User Manual for NCD ThinSTAR 532.NET & 564.NET Running Windows

Microsoft® Windows® CE.Net
NCD Software Release 6.0

Hotkey
Quick Reference Guide

To...	Press....
Display the Terminal Connection Manager	CTRL + ALT + END
Display the next or previous connection	CTRL + ALT + ↑ or ↓
Display the default connection	CTRL + ALT + HOME
Display the Terminal Properties dialog box[1]	F2 KEY

[1]From the Terminal Connection Manager.

FCC regulatory and safety information

FCC regulatory and safety information can be found in the Quick-Start Guide that came with your device, and on the Support section of the NCD website which can be found at:

http://www.ncd.com/support.html

CANADA ICES/NMB-003 Class/Classe (B)

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conform à la norme NMB-003 du Canada.

NCD Hardware Warranty

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Safety Instructions

Please read these safety instruction carefully and keep this user's manual for later reference.

1. **Before removing the outer case from the device always disconnect the AC power cord to prevent the possibility of dangerous electrical shock.**
2. **Before cleaning, disconnect the device from AC power. Do not use liquid or sprayed cleaning products to clean the unit. Instead, use a moistened sheet or cloth for cleaning.**
3. **Be sure not to expose the device to excessive humidity.**
4. **Be sure to install the device on a secure surface. A falling device could cause injury.**
5. **Place the power cord in such a way to avoid people stepping on it. Do not place anything over the power cord.**
6. **Be sure to note all cautions and warnings on the device.**
7. **If the device is not used for a long period of time, disconnect the AC power to avoid damage caused by voltage transients.**
8. **Never pour any liquid into any device openings: This could cause fire or electrical shock.**
9. **If one of the following situation occurs, be sure to get the device checked by a qualified service technician:**
    a. **The power cord or plug is damaged.**
    b. **Liquid penetrates the device case.**
    c. **The device is exposed to moisture.**
    d. **The device does not work well or you cannot get it to work according to the user's manual.**
    e. **The device has been dropped or damaged.**
    f. **If the device has obvious signs of breakage.**
10. **The device should be stored and used only in temperature and humidity controlled environments. Storing devices below -20°C (-4°F) or above 60°C (140°F) may cause damage.**
11. **The sound pressure level at the operators position according to IEC 704-1:1982 is equal or less to 70dB(A).**
12. **The input power cord shall be minimum H05VV-F, 3G, 0.75mm², rate minimum 6A.**
13. **The device should be used only where ambient air temperatures are maintained below 40°C.**

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Introduction

This introduction describes the purpose and structure of this manual, as well as other sources of information.

Overview

Purpose and intended readers

This manual explains how to use NCD ThinSTAR terminals that are powered by NCD Software incorporating the Microsoft® Windows® CE.Net operating system. It's intended primarily for end users, though administrators, evaluators, and others will find it helpful, too.

Organization

We recommend that you read the chapters of this manual in order. The main topics covered are:

- Unpacking and setting up the ThinSTAR.
- Configuring the ThinSTAR for the network.
- Connecting to one or more servers.
- Changing the properties of the ThinSTAR.

This manual doesn't explain how to use the Windows desktop or Windows-based applications. To learn how to use them, read their documentation.

What is a ThinSTAR?

ThinSTARs are thin client terminals that allow you to access applications running on Microsoft Windows application servers, as well as applications running on UNIX/Linux servers, midrange,

and mainframe computers, and on the Internet/intranet. Compared to personal computers, ThinSTARs are simple devices, since most of the computing is done by the servers.

ThinSTARS can connect to servers running Microsoft Windows 2000 Server (as well as Advanced Server and Datacenter Server versions), Microsoft Windows NT 4 Server, Terminal Server Edition (TSE), and to servers that are running Citrix MetaFrame®, WinFrame®, or Citrix Device Services (CDS). Using the Pericom terminal emulation suite, you can also connect to mainframes and minicomputers. Plus, you can connect printers, modems, bar code scanners, and other peripheral devices a ThinSTAR. Some models of ThinSTAR include Microsoft Internet Explorer Web browser for viewing and printing HTML Web pages.

Getting More Information

The Internet

Current and archival information about NCD products, including the latest software updates, is available at:

http://www.ncd.com

In addition, this user manual and other NCD documentation are available at the NCD Web site for browsing or downloading.

Technical support

For technical support regarding NCD products, call NCD at 1-800-800-9599 or send an e-mail message to *support@ncd.com*.

CHAPTER 1   *Setting Up the NCD ThinSTAR*

This chapter describes setting up the ThinSTAR.

Unpacking the ThinSTAR

Packaging contents   The ThinSTAR is shipped in cartons, containing these items. Depending on the shipping configuration, one or more of the items may be contained in separate shipping cartons (such as a monitor, keyboard, and mouse):

ThinSTAR

- A mouse with cable attached.
- A power cable.
- A Quick-Start Guide

Monitor

- A monitor power cable (attached to some monitors).
- A monitor video cable (attached to most monitors).
- A tilt/swivel base, attached or unattached.

To unpack the ThinSTAR, open the cartons, remove the components, and save the packing materials in case you need to repack them.

Connecting the Components

Back panel connectors

The diagrams on the following page below show the back panel of the ThinSTAR.

NOTE

The serial and parallel ports can be used with ICA and terminal emulation connections.

The following is an explanation of the different connections that can be found on a NCD ThinSTAR.

- •MOUSE is a PS/2-type mouse port.

- •KEYBOARD is a PS/2-type keyboard port.

- •LAN is an RJ-45 jack. The ThinSTAR automatically detects and connects to either 10BaseT or 100BaseT (twisted-pair) Ethernet.

- •PARALLEL is a standard DB-25 parallel port for local printers.

- •COM 1 and COM 2 are DB-9, RS-232 serial ports. Depending on which software version is loaded in the ThinSTAR, serial ports may be used for peripheral

devices such as modems, personal digital assistants (PDAs), and bar code scanners.

- •USB ports (two Type A USB ports)

- •MIC is a 3.5 mm microphone jack.

- •LINE IN is a 3.5 mm line audio input jack.

- •LINE OUT is a 3.5 mm audio output jack.

- •MONITOR is a standard DB-15, high-density, VGA-type monitor connector.

- The power supply connects through the supplied power cable. It automatically detects and accepts either 120 VAC or 240 VAC line voltage.

Connecting the cables

1 Connect the keyboard cable to the KEYBOARD port.

2 Connect the mouse cable to the MOUSE port.

Power

AC100-240V 50-60Hz

Audio

Serial Port COM 2

Parallel Port

Ethernet 10/100

Mouse

Serial Port COM 1

Monitor

USB Ports

Keyboard
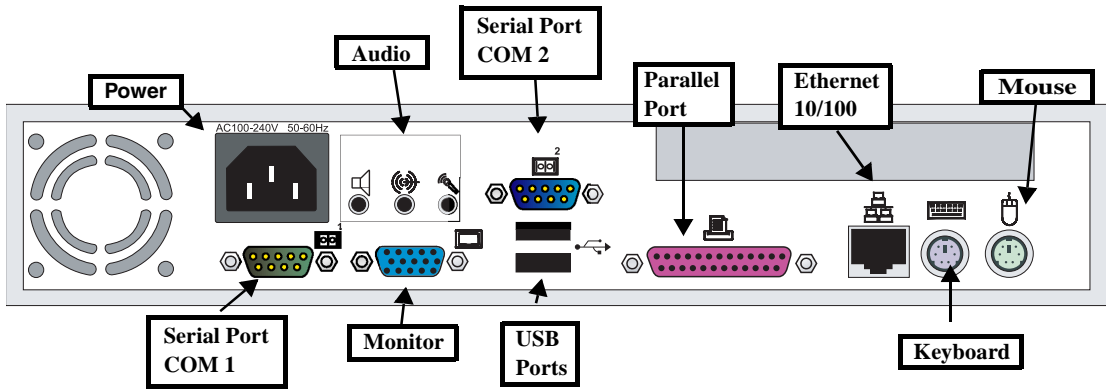
ThinSTAR back panel

3 Connect the monitor video cable to the MONITOR port.

Don't overtighten the screws. The video cable connection to the monitor varies. Some monitors have attached video cables.

4 Connect the monitor power cable to a power source.

5 Connect the power adapter cable into the socket.

6 Connect a twisted-pair, 10BaseT or 100BaseT Ethernet cable into the LAN jack.

This RJ-45 jack looks like a telephone jack.

7 Arrange the device and monitor in your work area.

The ThinSTAR is designed to be placed underneath the monitor or beside the monitor (in a vertical orientation using the provided foot or stand).

Connecting peripheral devices

You can connect a modem, printer, bar code scanner, and other peripheral devices to the ThinSTAR.

1 If the ThinSTAR is turned on, log off all its open connections, and then turn off the device.

2 If you have a local printer, connect its cable to the PARALLEL port. You can also attach local serial printers to either serial port: COM 1 or COM 2.

3 If you have an external modem, bar code scanner, or other serial device, connect its cable to a serial port (COM port).

4 Turn on the ThinSTAR and then the peripheral device.

Using the Front Panel

ThinSTAR Front Panel   Here are the details of the ThinSTAR front panel (see drawing on the following page).

- **To turn on the ThinSTAR**, push in the triangular on/off ① switch on the front panel.

- **To turn off the ThinSTAR**, push the on/off switch again.

- The *network activity indicator* lights when network activity is detected by the ThinSTAR. Amber color indicates a 10 BaseT connection. Green color indicates 100 BaseT connection.

- The *power indicator* lights when the ThinSTAR is powered on.

ThinSTAR front panel

Network activity indicator

Power indicator

On/off switch
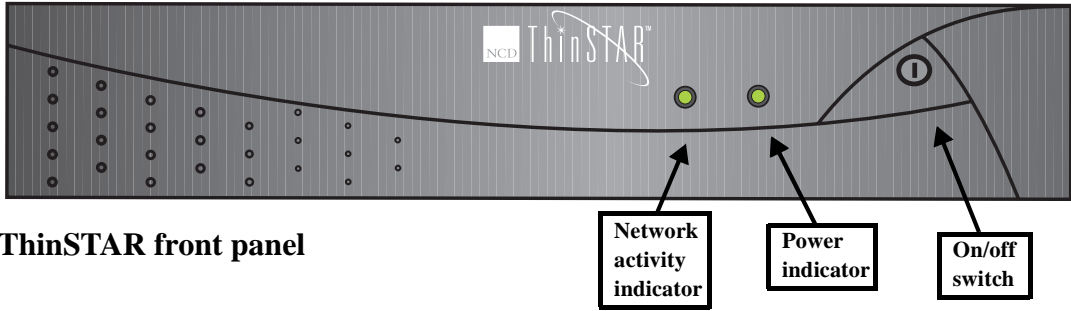
Arranging Your Work Area

Getting comfortable

These tips might help reduce eye strain and body fatigue when using the ThinSTAR:

- Adjust your chair seat level so that your feet are flat on the floor, your legs form a right angle with the floor, your knees are free of the chair seat, and your lower back is fully supported.
- Adjust the chair height the keyboard and mouse are at elbow height so your wrists are straight and supported.
- Maintain a neutral neck posture with the top of the monitor no higher than your eye level.
- Adjust the monitor and lighting to reduce glare on the screen and to place the monitor at a correct distance for your vision.
- Take periodic breaks to stretch your arms and wrists and rest your eyes.

CHAPTER 2 *Configuring the ThinSTAR*

This chapter describes how to configure the NCD ThinSTAR for a network.

Automatic ThinSTAR Properties Configuration

Automatic ThinSTAR Properties Configuration

NCD software incorporating Windows CE.Net contains the ability to be configured automatically from the server. Using NCD's ThinPATH Management Portal software, the network administrator can create a properties configuration template which each ThinSTAR will pull from the server when it is powered on. The ThinSTAR will also continue to check for changes to the properties configuration template every time it is powered on.

Note: If the automatic properties configuration is used, then the setup wizard will not appear when the ThinSTAR is booted for the first time.

Selecting the Initial Configurations

Before you begin

To configure the NCD ThinSTAR, ask the system administrator to answer these questions before you begin:

- **Does the network use DHCP to supply IP addresses?**

    If not, what is the static IP address for your ThinSTAR?

    _____._____._____._____

    If not, do you need to specify a subnet mask and gateway?

    _____._____._____._____, _____._____._____._____

Configuring

- **Does the network use DNS or WINS to name servers?**

    If it uses DNS, what are the IP addresses of the primary and secondary DNS servers and the default domain name?

    ___.___.___.___ , ___.___.___.___, _____

    If it uses WINS, what are the IP addresses of the primary and secondary WINS servers?

    ___.___.___.___, ___.___.___.___

The NCD Setup wizard guides you through the process of configuring the ThinSTAR. The Setup wizard appears when the ThinSTAR starts for the first time or it has been reset to factory-default settings. (See page 46.)

1 **Turn on or reset the ThinSTAR.**

2 **When the Setup wizard appears, click Next.**

3 **Read the End User License Agreement, and then click Accept.**

4 **In the IP Address dialog, select Yes or No, and then click Next.**
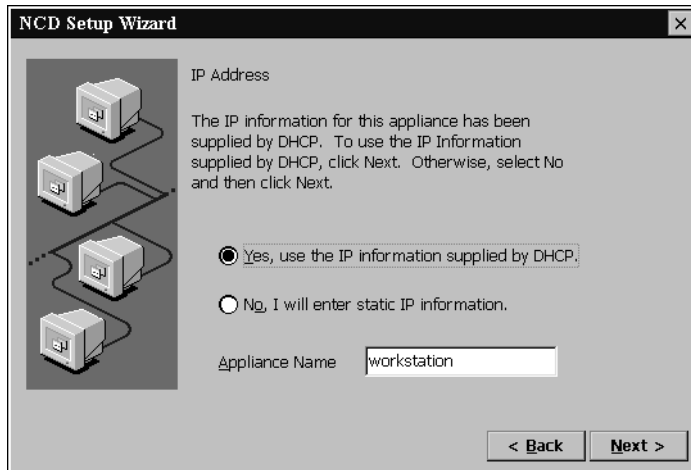
If you select Yes, an IP address for the ThinSTAR is supplied by DHCP. If you select No, enter a static IP address.

5 If you selected No in the IP address dialog, type an IP address and other information, if needed, and then click Next.

Ask the system administrator if you need to enter subnet mask and gateway settings.

6 If you specified an IP address, you can enable server name resolution by DNS and/or WINS, and then click Next.

To use DNS, type the default domain name and the IP address(es) of the primary and/or secondary DNS server. To use WINS, type of the primary and/or secondary WINS server IP address(es).

Configuring

Selecting the Initial Configurations   13

7 Select a Desktop Area resolution and Refresh Frequency, and then click Next.

The default setting is 800 x 600 at 60 Hz. You can select higher resolutions and frequencies if your monitor supports them.

To test the settings, click **Test** and then **OK**. If a solid blue rectangle appears on your screen, the resolution and refresh frequency that you chose are supported by your monitor.

8 Select whether you would like to setup a Web Browser connection or define RDP printers.

9 You have successfully completed the NCD Setup Wizard, click Back to change any settings that you have specified, or Finish to apply the settings.

10 If you have selected changes to any network settings or the desktop area and refresh frequency, click Yes to restart the ThinSTAR.

When the ThinSTAR restarts, the Terminal Connection Manager appears.

If you selected DHCP to supply an IP address but no DHCP server responds within 25 seconds, the Waiting for DHCP Response dialog box appears.

- To try DHCP again, click **Restart**.
- To restart without DHCP, click **Cancel**, press **F2**, type an IP address in the Network tab of the Terminal Properties dialog box, click **OK**, and then restart the ThinSTAR.

CHAPTER 3   *Creating Connections*

This chapter describes how to create server connections on the ThinSTAR.

Automatic Terminal Connection Configuration

Automatic Terminal Connection Configuration

NCD software incorporating Windows CE.Net contains the ability to be configured automatically from the server. Using NCD's ThinPATH Management Portal software, the network administrator can create a connection configuration template which the device pulls from the server when it is powered on. The ThinSTAR also continues to check for changes to the connection configuration template every time it is powered on.

NCD Connection Manager

Except for when you initially configure the ThinSTAR, or after you have intentionally factory reset the device, the NCD Connection Manager appears whenever the ThinSTAR starts. The Connection Manager lets you configure and manage connections to servers.

You can make RDP and ICA connections to servers running Microsoft® Windows® 2000 Server or Windows® NT 4.0 Terminal Server Edition. PPP (Point to Point Protocol)/RAS (Remote Access Server) dialup connections can be configured to run RDP and ICA connections on remote servers. Pericom terminal

Creating Connections

RDP and ICA are protocols that enable Thin-STARs to use Windows-based programs running on servers.

ICA connections require Citrix's MetaFrame, WinFrame, or CDS to be installed on the server to which you are connecting.

emulation connections can be used to connect to servers, minicomputers, and mainframes
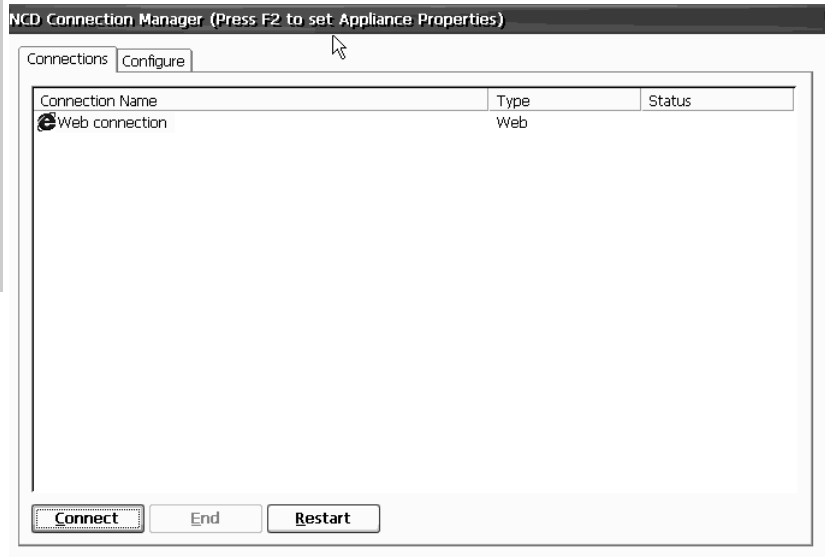
Note: There is also a simplified Single Button Connection Manager used to connect to a ThinSTAR's default connection (see "Single Button Connection Manager" on page 40).

Adding a connection   1 **If the Connection Manager isn't on screen, press CTRL + ALT +**

END.

Terminal Connection Manager (Press F2 to set Terminal Properties)

Connections | Configure

Connection Name	Type	Startup
ip_davem4	RDP	

Select Configure...

...and then click Add.

Add... | Edit... | Delete | Startup...
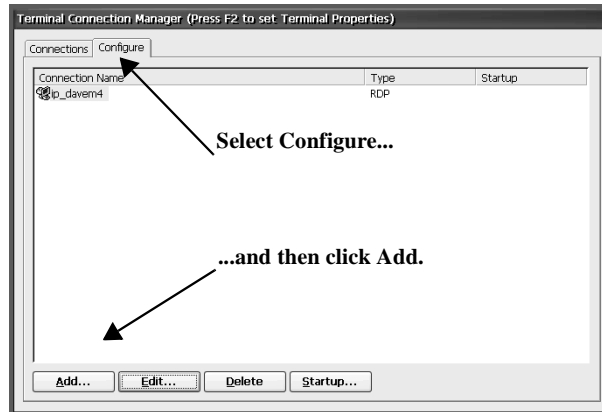
Select the Configure tab and click Add to create a connec-

2 Select the Configure tab.

Add...
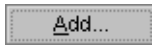
3 Click Add.

Once you click **Add**, the New Connection dialog will appear.
Continue by following the directions on creating the specific type of
connection you would like to establish as further explained in this
chapter.

Editing a connection

Once created, you can edit
any connection (except for
the Internet Explorer Web
browser) by clicking **Edit**. A
tabbed dialog containing all of the settings appropriate for the
connection type will appear. Click **OK** to save changes to the
connection, or **X** to cancel any changes.

Edit Connection   OK X

OK saves changes

X cancels changes
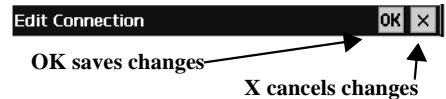
Deleting a connection

Highlight a
connection, and
then click
Delete. A
confirmation

Confirm Connection Delete   X

Are you sure you want to delete the connection 'Windows 2000 Server'?

Yes | No
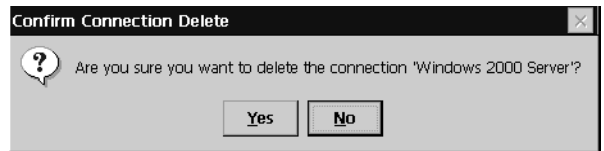
dialog box will appear. Click **Yes** to delete the highlighted connection.

Connection Startup

Connection Startup	×

Choose one of the following startup options for the connection you have selected:

Startup Options

◉ Make the selected connection your Default connection.

○ Automatically start the selected connection at startup.

OK   Cancel
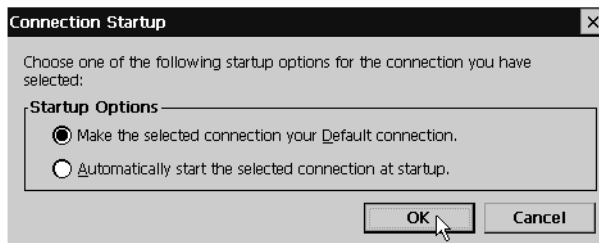
Highlight any defined connection and click **Startup** to set the connection as the Default Connection, or to set the connection to automatically start at device setup:

- **Make the selected connection your Default connection.** Only a single connection can be defined as the Default connection. The Default connection is started when the user clicks **Connect** on the ThinPATH Connection Manager one-button connection manager. (See "Enable Single button view - Click this checkbox to display a Single Button Connection Manager in place of the default Connection Manager. When enabled, the ThinPATH Connection Manager Connect button starts the connection defined as the Default Connection in the Connection Manager. (See "Connection Startup" on page 20.)" on page 57.)

- **Automatically start the selected connection at startup.** You can select one connection that will automatically start when the ThinSTAR starts up. If you want all connections to automatically start, you can use the Autostart all connections checkbox on the Administration tab of the NCD ThinSTAR Properties dialog. See "Autostart all connections" on page 56.

Creating an RDP connection

1 In the drop-down list, select *Microsoft Remote Desktop Client,*

and the click OK.

Select Microsoft Remote Desktop Client from the drop down menu

New Connection [×]

Select the type of connection to create:

Microsoft Remote Desktop Client	▼

Citrix ICA Client
Microsoft Remote Desktop Client
Neoware Dial-Up PPP Client
Pericom Terminal Emulation Client
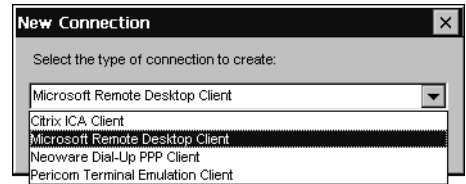
2 Type a name for the connection, as well as the IP address or DNS or WINS name of the server to which you would like to connect. Click in the Low Speed Connection checkbox if you are using a wide-area network. When finished, click Next.

WTS Connection Wizard

Type a name for the connection and the server you would like it connect to.

Type a name for the new connection.
Name:

Type the name of the computer to which you want to connect.
Server:

Click Low Speed Connection if you are connecting across a slower network.

Select a Low Speed Connection, only if you are using a wide-area Network.

☐ Low Speed Connection

<Back	Next>	Cancel
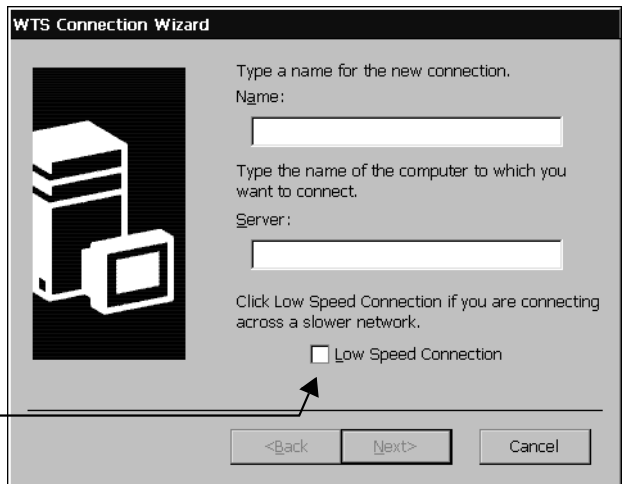
3 If you want, select Automatic Logon, and then type your user name, password, and domain name. When finished, click

Next.

Click the Automatic Logon checkbox and then enter your logon information.
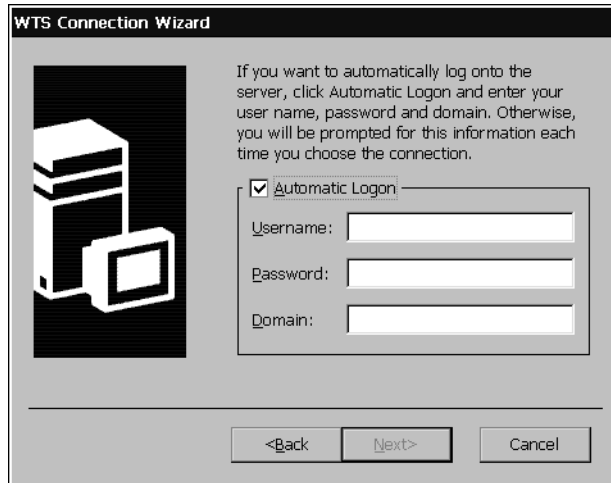
If you don't type this information now, it will be requested each time you start this connection.

Note: If this ThinSTAR is used by multiple people, then do not enter this information.

4 Select Desktop or Application file name, and click Next.

Select Desktop or Application file name and enter the appropriate information, if necessary.

For a connection that opens to a full-screen Windows desktop, select Desktop. For a connection that opens to a specific Windows-based program, select Application file name, and then type its name and (optionally) a working directory for its files.

5 Click Finish or select back to change any configuration options for this connection.

The connection will appear in the Connection Manager.

Creating an ICA connection

ICA is a network protocol used by Windows NT-based servers running Citrix MetaFrame, WinFrame, or CDS. ICA connections also let you create dial-in and null-modem serial port connections.

1 In the Connection Manager select the Configure tab and then click Add.

2 Select *Citrix ICA Client* from the drop-down list, and then click OK.

Select Citrix ICA Client from the drop down menu

New Connection	✕
Select the type of connection to create:	
Citrix ICA Client	▼
Citrix ICA Client	
Microsoft Remote Desktop Client	
Neoware Dial-Up PPP Client	
Pericom Terminal Emulation Client	
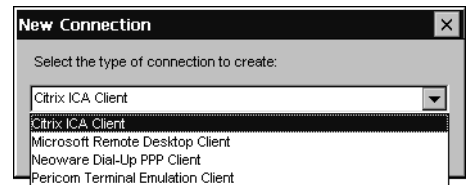
3 Select a connection type, and then click Next.

- If you're using an Ethernet network, select *Network Connection.*
- If you're using a serial port connection, select *Dial-in Connection*.

4 If you selected a network connection, select a Citrix server or a published application, and then click Next.

Note: If you are using a version of Citrix MetaFrame prior to XP in your server farm, you may not see a list of servers or applications in this dialog because the ICA 6.2 client defaults to a broadcast protocol of "TCP + HTTP browser" and earlier server

NOTE

A published application is a server-based program to which you can directly connect.

farms typically use "TCP browser" broadcasts. For information about changing the global browser protocol, see "Changing the Global ICA Client Settings" on page 61.

This error message may indicate that you need to change the default browser protocol in Global ICA settings.

ICA CE Settings OK ×

No Citrix servers were found on the network. Make sure that your server location addresses are set correctly.

Select a Citrix Server or Published Application

Select a Citrix s...

◉ Citrix Serve...

Server Location ×

Server Group | Primary ▼

Address

Add | ica | OK

Delete | | Cancel

You can chang...

Primary Citrix s... | | Default List

You can set the browser protocol for a single connection from the Server Location dialog.

TCP + HTTP browser ▼

TCP browser
TCP + HTTP browser
SSL + HTTPS browser

To change the broadcast protocol for a single connection, or to connect to a server that isn't on the local network, click **Server Location**.

Type a server or application name, or select a server or application from the list.

Server IP addresses can also be entered.

Select a Citrix Server or Published Application

Select a Citrix server from the list or type in a server name.

◉ Citrix Server   ◯ Published Application   ica

JAWS
LEOPARD | Refresh
MINT_7
PRODUCTION2 ▼

You can change your server location settings by clicking Server Location.

Primary Citrix server: (Auto-Locate) | Server Location...

Cancel | < Back | Next > | Finish
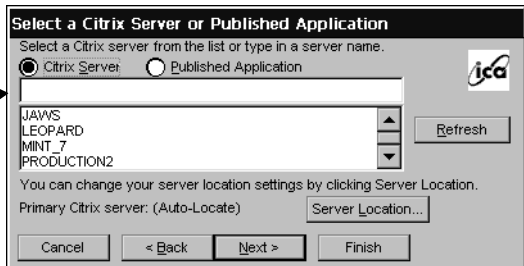
5 **If you selected a dial-in connection, select a dial-in device and serial communication (COM) port and other settings, and**

then click Next.

Specify and config-ure your Dial-In Device, and enter a Phone Number

Dial-In Devices

Dial-In Device: Hayes Compatible on COM1: ▼ | Configure

Phone Number

☑ Use Tone Dialling

Cancel | < Back | Next > | Finish

- To configure a modem connection, select a Hayes compatible device, type a phone number, and then click **Configure** to select the port settings and call options. Set the Connection Preferences to match the modem settings, and then click **OK**.

- To configure a null-modem connection, select a serial cable device, click **Configure** to select the serial port settings, and then click **OK**.

6 Type a title for the ICA connection, and click Next

Type a name for Citrix ICA connec-tion

Select a Title for the ICA Connection

Select a title for the ICA connection.

ica

Cancel | < Back | Next > | Finish

7 If you want, specify a Windows application to start with the

connection, and then click Next.
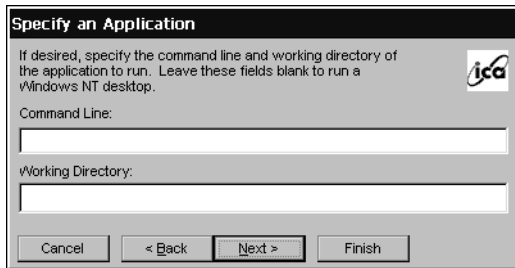
Type the command line and the working directory of an application to autostart when you start this connection.

In the Command Line box, type the path and application name. For example, if Microsoft Notepad was located in the C:\WTSRV directory, you would type *C:\WTSRV\Notepad.exe*.

In the Working Directory box, type the drive and path of its working directory. For example, *C:\My Documents*.

8   If you want, specify logon information, and then click Next.
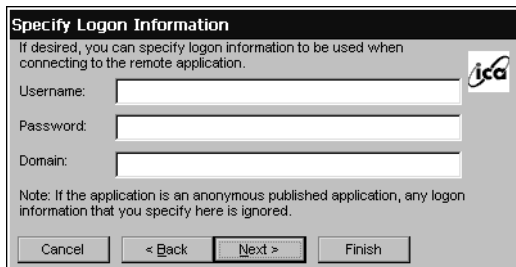
Type your logon information.

If you don't type logon information now, it will be requested when the connection starts.

9   Select a color depth, and then click Next.
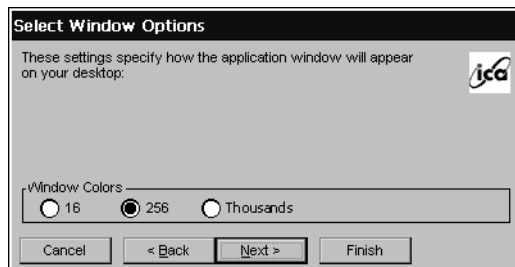
Select the number of simultaneous on-screen colors you would like this connection to use. (MetaFrame is required on the server for color depths higher than 256 colors.)

Note: The option to use thousands of colors is only available when the device's desktop area and refresh frequency is set to a resolution that supports high color (i.e. - 800x600 @ 85hz high color (16-bit)). See page 21.

10 If needed, select printing, data compression sound, speed-screen, and encryption settings. When finished, click Next.

Select and config-ure these options if you would like to use them.

Compression, Encryption and Sound	
☑ Use Printer Configuration Utility	
☑ Compress Data Stream	
☑ Enable Sound	
Sound Quality:	High
SpeedScreen:	Off
Encryption Level:	Basic
Cancel	< Back	Next >	Finish

Use Printer Configuration Utility

If you are using MetaFrame 1.8 or later, you have two choices regarding configuring printers attached locally to the NCD terminal: (1) If only Administrators (using the MetaFrame Printer Configuration Utility on the server) are to define and configure any locally attached printers -- check the box, or (2) if users need to locally define printers for their MetaFrame sessions -- uncheck the box.

Compress Data Streams

If you're using a dial-in connection or wide-area network, you can select Compress Data Stream to increase performance.

Enable Sound

If the NCD terminal and network support ICA audio, select Enable Sound, and then select a sound quality. High is recommended for high-speed connections, Medium for most connections, and Low for dial-in connections.

Creating Connections

SpeedScreen

If you are using MetaFrame 1.8 Feature Release 1 or later, you can enable SpeedScreen3. Speedscreen3 is designed to enhance the performance of the low bandwidth or high latency connection. For slower server connections set the SpeedScreen option to **On**. If you are uncertain of the connection speed set the SpeedScreen option to **Auto**.

Encryption Level

If the MetaFrame server includes the optional Citrix SecureICA™ Services, you can choose different encryption levels for the connection (up to 128-bit RC5 encryption). If SecureICA has not been installed on the MetaFrame server, choose *Basic* encryption.

11 **Click in the checkbox if you would like to use an alternate address when connecting through firewalls. Click in the SOCKS checkbox if you would like to connect via a SOCKS proxy server. If so, specify the address and port for the proxy to use. When you complete this step, click Finish.**
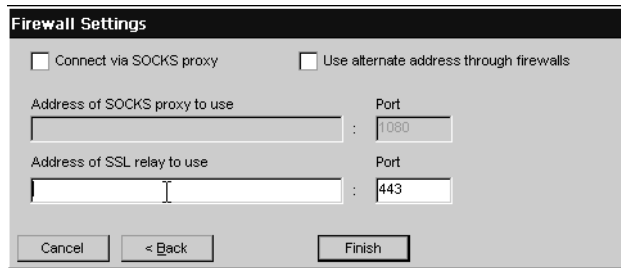
Select and configure Firewall options if you would like to use them.

The ICA connection will appear in the Connection Manager.

Creating a PPP/RAS dialup connection

NOTE

The dialup connection functionality will be available in a future release.

PPP (Point to Point Protocol)/RAS (Remote Access Server) is the Internet Standard for the transmission of network packets over dial-up connections. Once a PPP/RAS connection has been establish, a user can then run RDP, ICA, or terminal emulation server sessions.
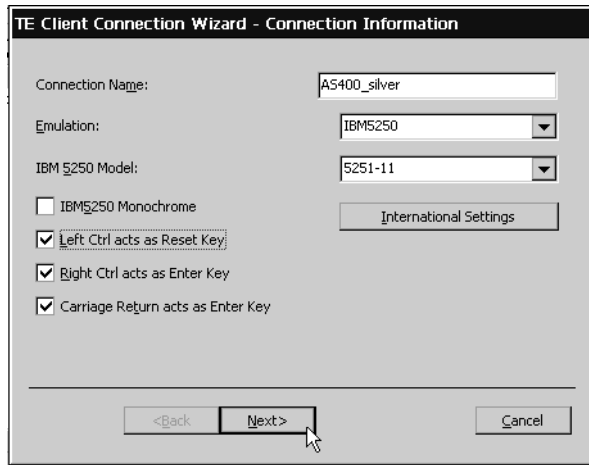
1 **In the Connection Manager select the Configure tab and then click Add.**

2 **In the New Connection popup dialog select *NCD Dial-Up PPP Client* from the dropdown menu, and then click OK.**

3 **The NCD Create New PPP Connection Wizard starts and the first step is to type a name for the connection. Click Next to continue.**

4 **Select a modem from the drop down menu.**
   Note: If an internal modem is installed, it will be seen as "Com 3:".

5 **After you've selected the modem, click Device Properties.**
   In the Device Properties dialog define the Port Settings and Call Options according to the modem setup. To learn the setting for the modem, read its manual. Once you've completed setting up the modem configuration, click **OK** in the upper right hand of the Device Properties dialog.
   Note: When setting the baud rate for 56k modems, choose "115200."

6 **If the Internet Service Provider (ISP) or the system administrator has specified settings for the PPP/RAS connection then click TCP/IP Settings in the Select Modem dialog.**

   To enter these specific settings, click on the User Specified radio buttons and then enter the settings. When finished, click **OK** in the upper right hand corner. To configure the connection using SLIP, and/or compression, check with the system administrator for the proper settings. The use of a remote gateway is selected by default when using a PPP Dial-Up connection. If you are using this connection to augment the Local Network with a connection to a remote site, then check with the network administrator to see if the use of a remote gateway is necessary.

7 **If you would like to secure the Dial-Up PPP connection using encryption, select the Security button in the Select Modem dialog.**

Creating Connections

Click the checkboxes that coincide with the security you would like to provide for the connection. When finished, click **OK**. Click **Next** in the Select Modem dialog to continue.

8 **Enter your login information. When complete, click Next.**
   Note: This information is used to login, via PPP/RAS, to the ISP or other network. It may be different from your Windows login information. A domain name is not always necessary for a PPP/RAS connection. Check with you System Administrator to confirm if a domain name should be entered with this PPP/RAS connection.

9 **To automatically start one or more host connections when you establish a Dial-Up PPP connection, select those host connection names you would like to autostart and click Next.**
   Note: To select multiple host connections to autostart, hold down **Ctrl** and click on each host connection you would like to autostart. To select a range of host connections to autostart, click on the first connection, hold down **Shift**, and then click on the last host connection you would like to include. This will select every name between the first and last connections that you clicked.

10 **Enter the telephone number to your internet service provider or your dial-up server.**
    Once you've specified the telephone number, click **Finish** to complete the PPP/RAS connection configuration.

Creating a Pericom Terminal Emulation Connection

Pericom terminal emulation connections allow the user to connect to servers, minicomputers, and mainframes by emulating terminals. The supported terminal emulations include:

Tip

For more detailed information about the Pericom terminal emulation client, read the *Terminal Emulation User's Guide*, available at *www.ncd.com*.

- **ADDS A2.**
- **ANSI BBS.**
- **DEC VT52, VT100, and VT300 7-bit and 8-bit.**
- **Hazeltine HZ1500.**
- **HP70092.**
- **IBM 3151.**

- **IBM3270 (3278 models 2, 3, 4, 5, 2-E, 3-E, 4-E, and 5-E; 3279 models 2, 3, 4, 5; and 3287 model 1).**
- **IBM5250 (including keyboard macros).**
- **SCO Console.**
- **Tandem 6530.**
- **Televideo TVI910 and TVI920.**
- **Wyse WY50, WY50+, and WY60.**

To create a terminal emulation connection, you must select the emulator type and the host computer. You can also select Telnet, serial port, autologin, and client printer settings.

1 **In the Connection Manager, select the Configure tab and then click Add.**

2 **In the New Connection popup dialog select *Pericom Terminal Emulation Client* from the dropdown menu, and then click OK.**

New Connection	×
Select the type of connection to create:	
Pericom Terminal Emulation Client ▼	
Citrix ICA Client Microsoft Remote Desktop Client Neoware Dial-Up PPP Client Pericom Terminal Emulation Client	
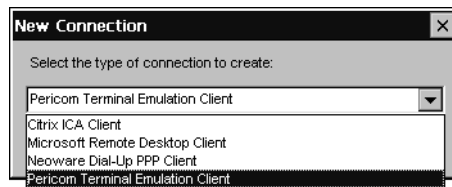
Select Pericom Terminal Emulation Client from the drop down menu

3 **Type a connection name, select a terminal emulation and**

Creating a Pericom Terminal Emulation Connection   *31*

model type (if required), and then click Next.

TE Client Connection Wizard - Connection Information

Connection Name: AS400_silver

Emulation: IBM5250

IBM 5250 Model: 5251-11

☐ IBM5250 Monochrome

☑ Left Ctrl acts as Reset Key

☑ Right Ctrl acts as Enter Key

☑ Carriage Return acts as Enter Key

International Settings

<Back   Next>   Cancel

Note: Click **International Settings** to specify the type of keyboard you are using for your terminal emulation session.

4   Select the type of connection you are using to connect to the server, minicomputer, or mainframe.

TE Client Connection Wizard - Host Information

Connection Type

◉ TCP/IP   Host Name: AS400_silver

○ Modem   Configuration Name:

○ Serial   Connect to:

Advanced...

<Back   Next>   Cancel
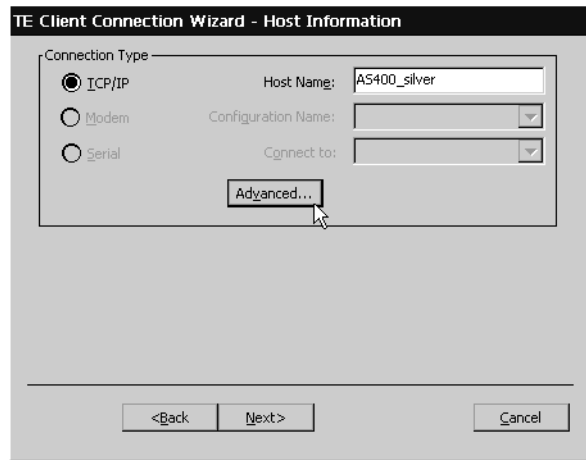
- For a connection to an Ethernet network, select *TCP/IP*, and continue with step 5.

- For a dial-in serial port connection, select *Modem*, and continue with step 6.

- For a null-modem serial port connection, select *Serial*, and continue with step 7.

5 If you selected a TCP/IP connection, type the IP address or DNS/WINS name of the host computer, and then click Advanced.

- To change the default Telnet port number, 23, type another 16-bit port number.

- To override the terminal name reported over Telnet, type a name in the Telnet Name box.

- To avoid generating a Telnet echo when the connection starts, select Suppress Echo.

- To select Telnet Binary or EOR options, select *DO* in the Force Negotiation section.

  No, the default setting, won't force any negotiations. *DONT* forces a negotiation by telling the host that the option isn't supported.

- To send a timing mark (TM) or carriage return (CR) with a Telnet break packet, select the appropriate break settings.

Creating Connections

6 If you selected a modem connection, click Configure.
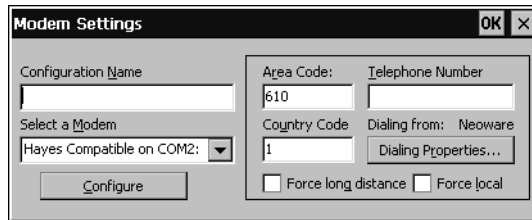
- If this is a new configuration, type a configuration name.
- To set serial port settings and call options, click **Configure**.
- To set advanced dialing settings, click **Dialing Properties**.

7 If you selected a null-modem connection, select serial communication (COM) port 1 or 2, click Configure, select the serial port settings, and then click OK.
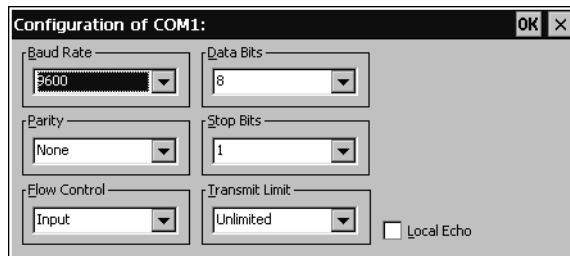
8 Click Next to display the Advanced Options dialog box.

TE Client Connection Wizard - Advanced Options

Auto Login	Defines Parameters for the Automatic Login Feature
Printers	Defines settings for printer support
GUI overrides	Defines any required overrides from default GUI
Aux Port	Defines settings for Aux port

<Back   Finish   Cancel
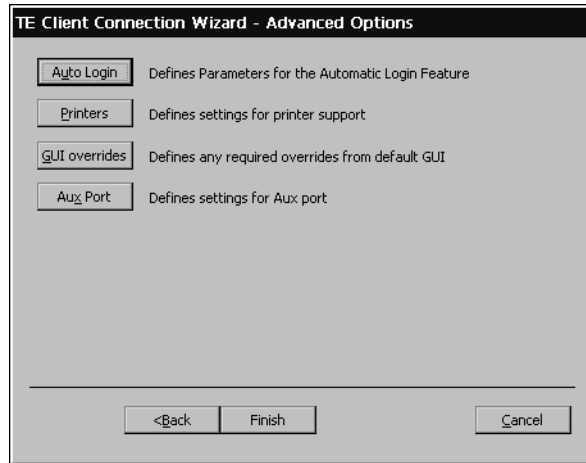
Auto Login

9 To create an autologin connection, click Auto Login, select settings, and then click OK.

Automate Login Process   OK ✕

Parameters
☐ Set Initiation String

Wait For
◉ Text: [   ]
○ Keyboard Lock
○ Keyboard Unlock

Respond With
[   ]
C. Return ▼   Insert
VK_SHIFT ▼

Definitions

Act on	Send

Remove All

Add ->
<- Remove
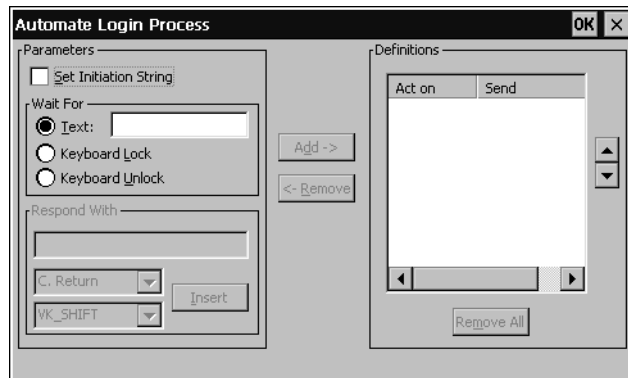
NOTE

Autologin connections automatically enter your username, password, and other information when you log into a host. To set up an autologin connection, you need to know the exact prompts sent by the host at login.

• To automate the login, first type the login prompt sent by the host (for example, *login:*) in the Wait For box. Then type your username in the Respond With box, select an item from the drop-down menu (for example, *C. Return*), click **Insert**, and click **Add** to add it to the Definitions list.

Repeat this procedure for the password and any other prompts sent by the host. The prompts that you type in the Wait For box must exactly match the prompts sent by the host.

Creating Connections

- To reposition a definition, use the up and down arrow buttons.
- To edit a definition, highlight it, click **Remove**, and then edit.

Printers

10 To set up a client printer, click Printers, select a printer port and other settings, and then click OK. To set up a network

Printer Port Settings   **OK** ☒

☐ Use Network Printer (LPR)

Select a printer port or click the "Use Network Printer (LPR)" checkbox

Printer Port: Parallel Cable on LPT1: ▼   Configure

LPD Hostname: _____

☐ FormFeed Terminator
☐ Translate National Characters
☐ Auto Line Feed
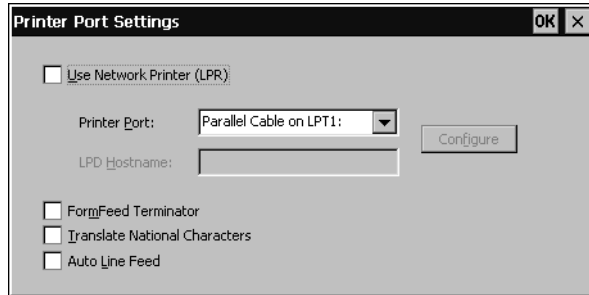
printer using LPR click the "Use Network Printer (LPR)" checkbox and enter an LPD Hostname.

If you select a serial port for a client printer, click **Configure**, select the appropriate serial port settings, and then click **OK**.

- To advance the paper to the top of the form after printing, select FormFeed Terminator.
- To start at the next line when the printer receives a carriage return, select Auto Line Feed.

GUI overrides

11 To customize the terminal emulation graphical user interface, click GUI Overrides, select items, and then click OK.

GUI Overrides   **OK** ☒

┌─Command Bar Items─────┐   ┌─Action on Host Close─┐
☐ Disable All   ◉ Display Options
☐ Disable File Menu   ○ Shutdown
☐ Disable Edit Menu   ○ Stay Alive
☐ Disable Settings Menu   ○ Reconnect
☐ Disable Button Tools
☐ Disable Close Button

☐ Disable Status Bar   ☐ No connection warning on close
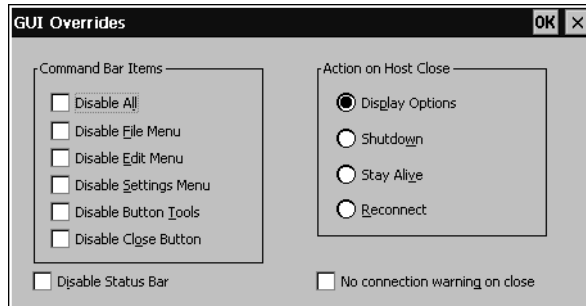
Aux Port

12 If you would like to add an auxiliary device to be used during

the terminal emulation session, click Aux Port.
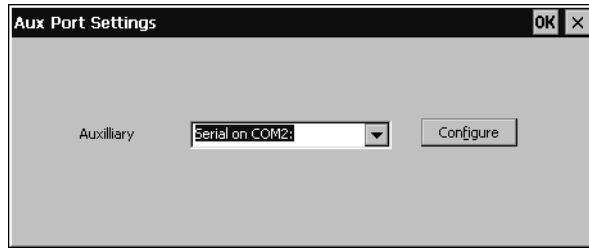
13 In the Advanced Options dialog box, click Finish.

CHAPTER 4 *Using Connections*

This chapter describes how to use server connections on the ThinSTAR.

Using Connections

Starting a connection   Once a connection has been created, you can start that connection.

1 In the Terminal Connection Manager, select the Connections tab.

To display the Terminal Connection Manager, press CTRL + ALT + END.

To start a connection select the Connections tab, and then double-click a connection name.
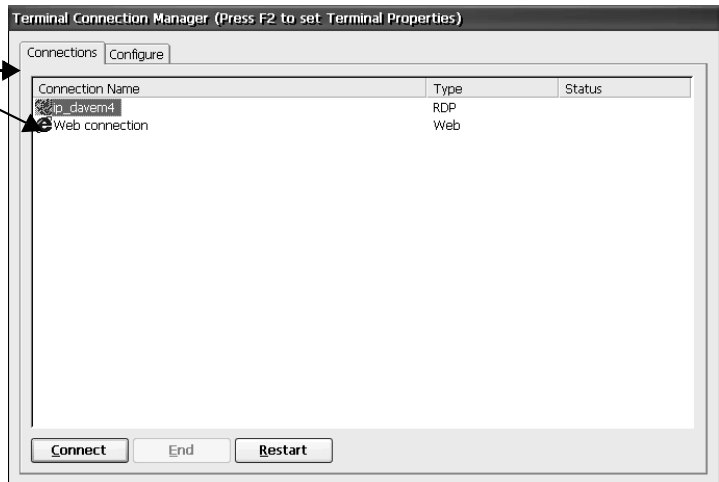
	2 Double-click a connection name.
Connect	Or click a connection name, and click **Connect**.

Or press ↑ or ↓ to highlight a connection name, and then press Enter.

To use the default connection, simply click **Connect**.

3 If Automatic Logon wasn't selected for the connection, type your logon information, and then click OK.

You can start more connections now.

Single Button Connection Manager

If the ThinSTAR is set to display the Single Button Connection Manager, click **Connect** to start the default server connection on the

device. See "Selecting startup options" below to learn how to specify which server connection is the default.

Selecting startup options

As startup options, you can select a default and an autostart connection. The default connection is highlighted in the Connection Manager. An autostart connection starts whenever the ThinSTAR starts.

Note

You can set all connections to start automatically. To learn how, see page 56.

If you don't select a default connection, the first connection listed in the Connection Manager will be used. The autostart connection, if any, also functions as the default connection. Selecting another default connection returns the autostart connection to normal status.

1 In the Terminal Connection Manager Configure tab, select a connection name.

Startup...

2 Click Startup.

Connection Startup ☒

Choose one of the following startup options for the connection you have selected:

Startup Options

◉ Make the selected connection your <u>D</u>efault connection.

○ <u>A</u>utomatically start the selected connection at startup.

| OK | Cancel |
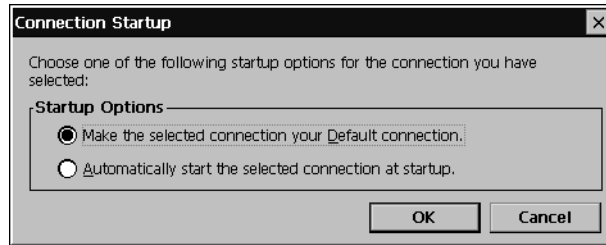
3 Select a startup option, and then click OK.

Switching connections

When more than one connection is active on the ThinSTAR, you can switch between connections by using these key combinations:

- **To cycle through the active connections**, press
  CTRL + ALT + ↑ or ↓.
- **To display the default connection**, press CTRL + ALT + HOME.
- **To open the Terminal Connection Manager**, press CTRL + ALT + END.

  Then select another active connection in the Connections tab.

Cutting and pasting between connections

You can cut and paste text and graphics between Windows programs in different ICA connections. Use the regular Windows cut, copy, and paste commands.

Editing and deleting connections

You can delete inactive connections or change their properties.

Edit...

1 To edit a connection, select the Terminal Connection Manager Configure tab, select the name of the connection you would like to edit, and click Edit.

Or double-click a connection name in the Configure tab.

2 Depending on the type of connection you are editing, a specific edit connection dialog will appear. For detailed information about the specific edit connection dialogs, (see

"Creating Connections" on page 17).

3 When you are finished editing the connection configuration, click OK, or complete the wizard, depending on the type of connection you are editing.

Delete

4 To delete a connection, select its name in the Configure tab, click Delete, and then click Yes.

Printing over the network

When using RDP, ICA, or terminal emulation connections, you can print program files to network printers just as you would on a personal computer.

Printing Locally

To print to a client printer (a printer directly connected to the ThinSTAR), you must setup the printer based upon the type of session you are running.

Setting Up Local Printing in an RDP Session

Programs running in RDP connections can print to client printers, if the ThinSTAR's Properties have been properly configured. To properly configure your printer, see Chapter 5 - Changing ThinSTAR Properties - Step #6.

Local Printing in an ICA Session

Programs, running in ICA connections, can print to client printers, if the ThinSTAR serial or parallel ports have been mapped on a Windows NT-based server. Ask the system administrator for assistance.

Closing connections

End

- **To disconnect a connection**, click **Disconnect** in its Windows Start menu. Or click **End** in the Terminal Connection Manager Connection tab.

  When you disconnect a connection, its applications and files will appear as you left them when the connection is restarted.

- **To log off a connection**, click **Logoff** in its Windows Start menu.

When all the connections are closed, you can turn off the ThinSTAR.

Using a Pericom Terminal Emulation connection

Once you've created a terminal emulation connection, here's how to start using it.

1 **In the Terminal Connection Manager, select the Connections tab.**

2 **Double-click a terminal emulation connection (TEC) name, or click a name and then click Connect.**

3 **If the login for this connection hasn't been automated, enter the network user name and then password.**

After login, the terminal emulation screen appears, with a Command bar at the top, a scroll bar at the right, and a status bar at the bottom.

Command bar

Tip

The curved arrow buttons on right of the Command bar toggle up to 48 soft buttons (12 in four levels) that you can define by selecting Settings | Soft Buttons in the menus

Using the Command bar, you can change settings, print screens, and use the menu commands.

Status bar

The status bar lets you switch between local and online mode, and pause or resume scrolling.

The status bar also displays information about the emulation: typically the emulation type, the line and column of the text cursor, the edit mode (overstrike or insert), and the printer status.

4 **Type entries at the cursor, and then press Enter.**

5 **To close the connection, click File | Exit. Or click the close button (X) on the Command bar.**

CHAPTER 5 *Changing ThinSTAR Properties*

This chapter describes how to set the ThinSTAR Properties.

Changing Configurations

Understanding ThinSTAR properties

After the ThinSTAR is initially configured, you can change its Setup settings, keyboard locale, and other ThinSTAR properties. The ThinSTAR Properties dialog box also includes management options so you can automatically start and restart the connections, password protect the ThinSTAR, and prevent connection property changes.

Don't confuse ThinSTAR properties with connection properties. Connection properties are configured in the Connection Manager and apply only to specific connections. ThinSTAR properties apply to all connections.

Accessing the ThinSTAR Properties dialog box

1 **If the Connection Manager is on screen, press the F2 key.**

2 **If a connection session is on-screen, simultaneously press Ctrl + Alt + End keys to display the Connection Manager screen, then press the F2 key.**

Changing Properties

The General tab

The General tab of the NCD Appliance Properties dialog box lists information about the ThinSTAR hardware and software. The product ID number is unique to the ThinSTAR.

To reset all ThinSTAR and connection properties to their factory default settings, select the Reset check box in the General tab, click **Yes**, and then click **OK** to restart the ThinSTAR.

Caution

If you reset the ThinSTAR, you must reenter all of its properties and connections. TSCALs (Terminal Services Client Access Licenses) for Windows 2000 Server RDP sessions are also deleted and lost when the ThinSTAR is reset to the factory-default property settings.

Appliance Name The Appliance name defaults to the name "NCD-xxxxxx" with the last six digits of the name being the last six digits of the ThinSTAR's built-in network interface MAC address (also the last six digits of the ThinSTAR's serial number). This name is used by Citrix servers to identify the client device, and by Microsoft Windows 2000 Servers with Terminal Services to define client-connected printers. If you change the Appliance Name from the default, you should use another unique identifier.

Note: The Appliance Name field may not contain the following characters:

```
\ : " ; / ~ ' @ # $ % ^ { } < > * + = | ? , . <space>
```

The Display tab

NOTE

The wait time sets the minutes of inactivity after which the screen saver will appear.

Unless the wait time is set for a longer period, your monitor will shut down after 20 minutes of inactivity to save energy.

You can change the desktop area and refresh frequency. If you do, click **Test** to test the setting. If the setting is supported by your monitor, a solid blue screen appears during the test.
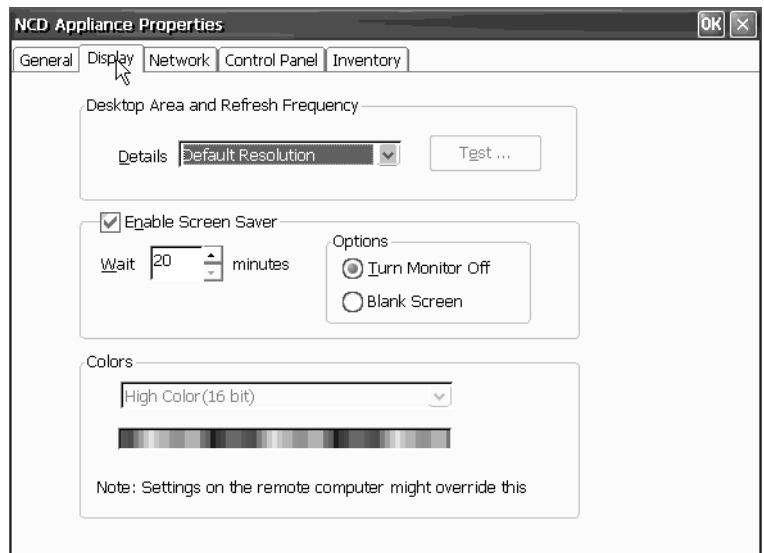
Click the Enable Screen Saver checkbox to enable the screen saver. Select the amount of idle time before the screen saver starts, and whether you would like the screen saver to turn the monitor off or leave the screen blank.

Changing Properties

The Network tab

Select DHCP to supply an IP address to the ThinSTAR, or specify a static IP address. You can also type subnet mask and gateway settings.

To enter DNS or WINS settings, click Advanced Network. This setting is only available if you manually specify an IP address.

To manually specify the network speed, click Network Speed.
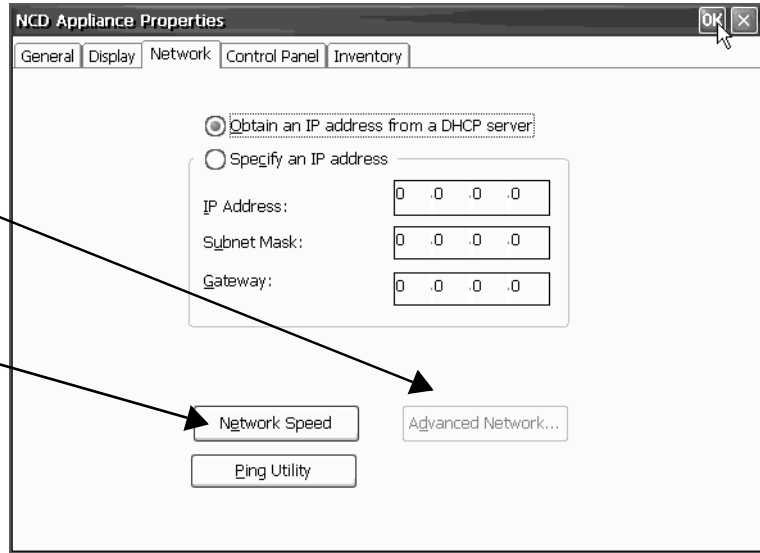
Click **Network Speed** to manually override the device's automatically detected Ethernet connection speed. The options are Auto Detect (default selection), 10 Mbits half duplex, 10 Mbits full duplex, 100 Mbits half duplex, and 100 Mbits full duplex.
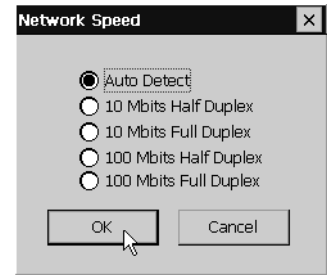
The built-in Ping utility provides a mechanism to check that network settings are correct, and that the network connection is working. Click **Ping** to access the utility's dialog. Enter the destination IP address, then click **OK**. The results of the Ping Utility test appears in the dialog.

To enable DNS or WINS for the ThinSTAR, click **Advanced Network**, type the appropriate settings, and then click **OK**.

Ping Utility		×
IP Address:	10 .10 .80 .123	Ping
Ping IP address 10.10.80.123 succeeded.		
		Close
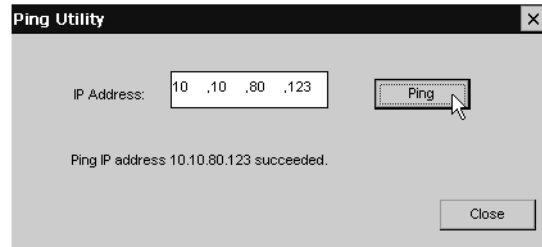
Control Panel tab

The Control Panel tab provides configuration of many features of the ThinStar Appliance.
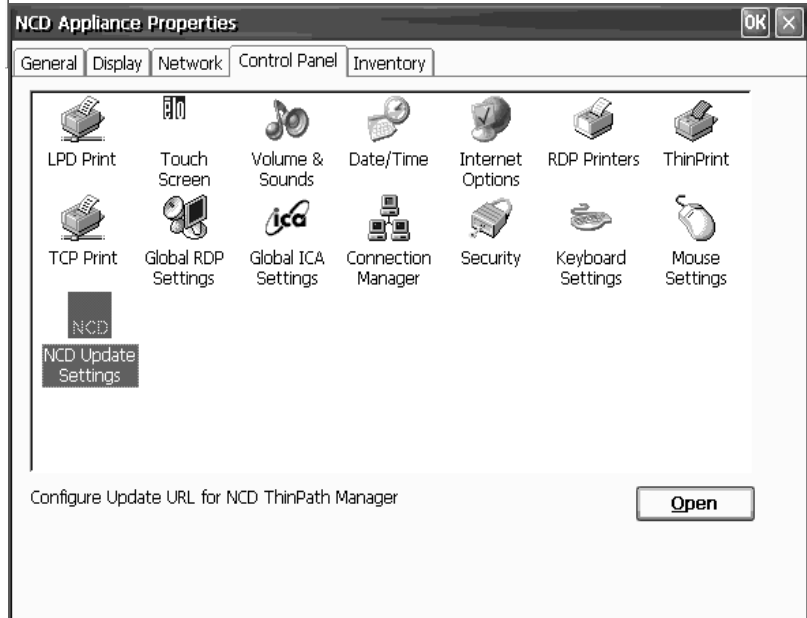
Volume and Sounds Use the Volume Control slider to set the ThinSTAR's internal/external speaker volume. This dialog also allows enabling sounds for events and applications as well as key clicks**.**
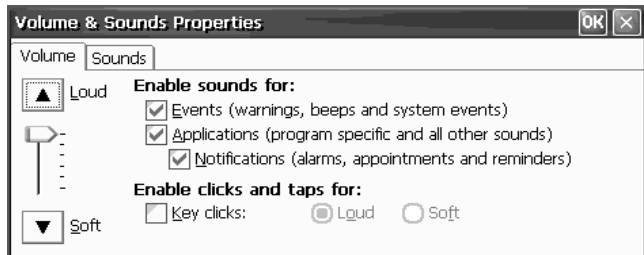
Date / Time   ThinSTAR date, time, and time zone can be set by clicking Time
                         Settings.

                         These settings are used by Citrix MetaFrame XP servers and the ICA
                         6.2 client if the server has been set to enable Per-User Time Zone
                         Support.
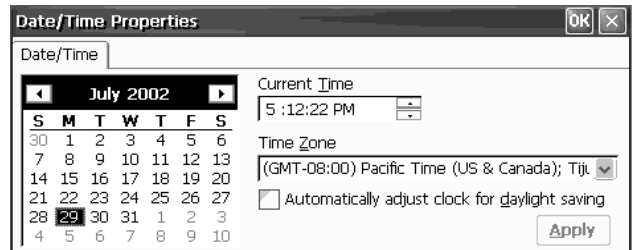
Internet Options   To configure the web browser, click Internet Options in the Control
                         Panel tab.
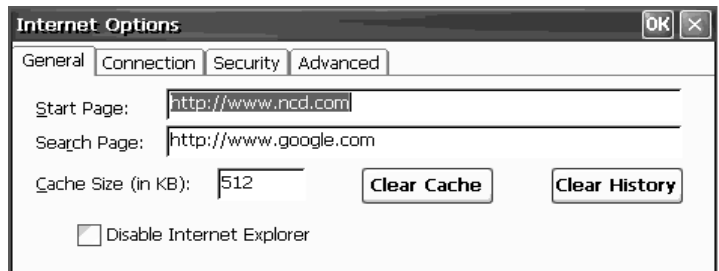
- **Start Page** - The specified Start page URL is the page that will
  appear when you start the browser, or when you click **Home** in
  the browser.
- **Search Page** - The specified Search page URL is the page that
  will appear when you click **Search** in the browser.
- **Browser Cache** - Specify the cache size to use for saving the
  history, cookies, and elements of the pages that you have visited,
  so that they may be accessed when you use the browser in the
  future. The use of these elements can speed up the loading of
  previously visited pages.

Changing Properties

- **Disable Internet Explorer** - Select this option to remove the web connection from Connection Manager.

- **Setting Preferences** - Click the Advanced tab button to specify how you would like the browser to display hyperlinks and images and play sounds.

- **Setting Proxy information** - If the connection to the internet uses a proxy server, then click **Connection Tab** to specify the proxy servers settings.

RDP Printers   **RDP Printers** - The printers defined in this window are used only by RDP connections to Windows 2000 Servers with Terminal Services activated.

Click Add Printer to create an RDP local printer definition, or select an already-defined printer and click Properties.

In the Printer Properties dialog you can specify the following:

Type a name for the printer and the select the Manufacturer and Model of the printer
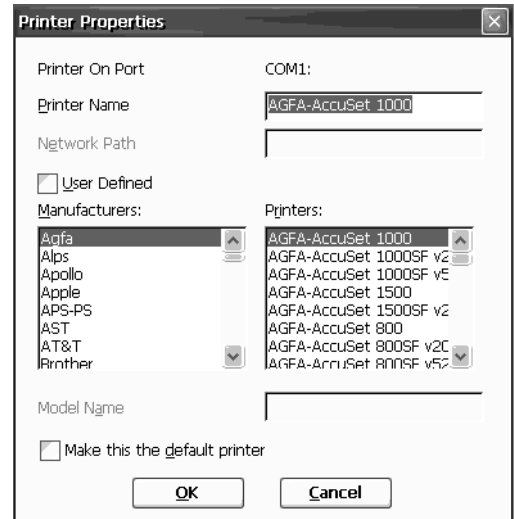
- **Printer Name** - This field allows you to name the printer you have connected to the windows-based terminal.
- **Manufacturers** - Select the manufacturer of the printer connected to the windows-based terminal.
- **Printers** - Select the model of printer you have connected to the windows-based terminal from the list of printers made by the manufacturer you selected.
- **Make this the default printer** - Click this checkbox if you would like the printer connected to the windows-based terminal to be the default.

Once you have defined the printer, click **OK**.

ThinPrint®   ThinSTARs include a local client that supports ThinPrint® servers. To make configuration changes to the ThinPrint client, click the **Thinprint** icon.

For information about configuring the ThinPrint client and server software, please visit http://www.thinprint.com/

ThinPrint is a product of ThinPrint GmbH, Berlin, Germany.

TCP Print   Click this icon to enable a printer connected to the local ThinSTAR to be used by other users through a Windows 2000 Server. In the TCP Print dialog select the port the printer is attached to. You can modify the port number if the default setting is not appropriate.
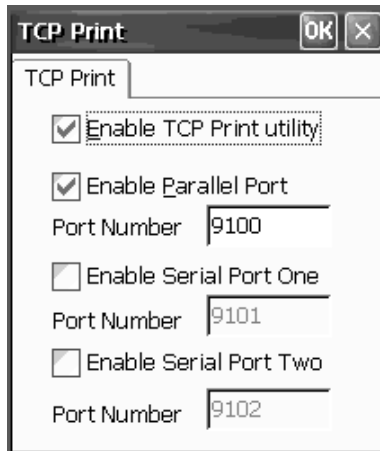
LPD Print   Click this icon to enable a printer connected to the ThinSTAR to be used through any server that can print using the LPR/LPD protocol (UNIX, Linux, Windows NT Server, Windows 2000 Server,

mainframes, etc.). In the LPD Print dialog select the port your printer is attached to and specify the queue name.
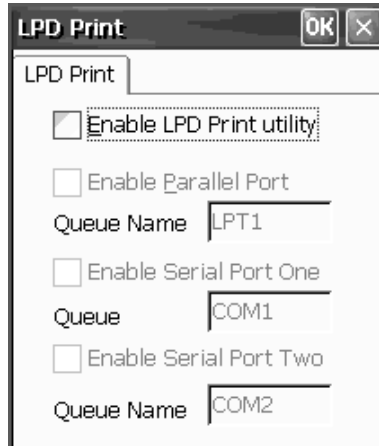
Global RDP Settings

Global RDP Settings control the following settings:

- **Remote Computer Sound** - Set to bring to this computer, don't play, or leave at remote computer
- **Local Devices** - Choose to make local printers and serial ports available in a session
- **Experience** - Choose how to optimize connection performance

Changing Properties
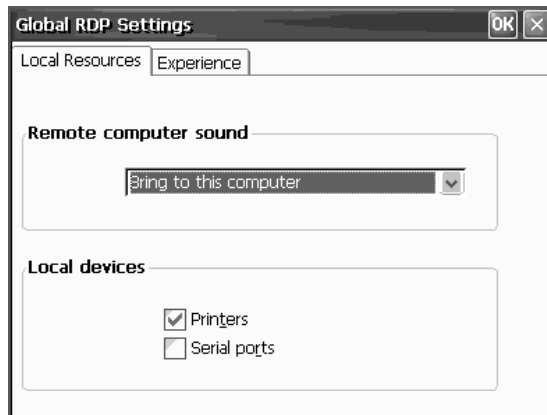
Connection Manager
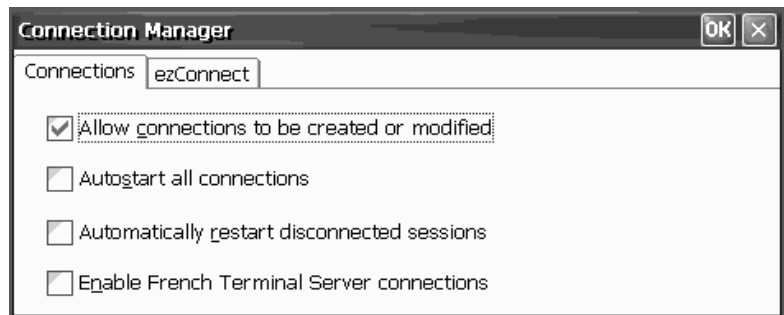
Connections tab

- **Allow connections to be created or modified**

  This checkbox allows you to prevent ThinSTAR users from adding, changing, or deleting connections defined through the Connection Manager. Check this box to allow access to the Configure tab in Connection Manager. Uncheck this box to hide the Configure tab.

  Checking this box and setting a ThinSTAR password effectively locks down the desktop device so that end users may not make any changes.

- **Autostart all connections**

  This checkbox, if checked, causes all of the defined connections (in the Terminal Connection Manager) to be started whenever the ThinSTAR starts. If you desire to have fewer than all of the connections autostart, set the individual connections to autostart. See "Selecting startup options" on page 40.

- **Automatically restart disconnected sessions**

  This checkbox, if checked, causes any disconnected connection to automatically reconnect. Used in conjunction with autostarted connections, a ThinSTAR can be configured to always be connected to one or more servers.

- **Enable French Terminal Server connections**

This checkbox, if checked, enables RDP connections to the French version of Windows NT Server, Terminal Server Edition. This checkbox does not affect ICA connections.

ezConnect tab - set the ThinSTAR to display a single button Connection Manager dialog when the ThinSTAR is booted.
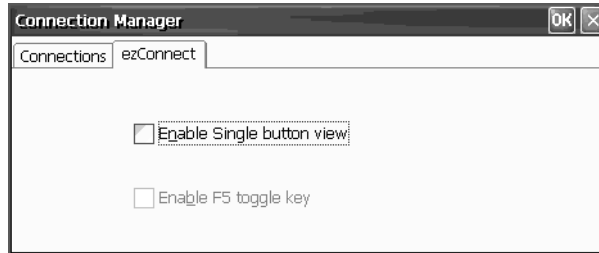
- **Enable Single button view** - Click this checkbox to display a Single Button Connection Manager in place of the default Connection Manager. When enabled, the ThinPATH Connection Manager Connect button starts the connection defined as the Default Connection in the Connection Manager. (See "Connection Startup" on page 20.)

- **Enable F5 toggle key** - Click this checkbox to allow the user to toggle between the Single Button Connection Manager and the Terminal Connection Manager.
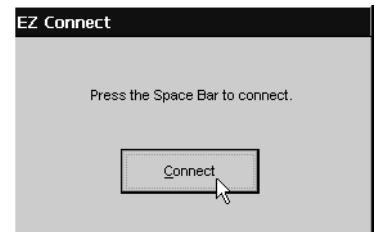
Security   Setting a ThinSTAR password protects the device configuration from unauthorized changes. Click on **Appliance Password Tab** to access the Change Password dialog. If you are setting the password for the first time, leave the Old Password field blank. If you are changing an existing password, you must enter the existing password as well as the new password.

Changing Properties

To delete a password, type the old password and don't type a new password.
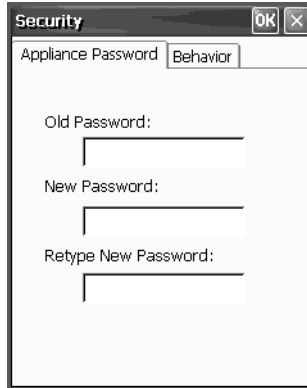
Mouse Settings

Use the slider to set mouse speed. Choose whether the mouse button support should be right or left handed.
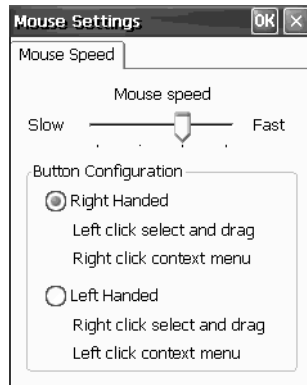
Keyboard Settings

Locale sets the keyboard language of the keyboard attached to the ThinSTAR.

- **Enable Num Lock key at startup** - Forces the Num Lock key to be set on during ThinSTAR startup, if checked.
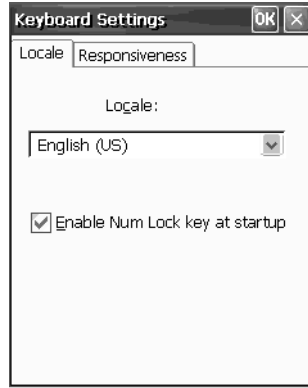
Responsiveness tab controls the Character Repeat: Set the repeat delay and rate for keys held depressed on the keyboard.

Touch Screen   Port setting and access to calibration screen for ELO touch screens.
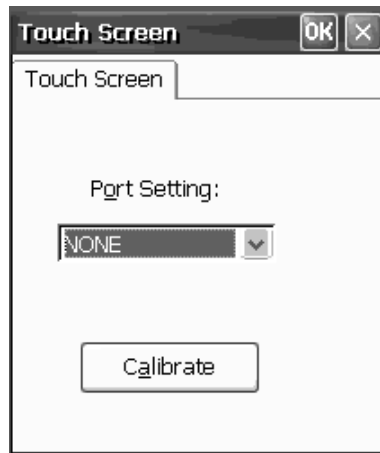
NCD Update Setting   Set the URL for NCD ThinPATH Management Server, which provides remote management of the terminal.

NCDURL

NCD Update Settings

Enter Url:
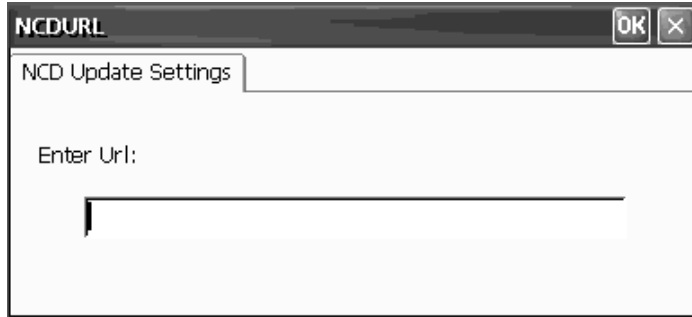
The Inventory tab

The Inventory tab displays information about the ThinSTAR's network settings, and its software and hardware specifications.

NCD Appliance Properties

General | Display | Network | Control Panel | Inventory

Network

IP Address: (DHCP) 192.43.159.134 Primary DNS: 192.86.85.5

Subnet Mask: 255.255.255.0 Secondary DNS:

Default Gateway: 192.43.159.1 DNS Domain: pcx.ncd.com

MAC Address: 00:E0:C5:6E:BF:CA Primary WINS: 192.43.159.11

Renew Secondary WINS: 192.86.85.79

Software

NCD Rev. 6.0 (July 18 2002)

Windows CE: 4.0

ICA Client: 6.3 Build 1050

RDP Client: 5.1

Pericom Client: 1.6.0 Build 54748

Boot Software: BIOS

Appliance

Family: WN6b

CPU: Geode

Main Memory: 28.0 MB

Storage Media: 16 MB DiskOnChip

Video Memory: 4.0 MB

Resolution: 800x600 (60Hz) - 256

In the Network section, the subnet mask and default gateway settings are used if the network has multiple subnets. The MAC (Media Access Control) address is the unique hardware identifier for the ThinSTAR's integrated network interface.

In the ThinSTAR section, Main Memory shows the amount of random-access memory (RAM) in the ThinSTAR, and Resolution shows the current screen resolution for your monitor.

Changing the Global ICA Client Settings

You can change settings such as hotkeys and server location for all the ICA connections using the Global ICA Client Settings dialog box. In the NCD Appliance Properties Control Panel tab, click **Global ICA Settings**.

Hotkeys tab   In the Hotkeys tab, you can use the drop-down boxes to customize hotkeys for the ICA connections.

Global ICA Client Settings   **OK** ✕

Hotkeys | Preferences | Server Location | Firewall Settings | PNLite

Status Dialog	Ctrl 6	CTRL-ESC	Ctrl 5
Close Session	Ctrl 2	ALT-ESC	Ctrl 7
ESC	Ctrl 3	ALT-TAB	Ctrl 8
CTRL-ALT-DEL	Ctrl 4	ALT-BACKTAB	Ctrl 9
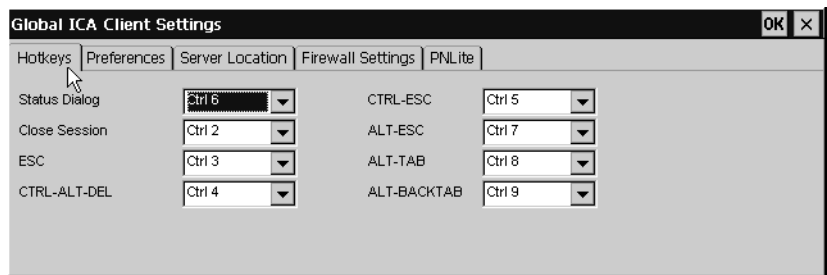
TABLE 1. Default ICA Hotkeys

Windows NT Hotkeys	ICA Hotkeys	ICA Function
Status Dialog	CTRL + 6	Displays the connection status.
Close Remote Application	CTRL + 2	Disconnects the connection.
Toggle Title Bar	CTRL + 3	Hides or displays the desktop title bar in the connection.
CTRL + ALT +DEL	CTRL + 4	Displays the connection's Windows NT Security dialog box.

TABLE 1. Default ICA Hotkeys

Windows NT Hotkeys	ICA Hotkeys	ICA Function
CTRL + ESC	CTRL + 5	Displays Task List (WinFrame) or Start menu (MetaFrame).
ALT + ESC	CTRL + 7	Cycles through the windows of applications.
ALT + TAB, ALT + BACKTAB	CTRL + 8 OR 9	Cycle through the applications in the connection.

Preferences tab

You can enter a serial number for the ICA client software, which is needed for servers running Citrix's WinFrame. You can also enter a unique client name for the ThinSTAR and select the default Windows colors. For PPP connections, 16 colors may provide better performance.
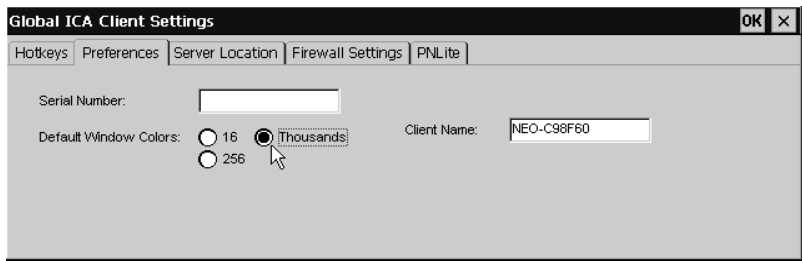
The Client Name set in this dialog is the same as the Appliance Name set on the General tab of the NCD Appliance Properties dialog. (See "Appliance Name" on page 46.)

Note: The Client Name field may not contain the following characters:

```
\ : " ; / ~ ' @ # $ % ^ { } < > * + = | ? , . <space>
```

Server Location tab

When you define ICA connections, the ICA Client Setup Wizard uses a broadcast to locate a server configured as an ICA Master Browser server. Since network broadcasts are not routinely transmitted through routers, if the Master Browser is on a subnet different from the ThinSTAR, no list of servers or published applications will appear from which to select.

Tip

If you want to delete all the selected ICA servers and groups, click Default List.

Don't have MetaFrame XP?

By default, the ICA 6.2 client uses TCP + HTTP browsing, which is the default for MetaFrame XP Master Browsers / Server Farms. If you are using earlier versions of MetaFrame or WinFrame, you should change to "TCP browser."

Using the Server Location tab, you can add addresses of ICA Master Browser servers on other subnets to make setting up connections easier (selecting from a master list). You can create up to three groups of ICA servers (Primary, Backup 1, and Backup 2).
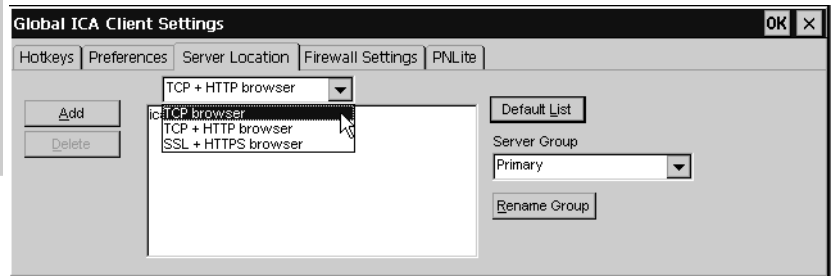
To select a server, first select a server group and then click **Add**. Then type the IP address or DNS name of a Citrix Master Browser server and click **OK**. You can add more servers to this and other groups, delete servers, and prioritize them.

Note: Select **Use HTTP server location** if the firewall restricts UDP broadcasts. This option enables the client to retrieve a list of all Citrix servers on the network and a list of all published applications from a Citrix server that's behind a firewall. Using this setting requires the user to specify the server address and the port to use when you click **Add**.

Firewall Settings tab

You can set the ICA connections to connect through a SOCKS proxy server firewall. First select the Connect via SOCKS proxy checkbox,

and then type the IP address of the SOCKS server. If the port number isn't 1080, type another.

| Global ICA Client Settings | OK | × |

Hotkeys | Preferences | Server Location | Firewall Settings | PNLite

☐ Connect via SOCKS proxy   ☐ Use alternate address through firewalls

Address of SOCKS proxy to use   Port
[   ] : [1080]

Address of SSL relay to use   Port
[   ] : [443]
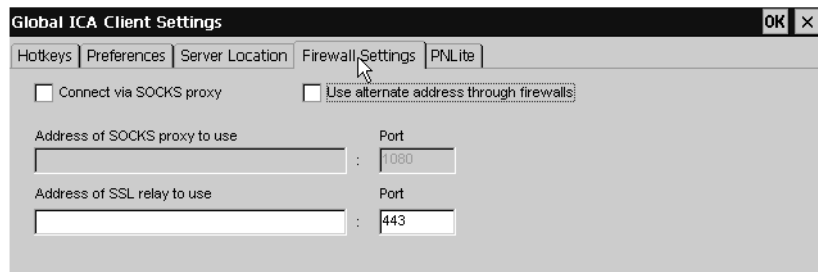
Note: If you select a SOCKS proxy server, you must specify at least one Citrix server in the Server Location tab for server browsing to work. Also, if the ICA client is outside a firewall that uses address remapping, you must select the Use alternate address through firewalls checkbox.

PNLite tab

PNLite allows you to set the ThinSTAR to display only the server connections and published desktops provided from an NFuse server. When enabled, at startup the ThinSTAR prompts for a password (or other appropriate user credential information if not already saved) and then displays only ICA connections and published applications that are made available to the specified user.

Click the Enable PNLite checkbox if you wish to use the ThinSTAR solely as a PNLite device connected to a Citrix NFuse server.

Enter the address and port of the NFuse server, and then enter your user credentials to logon to the server.

| Global ICA Client Settings | OK | × |

Hotkeys | Preferences | Server Location | Firewall Settings | PNLite

☑ Enable PNLite

Server
Address and port of NFuse server
[http://www.citrix.com]   [8080]
☑ Use SSL

User credentials
User name: [demo 1]
Password: [   ]
Domain: [test domain]
☐ Save password
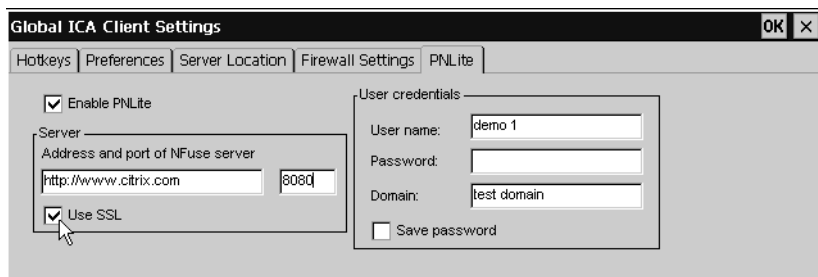
Any user credential information not provided on this screen will be prompted-for when the ThinSTAR starts up.

Appendix 5   *Using LPR/LPD Printing*

This appendix describes how to configure your ThinSTAR for network printing with Windows and UNIX servers.

Network printing using LPR/LPD

LPR (which stands for "Line Printer Remote" although you can use it with most kinds of printer) is a printing protocol that is part of the TCP/IP protocol suite. LPR allows you to send a print job to a networked computer (or to an LPR-equipped network printer) for handling with other print jobs (the job gets placed in a "print queue"). In order for LPR to work, there must be a receiving device that is running the Line Printer Daemon ("LPD"), the computer utility that is responsible for accepting LPR jobs.

ThinSTARs include LPD for accepting LPR print jobs. Windows NT and Windows 2000 servers can print using LPR, as can UNIX/Linux servers and many mainframes. That means that print jobs can be directed to ThinSTARs from virtually any server operating system. This allows administrators to create network printers for use by anyone using the network, without depending on having an active user session.

Both the ThinSTAR and the server require configuration to use LPR/LPD. This appendix describes typical configuration settings on ThinSTARs, as well as on Windows and UNIX servers.

Configuring the ThinSTAR for LPR/LPD printing

1 Power off the ThinSTAR.

2 Connect the printer that is to be networked to a parallel or serial port.

3 Power on the ThinSTAR.

4 When the Connection Manager appears, press **F2** to access the NCD Appliance Properties dialog.

5 Select the LPD Print icon within the Control Panel tab.
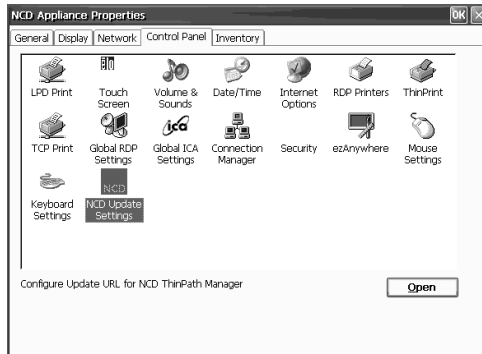
6 Check to make sure that LPD is enabled for the port to which you connected the printer. (Select Enable LPD Print Utility if not checked, and make sure checkbox for the port to which you connected the printer is checked.) Click **OK** to close the LPD Print Utility dialog.

7 Select the Inventory tab.

8 Note the IP address of the ThinSTAR.
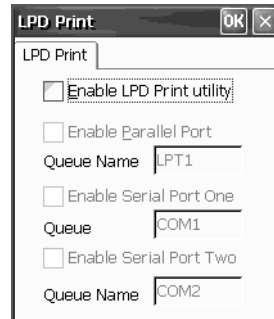
Windows 2000 LPR/LPD printing to the ThinSTAR

1 On the Windows 2000 server, log in as administrator.

2 Open the Printers dialog.

3 Select Add Printer.

4 Click **Next**, select Local Printer, making sure that the checkbox is NOT checked for Automatically Detect and Install my Plug and Play Printer. Click **Next**.

5 Select Create a new port, and scroll down to LPR port. Click **Next**. A dialog will appear for entering information about the device to which you connected the printer.

Add LPR compatible printer		
Name or address of server providing lpd:	<IP_Address_of_Appliance>	OK
Name of printer or print queue on that server:	LPT1	Cancel
		Help
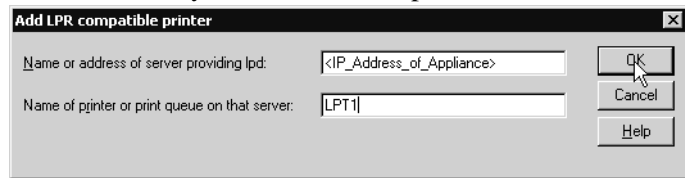
6 On the top line (Name or address of server providing lpd), enter the IP address of the ThinSTAR.

7 In the bottom line (Name of printer or print queue on that server), enter the Queue Name of the port to which you attached the printer. For example, if you attached the printer to the parallel port, you would enter the Queue Name "LPT1" (without any punctuation).

8 Click **OK**.

9 The rest of the printer installation is the same as for any other Windows printer.

Windows NT 4 LPR/LPD printing to the ThinSTAR

1 On the Windows NT 4.0 server, log in as administrator.

2 Open the Printers dialog.

3 Select Add Printer.

4 Select My Computer. Click **Next**.

5 Select Add Port.

6 Select LPR Port. Click **New Port**.

7 A dialog will appear. On the top line (Name or address of server providing lpd), enter the IP address of the ThinSTAR.

8 In the bottom line (Name of printer on that machine), enter the Queue Name of the port to which you attached the printer. For example, if you attached the printer to the parallel port, you would enter the Queue Name "LPT1" (without any punctuation).

9 Click **OK**.

10 The rest of the printer installation is the same as for any other Windows printer.

Linux/UNIX LPR/LPD printing to the ThinSTAR

1 On the Linux/UNIX server, first log in as administrator (root).

2 Edit the /etc/printcap file and add the following section with the appropriate values:

```
<printer name>:\
      :sd=/var/spool/lpd/<port driver>:\
      :mx#0:\
      :sh:\
      :rm=<ip address>:\
      :rp=<remote port>:
```

As an example: For a printer to be named "hp5si," attached to thin client at IP address "10.10.100.13," connected to the parallel port (Queue Name "LPT1"), the entry would be:

```
hp5si:\
        :sd=/var/spool/lpd/hp5si:\
        :mx#0:\
        :sh:\
        :rm=10.10.100.13:\
        :rp=LPT1:
```

3 Save the file.

4 To print from the command line, enter the command:

```
lpr -P <printer name> <name of file to print>
```

Further driver configuration on Linux is left to the customer.

Frequently observed issues

Don't use punctuation   When you enter the Queue Name, be sure not to add a colon (:) or any other punctuation. Just use the Queue Name, exactly as it appears in the LPD Printer Utility dialog on the ThinSTAR.

"Printer name" really means Queue Name   Although both Windows 2000 and Windows NT 4.0 use the term "name of printer" to prompt for information when defining an LPR printer, the correct entry is the appropriate Queue Name (see above). For example, if you attached the printer to the parallel port, you would enter the Queue Name "LPT1" (without any punctuation).

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