HEWLETT PACKARD

Expanding Possibilities

application note

Using HP TopTools Remote Control to Remotely Configure an HP NetServer

September 1999

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Configuring an HP NetServer Remotely

Overview

Typically, when you install an HP NetServer, HP recommends that you install a Utility Partition that contains all relevant utilities for the server you are installing. This Utility Partition is a DOS partition that takes up 32 MB of disk space. If you opt not to install the Utility Partition, you may still be able to access utilities for your server.

To remotely run HP NetServer utilities located on the HP NetServer Navigator CD, you need a target HP NetServer on which you will be using the utilities, a readily available Windows NT server to be used as a TFTP (Trivial File Transfer Protocol) server, and a Windows client PC to be used to remotely access the HP TopTools Remote Control card in the target HP NetServer. See Figure 1 below.
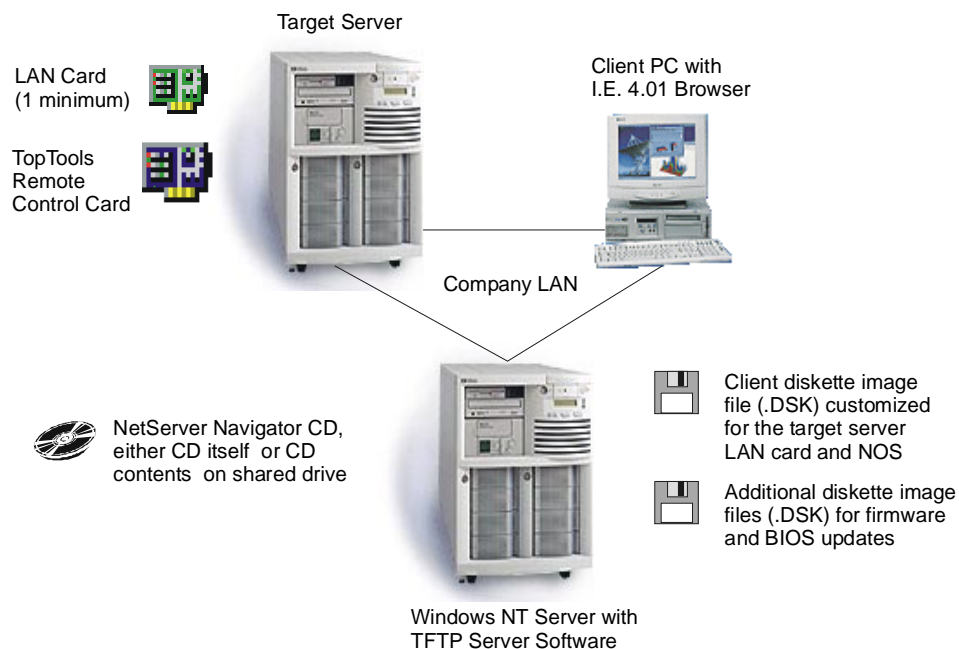
Target Server

LAN Card
(1 minimum)

TopTools
Remote
Control Card

Client PC with
I.E. 4.01 Browser

Company LAN

NetServer Navigator CD,
either CD itself or CD
contents on shared drive

Client diskette image
file (.DSK) customized
for the target server
LAN card and NOS

Additional diskette image
files (.DSK) for firmware
and BIOS updates

Windows NT Server with
TFTP Server Software

Figure 1. Components for Running Utilities Remotely

Requirements

You will need the following in order to remotely access HP NetServer utilities:

For the Target Server:

- An HP NetServer

- You should have at least one LAN card with a network connection. If you have more than one LAN card the completion time can be reduced by up to half.

- You should have one **HP TopTools Remote Control card** with a network connection. This card should be configured with an IP address, you may do this ahead of time and simply install the card each new server to be remotely configured. See the TopTools Remote Control User Guide for details on initial card setup.

For the Navigator CD Files:

- For the HP NetServer Navigator CD (must support your target server), you need a shared drive on the network that will contain either the CD or the CD's files. On your Windows NT TFTP server, create a share in the "Everyone" group with Read access. Example share: *servername**sharename* (where *servername* is the name of the server and *sharename* is the name of the CD-ROM drive that contains the HP NetServer Navigator CD).

For the Windows NT TFTP Server:

- The TFTP server software should be installed on a readily available Windows NT server (3.51 and above) in its own directory (steps to do this are included in this document)

- A NOS client diskette image file (.DSK), customized for the target server, saved to the TFTP server directory (steps to do this are included in this document)

- One LAN card with a network connection. If both the TFTP server and the target server each have two LAN cards the completion time can be reduced by over half.

For the Client PC:

- A Windows NT or 95 client PC with Internet Explorer version 4.01 (with SP1) or above

NOTE	The Client PC could also be used as your TFTP server, but these systems are typically setup with DHCP which can vary the IP address. For the remote access to work consistently, you need to know the correct IP address of the TFTP server--you wouldn't want one that could change.

Configuring a Server Remotely

Do the following steps to remotely configure and run HP utilities the target HP NetServer. Once the client diskette images are created (specific to the NOS and LAN card on the target server) you can easily apply this technique to other HP NetServer systems.

Install the TFTP Software on a Windows NT Server

This software may be found on the HP NetServer Navigator CD.

1. Create a directory on the Windows NT Server.

2. Copy the TFTPSERV.EXE file found under the TTRC/US directory of the NetServer Navigator CD to this directory. Do not run this executable until instructed to do so later in this document.

Create the Target System LAN Card Driver Diskette

1. At a Windows NT system, insert the HP NetServer Navigator CD.

2. After a few seconds the CD will autorun and display the NetServer Diskette Library.

3. Place a blank floppy diskette in drive A and create a diskette for the LAN card in the target server. For example, if the target server had a D5013A LAN card installed, we would select the "HP D5013A/J317A PCI LAN Adapter Support Disk" to be created.

Create System Firmware and BIOS Update Diskettes

If you wish to do remote firmware and BIOS updates of your HP NetServer system, create the necessary diskettes.

1. At a Windows NT system, insert the HP NetServer Navigator CD.

2. After a few seconds the CD will autorun and display the NetServer Diskette Library.

3. Use blank floppy diskettes in drive A to create a diskettes for each update utility desired. For example, if your target server is an HP NetServer LH 3 and you want to update its BIOS, you would select the "BIOS Update Diskette - LH 3" to be created.

NOTE	Although most of the update utilities you require for your system are available on the HP NetServer Navigator remote utility access menu, you may need to access only one. In which case, a single diskette image on the TFTP Server would save you time. **However, when updating a system using this method, no warnings or version comparisons are made.**

Create the NOS Client Diskette

If you've already created this diskette as described in the "Installing a NOS on a Server Remotely" section, you can skip this section.

1. Go to a **Windows NT Server** system and create the NOS Client diskette. In this example, we will create a NOS Client Diskette for a target server that has an HP D5013A LAN card installed.

2. Go to **Start | Programs** and under **Administrative Tools** select **Network Client Administrator**.

3. Select Make Network Installation Startup Disk.

4. Select **Use Existing Shared Directory** and specify the Server name and share name to where the manufacturer's NOS installation files are located. In Figure 2 below, the server name's IP address is given (could be DNS name) and share name (where the NOS files are located) is "Clients".
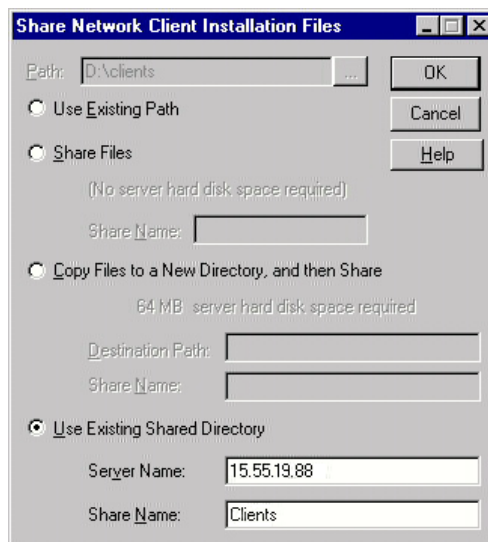
Figure 2. Identifying a Share for NOS Installation Files

5. After identifying the share, click **OK**.

6. Next select the target workstation configuration (see Figure 3 below). For Network Client, select **Network Client v3.0 for MS-DOS and Windows**. Then select the Network Adapter Card being used in the remote server (on which you will be installing the NOS).

NOTE   If your Network Adapter Card is not listed, you will need to customize a special NT file to add it. Instructions for doing so are listed in the Client.doc file found under the SUPPORT directory on the Windows NT Server CD.
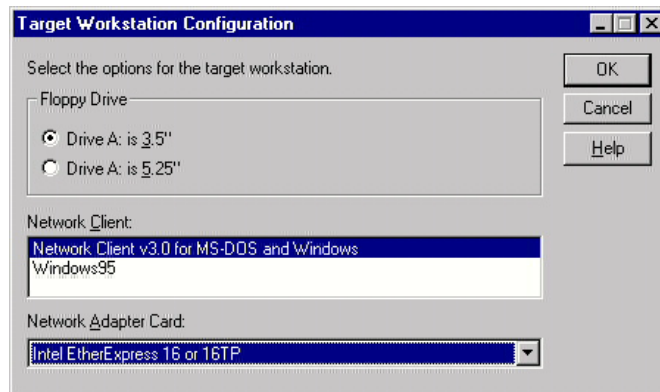
Figure 3. Identifying a Network Adapter to be used by the Client Disk

7. Click **OK** to display the Network Startup Disk Configuration screen and do one of the following:

    ◊ **If you are installing Windows NT**, type in the computer name of the server where the NOS files are located. Then enter an existing user name and domain (the defaults may be used for these fields). Select **TCP/IP Protocol**. You may then select either DHCP or, if the server is on a different subnet, enter the IP address, subnet mask, and gateway of the server. See Figure 4.

    ◊ **If you are installing NetWare**, select **NWLink IPX Compatible Protocol**. Then enter an existing user name and domain (the defaults may be used for these fields). See Figure 5.
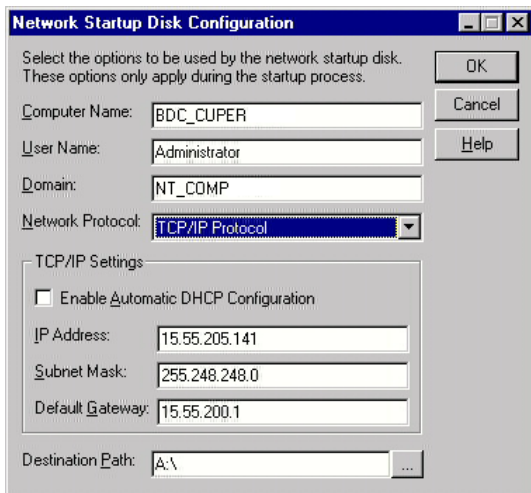

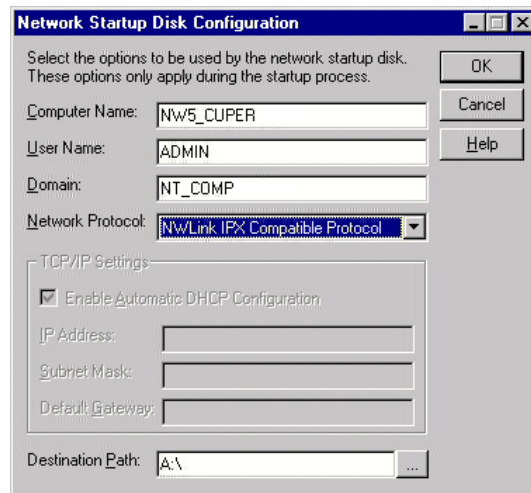**Figure 4. NT Startup Disk Configuration**   **Figure 5. NetWare Startup Disk Configuration**

8. Once the NOS Client diskette has been created, edit the CONFIG.SYS file on it to REM out the HIMEM.SYS line.

Copy Disk Images to the TFTP Server Using COPYDISK.EXE

Using the COPYDISK.EXE utility (located on the HP NetServer Navigator CD under the TTRC\US directory), create a diskette image of your NOS Client Diskette and any update diskettes you've created. Then copy them to the directory on the TFTP server that contains the TFTPSERV.EXE program. If the drive containing the TFTP software is shared, you may do this from your remote client PC. The syntax is:

```
copydisk sourcedrive destinationpath
```

where *sourcedrive* is a floppy drive on your PC where the diskette you want to make the image of has been inserted (example, drive A), *destinationpath* is the destination drive (shared on the TFTP server), directory (where the TFTPSERV.EXE file is located) and filename (your proposed destination filename with .DSK extension, example, x:\tftp\msclient.dsk).

Remotely Update the Target Server from Disk Images

If you are updating the target server using disk image files (.DSK), follow the instructions below. If you want to access all of the available utilities from the HP NetServer Navigator CD, proceed to the section "Remotely Access Utilities from the Navigator CD" further on in this document.

1. Run the TFTPSERV.EXE program on the TFTP server. If the drive on the Windows NT server that contains the TFTP software is shared, you could do this from your client PC.

2. From your client PC, launch Microsoft Internet Explorer (version 4.01 or greater) and connect to the TopTools Remote Control card on the target server (enter the card's IP address as the URL).

3. Click the **Remote Control** tab.

4. Select the **Power Cycle** option. (The **Reset** option may also be used to skip the system memory check.)

5. Check the **Remote Boot** option under "Server Control".

6. Enter the TFTP server's IP address and update diskette image file name that you copied to the TFTP server directory. See example in Figure 6.
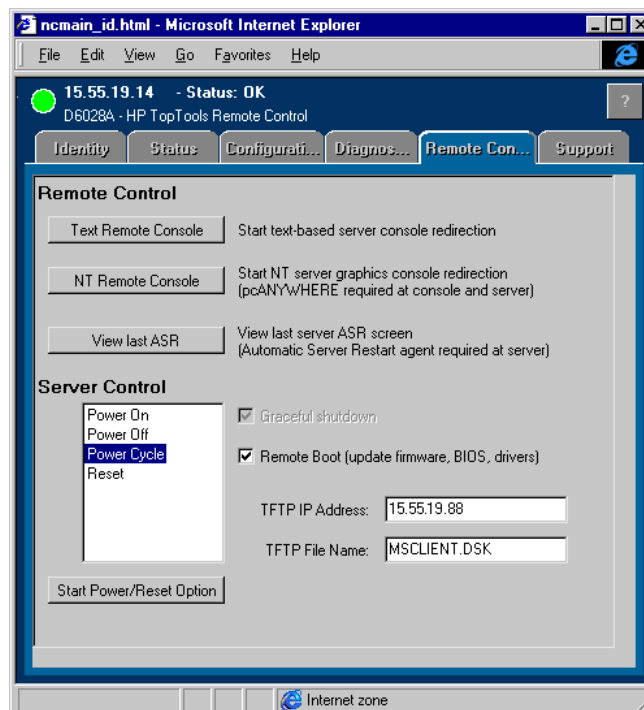

Figure 6. Rebooting the Server to from a Disk Image File

7. Click the **Start Power/Reset Option** button.

8. The server will then reboot using the NOS Client Diskette image file using the image. Click **Text Remote Console**.

9. At the **Text Remote Console** window, you can watch as the target server boots, accesses the update disk image file from the TFTP server and proceeds with the update.

10. When the update is complete the server will reboot. At this point you could enter the name of another update disk image file.

11. **IMPORTANT:** When done updating, be sure to uncheck the **Remote Boot** option under "Server Control" or you target server will continue to boot off of the image on the TFTP server.

Remotely Access Utilities from the Navigator CD

1. Run the TFTPSERV.EXE program on the TFTP server. If the drive on the Windows NT server that contains the TFTP software is shared, you could do this from your client PC.

2. From your client PC, launch Microsoft Internet Explorer (version 4.01 or greater) and connect to the TopTools Remote Control card on the target server (enter the card's IP address as the URL).

3. Click the **Remote Control** tab.

4. Select the **Power Cycle** option. (The **Reset** option may also be used to skip the system memory check.)

5. Check the **Remote Boot** option under "Server Control".

6. Enter the TFTP server's IP address and NOS Client diskette image file name that you copied to the TFTP server directory. See example in Figure 7.
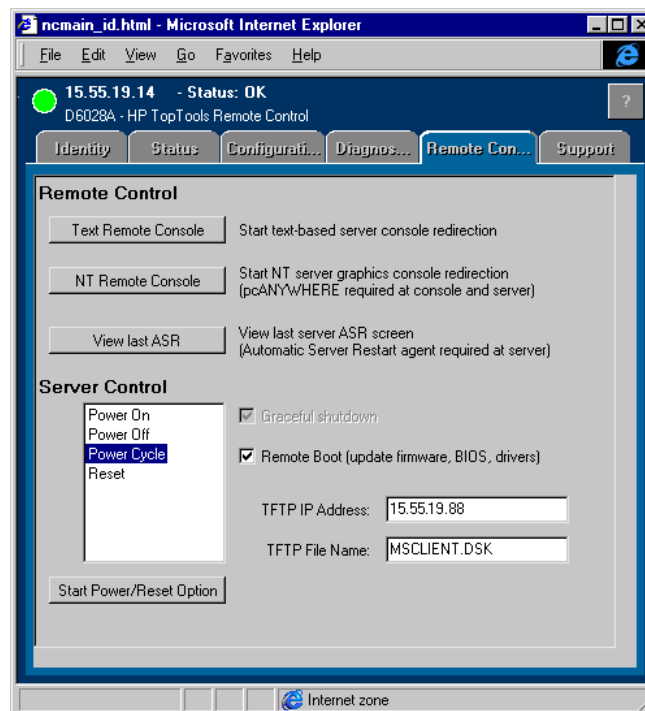

Figure 7. Rebooting the Server to from a NOS Client Disk Image File

7. Click the **Start Power/Reset Option** button.

8. The server will then reboot using the NOS Client Diskette image file using the image. Click **Text Remote Console**.

9. At the **Text Remote Console** window, as the target server boots. If you needed to go into the target server's BIOS setup program, you would press [F2] when prompted.

11. After the server reboots, to will boot off the NOS Client diskette image on the TFTP server.

6

12. Still at the **Text Remote Console** window, when the client software loads, login as **guest** and simply press **Enter** at the password prompt (there is no password).

13. Connect to the shared drive on your Windows NT TFTP server that contains the HP NetServer Navigator CD, enter:

    net use f:*servername**sharename*

    where *servername* is the name of the server and *sharename* is the name of the CD-ROM drive with the Navigator CD.

14. Switch to the **f:** drive.

15. At f: prompt in the **Text Remote Console** window, enter:

    ***system*\usmgr -L US**

    where *system* refers to the directory name of the target system (example, LH3).

16. The Utility Partition launches. You will be prompted to answer if you are running the Utility Partition remotely. Answer **Yes**.

17. The Utility Partition will then display in your **Text Remote Console** window. Typical utilities for HP NetServer systems that you may run remotely include:

    ◊ DiagTools. For testing and diagnosing hardware problems with the server.

    ◊ Configure Remote Management. For configuring your server's Integrated Remote Assistant.

    ◊ NetRAID Configuration. For configuring your disk array.

    ◊ BIOS update. To flash the server's BIOS to a newer version.

    ◊ System date, time, and keyboard language.

NOTE	Some utilities will cause a server to reboot upon exit, when this happens be sure to click the **Power Cycle** or **Reset** option of HP TopTools Remote Control or the server will not boot off of the NOS Client disk image.

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18. After selecting and running the utilities you need, exit the Utility Partition.

19. **IMPORTANT:** When done using the Utility Partition, be sure to uncheck the **Remote Boot** option under "Server Control" or you target server will continue to boot off of the image on the TFTP server.

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