



NCD ThinSTAR Operating Software
and NCD ThinPATH Manager
Installation Guide

Copyright

Copyright © 2000 by Network Computing Devices, Inc. (NCD). The information contained in this document is subject to change without notice. Network Computing Devices, Inc. shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this material. This document contains information which is protected by copyright. All rights are reserved. No part of this document may be photocopied, reproduced, or translated to another language without the prior written consent of Network Computing Devices, Inc.

Trademarks

Network Computing Devices, ThinSTAR, and XRemote are registered trademarks of Network Computing Devices, Inc. ThinPATH, Explora, Explora Pro, ECX, HMX, HMXpro, HMXpro24, WinCenter, WinCenter Pro, WinCenter Connect, NCDnet, and NCDware are trademarks of Network Computing Devices, Inc.

Other product and company names mentioned herein are the trademarks of their respective owners. All terms mentioned in this book that are known to be trademarks or service marks have been appropriately capitalized. NCD cannot attest to the accuracy of this information. Use of a term in this book should not be regarded as affecting the validity of any trademark or service mark.

Disclaimer

THE SOFTWARE PRODUCTS ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, NCD FURTHER DISCLAIMS ALL WARRANTIES, INCLUDING WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. THE ENTIRE RISK ARISING OUT OF THE USE OR PERFORMANCE OF THE SOFTWARE PRODUCTS AND DOCUMENTATION REMAINS WITH THE END USER.

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, IN NO EVENT SHALL NCD OR ITS SUPPLIERS BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, DIRECT, INDIRECT, SPECIAL, PUNITIVE, OR OTHER DAMAGES WHATSOEVER (INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS OF BUSINESS PROFITS, BUSINESS INTERRUPTION, LOSS OF BUSINESS INFORMATION, OR OTHER PECUNIARY LOSS) ARISING OUT OF THE USE OF OR INABILITY TO USE THE SOFTWARE PRODUCTS OR DOCUMENTATION, EVEN IF NCD HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. BECAUSE SOME STATES/JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF LIABILITY FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES, THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

Revision History

May 2000. Installation Guide. Document 9300919, Rev. A.
June 2001. Installation Guide. Document 9300959, Rev. B.
February 2002. Installation Guide. Rev. C.

Software Version

NCD ThinSTAR Operating Software 2.20; NCD ThinPATH Manager 2.20.

NCD ThinSTAR Operating Software 2.30; NCD ThinPATH Manager 2.30.

NCD ThinSTAR Operating Software 2.31; NCD ThinPATH Manager 2.31.



Contents

Features and Functionality	7
Installation Requirements	10
Installation Environments	11
Installation Procedures	12
Installing Over Prior Versions	12
NCD ThinSTAR Operating Software Procedures	12
NCD ThinPATH Manager Procedures	19
Changing Policies to Include Web Configuration Tool	23
Defining Printer Connections	23
Setting Terminal Upgrade Policies	26
Next Steps	28
Documentation	30

Installation Guide

This guide is intended for the system administrator. It explains how to install NCD ThinSTAR Operating Software for automatic updates of terminal software and NCD ThinPATH Manager for centralized terminal configuration.

The instructions assume that you have a functioning Windows 2000 or Windows NT network.

Features and Functionality

When you install these products on a Windows 2000 Server, Windows Terminal Server, or Windows NT 4.0 Server, the server becomes a Management Server with central terminal support.

■ **NCD ThinSTAR Operating Software**

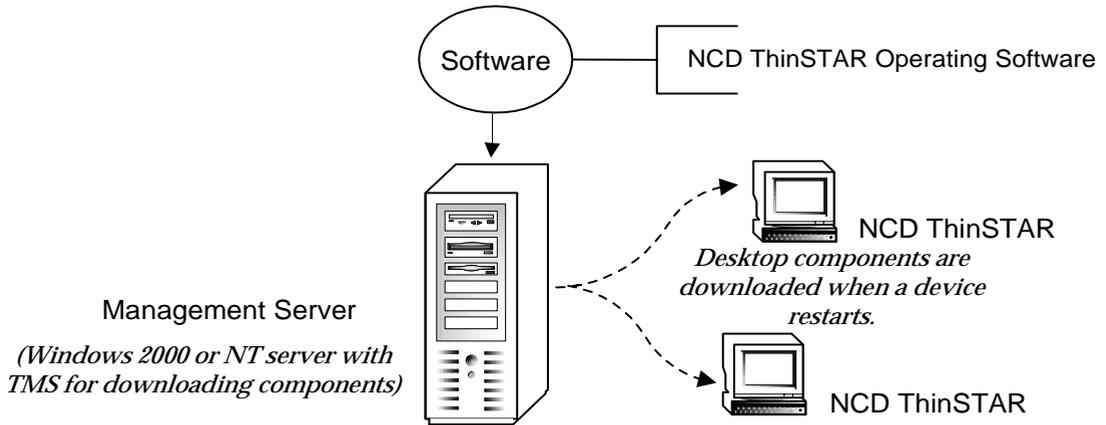
NCD ThinSTAR Operating Software provides the first level of central support. With it, you can replace or upgrade terminal software from the Management Server.

■ **NCD ThinPATH Manager**

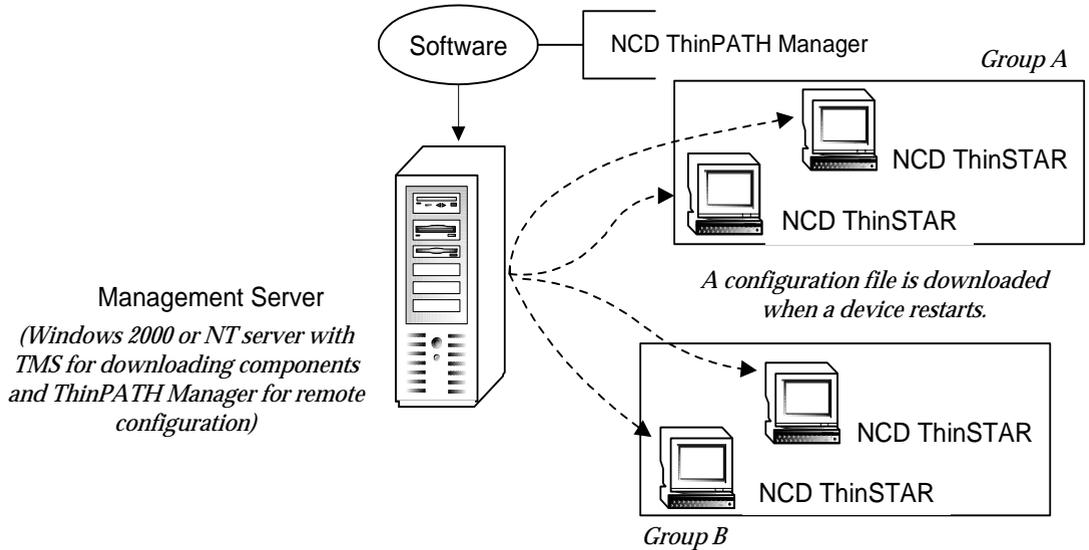
NCD ThinPATH Manager extends support to terminal configuration. With it, you can set terminal properties, connections, and other options at the Management Server.

You can also restart devices remotely and change terminal configurations remotely or from a web browser. You can use a browser because NCD ThinPATH Manager places an HTTP server on NCD ThinSTAR terminals. If your site has SNMP network management, you can install NCD ThinPATH Manager, then configure the SNMP agent and enable it to change terminal properties.

Installing NCD ThinSTAR Operating Software places NCD ThinSTAR Management Service (TMS) on the Management Server. TMS downloads software components from the Management Server onto NCD ThinSTAR terminals when they restart.



Installing NCD ThinPATH Manager places software for configuring terminals remotely on the Management Server. After the installation, you define groups of terminals and distribute preconfigured terminal properties and connections to them.



Installation Requirements

Installation requirements are as follows:

- A Windows server that you can use as a Management Server

This can be a Windows 2000 Server, a Windows Terminal Server, or a Windows NT 4.0 Server.

For automatic recovery of NCD ThinSTAR Operating Software, Management Server, the terminal, and DHCP must be on the same subnet.

- Administrative rights to install or configure software

- Adequate flash memory

NCD ThinSTAR 200 terminals with additional NCD ThinPATH products may not have enough flash memory available to support the enhanced NCD ThinSTAR Operating Software and NCD ThinPATH Manager software plus the extra products. For information on customizing your installation to accommodate your memory limits, see the *NCD ThinSTAR Operating Software Release Notes*.

- Special requirements for NCD ThinPATH Manager

- A license key

- The Microsoft SNMP Network Service installed, so that NCD ThinPATH Manager can restart terminals remotely

- A compatible web browser to configure individual terminals via the web with NCD ThinPATH Manager (for example, Netscape 4.0 and Microsoft Internet Explorer 4.0 and later)

Installation Environments

By design, terminals broadcast to the local subnet for updates and there should be one Management Server on the subnet to provide the updates.

However, each terminal has configuration settings, called Terminal Properties, and you can configure a terminal to receive updates from a Management Server outside the local subnet.

Note The *NCD ThinSTAR Terminal User's Guide* tells you how to set up terminals after installation. This guide explains how to specify the IP address of the appropriate Management Server in Terminal Properties.

It is also possible to have multiple installations of NCD ThinSTAR Operating Software on the same subnet, but NCD does not recommend this type of installation. If the Operating Software is installed multiple times on the same subnet, any of those Management Servers may send new software or a configuration file to any terminal. Similarly, terminals may be managed by a different server each time they restart. The only reasons to install multiple Management Servers on one subnet are:

- You have many (more than 100) NCD ThinSTAR terminals on your subnet.
- Your Management Server has inadequate system resources to support multiple simultaneous software upgrades.

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.

Installation Procedures

Both NCD ThinSTAR Operating Software and NCD ThinPATH Manager are included together. You must install NCD ThinSTAR Operating Software first. You do not need a license key to install this software.

If error messages appear, see the *NCD ThinSTAR Terminal Administration Guide*.

Installing Over Prior Versions

You can install this software over previous versions of the same products.

If you are running beta software, remove it before beginning this installation. Remove NCD ThinPATH Manager, then NCD ThinSTAR Operating Software. If you are asked about locked files, select the Reboot option.

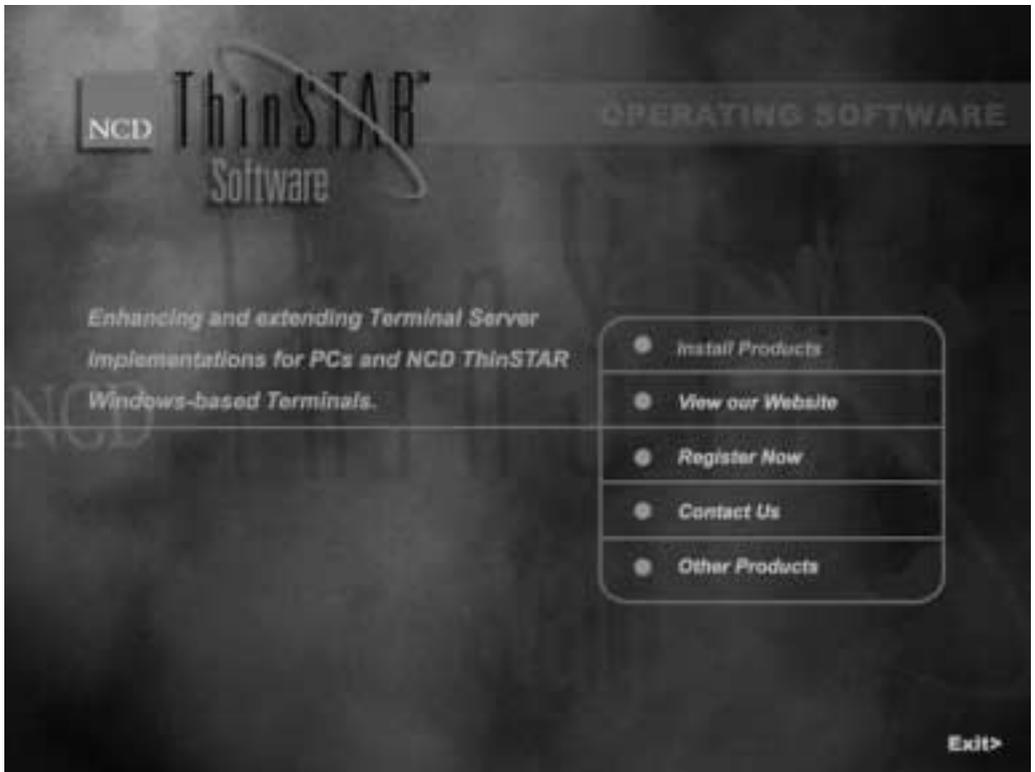
NCD ThinSTAR Operating Software Procedures

Install the Operating Software before installing NCD ThinPATH Manager.

Installing NCD ThinSTAR Operating Software

To install the Operating Software:

1. Log on to the NCD ThinSTAR Management Server and close all running programs.
2. Download the software from the NCD website as described in the document included with the product package.
3. Run **ThinSTAROperatingSoftware.exe** to unpack the files and run the installation.
4. Select Install Products.



5. Select NCD ThinSTAR Operating Software.



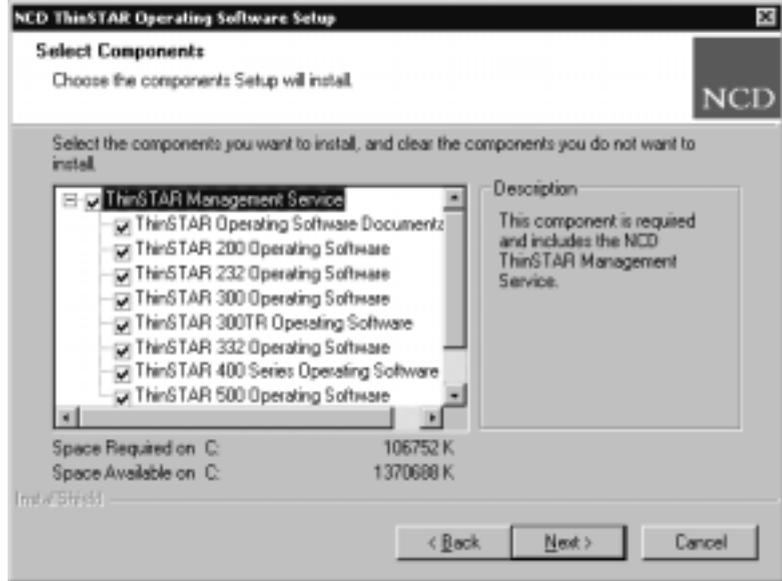
6. Acknowledge acceptance of the license agreement, then click Next when the setup program is introduced.

7. Choose where to install the software.



8. Choose the installation type.

- A full installation installs documentation plus software for all NCD ThinSTAR terminal models.
- A custom installation lets you choose components based on your site requirements. The items that are checked will be installed. Remove checks for items that you do not want to install.



- If you upgrade from the previous version of the ThinSTAR Operating Software and you select a full installation, you will install software for all NCD ThinSTAR terminal models and overwrite the existing software. If you select a custom installation, you can select which components to install. A component is unselected if it is already installed and the installation does not have a new version. To overwrite an existing component, select it in the list.

Note During a custom install be careful to select only those existing components that you want updated so that you do not inadvertently override components you do not want reinstalled.

9. Click Finish.

Modifying, Repairing, or Removing the Installation

If you remove software, remove any additional NCD ThinPATH and ThinSTAR Software first and then remove the NCD ThinSTAR Operating Software, V 2.30.

To modify, repair, or remove the installation:

1. Open the Windows Control Panel and select Add/Remove Programs.
2. Select the NCD ThinSTAR Operating Software and click Add/Remove in Windows NT or Change/Remove in Windows 2000.
3. When the setup program is introduced, select an option and click Next to continue.

Options are as follows:



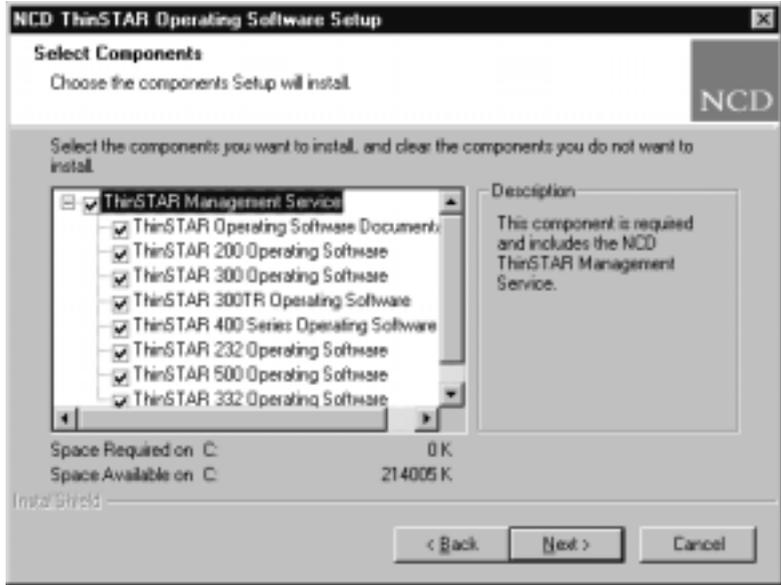
Modify lets you add or remove components after the initial installation.

Repair lets you reinstall the product, either the same version or a new version.

Remove deletes all files and menu items associated with the product.

— Modify

You can add or remove components. Each installed component is checked. For example, here all components are installed.



To remove a component from the installation, click it to toggle the selection off and remove the component. To add a component, check it.

Click Next to continue.

— Repair

This reinstalls all components of the current installation.

— Remove

This removes all installed components.

NCD ThinPATH Manager Procedures

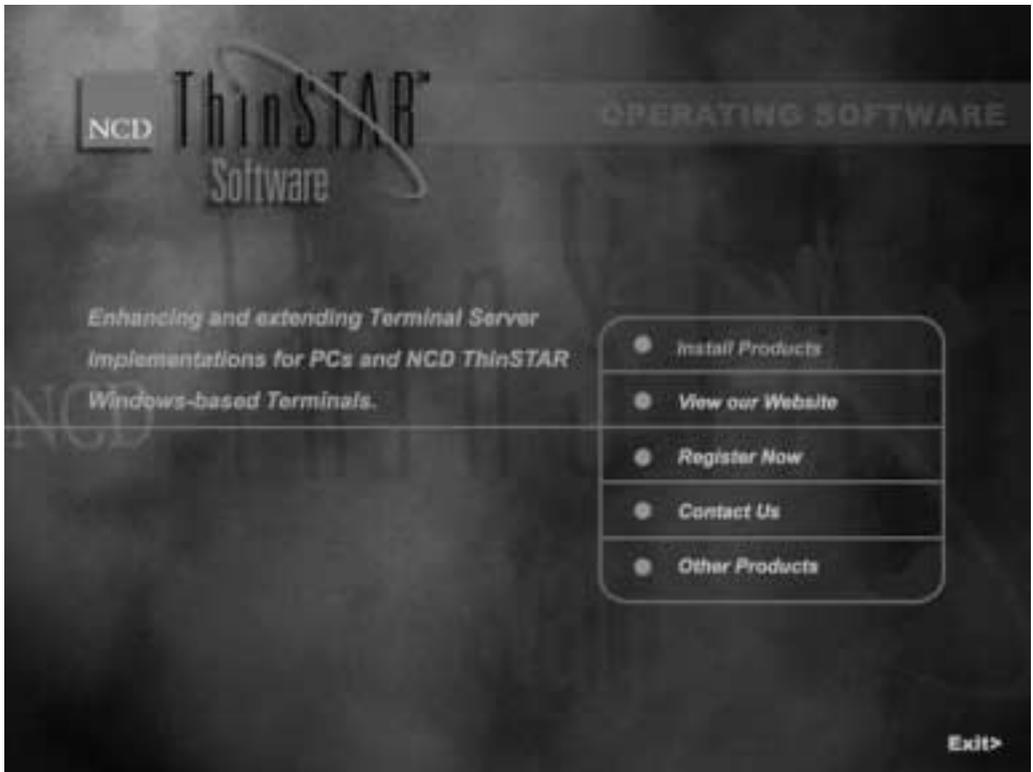
You must install NCD ThinSTAR Operating Software before NCD ThinPATH Manager.

Installing NCD ThinPATH Manager

After installing NCD ThinSTAR Operating Software, you can install NCD ThinPATH Manager. This installation requires a license key.

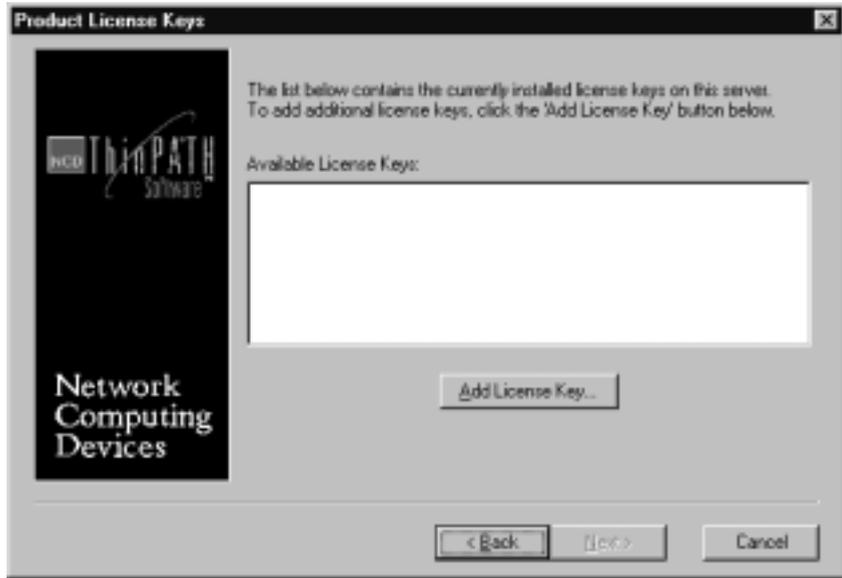
To install NCD ThinPATH Manager:

1. At the main installation menu, select Install Products.



2. Select NCD ThinPATH Manager.
3. Acknowledge acceptance of the license agreement, then click Next when the setup program is introduced.

4. Enter the license key and click Next.



The first time you run the installation program, click Add License Key, then enter the license keys supplied and click OK before clicking Next.

Keep track of all your license keys; you will need them if you run the installation program again.

5. When Setup is complete, click Finish.

Modifying, Repairing, or Removing the Installation

If removing software, remove NCD ThinPATH Manager first (if installed), then remove NCD ThinSTAR Operating Software.

To modify, repair, or remove the NCD ThinPATH Manager installation:

1. Open the Windows Control Panel and select Add/Remove Programs.
2. Select NCD ThinPATH Manager and click Add/Remove in Windows NT or Change/Remove in Windows 2000.
3. When the setup program is introduced, select an option and click Next to continue. The options available are as follows:



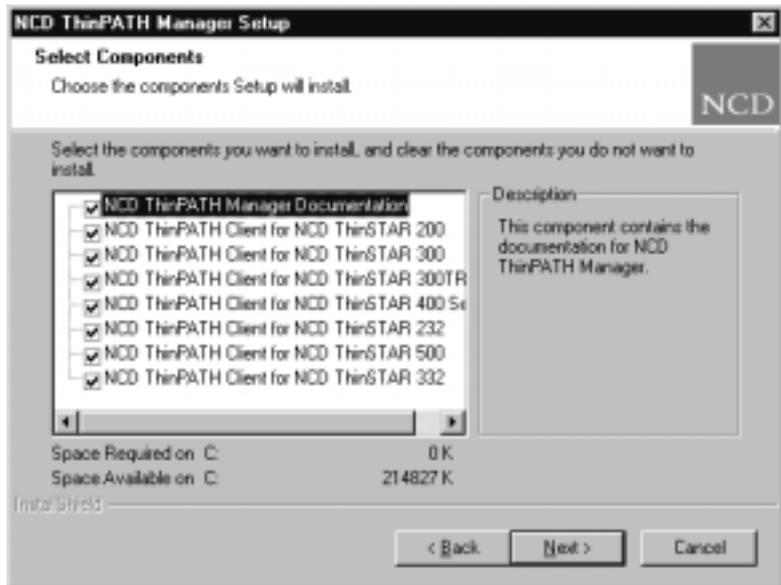
Modify lets you add or remove components after the initial installation.

Repair lets you reinstall the product, either the same version or a new version.

Remove deletes all files and menu items associated with the product.

- **Modify**

This presents a list of components with installed components checked. For example, here all components are installed.



To remove a component from the installation, click it to toggle the selection off; all unchecked components will be removed. To add a component, check it.

Click Next to continue.

- **Repair**

This reinstalls all components of the current installation.

- **Remove**

This removes all installed components.

Changing Policies to Include Web Configuration Tool

By default, the NCD ThinPATH Manager Web Configuration Tool is not installed on terminals because of its size. If your terminals have adequate flash memory and you want to install the Web Configuration Tool, change the upgrade policy setting for the tool in the NCD ThinSTAR Management Service (TMS).

To install the ThinPATH Web Configuration Tool on terminals:

1. Go to the Management Server and select Start > Settings > Control Panel > ThinSTAR Manager.
2. Select the terminal type.
3. Select NCD ThinPATH Web Configuration on the Software list and choose the Upgrade if newer policy.

When you restart terminals, as described in the *NCD ThinPATH Manager Centralized Startup Guide*, the Management Server downloads the Web Configuration Tool onto terminals.

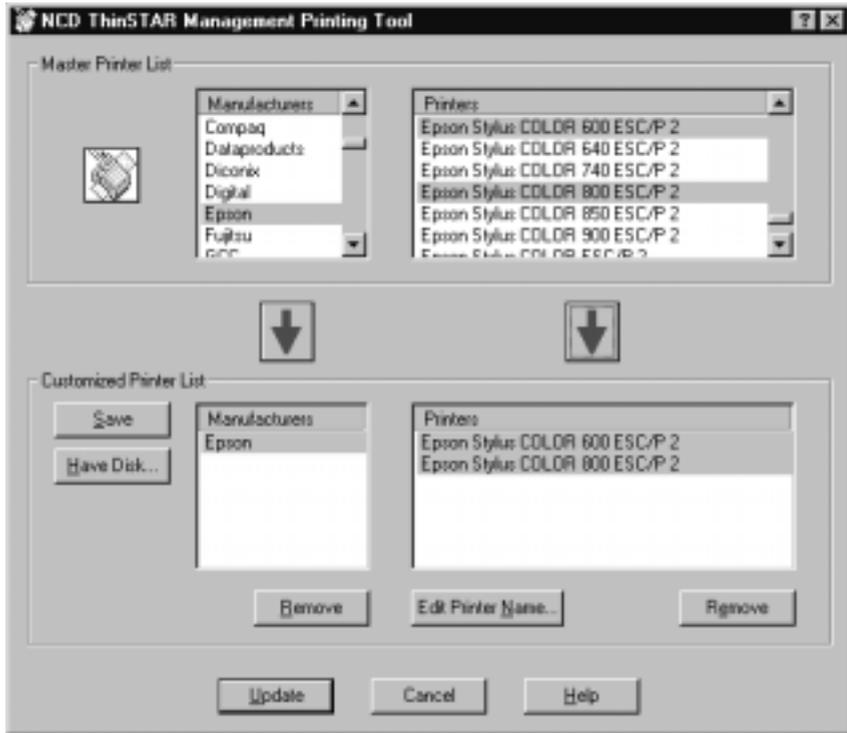
Defining Printer Connections

The new Microsoft Terminal Server 5.0 client includes local printer configuration for printing during Windows 2000 Server sessions. A list of available printers appears when you run the terminal setup wizard.

If you want to save flash memory on the terminal, you can use the NCD ThinSTAR Printing Tool on the Management Server to shorten the list that is downloaded to the terminals.

Note You can run this tool if you log onto a Windows 2000 or Windows NT 4.0 Server as a system administrator. However, terminals can only print during connections to Windows 2000 Servers.

In the following example, two Epson printers have been added to the customized list. These two printers will be the only printers listed on the terminal.



To create a customized list of printers for your site:

1. Select Start > Programs > Administrative Tools (Common) > NCD ThinSTAR OS > NCD ThinSTAR Management Printing Tool.
2. Select manufacturers and printers for your customized list.

- All printers for a manufacturer

Select the manufacturer and click the down arrow under the list of manufacturers. Alternatively, you can drag and drop the manufacturer into the customized list.

- A selection of printers

Select printers (using SHIFT + click for a continuous block or CTRL + click for random selections), then click the down arrow under the list of printers. Alternatively, you can drag and drop the selected printers into the customized list.

To remove a manufacturer and all of its printers from the customized lists, select the manufacturer and click the Remove button beneath the Manufacturers list.

To remove a subset of a manufacturer's printers, select the manufacturer, then select the unnecessary printers and click the Remove button beneath the Printers list.

3. Click Save to save the customized list.
4. If you want to add a printer that is not on the master list, click Have Disk and browse to find the .INF file that defines the printer and its drivers.

The program adds the new printer to the custom list.

5. If you want to change the printer name provided, select the printer from the custom list and click on Edit Printer Name, or double click the printer name, then edit it and click OK.

Note Only change the printer name if you know that your Windows 2000 Server uses a different name for the device.

6. After defining the customized list, you can complete the custom printer database without updating terminals, or you can make the custom list available to terminals.
 - To create the new customized list without immediately making it available to terminals, click Cancel.
 - To make the customized list available to terminals, click Update.

When terminals restart, all existing terminal models receive the same customized printer list.

Setting Terminal Upgrade Policies

Upgrade policies determine whether a terminal’s software is replaced.

The default policy for most components is to upgrade a terminal’s software if the software on the Management Server is newer. One exception is the default policy for the NCD ThinPATH Manager Web Configuration tool; it is set to Upgrade Disabled because the tool requires significant flash memory space on a terminal.

You can set different policies for each software component for a particular terminal model. The policy applies to all terminals of that model supported by that Management Server.

Terminal Upgrade Policies	
Upgrade if not equal	Operating Software and client software on the terminal are upgraded if newer or older than the software on the Management Server. With this policy, you can return to an earlier version or use a newer version.
Upgrade if newer	Operating Software and client software on the terminal are upgraded if the software on the Management Server is newer. With this policy, the terminal always runs the latest version of the Operating Software kept on the Management Server. This is the default value for most Operating Software components.
Upgrade DISABLED	The terminal’s Operating Software and client software are not upgraded.
Remove component	The Management Server removes the software component from the terminal the next time it restarts. Use this policy to remove software that you no longer use, or to increase the amount of available flash memory. (In Terminal Properties, see Inventory > Hardware for flash memory.)

To set the upgrade policy for each component:

1. Open the Control Panel and click the ThinSTAR Manager icon.
2. Select the terminal model, then select a component and an upgrade policy for it as shown in the following example.



3. Click Close after setting policies for your terminal models.

When a terminal restarts, it displays an upgrade message while it replaces its software.



CAUTION. Do not turn the terminal off during an upgrade. Turning it off at this time may damage it, requiring a software recovery that will destroy the configuration that is currently defined.



As files are copied, file names are displayed in this area.

After the upgrade is complete, the terminal restarts automatically, without any changes to its configuration and connections. It may start a connection wizard or the Connection Manager.

Next Steps

After installing the software and adjusting upgrade policies (if necessary), you configure terminals.

- **If you installed only NCD ThinSTAR Operating Software ...**

You can set up terminal properties and connections on each terminal.

For instructions, read the *NCD ThinSTAR Release Notes*, then go to the *NCD ThinSTAR Terminal User's Guide*. The guide explains how to configure terminal properties and set up connections one by one.

■ **If you also installed NCD ThinPATH Manager ...**

You will configure terminal properties and define connections from the Management Server.

For instructions, read the *NCD ThinSTAR Release Notes* and the *NCD ThinPATH Manager Release Notes*, then go to the *NCD ThinPATH Manager Centralized Startup Guide*. Reference information for the tools is in *NCD ThinPATH Manager Reference* and in online help.

The *NCD ThinPATH Manager Release Notes* explain how to add SNMP Services to make two .DLL files from SNMP Services available. NCD ThinPATH Manager needs these files to restart terminals remotely.

If your site uses SNMP to manage a network, you can configure the SNMP agent and enable it to change terminal properties. The full list of SNMP values is in NCD-THINSTAR-MIB.txt. By default, the directory containing this file is
\Program Files\NCD\ThinSTAR Management.

Documentation

Documentation is available online in PDF format or on the NCD website at:

www.ncd.com

For most online documents, select: Start\Programs\Administrative Tools (Common) and then:

■ **NCD ThinSTAR OS\Online Documentation for:**

Installation Guide	Software installation for NCD ThinSTAR Operating Software and NCD ThinPATH Manager.
Terminal User's Guide	Information on individual terminal setup; description of terminal properties; and information on creating and managing connections.
Terminal Administration Guide	Automatic updating and recovery of NCD ThinSTAR terminals with the ThinSTAR Operating Software, troubleshooting and a glossary.
User's Guide	Description of the setup wizard with brief introduction to terminal properties and connections.
Release Notes	Release-specific details and last-minute information.

or

■ **NCD ThinPATH Manager\Online Documentation for:**

Centralized Startup Guide	Terminal setup from a central location, configuring terminal properties and connections for groups of terminals.
Manager Reference	Information about NCD ThinPATH Manager tools with a section on troubleshooting and a glossary.
Release Notes	Release-specific details and last-minute information.