FortiADC - Release Notes

Version 6.2.5

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November 2, 2022
FortiADC 6.2.5 Release Notes
01-544-677187-20221102

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Change Log

Date	Change Description
November 2, 2022	FortiADC 6.2.5 Release Notes initial release.

Introduction

This *Release Notes* covers the new features, enhancements, known issues, and resolved issues of FortiADC™ version 6.2.5, Build 0244.

To upgrade to FortiADC 6.2.5, see Upgrade notes.

FortiADC provides load balancing, both locally and globally, and application delivery control. For more information, visit: https://docs.fortinet.com/product/fortiadc/.

What's new

FortiADC 6.2.5 is a patch release, where no new features and enhancements are covered in this release. See Known issues on page 12 and Resolved issues on page 9 for details.

Hardware, VM, cloud platform, and browser support

This section lists the hardware models, hypervisor versions, cloud platforms, and web browsers supported by FortiADC 6.2.5. All supported platforms are 64-bit version of the system.

Supported Hardware:

- FortiADC 200D
- FortiADC 300D
- FortiADC 400D
- FortiADC 700D
- FortiADC 1500D
- FortiADC 2000D
- FortiADC 4000D
- FortiADC 100F
- FortiADC 120F
- FortiADC 200F
- FortiADC 220F
- FortiADC 300F
- FortiADC 400F
- FortiADC 1000F
- FortiADC 1200F
- FortiADC 2000F
- FortiADC 2200F
- FortiADC 4000F
- FortiADC 4200F
- FortiADC 5000F

For more information on the supported hardware models, see FortiADC's Hardware Documents.

Supported hypervisor versions:

VM environment	Tested Versions
VMware	ESXi 3.5, 4.x, 5.0, 5.1, 5.5, 6.0, 6.5, 6.7, 7.0
Microsoft Hyper-V	Windows Server 2012 R2, 2016 and 2019
KVM	Linux version 3.19.0 qemu-img v2.0.0, qemu-img v2.2
Citrix Xen	XenServer 6.5.0
Xen Project Hypervisor	4.4.2, 4.5
OpenStack	Pike
Nutanix	AHV

Supported cloud platforms:

- AWS (Amazon Web Services)
- Microsoft Azure
- GCP (Google Cloud Platform)
- OCI (Oracle Cloud Infrastructure)

For more information on the supported cloud platforms, see the FortiADC Private Cloud and Public Cloud documents.

Supported web browsers:

- Mozilla Firefox version 59
- Google Chrome version 65

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.

Resolved issues

The following issues have been resolved in FortiADC 6.2.5 release. For inquiries about particular bugs, please contact Fortinet Customer Service & Support.

Bug ID	Description
0854842	Process crashed when running stress test and system reload.
0853597	Servers in server pool showing as unavailable due to LB crash and Netlink issue.
0850561	SLB stops responding to SSL requests.
0849916	SAML inserts a header persistent-id that contains 0x00 making HTTP requests invalid caused by the overflow of characters when the input value exceeds 1023.
0848099	The number of VDOMs that can be assigned to administrators through the GUI does not match the CLI. Through the GUI, only 10 VDOMs can be assigned to administrator, whereas 10+ VDOMs can be assigned through the CLI.
0847369	VDOM traffic-log does not work when VDOM capacity is exceeded. For VMs (16 or 32 CPU) the VDOM capacity should be 15 or 20, however the VDOM traffic-log stops working after 10 VDOMs are added. For hardware platforms, when the number of VDOMs exceed the capacity (32 in some platforms), the traffic-log does not work for the excess VDOM.
0846947	When the vPath contains %f0, it will cause the error_page to not work.
0846513	Redirecting to HTTPS does not work due to HTTPS service not being enabled automatically on the management port.
0844072	Management IP unavailable after switching AP mode to standalone.
0840608	WAF Source IP exceptions stopped working for URL protection.
0840354	The VM can create up to 15 VDOMs after importing the 16 Cores license, but only 10 corresponding VDOM names are created in /var/log/logrpt/{VDOM}, where the logging for some of the VDOMs are not working.
0840171	Route Health Injection leaking between VDOMs.
0838537	Administrator who has read/write permission cannot upload certificate in VDOMs.
0837825	Improper grammar in log messages.
0836867	Unexpected RHI behavior for in A-A-VRRP HA cluster.
0835425	RADIUS virtual server intermittently adds incorrect translated destination port in the forwarded RADIUS requests.

Bug ID	Description
0831472	Issues with VSL4 and SNAT due to IP ARP conflict.
0830087	In the GUI, VDOMs are not showing in the drop-down menu.
0829597	HA A-A mode secondary unit traffic log shows gateway as none.
0828919	L2 SSL Forward Proxy bypassed session and log show incorrect port information.
0827748	FortiADC devices showing consistent slowness.
0826635	FortiADC crashed after changing the virtual server type from Layer 4 to Layer 2.
0824625	IP address in "227 Enter Passive Mode" is changed from virtual to real-server when "227 Enter Passive Mode" is resent.
0824287	Enhancement request to add SAN field for manual CSR creation in GUI and CLI.
0822767	When using the Bot Detection Policy exception to whitelist IPs, the logs still continue to log allowlist matches.
0821812	Clock synchronization failure with local NTP server when the virtual server uses port 123, causing the NTP bind to fail.
0821776	Kernel panic while removing VLAN interface.
0820934	FortiADC GUI interfaces displaying as disabled.
0818663	Cloned IPS signatures cannot be modified.
0806321	Email alerts is being sent in TLS 1.0, but since TLS versions 1.2 or lower has been deprecated, connections lower than TLS 1.2 is not being accepted.
0802844	Unable to login to FortiADC GUI and abnormal behavior in some virtual servers due to tmpfs_control leak issue.

Common Vulnerabilities and Exposures

For more information, visit https://www.fortiguard.com/psirt.

Bug ID	Description
0829266	FortiADC 6.2.5 is no longer vulnerable to the following CVE-Reference: CVE-2022-2097.
0825708	FortiADC 6.2.5 is no longer vulnerable to the following CVE-Reference: CWE-89: Improper Neutralization of Special Elements used in an SQL Command ("SQL Injection").
0825707	FortiADC 6.2.5 is no longer vulnerable to the following CVE-Reference: CWE-20: Improper Input Validation.
0797261	FortiADC 6.2.5 is no longer vulnerable to the following CVE-Reference:

Bug ID	Description
	CVE-2018-25032.
0784332	FortiADC 6.2.5 is no longer vulnerable to the following CVE-Reference: CWE-321: Use of Hard-coded Cryptographic Key.

Known issues

This section lists known issues in version FortiADC6.2.5 release. For inquiries about particular bugs, please contact Fortinet Customer Service & Support.

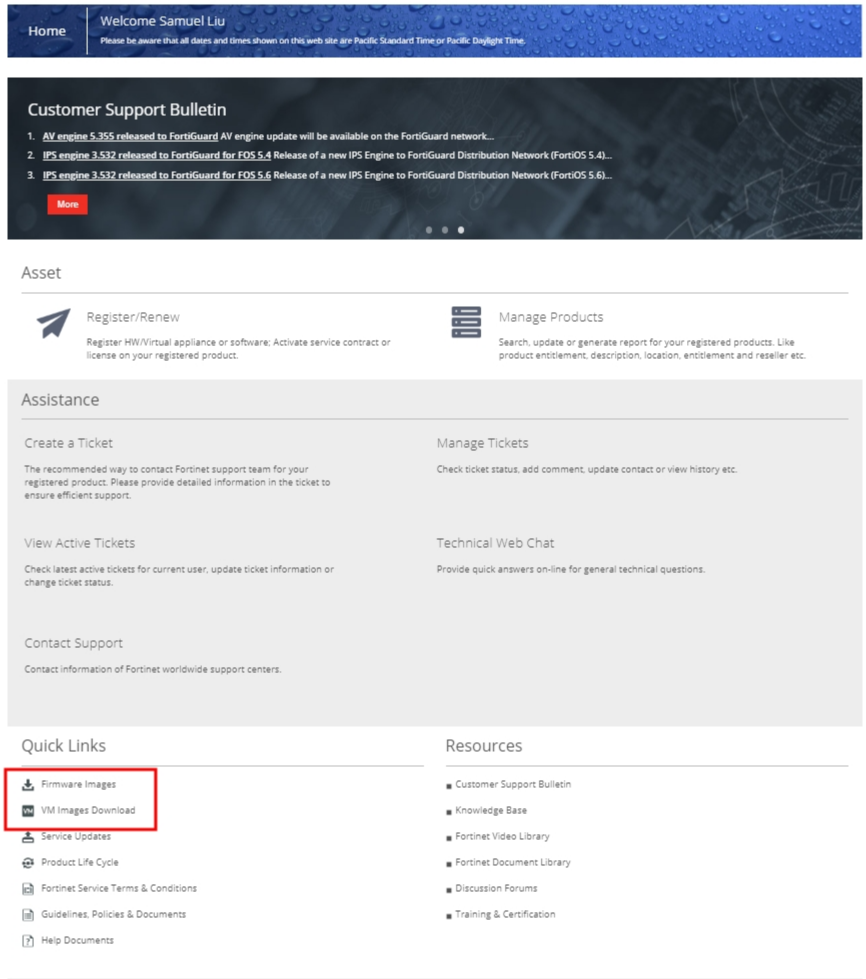
Bug ID	Description
0828572	200D/100F/200F/1000F/2000F/4000F incorrectly uses FortiADC-VM as the default certificate, which may cause FortiSandbox Cloud connection issues. This is expected to be fixed in the next release.

Image checksums

To verify the integrity of the firmware file, use a checksum tool and compute the firmware file's MD5 checksum. Compare it with the checksum indicated by Fortinet. If the checksums match, the file is intact.

MD5 checksums for Fortinet software and firmware releases are available from Fortinet Customer Service & Support. After logging in to the web site, near the bottom of the page, click the Firmware Image Checksums button. (The button appears only if one or more of your devices has a current support contract.) In the File Name field, enter the firmware image file name including its extension, then click Get Checksum Code.

Customer Service & Support image checksum tool



Home

Welcome Samuel Liu

Please be aware that all dates and times shown on this web site are Pacific Standard Time or Pacific Daylight Time.

Customer Support Bulletin

1. AV engine 5.355 released to FortiGuard AV engine update will be available on the FortiGuard network...
2. IPS engine 3.532 released to FortiGuard for FOS 5.4 Release of a new IPS Engine to FortiGuard Distribution Network (FortiOS 5.4)...
3. IPS engine 3.532 released to FortiGuard for FOS 5.6 Release of a new IPS Engine to FortiGuard Distribution Network (FortiOS 5.6)...

More

Asset

Register/Renew

Register HW/Virtual appliance or software; Activate service contract or license on your registered product.

Manage Products

Search, update or generate report for your registered products. Like product entitlement, description, location, entitlement and reseller etc.

Assistance

Create a Ticket

The recommended way to contact Fortinet support team for your registered product. Please provide detailed information in the ticket to ensure efficient support.

Manage Tickets

Check ticket status, add comment, update contact or view history etc.

View Active Tickets

Check latest active tickets for current user, update ticket information or change ticket status.

Technical Web Chat

Provide quick answers on-line for general technical questions.

Contact Support

Contact information of Fortinet worldwide support centers.

Quick Links

Firmware Images
VM Images Download
Service Updates
Product Life Cycle
Fortinet Service Terms & Conditions
Guidelines, Policies & Documents
Help Documents

Resources

- Customer Support Bulletin
- Knowledge Base
- Fortinet Video Library
- Fortinet Document Library
- Discussion Forums
- Training & Certification

Upgrade notes

This section includes upgrade information about FortiADC 6.2.5.

Supported upgrade paths

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

Note:

If you are upgrading to a version that is in a higher version level, you will need to upgrade to the nearest branch of the major level incrementally until you reach the desired version. For example, to upgrade from 5.3.5 to 6.1.5, you will follow the upgrade path below:

5.3.5 → 5.4.x → 6.0.x → 6.1.5

(wherein "x" refers to the latest version of the branch)

6.1.x to 6.2.x

Direct upgrade via the web GUI or the Console.

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.

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

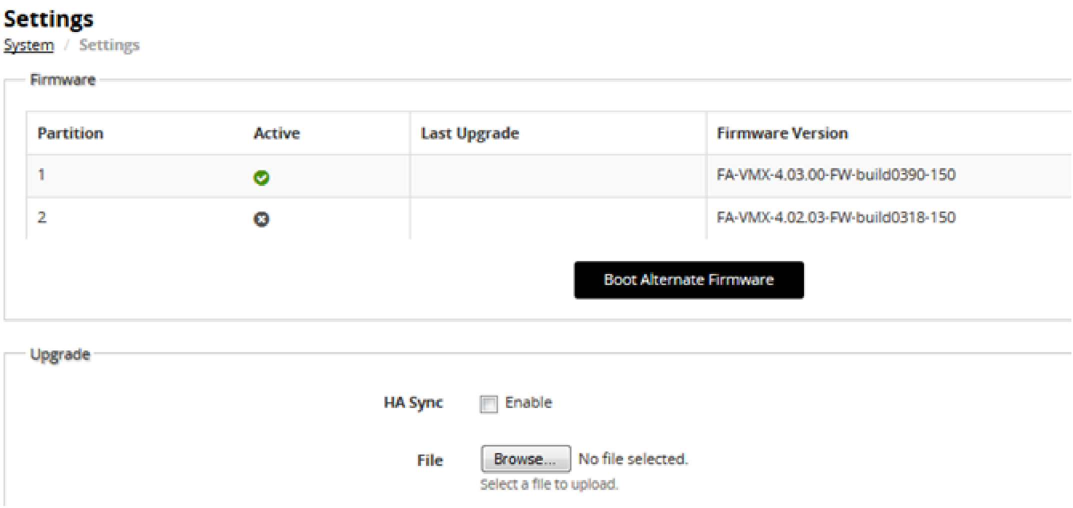
The following figure shows the user interface for managing firmware (either upgrades or downgrades). Firmware can be loaded on two disk partitions: the active partition and the alternate partition. The upgrade procedure:

- 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.



Partition	Active	Last Upgrade	Firmware Version
1	✓		FA-VMX-4.03.00-FW-build0390-150
2	✗		FA-VMX-4.02.03-FW-build0318-150

HA Sync □ Enable

File Browse... No file selected.
Select a file to upload.

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.

Special notes

Suggestions

- HSM doesn't support TLS v1.3. If the HSM certificate is used in VS, the TLS v1.3 handshake will fail. **Workaround:** Uncheck the TLSv1.3 in the SSL profile if you're using the HSM certificate to avoid potential handshake failure.
- 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 6.2.5, please discard the old 5.2.x/5.3.x config file and back up the config file in 6.2.5 again.
- Keep the old SSL version predefined config to ensure a smooth upgrade.
- 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 primary-secondary 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.
- In version 6.2.0, the default mode of QAT SSL has been changed to polling.
- To use the SRIOV feature, users must deploy a new VM.
- Before downgrading from 6.1.4, ensure the new L7 TCP or L7 UDP application profiles are deleted or changed to a profile type that is supported in the downgrade version. Otherwise, this will cause the cmdb to crash.
- After upgrading to 6.2.5, in HA environments where both nodes have been installed with certificate embedded licenses and are using FortiSandbox Cloud functions, you must reinstall the licenses. As the nodes would have been synchronized and overwritten during the upgrade, the certificates would not be recoverable. Reinstalling the certificate embedded licenses is required to ensure the certificate-related functions would work properly.