



NCD ThinSTAR
Connection Reference

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Connection Reference

This document has reference information for managing a terminal's connections, including Microsoft Terminal Server (RDP) connections and Citrix ICA connections.

Introduction to 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:

- RDP connections

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

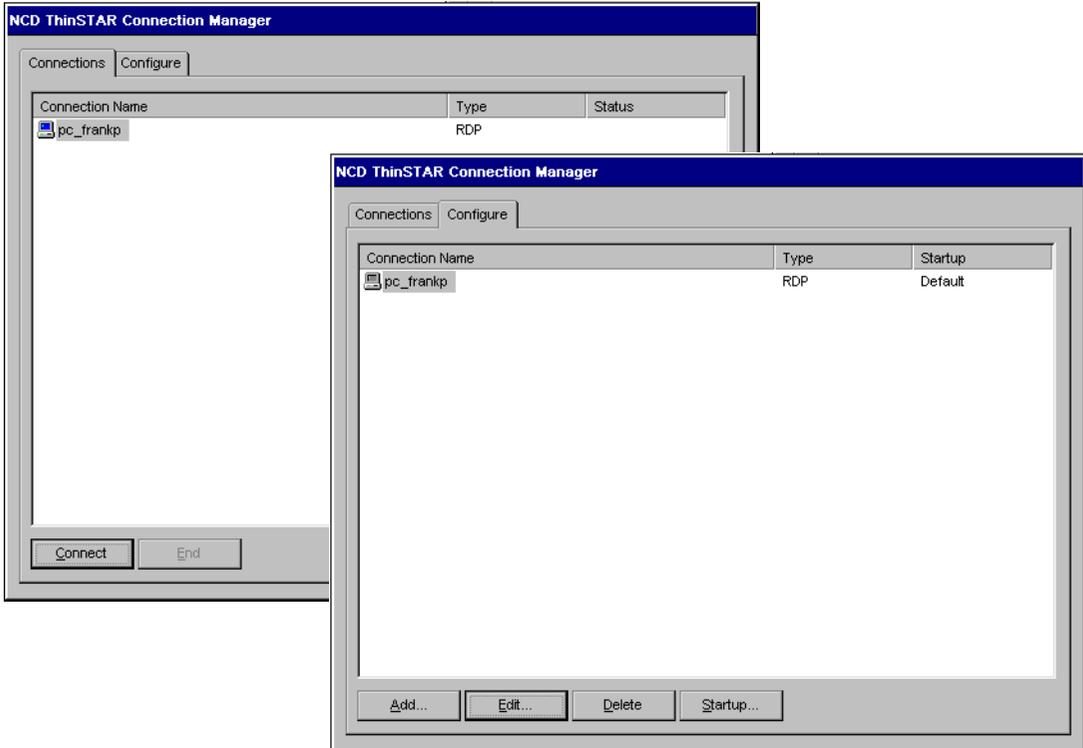
- Citrix ICA connections

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.

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

The Connection Manager has a **Connections** tab for starting or ending connection sessions and a **Configure** tab for configuring connections:



By default, the **Configure** tab is enabled and configuring connections is allowed. However, it is possible to protect the configuration by disabling the tab, as described in *NCD ThinSTAR Terminal Properties Reference*.

After you set the terminal up with the setup wizard, the connection wizard for your default client starts so that you can define at least one connection.

RDP Connections

The Microsoft Terminal Server client uses the RDP protocol. This section explains how to add and use Microsoft RDP connections.

Adding and Configuring an RDP Connection

To add an RDP connection:

1. Start the WTS (Windows Terminal Server) connection wizard.

Note It starts after setup if the default client is Microsoft Terminal Server. Later, you can press **Ctrl+Alt+End** to display the Connection Manager, then select the **Configure** tab, click **Add**, and select the Microsoft Terminal Server client as the type.

2. Specify a connection name and server, then click **Next**.

— **Name**

The name of the connection, up to 32 characters. For example, Lab 8 identifies a Terminal Server; dBase or Finance identify an application.

— **Server**

The IP address or host name of the Terminal Server to host the connection.

You can use a host name only if DNS or WINS is enabled, and, for DNS, a default domain was defined through DHCP or during setup.

If there is no default domain or the DNS server and the terminal are in different TCP/IP domains, specify a fully qualified domain name.

A dial-up connection may need the fully qualified domain name or IP address, depending on your PPP service.

— **Low Speed Connection**

Select this if connecting to the server through a low bandwidth WAN or serial line.

3. Enable or disable automatic user logon, then click **Next**.

By default, automatic user logon is disabled and users must provide login data when using the connection. Leave this feature disabled if automatic logon poses an unacceptable security risk.

To let a user log on automatically when starting this connection, check **Automatic Logon** and provide logon information:

— **Username**

The user ID of a local user on a particular server or a global user on a Domain Controller.

— **Password**

The password for the user ID; it is kept in encrypted form.

— **Domain**

The Windows NT domain name, if the server belongs to a Windows NT domain and the Primary Domain Controller authenticates users.

The name of the server if you want it to authenticate users or if it is not a member of a Windows NT domain.

4. Choose what to display when the connection starts, then click **Next**.
 - **Desktop**

Display the Windows NT desktop.
 - **Application file name**

Do not start with the Windows NT desktop. Instead, start an application; when the user closes this application, the connection ends.

Enter the directory path and file name of the application. Use the full path if it is not specified in the user's environment on the Terminal Server host.
 - **Working directory**

If you specified an application, you can give the path to a working directory. By default, the application saves data files in that directory.

If you do not specify a working directory, the application saves data files in the user's home directory on the host.

For Windows NT 4.0, the directory is set in **Start > Programs > Administrative Tools > User Manager for Domains > User > Properties > Profile**.

For Windows 2000, the directory is set in **Start > Programs > Administrative Tools > Computer Management**.
5. Click **Back** to review or change previous settings, then return and click **Finish** to apply the settings.

The Connection Manager includes the new connection in its list of connections.

If you have just created the first connection and the terminal is in dial-up mode, the NCD dial-up client's connection wizard starts. See *Adding an NCD Dial-Up Connection* on page 26.

Configuring an RDP Printer in Terminal Properties

When you set properties on the **Management > Clients** tab of Terminal Properties, you can set some client properties globally. For example, you can configure a printer for RDP connections.

To configure a printer for RDP connections:

1. In Terminal Properties, select **Management > Clients**.
2. Select **Microsoft Terminal Server Client** and click **Configure**.
3. Select a printer and click **Properties**.
4. Enter information:
 - **Friendly Name**
Give a name users will recognize.
 - **Manufacturers**
Select a manufacturer.
 - **Printers**
Select a printer.
5. Choose whether to make the printer the default printer.
6. Click **OK**.

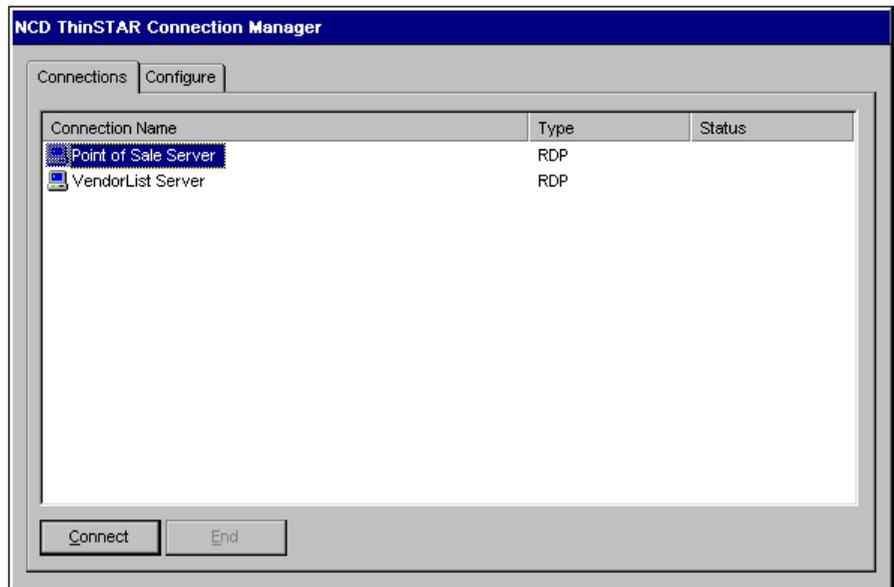
Starting an RDP Connection

You start connections from the Connection Manager, which lists all connections on its **Connections** tab. You can press **Ctrl+Alt+End** to display the Connection Manager.

A terminal must be in the correct mode—LAN or dial-up—to start a connection. To change the mode, see the *NCD ThinSTAR Terminal Properties Reference*.

To start an RDP connection:

1. In the Connection Manager, select the **Connections** tab, then double click the name or select the name and click **Connect**.



If the connection was correctly defined, and the server is running, the connection starts.

If the terminal cannot connect, select the **Configure** tab. Correct the server specification for the connection if it is wrong, then try to connect again.

If you have the right server, see whether it is running and check whether the terminal is physically connected to the network. You can use the **Management > Network > Diagnostics** tab in Terminal Properties to do this. For information, see *NCD ThinSTAR Terminal Properties Reference*.

2. Enter logon information—user name, password, and domain—if requested, then click **OK**. A connection may require logging on manually or the user information in an automatic logon connection may be wrong or may not be authenticated for that server. The connection starts the specified application or the server's desktop, depending on startup options set in Step 4 on page 5.

Stopping an RDP Connection

You can stop connections by logging off the Windows NT desktop or suspend them by quitting the Windows application. A suspended connection or application continues to use server resources, so some sites discourage disconnecting.

■ Logging Off

On the Windows NT desktop, select **Start > Logoff** to close open applications, then log off and end the connection.

■ Disconnecting

On the Windows NT desktop, select **Start > Disconnect** to log off and end the connection, but leave open applications running in a suspended state. When you reconnect to the server, the applications are in the same state as when you disconnected. It may be convenient to disconnect, but applications left running may place excessive demands on the server.

ICA Connections

The Citrix ICA client provides both network and dial-in connections using the ICA protocol. It does not support modem callback.

Adding an ICA Network Connection

A connection wizard asks for information necessary to create a connection. The screens it displays vary somewhat depending on the version and build of the Citrix ICA client. This section includes screens for both the Citrix ICA client version 2.20, build 645, and the Citrix ICA client version 2.20, build 727. Generally, build 645 is installed on NCD ThinSTAR terminals and build 727 is installed on later models. The screens for build 645 are to the left; those for 727 are to the right.

You can check the version in Terminal Properties. To go to Terminal Properties from the Connection Manager, press **F2**. To check the version, select **Inventory > Software > Installed Software** and find Citrix ICA.

After adding the first connection, you can create additional connections as needed. To do that, press **Ctrl+Alt+End** to display the Connection Manager, then start the wizard from the Connection Manager. To start the wizard, select the **Configure** tab and click **Add**. Select the Citrix ICA client as the type of connection.

Adding an ICA Network Connection

To create an ICA network connection:

1. Start the connection wizard.

If the Citrix ICA client is the default client, its connection wizard starts after you complete the setup wizard so that you can define one connection.

2. Select **Network Connection** as the connection type and click **Next**.
3. Select a server or published application and click **Next**.

The lists displayed depend on the global ICA client settings in Terminal Properties, as described in *Making Global ICA Client Settings* on page 17. By default, they include servers or published applications in the local network.

The client uses the primary Citrix server to build the lists. To build the first list, it does an auto-locate broadcast and uses the first ICA server browser that responds. If servers or published applications do not appear and you think they should, click **Refresh** to update the lists. For example, you may need to refresh the lists in the following situations:

- A server or published application does not appear because the network had a temporary problem or a server was down.
- You have just added or deleted servers.
- You have just added a server on another subnet in one of the server locations.

Addresses on Remote Networks

To list servers and published applications on remote networks, click **Server Location**, edit the list, and click **OK**.

— Server Group

If your screen includes a **Server Group** option, you locate available servers and published applications by group. This selection is used instead of a group defined in global settings for the Citrix ICA client in Terminal Properties.

You can define up to three groups of Citrix servers to which you want to contact: a primary and two backups. The client attempts to contact all the servers within the Primary group using directed packets; the first server to respond is then queried for the address of the master ICA Browser. If none of the servers respond, the client attempts to contact all the servers within the Backup 1 group. If there is still no response, the client attempts to contact all of the servers in the Backup 2 group. This process is repeated each time the user attempts to make an ICA connection.

— Addresses

The default address, **Auto-Locate**, lists servers and published applications on the local network only.

You can use the following buttons to edit the list:

Add To include servers and published applications on remote networks, such as those on the other side of a gateway, click **Add**. Enter the name or IP address of a server that tracks servers on the remote network and click **OK**. ICA browsing is not supported in dial-up mode.

Delete To delete a server from the list, select it and click **Delete**.

Move Up/Move Down To reorder the list, use **Move Up** and **Move Down**. The first server listed, the primary server, is consulted first to build the list of servers and published applications. The second server is consulted next, and so on.

Default List The list saved last is the default list. To replace the current list with the default list, click **Default List**, then click **Yes**.

4. Specify a title for the connection. For Citrix ICA build 645, this information is requested in Step 9.

By default, the server or published application name is displayed. To specify a different title, backspace through the default name and type another name.

5. Choose what to display when the connection starts, then click **Next**.

To start with the Windows desktop, leave this information blank.

To start with an application, enter the following information:

— **Command Line**

Enter the path and name of the application. During the session, you can run only this application. When you quit the application, the session ends.

— **Working Directory**

Enter the drive and path of the working directory (optional).

This associates the directory with the application; when you access a file from the application, the application uses the working directory by default. For example, commands in the application's **File** menu operate, by default, on files in the working directory.

6. Specify logon information, then click **Next**.

If you enter a valid user name, password, and server domain, it is used for an automatic logon.

If you leave **any** of these fields blank, the connection prompts for **all** of the information.

For published applications, the logon information must be valid for the server running the published application. If the connection is to an anonymous published application, the logon information is ignored.

7. Choose whether to use 16 colors or 256 colors for the desktop or application, then click **Next**.

A dial-up connection may be faster with 16 colors.

The default number of colors displayed is affected by the global ICA client settings you can make in Terminal Properties. For more information, see *Making Global ICA Client Settings* on page 17.

8. Specify compression and sound, then click **Next**.

Provide information as follows:

- **Compress Data Stream**

Enable or disable data compression. Enabling compression reduces the amount of data transferred between the terminal and server but increase the load on the server.

Disabling compression reduces the load on the server but transfers more data. With a high speed LAN, compression may be unnecessary.

- **Cache**

Not supported in this release.

- **Enable Sound**

Allows applications to play sound on the terminal.

- **Sound Quality**

If sound is enabled, set sound quality. The higher the quality level, the greater the bandwidth consumption.

Medium is recommended for LAN-based connections.

Low is recommended for low-bandwidth connections, including modem connections.

- **Encryption Level**

Not supported in this release.

9. Specify a title for the connection. For Citrix ICA build 727, this information is requested in Step 4.

By default, the server or published application name is displayed. To specify a different title, backspace through the default name and type another name.

10. If you have Citrix ICA build 727, enter firewall information.

If you are using a SOCKS proxy server to limit access to Citrix servers, you must configure the ICA Client to connect to Citrix servers through a SOCKS proxy server. You can configure a default SOCKS proxy for all connections or use only a SOCKS proxy with a specific connection file.

To configure a default SOCKS proxy server, select **Connect via SOCKS proxy** and enter the SOCKS proxy server's IP address and the proxy server's port number (if it is not 1080).

Note If you configure a default SOCKS proxy server, you can successfully browse for a server or published application only if you specify at least one server in Step 3.

If the terminal is outside a firewall that uses address remapping, you must configure the ICA Client to use the alternate address returned by the master ICA Browser. This is necessary even if you are not using a SOCKS proxy server.

Note You must use the ALTADDR utility to manually set the alternate address for each Citrix server. For information, see the Command Reference appendix of your MetaFrame Administrator's Guide or the WINFRAME System Guide.

Note If you set alternate address translation for all connection entries, it cannot be disabled for specific connection entries.

11. Click **Finish** to save the connection, then click **OK**.

Adding an ICA Dial-In Connection

For a connection over a modem, you can add an ICA dial-in connection.

This requires configuring the ICA dial-in server. See the WinFrame/ MetaFrame documentation for instructions.

The NCD dial-up client provides an alternative way of adding a connection over a modem. To use this method, identify the ICA connection as a network connection and set dial-up options as described in *Adding an NCD Dial-Up Connection* on page 26.

To create an ICA dial-in connection:

1. Start the connection wizard.

If the Citrix ICA client is the default client, its connection wizard starts after you set up the terminal so that you can define one connection.

2. After adding the first connection, you can press **Ctrl+Alt +End** to display the Connection Manager, then start the wizard from it.

To start the wizard, select the **Configure** tab, click **Add**. Select the Citrix ICA client as the type of connection.

3. Select **Dial-In Connection** as the connection type and click **Next**.
4. Provide modem information as follows, then click **Next**.

— **Dial-In Device**

Modem type. Hayes Compatible is the only type supported.

— **Area**

The area code of the number to dial, for future use.

— **Phone Number**

The full phone number (long distance access, country code, area code, and phone number), with or without hyphens.

- **Country**

For future use.

- **Use Area and Country Codes**

For future use.

Click **Configure** if you want to configure port settings and call options (see Step 4 on page 28 for definitions), then click **OK**.

5. Complete the remaining screens. These screens are the same as those for a network connection; explanations for completing them begin with Step 4 on page 11.

Making Global ICA Client Settings

In Terminal Properties, you can define default settings for all ICA client connections. You can override some of these settings when you create an ICA connection.

To set global settings for the ICA client:

1. From the Connection Manager, press **F2** to start Terminal Properties.
2. Select **Management > Clients**.
3. Select the Citrix ICA client beside the **Configure Client** button, then click the button.
4. Make global ICA client settings on any or all of the following tabs, then click **OK** to save your changes or click **X** to cancel them: **Hotkeys**, **Preferences**, **Server Location**, **Firewall Settings** (only in Citrix ICA build 727).

Hotkeys

The Citrix ICA client provides hotkeys for basic functions. These affect the ICA client or emulate standard Windows sequences.

Default Values for the ICA Client Hotkeys		
Function	Default	Description
Status	Ctrl+6	Displays the status of the connection.
Close application	Ctrl+2	Disconnects the ICA client from the server and closes the client window, but the session still runs on the server. To avoid this, log off instead of using the hotkey.
Toggle title bar	Ctrl+3	Hides or displays the window title bar.
Ctrl+Alt+Del	Ctrl+4	Sends the standard Windows Ctrl+Alt+Del to the server. Displays the Windows NT Security information.
Ctrl+Esc	Ctrl+5	Sends the standard Windows Ctrl+Esc to the server. The remote Task List appears on WinFrame servers; the Windows NT Start menu appears on MetaFrame servers.

Default Values for the ICA Client Hotkeys <i>(continued)</i>		
Function	Default	Description
Alt+Esc	Ctrl+7	Sends the standard Windows Alt+Esc . Cycles through minimized icons and open application windows.
Alt+Tab	Ctrl+8	Sends the standard Windows Alt+Tab to the server. Cycles through open applications, displaying programs.
Alt+Backtab	Ctrl+9	Cycles through open applications in reverse order.

Preferences

Provide data as follows.

— **Serial Number**

Leave this empty.

— **Default Window Colors**

Check **16** or **256** colors. NCD ThinSTAR terminals use up to 256 colors. Low-bandwidth connections, such as most modem connections, may perform better with 16 colors.

— **Enable Palette Device**

Always checked for Citrix ICA build 645. Not in later builds.

— **Client Name**

The terminal name used when a printer is attached to the terminal during an ICA session. For details, see *Configuring ICA Access to Printers* on page 23.

— **Allow Automatic Client Updates**

For future use.

Server Location

The ICA client uses this data to locate servers and published applications when you create or edit an ICA connection.

— Server Group

If your screen has a **Server Group** option, a group you select here is used instead of a group defined in global settings for the Citrix ICA client in Terminal Properties.

You can define up to three groups of servers—one primary and two backups. When an ICA connection starts, the client tries to contact servers in the Primary group; if a server responds, it asks for the address of the master ICA Browser. If not, the client tries to contact the servers in Backup 1, and, if necessary, the servers in Backup 2.

— Addresses

Auto-Locate, the default, causes the client to seek only servers and published applications on the local network. You can use the following buttons to edit the list:

Add To include servers and published applications on a remote network, click **Add**. Give the name or IP address of a server that tracks servers on the remote network and click **OK**. ICA browsing isn't supported for dial-up.

Delete To delete a server from the list, select it and click **Delete**.

Move Up/ To reorder the list, use **Move Up** and **Move Down**.
Move Down The first server listed, the primary server, is consulted first to build the list of servers and published applications. The second server is consulted next, and so on.

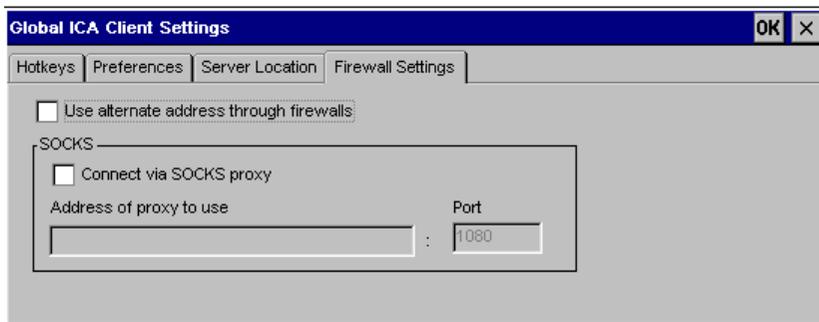
Default List The list saved last is the default list. To replace the current list with the default list, click **Default List**, then click **Yes**.

— Rename Groups

You can change group names.

Firewall Settings

You can make global firewall settings.



If you are using a SOCKS proxy server to limit server access, you must configure the ICA Client to connect to Citrix servers through a SOCKS proxy server. You can configure a default SOCKS proxy for all connections or use only a SOCKS proxy with a specific connection file.

To configure a default SOCKS proxy server, select **Connect via SOCKS proxy** and enter the SOCKS proxy server's IP address and the proxy server's port number (if it is not 1080).

Note If you configure a default SOCKS proxy server, you can successfully browse for a server or published application only if you specify at least one server in Step 3.

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Note You must use the ALTADDR utility to manually set the alternate address for each Citrix server. For information, see the Command Reference appendix of your MetaFrame Administrator's Guide or the WINFRAME System Guide.

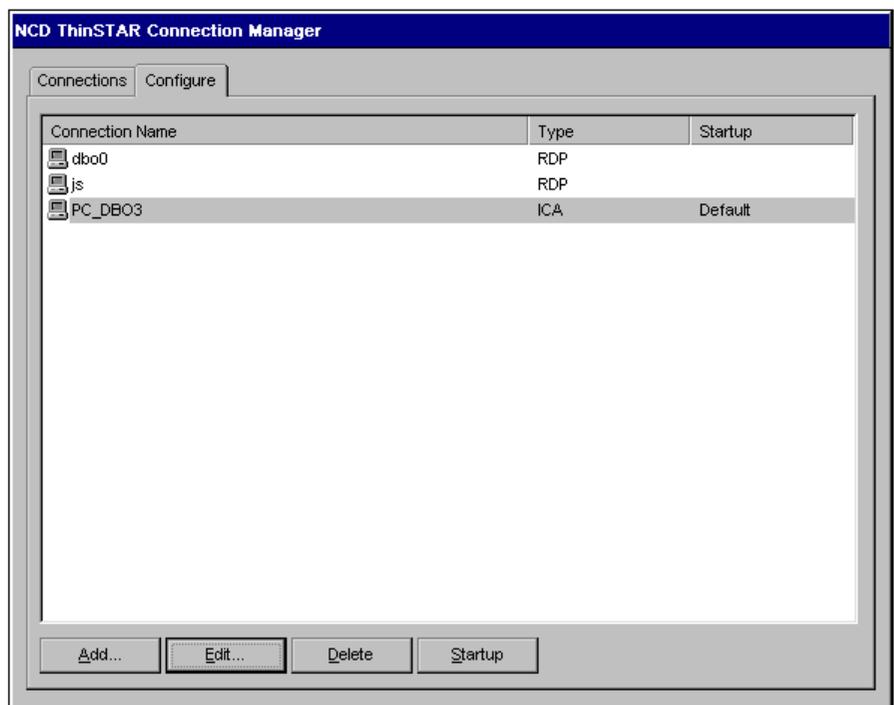
Note If you set alternate address translation for all connection entries, it cannot be disabled for specific connection entries.

Starting an ICA Connection

You start connections from the Connection Manager, which lists all connections on its **Connections** tab. If the Connection Manager is not displayed, press **Ctrl+Alt+End**.

A terminal must be in the correct mode—LAN or dial-up—to start a connection. To change the mode, see the *NCD ThinSTAR Terminal Properties Reference*.

1. In the Connection Manager, select the **Connections** tab, then double click the connection or select the connection and click **Connect**.



If the connection was correctly defined and the server is running, the connection starts.

If the terminal cannot connect, select the **Configure** tab. Correct the server specification for the connection if it is wrong, then try to connect again. If you have the right server, see whether it is running and check whether the terminal is physically connected to the network. For more information, see the *NCD ThinSTAR Terminal Properties Reference*.

2. Enter logon information—user name, password, and domain—if requested, then click **OK**. A connection may need a manual logon or the user information in an automatic logon connection may be wrong or may not be authenticated for that server.

The connection starts the specified application or the server's desktop, depending on startup options set when it was defined.

Stopping an ICA Connection

You can log off or disconnect ICA connections. Disconnecting suspends the connection and leaves it executing on the server; you can reconnect later and resume any tasks left running. Since the connection continues to use server resources even if disconnected, it may be better to log off.

Logging Off

On WinFrame servers, in the Program Manager, select **File > Logoff**, then click **OK** to confirm.

On MetaFrame servers, select **Start >Logoff**.

Disconnecting

On WinFrame servers, in the Program Manager, select **File > Disconnect**, then click **OK** to confirm.

On MetaFrame servers, select **Start >Logoff**.

Configuring ICA Access to Printers

During a Citrix ICA session, a user can print to a printer attached to the serial or parallel port of an NCD ThinSTAR terminal if the server allows client printer mapping and the printer is mapped as explained in the following sections.

It is possible to print to local printers during connections to servers or published applications. In an application's print command, the user selects the local mapped printer from the list of printers.

To map a local printer, you must associate a client name to the terminal. You can change the name on the **Preferences** tab of Global ICA Client Settings. The default name is the terminal's serial number.

You must configure every Windows NT server needed for printing. The details differ depending on the build version of the ICA client, so use the instructions for the version you have. To check the version, go to Terminal Properties, then select **Inventory > Software > Installed Software** and locate the Citrix ICA entry.

Configuring Printer Access in MetaFrame

The following sections have instructions for ICA client builds 727 and 645.

Instructions for ICA Client Build 727

To configure access to a local printer:

1. Log onto the Citrix server.
2. Click **Start > Programs > MetaFrame Tools > ICA Client Printer Configuration**.
3. **Printer > New**.
4. Complete the wizard to map the client printer.

Instructions for ICA Client Build 645

To configure access to a local printer:

1. On the MetaFrame server, click **Start**.
2. Select **Settings > Printers**, then select a network printer.

Printers have names similar to *clientname#port*, where *clientname* is the name you assigned through Global ICA Client Settings and *port* is a port on the terminal, such as COM1 or LPT1.

If no client printer is available, add one.

- Double click the **Add Printer** icon in the Printers window and complete the screens presented.
- Click **Network printer server** and double click **Client**.
- Select the printer and click **OK**.
- Terminal printer ports have names similar to *clientname#port*.
- If you want this printer to be the default printer, click **Yes**, then click **Next**.
- Click **Finish**.

Configuring Printer Access in WinFrame

The following sections have instructions for ICA client builds 727 and 645.

Instructions for ICA Client Build 727

To configure printing to a local printer when connected to the WinFrame server:

1. Log onto the Citrix server.
2. Go to the Administrative Tools program group of the Program Manager.
3. Double click **ICA Client Printer Configuration**.
4. Complete the wizard to map the client printer.

Instructions for ICA Client Build 645

To configure printing to a local printer when connected to the WinFrame server:

1. On the WinFrame server, in the Main program group, double click the **Print Manager** icon.
2. Select a network printer.

Note Printers have names similar to *clientname#port*, where *clientname* is the name you assigned in the Global ICA Client Settings and *port* is a port on the terminal; for example, COM1 or LPT1.

If no client printer is available:

- From the Printer menu, click **Connect to Printer**.
- In the list of shared printers, double click **Client Network**.
- Double click the **Client** icon.
- Select the client printer icon, which has a name similar to *clientname#port*, and click **OK**.
- If you want this printer to be the default printer, select it in the **Default** menu.

NCD Dial-Up Connections

The dial-up client provides a network connection over a modem. Once the connection is established, a protocol client connection (RDP, for example) can start. Therefore, you must configure both a dial-up connection and a connection for an RDP client, ICA client, or an optional installed protocol client.

After you complete the Setup Wizard, the terminal starts the appropriate connection wizard (RDP or ICA) if no connection exists. It then starts the NCD dial-up connection wizard.

Note The NCD dial-up client does not support modem callback.

If you want to connect to an ICA session over a modem you have two choices:

- You can create an ICA dial-in connection as described in *Adding an ICA Dial-In Connection* on page 15.
- You can create an NCD dial-up connection, then create an ICA network connection to use over the dial-up line.

Adding an NCD Dial-Up Connection

This section explains how to create an NCD dial-up connection.

To add an NCD dial-up connection using the NCD dial-up client:

1. Start the connection wizard.

If you select the dial-up client as the default when configuring the terminal, the dial-up connection wizard starts after you create an RDP or ICA connection so you can configure the dial-up connection.

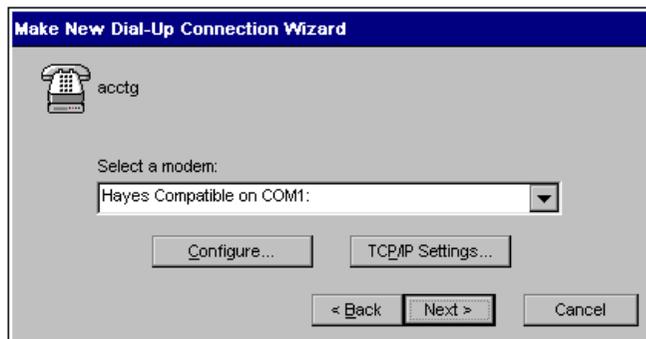
If connections exist and you want to add more, go to the **Configure** tab of the Connection Manager and click **Add**, then select the NCD dial-up client.

- Specify the connection name and click **Next**.



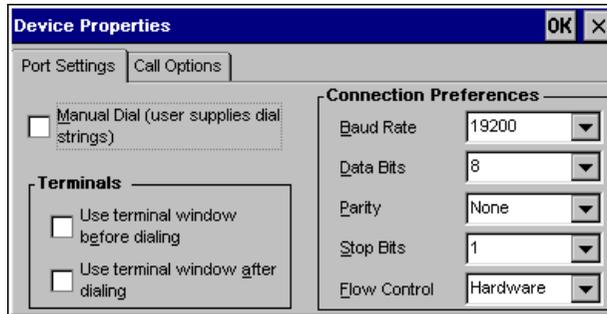
The name could identify the host or the application. It can have up to 20 characters when you are defining the connection. If you edit the connection from the Connection Manager, the name can be extended to 32 characters.

- Select a modem.



Currently, only Hayes-compatible modems are supported.

4. Click **Configure** to configure the port settings and call options and click **OK**.



Provide information for **Port Settings** as follows.

— **Manual Dial**

If this is enabled, the user can enter data and modem commands in a separate window when dialing. The manual dialing window is provided by the Microsoft Windows RAS/TAPI subsystem. If manual dialing is disabled, the NCD dial-up client dials the phone number and no window is displayed.

— **Terminals**

Use terminal window before dialing

If this is enabled, the user can enter modem commands before dialing the host computer.

Use terminal window after dialing

If this is enabled, the user can enter commands to the host computer after dialing is complete.

— Connection Preferences

Choose values as follows.

The following serial port parameters (baud rate, data bits, parity, and stop bits) determine the characteristics of the connection between the terminal and the modem and are automatically sensed by the modem. The modem uses these parameters to define the format of the data that it sends to the host and expects from the host.

Baud Rate—Determines the upper limit of the speed of the connection between the modem and the host. Select the highest speed available on the terminal's modem; the modem does not negotiate a connection higher than the baud rate you specify.

Data Bits—The number of data bits generated by the terminal and expected by the host.

Parity—The type of parity generated by the terminal and expected by the host.

Stop Bits—The number of stop bits generated by the terminal and expected by the host.

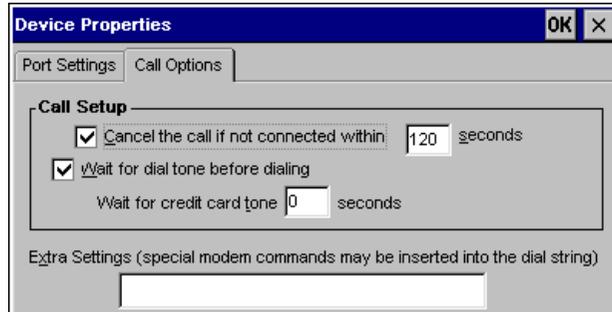
Flow Control—The type of flow control handshaking used on the terminal's serial port and expected by the host. You can select one of the following:

If you choose Hardware, hardware handshaking, also called DTR/DSR, is used.

If you choose Software, the terminal sends an XOFF (^S) character when the input buffer space is low and an XON (^Q) character when input buffer space is available. This is *not recommended* because noise on the line can introduce spurious XOFF characters that can cause the connection to freeze.

If you choose None, there is no flow control handshaking.

Provide information for **Call Options** as follows.



— Call Setup

Use these options as follows.

Cancel the call if not connected within *seconds*—This option cancels the call if it is not completed within the specified time. Set this to the amount of time you are willing to wait for the connection to occur.

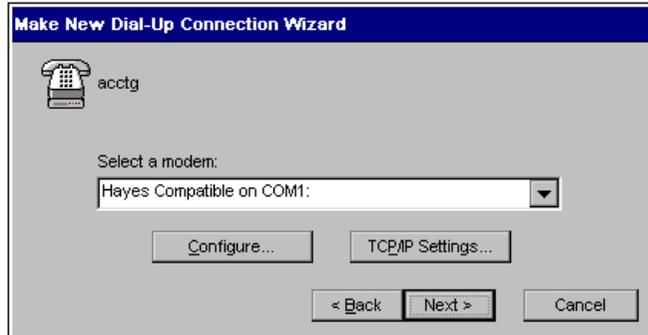
Wait for dial tone before dialing—When this is enabled, the call does not go through until there is a dial tone. Disable this if you are making a direct serial connection between two modems and not using the phone line. With such a connection, there is never a dial tone.

Wait for credit card tone *seconds*—This option waits for the specified time before continuing the call to allow time for entering a credit card number.

— Extra Settings

You can enter modem commands here to override the default settings; for example, to turn on local echo, enter 'E1'.

5. Click **TCP/IP Settings** to configure TCP/IP, then click **OK**.



Supply information on the **General** tab as follows:

— **Server-assigned address**

Select this item if your dial-in host supplies the terminal with an IP address. Uncheck this box and fill in the IP address field if the host does not supply an IP address. You may want to assign an address (if allowed by the server) for long-term, dedicated dial-up connections.

— **Use SLIP**

Enable this option if the dial-up server does not support the default protocol, PPP.

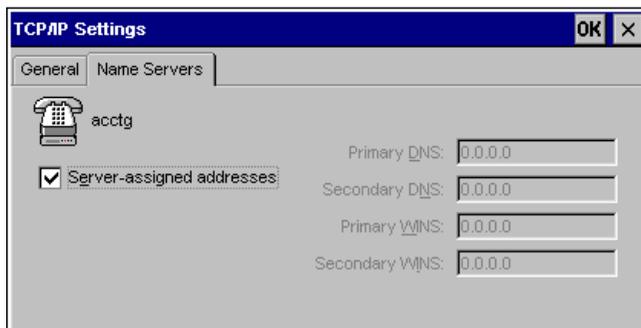
— **Use software compression**

Compression speeds up data transmission; however, it can only be used if the terminal and the host use compatible compression methods. It should not be necessary to disable this option.

— **Use IP header compression**

Compression speeds up data transmission; however, it can only be used if the terminal and the host use compatible compression methods. It should not be necessary to disable this option.

Supply information on the **Name Servers** tab as follows:



— **Server-assigned addresses**

Causes the dial-up client to accept from the dial-in server the IP addresses of the hosts providing name service.

Select this option if your dial-in host gives the terminal name resolution parameters. Disable this option and enter the DNS and/or WINS name server host addresses if the PPP host does not give name server information or if you want to use different name server hosts.

— **Primary and Secondary DNS**

The IP address of the first DNS server to resolve device names and the IP address of the DNS server to resolve device names if the primary server cannot.

— **Primary and Secondary WINS**

The IP address of the first WINS server to resolve device names and the IP address of the WINS server to resolve device names routed if the primary server cannot.

6. Click **Next**.

7. Specify the telephone number to dial and click **Next**.



Type the complete phone number of the modem on the dial-in server; using up to 128 characters. For example:

9-1-650-555-1212

Note Hyphens are not required. Remove them, if necessary, to remain within the 128-character limit.

Selecting a Startup Session for an NCD Dial-Up Connection

A connection can start automatically once the dial-up network connection is established. The list shows your protocol connections (RDP or ICA). If no protocol session is selected, selection occurs after the dial-up connection is started from the Connection Manager.

To specify the protocol connection to start and other options:

1. Select a protocol connection or **<none>**.



2. To automatically close the dial-up connection when the user logs off or disconnects from the protocol session, enable **Close dial-up connection at session end**. Otherwise, the dial-up connection remains open and the user can select another protocol session.
3. To erase the saved user name and password, click **Forget Password**.

When the connection is first created, this option is not available. The user can enable it by saving the user name and password after starting the connection. For more information about saving the user name and password, see *Starting an NCD Dial-Up Connection* on page 35. Depending on your environment, saving the password may be an unacceptable security risk.

4. Click **Next**.
5. To review or change settings, click **Back**. To apply the settings, click **Finish**. The new connection is included in the list of connections in the Connection Manager.

Starting an NCD Dial-Up Connection

The terminal must be in dial-up mode as described in the *NCD ThinSTAR Terminal Properties Reference*.

To start a dial-up connection, using the NCD dial-up client:

1. Press **Ctrl+Alt+End** to display the Connection Manager.
2. On the **Connections** tab of the Connection Manager, double click the connection name or select the connection and click **Connect**.

If the connection was correctly defined, and the server is running, the connection starts.

If the terminal cannot connect, select the **Configure** tab. Correct the dialing specification for the connection if it is wrong, then try to connect again.

3. The first time you use a dial-up connection, you must log in. You can click **Save Password** if you do not want to enter it the next time you start the connection.

Note If saving the password introduces an unacceptable security risk, you can edit the dial-up connection and enable **Forget Password**. See *Selecting a Startup Session for an NCD Dial-Up Connection* on page 34 for more information.

4. Begin a protocol connection session.

If a startup session is defined for the connection, it starts automatically.

If none is defined, press **Ctrl+Alt+End** to display the Connection Manager, select a protocol connection, and click **Connect**.

5. Enter logon information—user name, password, and domain—if requested, then click **OK**.

A connection may require logging on manually or the user information in an automatic logon connection may be wrong or may not be authenticated for that server.

The connection starts the specified application or the server's desktop, depending on startup options.

Stopping an NCD Dial-Up Connection

How you stop the dial-up connection depends on how it is configured.

Configuration Setup	How you stop
Close dial-up connection at session end is enabled.	Log off or disconnect from the application host. The connection stops automatically, then the dial-up session ends.
Close dial-up connection at session end is disabled or no startup session was selected.	Log off or disconnect from the application host, then click Disconnect to stop the dial-up connection when prompted. You can also highlight the active dial-up session in the Connection Manager and click End .

Managing Connections

The **Configure** tab of the Connection Manager has options for performing the following functions:

- Adding connections
- Editing connections
- Deleting connections
- Stopping connections
- Setting a connection as the default or setting it to start automatically

The Connection Manager is on the terminal screen when no connection is running. To display it when a connection is running, press **Ctrl+Alt+End**.

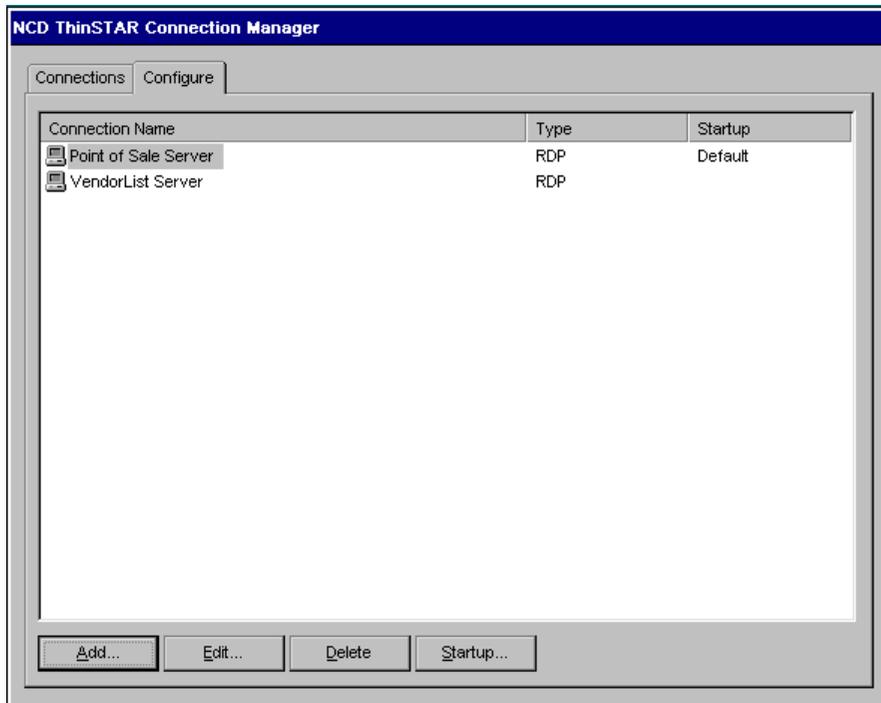
By default, the **Configure** tab is displayed, making it easy to set up connections on a terminal. After you have created connections, you can hide the **Configure** tab to preserve the connections. Instructions are in the *NCD ThinSTAR Terminal Properties Reference*.

Adding a Connection in the Connection Manager

After you have created one connection as part of the startup process, you can use the Connection Manager to create new connections.

To add connections:

1. On the **Configure** tab of the Connection Manager, click **Add**.



2. Select the type of connection, then click **OK**. The list includes optional clients that you have installed.
3. If the client software provides a wizard or utility for defining a new connection (most do), it starts now.

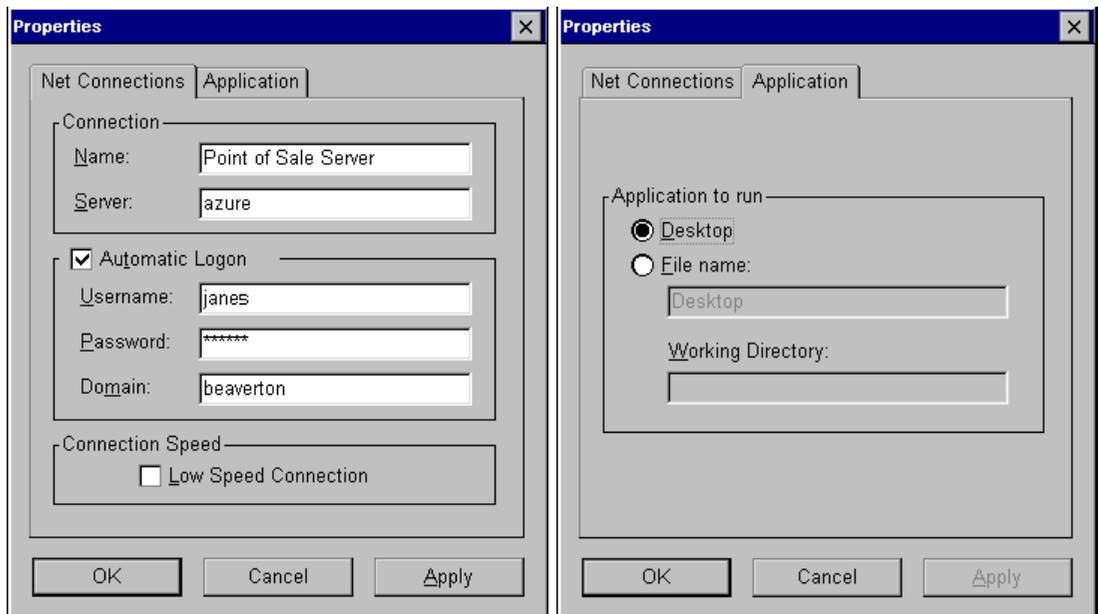
For the Microsoft Terminal Server client, see page 3. For the Citrix ICA client, see page 9. For an NCD dial-up client, see page 26.

Editing a Connection in the Connection Manager

To modify the properties of a connection:

1. On the **Configure** tab of the Connection Manager, select the desired connection.
2. Click **Edit** and make changes.

Edit mode and the connection wizard may present properties differently. For example, properties for an RDP connection appear as follows:



Client information is on the following pages: Microsoft Terminal Server on page 3; Citrix ICA on page 9; NCD dial-up on page 26.

Deleting a Connection in the Connection Manager

To delete an existing connection:

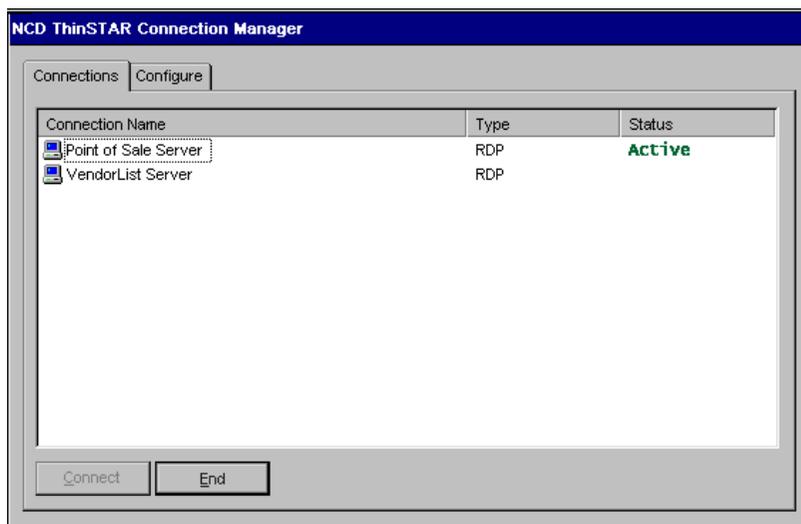
1. On the **Configure** tab of the Connection Manager, select the connection you want to delete.
2. Click **Delete** and confirm that you want to delete the connection.

Stopping a Connection from the Connection Manager

It is best to disconnect or log off from the host desktop or application, but you can also stop a connection from the Connection Manager.

Note To disconnect or log off, see *Stopping an RDP Connection* on page 8, *Stopping an ICA Connection* on page 22, or *Stopping an NCD Dial-Up Connection* on page 36.

1. Select the **Connections** tab of the Connection Manager.



A connections that is running has active status.

The **End** button disconnects (suspends) connections, but leaves them running on the server, using resources. For this reason, administrators often prefer to have users log off.

2. Select the active connection and click **End**, then click **OK** when prompted to confirm that you want to disconnect.

If you do not respond or have a problem with the session, click **End Task** when prompted to terminate immediately.

Setting Startup Options in the Connection Manager

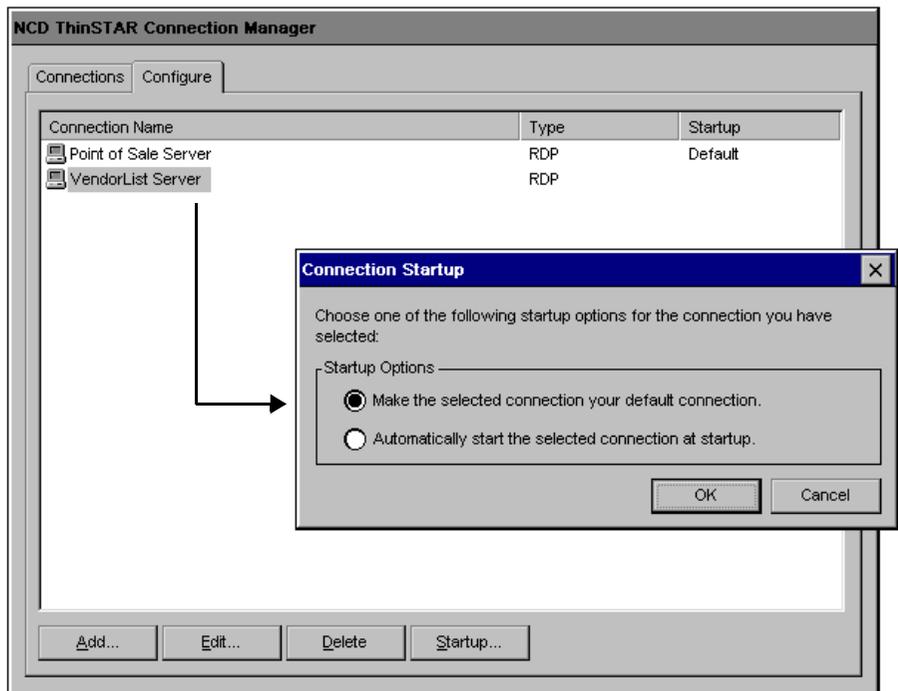
You can select one connection as the default connection or as an autostart connection.

Setting a Default Connection

The default connection is the one highlighted when you display the Connection Manager. You can start the default connection, or switch to it, by pressing **Ctrl+Alt+Home**. One connection can be the default connection. If you set a connection as an autostart connection, it automatically becomes the default.

To set a connection as the default:

1. On the **Configure** tab of the Connection Manager, select the connection you want to have as the default and click **Startup**.
2. Select **Make the selected connection your default connection** and click **OK**.



Setting an Autostart Connection

You can configure a connection to start automatically when you restart the terminal.

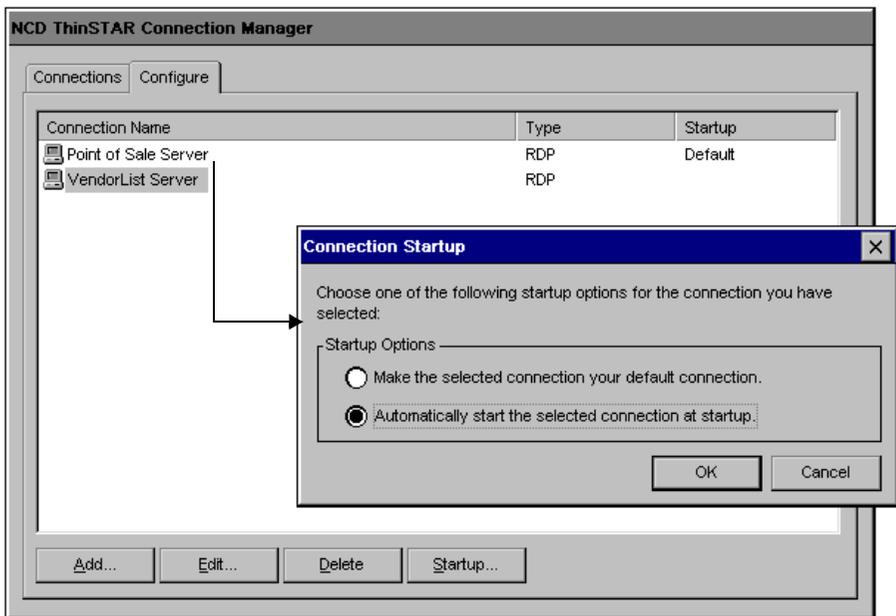
When you log off, the autostart connection restarts immediately. If this happens and you want to stop it, see page 43.

A dial-up connection must specify a protocol connection as well for true automated startup, or it is necessary to start the protocol connection manually at logon.

Configuring a connection to start automatically makes it the default connection. If you later make another connection the default, the original autostart connection no longer starts automatically.

To configure a connection to start automatically:

1. On the **Configure** tab of the Connection Manager, select the connection you want to start automatically.
2. Click **Startup**, then select **Automatically start the selected connection at startup** and click **OK**.



The autostart connection fails unless it corresponds to the terminal's network connection mode—LAN or dial-up. If you need to change the mode, see the *NCD ThinSTAR Terminal Properties Reference*.

Stopping an Autostart Connection

An autostart connection restarts as soon as you close the Windows NT desktop or log off. To prevent this, set the connection as the default connection rather than the autostart connection.

To stop the autostart connection:

1. While the autostart connection is active, press **Ctrl+Alt+End** to go to the Connection Manager.
2. Select the **Configure** tab.
3. Click **Startup**.
4. Select **Make the selected connection your default connection** and click **OK**.
5. To return to your running connection, select the **Connections** tab and select the active connection.
6. Click **Connect**.

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