FortiSwitch Release Notes

Version 6.2.1

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FortiSwitch Release Notes

September 22, 2019

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Change log

Date	Change Description
June 20, 2019	Initial release for FortiSwitchOS 6.2.1
July 22, 2019	Added bug 572052 to the “Known issues” section.
September 9, 2019	Added support for RMON group 1 to the feature matrix. Updated the split port and TDR rows of the feature matrix.
September 22, 2019	Updated the feature matrix.

Introduction

This document provides the following information for FortiSwitch 6.2.1 build: 0176.

See the Fortinet Document Library for FortiSwitch documentation.

Supported models

FortiSwitch 6.2.1 supports the following models:

FortiSwitch 1xx	FSW-108E, FSW-108E-POE, FSW-108E-FPOE, FSW-124E, FSW-124E-POE, FSW-124E-FPOE, FSW-148E, FSW-148E-POE
FortiSwitch 2xx	FSW-224D-FPOE, FSW-224E, FSW-224E-POE, FSW-248D, FSW-248E-POE, FSW-248E-FPOE
FortiSwitch 4xx	FSW-424D, FSW-424D-FPOE, FSW-424D-POE, FSW-448D, FSW-448D-FPOE, FSW-448D-POE
FortiSwitch 5xx	FSW-524D-FPOE, FSW-524D, FSW-548D, FSW-548D-FPOE
FortiSwitch 1xxx	FSW-1024D, FSW-1048D, FSW-1048E
FortiSwitch 3xxx	FSW-3032D, FSW-3032E
FortiSwitch Rugged	FSR-112D-POE, FSR-124D

What's new in FortiSwitchOS 6.2.1

Release 6.2.1 provides the following new features:

- You can now configure one or more DHCP servers on any FortiSwitch interface.
- You can now clear port statistics on selected ports in the GUI.
- Access VLANs are now supported on the 108E, 124E, 108E-POE, 108E-FPOE, 124E-POE, 124E-FPOE, 148E, and 148E-POE models.
- The STP Instances page (*Switch* > *STP* > *Instances*) now lists the ports for each STP instance.
- RADIUS accounting now supports both EAP authentication and MAB authentication.

- Both 802.1x port-based authentication and 802.1x MAC-based authentication now support CoA.
- The Lines Per Page field has been removed from the *System* > *Admin* > *Settings* page.
- TLS 1.3 is now supported.
- You can now enable and configure FortiSwitch Cloud management from a link in the dashboard.

Special notices

Supported features for FortiSwitchOS 6.2.1

The following table lists the FortiSwitch features in Release 6.2.1 that are supported on each series of FortiSwitch models. All features are available in Release 6.2.1, unless otherwise stated.

Feature	GUI supported	112D-POE	FSR-124D	1xxE	200 Series 400 Series	500 Series	1024D 1048D 1048E	3032D 3032E
Management and Configuration								
CPLD software upgrade support for OS	—	—	—	—	—	—	1024D 1048D	—
Firmware image rotation (dual-firmware image support)	—	✓	✓	148E 148E-POE	✓	✓	✓	✓
HTTP REST APIs for configuration and monitoring	—	✓	✓	✓	✓	✓	✓	✓
Support for switch SNMP OID	✓	✓	✓	✓	✓	✓	✓	✓
IP conflict detection and notification	✓	✓	✓	✓	✓	✓	✓	✓
FortiSwitch Cloud configuration	✓	✓	✓	✓	✓	✓	✓	✓
Security and Visibility								
802.1x port mode	✓	✓	✓	✓	✓	✓	✓	✓
802.1x MAC-based security mode	✓	✓	✓	✓	✓	✓	✓	✓
User-based (802.1x) VLAN assignment	✓	✓	✓	✓	✓	✓	✓	✓

Feature	GUI supported	112D-POE	FSR-124D	1xxE	200 Series 400 Series	500 Series	1024D 1048D 1048E	3032D 3032E
802.1x enhancements, including MAB	✓	✓	✓	✓	✓	✓	✓	✓
MAB reauthentication disabled	—	✓	✓	✓	✓	✓	✓	✓
open-auth mode	✓	✓	✓	✓	✓	✓	✓	✓
Support of the RADIUS accounting server	Partial	✓	✓	✓	✓	✓	✓	✓
Support of RADIUS CoA and disconnect messages	—	✓	✓	✓	✓	✓	✓	✓
EAP Pass-Through	✓	✓	✓	✓	✓	✓	✓	✓
Network device detection	—	—	✓	—	✓	✓	✓	✓
IP-MAC-Binding	✓	—	—	—	—	✓	✓	✓
sFlow	✓	✓	✓	—	✓	✓	✓	✓
Flow export	—	—	✓	—	✓	✓	✓	✓
ACL	—	—	✓	—	✓	✓	✓	✓
Multistage ACL	—	—	—	—	—	✓	✓	✓
Multiple ingress ACLs	—	—	✓	—	✓	✓	✓	✓
Schedule for ACLs	—	—	✓	—	✓	✓	✓	✓
DHCP snooping	✓	✓	✓	✓	✓	✓	✓	✓
Allowed DHCP server list	—	✓	✓	✓	✓	✓	✓	✓
DHCP blocking	—	—	✓	—	✓	✓	✓	✓

Feature	GUI supported	112D-POE	FSR-124D	1xxE	200 Series 400 Series	500 Series	1024D 1048D 1048E	3032D 3032E
IP source guard	—	—	✓	—	✓	—	—	—
Dynamic ARP inspection	✓	—	✓	✓	✓	✓	✓	✓
ARP timeout value	—	✓	✓	✓	✓	✓	✓	✓
Access VLANs (See Note 5.)	—	✓	✓	✓	✓	✓	✓	✓
VLAN tag by ACL	—	—	✓	—	✓	✓	✓	✓
RMON group 1	—	✓	✓	✓	✓	✓	✓	✓
Layer 2								
Link aggregation group size (maximum number of ports) (See Note 2.)	✓	8	8	8	8	24/48	24/48	24 64
LAG min-max-bundle	—	✓	✓	✓	✓	✓	✓	✓
IGMP snooping	✓	—	✓	✓	✓	✓	✓	✓
IGMP proxy	✓	—	✓	✓	✓	✓	✓	✓
IGMP querier	—	—	✓	✓	✓	✓	✓	✓
LLDP transmit	—	✓	✓	✓	✓	✓	✓	✓
LLDP-MED	—	✓	✓	✓	✓	✓	✓	✓
LLDP-MED: ELIN support	—	✓	✓	✓	✓	✓	✓	✓
LLPD-MED: PoE negotiation	—	✓	✓	✓	✓	✓	—	—
Per-port max for learned MACs	—	—	✓	✓	✓	✓	—	—

Feature	GUI supported	112D-POE	FSR-124D	1xxE	200 Series 400 Series	500 Series	1024D 1048D 1048E	3032D 3032E
MAC learning limit (See Note 4.)	—	—	✓	✓	✓	✓	—	—
Learning limit violation log (See Note 4.)	—	—	✓	✓	✓	✓	—	—
set mac-violation-timer	—	✓	✓	—	✓	✓	✓	✓
Sticky MAC	✓	✓	✓	✓	✓	✓	✓	✓
Total MAC entries	—	✓	✓	✓	✓	✓	✓	✓
MSTP instances	—	0-15	0-15	0-15	0-15	0-32	0-32	0-32
STP root guard	—	✓	✓	✓	✓	✓	✓	✓
STP BPDU guard	✓	✓	✓	✓	✓	✓	✓	✓
'forced-untagged' or 'force-tagged' setting on switch interfaces	—	✓	✓	✓	✓	✓	✓	✓
Private VLANs	✓	—	✓	—	✓	✓	✓	✓
Multi-stage load balancing	—	—	—	—	—	—	✓	✓
Priority-based flow control	—	—	—	—	—	✓	✓	✓
Storm control	✓	✓	✓	✓	✓	✓	✓	✓
Per-port storm control	✓	✓	✓	✓	✓	✓	✓	✓
MAC/IP/protocol-based VLAN assignment	✓	✓	✓	✓	✓	✓	✓	✓
Virtual wire	✓	—	✓	—	✓	✓	✓	✓
Loop guard	✓	✓	✓	✓	✓	✓	✓	✓

Feature	GUI supported	112D-POE	FSR-124D	1xxE	200 Series 400 Series	500 Series	1024D 1048D 1048E	3032D 3032E
Percentage rate control	✓	—	✓	—	✓	✓	✓	✓
VLAN stacking (QinQ)	—	—	✓	—	✓	✓	✓	✓
VLAN mapping	—	—	✓	—	✓	✓	✓	✓
SPAN	✓	✓	✓	✓	✓	✓	✓	✓
RSPAN and ERSPAN	—	—	✓	—	✓	✓	✓	✓
Layer 3								
Static L3/hardware-based routing	✓	—	✓	—	✓	✓	✓	✓
Software routing only	✓	✓	—	✓	—	—	—	—
OSPF (See Note 3.)	✓	—	—	—	✓	✓	✓	✓
RIP (See Note 3.)	✓	—	—	—	✓	✓	✓	✓
VRRP (See Note 3.)	✓	—	—	—	✓	✓	✓	✓
BGP (See Note 3.)	—	—	—	—	—	✓	✓	✓
IS-IS (See Note 3.)	—	—	—	—	—	✓	✓	✓
PIM (See Note 3.)	—	—	—	—	—	✓	✓	✓
Hardware-based ECMP	—	—	—	—	—	✓	✓	✓
Static BFD	—	—	—	—	—	—	✓	✓
DHCP relay feature	✓	—	✓	✓	✓	✓	✓	✓
DHCP server	—	—	—	—	4xx only	✓	✓	✓

Feature	GUI supported	112D-POE	FSR-124D	1xxE	200 Series 400 Series	500 Series	1024D 1048D 1048E	3032D 3032E
High Availability								
MCLAG (multichassis link aggregation)	Partial	—	—	—	✓	✓	✓	✓
STP supported in MCLAGs	—	—	—	—	✓	✓	✓	✓
IGMP snooping support in MCLAG	✓	—	—	—	✓	✓	✓	✓
Quality of Service								
802.1p support, including priority queuing trunk and WRED	✓	—	✓	—	✓	✓	✓	✓
QoS queue counters	—	—	✓	—	✓	✓	✓	✓
QoS marking	—	—	✓	—	✓	✓	✓	✓
Summary of configured queue mappings	✓	—	✓	✓	✓	✓	✓	✓
Miscellaneous								
PoE-pre-standard detection (See Note 1.)	—	✓	✓	FS-1xxE POE	✓	✓	—	—
PoE modes support: first come, first served or priority based (PoE models)	—	✓	✓	FS-1xxE POE	✓	✓	—	—
Control of temperature alerts	—	✓	✓	—	✓	✓	✓	✓
Split port	Partial	—	—	—	—	✓	1048E	✓

Feature	GUI supported	112D-POE	FSR-124D	1xxE	200 Series 400 Series	500 Series	1024D 1048D 1048E	3032D 3032E
TDR (time-domain reflectometer)/cable diagnostics support	✓	—	✓	—	✓	✓	—	—
Auto module max speed detection and notification	✓	—	—	—	—	✓	✓	—
Monitor system temperature (threshold configuration and SNMP trap support)	—	✓	✓	—	✓	✓	✓	✓
Cut-through switching	—	—	—	—	—	—	✓	✓
Add CLI to show the details of port statistics	—	✓	✓	✓	✓	✓	✓	✓
Configuration of the QSFP low-power mode	—	—	—	—	—	✓	1048D	✓
Energy-efficient Ethernet	—	✓	✓	✓	✓	✓	—	—

Notes

1. PoE features are applicable only to the model numbers with a POE or FPOE suffix.
2. 24-port LAG is applicable to 524D, 524-FPOE, 1024D, and 3032D models. 48-port LAG is applicable to 548D, 548-FPOE, and 1048D models.
3. To use the dynamic layer-3 protocols, you must have an advanced features license.
4. The per-VLAN learning limit and per-trunk learning limit are not supported on the 448D series.
5. Access VLANs are not supported on 108D-POE or 224D-POE.

Connecting multiple FSW-R-112D-POE switches

The FSW-R-112D-POE switch does not support interconnectivity to other FSW-R-112D-POE switches using the PoE ports. Fortinet recommends using the SFP ports to interconnect switches.

Upgrade information

FortiSwitch 6.2.1 supports upgrading from FortiSwitch 3.5.0 and later.

Cooperative Security Fabric upgrade

FortiOS 5.4.1 greatly increases the interoperability between other Fortinet products. This includes:

- FortiClient 5.4.1
- FortiClient EMS 1.0.1
- FortiAP 5.4.1
- FortiSwitch 3.4.2

The upgrade of the firmware for each product must be completed in a precise order so the network connectivity is maintained without the need of manual steps. Customers must read the following two documents prior to upgrading any product in their network:

- *Cooperative Security Framework - Upgrade Guide*
- *FortiOS 5.4.0 to 5.4.1 Upgrade Guide for Managed FortiSwitch Devices*

  This document is available in the Customer Support Firmware Images download directory for FortiSwitch 3.4.2.

Product integration and support

FortiSwitch 6.2.1 support

The following table lists 6.2.1 product integration and support information.

Web browser	• Microsoft Internet Explorer version 11 • Mozilla Firefox version 52 • Google Chrome version 56 Other web browsers may function correctly, but are not supported by Fortinet.
FortiOS (FortiLink Support)	FortiLink is supported on all FortiSwitch models when running FortiOS 5.4.0 and later and FortiSwitchOS 3.2.1 and later.

Resolved issues

The following issues have been fixed in 6.2.1. For inquiries about a particular bug, please contact Customer Service & Support.

Bug ID	Description
527565	When the MAC Authentication Bypass (MAC) is enabled, quarantining a host does not work.
528983	When IGMP snooping is enabled on a VLAN, reserved multicast packets are forwarded twice on the 124D, 224D-FPOE, 248D, 424D, 424D-POE, 424D-FPOE, 448D, 448D-POE, 448D-FPOE, 224E, 224E-POE, 248E-POE, 248E-FPOE models.
539823	The Cisco expansion module BEKEM cannot be powered up on a FortiSwitch unit.
556617	Rate-limiting a quarantined VLAN did not work.
559354, 559783	The IGMP snooping daemon crashes on the FortiSwitch-148E-POE model.
560414	After upgrading, the OSPF MD5 key configuration disappeared.

Known issues

The following known issues have been identified with 6.2.1. For inquiries about a particular bug or to report a bug, please contact Fortinet Customer Service & Support.

Bug ID	Description
414972	IGMP snooping might not work correctly when used with 802.1x Dynamic VLAN functionality.
382518, 417024, 417073, 417099, 438441	DHCP snooping and dynamic ARP inspection (DAI) do not work with private VLANs (PVLANs).
480605	When DHCP snooping is enabled on the FSR-112D-POE, the switched virtual interface (SVI) cannot get the IP address from the DHCP server. **Workarounds:** —Use a static IP address in the SVI when DHCP snooping is enabled on that VLAN. —Temporarily disable dhcp-snooping on vlan, issue the `execute interface dhcpclient-renew <interface>` command to renew the IP address. After the SVI gets the IP address from the DHCP server, you can enable DHCP snooping.
510943	The time-domain reflectometer (TDR) function (cable diagnostics feature) reports unexpected values. **Workaround:** When using the cable diagnostics feature on a port (with the `diagnose switch physical-ports cable-diag <physical port name>` CLI command), ensure that the physical link on its neighbor port is down. You can disable the neighbor ports or physically remove the cables.
520954	When a “FortiLink mode over a layer-3 network” topology has been configured, the FortiGate GUI does not always display the complete network.
542031	For the 5xx switches, the `diagnose switch physical-ports led-flash` command flashes only the SFP port LEDs, instead of all the port LEDs.
548783	Some models support setting the mirror destination to “internal.” This is intended only for debugging purposes and might prevent critical protocols from operating on ports being used as mirror sources.
561745	The FS-248E-FPOE model does not display ports 39-48 on the switch faceplate on the *System* > *Dashboard* page.

Bug ID	Description
572052	Backup files from FortiSwitchOS 3.x that have 16-character-long passwords fail when restored on FortiSwitchOS 6.x. In FortiSwitchOS 6.x, file backups fail with passwords longer than 15 characters. **Workaround:** Use passwords with a maximum of 15 characters for FortiSwitchOS 3.x and 6.x.