



NCD ThinSTAR
Terminal Startup Guide

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Terminal Startup Guide

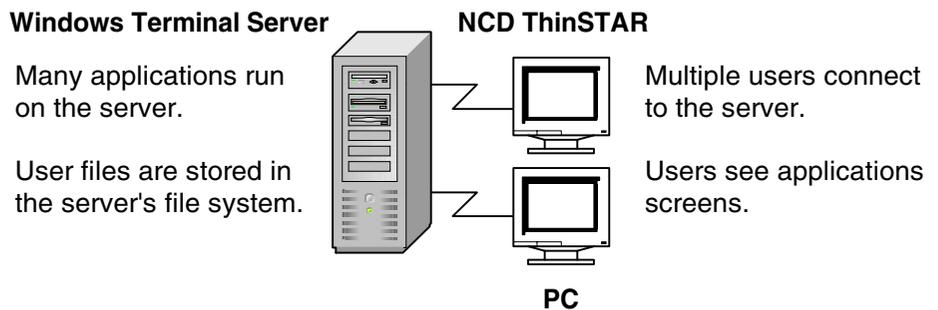
This startup guide follows the *NCD ThinSTAR Operating Software and NCD ThinPATH Manager Installation Guide*. It describes NCD's thin client computing and explains how to set up individual NCD ThinSTAR desktops.

If your site plans to implement centralized configuration through the optional NCD ThinPATH Manager product, use the *NCD ThinPATH Manager Centralized Startup Guide* instead.

NCD Thin Client Computing

With the base NCD ThinSTAR product, users at NCD ThinSTAR terminals run Windows applications on servers with Microsoft Windows 2000 with Terminal Services, Microsoft Windows NT 4.0, Terminal Server Edition, the Citrix MetaFrame software for Terminal Server, or the Citrix WinFrame operating system. Additional NCD products extend access to UNIX hosts and to other hosts through terminal emulation.

Users do not run applications stored on their local terminals; they see application screens on their desktops, but the applications are running on servers.



A client is software that lets you use server resources. Thin client software is a client that runs on a thin client device.

A thin client device is a compact terminal. The NCD ThinSTAR terminal is a thin client device. It stores its Operating Software in non-volatile memory called flash memory, then loads the Operating Software into RAM memory when it restarts.

When you first start a terminal, you complete a setup wizard to set terminal properties and create an initial connection. Later, you can change terminal properties with Terminal Properties software and you can add connections.

Introduction to Terminal Setup

The terminal setup described in this guide involves going from terminal to terminal and completing the following processes:

- Completing initial terminal setup
- Creating connections
- Configuring terminal properties

Once these steps are completed, the user can connect to a Windows Terminal Server and run applications that are on the server.

In preparation for setting up terminals, you may want to print the following reference documentation, which is in PDF format:

- *NCD ThinSTAR Connection Reference*
- *NCD ThinSTAR Terminal Properties Reference*
- *NCD ThinSTAR Terminal Administration Reference*

These documents are on the product CD and are installed online. To reach the online documents, select **Start\Programs\Administrative Tools (Common)**, then select **NCD ThinPATH Manager\OnLine Documentation** or **NCD ThinSTAR OS\OnLine Documentation**.

Completing Initial Terminal Setup

This section explains how to do initial terminal setup, which includes starting an NCD ThinSTAR terminal and completing setup wizards for the terminal and for printing.

To start terminals and complete the setup wizards:

1. Start the terminal.
2. Click **Next** when the Welcome appears.
3. Click **Accept** at the License Agreement to acknowledge acceptance of the legal terms governing product use.
4. Select the network connection type, then click **Next**.

The terminal can connect to a server through the LAN or by dialing in over a modem.

5. Select a default client, then click **Next**.

The default can be the Microsoft Terminal Server client or the Citrix ICA client. The NCD dial-up client is not a protocol client. It creates a network connection via modem for protocol clients.

6. Enable or disable dynamic assignment of IP addresses, then click **Next**. For dial-up clients, IP addresses are not requested; go to Step 9 on page 5.

Choose an addressing option:

- **Yes, use the IP information supplied by DHCP.**

A network with DHCP can provide the IP address. A terminal gets its address and other network identifiers through the DHCP service by default if it is properly connected to the network and DHCP service is available and configured. Go to Step 9 on page 5.

— **No, I will enter static IP information.**

You can have a specific IP address for the terminal. This is selected automatically if the network does not have DHCP or the terminal is not properly connected to the network.

If this is selected automatically in a network with DHCP configured and running, the terminal cannot get its IP address and communicate on the network. Verify that the terminal is properly connected to the network, then restart the terminal. The setup wizard should detect the DHCP server and select the DHCP option.

7. If you chose static IP addressing, enter settings, then click **Next**.

— **IP Address**

Required. The IP address for the terminal.

— **Subnet Mask**

Required. The mask assumes that there are no subnets. If there are subnets, enter the mask for the terminal's subnet.

— **Gateway**

Optional. The address of the machine the subnet uses to communicate with another network.

8. If you chose static addressing, enable or disable DNS or WINS name resolution services and provide network information, then click **Next**.

Windows NT hosts support both WINS and DNS name resolution services. The DNS server can be a Windows NT server or a UNIX host. The selected services must be properly configured and available on the network. Select either or both services:

— **Enable DNS**

— **Enable WINS**

Provide the following network information:

— **Default Domain Name (DNS only)**

The TCP/IP domain for the DNS server. If you specify a default domain name and a primary server IP address, users can identify a server by its host name.

— **Primary Server IP Address**

The IP address of the DNS or WINS server that resolves device names.

— **Secondary Server IP Address**

The IP address of the DNS or WINS server that resolves device names if the primary server cannot resolve them.

9. Choose a display resolution and click **Test** to check it. When it is acceptable, click **Next**.

You can use almost any monitor with the terminal. Newer monitors support the DDC (Display Data Channel) protocol, version 2.0, that lets a computer's video chip query monitors and adjust video settings to get the best desktop area and refresh rate the monitor supports. The screen flickers less with a higher refresh rate; you should specify at least 70 Hz.

With the default option, **Best Available Using DDC**, the terminal checks for a DDC 2.0-compliant monitor.

If the monitor is DDC 2.0-compliant, the terminal sets the display to the best resolution the monitor supports. NCD ThinSTAR terminals support the following resolutions, all at an 85 Hz refresh rate:

| | |
|-----------------------------------|-------------------|
| NCD ThinSTAR 200 terminals | Up to 1024 x 786 |
| NCD ThinSTAR 250 terminals | Up to 1280 x 1024 |
| NCD ThinSTAR 300 series terminals | Up to 1600 x 1200 |
| NCD ThinSTAR 400 series terminals | Up to 1600 x 1200 |

If the monitor is DDC 2.0-compliant, but you want a specific resolution, select and test the resolution.

If you select **Best Available Using DDC** and the monitor is not DDC 2.0-compliant or cannot be identified, the terminal uses 800 x 600 and 75 Hz, but continues to display **Best Available using DDC** as the setting.

If you get the default 800 x 600 desktop, the monitor may still support a better resolution. To check and select a higher resolution, see the *NCD ThinSTAR Terminal Properties Reference*. If the test pattern, a bordered rectangular grid, is not distorted or skewed, the monitor supports the resolution.

After completing the setup and connection wizards, follow instructions in the *NCD ThinSTAR Terminal Properties Reference* to see which resolution DDC selects.

10. Assign a name to identify your terminal.

If you have NCD ThinPATH Manager, an optional product, the name you assign appears in the Managed Terminals List, and you can use it with the Configuration Tool and Remote Restart Tool. The list includes all terminals that have restarted and contacted the Management Server. The name is an identifier; it is not a network address.

11. If a printer is attached to your terminal and you want to configure it for Microsoft Terminal Server Client connections to Windows 2000 servers, click **Yes** (otherwise, click **No**), then click **Next**.

If configuring the printer:

- Select the port the printer is to use, then click **Next**.
- Select the printer manufacturer and model, then click **Next**.
- Enter a printer name to identify the printer, then click **Next**.
- Choose whether to make this the default printer, then click **Next**.
- Choose whether to configure another printer, then click **Next**.

12. To review or change previous settings, click **Back**, then click **Finish** to apply the settings. The terminal restarts, if necessary.

After initial setup, you can use Terminal Properties to change the configuration, as described in the *NCD ThinSTAR Terminal Properties Reference*.

The setup wizard does not reappear unless the terminal performs a software recovery or you reset the terminal to factory defaults as described in *NCD ThinSTAR Terminal Properties Reference*.

Managing Connections

Terminals can connect to a Windows Terminal Server through LAN connections and modem connections.

Two clients, each with its own communication protocol, provide logical connections:

- Microsoft Terminal Server client connections

The Microsoft Terminal Server client uses the RDP protocol to connect to a Windows Terminal Server.

- Citrix ICA connections

The Citrix ICA client uses the ICA protocol to connect to a server running Citrix WinFrame or to a Windows Terminal Server running Citrix MetaFrame.

A third client, the NCD dial-up client, provides network transport for an RDP or ICA session over a modem.

Creating Connections

You create connections with connection wizards and administer them with the Connection Manager.

After terminal setup, the connection wizard for the default client starts. If the default is a dial-up connection, the dial-up connection wizard starts after the client connection wizard. For information about these wizards, see the *NCD ThinSTAR Connection Reference*.

If connections exist, the NCD ThinSTAR Connection Manager appears instead of a connection wizard.

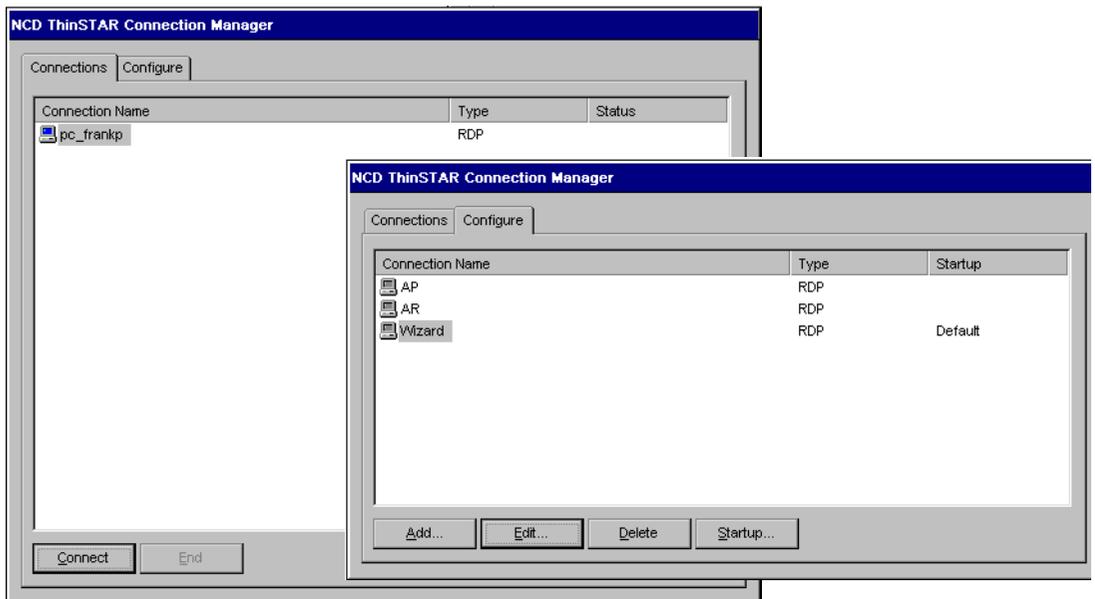
Going to the Connection Manager

If you are not at the Connection Manager, press **Ctrl+Alt+End** to go there.

Using the Connection Manager

The Connection Manager has a **Connections** tab for starting or ending sessions and a **Configure** tab for configuring connections. By default, the **Configure** tab is enabled so that you can add, change, and delete connections. However, you can disable the tab through Terminal Properties to protect the configuration from changes. This is explained in the *NCD ThinSTAR Terminal Properties Reference*.

In the following example, the **Configure** tab is enabled.



Verifying Connections

After completing the setup wizard and connection wizard, you can run diagnostics to verify the network connection.

To verify the connection:

1. Press **F2** to go to Terminal Properties, then select **Management > Network > Diagnostics**.
2. Identify the host to ping (by IP address or host name, if the network has a name resolution service) and click **ping**.

Configuring Terminal Properties

Terminal properties are the configuration values for NCD ThinSTAR terminals. You can run Terminal Properties software to configure a terminal.

You define essential properties when you configure the terminal with the setup wizard. After setup, you can view and modify settings through Terminal Properties, as described in this section. Property descriptions are in *NCD ThinSTAR Terminal Properties Reference*.

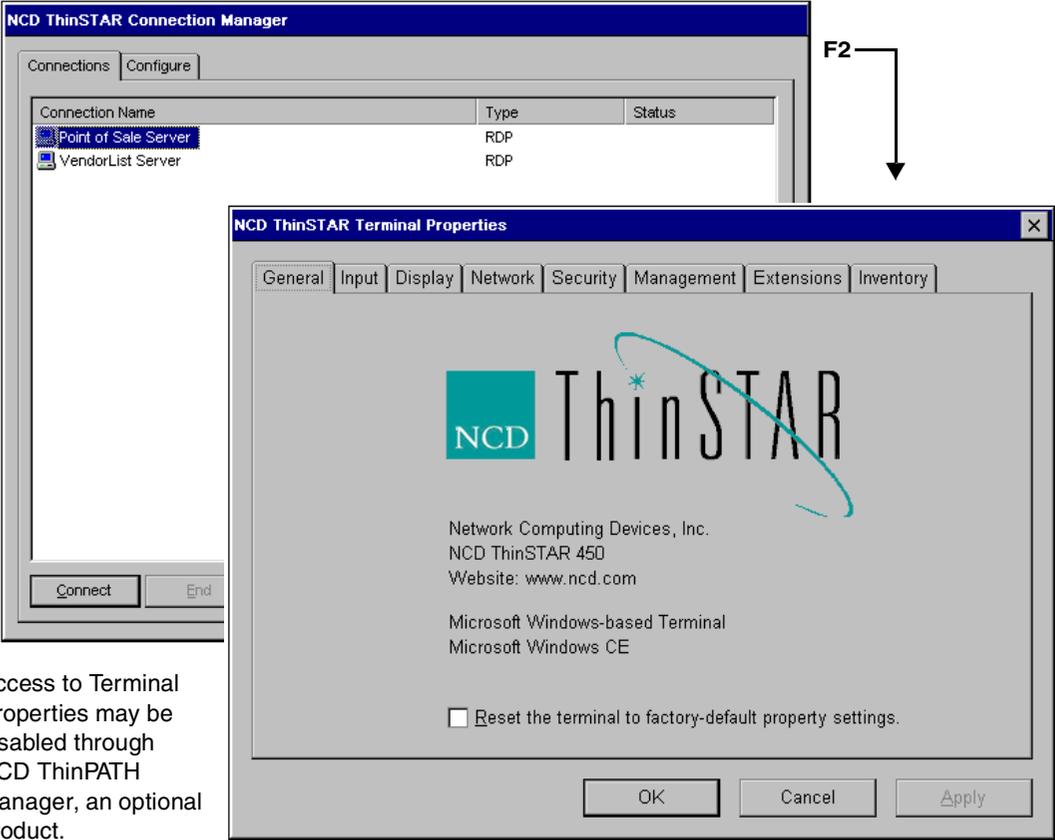
Terminal Properties software presents all configuration values and hardware, software, and network inventory details in one place. The information is organized on the following tabs:

- **General** — identifies the product and provides an option for resetting all configured values to factory defaults.
- **Input** — has settings for the keyboard and the mouse.
- **Display** — has settings for the monitor, including resolution, refresh rate, and a screen saver.
- **Network** — has basic settings for network addresses.
- **Security** — provides password protection.
- **Management** — has tabs with settings for pointer speed, audio, touchscreen (available on the NCD ThinSTAR 300 and 400 series), the Management Server, hotkeys, network, monitor power, and clients. The network information on the **Management** tab provides additional networking options and includes diagnostics.
- **Extensions** — lists additional terminal options, including identification and wireless options.
- **Inventory** — has tabs with information about hardware, software, the network, and graphics.

Access to Terminal Properties

If you are at the Connection Manager, press **F2** to go to Terminal Properties. If you are not at the Connection Manager, press **Ctrl+Alt+End** to go there, then press **F2** to go to Terminal Properties.

Ctrl+Alt+End →



Access to Terminal Properties may be disabled through NCD ThinPATH Manager, an optional product.

Password Protection

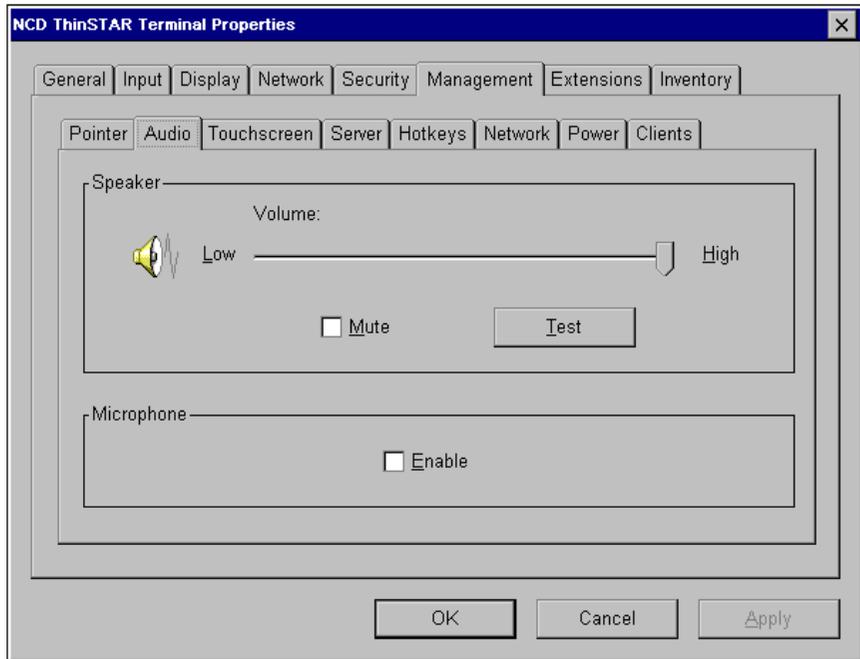
You can protect the terminal configuration with a password. If a password exists, terminal properties are visible, but you must enter the password to change properties except those on the following tabs: **Input**, **Display**, **Management > Pointer**, **Management > Audio**, **Management > Power**, and **Management > Touchscreen**.

Keyboard Navigation in Terminal Properties

You can use the keyboard to navigate in Terminal Properties. When you are on a tab name, you can use the **Alt** key with an underlined letter to go to a property and change its value.

Going to a Property or Button

As an illustration of keyboard navigation, consider the **Audio** tab.



Going to a property or button has the following effects:

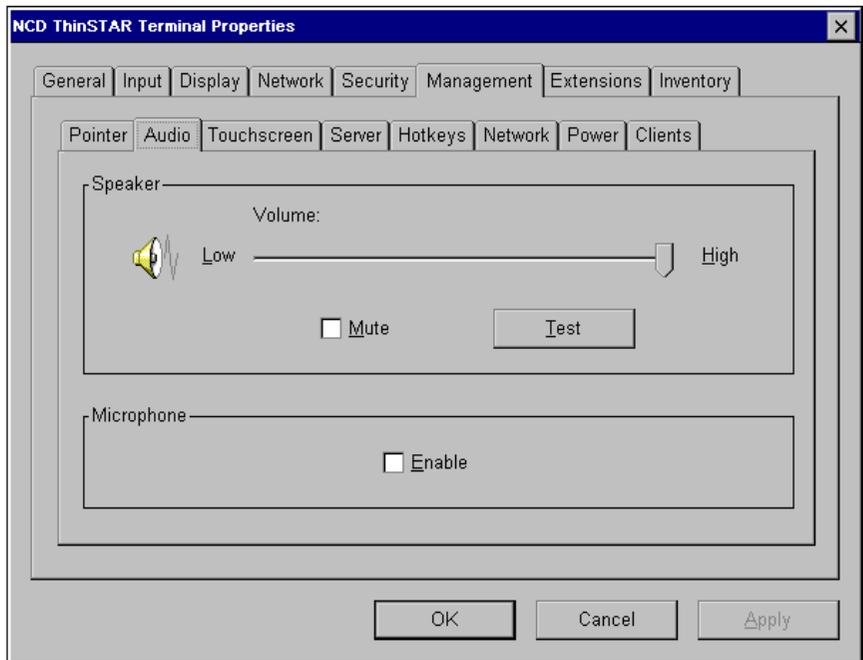
- Going to a slider moves the cursor one unit. For **Volume**, **Alt+L** moves it one unit lower and **Alt+H** moves it one unit higher.
- Going to a checkbox toggles its value. For example, if the **Enable** box is checked, using **Alt+E** disables the property.
- Going to a button activates the button. For example, **Alt+A** goes to the **Apply** button and applies changes.

In a property, the underlined letter without **Alt** goes to properties or buttons on the same tab. In **Volume**, **T** activates the **Test** button. This shortcut is not available for list boxes or fields that allow you to edit information.

Cycling Through Tabs, Properties, and Buttons

You can press **Tab** to cycle down through a main property tab and its contents or press **Shift+Tab** to go in reverse tab order.

For example, from the **Management > Audio** tab, you can press **Tab** to go through rows of tabs, properties, and buttons as follows: **Audio** tab, **Volume** field, **Mute** button, **Test** button, **Enable** button, **OK** button, **Cancel** button, **Apply** button (if you made any changes). After cycling down, you start back up at the **Management** tab.



Saving or Ignoring Changes and Exiting

After viewing or modifying configuration settings, you can save or cancel changes and exit.

The **Apply** button, the **OK** button, and the **Cancel** button perform these functions, as follows:

| Button | Result |
|---------------|---|
| Apply | Saves changes and remains in Terminal Properties. |
| OK | Saves changes and closes Terminal Properties, then returns to the Connection Manager. |
| Cancel | Closes Terminal Properties. Any changes that you did not apply are lost. |

A suggested practice is to use the **Apply** button to apply changes on each tab, then to use the **OK** button when you are ready to exit Terminal Properties.

Assigning a Terminal to a Management Server

Each terminal needs to be assigned to a single Management Server.

One Management Server per Subnet

By default, terminals broadcast for the Management Server on their local subnet. If you have one Management Server for each subnet, you do not need to assign a Management Server.

One Management Server for Multiple Subnets

If one Management Server is to support multiple subnets, the recommended practice is to bring the terminal onto the local subnet and assign the Management Server when setting it up.

To assign a Management Server:

1. In Terminal Properties, select **Management > Server** and enter the IP address of the Management Server.
2. Restart the terminal.

Multiple Management Servers on One Subnet

It is possible to have multiple installations of NCD ThinSTAR Operating Software on the same subnet, but NCD does not recommend this type of installation.

If you feel that multiple Management Servers are needed on the same subnet, please contact NCD Technical Support. They can assist you with planning and implementing the installation.

Summary of Navigation Paths

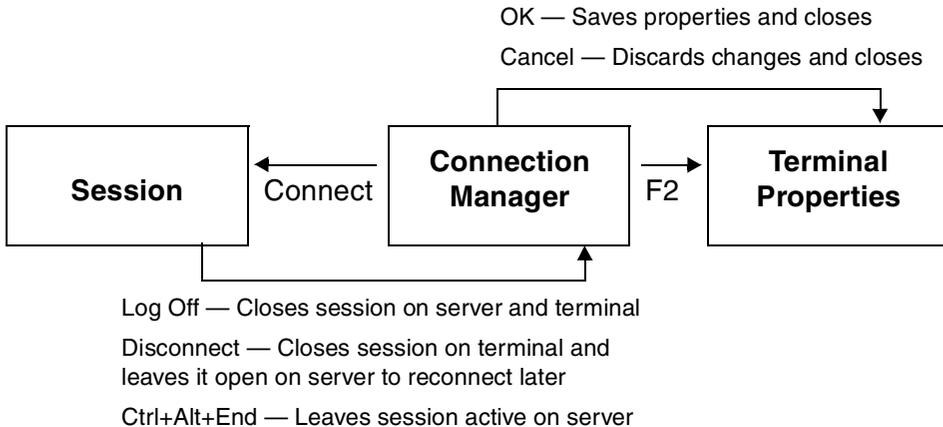
After initial setup, which involves setup and connection wizards, the Connection Manager and Terminal Properties are the main tools you use to administer NCD ThinSTAR terminals. This section summarizes movement between tools and use of special key sequences.

Navigation Paths

In the Connection Manager, you can press **F2** to go to Terminal Properties.

In Terminal Properties, you can click **OK** to save and close Terminal Properties and return to the Connection Manager, or click **Cancel** to return to the Connection Manager without saving changes.

When you are in a communication session, you can log off, disconnect, or press **Ctrl+Alt+End** to display the Connection Manager. Pressing **Ctrl+Alt+End** leaves the connection active on the terminal. Disconnecting ends the connection on the terminal but leaves the session active on the server.



Summary of Special Key Sequences

Special keys for NCD ThinSTAR terminals are as follows.

| Special Key Sequences | | |
|-----------------------|---|---|
| Key Sequence | When to Press | Result |
| F5 | During progress bar | The terminal starts in safe boot mode, using 640 x 480 resolution. |
| Shift+F5 | During progress bar | The terminal provides diagnostic tools, including hardware tests and ping to check for connections. Typically this is not used because diagnostics are available in Terminal Properties. The path is Management > Network > Diagnostics . |
| Shift+F11 | During progress bar | The terminal goes into a forced recovery, which rebuilds flash memory. This is available only if you installed NCD ThinSTAR Operating Software on the Management Server. |
| Ctrl+Alt+End | After restarting terminal | The terminal displays the Connection Manager with a list of configured connections. |
| F2 | When you can see the Connection Manager | The terminal displays Terminal Properties so you can view or change configuration settings. |

Resetting Properties to Factory Defaults

Notice on the **General** tab that you can set terminal properties to factory defaults. With Operating Software 2.x, resetting to defaults does the following:

- Deletes all connection information and clients other than the Microsoft Terminal Server Client and the Citrix ICA Client
- Resets terminal property settings to their factory values.
- Starts the setup wizard.

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