

# **1.** Configure a TFTP server application and use it to recover a Digi device by reflashing the firmware.

Objective: Install and Configure a TFTP server to allow the recovery of a Digi device currently in the POST menu or after a failed firmware update . This procedure is valid for all the PortServer family devices.

- 1.1 Software Requirements
  - Digi Device Discovery
  - PuTTy or any Terminal application
  - 3Com 3CDaemon or any other TFTP server application
  - Firmware image for the Digi device
- 1.2 Hardware Requirements
  - Any Digi device such as Portserver Family, Digi Connect Family.
  - Computer or Laptop with a serial port.
  - Serial Cable (Crossover, DB-9 to DB-9 or DB-9 to RJ-45 in the case of a PortServer)
  - In some case, tool to connect 2 jumper pins (Digi Connect Wan devices)

#### 2. Scenario

In our example, we will recover a Digi PortServer TS using the 3CDaemon TFTP server and the latest firmware image downloaded from the Digi support web site.

#### 3. Sample diagram.



## 4. Step by step instructions

## a. Configure and prepare the TFTP server

- a) Go to the Digi Support web site and download the latest firmware for your device, in this case, the PortServer TS4 which file name is : 82000747\_V1.bin (note the file name as it will be asked during the TFTP configuration of the device) Save the file to a directory on your computer : c:\tftp.
- b) Start your TFTP server application, in this case 3CDaemon, click on "Configure TFTP Server"
- c) In the TFTP Configuration tab, change the "Upload/Download Directory" to the one where the image file was saved : c:\tftp\ click OK.

3CDaemon Configuration							
General Configuration TFTP Configuration FTP Profiles Syslog Configuration							
Create directory names in incoming file requests?							
Allow overwrite of existing files?							
Upload/Download directory: C.\tftp\							
Per-packet timeout in seconds (2-15): 5							
Maximum retries (5-20):							
Interframe transmission gap: (0-1500)							
3CDaemon OK Cancel Apply							

d) The 3CDaemon window should now show the status "Listening for TFTP requests on IP address : xx.xx.xx, port 69" where xx.xx.xx is the local IP address of the computer.

3CDaemon	The second se								
Eile View Help									
TFTP Server	Start Time	Peer	Bytes	Status					
Configure TFTP Server	Jun 13, 2012 13:23:18	local	0	Listening for TFTP requests on IP address: 10.100.1.66, Port 69					
TFTP Server is started. Click here to stop it									
Logging to Tftpd.log. Click to stop.									
Not debugging. Click to start.									
Clear list.									
View Log/Debug files.									
FTP Server									
Syslog Server									
TFTP Client									
For Help, press F1	For Help, press F1 NUM								





## b. Setting the device in "Recovery mode" or in POST menu.

- a) Connect the serial cable to the computer and to the PortServer's serial port **1**. Also connect the PortServer to the network switch.
- b) Open PuTTy or any terminal application on your computer with the settings: **9600 8-N-1** and **NO** flow control.
- c) To have the unit boot to the POST menu, it is required to do the following :
  - 1. Locate the reset button on the unit and press it
    - 2. While holding the reset button, power on the PortServer
    - **3.** While still holding the reset button, press the letter V on the keyboard until the Diagnostic menu appears (POST), and release the reset button.

COM1 - PuTTY						
	A					
Diagnost	ic Tests					
t) ->TFTP related choices.	h) ->Hardware tests.					
m) Quick memory test (seconds).	M) Long memory test (minutes).					
V) Show VPD data.	R) Set mfg test result					
<ol> <li>Erase NVRAM from flash.</li> </ol>	<ol><li>Erase the BOOTPARM from flash.</li></ol>					
3) Erase the OS from flash.	4) Put TFTP'd OS file into flash.					
5) Reset Port 1 to 9600.	6) Run OS.					
1	=					
Enter choice (ESC to exit-Diagnostic Tests)[thmMVR123456] :						

- c. Configuring recovery settings and re-flashing the device.
- a) Press **"T**" for TFTP menu
- b) On the next screen, press 2 for "**TFTP settings**", the following information will be prompted :
  - a. Enter TFTP filename : 82000747\_V1.bin (file previously downloaded)
  - **b.** Enter IP address : **10.100.1.192** (this is the PortServer IP address to be used, which should be in the same IP range as the computer)
  - c. Enter network mask : 255.255.255.0
  - d. Enter network gateway : 10.100.1.1 (not needed if not available)
  - e. Enter network TFTP server : **10.100.1.66** (this is the computer IP address, the one showed in the 3CDaemon TFTP server window)
- c) The menu will go back to the previous TFTP choices :



COM1 - PUTTY					
Diagnosti	c Tests	*			
<ul> <li>t) -&gt;TFTP related choices.</li> <li>m) Quick memory test (seconds).</li> <li>V) Show VPD data.</li> <li>1) Erase NVRAM from flash.</li> <li>3) Erase the OS from flash.</li> <li>5) Reset Port 1 to 9600.</li> </ul>	<ul> <li>h) -&gt;Hardware tests.</li> <li>M) Long memory test (minutes).</li> <li>R) Set mfg test result</li> <li>2) Erase the BOOTPRAM from flash.</li> <li>4) Put TFTP'd OS file into flash.</li> <li>6) Run OS.</li> </ul>				
Enter choice (ESC to exit-Diagnostic T	Pests)[thmMVR123456] :t				
TFTP Related Options 1) Show current TFTP settings. 2) Enter TFTP settings.					
Enter choice (ESC to exit-TFTP Related Options)[123] :2					
Enter TFTP filename []: 82000747_V1.bin					
Enter IP address [0.0.0.0]: 10.100.1.1					
Enter network mask [0.0.0.0]: 255.255.25.0					
Enter network gateway [0.0.0.0]: 10.100.1.1					
Enter network TFTP server [0.0.0.0]: 10.100.1.66					
Enter choice (ESC to exit-TFTP Related Options)[123] :					

d) Press 3 to proceed with download of the firmware image file to the device and reflashing, at this time, the TFTP server window will show a connection with the peer IP address (PortServer) and the status. The TFTP server window will show "**Done**" if the file transfert completed successfully and the Diagnostic menu will report success :

300 3CDaemon	The section									
Eile Yiew Help										
TFTP Server	Start Time	Peer	Bytes	Status						
	Jun 13, 2012 14:03:07	10.100.1.198	1403648	Send of 82000747_V1.bin done. 1403648 bytes in 4 secs.(342 KB/sec)						
Configure TETP Server	Jun 13, 2012 13:23:18	local	0	Listening for TFTP requests on IP address: 10.100.1.66, Port 69						
<b>STOP</b>										
TFTP Server is started.										
Click here to stop it.										
Logging to Tftpd.log.										
Click to stop.										
X										
Not debugging.										
Click to start.										
Clear list.										
<b>6</b> 8										
View Loa/Debua files.										
FTP Server	-									
Syslog Server	-									
For Heip, press F1					NUM					





- e) Press the "Escape" key to leave the TFTP menu
- f) Press "6" to Run the OS. The device will reboot and start the newly flashed image.
- g) Start Digi Device Discovery to discover the unit and access the web interface for configuration.