



***YEStation* User's Guide for Windows-Based Terminals Models 2xx7 with XPe**



27x7

22x7

24x7



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Installing Your Terminal

- 22x7 and 23x7 terminals are no longer in production, and their physical characteristics are not discussed in the manual. However, their user interfaces and firmware capabilities are very similar to those of the 2417 and 27x7 terminals—identical for most software-dependent functions—so this manual is still pertinent for these older terminals. Please contact Affirmative Technical Support if you have any questions about the slight operational differences.
- Your terminal has no internal fan, and relies on natural airflow for cooling. When you mount it, *make sure to keep as many ventilation holes, as possible, unobstructed.*
- **DO NOT USE** any AC-DC adapter other than the one provided with the terminal or acquired from Affirmative Technology Group or its distributors.

Mounting

Horizontal mounting will obstruct the airflow required to cool the terminal. These terminals can either be mounted vertically on a flat surface, using the provided stands as shown in the picture on the front cover of this manual, or on the rear of LCD monitors using optional VESA mounting plates as shown here. Such a plate can be attached to most of the current crop of LCD monitors, as shown in the following figure.



VESA Mounting Plate on a 17" LCD Monitor



241x Mounted on an LCD Monitor



273x Mounted on an LCD Monitor

Cabling and Indicators

241x

Please make all cable connections before turning on the power. The 241x has the following controls and ports:

- **Power Switch** (front)
- **USB** (two front and three rear)
- **DVI-I** (rear)
- **RJ-45 LAN** (rear)
- **Printer Parallel** (rear)
- **Serial** (two rear)
- **Earphone Output** (rear)
- **Microphone Input** (rear)
- **16V DC Power** (rear)
- **Kensington Lock** (knockout in left rear)

There are three LED indicator lights:

- **Power.** The translucent **Power** button serves as the Power indicator. This indicator turns blue when the terminal is powered up.
- **Network Connection.** This amber indicator at the upper right corner of the RJ-45 Ethernet connector is on when there is a good physical connection to the Local Area Network.
- **Network Activity.** This green indicator at the upper left corner of the RJ-45 Ethernet connector flashes to indicate LAN activity.

273x

Please make all cable connections before turning on the power. The 273x has the following controls and ports:

- **Power Switch** (front)
- **USB** (two front and three rear)
- **DVI-I** (rear)

- **VGA** (rear)
- **RJ-45 LAN** (rear)
- **Serial** (two rear)
- **Audio Output** (rear)
- **Earphones Output** (front)
- **Microphone Input** (rear)
- **16V DC Power** (rear)
- **Optional PCI-e or Two Additional Serial** (rear)
- **Kensington Lock** (knockout in left rear)

There are four LED indicator lights:

- **Power.** The translucent **Power** button serves as the Power indicator. This indicator is faint amber when AC power is connected at the rear connector, and turns green when the terminal is powered up.
- **Network Connection.** This amber indicator at the upper right corner of the RJ-45 Ethernet connector is on when there is a good physical connection to the Local Area Network.
- **Network Activity.** This green indicator at the upper left corner of the RJ-45 Ethernet connector flashes to indicate LAN activity.
- **Flash Memory Activity.** This green indicator flashes when there is read or write activity to the flash memory.

Power On and Boot Up

These terminals can be powered on in two ways:

- Locally by pushing on the **Power** switch on the terminal.
- Remotely using eProManager remote central management software and the Wake on LAN capability of the terminals.

In either case, the process is:

1. Turn on the terminal after all rear panel connections have been made.
2. The translucent **Power** button will change from faint orange to light green.
3. You will briefly see the message **Starting System. Please Wait ...** on a black screen.
4. After several seconds, you will see the Windows XP Embedded startup screens which look very much like your desktop Windows XP startup screens.

Note: If you wish to access the terminal BIOS, press **F2** at the beginning of the bootup cycle.

Shutdown

These terminals should be shut down gracefully in typical Windows XP fashion by going to **Start>Turn Off Computer**.

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XPe LIMITATIONS (*Read this Section*)

Your terminal is pre-configured with the Windows XPe (XP Embedded) operating system and a minimal set of applications. If you are familiar with Windows XP on your desktop or laptop PC, you are familiar with Windows XPe. In general, you can install the same applications or peripherals on this terminal as you can on Windows XP, subject to memory and I/O port restrictions. However, primarily due to the limited amount of flash memory for program storage, *THERE ARE SOME LIMITATIONS.*

- XPe uses a utility called EWF (Enhanced Write Filter) Utility to control write access to the flash memory. If Write Protect is enabled, configuration changes can be made and new applications or peripheral drivers can be installed, but these modifications **will not be saved after a reboot** unless a special operation is executed, before the computer is turned off, to save them in non-volatile memory. This operation is called Write Filter Commit, and you can learn more about it at [Configuring Terminal Properties\Administrator Control Center|Control Panel|EWF Manager](#). *This protects your terminal from viruses, malware, and user games.* If Write Protect is disabled, changes, new applications, and bad stuff will automatically be saved in flash. XPe users are separated into two classes: computer administrator, and limited; limited users cannot execute any operation from the EWF Utility. So remember that changes made by limited users or Internet hackers will not survive a reboot unless Write Protect has been disabled by a user with computer administrator privileges.
- XPe is designed for a minimal memory footprint. It is possible to generate an XPe configuration that has the same full, rich feature set as XP Professional, but this would then require, for installation, the same large amount of non-volatile storage space that is required for XP Professional. In your PC, you have many Gigabytes of non-volatile storage on a hard disk; in your XPe terminal, you have 256-4,096 Megabytes of non-volatile flash storage to hold the XPe operating system and your choice of applications.
- When the software image is first created for an XPe terminal product, the developer chooses from a laundry list of XP features, trying to anticipate which ones are most likely to be required by the bulk of the terminal users. This restricted feature set is probably most likely to be noticed in the Windows Control Panel; you will see many, but not all, of the standard XP control utilities. Furthermore, within each utility you will probably not find all of the configuration parameters that you would find in XP. See [Configuring Terminal Properties|Control Panel](#) for information on the typical Control Panel.
- As mentioned above, you can generally install and run the same applications on your XPe terminal that can be installed on an XP PC, if there is enough volatile and non-volatile memory. But be aware that some applications assume the availability of standard XP modules that **may not have been included** in your XPe set. For instance, some applications require the Visual Basic Run Time Library, which is not included in the YEstation XPe module set. Therefore, these applications might install on the terminal, but they will not run. Unlike XP, which allows the installation or removal of some XP features in the field, XPe modules must be configured at build time; they cannot be added or removed in the field.

XPe Limitations

- If you are using Remote Desktop Protocol to access a Terminal Server, there is a further distinction between computer administrator rights and limited user rights. A limited user cannot store Terminal Server license information in the Registry, but a computer administrator can store such information. Hence a limited user using local rights cannot open an RDP session unless a computer administrator has already obtained a Terminal Server license for the terminal. See [Configuring Terminal Properties/Administrator Control Center/Control Panel/EFW Manager](#).for more information on this subject.

This user guide will assume that the user or administrator is familiar with XP administration and/or use as encountered on a PC. Therefore, this document will concentrate on those aspects of XPe which are significantly different from XP Professional.

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Configuring Terminal Properties

Almost all of your terminal properties are configured from the Start window, but several require the use of the Affirmative Technology Group remote central manager, eProManager.



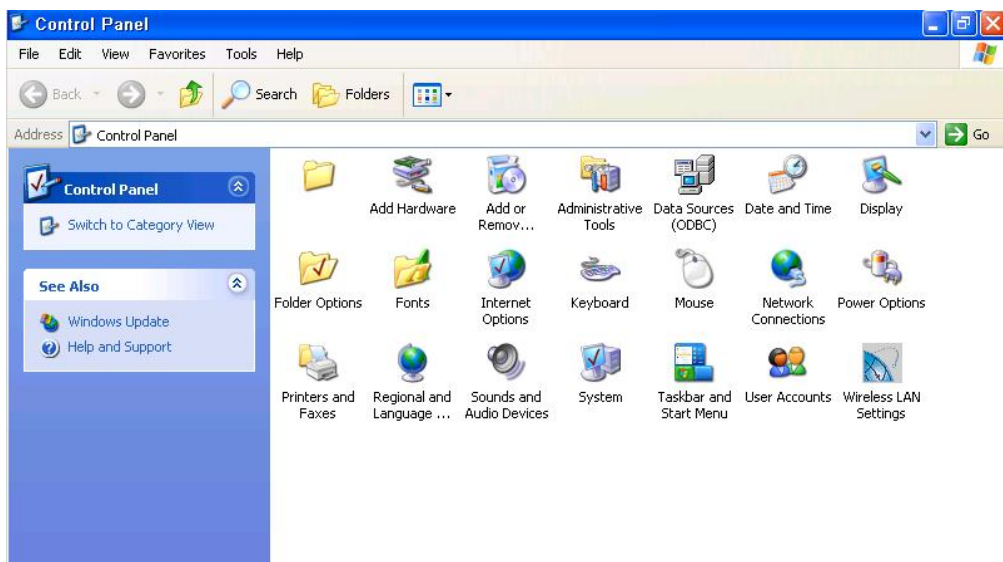
Start Window

Configuration changes and printer additions are initially stored in RAM. In order for these changes to be written permanently into non-volatile flash memory, thereby surviving a reboot, Write Protect must be disabled for the flash, or a Commit operation must be executed. See [Administrator Control Center/Control Panel/EWF Manager](#) for an explanation of the EWF (Enhanced Write Filter) utility, which provides Write Protect control.

Printers and Faxes provides the usual set of Windows printer configuration capabilities, allowing you to add a local or network printer as well as configure existing printers. No more will be said about it here.

Control Panel

Most terminal properties are configured in Control Panel.



Control Panel

As you can see, the YEstation build of XPe does not include all of the configuration utilities available in XP. This is generally the case in XPe, since each build is custom built to minimize memory footprint based upon expected customer usage. Also some utilities may not have all of the property parameters available in XP.

Administrator Control Center

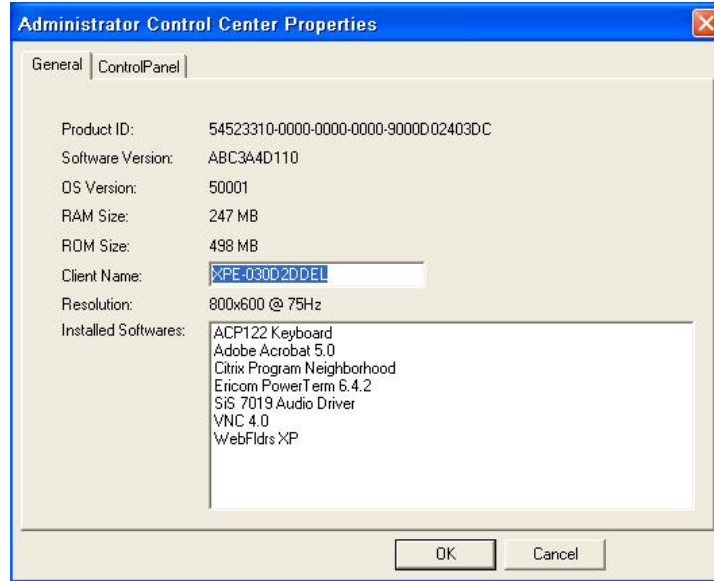
Several properties are configured in Administrator Control Center, which is reached from **Start>All Programs>Administrator Control Center**. You will first see the Login dialog box.



Administrator Control Center Dialog Box

The default password is “guest”, but you can change that here by clicking on the **Change** button and following the dialog box. This same password is also used for the [EWF Manager Utility](#). When you enter the correct password and click on **Login**, you will see the Administrator Control Center Properties-General window.

General



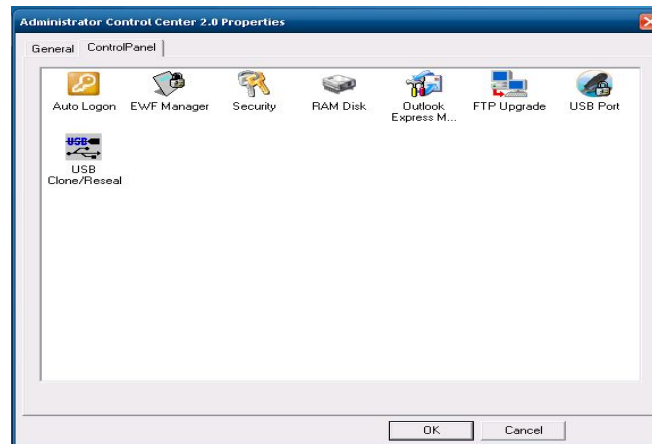
Administrator Control Center General Properties

Several of these general properties merit discussion.

- **Product ID.** The last twelve characters are a permutation of the MAC address.
- **Software Version.** This information is useful when seeking technical support from Affirmative Technology Group.
- **RAM Size.** This is the remaining RAM after the Z drive has been allocated. See [Control Panel|RAM Disk](#) for more information..
- **ROM Size.** This is the approximate size of the flash memory. In the above example, the installed CompactFlash is 512MB.
- **Client Name.** This is the “friendly” network name seen by remote central management software and any network administration software. Enter a name that is meaningful to your network administrator.

ControlPanel

You must be in the administrator group to access any of the utilities in ControlPanel. Several important configuration utilities are accessed from this window.



Administrator Control Center ControlPanel

Configuring Terminal Properties

These utilities are separate from the standard Control Panel because their significance typically calls for the extra security provided by the password login and restriction to administrators.

Note: If you make any changes using any of these five utilities, you will see the following information box when you **OK** out of Administrator Control Center.



Commit Information Box

If you want to save the changes into flash memory for use after the next reboot, be sure to click on **Yes**. See [EWF Manager](#) for more information on writing into flash.

Auto Login



Despite the restrictive title, this utility also provides extended control of user accounts.

Users



Default User Accounts

New users can be added here or in **Control Panel>User Accounts**. But several user properties can only be controlled from this utility. These properties are better illustrated if several users have already been added, as shown in the following dialog box.

Configuring Terminal Properties

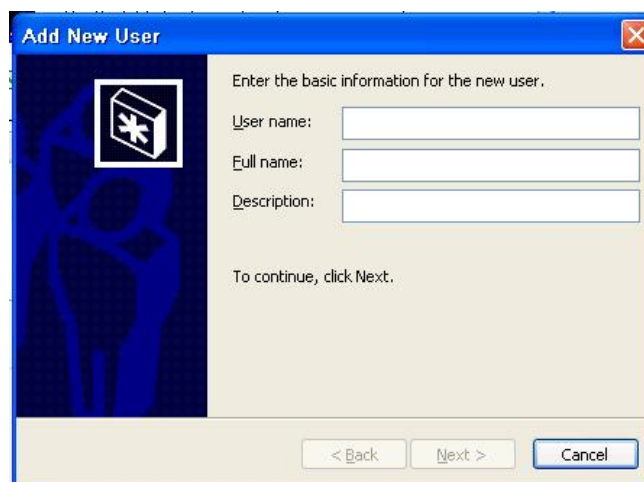


Additional User Accounts

- **Users must enter....** Check this box if you want user password control. But this control only exists for users that have been assigned passwords, and you can only assign passwords here in User Accounts. You can do this in one of two ways:
 - Add a new account here (click on **Add** and follow the Wizard) and define a password in the Wizard.
 - Add password control to an existing user by highlighting that user in the user list, clicking on **Reset Password**, and entering the password in the resulting dialog box. **Note:** You cannot change the password for the current user, despite the instructions to press **Ctrl+Alt+Del**.
- **Users for this computer.** This box contains a list of all the defined users. **Administrator** and **Guest** are default users; the rest have been added.

Add.

Click on this button to launch the Add New User Wizard. You will be led through three dialog boxes.



Add New User Dialog Box #1

Enter a **User Name**. This name will automatically be entered into **Full Name**, but the **Full Name** can be changed if you wish. The **Full Name** is the name you will see when you boot the terminal and arrive at the iconed Logon

Configuring Terminal Properties

screen. If you want to enter some information about this user for future administrative clarification, enter it in the **Description** field.



Add New User Dialog Box #2

Enter and confirm a password if desired. If you want this user to auto logon (see [Automatic Log On](#)), you must enter a password.

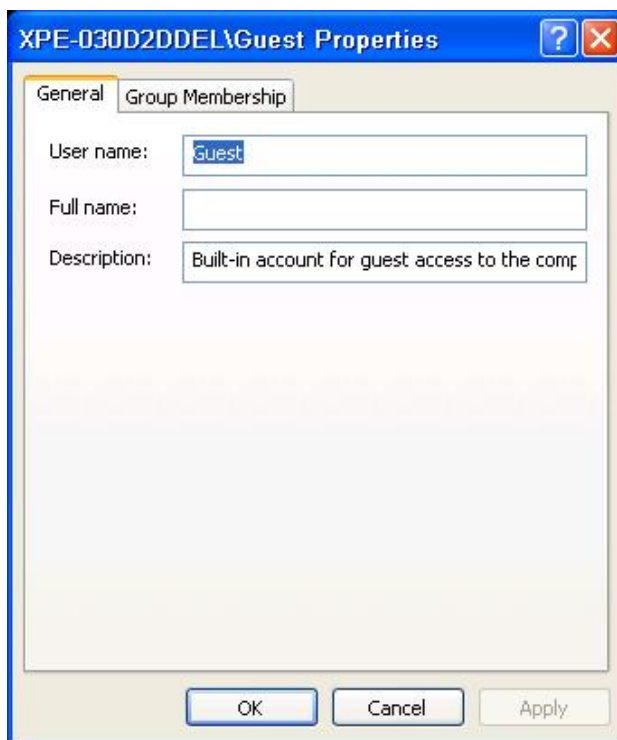


Add New User Dialog Box #3

Here is the interesting stuff. If you add a user through **Control Panel>User Accounts**, you have only two selections for the type of user, computer administrator (shown here as **Administrators**) and limited user (shown here as **Restricted user** or **Users**). But here you have additional options of **Guests** and **Standard user** (or **Power Users**). You also see several other options if you select the **Other** radio button and access the drop-down list as shown in the above dialog box, but they are holdovers from another world and have little or no use here.

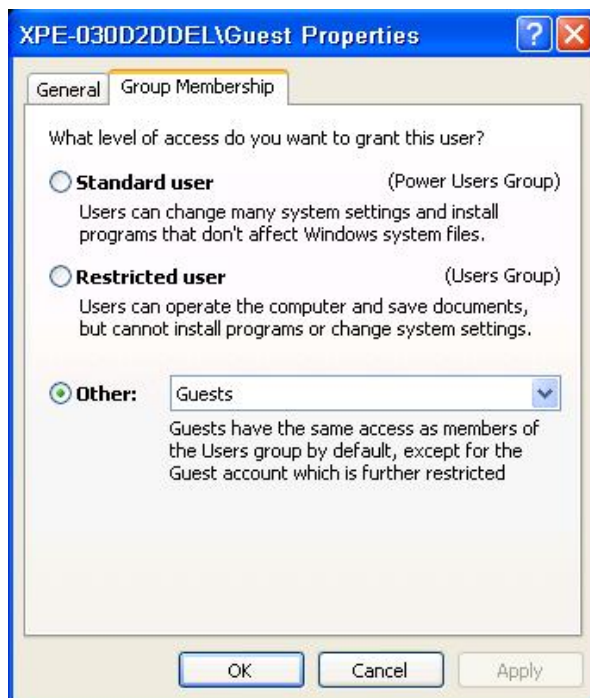
Properties

Click on this button to change the properties of an existing account. You can access two dialog boxes.



User General Properties Dialog Box

You can see that this dialog is a duplicate of the first dialog box encountered when adding a user.



User Group Membership Properties Dialog Box

This dialog is a duplicate of the final dialog box encountered when adding a user.

Reset Password

Click on this button to change the password for the highlighted user.



Reset User Password Dialog Box

This dialog is a duplicate of the second dialog box encountered when adding a user.

Automatic Log On

You can designate one user to be automatically logged on when you boot the terminal. To do this:

1. Highlight the desired user in the Users list.
2. De-select the **Users must enter...** box.
3. Click on **OK** or **Apply**. You will see the following dialog box.



Auto Logon Dialog Box

4. Enter the information for the user. You can change the user name here if you wish. **Note: You can enter a user name that is not in the User list, but the terminal will do strange, undesirable things on boot up.**
5. Click on **OK**.

EFW Manager



Enhanced Write Filter (EFW) may be the most visible difference between XPe and XP, at least from an administrator's point of view. Flash memory (the c drive) is treated as a protected volume, and the protection must be disabled or a specific action must be taken in order to commit software, file, and configuration changes to flash. EFW is the utility that controls flash protection.

There are several reasons why you may want to write into flash memory.

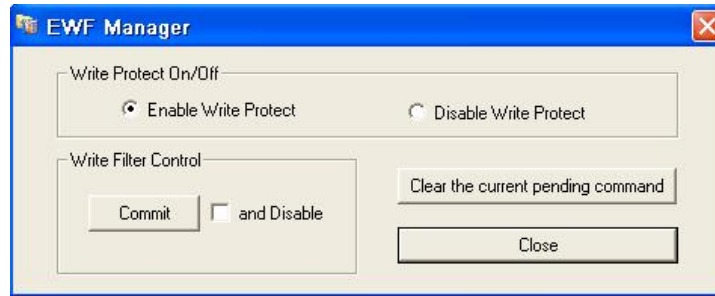
- You have transferred files into your 2xx7 and want to save them for future use after a Power Off or reboot.
- You have made configuration changes, such as those made via Control Panel, and want to retain them after a reboot.

Configuring Terminal Properties

- You have installed new application programs or device drivers and want to save them for future use after a reboot.
- You have signed on to a Terminal Server for the first time and want to save the TSCAL information.
- You are participating in a Domain and want to save the Domain Secret Key.

When flash write protection is enabled, changes, new software, etc. are written into a RAM overlay. The contents of this overlay can be written into flash, as shown below. But if the contents are not written into flash, they are lost when the terminal is rebooted. If write protection is disabled, changes, new software, etc. are written immediately into flash and are still available after a reboot.

Click on the icon to open the following dialog box.



EWF Manager Dialog Box

- **Write Protect On/Off.** These two radio buttons show the current status of EWF.
 - **Enable Write Protect.** If this radio button is active, the flash memory is write protected (EWF is enabled). This is also an action button; If the **Disable Write Protect** button is active (EWF is disabled), you can switch to a protected state by clicking on **Enable Write Protect** and closing the dialog box.
 - **Disable Write Protect.** *This is a status button only.* If this radio button is active, the flash memory is not write protected (EWF is disabled). If you try to switch from the protected state to an unprotected state by enabling this button and closing the dialog box, subsequent disabling action *appears* to be occurring. However, after the requested reboot (see below), you will find that nothing has changed, and the status is still **Disabled**.
- **Write Filter Control.** In addition to the enabling action provided by the **Enable Write Protect** button, you can initiate two other actions here.
 - **Commit.** Click on this button to commit the overlay contents to flash. You will see the following information box



EWF Commit Information Box

This box is for information only. It is not asking for your approval, so the commit will take place regardless of whether you click on **OK** or **X**.

- **and Disable.** If you make this selection and then close the dialog box without clicking **Commit**, the result is the same as if you had clicked on **Commit** by itself, except that you will not get the EWF Commit information box. The overlay contents are committed to flash, but write protection is not disabled.
- **Commit and Disable.** The *only* way to disable write protect is to select **and Disable** and then click on **Commit**.
- **Clear the current....** This button has no effect.

Configuring Terminal Properties

- **Hide.** If you click this button, the dialog box will disappear, but you can still access it by clicking on the icon in the System Tray.
- **Close.** Click here to close the EWF dialog box. If you took action to enable or disable write protect, that action will not actually take place until you reboot your terminal, as you will be reminded by the following information box.



Restart Information Box

There are two other ways to access the EWF utility.

- Enter from **Start>All Programs>EWF**. You will have to enter the EWF password to gain access. Even a non-administrator can gain access this way and appear to make changes after going through all the boxes. However, after reboot you will see that the changes never occurred.
- Use the command line interface from **Start>Run>Cmd**. In this case, no EWF password is required. However, the EWF commands will be executed only for administrators. Here are the available commands.
 - **ewfmgr c:** This command gives you the current protection state, **DISABLED** or **ENABLED**, of the C drive.
 - **ewfmgr c: -enable** This command enables protection *after the next reboot*.
 - **ewfmgr c: -commit** This command commits, at this point in time, any new files, software, and configuration changes to flash without regard to the protection state.
 - **ewfmgr c: -commitanddisable** This command commits, at this point in time, any new files, software, and configuration changes to flash without regard to the protection state, and then disables protection *after the next reboot*.

Security



Click on this icon for another opportunity to change the Administrator Control and EWF Manager password. You will see the following dialog box.



Change Password Dialog Box

The entries are self-evident, but there is one eccentricity. Even if your only desire is to disable the password, this utility still demands a new, confirmed password before disabling.

RAM Disk



Click on this icon to adjust the size of the RAM disk.

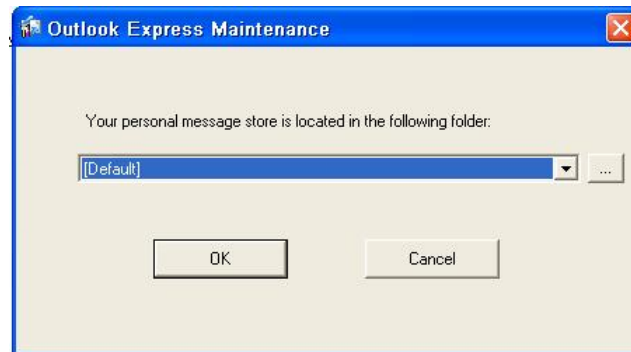


RAM Disk Dialog Box

Outlook Express Maintenance



Your Outlook Express maintenance options are very limited. Click on this icon to open the following dialog box.



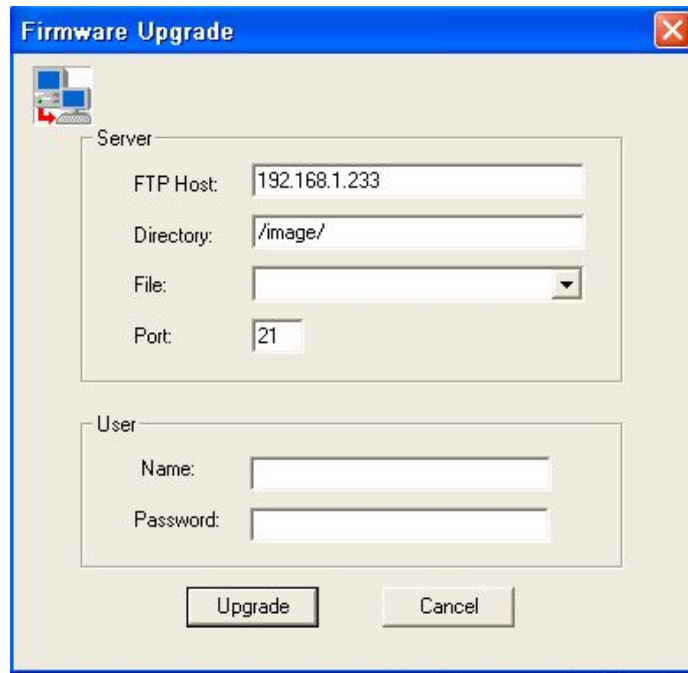
Outlook Express Maintenance Dialog Box

Your only maintenance option is to specify the storage location for your personal messages. If you click on the ... button, you will be able to browse available storage options, including USB and network storage.

FTP Upgrade



Click on this icon to see the Firmware Upgrade dialog box. If you have an FTP host somewhere on your network, you can pull down and install a new image file from that host. This new file will replace the current contents of the terminal's flash memory, and *all configuration parameters will be set back to default.*



Firmware Upgrade Dialog Box

1. Enter the parameters for your FTP server, as instructed by your network administrator.
2. Click on the **File** dropdown arrow to see the available image files at that server.
3. Highlight the desired image file.
4. Click on **Upgrade**. The image will now be upgraded without any further required interaction.

If you have Affirmative Technology Group's remote management software, eProManager, installed on your network, you can execute this same procedure from that management console, rather than having to be on site. Using that software, you can schedule the procedure to occur automatically at a convenient time, if you wish.

USB Port



USB Port

This applet controls the use of USB storage. Click on this icon to see the USB Storage Control dialog box.



USB Storage Control Dialog Box

For security reasons, you may want to avoid files being removed from your unit by disabling USB storage. Ignore the **Read-only USB Storage** check box, since this option does not work. If you enable USB storage, the user will be able to copy files to the USB drive.

USB Clone/Restore



This applet allows you to clone the current image to a USB drive and restore that image to any XPe thin client with the same hardware configuration. See [Cloning a 2xx7 YESTation XPe Image](#) for cloning/restore details.

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Configuring PowerTerm Sessions

Configuring a New Session

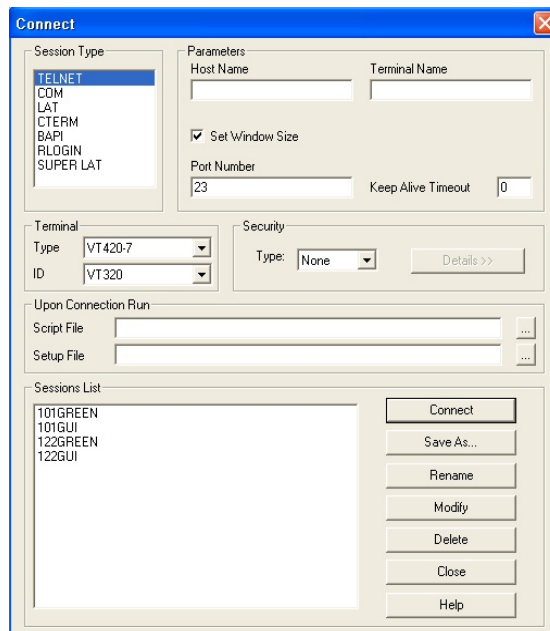
Configuration of a new session begins at the PowerTerm Connect dialog box. To open this dialog box, click on the **PowerTerm** icon on the Desktop.



This will open the PowerTerm Connect dialog box. The first time that you open this dialog box, you will probably see four pre-defined TN5250 display sessions in the Sessions List—**101GREEN**, **101GUI**, **122GREEN**, and **122GUI**. These sessions are configured to use the most-common properties of the PowerTerm green screen or graphical user interface alternatives. As is obvious, there are two sessions configured for use with the Affirmative Technology Group 101-key 5250/PC keyboard and two for use with the Affirmative Technology Group 122-key 5250/PC keyboard. Before configuring a new TN5250 display session from scratch, we suggest that you explore these pre-defined sessions. They are configured to access, over the Internet, the Affirmative Technology Group demo system with User Names and Passwords of **DEMO1** through **DEMO5**.

This section will explain the parameters in enough detail to get you started and connected. For many users, this may be all that is needed. For detailed information on configuring and operating PowerTerm sessions, please consult the PowerTerm XPe User Guide at http://www.affirmative.net/pub/PtSeriesXPeUsersGuide8_1.pdf.

The Connect dialog box allows you to set basic configuration parameters—those that will allow you to make a connection to your host. If you decide that one of the pre-defined sessions will, with some editing, meet your needs, set the basic parameters here. In this section, we will also show you how to configure TN5250 sessions.



Default PowerTerm Connect Dialog Box

- **Terminal Type.** Select a terminal type from the lengthy drop-down list. When you do this, the fields in the dialog box will change to reflect the basic attributes of that terminal type.

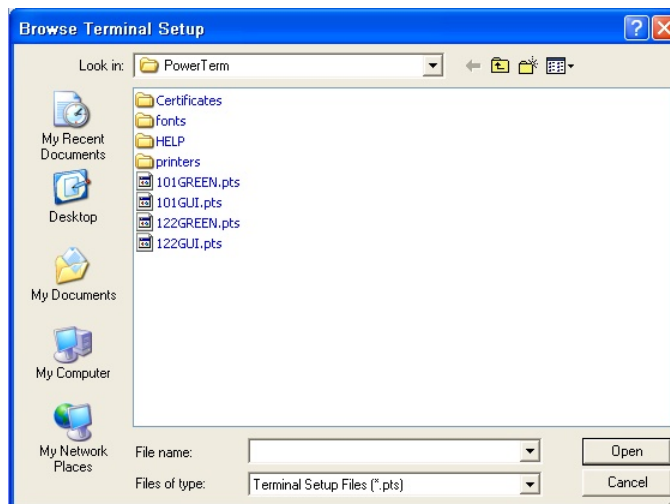
Display Session Configuration

If you choose the **5250 Display** type in the default Connect box, it will change to

5250 Display Connect Dialog Box

- **Terminal ID.** For each terminal type, there are usually a number of specific models that can be emulated. Choose your desired model here. The default **3477-FC** is probably the most popular 5250 terminal model
- **Session Type.** The list of available session types will vary depending upon which Terminal Type you select. For a 5250 display session, use the **TN5250** session type.
- **Host Name.** Enter an IP address, unless the host system name is defined in a DNS server. Each emulator session can have a different host if desired.
- **Device Name.** Enter the session name recognized by the host if you are using named sessions. For a printer session, it will probably be a named session as defined by your server administrator.
- **Auto SignOn.** This parameter is not available at this time.
- **Port Number.** This parameter will default to the common TCP port, so, unless you are instructed otherwise by your network administrator, you generally do not need to enter anything here.
- **Keep Alive Timeout.** If you want to ensure that your session connection is kept alive during periods of inactivity, put a number of seconds here. This is especially useful if you are using a slow WAN link to a remote server.
- **Security Type.** If you want a secure connection, and your host supports it, select the type of security from the drop-down list. When you make a selection, the **Details** button will be activated. Click on this button and enter security configuration details in the resulting dialog box.
- **Setup File.** If you want to clone the parameters of a previously-defined configuration, click on the ... button to the right of this field. You will see a browse window with a list of configuration (setup) files with the **.pts** extension. Select the file for the configuration that you wish to clone.

Configuring PowerTerm Sessions



Setup File List

- **Script File.** If you want to automatically invoke a previously-constructed script at session startup, click on the ... button to the right of this field and select a script file (**.psl**) from the resulting browse window. In this example, there is only one existing script, **StartOrder.psl**, which has been constructed to establish the starting order of a number of AutoStart PowerTerm sessions (see [Autostarting Powerterm Sessions in a Specific Order](#)).



Script File List

- **Save As....** You will probably want to save all the parameters of this connection for future use. If so, click on this button and enter a connection name in the Save Session window. This name will appear in the Sessions List and the session will be saved for future use.
- **Connect.** If you want to connect immediately, click on this button. Otherwise, you can click on **Close** or **X** and the connection will be saved for future use.
- **Rename.** Click on this button if you want to change the name of a session in the Sessions List.
- **Modify.** Click on this button if you have made some changes to an existing session in this dialog box, and you want to save those changes.
- **Delete.** Click on this button to delete an existing session. You will be asked to confirm your action.
- **Close.** Click here to close this dialog box.
- **Help.** On-line help is not available at this time.

This takes care of the basic configuration parameters. To select other configuration options, typically for look and feel, you will need to open (connect) the session.

Terminal Setup

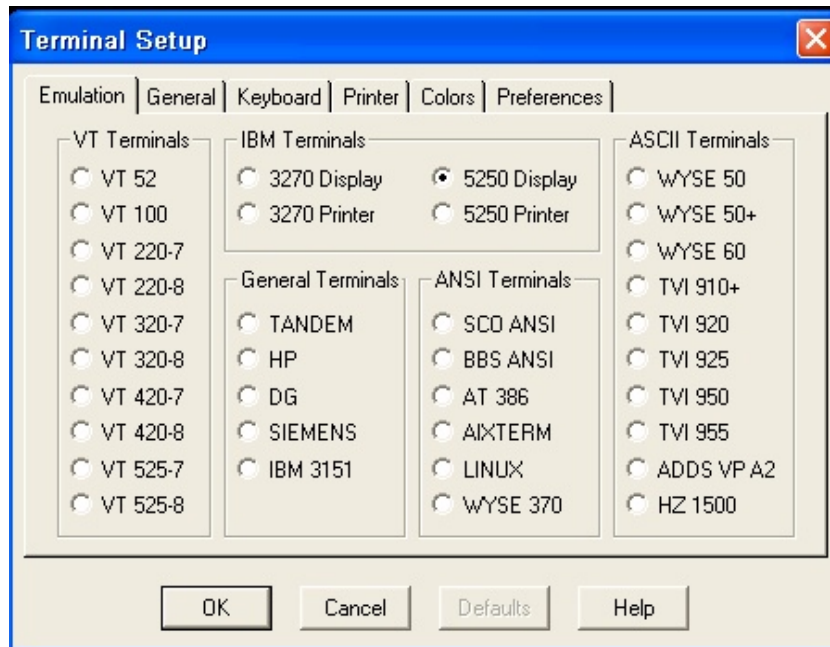
After entering the basic configuration parameters for a display session, you can open that session and get a sign-on screen. But you can complete these additional configuration parameters even without the sign-on screen.

Open the **Terminal** menu and select **Setup**. You can also click on the Setup button in the Tool Bar.



Setup Icon

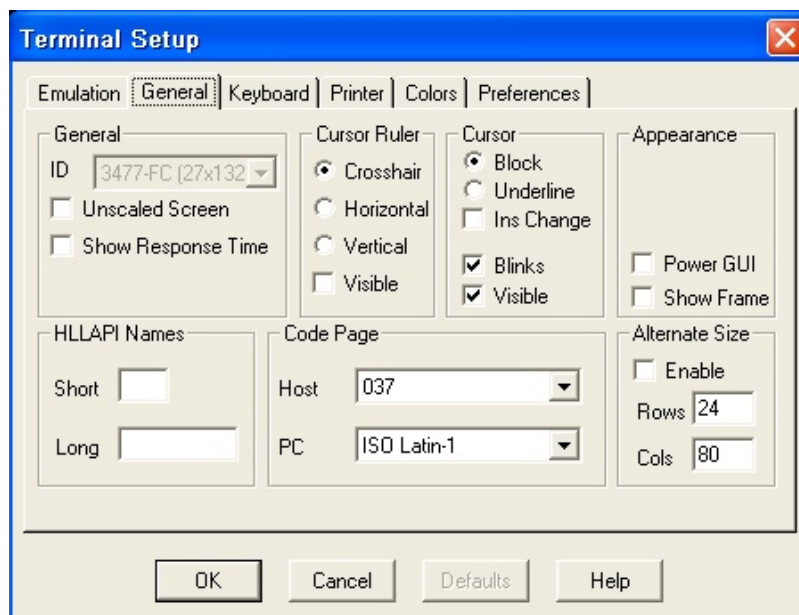
You will see the Terminal Setup window open with six tabbed dialog boxes. Ignore the Emulation box; you've already made your emulation choice in the basic configuration.



Emulation Dialog Box

NOTE: After making any configuration changes, you must save your new Terminal Setup before you close the session – otherwise they will be lost. This can be done in several ways depending upon the parameters you have chosen (see [Preferences](#)). In addition to doing this at session exit time, you can do it proactively at any time from the **File** menu by executing **Save Terminal Setup**. After you do this, these selections can be transferred to any new or existing connection by selecting that setup file when configuring the connection. If you do not do a Save, you will lose all these changes.

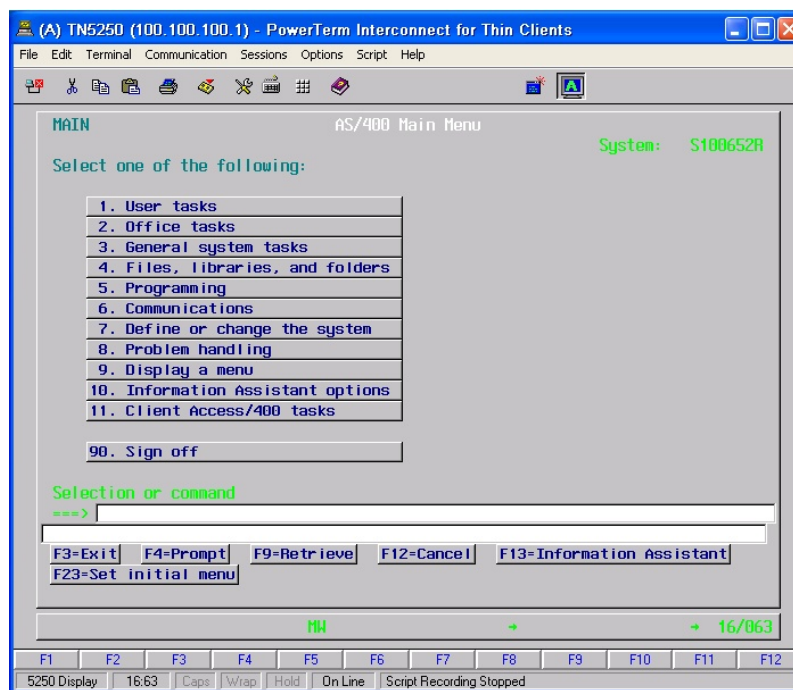
General



General Dialog Box

Most of the parameters in the General dialog box are self-explanatory. Here are explanations of the others.

- **Power GUI.** Check this box to convert a standard Green Screen look to a graphical look as shown here.

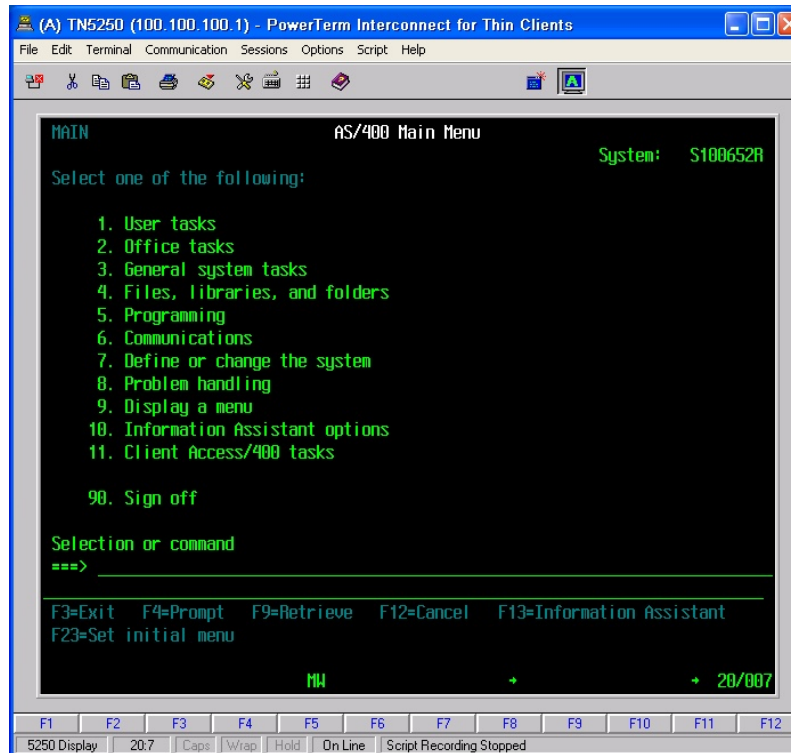


Power GUI Screen

The menu items and the F button callouts are automatically appear as action buttons which can be activated by a cursor left-click.

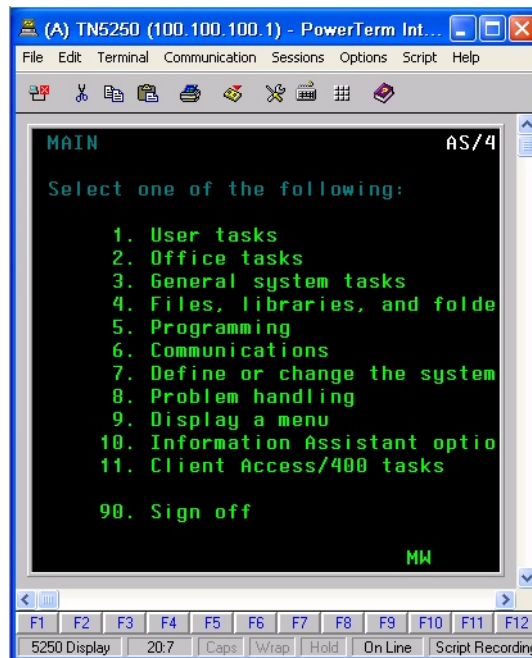
- **Show Frame.** Click on this box to put a silver frame around a Green Screen display. You cannot put a frame around a Power GUI screen.

Configuring PowerTerm Sessions



Framed Green Screen

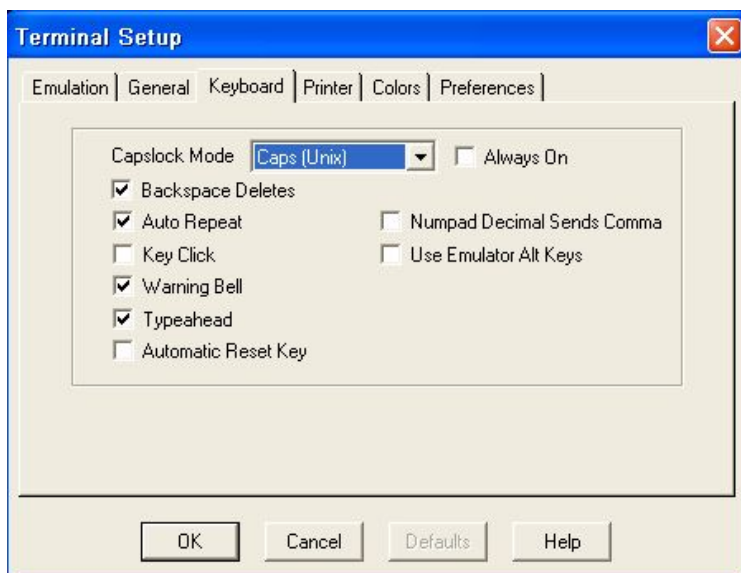
- **Unscaled Screen.** This option only applies to a framed screen. When it is checked, scaling a framed screen does not scale the Green Screen portion of the display. So you might get something that looks like this.



Unscaled Green Screen

- **Code Page.** If you are in the US, leave the code pages at their default settings.

Keyboard

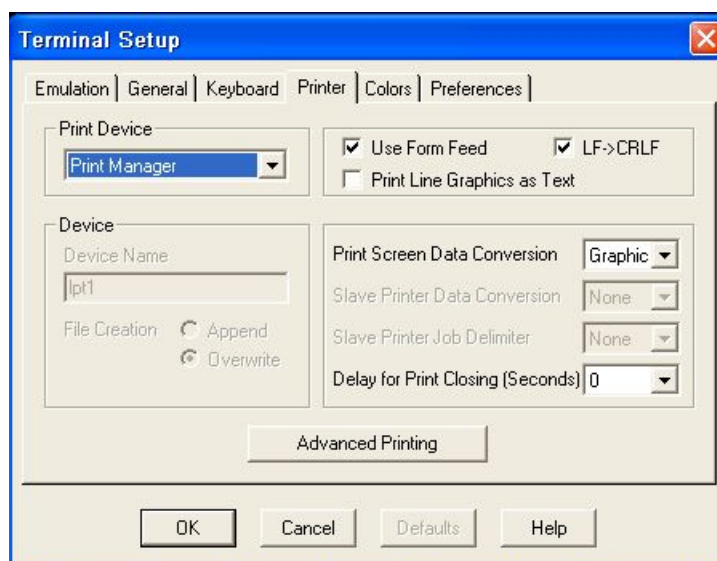


Keyboard Dialog Box

These parameters are self-explanatory, except for:

- **Caplock Mode,**
 - **Caps (Unix)**, locks alphabet keys on main keypad in uppercase.
 - **Shift**, locks alphabet and numeric keys on main keypad in shift setting. Pressing the shift button on your keyboard will release shift-lock mode.
 - **Reverse (Win)**, Same behavior as Caps Lock, however pressing the shift button on your keyboard reverses the caps operation. *This is the recommended mode* for users who are familiar with Windows applications.
 - **Always On**, enables you to toggle to a different application and turn Caps Lock mode off. On return to PowerTerm WTC it will automatically revert to Caps

Printer



Printer Dialog Box

Configuring PowerTerm Sessions

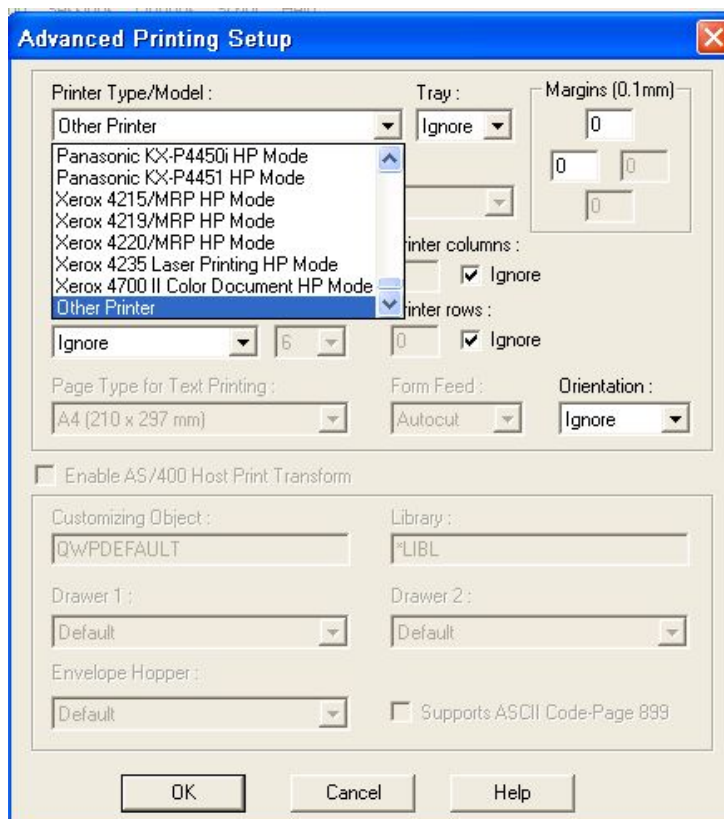
This dialog box is identical to the dialog box used when setting up a printer session. In display session configuration, it is intended to configure a printer for local Print Screens. If the Print Screen Data Conversion is set to **Graphic**, this configuration function, except for printing to a file, is usurped by the Windows Add Printer Wizard. Using this wizard, accessed from the **Print Setup** option in the File menu or from the **Printers and Faxes** utility in the Windows Start menu, you can configure a parallel, serial, USB, network, or LPR printer. You can add multiple printers on different ports; then choose the desired printer in the **File>Print Setup** dialog box when you wish to do a local print (**Print Screen**).

If you wish to print to a file, select **File** from the Print Device drop-down list. This will activate the Device section as seen here.



Enter the desired file name, including the complete path, in the Device Name field. Then select whether to **Append** or **Overwrite** in this file.

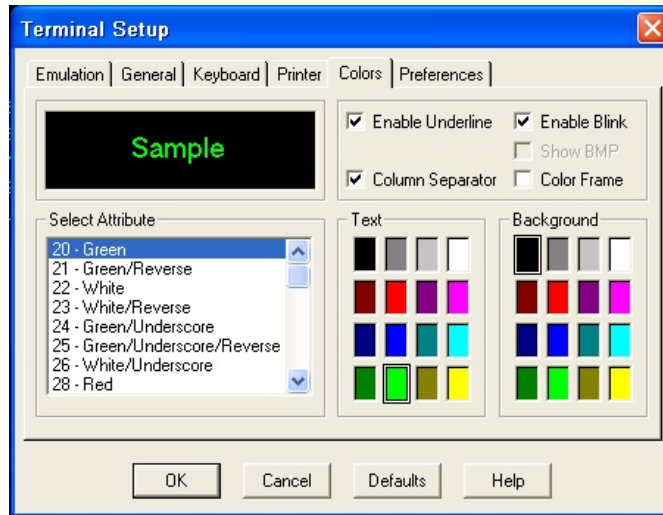
If you choose **None** in Print Screen Data Conversion, and **Device** in Print Device, you must specify a port in Device Name. Although the default is **lpt1**, and you are given no other choices, you can type in **com1** for the local COM port or **com2** to select the USB port. You are now dependent upon a PowerTerm printer driver, which you can select by clicking on **Advanced Printing**, as shown here.



Advanced Printing Dialog Box

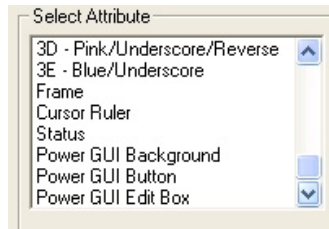
Select a printer from the Printer Type/Model drop-down list, and adjust other available parameters if you wish.

Colors

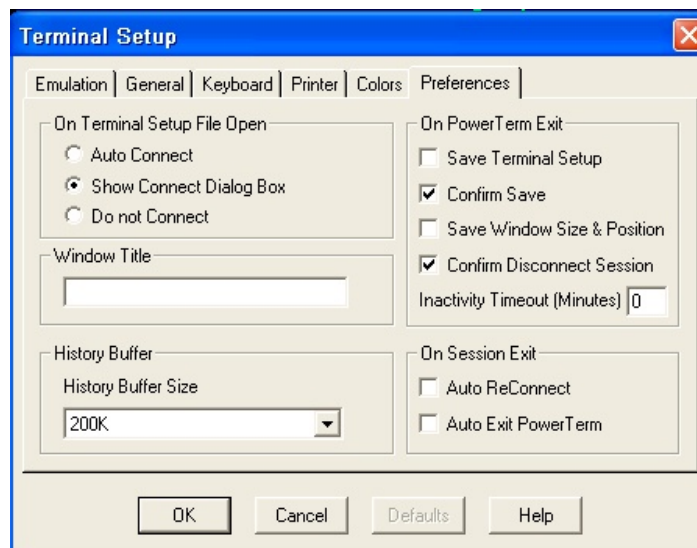


Colors Dialog Box

This dialog box allows you to customize the visual properties of the emulation screen attributes. You can also customize the colors for several other items seen at the bottom of the Select Attribute drop-down menu, shown here.



Preferences



Preferences Dialog Box

Configuring PowerTerm Sessions

- **On Terminal Setup....** Ignore this section.
- **History Buffer Size.** This parameter is valid only for non-IBM emulations.
- **Window Title.** Type in the “friendly” title that you wish to see in your Desktop Task Bar.
- **History Buffer.** This buffer is used only for non-IBM emulations.
- **On Power Term Exit.** This group of parameters defines certain actions that can be taken when the session is exited.
 - **Save Terminal Setup.** If you changed the terminal parameters during the session, the changes are automatically saved to the current terminal setup file.
 - **Confirm Save.** If you check this box, any changes in terminal parameters are *not* saved automatically when you exit the session. PowerTerm displays a dialog where you can decide whether or not to save any changes to the current terminal setup file. You can check either this box or **Save Terminal Setup**, but not both. If you leave both unchecked, changes will not be saved and you will not receive any prompt.
 - **Save Window Size & Position.** This saves the size and position of the emulation window. The next time you open this session, the window appears with the desired size at the set position.
 - **Confirm Disconnect Session.** When you close this session, you will be required to confirm your desire to disconnect.
 - **Inactivity Timeout.** If there is no keyboard activity within the specified time, the session will automatically close. Leave the setting at **0** if you do not want a timeout.
- **On Session Exit.** These parameters are invoked if the session communication was disconnected.
 - **Auto Reconnect.** Re-establishes communication if the line was disconnected.
 - **Auto Exit PowerTerm.** Closes the session altogether on a disconnect.

Keyboard mapping, Power Pad options, and other miscellany are available under the **Options** menu. If you change the keyboard mapping, be sure to execute a **Save Keyboard File** from the **File** menu.

After completing your configuration, click on **OK** and close or continue this session.

Printer Session Configuration

If you choose the **5250 Printer** type in the default Connect box, it will change to

5250 Printer Connect Dialog Box

See [Display Session Configuration](#) for an explanation of these parameters, except for:

- **Message Queue/Message Library.** Ask your server administrator about any changes here.

Terminal Setup

After entering the basic configuration parameters for a printer session, you can open that session and get a status screen. Now you can complete these additional configuration parameters.

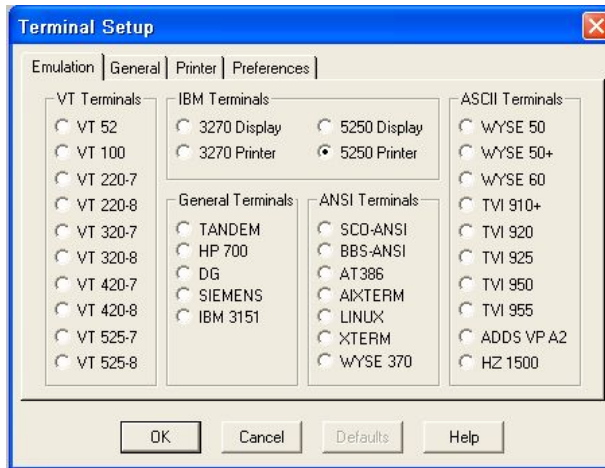
Open the **Terminal** menu and select **Setup**. You can also click on the Setup button in the Tool Bar.



Setup Icon

You will see the Terminal Setup window open with four tabbed dialog boxes. Ignore the Emulation box; you've already made your emulation choice in the basic configuration.

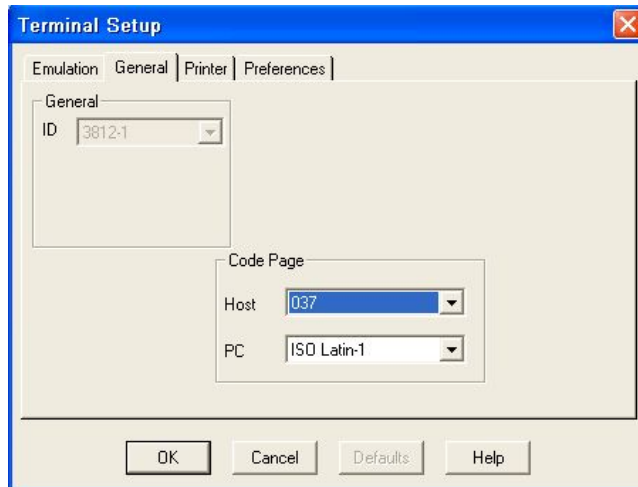
Configuring PowerTerm Sessions



Emulation Dialog Box

NOTE: After making any configuration changes, you must save your new Terminal Setup before you close the session – otherwise they will be lost. This can be done in several ways depending upon the parameters you have chosen (see [Preferences](#)). In addition to doing this at session exit time, you can do it proactively at any time from the **File** menu by executing **Save Terminal Setup**. After you do this, these selections can be transferred to any new or existing connection by selecting that setup file when configuring the connection. If you do not do a Save, you will lose all these changes.

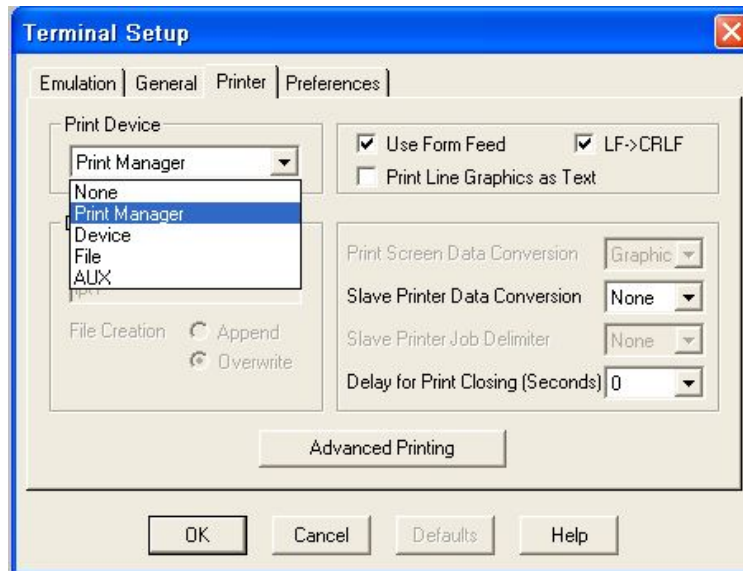
General



General Dialog Box

Leave the code page settings at their default settings if you are in the US.

Printer



Printer Dialog Box

If the Slave Printer Data Conversion is set to **Graphic**, this configuration function, except for printing to a file, is usurped by the Windows Add Printer Wizard. Using this wizard, accessed from the **Print Setup** option in the File menu or from the **Printers and Faxes** utility in the Windows Start menu, you can configure a parallel, serial, USB, network, or LPR printer. You may also want to use Host Print Transform in the Advanced Printing dialog box, as discussed on the next page.

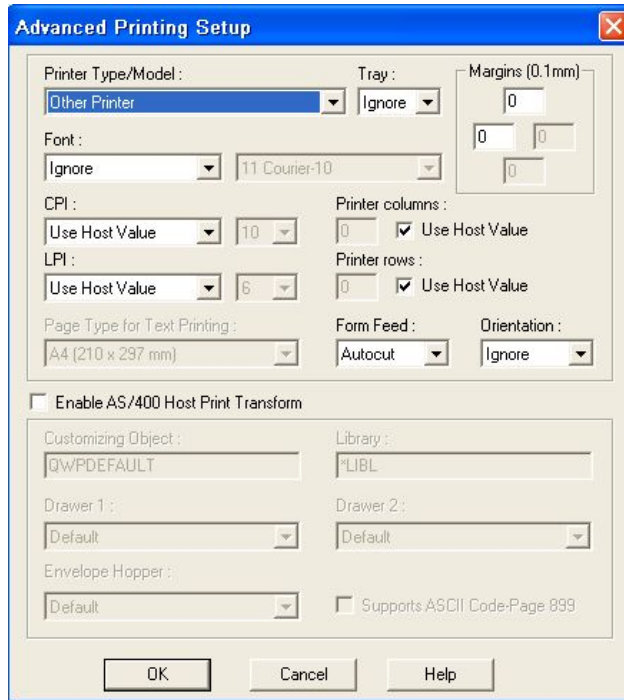
If you wish to print to a file, select **File** from the Print Device drop-down list. This will activate the Device section as seen here.



Enter the desired file name, including the complete path. Then select whether to **Append** or **Overwrite** in this file

If you choose **None** in Slave Printer Data Conversion, and **Device** in Print Device, you must specify a port in Device Name. Although the default is **lpt1**, and you are given no other choices, you can type in **com1** for the local COM port or **com2** to select the USB port. You are now dependent upon a PowerTerm printer driver, which you can select by clicking on **Advanced Printing**, as shown here.

Configuring PowerTerm Sessions



Advanced Printing Dialog Box

Select a printer from the Printer Type/Model drop-down list, and adjust other available parameters if you wish.

For the most reliable printing from the host, we recommend that you use Host Print Transform by checking the **Enable AS/400 Host Print Transform** box. This will also enable the configuration parameters in the lower part of the dialog box.

Preferences

This dialog box is exactly the same as the one for a display session. See [Display Session Configuration/Terminal Setup/Preferences](#) for more information.

Modifying or Cloning an Existing 5250 Display Session

Four 5250 default connections are normally provided: 101GREEN, 101GUI, 122GREEN, and 122GUI. As the names indicate, each connection is designed to optimize the use of an Affirmative 101-key or 122-key keyboard along with a classic “green screen” (text based) or contemporary graphical (GUI) display style.

Each default connection is configured to connect over the Internet to the Affirmative Technology Group demonstration AS/400 server. Before you make any modifications, we recommend, if your terminal has an Internet connection, that you connect to our server to verify your network configuration and to experience the display alternatives. Use **DEMO1** or **DEMO2** for the user name and password.

It may be convenient for you to modify one of the default connections for your own use, or to modify a connection that you have previously created. You can also clone an existing connection in all but name. Follow this procedure:

1. Click on the **PowerTerm** icon on the Desktop. You will see the PowerTerm Connect dialog box.
2. Highlight the name of the connection to be modified or cloned in the Sessions List. The basic configuration parameters for that connection will immediately be displayed
3. Change basic parameters as desired.
4. Click on one of the following:
 - If you want to clone to a new connection, click on **Save As** and put the new connection name in the resulting dialog box.
 - If you want to retain this connection under the same name, click on **Modify**.
5. If you want to change other parameters not found in the Connect dialog box, follow the procedure shown in [Configuring a New Session/Display Session Configuration](#).

Autostarting a Session

You may want to have your RDP, ICA, or emulation sessions automatically start when you boot up your terminal. A session is just another executable program to XPe, so you handle this just like any Autostart program on a desktop PC with XP—you move or copy a session shortcut, usually a desktop icon, into the user Startup folder. You can create an icon from **File>Save As Icon**.

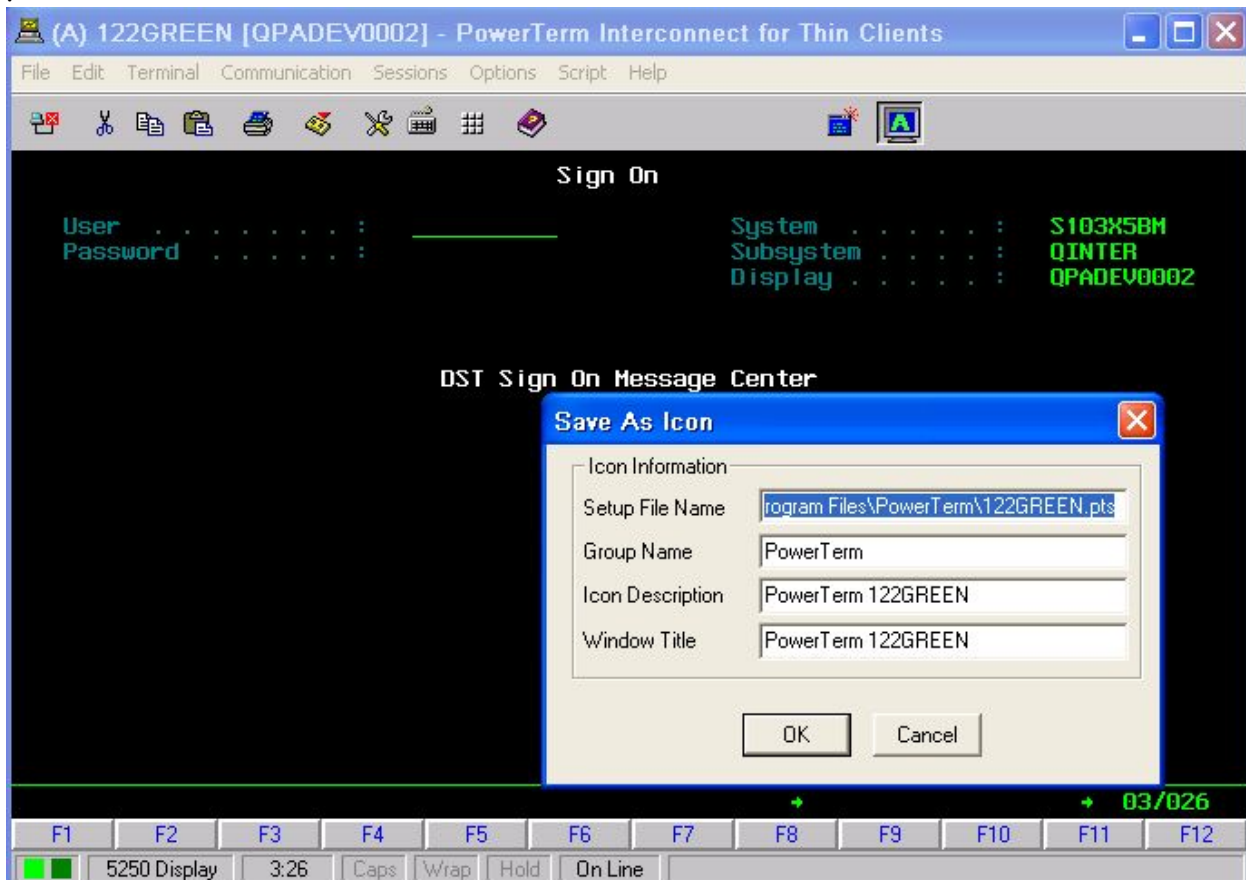
Autostarting Powerterm Sessions in a Specific Order

When using the standard XP Autostart method, there is no guarantee as to the starting order of the sessions, and hence no guarantee as to which session will end up on top (in focus) after the startups. However, there is a way to determine start order using the PowerTerm scripting language and a simple Windows delay program provided by Affirmative Technology Group. In this case, only the icon for the first session is placed in the Startup folder. Then that first session invokes a PowerTerm script which opens the other sessions in the desired order.

An example is shown here using the four PowerTerm default sessions, 101GREEN, 101GUI, 122GREEN, and 122GUI. In this example we want to start them in reverse order. The first requirement is to create icons for all four sessions, as follows.

Configuring PowerTerm Sessions

1. Open a session.
2. From the File menu, select **Save As Icon**. The Save As Icon dialog box will open



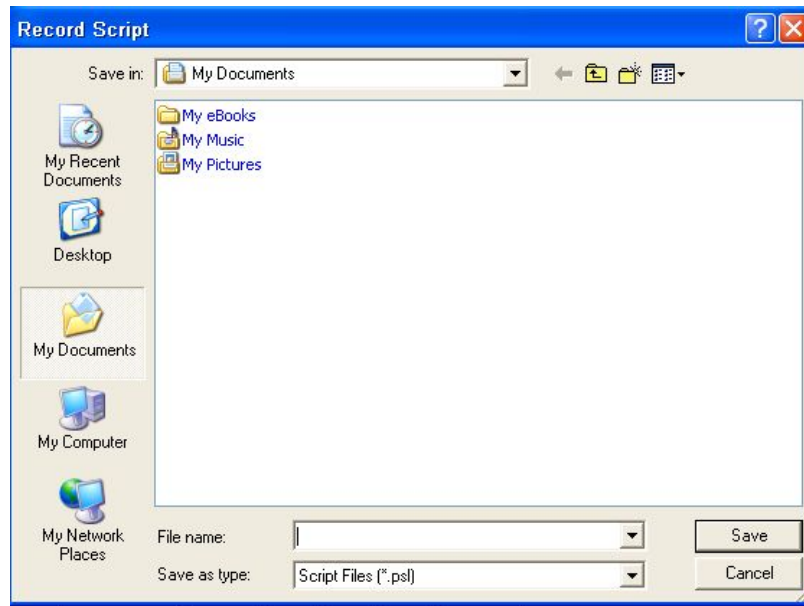
Save As Icon Dialog Box

3. Enter the icon information as desired. The most important item here is the Setup File Name. Each icon must have a unique **.pts** setup file.
4. Repeat for each of your sessions.

After creating your icons, continue as follows.

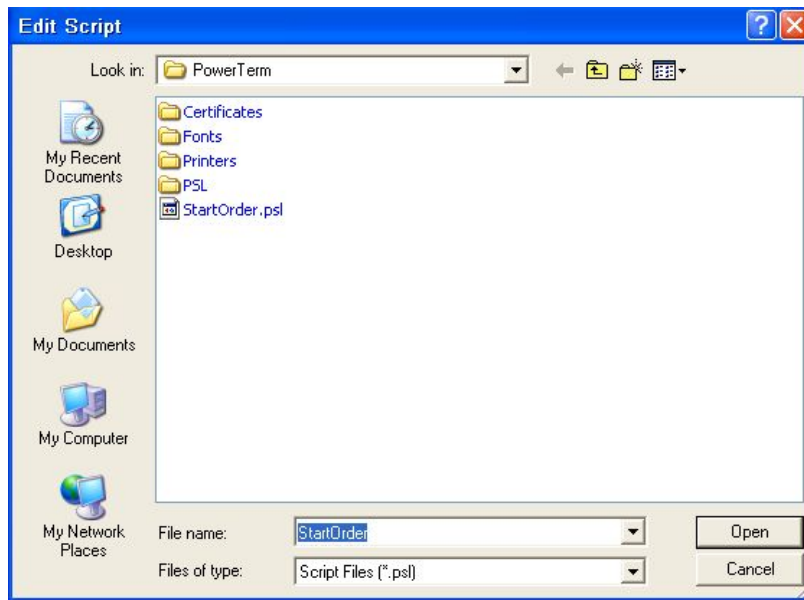
1. Install two files, **delay.exe** and **MSVBVM60.DLL**, in the **Program Files\PowerTerm** folder, if they are not already in that folder.
2. Open a session.
3. Select **Start Script Recording** from the Script menu.
4. Select **Stop Script Recording** from the Script menu.
5. Select **Save Recorded Script** from the Script menu. The following dialog box will open.

Configuring PowerTerm Sessions



Record Script Dialog Box

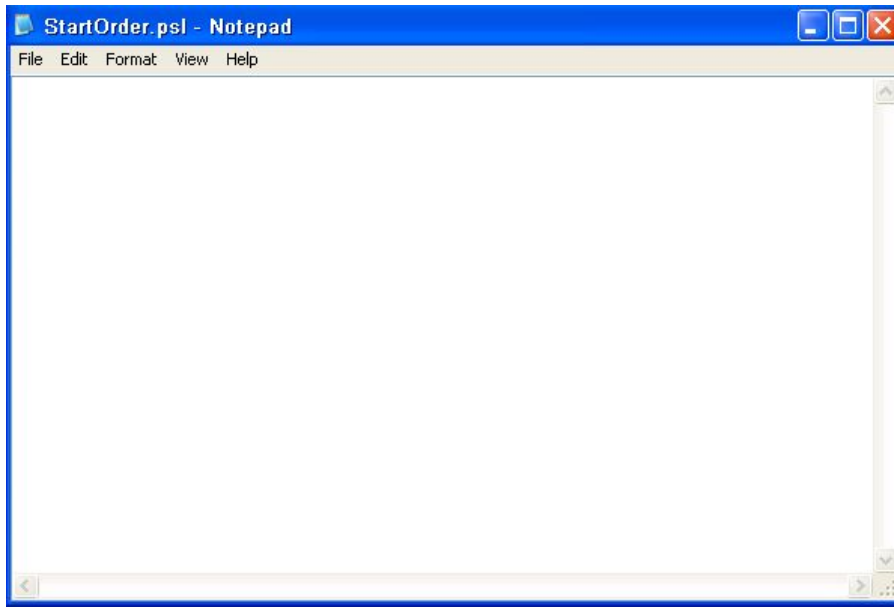
6. Unfortunately, Windows wants to default to the My Documents folder. In this case, it is necessary have the script in the Program Files\PowerTerm folder, so browse to that folder.
7. Enter the desired script name, **StartOrder** in this example, and do a **Save**.
8. Select **Edit Script** from the Script menu. The following dialog box will open.



Edit Script Dialog Box

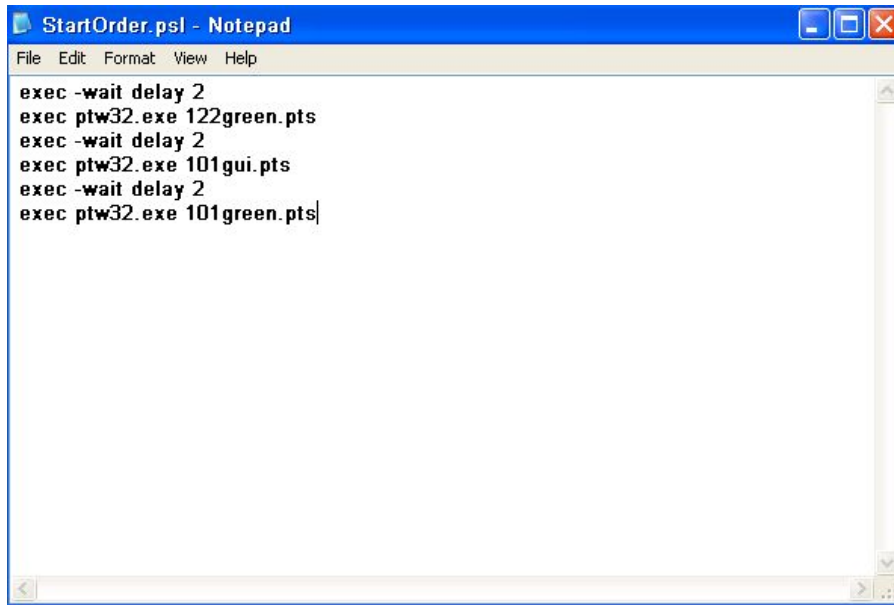
Configuring PowerTerm Sessions

9. If this is the only script file in this folder, the name will automatically be placed in the File Name field. Otherwise, select the desired script. Then do an **Open**. A blank Notepad screen will open as follows.



Notepad Screen

10. Enter script commands as shown below.. This example shows a delay of 2 seconds between the openings of each session; change this number if you want a shorter or longer delay. Note that you enter the unique **.pts** profile file for each of your PowerTerm sessions that you specified when creating that session's icon. Also note that you enter the information for each session in the order that you want that session to open, *except* for the first session of the opening order.

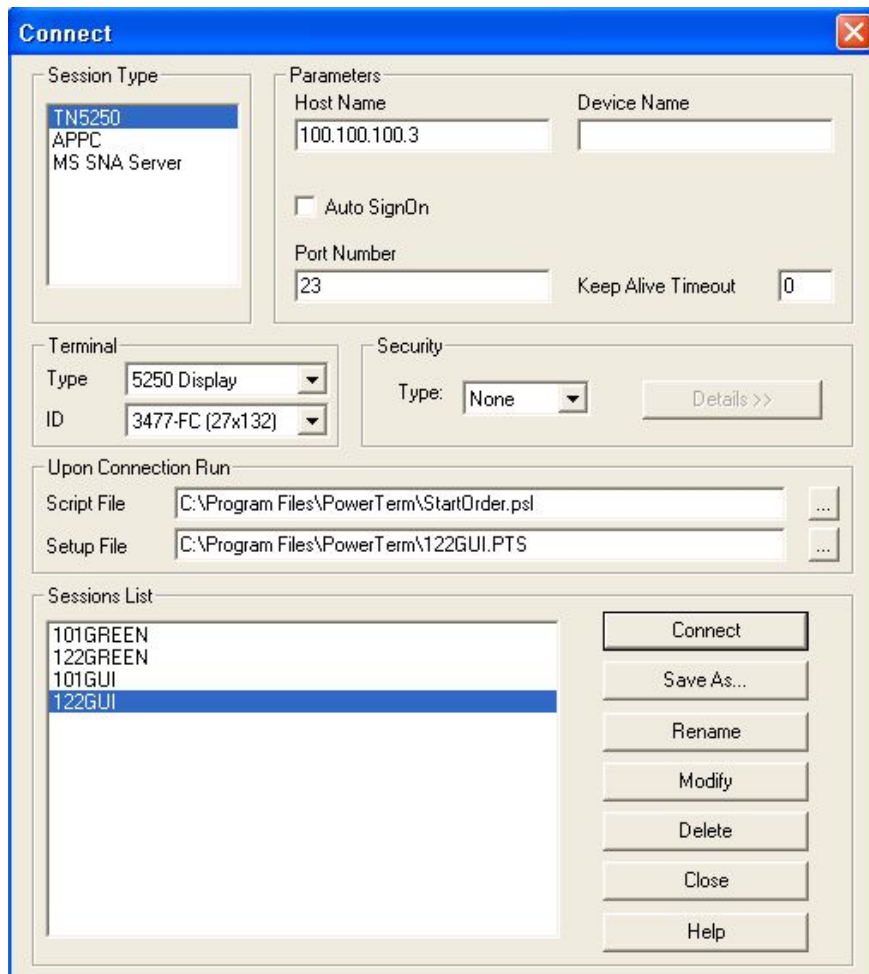


Start Order Script

11. Save the file.

Configuring PowerTerm Sessions

12. Configure the first session, and only the first session, in the opening order to execute this script file, as shown here.



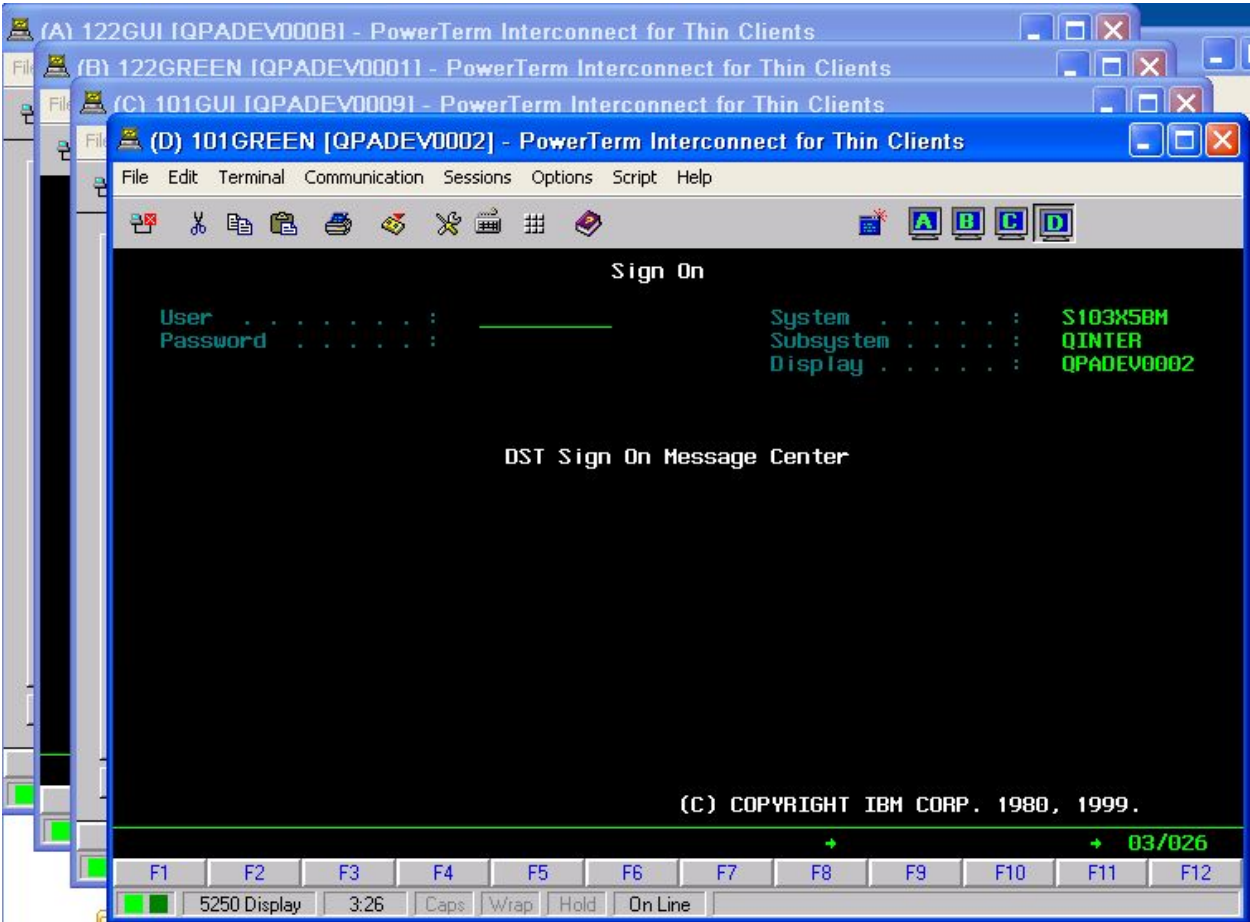
The image shows the 'Connect' dialog box in PowerTerm. It has a blue title bar with a close button. The dialog is divided into several sections: 'Session Type' with a list containing 'TN5250', 'APPC', and 'MS SNA Server'; 'Parameters' with fields for 'Host Name' (100.100.100.3), 'Device Name', 'Auto SignOn' (unchecked), 'Port Number' (23), and 'Keep Alive Timeout' (0); 'Terminal' with 'Type' (5250 Display) and 'ID' (3477-FC (27x132)); 'Security' with 'Type' (None) and a 'Details >>' button; 'Upon Connection Run' with 'Script File' (C:\Program Files\PowerTerm\StartOrder.psl) and 'Setup File' (C:\Program Files\PowerTerm\122GUI.PTS); and 'Sessions List' with a list containing '101GREEN', '122GREEN', '101GUI', and '122GUI' (selected). To the right of the list are buttons: 'Connect', 'Save As...', 'Rename', 'Modify', 'Delete', 'Close', and 'Help'.

Connect Dialog Box

13. Move the icon for the first session into your Startup folder.
14. *Be sure* to execute an Enhanced Write Filter **Commit** before you reboot, or else you will lose all your work.

Configuring PowerTerm Sessions

Now when you reboot, your sessions should start in order, as shown here.





Cloning a 2xx7 YESTation XPe Image

The 2xx7 YESTation has the capability to clone firmware images to other 2xx7 YESTations. You can build your special Desktop configuration, add applications and peripheral drivers, and then exactly reproduce the resulting firmware image on other units. You can create as many unique images as you wish, with the images stored in local USB drives or network-share directories anywhere on your network. In this section, the two methods of clone/restore will be referred to as **local** and **network**.

Requirements

First, two definitions:

- The **benchmark** YESTation is the unit on which the desired configuration, applications, and drivers are first assembled.
- The **target** YESTation is the unit which is to be made identical to the benchmark unit.

YESTations are based on several different hardware platforms, and cloning across different platforms is usually not exact. Applications and peripheral drivers should present no problem, but configuration parameters that depend upon internal hardware may not be cloned. This is often the case with display parameters, for example. For the best and most reliable results, use identical benchmark and target hardware platforms.

Network cloning requires the following elements:

- eProManager remote central management software, version 3.4a or above, installed on a management console on the network. This software can be downloaded from the Affirmative Technology Group web site; contact Affirmative Technology Group Technical Support for instructions.
- Benchmark and target units installed on the same network as eProManager.
- The network must have a DHCP server.
- Benchmark and target units to have flash memory of the same size.
- XPe firmware version 404 or above on the benchmark YESTation. If your benchmark unit does not have the proper version, Affirmative Technology Group will provide it on a CD
- XPe firmware version 301 or above on the target YESTation.
- At least one shared directory on the network that can be used to store the clone images. **This directory should be in a Windows PC, not in a unit with a server OS.**
- The YESTation must have a wired connection to the network. Cloning and restoration will not work with a wireless YESTation connection.

Local cloning requires the following elements:

- Benchmark and target units to have flash memory of the same size.
- XPe firmware version **ABC3C** or **ABC3T** or above on the benchmark and target YESTations.
- USB drive with free space equal to or larger than the flash memory in the units. **Note:** This is *not* the size of the image, but the total size of the flash.
- Benchmark and target units must be connected to a network with a DHCP server. Yes, this is a strange requirement for local storage, but it is due to using legacy code borrowed from the network procedures.

Network Cloning

Cloning consists of two major operations: Capture and Restoration.

- Capture involves the creating, extracting, and storing of the benchmark image.
- Restoration involves moving the benchmark image to the target unit and loading the image into the flash memory of the target unit.

eProManager

ePro is the central element in image cloning. This remote central management software must be installed on a computer on the same network as the benchmark and target YESTations. The installation requirements are:

- Windows 2000 Professional/Server/Advanced Server with Service Pack 3 or higher, Windows XP Professional, or Windows 2003 Server.
- 13MB-20MB disk space.

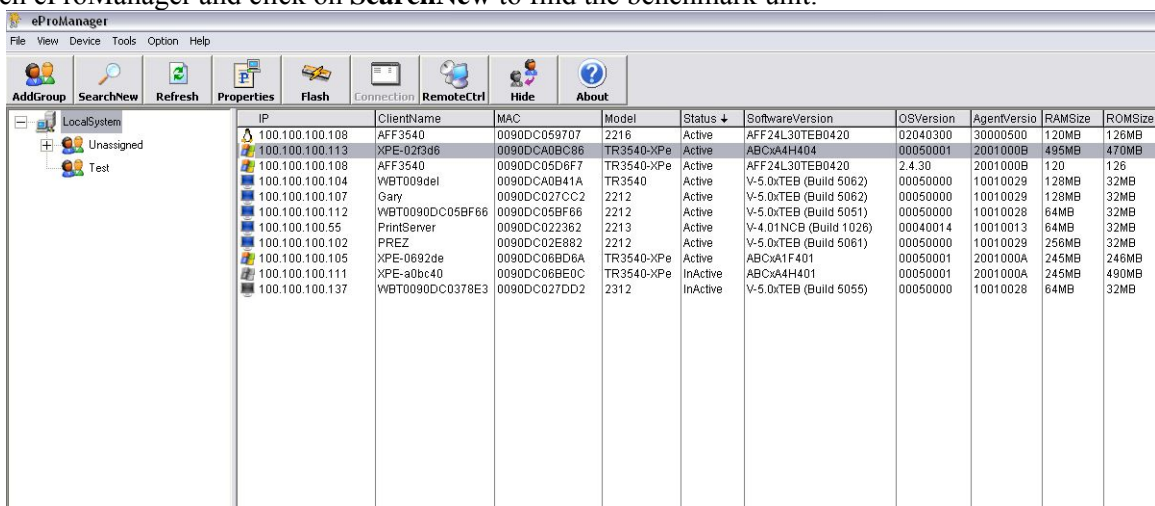
This document only discusses the particular aspects of ePro that apply to cloning. Complete details on the installation and operation can be found in the eProManager User Guide at <http://www.affirmative.net/pub/eProManagerUserGuide.pdf>.

You can download an installation package of the latest version of ePro from <http://www.affirmative.net/EPROMANAGERV4.8.ZIP>. Installation instructions are included in the zip file and in the User Guide.

Capture

The capture procedure is:

1. Create a base benchmark unit with an XPe image of version 404 or higher.
2. Configure the benchmark unit per your Desktop needs and with all the desired applications and peripheral drivers.
3. Connect the benchmark unit to the same network as your eProManager management console.
4. Open eProManager and click on **SearchNew** to find the benchmark unit.

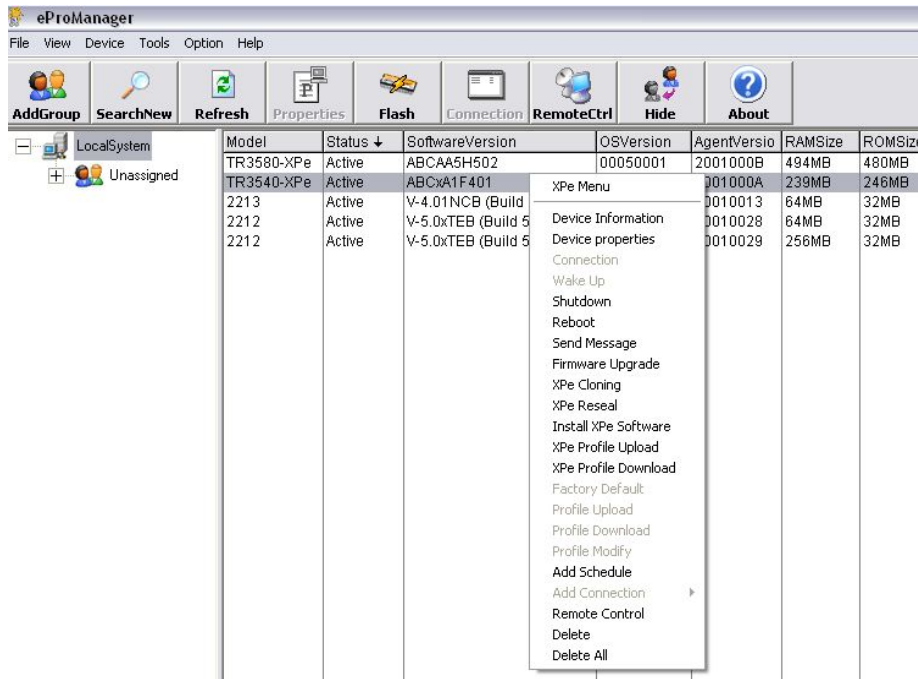


IP	ClientName	MAC	Model	Status	SoftwareVersion	OSVersion	AgentVersion	RAMSize	ROMSize
100.100.100.108	AFF3540	0090DC059707	2216	Active	AFF24L30TEB0420	02040300	30000500	120MB	126MB
100.100.100.113	XPE-027306	0090DC0A0BC86	TR3540-XPe	Active	ABCx4H404	00050001	2001000B	495MB	470MB
100.100.100.108	AFF3540	0090DC05D6F7	TR3540-XPe	Active	AFF24L30TEB0420	2.4.30	2001000B	120	126
100.100.100.104	WB0090del	0090DC0A0B41A	TR3540	Active	V-5.0xTEB (Build 5062)	00050000	10010029	128MB	32MB
100.100.100.107	Gary	0090DC027CC2	2212	Active	V-5.0xTEB (Build 5062)	00050000	10010029	128MB	32MB
100.100.100.112	WB0090DC05BF66	0090DC05BF66	2212	Active	V-5.0xTEB (Build 5051)	00050000	10010028	64MB	32MB
100.100.100.55	PrintServer	0090DC022362	2213	Active	V-4.01NCB (Build 1026)	00040014	10010013	64MB	32MB
100.100.100.102	PREZ	0090DC02E892	2212	Active	V-5.0xTEB (Build 5061)	00050000	10010029	256MB	32MB
100.100.100.105	XPE-0692de	0090DC06BD6A	TR3540-XPe	Active	ABCx4H401	00050001	2001000A	245MB	246MB
100.100.100.111	XPE-a0bc40	0090DC06BEDC	TR3540-XPe	InActive	ABCx4H401	00050001	2001000A	245MB	490MB
100.100.100.137	WB0090DC0378E3	0090DC027DD2	2312	InActive	V-5.0xTEB (Build 5055)	00050000	10010028	64MB	32MB

ePro Local System Terminal List

5. Right click on the benchmark unit, to see the context menu.

Cloning a 2xx7 YESTation XPe Image



XPe Context Menu

- Left click on **XPe Cloning** to see the Remote Clone Image dialog box.



Remote Clone Image Dialog Box

- Enter the information:
 - IP.** This is the IP address of the PC on the network that contains the shared directory that will contain the captured images. You can use your management console as the server, or you can use any Windows PC on the network that allows shared directories.
 - Directory.** This is the share name of the directory that will contain the captured images. Do not enter the complete path; only enter the share name.
 - File.** This will be the name of the captured image file. The extension, **.xpz**, will be added automatically.
 - User/Password.** This is the *local* user name and password that allows access to the shared directory.
Note: If the shared directory is in a domain environment, you must use the local User/Password, not the domain credentials.
- Click on **Clone**. You should see a confirmation that the remote clone command has been sent. You can now close this dialog box if you wish. ePro is now out of the capture loop, with all subsequent interaction taking place between the benchmark terminal and the computer that is storing the image files.

Cloning a 2xx7 YESTation XPe Image



Remote Clone Image Dialog Box with Confirmation

9. If you look at the benchmark unit display, you will see the unit shut off and then reboot with a lengthy Linux boot dialog. At the end of the dialog, you will see the processing message.



10. The image capture is a relatively slow process, occurring at about 9MB-50MB per minute, depending upon your hardware platform. At the end of this process, the benchmark unit will reboot and you should see three new files in your share directory, the desired **.xpz** image file and two information files (a **.res** and a **.txt** file). You won't get much information out of the information files, and they are not subsequently necessary for any image processing, so you can safely delete them. You will be using the **.xpz** file for subsequent restoration.

Restoration

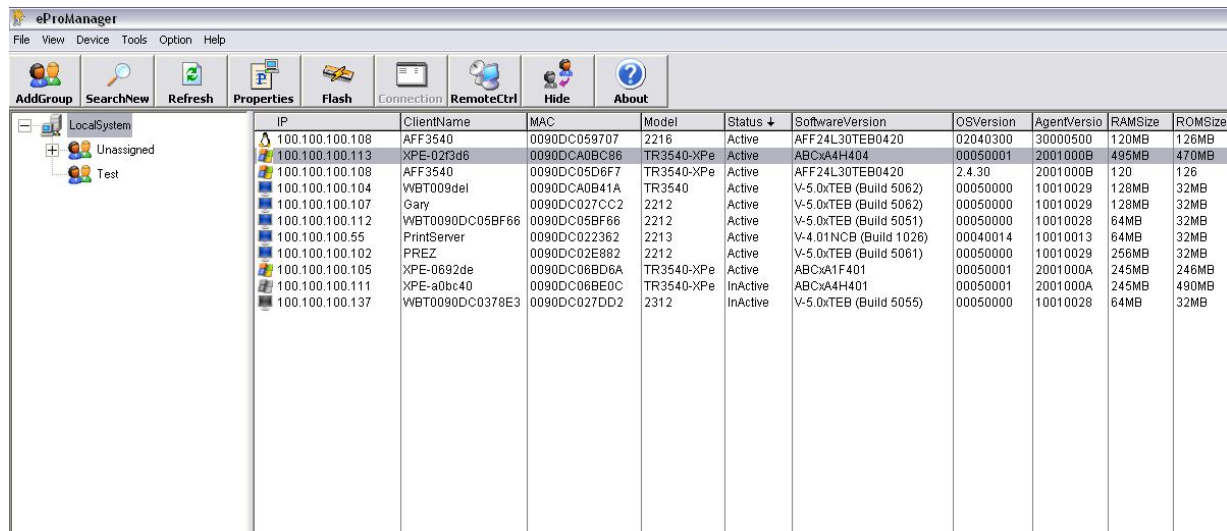
Your **.xpz** images can be restored to any target YESTation that has an XPe image of version 301 or above. But there are two different methods for restoration, FTP Update or Reseal, depending upon the image version at the target unit. Use FTP Update for all target image versions of 301 and above *until* you get to 404. For versions 404 and above, you must use the Reseal method.

FTP Update

This method of image updating has been available for YESTation XPe units since image version 301. You can execute a pull from the terminal or a push from eProManager. In either case, you must have an FTP server, configured to access your shared directory of image files, running somewhere on your network. Most network administrators use the FTP server that is a standard feature of Windows servers, but any FTP server will work if it is properly configured. FTP server configuration is not covered here.

Only the push procedure from an eProManager management console will be covered here, since it is typically the most convenient for network administrators. The procedure is:

1. Make a copy of your desired benchmark image file and rename it with a **.xpe** extension. The FTP method for XPe terminals only works with **.xpe** files, but **.xpe** and **.xpz** files are identical except for the name.
2. Open eProManager and click on **SearchNew** if your target unit is not seen in the terminal list.



The screenshot shows the eProManager application window. The interface includes a menu bar (File, View, Device, Tools, Option, Help) and a toolbar with icons for AddGroup, SearchNew, Refresh, Properties, Flash, Connection, RemoteCtrl, Hide, and About. On the left, a tree view shows 'LocalSystem' expanded, with 'Unassigned' and 'Test' sub-items. The main area displays a table of device information.

IP	ClientName	MAC	Model	Status	SoftwareVersion	OSVersion	AgentVersion	RAMSize	ROMSize
100.100.100.108	AFF3540	0090DC059707	2216	Active	AFF24L30TEB0420	02040300	30000500	120MB	126MB
100.100.100.113	XPE-02f3d6	0090DCA0BC86	TR3540-XPe	Active	ABCxA4H404	00050001	2001000B	495MB	470MB
100.100.100.108	AFF3540	0090DC05D6F7	TR3540-XPe	Active	AFF24L30TEB0420	2.4.30	2001000B	120	126
100.100.100.104	WBT009del	0090DCA0B41A	TR3540	Active	V-5.0xTEB (Build 5062)	00050000	10010029	128MB	32MB
100.100.100.107	Gary	0090DC027CC2	2212	Active	V-5.0xTEB (Build 5062)	00050000	10010029	128MB	32MB
100.100.100.112	WBT0090DC05BF66	0090DC05BF66	2212	Active	V-5.0xTEB (Build 5051)	00050000	10010028	64MB	32MB
100.100.100.55	PrintServer	0090DC022362	2213	Active	V-4.01NCB (Build 1026)	00040014	10010013	64MB	32MB
100.100.100.102	FREZ	0090DC02E882	2212	Active	V-5.0xTEB (Build 5061)	00050000	10010029	256MB	32MB
100.100.100.105	XPE-0692de	0090DC06BD6A	TR3540-XPe	Active	ABCxA1F401	00050001	2001000A	245MB	246MB
100.100.100.111	XPE-a0bc40	0090DC06BE0C	TR3540-XPe	InActive	ABCxA4H401	00050001	2001000A	245MB	490MB
100.100.100.137	WBT0090DC0378E3	0090DC027DD2	2312	InActive	V-5.0xTEB (Build 5055)	00050000	10010028	64MB	32MB

Cloning a 2xx7 YESTation XPe Image

3. Right click on the target unit, to see the context menu.

IP	ClientName	MAC	Model	Status ↓	SoftwareVersion
100.100.100.108	AFF3540	0090DC059707	2216	Active	AFF24L30TEB0420
100.100.100.113	XPE-02f3d6	0090DC059707	TR3540-XPe	Active	ABCxA4H404
100.100.100.108	AFF3540	0090DC059707	TR3540-XPe	Active	AFF24L30TEB0420
100.100.100.104	WBT009del		TR3540	Active	V-5.0xTEB (Build 5062)
100.100.100.107	Gary		2212	Active	V-5.0xTEB (Build 5062)
100.100.100.112	WBT0090DC0		2212	Active	V-5.0xTEB (Build 5051)
100.100.100.55	PrintServer		2213	Active	V-4.01NCB (Build 1026)
100.100.100.102	PREZ		2212	Active	V-5.0xTEB (Build 5061)
100.100.100.105	XPE-0692de		TR3540-XPe	Active	ABCxA1F401
100.100.100.111	XPE-a0bc40		TR3540-XPe	InActive	ABCxA4H401
100.100.100.137	WBT0090DC0		2312	InActive	V-5.0xTEB (Build 5055)

XPe Menu
 Device Information
 Device properties
 Connection
 Wake Up
 Shutdown
 Reboot
 Send Message
 Firmware Upgrade
 XPe Cloning
 XPe Reseal
 Factory Default
 Profile Upload
 Profile Download
 Profile Modify
 Add Schedule
 Add Connection
 Remote Control
 Delete
 Delete All

4. Left click on **Firmware Upgrade** to see the XPe Upgrade dialog box.

Server

FTP Host:

Directory:

File:

Port Num:

Upgrade status

IP	Upgrade Status
100.100.100.105	

User

Name:

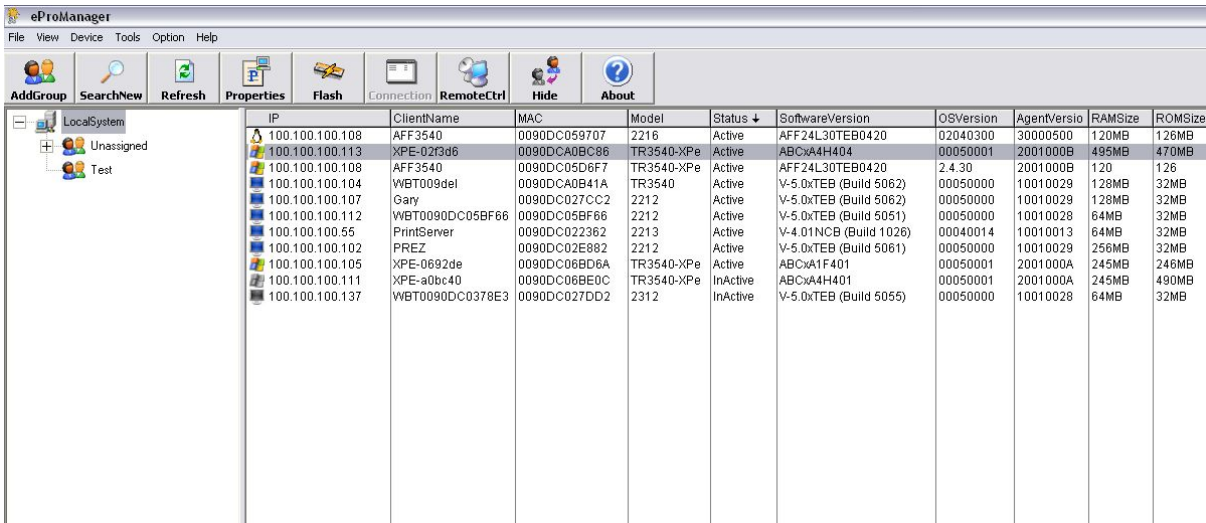
Password:

5. Enter the information:
 - **FTP Host..** This is the IP address of your FTP server.
 - **Directory.** This is the name of the directory that contains the captured images. Your FTP server must be configured to find this directory.
 - **File.** You cannot enter anything in this field.
 - **Port Num:.** The default is **21**, a standard for FTP servers. You should not have to change this number.
 - **User/Password.** This is the FTP user name and password that allows access to the image directory.
6. Click on the drop-down arrow of the **File** field to see a list of all the **.xpe** files in the image directory.
7. Highlight the desired file and click on **Upgrade**. The target unit will reboot into a Linux “rescue” sequence and re-image itself.

Reseal

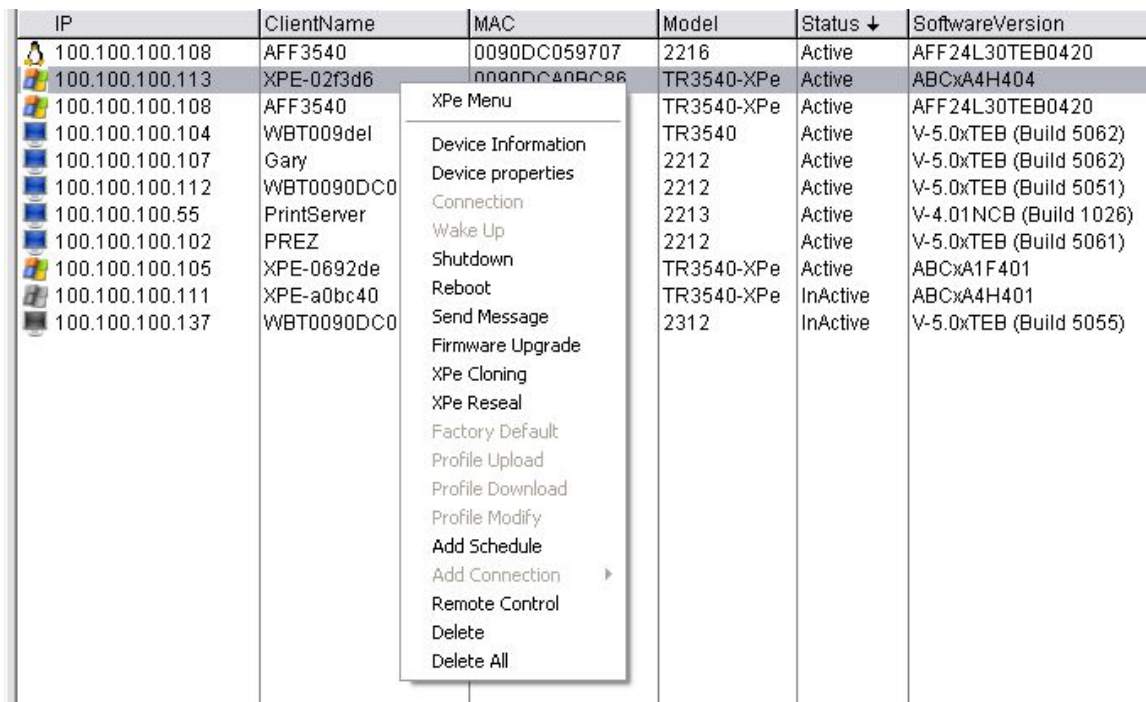
This method is used to re-image target units that are at image version 404 and above. The FTP method will not work with these image versions. The procedure is:

1. Make sure that your desired benchmark image file has a **.xpz** extension. If that file has a **.xpe** extension, rename it with a **.xpz** extension. The Reseal method for XPe terminals only works with **.xpz** files, but **.xpe** and **.xpz** files are identical except for the extension label.
2. Open eProManager and click on **SearchNew** if your target unit is not seen in the terminal list.



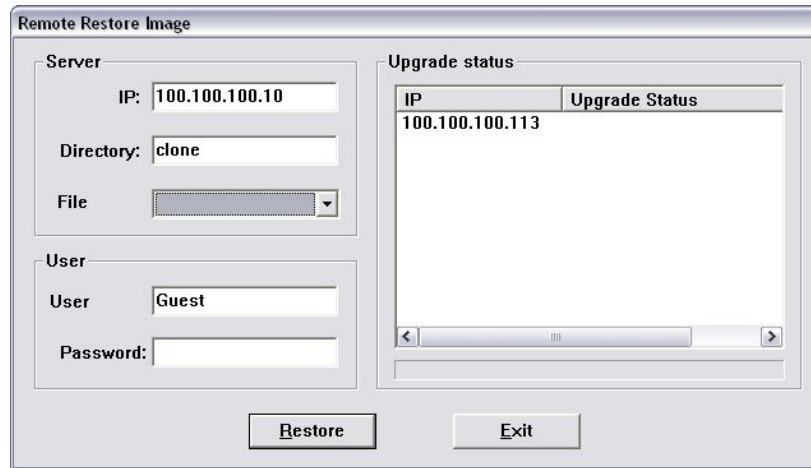
IP	ClientName	MAC	Model	Status	SoftwareVersion	OSVersion	AgentVersion	RAMSize	ROMSize
100.100.100.108	AFF3540	0090DC059707	2216	Active	AFF24L30TEB0420	02040300	30000500	120MB	126MB
100.100.100.113	XPE-02f3d6	0090DC059707	TR3540-XPe	Active	ABCx4H404	00050001	2001000B	495MB	470MB
100.100.100.108	AFF3540	0090DC05D6F7	TR3540-XPe	Active	AFF24L30TEB0420	2.4.30	2001000B	120	126
100.100.100.104	WBT009del	0090DC0A841A	TR3540	Active	V-5.0xTEB (Build 5062)	00050000	10010029	128MB	32MB
100.100.100.107	Gary	0090DC027C2C	2212	Active	V-5.0xTEB (Build 5062)	00050000	10010029	128MB	32MB
100.100.100.112	WBT0090DC05BF66	0090DC05BF66	2212	Active	V-5.0xTEB (Build 5051)	00050000	10010028	64MB	32MB
100.100.100.55	PrintServer	0090DC022362	2213	Active	V-4.01NCB (Build 1026)	00040014	10010013	64MB	32MB
100.100.100.102	PREZ	0090DC02E882	2212	Active	V-5.0xTEB (Build 5061)	00050000	10010029	256MB	32MB
100.100.100.105	XPE-0692de	0090DC06BD6A	TR3540-XPe	Active	ABCx41F401	00050001	2001000A	245MB	246MB
100.100.100.111	XPE-a0bc40	0090DC06BE0C	TR3540-XPe	InActive	ABCx4H401	00050001	2001000A	245MB	490MB
100.100.100.137	WBT0090DC0378E3	0090DC027DD2	2312	InActive	V-5.0xTEB (Build 5055)	00050000	10010028	64MB	32MB

3. Right click on the target unit, to see the context menu.



IP	ClientName	MAC	Model	Status	SoftwareVersion
100.100.100.108	AFF3540	0090DC059707	2216	Active	AFF24L30TEB0420
100.100.100.113	XPE-02f3d6	0090DC059707	TR3540-XPe	Active	ABCx4H404
100.100.100.108	AFF3540	0090DC05D6F7	TR3540-XPe	Active	AFF24L30TEB0420
100.100.100.104	WBT009del	0090DC0A841A	TR3540	Active	V-5.0xTEB (Build 5062)
100.100.100.107	Gary	0090DC027C2C	2212	Active	V-5.0xTEB (Build 5062)
100.100.100.112	WBT0090DC0	0090DC05BF66	2212	Active	V-5.0xTEB (Build 5051)
100.100.100.55	PrintServer	0090DC022362	2213	Active	V-4.01NCB (Build 1026)
100.100.100.102	PREZ	0090DC02E882	2212	Active	V-5.0xTEB (Build 5061)
100.100.100.105	XPE-0692de	0090DC06BD6A	TR3540-XPe	Active	ABCx41F401
100.100.100.111	XPE-a0bc40	0090DC06BE0C	TR3540-XPe	InActive	ABCx4H401
100.100.100.137	WBT0090DC0	0090DC027DD2	2312	InActive	V-5.0xTEB (Build 5055)

4. Left click on **XPe Reseal** to see the Remote Restore Image dialog box.



The dialog box is titled "Remote Restore Image". It contains two main sections: "Server" and "Upgrade status".

Server section:

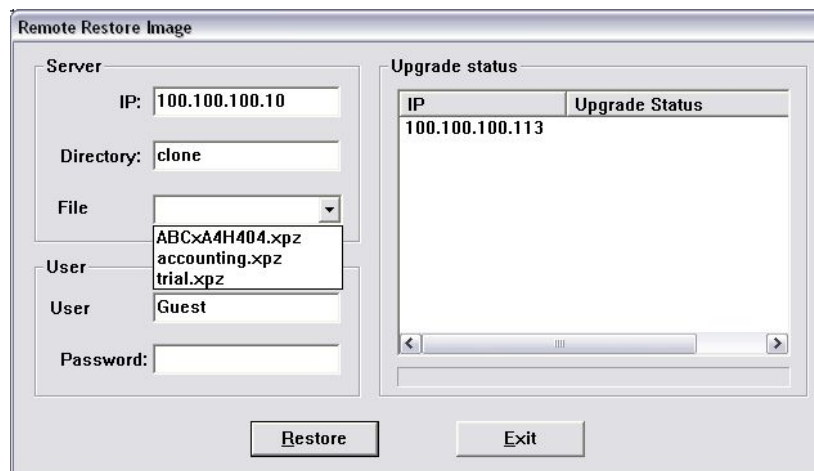
- IP:** 100.100.100.10
- Directory:** clone
- File:** (empty dropdown menu)
- User section:**
 - User:** Guest
 - Password:** (empty text field)

Upgrade status section:

IP	Upgrade Status
100.100.100.113	

At the bottom of the dialog box are two buttons: "Restore" and "Exit".

5. Enter the information:
 - **IP.** This is the IP address of the PC on the network that contains the shared directory with the images to be restored. You can use your management console as the server, or you can use any Windows PC on the network that allows shared directories.
 - **Directory.** This is the share name of the directory that will contain the restore images. Do not enter the complete path; only enter the share name.
 - **File.** You cannot enter anything into this field.
 - **User/Password.** This is the *local* user name and password that allows access to the shared directory. You *must* enter something in the Password field. If your password is blank, enter a character and then delete it. **Note: If the shared directory is in a domain environment, you must use the local User/Password, not the domain credentials.**
6. Click on the drop-down arrow of the **File** field to see a list of all the **.xpz** files in the image directory.



The dialog box is titled "Remote Restore Image". It contains two main sections: "Server" and "Upgrade status".

Server section:

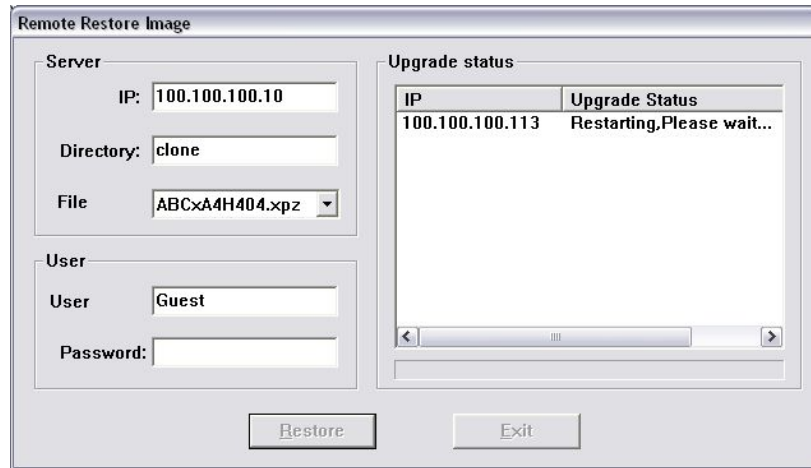
- IP:** 100.100.100.10
- Directory:** clone
- File:** (dropdown menu open showing a list of files)
- User section:**
 - User:** Guest
 - Password:** (empty text field)

Upgrade status section:

IP	Upgrade Status
100.100.100.113	

At the bottom of the dialog box are two buttons: "Restore" and "Exit".

7. Highlight the desired file and click on **Restore**. You will see a “Restarting...” message.



8. If you look at the target unit display, you will see the unit shut off and then reboot with a lengthy Linux boot dialog. At the end of the dialog, you will see an **“Image restore processing”** message.
9. The image restore is a relatively fast process, occurring at about 80MB-100MB per minute. At the end of this process, the target unit will reboot and you should see the Desktop results of the new image.

Local Cloning

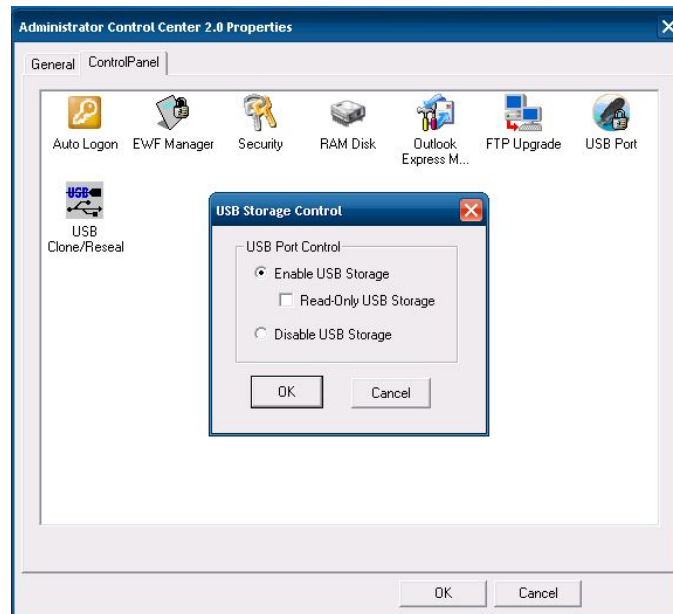
Cloning consists of two major operations: Capture and Restoration.

- Capture involves the creating, extracting, and storing of the benchmark image.
- Restoration involves moving the benchmark image to the target unit and loading the image into the flash memory of the target unit.

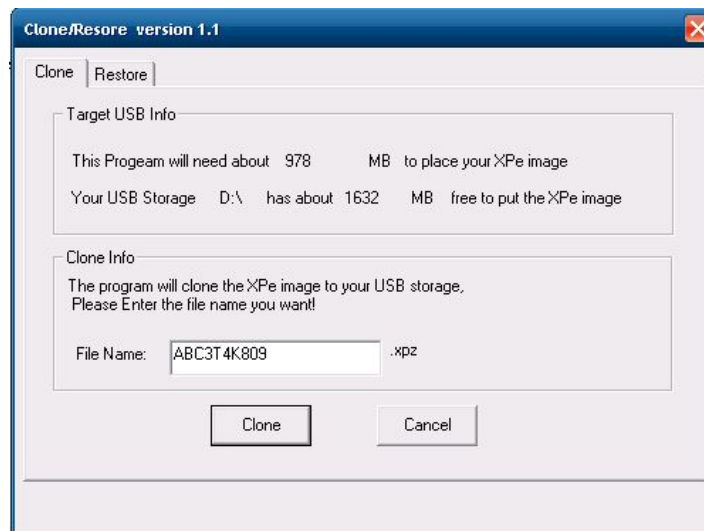
Capture

1. Make sure that the boot order in your BIOS puts the internal HDD ahead of the USB drive. Access the BIOS by toggling **F2** at the start of boot-up.
2. Make sure that your USB drive has enough free space. The cloned image itself probably does not occupy the entire flash memory, but the USB Clone/Reseal applet assumes that all of the internal flash will be cloned and requires that much free space.
3. Open the Administrator Control Center Control Panel and make sure that the USB Port applet has USB Storage enabled.

Cloning a 2xx7 YESTation XPe Image



4. Insert your USB drive.
5. Open the USB Clone/Reseal applet, click on the **Clone** tab, and enter a file name in the File Name field. The **.xpz** will automatically be added to the file name when the file is stored.

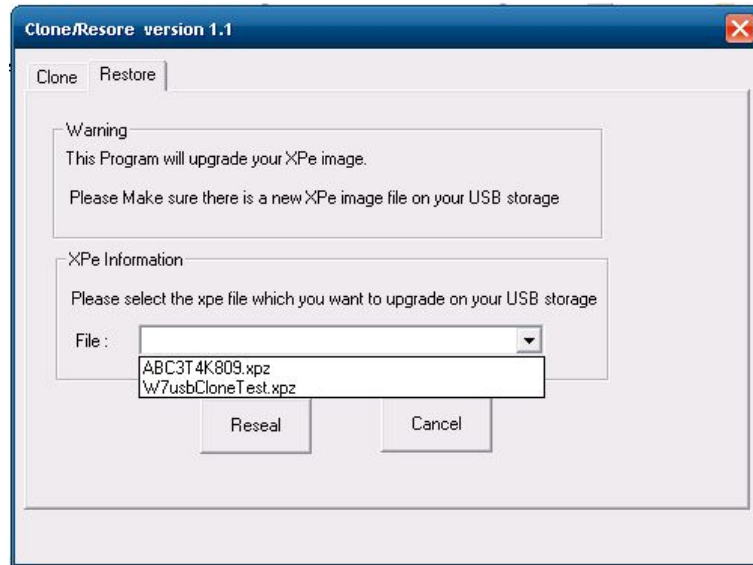


6. Click on **Clone** and watch the action, although that can get quite boring.
7. The unit will automatically restart, go through a Linux bootup process, and start cloning. This is where it gets boring, since all you will see for 10-15 minutes are dancing diagonal lines.
8. When cloning is complete, the unit will reboot back to the XPe desktop.

Note that the image file obtained this way is exactly the same as the image file that can be obtained over the LAN via the cloning process in eProManager. Therefore, you can use this file for Resealing over the network, and vice-versa.

Restoring

1. Make sure that the boot order in your BIOS puts the internal HDD ahead of the USB drive. Access the BIOS by toggling **F2** at the start of boot-up.
2. Open the Administrator Control Center Control Panel and make sure that the USB Port applet has USB Storage enabled.
3. Insert your USB drive.
4. Open the USB Clone/Reseal applet, click on the **Restore** tab, and choose the appropriate **.xpz** file from the drop-down list.



5. Click on **Reseal** and watch the action, although that can get quite boring.
6. The unit will automatically restart, go through a Linux bootup process, and start copying the **.xpz** file into the flash memory. This is where it gets boring, since all you will see for several minutes are dancing diagonal lines.
7. When copying is complete, the unit will reboot back to the XPe desktop.

Note that you can also use this same **.xpz** file to reseal over the network as described in [Network Cloning/Restoration/Reseal](#).

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Supporting Your YEstation

Affirmative Technology Group offers Technical Support services for all the Affirmative products. You can access Affirmative Technical Support in one of the following ways:

- via Phone
 - 602-437-1220
 - 855-437-1220
- via Fax
 - 602-437-1320
- via E-mail
 - support@affirmativetg.com