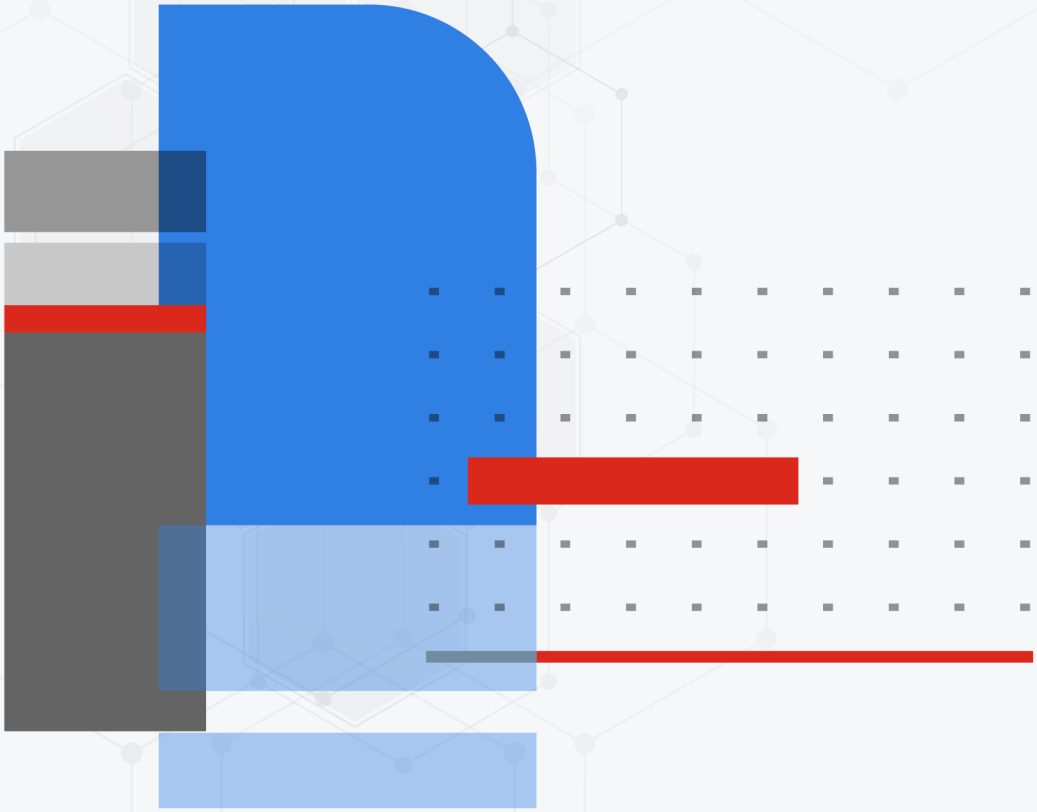
Release Notes

FortiOS 7.4.7



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January 21, 2025
FortiOS 7.4.7 Release Notes
01-747-1114568-20250121

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Change Log

Date	Change Description
2025-01-21	Initial release.

Introduction and supported models

This guide provides release information for FortiOS 7.4.7 build 2731.

For FortiOS documentation, see the Fortinet Document Library.

Supported models

FortiOS 7.4.7 supports the following models.

FortiGate	FG-40F, FG-40F-3G4G, FG-60E, FG-60E-DSL, FG-60E-DSLJ, FG-60E-POE, FG-60F, FG-61E, FG-61F, FG-70F, FG-71F, FG-80E, FG-80E-POE, FG-80F, FG-80F-BP, FG-80F-DSL, FG-80F-POE, FG-81E, FG-81E-POE, FG-81F, FG-81F-POE, FG-90E, FG-91E, FG-90G, FG-91G, FG-100F, FG-101F, FG-120G, FG-121G, FG-140E, FG-140E-POE, FG-200E, FG-200F, FG-201E, FG-201F, 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-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
FortiWiFi	FWF-40F, FWF-40F-3G4G, FWF-60E, FWF-60E-DSL, FWF-60E-DSLJ, FWF-60F, FWF-61E, FWF-61F, 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-60F, FGR-60F-3G4G, FGR-70F, 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

Special notices

- Hyperscale incompatibilities and limitations on page 7
- FortiGate 6000 and 7000 incompatibilities and limitations on page 7
- SMB drive mapping with ZTNA access proxy on page 7
- Local out traffic using ECMP routes could use different port or route to server on page 8
- Hyperscale NP7 hardware limitation on page 8

Hyperscale incompatibilities and limitations

See Hyperscale firewall incompatibilities and limitations in the Hyperscale Firewall Guide for a list of limitations and incompatibilities with FortiOS 7.4.7 features.

FortiGate 6000 and 7000 incompatibilities and limitations

See the following links for information about FortiGate 6000 and 7000 limitations and incompatibilities with FortiOS 7.4.7 features.

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

SMB drive mapping with ZTNA access proxy

In FortiOS 7.4.1 and later, SMB drive mapping on a Windows PC made through a ZTNA access proxy becomes inaccessible after the PC reboots when access proxy with TCP forwarding is configured as FQDN. When configured with an IP for SMB traffic, same issue is not observed.

One way to solve the issue is to enter the credentials into Windows Credential Manager in the form of `domain\username`.

Another way to solve the issue is to leverage the KDC proxy to issue a TGT (Kerberos) ticket for the remote user. See ZTNA access proxy with KDC to access shared drives for more information. This way, there is no reply in Credential Manager anymore, and the user is authenticated against the DC.

Local out traffic using ECMP routes could use different port or route to server

Starting from version 7.4.1, when there is ECMP routes, local out traffic may use different route/port to connect out to server. For critical traffic which is sensitive to source IP addresses, it is suggested to specify the interface or SD-WAN for the traffic since FortiOS has implemented `interface-select-method` command for nearly all local-out traffic.

```
config system fortiguard
    set interface-select-method specify
    set interface "wan1"
end
```

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`).

Changes in table size

Bug ID	Description
1042266	On high-end FortiGate models, the number of policy routes and policy routes6 is increased from 2048 to 5000.

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 10 and Upgrading Fabric or managed 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 7.4.7 greatly increases the interoperability between other Fortinet products. This includes:

FortiAnalyzer	• 7.4.6
FortiManager	• 7.4.6
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 or SSL 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 7.4.0, use FortiClient 7.4.0.

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 7.4.7. When Security Fabric is enabled in FortiOS 7.4.7, all FortiGate devices must be running FortiOS 7.4.7.

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 7.4.7:

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 7.4.7 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. Confirm that all components are synchronized and operating normally.
   For example, open the Cluster Status dashboard widget to view the status of all components, or use `diagnose sys confsync status` to confirm that all components are synchronized.

IPS-based and voipd-based VoIP profiles

In FortiOS 7.4.0 and later, the new IPS-based VoIP profile allows flow-based SIP to complement SIP ALG while working together. There are now two types of VoIP profiles that can be configured:

```
config voip profile
    edit <name>
        set feature-set {ips | voipd}
    next
end
```

A voipd-based VoIP profile is handled by the voipd daemon using SIP ALG inspection. This is renamed from proxy in previous FortiOS versions.

An ips-based VoIP profile is handled by the IPS daemon using flow-based SIP inspection. This is renamed from flow in previous FortiOS versions.

Both VoIP profile types can be configured at the same time on a firewall policy. For example:

```
config firewall policy
    edit 1
        set voip-profile "voip_sip_alg"
        set ips-voip-filter "voip_sip_ips"
    next
end
```

Where:

- `voip-profile` can select a `voip-profile` with `feature-set voipd`.
- `ips-voip-filter` can select a `voip-profile` with `feature-set ips`.

The VoIP profile selection within a firewall policy is restored to pre-7.0 behavior. The VoIP profile can be selected regardless of the inspection mode used in the firewall policy. The new `ips-voip-filter` setting allows users to select an IPS-based VoIP profile to apply flow-based SIP inspection, which can work concurrently with SIP ALG.

Upon upgrade, the `feature-set` setting of the `voip profile` determines whether the profile applied in the firewall policy is `voip-profile` or `ips-voip-filter`.

Before upgrade	After upgrade

`config voip profile`
`  edit "ips_voip_filter"`
`  set feature-set flow`
`  next`
`  edit "sip_alg_profile"`
`  set feature-set proxy`
`  next`
`end`
 	
`config firewall policy`
`  edit 1`
`  set voip-profile "ips_voip_filter"`
`  next`
`  edit 2`
`  set voip-profile "sip_alg_profile"`
`  next`
`end`
	`config voip profile`
	`  edit "ips_voip_filter"`
	`  set feature-set ips`
	`  next`
	`  edit "sip_alg_profile"`
	`  set feature-set voipd`
	`  next`
	`end`
	
	`config firewall policy`
	`  edit 1`
	`  set ips-voip-filter "ips_voip_filter"`
	`  next`
	`  edit 2`
	`  set voip-profile "sip_alg_profile"`
	`  next`
	`end`

GUI firmware upgrade does not respect upgrade path in previous versions

When performing a firmware upgrade from 7.4.0 - 7.4.3 that requires multiple version jumps, the *Follow upgrade path* option in the GUI does not respect the recommended upgrade path, and instead upgrades the firmware directly to the final version. This can result in unexpected configuration loss. To upgrade a device in the GUI, upgrade to each interim version in the upgrade path individually.

For example, when upgrading from 7.0.7 to 7.0.12 the recommended upgrade path is 7.0.7 -> 7.0.9 -> 7.0.11 -> 7.0.12. To ensure that there is no configuration loss, first upgrade to 7.0.9, then 7.0.11, and then 7.0.12.

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

As part of improvements to enhance performance and optimize memory usage on FortiGate models with 2 GB RAM or less, starting from version 7.4.4, FortiOS no longer supports proxy-related features.

This change impacts the FortiGate/FortiWiFi 40F, 60E, 60F, 80E, and 90E series devices, along with their variants, and the FortiGate-Rugged 60F (2 GB versions only). See Proxy-related features no longer supported on FortiGate 2 GB RAM models for more information.

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 setup VMs with at least 4 GB of RAM for optimal performance.

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. 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.

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

If local-in policy used an interface in version 7.4.5 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.

After upgrading to version 7.4.6 GA, users must manually recreate these policies and assign them to the appropriate SD-WAN zone.

Product integration and support

The following table lists FortiOS 7.4.7 product integration and support information:

Web browsers	• Microsoft Edge 112 • Mozilla Firefox version 113 • Google Chrome version 113 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 112 • Mozilla Firefox version 113 • Google Chrome version 113 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 0319 and later (needed for FSSO agent support OU in group filters)
	  • 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	• 7.00035
IPS Engine	• 7.00559

See also:

- Virtualization environments on page 18
- Language support on page 18
- SSL VPN support on page 19
- FortiExtender modem firmware compatibility on page 19

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 2019
Windows Hyper-V Server	• Microsoft Hyper-V Server 2019
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	✓
Korean	✓
Portuguese (Brazil)	✓
Spanish	✓

SSL VPN support

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 113 Google Chrome version 112
Microsoft Windows 10 (64-bit)	Microsoft Edge Mozilla Firefox version 113 Google Chrome version 112
Ubuntu 20.04 (64-bit)	Mozilla Firefox version 113 Google Chrome version 112
macOS Ventura 13.1	Apple Safari version 16 Mozilla Firefox version 103 Google Chrome version 111
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

FortiExtender model	Modem firmware image name	Modem firmware file on Support site	Geographical region
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
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

FortiExtender model	Modem firmware image name	Modem firmware file on Support site	Geographical region
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 7.4.7. To inquire about a particular bug, please contact Customer Service & Support.

Anti Virus

Bug ID	Description
1068321	MMDB and AVAI DBs are unsigned after upgrading from version 7.0.15 to version 7.2.9.

GUI

Bug ID	Description
1110382	Admin can login to GUI (HTTPS) with password, even when `admin-https-pki-required` is enabled.

HA

Bug ID	Description
1054041	DHCP client can't get IPv4 address from server with vcluster.

Intrusion Prevention

Bug ID	Description
1107445	Remove IPS diagnose command `diagnose ips cfgscript run`.

Log & Report

Bug ID	Description
1045253	FortiGate logs are not transferred into FortiGate Cloud Log server.

SSL VPN

Bug ID	Description
1000674	When generating function backtrace in crash logs for ARM32, SSL VPN frequently crashes due to segmentation faults.
1101837	Insufficient session expiration in SSL VPN using SAML authentication.

User & Authentication

Bug ID	Description
1070560	Admin authentication bypass when configuring TACACS server.

Known issues

Known issues are organized into the following categories:

- New known issues on page 24
- Existing known issues on page 24

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

New known issues

There are currently no issues that have been identified in version 7.4.7.

Existing known issues

The following issues have been identified in a previous version of FortiOS and remain in FortiOS 7.4.7.

Explicit Proxy

Bug ID	Description
1026362	Web pages do not load when `persistent-cookie` is disabled for `session-cookie-based authentication` with *captive-portal*.

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.
994986	The *By Sequence* view in the Firewall policy list may incorrectly show a duplicate implicit deny policy in the middle of the list. This is purely a GUI display issue and does not impact policy operation. The *Interface Pair View* and *Sequence Grouping View* do not have this issue.
1057080	On the *Firewall Policy* page, search results do not display in an expanded format.

FortiGate 6000 and 7000 platforms

Bug ID	Description
790464	After a failover, ARP entries are removed from all slots when an ARP query of single slot does not respond.
911244	FortiGate 7000E IPv6 routes may not be synchronized correctly among FIMs and FPMs.
976521	On FortiGate 6000 models, a CPU usage issue occurs in the node process when navigating a policy list with a large number (+7000) of policies in a VDOM.
1006759	After an HA failover, there is no IPsec route in the kernel.
1026665	On the FortiGate 7000F platform with virtual clustering enabled and syslog logging configured, when running the `diagnose log test` command from a primary vcluster VDOM, some FPMs may not send log messages to the configured syslog servers.
1048808	If the secondary reboots, after it rejoins the cluster SIP sessions are not resynchronized.
1060619	CSF is not working as expected.

1070365	FGCP HA session synchronization may stop working as expected on a FortiGate 7000F cluster managed by FortiManager. This happens if the HA configuration uses management interfaces as session synchronization interfaces by configuring the `session-sync-dev` option, for example:
	`config system ha`
	`  set session-sync-dev 1-M1 1-M2`
	`end`
	The problem occurs when FortiManager updates the configuration of the FortiGate 7000F devices in the cluster it incorrectly changes to the VDOM of the management interfaces added to the `session-sync-dev` command from `mgmt-vdom` to `vsys_ha` and the interfaces stop working as session sync interfaces.
	You can work around the problem by re-configuring the `session-sync-dev` option on the FortiGate 7000F cluster (this resets the VDOM of the session sync interfaces to `vsys_ha`) and then retrieving the FortiGate configuration from FortiManager. This synchronizes the correct configuration to FortiManager.

1078532	When upgrading the FG6001F platform, in some instances the slave chassis does not synchronize the FPC subscription license from master chassis. **Workaround**: use the `execute update-now` command.
1092728	On FortiGate 6000 and 7000 platforms, fragmented IPv6 traffic is randomly dropped.

GUI

Bug ID	Description
853352	When viewing entries in slide-out window of the *Policy & Objects* > *Internet Service Database* page, users cannot scroll down to the end if there are over 100000 entries.
885427	Suggest showing the SFP status information on the faceplate of FGR-60F/60F-3G4G devices.

Bug ID	Description
1047963	High Node.js memory usage when building FortiManager in Report Runner fails. Occurs when FortiManager has a slow connection, is unreachable from the FortiGate (because FMG is behind NAT), or the IP is incorrect.
1055197	On FortiGate G series models with dual WAN links, the *Interface Bandwidth* widget may show an incorrect incoming and outgoing bandwidth count where the actual traffic does not match the display numbers.
1071907	There is no setting for the type option on the GUI for npu_vlink interface.
1114549	FEXT can't be authorized by FGT GUI.

HA

Bug ID	Description
781171	When performing HA upgrade in the GUI, if the secondary unit takes several minutes to boot up, the GUI may show a misleading error message *Image upgrade failed* due to premature timeout. This is just a GUI display issue and the HA upgrade can still complete without issue.
1000808	FortiGate in an HA setup has an unnecessary primary unit selection when a new member joins or reboots one member in the VC cluster when the VC has more than 2 units.
1107137	The secondary FortiGate with an HA Reserved Management Interface cannot be accessed using HTTPS after upgrading from version 7.4.3.

Hyperscale

Bug ID	Description
817562	NPD/LPMD cannot differentiate the different VRFs, and considers all VRFs as 0.
896203	The parse error, `NPD-0:NPD PARSE ADDR GRP gmail.com MEMBER ERR`, appears after rebooting the system.
961328	FortiGate does not choose a random port when set to random mode.
977376	FG-4201F has a 10% performance drop during a CPS test case with DoS policy.
1024274	When Hyperscale logging is enabled with multicast log, the log is not sent to servers that are configured to receive multicast logs.
1025908	When running FGSP setup, the session count is approximately 50% less on the peer device.

IPsec VPN

Bug ID	Description
866413	Traffic over GRE tunnel over IPsec tunnel, or traffic over IPsec tunnel with GRE encapsulation is not offloaded on NP7-based units.
897871	GRE over IPsec does not work in transport mode.
944600	CPU usage issues occurred when IPsec VPN traffic was received on the VLAN interface of an NP7 vlink.
970703	FortiGate 6K and 7K models do not support IPsec VPN over vdom-link/npu-vlink.
1012615	IPsec VPN traffic is dropped after upgrading to version 7.4.3.

Proxy

Bug ID	Description
910678	CPU usage issue in WAD caused by a high number of devices being detected by the device detection feature.
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.
1060812	When Proxy-mode inline IPS scanning is enabled, the botnet check within the IPS profile does not work as expected when the IPS profile is applied to a proxy-based inspection policy using certificate inspection. **Workaround**: disable `ips.settings.proxy-inline-ips` in the CLI.

Routing

Bug ID	Description
903444	The `diagnose ip rtcache list` command is no longer supported in the FortiOS 4.19 kernel.

1040655	From version 7.4.1, when there is ECMP routes, local out traffic may use a different route/port to connect out to the server.
	Workaround: for critical traffic which is sensitive to source IP address, specify the interface or SD-WAN for the traffic using the `interface-select-method` command for nearly all local-out traffic. For example:
	`config system fortiguard`
	`set interface-select-method specify`
	`set interface "wan1"`
	`end`

Security Fabric

Bug ID	Description
1011833	FortiGate experiences a CPU usage issue in the node process when there multiple administrator sessions running simultaneously on the GUI in a Security Fabric with multiple downstream devices. This may result in slow loading times for multiple GUI pages.
1021684	In some cases, the *Security Fabric* topology does not load properly and displays a *Failed to load Topology Results* error.

System

Bug ID	Description
912383	FGR-70F and FGR-70F-3G4G failed to perform regular reboot process (using `execute reboot` command) with an SD card inserted.
1021903	After an interface role change, the updated role does not show in the le-switch member list.
1046484	After shutting down FortiGate, the system automatically boots up again.
1057131	A FortiGuard update can cause the system to not operate as expected if the FortiGate is already in conserve mode. Users may need to reboot the FortiGate.
1078541	The FortiFirewall 2600F model may become stuck after a fresh image burn. Upgrading from a previous version stills works. **Workaround**: power cycle the unit.
1102416	Cannot push `config sfp-dsl enable` and vectoring under interface.

Upgrade

Bug ID	Description
1114550	FortiExtender shows as offline after upgrading FGT from 7.4.5 to 7.4.6. **Workaround**: Reboot FortiExtender manually.

User & Authentication

Bug ID	Description
667150	On the *User & Authentication* > *User Definition* page, when a remote LDAP user with Two-factor Authentication enabled and Authentication type *FortiToken* tries to access the internet through firewall authentication, the web page does not receive the FortiToken notification or proceed to authenticate the user. **Workaround**: click the *Continue* button on the authentication page after approving the FortiToken on the mobile device.

Bug ID	Description
884462	NTLM authentication does not work with Chrome.
972391	RADIUS group is not properly displayed as used.
1080234	For FortiGate (versions 7.2.10 and 7.4.5 and later) and FortiNAC (versions 9.2.8 and 9.4.6 and prior) integration, when testing connectivity/user credentials against FortiNAC that acts as a RADIUS server, the FortiGate GUI and CLI returns an *invalid secret for the server* error. This error is expected when the FortiGate acts as the direct RADIUS client to the FortiNAC RADIUS server due to a change in how FortiGate handles RADIUS protocol in these versions. However, the end-to-end integration for the clients behind the FortiGate and FortiNAC is not impacted. **Workaround**: confirm the connectivity between the end clients and FortiNAC by checking if the clients can still be authorized against the FortiNAC as normal.
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.

1112718	When RADIUS server has the `require-message-authenticator` setting disabled, the GUI RADIUS server dialogs *Test connectivity* and *Test user credentials* still check for the `message-authenticator` value and incorrectly fail the test with *missing authenticator* error message.
	`config user radius`
	`edit <radius server>`
	`set require-message-authenticator disable`
	`next`
	`end`
	This is only a GUI display issue and the end-to-end integration with RADIUS server should still work.
	Workaround: user can confirm if the connection to RADIUS server via CLI command `diagnose test authserver radius <server> <method> <user> <password>`.

VM

Bug ID	Description
978021	VNI length is zero in the GENEVE header when in FTP passive mode.
1082197	The FortiGate-VM on VMware ESXi equipped with an Intel E810-XXV network interface card (NIC) using SFP28 transceivers at 25G speed is unable to pass VLAN traffic when DPDK is enabled.
1094274	FortiGate becomes unresponsive due to an error condition when sending IPv6 traffic.

WiFi Controller

Bug ID	Description
814541	When there are extra large number of managed FortiAP devices (over 500) and large number of WiFi clients (over 5000), the *Managed FortiAPs* page and *FortiAP Status* widget can take a long time to load. This issue does not impact FortiAP operation.
869978	CAPWAP tunnel traffic over tunnel SSID is dropped when offloading is enabled.
903922	Physical and logical topology is slow to load when there are a lot of managed FortiAP devices (over 50). This issue does not impact FortiAP management and operation.
964757	Clients randomly unable to connect to 802.1X SSID when FortiAP has a DTLS policy enabled.
972093	RADIUS accounting data usage is different between the bridge and tunnel VAP.
1050915	On the *WiFi & Switch Controller* > *Managed FortiAPs* page, when upgrading more than 30 managed FortiAPs at the same time using the *Managed FortiAP* page, the GUI may become slow and unresponsive when selecting the firmware. **Workaround**: Upgrade the FortiAPs in smaller batches of up to 20 devices to avoid performance impacts.
1083395	In an HA environment with FortiAPs managed by primary FortiGate, the secondary FortiGate GUI *Managed FortiAP* page may show the FortiAP status as offline if the FortiAP traffic is not routed through the secondary FortiGate. This is only a GUI issue and does not impact FortiAP operation.

ZTNA

Bug ID	Description
819987	SMB drive mapping made through a ZTNA access proxy is inaccessible after rebooting.
1020084	Health check on the ZTNA realserver does not work as expected if a blackhole route is added to the realserver address.

Built-in AV Engine

AV Engine 7.00035 is released as the built-in AV Engine. Refer to the AV Engine Release Notes for information.

Built-in IPS Engine

IPS Engine 7.00559 is released as the built-in IPS Engine. Refer to the IPS Engine Release Notes for information.

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.

Limitations on HA cluster formation between different FortiGate Rugged 60F and 60F 3G4G models

FortiGate Rugged 60F and 60F 3G4G models have various generations defined as follows:

- Gen1
- Gen2 = Gen1 + TPM
- Gen3 = Gen2 + Dual DC-input
- Gen4 = Gen3 + GPS antenna
- Gen5 = Gen4 + memory

The following HA clusters can be formed:

- Gen1 and Gen2 can form an HA cluster.
- Gen4 and Gen5 can form an HA cluster.
- Gen1 and Gen2 cannot form an HA cluster with Gen3, Gen4, or Gen5 due to differences in the `config system vin-alarm` command.

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