

S3900 Series Switches

FSOS Software Release Notes

Models: S3900-48T4S; S3900-24T4S; S3900-24F4S

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Notice

1) Due to command changes, upgrading will result in the loss of the modified command.

Please pay attention to save the configuration and modify it according to the changed command.

2) Since the V1.7.2 version of the software upgrades SSH and SSL to the latest one, a large number of new files have been added, making the size of the new version exceed the size limit of the 1.7.1 version of the software. Therefore, it is not possible to directly upgrade from version V1.7.1 to version V1.7.2. You need to use an UPGRADE version as a transition, first upgrade to the UPGRADE version, and then use the UPGRADE version to upgrade to the V1.7.2.

1. Introduction

1.1 Current Release

1.1.1 V1.7.3

S3900-48T4S-MR-V0173.bin

S3900-24T4S-MR-V0173.bin

S3900-24F4S-MR-V0173.bin

Runtime: V1.7.3

Loader: V1.4

1.1.2 V1.7.2

S3900-48T4S-MR-V0172.bin

S3900-24T4S-MR-V0172.bin

S3900-24F4S-MR-V0172.bin

Runtime: V1.7.2

Loader: V1.4

1.1.3 V1.7.1

S3900-48T4S-MR-V0171.bin

S3900-24T4S-MR-V0171.bin

S3900-24F4S-MR-V0171.bin

Runtime: V0.1.7.1

Loader: V1.4

1.1.4 V1.7.0

S3900-48T4S-MR-V0170.bin

S3900-24T4S-MR-V0170.bin

S3900-24F4S-MR-V0170.bin

Runtime: V0.1.7.0

Loader: V1.4

1.1.5 V1.6.9R2

S3900-48T4S-MR-V0169R2.bin

S3900-24T4S-MR-V0169R2.bin

S3900-24F4S-MR-V0169R2.bin

Runtime: V0.1.6.9R2

Loader: V1.4

1.1.6 V1.6.9

S3900-24T4S-MR-V0169.bin

S3900-48T4S-MR-V0169.bin

S3900-24F4S-MR-V0169.bin

Runtime: V0.1.6.9

Loader: V1.4

1.1.7 V1.6.7

S3900-24T4S-MR-V0167.bin

S3900-48T4S-MR-V0167.bin

S3900-24F4S-MR-V0167.bin

Runtime: V0.1.6.7

Loader: V1.1

1.1.8 V1.6.4

S3900-24T4S-MR-V0164.bin

S3900-48T4S-MR-V0164.bin

S3900-24F4S-MR-V0164.bin

Runtime: V0.1.6.4

Loader: V1.1

1.1.9 V1.6.2

S3900-24T4S-MR-V0162.bin

S3900-48T4S-MR-V0162.bin

Runtime: V0.1.6.2

Loader: V1.1

Note: MR: master runtime

2. New Changes

2.1 V1.7.3

2.1.1 Existing Functions Optimization

Optimize the stacking process and improve the efficiency of receiving and sending packets.

2.1.2 Existing Functions Optimization

0000164: The displayed time of the uploaded file does not follow the system time zone.

0000193: The backup IP address of the VLAN interface is lost after being saved and restarted.

0000197: Log in to SSH, log in to SSH again after logging out, the CLI operation may hang after logging in.

0000204: In a stacking scenario, the slave receiving a large number of Layer 2 broadcast messages will cause the spanning tree status to be abnormal.

0000234: After the stack is split, the MSTP instance members on the original slave unit are lost.

0000235: After the computer's Linux shell logs out from the SSH session connected to the switch, the Linux shell interface will get stuck.

0000236: Web: After clicking Logout, a prompt that does not match the expected operation pops up.

0000237: SSH connection cannot pass Radius/Tacacs+ authentication user.

0000251: Some unicast addresses cannot be added to IPv6 static neighbors.

0000252: The prefix length of the IPV6 local address should be 10 bits.

0000279: When the device is enabled with NTP, DNS, and the server name in NTP is a string, it runs for about 180 days, and the RAM is exhausted.

2.2 V1.7.2

2.2.1 Existing Functions Optimization

(1) SSH upgrade to SSH V2.0

host key type: RSA, ECDSA, ED25519

The server supports these key-exchange methods:

curve25519-sha256,curve25519-sha256@libssh.org,ecdh-sha2-nistp256,ecdh-sha2-nistp384,ecdh-sha2-nistp521,diffie-hellman-group-exchange-sha256,diffie-hellman-group16-sha512,diffie-hellman-group18-sha512,diffie-hellman-group14-sha256

The server supports these ciphers:

ChaCha20-Poly1305,AES-128-CTR,AES-192-CTR,AES-256-CTR,AES-128-GCM,AES-256-GCM

The server supports these MACs:

umac-64-etm@openssh.com,umac-128-etm@openssh.com,hmac-sha2-256-etm@openssh.com,hmac-sha2-512-etm@openssh.com,hmac-sha1-etm@openssh.com,UMAC-64,UMAC-128,SHA2-256,SHA2-512,SHA1

Note: Compared with the V1.7.1 version, the V1.7.2 version of the SSH key generation and storage method has changed greatly, so after upgrading to the V1.7.2 version, SSH needs to be reconfigured.

(2) TLS upgrade to TLS V1.3

(3) Web added a management page for management ip

(4) CLI Optimization

a. delete ip ssh authentication-retries

b. delete ip ssh timeout

c. dd ip ssh port

(5) Bug fixes

- a. After lgmpsnp is turned on, the ospf protocol packet will be discarded.
- b. DAI log web and cli display are inconsistent.
- c. Web: After adding eth 1/1 ~ 1/2 port to Trunk group, the default port of RMON --> Statistics Group --> Configuration/Statistics starts from 1/3.
- d. Web: PPPOE port Remote ID reads illegal characters under web.
- e. When deleting a nopassword user, the system should not print: Failed to delete user from ssh userdata.

2.3 V1.7.1**2.3.1 Existing Functions Optimization****(1) CLI Optimization**

In order to unify the command style of FS switch, the command line style of S39 series switch is optimized.

Type	Original Format	Original Location	New Format	New Location
Modify	ip add dhcp	switch(config-if)	ip address dhcp	
Modify	no ip add dhcp	switch(config-if)	no ip address dhcp	
Modify	ip dhcp dynamic-provision	switch(config)	dhcp dynamic-provision	
Modify	no ip dhcp dynamic-provision	switch(config)	no dhcp dynamic-provision	
Modify	interface craft ip add (A.B.C.D A.B.C.D/M)	switch(config-if)	management ip address	switch(config)
Modify	interface craft no ip add (A.B.C.D A.B.C.D/M)	switch(config-if)	no management ip address	switch(config)
Modify	ip dhcp client class-id [text text hex hex]	switch(config-if)	dhcp client class-id [text text hex hex]	
Modify	no ip dhcp client class-id	switch(config-if)	no dhcp client class-id	
Modify	ip dhcp l3 relay	switch(config)	dhcp relay	
Modify	no ip dhcp l3 relay	switch(config)	no dhcp relay	
Modify	ip dhcp l2 relay	switch(config)	dhcp l2 relay	
Modify	no ip dhcp l2 relay	switch(config)	no dhcp l2 relay	
Modify	ip dhcp relay information policy {drop keep replace}	switch(config)	dhcp relay information policy {drop keep replace}	
Modify	ip dhcp relay server address1 [address2 [address3 ...]]	switch(config)	dhcp relay server NUMBER SERVER-LIST	
Modify	no ip dhcp relay server	switch(config)	no dhcp relay server	
Modify	ip dhcp relay information option	switch(config)	dhcp relay information option	
Modify	no ip dhcp relay information option	switch(config)	no dhcp relay information option	
Modify	show ip dhcp relay		show dhcp-server	
Modify	ip dhcp snooping	switch(config)	dhcp snooping	
Modify	no ip dhcp snooping	switch(config)	no dhcp snooping	
Modify	ip dhcp snooping database flash		dhcp snooping database flash	
Modify	ip dhcp snooping information option	switch(config)	dhcp snooping information option	
Modify	no ip dhcp snooping information option	switch(config)	no dhcp snooping information option	
Modify	ip dhcp snooping verify mac-address	switch(config)	dhcp snooping verify mac-address	
Modify	no ip dhcp snooping verify mac-address	switch(config)	no dhcp snooping verify mac-address	
Modify	ip dhcp snooping trust	switch(config-if)	dhcp snooping trust	
Modify	no ip dhcp snooping trust	switch(config-if)	no dhcp snooping trust	
Modify	ip dhcp snooping information policy {drop	switch(config)	dhcp snooping information policy {drop	

Type	Original Format	Original Location	New Format	New Location
	keep replace}		keep replace}	
Modify	ip dhcp snooping vlan vlan-id	switch(config)	dhcp snooping vlan vlan-id	
Modify	no ip dhcp snooping vlan vlan-id	switch(config)	no dhcp snooping vlan vlan-id	
Modify	ip dhcp snooping information option circuit-id string string	switch(config-if)	dhcp snooping information option circuit-id string string	
Modify	no ip dhcp snooping information option circuit-id	switch(config-if)	no dhcp snooping information option circuit-id	
Modify	ip dhcp snooping information option [encode no-subtype] [remote-id {ip-address [encode {ascii hex}] mac-address [encode {ascii hex}] string string}}	switch(config)	dhcp snooping information option [encode no-subtype] [remote-id {ip-address [encode {ascii hex}] mac-address [encode {ascii hex}] string string}}	
Modify	no ip dhcp snooping information option [encode no-subtype] [remote-id [ip-address encode] [mac-address encode]]	switch(config)	no dhcp snooping information option [encode no-subtype] [remote-id [ip-address encode] [mac-address encode]]	
Modify	show ip dhcp snooping binding		show dhcp snooping binding	
Modify	show ip dhcp snooping		show dhcp snooping config	
Modify	clear ip dhcp snooping binding [mac-address vlan vlan-id]		clear dhcp snooping binding [mac-address vlan vlan-id]	
Modify	clear ip dhcp snooping database flash		clear dhcp snooping database flash	
Modify	dot1x system-auth-control	switch(config)	dot1x system-auth-ctrl	
Modify	no dot1x system-auth-control	switch(config)	no dot1x system-auth-ctrl	
Modify	dot1x re-authentication	switch(config-if)	dot1x reauthentication	
Modify	no dot1x re-authentication	switch(config-if)	no dot1x reauthentication	
Modify	show tacacs-server		show tacacs	
Modify	ipv6 dhcp snooping	switch(config)	dhcpv6 snooping	
Modify	no ipv6 dhcp snooping	switch(config)	no dhcpv6 snooping	
Modify	ipv6 dhcp snooping trust	switch(config-if)	dhcpv6 snooping trust	
Modify	no ipv6 dhcp snooping trust	switch(config-if)	no dhcpv6 snooping trust	
Modify	ipv6 dhcp snooping vlan {vlan-id vlan-range}	switch(config)	dhcpv6 snooping vlan {vlan-id vlan-range}	
Modify	no ipv6 dhcp snooping vlan {vlan-id vlan-range}	switch(config)	no dhcpv6 snooping vlan {vlan-id vlan-range}	
Modify	ipv6 dhcp snooping max-binding count	switch(config-if)	dhcpv6 snooping max-binding count	
Modify	no ipv6 dhcp snooping max-binding	switch(config-if)	no dhcpv6 snooping max-binding	
Modify	show ipv6 dhcp snooping binding		show dhcpv6 snooping binding	
Modify	show ipv6 dhcp snooping binding		show dhcpv6 snooping config	
Modify	show ipv6 dhcp snooping statistics		show dhcpv6 snooping statistics	

Type	Original Format	Original Location	New Format	New Location
Modify	clear ipv6 dhcp snooping binding [mac-address ipv6-address]		clear dhcpv6 snooping binding [mac-address ipv6-address]	
Modify	lldp	switch(config)	lldp enable	
Modify	no lldp	switch(config)	lldp disable	
Modify	lldp admin-status {rx-only tx-only tx-rx}	switch(config-if)	lldp enable (txonly txrx rxonly)	
Modify	no lldp admin-status	switch(config-if)	lldp disable	
Modify	lldp holdtime-multiplier value	switch(config)	lldp msg-tx-hold value	
Modify	no lldp holdtime-multiplier	switch(config)	no lldp msg-tx-hold	
Modify	lldp refresh-interval seconds	switch(config)	lldp timer msg-tx-interval seconds	
Modify	no lldp refresh-interval	switch(config)	no lldp timer msg-tx-interval	
Modify	lldp reinit-delay seconds	switch(config)	lldp timer reinit-delay seconds	
Modify	no lldp reinit-delay	switch(config)	no lldp timer reinit-delay	
Modify	lldp tx-delay seconds	switch(config)	lldp timer tx-delay NUMBER	
Modify	no lldp tx-delay	switch(config)	no lldp timer tx-delay	
Modify	lldp basic-tlv {management-ip-address port-description system-capabilities system-description system-name }	switch(config-if)	lldp tlv basic { port-description system-name system-description system-capabilities management-address all }	
Modify	no lldp basic-tlv {management-ip-address port-description system-capabilities system-description system-name }	switch(config-if)	no lldp tlv basic { port-description system-name system-description system-capabilities management-address all }	
Modify	lldp dot1-tlv { proto-ident proto-vid pvid vlan-name }	switch(config-if)	lldp tlv 8021-org-specific { port-vlan protocol-vlan vlan-name protocol-id all }	
Modify	no lldp dot1-tlv { proto-ident proto-vid pvid vlan-name }	switch(config-if)	no lldp tlv 8021-org-specific { port-vlan protocol-vlan vlan-name protocol-id all }	
Modify	lldp dot3-tlv { link-agg mac-phy max-frame poe }	switch(config-if)	lldp tlv 8023-org-specific { mac-phy-cfg power link-aggregation max-frame-size all }	
Modify	no lldp dot3-tlv { link-agg mac-phy max-frame poe }	switch(config-if)	no lldp tlv 8023-org-specific { mac-phy-cfg power link-aggregation max-frame-size all }	
Modify	lldp med-tlv { ext-poe inventory location med-cap network-policy }	switch(config-if)	lldp tlv med { network-policy ext-power location med-cap inventory all }	
Modify	no lldp med-tlv { ext-poe inventory location med-cap network-policy }	switch(config-if)	no lldp tlv med { network-policy ext-power location med-cap inventory all }	
Modify	lldp med-location civic-addr [[country country-code]] [what device-type] [ca-type ca-value]]	switch(config-if)	lldp tlv med civic-addr [[country country-code]] [what device-type] [ca- type ca-value]]	

Type	Original Format	Original Location	New Format	New Location
Modify	no lldp med-location civic-addr [[country] [[what]] [ca-type]]	switch(config-if)	no lldp tlv med civic-addr [[country]] [[what]] [ca-type]]	
Modify	system-name NAME	switch(config)	lldp system-name NAME	
Modify	no system-name	switch(config)	no lldp system-name	
Modify	show lldp info local-device [detail interface]		show lldp local tlv-info {<cr> ethernet port-channel}	
Modify	show lldp config [detail interface]		show lldp local config {<cr> ethernet port-channel}	
Modify	show lldp info remote-device [detail interface]		show lldp neighbor {<cr> ethernet port-channel}	
Modify	show lldp info statistics [detail interface]		show lldp statistics {<cr> ethernet port-channel}	
Modify	logging level {flash ram} level	switch(config)	logging level module {flash ram} level	
Modify	no logging level {flash ram}	switch(config)	no logging level module	
Modify	logging host host-ip-address	switch(config)	logging server address host-ip-address	
Modify	no logging host host-ip-address	switch(config)	no logging server address host-ip-address	
Modify	rspan session session-id source interface interface-list [rx tx both]	switch(config)	monitor session session-id source interface interface interface-list [rx tx both]	
Modify	no rspan session session-id source interface interface-list [rx tx both]	switch(config)	no monitor session session-id source interface interface interface-list [rx tx both]	
Modify	rspan session session-id destination interface interface [tagged untagged]	switch(config)	monitor session session-id remote vlan vlan-id {source intermediate destination} interface	
Modify	no rspan session session-id destination interface interface [tagged untagged]	switch(config)	no monitor session session-id remote vlan vlan-id {source intermediate destination} interface	
Modify	port monitor {interface [rx tx both]}	switch(config-if)	monitor session session source interface interface [rx tx both]	switch(config)
Modify	no port monitor {interface	switch(config-if)	no monitor session session source interface interface [rx tx both]	switch(config)
Add			monitor session session destination interface interface	switch(config)
Add			no monitor session session destination	switch(config)
Modify	authentication login {[local] [radius] [tacacs]}	switch(config)	aaa authentication login {[local] [radius] [tacacs]}	
Modify	no authentication login	switch(config)	no aaa authentication login	
Modify	aaa authorization login {default strategy-name} list {tacacs+ server-list}	switch(config)	aaa authorization exec {default strategy-name} list {tacacs+ server-list}	
Modify	no aaa authorization login {default	switch(config)	no aaa authorization exec {default	

Type	Original Format	Original Location	New Format	New Location
	strategy-name}		strategy-name}	
Modify	authorization login {default strategy-name}	switch(config-line-vty)	authorization exec {default strategy-name}	
Modify	no authorization login	switch(config-line-vty)	no authorization exec	
Modify	aaa accounting login {default strategy-name} start-stop list {radius tacacs+ server-list}	switch(config)	aaa accounting exec {default strategy-name} start-stop list {radius tacacs+ server-list}	
Modify	no aaa accounting login {default strategy-name}	switch(config)	no aaa accounting exec {default strategy-name}	
Modify	accounting login {default strategy-name}	switch(config-line-vty)	accounting exec {default strategy-name}	
Modify	no accounting login	switch(config-line-vty)	no accounting exec	
Modify	ip igmp snooping vlan vlan-id immediate-leave	switch(config)	ip igmp snooping vlan vlan_id fast-leave	
Modify	no ip igmp snooping vlan vlan-id immediate-leave	switch(config)	no ip igmp snooping vlan vlan_id fast-leave	
Modify	ip igmp snooping vlan vlan-id query-resp-intvl interval	switch(config)	ip igmp snooping vlan vlan_id query-max-response-time time	
Modify	no ip igmp snooping vlan vlan-id query-resp-intvl	switch(config)	no ip igmp snooping vlan vlan_id query-max-response-time	
Modify	ip igmp snooping vlan vlan-id static ip-address interface	switch(config)	ip igmp snooping vlan vlan_id static-group group-address interface	
Modify	no ip igmp snooping vlan vlan-id static ip-address interface	switch(config)	no ip igmp snooping vlan vlan_id static-group group-address interface	
Modify	ip igmp snooping vlan vlan-id last-memb-query-intvl interval	switch(config)	ip igmp snooping vlan vlan_id last-member-query-interval interval	
Modify	no ip igmp snooping vlan vlan-id last-memb-query-intvl	switch(config)	no ip igmp snooping vlan vlan_id last-member-query-interval	
Modify	ip igmp snooping vlan vlan-id last-memb-query-count count	switch(config)	ip igmp snooping vlan vlan_id last-member-query-count count	
Modify	no ip igmp snooping vlan vlan-id last-memb-query-count	switch(config)	no ip igmp snooping vlan vlan_id last-member-query-count	
Modify	ip igmp snooping unregistered-data-flood	switch(config)	ip igmp snooping discard-unknown	
Modify	no ip igmp snooping unregistered-data-flood	switch(config)	no ip igmp snooping discard-unknown	
Modify	ip igmp snooping router-port-expire-time seconds	switch(config)	ip igmp snooping mrouter-aging-interval seconds	
Modify	clear ip igmp snooping groups dynamic		clear ip igmp snooping group *	
Modify	show ip igmp snooping group		show ip igmp snooping groups	
Modify	ipv6 mld snooping vlan vlan-id	switch(config)	ipv6 mld snooping vlan vlan_id fast-leave	

Type	Original Format	Original Location	New Format	New Location
	immediate-leave			
Modify	no ipv6 mld snooping vlan vlan-id immediate-leave	switch(config)	no ipv6 mld snooping vlan vlan_id fast-leave	
Modify	ipv6 mld snooping query-interval interval	switch(config)	ipv6 mld snooping query-interval interval	
Modify	no ipv6 mld snooping query-interval	switch(config)	no ipv6 mld snooping query-interval	
Modify	ipv6 mld snooping query-max-response-time seconds	switch(config)	ipv6 mld snooping query-max-response-time seconds	
Modify	no ipv6 mld snooping query-max-response-time seconds	switch(config)	no ipv6 mld snooping query-max-response-time seconds	
Modify	ipv6 mld snooping vlan vlan-id static ipv6-address interface	switch(config)	ipv6 mld snooping vlan vlan_id static-group group-address interface	
Modify	no ipv6 mld snooping vlan vlan-id static ipv6-address interface	switch(config)	no ipv6 mld snooping vlan vlan_id static-group group-address interface	
Modify	ipv6 mld snooping router-port-expire-time time	switch(config)	ipv6 mld snooping mrouter-aging-interval time	
Modify	no ipv6 mld snooping router-port-expire-time	switch(config)	no ipv6 mld snooping mrouter-aging-interval	
Modify	ipv6 mld snooping robustness value	switch(config)	ipv6 mld snooping robustness-variable value	
Modify	no ipv6 mld snooping robustness	switch(config)	no ipv6 mld snooping robustness-variable	
Modify	clear ipv6 mld snooping groups dynamic		clear ipv6 mld snooping *	
Modify	show ipv6 mld snooping group		show ipv6 mld snooping groups	
Modify	mvr domain domain-id upstream-source-ip source-ip-address	switch(config)	mvr domain domain-id source-address source-ip-address	
Modify	no mvr domain domain-id upstream-source-ip	switch(config)	no mvr domain domain-id source-address	
Modify	mvr6 domain domain-id upstream-source-ip source-ipv6-address	switch(config)	mvr6 domain domain-id source-address source-ipv6-address	
Modify	no mvr6 domain domain-id upstream-source-ip	switch(config)	no mvr6 domain domain-id source-address	
Modify	dns host name address	switch(config)	ip host hostname ip-address	
Modify	no dns host name address	switch(config)	no ip host hostname ip-address	
Modify	dns domain-name name	switch(config)	dns domain name	
Modify	no dns domain-name	switch(config)	no dns domain	
Modify	dns name-server server-address1 [server-address2 ... server-address6]	switch(config)	dns server server-address1 [server-address2 ... server-address6]	
Modify	no dns name-server server-address1 [server-address2 ... server-address6]	switch(config)	no dns server server-address1 [server-address2 ... server-address6]	
Modify	show hosts		show ip host	
Modify	switchport {broadcast multicast unicast}	switch(config-if)	storm-control {broadcast multicast unicast}	

Type	Original Format	Original Location	New Format	New Location
	packet-rate rate		packet-rate rate	
Modify	no switchport {broadcast multicast unknown-unicast}	switch(config-if)	no storm-control (broadcast multicast unicast)	
Modify	mac-address-table aging-time <i>seconds</i>	switch(config)	mac-address-table ageing-time <i>seconds</i>	
Modify	no mac-address-table aging-time	switch(config)	no mac-address-table ageing-time	
Modify	show mac-address-table aging-time		show mac-address-table ageing-time	
Modify	restart		reboot	
Modify	vlan vlan-id [name vlan-name] media ethernet [state {active suspend}] [rspan]	switch(config-vlan)	vlan vlan-id [name vlan-name] { state (enable disable) } [monitor]	
Modify	voice vlan mac-address mac-address mask mask-address [description description]	switch(config)	voice vlan mac-address mac-address mask-address [description description]	
Modify	no voice vlan mac-address mac-address mask mask-address	switch(config)	no voice vlan mac-address mac-address mask-address	
Modify	switchport voice vlan {manual auto}	switch(config-if)	voice vlan {manual auto}	
Modify	no switchport voice vlan	switch(config-if)	no voice vlan	
Modify	switchport voice vlan priority priority-value	switch(config-if)	voice vlan set cos COS	
Modify	no switchport voice vlan priority	switch(config-if)	no voice vlan set cos	
Modify	port channel load-balance {dst-ip dst-mac src-dst-ip src-dst-mac src-ip src-mac}	switch(config)	port-channel load-balance hash-field-select {dst-ip dst-mac src-dst-ip src-dst-mac src-ip src-mac}	
Modify	no port channel load-balance	switch(config)	no port-channel load-balance hash-field-select	
Modify	efm oam	switch(config-if)	ethernet oam enable	
Modify	no efm oam	switch(config-if)	no ethernet oam enable	
Modify	efm oam link-monitor frame	switch(config-if)	ethernet oam link-monitor frame-seconds	
Modify	no efm oam link-monitor frame	switch(config-if)	no ethernet oam link-monitor frame-seconds	
Modify	efm oam mode {active passive}	switch(config-if)	ethernet oam mode (active passive)	
Modify	no efm oam mode	switch(config-if)	no ethernet oam mode	
Modify	efm oam link-monitor frame threshold count	switch(config-if)	ethernet oam link-monitor frame threshold count	
Modify	no efm oam link-monitor frame threshold	switch(config-if)	no ethernet oam link-monitor frame threshold	
Modify	efm oam critical-link-event {critical-event dying-gasp}	switch(config-if)	ethernet oam remote-failure {critical-event dying-gasp}	
Modify	no efm oam critical-link-event {critical-event dying-gasp}	switch(config-if)	no ethernet oam remote-failure {critical-event dying-gasp}	
Modify	show efm oam counters interface [interface-list]		show ethernet oam statistics interface [interface-list]	

Type	Original Format	Original Location	New Format	New Location
Modify	efm oam remote-loopback {start stop} interface	switch(config)	ethernet oam remote-loopback {start stop} interface	
Modify	cfm enable	switch(config)	ethernet cfm enable	
Modify	no cfm enable	switch(config)	no ethernet cfm enable	
Modify	cfm domain index index name domain-name level level-id [mip-creation type]	switch(config)	ethernet cfm domain index index name domain-name level level-id [mip-creation type]	
Modify	no cfm domain index index	switch(config)	no ethernet cfm domain index index	
Modify	cfm mep mepid mepid md domain-name ma ma-name [up]	switch(config-if)	ethernet cfm mep mepid mepid md domain-name ma ma-name [up]	
Modify	no cfm mep mepid mepid md domain-name ma ma-name	switch(config-if)	no ethernet cfm mep mepid mepid md domain-name ma ma-name	
Modify	cfm cc enable md domain-name ma ma-name	switch(config)	ethernet cfm cc enable md domain-name ma ma-name	
Modify	no cfm cc enable md domain-name ma ma-name	switch(config)	no ethernet cfm cc enable md domain-name ma ma-name	
Modify	cfm linktrace cache	switch(config)	ethernet cfm linktrace cache enable	
Modify	no cfm linktrace cache	switch(config)	no ethernet cfm linktrace cache enable	
Modify	cfm linktrace cache hold-time minutes	switch(config)	ethernet cfm linktrace cache holdtime minutes	
Modify	no cfm linktrace cache hold-time minutes	switch(config)	no ethernet cfm linktrace cache holdtime	
Modify	cfm linktrace cache size entries	switch(config)	ethernet cfm linktrace cache size entries	
Modify	cfm linktrace cache size entries	switch(config)	ethernet cfm linktrace cache size	
Modify	cfm mep crosscheck start-delay delay	switch(config)	ethernet cfm mep crosscheck start-delay delay	
Modify	no cfm mep crosscheck start-delay	switch(config)	no ethernet cfm mep crosscheck start-delay	
Modify	clear cfm errors [domain domain-name level level-id]		clear ethernet cfm errors [domain domain-name level level-id]	
Modify	cfm delay-measure two-way [src-mep source-mpid] {dest-mepdestination-mpid mac-address} md domain-name ma ma-name [count transmit-count][interval interval] [size packet-size] [timeout timeout]	switch(config)	ethernet cfm delay-measure two-way [src-mep source-mpid] {dest-mep destination-mpid mac-address} md domain-name ma ma-name [count transmit-count] [interval interval] [size packet-size] [timeout timeout]	
Modify	show cfm maintenance-points local {mep [domain domain-name interface interface level level-id] mip [domain domain-name level level-id]}		show ethernet cfm maintenance-points local {mep [domain domain-name interface interface level level-id] mip [domain domain-name level level-id]}	
Modify	show cfm configuration {global traps interface interface}		show ethernet cfm configuration {global traps interface interface}	

Type	Original Format	Original Location	New Format	New Location
Modify	clear cfm linktrace-cache		clear ethernet cfm linktrace cache	
Modify	show cfm linktrace-cache		show ethernet cfm linktrace cache	
Modify	show cfm maintenance-points remote {mac mac-address mepid mepid} [domain domain-name level level-id ma ma-name]		show ethernet cfm maintenance-points remote {mac mac-address mepid mepid} [domain domain-name level level-id ma ma-name]	
Modify	cfm loopback {dest-mep destination-mepid src-mep source-mepid {dest-mep destination-mepid mac-address} mac-address} md domain-name ma ma-name [count transmit-count] [size packet-size]	switch(config)	ethernet cfm loopback {dest-mep destination-mepid src-mep source-mepid {dest-mep destination-mepid mac-address} mac-address} md domain-name ma ma-name [count transmit-count] [size packet-size]	
Modify	cfm linktrace {dest-mep destination-mepid src-mep source-mepid {dest-mep destination-mepid mac-address} mac-address} md domain-name ma ma-name [ttl number]	switch(config)	ethernet cfm linktrace {dest-mep destination-mepid src-mep source-mepid {dest-mep destination-mepid mac-address} mac-address} md domain-name ma ma-name [ttl number]	
Modify	snmp-server server	switch(config)	snmp-server enable	
Modify	no snmp-server server	switch(config)	no snmp-server enable	
Modify	snmp-server enable traps ethernet cfm cc [config loop mep-down mep-up]	switch(config)	snmp-server trap enable ethernet cfm cc [config loop mep-down mep-up]	
Modify	no snmp-server enable traps ethernet cfm cc [config loop mep-down mep-up]	switch(config)	no snmp-server trap enable ethernet cfm cc [config loop mep-down mep-up]	
Modify	snmp-server host host-addr [inform [retry retries timeout seconds]] community-string [version {1 2c 3 { auth noauth priv } [udp-port port]]	switch(config)	snmp-server trap target-address host-addr [inform [retry retries timeout seconds]] community-string [version { 2c 3 { auth noauth priv } [udp-port port]]	
Modify	no snmp-server host host-addr	switch(config)	no snmp-server trap target-address host-addr	
Modify	snmp-server contact string	switch(config)	snmp-server system-contact string	
Modify	no snmp-server contact	switch(config)	no snmp-server system-contact	
Modify	snmp-server location string	switch(config)	snmp-server system-location string	
Modify	no snmp-server location	switch(config)	no snmp-server system-location	
Modify	show snmp engine-id		show snmp-server engineID	
Modify	show snmp group		show snmp-server group	
Modify	show snmp user		show snmp-server usm-user	
Modify	show snmp view		show snmp-server view	
Modify	snmp-server user username groupname [remote ip-address] {v1 v2c v3 [encrypted] [auth {md5 sha}	switch(config)	snmp-server usm-user username groupname [remote ip-address] {v1 v2c v3 [encrypted] [auth {md5 sha} auth-password [priv des56	

Type	Original Format	Original Location	New Format	New Location
	auth-password [priv des56 priv-password]]		priv-password]]	
Modify	show snmp		show snmp-server	
Modify	rmon collection history controlEntry index [[owner name] [buckets number] [interval seconds]] [buckets number] [interval seconds] interval seconds	switch(config-if)	[[owner name] [buckets number] [interval seconds]] [buckets number] [interval seconds] interval seconds	
Modify	rmon collection stats controlEntry index [owner name]	switch(config-if)	rmon collection stats index [owner name]	
Modify	show rmon alarms		show rmon alarm	
Modify	show rmon events		show rmon event	
Modify	spanning-tree	switch(config)	spanning-tree enable	
Modify	no spanning-tree	switch(onfig)	no spanning-tree enable	
Modify	spanning-tree pathcost method {long short}	switch(onfig)	spanning-tree pathcost-standard { dot1d-1998 dot1t }	
Modify	spanning-tree pathcost method {long short}	switch(onfig)	no spanning-tree pathcost-standard	
Modify	spanning-tree portfast [auto]	switch(config-if)	spanning-tree edgeport	
Modify		switch(config-if)	spanning-tree port (enable disable)	
Modify	spanning-tree bpdu-filter	switch(config-if)	spanning-tree edgeport bpdu-filter	
Modify	no spanning-tree bpdu-filter	switch(config-if)	no spanning-tree edgeport bpdu-filter	
Modify	spanning-tree bpdu-guard [auto-recovery [interval interval]]	switch(config-if)	spanning-tree edgeport bpdu-guard	
Modify	mst instance-id vlan vlan-range	switch(config-mstp)	instance instance-id vlan vlan-id	
Modify	no mst instance-id vlan vlan-range	switch(config-mstp)	no instance instance-id vlan vlan-id	
Modify	spanning-tree transmission-limit count	switch(onfig)	spanning-tree transmit-holdcount count	
Modify	no spanning-tree transmission-limit	switch(onfig)	no spanning-tree transmit-hold count	
Modify	name name	switch(config-mstp)	region name	
Modify	no name	switch(config-mstp)	no region	
Modify	spanning-tree cost cost	switch(config-if)	spanning-tree path-cost number	
Modify	no spanning-tree cost	switch(config-if)	no spanning-tree path-cost	
Modify	spanning-tree mst instance-id cost cost	switch(config-if)	spanning-tree instance instance-id path-cost cost	
Modify	no spanning-tree mst instance-id cost	switch(config-if)	no spanning-tree instance instance-id path-cost	
Modify	spanning-tree mst max-hops hop-number	switch(config)	spanning-tree max-hops hop-number	
Modify	no spanning-tree mst max-hops	switch(config)	no spanning-tree max-hops	
Modify	spanning-tree mst instance-id port-priority	switch(config-if)	spanning-tree instance instance-id	

Type	Original Format	Original Location	New Format	New Location
	priority		port-priority priority	
Modify	no spanning-tree mst instance-id port-priority	switch(config-if)	no spanning-tree instance instance-id port-priority	
Modify	debug spanning-tree (all bpdu events root)		debug stp (all bpdu events root)	
Modify	no debug spanning-tree (all bpdu events root)		no debug stp (all bpdu events root)	
Modify	show debug spanning-tree		show debugging spanning-tree	
Modify	show spanning-tree mst instance-id		show spanning-tree mst instance instance-id	
Modify	show spanning-tree mst configuration		show spanning-tree mst config	
Modify	spanning-tree bpdu-filter	switch(config-if)	spanning-tree edgeport bpdu-filter	
Modify	no spanning-tree bpdu-filter	switch(config-if)	no spanning-tree edgeport bpdu-filter	
Modify	spanning-tree loopback-detection	switch(config-if)	spanning-tree guard loop	
Modify	no spanning-tree loopback-detection	switch(config-if)	no spanning-tree guard loop	
Modify	show spanning-tree detail		show spanning-tree brief	
Modify	loopback-detection	switch(config)	loopback-detect enable	
Modify	no loopback-detection	switch(config)	no loopback-detect enable	
Modify	loopback-detection transmit-interval seconds	switch(config)	loopback-detect packet-interval seconds	
Modify	no loopback-detection transmit-interval	switch(config)	no loopback-detect packet-interval	
Modify	show loopback-detection [interface]		show loopback-detect [interface]	
Modify	loopback-detection recover-time seconds	switch(config)	loopback-detect recovery-interval seconds	
Modify	no loopback-detection recover-time	switch(config)	no loopback-detect recovery-interval	
Modify	loopback-detect action { shutdown none block }	switch(config)	loopback-detect action { shutdown none block }	
Modify	no loopback-detect action	switch(config)	no loopback-detect action	
Modify	udld aggressive	switch(config-if)	udld port aggressive	
Modify	no udld aggressive	switch(config-if)	no udld port aggressive	
Modify	udld message-interval message-interval	switch(config)	udld message interval message-interval	
Modify	no message-interval	switch(config)	no udld message interval	
Modify	wtr-timer minutes	switch(config-erps)	timer wait-to-restore minutes	
Modify	no wtr-timer	switch(config-erps)	no timer wait-to-restore	
Modify	holdoff-timer milliseconds	switch(config-erps)	timer hold-off milliseconds	
Modify	no holdoff-timer	switch(config-erps)	no timer hold-off	
Modify	guard-timer milliseconds	switch(config-erps)	timer guard-timer milliseconds	
Modify	no guard-timer	switch(config-erps)	no timer guard-timer	
Modify	meg-level level	switch(config-erps)	raps-mel level	
Modify	no meg-level	switch(config-erps)	no raps-mel	

Type	Original Format	Original Location	New Format	New Location
Modify	ip source-guard binding mac-address vlan vlan-id ip-address interface ethernet-unit/port	switch(config)	ip source binding mac mac-address vlan vlan-id ip ip-address interface ethernet-unit/port	
Modify	no ip source-guard binding mac-address ip-address	switch(config)	no ip source binding mac-address ip-address	
Modify	ipv6 source-guard binding mac-address vlan vlan-id ipv6-address interface ethernet-unit/port	switch(config)	ip source binding mac mac-address vlan vlan-id ip ipv6-address interface ethernet-unit/port	
Modify	no ipv6 source-guard binding mac-address ipv6-address	switch(config)	no ip source binding mac-address ipv6-address	
Modify	ip source-guard {sip sip-mac}	switch(config-if)	ip source {sip sip-mac}	
Modify	no ip source-guard	switch(config-if)	no ip source	
Modify	ip source-guard max-binding number	switch(config-if)	ip source max-binding number	
Modify	no ip source-guard max-binding	switch(config-if)	no ip source max-binding	
Modify	show ip source-guard binding [dhcp-snooping static blocked]		show ip source binding [dhcp-snooping static blocked]	
Modify	show ip arp inspection configuration		show ip arp inspection	
Modify	show ip arp inspection interface [interface]		show ip arp inspection interfaces [interface]	
Modify	mac access-list ACL-NAME		Only the help information has been modified	
Modify	arp access-list acl		Only the help information has been modified	
Modify	police {srtcm-color-blind srtcm-color-aware} committed-rate committed-burst excess-burst conform-action transmit exceed-action {drop new-dscp} violate action {drop new-dscp}	switch(config-pmap-c)	policer {srtcm-color-blind srtcm-color-aware} committed-rate committed-burst excess-burst conform-action transmit exceed-action {drop new-dscp} violate action {drop new-dscp}	
Modify	no police {srtcm-color-blind srtcm-color-aware} committed-rate committed-burst excess-burst conform-action transmit exceed-action {drop new-dscp} violate action {drop new-dscp}	switch(config-pmap-c)	no policer {srtcm-color-blind srtcm-color-aware} committed-rate committed-burst excess-burst conform-action transmit exceed-action {drop new-dscp} violate action {drop new-dscp}	
Modify	police {trtcm-color-blind trtcm-color-aware} committed-rate committed-burst peak-rate peak-burst conform-action transmit exceed-action {drop new-dscp} violate action {drop new-dscp}	switch(config-pmap-c)	policer {trtcm-color-blind trtcm-color-aware} committed-rate committed-burst peak-rate peak-burst conform-action transmit exceed-action {drop new-dscp} violate action {drop new-dscp}	
Modify	no police {trtcm-color-blind	switch(config-pmap-c)	no policer {trtcm-color-blind	

Type	Original Format	Original Location	New Format	New Location
	trtcm-color-aware} committed-rate committed-burst peak-rate peak-burst conform-action transmitexceed-action {drop new-dscp} violate action {drop new-dscp}		trtcm-color-aware} committed-rate committed-burst peak-rate peak-burst conform-action transmit exceed-action {drop new-dscp} violate action {drop new-dscp}	
Modify	ipv6 nd raguard	switch(config-if)	ipv6 nd ra suppress	
Modify	no ipv6 nd raguard	switch(config-if)	no ipv6 nd ra suppress	
Modify	server telnet enable	switch(config)	service telnet enable	
Modify	no server telnet enable	switch(config)	no service telnet enable	
Modify	server http enable	switch(config)	service http enable	
Modify	no server http enable	switch(config)	no service http enable	
Modify	server https enable	switch(config)	service https enable	
Modify	no server https enable	switch(config)	no service https enable	
Modify	server http port port-number	switch(config)	serve http port port-number	
Modify	no server http port	switch(config)	no serve http port	
Modify	server https secure-port port_number	switch(config)	service https secure-port port_number	
Modify	no server https secure-port	switch(config)	no service https secure-port	
Modify	restart at hour minute [day month moth day [year]]	switch(config)	schedule reboot at hour minute [day month moth day [year]]	
Modify	restart in [hour minute minute]	switch(config)	schedule reboot in [hour minute minute]	
Modify	show cpu guard		show cpu traffic-limit	
Modify	show bootvar		show boot	
Modify	show cpu utilization		show process cpu history	
Modify	restart		reboot	
Modify	qos map phb-queue queue-id from phb0 ... phb7	switch(config-if)	qos map phb-queue queue-id from phb0 ... phb7	switch(config)
Modify	no map phb-queue phb0 ... phb7	switch(config-if)	no map phb-queue phb0 ... phb7	switch(config)

Web Optimization

- The web network management divided four categories: Monitor, Configuration, Maintenance, Network.
- Monitor

The Web monitor page appears after login, as shown in figure 1.

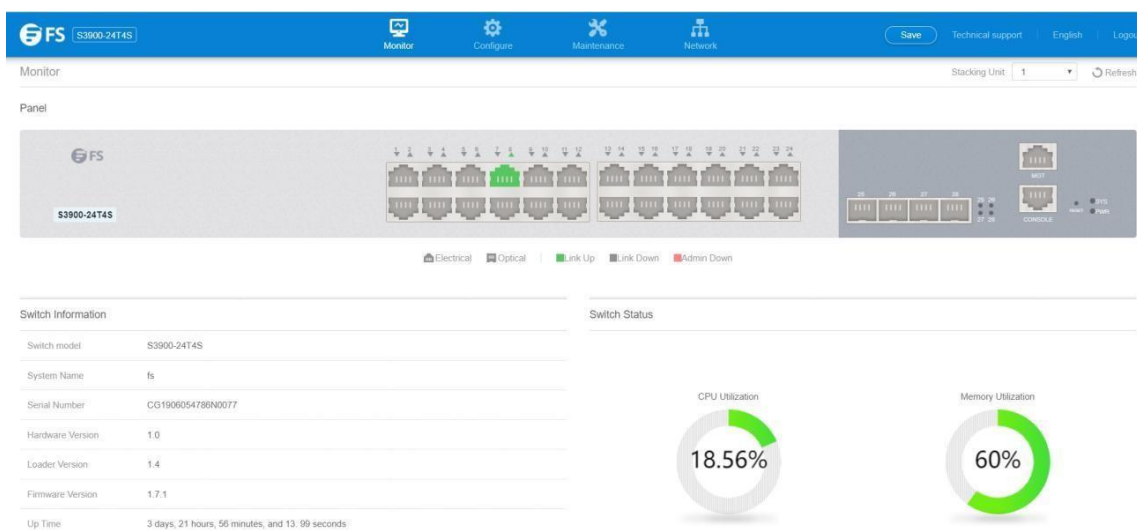


Figure 1 Web monitor page

The whole monitor page consists of the top control bar, the configuration display area and the bottom area.

c Configuration

If you click "Configuration" in the top control bar, as shown in figure 2.

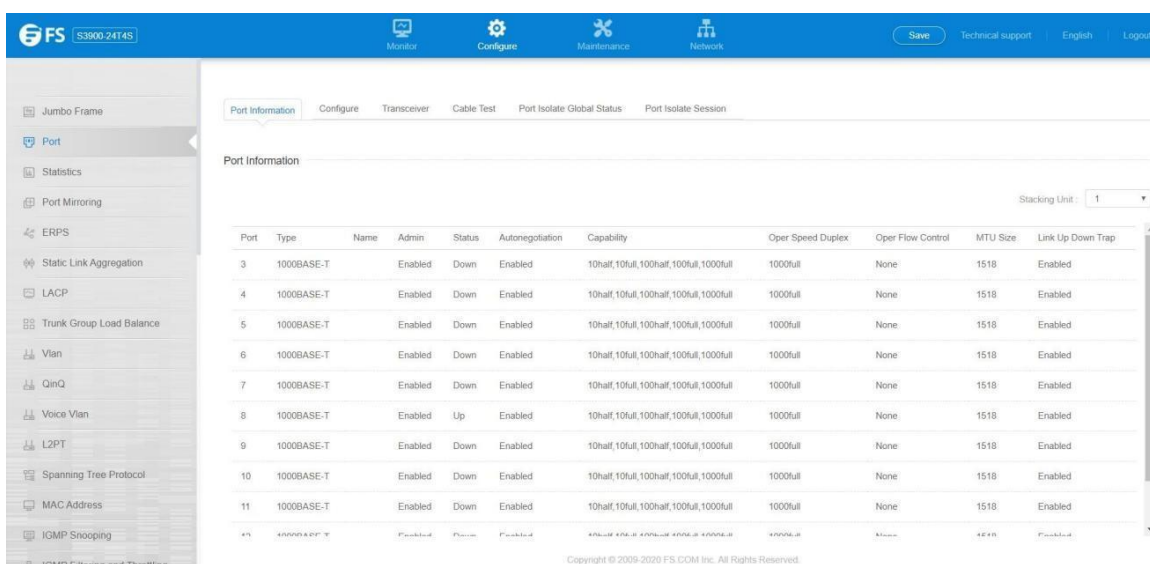


Figure 2 Web configuration page

The whole configuration page consists of the top control bar, the navigation bar, the configuration area and the bottom area.

d Maintenance

If you click "Maintenance" in the top control bar, as shown in figure 3.

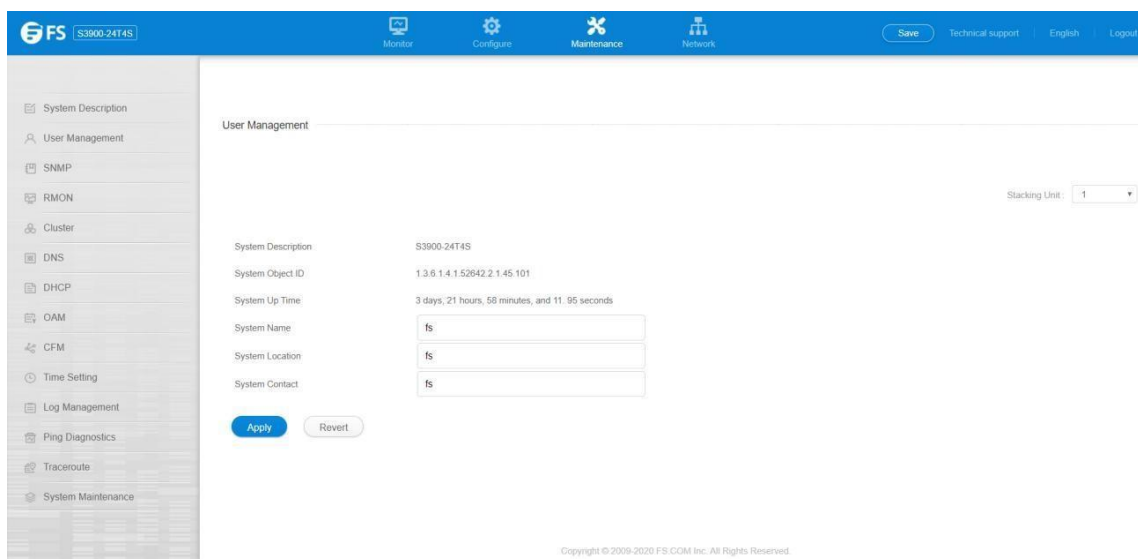


Figure 3 Web maintenance page

The whole maintenance page consists of the top control bar, the navigation bar, the configuration area and the bottom area.

e Network

If you click "Network" in the top control bar, as shown in figure 4.

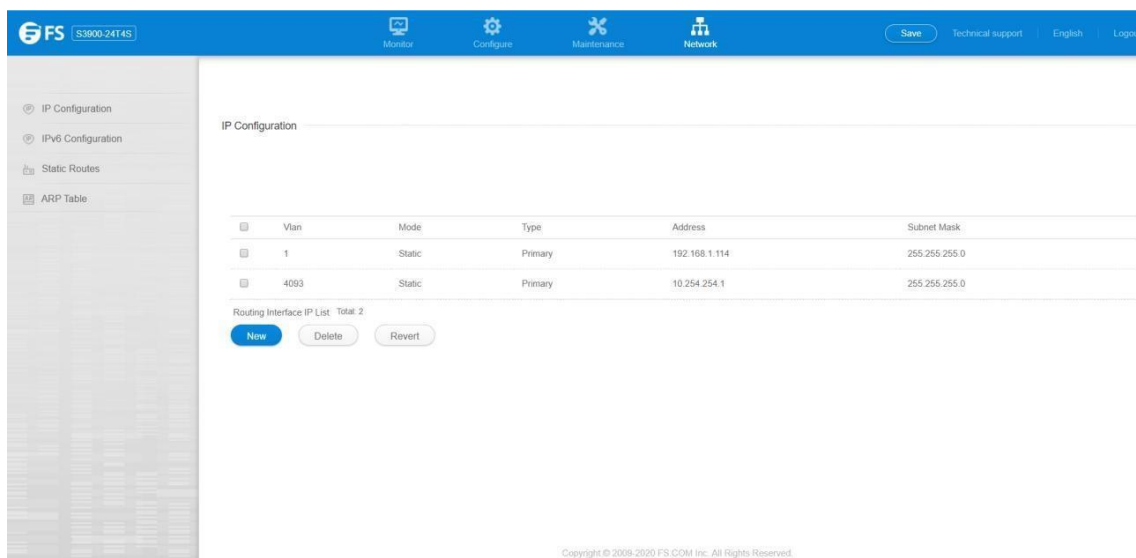


Figure 4 Web network page

The whole network page consists of the top control bar, the navigation bar, the configuration area and the bottom area.

Span and RSpan Module Optimization

- Both span and rspan can be configured with four sessions.
- In total, there is only one TX (chip limit) flow and four RX streams. In other words, each session can configure the RX reverse flow, but only one session can configure the TX direction flow.

2.3.2 Bug Fixes

- SNTP: SNTP configures multiple inaccessible servers, causing system restart.
- FAN: The fan sometimes makes abnormal noise.

- c. SNMP: SNMP cannot obtain the IFX table information of the stacked slave devices.
- d. STP: Delete the VLAN corresponding to native vid on the port, but when the native vid configuration is retained, STP does not work properly and cannot receive the protocol package.
- e. LACP: After two devices are stacked, link aggregation (1/25 port and 2/25 port mode on, using 1G module) is done with the peer switch (1G switch) to save the configuration and restart. The 2/25 port link aggregation configuration is lost.

2.4 V1.7.0

2.4.1 Existing Functions Optimization

1) SSH Module Optimization

- c. SSH module adds RSA2.0 key: users can upload RSA2.0 public key, and the maximum length is 2048.
- d. SSH module adds hellman group 14 exchange protocol.

2) VLAN Optimization

The hybrid port can set the pvid to tagged. The packets sent through pvid will carry vlan tags with pvid.

The command is *switchport hybrid allowed vlan add XXX tagged*.

3) WEB Optimization

The account number in the login page is changed to username.

4) Stacking optimization

Optimize the stacking processing mechanism to improve the stability.

5) Upgrade

Encrypted and unencrypted images can be upgraded.

2.4.2 Bug Fixes

- a. IGMPSNP: The multicast stream cannot be received after sending the report packet directly. Only after receiving a query packet and replying to a report packet can the multicast stream be received.
- b. Stacking: In the stacking state, the boot system config crashes directly, the master device does not respond, but the backup device restarts, and the stacking is split.
- c. Stacking: When there are a large number of packets with different source MAC addresses, the stacking connection is broken. The CPU utilization is low, and the switch is deadlocked directly.

2.5 V1.6.9R2

2.5.1 Existing Functions Optimization

1) ingress-filtering Optimization

Change the default setting from Disable to Enable.

2) VLAN Optimization

- a. When the port is in the trunk mode, after the command *switchport trunk allowed vlan all* is executed, the newly added VLAN can be automatically added to the port.
- b. When the command *no switchport mode* is executed, *show run* displays that the port mode will change to hybrid instead of the

default configuration, which is now changed to the default configuration.

- c. The port receives a VLAN that is not allowed to pass, and the ARP does not record.

3) CLI Optimization

- a. Delete the command *ip source-guard binding filter-source*, which is an invalid instruction.
- b. Modify the *logging lever* command error.
- c. Fix the automated upgrade configuration file script.

4) WEB Optimization

- a. Modify the interface configure page. The current value can be obtained when setting a single port.
- b. Modify the vlan member setting page, cancel the setting of the ingress filter and the acceptable frame, and add a page to set them.
- c. The "FS" logo in the Login interface changed to the latest.

5) LLDP Optimization

Modify the form of *lldp port id*, changed it from mac address to port.

6) Stacking Optimization

During the startup negotiation, all the non-stacking ports are shut down to prevent network turbulence, which affects the stack negotiation efficiency.

7) Add the Timed Restart Function

- a. By CLI, add the restart command in config terminal mode, and add the show restart command in exec mode.
- b. By Web, add an option configuration page for timed restart on the system reboot page.

2.5.2 Bug Fixes

- a. The switch will be stuck when execute the command *show spanning-tree interface*.
- b. The BPDU MAC address is not defined by FS, changed to 649d99.
- c. When the 10G optical ports 27, 28 of S3900-24T4S and S3900-24F4S connected to some DACs, there is no linkup.
It is recommended that the length of the connected DAC does not exceed 4 meters, otherwise error code may occur due to signal attenuation.
- d. When the 10G optical ports 51, 52 of S3900-48T4S connected to some DACs, there is no linkup.
It is recommended that the length of the connected DAC does not exceed 1 meter, otherwise error code may occur due to signal attenuation.

2.6 V1.6.9

2.6.1 New Functions

- The S3900-24F4S switch is compatible with 100M optical transceiver module
- NTP/SNTP support domain name configuration on CLI
- Image version is upgraded, and the configuration files upgrade automatically
- IP routing isolation between Craft port and vlan port
- Add Settings for console/vty on CLI
- Formatting file system under u-boot is supported

2.6.2 Existing Functions Optimization

1) CLI Optimization

a. The partial command and behavior of the VLAN are changed to Cisco mode:

There are three different modes: access, trunk, hybrid.

In Access mode:

pvid: switchport access vlan

In Trunk mode:

pvid: switchport trunk native vlan

tagged vlan: switchport trunk allowed vlan add/remove

In Hybrid mode:

pvid: switchport hybrid pvid

vlan: switchport hybrid allowed vlan add/remove [tagged/untagged]

b. The STP CLI command is modified in cisco format.

The original "host name" is changed to "system-name", and "prompt" is changed to "host name".

Content formats of some show command are adjusted.

Running configure commands of static trunk are complete.

SFP compatibility is optimized.

When setting port mode, error messages are optimized.

c. Add and set console and vty commands

Type	Original Format	Original Location	New format	New Location
Modify	switchport access vlan	switch(config-if)	switchport access vlan (access mode only)	
Modify	switchport allowed vlan add	switch(config-if)	switchport trunk allowed vlan add/remove xxx	
Modify	switchport access vlan	switch(config-if)	switchport trunk native vlan (trunk mode only)	
Modify	switchport allowed vlan add	switch(config-if)	switchport trunk allowed vlan all	
Modify	switchport allowed vlan add	switch(config-if)	switchport hybrid allowed vlan add xxx tagged untagged	
Modify	switchport access vlan	switch(config-if)	switchport hybrid pvid (hybrid mode only)	
Modify	switchport allowed vlan remove	switch(config)	switchport hybrid allowed vlan remove (hybrid mode only)	switch(config)
Modify	switchport allowed vlan remove	switch(config)	switchport trunk allowed vlan remove (trunk mode only)	switch(config)
Modify	no switchport access vlan	switch(config-if)	no switchport access vlan (access mode only)	
Modify	no switchport allowed vlan	switch(config-if)	no switchport trunk allowed vlan	
Modify	no switchport access vlan	switch(config-if)	no switchport trunk native vlan (trunk mode only)	

Type	Original Format	Original Location	New format	New Location
Modify	no switchport allowed vlan	switch(config-if)	no switchport hybrid allowed vlan	
Modify	no switchport access vlan	switch(config-if)	no switchport hybrid pvid (hybrid mode only)	
Modify	spanning-tree edge-port [auto]	switch(config-if)	spanning-tree portfast [auto]	
Modify	spanning-tree system-bpdu-flooding to-all	switch(config)	spanning-tree bpdu flooding	
	spanning-tree system-bpdu-flooding to-vlan	switch(config)	spanning-tree bpdu filtering	
Modify	spanning-tree port-bpdu-flooding	switch (config-if)	spanning-tree bpdu	
	no spanning-tree port-bpdu-flooding	switch(config-if)	no spanning-tree bpdu	
Modify	spanning-tree root-guard	switch(config-if)	spanning-tree guard root	
Modify	max-hops hop-count	switch(config-mstp)	spanning-tree mst max-hops hop-count	switch(config)
Modify	show spanning brief		show spanning active detail	
Modify	show spanning {ethernet <1-1>/<1-x> port-channel <1-6>}		show spanning-tree interface {ethernet<1-1> port-channel <1-6>} mst <0-4094>	
Modify	show spanning-tree mst <0-4094> {ethernet <1-1>/<1-x> port-channel <1-6>}		show spanning-tree mst <0-4094>	
Delete	ip ssh server-key size	switch(config)		
Add		switch(config-line-console)	databits	switch(config-line-console)
Add		switch(config-line-console)	exec-timeout	switch(config-line-console)
Add		switch(config-line-console)	help	switch(config-line-console)
Add		switch(config-line-console)	login	switch(config-line-console)
Add		switch(config-line-console)	parity	switch(config-line-console)
Add		switch(config-line-console)	password	switch(config-line-console)
Add		switch(config-line-console)	password-thresh	switch(config-line-console)
Add		switch(config-line-console)	show	switch(config-line-console)
Add		switch(config-line-console)	silent-time	switch(config-line-console)
Add		switch(config-line-console)	speed	switch(config-line-console)
Add		switch(config-line-console)	stopbits	switch(config-line-console)
Add		switch(config-line-console)	timeout	switch(config-line-console)
Add		switch(config-line-console)	no databits	switch(config-line-console)
Add		switch(config-line-console)	no exec-timeout	switch(config-line-console)
Add		switch(config-line-console)	no login	switch(config-line-console)

Type	Original Format	Original Location	New format	New Location
Add		switch(config-line-console)	no parity	switch(config-line-console)
Add		switch(config-line-console)	no password	switch(config-line-console)
Add		switch(config-line-console)	no password-thresh	switch(config-line-console)
Add		switch(config-line-console)	no silent-time	switch(config-line-console)
Add		switch(config-line-console)	no speed	switch(config-line-console)
Add		switch(config-line-console)	no stopbits	switch(config-line-console)
Add		switch(config-line-console)	no timeout	switch(config-line-console)
Add		switch(config-line-vty)	timeout	switch(config-line-vty)
Add		switch(config-line-vty)	no exec-timeout	switch(config-line-vty)
Add		switch(config-line-vty)	no login	switch(config-line-vty)
Add		switch(config-line-vty)	no password	switch(config-line-vty)
Add		switch(config-line-vty)	no password-thresh	switch(config-line-vty)
Add		switch(config-line-vty)	no silent-time	switch(config-line-vty)
Add		switch(config-line-vty)	no timeout	switch(config-line-vty)
Delete	aaa accounting command ...	switch(config)		switch(config)
Modify	aaa accounting dot1x default/WORD start-stop group ...	switch(config)	aaa accounting dot1x default/WORD start-stop list ...	switch(config)
Modify	aaa accounting exec default/WORD start-stop group ...	switch(config)	aaa accounting login default/WORD start-stop list ...	switch(config)
Modify	aaa authorization exec default/WORD group ...	switch(config)	aaa authorization login default/WORD list ...	switch(config)
Modify	aaa group server ...	switch(config)	aaa list server ...	switch(config)
Delete	no aaa accounting command	switch(config)		switch(config)
Modify	no aaa accounting exec	switch(config)	no aaa accounting login	switch(config)
Modify	no aaa authorization exec	switch(config)	no aaa authorization login	switch(config)
Modify	no aaa group	switch(config)	no aaa list	switch(config)
Delete	accounting commad	switch(config-line_console)		switch(config-line_console)
Modify	accounting exec	switch(config-line_console)	accounting login	switch(config-line_console)
Modify	authorization exec	switch(config-line_console)	authorization login	switch(config-line_console)
Delete	no accounting command	switch(config-line_console)		switch(config-line_console)

Type	Original Format	Original Location	New format	New Location
Modify	no accounting exec	switch(config-line_console)	no accounting login	switch(config-line_console)
Modify	no authorization exec	switch(config-line_console)	no authorization login	switch(config-line_console)
Delete	accounting commad	switch(config-line_vty)		switch(config-line_vty)
Modify	accounting exec	switch(config-line_vty)	accounting login	switch(config-line_vty)
Modify	authorization exec	switch(config-line_vty)	authorization login	switch(config-line_vty)
Delete	no accounting command	switch(config-line_vty)		switch(config-line_vty)
Modify	no accounting exec	switch(config-line_vty)	no accounting login	switch(config-line_vty)
Modify	no authorization exec	switch(config-line_vty)	no authorization login	switch(config-line_vty)
Delete	show accounting command	switch		switch
Modify	show accounting exec	switch	show accounting login	switch
Modify	bridge-ext gvrp	switch(config)	gvrp enable	switch(config)
Delete	auto-traffic-control	switch		
Delete	auto-traffic-control	switch(config-if)		

2) Web Optimization

- Configuration optimization
- Data display optimization
- Web frame construction optimization

3) SSH Optimization

SSH, the maximum length of secret key is 1024.

2.6.3 Bug Fixes

- The web NTP project cannot be deleted.
- LACP of S3900-24F4S equipment, firstly one optical port is added to LACP, then multiple electronic ports are added to the same LACP, and the electronic ports continuously linkup and linkdown.
- The byte order of IP address in the message is wrong.
- Computer crashed while telnet executes time-zone command.
- Internet explorer compatibility problem.
- In stacking mode, port error while setting 802.1x attribute via CLI.
- In stacking mode, port error while setting netaccess via CLI.
- In stacking mode, RMON does not create default configuration for slave devices.
- RMON creates the default configuration, which cannot be created on the port-channel.
- The packet length problem of LACP.
- CLI command tree error in AAA mode.
- Each time the SSH reboots, it will regenerate the hostkey.
- Some vlans are not effective due to big endian and little endian.
- The 1G module cannot link up on port 49 and 50 of S3900-48T4S.

- o. Info error of Show CPU.
- p. Access port should not allow to add vlan.
- q. Error messages in hybrid mode while setting vlan.
- r. Error while setting the maximum QinQ entries.
- s. OUI inspection of voice vlan has bug.
- t. The maximum entries of vlan translate has bug.
- u. Web page configuration OAM problem.
- v. Check setting of ACL entry has bug.

2.7 V1.6.7

2.7.1 Bug Fixes

- a. Fix bug: Cannot enable/disable event log remotehost
- b. Fix bug: Console port will have no response after switch runs some days

2.8 V1.6.4

2.8.1 Existing Functions Optimization

1) CLI Optimization

Type	Original Format	Original Location	New format	New Location
Modify	Show interfaces		Show interfaces configuration	
	switchport xxx		xxx	
Add			Channel-group xxx mode on	Switch(config-if)
Add			Channel-group xxx mode	
			auto	Switch(config-if)
Modify	Show lacp internal	Switch	Show lacp	Switch
Delete	Show lacp			
	neighbor	Switch		
Delete	Show lacp sysid	Switch		
Delete	Lacp	Switch(config-if)		

2) Web Modification

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Trunk group configuration page improvement.

3) Trunk Group Optimization

- a. The configuration method of static trunk group as follows:

Example: Add the eth 1/1 to group 1

Interface port-channel 1

Interface eth 1/1

Channel-group 1 mode on

b. The configuration method of the LACP as follows:

In the port configuration mode, create the group and add the ports to the group, which is completed by one command.

Example: In the eth 1/3 mode, create the lacp group 2, add the eth 1/3 to group 2

Interface eth 1/3

Channel-group 2 mode auto

4) Fan Speed Control Optimization

2.8.2 Bug Fixes

When Layer 3 forwarding of the first member in the trunk group fails, the traffic is limited.

2.9 V1.6.2

2.9.1 Existing Functions Optimization

1) CLI Optimization

Type	Original Format	Original Location	New format	New Location
Modify	Console#		Switch#	
Modify	Config	Switch#	Config terminal	Switch#
Modify	switchport native vlan	Switch(config-if)#	switchport access vlan	Switch(config-if)#
Modify	show interfaces transceiver	Switch#	Show transceiver ethernet x/x detail	Switch#
Add			ip ssh server enable	Switch(config)#
Modify	ip http server	Switch(config)#	server http enable	Switch(config)#
Modify	ip http secure-server	Switch(config)#	server https enable	Switch(config)#
Modify	ip telnet server	Switch(config)	service telnet enable	Switch(config)
Modify	username gyt access-level	Switch(config)#	username uyt privilege	Switch(config)#
Modify	Show vlan	Switch#	Show vlan all	Switch#
Modify	Show ip inerface	Switch#	Show ip interface brief	Switch#
Modify	Ip address xx.xx.xx.xx/xxx	Switch(config-if)#	Ip add xx.xx.xx.xx/xxx	Switch(config-if)#
Modify	access-list arp	Switch (config) #	arp access-list	Switch(config)#
Modify	access-list ip	Switch (config) #	ip access-list	Switch(config)#
Modify	access-list ipv6	Switch (config) #	lpv6 access-list	Switch(config)#
Modify	access-list mac	Switch (config) #	mac access-list	Switch(config)#

Type	Original Format	Original Location	New format	New Location
Modify	Ethernet cfm	Switch#	cfm	Switch(config)#
Modify	Process cpu	Switch(config)#	Cpu	Switch(config)#
Modify	efm	Switch#	efm	Switch(config)#
Modify	erps	Switch#	erps	Switch(config)#
Modify	Sflow	switch#	Sflow	Switch(config)#
Modify	ip access-group	Switch(config-if)	ip service-acl	Switch(config-if)
Modify	ipv6 access-group	Switch(config-if)	ipv6 service-acl	Switch(config-if)
Modify	mac access-group	Switch(config-if)	mac service-acl	Switch(config-if)
Modify	clear ethernet cfm	Switch#	clear cfm	Switch#
Modify	switch stacking	Switch#	stacking	Switch(config)#

2) Web Modification

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3) Company OID Node Modification

51134 changed to 52642.2

4) Features Modification

- a. 10G SFP+ port supports manual/auto speed negotiation(10G/1G).
- b. The default management IP address is changed to 192.168.1.1.
- c. SSH enable mode is changed to directly execute IP SSH serverenable.

2.9.2 Bug Fixes

- a. The ARP table of the slave device is unstable in the stacking mode.
- b. Fan alarms falsely.



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