

AXUS WinClient 620XPe Series

~ Slim Type Windows Base Terminal

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This product conforms to the requirement of IEC950 and EN60950.

This product conforms to requirements of EN55022 for Class A equipment or EN55022 for Class B equipment.

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Introduction

Introducing the WinClient with XP Embedded.

WinClient Windows Based Terminals are designed to access any Windows application such as Microsoft Word, Excel or PowerPoint residing on Windows Terminal Server. WinClient is very easy on installation; there is no need to install any software onto network. Simply plug a WinClient into the network, configure WinClient, and then connect to Windows Terminal Server to run Windows applications.

WinClient supports RDP (Remote Desktop Protocol) and Citrix ICA (Independent Computing Architecture). WinClient connects to one or more Windows NT-based Servers via RDP. Citrix MetaFrame or WinFrame to capable with ICA.

AXUS' WBT and WRM contains the FreeDOS, and VNC kernel. For more information, or to contribute to the Open Source effect, Please visit www.freedos.org
www.realvnc.com.

Features of WinClient TC620 XPE

Model	TC-620 Series
Processor	
CPU	VIA Luke Eden 800MHz / 1GHz
Memory	
RAM	One 256MB SDRAM 168pin DIMM up to 512MB
DOM	Default 512 MB , Up to 1GB
CF	Optional extension storage
Standard Interface	
VGA	Up to 1600x1200x16bit high color, VESA monitor support with DDC
LAN	10/100BaseT fast Ethernet, twisted pair RJ45 , PXE supported
Wireless	USB Wireless LAN 802.11b/g (Option)
Smart Card	Optional
Keyboard and Mouse	PS2 Type
Serial	RS232, 9Pin DSUB COM1, COM2
Parallel	25Pin DSUB
USB Port	2 x USB 2.0 Ports (Front), 2 x USB 2.0 Ports (Back)
Audio Line Out	1/8inches mini, full 16bit stereo, 44KHz sample rate
Power System	
Connector	2 Pin Jack 5V DC.
AC/DC Adapter	Input AC 100/240 Volt, 50~60Hz. Output 12VCD, 4.2A
Physical Mechanical	
Dimension	220 mm (H) x 45 mm (W) x 155 mm (D)
Client Side System Software	
OS System	Microsoft Windows XP Embedded Service Pack 2
Optional Terminal Emulations	IBM: 3270, 5250 for Display and Printer Digital: VT52, VT100, VT220-7, VT220-8, VT320-7, VT320-8, VT420-7, VT420-8, VT525-7, VT525-8 ANSI: SCO ANSI, BBS ANSI, AT 386, AIXTERM, LINUX, XTERM, WYSE 370 General Terminals: TANDEM, HP, DG, SIEMENS, IBM 3151 ASCII Terminals: WYSE 50, WYSE 50+, WYSE 60, TVI 910+, TVI 920, TVI 925, TVI 950, TVI 955, ADDS VP A2, HZ 1500
Local Browser	IE6.0
Connectivity	Microsoft Remote Desktop Protocol, RDP 5.2 Citrix ICA Protocol, ICA9.0
Server Side System Software	
Management Tool	AXUS WinClient Remote Manager

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Hardware Setup

Unpacking & Checking the Equipment

Before unpacking the WinClient, prepare a clean, stable surface to put the contents of your WinClient shipping container on. You should find following items in the WinClient package:

The WinClient TC620 XPE

One AC Adapter

A Power Cord

A Stand for your WinClient

Recovery CD

*A PS/2 Keyboard with cable

*A PS/2 Mouse with cable

The WinClient TC820 XPE

One AC Adapter

A Power Cord

Recovery CD

*A PS/2 Keyboard with cable

*A PS/2 Mouse with cable

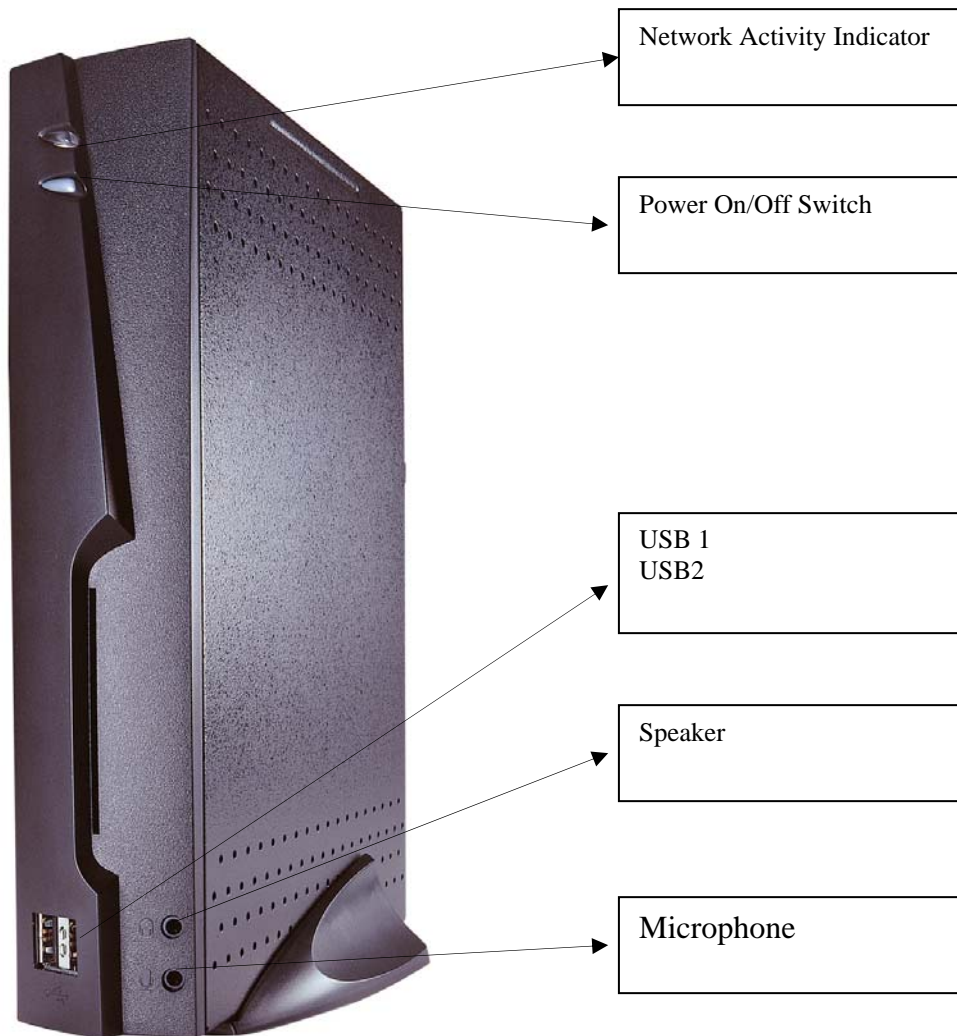
Notice:

*PS/2 Keyboard and Mouse are optional items.

Identify Parts of the WinClient TC620 XPE

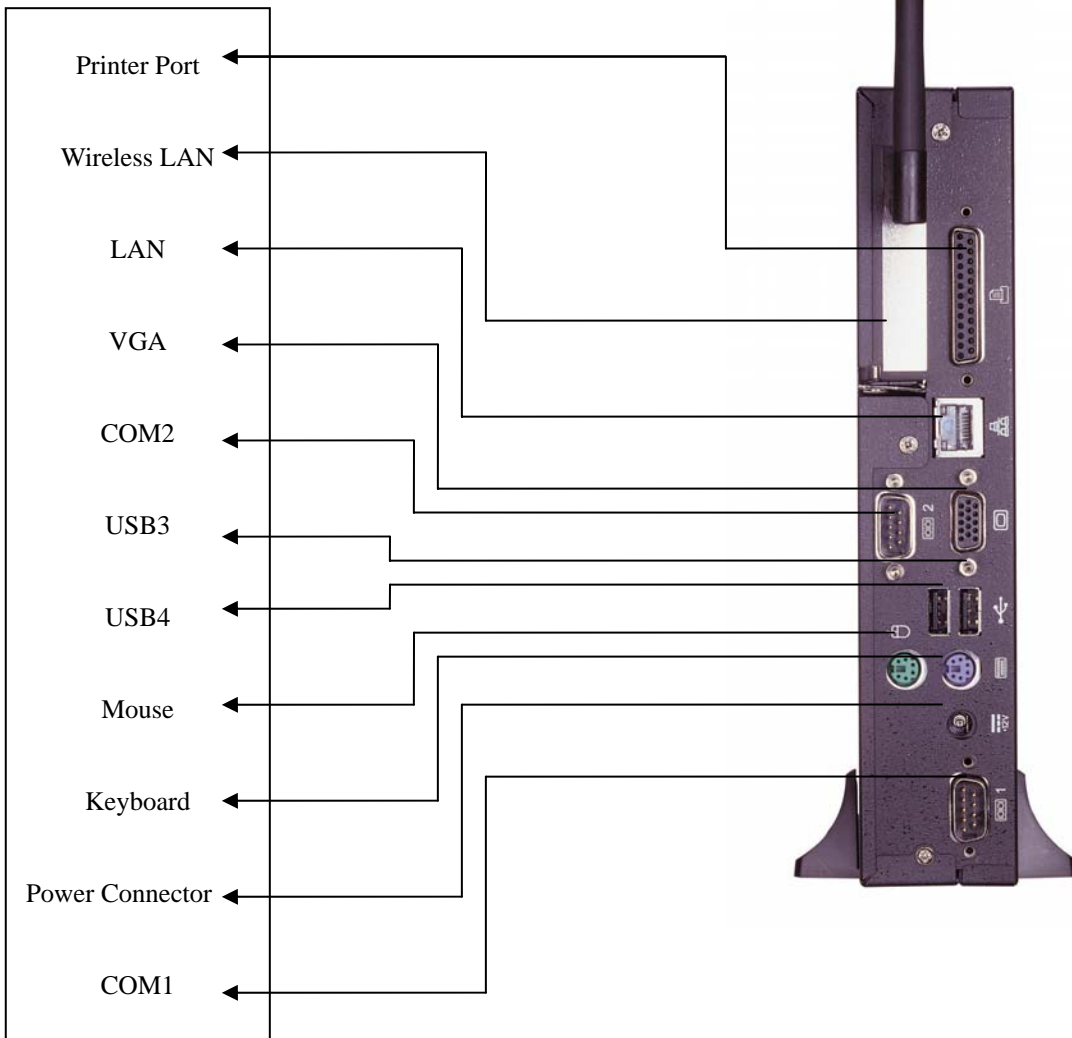
The illustrations that follow identify the various features of the WinClient TC620 XPE.

Front View



Power On/Off Switch (The Power On/Off Switch turns your WinClient on or off. Push it in for on, out for off)
Network Activity Indicator (Yellow lights when your WinClient is sending data through a network)
Power Indicator (Green lights when your WinClient is connected to a power source and is turned on)

Rear View



Network , RJ-45 jack for a 10/100BaseT twisted pair Ethernet connector.
Video, standard DB-15 VGA type connector for Monitor.
Parallel, standard DB-25 parallel port for printer.
COM1, DB-9 RS232 port, for external modem, touch screen .
COM2, DB-9 RS232 port.
USB1, Universal Serial Bus connector.
USB2, Universal Serial Bus connector.
Mouse, PS/2 type mouse connector.
Keyboard, PS/2 type keyboard connector.
Power, Power Connector

Connecting the Terminal

Before connecting the cables, arrange your WinClient and monitor in your work area. Be sure not to block the vents around WinClient and Monitor.

Plug the AC power core into the power adapter, then into AC power source.

Connect the adapter cable to power connector

Connect the keyboard cable to keyboard connector.

Connect the mouse cable to mouse connector.

Connect the monitor video cable to video connector. (For TC620)

Connect the monitor power cable to the AC power source. (For TC620)

Connect the 10/100Base-T twisted pair network cable to network connector.

If you have a local printer, connect its cable to parallel port.

If you have microphone, plug its cable into microphone port.

If you have headphone or speaker, plug its cable into headphone port.

Using the Power On/Off Switch

After the cables are connected, you are ready to turn it on by pressing power On/Off switch.

To turn on your WinClient, push the power On/Off switch located next to the power indicator light.

To turn off your WinClient, push the power On/Off switch again so that it returns to its extended position. The power indicator light will be off.

START UP

Quickly Configure Your WinClient

After completing the hardware setup, the WinClient must be configured before it is ready to use. This chapter guides you through the most easy and quick way to configure your WinClient. Quick configuring your WinClient can be accomplished through following steps:

Turn on your WinClient. A normal Windows XP Logon screen will appear with two default users already made.

Administrator: With full power and access
This user will not be limited and not restricted to run or access any programs.
Default password: **root**

User: Limited Privilege.
With limited access and many restrictions, some functions and disk space may not be viewed or used by this user. Right mouse click is not supported on the user account. Maximum of 10 users can be created, however Axis only recommends 3.
Default password: **user**

The following are a screen shot of the default administrator desktop.
Administrator Default Desktop:

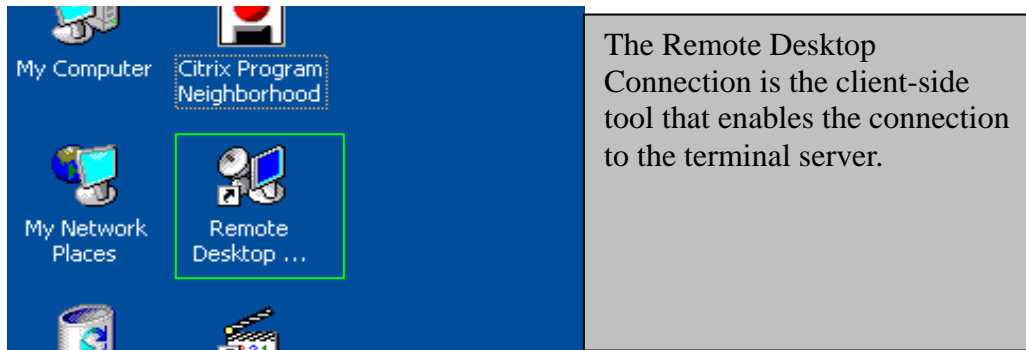


Administrators Access Right & Application

Please notice the default icons on the desktop. Some are different from the original Windows XP. The new icons are pre-install applications for the connivances in a networked environment.

Citrix Program Neighborhood	
	<p>Program used to create ICA connection to a Citrix Server or Citrix published application.</p>

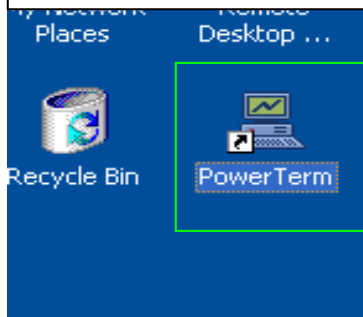
Remote Desktop Connection



The Remote Desktop Connection is the client-side tool that enables the connection to the terminal server.

It is best for users to save RDP connection in the “My document RDP folder”, so that, administrator can maintain RDP connection remotely by WinClinet Remote Manager.

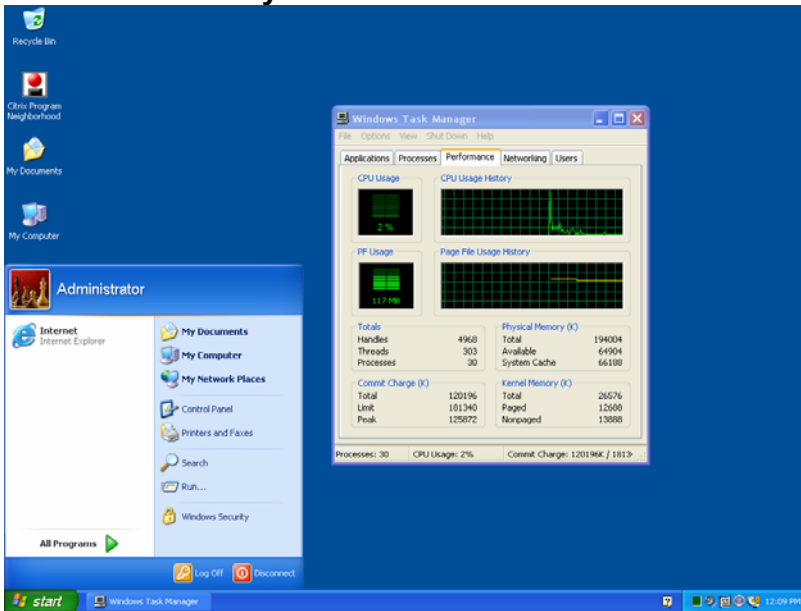
PowerTerm (optional)



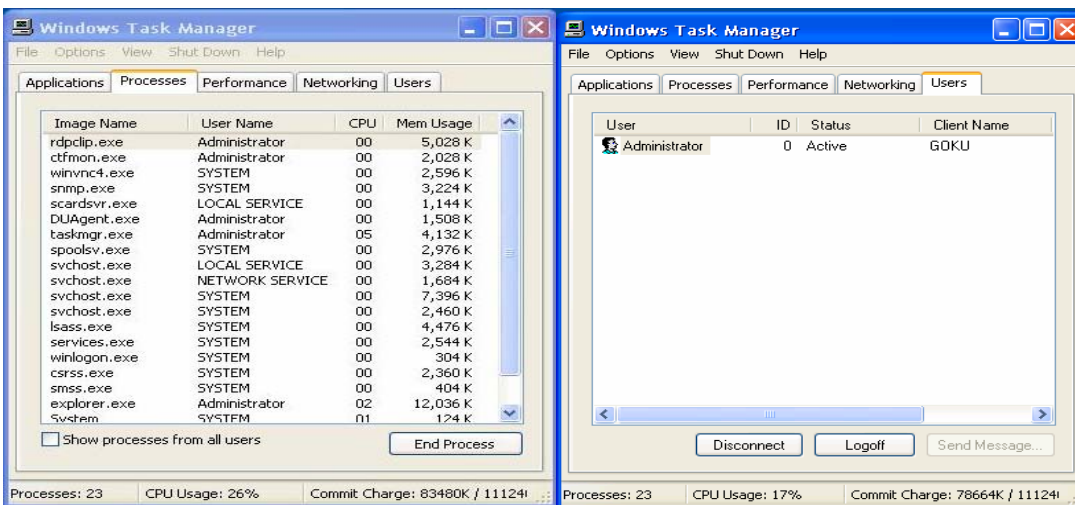
Connection tool used to communicate with text server by telnet. This software is not a standard installation on every WinClient.

Notice some applications are pre-install on the WinXPe and their shortcuts can be found on the start menu. In this section, some application will be point out and explained.

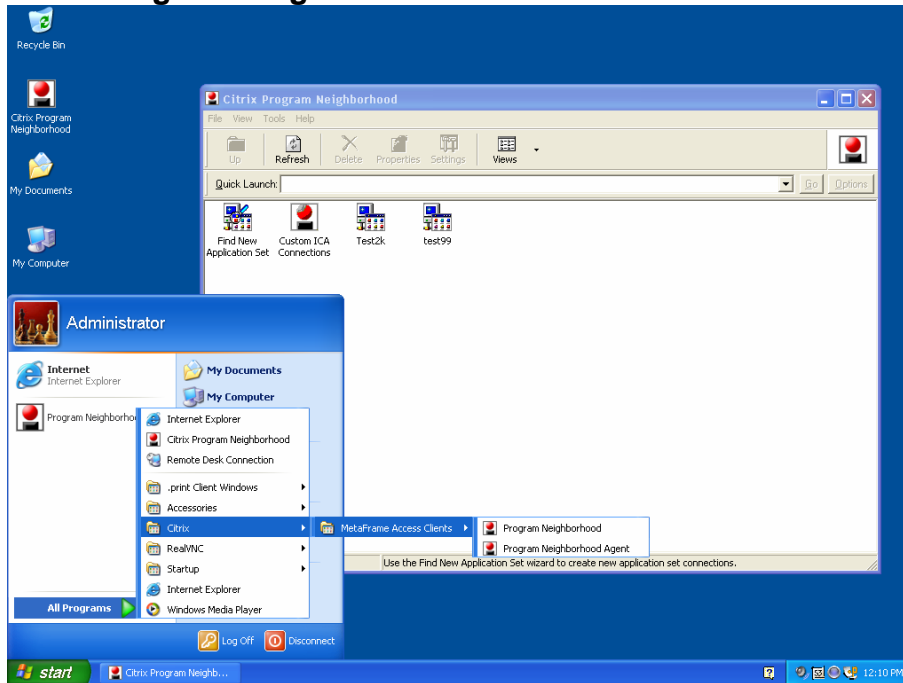
Windows Security



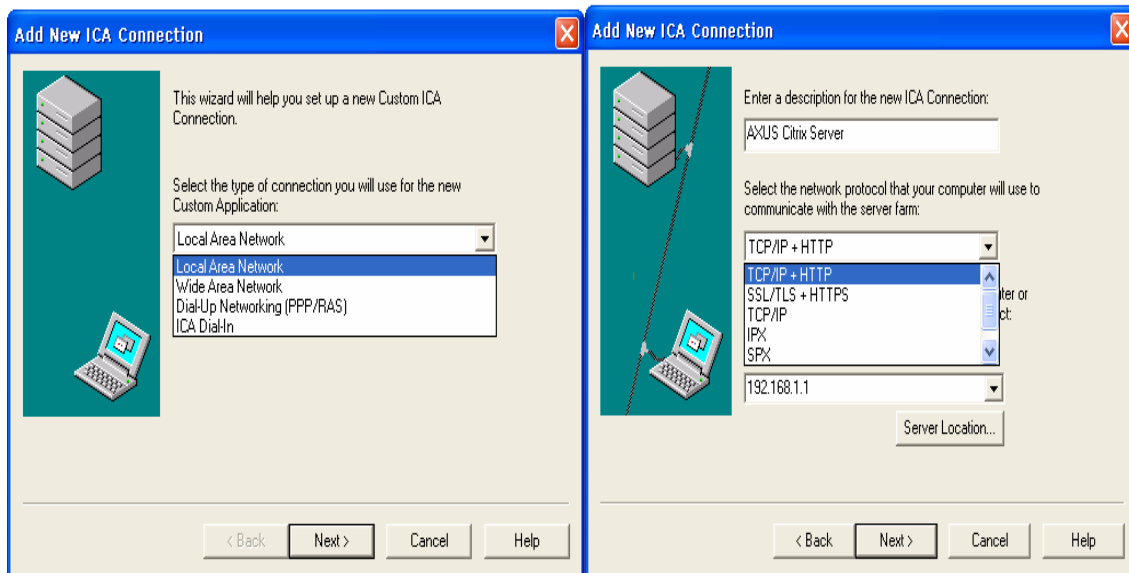
Usually to be known as Windows Task Manager on a normal Windows XP system for PC. Windows Security or Windows Task Manager can be used to monitor application currently opened and the process that is running. System consumption and network usage can also be viewed.



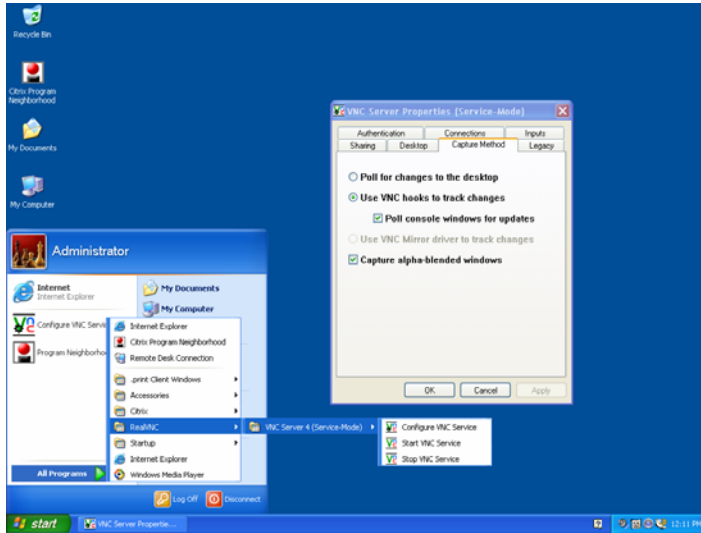
Citrix Program Neighborhood



Once again, The Citrix Program Neighborhood can be located on the start menu. To add a new connection to a Citrix server simply by clicking on add an ICA connection. Helps on how to make an ICA can be found on www.citrix.com.

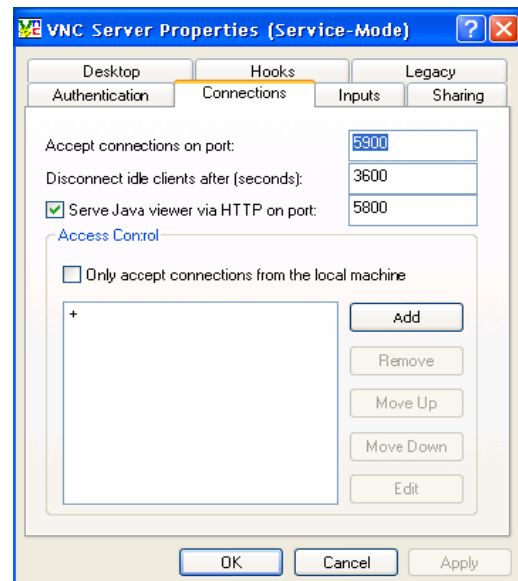
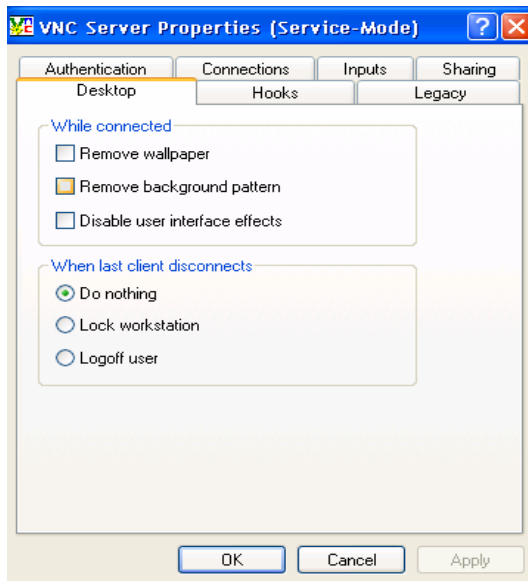


Real VNC



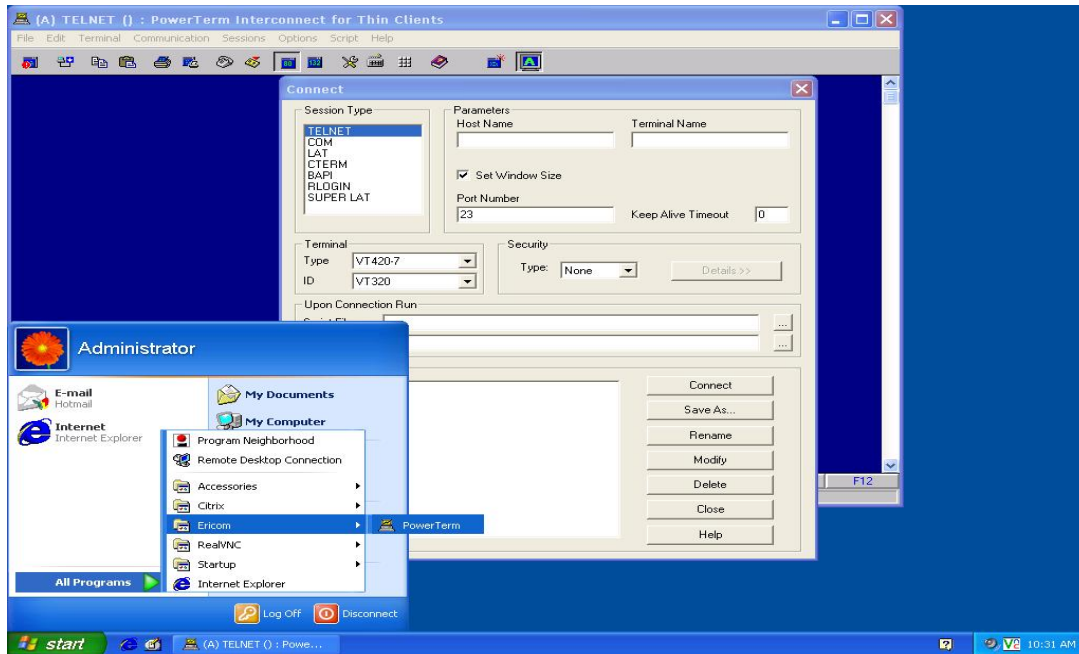
VNC (Virtual Network Computing) software makes it possible to view and fully-interact with one computer from any other computer or mobile device anywhere on the Internet. VNC software is cross-platform, allowing remote control between different types of computer.

The server mode allows network administrators to monitor the actives on this particular WinClient.

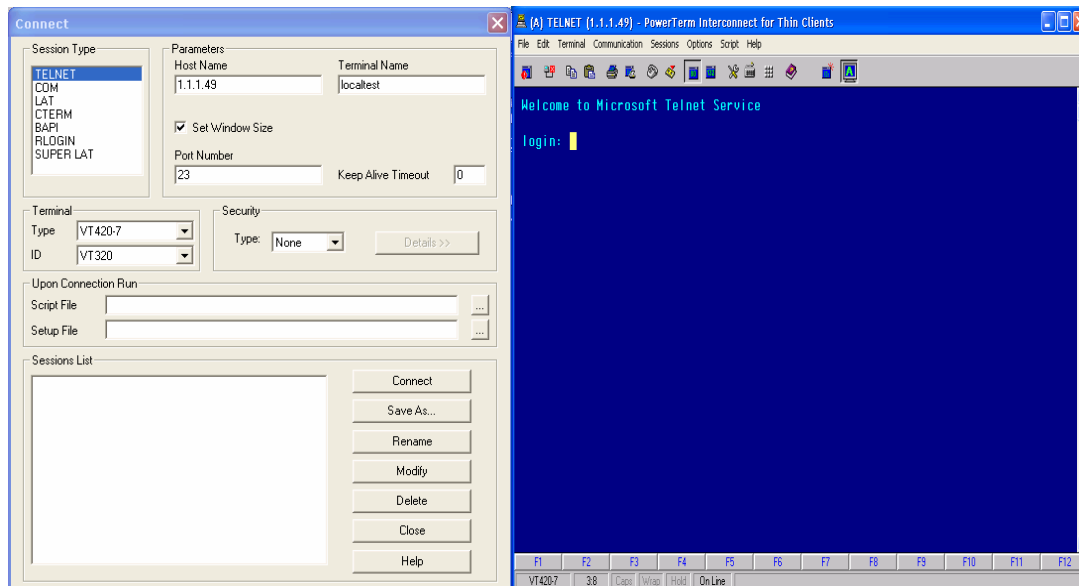


VNC server is disabled at default. To active it at window start up, please go to Start Menu → VNC Server 4 (Service-Mode) → Register VNC Service.

Ericom PowerTerm



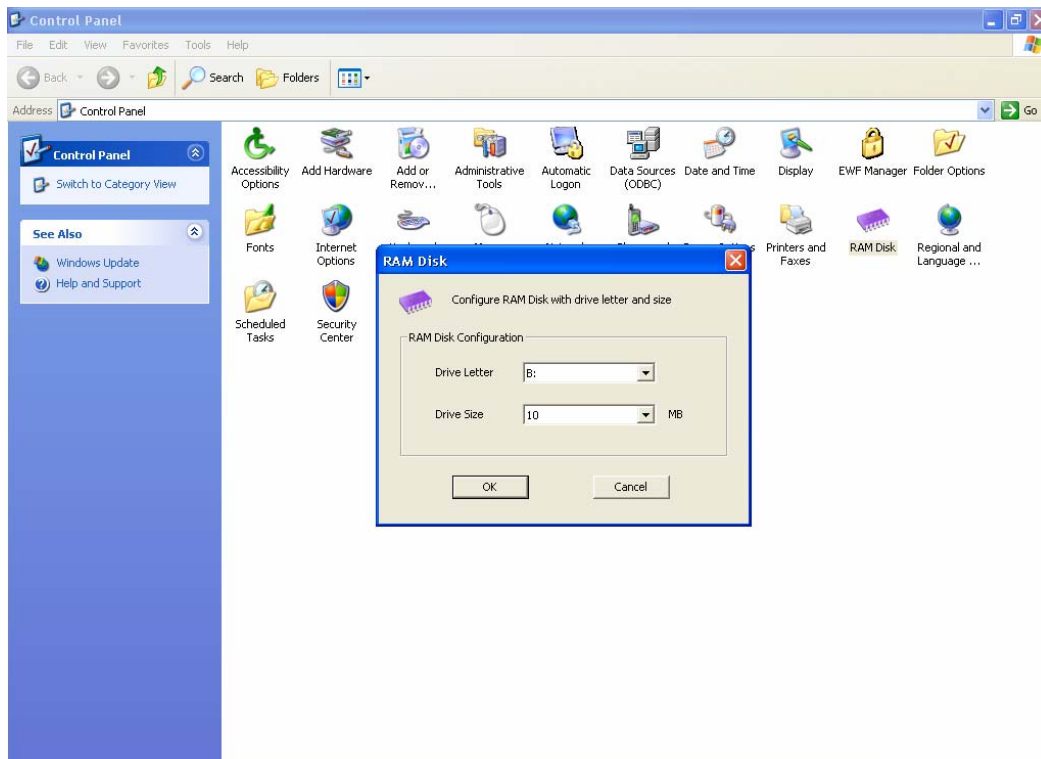
This software is used to make communication with text based terminal by telnet. PowerTerm has similar functions as telnet client that is built in on windows. However, with some UNIX server the default built in telnet client can not properly display the text, therefore Powerterm must be used.



Enhanced features

To bring our WinClient to perfection in a networking environment, few new features was introduced to XPE. For example: Ram disk, automatic logon and Enhanced Write Filter Manager. Administrator is now equipped with powers to limit which user will be automatically login at startup. In the following section Ram disk, automatic logon and Enhanced Write Filter Manager will be explain in more detail.

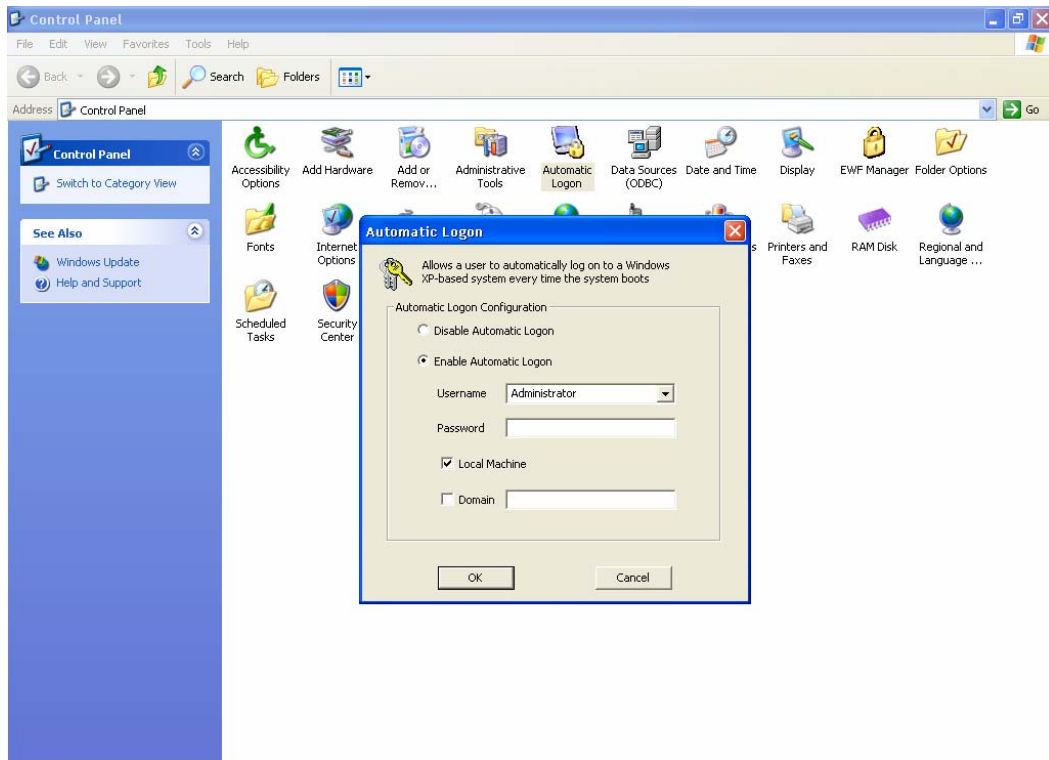
Ram Disk



Ram disk is a temporarily storage location. When the WinClient is powered off all the information stored in the Ram disk will be erased. The size of Ram disk can be adjusted by going to Control panel → Ram Disk. The default size of Ram disk is set to be 10MB. A useful application of Ram disk can be used as a temporarily space for webpage storage.

NOTE: This function is only adjustable for administrator. This will affect all users.

Automatically logon



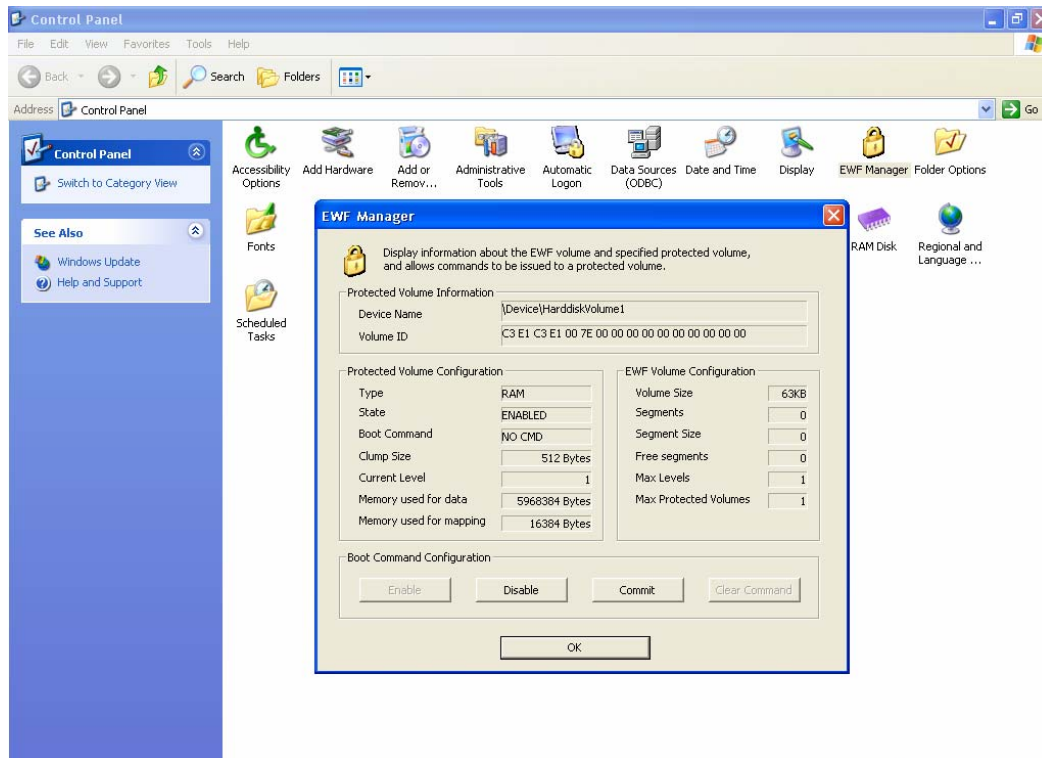
To set which user is the default logon user at Windows startup, go to Control Panel → Automatic Logon

It will list the all users existed in this system, when an account name is manually typed and the user doesn't exist in the system, then it will be automatically created.

A piratical useful application of this function be can illustrated by the following scenario.

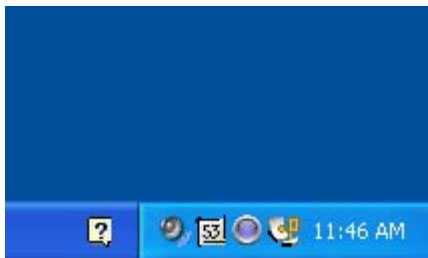
If there are 3 Winclient on the first floor, 3 Winclient on the second floor, the administrator doesn't need to run to every floor to manually logon with a user account at every time when the Winclient reboot.

Enhanced Write Filter Manager



The enhanced Write Filter Manager tool allows administrator to prevent further data to be written on to the DOM. Due to the limited space available on the DOM, over usage of DOM space will result in unstablensness of operation system. Once enabled, all data will be temporally stored in the RAM (random access memory) and erased once the WinClient reboots. The Enhanced Write Filter function can be located on the following two places.

- 1 Under Control panel → EWF Manager.
- 2 Under System Tray (next to the system clock). Refer to the picture below



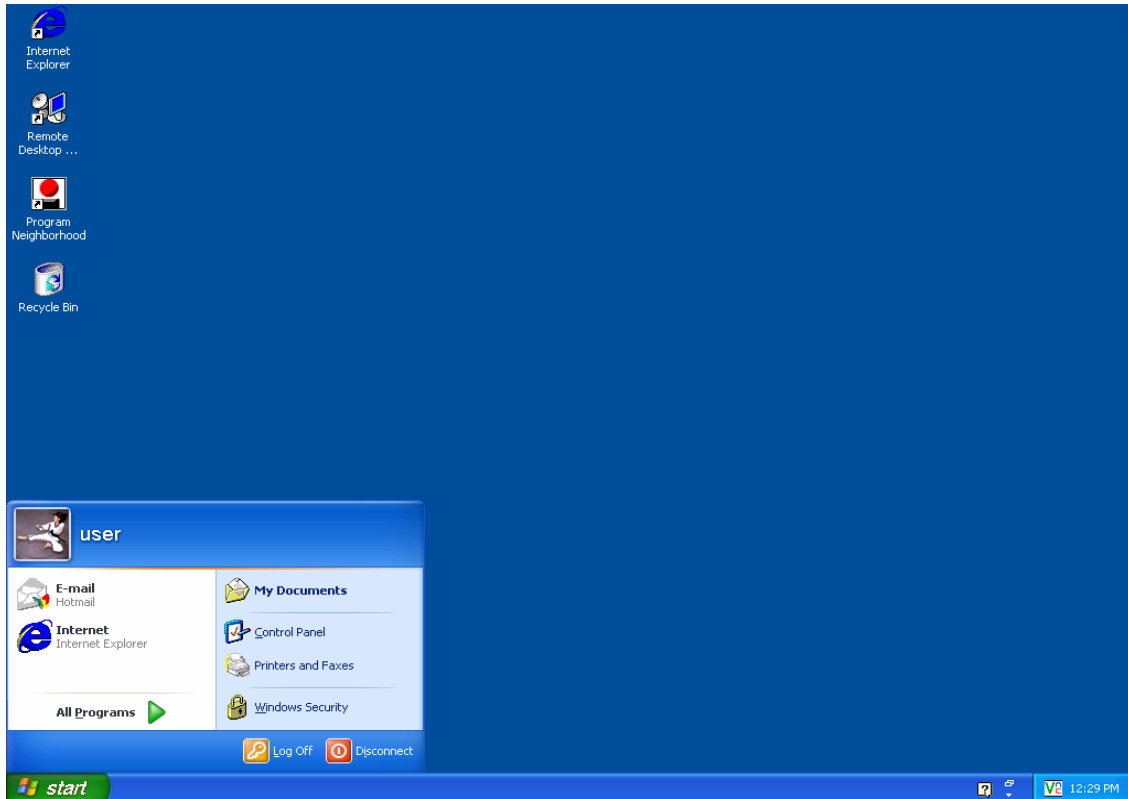
Function of EWF manager

Enable	To enable write protection on the DOM.
Disable	To disable write protection on the DOM. This allows changes to be made on the DOM.
Commit	When write protection is enabled, by using commit function, all data on the RAM will be write to the DOM.
Clear Command	Before system reboots, changes such as Enable EWF, Disable EWF, and Commit can be cleared by using "Clear Command". Please remember any changes to the EWF manager the system will ask you to reboot. In order to clear command, you must command function from the EWF manager.

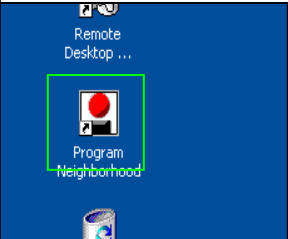
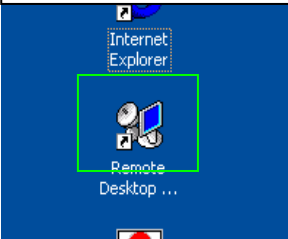
Note: If you wish to use the EWF Manager function from the system tray, right mouse click on the icon then select a function. Double clicking on the icon will only result in EWF Manager status.

User Access Right & Application

Please notice the default icons on the desktop. Some are different from the original Windows XP. The new icons are pre-install applications for the connivances in a networked environment.

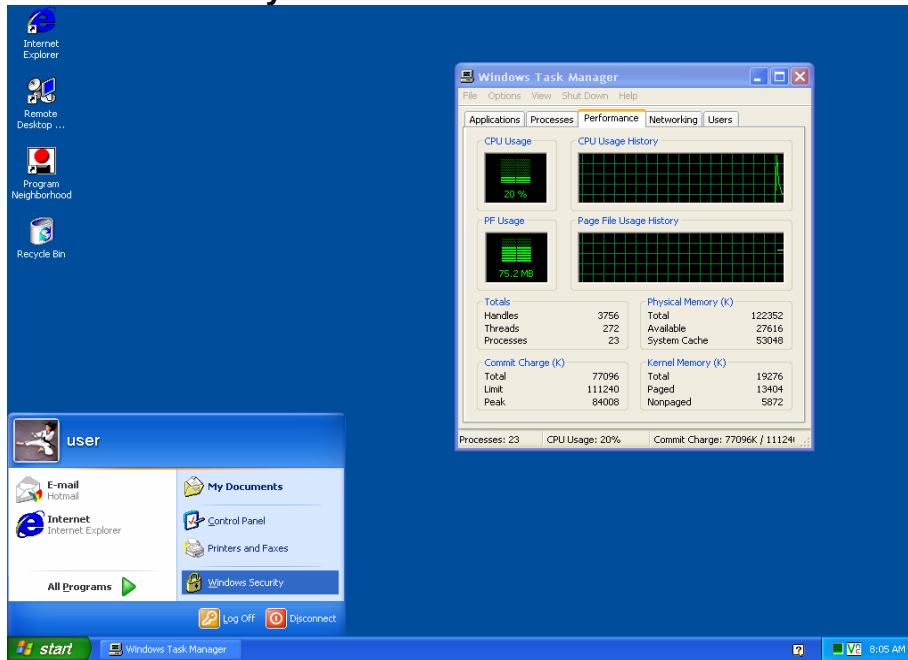


NOTE: Right mouse click is **NOT** supported on the user account.

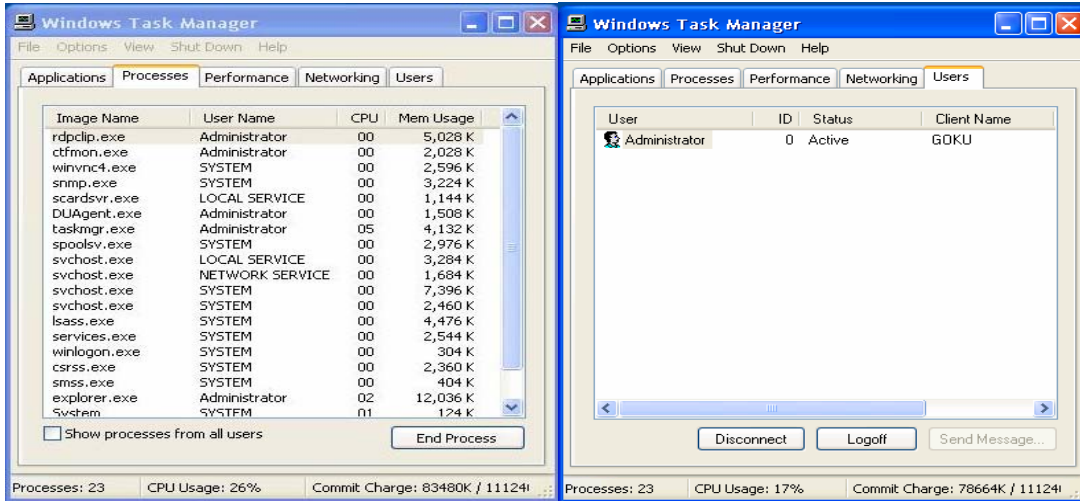
Citrix Program Neighbor	Remote Desktop Connection
 <p>Program used to create ICA connection to a Citrix Server or Citrix published application.</p>	 <p>The Remote Desktop Connection is the client-side tool that enables the connection to the</p>

Notice some applications are pre-install on the xpe and their shortcuts can be found on the start menu. In this section, some application will be point out and explained.

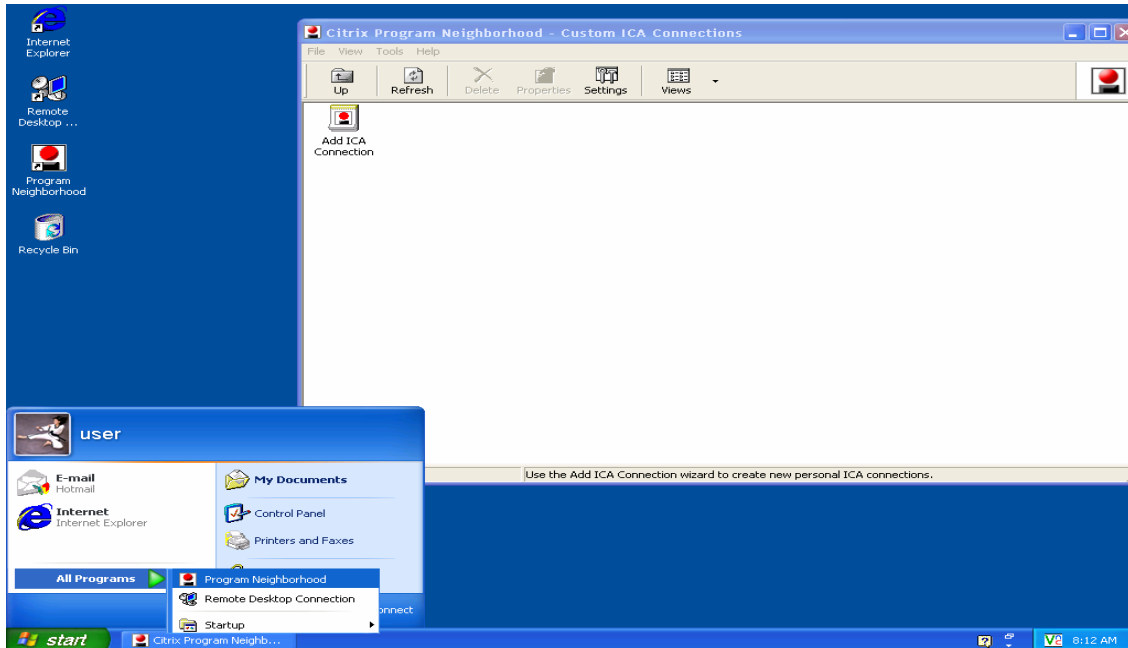
Windows Security



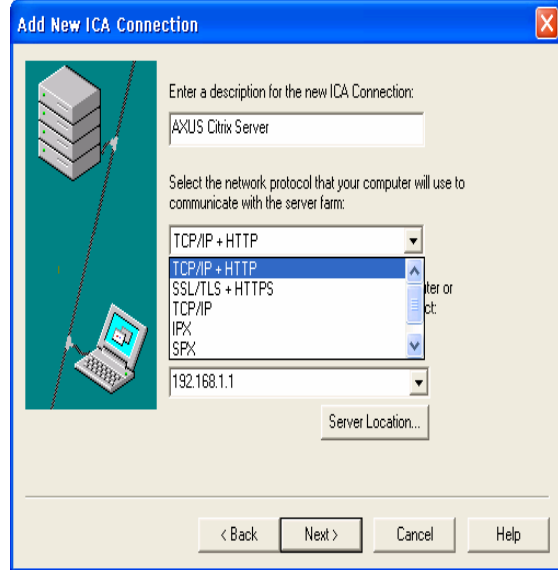
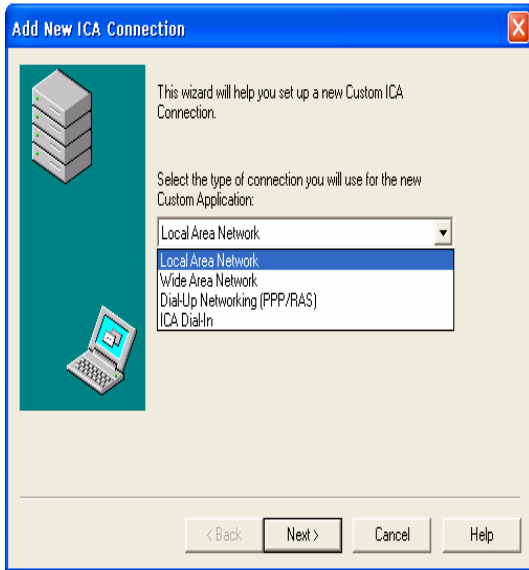
Usually to be known as Windows Task Manager on a normal Windows XP system for PC. Windows Security or Windows Task Manager can be used to monitor application currently opened and the process that is running. System consumption and network usage can also be viewed.



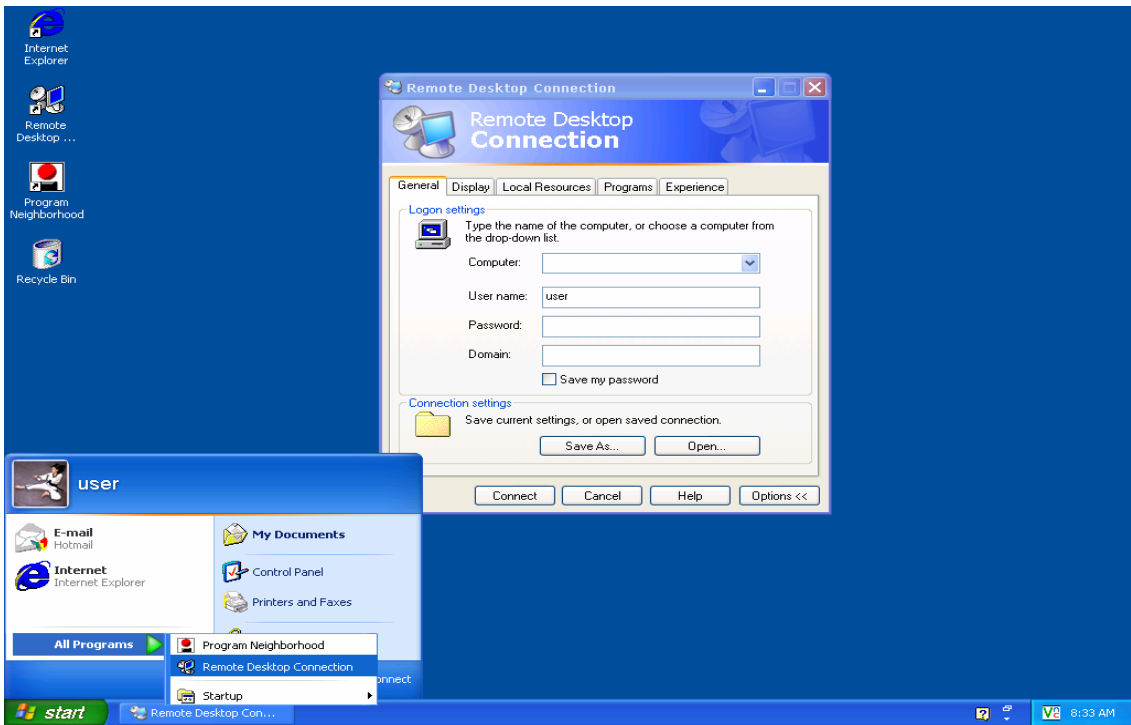
Citrix Program Neighborhood



Once again, The Citrix Program Neighborhood can be located on the start menu. To add a new connection to a Citrix server simply by clicking on add an ICA connection. Helps on how to make an ICA can be found on www.citrix.com.



Remote Desktop Connection



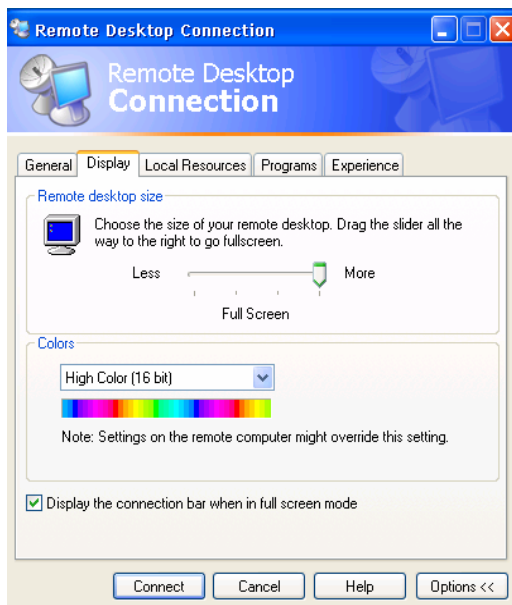
Using Remote Desktop Connection

To create a new connection by using Remote Desktop Connection

1. Click Start → All Programs → Remote Desktop Connection.
2. In the Remote Desktop Connection dialog box, in the Computer box, type the name or IP address of a computer running Windows XP Professional for which you have Remote Desktop permissions.
3. Click Connect.
4. In the Log On to Windows dialog box, type your user name, password, and domain (if required), and then click OK.

In Remote Desktop Connection, you can pre-configure your Remote Desktop sessions.

- If you want all of your Remote Desktop sessions to respond exactly the same each time you establish a session, click the Options button, pre-configure the desired settings and click Save As under Connection Settings. Enter *filename* and click Save. Each time you want to open that session, click Open, and then double-click *filename*.
- If your video adapter does not support higher resolutions, you can set the display size of the Remote Desktop session to fit your display configuration. On the Display tab, move the Remote desktop size slider. Select the resolution that best fits your needs, and then click Connect.
- If you need to print information or check disk status from your Remote Desktop session, you can have the remote computer automatically connect to your computer's disk drives or printers. On the Local Resources tab, in Local devices, click Disk drives or Printers, and then click and Connect.



Maintenance & Recovery

Firmware Upgrade

Axus will irregularly release new firmware to update WinXPe and patch the previous version. In order to perform a firmware, Remote boot server for PXE must be installed. To install remote boot server and configure please follow the steps below.

To Install Remote Boot Server

1. Prepare your server operating system : Windows Server 2000 Server

Note. It should be installed on any Windows server OS later than or including Windows 2000 Server Service Pack (SP) 2.

2. Insert **Recovery Disk** into the CD-ROM drive of the server.
3. Go to folder Remote Boot Server and, choose **Remote Boot Setup**.
4. In the **Setup Wizard**, choose **Next**.
5. Choose the **Accept** option button, and then choose **Next** to accept the terms of the End-User License Agreement (EULA).
6. Choose **Next**.
7. From the **Setup Type** page, choose **Typical** option, and then choose **Next**.
8. From the **Final Setup** window, choose **Install**.

Note that be sure to after Remote boot service is installed, please copy mini OS called "v1.2.sdi" to the directory where reboot boot service is installed. The mini-OS should also come with your CD. Please refer to below.

Copy cd:\BootImage\v1.2.sdi to C:\program files\Windows Embedded\Remote Boot Service\downloads

The above directory depends on the installed directory of your Remote Boot Service.

To Configure Remote Boot Sever

1. When Remote Boot Server is properly installed, Select **Microsoft Windows Embedded Studio → Remote Boot Manager** from Start Menu
2. In the Global Settings :
 - 2-1. Use default Settings to boot unspecified clients:
Selected
 - 2-2. Use DHCP Port (67):
If Remote Boot Server and DHCP server is not located on the same machine, please select this option and open port 67 on the DHCP server.
3. In Default Settings :
 - 3-1: **Boot Server:** Fill in this field with the IP for this remote boot server
 - 3-2: **Boot Program:** Fill in this field with “**Startrom.com**”
 - 3-3: **Boot Image:** Fill in this filed with name for image, for instance:
v1.0.sdi
 - 3-4: **Boot Parameters:** Leave it blank

For more detail information, please refer HELP on Remote Boot Server

Client End

Upgrading firmware on WinClient after PXE server is successfully installed.

1. Turn on your WinClient.
2. In BIOS, When “**press F12 for network service boot**” press F12 to begin.
3. After boot image finished loading , In DOS prompt, execute upgrade program “**upfw**”, the command is as follows:

XPe Firmware Upgrade Command-line

Usage: upfw [PXEServerIP] [FWFolder] [FirmwareName] [Username] [Password]

PXEServerIP:	PXE Server IP addresss.
FWFolder:	The share folder on PXE server, which contains the firmware image.
FirmwareName:	Firmware image file name.
Username:	The user account of PXE server, whom is allowed to access the share folder.
Password:	Password of user account.

For Example: upfw 192.168.1.99 temp x-v1.1.4-512-62-v1.imx username

1234

If firmware is updated successfully, the following messages will appear:

Upgrade Firmware Successful...
Waiting for reboot after 30 second...

If error occurs during update, you will see the following messages again and again until the error is fixed:

*NOTE: Please note that a firmware update **IS NOT** the same as component update.

BIOS upgrade

This function is used to upgrade BIOS. To upgrade BIOS, follow the steps below.

- 1 Connect USB floppy to WinClient and put the disk included BIOS image file.
- 2 Power on WinClient.
- 3 When BIOS information appears, press “ALT+F2”, the upgrading utility will be appears, and it will search BIOS image from USB floppy automatically. If the image file is searched, the utility starts to upgrade BIOS.
- 4 After finishing to upgrade, the system will reboot automatically, press “DEL” to enter BIOS menu when reboot. Go to “Load Optimized Defaults” and enter “Y” to restore default settings, and press F10 to save the setting and quit.

*Note: Do not remove USB floppy during upgrading progress.

Component update

This function is used to update components of XPE. On every Friday your Winclient will automatically search for updates. Once every four hours.

*NOTE: Please note that a component update **IS NOT** the same as firmware upgrade.

Operating System Recovery

To recover operating system in case of a system failure, follow the steps below.

1. Connect USB CD-ROM to WinClient and put the Recovery CD in it. You

can find it within WinClient product package.

2. Power on WinClient
It will boot from USB CD-ROM and start to recover your WinClient.
3. After system finishes restoring, all configurations will be set back to factory default.

Note: The recovery speed can be enhanced by setting BIOS. Please follow the steps as below:

- 1 Power on WinClient.
- 2 Press "DEL" to enter BIOS menu.
- 3 Go to Integrated Peripherals → VIA OnChip PCI Device.
- 4 Set USB Ram Allocate to Shadow.

Note: Please restore this setting to "Ram Base" when you finish recovering.