FortiADC - Upgrade Instructions

Version 6.1.1

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FortiADC 6.1.1 Upgrade Instructions
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Change Log

Date	Change Description
12/22/2020	First updated for 6.1.0 release.
10/08/2019	First updated for 5.3.0 release.
03/29/2019	First update for 5.2.0 release.
02/05/2018	Second update for 5.0.0 release.
09/29/2017	First update for 4.8.1 release.
06/08/2017	Initial release.

Introduction

This document provides detailed instructions on how to upgrade FortiADC at various release points.

Important notes

If you want to update from 4.5.1 -> 5.0.3, follow this path: 4.5.1->4.6.5->4.7.4->4.8.6->5.0.3.

You do not need to go 4.5.1->4.6.**0**->4.7.**0**->4.8.**0** -> 5.0.**0** -> 5.0.3 and so on. That is to say, there is no need to the '0' version. You can just update directly to the minor version, skipping 5.0.0 and going directly to 5.0.3.

Supported upgrade paths

This section discusses the general paths to upgrade FortiADC from previous releases.

6.0.x to 6.1.x

Direct upgrade via the web GUI or the Console.

5.4.x to 6.0.x

Direct upgrade via the web GUI or the Console.

5.3.x to 5.4.x

Direct upgrade via the web GUI or the Console.

5.2.x to 5.3.x

Direct upgrade via the web GUI or the Console.

5.1.x to 5.2.x

Direct upgrade via the web GUI or the Console.

5.0.4 to 5.1.x

Direct upgrade via the web GUI or the Console.

Note: allow-ssl-version

There is an old SSL version in the allow-ssl-version config that is not recommend; but the client may have configured it before. This is removed when you upgrade from 5.0.x to 5.1.x/5.2.x. The client may need to add it back manually for compatibility.

5.0.0 to 5.0.4

Direct upgrade via the web GUI or the Console

4.8.x to 5.0.0

Direct upgrade via the web GUI or the Console.

GUI

Due to GUI changes and enhancements, we strongly recommend refreshing (Ctrl +F5) your web browser when access the FortiADC web GUI after the upgrade.

Authentication

This upgrade addresses the compatibility with other devices. Therefore, you must download the new FortiADC SAML SP and upload it to the SAML IDP peer. You do not need to modify the FortiADC SP file anymore.

System

It will take more time to upgrade to 5.0.0 because FortiADC has to create quarantine partition for the AV feature.

GEO IP

You will lose your existing GEO IP protection region configurations when upgrading from 4.7.x to 5.0.0.

4.8.4 to 4.8.4

Direct upgrade via the web GUI or the Console.

4.8.2 to 4.8.3

Direct upgrade via the web GUI or the Console.

4.8.1 to 4.8.2

Direct upgrade via the web GUI or the Console.

4.8.0 to 4.8.1

Direct upgrade via the web GUI or the Console.

GUI

- Due to GUI changes, be sure to refresh your web browser when the upgrade is completed (Ctrl + F5).
- FortiADC 60F supports Google Chrome only.

HA

- To synchronize system image upgrade in HA mode, make sure that all the devices in the HA cluster use exactly the same version of the image.
- Use the management interface in HA mode instead of a dedicated interface.

Platform

- Upgrade your VM01 to 4 GB of memory in virtual platform.

4.7.x to 4.8.0

Direct upgrade via the web GUI or the Console.

- GUI—Due to GUI changes, be sure to refresh (CTRL+F5) your web browser when access FortiADC upon upgrade.
- HA—(For physical devices) Upon upgrade, wait for a few minutes for the HA state to stabilize and the configuration to sync.
- Service—When upgrading to 4.8.x from 4.7.x or lower, FortiADC will add 28 predefined services. If you have old services with the same names as those of the predefined services, FortiADC will rename those "old" services to "`oldname_upgrade`".
- Global Load Balance—If there was a virtual server pool that was not referenced by any GLB Host in the 4.7.x configuration, the Default Feedback IP configuration in this virtual server pool will be lost upon upgrade. To keep this Default Feedback IP, you MUST reference this virtual server pool in the GLB Host before upgrading the system.

4.6.x to 4.7.x

Direct upgrade via the web UI or the CLI.

- GUI—Due to GUI changes, refresh (CTRL+F5) your web browser when access FortiADC upon upgrade.
- HA—(For physical devices) Upon upgrade, wait for a few minutes for the HA state to stabilize and the configuration to sync.
- Service—When upgrading to 4.7.x from 4.6.x or lower, FortiADC will add 28 predefined services. If you have old services with the same names as those of the predefined services, FortiADC will rename those "old" services to "`oldname_upgrade`".
- Global Load Balance—If there was a virtual server pool that was not referenced by any GLB Host in 4.7.x configuration, the Default Feedback IP configuration in this virtual server pool will be lost upon upgrade. To keep this Default Feedback IP, you MUST reference this virtual server pool in the GLB Host before upgrading the system.

4.6.1 to 4.6.2

Direct upgrade via the web UI or CLI.

4.5.x to 4.6.x

Direct upgrade to FortiADC 4.6.0 from any version prior to 4.5.x is NOT supported via the GUI. The best way to upgrade is via the CLI using the `restore image` command. If you prefer to upgrade via the GUI, you MUST first upgrade the image to 4.5.x and then to 4.6.x.

- GUI — Due to GUI changes in 4.6.x, be sure to refresh your browser when accessing the new FortiADC web GUI.
- Global Load Balance — If your existing configuration contains the ISP feature, reconfigure it. This is because the ISP option has been moved.
- HA —Update the firmware if HA Sync is enabled. The process normally takes about 10 minutes to complete.

4.4.x to 4.5.x

Direct upgrade via the web UI or the CLI.

4.3.x to 4.5.x

Direct upgrade via the web UI or the CLI.

4.2.x to 4.5.x

Direct upgrade via the web UI or the CLI.

4.1.x to 4.5.x

You can upgrade from FortiADC 4.1.x using the CLI. Direct upgrade from 4.1.x to 4.5.x is not supported from the web UI. See the FortiADC Handbook for instructions on upgrading with the CLI.

4.0.x to 4.5.x

Direct upgrade from 4.0.x and earlier is not supported. You must first upgrade to FortiADC 4.1.x, and the system must be in an operable state.

Upgrade a stand-alone appliance from 4.2.x or later

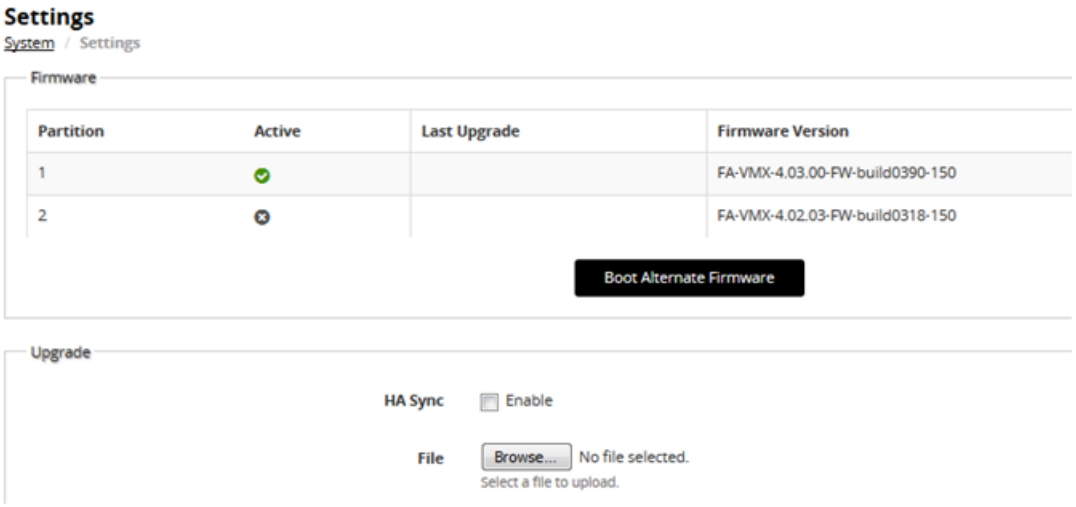
The following figure shows the user interface for managing firmware (either upgrades or downgrades). Firmware can be loaded on two disk partitions: the active partition and the alternate partition. The upgrade procedure:

- Updates the firmware on the inactive partition and then makes it the active partition.
- Copies the firmware on the active partition, upgrades it, and installs it in place of the configuration on the inactive partition.

For example, if partition 1 is active, and you perform the upgrade procedure:

- Partition 2 is upgraded and becomes the active partition; partition 1 becomes the alternate partition.
- The configuration on partition 1 remains in place; it is copied, upgraded, and installed in place of the configuration on partition 2.

This is designed to preserve the working system state in the event the upgrade fails or is aborted.



Before you begin:

- You must have super user permission (user admin) to upgrade firmware.
- Download the firmware file from the Fortinet Customer Service & Support website: https://support.fortinet.com/
- Back up your configuration before beginning this procedure. Reverting to an earlier firmware version could reset settings that are not compatible with the new firmware.
- You upgrade the alternate partition. Decide which partition you want to upgrade. If necessary, click **Boot Alternate Firmware** to change the active/alternate partitions.

To update firmware:

1. Go to System > Settings.
2. Click the **Maintenance** tab.
3. Scroll to the Upgrade section.
4. Click **Browse** to locate and select the file.

5. Click  to upload the firmware and reboot.
   The system replaces the firmware on the alternate partition and reboots. The alternate (upgraded) partition becomes the active, and the active becomes the alternate.
6. Clear the cache of your web browser and restart it to ensure that it reloads the web UI and correctly displays all interface changes.

Upgrading an HA cluster from 4.3.x or later

The upgrade page for Release 4.3.0 and later includes an option to upgrade the firmware on all nodes in an HA cluster from the primary node.

The following chain of events occurs when you use this option:

1. The primary node pushes the firmware image to the member nodes.
2. The primary node notifies the member nodes of the upgrade, and takes on their user traffic during the upgrade.
3. The upgrade command is run on the member nodes, the systems are rebooted, and the member nodes send the primary node an acknowledgment that the upgrade has been completed.
4. The upgrade command is run on the primary node, and it reboots. While the primary node is rebooting, a member node assumes the primary node status, and traffic fails over from the former primary node to the new primary node.

After the upgrade process is completed, the system determines whether the original node becomes the primary node, according to the HA Override settings:

- If Override is enabled, the cluster considers the Device Priority setting. Both nodes usually make a second failover in order to resume their original roles.
- If Override is disabled, the cluster considers the uptime first. The original primary node will have a smaller uptime due to the order of reboots during the firmware upgrade. Therefore, it will not resume its active role. Instead, the node with the greatest uptime will remain the new primary node. A second failover will not occur.

Before you begin, do the following:

1. Make sure that you have super user permission (user admin) on the appliance whose firmware you want to upgrade.
2. Download the firmware file from the Fortinet Customer Service & Support website: https://support.fortinet.com/
3. Back up your configuration before beginning this procedure. Reverting to an earlier version of the firmware could reset the settings that are not compatible with the new firmware.
4. Verify that the cluster node members are powered on and available on all of the network interfaces that you have configured. (Note: If required ports are not available, HA port monitoring could inadvertently trigger an additional failover, resulting in traffic interruption during the firmware update.)
5. You upgrade the alternate partition. Decide which partition you want to upgrade. If necessary, click **Boot Alternate Firmware** to change the active/alternate partitions.

To update the firmware for an HA cluster:

1. Log into the Web UI of the primary node as the admin administrator.
2. Go to System > Settings.
3. Click the **Maintenance** tab.
4. Scroll to the Upgrade section.
5. Click **Browse** to locate and select the file.
6. Enable the **HA Sync** option.
7. Click  to upload the firmware and start the upgrade process.
8. Wait for the system to reboot and log you out to complete the upgrade.

9. Clear the cache of your Web browser and restart it to ensure that it reloads the web UI and correctly displays all interface changes.

Note: Normally, it takes approximately up to 10 minutes to upgrade with HA Sync.

Supported web browsers

FortiADC has been fully tested with the latest versions of the following Web browsers:

- Chrome
- Firefox

We strongly recommend you set either of the Web browsers as your default Web browser when working with FortiADC. You may also use other (versions of the) browsers, but you may encounter certain issues with FortiADC's Web GUI.

Note: FortiADC 60F supports Google Chrome only.

Special notes

Since the v4.7.x release, FortiADC has introduced a parameter called `config-priotity` for HA configuration. It allows you to determine which configuration the system uses when synchronizing the configuration between the HA nodes. Therefore, upon upgrading to FortiADC 4.7.x or higher, we strongly recommend that you use this option to manually set different HA configuration priority values on the HA nodes. Otherwise, you'll have no control over the system's master-slave configuration sync behavior.

When the configuration priority values are identical on both nodes (whether by default or by configuration), the system uses the configuration of the appliance with the larger serial number to override that of the appliance with the smaller serial number. When the configuration priority values on the nodes are different, the configuration of the appliance with the lower configuration priority will prevail.

The request-body-detection in the WAF web-attack-signature profile will be changed from "disable" to "enable" automatically after upgrading to FortiADC 5.4.0.

Suggestions

- The backup config file in versions 5.2.0-5.2.4/5.3.0-5.3.1 containing certificate config might not be restored properly (causing config to be lost). After upgrading to version 6.1.1, please discard the old 5.2.x/5.3.x config file and back up the config file in 6.1.1 again.
- Keep the old SSL version predefined config to ensure a smooth upgrade.
- HSM does not support TLSv1.3. If the HSM certificate is used in VS, the TLSv1.3 handshake will fail. **Workaround**: Uncheck the TLSv1.3 in the SSL profile if you are using the HSM certificate to avoid potential handshake failure.