Release Notes

FortiOS 7.6.6

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January 27, 2026
FortiOS 7.6.6 Release Notes
01-766-1248606-20260127

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Change Log

Date	Change Description
2026-01-28	Initial release.

Introduction and supported models

This guide provides release information for FortiOS 7.6.6 build 3652.

For FortiOS documentation, see the Fortinet Document Library.

Supported models

FortiOS 7.6.6 supports the following models.

FortiGate	FG-40F, FG-40F-3G4G, FG-50G, FG-50G-5G, FG-50G-SFP, FG-50G-DSL, FG-50G-SFP-POE, FG-51G, FG-51G-5G, FG-51G-SFP-POE, FG-60F, FG-61F, FG-70F, FG-70G, FG-70G-POE, FG-71F, FG-71G, FG-71G-POE, FG-80F, FG-80F-BP, FG-80F-DSL, FG-80F-POE, FG-81F, FG-81F-POE, FG-90G, FG-91G, FG-100F, FG-101F, FG-120G, FG-121G, FG-200E, FG-200F, FG-200G, FG-201E, FG-201F, FG-201G, FG-300E, FG-301E, FG-400E, FG-400E-BP, FG-401E, FG-400F, FG-401F, FG-500E, FG-501E, FG-600E, FG-601E, FG-600F, FG-601F, FG-700G, FG-701G, FG-800D, FG-900D, FG-900G, FG-901G, FG-1000D, FG-1000F, FG-1001F, FG-1100E, FG-1101E, FG-1800F, FG-1801F, FG-2000E, FG-2200E, FG-2201E, FG-2500E, FG-2600F, FG-2601F, FG-3000D, FG-3000F, FG-3001F, FG-3100D, FG-3200D, FG-3200F, FG-3201F, FG-3300E, FG-3301E, FG-3400E, FG-3401E, FG-3500F, FG-3501F, FG-3600E, FG-3601E, FG-3700D, FG-3700F, FG-3701F, FG-3960E, FG-3980E, FG-4200F, FG-4201F, FG-4400F, FG-4401F, FG-4800F, FG-4801F, FG-5001E, FG-5001E1, FG-6000F, FG-7000E, FG-7000F
FortiWiFi	FWF-40F, FWF-40F-3G4G, FWF-50G, FWF-50G-5G, FWF-50G-SFP, FWF-50G-DSL, FWF-51G, FWF-60F, FWF-61F, FWF-70G, FWF-70G-POE, FWF-71G, FWF-80F-2R, FWF-80F-2R-3G4G-DSL, FWF-81F-2R, FWF-81F-2R-3G4G-DSL, FWF-81F-2R-POE, FWF-81F-2R-3G4G-POE
FortiGate Rugged	FGR-50G-5G, FGR-60F, FGR-60F-3G4G, FGR-70F, FGR-70G, FGR-70G-5G-Dual, FGR-70F-3G4G
FortiFirewall	FFW-1801F, FFW-2600F, FFW-3001F, FFW-3501F, FFW-3980E, FFW-4200F, FFW-4400F, FFW-4401F, FFW-4801F, FFW-VM64, FFW-VM64-KVM
FortiGate VM	FG-ARM64-AWS, FG-ARM64-AZURE, FG-ARM64-GCP, FG-ARM64-KVM, FG-ARM64-OCI, FG-VM64, FG-VM64-ALI, FG-VM64-AWS, FG-VM64-AZURE, FG-VM64-GCP, FG-VM64-HV, FG-VM64-IBM, FG-VM64-KVM, FG-VM64-OPC, FG-VM64-RAXONDEMAND, FG-VM64-XEN

FortiGate 6000 and 7000 support

FortiOS 7.6.6 supports the following FG-6000F, FG-7000E, and FG-7000F models:

FG-6000F	FG-6001F, FG-6300F, FG-6301F, FG-6500F, FG-6501F
FG-7000E	FG-7030E, FG-7040E, FG-7060E
FG-7000F	FG-7081F, FG-7121F

Special notices

FortiGate cannot restore configuration file after private-data-encryption is re-enabled

In a new enhancement, enabling `private-data-encryption` will utilize a randomly generated private key. Therefore, FortiGate cannot restore the configuration file in the following sequence:

1. `private-data-encryption` enabled with random key, and configuration is backed up.
2. `private-data-encryption` disabled.
3. `private-data-encryption` enabled again, with new random key.
4. Restore configuration file in step 1.

When disabling `private-data-encryption`, a warning in the CLI will be displayed:

```
This operation will restore system default data encryption key!
```

```
Previous config files encrypted with the private key cannot be restored after this operation!
```

```
Do you want to continue? (y/n)y
```

FortiManager support for updated FortiOS private data encryption key

With the introduction of FortiOS 7.6.1, Fortinet has updated the private-data-encryption key feature. Administrators are no longer required to manually input a 32-digit hexadecimal `private-data-encryption` key. Instead administrators simply enable the command, and a random `private-data-encryption` key is generated.

How FortiManager 7.6.3 and later works with FortiOS private data encryption keys has changed. This topic covers the changes. See FortiManager behavior on page 9.

Previous FortiOS CLI behavior

```
config system global
    set private-data-encryption enable
end
Please type your private data encryption key (32 hexadecimal numbers):
12345678901234567890123456789abc
Please re-enter your private data encryption key (32 hexadecimal numbers) again:
12345678901234567890123456789abc
Your private data encryption key is accepted.
```

New FortiOS CLI behavior

```
config system global
    set private-data-encryption enable
end
This operation will generate a random private data encryption key!
Previous config files encrypted with the system default key cannot be restored after this
operation!
Do you want to continue? (y/n)y
Private data encryption key generation succeeded!
```

FortiManager behavior

FortiManager 7.6.3 can centrally manage FortiGates with the private-data-encryption setting enabled, with the following limitations:

- FortiManager cannot import objects that include the password type attribute.
- FortiManager cannot be used to create NAT and transparent VDOMs.

This applies to FortiGates with private keys that are manually configured in FortiOS 7.6.0 and earlier and private keys that are randomly generated in FortiOS 7.6.1 and later.

FortiManager does not require you to verify the private key of the FortiGate when adding it to FortiManager.

FortiGates that require the protection of private data encryption and need to be managed by FortiManager should follow these procedures on a fresh install.

1. On the FortiGate, enable private-data-encryption.
2. On the FortiManager, add the FortiGate to the Device Manager. FortiManager will not be required to provide the key for PDE, as it will not be importing any password-related settings.
3. Make all configuration changes directly on the FortiManager.
4. Push and install the changes to the FortiGate.

If you require the use of NAT or Transparent VDOMs, you should perform this additional step before the steps above.

1. Enable multi-vdom mode on the FortiGate.
2. Add the VDOMs that you will use on the FortiGate.
3. Follow the above steps to enable private-data-encryption and manage the FortiGate from the FortiManager.

For more information, see the FortiManager Administration Guide.

FortiOS upgrade behavior with FortiManager 7.6.2 and earlier

If in FortiOS 7.4.5 or 7.6.0 the 32-digit hexadecimal private key is enabled, and then the FortiGate device is upgraded to 7.6.1, the 32-digit hexadecimal `private-data-encryption` key is preserved. As a result, FortiManager 7.6.2 and earlier is aware of the 32-digit hexadecimal `private-data-encryption` key and can continue to manage the FortiGate device. However, if the `private-data-encryption` key is enabled after an upgrade of FortiOS to 7.6.1, FortiManager 7.6.2 and earlier no longer can manage FortiGate devices running FortiOS 7.6.1.

Hyperscale incompatibilities and limitations

See Hyperscale firewall incompatibilities and limitations in the Hyperscale Firewall Guide for a list of limitations and incompatibilities with FortiOS 7.6.6 features.

Hyperscale NP7 hardware limitation

Because of an NP7 hardware limitation, for CGN traffic accepted by a hyperscale firewall policy that includes an overload with port block allocation (overload PBA) IP Pool, only one block is allocated per client. The setting of the hyperscale firewall policy `cgn-resource-quota` option is ignored.

Because of this limitation, under certain rare conditions (for example, only a single server side IP address and port are being used for a large number of sessions), port allocation may fail even if the block usage of the client is less than its quota. In cases such as this, if the client has traffic towards some other servers or ports, additional port allocation can become successful. You can also work around this problem by increasing the IP Pool block size (`cgn-block-size`).

FortiGate 6000 and 7000 incompatibilities and limitations

See the following links for information about FortiGate 6000 and 7000 limitations and incompatibilities with FortiOS 7.6.6 features.

- FortiGate 6000 incompatibilities and limitations
- FortiGate 7000E incompatibilities and limitations
- FortiGate 7000F incompatibilities and limitations

FortiGate VM memory and upgrade

FortiGate virtual machines (VMs) are not constrained by memory size and will continue to support all available features after upgrading to FortiOS 7.6.0. However, it is recommended to set up VMs with at least 4 GB of RAM for optimal performance.

RADIUS vulnerability

Fortinet has resolved a RADIUS vulnerability described in CVE-2024-3596. As a result, firewall authentication, FortiGate administrative GUI authentication, and WiFi authentication may be affected depending on the functionality of the RADIUS server software used in your environment. RFC 3579 contains information on the affected RADIUS attribute, message-authenticator.

In order to protect against the RADIUS vulnerability described in CVE-2024-3596, as a RADIUS client, FortiGate will:

1. Force the validation of message-authenticator.
2. Reject RADIUS responses with unrecognized proxy-state attribute.

Message-authenticator checking is made mandatory under UDP/TCP. It is not mandatory when using TLS. Therefore, if FortiGate is using UDP/TCP mode without RADSEC, the RADIUS server should be patched to ensure the message-authenticator attribute is used in its RADIUS messages.

Affected Product Integration

- FortiAuthenticator version 6.6.1 and older
- Third party RADIUS server that does not support sending the message-authenticator attribute

Solution

- Upgrade FortiAuthenticator to version 6.6.2, 6.5.6 or 6.4.10 and follow the upgrade instructions: https://docs.fortinet.com/document/fortiauthenticator/6.6.2/release-notes/859240/upgrade-instructions
- Upgrade the RADIUS server and/or enable it to send the correct message-authenticator attribute

Changes to NP7 traffic shaping

The following known issues for the Queuing based Traffic Management (QTM) module on NP7 are fixed:

- Incorrect checksum for fragments after QTM.
- Packets longer than 6000 bytes cause QTM to hang.
- Refreshing causes QTM to hang.
- MTU is not honored after QTM, so the packet is not fragmented.

As a result of these changes, you can no longer use the following command to change QoS type used for traffic shaping for sessions offloaded to NP7 processors:

```
config system npu
    set default-qos-type {policing | shaping}
end
```

Instead, `default-qos-type` can only be set to `policing`.

For NP7 sessions, policy traffic shaping, per-IP shaping, and regular port shaping (outbandwidth enabled on an interface without a shaping profile) always use the NP7 accounting and traffic shaping module (called the TPE module). This is the same as changing the `default-qos-type` to `policing`.

For NP7 sessions, shaping profiles on interfaces now only use QTM for traffic shaping (equivalent to setting `default-qos-type` to `shaping`). Shaping profiles on interfaces are also called Multiclass shaping (MCS). The interface can be a physical interface, LAG interface, and VLAN interface (over physical or LAG). The FortiGate supports shaping profiles on a maximum of 100 interfaces.

SSL VPN tunnel mode replaced with IPsec VPN

Starting in FortiOS 7.6.3, the SSL VPN tunnel mode feature is replaced with IPsec VPN, which can be configured to use TCP port 443. SSL VPN tunnel mode is no longer available in the GUI and CLI. Settings will not be upgraded from previous versions. This applies to all FortiGate models.

To ensure uninterrupted remote access, customers must migrate their SSL VPN tunnel mode configuration to IPsec VPN before upgrading to FortiOS 7.6.3 and later.

See Migration from SSL VPN tunnel mode to IPsec VPN in the *FortiOS 7.6 New Feature* guide for detailed steps on migrating to IPsec VPN before upgrade.

A complete migration guide can be found in the following links:

- For FortiOS 7.6, see SSL VPN to IPsec VPN Migration.
- For FortiOS 7.4, see SSL VPN to IPsec VPN Migration.

Agentless VPN (formerly SSL VPN web mode) not supported on some FortiGate series models

On the following FortiGate models, the Agentless VPN (formerly SSL VPN web mode) feature is no longer available from the GUI or CLI. Settings will not be upgraded from previous versions.

The affected models include:

- FGT-40F/FWF-40F and variants
- FGT-50G/FWF-50G and variants
- FGT-60F/FWF-60F
- FGT-61F/FWF-61F
- FGR-60F and variants (2GB versions only)
- FGT-70G/FWF-70G and variants
- FGT-90G and FGT-91G

To confirm if your FortiGate model has 2 GB RAM, enter `diagnose hardware sysinfo conserve` in the CLI, and check that the total RAM value is below 2000 MB (1000 MB = 1 GB).

On these FortiGate models, consider migrating to using IPsec Dialup VPN for remote access.

See SSL VPN to IPsec VPN Migration for more information.

FortiGate models not listed above will continue to support Agentless VPN (formerly SSL VPN web mode). However, SSL VPN tunnel mode is not longer supported on any models.

2 GB RAM FortiGate models no longer support most FortiOS proxy-related features

As part of improvements to enhance performance and optimize memory usage on FortiGate models with 2 GB RAM or less, FortiOS no longer supports most proxy-related features.

However FortiOS 7.6.5 brings back proxy-based inspection for email protocols on FortiGate models with 2 GB RAM. This covers the following services:

- SMTP(s)
- POP3(s)
- IMAP(s)

- NNTP

Firewall policies can once again support proxy-based inspection mode when users select one or more of the above services in the firewall policy.

This change impacts the FortiGate 40F, 60F, and 50G series devices, along with their variants.

See Proxy-related features no longer supported on FortiGate 2 GB RAM models for more information.

2 GB RAM FortiGate models no longer support Security Rating and Security Fabric topology

To enhance the stability of physical FortiGate devices devices with 2 GB RAM, the Security Rating feature and Security Fabric topology visibility have been removed. These changes prioritizes device stability and mitigate potential performance issues. For more information, see Optimizations for physical FortiGate devices with 2 GB RAM.

GUI access conflict with IPSec TCP tunnel on the same interface

In FortiOS version 7.6.1, the default IKE TCP port has been changed to port 443 on new deployments. In the FortiOS 7.6.1 Release Notes, see Bug ID 1051144 in Changes in default values.

This may affect GUI access for interfaces bound to an IPsec tunnel in the scenario that the GUI admin port is also using port 443.

In case GUI connectivity is lost, connect to the FortiGate by:

1. Connecting from an interface that is not bound to an IPsec tunnel.
2. Connecting to the interface using SSH, if SSH is enabled.
3. Connecting to the FortiGate from console.

To ensure continued functionality, users are recommended to either:

- Choose an alternative interface for GUI access by configuring:

  ```
  config system global
      set admin-sport <port>
  end
  ```

- Customize the `ike-tcp-port` to a value other than 443:

  ```
  config system settings
      set ike-tcp-port <port>
  end
  ```

SAML certificate verification

SAML certification verification has added a new setting in FortiOS 7.6.5. For security purposes, FortiGate by default requires a signature verification for both the SAML response message and the SAML assertion carried inside the SAML response. This means that the SAML response must have a valid signature, and the SAML assertion must also have a valid signature. If the Identity Provider (IdP) provides an invalid signature, or fails to sign one of these, the FortiGate will reject the SAML response.

This check can be loosened up with the following configuration:

```
config user saml
    edit <name>
        set require-signed-resp-and-asrt <enable | disable>
    next
end
```

- `enable`: Both response and assertion must be signed and valid. (Default)
- `disable`: At least one of response or assertion must be signed and valid.

For more information, see Identify Providers.

Policy check required for hairpin traffic

In FortiOS 7.6.5, the default setting for `allow-traffic-redirect` and `ipv6-allow-traffic-redirect` changed from `enable` to `disable`:

```
config system global
  set allow-traffic-redirect disable
  set ipv6-allow-traffic-redirect disable
end
```

Upon upgrade, both of these settings will be changed to `disable`, even if they were enabled before.

Disabling this setting ensures that hairpin traffic arriving at an interface and redirected out on the same interface requires a firewall policy to explicitly allow the traffic. If you want to redirect traffic without the need for a policy based only on routing decision, then manually enable these settings.

Changing vlan-lookup-cache requires system restart

Enabling or disabling `vlan-lookup-cache` or any configuration change that causes a system restart can disrupt the operation of an FGCP cluster. If possible, you should make this configuration change to the individual FortiGates before setting up the cluster. If the cluster is already operating, you should temporarily remove the secondary FortiGate(s) from the cluster, change the configuration of the individual FortiGates and then re-form the cluster. You can remove FortiGate(s) from a cluster using the *Remove Device from HA cluster* button on the *System > HA GUI* page. For more information, see Disconnecting a FortiGate.

Upgrade information

Supported upgrade path information is available on the Fortinet Customer Service & Support site.

FortiGate	Upgrade option	Details
Individual FortiGate devices	Manual update	Use the procedure in this topic. See also Upgrading individual devices in the FortiOS Administration Guide.
	Automatic update based on FortiGuard upgrade path	See Enabling automatic firmware updates in the FortiOS Administration Guide for details
Multiple FortiGate devices in a Fortinet Security Fabric	Manual, immediate or scheduled update based on FortiGuard upgrade path	See Fortinet Security Fabric upgrade on page 17 and Upgrading all devices in the FortiOS Administration Guide.

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*.

Fortinet Security Fabric upgrade

FortiOS 7.6.6 is verified to work with these Fortinet products. This includes:

FortiAnalyzer	• 7.6.6
FortiManager	• 7.6.6
FortiExtender	• 7.4.0 and later
FortiSwitch OS (FortiLink support)	• 6.4.6 build 0470 and later

FortiAP	• 7.2.2 and later
FortiAP-U	• 6.2.5 and later
FortiAP-W2	• 7.2.2 and later
FortiClient EMS	• 7.0.3 build 0229 and later
FortiClient Microsoft Windows	• 7.0.3 build 0193 and later
FortiClient Mac OS X	• 7.0.3 build 0131 and later
FortiClient Linux	• 7.0.3 build 0137 and later
FortiClient iOS	• 7.0.2 build 0036 and later
FortiClient Android	• 7.0.2 build 0031 and later
FortiSandbox	• 2.3.3 and later for post-transfer scanning • 4.2.0 and later for post-transfer and inline scanning

[*] If you are using FortiClient only for IPsec VPN, FortiClient version 6.0 and later are supported.

When upgrading your Security Fabric, devices that manage other devices should be upgraded first.

When using FortiClient with FortiAnalyzer, you should upgrade both to their latest versions. The versions between the two products should match. For example, if using FortiAnalyzer 7.6.0, use FortiClient 7.6.0.

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

1. FortiAnalyzer
2. FortiManager
3. FortiGate devices
4. Managed FortiExtender devices
5. Managed FortiSwitch devices
6. Managed FortiAP devices
7. FortiClient EMS
8. FortiClient
9. FortiSandbox
10. FortiMail
11. FortiWeb
12. FortiNAC
13. FortiVoice
14. FortiDeceptor
15. FortiNDR
16. FortiTester
17. FortiMonitor

If Security Fabric is enabled, then all FortiGate devices must be upgraded to 7.6.6. When Security Fabric is enabled in FortiOS 7.6.6, all FortiGate devices must be running FortiOS 7.6.6.

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
- admin user account
- session helpers
- system access profiles

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, go to *Support > Firmware Image Checksums* (in the *Downloads* section), enter the image file name including the extension, and click *Get Checksum Code*.

FortiGate 6000 and 7000 upgrade information

Upgrade FortiGate 6000 firmware from the management board GUI or CLI. Upgrade FortiGate 7000 firmware from the primary FIM GUI or CLI. The FortiGate 6000 management board and FPCs or the FortiGate 7000 FIMs and FPMs all run the same firmware image. Upgrading the firmware copies the firmware image to all components, which then install the new firmware and restart. A FortiGate 6000 or 7000 firmware upgrade can take a few minutes, the amount of time depending on the hardware and software configuration and whether DP or NP7 processor software is also upgraded.

On a standalone FortiGate 6000 or 7000, or an HA cluster with `uninterruptible-upgrade` disabled, the firmware upgrade interrupts traffic because all components upgrade in one step. These firmware upgrades should be done during a quiet time because traffic can be interrupted for a few minutes during the upgrade process.

Fortinet recommends running a graceful firmware upgrade of a FortiGate 6000 or 7000 FGCP HA cluster by enabling `uninterruptible-upgrade` and `session-pickup`. A graceful firmware upgrade only causes minimal traffic interruption.

Fortinet recommends that you review the services provided by your FortiGate 6000 or 7000 before a firmware upgrade and then again after the upgrade to make sure that these services continue to operate normally. For example, you might want to verify that you can successfully access an important server used by your organization before the upgrade and make sure that you can still reach the server after the upgrade and performance is comparable. You can also take a snapshot of key performance indicators (for example, number of sessions, CPU usage, and memory usage) before the upgrade and verify that you see comparable performance after the upgrade.

To perform a graceful upgrade of your FortiGate 6000 or 7000 to FortiOS 7.6.6:

1. Use the following command to set the `upgrade-mode` to `uninterruptible` to support HA graceful upgrade:

   ```
   config system ha
       set uninterruptible-upgrade enable
   end
   ```

   When upgrading from FortiOS 7.4.1 to a later version, use the following command to enable uninterruptible upgrade:

   ```
   config system ha
       set upgrade-mode uninterruptible
   end
   ```

2. Download the FortiOS 7.6.6 FG-6000F, FG-7000E, or FG-7000F firmware from https://support.fortinet.com.
3. Perform a normal upgrade of your HA cluster using the downloaded firmware image file.
4. When the upgrade is complete, verify that you have installed the correct firmware version.
   For example, check the FortiGate dashboard or use the `get system status` command.
5. Check the *Cluster Status* dashboard widget or use the `diagnose sys confsync status` command to confirm that all components are synchronized and operating normally.

Default setting of cp-accel-mode is changed to none on 2GB memory models

This change disables CP acceleration to lower system memory usage thus can prevent some unexpected behavior due to lack of memory.

Previous FortiOS CLI behavior:

```
config ips global
    set cp-accel-mode advanced
end
```

New FortiOS CLI behavior after upgrade:

```
config ips global
    set cp-accel-mode none
end
```

This change will cause performance impact as CPU will do the pre-match (pattern match) inside IPS (CPU) instead of hardware engine (cp module in SOC4). Some customers could expect an increase in CPU utilization as a result.

FortiGate and FortiWiFi 4xF/6xF families are affected by this change.

Policies that use an interface show missing or empty values after an upgrade

If local-in policy, DoS policy, interface policy, multicast policy, TTL policy, or central SNAT map used an interface in version 7.4.5, 7.6.0 GA or any previous GA version that was part of the SD-WAN zone, these policies will be deleted or show empty values after upgrading to version 7.4.6 or 7.6.1 or later.

This issue is resolved in FortiOS 7.6.3 with mantis 1104649.

After following the upgrade path to FortiOS 7.6.3, you must manually recreate these policies and assign them to the appropriate SD-WAN zone.

Although not recommended, you can skip the upgrade path and upgrade directly to FortiOS 7.6.3, and the policies remain untouched. Skipping upgrade steps might cause devices to miss other important FortiOS checks and changes and is not recommended.

Managed FortiSwitch do not permit empty passwords for administrator accounts

Starting from FortiOS version 7.6.1, a managed FortiSwitch no longer permits empty passwords for the admin account. If a FortiSwitch unit was previously authorized without an admin password, the FortiGate will automatically generate a random admin password for the FortiSwitch upon upgrading to 7.6.1 or later. This change will cause the admin to lose access.

To regain access, configure a password override on the FortiGate device using the following commands:

```
config switch-controller switch-profile
    edit default
        set login-passwd-override enable
        set login-passwd <passwd>
    next
end
```

FortiSwitch units with an existing admin password will not be affected by this change.

Removed speed setting affects SFP+ interfaces after upgrade

Starting in FortiOS 7.6.1, the `1000auto` speed setting is removed. If a FortiGate SFP+ port speed is set to `1000auto` before upgrade, the upgrade process automatically changes the setting to `10000full`. This change can cause the interface to go down when the connecting device has a different speed setting.

Workaround: After upgrade, align the port settings. Edit the port and set the speed to `1000full` to restore the connection.

```
config system interface
    edit <port>
        set speed 1000full
    next
end
```

Hyperscale with FGCP HA clusters and interface monitoring

For previous versions of hyperscale FortiOS, FGCP HA clustering with hardware session synchronization with `config vcluster-status disabled` allowed you to monitor `hw-session-sync-dev` interfaces. FortiOS 7.6.3 changed this behavior, and you can no longer monitor `hw-session-sync-dev` interfaces.

If your HA configuration includes monitoring `hw-session-sync-dev` interfaces, the upgrade to FortiOS 7.6.4 removes the monitor interface configuration.

You can work around this problem by removing monitoring from `hw-session-sync-dev` interfaces or by selecting different interfaces to be `hw-session-sync-dev` interfaces before performing the upgrade.

Password policy enforcement

After upgrade to FortiOS 7.6.5 or later, the password policy is enforced, and your password must meet the requirements before you can log in to FortiOS. Passwords must contain:

- 1 uppercase letter
- 1 lowercase letter
- 1 special character
- 1 number (0-9)
- A minimum length of 12 characters

If your password meets the requirements, you can log in to FortiOS after upgrade.

If your password does not meet the requirements, you must change your password before you can log in to the GUI or CLI.

Product integration and support

The following table lists FortiOS 7.6.6 product integration and support information:

FortiManager and FortiAnalyzer	See the FortiOS Compatibility Tool for information about FortiOS compatibility with FortiManager and FortiAnalyzer.
Web browsers	• Microsoft Edge 135 • Mozilla Firefox version 138 • Google Chrome version 136 Other browser versions have not been tested, but may fully function. Other web browsers may function correctly, but are not supported by Fortinet.
Explicit web proxy browser	• Microsoft Edge 135 • Mozilla Firefox version 138 • Google Chrome version 136 Other browser versions have not been tested, but may fully function. Other web browsers may function correctly, but are not supported by Fortinet.
FortiController	• 5.2.5 and later Supported models: FCTL-5103B, FCTL-5903C, FCTL-5913C
Fortinet Single Sign-On (FSSO)	• 5.0 build 0328 and later (needed for FSSO agent support OU in group filters) • Windows Server 2025 Standard • Windows Server 2025 Datacenter • Windows Server 2025 Core • Windows Server 2022 Standard • Windows Server 2022 Datacenter • Windows Server 2019 Standard • Windows Server 2019 Datacenter • Windows Server 2019 Core • Windows Server 2016 Datacenter • Windows Server 2016 Standard • Windows Server 2016 Core • Windows Server 2012 Standard • Windows Server 2012 R2 Standard • Windows Server 2012 Core • Novell eDirectory 8.8
AV Engine	• 7.00048
IPS Engine	• 7.01168

See also:

- Virtualization environments on page 25
- Language support on page 25
- Agentless VPN support on page 26
- FortiExtender modem firmware compatibility on page 26

Virtualization environments

The following table lists hypervisors and recommended versions.

Hypervisor	Recommended versions
Citrix Hypervisor	• 8.2 Express Edition, CU1
Linux KVM	• Ubuntu 22.04.3 LTS • Red Hat Enterprise Linux release 9.4 • SUSE Linux Enterprise Server 12 SP3 release 12.3
Microsoft Windows Server	• Windows Server 2022
Windows Hyper-V Server	• Microsoft Hyper-V Server 2022
Open source XenServer	• Version 3.4.3 • Version 4.1 and later
VMware ESXi	• Versions 6.5, 6.7, 7.0, and 8.0.

Language support

The following table lists language support information.

Language support

Language	GUI
English	✓
Chinese (Simplified)	✓
Chinese (Traditional)	✓
French	✓
Japanese	✓

Language	GUI
Korean	✓
Portuguese (Brazil)	✓
Spanish	✓

Agentless VPN support

The following table lists the operating systems and web browsers supported by Agentless VPN (formerly SSL VPN web mode). See also SSL VPN tunnel mode replaced with IPsec VPN on page 12.

Operating System	Web Browser
Microsoft Windows 7 SP1 (32-bit & 64-bit)	Mozilla Firefox version 138 Google Chrome version 136
Microsoft Windows 10 (64-bit)	Microsoft Edge 135 Mozilla Firefox version 138 Google Chrome version 136
Ubuntu 20.04 (64-bit)	Mozilla Firefox version 138 Google Chrome version 136
macOS Ventura 13.1	Apple Safari version 18 Mozilla Firefox version 137 Google Chrome version 136
iOS	Apple Safari Mozilla Firefox Google Chrome
Android	Mozilla Firefox Google Chrome

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

FortiExtender modem firmware compatibility

The following table lists the modem firmware file name and version for each FortiExtender model and its compatible geographical region.

FortiExtender model	Modem firmware image name	Modem firmware file on Support site	Geographical region
FEX-101F-AM	FEM_EM06A-22-1-1	FEM_EM06A-22.1.1-build0001.out	America
FEX-101F-EA	FEM_EM06E-22-01-01	FEM_EM06E-22.1.1-build0001.out	EU
	FEM_EM06E-22.2.2	FEM_EM06E-22.2.2-build0002.out	EU
FEX-201E	FEM_06-19-0-0-AMEU	FEM_06-19.0.0-build0000-AMEU.out	America and EU
	FEM_06-19-1-0-AMEU	FEM_06-19.1.0-build0001-AMEU.out	America and EU
	FEM_06-22-1-1-AMEU	FEM_06-22.1.1-build0001-AMEU.out	America and EU
	FEM_06-22-1-2-AMEU	FEM_06-22.1.2-build0001-AMEU.out	America and EU
FEX-201F-AM	FEM_07A-22-1-0-AMERICA	FEM_07A-22.1.0-build0001-AMERICA.out	America
	FEM_07A-22-2-0-AMERICA	FEM_07A-22.2.0-build0002-AMERICA.out	America
FEX-201F-EA	FEM_07E-22-0-0-WRLD	FEM_07E-22.0.0-build0001-WRLD.out	World
	FEM_07E-22-1-1-WRLD	FEM_07E-22.1.1-build0001-WRLD.out	World
FEX-202F-AM	FEM_07A-22-1-0-AMERICA	FEM_07A-22.1.0-build0001-AMERICA.out	America
	FEM_07A-22-2-0-AMERICA	FEM_07A-22.2.0-build0002-AMERICA.out	America
FEX-202F-EA	FEM_07E-22-1-1-WRLD	FEM_07E-22.1.1-build0001-WRLD.out	World
FEX-211E	FEM_12-19-1-0-WRLD	FEM_12-19.1.0-build0001-WRLD.out	World
	FEM_12-19-2-0-WRLD	FEM_12-19.2.0-build0002-WRLD.out	World
	FEM_12-22-1-0-AMEU	FEM_12-22.0.0-build0001-AMEU.out	America and EU
	FEM_12-22-1-1-WRLD	FEM_12-22.1.1-build0001-WRLD.out	World

FortiExtender model	Modem firmware image name	Modem firmware file on Support site	Geographical region
FEV-211F_AM	FEM_12_EM7511-22-1-2-AMERICA	FEM_12_EM7511-22.1.2-build0001-AMERICA.out	America
FEV-211F	FEM_12-22-1-0-AMEU	FEM_12-22.1.0-build0001-AMEU.out	World
FEX-211F-AM	FEM_12_EM7511-22-1-2-AMERICA	FEM_12_EM7511-22.1.2-build0001-AMERICA.out	America
FEX-212F	FEM_12-19-2-0-WRLD	FEM_12-19.2.0-build0002-WRLD.out	World
	FEM_12-22-1-1-WRLD	FEM_12-22.1.1-build0001-WRLD.out	World
FEX-311F	FEM_EM160-22-02-03	FEM_EM160-22.2.3-build0001.out	World
	FEM_EM160-22-1-2	FEM_EM160-22.1.2-build0001.out	World
FEX-511F	FEM_RM502Q-21-2-2	FEM_RM502Q-21.2.2-build0003.out	World
	FEM_RM502Q-22-03-03	FEM_RM502Q-22.3.3-build0004.out	World
	FEM_RM502Q-22-04-04-AU	FEM_RM502Q-22.4.4-build0005_AU.out	Australia
	FEM_RM502Q-22-1-1	FEM_RM502Q-22.1.1-build0001.out	World
	FEM_RM502Q-22-2-2	FEM_RM502Q-22.2.2-build0002.out	World

The modem firmware can also be uploaded manually by downloading the file from the Fortinet Customer Service & Support site. The firmware file names are listed in the third column of the table.

To download the modem firmware:

1. Go to https://support.fortinet.com/Download/FirmwareImages.aspx.
2. From the *Select Product* dropdown, select *FortiExtender*.
3. Select the *Download* tab.
4. Click *MODEM-Firmware*.
5. Select the FortiExtender model and image name, then download the firmware file.

Resolved issues

The following issues have been fixed in version 7.6.6. To inquire 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
1246654	FortiOS 7.6.6 is no longer vulnerable to the following CVE Reference: • CVE-2026-24858

Known issues

Known issues are organized into the following categories:

- New known issues on page 30
- Existing known issues on page 30

To inquire about a particular bug or report a bug, please contact Customer Service & Support.

New known issues

Currently no new issues have been reported in 7.6.6.

Existing known issues

The following issues have been identified in a previous version of FortiOS and remain in FortiOS 7.6.6.

Agentless VPN (formerly SSL VPN web mode)

See also SSL VPN tunnel mode replaced with IPsec VPN on page 12.

Bug ID	Description
1173772	Unable to connect to SMB over SSL VPN web mode in FIPS-CC mode.

Endpoint Control

Bug ID	Description
1019658	On FortiGate, not all registered endpoint EMS tags are displayed in the GUI.
1038004	FortiGate may not display the correct user information for some FortiClient instances.

Explicit Proxy

Bug ID	Description
1145590	certificate-inspection dropping client hello segment when traffic is tunneled in webproxy.

Firewall

Bug ID	Description
959065	On the *Policy & Objects > Traffic Shaping* page, when deleting or creating a shaper, the counters for the other shapers are cleared.
990528	When searching for an IP address on the *Firewall Policy* page, the search/filter functionality does not return the expected results.

FortiGate 6000 and 7000 platforms

Bug ID	Description
653335	SSL VPN user status does not display on the FortiManager GUI.
835847	Password policy was not correctly updated when using automation stitch.
936320	When there is a heavy traffic load, there are no results displayed on any *FortiView* pages in the GUI.
950983	*Feature Visibility* options are visible in the GUI on a `mgmt-vdom`.
994241	On FortiGate 7000F using FGSP and FGCP, when TCP traffic takes an asymmetric path, the TCP ACK and data packets might be dropped in NP7.
1006759	After an HA failover, there is no IPsec route in the kernel. **Workaround**: Bring down and bring up the tunnel.
1102072	On the FortiGate 7000 platform, cmdbsvr CPU usage can be higher than normal for extended periods on one or more FPM.
1112582	Under some conditions, such as during conserve mode, you may be unable to log in to the FortiGate 6000 management board GUI or CLI, or when you log in to the management board console, a message similar to fork failed() continuously repeats.
1130491	6KF WCCP doesn't seem to work as expected.
1131269	Dial up tunnel - syn and syn ack are on different blades even though ipsec-tunnel-slot set to master.
1132294	ip nat port-preserve feature is not working when client's source port doesn't fall under FPM's nat port-range.

Bug ID	Description
1170210	FGT Wireless controller Wifi client cannot ping GW/FGT interface. Pass-through traffic works fine.
1185528	Subscription license on the secondary chassis is missing after the graceful upgrade from 7.2.10/11 to 7.2.12. **Workaround**: Run `execute update-now` again.
1185869	Multicast traffic not working.

FortiView

Bug ID	Description
1034148	The *Application Bandwidth* widget on the *Dashboard > Status* page does not display some external applications bandwidth data.

GUI

Bug ID	Description
793029	Unexpected behavior occurs on some FortiGate models when a FortiClient lacks a required MAC address attribute.
1047146	After a firmware upgrade, a VLAN interface used in IPsec, SSL VPN, or SD-WAN is not displayed on the interface list or the SD-WAN page and cannot be configured in the GUI.

HA

Bug ID	Description
1234340	Asymmetric session handling fails when two FGSP links are configured and only the second link recovers after both go down.

Hyperscale

Bug ID	Description
1030907	With a FGSP and FGCP setup, sessions do not show on the HA secondary when the FGSP peer is in HA.

Bug ID	Description
1042011	Observed `NPD-0 :DEL PRP FAIL! 0xffffffff; NPD-0 :PRP ADD FAIL! 0xffffffff nat_type=00000044 block_sz=128 port_base=11000`.
1130107	Session-helper DNS session is created by hw and can be seen in log2host table.
1151441	(4801F-HA) "ha2" port as hw-session-sync-dev shows out-of-sync even though it is connected to NP7.

Intrusion Prevention

Bug ID	Description
1076213	FortiGate's with 4GB memory might enter conserve mode during the FortiGuard update when IPS or APP control is enabled. **Workaround**: Disable the `proxy-inline-ips` option under `config ips settings`.
1093769	Unexpected IPS UTM log has been generated for established TCP sessions that lack application data in NFGW policy mode.

IPsec VPN

Bug ID	Description
735398	On FortiGate, the IKE anti-replay does not log duplicate ESP packets when SA is offloaded in the event log.

Log & Report

Bug ID	Description
1124896	FAZ and FGT-cloud *Logs Sent Daily* chart looses data after upgrade.

Proxy

Bug ID	Description
1035490	The firewall policy works with proxy-based inspection mode on FortiGate models with 2GB RAM after an upgrade. **Workaround**: After an upgrade, reboot the FortiGate.

REST API

Bug ID	Description
938349	Unsuccessful API user login attempts do not get reset within the time specified in `admin-lockout-threshold`.
993345	The router API does not include all ECMP routes for SD-WAN included in the `get router info routing-table` command.
1103046	Shaping profile with queuing - no interface stats.

Security Fabric

Bug ID	Description
1040058	The Security Rating topology and results does not display non-FortiGate devices.

Switch Controller

Bug ID	Description
1113304	FortiSwitch units are offline after FortiGate is upgraded from 7.4.6 or 7.6.0 to 7.6.1 or later when LLDP configuration is set to vdom/disable under the FortiLink interface. **Workaround**: In LLDP configuration, enable `lldp-reception` and `lldp-transmission` under the FortiLink interface, or rebuild the FortiLink interface.

System

Bug ID	Description
947982	On NP7 platforms, DSW packets are missing resulting in VOIP experiencing performance issues during peak times.
1041726	Traffic flow speed is reduced or interrupted when the traffic shaper is enabled.
1103617	Integrating an interface does not work when adding a new member into an existing interface or creating a new interface.
1142465	ARP entries age out quickly after a system reboot, despite a long reachable-time setting.

Upgrade

Bug ID	Description
1091213	Upgrade causes X5 & X7 SFP Interfaces to go down.
1135049	An error condition in ips_load_json_gzfile occurs during FortiOS same-image upgrade.

User & Authentication

Bug ID	Description
1021719	On the *System > Certificates* page, the *Create Certificate* pane does not function as expected after creating a new certificate.
1082800	When performing LDAP user searches from the GUI against LDAP servers with a large number of users (more than 100000), FortiGate may experience a performance issue and not operate as expected due to the HTTPSD process consuming too much memory. User may need to stop the HTTPSD process or perform a reboot to recover. **Workaround**: Perform an LDAP user search using the CLI.
1141380	FortiGate cannot send token activation code to email.
1157003	Agentless FSSO connector issues occur when using Windows 2025 due to Microsoft introducing additional restrictions to remote Event log reading.

VM

Bug ID	Description
1125805	Unable to access the FortiGate VM web interface deployed on AWS when ACME is enabled.

Web Filter

Bug ID	Description
1040147	Options set in `ftgd-wf` cannot be undone for a web filter configuration.

WiFi Controller

Bug ID	Description
1227978	Wi-Fi clients cannot maintain previous IP addresses after roaming from one FAP to another in the inter-controller layer-3 roaming topology.

Built-in AV Engine

AV Engine 7.00048 is released as the built-in AV Engine.

Built-in IPS Engine

IPS Engine 7.01168 is released as the built-in IPS Engine.

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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