Access level switches,
industrial switches

MES14xx, MES24xx, MES3708P

Guide for firmware and bootloader version upgrade

SYSTEM FIRMWARE AND BOOTLOADER UPGRADE VIA CLI

Do not disable power supply or reboot the device during the process of system firmware or the bootloader upgrade.

To upgrade the firmware and bootloader using CLI, connect to the switch using a terminal program (such as HyperTerminal) via Telnet or SSH, or via the serial port.

Terminal program configuration when connecting to the switch via serial port:

1. Select the corresponding serial port;
2. Set the data transfer rate to 115200 bps;
3. Specify the data format: 8 data bits, 1 stop bit, non-parity;
4. Disable hardware and software data flow control;
5. Specify VT100 terminal emulation mode (many terminal applications use this emulation mode by default).

For switch models MES1428, MES2408, MES2428, MES3708P, the mes2400-xxxx-xxx.iss firmware file and the mes2400-xxxx-xxx.boot bootloader file are used.

For switch model MES2424, the mes2424-xxxx-xxx.iss firmware file and the mes2424-xxxx-xxx.boot bootloader file are used.

For switch model MES2448, the mes2448-xxxx-xxx.iss firmware file and the mes2448-xxxx-xxx.boot bootloader file are used.

For switch model MES2411X, the mes2411X-xxxx-xxx.iss firmware file and the mes2448-xxxx-xxx.boot bootloader file are used.

1. Bootloader file upload to non-volatile switch memory

To upload the bootloader file, enter the following command in the CLI:

`copy tftp://<ip-address>/filename boot,`

where

- *<ip address>* – IP address of the TFTP server from which the bootloader file will be downloaded;
- *filename* – bootloader file name.

The copying process is as follows:

```
console# copy tftp://<ip-address>/filename.boot boot
Erasing bootloader sector and starting copy operation...
...Completed: 10 %...
...Completed: 20 %...
...Completed: 30 %...
```

```
...Completed: 40 %...
...Completed: 50 %...
...Completed: 60 %...
...Completed: 70 %...
...Completed: 80 %...
...Completed: 90 %...
Copied tftp://<ip-address>/filename.boot ==> boot
```

If the bootloader file upload was successful, the following message will be displayed:

`Copied tftp://<ip-address>/filename.boot ==>boot`

Proceed to section 2 of the instruction.

If the upgrade process is interrupted by the `%Copied invalid bootloader file` message, check the integrity of the bootloader file on the tftp server.

If the upgrade process is interrupted by the `%Unable to copy remote bootloader file` message, check:

- **TFTP server availability;**
- **availability of the file and its correspondence to the device model.**

After correcting the errors, repeat the download of the bootloader file and proceed to section 2.

2. System firmware file upload to non-volatile switch memory

To upload the system firmware file, enter the following command in the CLI:

`copy tftp://<ip-address>/filename image,`

where

- *<ip address>* – IP address of the TFTP server from which the system firmware file will be downloaded;
- *filename* – firmware file name.

The copying process is as follows:

```
console# copy tftp://<ip-adress>/filename.iss image
Erasing image sector and starting copy operation...
...Completed: 10 %...
...Completed: 20 %...
...Completed: 30 %...
...Completed: 40 %...
...Completed: 50 %...
...Completed: 60 %...
...Completed: 70 %...
...Completed: 80 %...
...Completed: 90 %...
Copied tftp://<ip-adress>/filename.iss image ==> image
```

If the firmware file upload was successful, the following message will be displayed:

```
Copied tftp://<ip-address>/filename.iss ==>image
```

Proceed to section 3 of the instruction.

If the upgrade process is interrupted by the `%Copied invalid image` message, check the integrity of the bootloader file on the tftp server.

If the upgrade process is interrupted by the `%Unable to copy remote image` message, check:

- **TFTP server availability;**
- **availability of the file and its correspondence to the device model.**

After correcting the errors, repeat the download of the firmware file and proceed to section 3.

3. Selecting the system firmware file that will be active after rebooting the switch

The system firmware file is loaded into the inactive memory area by default (inactive image) and will be active after the switch is rebooted.

4. Switch reboot

To reboot the device, execute the **`reload`** command.

SYSTEM FIRMWARE UPGRADE VIA WEB INTERFACE

Do not disable the power or reboot the device during the system firmware upgrade.

If the switch has previously been used with version 10.2.3 and lower, enable the web interface by entering the following command on the switch command line:

```
(config)# set ip http enable
```

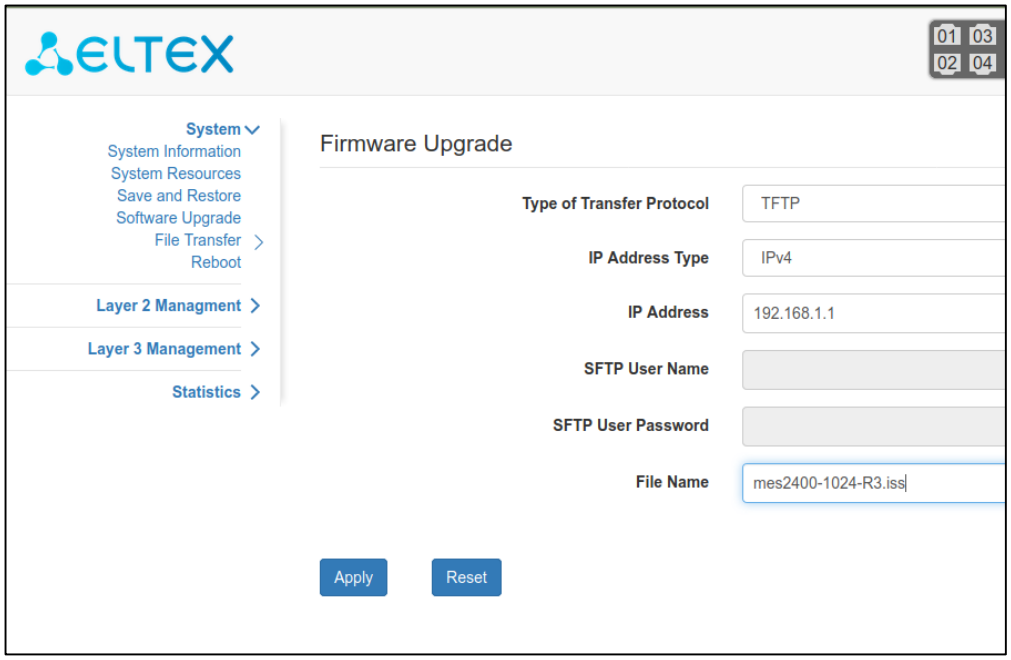
To upgrade the system firmware using the web interface, connect to the switch via HTTP by entering the following address in your browser:

```
http://<ip-address>/
```

where

- *<ip-address>* — switch IP address.

1. System firmware file upload to non-volatile switch memory



To upload a system firmware file to non-volatile switch memory, go to **System -> Firmware upgrade**.

Enter the **TFTP server** address in the **IP address** field. In the **File name** field, enter the firmware file name in the following format: **mes24xx-xxxx-xxx.iss**.

Click the **Apply** button. The file upload will begin.

For switch models MES1428, MES2408, MES2428, MES3708P, the mes2400-xxxx-xxx.iss firmware files are used.

For switch model MES2424, the mes2424-xxxx-xxx.iss firmware files are used.

For switch model MES2448, the mes2448-xxxx-xxx.iss firmware files are used.

For switch model MES2411X, the mes2411X-xxxx-xxx.iss firmware files are used.

When the file upload is complete, the following window will be opened:

Then proceed to section 2.

If the upgrade process is interrupted with an error, check:

- **integrity of the firmware file on the TFTP server;**
- **TFTP server availability;**
- **file availability and correspondence to the device model.**

After the errors have been corrected, repeat the download of the firmware file and proceed to section 2.

2. Selecting the system firmware file that will be active after rebooting the switch

The system firmware file is loaded into the inactive memory area (inactive image) by default and will be active after the switch is rebooted.

3. Switch reboot

To reboot the device, go to the **System -> Reboot** tab and click **Reboot.**