FortiManager - Release Notes

Version 6.4.4

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FortiManager 6.4.4 Release Notes
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Change Log

Date	Change Description
2020-12-16	Initial release.
2020-12-16	Updated FortiGate special branch models on page 22.
2020-12-18	Updated Known Issues on page 36.
2020-12-21	Updated Special Notices on page 8.
2021-02-03	Updated FortiGate models on page 20.
2021-02-09	Added FortiGate-4400F and FortiGate-4401F to FortiGate special branch models on page 22.
2021-02-18	Updated Supported models on page 6.
2021-02-23	Updated Virtualization on page 17.
2021-03-03	Added Management extension applications on page 7.
2021-03-18	Added Appendix B - Default and maximum number of ADOMs supported on page 42.
2021-04-12	Added FortiManager VM subscription license on page 6.
2021-05-07	Updated Downgrading to previous firmware versions on page 11.
2021-05-0	Updated Known Issues on page 36.
2022-01-06	Updated FortiMail models on page 25.

FortiManager 6.4.4 Release

This document provides information about FortiManager version 6.4.4 build 2253.

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

FortiManager version 6.4.4 supports the following models:

FortiManager	FMG-200F, FMG-300E, FMG-300F, FMG-400E, FMG-1000F, FMG-2000E, FMG-3000F, FMG-3000G, FMG-3700F, 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 11.

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 6.4.4.

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-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 6.4.4 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 6.4.4.

VPN Manager in a Fabric type ADOM

After Upgrading to FortiManager 6.4.4, the VPN Manager may fail to install to any device participating in a full mesh VPN.

Customers using VPN Manager in a fabric type ADOM should not upgrade to 6.4.4 until the issue is resolved.

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.

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 t1sv1
end
```

Upgrade Information

You can upgrade FortiManager 6.2.0 or later directly to 6.4.4.

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

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 6.4.4 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 6.4.4 support

This section identifies FortiManager 6.4.4 product integration and support information:

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 6.4.4 product integration and support for web browsers:

- Microsoft Edge 80 (80.0.361 or later)
- Mozilla Firefox version 83
- Google Chrome version 87

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

FortiOS/FortiOS Carrier

This section lists FortiManager 6.4.4 product integration and support for FortiOS/FortiOS Carrier:

- 6.4.0 to 6.4.4
- 6.2.0 to 6.2.7
- 6.0.0 to 6.0.11

FortiADC

This section lists FortiManager 6.4.4 product integration and support for FortiADC:

- 6.0.1
- 5.4.4

FortiAnalyzer

This section lists FortiManager 6.4.4 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 6.4.4 product integration and support for FortiAuthenticator:

- 6.0. to 6.2
- 5.0 to 5.5
- 4.3 and later

FortiCache

This section lists FortiManager 6.4.4 product integration and support for FortiCache:

- 4.2.9
- 4.1.6
- 4.0.4

FortiClient

This section lists FortiManager 6.4.4 product integration and support for FortiClient:

- 6.4.0 and later
- 6.2.8
- 5.6.6
- 5.4.0 and later

FortiDDoS

This section lists FortiManager 6.4.4 product integration and support for FortiDDoS:

- 5.4.0
- 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 18.

FortiMail

This section lists FortiManager 6.4.4 product integration and support for FortiMail:

- 6.4.0 and later
- 6.2.0 and later
- 6.0.10 and later
- 5.4.11
- 5.3.13

FortiSandbox

This section lists FortiManager 6.4.4 product integration and support for FortiSandbox:

- 3.1.4
- 3.0.6

- 2.5.2
- 2.4.1
- 2.3.3
- 2.2.2

FortiSOAR

This section lists FortiManager 6.4.4 product integration and support for FortiSOAR:

- 6.4.0 and later
- 6.0.0 and later

FortiSwitch ATCA

This section lists FortiManager 6.4.4 product integration and support for FortiSwitch ATCA:

- 5.2.3
- 5.0.0 and later

FortiWeb

This section lists FortiManager 6.4.4 product integration and support for FortiWeb:

- 6.3.9
- 6.2.4
- 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 6.4.4 product integration and support for virtualization:

- Amazon Web Service AMI, Amazon EC2, Amazon EBS
- Citrix XenServer 7.2
- Linux KVM Redhat 7.1
- Microsoft Azure
- Microsoft Hyper-V Server 2012 and 2016
- Nutanix AHV (AOS 5.10.5)
- OpenSource XenServer 4.2.5
- VMware ESXi versions 5.0, 5.5, 6.0, 6.5 , 6.7, and 7.0

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 6.4.4.

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

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-81E, FortiGate-81E-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-201E, FortiGate-300D, FortiGate-300E, FortiGate-301E, FortiGate-400D, 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-2000E, FortiGate-2500E, FortiGate-3000D, FortiGate-3100D, FortiGate-3200D, FortiGate-2200E, FortiGate-2201E, 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 5000 Series:** FortiGate-5001D, FortiGate-5001E, FortiGate-5001E1 **FortiGate DC:**FortiGate-401E-DC, FortiGate-800D-DC, FortiGate-1100E-DC, FortiGate-1500D-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 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-61F, **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	6.4
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-81E, FortiGate-81E-POE, 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, FG-400E, FG-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-2500E, FortiGate-3000D, FortiGate-3100D, FortiGate-3200D, FortiGate-3700D, FortiGate-3800D,FortiGate-2200E, FortiGate-2201E, FortiGate-2200E, FortiGate-2201E, FortiGate-3300E, FortiGate-3301E, FortiGate-3810D, FortiGate-3815D, FortiGate-3960E, FortiGate-3980E **FortiGate 5000 Series:** FortiGate-5001D, FortiGate-5001E, FortiGate-5001E1	6.2

Model	Firmware Version
FortiGate DC: FortiGate-80C-DC, FortiGate-401E-DC, FortiGate-600C-DC, RortiGate-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-3600C-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-30D, FortiWiFi-30D-POE, 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-61E, FortiWiFi-80CM, FortiWiFi-81CM, FortiWiFi-60F, FortiWiFi-61F **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 **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-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, FG-3600C, FG-3700D, FG-3800D, FG-3810D, FG-3815D, FG-3960E, FG-3980E **FortiGate 5000 Series:** FG-5001D, FG-5001E, FG-5001E1 **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-30E, FWF-30E-3G4G-INTL, FWF-30E-3G4G-NAM, FWF-50E, FWF-50E-2R, FWF-51E, FWF-60D, FWF-60D-POE, FWF-60E, FWF-61E, FWF-90D, FWF-90D-POE, FWF-92D, FortiWiFi-60F, FortiWiFi-61F, **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

Model	Firmware Version
FortiGate: FortiGate-80F, FortiGate-80F-Bypass, FortiGate-81F	6.4
FortiGate: FortiGate-30E-3G4G-GBL, FortiGate-60E, FortiGate-60E-DSL, FortiGate-60E-DSLJ, FortiGate-80F, FortiGate-80F-Bypass, FortiGate-81F, FortiGate-200F, FortiGate-201F, FortiGate-400E-Bypass, FortiGate-1800F, FortiGate-1801F, FortiGate-2600F, FortiGate-2601F, FortiGate-4200F, FortiGate-4201F, FortiGate-4400F, FortiGate-4401F **FortiGate 6000 Series:** FortiGate-6000F **FortiGate 7000 Series:** FortiGate-7000E **FortiGate DC:** FortiGate-1800F-DC, FortiGate-1801F-DC, FortiGate-4200F-DC, FortiGate-4201F-DC **FortiGate Rugged:** FortiGateRugged-90D **FortiWiFi:** FortiWifi-60E-DSL, FortiWiFi-60E-DSLJ,	6.2
FortiGate: FortiGate-30E-3G4G-GBL, FortiGate-41F, FortiGate-41F-3G4G, FortiGate-60E-DSL, FortiGate-60E-DSLJ, FortiGate-60F, FortiGate-61F, FortiGate-400E, FortiGate-401E, FortiGate-600E, FortiGate-601E, FortiGate-1800F, FortiGate-1801F, FortiGate-3400E, FortiGate-3401E, FortiGate-3600E, FortiGate-3601E **FortiGate 6000 Series:** FortiGate-6000F, FortiGate-6300F, FortiGate-6301F, FortiGate-6500F, FortiGate-6501F **FortiGate 7000 Series:** FortiGate-7000E, FortiGate-7030E, FortiGate-7040E, FortiGate-7060E, FortiGate-7060E-8-DC **FortiGate DC:** FortiGate-1100E-DC, FortiGate-3400E-DC, FortiGate-3401E-DC **FortiGate VM:** FortiGate-VM64-RAXONDEMAND **FortiWiFi:** FortiWiFi-41F, FortiWiFi-41F-3G4G,	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-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 **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	6.4

Model	Firmware Version
FortiCarrier: FortiCarrier-3000D, FortiCarrier-3100D, FortiCarrier-3200D, FortiCarrier-3700D, FortiCarrier-3800D, FortiCarrier-3810D, FortiCarrier-3815D, FortiCarrier-3960E, FortiCarrier-5001D, FortiCarrier-5001E, FortiCarrier-5001E1 **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-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

Model	Firmware Version
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-1000C, FAC-1000D, FAC-2000E, FAC-3000B, FAC-3000D, FAC-3000E **FortiAuthenticator VM:** FAC-VM	4.3, 5.0-5.5, 6.0
FortiAuthenticator: FAC-200D, FAC-200E, FAC-400C, FAC-400E, FAC-1000C, FAC-1000D, FAC-3000B, FAC-3000D, FAC-3000E **FortiAuthenticator VM:** FAC-VM	4.0-4.2

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, FI400B, 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-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 **FortiSandbox VM:** FSA-KVM, FSA-VM	2.5.2
FortiSandbox: FSA-1000D, FSA-2000E, FSA-3000D, FSA-3000E, FSA-3500D **FortiSandbox VM:** FSA-VM	2.4.1 2.3.3
FortiSandbox: FSA-1000D, FSA-3000D, FSA-3500D **FortiSandbox VM:** FSA-VM	2.2.0 2.1.3
FortiSandbox: FSA-1000D, FSA-3000D **FortiSandbox VM:** FSA-VM	2.0.3 1.4.2
FortiSandbox: FSA-1000D, FSA-3000D	1.4.0 and 1.4.1 1.3.0 1.2.0 and later

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 **FortiController:** FTCL-5103B, FTCL-5903C, FTCL-5913C	5.0.0
FortiSwitch-ATCA: FS-5003A, FS-5003B	4.3.0 4.2.0

FortiWeb models

Model	Firmware Version
FortiWeb: FortiWeb-100D, FortiWeb-400C, ortiWeb-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-XENSERVER	6.0.1
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	5.9.1
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	5.8.6

Model	Firmware Version
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	5.7.2
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	5.6.1
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 **FortiWeb VM:** FWB-VM-64, FWB-XENAWS, FWB-XENOPEN, FWB-XENSERVER, FWB-HYPERV, FWB-KVM, FWB-AZURE	5.5.6
FortiWeb: FWB-100D, FWB-400C, FWB-1000C, FWB-3000C, FWB-3000CFSX, FWB-3000D, FWB-3000DFSX, FWB-3000E, FWB-4000C, FWB-4000D, FWB-4000E **FortiWeb VM:** FWB-VM64, FWB-XENAWS, FWB-XENOPEN, FWB-XENSERVER, FWB-HYPERV	5.4.1
FortiWeb: FWB-100D, FWB-400B, FWB-400C, FWB-1000B, FWB-1000C, FWB-1000D, FWB-3000C, FWB-3000CFSX, FWB-3000D, FWB-3000DFSX, FWB-3000E, FWB-4000C, FWB-4000D, FWB-4000E **FortiWeb VM:** FWB-VM64, FWB-XENAWS, FWB-XENOPEN, FWB-XENSERVER, and FWB-HYPERV	5.3.9
FortiWeb: FWB-100D, FWB-400B, FWB-400C, FWB-1000B, FWB-1000C, FWB-1000D, FWB-3000C, FWB-3000CFSX, FWB-3000D, FWB-3000DFSX, FWB-3000E, FWB-4000C, FWB-4000D, FWB-4000E **FortiWeb VM:** FWB-VM64, FWB-HYPERV,FWB-XENAWS, FWB-XENOPEN, FWB-XENSERVER	5.2.4

Resolved Issues

The following issues have been fixed in 6.4.4. For inquires about a particular bug, please contact Customer Service & Support.

AP Manager

Bug ID	Description
593168	DFS channel list in WiFi template is inconsistent between FortiManager and FortiGate.
667215	FortiManager should be able to classify Rogue FortiAPs.
669906	FortiManager may not be able to install *mpsk-key* from AP Manager.
679115	No available interface can be selected when authorizing FortiExtender.

Device Manager

Bug ID	Description
604855	CLI Template should not prevent the *lan* interface from being deleted once all the dependencies have been removed.
609744	*Device Manager* > *System* > *Interface* may not be able to delete SSID interface.
627664	FortiManager cannot cooperate with socket-size *0* and changes it to *1* automatically.
636012	Importing a policy may report a conflict for the default SSH CA certificates.
643845	After auto link, FortiGate HA cluster members have the same hostname.
645086	Policy look-up shows an error even though the device is in sync.
646421	FortiManager may not be able to configure VDOM property resources setting.
649785	*SD-WAN* > *Monitor* may hang for an ADOM with 1500 devices.
649821	Installation may fail for FortiGate-600D.
654190	FortiManager should not modify IPv4 addressing mode when IPv6 addressing mode is changed.
655264	VDOM count is not correct when *vdom-mode split-vdom* is configured on FortiGate with VM0xV license.
656433	FortiManager device delete process may hang.

Bug ID	Description
657988	FortiManager may lose connection and fail to install after FortiGate HA switches rolls.
662243	FortiManager is unable to clone *SNMP Community* under *System Templates*.
662656	When importing polices that contain *policy block* or *global policy*, the import wizard should give a warning that those polices will not be imported.
664253	The *auto-join-forticloud* configuration may cause *out-of-sync* status.
665344	A user with full read/write DVM privileges should be allowed to see and modify the System Provisioning Templates.
666833	GUI returns no warning when 4-byte AS or invalid community is being configured on *Standard* community.
667826	Device Manager may display *No entry found* and *rtmmond* and security console crashes.
669129	FortiManager does not create dynamic mapping for address group causing an import failure.
669155	SD-WAN monitor stuck at loading when admin profile is set to *Read-Only* for SD-WAN.
669704	FortiManager does not allow the user to configure FortiGate admin password longer than 32 characters.
670839	FortiManager should be able to configure IPSec Phase2 selector using the same IP range.
671348	FortiManager should allow more than ten incoming source interfaces for policy routing decision.
672319	*View Config*, *View Install Log*, and *Revision Diff* in workspace mode should not be greyed out when ADOM is unlocked.
672338	FortiManager may unset interface weight in SD-WAN when installing within 6.0 ADOM.
673008	SD-WAN Rules order changes to the default when creating a rule and moving it to the top.
673641	When creating a policy, all the *vwpare* names are display and not only the names from the installation target.
674282	FortiManager sends *unset entry-id* if FortiGate implements NAC access-mode at FortiSwitch switchport level.
674938	FortiManager should add support for *set use-shortcut-sla* option in SD-WAN rules.
677241	Interface speed is incorrectly set on port group due to missing aggregate membership verification.
678066	Install may fail when changing FortiGate admin password from FortiManager.

FortiSwitch Manager

Bug ID	Description
650453	FortiSwitch template and VLAN shall appear for firewall policy creation.
678804	FortiSwitch template is not working properly in switchport NAC access-mode.

Global ADOM

Bug ID	Description
632400	When installing a global policy, FortiManager may delete policy routes and settings on an ADOM.
667423	Assigned header policy from the global ADOM shows up on excluded policy package.
670280	Promoting the Profile Group object should not promote the default Protocol option.

Others

Bug ID	Description
649399	After upgrade, install may failed if a FortiGate was assigned to a system template.
659916	FortiManager may consume high memory usage by the *svc sys daemon*.
661069	ADOM restricted access user is able to pull Device Manager information from ADOMs via JSON API.
665617	FortiManager may consume high CPU resource when locking ADOM or loading policy.
670479	FortiManager configuration file size may be large due to a bulk of resync files.
673210	When checking unused policy, implicit policy information is not included.

Policy and Objects

Bug I D	Description
494367	Users cannot search address in policy where the address is a part of a nested group.
523350	FortiManager does not show the default certificate under SSL/SSH Inspection within policy.
547052	FortiManager GUI should not allow creating Security Profiles without any SSL/SSH Inspection

Bug I D	Description
	Profile defined.
565301	Exporting policy package to Excel may not work.
587634	FortiManager may not be able to create new wildcard FQDN type address to FortiGate 6.2.
601229	FortiManager is missing *device-type* option for *custom device* dynamic mapping.
608268	Users may not be able to edit firewall policy due to *session-ttl:out of range* in v5.6 or v6.0 ADOM.
612317	FortiManager shows incorrect country code for *Cyprus* under *User* definition.
615936	FortiManager is missing the SSH protocol in DLP filter.
633727	FortiManager is unable to display summary of policy package diff for VDOM with a long name.
647189	FortiManager dynamic object filter generator is adding a "s" at the end of tag resulting in non-working object.
651991	After adding and removing Security Profile, the policy *Security Profile* changes from *no-inspection* to empty.
657026	The GUI hangs in loading when trying to apply changes made to Anti Virus profile.
658528	The URL remote category, *FortiGuard Threat Feed*, is not available in the drop down menu for *Proxy Address*.
660804	Kubernetes SDN connector may show less options than on FortiGate.
661590	Without selecting security profile group on proxy policy, FortiManager should fail the install with a proper error message.
666913	Web URL Filter is deleted when URL Filter option is unchecked under the Web Filter Profile.
667414	FortiManager may freeze when editing the comment field on a policy package with many policies.
668649	Install may hang at 75% when no VLAN interface is configured for fsp managed-switch.
669389	Install may fail due to web filter profile in flow mode with setting changes available in proxy mode only.
670019	There is no *Decrypted Traffic Mirror* option in a policy when only one port mapping is enabled in *Full SSL/SSH Inspection*.
670833	Search box for address may not always work.
671265	Global object assignment may not work.
671693	*Internet Service Group* should give an error or a warning when the direction setting is not the same.
671985	*Decrypted Traffic Mirror* setting is not being removed from policy after changing the SSL Inspection method.
671988	FortiManager is not able to push dynamic objects to FortiGate after receiving the configurations from NSXT connector.

Bug I D	Description
673305	Policy package install may stall and fail due to high memory usage.
673311	Full SSL/SSH Inspection profile's *Invalid SSL Certificates* setting is not taking effect when *Inspect All Ports* is selected.
674899	FortiManager may not be able to edit proxy addresses objects.
675199	Local web category override is not installed if web filter is part of policy block package.
675501	Policy check may show negative values.
675541	Deleting an override entry should trigger modified status for policy packages with *FortiGuard Category Based Filter* enabled within web filter profile.
675587	Firewall VIP hover-over popup should not show ports when port forwarding is disabled.
678439	FortiManager may always configure empty application parameter values.
680750	IPS Profile is not able to set to action "Monitor" in the signature filter.
681342	Devices are evicted from Installation target after authorizing a new device.
682370	Having changed an IPS profile on the security profile, the change is not visible when editing the policy again.

Revision History

Bug I D	Description
492088	FortiManager attempts to change *Chassis ID* on FortiGate 7000 series when installing configuration.
579286	Installation may fail for FortiGate 6.2 within ADOM 6.0 due to configuration changes with *virtual-wan-link* member weight and *volume-ratio*, and i*nternet-service-ctrl*.
637465	Installation fails when installing global v6.2 IPv4 policy to v6.4 FortiGate.
642075	Install may fail with delete *metadata-server* error.
660525	When installing from FortiManager, it may unset *comment*, *organization*, and *subnet-name* during install.
662438	FortiManager may try to purge all web rating override entries.
662661	Default value of *global: system npu ip-reassembly:max-timeout* NPU setting in ADOM 6.0 for FortiGate-1800F should be changed to *10000* to avoid *Conflict* status.
667148	When a policy install is performed, *Install preview* shows a lot of firewall policies with metafield changes without any actual changes been done.
673327	With traffic shaper in Mbps or Gbps, FortiManager should convert it to Kbps if installation target is non 64 bits FortiGate model.

Script

Bug ID	Description
663820	The LDAP port value remains *636* on device database and FortiManager is not accepting custom port number via CLI script.

Services

Bug ID	Description
591748	Hide or show license expired devices may not work.
671387	FortiManager installs the latest IPS and application control signatures on managed device despite the *To Be Deployed Version* is configured.
673307	FortiManager may return *invalid license* to FortiMail and cause *AntiSpam* license to expire.
674511	FortiManager should counts FMGC expired device number.

System Settings

Bug ID	Description
553488	TACACS is unable to assign multiple ADOMs to admins.
623457	FortiManager prompts an error while importing CA certificate.
631733	Changes to *trusted IP* are not saved and installed.
642205	While FortiAnalyzer model is disabled, FortiManager may fail to create an ADOM due to over size with disk quota.
654370	Users may not be able to access Java console with an error message: "Too many concurrent connections."
660226	HA may crash when upgrading.
662970	Firewall addresses may not be not visible in the GUI after upgrading FortiManager.
667445	FortiManager may show errors on "dynamic_mapping.local-int" during upgrade.
674661	After upgrade, FortiGate VDOM that contains a FortiToken user cannot be managed anymore, and policy install generates an error.
677118	Upgrading ADOM from 6.2 to 6.4 may fail due to replacement message.
677461	FortiManager is not able to identify ADOMs that are locked by none super user administrators.

VPN Manager

Bug ID	Description
596953	Go to *VPN manager* > *Monitor*. Select a specific community from the tree menu to show only that community's tunnels, the monitor page displays a white screen.
608221	There is no *XAUTH USER* column in VPN Manager Monitor.
620801	*SSLVPN* > *Edit SSLVPN Settings* > *IP Range*, only shows configuration from ADOM database objects.
647394	VPN Manager with VPN zone feature disabled may trigger policy copy failure.
653328	FortiManager is unable to edit a SSL portal in VPN Manager containing "/" special character.
658221	The dns-suffix on SSL VPN portal is not installed if *web-mode* is disabled.

Known Issues

The following issues have been identified in 6.4.4. For inquires about a particular bug or to report a bug, please contact Customer Service & Support.

AP Manager

Bug ID	Description
633171	There may be *DFS Channel* mismatch between FortiManager and FortiGate for FAP-223E.
648812	DHCP server is incorrectly created for Bridge SSID.
674636	SSID may be empty in *AP Manager> WiFi Profiles> SSID* column.

Device Manager

Bug ID	Description
485037	*Monitor* > *Map View* may fail if proxy is enabled.
575215	When creating an new interface for a VDOM, FortiManager may list interfaces that may belong to another ADOM.
596711	FortiManager CLI Configuration shows incorrect default wildcard value for router access-list.
598431	Install wizard may show a blank area when scrolling down the wizard to select device(s).
604125	FortiManager may not be able to edit VDOM link interface from VDOM level.
610568	FortiManager may not follow the order in CLI Script template.
615044	Configuration status may be shown modified after added FortiGate to FortiManager.
630316	After *auto-conf IPv6* address is changed on FortiGate, the address is not updated into device database.
636357	Retrieve may fail on FortiGate cluster with *Failed to reload configuration. invalid value* error.
636638	Fabric view may stuck at loading.
640907	FortiManager is unable to configure FortiSwitch port mirroring.
651560	SD-WAN monitor may stuck loading when admin user belongs to device group.
652052	FortiManager may fail to add another FortiManager in Fabric ADOM.
659387	FortiManager should be able to provision CLI-template, SD-WAN-template, and Policy

Bug ID	Description
	Package together to the model device.
659981	FortiManager should be able to identify and show default SSL-SSH profile as ready only profiles.
660491	Device Manager system interface should not allow duplicated secondary IP address.
665207	FortiManager needs IPv6 support on Syslog server setting.
665955	FortiManager is not reflecting proper *admintimeout* value in CLI only object.
666872	BGP Neighbors table does not have height limit and vertical scroll bar.
667738	GUI should generate error message when using invalid IP address or special characters in interface name.
670535	Install fails when creating a new DHCP reservation due to missing MAC address.
670577	When creating an API admin from CLI Configuration, trusted host section is missing.
674123	SD-*WAN template* > *SD-WAN Rules* options for *Load Balance Mode* do not match those on FortiOS.
674904	FortiManager may not be able to import policy with interface binding contradiction on *srcintf* error.
680516	Host Name is truncated when name has more than 31 characters.
684955	Customized system dashboard may disappear after a while.

FortiSwitch Manager

Bug ID	Description
667703	After FortiSwitch is added, running a script to provision may fail.
674539	FortiManager may fail to upgrade two FortiSwitch devices at the same time.

Global ADOM

Bug ID	Description
667197	User should not be able to delete global object when ADOM is not locked.

Others

Bug ID	Description
605560	Flag *is_model* and *linked_to_model* are not working for add model device with JSON API.
678322	Rebuilding the database may never start when FortiAnalyzer mode is enabled.
681707	The *diagnose cdb upgrade check +all* command may unset *defmap-intf*.

Policy & Objects

Bug ID	Description
580880	FortiManager is unable to see dynamic mapping for Local Certificate if workflow session is created.
585177	FortiManager is unable to create VIPv6 virtual server objects.
601696	FortiManager may add unexpected IPv6 address to IPv6 address field when deleting ::/0.
608535	NAT option is missing from Central NAT policy package.
615624	Firewall policy and proxy policy cannot select IP type external resource as address.
617894	FortiManager is missing IPV6 none values after modifying policy.
623100	FortiManager is constantly changing UUID for firewall address object.
630431	Some application and filter overrides are not displayed on GUI.
631158	FortiManager is unable to import firewall objects of *fsso fortiems-cloud* user due to Server cannot be empty.
652753	When an obsolete internet service is selected, FortiManager may show entries IDs instead of names.
655601	FortiManager may be slow to add or remove a URL entry on web filter with a large list.
656991	FortiManager should not allow VIP to be created with same IP for External IP and Mapped IP Address.
659296	FortiManager may take a lot of time to update web filter URL filter list.
660483	IPS signatures may not match between FortiGate and FortiManager.
663109	FortiManager should not allow a user to select a profile group in a flow-based policy that uses a proxy-based feature.
666258	User should not be able to create a firewall policy with an Internet service with Destination direction in Source by using drag and drop.
670061	FortiManager does not report error when an unsupported FQDN address format is created.

Bug ID	Description
675509	FortiManager may randomly set IPv4 IP Pool object to overload.
677528	Address object search may not display the address group which contains the searched object within the group.
679282	Editing a global object in an ADOM is not possible and generates an error, *undefined is not iterable*.
682356	FortiManager may not be able to map normalized interface.
684081	*Policy Check* and *Find Unused Policies* may not work for FortiGate in Policy-Based mode.

Revision History

Bug ID	Description
606737	User may not be able to install policy package due to change with external interface with VIP settings.
618305	FortiManager changes configuration system csf settings.
623159	Zone validation in re-Install Policy is not saving the user choice and deleting all related policies.
635957	Install fails for subnet overlap IP between two interfaces.
664284	FortiManager may not be able to configure SSH certificate.
672609	After import, FortiManager may prompt password error on administrator during install.
674094	FortiManager may unset explicit proxy's HTTPS and PAC ports and change the value to 0 instead.
675867	The *ssl-anomaly-log* configuration may be incorrectly pushed by FortiManager when installing 5.6 ADOM policy to 6.0 FortiGate.
679139	When a policy package is shared between many firewalls, web rating override purge may fail in some scenarios.

Script

Bug ID	Description
613575	After script is run directly on CLI, FortiManager may fail to reload configuration.
668876	Using CLI script to create SD-WAN with auto-numbering, *edit 0*, may not work.
668947	Changes using CLI Script may not be applied to devices in the container or folder.

Services

Bug ID	Description
567664	HA secondary device does not update FortiMeter license.

System Settings

Bug ID	Description
517964	FortiManager may create an incorrect certificate and it cannot be deleted.
579964	FMGVM64-Cloud needs to provide GUI support for ADOM upgrade in system information dashboard.
598194	FortiManager two-factor authentication admin login is missing the option for *FTK Mobile* push notification authentication.
614127	FortiManager should show details in the *fnbamd* debug if login fails due to trusted hosts.
625683	Changes made by ADOM upgrade may not update *Last Modified* date/time and user admin.
635181	FortiManager is unable to delete mail server with error message *used* displayed.
652417	FortiManager HA may go out of synchronization periodically based on the logs.
660130	ADOM upgrade may fail caused by invalid setting of *ssl-exempt*.
670497	After upgraded FortiManager, it may delete syslog configuration.

VPN Manager

Bug ID	Description
681110	VPN manager may not push any configuration on ADOM 6.0 for dial up VPN on FortiGate.
685704	After upgrading FortiManager, installing to any device participating in the full mesh VPN may fail with copy error *fetch device/vdom list failed*.

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	500	✓	1200

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

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

FortiManager Platform	Default number of ADOMs
FMG-VM-BASE	5