PTC X/Server

User Guide

PTC

PTC Inc.

PTC X/Server User Guide

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8.7-0308

Technical Support

To request customer support, please contact us by one of the means listed below and in your request include the name and version number of the product, your serial number, and the operating system and version/patch level that you are using. Contact PTC X/Server customer support at:

Technical Support Form:	http://www.mkssoftware.com/support/support.asp
E-mail:	MKSToolkitSupport@ptc.com
Telephone:	+1-703-803-7660
Fax:	+1-703-803-3344

When reporting problems, please provide a test case and test procedure, if possible. If you are following up on a previously reported problem, please include the problem tracking number in your correspondence.

Finally, tell us how we can contact you. Please give us your e-mail address and telephone number.

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Introduction

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Thank you for purchasing PTC X/Server. This book introduces you to the X/Server itself as well as the other programs that make up the PTC X/Server packages and gets you up and running quickly. You should read it if you want to use PTC X/Server on your PC to access UNIX applications.

As you read on, you.ll find out why PTC X/Server is the easiest way to access UNIX applications from Microsoft Windows.

What is PTC X/Server?

PTC X/Server provides Windows PC users with transparent access to X Window System applications running on remote host systems, as well as to UNIX character-based applications and or PTC MKS Toolkit ported UNIX applications running on Windows. It allows you to browse files on remote systems and launch applications with point and click simplicity. File transfer, printing and advanced messaging complete this connectivity package. PC users, whether in the office or on the road, can work with UNIX applications just as they do with Windows—all network and connection details are handled by PTC X/Server and kept hidden.

With PTC X/Server, you can:

■ Run X Window System graphical applications or character-terminal (for example, VT420) applications on remote UNIX systems.

■ Operate in the familiar, friendly environment of Microsoft Windows.

■ Launch UNIX applications easily from Windows.

■ Choose a Microsoft Windows look and feel for X applications, or use a standard X window manager for the look and feel of an X workstation.

■ Suspend an X session and resume it later without closing X applications (if Vision Resume. is in use at your site).

- Browse through files and folders and view the file hierarchy on UNIX systems in a similar way to browsing Windows files.

- Open UNIX-based documents from the Windows desktop.

- Copy information between UNIX applications and Microsoft Windows applications.

- Transfer files between your PC and UNIX systems.

- Create a virtual desktop space with multiple zones, with Windows and UNIX programs running in each, and switch between them.

- Print files from a remote host on a printer attached to your PC.

- Print from a Windows application on a printer attached to a UNIX system.

- Connect your PC to UNIX systems using a variety of different networks.

About This Manual

In Chapter 2, The Basics, you.ll find out what's on the Windows desktop, and how to get more information from online Help. You'll find out how to run UNIX applications, work with X programs and terminal emulators, and browse through UNIX files.

In Chapter 3, Beyond the Basics, you.ll discover how to turn your PC into an X display running your choice of window manager. You'll also learn how to suspend and resume a session, organize files on a UNIX server, organize your desktop into zones, set up remote printing, and link UNIX data to a Windows document. Finally, you'll see how you can fix PTC X/Server problems using the provided troubleshooters.

The Basics

2

This chapter gives a brief overview of how to get started with PTC X/Server.

You'll learn what's in the Windows **Start** menu, and how to get more information from online help.You'll find out how to run UNIX applications, work with X applications and terminal emulators, and browse through UNIX files.

What's on the Start Menu?

When you install PTC X/Server, the installer adds the **UNIX Programs**, **New UNIX Program**, and **Run UNIX Program** commands to the **Start** menu.
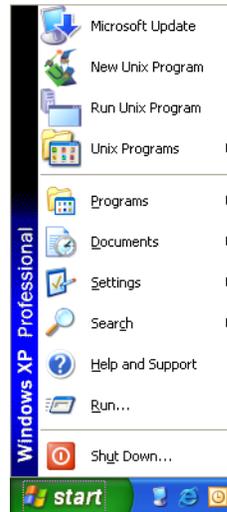
Additionally, the PTC XServer folder in the **Start** menu's **Programs** folder may contain some or all of the items shown in the following table, depending on installation choices. This folder is also called the **PTC XServer Start** menu.

Some items may be in sub-menus of the main PTC XServer menu,

Item	Description
	ANSI Emulator is an ANSI terminal emulator.
	Audio Server provides X applications with the ability to send and receive audio data such as voice, sound effects, and music in a network environment. It can be found in the **Accessories** sub-menu.
	UNIX Neighborhood can be used to browse remote hosts.

Item	Description
	Keymap Editor allows you to create and modify keyboard maps for use with terminal emulators. It can be found in the Accessories sub-menu.
	Program Starter can be used to remotely execute a program on a UNIX server.
	Help starts the PTC X/Server Help.It can be found in the **Documentation** sub-menu.
	VT420 Emulator is a VT420 terminal emulator.
	Wyse 60 Emulator is a Wyse 60 terminal emulator.
	X/Server allows X Window System clients to display on your PC.
	XVSpy is a troubleshooting tool that records and plays back an X protocol stream. It should be used under the direction of Customer Support and is not discussed in the PTC X/Server documentation. It can be found in the **Accessories** sub-menu.
	Zones creates a virtual desktop space with several zones containing Windows and/or UNIX applications that you can switch between.

Getting Help

Online Help is the main source of information about PTC X/Server software. There are several different varieties of help available from the **PTC XServer** folder on the **Start** menu or from within the PTC X/Server programs themselves.

First of all, there is context help in the programs that describes what you see on your screen. This help is usually available by clicking on the **?** in the program's title bar and then clicking on the item about which you would like more information.

Second, there are the HTML Help files (launched from the **Documentation** sub-menu of the PTC XServer folder) which give more details about using the individual PTC X/Server programs.

Finally, there are PDF documents (also launched from the **Documentation** sub-menu) such as this User Guide which provide introductory or advanced information that you can either read on-screen or print out for greater convenience.

Running an X Program

The X Server must be running to allow you to display X programs on your PC. Normally, the X Server is launched by selecting **X Server** from the **PTC XServer Start** menu, although it can be configured to automatically run when you start Windows. By default, the X Server runs in multiple-windows mode, which means that the built-in Vision Window Manager is used and X clients have the look and feel of Microsoft Windows. If you want your PC to look like an X terminal, you need to use the X Server in single-window mode with a standard X window manager.

You can use Remote Program Starter to start X applications, residing any-where on your network.

To Run an X Program

1. Click the **Start** button, and then click **Run UNIX Program**.

2. In the **Host** box, type a host name or choose a host from the drop-down list.

3. In the **Command** box, enter the command required to start an X program.

   Do not include the **–display** option (because *DISPLAY* is set automatically), and do not type an ampersand (&) at the end. Alternatively, click the **Browse** button. If the **Host** box is empty, all the configured hosts will be displayed. If you specified a host in the **Host** box, then the contents of your home directory on that host will be displayed.**Browse** the host until you find the program or shell script you want to execute.

4. If you want to change other settings, choose a command from the **Properties** menu. You can get Help on an item by clicking the question mark button (**?**) in the title bar, then clicking the item.

5. Click **Run**.

The X application should start in a few seconds. If it fails to appear, use the Help troubleshooters to help you identify the problem. Launch **PTC XServer Help** from the **Documentation** sub-menu of the PTC XServer folder on the **Start** menu and double-click **Troubleshooting** on the **Contents** tab.

Running a Character-based Program

Character-based UNIX programs are designed to work with certain types of terminal, so to run a UNIX program from your PC you need to use one of the PTC X/Server terminal emulators. VT420, Wyse 60 and ANSI terminal emulators are provided, and most UNIX applications can be configured to use one of these terminal types.

To Run a Program from a Terminal Emulator

1. Launch the desired terminal emulator by clicking **ANSI Emulator**, **VT420 Emulator**, or **Wyse 60 Emulator** in the PTC XServer folder of the **Start** menu.
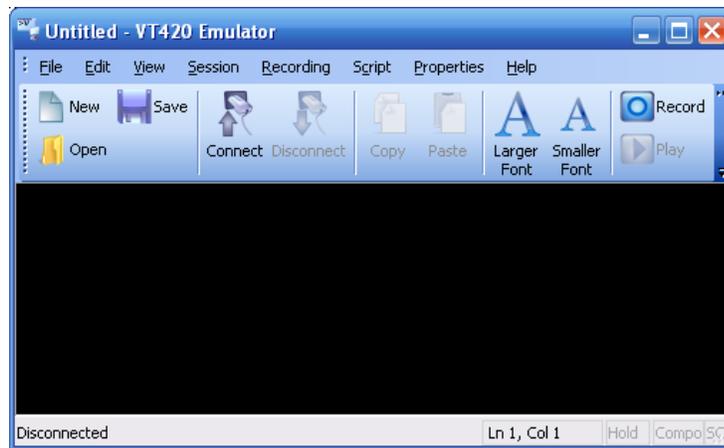
2. On the **Session** menu, click **Connect**.
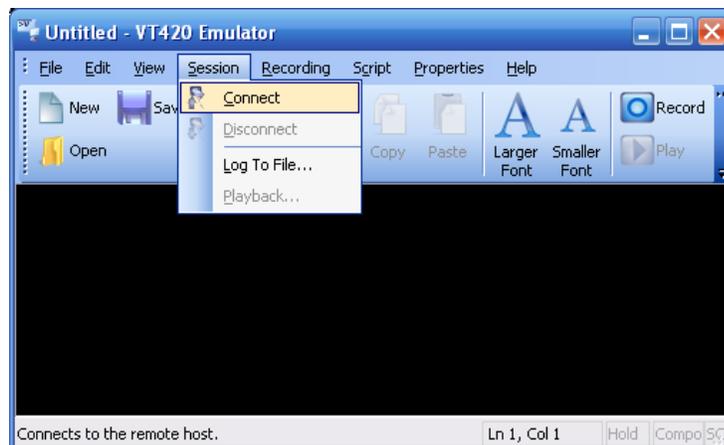
3. In the **Host** box, type a host name or choose a host from the drop-down list.

4. In the **Username** box, type a username or chose one from the drop-down list.

5. In the **Command Line** box, enter the command required to start a program, or leave the box empty if you want to log in to the UNIX host manually. If you want to see the UNIX system prompt, then enter the name of a shell program such as `sh` or `csh`.

Alternatively, click the browse button (**...**) to browse the UNIX neighborhood for a host and or command. If no host is specified, all hosts are shown. If the **Host** entry already specifies a host, your home directory on that host is shown. Browse until you find the program or shell script you want to execute.

If you entered a program name, then a connection is opened to the UNIX host, you are logged in automatically, and the program is started. If you specified a shell program, then the UNIX system prompt appears and you can interact with the system in the same way as if you logged in at a real terminal. If you left the **Command Line** box empty, then a connection is opened, and you will see the UNIX Login prompt asking you to log in manually, after which you will see the system prompt produced by your default login shell. If you specified a program that is not a shell, then you will see that program as soon as the automatic connection and log in process has completed.

Creating a UNIX Program Item

The UNIX Application Wizard can be used to create a Windows desktop item that allows you to start an X application or a character-based application. The wizard will either add the application to the **UNIX Programs** menu on the **Start** menu, or create a new icon on the desktop or in a folder, depending on how you started the wizard. You can also include settings files in your Web pages.

To Create a UNIX Program Desktop Item

1. Do one of the following:

   - If you want the application to appear on the **Start** menu, click the **Start** button, and then click **New UNIX Program**.

   - If you want the application to appear as an icon on the desktop or in a folder, click with the right mouse button where you want the item to appear, click **New**, and then click **UNIX Program**.

2. Follow the wizard's instructions, choosing the host and the command to be executed. You can use the **Browse** button to find the executable file you want.

3. You are asked to choose the type of program. **Other** means a UNIX program that does not require a user interface.

4. The wizard asks if you want to test the application. Be sure that the command will not make unwanted changes on the host system before you execute it.

   If the application is an X client then the **Host Replies** window is displayed to show status messages including any error messages produced by the host operating system. The X client should then appear.
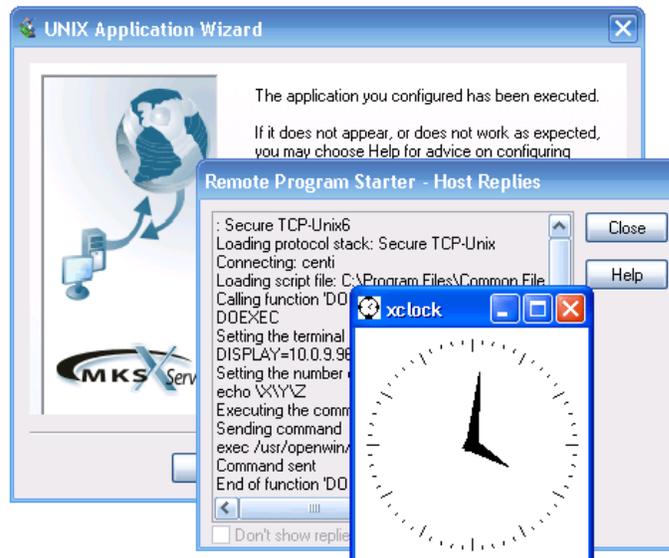
5. If the command produces an error, it will be displayed by the wizard. For most common errors you can select the error in the list box and click the **Help** button for assistance with that specific problem. You can click the **Back** button to return to previous settings, and then try executing the program again.

6. The wizard prompts you for an application name, which is used as the name of the settings file.

The UNIX Application Wizard creates either a Remote Program Starter document (`.rps`) or a terminal emulator document (`.v42`, `.ans`, `.w60`). If you ran the wizard from the **Start** menu, then the application is added to the list of UNIX programs on the **Start** menu. If you ran the wizard from the desktop, then a new icon appears. If you ran the wizard from inside a folder, then the settings document appears in the folder.

Working with X Applications

This section provides some basic information about working with X applications once they have been started and are displayed on your PC screen.

Copying and Pasting Between X and Windows

You can easily copy and paste information between X clients and Windows applications. These instructions assume that you have not altered the default Clipboard settings in the X Server profile.

To Copy and Paste Information

1. Select the information in the X application by dragging over it with the mouse. This action copies the information to the Windows Clipboard.
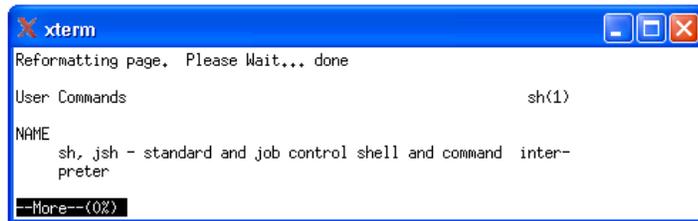
2. In the document where you want to insert the information, position the input cursor where you want it to appear.

You can also copy and paste information in a terminal emulator. For more information, see

3. On the **Edit** menu, click **Paste**.
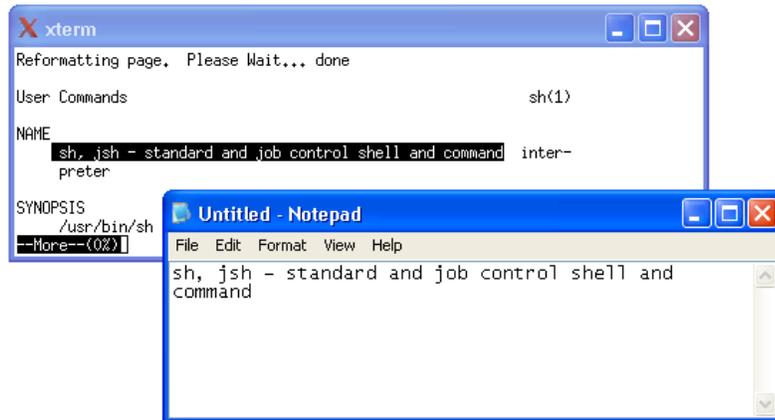
The new information appears in the document.

Tip To paste information from the Clipboard to an X application, position the cursor and then click both mouse buttons at the same time.

Using Font Substitution

By default, font substitution is enabled so that if an X application requests a font that is not available on your PC (or a font server) then the X Server will silently substitute another font. If you prefer to have more control over font substitution, then click **Interactive** on the **Fonts** tab in the X Server **Properties** dialog box. Interactive font substitution can be for a single request, for all requests in a session, or permanent. In order for permanent font substitution to be used the **Global Aliases** item must be in the **Font Path Items** list.
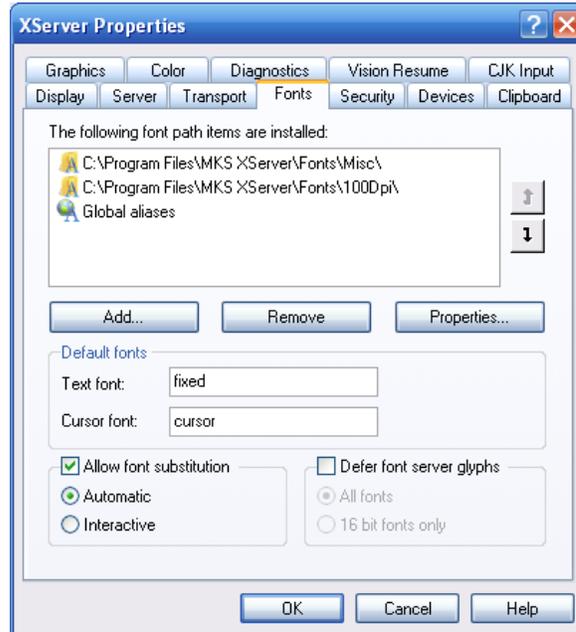
When an application requests a font that is unavailable, a dialog box is displayed showing the suggested substitution.
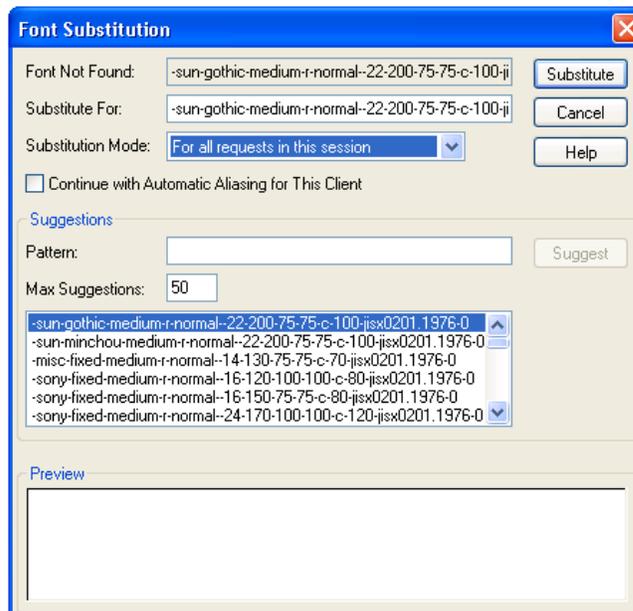
You can either accept the suggestion, or choose another font from the
Suggestions list. If the initial font suggestions list does not contain a
suitable font, then a manual search of all available fonts can be carried out.
Enter the search pattern in the **Pattern** box, using wildcard characters if you
wish. You could copy part of the logical font description from the **Font Not
Found** box to the **Pattern** box using standard Windows copy and paste
techniques. Select the text you want to copy, then press CONTROL+INSERT.
Select the destination, then press SHIFT+INSERT. Click **Suggest** to show
the new suggestions list.

Working with a Terminal Emulator

This section provides some basic information about working within a terminal emulator once you have opened a connection and run a UNIX program.

Copying and Pasting Information

As you work, you often need to copy information from one document to another, or from one place to another within a document. Before you edit information, you must select (highlight) it. Place the mouse pointer where you want to start selecting. Then press and hold down the mouse button, and drag the pointer to where you want the selection to end. Then release the mouse button.

To copy information

1. Select the information.
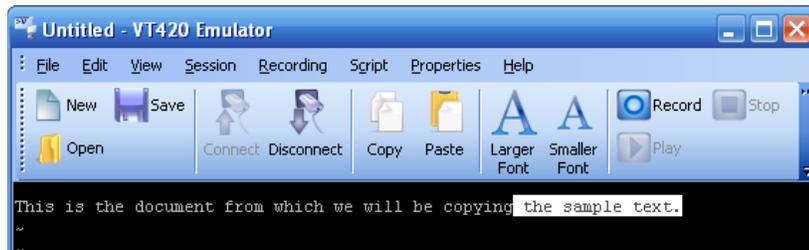
2. On the **Edit** menu, click **Copy**.

3. In the document where you want to insert the information, position the input cursor where you want it to appear.
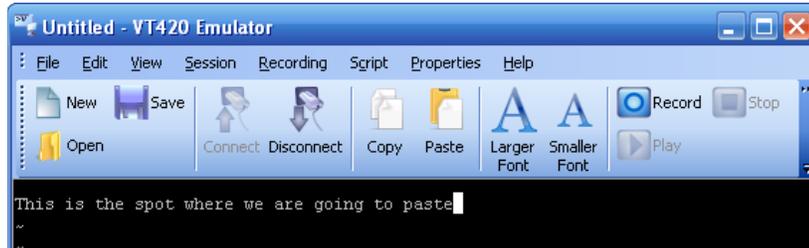

4. On the **Edit** menu, click **Paste**.
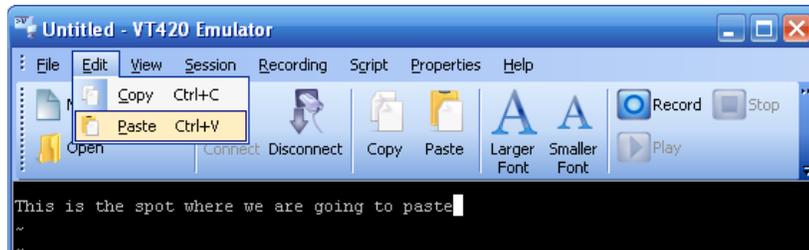

The new information appears in the document.
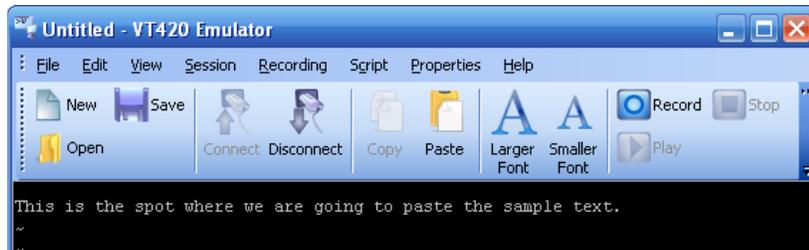
Tip You can also copy information from a UNIX document to a PC document, or vice versa.

Changing the Font

By default, the font size changes as you resize the emulator window. The intention is to display as much as possible of the virtual screen (for example, 80 columns by 25 rows) in the window. If the whole of the virtual screen cannot be displayed, then scroll bars are added to the window. This section tells you what to do if you prefer to work with a fixed font size that does not change as you resize the window.

To Change the Font

1. On the **Properties** menu, click **Font**.
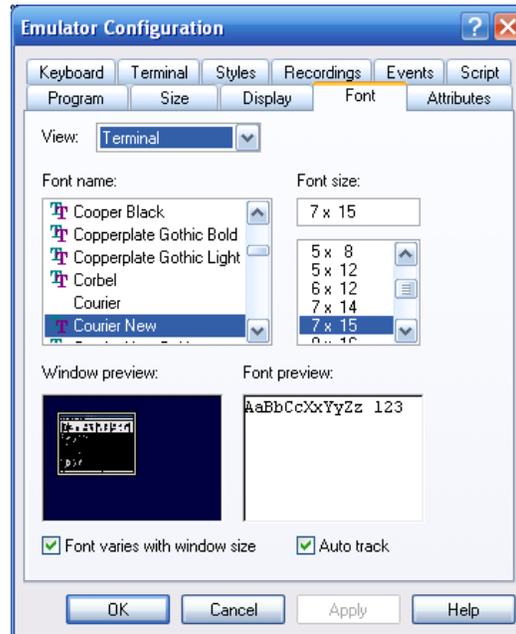
2. In the **Font size** box, click the size of font you want.

3. Click **Font varies with window size**, so that the box is not checked.

Changing Text Attributes

The default colors are white text on a black background. You can change the background color, and colors for normal text, and text with attributes such as bold or flashing. Note that if you specify colors or other text attributes, these will override any specified by the UNIX application.

To Change Text Attributes

1. On the **Properties** menu, click **Attributes**.
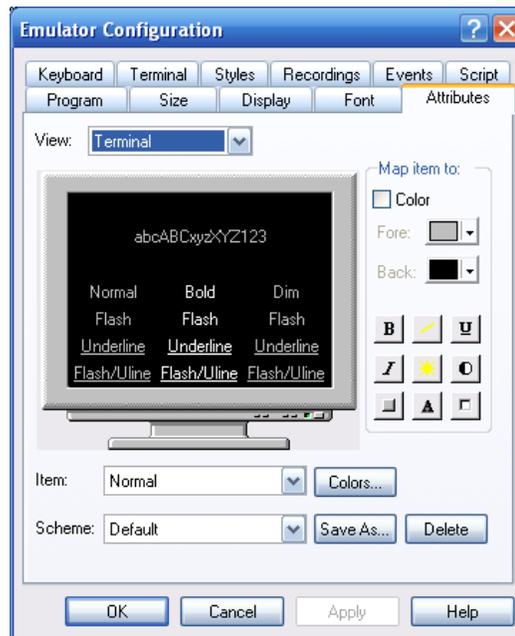
2. In the **Item** box, click the item you want to change color.

3. In the **Map Item To** section, select the **Color** check box. The **Fore** and **Back** buttons below become enabled. Click a button to display the available colors, then choose the color you want.

Tip   Instead of using the **Item** box, click what you want to change in the preview screen.

Seeing What's on a UNIX Server

You can browse the files and folders on a UNIX computer.

Browsing UNIX Servers

You can use UNIX Neighborhood to see what's on a UNIX computer.

To See What's on a UNIX Server

1. Select **UNIX Neighborhood** from the **PTC XServer Start** menu.

2. A window appears, displaying icons for all UNIX servers on your local network to which you can connect.
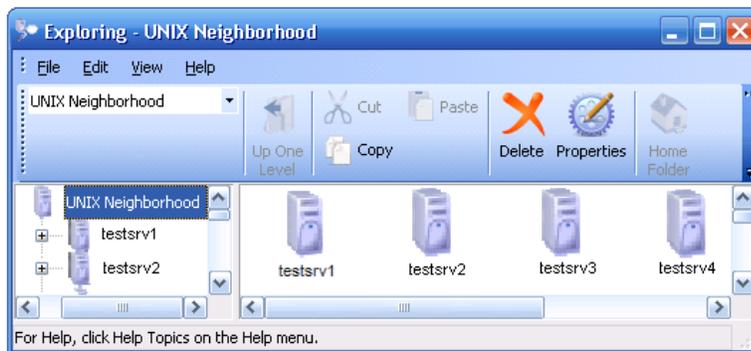
3. Double-click the icon for the host you want to browse.
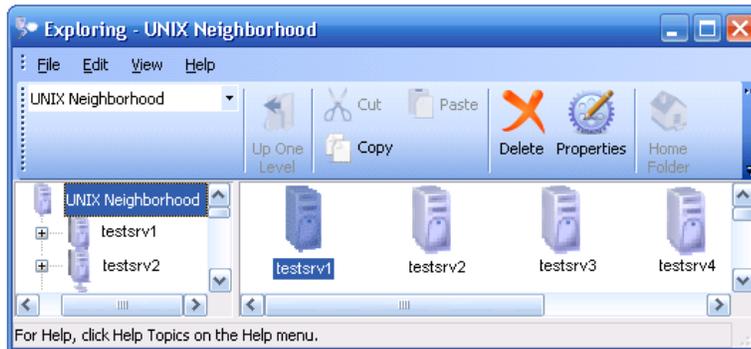
4. If this is the first time you have connected to this host, you will be prompted to enter a username and password.

A window appears showing the contents of your home folder on the host.
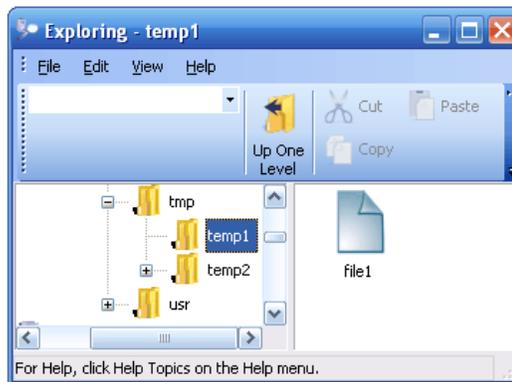
To See the Hierarchy of Folders

1. Select **UNIX Neighborhood** from the **PTC XServer Start** menu.

2. Click a host in the left side of the window. If this is the first time you have connected to this host, you will be prompted to enter a username and password. The tree is then expanded to show the contents of your home folder on the host.
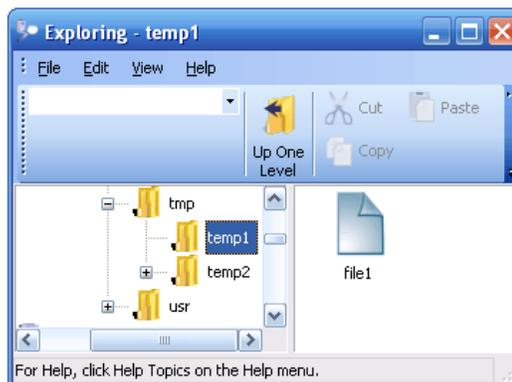
The right side of the window displays the contents of the item you click on the left.

Recognizing Different Types of Files

Folders and files are displayed in **UNIX Neighborhood** using several different icons including:

This Icon	Represents
	A folder, which can contain files and other folders.
	A file. The documents you use and create are files, and so are the programs you use. Different types of files may have different-looking icons. This standard (generic) icon is used when a file type does not have a specific icon associated with it.
>a	A program that runs in an ANSI terminal emulator.
>V	A program that runs in a VT420 terminal emulator.
>W	A program that runs in a Wyse 60 terminal emulator.

Some other file types with distinctive icons are configured by **Setup**, and you can add your own.

Opening a Program or Document

You double-click icons to see the contents of a folder or to start a program or open a document.

To Run a Program or Open a Document from UNIX Neighborhood

In **UNIX Neighborhood**, find the file you want to open, and then double-click it.

If the file is recognized as an executable program, then the appropriate terminal emulator or remote program starter is run on the PC, which then executes the program on the UNIX server. If the file is a document, then the document is loaded after the UNIX program starts.

If the file is not recognized as one of the registered file types, then the **Open With** dialog box is displayed for you to choose the application used to display the file.
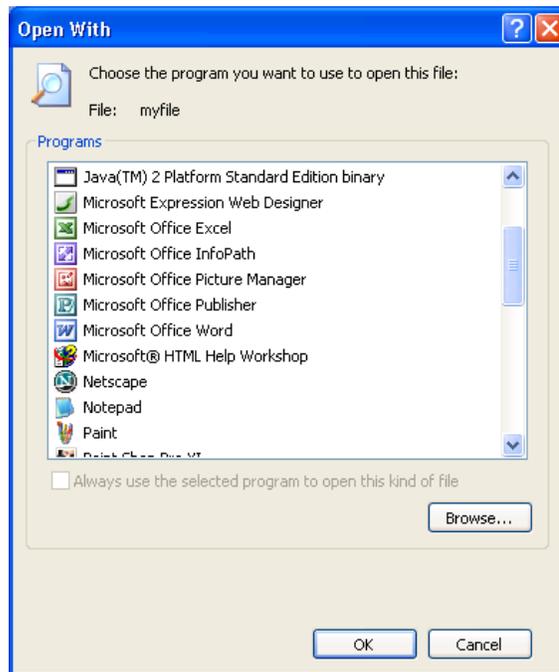
Changing the Appearance of the Window

You can change the appearance of windows.

To Change the Appearance of the Window

On the **View** menu, click the **Small Icons**, **List**, or **Details** commands.
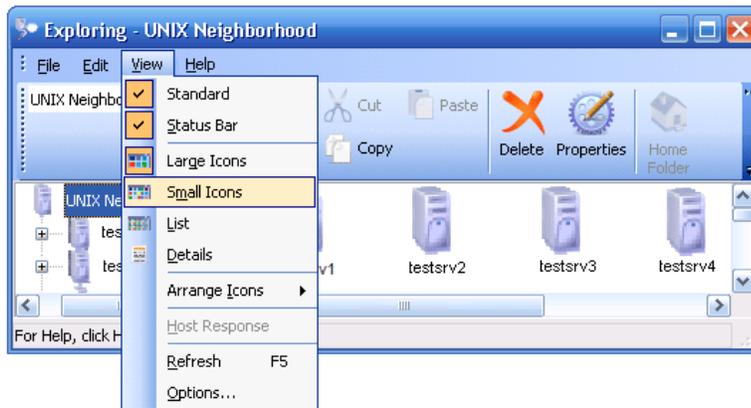
This is the **Large Icons** view.

> **Tip**   To see a description of what each menu command does, click the **View** menu, and make sure there is a check mark next to the **Status Bar** command. Then when you rest your mouse over a menu command, information about the command appears at the bottom of the window.

Displaying the Previous Folder

You can display the previous folder.

To display the previous folder

1. If the toolbar is not visible, click **View**, and then click **Standard**.

2. On the toolbar, click the **Up Folder** button or press the BACKSPACE key.

Beyond the Basics

3

Once you've mastered the basics, you'll want to know more about configuring PTC X/Server and how to use more of the advanced facilities.

In this chapter, you'll discover how to turn your PC into an X display running your choice of window manager, how to suspend and resume a session, how set up remote printing, and how to use PTC X/Server to organize files on a UNIX server too.

Configuring PTC X/Server

You can use the **Configuration** sub-menu of the **PTC XServer Start** menu to change settings for:

- PTC X/Server Communications

- PTC X/Server Services

- PTC X/Server Profiles

You can configure the basic communications layer, and also the higher-level services that are only available if SCO Vision2K software is installed on the UNIX host. Configure PTC X/Server profiles to specify options for the X Server.

To Configure PTC X/Server from the Start Menu

1. From the **PTC XServer Start** menu, select **Configuration**.

2. Click **PTC X/Server Communications**, **PTC X/Server Services**, or **PTC X/Server Configuration**.

The following sections describe each of the three types of configuration.

Configuring PTC X/Server Communications

The PTC X/Server Communications settings are used to configure the following:

- Hosts, to which you can connect and run UNIX programs.

- Transports, used to connect the PC to remote UNIX hosts.

- Database, that provides access to the PTC X/Server Communications database.

- Diagnostics, that provide troubleshooting information.

You should not need to change any of these settings.

Host Finder will detect all hosts running SCO Vision2K software as well as hosts running the X Display Manager (xdm) daemon. By default, the transport used to connect to the host will be chosen automatically from those available when the connection is opened.
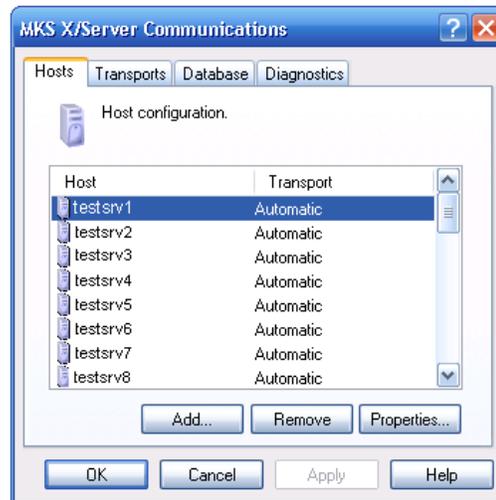
Configuring PTC X/Server Services

The PTC X/Server Services settings are used to configure the following:

- **General**, that allows PTC X/Server Services to be started or shut down manually, and allows you to prevent the banner being displayed at start up.

- **LNA**, that allows the PC to launch server programs on demand.

- **Host Finder**, that detects remote hosts and configures them automatically.

- **Printing**, that provides local and remote printing services.

By default, Host Finder detects all UNIX servers that have SCO Vision2K software installed, and hosts running the X Display Manager (xdm) daemon. You enable or disable categories of hosts by clicking the check boxes in the **Host Types** box. You should not need to alter settings in the **LNA** or **Admin** tabs, and the **Printing** settings are discussed later in this chapter.
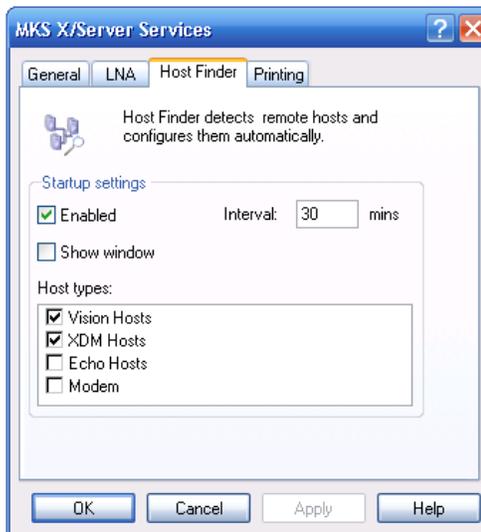
Configuring PTC X/Server Profiles

The **PTC XServer Configuration** menu item (in the **Configuration** sub-menu of the **PTC XServer Start** menu) allows you to configure the various properties of PTC X/Server including the following:

■ General settings, that allows you to create or modify profiles, and specify a profile to use when the X Server starts.

■ Global settings, that allow you to specify whether the X Server should be started when Windows starts, and some security options.

■ Web settings, that allow you to specify an X firewall proxy, recognized web servers, and control the profile used when starting an X client from an RX document.

The X Server properties control how the server looks and behaves, and how X clients should appear on the screen.

Normally, when you launch PTC X/Server Configuration, you are editing the default X Server profile. If you make changes and click **Save** on the **File** menu, those changes will be made to the default profile.

Use the icons and the **Manage** menu to configure the various server properties. Some options only become applicable when you choose another option. When options are not applicable, they appear grayed in the dialog boxes. If grayed options become available again, they show the built-in default settings
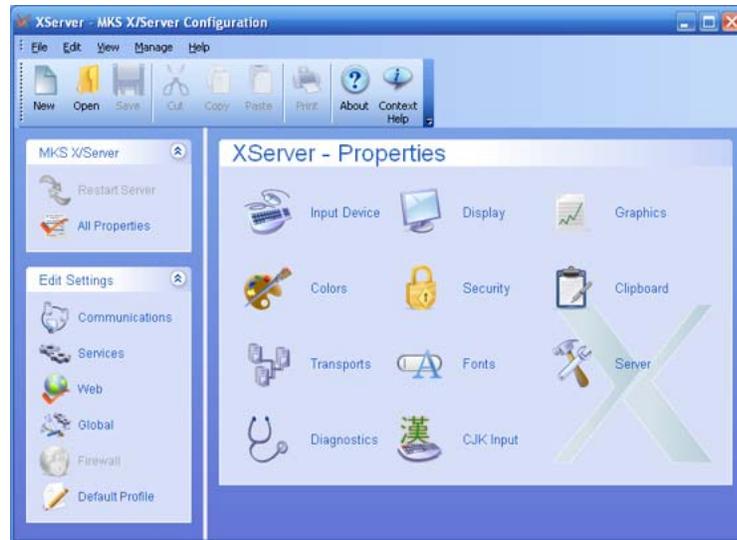
You can also use PTC X/Server Configuration to create new profiles and make changes to a profile that already exists.

To Create a New Profile

1. Select **PTC XServer Configuration** from the **Configuration** sub-menu of the **PTC XServer Start** menu. The **PTC X/Server Configuration** dialog box appears.

2. Select **New** from the **File** menu.

3. Set the various properties desired for the new profile.

4. Select **Save As...** from the **File** menu. The **Save Copy As** dialog box appears. Enter a name for the new profile in the **File name:** box and click **Save**.

To Configure An Existing Profile

1. Select **PTC XServer Configuration** from the **Configuration** sub-menu of the **PTC X/Server Start** menu. The **PTC X/Server Configuration** dialog box appears.

2. Select **Open...** from the **File** menu. The Open dialog box appears. Select the profile to be configured and click Open.

3. Make the desired changes to the profile.

4. Click Save on the File menu, to save the changed profile. As an alternative, you could select **Save As...** from the **File** menu to save the modified profile under a new name.

> **Note** You can run multiple instances of the X Server, using different profiles, providing you specify a different X Display Number for each profile. However, you can only run one multiple-windows mode session.

Configuring an X Server that is Running

You can configure a currently-running X Server by changing its properties.

To Configure an X Server that is Running

Do one of the following:

- If the server is running hidden, click the X Server icon in the notification area of the taskbar with the right mouse button, and then click **Properties**.

- If the server is not hidden, click the X Server on the taskbar with the right mouse button and click **Properties**.

- If the server is running in single window mode, select **Configuration** from the **PTC X/Server Start** menu and click **PTC XServer Configuration**.

A dialog box appears, with the name of the current profile displayed in the title bar. Use the tabs to switch between the various server properties. To save changes and close the properties dialog box, click **OK**. For changes to take effect before you close a properties dialog box, click **Apply**. Most changes you make take effect immediately, but others (such as changing the display mode) require you to restart the X Server. If this is necessary, a dialog box is displayed asking whether you wish to restart the server now. If this is a convenient time to restart the server, choose the **Yes** button. If you have active clients, you may prefer to choose **No**, close down your clients, and then restart the server using the **Restart** command on the **Control** menu.

Switching X Server Profiles

When you edit a profile, it has no effect on any currently running X Server started with that profile. However, if you change the properties for a running X Server, those changes are saved to the profile and will be in effect the next time you use the profile to start an X Server.

Normally, when the X Server is started, the default X Server profile is used. To change the profile used, select **PTC XServer Configuration** from the **Configuration** sub-menu of the **PTC XServer Start** menu. When the PTC X/Server Configuration dialog box appears, click on the **Default Profile** icon. The **When starting** PTC X/Server dialog box appears.

To always load a particular profile when the X Server starts, select the **Always use this profile:** option and choose the desired profile from the dropdown list. Otherwise, you can select the **Prompt for a profile** to be used option and the X Server will ask you to select a profile to use each time it launches.

Starting the X Server

The X Server is normally launched by selecting **X Server** from the **PTC XServer Start** menu. If you want the X Server to start automatically each time Windows starts, select **PTC XServer Configuration** from the **Configuration** sub-menu of the **PTC XServer Start** menu. When the **PTC XServer Configuration** dialog box appears, select **Global Settings** from the **Manage** menu, and enable the **Load PTC X/Server At Windows Startup** option. The server may also start automatically if it is not running when you use the Program Starter to run an X client.

To Start the X Server Manually

- Select **X Server** from the **PTC XServer Start** menu.

The server starts, and if it is configured to run hidden, then an indicator appears in the notification area of the Windows taskbar. If you have changed the configuration, then the server may appear as an icon on the taskbar or as a window.

Windows Management

The profiles created when you installed PTC X/Server run the X Server in multiple-windows mode, which means that each X program appears in its own Microsoft Window. The VWM window manager built in to the X Server is used to manage X clients. This gives X programs the look and feel of Microsoft Windows.

If you prefer to make your PC resemble a standard X display, then you can run the X Server in single-window mode. X applications appear within a single Microsoft window, which can be made to fill the entire PC screen.You can use a standard X window manager such as the local Motif MWM supplied with PTC X/Server, or a host-based window manager such as CDE, KDE, GNOME, OPEN LOOK OLWM, HP-VUE or DECwindows.

Tip   To use the local MWM window manager supplied with PTC X/Server, you need to install it using the **Custom** or **Repair** options of the PTC X/Server installer and then enable it in the **Advanced Single-Window Mode** dialog box.

To Create a Profile for Single-window Mode

1. From the **PTC XServer Start** menu, select **Configuration**, and click **PTC XServer Configuration**.On the **File** menu, click **New**. This creates a new profile based on the default PTC N*u*TCRACKER Platform profile.

2. Click **Display**.

3. Click **Single Window**.

> **Tip**   Clicking the **Advanced** button allows you to set other options, such as making the X Server fill the PC screen. For Help on an item in a dialog box, click the question-mark button in the upper-right corner, and then click the item.

If you want to use X Display Manager to start an X session, look up XDMCP in the Help index.

4. Click **OK**, and in the **PTC X/Server Profiles** dialog box, either specify that **Single** should always be used as the profile when starting the X Server, or ask to be prompted.

Suspending and Resuming a Session

Vision Resume allows you to suspend an X session and resume it at a later time. The main benefits are:

- X clients that are part of a Resume session actually run via a "proxyserver" on a UNIX host.

- The proxy-server communicates with the X Server running on a PC to display output and receive user input.

- A session can be suspended at any time either by user action, or through an unscheduled event such as communications failure. The X clients that are part of the session continue to run on the proxy-server.

- When a session is resumed, the X clients that were previously running reappear on the PC display and you can continue to work with them.

- There is only one Resume session for a UNIX user, so a session can be resumed on the same PC or a different PC.

- An X session can be relocated to a different display at any time.

Configuring Vision Resume on the PC

Vision Resume is configured by changing the properties for an X Server profile. You can display properties either by selecting **PTC XServer Configuration** from the **Configuration** sub-menu of the **PTC XServer Start** menu, or for the current X session by using the X Server's **Control** menu. By default, the option to use Vision Resume is disabled. Vision Resume must also be installed and configured on your UNIX server (ask your System Administrator).

To Configure Vision Resume on the PC

1. In the X Server properties dialog box, select **All Properties** and click the **Vision Resume** tab.
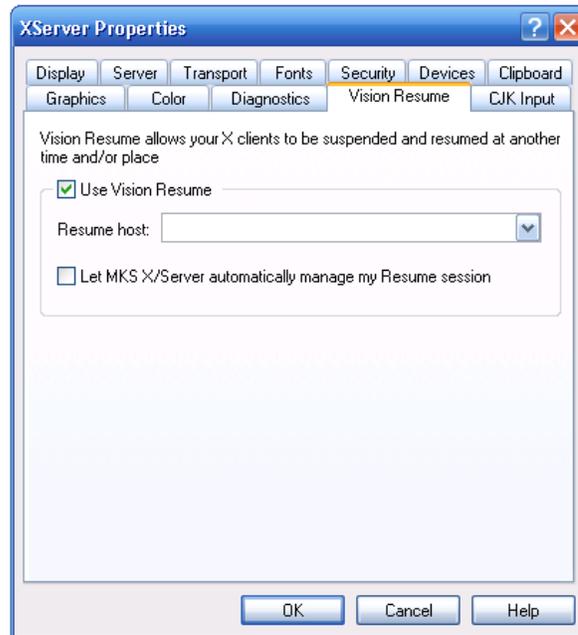
2. Choose the **Use Vision Resume** option.

3. In the **Resume Host** box, choose the host on which the Vision Resume proxy-server will run. If you leave this box empty, then you will be prompted for a host when you start a Resume session.

4. Choose the **Let PTC X/Server Automatically Manage My Resume Session** option if you want a Resume session to be started automatically when the X Server starts.

Controlling a Vision Resume Session

If the **Let PTC X/Server Automatically Manage My Resume Session** option is enabled, then when the Vision X Server starts, any existing session will be resumed or a new session will be started.

You can also start or resume a session manually.

### To Control a Vision Resume Session

1. Do one of the following:

■ If the server is running hidden, then click the X Server icon in the notification area of the taskbar with the right mouse button and click **Vision Resume**.

■ If the server is not hidden, click the X Server icon on the taskbar with the right mouse button and click **Vision Resume**.

■ If the server is running in single-window mode, click the **Control** menu and then click **Vision Resume**.

2. If a Resume Host has not been specified in the X Server profile, then you will be prompted to choose one. If the profile specifies the Resume host then you will not see this dialog box.

If you want to set this Resume Host name in the X Server profile, click the check box.
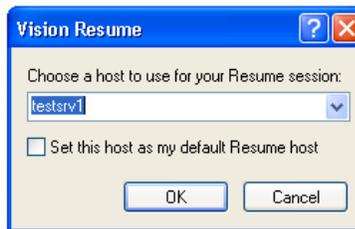
For more information, look up "Vision Resume" in the Help index.

3. When the **Vision Resume Session Control** dialog box is displayed, click the action you want.
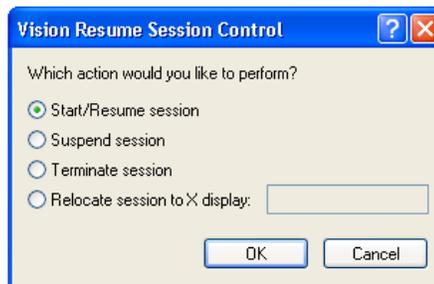
A connection is opened to the Resume host. If you are starting a new Resume session, then the X clients specified in your session file are started.

Organizing Files and Folders

This section details some procedures for working with files and folders on a UNIX server, and for copying files between your PC and a UNIX server. This is normally done using UNIX Neighborhood.

Using UNIX Neighborhood

You can move or copy files within one UNIX file system; from one UNIX system to another; or between a UNIX system and your PC.
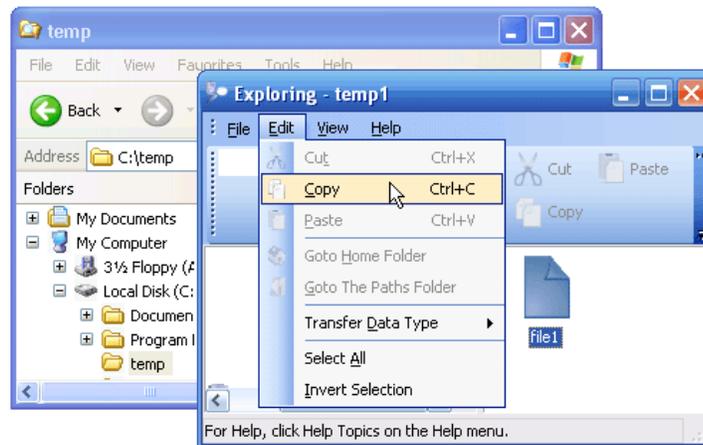
To Move or Copy Using the Edit menu

1. Click the file or folder you want to move or copy. You can click a UNIX file or folder in **UNIX Neighborhood**, or a Windows file or folder in **My Computer.**

2. To move the file, select **Cut** from the **Edit** menu. To copy the file, select **Copy** from the **Edit** menu.

3. Open the folder where you want to put the copy. You can open a UNIX folder in **UNIX Neighborhood**, or a Windows folder in **My Computer**.

4. On the **Edit** menu, click **Paste**.

Tip To select more than one file or folder to copy, hold down the CTRL key, and then click the items you want.

To Move or Copy by Using the Right Mouse Button

1. Use the right mouse button to click the file you want to move or copy. You can click a UNIX file in **UNIX Neighborhood**, or a Windows file in **My Computer**.
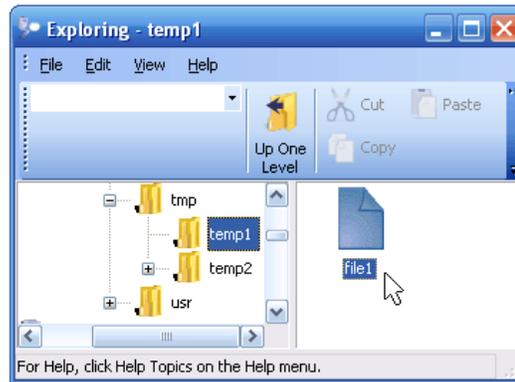
2. To move the file, click **Cut**. To copy the file, click **Copy**.

3. Open the folder where you want to place the file. You can open a UNIX folder in **UNIX Neighborhood**, or a Windows folder in **My Computer**. Then use the right mouse button to click an empty part of the window.
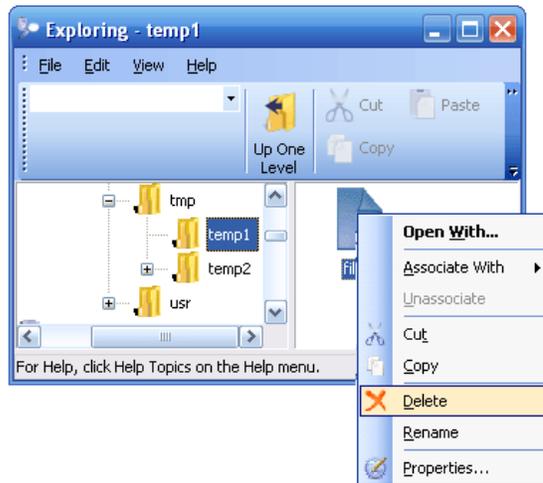
4. Click **Paste**.
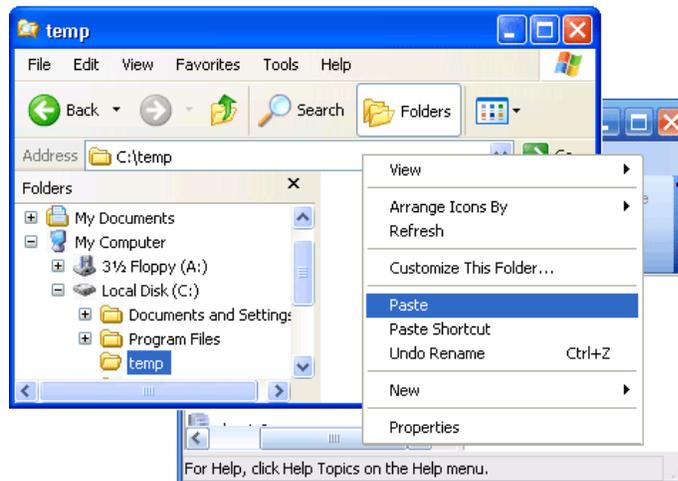
To Delete a File or Folder

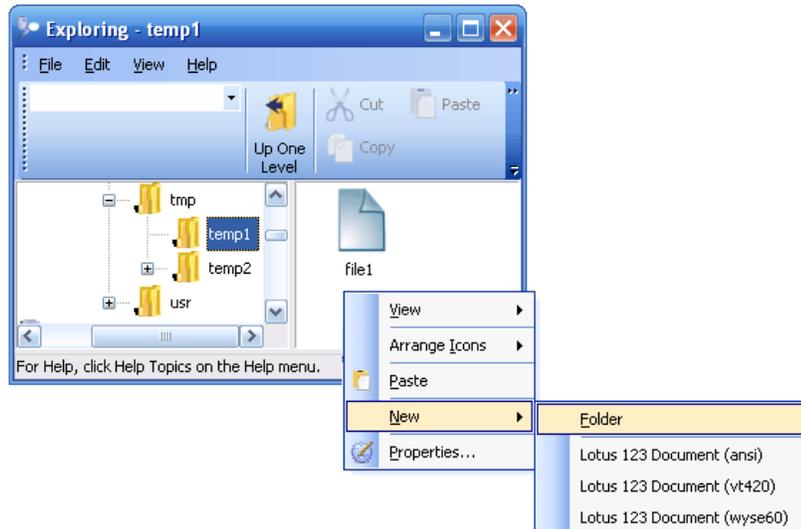1. In **UNIX Neighborhood**, click the file or folder you want to delete.

2. On the **File** menu, click **Delete**.

You can also use **UNIX Neighborhood** to create new folders.

To Create a New Folder

1. In **UNIX Neighborhood**, open the folder where you want to create the new folder.

2. On the **File** menu, point to **New**, and then click **Folder**.

3. The new folder appears with a temporary name.
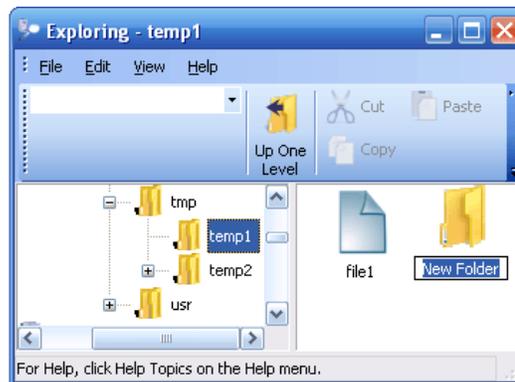
Tip To set properties for the new folder, click **Properties** on the **File** menu.

4. Type a name for the new folder, and then press ENTER.

Printing

PTC X/Server allows Windows and UNIX applications to share printers. You can print from a UNIX application to a printer attached to a PC, or you can print from a Windows application to a UNIX printer.

In addition, some PTC X/Server terminal emulators have slave printing capabilities, just like the real terminals they emulate.

Printing UNIX files on your PC

The Print Server on the PC listens for print requests, and prints them on a local printer attached to your PC. A local printer called Default is set up for you when you install PTC X/Server, configured to use the standard LPD print service that many versions of UNIX support over TCP/IP network connections. To be able to send print requests, the System Administrator needs to configure the PC printer as a remote printer on your UNIX host.

To Change the Local Printer Type

1. Select **PTC XServer Services** from the **Configuration** sub-menu of the **PTC XServer Start** menu, and click the **Printing** tab.

2. In the **Printers** box, click **Default**, and then click **Edit**.

3. In the `Printer Type` box, choose **RPC Protocol** from the drop-down list.
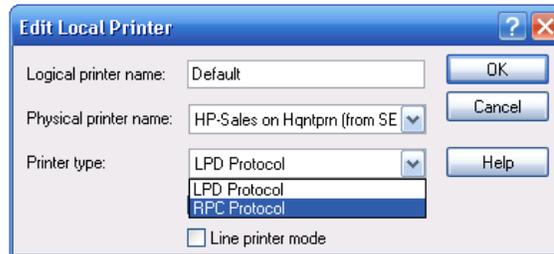
4. Make any changes you want to the other options.

Printing PC Files on UNIX

PTC X/Server allows you to print from a Windows application to a printer attached to a remote UNIX server. Print jobs will be scheduled by the UNIX spooler. The Print Server on the PC also acts as a client program to send print requests to the print server on the UNIX host. You can choose whether the client sends print requests using the LPD protocol, or using the Vision USP RPC protocol.

Configuring a remote UNIX printer involves three separate actions:

1. On your UNIX host, set up the printer which is to receive printing requests from your PC. For example, the printer might be called `room123`.

2. Add a new Windows printer that sends its output to a file on the PC.

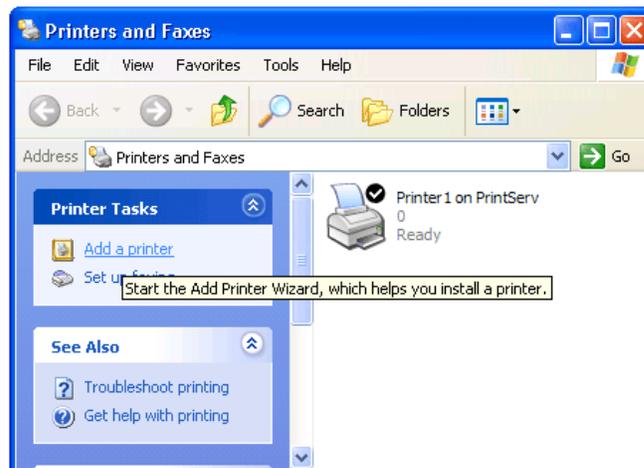**3.** Configure the remote printer in PTC X/Server Services.

When you have configured the remote printer, you will be able to print to it by choosing it in your Windows application, just like any local printer.

To Add a Printer on Windows XP

1. On the PC, select **Printers and Faxes** from the **Start** menu.
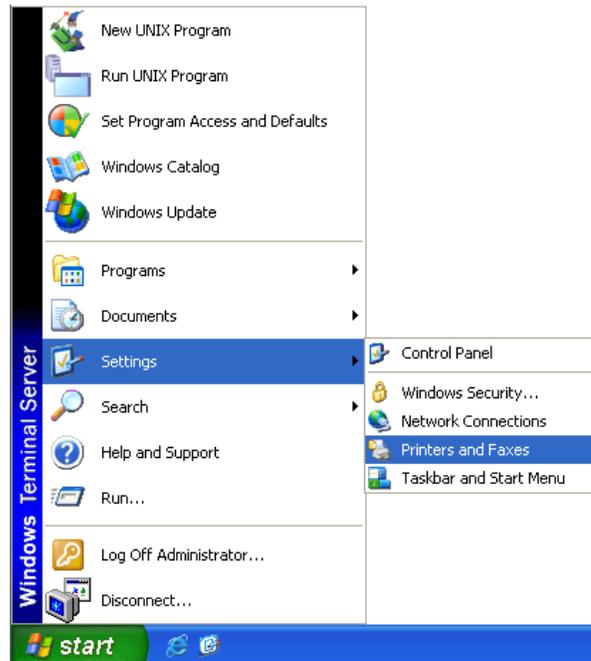
2. Click **Add a Printer**.

3. The **Add Printer** wizard starts, and you should follow the instructions to set up a new printer. Choose **Local Printer**, and then select the type of printer attached to the UNIX system. When you are asked to choose a port, none of the existing ports are suitable for remote printing, so temporarily select LPT1:. Specify a meaningful printer name, for example QMS-PS810 on UNIX. Do not choose to print a test page.

4. When the wizard has finished, the new printer appears in the **Printers** window.
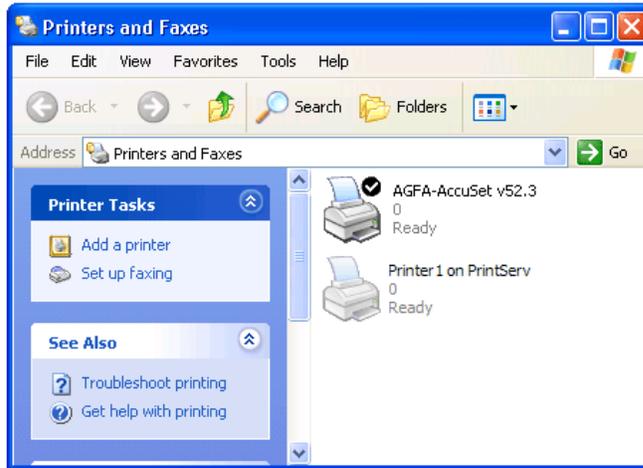
5. Click the new printer icon with the right mouse button, and click **Properties**.
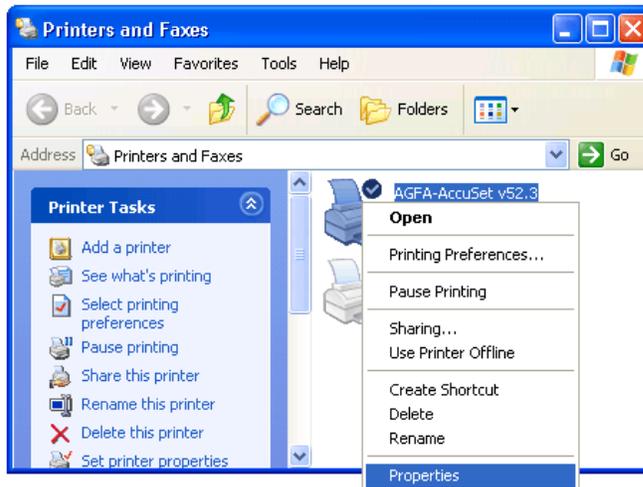
6. On the **Ports** tab, click **Add Port**.

7. Click **Other**, and select **Local Port** in the list box. Click **OK**.

8. Type a filename as a new port name. For example,
    `c:\tmp\unixprt.tmp`. Click **OK**.
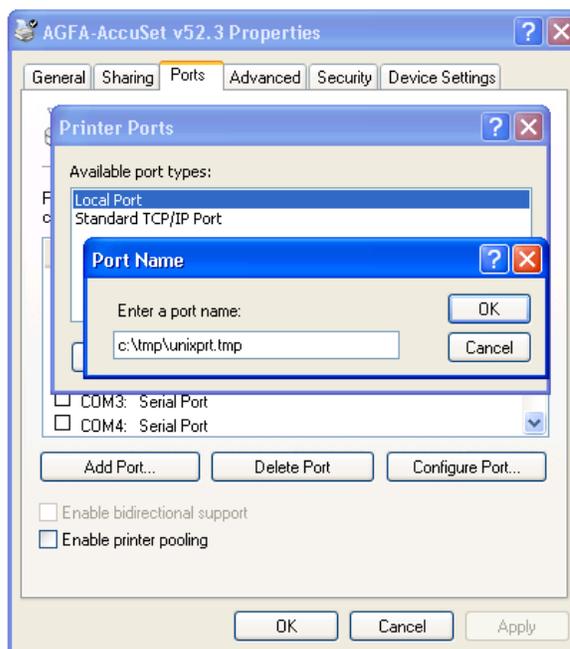
9. The new "port" will now be shown in the **Print to the Following Port**
    box. Click **OK** to exit from the **Printer Properties** dialog box.

You can now proceed to add a remote printer in PTC X/Server Services, as
described later in this section.

To Configure a Remote Printer in PTC X/Server Services

1. Select **PTC XServer Services** from the **Configuration** sub-menu of the
    PTC XServer Start menu.

2. Select the **Printing** tab and click **Add Remote**.

3. In the **Logical Printer Name** box, type a new name.

4. In the **Physical Printer Name** box, choose the Windows printer you just
    set up (for example, `QMS-PS810 on UNIX` on
    `c:\tmp\unixprt.tmp`.).

5. Specify the name of the remote host, and the remote printer (for
    example, `room123`).

6. Specify the communications protocol (LPD or RPC) by which print data will be sent from your PC to the selected UNIX host. If the UNIX host handles incoming LPD remote printing requests, and your PC is able to establish a TCP/IP connection to the UNIX host, select **LPD Protocol**; otherwise select **RPC Protocol**. If you are using LPD protocol, you may have to add your PC's network name to the `/etc/hosts.equiv` or `/etc/hosts.lpd` file on the host (refer to the LPD documentation on the host).

Putting a UNIX Shortcut on the Desktop

In Windows, shortcuts provide easy access to the documents and programs you use most often. PTC X/Server lets you put shortcuts to UNIX items directly on the Windows desktop. You can create a shortcut to a folder, a program or a document.

Creating a shortcut does not change the file's location on the UNIX server, and does not copy it to the PC. When you delete a shortcut, the original file is not deleted. If you delete the file, the shortcut is not deleted automatically.

To Put a Shortcut on the Desktop

1. Drag an icon from **UNIX Neighborhood** to the desktop.

    Double-clicking on a folder shortcut starts **UNIX Neighborhood** to display the contents of the folder. Double-clicking on a program shortcut starts the program, and a document shortcut starts the associated program with the document loaded.

Starting UNIX Programs Automatically

You can have a UNIX program start automatically when you start Windows.

To Make a UNIX Program Start when Windows Starts

1. Create a Windows desktop item (on the desktop, not in the **Start** menu) that lets you start an X application or a character-based application.

For more information, see "Creating a UNIX Program Item" on page 11.

2. In **Windows Explorer**, display the **Startup** folder.

3. Use the right mouse button to drag the document icon into the **Startup** folder. Release the mouse button.
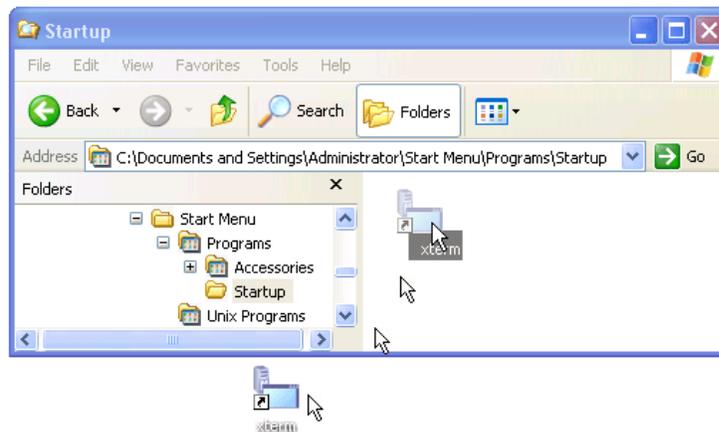
4. Click **Create Shortcut(s) Here**.
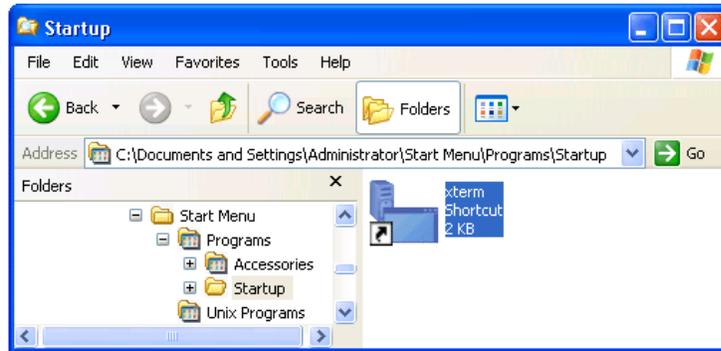
The program specified by the shortcut will be started each time you start Windows.

Organizing the Desktop with Zones

For more information, look up "Zones" in the Help index.

You can use the Zones program to organize your desktop. Applications that are currently running can be grouped into zones that you can easily switch between. When you start Zones, the zonebar appears at the top of the PC screen.
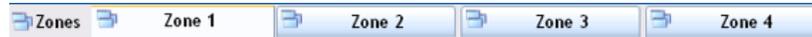
The **Zones** button on the left displays a menu. The other buttons represent the different zones. You can change the names of the zones, move the zonebar to a different location, or hide it in the same way that the Windows toolbar can be hidden. The Windows desktop remains visible in all zones.

All programs running when you start Zones are placed into Zone 1. Click a zone button if you want to switch to a different zone, and start any applications you want to appear in the new zone. You can start local Windows applications, or use other PTC X/Server programs to start UNIX applications.

Each zone has a StartUp folder to allow you to specify programs that should be started when you first enter a zone.

Using SSH with PTC X/Server

SSH (Secure Shell) is a secure replacement for older TCP protocols such as `rexec`, `rsh`, `rlogin`, `telnet`, and `ftp`. SSH provides the functionality of these older protocols while adding the security of an SSL encryption layer and support for modern authentication mechanisms. You can also use an established SSH connection to tunnel other protocols (such as X11) over the existing channel.

PTC X/Server provides transports that use older connection mechanisms as well as ones that use SSH. As a result, you can connect to both pre-SSH machines and SSH-capable machines. PTC X/Server first tries to connect using SSH and if that fails, it falls back to using an insecure transport (for example, `telnet`) to make the connection.

SSH can be configured to use a variety of authentication methods. By default, PTC X/Server is configured the simplest authentication method (where you are always prompted for your username and password when you connect to a UNIX machine). PTC X/Server can also be configured to use RSA/DSA Public Key Authentication or Smart Card Authentication.

One of the most popular reasons to use SSH is that it allows passwordless authentication. In other words, once you have set up passwordless authentication, you can open secure connections without providing your password each time. To set up passwordless authentication, you must generate a pair of public and private keys using the `ssh-keygen` utility (available with PTC MKS Toolkit and on most UNIX systems) and copy them to the machine to which you want to connect. Where precisely you copy your key depends upon the specifics of the secure shell service or daemon running on the remote machine.

If you are connecting to a secure shell service or daemon that is derived from the OpenSSH version of secure shell (such as the secure shell service (`sshd`) from PTC MKS Toolkit), you should append protocol version 1 RSA keys to the host's ~/.ssh/authorized_keys file and protocol version 2 RSA and DSA keys to the host's ~/.ssh/authorized_keys2 file where ~/ is the home directory of the account on the remote host.

If you are connecting to a secure shell service or daemon that is derived from the ssh.com version of secure shell, the procedure is somewhat different. The first thing you must be aware of is that the format of the public key files that are used by these secure shell daemons is different than the format that is used by the OpenSSH derived versions. Fortunately `ssh-keygen` can convert these for you with a command like:

```
ssh-keygen -e -f ~/.ssh/id_dsa > dsa2.pub
```

In this example, the file dsa2.pub is the file that contains the public key and should be installed on the remote server. Typically this is done by simply copying the file to ~/.ssh2/dsa2.pub — the ssh.com versions of the service keep each public key in a separate file. Finally you need to append a single line to the file ~/.ssh2/authorization:

```
Key dsa2.pub
```

If you are using PTC MKS Toolkit to create the private key, the key is placed in the correct location. Otherwise, you should use the **Identity** tab of the **Secure Shell Client Host Configuration** dialog box during SSH configuration to import the private key and place it in the correction location.
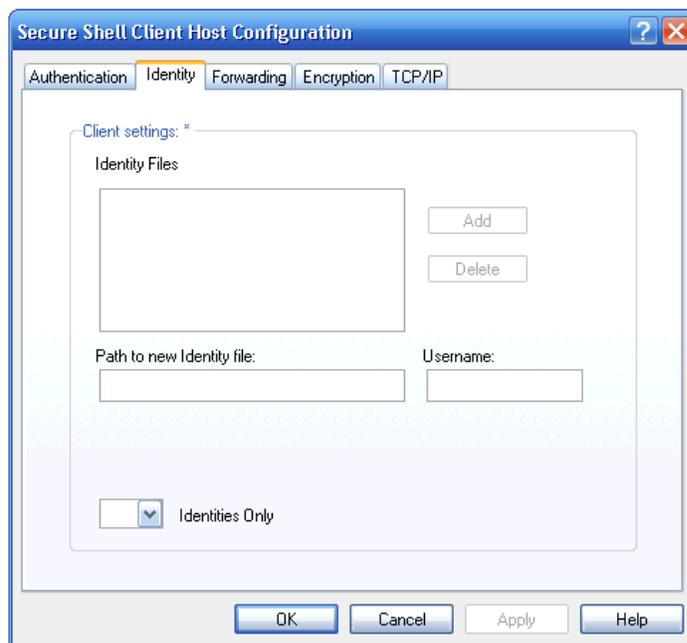
Once you have done this, passwordless authentication should be enabled.

When connecting to a remote host using SSH, you may leave the password field empty. If the password is entered, it is cached and no further username/ password dialogs will show up for that host. If no password is entered, the SSH layer may or may not prompt for a password. Such a password is never cached in the password database, so every connection that is opened will prompt again for a password. If you are using passwordless authentication, it is appropriate to not enter the password at the username/password dialog.

Troubleshooting

If you encounter problems when using PTC X/Server software, select **Troubleshooting** in the table of contents for PTC X/Server Help, and follow the step-by-step instructions to resolve the problem. In addition, PTC X/Server Help gives information about how to contact Technical Support if you cannot resolve your problem.