

HP NetServer E 60 Remote Administrator Guide

Server Management Solution



March 1999

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1 What Is Remote Administration?

The HP NetServer E 60 systems incorporate remote access capabilities. Using pcANYWHERE32 (included on the *HP NetServer Navigator CD-ROM*) or terminal emulation software of your own choosing, you can access your NetServer from a remote site. Remote access is particularly useful for network administrators, VARs, support technicians, and other support experts who can evaluate, maintain and, if necessary, reconfigure a NetServer remotely.

The HP NetServer offers a range of remote control capabilities. With a modem connection at one of the NetServer's serial ports, personnel at a distant workstation or terminal can control server functions (including the boot process), run diagnostic utilities, and perform NOS-level configuration procedures.

The HP NetServer includes three distinct methods you can use to control an HP NetServer remotely. These are:

- HP's Console Redirection
- Graphics Console Redirection (Windows NT)
- RCONSOLE (Novell NetWare)

HP Remote Console

HP Remote Console is built into the NetServer BIOS and is NOS independent. Use HP's BIOS level remote access to diagnose and remedy problems associated with a NetServer's hardware operations or configuration. The following illustration shows how HP's Remote Console works.

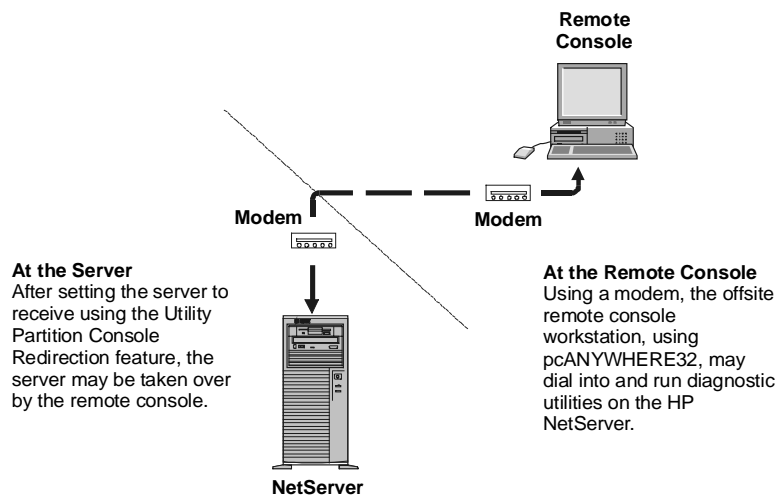


Figure 1-1. HP Remote Console Setup

Using Remote Console, you can remotely access a customer's NetServer Utility Partition to:

- Update the system BIOS. This feature is particularly useful since it allows you to update a NetServer's BIOS remotely.
- Run the HP LAN configuration utility to configure and test the embedded 10/100Base-T adapter.
- Run the SCSI Configuration Utility. This utility allows you to configure the server's SCSI host adapter settings, format a disk, or verify disk media.

- Run NetServer Diagnostics. This utility provides you with ways to test a NetServer's hardware components, including main circuit board function.
- Remotely boot the server and view startup messages.
- Set or reset system date, time, and keyboard language.

Graphics Console Redirection (Windows NT)

You can use pcANYWHERE32's capabilities (when installed at both NetServer and remote console) to gain virtually full graphic control over an HP NetServer from a remote location.

Using this feature, the console display exactly mimics the display at the NetServer. In this way, you can take full control of your HP NetServer from the remote console. pcANYWHERE32 graphics console redirection requires your HP NetServer to be running Windows NT.

The following figure shows how the Graphic Console Redirection is setup.

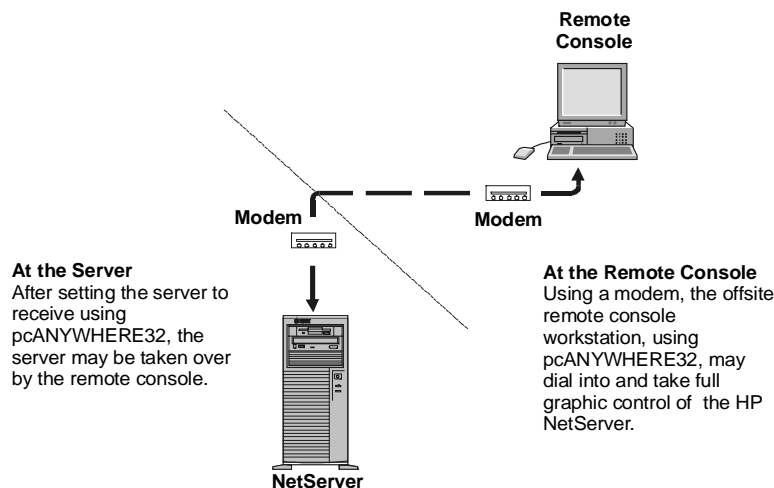


Figure 1-2. A Typical Installation of Graphics Console Redirection

pcANYWHERE32 allows you to redirect what's graphically displayed on an HP NetServer running Windows NT 3.51 or 4.0 to a remote Windows NT 3.51, 4.0 or Windows 95 PC console. Features include the ability to:

- Launch the NetServer's registry editor.
- Run NOS-level diagnostics on the NetServer.
- Access the NetServer's control panel to review and modify a connected NetServer's NOS level configuration settings, including network settings, administrative tools, and driver installation.

RCONSOLE (NetWare)

You can use Novell NetWare's RCONSOLE program to take control of a customer's HP NetServer running Novell NetWare/intraNetWare. RCONSOLE works at the NOS-level to provide full character-based remote access to a NetServer running Novell NetWare/intraNetWare. Features include the ability to:

- Load and unload modules (NLMs)
- Run NOS-level diagnostics on the NetServer

- Monitor and evaluate NetServer performance
- Perform NOS-level configuration including modification of network settings

Recommended Modems

An updated list of recommended modems may be found on the HP NetServer Tested Products List. To review the Tested Products List, go to either:

- **HP NetServer Navigator CD-ROM:** To access the modem list from the *HP NetServer Navigator CD-ROM*:
 1. Insert the *HP NetServer Navigator CD-ROM* into a client with a CD-ROM drive.
 2. Run Windows Explorer and double-click on the TPL.HLP file located in the TPL directory.
- **HP web site:** For the most up-to-date modem list, go to HP's web site. Open your browser and enter the following URL:

`http://www.hp.com/netserver/servsup/compatibility`

Refer to the "HP NetServer Tested Products Lists."

NOTE	HP recommends matching the modem manufacturer/model at the HP NetServer and console for optimum communications.
-------------	---

Documentation

The HP NetServer includes the following documentation:

- This guide, which describes how to install and use the Remote Console feature to manage your HP NetServer.
- pcANYWHERE online documentation. The complete pcANYWHERE User Guide is in Adobe Acrobat PDF format on the *HP NetServer Navigator CD-ROM* in the \UTIL\PCA32\language subdirectory (where language represents a two letter abbreviation for your local language).

Where to Go Next

To set up HP Remote Console, proceed to Chapter 2. To set up Graphic Console Redirection, proceed to Chapter 3. To set up NetWare RCONSOLE, proceed to Chapter 4.

2 Installing HP Remote Console

The HP NetServer's built-in Remote Console Redirection feature can be used to provide troubleshooting and diagnostic services. Remote Console Redirection allows you (or a VAR or system administrator) to manage, monitor and configure a server without traveling to the NetServer site. Using Remote Console Redirection, you can access and initiate all the configuration and diagnostic features incorporated into the HP NetServer Utility Partition. The following illustration shows how HP Remote Console Redirection works.

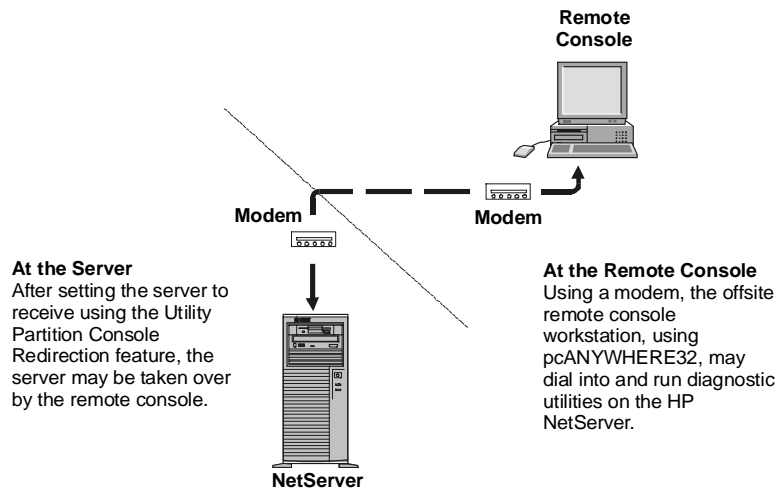


Figure 2-1. HP Remote Console Setup

You (or your customer) may need assistance setting up a NetServer for HP Console, particularly if you are unfamiliar with DOS prompt computing. In such cases, HP recommends that you first establish phone contact with an assistant and walk them through the setup defined in "Setup at the HP NetServer" of the installation steps that follow.

Minimum Server Requirements

In order to use HP Remote Console, your server needs:

- An installed HP Utility Partition.
- An external modem or direct connection via one of the HP NetServer's two serial ports.
- An *HP NetServer Navigator CD-ROM* Version E.10.00 or later. (To find the version number, look on the CD-ROM, opposite the HP logo.) The *HP NetServer Navigator CD-ROM* includes the Utility Partition setup and associated files, as well as pcANYWHERE32 communications software.

NOTE HP recommends that the customer (end user) retain possession of the *HP NetServer Navigator CD-ROM*. In case of emergency, the server can be rebooted directly via the Navigator CD-ROM. Furthermore, remote administration software components are then available to the end user as needed.

Minimum Console Requirements

For the remote console, you can use any ANSI X3.64 compatible terminal or terminal emulator with a modem or RS-232 connection. For best results, use an ANSI color terminal that supports 25-line mode and IBM PC character set. In addition, you will need:

- A 386-based (or faster) computer with 12 MB of available disk space
- A communications link to the server, either through a modem or a direct serial connection
- Communications software. You can make master diskettes of the pcANYWHERE32 software from the *HP NetServer Navigator CD-ROM* that comes with the HP NetServer system.
- Microsoft Windows 95, or Windows NT Workstation 3.51 or 4.0

Installation of HP Remote Console

Installing HP Remote Console is a two-part process including setup at the NetServer and at the workstation designated as the remote console.

You first set up and configure Remote Console at the NetServer. Steps include assigning a serial (COM) port and password, and then initializing the modem.

Once the modem at the NetServer has been initialized, you can use pcANYWHERE32 (with either Windows NT or Win 95), or any standard communications program running on a console workstation to establish a simple, character-based terminal connection.

Setup at the HP NetServer

At the NetServer, the installation of HP Remote Console includes three steps:

1. BIOS-Level Setup
(Enables console redirection at the BIOS level.)
2. Modem Installation
(Refers to physical installation of the external modem hardware.)
3. Modem Initialization
(Modem setup for communication with the remote console. Note that in order to do this step, a Utility Partition must have already been installed on the HP NetServer using the Configuration Assistant utility found on the *HP NetServer Navigator CD-ROM*.)

BIOS Level Setup

HP Remote Console is built into the NetServer system BIOS and is enabled through a series of steps in the BIOS setup program.

NOTE The HP NetServer must be rebooted as part of the installation for Remote Console Redirection at the server.

The HP NetServer is equipped with two built-in serial ports located on the back of the unit. They are designated Serial A (COM 1) and Serial B (COM 2).

To enable and configure Remote Console at the server:

1. Power on (or reboot) the HP NetServer and, when prompted during boot-up, press [F2] to run the Setup program.
2. On the BIOS Setup Main Menu, using the arrow keys, cursor to the Configuration pull-down menu. Select "Integrated I/O Ports," and press Enter.
3. The server displays a list of Integrated I/O Ports. Select "Serial Ports" and press Enter.

- Cursor to "Console Redirection" and select a serial port for console redirection. Use the cursor keys to toggle through the options. The table below shows serial port defaults.

Table 2-1. HP NetServer E Series Default Serial Port Interrupts

Label	Port	Interrupt
Serial A	COM 1	3F8h IRQ 4
Serial B	COM 2	2F8h IRQ 3

NOTE Your serial port IRQ and I/O address settings must match the entry in the Console Redirect Port field. If you are unable to match these settings, consult your system administrator or HP technical representative.

- Next, configure the Console Redirection port for serial speed (baud rate), console type (terminal emulation), flow control, and connection type (modem or direct). See Table 2-2 for recommendations.

Table 2-2. Communications Parameters

Parameter	Recommended	Alternate
Baud Rate	19.2K or 38.4K	115.2K, 9600, 4800, 2400, 1200, 600
Console Type	PC ANSI	VT100
Flow Control	XON/XOFF	No flow control, CTS/RTS
Console connection	via modem	direct (requires null modem serial cable, not provided)

- When done, press [Esc] three times. This returns you to the Configuration menu.
- On the Configuration menu, move the cursor to Exit and select "Exit Saving Changes."

The HP NetServer reboots and incorporates the new information in the NetServer's BIOS.

CAUTION As long as the BIOS-level Console Redirection is enabled, your NetServer's security is easily breached. Therefore, HP advises that you disable console redirection as soon as you or the remote user are finished using HP Remote Console Redirection.

Modem Installation

To enable console redirection, you need to connect an external modem to the NetServer port you assigned for use with console redirection. The ports are designated on the back of the NetServer. Connect the modem to the port you have chosen for console redirection, either Serial A or Serial B.

Modem Initialization

At the HP NetServer, the third step required to enable a Remote Console is initializing the modem.

To initialize the modem and initiate a remote console session:

- Reboot the server and, when prompted, press [F12].

The server displays the Utility Partition Manager.

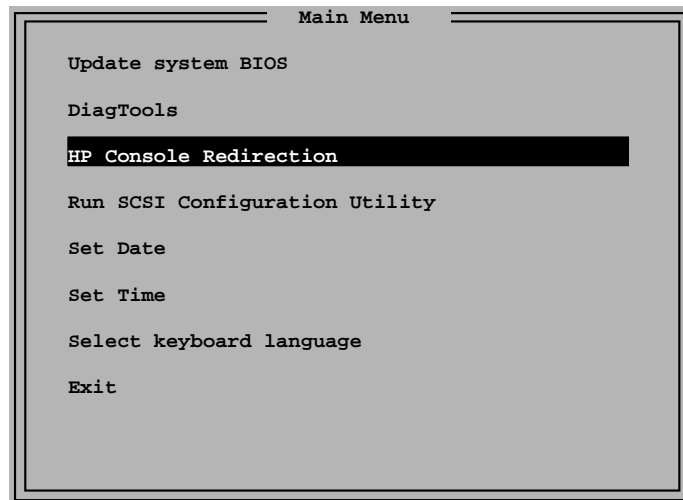


Figure 2-2. HP Utility Partition Main Menu

2. On the Utility Partition Main Menu, cursor to "HP Console Redirection."

The server displays the HP Console Redirection screen.

3. From the popup menu, select "Initialize the modem."

The program supplies a default initialization string (AT&F). This string includes a group of characters sent to the modem that configure it for routine operations. Use either the default string supplied by HP, or the initialization string supplied by the manufacturer of the modem you connected to the NetServer.

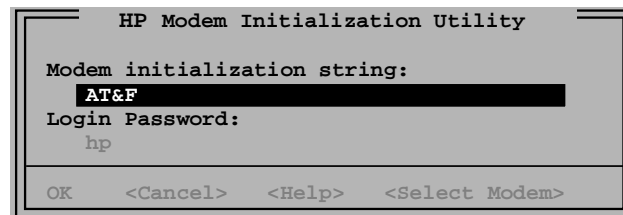


Figure 2-3. HP NetServer Modem Initialization Utility

NOTE You can modify the modem initialization string as required. This string may have been preset by the service personnel who call in to diagnose problems with the server remotely.

4. The HP Modem Initialization Utility also allows for a case-sensitive password.

You can enter any alphanumeric combination up to 20 characters in the space provided. The password you enter here will be required for remote access to the HP NetServer.

5. Tab to OK and press Enter.

The HP Modem Initialization Utility saves the modem initialization string and password, and informs you that initialization is about to occur.

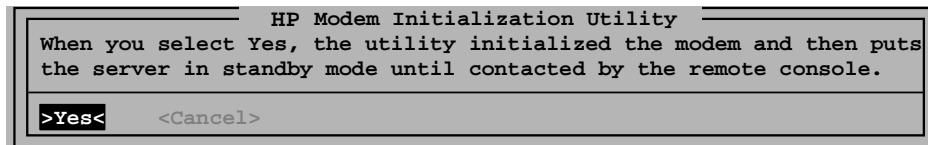


Figure 2-4. Initializing the Server's Modem

6. Select Yes to initialize the modem. (Cancel returns you to the HP Utility Partition's Main Menu.)

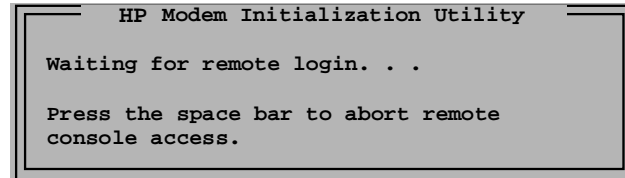


Figure 2-5. Waiting for a Remote Login

The HP NetServer awaits a call from the remote console and is functionally disabled until a connection is made.

Ending the Remote Console Session

To end a remote console session and return to normal HP NetServer operation, press the space bar at the "HP Modem Initialization Utility" screen displayed at the HP NetServer.

NOTE Once the NetServer's modem has been initialized, your HP NetServer awaits a call from the remote console and is *functionally disabled* until a connection is made, or until you disable the remote login by pressing the space bar at the server.

Setup at the Remote Console

You can use pcANYWHERE32 (shipped with each HP NetServer). Or, you may use any standard communications program to establish a simple, character-based terminal connection from a console workstation to the HP NetServer.

If you plan to manage your HP NetServer using either a direct terminal connection or via modem, and you have chosen *not* to use Symantec's pcANYWHERE32, make sure your terminal emulation software:

- Provides remote dial-in and communications features
- Is correctly configured for console redirection

Regardless of which communications software you use, the following parameters apply at the server's COM port:

Table 2-3. Communications Parameters

Parameter	Required
Baud Rate	19.2K or 38.4K
Data Bits	8
Stop Bits	1
Parity	None
Handshaking	XON/XOFF
Connect	Assert DCD
Disconnect	Drop DTR

The remote console's display should closely resemble the characteristics of the server's display if you use a PC-based, ANSI color terminal emulator that supports 25-line mode and the IBM PC character set. The following table provides the terminal settings to use when configuring your communications software for use with HP Remote Console.

Table 2-4. Terminal Emulation Settings

Setting	Recommended	Alternate
Emulation	ANSI Color	Monochrome ANSI/VT-100
Character Set	Extended PC/IBM PC	ANSI
Screen Dimensions	80 x 25	80 x 24
Line Wrap	OFF	
Local Echo	OFF	
Scroll	ON	
Carriage Return Translation	None	
Backspace Translation	None	
Cursor	Underline, blinking	

Installing and Configuring pcANYWHERE32 at the Remote Console

Although there are several connection options, typically you access the HP NetServer via a modem. Unless you have decided to use another communications package, you need to install the pcANYWHERE32 to enable character-based console redirection at a remote workstation. Note that pcANYWHERE32 console software is included with the HP NetServer.

To install pcANYWHERE32 at the remote console:

1. Insert the *HP NetServer Navigator CD-ROM* into your Windows NT or 95 console's CD-ROM drive and choose "Run" from the File menu in Program Manager, or the Start menu in Windows, and enter:

```
x:\util\pca32\language\disk1\setup.exe
```

where **x:** is the CD-ROM drive containing the *HP NetServer Navigator CD-ROM* and **language** is an abbreviation for your local language (US=English, FR=French, GE=German, IT=Italian, SP=Spanish, JP=Japanese).

2. After pcANYWHERE32 is installed, restart Windows NT or Windows 95.
3. Go to \UTIL\PCA32\US\HPEXTN directory on the *HP NetServer Navigator CD-ROM* and double click on the file "HPPCA.REG". This will create three new registry entries under the OnlineService Key under pcANYWHERE\CurrentVersion.
4. Copy the following files from the pcANYWHERE32 install directory in the *HP NetServer Navigator CD-ROM*:

```
\UTIL\PCA32\language\HPEXTN\hpbioscr.scr
```

```
\UTIL\PCA32\language\HPEXTN\e60client.osf
```

```
\UTIL\PCA32\language\HPEXTN\hpcrsupp.mk7
```

into the "data" subdirectory under the pcANYWHERE32 program directory on the hard drive. In the above, **language** is an abbreviation for your local language (US=English, FR=French, GE=German, IT=Italian, SP=Spanish, JP=Japanese).

5. Change the attribute of these files from read only to read and write.
6. To run pcANYWHERE32, double-click the pcANYWHERE32 program icon in the pcANYWHERE32 program group, or choose it from the Start menu.

- The first time you start pcANYWHERE32, the Smart Setup Wizard (shown below) helps you configure your system by prompting you for basic information such as the COM port (COM 1 or COM 2) and your modem specifications.

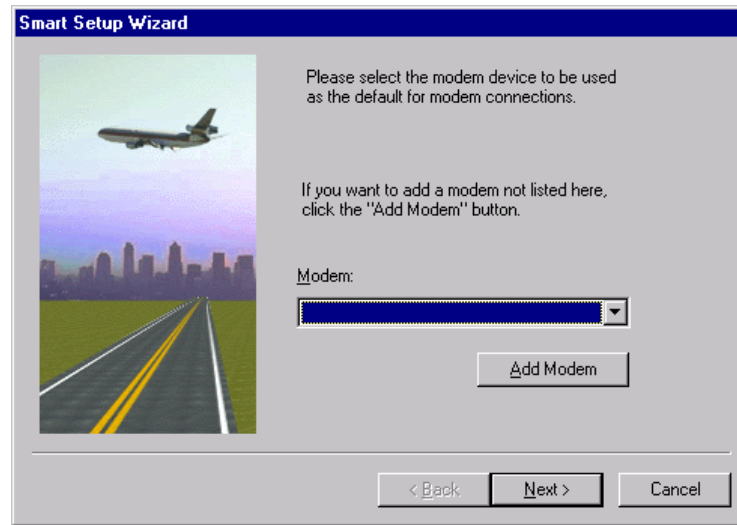


Figure 2-6. pcANYWHERE Setup, Modem Selection

- After setup with the Smart Wizard is complete, pcANYWHERE32 displays the main program window.

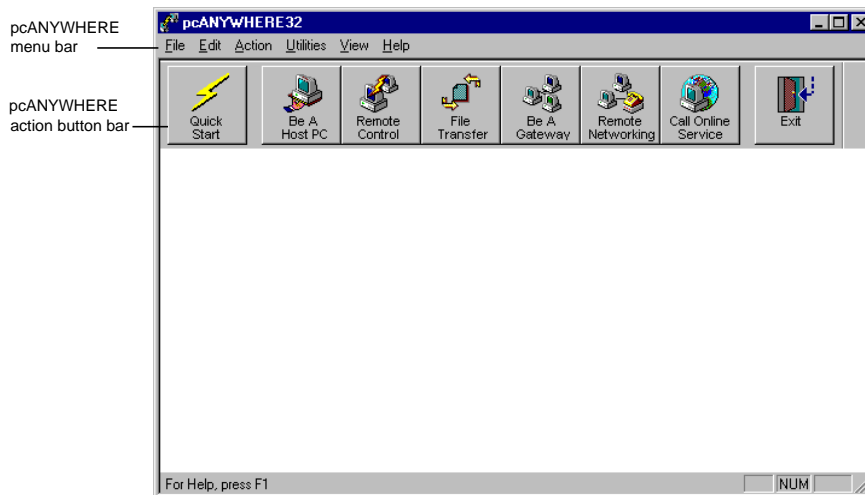


Figure 2-7. pcANYWHERE Main Screen

Once you have completed the initial pcANYWHERE32 installation, you will need to configure for your remote console modem model and phone number for your HP NetServer. After selecting a modem model (from the ones on the supported modem list), you need to identify the phone number of each server you want to remotely access.

To set the host phone number:

- At the main program window action bar, click Call Online Service.
You will see an Add Online Service item and a connection item labeled E60Clien created for you by the Smart Setup Wizard.
- Right-click E60Clien to display the item's drop-down menu and click Properties.

3. In the Properties window, click Details and verify that the correct COM port and modem type are set. Microsoft Windows 95 and NT 4.0 will present you with a pre-configured list of Unimodem entries for your selection. NT 3.51 will present you with COM port options.
4. Click the Settings tab and enter the server's phone number.
5. Click OK to return to the main program window.
6. If you wish to rename the connection item to something other than "E60Clien," right-click the connection item and then click Rename. Type in the new name.
7. You can copy and paste this icon multiple times to create an icon for each server you manage.

Using HP Remote Console

Originating a remote management session between an HP NetServer and a remote console involves initialization at the server (to put the server in standby mode) and an initiating call from the remote console. Because Symantec's pcANYWHERE32 communications software is included with your customer's HP NetServer, the following instructions assume use of this software product at the remote console.

At the HP NetServer

Have someone at the NetServer initialize the modem by booting into the Utility Partition and running the HP Console Redirection utility (see Modem Initialization above.) When you initiate the Modem Initialization Utility and select "Yes" to allow a remote login, server function is suspended until a remote user successfully logs on. The server remains in this standby state indefinitely until a connection is made, or until you disable the remote login by pressing the space bar at the server. Before returning the server to normal operation, refer to the caution below.

CAUTION	As long as the BIOS-level Console Redirection is enabled, your NetServer's security is easily breached. Therefore, HP advises that you disable console redirection as soon as you or the remote user are finished using HP Remote Console Redirection. This requires going back into the NetServer's BIOS setup program and setting the "COM Port Address" entry setting (described in the "BIOS Level Setup" section above) to "disabled."
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At the Remote Console

To initiate a remote management session using pcANYWHERE32:

1. Run pcANYWHERE32 from the pcANYWHERE32 program group in your Windows Program Manager.
2. Click the "Call Online Service" button.

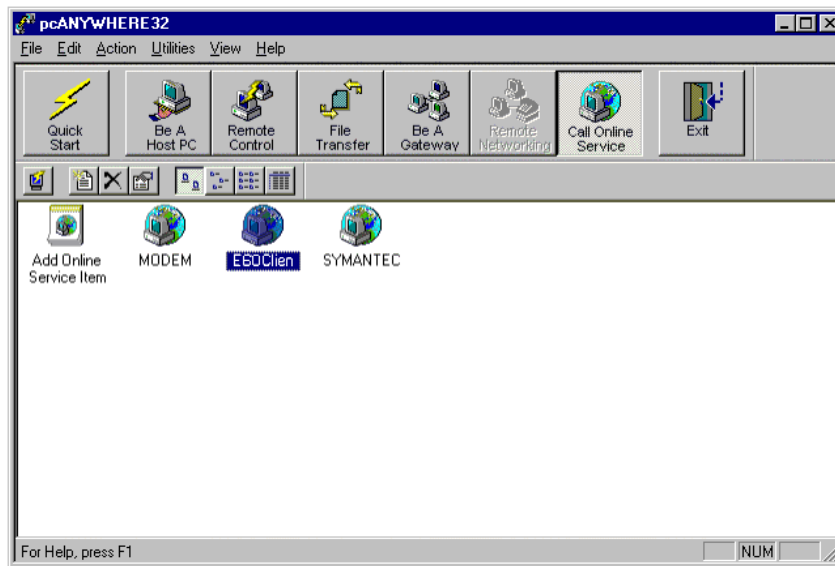


Figure 2-8. pcANYWHERE Call Online Service Screen

3. Right-click the "E60Clien" connection icon to display the item's drop-down menu and click "Properties...".
4. In the Properties window, click Details and verify that the correct COM port and modem type are set. Microsoft Windows 95 and NT 4.0 will present you with a pre-configured list of Unimodem entries for your selection. Windows NT 3.51 will present you with COM port options.
5. Click the Settings tab and confirm the server's phone number.
6. Click OK to return to the main program window.
7. Double-click the "E60Clien" connection icon. When prompted, enter the password you defined in the HP NetServer's modem initialization program.

After the NetServer accepts the password, you have access to both the BIOS setup routine and to the HP NetServer's Utility Partition. Refer to Appendix B "Terminal Emulation Keys" for information about remotely using keystrokes to execute BIOS specific commands at the server.

NOTE You can copy and paste the connection icon multiple times to create an icon for each HP NetServer E Series servers you want to manage. Be sure to modify the server name and phone number entry for server by right-clicking on the icon and going into "Properties...".

When a Remote Console Connection May Be Lost

During the execution of the following utilities you will loose the remote connection to the server. This means that you will need to reestablish the remote connection at both the remote console and the server as described above.

- Running Utility Partition utilities:
 - ◇ **Update system BIOS** (upon completion)
 - ◇ **DiagTools** (when running the "Quick Test" or "Continuous Test" options for either the "System Board" or "Run All" tests)
 - ◇ **Exit** (upon system reboot)
- Running the BIOS Setup utility (upon exiting the utility)

3 Installing Graphic Console Redirection (Windows NT)

If you want to access an HP NetServer running Windows NT 4.0 and your remote console is running either Windows NT or Windows 95, you can redirect all the information displayed on the HP NetServer to your remote console using pcANYWHERE32.

The following figure shows how the Graphic Console Redirection is set up.

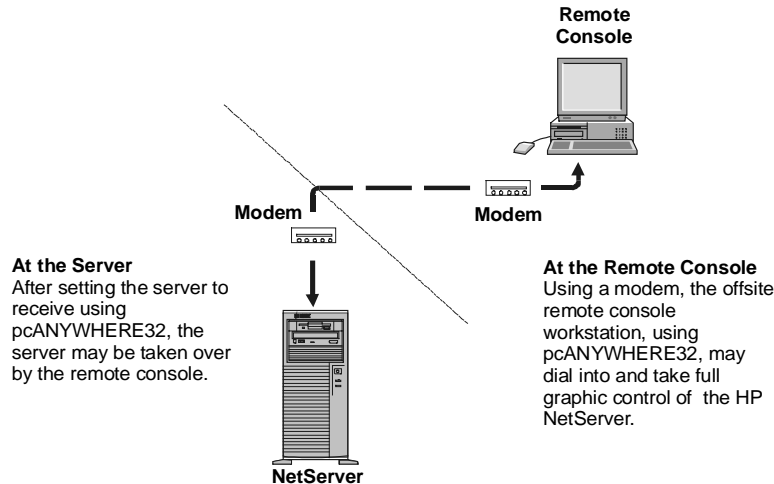


Figure 3-1. A Typical Installation of Graphics Console Redirection

A window on the console display exactly mimics the display at the NetServer. In this way, you can take full control of your HP NetServer from the remote console. However, to enable graphics redirection, pcANYWHERE32 software must be installed on both the NetServer and the remote console.

NOTE pcANYWHERE32 graphics console redirection requires your HP NetServer to be running Windows NT. In addition, pcANYWHERE32 operates only on consoles running either Windows 95 or Windows NT.

pcANYWHERE32 allows you to redirect what's graphically displayed on an HP NetServer running Windows NT 3.51 or 4.0 to a remote Windows NT 3.51, 4.0, or Windows 95 PC console.

Installation of pcANYWHERE32 is a two-part process. Separate setup steps are required for installation at the NetServer and at the workstation designated as the remote console.

Minimum Server Requirements

In order to use Graphic Console Redirection, your server needs:

- An external modem or direct connection via one of the HP NetServer's two serial ports
- pcANYWHERE32 communications software running on the HP NetServer with Windows NT Server 3.51, 4.0, or BackOffice Small Business Server 4.0.

Minimum Console Requirements

For the remote console, you can use any ANSI X3.64 compatible terminal or terminal emulator with a modem or RS-232 connection. For best results, use an ANSI color terminal that supports 25-line mode and IBM PC character set. In addition, you will need:

- A 486-based (or faster) computer with 12 MB of available disk space.
- A communications link to the server, either through a modem or a direct serial connection.
- pcANYWHERE32 console software. You can make master diskettes of pcANYWHERE32 software from the *HP NetServer Navigator CD-ROM* that comes with each HP NetServer system.
- Microsoft Windows 95, or Windows NT Workstation 3.51 or 4.0.

Installing pcANYWHERE32 on the Remote Console

See the instructions in the preceding chapter in the "Installing and Configuring pcANYWHERE32 at the Remote Console" section to do the initial modem setup of pcANYWHERE32 at the remote console. Then do the following to enable Graphic Console Redirection of your Windows NT NetServer.

1. Run pcANYWHERE32 from the pcANYWHERE32 program group in your Windows Program Manager.
2. Click the "Remote Control" button.

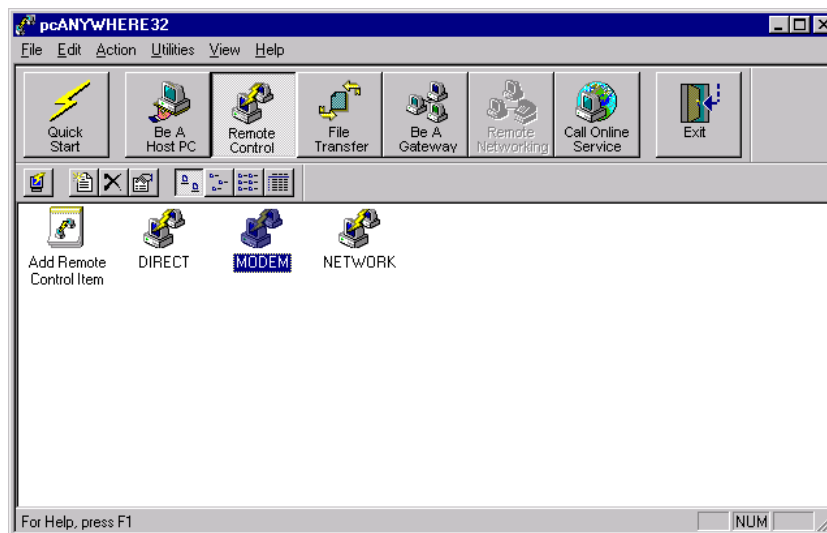


Figure 3-2. pcANYWHERE Remote Control Screen

3. Right-click the "Modem" connection item to display the drop-down menu.
4. Choose "Properties..." from the drop-down menu. Click Details and verify that the correct COM port and modem type are set for your remote console. Microsoft Windows 95 and NT 4.0 will present you with a pre-configured list of Unimodem entries for your selection. Windows NT 3.51 will present you with COM port options.
5. Click the Settings tab and confirm the server's phone number.
6. Click OK to return to the main program window. Your remote console is now configured to enable Graphic Console Redirection. Proceed to the next section to set up the server.

NOTE You can copy and paste the connection icon multiple times to create an icon for each HP NetServer you want to manage. Be sure to modify the server name and phone number entry for server by right-clicking on the icon and going into "Properties..."

Installing pcANYWHERE32 on the NetServer

If the HP NetServer you are setting up for remote access does not have pcANYWHERE32 Server software already installed, you (or your customer or client) must install pcANYWHERE32 at the NetServer. Otherwise, skip the following installation steps and proceed to the following section detailing the configuration of pcANYWHERE32 on the NetServer.

Follow these instructions to install pcANYWHERE32 host software on the NetServer:

1. Insert the *HP NetServer Navigator CD-ROM* into your Windows NT or Windows 95 console's CD-ROM drive and choose "Run" from the File menu in Program Manager, or the Start menu in Windows, and enter:

```
x:\util\pca32\language\disk1\setup.exe
```

where **x:** is the CD-ROM drive containing the *HP NetServer Navigator CD-ROM* and **language** is an abbreviation for your local language (US=English, FR=French, GE=German, IT=Italian, SP=Spanish, JP=Japanese).

Follow the instructions on the screen to install pcANYWHERE32.

2. Once pcANYWHERE32 is installed, restart the server and run pcANYWHERE32 by double-clicking the pcANYWHERE32 program icon in the pcANYWHERE32 program group.

Configuring pcANYWHERE32 on the NetServer

The first time you start pcANYWHERE32, the Smart Setup Wizard helps you configure your system and prompts you for basic information including COM port and modem type. Select the modem on the list that most closely matches the one you intend to use.

In Windows NT, to set up Serial A (COM 1) or Serial B (COM 2) as the serial port:

1. Click Ports in the Control Panel.
2. In the Ports dialog box, select COM 1 (or COM 2).
3. Click "Settings..." and then "Advanced...".
Configure using the following address and IRQ settings:

Table 3-1. HP NetServer Default Serial Port Interrupts

Label	Port	Interrupt
Serial A	COM 1	3F8h IRQ 4
Serial B	COM 2	2F8h IRQ 3

For best performance, check the FIFO Enabled box.

Be sure to select the same COM port you identified when you configured the NetServer during BIOS setup. Check by booting DOS and, when prompted during boot-up, press [F2] to run the Setup program.

NOTE You must reinitialize the modem to enable Remote Console Redirection.

On the BIOS Setup Main Menu, cursor to the Configuration menu and select "Integrated I/O Ports." Check the display of Integrated I/O Ports.

After you have finished running the Smart Setup Wizard, the pcANYWHERE32 main program window appears.

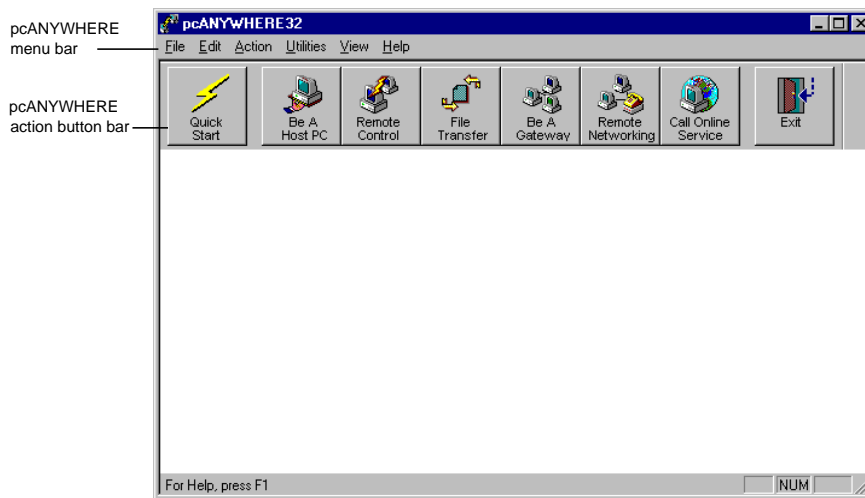


Figure 3-3. pcANYWHERE Main Screen

To finish configuration, at the main program window:

1. Click "Be A Host PC."
2. Select the Modem connection item (see the following figure).

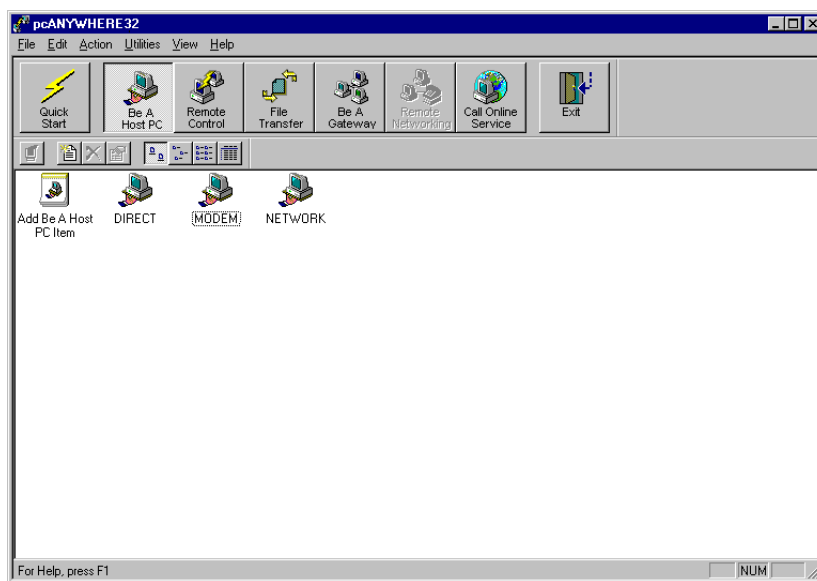


Figure 3-4. pcANYWHERE Be A Host PC Screen

3. Right-click the Modem connection item to display the drop-down menu.
4. Choose "Properties..." from the drop-down menu in the Connection Info section. After verifying that the COM port and modem type are set correctly, click OK to return to pcANYWHERE32's main program window.
5. Run the Modem connection item by double-clicking it. This initializes the modem and establishes the Modem connection item you just set up as the default.

NOTE

The settings you have just selected become pcANYWHERE32's defaults for the server-side installation. In order for pcANYWHERE32 to communicate with a remote console, the installation at the remote console must use these same settings.

A pcANYWHERE32 icon appears to indicate the configuration process is complete. Your server is now ready to support a remote connection. To customize your host configuration for more options and greater security (such as creating a specific list of allowed callers, or for using features such as call-back), refer to pcANYWHERE32's online help. To enable a Graphics Console Redirection session, proceed to the next section.

Using Graphics Console Redirection

Initiating a graphic console redirection of an HP NetServer to a remote console involves two steps. First, run pcANYWHERE32 at the server and set it into "Host mode." Second, connect to the server using the "Remote Control" from a remote console running pcANYWHERE32.

At the HP NetServer

To initiate a graphics console redirection of the server console, do the following at the server:

1. Have someone run pcANYWHERE32 from the pcANYWHERE32 program group in your Windows Program Manager.
2. Click the "Be a Host" button.
3. Double-click the "Modem" connection icon you modified for your HP NetServer. This initializes the modem and prepares the server for takeover by your remote console.

At the Remote Console

After you've set the server to be a host, do the following at the remote console:

1. Run pcANYWHERE32 from the pcANYWHERE32 program group in your Windows Program Manager.
2. Click the "Remote Control" button. Then double-click the "Modem" connection icon you configured for your HP NetServer. This initializes the modem and dials the server's phone number.
3. Enter the password for the HP NetServer if you set one up when you installed pcANYWHERE32 at the server.

After the NetServer accepts the password, you will see the graphics console of the server displayed on your remote console. At this point, you can perform any tasks you would have ordinarily done at the server console.

NOTE	You will need to emulate the keyboard functions when your console is remotely or directly connected. For example, using console redirection you must send a special sequence of keys to the NetServer in order to initialize a warm server reboot. For a complete listing of emulation sequences supported by the BIOS, see Appendix B.
-------------	---

When an NT Graphic Console Redirection Session May be Lost

During the graphic console redirection session, if you do a "Shutdown and Restart" of the Windows NT NetServer, this will reboot the server and you will lose the remote connection to the server. This means that you will need to reestablish the remote connection via pcANYWHERE32 at both the remote console and the server as described above.

4 Installing RCONSOLE (NetWare)

Novell NetWare's RCONSOLE feature works at the NOS level to provide full remote access to a NetServer running NetWare/intraNetWare. Installation of RCONSOLE requires specific setup steps at both the console and NetServer before you can establish an RCONSOLE communications link. Only the NetServer needs to be running NetWare/intraNetWare; the RCONSOLE program can be run from a DOS prompt. Thus, the only software requirement is that the client has access to DOS.

The following figure shows how RCONSOLE works on a NetServer running NetWare.

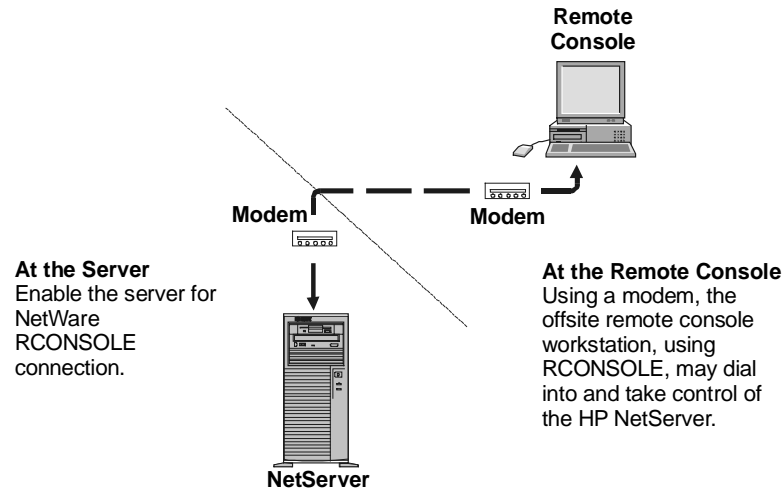


Figure 4-1. RCONSOLE Remotely Controlling an HP NetServer

Minimum Server Requirements

In order to use RCONSOLE, your server needs:

- An external modem or direct connection via one of the HP NetServer's two serial ports
- An HP NetServer E Series system running Novell NetWare/intraNetWare (3.12 or 4.11), intraNetWare for Small Business 1.10, and including RCONSOLE software and utilities

Minimum Console Requirements

For best results, use an ANSI color terminal that supports 25-line mode and IBM PC character set. In addition, you will need:

- A 386-based (or faster) computer with 6 MB of available disk space
- A communications link to the server, either through a modem or a direct serial connection
- Novell NetWare's RCONSOLE program
- MSDOS 3.0 or later

Setup at the NetWare NetServer

Enabling a NetWare RCONSOLE connection at your NetServer involves several steps, including modifying the AUTOEXEC.NCF file and rebooting the server in order to activate the changes.

To enable a NetWare RCONSOLE connection:

1. Run the NetWare server program and at the server prompt, type:

```
load install
```

- At the NetServer installation utility, select "NCF files options," then "Edit AUTOEXEC.NCF file".
- Edit AUTOEXEC.NCF by typing the following commands, each on a separate line:

```
load remote <password>
load aio
load aiocomx
load rs232 <com port> 19200
```

- Save and exit the edit by pressing [F10], then quit the install program.
- Take the server off line. Type:

```
down
```

- Quit the NOS. Exit the NetWare environment and enter DOS, type:

```
exit
```

- Reboot, then run NetWare. Change to the NetWare server directory and type:

```
server
```

At this point, your server is permanently enabled for RCONSOLE connection.

Setup at the NetWare Client

RCONSOLE software must also be installed and configured at the workstation used as the remote console.

To install RCONSOLE software at the NetWare client workstation:

- Copy the following files stored on the NetWare/intraNetWare CD to a common directory:

rconsole.exe	rconsole.hep	rconsole.msg
textutil.hep	textutil.idx	textutil.msg
_run.ovl	ibm_aio.ovl	ibm_run.ovl
		_aio.ovl

- Switch to the directory that holds the files you just copied to the console and run:

```
rconsole.exe
```

NOTE Novell recommends that the program **rconsole.exe** be run in DOS (not in a DOS window inside Windows).

- Select Asynchronous, then "Configuration."

Enter the settings appropriate to the modem installed at the console. Enter any sequence of characters (limit 8) for User Connection ID. You must make an entry for "Call-back number" even if you do not intend to use this feature.

- Press [Esc] to return to the previous menu, and select "Connect to Remote Location."
- Press [Ins] to enter data in the supplied fields. Provide the phone number and location as prompted. Enter the name of the server you want to manage and the server's phone number.
- Press [Esc] to return to the previous screen. Highlight the phone number of the server you want to call using RCONSOLE and press [Enter].

RCONSOLE dials the selected server, establishes a connection and then supplies you with a list of servers available via the selected phone access. As soon as you select a server, RCONSOLE initiates a remote console session. For further information about RCONSOLE capabilities such as dial-back and inband remote, refer to your Novell NetWare documentation.

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B Terminal Emulation Keys

When keyboard commands are redirected to the NetServer's keyboard from a remote console, keystrokes generated on a generic terminal keyboard may not be able to control all the NetServer's keyboard keys. When there is no direct mapping between the remote keyboard and the NetServer keyboard, special keys on the NetServer keyboard are emulated using character strings.

This is why keys such as [Esc] and Home must be emulated in the form of ANSI escape sequences to access HP NetServer functions remotely. If you choose not to use pcANYWHERE32 (which has pre-defined emulation keys), you will need to program macro keys to correspond to the Remote Console Redirection escape sequences.

PC keystrokes that have no ASCII/ANSI terminal equivalents, but are recognized by the HP NetServer BIOS, can only be used after you have logged onto the NetServer. These BIOS specific commands are initiated by pressing Alt-0 (zero) if the terminal has been set up correctly.

Most terminal emulation software permits the mapping of special keys to character strings. If this is not true of the software you are using, you must send strings manually. The tables below provide a guide to keyboard emulation, both with keyboard combinations (where keys are held down together) and keystroke sequences (where a string of keystrokes is entered).

Sequence	Legend
Esc O P	F1
Esc O Q	F2
Esc O R	F3
Esc O S	F4
Esc [@	Insert
Esc [A	Up arrow
Esc [B	Down arrow
Esc [C	Right arrow
Esc [D	Left arrow
Esc [H	Home
Esc [K	End
Esc [M	F5
Esc [U	Page Down
Esc [V	Page Up
Esc [Z	Shift Tab
Esc [i	Print Screen
Esc [2 i	Shift Print Screen
Esc [1 7 ~	F6
Esc [1 8 ~	F7

Sequence	Legend
Esc [1 9 ~	F8
Esc [2 0 ~	F9
Esc [2 1 ~	F10
Esc [2 3 ~	F11
Esc [2 4 ~	F12
Esc [6 4 ~	cF1
Esc [6 5 ~	cF2
Esc [6 6 ~	cF3
Esc [6 7 ~	cF4
Esc [6 8 ~	cF5
Esc [6 9 ~	cF6
Esc [7 0 ~	cF7
Esc [7 1 ~	cF8
Esc [7 2 ~	cF9
Esc [7 3 ~	cF10
Esc [7 4 ~	cF11
Esc [7 5 ~	cF12
Esc Esc	Esc
Esc Del	Ctrl-Alt-Del

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