

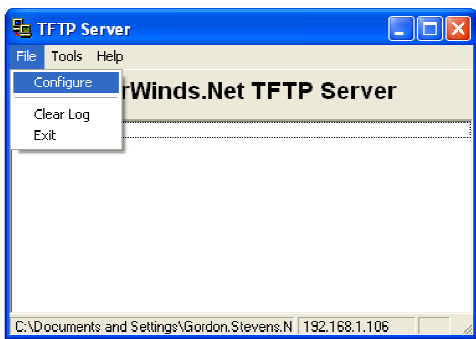
N-TRON TFTP Firmware Upgrade Procedure

For use with Fully Managed 700, 7000, and 9000 Series Industrial Ethernet Switches

This document is intended to be a reference and not completely replace any user guides/manuals. If you do not already have a TFTP Server application installed on the PC, you will need to install one before you begin the firmware upgrade procedure outlined in this document. We recommend using SolarWinds TFTP server as it has been tested and is available from the internet at no cost. You may download a current version directly from SolarWinds web site here: <http://www.solarwinds.com/>

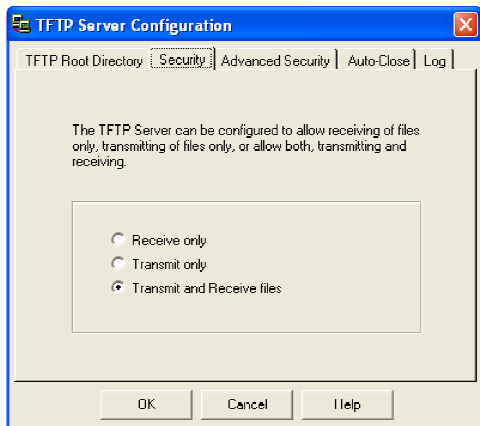
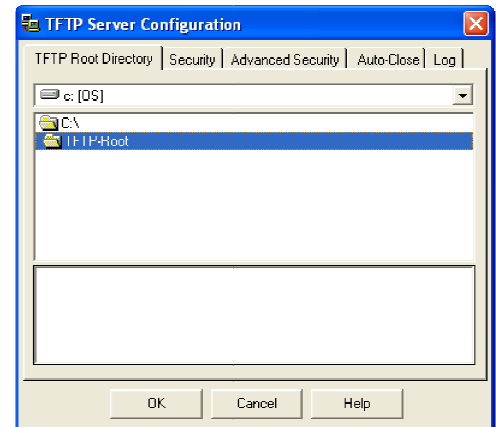
Of course, any TFTP Server should work fine. Once you have a TFTP Server application successfully installed on the PC you will be using to serve the firmware file from, you will need to verify the configuration as described in this document.

If the TFTP Server has not already been started on a PC, you may need to manually execute from the Windows Start Menu as shown in the illustration.



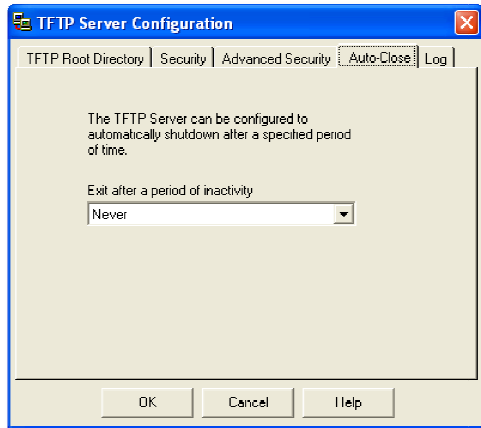
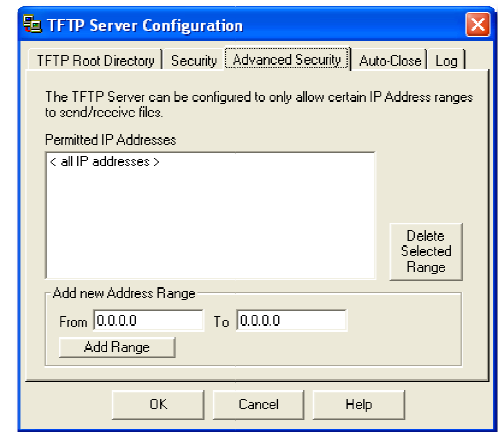
Once loaded, you may need to verify/configure the TFTP Server settings. From the File pull down menu, select Configure as shown in the illustration.

On the TFTP Root Directory tab, you'll need to select the folder to host the files (the default location is C:\TFTP-ROOT\). Note - This is the folder where you will need to copy the uncompressed firmware image files to be served from on the PC with the TFTP Server application is running.



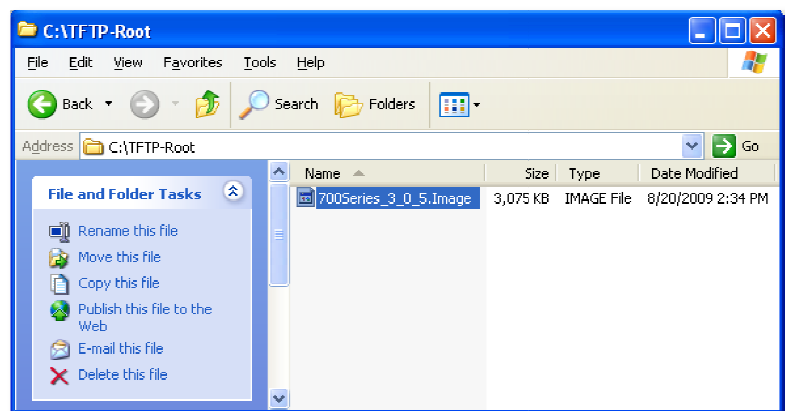
Under the Security tab, you should select Transmit and Receive Files to allow the TFTP Server to be used to upgrade firmware and configuration settings from the fully managed N-Tron switch as shown in this illustration.

Under the Advanced Security tab, ensure <all IP addresses> is included in the Permitted IP Address window for minimal security during the firmware updating process as shown here.



Under the Auto-Close tab, ensure “Never” is selected to prevent the server from closing during between Ethernet switches if updating more than one.

Once the above configuration settings have been verified, you will need to extract the image file(s) into the C:\TFTP-Root\ folder as shown in the illustration.

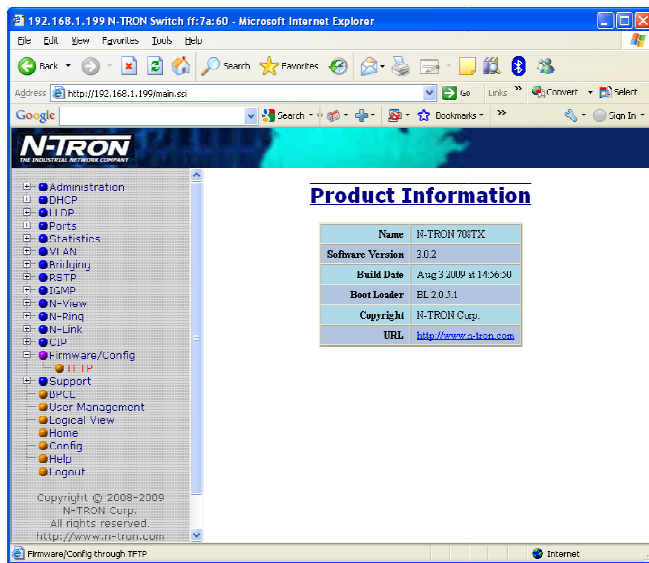
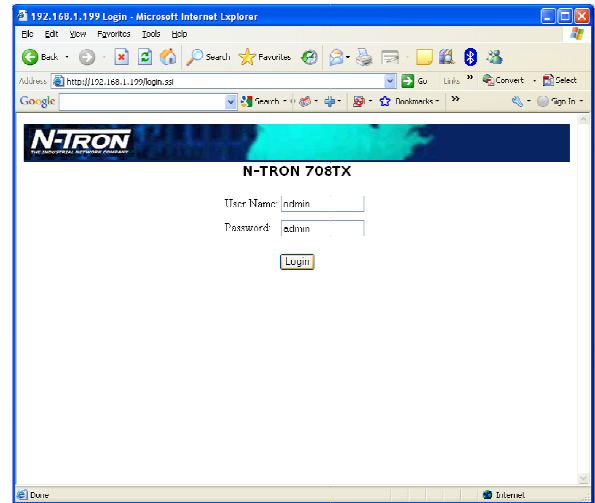


Note - You may also need to temporarily *disable* any Firewall, AV, and Internet Security applications on the PC running the TFTP Server software, to allow the Ethernet switch to access the TFTP Server during the upgrade process. The switch must be able to successfully Ping the TFTP Server’s IP Address before the image download process can begin. For more information regarding this process, please refer to the application’s documentation.

Ensure the PC with the TFTP server software running is connected to the switch directly or by a local LAN connection. Load your web browser on the PC and enter the IP Address of the switch you plan to upgrade the firmware. Note - The factory default IP address is **192.168.1.201** and Subnet Mask of **255.255.255.0**. For the purposes of this document, the switch's IP address is 192.168.1.199. Login with the following factory default credentials:

Username: **admin**

Password: **admin**



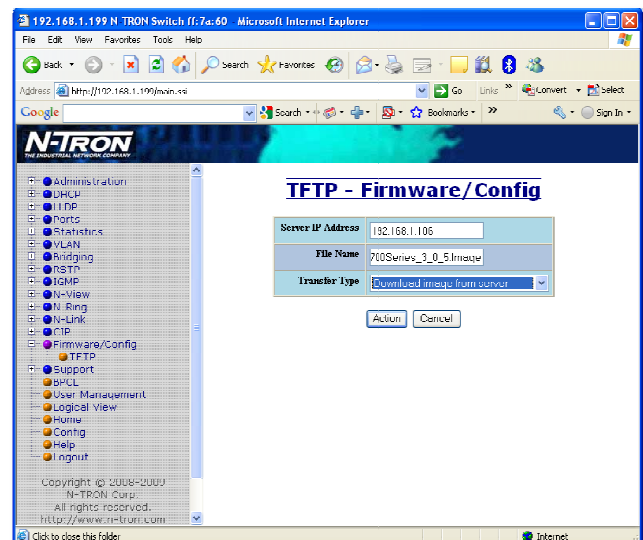
Determine the existing software/firmware version on the Product Information page.

- If Version 1.x, you must first upgrade to version 2.x. as an intermediate step before proceeding with upgrading to the latest version of software/firmware. When upgrading the software/firmware image from 1.x to 2.x, do not cycle power until the browser window displays the Login Page. Please allow several minutes after the image transfer is completed.
- If Version 2.x.x, you are able to proceed with upgrading to the latest version of software/firmware.

When upgrading the software/firmware image from 2.x to 3.x, do not cycle power until the browser window displays the Login Page. Please allow several minutes after the image transfer is completed.

Browse to the Firmware/Config → TFTP menu.

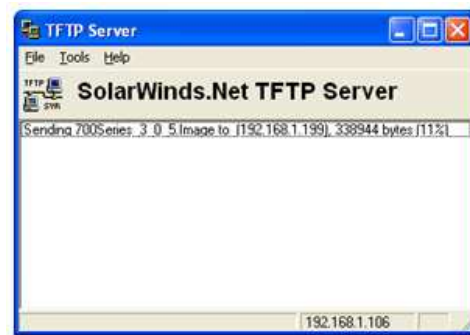
- Enter the IP Address of the TFTP server
- Enter the complete image filename
- From the dropdown list, select Download image from server
- Click on the Action button to begin the download



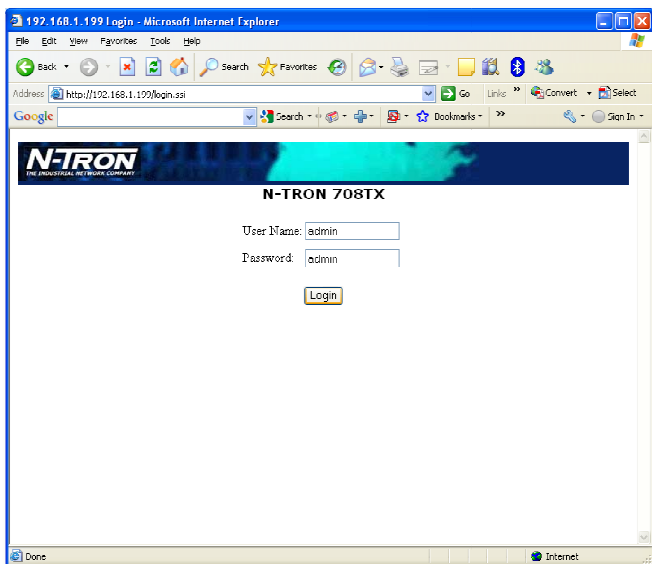
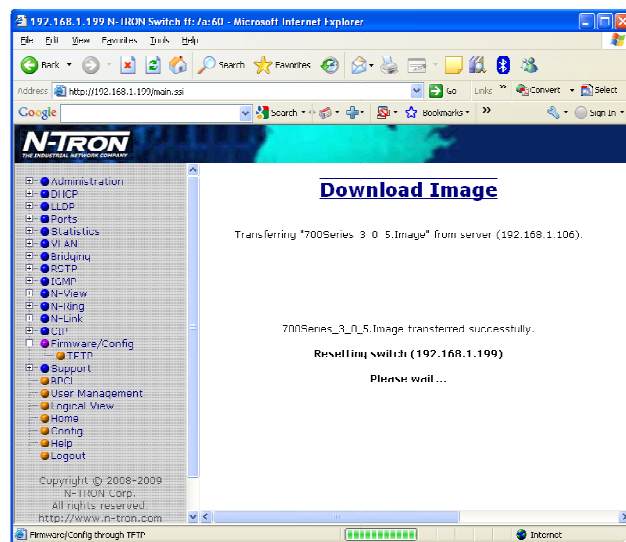


As the image is downloading from the TFTP Server, the web browser will display a screen similar to the one shown here.

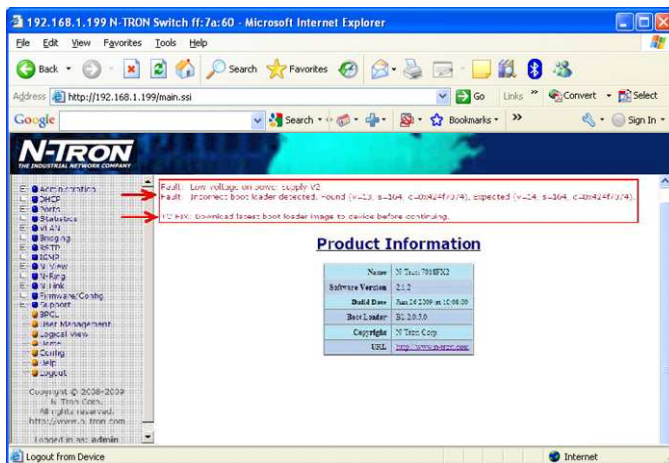
The TFTP Server will also provide status while the switch is downloading the software/firmware image.



Once the image has been successfully downloaded and transferred to the internal memory of the switch, it will reboot to load the new software/firmware image.



After the switch completely reboots, log back into the web browser interface using the same credentials as before. Verify the software/firmware version matches the software version you upgraded to on the Product Information page.

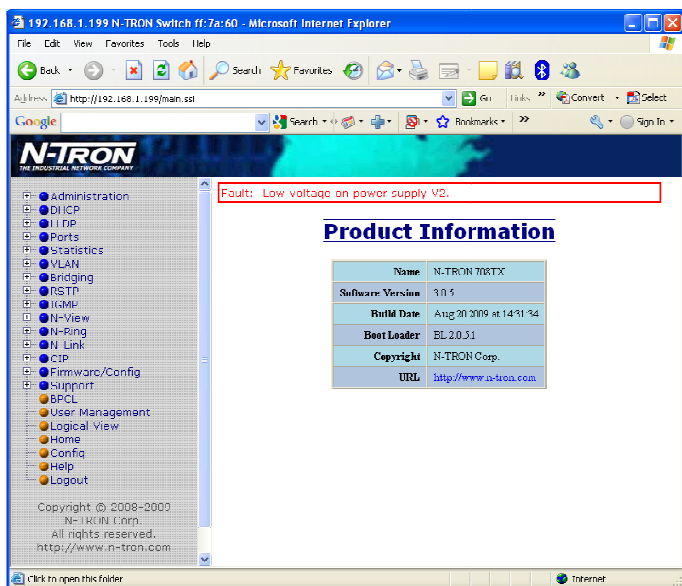
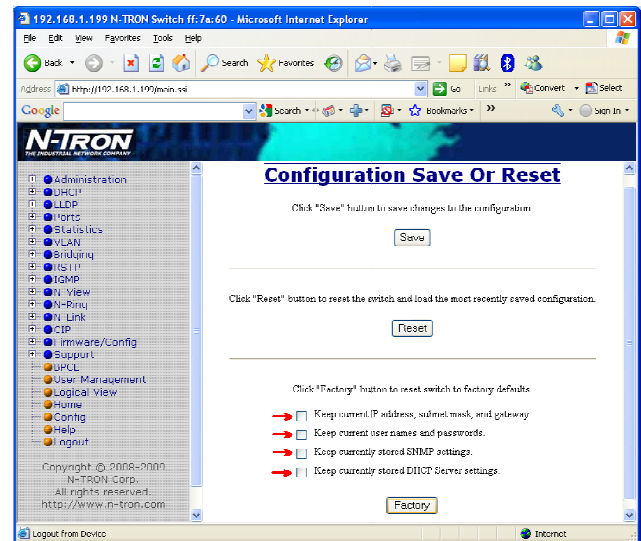


It is recommended that you restore factory defaults immediately after the firmware/software upgrade process. This is possible from the Config menu in the web browser interface.

At the lower portion of the screen, deselect all 4 boxes and click on the Factory button to completely restore the switch to factory defaults.

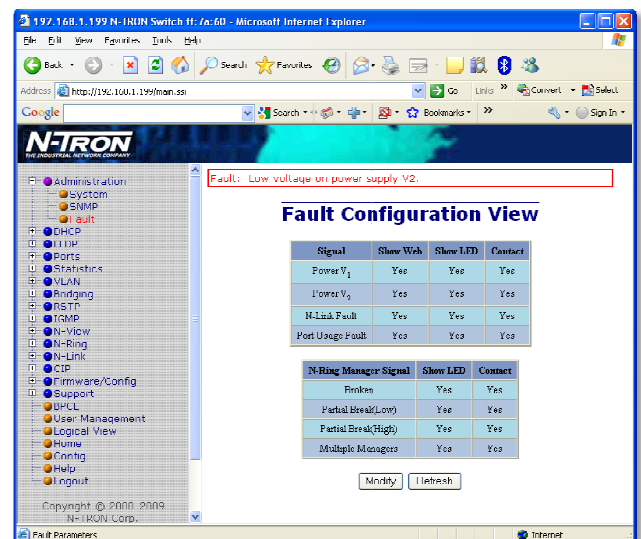
Note – the factory default IP Address scheme is IP Address: 192.168.1.201, Subnet Mask: 255.255.255.0

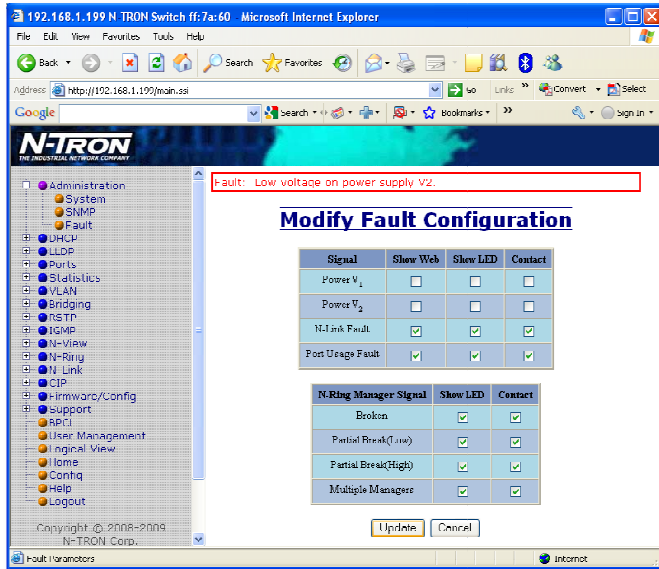
If prompted to upgrade the BootLoader image in the web browser interface, you must download it from the TFTP Server. This process is similar to the firmware/software image download you just completed except for the Transfer Type will be Download Boot Image from server.



To prevent this fault message from being displayed, you may disable the detection feature from the Administration → Fault menu. Click the Modify button.

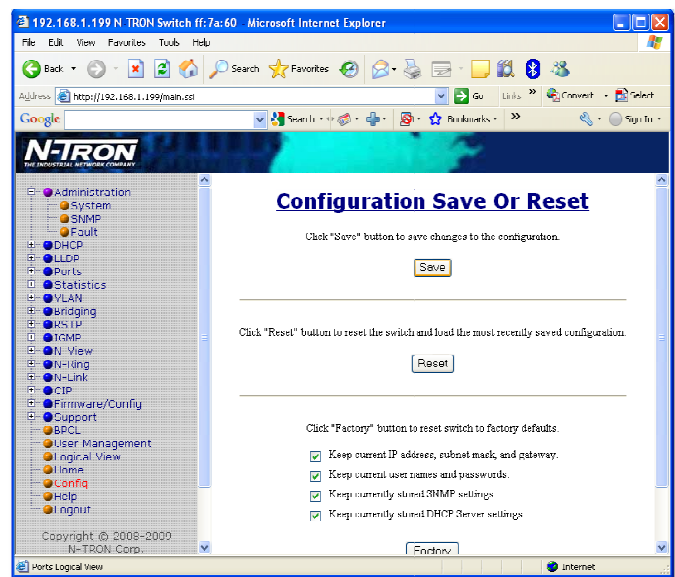
If you are using only one power supply, you may see a Fault message stating "Low voltage on power supply...". This is by design.





Deselect the respective check boxes as shown. Click on the Update button.

The switch will prompt you with a statement at the bottom of the page informing you that changes have been made to the configuration that have not been saved. From the Config menu, click on the Save button to maintain these settings.



You may now reconfigure any custom configuration settings including the switch's IP address, user account(s), and so forth.