

S5850 and S8050 Series Switches FSOS Software Release Notes

Models: S5850-48S6Q, S5850-32S2Q, S5850-48S2Q4C, S5850-48T4Q, S8050-20Q4C

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1. Introduction

This document describes the release information about S5850-and-S8050-Series-Switches-FSOS-V7.4.3.r3.r, such as new features, command line changes, behavior changes, fixed problems, etc.;

Please remind, before loading S5850-and-S8050-Series-Switches-FSOS-V7.4.3.r3.r firmware, please backup configuration file to avoid potentials risks.

2. Version Information

2.1 Basic Information

Current Release	S5850-and-S8050-Series-Switches-FSOS-V7.4.3.r3.r.bin
Applicable Customer	General
Category	Official Release
MD5	A9F597C95354F1F6FDE8B46B89DEEAB1

2.2 Release History

Current Release	Baseline Release	Release Date	Category	Important Changes Based on Baseline Version
FSOS-v7.4.3.r3.r	FSOS-V7.4.1	2022-07-20	Official release	rpc-api optimize Bug fixes for higher stability
FSOS-v7.4.1	FSOS-v7.3.3.r	2021-11-29	Official Release	Support show used state of interface buffer Optimize ECMP functionality Optimize MLAG functionality Bug fixes for higher stability
FSOS-v7.3.3.r	FSOS-V7.3.2	2021-05-31	Official Release	Support VRF for OSPFv3 Support IPv6 address with 127 bit mask Support VRF for PBR Support to send syslog to server with TCP connection Support to set SNMP community with special character Support Dot1x access account and keep alive Support to distribute a MPLS label for default-route (FEC 0.0.0.0/0) Bug fixes for higher stability
FSOS-v7.3.0.1	FSOS-v7.3	2021-04-07	Official Release	For the version that does not support the 2.5G rate, it can support 4 rates of 10G, 5G, 1G, and 100M; for the version that supports the 2.5G rate, it can support 3 rates of 10G/5G/2.5G (1G/100M is not supported). Support voltage monitoring, no perception at the functional level, mainly due to technical perfection, avoiding the limit value protection of the power supply environment in different scenarios. Upgrade phy's firmware, mainly to solve the problem of congestion and complete cut-off under 5G speed. Fix the problem that the Smart config function cannot be used. Synchronize the protocol stack SDK version to the latest version 7.3, and update the protocol stack function to the latest.
FSOS-V7.2.5.r1	FSOS-V7.2.5	2020-10-19	Official Release	Bug fixes for higher stability
FSOS-V7.2.5	FSOS-V7.2.4.r2	2020-09-08	Official Release	Support to configure route aggregation in bgp ipv4 vrf address family Support new SNMP OIDs RPC-API optimized Support trap for BFD status change Support to prevent DHCP flooding attacking Support transmit multicast packets via VxLAN tunnels Support URPF loose mode Support VLAN Storm Control Aggregation ports support weighted load-balance QoS profile optimized 10G port of S5850-48S6Q behavior changes when switching to 2.5G mode Support aggregation port member with different speed Bug fixes for higher stability
FSOS-V7.2.4.r2	FSOS-V7.2.4	2020-07-24	Official Release	N/A

Current Release	Baseline Release	Release Date	Category	Important Changes Based on Baseline Version
FSOS-V7.2.4	FSOS-V7.2.3.r1	2020-05-27	Official Release	<ul style="list-style-type: none"> Support overlay and port-security on same interface Support DHCPv6 snooping option 37 Support carrier down hold time PBR resource adjusted Support vlan translation feature to edit the VLAN tags of APP/PING packets which are sent by the device QOS optimized Support use selective QinQ ports as the down-link of overlay IPFIX is controlled in ms (Metro service) license instead of ma (Metro advanced) license SNMP Trap optimized Smart link optimized CFM optimized RIP/RIPng optimized OSPF resource adjusted SNMP ACL use white list Bug fixes for higher stability
FSOS-V7.2.3.r 1	FSOS-V7.2.3	2020-04-30	Official Release	<ul style="list-style-type: none"> Bug fixes for higher stability
FSOS-V7.2.3	FSOS-V7.2.2	2020-03- 13	Official Release	<ul style="list-style-type: none"> Support to configure DHCP option82 per-port Upgrade the version of G.8032 Support to specify the path when copy files via FTP/TFTP Support to specify the source port of the switch when copy files via FTP/TFTP Support IPv6 features in IPRAN Profile Support UP MEP on Basic QinQ and VLAN Translation interfaces Support vlan group and port group for ACL Support to display the usage of DHCP address pool Support 2 new SNMP OIDs: dot1qTpFdbPort and dot1qTpFdbStatus The display of lldp optimized Support to use aggregation ports as the destination port of rspan Support to check the validation of time-range Change the behavior when port-isolate co-work with aggregation ports SNMP get port statistics result includes 20B inter frame gap by default Support license control for VXLAN/PFC/ECN The parameter "-t" (packet timeout value) of the command "ping" is in seconds Bug fixes for higher stability
FSOS-V7.2.2	FSOS-V7.2. 1	2019- 12- 12	Official Release	<ul style="list-style-type: none"> Support option 252 for DHCP Server Support Port Cross Connect Support AAA for web UI users Support NTP via out-band port Support BFD co-work with PBR Support to enable/disable overlay split horizon per-VNI Support DHCP Relay co-work with Vxlan Support to specify the Errdisable ports for MAC-Flap function Support dynamic LACP mode

Current Release	Baseline Release	Release Date	Category	Important changes based on baseline version
FSOS-V7.2.1	FSOS-V6.2.29.r2	2019-08-27	Official Release	<ul style="list-style-type: none"> Support to specify the VRF and source IP for SNMP Support new network types for OSPFv3 Support to configure IPv6 ACL on Line VTY Support vrrp uniform-mac mode Support SCP IPv6 Ping optimized Support IPv6 black hole route Support IS-IS v4 & v6 Support EVPN type 2/3/5 Support MPLS Apply VLAN ACL in VLAN configuration mode instead of VLAN interface mode PBR optimized overlay gateway-mac optimized
FSOS-V6.2.29.r2	FSOS-V6.2.28	2019-04-23	Official Release	<ul style="list-style-type: none"> Support chip level ARP guard function Support HTTPS for RPC-API Support IPV6 source guard Gratuitous ARP optimized VXLAN optimized Support IPV6 telnet server on management port Support "show this" Support to set the speed of the fan by command Link aggregation optimized MLAG optimized Support IPv4 black hole routings OSPF optimized IPV6 optimized System log for power alarm optimized System fault message optimized DHCP relay optimized
FSOS-V6.2.28	FSOS-V6.2.27	2018-11-30	Official Release	<ul style="list-style-type: none"> Support black hole ARP Support Debian system Support port bridge BGP optimized ICMPv6 packet process optimized
FSOS-V6.2.27	FSOS-V6.2.26	2018-08-09	Official Release	<ul style="list-style-type: none"> Summer time optimized MLAG optimized Increase the count of ipv4 routes for L3 profile WEB service optimized Loopback-detection optimized Enlarge the valid range of the ipv4 address's mask length Enlarge the valid range BGP AS number. (2 Byte → 4 Byte) Adjust the parameters for the hash algorithm of linkagg and ecmp load balance RPC-API optimized Support to configure FAN speed via command line Interface rate statistics function optimized QinQ function optimized Increase the priority of the management packets

Current Release	Baseline Release	Release Date	Category	Important Changes Based on Baseline Version
FSOS-V6.2.26	FSOS-V6.2.25	2018-05-09	Official Release	<ul style="list-style-type: none"> Support EFD Support Latency Monitor, Buffer Monitor Support to save OVSDB configuration Support to specify account type Vxlan function extended RPC-API performance optimized and function extended CPU Traffic Limit optimized LAG function extended VRF function extended BFD optimized ACL optimized Remove License control
FSOS-V6.2.25	FSOS-V6.2.24	2018-01-31	Official Release	<ul style="list-style-type: none"> Sflow upgraded to Version 5.0 Sflow sampling range extended to 32- 1048576 VARP optimized Support PFC Support ICMP debug VXLAN optimized Support CFM Support EFM WebUI optimized Support DHCP relay on virtual IP Support IPv6 Support G8032 Support BFD
FSOS-V6.2.24	FSOS-V6.2.23	2017-09-31	Official Release	<ul style="list-style-type: none"> Support ARP learning via Overlay Tunnel Support Overlay centralized Gateway 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 Sflow optimized

Current Release	Baseline Release	Release Date	Category	Important Changes Based on Baseline Version
FSOS-V6.2.23	FSOS-V6.2.22	2017-08-11	Official Release	<ul style="list-style-type: none"> Support 'reset factory config' Support to display packets received/sent by CPU Support OSPF secondary IP address Support SERDES loopback (internal/external) Support to display management port detail Support LLDP Configuration MIB node PBR function optimized PRC-API function optimized VLAN statistics function optimized
FSOS-V6.2.22	FSOS-V6.2.21	2017-03-31	Official Release	<ul style="list-style-type: none"> Support Overlay-horizon split switch BGP optimized, IBGP support VRF Support Telnet\SSH inside VRF Support L3-GRE Some behavior changes
FSOS-V6.2.21	FSOS-V6.2.20	2017-01-03	Official Release	<ul style="list-style-type: none"> Support Ping parameters Support MLAG orphan port Support IP_SLA linkage with static routing Support BGP 4 octet AS number Support Packet length ACL Support CPU capture Support Vlan counter
FSOS-V6.2.20	FSOS-V6.2.14	2016-09-12	Official Release	<ul style="list-style-type: none"> Support to modify Telnet\SSH port number WEB-UI optimized Memory management optimized RPC-API optimized platform ports optimized
FSOS-V6.2.14	FSOS-V6.2.11	2016-07-20	Official Release	<ul style="list-style-type: none"> Platform ports optimized
FSOS-V6.2.11	FSOS-V6.2.9	2016-06-29	Official Release	<ul style="list-style-type: none"> Smart-link optimized Hardware FDB learning optimized AAA optimized
FSOS-V6.2.9	FSOS-V6.2.1	2016-06-04	Official Release	<ul style="list-style-type: none"> Support WEBUI Support some application to specify source IP、source port Support Telnet\SSH ACL Unidirectional link optimized Platform ports optimized ERPS optimized Smart-link performance optimized

2.3 Hardware Supported

NOTE: Before upgrade, please double-check the version is compatible with hardware.

Series	Name
Hardware model (T means 10G electrical port, S means 10G optical port, Q means 40G optical port, C means 100G optical port)	S5850-48S6Q S5850-48S2Q4C S5850-32S2Q S8050-20Q4C S5850-48T4Q
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

S5850# show version

FSOS Software, S5850, Version 7.4.3.r3

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The current running image is flash:/boot/S5850-and-S8050-Series-Switches-FSOS-V7.4.3.r3.r.bin

Switch uptime is 0 days, 4 hours, 3 minutes Hardware Type is 48S6Q Hardware Version is 2.0

SDRAM size 1024M

Flash size 2048M

EPLD Version is 2.3 BootRom Version is 8. 1.3

System serial number is CG1909251442N0007

2.4 Version Compatibility

Current Version	Historical Version	Compatibility
V7.4.3.r3	All previous versions	YES
V7.4.1	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.COM, 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-v7.4.3.r3

N/A

3.2 FSOS-v7.4.1

New features	Specification
Support show used state of interface buffer	Show the buffer usage of all queues for interface

3.3 FSOS-V7.3.3.r

New features	Specification
Support VRF for OSPFv3	Support OSPFv3 in different VRF instance
Support IPv6 address with 127 bit mask	Support IPv6 address with at most 127 bit mask
Support VRF for PBR	Support PBR in different VRF instance
Support to send syslog to server with TCP connection	Support to use command to set TCP or UDP connection; support to specify TCP/UDP port. The default configuration is UDP with port 514
Support to set SNMP community with special character	Support digit/up case character/low case character/special character such as ~!@#%\$%^&*()_+`=- ,./:[]<:}
Support Dot1x access account and keep alive	N/A
Support to distribute a MPLS label for default-route (FEC 0.0.0.0/0)	N/A

3.4 FSOS-V7.3.2

New features	Specification
Support to set static system-id for MLAG interfaces	Support to use static system-id on MLAG interfaces for LACP negotiation
Support IP routes cross different VRFs	Support to specify different VRFs for destination network and nexthop in one route
Support to send SFLOW packets through management interface	N/A
Support master and backup members in aggregation interface	Support to set different priority value for aggregation members , in order to let the members work in master or backup mode
Support ECMP for recursion route	N/A
Support user block feature	Support to block the users who enter the illegal password for a certain number of times.
Support to set min LS Interval for OSPF	N/A
Support prefix-list for OSPF distribute-list	N/A
Support periodic DM packet check	N/A
Support 2to1 VLAN mapping	Support to mapping to a new VLAN according to the original inner and outer VLAN tags
Support to announce MPLS SR label in ISIS	Need SR license
Support to report IPFIX Delta counter	Support to choose Delta counter or total counter to server

3.5 FSOS-V7.3.0.1

N/A

3.6 FSOS-V7.2.5.r1

N/A

3.7 FSOS-V7.2.5

New features	Specification
Support to configure route aggregation in bgp ipv4 vrf addressfamily	N/A
Support new SNMP OIDs	Power related: devCurrentPower(OID: 1.3.6.1.4.1.27975.37.1.2.1.9) devRatedPower(OID: 1.3.6.1.4.1.27975.37.1.2.1.8) Physical interface related: interfacePhyType(OID: 1.3.6.1.4.1.27975.42.1.1.28) All OIDs above are read-only
RPC-API optimized	Improve the speed when using RPC-API to apply the configurations
Support trap for BFD status change	N/A
Support to prevent DHCP flooding attacking	N/A
Support transmit multicast packets via VxLAN tunnels	N/A
Support URPF loose mode	N/A
Support VLAN Storm Control	N/A
Aggregation ports support weighted load-balance	According to the weight of each member port, the aggregation port data traffic realizes load balancing based on flow. It only supports configuring the weight of member ports in the static load balancing (SLB) and non self-healing mode. And the total weight sum cannot exceed the maximum number of member ports supported by the aggregation port.

3.8 FSOS-V7.2.4.r2

N/A

3.9 FSOS-V7.2.4

New features	Specification
Support overlay and port-security on same interface	N/A
Support DHCPv6 snooping option 37	N/A
Support carrier down hold time	Support to configure carrier down hold time in a range of 0-500 ms. If the interface status changes to down, then recovered before the hold time, system should ignore this issue in order to prevent network flap
Support vlan translation feature to edit the VLAN tags of APP/PING packets which are sent by the device	N/A
QOS optimized	Support VLAN storm control Support to display the resource of VLAN storm control
Support use selective QinQ ports as the down-link of overlay	N/A

3.10 FSOS-V7.2.3.r1

N/A

3.11 FSOS-V7.2.3

New Features	Specification
Support to configure DHCP option82 per-port	N/A
Support to specify the path when copy files via FTP/TFTP	N/A
Support to specify the source port of the switch when copy files via FTP/TFTP	N/A
Support IPv6 features in IPRAN Profile	IPv6 related resource is allocated in IPRAN profile
Support UP MEP on Basic QinQ and VLAN Translation interfaces	Support UP MEP on Basic QinQ and VLAN Translation interfaces
Support vlan group and port group for ACL	Support to match vlan group and port group in ACL
Support to display the usage of DHCP address pool	N/A
Support 2 new SNMP OIDs: dot1qTpFdbPort and dot1qTpFdbStatus	N/A
Support to use aggregation ports as the destination port of rspan	N/A

3.12 FSOS-V7.2.2

New Features	Specification
Support option 252 for DHCP Server	N/A
Support Port Cross Connect	N/A
Support AAA for web UI users	N/A
Support NTP via out-band port	Support to NTP connect to the server and synchronous the time via out-band port
Support BFD co-work with PBR	Support to use BFD to check the connectivity of PBR
Support to enable/disable overlay split horizon per-VNI	Support to enable/disable overlay split horizon per-VNI according to the different network topology
Support DHCP Relay co-work with Vxlan	Support DHCP Relay functions send DHCP packets into the Vxlan tunnel for encapsulation and transmission
Support to specify the Errdisable ports for MAC-Flap function	Support to specify the Errdisable ports and non-Errdisable ports, for MAC-Flap function
Support dynamic LACP mode	Support to use the ports as separated L2 ports before LACP negotiated successfully

3.13 FSOS-V7.2.1

New Features	Specification
Support to specify the VRF and source IP for SNMP	Support to specify the VRF and source IP for SNMP packets
Support new network types for OSPFv3	Support Broadcast/ NMBA/ P2P /P2MP
Support to configure IPv6 ACL on Line VTY	Support to configure IPv6 ACL on Line VTY to enhance the security of user login
Support vrrp uniform-mac mode	Support up to 255 groups
Support SCP	Support to copy files via SCP
IPv6 Ping optimized	Support to specify the source IP address, packet count, packet interval, packet size, timeout, hop limit, etc. Support to specify the QoS options in the packet Support to ping host name
Support IPv6 black hole route	N/A
Support IS-IS v4 & v6	N/A
Support EVPN type 2/3/5	Only support when using "ma" license
Support MPLS	Only support when using "ma" license and "ipran" profile

3.14 FSOS-V6.2.29.r2

New Features	Specification
Support chip level ARP guard function	Support to filter the ARP packets to cpu, and limit the rate of the ARP packet after the filter, in order to prevent the ARP packets
RPC-API optimized	Support HTTPS for RPC-API
Support IPV6 source guard	Support IPV6 address/MAC/PORT/VLAN binding
Gratuitous ARP optimized	Support to send gratuitous ARP from layer 3 interfaces by specified interval
VXLAN optimized	Support to set the udp-dest-port of VXLAN
Support IPV6 telnet server on management port	Support to enable IPV6 telnet server on management port
Support "show this" function	Support to show configuration in each configure-mode with the command "show this"
Support to set the speed of the fan by command	N/A

3.15 FSOS-V6.2.28

New Features	Specification
Link aggregation optimized	Support 4 modes for Link aggregation port's maximum member: 16/32/64/ 128
MLAG optimized	Support MLAG to synchronize Overlay FDB
Support IPv4 black hole routings	N/A
OSPF optimized	Support NSSA area
IPv6 optimized	Support IPV6 for VRF Support IPV6 address family for BGP ICMPv6 packet process optimized
System log for power alarm optimized	Support detailed information for power alarm
System fault message optimized	Support separated information for BGP/OSPF modules
DHCP relay optimized	Support DHCP relay cycle function When more than one DHCP server is configured, system should relay the packet to different server in order to achieve load-balance
Support black hole ARP	N/A
Support debian system	N/A
Support port bridge	Use port bridge function to forward the packets which from and to a same interface
BGP optimized	Support IPV6 address family for BGP Change the default condition to announce the route BGP command line optimized

3.16 FSOS-V6.2.27

New Features	Specification
Summer time optimized	Support to switch the summer time with the rules such as " month/ week-number/ weekday" . For example: Begin to use summer time at last SUNDAY of March, and finish using summer time at first MONDAY of October.
MLAG optimized	Optimize the " reload-delay" function of MLAG: In the previous version, System blocks all interfaces after the MLAG device rebooting, and it should wait for a certain time (5 minutes by default) before turn on these interfaces. Now it supports to recover the interface automatically. When the system detected that MLAG neighbor is established, the states of the interfaces can be recovered immediately.

New Features	Specification
Support OVSDDB virtual port	Support OVSDDB virtual port for global tunnel configurations
Increase the count of ipv4 routes for L3 profile	Support 32K ipv4 routes for L3 profile. In the previous version there are 8K ipv4 routes.
WEB service optimized	Support to specified ip source address for WEB service.
Loopback-detection optimized	<p>Support the block action: after loopback is detected, system should block the interface</p> <p>Support auto recovery: a timer can be configured; the blocked interfaces will be turned on after the timer is expired.</p> <p>Support a delay timer: After loopback is detected, system will wait for some time before it takes action, in order to prevent flapping. If the delay timer is not configured, system should take action immediately when loopback is detected.</p>
Support to display ARP information of the management interface	N/A
Enlarge the valid range of the ipv4 address's mask length	Support to configure 31 bits mask length for IPv4 address
Enlarge the valid range BGP AS number.	2 Byte AS number → 4 Byte AS number
Adjust the parameters for the hash algorithm of linkagg and ecmp load balance	<p>Support to use source interface as hash key for linkagg load balance</p> <p>Change the default hash key:</p> <p>Previous version: macsa 、 macda 、 ipsa 、 ipda → Current version: IP quintuple group (ipsa, ipda, ip src port, ip dst port, ip protocol)</p>
RPC-API optimized	<p>In the Previous versions, the commands which need to confirm “yes or no” are not supported by RPC-API. This feature is optimized as below:</p> <p>Confirm “yes” by default for the commands via RPC-API</p> <p>Confirm “ no” by default when system asks if need to write configurations before reboot</p>
Support to set the fan speed via command line	Support the configure the fan speed in 3 conditions of temperature: low, high, critical
Interface statistics optimized	<p>Interface statistics function support to included or exclude IPG (inter packet gap):</p> <p>-- Include IPG by default.</p> <p>-- Support a command line for user to choose include or exclude IPG</p>

3.17 FSOS-V6.2.26

New Features	Specification
Support EFD	Support Elephant Flow Detection function
Support Latency Monitor, Buffer Monitor	N/A
Support to save OVSDB configuration	Support to save configuration automatically or manually
Support to specify account type	Support to specify account service type as telnet, rpc-api, ssh, web
Vxlan function extended	--Support to transparent L2 protocol packets via Vxlan tunnel --Vxlan + Vlan mapping function optimized --Support to specify Vxlan header's DSCP
RPC-API function extended	--Separate RPC-API account and Telnet/SSH account --Support RPC-API under VRF --Performance highly optimized
CPU Traffic Limit optimized	The path to CPU optimized
LAG function extended	Support new LAG mode: 32 members mode
VRF function extended	Support to copy files under VRF
BFD optimized	N/A
ACL optimized	Support to display all ACL statistics by one command
Policy-map type qos support ACL statistics	N/A
Reboot mechanism optimized	Support countdown timer

3.18 FSOS-V6.2.25

New Features	Specification
VARP optimized	Virtual IP could be in different network segment compared with primary IP
Support PCF	N/A
Support ICMP debug	N/A
VXLAN optimized	Support VXLAN + VLAN mapping scenario
Support EFM	Support link failure detect, fix, auto discovery, remote loopback

New Features	Specification
Support CFM	Support hardware CCM detect, MAC Ping, MAC Trace
WebUI optimized	Support to configure web timeout, and clear web users
Support Ipv6	N/A
Support G8032	N/A
Support BFD	N/A

3.19 FSOS-V6.2.24

New Features	Specification
Support ARP learning via Overlay Tunnel	N/A
Support Overlay centralized Gateway	N/A
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
Sflow optimized	Support Sflow version 5

3.20 FSOS-V6.2.23

New Features	Specification
BGP support to synchronize ARP (EVPN function)	DEMO version
Reset factory config	Support CLI and WEBUI to reset factory config
SERDES loopback	Support internal/external loopback
CPU receive/send packets NUM and rate statistic	Show cpu traffic-statistics receive/transmit

New Features	Specification
Display management port detail	Show management interface
OSPF support secondary IP address	OSPF support to assert secondary IP
BGP MD5 authentication and encryption	BGP neighbor establishing support MD5 authentication/encryption
LLDP Configuration MIB node	Support LLDP standard SNMP node
Tunble optical module	Support to configure wave length
Multi-link function optimized	N/A

3.21 FSOS-V6.2.22

New Features	Specification
Overlay multi uplink	Overlay support to specify multi source IP address, and multi uplink scenario
BGP optimized	BGP upgraded to version v7. 10
Overlay horizon-split switch	Support Overlay horizon split disable/enable
Telnet\SSH inside VRF	Address inside VRF can be managed by Telnet/SSH
L3-GRE	Support GRE L3 tunnel

3.22 FSOS-V6.2.21

New Features	Specification
MLAG orphan port	MLAG support orphan port scenario
BGP 4 octet AS number	Support AS number with 4 octets, compatible with new BGP version
IP_SLA linkage with static routing	Support track static address
Packets capture (CPU Mirror)	Support packets capture on local switch, and saved as pcap format
Vlan counter	Support Vlan counter
Packet length ACL	Support ACL matching by packet length
Ping parameter	Support to specify src-mac, packet length, number, interval, set DF, etc;

3.23 FSOS-V6.2.20

New Features	Specification
Telnet\SSH can modify port number	N/A

3.24 FSOS-V6.2.14

N/A

3.25 FSOS-V6.2.1 1

N/A

3.26 FSOS-V6.2.9

New Features	Specification
WEBUI	Switch WEB management
FEC	Used on 100G port to correct CRC packet
Tacacs/Radius Server shared-key encryption	N/A
100G port auto-negotiation with 40G port	100G ports support auto-negotiation with 40G ports
NTP\Logging server\DNS\AAA specify source IP or port	N/A
Telnet\SSH ACL	Support to configure ACL rules to control Telnet/SSH user login

4. CLI Changes Specification

New CLI changes based on the baseline version

4.1 FSOS-V7.4.3.r3

N/A

4.2 FSOS-V7.4.1

N/A

4.3 FSOS-V7.3.3.r

Original Format	New Format	Remark
router ipv6 ospf [PROCESS-ID]	router ipv6 ospf [PROCESS-ID [vrf VPN-NAME]]	Support VRF for OSPFv3
	show ipv6 vrf ospf	Support VRF for OSPFv3, add a new command to show statuses
logging server address (mgmt-if) (IPV4_ADDR IPV6_ADDR) (source-interface IFNAME source-ip SRC_IP_ADDR)	logging server address (mgmt-if) (IPV4_ADDR IPV6_ADDR) (dest-port DEST_PORT) (transport (tcp udp)) (source-interface IFNAME source-ip SRC_IP_ADDR)	Support to send syslog to server with TCP connection
	dot1x handshake no dot1x handshake dot1x timeout handshake-period SECONDS no dot1x timeout handshake-period dot1x accounting-mode radius no dot1x accounting-mode dot1x accounting start-fail (offline online) no dot1x accounting start-fail dot1x accounting realtime INTERVAL no dot1x accounting realtime dot1x accounting interim-fail (max-times TIMES) (offline online) no dot1x accounting interim-fail	Support Dot1x access account and keep alive
	label distribution default-route no label distribution default-route	Support to distribute a MPLS label for default-route (FEC 0.0.0.0/0)

4.4 FSOS-V7.3.0.1

N/A

4.5 FSOS-V7.2.5.r1

N/A

4.6 FSOS-V7.2.5

Original Format	New Format	Remark
-	distribute-weight WEIGHT	Aggregation portssupport weighted load-balance
mac-address-table ageing-time	mac-address-table aging-time	Modify the command line style

4.7 FSOS-V7.2.4.r2

N/A

4.8 FSOS-V7.2.4

Original Format	New Format	Remark
<pre>ethernet cfm domain *DOMAIN_NAME* level *LEVEL*</pre>	<pre>ethernet cfm domain *DOMAIN_NAME* level *LEVEL* (format (no-md-name string *STRING* dns *DNS_NAME* mac-address *MAC_ADDRESS*))</pre>	The format MUST be specified when configure the CFM domain in Y1731 mode

4.9 FSOS-V7.2.3.r1

N/A

4.10 FSOS-V7.2.3

N/A

4.11 FSOS-V7.2.2

Original Format	New Format	Remark
N/A	show route-mac	Use this command to display the route-mac of the system.

4.12 FSOS-V7.2.1

Original Format	New Format	Remark
show radius-server (interface IFPHYSICAL)	show dot1x radius-server status (interface IFPHYSICAL)	This command only shows the dot1x related information, therefore it is changed to the new format.
<pre>show policy-map statistics interface (IFPHYSICAL IFAGG IFVLAN) ace (class-based ace-based) (class NAME) show policy-map type qos statistics interface (IFPHYSICAL IFAGG IFVLAN) ace (class-based ace-based) (class NAME) show policy-map statistics (interface vlan port-group vlan-group e ss) ace (class-based ace-based) (class NAME) show policy-map type qos statistics (interface vlan port-group vlan-group) ace (class-based ace-based) (class NAME)</pre>	<pre>show policy-map statistics interface (IFPHYSICAL IFAGG IFVLAN) (input output) ace (class-based ace-based) (class NAME) show policy-map type qos statistics interface (IFPHYSICAL IFAGG IFVLAN) input ace (class-based ace-based) (class NAME) show policy-map statistics (interface vlan port-group vlan-group ess) (input output) ace (class-based ace-based) (class NAME) show policy-map type qos statistics (interface vlan port-group vlan-group) (input) ace (class-based ace-based) (class NAME)</pre>	Update the ACL/QoS stats show and clear commands
-	vlan < 1-4094>	Add new command to enter VLAN configuration mode
-	bgp neighbor NEIGHBORID update-source	Add new command to set the source IP of BGP neighbor
service-policy input NAME (VLAN interface mode)	service-policy input NAME (VLAN configuration mode)	<p>VLAN ACL command moved from VLAN interface mode to VLAN configuration mode.</p> <p>The original command is not kept. If your system has the related configuration, please contact our technical supporter to help the configuration transition.</p>

4.13 FSOS-V6.2.29.r2

N/A

4.14 FSOS-V6.2.28

Original Format	New Format	Remark
port-channel group-mode (32 56)	port-channel group-mode (32 56 8 16)	Add to modes for port channel group: 128 members * 7 groups 64 members * 15 groups The follow modes are supported in previous versions and still supported now: 32 members * 31 groups 16 members * 55 groups
show clock	show clock (utc)	Add the optional parameter "utc" to display the UTC time
N/A	sync-overlay	Add new command in MLAG configuration mode to synchronize Overlay FDB
N/A	ip route A.B.C.D/M null0	Support to use interface null0 to configure static black hole route
N/A	area (A.B.C.D)nssa no area (A.B.C.D) nssa	Support NSSA area in OSPF configuration mode
N/A	Neighbor X:X::X:X	Add new command in BGP configuration to support IPV6 address
N/A	tunnel mode (erspan (ecmp-dst-gre)	Support a new tunnel mode: erspan.
N/A	cpu-traffic-limit reason icmpv6 (rate class)	Add new command to support rate and class configuration of ICMPv6 packets
N/A	show diagnostic-information bgp/ospf	Add new command to display the diagnostic information of bgp/ospf
N/A	dhcp relay address cycle no dhcp relay address cycle	cycle no dhcp relay address cycle Add new command to enable or disable DHCP relay cycle function
N/A	arp fake global enable arp fake enable arp fake timeout TIME	Add new commands for black hole ARP. Black hole ARP is disabled by default
N/A	switchport port-bridge enable no switchport port-bridge enable	Add new command to enable or port bridge function Port bridge is disabled by default
N/A	ffe c0 C0 c 1 C1 c2 C2 c3 C3 channel (1-4)	Add new command to configure FFE parameter

4.15 FSOS-V6.2.27

Original Format	New Format	Remark
N/A	reload-delay auto	New command in MLAG configuration mode. Support to detect MLAG neighbor states automatically after system reboot, support to turn on the interfaces immediately after MLAG neighbor is established.
N/A	ovsdb virtual-port NAME	New command for Creating ovsdb virtual port
N/A	http server source address/port	New command in global configuration mode. Support to specify the source address and port of WEB service.
N/A	loopback-detect action block	Support to block the interface if network loop is detected.
N/A	loopback-detect recovery-time	Support to configure the recovery timer after the network loop finished.
N/A	loopback-detect delay-time	Support to configure the delay timer before loopback detection function take action
N/A	show management arp	New command in EXEC mode. Support the display the ARP information of management interface
N/A	port-channel load-balance hash-field-select src-interface	New command in global configuration mode. Support to use source- interface as hash key for linkagg load balance.
N/A	fan BOTTOM_SPEED_RATE LOW_SPEED_RATE HIGH_SPEED_RATE FULL_SPEED_RATE	Support to set the fan speed.
N/A	flow-statistics include-inter frame enable/disable	New command in interface configuration mode. Support to decide whether the statistics function include or exclude IPG(inter packet gap)

4.16 FSOS-V6.2.26

Original Format	New Format	Remark
N/A	N/A	All Latency Monitor and Buffer Monitor commands are updated, please refer to CLI manual
N/A	remote-vtep < 1-65535> encapsulation-dscp-strategy <custom-assign VALUE dscp-copy priority-map>;	New command to specify Vxlan header's DSCP
N/A	Statistics enable	New command under ' <i>Policy-map type qos</i> '
N/A	show policy-map type qos statistics clear qos policy-map type qos statistics	New command to display ' <i>policy-map type qos</i> ' ACL statistics
N/A	username admin service-type <all none rpc-api ssh telnet web>	New command to specify account type
show mac-address flapping-configuration	N/A	Command removed. New command to display: <i>show errdisable fdb-loop</i>
N/A	port-channel group-mode <32 56>	New command to switch LAG mode
N/A	< no> arp as-layer-3 enable	New command to process ARP packets as normal IP packets

4.17 FSOS-V6.2.25

Original Format	New Format	Remark
cpu-traffic-statistics time	cpu-traffic-statistics time	CLI moved to config mode
Pause buffer-size	N/A	CLI removed
sflow flow-sampling rate<1-8192>	sflow flow-sampling rate<32- 1048576>	Sampling rate extended

4.18 FSOS-V6.2.24

Original Format	New Format	Remark
Vlan xxx remote-vtep x keep-vlan-tag	Remote-vtep x ip address x.x.x.x type vxlan keep-vlan-tag	N/A

4.19 FSOS-V6.2.23

N/A

4.20 FSOS-V6.2.22

Original Format	New Format	Remark
show monitor cpu packet buffer	show monitor cpu packet-buffer	N/A
clear monitor cpu packet buffer	clear monitor cpu packet all	N/A
show monitor capture strategy	show monitor cpu capture strategy	N/A
monitor capture strategy	monitor cpu capture strategy	N/A

4.21 FSOS-V6.2.21

Original Format	New Format	Remark
type echo protocol iplcmp-Echo *	type icmp-echo *	N/A

4.22 FSOS-V6.2.20

N/A

4.23 FSOS-V6.2.14

N/A

4.24 FSOS-V6.2.1 1

N/A

4.25 FSOS-V6.2.9

N/A

5. New Behaviors Specification

New behaviors based on the baseline version

5.1 FSOS-V7.4.3.r3

Item	Earlier Behavior	New Behavior
rpc-api optimize	System log records the "show" command via rpc-api	System log does not record the "show" command via rpc-api

5.2 FSOS-V7.4.1

Item	Earlier Behavior	New Behavior
Optimize ECMP functionality	No separate control for ECMP-related function	ECMP-related function add separate license control
Optimize MLAG functionality	The default value of keepalive-interval is 60 seconds	The default value of keepalive-interval change to 1 second. Optimize flush fdb mechanism

5.3 FSOS-V7.3.3.r

N/A

5.4 FSOS-V7.3.0.1

N/A

5.5 FSOS-V7.2.5.r1

N/A

5.6 FSOS-V7.2.5

N/A

5.7 FSOS-V7.2.4

Item	Earlier Behavior	New Behavior
PBR resource adjusted	Support 256 entries	Support 512 entries for default and layer3 profile. Support 256 entries for IPv6 and IPRAN profile.
IPFIX is controlled in ms (Metro service) license instead of ma (Metro advanced) license	IPFIX is controlled in ma (Metro advanced) license	IPFIX is controlled in ms (Metro service) license
SNMP Trap optimized	SNMP v2 timeout is in a range of 1- 1800s, retry time is in a range of 0- 100; SNMP v3 timeout is in a range of 0-65535s, retry time is in a range of 0-255	SNMP v2/v3 timeout is in a range of 1- 1800s, retry time is in a range of 0- 100
Smart link optimized	Static FDB can be configured on smart link interfaces but cannot work.	System support a validation check to forbidden configure static FDB on smart link interfaces.

Item	Earlier Behavior	New Behavior
CFM optimized	cfm domain name can be configured without format MAID can be duplicated	cfm domain name must be configured with format system support validation check that MAID must be globally unique
RIP/RIPng optimized	Increase metric when receive the message of route	Increase metric when send the message of route
OSPF resource adjusted	The maximum count of static neighbor and summary address is limited by the system memory.	The maximum static neighbor is 256 The maximum summary address is 2000
SNMP ACL use white list	SNMP ACL use black list	SNMP ACL use white list

5.8 FSOS-V7.2.3.r1

N/A

5.9 FSOS-V7.2.3

Item	Earlier Behavior	New Behavior
Support license control for VXLAN/PFC/ECN	VXLAN/PFC/ECN is not controlled by any license	M5 or higher privilege license is required for VXLAN/PFC/ECN
Support to check the validation of time-range	System does not check the validation of time-range	Support to check the validation of time-range, the end time must late than the begin time
Upgrade the version of G.8032	Support G.8032-201003	Support G.8032-201708
The display of lldp optimized	The command "show lldp neighbor" does not show the local information	The command "show lldp neighbor" shows the local information and the neighbor count
Change the behavior when port-isolate co-work with aggregation ports	System does not deal with this condition	A physical port with port-isolate enabled will clear port-isolate related configuration when it join an aggregation port
SNMP get port statistics result includes 20B inter frame gap by default	SNMP get port statistics result does not include 20B inter frame gap by default	SNMP get port statistics result includes 20B inter frame gap by default
The parameter "-t" (packet timeout value) of the command "ping" is in seconds	The parameter "-t" (packet timeout value) of the command "ping" is in milliseconds	The parameter "-t" (packet timeout value) of the command "ping" is in seconds

5.10 FSOS-V7.2.2

Item	Earlier Behavior	New Behavior
Configuration check for PBR changed	PBR bind empty route-map is allowed	PBR bind empty route-map is NOT allowed
Configuration check for overlay gateway mac changed	vlan interface should be configured be for set overlay gateway mac	System do not check vlan interface configuration when set overlay gateway mac
Default configuration for 40G/ 100G duplex changed	40G/ 100G duplex is "auto" by default	40G/ 100G duplex is "full" by default. If the 40G/ 100G is connected with copper, user should change the configuration after upgrade to 7.2.3
Overlay tunnel resource adapt in default profile	Support 4088 overlay tunnels in default profile	Support 8192 overlay tunnels in default profile
Configuration check for bfd interval changed	No check for configuring bfd interval	Do NOT support to change bfd interval on same interface too often, the second configuration should wait at least 3 seconds

5.11 FSOS-V7.2.1

Item	Earlier Behavior	New Behavior
ICMPv6 redirect packets changed	If ICMPv6 redirect packet size is smaller than 8bytes, the packet should be padding with "0", until the size achieves 8bytes.	No padding for small packets.
show stm prefer command changed	"show stm prefer" shows the table size and usage.	"show stm prefer" shows the table size "show resource" shows the usage.
File name length extended	Support the file name up to 48 characters.	Support the file name up to 64 characters
Apply VLAN ACL in VLAN configuration mode instead of VLAN interface mode	Apply VLAN ACL in VLAN interface mode.	Apply VLAN ACL in VLAN configuration mode
The default configuration of jumbo frame changed	Jumbo frame is disabled by default.	Jumbo frame is enabled by default.
ARP protection feature changed	The action of rule for ARP protection is permit.	The action of rule for ARP protection is deny.

Item	Earlier Behavior	New Behavior
Static route feature changed	The route is active when nexthop IP is in the destination network.	The route is inactive when nexthop IP is in the destination network.
IP ACL L4 port range profile changed	Support 4 L4 port range	Support 3 L4 port range
PBR optimized	There is no check when configuring PBR	Support auto check for PBR configuration, in order to prevent configuration fault.
Port-security optimized	Port-security is not supported on aggregation ports	Port-security is supported on aggregation ports
overlay gateway-mac optimized	User does not need to create vlan interface before configuring overlay gateway-mac	User should create vlan interface before configuring overlay gateway-mac

5.12 FSOS-V6.2.29.r2

Item	Earlier Behavior	New Behavior
Source address range of NDP NS/NA packets changed	Only support link-local address for IPV6 NDP NS/NA packets	Also support global unicast address
The default value of NDP stale->delay timer changed	The default value of NDP stale->delay timer is 20s	The default value of NDP stale->delay timer is 1200s

5.13 FSOS-V6.2.28

Item	Earlier Behavior	New Behavior
ecmp dlb and self-healing behavior change	No limitation for ecmp dlb and self-healing	Do NOT support ecmp dlb and self-healing use agg ports as their members
slow protocol behavior change	Use ether type to identify the slow protocol packets	Use mac da (destination address) to identify the slow protocol packets
Change the default condition to announce the route	There is NO check is processed before announce the route	Before announce the route,system should check the prefix of the route and the local address. If the prefix matches any of the local address, the route can be announced
RSPAN destination port behavior change	No limitation for RSPAN destination port	Can NOT use agg member port as RSPAN destination port
ICMPv6 packet process optimized	No special process for ICMPv6 packets	Use a separate queue to send ICMPv6 packets to CPU. Support to configure the rate and class for ICMPv6 packet

5.14 FSOS-V6.2.27

Item	Earlier Behavior	New Behavior
Qinq optimized	Strip one tag for the packets going out the qinq port	Strip one tag or two tags or edit the inner tag according to the configuration
Increase the default DSCP for management packet	DSCP for Telnet: 0 DSCP for SSH: 4	DSCP for Telnet & SSH : 48
Support "vlan dot1q tag native" on the trunk port only	There's no limitation. But this command is not recommended to use on access ports	This command can only used on the trunk ports.
Use IP quintuple group as default hash key for linkagg and ecmp	Default hash key: Macsa, macda, ipsa, ipda	Default hash key: IP quintuple group (ipsa, ipda, ip src port, ip dst port, ip protocol)
Increase the count of ipv4 routes for L3 profile	Support 8K ipv4 routes for L3 profile.	Support 32K ipv4 routes for L3 profile.

5.15 FSOS-V6.2.26

Item	Earlier Behavior	New Behavior
L3 MTU range	<68-9000>	<68-9216>
Port description	Don't support special character	support special character
Syslog level for ARP aging	Level 4	Level 6
FDB-LOOP default action	Set port to Errdisable status	Record to syslog

5.16 FSOS-V6.2.25

Item	Earlier Behavior	New Behavior
VXLAN and VLAN Translation	Do not support to configure on same interface	Support to configure on same interface
Hostname name rules	Need to start with letters and stop with number or letters	Without limitation

5.17 FSOS-V6.2.24

Item	Earlier Behavior	New Behavior
BGP AS number	Do not support xx.yy format	Support xx.yy format
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'
Show running-config, show startup-config	Privilege 2 CLI	Privilege 4 CLI

5.18 FSOS-V6.2.23

Item	Earlier Behavior	New Behavior
VLAN statistic	N/A	Support statistic by bytes
IS-IS	Packets drop by default	Packets transmit by default
RPC-API	100 CLI per command	1024 CLI per command
Configuration file backup	N/A	System will copy the configuration file to flash: /boot folder, when uers save (Write) the file.
Show diagnostic-information	N/A	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)
Flow policer	Support 768 policer rules by default	Users can switch to 3840 policer rules (refer to CLI doc for details)

5.19 FSOS-V6.2.22

Item	Earlier Behavior	New Behavior
Vlan name description	Character limit is 16	Character limit is up to 31
Syslog recording condition	Do not record CLI operations in privileged mode	Record CLI operations in all modes
EFD function released	License required to use EFD function	Open to all users
HTTP/HTTPS independent switch	Only one switch for HTTP/HTTPS	Two independents switches for HTTP and HTTPS

5.20 FSOS-V6.2.21

Item	Earlier Behavior	New Behavior
Reboot-info optimized	Display less information	Display more detailed information
Extend more port type to support RF/LF	Only 10G port support RF/LF	10G\40G\ 100G ports support RF/LF
Optimized policer cbs\pbs mechanism	Need to adjust cbs\pbs value manually	Automatic resizing

5.21 FSOS-V6.2.20

Item	Earlier Behavior	New Behavior
Ports description character limit	Character limit is 20	Character limit is up to 240
RPC-API optimized	N/A	N/A
WEB-UI optimized	N/A	N/A
Memory management optimized	N/A	N/A
Platform ports optimized	N/A	N/A

5.22 FSOS-V6.2.14

Item	Earlier Behavior	New Behavior
Platform ports optimized	N/A	N/A

5.23 FSOS-V6.2.11

Item	Earlier Behavior	New Behavior
Platform ports optimized	N/A	N/A
Hardware learning optimized	N/A	N/A
AAA optimized	N/A	N/A

5.24 FSOS-V6.2.9

Item	Earlier Behavior	New Behavior
Enhance ports up\down event log level	Ports up\down log level is 6	Ports up/down level is 4
Enhance syslog recording range	Only recorded level 0-4 log	Record level 0-6 log
ERPS optimized	N/A	Support RRPP
Unidirectional link optimized	N/A	N/A
Platform ports optimized	N/A	N/A
Smart-link performance optimized	N/A	N/A
LLDP default behavior changed	LLDP disabled on ports by default	LLDP enabled on ports by default
NTP Server Hostname character limit	Hostname only accepts number, letter	Hostname supports more special character

6. Fixed Problems

Fixed problems based on baseline version.

6.1 FSOS-V7.4.3.r3

Problem Description	Occurred Condition
The port LED Indicator abnormal on some device	When the last port is UP, all LED Indicators of the last 12 ports are on. When the last port is DOWN, all LED Indicators of ports are off.

6.2 FSOS-V7.4.1

Problem Description	Occurred Condition
Known unicast forwarding exception when horizontal splitting is enabled on vin in special case	Some checking errors will cause a unicast forwarding exception when horizontal splitting is enabled on vin
After configure loopback-detect packet-interval ,it is not visible in the content of show running, but is actually in effect	The write function of this command conflicts with another global write function which caused it is not visible in the content of show running

6.3 FSOS-V7.3.3.r

Problem Description	Occurred Condition
Removing a mirror session may lead system crash in special case	The mirror session has an mirror destination group which is not exist
Configuring EVPN RD failed in special case	If there is a remote RD same as the RD to configure, system prompt a message that "this set value must be unique"
OSPF module record some unnecessary logs in special case	There are more than one VRF in the system. When OSPF receive a packet not belong to the own VRF, it records a log.
The interface status is UP when there is no interface module plugged in	The interface belongs to a static channel group. Use the command "shutdown" and "no shutdown" to change the interface statue rapidly and repeatedly, the status may shows "UP" in some case
System cannot parse BGP packet in some case which may lead BGP neighbor disconnect	The BGP packet carries an community attribute "0000:ffff"

6.4 FSOS-V7.3.0.1

N/A

6.5 FSOS-V7.2.4

6.6 FSOS-V7.2.5.r1

Problem Description	Occurred Condition
SNMP may lead memory leak in some case	Device runs for a long time and it reports CRC TRAP constantly
States of LACP interface error in some case	The steps to reproduce this bug is as following: 1, Set a member port as the destination port of a mirror session 2, Set the state of the member port as "error disable" 3, Move the member port from one LACP to another
Smart config does not work	N/A
After the MLAG device reboot, the Peer links are shut down	N/A

6.7 FSOS-V7.2.5

Problem Description	Occurred Condition
System process ARP packets abnormal in some case	"cpu protect arp" is enabled and the packets are from VxLAN networks
The IPv6 address of FD00::/8 and FC00::/8 cannot reply the PING request	N/A
The options of port speed are not same when configuring via WEB and command line, 25G cannot configure when using WEB.	N/A

6.8 FSOS-V7.2.4.r2

Problem Description	Occurred Condition
DHCP client cannot get the previous IP address from the server after timeout in some case.	Change the time of the client to let the DHCP client in timeout condition immediately, then the client will get a new IP address which is different from the previous address
The CFM session cannot UP in overlay environment in some case.	Devices are connected by VXLAN tunnel, the down link port is a vlan translation with an up mep on it, the statues of up mep is always down
SNMP cannot get information of interface module of the split interfaces	N/A
SSH server cannot work and CPU usage is very high in some case	The client is using the zlib@openssh compress algorithm

6.9 FSOS-V7.2.4

Problem Description	Occurred Condition
Part of the private OID abnormal after use "update oem" command to update private mib OIDs	N/A
PBR configurations on the interfaces lost in some case.	Add a new route-map sequence and bind the Access control list and nexthop, the previous configuration of "ip policy route-map" may lost
The ECN field of udp packets cannot be marked	N/A
When the mlag peers are not established, the initial system ID is wrong, which lead the system send illegal LACP packets	N/A
There is a spelling mistake in the result of "show ip arp" command	N/A
The packets loop on the mlag peer-link and mlag interfaces in some case	The packets are known unicast packets.
The system cannot deal with the packets sent to CPU with VLAN tag 0	N/A
Certain types of device failed to read/write eeprom in some case	The device type is S5850-48S6Q, which may failed to read and write eeprom when loading uBoot and the system

6.10 FSOS-V7.2.3.r1

Problem Description	Occurred Condition
Unicast packets loop in MLAG topology	The unicast FDBs have not synchronized between 2 MLAG devices, the unicast packets are not blocked on the peer link, which will lead the loop circuit.

6.11 FSOS-V7.2.3

Problem Description	Occurred Condition
Basic ACL in LINE VTY mode failed to limit the users login via SSH	Apply basic ACL in LINE VTY mode and login the device via SSH
Overlay tunnel resource is not correct	The result of command "show resource overlay" is not correct
VxLAN use VRRP virtual MAC as inner MAC, the packets is failed to route after decapsulation	The down link port is VRRP uniform mode, the up link is VxLAN. After VxLAN header decapsulated, the inner MAC destination is the VRRP uniform mac, the packet cannot be routed on the VRRP master.
Interface statistics of 100G/40G ports abnormal in some case	2 devices' aggregation ports are connected directly. The aggregation ports are work with "auto" mode. There heavy traffic through this 2 devices. Use the following steps to occurred this bug: 1, Choose a member port of the aggregation ports, quit this member from the aggregation ports 2, Use the command "speed 100g" and "speed auto" on the quit member to change the speed mode repeatedly 3, Let the member port join the aggregation port again 4, The statistics result of the aggregation port may be abnormal
IP BFD co-work with IP OSPF abnormal when the interface has multiple IP address	Configure multiple IP address on the interface, then enable and disable IP BFD co-work with IP OSPF repeatedly
UDP packets might be discard randomly when forwarding at layer 2	The source and destination port of the UDP packets are random variation, and the packets are forwarding at layer 2
The prompt information is not correct when the file name is too long	The prompt information recommended that the maximum length of file name is 47 in the command "copy". The actual maximum length should be 63
Configure ip access-list entries overload may lead system abnormal	System supports 2048 ip access-list entries at most, configure to many entries may lead system abnormal
Input ifindex of IPFIX is not correct in some case	Enable " interface input" in IPFIX recorder, the cache packet records both input and output information with the input ifindex
Some types of tacacs server always fail in first SSH login	Use "tacacs plus" server and login via SSH always failed first time
ECN cannot mark UDP packets	N/A

6.12 FSOS-V7.2.2

Problem Description	Occurred Condition
PIM-DM may lead memory leak in some case	Enable pim-dm on the interface and send different flows to that interface and enable/disable pim-dm repeatedly at the same time.
System crashed when using SNMP GET for certain OID	Use SNMP to get a MSTP instance which is not existed.
ARP protect acl mismatch in some case	ARP white list is enabled and overlay gateway is enabled/disabled repeatedly
EVPN cannot deal with the routes with same RD which are sent by different neighbors	In EVPN dual-uplink topology, if system receives 2 EVPN routes with same RD from different neighbors, system should select one route and delete another. If the neighbor who sent the selected route is disconnected, the selected route is deleted, but the un-selected route cannot be recovered in this case.
EVPN asymmetric topology may lead system crash in some case	Static DVR and dynamic EVPN route conflicts in EVPN asymmetric topology
EVPN up-link ports cannot match ACL with Vxlan inner header.	N/A
System calculate the MPLS packet length include the MPLS label and does not conform the standard of MTU, may lead some packets discard.	N/A
BFD cannot co-work with HUAWEI new product	BFD cannot co-work with HUAWEI CE6860

6.13 FSOS-V7.2.1

Problem Description	Occurred Condition
AAA Local authentication not work in certain condition	Tacacs or radius authentication is enabled and authenticated failed in certain cases, local authentication is also failed
The SNMP get returns error value. (if In Multicast Pkts OID: 1.3.6. 1.2. 1.31. 1. 1. 1.2)	N/A
The configuration lost the update in certain history version.	<p>" ip sla monitor schedule" and " ip sla monitor" is configured at same system.</p> <p>The version before update is v 6.2.29.r 1</p> <p>The version after update is v 6.2.29.r 1</p>
" update oem information" command does not check the input parameter, which might lead SNMP work abnormal	The parameter for " update oem information" should be number and comma. If the OID is not in number and comma format, it will lead SNMP OID parse error
AAA Vendor-ID is not updated after OID changed.	When the OID of private MIB changed, the system parses the Radius Vendor-Specific Attribute error

6.14 FSOS-V6.2.29.r2

Problem Description	Occurred Condition
Processis abnormal MLAG packets	MLAG packets are not sent to the CPU by pre-defined path, MLAG peers may break in extreme case
PVLAN function works abnormal in special cases	abnormal in special cases User configure PVLAN on layer3 interface will lead this issue
Memory leak in certain condition	certain condition Use SNMP to process certain nodes repeatedly over a long period of time
PIM-DM and VRRP cannot work together, and may lead system crash in extreme case	PIM-DM and VRRP work together may lead system crash in extreme case
"Show bfd" command works abnormal	Use illegal parameter will lead this command work abnormal, and may lead system crash

6.15 FSOS-V6.2.28

Problem Description	Occurred Condition
The SNNO (sysUpTimeInstance, OID 1.3.6. 1.2. 1. 1.3.0)rolls over	System up for a long time and the value of" up time" rolls over
System dealsthe lacp packets with actor-key 0 as invalid packets	System receive the lacp packets with actor-key 0
The show result of RPC API might affect each other	Use RPC-API with multi-process
OVSDB lead system crash in extreme case	If the vlan-vni mapping in configure file and OVSDB don't coincide with each other,system may crash with a minimum probability

6.16 FSOS-V6.2.27

Problem Description	Occurred Condition
Error log printed in BFD module	System receive the packets with its own ip address and udp port 1 1 121.
NTP packets are wrongly truncated	In VXLAN topology, and " keep vlan tag" is configured
Notification includes wrong spelling appeared on the terminal	N/A

6.17 FSOS-V6.2.26

Problem Description	Occurred Condition
"show ip bgp community" may cause BGP abnormal	N/A
BGP message includes 32 RT info may cause BGP abnormal	N/A
BGP route revoked may cause memory leak	In some special condition
Radius don't work on out-band management	N/A
Some tagged Vxlan packets may be dropped after decapsulation	In some special condition
PIM module crash	In some special condition
Link flapping on 40G port	Some hardware type occurs link flapping when the ports are used as LAG
'ACL egress stats exclude-drop output' don't work	N/A

6.18 FSOS-V6.2.25

Problem Description	Occurred Condition
When LAG member changed, load balance may work abnormally in special condition	LAG member changes
MLD module work abnormally, switch cannot learn MLD report	N/A
Delete LAG interface may impact hsrvd module.	ARP loop occurs
NTP synchronization failed	In some special condition
PBR entry cannot take effect based on seq-number	NA
VXLAN cannot learn ARP by tunnel	If VNI number greater than 16bits
Packets may miss one bit after pcap convert	If packet size is multiple of 16bits
Radius abnormal	N/A
IP_SLA timeout	In some special condition

6.19 FSOS-V6.2.24

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 packets	N/A
SNMP ACL do not support extend ACL	N/A

6.20 FSOS-V6.2.23

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	N/A

6.21 FSOS-V6.2.22

Problem Description	Occurred Condition
Rate display is inaccurate on aggregation ports	N/A
Unreasonable check on static routing track configuration	If next hop is in the target segment, static routing track cannot be configured correctly
Sflow sampling frequency is inaccurate	N/A
RPC-API cause memory leak	Frequently execute RPC-API operation
Telnet process causes CPU high usage	Small probability occurred
DCHP process Crash	When dhcp client communicating with dhcp sever, vlan interface will be deleted in some particular conditions
100Gport auto-negotiation time is slow to a 40G port	N/A

6.22 FSOS-V6.2.21

Problem Description	Occurred Condition
SNMP ifAlias node get interruption	One port has no description in a continuous port
FDB is not flushed when MLAG ports are in errdisable	MLAG ports are in errdisable
FDB Loop cause Peer-link ports error disable	FDB duplicated occurred frequently on MLAG ports
When MLAG failed, FDB do not synchronize to Peer-link	MLAG failed in some special conditions

6.23 FSOS-V6.2.20

Problem Description	Occurred Condition
Cloud Agent enable cause memory leak	N/A
SNMP IfAlias node getting range error	Get public node IfAlias when port description is oversize
MLAG+Overlay scenario, ARP will overwrite 32 bits DVR routing	MLAG+Overlay scenario, when switches use the same ip address on each side of overlay tunnel
LLDP causes switches reboot automatically in some particular conditions	Cooperation with other vendors, and DCBX enable
MLAG Peer-link could learn FDB in some special conditions	When packet's mac da match the configured gateway mac, mac address learning disable on peer link will not take effect
Mass TCP attacks cause switches reboot	Switches suffered mass TCP attacks from public network

6.24 FSOS-V6.2.14

Problem Description	Occurred Condition
Port ethertype modification causes ERPS abnormal	Modify ethertype on ERPS ports
ERPS switching performance cannot be within 50ms on aggregation ports	Using aggregation ports as ERPS interface
Switches do not forward packets in some particular conditions	Small probability occurred
Switches create imish.core file if suffering mass login attacks	Mass login attacks

6.25 FSOS-V 6.2.1 1

Problem Description	Occurred Condition
40G\ 100Gports Pathcost is incorrect in OSPF	N/A
Vlan cannot learn FDB if overlay enable	N/A
Ping function cannot work in some particular conditions	Specify VRF

6.26 FSOS-V 6.2.9

Problem Description	Occurred Condition
Interface tunnel operation causes switch reboot	Create, then delete interface tunnel
Multi-users AAA authentication cannot work	Multi-users AAA authentication
Specified TCP port attack causes switch reboot	TCP attack on specified port 8100

7. 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.
- 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
- Overlay will remove double vlan tag by default, after packets arrived on remote Vtep end, it will add only one vlan tag. We can also enable keep vlan tag function to keep vlan. After packets arrived on remote Vtep end, it is possible to change outer vlan based on VNI correspondence.
- The PBR commands are different between v6.2 and v7.2. If there is any PBR configuration, version update between v6.2 and v7.2 may lead the configuration lost. We strongly you contact with our technical supporters before you update the software version.
- Port-security can NOT work together with MLAG.

8. Operating System Upgrade

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

```
FS# copy mgmt-ifftp://admin:admin@10.10.25.33/S5850-and-S8050-Series-Switches-FSOS-V7.4.3.r3.r.bin
```

```
flash:/boot
```

NOTE:

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

For how to copy, please refer to 《s58-series-switches-fsos-software-upgrade-guide》 .

Step 2 Set the target firmware as next boot firmware.

For example, set S5850-and-S8050-Series-Switches-FSOS-V7.4.3.r3.r.bin as the target version to upgrade.

```
FS# boot system flash:/boot/S5850-and-S8050-Series-Switches-FSOS-V7.4.3.r3.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/S5850-and-S8050-Series-Switches-FSOS-V7.4.3.r3.r.bin as the next boot image? [confirm]y/n
```

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: v7.4.1
```

```
The current running image is: flash:/boot/FSOS-S5850-and-S8050-Series-Switches-v7.4.1.r.bin
```

```
The next time boot image version is: v7.4.3.r3
```

```
The next running image is: flash:/boot/S5850-and-S8050-Series-Switches-FSOS-V7.4.3.r3.r.bin
```

Step 4 Restart the switch.

Step 5 Check if the switch has been successfully upgraded.

```
FS# show version
```

```
FSOS Software, S5850, Version 7.4.3.r3
```

```
Copyright (C) 2019 by FS.COM . All rights reserved.
```

```
The current running image is flash:/boot/S5850-and-S8050-Series-Switches-FSOS-V7.4.3.r3.r.bin
```

```
FS uptime is 0 days, 0 hours, 12 minutes
```

```
Hardware Type is 48S6Q
```

```
Hardware Version is 1.0
```

```
SDRAM size 1024M
```

```
Flash size 2048M
```

```
EPLD Version is 2.3
```

```
BootRom Version is 8.1.3
```

```
System serial number is CG1909251442N0007
```



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