



Install and Upgrade Patch Deployment Guide 2020.3.0 FP7

Version: 2020.3.0

Patch Deployment Guide FP7

The purpose of this document is to guide the users for applying patches on AppViewX v2020.3.0 FP7.

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Preface

Revision History

Revision	Description	Date
v1.0	Patch deployment guide for Appviewx 2020.3.0 FP7	October, 2021
v1.1	Updates to Patch deployment guide for Appviewx 2020.3.0 FP7	November, 2021

About this Guide

The purpose of this document is to guide the users for applying patches on AppViewX v2020.3.0 FP7.

Audience

This document is intended for internal users and customers of Appviewx to support patch deployment activities.

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.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
<code>codeblock</code>	Indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

Chapter 1: Expectations and Recommendations

Expectations

This patch deployment process involves:

- Plugins and addons upgrade



Note: FP6 patch is mandatory before applying FP7.

- The new option included from FP7 patch to enable/disable support for managing legacy endpoints works only with the deprecated TLS v1.0 or v1.1.

Recommendations

- Make the decision on choosing the option `ENABLE_LOWER_TLS OPTION` as **Yes** or **No** before you apply any new patch on top of FP7.
- To disable support for TLS v1.0 and TLS v1.1 as security standards, provide the response as **NO**
- If a customer wants to change **ENABLE_LOWER_TLS** to **YES** or **NO** after completion of the existing patch. Follow the steps mentioned in the Frequently Asked Questions (FAQ) section.

Chapter 2: Plugins and Addons Upgrade

Follow the steps below to add the plugins and addons.

1. Log in to the [release portal](#) and download the FP7 patch files
 - **appviewx_plugins_2020.3.0_FP7.tar.gz**
 - **appviewx_kubernetes_addons_2020.3.0_FP7.tar.gz**
2. Download the latest FP7 scripts bundle from release portal.
3. Move all the downloaded files to the node where the installation is initiated.
4. Untar the script <.tar> file.
5. Open the terminal window with valid credentials.
6. 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.

7. If the previous fixed patch from AppViewX had already been applied, ignore this step or else follow the two steps below before proceeding with the patch upgrade.
 - a. Run the following command on any one node

```
helm uninstall avx-platform-webavx-platform-gatewayavx-platform-amc
```

- b. Run the following commands on all the nodes

```
cd <installation_path>/plugins
```

```
sudo rm -rf avx_platform_web avx_platform_gateway avx_platform_amc
```

8. Copy the downloaded files to the AppViewX server where the AppViewX installer is available.
9. Untar the scripts using the command

```
tar -xzf scripts.tar.gz
```

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

```
hpa_conf.json.template  mergeconf.
hpa_conf.json.template  insight_install.sh     mongo_back
hpa_conf.json.template  installation_logs.txt  mongo-back
10523-064524            install_bcp.sh         mongodb_se
```



Note: If you have a **hpa_conf.json** file in the 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.

```

1 {
2   "deploymentfiles": {
3     "avx_platform_queue": {
4       "xms": "1g",
5       "xmx": "3g"
6     },
7     "avx_vendors": {
8       "xms": "1g",
9       "xmx": "2g"
10    },
11    "avx_subsystems": {
12      "xms": "1g",
13      "xmx": "3g"
14    }
15  },
16  "autoscalereplica": [
17    "avx_vendors",
18    "avx_subsystems"
19  ],
20  "hpafiles": {
21    "avx_subsystems_sync": {
22      "cputhreshold": "200",
23      "maxreplica": "3"
24    },
25    "avx_platform_core": {
26      "cputhreshold": "200",
27      "maxreplica": "3"
28    },
29    "avx_vendors": {}
30  },
31  },
32  "plugins_sync_memory_with_xmx": [
33    "avx_vendors",
34    "avx_subsystems_sync",
35  ]
36 }

```

NORMAL hpa_conf.json
"hpa_conf.json" 39L, 805C

- 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.

11. Take backup of the **plugins_install.sh** file in **<INSTALLER_PATH>/appviewx_kubernetes/scripts** using the command:

```
cd <INSTALLER_PATH>/appviewx_kubernetes/scripts mv plugins_install.sh plugins_install.sh.bak
```

12. Copy the files from scripts directory to the **<INSTALLER_PATH>/appviewx_kubernetes/scripts** directory using the command:

```
cp -r <Download_Directory>/scripts/* <INSTALLER_PATH>/appviewx_kubernetes/scripts/.
```

13. Execute the script file `apply_patch.sh`. On execution it will request the following:

- Absolute file path for plugins and add-on tar files
- Enable TLSv1.0 and TLSv1.1 (Yes/No)
 - It is recommended to select “NO.”
 - Select “YES” only if it is required for the customer.



Note:

- Transport Layer Security (TLS) such as Secure Sockets Layer (SSL), is an encryption protocol intended to keep data secure when being transferred over a network. As of today, only TLS 1.2 and TLS 1.3 are recommended, whereas all other protocol versions have been formally deprecated in 2018 by Apple, Google, Microsoft and Mozilla
- AppViewX recommends to choose "NO" to defaults hardened. This will enable TLS 1.2 and above as per global security standards
- Reference links:
 - <https://csrc.nist.gov/publications/detail/sp/800-52/rev-2/final>
 - https://www.sec.gov/oit/announcement/tls1_and_tls1_1_to_be_disabled
- 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.

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

- a. 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.

```
-bash-4.2$ ./apply_patch.sh
Enable TLSv1.0 and TLSv1.1 (yes/no): no
```

```
Enter the absolute path of Addon tar package downloaded from the AppViewX Release Portal (Press enter to leave it blank): /home/appviewx/new/a
ppviewx_addons_2020.3.FP7.tar.gz
Enter the absolute path of Plugins tar package downloaded from the AppViewX Release Portal (Press enter to leave it blank): /home/appviewx/new
/AppViewX_2020.3.FP7.tar.gz
```

```
Extracting the package..
Successfully extracted package to: /home/appviewx/new/appviewx_kubernetes/scripts/patch/AppViewX_2020.3.0_Latest_Plugins
```

```

ENABLED_PLUGINS
-----
appview_dependencies
a Slack ops
avx_crontab
avx_config_server
avx_platform_core
avx_platform_amc
avx_platform_queue
avx_platform_gateway
avx_platform_web
avx_subsystems
avx_vendors
avx_subsystems_sync
avx_platform_report_generator
avx_visual_page_builder
avx_platform_logforwarding
avx_vendor_cert_network_discovery
-----
ENABLED_PLUGINS AND NAMESPACES
-----
avx_commons - absecon
avx_crontab - avx
avx_config_server - absecon
avx_platform_core - absecon
avx_platform_amc - absecon
avx_platform_queue - absecon
avx_platform_gateway - absecon
avx_platform_web - absecon
avx_subsystems - absecon
avx_vendors - absecon
avx_subsystems_sync - absecon
avx_platform_report_generator - absecon
avx_visual_page_builder - absecon
avx_platform_logforwarding - absecon
avx_vendor_cert_network_discovery - absecon
-----
Do you wish to continue (Yes/No)? yes

```

- b. MongoDB and Vault backup can be taken before deploying the newer version for rollback, when prompted.

```
Do you wish to take DB backup (Yes/No)?yes
```

- c. Old Existing DB Backups can be cleaned.

```
Do you wish to remove Existing DB backup (Yes/No) - Default (No): ?No
```

- d. Old Existing plugin backup can be cleaned up.

```
Do you wish to remove Existing plugin backup (Yes/No) - Default (No): ?no
```

- 15. 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**

```
Patch Process Completed and Plugins are Upgraded.
```

- 16. In case of any failure during the patch deployment, an automated rollback can be initiated by executing the below commands shown in the image below.

```
Please use following commands to restore:  
Restore Plugins:  
1. rm -rf ../yaml/appviewx_plugins && mv /home/appviewx/new/appviewx_kubernetes/scripts/backup_20211108-132805/appviewx_plugins ../yaml/  
Restore Database:  
1. ./mongo_restore.sh /home/appviewx/appviewx/ /home/appviewx/new/appviewx_kubernetes/scripts/../../ config-server /home/appviewx/appviewx/logs/mongo_backup_Mon_Nov_8_08_10_59_UTC_2021.tar.gz  
2. ./vault_restore.sh -p /home/appviewx/appviewx/logs/vault_backup_Mon_Nov_8_08_11_18_UTC_2021
```



Note: Edit the backup files as required.

Chapter 3: Frequently Asked Questions (FAQ)

1. How is FP7 different from our previous FP's?

A configuration parameter **ENABLE_LOWER_TLS** is added in **appviewx.conf** as part of the apply patch from FP7. This provides options to either enable or disable TLS (v1.0 or v1.1) communication between AppViewX and devices after the Java upgrade in FP7.

- To enable: **ENABLE_LOWER_TLS = TRUE** (when we choose **YES** in the interactive session).
- To disable: **ENABLE_LOWER_TLS = FALSE** (when we choose **NO** in the interactive session).
- a. Change the option to True or False in **appviewx.conf** file as per the requirement.
- b. Perform the `./plugins_install.sh`



Note: Execute the above commands only after the replicaset has been completely deployed i.e. if it has reached the desired number of replicas and the previous replicaset has been completely terminated. It would generally take 10 minutes after the patch for this to complete. To confirm the same please execute command

```
kubectl get rs -n <datacenter>
```

The command needs to be executed for every datacenter. Verify from the output that the desired number of replicas, current number of replicas, and ready number of replicas are all equal for the latest deployed replicaset.

2. If a customer wants to change **ENABLE_LOWER_TLS** to **YES** or **NO** after completion of the patch.

- a. Perform the **./apply_patch.sh** and change the option to Yes/No as per the requirement

```
-bash-4.2$ ./apply_patch.sh  
Enable TLSv1.0 and TLSv1.1 (yes/no): no
```

- b. Choose FP7 patch files, as this change needs to be applied to all available plugins

```
Enter the absolute path of Addon tar package downloaded from the AppViewX Release Portal (Press enter to leave it blank): /home/appviewx/new/a  
ppviewx_addons_2020.3.FP7.tar.gz  
Enter the absolute path of Plugins tar package downloaded from the AppViewX Release Portal (Press enter to leave it blank): /home/appviewx/new  
/AppViewX_2020.3.FP7.tar.gz
```

- c. Apply all the patches that you have applied on top of FP7 patch.



Note:

Customer, who has implemented ACME use case follow the steps given in the [ACME Workaround Guide](#) after applying the FP7 patch

Chapter 4: 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. The config server pod must be in “Running” state to deploy the plugin. If the config server pod is not in “Running” state, the script will terminate with the following error message.
“Please ensure that config server pod is in running state before applying the patch.”
4. To check the status of pods use the command below. If the plugin upgrade is successful, all the pods will be in the running state.

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

5. If the helm install is triggered instead of helm upgrade, the following error message is displayed: *“cannot re-use a name that is still in use”*. This is due to a timeout issue while helm chart check is in progress. Fix the issue by re-triggering the following command:

```
scripts/plugins_install.sh
```

```
and 20 more similar warnings elsewhere)
Error: Error running command 'helm install --set-string timestamp=2021-08-17T14:59:21Z \
--set-string appviewx.multi=true \
--set common.namespace="{avx}" \
--set appviewx.replicas="2" \
--set appviewx.nodeAffinity="{us,eu}" \
--set appviewx.installation user=appviewx \
--set appviewx.installation user_id=1000 \
--set appviewx.appviewx path=/home/appviewx/appviewx_cluster/ \
avx-platform-web /home/appviewx/appviewx_binaries/appviewx_kubernetes/yaml/appviewx_plugins/avx_platform_web/chart;
: exit status 1. Output: Error: cannot re-use a name that is still in use
```

Chapter 5: 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).

Requesting Technical Support

Technical product support is available through AppViewX help support center, request to send an email to help@appviewx.com

Self-Help Online Tools and Resources

For quick and easy problem resolution, AppViewX is designed an online self-service portal called the help support center that provides you with the following features:

- Find help support center: <https://help.appviewx.com/home>
- Find product technical documentation: <https://helpcenter.appviewx.com/techdoc/>
- 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>