

Cisco Directions On How to Enable TFTP

Setting Up a TFTP Server

The Cisco IP Manager software is designed to use the Trivial File Transfer Protocol (TFTP) to upload and download network element data. Before you can use this protocol, however, you must configure a machine to be a TFTP server. If possible, each machine on which you install NEMServer should act as its own TFTP server.

If you use a remote TFTP server, the /tftpboot directory must be mounted on the NEMServer host. Enabling the TFTP Daemon Log in as the superuser and edit the file /etc/inetd.conf. Locate the line that enables TFTP:

```
#tftp dgram udp wait root /usr/sbin/in.tftpd in.tftpd -s /tftpboot
```

Remove the comment character (#) from the beginning of the line. Save your changes and exit the text editor. The Cisco IP Manager TGServer requires the TFTP directory to be named /tftpboot. If you are not able to do this, you must set up a symbolic link to your TFTP directory. (The user who launches the servers must have write permission to this directory.) If for some reason your network requires you to use something like myTftp, you should create a symbolic link by entering the following on the command line:

```
ln -s /myTftp /tftpboot
```

To verify that your workstation is TFTP-enabled, enter the following on the UNIX command line:

```
ps -ef | grep -v grep | grep inetd
```

The output displays the process identification number for the inetd configuration:

```
root 106 1 0 Sep 21 ? 0:00 /usr/sbin/inetd -s
```

The first column shows the user ID of the user who owns the process (inetd is owned by root). The process ID is the number in the second column. In the example, the process ID is 106. Issue a kill command with a -1 (the number one) or -HUP argument to force the inetd process to read the newly edited inetd.conf file:

```
kill -1 106
```

Verify that TFTP is enabled by entering the following:

```
netstat -a | grep tftp
```

Your machine is enabled as a TFTP server if you see the following:

```
*.tftp Idle
```

If there is no output from the netstat command, TFTP is not enabled. Check the /etc/inetd.conf file for errors and repeat the previous instructions. For more information about TFTP or the kill command, see the UNIX man pages for tftp, tftpd, and kill.

Creating the TFTP Home Directory

While logged in as the superuser, create the /tftpboot directory if it does not already exist, by entering the following on the command line:

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```
mkdir /tftpboot
```

Modify the permissions for this directory to give all users read, write, and execute permissions, by entering the following command:

```
chmod 777 /tftpboot
```

If you intend to specify a subdirectory of /tftpboot for your Cisco IP Manager TFTP communications from within the GUI (Domain Properties dialog), you should create that at this time, as well, and set its permissions to the same value.