

FS S5800-8TF12S Switch

Release Note

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1 Introduction

This document describes the release information about FSOS-v5.3.6, such as new features, command line changes, behavior changes, fixed problems, etc.;

Remind you, before loading FSOS-v5.3.6 firmware, please backup configuration file to avoid potentials risks.

2

Version Information

2.1 Basic Information

Current Release	FSOS-s5800-8tf12s-v5.3.6
Applicable Product	S5800-8TF12S
Applicable Customer	General
Category	Official release

2.2 Release History

Table1 Version historical information

Current Release	Baseline Release	Release Date	Category	Important changes based on baseline version
FSOS-V5.3.6	FSOS-V5.3.5	2018-01-31	Official release	--Sflow upgraded to Version 5.0 --Support ICMP debug --WebUI optimized --BGP optimized
FSOS-V5.3.5	FSOS-V5.3.4	2017-09-31	Official release	--Support OSPF multi network models --Support OSPF neighbor establishing based on GRE Tunnel Interface --Support to record MAC flapping in syslog --Telnet/SSH support to configure Client source IP --Support to configure errdisable via WebUI

				--IP SLA optimized --Syslog optimized
FSOS-V5.3.4	FSOS-V5.3.3	2017-08-15	Official release	--Support mirror packets to CPU --Support to display packets received/sent by CPU --Support OSPF secondary IP address --Support to display management port detail --Support LLDP Configuration MIB node --PBR function optimized --Multi-link function optimized --PRC-API function optimized
FSOS-V5.3.3	FSOS-V5.3.2	2017-04-26	Official release	--Syslog optimized --Support HTTP/HTTPS independent switch --Vlan name description optimized --WebUI optimized --Agg interface optimized --ERPS optimized --Fix some process issues
FSOS-V5.3.2	FSOS-V5.3.1	2016-12-26	Official release	--Syslog optimized --Support MLAG orphan port --Support Fast PING --Support 10G port auto-negotiation speed --ERPS optimized --GRE tunnel optimized --Storm control optimized
FSOS-V5.3.1	FSOS-V5.2.36.13	2016-10-17	Official release	--Support to modify Telnet\SSH port number --Fix start-config file generating issue --Flowcontrol optimized --Fan operation mode optimized --RPC-API optimized --MLAG optimized
FSOS-V5.2.36.15	FSOS-V5.2.36.14	2016-07-25	Official release	--Memory management optimized

FSOS-V5.2.36.14	FSOS-V5.2.36.13	2015-07-12	Official release	--DHCP server function optimized
FSOS-V5.2.36.13	FSOS-V5.2.36.12	2015-05-12	Official release	--Fix memory leak issue --Fix ports shutdown, reopen issue --.core file optimized
FSOS-V5.2.36.12	FSOS-V5.2.36.10	2015-11-30	Official release	--ACL support 512 cmap --Fix console port connection issue --Fix Mac-learning display issue --Fix PIPE FD issue
FSOS-V5.2.36.10		2015-10-12	Official release	--Support flow redirection --Support mirror port in transmission --LACP optimized

2.3 Hardware Supported



Notice

Before upgrade, please double-check the version is compatible with Hardware.

Table 2 Hardware supported

Series	Name
Hardware model (T means 1G port, F means 1G optical port, S means 10G optical port, Q means 40G optical port, C means 100G optical port)	S5800-8TF12S
BOOTROM version	Switch pre-installed version(version can be displayed by CLI 'show version')
EPLD version	Switch pre-installed version (version can be displayed by CLI 'show version')
Remark	N/A



Example to check firmware version, hardware model, BootRom and EPLD version. Some earlier switch's BootRom, EPLD version may be different, but will not impact upgrade.

```
S5800# show version
NetworkOS Software, Switch, Version 5.3.2
Copyright (C) 2017 Switch Vendor Inc. All rights reserved.
The current running image is flash:/boot/FSOS-s5800-8tf12s-v5.3.2.r.bin-Firmware
version

S5800 uptime is 0 days, 21 hours, 12 minutes
Hardware Type is 8TF12S --Hardware version
Hardware Version is 2.0
SDRAM size 1024M
Flash size 2048M
EPLD Version is 1.2 --- EPLD version
BootRom Version is 7.1.2 ---BootRom version
System serial number is E101ZB14202C
```

2.4 Version Compatibility

Table 3 Upgrade compatibility table

Current Version	Historical Version	Compatibility
V5.3.6	All previous versions	YES

2.5 Upgrade Precaution

- ✚ Not unless special notice, UBOOT and EPLD version do not need to upgrade.
- ✚ Please double check MD5 value is identical with the value provided by FS, to prevent file damaged during transmission.
- ✚ Please carefully check the firmware version is compatible with hardware model.
- ✚ Please backup configuration file before upgrade.
- ✚ Please keep previous firmware until all procedures finished, if need to rollback.

3

New Features Specification

New features added to baseline version

3.1 FSOS-V5.3.6

New features	Specification
Support ICMP debug	N/A
WebUI optimized	Support to configure web timeout, and clear web users

3.2 FSOS-V5.3.5

New features	Specification
Support OSPF multi network models	Support broadcast, non-broadcast, P2P, P2MP models
Support OSPF neighbor establishing by GRE Tunnel Interface	N/A
Support to record MAC flapping in syslog	Syslog will make a record, when MAC flapping detected
Telnet/SSH support to configure Client source IP	N/A
Support to configure errdisable via WebUI	Add new web page to configure errdisable parameters
IP SLA optimized	Support to configure more parameters
Syslog optimized	By using 'logging sync' command, system will save immediately the log in buffer to syslog file

3.3 FSOS-V5.3.4

New features	Specification
Mirror to CPU	Support to mirror packets to CPU by port or by VLAN, and save as .pcap format.
Reset factory config	Support CLI and WEBUI to reset factory config
CPU receive/send packets NUM and rate statistic	Show cpu traffic-statistics receive/transmit
Display management port detail	Show management interface
OSPF support secondary IP address	OSPF support to assert secondary IP
LLDP Configuration MIB node	Support LLDP standard SNMP node
Multi-link function optimized	N/A

3.4 FSOS-V5.3.3

New features	Specification
Syslog optimized	Syslog will record aged ARP item
Telnet/SSH inside VRF	Address inside VRF can be managed by Telnet/SSH
WebUI optimized	NA

3.5 FSOS-V5.3.2

New Features	Specification
MLAG orphan port	MLAG support orphan port scenario
Fast PING	Support 10ms ping

3.6 FSOS-V5.3.1

New Features	Specification
Support Telnet/SSH to modify port number	N/A
10G port support manual/auto speed negotiation	10G port support to configure 10G or 1G speed 10G port support auto-negotiation speed

Logging sever support to define source IP or source interface	NA
---	----

3.7 FSOS-V5.2.36.15

N/A

3.8 FSOS-V5.2.36.14

N/A

3.9 FSOS-V5.2.36.13

N/A

3.10 FSOS-V5.2.36.12

N/A

3.11 FSOS-V5.2.36.10

New Features	Specification
Mirror destination port support to transmit flow	NA
Flow redirection	NA

4 CLI Changes Specification

New CLI changes based on the baseline version

4.1 FSOS-V5.3.6

Original format	New format	Remark
cpu-traffic-statistics time	cpu-traffic-statistics time	CLI moved to config mode

4.2 FSOS-V5.3.5

N/A

4.3 FSOS-V5.3.4

N/A

4.4 FSOS-V5.3.3

N/A

4.5 FSOS-V5.3.2

N/A

4.6 FSOS-V5.3.1

N/A

4.7 FSOS-V5.2.36.15

N/A

4.8 FSOS-V5.2.36.14

N/A

4.9 FSOS-V5.2.36.13

N/A

4.10 FSOS-V5.2.36.12

N/A

4.11 FSOS-V5.2.36.10

N/A

5

New Behaviors Specification

New behaviors based on the baseline version

5.1 FSOS-V5.3.6

Item	Earlier Behavior	New Behavior
Hostname name rules	Need to start with letters and stop with numbers or letters	Without limitation
BGP optimized	AS number support only 2 bits	AS number extended to 4 bits, support BGP authentication

5.2 FSOS-V5.3.5

Item	Earlier Behavior	New Behavior
Multi destination mirror group	Do not support mirror by source vlan	Support mirror by source vlan
Show diagnostic-information	Without 'show memory-threshold, show hal message buffer'	Include 'show memory-threshold, show hal message buffer'

5.3 FSOS-V5.3.4

Item	Earlier Behavior	New Behavior
IS-IS packets	Packets drop by default	Packets transmit by default
RPC-API	100 CLI per command	1024 CLI per command
Show diagnostic-information	NA	It will display the .core file in

		sys-diag folder
ACL statistic	Count the packets dropped by policer rules	Users can decide to count the dropped packets or not(refer to CLI doc for details)

5.4 FSOS-V5.3.3

Item	Earlier Behavior	New Behavior
Vlan name description	Character limit is 16	Character limit is up to 31
Syslog optimized	Do not record aged ARP item	Record aged ARP item
Syslog optimized	Record only the log in config mode	Record the log in all mode
WebUI optimized	Mac ACL do not support to configure untag-vlan parameter	Mac ACL support untag-vlan configuration
HTTP/HTTPS independent switch	Only one switch for HTTP/HTTPS	Two independents switches for HTTP and HTTPS
Agg interface optimized	Agg max group is 31	MLAG max group is 55

5.5 FSOS-V5.3.2

Item	Earlier Behavior	New Behavior
Tunnel interface IP address	Allow to configure IPv4 32 bit mask, IPv6 128 bit mask	Don't allow to configure IPv4 32 bit mask, IPv6 128 bit mask
GRE tunnel mac address	GRE tunnel with mac address	GRE tunnel has without mac address
Storm control	NA	Support to configure pps 1000
Tunnel port recording	Syslog recording condition depends on tunnel port status	Syslog recording condition not depends on tunnel port status
Indicator light flicker frequency	NA	flicker frequency improved

5.6 FSOS-V5.3.1

Item	Earlier Behavior	New Behavior
Fan operating mode	Temperature \geq 50° C →working Temperature $<$ 50° C → Stop	Temperature \geq 50° C →working Temperature $<$ 50° C → 20% speed

		working
Flowcontrol on agg member port	NA	Support to configure flowcontrol on agg member port
Optical port switching time optimized	N/A	N/A

5.7 FSOS-V5.2.36.15

N/A

5.8 FSOS-V5.2.36.14

N/A

5.9 FSOS-V5.2.36.13

Item	Earlier Behavior	New Behavior
.core file	.core file is under flash folder	.core file is under sys-diag folder

5.10 FSOS-V5.2.36.12

Item	Earlier Behavior	New Behavior
ACL class-map	62 cmap max	512 cmap max

5.11 FSOS-V5.2.36.10

N/A

6

Fixed Problems

Fixed problems based on baseline version

6.1 FSOS-V5.3.6

Problem Description	Occurred Condition
When LAG member changed, load balance may work abnormally in special condition.	LAG member changes
IP_SLA timeout	In some special condition
Password configuration failed	In some special condition
L3VPN may impact BGP	Interface ports flapping

6.2 FSOS-V5.3.5

Problem Description	Occurred Condition
Syslog sever IP unreachable will cause CPU usage high	Incorrect syslog sever IP
Do not support 'Openssh' tool	N/A
MLAG cannot isolate igmp query parckets	N/A
SNMP ACL do not support extend ACL	N/A

6.3 FSOS-V5.3.4

Problem Description	Occurred Condition
---------------------	--------------------

Management port up or down events will record in syslog file with better method	N/A
LLDP module crash in some special condition	Vlan name in packets is not on standard format
Some BHM mechanism optimized	N/A
PBR do not function after reboot system	In some special condition
L2 protocol do not function	Remove vlan 1 from trunk port
PRC-API	In some special condition, CPU will be occupied 100%

6.4 FSOS-V5.3.3

Problem Description	Occurred Condition
ERPS secondary port is still block, when primary port is down	NA
MLAG cannot establish neighborhood	MLAG neighborhood aborted
MLAG synchronized mac address can be aged	Peer link is not agg interface
Hsrp process issue	NA
ERPS blocked interface can learn mac address	NA
ERPS configuration missed	Remove control VLAN from primary or secondary interface
Agg group reduce to 1-31	Enable dynamic-load-balance

6.5 FSOS-V5.3.2

Problem Description	Occurred Condition
ERPS link recover cause a loop	In some special condition
After delete tunnel mode, tunnel status is still up	NA
GRE tunnel issue	NA
10G optical port with 100M SFP-T auto negotiation issue	NA

6.6 FSOS-V5.3.1

Problem Description	Occurred Condition
Add one agg port to MLAG interface, its learned fdb will synchronize to other member port	NA
SNMP ifAlias node getting interruption	One port has no description in a continuous ports
Start-config file cannot be generated when flash is full	NA
RPC-API cause python CPU accrued 100%	To run 'cpu-traffic-limit reason fwd-to-cpu rate'
CCM communication issue	In some special condition
Voice vlan work abnormally under IPv6 profile	NA

6.7 FSOS-V5.2.36.15

Problem Description	Occurred Condition
Memory management optimized	NA

6.8 FSOS-V5.2.36.14

Problem Description	Occurred Condition
DHCP server optimized	N/A

6.9 FSOS-V5.2.36.13

Problem Description	Occurred Condition
Some shutdown port will reopen	NA
RPC-API cause memory leak	NA
DHCP client receive IP address with obvious delay	NA

6.10 FSOS-V5.2.36.12

Problem Description	Occurred Condition
---------------------	--------------------

'Show policy-map' CLI cannot display mac-learning status	Class-map statistic do not enable
Console port timeout will block user rejoin	NA
Fork process occur pipe fd	NA

6.11 FSOS-V5.2.36.10

Problem Description	Occurred Condition
Encrypt letter length will cause generate device identifier error	NA
LACP member status is not identical with STP status	STP disable on agg port

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Version Restrictions And Cautions

All features that asserted to support are in product Spec manual, for some features or CLI already exist in switches but not declared in Spec manual, we consider them as testing features, so its functions are not guaranteed. Please do not use these kinds of features in production network.

A part of advanced features are under controlled by License file, users cannot active these features without license authorization, the features included: OSPF, PIM_SM, IGMP, PBR, VRF, BGP, QINQ, MVR, ERPS, MEF, ETHOAM, EXTEN D_ACL, BFD, IPv6, OSPF6, PIM_SM6, MVR6, RIPNG, TUNNEL_V6, PIM_DM ;

After enable hardware FDB learning, errdisable reason fdb-loop will not take effect. If you do not require high speed FDB learning, we suggest choosing software FDB learning by default, no need to active hardware learning. When mirror destination port is down, the port statistic will still grow, but that do not impact function

8 Operating System Upgrade

Step 1 Copy the image (.bin) to switch **flash:/boot**

```
FS# copy mgmt-if ftp://admin:admin@10.10.25.33/ FSOS-s5800-8tf12s-v5.3.4.r.bin.  
flash:/boot
```



Upload the firmware provided by FS to TFTP\FTP\U, and then copy it to the switch flash:/boot from TFTP\FTP\U.

Step 2 Set the target firmware as next boot firmware.

For example, set FSOS-s5800-8tf12s-v5.3.4.r.bin as the target version to upgrade.

```
FS# boot system flash:/boot/FSOS-s5800-8tf12s-v5.3.4.r.bin
```

Then the switch will ask to confirm the setting. You can enter 'y' to continue, or enter 'n' to cancel it.

```
Are you sure to use flash:/boot/FSOS-s5800-8tf12s-v5.3.4.r.bin as the next boot image?  
[confirm]
```

Step 3 Verify the next boot version.

Use **show boot** command to verify if the next boot version is correct

```
FS# show boot  
The current boot image version is: S5800-5.3.2  
The current running image is: flash:/boot/FSOS-s5800-8tf12s-v5.3.2.r.bin  
The next time boot image version is: v5.3.4  
The next running image is: flash:/boot/FSOS-s5800-8tf12s-v5.3.4.r.bin
```

Step 4 Restart the switch.

Step 5 Check if the switch has been successfully upgraded.

```
Switch# show version  
FSOS Software, S5800, Version 5.3.4  
Copyright (C) 2004-2013 FS Networks Inc. All rights reserved.  
The current running image is flash: /boot/FSOS-s5800-8tf12s-v5.3.4.r.bin  
  
Switch uptime is 17 days, 0 hours, 39 minutes  
Hardware Type is 8TF12S
```

```
Hardware Version is 2.0  
SDRAM size 1024M  
Flash size 2048M  
EPLD Version is 1.2  
BootRom Version is 7.1.2  
System serial number is E128GD173005
```

9 FS Authentication Interface Module

To ensure device compatibility, and make it work at its optimum performance, we recommend that you use these FS authentication interface module.

Form9-1 FS Authentication Interface Modul

Brand	Type	Center Wavelength	Interface Type	Support Cable	Transmission Distance	PN No.
Allray	1G optical module	1310nm	LC	LR	10km	ATR-S0201D
		850nm	LC	SR	500m	ATR-S0200D
Gigalight	1G optical module	850nm	LC	SR	550m	SFP-8524-S5CD
		1310nm	LC	LR	20km	GP-3124-L2CD
	40G/4*10G AOC	850nm	/	SR	100m	GQP-MD0400-005C
	10/100/1000 Photoelectric module	/	RJ45	/	/	GE-GB-P1RC
ATOP	10G optical module	850nm	LC	SR	300m	APSP85B33CDL03
Innolight	10G optical module	850nm	LC	SR	300m	TR-PX85S-N00
		1310nm	LC	LR	10km	TR-PX13L-NBK
	40G optical module	850nm	MPO	SR	100m	TR-QQ85S-N00
	100G optical module	1310nm	LC	LR	10km	TR-FC13L-N00
		850nm	MPO	SR	100m	TR-FC85S-N00
	10G AOC	850nm	/	SR	100m	TF-PX003-N00
		850nm	/	SR	100m	TF-PX010-N00
	40G AOC	850nm	/	SR	100m	TF-QQ003-N00
850nm		/	SR	100m	TF-QQ010-N00	
Finisar	10G optical module	850nm	LC	SR	300m	FTLX8571D3BCL
	40G optical module	850nm	MPO	SR	150m	FTL410QE3C
	100G optical module	1310nm	LC	LR	10km	FTLC1151RDPL
		850nm	MPO	SR	100m	FTLC9551REMP

FS	10G optical module	850nm	LC	SR	300m	SPF+-85192-SRC
		1310nm	LC	LR	10km	SPF+-31192-LRC
	40G optical module	850nm	MPO	SR	100m	CQS-MP0400-SR4C
		1310nm	LC	LR	2km	GQM-SP0400-IR4C
		1330nm	LC	LR	10km	GQS-SP0400-LR4CP
Avago	100G optical module	850nm	MPO	SR	100m	AFBR-89CDDZ
万兆通	10G DAC	/	/	/	3m	SFP-H10G-CU3M
	40G DAC	/	/	/	1m	QSFP-H40G-CU1M
		/	/	/	3m	QSFP-H40G-CU3M
	40G/4*10G DAC	/	/	/	3m	QSFP-H40G-CU3M
LEONI	10G DAC	/	/	/	3m	L45593-C100-D30
	40G DAC	/	/	/	0.5m	L45593-D117-D5
		/	/	/	1m	L45593-D117-D10
		/	/	/	3m	L45593-D117-D30
	40G/4*10G DAC	/	/	/	0.5m	L45593-D177-D5
		/	/	/	1m	L45593-D177-D10
Amphenol	100G AOC	850nm	/	SR	100m	FOQQD33P00010
		850nm	/	SR	100m	FOQQD33P00020

If you use interface modules that are not certified by FS, you may have the following problems:

- 1) Some unauthenticated interface modules do not conform to the MSA protocol, causing a port to be inserted into the optical module and its adjacent port cannot be inserted into the optical module. The golden finger of some unauthenticated interface modules are not reasonable, resulting a short circuit in the interface.
- 2) Some unauthenticated optical modules are not properly designed in the data bus, which can lead to the abnormal data of the device bus, and even the data on the data bus cannot be read again.
- 3) Some unauthenticated optical modules are not reasonable in temperature monitoring, leading to incorrect temperature alarm information on the system. Or the operating temperature range of the interface module does not meet the requirements, and the low power of the high temperature times even leads to business interruption.
- 4) Some unauthenticated optical modules are not reasonable in register setting, so the data bus cannot read the parameters and diagnostic information correctly.
- 5) Some unauthenticated optical modules are not designed to satisfy EMC, not only meet the electromagnetic interference, but also influence the surrounding equipments.