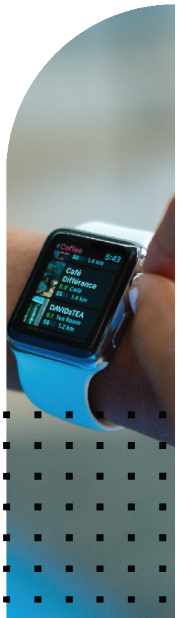
Release Notes

FortiOS 7.0.10



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April 1, 2024
FortiOS 7.0.10 Release Notes
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Date	Change Description
2023-02-23	Initial release.
2023-02-27	Updated Known issues on page 27.
2023-03-06	Updated Fortinet Security Fabric upgrade on page 12.
2023-03-07	Updated Resolved issues on page 24.
2023-03-08	Updated Resolved issues on page 24 and Known issues on page 27.
2023-03-20	Updated Known issues on page 27.
2023-03-21	Updated Introduction and supported models on page 7.
2023-03-22	Added VDOM link and policy configuration is lost after upgrading if VDOM and VDOM link have the same name on page 20. Updated Known issues on page 27.
2023-04-04	Updated VDOM link and policy configuration is lost after upgrading if VDOM and VDOM link have the same name on page 20.
2023-04-11	Updated Resolved issues on page 24.
2023-04-17	Updated Known issues on page 27.
2023-04-19	Updated Introduction and supported models on page 7.
2023-05-02	Updated Known issues on page 27.
2023-05-10	Updated Introduction and supported models on page 7.
2023-05-15	Updated How VoIP profile settings determine the firewall policy inspection mode on page 15, Product integration and support on page 21, and Known issues on page 27.
2023-05-16	Updated Introduction and supported models on page 7.
2023-05-17	Updated Known issues on page 27.
2023-05-29	Updated Known issues on page 27.
2023-06-13	Added IP pools and VIPs are not considered local addresses for certain FortiOS versions on page 10. Updated Resolved issues on page 24.
2023-06-26	Updated Resolved issues on page 24 and Known issues on page 27.
2023-08-08	Updated Resolved issues on page 24 and Known issues on page 27.
2023-08-11	Updated Resolved issues on page 24.
2023-08-22	Updated Resolved issues on page 24 and Known issues on page 27.

Date	Change Description
2023-09-06	Updated Known issues on page 27, Built-in AV Engine on page 33, and Built-in IPS Engine on page 34.
2023-10-04	Updated Known issues on page 27.
2023-10-17	Updated IP pools and VIPs are not considered local addresses for certain FortiOS versions on page 10.
2023-12-13	Updated Known issues on page 27.
2023-12-27	Updated Known issues on page 27.
2024-02-13	Updated IP pools and VIPs are not considered local addresses for certain FortiOS versions on page 10.
2024-03-06	Updated Known issues on page 27.
2024-03-18	Updated Known issues on page 27.
2024-04-01	Added GUI firmware upgrade does not respect upgrade path on page 20.

Introduction and supported models

This guide provides release information for FortiOS 7.0.10 build 0450.

For FortiOS documentation, see the Fortinet Document Library.

Supported models

FortiOS 7.0.10 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-POE, FG-81E, FG-81E-POE, FG-81F, FG-81F-POE, FG-90E, FG-91E, FG-100E, FG-100EF, FG-100F, FG-101E, FG-101F, 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-500E, FG-501E, FG-600E, FG-601E, FG-800D, FG-900D, FG-1000D, FG-1100E, FG-1101E, FG-1200D, FG-1500D, FG-1500DT, FG-1800F, FG-1801F, FG-2000E, FG-2200E, FG-2201E, FG-2500E, FG-2600F, FG-2601F, FG-3000D, FG-3100D, FG-3200D, FG-3300E, FG-3301E, FG-3400E, FG-3401E, FG-3500F, FG-3501F, FG-3600E, FG-3601E, FG-3700D, FG-3800D, FG-3960E, FG-3980E, FG-4200F, FG-4201F, FG-4400F, FG-4401F, 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-81F-2R, FWF-81F-2R-POE, FWF-81F-2R-3G4G-POE
FortiGate Rugged	FGR-60F, FGR-60F-3G4G
FortiGate VM	FG-ARM64-AWS, 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-SVM, FG-VM64-VMX, FG-VM64-XEN
Pay-as-you-go images	FOS-VM64, FOS-VM64-HV, FOS-VM64-KVM, FOS-VM64-XEN

Special branch supported models

The following models are released on a special branch of FortiOS 7.0.10. To confirm that you are running the correct build, run the CLI command `get system status` and check that the `Branch point` field shows 0450.

FFW-3001F	is released on build 5103.
FFW-3501F	is released on build 4961.
FFW-4801F	is released on build 4964.

FG-80F-DSL	is released on build 4921.
FG-400F	is released on build 4913.
FG-401F	is released on build 4913.
FG-600F	is released on build 4913.
FG-601F	is released on build 4913.
FG-900G	is released on build 6607.
FG-901G	is released on build 6607.
FG-1000F	is released on build 6521.
FG-1001F	is released on build 6521.
FG-3000F	is released on build 4913.
FG-3001F	is released on build 4913.
FG-3200F	is released on build 6527.
FG-3201F	is released on build 6527.
FG-3700F	is released on build 6527.
FG-3701F	is released on build 6527.
FG-4800F	is released on build 6527.
FG-4801F	is released on build 6527.
FGR-70F	is released on build 6524.
FGR-70F-3G4G	is released on build 6524.

Special notices

Azure-On-Demand image

Starting from FortiOS 6.4.3, the FG-VM64-AZUREONDEMAND image is no longer provided. Both Azure PAYG and Azure BYOL models will share the same FG-VM64-AZURE image for upgrading and new deployments. Remember to back up your configuration before upgrading.

For ONDEMAND models before 6.4.2, upgrade to 6.4.2 using the FG-VM64-AZUREONDEMAND image. Then, upgrade to a later build using the FG-VM64-AZURE image.

GCP-On-Demand image

Starting from FortiOS 7.0.0, the FG-VM64-GCPONDEMAND image is no longer provided. Both GCP PAYG and GCP BYOL models will share the same FG-VM64-GCP image for upgrading and new deployments. Remember to back up your configuration before upgrading.

For PAYG models with a 6.2.x build, upgrade to the latest 6.4.x build (6.4.5 or later) using the FG-VM64-GCPONDEMAND image. Then, upgrade to 7.0.x using the FG-VM64-GCP image.

ALI-On-Demand image

Starting from FortiOS 7.0.0, the FG-VM64-ALIONDEMAND image is no longer provided. Both ALI PAYG and ALI BYOL models will share the same FG-VM64-ALI image for upgrading and new deployments. Remember to back up your configuration before upgrading.

For PAYG models with a 6.2.x build, upgrade to the latest 6.4.x build (6.4.5 or later) using the FGT-VM64-ALIONDEMAND image. Then, upgrade to 7.0.x using the FGT-VM64-ALI image.

Unsupported websites in SSL VPN web mode

The following websites are not supported in SSL VPN web mode in FortiOS 7.0.1 and later:

- Facebook
- Gmail
- Office 365
- YouTube

RDP and VNC clipboard toolbox in SSL VPN web mode

Press `F8` to access the RDP/VNC clipboard toolbox. The functionality in previous versions with the clipboard toolbox in the right-hand side of the RDP/VNC page has been removed in FortiOS 7.0.1 and later.

CAPWAP offloading compatibility of FortiGate NP7 platforms

To work with FortiGate NP7 platforms running FortiOS 7.0.1 and later, current FortiAP models whose names end with letter E or F should be upgraded to the following firmware versions:

- FortiAP (F models): version 6.4.7, 7.0.1, and later
- FortiAP-S and FortiAP-W2 (E models): version 6.4.7, 7.0.1, and later
- FortiAP-U (EV and F models): version 6.2.2 and later
- FortiAP-C (FAP-C24JE): version 5.4.3 and later

The CAPWAP offloading feature of FortiGate NP7 platforms is not fully compatible with FortiAP models that cannot be upgraded (as mentioned above) or legacy FortiAP models whose names end with the letters B, C, CR, or D. To work around this issue for these FortiAP models, administrators need to disable `capwap-offload` under `config system npu` and then reboot the FortiGate.

IP pools and VIPs are not considered local addresses for certain FortiOS versions

For FortiOS 6.4.9 and later, 7.0.1 to 7.0.12, 7.2.0 to 7.2.5, and 7.4.0, all IP addresses used as IP pools and VIPs are not considered local IP addresses if responding to ARP requests on these external IP addresses is enabled (`set arp-reply enable`, by default). For these cases, the FortiGate is not considered a destination for those IP addresses and cannot receive reply traffic at the application layer without special handling.

- This behavior affects FortiOS features in the application layer that use an IP pool as its source IP pool, including SSL VPN web mode, explicit web proxy, and the phase 1 local gateway in an interface mode IPsec VPN.
- The FortiGate will not receive reply traffic at the application layer, and the corresponding FortiOS feature will not work as desired.
- Configuring an IP pool as the source NAT IP address in a regular firewall policy works as before.

For details on the history of the behavior changes for IP pools and VIPs, and for issues and their workarounds for the affected FortiOS versions, see Technical Tip: IP pool and virtual IP behavior changes in FortiOS 6.4, 7.0, 7.2, and 7.4.

FEC feature design change

The FEC feature design has the following changes starting in FortiOS 7.0.2:

- FEC enabled on FortiGates running 7.0.2 is not backward compatible with FEC enabled on FortiGates running previous versions.
- In addition to enabling FEC on IPsec interfaces in previous versions, there is a new option, `fec`, that should also be enabled under the related firewall policy so the feature works:

```
config firewall policy
    edit <id>
        set fec enable
    next
end
```

- The `fec` option is not automatically enabled in a firewall policy when upgrading from a previous version. It must be enabled manually.

Support for FortiGates with NP7 processors and hyperscale firewall features

FortiOS 7.0.10 includes main branch support for FortiGates with NP7 processors (FG-1800F, FG-1801F, FG-2600F, FG-2601F, FG-3500F, FG-3501F, FG-4200F, FG-4201F, FG-4400F, and FG-4401F). These FortiGates can also be licensed for hyperscale firewall features. Previous versions of FortiOS supported FortiGates with NP7 processors through special branch firmware builds.

For more information, refer to the Hyperscale Firewall Release Notes.

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*.

Fortinet Security Fabric upgrade

FortiOS 7.0.10 greatly increases the interoperability between other Fortinet products. This includes:

FortiAnalyzer	• 7.0.6
FortiManager	• 7.0.6
FortiExtender	• 4.0.0 and later. For compatibility with latest features, use latest 7.0 version.
FortiSwitch OS (FortiLink support)	• 6.4.6 build 0470 or later
FortiAP **FortiAP-S** **FortiAP-U** **FortiAP-W2**	• See Strong cryptographic cipher requirements for FortiAP on page 14
FortiClient* EMS	• 7.0.0 build 0042 or later
FortiClient* Microsoft Windows	• 7.0.0 build 0029 or later
FortiClient* Mac OS X	• 7.0.0 build 0022 or later
FortiClient* Linux	• 7.0.0 build 0018 or later
FortiClient* iOS	• 6.4.6 build 0507 or later
FortiClient* Android	• 6.4.6 build 0539 or later
FortiSandbox	• 2.3.3 and later

* 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 7.0.0, use FortiClient 7.0.0.

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. Managed FortiExtender devices
4. FortiGate devices
5. Managed FortiSwitch devices
6. Managed FortiAP devices
7. FortiClient EMS
8. FortiClient
9. FortiSandbox
10. FortiMail
11. FortiWeb
12. FortiADC
13. FortiDDOS
14. FortiWLC
15. FortiNAC
16. FortiVoice
17. FortiDeceptor
18. FortiAI/FortiNDR
19. FortiTester
20. FortiMonitor

If Security Fabric is enabled, then all FortiGate devices must be upgraded to 7.0.10. When Security Fabric is enabled in FortiOS 7.0.10, all FortiGate devices must be running FortiOS 7.0.10.

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*.

IPsec interface MTU value

IPsec interfaces may calculate a different MTU value after upgrading from 6.4.

This change might cause an OSPF neighbor to not be established after upgrading. The workaround is to set `mtu-ignore` to `enable` on the OSPF interface's configuration:

```
config router ospf
    config ospf-interface
        edit "ipsce-vpnx"
            set mtu-ignore enable
        next
    end
end
```

HA role wording changes

The term master has changed to primary, and slave has changed to secondary. This change applies to all HA-related CLI commands and output. The one exception is any output related to VRRP, which remains unchanged.

Strong cryptographic cipher requirements for FortiAP

FortiOS 7.0.0 has removed 3DES and SHA1 from the list of strong cryptographic ciphers. To satisfy the cipher requirement, current FortiAP models whose names end with letter E or F should be upgraded to the following firmware versions:

- FortiAP (F models): version 6.4.3 and later
- FortiAP-S and FortiAP-W2 (E models): version 6.2.4, 6.4.1, and later
- FortiAP-U (EV and F models): version 6.0.3 and later
- FortiAP-C (FAP-C24JE): version 5.4.3 and later

If FortiGates running FortiOS 7.0.1 and later need to manage FortiAP models that cannot be upgraded or legacy FortiAP models whose names end with the letters B, C, CR, or D, administrators can allow those FortiAPs' connections with weak cipher encryption by using compatibility mode:

```
config wireless-controller global
    set tunnel-mode compatible
end
```

How VoIP profile settings determine the firewall policy inspection mode

When upgrading, all firewall policies with a VoIP profile selected will be converted to proxy-based inspection. All firewall policies that do not have a VoIP profile selected will remain in the same inspection mode after upgrading.

In the case when customers are using the following settings in 6.4:

```
config system settings
    set default-voip-alg-mode proxy-based
end
```

```
config firewall policy
    edit 0
        set inspection-mode flow
        unset voip-profile
    next
end
```

In 6.4, by default, SIP traffic is handled by proxy-based SIP ALG even though no VoIP profile is specified in a firewall policy.

After upgrading, the firewall policy will remain in `inspection-mode flow` but handled is by flow-based SIP inspection.

Due to the difference in which the SIP traffic is handled by flow-based SIP versus proxy-based SIP ALG inspection in 7.0.0 and later, if customers want to maintain the same behavior after upgrading, they can manually change the firewall policy's `inspection-mode` to `proxy`:

```
config firewall policy
    edit 0
        set inspection-mode proxy
        unset voip-profile
    next
end
```

Or prior to upgrading, they can assign a `voip-profile` to the firewall policies that are processing SIP traffic to force the conversion to `inspection-mode proxy` after upgrading.

L2TP over IPsec configuration needs to be manually updated after upgrading from 6.4.x or 7.0.0 to 7.0.1 and later

If the setting is not manually updated after upgrading, the VPN connection will be established, but it will not be accessible from the internal network (office network). This setting change is necessary regardless of whether route-based or policy-based IPsec is used.

To make L2TP over IPsec work after upgrading:

1. Add a static route for the IP range configured in `vpn l2tp`. For example, if the L2TP setting in the previous version's root VDOM is:

```
config vpn l2tp
    set eip 210.0.0.254
    set sip 210.0.0.1
    set status enable
    set usrgrp "L2tpusergroup"
end
```

   Add a static route after upgrading:

```
config router static
    edit 1
        set dst 210.0.0.0 255.255.255.0
        set device "l2t.root"
    next
end
```

2. Change the firewall policy source interface tunnel name to `l2t.VDOM`.

Add interface for NAT46 and NAT64 to simplify policy and routing configurations

This update simplifies the policy and routing of NAT46 and NAT64 policies by adding the NAT tunnel interface and options in `firewall vip/vip6` and `firewall policy` settings. The `policy46` and `policy64` settings have been merged into `policy`, and `vip46` and `vip64` into `vip` and `vip6`. Most firewall policy options can now be used in policies with NAT46 and NAT64 options enabled.

Upgrading

When upgrading from FortiOS 6.4.x or 7.0.0 to 7.0.1 and later, the old configurations for `vip46`, `vip64`, `policy46`, `policy64`, `nat64`, and `gui-nat46-64` will be removed. All objects in them will be removed.

The following CLI commands have been removed:

- `config firewall vip46`
- `config firewall vip64`

- `config firewall policy46`
- `config firewall policy64`
- `config system nat64`
- `set gui-nat46-64 {enable | disable}` (under `config system settings`)

The following GUI pages have been removed:

- *Policy & Objects* > *NAT46 Policy*
- *Policy & Objects* > *NAT64 Policy*
- NAT46 and NAT64 VIP category options on *Policy & Objects* > *Virtual IPs* related pages

During the upgrade process after the FortiGate reboots, the following message is displayed:

```
The config file may contain errors,
Please see details by the command 'diagnose debug config-error-log read'
```

The following output is displayed after running the diagnose command:

```
# diagnose debug config-error-log read
>>> "config" "firewall" "policy64" @ root:command parse error (error -
61)
>>> "config" "firewall" "policy46" @ root:command parse error (error -
61)
```

Creating new policies

After upgrading FortiOS 6.4.x or 7.0.0 to 7.0.1 and later, you will need to manually create new `vip46` and `vip64` policies.

- Create a `vip46` from `config firewall vip` and enable the `nat46` option.
- Create a `vip64` from `config firewall vip6` and enable the `nat64` option.
- Create or modify `ippool` and `ippool6`, and enable the `nat64` or `nat46` option.
- Create a policy and enable the `nat46` option, apply the `vip46` and `ippool6` in a policy.
- Create a policy and enable the `nat64` option, apply the `vip64` and `ippool` in policy.
- Ensure the routing on the client and server matches the new `vip`/`vip6` and `ippool`/`ippool6`.

Example configurations

`vip46` object:

Old configuration	New configuration

`config firewall vip46`
`edit "test-vip46-1"`
`set extip 10.1.100.155`
`set mappedip 2000:172:16:200::55`
`next`
	`config firewall vip`
	`edit "test-vip46-1"`
	`set extip 10.1.100.150`
	`set nat44 disable`
	`set nat46 enable`

Old configuration	New configuration
end	set extintf "port24" **set ipv6-mappedip 2000:172:16:200::55** next end

`ippool6` object:

Old configuration	New configuration
config firewall ippool6 edit "test-ippool6-1" set startip 2000:172:16:201::155 set endip 2000:172:16:201::155 next end	config firewall ippool6 edit "test-ippool6-1" set startip 2000:172:16:201::155 set endip 2000:172:16:201::155 **set nat46 enable** next end

NAT46 policy:

Old configuration	New configuration
config firewall policy46 edit 1 set srcintf "port24" set dstintf "port17" set srcaddr "all" set dstaddr "test-vip46-1" set action accept set schedule "always" set service "ALL" set logtraffic enable set ippool enable set poolname "test-ippool6-1" next end	config firewall policy edit 2 set srcintf "port24" set dstintf "port17" set action accept **set nat46 enable** set srcaddr "all" set dstaddr "test-vip46-1" set srcaddr6 "all" set dstaddr6 "all" set schedule "always" set service "ALL" set logtraffic all set ippool enable set poolname6 "test-ippool6-1" next end

`vip64` object

Old configuration	New configuration
config firewall vip64 edit "test-vip64-1" set extip 2000:10:1:100::155 set mappedip 172.16.200.155 next	config firewall vip6 edit "test-vip64-1" set extip 2000:10:1:100::155 set nat66 disable **set nat64 enable**

Old configuration	New configuration
end	**set ipv4-mappedip 172.16.200.155** next end

`ippool` object

Old configuration	New configuration
config firewall ippool edit "test-ippool4-1" set startip 172.16.201.155 set endip 172.16.201.155 next end	config firewall ippool edit "test-ippool4-1" set startip 172.16.201.155 set endip 172.16.201.155 **set nat64 enable** next end

NAT64 policy:

Old configuration	New configuration
config firewall policy64 edit 1 set srcintf "wan2" set dstintf "wan1" set srcaddr "all" set dstaddr "test-vip64-1" set action accept set schedule "always" set service "ALL" set ippool enable set poolname "test-ippool4-1" next end	config firewall policy edit 1 set srcintf "port24" set dstintf "port17" set action accept **set nat64 enable** set srcaddr "all" set dstaddr "all" set srcaddr6 "all" set dstaddr6 "test-vip64-1" set schedule "always" set service "ALL" set logtraffic all set ippool enable set poolname "test-ippool4-1" next end

ZTNA configurations and firewall policies

Since FortiOS 7.0.2, ZTNA configurations no longer require a firewall policy to forward traffic to the access proxy VIP. This is implicitly generated based on the ZTNA rule configuration.

When upgrading from FortiOS 7.0.1 or below:

- If an `access-proxy` type `proxy-policy` does not have a `srcintf`, then after upgrading it will be set to `any`.
- To display the `srcintf` as *any* in the GUI, *System* > *Feature Visibility* should have *Multiple Interface Policies* enabled.
- All full ZTNA firewall policies will be automatically removed.

Default DNS server update

Starting in FortiOS 7.0.4, if both primary and secondary DNS servers are set to use the default FortiGuard servers prior to upgrading, the FortiGate will update them to the new servers and enable DoT after upgrading. If one or both DNS servers are not using the default FortiGuard server, upgrading will retain the existing DNS servers and DNS protocol configuration.

VDOM link and policy configuration is lost after upgrading if VDOM and VDOM link have the same name

Affected versions:

- FortiOS 6.4.9 and later
- FortiOS 7.0.6 and later
- FortiOS 7.2.0 and later

When upgrading to one of the affected versions, there is a check within the set `vdom-links` function that rejects `vdom-links` that have the same name as a VDOM. Without the check, the FortiGate will have a kernel panic upon bootup during the upgrade step.

A workaround is to rename the `vdom-links` prior to upgrading, so that they are different from the VDOMs.

GUI firmware upgrade does not respect upgrade path

When performing a firmware upgrade 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.

Product integration and support

The following table lists FortiOS 7.0.10 product integration and support information:

Web browsers	• Microsoft Edge 94 • Mozilla Firefox version 105 • Google Chrome version 107 Other web browsers may function correctly, but are not supported by Fortinet.
Explicit web proxy browser	• Microsoft Edge 44 • Mozilla Firefox version 74 • Google Chrome version 80 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 0309 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
	  • Windows Server 2008 64-bit (requires Microsoft SHA2 support package)
	  • Windows Server 2008 R2 64-bit (requires Microsoft SHA2 support package)
	  • Windows Server 2008 Core (requires Microsoft SHA2 support package)
	  • Novell eDirectory 8.8

AV Engine	• 6.00282
IPS Engine	• 7.00157

Virtualization environments

The following table lists hypervisors and recommended versions.

Hypervisor	Recommended versions
Citrix Hypervisor	• 8.1 Express Edition, Dec 17, 2019
Linux KVM	• Ubuntu 18.0.4 LTS • Red Hat Enterprise Linux release 8.4 • SUSE Linux Enterprise Server 12 SP3 release 12.3
Microsoft Windows Server	• 2012R2 with Hyper-V role
Windows Hyper-V Server	• 2019
Open source XenServer	• Version 3.4.3 • Version 4.1 and later
VMware ESX	• Versions 4.0 and 4.1
VMware ESXi	• Versions 6.5, 6.7, and 7.0.

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 105 Google Chrome version 107
Microsoft Windows 10 (64-bit)	Microsoft Edge Mozilla Firefox version 105 Google Chrome version 107
Ubuntu 20.04 (64-bit)	Mozilla Firefox version 105 Google Chrome version 107
macOS Monterey 12.4	Apple Safari version 15 Mozilla Firefox version 105 Google Chrome version 107
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.

Resolved issues

The following issues have been fixed in version 7.0.10. To inquire about a particular bug, please contact Customer Service & Support.

Firewall

Bug ID	Description
865661	Standard and full ISDB sizes are not configurable on FG-101F.

Proxy

Bug ID	Description
818371	An error condition occurs in WAD while parsing certain URIs.
855882	Improvementsto WAD to resolve a memory usage issue when user-info updates the FortiAP information.
856235	The WAD process memory usage gradually increases over a few days, causing the FortiGate to enter into conserve mode.

Routing

Bug ID	Description
847037	When the policy route has a set gateway, the FortiGate is not following the policy route to forward traffic and sends unreasonable ARP requests.

Security Fabric

Bug ID	Description
839258	Unable to add another FortiGate to the Security Fabric after updating to the latest patch.

SSL VPN

Bug ID	Description
746230	SSL VPN web mode cannot display certain websites that are internal bookmarks.
848067	RDP over VPN SSL web mode stops work after upgrading.

System

Bug ID	Description
824543	The `reply-to` option in the email server settings is no longer visible in a default server configuration on FortiOS 7.2.0.
827240	FortiGate in HA may freeze and reboot. Before the reboot, softIRQ may be seen as high. This leads to a kernel panic.
847077	`Can't find xitem. Drop the response.` error appears for DHCPOFFER packets in the DHCP relay debug.
853794	Issue with the `server_host_key_algorithm` compatibility when using SSH on SolarWinds.
855573	False alarm of the PSU2 occurs with only one installed.
856202	Random reboots and kernel panic on NP7 cluster when the FortiGate sends a TCP RST packet and IP options are missing in the header.
859717	The FortiGate is only offering the `ssh-ed25519` algorithm for an SSH connection.

Upgrade

Bug ID	Description
850691	The `endpoint-control fctems` entry `0` is added after upgrading from 6.4 to 7.0.8 when the FortiGate does not have EMS server, which means the `endpoint-control fctems` feature was not enabled previously. This leads to a FortiManager installation failure.

Common Vulnerabilities and Exposures

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

Bug ID	CVE references
843331	FortiOS 7.0.10 is no longer vulnerable to the following CVE Reference: • CVE-2022-41330
844920	FortiOS 7.0.10 is no longer vulnerable to the following CVE Reference: • CVE-2022-41328
845847	FortiOS 7.0.10 is no longer vulnerable to the following CVE Reference: • CVE-2022-41329
854171	FortiOS 7.0.10 is no longer vulnerable to the following CVE Reference: • CVE-2022-42474
865932	FortiOS 7.0.10 is no longer vulnerable to the following CVE Reference: • CVE-2022-45861

Known issues

The following issues have been identified in version 7.0.10. To inquire about a particular bug or report a bug, please contact Customer Service & Support.

Endpoint Control

Bug ID	Description
730767	The new HA primary FortiGate cannot get EMS Cloud information when HA switches over. **Workaround**: delete the EMS Cloud entry then add it back.

Explicit Proxy

Bug ID	Description
817582	When there are many users authenticated by an explicit proxy policy, the *Firewall Users* widget can take a long time to load. This issue does not impact explicit proxy functionality.

Firewall

Bug ID	Description

843554	If the first firewall service object in the service list (based on the order in the command line table) has a protocol type of *IP*, the GUI may incorrectly modify its protocol number whenever a new firewall service of the same protocol type *IP* is created in the GUI.
	This silent misconfiguration can result in unexpected behavior of firewall policies that use the impacted service. For example, some 6K and 7K platforms have firewall service *ALL* (protocol type *IP*) as the first service, and this can cause the *ALL* service to be modified unexpectedly.
	Workaround: create a new service in the CLI, or move a non-IP type services to the top of the firewall service list. For example, if `ALL` is the first firewall service in the list:
	`config firewall service custom`
	`edit "unused"`
	`set tcp-portrange 1`
	`next`
	`move "unused" before "ALL"`
	`end`

Bug ID	Description
897849	*Firewall Policy* list may show empty sequence grouping sections if multiple policies are sharing the same `global-label`. **Workaround**: drag and drop the policy to the correct sequence group in the GUI, or remove the `global-label` for each member policy in the group except for the leading policy. For example, in the configuration, policy 2 will be automatically grouped under `group1` without the need of adding the same `global-label`. • Policy 1 (`global-label "group"`) • Policy 2 • Policy 3 (`global-label "group2"`) • Policy 4
860480	FG-3000D cluster kernel panic occurs when upgrading from 7.0.5 to 7.0.6 and later.
861990	Increased CPU usage in softIRQ after upgrading from 7.0.5 to 7.0.6.

GUI

Bug ID	Description
440197	On the *System* > *FortiGuard* page, the override FortiGuard server for *AntiVirus & IPS Updates* shows an *Unknown* status, even if the server is working correctly. This is a display issue only; the override feature is working properly.
677806	On the *Network* > *Interfaces* page when VDOM mode is enabled, the *Global* view incorrectly shows the status of IPsec tunnel interfaces from non-management VDOMs as up. The VDOM view shows the correct status.
685431	On the *Policy & Objects* > *Firewall Policy* page, the policy list can take around 30 seconds or more to load when there is a large number (over 20 thousand) of policies. **Workaround**: use the CLI to configure policies.
707589	*System* > *Certificates* list sometimes shows an incorrect reference count for a certificate, and incorrectly allows a user to delete a referenced certificate. The deletion will fail even though a success message is shown. Users should be able to delete the certificate after all references are removed.
708005	When using the SSL VPN web portal in the Firefox, users cannot paste text into the SSH terminal emulator. **Workaround**: use Chrome, Edge, or Safari as the browser.
755177	When upgrading firmware from 7.0.1 to 7.0.2, the GUI incorrectly displays a warning saying this is not a valid upgrade path.
810225	An *undefined* error is displayed when changing an administrator password for the first time. Affected models: NP7 platforms.
853352	On the *View/Edit Entries* slide-out pane (*Policy & Objects* > *Internet Service Database* dialog), users cannot scroll down to the end if there are over 100000 entries.

HA

Bug ID	Description
810286	FGSP local sessions exist after rebooting an HA pair with A-P mode, and the HW SSE/session count is incorrect.
818432	When private data encryption is enabled, all passwords present in the configuration fail to load and may cause HA failures.

Hyperscale

Bug ID	Description
795853	VDOM ID and IP addresses in the IPL table are incorrect after disabling EIF/EIM.
807476	After packets go through host interface TX/RX queues, some packet buffers can still hold references to a VDOM when the host queues are idle. This causes a VDOM delete error with `unregister_vf`. If more packets go through the same host queues for other VDOMs, the issue should resolve by itself because those buffers holding the VDOM reference can be pushed and get freed and recycled.
811109	FortiGate 4200F, 4201F, 4400F, and 4401F HA1, HA2, AUX1, and AUX2 interfaces cannot be added to an LAG.
836976	Sessions being processed by hyperscale firewall policies with hardware logging may be dropped when dynamically changing the `log-processor` setting from `hardware` to `host` for the hardware log sever added to the hyperscale firewall policy. To avoid dropping sessions, change the `log-processor` setting during quiet periods.
838654	Hit count not ticking for implicit deny policy for hardware session in case of NAT46 and NAT64 traffic.
839958	`service-negate` does not work as expected in a hyperscale deny policy.
842659	`srcaddr-negate` and `dstaddr-negate` are not working properly for IPv6 traffic with FTS.
843197	Output of `diagnose sys npu-session list/list-full` does not mention policy route information.
843266	Diagnose command should be available to show `hit_count/last_used` for policy route and NPU session on hyperscale VDOM.
843305	Get `PARSE SKIP ERROR=17 NPD ERR PBR ADDRESS` console error log when system boots up.
844421	The `diagnose firewall ippool list` command does not show the correct output for overload type IP pools.
846520	NPD/LPMD process killed by out of memory killer after running mixed sessions and HA failover.
877696	Get KTRIE invalid node related error and kernel panic on standby after adding a second device into A-P mode HA cluster.

IPsec VPN

Bug ID	Description
761754	IPsec aggregate static route is not marked inactive if the IPsec aggregate is down.
810833	IPsec static router gateway IP is set to the gateway of the tunnel interface when it is not specified.
822651	NP dropping packet in the incoming direction for SoC4 models.

Log & Report

Bug ID	Description
850642	Logs are not seen for traffic passing through the firewall caused by numerous simultaneous configuration changes.

Proxy

Bug ID	Description
727629	An error case occurs in WAD while handling the HTTP requests for an explicit proxy policy.

Routing

Bug ID	Description
846107	IPv6 VRRP backup is sending RA, which causes routing issues.

Security Fabric

Bug ID	Description
614691	Slow GUI performance in large Fabric topology with over 50 downstream devices.
794703	Security Rating report for *Rogue AP Detection* and *FortiCare Support* checks show incorrect results.
825291	Security rating test for *FortiAnalyzer* fails when connected to FortiAnalyzer Cloud.

SSL VPN

Bug ID	Description
819754	Multiple DNS suffixes cannot be set for the SSL VPN portal.
852566	User peer feature for one group to match to multiple user peers in the authentication rules is broken.

System

Bug ID	Description
724085	Traffic passing through an EMAC VLAN interface when the parent interface is in another VDOM is blocked if NP7 offloading is enabled. **Workaround**: set the `auto-asic-offload` option to `disable` in the firewall policy.
799570	High memory usage occurs on FG-200F.
812957	When setting the `speed` of 1G SFP ports on FG-180xF platforms to `1000full`, the interface does not come up after rebooting.
847314	NP7 platforms may encounter random kernel crash after reboot or factory reset.
847664	Console may display `mce: [Hardware Error]` error message after fresh image burn or reboot.
850683	Console keeps displaying `bcm_nl.nr_request_drop ...` after the FortiGate reboots because of the `cfg-save revert` setting under `config system global`. Affected platforms: FG-10xF and FG-20xF.
850688	FG-20xF system halts if setting `cfg-save` to `revert` under `config system global` and after the `cfg-revert-timeout` occurs.
882187	Optimize memory usage caused by the high volume of disk traffic logs.
883071	Kernel panic occurs due to null pointer dereference.
884023	When a user is logged in as a VDOM administrator with restricted access and tries to upload a certificate (*System* > *Certificates*), the *Create* button on the *Create Certificate* pane is greyed out.
901721	In a certain edge case, traffic directed towards a VLAN interface could trigger a kernel panic.

Upgrade

Bug ID	Description
854550	After upgrading to 7.0.8, `replacemsg utm` parameters are not taken over and revert to the default. Affected replacement messages under `config system replacemsg utm`: `virus-html`, `virus-text`, `dlp-html`, `dlp-text`, and `appblk-html`.

User & Authentication

Bug ID	Description
765184	RADIUS authentication failover between two servers for high availability does not work as expected.
853793	FG-81F 802.1X MAC authentication bypass (MAB) failed to authenticate Cisco AP.

VM

Bug ID	Description
764392	Incorrect VMDK file size in the OVF file for hw13 and hw15. **Workaround**: manually correct the hw13 and hw15 OVF file's `ovf:size` value.

Web Filter

Bug ID	Description
766126	Block replacement page is not pushed automatically to replace the video content when using a video filter.

ZTNA

Bug ID	Description
848222	ZTNA TCP forwarding is not working when a real server is configured with an FQDN address type. An FQDN address type that can resolve public IPs is not recommended for ZTNA TCP forwarding on real servers because the defined internal DNS database zone is trying to override it at the same time. By doing so, the internal private address may not take effect after rebooting, and causes a ZTNA TCP forwarding failure due to the real server not being found.

Built-in AV Engine

AV Engine 6.00282 is released as the built-in AV Engine. Refer to the AV Engine Release Notes for information.

Built-in IPS Engine

IPS Engine 7.00157 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.

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