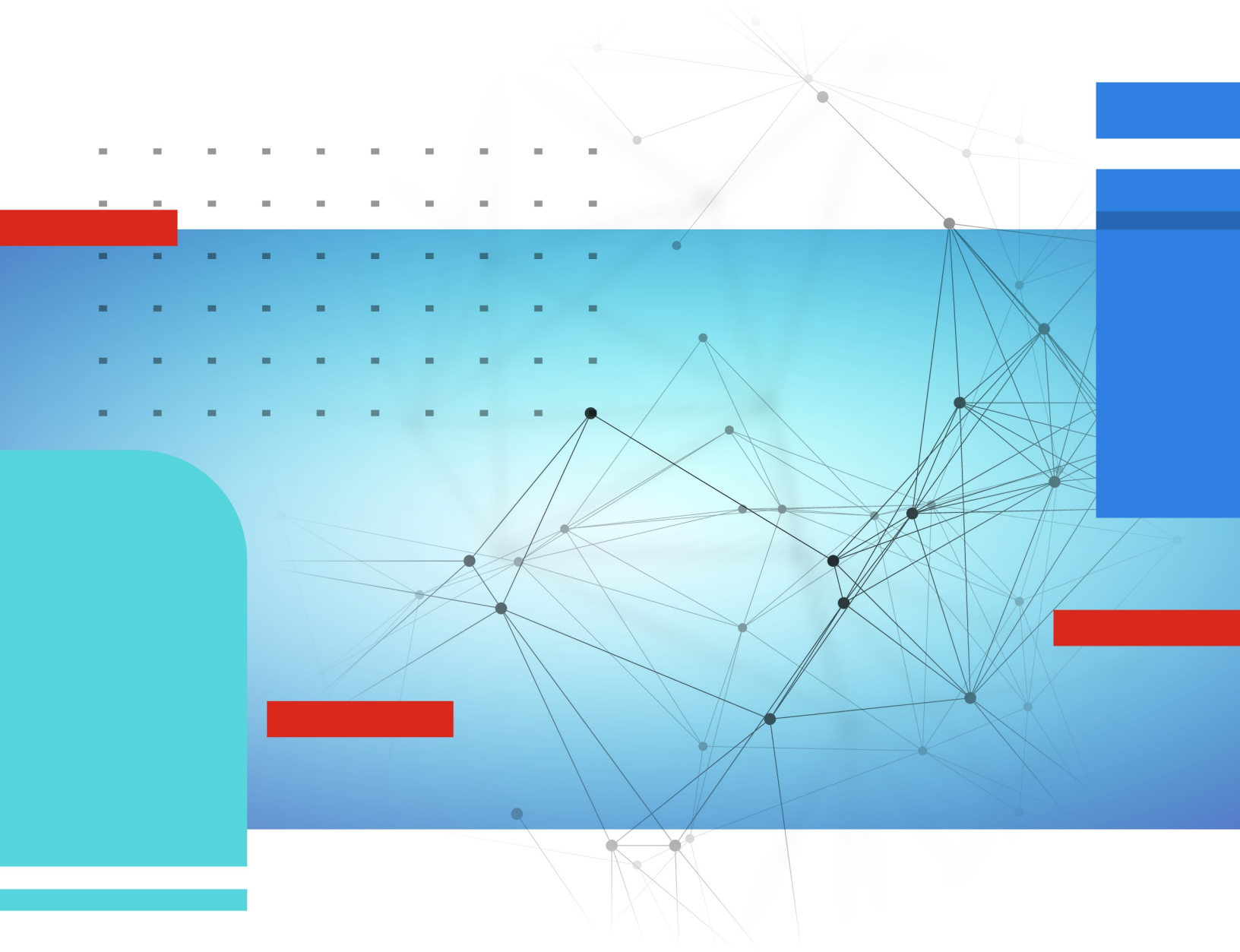
Release Notes

FortiADC 7.6.3



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July 14, 2025
FortiADC 7.6.3 Release Notes

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Change Log

Date	Change Description
July 14, 2025	FortiADC 7.6.3 Release Notes initial release.

Introduction

This *Release Notes* covers the new features, enhancements, known issues, and resolved issues of FortiADC™ version 7.6.3, Build 0602.

To upgrade to FortiADC 7.6.3, 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 7.6.3 introduces enhancements and new features across various modules including Web Application Firewall, Server Load Balance, Global Load Balance, and more.

More detailed information is available in the New Features Guide.

Network

IPv6 Support for HA Management Interface

FortiADC now supports configuration of an IPv6 address on the HA management interface, allowing administrators to access the system using either IPv4 or IPv6. This enhancement expands flexibility for deployments in dual-stack or IPv6-only environments.

IPv6 Router Advertisement Support via CLI

This enhancement adds the new CLI command `config router ipv6-ra` to support the Router Advertisement (RA) functionality, allowing FortiADC to act as an IPv6 router and broadcast configuration information to hosts on the network. This feature helps fulfill RIPE-772 compliance requirements and supports automatic IPv6 address configuration (SLAAC) as well as DNS configuration via RA options.

IPsec-Based Authentication and Encryption for OSPFv3 via CLI

FortiADC 7.6.3 introduces CLI-based support for IPsec authentication and encryption in OSPFv3, enabling secure exchange of dynamic routing information over IPv6. This enhancement helps meet regulatory and security requirements in environments where OSPFv3 packet confidentiality and integrity are mandatory.

Server Load Balance

L4 Virtual Server Support for ESP Packets (IPsec VPN without NAT-T)

FortiADC 7.6.3 adds support for handling ESP (Encapsulating Security Payload) protocol traffic in Layer 4 virtual servers. This enhancement enables FortiADC to support IPsec VPN deployments that operate without **NAT Traversal (NAT-T)**.

Previously, ESP packets were dropped when received by L4 virtual servers because the ESP protocol was not supported in Layer 4 SLB mode. This limitation prevented FortiADC from serving as a load balancer for IPsec VPN endpoints in non-NAT-T environments.

With this enhancement, FortiADC introduces session association logic that maps ESP packets to the IKE (Internet Key Exchange) session established during the initial VPN handshake.

Platform

New FortiADC-VMUL License Model and Expanded VDOM Support for Virtual Appliances 7.6.3

FortiADC 7.6.3 introduces the **FortiADC-VMUL** license model, a new virtual appliance option designed to support large-scale deployments requiring high vCPU and VDOM capacity. Unlike other VM models, VMUL supports deployment on systems with significantly higher compute resources—for example, configurations with 64 vCPUs—providing improved scalability and flexibility for enterprise and service provider environments.

As part of this enhancement, the **maximum number of supported VDOMs** has been expanded for several FortiADC virtual machine models. Previously, VM04 and VM08 were limited to 10 VDOMs, but with FortiADC 7.6.3, VDOM limits now align more closely with system memory allocation. **VMUL** supports up to **90 VDOMs**, matching the capabilities of the high-end VM32 model.

Hardware, VM, cloud platform, and browser support

This section lists the hardware models, hypervisor versions, cloud platforms, and web browsers supported by FortiADC 7.6.3. All supported platforms are 64-bit version of the system.

Supported Hardware:

- FortiADC 300D
- FortiADC 100F
- FortiADC 120F
- FortiADC 200F
- FortiADC 220F
- FortiADC 300F
- FortiADC 320F
- FortiADC 400F
- FortiADC 420F
- 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.

VDOM capacity by FortiADC VM model

The following table lists the maximum number of supported VDOMs for each FortiADC VM model and the corresponding recommended system memory:

VM Model	Maximum VDOMs	Recommended System Memory
VM01	10	8 GB
VM02	10	8 GB
VM04	25	≥ 16 GB
VM08	45	≥ 32 GB
VM16	60	≥ 64 GB
VM32	90	≥ 128 GB
VMUL	**90**	**≥ 128 GB**

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, 8.0
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, Octavia 2023.2
Nutanix	AHV
Proxmox VE	6.4

Supported cloud platforms:

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

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

Supported web browsers:

- Mozilla Firefox version 109
- Google Chrome version 110

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 7.6.3 release. For inquiries about particular bugs, please contact Fortinet Customer Service & Support.

Bug ID	Description
1168921	After upgrading to firmware version 7.6.2, IPv6 routes are missing and the default route becomes inactive due to delayed initialization of `rtmd`, which fails to load global address information during startup.
1163215	DNS zone transfers fail through FortiADC when the zone file is large, as the system sends a TCP RST to the backend after partial transfer (~25,000 records), due to an insufficient backend receive buffer size.
1160460	SCEP certificate retrieval fails when the server returns a full certificate chain containing multiple certificates.
1159739	In HA mode, when a session with the same 5-tuple is recreated on the primary ADC but maps to a different real server (RS), the updated RS name is not synced to the secondary, resulting in stale session data.
1151892	FortiADC services were interrupted due to multiple `httproxy-ssl` crashes, triggered when an HTTPS virtual server received HTTP/2 requests that were not properly processed.
1150240	FortiADC (secondary) enters a reboot loop when connected to the network with the heartbeat interface active, triggered by a buffer overflow caused by an excessively long certificate file name.
1143314	FortiADC drops ESP traffic in an IPsec tunnel setup, replying with ICMPv6 "Unrecognized Next Header" messages. This occurs because ESP packets do not match existing IKEv2-created UDP sessions using 5-tuple keys, preventing proper session association and DNAT processing.

Known issues

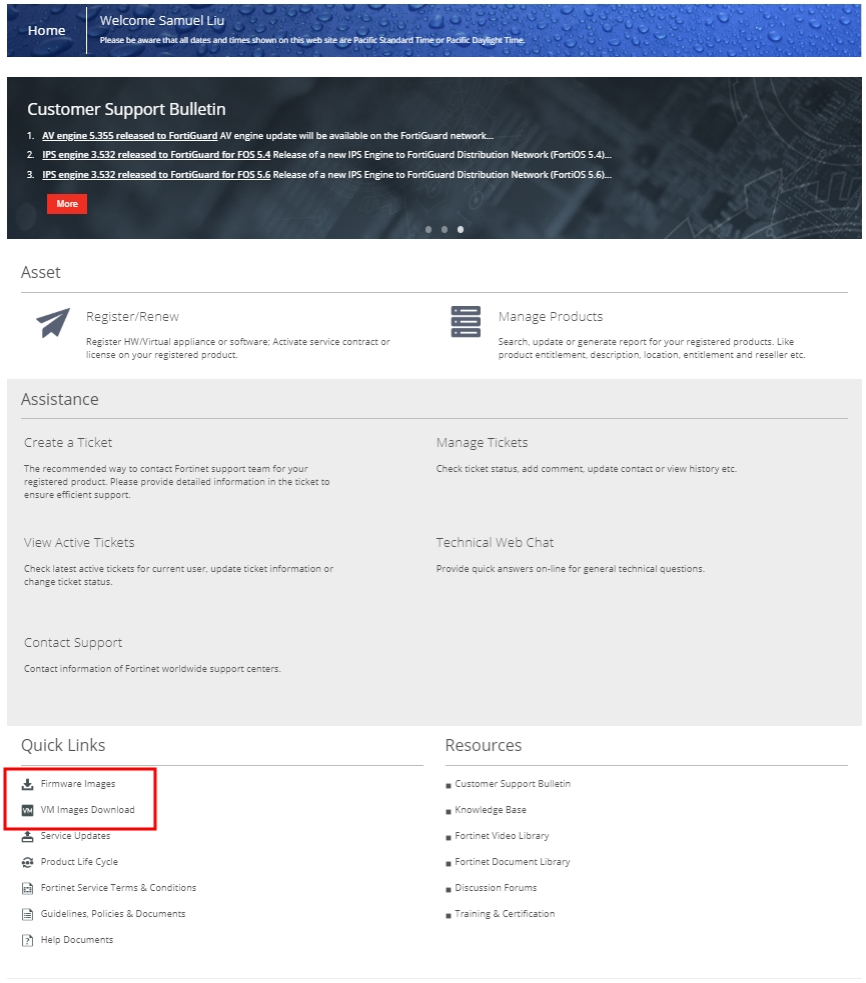
There are no known issues in version FortiADC7.6.3.

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



Upgrade notes

This section includes upgrade information about FortiADC 7.6.3.

Supported upgrade paths

To upgrade to FortiADC 7.6.3, you must proceed incrementally through each major version branch until you reach the target version. This ensures compatibility and system stability.

For example, to upgrade from **7.4.2** to **7.6.3**, follow this path:

7.4.2 → 7.4.x → **7.6.2** → 7.6.3

(Where "x" refers to the latest patch version in the branch.)

Important: Disk Expansion Requirement in 7.6.2

If you are upgrading from **7.6.1 or earlier** and intend to upgrade to **7.6.3 or later**, you must first upgrade to **7.6.2**. This is required due to the disk expansion mechanism introduced in FortiADC 7.6.2.

Skipping 7.6.2 may result in system issues or failed upgrades due to incompatible disk layout changes. For details, see Data Partition Expansion 7.6.2 on page 14.

7.6.2 to 7.6.3

Direct upgrade via the web GUI or the Console.

7.4.x to 7.6.0/7.6.1/7.6.2

Direct upgrade via the web GUI or the Console.

7.2.x to 7.4.x

Direct upgrade via the web GUI or the Console.

7.1.x to 7.2.x

Direct upgrade via the web GUI or the Console.

7.0.x to 7.1.x

Direct upgrade via the web GUI or the Console.

6.2.x to 7.0.x

Direct upgrade via the web GUI or the Console.

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.

For more information on upgrading from versions earlier than 5.2.x, please see the Upgrade Instructions document for that version.

Data Partition Expansion - 7.6.2

In FortiADC 7.6.2, the data partition size is expanded to support larger firmware images and new feature implementations. The existing 200MB partition on most platforms has been a limiting factor for future enhancements. This update increases the partition size to the maximum allowable capacity based on the system's hardware, ensuring compatibility with upcoming releases.

This expansion applies only to hardware appliances and private cloud instances. Public cloud images will maintain the current partition size.

Key Enhancements

Benefit	Details
Increased Storage Capacity	Expands the data partition from 200MB to the maximum available space on supported hardware and private cloud platforms, allowing more room for firmware images, logs, and feature enhancements.
Seamless Future Upgrades	Eliminates storage-related upgrade failures, ensuring smooth transitions to newer firmware versions.
Enhanced System Longevity	Prevents storage limitations from restricting feature adoption, extending the platform's scalability and maintainability.

Upgrade Considerations and Limitations

Expanding the data partition in FortiADC 7.6.2 introduces specific upgrade requirements and operational impacts. Administrators must follow a structured upgrade path to ensure a smooth transition while considering potential limitations.

Mandatory Upgrade Path

Upgrading beyond 7.6.2 (such as 7.6.3) requires installing 7.6.2 first. This ensures that the partition expansion is completed before applying a newer firmware version. Any attempt to upgrade directly to a post-7.6.2 release without first installing 7.6.2 will be blocked.

Longer Upgrade Duration

Because the upgrade includes a partition resizing process, the total upgrade time is longer than a typical firmware update. The duration depends on the platform and storage configuration, so administrators should plan accordingly to minimize downtime.

Irreversible Partition Change

Once the partition is expanded in 7.6.2, it cannot be reverted by downgrading to a previous firmware version. The partition remains in its expanded state even if an earlier release is installed. Before upgrading, ensure that your environment is compatible with 7.6.2 and later versions.

HA Cluster Upgrade Best Practices

For HA (High Availability) clusters, follow these guidelines to prevent service disruption:

- Do not toggle HA mode during the upgrade, as this can lead to downtime for all nodes in the process.
- Upgrade each node individually, rather than upgrading all nodes at once, to minimize potential issues.
- For Active-Passive (A-P) clusters, start by upgrading the secondary node. Once the secondary node is fully operational, proceed to upgrade the primary node to ensure continued availability.

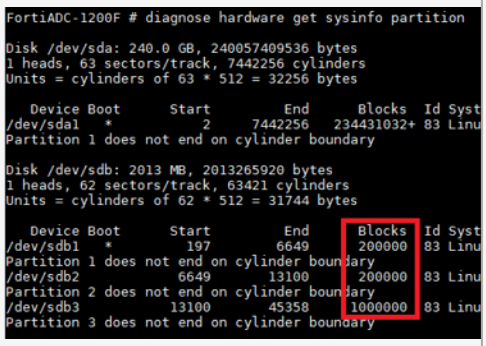
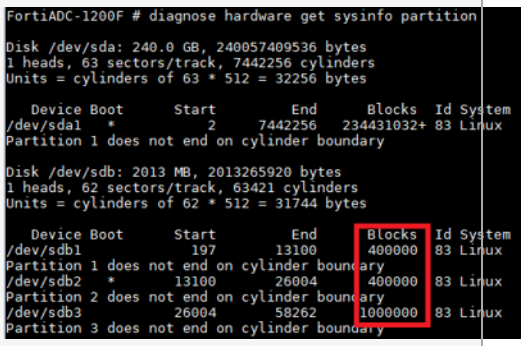
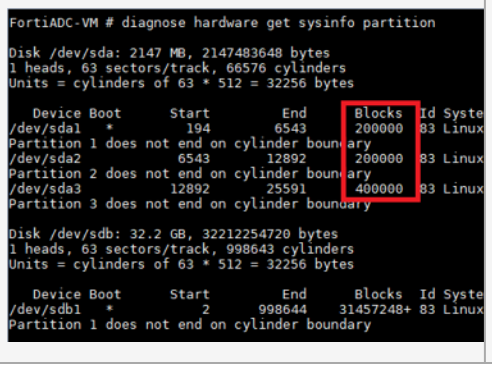
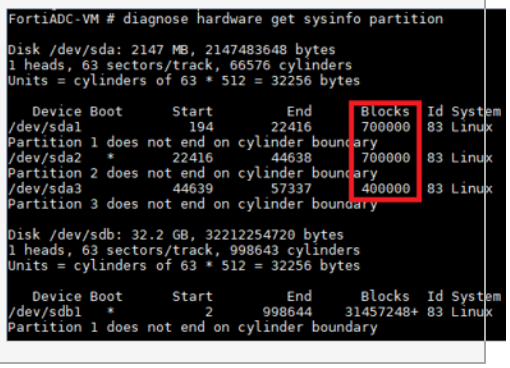
Verifying Successful Data Partition Expansion

After performing an upgrade to FortiADC version 7.6.2 or later, the data partition will be expanded to provide increased storage capacity. To verify that the expansion has been successfully applied, you can use the following CLI command:

```
diagnose hardware get sysinfo partition
```

This command returns detailed information on the system's storage partitions, including the size of the data partition. By comparing the partition size values before and after the upgrade, you can confirm that the partition has been expanded as expected.

Example output comparison:

Platform	Before Upgrade to 7.6.2	After Upgrade to 7.6.2
Hardware (1200F)		
Virtual Machine		

Upgrading a stand-alone appliance

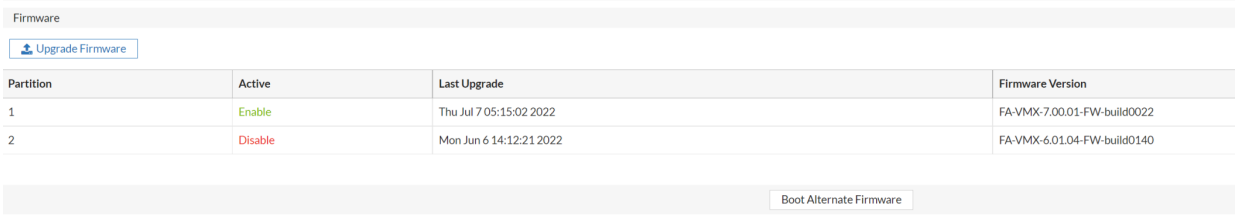
The following figure shows the user interface for managing firmware (either upgrades or downgrades). Firmware can be loaded on two disk partitions: the active partition and the alternate partition. The upgrade procedure:

- 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 the firmware:

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

The upgrade page includes an option to upgrade the firmware on all nodes in an HA cluster from the primary node.

The following chain of events occur 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.)

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 Firmware** button.
5. Click **Choose File** to locate and select the file.
6. Enable the **HA Cluster Upgrade**.
7. Click to upload the firmware and start the upgrade process.

After the new firmware has been installed, the system reboots.

When you update software, you are also updating the web UI. To ensure the web UI displays the updated pages correctly:

- Clear your browser cache.
- Refresh the page.

In most environments, press Ctrl+F5 to force the browser to get a new copy of the content from the web application. See the Wikipedia article on browser caching issues for a summary of tips for many environments: https://en.wikipedia.org/wiki/Wikipedia:Bypass_your_cache.

Special notes and suggestions

7.2.3

- The real server auto-populate feature is currently supported only in FortiADC version 7.2.3. Upgrading from version 7.2.3 to 7.4.0/7.4.1 will cause auto-populated real server related configuration loss, and may cause other unexpected behavior.
  Support for real server auto-population will be extended to later versions in the next release.

7.0.2/7.1.x

- After upgrading to 7.0.2/7.1.x, in Virtual Machine HA environments where both nodes have been installed with certificate embedded licenses you must reinstall those licenses. As some backend certificate files would have been synchronized and overwritten by the HA Peer (due to an existing bug), the certificate file would not be recoverable. Reinstalling the certificate embedded licenses is required to ensure they would work properly where they are needed, such as in ZTNA or FortiSandbox Cloud.

7.0.0

- When deploying the new GSLB based on FortiADC 7.0.0, the verify-CA function will be enabled by default.

6.2.2

- To use the SRIOV feature, users must deploy a new VM.

6.2.0

- In version 6.2.0, the default mode of QAT SSL has been changed to polling.

6.1.4

- 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.

5.2.0-5.2.4/5.3.0-5.3.1

- The backup configuration file in versions 5.2.0-5.2.4/5.3.0-5.3.1 containing the certificate configuration might not be restored properly (causing the configuration to be lost). After upgrading, please discard the old 5.2.x/5.3.x configuration file and back up the configuration file in the upgraded version again.

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