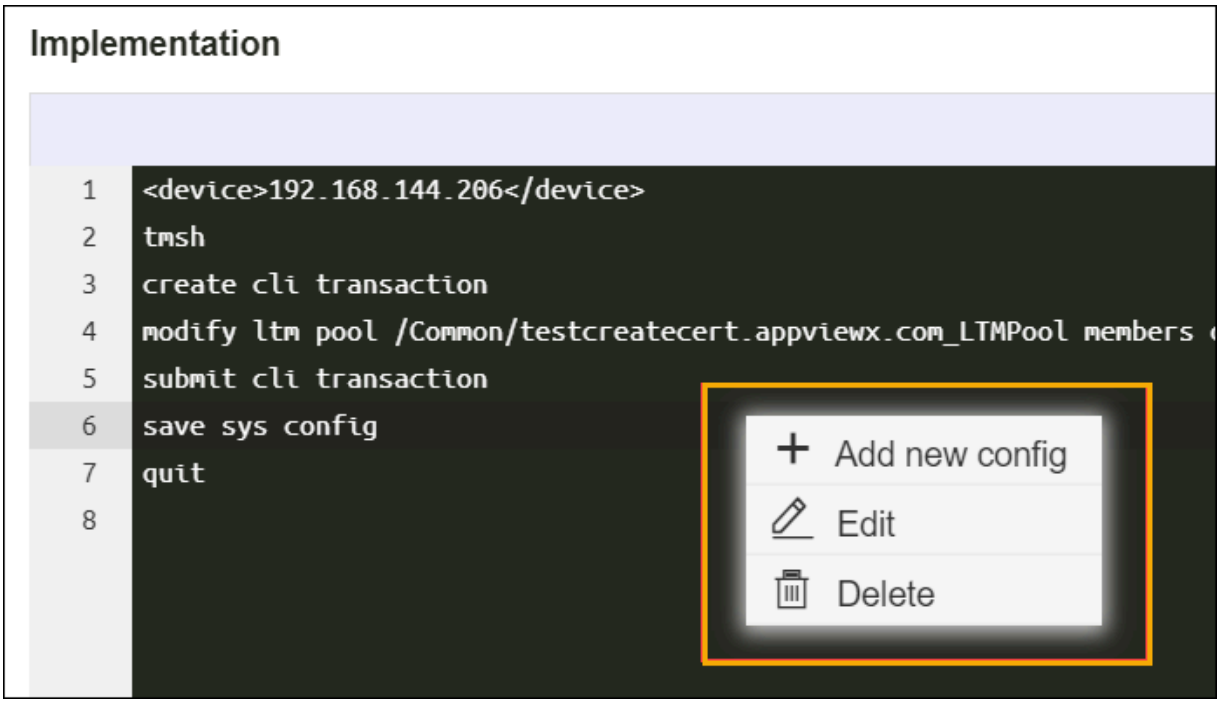

13. After the review, click **Submit**.

    The **Confirmation** dialog box is displayed.

    Note: To stop running the workflow creation, Click **Cancel**.

14. Click **Ok** to continue the workflow creation.

    It takes a while to complete the post-validation.

    After the successful post-validation, the workflow is created and the email triggered to the configured email IDs.

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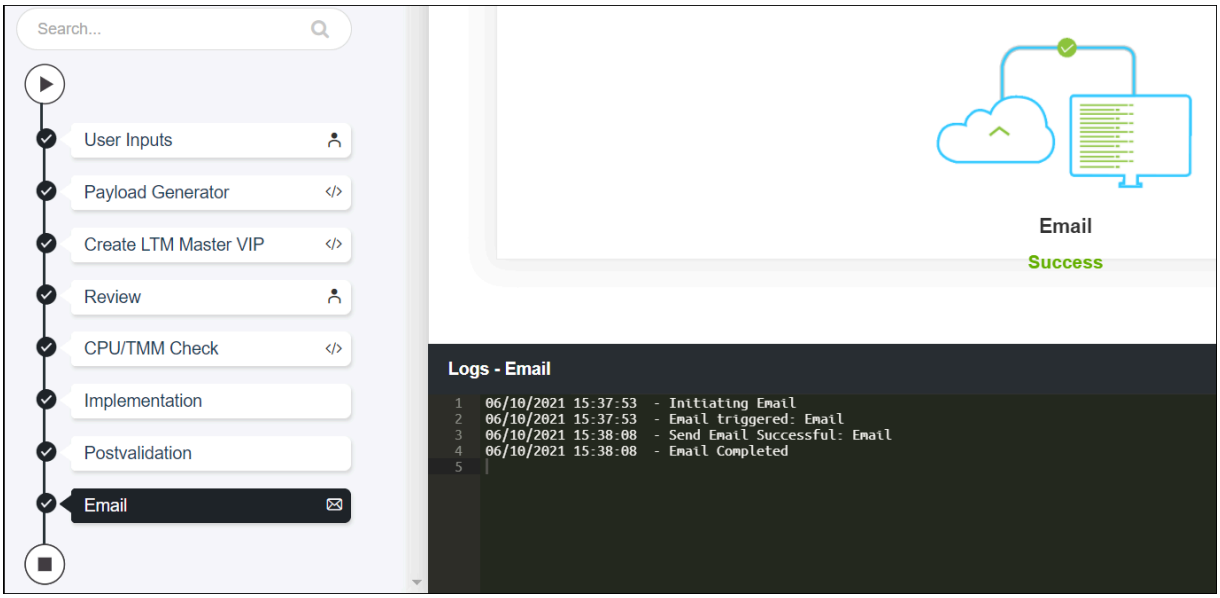

Note: The validation stages are shown in the left side of the screen. To view any validation stage, click on the respective stage.

Manage F5 LTM Pool members with Service Now

This workflow selects VIP in a device and modifies (add/delete) associated pool members.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG-IP LTM** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Manage F5 LTM Pool members with Service Now** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click Run.
   The **Request > Manage F5 LTM Pool members with Service Now :: FormBuilder** page is displayed.
5. Enter a valid IP address and port number in the **Destination Address** and **Service Port** field in the **Virtual Server Details** section.
6. Click **Get Virtual Server Details**.
   The devices are loaded.

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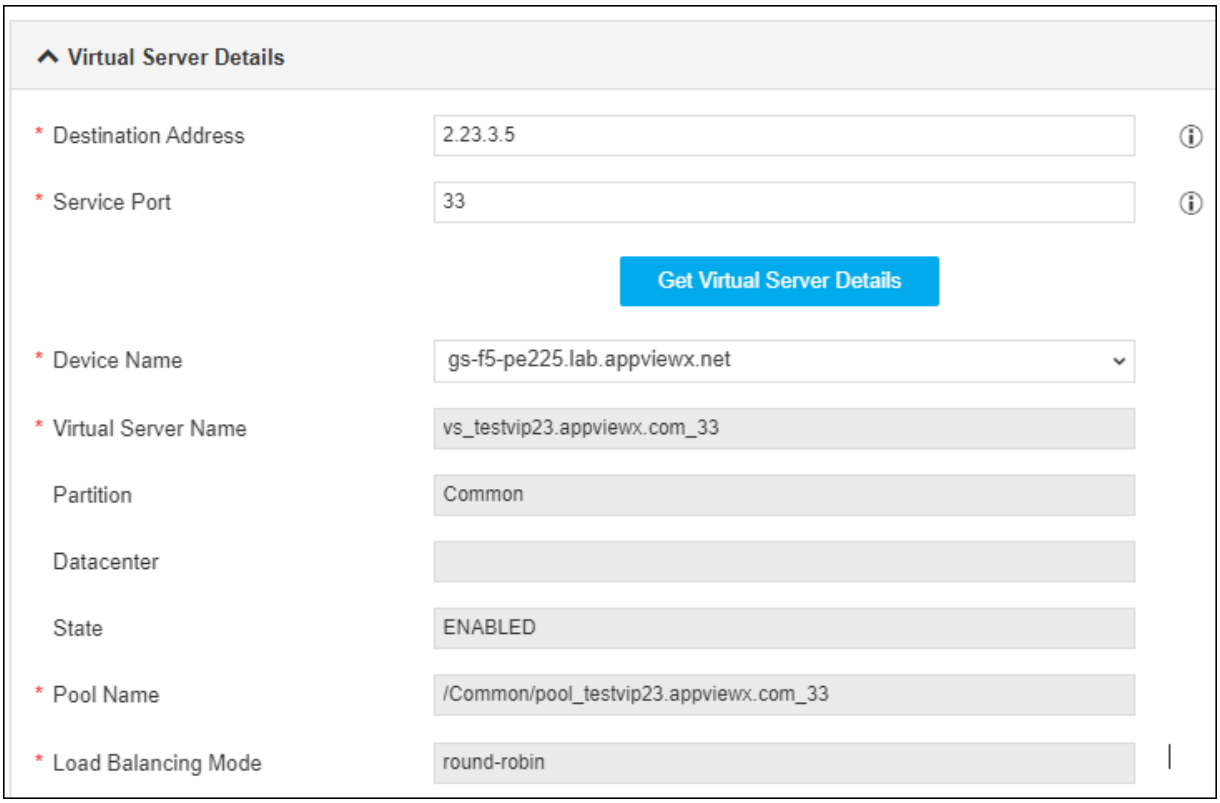
The devices are fetched for the given destination address.

7. Select the device from the **Device Name** dropdown list.

   The virtual server details and pool details are fetched for the selected device.



8. Update the **Pool Member Details** as required.
9. Update the **Change Management** details as required.
10. Click **Submit**.

    The **Confirmation** dialog box is displayed.
11. To save this form so you can edit it later, click **Save Draft** and then click **OK**.

    The form will be saved as **Open request** under **Request** > **My Request**.

    OR

    To submit the form, click **OK**.

    The pre-validation starts automatically and reaches the **Review** stage.
12. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs.

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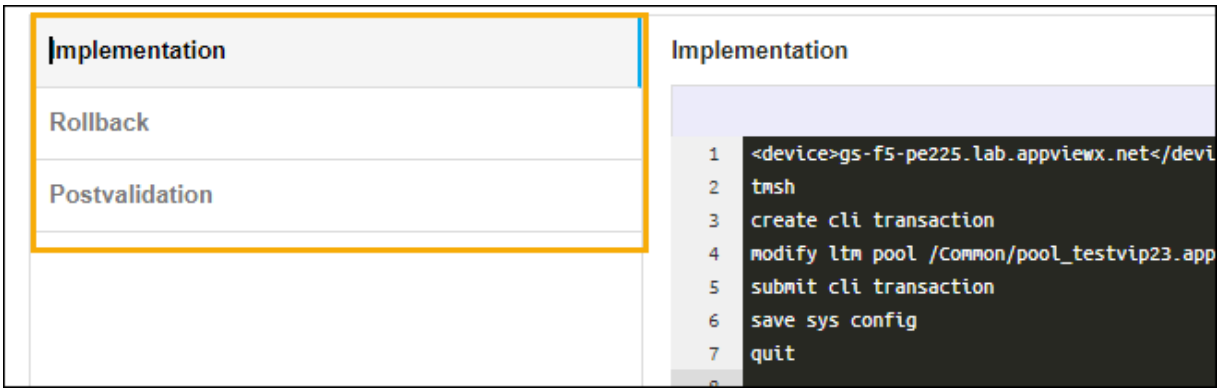
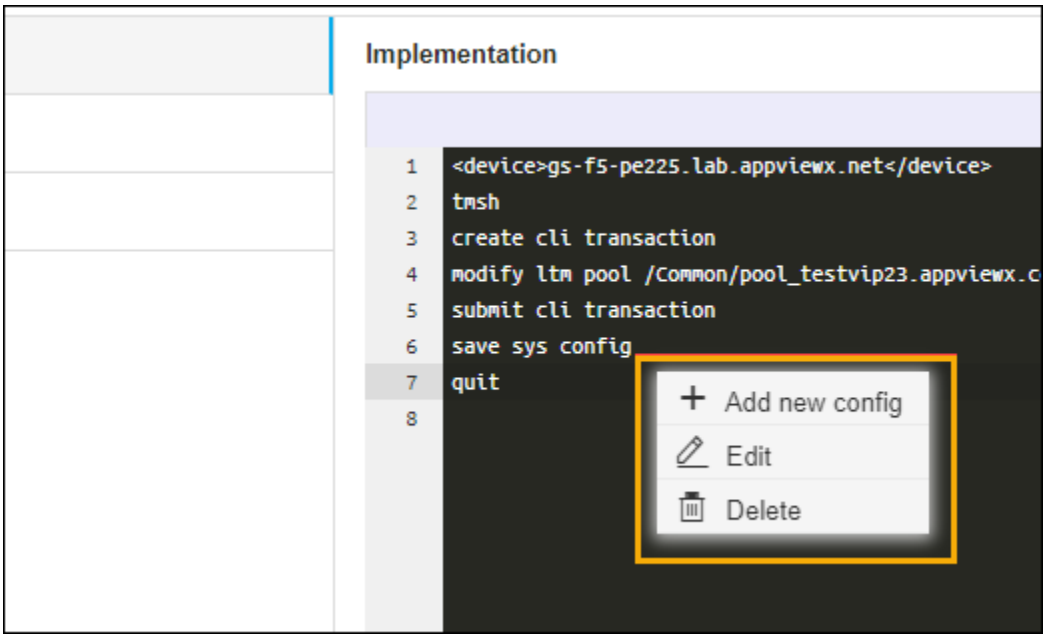


13. (Optional) If you need to change any data at this stage, right click and select the required option.



14. After the review, click **Submit**.

    The **Confirmation** dialog box is displayed.

> **Note:** To stop running the workflow creation, click **Cancel**.

15. Click **Ok** to continue the workflow creation.

    It takes a while to complete the post-validation.

    After the successful post-validation, the workflow is created and the email triggered to the configured email IDs.

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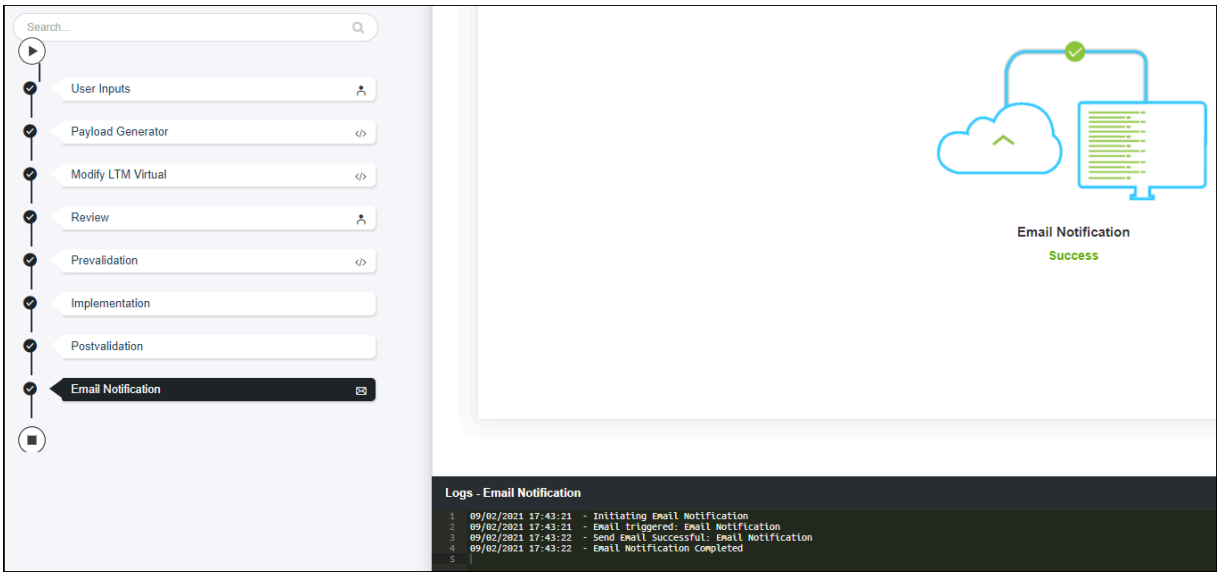

Note: The validation stages are shown in the left side of the screen. To view any validation stage, click on the respective stage.

Modify F5 LTM VIP Advanced

This workflow modifies VIP along with its associated objects(Pool, Monitor, IRule, Profiles, Persistence, Snatpool)

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG-IP LTM** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Modify F5 LTM VIP Advanced** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click Run.
   The **Request > Modify F5 LTM VIP Advanced :: FormBuilder** page is displayed.
5. Select the **Datacenter**, **Device Name**, and **Virtual Server** from the dropdown list, and then click the **Get Virtual Server config** button.
   The device details, such as SSL and Persistence, Rule, etc. are auto-populated.
6. Update the **SSL and Persistence**, **Rule**, **Protocol**, **Snat Pool**, **Mirror and Source-Port**, **Pool and Monitor**, and/or **Pool Members** details as required.
7. Click **Submit**.

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The **Confirmation** dialog box is displayed.

8. To save this form so you can edit it later, click **Save Draft** and then click **OK**.

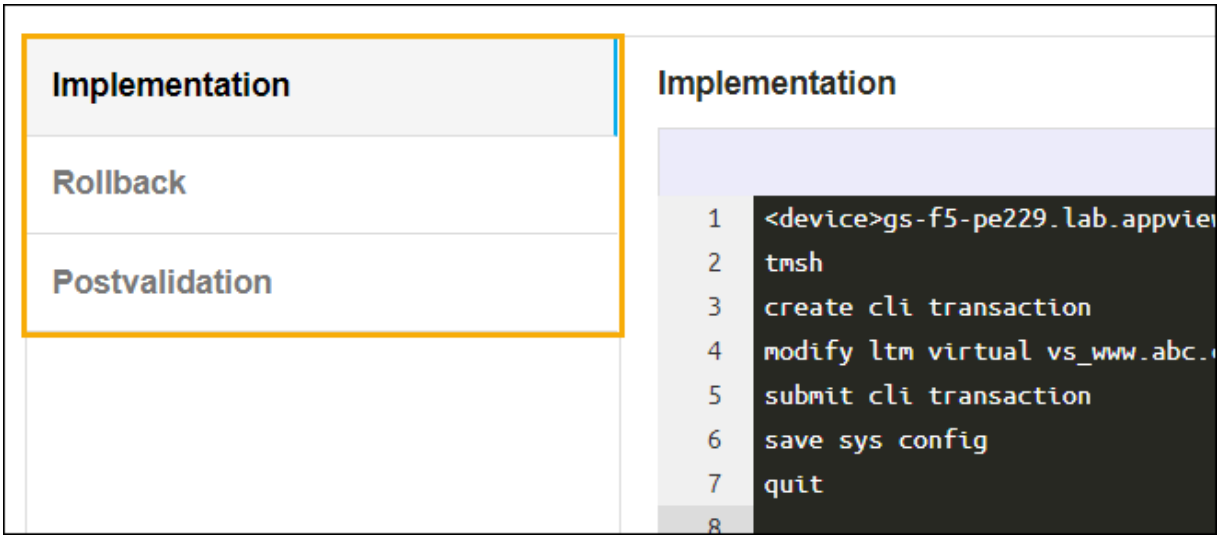
   The form will be saved as **Open request** under **Request** > **My Request**.

   OR

   To submit the form, click **OK**.

   The pre-validation starts automatically and reaches the **Review** stage.

9. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs.



10. (Optional) If you need to change any data at this stage, right click and select the required option.

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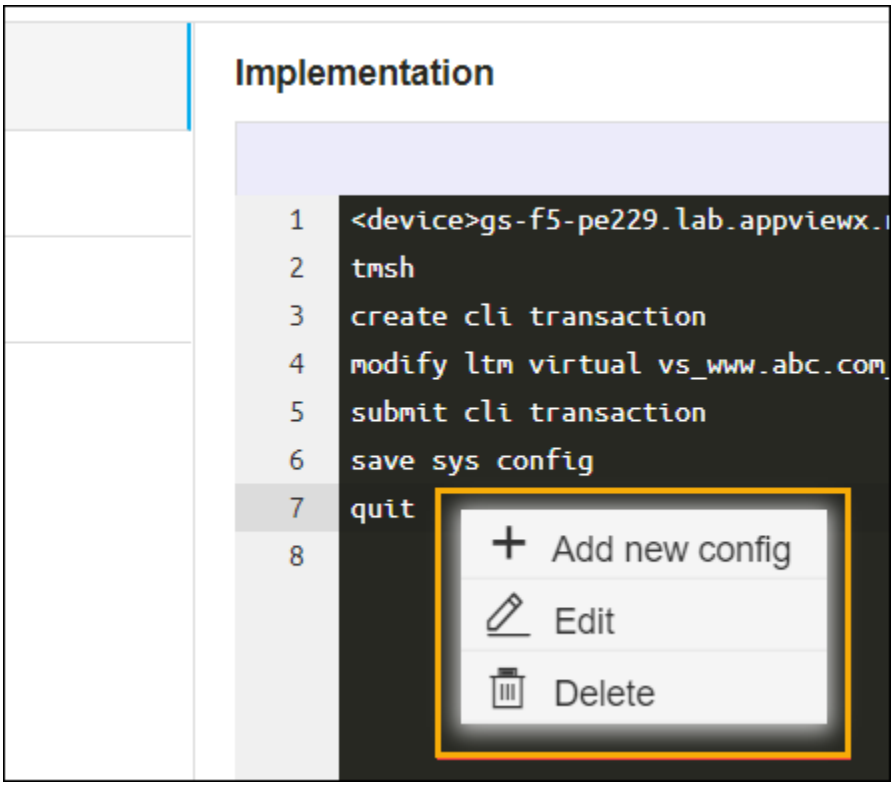

11. After the review, click **Submit**.

> **Note:** To stop running the workflow creation, click **Cancel**.

12. Click **Ok** to continue the workflow creation.
    It takes a while to complete the post-validation.

    After the successful post-validation, the workflow is created and the email triggered to the configured email IDs.

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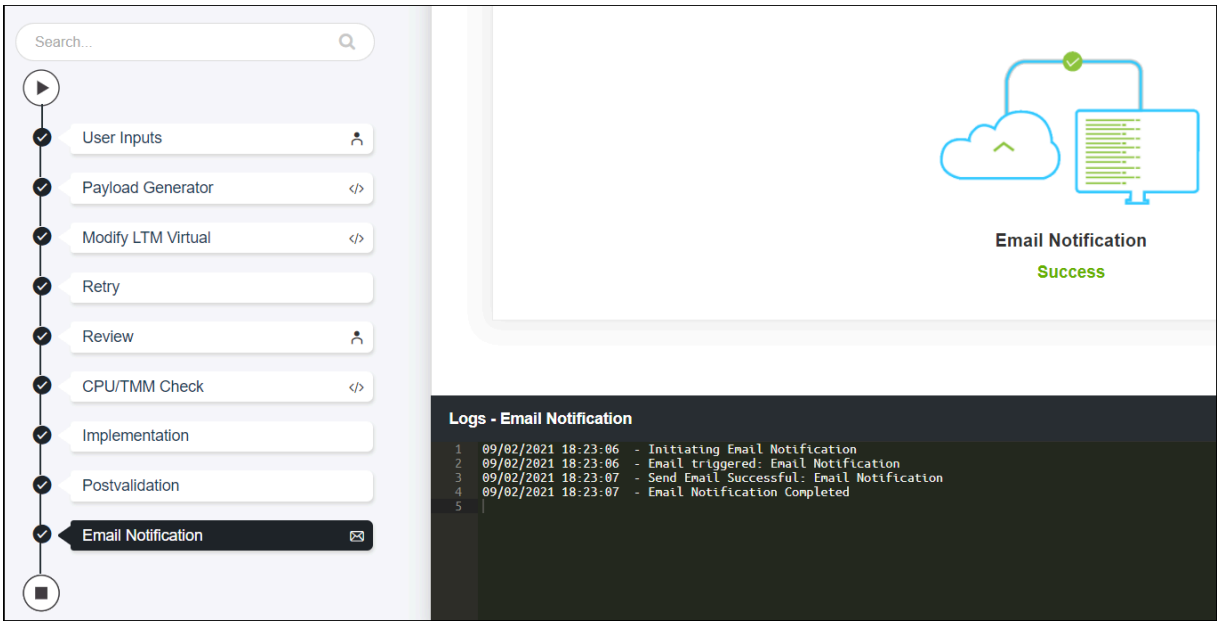

Note: The validation stages are shown in the left side of the screen. To view any validation stage, click on the respective stage.

Create F5 LTM Multiple VIP

This workflow creates VIP with Single Pool and Single Monitor on Multiple Devices and also creates Multiple VIPs on the same Device.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG-IP LTM** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Create F5 LTM Multiple VIP** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click Run.
   The **Request > Create F5 LTM Multiple VIP :: FormBuilder** page is displayed.
5. Enter/select the **Device Details**.

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Device Details Section - Field and Description Table

Field	Description
***Datacenter**	Displays the list of datacenters of the devices, which are created in the Device Inventory. Select the datacenter of a device from the drop-down option for which this request is to be created. For the devices which are created without a datacenter in the Device Inventory, select the datacenter as **None**.
***Device Name**	Displays the list of devices associated with the selected datacenter. If the datacenter is selected as **None**, the devices that are created without datacenter details are listed. Select the desired device from the drop-down option.

6. Enter/select the **Virtual Details**.

Virtual Details Section - Field and Description Table

Field	Description
***Application Name**	Enter the application name of the virtual server.
***Virtual Server Type**	The attributes of this virtual server. The default is a Standard. • **Standard** - A virtual server that directs client traffic to a load balancing pool and is the most basic type of virtual server. When you first create the virtual server, you assign an existing default pool to it. From then on, the virtual server automatically directs traffic to that default pool. • **Performance (Layer 4)** - A virtual server that shares the same IP address as a node in an associated VLAN.
***Destination Address**	Enter the destination IP address information for the virtual server.
***Service Port**	Enter a service port.

7. Enter/select the **Pool Details**.

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Pool Details Section - Field and Description Table

Field	Description
Load Balancing Method	The load balancing method is used to select a pool in this WideIP. The default is a round-robin. The methods are: • **round-robin** - the system selects the pools sequentially. • **least-connection-node** - The system passes a new connection to the node that has the least number of current connections out of all pools of which a node is a member. This method works best in environments where the servers or other equipment you are load balancing have similar capabilities. This is a dynamic load balancing method, distributing connections based on various aspects of real-time server performance analysis, such as the number of current connections per node, or the fastest node response time. • **least-connection-member** - The system passes a new connection to the node that has the least number of current connections in the pool. This method works best in environments where the servers or other equipment you are load balancing have similar capabilities. This is a dynamic load balancing method, distributing connections based on various aspects of real-time server performance analysis, such as the current number of connections per node or the fastest node response time. • **ratio-member** - The number of connections that each machine receives over time is proportionate to a ratio weight you define for each machine within the pool.
Address	Enter the IP address of the pool.
Service Port	Enter a service port.
Pool Member Status	The current state of the pool members. The statuses are: • **user-enabled** - when you select this option, the system sends traffic to this pool member regardless of the pool member's state. • **user-disabled** - when this option is selected, the pool member can handle only persistent or active connections.
Priority Group	A number representing the priority group for the pool members. To specify a priority, you must activate priority group usage when you create a new pool or when adding or removing pool members. When activated, the system load balances traffic according to the priority group number assigned to the pool member.

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Field	Description
Pool Members	Enter the IP address of the pool member. And then click the Add button. Any number of pool numbers can be added to the pool. After adding the pool, you can manage them.

8. Enter/select the **Snat Details**.

Snat Details Section - Field and Description Table

Field	Description
Snat Choice	Select the SNAT choice for any connections using this pool. The options are: • **AutoMap** -This option allows you to select a translation address from the available self-IP address. • **SNAT** - This option allows you to select a floating self IP as a translation address.

9. Enter/select the **Monitor Details**.

Monitor Details Section - Field and Description Table

Field	Description
Monitor Type	Select the health monitors that are available to add for the pool: • **HTTP** • **HTTPS** • **TCP** • **TCPHALFOPEN** • **Gatewayicmp**
Send String	The text string that the monitor sends to the target object. You must include \r\n at the end of a non-empty Send String. To retrieve a specific page from a website, specify a fully qualified path name.
Receive String	The regular expression representing the text string that the monitor looks for in the returned resource. The most common receive expressions contain a text string that is included in an HTML file on your site. The text string can be regular text, HTML tags, or image names, and the associated operation is not case-sensitive.

10. Click to add the provided VIP details for a device.
    These details are created as scenario_1. You can add VIP details for another device by repeating the above procedure.

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11. Once the VIP details are created for the desired devices, click **Submit**.
    The **Confirmation** dialog box is displayed.
12. To save this form so you can edit it later, click **Save Draft** and then click **OK**.
    The form will be saved as **Open request** under **Request** > **My Request**.

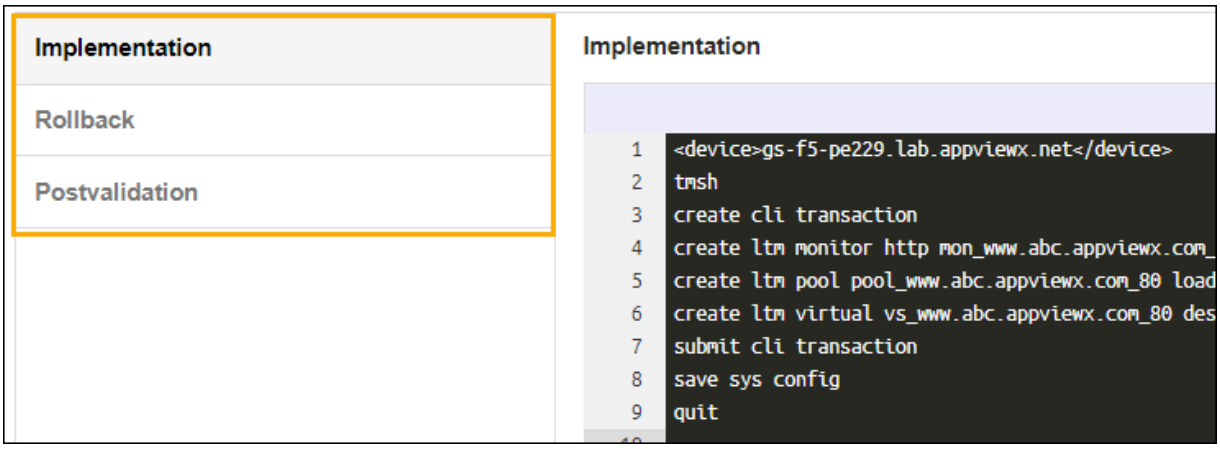
    OR

    To submit the form, click **OK**.

    The validation starts automatically and reaches the **Review** stage.

> **Note:**
> - If there is any failure at this stage, start a new request by providing the correct data.
> - Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

13. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs.



14. (Optional) If you need to change any data at this stage, right click and select the required option.

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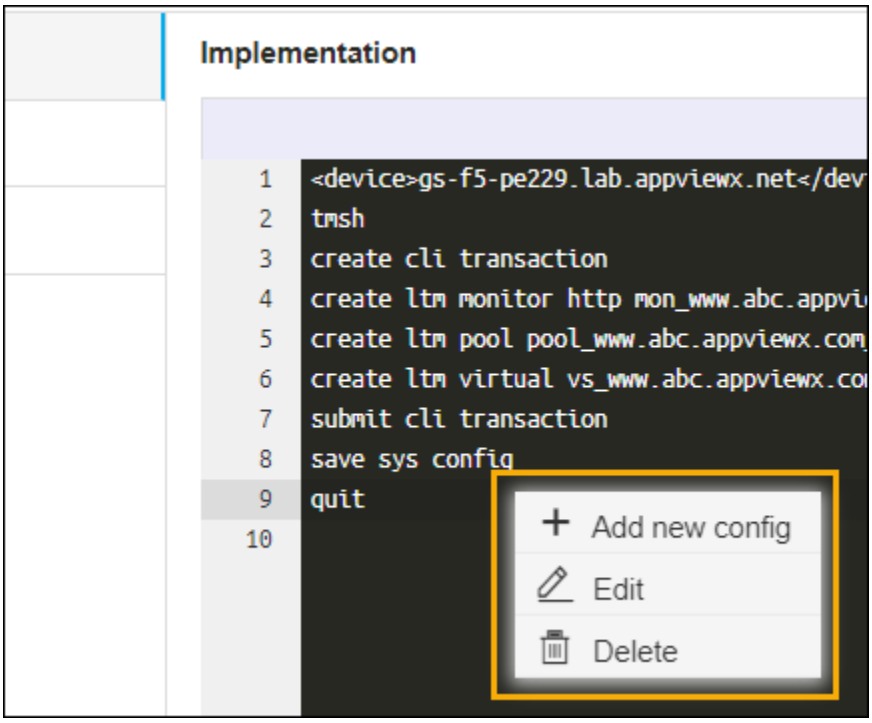


15. After the review, click **Submit**.

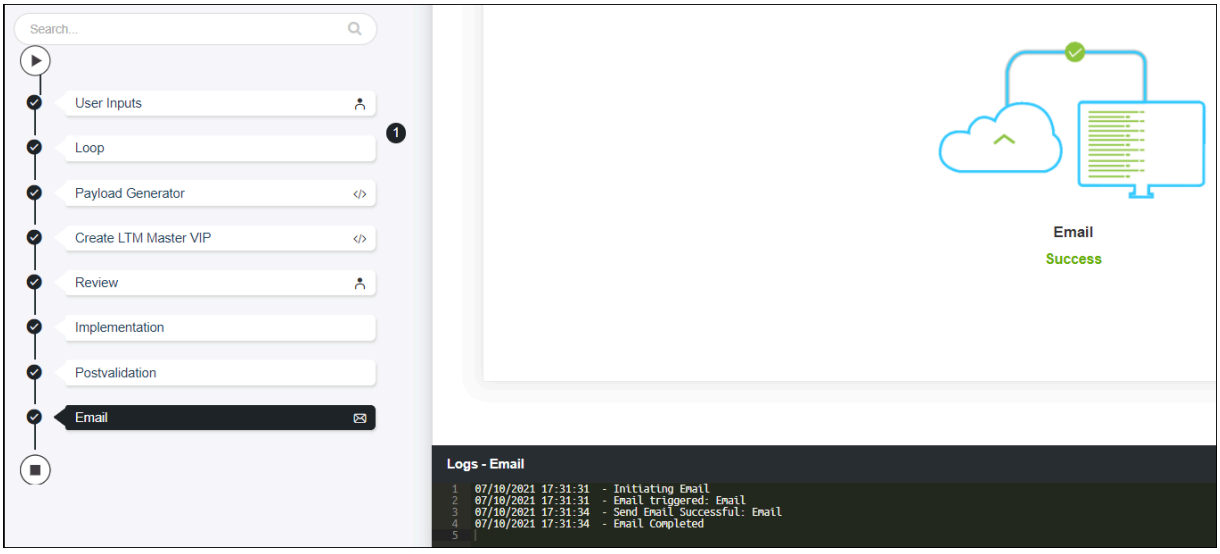
    The **Confirmation** dialog box is displayed.

> **Note:** To stop running the workflow creation, click **Cancel**.

16. Click **Ok** to continue the workflow creation.

    It takes a while to complete the request.

    The workflow is created and the email is triggered to the configured email IDs.



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Note: The stages of the request are shown in the left side of the screen. To view a particular stage of the request, click the respective stage.

Create F5 LTM Monitors - Multiple Devices

This workflow creates a Single Monitor of Type (HTTP, HTTPS, GatewayICMP) with the same configuration on multiple devices.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG-IP LTM** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Create F5 LTM Monitors - Multiple Devices** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click

.
   The **Request > Create F5 LTM Monitors - Multiple Devices :: FormBuilder** page is displayed.
5. Enter/select the **Device Details**.

Device Details Section - Field and Description Table

Field	Description
***Datacenter**	Displays the list of datacenters of the devices, which are created in the Device Inventory. Select the datacenter of a device from the drop-down option for which this request is to be created. For the devices which are created without a datacenter in the Device Inventory, select the datacenter as **None**.
***Device Name**	Displays the list of devices associated with the selected datacenter. If the datacenter is selected as **None**, the devices that are created without datacenter details are listed. Select the desired devices from the drop-down option.

6. Enter/select the **Monitor Details**.

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Monitor Details Section- Field and Description Table

Field	Description
***Monitor Type**	Select the monitor type from the drop-down option.
***Name**	Enter the name of the monitor.
Description	Enter the description for the monitor.
Interval	The frequency at which the system issues the monitor check when either the resource is down or the status of the resource is unknown. Enter the value for the interval in seconds.
Timeout	The number of seconds the target has in which to respond to the monitor request. Enter the timeout value in seconds.
Send String	The text string that the monitor sends to the target object. You must include \r\n at the end of a non-empty Send String. The default setting is GET /\r\n, which retrieves a default HTML file for a website. To retrieve a specific page from a website, specify a fully qualified path name
Receive String	The regular expression representing the text string that the monitor looks for in the returned resource. The most common receive expressions contain a text string that is included in an HTML file on your site. The text string can be regular text, HTML tags, or image names, and the associated operation is not case-sensitive.
Reverse	Instructs the system to mark the target resource down when the test is successful. This setting is useful. For example, if the content on your website's home page is dynamic and changes frequently, you may want to set up a reverse ECV service check that looks for the string errors. A match for this string meant that the webserver was down. To use this option, you must specify values for Send String and Receive String. • disabled - Specifies that the monitor does not operate in reverse mode. • enabled - Specifies that the monitor operates in reverse mode.
Receive Disable String	This setting works like a Receive String, except that the system marks the node or pool member disabled when its response matches Receive Disable String but not Receive String. To use this setting, you must specify both Receive Disable String and Receive String.
Username	Enter the user name, if the monitored target requires authentication.

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Field	Description
Password	Enter the password, if the monitored target requires authentication.
Transparent	The transparent mode of the monitor. A monitor in transparent mode directs traffic through the associated pool members or nodes (usually a router or firewall) to the aliased destination (that is, it probes the Alias Address-Alias Service Port combination specified in the monitor). If the monitor cannot successfully reach the aliased destination, the pool member or node through which the monitor traffic was sent is marked down. • **disabled** - Specifies that the monitor does not operate in transparent mode. • **enabled** - Specifies that the monitor operates in transparent mode.
Alias Address	Enter an alias IP address for the monitor to check on behalf of the pools or pool members with which the monitor is associated.
Alias Service Port	Enter an alias port or service for the monitor to check, on behalf of the pools or pool members with which the monitor is associated.

7. Click **Submit**.
   The **Confirmation** dialog box is displayed.
8. To save this form so you can edit it later, click **Save Draft** and then click **OK**.
   The form will be saved as **Open request** under **Request** > **My Request**.

   OR

   To submit the form, click **OK**.

   The validation starts automatically and reaches the **Review** stage.

   Note:
   - If there is any failure at this stage, start a new request by providing the correct data.
   - Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

9. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs.

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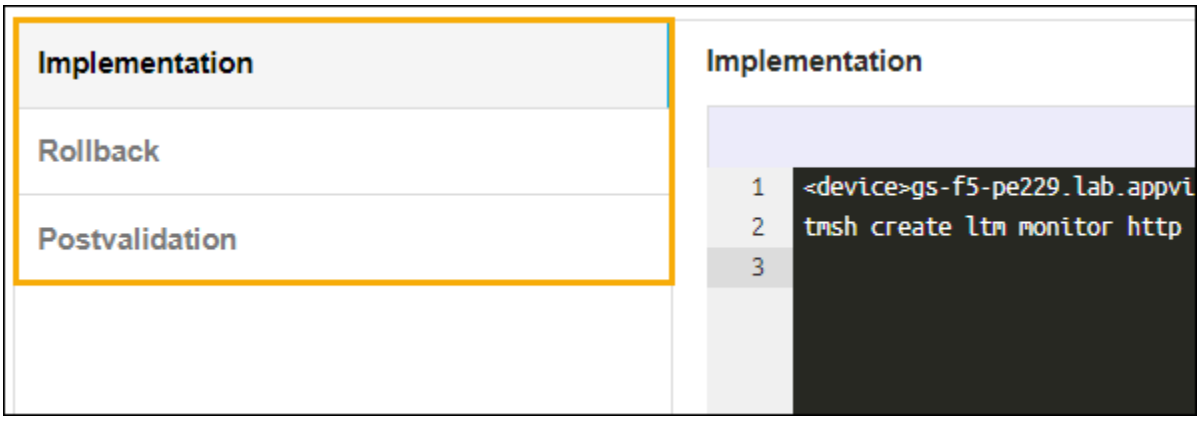
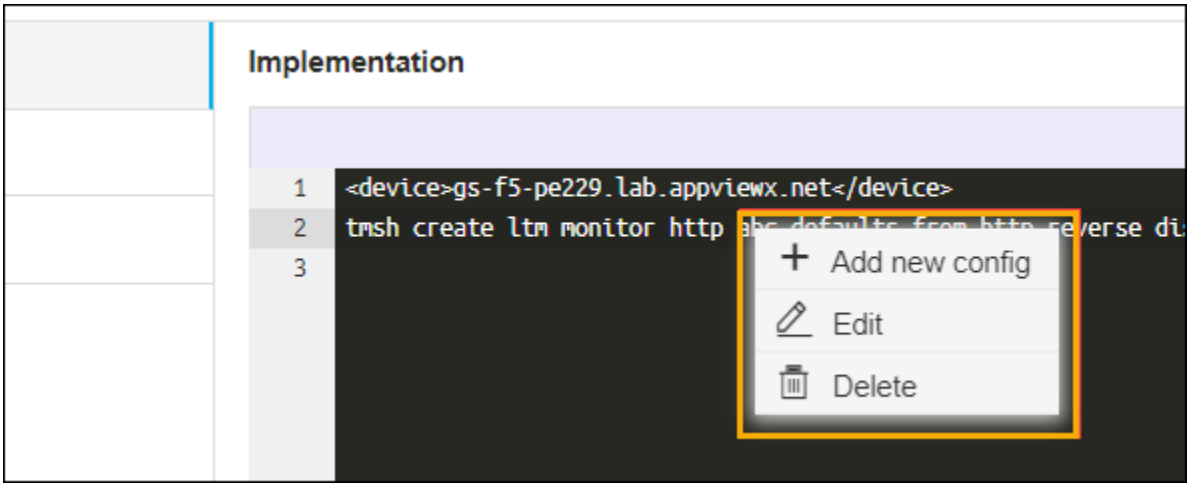


10. (Optional) If you need to change any data at this stage, right click and select the required option.



11. After the review, click **Submit**.

    The **Confirmation** dialog box is displayed.

> **Note:** Click **Cancel** to stop running the workflow creation.

12. Click **Ok** to continue the workflow creation.

    It takes a while to complete the request.

    The workflow is created and the email is triggered to the configured email IDs.

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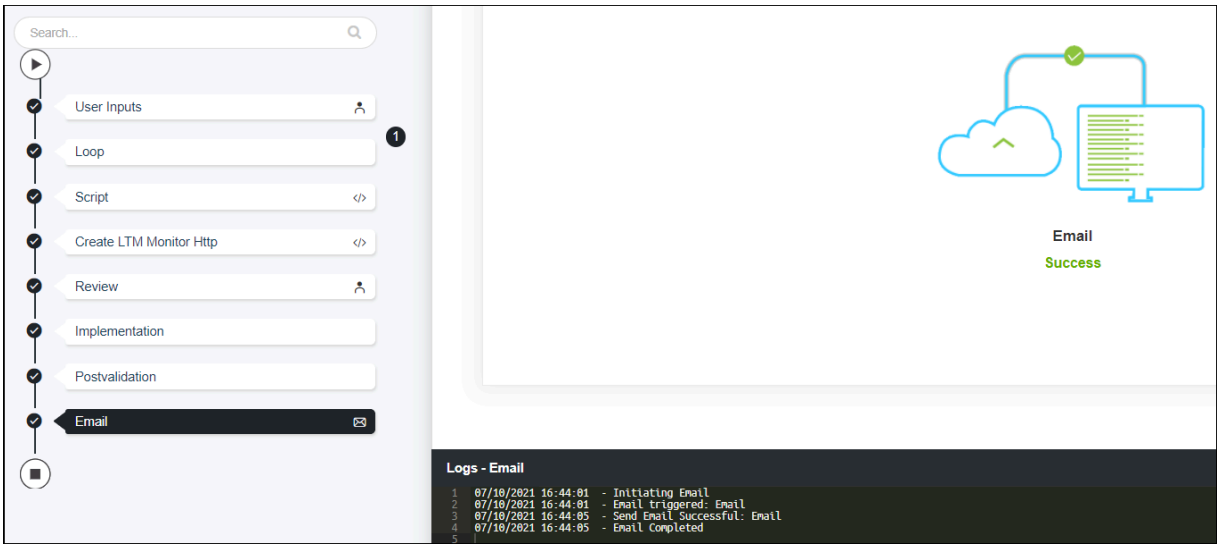

Note: The stages of the request are shown in the left side of the screen. To view a particular stage of the request, click the respective stage.

Create F5 LTM Monitors

This workflow creates a Single Monitor of Type (HTTP, HTTPS, GatewayICMP) with all parameters on F5 device.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG-IP LTM** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Create F5 LTM Monitors** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click Run.
   The **Request > Create F5 LTM Monitors :: FormBuilder** page is displayed.
5. Enter/select the **Device Details**.

Device Details Section - Field and Description Table

Field	Description
***Datacenter**	Displays the list of datacenters of the devices, which are created in the Device Inventory. Select the datacenter of a device from the drop-down option for which this

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Field	Description
	request is to be created. For the devices which are created without a datacenter in the Device Inventory, select the datacenter as **None**.
***Device Name**	Displays the list of devices associated with the selected datacenter. If the datacenter is selected as **None**, the devices that are created without datacenter details are listed. Select the desired device from the drop-down option.

6. Enter/select the **Monitor Details**.

Monitor Details Section - Field and Description Table

Field	Description
***Monitor Type**	Select the monitor type from the drop-down option.
***Name**	Enter the name of the monitor.
Description	Enter the description for the monitor.
Interval	The frequency at which the system issues the monitor check when either the resource is down or the status of the resource is unknown. Enter the value for the interval in seconds.
Timeout	The number of seconds the target has in which to respond to the monitor request. Enter the timeout value in seconds.
Send String	The text string that the monitor sends to the target object. You must include \r\n at the end of a non-empty Send String. The default setting is GET /\r\n, which retrieves a default HTML file for a website. To retrieve a specific page from a website, specify a fully qualified path name
Receive String	The regular expression representing the text string that the monitor looks for in the returned resource. The most common receive expressions contain a text string that is included in an HTML file on your site. The text string can be regular text, HTML tags, or image names, and the associated operation is not case-sensitive.
Reverse	Instructs the system to mark the target resource down when the test is successful. This setting is useful. for example, if the content on your website home page is dynamic and changes frequently, you may want to set up a reverse ECV service check that looks for the string errors. A match for this string meant that the webserver was down. To use this option, you must specify values for Send String and Receive String.

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Field	Description
	• disabled - Specifies that the monitor does not operate in reverse mode. • enabled - Specifies that the monitor operates in reverse mode.
Receive Disable String	This setting works like a Receive String, except that the system marks the node or pool member disabled when its response matches Receive Disable String but not Receive String. To use this setting, you must specify both Receive Disable String and Receive String.
Username	Enter the user name, if the monitored target requires authentication.
Password	Enter the password, if the monitored target requires authentication.
Transparent	The transparent mode of the monitor. A monitor in transparent mode directs traffic through the associated pool members or nodes (usually a router or firewall) to the aliased destination (that is, it probes the Alias Address-Alias Service Port combination specified in the monitor). If the monitor cannot successfully reach the aliased destination, the pool member or node through which the monitor traffic was sent is marked down. • **disabled** - Specifies that the monitor does not operate in transparent mode. • **enabled** - Specifies that the monitor operates in transparent mode.
Alias Address	Enter an alias IP address for the monitor to check, on behalf of the pools or pool members with which the monitor is associated.
Alias Service Port	Enter an alias port or service for the monitor to check, on behalf of the pools or pool members with which the monitor is associated.

7. Click **Submit**.
   The **Confirmation** dialog box is displayed.
8. To save this form so you can edit it later, click **Save Draft** and then click **OK**.
   The form will be saved as **Open request** under **Request** > **My Request**.

   OR

   To submit the form, click **OK**.

   The validation starts automatically and reaches the **Review** stage.

Note:

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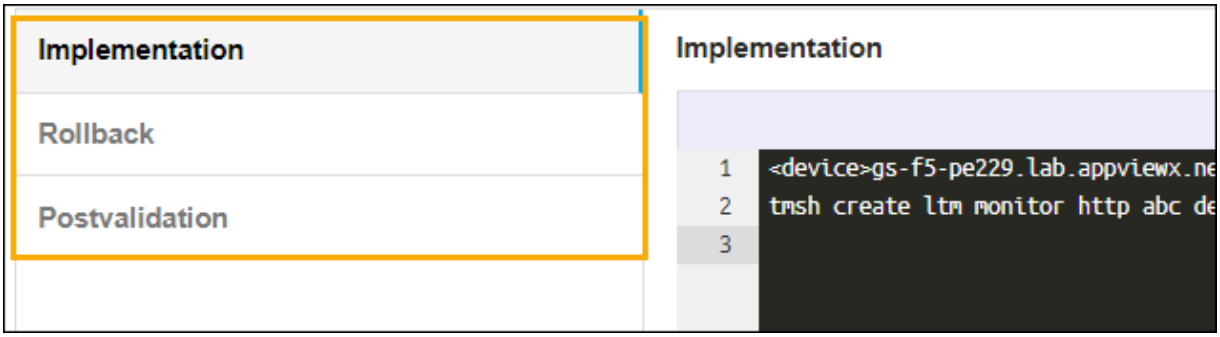
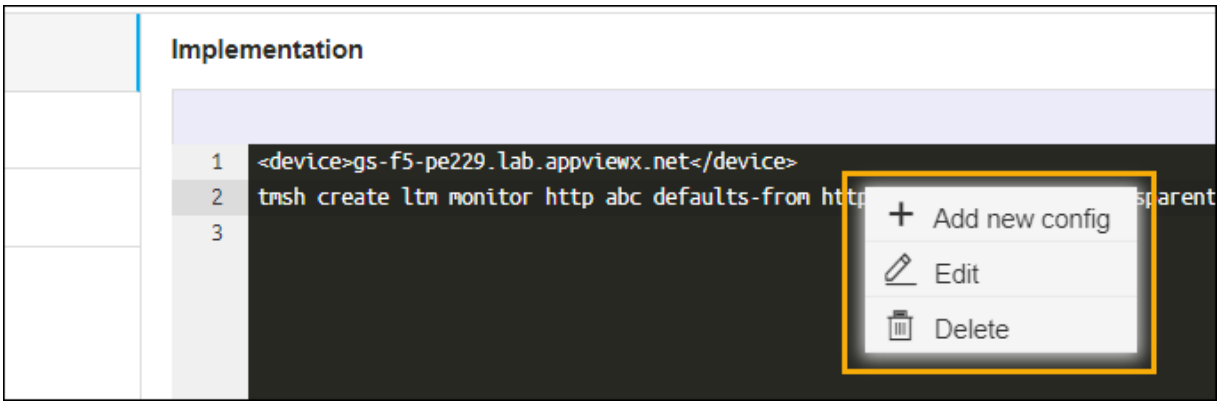
- If there is any failure at this stage, start a new request by providing the correct data.
- Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

9. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs.



10. (Optional) If you need to change any data at this stage, right click and select the required option.



11. After the review, click **Submit**.

    The **Confirmation** dialog box is displayed.

> **Note:** To stop running the workflow creation, click **Cancel**.

12. Click **Ok** to continue the workflow creation.

    It takes a while to complete the request.

    The workflow is created and the email is triggered to the configured email IDs.

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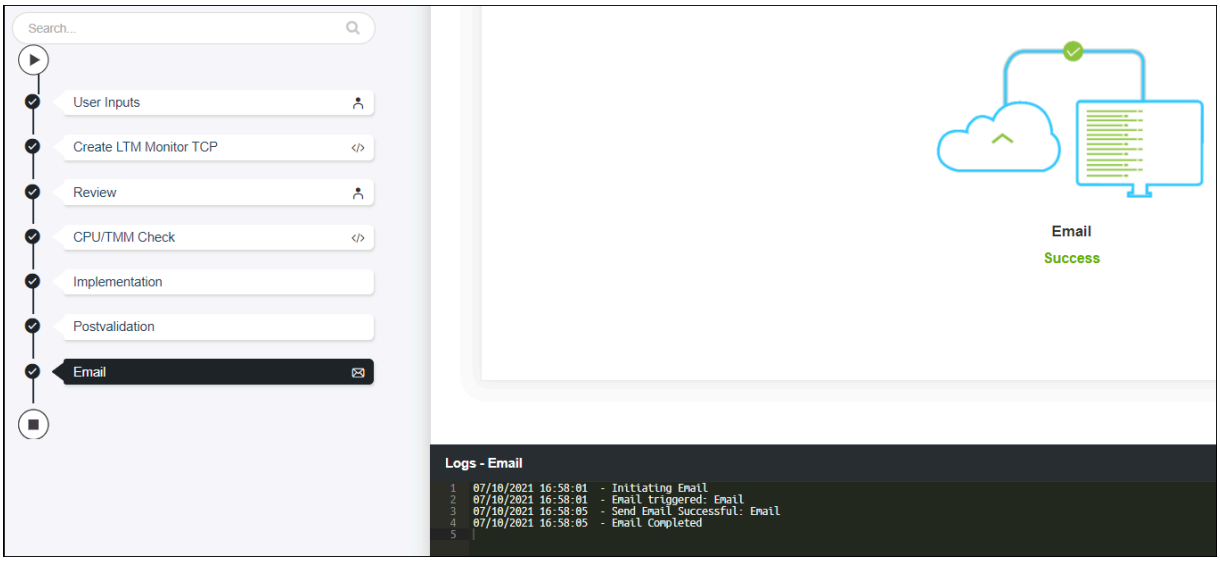

Note: The stages of the request are shown in the left side of the screen. To view a particular stage of the request, click the respective stage.

F5 BIG-IP GTM

- Create F5 GTM WideIP
- Create F5 GTM WideIP with Multiple Pools
- Create F5 GTM WideIP with Topology
- Create F5 GTM WideIP with Service Now
- Modify F5 GTM WideIP
- Delete F5 GTM WideIP

Create F5 GTM WideIP

This workflow creates a GTM WideIP with a single pool for a device.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG-IP LTM** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Create F5 GTM WideIP** workflow.

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The **Run** and **Schedule** buttons are displayed.

4. Click Run.

   The **Request > Create F5 GTM WideIP :: FormBuilder** page is displayed.

5. Enter/select the **Device Details**.

Device Details Section - Field and Description Table

Field	Description
***Datacenter**	Displays the list of datacenters of the devices, which are created in the Device Inventory. Select the datacenter of a device from the drop-down option for which this request is to be created. For the devices which are created without a datacenter in the Device Inventory, select the datacenter as **None**.
***Device Name**	Displays the list of devices associated with the selected datacenter. If the datacenter is selected as **None**, the devices that are created without datacenter details are listed. Select the desired device from the drop-down option.
***Partition**	Partition in which objects will be created. If you want to create a new partition, then click **Create New Partition** from the dropdown list and then provide a partition name.

6. Enter/select the **DNS Details**.

DNS Details Section - Field and Description Table

Field	Description
***Do you want to integrate with DNS**	By default, the **No** option is selected. If you want to integrate with DNS for CNAME record creation, select **Yes**. When you select **Yes**, the following fields are displayed: Select the **Vendor** from the drop-down list. The default vendors are: **Infoblox** and **bluecat**.

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Field	Description
	When you select DNS vendor as **Infoblox**, you need to provide the following details: • Select the **Device Name** from the drop-down list. • Enter the **App Name** for the WideIP name in the format www.<name>.com. When you select DNS vendor as **bluecat**, you need to provide the following details: • Select the **Device Name** from the drop-down list. • Select the **Configuration** from the drop-down list. • Select the **View** for the selected configuration. The options are displayed based on the selected configuration. • Enter the **App Name** for the WideIP name in the format of www.<name>.com.

7. Enter/select the **General Properties**.

General Properties Section - Field and Description Table

Field	Description
***Wide IP Name**	Enter the WideIP Name in the FQDN format. For example, <yyy>.www.<name>.com.
***Type**	Select the pool/WideIP type. The types are: • **A** - the pool/Wide IP responds to A queries. The A pool/Wide IP is a mapping of an FQDN to a set of IPv4 virtual servers that host the domain's content, such as a Web site or an e-commerce site. You can also specify pool members' virtual server and ratio settings.

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Field	Description
	• **CNAME** - the pool/Wide IP responds to CNAME queries. A CNAME pool/Wide IP is a mapping of an FQDN to its canonical name. This is the configuration of a static name or a Wide IP name. Static names support older configurations. Wide IP names allow service checking, enhanced load balancing, and CNAME chasing in the reply. You can also specify pool members' ratio.
Description	Enter the descriptive text to identify the WideIP.
State	It allows the system to use this wide IP and its resources for load balancing. The options are: • **enabled** (default) • **disabled**
***Do you want to add Alias ?**	Add Alias for the WideIP name. The options are: • **No** (default) • **Yes** – When you select **Yes**, the following fields are displayed to add alias details: Enter the alias name for WideIP in the Alias field. You can add any number of aliases for WideIP. After entering the alias in the Alias field, click to add an alias. The added aliases are displayed under the Alias List. You can manage the added alias(es) to the list.

8. Enter/select the **Pool** details.

Note: The pool will be created with the name **pool_<wideip_name>**.

Pool Section - Field and Description Table

Field	Description
***Load Balancing Method**	The load balancing method is used to select a pool in this WideIP. The methods are: • **round-robin** - the system selects the pools sequentially. • **global-availability** -. the system selects a pool by following the order of the Pool List. The system repeatedly selects the first pool in the list for as long as its status is available. If the pool becomes unavailable for any reason, the system then repeatedly selects the next pool in the list, and so on. • **ratio** - the system selects a pool based on the ratio that you assign to the pool.

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Field	Description
***Persistence**	By default, this option is disabled. When, a local DNS makes repetitive requests on behalf of a client, the system reconnects the client to the same resource as previous requests.
Preferred	Select the preferred load balancing method. The system tries this method first. **Note:** When you choose the **fallback-ip** option, the Fallback IP field will be displayed and you need to input the Fallback IP.
Alternate	Select the alternate load balancing method. The system tries this method if the Preferred method is unsuccessful in picking the WideIP. **Note:** When you choose the **fallback-ip** option, the Fallback IP field will be displayed and you need to input the Fallback IP.
Fallback	Select the alternate load balancing method. The system tries this method if the Preferred and Alternate methods are unsuccessful in picking the WideIP.
Fallback IP	When the **fallback-ip** option is selected as Preferred or Alternate load balancing method, this field will be displayed to add the Fallback IP. The **Fallback IP** is not applicable for the pool type **CNAME**.
Health Monitor	The health monitors that the system uses to determine whether it can use this pool for load balancing. To get the fields to be monitored, click the **Retrieve** button, and then select the

9. Enter/select the **Pool Member Details**.

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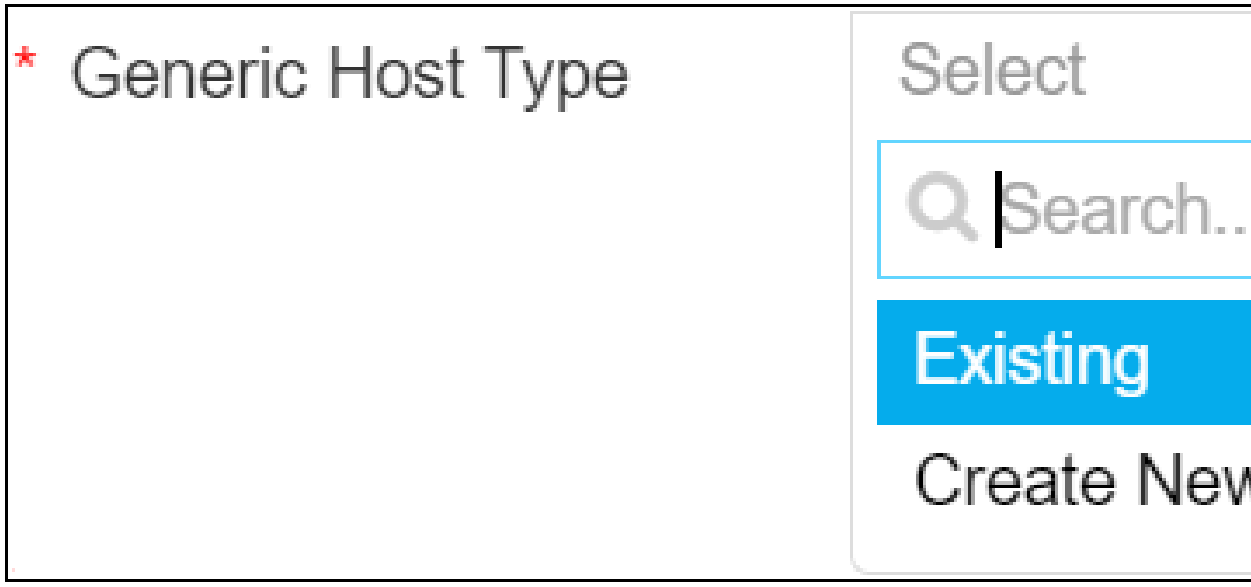
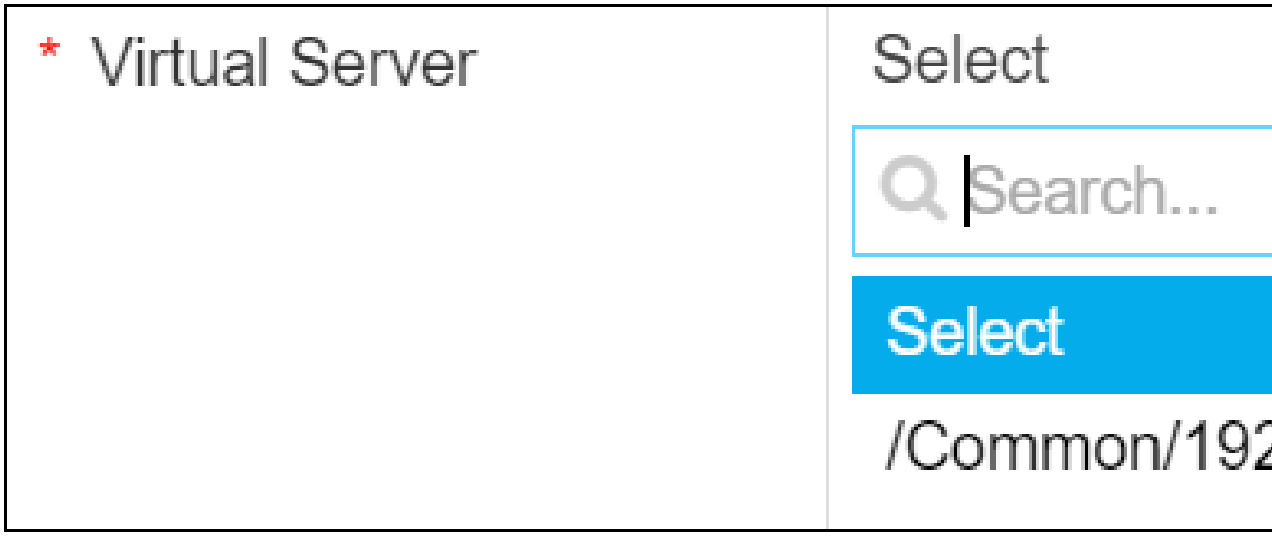
Pool Member Details Section - Field and Description Table

Field	
***Pool Member Type**	Select the pool member types. The pool member types are: • **Generic Host** – When you select this pool member type, you get the option to select the Generic Host Ty  • **Big IP System** – When you select this pool member type, you get the option to select the configured virtu  **Note:** It takes a while to load the servers.

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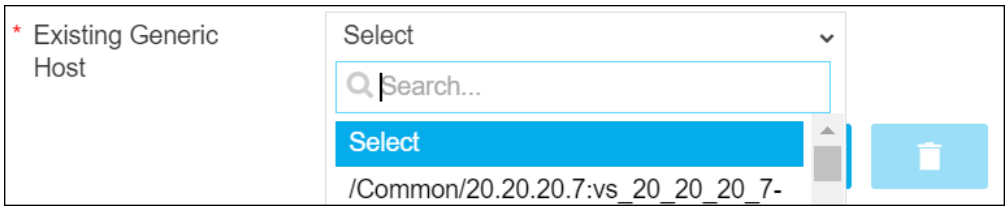
Field	
***Generic Host Type**	When the pool member type is selected as Generic Host, you need to select the type of generic host. The g • **Existing** – This option allows to select the existing host. When you select this option, the existing generic  • **Create New** – This option allows you to create a generic host. When you select this, the following fields ar • ***Data Center** – select the datacenter of the pool member. • ***Pool Member IP** – enter the IP of the pool. • ***Port** – enter the port of the pool member.
***Virtual Server**	When the pool member type is selected as Big IP System. Select a virtual server from the dropdown list.
***Pool Member List**	Enter the pool member details, and then click the Add button. The pool member details are added to t **Note:** For Pool with type CNAME, pool members can be either existing wide IP or a static wide IP.

10. Click **Submit**.

    The **Confirmation** dialog box is displayed.

11. To save this form so you can edit it later, click **Save Draft** and then click **OK**.

    The form will be saved as **Open request** under **Request** > **My Request**.

    OR

    To submit the form, click **OK**.

    The validation starts automatically and reaches the **Review** stage.

    Note:
    - If there is any failure at this stage, start a new request by providing the correct data.
    - Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

12. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs.

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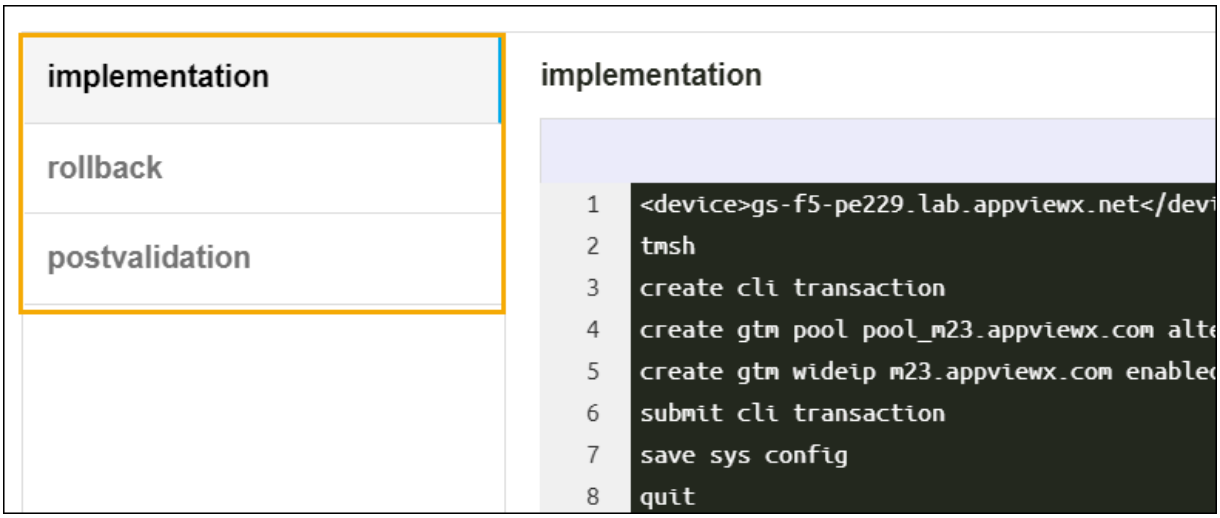
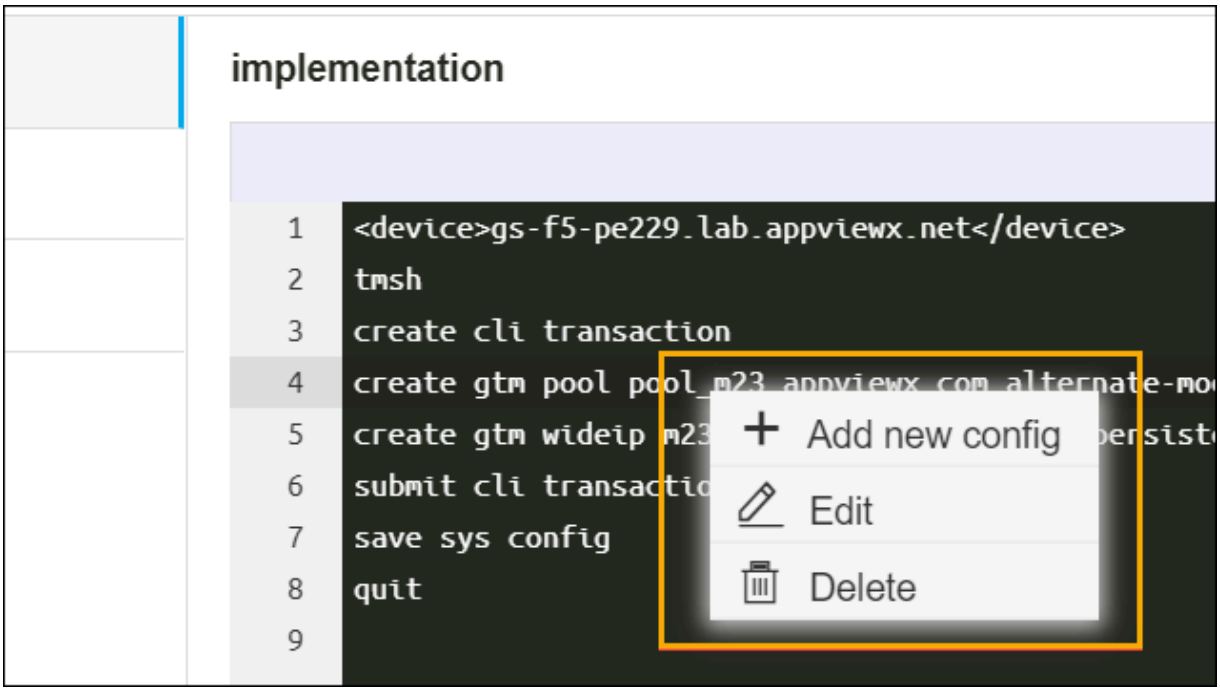


13. (Optional) If you need to change any data at this stage, right click and select the required option.



14. After the review, click **Submit**.

    The **Confirmation** dialog box is displayed.

> **Note:** To stop running the workflow creation, click **Cancel**.

15. Click **Ok** to continue the workflow creation.

    It takes a while to complete the request.

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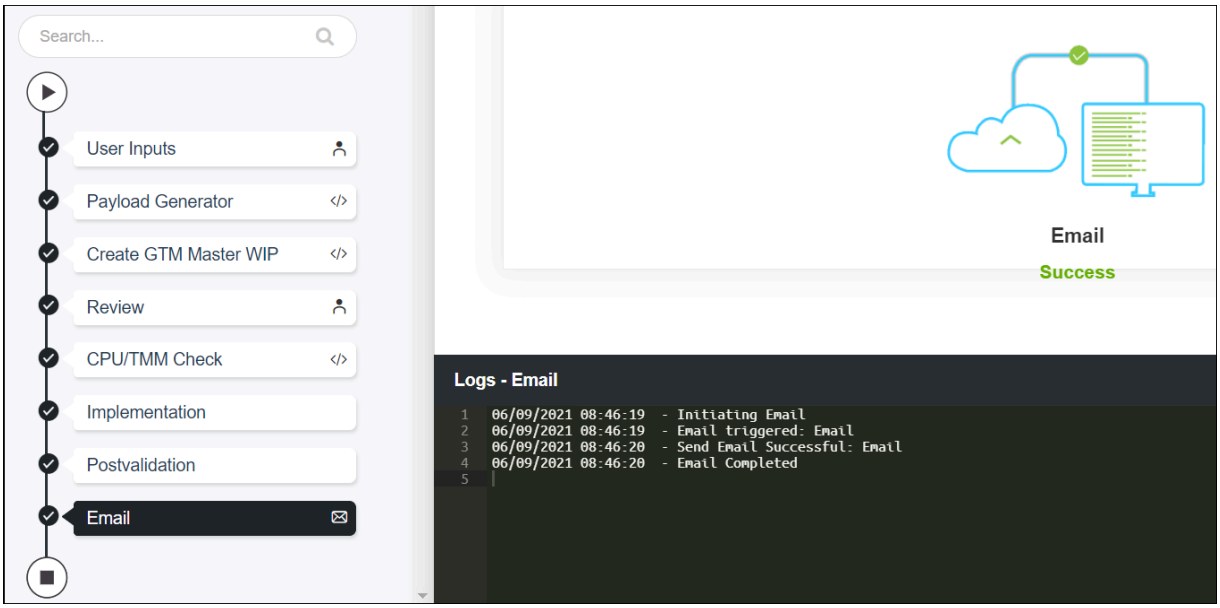
The workflow is created and the email is triggered to the configured email IDs.



Note: The stages of the request are shown in the left side of the screen. To view a particular stage of the request, click the respective stage.

Create F5 GTM WideIP with Multiple Pools

This workflow creates a GTM WideIP with multiple pools.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG-IP LTM** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Create F5 GTM WideIP with Multiple Pools** workflow.

   The **Run** and **Schedule** buttons are displayed.
4. Click Run.

   The **Request > Create F5 GTM WideIP with Multiple Pools :: FormBuilder** page is displayed.
5. Enter/select the **Device Details**.

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Device Details Section - Field and Description Table

Field	Description
***Datacenter**	Displays the list of datacenters of the devices, which are created in the Device Inventory. Select the datacenter of a device from the drop-down option for which this request is to be created. For the devices which are created without datacenter in the Device Inventory, select the datacenter as **None**.
***Device Name**	Displays the list of devices associated with the selected datacenter. If the datacenter is selected as **None**, the devices that are created without datacenter details are listed. Select the desired device from the drop-down option.

6. Enter/select the **DNS Details**.

DNS Details Section - Field and Description Table

Field	Description
***Do you want to integrate with DNS**	By default, the **No** option is selected. If you want to integrate with DNS for CNAME record creation, select **Y** When you select **Yes**, the following fields are displayed: Select the **Vendor** from the drop-down list. The default vendors are: **Infoblox** and **bluecat**. When you select DNS vendor as **Infoblox**, you need to provide the following details: • Select the **Device Name** from the drop-down list. • Enter the **App Name** for the WideIP name in the format www.<name>.com. When you select DNS vendor as **bluecat**, you need to provide the following details:

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Field	Description
	 • Select the **Device Name** from the drop-down list. • Select the **Configuration** from the drop-down list. • Select the **View** for the selected configuration. The options are displayed based on the selected configura • Enter the **App Name** for the WideIP name in the format of www.<name>.com.

7. Enter/select the **General Properties**.

General Properties Section - Field and Description Table

Field	Description
***Wide IP Name**	Enter the WideIP Name in the FQDN format.
***Type**	Select the pool/WideIP type. The types are: • **A** - the pool/Wide IP responds to A queries. The A pool/Wide IP is a mapping of a FQDN to a set of IPv4 virtual servers that host the domain's content, such as a Web site or an e-commerce site. You can also specify pool members' virtual server and ratio settings • **CNAME** - the pool/Wide IP responds to CNAME queries. A CNAME pool/Wide IP is a mapping of a FQDN to its canonical name. This is the configuration of a static name or a Wide IP name. Static names support older configurations. Wide IP names allow service checking, enhanced load balancing, and CNAME chasing in the reply. You can also specify the pool members' ratio.

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Field	Description
Description	Enter the descriptive text to identify the WideIP.
State	Allows the system to use this wide IP and its resources for load balancing. The options are: • **enabled** (default) • **disabled**
***Do you want to add Alias ?**	Add Alias to the WideIP name. The options are: • **No** (default) • **Yes** – When you select **Yes** the following fields are displayed to add alias details: Enter the alias name for WideIP in the Alias field. You can add any number of aliases for WideIP. After entering the alias in the Alias field, click to add an alias. The added aliases are displayed under the Alias List. You can manage the added alias(es) to the list.

8. Enter/select the **Pool** details.

Pool Section - Field and Description Table

Field	Description
Info	Information that are to be noted while entering the details in this section.
***Load Balancing Method**	The load balancing method used to select a pool in this WideIP. The methods are: • **round-robin** - the system selects the pools sequentially. • **global-availability** -. the system selects a pool by following the order of the Pool List. The system repeatedly selects the first pool in the list for as long as its status is available. If the pool becomes unavailable for any reason, the system then repeatedly selects the next pool in the list, and so on. • **ratio** - the system selects a pool based on the ratio that you assign to the pool.
***Persistence**	By default, this option is disabled. When enabled, a local DNS makes repetitive requests on behalf of a client, the system reconnects the client to the same resource as previous requests.
***Pool Name**	Enter the pool name.
Preferred	Select the preferred load balancing method. The system tries this method first.

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Field	Description
	Note: When you choose the **fallback-ip** option, the Fallback IP field will be displayed and you need to input the Fallback IP.
Alternate	Select the alternate load balancing method. The system tries this method if the Preferred method is unsuccessful in picking the WideIP. **Note:** When you choose the **fallback-ip** option, the Fallback IP field will be displayed and you need to input the Fallback IP.
Fallback	Select the alternate load balancing method. The system tries this method if the Preferred and Alternate methods are unsuccessful in picking the WideIP.
Fallback IP	When the **fallback-ip** option is selected as Preferred or Alternate load balancing method, this field will be displayed to add the Fallback IP. The **Fallback IP** is not applicable for the pool type **CNAME**.
Health Monitor	The health monitors that the system uses to determine whether it can use this pool for load balancing. To get the fields to be monitored, click , and then select the
Pools	Click to add the pool details to the list. You can add multiple to pool to the list. After adding pool(s) to the list, you can manage them.

9. Enter/select the **Pool Member Details**.

Pool Member Details Section - Field and Description Table

Field	Description
Info	Information that is to be noted while entering the details in this section.
Pool	Click to get the pool name.
Pool Member Type	Select the pool member types. The pool member types are: • **Generic Host** – When you select this pool member type, you get the option to select the Generic Host Ty

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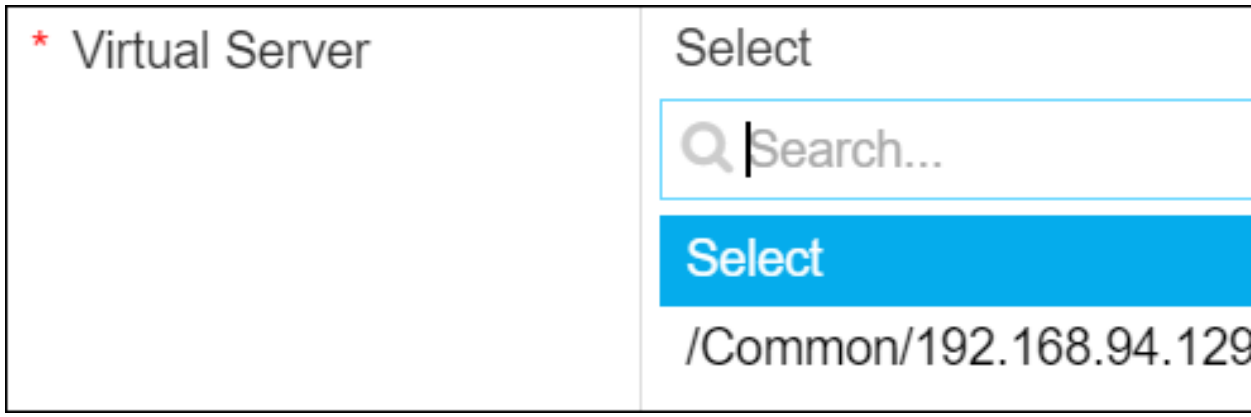
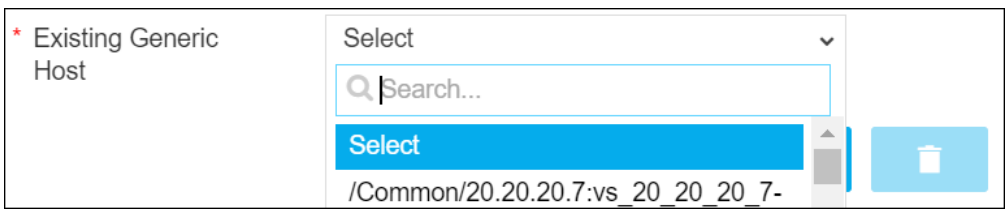
Field	Description
	 • **Big IP System** – When you select this pool member type, you get the option to select the configured virtua  **Note:** It takes a while to load the servers.
***Generic Host Type**	When the pool member type is selected as Generic Host, you need to select the type of generic host. The g • **Existing** – This option allows to select the existing host. When you select this option, the existing generic 

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Field	Description
	• **Create New** – This option allows you to create a generic host. When you select this, the following fields ar • ***Data Center** – select the datacenter of the pool member. • ***Pool Member IP** – enter the IP of the pool. • ***Port** – enter the port of the pool member.
***Virtual Server**	When the pool member type is selected as Big IP System. Select a virtual server from the dropdown list.
***Pool Member List**	Enter the IP address of the pool member. And then click . Any number of pool numbers can be added

10. Click **Submit**.

    The **Confirmation** dialog box is displayed.

11. To save this form so you can edit it later, click **Save Draft** and then click **OK**.

    The form will be saved as **Open request** under **Request** > **My Request**.

    OR

    To submit the form, click **OK**.

    The validation starts automatically and reaches the **Review** stage.

    Note:
    - If there is any failure at this stage, start a new request by providing the correct data.
    - Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

12. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs.

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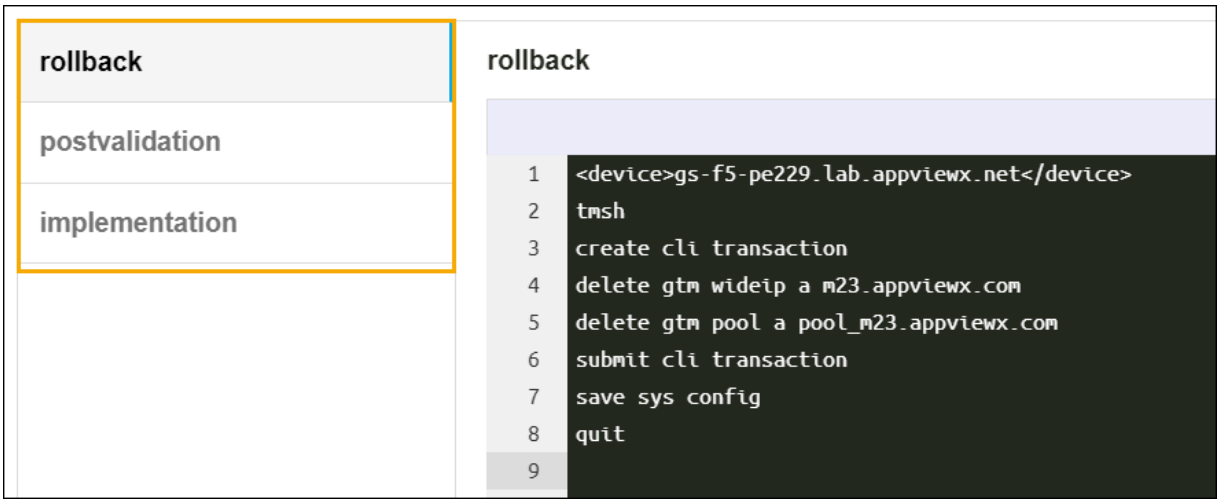
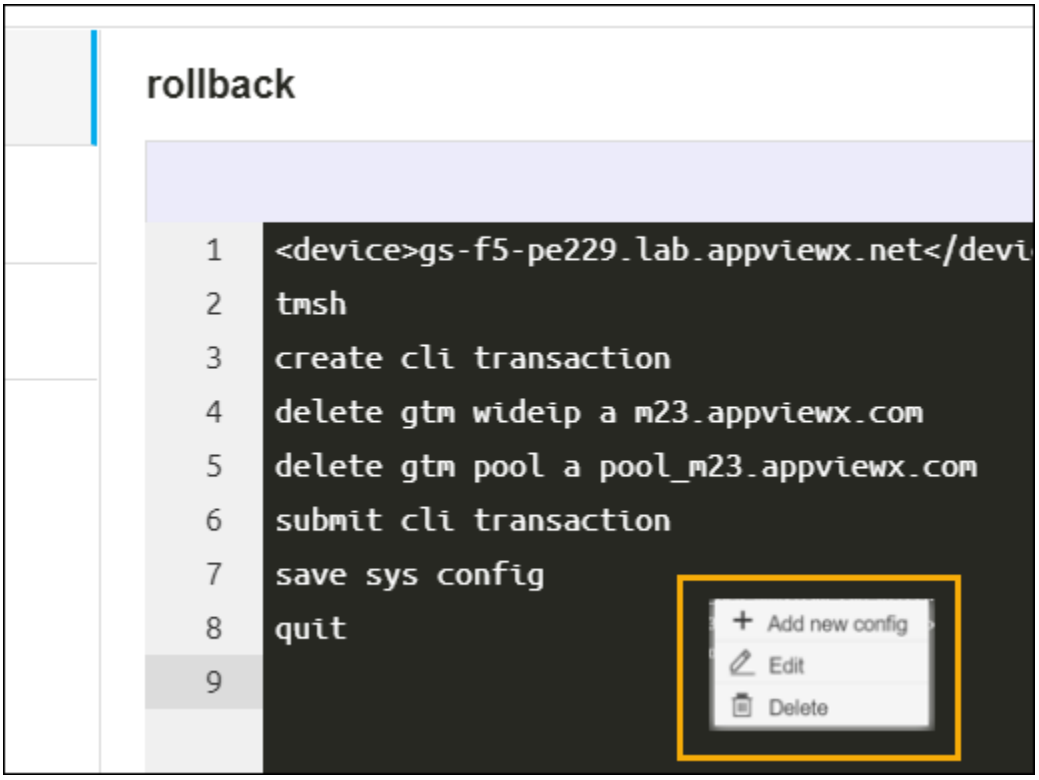


13. (Optional) If you need to change any data at this stage, right click and select the required option.



14. After the review, click **Submit**.

    The **Confirmation** dialog box is displayed.

> **Note:** To stop running the workflow creation, click **Cancel**.

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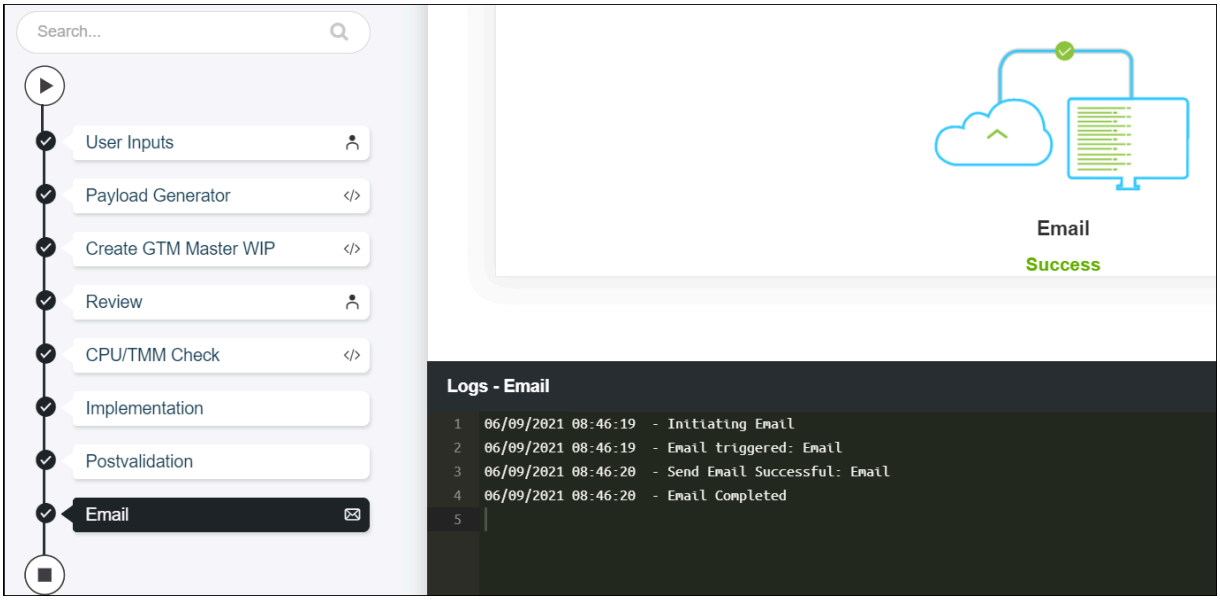
15. Click **Ok** to continue the workflow creation.
    It takes a while to complete the request.

    The workflow is created and the email is triggered to the configured email IDs.



> **Note:** The stages of the request are shown in the left side of the screen. To view a particular stage of the request, click the respective stage.

Create F5 GTM WideIP with Topology

This workflow creates a WideIP with multiple Pools and chooses a topology record for the pools that are created.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG-IP LTM** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Create F5 GTM WideIP with Topology** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click Run.
   The **Request > Create F5 GTM WideIP with Topology :: FormBuilder** page is displayed.
5. Enter/select the **Device Details**.

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Device Details Section - Field and Description Table

Field	Description
Datacenter	Displays the list of datacenters of the devices, which are created in the Device Inventory. Select the datacenter of a device from the drop-down option for which this request is to be created. For the devices which are created without a datacenter in the Device Inventory, select the datacenter as **None**.
***Device Name**	Displays the list of devices associated with the selected datacenter. If the datacenter is selected as **None**, the devices that are created without datacenter details are listed. Select the desired device from the drop-down option.

6. Enter/select the **DNS Details**.

DNS Details Section - Field and Description Table

Field	Description
***Do you want to integrate with DNS**	By default, the No option is selected. If you want to integrate with DNS for CNAME record creation, select Y When you select Yes, the following fields are displayed: Select the Vendor from the drop-down list. The default vendors are **Infoblox** and **bluecat**. When you select DNS vendor as **Infoblox**, you need to provide the following details: • Select the **Device Name** from the drop-down list. • Enter the **App Name** for the WideIP name in the format www.<name>.com. When you select DNS vendor as **bluecat**, you need to provide the following details:

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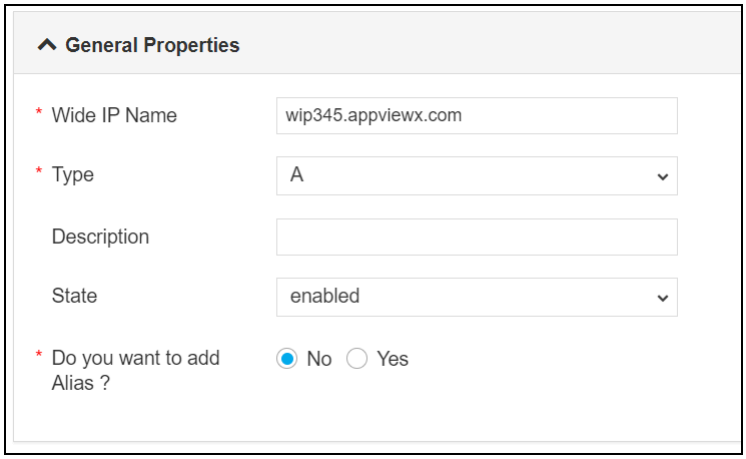
Field	Description
	 • Select the **Device Name** from the drop-down list. • Select the **Configuration** from the drop-down list. • Select the **View** for the selected configuration. The options are displayed based on the selected configura • Enter the **App Name** for the WideIP name in the format of www.<name>.com.

7. Enter/select the **General Properties**.

General Properties Section - Field and Description Table

Field	Description
***Wide IP Name**	Enter the WideIP Name in the FQDN format.
***Type**	Select the pool/WideIP type. The types are: • A - the pool/Wide IP responds to A queries. The A pool/Wide IP is a mapping of an FQDN to a set of IPv4 virtual servers that host the domain's content, such as a Web site or an e-commerce site. You can also specify pool members' virtual server and ratio settings. • CNAME - the pool/Wide IP responds to CNAME queries. A CNAME pool/Wide IP is a mapping of an FQDN to its canonical name. This is the configuration of a static name or a Wide IP name. Static names support older configurations. Wide IP names allow service checking, enhanced load balancing, and CNAME chasing in the reply. You can also specify pool members' ratio.
Description	Enter the descriptive text to identify the WideIP.
State	It allows the system to use this wide IP and its resources for load balancing. The options are:

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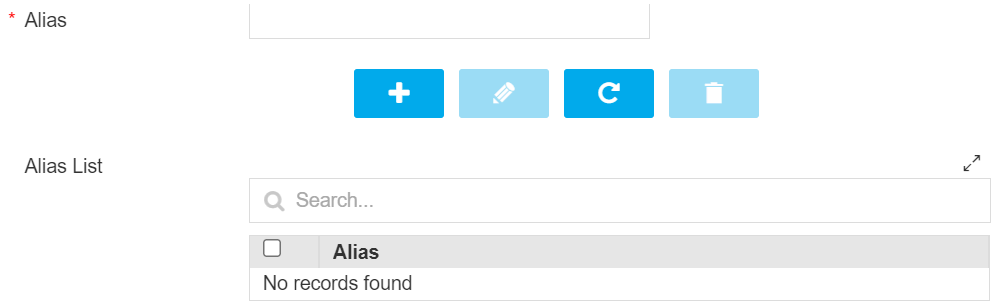
Field	Description
	• enabled (default) • disabled
***Do you want to add Alias ?**	Add Alias for the WideIP name. The options are: • **No** (default) • **Yes** – When you select Yes the following fields are displayed to add alias details:  Enter the alias name for WideIP in the Alias field. You can add any number of aliases for WideIP. After entering the alias in the Alias field, click to add an alias. The added aliases are displayed under the Alias List. You can manage the added alias(es) to the list.

8. Enter/select the **Pool** details.

Pool Section - Field and Description Table

Field	Description
Info	Information that is to be noted while entering the details in this section.
***Load Balancing Method**	The load balancing method is used to select a pool in this WideIP. The methods are: • round-robin - the system selects the pools sequentially. • global-availability -. the system selects a pool by following the order of the Pool List. The system repeatedly selects the first pool in the list for as long as its status is available. If the pool becomes unavailable for any reason, the system then repeatedly selects the next pool in the list, and so on. • ratio - the system selects a pool based on the ratio that you assign to the pool.

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Field	Description
***Persistence**	By default, this option is disabled. When a local DNS makes repetitive requests on behalf of a client, the system reconnects the client to the same resource as previous requests.
***Pool Name**	Enter the pool name.
Preferred	Select the preferred load balancing method. The system tries this method first. **Note:** When you choose the fallback-ip option, the Fallback IP field will be displayed and you need to input the Fallback IP.
Alternate	Select the alternate load balancing method. The system tries this method if the Preferred method is unsuccessful in picking the WideIP. **Note:** When you choose the fallback-ip option, the Fallback IP field will be displayed and you need to input the Fallback IP.
Fallback	Select the alternate load balancing method. The system tries this method if the Preferred and Alternate methods are unsuccessful in picking the WideIP.
Fallback IP	When the fallback-ip option is selected as Preferred or Alternate load balancing method, this field will be displayed to add the Fallback IP. The Fallback IP is not applicable for the pool type CNAME.
Health Monitor	The health monitors that the system uses to determine whether it can use this pool for load balancing. To retrieve the fields to be monitored, click , and then select the
Pools	Click to add the pool details to the list. You can add multiple to the pool to the list. After adding pool(s) to the list, you can manage them.

9. Enter/select the **Pool Member Details**.

Pool Member Details Section - Field and Description Table

Field	Description
Info	Information that is to be noted while entering the details in this section.

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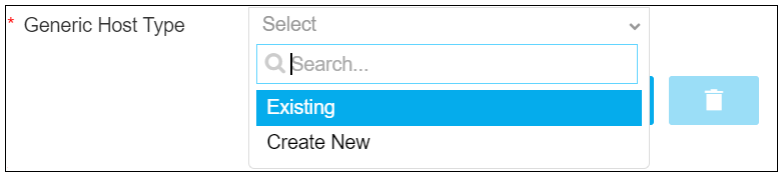
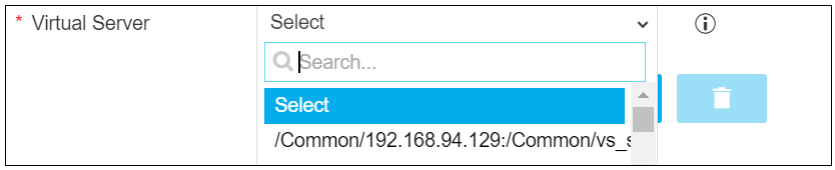
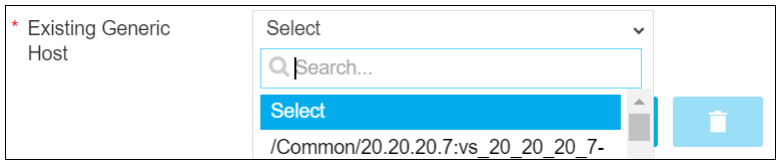
Field	Description
Pool	Click the Retrieve ( ) button to get the pool name.
Pool Member Type	Select the pool member types. The pool member types are: • **Generic Host** – When you select this pool member type, you get the option to select the Generic Host Typ  • **Big IP System** – When you select this pool member type, you get the option to select the configured virtua  **Note:** It takes a while to load the servers.
***Generic Host Type**	When the pool member type is selected as Generic Host, you need to select the type of generic host. The g • **Existing** – This option allows to select the existing host. When you select this option, the existing generic  • **Create New** – This option allows you to create a generic host. When you select this, the following fields ar • ***Data Center** – select the datacenter of the pool member. • ***Pool Member IP** – enter the IP of the pool. • ***Port** – enter the port of the pool member.
***Virtual Server**	When the pool member type is selected as Big IP System. Select a virtual server from the dropdown list.

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Field	Description
***Pool Member List**	Enter the IP address of the pool member. And then click . Any number of pool numbers can be added

10. Enter/select the **Topology** details.

Topology Section - Field and Description Table

Field	Description
Request Source (Region)	The origination section of the topology record for the pool. Click to retrieve the list of associated regions.
Destination (Pool)	The target section of the topology record for the pool.
Weight	The weight of the topology record. The system finds the weight of the first topology record that matches the server object (pool or pool member) and the local DNS. The system then assigns that weight as the topology score for that server object. The system load balances to the server object with the highest topology score. If the system finds no topology record that matches both the server object and the local DNS, then the system assigns that server object a zero score.
Topology Record Detail …	After providing the topology details for the pool, click . The List of topologies is added for the pool. You can manage topology records after adding them.

11. Click **Submit**.
    The **Confirmation** dialog box is displayed.
12. To save this form so you can edit it later, click **Save Draft** and then click **OK**.
    The form will be saved as **Open request** under **Request** > **My Request**.

    OR

    To submit the form, click **OK**.

    The validation starts automatically and reaches the **Review** stage.

Note:

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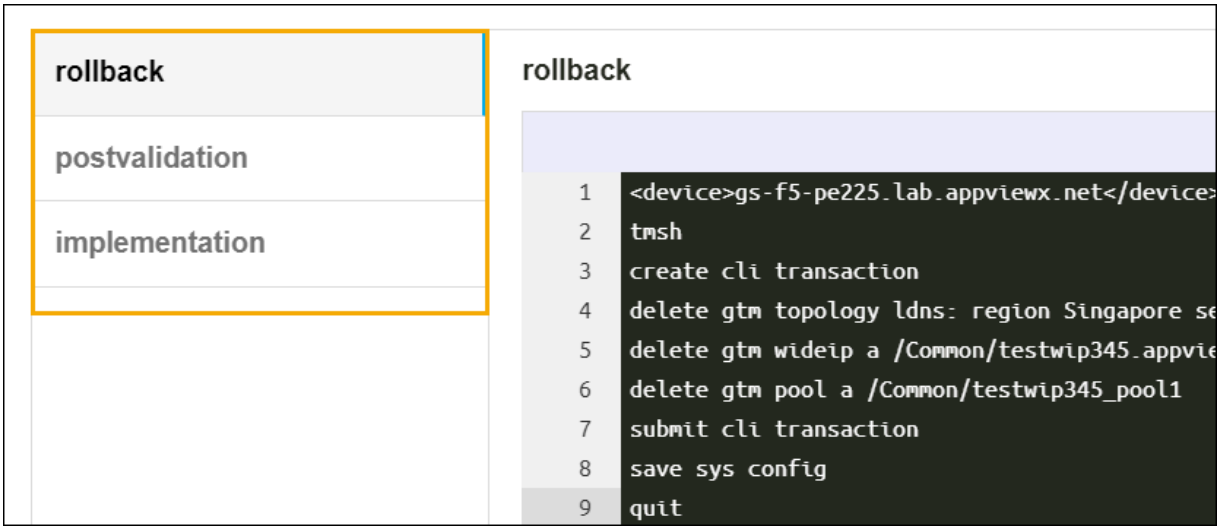
- If there is any failure at this stage, start a new request by providing the correct data.
- Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

13. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs.



14. (Optional) If you need to change any data at this stage, right click and select the required option.

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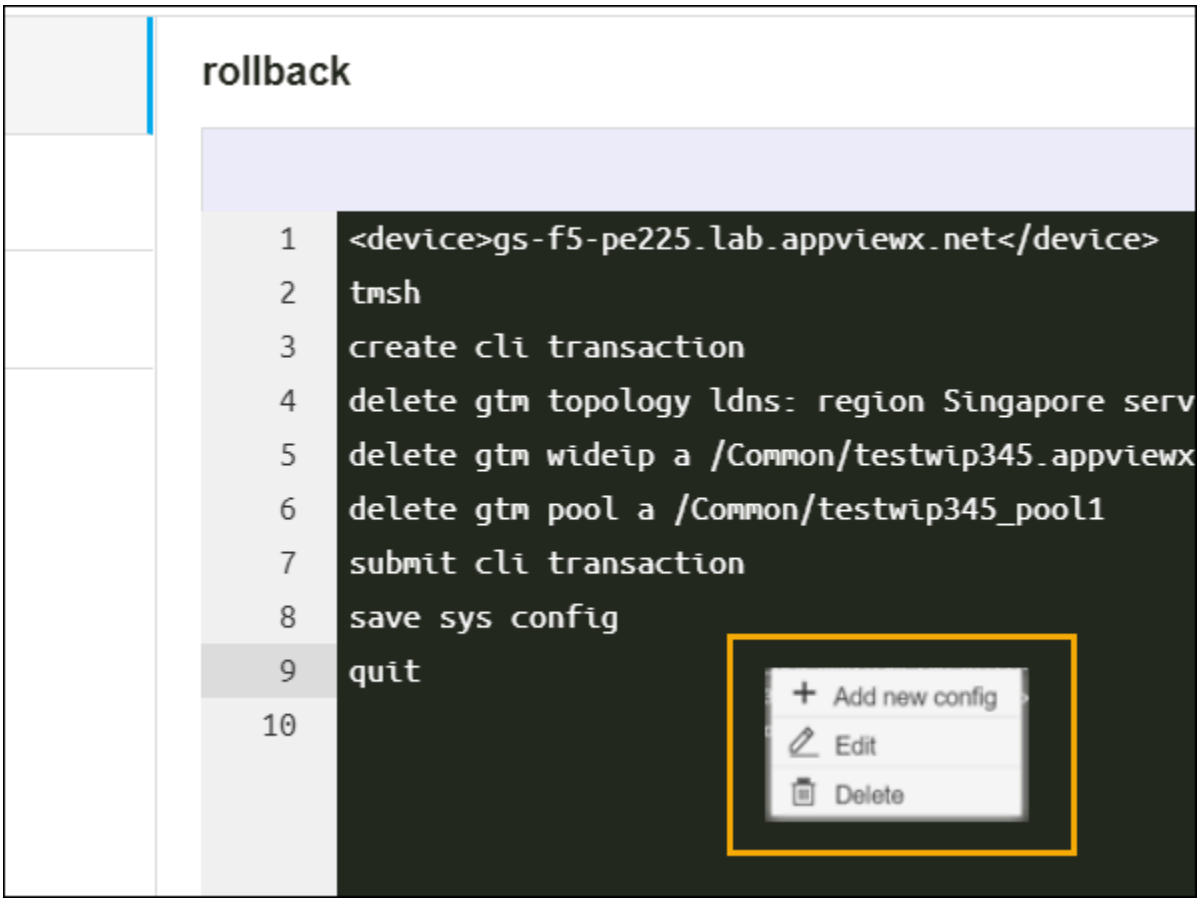

15. After the review, click **Submit**.
    The **Confirmation** dialog box is displayed.

    Note: To stop running the workflow creation, click **Cancel**.

16. Click **Ok** to continue the workflow creation.
    It takes a while to complete the request.

    After a successful post-validation, the workflow is created and the email triggered to the configured email IDs.

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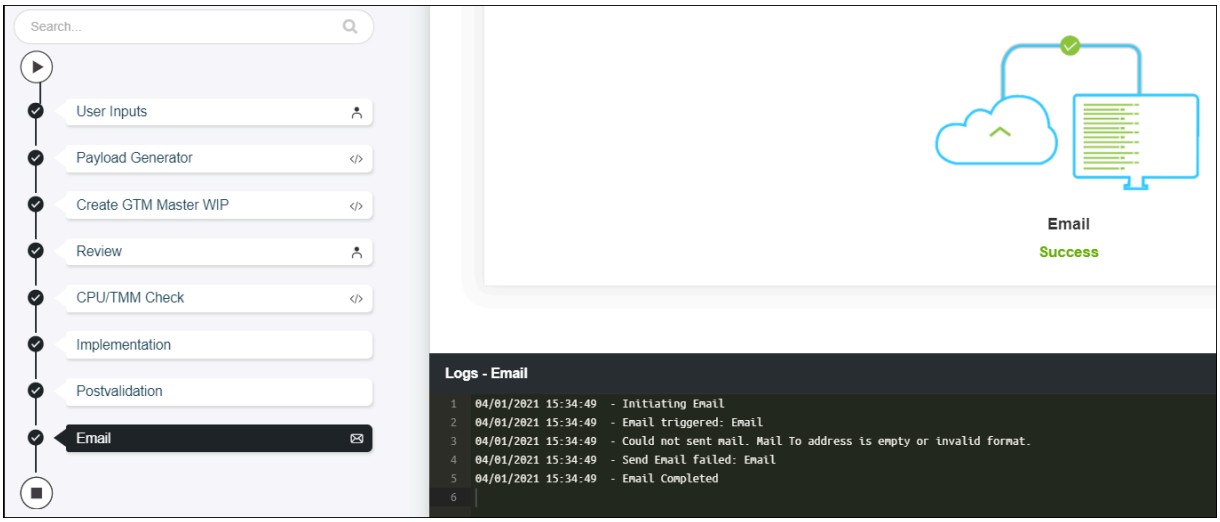

Note: The stages of the request are shown in the left side of the screen. To view a particular stage of the request, click the respective stage.

Create F5 GTM WideIP with Service Now

This workflow creates a WideIP with multiple Pools and integrates with ITSM – Service Now, where you can set Time Zone, Start time, and End time for the ticket creation.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG-IP LTM** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Create F5 GTM WideIP with Service Now** workflow. The **Run** and **Schedule** buttons are displayed.
4. Click Run.
   The **Request > Create F5 GTM WideIP with Service Now :: FormBuilder** page is displayed.
5. Enter/select the **Device Details**.

Device Details Section - Field and Description Table

Field	Description
Datacenter	Displays the list of datacenters of the devices, which are created in the Device Inventory. Select the datacenter of a device from the drop-down option for which this

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Field	Description
	request is to be created. For the devices, which are created without a datacenter in the Device Inventory, select the datacenter as **None**.
***Device Name**	Displays the list of devices associated with the selected datacenter. If the datacenter is selected as **None**, the devices that are created without datacenter details are listed. Select the desired device from the drop-down option.

6. Enter/select the **DNS Details**.

DNS Details Section - Field and Description Table

Field	Description
***Do you want to integrate with DNS**	By default, the **No** option is selected. If you want to integrate with DNS for CNAME record creation, select **Y** When you select **Yes**, the following fields are displayed: Select the **Vendor** from the drop-down list. The default vendors are: **Infoblox** and **bluecat**. When you select DNS vendor as **Infoblox**, you need to provide the following details: • Select the **Device Name** from the drop-down list. • Enter the **App Name** for the WideIP name. When you select DNS vendor as **bluecat**, you need to provide the following details:

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Field	Description
	• Select the **Device Name** from the drop-down list. • Select the **Configuration** from the drop-down list. • Select the **View** for the selected configuration. The options are displayed based on the selected configura • Enter the **App Name** for the WideIP name.

7. Enter/select the **General Properties**.

General Properties Section - Field and Description Table

Field	Description
***Wide IP Name**	Enter the WideIP Name in the FQDN format.
***Type**	Select the pool/WideIP type. The types are: • A - the pool/Wide IP responds to A queries. The A pool/Wide IP is a mapping of an FQDN to a set of IPv4 virtual servers that host the domain's content, such as a Web site or an e-commerce site. You can also specify pool members' virtual server and ratio settings. • CNAME - the pool/Wide IP responds to CNAME queries. A CNAME pool/Wide IP is a mapping of a FQDN to its canonical name. This is the configuration of a static name or a Wide IP name. Static names support older configurations. Wide IP names allow service checking, enhanced load balancing, and CNAME chasing in the reply. You can also specify pool members' ratio.
Description	Enter the descriptive text to identify the WideIP.
State	It allows the system to use this wide IP and its resources for load balancing. The options are: • enabled (default) • disabled
***Do you want to add Alias ?**	Add Alias for the WideIP name. The options are: • **No** (default) • **Yes** – When you select **Yes** the following fields are displayed to add alias details:

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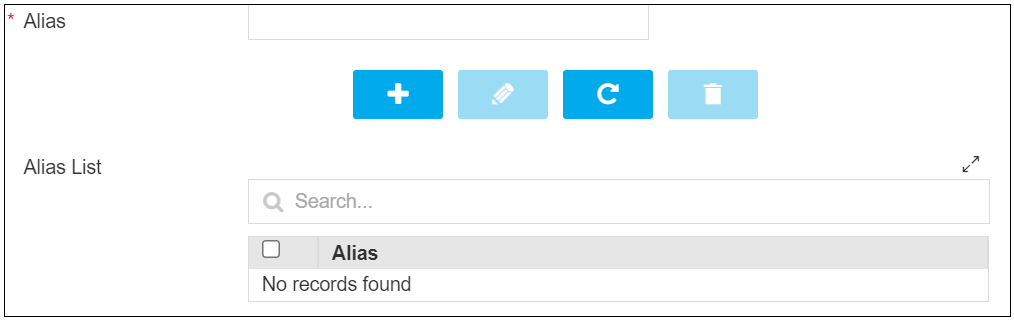
Field	Description
	 Enter the alias name for WideIP in the Alias field. You can add any number of aliases for WideIP. After entering the alias in the Alias field, click to add an alias. The added aliases are displayed under the Alias List. You can manage the added alias(es) to the list.

8. Enter/select the **Pool** details.

Pool Section - Field and Description Table

Field	Description
Info	Information that are to be noted while entering the details in this section.
***Load Balancing Method**	The load balancing method is used to select a pool in this WideIP. The methods are: • **round-robin** - the system selects the pools sequentially. • **global-availability** -. the system selects a pool by following the order of the Pool List. The system repeatedly selects the first pool in the list for as long as its status is available. If the pool becomes unavailable for any reason, the system then repeatedly selects the next pool in the list, and so on. • **ratio** - the system selects a pool based on the ratio that you assign to the pool.
***Persistence**	By default, this option is disabled. When enabled, a local DNS makes repetitive requests on behalf of a client, the system reconnects the client to the same resource as previous requests.
***Pool Name**	Name of the pool.
Preferred	Select the preferred load balancing method. The system tries this method first.

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Field	Description
	Note: When you choose the fallback-ip option, the Fallback IP field will be displayed and you need to input the Fallback IP.
Alternate	Select the alternate load balancing method. The system tries this method if the Preferred method is unsuccessful in picking the WideIP. **Note:** When you choose the fallback-ip option, the Fallback IP field will be displayed and you need to input the Fallback IP.
Fallback	Select the alternate load balancing method. The system tries this method if the Preferred and Alternate methods are unsuccessful in picking the WideIP.
Fallback IP	When the fallback-ip option is selected as Preferred or Alternate load balancing method, this field will be displayed to add the Fallback IP. The Fallback IP is not applicable for the pool type CNAME.
Health Monitor	The health monitors that the system uses to determine whether it can use this pool for load balancing. To get the fields to be monitored, click , and then select the objects from the drop-down option.
***Pools**	Add multiple pools by clicking . After adding pool(s) to the list. You can manage them.

9. Enter/select the **Pool Member Details**.

Pool Member Details Section - Field and Description Table

Field	Description
Info	Information that are to be noted while entering the details in this section.
***Pool**	Click to select the pool name.
***Pool Member Type**	Select the pool member types. The pool member types are: • Generic Host – When you select this pool member type, you get the option to select the Generic Host Typ

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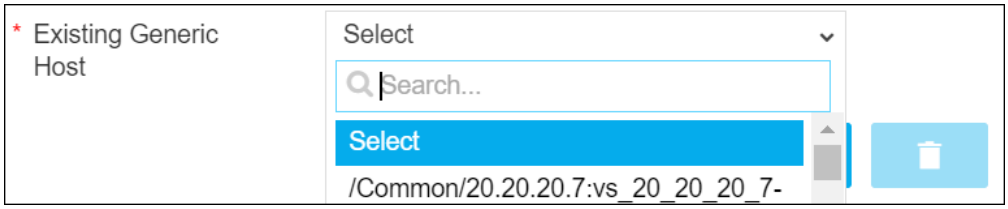
Field	Description
	 • Big IP System – When you select this pool member type, you get the option to select the configured virtua **Note:** It takes a while to load the servers.
***Generic Host Type**	When the pool member type is selected as Generic Host, you need to select the type of generic host. The g Existing – This option allows to select the existing host. When you select this option, the existing generic hos 

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Field	Description
	Create New – This option allows you to create a generic host. When you select this, the following fields are • ***Data Center** – select the datacenter of the pool member. • ***Pool Member IP** – enter the IP of the pool member. • ***Port** – enter the port of the pool member.
***Virtual Server**	When the pool member type is selected as Big IP System. Select a virtual server from the dropdown list.
***Pool Member List**	Enter the IP address of the pool member. And then click . Any number of pool numbers can be added

10. Enter/select the **Topology** details.

Topology Section - Field and Description Table

Field	Description
Info	Information that is to be noted while entering the details in this section.
***Request Source (Region)**	The origination section of the topology record for the pool. Click to get the list of associated regions.
***Destination (Pool)**	The target section of the topology record for the pool.
***Weight**	The weight of the topology record. The system finds the weight of the first topology record that matches the server object (pool or pool member) and the local DNS. The system then assigns that weight as the topology score for that server object. The system load balances to the server object with the highest topology score. If the system finds no topology record that matches both the server object and the local DNS, then the system assigns that server object a zero score.
***Topology Record…**	After providing the topology details for the pool, click Add icon. The List of topologies is added for the pool. You can manage topology records after adding them.

11. Enter/select the **Change Management** details.

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Change Management Section - Field and Description Table

Field	Description
***Do you want to integrate ServiceNow?**	By default, the **No** option is selected. If you want to integrate with ServiceNow, select **Yes** and provide • **Timezone** – select the timezone from the drop-down list. • **Start Time** – select the start date and time from the calendar. • **End Time** – select the end date and time from the calendar.

12. Click **Submit**.
    The **Confirmation** dialog box is displayed.
13. To save this form so you can edit it later, click **Save Draft** and then click **OK**.
    The form will be saved as **Open request** under **Request** > **My Request**.

    OR

    To submit the form, click **OK**.

    The validation starts automatically and reaches the **Review** stage.

> **Note:**
> • If there is any failure at this stage, start a new request by providing the correct data.
> • Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

14. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs. <screenshot>
15. (Optional) If you need to change any data at this stage, right click and select the required option.<screenshot>
16. After the review, click **Submit**.
    The **Confirmation** dialog box is displayed.

> **Note:** To stop running the workflow creation, click **Cancel**.

17. Click **Ok** to continue the workflow creation.
    It takes a while to complete the request.

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The workflow is created and the email is triggered to the configured email IDs. <screenshot>

> **Note:** The stages of the request are shown in the left side of the screen. To view a particular stage of the request, click the respective stage.

Modify F5 GTM WideIP

This workflow modifies an existing WideIP and/or its Pool details, which is associated with the WideIP, and manages Pool members.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG-IP LTM** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Modify F5 GTM WideIP** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click

.
   The **Request > Modify F5 GTM WideIP :: FormBuilder** page is displayed.
5. Enetr/Select the **Wide IP**, **Pool**, and **Pool Member Details** of the device that is to be modified.
6. Update the necessary details of WIP, pool, and pool member, and then click **Submit**.
   The validation starts automatically and reaches the **Review** stage.

> **Note:**
> - If you want to save this form to edit it later, click the **Save Draft** button, and then click **Ok** in the Confirmation popup window. The form will be saved as Open request under **Request** > **My Request**.
> - If you want to cancel this form, click the **Cancel** button.

7. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs.

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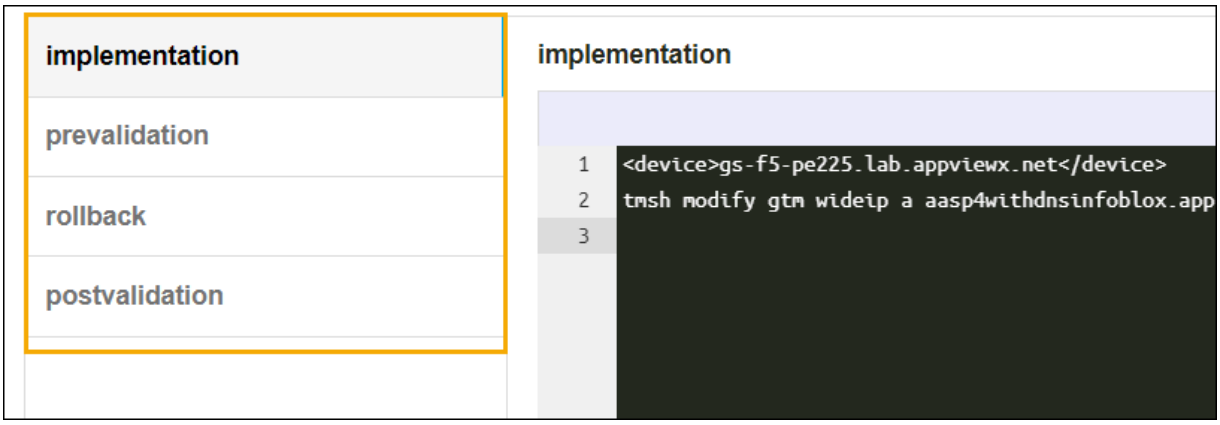
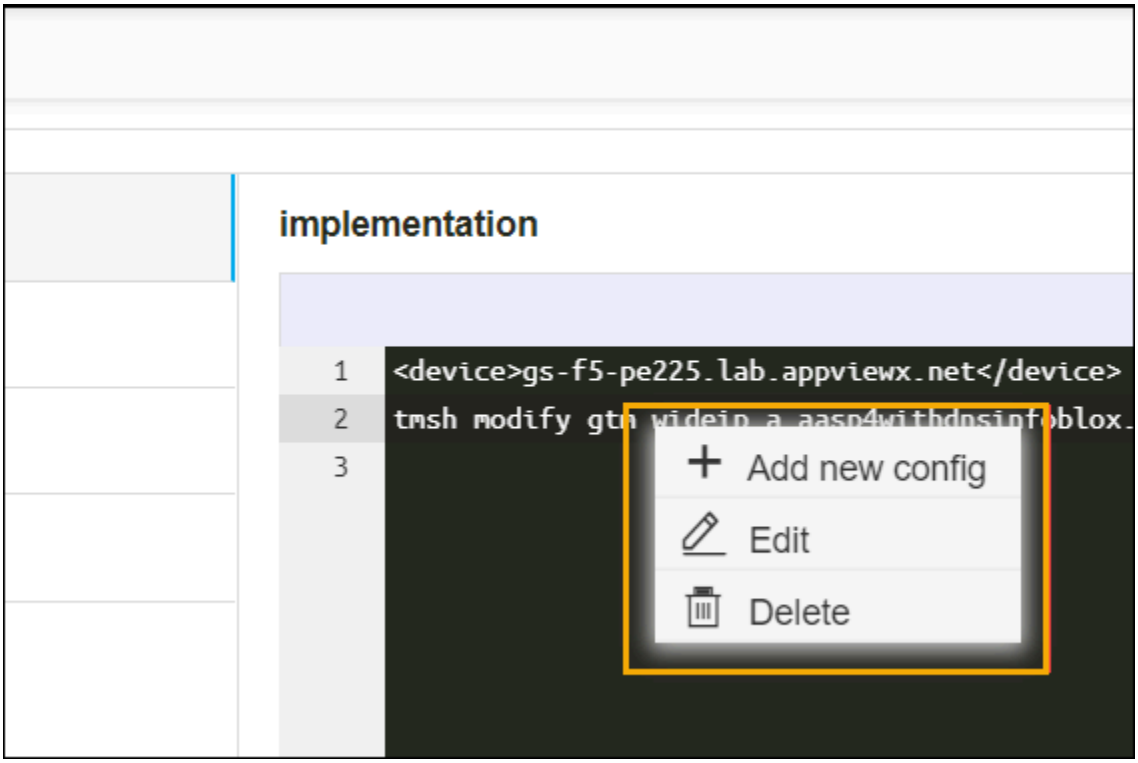


8. (Optional) If you need to change any data at this stage, right click and select the required option.



9. After the review, click **Submit**.

   The **Confirmation** dialog box is displayed.

> **Note:** To stop running the workflow creation, click **Cancel**.

10. Click **Ok** to continue the workflow creation.

    It takes a while to complete the request.

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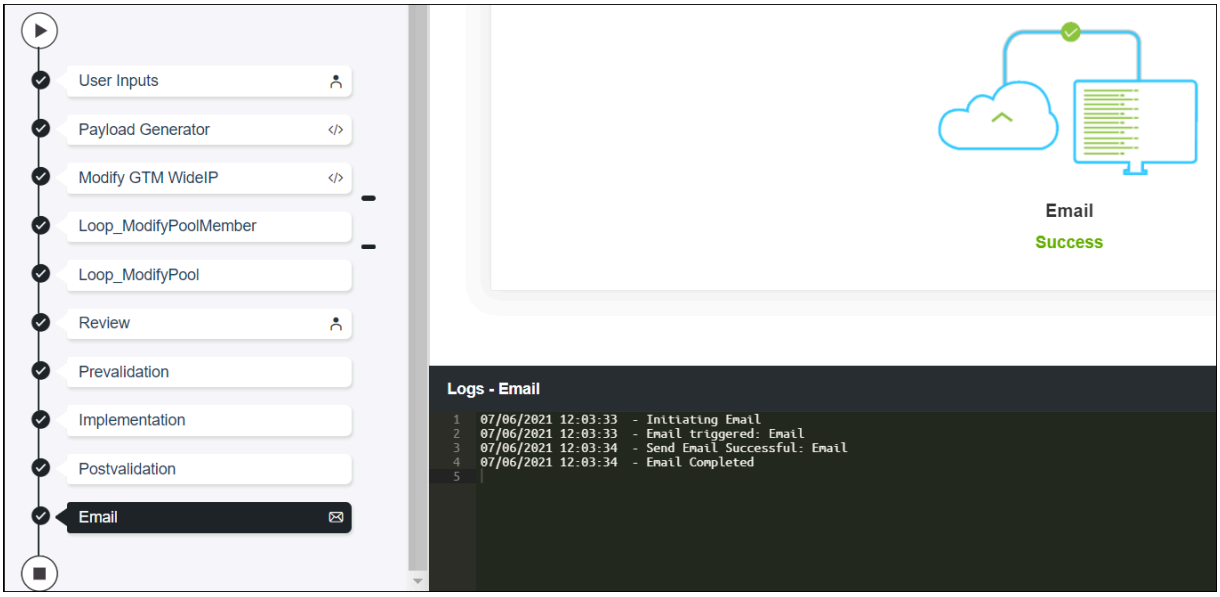
The workflow is created and the email is triggered to the configured email IDs.



Note: The stages of the request are shown in the left side of the screen. To view a particular stage of the request, click the respective stage.

Delete F5 GTM WideIP

This workflow deletes an existing WideIP. On deleting a WideIP, associated Pool, Pool members, Topology, Monitor, and Servers with the WideIP are deleted if they are not associated with any other WideIP. Also, it deletes the associated CNAME record in the DNS – Infoblox/Bluecat.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG-IP LTM** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Delete F5 GTM WideIP** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click Run.
   The **Request > Delete F5 GTM WideIP :: FormBuilder** page is displayed.
5. For the device to be deleted, select the **Device Details**, the **Wide IP Details**, and the **DNS Details**.
6. Click **Submit**.

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The validation starts automatically and reaches the **Review** stage.

7. To save this form so you can edit it later, click **Save Draft** and then click **OK**.
   The form will be saved as **Open request** under **Request** > **My Request**.

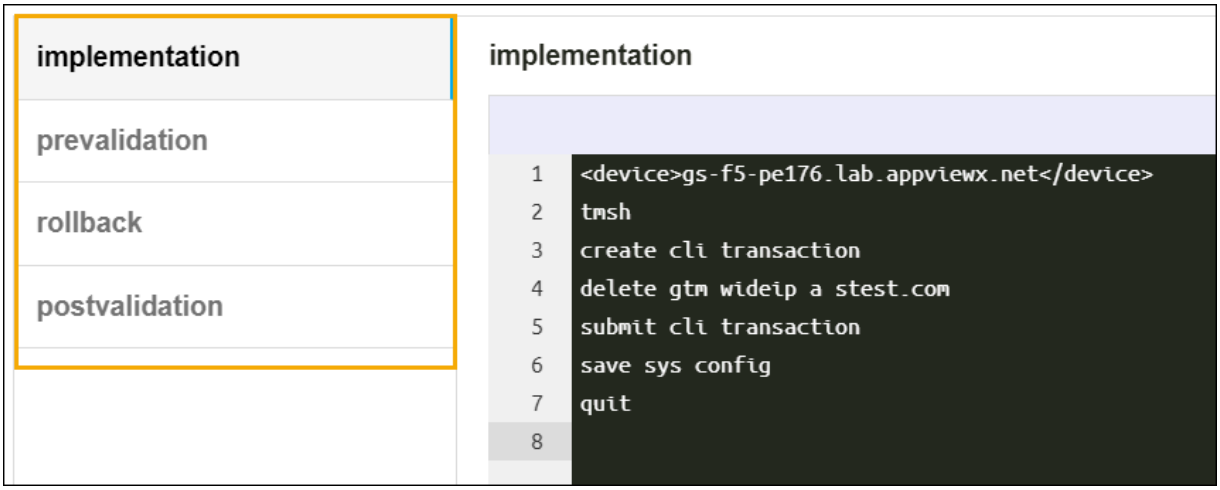
   OR

   To submit the form, click **OK**.

   The validation starts automatically and reaches the **Review** stage.

> **Note:**
> - If there is any failure at this stage, start a new request by providing the correct data.
> - Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

8. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs.



9. (Optional) If you need to change any data at this stage, right click and select the required option.

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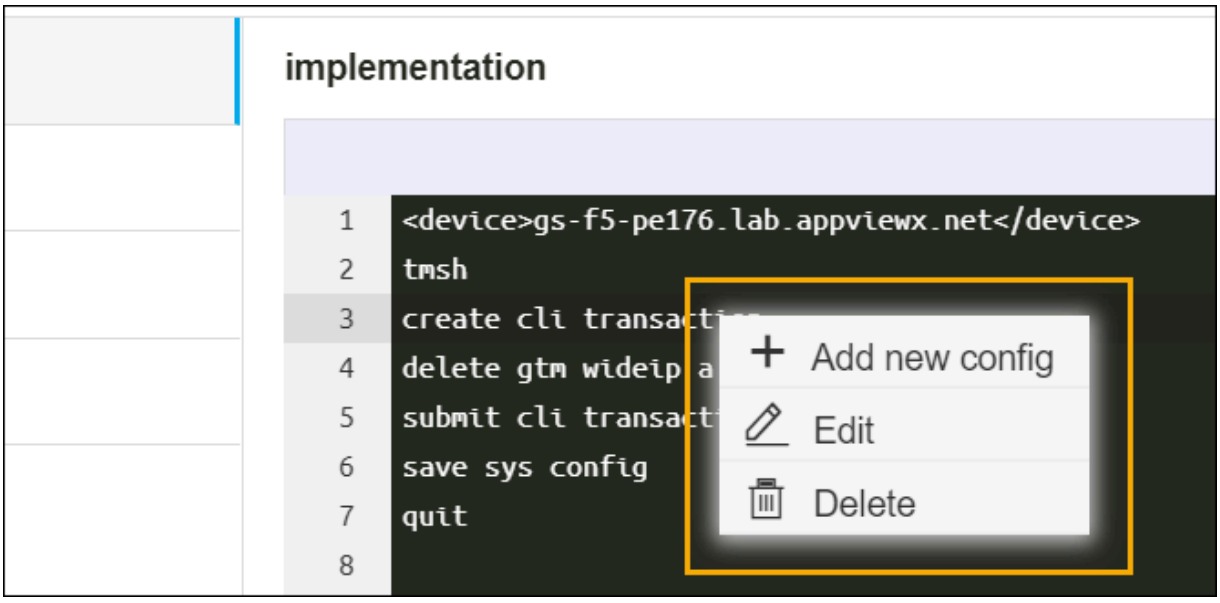


10. After the review, click **Submit**.

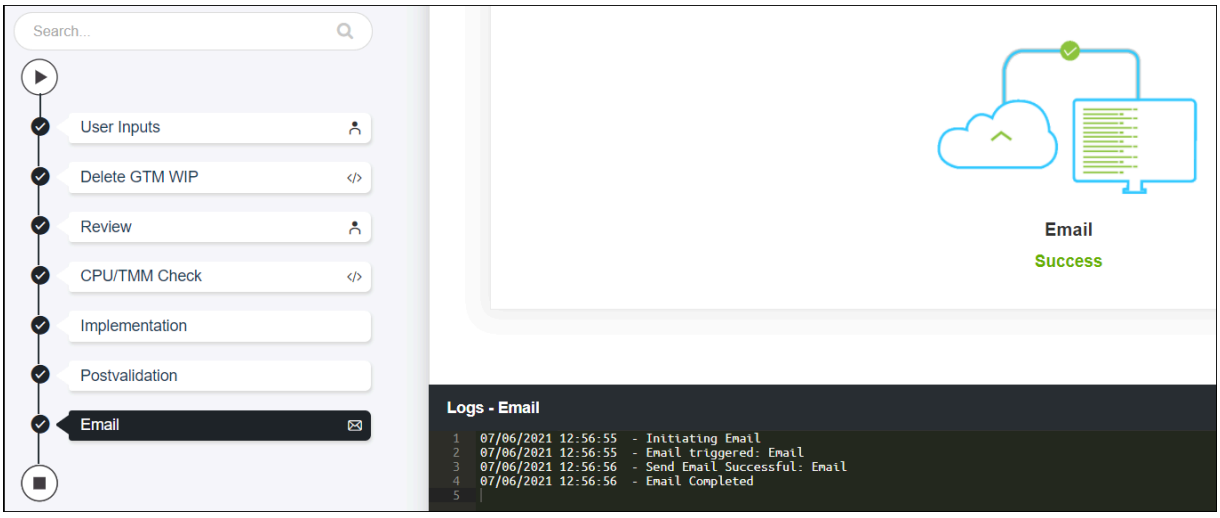
    The **Confirmation** dialog box is displayed.

> **Note:** To stop running the workflow creation, click **Cancel**.

11. Click **Ok** to continue the workflow creation.

    It takes a while to complete the request.

    The workflow is created and the email is triggered to the configured email IDs.



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Note: The stages of the request are shown in the left side of the screen. To view a particular stage of the request, click the respective stage.

F5 BIG-IP AS3

• DNS
• LTM

DNS

• Create GTM Application Services
• Modify GTM Application Services
• Delete GTM Application Services

Create GTM Application Services

This workflow creates GTM Wide-IP along with GTM pool and monitor.

Prerequisites

- The AS3 service has to be enabled in the target F5 device.
- F5 device list displays only AS3 service enabled and active devices.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG-IP AS3** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Create GTM Application Services** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click

.
   The **Request > Create GTM Application Services :: FormBuilder** page is displayed.
5. Enter/select the **General Properties**.

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General Properties Section - Field and Description Table

Field	Description
****Device Name**	Select a device from the dropdown list. Only the devices that are AS3 enabled and active are displayed.
***Partition Type**	Select a partition type. The options are: • Create New Partition (default) - select this option to create a new partition. • Existing Partition - select this option to choose an existing partition. **Note:** Partition dropdown lists only the partitions created via AS3 triggered API calls.
***Enter Partition Name**	Enter the partition name.
***Application Type**	Select a application type. The options are: • Create New Application (default) - select this option to create a new application. • Existing Application - select this option to choose an existing partition.
***Enter Application Name**	Enter the name for the application.

6. Enter/select the **Wide IP** details.

Wide IP Section - Field and Description Table

Field	Description
WideIP FQDN	Enter the fully qualified domain name.
WideIP Type	Select Wide IP type from the dropdown list.

7. Enter/select the **Pool** details.

Pool Section - Field and Description Table

Field	Description
***Pool Name**	Enter the pool name.

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Field	Description
***Pools Load Balancing Method**	Select a load balancing method for the pools.
Pool Members Preferred Load Balancing Method	Select a preferred load balancing method for the pool members. The system tries this method first.
Pool Members Fallback Load Balancing Method	Select the alternate load balancing method. The system tries this method if the Preferred method is unsuccessful in picking the WideIP.

8. Enter/select the **Pool Members** details.

Pool Members Section - Field and Description Table

Field	Description
***Pool member Type**	Select a pool member type from the deopdown list. The types are: • **Generic Host** (default) - When you select this option you need to select GTM server and virtual servers. • **BIG-IP System** -. When you select this option you need to select GTM server and existing VIP.
***GTM Server**	Select a GTM server from the dropdown list.
***Virtual Servers**	Select the virtual servers from the dropdown list

9. Enter/select the **Monitors** details.

Monitors Section - Field and Description Table

Field	Description
***Do you want to associate a HTTP/HTTPS monitor to the pool**	Select Yes to associate a HTTP/HTTP monitor, and then select monitor from the dropdown list otherwise select No.

10. Click **Submit**.
    The **Confirmation** dialog box is displayed.
11. To save this form so you can edit it later, click **Save Draft** and then click **OK**.
    The form will be saved as **Open request** under **Request** > **My Request**.

    OR

    To submit the form, click **OK**.

    The validation starts automatically and reaches the **Review** stage, after which the workflow is created.

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Note:
- If there is any failure at this stage, start a new request by providing the correct data.
- Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

Note: The stages of the request are shown in the left side of the screen. To view a particular stage of the request, click the respective stage.

Modify GTM Application Services

This workflow modifies GTM Wide-IP along with GTM pool and monitor association.

Pre-requisites

- The AS3 service has to be enabled in the target F5 device.
- F5 device list displays only AS3 service enabled and active devices.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG-IP AS3** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Modify GTM Application Services** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click

.
   The **Request > Modify GTM Application Services :: FormBuilder** page is displayed.
5. In the **General Properties** section, select the Device Name to modify, and then choose the Partition and Application details of the device that are to be modified.
6. Click **Get Wide IP** to get an existing Wide-IP and select the target Wide-IP.
7. Fetch the associated pool by clicking **Get Pool Name** button, and then fetch the pool's details by clicking the **Get Pool Details** button to modify.
8. Fetch the pool member's configuration by clicking the **Get Pool Members** button to modify.
9. Update the necessary details, and then click the **Submit** button.
   The validation starts automatically stage.

Note:

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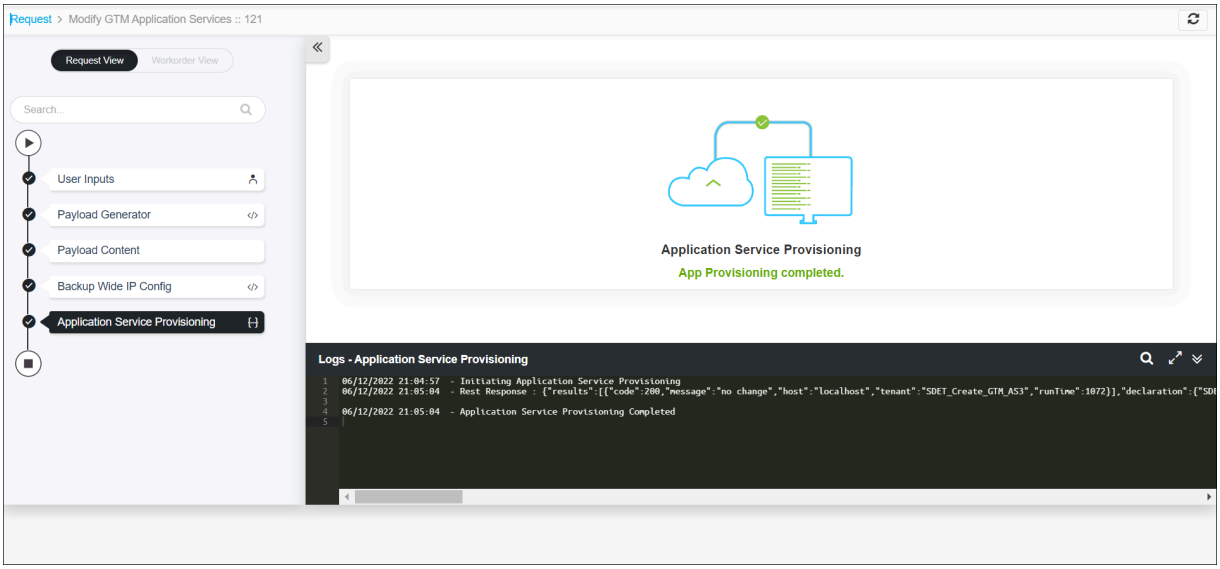
- If you want to save this form to edit it later, click **Save Draft**, and then click **Ok** in the Confirmation popup window. The form will be saved as Open request under **Request** > **My Request**.
- If you want to cancel this form, click **Cancel**.

10. The workflow is created and GTM Wide-IP along with GTM pool and monitor association are updated.



Note: The stages of the request are shown in the left side of the screen. To view a particular stage of the request, click the respective stage.

Delete GTM Application Services

By running this workflow, you can delete a GTM Wide-IP along with GTM pool.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG-IP AS3** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Delete GTM Application Services** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click Run.
   The **Request > Delete GTM Application Services :: FormBuilder** page is displayed.

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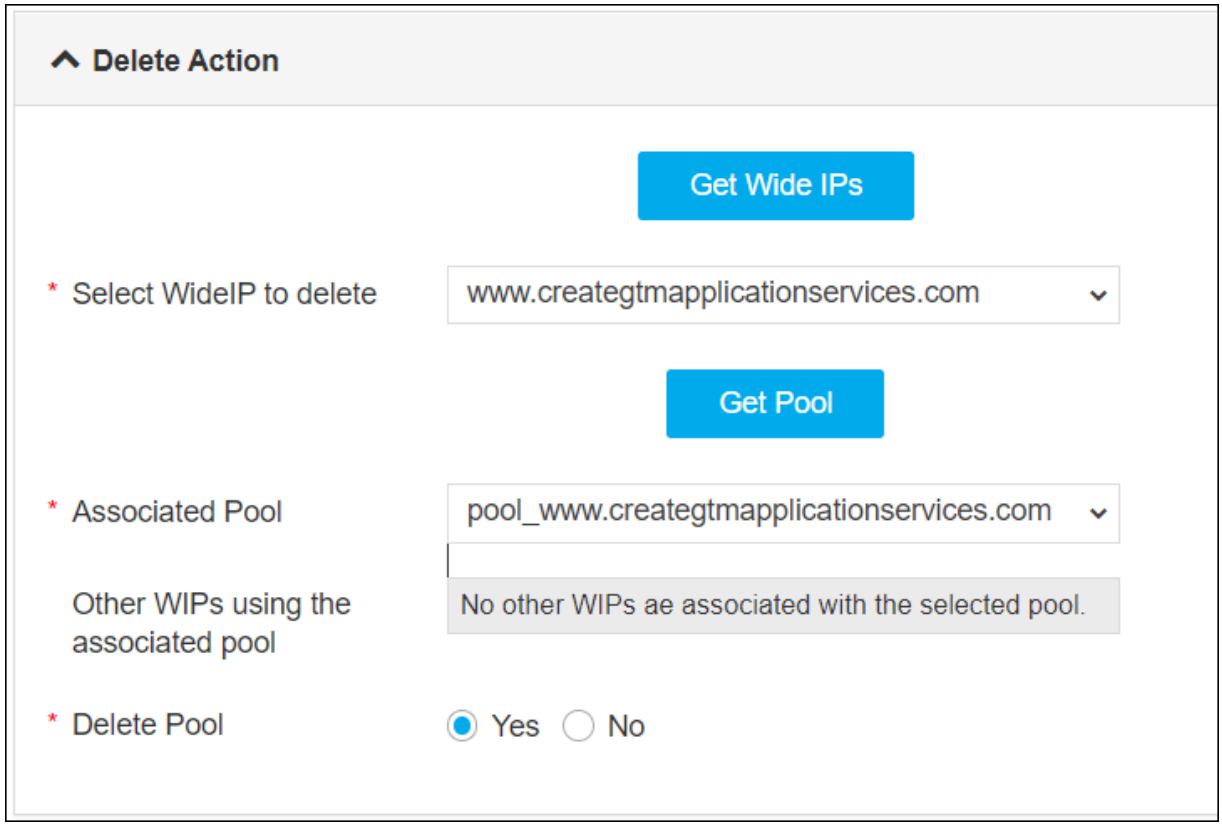
5. In the **General Properties** section, select the Device Name, and then choose the Partition and Application details of the device that are to be deleted.
6. Fetch the following details:
   - Wide IP by clicking the **Get Wide IPs** button, and then select a Wide IP from the dropdown list.
   - Pool by clicking the **Get Pool** button, and then select an associated pool from the dropdown list.

   Click **Yes** to delete the associated pool otherwise select No.



7. Click the **Submit** button.
   The Confirmation popup opens.

Note:
- If you want to save this form to edit it later, click the **Save Draft** button, and then click **Ok** in the Confirmation popup window. The form will be saved as Open request under **Request** > **My Request**.
- If you want to cancel this form, click the **Cancel** button.

8. Click **Submit**.

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The **Confirmation** dialog box is displayed.

9. To save this form so you can edit it later, click **Save Draft** and then click **OK**.

   The form will be saved as **Open request** under **Request** > **My Request**.

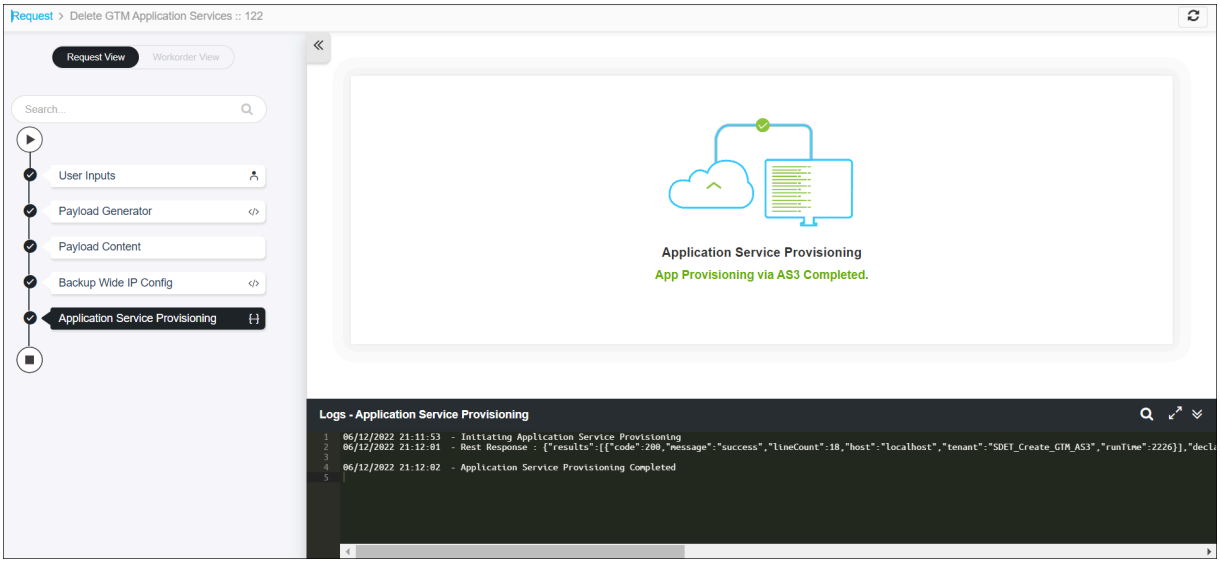
   OR

   To submit the form, click **OK**.

   The validation starts automatically.

> **Note:**
> - If there is any failure at this stage, start a new request by providing the correct data.
> - Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

10. The workflow is created and the Wide IP along with its pool are deleted.



> **Note:** The stages of the request are shown in the left-side of the screen. To view a particular stage of the request, click the respective stage.

LTM

- Create LTM Application Services
- Modify LTM Application Services

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- Delete LTM Application Services
- Fetch Application Services

Create LTM Application Services

This workflow creates virtual server along with pool and other objects using application services (AS3) in F5.

Pre-requisites

- The AS3 service has to be enabled in the target F5 device.
- F5 device list displays only AS3 service enabled and active devices.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG-IP AS3** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Create LTM Application Services** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click

.
   The **Request > Create LTM Application Services :: FormBuilder** page is displayed.
5. Enter/select the **Device and Partition Details**.

Device and Partition Details Section - Field and Description Table

Field	Description
****Device Name**	Select a device from the dropdown list. Only the devices that are AS3 enabled and active are displayed.
***Partition Type**	Select a partition type. The options are: • Create New Partition (default) - select this option to create a new partition. • Existing Partition - select this option to choose an existing partition. **Note:** Partition dropdown lists only the partitions created via AS3 triggered API calls.
***Enter Partition Name**	Enter the partition name.

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6. Enter/select the required details in the **Enter Virtual Server Details** section.

Enter Virtual Server Details Section - Field and Description Table

Field	Description
***Virtual Server Name**	Enter the virtual server name.
***Virtual Server IP**	Select virtual server IP address.
***Virtual Server Port**	Enter virtual server port.

7. Enter/select the required deatils in the **Enter Pool Details** section.

Enter Pool Details Section - Field and Description Table

Field	Description
***Pool Name**	Enter the pool name.
***Pools Load Balancing Method**	Select a load balancing method for the pools.
***Pool Member addresses**	Enter pool member' IP addresses.
***Pool Member Service Port**	Enter pool member service port.
***Pool Members**	Click the add button to add the pool member's details to the Pool Members table. **Note:** After adding the pool member's details to the Pool Members table, you can modify them.

8. Select the **Additional Details**.
9. Click **Submit**.

   The **Confirmation** dialog box is displayed.
10. To save this form so you can edit it later, click **Save Draft** and then click **OK**.

    The form will be saved as **Open request** under **Request** > **My Request**.

    OR

    To submit the form, click **OK**.

    The validation starts automatically and reaches the **Review** stage, after which the workflow is created.

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Note:
- If there is any failure at this stage, start a new request by providing the correct data.
- Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

Note: The stages of the request are shown in the left side of the screen. To view a particular stage of the request, click the respective stage.

11. Click **Ok** to submit the form.
    The validation starts automatically after which the workflow is created.

Note:
- If there is any failure at this stage, start a new request by providing the correct data.
- Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

Modify LTM Application Services

This workflow modifies virtual server along with pool and other objects using application services (AS3) in F5.

Pre-requisites

- The AS3 service has to be enabled in the target F5 device.
- F5 device list displays only AS3 service enabled and active devices.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG-IP AS3** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Modify LTM Application Services** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click

.
   The **Request > Modify LTM Application Services :: FormBuilder** page is displayed.

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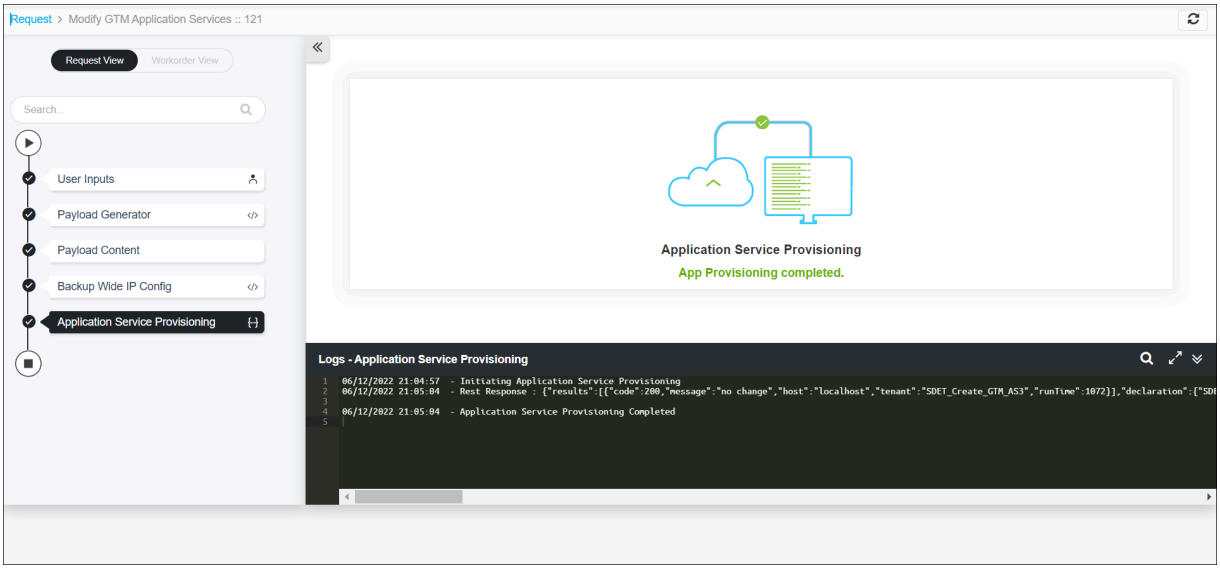
5. In the **Device and Partition Details** section, select the Device Name to modify, and then choose the Partition of the device that are to be modified.
6. In the **Enter Virtual Server Details** section, click the **Get Virtuals** button to get the virtual server details and select the modify the virtual server details as needed.
7. In the **Enter Pool Details** section, fetch the associated pool by clicking the **Get Pool Name** button, and then fetch the pool's details by clicking the **Get Pool Details** button to modify.

> **Note:** Select the check box in the Pool Members table for the pool member to modify.

8. Update the necessary details, and then click the **Submit** button.
   The validation starts automatically stage.

> **Note:**
> - If you want to save this form to edit it later, click the **Save Draft** button, and then click **Ok** in the Confirmation popup window. The form will be saved as Open request under **Request** > **My Request**.
> - If you want to cancel this form, click the **Cancel** button.

9. The workflow is created with modified details..



> **Note:** The stages of the request are shown in the left side of the screen. To view a particular stage of the request, click the respective stage.

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Delete LTM Application Services

By running this workflow, you can delete a virtual server along with pool.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG-IP AS3** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Delete LTM Application Services** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click

.
   The **Request > Delete LTM Application Services :: FormBuilder** page is displayed.
5. In the **General Properties** section, select the Device Name, and then choose the Partition and Application details of the device that are to be deleted.
6. Fetch the following details:
   - Wide IP by clicking the **Get Wide IPs** button, and then select a Wide IP from the dropdown list.
   - Pool by clicking the **Get Pool** button, and then select an associated pool from the dropdown list.

     Click **Yes** to delete the associated pool otherwise select No.
7. Click **Submit**.
   The **Confirmation** dialog box is displayed.
8. To save this form so you can edit it later, click **Save Draft** and then click **OK**.
   The form will be saved as **Open request** under **Request** > **My Request**.

   OR

   To submit the form, click **OK**.

   The validation starts automatically and reaches the **Review** stage, after which the workflow is created.

   Note:
   - If there is any failure at this stage, start a new request by providing the correct data.
   - Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

   Note: The stages of the request are shown in the left side of the screen. To view a particular stage of the request, click the respective stage.
9. Click **Ok** to submit the form.

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The validation starts automatically after which the workflow is created and the Wide IP along with its pool are deleted.

Note:

- If there is any failure at this stage, start a new request by providing the correct data.
- Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

Fetch Application Services

This workflow fetches all the AS3 objects of a partition.

Pre-requisites

- The AS3 service has to be enabled in the target F5 device.
- F5 device list displays only AS3 service enabled and active devices.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG-IP AS3** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Fetch Application Services** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click

.
   The **Request > Fetch Application Services :: FormBuilder** page is displayed.
5. In the **AS3 Details** section, select the Device Name and associated partition to fetch the AS3 objects.
6. Click the **Submit** button.
   The validation starts automatically stage.

Note:

- If you want to save this form to edit it later, click the **Save Draft** button, and then click **Ok** in the Confirmation popup window. The form will be saved as Open request under **Request** > **My Request**.
- If you want to cancel this form, click the **Cancel** button.

7. The workflow is created and AS3 objects are fetched in the JSON format.

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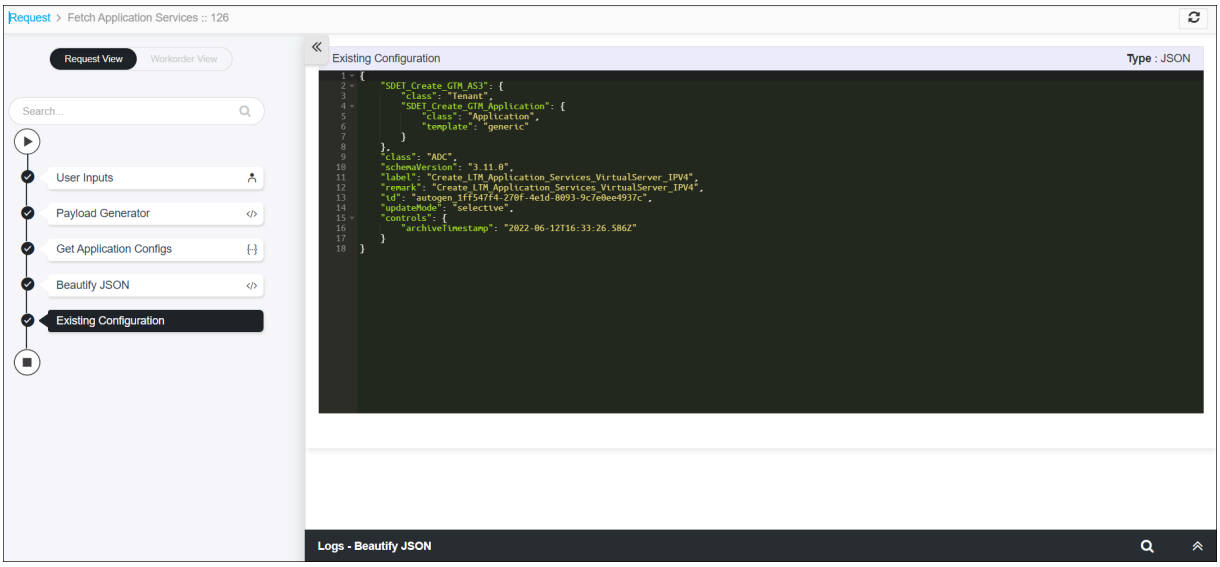

Note: The stages of the request are shown in the left side of the screen. To view a particular stage of the request, click the respective stage.

F5 BIG IP ASM

• Web App Vulnerability Remediation

Web App Vulnerability Remediation

This workflow create/selects a ASM Policy in F5 WAF Device to assess and remediate vulnerabilities

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG IP ASM** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Web App Vulnerability Remediation** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click Run.
   The **Request > Web App Vulnerability Remediation :: FormBuilder** page is displayed.
5. Enter/select the **Device and ASM Policy** details.

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Device and ASM Policy Section - Field and Description Table

Field	Description
***Device Name**	Select a device from the dropdown list for which the policy has to be created.

***ASM Policy Options**	Options to create a ASM policy. The options are:
	• **Create New** - select this option to create a policy newly and enter/select the following policy details:
	  • **ASM Policy Name** - enter the name for the policy.
	  • **Enforcement Mode** - select a enforcement mode from the dropdown list.
	  • **Do you want to associate a Parent Policy** - select Yes to associate a parent policy. Otherwise select No (default option).
	  • **Do you want to associate VIPs to the Policy** - select Yes to associate VIPs to the policy, and then select the desired VIPs from the **Virtual Servers** dropdown option. Otherwise select No (default option).
	• **Select Existing** - select this option to use the already created policy, and then select a policy from **ASM Policy** dropdown option.

6. Select the inputs for the **Upload Vulnerability Scan Report**.

Upload Vulnerability Scan Report Section - Field and Description Table

Field	Description
***Assessment Tool**	Select a assement tool from the dropdown list.
***Vulnerability Scan report**	Upload a vulnerability scan report in the `.xml` format.

7. Enter the **Email** ID in the **Send Assessment Report** section.
   Once the workflow is complete, the generated report will be sent to this email ID. More than one email ID can be added with comma separated.
8. Click **Submit**.
   The **Confirmation** dialog box is displayed.
9. To save this form so you can edit it later, click **Save Draft** and then click **OK**.
   The form will be saved as **Open request** under **Request** > **My Request**.

   OR

   To submit the form, click **OK**.

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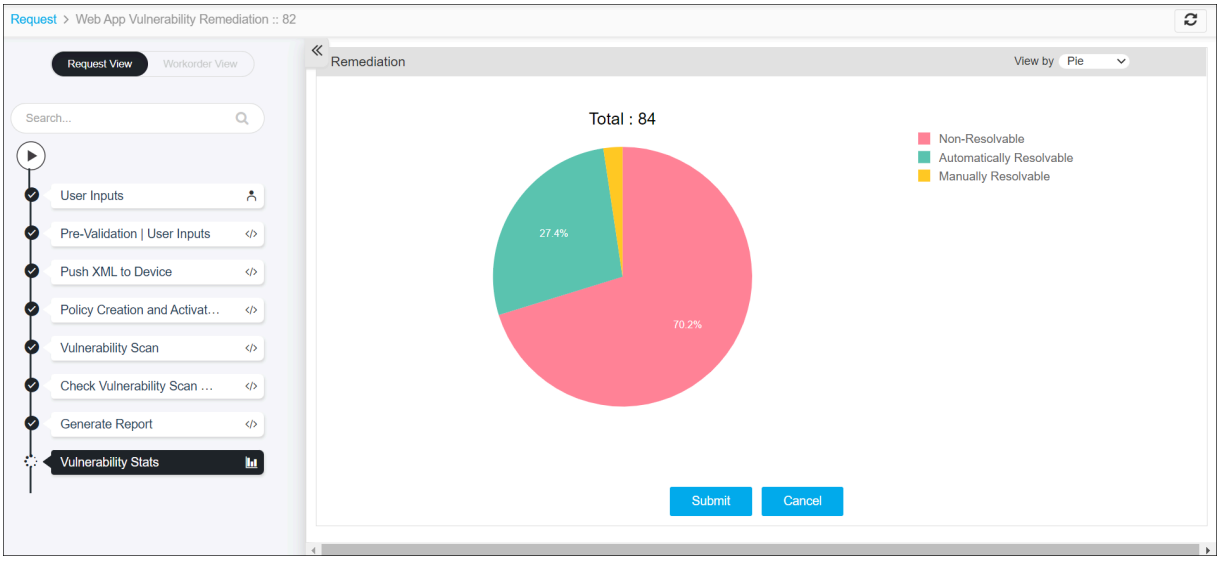
The validation starts automatically and reaches the **Review** stage.

Note:

- If there is any failure at this stage, start a new request by providing the correct data.
- Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

10. View the vulnerability status under the **Vulnerability Stats** tab.



Tip: The view of this report can be changed from Pie chart or Donut view by selecting the option from the View by drop-down option.

11. Click **Submit**.
12. View the vulnerability report under the **Vulnerability Report** tab.

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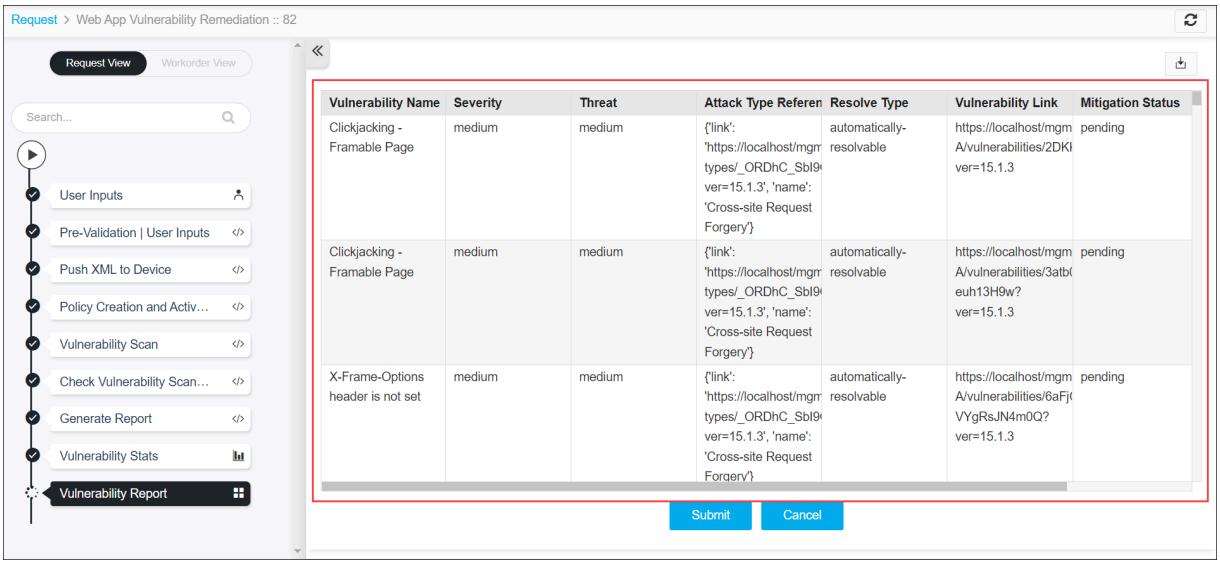
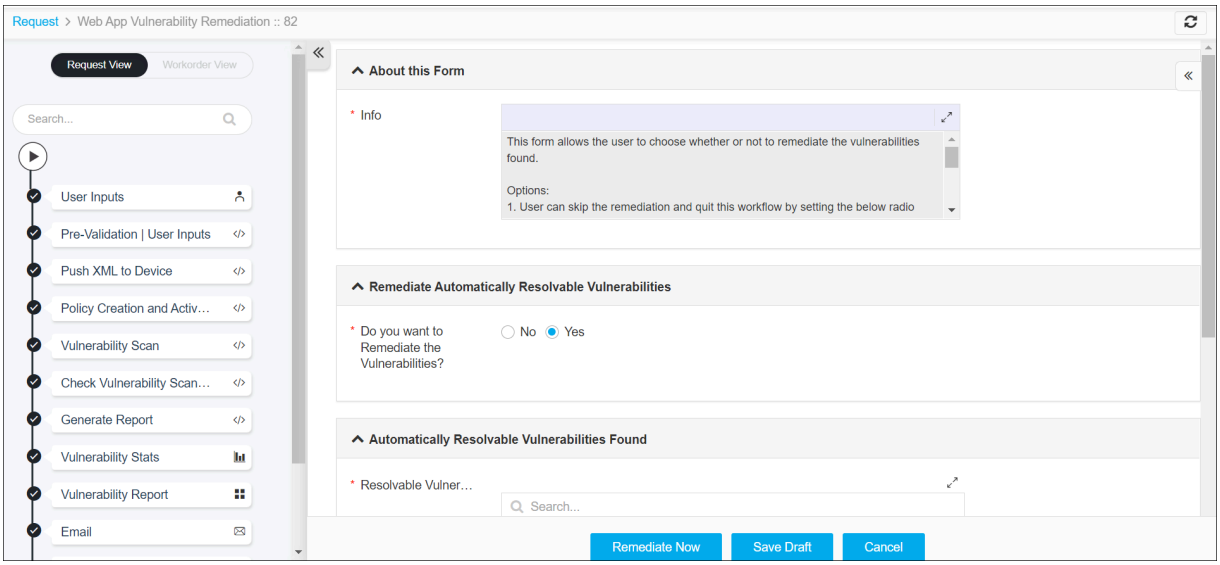


The report can be downloaded by clicking the Download ( ) button.

13. Click the **Submit** button.

    The workflow reached the **Choice to Remediate** stage.

14. Select the option to resolve the vulnerabilities automatically or not.



If you select

- **Yes**, the identified vulnerabilities will be resolved.
- **No**, the vulnerabilities will not be resolved.

15. Click **Remediate Now**.

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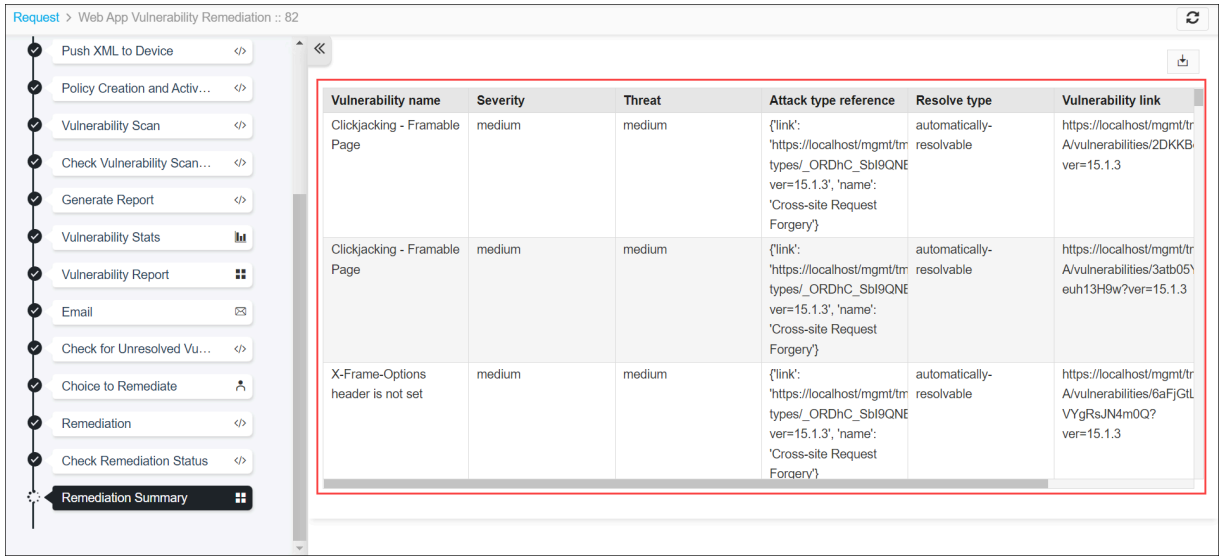
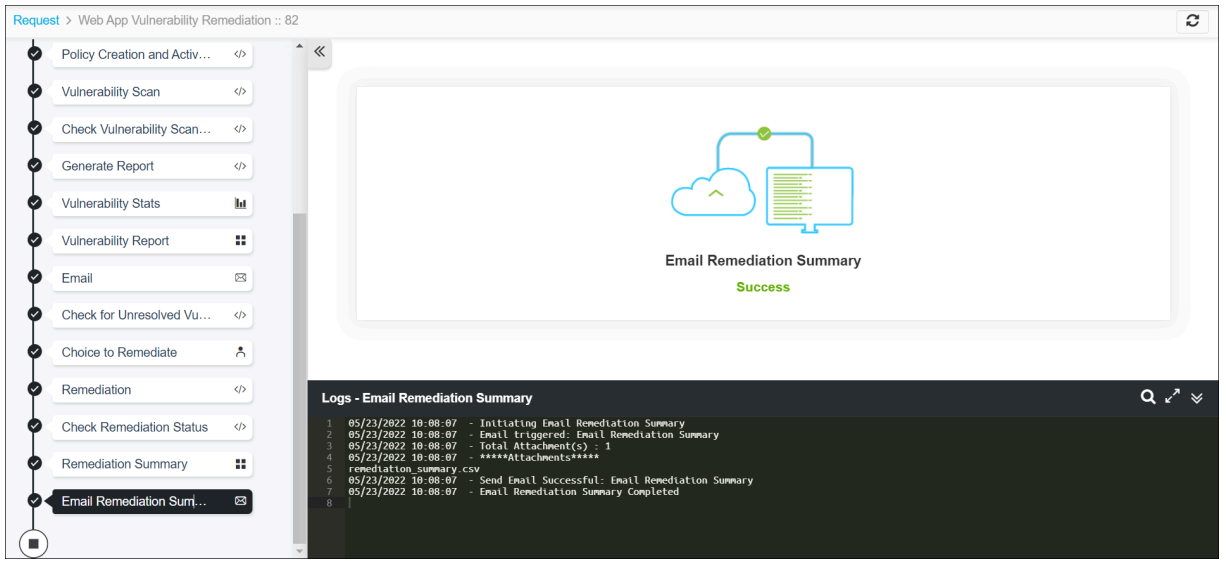
16. View the remediation summary under the **Remediation Summary** tab.



The report can be downloaded by clicking the Download ( ) button.

17. It takes a while for the workflow completion and the email is triggered with remediation report.



Note: The validation stages are shown in the left side of the screen. To view a validation stage, click on the respective stage.

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AVI SLB/GSLB

- AVI SLB
- AVI GSLB

AVI SLB

- Create AVI SLB service – Basic
- Modify AVI SLB service
- Modify AVI SLB service – Advanced
- Delete AVI SLB service

Create AVI SLB service – Basic

This workflow creates a virtual service on AVI devices. The virtual service can be of HTTP, HTTPS, L4, or L4 SSL/TLS type. The SSL certificate and SSL profile can be attached based on the virtual service type. The Pool members can be attached as IP and hostname, IP range, or IP group.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **AVI SLB** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Create AVI SLB service – Basic** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click

.
   The **Request > Create AVI SLB service – Basic :: FormBuilder** page is displayed.
5. Select **Device Info**.

Device Info Section - Field and Description Table

Field	Description
Data center	Displays the list of datacenters of the devices, which are created in the Device Inventory. Select the datacenter of a device from the drop-down option for which this request is to be created. For the devices, which are created without a datacenter in the Device Inventory, select the datacenter as **None**.

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Field	Description
***Device Name**	Displays the list of devices associated with the selected datacenter. If the datacenter is selected as **None**, the devices that are created without datacenter details are listed. Select the desired device from the drop-down option.
***Cloud**	Clouds are containers for the environment that Vantage is installed or operating within. During the initial setup of Vantage, a default cloud, named “Default-Cloud”, is created. This is where the first Controller is deployed, into Default-Cloud. Additional clouds may be added, containing SEs and virtual services. Select a cloud from the drop-down list.
***Tenant Name**	A tenant is an isolated instance of Avi Vantage. Each Avi Vantage user account is associated with one or more tenants. The tenant associated with a user account defines the resources that users can access within Avi Vantage. When a user logs in, Avi Vantage restricts their access to only those resources that are in the same tenant. Select a tenant's name from the drop-down list.
***VRF**	The Virtual Routing Framework (VRF) is a method of isolating traffic within a system. This is also referred to as a “Route Domain” within the load balancer community. Select a VRF from the drop-down list.

6. Enter/select the **Virtual Service Info**.

Virtual Service Info Section - Field and Description Table

Field	Description
***Name**	Enter the name of the virtual server.
***VIP Address**	Enter the VIP address.
***Service Port**	Enter a service port.
***Application Type**	Select one of the following application types from the drop-down list: • HTTP • HTTPS • L4 • L4 SSL/TLS
***Select Servers**	Select one of the following servers for the pools to be attached:

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Field	Description
	• IP • IP Range • IP Group
DNS	Enter the FQDN.
IP	Enter the IP address.
Server Details	Click the add icon to add the virtual server details to the list. After adding the server details to the list, you can manage them.

7. Click the **Submit** button.
   The Confirmation popup opens.

> **Note:**
> • If you want to save this form to edit it later, click the **Save Draft** button, and then click **Ok** in the Confirmation popup window. The form will be saved as Open request under **Request** > **My Request**.
> • If you want to cancel this form, click the **Cancel** button.

8. Click **Submit**.
   The **Confirmation** dialog box is displayed.
9. To save this form so you can edit it later, click **Save Draft** and then click **OK**.
   The form will be saved as **Open request** under **Request** > **My Request**.

   OR

   To submit the form, click **OK**.

   The validation starts automatically and reaches the **Review** stage.

> **Note:**
> • If there is any failure at this stage, start a new request by providing the correct data.
> • Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

10. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs:

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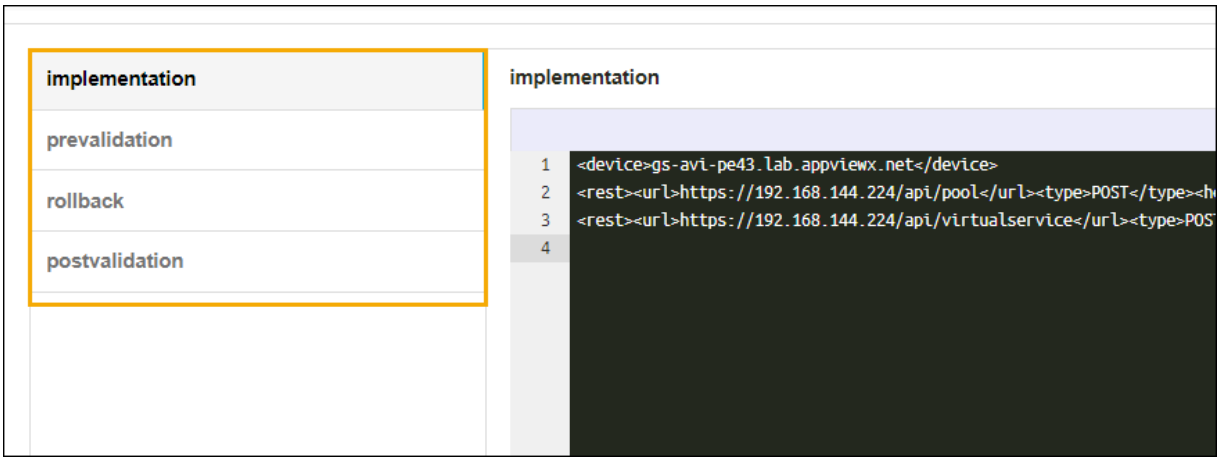
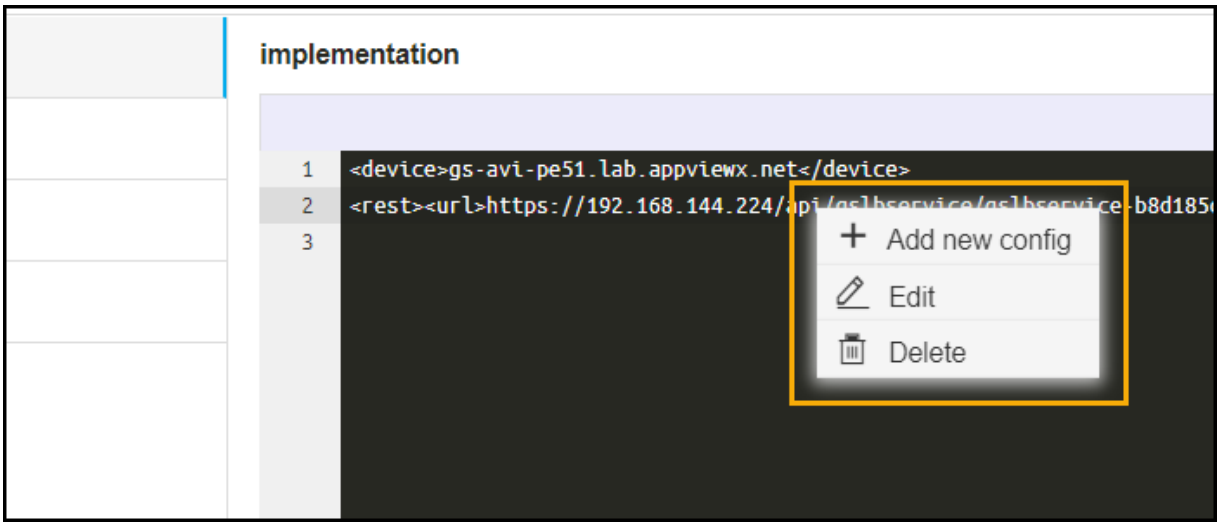


11. (Optional) To update any data at this stage, right click, as shown in the image below, and select the required option.



12. After the review, click **Submit**.
    The Confirmation popup opens.

> **Note:** To stop running the workflow creation, click **Cancel**.

13. Click **Ok** to continue the workflow creation.
    It takes a while to complete the request.
14. The workflow is created and the email is triggered to the configured email IDs.

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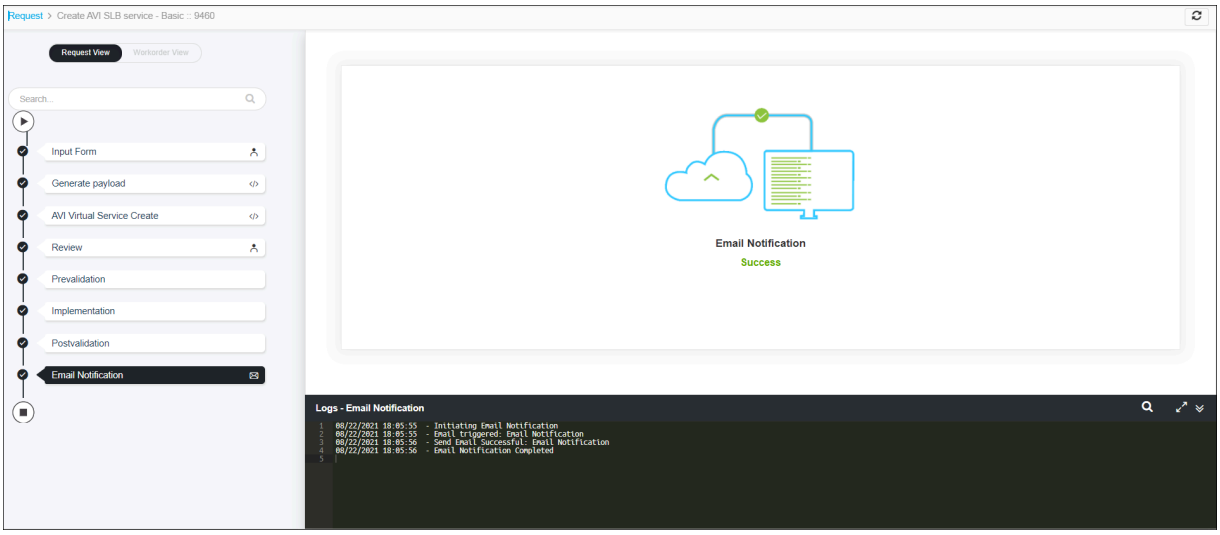

Note: The stages of the request are shown in the left-side of the screen. To view a particular stage of the request, click the respective stage.

Modify AVI SLB service

By running this workflow, you can modify a virtual service on the AVI device.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **AVI SLB** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Modify AVI SLB service** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click

.
   The **Request > Modify AVI SLB service :: FormBuilder** page is displayed.
5. Provide the device information and fetch the details of a virtual service.
6. Modify the necessary details of a virtual service for a device.
7. Click the **Submit** button.
   The Confirmation popup opens.

Note:

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- If you want to save this form to edit it later, click the **Save Draft** button, and then click **Ok** in the Confirmation popup window. The form will be saved as Open request under **Request** > **My Request**.
- If you want to cancel this form, click the **Cancel** button.

8. Click **Submit**.
   The **Confirmation** dialog box is displayed.
9. To save this form so you can edit it later, click **Save Draft** and then click **OK**.
   The form will be saved as **Open request** under **Request** > **My Request**.

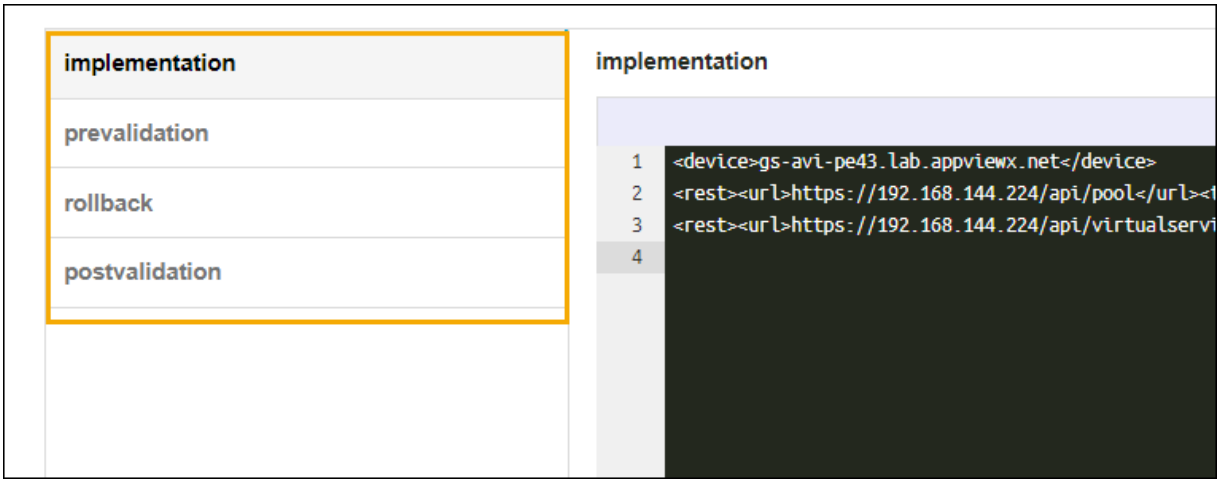
   OR

   To submit the form, click **OK**.

   The validation starts automatically and reaches the **Review** stage.

Note:
- If there is any failure at this stage, start a new request by providing the correct data.
- Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

10. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs:



11. (Optional) To update any data at this stage, right click, as shown in the image below, and select the required option.
12. After the review, click the **Submit** button.
    The Confirmation popup opens.

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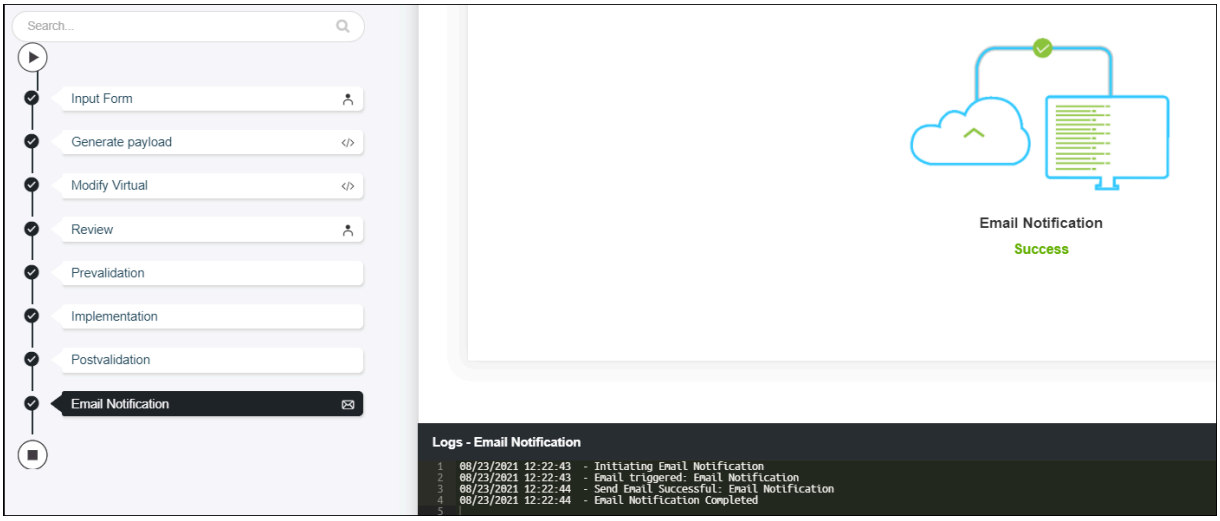
Note: To stop running the workflow creation, click **Cancel**.

13. Click **Ok** to continue the workflow creation.
    It takes a while to complete the request.
14. The workflow is created and the email is triggered to the configured email IDs.



Note: The stages of the request are shown in the left-side of the screen. To view a particular stage of the request, click the respective stage.

Modify AVI SLB service – Advanced

By running this workflow, you can create a virtual service on an AVI device. You can modify advanced parameters (like SNAT IP, host name translation, etc.), objects (like application profile, network profile, WAF policy, etc.), and/or pools attached to a virtual service.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **AVI SLB** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Modify AVI SLB service – Advanced** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click Run.
   The **Request > Modify AVI SLB service – Advanced :: FormBuilder** page is displayed.

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5. Enter/select the **Device Info**.
   The **Virtual Service Info** details are automatically retrieved.
6. As required, modify the virtual service and pool details for a device.
7. Click **Submit**.
   The **Confirmation** dialog box is displayed.
8. To save this form so you can edit it later, click **Save Draft** and then click **OK**.
   The form will be saved as **Open request** under **Request** > **My Request**.

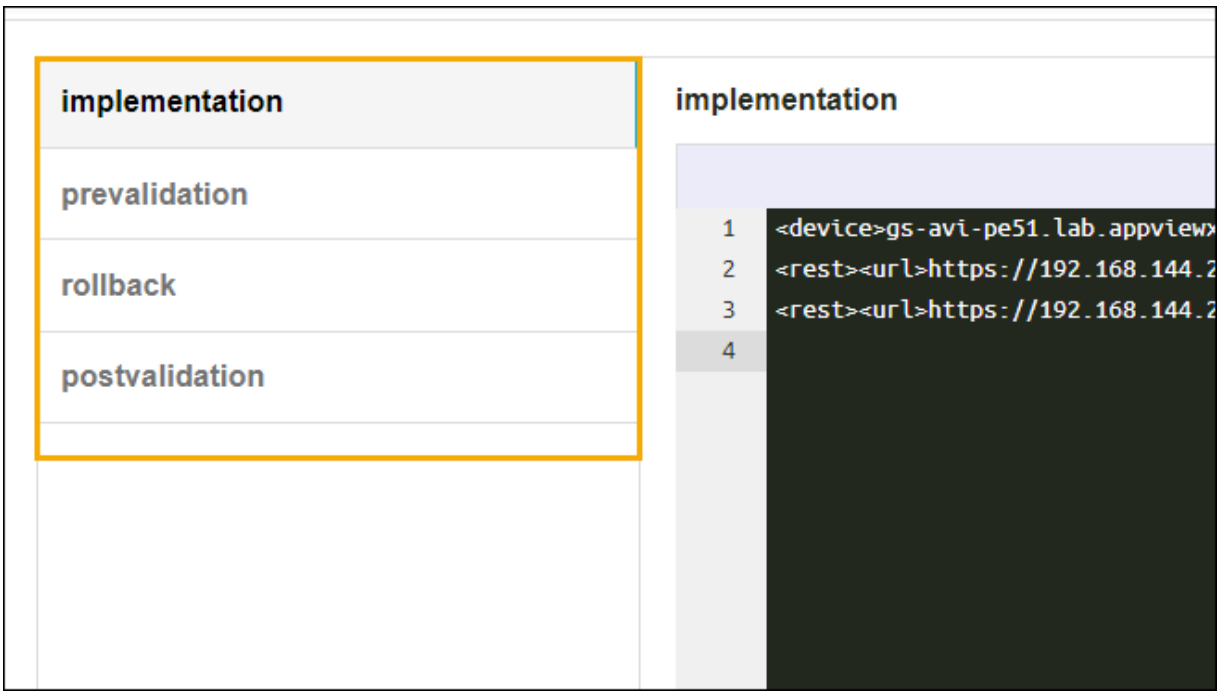
   OR

   To submit the form, click **OK**.

   The validation starts automatically and reaches the **Review** stage.

> **Note:**
> - If there is any failure at this stage, start a new request by providing the correct data.
> - Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

9. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs:



10. (Optional) If you need to change any data at this stage, right click, as shown in the image below, and select the required option.

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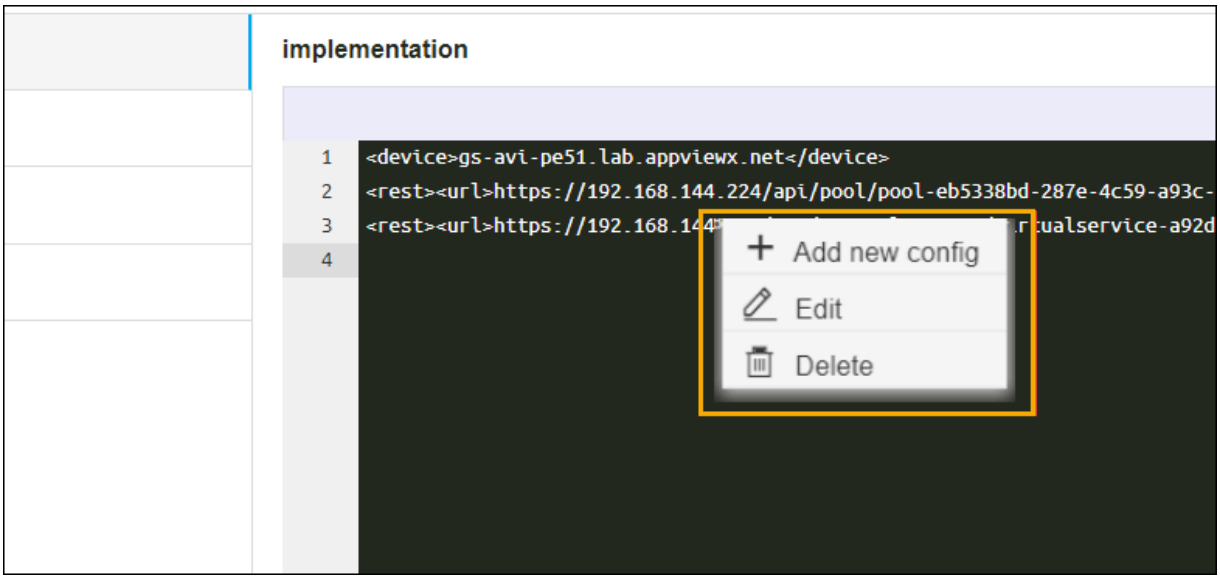


11. After the review, click **Submit**.

    The **Confirmation** dialog box is displayed.

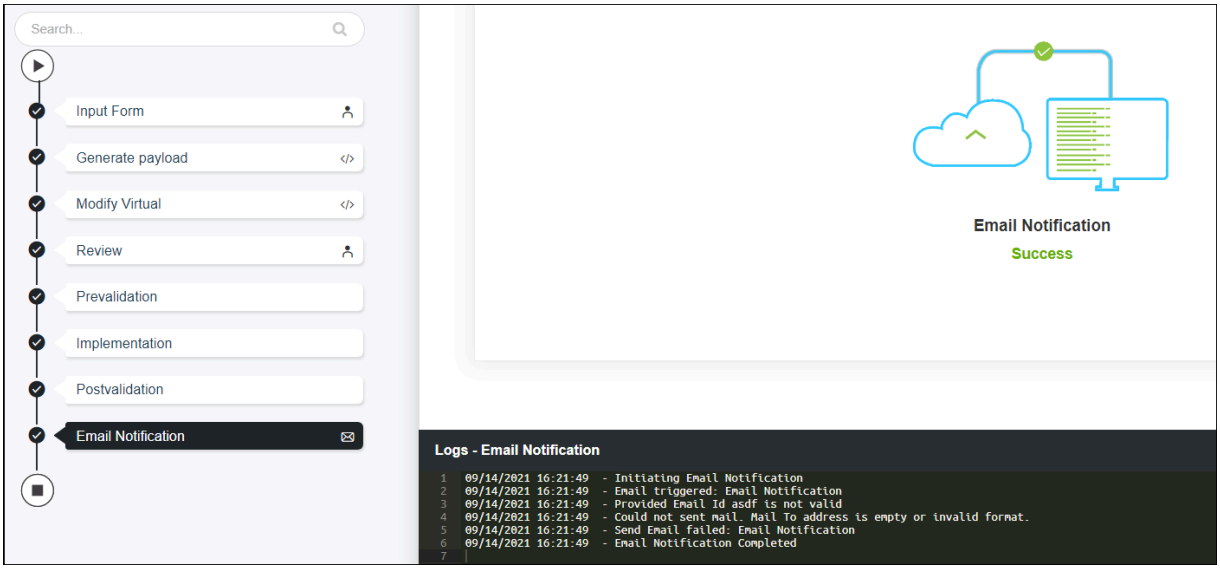
12. To continue with the workflow creation, click **Ok**

    OR

    To abort the workflow creation, click **Cancel**.

    It takes a while to complete the post-validation.

    When the workflow is created, an email is triggered to all the configured email IDs.



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Note: The validation stages are shown in the left side of the screen. To view a validation stage, click on the respective stage.

Delete AVI SLB service

By running this workflow, you can delete a virtual service from AVI device by fetching all virtual services based on device, cloud, and tenant name.

Warning: This workflow deletes attached objects like pool, application profile, network profile, etc.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **AVI SLB** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Delete AVI SLB service** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click

.
   The **Request > Delete AVI SLB service :: FormBuilder** page is displayed.
5. Enter the SLB service details that are to be deleted.
6. Click **Submit**.
   The **Confirmation** dialog box is displayed.
7. To save this form so you can edit it later, click **Save Draft** and then click **OK**.
   The form will be saved as **Open request** under **Request** > **My Request**.

   OR

   To submit the form, click **OK**.

   The validation starts automatically and reaches the **Review** stage.

Note:
- If there is any failure at this stage, start a new request by providing the correct data.
- Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

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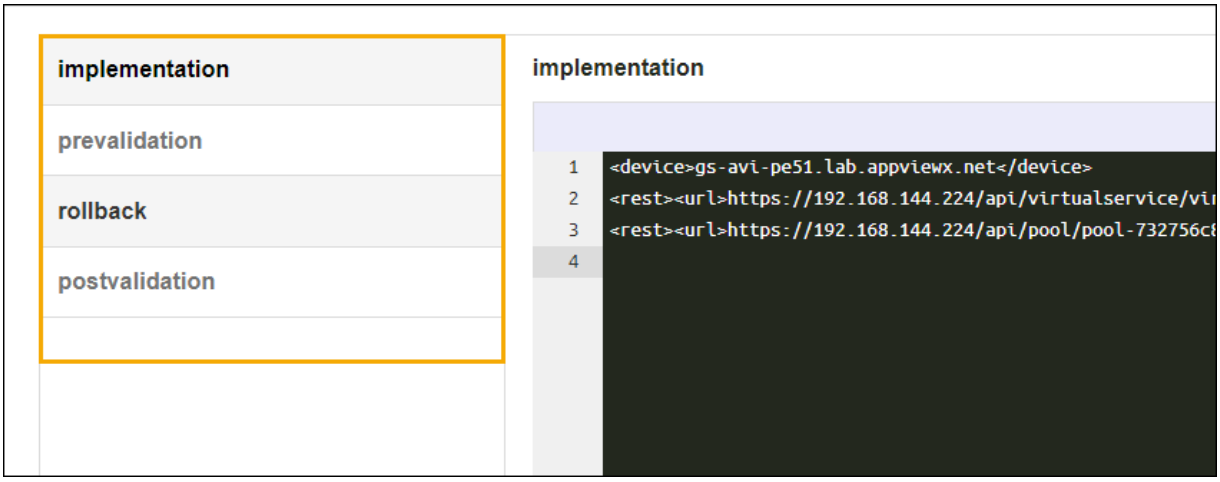
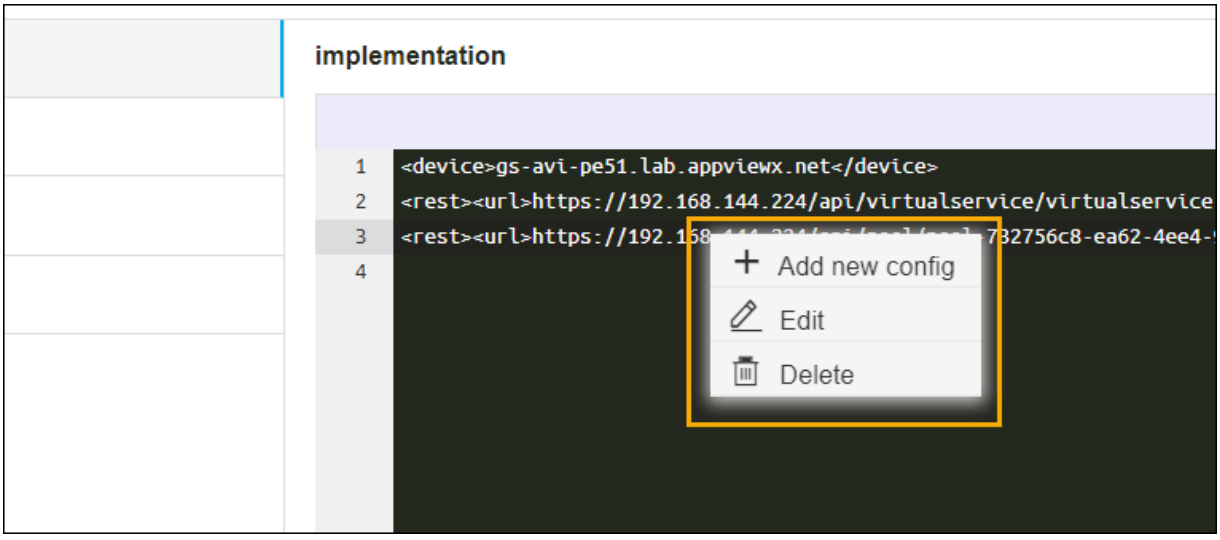
8. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs:



9. (Optional) If you need to change any data at this stage, right click, as shown in the image below, and select the required option.



10. After the review, click **Submit**.

    The **Confirmation** dialog box is displayed.

11. To continue with the workflow creation, click **Ok**

    OR

    To abort the workflow creation, click **Cancel**.

    It takes a while to complete the post-validation.

    When the workflow is created, an email triggered to all the configured email IDs.

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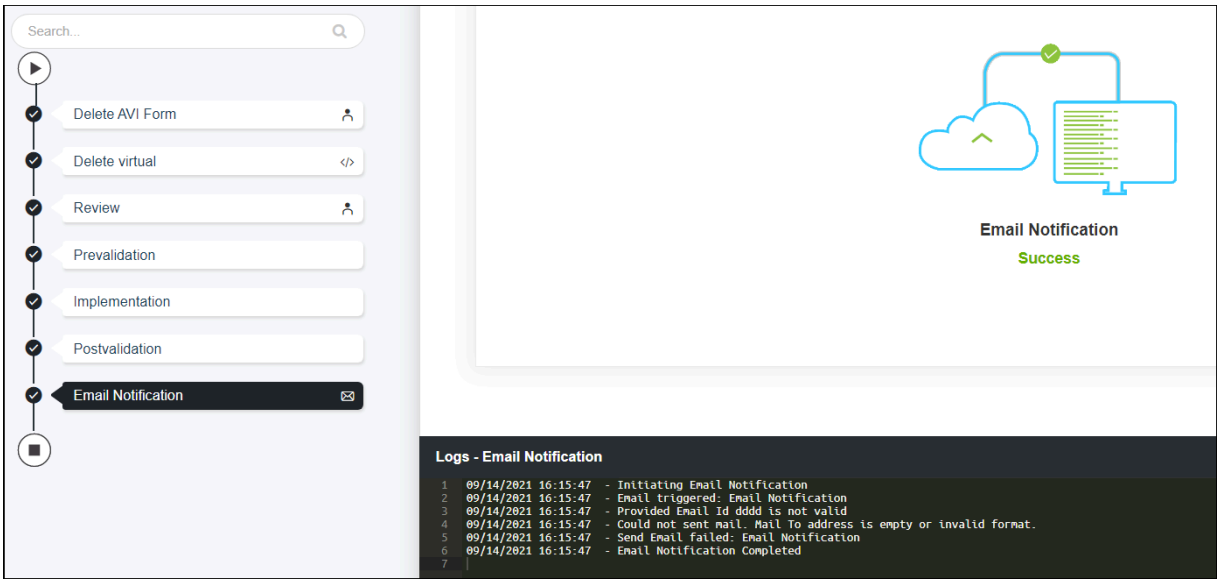

Note: The validation stages are shown in the left side of the screen. To view a validation stage, click on the respective stage.

AVI GSLB

- Create AVI GSLB service
- Modify AVI GSLB service
- Delete AVI GSLB service

Create AVI GSLB service

By running this workflow, you can create a GSLB service in AVI devices. Provide the Domain names according to the subdomains configured on the device, Health Monitors, and application persistence profiles for the GSLB service. The pool members can either be an IP or existing virtual service.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **AVI GSLB** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Create AVI GSLB service** workflow.
   The **Run** and **Schedule** buttons are displayed.

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4. Click Run.

   The **Request > Create AVI GSLB service :: FormBuilder** page is displayed.

5. Enter/select the **Device Config**.

Device Config Section - Field and Description Table

Field	Description
Datacenter	Displays the list of datacenters of the devices, which are created in the Device Inventory. Select the datacenter of a device from the drop-down option for which this request is to be created. For the devices, which are created without a datacenter in the Device Inventory, select the datacenter as **None**.
***Device Name**	Displays the list of devices associated with the selected datacenter. If the datacenter is selected as **None**, the devices that are created without datacenter details are listed. Select the desired device from the drop-down option.
Tenant	A tenant is an isolated instance of Avi Vantage. Each Avi Vantage user account is associated with one or more tenants. The tenant associated with a user account defines the resources that users can access within Avi Vantage. When a user logs in, Avi Vantage restricts their access to only those resources that are in the same tenant. Select a tenant from the drop-down list.

6. Enter/select the **GSLB Config** details.

GSLB Config Section - Field and Description Table

Field	Description
***GSLB Name**	Enter GSLB name.
***Application Name**	Enter the name of the application associated with the object.
***Domain Names**	Make use of the following buttons to add and manage application name.
***Health Monitor**	An association between a health or performance monitor and an entire pool, rather than with individual pool members. This eases the task of configuring health and performance monitoring for multiple web servers. To get the list of health monitors,

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Field	Description
	click the Retrieve button, and then select the objects from the drop-down option.
Controller Health status	Select the health status. The possible values are: • False (default) • True - enables you to verify the proper operation of your system and ensure your hardware and software function at peak efficiency.
***Health Monitor Scope**	Select the health monitor scope from the drop-down list.
Pool Load Balancing Algorithm	Select the pool load balancing algorithm from the drop-down list.
Site Persistence Enabled	Click the True radio button to enable site persistence and when a local DNS makes repetitive requests on behalf of a client, the system reconnects the client to the same resource as previous requests.
***Pool Name**	Enter the pool name.
lb_algorithm	Select the lb_algorithm from the drop-down list.
Pool Member Type	Select the virtual configuration type. The possible values are: • IP • Virtual Service
Pool Member IP	Enter the IP address or virtual service. Based on the selection that is made in the **Type** field, enter the IP address or retrieve and select a virtual service from the drop-down list.
Pool Member Enabled	By default, the pool member is enabled. To disable the pool member, click the **True** radio button.
Priority	To specify a priority, you must activate priority group usage when you create a new pool or when adding or removing pool members. When activated, the system load balances traffic according to the priority group number assigned to the pool member.

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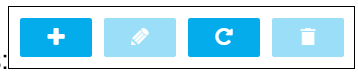
Field	Description
Ratio	The system selects a pool based on the ratio that you assign to the pool. Enter the ratio of the pool.
Public Ip	Enter the public IP address.
Pool Members	The pool members can be added or managed by using the following buttons: 
TTL served by DNS Service	Specify TTL (time to live) settings for Infoblox host records and resource records. TTL is the time that a name server is allowed to cache data. After the TTL expires, the name server is required to update the data.
Down Response	Select the down response from the drop-down.
Number of IPs returned by DNS serve	Enter the number of IPs that are returned by the DNS service.

7. Click **Submit**.

   The **Confirmation** dialog box is displayed.
8. To save this form so you can edit it later, click **Save Draft** and then click **OK**.

   The form will be saved as **Open request** under **Request** > **My Request**.

   OR

   To submit the form, click **OK**.

   The validation starts automatically and reaches the **Review** stage.

   Note:
   - If there is any failure at this stage, start a new request by providing the correct data.
   - Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.
9. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs:

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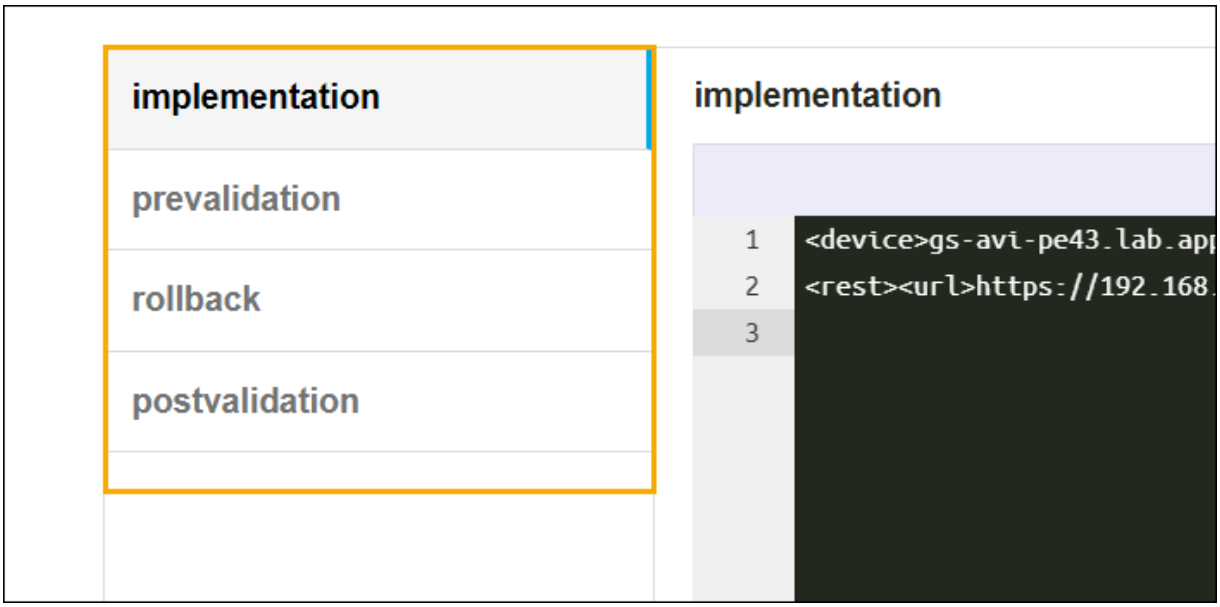
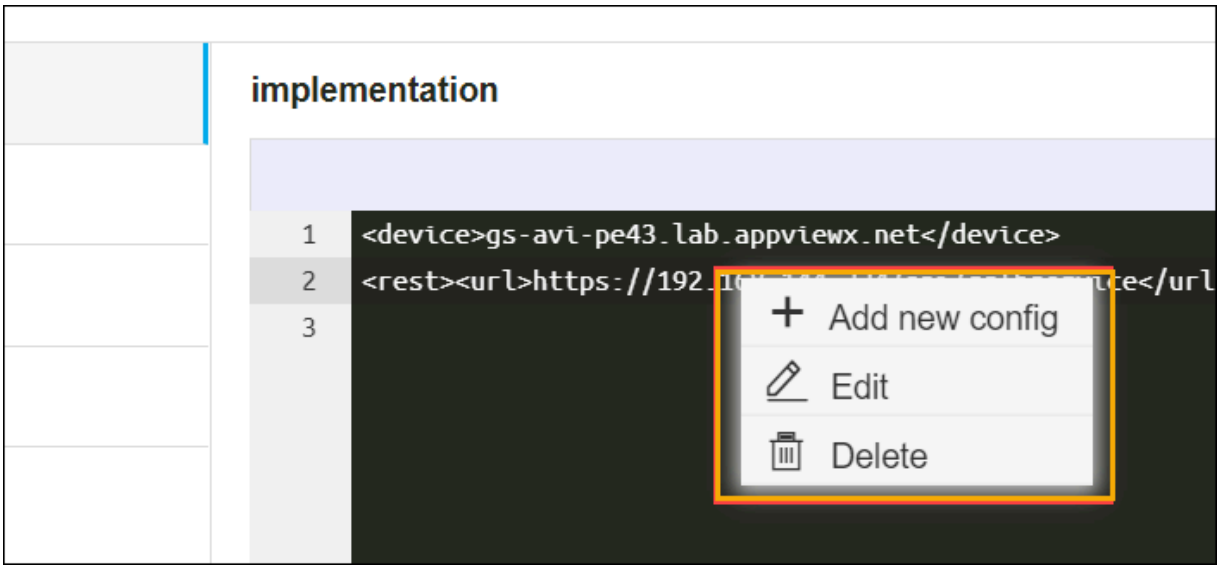


10. (Optional) If you need to change any data at this stage, right click, as shown in the image below, and select the required option.



11. After the review, click **Submit**.

    The **Confirmation** dialog box is displayed.

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Modify AVI GSLB service

By running this workflow, you can modify a GSLB service on AVI device. In modifying flow, it lists available domains under GSLB service and you can add or modify domains. The pool members can also be modified.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **AVI GSLB** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Modify AVI GSLB service** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click

.
   The **Request > Modify AVI GSLB service :: FormBuilder** page is displayed.
5. Enter the device information in the **Device Config** section and fetch the details of a GSLB configuration.

   Note: The **GSLB Config** details are automatically fetched.

6. Modify the necessary details of the GSLB service.
7. Click **Next**.
8. To save this form so you can edit it later, click **Save Draft** and then click **OK**.
   The form will be saved as **Open request** under **Request** > **My Request**.

   OR

   To submit the form, click **OK**.

   The validation starts automatically and reaches the **Review** stage.

   Note:
   - If there is any failure at this stage, start a new request by providing the correct data.
   - Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

9. Review the input data under the **implementation**, **rollback**, and **postvalidatio**n tabs:

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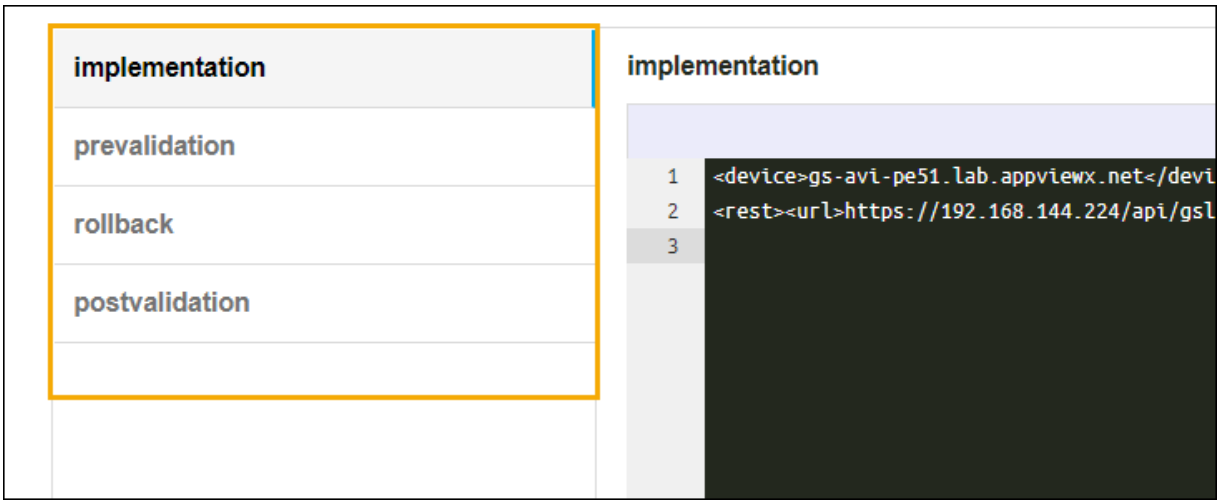
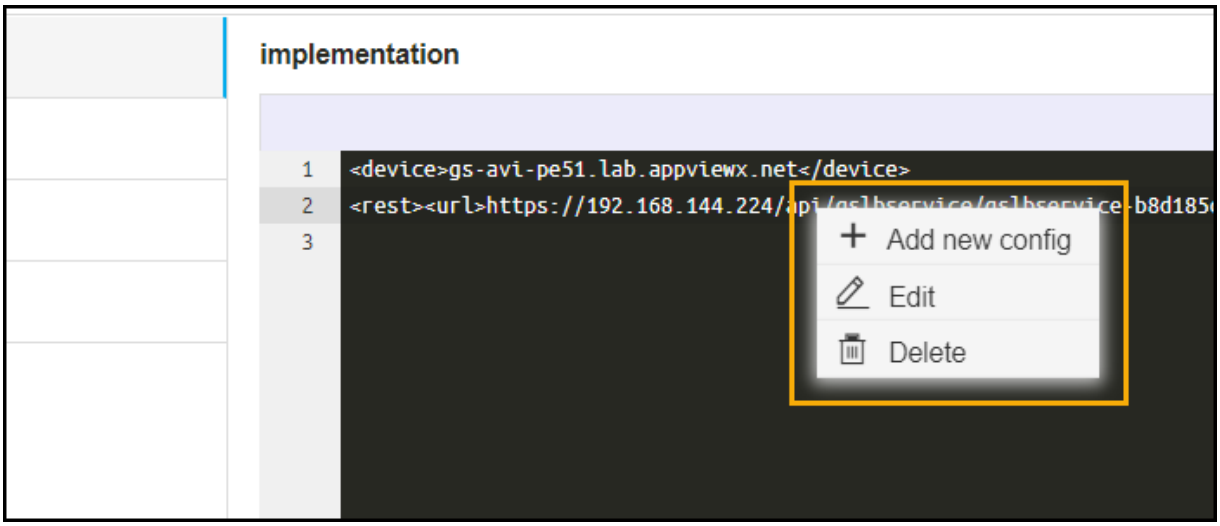


10. (Optional) If you need to change any data at this stage, right click, as shown in the image below, and select the required option.



11. After the review, click **Submit**.

    The **Confirmation** dialog box is displayed.

12. To continue with the workflow creation, click **Ok**

    OR

    To abort the workflow creation, click **Cancel**.

    It takes a while to complete the post-validation.

    When the workflow is created, an email is triggered to all the configured email IDs.

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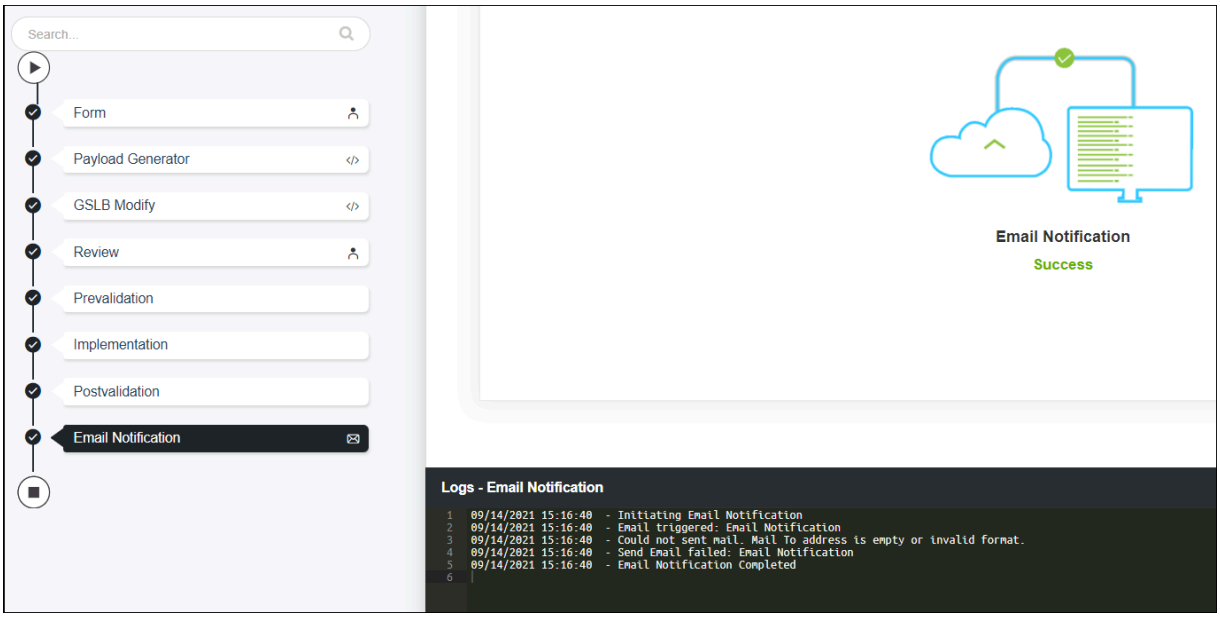

Note: The validation stages are shown in the left side of the screen. To view a validation stage, click on the respective stage.

Delete AVI GSLB service

By running this workflow, you can delete a GSLB service from AVI device by fetching all the GSLB service from the device based on tenant name. You can delete any GSLB service from the list.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **AVI GSLB** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Delete AVI GSLB service** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click Run.
   The **Request > Delete AVI GSLB service :: FormBuilder** page is displayed.
5. Enter the GSLB device details that are to be deleted.
6. Click **Next**.
7. To save this form so you can edit it later, click **Save Draft** and then click **OK**.
   The form will be saved as **Open request** under **Request** > **My Request**.

   OR

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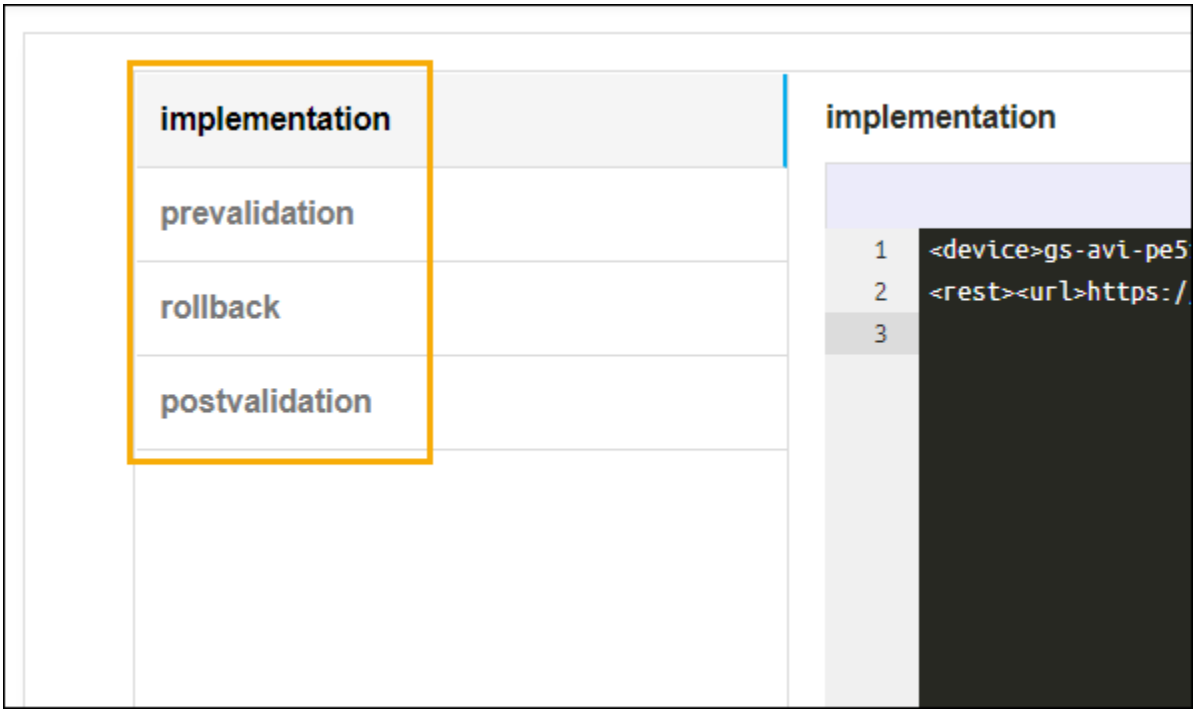
To submit the form, click **OK**.

The validation starts automatically and reaches the **Review** stage.

Note:

- If there is any failure at this stage, start a new request by providing the correct data.
- Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

8. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs:



9. (Optional) If you need to change any data at this stage, right click, as shown in the image below, and select the required option.

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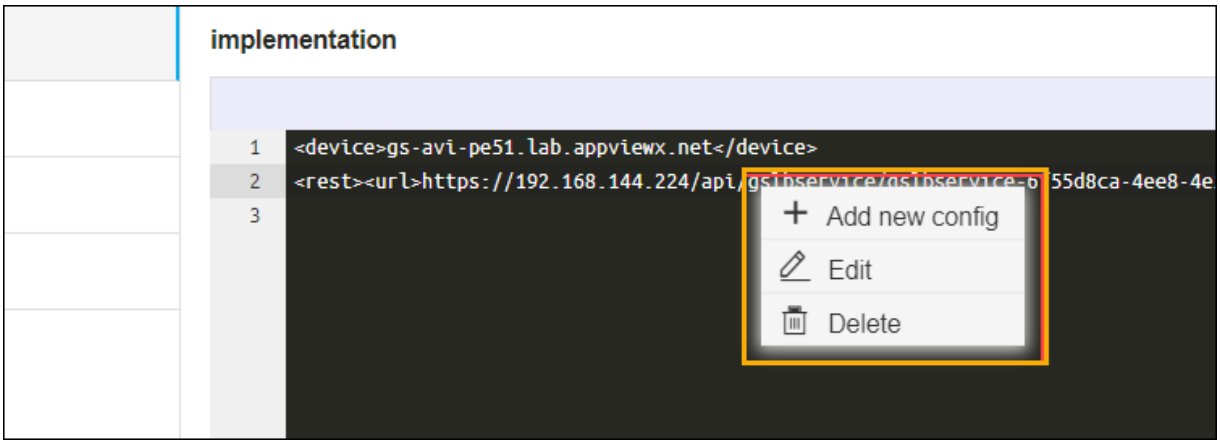

10. After the review, click **Submit**.
    The **Confirmation** dialog box is displayed.
11. To continue with the workflow creation, click **Ok**
    OR

    To abort the workflow creation, click **Cancel**.

    It takes a while to complete the post-validation.

    When the workflow is created, an email triggered to all the configured email IDs.

> **Note:** The validation stages are shown in the left side of the screen. To view a validation stage, click on the respective stage.

Infoblox IPAM

- Create Infoblox DNS Records – Basic
- Modify Infoblox DNS Records - Basic
- Delete Infoblox DNS Records - Basic
- Modify Infoblox DNS Record – Advanced
- Delete Infoblox DNS Records – Advanced

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Create Infoblox DNS Records – Basic

This workflow creates records in Infoblox and multiple record types (A, HOST, PTR, CNAME, TXT, MX) using the table. In the case of A, Host, and PTR record creation, IP can be fetched and reserved on the fly.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **Infoblox IPAM** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Create Infoblox DNS Records – Basic** workflow. The **Run** and **Schedule** buttons are displayed.
4. Click

.
   The **Request > Create Infoblox DNS Records – Basic :: FormBuilder** page is displayed.
5. Enter/select **Device Info**.

Device Info Section - Field and Description Table

Field	Description
***Device Name**	Select the device name from the drop-down list.

6. Enter/select **Record Info**.

Record Info Section - Field and Description Table

Field	Description
***Network View**	Select the network view from the drop-down option.
***DNS View**	Select the DNS view from the drop-down option.
***Record Type**	Select the record types from the drop-down option. The record types are A, HOST, PTR, CNAME, TXT, MX). In the case of A, Host, and PTR record creation, IP can be fetched and reserved on the fly. The record type A is shown.
***TTL**	Specify TTL (time to live) settings for Infoblox host records and resource records. TTL is the time that a name server is allowed to cache data. After the TTL expires, the name server is required to update the data.

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7. If you cancel this request, remember to free the reserved IP by clicking the **Un-reserve IP** button.
8. Click **Submit**.

   The **Confirmation** dialog box is displayed.
9. To save this form so you can edit it later, click **Save Draft** and then click **OK**.

   The form will be saved as **Open request** under **Request** > **My Request**.

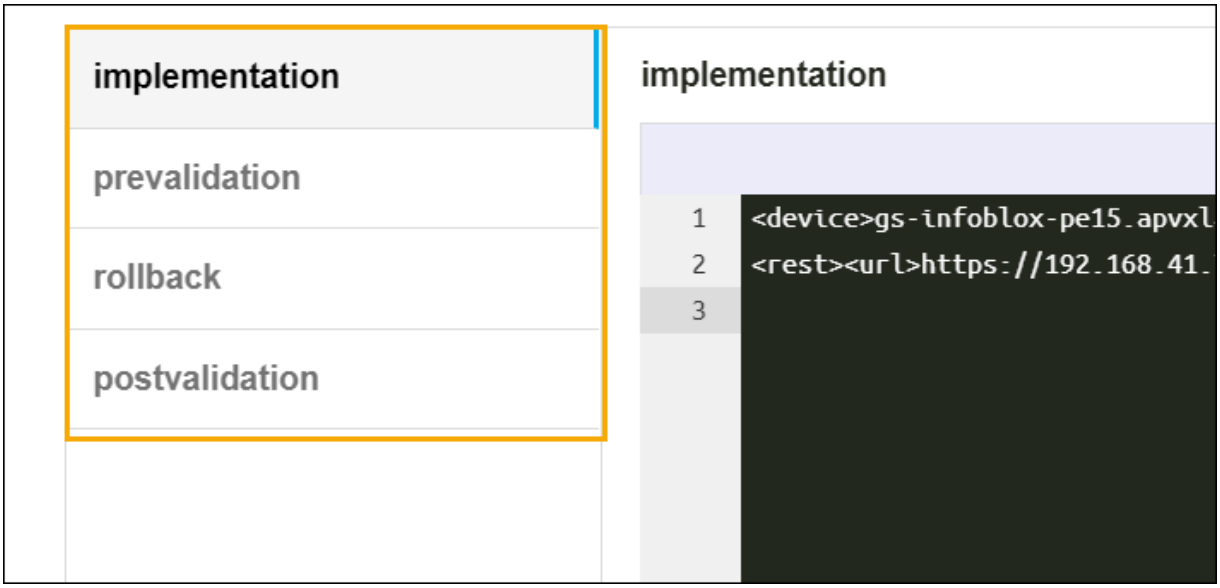
   OR

   To submit the form, click **OK**.

   The validation starts automatically and reaches the **Review** stage.

> **Note:**
> - If there is any failure at this stage, start a new request by providing the correct data.
> - Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

10. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs:



11. (Optional) If you need to change any data at this stage, right click, as shown in the image below, and select the required option.

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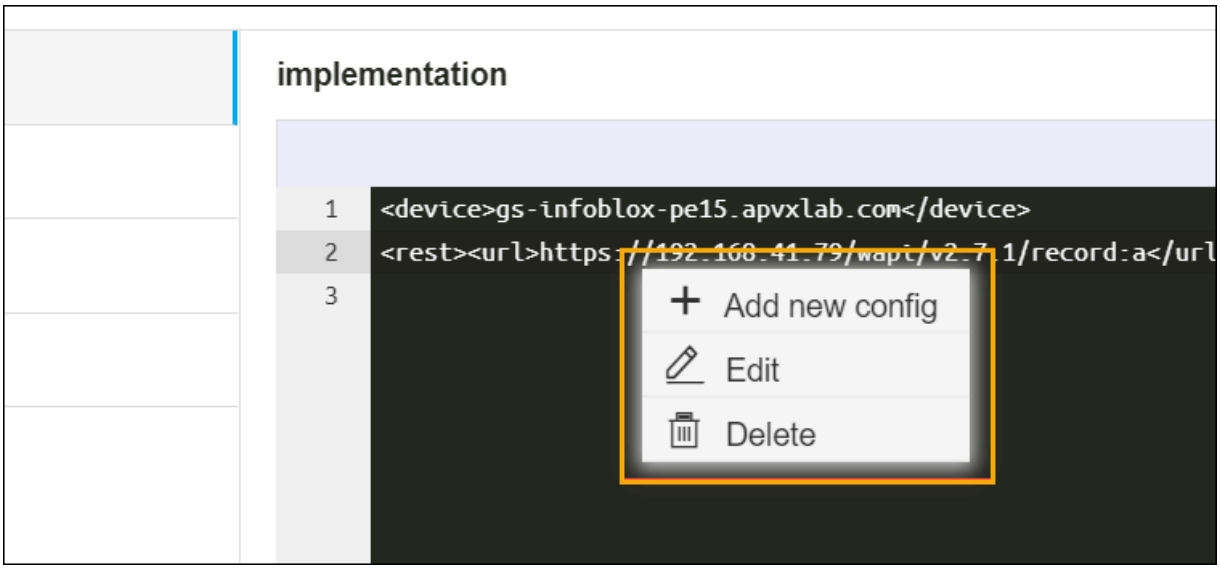


12. After the review, click **Submit**.

    The **Confirmation** dialog box is displayed.

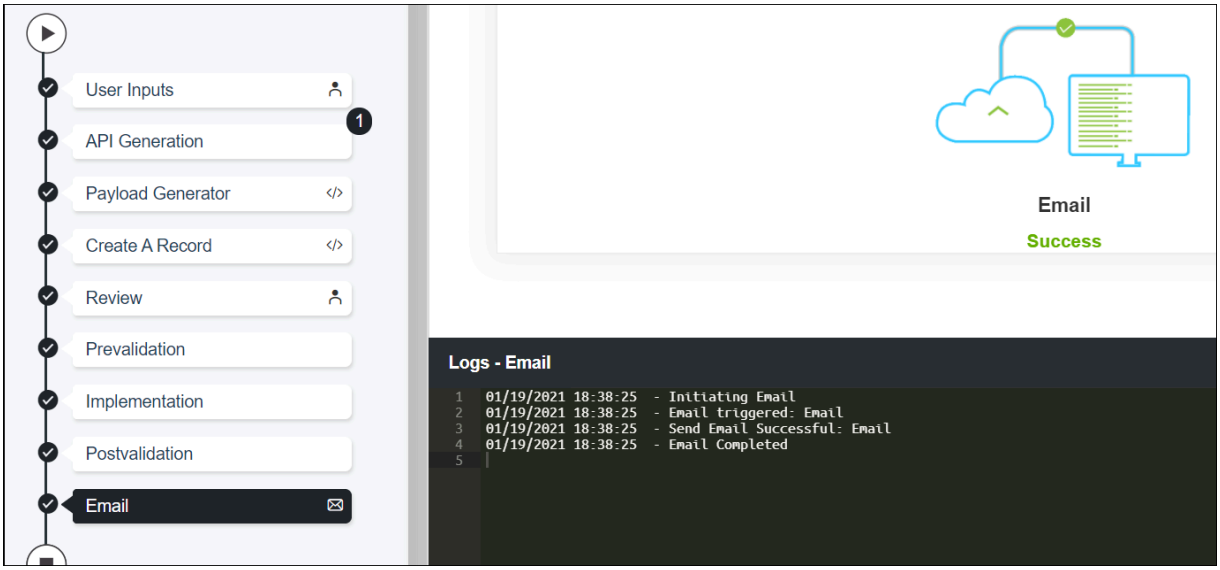
13. To continue with the workflow creation, click **Ok**

    OR

    To abort the workflow creation, click **Cancel**.

    It takes a while to complete the post-validation.

    When the workflow is created, an email is triggered to all the configured email IDs.



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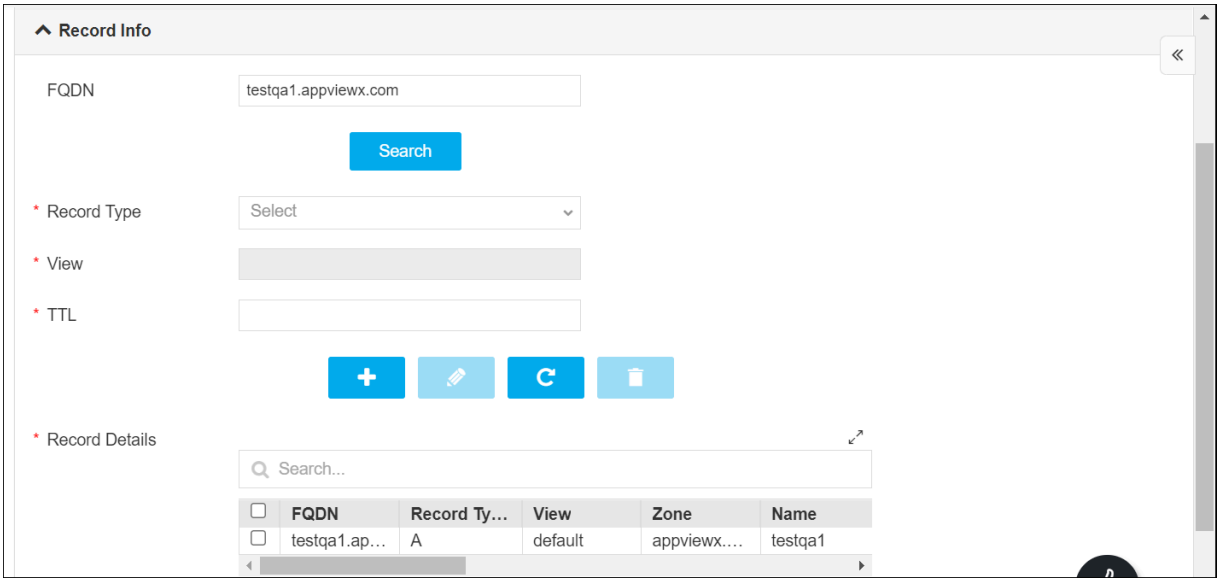
Note: The validation stages are shown in the left side of the screen. To view a validation stage, click on the respective stage.

Modify Infoblox DNS Records - Basic

This workflow modifies existing records in Infoblox by fetching the existing records based on App Name. By using this workflow, you can modify multiple (A, HOST, PTR,CNAME,TXT,MX) records using the table.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **Infoblox IPAM** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Modify Infoblox DNS Records - Basic** workflow. The **Run** and **Schedule** buttons are displayed.
4. Click Run.
   The **Request > Modify Infoblox DNS Records - Basic :: FormBuilder** page is displayed.
5. Provide the necessary details of DNS record for a device.



6. Click **Submit**.
   The **Confirmation** dialog box is displayed.
7. To save this form so you can edit it later, click **Save Draft** and then click **OK**.

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The form will be saved as **Open request** under **Request** > **My Request**.

OR

To submit the form, click **OK**.

The validation starts automatically and reaches the **Review** stage.

Note:

- If there is any failure at this stage, start a new request by providing the correct data.
- Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

8. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs.

9. (Optional) If you need to change any data at this stage, right click, as shown in the image below, and select the required option.

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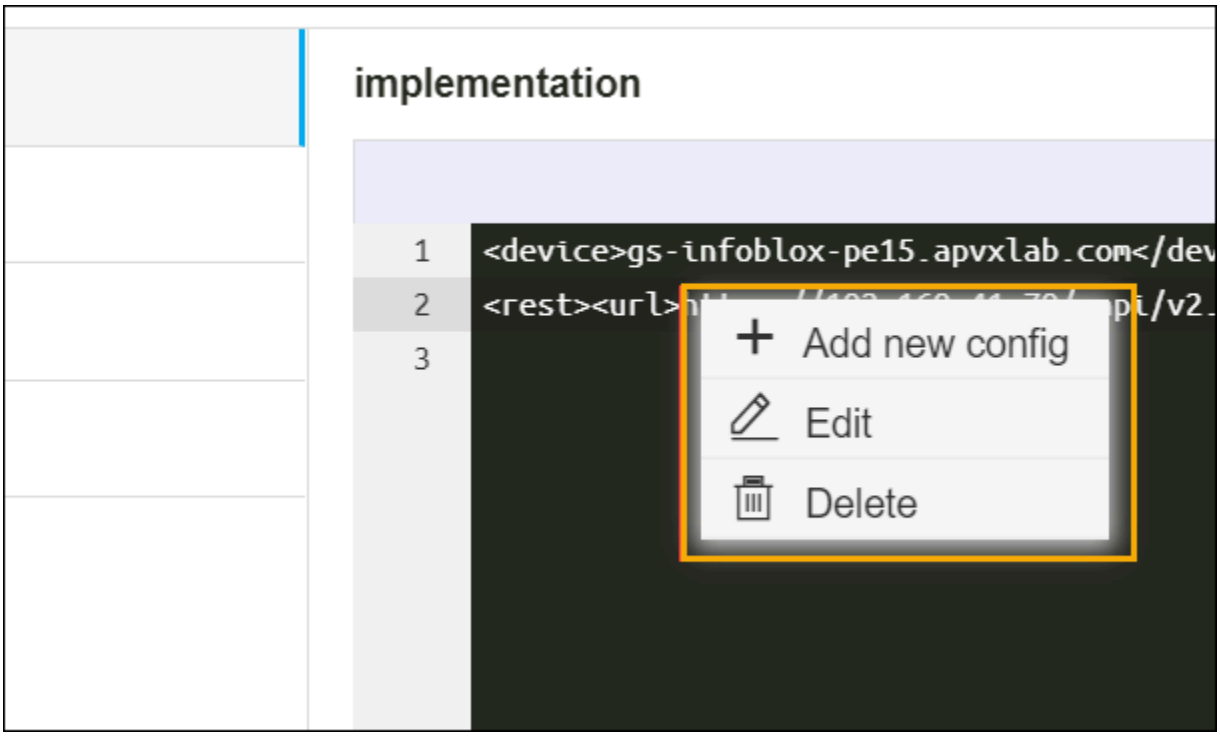

10. After the review, click **Submit**.

    The **Confirmation** dialog box is displayed.

11. To continue with the workflow creation, click **Ok**

    OR

    To abort the workflow creation, click **Cancel**.

    It takes a while to complete the post-validation.

    When the workflow is created, an email is triggered to all the configured email IDs.

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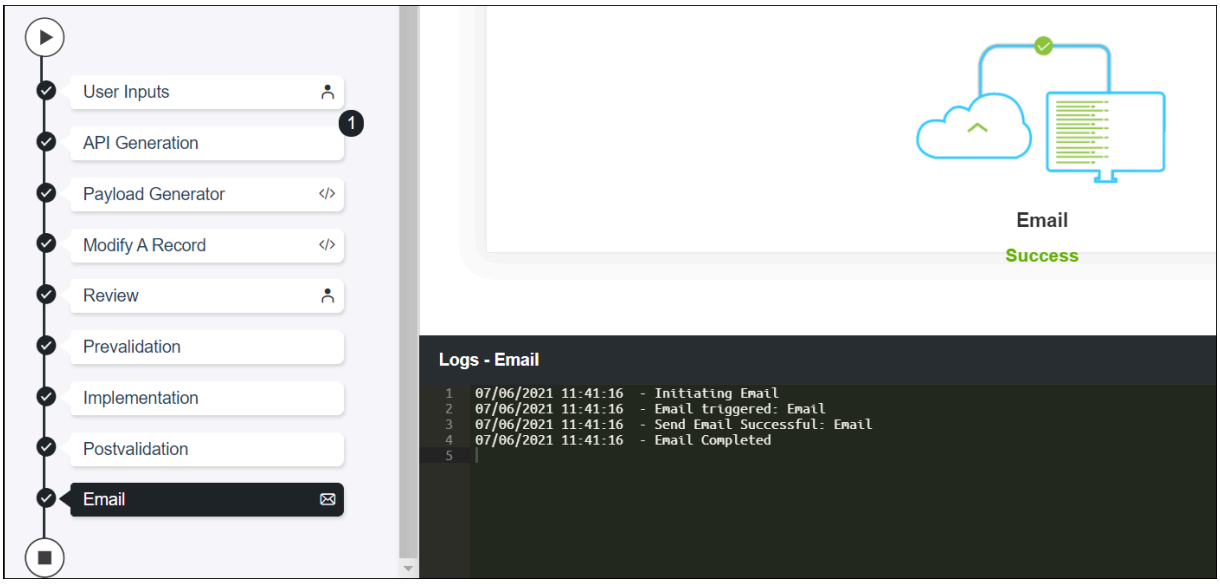

Note: The validation stages are shown in the left side of the screen. To view a validation stage, click on the respective stage.

Delete Infoblox DNS Records - Basic

This workflow deletes existing records in Infoblox by fetching the existing records based on App Name. By using this workflow, you can modify multiple (A, HOST, PTR, CNAME, TXT, MX) records using the table.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **Infoblox IPAM** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Delete Infoblox DNS Records - Basic** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click Run.
   The **Request > Delete Infoblox DNS Records - Basic :: FormBuilder** page is displayed.
5. Provide the DNS record details of the device are to be deleted.

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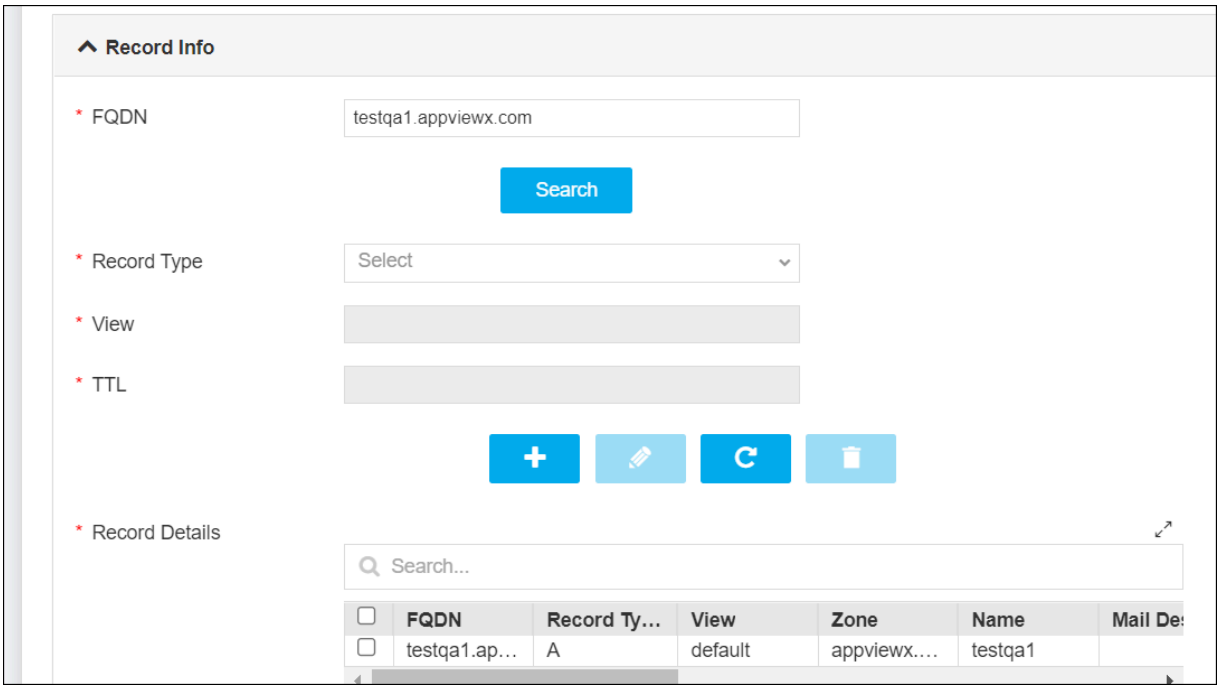

6. Click **Submit**.

   The **Confirmation** dialog box is displayed.

7. To save this form so you can edit it later, click **Save Draft** and then click **OK**.

   The form will be saved as **Open request** under **Request** > **My Request**.

   OR

   To submit the form, click **OK**.

   The validation starts automatically and reaches the **Review** stage.

> **Note:**
> - If there is any failure at this stage, start a new request by providing the correct data.
> - Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

8. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs.

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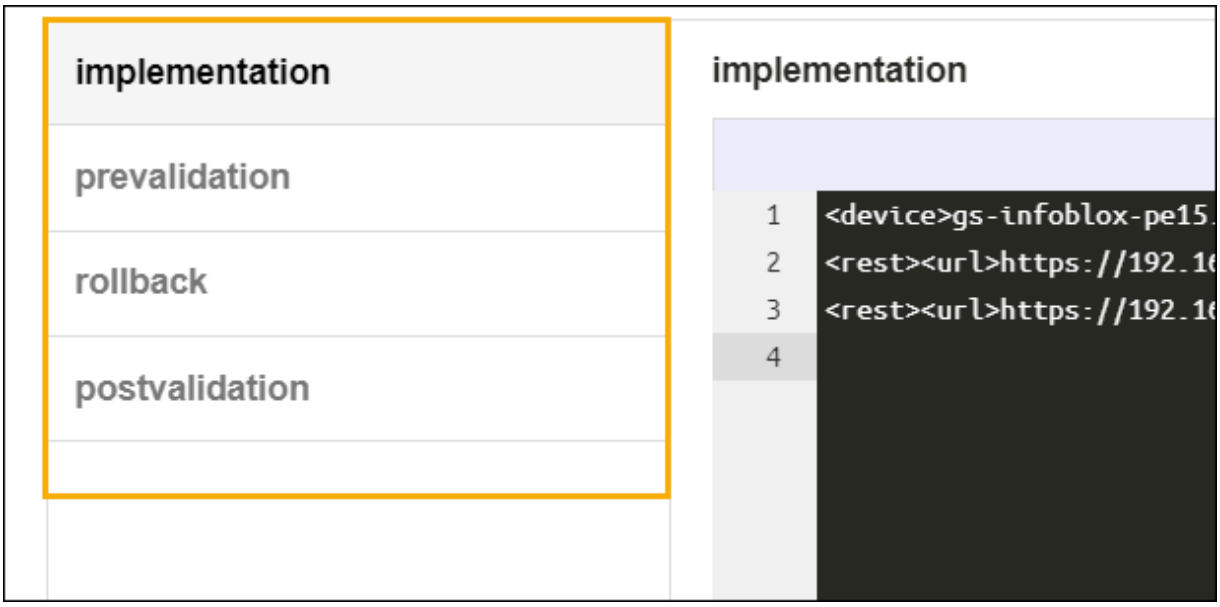
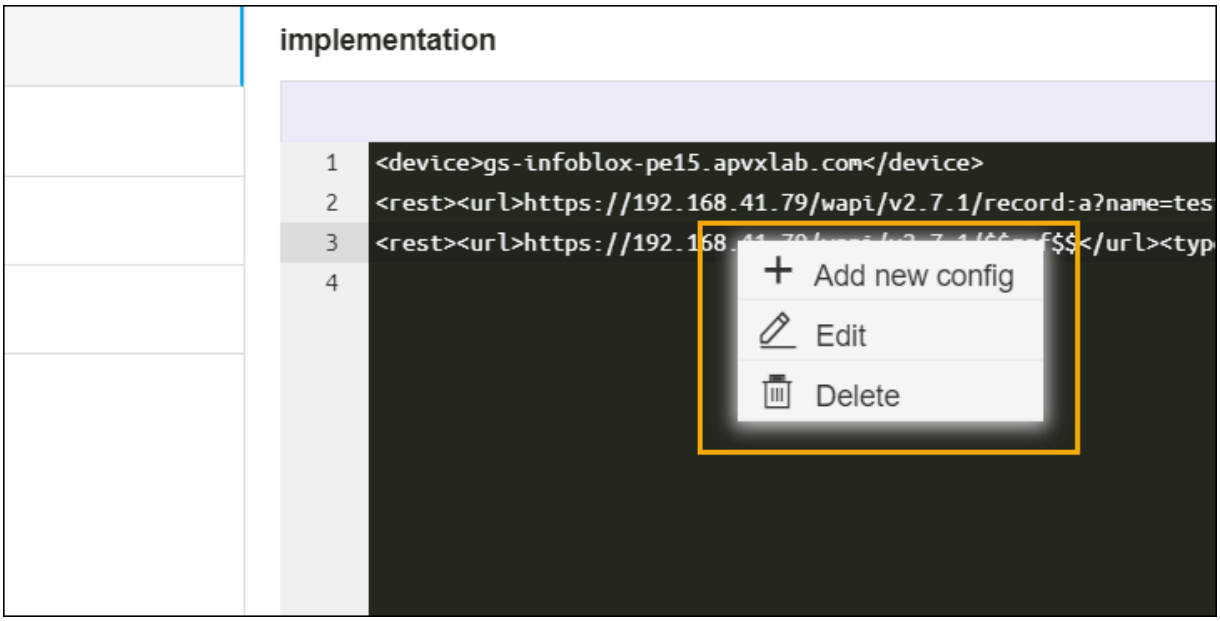


9. (Optional) If you need to change any data at this stage, right click, as shown in the image below, and select the required option.



10. After the review, click **Submit**.

    The **Confirmation** dialog box is displayed.

11. To continue with the workflow creation, click **Ok**

    OR

    To abort the workflow creation, click **Cancel**.

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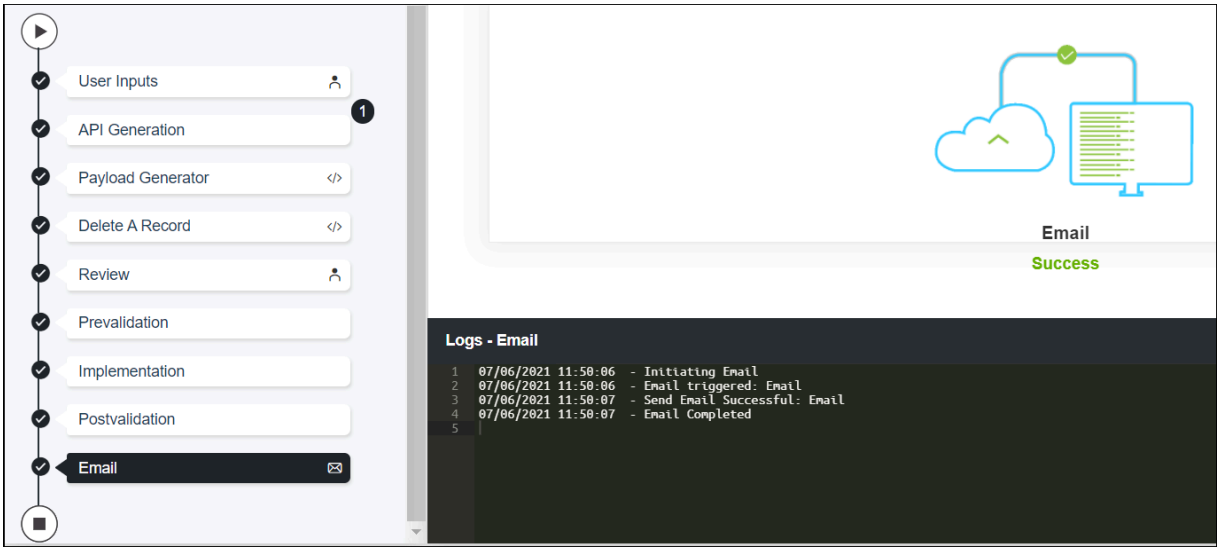
It takes a while to complete the post-validation.

When the workflow is created, an email is triggered to all the configured email IDs.



Note: The validation stages are shown in the left side of the screen. To view a validation stage, click on the respective stage.

Modify Infoblox DNS Record – Advanced

This workflow modifies the existing records in Infoblox by fetching the existing records based on FQDN. By using this workflow, you can modify multiple (A, HOST, PTR,CNAME,TXT,MX) records using the table.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **Infoblox IPAM** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Modify Infoblox DNS Record – Advanced** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click Run.
   The **Request > Modify Infoblox DNS Record – Advanced :: FormBuilder** page is displayed.

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5. Modify the necessary details of existing DNS records for the device in Infoblox.
6. Click **Submit**.

   The **Confirmation** dialog box is displayed.
7. To save this form so you can edit it later, click **Save Draft** and then click **OK**.

   The form will be saved as **Open request** under **Request** > **My Request**.

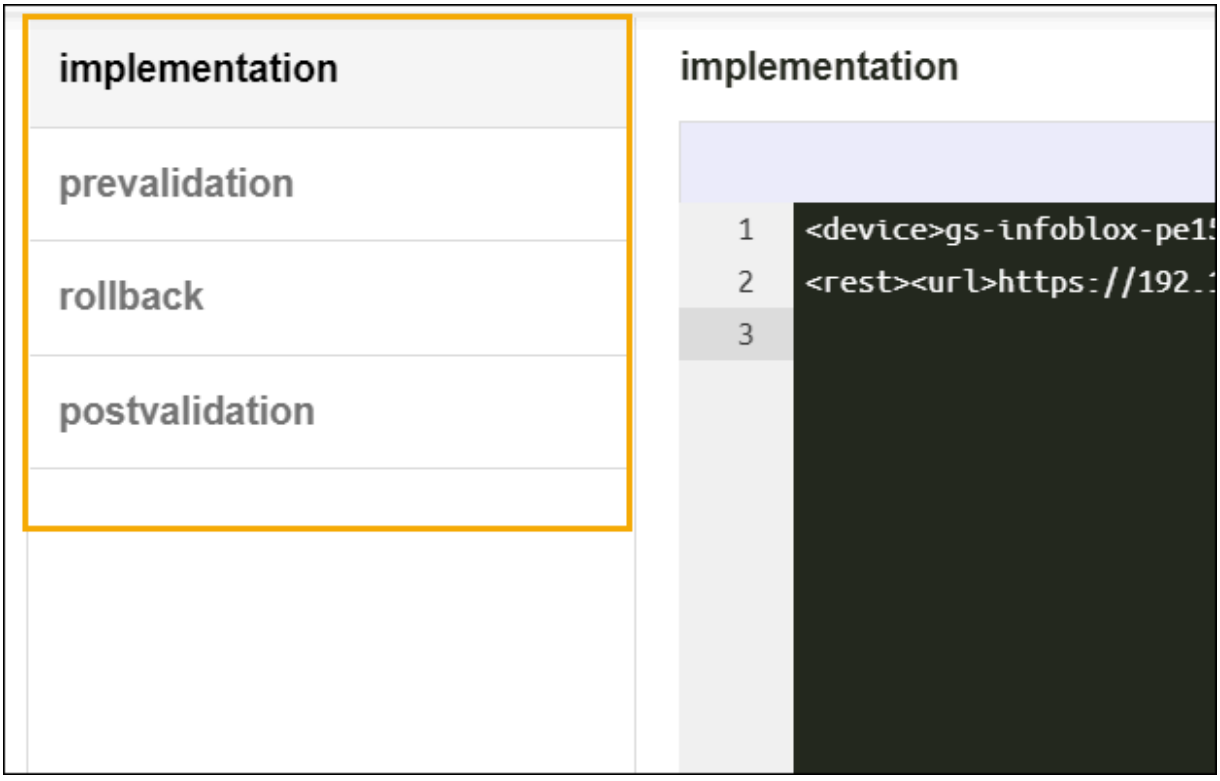
   OR

   To submit the form, click **OK**.

   The validation starts automatically and reaches the **Review** stage.

> **Note:**
> - If there is any failure at this stage, start a new request by providing the correct data.
> - Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

8. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs:



9. (Optional) If you need to change any data at this stage, right click, as shown in the image below, and select the required option.

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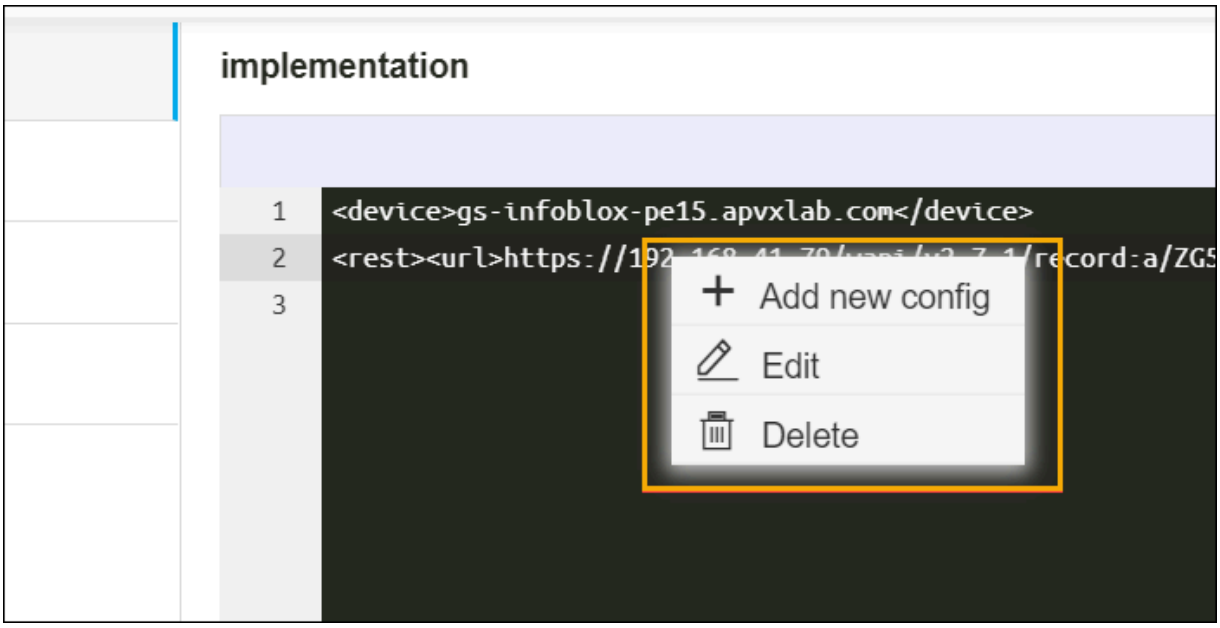


10. After the review, click **Submit**.

    The **Confirmation** dialog box is displayed.

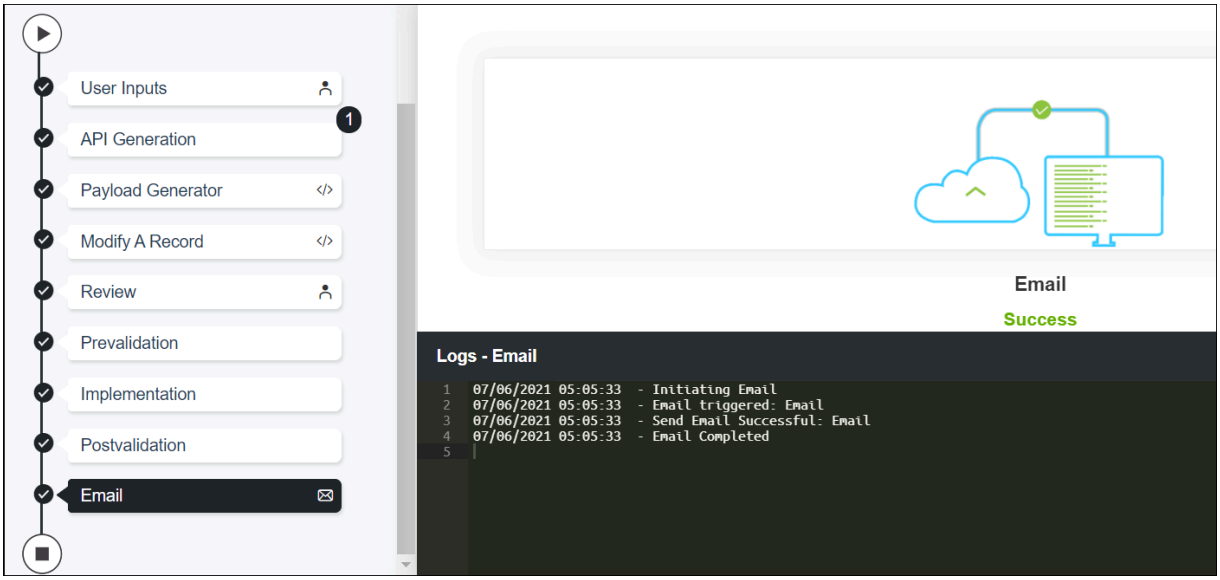
11. To continue with the workflow creation, click **Ok**

    OR

    To abort the workflow creation, click **Cancel**.

    It takes a while to complete the post-validation.

    When the workflow is created, an email is triggered to all the configured email IDs.



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Note: The validation stages are shown in the left side of the screen. To view a validation stage, click on the respective stage.

Delete Infoblox DNS Records – Advanced

This workflow deletes existing records in Infoblox by fetching the existing records based on FQDN. By using this workflow, you can delete multiple (A, HOST, PTR, CNAME, TXT, MX) records.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **Infoblox IPAM** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Delete Infoblox DNS Records – Advanced** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click

.
   The **Request > Delete Infoblox DNS Records – Advanced :: FormBuilder** page is displayed.
5. Provide the DNS record details of the device are to be deleted.
6. Click **Submit**.
   The **Confirmation** dialog box is displayed.
7. To save this form so you can edit it later, click **Save Draft** and then click **OK**.
   The form will be saved as **Open request** under **Request** > **My Request**.

   OR

   To submit the form, click **OK**.

   The validation starts automatically and reaches the **Review** stage.

   Note:
   - If there is any failure at this stage, start a new request by providing the correct data.
   - Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

8. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs:

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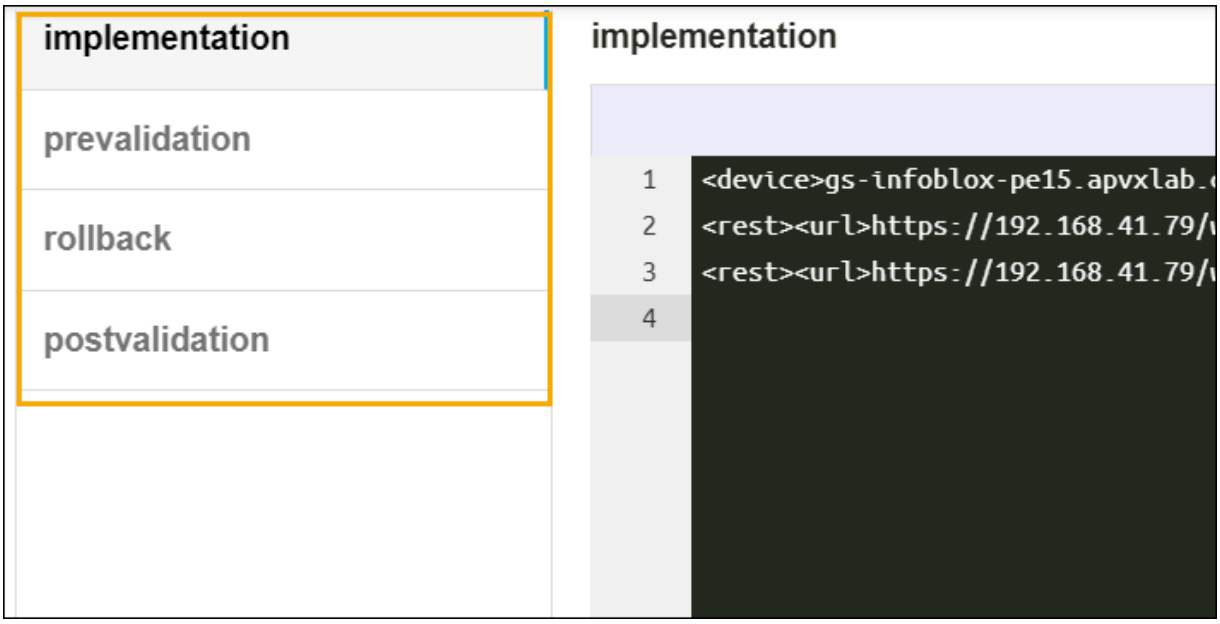

9. (Optional) If you need to change any data at this stage, right click, as shown in the image below, and select the required option.
10. After the review, click **Submit**.

    The **Confirmation** dialog box is displayed.
11. To continue with the workflow creation, click **Ok**

    OR

    To abort the workflow creation, click **Cancel**.

    It takes a while to complete the post-validation.

    When the workflow is created, an email is triggered to all the configured email IDs.

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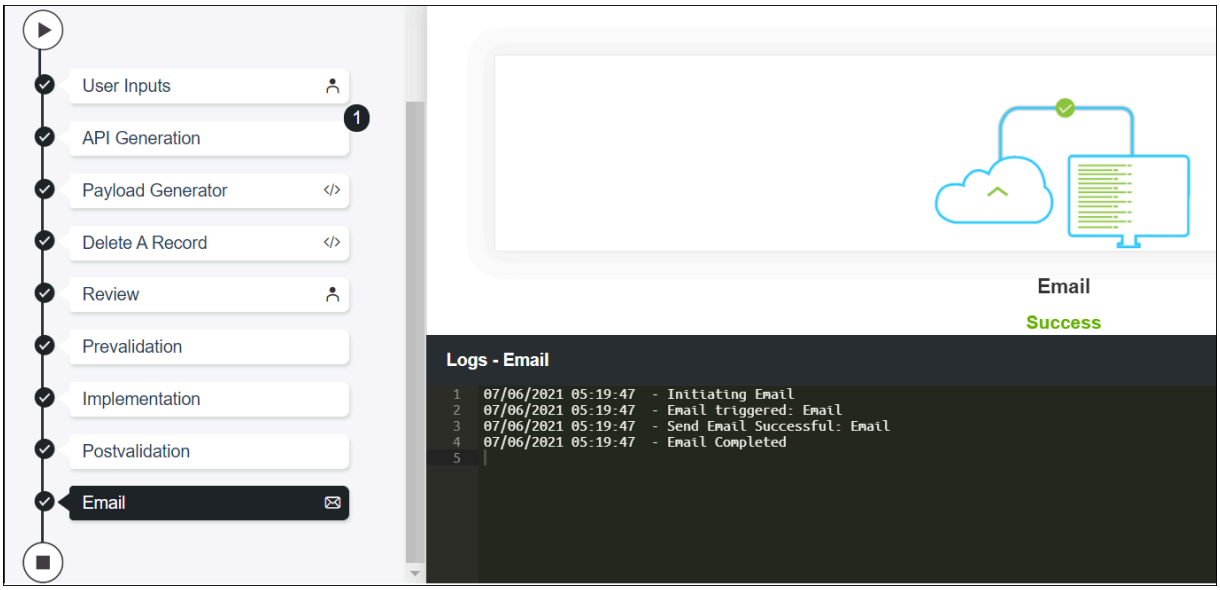

Note: The validation stages are shown in the left side of the screen. To view a validation stage, click on the respective stage.

Bluecat IPAM

- Create BlueCat DNS Records
- Modify BlueCat DNS Records
- Delete BlueCat DNS Record

Create BlueCat DNS Records

This workflow creates records in Bluecat. Also, it creates multiple (A, HOST, PTR,CNAME,TXT,MX) records. In the case of A, Host, PTR record creation, IP can be fetched and reserved on the fly.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **Bluecat IPAM** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Create BlueCat DNS Records** workflow. The **Run** and **Schedule** buttons are displayed.

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4. Click

.

   The **Request > Create BlueCat DNS Records :: FormBuilder** page is displayed.

5. Enter/select **Device Info**.

Device Info Section - Field and Description Table

Field	Description
***Device Name**	Select the device name from the drop-down list.

6. Enter/select **Record Info**.

Record Info Section - Field and Description Table

Field	Description
***Network View**	Select the network view from the drop-down option.
***DNS View**	Select the DNS view from the drop-down option. DNS view is the container object for DNS zones and resource records.
***Zone**	Select the zone from the drop-down option. DNS zones represent your DNS zone of authority. For example, appviewx.com.
***Record Type**	Select the record types from the drop-down option. The record types are A, HOST, PTR, CNAME, TXT, MX). In the case of A, Host, and PTR record creation, IP can be fetched and reserved on the fly. Provide the details for record type.
***TTL**	Specify TTL (time to live) settings for Infoblox host records and resource records. TTL is the time that a name server is allowed to cache data. After the TTL expires, the name server is required to update the data.

7. If you cancel this request, remember to free the reserved IP by clicking the **Un-reserve IP** button.

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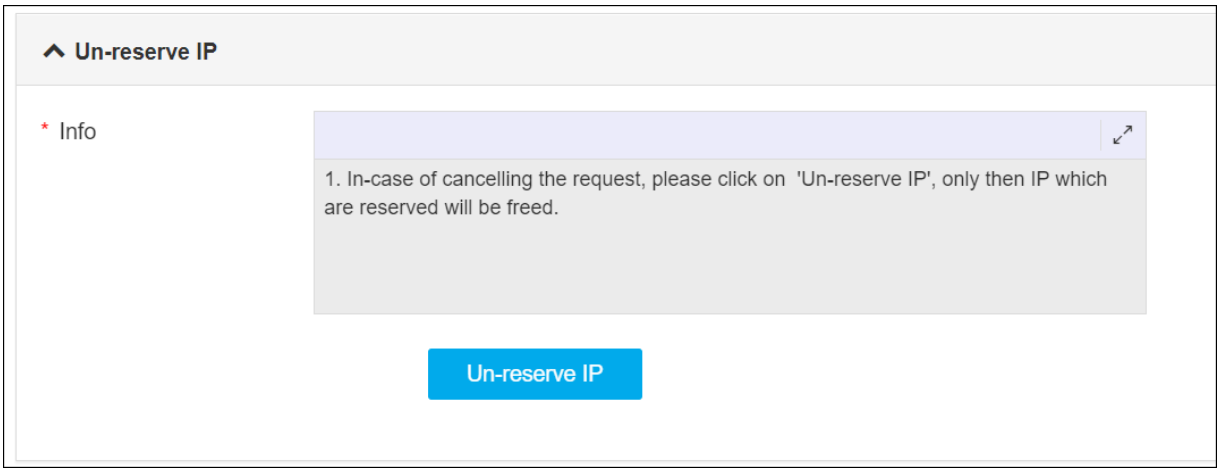

8. Click **Submit**.
   The **Confirmation** dialog box is displayed.
9. To save this form so you can edit it later, click **Save Draft** and then click **OK**.
   The form will be saved as **Open request** under **Request** > **My Request**.

   OR

   To submit the form, click **OK**.

   The validation starts automatically and reaches the **Review** stage.

   Note:
   - If there is any failure at this stage, start a new request by providing the correct data.
   - Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

10. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs:

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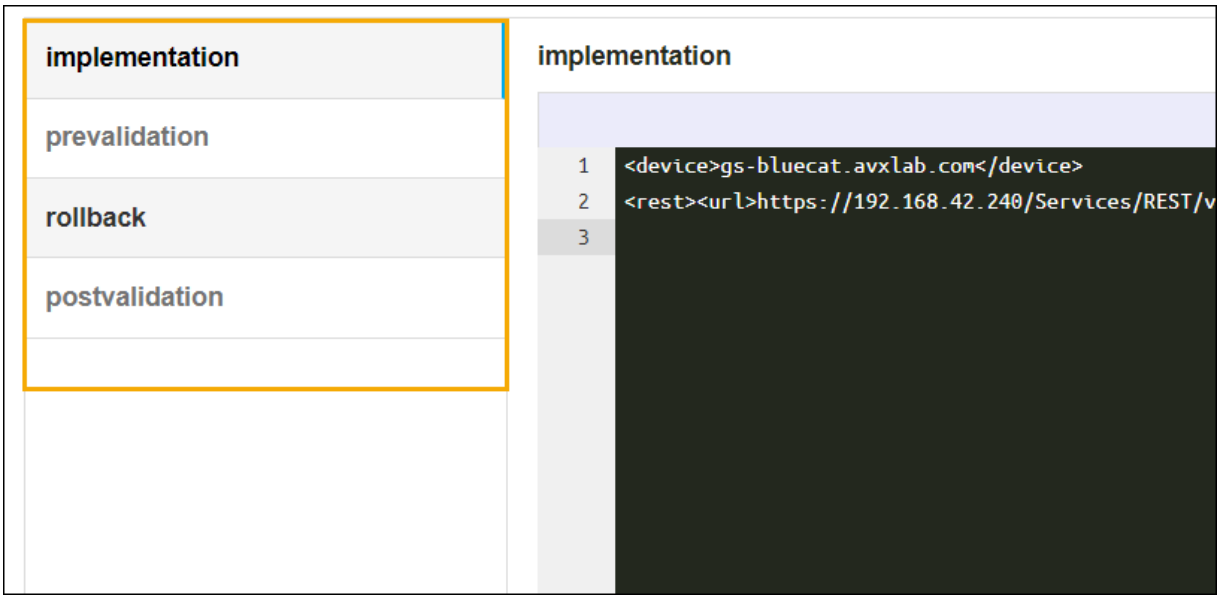
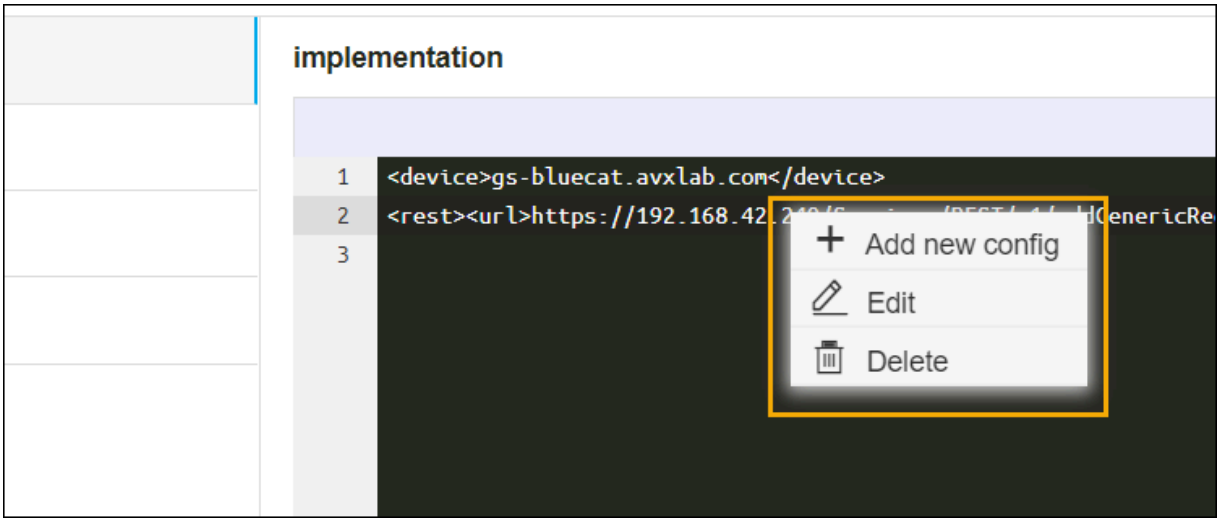


11. (Optional) If you need to change any data at this stage, right click, as shown in the image below, and select the required option.



12. After the review, click **Submit**.

    The **Confirmation** dialog box is displayed.

13. To continue with the workflow creation, click **Ok**

    OR

    To abort the workflow creation, click **Cancel**.

    It takes a while to complete the post-validation.

    When the workflow is created, an email is triggered to all the configured email IDs.

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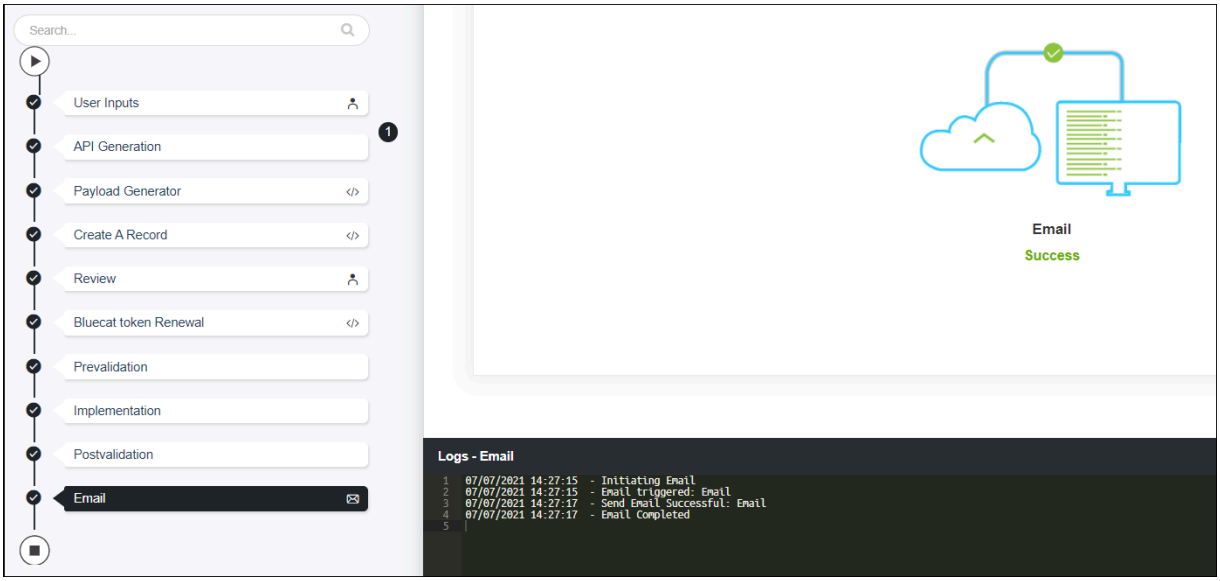

Note: The validation stages are shown in the left side of the screen. To view a validation stage, click on the respective stage.

Modify BlueCat DNS Records

This workflow modifies existing records in Bluecat by fetching the existing records based on FQDN. It can also modify multiple (A, HOST, PTR, CNAME, TXT, MX) records.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **Bluecat IPAM** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Modify BlueCat DNS Records** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click Run.
   The **Request > Modify BlueCat DNS Records :: FormBuilder** page is displayed.
5. Provide the necessary details of DNS records for a device.

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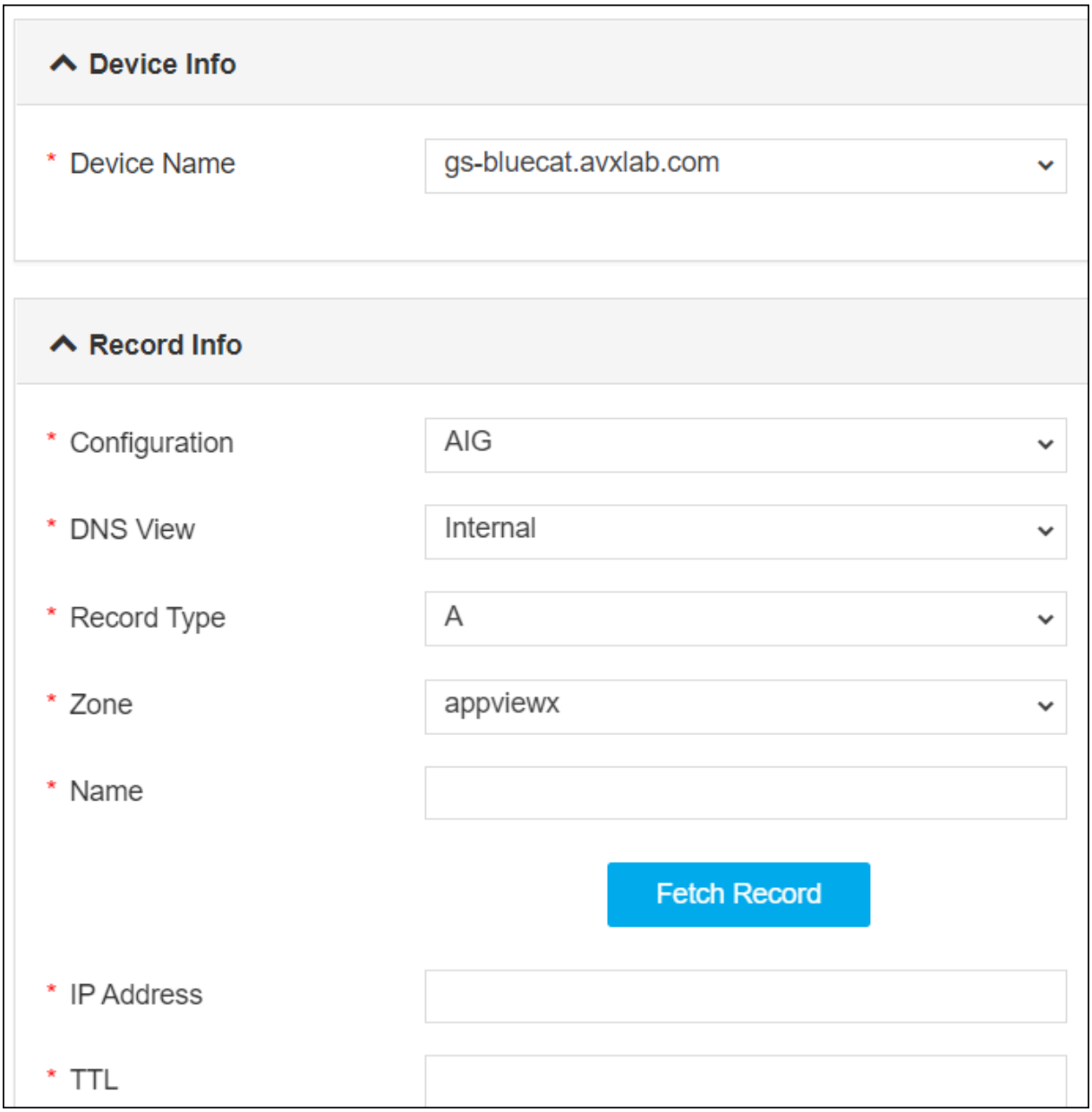

6. Click **Submit**.

   The **Confirmation** dialog box is displayed.
7. To save this form so you can edit it later, click **Save Draft** and then click **OK**.

   The form will be saved as **Open request** under **Request** > **My Request**.

   OR

   To submit the form, click **OK**.

   The validation starts automatically and reaches the **Review** stage.

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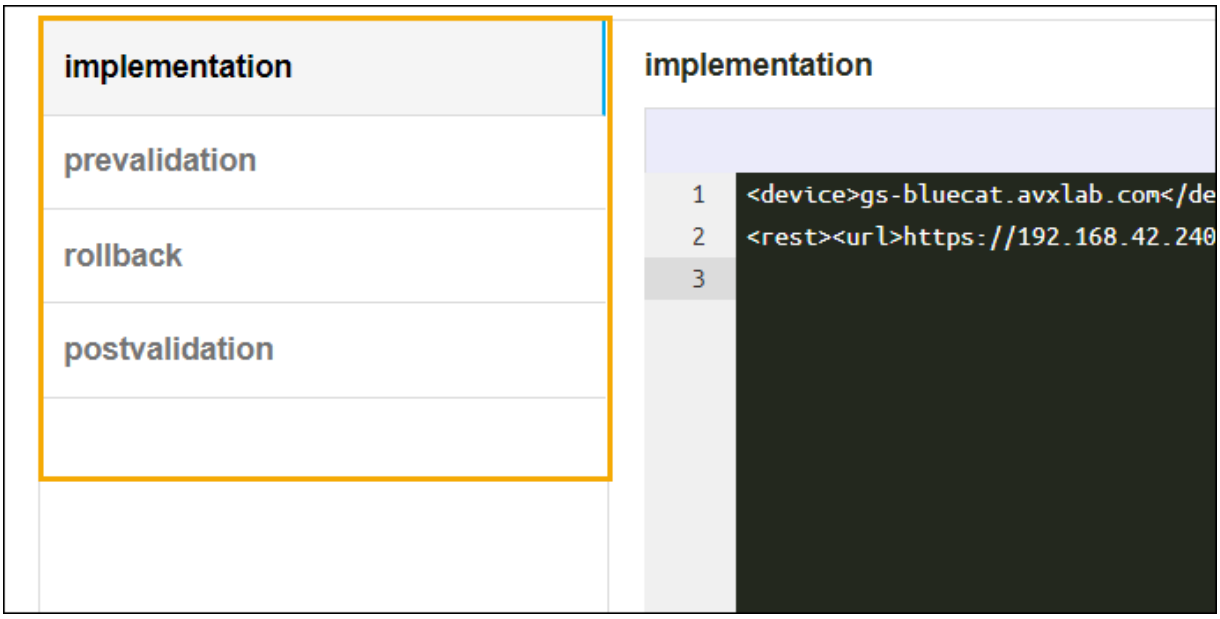
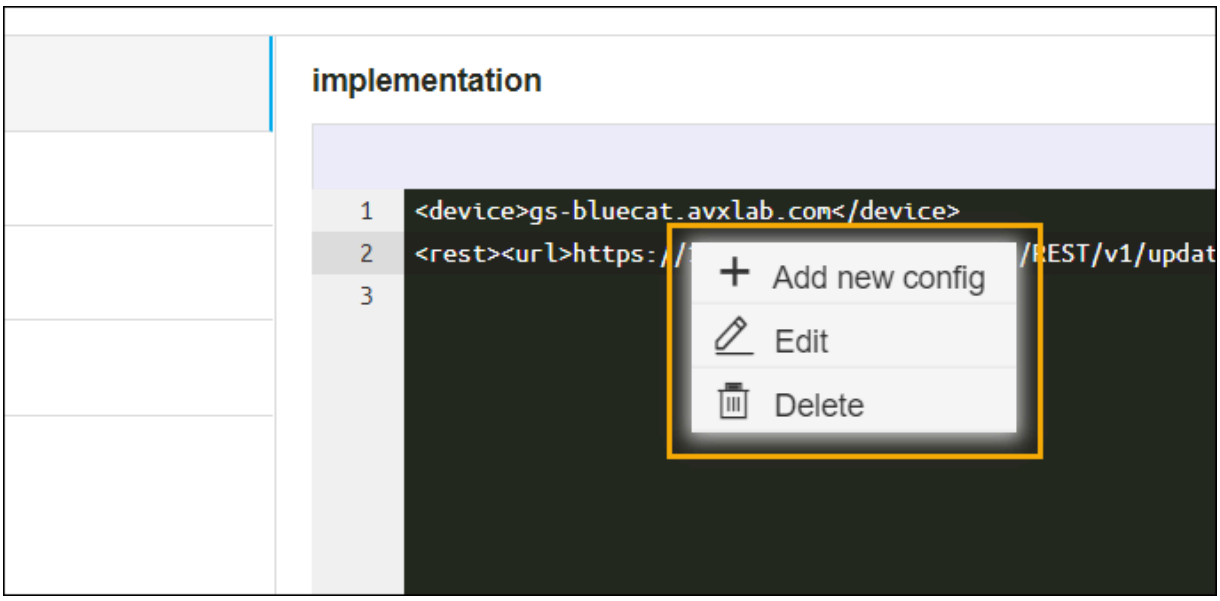
Note:

- If there is any failure at this stage, start a new request by providing the correct data.
- Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

8. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs:



9. (Optional) If you need to change any data at this stage, right click, as shown in the image below, and select the required option.



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10. After the review, click **Submit**.

    The **Confirmation** dialog box is displayed.

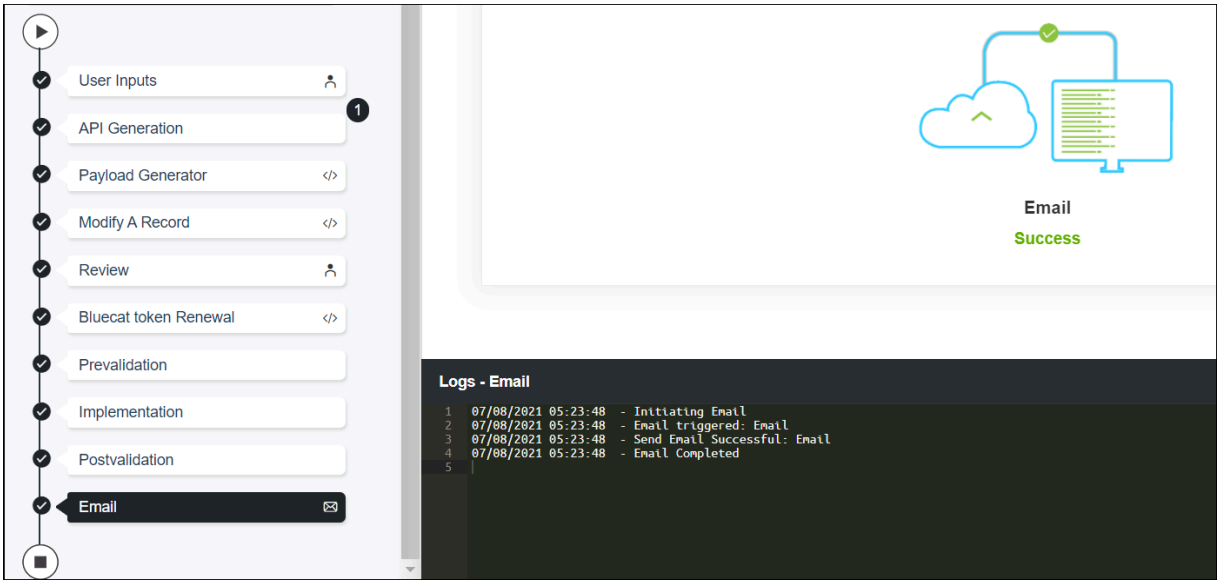
11. To continue with the workflow creation, click **Ok**

    OR

    To abort the workflow creation, click **Cancel**.

    It takes a while to complete the post-validation.

    When the workflow is created, an email is triggered to all the configured email IDs.



Note: The validation stages are shown in the left side of the screen. To view a validation stage, click on the respective stage.

Delete BlueCat DNS Record

This workflow deletes existing records in Bluecat by fetching the existing records based on FQDN. Also deletes multiple (A, HOST, PTR,CNAME,TXT,MX) records.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **Bluecat IPAM** category on the **View/Run Workflows** page.

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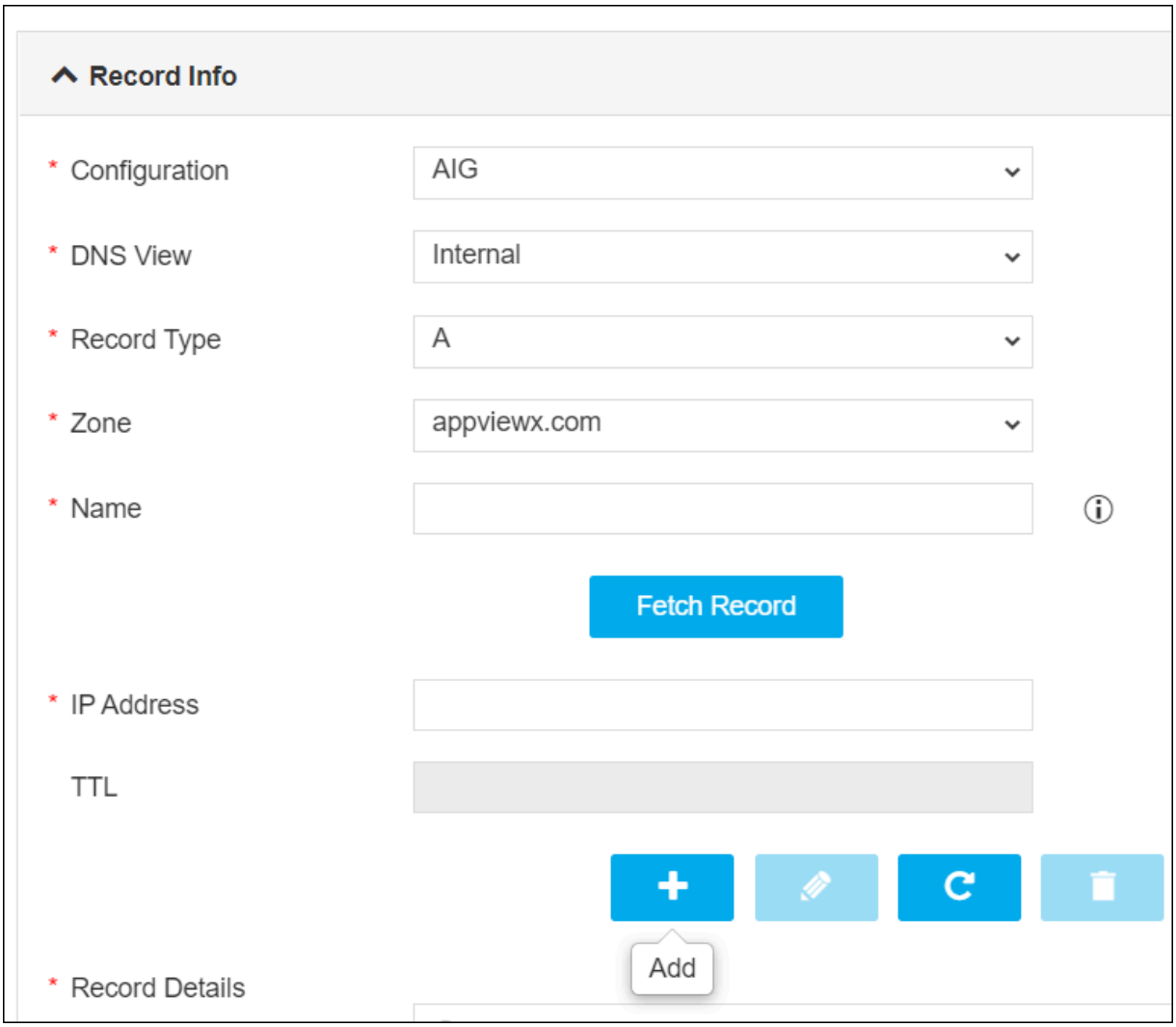
3. On the popup window, hover the mouse over the **Delete BlueCat DNS Record** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click Run.
   The **Request > Delete BlueCat DNS Record :: FormBuilder** page is displayed.
5. Provide the necessary details of DNS records that are to be deleted.



6. Click **Submit**.
   The **Confirmation** dialog box is displayed.
7. To save this form so you can edit it later, click **Save Draft** and then click **OK**.
   The form will be saved as **Open request** under **Request** > **My Request**.

   OR

   To submit the form, click **OK**.

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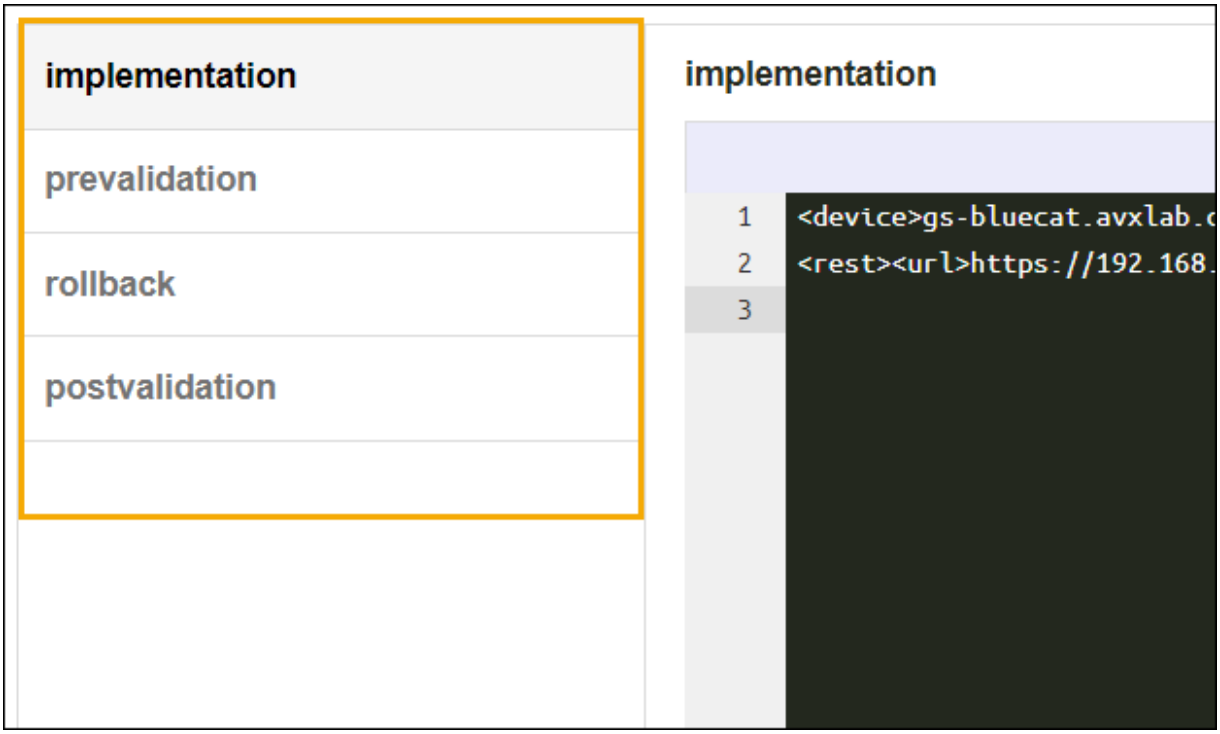
The validation starts automatically and reaches the **Review** stage.

Note:

- If there is any failure at this stage, start a new request by providing the correct data.
- Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

8. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs:



9. (Optional) If you need to change any data at this stage, right click, as shown in the image below, and select the required option.

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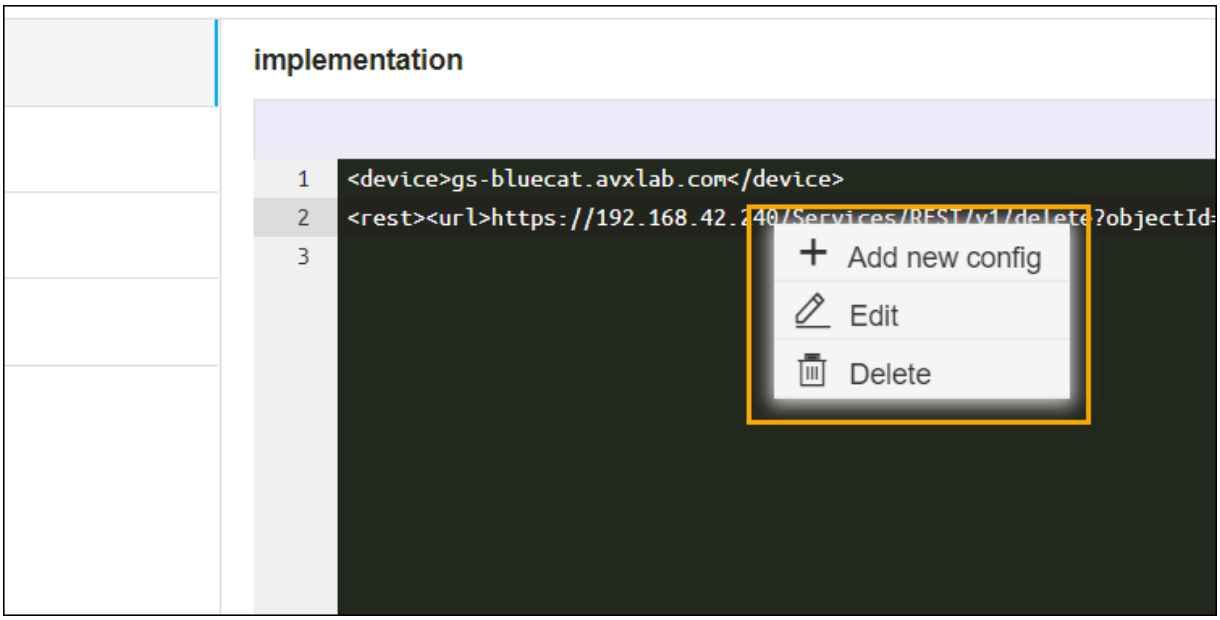


10. After the review, click **Submit**.

    The **Confirmation** dialog box is displayed.

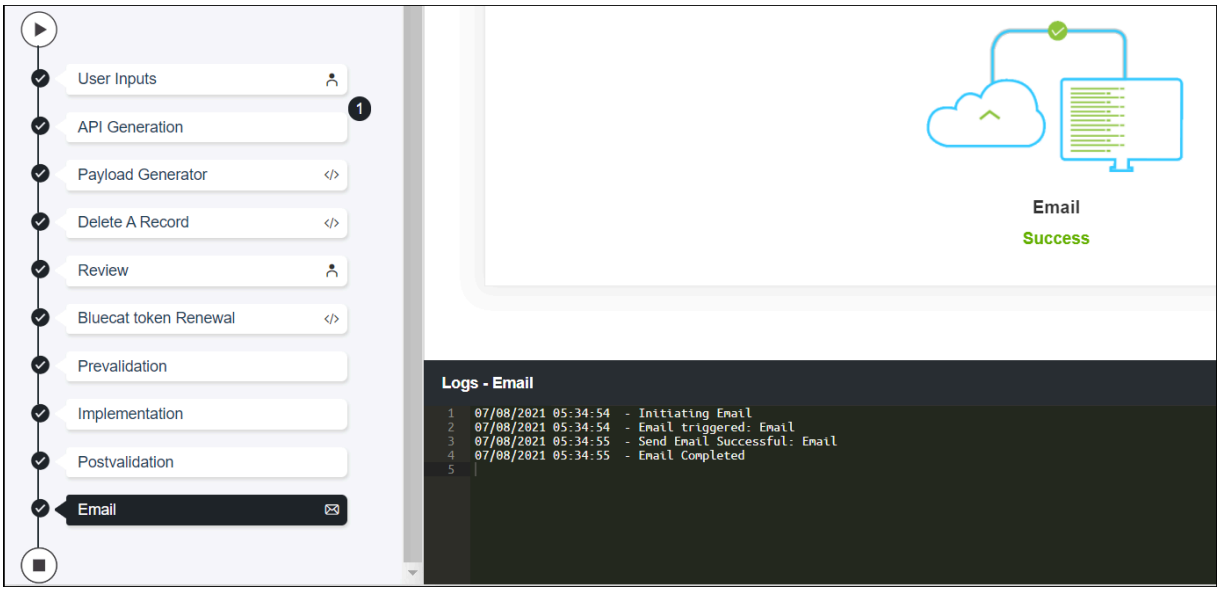
11. To continue with the workflow creation, click **Ok**

    OR

    To abort the workflow creation, click **Cancel**.

    It takes a while to complete the post-validation.

    When the workflow is created, an email is triggered to all the configured email IDs.



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Note: The validation stages are shown in the left side of the screen. To view a validation stage, click on the respective stage.

F5 BIG-IP System

- Automate F5 BIG-IP Upgrades
- Compliance - CVE Reporting and Golden Config Compliance

Automate F5 BIG-IP Upgrades

The workflows grouped under this sub-category include:

- F5 BIG-IP Software Upgrade on Standalone Devices
- F5 BIG-IP Software Upgrade on HA Devices

F5 BIG-IP Software Upgrade on Standalone Devices

- Overview
- Prerequisite
- Running a Software Upgrade on Standalone Devices

Overview

This workflow upgrades the BIG-IP version from the existing version to a higher version as recommended by F5. For more information, refer to https://support.f5.com/csp/article/K13845.

Prerequisite

The prerequisites are:

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- The ISO files for the software upgrade must be available in the path **/shared/images** of the F5-BIG IP in which the upgrade is to be performed.
- The User using which F5 BIG-IP is Managed in AppViewX should have Advance shell Access.
- For License reactivation, the F5 device should have Internet access.

Running a Software Upgrade on Standalone Devices

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG-IP System** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Software Upgrade on Standalone Devices** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click

.
   The **Request > Software Upgrade on Standalone Devices :: FormBuilder** page is displayed.
5. Enter/select **Device Selection** details.

Device Selection Section - Field and Description Table

Field	Description
***Datacenter**	Displays the list of datacenters of the devices, which are created in the Device Inventory. Select the datacenter of a device from the drop-down option for which this request is to be created. For the devices, which are created without a datacenter in the Device Inventory, select the datacenter as **None**.
***Device Name**	Displays the list of devices associated with the selected datacenter. If the datacenter is selected as **None**, the devices that are created without datacenter details are listed. Select the desired device from the drop-down option.

   The fields in the **Device Details** section are auto-populated.
6. Enter/select **Image and Volume Details**.

Field description for the Image and Volume Details section

Field	Description
***ISO File Name**	Click the retrieve button and then select a desired ISO file name from the dropdown list.

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Field	Description
***New Volume Name**	Enter the new volume name. The format of the volume name must be in the form of **HDX.Y**, **CFX.Y**, or **MDX.Y**.

7. Select **Renew License**.

   The possible values include:

   • **No**: This option does not allow you to renew the license. By default, this option is selected.

   • **Yes**: Select this option to generate

8. Click **Next**.

   The **Confirmation** dialog box is displayed.

9. To save this form so you can edit it later, click **Save Draft** and then click **OK**.

   The form will be saved as **Open request** under **Request** > **My Request**.

   OR

   To submit the form, click **OK**.

   The software upgrade starts. It takes a while to complete the software upgrade.

   Note:

   • A request is created for this workflow. To view the request, navigate to Menu > Request > All.

   • If there is any failure in running this workflow, start a new workflow by providing the correct data.

   • Alternatively, clone the request, update the correct input data in the form input, and submit the workflow.

10. After the manual check, click **Proceed**.

    The **Confirmation** dialog box is displayed.

11. Click **Ok** to submit the form.

12. After the **Object Count Comparison**, click **Proceed**.

    The **Confirmation** dialog box is displayed.

13. Click **Ok** to submit the form.

    The implementation process for software upgrade is completed.

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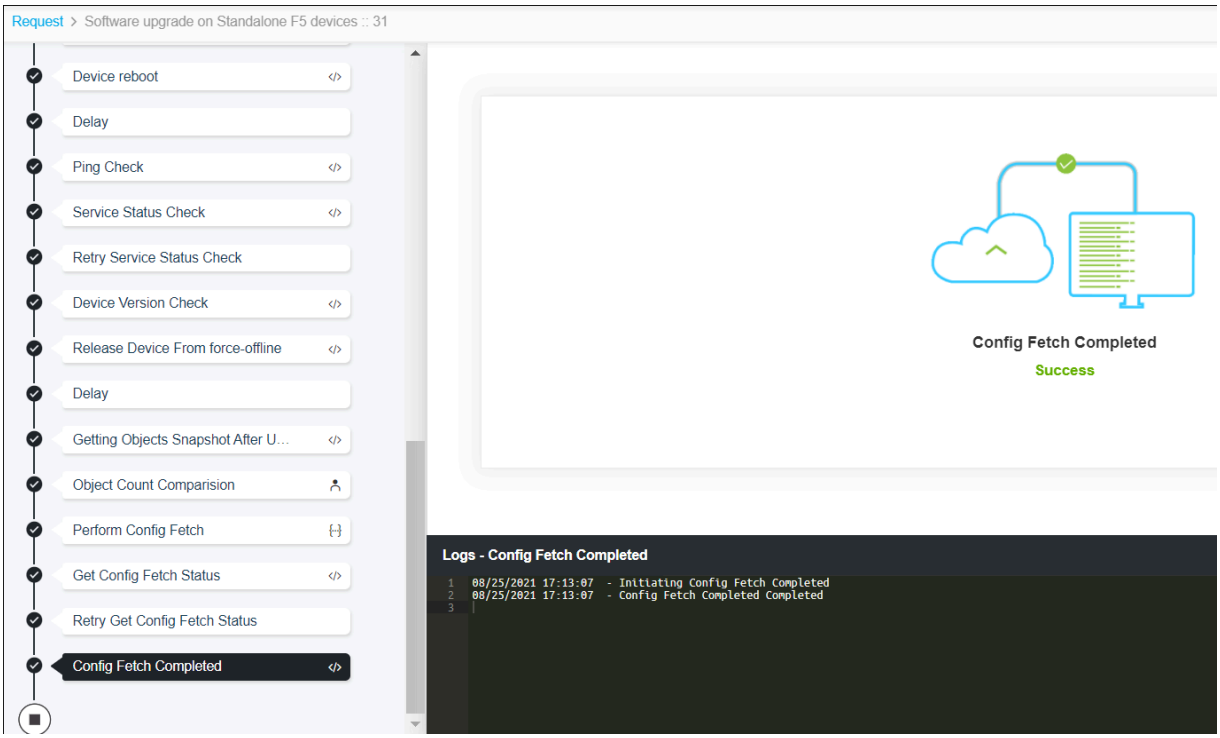
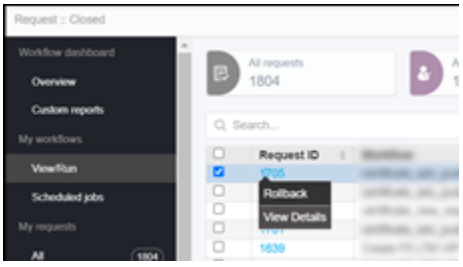


14. In case the request has to be reverted, execute the following steps:

    a. Go to the **Menu** > **Request** > **All**.

    b. Right-click the row on your desired Request ID.

    c. Select the **Rollback** option.



    d. Select **Yes** in the **Rollback** confirmation dialog box.

    A new request is triggered for performing rollback.

F5 BIG-IP Software Upgrade on HA Devices

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- Overview
- Prerequisites
- Running Software Upgrade on F5 HA Devices

Overview

This workflow upgrades the BIG-IP version from the existing version to a higher version as recommended by HA F5. For more information, refer to https://support.f5.com/csp/article/K13845.

Prerequisites

The prerequisites are:

- The ISO files for the software upgrade must be available in both active and standby devices and the file should be in the path /shared/images of the F5-BIG IP in which upgrade to be performed.
- The User using which F5 BIG-IP is Managed in AppViewX should have Advance shell Access.
- For License reactivation, the F5 device should have Internet access.

Running Software Upgrade on F5 HA Devices

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG-IP System** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Software Upgrade on F5 HA Devices** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click

.
   The **Request > Software Upgrade on F5 HA Devices :: FormBuilder** page is displayed.
5. Enter/select the **Device Selection** details.

Device Selection Section - Field and Description Table

Field	Description
***Datacenter**	Displays the list of datacenters of the devices, which are created in the Device Inventory. Select the datacenter of a device from the drop-down option for which this request is to be created. For the devices, which are created without a datacenter in the Device Inventory, select the datacenter as **None**.

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Field	Description
***Device Name**	Displays the list of devices associated with the selected datacenter. If the datacenter is selected as **None**, the devices that are created without datacenter details are listed. Select the desired device from the drop-down option.

The fields in the **StandBy Device Details** and the **Active Device Details** sections are auto-populated.

6. Enter/select **Image and Volume Details**.

Image and Volume Details Section - Field and Description Table

Field	Description
***ISO File Name**	Click the retrieve button and then select a desired ISO file name from the dropdown list.
notes_field	Error messages will be shown in this field in case of non-availability of an ISO file.
***New Volume Name**	Enter the new volume name. The format of the volume name must be in the form of HDX.Y, CFX.Y, or MDX.Y.

7. Select **Renew License**.

   The possible values include:

   - **No**: This option does not allow you to renew the license. By default, this option is selected.
   - **Yes**: Select this option to generate

8. Click **Next**.

   The **Confirmation** dialog box is displayed.

9. To save this form so you can edit it later, click **Save Draft** and then click **OK**.

   The form will be saved as **Open request** under **Request** > **My Request**.

   OR

   To submit the form, click **OK**.

   The software upgrade starts. It takes a while to complete the software upgrade.

Note:

- A request is created for this workflow. To view the request, navigate to Menu > Request > All.
- If there is any failure in running this workflow, start a new workflow by providing the correct data.
- Alternatively, clone the request, update the correct input data in the form input, and submit the workflow.

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10. After the manual check, click **Proceed**.

    The **Confirmation** dialog box is displayed.

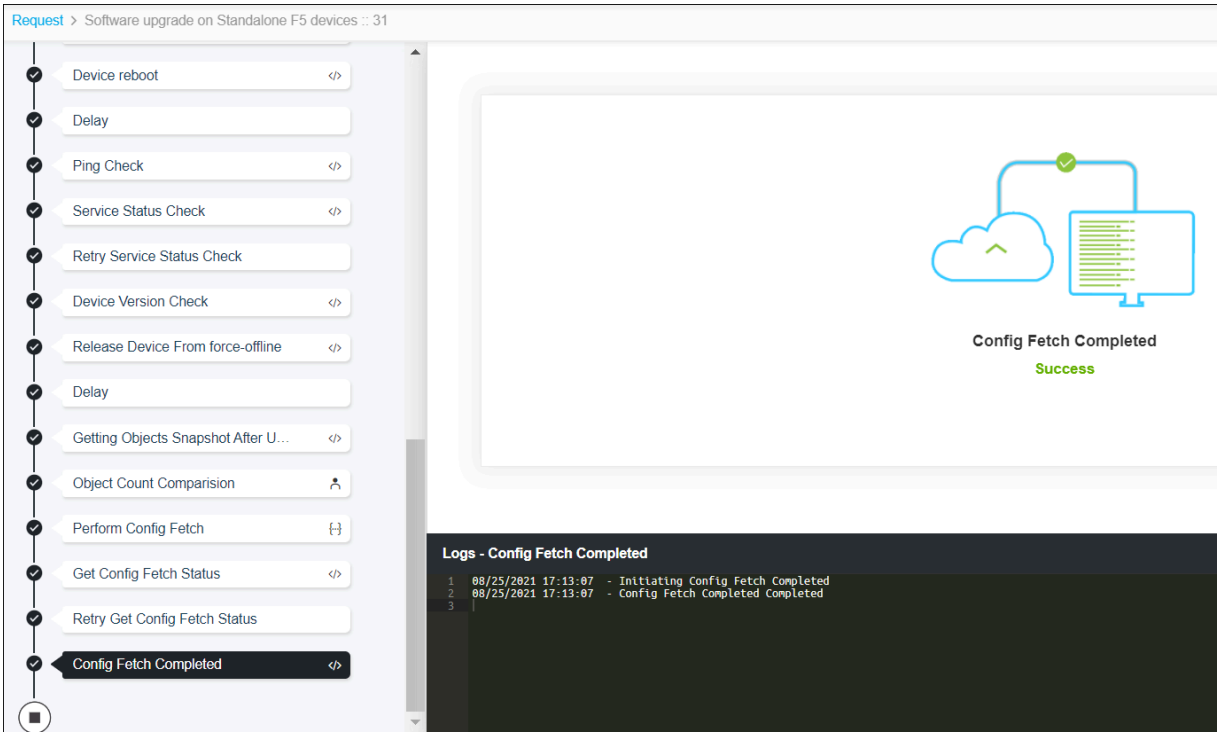
11. Click **Ok** to submit the form.

12. After the **Object Count Comparison**, click **Proceed**.

    The **Confirmation** dialog box is displayed.

13. Click **Ok** to submit the form.

    The implementation process for software upgrade is completed.

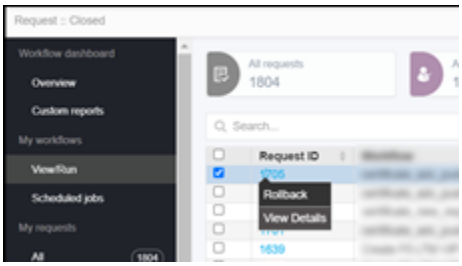


14. In case the request has to be reverted, execute the following steps:

    a. Go to the **Menu** > **Request** > **All**.

    b. Right-click the row on your desired Request ID.

    c. Select the **Rollback** option.



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d. Select **Yes** in the **Rollback** confirmation dialog box.
A new request is triggered for performing rollback.

Compliance - CVE Reporting and Golden Config Compliance

The workflows grouped under this sub-category are:

- Fetch F5 BIG-IP CVEs
- F5 BIG-IP CVE Reporting
- F5 BIG-IP Golden Config Compliance

Fetch F5 BIG-IP CVEs

- Overview
- Prerequisites
- Running F5 BIG-IP CVE Reporting

Overview

This workflow fetches a list of CVE vulnerabilities from the Global site https://cve.mitre.org/ and stores them in the AppViewX Database. By using these vulnerabilities stored in the Database, the managed F5 load balancers in AppViewX can be validated to see whether they are vulnerable or not. This workflow only downloads the vulnerability data from the site and stores it in the database. The vulnerability validation and report generation can be done using the F5 BIG-IP CVE Reporting workflow. The vulnerabilities are identified for the Modules (LTM, GTM, ASM, AFM).

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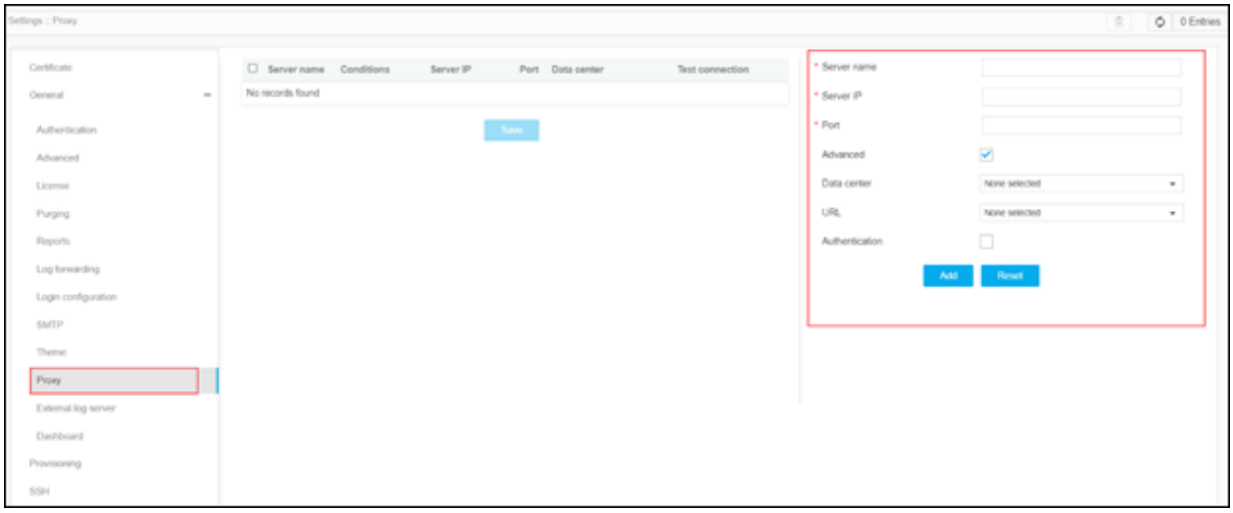
Prerequisites

- The VM (Virtual Machine) in which AppViewX is installed should have internet access or access to the proxy server. The proxy server should be configured in AppViewX. To configure, go to **Settings** > **General** > **Proxy**.



- You must be mapped to a role in which access to Collection, **Create/Modify** should be enabled to run this workflow.

Running F5 BIG-IP CVE Reporting

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG-IP System** category on the **View/Run Workflows** page.

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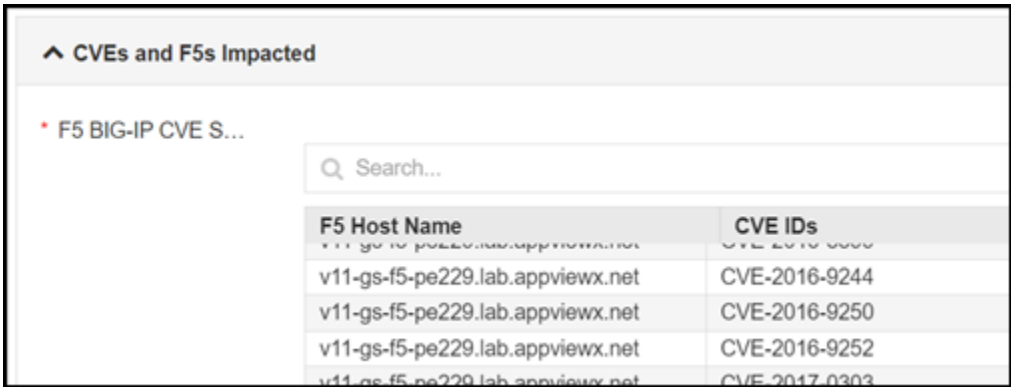
3. On the popup window, hover the mouse over the **F5 BIG-IP CVE Reporting** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click Run.
   The **Request > F5 BIG-IP CVE Reporting :: FormBuilder** page is displayed.
5. Enter/select the **Search Filter** details.

Search Filter Section - Field and Description Table

Field	Description
Search Filter	Select the search filter. The possible options are: • **F5 BIG-IP Version** – This option allows you to get the devices based on the product version. The product versions listed in the drop-down option are in the format **<major version>.x.x**. The vulnerabilities will be validated for the devices of selected product versions. • **F5 Big-IP Name** – This option allows you to get the devices based on the name.
***Available Device Versions**	Select the devices or product version from the drop-down list for which CVE validation to be triggered. The drop-down list is displayed if Search Filter is F5 BIG-IP Version.
***Available Devices**	Select the devices from the drop-down list for which CVE validation to be triggered. The drop-down list is displayed if Search Filter is F5 BIG-IP Name.

6. Click **Get CVE AFFECTED F5s** to get the devices affected by the CVE vulnerabilities.



   The devices that are affected by the vulnerabilities are listed in the **CVEs and F5s Impacted** section.
7. If this report is to be sent via email, set the **Get Report By Email** option to **Yes**, and then enter the email IDs in the **Email_id** field.

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Note: Multiple email IDs can be added as comma-separated values.

8. Click **Submit For Detailed Report**.
9. To save this form so you can edit it later, click **Save Draft** and then click **OK**.
   The form will be saved as **Open request** under **Request** > **My Request**.

   OR

   To submit the form, click **OK**.

   The report generation starts automatically. The CVE Report and CVE Severity Report are generated.
10. To view the CVE report, click the **CVE Report** tab from the left panel.

    The report can be downloaded by clicking .
11. To view the CVE severity report, click the **CVE Severity Report** tab from the left panel.
    The view of this report can be changed from pie chart or donut view by selecting the option from the **View by** drop-down option.
    The CVE Severity Report displays the following details:
    - **Device Scanned** – Total number of scanned devices.
    - **Vulnerable Devices** – Total number of vulnerable devices in the devices scanned.
    - **Unique CVEs** - Unique vulnerability.
    - **Total CVEs** – Cumulative count of severities (Critical, Medium, High, etc.) reported for each module (LTM, GTM, AFM, and ASM) in the device. The severity reported for a module is identified only if the module is enabled in AppViewX while adding the device in the Inventory.

    The remediation versions are mentioned for each module (LTM/GTM/AFM/ASM) in the vulnerable devices, in the CVE Report tab. If required, trigger the F5 BIG-IP Software Upgrade on Standalone or F5 BIG-IP Software Upgrade on HA Devices to fix the vulnerabilities in the device.

F5 BIG-IP CVE Reporting

- Overview
- Prerequisites
- Running Fetch F5 BIG-IP CVEs

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Overview

This workflow validates the vulnerabilities against the device and generates reports. Before you run this workflow, make sure to run the Fetch F5 BIG-IP CVEs workflow to get the latest vulnerabilities list from the Global site.

Prerequisites

You must be mapped to a role in which access to Collection, **Create/Modify** should be enabled to run this workflow.

Running Fetch F5 BIG-IP CVEs

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG-IP System** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Fetch F5 BIG-IP CVEs** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click Run.
   The script starts running.

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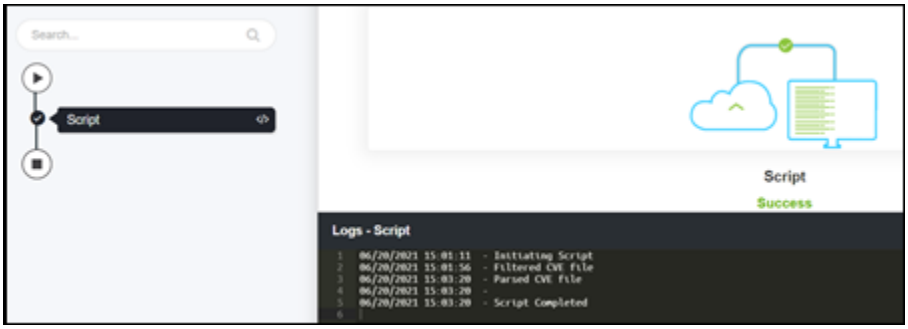
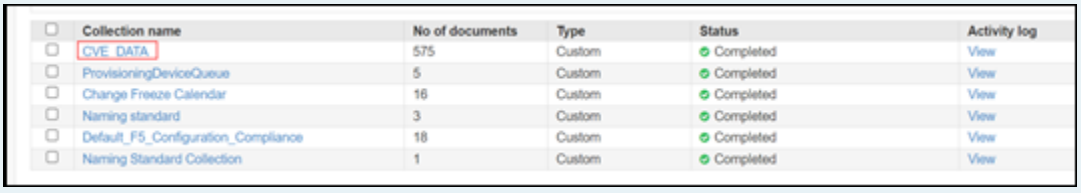
Once the workflow is completed, the CVE vulnerabilities are fetched from the Global site and stored in the Database.



Note: To view the list of stored vulnerabilities, go to **Menu** > **Collection**:



Collection name	No of documents	Type	Status	Activity log
CVE_DATA	575	Custom	Completed	View
ProvisioningDeviceQueue	5	Custom	Completed	View
Change Freeze Calendar	16	Custom	Completed	View
Naming standard	3	Custom	Completed	View
Default_F5_Configuration_Compliance	18	Custom	Completed	View
Naming Standard Collection	1	Custom	Completed	View

F5 BIG-IP Golden Config Compliance

- Overview
- Prerequisites
- Running F5 BIG-IP Golden Config Compliance

Overview

This workflow validates a set of default parameters and custom parameters, if any, in the F5 load balancers managed in the AppViewX. Post validation, it generates a report of compliant and non-compliant parameters.

- **Complaint parameter** - The value of the parameter in the device matches with the value defined in the Compliance Policy in AppViewX for the parameter.
- **Non-complaint parameter** - The value of the parameter in the device does not match with the value defined in the Compliance Policy in AppViewX for the parameter.

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This workflow provides an option to make the non-compliant parameters to compliant parameters in the F5 load balancer by writing the value as defined in the AppViewX. AppViewX ships the Standard Compliance policy Default_F5_Configuration_Compliance with Default parameters and sample values. The Standard Compliance policy file is non-editable. You can create Custom Compliance policies with Custom or selected Default parameters of your choice.

- Default Parameters – The parameters supported by default in AppViewX are:
  - Command to read the values for the parameter.
  - Command to write the value for the parameter.
  - Command to revert the value for the parameter.

In F5, the commands are defined in AppViewX.

- Custom Parameters – The Parameters newly added by the user. The user must provide the command to read, the command to write, the command to revert, as an input in the Workflow.

Compliant or Non-compliant parameters are decided based on the logic below:

- A value is mapped to a parameter in the Policy.
- The Parameter complete config is taken from the device, as a response.
- If the value defined in the Policy is available in the response, then it is compliant, else non-compliant. For a few default parameters (syslog_param, cm-device-group-auto-sync, net-self-allow-service), the logic changes. For more details, click here.

Prerequisites

You must be mapped to a role in which access to Collection, **Create/Modify** should be enabled to run this workflow.

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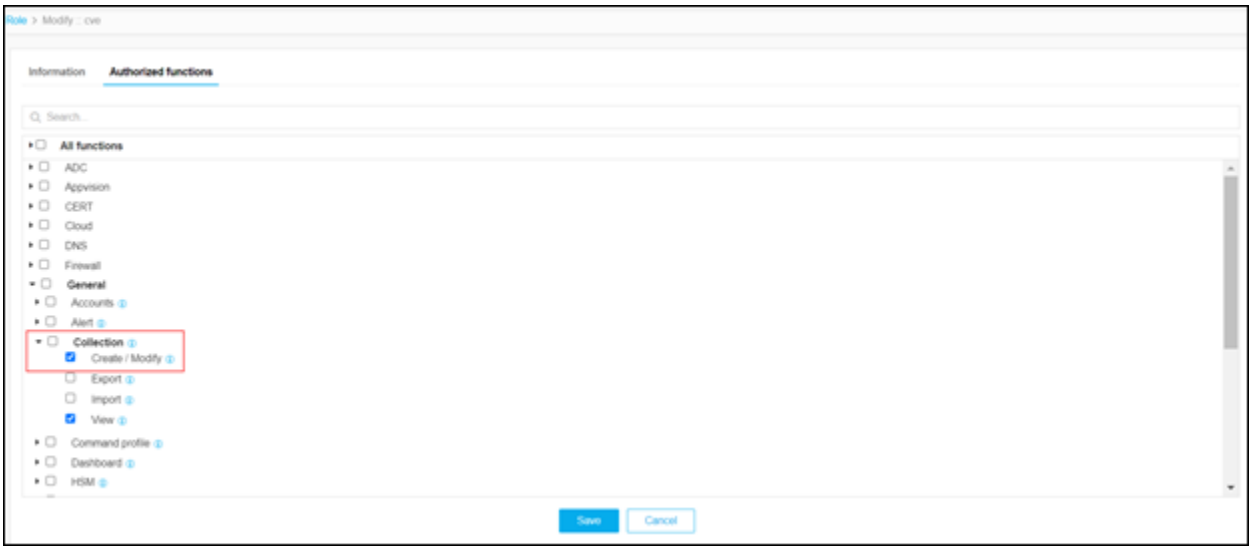

Running F5 BIG-IP Golden Config Compliance

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG-IP System** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **F5 BIG-IP Golden Config Compliance** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click

.
   The **Request > F5 BIG-IP Golden Config Compliance :: FormBuilder** page is displayed.
5. Select the **Select Compliance Policy** from the dropdown list.
   The compliance policy options are:
   - **Create New Compliance** – Select this option if you want to create a custom compliance policy file. When you select this option, the Compliance Policy Name field is shown in the form input to enter the name of the compliance policy file name.

   - **Default_F5_Configuration_Compliance** - Select this option to use the Standard Compliance policy file, which was shipped by AppViewX.
   - **<Custom Compliance Policy File Name>** - Other custom compliance policy files If any custom compliance policy file was created already.

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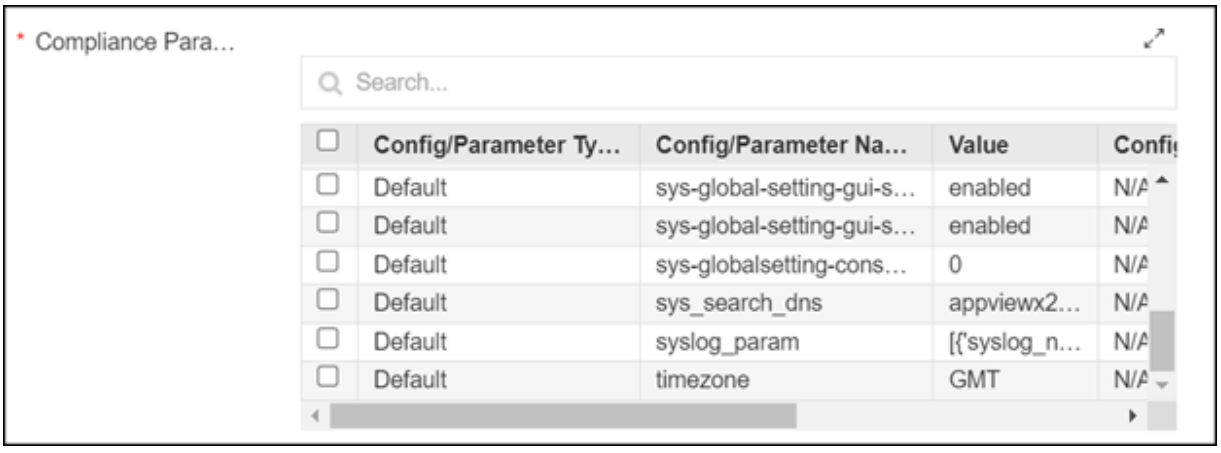
6. Select the **Select Type** options are:
   - **Device Name** - When you select **Device Name** option, you get the option to select devices in the **Device Name** field for which the compliance policy validation is triggered.

     Note: Only the devices that are in managed and active status are displayed for the selection.

   - **Device Group** - When you select the Device Group option, you get the option to select the device group in the Device Group field for which the compliance policy validation is triggered.

     Note: Only the devices that are in managed and active status within the group are displayed.

7. After the **Device Name** selection or **Device Group** selection, the Compliance Parameter Table is updated with the parameters based on the selected compliance policy.



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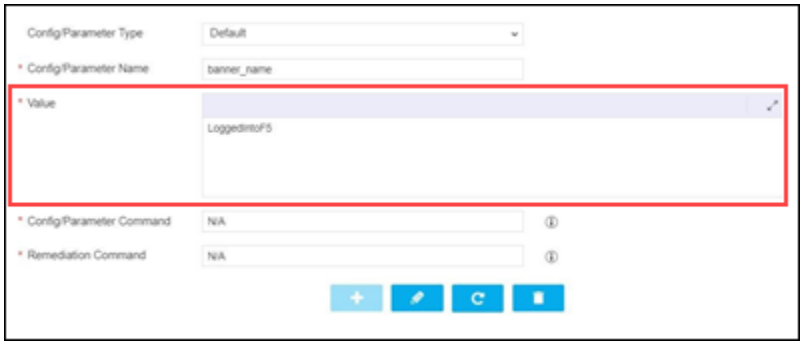
- When the **Create New Compliance** or **Default_F5_Configuration_Compliance** option is selected in the **Select Compliance Policy** field, the **Compliance Parameter Table** displays the Default parameters.
  - The **Default Parameters Value** in the **Compliance Parameter** table must be modified accordingly. To modify,
    - Select a Param:

    - Modify **Value** for a Param:



    - Update the Value. To update the modified value into the table, click **(Edit)**.
  - New custom parameters can also be added. The custom parameter can be added by providing the details for it as follows:

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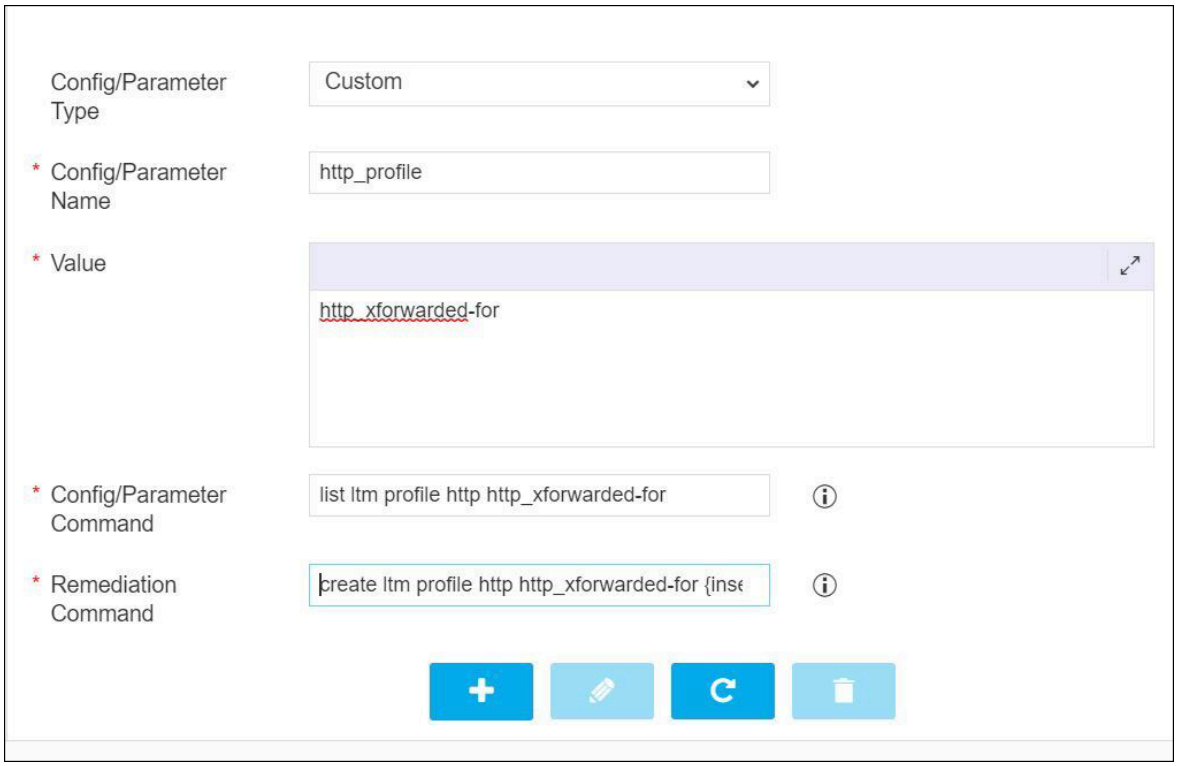

- If the Default compliance policy is selected and the values are modified, save this as a new compliance policy by clicking the **Save as** option as **Yes**.
- If you select the **Save as** option as **No**, the modified values or added any custom parameter will not be saved as a new compliance policy.
- On selecting a specific compliance policy in the beginning of this form, the **Compliance Parameter Table** displays default and custom parameters as customized.
- If any values are modified or any new custom parameter is added to the table, then you can save them in the compliance policy by selecting the option Update Policy – **Yes**.

Note:

- You can only update the values for the default parameters and should not modify the Config/Parameter Name field for Default parameters. Modifying the Config/Parameter Name field might lead to incorrect validation.
- Any new Config/Param added as type Default will also be considered as Custom parameter.

8. In the Compliance Parameter Table, enter/select the details as required.

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Compliance Parameter Table

Field	Description
Config/ Parameter Type	You can select **Custom** or Default Config/Parameter type. For Custom Compliance policy, the Config/Parameter type is considered as **Custom** by default even if it is selected as **Default**.
Config/ Parameter Name	Enter the config/parameter name.
Value	Enter the expected value in the device for the parameter.
Config/ Parameter Command	Enter the command to validate the parameter (Applicable only for Custom Parameter). For the Default parameter, the command is defined by AppViewX.
Remediation Command	Enter the command to remediate the parameter (Applicable only for the Custom parameter). For the Default parameter, the command is defined by AppViewX.

9. To add a new parameter to the Compliance Parameter Table, click Add ( ) button After adding the parameter, you can manage (update/delete) it.
10. Click the **Submit** button.
    The Confirmation popup opens.

> **Note:**
> - If you want to save this form to edit it later, click the **Save Draft** button, and then click **Ok** in the Confirmation popup window. The form will be saved as Open request under **Request** > **All**.
> - If you want to cancel this form, click the **Cancel** button.

11. Click **Ok** to submit the form.
    The Compliance Check runs automatically and generates **Compliance Grid Report**.
12. From the Compliance Grid Report, you get to know if the device parameters are Compliant or Non-Compliant.

    You can download the **Compliance Grid Report** in the **.csv** or **.xlsx** format by clicking **(Download)**.

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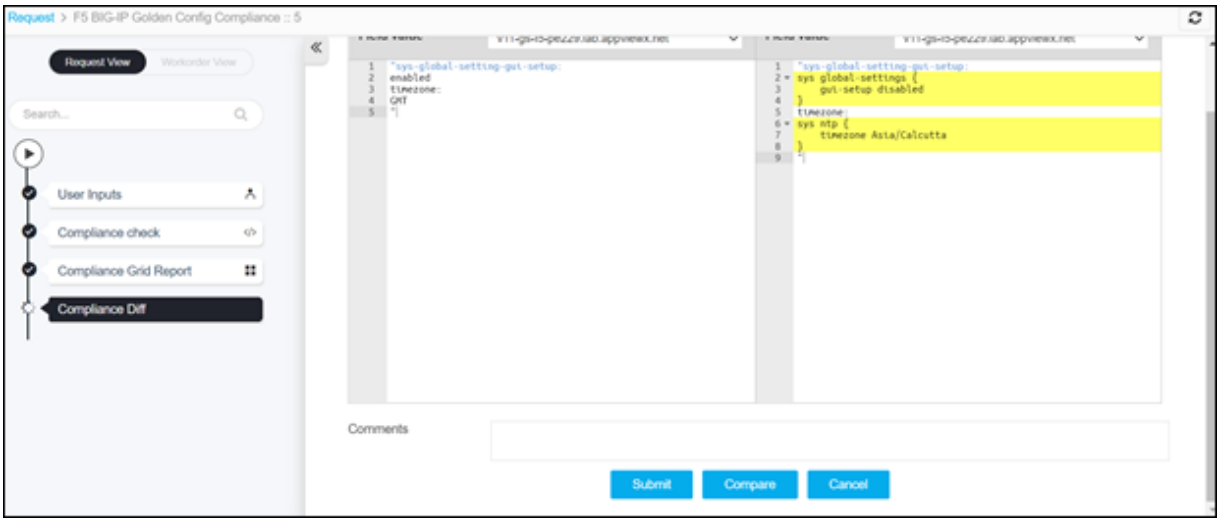
The summary of the Compliance Grid Report are:

- The first column displays the device name.
- The other columns display Config/Parameter names.
- The report has two body rows. They represent the following:
- First Row - the status of the Parameter in the device.
- Second Row - the actual value of the parameter in the device.

13. Click the **Submit** button, and then click **Ok** in the confirmation pop-up.
    The **Compliance Diff check** runs.
14. The **Compliance Diff check** displays the details of non-compliant parameters for each device.
    The details are:
    - Parameter name and the value in the selected policy – shown in the left side of the diff Palate-Golden Config.
    - Parameter name and the value in the selected device - shown in the right side of the diff Palate-actual config.

> **Note:** To view the compliance difference for the other devices, select a device from the field value drop-down list in the left and/or right side of the diff Palate.



15. Click the **Submit** button, and then click **Ok** in the confirmation pop-up.
16. The **Compliance Policy Create/Update** runs automatically:

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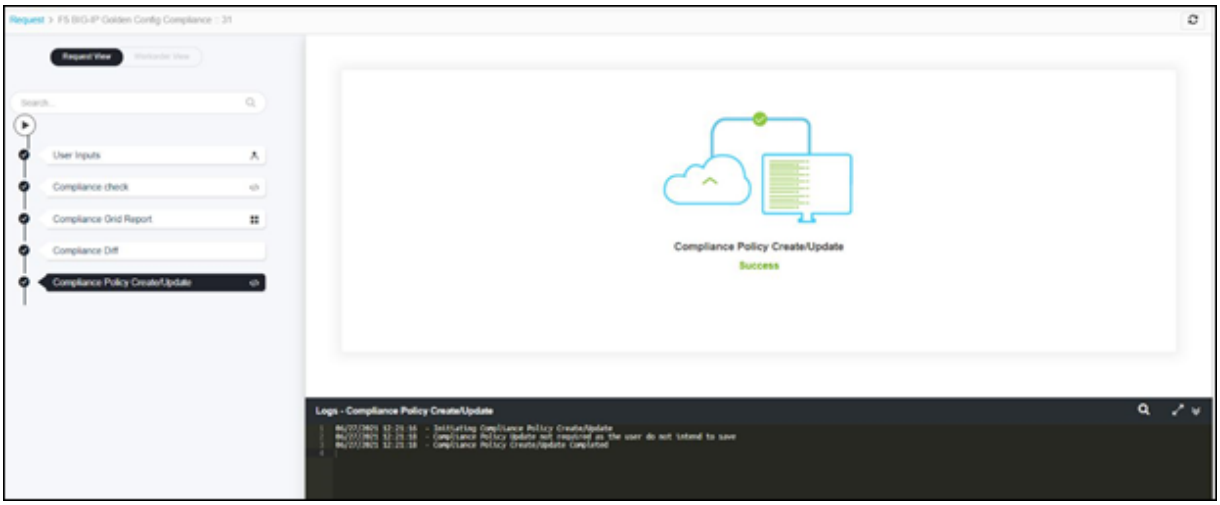
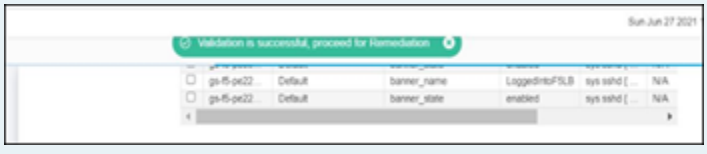


Note: At this phase, the policy is created/updated if you have selected the option Create New Compliance, SaveAs – Yes, Update Policy -Yes in the form input.

17. Remediation Review: The Page displays a list of the Non-Compliant Parameters. By default, two options are displayed: No, Yes.
    - **No** – By default this option is selected. When this option is selected and you **Submit**, the remediation will not be applied to the non-compliant parameters, the workflow ends.
    - **Yes** – When you select **Yes**, the remediation table is displayed for the non-compliant parameters.

Note:

- In case any custom parameter is part of this remediation table, then update the rollback command in the **Rollback Command** field.
- For default parameters, the remediation or rollback command is not required to be provided.
- If the rollback command is not updated for the custom parameter, you do not get the rollback option in case to revert the device parameter to the older state.
- Once the remediation command and rollback command are updated to the device, click the Update button.
- Validate the remediation and rollback details by clicking the Validate button until the message Validation is Successful is seen.



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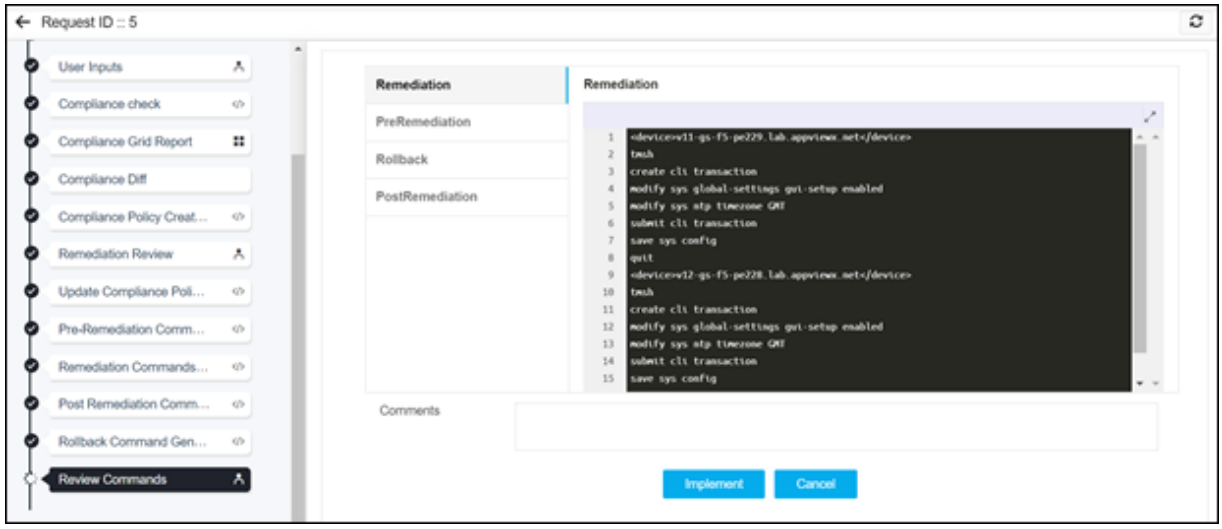
18. Click the **Submit** button, and then click **Ok** in the confirmation pop-up.
    The update of remediation and rollback commands run automatically and generates Review Commands to review and implement the changes.



19. If required, review the commands that are about to be executed in the F5 load balances in the following tabs:
    - **Remediation**
    - **PreRemediation** – List the values of the parameter, prior Remediation.
    - **Rollback** – Revert the parameter's value to the previous state of Remediation.
    - **PostRemediatio**n - List the values of the parameter, post Remediation.

20. You can edit the commands at this stage, by clicking the right-mouse button in the desired tab.

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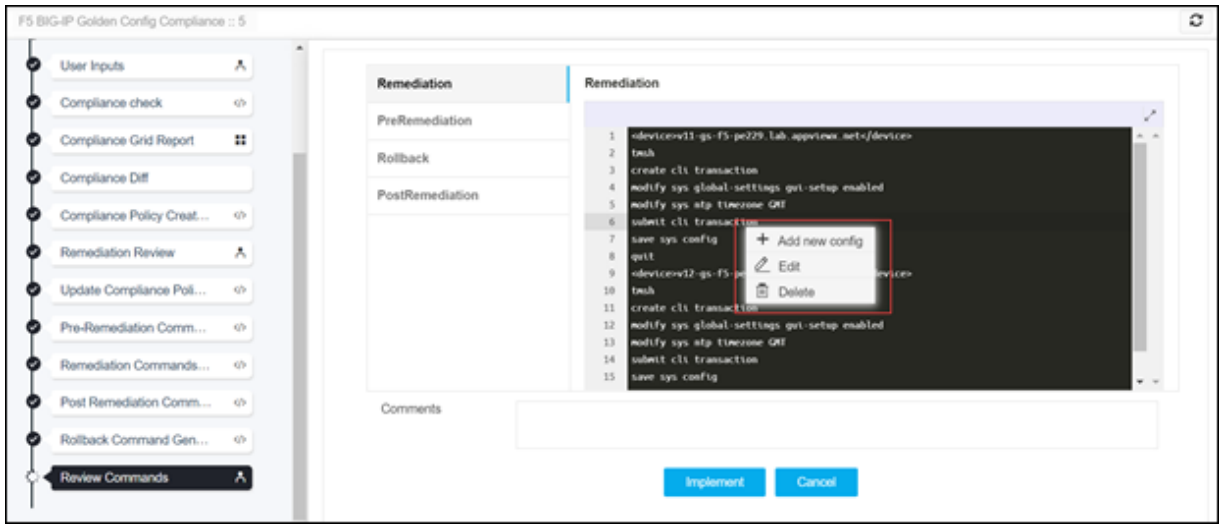
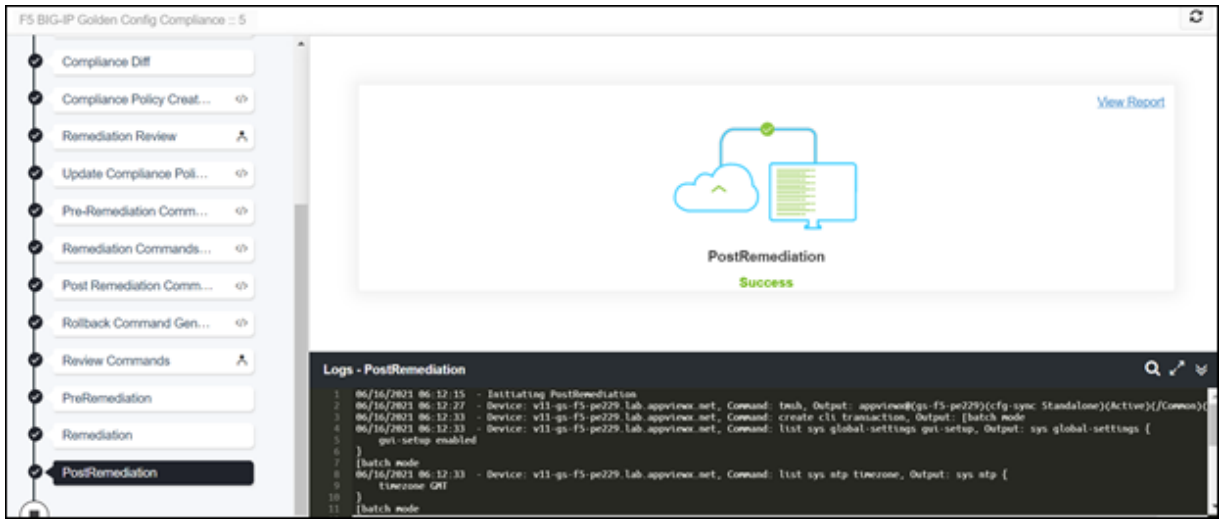


21. Once reviewed the commands, click the Implement button, and then click **Ok** in the confirmation pop-up.

    The implementation process completes:



22. In case the request has to be reverted, perform the following steps
    - Go to the **Menu** > **Request** > **All**.
    - Right-click the row on your desired Request ID.
    - Select the **Rollback** option.

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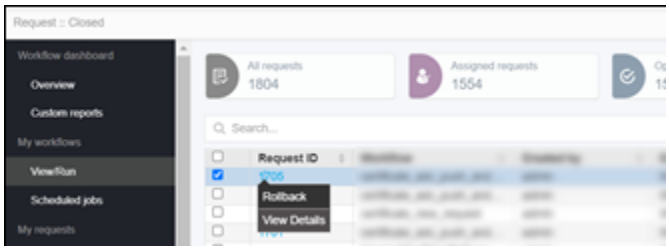

- Select Yes on the Rollback confirmation dialog.
- A new request is triggered for performing rollback.

23. Mapping for the Default Parameter Name to Actual Parameter in Device:

Mapping for the Default Parameter Name to Actual Parameter in Device

Default Parameter Name	Actual Parameter

banner_name:	`appviewx@(gs-f5-pe306)(cfg-sync In Sync)(Active)(/Common)(tmos)# list sys sshd banner-text`
	`sys sshd {`
	`  banner-text none`
	`}`

banner_state	`appviewx@(gs-f5-pe306)(cfg-sync In Sync)(Active)(/Common)(tmos)# list sys sshd banner-text`
	`sys sshd {`
	`  banner-text none`
	`}`

cm-device-group-auto-sync	Compliant or Non-Compliant is decided based on the below logic:
	In each of the cm device-group config, first it is checked whether “type sync-failover” is there. If it exists, then “auto-sync” value in the device is cross checked with the value defined in the Policy, if all match compliant, else non-compliant. Remediation happens only for Non-Complaints.
	`cm device-group HA_group {`
	`  auto-sync enabled`
	`  devices {`
	`  gs-f5-pe305.lab.appviewx.net { }`
	`  gs-f5-pe306.lab.appviewx.net { }`
	`  }`
	`  type sync-failover`
	`}`
	`cm device-group datasync-device-gs-f5-pe305.lab.appviewx.net-dg {`
	`  auto-sync enabled`
	`  devices {`
	`  gs-f5-pe305.lab.appviewx.net { }`
	`  gs-f5-pe306.lab.appviewx.net { }`
	`  }`
	`  full-load-on-sync true`
	`  network-failover disabled`
	`}`

dns_ip_address	

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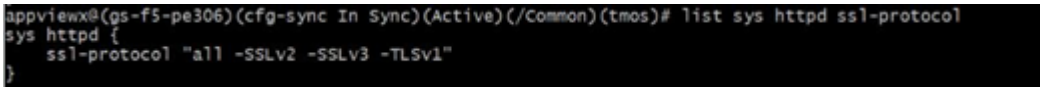
Default Parameter Name	Actual Parameter
gateway_ip	
httpd-allow	
httpd-auth-pam-idle-timeout	
httpd-redirect-http-to-https	
httpd-ssl-protocol	
net-self-allow-service	The Parameter is compliant or Non-Compliant is decided based on the key “allow-service”. In each net self config, it is checked if the value of allow-service in the device matches with the one defined in AppViewX. If all config matches, it is Compliant, else it is Non-Compliant. Remediation happens only for the config that are Non-Compliant. Only Default Values are supported (none, default, all) and no custom values are supported. Example for custom value is tcp:8844.

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Default Parameter Name	Actual Parameter
ntp_ip_address	
ssh_inactivity_timeout	
sys-global-setting-gui-security-banner	
sys-global-setting-gui-setup	
sys-globalsetting-console-inactivity-timeout	
sys_search_dns	
syslog_param	

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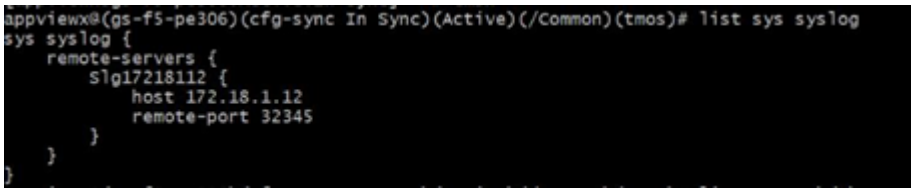
Default Parameter Name	Actual Parameter
syslog_param	Compliant or Non-Compliant is based on the points below: • If the IP and Port defined in Golden config match with the device, then compliant. Then, no action is required. • If Syslog Name, IP, or port defined in Golden config does not match, then it is non-compliant. Then, update the IP or port. • · If the Syslog Name and IP or port defined in the golden config do not match, then create a new Syslog config. 
timezone	

F5 BIG-IP ZTP

- HA
- Standalone

HA

- Launch F5 BIG-IP HA Pair in Azure

Launch F5 BIG-IP HA Pair in Azure

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This workflow launches a failover High Availability (HA) Multi NIC F5 BIG-IP Virtual Machines on Azure. The existing VNET and Subnet are utilised to create two F5 devices with Standby and Active state on Azure. AppViewX will check if the deployment successfully completes. Once done, the device(s) details are fetched. The failover F5 devices are added into AppViewX and Email will be sent to the user. Option to do basic provisioning to the newly added F5 device. Active device will be chosen for the same.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG-IP ZTP** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Launch F5 BIG-IP HA Pair in Azure** workflow. The **Run** and **Schedule** buttons are displayed.
4. Click

. The **Request > Launch F5 BIG-IP HA Pair in Azure :: FormBuilder** page is displayed.
5. Enter/select **Azure Account Details**.

> **Note:** The entered tenant/application ID must have contributor/owner access to the Azure application provided.

Azure Account Details Section - Field and Description Table

Field	Description
Azure Subscription ID	Enter the subscription ID.
Tenant(Directory) ID	Enter Tenant ID.
Azure Client ID	Enter the client ID.
Azure Client Secret	Enter the client secret key.

6. Enter/select **Proxy Details**.

Proxy Details Section - Field and Description Table

Field	Description
Connect to Azure via Proxy	Allows to make connections via Proxy,. The options are:

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Field	Description
	• **No** (default) - select this option to connect with Azure without proxy (Internet connection must be required). • **Yes** - select this option to connect with Azure via proxy, then click the **Get Proxies in Appviewx** button to fetch the proxy servers configured in AppViewX to be displayed in the **Proxies** dropdown list.
***Proxy**	Select a proxy servers configured in AppViewX from the dropdown list.

7. Enter/select **Azure Deployment information**.

Azure Deployment information Section - Field and Description Table

Field	Description
Get F5 on Azure Deployment collections	Click the **Get F5 on Azure Deployment collections** button to get the deployment templates from the AppViewX Collection.
Select Deployment Collection	Select a deployment collection from the dropdown list.
Select the Deployment Template	Select a deployment template type from the dropdown list.
Stack type	It is non editable field and stack type will be auto-filled from the selected deployment template.
F5 BIG-IP Version	It is non editable field and F5 BIG IP version will be auto-filled from the selected deployment template.
F5 BIG-IP Virtual Edition	It is non editable field and F5 BIG IP virtual edition will be auto-filled from the selected deployment template.
nic	Add n number of NICs using this template.

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Field	Description
Content Version	It is non-editable field and content version will be auto-filled from the selected deployment template.

8. Enter/select **F5 Virtual Machine Details**.

F5 Virtual Machine Details Section - Field and Description Table

Field	Description
F5 Instance Name	Name of the F5 device name which was provided for a device while onboarding it in AppViewX Inventory.
Get available resource groups	Click this button to fetch the Azure resource groups of virtual network.
Virtual Network Resource Group	Select a virtual network resource group from the dropdown list.
Virtual Network	Select a virtual network from the resource group from the dropdown list. **Note:** Make sure that selected the VNET/ Management Subnet has connection established from and to AppViewX, only then the device can be communicated from AppViewX.
mgmt subnet name	Select a unique management subnet name from the dropdown list. Your subnet must have access to the internet.
External subnet name	Select an external subnet name.
Internal subnet name	Select an Internal subnet name.
mgmt IP-Address	Management IP address to use for the BIG-IP management IP address. By default, this field is filled with DYNAMIC to use a dynamically assigned IP address. Else provide an IP address.

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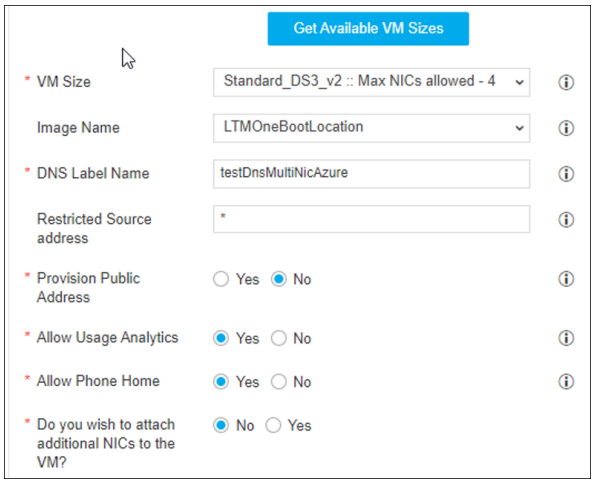
Field	Description
Get Available VM Sizes	Click this button to fetch the available VM sizes. 
VM Size	Select the instance size of the virtual machine from the dropdown list.
Boot Location Type	The options are displayed in this field as it is available in the Azure marketplace for F5. Select a boot location type based on the requirement.
DNS Label Name	Enter a unique DNS Name for the Public IP address used to access the Virtual Machine.
Restricted Source address	This field restricts management access to a specific network or address. Enter an IP address or address range in CIDR notation or asterisk for all sources.
Provision Public Address	Provision to create the Public IP addresses for BIG-IP Management traffic. These addresses will be configured directly on the Azure network interfaces.
Allow Usage Analytics	This deployment can send anonymous template statistics to F5 to help us determine how to improve our solutions. If you select **No**, statistics are not sent.

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Field	Description
Allow Phone Home	This deployment can provide F5 with high-level device use information to optimize development resources. If you select **No** the information is not sent.
Do you wish to attach additional NICs to the VM?	Click Yes to attach additional NICs to the VM otherwise select No.

9. Enter/select **F5 Login Info**.

F5 Login Info Section - Field and Description Table

Field	Description
Login User Name	Enter the user name for the virtual machine. **Note:** The user name must not be "admin".
Authentication Type	Type of authentication to use on the Virtual Machine, password based authentication or key based authentication.
Login Password	Enter the password with the following combination: Minimum eight characters, at least one uppercase letter, one lowercase letter, one number and one special character.

10. Enter/select **F5 License details**.

F5 License Details Section - Field and Description Table

Field	Description
Do you wish to activate license for the F5 device?	The options for activating the license:

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Field	Description
	• **No** (default) - if you select this option, you cannot access F5 modules. • **Yes** - if you select this option, the Base registration key is enabled. Enter the registration key to activate the license.

11. The following table provides the field description for the **EBS Volume Details** section.
12. Click **Submit**.
    The **Confirmation** dialog box is displayed.
13. To save this form so you can edit it later, click **Save Draft** and then click **OK**.
    The form will be saved as **Open request** under **Request** > **My Request**.

    OR

    To submit the form, click **OK**.

    The validation starts automatically and reaches the **Deployment Info** stage. In this page, the host details are shown. If required, you can download the details in the **.csv** or **.xls** format by clicking the **(Download)** button.

14. Click the **Submit** button to submit the form.
    The validation starts automatically and reaches the **VM Status** stage.
15. Click **Submit** to submit the form.
    The validation starts automatically and reaches the **High Availability F5 Devices Info** stage.
16. Click **Submit** to submit the form.
    The validation starts automatically and reaches the **Basic Provisioning** stage.
17. Enter/select the **Basic VIP Creation** details.

Basic VIP Creation Section - Field and Description Table

Field	Description
VIP Name	Enter the name of the VIP.
Destination Address	Enter the destination IP address.

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Field	Description
Port	Enter a port.
Pool Name	Enter the pool name.
Load Balancing Method	The load balancing method is used to distribute traffic across pool in this VIP. The default is round-robin. The methods are: • **round-robin** - the system selects the pools sequentially. • **least-connection-node** - The system passes a new connection to the node that has the least number of current connections out of all pools of which a node is a member. This method works best in environments where the servers or other equipment you are load balancing have similar capabilities. This is a dynamic load balancing method, distributing connections based on various aspects of real-time server performance analysis, such as the number of current connections per node, or the fastest node response time. • **least-connection-member** - The system passes a new connection to the node that has the least number of current connections in the pool. This method works best in environments where the servers or other equipment you are load balancing have similar capabilities. This is a dynamic load balancing method, distributing connections based on various aspects of real-time server performance analysis, such as the current number of connections per node or the fastest node response time. • **ratio-member** - The number of connections that each machine receives over time is proportionate to a ratio weight you define for each machine within the pool.

18. Enter/select **Pool Member Details**.

Pool Member Details Section - Field and Description Table

Field	Description
Member IP	Enter the member IP.
Port	Enter a port.

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Field	Description
Pool Members	Click the add button to add the pool members to the table. After adding the pool member details to the list, you can manage them.

19. Enter/select **Monitor Details**.

Monitor Details Section - Field and Description Table

Field	Description
Monitor Type	Select the health monitors that are available to add for the pool: • HTTP • HTTPS • TCP • TCPHALFOPEN • Gatewaylcmp
Monitor Name	Enter the name for the monitor.
Send String	The text string that the monitor sends to the target object. You must include \r\n at the end of a non-empty Send String. To retrieve a specific page from a website, specify a fully qualified path name.
Receive String	The regular expression representing the text string that the monitor looks for in the returned resource. The most common receive expressions contain a text string that is included in an HTML file on your site. The text string can be regular text, HTML tags, or image names, and the associated operation is not case-sensitive.

20. Enter/select **Other Settings**.

Other Settings Section - Field and Description Table

Field	Description
Banner Name	Enter the name for banner.
Banner State	Select a state for the banner. The possible states are: • enabled • disabled
DNS Address	Enter the DNS address.

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Field	Description
NTP Address	Enter the NTP address.

21. Enter/select the **Syslog Setting** details.

Syslog Setting Section - Field and Description Table

Field	Description
Syslog Name	Enter the name for syslog.
Syslog Ipddress	Enter the syslog IP address.
Syslog Port	Enter the syslog port.
SYSLOG	Click the add button to add the syslog settings to the list. After adding the syslog settings to the list, you can manage them.

22. Click **Submit** to submit the form.
    The validation starts automatically and reaches the **Review** stage.
23. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs.
24. After the review, click the **Submit** button.
    The Confirmation popup opens. It takes a while to complete the request.

Note: To stop running the workflow creation, click **Cancel** .

Note: The credentials to access BIG-IP Configuration Utility are:
Username: admin
Password: Contact the AppViewX support team.

Standalone

- Launch F5 Standalone Single NIC in Azure
- Launch F5 Standalone Multi NIC in Azure

Launch F5 Standalone Single NIC in Azure

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This workflow launches a Standalone Single-NIC F5 BIG-IP in Azure Cloud. A F5 device will be deployed in Azure. If new-stack template is selected, then vnets and subnets will be created. If existing-stack template is selected, the existing vnet and subnet will be utilized. AppViewX checks if the deployment successfully completed. Once completed, the device details are fetched. The F5 device is added into AppViewX and Email will be sent to the user. There is an option to do basic provisioning to the newly added F5 device.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG-IP ZTP** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Launch F5 Standalone Single NIC in Azure** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click

.
   The **Request > Launch F5 Standalone Single NIC in Azure :: FormBuilder** page is displayed.
5. Enter/select the **Azure Account Details**.

> **Note:** The entered tenant/application ID must have contributor/owner access to the Azure application provided.

Azure Account Details Section - Field and Description Table

Field	Description
Azure Subscription ID	Enter the subscription ID.
Tenant(Directory) ID	Enter Tenant ID.
Azure Client ID	Enter the client ID.
Azure Client Secret	Enter the client secret key.

6. Enter/select the **Proxy Details**.

Proxy Details Section - Field and Description Table

Field	Description
***Connect to Azure via Proxy**	Allows to connect with Azure via proxy or not. The options are:

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Field	Description
	• **No** (default) - select this option to connect with Azure without proxy (Internet connection must be required). • **Yes** - select this option to connect with Azure via proxy, then click the **Get Proxies in Appviewx** button to fetch the proxy servers configured in AppViewX to be displayed in the **Proxies** dropdown list.
***Proxy**	Select a proxy servers configured in AppViewX from the dropdown list.

7. Enter/select the **Azure Deployment information**.

Azure Deployment information Section - Field and Description Table

Field	Description
Get F5 on Azure Deployment collections	Click the **Get F5 on Azure Deployment collections** button to get the deployment templates from the AppViewX Collection.
Select Deployment Collection	Select a deployment collection from the dropdown list.
Select the Deployment Template	Select a deployment template type from the dropdown list.
Stack type	It is non editable field and stack type will be auto-filled from the selected deployment template.
F5 BIG-IP Version	It is non editable field and F5 BIG IP version will be auto-filled from the selected deployment template.
F5 BIG-IP Virtual Edition	It is non editable field and F5 BIG IP virtual edition will be auto-filled from the selected deployment template.

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Field	Description
Content Version	It is non editable field and content version will be auto-filled from the selected deployment template.

8. Enter/select the **F5 Virtual Machine Details**.

F5 Virtual Machine Details - Field and Description Table

Field	Description
F5 Instance Name	Name of the F5 device/Azure instance which was provided for a device while onboarding it in AppViewX Inventory.
Get available resource groups	Click this button to fetch the Azure resource groups.
Virtual Network Resource Group	Select a virtual network resource group from the dropdown list.
Virtual Network	Select a virtual network from the resource group from the dropdown list.
mgmt subnet name	Select a unique management subnet name from the dropdown list. Your subnet must have access to the internet. **Note:** Make sure that selected the VNET/ Management Subnet has connection established from and to AppViewX, only then the device can be communicated from AppViewX.
mgmt IP-Address	Management IP address to use for the BIG-IP management IP address. By default, this field is filled with DYNAMIC to use a dynamically assigned IP address. Else provide an IP address from management subnet.
Get Available VM Sizes	Click this button to fetch the available VM sizes.

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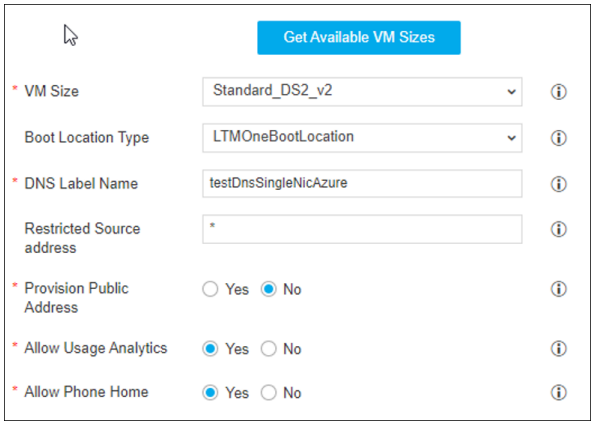
Field	Description
	
VM Size	Select the instance size of the virtual machine from the dropdown list.
Boot Location Type	The options are displayed in this field as it is available in the Azure marketplace for F5. Select a boot location type based on the requirement.
DNS Label Name	Enter a unique DNS Name for the Public IP address used to access the Virtual Machine.
Restricted Source address	This field restricts management access to a specific network or address. Enter an IP address or address range in CIDR notation or asterisk for all sources.
Provision Public Address	Provision to create the Public IP addresses for BIG-IP Management traffic. These addresses will be configured directly on the Azure network interfaces.
Allow Usage Analytics	This deployment can send anonymous template statistics to F5 to help us determine how to improve our solutions. If you select **No**, statistics are not sent.
Allow Phone Home	This deployment can provide F5 with high-level device use information to optimize development

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Field	Description
	resources. If you select **No** the information is not sent.

9. Enter/select **F5 Login Info**.

F5 Login Info Section - Field and Description Table

Field	Description
Login User Name	Enter the user name for the virtual machine. **Note:** The user name must not be "admin".
Authentication Type	Type of authentication to use on the Virtual Machine. The available option is password based authentication.
Login Password	Enter the password with the following combination: Minimum eight characters, at least one uppercase letter, one lowercase letter, one number and one special character.

10. Enter/select the **F5 License Activation**details.

F5 License Activation Section - Field and Description Table

Field	Description
Do you wish to activate license for the F5 device?	The options for activating the license: • **No** - if you select this option, you cannot access F5 modules. • **Yes** - if you select this option, the Base registration key is enabled. Enter the registration key to activate the license.

11. Click **Submit**.

    The **Confirmation** dialog box is displayed.
12. To save this form so you can edit it later, click **Save Draft** and then click **OK**.

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The form will be saved as **Open request** under **Request** > **My Request**.

OR

To submit the form, click **OK**.

The validation starts automatically and reaches the **Deployment Info** stage. In this page, the host details are shown. If required, you can download the details in the **.csv** or **.xls** format by clicking the **(Download)** button.

13. Click **Submit** to submit the form.
    The validation starts automatically and reaches the **VM Status** stage.
14. Click **Submit** to submit the form.
    The validation starts automatically and reaches the **Basic Provisioning** stage.
15. Enter/select the **Basic VIP Creation** details.

Basic VIP Creation Section - Field and Description Table

Field	Description
VIP Name	Enter the name of the VIP.
Destination Address	Enter the destination IP address.
Port	Enter a port.
Pool Name	Enter the pool name.
Load Balancing Method	The load balancing method is used to distribute traffic across pool in this VIP. The default is round-robin. The methods are: • **round-robin** - the system selects the pools sequentially. • **least-connection-node** - The system passes a new connection to the node that has the least number of current connections out of all pools of which a node is a member. This method works best in environments where the servers or other equipment you are load balancing have similar capabilities. This is a dynamic load balancing method, distributing connections based on various aspects of real-time server performance analysis, such as the number of current connections per node, or the fastest node response time. • **least-connection-member** - The system passes a new connection to the node that has the least number of current connections in the pool. This method works best in environments

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Field	Description
	where the servers or other equipment you are load balancing have similar capabilities. This is a dynamic load balancing method, distributing connections based on various aspects of real-time server performance analysis, such as the current number of connections per node or the fastest node response time. • **ratio-member** - The number of connections that each machine receives over time is proportionate to a ratio weight you define for each machine within the pool.

16. Enter/select the **Pool Member Details**.

Pool Member Details Section - Field and Description Table

Field	Description
Member IP	Enter the member IP.
Port	Enter a port.
Pool Members	Click the add button to add the pool members to the table. After adding the pool member details to the list, you can manage them.

17. Enter/select the **Monitor Details**.

Monitor Details Section - Field and Description Table

Field	Description
Monitor Type	Select the health monitors that are available to add for the pool: • HTTP • HTTPS • TCP • TCPHALFOPEN • Gatewaylcmp
Monitor Name	Enter the name for the monitor.
Send String	The text string that the monitor sends to the target object. You must include \r\n at the end of a non-empty Send String. To retrieve a specific page from a website, specify a fully qualified path name.

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Field	Description
Receive String	The regular expression representing the text string that the monitor looks for in the returned resource. The most common receive expressions contain a text string that is included in an HTML file on your site. The text string can be regular text, HTML tags, or image names, and the associated operation is not case-sensitive.

18. Enter/select the **Other Settings**.

Other Settings Section - Field and Description Table

Field	Description
Banner Name	Enter the name for banner.
Banner State	Select a state for the banner. The possible states are: • enabled • disabled
DNS Address	Enter the DNS address.
NTP Address	Enter the NTP address.

19. Enter/select the **Syslog Setting** details.

Syslog Setting Section - Field and Description Table

Field	Description
Syslog Name	Enter the name for syslog.
Syslog Ipddress	Enter the syslog IP address.
Syslog Port	Enter the syslog port.
SYSLOG	Click the add button to add the syslog settings to the list. After adding the syslog settings to the list, you can manage them.

20. Click **Submit** to submit the form.
    The validation starts automatically and reaches the **Review** stage.
21. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs.
22. (Optional) If you need to change any data at this stage, right click and select the required option.
23. After the review, click the **Submit** button.
    The Confirmation popup opens.

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Note: Click **Cancel** to stop running the workflow creation.

24. Click **Ok** to complete the workflow creation.
    It takes a while to complete the request.

Note: The stages of the request are shown in the left-side of the screen. To view a particular stage of the request, click the respective stage.

Launch F5 Standalone Multi NIC in Azure

This workflow launches a Standalone Multi NIC F5 BIG-IP Virtual Machine on Azure. An F5 device will be deployed in Azure. If a new-stack template is selected, then vnets and subnets will be created. If an existing-stack template is selected, the existing vnet and subnet will be utilized. AppViewX checks if the deployment successfully completed. Once completed, the device details are fetched. The F5 device is added into AppViewX and Email will be sent to the user. Also, option to do basic provisioning to the newly added F5 device.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **F5 BIG-IP ZTP** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Launch F5 Standalone Multi NIC in Azure** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click

.
   The **Request > Launch F5 Standalone Multi NIC in Azure :: FormBuilder** page is displayed.
5. Enter/select the **Azure Account Details**.

Note: The entered tenant/application ID must have contributor/owner access to the Azure application provided.

Azure Account Details Section - Field and Description Table

Field	Description
Azure Subscription ID	Enter the subscription ID.

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Field	Description
Tenant(Directory) ID	Enter Tenant ID.
Azure Client ID	Enter the client ID.
Azure Client Secret	Enter the client secret key.

6. Enter/select the **Proxy Details**.

Proxy Details Section - Field and Description Table

Field	Description
Connect to Azure via Proxy	Allows to connect with Azure via proxy or not. The options are: • **No** (default) - select this option to connect with Azure without proxy (Internet connection must be required). • **Yes** - select this option to connect with Azure via proxy, then click the **Get Proxies in Appviewx** button to fetch the proxy servers configured in AppViewX to be displayed in the **Proxies** dropdown list.
***Proxy**	Select a proxy servers configured in AppViewX from the dropdown list.

7. Enter/select the **Azure Deployment information**.

Azure Deployment information Section - Field and Description Table

Field	Description
Get F5 on Azure Deployment collections	Click the **Get F5 on Azure Deployment collections** button to get the deployment templates from the AppViewX Collection.
Select Deployment Collection	Select a deployment collection from the dropdown list.
Select the Deployment Template	Select a deployment template type from the dropdown list.

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Field	Description
Stack type	It is non editable field and stack type will be auto-filled from the selected deployment template.
F5 BIG-IP Version	It is non editable field and F5 BIG IP version will be auto-filled from the selected deployment template.
F5 BIG-IP Virtual Edition	It is non editable field and F5 BIG IP virtual edition will be auto-filled from the selected deployment template.
nic	Add n number of NICs using this template.
Content Version	It is non-editable field and content version will be auto-filled from the selected deployment template.

8. Enter/select the **F5 Virtual Machine Details**.

F5 Virtual Machine Details Section - Field and Description Table

Field	Description
F5 Instance Name	Name of the F5 device name which was provided for a device while onboarding it in AppViewX Inventory.
Get available resource groups	Click this button to fetch the Azure resource groups of virtual network.
Virtual Network Resource Group	Select a virtual network resource group from the dropdown list.
Virtual Network	Select a virtual network from the resource group from the dropdown list. **Note:** Make sure that selected the VNET/ Management Subnet has connection established from and to AppViewX, only then the device can be communicated from AppViewX.

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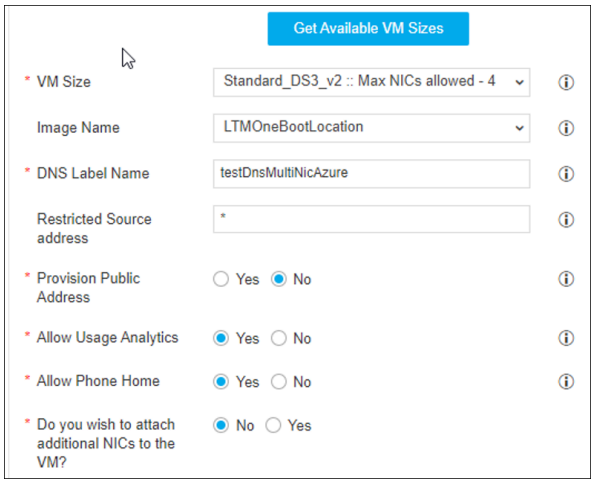
Field	Description
mgmt subnet name	Select a unique management subnet name from the dropdown list. Your subnet must have access to the internet.
External subnet name	Select an external subnet name.
Internal subnet name	Select an Internal subnet name.
mgmt IP-Address	Management IP address to use for the BIG-IP management IP address. By default, this field is filled with DYNAMIC to use a dynamically assigned IP address. Else provide an IP address.
Get Available VM Sizes	Click this button to fetch the available VM sizes. 
VM Size	Select the instance size of the virtual machine from the dropdown list.
Boot Location Type	The options are displayed in this field as it is available in the Azure marketplace for F5. Select a boot location type based on the requirement.
DNS Label Name	Enter a unique DNS Name for the Public IP address used to access the Virtual Machine.
Restricted Source address	This field restricts management access to a specific network or address. Enter an IP address

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Field	Description
	or address range in CIDR notation or asterisk for all sources.
Provision Public Address	Provision to create the Public IP addresses for BIG-IP Management traffic. These addresses will be configured directly on the Azure network interfaces.
Allow Usage Analytics	This deployment can send anonymous template statistics to F5 to help us determine how to improve our solutions. If you select **No**, statistics are not sent.
Allow Phone Home	This deployment can provide F5 with high-level device use information to optimize development resources. If you select **No** the information is not sent.
Do you wish to attach additional NICs to the VM?	Click Yes to attach additional NICs to the VM otherwise select No.

9. Enter/select the **F5 Login Info**.

F5 Login Info Section - Field and Description Table

Field	Description
Login User Name	Enter the user name for the virtual machine. **Note:** The user name must not be "admin".
Authentication Type	Type of authentication to use on the Virtual Machine, password based authentication or key based authentication.
Login Password	Enter the password with the following combination: Minimum eight characters, at least one uppercase letter, one lowercase letter, one number and one special character.

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10. Enter/select the **F5 License details**.

F5 License details Section - Field and Description Table

Field	Description
Do you wish to activate license for the F5 device?	The options for activating the license: • **No** (default) - if you select this option, you cannot access F5 modules. • **Yes** - if you select this option, the Base registration key is enabled. Enter the registration key to activate the license.

11. Click **Submit**.
    The **Confirmation** dialog box is displayed.
12. To save this form so you can edit it later, click **Save Draft** and then click **OK**.
    The form will be saved as **Open request** under **Request** > **My Request**.

    OR

    To submit the form, click **OK**.

    The validation starts automatically and reaches the **Deployment Info** stage. In this page, the host details are shown. If required, you can download the details in the **.csv** or **.xls** format by clicking the **(Download)** button.
13. Click **Submit** to submit the form.
    The validation starts automatically and reaches the **VM Status** stage.
14. Click **Submit** to submit the form.
    The validation starts automatically and reaches the **Basic Provisioning** stage.
15. Enter/select the **Basic VIP Creation** details.

Basic VIP Creation Section - Field and Description Table

Field	Description
VIP Name	Enter the name of the VIP.
Destination Address	Enter the destination IP address.
Port	Enter a port.
Pool Name	Enter the pool name.

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Field	Description
Load Balancing Method	The load balancing method is used to distribute traffic across pool in this VIP. The default is round-robin. The methods are: • **round-robin** - the system selects the pools sequentially. • **least-connection-node** - The system passes a new connection to the node that has the least number of current connections out of all pools of which a node is a member. This method works best in environments where the servers or other equipment you are load balancing have similar capabilities. This is a dynamic load balancing method, distributing connections based on various aspects of real-time server performance analysis, such as the number of current connections per node, or the fastest node response time. • **least-connection-member** - The system passes a new connection to the node that has the least number of current connections in the pool. This method works best in environments where the servers or other equipment you are load balancing have similar capabilities. This is a dynamic load balancing method, distributing connections based on various aspects of real-time server performance analysis, such as the current number of connections per node or the fastest node response time. • **ratio-member** - The number of connections that each machine receives over time is proportionate to a ratio weight you define for each machine within the pool.

16. Enter/select the **Pool Member Details**.

Pool Member Details Section - Field and Description Table

Field	Description
Member IP	Enter the member IP.
Port	Enter a port.
Pool Members	Click the add button to add the pool members to the table. After adding the pool member details to the list, you can manage them.

17. Enter/select the **Monitor Details**.

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Monitor Details Section - Field and Description Table

Field	Description
Monitor Type	Select the health monitors that are available to add for the pool: • HTTP • HTTPS • TCP • TCPHALFOPEN • Gatewaylcmp
Monitor Name	Enter the name for the monitor.
Send String	The text string that the monitor sends to the target object. You must include \r\n at the end of a non-empty Send String. To retrieve a specific page from a website, specify a fully qualified path name.
Receive String	The regular expression representing the text string that the monitor looks for in the returned resource. The most common receive expressions contain a text string that is included in an HTML file on your site. The text string can be regular text, HTML tags, or image names, and the associated operation is not case-sensitive.

18. Enter/select the **Other Settings**.

Other Settings Section - Field and Description Table

Field	Description
Banner Name	Enter the name for banner.
Banner State	Select a state for the banner. The possible states are: • enabled • disabled
DNS Address	Enter the DNS address.
NTP Address	Enter the NTP address.

19. Enter/select the **Syslog Setting** details.

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Syslog Setting Section - Field and Description Table

Field	Description
Syslog Name	Enter the name for syslog.
Syslog Ipddress	Enter the syslog IP address.
Syslog Port	Enter the syslog port.
SYSLOG	Click the add button to add the syslog settings to the list. After adding the syslog settings to the list, you can manage them.

20. Click **Submit** to submit the form.
    The validation starts automatically and reaches the **Review** stage.
21. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs.
22. (Optional) If you need to change any data at this stage, right click and select the required option.
23. After the review, click the **Submit** button.
    The Confirmation popup opens.

> **Note:** Click **Cancel** to stop running the workflow creation.

24. Click **Ok** to complete the workflow creation.
    It takes a while to complete the request.

> **Note:** The stages of the request are shown in the left-side of the screen. To view a particular stage of the request, click the respective stage.

GITOps

- GitHub - Create New Project
- GitLab - Create New Project
- GITOps - Create or Modify GTM Application Services
- GITOps - Create or Modify LTM Application Services
- GITOps - Delete LTM or GTM Application Services
- GitOps - Pull Config and Execute AS3

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GitHub - Create New Project

This workflow creates a new project in GitHub Cloud.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **GITOps** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **GitHub - Create New Project** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click

.
   The **Request > GitHub - Create New Project :: FormBuilder** page is displayed.
5. Enter/select the field information in the **GitHub - Create New Repository** section.

   GitHub - Create New Repository Section - Field and Description Table

Field	Description
***Enter Repository Name**	Enter the repository name for the GitHub Project. The project will be created with this name.
***Enter Description**	Enter the Description for the GitHub Project.

6. Enter the field information in the **GitHub - Details** section.

   GitHub - Details Section - Field and Description Table

Field	Description
***Username**	Enter the valid username that has privelege to create projects.
***Password**	Enter the password or API token.

7. Click the **Next** button.
   The **Confirmation** popup opens.

   Note:
   - If you want to save this form to edit it later, click the **Save Draft** button, and then click **Ok** in the **Confirmation** popup window. The form will be saved as **Open** request under **Request** > **My Request**.
   - If you want to cancel this form, click the **Cancel** button.

8. Click **Ok** to submit the form.

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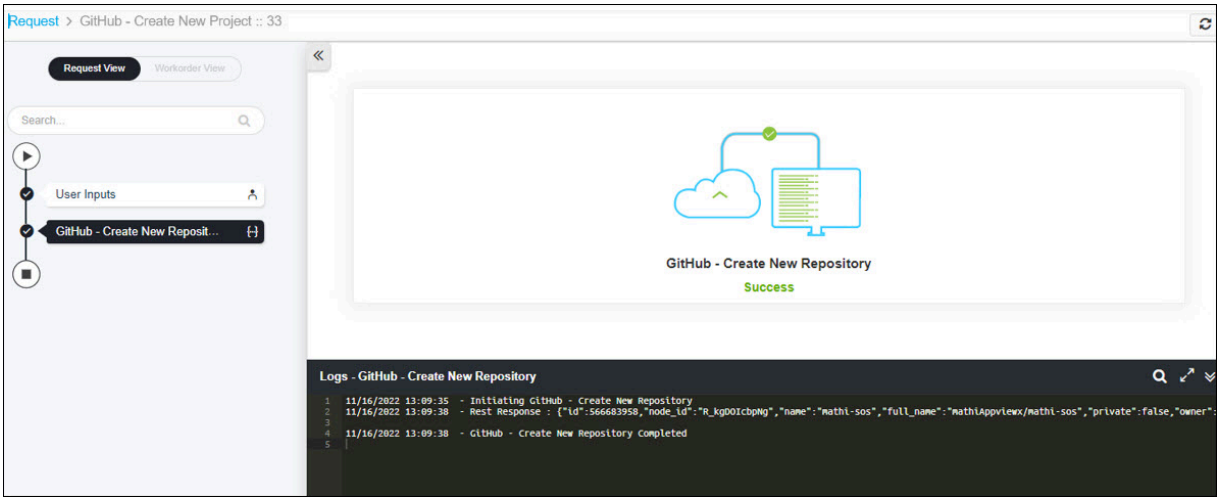
9. The workflow is completed and the new project is created in the GitHub.



Note: The stages of the request are shown in the left side of the screen. To view a particular stage of the request, click the respective stage.

GitLab - Create New Project

This workflow creates a new project in GitLab Cloud/OnPrem.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **GITOps** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **GitLab - Create New Project** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click Run.
   The **Request > GitLab - Create New Project :: FormBuilder** page is displayed.
5. Enter the field information in the **GitLab - Create Projects** section.

GitLab - Create Projects Section - Field and Description Table

Field	Description
***Enter GitLab Url**	Enter the GitLab URL.

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Field	Description
***Enter Private Token**	Enter the private access token.
***Enter Project Name**	Enter the GitLab project name.

6. Click the **Next** button.
   The **Confirmation** popup opens.

> **Note:**
> - If you want to save this form to edit it later, click the **Save Draft** button, and then click **Ok** in the **Confirmation** popup window. The form will be saved as **Open** request under **Request** > **My Request**.
> - If you want to cancel this form, click the **Cancel** button.

7. Click **Ok** to submit the form.
8. The workflow is completed and the new project is created in the GitLab.

> **Note:** The stages of the request are shown in the left side of the screen. To view a particular stage of the request, click the respective stage.

GITOps - Create or Modify GTM Application Services

Prerequisites: F5 device must have AS3 service enabled and running.

This workflow pushes the AS3 configurations to an active GitLab repository. Review can be automated from Git using custom logic script.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **GITOps** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **GITOps - Create or Modify GTM Application Services** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click

.
   The **Request > GITOps - Create or Modify GTM Application Services :: FormBuilder** page is displayed.

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5. Enter the field information in the **General Properties** section.
6. The following table provides the field description for the **General Properties** section.

General Properties Section - Field and Description Table

Field	Description
***Action**	Select the action to create or modify an application service. The options are: • **Create** (default) - select this option to create an application service for a device. • **Modify** - select this option to choose an existing application and partition.
***Device Name**	Select the device name from the drop-down list.
***Partition Type**	Partition in which objects will be created. Select a partition type. The options are: • **Create New Partition** (default) - select this option to create a new partition. • **Existing Partition** - select this option to choose an existing partition. **Note:** Partition dropdown lists only the partitions created via AS3 triggered API calls.
***Enter Partition Name**	Enter the partition name.
***Application Type**	Select a application type. The options are: • **Create New Application** (default) - select this option to create a new application. • **Existing Application** - select this option to choose an existing partition.
***Enter Application Name**	Enter the FQDN of the virtual server.

7. Enter the field information in the **Wide IP** section.

Wide IP Section - Field and Description Table

Field	Description
***WideIP FQDN**	Enter the fully qualified domain name.
***WideIP Type**	Select a Wide IP type from the dropdown list.

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8. Enter the field information in the **Pool** section.

Pool Section - Field and Description Table

Field	Description
***Pool Name**	Enter the pool name.
***Pools Load Balancing Method**	Select a load balancing method for the pools.
Pool Members Preferred Load Balancing Method	Select a preferred load balancing method for the pool members. The system tries this method first.
Pool Members Alternate Load Balancing Method	Select the alternate load balancing method. The system tries this method if the Preferred method is unsuccessful in picking the WideIP.
Pool Members Fallback Load Balancing Method	Select the fallback load balancing method. The system tries this method if the Preferred and alternate methods are unsuccessful in picking the WideIP.

9. Enter the field information in the **Pool Members** section.

Pool Members Section - Field and Description

Field	Description
***Pool member Type**	Select a pool member type from the deopdown list. The types are: • Generic Host (default) - When you select this option you need to select GTM server and virtual servers. • Existing VIP -. When you select this option you need to select GTM server and existing VIP.
***GTM Server**	Select a GTM server from the dropdown list.

10. Enter the field information in the **Monitors** section.

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Monitors Section - Field and Description Table

Field	Description
***Do you want to associate a HTTP/HTTPS monitor to the pool?**	Select Yes to associate a HTTP/HTTP monitor, and then select monitor from the dropdown list otherwise select No.

11. Click the **Submit** button.
    The **Confirmation** popup opens.

> **Note:**
> - If you want to save this form to edit it later, click the **Save Draft** button, and then click **Ok** in the **Confirmation** popup window. The form will be saved as **Open** request under **Request** > **My Request**.
> - If you want to cancel this form, click the **Cancel** button.

12. Click **Ok** to submit the form.
13. The workflow is completed and the GTM application service is created/updated in the GitHub.

> **Note:** The stages of the request are shown in the left side of the screen. To view a particular stage of the request, click the respective stage.

GITOps - Create or Modify LTM Application Services

F5 device must have AS3 service enabled and running.

This workflow pushes the AS3 configurations to an active GitLab repository. Review can be automated from Git using custom logic script.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **GITOps** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **GITOps - Create or Modify LTM Application Services** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click

.

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The **Request > GITOps - Create or Modify LTM Application Services :: FormBuilder** page is displayed.

5. Enter the field information in the **General Properties** section.

General Properties Section - Field and Description Table

Field	Description
***Action**	Select the action to create or modify an application service. The options are: • **Create** (default) - select this option to create an application service for a device. • **Modify** - select this option to choose an existing application and partition.
***Device Name**	Select the device name from the drop-down list.
***Partition Type**	Partition in which objects will be created. Select a partition type. The options are: • **Create New Partition** (default) - select this option to create a new partition. • **Existing Partition** - select this option to choose an existing partition. **Note:** Partition dropdown lists only the partitions created via AS3 triggered API calls.
***Enter Partition Name**	Enter the partition name.
***Application Type**	Select a application type. The options are: • **Create New Application** (default) - select this option to create a new application. • **Existing Application** - select this option to choose an existing partition.
***Enter Application Name**	Enter the FQDN of the virtual server.

6. Enter the field information in the **Enter Virtual Server Details** section.

Enter Virtual Server Details- Field and Description Table

Field	Description
***Virtual Server Name**	Enter the virtual server name.

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Field	Description
***Virtual Server IP**	Select virtual server IP address.
Virtual Server Port	Enter virtual server port.

7. Enter the field information in the **Enter Pool Details** section.

Enter Pool Details Section - Field and Description Table

Field	Description
***Pool Name**	Enter the pool name.
***Pool Members Load Balancing Method**	Select a load balancing method for the pools.
Pool Member Addresses	Enter pool member' IP addresses.
Pool Member Service Port	Enter pool member service port.
Pool Members	Click the add button to add the pool member's details to the Pool Members table. **Note:** After adding the pool member's details to the Pool Members table, you can modify them.

8. Select the field information in the **Additional Details** section.
9. Click the **Submit** button.
   The **Confirmation** popup opens.

Note:
- If you want to save this form to edit it later, click the **Save Draft** button, and then click **Ok** in the **Confirmation** popup window. The form will be saved as **Open** request under **Request** > **My Request**.
- If you want to cancel this form, click the **Cancel** button.

10. Click **Ok** to submit the form.
11. The workflow is completed and the GTM application service is created/updated in the GitHub.

Note: The stages of the request are shown in the left side of the screen. To view a particular stage of the request, click the respective stage.

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GITOps - Delete LTM or GTM Application Services

F5 device must have AS3 service enabled and running.

This workflow deletes a LTM or GTM application service from GitLab device by fetching all the LTM or GTM application service from the device based on device name. You can delete any LTM or GTM application service from the list.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **GITOps** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **GITOps - Delete LTM or GTM Application Services** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click

.
   The **Request > GITOps - Delete LTM or GTM Application Services :: FormBuilder** page is displayed.
5. Enter the field information in the **General Properties** section.

General Properties Section - Field and Description Table

Field	Description
***F5 Device**	Select a device from the dropdown list.
***Select the object to Delete**	Select an object from the dropdown list.
***Select Partition**	Select a partition from the dropdown list.
***Select Application**	Select an application from the dropdown list.

6. Enter the field information in the **Delete Action** section.

Delete Action Section - Field and Description Table

Field	Description
***Delete Pool**	Select any of the following options to delete a pool or not: • Yes • No

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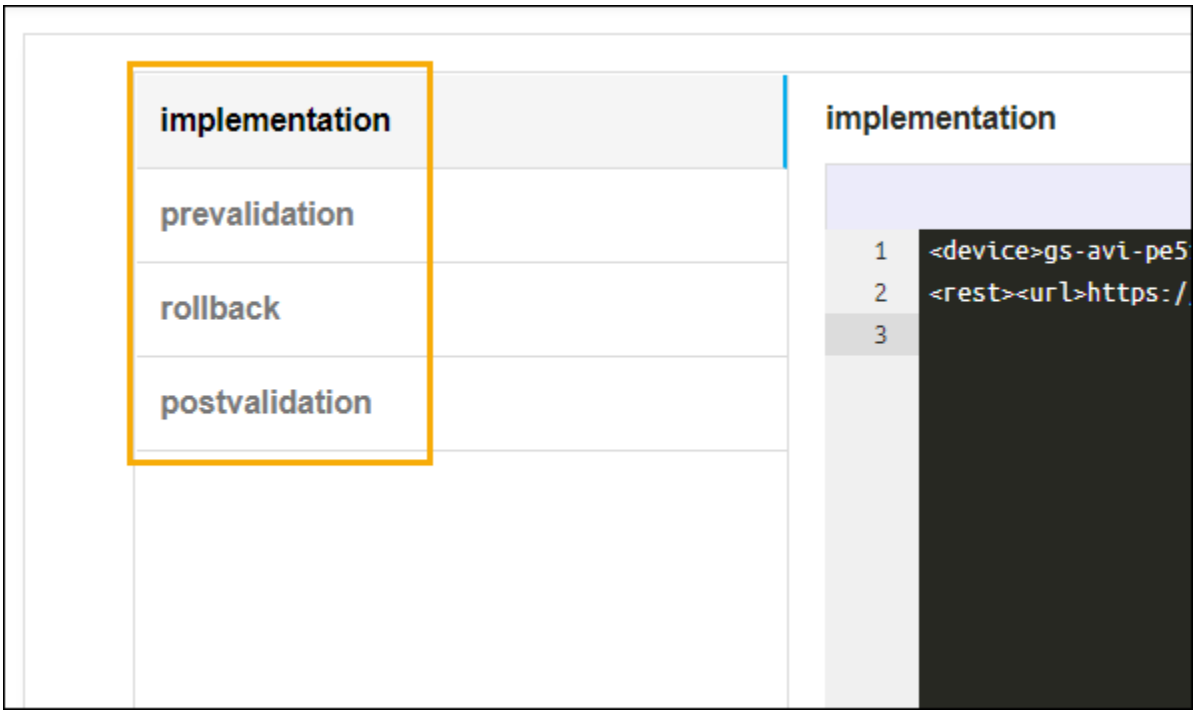
7. Click the **Submit** button.

> **Note:**
> - If you want to save this form to edit it later, click the **Save Draft** button, and then click **Ok** in the Confirmation popup window. The form will be saved as Open request under **Request** > **My Request**.
> - If you want to cancel this form, click the **Cancel** button.

8. Click **Ok** to submit the form.
   The validation starts automatically and reaches the Review stage.

> **Note:**
> - If there is any failure at this stage, start a new request by providing the correct data.
> - Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

9. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs:



10. (Optional) If you need to update any data at this stage, you can do so by clicking the right-side of the mouse on the data and selecting the desired option.

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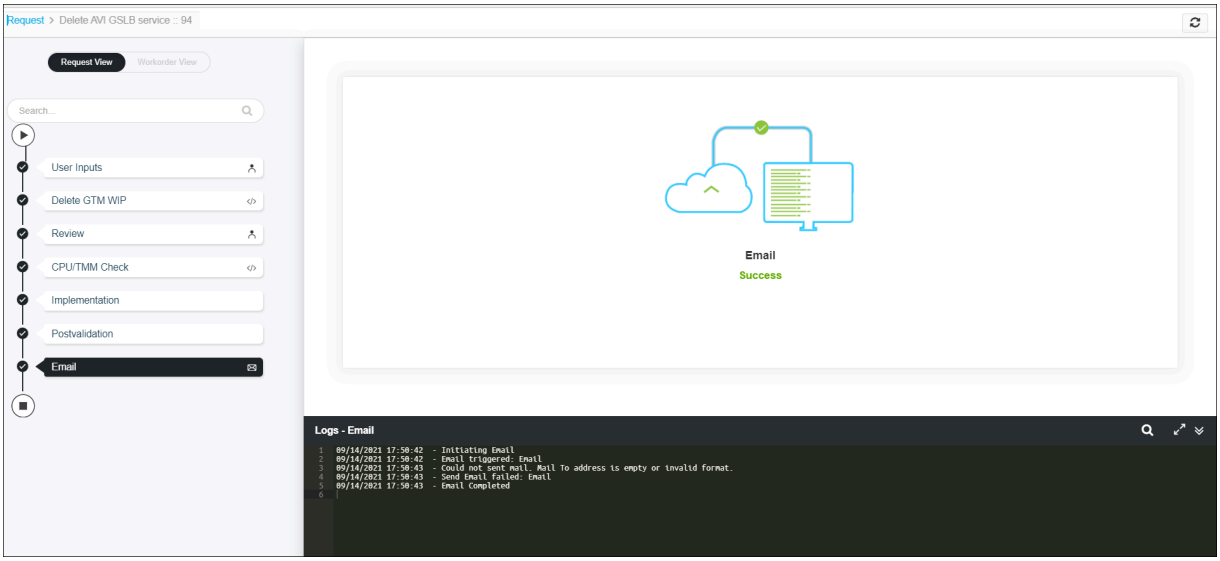
11. After the review, click the **Submit** button.
    The Confirmation popup opens.

> **Note:** To stop running the workflow creation, click **Cancel**.

12. Click **Ok** to continue the workflow creation.
    It takes a while to complete the request.
13. The workflow is created and the email is triggered to the configured email IDs.



> **Note:** The stages of the request are shown in the left-side of the screen. To view a particular stage of the request, click the respective stage.

GitOps - Pull Config and Execute AS3

This workflow pulls the AS3 configurations from a file in GitHub repository.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **GITOps** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **GitOps - Pull Config and Execute AS3** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click Run.

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The **Request > GitOps - Pull Config and Execute AS3 :: FormBuilder** page is displayed.

5. Select the field information in the **AS3 Device** section.

AS3 Device Section - Filed and Description Table

Field	Description
***Select Device**	Select a device from the dropdown list.

6. Enter the field information in the **GitHub Repo Details** section.

GitHub Repo Details Section - Field and Description Table

Field	Description
***Repo Owner**	Enter the name of the repository owner.
***Repo Name**	Enter the name of the repository.
***File Path**	Enter the file path.
***GitHub Username**	Enter GitHub username.
GitHub Password	Enter GitHub password.

7. Click the **Next** button.

Note:
- If you want to save this form to edit it later, click the **Save Draft** button, and then click **Ok** in the Confirmation popup window. The form will be saved as Open request under **Request** > **My Request**.
- If you want to cancel this form, click the **Cancel** button.

8. Click **Ok** to submit the form.

The validation starts automatically and reaches the Review stage.

Note:
- If there is any failure at this stage, start a new request by providing the correct data.
- Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

9. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs:

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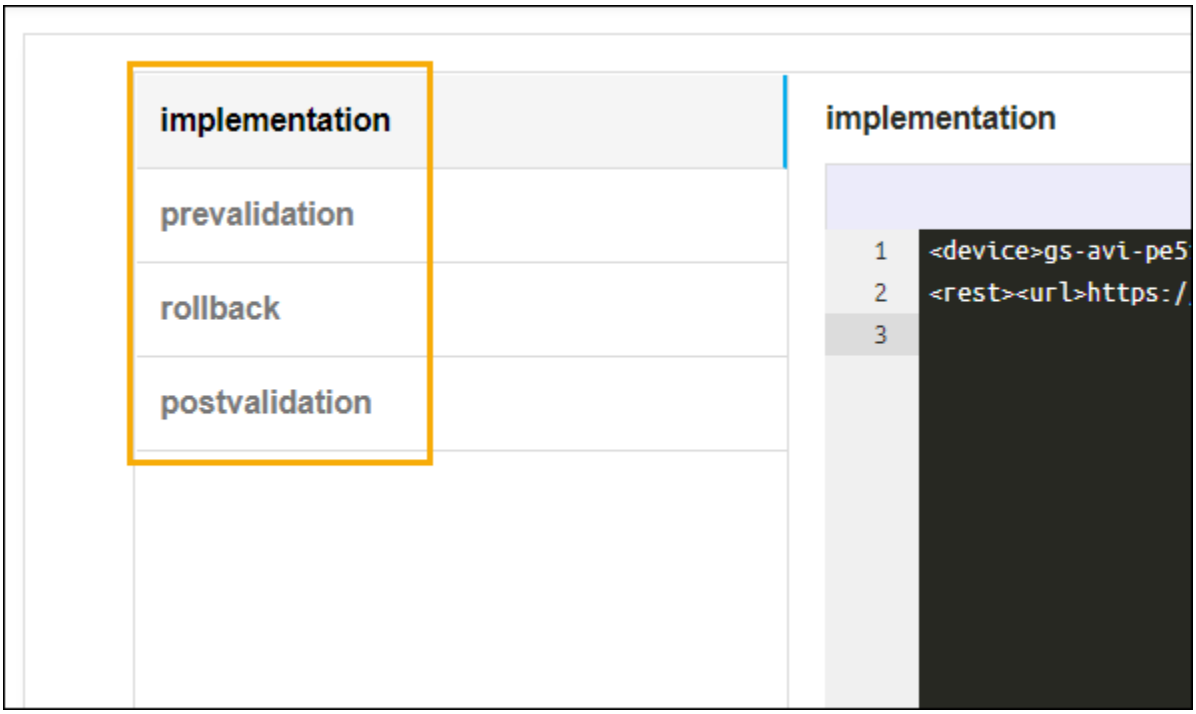
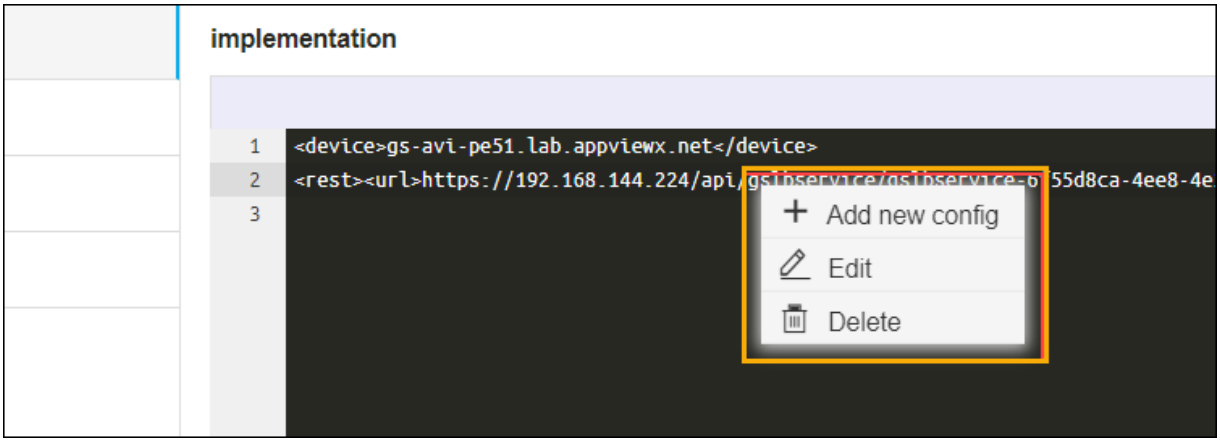


10. (Optional) If you need to update any data at this stage, you can do so by clicking the right-side of the mouse on the data and selecting the desired option.



11. After the review, click the **Submit** button.
    The Confirmation popup opens.

> **Note:** To stop running the workflow creation, click **Cancel**.

12. Click **Ok** to continue the workflow creation.
    It takes a while to complete the request.

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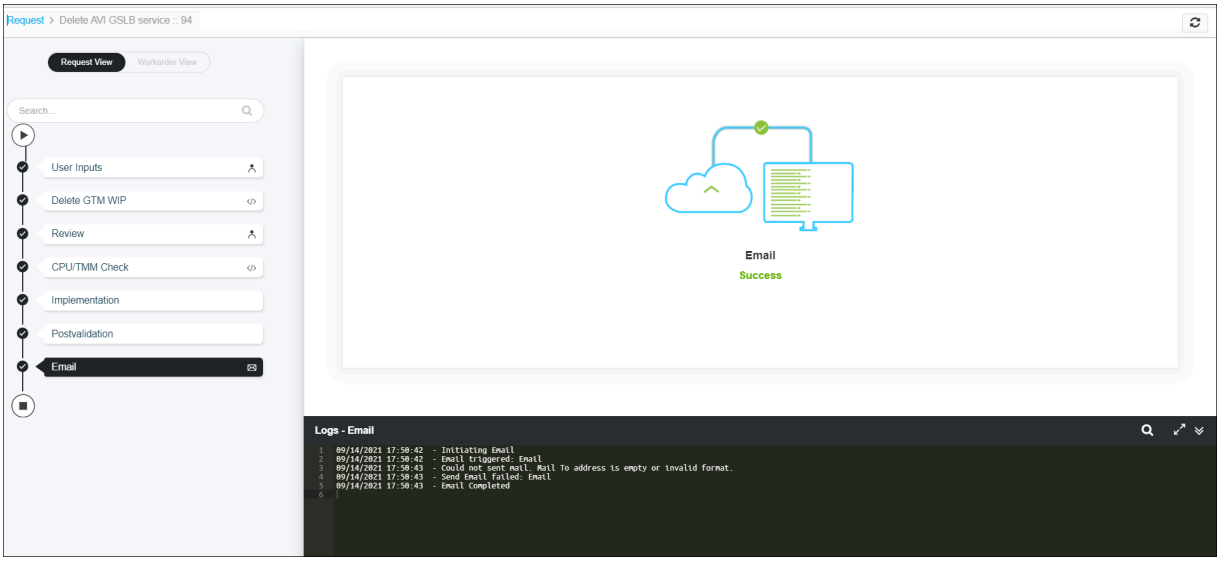
13. The workflow is created and the email is triggered to the configured email IDs.



Note: The stages of the request are shown in the left-side of the screen. To view a particular stage of the request, click the respective stage.

Nginx Plus

- Create NginxPlus LB Server
- Create NginxPlus LB Server with Service Now
- Delete NginxPlus LB Server
- Delete NginxPlus LB Server with Service Now
- Modify NginxPlus LB Server
- Modify NginxPlus LB Server with Service Now

Create NginxPlus LB Server

This workflow enables you to create HTTP or TCP load balancing server in existing or new source configuration.

To run this workflow:

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1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **Nginx Plus** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Create F5 LTM VIP** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click

.
   The **Request > Create F5 LTM VIP :: FormBuilder** page is displayed.
5. Enter or select the field information in the **Device and Load balancing type** section.

Device and Load balancing type Section - Field and Description Table

Field	Description
***Data Center**	Displays the list of datacenters of the devices, which are created in the Device Inventory. Select the datacenter of a device from the drop-down option for which this request is to be created. For the devices which are added without a datacenter in the Device Inventory, select the datacenter as **None**.
***Device Name**	Displays the list of devices associated with the selected datacenter. If the datacenter is selected as **None**, the devices that are created without datacenter details are listed. Select the desired device from the drop-down option.
***Source Config Option**	Select this option to choose an existing or new source config.
***Nginx Source Path**	Enter the path of the existing source config.
***Load Balancing Type**	Select the load balancing type: • **HTTP** • **TCP**
***Load Balancing Method**	Select a load balancing method from the dropdown list.
Server Name	Enter the server name, if the **Load Balancing Type** is selected as HTTP/

6. Enter or select the field information in the **LB server and UpStream** section.

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LB server and UpStream Section - Field and Description Table

Field	Description
***LB server IP**	Enter the IP address of the Load balancing (LB) server.
***LB server Port**	Enter the port of the Load balancing (LB) server.
***Upstream Server**	Enter the upstream server name.
Health Check	Select a health check option: • **Active** (default) • **Passive**
***Upstream Server IP and Port**	Enter the upstream server IP address and port no. It must be in the format of *<IP Address>*:*<port no.>*.
***Weight**	The weight of the topology record. Enter the weight in the numerals.
***Server Status**	Select a server status from the dropdown list.
Server Type	Select a server type from the dropdown list: • **Normal** (default) • **Backup**
Fail Timeout	Enter the timeout value in seconds.
Max Fail	Enter the maximum allowed failures.
Slow Start	Enter the slow start value.
Upstream Server Grid	click the Add button to add the server and upstream details to the Upstream Server Grid.

7. Enter or select the field information in the **Persistence** section.

Persistence Section - Field and Description Table

Field	Description
Sticky Cookie Persistence	By default, this option is disabled. When enabled Sticky cookie persistence helps to reconnect the server with the client to the same resource as previous requests.

8. Enter or select the field information in the **SSL** section.

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SSL Section - Filed and Description Table

Field	Description
***Do you want to add SSL**	Select any of the following options to enable SSL certificates. • **No** (default) - The only Client will have an SSL Certificate • **Yes** - Both Client and Servers will have SSL certificates

9. Click the **Submit** button.

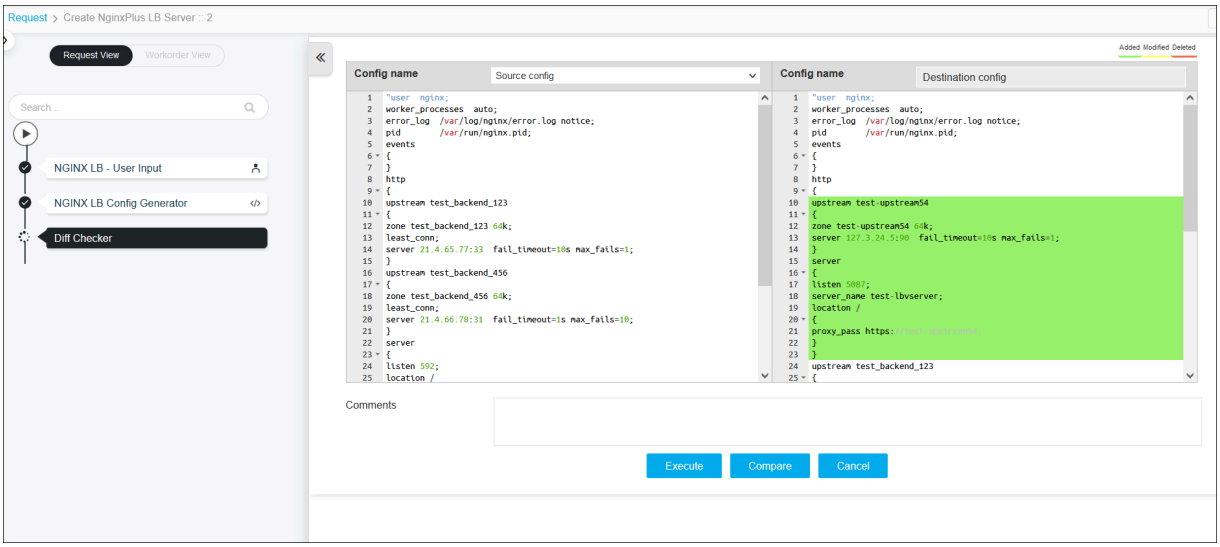
   The Confirmation popup opens.

> **Note:**
> - If you want to save this form to edit it later, click the **Save Draft** button, and then click **Ok** in the Confirmation popup window. The form will be saved as Open request under **Request** > **My Request**.
> - If you want to cancel this form, click the **Cancel** button.

10. Click **Ok** to submit the form.

    The validation starts automatically and reaches the **Diff Checker** stage.

11. Compare the updates and click the **Execute** button.



   The validation starts automatically and reaches the **Backup Master Config** stage.

12. Click the **Submit** button.

    The validation starts automatically and reaches the **NGINX Config Check** stage.

13. Click the **Execute** button.

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The validation starts automatically and reaches the **NGINX Config Check Reload** stage.

14. Click the **Execute** button.

    The validation starts automatically and reaches the **NGINX Config Check Reload** stage.

15. Click the **Execute** button.

    The validation starts automatically and reaches the **Remove Backup of Master Config** stage.

16. Click the **Submit** button.

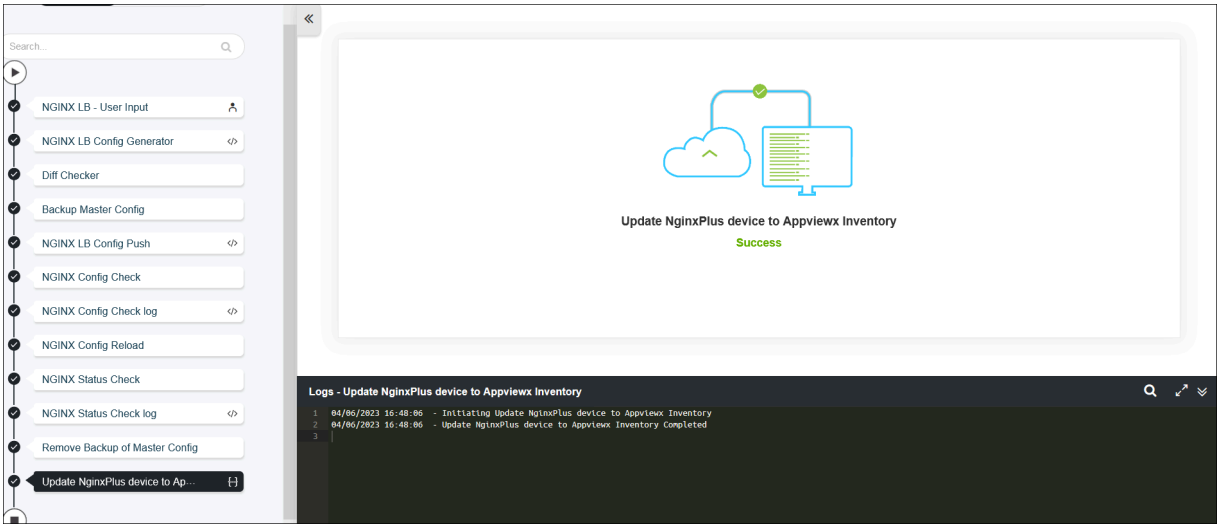
    The Confirmation popup opens.

> **Note:** To stop running the workflow creation, click **Cancel**.

17. Click **Ok** to continue the workflow creation.

    It takes a while to complete the request.

18. The workflow is completed.



> **Note:** The stages of the request are shown in the left side of the screen. To view a particular stage of the request, click the respective stage.

Create NginxPlus LB Server with Service Now

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **Nginx Plus** category on the **View/Run Workflows** page.

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3. On the popup window, hover the mouse over the **Create NginxPlus LB Server with Service Now** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click

   .
   The **Request > Create NginxPlus LB Server with Service Now :: FormBuilder** page is displayed.
5. Enter or select the field information in the **Device and Load balancing type** section.

Device and Load balancing type Section - Field and Description able

Field	Description
***Data Center**	Displays the list of datacenters of the devices, which are created in the Device Inventory. Select the datacenter of a device from the drop-down option for which this request is to be created. For the devices which are added without a datacenter in the Device Inventory, select the datacenter as **None**.
***Device Name**	Displays the list of devices associated with the selected datacenter. If the datacenter is selected as **None**, the devices that are created without datacenter details are listed. Select the desired device from the drop-down option.
***Source Config Option**	Select this option to choose an existing or new source config.
***Nginx Source Path**	Enter the path of the existing source config.
***Load Balancing Type**	Select the load balancing type: • **HTTP** • **TCP**
***Load Balancing Method**	Select a load balancing method from the dropdown list.
Server Name	Enter the server name, if the **Load Balancing Type** is selected as HTTP/

6. Enter or select the field information in the **LB server and UpStream** section.

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LB server and UpStream Section - Field and Description Table

Field	Description
***LB server IP**	Enter the IP address of the Load balancing (LB) server.
***LB server Port**	Enter the port of the Load balancing (LB) server.
***Upstream Server**	Enter the upstream server name.
Health Check	Select a health check option: • **Active** (default) • **Passive**
***Upstream Server IP and Port**	Enter the upstream server IP address and port no. It must be in the format of *<IP Address>*:*<port no.>*.
***Weight**	The weight of the topology record. Enter the weight in the numerals.
***Server Status**	Select a server status from the dropdown list.
Server Type	Select a server type from the dropdown list: • **Normal** (default) • **Backup**
Fail Timeout	Enter the timeout value in seconds.
Max Fail	Enter the maximum allowed failures.
Slow Start	Enter the slow start value.
Upstream Server Grid	click the Add button to add the server and upstream details to the Upstream Server Grid.

7. Enter or select the field information in the **Persistence** section.

Persistence Section - Field and Description Table

Field	Description
Sticky Cookie Persistence	Select one of the following options: • No (default) • Yes

8. Enter or select the field information in the **SSL** section.

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SSL Section - Table and Description Table

Field	Description
Sticky Cookie Persistence	By default, this option is disabled. When enabled Sticky cookie persistence helps to reconnect the server with the client to the same resource as previous requests.

9. Enter or select the field information in the **Change Management** section.

Change Management Section - Field and Description Table

Field	Description

*Do you want to integrate ServiceNow Ticket?	Select this option to create a service now ticket or not. The options are:
	• **No** (default)
	• **Yes** - select this option to create a ServiceNow ticket and select the follwing details:
	  • **Timezone** – select the timezone from the drop-down list.
	  • ***Start Time** – select the start date and time from the calendar.
	  • ***End Time** – select the end date and time from the calendar.

10. Click the **Submit** button.
    The Confirmation popup opens.

> **Note:**
> • If you want to save this form to edit it later, click the **Save Draft** button, and then click **Ok** in the Confirmation popup window. The form will be saved as Open request under **Request** > **My Request**.
> • If you want to cancel this form, click the **Cancel** button.

11. In the **Diff Checker** stage, click the **Compare** button to view the updates, and then click the **Execute** button.
12. In the **Get SNOW Ticket** stage, click the **Execute** button.
13. In the **Backup Mater Config** stage, click the **Execute** button.
14. In the **NGINX Config Check** stage, click the **Execute** button.
15. In the **NGINX Config Reload** stage, click the **Execute** button.

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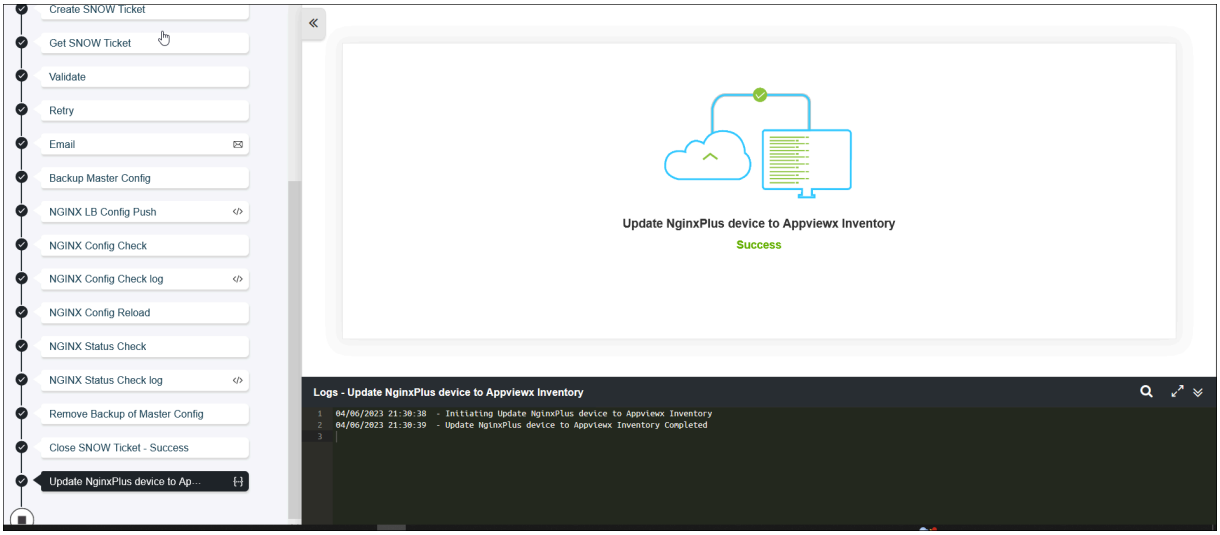
16. In the **NGINX Status Check** stage, click the **Execute** button.
17. In the **Remove Backup of Master Config** stage, click the **Submit** button.
18. The workflow is created and the email is triggered to the configured email IDs.



Note: The stages of the request are shown in the left side of the screen. To view a particular stage of the request, click the respective stage.

Delete NginxPlus LB Server

This workflow enables you to delete HTTP or TCP LB Server and Upstream Servers.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **Nginx Plus** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Delete NginxPlus LB Server** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click Run.
   The **Request > Delete NginxPlus LB Server :: FormBuilder** page is displayed.
5. Select a datacenter, device, and Nginx source path in the **Device Details** section.
6. Choose the load balancing type and fetch and select the load balancing IP and Port in the **LB Server And Upstream** section.
7. Click the **Submit** button.

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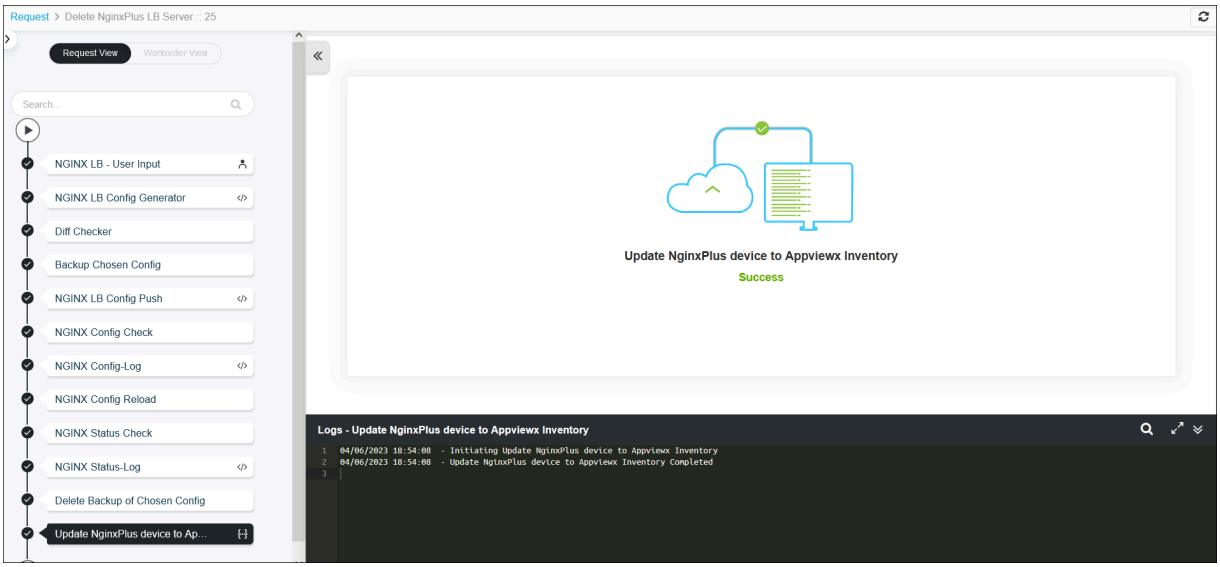
Note:

- If you want to save this form to edit it later, click the **Save Draft** button, and then click **Ok** in the Confirmation popup window. The form will be saved as Open request under **Request** > **My Request**.
- If you want to cancel this form, click the **Cancel** button.

8. In the **Diff Checker** stage, click the <Compare> button to view the updates, and then click the **Submit** button.
9. In the **Backup Chosen Config** stage, click the <Submit> button.
10. In the **NGINX Config Check** stage, click the <Execute> button.
11. In the **NGINX Config Reload** stage, click the <Execute> button.
12. In the **NGINX Status Check** stage, click the <Submit> button.
13. In the **Delete Backup of Chosen Config** stage, click the <Execute> button.
14. The workflow is created.



Note: The stages of the request are shown in the left-side of the screen. To view a particular stage of the request, click the respective stage.

Delete NginxPlus LB Server with Service Now

This workflow enables you to delete HTTP or TCP LB Server and Upstream Servers.

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To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **Nginx Plus** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Delete NginxPlus LB Server with Service Now** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click

.
   The **Request > Delete NginxPlus LB Server with Service Now :: FormBuilder** page is displayed.
5. Select a datacenter, device, and Nginx source path in the **Device Details** section.
6. Choose the load balancing type and fetch and select the load balancing IP and Port in the **LB Server And Upstream** section.
7. Choose **Yes** to create a ServiceNow ticket in the **Change Management** section. Otherwise choose **No**.
8. Click the **Submit** button.

> **Note:**
> - If you want to save this form to edit it later, click the **Save Draft** button, and then click **Ok** in the Confirmation popup window. The form will be saved as Open request under **Request** > **My Request**.
> - If you want to cancel this form, click the **Cancel** button.

9. In the **Diff Checker** stage, click the **Compare** button to view the updates, and then click the **Execute** button.
10. In the **Get SNOW Ticket** stage, click the **Execute** button.
11. In the **Backup Mater Config** stage, click the **Execute** button.
12. In the **NGINX Config Check** stage, click the **Execute** button.
13. In the **NGINX Config Reload** stage, click the **Execute** button.
14. In the **NGINX Status Check** stage, click the **Execute** button.
15. In the **Remove Backup of Master Config** stage, click the **Submit**
16. The workflow is created and the email is triggered to the configured email IDs.

> **Note:** The stages of the request are shown in the left-side of the screen. To view a particular stage of the request, click the respective stage.

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Modify NginxPlus LB Server

Prerequisites

- /etc/nginx/ssl Folder must be present.
- In master file (/etc/nginx/nginx.conf), http block must be present for creating a HTTP LB.
- In master file (/etc/nginx/nginx.conf), stream block must be present for creating a TCP LB.

This workflow modifies a GSLB virtual server on a Citrix device by fetching the device details.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **Nginx Plus** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Create F5 LTM VIP** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click

.
   The **Request > Create F5 LTM VIP :: FormBuilder** page is displayed.
5. In the **Device and Load Balancing Type** section, select the following:
   - Data Center
   - Device Name
   - Nginx Source Path
   - Modification Preference - select Virtual Server or Orphan Upstreams
   - Load Balacing Type - select HTTP or TCP
6. In the **Load Balancing Server and Upstream** section, modify the upstream server information as follows:
   - If you selected **Modification Preference** as a Virtual Server, fetch and select the LB server IP and Port, and modify the Upstream server information as needed.
   - If you selected **Modification Preference** as Orphan Upstreams, then fetch and modify the Upstream server information as needed.
7. Modify the Persistence and SSL options as needed.
8. Click the **Submit** button.

Note:

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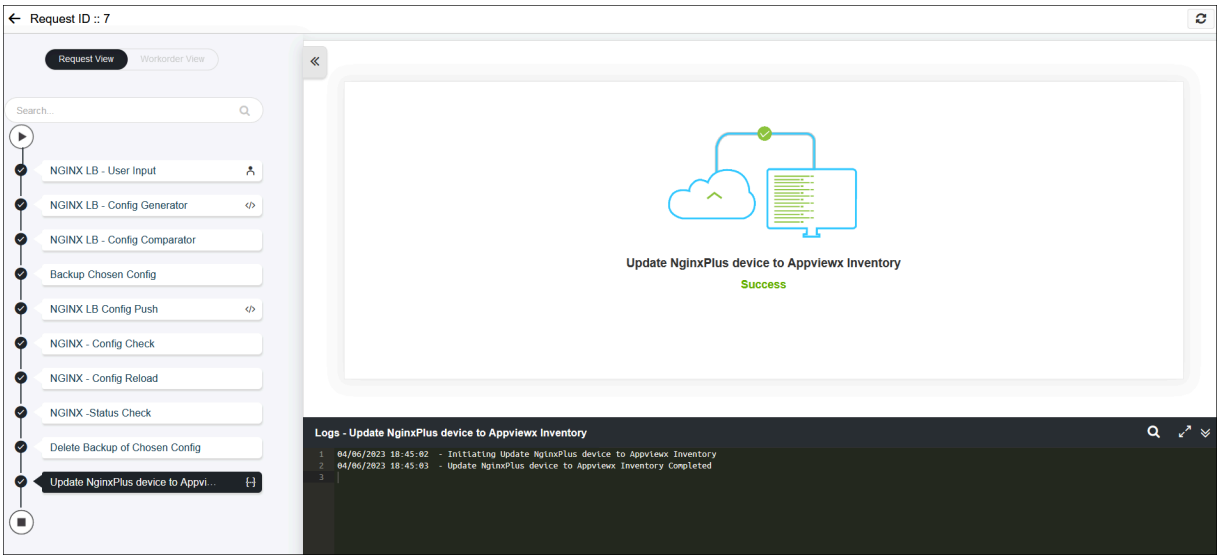
- If you want to save this form to edit it later, click the **Save Draft** button, and then click **Ok** in the Confirmation popup window. The form will be saved as Open request under **Request** > **My Request**.
- If you want to cancel this form, click the **Cancel** button. The form will be saved as Cancelled request under **Request** > **My Request**.

9. Click **Ok** to submit the form.
   The validation starts automatically.
10. In the **NGINX LB - Config Comparator** stage, compare the updated by clicking the **Compare** button, and then click the **Execute** button.
11. In the **Backup Chosen Config** stage, click the **Submit** button.
12. In the **NGINX Config Check** stage, click the **Execute** button.
13. In the **NGINX Config Reload** stage, click the **Execute** button.
14. In the **NGINX Status Check** stage, click the **Execute** button.
15. In the **Delete Backup of Chosen Config** stage, click the **Submit** button.
16. The workflow is created.



Note: The stages of the request are shown in the left-side of the screen. To view a particular stage of the request, click the respective stage.

Modify NginxPlus LB Server with Service Now

Prerequisites

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- /etc/nginx/ssl Folder must be present.
- In master file (/etc/nginx/nginx.conf), http block must be present for creating a HTTP LB.
- In master file (/etc/nginx/nginx.conf), stream block must be present for creating a TCP LB.

This workflow modifies a GSLB virtual server on a Citrix device by fetching the device details.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **Nginx Plus** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Modify NginxPlus LB Server with Service Now** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click

.
   The **Request > Modify NginxPlus LB Server with Service Now :: FormBuilder** page is displayed.
5. In the **Device and Load Balancing Type** section, select the following:
   - Data Center
   - Device Name
   - Nginx Source Path
   - Modification Preference - select Virtual Server or Orphan Upstreams
   - Load Balacing Type - select HTTP or TCP
6. In the **Load Balancing Server and Upstream** section, modify the upstream server information as follows:
   - If you selected Modification Preference as Virtual Server, fetch and select the LB server IP and Port, and modify the Upstream server information as needed.
   - If you selected Modification Preference as Orphan Upstreams, then fetch and modify the Upstream server information as needed.
7. Modify the Persistence, SSL, and Change Management options as needed.
8. In the **Diff Checker** stage, click the **Compare** button to view the updates, and then click the **Execute** button.
9. In the **Get SNOW Ticket** stage, click the **Execute** button.
10. In the **Backup Mater Config** stage, click the **Execute** button.
11. In the **NGINX Config Check** stage, click the **Execute** button.
12. In the **NGINX Config Reload** stage, click the **Execute** button.
13. In the **NGINX Status Check** stage, click the **Execute** button.

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14. In the **Remove Backup of Master Config** stage, click the **Submit**
15. The workflow is created and the email is triggered to the configured email IDs.

> **Note:** The stages of the request are shown in the left-side of the screen. To view a particular stage of the request, click the respective stage.

Citrix SLB

- Create Citrix SLB Virtual Server
- Delete Citrix SLB Virtual Server
- Modify Citrix SLB Virtual Server

Create Citrix SLB Virtual Server

This workflow creates a virtual server on Citrix LTM devices.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **Citrix SLB** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Create Citrix SLB Virtual Server** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click

.
   The **Request > Create Citrix SLB Virtual Server :: FormBuilder** page is displayed.
5. Select the field information in the **Citrix Device Details** section.
6. The following table provides the field description for the **Citrix Device Details** section:

Citrix Device Details Section - Field and Description Table

Field	Description
Data center	Displays the list of datacenters of the devices, which are created in the Device Inventory. Select the datacenter of a device from the drop-down option for which this request is to be created. For the devices, which are created without a datacenter in the Device Inventory, select the datacenter as **None**.

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Field	Description
***Citrix LTM Device**	Displays the list of devices associated with the selected datacenter. If the datacenter is selected as **None**, the devices that are created without datacenter details are listed. Select the desired device from the drop-down option.

7. Enter or select the field information in the **Citrix Vip Details** section.

Citrix Vip Details Section - Field and Description Table

Field	Description
***Virtual Server Name**	Enter the name of the virtual server.
***Virtual Server IP**	Enter the VIP address.
***Virtual Server Port**	Enter a server port.

8. Enter or select the field information in the **Service or Service Group Details** section.

Service or Service Group Details Section - Field and Description Table

Field	Description
***Protocol**	Enter the name of the virtual server.
***Type**	Enter the VIP address.
***Service Name**	Enter a service port.
***Service IP Address**	Enter service IP address.
***Service Port**	Enter service port.
***Service Details**	Click Add ( ) button to add the service(s) to the Service Details.

9. Enter or select the field information in the **Monitor** section of Form Input.

Monitor Section - Field and Description Table

Field	Description
***Monitor Settings**	By default, No option is selected. Select Yes to choose the health monitors.

10. Click the **Submit** button.

The Confirmation popup opens.

Note:

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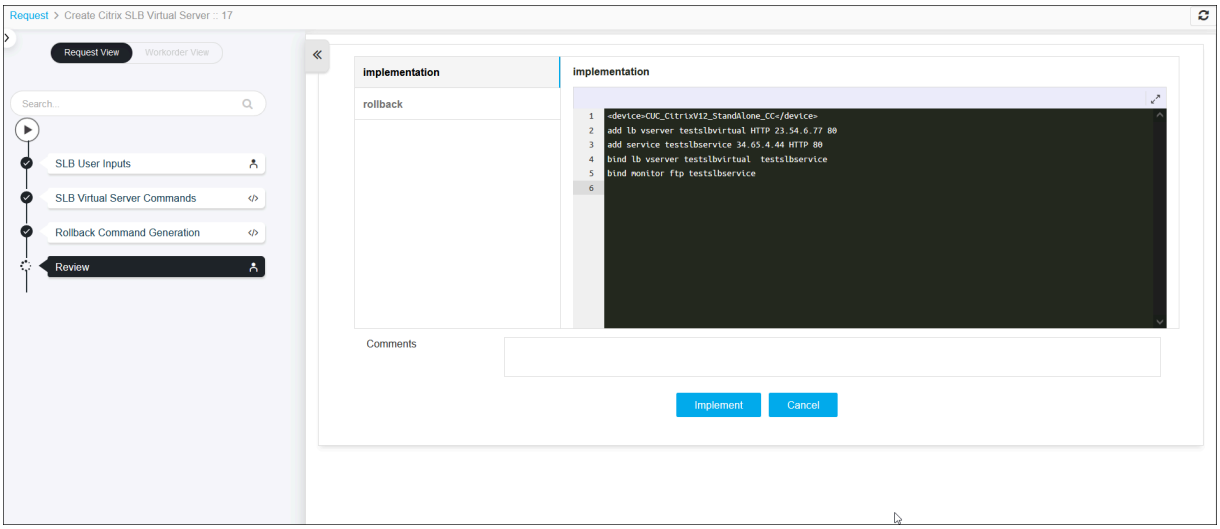
- If you want to save this form to edit it later, click the **Save Draft** button, and then click **Ok** in the Confirmation popup window. The form will be saved as Open request under **Request** > **My Request**.
- If you want to cancel this form, click the **Cancel** button.

11. Click **Ok** to submit the form.
    The validation starts automatically and reaches the Review stage.

Note:
- If there is any failure at this stage, start a new request by providing the correct data.
- Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

12. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs:



13. (Optional) If you need to update any data at this stage, you can do so by clicking the right-side of the mouse on the data and selecting the desired option.
14. After the review, click the **Implement** button.
    The Confirmation popup opens.

Note: To stop running the workflow creation, click **Cancel**.

15. Click **Ok** to continue the workflow creation.
    It takes a while to complete the request.

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16. The workflow is created and the email is triggered to the configured email IDs.

> **Note:** The stages of the request are shown in the left-side of the screen. To view a particular stage of the request, click the respective stage.

Delete Citrix SLB Virtual Server

By running this workflow, you can delete a SLB virtual server from Citrix device by fetching all the SLB virtual server from the device.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **Citrix SLB** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Delete Citrix SLB Virtual Server** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click

.
   The **Request > Delete Citrix SLB Virtual Server :: FormBuilder** page is displayed.
5. Select a datacenter, device, and virtual server in the **Device and Virtual Server Details** section.
6. Click the **Submit** button.

> **Note:**
> - If you want to save this form to edit it later, click the **Save Draft** button, and then click **Ok** in the Confirmation popup window. The form will be saved as Open request under **Request** > **My Request**.
> - If you want to cancel this form, click the **Cancel** button.

7. Click **Ok** to submit the form.
   The validation starts automatically and reaches the Review stage.

> **Note:**
> - If there is any failure at this stage, start a new request by providing the correct data.
> - Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

8. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs:

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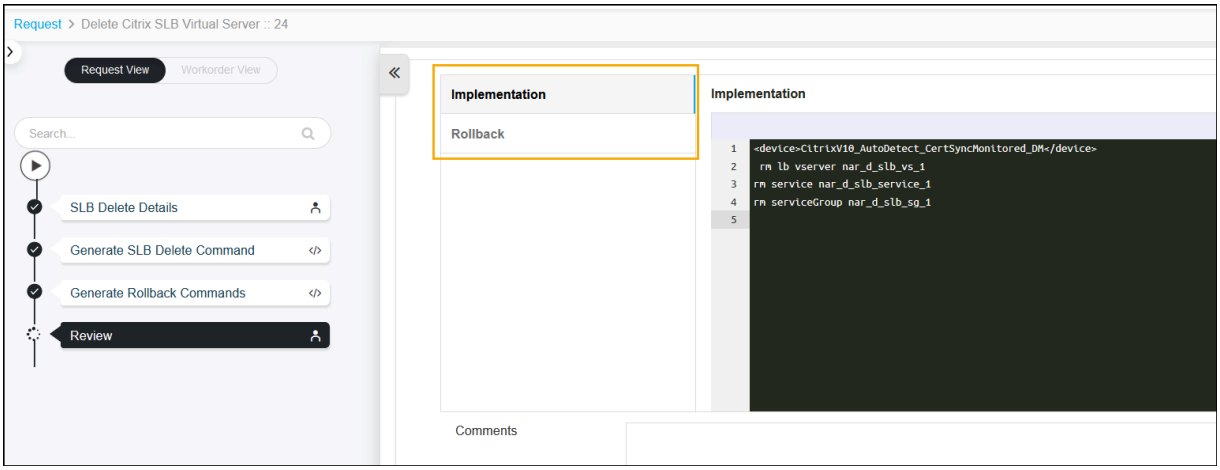

9. (Optional) If you need to update any data at this stage, you can do so by clicking the right-side of the mouse on the data and selecting the desired option.
10. After the review, click the **Implement** button.
    The Confirmation popup opens.

> **Note:** To stop running the workflow creation, click **Cancel**.

11. Click **Ok** to continue the workflow creation.
    It takes a while to complete the request.
12. The workflow is created and the email is triggered to the configured email IDs.

> **Note:** The stages of the request are shown in the left-side of the screen. To view a particular stage of the request, click the respective stage.

Modify Citrix SLB Virtual Server

By running this workflow, you can modify a SLB virtual server on Citrix device by fetching the device details.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **Citrix SLB** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Modify Citrix SLB Virtual Server** workflow.

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The **Run** and **Schedule** buttons are displayed.

4. Click

.

   The **Request > Modify Citrix SLB Virtual Server :: FormBuilder** page is displayed.
5. Fetch and select the details of device, virtual server, and service or service group.
6. Modify the necessary details of a virtual service for a device.
7. Click the **Submit** button.

   The Confirmation popup opens.

> **Note:**
> - If you want to save this form to edit it later, click the **Save Draft** button, and then click **Ok** in the Confirmation popup window. The form will be saved as Open request under **Request** > **My Request**.
> - If you want to cancel this form, click the **Cancel** button.

8. Click **Ok** to submit the form.

   The validation starts automatically and reaches the Review stage.

> **Note:**
> - If there is any failure at this stage, start a new request by providing the correct data.
> - Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

9. Review the input data under the implementation, rollback, and postvalidation tabs:

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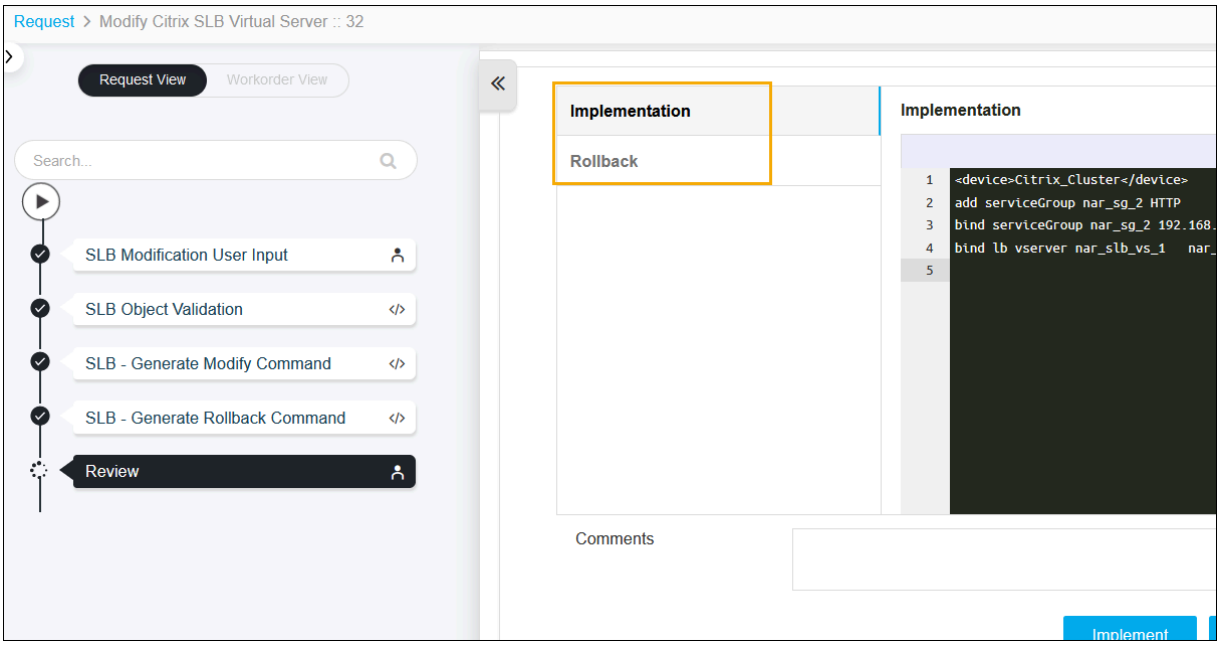

10. (Optional) If you need to update any data at this stage, you can do so by clicking the right-side of the mouse on the data and selecting the desired option.
11. After the review, click the **Implement** button.
    The Confirmation popup opens.

> **Note:** To stop running the workflow creation, click **Cancel**.

12. Click **Ok** to continue the workflow creation.
    It takes a while to complete the request.
13. The workflow is created and the email is triggered to the configured email IDs.

> **Note:** The stages of the request are shown in the left-side of the screen. To view a particular stage of the request, click the respective stage.

Citrix GSLB

- Create Citrix GSLB Virtual Server
- Delete Citrix GSLB Virtual Server
- Modify Citrix GSLB Virtual Server

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Create Citrix GSLB Virtual Server

This workflow creates a virtual server on Citrix devices.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **Citrix GSLB** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Create Citrix GSLB Virtual Server** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click

.
   The **Request > Create Citrix GSLB Virtual Server :: FormBuilder** page is displayed.
5. Select the field information in the **Citrix Device Details** section.

Citrix Device Details Section - Field and Description Table

Field	Description
Data center	Displays the list of datacenters of the devices, which are created in the Device Inventory. Select the datacenter of a device from the drop-down option for which this request is to be created. For the devices, which are created without a datacenter in the Device Inventory, select the datacenter as **None**.
***Device**	Displays the list of devices associated with the selected datacenter. If the datacenter is selected as **None**, the devices that are created without datacenter details are listed. Select the desired device from the drop-down option.
***Site**	Select a site from dropdown list.

6. Enter or select the field information in the **GSLB Virtual Server Details** section.

GSLB Virtual Server Details Section - Field and Description Table

Field	Description
***GSLB Virtual Server Name**	Enter the name of the virtual server.
***Domain Name**	Enter the domain name.
Load Balancing Method	Select a load balancing method from the dropdown list.
Persistence Type	Select a persistence type from the dropdown list.
***Service Type**	Select a service type from the dropdown list.

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7. Enter or select the field information in the **Service or Service Group Details** section.

Service or Service Group Details Section - Field and Description Table

Field	Description
***Type**	Select **Service** or **Service Group**.
***Service Name**	Enter a service name.
***Service Protocol**	Select service protocol from the dropdown list.
***Service IP**	Enter service IP address.
***Service Port**	Enter service port no.
***Service List**	Click Add ( ) button to add the service(s) to the Service List.

8. Enter or select the field information in the **Monitor** section.

Monitor Section - Filed and Description Table

Field	Description
***Monitor Choice**	By default, No option is selected. Select Yes to choose the health monitors.

9. Click the **Submit** button.
   The Confirmation popup opens.

> **Note:**
> - If you want to save this form to edit it later, click the **Save Draft** button, and then click **Ok** in the Confirmation popup window. The form will be saved as Open request under **Request** > **My Request**.
> - If you want to cancel this form, click the **Cancel** button.

10. Click **Ok** to submit the form.
    The validation starts automatically and reaches the Review stage.

> **Note:**
> - If there is any failure at this stage, start a new request by providing the correct data.
> - Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

11. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs:

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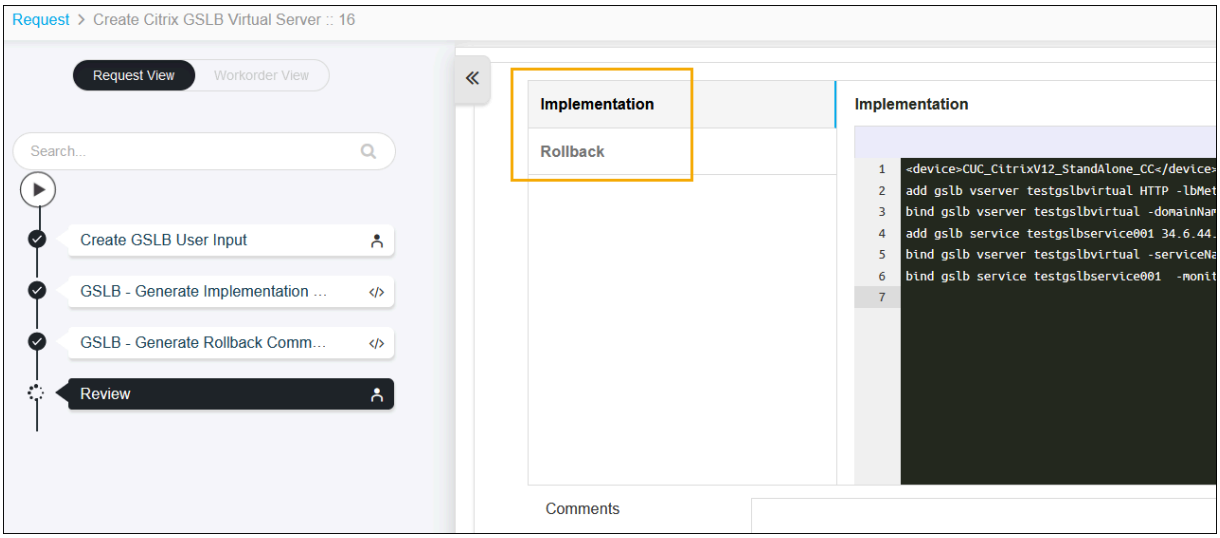

12. (Optional) If you need to update any data at this stage, you can do so by clicking the right-side of the mouse on the data and selecting the desired option.
13. After the review, click the **Implement** button.
    The Confirmation popup opens.

> **Note:** To stop running the workflow creation, click **Cancel**.

14. Click **Ok** to continue the workflow creation.
    It takes a while to complete the request.
15. The workflow is created and the email is triggered to the configured email IDs.

> **Note:** The stages of the request are shown in the left-side of the screen. To view a particular stage of the request, click the respective stage.

Delete Citrix GSLB Virtual Server

This workflow deletes a GSLB virtual server from Citrix device by fetching all the GSLB virtual server from the device.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **Citrix GSLB** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Delete Citrix GSLB Virtual Server** workflow.

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The **Run** and **Schedule** buttons are displayed.

4. Click Run.

   The **Request > Delete Citrix GSLB Virtual Server :: FormBuilder** page is displayed.
5. Fetch and select a device, and virtual server details in the **Citrix Device and Virtual Service Details** section.
6. Click the **Submit** button.

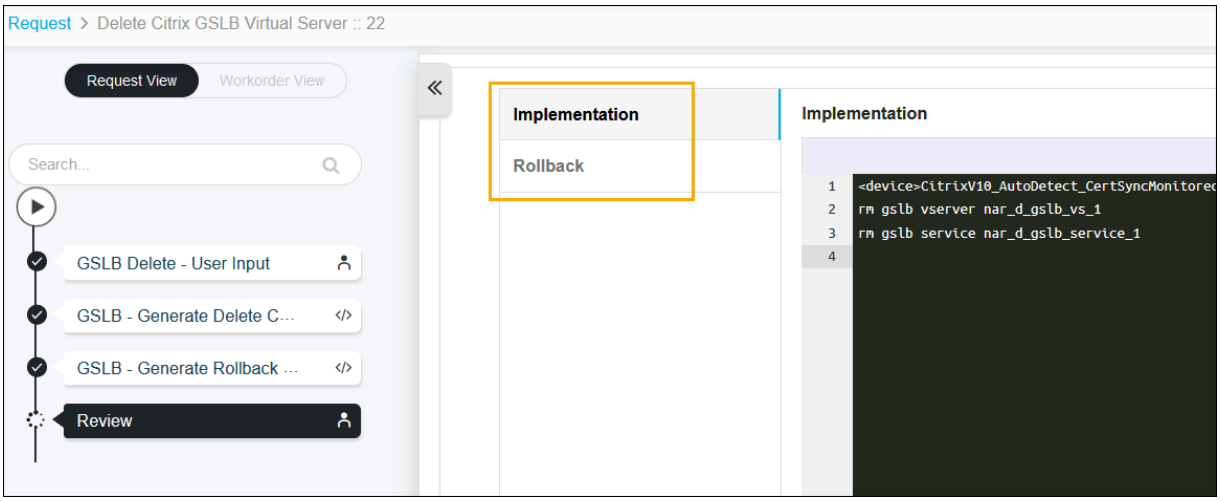
> **Note:**
> - If you want to save this form to edit it later, click the **Save Draft** button, and then click **Ok** in the Confirmation popup window. The form will be saved as Open request under **Request** > **My Request**.
> - If you want to cancel this form, click the **Cancel** button.

7. Click **Ok** to submit the form.

   The validation starts automatically and reaches the Review stage.

> **Note:**
> - If there is any failure at this stage, start a new request by providing the correct data.
> - Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

8. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs:



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9. (Optional) If you need to update any data at this stage, you can do so by clicking the right-side of the mouse on the data and selecting the desired option.
10. After the review, click the **Impalement** button.
    The Confirmation popup opens.

> **Note:** To stop running the workflow creation, click **Cancel**.

11. Click **Ok** to continue the workflow creation.
    It takes a while to complete the request.
12. The workflow is completed and the email is triggered to the configured email IDs.

> **Note:** The stages of the request are shown in the left-side of the screen. To view a particular stage of the request, click the respective stage.

Modify Citrix GSLB Virtual Server

This workflow modifies a GSLB virtual server on a Citrix device by fetching the device details.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **Citrix GSLB** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Modify Citrix GSLB Virtual Server** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click

.
   The **Request > Modify Citrix GSLB Virtual Server :: FormBuilder** page is displayed.
5. Fetch and select the details of device, virtual server, and service or service group.
6. Modify the necessary details of GSLB virtual server.
7. Click the **Submit** button.

> **Note:**
> - If you want to save this form to edit it later, click the **Save Draft** button, and then click **Ok** in the Confirmation popup window. The form will be saved as Open request under **Request** > **My Request**.
> - If you want to cancel this form, click the **Cancel** button. The form will be saved as Cancelled request under **Request** > **My Request**.

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8. Click **Ok** to submit the form.
   The validation starts automatically and reaches the Review stage.

   Note:
   - If there is any failure at this stage, start a new request by providing the correct data.
   - Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

9. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs:
10. (Optional) If you need to update any data at this stage, you can do so by clicking the right-side of the mouse on the data and selecting the desired option.
11. After the review, click the **Implementation** button.
    The Confirmation popup opens.

    Note: To stop running the workflow creation, click **Cancel**.

12. Click **Ok** to continue the workflow creation.
    It takes a while to complete the request.
13. The workflow is created and the email is triggered to the configured email IDs.

    Note: The stages of the request are shown in the left-side of the screen. To view a particular stage of the request, click the respective stage.

Citrix Context Switch

- Create Citrix CS Virtual Server
- Delete Citrix CS Virtual Server

Create Citrix CS Virtual Server

This workflow creates a context switch virtual server on Citrix devices.

To run this workflow:

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1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **Citrix Context Switch** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Create Citrix CS Virtual Server** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click

.
   The **Request > Create Citrix CS Virtual Server :: FormBuilder** page is displayed.
5. Select the field information in the **Citrix Device Details** section.

Citrix Device Details Section - Field and Description

Field	Description
Data center	Displays the list of datacenters of the devices, which are created in the Device Inventory. Select the datacenter of a device from the drop-down option for which this request is to be created. For the devices, which are created without a datacenter in the Device Inventory, select the datacenter as **None**.
***Citric LTM Device**	Displays the list of devices associated with the selected datacenter. If the datacenter is selected as **None**, the devices that are created without datacenter details are listed. Select the desired device from the drop-down option.

6. Enter or select the field information in the **Citrix CS VIP Details** section.

Citrix CS VIP Details Section - Field and Description

Field	Description
***Virtual Server Name**	Enter the name of the virtual server.
***Protocol**	Select a protocol from the dropdown list.
IP Address Type	Select the IP address type.
***Virtual Server IP**	Enter the virtual server IP address.
***Virtual Server Port**	Enter the virtual server port no.

7. Enter or select the field information in the **Context switch policy binding** section.

Context switch policy binding Section - Field and Description Table

Field	Description
Select Policy	Click the **Fetch Existing Context Switch Policy** button, and then select a policy from the dropdown list.

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Field	Description
Priority	By default. the priority is set to 120. If needed, you can update the value. It is mandatory for all the CS policy bindings. **Note:** Priority cannot be specified for URL-based context switching policy.
Target Load Balancing Virtual Server	Click the retrieve button and select a virtual server from the dropdown list.
CS Policy Binding	Click Add ( ) button to add the policy to theCS Policy Binding.
Default Virtual Server Bound	Click the **Fetch available LB Servers** button, and then select a Default Virtual Server Bound from the dropdown list.

8. Enter or select the field information in the **Profiles** section of Form Input.

Profiles Section - Field and Description Table

Field	Description
Net Profile	Click the **Fetch Profiles** button, and then select a net profile from the dropdown list.
TCP Profile	Select a TCP profile from the dropdown list.
HTTP Profile	Select a HTTP profile from the dropdown list.

9. Click the **Submit** button.
   The Confirmation popup opens.

Note:
- If you want to save this form to edit it later, click the **Save Draft** button, and then click **Ok** in the Confirmation popup window. The form will be saved as Open request under **Request** > **My Request**.
- If you want to cancel this form, click the **Cancel** button.

10. Click **Ok** to submit the form.
    The validation starts automatically and reaches the Review stage.

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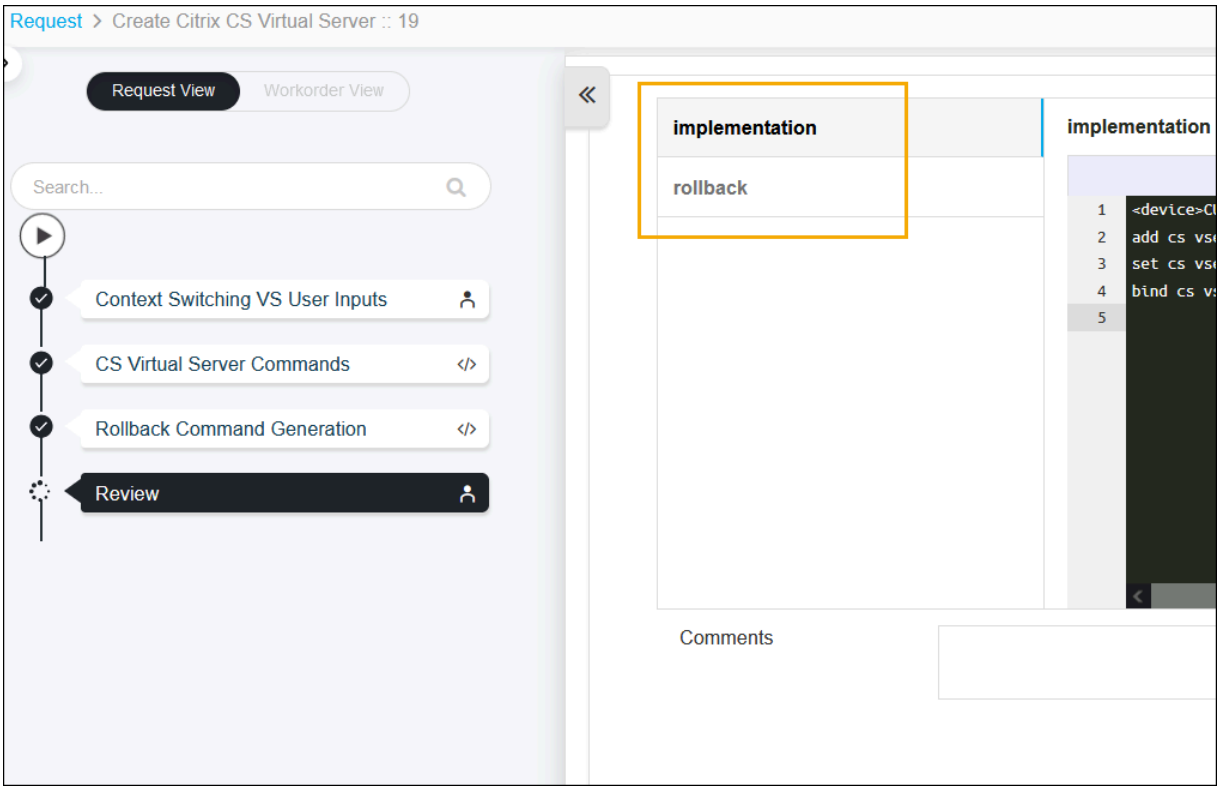

Note:

- If there is any failure at this stage, start a new request by providing the correct data.
- Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

11. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs:
12. (Optional) If you need to update any data at this stage, you can do so by clicking the right-side of the mouse on the data and selecting the desired option.
13. After the review, click the **Implement** button.
    The Confirmation popup opens.

Note: To stop running the workflow creation, click **Cancel**.

14. Click **Ok** to continue the workflow creation.
    It takes a while to complete the request.

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15. The workflow is created and the email is triggered to the configured email IDs.

> **Note:** The stages of the request are shown in the left-side of the screen. To view a particular stage of the request, click the respective stage.

Delete Citrix CS Virtual Server

This workflow deletes a context switch virtual server from Citrix device by fetching all the context switch virtual server from the device.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **Citrix Context Switch** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Delete Citrix CS Virtual Server** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click

.
   The **Request > Delete Citrix CS Virtual Server :: FormBuilder** page is displayed.
5. Fetch and select a device, and virtual server details in the **Device and Virtual Service Details** section.
6. Click the **Submit** button.

> **Note:**
> - If you want to save this form to edit it later, click the **Save Draft** button, and then click **Ok** in the Confirmation popup window. The form will be saved as Open request under **Request** > **My Request**.
> - If you want to cancel this form, click the **Cancel** button.

7. Click **Ok** to submit the form.
   The validation starts automatically and reaches the Review stage.

> **Note:**
> - If there is any failure at this stage, start a new request by providing the correct data.
> - Alternatively, select the failed request and clone it. Update the correct input data in the form input, and submit the workflow again.

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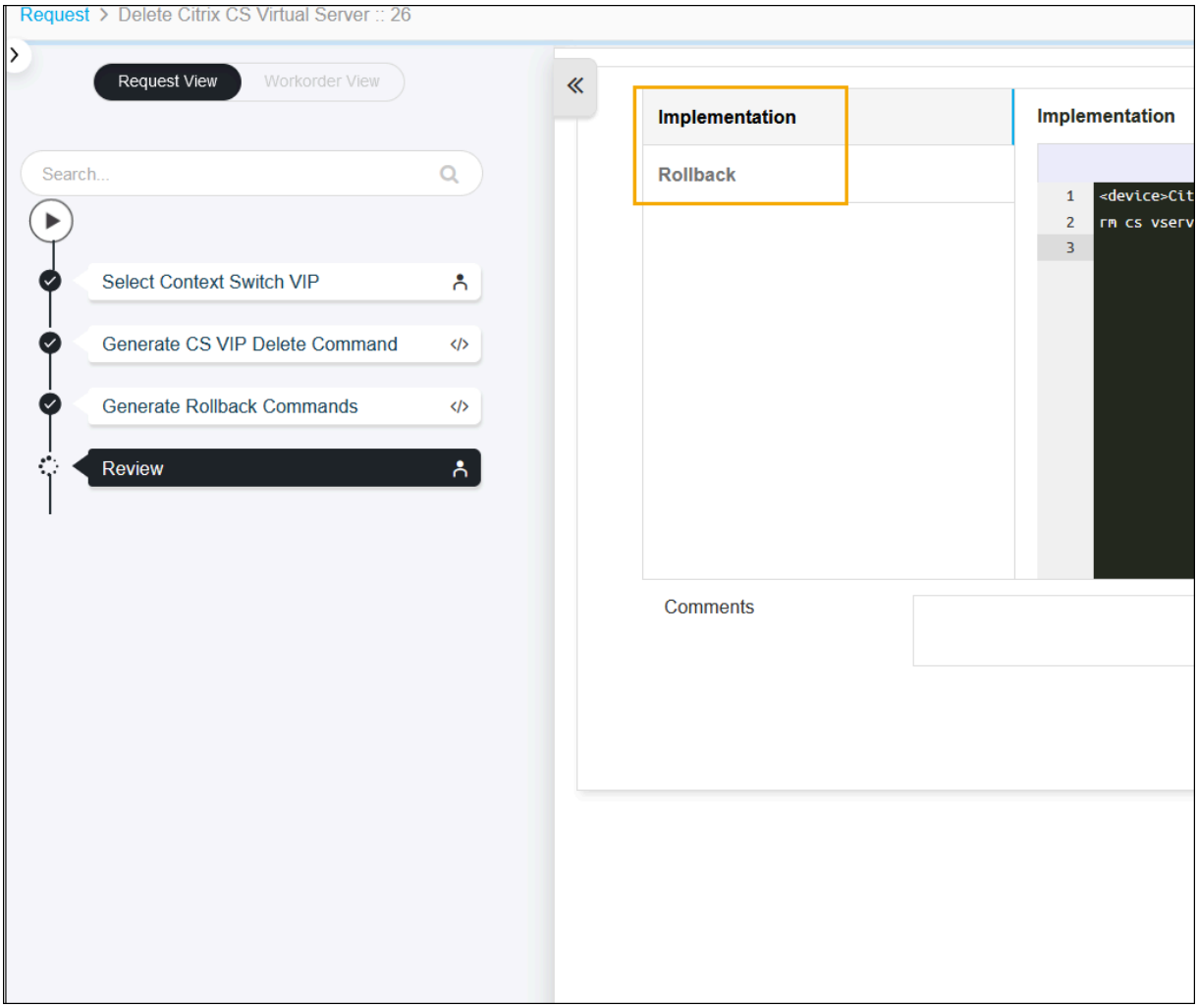
8. Review the input data under the **implementation**, **rollback**, and **postvalidation** tabs:



9. (Optional) If you need to update any data at this stage, you can do so by clicking the right-side of the mouse on the data and selecting the desired option.
10. After the review, click the **Impalement** button.
    The Confirmation popup opens.

> **Note:** To stop running the workflow creation, click **Cancel**.

11. Click **Ok** to continue the workflow creation.
    It takes a while to complete the request.

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12. The workflow is completed and the email is triggered to the configured email IDs.

> **Note:** The stages of the request are shown in the left-side of the screen. To view a particular stage of the request, click the respective stage.

Citrix NetScaler System

• Citrix NetScaler Golden Config Compliance

Citrix NetScaler Golden Config Compliance

This workflow validates a device against a compliance policy. A Standard Compliance policy "Citrix_Default_Compliance" with Default Parameters and Sample Values has been provided under the Collection. View this policy by navigating **menu** > **Collection**. Either you can select the default parameters or add custom commands to perform a compliance check and remediate. If the custom option is chosen, addition of rollback command is mandatory.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **Citrix NetScaler System** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **Citrix NetScaler Golden Config Compliance** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click

.
   The **Request > Citrix NetScaler Golden Config Compliance :: FormBuilder** page is displayed.
5. In the **Device Details** section, select a device, and then a compliance policy .
6. In the **Compliance Parameter** table, select or enter the following details:

Compliance Parameter Section - Field and Description Table

Field	Description
***Config/ Parameter Type**	You can select **Custom** or Default Config/Parameter type. For Custom Compliance policy, the Config/Parameter type is considered as **Custom** by default even if it is selected as **Default**.

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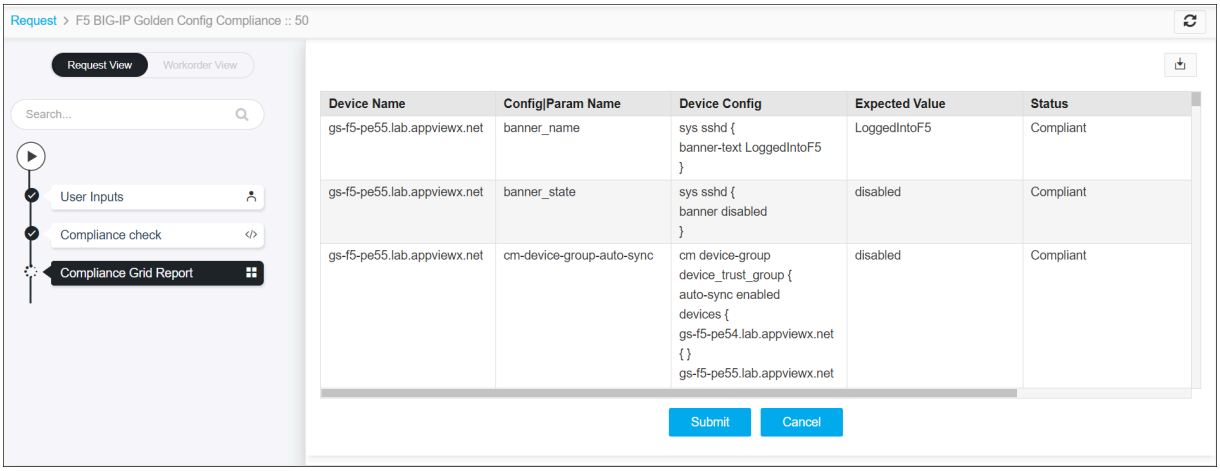
Field	Description
***Config/ Parameter Name**	Enter the config/parameter name.
***Value**	Enter the expected value in the device for the parameter.

7. To add a new parameter to the Compliance Parameter Table, click Add ( ) button After adding the parameter, you can manage (update/delete) it.
8. Click the **Submit** button.
   The Confirmation popup opens.

> **Note:**
> - If you want to save this form to edit it later, click the **Save Draft** button, and then click **Ok** in the Confirmation popup window. The form will be saved as Open request under **Request** > **All**.
> - If you want to cancel this form, click the **Cancel** button.

9. Click **Ok** to submit the form.
10. The Compliance Check runs automatically and generates **Compliance Grid Report**.
11. From the Compliance Grid Report, you get to know if the device parameters are Compliant or Non-Compliant.

    You can download the **Compliance Grid Report** in the .csv or .xlsx format by clicking the Download ( ) button.



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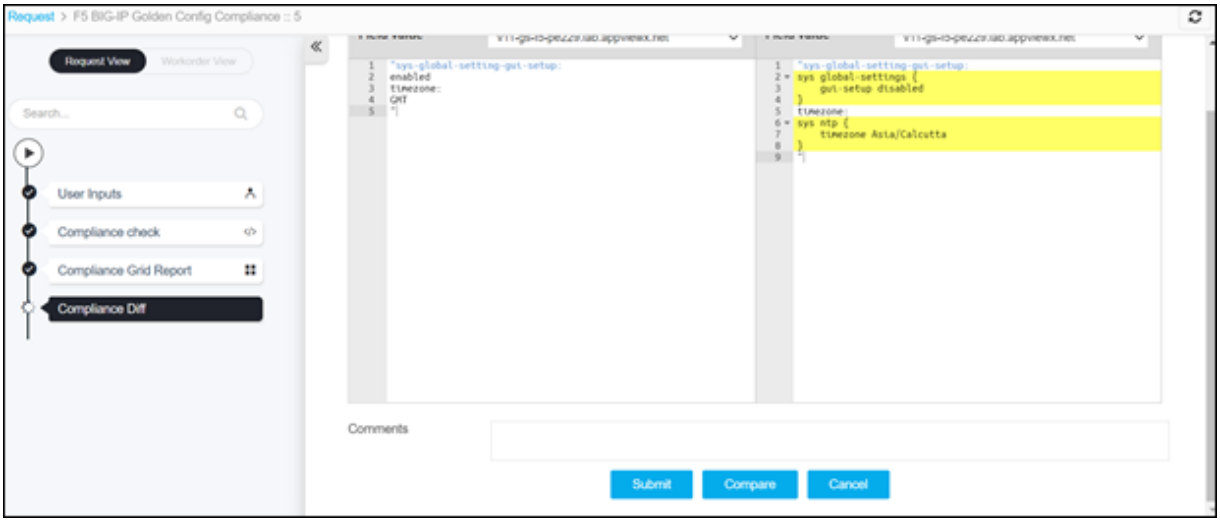
The summary of the Compliance Grid Report are:

- The first column displays the device name.
- The other columns display Config/Parameter names.
- The report has two body rows. They represent the following:
- First Row - the status of the Parameter in the device.
- Second Row - the actual value of the parameter in the device.

12. Click the **Submit** button, and then click **Ok** in the confirmation pop-up.
    The **Compliance Diff check** runs.
13. The **Compliance Diff check** displays the details of non-compliant parameters for each device.
14. The details are:
    - Parameter name and the value in the selected policy – shown in the left side of the diff Palate- Golden Config.
    - Parameter name and the value in the selected device - shown in the right side of the diff Palate- actual config.

> **Note:** To view the compliance difference for the other devices, select a device from the field value drop-down list in the left and/or right side of the diff Palate.



15. Click the **Submit** button, and then click **Ok** in the confirmation pop-up.
16. The **Compliance Policy Create/Update** runs automatically:

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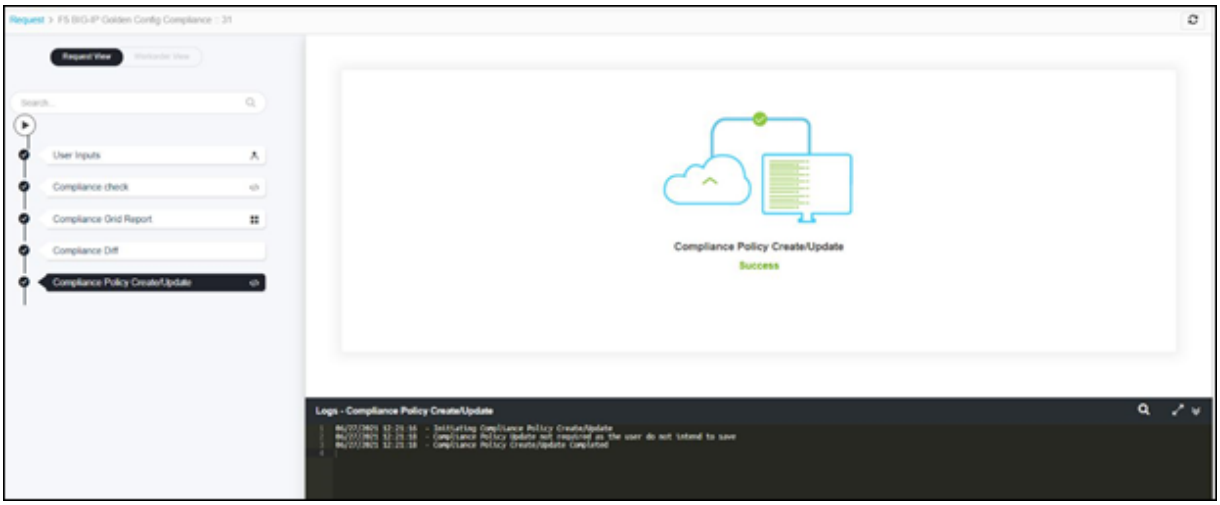

Note: At this phase, the policy is created/updated if you have selected the option Create New Compliance, SaveAs – Yes, Update Policy -Yes in the form input.

17. Remediation Review: The Page displays a list of the Non-Compliant Parameters. By default, two options are displayed: No, Yes.
    - **No** – By default this option is selected. When this option is selected and you **Submit**, the remediation will not be applied to the non-compliant parameters, the workflow ends.
    - **Yes** – When you select **Yes**, the remediation table is displayed for the non-compliant parameters.

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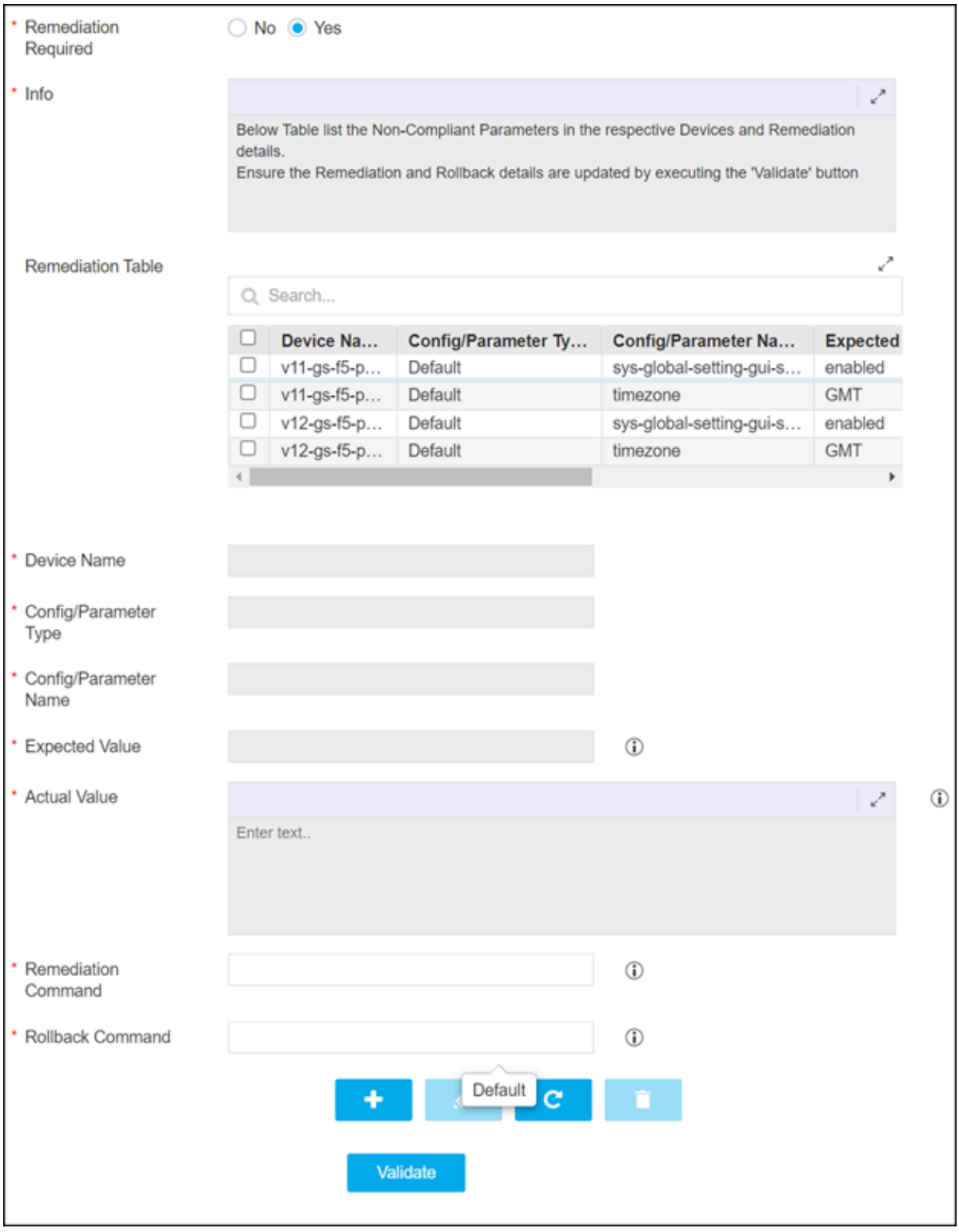

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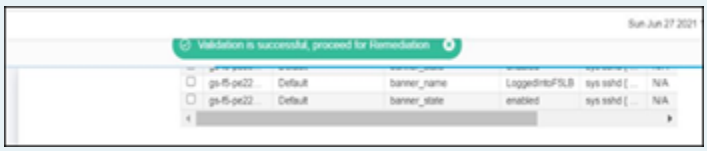
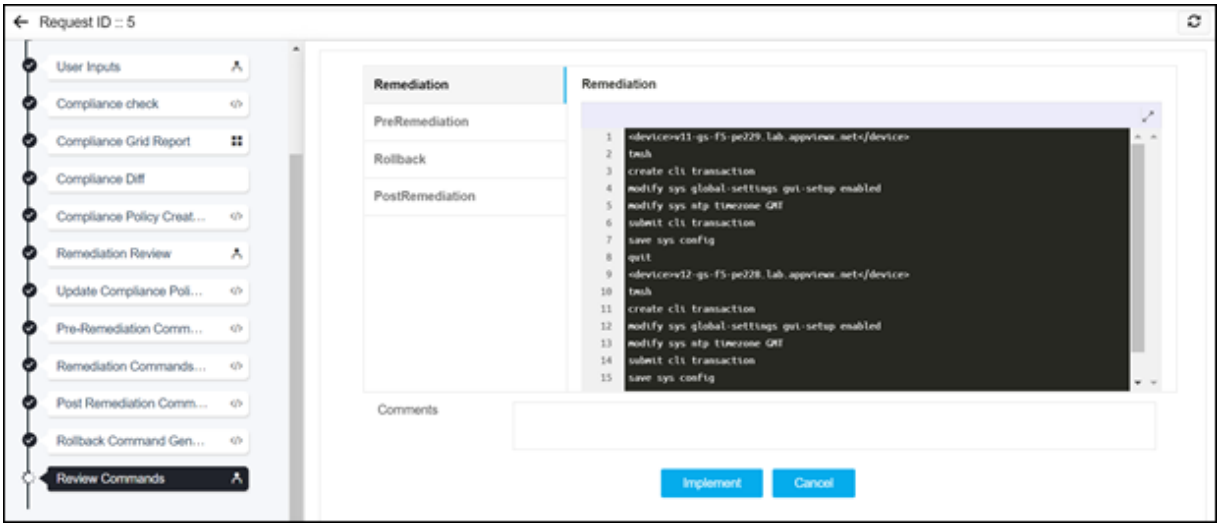
Note:

- In case any custom parameter is part of this remediation table, then update the rollback command in the **Rollback Command** field.
- For default parameters, the remediation or rollback command is not required to be provided.
- If the rollback command is not updated for the custom parameter, you do not get the rollback option in case to revert the device parameter to the older state.
- Once the remediation command and rollback command are updated to the device, click the Update button.
- Validate the remediation and rollback details by clicking the Validate button until the message Validation is Successful is seen.



18. Click the **Submit** button, and then click **Ok** in the confirmation pop-up.
    The update of remediation and rollback commands run automatically and generates Review Commands to review and implement the changes.



19. If required, review the commands that are about to be executed in the F5 load balances in the following tabs:
    - **Remediation**
    - **PreRemediation** – List the values of the parameter, prior Remediation.
    - **Rollback** – Revert the parameter's value to the previous state of Remediation.

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- **PostRemediation** - List the values of the parameter, post Remediation.

Reports

• F5 Disk Space Monitoring

F5 Disk Space Monitoring

This workflow retrieves multiple devices from the data center and displays the used hard disk space as well as the available hard disk space.

To run this workflow:

1. Go to **Menu** > **ADC+** > **AUTOMATION** > **Workflow Catalog** > **View/Run**
2. Click the **Reports** category on the **View/Run Workflows** page.
3. On the popup window, hover the mouse over the **F5 Disk Space Monitoring** workflow.
   The **Run** and **Schedule** buttons are displayed.
4. Click

.
   The **Request > F5 Disk Space Monitoring :: FormBuilder** page is displayed.
5. In the **F5 Device Details** section, select a datacenter, and then an F5 device from the list.
6. In the **Hard Disk Threshold Limits** section, select or enter the following details:

Hard Disk Threshold Limits Section - Field and Description Field

Field	Description
Hard Disk Used Space	

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Field	Description
***Warning Threshold (%)**	The warning threshold is configured to trigger when the used disk space exceeds a specified percentage (above x %).
***Critical Threshold (%)**	The critical threshold is defined to activate when the used disk space exceeds a specified percentage (above x %).
Hard Disk Free Space	
***Warning Threshold (%)**	The warning threshold is configured to trigger when the free disk space exceeds a specified percentage (above x %).
***Critical Threshold (%)**	The critical threshold is defined to activate when the free disk space exceeds a specified percentage (above x %).

7. In the **Email** section, enter the email addresses, separated by commas.
8. Click the **Submit** button.
   The Confirmation popup opens.

> **Note:**
> - If you want to save this form to edit it later, click the **Save Draft** button, and then click **Ok** in the Confirmation popup window. The form will be saved as Open request under **Request** > **All**.
> - If you want to cancel this form, click the **Cancel** button.

9. The workflow runs automatically and an email will be triggered if it has been configured.

Sample Workflow Creation

- Sample Workflow Creation
- Designing F5 BIG-IP Automation Workflow
- Designing Infoblox IPAM Automation Workflow
- Designing BlueCat IPAM Automation Workflow

Sample Workflow Creation

- Sample Workflow Creation
- Designing F5 BIG-IP Automation Workflow

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- Designing Infoblox IPAM Automation Workflow
- Designing BlueCat IPAM Automation Workflow

Designing F5 BIG-IP Automation Workflow

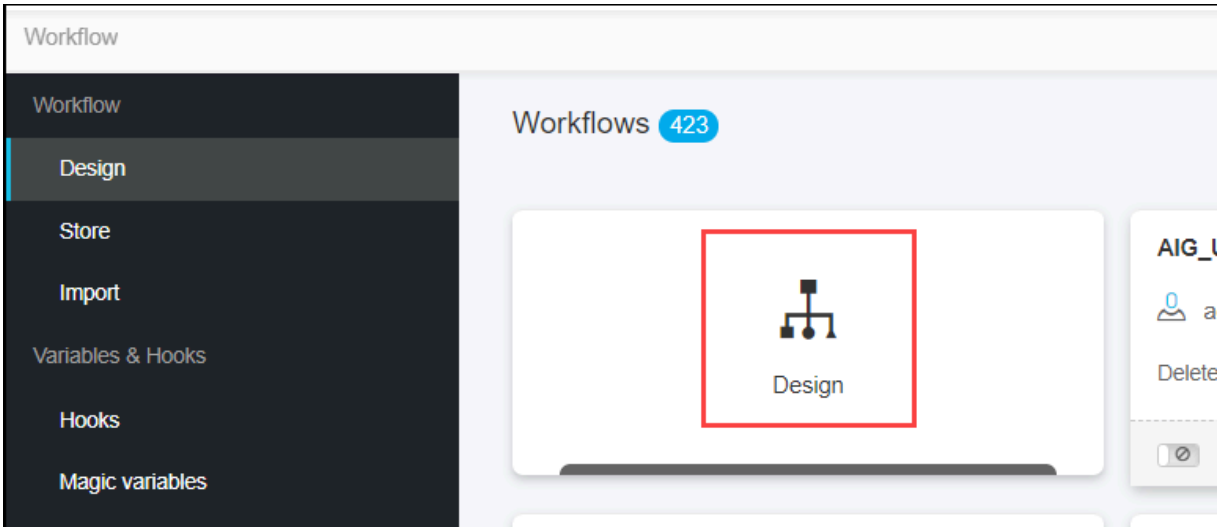
This section covers the following procedures:

- Sample workflow creation with pool, pool members, and monitor
- Customize the variables for a task
- Sample Workflow Creation with Pool, Pool Members, and Monitor
- Customize the Variables for a task

Sample Workflow Creation with Pool, Pool Members, and Monitor

To create a WideIP with pool, pool members, and monitor,

1. Go to **Menu** > **Studio** > **Workflow**.
   The Workflows page appears.
2. Click **Design** to create a new workflow.



3. Enter/select the workflow design details.

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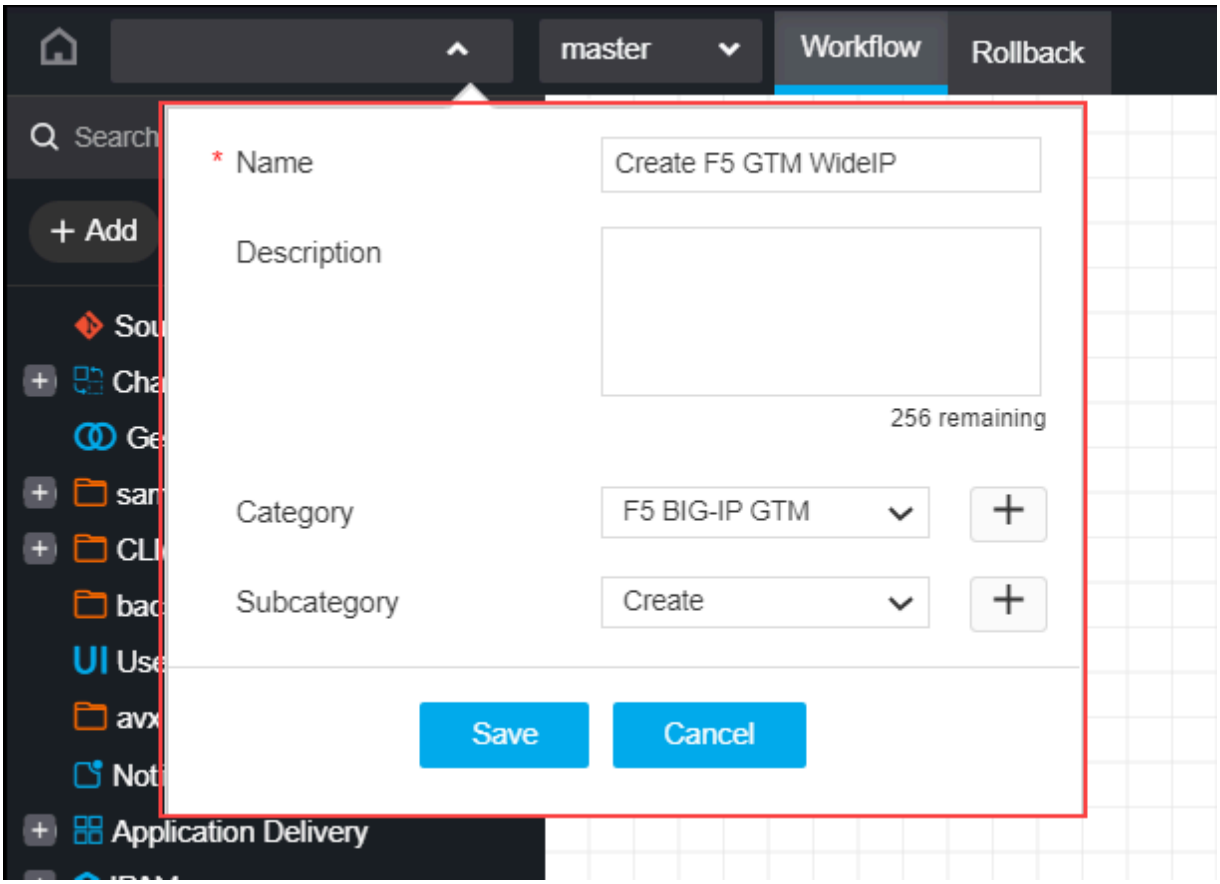

Field descriptions for the workflow design details

Field	Description
***Name**	Name of the workflow.
Description	Description for the workflow.
Category	Select the category as F5 BIG-IP GTM from the drop-down option.
Subcategory	Select sub-category for the workflows from the drop-down option. The possible options are: • Modify • Create • Default • Delete

4. Click the **Save** button.
   The workflow is created:

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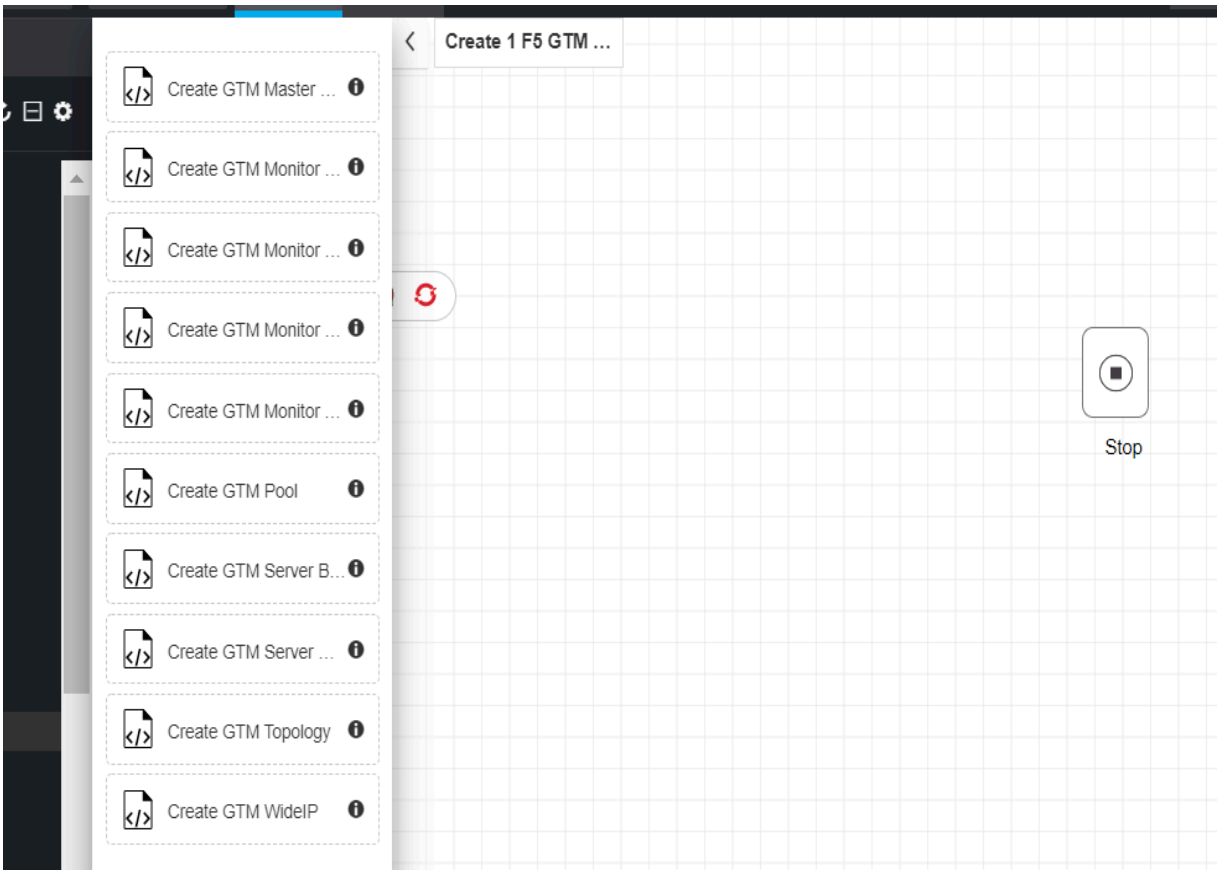
5. Go to **Application Delivery** > **F5 BIG IP CLI** > **GTM**.
6. Place any **Create GTM Monitor** task. For example, **Create GTM Monitor HTTP**.



The Input, Output, and Information data for **Create GTM Monitor** task are displayed:

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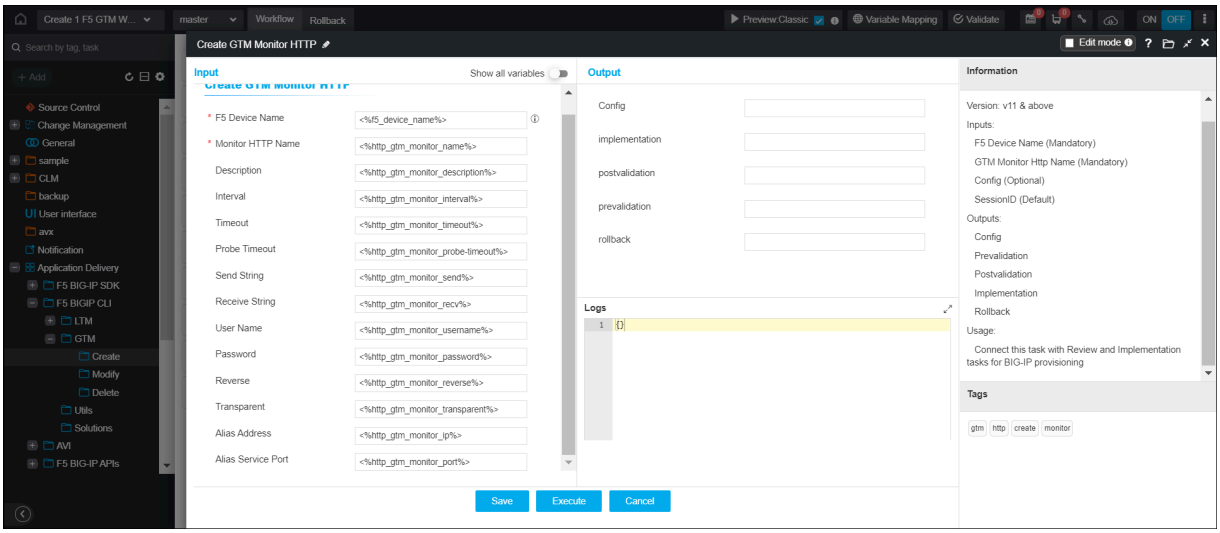
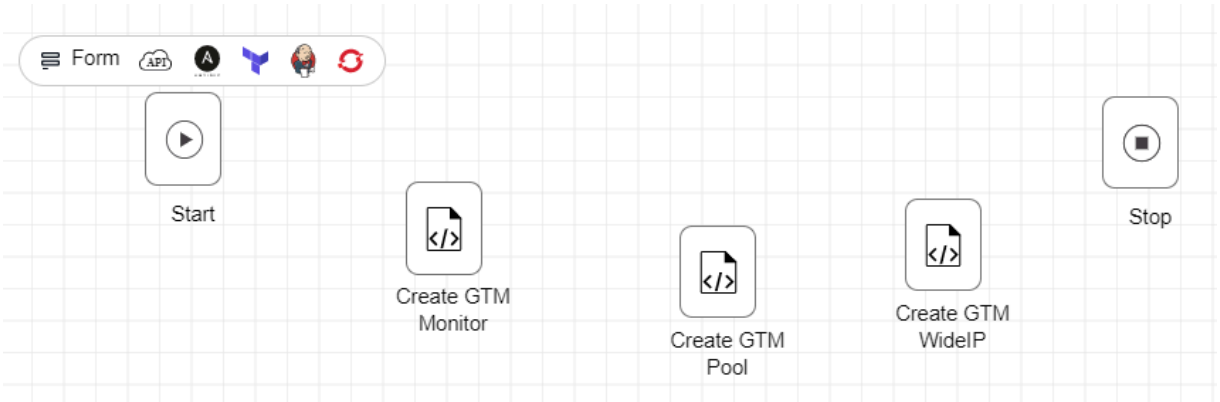


7. Click the **Save** button.

   The **Create GTM Monitor HTTP** task has been added to the workflow:

8. Similarly, place **Create GTM Pool** task and **Create GTM WideIP** task from the folder **Application Delivery** > **F5 BIG IP CLI** > **GTM**.



9. Click the **Form** in the Design page to auto-generate the form for the selected tasks.

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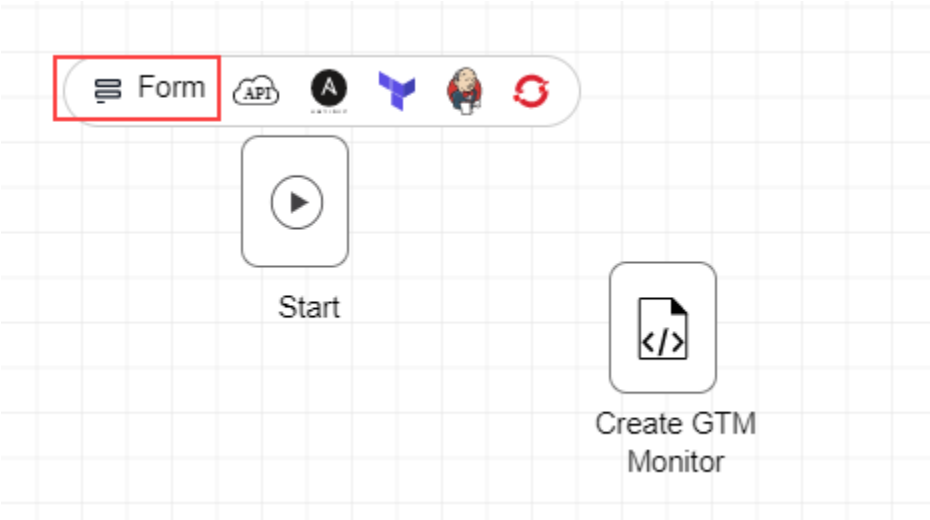
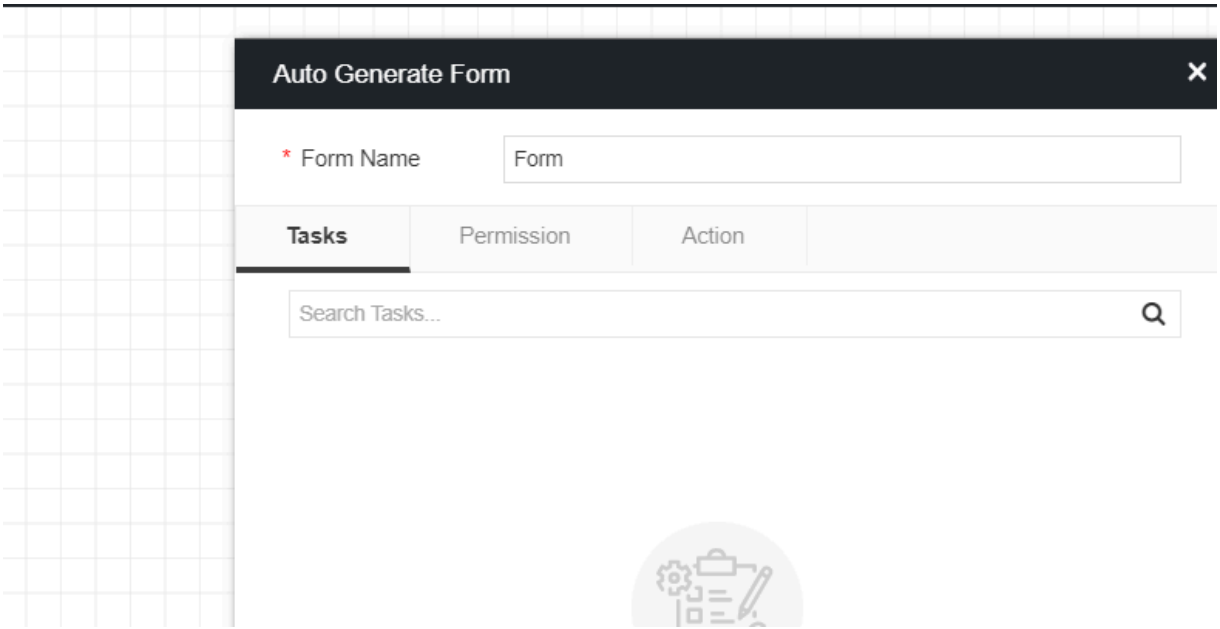


The **Auto Generated** Form appears:



10. Click the add ( ) button of the **Create GTM Monitor HTTP** task, **Create GTM Pool** task and **Create GTM WideIP**.

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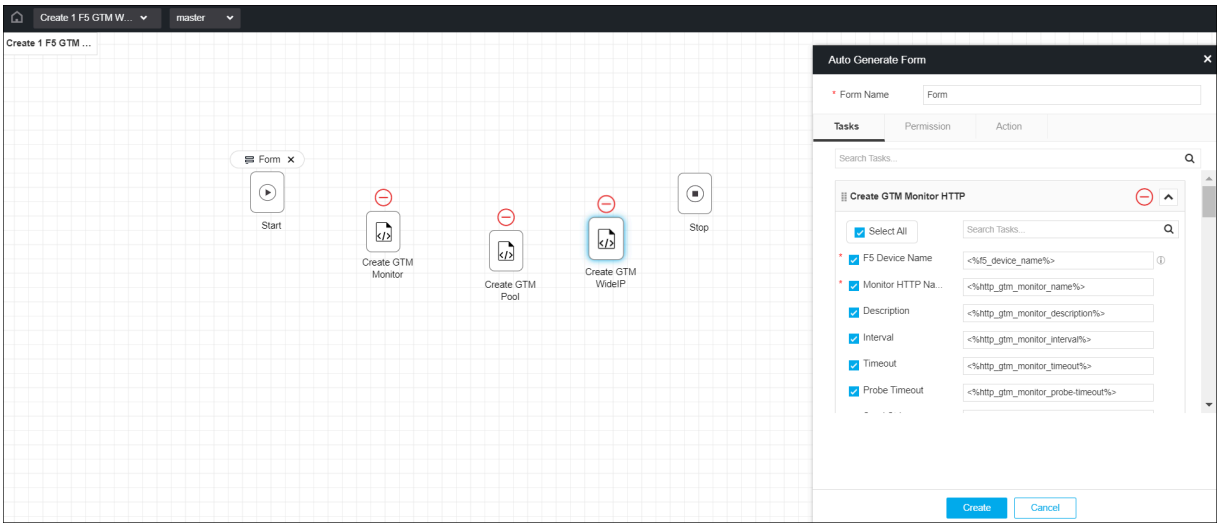

The tasks are added to the Auto Generate Form:

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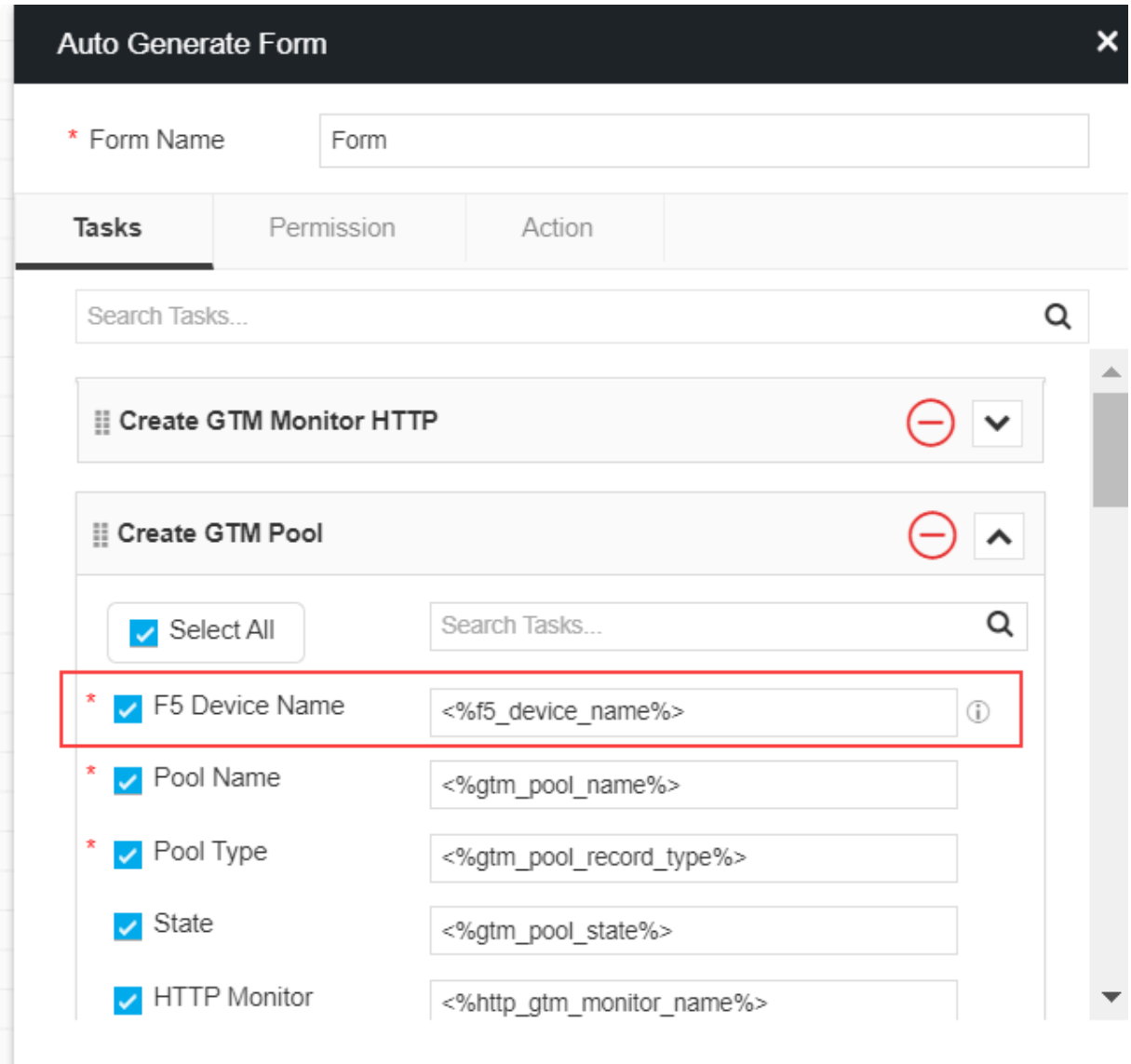

Note: The sequence of the tasks is maintained based on the add button clicked sequence on the tasks. If you want to alter the sequence after adding the tasks to the Auto Generate Form, delete the task(s) from the Auto Generate Form and add them again.

11. Verify all the fields and select/clear the checkbox of the fields to add them to the form.
12. The following fields are not to be selected to avoid duplication being shown in the form.

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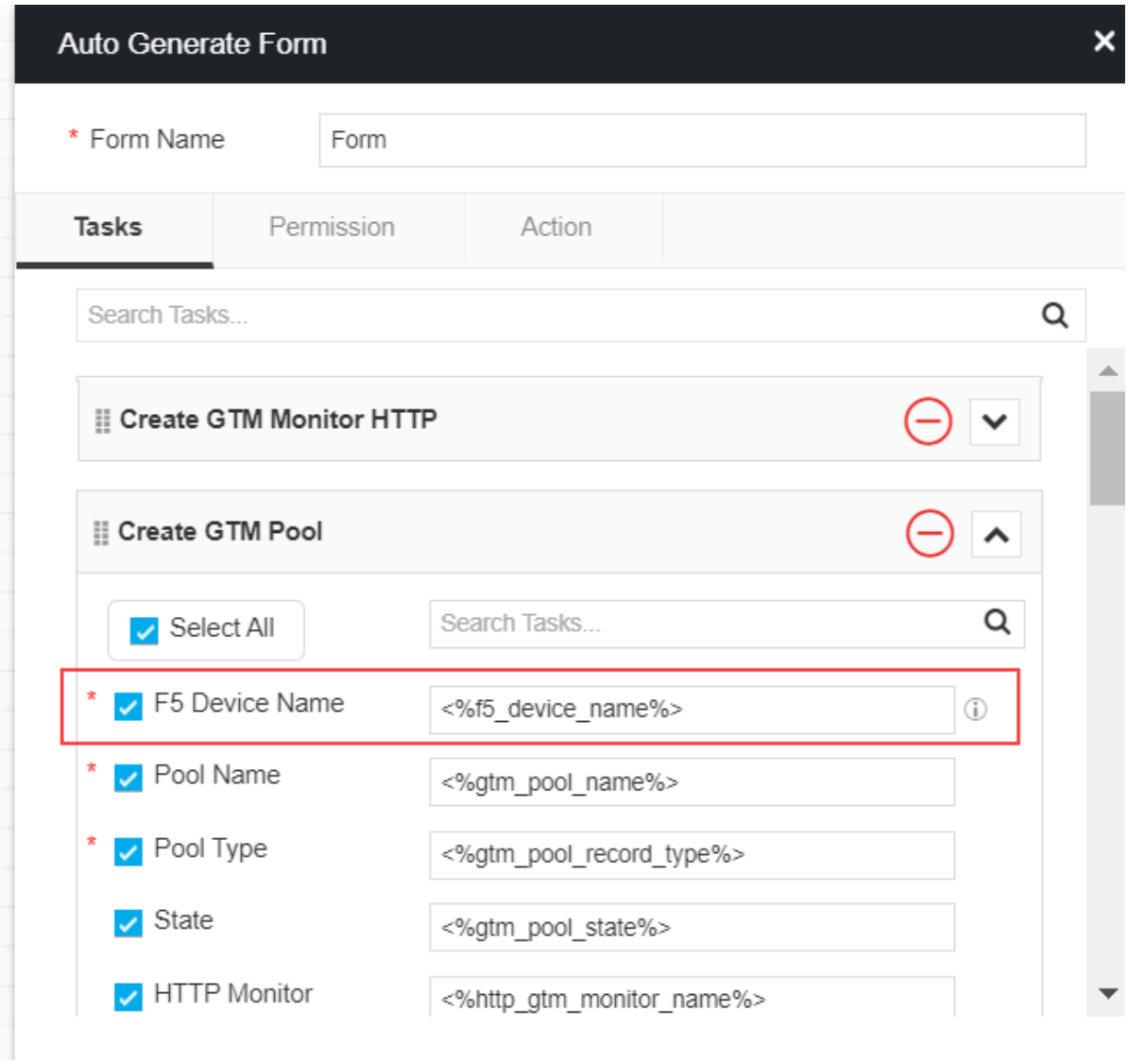
- Clear the checkbox from the **F5 Device Name** field from the **Create GTM Pool** task and **Create GTM WideIP**.



- Clear the checkbox from the **F5 Device Name** and **Pool** fields from the **Create GTM WideIP** task.

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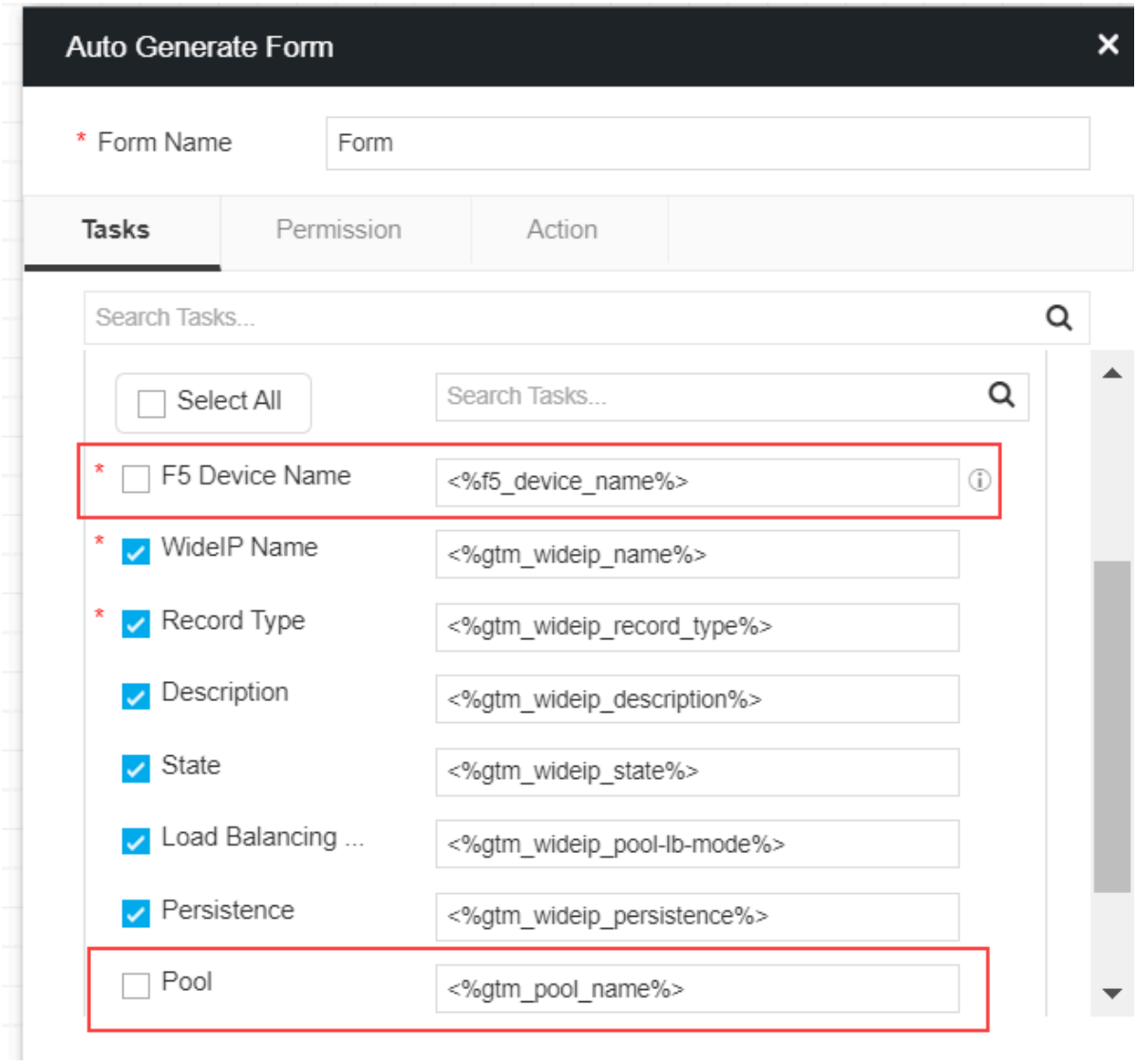

13. Click the **Create** button.
14. Go to **Application Delivery** > **F5 BIG IP CLI** > **Utils** folder, and then place **Review and Implement** subflow from the folder.

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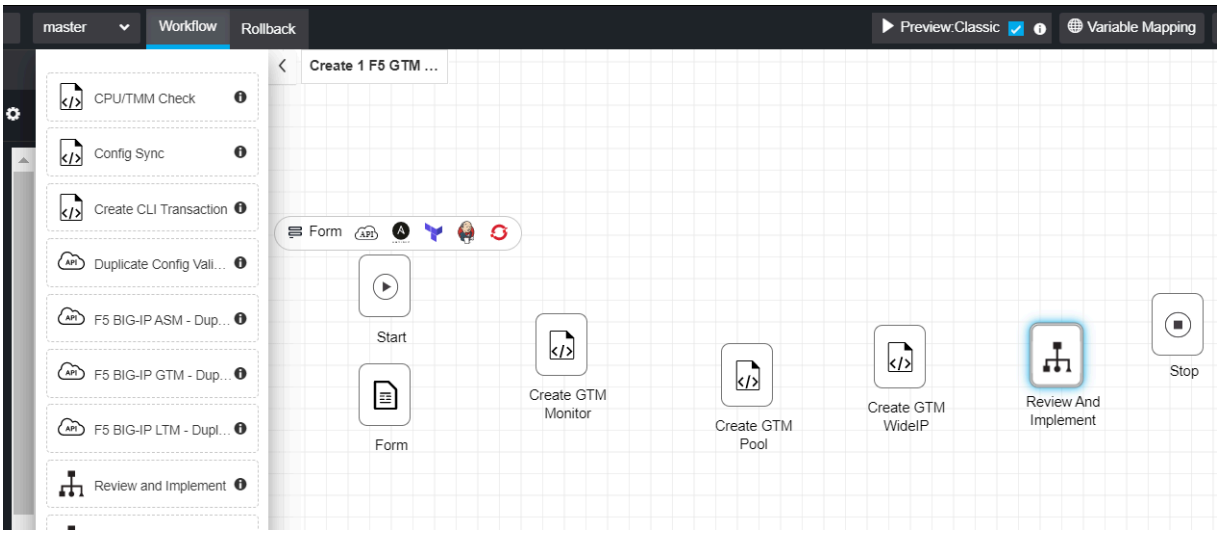
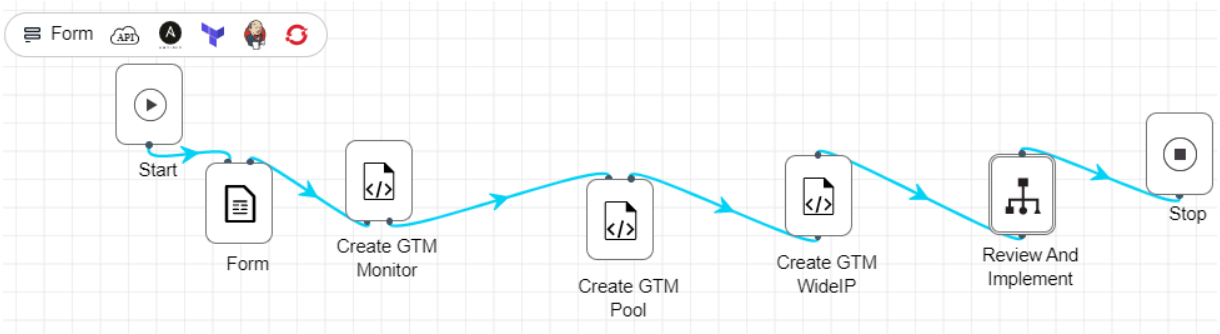


15. Connect all the tasks.



16. Enable the workflow by clicking the **ON** toggle button

17. Click the **Validate & Enable** button.

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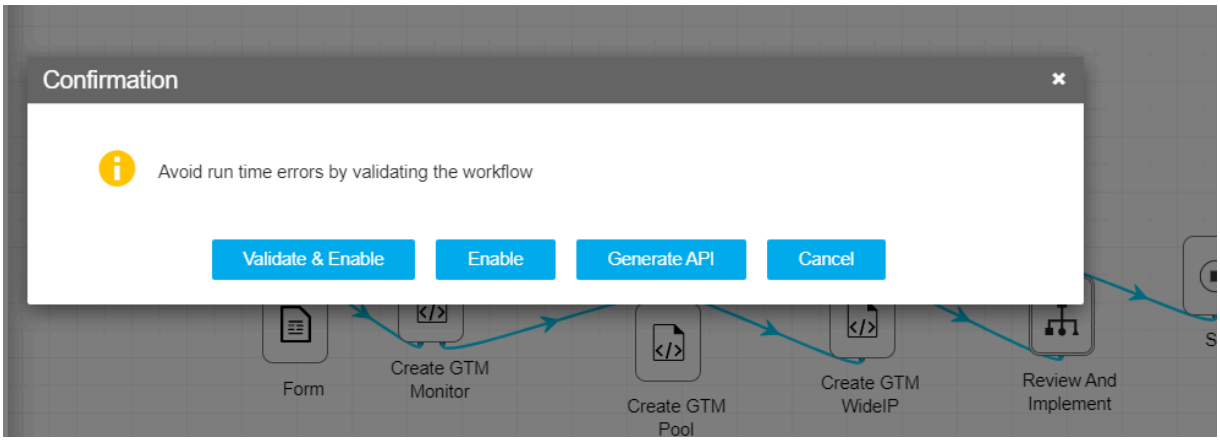
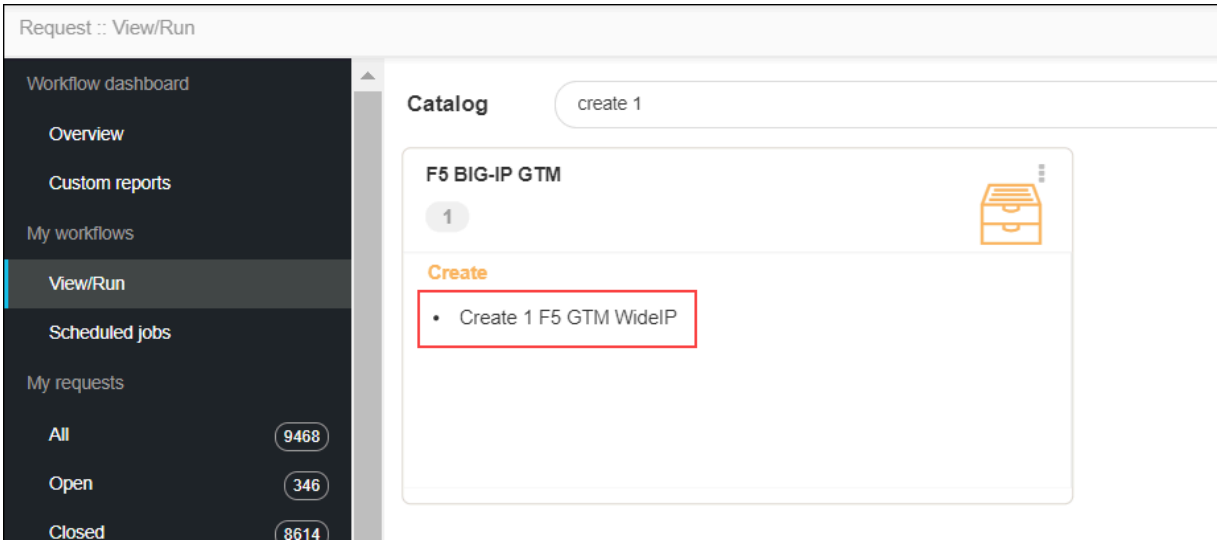


18. The workflow is added to the Workflow Catalog page.



19. Run and verify the workflow.

Customize the Variables for a task

The variables can be customized for a task after creating a workflow also.

To customize the variables for a task,

1. Go to **Menu** > **Studio** > **Workflow**.
   The Workflows page appears:
2. Click the workflow for which the variables are to be customized.
3. Disable the workflow by clicking the **OFF** toggle button.

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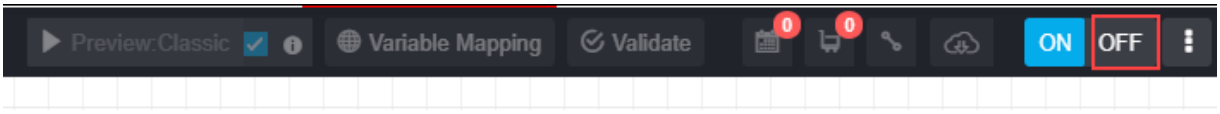
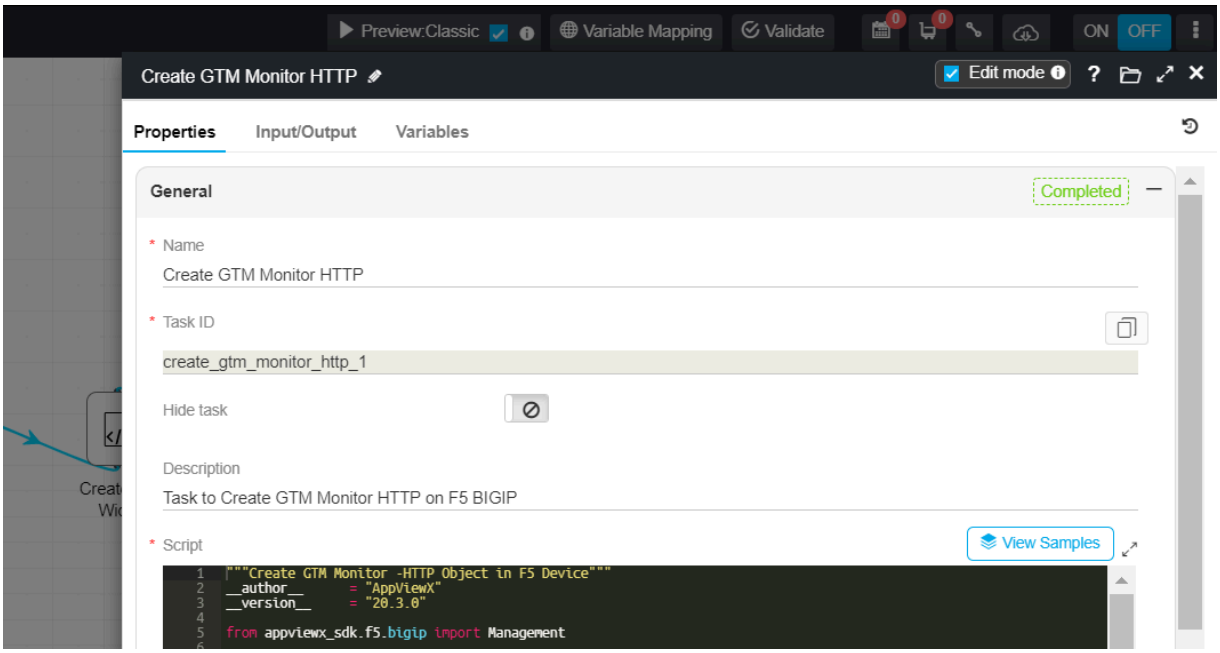


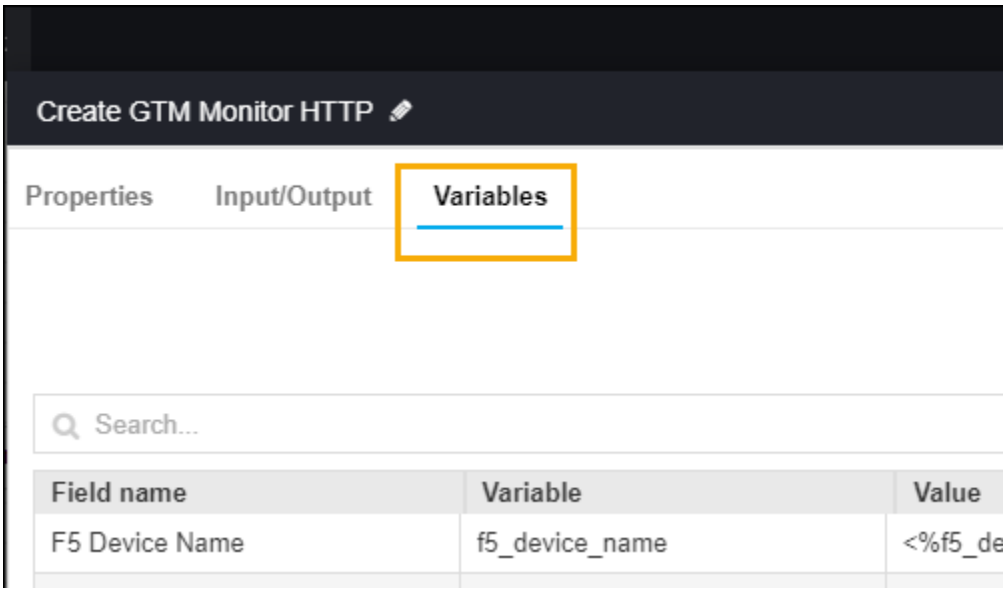
The Confirmation popup appears.

4. Click **Yes** to confirm the disabling workflow.
5. Click twice on the desired task.

   The workflow Properties page appears:



6. Click the **Variables** tab.



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7. You can update any of the following details for the variables:
   - **Field Type** - select the field type from the drop-down option. For example, Description, Password, Dropdown, etc.
   - **Parent** - select the parent field from the drop-down option.
   - **Type** - select the type from the drop-down option. For example, String, JSON, Email, etc.
   - **Show variables** - enable or disable the variable by clicking the toggle button.
   - **Mandatory** - mark whether the field is mandatory or not by clicking the toggle button.
8. Click the **Save** button, and then close the window.
   The updated variables are displayed in the form.

Designing Infoblox IPAM Automation Workflow

This section covers the following procedures:

- Sample workflow creation with A, CNAME, and PTR Records in Infoblox
- Customize the variables for a task

- Sample Workflow Creation with A, CNAME, and PTR Records in Infoblox
- Customize the Variables for a Task

Sample Workflow Creation with A, CNAME, and PTR Records in Infoblox

To create a sample workflow with A, CNAME, and PTR Records,

1. Go to **Menu** > **Studio** > **Workflow**.
   The Workflows page appears:
2. Click Design to create a new workflow.

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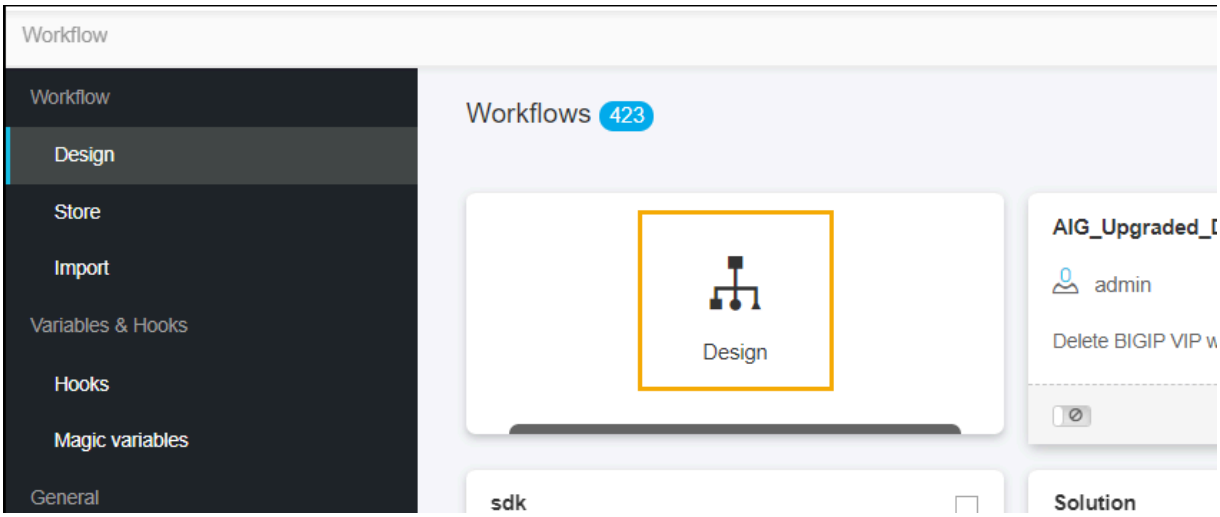
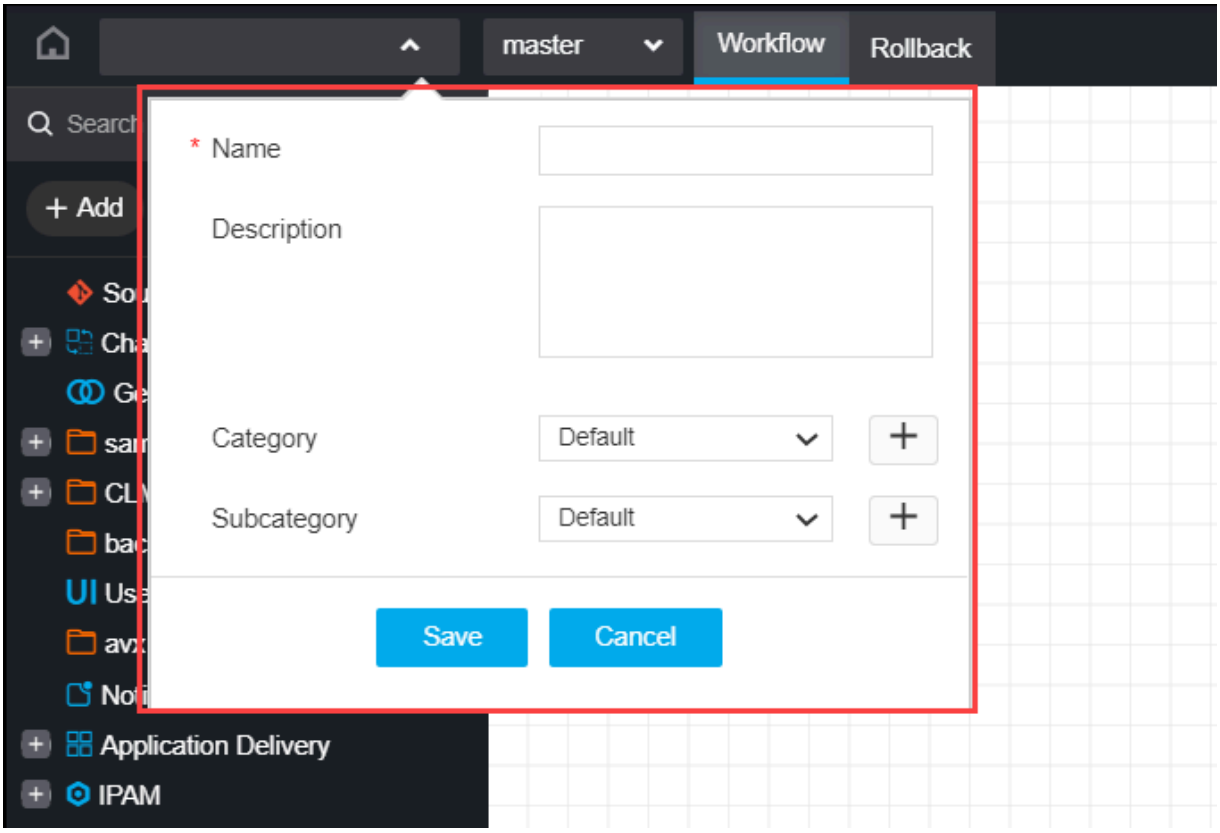


3. Enter/select the workflow design details.



Field descriptions for the workflow design details

Field	Description
***Name**	Name of the workflow.

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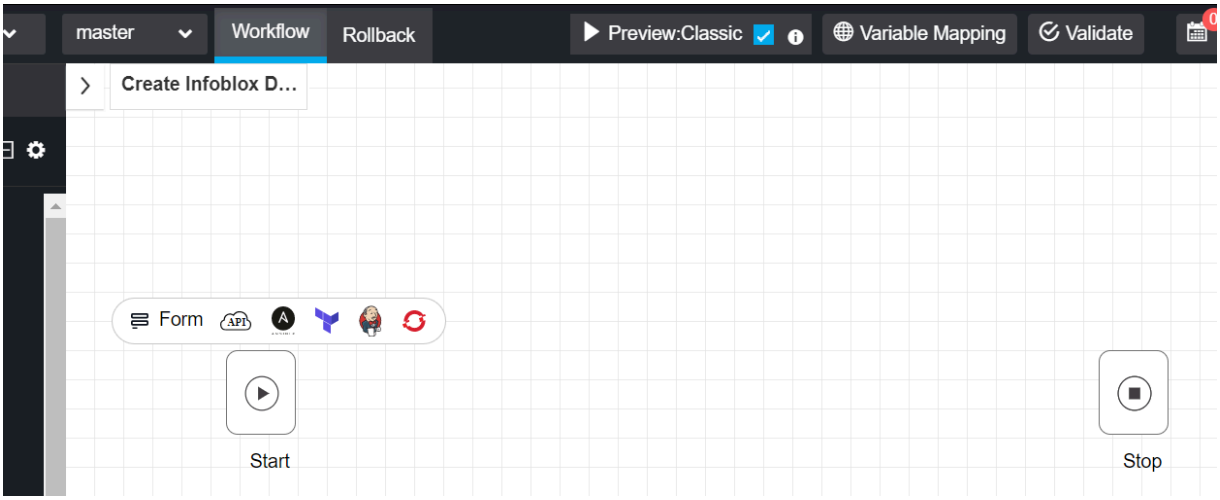
Field	Description
Description	Description for the workflow.
Category	Select the category from the drop-down option.
Subcategory	Select sub-category for the workflows from the drop-down option. The possible options are: • Modify • Create • Default • Delete

4. Click the **Save** button.

   The workflow is created:



5. Go to **IPAM** > **Infoblox** > **Create** folder.
6. Place **Create A Record** task.

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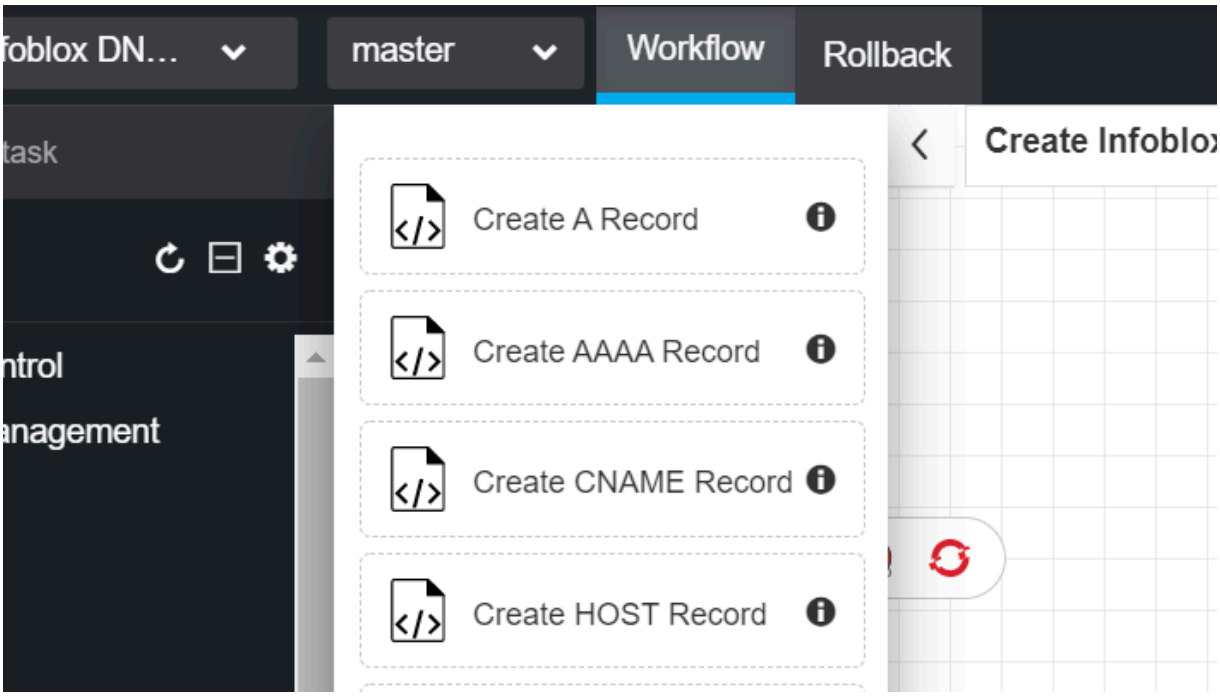
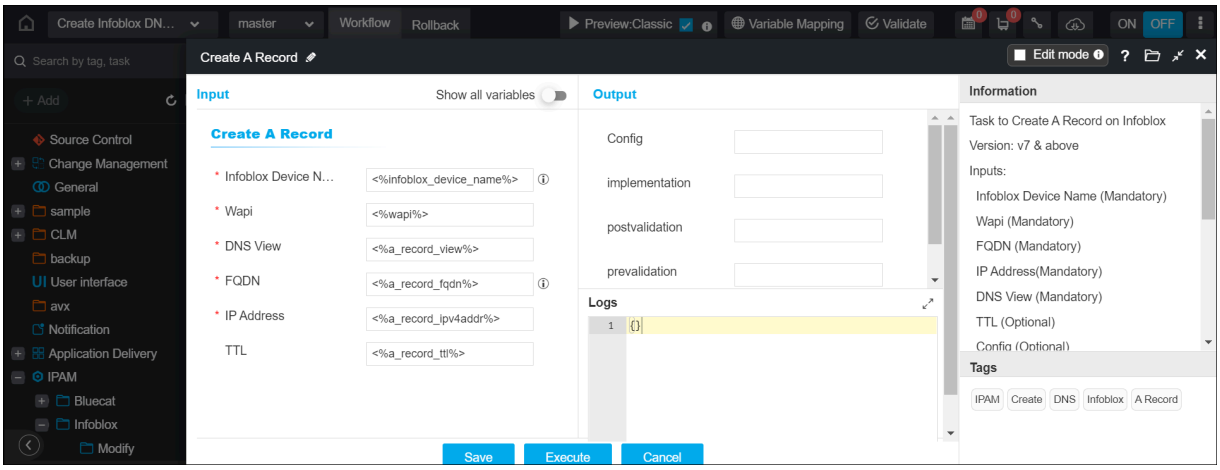


The Input, Output, and Information data for **Create A Record** task are displayed:



7. Click the **Save** button.

   The **Create A Record** task has been added to the workflow:

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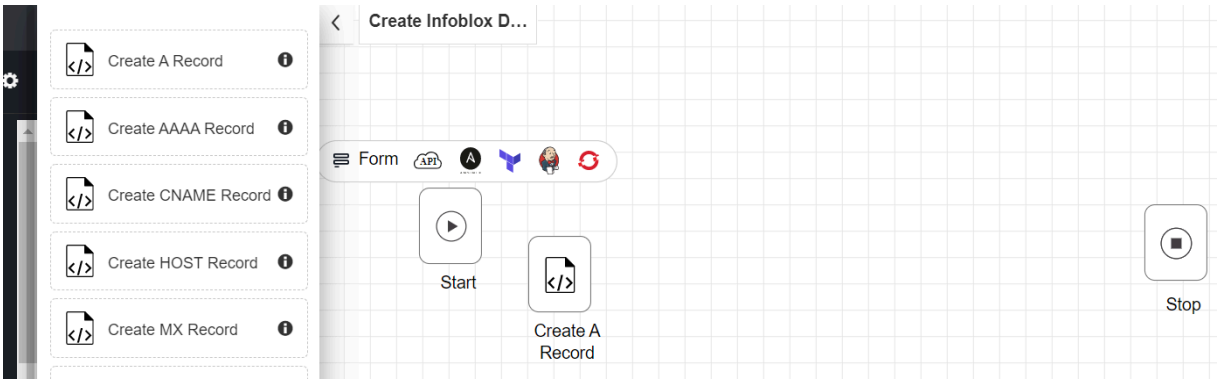
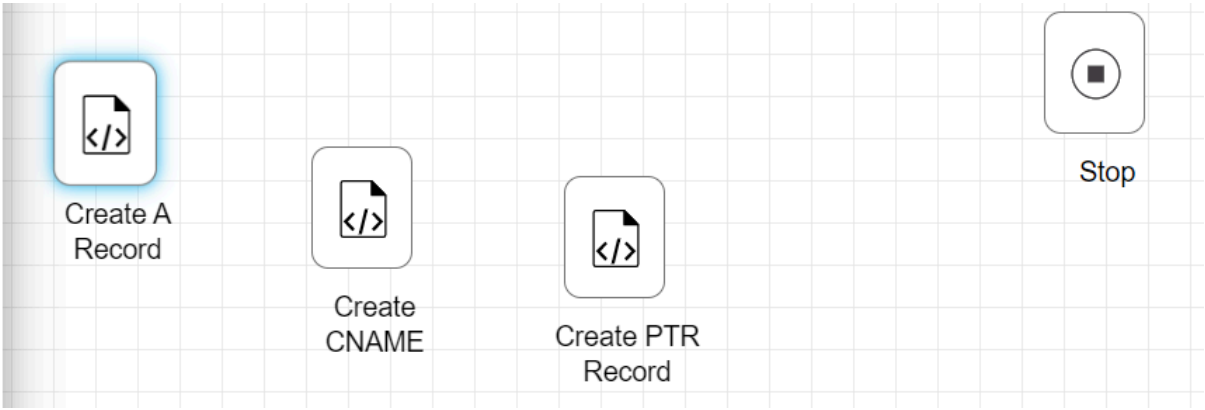
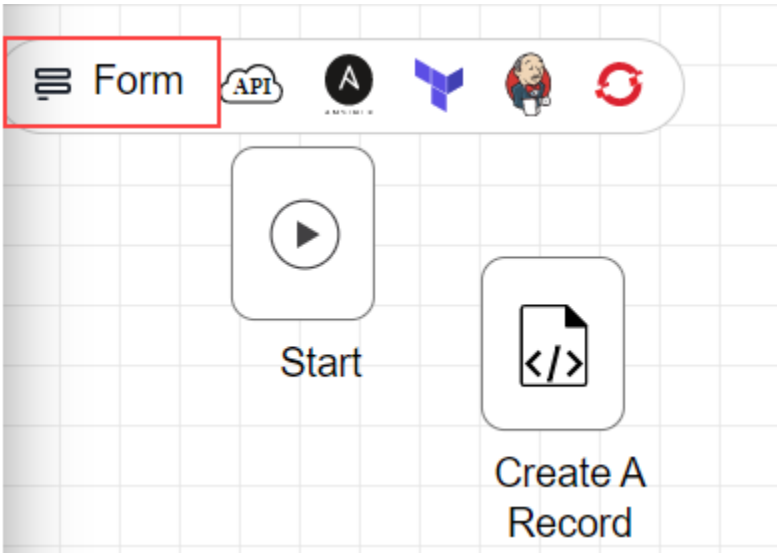


8. Similarly, place **Create CNAME Record** task and **Create PTR Record** task from the folder **IPAM** > **Infoblox** > **Create**.



9. Click the **Form** in the Design page to auto-generate the form for the selected tasks.



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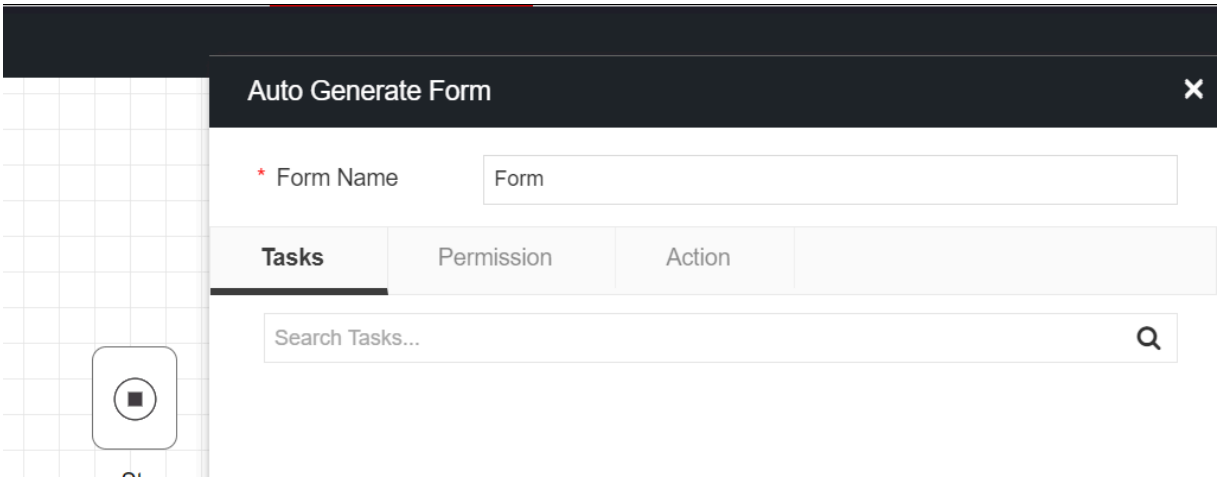
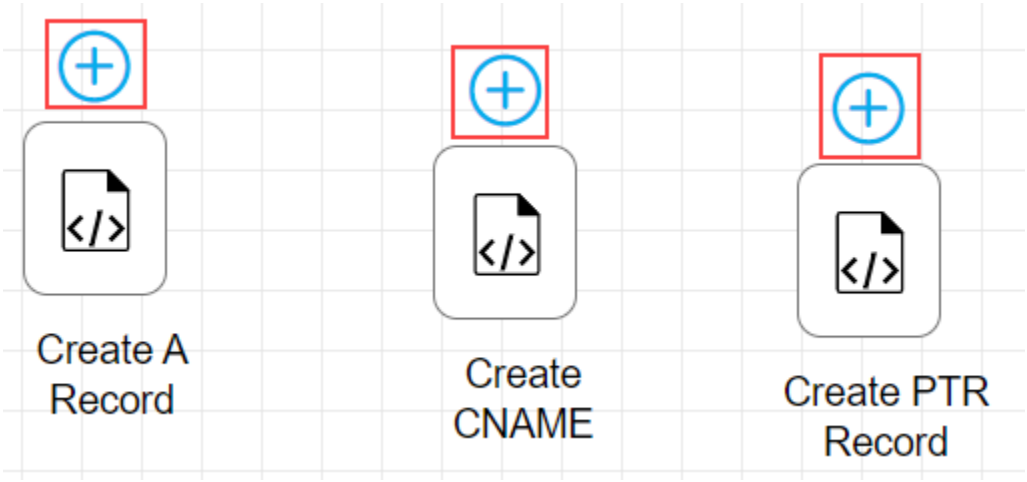
The Auto Generated Form appears:



10. Click the add ( ) button of the **Create A Record**, **Create CNAME Record**, and **Create PTR Record** tasks.



The tasks are added to the Auto Generate Form:

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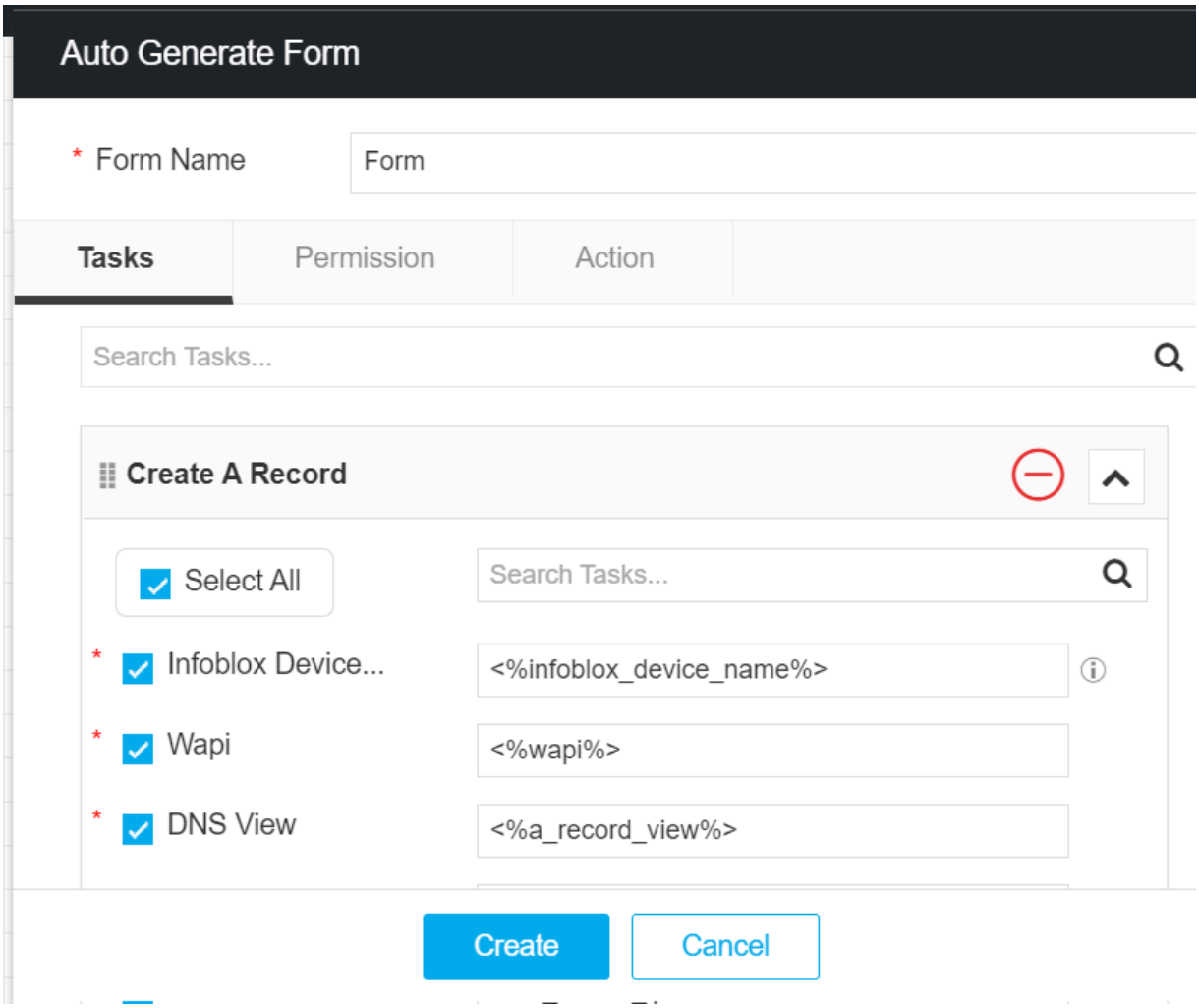

Note: The sequence of the tasks is maintained based on the add button clicked sequence on the tasks. If you want to alter the sequence after adding the tasks to the Auto Generate Form, delete the task(s) from the Auto Generate Form and add them again.

11. Verify all the fields and select/clear the checkbox of the fields to add them to the form.
    The following fields are not to be selected to avoid duplication being shown in the form.

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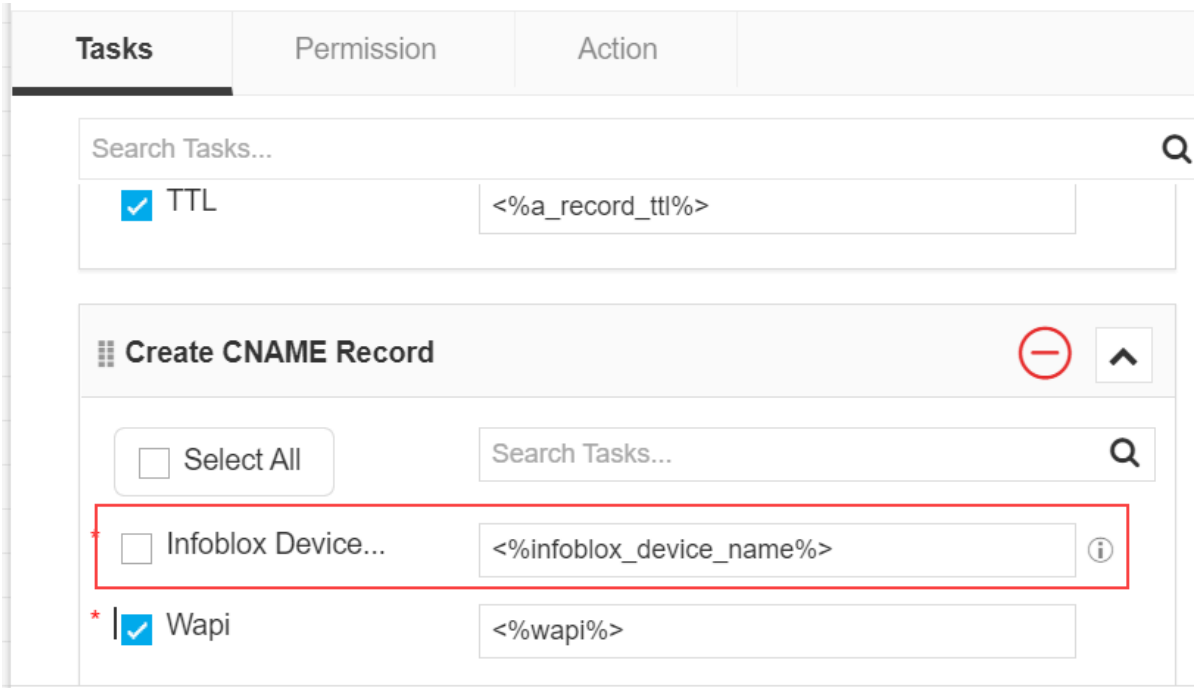
- Clear the checkbox for the **Infoblox Device Name** field from the **Create CNAME Record** task and **Create PTR Record** task.



- Clear the checkbox for the **Infoblox Device Name** field and **DNS View** from the **Create PTR Record** task.

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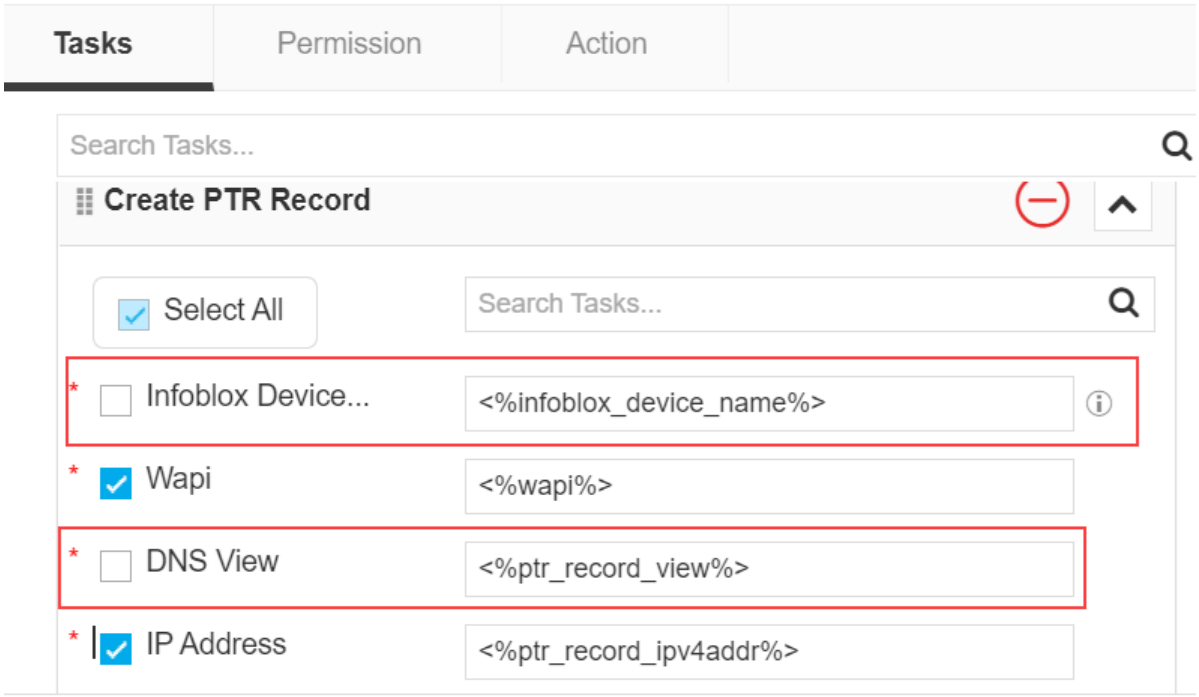
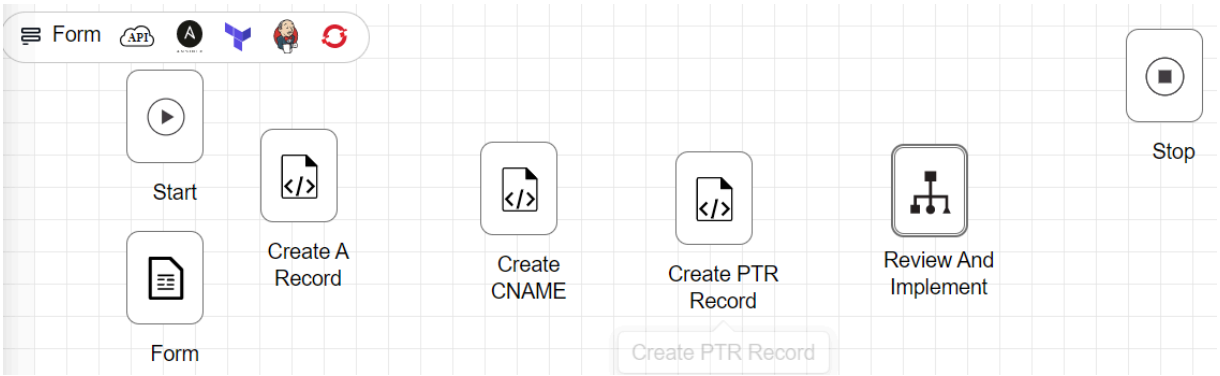
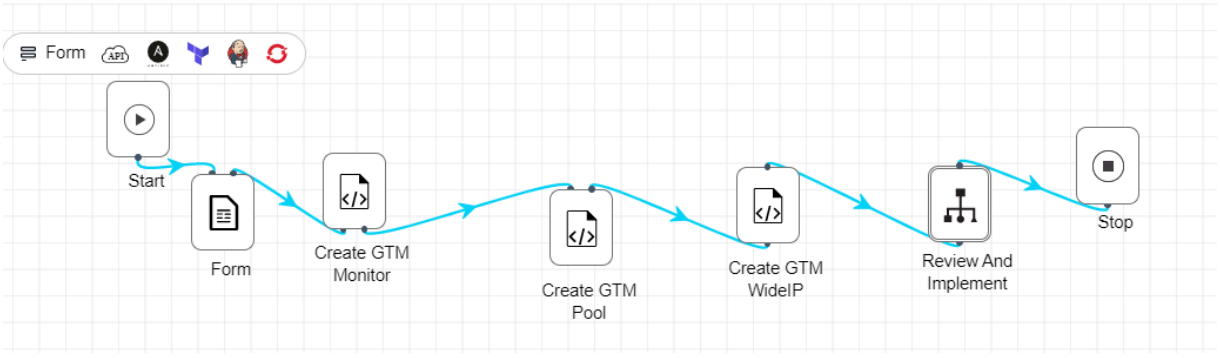


12. Click the **Create** button.
13. Go to **IPAM** > **Infoblox** > **Utils** folder, and then place **Review and Implement** subflow from the folder.



14. Connect all the tasks.



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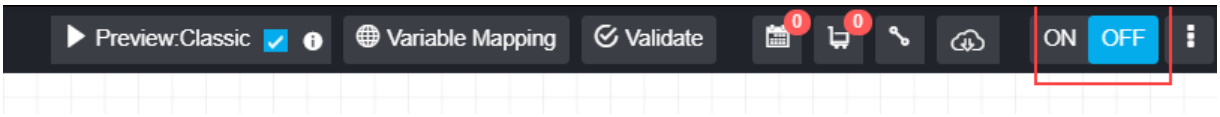
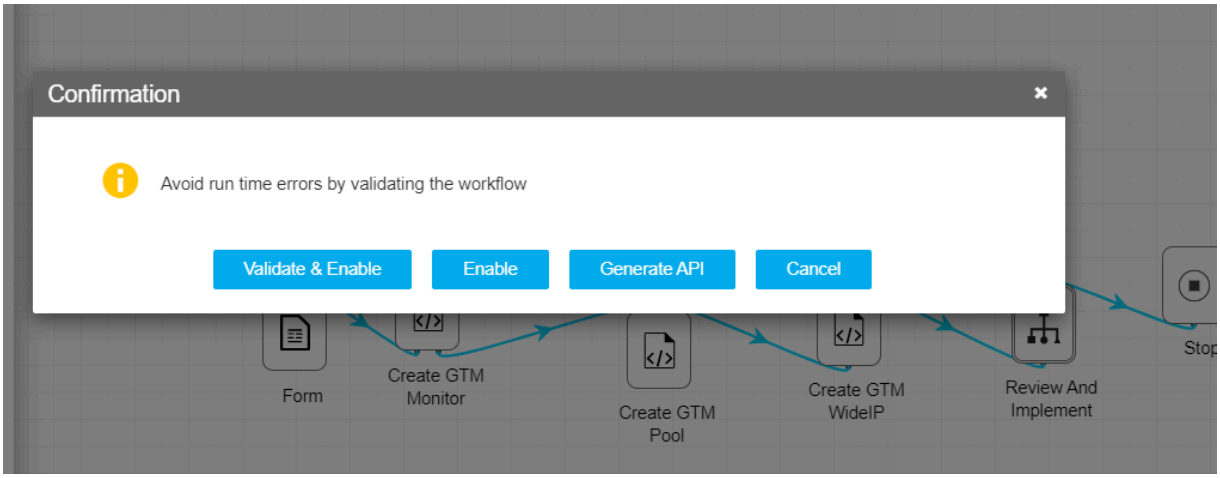
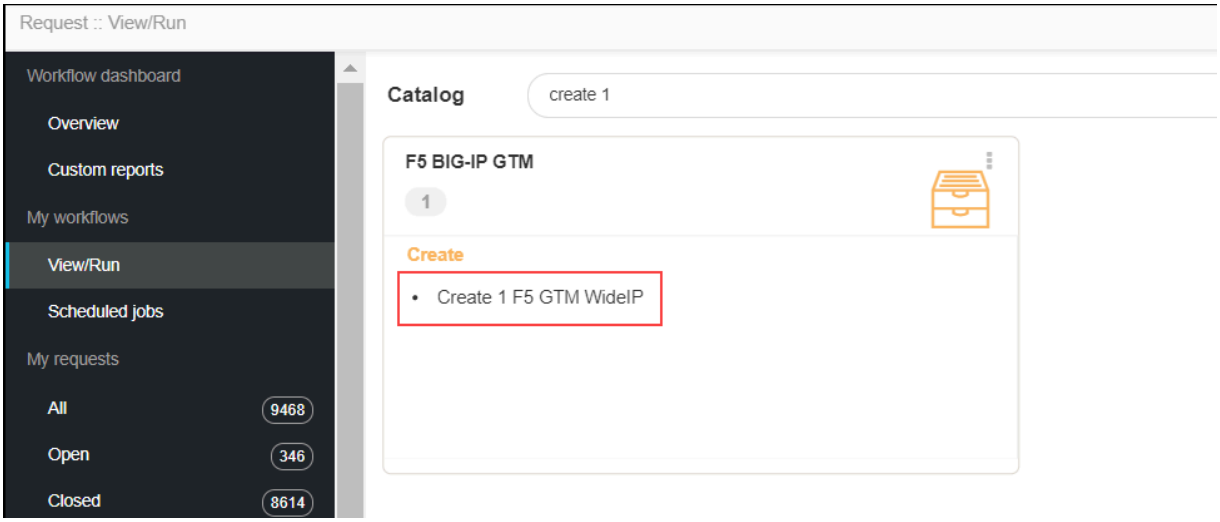
15. Enable the workflow by clicking the **ON** toggle button.



16. Click the **Validate & Enable** button.



The workflow is added to the Workflow Catalog page.



17. Run and verify the workflow.

Customize the Variables for a Task

The variables can be customized for a task after creating workflow also.

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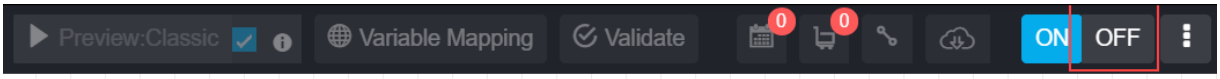
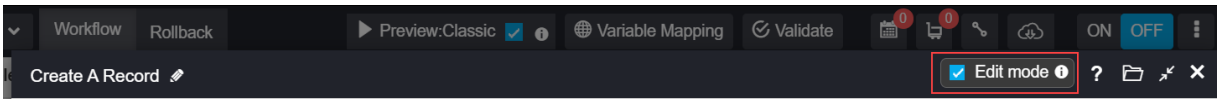
To customize the variables for a task,

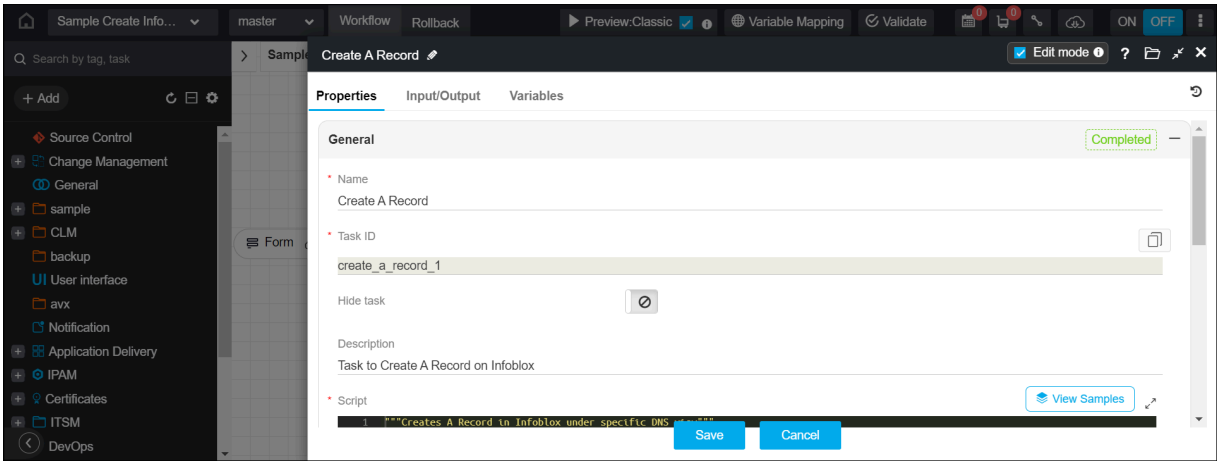
1. Go to **Menu** > **Studio** > **Workflow**.
   The Workflows page appears:
2. Click the workflow for which the variables are to be customized.
3. Disable the workflow by clicking the **OFF** toggle button.



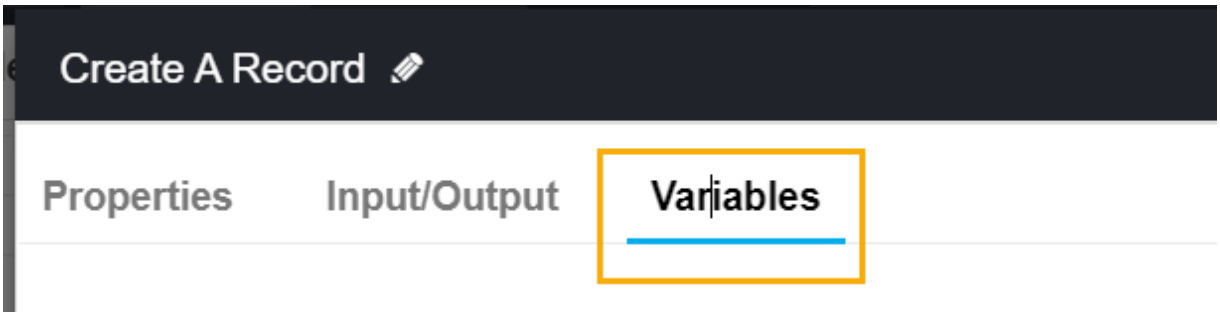
   The Confirmation popup appears.
4. Click **Yes** to confirm the disabling workflow.
5. Click twice on the desired task to customize the variables.
6. Make sure the **Edit Mode** check box is selected.



   The workflow Properties page appears:



7. Click the **Variables** tab.



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Note: Make use of the scroll bar to view the details of the variables.

8. You can update any of the following details for the variables:
   - **Field Type** - select the field type from the drop-down option. For example, Description, Password, Dropdown, etc.
   - **Parent** - select the parent field from the drop-down option.
   - **Type** - select the type from the drop-down option. For example, String, JSON, Email, etc.
   - **Show variable**s - enable or disable the variable by clicking the toggle button.
   - **Mandatory** - mark whether the field is mandatory or not by clicking the toggle button.
9. Click the **Save** button, and then close the window.
   The updated variables are displayed in the form.

Designing BlueCat IPAM Automation Workflow

This section covers the following procedures:

- Sample workflow creation with A, CNAME, and PTR Records in BlueCat
- Customize the variables for a task

- Sample Workflow Creation with A, CNAME, and PTR Records in BlueCat
- Customize the Variable for a Task

Sample Workflow Creation with A, CNAME, and PTR Records in BlueCat

This section covers the sample procedures for creating a sample workflow with A, CNAME, and PTR Records in BlueCat.

To create a sample workflow with A, CNAME, and PTR records,

1. Go to **Menu** > **Studio** > **Workflow**.
   The Workflows page is displayed.
2. Click **Design** to create a new workflow.

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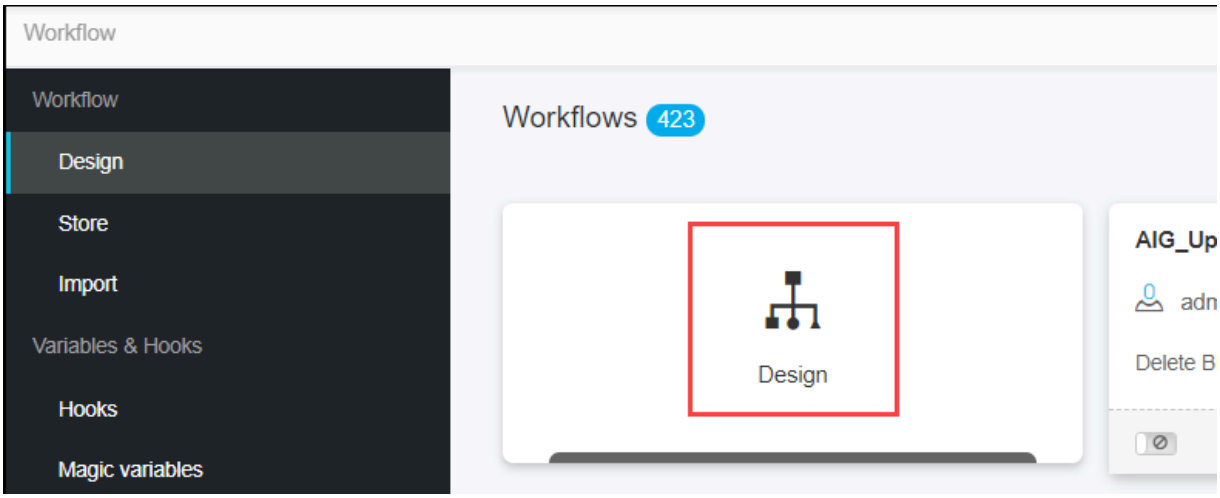
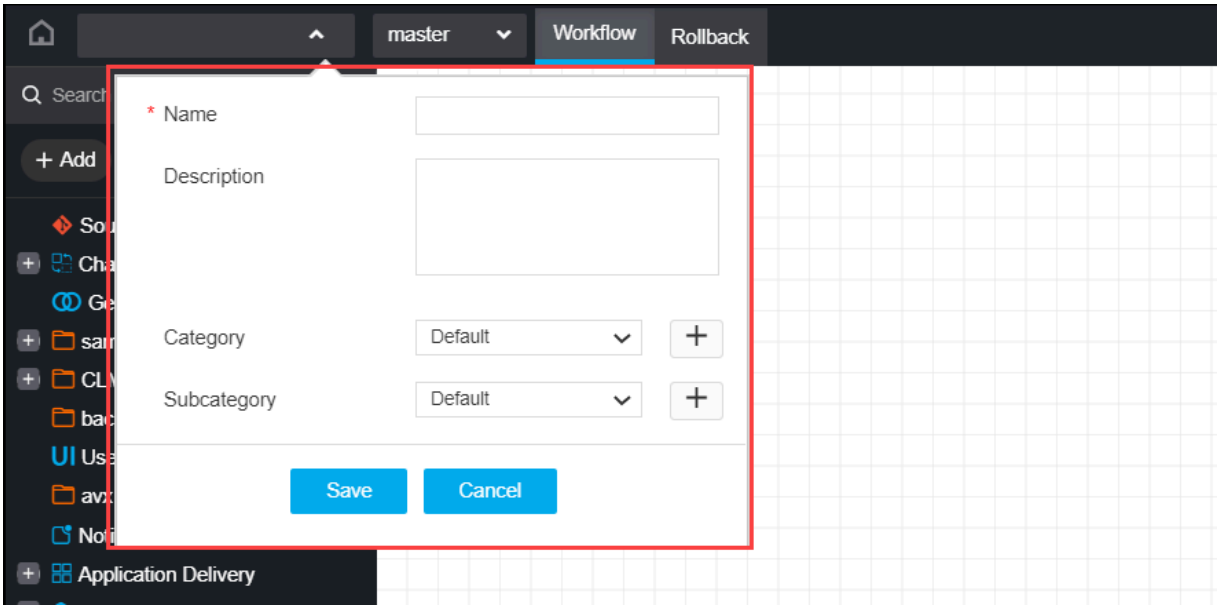


3. Enter/select the field information for the workflow design.



Field descriptions for the workflow design details

Field	Description
***Name**	Name of the workflow.
Description	Description for the workflow.
Category	Select the category from the drop-down option.
Subcategory	Select sub-category for the workflows from the drop-down option. The possible options are:

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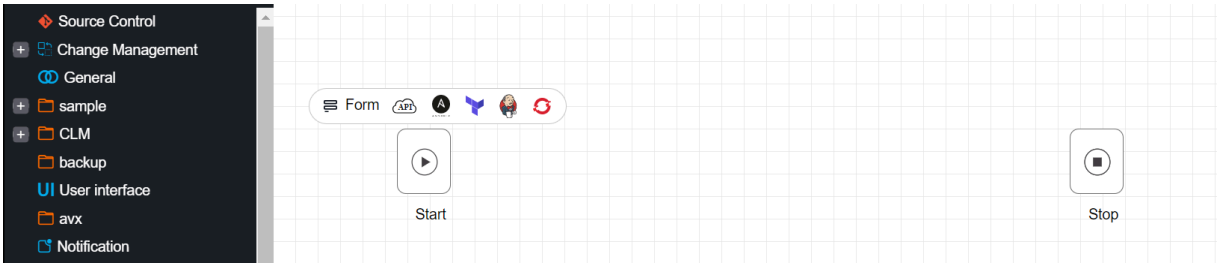
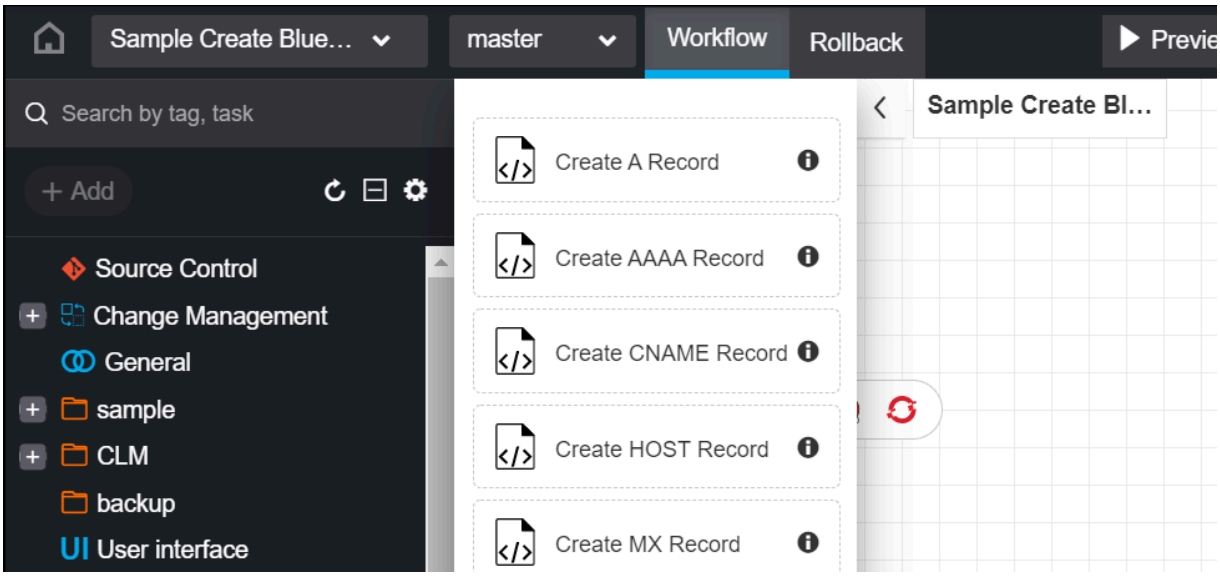
Field	Description
	• Modify • Create • Default • Delete

4. Click the **Save** button.

   The workflow is created.



5. Go to the **IPAM** > **Bluecat** > **Create** folder.
6. Place **Create A Record** task.



The Input, Output, and Information data for **Create A Record** task are displayed.

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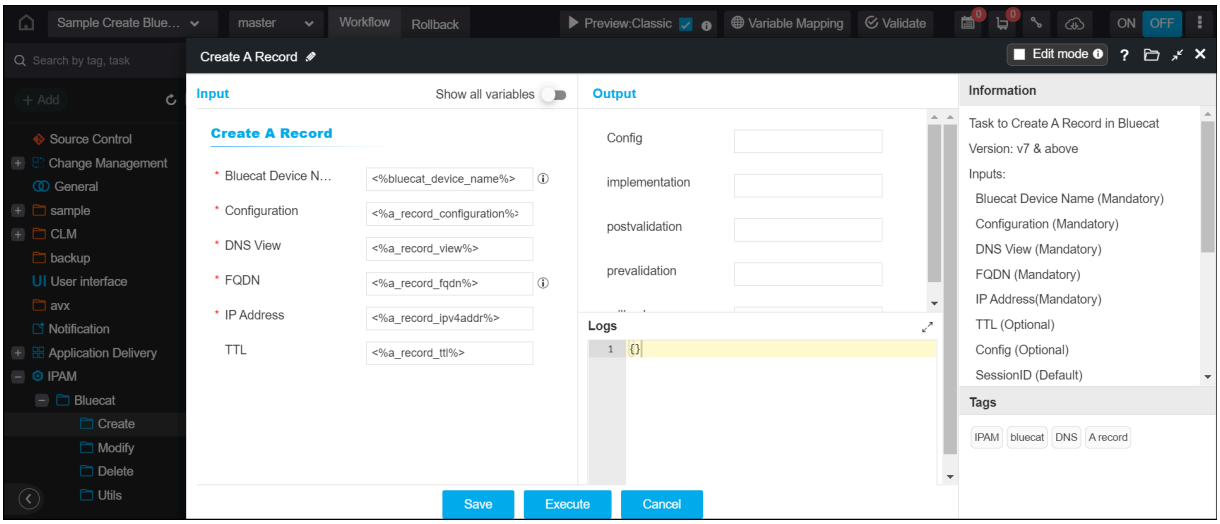
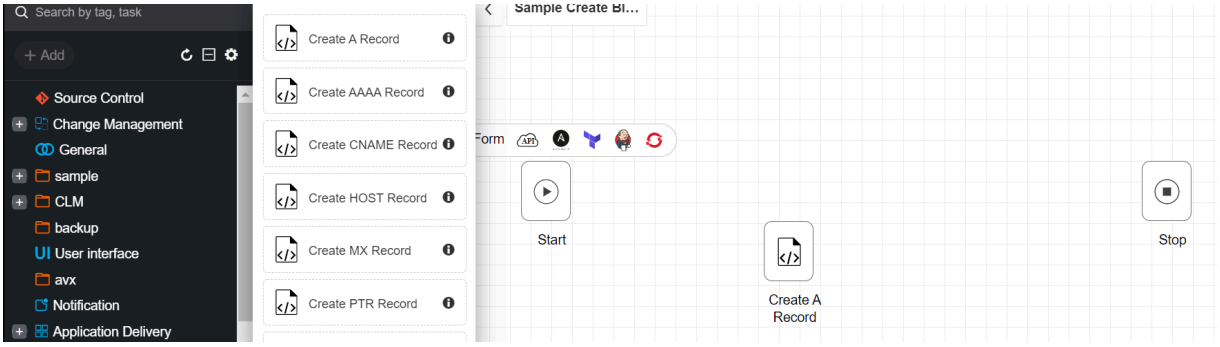
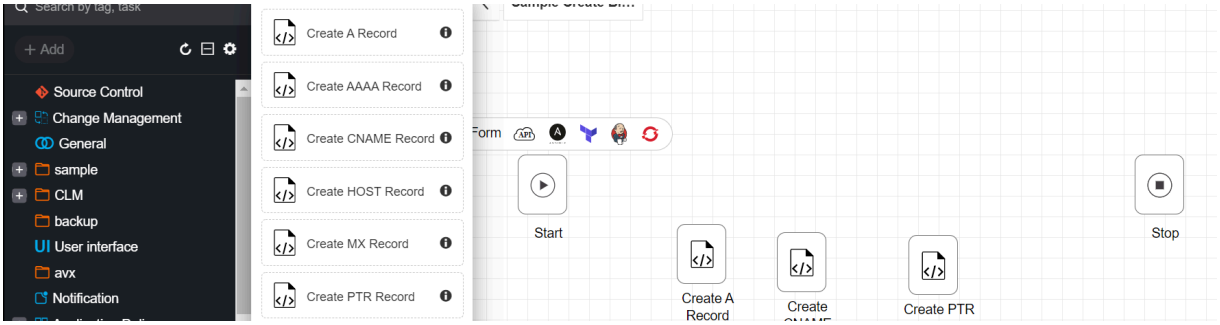


7. Click the **Save** button.

   The **Create A Record** task has been added to the workflow:



8. Similarly, place the **Create CNAME Record** task and **Create PTR Record** task from the folder **IPAM** > **Bluecat** > **Create**.



9. Click the **Form** in the Design page to auto-generate the form for the selected tasks.

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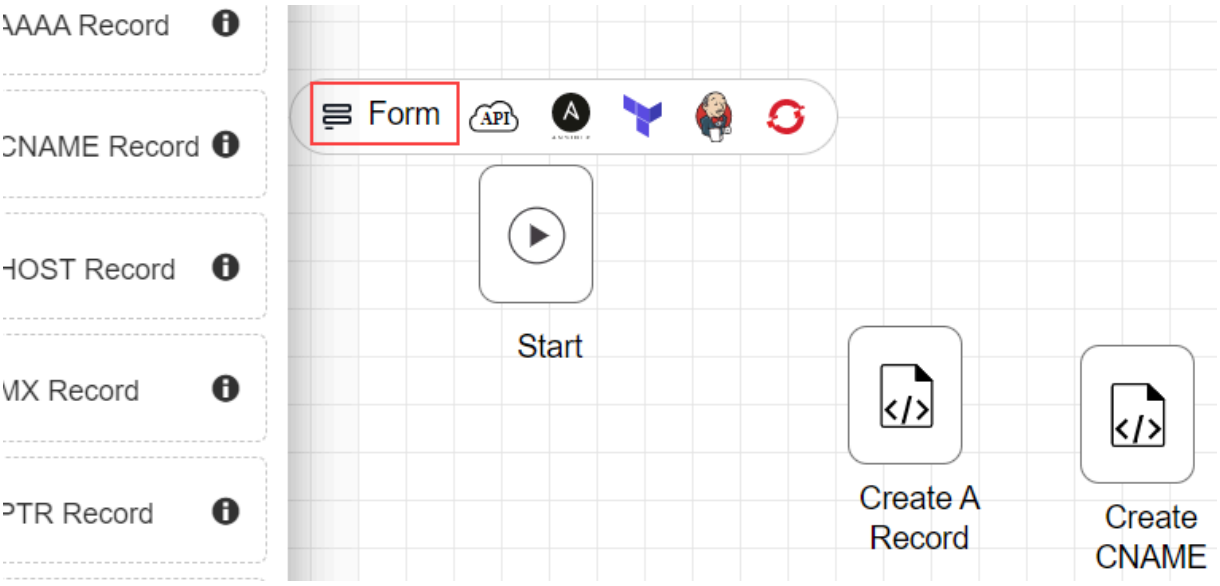
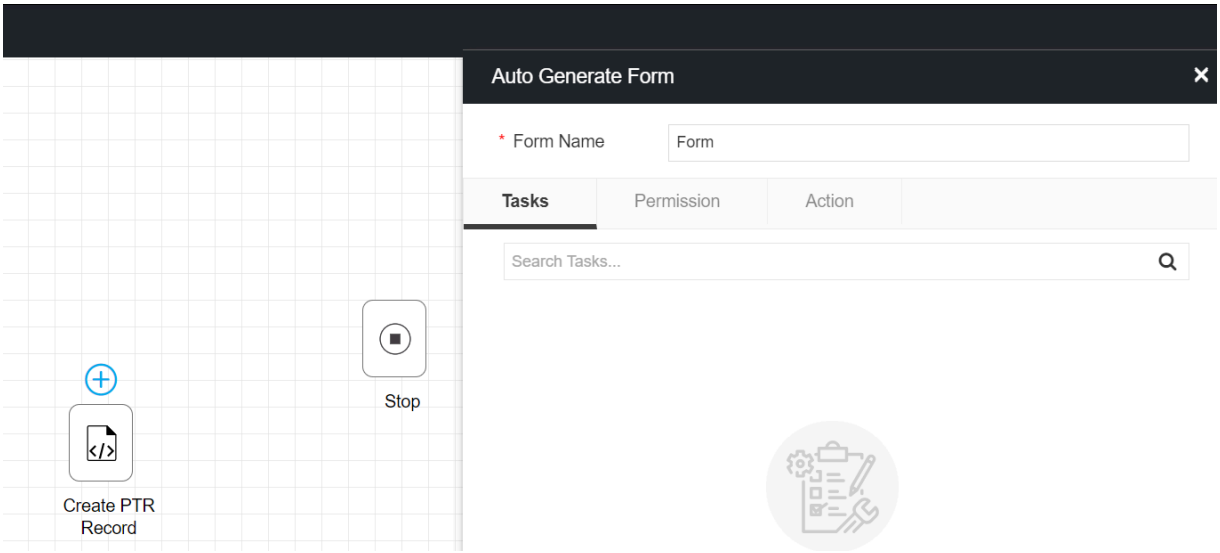


The **Auto Generate Form** appears:



10. Click the add ( ) button of the **Create A Record** task, **Create CNAME Record** task, and **Create PTR Record** task.

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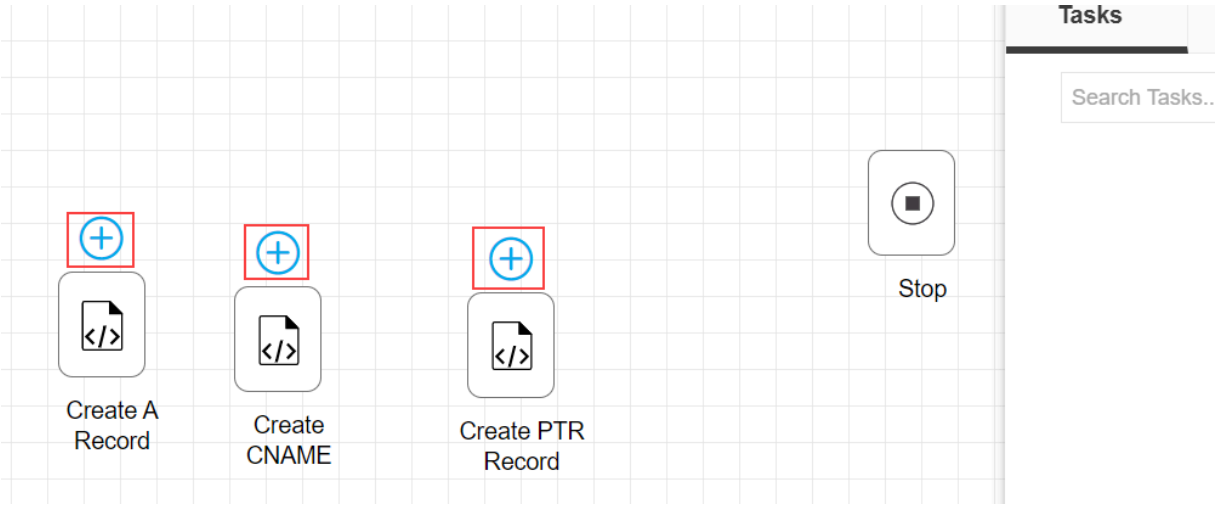
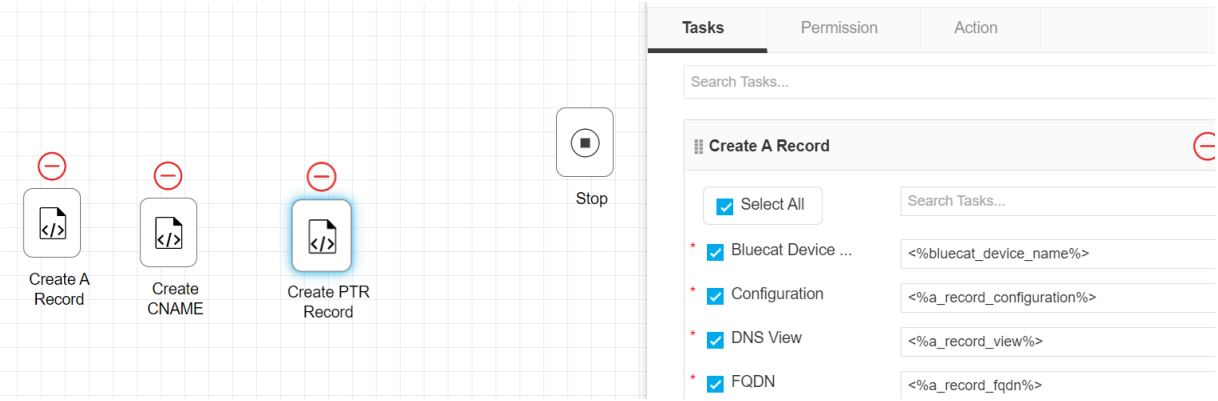


The tasks are added to the Auto Generate Form:



Note: The sequence of the tasks is maintained based on the add button clicked sequence on the tasks. If you want to alter the sequence after adding the tasks to the Auto Generate Form, delete the task(s) from the Auto Generate Form and add again.

11. Verify all the fields and select/clear the checkbox of the fields to add them to the form.

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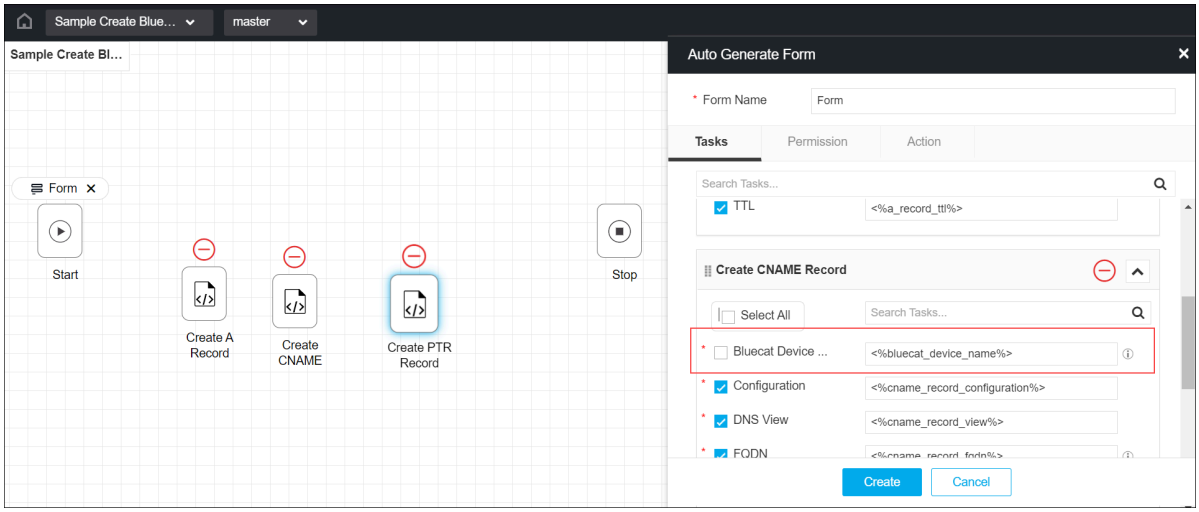
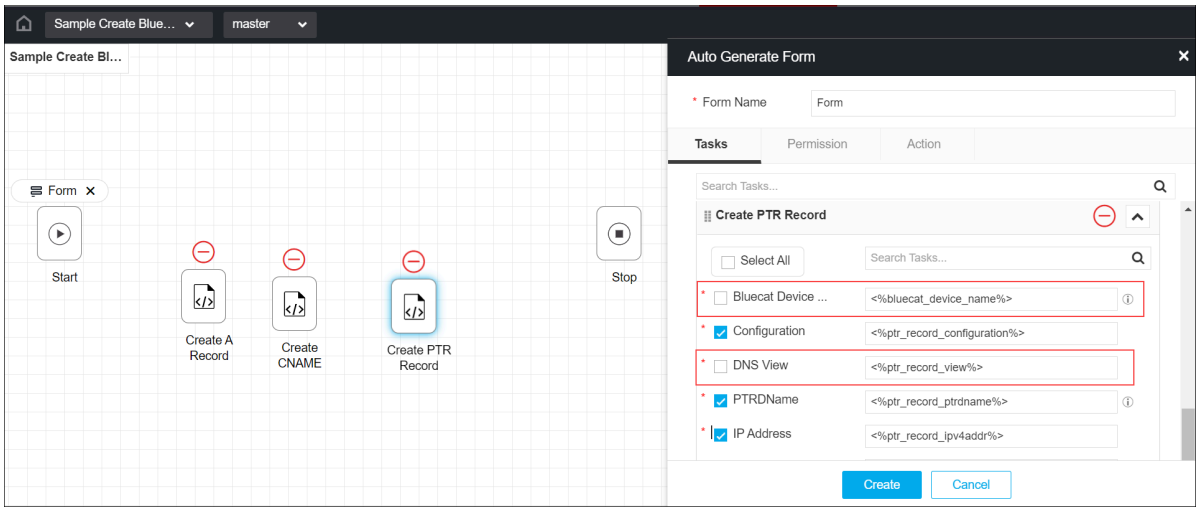
- Unselect the Bluecat Device Name field from the Create CNAME Record task.



- Unselect the **Bluecat Device Name** field and **DNS View** from the **Create PTR Record** task.



Note: These fields are not to be selected to avoid duplication being shown in the form.

12. Click the **Create** button.
13. Go to **IPAM** > **Bluecat** > **Utils** folder, and then place **Review and Implement** subflow from the folder.

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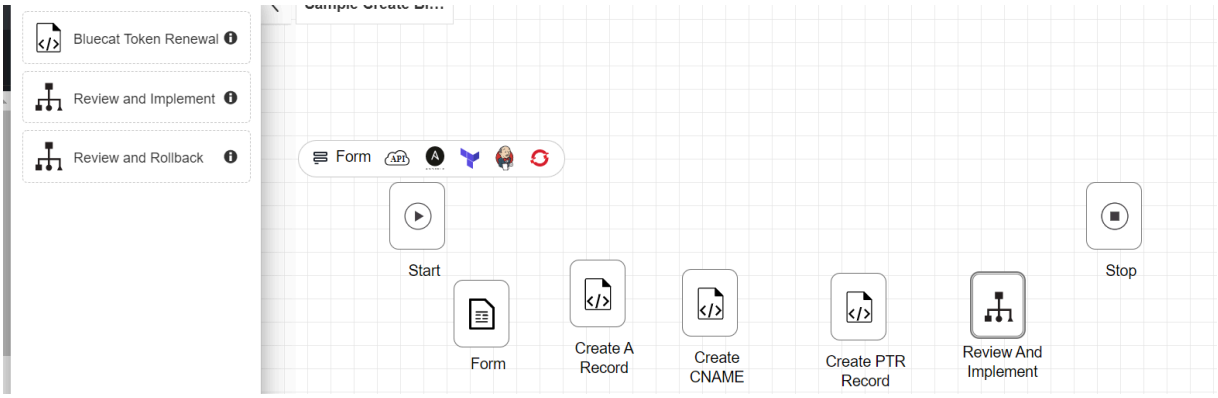
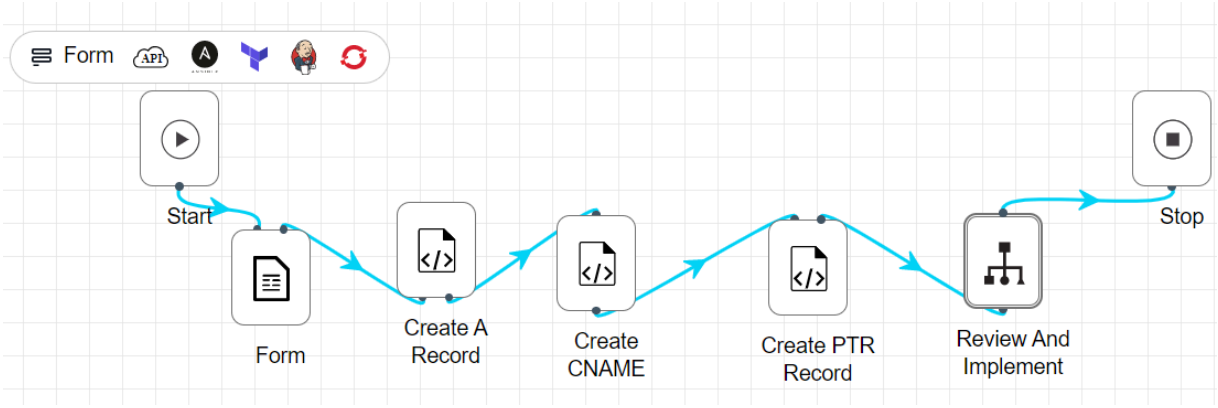
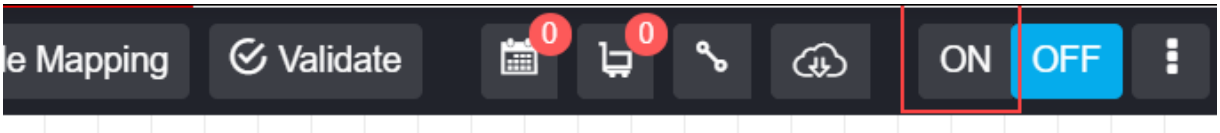


14. Connect all the tasks.



15. Enable the workflow by clicking the **ON** toggle button.



16. Click the **Validate & Enable** button.

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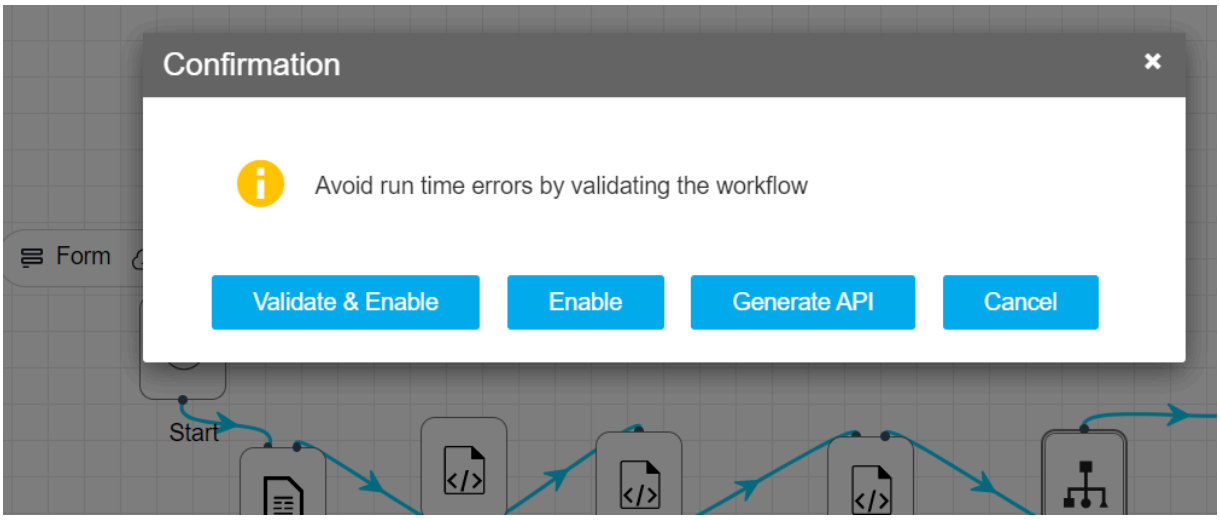
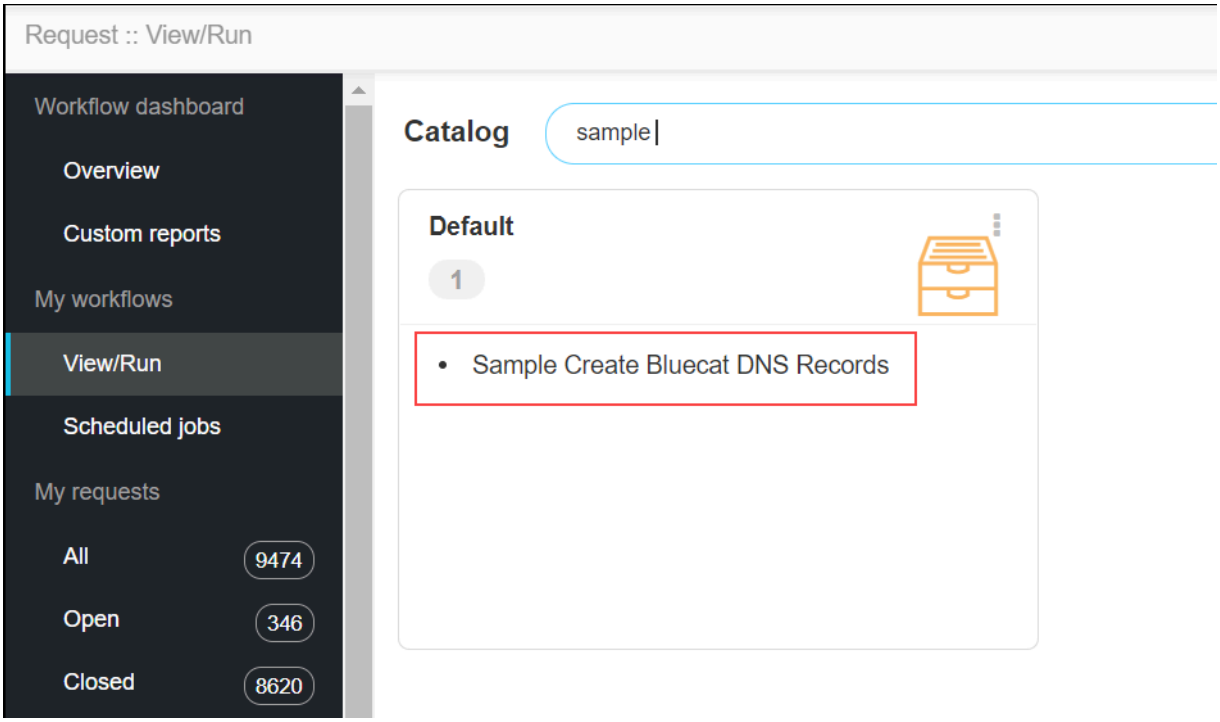


The workflow is added to the Workflow Catalog page.



17. Run and verify the workflow.

Customize the Variable for a Task

The variables can be customized for a task after creating a workflow also.

To customize the variables for a task,

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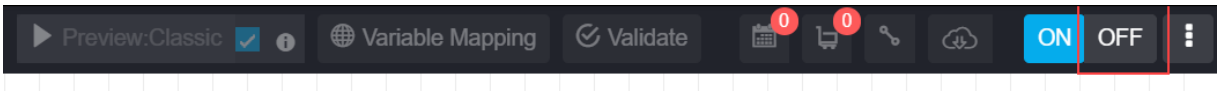
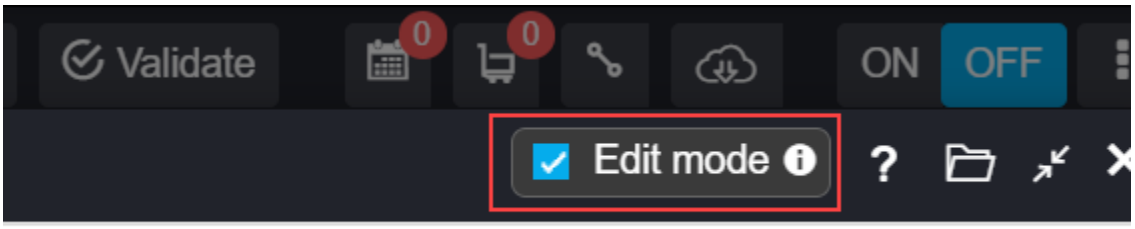
1. Go to **Menu** > **Studio** > **Workflow**.

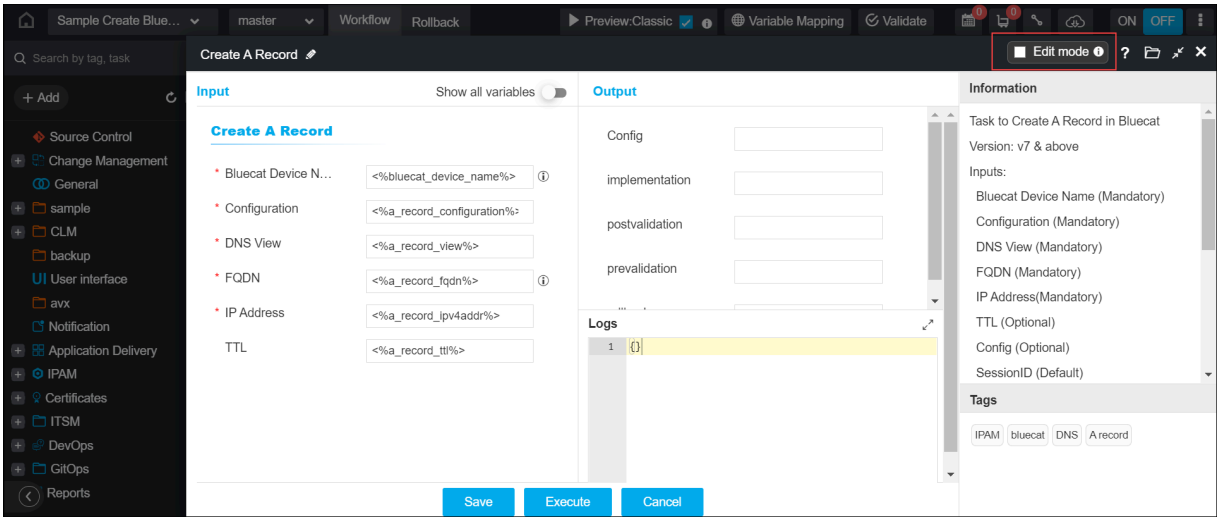
   The Workflows page appears.
2. Click the workflow for which the variables are to be customized.
3. Disable the workflow by clicking the **OFF** toggle button.



   The Confirmation popup appears.
4. Click **Yes** to confirm the disabling workflow.
5. Click twice on the desired task to customize the variables.
6. Make sure the **Edit Mode** check box is selected.



   The workflow Properties page appears.



7. Click the **Variables** tab.

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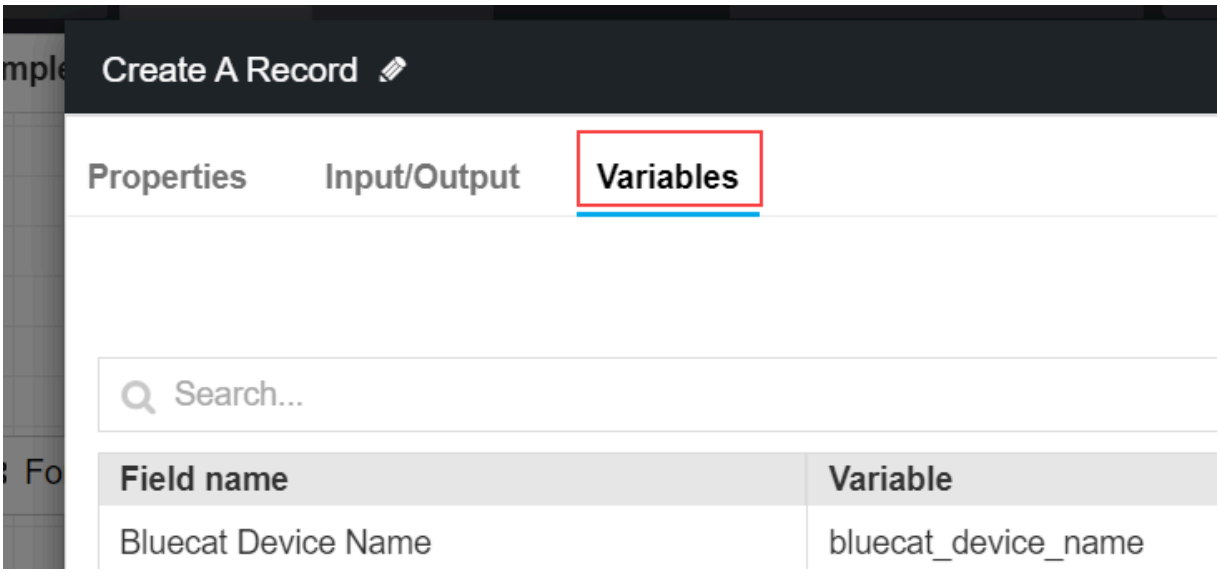

Note: Make use of the scroll bar to view the details of the variables.

8. You can update any of the following details for the variables:
   - **Field Type** - select the field type from the drop-down option. For example, Description, Password, Dropdown, etc.
   - **Parent** - select the parent field from the drop-down option.
   - **Type** - select the type from the drop-down option. For example, String, JSON, Email, etc.
   - **Show variables** - enable or disable the variable by clicking the toggle button.
   - **Mandatory** - mark whether the field is mandatory or not by clicking the toggle button.
9. Click the **Save** button, and then close the window.
   The updated variables are displayed in the form.

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Chapter 5: ADC+ Troubleshooting Guide

- Overview
- Asset Management Issues
- Device Inventory Action Issues
- Device Backup and Restore Issues
- Dashboard Inventory Action Issues
- ADC Dashboard Specific Issues
- Control Center Search and Action Issues
- iHealth Report Generation Issues

Overview

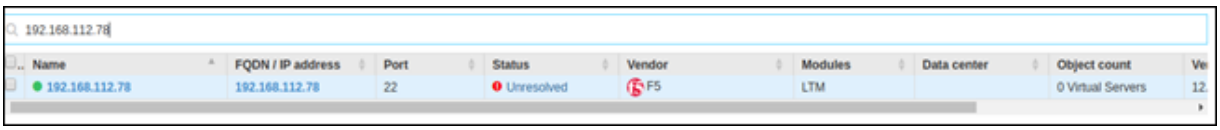
Asset Management Issues

- Device addition in Unresolved/Failed State
- A10 Device
- Citrix device
- Akamai device
- Amazon ELB

Device addition in Unresolved/Failed State

The following recommended solutions are very common to all ADC vendors when device addition status moves to unresolved or Failed state. Vendor Specific issues and it's recommendations are given below.

1. Log in to AppViewX.
2. Go to **Menu** > **ASSET MANAGEMENT** > **Device Inventory** and search for the device that was added.



3. Click on the status of that particular device.

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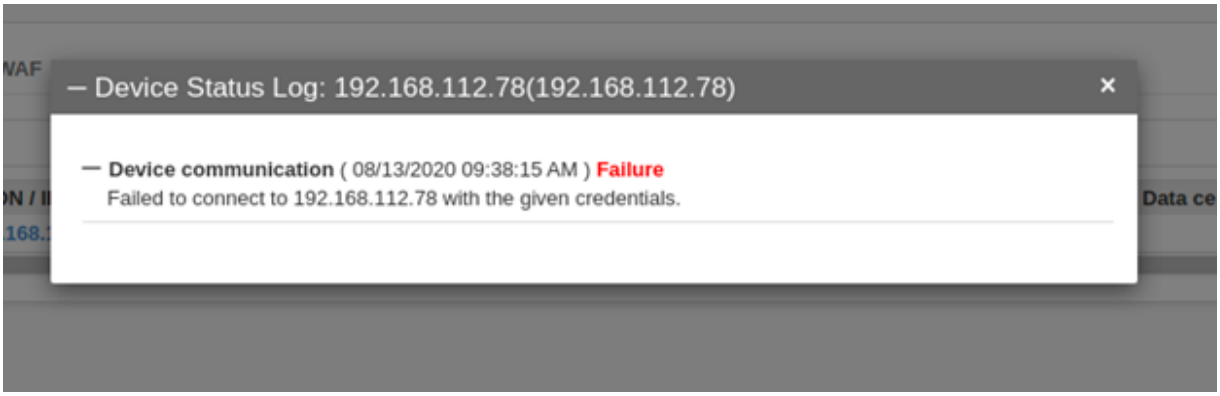

Error Message	Possible Cause	Possible Solution
Failed to connect to <deviceIp> with given credentials.	Password of the device added might be wrong.	Click on the device name in the Inventory Page. Update the correct password and click Save.
Problem in checking shell access during terminal access verification.	This user might not have shell access permission in the device.	Check for shell access from AppViewX to the device with the same username/password used to add the device in AppViewX.
Modules - <Module names> not supported for version <version> by AppViewX.	Version might not be supported in AppViewX	Check for this particular version to be supported in the FSM document. Else contact Support team.

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Error Message	Possible Cause	Possible Solution
DeviceType does not match with the Provisioned Modules : <Module name>	There might be a mismatch in modules enabled in the device and the modules selected in AppViewX.	Cross check for which modules are selected in AppViewX for this particular device and those modules are enabled in the device or not. If there is a mismatch, select the module appropriately and save the device. Else contact Support team.
Error in parsing <Module names> <version> configuration files	Some error would have occurred during parsing in the code logic.	Contact Support team.

A10 Device

1. Log in to AppViewX.
2. Go to **Menu** > **ASSET MANAGEMENT** > **Device Inventory** and search for the device that was added.
3. Click on the status of that particular device.

Error Message	Possible Cause	Possible Solution
Device communication failure with given enabled password.	Enable password of the device might not be provided or the provided Enable password might be wrong.	Click on the device name in the Inventory Page. Update the correct enable password of the device and click Save.
Device communication unsuccessful.	Password of the device might be wrong.	Click on the device name in the Inventory Page. Update the correct password and click Save.

Citrix device

1. Log in to AppViewX.
2. Go to **Menu** > **ASSET MANAGEMENT** > **Device Inventory** and search for the device that was added.

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3. Click on the status of that particular device.

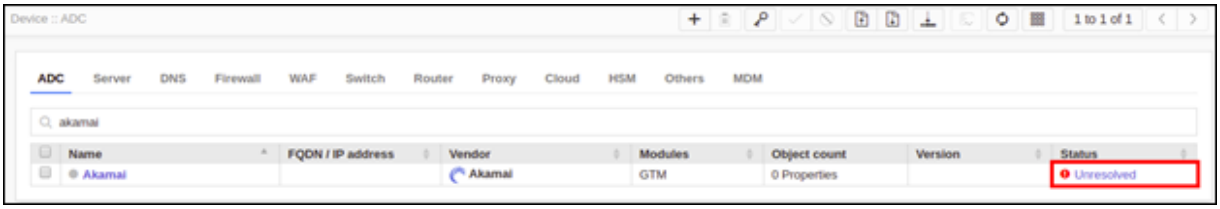
Error Message	Possible Cause	Possible Solution
Device communication failed. Device Login Failed.	Password of the device might be wrong.	Click on the device name in the Inventory Page. Update the correct password and click Save.

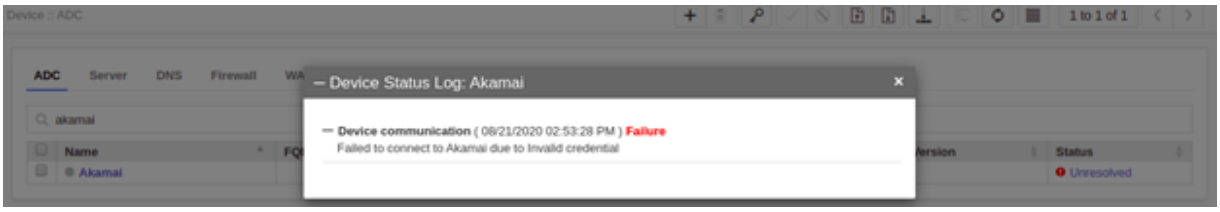
Akamai device

Akamai device addition will fail when the AppViewX node does not have an internet connection. For such issues, the recommended solutions are given below.

Error Message	Possible Cause	Possible Solution
Failed to connect to <Device Name> due to Invalid credential.	Proxy is not configured properly for an Akamai device.	Configure proxy for the Akamai device as shown above and trigger config fetch for the same device.

1. Log in to AppViewX.
2. Click **Menu** > **ASSET MANAGEMENT** > **Device Inventory** and search for the device that was added.
3. Click on the status of that particular device.





Recommendation:

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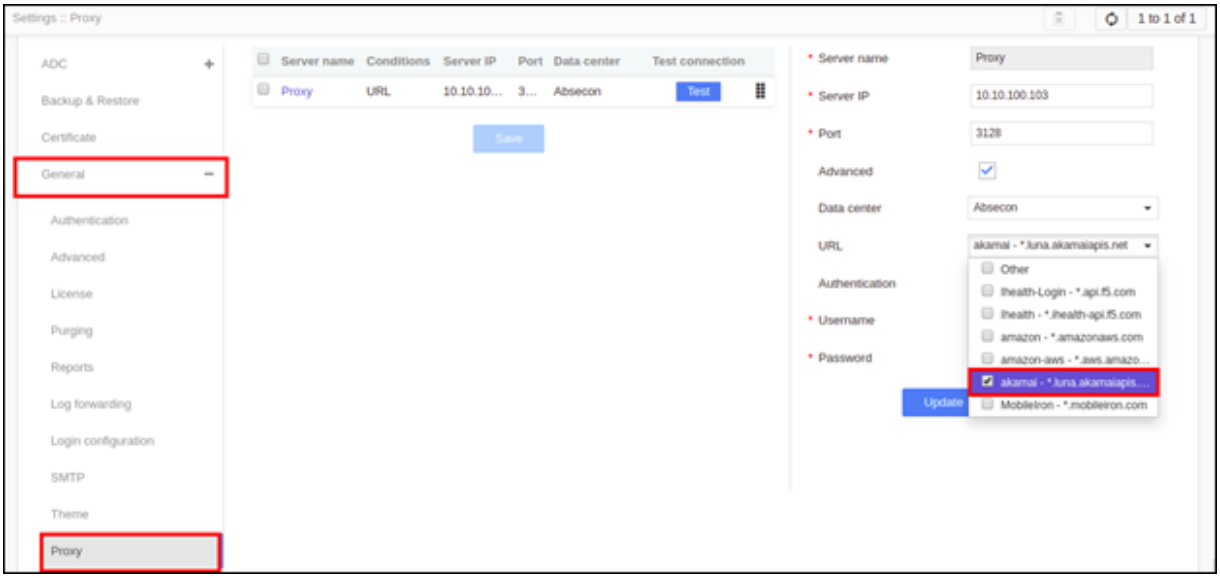
1. Click **Main Menu > Settings > General > Proxy**.
2. From the **URL** list, select **akamai - *.luna.akamaiapis.net**.
3. Click **Update**.



4. Click **Save**.

Amazon ELB

Amazon ELB device addition will fail when the AppViewX node does not have an internet connection. For such issues recommended solutions are given below.

Error Message	Possible Cause	Possible Solution
Communication to AWS account amazon is unsuccessful for Region <region> Unable to execute HTTP request: Connect to <device> failed: connect timed out ## Communication to AWS account amazon is unsuccessful for Region <region> Unable to execute HTTP request: Connect to <device> failed: connect timed out.	Proxy is not configured properly for an Amazon ELB device.	Configure proxy for the Amazon ELB device as shown above and trigger config fetch for the same device.

1. Log in to AppViewX.
2. Click **Menu** > **ASSET MANAGEMENT** > **Device Inventory** and search for the device that was added.

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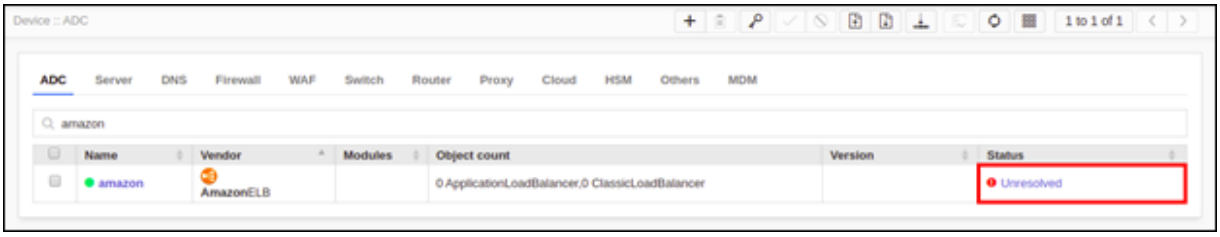
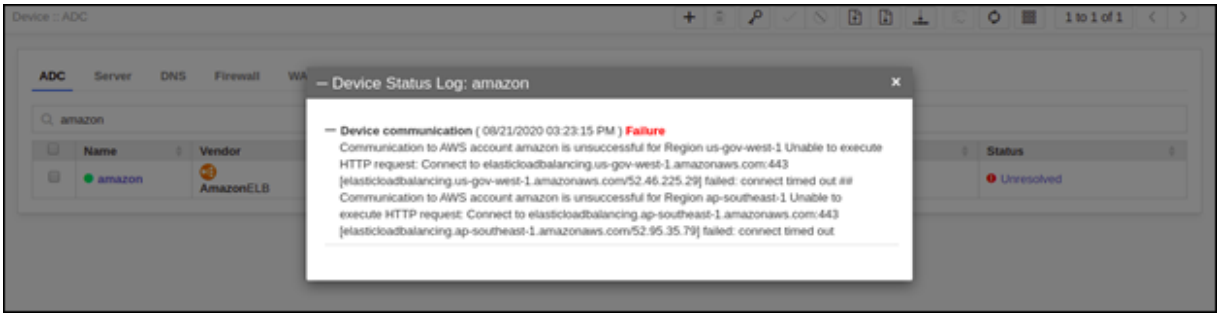
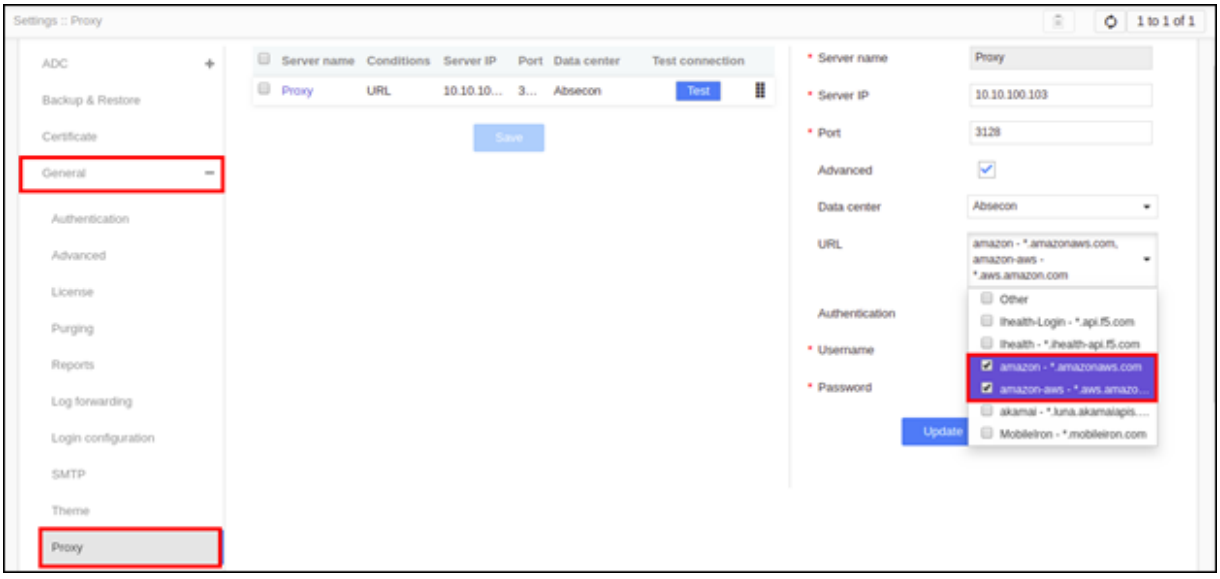
3. Click on the status of that particular device.





Recommendation:

1. Click **Main Menu > Settings > General > Proxy**.
2. From the URL list, select **amazon -*.amazonaws.com** and **amazon-aws -*.aws.amazon.com**.
3. Click **Update**.



4. Click **Save**

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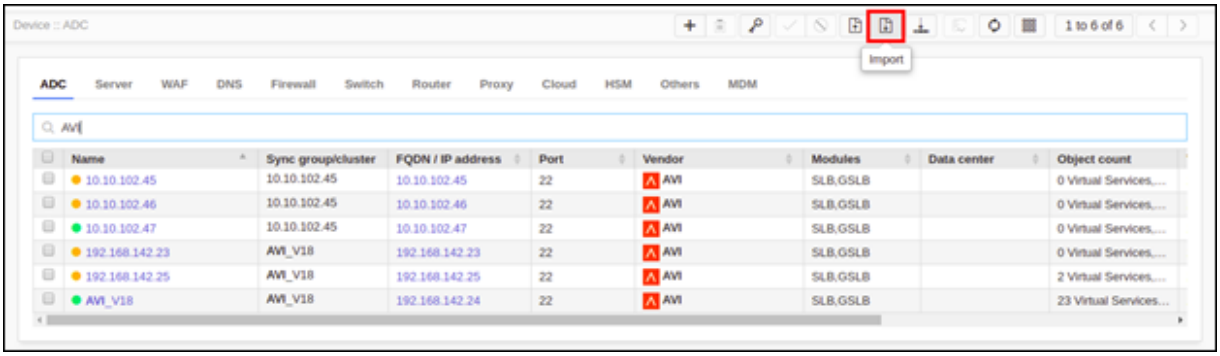
Device Inventory Action Issues

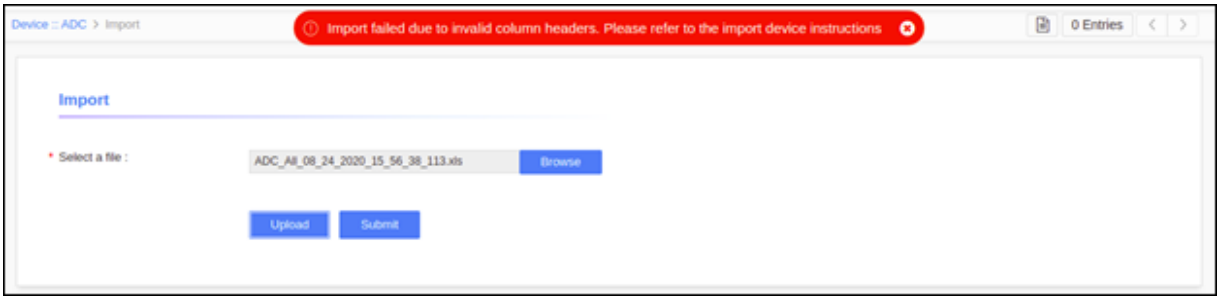
- Issue in device import
- Issue in Unmanaging a Device
- Issue in Fetch Config

Issue in device import

1. Log in to AppViewX.
2. Click **Menu** > **ASSET MANAGEMENT** > **Device Inventory**.
3. To navigate to the **ADC Device Import** page, click **Import**.



4. Select a file having the extension as `xls` or `xlsx`.



5. Click **Upload**.

Error Message	Possible Cause	Possible Solution
Import failed due to invalid column headers. Please	Import sheet has unsupported	Valid column headers are: device name, associated primary, sync group/cluster, ip address/fqdn, vendor, modules, data center, credential type, username, password, credential name, AppViewX

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Error Message	Possible Cause	Possible Solution
refer to the import device instructions.	column headers.	group sync, enable password, port, vcmp guest, secondary/failover, token based authentication. Please validate the import sheet for these entries. Refer to the sample sheet as shown above.
Exception while Validating.	Import sheet contains invalid entries and it cannot be parsed.	Validate entries in the import sheet.
Exception while Validating.	The file has been removed during import.	Check if the import sheet exists.
Exception while Validating.	The sheet cannot be read due to insufficient permission.	Check for read permission to import sheets.

6. To download the sample import sheet, click the sample file icon.

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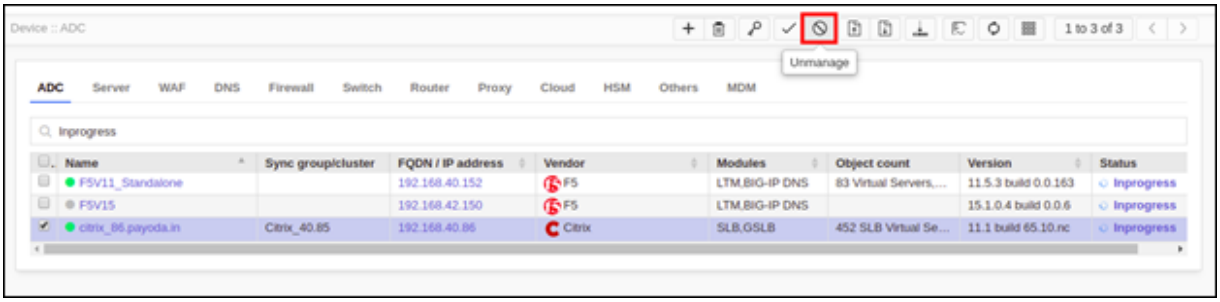
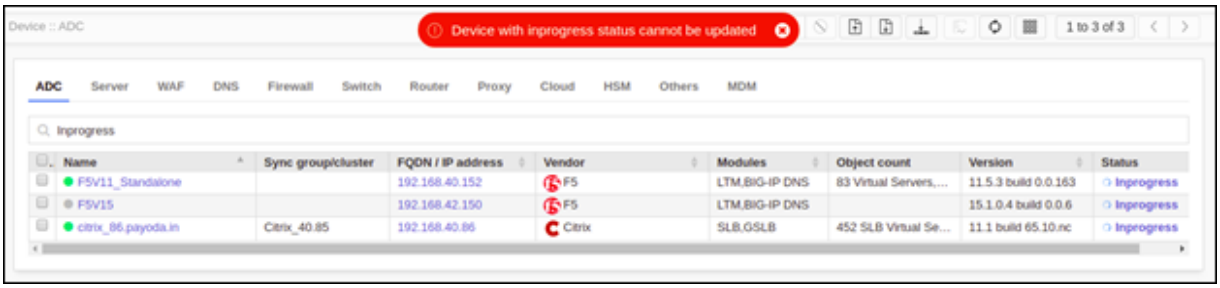
Issue in Unmanaging a Device

1. Log in to AppViewX.
2. Click **Menu** > **ASSET MANAGEMENT** > **Device Inventory**.
3. Select the device(s) that have their **Status** as **Inprogress** and click the **Unmanaged** icon.





Error Message	Possible Cause	Possible Solution
Selected device(s) are in in-progress/unmanaged state. Operation cannot be performed.	Device cannot be unmanaged because it is already in unmanaged/ inprogress state.	Manage the device(s) in an unmanaged/inprogress state before performing action.
Config fetch not allowed for Unmanaged/Queued devices and Device(s) on which other operations is already in progress	One or more devices are in an inprogress/queued state and cannot be ignored as a stale state since the last updated time is within 300 seconds.	Wait until the device in inprogress/queued state attains the timeout period of 300 seconds and perform action again.
Operation cannot be performed, Other operation is already in process on Device(s).	Update action cannot be performed on a device in an inprogress state.	Wait for the device to be resolved to a state before performing action.

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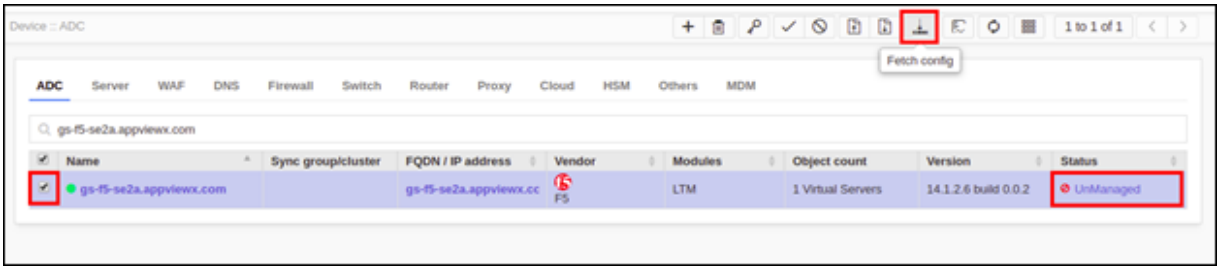
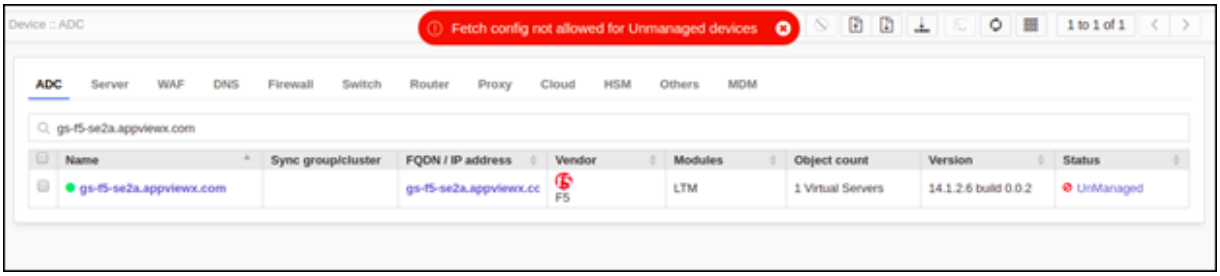
Issue in Fetch Config

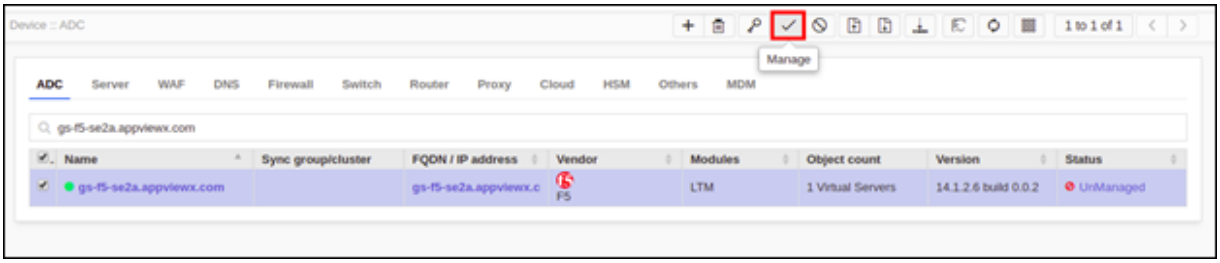
1. Log in to the AppViewX.
2. Click **Menu** > **ASSET MANAGEMENT** > **Device Inventory**.
3. Select the device(s) that have their **Status** as **UnManaged** and click the **config fetch** icon.





Error Message	Possible Cause	Possible Solution
Config fetch not allowed for Unmanaged/ Queued devices and Device(s) on which other operations are already in progress.	One or more devices went to an unmanaged state after the action was triggered.	Manage the device(s) in an unmanaged state before performing action.

4. Select the unmanaged device(s) and click the **manage** icon and once device status updated to Managed we can trigger the fetch config action.



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Device Backup and Restore Issues

- Issue in schedule/trigger device backup
- Unable to View the Old Backup Files
- Issue in Email Notification for Configured for Backups
- Issue in Restoring a Device

Issue in schedule/trigger device backup

1. Login to AppViewX.
2. Click **Menu** > **ASSET MANAGEMENT** > **Device Inventory**.
3. Search for the Device name.
4. Expand the group to check the generated backups.
5. If the backups are not generated, check the Audit Log to identify the root cause for backup failure.

Error Scenario	Possible Cause	Possible Solution
Unavailability of device version.	Device may be still in inprogress state, and yet to fetch the device version.	Wait for the device version check to be completed. Check in device inventory.
	Device may be in an unresolved state.	Check the device credentials.
Backup cannot be performed on an unresolved device.	Device is in an unresolved state.	Check for device credentials and manage the device.
Problem in establishing communication with devices.	Device is in managed state in AppViewX. But the credentials of the device may be changed now.	Check for the device credentials and update the latest credentials.
Scheduled Backup did not get triggered and backup is not generated.	Scheduler component is not running.	Please contact the administrator to start the scheduler component.

Unable to View the Old Backup Files

1. Login to AppViewX.
2. Click **Menu** > **ASSET MANAGEMENT** > **Device Inventory**.
3. Expand the group to check the generated backups.

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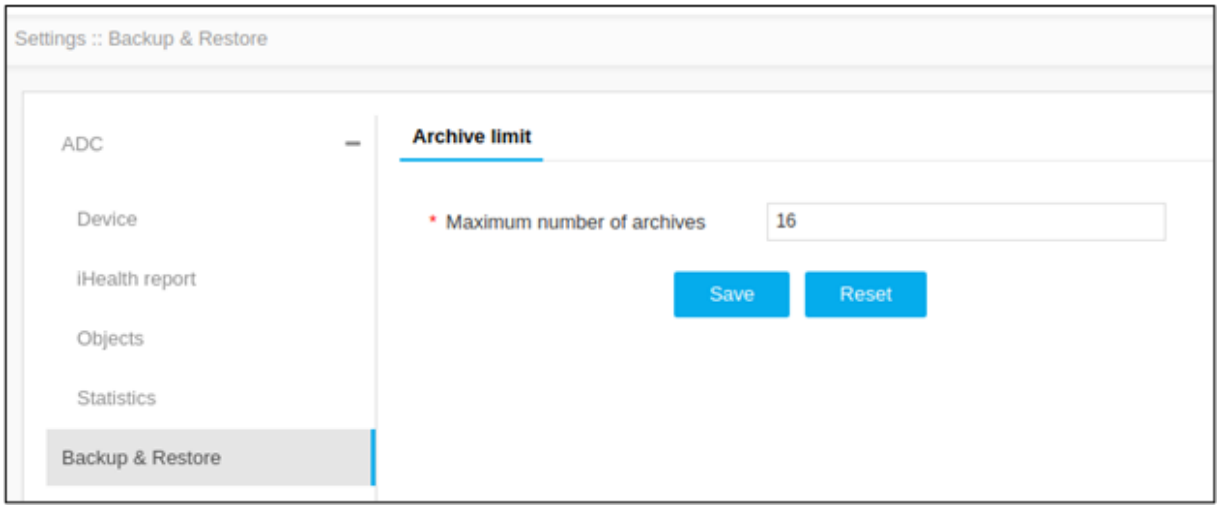
4. If old backups are missing, check the backup settings page.

Error Scenario	Possible Cause	Possible Solution
Old Backup files are missing.	Number of archives to be retained has been modified.	Maximum number of Archives to be maintained can be set in Settings > Backup & Restore Maximum value allowed is 16. More specific settings can be done at Settings available at Backup & Restore Page.



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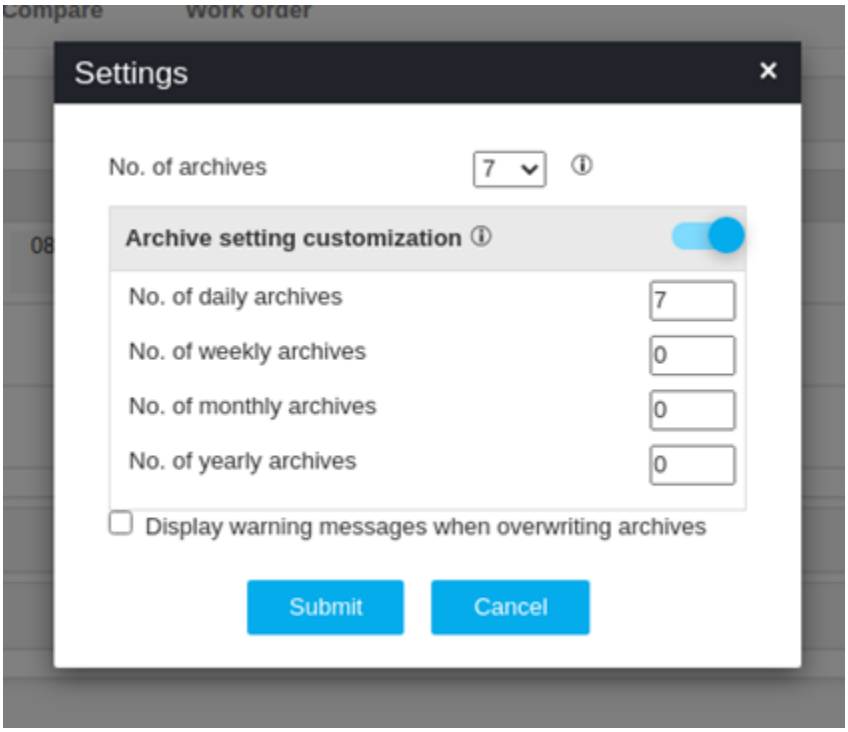

Issue in Email Notification for Configured for Backups

1. Login to AppViewX.
2. Click **Menu** > **ASSET MANAGEMENT** > **Device Inventory**.
3. Expand the group to check the generated backups.
4. If the backup is generated and still no email notification was sent to the user.

Error Scenario	Possible Cause	Possible Solution
Backup Status mail is not received.	SMTP configuration is not configured.	Please update SMTP details in Menu > Settings > General > SMTP. Provide the details and check the configuration with Test email Configuration.
	Mail Id added may not be valid.	Check for the mail Id added.

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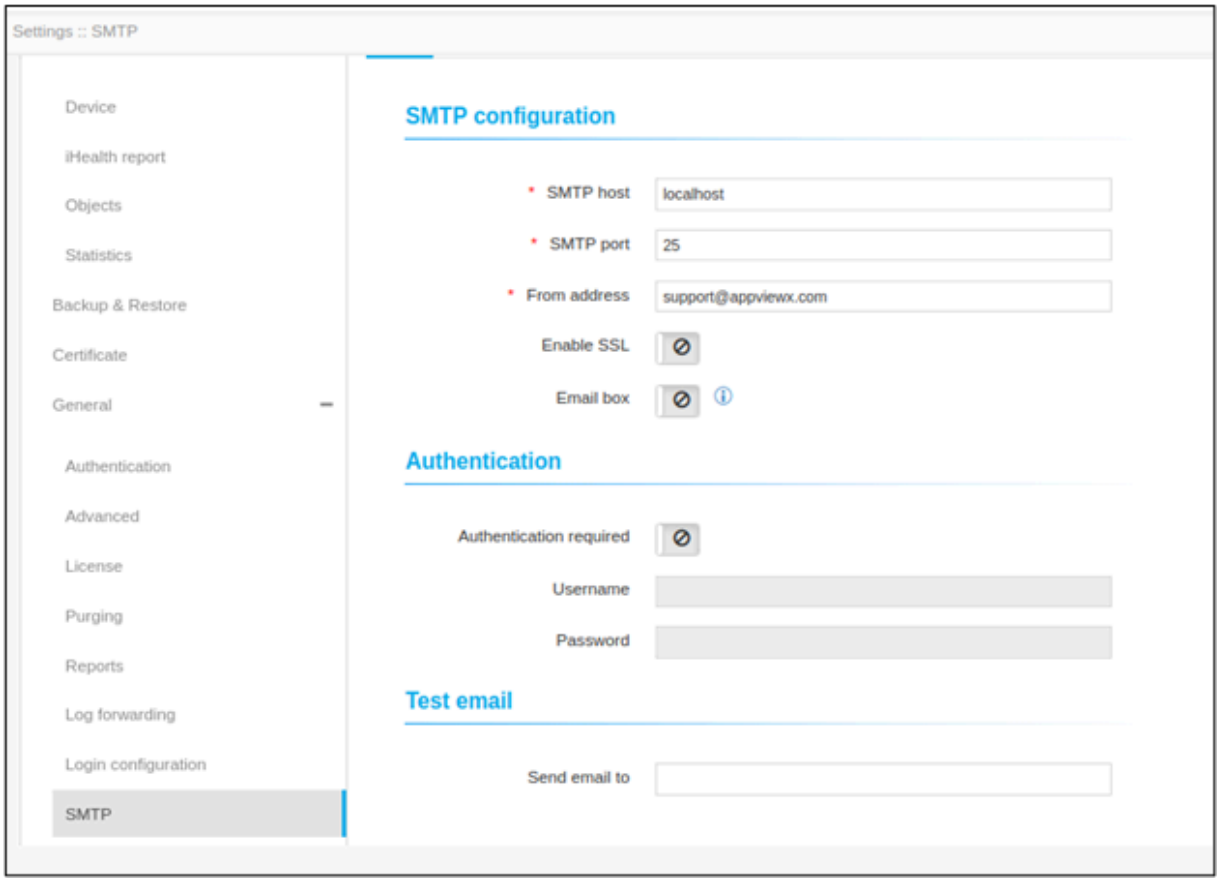

Issue in Restoring a Device

1. Login to AppViewX.
2. Click **Menu** > **ASSET MANAGEMENT** > **Device Inventory**.
3. Provide the device name.
4. Select one archive from generated backups.
5. Click **Proceed**.
6. If a success message is not shown in the pop up, check the audit logs.

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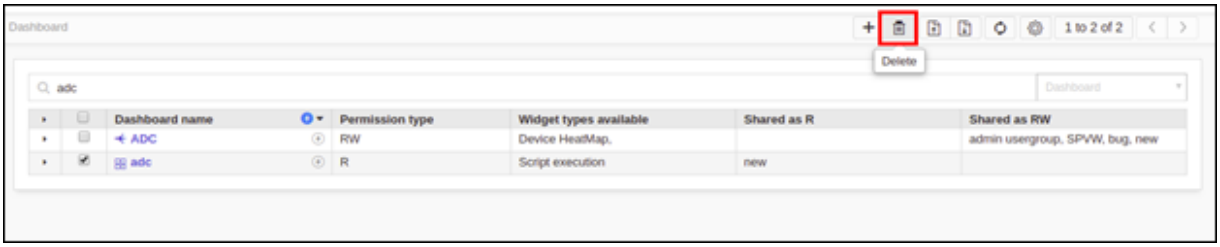
Error Scenario	Possible Cause	Possible Solution
Action cannot be performed on an unresolved device.	Device is in an unresolved state.	Check for device credentials and manage the device.
Problem in establishing communication with devices.	Device is in managed state in AppViewX. But the credentials of the device may be changed now.	Check for the device credentials and update the latest credentials.

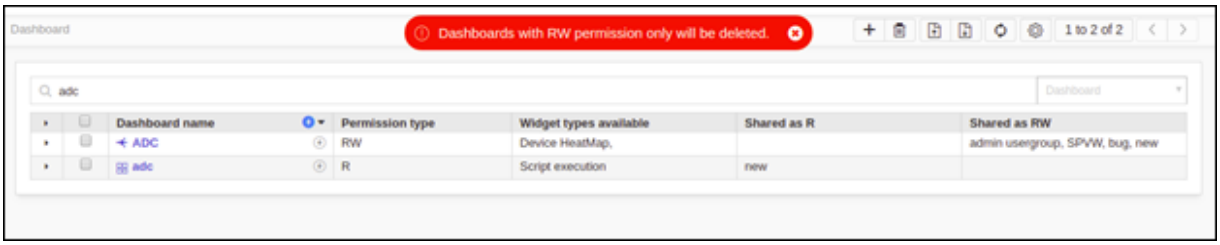
Dashboard Inventory Action Issues

- Issues in Dashboard Delete
- Issues in Dashboard Import
- Issues in Dashboard Export
- Issues in Dashboard Settings

Issues in Dashboard Delete

1. Log in to AppViewX.
2. Click **Menu** > **ASSET MANAGEMENT** > **Device Inventory**.
3. Select the dashboard(s) to delete.
4. Click **delete**.





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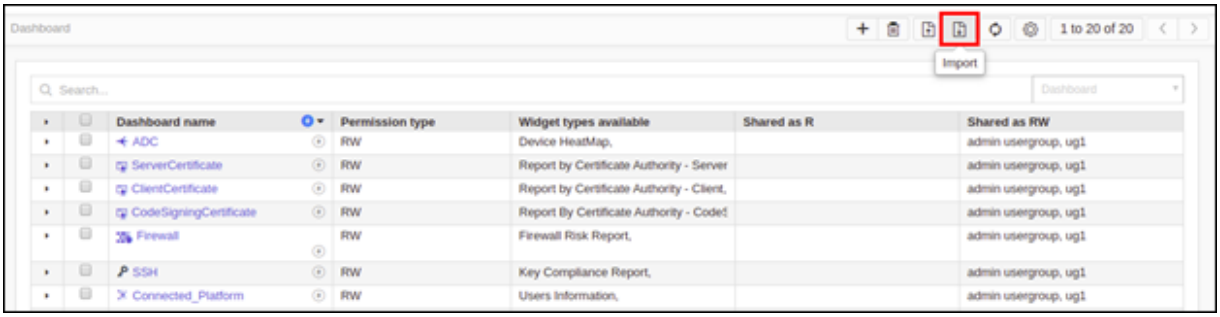
Error Message	Possible Cause	Possible Solution
Only dashboards with R/W access will be deleted.	User only has Read permission for the dashboard and cannot delete the dashboard.	1. Update roles of user: Navigate to 'Account' -> 'User' -> 'Roles' and update user with required roles. Refer to the admin guide. 2. Contact the user with RW access to the dashboard and request to 'share' roles with RW permission to the user. 3. Login with another user who has RW permission to dashboard and try again.

Issues in Dashboard Import

- Process Failed by Invalid Dashboard
- Import Zip File Validation Failed
- Import Summary for Dashboard not Found
- Destination device information is not available for dashboard(s).
- Read write permission not available for the given dashboard to import

Process Failed by Invalid Dashboard

1. Log in to AppViewX.
2. Click **Menu** > **TRAFFIC MANAGEMENT** > **Dashboards**.
3. To navigate to the dashboard import page, click the **import** icon.



4. Select the .zip file to import.
5. Click **Upload**.

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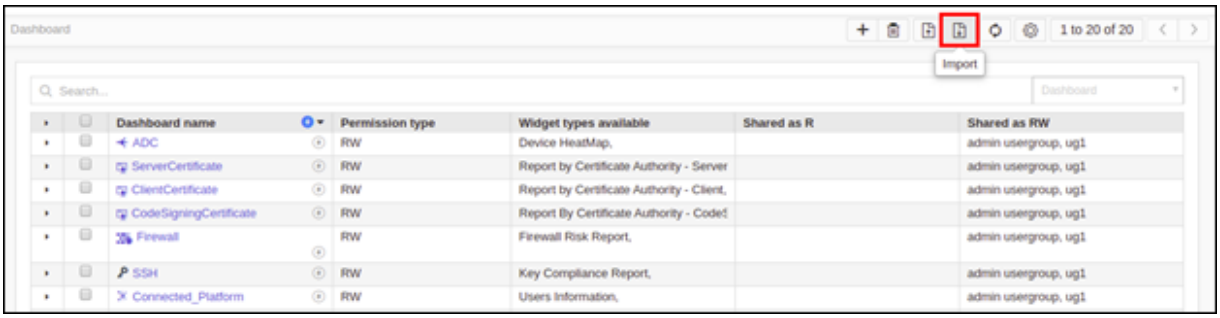
6. Select the dashboard(s) and click **Submit**.

Error Message	Possible Cause	Possible Solution
Process Failed by Invalid Dashboard.	During dashboard import, the imported file has invalid entries and the user submitted the file in spite of the warning.	Navigate to 'Dashboard' -> click on 'import' icon -> under 'select file', click on 'browse' icon -> select file and click 'upload' button -> the dashboard details parsed should display a green symbol indicating valid import entries -> then click 'submit' button.

Import Zip File Validation Failed

1. Log in to AppViewX.
2. Click **Menu** > **TRAFFIC MANAGEMENT** > **Dashboards**.
3. To navigate to the dashboard import page, click the **import** icon.



4. Select the .zip file to import.
5. Click **Upload**.

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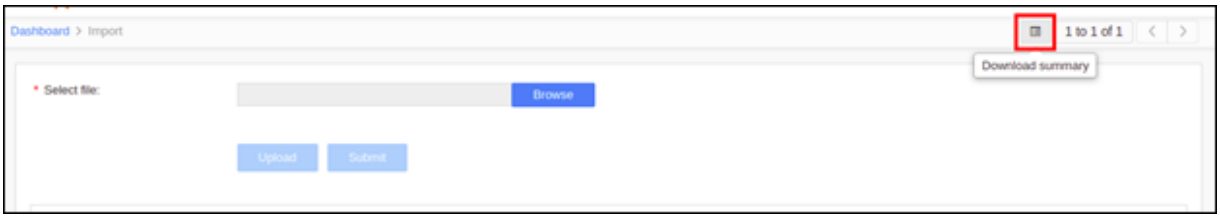
Error Message	Possible Cause	Possible Solution
Import zip file validation failed.	The imported file has invalid entries.	Import a proper zip file that has been exported from any appviewx node containing application widget.
Widget details are invalid.	During device import, the imported file has invalid widget details.	Choose an import file that has valid widget details. Navigate to 'Dashboard' -> click on 'import' icon -> under 'select file', click on 'browse' -> select a valid import file -> click on 'upload' button -> the dashboard details parsed should display a green symbol indicating valid import entries -> then click 'submit' button. Refer to the admin guide.

Import Summary for Dashboard not Found

1. Log in to AppViewX.
2. Click **Menu** > **TRAFFIC MANAGEMENT** > **Dashboards**.
3. To navigate to the dashboard import page, click the **import** icon.
4. Click the **Download Summary** icon.



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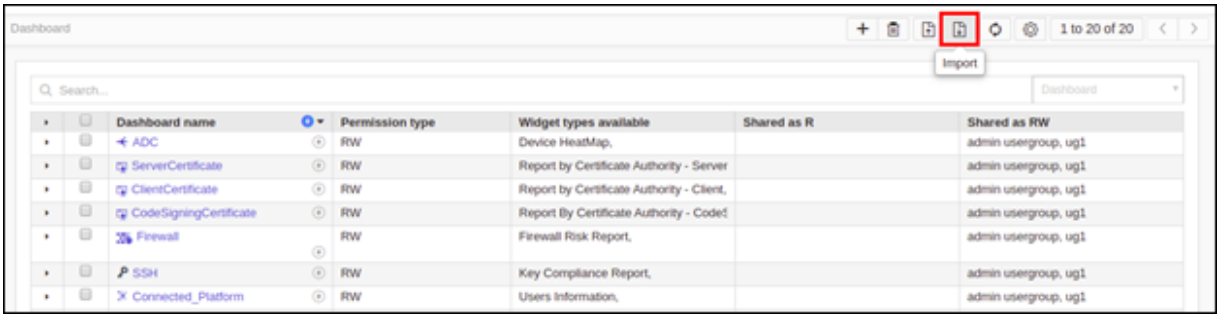
Error Message	Possible Cause	Possible Solution
Import summary for dashboard not found.	Something went wrong while populating the previous import details into the database.	Please perform operation when there is a previous successful import: Navigate to 'Dashboard' -> click on 'import' icon -> if there was a previous successful import, 'Download summary' icon will appear. click on it.

Destination device information is not available for dashboard(s).

1. Log in to AppViewX.
2. Click **Menu** > **TRAFFIC MANAGEMENT** > **Dashboards**.
3. To navigate to the dashboard import page, click the **import** icon.



4. Select the .zip file to import.
5. Click **Upload**.
6. Select the required dashboard(s).
7. Click **Submit**

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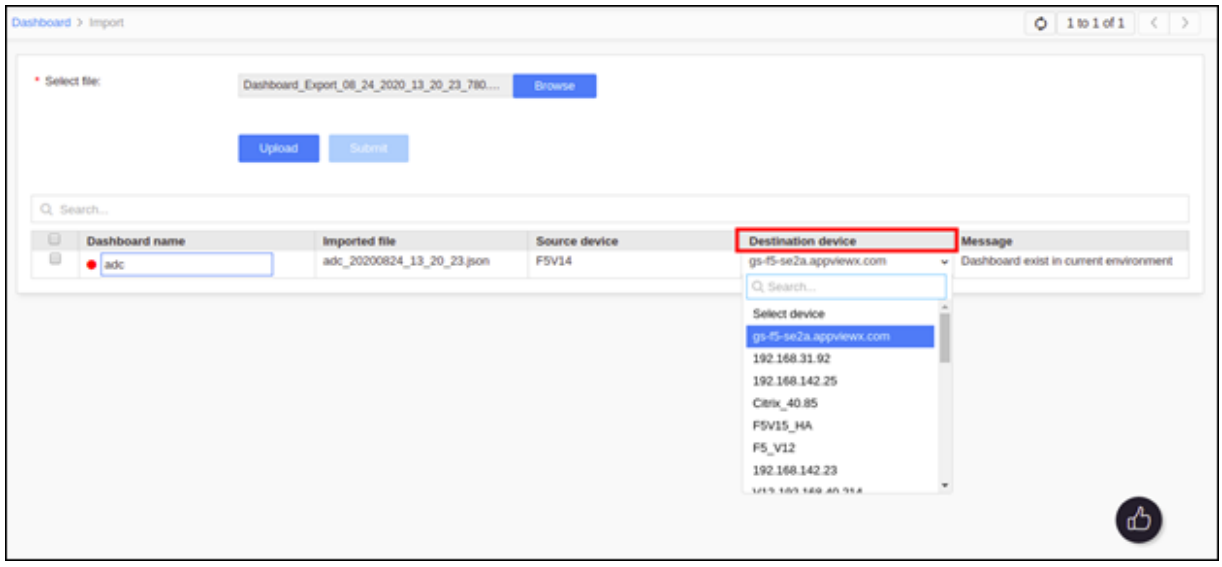
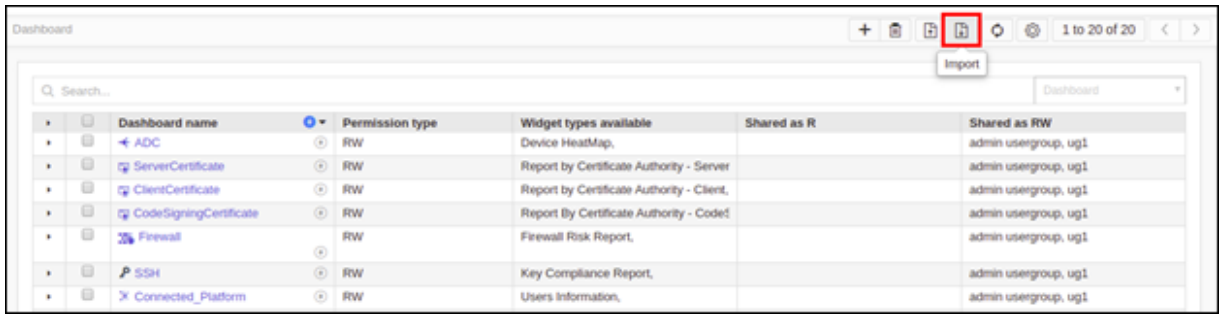


Error Message	Possible Cause	Possible Solution
Destination device information is not available for one or more dashboard(s).	Destination device not selected for one or more dashboard(s).	Select the appropriate device in the destination device column as shown above.

Read write permission not available for the given dashboard to import

1. Log in to AppViewX.
2. Click **Menu** > **TRAFFIC MANAGEMENT** > **Dashboards**.
3. To navigate to the dashboard import page, click the **import** icon.



4. Select the .zip file to import.
5. Click **Upload**.

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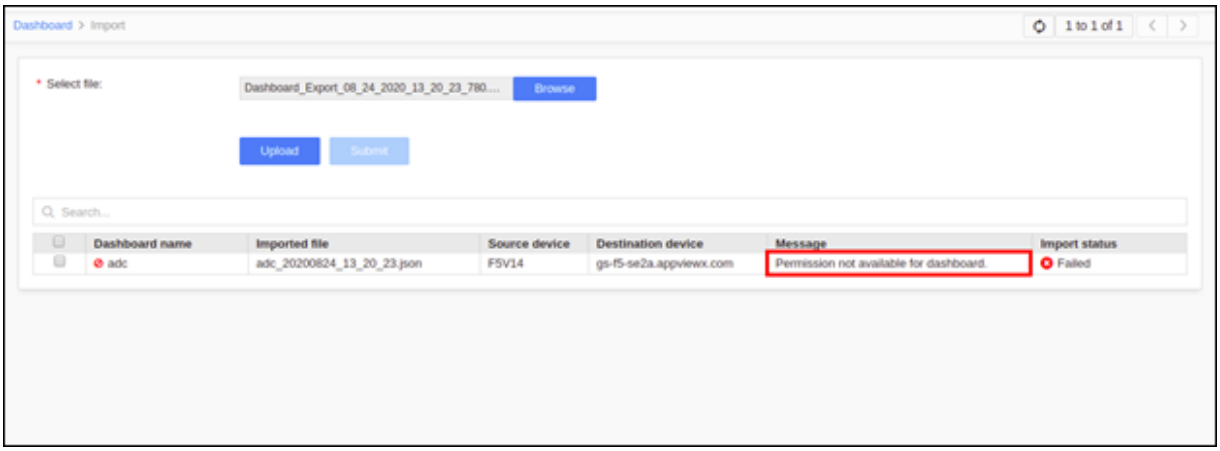


6. Select the required dashboard(s).
7. Click **Submit**.

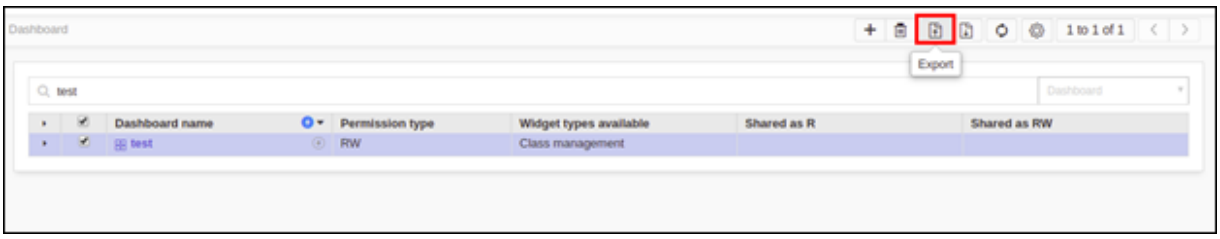
Error Message	Possible Cause	Possible Solution
Read write permission not available for dashboard.	User only has Read permission for the dashboard and cannot export the dashboard.	Update roles of user: Navigate to 'Account' -> 'User' -> 'Roles' and update user with required roles. Refer to the admin guide.

Issues in Dashboard Export

- Unable to export the dashboard(s)
- Read Write Permission Unavailable for the Dashboard to Export

Unable to export the dashboard(s)

1. Log in to AppViewX.
2. Click **Menu** > **TRAFFIC MANAGEMENT** > **Dashboards**.
3. Select the dashboard(s) to be exported and click the **export** icon.



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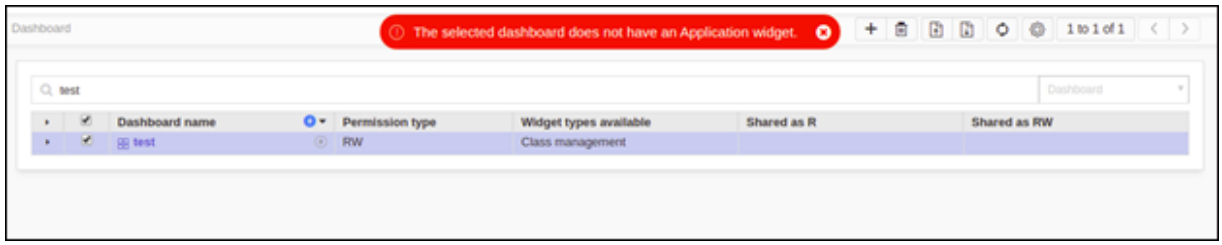

Error Message	Possible Cause	Possible Solution
Selected dashboard(s) does not have an Application Widget part of it.	One or more dashboard without application widget was selected for dashboard export.	Dashboard export operation can be performed only on the dashboard with application widget in it. Navigate to 'Dashboard' -> under dashboard grid list, select dashboard(s) with application widget in it -> click on 'export' icon.
Exception in Process Widget details.	Unable to process application widget details for export.	Select dashboard with valid application widget details. Navigate to 'Dashboard' -> under dashboard grid list, select dashboard(s) with application widget in it -> click on 'export' icon.
Exception Occured during zip file creation.	Dashboard details contain invalid content and it cannot be written to zip file during dashboard export.	Check if dashboard details contain valid entries.

Read Write Permission Unavailable for the Dashboard to Export

1. Log in to AppViewX.
2. Click **Menu** > **TRAFFIC MANAGEMENT** > **Dashboards**.
3. Select the dashboard(s) to be exported and click the **export** icon.

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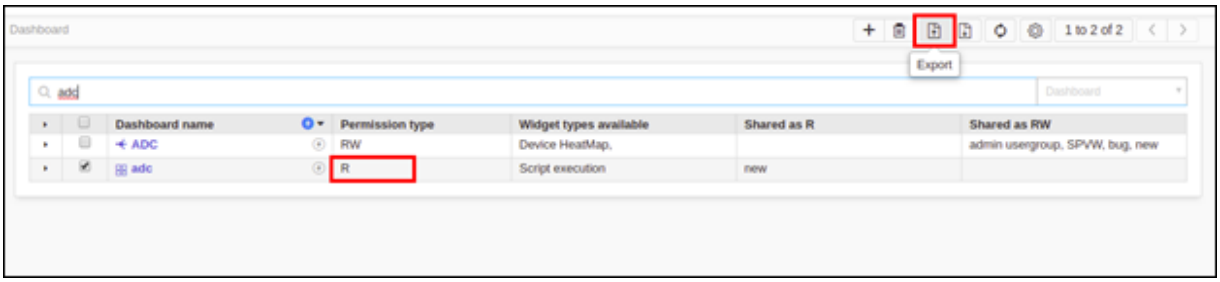

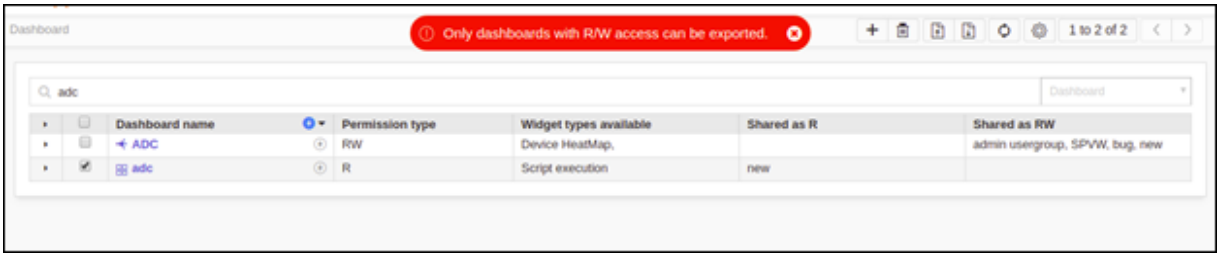

Error Message	Possible Cause	Possible Solution
Only dashboards with R/W access can be exported.	User only has Read permission for the dashboard and cannot export the dashboard.	a. Update roles of user: Navigate to 'Account' -> 'User' -> 'Roles' and update user with required roles. Refer to the admin guide. b. Contact the user with RW access to the dashboard and request to 'share' roles with RW permission to the user. c. Login with another user who has RW permission to dashboard and try again.
User not associated with any role.	During dashboard export, the user performing operation does not have any role.	Perform action using users with valid roles. Navigate to 'Dashboard' -> under dashboard grid list, select dashboard(s) to export -> click on 'export' icon.
Exception Occured during zip file creation.	File write location cannot be accessed to create an export file.	Ensure the file is written to location that has access permission.

Issues in Dashboard Settings

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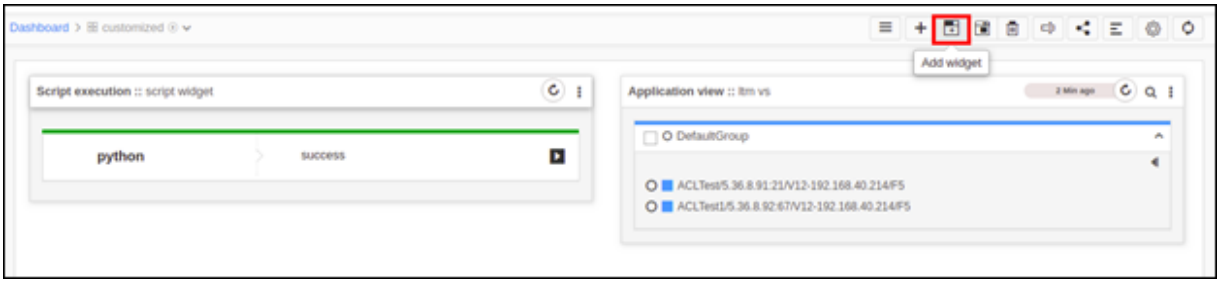
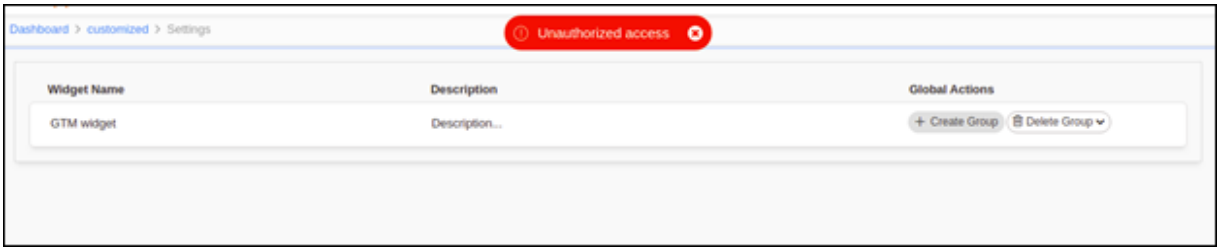
• Unauthorized Access to Add Widget(s)
• Read Write Permission not available for dashboard to move/copy widget(s)

Unauthorized Access to Add Widget(s)

1. Log in to AppViewX.
2. Click **Menu** > **TRAFFIC MANAGEMENT** > **Dashboards**.
3. To create a new widget, click the **add widget** icon.





Error Message	Possible Cause	Possible Solution
Permission not available for dashboard.	User is not authorized to perform the operation on the dashboard.	a. Update permission to dashboard: Navigate to 'Account'-> 'User'-> 'Roles' and update users with roles that have R/W permission to dashboard. Refer to the admin guide. b. Login with another user who has access to the dashboard and try again.

Read Write Permission not available for dashboard to move/copy widget(s)

1. Log in to AppViewX.
2. Click **Menu** > **TRAFFIC MANAGEMENT** > **Dashboards**.
3. To move or copy the widget, click **Options** and select the **move to/copy to** option.

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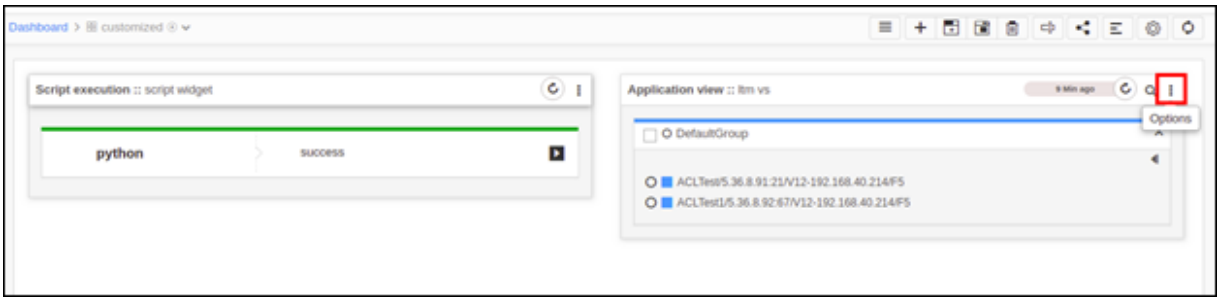
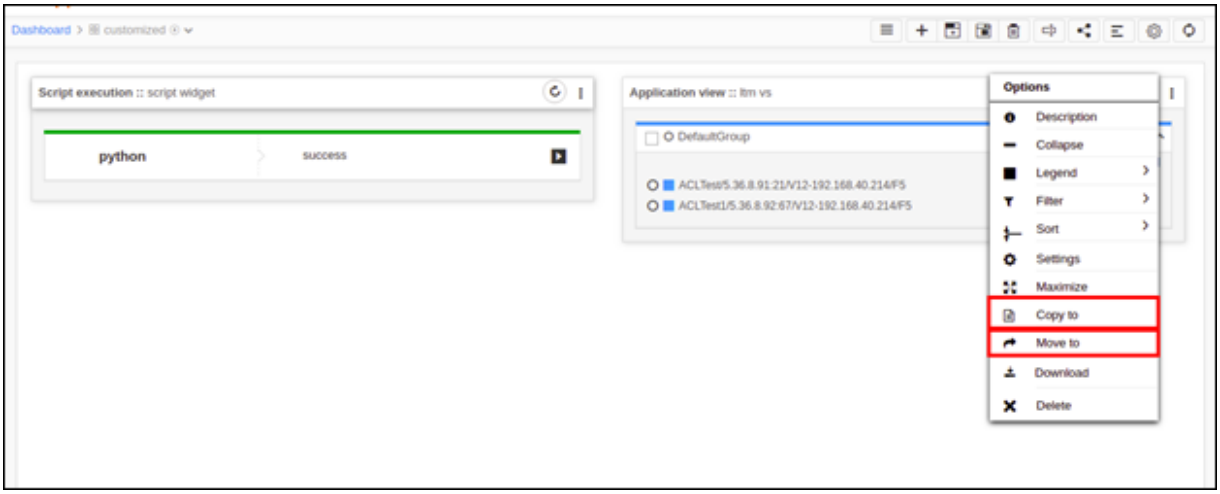
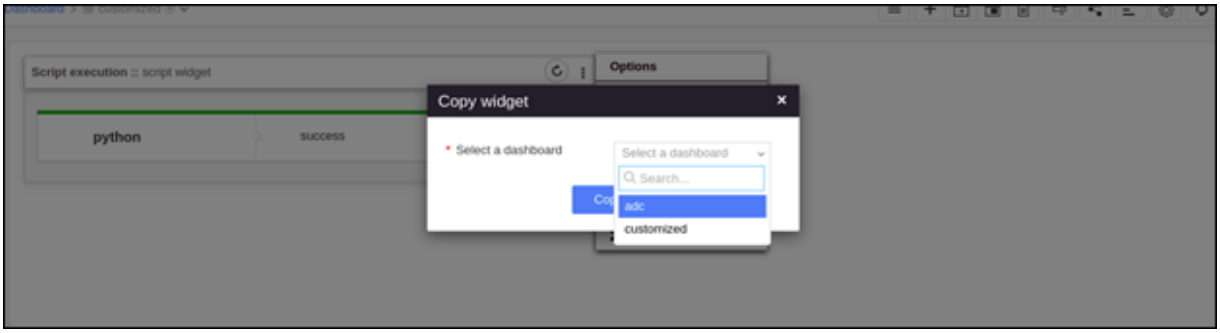




4. Select the dashboard to which the widget should be copied or moved.



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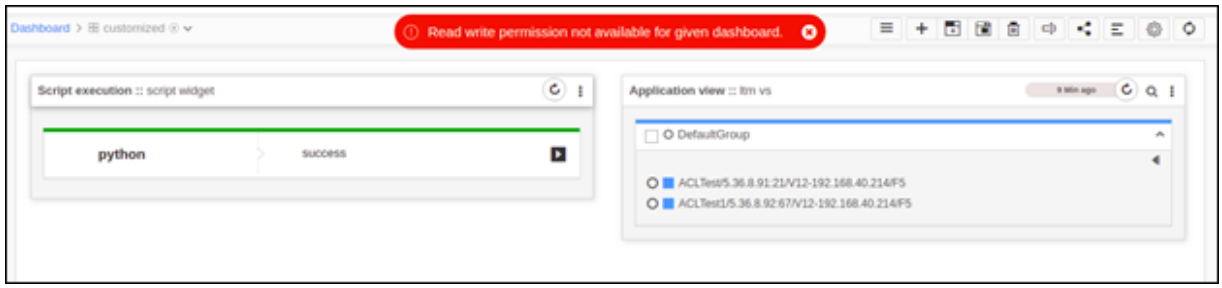

Error Message	Possible Cause	Possible Solution
Read write permission not available for given dashboard.	User only has Read permission for the dashboard and cannot perform update action on the dashboard. User does not have R/W permission to one of the dashboard during copy/move widget action.	Update roles of user: Navigate to 'Account' -> 'User' -> 'Roles' and update user with required roles. Refer to the admin guide. Contact the user with RW access to the dashboard and request to 'share' roles with RW permission to the user. Login with another user who has RW permission to dashboard and try again.

ADC Dashboard Specific Issues

- Issue in Class Management - Search
- Issue in Class Management - View Action
- Issue in Class Management - Modify Action
- Issue in Class Management - Rollback Action
- Issue in Application Widget Actions
- Application Widget Settings
- Script Execution Widget Actions

Issue in Class Management - Search

1. Log in to AppViewX.
2. Click **Menu** > **TRAFFIC MANAGEMENT** > **Dashboards**.

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3. Search the ClassManagement Widget > Search for a class.

Error Message	Possible Cause	Possible Solution
Class names are not listed.	The device is Not Managed.	Trigger config fetch for the device and confirm LTM parsing in successfully completed.

Issue in Class Management - View Action

1. Log in to AppViewX.
2. Click **Menu** > **TRAFFIC MANAGEMENT** > **Dashboards**.
3. Search the ClassManagement Widget > Execute view Action.

Error Message	Possible Cause	Possible Solution
The class name provided by the user does not exist.	The class object is not found on the device.	Check in the F5 device.
Unable to connect to device with the provided credentials. Displaying attributes from the database.	The device credentials might be changed.	Update the credentials for the device in Device Inventory.
Associated class not found in the device.	The class object is not found on the device.	Check in the F5 device.
Failed to retrieve class details. Refer log for more details.	There might be a problem in getting class data from the device.	Please check connectivity to the device.

Issue in Class Management - Modify Action

When the Modify Action is executed on a particular class, the newly added values are not reflected in the device.

1. Log in to AppViewX.
2. Click **Menu** > **TRAFFIC MANAGEMENT** > **Dashboards**.
3. Search the ClassManagement Widget > View log >and check for the Error Message for the Action failure.

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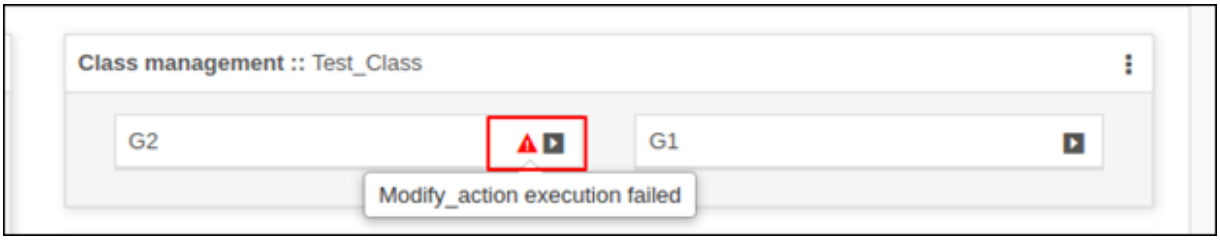
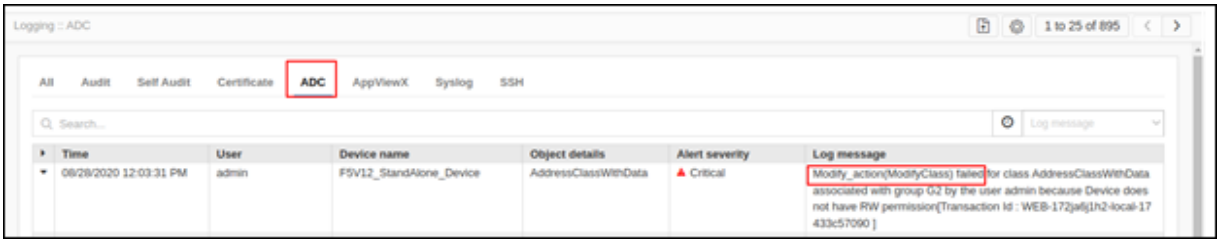
4. Action Execution Failure is shown in Widget.



5. View Log shows the actual error message.

6. Navigate to **Main Menu** > **Logging** > **ADC**.



7. Search for the operation that was performed.

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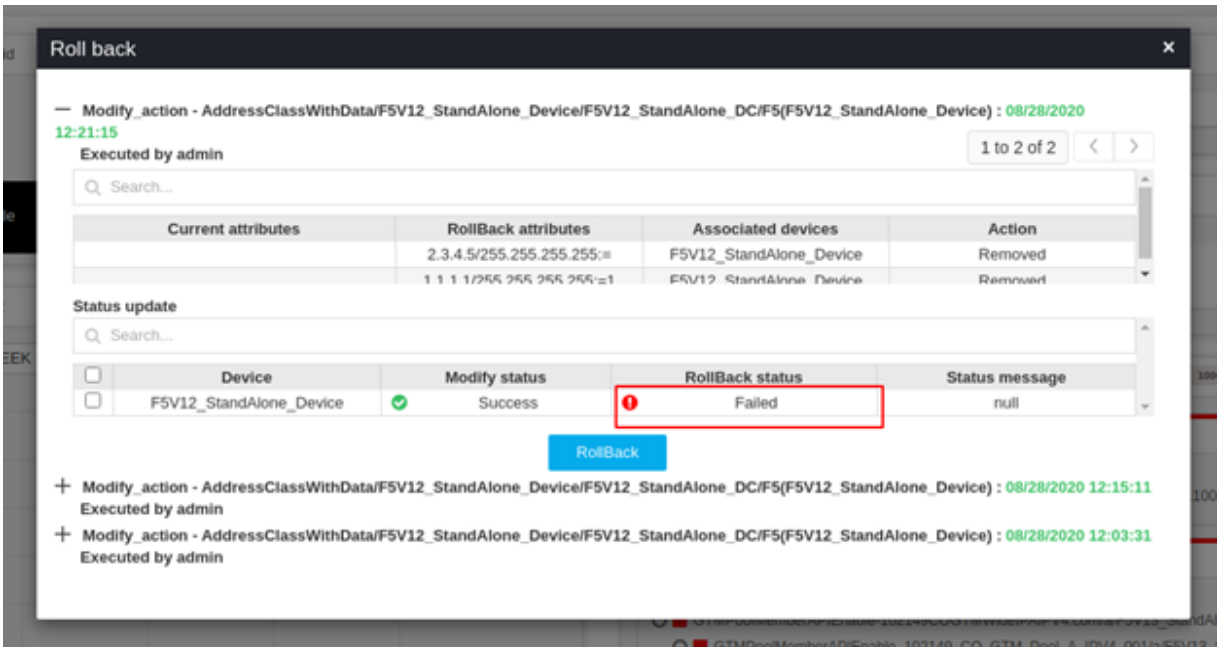

Error Message	Possible Cause	Possible Solution
(User: <userName>) Modify_action(ModifyClass) failed for class <className> associated with group <groupName> by the user <userName>	The class object is not found on the device.	Check for the presence of class in the F5 device.
Device does not have RW permission.	To execute Modify action, the user should have RW access for the device.	Check in **Menu**> **Account** > **Resources** >**Device** > Provide **RW** access for the device.
Failed to retrieve class details. Refer log for more details.	There might be a problem in getting class data from the device.	Please check connectivity to the device.

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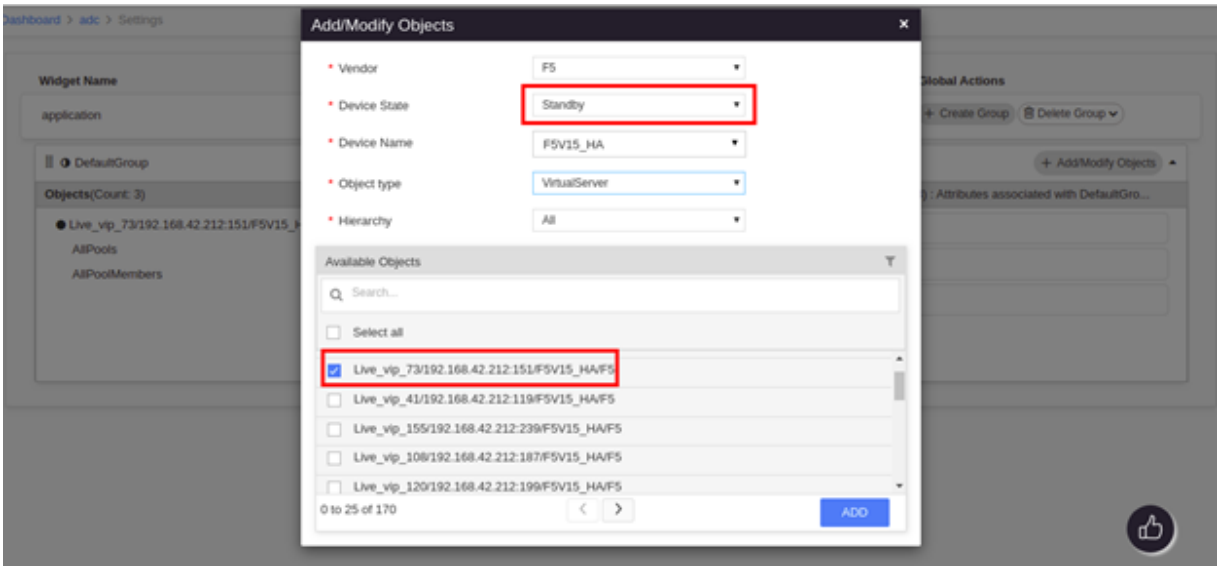
Issue in Class Management - Rollback Action

When Rollback Action is executed on a particular class, the newly added values are not removed in the device.

1. Log in to AppViewX.
2. Navigate to **Menu** > **TRAFFIC MANAGEMENT** > **Dashboards**.
3. Search the ClassManagement Widget > View log > and check for the Error Message for the Action failure.



4. Navigate to **Main Menu** > **Logging** > **ADC**.
5. Search for the operation that was performed.

Error Message	Possible Cause	Possible Solution
(User: <userName>) Modify_action(Rollback) failed for class <className> associated with group <groupName> by the user <userName>	The class object is not found on the device.	Check for the presence of class in the F5 device.

Issue in Application Widget Actions

We have a set of actions that can be performed from the dashboard. For example, an object enable action can be performed by right clicking on the object as explained below.

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1. Log in to AppViewX.
2. Navigate to **Menu** > **TRAFFIC MANAGEMENT** > **Dashboards**.
3. Search the Application Widget.
4. Right-click the required objects/groups.

Error Message	Possible Cause	Possible Solution
AppViewX throws No actions found error from UI	ACL permissions to RW on this object/Dashboard might not be allowed for this user role.	Check with admin whether this user has RW permissions to perform actions on this object/Device/Dashboard. If so, request for permission.
No actions are displayed when right click is performed on the object.	Actions would not have enabled on the Widget settings.	Go to the settings of the particular Widget, and check for actions being enabled below the actions tab. If not, enable the actions.
No actions are displayed when right click is performed on the object.	Enabled actions might not be applicable for the particular type of object on which action is tried to perform.	N/A

5. To determine the root cause for backup failure, check the **Audit Log**.
6. Navigate to **Main Menu > Logging > ADC**.
7. Search for the object name.

Error Scenario	Possible Cause	Possible Solution
Status fetch failure - Device communication failure	Device is in managed state in AppViewX. But the credentials of the device may be changed now.	Check for the device credentials and update the latest credentials.

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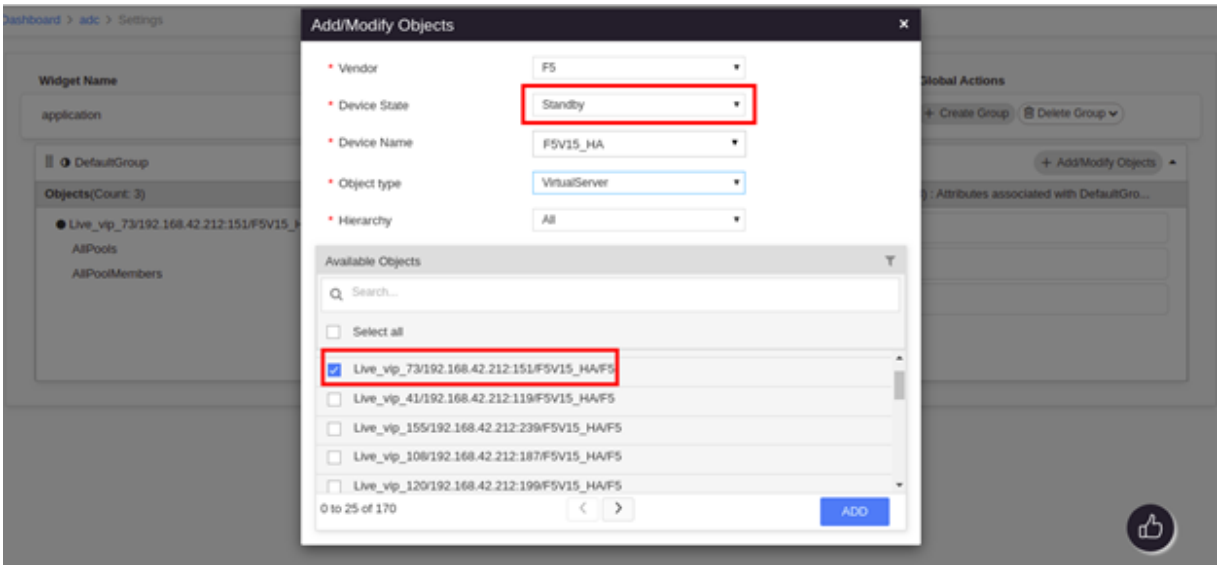
Error Scenario	Possible Cause	Possible Solution
Action failed for the object - Southbound communication failed.	a. Device is in an unresolved state. b. avx_vendors plugin may not be running. c. Error while performing action.	a. Check for device credentials and manage the device. b. Check for avx_vendors plugin state. c. Check for the backend logs.
Object greyed out : The requested object not found.	Objects may be deleted from the device.	Check for the object in the F5 device.

Application Widget Settings

- Configured with standby objects and it displays their corresponding active objects

Configured with standby objects and it displays their corresponding active objects

1. Log in to AppViewX.
2. Navigate to **Menu** > **TRAFFIC MANAGEMENT** > **Dashboards**.
3. Create an application widget with standby objects.



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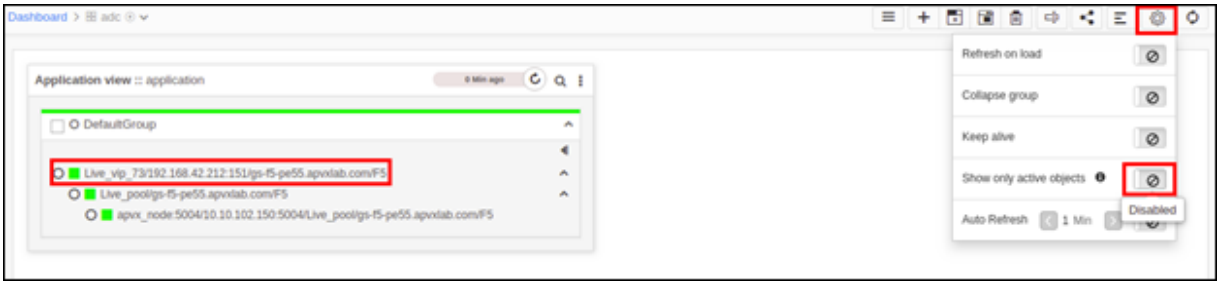
It shows the active objects of the standby objects configured.

4. Click the **settings** icon and disable the **Show only active objects** option.

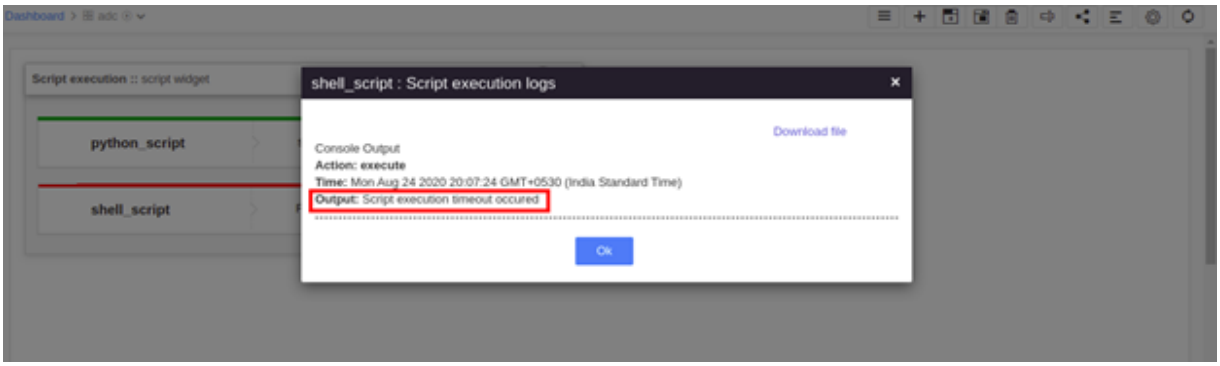


Script Execution Widget Actions

- Script Execution Timeout Occurred

Script Execution Timeout Occurred

1. Log in to AppViewX.
2. Navigate to **Menu** > **TRAFFIC MANAGEMENT** > **Dashboards**.
3. Create a script execution widget.
4. Add a script.
5. Execute the script.



6. Navigate to **Main Menu > Settings > ADC > Device > Script Execution**

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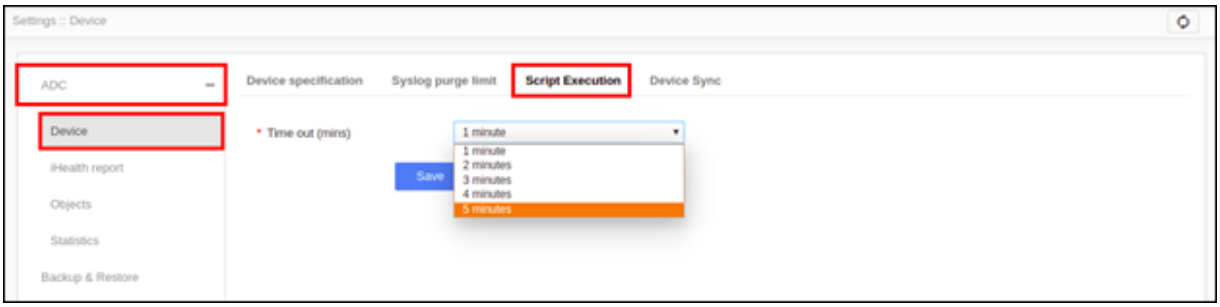


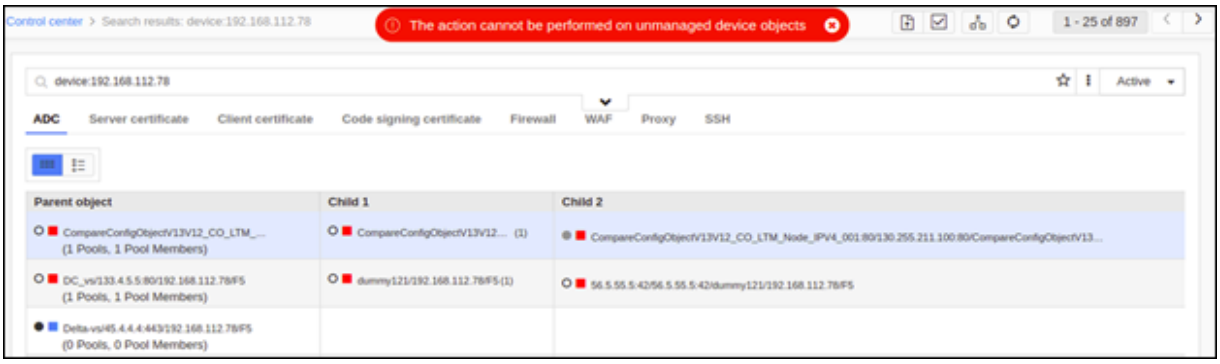
7. Select the **Time out (mins)**.
8. Click **Save**.

Control Center Search and Action Issues

- Issue while performing actions on an object
- Issues in Control Center Search

Issue while performing actions on an object

1. Action executed on an object throws an error message "*Action cannot be performed on unmanaged device object(s)*".



   a. Log in to AppViewX.

   b. Navigate to **Menu** > **ASSET MANAGEMENT** > **Device Inventory**.

   c. Search for the device on which the action was performed.

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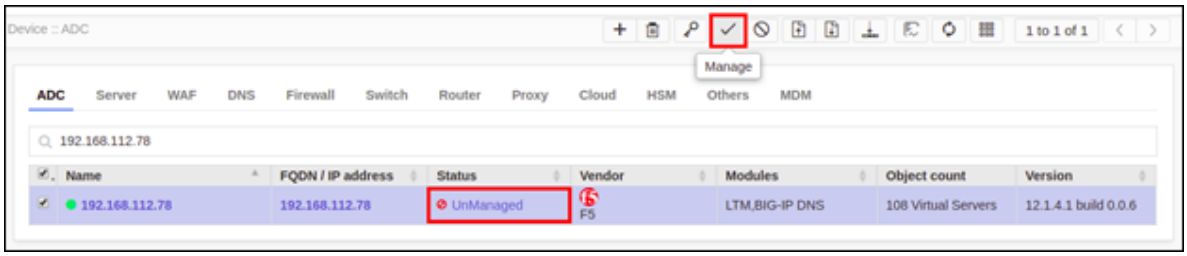
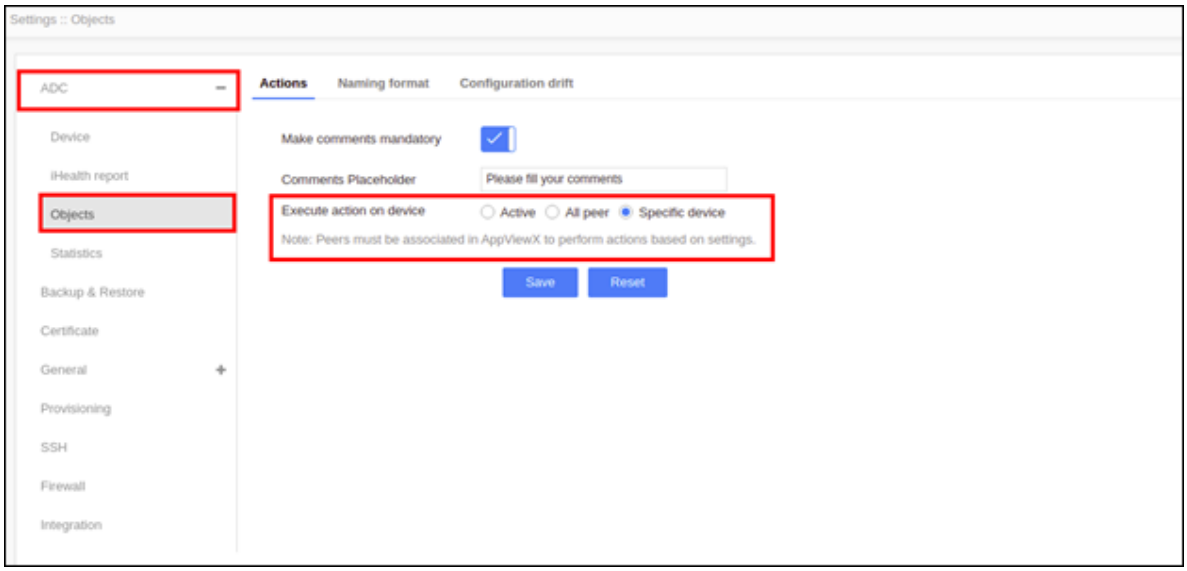


Error Message	Possible Cause	Possible Solution
Action cannot be performed on unmanaged device object(s).	Device is in an Unmanaged state.	Click the Manage icon as shown in the above image. After the device gets Managed, perform the required action on the respective object.

2. Action Executed on the Standby Object is not Reflected on the Active Object.

   a. Log in to AppViewX.

   b. Navigate to **Main Menu > Settings > ADC > Objects > Actions**.



Error Message	Possible Cause	Possible Solution
No error	**Execute action on device** might be set to **Specific device**.	Change **Execute action on device** to **All Peer**and click **Save**.

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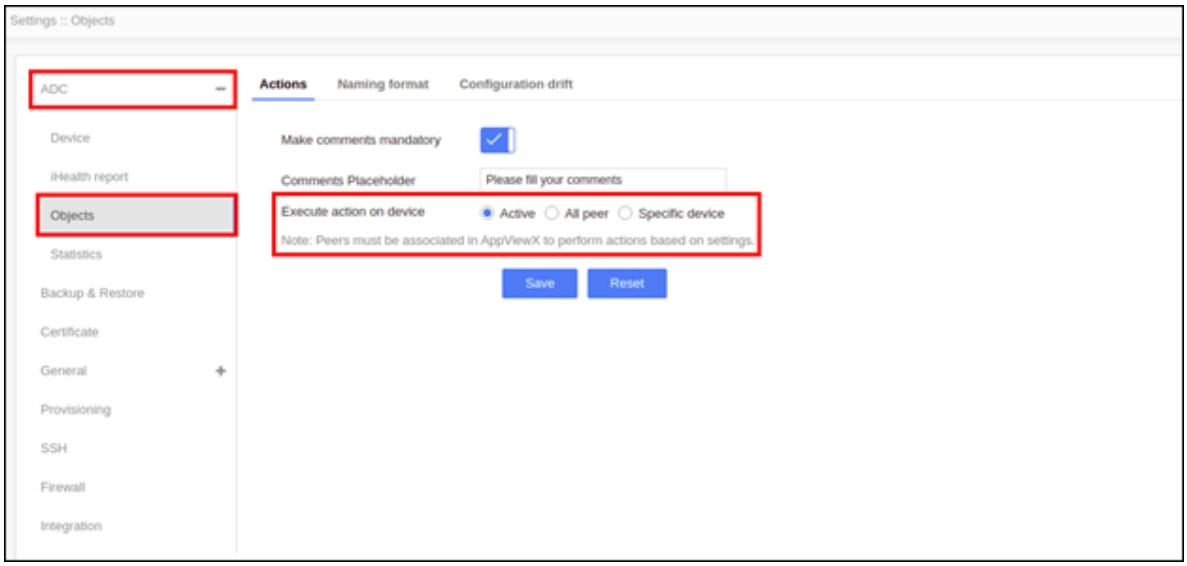
3. Action is not Executed on the Standby Object Triggered

   a. Log in to AppViewX.

   b. Navigate to **Main Menu > Settings > ADC > Objects > Actions**.



Error Message	Possible Cause	Possible Solution
No error	**Execute action on device** might be set to **Active**.	Change **Execute action on device** to **All peer**or **Specific device** and click **Save**.

Issues in Control Center Search

1. Result Exceeded the Maximum Record Size for the Control Center Export.

   a. Log in to AppViewX.

   b. Navigate to **Menu** > **ASSET MANAGEMENT** > **App Search**.

   c. Select the objects to export and click the **export** icon.

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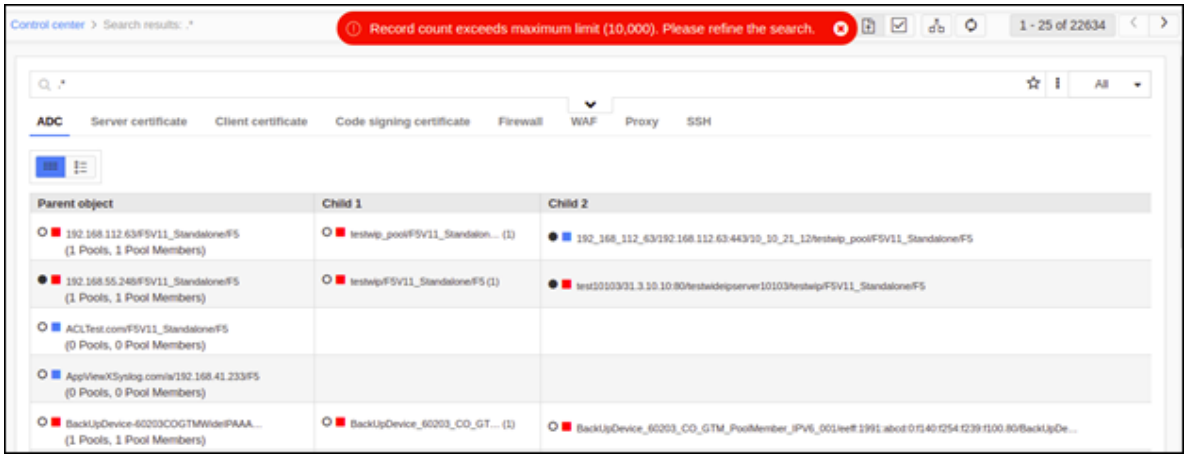

Error Message	Possible Cause	Possible Solution
Result exceeded the max record size.	Result size exceeded maximum limit. For Application View, the limit is 10000 and for Infrastructure View the limit is 300000.	Modify your search criteria to limit the search results.

2. No Content Found for Control Center Export

   a. Log in to AppViewX.

   b. Navigate to **Main Menu > Control center > ADC tab**.

   c. Search for object(s) in the search bar and click the **export** icon.

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Error Message	Possible Cause	Possible Solution
No contents found for search result.	The search criteria did not match any results.	Modify your search criteria to match results.

3. No Records Found

   a. Log in to AppViewX.

   b. Navigate to **Main Menu > Control center > ADC** tab.

   c. Search for object(s) in the search bar.

Error Message	Possible Cause	Possible Solution
No records found are shown when I search for an object in the Control center.	The object might have been deleted in the device.	Check for the existence of the object in the device.
No records found are shown when I search for an object in the Control center.	If the object is present in the device and still it is not shown in the Control Center, the filter in the Control center page might be checked.	Check for the HA state of device(a drop down filter) in the Control center page. It will be available to the right of the search box. Change the value to **All**.

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Error Message	Possible Cause	Possible Solution
No records found are shown when I search for an object in the Control center.	ACL permissions to this object might not be allowed for the user role.	Check with the adminstrator whether the user has permissions to view the object/ device. If so, request for permission and provide a config fetch of the device.
No results found	The search criteria did not match any results.	Modify your search criteria to match results.
No results found	Search filters led to a larger result and 16mb cap limit is reached in Mongo Server.	Narrow your search criteria to limit the search results.
No results found	User does not have permission to view the results.	Navigate to Account -> Resource -> Modify Resource -> Select Access Control -> Under Access Control tab assign permission to ADC Objects. Refer admin guide.

4. Object not Found

   a. Log in to AppViewX.

   b. Navigate to **Main Menu > Control center > ADC tab**.

   c. Search for object(s) in the search bar.

   d. Click the required object to open in the topology view.

Error Message	Possible Cause	Possible Solution
Object not found	The object(s) must have been removed after config sync.	Login to device and check if the object was deleted from the device.
Object not found	The device in which the object exists must have been deleted from AppViewX.	Navigate to 'Inventory' -> 'Device' -> 'ADC' , and check if the device has been deleted. If true, re-add device or request topology for objects in other available devices. Refer to the admin guide.

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Error Message	Possible Cause	Possible Solution
Object not found	The object(s) for which topology was requested is invalid.	1. If AppViewX is not in sync with the device, wait for midnight config sync. 2. If AppViewX is not in sync with the device, navigate to 'Inventory' -> 'Device' -> 'ADC' -> select the corresponding device -> click on 'config fetch' icon. Refer to the admin guide.

5. The Regex Expression is Invalid

   a. Log in to AppViewX.

   b. Navigate to **Main Menu > Control center > ADC**.

   c. Search for object(s) in the search bar using a regex expression.

Error Message	Possible Cause	Possible Solution
The Expression is Invalid.	The keywords used for search is invalid.	Use the available keywords in the control center page. Navigate to Control center -> Click on the Expand icon near the Search bar and use one of the available search keys.
The Expression is Invalid.	The search term contains special characters ('(',')') that led to an invalid expression.	If the search term contains special characters, try to use a different filter.

6. Object Dictionary does not Contain Data for the Given Code.

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a. Log in to AppViewX.

b. Navigate to **Main Menu > Control center > ADC**.

c. Search for object(s) in the search bar.

Error Message	Possible Cause	Possible Solution
Object dictionary does not contain data for the given code.	Script to populate the object dictionary was not executed.	Verify if AppViewX supports the object type specified by the code.
Object dictionary does not contain data for the given code.	AppViewX does not support the object type specified by the code.	Contact AppViewX support to execute the script to populate the object dictionary.

iHealth Report Generation Issues

• Unable to Generate iHealth Report

• Issues in iHealth Report Generation

Unable to Generate iHealth Report

1. Log in to AppViewX.
2. Navigate to **Menu** > **ASSET MANAGEMENT** > **Device Inventory**.
3. Select Device and click **Generate iHealth Report**.

Error Message	Possible Cause	Possible Solution
Please provide the valid credentials under AppViewX settings to generate the iHealth report.	iHealth settings like username, password and proxy are not configured in the **iHealth report configuration** page.	a. Navigate to **Menu > Settings > ADC > iHealth report**. b. Update **iHealth username**.

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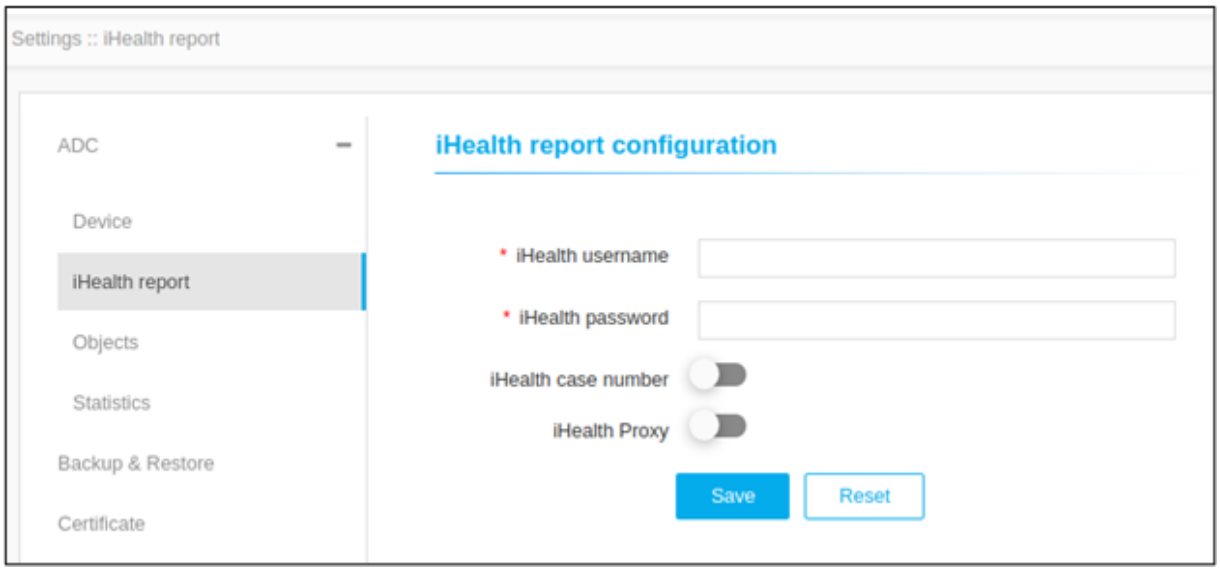
Error Message	Possible Cause	Possible Solution
		c. Update **iHealth password**. d. Enable **iHealth Proxy**.



Issues in iHealth Report Generation

1. Log in to AppViewX.
2. Navigate to **Menu** > **ASSET MANAGEMENT** > **Device Inventory**.
3. Select the required device and click **Generate iHealth Report**.
4. Click the Report status to view the actual error report.

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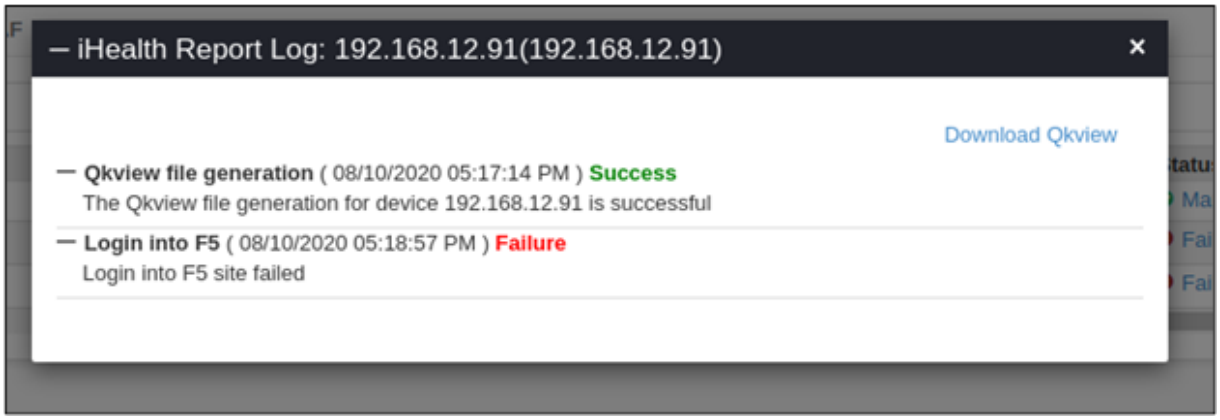

Error Message	Possible Cause	Possible Solution
Report status is stuck in Queued state.	The `avx_vendors` plugin may be not running.	Please contact the administrator to restart the component.
Failed to connect to <device> with the given credentials.	The credentials provided for the device are wrong.	Update the credentials for the device.
Login into the F5 site failed.	Proxy is not configured or proxy credentials are updated wrongly.	a. Update the proxy values in **Settings > General > Proxy**. b. Select the ihealth Login urls in the **URL** list.

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