MultiLink Ethernet Switch Firmware Upgrade Procedure

This document describes the process for upgrading the firmware on a GE Multilin MultiLink Ethernet switch. The methods described for updating the Multilink firmware either locally using the console port or remotely over the network using FTP or TFTP.

The following equipment and software will be required for loading the MultiLink Ethernet Switch with the new firmware version.

1) A female-female null modem cable. (Only necessary when upgrading using the MultiLink console port)
2) PC Serial port – if your PC does not have a serial port, a USB to serial converter will be required (Only necessary when upgrading using the MultiLink console port)
3) A PC (or a workstation/computer) with a terminal emulation program such as HyperTerminal (included with Windows) or Teraterm-pro or other equivalent software. Verify that the software supports Xmodem protocol
4) Enough disk space to store and retrieve the configuration files as well as copy of the MultiLink Firmware. We recommend that at least 15MB of disk space is available for this purpose.
5) Manager level account name and password for the switch being upgraded
6) Connection to the Internet. Ensure the connection does not block ftp file transfers

The latest version of the MultiLink firmware can be downloaded from the GE Multilin website at the following link:

http://www.geindustrial.com/multilin/catalog/ethernet.htm

To determine the version of firmware currently installed on you switch perform the following:

Using the command line interface, log into the switch using "Manager" Access rights.
In the Command line prompt, enter the command 'show version'.

Using the EnerVista Web Interface, enter the IP address of the switch in the address bar of a web browser. The firmware version installed on the switch will appear in the lower left corner of the screen.

Upgrading Using a Serial Connection – Command Line Interface

Use the following steps to load firmware to the Multilink with the serial port.

1) Download the Multilink firmware from the GE Multilin web site to a convenient location on your hard drive.
2) Use the null-modem cable to connect to the serial port of the switch.
3) Login at the manager level with the proper password.
4) It is recommended that the switch configuration be saved before upgrading the firmware.

   If the current firmware is older than 1.7 3, use the *saveconf* command as shown below.

```
Multilink - HyperTerminal
File  Edit  View  Call  Transfer  Help

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MultiLink MNS Version: 1.6.2

NOTE: System TCP/IP (ip/mask/gateway) is not configured yet.

Login    : manager
Password : *******
ML2400#saveconf mode=serial

   Do you wish to upload the configuration? [ 'Y' or 'N']
   Use XMODEM to download config file.

Connected 2:05:32    Auto detect    38400 8-N-1    SCROLL    CAPS    NUM    Capture    Print echo
```
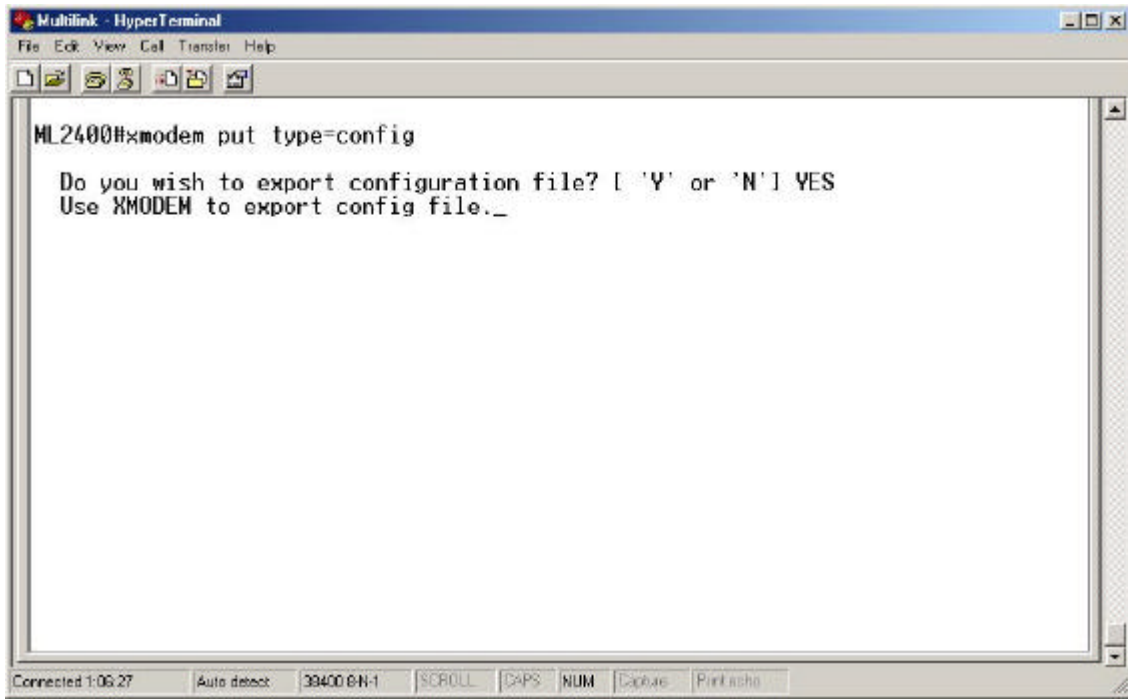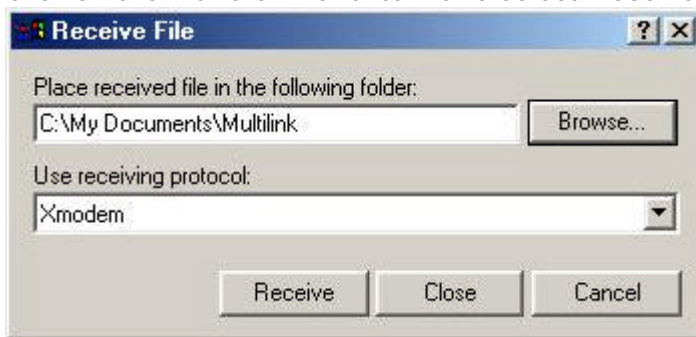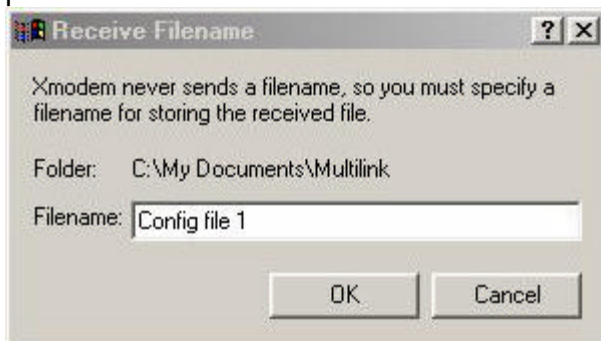
   If the current firmware is 1.7.3 or above, enter the *xmodem* command as shown below.

```
ML2400#xmodem put type=config

  Do you wish to export configuration file? [ 'Y' or 'N'] YES
  Use XMODEM to export config file._
```

Click on the Transfer menu item and select 'Receive File'.

Enter the path to which the configuration file will be stored. Select Xmodem for the receiving protocol.

Enter a name for the configuration file.
Click OK and the configuration file will be stored to the specified location.
Verify that the configuration file has been created and stored correctly.
This completes the save configuration procedure.

5) Below will show how to upgrade the firmware.
   If the current firmware is older than 1.7.3, use the *upgrade* command.
       ML2400# upgrade mode=serial
       Do you wish to upgrade the image? [Y or N] Y
   See figure below.

If the current firmware is 1.7.3 or above, use the *xmodem* command,
    ML2400# xmodem get type=app
    Do you wish to upgrade the image? [Y or N] Y
    See figure below.

```
Multilink - HyperTerminal
File  Edit  View  Call  Transfer  Help

ML2400#xmodem get type=app

    Do you wish to upgrade the image? [ 'Y' or 'N'] YES
    Please start XModem file transfer now.§§§§



Connected 1:08:56    Auto detect    38400 8-N-1    SCROLL  CAPS  NUM  Capture  Print echo
```

6) Select the Transfer menu item and choose the 'Send File' option.

```
Send File

Folder: C:\My Documents\Multilink\1.7.x

Filename:
C:\My Documents\Multilink\1.7.x\ML_Rel1.7.3.bir    [ Browse... ]

Protocol:
Xmodem                                          ▼

        [ Send ]    [ Close ]    [ Cancel ]
```
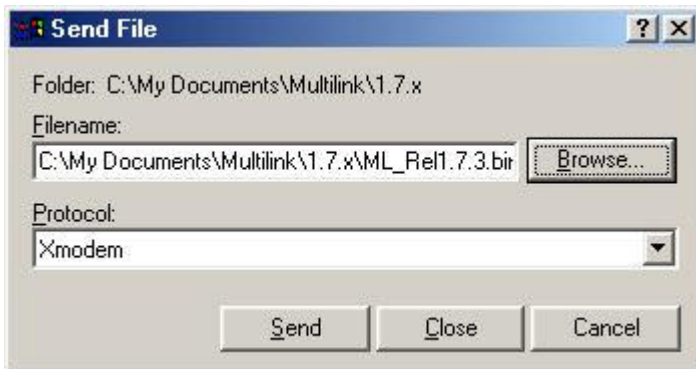
Enter the location of the firmware file that is to be loaded into the switch. Select Xmodem for the protocol. Click on the Send button and the file will start to load as shown below.
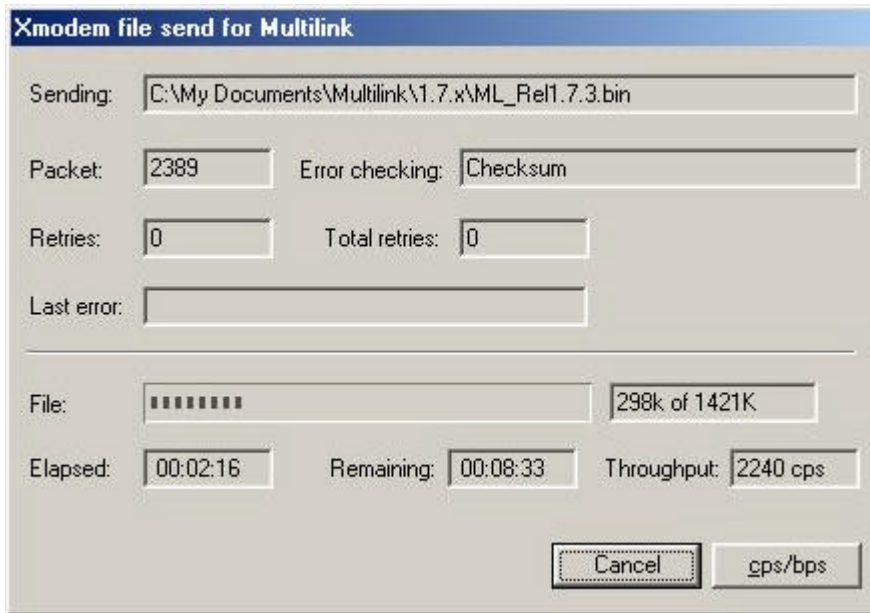
7) Once the file transfer is completed reboot the switch with the 'reboot' command or by cycling power.

    ML2400# reboot
    Proceed on rebooting the switch? [Y or N] Y
    Rebooting now......

8) Login to the switch and use the 'show version' command to verify the version.

    ML2400# show version

If necessary upload the configuration file using the following commands.
If the showing version is older than 1.7.3, use the *loadconf* command as shown below,

If the showing version is 1.7.3 or above, enter the *xmodem* command as shown below,

Select the Transfer menu item and choose the 'Send File' option.

Enter the location of the configuration file and select Xmodem for the protocol.
Click on the Send button and the file will start to load as shown below.
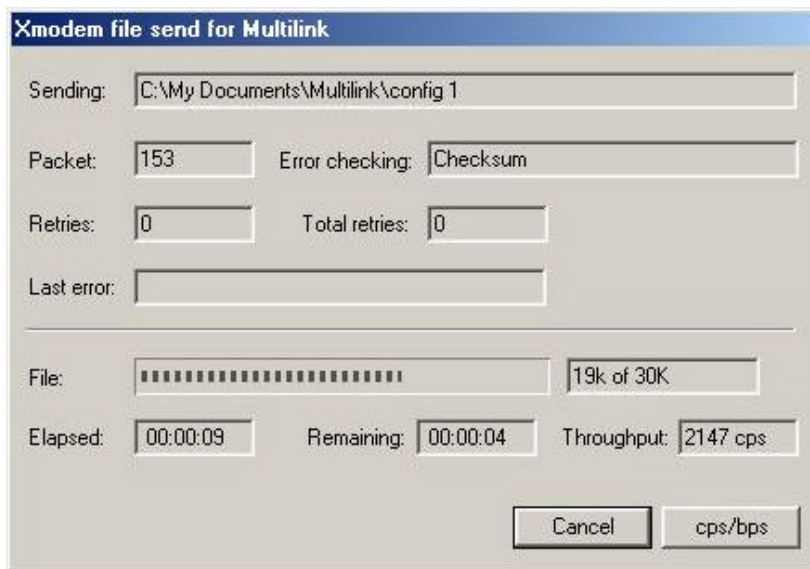
Once the transfer has completed the switch will have to be rebooted either by entering 'reboot' at the command line or by cycling power to the relay.

> ML2400# reboot
> Proceed on rebooting the switch? [Y or N] Y
> Rebooting now……

9) Once the switch has rebooted login and verify that the configuration was loaded correctly. This completes the upgrade process.

Upgrading Using the EnerVista Web Interface Software

Use the following steps to load the firmware to the Multilink using the EnerVista Web Interface Software.

1) Download the Multilink firmware from the GE Multilin web site to a convenient location on the hard drive.
2) Ensure that you have an ftp or tftp server installed and running on your computer. If you are using ftp, make sure you also have the ftp login name and password information ready.
3) Select the switch you want to upgrade. Make sure you have system administration rights and privileges available on that switch.
4) Open a SWM session with the switch by typing in the URL https://<IPaddress> of the switch.

Using FTP

It is always a good idea to save the configuration before an upgrade. So GE Multilin recommends a two-step update. First save the configuration to the ftp server. Then load the new image and restart the switch. To save the configuration using FTP, select the 'Config Upload' Transfer Type in the FTP window.
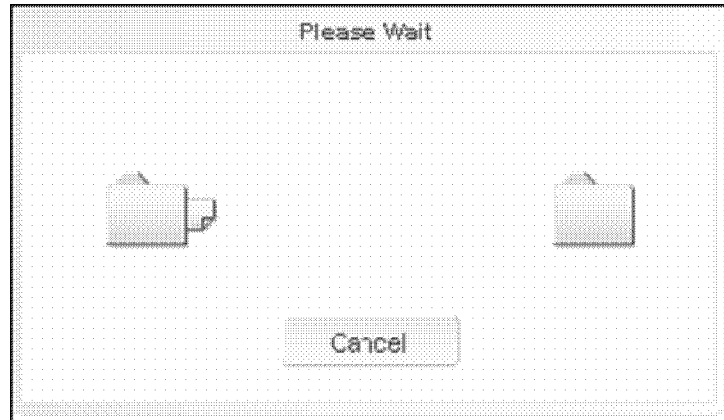
Load the new firmware file as shown below.
Please note that the FTP is located under Configuration -> File Mgmt -> FTP, if the current firmware is older than 1.7.3.
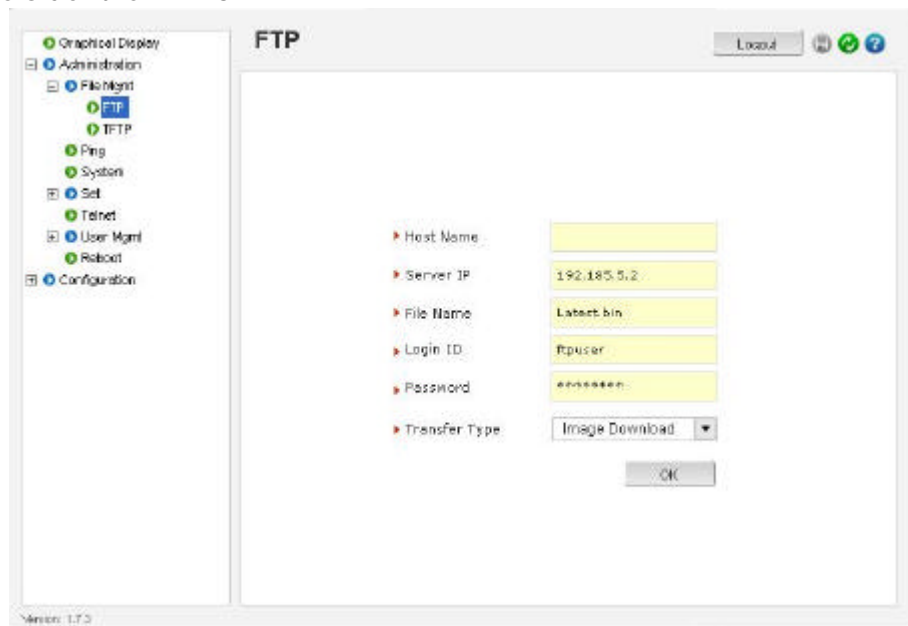
As the file is being loaded, you will see the file transfer in progress image show up

Once the transfer is completed, the switch needs to be restarted.

After the restart the new version of MultiLink firmware is ready for use.

Using TFTP

It is always a good idea to save the configuration before an upgrade. So GE Multilin recommends a two-step update. First save the configuration to the TFTP server. Then load the new image and restart the switch. The save configuration process is described in chapter 5.
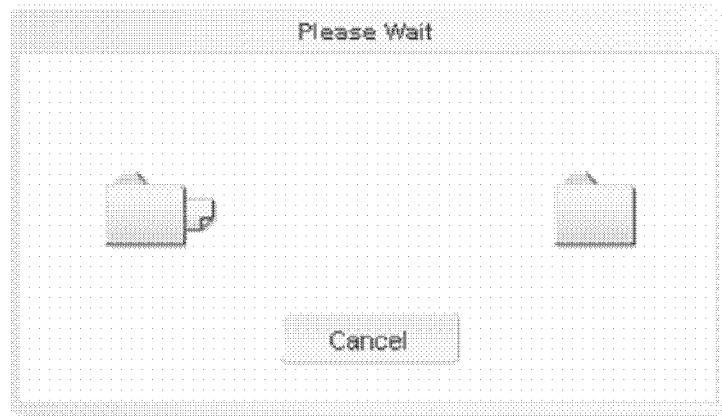
Follow the steps below to load the firmware.
Please note that the TFTP is located under Configuration -> File Mgmt -> TFTP, if the current firmware is older than 1.7.3.

As the file is being loaded, you will see the file transfer in progress image show up

Once the transfer is completed, the switch needs to be restarted.

After the restart the new version of Multilink firmware is ready for use.