Security Gateway Software Upgrade Guide

Models: SG-5110, SG-3110, SG-5105

Contents

1. SG Equipment Upgrade Considerations

1.1 The Purpose of Equipment Upgrade

Get new features.

Resolve software defects.

1.2 Preparation Before Upgrading

Please download the latest version from the official website. Read the version release notes to confirm the functional defects and new functions supported by this version;

Before upgrading the device, please back up the current configuration of the device. For the specific operation steps, please refer to the configuration backup;

Before upgrading, please prepare the console cable. When the device upgrade fails, use the console cable to restore the version. For the specific operation steps, refer to the main program recovery;

1.3 Upgrade Considerations

The device upgrade needs to restart the device, which will cause network disconnection. Please avoid upgrading during peak business hours.

There is a certain risk in upgrading equipment. Please ensure that the power supply of the equipment is stable during the upgrade process. If the device upgrade fails, you need to use the console cable to restore the main program.

1.4 Downgrade

Because there are functional differences between the high version and the low version, the configuration will also be different. In general, the high version is compatible with the low version configuration, but the low version is not necessarily compatible with the high version configuration. Therefore, it is not recommended to perform the downgrade operation, otherwise it may lead to incompatible configuration or partial configuration loss, and even the device cannot be used and needs to be returned to the factory;

If you must downgrade, please operate when there is a backup of the lower version configuration and the network is relatively idle. After downgrading, you need to check whether the configuration is correct.

2. SG Gateway Mode Upgrade

2.1 Network Topology
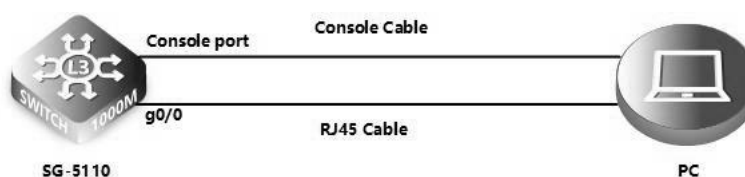
2.2 Configuration Points

Please note the following before upgrading:

- Because the upgrade needs to be restarted, please upgrade within the time allowed to disconnect the network. The upgrade takes about 10 minutes.
- Download the corresponding software version according to the product model. Confirm that the software version corresponds to the product model, and read the release notes carefully before upgrading.

2.3 Operating Steps

2.3.1 Upgrade via Console Line Login

Use software TFTP on local PC

Specify the folder where the version file is located and the IP address of the TFTP server
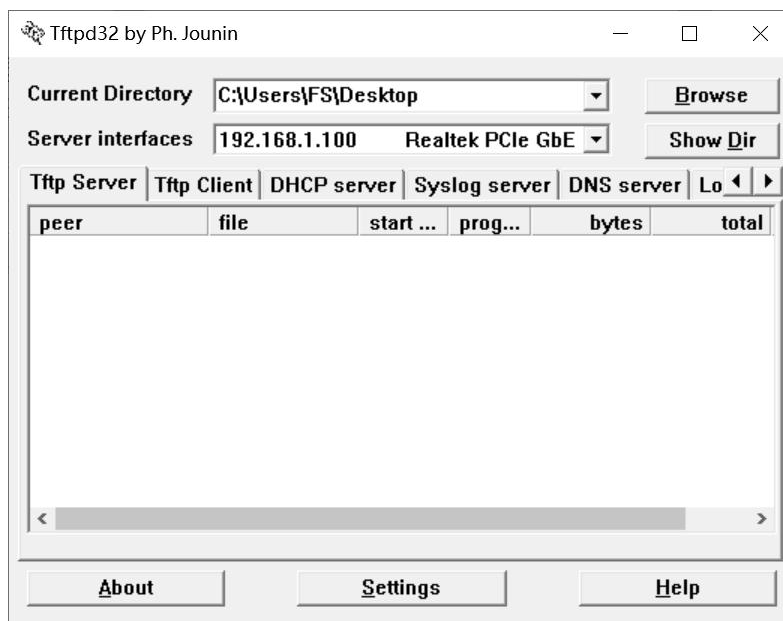
Before upgrading, please check the windows firewall, anti-virus software settings, system security policies, etc., TftpServer can only open one to prevent port conflicts.

Log in to the SG device in console mode.

The default SG IP address is 192.168.1.1 on the 0/MGMT interface

Enter the upgrade command: **copy tftp://192.168.1.100/fsos.bin sata0:fsos.bin** (where 192.168.1.100 is the computer IP) as follows:

Tip: copy success means the file has been uploaded successfully.

SG-5110#copy tftp://192.168.1.100/fsos.bin sata0:fsos.bin

Press Ctrl+C to quit

!!

Copy success.

Do not restart after importing the main program, you need to enter upgrade sata0:fsos.bin force to update the main program

SG-5110#upgrade sata0:fsos.bin force

You use the force command, Are you sure?Continue [Y/n]y

Upgrade the device must be auto-reset after finish, are you sure upgrading now?[Y/n]y

*Jul 14 03:43:48: %UPGRADE-6-INFO: Upgrade processing is 10%

Running this command may take some time, please wait.

This command is to load the main program on the hard disk to take effect. If you do not load the newly upgraded version, it will not take effect, and the show version will still be the old version;

2.4 Effect Verification

Check whether the upgrade is successful, and check the version information through show version after restart:

SG-5110#show version

System description   : FS EASY GATEWAY(SG-5110) by FS Networks.

System start time   : 2020-07-14 03:46:46

System uptime   : 0:00:01:03

System hardware version : 1.20

System software version : SG_FSOS 11.9(4)B12

System patch number   : NA

System serial number   : H1Q101600176B

System boot version   : 3.3.0

3. SG Bridge Mode Upgrade

3.1 Network Topology
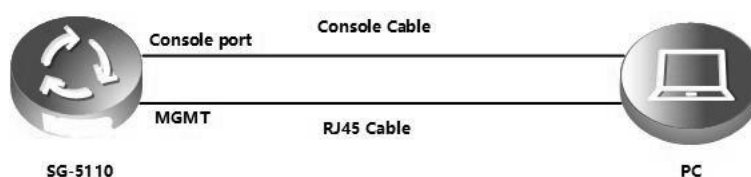
3.2 Configuration Points

Please note the following before upgrading:

- Because the upgrade needs to be restarted, please upgrade within the time allowed for disconnection. The upgrade takes about 10 minutes.
- After downloading the main program, modify the main program file name to fsos.bin, confirm that the main program corresponds to the product model, the size is correct, and read the release notes carefully before upgrading.
- **Command line mode bridge mode upgrade command is different from gateway mode.**
- **Bridge mode upload file command copy oob_tftp://192.168.1.100/fsos.bin sata0:fsos.bin**
- **Gateway mode upload file command copy tftp://192.168.1.100/fsos.bin sata0:fsos.bin**

3.3 Operating Steps

3.3.1 Upgrade via Console Line Login

Use software TFTP on local PC

Specify the folder where the version file is located and the IP address of the TFTP server
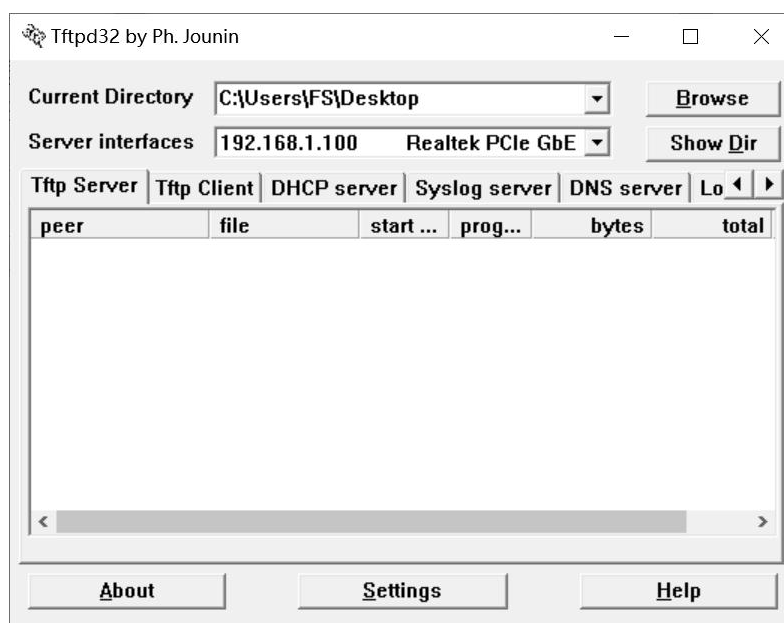
Before upgrading, please check the windows firewall, anti-virus software settings, system security policies, etc., TftpServer can only open one to prevent port conflicts.

Log in to the SG device in console mode.

The default IP address of SG is 192.168.1.1 on the 0/MGMT interface, which is configured according to the actual situation when upgrading;

SG-5110#copy oob_tftp://192.168.1.100/fsos.bin sata0:fsos.bin

Press Ctrl+C to quit

!!

Copy success.

Do not restart after importing the main program, you need to enter **upgrade sata0:fsos.bin force** to update the main program;

SG-5110#upgrade sata0:fsos.bin force

You use the force command, Are you sure?Continue [Y/n]y

Upgrade the device must be auto-reset after finish, are you sure upgrading now?[Y/n]y

*Jul 14 03:43:48: %UPGRADE-6-INFO: Upgrade processing is 10%

Running this command may take some time, please wait.

3.4   Effect Verification

Check whether the upgrade is successful. After restarting, check the version information through show version:

SG-5110#show version

System description   : FS EASY GATEWAY(SG-5110) by FS Networks.

System start time   : 2020-07-14 03:46:46

System uptime   : 0:00:01:03

System hardware version : 1.20

System software version : SG_FSOS 11.9(4)B12

System patch number   : NA

System serial number   : H1Q101600176B

System boot version   : 3.3.0

4. Main Program Recovery

4.1 Networking Requirements

If there is a problem that the main program of the device is abnormally lost, you can try to restore the device through the CTRL layer. The phenomenon that the main program of the device is lost is that the PWR and SYS lights of the device are always on, and the network cables connected to other interfaces are not on.
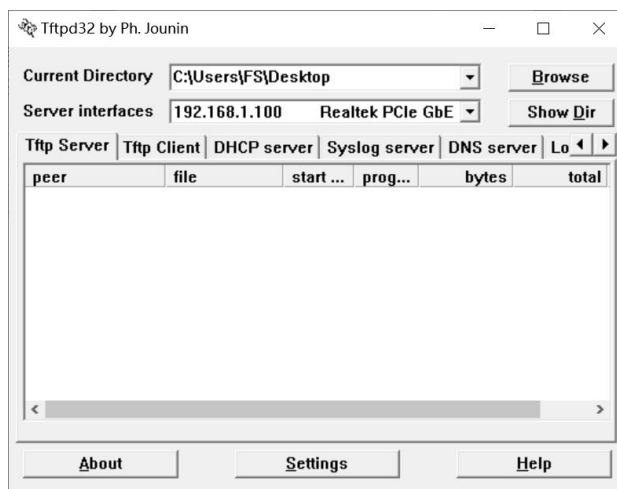
4.2 Network Topology
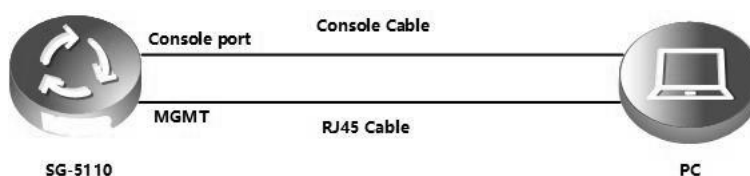
4.3 Configuration Points

- The main program name must be "fsos.bin"
- The 0/MGMT port of EG is used to connect the PC transmitting the main program

4.4 Operating Steps

Use software TFTP on local PC

Specify the folder where the version file is located and the IP address of the TFTP server

Before upgrading, please check the windows firewall, anti-virus software settings, system security policies, etc., TftpServer can only open one to prevent port conflicts.

Log in to the SG device via console

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 V3.3.0.9dc7669 (Dec 20 2018 - 14:04:49 +0800)

Clock: CPU   1200 [MHz]

          DDR   800   [MHz]

          FABRIC   800   [MHz]

          MSS   200   [MHz]

DRAM: 2 GiB

U-Boot DT blob at : 000000007f680678

Comphy-0: SGMII1   3.125 Gbps

Comphy-1: SGMII2   3.125 Gbps

Comphy-2: SGMII0   1.25 Gbps

Comphy-3: SATA1   5 Gbps

Comphy-4: UNCONNECTED   1.25 Gbps

Comphy-5: UNCONNECTED   1.25 Gbps

UTMI PHY 0 initialized to USB Host0

UTMI PHY 1 initialized to USB Host1

MMC: sdhci@780000: 0

SCSI: Net: eth0: mvpp2-0, eth1: mvpp2-1, eth2: mvpp2-2 [PRIME]

SETMAC: Setmac operation was performed at 2020-03-25 20:19:16 (version: 11.0)

Press Ctrl+C to enter Boot Me 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.
**********************************************
```

Select the menu "0" as shown below

```
====== 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.
**********************************************
```

Select the menu "1" as follows, where Local IP is the IP of the SG device, Remote IP is the computer IP, and fsos.bin is the main program file name of the device

```
====== BootLoader Menu("Ctrl+Z" to upper level) ======
     Tftp utilities.
**********************************************
     0. Upgrade bootloader.
     1. Upgrade kernel and rootfs by install package.
**********************************************
Press a key to run the command: 1
Plz enter the Local IP:[]: 192.168.1.1                    ---------Switch address
Plz enter the Remote IP:[]: 192.168.1.100                 ---------PC address
Plz enter the Filename:[]: fsos.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.
**********************************************
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
```

4.5   Effect Verification

View device version information through show version;