Title: **Instructions For Updating Firmware.**
Models: **TimeTools SR and SC Series NTP Servers**

Updating the SR Series NTP Server firmware is very straightforward.

1. Obtain Firmware Upgrade

Firmware updates can be obtained from TimeTools website at:

https://timetoolsltd.com/support/download/sr-and-sc-series-ntp-time-servers-firmware-updates/

The firmware update is stored as a compressed tarball file (.tgz) that must be uploaded to the time server.

IMPORTANT!	**Ensure firmware upgrade matches model type of installation unit.** **Eg.SR71-1.0.008.tgz for TimeTools SR7110 and SC7105 series NTP server models.** **SR71-1.0.008.tgz for SR7110, SC7105 models.** **SR92-1.0.008.tgz for SR9210, SC9205 models.** **SR97-1.0.008.tgz for SR9750, SR9850, SC9705 models.** **SR9860D-1.0.008.tgz for SR9860D models.**

2. Uploading The Firmware Update Using FTP.

To upload the firmware update file to the target unit requires the use of an FTP Client such as WS_FTP available from http://www.ipswitch.com/products/file-transfer.asp.

Typical FTP Settings:

Host: **192.168.0.200 (IP address of time server)**
Port: **21 (standard FTP port)**
Host Type: **UNIX (standard)**
User ID: **admin**
Password: **admin**
Transfer Mode: **Binary**   **(!!! Important !!! - Binary NOT Ascii)**
Remote directory: **/tmp/admin**

Upload the firmware upgrade tarball file, (eg **'SR71-1.0.008.tgz')** to target /tmp/admin directory.

IMPORTANT!	**Ensure that the firmware upgrade tarball file is uploaded to the target unit using FTP in Binary Mode, NOT ASCII Mode. ASCII mode will truncate the tarball.** **Check that the file size, in bytes, of the uploaded file match the original:** **SR71-1.0.008.tgz for SR7110, SC7105 models - 3,461,133 bytes.** **SR92-1.0.008.tgz for SR9210, SC9205 models - 3,461,146 bytes.** **SR97-1.0.008.tgz for SR9750, SR9850, SC9705 models - 3,461,152 bytes.** **SR9860D-1.0.008.tgz for SR9860D models - 3,461,353 bytes.**

3. Installing Firmware Update

From a telnet session, login as 'admin', password 'admin' (unless password modified).

```
>telnet 192.168.0.200
>NTP001 Login: admin
>Password: admin
```

Install the firmware update using the 'extract' command as follows:

```
>extract sr71-1.0.008.tgz      #Execute extract script
WARNING: DO NOT TURN OFF OR RESET DEVICE UNTIL UPGRADE COMPLETE !
Update complete.
```

This may take a few minutes to complete. Do not turn off or reset the device while the unit is updating. When the update is complete, reboot the time server for the firmware upgrade to take effect.

```
>restart
```

4. Checking New Version Number.

When the unit has restarted, log into the device using a web-browser to check that the firmware version number has been updated. On the main web status page the firmware version number should now be Rev. 1.0.008 05-MAR-20.

5. Save NTP Configuration File Settings

Some firmware updates, particularly ones that update the NTP daemon, require slight modifications to the NTP configuration file. This can be achieved by simply clicking the 'Submit' button (see below) in the 'NTP Configuration Menu'. Any required amendments to the NTP configuration file will be saved and the NTP service automatically restarted.
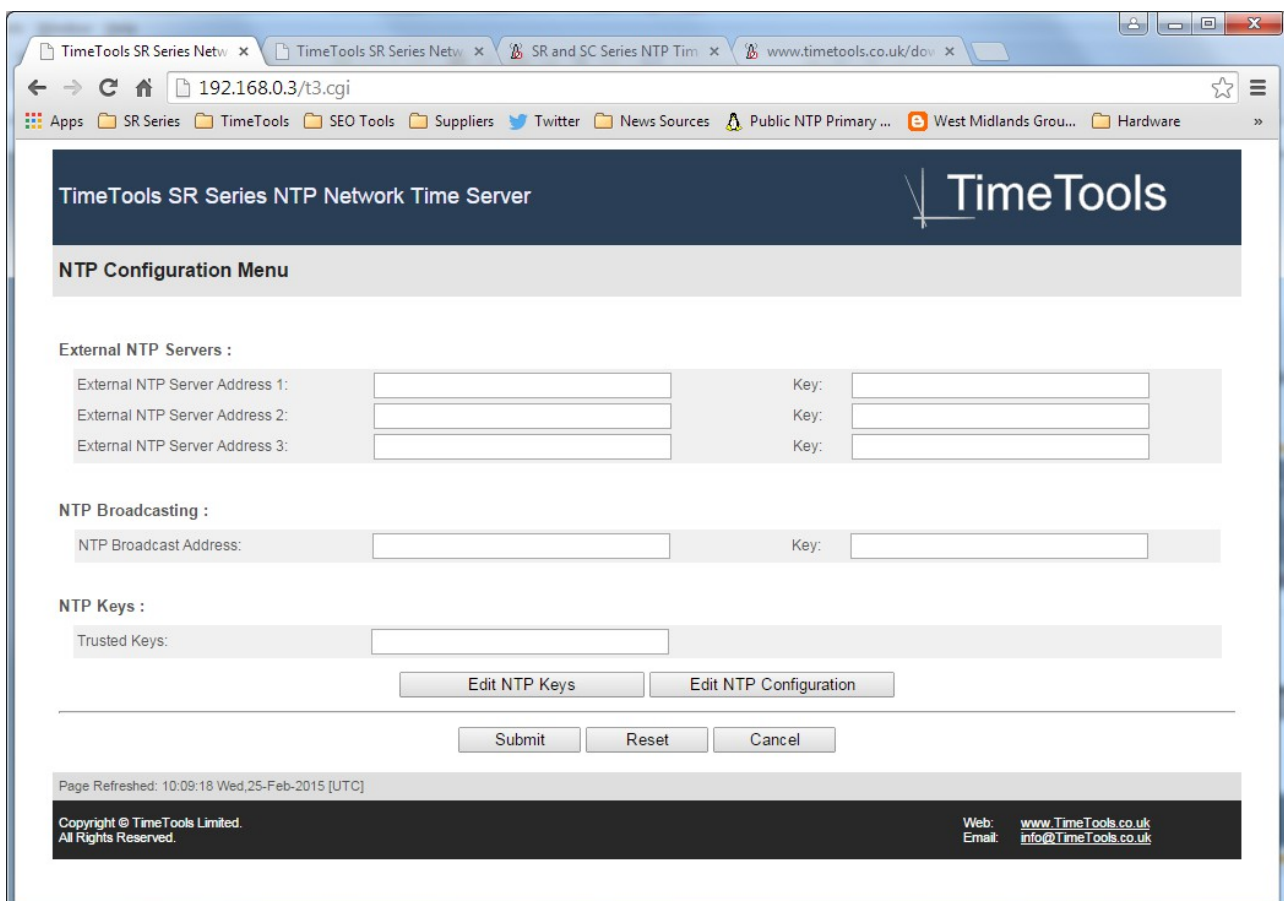

Fig1. Click the NTP Configuration Menu 'Submit' button to save required changes to the NTP configuration file.

6. Completion

The NTP server will take up to 30 minutes to resynchronize before it can be used for client time synchronization.

TimeTools