

Release Notes

FortiADC 7.4.4



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FortiADC 7.4.4 Release Notes

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Change Log

Date	Change Description
May 31, 2024	FortiADC 7.4.4 Release Notes initial release.

Introduction

This *Release Notes* covers the new features, enhancements, known issues, and resolved issues of FortiADC™ version 7.4.4, Build 0347.

To upgrade to FortiADC 7.4.4, 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 7.4.4 offers the following new features and enhancements:

Client address insertion in Layer 4 TCP virtual server

In Layer 4 TCP virtual servers, you can now insert the Client IP in the TCP option. In configurations with source NAT, the client IP is modified during packet forwarding, which makes it difficult to identify the original client IP after that information has been altered. By inserting the Client IP in the TCP option, it enables the real servers to easily retrieve the client address.

The screenshot shows the configuration page for an Application Profile. The 'Name' field is highlighted with a yellow background and contains the text 'Required config name. No spaces.' The 'Type' dropdown is set to 'TCP'. Under the 'Specifics' section, the 'Client IP Insertion in TCP Option' toggle is turned off and is highlighted with a red rectangular box. Other settings include 'Timeout TCP Session' (100), 'Timeout TCP Session after FIN' (100), 'Timeout Send RST' (off), 'IP Reputation' (off), 'Geo IP Blocklist' (Click to select), and 'Geo IP Allowlist' (Click to select).

Application Profile	
Name	Required config name. No spaces.
Type	TCP
Specifics	
Timeout TCP Session	100 Default: 100 Range: 1-86400 seconds
Timeout TCP Session after FIN	100 Default: 100 Range: 1-86400 seconds
Timeout Send RST	☐
Client IP Insertion in TCP Option	☐
IP Reputation	☐
Geo IP Blocklist	Click to select
Geo IP Allowlist	Click to select

Hardware support for HA Active-Active-VRRP Unicast and Broadcast

This enhancement has extended the HA functionality in FortiADC hardware configurations to include both Unicast and Broadcast heartbeat types in Active-Active-VRRP mode; whereas previously, hardware HA only supported the Multicast heartbeat type by default in Active-Active-VRRP mode.

Setting

Cluster Mode

Basic

Group Name	FADC-HW
Group ID	1 Default: 0 Range: 0-31
Config Priority	100 Default: 100 Range: 0-255
Local Node ID	0 Default: 0 Range: 0-7
Heartbeat Interface	ha X +
Data Interface	ha X +
Heartbeat Type	Multicast Broadcast <input checked="" type="button" value="Unicast"/>
Peer Address	1.1.1.1
Local Address	1.1.1.0

Hardware, VM, cloud platform, and browser support

This section lists the hardware models, hypervisor versions, cloud platforms, and web browsers supported by FortiADC 7.4.4. All supported platforms are 64-bit version of the system.

Supported Hardware:

- FortiADC 300D
- FortiADC 400D
- 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](#).

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
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

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 7.4.4 release. For inquiries about particular bugs, please contact [Fortinet Customer Service & Support](#).

Bug ID	Description
1034347	High CPU utilization due to timer system issues, and httpoxy-SSL crashes caused by crash in the WAF module.
1031466	Unable to pass TLS-APLN-01 challenge with HTTP2 VS.
1028042	When an SDN Connector is disabled/disconnected, the Dynamic manual real servers using the SDN Connector remains enabled when it should be disabled.
1028025	ICMP Timestamp Request Remote Date Disclosure (CVE-1999-0524) remediation support.
1027026	FD (file descriptor) leak for Health Check, leading to partial VS down in the VDOM.
1025346	In GLB, the error "GLB FQDN A/AAAA hosts are duplicated" message occurs when adding more than two A records into a policy.
1025087	FortiADC stops processing DNS queries with the zone type defined as fqdn-generate.
1024877	When an SDN Connector is disabled, the dynamic real server pool and its RS members remains available when they should be removed once the SDN Connector is disabled.
1024031	High CPU usage occurs after upgrading device from 7.4.1 to 7.4.3.
1022505	GSLB does not work as expected after upgrading to 7.2.4.
1020498	Alertd crashes when HA synchronizes configurations.
1005919	The FortiADC becomes stuck on 1M connections on the dashboard concurrent sessions as a result of a timer system issue.
1005767	Unable to manage the FortiADC if logged in as LDAP user due to exceeding the maximum DN (Distinguished Name) length of 127 characters.
1003220	FortiADC-VM memory leak caused by the incorrect return of ha_tun_rcv.
0999904	Httpoxy-SSL crashed related to the WAF module crash.
0979813	Web-category-test display issues.
0857626	FortiADC network becomes unresponsive at random in Redhat Openstack environment.

Known issues

There are no known issues in version FortiADC7.4.4.

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

The screenshot shows the Fortinet Customer Service & Support portal. At the top, a blue banner displays 'Home' and 'Welcome Samuel Liu' with a note about time zones. Below this is a 'Customer Support Bulletin' section with three items: 'AV engine 5.355 released to FortiGuard AV engine update will be available on the FortiGuard network...', 'IPS engine 3.532 released to FortiGuard for FDS 5.4 Release of a new IPS Engine to FortiGuard Distribution Network (FortiOS 5.4)...', and 'IPS engine 3.532 released to FortiGuard for FDS 5.6 Release of a new IPS Engine to FortiGuard Distribution Network (FortiOS 5.6)...'. A 'More' button is present. The main content area is divided into 'Asset' and 'Assistance' sections. 'Asset' includes 'Register/Renew' and 'Manage Products'. 'Assistance' includes 'Create a Ticket', 'Manage Tickets', 'View Active Tickets', 'Technical Web Chat', and 'Contact Support'. At the bottom, there are 'Quick Links' and 'Resources' sections. In the 'Quick Links' section, 'Firmware Images' and 'VM Images Download' are highlighted with a red box. The 'Resources' section lists various links like 'Customer Support Bulletin', 'Knowledge Base', 'Fortinet Video Library', 'Fortinet Document Library', 'Discussion Forums', and 'Training & Certification'.

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 FDS 5.4 Release of a new IPS Engine to FortiGuard Distribution Network (FortiOS 5.4)...
3. IPS engine 3.532 released to FortiGuard for FDS 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 7.4.4.

Supported upgrade paths

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

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 7.1.1 to 7.4.0, you will follow the upgrade path below:

7.1.1 → 7.1.x → 7.2.x → 7.4.0

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

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.

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.

Firmware			
Upgrade Firmware			
Partition	Active	Last Upgrade	Firmware Version
1	Enable	Thu Jul 7 05:15:02 2022	FA-VMX-7.00.01-FW-build0022
2	Disable	Mon Jun 6 14:12:21 2022	FA-VMX-6.01.04-FW-build0140
Boot Alternate Firmware			

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.)
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 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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