FortiSwitch Devices Managed by FortiOS Release Notes

Version 6.4.5

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September 1, 2021

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TABLE OF CONTENTS

Change log

Date	Change Description
February 18, 2021	Initial document release for FortiOS 6.4.5
February 26, 2021	Added another feature to the “What’s new in FortiOS 6.4.5” section.
September 1, 2021	Updated the “Support of FortiLink features” section.

Introduction

This document provides the following information for FortiSwitch 6.4.6 devices managed by FortiOS 6.4.5 build 1828.

- Special notices on page 9
- Upgrade information on page 12
- Product integration and support on page 13
- Resolved issues on page 14
- Known issues on page 15

See the Fortinet Document Library for FortiSwitch documentation.

NOTE: FortiLink is not supported in transparent mode.

The maximum number of supported FortiSwitch units depends on the FortiGate model:

FortiGate Model Range	Number of FortiSwitch Units Supported
FortiGate 40F, 91E, FortiGate-VM01	8
FortiGate 60F, 6xE, 80F, 8xE, 90E	16
FortiGate 100D, FortiGate-VM02	24
FortiGate 100E, 100EF, 100F, 101E, 140E, 140E-POE	32
FortiGate 200E, 201E	64
FortiGate 300D to 500D	48
FortiGate 300E to 500E	72
FortiGate 600D to 900D and FortiGate-VM04	64
FortiGate 600E to 900E	96
FortiGate 1000D to 15xxD	128
FortiGate 1100E to 25xxE	196
FortiGate-3*xxx* and up and FortiGate-VM08 and up	300

Supported models

Refer to the FortiLink Compatibility table to find which FortiSwitchOS versions support which FortiOS versions.

New models (NPI releases) might not support FortiLink. Contact Customer Service & Support to check support for FortiLink.

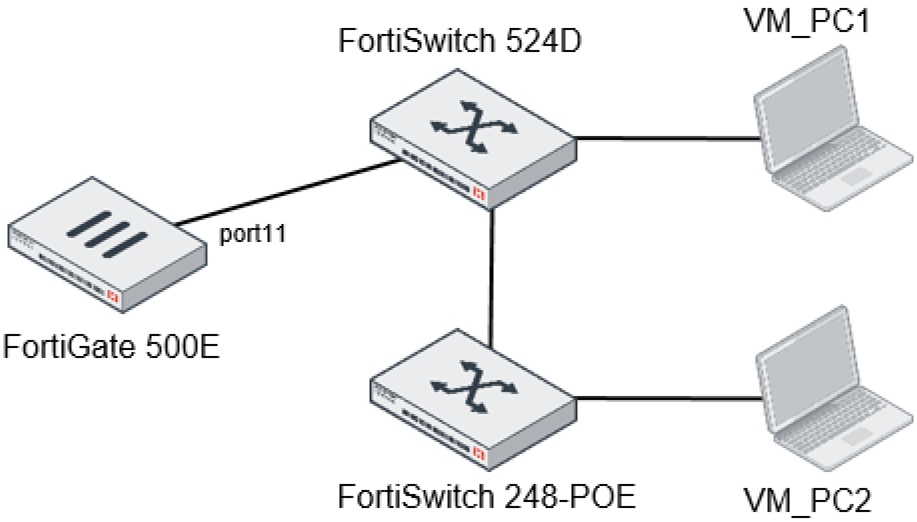
What's new in FortiOS 6.4.5

The following list contains new managed FortiSwitch features added in FortiOS 6.4.5:

- You can now use wildcards in a MAC address in a NAC policy.

When configuring a NAC policy, you can use the wildcard * character when manually specifying a MAC address to match the device.

```
config user nac-policy
       edit <policy>
               set mac "xx:xx:xx:**:**:**"
       next
end
```



In this example, VM_PC1 and VM_PC2 both have MAC addresses that start with 00:0c:29. A NAC policy is created on the FortiGate 500E to match both PCs. After the PCs are connected to the FortiSwitch units, they are detected by the NAC policy and assigned to Lab_VLAN.

To configure a MAC address with wildcards in a NAC policy:

1. Configure a MAC policy to be applied on the managed FortiSwitch units through the NAC device:

```
config switch-controller mac-policy
       edit "LAB_Linux"
               set fortilink "port11"
```

```
                set vlan "Lab_VLAN"
                next
        end
```

2. Configure the NAC policy matching pattern to identify matching NAC devices:

```
config user nac-policy
        edit "VM-Policy
                set mac "00:0c:29:**:**:**"
                set switch-fortilink "port11"
                set switch-mac-policy "LAB_Linux"
        next
end
```

3. Check that the NAC devices are added:

```
# show switch-controller nac-device
config switch-controller nac-device
        edit 2
                set description "auto detected @ 2020-11-30 14:13:45"
                set mac 00:0c:29:d4:4f:3c
                set last-known-switch "S248EPTF18001384"
                set last-known-port "port6"
                set matched-nac-policy "VM-Policy"
                set mac-policy "LAB_Linux"
        next
        edit 3
                set description "auto detected @ 2020-11-30 14:16:07"
                set mac 00:0c:29:a8:0a:1c
                set last-known-switch "S524DN4K16000116"
                set last-known-port "port7"
                set matched-nac-policy "VM-Policy"
                set mac-policy "LAB_Linux"
        next
end
```

- PoE pre-standard detection is now disabled by default.

Starting with this version, the factory default setting for power over Ethernet (PoE) pre-standard detection is `disable` for both managed and standalone FortiSwitch units.

Depending on the FortiSwitch model, you can manually change the `poe-pre-standard-detection` setting on the global level or on the port level.

PoE pre-standard detection is a global setting for the following FortiSwitch models: FSR-112D-POE, FS-548DFPOE, FS-524D-FPOE, FS-108D-POE, FS-224D-POE, FS-108E-POE, FS-108E-FPOE, FS-124E-POE, and FS-124EFPOE. For the other FortiSwitch PoE models, PoE pre-standard detection is set on each port.

On the global level, set `poe-pre-standard-detection` with the following commands:

```
config switch-controller managed-switch
       edit <FortiSwitch_serial_number>
               set poe-pre-standard-detection {enable | disable}
       next
end
```

On the port level, set `poe-pre-standard-detection` with the following commands:

```
config switch-controller managed-switch
       edit <FortiSwitch_serial_number>
               config ports
                       edit <port_name>
                               set poe-pre-standard-detection {enable | disable}
                       next
               end
       next
end
```

When you upgrade FortiOS, the setting of `poe-pre-standard-detection` stays the same. When you downgrade from FortiOS 6.4 to FortiOS 6.2, the setting of `poe-pre-standard-detection` stays the same.

- You can now use the `set fortilink-p2p-native-vlan <VLAN>` command (under `config switch global`) to specify the native VLAN on the inter-switch link (ISL) when `fortilink-p2p` is enabled. By default, the native VLAN is 4094.
- The `set fortlink-p2p {enable | disable}` command under `config switch physical port` has been changed to `set fortilink-p2p {enable | disable}`.

Special notices

Support of FortiLink features

The following table lists the FortiSwitch models supported by FortiLink features.

FortiLink Features	FortiSwitch Models
Centralized VLAN Configuration	D-series, E-series, F-series
Switch POE Control	D-series, E-series, F-series
Link Aggregation Configuration	D-series, E-series, F-series
Spanning Tree Protocol (STP)	D-series, E-series, F-series
LLDP/MED	D-series, E-series, F-series
IGMP Snooping	D-series, E-series, F-series
802.1x Authentication (Port-based, MAC-based, MAB)	D-series, E-series, F-series
Syslog Collection	D-series, E-series, F-series
DHCP Snooping	D-series, E-series, F-series
Device Detection	D-series, E-series, F-series
Support FortiLink FortiGate in HA Cluster	D-series, E-series, F-series
LAG support for FortiLink Connection	D-series, E-series, F-series
Active-Active MCLAG from FortiGate to FortiSwitch units for Advanced Redundancy	Not supported on FS-1xx Series
sFlow	Not supported on FS-1xxE Series or FS-1xxF Series
Dynamic ARP Inspection (DAI)	D-series, E-series, F-series
Port Mirroring	D-series, E-series, F-series
RADIUS Accounting	D-series, E-series, F-series
Centralized Configuration	D-series, E-series, F-series

FortiLink Features	FortiSwitch Models
Block Intra-VLAN Traffic	D-series, E-series, F-series
STP BDPU Guard, Root Guard, Edge Port	D-series, E-series, F-series
Loop Guard	D-series, E-series, F-series
Switch admin Password	D-series, E-series, F-series
Storm Control	D-series, E-series, F-series
802.1x-Authenticated Dynamic VLAN Assignment	D-series, E-series, F-series
Host Quarantine on Switch Port	D-series, E-series, F-series
QoS	Not supported on FSR-112D-POE
Centralized Firmware Management	D-series, E-series, F-series
Automatic network detection and configuration	D-series, E-series, F-series
Dynamic VLAN assignment by group name	D-series, E-series, F-series
Sticky MAC addresses	D-series, E-series, F-series
NetFlow and IPFIX flow tracking and export	D-series, E-series, F-series
FortiSwitch split ports	FS-524D, FS-524D-FPOE, FS-548D, FS-548D-FPOE, FS-1048E, FS-3032D, and FS-3032E
Encapsulated remote switched port analyzer (ERSPAN)	FS-2xx and higher
MSTP instances **NOTE:** In FortiLink mode, the FortiGate unit supports 1-14 instances for all platforms.	D-series, E-series, F-series
QoS statistics	D-series, E-series, F-series
Configuring SNMP through FortiLink	D-series, E-series, F-series
IPv4 source guard	FSR-124D, FS-224D-FPOE, FS-248D, FS-424D-POE, FS-424D-FPOE, FS-448D-POE, FS-448D-FPOE, FS-424D, FS-448D, FS-2xxE, and FS-4xxE
Integrated FortiGate network access control (NAC) function	D-series, E-series, F-series
FortiGuard IoT identification	D-series, E-series, F-series

FortiLink Features	FortiSwitch Models
Point-to-point layer-2 network supported	D-series, E-series, F-series
Dynamic detection of LLDP neighbor devices	D-series, E-series, F-series
Explicit congestion notification (ECN)	FS-1024D, FS-1048D, FS-1048E, FS-3032D, FS-3032E, FS-4xxE, and FS-5xxD
Aggregation mode selection for trunk members	D-series, E-series, F-series
Multiple attribute values sent in a RADIUS Access-Request	D-series, E-series, F-series
PTP transparent-clock mode	FS-1048E, FS-224D, FS-224E, FS-3032D, FS-3032E, FS-424D, FS-4xxE, and FS-5xxD
Rapid PVST interoperation	D-series, E-series, F-series
Support of matching EMS tags in NAC policies	D-series, E-series, F-series
Flash port LEDs	D-series, E-series, F-series
Cable diagnostics	Not supported on FSR-112D-POE, FS-1024D, FS-1048D, FS-1048E, FS-3032D, or FS-3032E
Automated detection and recommendations	D-series, E-series, F-series
Flow control	D-series, E-series, F-series
Ingress pause metering	200 series, 400D and 400E series, 500 series, FS-1024D, FS-1048D, FS-1048E, and FS-3032D

Upgrade information

FortiSwitchOS 6.4.6 supports upgrading from FortiSwitchOS 3.5.0 and later.

To determine a compatible FortiOS version, check the FortiLink Compatibility matrix (https://docs.fortinet.com/document/fortiswitch/6.4.5/fortilink-compatibility).

Within the Security Fabric, the FortiSwitch upgrade is done after the FortiGate upgrade. Refer to the latest *FortiOS Release Notes* for the complete Security Fabric upgrade order. See https://docs.fortinet.com/document/fortigate/6.4.4/fortios-release-notes.

Product integration and support

FortiSwitchOS 6.4.6 support

The following table lists FortiSwitchOS 6.4.6 product integration and support information.

Web browser	• Mozilla Firefox version 52 • Google Chrome version 56 Other web browsers may function correctly, but are not supported by Fortinet.
FortiOS (FortiLink Support)	Refer to the FortiLink Compatibility table to find which FortiSwitchOS versions support which FortiOS versions.

Resolved issues

The following issues have been fixed in FortiOS 6.4.5. For inquiries about a particular bug, please contact Customer Service & Support.

Bug ID	Description
686031	In FortiOS 6.4.4 with FortiSwitchOS 6.4.5, LLDP traffic causes the memory used by the flcfg daemon to keep increasing.

Known issues

The following known issues have been identified with FortiOS 6.4.5. For inquiries about a particular bug or to report a bug, please contact Fortinet Customer Service & Support.

Bug ID	Description
298348, 298994	Enabling the `hw-switch-ether-filter` command on the FG-92D model (the default setting) causes FortiSwitch devices to not be discovered.
527695	Starting in FortiOS 6.4.0, VLAN optimization is enabled by default (`set vlan-optimization enable` under `config switch-controller global`). On a network running FortiSwitchOS earlier than 6.0.0, this change results in a synchronization error, but the network still functions normally. If you have FortiSwitchOS 6.0.x, you can upgrade to remove the synchronization error or disable VLAN optimization. On a network with `set allowed-vlans-all enable` configured (under `config switch-controller vlan-policy`), the setting reverts to the default, which is disabled, when upgrading to FortiOS 6.4.0. If you want to maintain the allowed-vlans-all behavior, you can restore it after the upgrade.
586801	NetBIOS stops working when proxy ARP is configured and the access VLAN is enabled because FortiGate units do not support NetBIOS proxy.
602397	The *FortiSwitch Ports* page is slow with a large topology.
621785	`user.nac-policy[].switch-scope` might contain a data reference to `switch-controller.managed-switch`. When this reference is set by an admin, the admin needs to remove this reference before deleting the `managed-switch`.