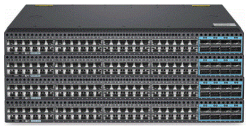
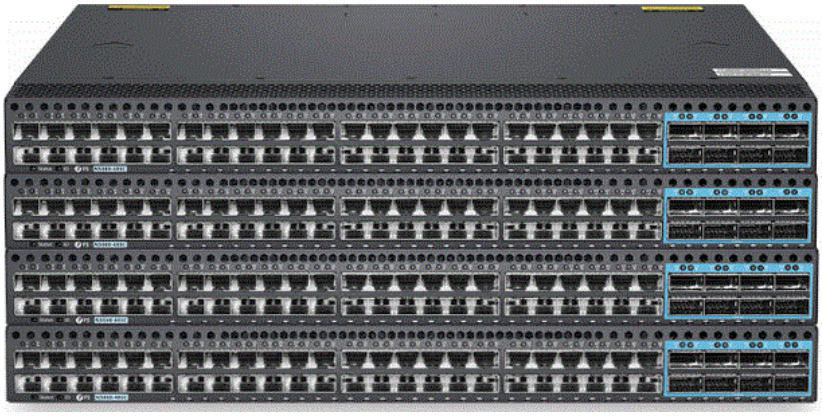


FS N5860 Series Switch Software User Guide

Contents

FS N5860 Series Switch Software



Switch Software Upgrade Guide

Models: N5860 Series; N8560 Series; NC8200 Series; NC8400 Series

Explanation

When new features are added or the original performance needs to be optimized and the currently running version is lagging behind, the device needs to be upgraded. To achieve this, you need to load the higher version of the system software, upgrade through the CLIinterface, WEB interface, and restart the device.

Precautions

- In the process of upgrading and downgrading, please pay attention to the prompt information output during the operation. If it fails, please save the log information and contact FS Network Technical Support.
- During the upgrade and downgrade process, there will be a prompt message not allowing a restart. Once such a prompt message appears, please do not power off, do not reset the system, and do not insert or remove any modules.
- After the upgrade and downgrade are complete, run the show version command to view the current version number of the device to confirm the upgrade is successful.

TFTP server setup

Use software TFTP on the local PC Specify the folder where the version file is located and the IP address of the TFTP server

Upgrade steps

1. Upgrade under the main program:
    - Set the IP address of the console port of the switch
    - Enter privileged mode
    - Enter global configuration mode
    - Enter vlan 1 interface
    - Set management IP on VLAN 1 interface
    - Return to global configuration mode
    - Set the computer IP address, and confirm that the computer can ping the switch, and the switch can also ping the computer
    - Restart the switch

Note: The firewall function of the computer must be turned off, and the anti-virus software must be exited, otherwise, the upgrade may not succeed.

Models: N5860 Series; N8560 Series; NC8200 Series; NC8400 Series

Explanation

When new features are added or the original performance needs to be optimized and the current running version is lagging behind, the
device needs to be upgraded. At this time, you need to load the higher version of the system software, upgrade through the CLI interface,
WEB interface, and restart the device to achieve.

Precautions

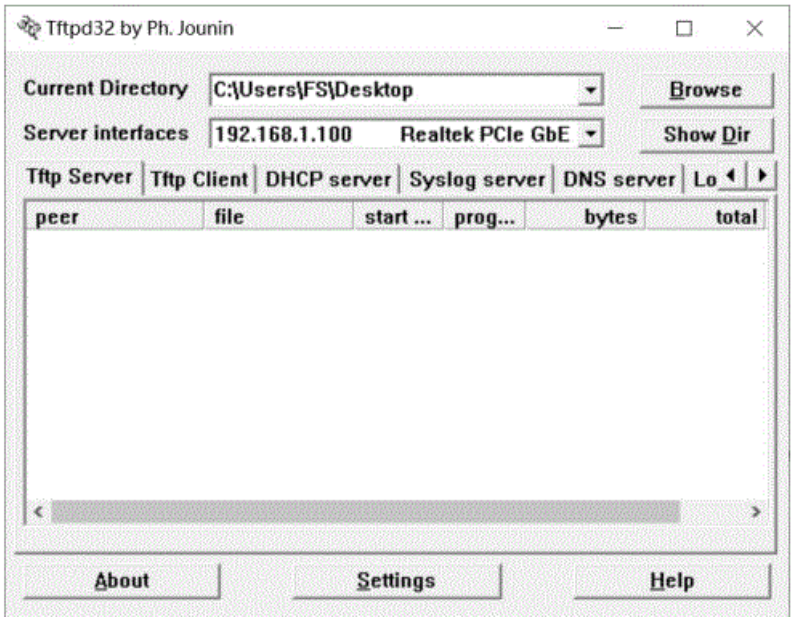
In the process of upgrading and downgrading, please pay attention to the prompt information output during the operation. If it fails,
please save the log information and contact FS Network Technical Support.

During the upgrade and downgrade process, there will be a prompt message not allowing restart. Once such a prompt message
appears, please do not power off, do not reset the system, and do not insert or remove any modules.

After the upgrade and downgrade are complete, run the show version command to view the current version number of the device
to confirm the upgrade is successful.

TFTP server setup

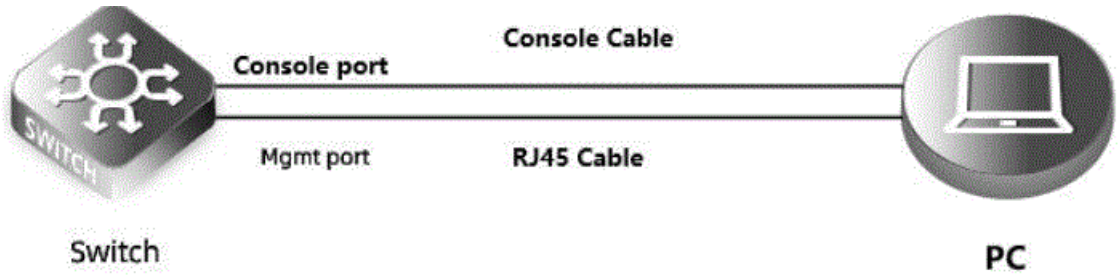
Use software TFTP on local PC
Specify the folder where the version file is located and the IP address of the TFTP server



3. Upgrade steps

Upgrade under the main program

Network topology



Configuration steps
Set the IP address of the console port of the switch

```
S5860>enable                                    ------->Enter privileged mode
```

```
S5860#configure terminal                                  ------->Enter global configuration mode
S5860(config)#interface vlan 1                            ------->Enter vlan 1 interface
S5860(config-if)#ip address 192.168.1.200 255.255.255.0   ------->Set management ip on vlan 1 interface
S5860(config-if)#exit                                     ------->Return to global configuration mode
```

Set the computer IP address, and confirm that the computer can ping the switch, and the switch can also ping the computer

```
C:\Users\FS>ping 192.168.1.200

Ping 192.168.1.200 with 32 bytes of data:
Reply from 192.168.1.200: Byte=32 Time=3ms TTL=64
Reply from 192.168.1.200: Byte=32 Time=2ms TTL=64
Reply from 192.168.1.200: Byte=32 Time=2ms TTL=64
Reply from 192.168.1.200: Byte=32 Time=2ms TTL=64

Ping statistics of 192.168.1.200:
        Packet: Sent = 4, Received = 4, Lost = 0 (0% lost),
Estimated time of round trip (in milliseconds):
        Shortest = 2ms, longest = 3ms, average = 2ms
```

```
S5860#ping 192.168.1.100
Sending 5, 100-byte ICMP Echoes to 192.168.1.100, timeout is 2 seconds:
   < press Ctrl+C to break >
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/2 ms.
```

NOTE: The firewall function of the computer must be turned off, and the anti-virus software must be exited, otherwise the upgrade may not succeed

Put the tftp software (tftp software can be downloaded from the Internet) and the new software version into the same directory.
Start the tftp tool and execute the following commands on the switch, the device will be automatically upgraded:

```
S5860#upgrade download tftp://192.168.1.100/S5860_FSOS11.4(1)B70P1_install.bin
Upgrade the device must be auto-reset after finish, are you sure upgrading now?[Y/N]y
```

The following prompt indicates that the upgrade was successful:

```
*Sep 19 12:37:24: %7: [Slot 0]:Upgrade processing is 10%
*Sep 19 12:37:39: %7:
*Sep 19 12:37:39: %7: [Slot 0]:Upgrade processing is 20%
*Sep 19 12:37:39: %7:
*Sep 19 12:37:40: %7: [Slot 0]:Upgrade processing is 30%
*Sep 19 12:37:40: %7:
*Sep 19 12:37:40: %7: [Slot 0]:Upgrade processing is 40%
*Sep 19 12:37:40: %7:
*Sep 19 12:37:40: %7: [Slot 0]:Upgrade processing is 50%
*Sep 19 12:37:40: %7:
*Sep 19 12:37:40: %7: [Slot 0]:Upgrade processing is 60%
*Sep 19 12:37:41: %7:
*Sep 19 12:37:41: %7: [Slot 0]:Upgrade processing is 70%
```

```
Upgrade info [OK]
        Rootfs version[1.0.0.ca7d092b->1.0.0.99662b17]
Reload system to take effect!
System is reload%FS_SYS-0-REBOOT

.....
Erasing at 0xfe0000 -- 100% complete.
OK
Erasing Nand...
Erasing at 0x4e0000 -- 100% complete.
Writing to Nand... done

SUCCESS: UPGRADING OK.
resetting ...
.....
```

Restart the switch

```
S5860#reload          ----->Restart the switch to take effect
Reload system?(Y/N) y
```

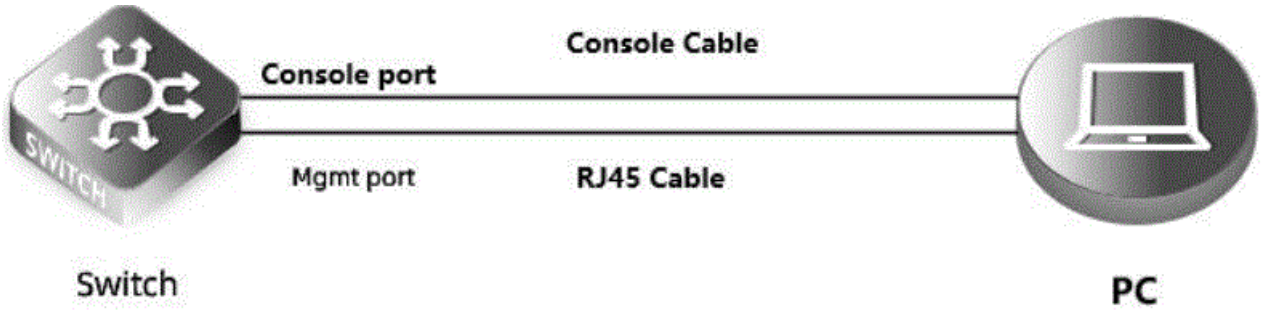
After restart, confirm whether the switch is successfully upgraded

Functional Verification

Confirm whether the version is the upgraded version by show version

U disk upgrade

Network topology



Configuration steps
Set the IP address of the console port of the switch

```
S5860>enable                                        ------->Enter privileged mode
S5860#configure terminal                                ------->Enter global configuration mode
S5860(config)#interface vlan 1                      ------->Enter vlan 1 interface
S5860(config-if)#ip address 192.168.1.200 255.255.255.0    ------->Set management ip on vlan 1 interface
S5860(config-if)#exit                                   ------->Return to global configuration mode
```

Set the computer IP address, and confirm that the computer can ping the switch, and the switch can also ping the computer

```
C:\Users\FS>ping 192.168.1.200

Ping 192.168.1.200 with 32 bytes of data:
```

```
Reply from 192.168.1.200: Byte=32 Time=3ms TTL=64
Reply from 192.168.1.200: Byte=32 Time=2ms TTL=64
Reply from 192.168.1.200: Byte=32 Time=2ms TTL=64
Reply from 192.168.1.200: Byte=32 Time=2ms TTL=64

Ping statistics of 192.168.1.200:
        Packet: Sent = 4, Received = 4, Lost = 0 (0% lost),
Estimated time of round trip (in milliseconds):
        Shortest = 2ms, longest = 3ms, average = 2ms
```

```
S5860#ping 192.168.1.100
Sending 5, 100-byte ICMP Echoes to 192.168.1.100, timeout is 2 seconds:
   < press Ctrl+C to break >
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/2 ms.
```

NOTE: The firewall function of the computer must be turned off, and the anti-virus software must be exited, otherwise the upgrade may not succeed

Insert the U disk carrying the installation package into the USB port of the device
Log in to the switch and execute the following commands on the switch, the device will be automatically upgraded

```
S5860#upgrade usb0:S5860_FSOS11.4(1)B70P1_install.bin        ------->There is no space between usb0 and the name of the rack package
*Sep 19 12:37:24: %7: [Slot 0]:Upgrade processing is 10%
*Sep 19 12:37:39: %7:
*Sep 19 12:37:39: %7: [Slot 0]:Upgrade processing is 20%
*Sep 19 12:37:39: %7:
*Sep 19 12:37:40: %7: [Slot 0]:Upgrade processing is 30%
*Sep 19 12:37:40: %7:
*Sep 19 12:37:40: %7: [Slot 0]:Upgrade processing is 40%
*Sep 19 12:37:40: %7:
*Sep 19 12:37:40: %7: [Slot 0]:Upgrade processing is 50%
*Sep 19 12:37:40: %7:
*Sep 19 12:37:40: %7: [Slot 0]:Upgrade processing is 60%
*Sep 19 12:37:41: %7:
*Sep 19 12:37:41: %7: [Slot 0]:Upgrade processing is 70%

Upgrade info [OK]
        Rootfs version[1.0.0.ca7d092b->1.0.0.99662b17]
Reload system to take effect!
System is reload%FS_SYS-0-REBOOT


......
Erasing at 0xfe0000 -- 100% complete.
OK
```

```
Erasing Nand...
Erasing at 0x4e0000 -- 100% complete.
Writing to Nand... done

SUCCESS: UPGRADING OK.
resetting ...
......
```

Restart the switch

```
S5860#reload          ------> Restart the switch to take effect
Reload system?(Y/N) y
```

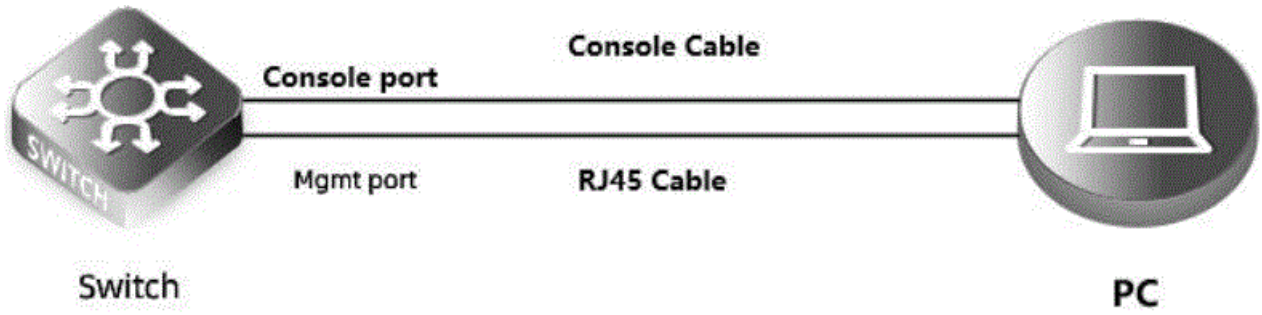
After restart, confirm whether the switch is successfully upgraded

Functional Verification

Confirm whether the version is the upgraded version by show version

Upgrade in Uboot mode

Network topology



Configuration steps
Restart the device
When the Ctrl+C prompt appears, press the CTRL and C keys simultaneously on the keyboard to enter the bootloader menu

```
U-Boot 1.4.2--gf4b0786 (Nov 01 2018 - 09:52:06 +0800)

I2C:      ready
DRAM:    1 GiB
NAND:    1024 MiB
In:          serial
Out:        serial
Err:        serial
Unlocking L2 Cache ...Done
arm_clk=1000MHz, axi_clk=400MHz, apb_clk=100MHz, arm_periph_clk=500MHz
SETMAC: Setmac operation was performed at 2020-02-28 15:24:58 (version: 11.0)
Press Ctrl+C to enter Boot Menu
Net:      eth-0
Entering simple UI....


====== BootLoader Menu("Ctrl+Z" to upper level) ======
      TOP menu items.
***********************************************
      0. Tftp utilities.
      1. XModem utilities.
      2. Run main.
      3. SetMac utilities.
      4. Scattered utilities.
      5. Set Module Serial
***********************************************
```

After entering the bootloader menu, click the red reminder below to enter the address configuration menu

```
====== BootLoader Menu("Ctrl+Z" to upper level) ======
      TOP menu items.
************************************************
      0. Tftp utilities.
      1. XModem utilities.
      2. Run main.
      3. SetMac utilities.
      4. Scattered utilities.
      5. Set Module Serial
************************************************
Press a key to run the command: 0

====== BootLoader Menu("Ctrl+Z" to upper level) ======
      Tftp utilities.
************************************************
      0. Upgrade bootloader.
      1. Upgrade kernel and rootfs by install package.
      2. Down to memory and jump to run.
************************************************
Press a key to run the command: 1
```

Under the menu, follow the prompts to enter the switch device address, execute the pc address, and the file name to be upgraded

```
Plz enter the Local IP:[]: 192.168.1.200          --------->Switch address
Plz enter the Remote IP:[]: 192.168.1.100         -------->PC address
Plz enter the Filename:[]: S5860_FSOS11.4(1)B70P1_install.bin      -------->Upgrade bin file
```

Follow the prompts to select Y to continue to the next step

```
Determined to upgrade? [Y/N]: Y
Upgrading, keep power on and wait please ...
Upgrading boot ...
```

After successful upgrade, automatically return to the bootloader menu interface, press ctrl+z to exit the menu item to restart

```
====== BootLoader Menu("Ctrl+Z" to upper level) ======
      Tftp utilities.
************************************************
```

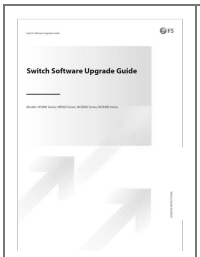
```
    0. Upgrade bootloader.
    1. Upgrade kernel and rootfs by install package.
    2. Down to memory and jump to run.
***********************************************
Press a key to run the command:

======= BootLoader Menu("Ctrl+Z" to upper level) =======
    TOP menu items.
***********************************************
    0. Tftp utilities.
    1. XModem utilities.
    2. Run main.
    3. SetMac utilities.
    4. Scattered utilities.
    5. Set Module Serial
***********************************************
Press a key to run the command: 2
Unmounting UBIFS volume kernel!
```

Functional Verification
Confirm whether the version is the upgraded version by show version

www.fs.com

Documents / Resources

	FS N5860 Series Switch Software [pdf] User Guide N5860 Series, N8560 Series, NC8200 Series, NC8400 Series, N5860 Series Switch Software, Switch Software, Software

References

- FS.com - Data Center, Enterprise, Telecom