appviewx

Install and Upgrade Patch Deployment Guide OnPrem FP2

Version: 2022.1.0

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External Reference Links

This product includes software developed by the CentOS Project (www.centos.org).

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Preface

Revision History

Revision	Description	Date
v1.0	Release 2022.1.0 FP2	December 2022

About this Guide

The document describes the steps to install the latest patch for 2022.1.0 FP2.

Audience

The document is intended for the internal users and the customers of AppViewX to support the patch installation.

Text Conventions

The following text conventions are used in this document:

Convention	Description
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
`codeblock`	Indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

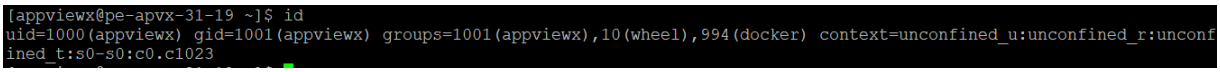
Chapter 1: Prerequisites

The prerequisites are as follows:

1. Ensure that the node password do not contain special characters such as single quote (‘), double quote (“), and backslash (\).
2. (Recommended step) Proceed with the NTP or Chrony setup during the plugin upgrade. This setup is included in the plugin upgrade. Ensure to get the NTP server details prior to the upgrade. Ignore if it is already in place.
3. Keep the existing “mtu” value by executing the command:

```
kubectl edit cm calico-config -n kube-system
```

4. Note the CA certificate path if ENABLE_CUSTOM_CERTS=TRUE.
5. Get details of the user id and user group (enter the command `id` to get the details).



6. Check details regarding the time synchronization enablement (NTP/Chrony).
7. If the external backup server is enabled to push backups of Mongo and Vault, keep the details of external backup server’s IP address, port, user, and path. Ignore if not enabled.
8. Keep the CLI node password ready.
9. If ELK is enabled, keep the elastic user password ready.

Chapter 2: Expectations and Recommendations

Expectations

This patch deployment process only involves

- Plugins and addons upgrade

Note: Application upgrade to version 2022.1.0 FP1 is mandatory before applying FP2 .

Recommendations

1. The new option included from 2020.3.0 FP7 patch to enable/disable support for managing legacy endpoints works only with the deprecated TLS v1.0 or v1.1.
2. In case load balancer is used for ingress gateway service, provide the URL of the Load Balancer service and port
   a. INGRESS_LB_URL=<Input the LB Service URL>

      Example: abc.123xyz.com

   b. INGRESS_LB_PORT=<Input the LB PORT NUMBER>

Chapter 3: AppViewX Conf File

The following parameters must be configured in the **appviewx.conf** file for the FP2 installation process:

Parameter	Description
DB_MIGRATION_JOB_TIMEOUT	This parameter is used to configure the timeout (in minutes) for the DB Migration job. *Example:* DB_MIGRATION_JOB_TIMEOUT=65

Chapter 4: Plugins and Addons Upgrade

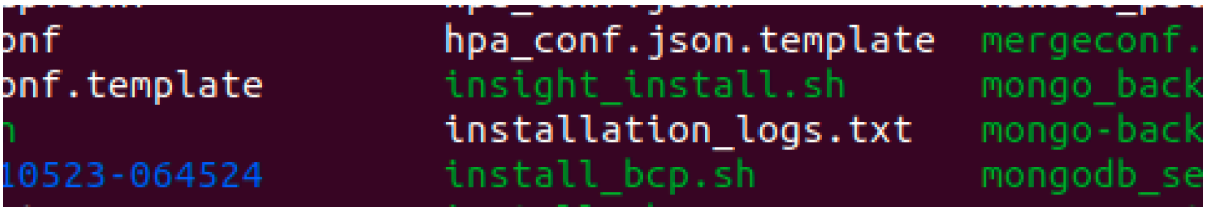
Follow the steps below to add the plugins and addons.

1. Log in to the release portal and download the FP10 patch files
   - **appViewX_2022.1.FP2.tar.gz**
   - **appviewx_addons_2022.1.FP2.tar.gz**
   - Download the latest dated script file **(tar.gz)** from release portal, for example - **scripts_FP2_(latest date).tar.gz**
2. Move all the downloaded files to the node where the installation is initiated.
3. Open the terminal window with valid credentials and validate the “md5sum” value of the downloaded files.
4. To know the status of the pods, execute the command

   ```
   kubectl get pods –A
   ```

   If a pod is in a state other than *“Running”* or the two containers associated with the pod (0/2 or 1/2) are not up and running, take note of it.

5. Check and replace the **hpa_conf.json.template** file that is present in the scripts directory.

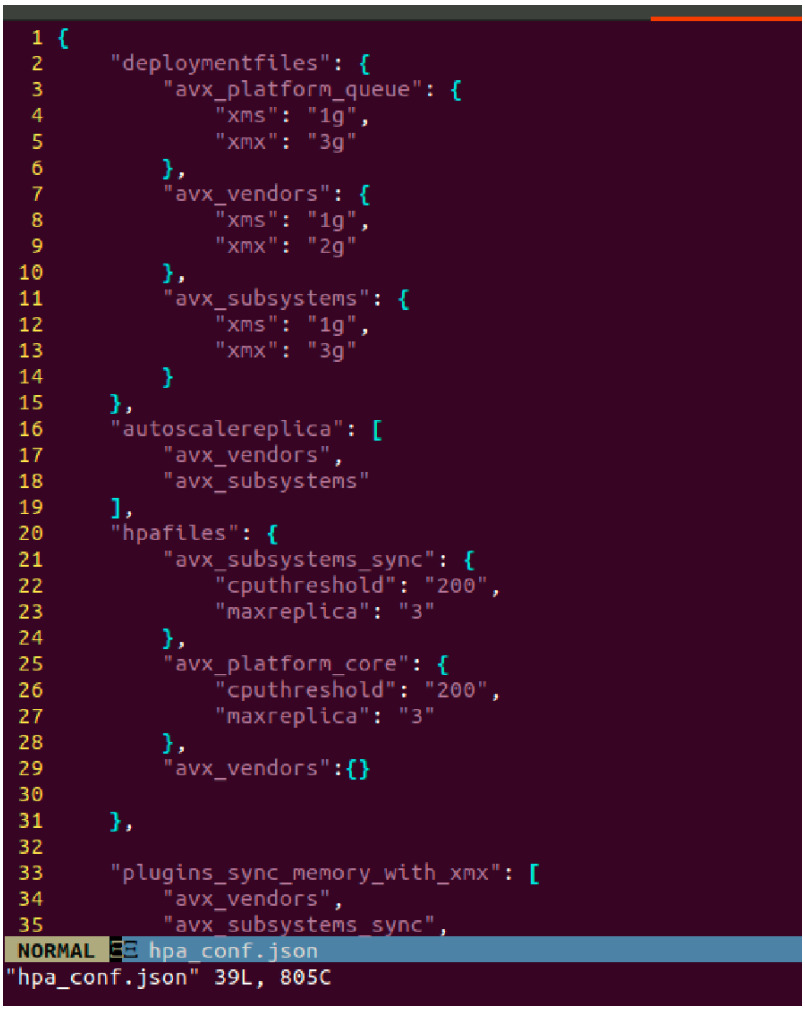


> **Note:** If you have a **hpa_conf.json** file in scripts directory ignore the below steps and move on to Step 9.

   a. Copy the content from **<hpa_conf.json.template>** file to **<hpa_conf.json>** by executing the command:

   ```
   cp hpa_conf.json.template hpa_conf.json
   ```

   b. If there are customized values that need to be set for the keys in the **hpa_conf.json** file, configure them accordingly.



c. By default, if the customer does not create the **hpa_conf.json** file before patch, the file will be created using the **hpa_conf.json.template** file.

6. Configure the datacenter latency optimization

> **Note:** Data centers (greater than 50ms). If not applicable, move on to Step 14. This step is applicable only for deployment with high latency between datacenters.

The **OPTIMISE_ROUTING_FOR_LATENCY=TRUE** and **PREFERRED_DEFAULT_DC=<preferred datacenter>** option can be added to the appviewx.conf file (this needs to be added manually before the patch) and can be set to true for deployments/setups where there is a high latency (>50ms) between the data centers/nodes. This will switch the ATI-gateway routing strategy to optimize for latency. The default value for this is *false* unless specified as *true*.

The option to enable routing strategy of the gateway and other components where there is high latency(>50ms) is shown below.

```
# Option to enable local routing incase the latency between the DCs are high
OPTIMISE_ROUTING_FOR_LATENCY=FALSE
PREFERRED_DEFAULT_DC=absecon
```

7. Downloaded patch files absolute path should be kept ready and decision on TLS version support should be made, before executing the command <apply_patch.sh>

   Make a note of the downloaded absolute file path for plugins and add-on tar files.

8. Navigate to the **<INSTALLER_PATH>/appviewx_kubernetes/scripts** directory and execute

```
./apply_patch.sh
```

   - By default, the patch script works at interactive mode and the following questions will be asked during the process:

```
Do you wish to cleanup the existing scripts backup ("yes"/"no"):
```

```
Do you wish to take backup of the scripts ("yes"(recommended)/"no"):
```

   Recommend to answer “Yes” (the process will take a few minutes depending on the size of the scripts directory).

```
Enter the absolute path of scripts tar package downloaded from the AppViewX Release Portal (Press enter to leave it blank):
Checking for newly introduced conf parameters..
==========================================================================================================================
```

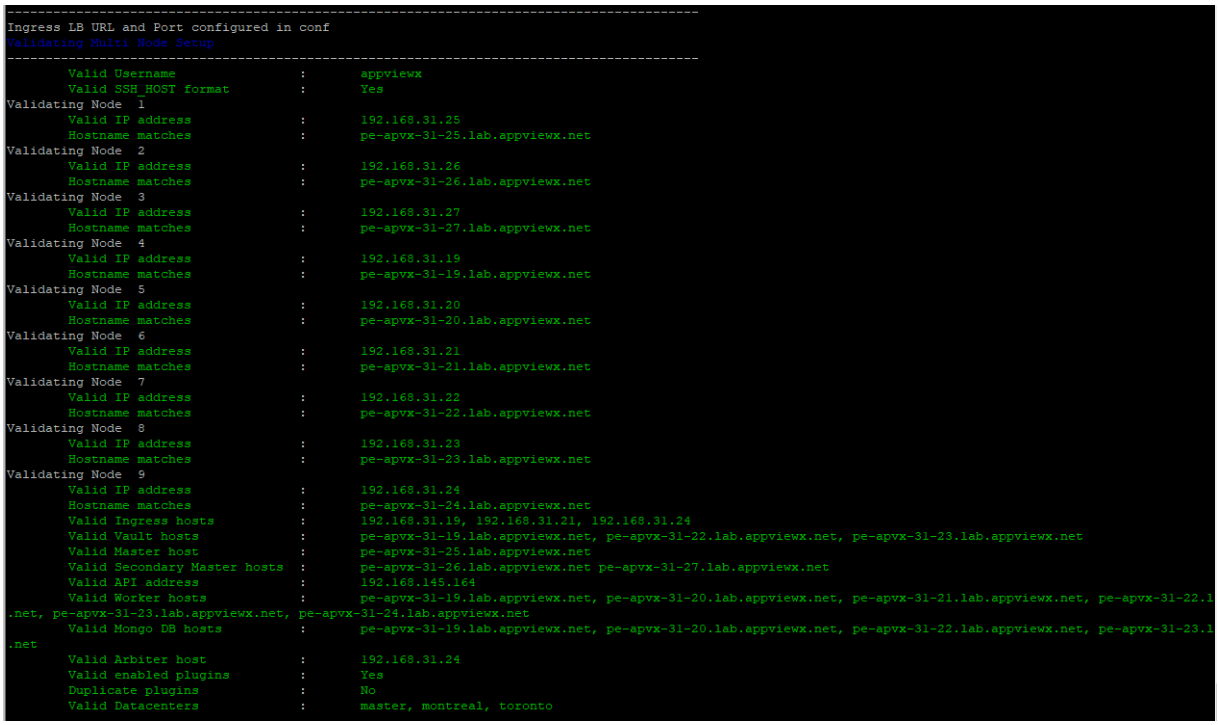
   Enter the absolute script path and proceed.

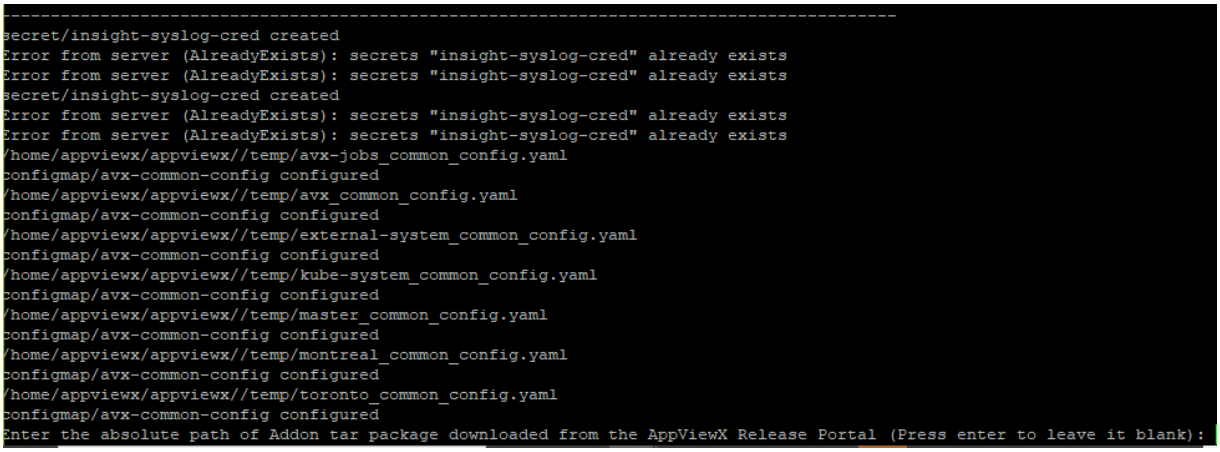
9. To change the default values of newly added **appviewx.conf** parameters, provide the valid input as per the instructions.

```
     Checking for newly introduced conf parameters..
==========================================================================================================
     Please provide the appropriate input for DB_MIGRATION_JOB_TIMEOUT
# Configure the Timeout for the DB Migration job in minutes
Default value for the parameter is : 60

Please enter the value to alter the default value according to the above instruction. Kindly press enter to use default value : ----------------------------------------
--------------------------------------------------
```

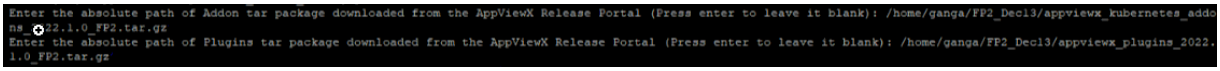
   Keep the default value OR enter the desired values and hit the enter key to continue with the patching process.

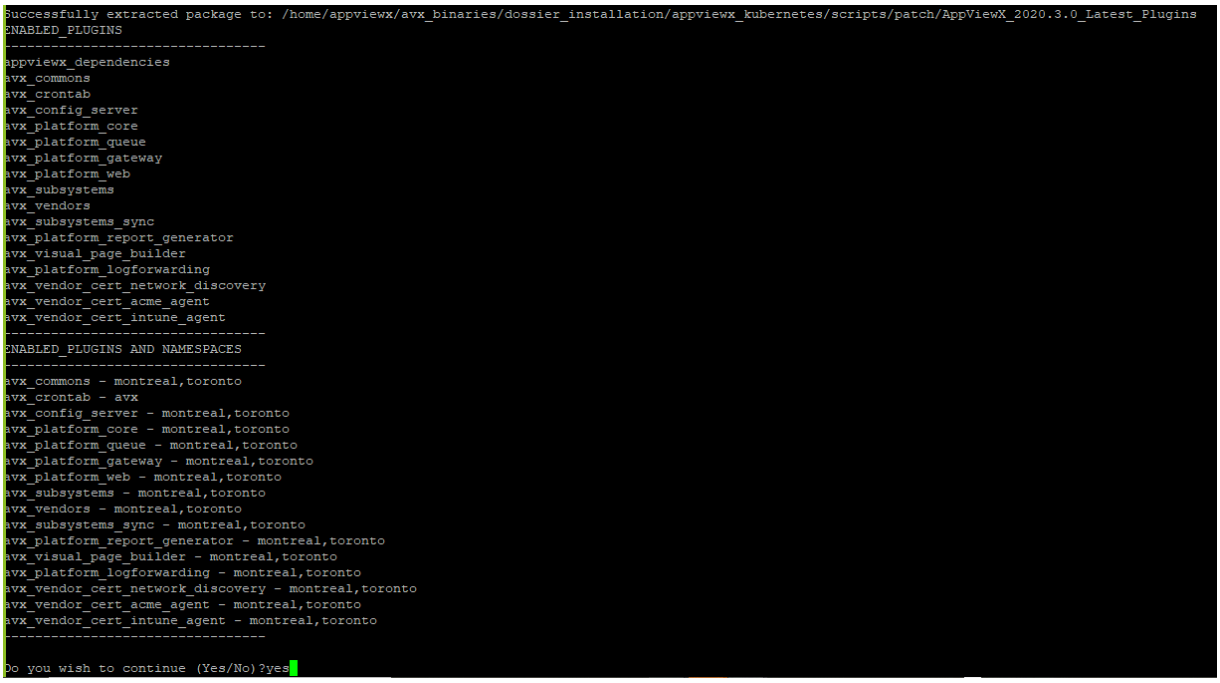


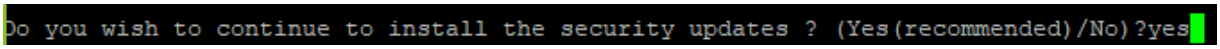


10. Verify the list of enabled plugins and their respective data center. After the verification, provide the appropriate input to continue the deployment or exit the process.

    (Supply the answer for the below question as applicable – This question may not be displayed if already answered in a previous fix pack patching)



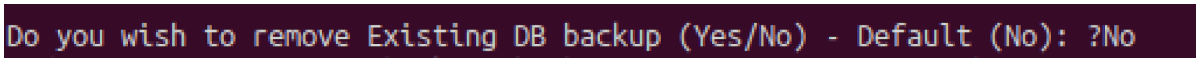




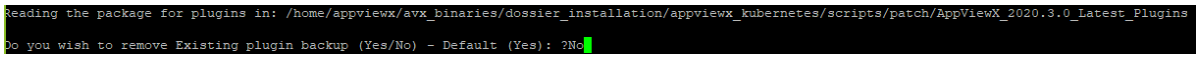
11. Take the backup as desired.

    • MongoDB and Vault backup can be taken before deploying the newer version for rollback

    • Old Existing DB Backups can be cleaned



    • Old Existing plugin backup can be cleaned up.



12. After successful deployment, the following message will be displayed along with the manual restore commands for rollback. **Kindly wait for a few minutes for the backend process to complete**.

```
Apply complete! Resources: 783 added, 0 changed, 0 destroyed.
deployment.apps/avx-crontab patched (no change)
deployment.apps/avx-crontab scaled
warning: Immediate deletion does not wait for confirmation that the running resource has been terminated. The resource may continue to run on the cluster indefinitely.
pod "avx-crontab-57fc6f597b-6cbxr" force deleted
deployment.apps/avx-crontab scaled
mongo-routerdb-0                                  2/2     Terminating        0          63m
mongo-routerdb-1                                  2/2     Terminating        0          63m
mongo-routerdb-2                                  2/2     Terminating        0          63m
statefulset.apps/vault patched (no change)
pe-apvx-31-25.lab.appviewx.net master
pe-apvx-31-26.lab.appviewx.net master
pe-apvx-31-27.lab.appviewx.net master
pe-apvx-31-19.lab.appviewx.net montreal
pe-apvx-31-20.lab.appviewx.net montreal
pe-apvx-31-21.lab.appviewx.net montreal
pe-apvx-31-22.lab.appviewx.net toronto
pe-apvx-31-23.lab.appviewx.net toronto
pe-apvx-31-24.lab.appviewx.net toronto
OPTIMISE_ROUTING_FOR_LATENCY is not enabled in the appviewx.conf(Note: applicable only for the high latency environments)..ignoring..

Patch Process Completed and Plugins are Upgraded.

cmd to execute ./syncconf.sh /home/appviewx/appviewx/ /home/appviewx/avx_binaries/FP10/AppViewX_2020.3.FP10.tar.gz
```

13. To setup NTP or Crony server, provide the appropriate input.

    Please enter “no” if we have ntp/chrony already configured and it will retain the existing ntp/chrony configurations.

```
Do you want to configure the NTP/Chrony?[Yes|No](Recommended 'Yes' and ignore if already configured): no
Exiting!
```

```
Do you want to configure the NTP/Chrony?[Yes|No](Recommended 'Yes' and ignore if already configured): yes
Enter the time sync type[ntp/chrony](default chrony): ntp
```

14. In case of any failure during the patch deployment, an automated rollback can be initiated by executing the below commands.

    Note: Edit the backup files as required.

```
Please use following commands to restore:

Restore Plugins:

        1. rm -rf ../yaml//appviewx_plugins && mv /home/appviewx/installer/appviewx_kubernetes/scripts/../backups/backup_20220726-154931/appviewx_plugins ../yaml/

Restore Database:

        1. ./mongo_restore.sh /home/appviewx/installer/appviewx_kubernetes/scripts/../..//appviewx_kubernetes/mongo_backup/mongo_backup_Tue_Jul_26_15_52_10_IST_2022.tar.gz
        2. ./vault_restore.sh -p /home/appviewx/installer/appviewx_kubernetes/scripts/../..//appviewx_kubernetes/vault_backup/vault_backup_Tue_Jul_26_15_52_24_IST_2022
```

15. Trigger Gateway restart once all plugins have been patched (step “a” is required and step “b” is applicable only if **avx_platform_gateway_external plugin** is enabled/ up and running.

    a. The following command can be executed once the patch process is completed.

```
kubectl delete pods -n avx $(kubectl get pods -n avx | grep "gateway" | awk '{print $1}') --force
```

    b. The following command can be executed if external gateway plugin is enabled:

    - Execute this command to verify external gateway is running.

```
kubectl get pods -A | grep avx_platform_gateway_external
```

- If Yes, execute the below command. If No, below command can be ignored.

```
kubectl delete pods -n external-system $(kubectl get pods -n external-system | grep "gateway" | awk '{print $1}') –force
```

Note: At least one input for Plugins and Addons upgrade must be given to proceed with the patch process. Both inputs can be given at the same time as well.

16. Additional validations after patching.

    a. Execute the command below to check pod status and wait until all the pods are in running state.

    ```
    kubectl get pods –A
    ```

    b. Execute the command below from the **scripts directory** to check whether the date and time of the nodes are in sync.

    ```
    ./appviewx.sh --run-on-all "timedatectl"
    ```

17. Patching logs can be found in <Installer_path>appviewx_kubernetes/logs

Chapter 5: Post-Patching Steps (HSM Customers)

Note: The steps described below are applicable only to customers using HSM.

1. Login to the CLI where avx_platform_hsm pod is up and running
2. Navigate to APPVIEWX_INSTALLATION_PATH}/appviewx_dependencies/properties
3. Open the "hsm" bash file using the command

```
vi hsm
```

4. Reconfigure the path location for the respetive HSM vendor.
5. Refer the HSM integration with AppViewX document for the path re-configuration
6. Once the path has been set properly, restart the **avx_platform_hsm** pod using the command

```
kubectl delete pods -n <datacenter> <pod_name>
```

7. Login to GUI and update the HSM setting with required details and proceed
8. For **Multi-node customers** - repeat all the above steps on all the servers where the avx_platform_HSM pod is running.

Chapter 6: Debugging Information

Information on debugging details are mentioned below

1. The **<patch_logs.txt>** file can be located at <INSTALLER_PATH>/appviewx_kubernetes/scripts
2. If deployment fails with the message: *"scp failed: Upload failed"*, run the commands below:

```
chown -R appviewx:appviewx <installation_path>/plugins
```

```
chown -R appviewx:appviewx <installation_path>/logs
```

> **Note:** The **<installation_path>** is mentioned in the **/appview_kubernetes/scripts/appviewx.conf**file as the parameter INSTALLATION_PATH.

3. To check the status of pods use the command below.

```
kubectl get pods -n <namespace>
```

   If the plugin upgrade is successful, all the pods will be in the *"Running"* state.

4. If the helm install is triggered instead of helm upgrade, the error message *"Cannot re-use a name that is still in use"* is displayed. This happens due to a timeout issue during the helm chart check. Fix the issue by re-triggering the following command:

```
scripts/plugins_install.sh
```

Chapter 7: More Information

For the latest, most complete information about known and fixed issues with the AppViewX modules, see the latest revision of the release notes.

To access Software Release Notifications for AppViewX Releases, visit our Help center at https://help.appviewx.com/home. You need to log in to your AppViewX account. From the Help center, search by the specific release number or navigate to Release Portal and choose the release, for example, v20.3.0.

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If you are preferred to send feedback through e-mail, be sure to include the following information with your comments:

- Document or topic name
- URL or page number
- Software release version (if applicable).

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- Find solutions and answer questions using our Knowledge Base: https://internalkb.appviewx.com/knowledge-base
- Download the latest versions of software: https://release.appviewx.com