**FORTINET**

*High Performance Network Security*

# FortiSwitch - Release Notes

3.6.0

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# Change Log

| Date | Change Description |
|---|---|
| June 6, 2017 | Initial release. |
| June 19, 2017 | Added a known issue (bug 437482). |
| June 27, 2017 | Added a resolved issue (bug 415322). |
| July 5, 2017 | Changed the FortiSwitch 200 table to show that FSW-224D-POE does not support Multi-Chassis Link Aggregation. |
| June 6, 2018 | Added the "Common vulnerabilities and exposures" section. |
| September 18, 2018 | Added bug 510943 to the "Known Issues" section. |
| November 8, 2019 | Added bug 593993 to the "Known Issues" section. |

# Introduction

This document provides the following information for FortiSwitch 3.6.0 build: 0371.

- Supported models
- Special Notices
- Upgrade Information
- Product Integration and Support
- Resolved Issues
- Known Issues

See the Fortinet Document Library for FortiSwitch documentation.

## Supported models

FortiSwitch 3.6.0 supports the following models:

| | |
|---|---|
| **FortiSwitch** | FSW-108D-POE, FSW-124D, FSW-124D-POE, FSW-224D-FPOE, FSW-224D-POE, FSW-248D-FPOE, FSW-248D-POE,FSW-248D, FSW-424D, FSW-424D-FPOE, FSW-424D-POE, FSW-448D, FSW-448D-FPOE, FSW-448D-POE, FSW-524D-FPOE, FSW-524D, FSW-548D, FSW-548D-FPOE, FSW-1024D, FSW-1048D, FSW-3032D |
| **FortiSwitch Rugged** | FSR-112D-POE, FSR-124D |

## What's new in 3.6.0

This FortiSwitch 3.6.0 release offers the following new feature or and enhancements:

- MLAG (Multi-Chassis Link Aggregation)
- Dynamic Layer-3 protocols (OSPF, RIP, VRRP) (This features requires the advanced features license.)
- Route-map support
- Firmware Image Rotation (Dual firmware image support)
- TDR (Time-Domain Reflectometer) /cable diagnostics support
- Per-VAN MAC learning limit
- Sticky MAC on switch interfaces
- POE modes support: First Come First Serve or Priority Based (POE models)
- ACL: Egress Mask Action support
- Monitor System Temperature (Threshold configuration, SNMP trap support)
- 'forced-untagged' or 'force-tagged' setting on Switch interfaces
- Selective Packet Sampling to CPU (A useful diagnostic tool)

- Add CLI to show extended port statistics
- CLI display progress (%) during firmware upgrade

# Special Notices

## Supported Features

Features support by model.

### FortiSwitch 100

| Feature | FSW-108D-POE | FSR--112D-POE | FSW-124D | FSW-124D-POE | FSR-124D |
|---------|:---:|:---:|:---:|:---:|:---:|
| 48 port lag support | | | | | |
| 801.1x port mode | ✓ | ✓ | ✓ | ✓ | ✓ |
| 802.1x MAC base security mode | | | ✓ | ✓ | ✓ |
| ACL | | | ✓ | ✓ | ✓ |
| Auto module max speed detection & notification | | | | | |
| CPLD Software Upgrade Support for OS | | | | | |
| DHCP relay feature | | | ✓ | ✓ | ✓ |
| DHCP Snooping | | | ✓ | ✓ | ✓ |
| HTTP REST APIs | ✓ | ✓ | ✓ | ✓ | ✓ |
| HW based ECMP | | | | | |

| Feature | FSW-108D-POE | FSR--112D-POE | FSW-124D | FSW-124D-POE | FSR-124D |
|---|---|---|---|---|---|
| IGMP Snooping | | | ✓ | ✓ | ✓ |
| IP conflict detection & notification | ✓ | ✓ | ✓ | ✓ | ✓ |
| LAG min-max-bundle | ✓ | ✓ | ✓ | ✓ | ✓ |
| LLDP transmit | ✓ | ✓ | ✓ | ✓ | ✓ |
| LLDP-MED | ✓ | ✓ | ✓ | ✓ | ✓ |
| Loop-guard | ✓ | ✓ | ✓ | ✓ | ✓ |
| IP-MAC Binding | | | | | |
| POE-pre-standard detection | ✓ | ✓ | | ✓ | |
| QOS: 802.1p support | | | ✓ | ✓ | ✓ |
| SFLOW | ✓ | ✓ | ✓ | ✓ | ✓ |
| Software Routing Only | ✓ | ✓ | | | |
| Static BFD | | | ✓ | ✓ | ✓ |
| Static L3/HW based routing | | | ✓ | ✓ | ✓ |
| Storm Control | ✓ | ✓ | ✓ | ✓ | ✓ |
| Virtual Wire | | | ✓ | ✓ | ✓ |
| vlan tag by ACL | | | ✓ | ✓ | ✓ |
| vlan tag by MAC/IP/802.1x | ✓ | ✓ | ✓ | ✓ | ✓ |

| Feature | FSW-108D-POE | FSR--112D-POE | FSW-124D | FSW-124D-POE | FSR-124D |
|---|---|---|---|---|---|
| Implement Switch SNMP OID | ✓ | ✓ | ✓ | ✓ | ✓ |
| Support QSFP to 4*SFP splitter cable | ✓ | ✓ | ✓ | ✓ | ✓ |
| Support per port MAC-limit | ✓ | ✓ | ✓ | ✓ | ✓ |
| Multi-Chassis Link Aggregation | | | | | |
| Dynamic L3 Protocols (OSPF, RIP, VRRP) | | | | | |
| Dynamic ARP Inspection | | | ✓ | ✓ | ✓ |
| Firmware Image Rotation (Dual firmware image support) | | ✓ | ✓ | ✓ | ✓ |
| Time-Domain Reflectometer (TDR)/Cable Diagnostics Support | | | ✓ | ✓ | ✓ |
| Per-VAN MAC Learning Limit | | | ✓ | ✓ | ✓ |
| Sticky MAC on Switch Interfaces | | | ✓ | ✓ | ✓ |
| POE Modes support | ✓ | ✓ | ✓ | ✓ | ✓ |

| Feature | FSW-108D-POE | FSR--112D-POE | FSW-124D | FSW-124D-POE | FSR-124D |
|---|---|---|---|---|---|
| ACL: Egress Mask Action support | | | ✓ | ✓ | ✓ |
| Monitor System Temperature | ✓ | ✓ | ✓ | ✓ | ✓ |
| 'forced-untagged' or 'force-tagged' setting on Switch Interfaces | ✓ | ✓ | ✓ | ✓ | ✓ |
| Selective Packet Sampling to CPU | | | ✓ | ✓ | ✓ |
| Add CLI to show extended port statistics | ✓ | ✓ | ✓ | ✓ | ✓ |
| CLI display progress (%) during firmware upgrade | ✓ | ✓ | ✓ | ✓ | ✓ |

## FortiSwitch 200

| Feature | FSW-224D-POE | FSW-224D-FPOE | FSW-248D | FSW-248D-POE | FSW-248D-FPOE |
|---|---|---|---|---|---|
| 48 port lag support | | | ✓ | ✓ | ✓ |
| 802.1x port mode | ✓ | ✓ | ✓ | ✓ | ✓ |
| 802.1x MAC base security mode | | ✓ | ✓ | ✓ | ✓ |
| ACL | | ✓ | ✓ | ✓ | ✓ |

| Feature | FSW-224D-POE | FSW-224D-FPOE | FSW-248D | FSW-248D-POE | FSW-248D-FPOE |
|---|---|---|---|---|---|
| Auto module max speed detection & notification | | | | | |
| CPLD Software Upgrade Support for OS | | | | | |
| DHCP relay feature | | ✓ | ✓ | ✓ | ✓ |
| DHCP Snooping | | ✓ | ✓ | ✓ | ✓ |
| HTTPS REST APIs | ✓ | ✓ | ✓ | ✓ | ✓ |
| HW based ECMP | | | | | |
| IGMP Snooping | | ✓ | ✓ | ✓ | ✓ |
| IP conflict detection & notification | ✓ | ✓ | ✓ | ✓ | ✓ |
| LAG min-max-bundle | ✓ | ✓ | ✓ | ✓ | ✓ |
| LLDP transmit | ✓ | ✓ | ✓ | ✓ | ✓ |
| LLDP-MED | ✓ | ✓ | ✓ | | ✓ |
| Loop-guard | ✓ | ✓ | ✓ | ✓ | ✓ |
| MAC-IP Binding | | | | | |
| POE-pre-standard detection | ✓ | ✓ | | ✓ | ✓ |
| QOS: 802.1p support | | ✓ | ✓ | ✓ | ✓ |
| SFLOW | ✓ | ✓ | ✓ | ✓ | ✓ |

| Feature | FSW-224D-POE | FSW-224D-FPOE | FSW-248D | FSW-248D-POE | FSW-248D-FPOE |
|---|---|---|---|---|---|
| Software Routing Only | ✓ | | | | |
| Static BFD | | ✓ | ✓ | ✓ | ✓ |
| Static L3/HW based routing | | ✓ | ✓ | ✓ | ✓ |
| Storm Control | ✓ | ✓ | ✓ | ✓ | ✓ |
| Virtual Wire | | ✓ | ✓ | ✓ | ✓ |
| vlan tag by ACL | | ✓ | ✓ | ✓ | ✓ |
| vlan tag by MAC/IP/802.1x | ✓ | ✓ | ✓ | ✓ | ✓ |
| Implement Switch SNMP OID | ✓ | ✓ | ✓ | ✓ | ✓ |
| Support QSFP to 4*SFP splitter cable | ✓ | ✓ | ✓ | ✓ | ✓ |
| Support per port MAC-limit | ✓ | ✓ | ✓ | ✓ | ✓ |
| Multi-Chassis Link Aggregation | | ✓ | ✓ | ✓ | ✓ |
| Dynamic L3 Protocols (OSPF, RIP, VRRP) | ✓ | ✓ | ✓ | ✓ | ✓ |
| Dynamic ARP Inspection | ✓ | ✓ | ✓ | ✓ | ✓ |
| Firmware Image Rotation (Dual firmware image support) | | ✓ | ✓ | ✓ | ✓ |

| Feature | FSW-224D-POE | FSW-224D-FPOE | FSW-248D | FSW-248D-POE | FSW-248D-FPOE |
|---|---|---|---|---|---|
| Time-Domain Reflectometer (TDR)/Cable Diagnostics Support | ✓ | ✓ | ✓ | ✓ | ✓ |
| Per-VAN MAC Learning Limit | ✓ | ✓ | ✓ | ✓ | ✓ |
| Sticky MAC on Switch Interfaces | ✓ | ✓ | ✓ | ✓ | ✓ |
| POE Modes support | ✓ | ✓ | ✓ | ✓ | ✓ |
| ACL: Egress Mask Action support | ✓ | ✓ | | ✓ | ✓ |
| Monitor System Temperature | ✓ | ✓ | ✓ | ✓ | ✓ |
| 'forced-untagged' or 'force-tagged' setting on Switch Interfaces | ✓ | ✓ | ✓ | ✓ | ✓ |
| Selective Packet Sampling to CPU | ✓ | ✓ | ✓ | ✓ | ✓ |
| Add CLI to show extended port statistics | ✓ | ✓ | ✓ | ✓ | ✓ |
| Display Progress (%) during Firmware Upgrade. | ✓ | ✓ | ✓ | ✓ | ✓ |

## FortiSwitch 400

| Feature | FSW-424D | FSW-424D-POE | FSW-424D-FPOE | FSW-448D | FSW-448D-POE | FSW-448D-FPOE |
|---|---|---|---|---|---|---|
| 48 port lag support | | | | | | |
| 802.1x port mode | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 802.1x MAC base security mode | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| ACL | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Auto module max speed detection & notification | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| CPLD Software Upgrade Support for OS | | | | | | |
| DHCP relay feature | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| DHCP Snooping | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| HTTP REST API | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| HW based ECMP | | | | | | |
| IGMP Snooping | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| IP conflict detection & notification | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| LAG min-max-bundle | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| LLDP transmit | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

| Feature | FSW-424D | FSW-424D-POE | FSW-424D-FPOE | FSW-448D | FSW-448D-POE | FSW-448D-FPOE |
|---|---|---|---|---|---|---|
| LLDP-MED | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Loop-guard | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| MAC-IP Binding | | | | | | |
| POE-pre-standard detection | | ✓ | ✓ | | ✓ | ✓ |
| QOS: 802.1p support | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| SFLOW | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Software Routing Only | | | | | | |
| Static BFD | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Static L3/HW based routing | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Storm Control | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Virtual Wire | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| vlan tag by ACL | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| vlan tag by MAC/IP/802.1x | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Implement Switch SNMP OID | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Support QSFP to 4*SFP splitter cable | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Support per port MAC-limit | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Multi-Chassis Link Aggregation | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

| Feature | FSW-424D | FSW-424D-POE | FSW-424D-FPOE | FSW-448D | FSW-448D-POE | FSW-448D-FPOE |
|---|:---:|:---:|:---:|:---:|:---:|:---:|
| Dynamic L3 Protocols (OSPF, RIP, VRRP) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Dynamic ARP Inspection | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Firmware Image Rotation (Dual firmware image support) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Time-Domain Reflectometer (TDR)/Cable Diagnostics Support | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Per-VAN MAC Learning Limit | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Sticky MAC on Switch Interfaces | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| POE Modes support | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| ACL: Egress Mask Action support | ✓ | ✓ |  | ✓ | ✓ | ✓ |
| Monitor System Temperature | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 'forced-untagged' or 'force-tagged' setting on Switch Interfaces | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

| Feature | FSW-424D | FSW-424D-POE | FSW-424D-FPOE | FSW-448D | FSW-448D-POE | FSW-448D-FPOE |
|---|---|---|---|---|---|---|
| Selective Packet Sampling to CPU | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Add CLI to show extended port statistics | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| CLI display progress (%) during firmware upgrade | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

## FortiSwitch 500

| Feature | FSW-524D | FSW-524D-FPOE | FSW-548D | FSW-548D-FPOE |
|---|---|---|---|---|
| 48 port lag support | | | ✓ | ✓ |
| 802.1x port mode | ✓ | ✓ | ✓ | ✓ |
| 802.1x MAC base security mode | ✓ | ✓ | ✓ | ✓ |
| ACL | ✓ | ✓ | ✓ | ✓ |
| Auto module max speed detection & notification | ✓ | ✓ | ✓ | ✓ |
| CPLD Software Upgrade Support for OS | | | | |
| DHCP relay feature | ✓ | ✓ | ✓ | ✓ |
| DHCP Snooping | ✓ | ✓ | ✓ | ✓ |
| HTTP REST APIs | ✓ | ✓ | ✓ | ✓ |
| HW based ECMP | ✓ | ✓ | ✓ | ✓ |
| IGMP Snooping | ✓ | ✓ | ✓ | ✓ |
| IP conflict detection & notification | ✓ | ✓ | ✓ | ✓ |

| Feature | FSW-524D | FSW-524D-FPOE | FSW-548D | FSW-548D-FPOE |
|---|---|---|---|---|
| LAG min-max-bundle | ✓ | ✓ | ✓ | ✓ |
| LLDP transmit | ✓ | ✓ | ✓ | ✓ |
| LLDP-MED | ✓ | ✓ | ✓ | ✓ |
| Loop-guard | ✓ | ✓ | ✓ | ✓ |
| MAC-IP Binding | ✓ | ✓ | ✓ | ✓ |
| POE-pre-standard detection | | ✓ | | ✓ |
| QOS: 802.1p support | ✓ | ✓ | ✓ | ✓ |
| SFLOW | ✓ | ✓ | ✓ | ✓ |
| Software Routing Only | | | | |
| Static BFD | ✓ | ✓ | ✓ | ✓ |
| Static L3/HW based routing | ✓ | ✓ | ✓ | ✓ |
| Storm Control | ✓ | ✓ | ✓ | ✓ |
| Virtual Wire | ✓ | ✓ | ✓ | ✓ |
| vlan tag by ACL | ✓ | ✓ | ✓ | ✓ |
| vlan tag by MAC/IP/802.1x | ✓ | ✓ | ✓ | ✓ |
| Implement Switch SNMP OID | ✓ | ✓ | ✓ | ✓ |
| Support QSFP to 4*SFP splitter cable | ✓ | ✓ | ✓ | ✓ |
| Support per port MAC-limit | ✓ | ✓ | ✓ | ✓ |
| Multi-Chassis Link Aggregation | ✓ | ✓ | ✓ | ✓ |

| Feature | FSW-524D | FSW-524D-FPOE | FSW-548D | FSW-548D-FPOE |
|---|---|---|---|---|
| Dynamic L3 Protocols (OSPF, RIP, VRRP) | ✓ | ✓ | ✓ | ✓ |
| Dynamic ARP Inspection | ✓ | ✓ | ✓ | ✓ |
| Firmware Image Rotation (Dual firmware image support) | ✓ | ✓ | ✓ | ✓ |
| Time-Domain Reflectometer (TDR)/Cable Diagnostics Support | ✓ | ✓ | ✓ | ✓ |
| Per-VAN MAC Learning Limit | ✓ | ✓ | ✓ | ✓ |
| Sticky MAC on Switch Interfaces | ✓ | ✓ | ✓ | ✓ |
| POE Modes support | ✓ | ✓ | ✓ | ✓ |
| ACL: Egress Mask Action support | ✓ | ✓ | ✓ | ✓ |
| Monitor System Temperature | ✓ | ✓ | ✓ | ✓ |
| 'forced-untagged' or 'force-tagged' setting on Switch Interfaces | ✓ | ✓ | ✓ | ✓ |
| Selective Packet Sampling to CPU | ✓ | ✓ | ✓ | ✓ |
| Add CLI to show extended port statistics | ✓ | ✓ | ✓ | ✓ |
| CLI display progress (%) during firmware upgrade | ✓ | ✓ | ✓ | |

## FortiSwitch 1000

| Feature | FSW-1024D | FSW-1048D |
|---|:---:|:---:|
| 48 port lag support | | ✓ |
| 802.1x port mode | ✓ | ✓ |
| 802.1x MAC base security mode | ✓ | ✓ |
| ACL | ✓ | ✓ |
| Auto module max speed detection & notification | ✓ | ✓ |
| CPLD Software Upgrade Support for OS | ✓ | ✓ |
| DHCP relay feature | ✓ | ✓ |
| DHCP Snooping | ✓ | ✓ |
| HTTP REST APIs | ✓ | ✓ |
| HW based ECMP | ✓ | ✓ |
| IGMP Snooping | ✓ | ✓ |
| IP conflict detection & notification | ✓ | ✓ |
| LAG min-max-bundle | ✓ | ✓ |
| LLDP transmit | ✓ | ✓ |
| LLDP-MED | ✓ | ✓ |
| Loop-guard | ✓ | ✓ |
| MAC-IP Binding | ✓ | ✓ |
| POE-pre-standard detection | | |
| QOS: 802.1p support | ✓ | ✓ |
| SFLOW | ✓ | ✓ |
| Software Routing Only | | |
| Static BFD | ✓ | ✓ |
| Static L3/HW based routing | ✓ | ✓ |

| Feature | FSW-1024D | FSW-1048D |
|---|:---:|:---:|
| Storm Control | ✓ | ✓ |
| Virtual Wire | ✓ | ✓ |
| vlan tag by ACL | ✓ | ✓ |
| vlan tag by MAC/IP/802.1x | ✓ | ✓ |
| Implement Switch SNMP OID | ✓ | ✓ |
| Support QSFP to 4*SFP splitter cable | | ✓ |
| Support per port MAC-limit | ✓ | ✓ |
| Multi-Chassis Link Aggregation | ✓ | ✓ |
| Dynamic L3 Protocols (OSPF, RIP, VRRP) | ✓ | ✓ |
| Dynamic ARP Inspection | ✓ | ✓ |
| Firmware Image Rotation (Dual firmware image support) | ✓ | ✓ |
| Time-Domain Reflectometer (TDR)/Cable Diagnostics Support | ✓ | ✓ |
| Per-VAN MAC Learning Limit | ✓ | ✓ |
| Sticky MAC on Switch Interfaces | ✓ | ✓ |
| POE Modes support | ✓ | ✓ |
| ACL: Egress Mask Action support | ✓ | ✓ |
| Monitor System Temperature | ✓ | ✓ |
| 'forced-untagged' or 'force-tagged' setting on Switch Interfaces | ✓ | ✓ |
| Selective Packet Sampling to CPU | ✓ | ✓ |
| Add CLI to show extended port statistics | ✓ | ✓ |
| CLI display progress (%) during firmware upgrade | ✓ | ✓ |

## FortiSwitch 3000

| Feature | FSW-3032D |
|---|:---:|
| 48 port lag support | |
| 802.1x port mode | ✓ |
| 802.1x MAC base security mode | ✓ |
| ACL | ✓ |
| Auto module max speed detection & notification | |
| CPLD Software Upgrade Support for OS | |
| DHCP relay feature | ✓ |
| DHCP Snooping | ✓ |
| HTTP REST APIs | ✓ |
| HW based ECMP | ✓ |
| IGMP Snooping | ✓ |
| IP conflict detection & notification | ✓ |
| LAG min-max-bundle | ✓ |
| LLDP transmit | ✓ |
| LLDP-MED | ✓ |
| Loop-guard | ✓ |
| MAC-IP Binding | ✓ |
| POE-pre-standard detection | |
| QOS: 802.1p support | ✓ |
| SFLOW | ✓ |
| Software Routing Only | |
| Static BFD | ✓ |
| Static L3/HW based routing | ✓ |

| Feature | FSW-3032D |
|---|:---:|
| Storm Control | ✓ |
| Virtual Wire | ✓ |
| vlan tag by ACL | ✓ |
| vlan tag by MAC/IP/802.1x | ✓ |
| Implement Switch SNMP OID | ✓ |
| Support QSFP to 4*SFP splitter cable | ✓ |
| Support per port MAC-limit | ✓ |
| Multi-Chassis Link Aggregation | ✓ |
| Dynamic L3 Protocols (OSPF, RIP, VRRP) | ✓ |
| Dynamic ARP Inspection | ✓ |
| Firmware Image Rotation (Dual firmware image support) | ✓ |
| Time-Domain Reflectometer (TDR)/Cable Diagnostics Support | ✓ |
| Per-VAN MAC Learning Limit | ✓ |
| Sticky MAC on Switch Interfaces | ✓ |
| POE Modes support | ✓ |
| ACL: Egress Mask Action support | ✓ |
| Monitor System Temperature | ✓ |
| 'forced-untagged' or 'force-tagged' setting on Switch Interfaces | ✓ |
| Selective Packet Sampling to CPU | ✓ |
| Add CLI to show extended port statistics | ✓ |
| CLI display progress (%) during firmware upgrade | ✓ |

# Default Flow-Control state changed to disable

This change allows a port to ignore the pause frame it receives. You can still enable flow control on a port if so desired by using the following CLI commands:

## To enable flow control on *both* RX *and* TX:

```
S548DN4K16000360 # config switch physical-port
S548DN4K16000360 (physical-port) # edit port9
S548DN4K16000360 (port9) # set flow-control both
```

## To enable flow control on RX only:

```
S548DN4K16000360 # config switch physical-port
S548DN4K16000360 (physical-port) # edit port9
S548DN4K16000360 (port9) # set flow-control rx
```

## To enable flow control on TX only:

```
S548DN4K16000360 # config switch physical-port
S548DN4K16000360 (physical-port) # edit port9
S548DN4K16000360 (port9) # set flow-control tx
```

# 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 3.6.0 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 3.6.0 support

The following table lists 3.6.0 product integration and support information.

| Web browser | <ul><li>Microsoft Internet Explorer version 11</li><li>Mozilla Firefox version 52</li><li>Google Chrome version 56</li></ul>Other web browsers may function correctly, but are not supported by Fortinet. |
| --- | --- |

| FortiOS (FortiLink Support) | • 5.4.1 and later |
|---|---|
| | FortiSwitch must be upgraded first before upgrading FortiOS. Please read the *Upgrade Information > Cooperative Security Fabric Upgrade* section in this document. |
| | • 5.4.0 |
| | FortiSwitch models: FSW-108D-POE, FSW-124D, FSW-124D-POE, FSW-224D-POE, FSW-224D-FPOE, FSW-248D-POE, FSW-248D-FPOE, FSW-424D, FSW-424D-POE, FSW-424D-FPOE, FSW-448D, FSW-448D-POE, FSW-448D-FPOE, FSW-524D, FSW-524D-FPOE, FSW-548D, FSW-548D-FPOE, FSW-1024D, FSW-1048D, FSW-3032D, FSR-112D-POE |
| | FortiGate models: FG-60D, FG-60D-POE, FG-90D, FG-90-POE, FG-100D, FG-140D, FG-140D-POE, FG-140D-POE-T1, FG-200D, FG-240D, FG-280D, FG-280D-POE, FG-600C, FG-800C, FG-1000C, FG-1500D, FG-1200D, FG-3700D, FG-3700DX |
| | FortiWiFi models: FWF-60D, FWF-60D-POE, FWF-90D, FWF-90D-POE |
| | • 5.2.3 and later |
| | FortiSwitch models: FSW-108D-POE, FSW-124D, FSW-124D-POE, FSW-224D-POE, FSW-224D-FPOE, FSR-112D-POE |
| | FortiGate models: FG-60D, FG-90D, FG-100D, FG-140D, FG-200D, FG-240D, FG-280D, FG-600C, FG-800C, FG-1000C, FG-60D-POE, FG-90D-POE, FG-140D-POE, FG-140D-POE-T1, FG-280D-POE |
| | FortiWiFi models: FWF-60D, FWF-60D-POE, FWF-90D, FWF-90D-POE |
| | • 5.2.2 |
| | FortiSwitch models: FSW-224D-POE |
| | FortiGate models: FG-90D, FG-90D-POE, FG-100D, FG-140D, FG-140D-POE, FG-140D-POE-T1, FG-200D, FG-240D, FG-280D, FG-280D-POE, FG-600C, FG-800C, FG-1000C |
| | FortiWiFi models: FWF-90D, FWF-90D-POE |

# Resolved Issues

The following issues have been fixed in 3.6.0. For inquiries about a particular bug, please contact Customer Service & Support.

| Bug ID | Description |
| --- | --- |
| 377609 | The PoE port does not return to link up when you remove and insert the link. |
| 393856 | LLDP-MED does not time out quickly enough on FSR-124D. |
| 393622 | `get switch dhcp-snooping status` does not report correctly snoop-enabled VLANs. |
| 408113 | The local user failed authentication when eap-passthru is enabled by default. |
| 414802 | IGMP-Snooping: Traffic flooding to newly assigned VLAN source port. |
| 414570 | 802.1 does not clean up completely when adding 802.1x interface to the trunk port. |
| 0408290 | FSW-224D-POE Behavior as POE PD<br><br>FSW-224D-POE POE ports should not be connected to another PSE device. FSW-224D-POE will act as PD if connected to PSE and main power is removed. Additionally some POE ports maybe be unpowered if acting as a PD. |
| 0410200 | 802.1x: vlan programming received from radius server can be overwritten by CLI configuration.<br><br>Resolved when a vlan is learned from radius authentication and pro-grammed to switch port, it could be overwritten by CLI configuration. |
| 0414570 | 802.1 does not clean up fully when adding 802.1x interface to the trunk port. |
| 0408113 | FortiSwitch was unable to support multiple remote RADIUS server groups while in FortiLink mode. |
| 0404319 | FortiSwitch would report an error when switching from switch-management mode to local management mode |
| 0394256 | (802.1x feature interaction and session flush) Enabling other features on an authorized port would flush the existing session. |

| Bug ID | Description |
|--------|-------------|
| 0402037 | Lack of MAB support on FSW-108D-POE, FSW-224D-POE,and FSR-112D-POE platforms. |
| 0414060 | DHCP snooping feature did not work with the 802.1x dynamic vlan assignment. |
| 0401465 | 802.1x limits the maximum number of MAB concurrent sessions to 10 per port. |
| 0365835 | FortiSwitch was unable to monitor system temperature and generate log and SNMP trap if temperature crosses a configurable threshold. |
| 415322 | LLPD had a periodic memory leak every 30 seconds, which could add up to a megabyte every week. |

# Common vulnerabilities and exposures

FortiSwitch 3.6.0 is no longer vulnerable to the following CVE references:

- CVE-2017-3731
- CVE-2017-3732
- CVE-2016-7055

# Known Issues

The following known issues have been identified with 3.6.0. For inquiries about a particular bug or to report a bug, please contact Fortinet Customer Service & Support.

| Bug ID | Description |
|--------|-------------|
| 393845 | Newly created static MAC address may not be get added in MAC address table when 802.1x feature is enabled on same interface. |
| 393186 | FSW does NOT allow timezones 00, 76, 82 and 86. |
| 410200 | 802.1x: VLAN programming received from a RADIUS server can be overwritten by CLI configuration. <br><br> **Workaround:** Do NOT manually change the VLAN assignment on a port that is in an authentication state. |
| 391607 | Switch does not send gratuitous ARP for IP conflict when the system boots up and adds a new switch virtual interface (SVI). |
| 414972 | IGMP snooping may not work correctly when used with 802.1x Dynamic VLAN functionality. |
| 416655 | IGMP snooping may not work correctly when used with 802.1x Dynamic VLAN functionality. |
| 417024 | DHCP client lease time on PVLAN is inaccurate. |
| 417073 | DHCP MAC address client is learned on Primary VLAN instead of the isolated VLAN. |
| 417099 | The system shows no DAI stats entry on PVLAN ports. |
| 422621 | Enabling IGMP snooping on a VLAN would disable Layer-3 functions, e.g., OSPF, RIP and VRRP. |
| 423161 | The system is unable to ping two IPv6 neighbors using the VLAN system interface. |
| 423940 | In some cases, the MAC address and VLAN ID are shown (diagnostic command) twice on the same interface after splitting ports. |
| 424096 | (Access VLAN) A Host in the same access VLAN can receive IGMP messages from other hosts. |

| Bug ID | Description |
|--------|-------------|
| 433900 | The pause frames may cause the switch to stop sending STP, LLDP, and LACP packets to other ports of the switch.<br><br>**Workaround:** Disable flow-control on physical-port(s). |
| 434680 | If you have a sticky-MAC address on an interface which is moved to split-port mode, some entries may remain.<br><br>**Workaround:** Clear sticky-MAC address before changing to split-port mode. |
| 434956 | (GUI_QOS) Egress policy may display ' -1' as max-rate. Please verify your setting from CLI. |
| 380239 | IGMP-Snooped multicast groups are not immediately flushed out of the snooping table when the querier port is shut down. |
| 418204 | DHCP snooping feature creates an entry even if server sends DHCPNAK to the client. |
| 437482 | When the 3.6.0 FortiSwitchOS CLI is used to upgrade the BIOS, the FortiSwitch becomes completely nonfuntional.<br><br>**Workaround:** Enter BIOS and then upgrade from within it. |
| 510943 | 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. |
| 593993 | When the switch-controller.global.https-image-upgrade is enabled, the FS-108D-POE/FS-224D-POE might fail to upgrade.<br><br>**Workaround:** Disable https-image-upgrade. |