



NCD ThinPATH™ Plus
Startup Guide

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Revisions

Part Number	Revision Date	Description
9300789	March, 1999	NCD ThinPATH Plus, Version 2.0 release for NCD ThinSTAR and PC clients, with audio support

NCD ThinPATH Plus

NCD ThinPATH Plus™ provides two services to users of desktops that run applications through a Windows Terminal Server:

- Making serial and parallel devices available to desktop connections
- Allowing audio input and output (output only for the NCD ThinSTAR 200) using standard Windows audio features

These services are available to both NCD ThinSTAR and PC desktops.

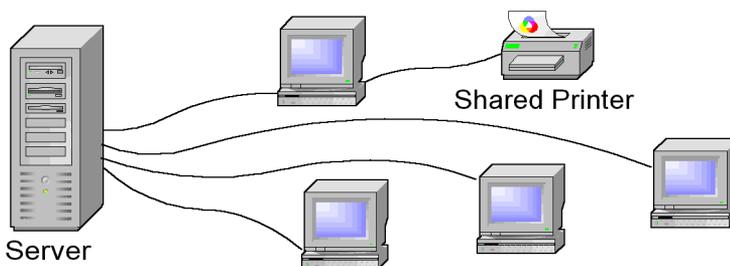
Serial and Parallel Devices

Typically, NCD ThinPATH Plus makes peripheral devices available in situations where:

- Several people need to share a device attached to one desktop.
- Several people need to use a device attached to their desktops.
- An individual requires a personal device.

Shared Device

With NCD ThinPATH Plus, several Windows Terminal Server users can share a device, as in this example:

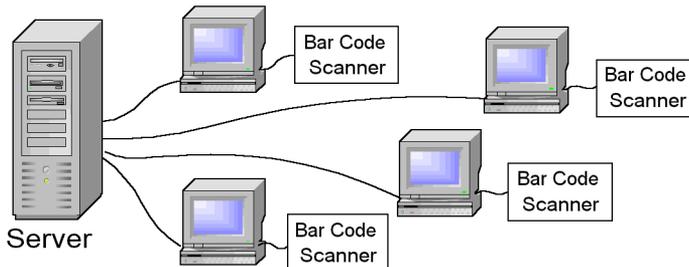


In an office environment such as this, several people share a printer that is physically attached to an NCD ThinSTAR or PC desktop.

As the administrator, you map the physical desktop port to a port on the server called a virtual port. Other users can then print to the device by specifying the virtual port.

Multiple Stations

In other environments, multiple stations have desktops with attached devices, as in this example of a retail environment:

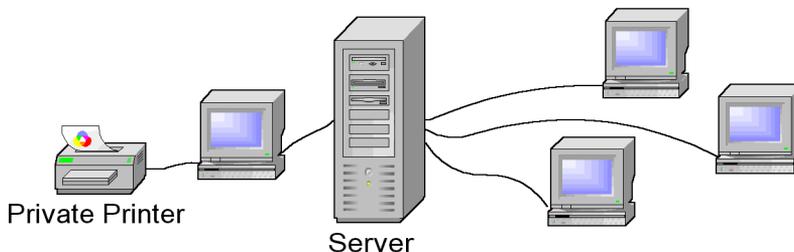


Here, at a point of sale station, a person can use any desktop that has a bar code scanner attached.

As the administrator, you map the physical desktop port to one virtual port on the server. It is not necessary to create a virtual port for each individual device. Each user who specifies the virtual port can scan with the scanner attached to the current desktop.

Personal Devices

Where privacy is essential or use of a device is limited, an individual may have a personal device, as shown in this example.



As the administrator, you map the physical desktop port to one virtual port on the server. The user at that desktop can use the attached device.

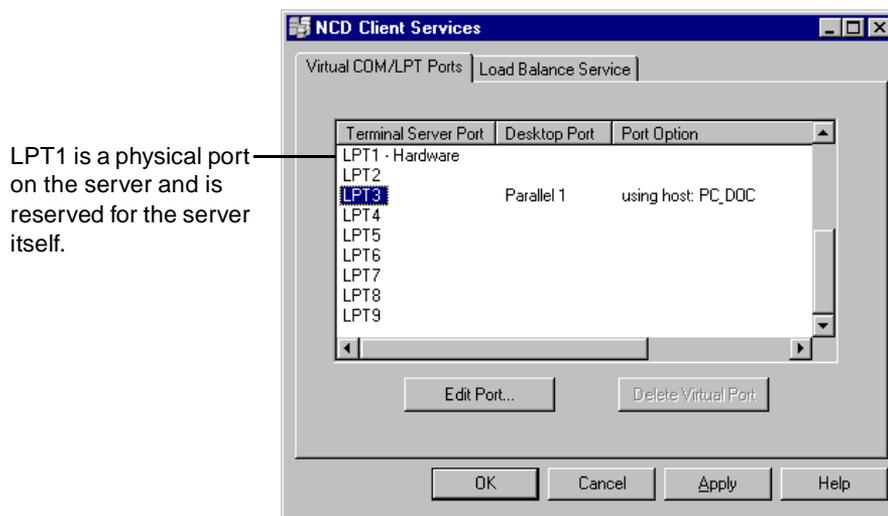
Mapping Physical Desktop Device Ports to Virtual Server Ports

A desktop device has serial and parallel ports for peripheral devices. An NCD ThinSTAR 300 has two serial ports and one parallel port. An NCD ThinSTAR 200 has one serial port and one parallel port. You can attach devices such as printers, bar code readers, personal digital assistants, and process control devices to these physical ports.

You map the physical desktop ports to virtual ports on the server so that users can access desktop devices during connection sessions.

Note The server has its own physical ports in addition to the virtual ports representing desktop ports. The physical ports on the server (including COM1, COM2, and LPT1) are best reserved for server devices.

You do the mapping through a graphical user interface. For example:



This example maps a printer attached to a user desktop to the virtual terminal server port LPT3.

Through this mapping, several users could print to LPT3 and access the device attached to PC_DOC.

Data Transfer

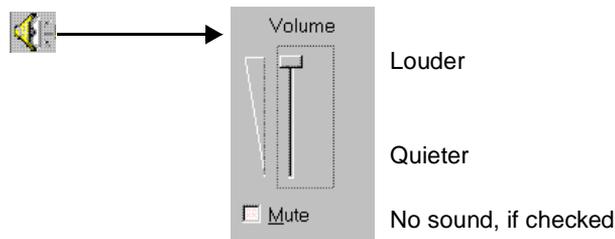
In support of high demand serial applications, this product includes complete bidirectional transfer for up to 57.6K baud, as well as complete serial flow control. A server-based application or device driver transfers data transparently from a server's virtual port to a desktop port over the TCP/IP network.

Audio Input and Output

When you run an application on a server and that application uses sound (for warnings, for example), the sound travels from the server to the desktop.

Volume controls can be set from the desktop for each session, using standard Windows application procedures.

You can display the volume slider by left clicking on the speaker icon on the taskbar. You can adjust sound by sliding the bar or turn sound off by checking the **Mute** box.



If the speaker icon is not on the taskbar, you can restore it. To do this, select **Start > Settings > Control Panel > Multimedia** and check the box that says to show the volume control on the taskbar.

You can display other volume controls as well. To do this, right click the speaker icon, then select **Open Volume Controls**. Slider bars are displayed according to the properties set for volume controls.

For additional information about the sound capabilities of Windows, use the online help provided with Windows.

Online Documentation

PDF documents are available in the **Documentation** directory of the NCD Client Services CD. You can view the documents with the Adobe Acrobat Reader, which is available at <http://www.adobe.com/acrobat>. Online help is available on the server after installation.

Installing Software

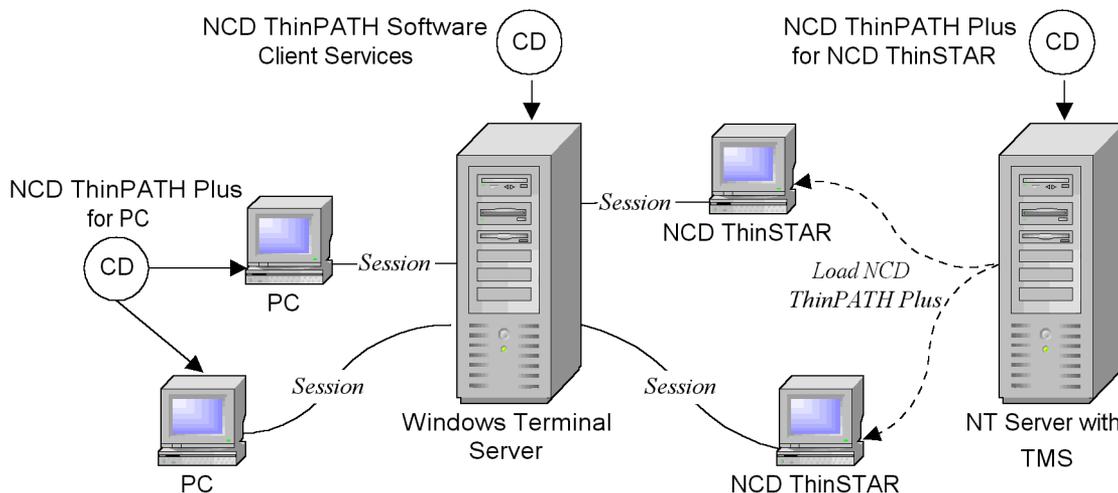
This section explains how to install software on Windows Terminal Servers, NCD ThinSTARs, and PCs. Subsequent sections explain how to configure the software and use the services.

Media

Software for NCD ThinPATH Plus is delivered on the following CD-ROM disks:

- **NCD ThinPATH Software Client Services** has Windows Terminal Server software.
- **NCD ThinPATH Plus for NCD ThinSTAR** has client software for NCD ThinSTARs. You load this software onto the NT server running the ThinSTAR Management Service (TMS); TMS then upgrades desktops when you restart them.
- **NCD ThinPATH Plus for PC** has client software for PCs.

These CDs are installed as follows. Detailed steps begin on page 6.



Installing Server Software

You must install NCD ThinPATH software on every server that supports desktop devices. Prerequisites include:

- Microsoft Windows NT Server 4.0, Terminal Server Edition
- Administrative rights to install or configure the software
- Standard Windows multimedia capabilities

To install NCD Client Services:

1. Log onto the server as the administrator.
2. Insert the following CD and wait while the wizard launches automatically:

NCD ThinPATH Software Client Services

3. Select **Install** or **Update NCD Client Services** and click **Next**.
4. Enter licensing information, then click **Next**. For a new installation, find the license key on a label on the CD case. Type the 22-character license key, including the dashes (-), in the **License installation**. The existing license key is displayed. This key is also needed to upgrade an installation.
5. Select components, then click **Next** to complete the installation.
6. Select **Restart**, if asked, to restart your computer, and click **Finish**. The new installation takes effect when the computer is restarted.

To upgrade a license key:

1. Log onto the server as the administrator.
2. Select **Start > Programs > Administrative Tools (Common) > NCD License Manager**.
3. Enter the new license keys.

Installing Client Software for the NCD ThinSTAR

NCD ThinPATH Plus is installed on NCD ThinSTARs through ThinSTAR Management Service (TMS), which is part of the NCD ThinSTAR Operating Software.

Note For more information about TMS, see the *NCD ThinSTAR System Administrator's Guide*.

To install NCD ThinPATH Plus for an NCD ThinSTAR, you must have:

- NCD ThinSTAR terminal with 16 MB RAM recommended
- NCD ThinSTAR Operating Software (which includes TMS) installed on a server running Microsoft Windows NT 3.51 or better

To install the software:

1. Insert the following CD in the server that has TMS installed:
NCD ThinPATH Plus for NCD ThinSTAR
2. Run **Setup**.
3. Restart the NCD ThinSTAR to upgrade its software.

Installing Client Software for the PC

To install NCD ThinPATH Plus on a PC, you must have:

- A PC with Windows 95, Windows 98, or Windows NT 4.0
- A sound card or sound card support for audio
- A functional RDP client installed on the PC

To install the software:

1. Insert the following CD in the PC:

NCD ThinPATH Plus for PC

2. Run **Setup** and follow the instructions on the screen.
3. Go to the Control Panel and enable LPT/COM port services and audio services.

To enable the services, select **Start > Settings > Control Panel > Plus Controls**.

4. Set options for audio or COM/LPT ports. You must enable audio on a PC to hear sound; volume control determines how loud it is.

Adding and Configuring Ports

On the server, you can use the Virtual COM/LPT Ports tab to map virtual serial and parallel ports on a Windows Terminal Server to physical serial and parallel ports of Windows Terminal Server desktops.

Adding Virtual Ports

Eighteen virtual ports are defined during installation (nine for LPT devices and nine for COM ports). You can add virtual ports as needed.

To add virtual COM/LPT ports:

1. Select **Start > Programs > Administrative Tools (Common) > NCD Client Services**.
2. Select the **Virtual COM/LPT Ports** tab.
3. Right click on the title bar to add virtual ports.
4. Restart the system so that it recognizes the new virtual ports.
5. Select **Modify Serial/Parallel Configuration** and configure the new virtual ports as described in the following section.

Configuring Virtual Ports

To configure virtual COM/LPT ports from the server:

1. Select **Start > Programs > Administrative Tools (Common) > NCD Client Services**.
2. Select the **Virtual COM/LPT Ports** tab.
3. Select a Terminal Server port (COM 3-9, LPT 2-9, or a virtual port that you have added).

Note We recommend that you reserve **LPT1, COM1, and COM2** for actual devices attached to the server.

If you map a physical hardware port on the server as a virtual port, you cannot use the physical port on the server. The word *Hardware* with a port name indicates a physical server port has not been mapped.

4. Click **Edit Port**, then map the port.
 - **Use Client Service** maps a virtual COM/LPT port to the serial/parallel port of all Windows Terminal Server clients that log into this server.
 - **Use Specified Client Hostname** maps a virtual COM/LPT port to a single client device. Select and enter the host name or IP address of the client.
5. Click **Next**.
6. Select the desktop port to associate with the virtual port.
 - For a parallel port, click **Finish**.
 - For a serial port, click **Next**, then select default settings (baud rate, data bits, parity, stop bits, and flow control) for the connection and click **Finish**. Most applications—including the Windows Print Manager—override these. However, if you map a virtual LPT port to a serial port, these settings are used for the port.
7. Click **Apply** to save the settings.

Verifying Device Connections

When data travels over a TCP/IP network, it may be delayed or interrupted. If software expects data to arrive within a certain time, it may time out while waiting and conclude that there is a hardware error.

We encourage you to test each device during client installation to determine whether there are any server timing issues when the device is attached to a desktop. Serial devices may not work properly, for example, if they use their own timeouts instead of the operating system's timeouts.

Product Support

To receive NCD Product Support, return your product registration card.

Note If you purchased the product from a distributor or a value-added reseller (VAR), ask whether they provide product support before you contact NCD directly.

Support for this product is free during regular business hours for 30 days, beginning with your first call. After that, please contact NCD at one of the following numbers for information about support contracts:

503-641-2200

1-800-800-9599 (U.S. and Canada only)

The latest information on support is also on the World Wide Web:

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

For technical information, consult the documentation. If you need further help, gather the following required information and contact NCD Product Support, as described on page 12.

Name and Address	NCD customer ID User name and title Company/organization name Phone number Fax number E-mail address Mailing address
NCD ThinSTAR (See Terminal Properties Inventory tab)	ThinSTAR model ThinSTAR Core Software version Terminal Server client ThinSTAR Management Service version Terminal Server version
NCD ThinPATH Software	Terminal Server version and service pack
PC	Operating system Type of sound card
Problem	A detailed problem description

Contacting Product Support

International Support	<p>If you are outside the U.S. and Canada, contact the distributor that sold you the NCD product. If you cannot do this, or you need direct technical assistance, get the information listed on page 11, then do one of the following:</p> <p>Follow the international dialing instructions appropriate for your location, then call one of the following numbers and ask for Product Support: 503-641-2200 (worldwide) 1-800-800-9599 (U.S. and Canada only)</p> <p>Send your support request via e-mail to support@ncd.com. See “Electronic Mail” below for further instructions.</p>
Electronic Mail	<p>Send a mail message to support@ncd.com. Product support responds with an electronic problem template that includes the information on page 11 along with an NCD Support Incident ID number. Please include this number when you send e-mail messages to Product Support about this issue. You do not need to include the problem template information in subsequent messages.</p>
World Wide Web	<p>NCD’s World Wide Web site provides updates, product information, technical notes, and the NCD Knowledgebase, which contains technical information. You may also submit a support request or comment.</p> <p>The NCD web site is located at: http://www.ncd.com.</p>
FTP	<p>The NCD FTP site provides product updates. To access NCD’s FTP site, log into ftp.ncd.com. Use anonymous as the user name and use your e-mail address as the password. After logging in, you can find updates in /pub/ThinSTAR/Archive.</p> <p>Since most files are binary, remember to execute a binary command before getting a file.</p>
Fax	<p>Get the required information listed on page 11. Fax it to 503-641-2959. This helps the support engineer analyze the question and prepare a solution before contacting you.</p>
Telephone	<p>Get the required information listed on page 11 and go to your multi-user NT server’s console—since the support engineer may need data from the server or may ask you to perform tasks at the console. Call one of the following numbers and ask for Product Support: 503-641-2200 (worldwide) or 1-800-800-9599 (U.S. and Canada only)</p> <p>During your call, you receive an NCD Support Incident ID number. Please mention the number in subsequent calls concerning the same issue.</p>

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