



# FortiOS - Release Notes

Version 6.0.8

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FortiOS 6.0.8 Release Notes

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# Change Log

| Date       | Change Description                                                                                                                                                                                                                  |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2019-12-06 | Initial release.                                                                                                                                                                                                                    |
| 2019-12-09 | Added <i>Upgrade Information &gt; FortiGuard protocol and port number</i> .<br>Updated <i>Resolved Issues &gt; Common Vulnerabilities and Exposures</i> and <i>Special Notices &gt; Using FortiManager as a FortiGuard server</i> . |
| 2019-12-11 | Added FG-60F, FG-61F, FG-100F, and FG-101F to <i>Introduction and supported models &gt; Special branch supported models</i> .                                                                                                       |
| 2019-12-17 | Added FG-2200E, FG-2201E, FG-3300E, and FG-3301E to <i>Introduction and supported models &gt; Special branch supported models</i> .<br>Updated <i>Special Notices &gt; Using FortiAnalyzer units running older versions</i> .       |
| 2020-03-05 | Added <i>External IP not allowed to be the same as mapped IP</i> to <i>Upgrade Information</i> .                                                                                                                                    |

# Introduction

This document provides the following information for FortiOS 6.0.8 build 0303:

- [Special Notices](#)
- [Upgrade Information](#)
- [Product Integration and Support](#)
- [Resolved Issues](#)
- [Known Issues](#)
- [Limitations](#)

For FortiOS documentation, see the [Fortinet Document Library](#).

## Supported models

FortiOS 6.0.8 supports the following models.

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>FortiGate</b>            | 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-DSLJ, FG-60E-POE, 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-92D, FG-94D-POE, FG-98D-POE, FG-100D, FG-100E, FG-100EF, FG-101E, FG-140D, FG-140D-POE, FG-140E, FG-140E-POE, FG-200D, FG-200D-POE, FG-200E, FG-201E, FG-240D, FG-240D-POE, FG-280D-POE, FG-300D, FG-300E, FG-301E, FG-400D, FG-400E, FG-401E, FG-500D, FG-500E, FG-501E, FG-600D, FG-600E, FG-601E, FG-800D, FG-900D, FG-1000D, FG-1200D, FG-1500D, FG-1500DT, FG-2000E, FG-2500E, FG-3000D, FG-3100D, FG-3200D, FG-3400E, FG-3401E, FG3600E, FG-3601E, FG-3700D, FG-3800D, FG-3810D, FG-3815D, FG-3960E, FG-3980E, FG-5001D, FG-5001E, FG-5001E1 |
| <b>FortiWiFi</b>            | FWF-30D, FWF-30D-POE, 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-60E-DSL, FWF-60E-DSLJ, FWF-61E, FWF-90D, FWF-90D-POE, FWF-92D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>FortiGate Rugged</b>     | FGR-30D, FGR-35D, FGR-60D, FGR-90D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>FortiGate VM</b>         | FG-SVM, FG-VM64, FG-VM64-ALI, FG-VM64-ALIONDEMAND, FG-VM64-AWS, FG-VM64-AWSONDEMAND, FG-VM64-HV, FG-VM64-KVM, FG-VMX, FG-VM64-XEN, FG-VM64-GCP, FG-VM64-OPC, FG-VM64-GCPONDEMAND                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Pay-as-you-go images</b> | FOS-VM64, FOS-VM64-KVM, FOS-VM64-XEN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>FortiOS Carrier</b>      | FortiOS Carrier 6.0.8 images are delivered upon request and are not available on the customer support firmware download page.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

## Special branch supported models

The following models are released on a special branch of FortiOS 6.0.8. To confirm that you are running the correct build, run the CLI command `get system status` and check that the `Branch point` field shows 0303.

|                              |                            |
|------------------------------|----------------------------|
| <b>FG-30E-MG</b>             | is released on build 5419. |
| <b>FG-60F</b>                | is released on build 6575. |
| <b>FG-61F</b>                | is released on build 6575. |
| <b>FG-100F</b>               | is released on build 6575. |
| <b>FG-101F</b>               | is released on build 6575. |
| <b>FG-1100E</b>              | is released on build 6553. |
| <b>FG-1101E</b>              | is released on build 6553. |
| <b>FG-2200E</b>              | is released on build 6587. |
| <b>FG-2201E</b>              | is released on build 6587. |
| <b>FG-3300E</b>              | is released on build 6587. |
| <b>FG-3301E</b>              | is released on build 6587. |
| <b>FG-VM64-AZURE</b>         | is released on build 5420. |
| <b>FG-VM64-AZUREONDEMAND</b> | is released on build 5420. |
| <b>FG-VM64-RAXONDEMAND</b>   | is released on build 8569. |

# Special Notices

- WAN optimization and web caching functions
- FortiGuard Security Rating Service
- Using FortiManager as a FortiGuard server on page 9
- Built-in certificate
- FortiGate and FortiWiFi-92D hardware limitation
- FG-900D and FG-1000D
- FortiClient (Mac OS X) SSL VPN requirements
- FortiClient profile changes
- Use of dedicated management interfaces (mgmt1 and mgmt2)

## WAN optimization and web caching functions

WAN optimization and web caching functions are removed from 60D and 90D series platforms, starting from 6.0.0 due to their limited disk size. Platforms affected are:

- FGT-60D
- FGT-60D-POE
- FWF-60D
- FWF-60D-POE
- FGT-90D
- FGT-90D-POE
- FWF-90D
- FWF-90D-POE
- FGT-94D-POE

Upon upgrading from 5.6 patches to 6.0.0, `diagnose debug config-error-log read` will show command parse error about `wanopt` and `webcache` settings.

## FortiGuard Security Rating Service

Not all FortiGate models can support running the FortiGuard Security Rating Service as a Fabric "root" device. The following FortiGate platforms can run the FortiGuard Security Rating Service when added to an existing Fortinet Security Fabric managed by a supported FortiGate model:

- FGR-30D-A
- FGR-30D
- FGR-35D
- FGR-60D
- FGR-90D

- FGT-200D
- FGT-200D-POE
- FGT-240D
- FGT-240D-POE
- FGT-280D-POE
- FGT-30D
- FGT-30D-POE
- FGT-30E
- FGT-30E-MI
- FGT-30E-MN
- FGT-50E
- FGT-51E
- FGT-52E
- FGT-60D
- FGT-60D-POE
- FGT-70D
- FGT-70D-POE
- FGT-90D
- FGT-90D-POE
- FGT-94D-POE
- FGT-98D-POE
- FWF-30D
- FWF-30D-POE
- FWF-30E
- FWF-30E-MI
- FWF-30E-MN
- FWF-50E-2R
- FWF-50E
- FWF-51E
- FWF-60D
- FWF-60D-POE
- FWF-90D
- FWF-90D-POE
- FWF-92D

## Using FortiManager as a FortiGuard server

If you use FortiManager as a FortiGuard server, and you configure the FortiGate to use a secure connection to FortiManager, you must use HTTPS with port 8888. HTTPS with port 53 is not supported.

## Built-in certificate

FortiGate and FortiWiFi D-series and above have a built in Fortinet\_Factory certificate that uses a 2048-bit certificate with the 14 DH group.

## FortiGate and FortiWiFi-92D hardware limitation

FortiOS 5.4.0 reported an issue with the FG-92D model in the *Special Notices > FG-92D High Availability in Interface Mode* section of the release notes. Those issues, which were related to the use of port 1 through 14, include:

- PPPoE failing, HA failing to form.
- IPv6 packets being dropped.
- FortiSwitch devices failing to be discovered.
- Spanning tree loops may result depending on the network topology.

FG-92D and FWF-92D do not support STP. These issues have been improved in FortiOS 5.4.1, but with some side effects with the introduction of a new command, which is enabled by default:

```
config global
  set hw-switch-ether-filter <enable | disable>
```

### When the command is enabled:

- ARP (0x0806), IPv4 (0x0800), and VLAN (0x8100) packets are allowed.
- BPDUs are dropped and therefore no STP loop results.
- PPPoE packets are dropped.
- IPv6 packets are dropped.
- FortiSwitch devices are not discovered.
- HA may fail to form depending the network topology.

### When the command is disabled:

- All packet types are allowed, but depending on the network topology, an STP loop may result.

## FG-900D and FG-1000D

CAPWAP traffic will not offload if the ingress and egress traffic ports are on different NP6 chips. It will only offload if both ingress and egress ports belong to the same NP6 chip.

## FortiClient (Mac OS X) SSL VPN requirements

When using SSL VPN on Mac OS X 10.8, you must enable SSLv3 in FortiOS.

## FortiClient profile changes

With introduction of the Fortinet Security Fabric, FortiClient profiles will be updated on FortiGate. FortiClient profiles and FortiGate are now primarily used for Endpoint Compliance, and FortiClient Enterprise Management Server (EMS) is now used for FortiClient deployment and provisioning.

The FortiClient profile on FortiGate is for FortiClient features related to compliance, such as Antivirus, Web Filter, Vulnerability Scan, and Application Firewall. You may set the *Non-Compliance Action* setting to *Block* or *Warn*. FortiClient users can change their features locally to meet the FortiGate compliance criteria. You can also use FortiClient EMS to centrally provision endpoints. The EMS also includes support for additional features, such as VPN tunnels or other advanced options. For more information, see the *FortiOS Handbook – Security Profiles*.

## Use of dedicated management interfaces (*mgmt1* and *mgmt2*)

For optimum stability, use management ports (*mgmt1* and *mgmt2*) for management traffic only. Do not use management ports for general user traffic.

## Using FortiAnalyzer units running older versions

When using FortiOS 6.0.8 with FortiAnalyzer units running 5.6.5 or lower, or 6.0.0-6.0.2, FortiAnalyzer might report increased bandwidth and session counts if there are sessions that last longer than two minutes.

For accurate bandwidth and session counts, upgrade the FortiAnalyzer unit to the latest version.

# Upgrade Information

Supported upgrade path information is available on the [Fortinet Customer Service & Support site](#).

## To view supported upgrade path information:

1. Go to <https://support.fortinet.com>.
2. From the *Download* menu, select *Firmware Images*.
3. Check that *Select Product* is *FortiGate*.
4. Click the *Upgrade Path* tab and select the following:
  - *Current Product*
  - *Current FortiOS Version*
  - *Upgrade To FortiOS Version*
5. Click *Go*.

## FortiGuard protocol and port number

Fortinet has updated the protocol that is used between the FortiGate unit and FortiGuard. Please read the section under *Resolved Issues > Common Vulnerabilities and Exposures*. Upon upgrading to a patched version of FortiOS, customers must manually change the protocol and port used for connecting to FortiGuard.

```
config system fortiguard
    set protocol https
    set port 8888
end
```

Once the FortiGate is upgraded to a patched version, any factory reset will change the default FortiGuard settings to those above—protocol HTTPS and port 8888.

## Fortinet Security Fabric upgrade

FortiOS 6.0.8 greatly increases the interoperability between other Fortinet products. This includes:

- FortiAnalyzer 6.0.0 and later
- FortiClient 6.0.0 and later
- FortiClient EMS 6.0.0 and later
- FortiAP 5.4.4 and later
- FortiSwitch 3.6.4 and later

Upgrade the firmware of each product in the correct order. This maintains network connectivity without the need to use manual steps.

Before upgrading any product, you must read the *FortiOS Security Fabric Upgrade Guide*.



If Security Fabric is enabled, then all FortiGate devices must be upgraded to 6.0.8. When Security Fabric is enabled, you cannot have some FortiGate devices running 6.0.8 and some running 5.6.x.

---

## Minimum version of TLS services automatically changed

For improved security, FortiOS 6.0.8 uses the `ssl-min-protocol-version` option (under `config system global`) to control the minimum SSL protocol version used in communication between FortiGate and third-party SSL and TLS services.

When you upgrade to FortiOS 6.0.8 and later, the default `ssl-min-protocol-version` option is TLS v1.2. The following SSL and TLS services inherit global settings to use TLS v1.2 as the default. You can override these settings.

- Email server (`config system email-server`)
- Certificate (`config vpn certificate setting`)
- FortiSandbox (`config system fortisandbox`)
- FortiGuard (`config log fortiguard setting`)
- FortiAnalyzer (`config log fortianalyzer setting`)
- LDAP server (`config user ldap`)
- POP3 server (`config user pop3`)

## Downgrading to previous firmware versions

Downgrading to previous firmware versions results in configuration loss on all models. Only the following settings are retained:

- operation mode
- interface IP/management IP
- static route table
- DNS settings
- VDOM parameters/settings
- admin user account
- session helpers
- system access profiles

If you have long VDOM names, you must shorten the long VDOM names (maximum 11 characters) before downgrading:

1. Back up your configuration.
2. In the backup configuration, replace all long VDOM names with its corresponding short VDOM name. For example, replace `edit <long_vdom_name>/<short_name>` with `edit <short_name>/<short_name>`.

3. Restore the configuration.
4. Perform the downgrade.

## Amazon AWS enhanced networking compatibility issue

With this new enhancement, there is a compatibility issue with older AWS VM versions. After downgrading a 6.0.8 image to an older version, network connectivity is lost. Since AWS does not provide console access, you cannot recover the downgraded image.

When downgrading from 6.0.8 to older versions, running the enhanced nic driver is not allowed. The following AWS instances are affected:

- C3
- C4
- R3
- I2
- M4
- D2

## FortiGate VM firmware

Fortinet provides FortiGate VM firmware images for the following virtual environments:

### Citrix XenServer and Open Source XenServer

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

### Microsoft Hyper-V

- `.out`: Download the 64-bit firmware image to upgrade your existing FortiGate VM installation.
- `.out.hyperv.zip`: Download the 64-bit package for a new FortiGate VM installation. This package contains three folders that can be imported by Hyper-V Manager on Hyper-V 2012. It also contains the file `fortios.vhd` in the Virtual Hard Disks folder that can be manually added to the Hyper-V Manager.

## VMware ESX and ESXi

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

## 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*.

## FortiGuard update-server-location setting

The FortiGuard `update-server-location` default setting is different between hardware platforms and VMs. On hardware platforms, the default is `any`. On VMs, the default is `usa`.

On VMs, after upgrading from 5.6.3 or earlier to 5.6.4 or later (including 6.0.0 or later), `update-server-location` is set to `usa`.

If necessary, set `update-server-location` to use the nearest or low-latency FDS servers.

### To set FortiGuard `update-server-location`:

```
config system fortiguard
    set update-server-location [usa|any]
end
```

## External IP not allowed to be the same as mapped IP

Traffic will be dropped when the IPS is enabled in a policy with a VIP that has the same external and mapped IP.

To avoid this, the kernel will disallow the configuration of the same `extip` and `mappedip` for VIPs in the CLI starting from FortiOS 6.0.0.

# Product Integration and Support

The following table lists FortiOS 6.0.8 product integration and support information:

|                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Web Browsers</b>                                                                                                                             | <ul style="list-style-type: none"><li>• Microsoft Edge 44</li><li>• Mozilla Firefox version 66</li><li>• Google Chrome version 73</li><li>• Apple Safari version 12.1</li></ul> <p>Other web browsers may function correctly, but are not supported by Fortinet.</p>                                                                                                                                                                                                                                                                                 |
| <b>Explicit Web Proxy Browser</b>                                                                                                               | <ul style="list-style-type: none"><li>• Microsoft Edge 41</li><li>• Microsoft Internet Explorer version 11</li><li>• Mozilla Firefox version 59</li><li>• Google Chrome version 65</li><li>• Apple Safari version 9.1 (For Mac OS X)</li></ul> <p>Other web browsers may function correctly, but are not supported by Fortinet.</p>                                                                                                                                                                                                                  |
| <b>FortiManager</b>                                                                                                                             | <p>See important compatibility information in <a href="#">Fortinet Security Fabric upgrade on page 12</a>. For the latest information, see <a href="#">FortiManager compatibility with FortiOS</a> in the Fortinet Document Library.</p> <p>Upgrade FortiManager before upgrading FortiGate.</p>                                                                                                                                                                                                                                                     |
| <b>FortiAnalyzer</b>                                                                                                                            | <p>See important compatibility information in <a href="#">Fortinet Security Fabric upgrade on page 12</a>. For the latest information, see <a href="#">FortiAnalyzer compatibility with FortiOS</a> in the Fortinet Document Library.</p> <p>Upgrade FortiAnalyzer before upgrading FortiGate.</p>                                                                                                                                                                                                                                                   |
| <b>FortiClient:</b> <ul style="list-style-type: none"><li>• <b>Microsoft Windows</b></li><li>• <b>Mac OS X</b></li><li>• <b>Linux</b></li></ul> | <ul style="list-style-type: none"><li>• 6.0.0</li></ul> <p>See important compatibility information in <a href="#">Fortinet Security Fabric upgrade on page 12</a>.</p> <p>If you're upgrading both FortiOS and FortiClient from 5.6 to 6.0, upgrade FortiClient first to avoid compatibility issues.</p> <p>FortiClient for Linux is supported on Ubuntu 16.04 and later, Red Hat 7.4 and later, and CentOS 7.4 and later.</p> <p>If you are using FortiClient only for IPsec VPN or SSL VPN, FortiClient version 5.6.0 and later are supported.</p> |
| <b>FortiClient iOS</b>                                                                                                                          | <ul style="list-style-type: none"><li>• 5.6.0 and later</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>FortiClient Android and FortiClient VPN Android</b>                                                                                          | <ul style="list-style-type: none"><li>• 5.4.2 and later</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>FortiAP</b>                                                                                                                                  | <ul style="list-style-type: none"><li>• 5.4.2 and later</li><li>• 5.6.0 and later</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

|                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>FortiAP-S</b>                              | <ul style="list-style-type: none"> <li>• 5.4.3 and later</li> <li>• 5.6.0 and later</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>FortiSwitch OS<br/>(FortiLink support)</b> | <ul style="list-style-type: none"> <li>• 3.6.9 and later</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>FortiController</b>                        | <ul style="list-style-type: none"> <li>• 5.2.5 and later</li> </ul> Supported models: FCTL-5103B, FCTL-5903C, FCTL-5913C                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>FortiSandbox</b>                           | <ul style="list-style-type: none"> <li>• 2.3.3 and later</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Fortinet Single Sign-On<br/>(FSSO)</b>     | <ul style="list-style-type: none"> <li>• 5.0 build 0282 and later (needed for FSSO agent support OU in group filters) <ul style="list-style-type: none"> <li>• Windows Server 2016 Datacenter</li> <li>• Windows Server 2016 Standard</li> <li>• Windows Server 2016 Core</li> <li>• Windows Server 2012 Standard</li> <li>• Windows Server 2012 R2 Standard</li> <li>• Windows Server 2012 Core</li> <li>• Windows Server 2008 (32-bit and 64-bit)</li> <li>• Windows Server 2008 R2 64-bit</li> <li>• Windows Server 2008 Core</li> <li>• Novell eDirectory 8.8</li> </ul> </li> </ul> |
| <b>FortiExtender</b>                          | <ul style="list-style-type: none"> <li>• 3.3.2, 4.0.0</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>AV Engine</b>                              | <ul style="list-style-type: none"> <li>• 6.00019</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>IPS Engine</b>                             | <ul style="list-style-type: none"> <li>• 4.00035</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Virtualization Environments</b>            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Citrix</b>                                 | <ul style="list-style-type: none"> <li>• XenServer version 5.6 Service Pack 2</li> <li>• XenServer version 6.0 and later</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Linux KVM</b>                              | <ul style="list-style-type: none"> <li>• RHEL 7.1/Ubuntu 12.04 and later</li> <li>• CentOS 6.4 (qemu 0.12.1) and later</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Microsoft</b>                              | <ul style="list-style-type: none"> <li>• Hyper-V Server 2008 R2, 2012, 2012 R2, and 2016</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Open Source</b>                            | <ul style="list-style-type: none"> <li>• XenServer version 3.4.3</li> <li>• XenServer version 4.1 and later</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>VMware</b>                                 | <ul style="list-style-type: none"> <li>• ESX versions 4.0 and 4.1</li> <li>• ESXi versions 4.0, 4.1, 5.0, 5.1, 5.5, 6.0, 6.5, and 6.7</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>VM Series - SR-IOV</b>                     | <p>The following NIC chipset cards are supported:</p> <ul style="list-style-type: none"> <li>• Intel 82599</li> <li>• Intel X540</li> <li>• Intel X710/XL710</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                  |

## Language support

The following table lists language support information.

### Language support

| Language              | GUI |
|-----------------------|-----|
| English               | ✓   |
| Chinese (Simplified)  | ✓   |
| Chinese (Traditional) | ✓   |
| French                | ✓   |
| Japanese              | ✓   |
| Korean                | ✓   |
| Portuguese (Brazil)   | ✓   |
| Spanish               | ✓   |

## SSL VPN support

### SSL VPN standalone client

The following table lists SSL VPN tunnel client standalone installer for the following operating systems.

### Operating system and installers

| Operating System                       | Installer                                                                                                                  |
|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Linux CentOS 6.5 / 7 (32-bit & 64-bit) | 2336. Download from the Fortinet Developer Network:<br><a href="https://fndn.fortinet.net">https://fndn.fortinet.net</a> . |
| Linux Ubuntu 16.04 (32-bit & 64-bit)   |                                                                                                                            |

Other operating systems may function correctly, but are not supported by Fortinet.



SSL VPN standalone client no longer supports the following operating systems:

- Microsoft Windows 7 (32-bit & 64-bit)
- Microsoft Windows 8 / 8.1 (32-bit & 64-bit)
- Microsoft Windows 10 (64-bit)
- Virtual Desktop for Microsoft Windows 7 SP1 (32-bit)

## SSL VPN web mode

The following table lists the operating systems and web browsers supported by SSL VPN web mode.

### Supported operating systems and web browsers

| Operating System                             | Web Browser                                                                       |
|----------------------------------------------|-----------------------------------------------------------------------------------|
| Microsoft Windows 7 SP1 (32-bit & 64-bit)    | Mozilla Firefox version 66<br>Google Chrome version 73                            |
| Microsoft Windows 10 (64-bit)                | Microsoft Edge<br>Mozilla Firefox version 66<br>Google Chrome version 73          |
| Linux Ubuntu 16.04 / 18.04 (32-bit & 64-bit) | Mozilla Firefox version 66                                                        |
| MacOS High Sierra 10.13.6                    | Apple Safari version 12<br>Mozilla Firefox version 66<br>Google Chrome version 72 |
| iOS                                          | Apple Safari<br>Mozilla Firefox<br>Google Chrome                                  |
| Android                                      | Mozilla Firefox<br>Google Chrome                                                  |

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

## SSL VPN host compatibility list

The following table lists the antivirus and firewall client software packages that are supported.

### Supported Microsoft Windows XP antivirus and firewall software

| Product                           | Antivirus | Firewall |
|-----------------------------------|-----------|----------|
| Symantec Endpoint Protection 11   | ✓         | ✓        |
| Kaspersky Antivirus 2009          | ✓         |          |
| McAfee Security Center 8.1        | ✓         | ✓        |
| Trend Micro Internet Security Pro | ✓         | ✓        |
| F-Secure Internet Security 2009   | ✓         | ✓        |

**Supported Microsoft Windows 7 32-bit antivirus and firewall software**

| Product                                                  | Antivirus | Firewall |
|----------------------------------------------------------|-----------|----------|
| CA Internet Security Suite Plus Software                 | ✓         | ✓        |
| AVG Internet Security 2011                               |           |          |
| F-Secure Internet Security 2011                          | ✓         | ✓        |
| Kaspersky Internet Security 2011                         | ✓         | ✓        |
| McAfee Internet Security 2011                            | ✓         | ✓        |
| Norton 360™ Version 4.0                                  | ✓         | ✓        |
| Norton™ Internet Security 2011                           | ✓         | ✓        |
| Panda Internet Security 2011                             | ✓         | ✓        |
| Sophos Security Suite                                    | ✓         | ✓        |
| Trend Micro Titanium Internet Security                   | ✓         | ✓        |
| ZoneAlarm Security Suite                                 | ✓         | ✓        |
| Symantec Endpoint Protection Small Business Edition 12.0 | ✓         | ✓        |

## Resolved Issues

The following issues have been fixed in version 6.0.8. For inquiries about a particular bug, please contact [Customer Service & Support](#).

## Common Vulnerabilities and Exposures

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

| Bug ID | CVE references                                                                                                                                                                                                                            |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 491701 | FortiOS 6.0.8 is no longer vulnerable to the following CVE Reference: <ul style="list-style-type: none"><li>• CVE-2018-9195</li></ul> Please read the section under <i>Upgrade Information &gt; FortiGuard protocol and port number</i> . |

# Known Issues

The following issues have been identified in version 6.0.8. For inquiries about a particular bug or to report a bug, please contact [Customer Service & Support](#).

## GUI

| Bug ID | Description                                                                                                                                 |
|--------|---------------------------------------------------------------------------------------------------------------------------------------------|
| 556397 | IP pools in the SSL VPN settings are overwritten when the SSL VPN settings are modified in the GUI.                                         |
| 559866 | When sending a CSF proxied request, segfault happens (httpd crashes) if FortiExplorer accesses the root FortiGate by the management tunnel. |
| 575592 | IP pool and tunnel mode settings in <code>config vpn ssl web portal</code> are overwritten when SSL VPN settings are modified in the GUI.   |

## HA

| Bug ID | Description                                                                                  |
|--------|----------------------------------------------------------------------------------------------|
| 530215 | <code>application hasync</code> returns "**** signal 11 (Segmentation fault) received ****". |

## IPsec VPN

| Bug ID | Description              |
|--------|--------------------------|
| 575477 | IKED memory leak occurs. |

## Log & Report

| Bug ID | Description                                                               |
|--------|---------------------------------------------------------------------------|
| 493886 | <code>reportd</code> is sometimes stuck at 99% CPU usage.                 |
| 586038 | VPN tunnel durations are too long in the local reports for FortiOS 6.0.6. |

## Proxy

| Bug ID | Description                                                                               |
|--------|-------------------------------------------------------------------------------------------|
| 566859 | In WAD conserve mode in 5.6.8, the <code>max_blocks</code> value is high on some workers. |

## Routing

| Bug ID | Description                                                                   |
|--------|-------------------------------------------------------------------------------|
| 581488 | The BGP confederation router sends an incorrect AS to neighbor group routers. |

## Security Fabric

| Bug ID | Description                                                                                                                      |
|--------|----------------------------------------------------------------------------------------------------------------------------------|
| 583107 | The <i>Access Layer Quarantine</i> action is not propagated to the downstream device in <i>Security Fabric &gt; Automation</i> . |

## SSL VPN

| Bug ID | Description                                                                        |
|--------|------------------------------------------------------------------------------------|
| 561585 | SSL VPN does not show correctly in the Windows Admin Center application.           |
| 586032 | Unable to download report from an internal server via SSL VPN web mode connection. |

## Switch Controller

| Bug ID | Description                                                                                         |
|--------|-----------------------------------------------------------------------------------------------------|
| 592111 | FortiSwitch shows offline CAPWAP response packet getting dropped/failed after upgrading from 6.2.2. |

## System

| Bug ID | Description                                                                                                                      |
|--------|----------------------------------------------------------------------------------------------------------------------------------|
| 527942 | diagnose firewall proute list should not print vwl_mbr_seq if it is not generated by the VWL service rule.                       |
| 548443 | DHCP-enabled interfaces occasionally fail to perform discovery.                                                                  |
| 573090 | Making a change to a policy using inline editing is very slow with large table sizes.                                            |
| 578531 | The FortiCloud daemon resolves mgrctrl1.fortinet.com to the wrong IP address.                                                    |
| 580883 | DNS servers acquired via PPPoE in non-management VDOMs are used for DHCP DNS server option 6.                                    |
| 589234 | Local system DNS setting instead of DNS setting acquired from upstream DHCP server was assigned to client under management VDOM. |

## VM

| Bug ID | Description                                                                                                            |
|--------|------------------------------------------------------------------------------------------------------------------------|
| 577653 | vMotion tasks cause connections to be dropped as sessions related to vMotion VMs do not appear on the destination VMX. |

## VoIP

| Bug ID | Description                                                                           |
|--------|---------------------------------------------------------------------------------------|
| 580588 | SDP information fields are not being NATted in multipart media encapsulation traffic. |
| 582271 | Add support for Cisco IP phone keepalive packet.                                      |

# Limitations

## Citrix XenServer limitations

The following limitations apply to Citrix XenServer installations:

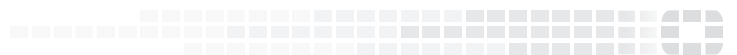
- XenTools installation is not supported.
- FortiGate-VM can be imported or deployed in only the following three formats:
  - XVA (recommended)
  - VHD
  - OVF
- The XVA format comes pre-configured with default configurations for VM name, virtual CPU, memory, and virtual NIC. Other formats will require manual configuration before the first power on process.

## Open source XenServer limitations

When using Linux Ubuntu version 11.10, XenServer version 4.1.0, and libvir version 0.9.2, importing issues may arise when using the QCOW2 format and existing HDA issues.



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