

# SNR

SNR. CLI (Command Line Interface) WEB-.

- - WEB-
  - CLI
  - IP-
    - WEB- ( WEB-)
    - WEB- ( WEB-)
  - VLAN, L3- VLAN
    - WEB- ( WEB-)
    - WEB- ( WEB-)
  - Uplink-
    - WEB- ( WEB-)
    - WEB- ( WEB-)
  - , ,
    - WEB- ( WEB-)
    - WEB- ( WEB-)
  - HTTP
    - WEB-
    - WEB-
  - SSL- WEB-
    - CLI
    - WEB- ( WEB-)

- Serial- Console , ;
- (Putty, Minicom, HyperTerminal) :
  - Serial- ;
  - 9600;
  - :8 , 1 , ;



S2995G S3850G 115200 .

WEB-

IP- 192.168.1.1. WEB-, IP- ( 192.168.1.2), Ethernet- 192.168.1.1. admin/admin.

CLI

- , '>' . . , 'enable';
- , '#';
- , 'config'. - '(config)#';
- 'exit';
- , 'write' 'copy running-config startup-config' ;
- TAB, ;
- " " .



1.2 SNR

## IP-

VLAN 1, . IP- :

```
switch#conf
switch(config)#int vlan1
switch(config-if-vlan1)#ip add 192.168.1.100 255.255.255.0
```

## WEB- ( WEB-)

- Port configuration -> VLAN interface configuration -> L3 interface IP address mode configuration

The screenshot shows a web-based configuration interface for a network device. On the left is a tree view of the configuration hierarchy. The right pane displays the configuration for the L3 interface IP address mode.

L3 interface IP address mode configuration	
VLAN interface	Vlan1 ▼
IP mode	Specify IP address ▼
Interface IP address	192.168.1.100
Interface network mask	255.255.255.0
Operation	Add ▼
<input type="button" value="Apply"/>	



WEB 'Save and Exit', .

## WEB- ( WEB-)

- IPv4 business Three layer interface Primary IP configuration

"+" , "Save"

SNR-S2985G-24T    Device admin    Layer2 function    IPv4 business    Route protocol    Multicast protocol    Security function    Reliability    IPv6 business

Three layer interface

Overview    Three layer interface

L3 interface configuration    Primary IP configuration    Secondary IP configuration

<input type="checkbox"/>	VLAN interface	IP mode	Interface IP address
<input type="checkbox"/>	Vlan1	Specify ip address	192.168.1.1
<input type="checkbox"/>	Vlan3999	Specify ip address	172.31.254.85

< 1 > To 1 Page Confirm Total 2 10

Add

VLAN interface: Vlan1

IP mode: Specify ip address

Interface IP address: 192.168.1.100

Interface network mask: 255.255.255.0

Save    Cancel

## VLAN, L3- VLAN

```
switch(config)#vlan 2
switch(config-vlan2)#switchport interface e1/0/2
switch(config-vlan2)#exit
switch(config)#int vlan2
switch(config-if-vlan2)#ip add 192.168.2.100 255.255.255.0
```

## WEB- (WEB-)

- VLAN: VLAN configuration -> VLAN configuration -> Create/Remove VLAN -> VLAN ID configuration;
- : VLAN configuration -> VLAN configuration -> Assign ports for VLAN -> Assign ports for VLAN;
- L3-: Port configuration -> VLAN interface configuration -> Add interface VLAN;
- IP-: Port configuration -> VLAN interface configuration -> L3 interface IP address mode configuration.

VAG

- SNR-S2985G-8T-POE
  - Switch basic configuration
  - Module management
  - Port configuration
  - MAC address table configuration
  - VLAN configuration
    - VLAN configuration
      - Create/Remove VLAN
        - VLAN ID configuration
      - Assign ports for VLAN
      - Port type configuration

VAG

- SNR-S2985G-8T-POE
  - Switch basic configuration
  - Module management
  - Port configuration
  - MAC address table configuration
  - VLAN configuration
    - VLAN configuration
      - Create/Remove VLAN
      - Assign ports for VLAN
        - Assign ports for VLAN

VLAN ID configuration	
VLAN ID	2
VLAN Name	
VLAN Type	
Operation	Add
Apply	

VLAN ID information		
VLAN ID	VLAN Name	VLAN Type
1	default	universal vlan

Assign ports for VLAN	
VLAN ID	2
Port	Ethernet1/0/2
Operation	Add
Apply	

Information feedback window

NAG

- SNR-S2985G-8T-POE
  - Switch basic configuration
  - Module management
  - Port configuration
    - Ethernet port configuration
    - VLAN interface configuration
      - Add interface VLAN
      - L3 interface IP address mode con
    - SPAN configuration

Add interface VLAN	
VLAN ID	2
Operation	Add
Apply	

Vlan ID	State
Vlan1	Layer 3 interface
Vlan2	Non layer 3 interface

NAG

- SNR-S
  - Swi
    - Mod
      - Por
        - E
          - V
            -

WEB- (WEB-)

- VLAN: Layer2 function -> VLAN -> Global configuration -> "+" ;
- : Layer2 function -> VLAN -> Port VLAN Configuration -> "+" ;
- L3: IPv4 business -> Three layer interface -> L3 interface configuration -> Interface configuration -> "Save";
- IP: IPv4 business -> Three layer interface -> Primary IP configuration -> "+" .

SNR-S2985G-24T Device admin Layer2 function IPv4 business Route protocol Multicast protocol Security function Reliability IPv6 business

Port configuration Loop detection Port isolation Storm control Rate violation ULDP LLDP LED lights Large package MAC VLAN GVRP VLAN translation VLAN translation n-to-1

Overview Three layer interface x VLAN x

Global configuration Port mode Port VLAN Configuration Private VLAN Private VLAN Associated with a VLAN

<input type="checkbox"/>	Vlan ID	VLAN name
<input type="checkbox"/>	1	default
<input type="checkbox"/>	3999	VLAN3999

< 1 > To 1 Page Confirm Total 2 10

Add VLAN

VLAN  Single  Multiple

Vlan ID

VLAN name

Save Cancel

SNR-S2985G-24T Device admin Layer2 function IPv4 business Route protocol Multicast protocol Security function Reliability IPv6 business

Port configuration Loop detection Port isolation Storm control Rate violation ULDP LLDP LED lights Large package MAC VLAN GVRP VLAN translation VLAN translation n-to-1

Overview VLAN x

Global configuration Port mode Port VLAN Configuration Private VLAN Private VLAN Associated with a VLAN

<input type="checkbox"/>	port	Type	Vlan ID	Tagged
<input type="checkbox"/>	Ethernet1/0/1	trunk		native
<input type="checkbox"/>	Ethernet1/0/1	trunk		
<input type="checkbox"/>	Ethernet1/0/2	access		
<input type="checkbox"/>	Ethernet1/0/3	access		
<input type="checkbox"/>	Ethernet1/0/4	access		
<input type="checkbox"/>	Ethernet1/0/5	access		
<input type="checkbox"/>	Ethernet1/0/6	access		
<input type="checkbox"/>	Ethernet1/0/7	access		
<input type="checkbox"/>	Ethernet1/0/8	access		
<input type="checkbox"/>	Ethernet1/0/9	access		

< 1 2 3 > To 1 Page Confirm Total 29 10

Add

port

Port type

VLAN list

Tagged  Untag  Tag  Allowed  Native

Operation type

Save Cancel

SNR-S2985G-24T Device admin Layer2 function IPv4 business Route protocol Multicast protocol Security function Reliability IPv6 business

Three layer interface Overview Three layer interface x

L3 interface configuration Primary IP configuration Secondary IP configuration

Interface configuration

VLAN ID 2 Save

Interface show

<input type="checkbox"/>	VLAN interface
<input type="checkbox"/>	Vlan1
<input type="checkbox"/>	Vlan3999

< 1 > To 1 Page Confirm Total 2 10 v

SNR-S2985G-24T Device admin Layer2 function IPv4 business Route protocol Multicast protocol Security function Reliability IPv6 business

Three layer interface Overview Three layer interface x

L3 interface configuration Primary IP configuration Secondary IP configuration

+ -

<input type="checkbox"/>	VLAN interface	IP mode	Interface IP address
<input type="checkbox"/>	Vlan1	Specify ip address	192.168.1.100
<input type="checkbox"/>	Vlan2	Unassigned	
<input type="checkbox"/>	Vlan3999	Specify ip address	

< 1 > To 1 Page Confirm Total 3 10 v

Add - x

VLAN interface Vlan2

IP mode Specify ip address

Interface IP address 192.168.2.100

Interface network mask 255.255.255.0

Save Cancel

2 100 /:

```
switch(config)#int e1/0/2
switch(config-if-ethernet1/0/2)#bandwidth control 100000 both
```

## WEB- ( WEB-)

- Port configuration -> Ethernet port configuration -> Bandwidth control configuration

Bandwidth control configuration

Port	Bandwidth control level	Control type	Operation
Ethernet1/0/2	100000	Both	Configuration

Apply

Port list

Port	Ingress bandwidth threshold(Kb)	Egress bandwidth threshold(Kb)
Ethernet1/0/1	100000	100000

## WEB- ( WEB-)

- Layer2 function -> Port configuration -> Broadband speed limit -> ""

Overview Port configuration

Basic configuration Broadband speed limit Switchport description Combo port combination mode Scanning mode

port	Receiving Bandwidth Limit value	Transmit Bandwidth Limit
Ethernet1/0/1		
Ethernet1/0/2		
Ethernet1/0/3		
Ethernet1/0/4		
Ethernet1/0/5		
Ethernet1/0/6		
Ethernet1/0/7		
Ethernet1/0/8		
Ethernet1/0/9		
Ethernet1/0/10		

1 2 3 > To 1 Page Confirm Total 28 10

Edit

port Ethernet1/0/1

Receiving Bandwidth Limit value 100000 Kbps

Transmit Bandwidth Limit 10000 Kbps

Apply Cancel

## Uplink-

, 9, VLAN 2:

```
switch(config-if-ethernet1/0/9)#switchport mode trunk
switch(config-if-ethernet1/0/9)#switchport trunk allowed vlan 2
```

## WEB- ( WEB-)

- : VLAN configuration -> VLAN configuration -> Port type configuration -> Set port mode(access/hybrid/trunk)
- VLAN: VLAN configuration -> VLAN configuration -> Trunk port configuration -> VLAN setting for trunk port

NAG

- SNR-S2985G-8T-POE
  - Switch basic configuration
  - Module management
  - Port configuration
  - MAC address table configuration
  - VLAN configuration
    - VLAN configuration
      - Create/Remove VLAN
      - Assign ports for VLAN
      - Port type configuration
      - Set port mode(access/hybrid/trunk)

Port mode configuration	
Port	Ethernet1/0/9
Type	trunk
State	Enable VLAN ingress check
<input type="button" value="Apply"/>	

Port mode configuration		
Port	Type	State
Ethernet1/0/1	access	Open
Ethernet1/0/2	access	Open

### WEB- ( WEB-)

- : Layer2 function -> VLAN -> Port mode -> "" ->
- VLAN: Layer2 function -> VLAN -> Port VLAN Configuration -> "" , "+"

port	Type	VLAN ingress rule	Pvid
Ethernet1/0/1	trunk	Open	1
Ethernet1/0/2	access	Open	1
Ethernet1/0/3	access	Open	1
Ethernet1/0/4	access	Open	1
Ethernet1/0/5	access	Open	1
Ethernet1/0/6	access	Open	1
Ethernet1/0/7	access	Open	1
Ethernet1/0/8	access	Open	1
Ethernet1/0/9	access	Open	1
Ethernet1/0/10	access	Open	1

Dialog: Edit Port Mode

port: Ethernet1/0/9

Type: trunk

Pvid: 1

Status:  Enable VLAN ingress check,  Disable VLAN ingress check

Buttons: Save, Cancel

port	Type	Vlan ID	Tagged	VLAN list
Ethernet1/0/1	trunk		native	1
Ethernet1/0/1	trunk			2,3999
Ethernet1/0/2	access			
Ethernet1/0/3	access			
Ethernet1/0/4	access			
Ethernet1/0/5	access			
Ethernet1/0/6	access			
Ethernet1/0/7	access			
Ethernet1/0/8	access			
Ethernet1/0/9	trunk			1
Ethernet1/0/9	trunk			1-4094
Ethernet1/0/10	access			

Dialog: Edit

port: Ethernet1/0/9

Port type: trunk

VLAN list: 2

Tagged:  Untag,  Tag,  Allowed,  Native

Operation type: WORD

Buttons: Save, Cancel



, Trunk Hybrid Access (1):

- Trunk – 2 :
  - Allowed – VLAN , VLAN
  - Native – VLAN, , VLAN
- Hybrid – 3 :
  - Tag – VLAN , VLAN
  - Untag – VLAN , VLAN
  - Native – VLAN , VLAN

, Hybrid VLAN, "+" ""

, ,

'admin', . 'nag', 'admin' :

```
(config)#username nag privilege 15 password nag
(config)#no username admin
(config)#username nag password nagnag
```

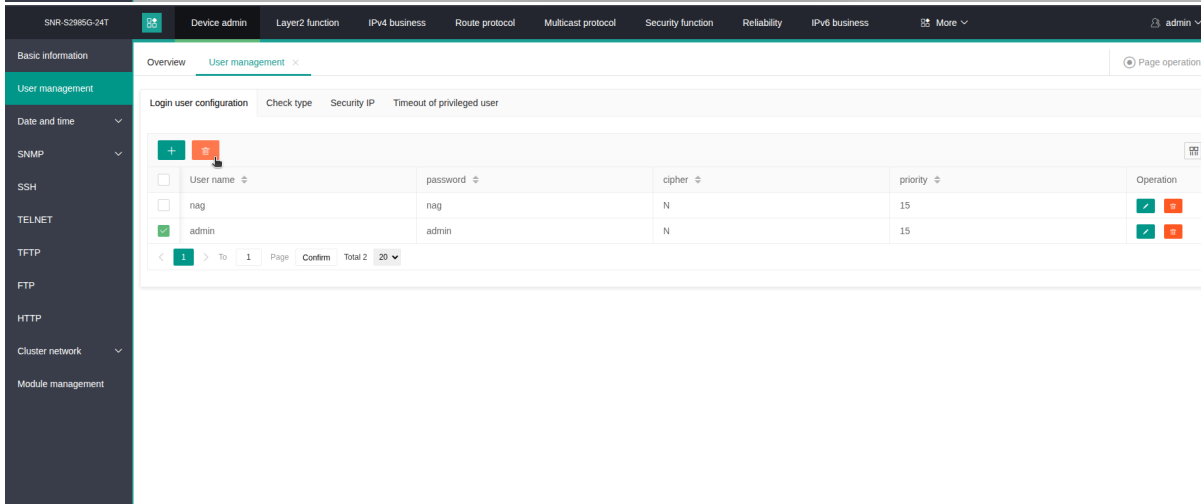
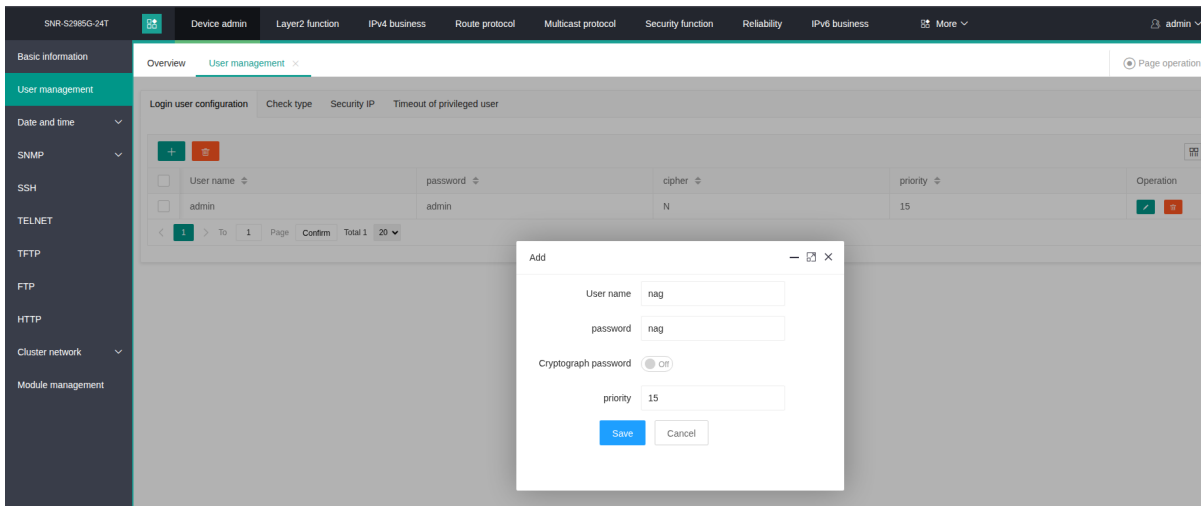
### WEB- ( WEB-)

- Switch basic configuration -> Switch basic configuration -> Login user configuration

The screenshot shows a web-based configuration interface for a network device. On the left, a tree view displays the configuration hierarchy: NAG > SNR-S2985G-8T-POE > Switch basic configuration > Login user configuration. The 'Login user configuration' folder is selected. The main area shows a configuration form for a user named 'admin'. The form includes fields for 'User' (filled with 'admin'), 'Password' (empty), 'Priority' (empty), and 'Operation' (set to 'Remove'). There is an 'Encrypted text' checkbox and an 'Apply' button at the bottom right.

### WEB- ( WEB-)

- : Device admin -> User management -> Login user configuration -> "+"
- : Device admin -> User management -> Login user configuration -> ""
- : Device admin -> User management -> Login user configuration -> ""

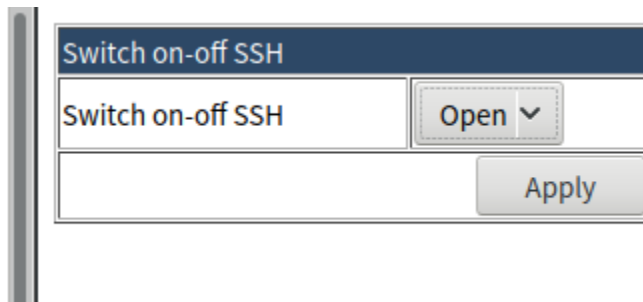
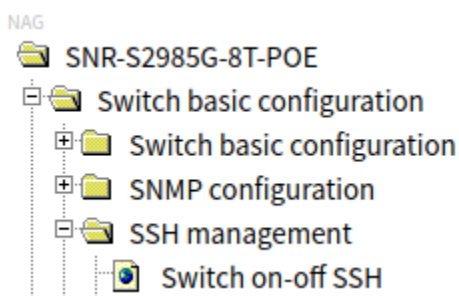


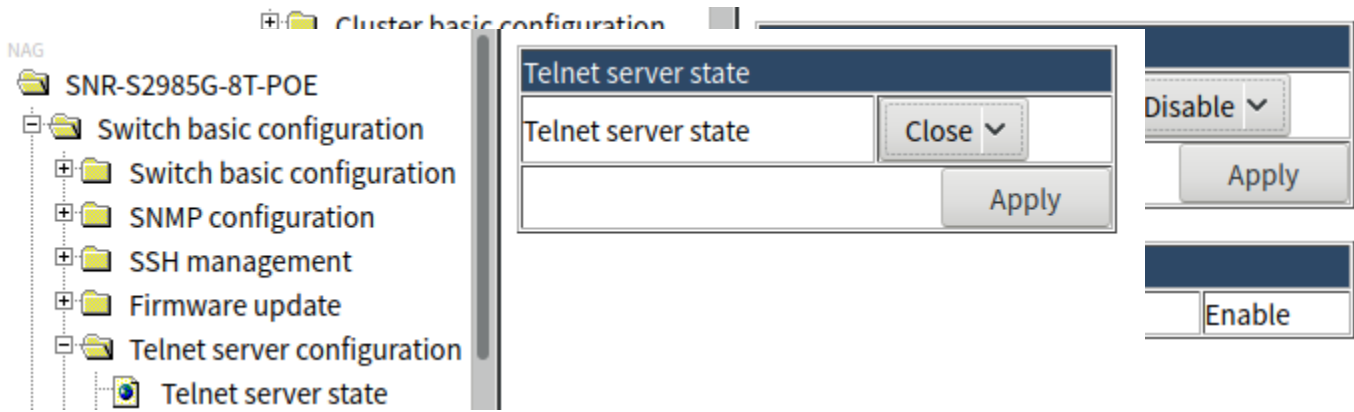
SNR Telnet HTTP . SSH Telnet, .. . HTTP:

```
(config)#ssh-server enable
(config)#no telnet-server enable
(config)#no ip http server
```

### WEB- ( WEB-)

- Switch basic configuration -> SSH management -> Switch on-off SSH
- Switch basic configuration -> Telnet server configuration -> Telnet server state
- SSL config -> IP HTTP server configuration





WEB- ( WEB-)

- Device admin -> SSH -> Global configuration
- Device admin -> TELNET -> Telnet server state
- Security function -> SSL -> SSL config -> SSL global configuration

SNR-S2985G-24T

Device admin Layer2 function IPv4 business Route protocol Multicast protocol Security function Reliability IPv6 business

Basic information

User management

Date and time

SNMP

**SSH**

TELNET

TFTP

FTP

HTTP

Cluster network

Module management

Overview SSH

Global configuration Manage configuration Server state Maximum number of SSH connections

SSH function switch

SNR-S2985G-24T

Device admin Layer2 function IPv4 business Route protocol Multicast protocol Security function Reliability IPv6 business

Basic information

User management

Date and time

SNMP

SSH

**TELNET**

TFTP

FTP

HTTP

Cluster network

Module management

Overview SSH TELNET

Telnet server state Max numbers of telnet access connection

Telnet server state

SNR-S2985G-24T

Device admin Layer2 function IPv4 business Route protocol Multicast protocol Security function Reliability IPv6 business

Digital ACL

Named acls

Packet filtering ACL

AM configuration

QOS

ARP

Anti ARP scanning

RADIUS

TACACS

802.1x

MAB

Prevent DOS

**SSL**

Overview SSH TELNET Digital ACL SSL

SSL config Configure show

IP HTTP server configuration

IP HTTP server status

SSL global configuration

SSL status

SSL server monitor port configuration

port number 443

secure-ciphersuite configuration

secure-ciphersuite type DEFAULT

## HTTP



SNR .

## WEB-

NOS -, TFTP/FTP-. Boot- . . .

- Switch basic configuration -> Firmware update -> HTTP service
- Switch basic configuration -> Switch basic configuration -> Save current running-configuration

The screenshot shows a configuration tree on the left for a switch model SNR-S2985G-8T-POE. The tree includes categories like Switch basic configuration, SNMP configuration, SSH management, Firmware update, TFTP service, FTP service, HTTP service, Telnet server configuration, Maintenance and debugging, Module management, Port configuration, MAC address table configuration, VLAN configuration, and IGMP Snooping configuration. The 'HTTP service' option is selected.

The main configuration area displays the 'HTTP service' settings:

File	Обзор...	S2985.img
Local file name	nos.img	
File type	Img file	▼

An 'Apply' button is located at the bottom right of the configuration area.

Below the configuration area, an 'Information feedback window' displays the following text:

```
File name is nos.img, file size is 12874335(bytes).
Begin to write local file, please wait...
Write ok.
```

WEB-

NOS, , SSL- , TFTP/FTP-. Boot- . . .

- Device admin -> HTTP -> HTTP Upgrade
- Device admin -> Basic information -> Basic configuration

SNR-S2985G-24T

Device admin Layer2 function IPv4 business Route protocol Multicast protocol Security function Reliability IPv6 business

Basic information

User management

Date and time

SNMP

SSH

TELNET

TFTP

FTP

**HTTP**

Cluster network

Module management

Overview HTTP

HTTP Upgrade

File

Local file name

Type

HTTP Download

File

SNR-S2985G-24T

Device admin Layer2 function IPv4 business Route protocol Multicast protocol Security function Reliability IPv6 business

Basic information

User management

Date and time

SNMP

SSH

TELNET

TFTP

FTP

**HTTP**

Cluster network

Module management

Overview HTTP

HTTP Upgrade

File  SNR-S2985G-48T(24T\_8T)(P...

Local file name

Type

HTTP Download

File

SNR-S2985G-24T

Device admin Layer2 function IPv4 business Route protocol Multicast protocol Security function Reliability IPv6 business

Basic information

User management

Date and time

SNMP

SSH

TELNET

TFTP

FTP

HTTP

Cluster network

Module management

Overview Basic information

Host name and version CPU and memory Basic configuration

Save current running configuration

## SSL- WEB-

 SSL- WEB-!  
 , WEB-, , .

Flash :

1. "https\_cert.crt" – SSL-

2. "https\_key.key" –

WEB-

CLI

1. SSL HTTPS :

```
Switch(config)# ip http secure-server
```

2. Flash "https\_cert.crt" "https\_key.key"., TFTP:

```
Switch# copy tftp://<TFTP-Server>/test.crt https_cert.crt  
Switch# copy tftp://<TFTP-Server>/test.key https_key.key
```

3. :

```
Switch# write  
Confirm to overwrite current startup-config configuration [Y/N]:y  
Write running-config to current startup-config successful
```

4. :

```
Switch# reload  
Process with reboot? [Y/N] y  
Switch reboot, close telnet connection!  
Connection closed by foreign host.
```

5. ! SSL- WEB- HTTPS

WEB- ( WEB-)

1. SSL HTTPS. "Security function" "SSL" "SSL config" "SSL status" "SSL global configuration", :



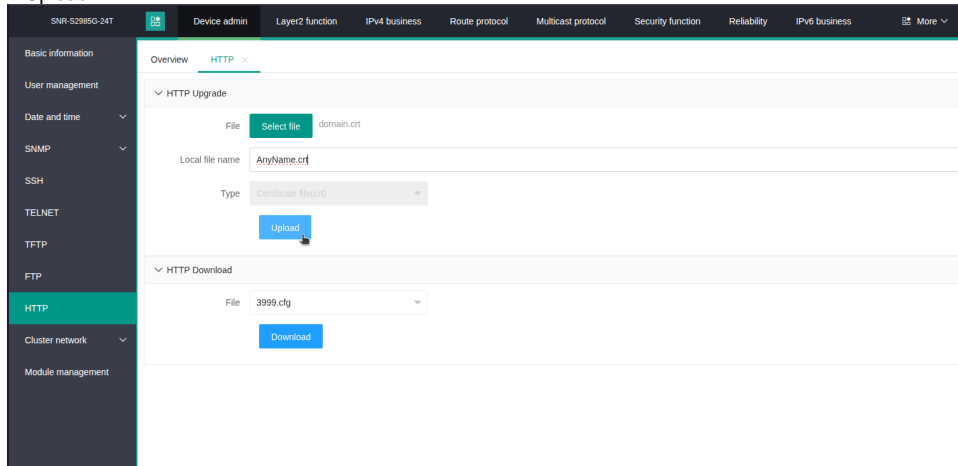
: "Security function" "HTTP/HTTPS" "SSL Configuration", "HTTPS Configuration", "IP HTTPS Server Status"

2. WEB-. "Device admin" "HTTP".

"HTTP Upgrade":

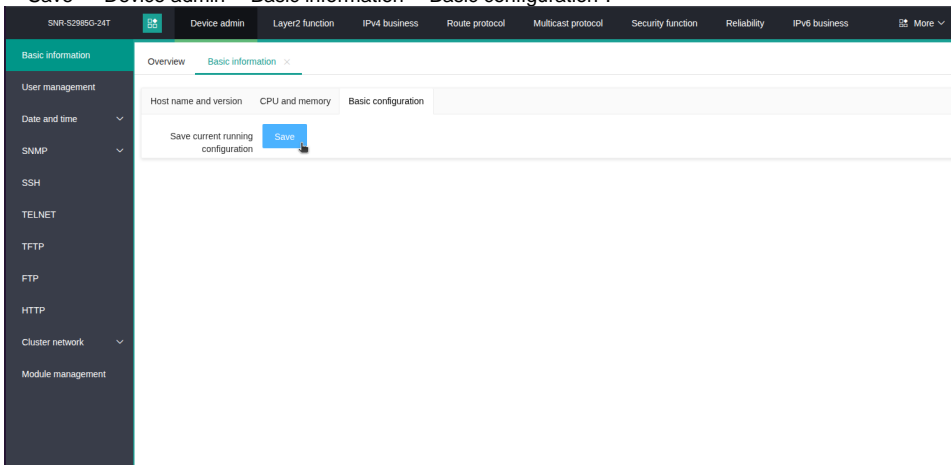
- a. "File"
- b. "Local file name" ".cr". – "https\_cert.crt"
- c. "Type" ,.. . , "Certificate file(cr)"

d. "Upload"

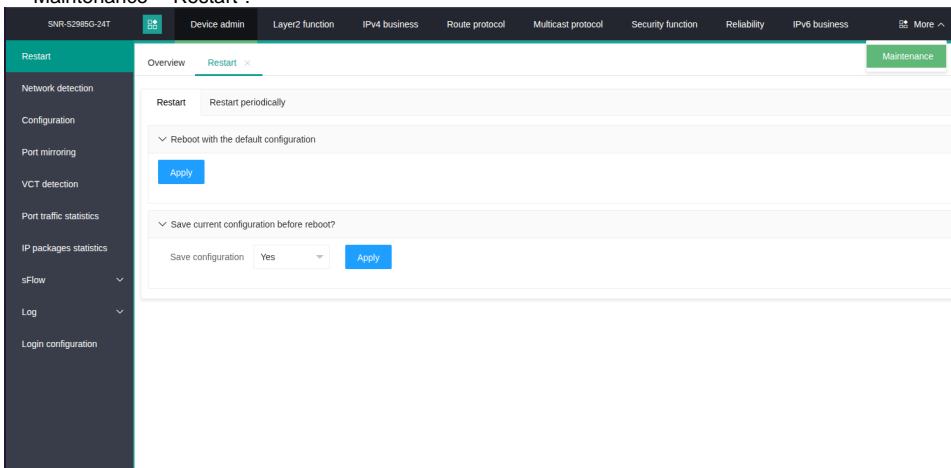


3. "Device admin" "HTTP" "HTTP Upgrade":
  - a. "File"
  - b. "Local file name" ".key". – "https\_key.key"
  - c. "Type" , .. . , "Certificate file(key)"
  - d. "Upload"

4. "Save" "Device admin" "Basic information" "Basic configuration":



5. "Maintenance" "Restart":



6. ! SSL- WEB- HTTPS