



FortiManager - Release Notes

Version 6.4.9

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FortiManager 6.4.9 Release Notes

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TABLE OF CONTENTS

Change Log	5
FortiManager 6.4.9 Release	6
Supported models	6
FortiManager VM subscription license	6
Management extension applications	7
Supported models for MEA	7
Minimum system requirements	7
Special Notices	8
View Mode is disabled in policies when policy blocks are used	8
Custom signature filenames	8
SDN fabric connectors	8
ADOM version enforcement	8
Management Extension Applications (MEA) and upgrade	9
Policy Hit Count on unused policy	9
Wireless Manager (FortiWLM) not accessible	9
SD-WAN Orchestrator not accessible	9
Support for FortiOS 6.4 SD-WAN Zones	9
FortiGuard Rating Services with FortiGate 6.4.1 or Later	10
Citrix XenServer default limits and upgrade	10
Multi-step firmware upgrades	10
Hyper-V FortiManager-VM running on an AMD CPU	10
SSLv3 on FortiManager-VM64-AWS	11
Upgrade Information	12
Downgrading to previous firmware versions	12
Firmware image checksums	12
FortiManager VM firmware	12
SNMP MIB files	14
Product Integration and Support	15
FortiManager 6.4.9 support	15
Web browsers	16
FortiOS/FortiOS Carrier	16
FortiADC	16
FortiAnalyzer	16
FortiAuthenticator	16
FortiCache	16
FortiClient	17
FortiDDoS	17
FortiMail	17
FortiSandbox	17
FortiSOAR	18
FortiSwitch ATCA	18
FortiTester	18

FortiWeb	18
Virtualization	19
Feature support	19
Language support	20
Supported models	20
FortiGate models	21
FortiGate special branch models	23
FortiCarrier models	24
FortiADC models	25
FortiAnalyzer models	26
FortiAuthenticator models	27
FortiCache models	27
FortiDDoS models	27
FortiMail models	28
FortiProxy models	28
FortiSandbox models	28
FortiSOAR models	29
FortiSwitch ATCA models	29
FortiTester models	29
FortiWeb models	30
Resolved Issues	32
AP Manager	32
Device Manager	32
FortiSwitch Manager	33
Global ADOM	33
Others	34
Policy and Objects	35
Revision History	36
Services	36
System Settings	37
VPN Manager	37
Known Issues	38
Device Manager	38
Others	38
Policy & Objects	39
Services	39
System Settings	39
VPN Manager	40
Appendix A - FortiGuard Distribution Servers (FDS)	41
FortiGuard Center update support	41
Appendix B - Default and maximum number of ADOMs supported	42
Hardware models	42
Virtual Machines	42

Change Log

Date	Change Description
2022-08-31	Initial release.
2022-10-20	Added FortiGate-200F, FortiGate-201F, FortiGate-2600F, FortiGate-2600F-DC, FortiGate-2601F, and FortiGate-2601F-DC to FortiGate models on page 21 .
2022-10-21	Updated FortiGate special branch models on page 23 .
2022-11-21	Updated Known Issues on page 38 .
2022-12-01	Updated FortiGate models on page 21 .
2022-12-14	Updated Resolved Issues on page 32 .
2022-12-20	Updated Resolved Issues on page 32 .
2023-01-30	Updated FortiOS/FortiOS Carrier on page 16 .
2023-07-12	Updated Resolved Issues on page 32 and Known Issues on page 38 .
2023-11-21	

FortiManager 6.4.9 Release

This document provides information about FortiManager version 6.4.9 build 2513.



The recommended minimum screen resolution for the FortiManager GUI is 1920 x 1080. Please adjust the screen resolution accordingly. Otherwise, the GUI may not display properly.

This section includes the following topics:

- [Supported models on page 6](#)
- [FortiManager VM subscription license on page 6](#)
- [Management extension applications on page 7](#)

Supported models

FortiManager version 6.4.9 supports the following models:

FortiManager	FMG-200F, FMG-200G, FMG-300E, FMG-300F, FMG-400E, FMG-400G, FMG-1000F, FMG-2000E, FMG-3000F, FMG-3000G, FMG-3700F, FMG-3700G, FMG-3900E, and FMG-4000E.
FortiManager VM	FMG-VM64, FMG-VM64-Ali, FMG-VM64-AWS, FMG-VM64-AWSOnDemand, FMG-VM64-Azure, FMG-VM64-GCP, FMG-VM64-HV (including Hyper-V 2016, 2019), FMG-VM64-KVM, FMG-VM64-OPC, FMG-VM64-XEN (for both Citrix and Open Source Xen).

FortiManager VM subscription license

The FortiManager VM subscription license supports FortiManager version 6.4.1 and later. For information about supported firmware, see [FortiManager VM firmware on page 12](#).

See also [Appendix B - Default and maximum number of ADOMs supported on page 42](#).



You can use the FortiManager VM subscription license with new FMG-VM installations. For existing FMG-VM installations, you cannot upgrade to a FortiManager VM subscription license. Instead, you must migrate data from the existing FMG-VM to a new FMG-VM with subscription license.

Management extension applications

The following section describes supported models and minimum system requirements for management extension applications (MEA) in FortiManager 6.4.9.



FortiManager uses port TCP/4443 to connect to the Fortinet registry and download MEAs. Ensure that the port is also open on any upstream FortiGates. For more information about incoming and outgoing ports, see the [FortiManager 6.4 Ports and Protocols Guide](#).

Supported models for MEA

You can use any of the following FortiManager models as a host for management extension applications:

FortiManager	FMG-3000F, FMG-3000G, FMG-3700F, FMG-3700G, FMG-3900E, and FMG-4000E.
FortiManager VM	FMG-VM64, FMG-VM64-Ali, FMG-VM64-AWS, FMG-VM64-AWSOnDemand, FMG-VM64-Azure, FMG-VM64-GCP, FMG-VM64-HV (including Hyper-V 2016, 2019), FMG-VM64-KVM, FMG-VM64-OPC, FMG-VM64-XEN (for both Citrix and Open Source Xen).

Minimum system requirements

Some management extension applications supported by FortiManager 6.4.9 have minimum system requirements. See the following table:

Management Extension Application	Minimum system requirement
SD-WAN Orchestrator	At least 12GB of memory is recommended to support SD-WAN Orchestrator MEA.
Wireless Manager (WLM)	A minimum of 4 CPU cores and 8 GB RAM is typically required. Depending on the number of running applications, the allocated resources should be increased.

Special Notices

This section highlights some of the operational changes that administrators should be aware of in 6.4.9.

View Mode is disabled in policies when policy blocks are used

When policy blocks are added to a policy package, the *View Mode* option is no longer available, and policies in the table cannot be arranged by *Interface Pair View*. This occurs because policy blocks typically contain multiple policies using different incoming and outgoing interfaces, however, *View Mode* is still disabled even when policy blocks respect the interface pair.

Custom signature filenames

Custom signature filenames are limited to a maximum of 50 characters because FortiManager appends the VDOM suffix to custom signature filenames when FortiGate uses VDOMs.

SDN fabric connectors

According to the current design, SDN fabric connectors are installed on all FortiGates in an ADOM, even if the fabric connectors are not in use. See also bug ID 496870 in [Known Issues on page 38](#).

Workaround: Place FortiGates in another ADOM when you do not want to install SDN fabric connectors to the devices.

ADOM version enforcement

Starting in FortiManager 6.4.6, ADOM versions are enforced. ADOM version N and N+1 are allowed, and the enforcement affects policy package installation.

For example, if you have ADOM version 6.0, and it contains a FortiGate running FortiOS 6.4, you cannot install a version 6.0 policy package to the FortiGate. The policy package installation fails with the following error message: `Device preparation failed: version mismatched, adom:6.0; dev:6.4.`

Management Extension Applications (MEA) and upgrade

Upgrading FortiManager when Management Extension Applications (MEA) are enabled may reset your *System Settings* to the default settings.

To prevent your *System Settings* from being lost, please disable all Management Extension Applications (MEA) prior to upgrading FortiManager.

Policy Hit Count on unused policy

FortiManager 6.4.3 and later no longer displays policy hit count information on the *Policy & Objects > Policy Packages* pane. However, you can view hit count information by using the *Unused Policies* feature and clearing the *Unused Only* checkbox. For more information, see the [FortiManager 6.4 New Features Guide](#).

Wireless Manager (FortiWLM) not accessible

If Wireless Manager was enabled in FortiManager 6.4.0, you can no longer access it in the FortiManager GUI when you upgrade FortiManager to 6.4.2. When you try to access FortiWLM, you are redirected to the FortiManager dashboard.

SD-WAN Orchestrator not accessible

If SD-WAN Orchestrator was enabled in FortiManager 6.4.1, you can no longer access it in the FortiManager GUI after upgrading to FortiManager 6.4.2.

To workaround this issue, run the following CLI command to manually trigger an update of SD-WAN Orchestrator to 6.4.1 r2:

```
diagnose docker upgrade sdwancontroller
```

Support for FortiOS 6.4 SD-WAN Zones

In 6.4 ADOMs, SD-WAN member interfaces are grouped into SD-WAN zones. These zones can be imported as normalized interfaces and used in firewall policies.



Customers upgrading FortiGates from FortiOS 6.2 to 6.4 who cannot upgrade the ADOM are advised to temporarily disable SD-WAN central management until they can upgrade the ADOM to 6.4. This is to prevent FortiManager from attempting to delete the newly created SD-WAN zones on the FortiGate.

FortiGuard Rating Services with FortiGate 6.4.1 or Later

FortiManager 6.4.1 or later is the supported version to provide FortiGuard rating services to FortiGate 6.4.1 or later.

Citrix XenServer default limits and upgrade

Citrix XenServer limits ramdisk to 128M by default. However the FMG-VM64-XEN image is larger than 128M. Before updating to FortiManager 6.4, increase the size of the ramdisk setting on Citrix XenServer.

To increase the size of the ramdisk setting:

1. On Citrix XenServer, run the following command:

```
xenstore-write /mh/limits/pv-ramdisk-max-size 536,870,912
```

2. Confirm the setting is in effect by running `xenstore-ls`.

```
-----  
limits = ""  
pv-kernel-max-size = "33554432"  
pv-ramdisk-max-size = "536,870,912"  
boot-time = ""  
-----
```

3. Remove the pending files left in `/run/xen/pygrub`.



The ramdisk setting returns to the default value after rebooting.

Multi-step firmware upgrades

Prior to using the FortiManager to push a multi-step firmware upgrade, confirm the upgrade path matches the path outlined on our support site. To confirm the path, please run:

```
dia fwmanager show-dev-upgrade-path <device name> <target firmware>
```

Alternatively, you can push one firmware step at a time.

Hyper-V FortiManager-VM running on an AMD CPU

A Hyper-V FMG-VM running on a PC with an AMD CPU may experience a kernel panic. Fortinet recommends running VMs on an Intel-based PC.

SSLv3 on FortiManager-VM64-AWS

Due to known vulnerabilities in the SSLv3 protocol, FortiManager-VM64-AWS only enables TLSv1 by default. All other models enable both TLSv1 and SSLv3. If you wish to disable SSLv3 support, please run:

```
config system global
set ssl-protocol tlsv1
end
```

Upgrade Information

You can upgrade FortiManager 6.2.0 or later directly to 6.4.9.



For other upgrade paths and details about upgrading your FortiManager device, see the *FortiManager Upgrade Guide*.

This section contains the following topics:

- [Downgrading to previous firmware versions on page 12](#)
- [Firmware image checksums on page 12](#)
- [FortiManager VM firmware on page 12](#)
- [SNMP MIB files on page 14](#)

Downgrading to previous firmware versions

FortiManager does not provide a full downgrade path. You can downgrade to a previous firmware release via the GUI or CLI, but doing so results in configuration loss. In addition the local password is erased.

A system reset is required after the firmware downgrading process has completed. To reset the system, use the following CLI commands via a console port connection:

```
execute reset {all-settings | all-except-ip}  
execute format {disk | disk-ext4 | disk-ext3}
```

Firmware image checksums

The MD5 checksums for all Fortinet software and firmware releases are available at the Customer Service & Support portal, <https://support.fortinet.com>. After logging in select *Download > Firmware Image Checksums*, enter the image file name including the extension, and select *Get Checksum Code*.

FortiManager VM firmware

Fortinet provides FortiManager VM firmware images for Amazon AWS, Citrix and Open Source XenServer, Linux KVM, Microsoft Hyper-V Server, and VMware ESX/ESXi virtualization environments.

Aliyun

- `.out`: Download the 64-bit firmware image to upgrade your existing FortiManager VM installation.
- `.out.kvm.zip`: Download the 64-bit package for a new FortiManager VM installation. This package contains QCOW2 that can be used by qemu.

Amazon Web Services

- The 64-bit Amazon Machine Image (AMI) is available on the AWS marketplace.

Citrix XenServer and Open Source XenServer

- `.out`: Download the 64-bit firmware image to upgrade your existing FortiManager VM installation.
- `.out.OpenXen.zip`: Download the 64-bit package for a new FortiManager VM installation. This package contains the QCOW2 file for the Open Source Xen Server.
- `.out.CitrixXen.zip`: Download the 64-bit package for a new FortiManager VM installation. This package contains the Citrix XenServer Virtual Appliance (XVA), Virtual Hard Disk (VHD), and OVF files.

Linux KVM

- `.out`: Download the 64-bit firmware image to upgrade your existing FortiManager VM installation.
- `.out.kvm.zip`: Download the 64-bit package for a new FortiManager VM installation. This package contains QCOW2 that can be used by qemu.

Microsoft Azure

The files for Microsoft Azure have AZURE in the filenames, for example `FMG_VM64_AZURE-v<number>-build<number>-FORTINET.out.hyperv.zip`.

- `.out`: Download the firmware image to upgrade your existing FortiManager VM installation.

Microsoft Hyper-V Server

The files for Microsoft Hyper-V Server have HV in the filenames, for example, `FMG_VM64_HV-v<number>-build<number>-FORTINET.out.hyperv.zip`.

- `.out`: Download the firmware image to upgrade your existing FortiManager VM installation.
- `.hyperv.zip`: Download the package for a new FortiManager VM installation. This package contains a Virtual Hard Disk (VHD) file for Microsoft Hyper-V Server.



Microsoft Hyper-V 2016 is supported.

VMware ESX/ESXi

- `.out`: Download the 64-bit firmware image to upgrade your existing VM installation.
- `.ovf.zip`: Download either the 64-bit package for a new VM installation. This package contains an Open Virtualization Format (OVF) file for VMware and two Virtual Machine Disk Format (VMDK) files used by the OVF file during deployment.



For more information see the [FortiManager Data Sheet](#) available on the Fortinet web site. VM installation guides are available in the [Fortinet Document Library](#).

SNMP MIB files

You can download the *FORTINET-FORTIMANAGER-FORTIANALYZER.mib* MIB file in the firmware image file folder. The Fortinet Core MIB file is located in the main FortiManager version 5.00 file folder.

Product Integration and Support

This section lists FortiManager 6.4.9 support of other Fortinet products. It also identifies what FortiManager features are supported for managed platforms and what languages FortiManager supports. It also lists which Fortinet models can be managed by FortiManager.

The section contains the following topics:

- [FortiManager 6.4.9 support on page 15](#)
- [Feature support on page 19](#)
- [Language support on page 20](#)
- [Supported models on page 20](#)

FortiManager 6.4.9 support

This section identifies FortiManager 6.4.9 product integration and support information:

- [Web browsers on page 16](#)
- [FortiOS/FortiOS Carrier on page 16](#)
- [FortiADC on page 16](#)
- [FortiAnalyzer on page 16](#)
- [FortiAuthenticator on page 16](#)
- [FortiCache on page 16](#)
- [FortiClient on page 17](#)
- [FortiDDoS on page 17](#)
- [FortiMail on page 17](#)
- [FortiSandbox on page 17](#)
- [FortiSOAR on page 18](#)
- [FortiSwitch ATCA on page 18](#)
- [FortiTester on page 18](#)
- [FortiWeb on page 18](#)
- [Virtualization on page 19](#)



To confirm that a device model or firmware version is supported by the current firmware version running on FortiManager, run the following CLI command:

```
diagnose dvm supported-platforms list
```



Always review the Release Notes of the supported platform firmware version before upgrading your device.

Web browsers

This section lists FortiManager 6.4.9 product integration and support for web browsers:

- Microsoft Edge 80 (80.0.361 or later)
- Mozilla Firefox version 91
- Google Chrome version 92

Other web browsers may function correctly, but are not supported by Fortinet.

FortiOS/FortiOS Carrier

This section lists FortiManager 6.4.9 product integration and support for FortiOS/FortiOS Carrier:

- 6.4.0 to 6.4.10
- 6.2.0 to 6.2.12
- 6.0.0 to 6.0.16

FortiADC

This section lists FortiManager 6.4.9 product integration and support for FortiADC:

- 6.0.1
- 5.4.4

FortiAnalyzer

This section lists FortiManager 6.4.9 product integration and support for FortiAnalyzer:

- 6.4.0 and later
- 6.2.0 and later
- 6.0.0 and later
- 5.6.0 and later
- 5.4.0 and later

FortiAuthenticator

This section lists FortiManager 6.4.9 product integration and support for FortiAuthenticator:

- 6.0. to 6.3
- 5.0 to 5.5
- 4.3

FortiCache

This section lists FortiManager 6.4.9 product integration and support for FortiCache:

- 4.2.9
- 4.1.6
- 4.0.4

FortiClient

This section lists FortiManager 6.4.9 product integration and support for FortiClient:

- 6.4.0 and later
- 6.2.1 and later
- 6.0.0 and later
- 5.6.0 and later
- 5.4.0 and later

FortiDDoS

This section lists FortiManager 6.4.9 product integration and support for FortiDDoS:

- 5.4.2
- 5.3.1
- 5.2.0
- 5.1.0
- 5.0.0
- 4.7.0
- 4.6.0
- 4.5.0
- 4.4.2
- 4.3.2
- 4.2.3

Limited support. For more information, see [Feature support on page 19](#).

FortiMail

This section lists FortiManager 6.4.9 product integration and support for FortiMail:

- 6.4.0 and later
- 6.2.0 and later
- 6.0.10 and later
- 5.4.12
- 5.3.13

FortiSandbox

This section lists FortiManager 6.4.9 product integration and support for FortiSandbox:

- 4.0.2
- 3.2.2
- 3.1.4
- 3.0.6
- 2.5.2
- 2.4.1
- 2.3.3
- 2.2.2

FortiSOAR

This section lists FortiManager 6.4.9 product integration and support for FortiSOAR:

- 6.4.0 and later
- 6.0.0 and later

FortiSwitch ATCA

This section lists FortiManager 6.4.9 product integration and support for FortiSwitch ATCA:

- 5.2.3
- 5.0.0 and later

FortiTester

This section lists FortiManager 6.4.9 product integration and support for FortiTester:

- 3.9
- 3.8
- 3.7

FortiWeb

This section lists FortiManager 6.4.9 product integration and support for FortiWeb:

- 6.3.15
- 6.2.5
- 6.1.2
- 6.0.7
- 5.9.1
- 5.8.6
- 5.7.2
- 5.6.1
- 5.5.6
- 5.4.1

Virtualization

This section lists FortiManager 6.4.9 product integration and support for virtualization:

- Amazon Web Services (AWS)
- Citrix XenServer 6.0+ and Open Source Xen 4.1+
- Linux KVM
- Microsoft Azure
- Microsoft Hyper-V 2008 R2, 2012, 2012 R2, 2016, and 2019
- VMware ESX/ESXi 5.5, 6.0, 6.5, 6.7, and 7.0
- Nutanix AHV (AOS 5.10.5)
- Google Cloud (GCP)
- Oracle Cloud Infrastructure (OCI)
- Alibaba Cloud (AliCloud)

Feature support

The following table lists FortiManager feature support for managed platforms.

Platform	Management Features	FortiGuard Update Services	Reports	Logging
FortiGate	✓	✓	✓	✓
FortiCarrier	✓	✓	✓	✓
FortiADC		✓		
FortiAnalyzer			✓	✓
FortiAuthenticator				✓
FortiCache			✓	✓
FortiClient		✓	✓	✓
FortiDDoS			✓	✓
FortiMail		✓	✓	✓
FortiSandbox		✓	✓	✓
FortiSOAR		✓		
FortiSwitch ATCA	✓			
FortiWeb		✓	✓	✓
Syslog				✓

Language support

The following table lists FortiManager language support information.

Language	GUI	Reports
English	✓	✓
Chinese (Simplified)	✓	✓
Chinese (Traditional)	✓	✓
French		✓
Japanese	✓	✓
Korean	✓	✓
Portuguese		✓
Spanish		✓

To change the FortiManager language setting, go to *System Settings > Admin > Admin Settings*, in *Administrative Settings > Language* select the desired language on the drop-down menu. The default value is *Auto Detect*.

Russian, Hebrew, and Hungarian are not included in the default report languages. You can create your own language translation files for these languages by exporting a predefined language from FortiManager, modifying the text to a different language, saving the file as a different language name, and then importing the file into FortiManager. For more information, see the *FortiAnalyzer Administration Guide*.

Supported models

The following tables list which FortiGate, FortiCarrier, FortiDDoS, FortiAnalyzer, FortiMail, FortiSandbox, FortiSwitch ATCA, FortiWeb, FortiCache, FortiProxy, and FortiAuthenticator models and firmware versions that can be managed by a FortiManager or send logs to a FortiManager running version 6.4.9.



Software license activated LENC devices are supported, if their platforms are in the supported models list. For example, support of FG-3200D indicates support of FG-3200D-LENC.

This section contains the following topics:

- [FortiGate models on page 21](#)
- [FortiGate special branch models on page 23](#)
- [FortiCarrier models on page 24](#)
- [FortiADC models on page 25](#)
- [FortiAnalyzer models on page 26](#)
- [FortiAuthenticator models on page 27](#)
- [FortiCache models on page 27](#)
- [FortiDDoS models on page 27](#)

- [FortiMail models on page 28](#)
- [FortiProxy models on page 28](#)
- [FortiSandbox models on page 28](#)
- [FortiSOAR models on page 29](#)
- [FortiSwitch ATCA models on page 29](#)
- [FortiTester models on page 29](#)
- [FortiWeb models on page 30](#)

FortiGate models

Model	Firmware Version
FortiGate: FortiGate-40F, FortiGate-40F-3G4G, FortiGate-60E, FortiGate-60E-DSL, FortiGate-60E-DSLJ, FortiGate-60E-POE, FortiGate-60F, FortiGate-61E, FortiGate-61F, FortiGate-80E, FortiGate-80E-POE, FortiGate-80F, FortiGate-80F-POE, FortiGate-80F-Bypass, FortiGate-81E, FortiGate-81E-POE, FortiGate-81F, FortiGate-81F-POE, FortiGate-90E, FortiGate-91E, FortiGate-100D, FortiGate-100E, FortiGate-100EF, FortiGate-100F, FortiGate-101E, FortiGate-101F, FortiGate-140E, FortiGate-140E-POE, FortiGate-200E, FortiGate-200F, FortiGate-201E, FortiGate-201F, FortiGate-300D, FortiGate-300E, FortiGate-301E, FortiGate-400D, FortiGate-400E, FortiGate-400E-Bypass, FortiGate-401E, FortiGate-500D, FortiGate-500E, FortiGate-501E, FortiGate-600D, FortiGate-600E, FortiGate-601E, FortiGate-800D, FortiGate-900D, FortiGate-1000D, FortiGate-1100E, FortiGate-1101E, FortiGate-1200D, FortiGate-1500D, FortiGate-1500DT, FortiGate-1800F, FortiGate-1801F, FortiGate-2000E, FortiGate-2200E, FortiGate-2201E, FortiGate-2500E, FortiGate-2600F, FortiGate-2601F, FortiGate-3000D, FortiGate-3100D, FortiGate-3200D, FortiGate-3300E, FortiGate-3301E, FortiGate-3400E, FortiGate-3401E, FortiGate-3600E, FortiGate-3601E, FortiGate-3700D, FortiGate-3800D, FortiGate-3810D, FortiGate-3815D, FortiGate-3960E, FortiGate-3980E, FortiGate-4200F, FortiGate-4201F, FortiGate-4400F, FortiGate-4401F FortiGate 5000 Series: FortiGate-5001D, FortiGate-5001E, FortiGate-5001E1 FortiGate 6000 Series: FortiGate-6000F, FortiGate-6300F, FortiGate-6301F, FortiGate-6500F, FortiGate-6501F, FortiGate-6300F-DC, FortiGate-6301F-DC, FortiGate-6500F-DC, FortiGate-6501F-DC FortiGate 7000 Series: FortiGate-7000E, FortiGate-7030E, FortiGate-7040E, FortiGate-7060E, FortiGate-7060E-8-DC, FortiGate-7000F, FortiGate-7121F FortiGate DC: FortiGate-401E-DC, FortiGate-800D-DC, FortiGate-1100E-DC, FortiGate-1500D-DC, FortiGate-1800F-DC, FortiGate-1801F-DC, FortiGate-2600F-DC, FortiGate-2601F-DC, FortiGate-3000D-DC, FortiGate-3100D-DC, FortiGate-3200D-DC, FortiGate-3400E-DC, FortiGate-3401E-DC, FortiGate-3600E-DC, FortiGate-3700D-DC, FortiGate-3800D-DC, FortiGate-3810D-DC, FortiGate-3815D-DC, FortiGate-3960E-DC, FortiGate-3980E-DC, FortiGate-4200F-DC, FortiGate-4201F-DC, FortiGate-4400F-DC, FortiGate-4401F-DC FortiGate Hardware Low Encryption: FortiGate-100D-LENC FortiWiFi: FortiWiFi-40F, FortiWiFi-40F-3G4G, FortiWiFi-60E, FortiWiFi-60E-DSL, FortiWiFi-60E-DSLJ, FortiWiFi-61E, FortiWiFi-60F, FortiWiFi-61E, FortiWiFi-61F	6.4

Model	Firmware Version
FortiGate VM: FortiGate-VM64, FortiGate-VM64-ALI, FortiGate-VM64-AWS, FortiGate-VM64-AZURE, FortiGate-VM64-AZUREONDEMAND, FortiGate-VM64-GCP, FortiGate-VM64-GCPONDEMAND, FortiGate-VM64-HV, FortiGate-VM64-KVM, FortiGate-VM64-OPC, FortiGate-VM64-Xen, FortiGate-VMX-Service-Manager, FortiGate-VM64-IBM FortiOS: FortiOS-VM64, FortiOS-VM64-HV, FortiOS-VM64-KVM, FortiOS-VM64-Xen FortiGateRugged: FortiGateRugged-60F, FortiGateRugged-60F-3G4G	
FortiGate: FortiGate-30E, FortiGate-30E-3G4G-INTL, FortiGate-30E-3G4G-NAM, FortiGate-40F, FortiGate-40F-3G4G, FortiGate-50E, FortiGate-51E, FortiGate-52E, FortiGate-60E, FG-60E-DSL, FortiGate-60E-POE, FortiGate-61E, FortiGate-60F, FortiGate-61F, FortiGate-80D, FortiGate-80E, FortiGate-80E-POE, FortiGate-80F, FortiGate-80F-Bypass, FortiGate-81E, FortiGate-81E-POE, FortiGate-81F, FortiGate-90E, FortiGate-91E, FortiGate-92D, FortiGate-100D, FortiGate-100E, FortiGate-100EF, FortiGate-101E, FortiGate-100F, FortiGate-101F, FortiGate-140D, FortiGate-140D-POE, FortiGate-140E, FortiGate-140E-POE, FortiGate-200E, FortiGate-201E, FortiGate-300D, FortiGate-300E, FortiGate-301E, FortiGate-400D, FortiGate-400E, FortiGate-400E-Bypass, FortiGate-401E, FortiGate-500D, FortiGate-500E, FortiGate-501E, FortiGate-600D, FortiGate-600E, FortiGate-601E, FortiGate-800D, FortiGate-900D, FortiGate-1000D, FortiGate-1200D, FortiGate-1500D, FortiGate-1500DT, FortiGate-1100E, FortiGate-1101E, FortiGate-2000E, FortiGate-2200E, FortiGate-2201E, FortiGate-2500E, FortiGate-3000D, FortiGate-3100D, FortiGate-3200D, FortiGate-3300E, FortiGate-3301E, FortiGate-3600E, FortiGate-3601E, FortiGate-3700D, FortiGate-3800D, FortiGate-3810D, FortiGate-3815D, FortiGate-3960E, FortiGate-3980E FortiGate 5000 Series: FortiGate-5001D, FortiGate-5001E, FortiGate-5001E1 FortiGate 6000 Series: FortiGate-6000F, FortiGate-6300F, FortiGate-6301F, FortiGate-6500F, FortiGate-6501F, FortiGate-6300F-DC, FortiGate-6301F-DC, FortiGate-6500F-DC, FortiGate-6501F-DC FortiGate 7000 Series: FortiGate-7000E, FortiGate-7030E, FortiGate-7040E, FortiGate-7060E, FortiGate-7060E-8-DC, FortiGate-7000F, FortiGate-7121F FortiGate DC: FortiGate-80C-DC, FortiGate-401E-DC, FortiGate-600C-DC, FortiGate-800C-DC, FortiGate-800D-DC, FortiGate-1000C-DC, FortiGate-1100E-DC, FortiGate-1500D-DC, FortiGate-3000D-DC, FortiGate-3100D-DC, FortiGate-3200D-DC, FortiGate-3240C-DC, FortiGate-3400E-DC, FortiGate-3401E-DC, FortiGate-3600E-DC, FortiGate-3700D-DC, FortiGate-3800D-DC, FortiGate-3810D-DC, FortiGate-3815D-DC, FortiGate-3960E-DC, FortiGate-3980E-DC FortiGate Hardware Low Encryption: FortiGate-80C-LENC, FortiGate-600C-LENC, FortiGate-1000C-LENC FortiWiFi: FortiWiFi-30E, FortiWiFi-30E-3G4G-INTL, FortiWiFi-30E-3G4G-NAM, FortiWiFi-40F, FortiWiFi-40F-3G4G, FortiWiFi-50E, FortiWiFi-50E-2R, FortiWiFi-51E, FortiWiFi-60E, FortiWiFi-60E-DSL, FortiWiFi-60E-DSLJ, FortiWiFi-60F, FortiWiFi-61E, FortiWiFi-61F, FortiWiFi-80F-2R, FortiWiFi-81F-2R, FortiWiFi-81F-2R-3G4G-POE, FortiWiFi-81F-2R-POE FortiGate-VM: FortiGate-VM64, FortiGate-VM64-ALI, FortiGate-VM64-ALIONDEMAND, FortiGate-VM64-AWS, FortiGate-VM64-AWSONDEMAND, FortiGate-VM64-AZUREONDEMAND, FortiGate-VM64-Azure, FortiGate-VM64-GCP, FortiGate-VM64-GCPONDEMAND, FortiGate-VM64-HV, FortiGate-VM64-KVM, FortiGate-VM64-OPC, FortiGate-VM64-Xen, FortiGate-VMX-Service-Manager	6.2

Model	Firmware Version
FortiGate Rugged: FortiGateRugged-30D, FortiGateRugged-30D-ADSL-A, FortiGateRugged-35D, FortiGateRugged-60F, FortiGateRugged-60F-3G4G FortiOS: FortiOS-VM64, FortiOS-VM64-HV, FortiOS-VM64-KVM, FortiOS-VM64-Xen	
FortiGate: FG-30D, FG-30D-POE, FG-30E, FG-30E-3G4G-GBL, FG-30E-3G4G-INTL, FG-30E-3G4G-NAM, FortiGate-40F, FortiGate-40F-3G4G, FG-50E, FG-51E, FG-52E, FG-60D, FG-60D-POE, FG-60E, FG-60E-DSL, FG-60E-DSLJ, FG-60E-POE, FortiGate-60F, FortiGate-61F, FG-60F, FG-61F, FG-61E, FG-70D, FG-70D-POE, FG-80D, FG-80E, FG-80E-POE, FG-81E, FG-81E-POE, FG-90D, FG-90D-POE, FG-90E, FG-91E, FG-92D, FG-94D-POE, FG-98D-POE, FG-100D, FG-100E, FG-100EF, FG-101E, FortiGate-100F, FortiGate-101F, FG-140D, FG-140D-POE, FG-140E, FG-140E-POE, FG-200D, FG-200D-POE, FG-200E, FG-201E, FG-240D, FG-240-POE, FG-280D-POE, FG300D, FG-300E, FG-301E, FG-400D, FG-400E, FG-401E, FG-500D, FG-500E, FG-501E, FG-600D, FG-800D, FG-900D, FG-1000D, FG-1200D, FG-1500D, FG-1500DT, FG-2000E, FortiGate-2200E, FortiGate-2201E, FG-2500E, FortiGate-3300E, FortiGate-3301E, FG-3000D, FG-3100D, FG-3200D, FortiGate-3600E, FortiGate-3601E, FG-3700D, FG-3800D, FG-3810D, FG-3815D, FG-3960E, FG-3980E FortiGate 5000 Series: FG-5001D, FG-5001E, FG-5001E1 FortiGate 6000 Series: FortiGate-6000F, FortiGate-6300F, FortiGate-6301F, FortiGate-6500F, FortiGate-6501F, FortiGate-6300F-DC, FortiGate-6301F-DC, FortiGate-6500F-DC, FortiGate-6501F-DC FortiGate 7000 Series: FortiGate-7000E, FortiGate-7030E, FortiGate-7040E, FortiGate-7060E, FortiGate-7060E-8-DC, FortiGate-7000F, FortiGate-7121F FortiGate DC: FG-401E-DC, FG1500D-DC, FG-3000D-DC, FG-3100D-DC, FG-3200D-DC, FG-3600E-DC, FG-3700D-DC, FG-3800D-DC, FG-3810D-DC, FG-3815D-DC FortiGate Hardware Low Encryption: FG-100D-LENC, FG-600C-LENC Note: All license-based LENC is supported based on the FortiGate support list. FortiWiFi: FWF-30D, FWF-30D-POE, FWF-30E, FWF-30E-3G4G-INTL, FWF-30E-3G4G-NAM, FWF-40F, FWF-40F-3G4G, FWF-41F, FWF-41F-3G4G, FWF-50E, FWF-50E-2R, FWF-51E, FWF-60D, FWF-60D-POE, FWF-60E, FWF-60E-DSL, FWF-60E-DSLJ, FWF-60F, FWF-61E, FWF-61F, FWF-90D, FWF-90D-POE, FWF-92D FortiGate VM: FG-VM64, FG-VM64-AWS, FG-VM64-AWSONDEMAND, FG-VM64-AZUREONDEMAND, FG-VM64-Azure, FG-VM64-GCP, VM64-GCPONDEMAND, FG-VM64-HV, FG-VM64-KVM, FG-VM64-OPC, FG-VM64-XEN, FG-VMX-Service-Manager, FOS-VM64, FOS-VM64-KVM, FOS-VM64-Xen FortiGate Rugged: FGR-30D, FGR-35D, FGR-60D, FGR-90D	6.0

FortiGate special branch models

The following FortiGate models are released on a special branch of FortiOS. FortiManager supports these models.

Model	Firmware Version
FortiGate: FortiGate-400F, FortiGate-401F, FortiGate-600F, FortiGate-601F, FortiGate-3500F, FortiGate-3501F FortiGate 6000 Series: FortiGate-6000F FortiGate 7000 Series: FortiGate-7000E, FortiGate-7000F FortiWiFi: FortiWiFi-80F-2R-3G4G-DSL	6.4
FortiGate: FortiGate-80D, FortiGate-200F, FortiGate-201F, FortiGate-2600F, FortiGate-2601F, FortiGate-1800F, FortiGate-1801F, FortiGate-2600F, FortiGate-2601F, FortiGate-4200F, FortiGate-4201F, FortiGate-4400F, FortiGate-4401F FortiGate DC: FortiGate-1800F-DC, FortiGate-1801F-DC, FortiGate-2600F-DC, FortiGate-2601F-DC, FortiGate-4200F-DC, FortiGate-4201F-DC, FortiGate-4400F-DC, FortiGate-4401F-DC FortiGate 6000 Series: FortiGate-6000F FortiGate 7000 Series: FortiGate-7000E, FortiGate-7000F FortiWiFi: FortiWiFi-80F-2R-3G4G-DSL, FortiWiFi-81F-2R-3G4G-DSL, FortiWiFi-81F-2R-3G4G-POE	6.2
FortiGate: FortiGate-30E-3G4G-GBL, FortiGate-40F, FortiGate-40F-3G4G, FortiGate-41F, FortiGate-41F-3G4G, FortiGate-60F, FortiGate-61F, FortiGate-100F, FortiGate-101F, FortiGate-1100E, FortiGate-1101E, FortiGate-1800F, FortiGate-1801F, FortiGate-2200E, FortiGate-2201E, FortiGate-3300E, FortiGate-3301E FortiGate DC: FortiGate-1100E-DC, FortiGate-1800F-DC, FortiGate-1801F-DC, FortiGate-2201E-ACDC FortiGate VM: FortiGate-VM64-AZUREONDEMAND, FortiGate-VM64-Azure, FortiGate-VM64-RAXONDEMAND FortiWiFi: FortiWiFi-40F, FortiWiFi-40F-3G4G, FortiWiFi-41F, FortiWiFi-41F-3G4G, FortiWiFi-60E-DSL, FortiWiFi-60E-DSLJ, FortiWiFi-60F, FortiWiFi-61F	6.0

FortiCarrier models

Model	Firmware Version
FortiCarrier: FortiCarrier-3000D, FortiCarrier-3100D, FortiCarrier-3200D, FortiCarrier-3400E, FortiCarrier-3600E, FortiCarrier-3601E, FortiCarrier-3700D, FortiCarrier-3800D, FortiCarrier-3810D, FortiCarrier-3815D, FortiCarrier-3960E, FortiCarrier-3980E, FortiCarrier-5001D, FortiCarrier-5001E, FortiCarrier-5001E1 FortiCarrier 6000 Series: FortiCarrier-6000F, FortiCarrier-6300F, FortiCarrier-6301F, FortiCarrier-6500F, FortiCarrier-6501F, FortiCarrier-6300F-DC, FortiCarrier-6301F-DC, FortiCarrier-6500F-DC, FortiCarrier-6501F-DC FortiCarrier 7000 Series: FortiCarrier-7000E, FortiCarrier-7030E, FortiCarrier-7040E, FortiCarrier-7060E, FortiCarrier-7060E-8-DC, FortiCarrier-7000F, FortiCarrier-7121F FortiCarrier-DC: FortiCarrier-3000D-DC, FortiCarrier-3100D-DC, FortiCarrier-3200D-DC, FortiCarrier-3400E, FortiCarrier-3401E, FortiCarrier-3400E-DC, FortiCarrier-3401E-DC, FortiCarrier-3700D-DC, FortiCarrier-3800D-DC, FortiCarrier-3810D-DC, FortiCarrier-3815D-DC, FortiCarrier-3960E-DC, FortiCarrier-3980E-DC	6.4

Model	Firmware Version
FortiCarrier-VM: FortiCarrier-VM64, FortiCarrier-VM64-ALI, FortiCarrier-VM64-AWS, FortiCarrier-VM64-Azure, FortiCarrier-VM64-GCP, FortiCarrier-VM64-HV, FortiCarrier-VM64-KVM, FortiCarrier-VM64-OPC, FortiCarrier-VM64-Xen FortiCarrier: FortiCarrier-3000D, FortiCarrier-3100D, FortiCarrier-3200D, FortiCarrier-3700D, FortiCarrier-3800D, FortiCarrier-3810D, FortiCarrier-3815D, FortiCarrier-3960E, FortiCarrier-5001D, FortiCarrier-5001E, FortiCarrier-5001E1 FortiCarrier 6000 Series: FortiCarrier-6000F, FortiCarrier-6300F, FortiCarrier-6301F, FortiCarrier-6500F, FortiCarrier-6501F, FortiCarrier-6300F-DC, FortiCarrier-6301F-DC, FortiCarrier-6500F-DC, FortiCarrier-6501F-DC FortiCarrier 7000 Series: FortiCarrier-7000E, FortiCarrier-7030E, FortiCarrier-7040E, FortiCarrier-7060E, FortiCarrier-7060E-8-DC, FortiCarrier-7000F, FortiCarrier-7121F FortiCarrier-DC: FortiCarrier-3000D-DC, FortiCarrier-3100D-DC, FortiCarrier-3200D-DC, FortiCarrier-3400E, FortiCarrier-3401E, FortiCarrier-3400E-DC, FortiCarrier-3401E-DC, FortiCarrier-3700D-DC, FortiCarrier-3800D-DC, FortiCarrier-3810D-DC, FortiCarrier-3815D-DC, FortiCarrier-3960E-DC FortiCarrier-VM: FortiCarrier-VM64, FortiCarrier-VM64-ALI, FortiCarrier-VM64-AWS, FortiCarrier-VM64-Azure, FortiCarrier-VM64-GCP, FortiCarrier-VM64-HV, FortiCarrier-VM64-KVM, FortiCarrier-VM64-OPC, FortiCarrier-VM64-Xen	6.2
FortiCarrier: FGT-3000D, FGT-3100D, FGT-3200D, FGT-3700D, FGT-3800D, FGT-3810D, FGT-3960E, FGT-3980E, FGT-5001D, FGT-5001E FortiCarrier 6000 Series: FortiCarrier-6000F, FortiCarrier-6300F, FortiCarrier-6301F, FortiCarrier-6500F, FortiCarrier-6501F, FortiCarrier-6300F-DC, FortiCarrier-6301F-DC, FortiCarrier-6500F-DC, FortiCarrier-6501F-DC FortiCarrier 7000 Series: FortiCarrier-7000E, FortiCarrier-7030E, FortiCarrier-7040E, FortiCarrier-7060E, FortiCarrier-7060E-8-DC, FortiCarrier-7000F, FortiCarrier-7121F FortiCarrier-DC: FGT-3000D-DC, FGT-3100D-DC, FGT-3200D-DC, FGT-3700D-DC, FGT-3800D-DC, FGT-3810D-DC, FGT-3960E-DC, FGT-3980E-DC FortiCarrier-VM: FG-VM, FG-VM64, FG-VM64-AWS, FG-VM64-Azure, FG-VM64-GCP, FG-VM64-HV, FG-VM64-KVM, FG-VM64-OPC, FG-VM64-Xen	6.0

FortiADC models

Model	Firmware Version
FortiADC-100F, FortiADC-200D, FortiADC-200F, FortiADC-300D, FortiADC-300F, FortiADC-400D, FortiADC-400F, FortiADC-700D, FortiADC-1000F, FortiADC-1500D, FortiADC-2000D, FortiADC-2000F, FortiADC-4000D, FortiADC-4000F, FortiADC-5000F, FortiADC-VM	6.0
FortiADC-100F, FortiADC-200D, FortiADC-200F, FortiADC-300D, FortiADC-300F, FortiADC-400D, FortiADC-400F, FortiADC-700D, FortiADC-1000F, FortiADC-1500D, FortiADC-2000D, FortiADC-2000F, FortiADC-4000D, FortiADC-4000F, FortiADC-5000F, FortiADC-VM	5.4

FortiAnalyzer models

Model	Firmware Version
FortiAnalyzer: FortiAnalyzer-200F, FortiAnalyzer-300F, FortiAnalyzer-400E, FortiAnalyzer-800F, FortiAnalyzer-1000E, FortiAnalyzer-1000F, FortiAnalyzer-2000E, FortiAnalyzer-3000E, FortiAnalyzer-3000F, FortiAnalyzer-3500E, FortiAnalyzer-3500F, FortiAnalyzer-3500G, FortiAnalyzer-3700F, FortiAnalyzer-3900E FortiAnalyzer VM: FortiAnalyzer-VM64, FortiAnalyzer-VM64-ALI, FortiAnalyzer-VM64-ALI-OnDemand, FortiAnalyzer-VM64-AWS, FortiAnalyzer-VM64-AWSOnDemand, FortiAnalyzer-VM64-Azure, FortiAnalyzer-VM64-Azure-OnDemand, FortiAnalyzer-VM64-GCP, FortiAnalyzer-VM64-GCP-OnDemand, FortiAnalyzer-VM64-HV, FortiAnalyzer-VM64-KVM, FortiAnalyzer-VM64-KVM-CLOUD, FortiAnalyzer-VM64-OPC, FortiAnalyzer-VM64-Xen	6.4
FortiAnalyzer: FAZ-200F, FAZ-300F, FAZ-400E, FAZ-800F, FAZ-1000E, FAZ-2000E, FAZ-3000E, FAZ-3000F, FAZ-3500E, FAZ-3500F, FAZ-3700F and FAZ-3900E. FortiAnalyzer VM: FAZ-VM64, FAZ-VM64-Ali, FAZ-VM64-AWS, FAZ-VM64-AWS-OnDemand, FAZ-VM64-Azure, FAZ-VM64-GCP, FAZ-VM64-HV, FAZ-VM64-KVM, FAZ-VM64-OPC, and FAZ-VM64-XEN (Citrix XenServer and Open Source Xen).	6.2
FortiAnalyzer: FAZ-200D, FAZ-300D, FAZ-400E, FAZ-1000D, FAZ-1000E, FAZ-2000B, FAZ-3000D, FAZ-3000E, FAZ-3000F, FAZ-3500E, FAZ-3500F, and FAZ-3900E. FortiAnalyzer VM: FAZ-VM64, FAZ-VM64-AWS, FMG-VM64-Azure, FAZ-VM64-HV, FAZ-VM64-KVM, and FAZ-VM64-XEN (Citrix XenServer and Open Source Xen).	6.0
FortiAnalyzer: FAZ-200D, FAZ-300D, FAZ-400E, FAZ-1000D, FAZ-1000E, FAZ-2000B, FAZ-3000D, FAZ-3000E, FAZ-3000F, FAZ-3500E, FAZ-3500F, and FAZ-3900E. FortiAnalyzer VM: FAZ-VM64, FAZ-VM64-AWS, FMG-VM64-Azure, FAZ-VM64-HV, FAZ-VM64-KVM, and FAZ-VM64-XEN (Citrix XenServer and Open Source Xen).	5.6
FortiAnalyzer: FAZ-200D, FAZ-300D, FAZ-400E, FAZ-1000D, FAZ-1000E, FAZ-2000B, FAZ-2000E, FAZ-3000D, FAZ-3000E, FAZ-3000F, FAZ-3500E, FAZ-3500F, FAZ-3900E, and FAZ-4000B. FortiAnalyzer VM: FAZ-VM64, FMG-VM64-Azure, FAZ-VM64-HV, FAZ-VM64-XEN (Citrix XenServer and Open Source Xen), FAZ-VM64-KVM, and FAZ-VM64-AWS.	5.4
FortiAnalyzer: FAZ-100C, FAZ-200D, FAZ-300D, FAZ-400C, FAZ-400E, FAZ-1000C, FAZ-1000D, FAZ-1000E, FAZ-2000B, FAZ-3000D, FAZ-3000E, FAZ-3000F, FAZ-3500E, FAZ-3500F, FAZ-3900E, FAZ-4000B FortiAnalyzer VM: FAZ-VM, FAZ-VM-AWS, FAZ-VM64, FAZ-VM64-Azure, FAZ-VM64-HV, FAZ-VM64-KVM, FAZ-VM64-XEN	5.2
FortiAnalyzer: FAZ-100C, FAZ-200D, FAZ-300D, FAZ-400B, FAZ-400C, FAZ-400E, FAZ-1000B, FAZ-1000C, FAZ-1000D, FAZ-1000E, FAZ-2000A, FAZ-2000B, FAZ-3000D, FAZ-3000E, FAZ-3000F, FAZ-3500E, FAZ-3500F, FAZ-4000A, FAZ-4000B FortiAnalyzer VM: FAZ-VM, FAZ-VM64, FAZ-VM64-AWS, FAZ-VM64-Azure, FAZ-VM64-HV, FAZ-VM-KVM, FAZ-VM-XEN	5.0

FortiAuthenticator models

Model	Firmware Version
FortiAuthenticator: FAC-200D, FAC-200E, FAC-400C, FAC-400E, FAC-800F, FAC-1000C, FAC-1000D, FAC-2000E, FAC-3000D, FAC-3000E FortiAuthenticator VM: FAC-VM	6.0 to 6.3
FortiAuthenticator: FAC-200D, FAC-200E, FAC-400C, FAC-400E, FAC-800F, FAC-1000C, FAC-1000D, FAC-2000E, FAC-3000B, FAC-3000D, FAC-3000E FortiAuthenticator VM: FAC-VM	5.0 to 5.5
FortiAuthenticator: FAC-200D, FAC-200E, FAC-400C, FAC-400E, FAC-800F, FAC-1000C, FAC-1000D, FAC-3000B, FAC-3000D, FAC-3000E FortiAuthenticator VM: FAC-VM	4.3

FortiCache models

Model	Firmware Version
FortiCache: FCH-400C, FCH-400E, FCH-1000C, FCH-1000D, FCH-3000C, FCH-3000D, FCH-3000E, FCH-3900E FortiCache VM: FCH-VM64, FCH-KVM	4.0, 4.1, 4.2

FortiDDoS models

Model	Firmware Version
FortiDDoS: FortiDDoS-200B, FortiDDoS-400B, FortiDDoS-600B, FortiDDoS-800B, FortiDDoS-900B, FortiDDoS-1000B, FortiDDoS-1200B, FortiDDoS-1500E, FortiDDoS-2000B, FortiDDoS-2000E	5.2, 5.3
FortiDDoS: FI-200B, FI-400B, FI-600B, FI-800B, FI-900B, FI-1000B, FI-1200B, FI-1500B, FI-2000B, FI-2000E	5.1
FortiDDoS: FI-1500E, FI-2000E	5.0
FortiDDoS: FI-200B, FI-400B, FI-600B, FI-800B, FI-900B, FI-1000B, FI-1200B, FI-2000B, FI-3000B	4.0, 4.1, 4.2, 4.3, 4.4, 4.5, 4.7

FortiMail models

Model	Firmware Version
FortiMail: FE-60D, FE-200D, FE-200E, FE-200F, FE-400E, FE-400F, FE-900F, FE-1000D, FE-2000E, FE-3000D, FE-3000E, FE-3200E, FE-VM	6.4
FortiMail: FE-60D, FE-200D, FE-200E, FE-200F, FE-400E, FE-400F, FE-900F, FE-1000D, FE-2000E, FE-3000D, FE-3000E, FE-3200E, FE-VM	6.2
FortiMail: FE-60D, FE-200D, FE-200E, FE-200F, FE-400E, FE-400F, FE-900F, FE-1000D, FE-2000E, FE-3000D, FE-3000E, FE-3200E, FE-VM	6.0
FortiMail: FE-60D, FE-200D, FE-200E, FE-400C, FE-400E, FE-1000D, FE-2000B, FE-2000E, FE-3000C, FE-3000E, FE-3200E FortiMail Low Encryption: FE-3000C-LENC	5.4
FortiMail: FE-60D, FE-200D, FE-200E, FE-400C, FE-400E, FE-1000D, FE-2000B, FE-2000E, FE-3000C, FE-3000D, FE-3000E, FE-3200E, FE-5002B FortiMail Low Encryption: FE-3000C-LENC FortiMail VM: FE-VM64, FE-VM64-HV, FE-VM64-XEN	5.3

FortiProxy models

Model	Firmware Version
FortiProxy: FPX-400E, FPX-2000E, FPX-4000E FortiProxy VM: FPX-KVM, FPX-VM64	1.0, 1.1, 1.2

FortiSandbox models

Model	Firmware Version
FortiSandbox: FSA-500F, FSA-1000F, FSA-2000E, FSA-3000E, FSA-3000F FortiSandbox-VM: FSA-AWS, FSA-VM	4.0
FortiSandbox: FSA-500F, FSA-1000D, FSA-1000F, FSA-2000E, FSA-3000D, FSA-3000E, FSA-3500D FortiSandbox-VM: FSA-AWS, FSA-VM	3.2
FortiSandbox: FSA-500F, FSA-1000D, FSA-1000F, FSA-2000E, FSA-3000D, FSA-3000E, FSA-3500D FortiSandbox-VM: FSA-AWS, FSA-VM	3.1
FortiSandbox: FSA-500F, FSA-1000D, FSA-1000F, FSA-2000E, FSA-3000D, FSA-3000E, FSA-3500D FortiSandbox VM: FSA-AWS, FSA-VM	3.0
FortiSandbox: FSA-1000D, FSA-2000E, FSA-3000D, FSA-3000E, FSA-3500D	2.5.2

Model	Firmware Version
FortiSandbox VM: FSA-KVM, FSA-VM	
FortiSandbox: FSA-1000D, FSA-2000E, FSA-3000D, FSA-3000E, FSA-3500D	2.4.1
FortiSandbox VM: FSA-VM	2.3.3
FortiSandbox: FSA-1000D, FSA-3000D, FSA-3500D	2.2.0
FortiSandbox VM: FSA-VM	

FortiSOAR models

Model	Firmware Version
FortiSOAR VM: FSR-VM	6.4
FortiSOAR VM: FSR-VM	6.0

FortiSwitch ATCA models

Model	Firmware Version
FortiController: FTCL-5103B, FTCL-5902D, FTCL-5903C, FTCL-5913C	5.2.0
FortiSwitch-ATCA: FS-5003A, FS-5003B	5.0.0
FortiController: FTCL-5103B, FTCL-5903C, FTCL-5913C	
FortiSwitch-ATCA: FS-5003A, FS-5003B	4.3.0
	4.2.0

FortiTester models

Model	Firmware Version
FortiTester: FortiTester-60F, FortiTester-100F, FortiTester-2000D, FortiTester-2000E, FortiTester-2500E, FortiTester-3000E, FortiTester-4000E	3.9
FortiTester VM: FortiTester-VM, FortiTester-VM-ALI-BYOL	
FortiTester: FortiTester-60F, FortiTester-100F, FortiTester-2000D, FortiTester-2000E, FortiTester-2500E, FortiTester-3000E, FortiTester-4000E	3.8
FortiTester VM: FortiTester-VM, FortiTester-VM-ALI-BYOL	
FortiTester: FortiTester-60F, FortiTester-100F, FortiTester-2000D, FortiTester-2000E, FortiTester-2500E, FortiTester-3000E, FortiTester-4000E	3.7
FortiTester VM: FortiTester-VM, FortiTester-VM-ALI-BYOL	

FortiWeb models

Model	Firmware Version
FortiWeb: FortiWeb-100D, FortiWeb-400C, FortiWeb-400D, FortiWeb-600D, FortiWeb-1000D, FortiWeb-1000E, FortiWeb-2000E, FortiWeb-3000C, FortiWeb-3000CFSX, FortiWeb-3000D, FortiWeb-3000DFSX, FortiWeb-3000E, FortiWeb-3010E, FortiWeb-4000C, FortiWeb-4000D, FortiWeb-4000E FortiWeb VM: FortiWeb-Azure, FortiWeb-Azure_OnDemand, FortiWeb-GCP, FortiWeb-GCP_OnDemand, FortiWeb-HyperV, FortiWeb-VM, FortiWeb-XENOpenSource, FortiWeb-XENServer	6.2, 6.3
FortiWeb: FortiWeb-100D, FortiWeb-400C, FortiWeb-400D, FortiWeb-600D, FortiWeb-1000D, FortiWeb-1000E, FortiWeb-1000E, FortiWeb-2000E, FortiWeb-3000C, FortiWeb-3000CFSX, FortiWeb-3000D, FortiWeb-3000DFSX, FortiWeb-3000E, FortiWeb-3010E, FortiWeb-4000C, FortiWeb-4000D, FortiWeb-4000E FortiWeb VM: FortiWeb-Azure, FortiWeb-Azure_OnDemand, FortiWeb-Docker, FortiWeb-GCP, FortiWeb-GCP_OnDemand, FortiWeb-HyperV, FortiWeb-VM, FortiWeb-XENOpenSource, FortiWeb-XenServer	6.1
FortiWeb: FWB-100D, FWB-400C, FWB-400D, FWB-600D, FWB-1000D, FWB-1000E, FWB-2000E, FWB-3000C, FWB-3000CFSX, FWB-3000D, FWB-3000DFSX, FWB-3000E, FWB-3010E, FWB-4000C, FWB-4000D, FWB-4000E FortiWeb VM: FWB-VM, FWB-HYPERV, FWB-XENOPEN, FWB-XENSERVEN	6.0
FortiWeb: FWB-1000D, FWB-1000E, FWB-100D, FWB-2000E, FWB-3000C, FWB-3000CFSX, FWB-3000D, FWB-3000DFSX, FWB-3000E, FWB-3010E, FWB-4000C, FWB-4000D, FWB-4000E, FWB-400C, FWB-400D, FWB-600D FortiWeb VM: FWB-Azure, FWB-CMINTF, FWB-HYPERV, FWB-KVM, FWB-KVM-PAYG, FWB-VM, FWB-VM-PAYG, FWB-XENAWS, FWB-XENAWS-Ondemand, FWB-XENOPEN	5.9
FortiWeb: FWB-1000C, FWB-1000D, FWB-1000E, FWB-100D, FWB-2000E, FWB-3000C, FWB-3000CFSX, FWB-3000D, FWB-3000DFSX, FWB-3000E, FWB-3010E, FWB-4000C, FWB-4000D, FWB-4000E, FWB-400C, FWB-400D, FWB-600D FortiWeb VM: FWB-Azure, FWB-Azure-Ondemand, FWB-CMINTF, FWB-HYPERV, FWB-KVM, FWB-KVM-PAYG, FWB-VM, FWB-VM-PAYG, FWB-XENAWS, FWB-XENAWS-Ondemand, FWB-XENOPEN	5.8
FortiWeb: FWB-1000C, FWB-1000D, FWB-100D, FWB-2000E, FWB-3000C, FWB-3000CFSX, FWB-3000D, FWB-3000DFSX, FWB-3000E, FWB-3010E, FWB-4000C, FWB-4000D, FWB-4000E, FWB-400C, FWB-400D, FWB-600D FortiWeb VM: FWB-Azure, FWB-HYPERV, FWB-KVM, FWB-OS1, FWB-VM, FWB-XENAWS, FWB-XENAWS-Ondemand, FWB-XENOPEN	5.7
FortiWeb: FWB-1000C, FWB-1000D, FWB-100D, FWB-2000E, FWB-3000C, FWB-3000CFSX, FWB-3000D, FWB-3000DFSX, FWB-3000E, FWB-3010E, FWB-4000C, FWB-4000D, FWB-4000E, FWB-400C, FWB-400D, FWB-600D FortiWeb VM: FWB-Azure, FWB-HYPERV, FWB-KVM, FWB-VM, FWB-XENAWS, FWB-XENAWS-Ondemand, FWB-XENOPEN	5.6

Model	Firmware Version
FortiWeb: FWB-100D, FWB-400C, FWB-400D, FWB-1000C, FWB-1000D, FWB-3000C, FWB-3000CFSX, FWB-3000D, FWB-3000DFSX, FWB-3000E, FWB-3010E, FWB-4000C, FWB-4000D, FWB-4000E	5.5
FortiWeb VM: FWB-VM-64, FWB-XENAWS, FWB-XENOPEN, FWB-XENSERVR, FWB-HYPERV, FWB-KVM, FWB-AZURE	
FortiWeb: FWB-100D, FWB-400C, FWB-1000C, FWB-3000C, FWB-3000CFSX, FWB-3000D, FWB-3000DFSX, FWB-3000E, FWB-4000C, FWB-4000D, FWB-4000E	5.4
FortiWeb VM: FWB-VM64, FWB-XENAWS, FWB-XENOPEN, FWB-XENSERVR, FWB-HYPERV	

Resolved Issues

The following issues have been fixed in 6.4.9. For inquiries about a particular bug, please contact [Customer Service & Support](#).

AP Manager

Bug ID	Description
710550	Installation fails due to invalid handoff-sta-thresh.
794836	Protected Management Frames (PMF) feature always gets disabled when security mode is set to WPA2 (Enterprise or Personal).

Device Manager

Bug ID	Description
676002	FortiManager does not allow reinstalling a policy when user selects all devices with VDOMs from Device Manager.
676415	SAML account with Remote certificate not getting imported to FortiManager-Cloud.
704106	Certificate Enrollment fails using SCEP on Microsoft server with sub-ca certificate chains.
746634	FMG3900E cannot connect to mapserver due to cert issue.
748579	CLI configurations for SD WAN template is not working properly.
762650	FortiManager is sending commands which do not exist in FortiGates; issue happens only on 80/81F and 60F.
762650	FortiManager is sending commands which do not exist in FGTs; issue happens only on 80/81F and 60F.
763234	Installation failed due to the syntax's difference between FortiGate and FortiManager in setting log-disk-quota for VDOMs.
773147	Installation fails due to the unexpected system interface config changes for "PVC" related settings.
775552	The <i>View Device</i> revision under <i>Revision History</i> does not display the full and complete device's configuration.
788923	SD-WAN template does not change the value of "service-sla-tie-break" for a SDWAN Zone.

Bug ID	Description
791117	Unable to create simultaneous static routes with named address objects.
791274	When optional meta fields are being used users cannot edit the devices.
801022	Config status gets modified even though the installation preview is empty.
806622	Installation failed after configuring the link-monitor.
806941	In FortiManager 6.4.8, using CLI template adds double quote around the variables hence installation fails.
807656	Editing the Device Group does not load any group members.
811977	Device Manager does not display devices list properly.
812213	Default factory setting on FortiGate does not match with its default factory setting on FortiManager's DB. This causes status conflict if FortiGate added to the FortiManager using the "Add Model Device" method.
814420	After the upgrade the scroll bar is missing for <i>Device Manager</i> , <i>SD-WAN</i> , and <i>SD-WAN Templates</i> .
834947	"Resource-limits" proxy default value is missing under the <i>Device Manager's</i> CLI Configurations.

FortiSwitch Manager

Bug ID	Description
803175	FortiSwitch template does not enable all the POE interfaces.
829700	FortiManager shows errors while installing FortiSwitch configuration.

Global ADOM

Bug ID	Description
811660	Global Database object assignment to ADOMs fails.

Others

Bug ID	Description
666037	Sorting FortiExtenders by Network, RSSI, RSRP, RSRQ, and SINR does not work properly.
671516	FortiManager/FortiAnalyzer cannot accept more than 100 concurrent admin sessions (Using JSON APIs).
682557	Installing gre-tunnel configuration to FGTs does not successfully complete due to the verification failure.
704093	Support FortiSandbox v4.0 objects in default download list.
711922	After firewall policy modification, the JSON response via proxy/JSON to get the FortiGate's config backup is not in clear text format any more.
747648	FortiManager does not support some of the FEX models and versions under the FEX Profiles.
776718	"FortiGuard Category Threat Feed"'s Fabric View does not display any interfaces under its Advanced setting.
784037	FortiManager offers low encryption cipher Suite in TLS 1.2.
792296	ADOM upgrade fails due to the Virtual wire pair policy.
804244	ADOMs created by XML API cannot be locked or unlocked.
806109	After ADOM upgrade, log-all is disabled for all protocols under Email Filter profile.
808822	Changing the HTTPS port used for Administrative Web Access will cause FortiManager to stop listening to port 443 for FortiGate update requests.
814425	Sorting FortiExtenders by Network, RSSI, RSRP, RSRQ, and SINR does not work properly.
815875	After FortiManager's upgrade, device level status has been modified and Install preview shows that pdf-report and fortiview features will be enabled on the FortiGates even if these are already enabled on the FortiGates before.
819494	Task completes successfully even when non-existing global package assignment is done using API request.
820248	Cloning same ADOM multiple times fails with error "Unknown DVM error".
820578	"svc authd" process is consuming 100% of CPU.
823294	SSH connection between FortiGate and FortiAnalyzer/FortiManagerv7.0.4/7.2.1 or later fails due to server_host_key_algorithms mismatch.
823547	In Advanced ADOM mode, it is not possible to create a new VDOM in a new ADOM via JSON API request.
826718	Failed to delete the hanging task from task monitor.

Policy and Objects

Bug ID	Description
620680	FortiManager does not support the geographic fields data for firewall internet-service Objects.
705302	Remote VPN certificate installation failed and certificate disappeared from FortiManager, however, on the FortiGate the certificate installed successfully.
706809	<i>Policy Check</i> export does not have the last hit count details anymore.
707481	Deleting DNS filter profile does not deletes the associated Domain filter.
711202	FMG does not support managing SAML user objects from Policy and Objects.
716892	Exporting to "Excel/CSV" does not include the value for fields "Log & Last Modified By".
716943	FortiManager's GUI shows so many blank areas after adding the IPS signatures and filters.
725132	When modifying IP address of Default VPN Interface of spoke in <i>Device Manager</i> , hub remote gateway should be modified to reflect that change.
731037	There may be File Filter file type mismatch between FortiGate and FortiManager.
758680	Unable to complete the Cisco pxGrid fabric connector's configuration on FortiManager.
765154	Installation fails when trying to disable the "safe search" on existing DNS filter from FortiManager.
767255	FortiManager fails to install the custom signature because it is too long.
773403	FortiManager may now differentiate between the ISDB objects "Predefined Internet Services" and "IP Reputation Database".
775733	When creating/editing an user in <i>User & Authentication</i> section, the <i>Add to Groups</i> section doesn't show any User Groups, even if the user has been already added to a group.
778171	After the upgrade, FortiManager is changing the "config antivirus quarantine" setting; this fails the installation.
791357	Installation failed when using custom-deep-inspection.
792980	Installation fails when trying to install SAML user configuration.
802934	FortiManager's Policy Package Diff displays policy objects change even though there is not any changes.
805642	New policies created in policy package do not inherit "global-label" section.
805783	After the 6.0 ADOM upgrade, installing the same v6.0 policy package got "unset webfilter-profile" in wanopt proxy policy.
805966	Verification fails due to the "resource-limits.proxy".
808033	Execution of the script on <i>Policy & Packages</i> for the first time does not change the status to "modify".

Bug ID	Description
809888	Replacement Message Group under Security profiles gets removed by FortiManager during the installation.
811450	"Installation Preparation" step for installing the policy package to the FortiGate takes very long time.
812909	FortiManager unsets the "bypass-watchdog" setting on FGT400E-Bypass.
813237	View Mode feature does not work properly when workspace mode is enabled on FortiManager.
814468	FortiManager purges 'gcp-project-list' and unsets several values from GCP sdn-connector.
815281	SDN dynamic address object filter does not display the list properly.
815812	Installation failed because FortiManager tried removing the credentials for Amazon Web Services (AWS) type SDN Connector and enabling the "use-metadata-iam" feature.
816108	The "group-poll-interval" value for FSSO fabric connector cannot configured properly.
816347	Objects Field search under the "Add Object(s)" feature does not properly locate any firewall object addresses for Source & Destination .
819713	FortiManager in task manager does not show the specific admin name who refreshes the hit-count.
820993	For Proxy-Policy, FortiManager unsets the "PROFILE-PROTOCOL-OPTION" when installing to the FortiGates.
825530	Explicit web proxy policy does not allow selecting any source address objects.
830502	FortiManager fails to create the CSV for Policy Package.
836783	FortiManager changes the "use-metadata-iam" value for the SDN connectors.

Revision History

Bug ID	Description
496870	Fabric SDN Connector is installed on FortiGate even if it is not in used.
691240	FortiManager should not unset the value forward-error-correction with certain FortiGate platforms.

Services

Bug ID	Description
752849	FortiManager doesn't have the proper version string of FortiGate's IPGeo Info.

Bug ID	Description
754038	FortiGate firmware upgrade via FortiManager may break FortiGate HA cluster.
808121	FortiManager ignores "add_no_service" setting for the "Unauthorized Devices".

System Settings

Bug ID	Description
687223	Users may not be able to upgrade ADOM because of profile-protocol-options'.
811633	Restricted Administrators using the API requests have full read-write access.
815728	FortiManager takes very long hours to rebuild the HA cluster back to synchronization status.
818969	Unable to poll SNMP with SNMP Engine ID.
822776	Query Distinguished Name does not display the LDAP users in FMG when Secure connection is enabled.
829751	Installation tasks got stuck at 0% and failed to start any new installation tasks.

VPN Manager

Bug ID	Description
615890	IPSec VPN Authusergrp option "Inherit from Policy" is missing when setting xauthtype as auto server.
796104	FortiManager deletes and re-creates VPN routes with different id's on every install.
810027	FortiManager Spoke IP setting for vpn configuration sets properly but the policy package does not change on the Hub phase1.

Known Issues

The following issues have been identified in 6.4.9. For inquiries about a particular bug or to report a bug, please contact [Customer Service & Support](#).

Device Manager

Bug ID	Description
692669	Browser may display a message, 'A webpage is slowing down your browser', while checking revision difference.
812687	Unable to add FortiGate WiFi-80F-2R to FortiManager when Trusted Platform Module (TPM) is enabled.
850471	FortiManager is attempting to modify replacement messages after upgrade, which leads to installation failure.

Bug ID	Description
835439	Global Policy assignment is not completed successfully due to some missing objects on Global ADOM.

Others

Bug ID	Description
729175	FortiManager should highlight device consisting of specific IP address under <i>Fabric View</i> .
750242	FortiManager's DB in HA clusters are not properly synced together.
796506	Upgrading HA cluster via FortiManager stays members into a restart loop.
840395	FortiManager does not support the FGT/FOS 6.4.11 Syntax.
850377	In Workflow Mode, when new session is created, the Policies disappear.

Policy & Objects

Bug ID	Description
698838	"Download Conflict File" does not display all of the firewall objects conflicts when importing policy packages from FortiGate to FortiManager.
774058	Rule list order may not be saved under File Filter Profile.
762392	The rating lookups does not return the correct category for the URL when it ends with "/" character.
767592	FortiManager shows "Validation Failed" and "No installation Targets on package" when an unmodified policy package is pushing to the FortiGates.
808900	Incorrect error message is displayed when re-installing the same policy to FortiGate immediately after the first installation.
831273	FortiManager does not allow deleting the entries for "server-info" under the log "npu-server".
834806	Installation fails due to extra back slashes when installing the custom IPS signatures to the FortiGates.
836103	FortiManager pushes old <code>internet-service-names</code> "Facebook" instead of "Meta".
841966	When Inserting "Above" or "Below" to add policy, the policy is added to the wrong section/place.
846634	GUI does not allow to edit the custom Application and Filter Overrides.
849470	When creating a new firewall policy via API Request, the "global-label" option is skipped.
855073	The "where used" feature does not function properly.

Services

Bug ID	Description
846198	FMG 's "svc sys" daemon is crashing repeatedly.

System Settings

Bug ID	Description
823898	FortiManager does not use all of the configured "ssl-cipher-suites" under its "system global" settings.

Bug ID	Description
841931	When FortiManager works in Workspace Mode, users are able to disable "Per-Device Mapping" without locking the ADOMs.

VPN Manager

Bug ID	Description
798995	It's not possible to delete an SSL VPN portal profile from the FortiManager GUI if the profile has been already installed.

Appendix A - FortiGuard Distribution Servers (FDS)

In order for the FortiManager to request and retrieve updates from FDS, and for FortiManager to serve as a FDS, please configure the necessary settings on all devices between FortiManager and FDS, or between FortiManager and FortiGate devices based on the items listed below:

- FortiManager accesses FDS for antivirus and attack updates through TCP/SSL port 443.
- If there is a proxy server between FortiManager and FDS, FortiManager uses port 80 to communicate with the proxy server by default and connects to the proxy server using HTTP protocol.
- If FortiManager manages a FortiGate device located behind a proxy server, the proxy server permits TCP/SSL traffic to pass through via port 443.

FortiGuard Center update support

You can configure FortiManager as a local FDS to provide FortiGuard updates to other Fortinet devices and agents on your network. The following table lists which updates are available per platform/version:

Platform	Antivirus	WebFilter	Vulnerability Scan	Software
FortiClient (Windows)	✓	✓	✓	✓
FortiClient (Mac OS X)	✓		✓	
FortiMail	✓			
FortiSandbox	✓			
FortiWeb	✓			



To enable FortiGuard Center updates for FortiMail version 4.2 enter the following CLI command:

```
config fmupdate support-pre-fgt-43
set status enable
end
```

Appendix B - Default and maximum number of ADOMs supported

This section identifies the supported number of ADOMs for FortiManager hardware models and virtual machines.

Hardware models

The following table identifies the default number of ADOMs supported for FortiManager hardware models G series and later. It also identifies the hardware models that support the ADOM subscription license and the maximum number of ADOMs supported.

FortiManager Platform	Default number of ADOMs	ADOM license support?	Maximum number of ADOMs
3000G Series	4000	✓	8000

For FortiManager F series and earlier, the maximum number of ADOMs is equal to the maximum devices/VDOMs as described in the [FortiManager Data Sheet](#).

Virtual Machines

FortiManager VM subscription license includes five (5) ADOMs. Licenses are non-stackable. Additional ADOMs can be purchased with an ADOM subscription license.

For FortiManager VM perpetual license, the maximum number of ADOMs is equal to the maximum number of Devices/VDOMs listed in the [FortiManager Data Sheet](#).



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