FORTINET

High Performance Network Security

FortiManager - Release Notes

VERSION 5.4.7

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Change Log

Date	Change Description
2019-07-18	Initial release of 5.4.7.
2019-07-24	Updated the *Product Integration* section.

Introduction

This document provides the following information for FortiManager 5.4.7 build 1247:

- Supported models
- Special Notices
- Upgrade Information
- Product Integration and Support
- Compatibility with FortiOS Versions
- Resolved Issues
- Known Issues
- FortiGuard Distribution Servers (FDS)

For more information on upgrading your device, see the FortiManager *Upgrade Guide*.

Supported models

FortiManager version 5.4.7 supports the following models:

FortiManager	FMG-200D, FMG-200F, FMG-300D, FMG-300E, FMG-400E, FMG-1000C, FMG-1000D, FMG-2000E, FMG-3000C, FMG-3000F, FMG-3900E, FMG-4000D, and FMG-4000E.
FortiManager VM	FMG-VM64, FMG-VM64-AWS, FMG-VM64-Azure, FMG-VM64-HV (including Hyper-V 2016), FMG-VM64-KVM, and FMG-VM64-XEN (for both Citrix and Open Source Xen).

What’s new in FortiManager 5.4.7

There are no new features or enhancements in FortiManager version 5.4.7.

Special Notices

This section highlights some of the operational changes that administrators should be aware of in 5.4.7.

Common Vulnerabilities and Exposures

FortiManager 5.4.7 is no longer vulnerable to the issue described in the following link - https://fortiguard.com/psirt/FG-IR-19-144.

FortiGate VM 16/32/UL license support

FortiOS 5.4.4 introduces new VM license types to support additional vCPUs. FortiManager 5.4.3 supports these new licenses with the prefixes of FGVM16, FGVM32, and FGVMUL.

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.

IPsec connection to FortiOS for logging

FortiManager 5.4.2 with FortiAnalyzer Features enabled no longer supports an IPsec connection with FortiOS 5.0.x/5.2.x. However UDP or TCP + reliable are supported.

Instead of IPsec, you can use the FortiOS reliable logging feature to encrypt logs and send them to FortiManager. You can enable the reliable logging feature on FortiOS by using the `configure log fortianalyzer setting` command. You can also control the encryption method on FortiOS by using the `set enc-algorithm default/high/low/disable` command.

FortiManager 5.4.1 and earlier supports IPsec connection with FortiOS 5.0.x/5.2.x.

VM License (VM-10K-UG) Support

FortiManager 5.4.2 introduces a new VM license (VM-10K-UG) that supports 10,000 devices. It is recommended to upgrade to FortiManager 5.4.2 before applying the new license to avoid benign GUI issues.

If you use the new license with FortiManager 5.4.1 or 5.2.x and earlier, the maximum number of devices is correctly enforced, but the GUI may display some VM information incorrectly. For example, the VM storage maximum may incorrectly display 100GB in the *License Information* widget on the *System Settings* pane. The

VM license type may not appear (FortiManager 5.4.1), and the VM license type may show *Unknown* (FortiManager 5.2.9).

System Configuration or VM License is Lost after Upgrade

When upgrading FortiManager from 5.4.0 or 5.4.1 to 5.4.2, it is imperative to reboot the unit before installing the 5.4.2 firmware image. Please see the *FortiManager Upgrade Guide* for details about upgrading. Otherwise, FortiManager may lose system configuration or VM license after upgrade. There are two options to recover the FortiManager unit:

1. Reconfigure the system configuration or add VM license via CLI with `execute add-vm-license <vm license>`.
2. Restore the 5.4.0 backup and upgrade to 5.4.2.

FortiOS 5.4.0 Support

With the enhancement in password encryption, FortiManager 5.4.2 no longer supports FortiOS 5.4.0. Please upgrade FortiGate to 5.4.2.

The following ADOM versions are not affected: 5.0 and 5.2.

Local in-policy after upgrade

After upgrading to FortiManager 5.4.1, you must import or reconfigure local in-policy entries. Otherwise, the subsequent install of policy packages to FortiGate will purge the local in-policy entries on FortiGate.

ADOM for FortiGate 4.3 Devices

FortiManager 5.4 no longer supports FortiGate 4.3 devices. FortiManager cannot manage the devices after the upgrade. To continue managing those devices, please upgrade all FortiGate 4.3 to a supported version, retrieve the latest configuration from the devices, and move the devices to an ADOM database with the corresponding version.

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

Upgrading to FortiManager 5.4.7

You can upgrade FortiManager 5.2.0 or later directly to 5.4.7. If you are upgrading from versions earlier than 5.2.0, you must upgrade to FortiManager 5.2 first. (We recommend that you upgrade to 5.2.9, the latest version of FortiManager 5.2.)

Bug ID	Description
404193	ADOM upgrade will fail if the MGMT interface is a dedicated management port and mapped to a dynamic interface. **Workaround**: Before upgrading to 5.4, you should remove MGMT interface from dynamic interface zone, if a managed FortiGate has MGMT interface and if it is a dedicated management port. This is because MGMT interface being set to a dedicated management port cannot be mapped to a dynamic interface zone in 5.4.

When upgrading from FMG 5.2, an *Import Policy Package* should be performed on all FortiGates using *Local-In-Polices*. As of FMG 5.4, these are handled in Policies & Objects.

For details about upgrading your FortiManager device, see the *FortiManager Upgrade Guide*.

During upgrade from 5.2.4 or earlier, invalid dynamic mappings and duplicate package settings are removed from the ADOM database. Please allow sufficient time for the upgrade to complete.

After changing the SFTP tool in FMG 5.4.4, a full directory path may now be required for some servers. Users may need to update their configuration after upgrade.

Previously, the following config example was working:

```
# config system backup all-settings
# set directory "folder/subfolder"
```

After upgrading to 5.4.4, the full path may need to be defined as in the example below:

```
# config system backup all-settings
# set directory "/home/username/folder/subfolder/"
```

The CLI command for manual backup is also affected.
Previously, it was working with:

```
# exec backup all-settings sftp 000.000.000.000
    folder/subfolder/ username password
```

After upgrading to 5.4.4:

```
# exec backup all-settings sftp 000.000.000.000
    /home/username/folder/subfolder/ username password
```

Upgrading from 5.2.x

Starting with FortiManager 5.4.0, you can create a maximum number of Global and ADOM objects for each object category, and the maximum is enforced. The maximum numbers are high and unlikely to be met. The purpose of the maximum is to help avoid excessive database sizes, which can impact performance.

During upgrade from FortiManager 5.2.x to 5.4.x to 5.6.2, objects are preserved, even if the 5.2 ADOM contains more than the maximum number of allowed objects. If you have met the maximum number of allowed objects, you cannot add additional objects after upgrading to FortiManager 5.6.2.

Following are examples of object limits:

- Firewall service custom: 8192 objects
- Firewall service group: 2000 objects

If you have reached the maximum number of allowed objects, you can reduce the number of objects by deleting duplicate or obsolete objects from the ADOM.

You can also reach the maximum number of allowed objects if you have multiple FortiGate/VDOMs in the same ADOM.

You can reduce the number of objects by moving the FortiGates/VDOMs into different ADOMs.

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. 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}
```

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.

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 FortiAnalyzer 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.
- `.hyperv.zip`: Download the package for a new FortiManager VM installation. This package contains a Virtual Hard Disk (VHD) file for Microsoft Azure.

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 product data sheet available on the Fortinet web site, http://www.fortinet.com/products/fortimanager/virtualappliances.html. VM installation guides are available in the Fortinet Document Library.

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*.

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

FortiManager 5.4.7 support

The following table lists 5.4.7 product integration and support information:

Web Browsers	- Microsoft Edge 40 Due to limitation on Microsoft Edge, it may not completely render a page with a large set of policies or objects. - Mozilla Firefox version 67 - Google Chrome version 75 Other web browsers may function correctly, but are not supported by Fortinet.

FortiOS/FortiOS Carrier	• 5.4.10 to 5.4.12 FortiManager 5.4.7 is fully tested as compatible with FortiOS/FortiOS Carrier 5.4.10 with some minor interoperability issues. For information, see Compatibility issues with FortiOS 5.4.10 on page 28. • 5.4.9 FortiManager 5.4.7 is fully tested as compatible with FortiOS/FortiOS Carrier 5.4.9 with some minor interoperability issues. For information, see Compatibility issues with FortiOS 5.4.9 on page 28. • 5.4.8 FortiManager 5.4.7 is fully tested as compatible with FortiOS/FortiOS Carrier 5.4.8, with some minor interoperability issues. For information, see Compatibility issues with FortiOS 5.4.8 on page 28. • 5.4.5 to 5.4.7 FortiManager 5.4.7 is fully tested as compatible with FortiOS/FortiOS Carrier 5.4.5, with some minor interoperability issues. For information, see Compatibility issues with FortiOS 5.4.5 on page 28. • 5.4.4 FortiManager 5.4.7 is fully tested as compatible with FortiOS/FortiOS Carrier 5.4.4, with some minor interoperability issues. For information, see Compatibility issues with FortiOS 5.4.4 on page 29. • 5.4.1 to 5.4.3 • 5.2.8 to 5.2.14 FortiManager 5.4.7 is fully tested as compatible with FortiOS/FortiOS Carrier 5.2.10, with some minor interoperability issues. For information, see Compatibility issues with FortiOS 5.2.10 on page 29. • 5.2.7 FortiManager 5.4.7 is fully tested as compatible with FortiOS/FortiOS Carrier 5.2.7, with some minor interoperability issues. For information, see Compatibility issues with FortiOS 5.2.7 on page 29. • 5.2.6 FortiManager 5.4.7 is fully tested as compatible with FortiOS/FortiOS Carrier 5.2.6, with some minor interoperability issues. For information, see Compatibility issues with FortiOS 5.2.6 on page 30. • 5.2.2 to 5.2.5 • 5.2.1 FortiManager 5.4.7 is fully tested as compatible with FortiOS/FortiOS Carrier 5.2.1, with some minor interoperability issues. For information, see Compatibility issues with FortiOS 5.2.1 on page 30. • 5.2.0 FortiManager 5.4.7 is fully tested as compatible with

FortiAnalyzer	• 5.4.0 to 5.4.5 • 5.2.0 to 5.2.11 • 5.0.0 to 5.0.13
FortiCache	• 4.2.2 • 4.1.2 • 4.0.0 to 4.0.4
FortiClient	• 5.4.3 • 5.4.1 • 5.2.0 and later
FortiMail	• 5.3.7 to 5.3.9 • 5.2.9 • 5.1.6 • 5.0.10
FortiSandbox	• 2.4.1 • 2.4.0 • 2.3.2 • 2.2.1 • 2.1.2 • 1.4.0 and later • 1.3.0 • 1.2.0 and 1.2.3
FortiSwitch ATCA	• 5.2.3 • 5.0.0 and later • 4.3.0 and later • 4.2.0 and later
FortiWeb	• 5.8.1 • 5.8.0 • 5.6.0 • 5.5.4 • 5.4.1 • 5.3.8 • 5.2.4 • 5.1.4 • 5.0.6

FortiDDoS	• 4.3.1 • 4.4.2 • 4.2.3 • 4.1.11 Limited support. For more information, see Feature support on page 18.
FortiAuthenticator	• 4.3.2
Virtualization	• Amazon Web Service AMI, Amazon EC2, Amazon EBS • Citrix XenServer 6.2 • Linux KVM Redhat 6.5 • Microsoft Azure • Microsoft Hyper-V Server 2008 R2, 2012 & 2012 R2 • OpenSource XenServer 4.2.5 • VMware • ESX versions 4.0 and 4.1 • ESXi versions 4.0, 4.1, 5.0, 5.1, 5.5, 6.0 and 6.5

To confirm that a device model or firmware version is supported by 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.

Feature support

The following table lists FortiManager feature support for managed platforms.

Platform	Management Features	FortiGuard Update Services	Reports	Logging
FortiGate	✓	✓	✓	✓
FortiCarrier	✓	✓	✓	✓
FortiAnalyzer			✓	✓
FortiCache			✓	✓

Platform	Management Features	FortiGuard Update Services	Reports	Logging
FortiClient		✓	✓	✓
FortiDDoS			✓	✓
FortiMail		✓	✓	✓
FortiSandbox		✓	✓	✓
FortiSwitch ATCA	✓			
FortiWeb		✓	✓	✓
FortiAuthenticator				✓
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 import language translation files for these languages via the command line interface using one of the following commands:

```
execute sql-report import-lang <language name> <ftp> <server IP address> <user name>
    <password> <file name>
```

```
execute sql-report import-lang <language name> <sftp <server IP address> <user name>
    <password> <file name>
execute sql-report import-lang <language name> <scp> <server IP address> <user name>
    <password> <file name>
execute sql-report import-lang <language name> <tftp> <server IP address> <file name>
```

For more information, see the *FortiManager CLI Reference*.

Supported models

The following tables list which FortiGate, FortiCarrier, FortiDDoS, FortiAnalyzer, FortiMail, FortiSandbox, FortiSwitch ATCA, FortiWeb, and FortiCache models and firmware versions that can be managed by a FortiManager or send logs to a FortiManager running version 5.4.7.

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.

FortiGate models

Model	Firmware Version
FortiGate: FG-30D, FG-30D-POE, FG-30E, FG-30E-3G4G-INTL, FG-30E-3G4G-NAM, FG-50E, FG-51E, FG-52E, FG-60D, FG-60D-POE, FG-60E, FG-60E-DSL, FG-60E-POE, FG-61E, FG-70D, FG-70D-POE, FG-80C, FG-80CM, 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, FG-140D, FG-140E, FG-140D-POE, FG-140E-POE, FG-200D, FG-200D-POE, FG-240D, FG-240D-POE, FG-280D-POE, FG-200E, FG-201E, FGT-300D, FG-300E, FG-301E, FG-400D, FG-500D, FG-500E, FG-501E, FG-600C, FG-600D, FG-800C, FG-800D, FG-900D, FG-1000C, FG-1000D, FG-1200D, FG-1500D, FG-1500DT, FG-3000D, FG-3100D, FG-3200D, FG-3240C, FG-3600C, FG-3700D, FG-3700DX, FG-3810D, FG-3815D, FG-2000E, FG-2500E, FG 3800D, FG-3960E, FG-3980E, **FortiGate 5000 Series:** FG-5001C, FG-5001D, FG-5001E, FG-5001E1 **FortiGate 7000 Series:** FG-7030E-Q, FG-7030E-S, FG-7040E-1, FG-7040E-2, FG-7040E-3, FG-7040E-4, FG-7040E-5, FG-7040E-6, FG-7040E-8, FG-7040E-8-DC, FG-7060E-1, FG-7060E-2, FG-7060E-3, FG-7060E-4, FG-7060E-5, FG-7060E-6, FG-7060E-8 **FortiGate DC:** FG-80C-DC, FG-600C-DC, FG-800C-DC, FG-1000C-DC, FG-1500D-DC, FG-3000D-DC, FG-3100D-DC, FG-3200D-DC, FG-3240C-DC, FG-3600C-DC, FG-3700D-DC, FG-3800D-DC, FG-3810D-DC, FG-8000D-DC **FortiGate Hardware Low Encryption:** FG-80C-LENC, FG-100D-LENC, FG-600C-LENC, FG-1000C-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-30D-POE, FWF-60D, FWF-60D-POE, FWF-60E-DSL, FWF-90D, FWF-90D-POE, FWF-92D, FWF-60E, FWF-61E, FWF-80CM, FWF-81CM **FortiGate VM:** FG-VM, FG-VM64, FG-VM64-AWS, FG-VM64-AWSONDEMAND, o FG-VM64-AZUREONDEMAND, FG-VM64-HV, FG-VM64-KVM, FG-VM64-XEN, FG-VMX-Service-Manager **FortiGate Rugged:** FGR-30D, FGR-35D, FGR-60D, FGR-90D	5.4

Model	Firmware Version
FortiGate: FG-20C, FG-20C-ADSL-A, FG-30D, FG-30D-POE, FG-40C, FG-60C, FG-60C-POE, FG-60C-SFP, FG-60D, FG-60D-3G4G-VZW, FG-60D-POE, FG-70D, FG-70D-POE, FG-80C, FG-80CM, FG-80D, FG-90D, FG-90D-POE, FG-92D, FG-94D-POE, FG-98D-POE, FG-100D, FG-110C, FG-111C, FG-140D, FG-140D-POE, FG-140D-POE-T1, FG-200B, FG-200B-POE, FG-200D, FG-200D-POE, FG-240D, FG-240D-POE, FG-280D-POE, FG-300C, FG-300D, FG-310B, FG-311B, FG-400D, FG-500D, FG-600D, FG-900D, FG-600C, FG-620B, FG-621B, FG-800C, FG-800D, FG-1000C, FG-1000D, FG-1200D, FG-1240B, FG-1500D, FG-1500DT, FG-3000D, FG-3016B, FG-3040B, FG-3100D, FG-3140B, FG-3200D, FG-3240C, FG-3600C,FG-3700D, FG-3700DX, FG-3810A, FG-3810D, FG-3815D, FG-3950B, FG-3951B **FortiGate 5000 Series:** FG-5001A, FG-5001A-SW, FG-5001A-LENC, FG-5001A-DW-LENC, FG-5001A-SW-LENC, FG-5001B, FG-5001C, FG-5001D, FG-5101C **FortiGate DC:** FG-80C-DC, FG-300C-DC, FG-310B-DC, FG-600C-DC, FG-620B-DC, FG-621B-DC, FG-800C-DC, FG-1000C-DC, FG-1240B-DC, FG-1500D-DC, FG-3000D-DC, FG-3040B-DC, FG-3100D-DC, FG-3140B-DC, FG-3200D-DC, FG-3240C-DC, FG-3600C-DC, G-3700D-DC, FG-3810A-DC, FG-3810D-DC, FG-3815D-DC, FG-3950B-DC, FG-3951B-DC, FG-8000D-DC **FortiGate Low Encryption:** FG-20C-LENC, FG-40C-LENC, FG-60C-LENC, FG-80C-LENC, FG-100D-LENC, FG-200B-LENC, FG-300C-LENC, FG-620B-LENC, FG-1000C-LENC, FG-1240B-LENC, FG-3040B-LENC, FG-310B-LENC, FG-600C-LENC, FG-3140B-LENC, FG-3810A-LENC, FG-3950B-LENC **FortiWiFi:** FWF-20C, FWF-20C-ADSL-A, FWF-30D, FWF-30D-POE, FWF-40C, FWF-60C, FWF-60CM, FWF-60CX-ADSL-A, FWF-60D, FWF-60D-3G4G-VZW, FWF-60D-POE, FWF-80CM, FWF-81CM, FWF-90D, FWF-90D-POE, FWF-92D **FortiGate Rugged:** FGR-60D, FGR-100C **FortiGate VM:** FG-VM-Azure, FG-VM, FG-VM64, FG-VM64-HV, FG-VM64-KVM, FG-VM64-XEN **FortiSwitch:** FS-5203B, FCT-5902D	5.2

Model	Firmware Version
FortiGate: FG-20C, FG-20C-ADSL-A, FG-30D, FG-30D-POE, FG-40C, FG-60C, FG-60C-POE, FG-60C-SFP, FG-60D, FG-60D-3G4G-VZW, FG-60D-POE, FG-70D, FG-70D-POE, FG-80C, FG-80CM, FG-80D, FG-90D, FG-90D-POE, FG-92D, FG-94D-POE, FG-98D-POE, FG-100D, FG-110C, FG-111C, FG-140D, FG-140D-POE, FG-140D-POE-T1, FG-200B, FG-200B-POE, FG-200D, FG-200D-POE, FG-240D, FG-240D-POE, FG-280D-POE, FG-300C, FG-300D, FG-310B, FG-311B, FG-500D, FG-600C, FG-620B, FG-621B, FG-700D, FG-800C, FG-900D, FG-1000C, FG-1000D, FG-1200D, FG-1240B, FG-1500D, FG-3000D, FG-3016B, FG-3040B, FG-3100D, FG-3140B, FG-3200D, FG-3240C, FG-3600C, FG-3700D, FG-3810A, FG-3950B, FG-3951B **FortiGate 5000 Series:** FG-5001A, FG-5001A-SW, FG-5001A-LENC, FG-5001A-DW-LENC, FG-5001A-SW-LENC, FG-5001B, FG-5001C, FG-5001D, FG-5101C **FortiGate DC:** FG-80C-DC, FG-300C-DC, FG-310B-DC, FG-600C-DC, FG-620B-DC, FG-621B-DC, FG-800C-DC, FG-1000C-DC, FG-1240B-DC, FG-1500D-DC, FG-3000D-DC, FG-3040B-DC, FG-3100D-DC, FG-3140B-DC, FG-3200D-DC, FG-3240C-DC, FG-3600C-DC, FG-3700D-DC, FG-3810A-DC, FG-3950B-DC, FG-3951B-DC **FortiGate Low Encryption:** FG-20C-LENC, FG-40C-LENC, FG-60C-LENC, FG-80C-LENC, FG-100D-LENC, FG-200B-LENC, FG-300C-LENC, FG-310B-LENC, FG-600C-LENC, FG-620B-LENC, FG-1000C-LENC, FG-1240B-LENC, FG-3040B-LENC, FG-3140B-LENC, FG-3810A-LENC, FG-3950B-LENC **FortiWiFi:**FWF-20C, FWF-20C-ADSL-A, FWF-30D, FWF-30D-POE, FWF-40C, FWF-60C, FWF-60CM, FWF-60CX-ADSL-A, FWF-60D, FWF-60D-POE, FWF-60D-3G4G-VZW, FWF-80CM, FWF-81CM, FWF-90D, FWF-90D-POE, FWF-92D **FortiGate Rugged:** FGR-60D, FGR-90D, FGR-100C **FortiGateVoice:** FGV-40D2, FGV-70D4 **FortiGate VM**: FG-VM, FG-VM64, FG-VM64-AWS, FG-VM64-AWSONDEMAND, FG-VM64-HV, FG-VM64-KVM, FG-VM64-XEN **FortiSwitch:** FS-5203B	5.0

FortiCarrier Models

Model	Firmware Version
FortiCarrier: FCR-3000D, FCR-3100D, FCR-3200D, FCR-3700D, FCR-3700DX, FCR-3800D, FCR-3810D, FCR-3815D, FCR-5001C, FCR-5001D, FCR-3000D-DC, FCR-3100D-DC, FCR-3200D-DC, FCR-3240C, FCR-3600C, FCR-3700D-DC, FCR-3810D-DC, FCR-5001C **FortiCarrier DC:** FCR-3000D-DC, FCR-3100D-DC, FCR-3200D-DC, FCR-3240C-DC, FCR-3600C-DC, FCR-3700D-DC, FCR-3800D-DC, FCR-3810D-DC, FCR-3815D-DC **FortiCarrier VM:** FCR-VM, FCR-VM64, FCR-VM64-AWS, FCR-VM64-AWSONDEMAND, FCR-VM64-HV, FCR-VM64-KVM	5.4
FortiCarrier: FCR-3000D, FCR-3100D, FCR-3200D, FCR-3240C, FCR-3600C, FCR-3700D, FCR-3700DX, FCR-3810A, FCR-3810D, FCR-3815D, FCR-3950B, FCR-3951B, FCR-5001A, FCR-5001B, FCR-5001C,FCR-5001D, FCR-5101C, FCR5203B, FCR-5902D **FortiCarrier DC:** FCR-3000D-DC, FCR-3100D-DC, FCR-3200D-DC, FCR-3700D-DC, FCR-3810D-DC **FortiCarrier Low Encryption:** FCR-5001A-DW-LENC **FortiCarrier VM:** FCR-VM, FCR-VM64, FCR-VM64-HV, FCR-VM64-KVM, FCR-Vm64-XEN, FCR-VM64-AWSONDEMAND	5.2
FortiCarrier: FCR-3240C, FCR-3600C, FCR-3810A, FCR-3950B, FCR-3951B, FCR-5001A, FCR-5001B, FCR-5001C, FCR-5001D, FCR-5101C **FortiCarrier DC:** FCR-3240C-DC, FCR-3600C-DC, FCR-3810A-DC, FCR-3950B-DC, FCR-3951B-DC **FortiCarrier Low Encryption:** FCR-5001A-DW-LENC **FortiCarrier VM:** FCR-VM, FCR-VM64	5.0

FortiDDoS models

Model	Firmware Version
FortiDDoS: FI-200B, FI400B, FI-600B, FI-800B, FI-900B, FI-1000B, FI-1200B, FI-2000B, FI-3000B	4.2, 4.1, 4.0

FortiAnalyzer models

Model	Firmware Version
FortiAnalyzer: FAZ-200D, FAZ-300D, FAZ-400E, FAZ-1000C, 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

FortiMail models

Model	Firmware Version
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	5.3.7
FortiMail: FE-60D, FE-200D, FE-200E, FE-400C, FE-400E, FE-1000D, FE-2000B, FE-3000C, FE-3000D, FE-5002B **FortiMail VM:** FE-VM64, FE-VM64-HV, FE-VM64-XEN	5.2.8
FortiMail: FE-100C, FE-200D, FE-200E, FE-400B, FE-400C, FE-400E, FE-1000D, FE-2000B, FE-3000C, FE-3000D, FE-5001A, FE-5002B **FortiMail VM:** FE-VM64	5.1.6
FortiMail: FE-100C, FE-200D, FE-200E, FE-400B, FE-400C, FE-1000D, FE-2000A, FE-2000B, FE-3000C, FE-3000D, FE-4000A, FE-5001A, FE-5002B **FortiMail VM:** FE-VM64	5.0.10

FortiSandbox models

Model	Firmware Version
FortiSandbox: FSA-1000D, FSA-3000D, FSA-3000E, FSA-3500D **FortiSandbox VM:** FSA-VM	2.3.2
FortiSandbox: FSA-1000D, FSA-3000D, FSA-3500D **FortiSandbox VM:** FSA-VM	2.2.0 2.1.0
FortiSandbox: FSA-1000D, FSA-3000D **FortiSandbox VM:** FSA-VM	2.0.0 1.4.2
FortiSandbox: FSA-1000D, FSA-3000D	1.4.0 and 1.4.1 1.3.0 1.2.0 and later

FortiSwitch ACTA 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: FWB-2000E	5.6.0
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	5.5.3

Model	Firmware Version
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	5.3.8
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

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, ForiCache-KVM	4.1
FortiCache: FCH-400C, FCH-400E, FCH-1000C, FCH-1000D, FCH-3000C, FCH-3000D, FCH-3900E **FortiCache VM:** FCH-VM64	4.0

FortiAuthenticator models

Model	Firmware Version
FortiAuthenticator: FAC-200D, FAC-200E, FAC-400C, FAC-400E, FAC-1000C, FAC-1000D, FAC-3000B, FAC-3000D, FAC-3000E, FAC-VM	4.0 and 4.1

Compatibility with FortiOS Versions

This section highlights compatibility issues that administrators should be aware of in 5.4.7.

Compatibility issues with FortiOS 5.4.10

Bug ID	Description

508337	FortiManager cannot edit the following configurations for replacement message:
	`* system replacemsg mail "email-decompress-limit"`
	`* system replacemsg mail "smtp-decompress-limit"`
	`* system replacemsg nntp "email-decompress-limit"`

Compatibility issues with FortiOS 5.4.9

Bug ID	Description

486592	FortiManager may report verification failure on the following attributes for RADIUS users:
	`rsso-endpoint-attribute`
	`rsso-endpoint-block-attribute`
	`sso-attribute`

Compatibility issues with FortiOS 5.4.8

The following table lists interoperability issues that have been identified with FortiManager version 5.4.7 and FortiOS 5.4.8.

Bug ID	Description
469700	FortiManager is missing three wtp-profiles: FAP221E, FAP222E, and FAP223E.

Compatibility issues with FortiOS 5.4.5

The following table lists interoperability issues that have been identified with FortiManager version 5.4.7 and FortiOS 5.4.5.

Bug ID	Description
434637	FortiGate `config ssd-trim-freq` causes FortiManager retrieval failure.
417581	AP Profile in AP Manager missing AP Country Code for TZ (Tanzania).

Compatibility issues with FortiOS 5.4.4

The following table lists interoperability issues that have been identified with FortiManager version 5.4.7 and FortiOS 5.4.4.

Bug ID	Description
407566	The *accesspoint-name* of an extended controller is lost when name contains more than thirty one characters.
407577	FortiManager should support the following syntax: `gui-domain-ip-reputation` and `auth-multi-group`.
407579	FortiManager should support the CLI, `ipsec-dec-subengine-mask`, on platforms that equip with the NP6 chipset.

Compatibility issues with FortiOS 5.2.10

The following table lists interoperability issues that have been identified with FortiManager version 5.4.7 and FortiOS 5.2.10.

Bug ID	Description
397220	FortiOS 5.2.10 increased the maximum number of the firewall schedule objects for 1U and 2U+ appliances. As a result, a retrieve may fail if more than the maximum objects are configured.

Compatibility issues with FortiOS 5.2.7

The following table lists interoperability issues that have been identified with FortiManager version 5.4.7 and FortiOS 5.2.7.

Bug ID	Description
365757	Retrieve may fail on LDAP User Group if object filter has more than 511 characters.
365766	Retrieve may fail when there are more than 50 portals within a VDOM.

Bug ID	Description
365782	Install may fail on system global optimize or system fips-cc entropy-token.

Compatibility issues with FortiOS 5.2.6

The following table lists interoperability issues that have been identified with FortiManager version 5.4.7 and FortiOS 5.2.6.

Bug ID	Description
308294	1) New default wtp-profile settings on FOS 5.2.6 cause verification errors during installation. 2) FortiManager only supports 10,000 firewall addresses while FortiOS 5.2.6 supports 20,000 firewall addresses.

Compatibility issues with FortiOS 5.2.1

The following table lists interoperability issues that have been identified with FortiManager version 5.4.7 and FortiOS version 5.2.1.

Bug ID	Description
262584	When creating a VDOM for the first time it fails.
263896	If it contains the certificate: `Fortinet_CA_SSLProxy` or `Fortinet_SSLProxy`, `retrieve` may not work as expected.

Compatibility issues with FortiOS 5.2.0

The following table lists known interoperability issues that have been identified with FortiManager version 5.4.7 and FortiOS version 5.2.0.

Bug ID	Description
262584	When creating a VDOM for the first time it fails.
263949	Installing a VIP with port forwarding and ICMP to a 5.2.0 FortiGate fails.

Compatibility issues with FortiOS 5.0.5

The following table lists known interoperability issues that have been identified with FortiManager version 5.2.1 and FortiOS version 5.0.5.

Bug ID	Description
230199	FortiManager allows the creation of a new FAP-320C WTP profile on a FortiOS 5.0.5 device causing the install to fail. FAP-320C is new for FortiOS 5.0.6.

Compatibility issues with FortiOS 5.0.4

The following table lists known interoperability issues that have been identified with FortiManager version 5.4.7 and FortiOS version 5.0.4.

Bug ID	Description
226064	Attempting to install time zones 79 and 80 fails. These time zones were added in FortiOS 5.0.5.
226078	When the password length is increased to 128 characters, the installation fails.
226098	When installing a new endpoint-control profile, installation verification fails due to default value changes in FortiOS 5.0.5.
226102	If DHCP server is disabled, installation fails due to syntax changes in FortiOS 5.0.5.
226203	Installation of address groups to some FortiGate models may fail due to table size changes. The address group table size was increased in FortiOS 5.0.5.
226236	The `set dedicated-management-cpu enable` and `set user-anonymize enable` CLI commands fail on device install. These commands were added in FortiOS 5.0.5.
230199	FortiManager allows the creation of a new FAP-320C WTP profile on a FortiOS 5.0.4 device causing the install to fail. FAP-320C is new for FortiOS 5.0.6.

Resolved Issues

The following issues have been fixed in 5.4.7. For inquires about a particular bug, please contact Customer Service & Support.

Bug ID	Description
465962	The fds-ssl-protocol for fds-setting may not work for TCP port 8890.

Common Vulnerabilities and Exposures

Visit https://fortiguard.com/psirt for more information.

Vulnerability
FortiManager 5.4.7 is no longer vulnerable to the issue described in the following link - https://fortiguard.com/psirt/FG-IR-19-144.

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	Version	Antivirus	AntiSpam	Vulnerability Scan	Software
FortiClient (Windows)	• 5.0.0 and later • 5.2.0 and later • 5.4.0 and later • 5.6.0 and later	✓		✓	
FortiClient (Windows)	• 4.3.0 and later	✓			
FortiClient (Windows)	• 4.2.0 and later	✓	✓		✓
FortiClient (Mac OS X)	• 5.0.1 and later • 5.2.0 and later	✓		✓	
FortiMail	• 4.2.0 and later • 4.3.0 and later • 5.0.0 and later • 5.1.0 and later • 5.2.0 and later • 5.3.7 to 5.3.9	✓	✓		

Platform	Version	Antivirus	AntiSpam	Vulnerability Scan	Software
FortiSandbox	• 1.2.0, 1.2.3 • 1.3.0 • 1.4.0 and later • 2.1.2 • 2.2.1 • 2.3.2	✓			
FortiWeb	• 5.0.6 • 5.1.4 • 5.2.0 and later • 5.3.0 • 5.4.1 • 5.5.4 • 5.6.0 • 5.8.0	✓			

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
```

High Performance Network Security