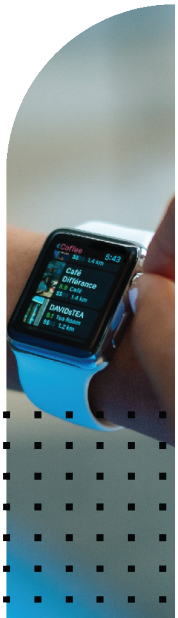
Release Notes

FortiOS 7.0.2



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March 6, 2024
FortiOS 7.0.2 Release Notes
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Change Log

Date	Change Description
2021-10-20	Initial release.
2021-10-22	Updated Supported models on page 8 and Special notices on page 9.
2021-10-25	Updated Resolved issues on page 37 and Known issues on page 56.
2021-11-04	Updated Resolved issues on page 37.
2021-11-15	Updated Changes in CLI on page 12, New features or enhancements on page 17, Resolved issues on page 37, Known issues on page 56, and Built-in AV Engine on page 61. Added Unsupported websites in SSL VPN web mode on page 10.
2021-11-24	Updated Fortinet Security Fabric upgrade on page 26 and Product integration and support on page 34.
2021-11-29	Updated New features or enhancements on page 17, Resolved issues on page 37, and Known issues on page 56.
2021-12-02	Updated Known issues on page 56.
2021-12-13	Added RDP and VNC clipboard toolbox in SSL VPN web mode on page 10. Updated Resolved issues on page 37.
2021-12-28	Updated New features or enhancements on page 17, Resolved issues on page 37, and Known issues on page 56.
2022-01-10	Updated New features or enhancements on page 17.
2022-01-24	Updated Known issues on page 56.
2022-02-07	Added ZTNA configurations and firewall policies on page 33. Updated New features or enhancements on page 17, Resolved issues on page 37, Known issues on page 56, and Fortinet Security Fabric upgrade on page 26.
2022-02-14	Updated Fortinet Security Fabric upgrade on page 26.
2022-02-22	Updated Resolved issues on page 37 and Known issues on page 56.
2022-03-07	Updated Known issues on page 56 and Built-in IPS Engine on page 62.
2022-03-29	Updated New features or enhancements on page 17
2022-04-01	Updated Known issues on page 56.
2022-05-10	Added CAPWAP offloading compatibility of FortiGate NP7 platforms on page 10.
2022-05-16	Updated New features or enhancements on page 17
2022-05-30	Updated Resolved issues on page 37.

Date	Change Description
2022-06-09	Updated 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 on page 29.
2022-06-16	Updated 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 on page 29 and Add interface for NAT46 and NAT64 to simplify policy and routing configurations on page 30.
2022-07-21	Updated Resolved issues on page 37.
2022-08-15	Updated Resolved issues on page 37 and Known issues on page 56.
2022-08-22	Updated Resolved issues on page 37.
2022-09-06	Updated New features or enhancements on page 17.
2022-10-03	Updated Known issues on page 56.
2022-10-17	Updated Known issues on page 56.
2022-10-24	Updated Known issues on page 56.
2022-11-02	Updated Known issues on page 56.
2023-01-20	Updated New features or enhancements on page 17.
2023-02-06	Updated Resolved issues on page 37.
2023-03-06	Updated Resolved issues on page 37.
2023-04-17	Updated Known issues on page 56.
2023-05-15	Updated How VoIP profile settings determine the firewall policy inspection mode on page 29, Resolved issues on page 37, and Known issues on page 56.
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 37.
2023-09-06	Updated Built-in AV Engine on page 61 and Built-in IPS Engine on page 62.
2023-10-17	Updated IP pools and VIPs are not considered local addresses for certain FortiOS versions on page 10.
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 56.

Introduction and supported models

This guide provides release information for FortiOS 7.0.2 build 0234.

For FortiOS documentation, see the Fortinet Document Library.

Supported models

FortiOS 7.0.2 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-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-2000E, FG-2200E, FG-2201E, FG-2500E, FG-3000D, FG-3100D, FG-3200D, FG-3300E, FG-3301E, FG-3400E, FG-3401E, FG-3600E, FG-3601E, FG-3700D, FG-3800D, FG-3960E, FG-3980E, 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
FortiGate Rugged	FGR-60F, FGR-60F-3G4G
FortiGate VM	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 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.

Changes in CLI

Bug ID	Description

713694	Configuring individual ciphers to be used in SSH administrative access can now be done from the CLI. Administrators can select the ciphers and algorithms used for SSH encryption, key exchange, and MAC using the following settings:
	`config system global`
	`set ssh-enc-algo <algo 1> [<algo 2> ... <algo n>]`
	`set ssh-kex-algo <algo 1> [<algo 2> ... <algo n>]`
	`set ssh-mac-algo <algo 1> [<algo 2> ... <algo n>]`
	`end`
	Previous configurations for enabling or disabling certain ciphers and algorithms have been deprecated.

719315	Add a new `block-sevrfail` option for `block-action` attribute in `dnsfilter profile`. Returns `SERVFAIL` for blocked domains.

721747	Add authd SSL control options for maximum protocol version SSL/TLS connections and signature algorithms for HTTPS authentication (affects TLS versions 1.2 and lower):
	`config user setting`
	`set auth-ssl-max-proto-version [default | SSLv3 | TLSv1 | TLSv1-1 | TLSv1-2]`
	`set auth-ssl-sigalgs [no-rsa-pss | all]`
	`end`
	The `auth-ssl-max-proto-version` default setting is no limit (`default`). The `auth-ssl-sigalgs` default setting is `all`.

725877	Change auto-scale `master-ip` to `primary-ip`.
	`config system auto-scale`
	`set primary-ip <IP address>`
	`end`

732645	Allow Security Fabric upstream to be specified as IP or FQDN, and change the setting from `upstream-ip` to `upstream`.
	`config system csf`
	`set upstream <IP or FQDN>`
	`end`

Changes in GUI behavior

Bug ID	Description
727501	Several ZTNA features are now configurable from the GUI on the *ZTNA Servers* tab: • When configuring *Service/Server Mapping*, a new toggle enables load balancing and a dropdown to select different load balancing methods. • When configuring *Service/Server Mapping*, *TCP Forwarding* can be selected under the *Service* option, which can be configured in the new slide-in pane by setting the TCP forwarding server and using a toggle to enable additional SSH options. • SAML can be enabled and configured on a ZTNA server. Additionally: • *Log & Report* has a menu item for *ZTNA* logs. • Some settings under `config authentication setting` can be configured under *User & Authentication* > *Authentication Settings*.
728746	Users are now able to export the current view of the *Policy & Objects* > *Firewall Policy* page to CSV and JSON format.

Changes in default behavior

Bug ID	Description
537354	Interface egress shaping offload to NPU when `shaping-offload` is enabled.
728234	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. Changes: • Firewall policies no longer have the *ZTNA* toggle for switching between *Full ZTNA* and *IP/MAC filtering*. • To perform IP/MAC filtering with ZTNA tags, assign tags under *IP/MAC Based Access Control* in a firewall policy. • ZTNA rules must include a source interface. Upgrading: • 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.
729879	When FIPS-CC mode is enabled, `subject-match` can now be configured. The default value is no longer `superset`, so it keeps the current setting.

Changes in default values

Bug ID	Description
729516	Change `ft-over-ds` default setting from enable to disable.
736842	The following default values have changed under `config wireless-controller wids-profile`: • `ap-bgscan-intv` has changed from 1 second to 3 seconds • `ap-bgscan-duration` has changed from 20 milliseconds to 30 milliseconds • `p-bgscan-idle` has changed from 0 milliseconds to 20 milliseconds

Changes in table size

Bug ID	Description
729990	Increase `firewall.address` global table size limit to 500,000 for 3600E models and higher.
733978	Increase per-VDOM table size for DNS server (`system.dns-database`) to 4096 for all models.
736452	Removed global and per VDOM limits to number of monitors.
749024	Increase maximum explicit proxy user limit. The new limits are as follows: • Entry-level models = 1,000 • 1U models = 12,000 • 1K models = 32,000 • 2K models = 64,000 • 3K, 4K, and 6K models = 128,000

New features or enhancements

More detailed information is available in the New Features Guide.

Bug ID	Description

566452	Support hardware switch on FG-400E and FG-1100E models. The following commands have been removed:
	`config system virtual-switch`
	`edit <name>`
	`config port`
	`edit <name>`
	`set speed <option>`
	`set status {up | down}`
	`next`
	`end`
	`next`
	`end`
	`config system physical-switch`
	`edit <name>`
	`config port`
	`edit <name>`
	`set speed <option>`
	`set status {up | down}`
	`next`
	`end`
	`next`
	`end`

575686	When configuring an SSID in bridge mode, users can select individual security profiles instead of a security profile group. This applies to models in the FAP-U series that can perform UTM on the FortiAP itself.
603012	When defining the FortiPresence server for location based services, allow the server address entry to be configured as an FQDN.

641524	Add interface selection for IPS TLS protocol active probing.
	`config ips global`
	`config tls-active-probe`
	`set interface-selection-method {auto | sdwan | specify}`
	`set interface <interface>`
	`set vdom <VDOM>`
	`set source-ip <IPv4 address>`
	`set source-ip6 <IPv6 address>`
	`end`
	`end`

Bug ID	Description
685663	FortiOS Carrier now has the ability to set up, monitor, and filter messages, as well as manipulate a GTP tunnel on an S10 interface based on mobility management messages defined in 3GPP TS 29.274 section 7.3. It adds the capability for carrier customers to manipulate GTP tunnels and perform message filtering when deployed in inter-LTE/MME handover scenario.
685910	Add SoC4 driver support for the IEEE 802.1ad, which is also known as QinQ. When the OID is used up, it is forbidden to create a new QinQ interface.
687074	Add support for IGMP snooping proxy to be configurable per VLAN. For each VLAN with IGMP snooping proxy enabled, an IGMP snooping querier can also be configured per VLAN for a selected managed switch.
688237	Add support for a FortiGate to manage a Procend 180-T DSL transceiver (FN-TRAN-DSL) that is plugged in to an SFP port. The management of the DSL transceiver includes the ability to program the physical layer attributes on the DSL module, retrieve the status and statistics from the module, support firmware upgrades of the module, and reset the module. Supported VDSL profiles: 8a, 8b, 8c, 8d, 12a, 12b, 17a, and 30a. Supported platforms: FG-80F, FG-81F, FG-80F-BP, FGR-60F, and FGR-60F-3G4G.
690690	The new *Asset Identity Center* page unifies information from detected addresses, devices, and users into a single page, while building a data structure to store the user and device information in the backend. *Asset* view groups information by *Device*, while *Identity* view groups information by *User*. When hovering over a device or a user in the GUI, it is possible to perform different actions relevant to the object, such as adding a firewall device address, adding an IP address, banning the IP, quarantining the host, and more.

695223	Add options to enable caching infected scan results and cleaning scan results in AV stream-based scans to help detect malware in oversized archives when downloads are interrupted. Cached traffic is released after five minutes.
	`config antivirus settings`
	`set cache-infection-result {enable | disable}`
	`set cache-clean-result {enable | disable}`
	`end`

697060	The MTU of an IPv6 tunnel interface will be calculated from the MTU of its parent interface minus headers.

700073	Add a default-action into `youtube-channel-filter` configuration to apply a default action to all channels when there is no match.
	`config videofilter youtube-channel-filter`
	`edit <id>`
	`set default-action {block | monitor | allow}`
	`set log {enable | disable}`
	`next`
	`end`
	The default settings are `monitor` for `default-action`, and `disable` for `log`.

Bug ID	Description
701125	LAN extension is a new configuration mode on the FortiGate that allows FortiExtender to provide remote thin edge connectivity back to the FortiGate over a backhaul connection. A FortiExtender deployed at a remote location will discover the FortiGate access controller (AC) and form an IPsec tunnel (or multiple tunnels when multiple links exists on the FortiExtender) back to the FortiGate. A VXLAN is established over the IPsec tunnels to create an L2 network between the FortiGate and the network behind the remote FortiExtender.
701632	Add `switch-recommendations` command to check the firmware used in the managed switches in order to make a recommendation on which tunnel mode to use: `execute switch-controller switch-recommendations tunnel-mode-settings <FortiLink interface>`
707682	Add support for a FortiGate to manage a Procend 180-T DSL transceiver (FN-TRAN-DSL) that is plugged in to a FortiSwitch port being managed through FortiLink. The management of the DSL transceiver and the FortiSwitch port includes the ability to program the physical layer attributes on the DSL module, retrieve the status and statistics from the module, support firmware upgrades of the module, and reset the module. A FortiSwitch running in standalone mode does not support programmability of the DSL module. Supported platforms: FG-60F and FG-40F-3G4G.
708971	Allow customers to send Fortinet system log entries to external TACACS+ accounting servers. Up to three external TACACS+ servers can be configured, each with different filters for log events. These filters include TACACS+ accounting for login events, configuration change events, and CLI command audits.
709065	The *Fabric Management* page allows administrators to manage the firmware running on each of the FortiGate, FortiAP, and FortiSwitch devices in the Security Fabric. A *Fabric Upgrade* can be performed either immediately or during a scheduled time. Administrators can choose a firmware from FortiGuard that the Fabric member will download directly to upgrade.
710098	Support FQDN address type in ZTNA access proxy real servers configurations.
711577	Add warnings to inform users when an installed firmware is not signed by Fortinet. The warning message appears in the CLI when the uploaded firmware fails signature validation, and when logging in to the FortiGate from the GUI. Additional messages are added in various places once a user is logged in to the GUI to remind them of the unsigned firmware.

711932	IPAM (IP address management) is now available locally on the FortiGate. A standalone FortiGate or a Fabric root in the Security Fabric can act as the IPAM server. Interfaces configured to be auto-managed by IPAM will receive an address from the IPAM server's address/subnet pool. *DHCP Server* is automatically enabled in the GUI, with the address range also populated by IPAM. Users can customize the address pool subnet and the size of a subnet that an interface can request.
	The following setting for FortiIPAM has been moved:
	`config system global`
	`  set fortiipam-integration {enable | disable}`
	`end`
	To:
	`config system ipam`
	`  set status enable`

Bug ID	Description
	`set server-type cloud` `end`
713690	Add user count per LDAP group in an Active Directory. When LDAP users log on through firewall authentication, the active users per LDAP group is counted and displayed in the *Firewall Users* view and in the CLI.

714788	Add HA uninterruptible upgrade option that allows users to configure a timeout value in minutes (1 - 300, default = 30) where the primary HA unit waits before the secondary HA unit is considered upgraded.
	`config system ha`
	`set uninterruptible-primary-wait <integer>`
	`end`

715498	Add option to enable NAT64 and NAT46 for security policy in NGFW policy mode.
717336	The dedicated management CPU feature ensures that CPU 0 is only used for management traffic. This feature, which was previously available for 2U models and higher, is extended to 1U models.
718001	Add support for the recently released Wi-Fi Alliance Hotspot 2.0 Release 3 specifications. The release version can now be configured in the wireless controller hotspot profile.
718071	Support for RFC 7606 extends BGP error handling for malformed attributes in UPDATE messages. Instead of only using the session reset approach from the base BGP specifications, the FortiGate will also use the treat-as-withdraw approach and the attribute discard approach specified in RFC 7606.
718293	The dstuser field added to UTM logs records the username of a destination device when that user has been authenticated on the FortiGate.

718295	Add the ability to specify EU servers as the location to send FortiGuard updates and queries. This option can be toggled from the GUI under *System* > *FortiGuard* > *FortiGuard Updates*, or from the CLI:
	`config system fortiguard`
	`set update-server-location {automatic | us | eu }`
	`end`

718296	Support configuration save (workspace) mode in the GUI. When in workspace mode, setting changes are saved to the memory and take effect right away as normal. However, setting changes are not saved to the flash until committed. If the device is rebooted, uncommitted configuration changes will be reverted. The *Revert upon timeout* setting can be enabled, which automatically reboots the device after the configured timeout and reverts configuration changes back to the previous save point.
718298	Three new web filter categories have been added to the FortiOS and FortiGuard servers: URL shortening (97), crypto mining (98), and potentially unwanted program (99).
718306	Location based services (LBS) information of associated and unassociated wireless stations can be retrieved through the REST API.

Bug ID	Description
718664	Endpoint posture changes trigger active ZTNA proxy sessions to be re-verified and terminated if the endpoint is no longer compliant to the ZTNA policy. The FortiGate monitors changes to endpoint tags that are updated by EMS through the fcnacd process. When a change is detected, active ZTNA sessions for the endpoint must match the ZTNA policy again before data can pass.
719764	As of 7.0.1, IPv6 can be configured in ZTNA in the following scenarios: • IPv6 client with IPv6 server • IPv6 client with IPv4 server • IPv4 client with IPv6 server Configuration changes: • Add `access-proxy` type in `config firewall vip6` • Add `config firewall access-proxy6` • Add `config firewall access-proxy(6) > config api-gateway6` • Add `access-proxy6` in `config firewall proxy-policy` As of 7.0.2, IPv6 can be configured in GUI in the *ZTNA Server* settings: • The server IP *Type* can be selected when creating a new server. • When IPv6 is enabled, the ZTNA server table will have multiple sections for IPv4 and IPv6 servers. • Server service mappings can now be selected as either IPv4 or IPv6. • TCP forwarding now contains IPv6 addresses.
719798	GTP sessions state synchronization for FortiOS Carrier is now extended to FGSP over FGCP clusters. This allows session synchronization for FGCP clusters across different sites in the same FGSP peer group, enhancing customer network's local redundancy and geo redundancy.
719799	When specifying ZTNA tags in a ZTNA rule, it is now possible to use the logical AND for tag matching. When *Match ZTNA tags* is configured to *All*, the client must match all the tags. When *Match ZTNA tags* is configured to *Any*, the client can match any of the tags.
720037	Support subscription-based VDOM licensing for FG-VM S-series using the new stackable subscription-based SKU.
720371	New ciphers have been added in FIPS ciphers mode on FortiGate VMs so that cloud instances running this mode can form IPsec tunnels with hardware models running FIPS-CC mode. Added to IPsec phase 1: • aes128-sha256 • aes128-sha384 • aes128-sha512 • aes256-sha256 • aes256-sha384 • aes256-sha512 Added to IPsec phase 2: • aes128-sha256 • aes128-sha384 • aes128-sha512 • aes256-sha256

Bug ID	Description
	• aes256-sha384 • aes256-sha512
721285	Add *FortiAP auto firmware provisioning* option on the *WiFi Settings* page to allow for a federated upgrade of a FortiAP upon discovery and authorization by the WiFi controller. FortiAP will be upgraded to the latest firmware from FDS, if the FortiGate has the available FDS service contract.

721828	User fields in logs can be anonymized by generating a hash based on the user name and salt value with the `set anonymization-hash` option.
	`config log setting`
	`  set user-anonymize enable`
	`  set anonymization-hash <string>`
	`end`

722651	Introduce an MSRP (Message Session Relay Protocol) decoder in the IPS engine to scan for IPS signatures against the application data. Malicious payload in the text message can be blocked. Both VoIP and IPS profiles must be configured in the firewall policy, and the inspection mode must be flow.
722849	Increase the number of HA group IDs to 1024, and extend the HA virtual MAC address range to support 1024 groups. Groups 0-255 will use the same VMACs as before, but groups 256-1023 will use VMAC addresses with the prefix e0:23:ff:fc.
724266	The FortiGate LAN extension controller can push out a bandwidth limit to the FortiExtender thin edge. The limit will be enforced on the FortiExtender side using traffic shaping.
725887	Support external browser-based SAML authentication for ZTNA policies. Add SAML redirect option to enable redirection after successful SAML authentication.
726268	Previously, `estimated-downstream-bandwidth` and `ingress-shaping-profile` needed to be configured to use the ingress traffic shaping feature work. Now, `estimated-downstream-bandwidth` changed to `inbandwidth`.
727502	Add WebSocket enhancements to allow users to subscribe to and listen to configuration table changes from the GUI. New alerts are added to notify users to reload the page when configuration changes occur on the page.
727512	When querying a FortiExtender or LTE-modem through the FortiGate REST API, GPS coordinates are now included in the response.
727947	Add `action-type cli-script` attribute to `config system automation-action` for CLI scripts to execute on all FortiGates in the Security Fabric.

728528	Add option to perform server identity check for FSSO SSL/TLS connection. The server FQDN or IP must match the SAN field in the collector agent certificate. If no SAN field is present, the IP must match the IP in the certificate's CN field.
	`config user fsso`
	`  edit <FSSO server>`
	`  set server <FQDN or valid IP>`
	`  set ssl-server-host-ip-check {enable | disable}`
	`  next`

Bug ID	Description
	`end`
729115	Add support for FortiMonitor to join the Security Fabric. When a FortiMonitor joins the Fabric, it appears in the FortiGate's Fabric topology and can be authorized from there.
729664	Add commands to lock down ISL/ICL links between FortiSwitches so that they become static configurations: • `execute switch-controller switch-recommendations fabric-lockdown-check` • `execute switch-controller switch-recommendations fabric-lockdown-disable` • `execute switch-controller switch-recommendations fabric-lockdown-enable` This adds stability during events such as cable disconnection or power outages.
731532	When a FortiGate is in NAT mode, a VLAN tag with a drop eligible indicator (DEI) bit set resets to 0 after passing through the FortiGate.
731720	Add wireless controller syslog profile that enables APs to send logs to the syslog server configured in the profile.
731721	Add support for advertising vendor specific elements over beacon frames containing information about the FortiAP name, model, and serial number. This allows wireless administrators doing site surveys to easily determine the coverage area of an AP.
732007	The certificate wizard helps administrators add local certificates either by provisioning them through ACME, generating them using the self-signed Fortinet_CA_SSL CA certificate, or importing a server certificate signed by a public or private CA. When generating a new certificate on the *SSL-VPN Settings* page, the *Common name* and *Subject alternate name* (SAN) fields are pre-filled with the address from the SSL VPN listening interface.
732010	When a FortiAP is connected to a switch port with 802.1x authentication enabled, the FortiAP can be configured to act as an 802.1x supplicant to authenticate against the server using EAP-FAST, EAP-TLS, or EAP-PEAP.

732325	Extend passive health measurement to support passive detection per internet service/application. If internet services/applications are defined in an SD-WAN rule with a passive health check, the SLA information per internet service/application will be differentiated and collected. Then, the SLA metrics (latency, jitter, and packet loss) on each SD-WAN member in this rule will be calculated based on relevant internet services/applications SLA information.
	`config system sdwan`
	`  config service`
	`  edit <id>`
	`  set passive-measurement {enable | disable}`
	`  next`
	`  end`
	`end`
	This feature is disabled by default.

Bug ID	Description

733597	Add the ability to authenticate wireless clients using MAC authentication and MPSK against a RADIUS server. Instead of statically storing the MPSK passphrases on the FortiGate, they can be passed from the RADIUS server dynamically when the client MAC is authenticated by the RADIUS server. The result passphrase will be cached on the FortiGate for future authentication, with a timeout configured per VAP.
	`config wireless-controller vap`
	`edit <name>`
	`set radius-mac-auth enable`
	`set radius-mac-auth-server <server>`
	`set mpsk-profile <profile>`
	`set radius-mac-mpsk-auth enable`
	`set radius-mac-mpsk-timeout <integer>`
	`next`
	`end`

733970	Adaptive Forward Error Check (FEC) improves upon the previous FEC mechanism in many ways. While the previous FEC mechanism always sends out x number of redundant packets for every y number of base packets, adaptive FEC takes link conditions into consideration and adaptively adjusts the FEC packet ratio. FEC can be configured to apply to only certain streams that are sensitive to packet loss to reduce unnecessary bandwidth. Since FEC does not support NPU offloading, being able to specify streams and policies that do not require FEC allows that traffic to be offloaded.
733976	ECDSA (Elliptic Curve Digital Signature Algorithm) is now supported in SSH administrative access. Administrative users can connect using an ECDSA key pair or ECDSA based-certificate.
735938	On the NAC Policy configuration page, specifying FortiSwitch groups is now supported. Previously, individual FortiSwitches had to be specified. The CLI command to specify individual switches is now updated to specify switch groups.
738640	Add 100 Mbps transceiver support for FGR-60F and FGR-60F-3G4G.
738759	Add DNS dashboard widget that shows latency to configured and dynamically retrieved DNS servers.
738904	When the FortiGate LAN extension controller is behind a NAT device, remote thin edge FortiExtenders must connect to the FortiGate via a backhaul address. This is an address on the upstream NAT device that forwards traffic to the FortiGate. It can be configured as an IP or FQDN on the FortiGate extender profile. When the default IKE port 500 is not accessible, it is possible to configure a custom IKE port on the FortiExtender and FortiGate.
739442	Add REST APIs to close multiple IPv4 or IPv6 sessions at once (previously, only a single session could be closed each time): • `POST https://<FortiGate IP>/api/v2/monitor/firewall/session/close-multiple` • `POST https://<FortiGate IP>/api/v2/monitor/firewall/session6/close-multiple` • `POST https://<FortiGate IP>/api/v2/monitor/firewall/session6/close-all`

Bug ID	Description
740204	Supply better heartbeat timing information to the auto-scale callback URL. Previously, the auto-scale heartbeat request made to the auto-scale callback URL did not contain a timestamp or sequence number. This information was estimated in the cloud function called by the callback URL, but the cloud function platform's timing was not as reliable as initially expected.
740468	Configuring SAML single sign-on configurations can now be done from the GUI under *User & Authentication* > *User Groups*. The new GUI wizard helps generate the SP URLs based on the supplied SP address. The created SAML object can also be selected when defining a new user group.
742411	Support configuring 802.11ax specified VAP data rates from the FortiGate wireless controller in order to cover 802.11ax data rates and modulation schemes that 802.11ac does not support.

742424	It is now possible to configure auto-BSS coloring from the FortiGate wireless controller so that the FortiAP radios to automatically change colors when BSS coloring conflicts are detected. The new setting is set to `auto` by default.
	`config wireless-controller wtp-profile`
	`  edit <profile>`
	`  config <radio>`
	`  set bss-color-mode {auto | static}`
	`  end`
	`  next`
	`end`

742855	Allow administrators to select which ciphers to use for TLS 1.3 in HTTPS connections, and which ciphers to ban for TLS 1.2 and below.
	`config system global`
	`  set admin-https-ssl-ciphersuites {<option1>}, [<option2]>, ...`
	`  set admin-https-ssl-banned-ciphers {<option1>}, [<option2>], ...`
	`end`

743791	Isolate the CPUs used by the DPDK engine from being used by other services in order to improve DPDK performance. This excludes processes that have affinity explicitly configured.
	`config dpdk cpus`
	`  set isolated-cpus <CPU_IDs or range>`
	`end`

743835	Add fields in the custom OVF template for *License Token* and *Configuration URL* to allow users to input a Flex VM token code and a web URL where a bootstrap configuration for the FortiGate is stored.
749336	The FortiGate external threat feeds now support feeds that are in STIX/TAXII format. To point to a feed that is in STIX format, use the `stix://` prefix in the URI to denote the protocol.

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

FortiAnalyzer	• 7.0.2
FortiManager	• 7.0.2
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 28
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. 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
19. FortiTester
20. FortiMonitor

If Security Fabric is enabled, then all FortiGate devices must be upgraded to 7.0.2. When Security Fabric is enabled in FortiOS 7.0.2, all FortiGate devices must be running FortiOS 7.0.2.

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`
`end`
	`config firewall vip`
	`edit "test-vip46-1"`
	`set extip 10.1.100.150`
	`set nat44 disable`
	`set nat46 enable`
	`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"`	`config firewall ippool6` `edit "test-ippool6-1"`

Old configuration	New configuration

`set startip 2000:172:16:201::155`
`set endip 2000:172:16:201::155`
`next`
`end`
	`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`
`end`
	`config firewall vip6`
	`edit "test-vip64-1"`
	`set extip 2000:10:1:100::155`
	`set nat66 disable`
	`set nat64 enable`
	`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`
	`config firewall ippool`
	`edit "test-ippool4-1"`
	`set startip 172.16.201.155`
	`set endip 172.16.201.155`

Old configuration	New configuration
next end	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.

Product integration and support

The following table lists FortiOS 7.0.2 product integration and support information:

Web browsers	• Microsoft Edge 94 • Mozilla Firefox version 93 • Google Chrome version 94 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 0302 and later (needed for FSSO agent support OU in group filters)
	  • 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	• 6.00266
IPS Engine	• 7.00043

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 4.0, 4.1, 5.0, 5.1, 5.5, 6.0, 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 89 Google Chrome version 91
Microsoft Windows 10 (64-bit)	Microsoft Edge Mozilla Firefox version 92 Google Chrome version 93
Ubuntu 20.04 (64-bit)	Mozilla Firefox version 92 Google Chrome version 93
macOS Big Sur 11.2	Apple Safari version 14 Mozilla Firefox version 92 Google Chrome version 93
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 7.0.2. To inquire about a particular bug, please contact Customer Service & Support.

Anti Spam

Bug ID	Description
743693	Anti spam engine crashes when extracting a malformed IP address from Received: headers.

Anti Virus

Bug ID	Description
665173	Crash logs are sometimes truncated/incomplete.
702646	Re-enable JavaScript heuristic detection and fix detection blocking content despite low rating.
724588	Flow AV quarantines a source IP when an AV scan error occurs.

Application Control

Bug ID	Description
701926	Stress test with application control only results in packet drops.

Data Leak Prevention

Bug ID	Description
745369	PDF corruption over HTTP by DLP.

DNS Filter

Bug ID	Description
722510	Rating requests to anycast SDNS server does not work as expected in SD-WAN.
724657	Anycast SDNS server IP is not added to non-index 0 DNS proxy workers.

Explicit Proxy

Bug ID	Description
674996	WAD encounters segmentation crash at `wad_ssl_arm_close`; crash occurred on explicit web proxy.
720363	When the client in web proxy mode uses the same session to send the HTTP requests with different host names, the HTTP host load balancing method does not take effect.
721039	Short disconnections of streaming applications (Teams and Whereby) through explicit proxy.
733863	Get 504 gateway timeout error when trying to access proxy.pac from remote users using dialup IPsec VPN.
744564	Expand web proxy header content string size from 256 to 512, then to 1024.

Firewall

Bug ID	Description
644225	Challenge ACK is being dropped.
726040	If a SYN has a different ISN in the SYN_SEND/SYN_RECV state, the FortiGate will let the SYN pass without updating the TCP sequence number, but drops the reply SYN/ACK because it fails the sequence number check.
727790	The `diagnose internet-service info` command should show multiple matching entries for the same IP, port, or protocol.
727809	Disabled deny firewall policy with virtual server objects is unable to be enabled after firewall reboot.
729245	HTTP/1.0 health check should process the whole response when `http-match` is set.
730803	Applying a traffic shaping profile and outbound bandwidth above 200000 blocks the traffic.
735031	IPv6 policy is only allowing the first MAC address from the source list.
736452	Unable to configure more than five health checks within virtual servers because of limitation of `firewall.vip:monitor`.

Bug ID	Description
738584	Firewall is using the wrong NAT IP address to send out traffic after removing the VIP and its associated policy.
741122	If a DCE/RPC packet has more than six string binding addresses, the expectation for the rest of the addresses will not be created, and the traffic will be denied.
743800	SNAT hairpin traffic NATs to the incorrect IP address when central NAT is enabled without a central NAT rule.
745853	FortiGate stops sending logs to Netflow traffic because the Netflow session cleanup routine runs for too long when there are many long live sessions in the cache.
748226	In `diagnose netlink interface list wan1`, the total bytes for the inbandwidth shaper is always `0`.

FortiView

Bug ID	Description
707649	On the *Dashboard* > *FortiView Sources* page, when filtering by source and then drilling down to sessions , the GUI API call does not set the source IP filter.
741792	Update FortiAnalyzer license REST API to use the FortiAnalyzer's licenses when in analyzer-collector mode.

GUI

Bug ID	Description
608770	When there is no IP/IPv6 address setting for *Zone*, the GUI incorrectly displays *0.0.0.0/0.0.0.0* for *IP/Netmask* and *::/0* for *IPv6 Address*.
631201	When editing an SSL/SSH inspection profile, the *Show in Address List* toggle in *Edit Wildcard FQDN Address* does not work when creating a new wildcard FQDN address.
653952	*The web page cannot be found* is displayed when a dashboard ID no longer exists.
677611	On the *Network* > *SD-WAN* > *SD-WAN Rules* tab, an SD-WAN member with link status down is displayed as selected.
681643	On the *Network* > *Packet Capture* page, the interface dropdown incorrectly lists interfaces that belong to a virtual wire pair.
686500	Unable to specify a custom hostname during FortiGate setup.

Bug ID	Description
689661	On the *Policy & Objects* > *Firewall Policy* page, policies that have enabled `internet-service-src-custom` and/or have specified an `internet-service-src-custom-group` are not listed in the policy list.
699508	When an administrator ends a session by closing the browser, the administrator timeout event is not logged until the next time the administrator logs in.
714304	Special characters `<`, `>`, `(`, `)`, `#`, `'`, and `"` are allowed in the name when set from the CLI. When set from the GUI they are flagged as invalid.
714716	*IPsec Monitor* shows the same usernames and IPSec tunnel names for different users when the peer ID is configured on the FortiGate and/or FortiClient.
716571	FortiSwitch topology view is missing the inter-chassis link (ICL) between FortiSwitches in the same tier of a topology containing two adjacent MC-LAG peer groups with at least two connections between the groups.
720613	The event log sometimes contains duplicated lines when downloaded from the GUI.
720657	Unable to reuse link local or multicast IPv6 addresses for multiple interfaces from the GUI.
721710	Data fails to load when the Security Fabric is enabled for a downstream FortiGate that has an upstream PPPoE interface to connect to the root.
722133	On the *Policy & Objects* > *Central SNAT* page, one-to-one IP pools do not appear in the NAT policy.
722450	The rating rule *Disable Username Sensitivity Check* incorrectly fails for remote LDAP users with two-factor authentication disabled.
722669	On the *Network* > *Interfaces* page, the DHCP range is incorrectly displayed when *DHCP Server* (status) is disabled.
722832	When LDAP server settings involve FQDN, LDAPS, and an enabled server identity check, the following LDAP related GUI items do not work: LDAP setting dialog, LDAP credentials test, and LDAP browser.
723988	On the *WiFi & Switch Controller* > *FortiSwitch Ports* page, the *PoE* option is grayed out so is cannot be configured. The CLI must be used.
727035	Unable to change FortiSwitch port status when native VLAN is empty.
727644	When the first row of sequence group in a policy table is deleted, the sequence group disappears.
728651	When populating the BGP global table from the GUI (*Network* > *BGP*), BGPD process memory increases until it exhausts memory and goes into conserve mode.
728742	Unable to reorder *Favorites* after upgrading to FortiOS 7.0.
729075	Tooltip for FortiView *Comprised Host* fails with a JavaScript error.
729675	*System* > *Settings* page does not load for a FortiGate in carrier mode with an administrator profile that has `custom` firewall settings.
730069	On the *Network* > *Static Routes* page, users are unable to create a static route with *Automatic gateway retrieval* enabled when a DHCP interface is specified.

Bug ID	Description
730211	Interface widget does not show data when the browser time differs from FortiGate UTC time.
732618	On the *Network* > *Interfaces* page, when *Dedicated Management Port* is enabled on an interface and the *Trusted Host 1* IP address is set to *0.0.0.0/0*, settings cannot be saved.
733375	On the *VPN* > *SSL-VPN Settings* page, after clicking *Apply*, `source-address` objects become `source-address6` objects if IPv6 is enabled.
733582	The *IP/Mac Based Access Control* radio button is no longer present in the *Firewall Policy* dialog from implicit policy projects.
734417	GUI incorrectly displays a warning saying there is not a valid upgrade path when upgrading firmware from 7.0.0 or 7.0.1 to 7.0.1 or 7.0.2.
734773	On the *System* > *HA* page, when *vCluster* is enabled and the management VDOM is not the root VDOM, the GUI incorrectly displays management VDOM as primary VDOM.
735114	In *FortiView Sources*, on a multi-VDOM FortiGate, if there is no cache for IOC (compromised hosts), a request to filter by IOC is sent to all VDOMs on the FortiGate, not just the current VDOM.
739543	On the *Network* > *Interfaces* page, unable to create or edit a VLAN switch as the VLAN ID validation incorrectly fails.
739827	On FG-VM64-AZURE, administrator is logged out every few seconds, and the following message appears in the browser: *Some cookies are misusing the recommended "SameSite" attribute*.
743477	On the *Log & Report* > *Forward Traffic* page, filtering by the *Source* or *Destination* column with negation on the IP range does not work.
744168	On the *Security Profiles* > *SSL/SSH Inspection* page, a new SSL/SSH inspection profile cannot be created when the *Inspection method* is *SSL Certificate Inspection*.
744860	On the *System* > *Settings* page, when the time zone is set to (GMT-6:00) Central America, the current system time is off by one hour during Daylight Saving Time (DST).
745325	When creating a new (public or private) SDN connector, users are unable to specify an *Update interval* that contains *60*, as it will automatically switch to *Use Default*.
745998	An IPsec phase 1 interface with a name that contains a `/` cannot be deleted from the GUI. The CLI must be used.
746012	When a compromised host event is detected by a FortiGate Cloud instance, it cannot trigger the corresponding automation action.

HA

Bug ID	Description
695067	When there are more than two members in a HA cluster and the HA interface is used for the heartbeat interface, some RX packet drops are observed on the HA interface. However, no apparent impact is observed on the cluster operation.

Bug ID	Description
705237	Remote two-factor authentication is not working for HA secondary management interface.
709963	When cluster members have a different size log disk configurations in the cluster system, failure occurs when users input a size higher than the default value on the primary device.
714788	Uninterruptible upgrade might be broken in large scale environments.
717788	FGSP has problem at failover when NTurbo or offloading is enabled (IPv4) with virtual wire pair traffic.
721929	In an HA A-P scenario during failover, the new passive WCCP router ends up choosing a change number during the regular WCCP configuration initiation that will not trigger an assignment, which causes the WCCP assignment to be lost.
723130	`diagnose sys ha reset-uptime` on the secondary devices triggers a failover on a cluster with more than two members.
725240	HA cluster goes out of sync due to mismatched `vpn.certificate.crl` checksum.
728670	In FGSP HA mode, the synchronizing mechanism of VWL daemon causes a synchronization message that goes back and forth infinitely, which causes the CPU and memory usage to keep increasing.
729590	DDNS registration fails on vcluster2 VDOMs.
729607	FTP transfers drop in active-active mode in cases where expectation sessions accumulated in the secondary unit reach the maximum number (128).
734138	HA standby management IP does not reply to ping if the `link-failed-signal` option is enabled and when the monitor interface is down.
738350	In some cases, the hasync process has high memory on HA secondary device.
744826	API key (token) on the secondary device is not synchronized to the primary when `standalone-config-sync` is enabled.
746008	DNS may not resolve correctly in a virtual cluster environment. It also impacts the FortiGate 6000F and 7000E/F series where DNS may not resolve on the correct blades (FPC/FPM).

Intrusion Prevention

Bug ID	Description
669089	IPS profile dialog in GUI shows misleading *All Attributes* in the *Details* field for filter entries with a CVE value.
693800	IPS memory spike on firmware running version: 5.00229.
698725	Custom IPS signature with deprecated options is causing a delay for the unit to boot up.
699775	Fortinet logo is missing on web filter block page in Chrome.

Bug ID	Description
713508	Low download performance occurs when SSL deep Inspection is enabled on aggregate and VLAN interfaces when nTurbo is enabled.
746467	IPS engine crashes when IPS injects packets to vNP and vNP/DPDK fails to restart (crashes and sometimes is out of service).

IPsec VPN

Bug ID	Description
668997	*Duplicate entry found* error shown when assigning multiple dialup IPsec tunnels with the same secondary IP in the GUI.
685668	Modify IKE to check `config firewall security-policy` for the user or group entry instead of checking `config firewall policy` if it is in NGFW mode.
701404	Routes are not added or removed as expected when failover occurs with IPsec FGSP HA.
707547	RADIUS accounting messages (IKEv2 EAP authentication) does not include the Class attribute (group name).
722564	Missing peer ID in IKEv2 and IKEv1 main mode.
725551	IKE idle timeout timers continue running when the HA state switches to secondary.
726362	It is possible to add multiple domains, even though that functionality is currently not supported.
726450	Local out dialup IPsec traffic does not match policy-based routes.
729012	The NAT-T keep alive messages are being logged incorrectly, causing the FortiGate to generate a huge number of logs.
729760	The ADVPN forwarder does not currently track the shortcut query that it forwards. Shortcut queries and replies are forwarded or terminated solely based on the route lookup.
729879	Static IPsec tunnel with signature authentication method cannot be established on FIPS-CC mode FortiGate because the certificate subject verification changes to RDN bitwise comparison based.
730449	SD-WAN service traffic will be interrupted after upgrading to 7.0.1 if all of the following conditions are matched in its 6.4.x configuration: • Using `set gateway enable` in a particular SD-WAN service • Having `mode-cfg` configured • Not having ADVPN configured on the hub
735430	TCP SYN-ACKs are silently dropped if the traffic is sourced from a dialup IPsec tunnel and UTM is enabled.
735477	IKEv1 aggressive mode may crash if the initiator received its own message as the first response.
743732	If a failure happens during negotiating a shortcut IPsec tunnel, the original tunnel NAT-T setting is reset by mistake.

Log & Report

Bug ID	Description
718140	Logs are missing on FortiGate Cloud from a certain point.
724827	Syslogd is using the wrong source IP when configured with `interface-select-method auto`.
726690	Forward traffic log from disk is missing for virtual wire pair policy.
726900	No traffic logs are shown after an overnight run.
731154	SSL VPN tunnel down event log (log ID 39948) is missing.
745310	Need to add the MIGSOCK send handler to flush the queue when the first item is added to the syslog queue to avoid logs getting stuck.

Proxy

Bug ID	Description
520176	Multiple WAD crashes observed with signal 6. The issue could be reproduced with a slow server that will not respond the connection in 10 seconds, and if the configuration changes during the 10 seconds.
582464	WAD SSL crash due to wrong cipher options chosen.
604373	When proxy-based deep inspection is enabled, a server requests a certificate from the client over TLS 1.2 and the client returns an ECDSA certificate. In a best case scenario, the handshake will fail. In a worst case scenario, WAD will crash.
663088	Application control in Azure fails to detect and block SSH traffic with proxy inspection.
688792	WAD crashes at `wad_http_req_exec_video_filter_check` with signal 11.
696012	Video filter cannot block embedded video calling by channel or category.
700073, 714109	YouTube server added new URLs (`youtubei/v1/player, youtubei/v1/navigator`) that caused proxy option to restrict YouTube access to not work.
706786	Multiple SSL connections without policies are being matched with multiple configuration changes for certificate updates, which may trigger a WAD crash.
715280	When the user/interface count reaches the respective maximum, the operation of reducing this count could impact the CPU and cause WAD to crash.
717995	Proxy mode generates untagged traffic in a virtual wire pair.
719681	Flow control failure occurred while transferring large files when `stream-scan` was running, which sometimes resulted in WAD memory spike.
723104	Proxy mode deep inspection is causing website access problems.

Bug ID	Description
724129	WebSocket connection is not successful when IPS and application control are enabled in a proxy inspection policy.
724670	Crash seen in WAD user information daemon when updating user group count upon user log off.
725628	WAD HTTP parser string leak for hostname and scheme with `trace-auth-no-rsp` enabled.
726270	In deep scan mode when there is no SNI, WAD will use the server certificate CNAME for the URL filter check and ignores the host header.
726999	WAD crash on `wad_hash_map_del`.
728641	SSL renegotiation fails when Firefox offers TLS 1.3, but the server decides to use TLS 1.2.
729797	CLI should block or warn users if an API gateway with the same service (protocol) and path are declared on the same ZTNA server.
733760	Proxy inspection firewall policy with proxy AV blocks POP3 traffic of the Windows 10 built-in Mail app.
737438	ZTNA HTTPS access proxy traffic is denied when a regular VIP and access proxy VIP (AP VIP) have the same external IP address.
737737	WAD crashes when firewall FQDN address is null.
738331	Excluded members in the address group are not excluded when the group is added to a proxy policy.
744746	When a policy has both IPS and AV features enabled, WAD has a memory spike when downloading large files.
744756	Web proxy forward server group could not recover sometimes if the FQDN is not resolved.
744882	When using STARTTLS, proxyd performs deep inspection even when `inspect-all` is not set to `deep-inspection`.
748194	Oversize log is not generated for a large EXE file when the `uncompressed-oversize-limit` option is set to `0`.

REST API

Bug ID	Description
731136	The following API has a change in response format, which may break backward compatibility for existing integration: `POST /api/v2/monitor/system/config/restore` New format results: `{'config_restored': True}` Old format results: `{'restore_started': True, 'session_id': 'nTuRkV'}` Note that only the response format is changed. The actual configuration restoration operation still works as before. The integration application should handle this new response format so it can return correct response message back to the user.

Bug ID	Description
743743	httpsd crashes due to `GET /api/v2/log/.../virus/archive` request when the `mkey` is not provided.
745926	Using multiple logical AND symbols (&) on monitor API filtering causes a 502 Bad Gateway error.

Routing

Bug ID	Description
537354	BFD/BGP dropping when `outbandwidth` is set on interface.
724541	One IPv6 BGP neighbor is allowed to be configured with one IPv6 address format and shows a different IPv6 address format.
724574, 731248	BFD neighborship is lost between hub and spoke. One side shows BFD as down, and other side does not show the neighbor in the list.
725322	Improve the distance help text to indicate that 255 means unreachable.
729002	PIM/PIM6 does not send out unicast packet with the correct source IP if interface is not specified.
729621	High CPU on hub BGPD due to hub FortiGate being unable to maintain BGP connections with more than 1K branches when `route-reflector` is enabled.
730194	When syncing a large number of service qualities, there is a chance of accessing out-of-boundary memory, which causes the VWL daemon to crash.
730208	Traffic is not going through when the returning interface is changed.
731683	SD-WAN did not check and properly handle cases of address groups with exclusion.
733187	FortiGate to FortiManager connection issue when using a loopback interface with a non-default VRF as the source for central management.
734628	SDNS traffic to the anycast IP servers does not follow the SD-WAN mode set in `config system fortiguard`.
736705	ZEBOS launcher is unable to start and crashes constantly if `aspath` has more than 80 characters in the `config router router-map > set-aspath` setting.
737298	IPv6 fragmentation does not work as expected for VNE tunnel.
737898	OSPFv3 cannot install IPv6 ECMP routes when both ABR next hops are in the same subnet.
738366	VNE tunnel IPv6 reassembly does not work as expected when the IPv4 packet length is more than 1497 bytes.
740377	HTTP probe response sends reset packets when the number of probes increases.
741844	IPsec VPN does not come up due to incorrectly routed IKE packets.
741947	SD-WAN routes are not installed in the kernel or FIB.

Bug ID	Description
742648	Health check over shortcut tunnel is dead after `auto-discovery-receiver` is disabled/enabled and VWL crash occurs.
743138	OSPF does not use the correct netmask length after upgrading to 7.0.1 when sending a hello packet on an IPsec interface.
743675	RIPv2 multiple routing entries are not reflected when receiving RIP updates via 802.3ad aggregate interface.
746000	Multicast streams sourced on SSL VPN client are not registered in PIM-SM.

Security Fabric

Bug ID	Description
635183	ACI dynamic address cannot be retrieved in HA vcluster2 from SDN connector.
670451	ACI SDN connector (connected by `aci-direct`) shows `curl` error 7 when updating from second VDOM.
695424	SDN connector for GCP ignores project settings.
717080	csfd shows high memory usage due to the JSON object not being used properly and the reference not being released properly.
724071	Log disk usage from user information history daemon is high and can restrict the use for general logging purposes.
726831	Security rating for *Local Log Disk Not Full* reporting as failed for FortiGate models without log disks.
731292	Dashboard *Security Fabric* widget takes a long time to load in the GUI.
731314	Security rating fails and displays *Duplicate Firewall Objects* message for FTP, FTP_GET, and FTP_PUT service objects.
732268	Dynamic address configured with SDN connector for VMware is collecting less IP addresses than expected.
733511	Automation stitch trigger count does not update when target device is a downstream device.
735717	vmwd gives an error when folders are created in the vSphere web interface, and vmwd ignores the IP addresses from vApp.
738344	When CSF root synchronizes a large automation setting (over 16000) to the downstream FortiGate, csfd crashes while trying to process the relay message.
740673	OCI Fabric connector has DNS failure in UK government region.
741346	The variable `%%date%%` resolves into `1900-01-00` instead of actual date when the schedule trigger type is used.
742603	Security rating fails due to duplicate address objects, even when no duplicate address objects exist.

Bug ID	Description
742743	Security rating Issue with unused deny policies.
745263	*AV & IPS DB Update* automation trigger is not working when clicking *Update Licenses & Definitions Now* in the GUI.
746950	When an Azure network interface ID contains upper case letters, the Azure SDN connector may not retrieve that network interface.

SSL VPN

Bug ID	Description
586035	The policy `script-src 'self'` will block the SSL VPN proxy URL.
640169	When the FortiGate is set as the DUT monitored by another FortiGate , the SSL VPN has a memory leak because it continues to receive HTTP requests and creates an HTTP state and tasks to process the request.
664276	SSL VPN host check validation not working for SAML user.
677031	SSL VPN web mode does not rewrite playback URLs on the internal FileMaker WebDirect portal.
706646	SolarWinds Orion NPM platform's web application has issues in SSL VPN web mode.
710657	The `dstaddr`/`dstaddr6` of an SSL VPN policy can be set to `all` when split tunnel mode is enabled and only the default portal is set.
711503	SSL VPN web mode access to internal web server http://10.2.1.78 is broken after upgrading to 7.0.0.
711974	SSL VPN bookmarks are not working correctly with multiple SD-WAN zones.
714155	SSL VPN bookmarks are not working correctly with customer internal website, https://it***.nt***.lo***.
716289	Navigation menu of the internal web server, https://lm***.lm***.au***.vw***, is having issues in the SSL VPN web portal.
718133	In some conditions, the web mode JavaScript parser will encounter an infinite loop that will cause SSL VPN crashes.
718142	The map integrated in the public site is not visible when using SSL VPN web mode.
718165	SSL VPN web mode redirection issue with http://10.3.24.14.
718817	Customer internal website, http://192.168.*.28/mo***/index.php, cannot be shown SSL VPN web mode due to proxy error.
722329	After SSL VPN proxy rewrite, some Nuage JS files have problems running.
725986	SSL VPN web mode does not work as expected when accessing http://ot***.de***.sp***.go***.

Bug ID	Description
726338	The wildcard matching method does not always work as expected because the kernel sometimes does not have the address yet.
726624	Jira web application (to***.cs***.tc***.co**) via SSL VPN web mode does not display website correctly.
727286	Unable to browse directories hosted on Nextcloud server through SSL VPN.
727551	When there are multiple user groups configured in a SSL VPN firewall policy, only the first user group is subjected for authentication verification. As a result, connection requests from other user groups may be terminated unexpectedly. A workaround is to use only one user group per SSL VPN policy.
729426	The wildcard FQDN does not always work reliably in cases where the kernel does not have the address yet.
729700	An internal website (https://cm***.va***.it***/cm***) does not load properly when connecting via SSL VPN web mode.
729889	NexGEN server could not be displayed in SS LVPN web mode.
730416	Forward traffic log does not generate logs for HTTP and HTTPS services with SSL VPN web mode.
731278	Customer internal website (ac***.sa***.com) does not load properly when connecting via SSL VPN web mode.
731606	Internal server (sa***.be***.com) is not loading after logging in with SSL VPN web mode.
732943	If the client certificate is only set in a specific authentication rule of the SSL VPN, the peer user may not log in successfully.
736436	Internal website (https://gg****.gl***.com/) shows a blank page in SSL VPN web mode.
736822	Non-US keyboard layout in RDP session with SSL VPN web mode does not work correctly.
737150	Internal website (oh***.com) could not be displayed in SSL VPN web mode.
737154	Slow RDP response when using SSL VPN web mode access.
737341	Some links and buttons are not working properly when accessing them through SSL VPN web mode.
737751	HTML5 page is not fully loading for SSL VPN web mode users.
738711	FortiClient error message is not pertinent when the client does not meet host checking requirements.
738715	Contents of Jira application (in***.ds***.com) in SSL VPN web mode are not displayed correctly.
738723	Video streaming does not work in SSL VPN web mode on https://te***.fortiddns.com:10443.
739711	SSL VPN bookmark button for Jira (sa***.con***.com) malfunctions.
740335	Internal website, https://te***.ko***.com, is not accessible in SSL VPN web mode.
740378	Windows FortiClient 7.0.1 cannot work with FortiOS 7.0.1 over SSL VPN when the tunnel IP is in the same subnet as one of the outgoing interfaces and NAT is not enabled.

Bug ID	Description
741453	Unable to log in to VMware vSphere vCenter 7.0 through SSL VPN web portal.
742332	SSL VPN web portal redirect fails in http://qu***.jj***.bu***.
744494	Memory occupied by the SSL VPN daemon increases significantly while the process is busy.
744899	SSL VPN RDP bookmark is not working when using Chrome 93 32-bit. Firefox 64-bit and Chrome 64-bit are still not supported on Windows 32-bit.
745499	In cases where a user is establishing two tunnel connections, there is a chance that the second session knocks out the first session before it is updated, which causes a session leak.
745554	Logging in with SSO to FortiAnalyzer with SSL VPN web mode fails.
746938	Unable to authenticate to outlook.com/owa/vw***.com website in SSL VPN web mode.
746990	RADIUS accounting messages after SSL VPN do not include the Class attribute (Group name).
747352	Internal web server page, https://te***.ss***.es:10443, is not loading properly in SSL VPN web mode.
747851	SSL VPN bookmark works on one URI (cu***.co***.cr***) and is not working on different URIs to the same destination server.
749918	Keyboard keys do not work with RDP bookmarks when PT-BR and PT-BR-ABNT2 layouts are chosen.

Switch Controller

Bug ID	Description
723501	When STP is enabled on a hardware switch interface, FortiLink loses its connection to FortiSwitch.

System

Bug ID	Description
488400	NPU offload is disabled for IPsec over pure EMAC VLANs (EMAC interfaces without VLAN IDs).
607565	Interface `emac-vlan` feature does not work on SoC4 platform.
619839	In FIPS-CC mode, keep getting `fcron_set_mgmt_vdom()-122: Invalid mgmt- vfid=-1` message on console.
644616	NP6 does not update session timers for traffic IPsec tunnel if established over one pure EMAC VLAN interface.
645848	FortiOS is providing self-signed CA certificate intermittently with flow-based SSL certificate inspection.

Bug ID	Description
666438	The iotd daemon has problems connecting to an anycast server when `fortiguard-anycast` is disabled.
671824	On FG-40F, get `NP6XLITE: failed to read lif accounting` message on console.
681791	Install preview does not show all changes performed on the FortiGate.
684563	Uploading a wrong script in the GUI can cause a continuous error.
696852	Failure to synchronize with FortiGate NTP server, even if the FortiGate NTP server is not properly synchronized with its higher tier NTP server.
698003	When creating a new administrator, the administrator profile's reference is visible in other administrator accounts from different VDOMs.
698590	The `dhcp6-client-options`" is missing on internal interfaces for IPv6.
700664	When the SD-WAN interface select method is configured in `system dns`, the rules are not applied to AXFR DNS database local out traffic.
702966	There was a memory leak in the administrator login debug that caused the getty daemon to be killed.
706686	LAG interface between FortiGate and Cisco switch flaps when adding/removing member interface.
710635	GUI should hide the *FortiGate Setup* dialog if all setup steps are complete.
712156	FortiCloud central management does not work if the FortiGate has trusted host enabled for the `admin` account.
713835	The BLE pin hole behavior should not be applied on FG-100F generation 1 that has no BLE built in.
715647	In VWP with `set wildcard-vlan enable`, for some special cases the SKB `headlen` is not long enough for handling. It may cause a protective crash when doing `skb_pull`.
715978	NTurbo does not work with EMAC VLAN interface.
720858	DDNS update interval is abnormal on FG-140E-POE.
721487	FortiGate often enters conserve mode due to high memory usage by httpsd process.
722248	When `lag-out-port-select` is enabled, FortiCarrier ESP packets drops in NPU link.
722273	SA is freed while its timer is still pending, which leads to a kernel crash.
722547	Fragmented SKB size occurs if the tail room is too small to carry the NTurbo `vtag`, which causes packets to be dropped.
724065	`Power supply 2 DC is lost` log only appears when unplugging the power cable from power supply 2.
724446	High CPU for cmdbsvr when editing an address group.
724779	HPE setting of NTurbo host queue is missing and causes IPS traffic to stop when HPE is enabled.
725264	FG-600E copper speed LED does not work.

Bug ID	Description
726634	NTP daemon is not responding when using the manual setting.
727343	Quarantined IP is not synchronized in FortiController mode.
727829	DNS FQDN was not synchronized amongst all the working blade, so each blade might have different IP from the same FQDN. If policy a uses the FQDN as the address, it will cause the IP address of FQDN to not be in the list for the current blade, so the traffic will not match this FQDN policy.
728647	DHCP discovery dropped on virtual wire pair when UTM is enabled.
729636	FTLC1122RDNL transceiver is showing as not certified by Fortinet on FG-3800D.
729939	Multiple processes crashing at the same time causes the device's management functionality to be unavailable when the packet size is smaller than `FSAE_HEADER_SIZE(6)`.
731708	The FG-traffic VDOM is lost after restoring the configuration if split-VDOM mode is set in the configuration file.
731789	Unable to set VDOM ID as filter in CLI for `diagnose debug flow`.
731821	MAP-E DDNS update request is not sent after booting up the device.
732760	SNMP trap packets are sometimes not sent from the primary `ha-direct` interface to all SNMP managers after upgrading.
734120	IPv6 Ready Phase 2 test failed on destination options (local link).
734565	Link monitor shows incorrect number of out-of-sequence packets.
734631	SSH UMAC cipher was not configured for umac-128, which causes `message authentication code incorrect` SSH error.
735492	Many processes are in a "D" state due to `unregister_netdevice`.
737711	When snmpd updates a huge table (~ 100K+) that might need more time than the SNMP client's timeout, the SNMP client meets a timeout error.
738332	Connectivity issue with FortiGuard after upgrading from 7.0.0 to 7.0.1 when `ha-direct` is enabled.
738640	Add support for FS-TRAN-FX 100 Mbps SFP optical transceivers on the FGR-60F and FGR-60F-3G4G models. Previously, there was no I2C reading/writing handler in drivers for FGR-60F and FGR-60F-3G4G.
740649	FortiGate sends CSR configuration without double quote (`"`) to FortiManager.
742416	DNS does not resolve on FIM01, but resolves on other blades.
742471	Parsing FFDB may cause a crash when loading at reboot if the versions of FFDB_APP and FFDB_GEO_ID_FILE are different.
743431	DDNS hostname is not correct when two VDOMs are configured.
743735	Potential DHCP memory leak when lease is mocked from reserved address.
745017	`get system checksum status` should only display checksums for VDOMs the current user has permissions for.

Bug ID	Description
748628	Modem `init-string` failed on 7.0.0 and 7.0.1 because it was unable to find the endpoint address.
748987	L2TP tunnel is not working properly for Android; only ping traffic passes.

User & Authentication

Bug ID	Description
556724	LLDP neighbors cannot be seen on virtual switch ports.
691838	Memory leaks and crashes observed during stress long duration performance test when using FortiToken Cloud.
707057	TACACS server traffic will not go through the specific interface from the GUI irrespective of the interface set under the TAC.
709964	Apple devices cannot load the FortiAuthenticator captive portal via the system pop-up only.
711263	`diagnose fortitoken-cloud sync` fails when user email address is longer than 35 characters.
713503	When IdP uses optional SAML parameters, the firewall stops processing the login request.
721747	Client certificate authentication fails with Windows Hello for Business certificates.
725056	FSSO local poller fails after recent Microsoft Windows update (KB5003646, KB5003638, ...).
725327	FSSO user fails to log in with principal user name.
725988	CRLs with the same name in different non-management VDOMs cannot be updated automatically.
732413	Device IP is in the firewall user list , but it has no user name and group name, so the portal page cannot load.
733065	When deauthorizing from the GUI, the notification is sent to fsae rather than fssod, even the if the authentication type is FSSO.
739350	RADIUS response is sent even when the `rsso-radius-response` attribute is set to `disable`.
739702	There are unknown user logins on the FortiGate and the logs do not have any information for the unknown user.
741403	Unknown user log in to FortiGate does not provide any information for the unknown user.
742047	RADIUS Request Account-Status-Type Interim-Update Message does not have the Class attribute.
744014	LLDP neighbors cannot be seen on virtual switch ports.

VM

Bug ID	Description
582123	EIP does not fail over if the primary FortiGate is rebooted or stopped from the Alibaba Cloud console.
656701	FortiGate VMX Service Manager enters conserve mode (cmdbsvr has high memory utilization).
721439	Problems occur when switching between HA broadcast heartbeat to unicast heartbeat and vice versa.
722290	Azure slow path NetVSC SoftNIC has stuck RX. If using an IPsec tunnel, use UDP/4500 for ESP protocol (instead of IP/50) when SR-IOV is enabled. On the phase 1 interface, use `set nattraversal forced`. UDP/4500 is the fast path for Azure SDN, and IP/50 is the slow path that stresses guest VMs and hypervisors to the extreme. If using cross-site IPsec data backup, use Azure VNet peering technology to build raw connectivity across the site, rather than using the default IP routing based on the assigned global IP address.
729811	ASG synchronization is lost between secondary and primary instances if the secondary instance reboots. Affected platforms: all public cloud VMs and KVMs.
732556	AliCloud SDN connector will not fetch information from the secondary ENI, so filtering IP addresses by Vswitch ID and security group might be incorrect.
734148	The vmtoolsd and openvmtools processes are using a high amount of memory.
736067	NSX connector sometimes stops updating addresses.
739376	vmwd gives an error when folders are created in the vSphere web interface, and vmwd ignores the IP addresses from vApp.
747194	EIP failed to update on Azure FG-VM.

WAN Optimization

Bug ID	Description
735049	The HEAD request fails when `webcache` is enabled.

Web Filter

Bug ID	Description
677234	Unable to block webpages present in the external list when accessing them through the Google Translate URL.

Bug ID	Description
739349	Web filter local rating configuration check might strip the URL, and the URL filter daemon does not start when `utm-status` is disabled.
744303	Websites are blocked when *FortiGuard Category Based Filter* is disabled in web filter profile while doing an SSL-exempt check.
747591	Default web filter policy allows many of the potentially liable categories by default instead of blocking them.

WiFi Controller

Bug ID	Description
700356	CAPWAP daemon crashing due to IoT detection.
719217	*Interface Bandwidth* widget should exclude bridge VAP interface (and mesh VAP interface).
720674	cw_acd is crashing on FG-40F.
733608	FG-5001D unable to display managed FortiAPs after upgrading.
741946	FortiGate is not recognizing attribute 49, Acct-Terminate-Cause Value (6) Admin Reset, from RFC 2866.
748154	802.1X clients are disconnected following FortiGuard update.
751298	*Cannot read properties of undefined (reading 'spectrum_analysis')* error appears when viewing downstream FortiGate from upstream FortiGate in *WiFi* dashboard.

Common Vulnerabilities and Exposures

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

Bug ID	CVE references
722821	FortiOS 7.0.2 is no longer vulnerable to the following CVE References: • CVE-2020-24586 • CVE-2020-24587 • CVE-2020-24588
726300	FortiOS 7.0.2 is no longer vulnerable to the following CVE Reference: • CVE-2021-36169
744267	FortiOS 7.0.2 is no longer vulnerable to the following CVE References: • CVE-2021-3711 • CVE-2021-3712

Known issues

The following issues have been identified in version 7.0.2. To inquire about a particular bug or report a bug, please contact Customer Service & Support.

Application Control

Bug ID	Description
752569	Per IP shaper under application list does not work as expected for some applications.

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.

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.

Bug ID	Description
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.
713529	When a FortiGate is managed by FortiManager with FortiWLM configured, the HTTPS daemon may crash while processing some FortiWLM API requests. There is no apparent impact on the GUI operation.
735248	On a mobile phone, the WiFi captive portal may take longer to load when the default firewall authentication login template is used and the user authentication type is set to HTTP. **Workaround**: edit the login template to disable HTTP authentication or remove the href link to googleapis.
738027	The *Device Inventory* widget shows *no results* when there are two *user_info* parameters. **Workaround**: use the CLI to retrieve the device list.
746953	On the *Network* > *Interfaces* page, users cannot modify the TFTP server setting. A warning with the message *This option may not function correctly. It is already configured using the CLI attribute: tftp-server.* appears beside the *DHCP Options* entry. **Workaround**: use the CLI.
755177	When upgrade firmware from 7.0.1 to 7.0.2, the GUI incorrectly displays a warning saying this is not a valid upgrade path.
756420	On the *Security Fabric* > *Fabric Connectors* page, the connection to FortiManager is shown as down even if the connection is up. **Workaround**: check the status in the CLI using `diagnose fdsm central-mgmt-status`.

HA

Bug ID	Description
701367	In an HA environment with multiple virtual clusters, *System* > *HA* will display statistics for *Uptime*, *Sessions*, and *Throughput* under virtual cluster 1. These statistics are for the entire device. Statistics are not displayed for any other virtual clusters.

IPsec VPN

Bug ID	Description
740624	FortiOS 7.0 has new design for dialup VPN (no more route tree in the IPsec tunnel), so traffic might not traverse over the dialup IPsec VPN after upgrading from FortiOS 6.4.6 to 7.0.1, 7.0.2, or 7.0.3 if the server replies on the static route over the dynamic tunnel interface to route the traffic back to the client.

Bug ID	Description

	Workaround: configure the `src-subnet` on the client phase 2 interface. Then, static routes will be added by IKE on the server side (`add-route enable` is required).
	`config vpn ipsec phase2-interface`
	`edit <name>`
	`set src-subnet <x.x.x.x/x>`
	`next`
	`end`

761754	IPsec aggregate static route is not marked inactive if the IPsec aggregate is down.
767945	In a setup with IPsec VPN IKEv2 tunnel on the FortiGate to a Cisco device, the tunnel randomly disconnects after updating to 7.0.2 when there is a CMDB version change (configuration or interface).

Proxy

Bug ID	Description
727629	An error case occurs in WAD while handling the HTTP requests for an explicit proxy policy.
735893	After the Chrome 92 update, in FOS 6.2, 6.4, or 7.0 running an IPS engine older than version 5.00246, 6.00099, or 7.00034, users are unable to reach specific websites in proxy mode with UTM applied. In flow mode everything works as expected.
766158	Video filter FortiGuard category takes precedence over allowed channel ID exception in the same category.

Routing

Bug ID	Description

745856	The default SD-WAN route for the LTE wwan interface is not created.
	Workaround: add a random gateway to the wwan member.
	`config system sdwan`
	`config members`
	`edit 2`
	`set interface "wwan"`
	`set gateway 10.198.58.58`
	`set priority 100`
	`next`
	`end`
	`end`

Security Fabric

Bug ID	Description
614691	Slow GUI performance in large Fabric topology with over 50 downstream devices.
753056	Recommendation information for *Failed Login Attempts* security rating rule should display *Lockout duration should be at least 30 minutes*, instead of 1800 minutes.
753358	Unable to trigger automation trigger with FortiDeceptor Fabric event.
755187	The security rating test for *Unused Policies* is incorrectly evaluated as *Pass* when there are unused policies with the accept action.

SSL VPN

Bug ID	Description
753515	DTLS does not work for SSL VPN and switches to TLS.
757450	SNAT is not working in SSL VPN web mode when accessing an SFTP server.

System

Bug ID	Description
644782	A large number of detected devices causes httpsd to consume resources, and causes entry-level devices to enter conserve mode.
681322	TCP 8008 permitted by authd, even though the service in the policy does not include that port.
708228	A DNS proxy crash occurs during `ssl_ctx_free`.
751715	Random LTE modem disconnections due to certain carriers getting unstable due to WWAN modem USB speed under super-speed.
756713	Packet loss on the LAG interface (eight ports) using SFP+/SFP28 ports in both static and active mode. Affected models: FG-110xE, FG-220xE, and FG-330xE.
758490	The value of the `extra-init` parameter under `config system lte-modem` is not passed to the modem after rebooting the device.
763185	High CPU usage on platforms with low free memory upon IPS engine initialization.
764252	On FG-100F, no event is raised for PSU failure and the diagnostic command is not available.

User & Authentication

Bug ID	Description
750551	DST_Root_CA_X3 certificate is expired. **Workaround**: see the Fortinet PSIRT blog, https://www.fortinet.com/blog/psirt-blogs/fortinet-and-expiring-lets-encrypt-certificates, for more information.
754725	After updating the FSSO DC agent to version 5.0.0301, the DC agent keeps crashing on Windows 2012 R2 and 2016, which causes lsass.exe to reboot.
778521	SCEP fails to renew if the local certificate name length is between 31 and 35 characters.

VM

Bug ID	Description
691337	When upgrading from 6.4.7 to 7.0.2, GCP SDN connector entries that have a `gcp-project-list` configuration will be lost.

WAN Optimization

Bug ID	Description
754378	When an AV profile is enabled in a WANOpt proxy policy on a server side FortiGate, EICAR sent over HTTPS will not get blocked.

Web Filter

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

Built-in AV Engine

AV Engine 6.00266 is released as the built-in AV Engine. Refer to the AV Engine Release Notes for information.

Built-in IPS Engine

IPS Engine 7.00043 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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