

PX

User Guide



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About this Document

This document provides installation and operation instructions for the PX system, produced by Minicom Advanced Systems Limited. It is intended for system administrators and network managers.

Chapters and Their Contents

1	Introduction	Provides an introduction to the document, PX product overview, features and benefits of PX, client computer operating system requirements, technical precautions, trademarks, and terminology used in the document. It also describes how to safely handle the device, provide feedback on the user guide, and WEEE Information for Minicom Customers and Recyclers.	Pg. 10
2	Installation	Lists PX system components, describes the functionalities of the PX elements, and provides instructions for rack mounting the unit and connecting the system.	Pg. 11
3	Configuring the Network	Provides instructions for logging into the Web configuration interface, configuring the device ID, IP address, and Centralized Management settings, enabling and configuring SNMP, adding, editing, removing, and blocking system Users, configuring the target server, Serial port, security settings, and the system date and time. It also provides instructions for installing an SSL certificate, upgrading firmware, restoring factory settings, and saving changes and logging out.	Pg. 19
4	Conducting a Remote Session	Describes how to start a remote session, set the session profile, full screen mode, view system information, adjust video settings, power manage target servers, manage keyboard sequences, synchronize mouse pointers, switch to a different server or device, and disconnect the remote session.	Pg. 38
5	Troubleshooting	Describes how to enter Safe mode, restore factory defaults, and restore device firmware.	Pg. 63
6	Technical Specifications	Lists and describes PX specifications.	Pg. 65
7	Video Resolution and Refresh Rates	Lists video resolutions and refresh rates.	Pg. 65

Style Conventions



Convention	Used for
Verdana	Regular text.
Arial Bold	Names of menus, commands, buttons, and other elements of the user interface.
<i>Arial Italics</i>	Special terms, the first time they appear.
Monospace	Text entered by the user.
	Notes , which offer an additional explanation or a hint on how to overcome a common problem.
	Warnings , which indicate potentially damaging user operations and explain how to avoid them.

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1 Introduction

Congratulations on adding PX to your remote access tools.

This document provides installation and operation instructions for Minicom's PX. It is intended for system administrators and network managers, and assumes that readers have a general understanding of networks, hardware, and software.

1.1 Product Overview

The PX system extends your KVM (keyboard, video, and mouse) from any computer or server over TCP/IP via LAN, WAN, or Internet connection. This enables you to control, monitor, and manage your servers from wherever you are, inside or outside the organization. PX is a cost-effective hardware solution, for secure, remote KVM access and control of a computer/server from the BIOS level – independent of the OS. It is designed to connect to a single computer over TCP/IP communication.

1.1.1 Features and Benefits

PX has the following features and benefits:

- **BIOS level control** to any server's brand and model, regardless of the server condition and network connectivity. Covers the entire spectrum of crash scenarios.
- **Compatible** with all major operating systems. Supports many hardware and software configurations for the remote client and target server computer.
- **Web-based control** – Browser based control of a target server from any location, via a secured standard IP connection.
- **Multi-user share mode** – Allows up to five simultaneous users to share a remote session.
- **Virtual media** – Enables mounting virtually any removable mass storage devices connected to the client computer onto the target server (see Section 4.5).

1.2 Terminology

The following table describes terms used in this guide.

Term	Definition
Target server	The computer/server that is accessed remotely via PX
Client computer	The PC running a remote PX session
Remote session	The process of accessing and controlling target servers connected to PX from a user workstation

1.3 Client Computer Operating System

The client computer operating system must be one of the following:

- Windows 2000 or later, with Firefox 3 or Internet Explorer 32-bit 7.0 or later version
- Linux with Firefox 3; 128-bit encryption support is required

1.4 Technical Precautions

This equipment generates radio frequency energy, and if not installed in accordance with the manufacturer's instructions, may cause radio frequency interference.

This equipment complies with Part 15, Subpart J of the FCC rules for a Class A computing device. This equipment also complies with the Class A limits for radio noise emission from digital apparatus set out in the Radio Interference Regulation of the Canadian Department of Communications. These above rules are designed to provide reasonable protection against such interference when operating the equipment in a commercial environment. If operation of this equipment in a residential area causes radio frequency interference, the user, and not Minicom Advanced Systems Limited, will be responsible.

Changes or modifications made to this equipment not expressly approved by Minicom Advanced Systems Limited could void the user's authority to operate the equipment.

1.5 Safety

The device must only be opened by an authorized Minicom technician. Disconnect the device from the power source and all cables from the device before service operation.

1.6 User Guide Feedback

Your feedback is very important to help us improve our documentation. Please email any comments to: ug.comments@minicom.com.

Please include the following information:

Trademarks

- Guide name
- Part number
- Version number (on the front cover)

1.7 Trademarks

All trademarks and registered trademarks are the property of their respective owners.

1.8 WEEE Compliance

This section provides WEEE Information for Minicom Customers and Recyclers.

Under the Waste Electrical and Electronic Equipment (WEEE) Directive and implementing regulations, when customers buy new electrical and electronic equipment from Minicom, they are entitled to:

- Send old equipment for recycling on a one-for-one, like-for-like basis (this varies depending on the country)
- Send back the new equipment for recycling when it ultimately becomes waste

Instructions for both customers and recyclers / treatment facilities wishing to obtain disassembly information are provided in our website www.minicom.com.

2 Installation

2.1 Overview

Install the PX system as follows:

1. Remove the PX system from the package, and check that all components are present and in good working condition.
2. Mount the PX unit in a rack.
3. Make all connections between the hardware and PX.
4. Power on the PX unit.

2.2 System Components

Before installing the PX system, verify that you have all the components on the following list, as well as any other items required for installation.

The PX system consists of:

- One PX unit
- One USB/Video cable (p/n 5CB00599)
- Rack-mounting brackets and screws
- Optional power adapter, ordered separately

2.2.1 The PX Unit

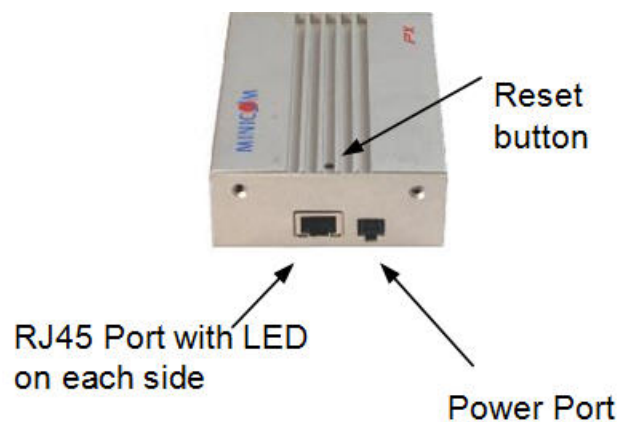


Figure 1 – PX Unit Top and Left Side Panel

Installation

Mounting the PX Unit

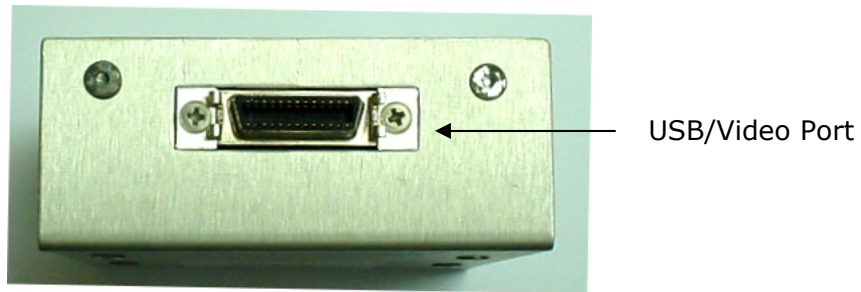


Figure 2 – PX Unit Right Side Panel

The following table describes the functionality of the elements of the PX panels.

Element	Functionality
RJ45 port	For connecting PX to your PoE enabled network switch via a CAT5 network cable.
LEDs	The two LEDs on either side of the RJ45 connector: One illuminates green to indicate that the PX is connected to the PoE network switch. The other illuminates green to indicate that the target server connected to this particular PX is being accessed.
Power port	For connecting the PX unit to a power adapter, where relevant.
Reset button	Pressing this button reboots the PX USB with the factory default settings.
USB/Video port	26-pin port for connecting the PX to the target server via a USB/Video cable.
Power LED	Indicates the state of the PX unit: Green indicates that the unit is powered on; Red indicates that the unit is powered off.

2.3 Mounting the PX Unit

You can connect the PX unit to a server rack, using the supplied rack mounting brackets.

Mount the PX unit into a rack as follows:

1. Assemble the bracket.
2. Connect the bracket to the PX unit.
3. Connect the bracket to the rack.

2.3.1 Rack Mounting Safety Considerations

When mounting PX onto a rack, avoid the following conditions:

- **Elevated operating ambient temperature** – The operating ambient temperature of the rack environment may be greater than the room ambient temperature.

Therefore, take special care when installing the unit in a closed or multi-unit rack assembly that the environment is compatible with the maximum rated ambient temperature.

- **Reduced airflow** – Install the equipment in a rack in such a way that the amount of airflow required for safe operation is not compromised.
- **Uneven mechanical loading** – Uneven loading can cause damage to the equipment or personal injury. Mount the equipment in the rack in such a way that a hazardous condition does not result due to uneven mechanical loading.
- **Circuit overloading** – When connecting the equipment to the supply circuit, make sure that the total power of all the components does not exceed the circuit capabilities. Overloading of circuits can affect over-current protection and supply wiring, potentially resulting in fire and shock hazards.
- **Unreliable earthing** – Maintain reliable earthing of rack-mounted equipment. Pay attention to supply connections other than direct connections to the branch circuit (for example, use of power strips).

2.3.2 Assembling the Bracket

The PX comes with a versatile bracket composed of two sections.



Figure 3 – PX Rear and Bracket Sections

➔ To assemble the bracket:

1. Connect the two bracket sections to each other, using the three long round-headed screws provided.

Installation

Mounting the PX Unit

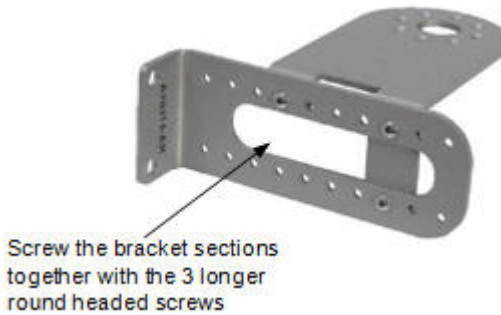


Figure 4 – Connecting Bracket Sections

2.3.3 Connecting the Bracket to the PX Unit

You can connect the bracket to the PX unit at different angles.

➔ **To connect the bracket to the PX unit:**

1. Connect section 2 of the bracket to the rear of the PX, using the two shorter flat-headed screws.



The screws should fit snugly into the indented side of section 2 of the bracket.

Figure 5 illustrates a possible application of the bracket.

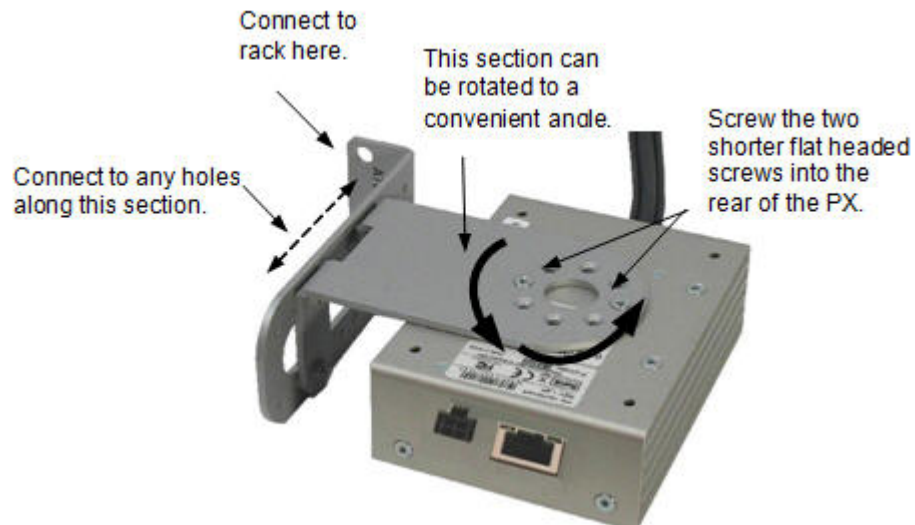


Figure 5 – A Possible Application of the Bracket to the Unit

2.3.4 Connecting the PX Unit to the Rack

The bracket, which has been connected to the unit, can be mounted into the rack in different ways:

- On the left or right side of the rack
- At different horizontal positions on the rack

➔ **To install the PX unit into the rack:**

1. Connect the bracket to the rack with screws, according to the rack manufacturer's instructions.

2.4 Connecting the PX

If your network switch supports PoE (Power Over Ethernet), PXs can receive power via the network cable. Alternatively, PXs can receive power from the optional power adapter.

➔ **To connect the PX:**

1. Connect the 26-pin connector of the supplied USB/Video cable to the 26-pin port of the PX.
2. Connect the USB and Video connectors of the USB/Video cable to the relevant ports of the target server (see Figure 6). For a connection to a PS/2 type computer, use the PS/2 cable p/n 5CB00611 (ordered separately), and connect the Keyboard, Video, and Mouse (KVM) connectors to the KVM ports of the target server.
3. Connect a network cable to the RJ45 port of the PX and to your PoE enabled network switch.
4. Where relevant, connect the power adapter to the PX power port.



It is recommended to place cables away from fluorescent lights, air conditioners, and machines that are likely to generate electrical noise.

Installation

Connecting the PX

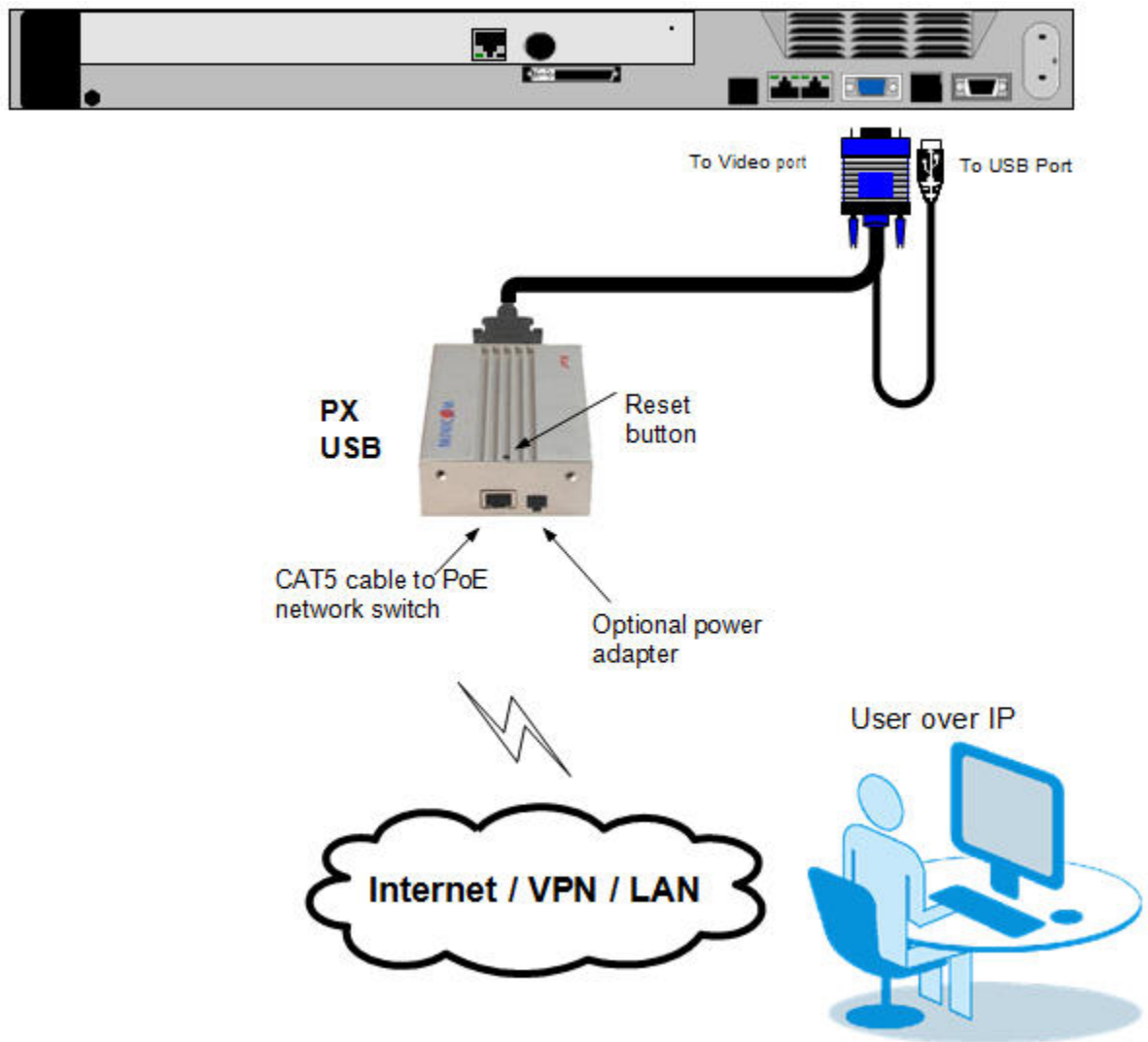


Figure 6 – PX Connections

2.4.1 PX LEDs

The PX has two green LEDs adjacent to the RJ45 connector. One indicates that the PX is connected to the PoE network switch, and the other shows that the target server connected to this particular PX is being accessed.

3 Configuring the Network

After the system has been installed and all connections have been made, you must configure the PX system as follows:

1. Configure PX's network settings, which includes configuring:
 - Device ID settings
 - PX's IP address
 - Centralized Management
2. Configure the SNMP settings.
3. Add, edit, remove, and block system Users.
4. Configure the target server settings.
5. Configure the Serial port settings.
6. Configure the security settings.
7. Configure the system date and time.

You can also perform the following additional operations, as required:

1. Install an SSL certificate.
2. Upgrade firmware.
3. Restore factory settings.

3.1 Boot-Up Process

By default, PX boots with an automatically assigned IP address from a DHCP (Dynamic Host Configuration Protocol) server on the network (see Figure 7 for an overview of the boot-up process). The DHCP server assigns the PX a valid IP address, gateway address, and subnet mask.

This automatically assigned IP address can be identified according to the PX MAC address that appears on the underside of the PX box, next to the device number (D.N.).

If no DHCP server is found on the network, PX boots with the static IP address: 192.168.0.155.



If a DHCP server later becomes available, the unit picks up the IP settings from the DHCP server. To keep the static IP address, you can disable DHCP, as explained in Section 3.3.2 on page 24.

Configuring the Network

Logging Onto the Web Configuration Interface

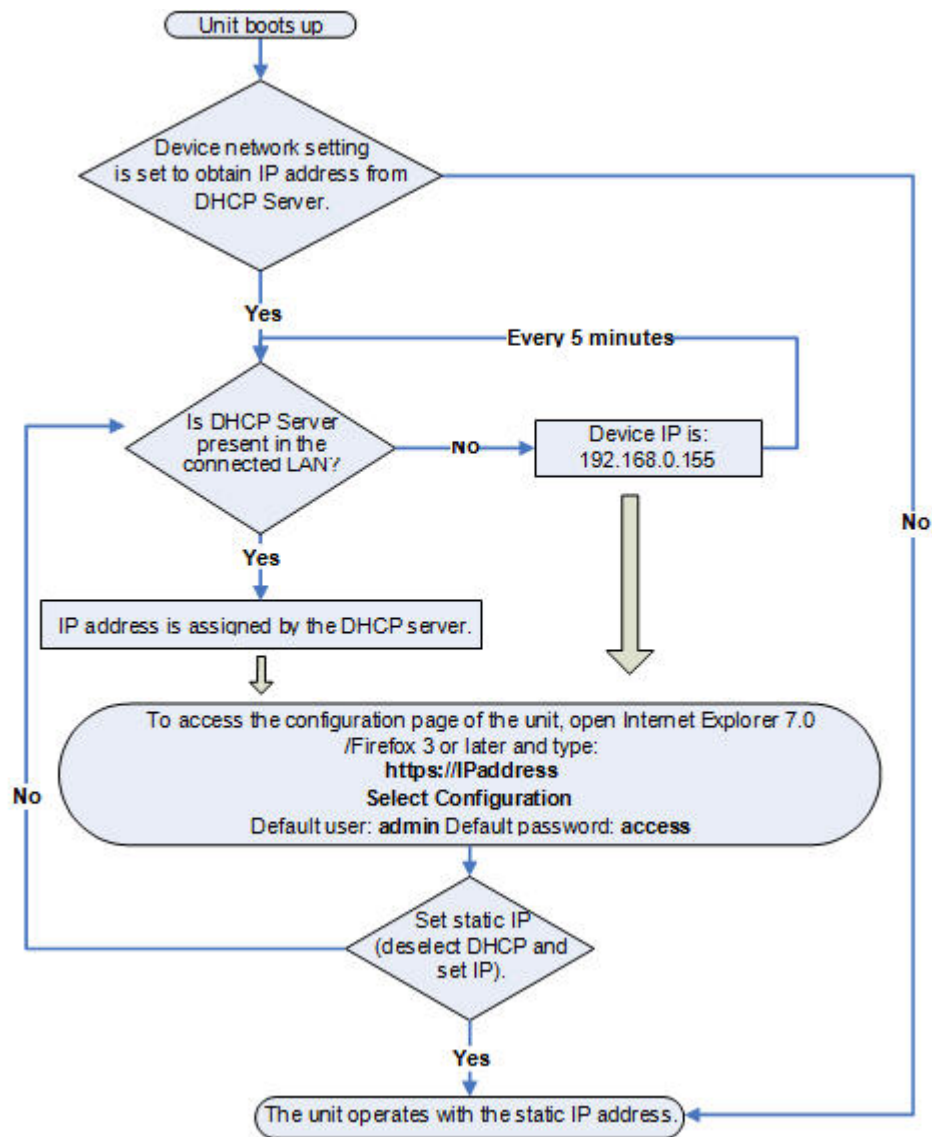


Figure 7 – Boot-Up Process

Assigning Static IP Addresses for a Number of Units

You can connect more than one PX to the same network. If there is no DHCP server, or you want to use static IP addresses, connect the PX units one at a time and change the static IP address of each unit before connecting the next unit.

3.2 Logging Onto the Web Configuration Interface

You can complete the initial setup of the PX system via the Web configuration interface.

Only one Administrator at a time can log onto the Web configuration interface. An idle timeout of 30 minutes terminates the session.

Before logging on the first time, verify that you have the latest Java installed on your computer. If not, you can download and install Java from:

<http://www.java.com/en/download/index.jsp>

➔ **To log into the Web interface:**

1. Open your Web browser (Internet Explorer 7.0 / Firefox 3 or later).
2. Type the PX system IP address <https://IP address/>, and press **Enter**.

The Web page appears.

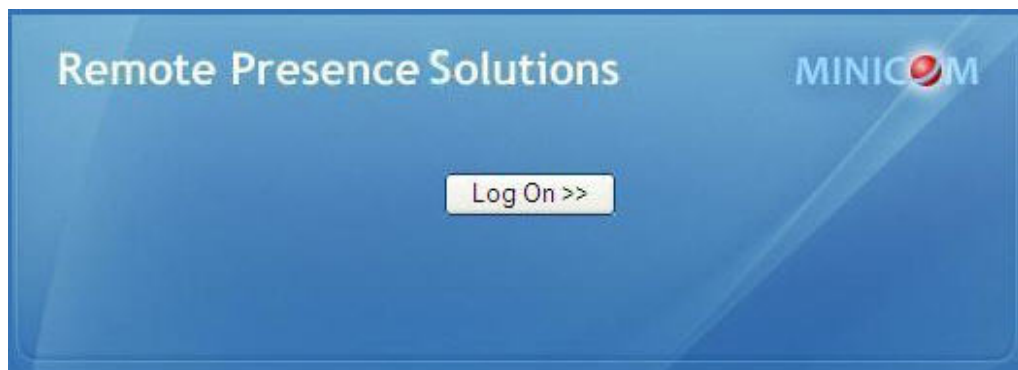


Figure 8 – Web Page

3. Click **Log On**.

Java installs. After installation has completed, the logon page appears.

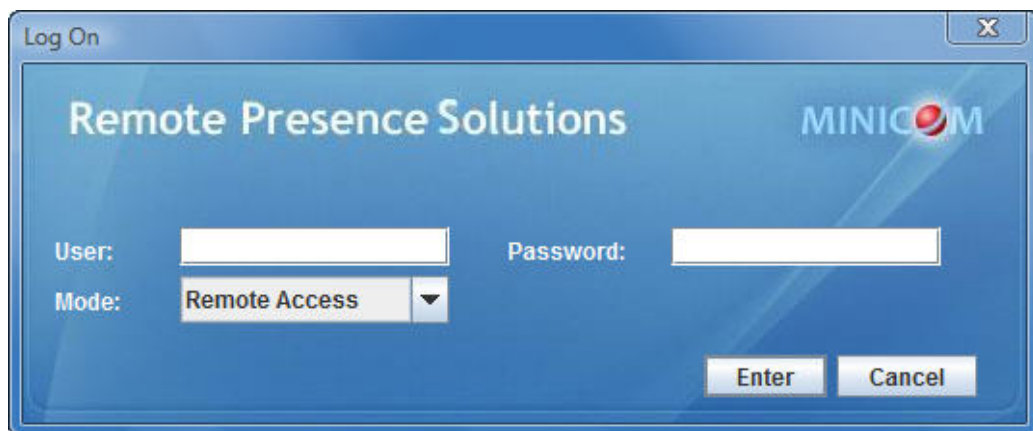


Figure 9 – Logon Page

4. In **User**, type the default Administrator name **admin** and in **Password**, type **access** (both lower case).
5. In **Mode**, select **Configuration**.

Configuring the Network

Logging Onto the Web Configuration Interface

6. Click **Enter**.

The Network configuration page appears with the Device tab open.

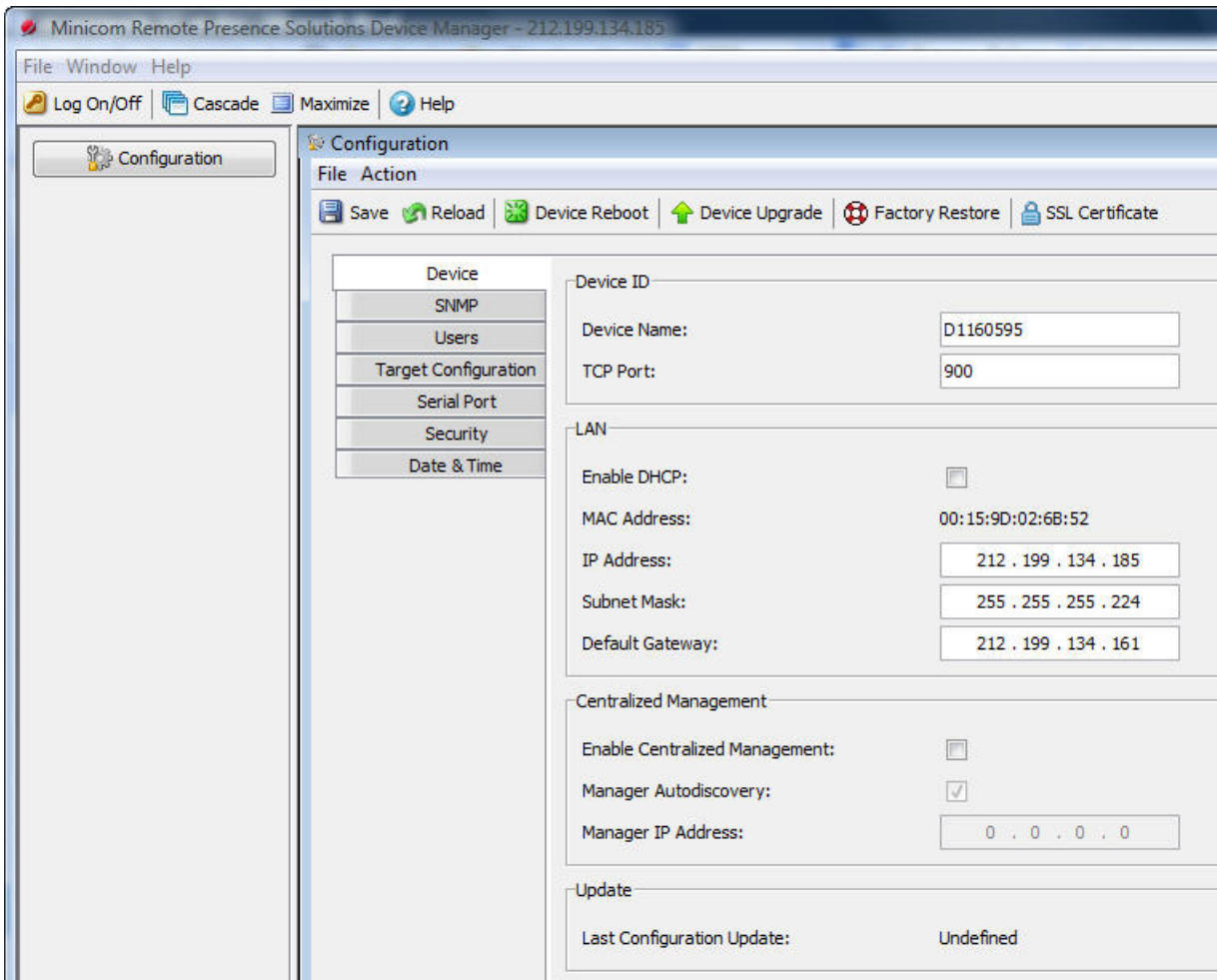



Figure 10 – Network Configuration – Device Tab

From the Configuration menu, you can configure the network, SNMP, Users, Switch Configuration, Serial Port, Security, and Date and Time settings. **After making all configuration changes, you must click the  Save button in the toolbar for the changes to go into effect.**



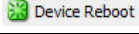
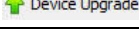
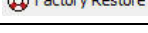

3.2.1 Web Configuration Interface Tabs

The following table summarizes the Web configuration interface tabs.

Tab	Description
Device	For configuration of the device settings, IP address, and centralized management
SNMP	For configuration of network SNMP settings
Users	For adding, editing, deleting, and blocking system Users
Target Configuration	For configuration of the target settings
Serial Port	For configuration of the Serial port settings
Security	For configuration of the security settings
Date & Time	For setting the system date and time

3.2.2 Web Configuration Toolbar Buttons

The following table describes the functionality of the Web configuration toolbar buttons.

Button	Functionality
 Save	Saves the configuration changes
 Reload	Reloads the device settings into the configuration page parameter settings
 Device Reboot	Reboots the device
 Device Upgrade	Upgrades the device firmware
 Factory Restore	Restores the device with factory settings
 SSL Certificate	Installs the SSL certificate onto the device

3.3 Configuring the Network Settings

On the network configuration page (see Figure 10), you can configure the following:

- Device ID
- Device IP address
- Centralized Management

Consult your Network Administrator for the network settings.

3.3.1 Configuring Device ID Settings

You can assign a name to the PX device, and select a TCP port.

Configuring the Network

Configuring the Network Settings

The default device name consists of the letter 'D' followed by the 6-digit device number (D.N.), which is printed on the silver label on the underside of the PX box.

If the DHCP server is published in the DNS server, you can connect to the PX system using the device name, as follows: <https://DeviceName>.

You can select any TCP port from port # 800 to 65535. When managed by Centralized Management, the port number can be changed from the management interface, if needed.



Firewall or router security access list must enable inbound communication through the selected TCP port and port 443 for the PX's IP address. (Default TCP port is 900; default Web interface TCP port is 443.)

For client computer access from a secured LAN, the selected ports should be open for outbound communication.

➔ To configure Device ID settings:

1. In **Device Name**, type a name for PX.
2. In **TCP Port**, type the number of the port (from 800 to 65535).

3.3.2 Configuring the Device IP Address

When a DHCP server is active on the same network to which PX is connected, the DHCP can provide automatic IP assignment. However, best practices recommend using MAC address reservations in the DHCP server to ensure that the IP address of the PX will not be changed.

Consult your Network Administrator regarding the use of the DHCP.



If you have access to the server, your configured (or default) PX device name will appear on the DHCP server's interface, making it easy to locate.

➔ To configure the device IP address, do one of the following:

- **Select automatic IP address assignment** – Select the **Enable DHCP** checkbox to enable a DHCP server that is active on the same network to which PX is connected, to provide automatic IP assignment.
- **Select manual IP address assignment** – Clear the **Enable DHCP** checkbox to disable the DHCP, and then type the **IP Address**, **Subnet Mask**, and **Default Gateway** for **LAN 1**, provided by your Network Administrator.

3.3.3 Configuring Centralized Management Settings

Minicom's Centralized Management IP-based systems ensure secure control of servers and network devices, and power and user administration in the data center environment. The Centralized Management systems combine out-of-band KVM via IP access with modern IT standards and requirements. They are the most comprehensive remote server maintenance solutions available in the market today.

➔ **To configure Centralized Management settings:**

1. Select the **Enable Centralized Management** checkbox to enable PX to be remotely managed by a Centralized Management system. When managed by Centralized Management, only Network Configuration is available from the PX configuration page. All other settings, such as Device Upgrade, Factory Restore, and SSL Certificate are disabled and are managed from Centralized Management.
2. Select the **Manager Auto Discovery** checkbox to cause the Centralized Management system to automatically detect the PX unit if they both reside on the same network segment as the PX.

OR

In **Manager IP Address**, type the static IP address of the Centralized Management Manager.



Although not required, it is recommended to type the Manager IP Address even if the PX resides on the same network segment as the Centralized Management Manager.

3.4 Configuring Network SNMP Settings

You can activate SNMP logging to provide support network monitoring. This will cause the PX to send monitoring events (such as log entries) to the SNMP server.

➔ **To enable and configure SNMP logging:**

1. From the configuration menu, select **SNMP**.

The SNMP page opens.

SNMP	
Enable Traps:	<input type="checkbox"/>
Community:	kvm.net
SNMP Manager IP:	0 . 0 . 0 . 0

Figure 11 – SNMP Settings

2. Select the **Enable Traps** checkbox to enable SNMP traps of PX events and operation.
3. In **Community**, type the name of the SNMP community.
4. In **SNMP Manager IP**, type the SNMP Server IP address.

3.5 Configuring User Settings

An Administrator can add, edit, remove, and block Users.

There are two levels of user access:

- **Administrator** – has unrestricted access to all windows and settings, and can change the name and password of all users
- **User** – can access and control target servers, but cannot use advanced mouse settings and power cycle; cannot access the Web configuration interface

3.5.1 Adding a User

➔ **To add a User:**

1. From the configuration menu, select **Users**.

The Users page opens and displays the existing Users.



User Name	Permission	Status
admin	Administrator	

Buttons: Add..., Edit..., Delete

Figure 12 – Users Page

2. Click the **Add** button.

The Add User page appears.

Figure 13 – Add User Page

3. Type a **User Name** and **Password**. The password must be at least six alphanumeric characters long and cannot include the user name, even if other characters are added.



The “special” characters **&**, **<**, **>**, and **”** cannot be used for either the user name or password.

The **User Name** and **Password** parameters depend on the security level chosen (see Section 3.8 on page 31).

4. In **Confirm Password**, retype the password.
5. In the **Permission** dropdown menu, select the permission type: **Administrator** or **User**.
6. Click **OK**.

The User is added to the list of Users.

3.5.2 Deleting User(s)

You can delete one or multiple Users at a time from the system.



You cannot delete an Administrator who is logged onto the system.

➔ To delete a User:

1. In the **Users** page (see Figure 12), select User(s) to delete. Select a group of Users by selecting the first User in the group, pressing the **Shift** button, and then selecting the last User.

Configuring the Network

Configuring User Settings

2. Click the **Delete** button.

The Delete confirmation page appears.

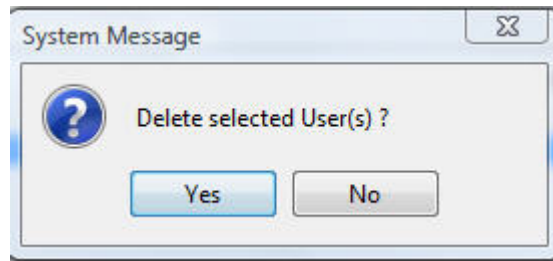


Figure 14 – Delete User Confirmation

3. Click **Yes**.

The User(s) are deleted from the system.

3.5.3 Blocking a User

An alternative to deleting a User is blocking a User. This means that the User's name and password is stored, but the User is unable to access the system.

➔ To block a User:

1. In the **Add User** page (see Figure 13), in the **Access** parameter, select the **Block** checkbox.

3.5.4 Editing User Information

You can change any of the following User parameters: **Permission**, **Access**, and **Password**.

➔ To edit User information:

1. In the **Users** page (see Figure 12), select a User and click the **Edit** button.

The Edit User page appears, with the User's information in the parameters.

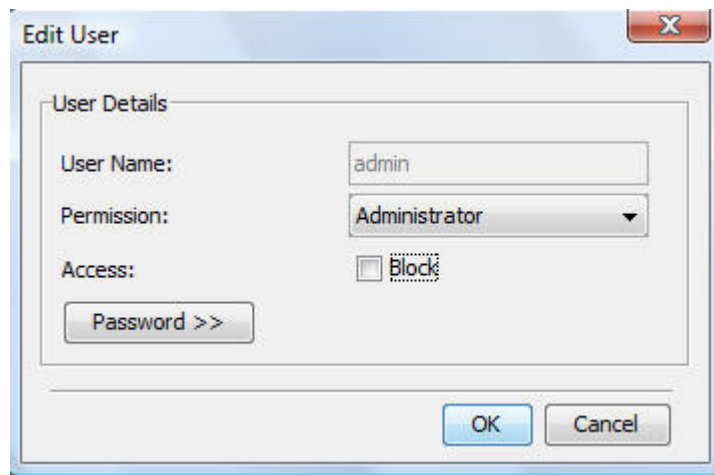
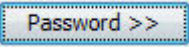


Figure 15 – Edit User Page

2. Change the **Permission** and/or **Access** as required.
3. To change the password, click .

The **Password** parameter opens. In the upper textbox, type the new password; in the lower textbox, confirm the new password.



You cannot change the password of an Administrator who is currently logged on to the system.

4. Click **OK**.

The User page opens with the user information changed accordingly.

3.6 Configuring the Target Server

For the target server connected to the PX, configure:

- The name of the server – It is recommended to give the server connected to PX a unique name, so that users accessing the system can easily identify it.
- The number of POCs attached to the server, provided that it is configured with POCs attached to it.

➔ To configure a target server:

1. From the configuration menu, select **Target**.

The Target Configuration page appears.

Configuring the Network

Configuring the Serial Port Settings



Figure 16 – Target Server Configuration Page

The following information is displayed for the server:

- The server number
 - The server name
 - The number of POCs attached to the server, provided that POCs are attached to the server; otherwise, it displays "0"
2. To change the name of a connected server, highlight the current server name, and type a new name.
 3. If POCs are attached to the server (see Section 3.7.1), type the number of POCs attached to the server.

3.7 Configuring the Serial Port Settings

When you have a Serial device connected to the system, you must configure the Serial Port settings.

➔ **To configure the serial port settings:**

1. From the configuration menu, select **Serial Port**.

The Serial Port page appears.

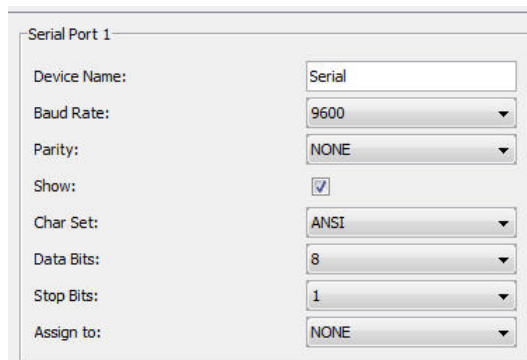


Figure 17 – Serial Port Page

2. Type a **Device Name** and choose the correct device parameters.

3. Select the **Show** checkbox to display the Serial device in the list of servers/devices that can be accessed.

3.7.1 Assigning Serial Port

When a Minicom Serial Remote Power Switch (RPS) or POC is connected to the Serial port, select **RPS** or **POC**, respectively, from the **Assign to** dropdown list. All other parameters are then grayed out. See the RPS or POC Installation Guide for further information on installing and operating the RPS or POC, respectively.



After assigning the Serial Port to POC, go to the Target Configuration page to type the number of POCs attached to each server (see Section 3.6 above).

3.8 Configuring the Security Settings

This section describes how to configure the security features, such as Account Blocking, Password Policy, and Idle Timeout.

You can choose a standard or high security level of password. The following table describes both these options.

Standard Security Policy	High Security Policy
At least six characters	At least eight characters; must include at least one digit, one uppercase letter, and one of the following "special" characters: !, @, #, \$, %, ^, *, (), -, ~, +, =, [], ' ; : ; ? , /, or {}
Must not include the user name	Must not include the user name

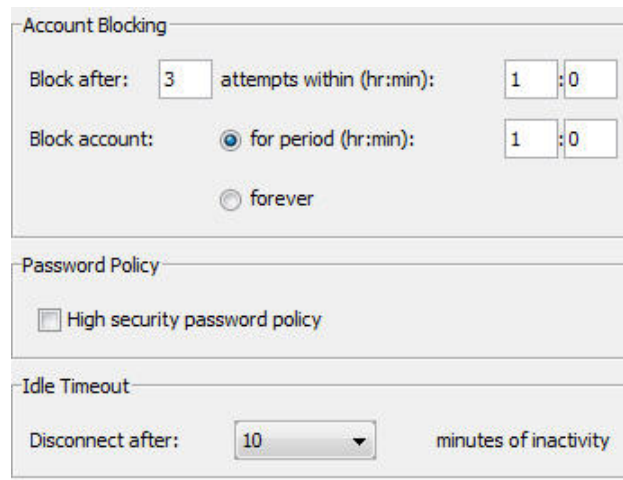
➔ **To configure the security settings:**

1. From the configuration menu, select **Security**.

The Security page appears.

Configuring the Network

Configuring the System Date and Time



The screenshot shows the Security Page configuration interface. It is divided into three sections: Account Blocking, Password Policy, and Idle Timeout. In the Account Blocking section, 'Block after' is set to 3 attempts within 1 hour and 0 minutes. 'Block account' is set to 'for period (hr:min):' with 1 hour and 0 minutes, and the 'forever' option is unselected. In the Password Policy section, the 'High security password policy' checkbox is unselected. In the Idle Timeout section, 'Disconnect after' is set to 10 minutes of inactivity.

Figure 18 – Security Page

2. In the **Account Blocking** section:
 - In **Block after**, type the number of allowable attempts to log in with a wrong username or password in a time period specified in **attempts within**, prior to a forced time lock.
 - In **Block account**, select **for period** to block the account for a specified period of time, or **forever** for a total block.
3. Select the **High security password policy** checkbox to enable the high security password policy; clear the checkbox for the standard security policy to apply.
4. In **Disconnect after**, select the timeout inactivity period after which the user is disconnected from the system. Select **No Timeout** to disable timeout.

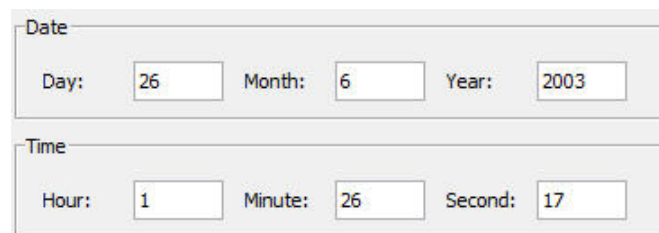
3.9 Configuring the System Date and Time

This section describes how to configure the system date and time.

➔ To configure the date and time:

1. From the configuration menu, select **Date & Time**.

The Date and time page appears.



The screenshot shows the Date and Time Page configuration interface. It is divided into two sections: Date and Time. In the Date section, 'Day' is 26, 'Month' is 6, and 'Year' is 2003. In the Time section, 'Hour' is 1, 'Minute' is 26, and 'Second' is 17.

Figure 19 – Date and Time Page

2. In **Date**, type the current date: **Day**, **Month**, and **Year**.
3. In **Time**, type the current time: **Hour**, **Minute**, and **Second**.

3.10 Performing Additional Configuration Operations


You can perform the following additional operations on PX:

- Install an SSL certificate.
- Upgrade firmware.
- Restore factory settings.

3.10.1 Installing an SSL Certificate

You can install an SSL Certificate, to ensure secure transactions between the Web servers and browsers.

➔ To install an SSL Certificate:

1. In the toolbar, select  **SSL Certificate**.

The SSL Certificate page appears.

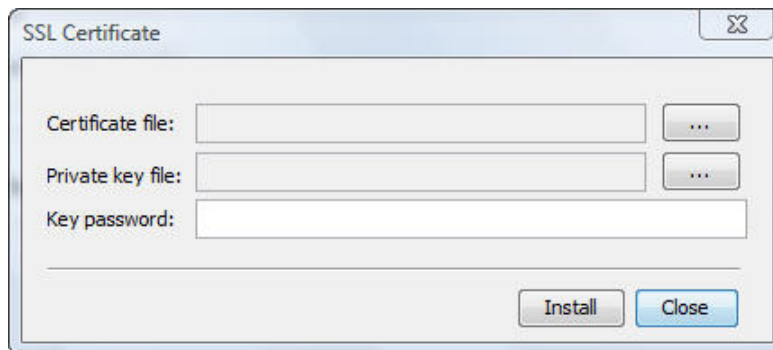


Figure 20 – SSL Certificate Page


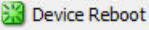
2. In **Certificate file**, browse to locate the **Cer** file.
3. In **Private key file**, locate the **private key** file in Microsoft pvk format.
4. In **Key password**, type the password required to upload the Private Key file.



Each Private Key file is generated with a unique password.

5. Click **Install**.


The SSL Certificate is installed.

6. Save the changes and restart the system, by clicking the  button, and then the  button.

3.10.2 Upgrading Firmware

You can upgrade the PX firmware to take advantage of new features.

➔ **To upgrade firmware:**

1. Download the firmware from Minicom's website at: <http://www.minicom.com/phandlh.htm>.
2. Save the firmware file on the client computer.
3. In the toolbar, select  **Device Upgrade**.

The Device Version Upgrade page appears, displaying the current firmware version on the device.

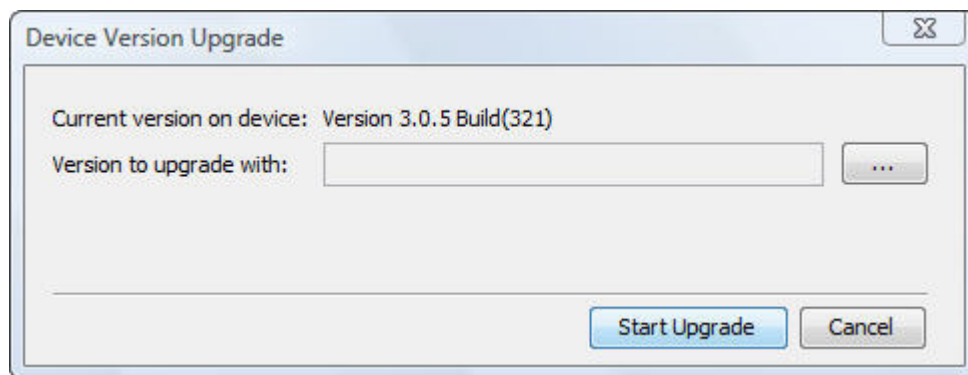



Figure 21 – Device Version Upgrade Page

4. In **Version to upgrade with**, browse to locate and upload the firmware file.
5. Verify the current and uploaded version of the firmware.
6. Click **Start Upgrade**.

The upgrade starts.

7. On upgrade completion, on the toolbar, click  **Device Reboot**.

A confirmation box appears.

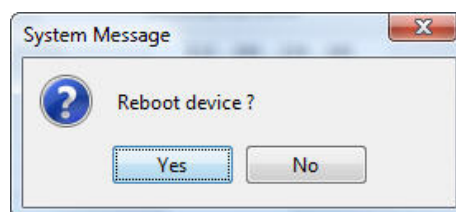


Figure 22 – Reboot Confirmation Page

8. Click **Yes**.

The unit reboots. After about 30 seconds, the Login page appears.



Depending on the type of firmware upgrade, the following settings may be erased: User settings, KVM switch settings, mouse and video adjustments, and RS232 settings. The network settings remain intact. For more information, refer to the firmware release notes.

3.10.3 Restoring Factory Settings

You can restore the PX unit to its factory settings. This restores the original PX parameters, resetting all the information added by the administrators, including: Network settings*, Servers, Switches, Users, and Passwords.

* You have the option to preserve Network settings – as explained in the following procedure.



Once reset, the data cannot be retrieved.

➔ **To restore factory settings:**

1. In the toolbar, select **Factory Restore**.

The Restore Factory Settings page appears.

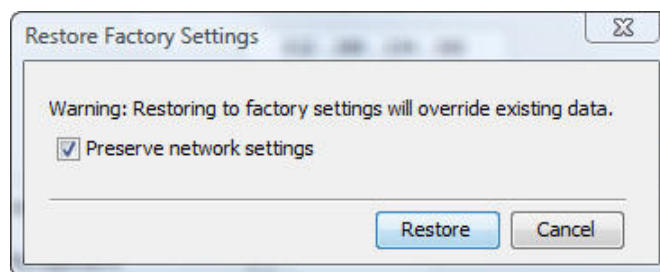


Figure 23 – Restore Factory Settings Page


2. To preserve network settings, select the **Preserve network settings** checkbox.
3. Click **Restore**.

Factory settings are restored.

3.11 Reloading a Page

You can load the parameters on any configuration page with the settings from the PX device. This is convenient if you have already changed settings on the page, and want to restore the device settings.

➔ To reload a page:

1. In the Configuration page toolbar, click the  Reload button.

The parameters are populated with the device settings.


3.12 Saving Changes and Logging Out

Once you have completed configuration changes, you must save them.

Changes to the aSSL Certificate pages require saving and restarting.

Saving the configuration changes after changing the Device page restarts the unit automatically.

➔ To save changes:

1. In the Configuration page toolbar, click the  Save button.

If you made changes to the Device page, the system automatically prompts you to reboot and restart the device, by displaying the following device reboot confirmation box:

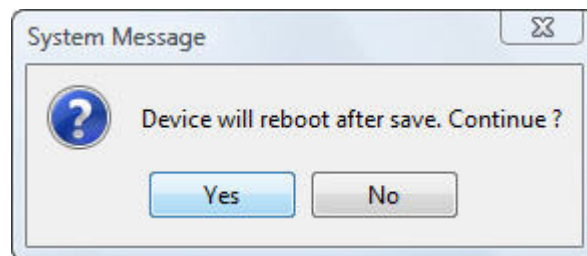


Figure 24 – Device Reboot Confirmation Message

1. Click **Yes**.

A message box informs that Save has completed.

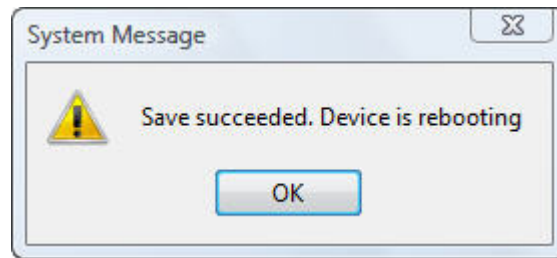


Figure 25 – Save Succeeded Message

2. Click **OK**.

Device reboots, and when it completes a Logon page appears.

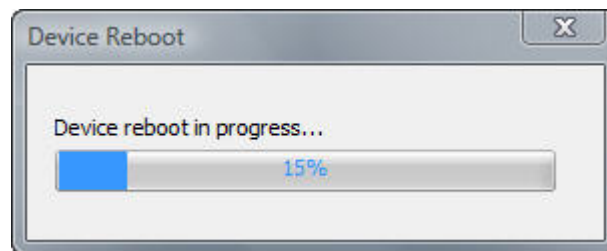


Figure 26 – Device Rebooting Progress Box

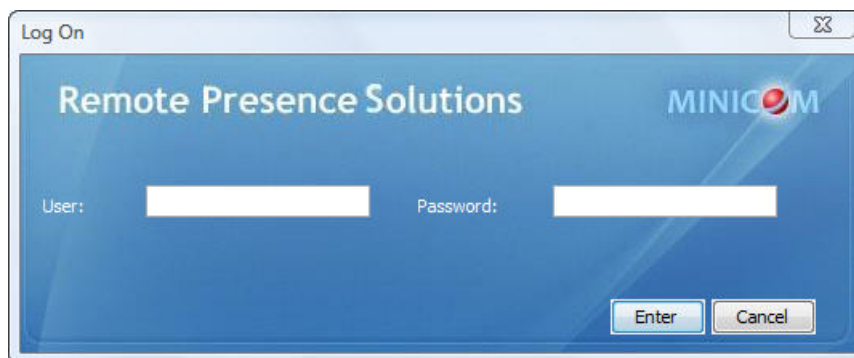



Figure 27 – Logon Page after Rebooting

3. Type your **User** name and **Password** and click **Enter**.

The Configuration page opens.

➔ **To log off:**

1. In the screen toolbar, click the  **Log On/Off** button.

The Configuration screen is closed, and the session closes.

4 Conducting a Remote Session

The remote session enables remotely accessing the server connected to PX. Before starting a remote session, PX must be fully configured.

You can perform the following from the remote session:

- Display/hide the toolbar.
- Mount Virtual media.
- Set the session profile.
- Display the session in full screen mode.
- Verify Remote Presence Solutions information.
- Adjust video settings.
- Power manage the target servers, provided that you have installed POC or RPC.
- Manage keyboard sequences.
- Synchronize mouse pointers.
- Switch to a different server or device.

4.1 Starting a Remote Session

On first connection, install the Minicom certificate and verify that you have the latest Java installed on your computer. If not, you can download and install Java from: <http://www.java.com/en/download/index.jsp>

When using the Firefox browser, install the Minicom Firefox add-on.

The following procedure describes how to log into a remote session from a client computer.

➔ **To log onto a remote session:**

1. At a client computer, open the Web browser (Internet Explorer 7.0 / Firefox 3 or later).
2. Type the PX system IP address - <https://IP address/> and press **Enter**.

The Web page appears (see Figure 8).

3. In the Web page, click **Log On**.

Java installs. After installation has completed, the logon page appears.

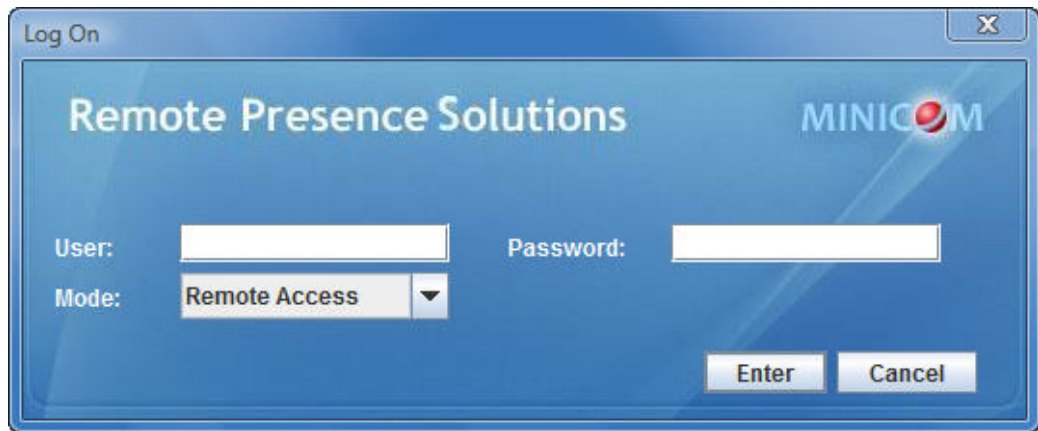


Figure 28 – Logon Page

Leave **Mode** as **Remote Access**.

4. In **User** and **Password**, type the default Administrator name and password, **admin** and **access** respectively (both lower case).
5. Click **Enter**.

The screen of the target server or the currently selected server on the KVM switch that is connected directly to PX, appears with the PX toolbar.

Conducting a Remote Session

Starting a Remote Session

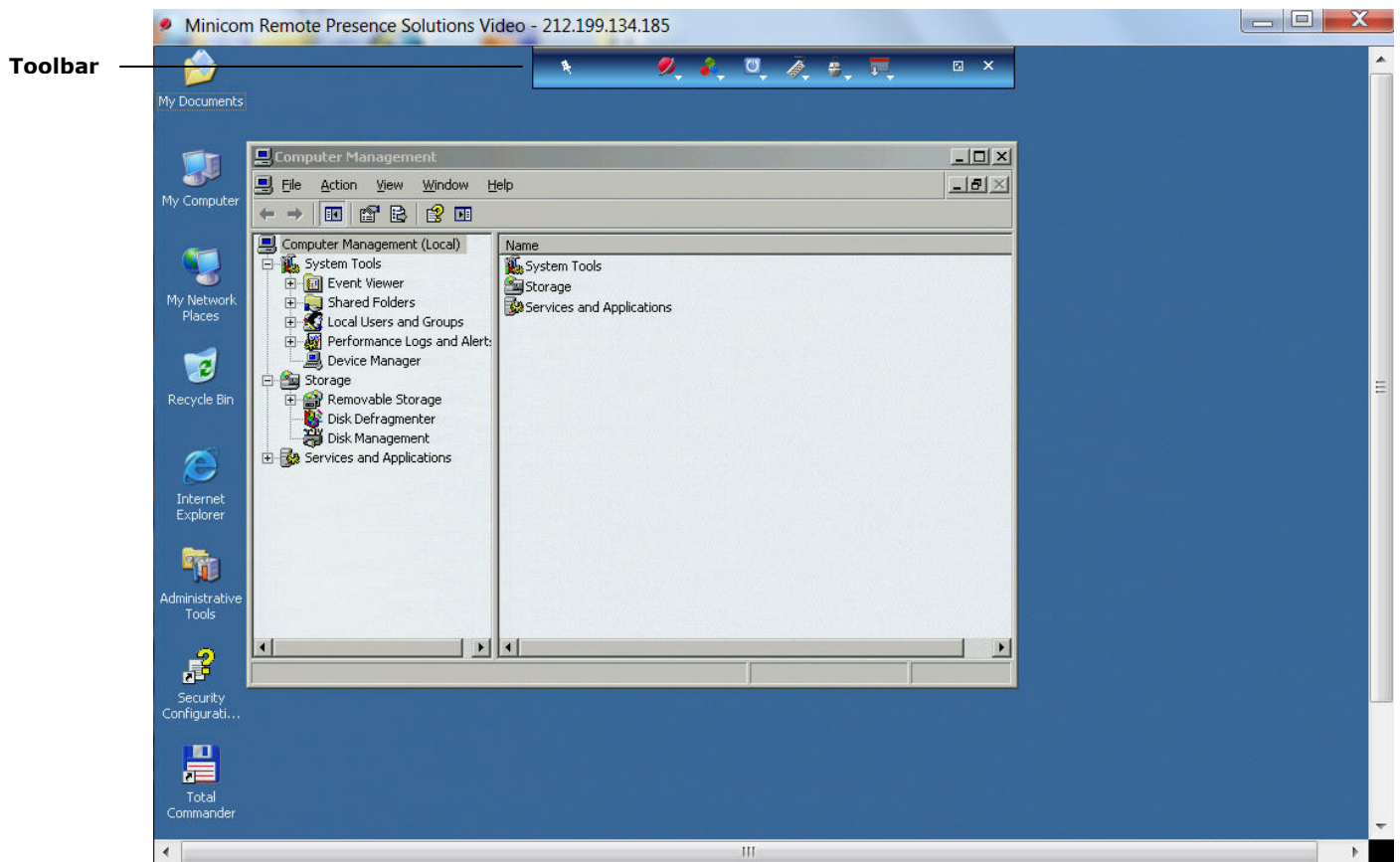




Figure 29 – Remote Session Page

4.1.1 Remote Session Toolbar Buttons

The following table describes the functionality of the Remote Session toolbar buttons.

Button	Description
	Toggle button for displaying/hiding toolbar.
	Session button. Pressing this button opens up a dropdown menu for selecting: Virtual Media – enables virtual mounting of removable mass storage devices connected to the client computer onto the Target server Session Profile – enables configuring remote session profile session About – displays client, firmware, Switch File, and KME version information



Video button. Pressing this button opens up a dropdown menu for performing:

Refresh – for refreshing the video image

Video Adjust – for automatically adjusting the video image

Advanced – for manually setting video settings

Performance – changing video performance by changing mode and/or bandwidth



Keys button. Pressing this button opens up a dropdown menu with predefined key sequence names and **Special Keys** item which enables you to: add a keyboard sequence, record a new custom key, edit an existing key sequence, and delete a key sequence



Mouse button. Pressing this button opens up a dropdown menu for performing:

Calibrate – calibrates the speeds of the mouse pointers of the target server and client computer in Win98, NT or 2000

Align – for aligning the local mouse pointer with the remote target server mouse pointer

Mouse Settings – for manually synchronizing the mouse pointers



Server/Serial button. Pressing this button displays the connected servers and serial devices. You can switch to a different server/device.



Restore button. To toggle Full screen mode on and off.



Logoff button. Closes the current remote session and displays the logon Web page.

4.2 Sharing a Remote Session

Users who want to remotely work on a server at the same time and collaborate their work, can share a remote session. All users in the remote session can connect to see the video at the same time and share the Keyboard/Mouse control. Up to five users can share the same remote session.

When connecting to a target server that other users are already connected to, the following message appears:

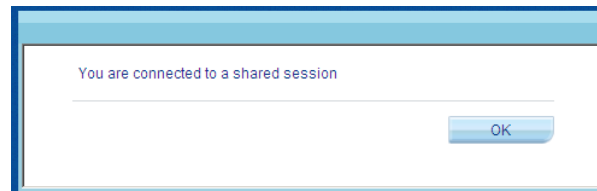


Figure 30 – Shared Remote Session

4.2.1 Exclusive Session


When starting a remote session and there are no other logged in users, a user can prevent other users from connecting to the session (see Section 4.6, step 4). This means that the user is the only one who can see the video and control the

Server Name


Keyboard/Mouse, enabling the user to work on the server without anyone seeing or interfering in the user's work.

4.3 Server Name

When the PX is in standalone mode, the server name is always **Server1**. If the PX is managed by Centralized Management, the server name is assigned via the Centralized Management and can be seen in the IE title bar.

You can also see the server by clicking  from the toolbar.

4.4 Displaying the Toolbar

The toolbar appears briefly at the top of the screen (see Figure 29). It disappears when the mouse is not over it. To make it reappear, glide the mouse over the top of the screen. To display the toolbar permanently, click the tack icon  on the toolbar.

4.5 Mounting Virtual Media

The Virtual Media option enables you to virtually mount onto the target server, removable mass storage devices connected to the client computer.

These mass storage devices include:

- Floppy drive
- CD-ROM
- DVD-ROM
- ISO Image of CD\DVD
- USB Flash Drives (Disk on key tokens)
- Miscellaneous USB memory sticks/cards identified by the operating system as removable mass storage devices

➔ **To virtually mount devices onto the target server:**

1. On the toolbar, select  > **Virtual Media**.

The Virtual Media window appears. All connected mass storage devices appear in the Local Drives section.

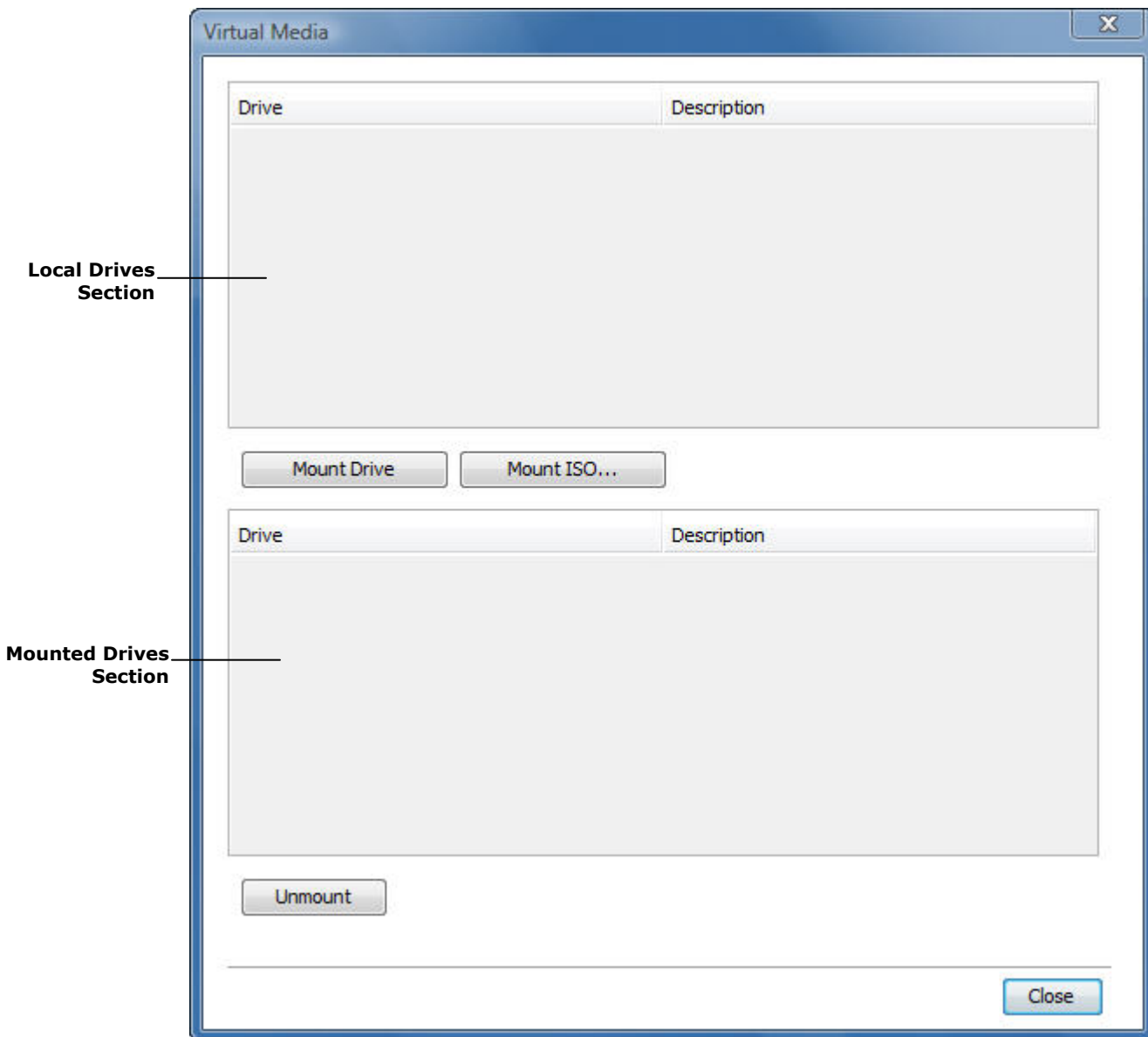


Figure 31 – Virtual Media

2. In the Local Drives section, select the device to be mounted and click **Mount Drive**.

The device mounts onto the target server and appears as a removable or CD/DVD drive of the target server. It also appears in the Mounted Drives section in the above figure. Once mounted, you can use the device during the remote session as if it is connected to the target server.

4.5.1 Mounting an ISO File

An ISO image (.iso) is a disk image of an ISO 9660 file system, and refers to any optical disc image, even a UDF image. In addition to the data files in the ISO image, it also contains all the file system metadata, including boot code, structures, and

attributes. All of this information is contained in a single file. These properties make it an attractive alternative to physical media for the distribution of software that requires this additional information, as it is simple to retrieve over the Internet.

➔ **To mount an ISO file:**

1. In the Virtual Media page (see Figure 31), click **Mount ISO**.

The Mount ISO page appears.

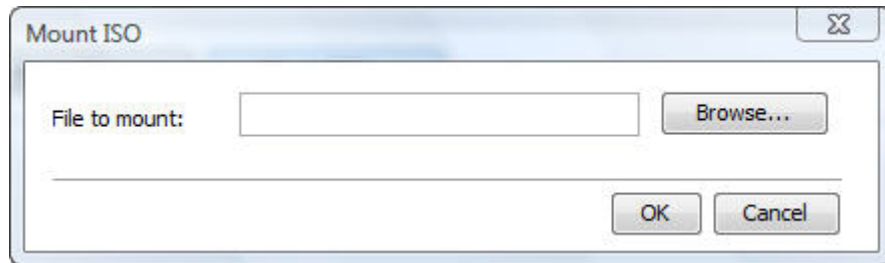


Figure 32 – Mount ISO Page

2. Click **Browse** to locate the ISO file.

The selected ISO filename appears in **File to mount**.

3. Click **OK**.

The file is mounted.

4.5.2 Virtual Media Limitations

As Virtual Media emulates USB 1.1 over a TCP connection, it has a number of limitations which govern the Virtual Media compatibility and operation:

- Virtual Media emulates USB 1.1. It does not emulate USB 2.0.
- Virtual Media redirects the client's local DVD/CD or removable mass storage devices to a target server during the open client session only. This means that if the remote client session disconnects, the mounted drives are automatically dismounted from the target server.
- Maximum data transfer speed of the Virtual Media does not exceed 5.0 Mb/s.
- Only drives identified by the client operating system as Drives with Removable Storage can be mounted as Virtual Media. Many USB attached hard disks identify themselves to the operating system as Hard Disk Drives and cannot be used for Virtual Media mounting.
- Booting from the mounted virtual media drive is possible only if the target server supports booting from the USB attached storage.

- Currently, it is not possible to boot a target server from Linux distribution mounted as Virtual Media.
- Windows CD/DVD or its modifications, such as Winternals ERD Commander, WinPE, BartPE, can be used for booting the target server when mounted as Virtual Media.
- Mounting removable mass storage devices such as USB flash drives (disk on key tokens) or miscellaneous USB memory sticks/cards, removes them from the client operating system and redirects them with Read/Write access permissions to the target server to ensure the integrity of the Write operation.
- Connection timeout does not occur during the entire time that Virtual Media remains mounted.
- PX USB with firmware version 3.0.2.27 or later has Virtual Media capabilities. Older versions of PX USB may not have this capability or may have a limited set of features.

4.6 Setting the Session Profile

You can set the remote session display features, as follows:

- Select the format of the mouse pointer, or hide it
- Hide the toolbar
- Display the session in full screen mode – You can work on the target server as if you are working on a local computer, using full screen mode. In Full Screen mode, the desktop window disappears, and is replaced by the accessed target server desktop.
- Prevent other users from logging into the same session

➔ To set the session profile:

1. On the toolbar, select  > **Session Profile**.

The Session Profile window appears.

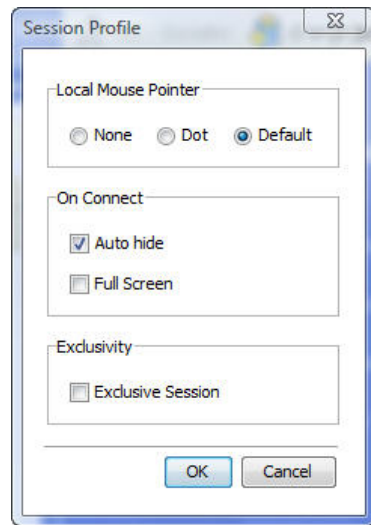




Figure 33 – Session Profile Dialog Box

2. In **Local Mouse Pointer**, select one of the following options to set the appearance of the client computer mouse pointer:
 - **None** – to hide the mouse pointer
 - **Dot** – for the mouse pointer to appear as a dot
 - **Default** – for the mouse pointer to appear as a regular-shaped mouse cursor
3. In **Auto Connect**, select:
 - **Auto hide** – to hide the toolbar from the next connection onwards
 - **Full Screen** – to display the remote session screen in full screen mode from the next connection onwards. To toggle full screen mode on and off, you can click the Restore button  (see Section 4.6.1).
4. In **Exclusivity**, select the **Exclusive Session** checkbox when starting a remote session and there are no other logged in users; this prevents other users from logging into the session.

4.6.1 Full Screen Mode


You can work on the target server as if you are working on a local computer, using full screen mode. In Full Screen mode, the desktop window disappears, and is replaced by the accessed target server desktop.

➔ To work in full screen mode:

1. Ensure that the client computer has the same screen resolution as the target server.
2. On the toolbar, click the Restore button .

The desktop window disappears.

➔ **To exit full screen mode:**

1. On the toolbar, click the Restore button .

The desktop window appears.




Full screen mode can also be activated from the Session Profile box, see Section 4.6, step 3.

4.7 Verifying Remote Presence Solutions Information

You can verify the client, firmware, KME (Keyboard/Mouse Emulation firmware), and Switch file versions installed on your PX. This information can assist system administrators in troubleshooting and support.

➔ **To verify Remote Presence Solutions information:**

1. On the toolbar, select  > **About**.

The information screen appears.

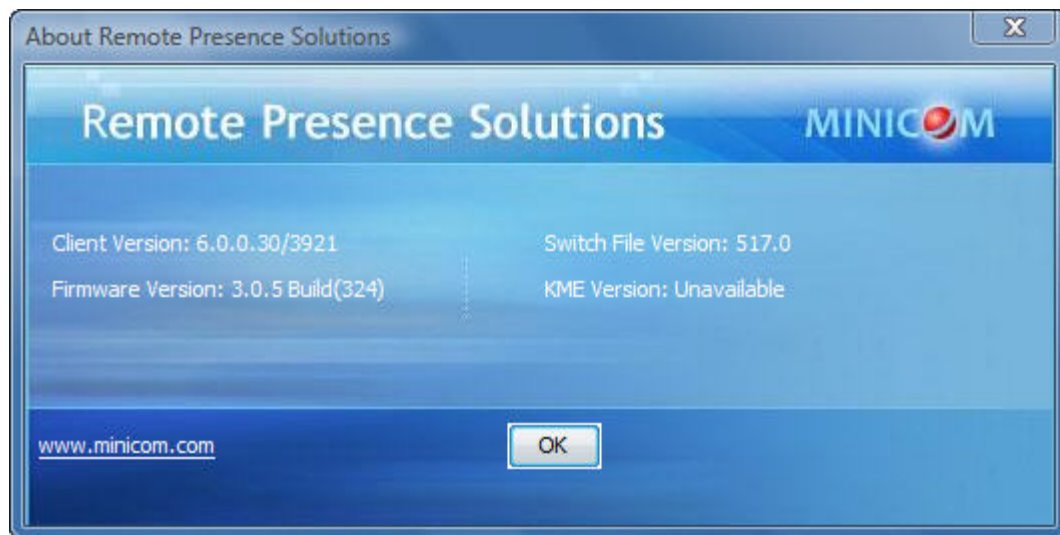


Figure 34 – Remote Presence Solutions Information

4.8 Changing the Video Performance Settings

From the toolbar, you can alter the video performance settings, by selecting a different mode or bandwidth.

The mode can be set to:

- **Fixed** – Enables you to select any bandwidth option. For example, in a LAN environment, it is best to set the bandwidth setting to **High**. For VPN and Internet environments, you may want to alter the settings to increase responsiveness.
- **Adaptive** – Automatically adapts to the best compression and colors according to the network conditions.

You can choose to display more colors for more fidelity, or less colors to reduce the volume of data transferred through the network. Choosing more colors requires more bandwidth.

The bandwidth can be set to:

- **Maximum** – For optimal performance when working on a LAN. This gives no compression and high color (16 bit)
- **High** – For low compression and high color (16 bit)
- **Medium** – For medium compression and either high color or 256 colors; Recommended when using a standard Internet connection
- **Low** – For high compression and 16 colors

➔ **To alter the settings:**

1. On the toolbar, select  > **Performance**.

The Performance dialog box appears.

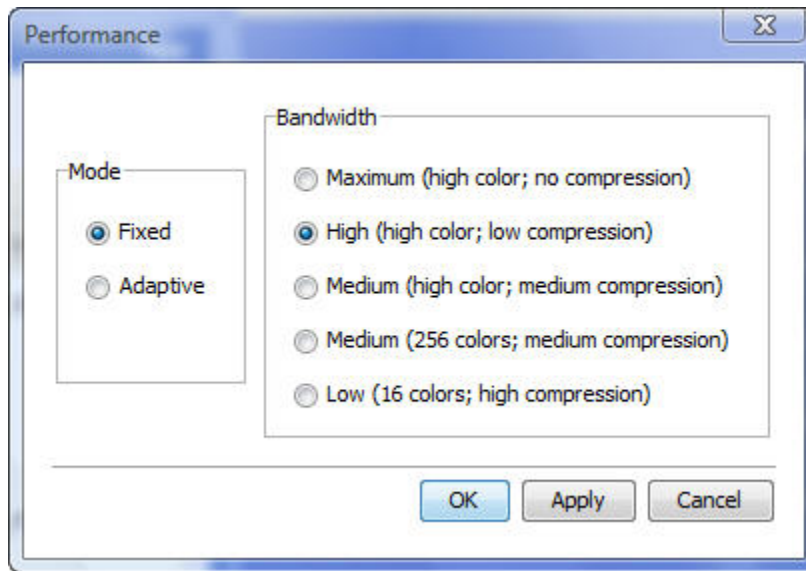


Figure 35 – Performance Settings

2. In **Mode**, select **Fixed** or **Adaptive**.
3. For **Fixed** mode, in **Bandwidth**, select **Maximum**, **High**, **Medium** (high color or 256 colors), or **Low**.
4. Click **OK**.

The chosen setting takes effect and the screen of the last accessed target server appears.

4.9 Adjusting the Video


There are three ways to adjust the video image:

- Refreshing the video image
- Automatically adjusting the video image
- Manually changing advanced video settings

4.9.1 Refreshing the Video Image

The video image may require refreshing when changing the display attributes of a target server. Refreshing completely regenerates the video image.

➔ **To refresh the video image:**

1. On the toolbar, select  > **Refresh**.

The image is refreshed.

4.9.2 Automatically Adjusting the Video Image

The video view may need to be adjusted for each target server or new screen resolution. In most cases, adjusting the video view using the default video settings gives the optimal view.

➔ **To automatically adjust the video image:**

1. On the toolbar, select  > **Video Adjust**.

The progress of video adjustment is displayed.

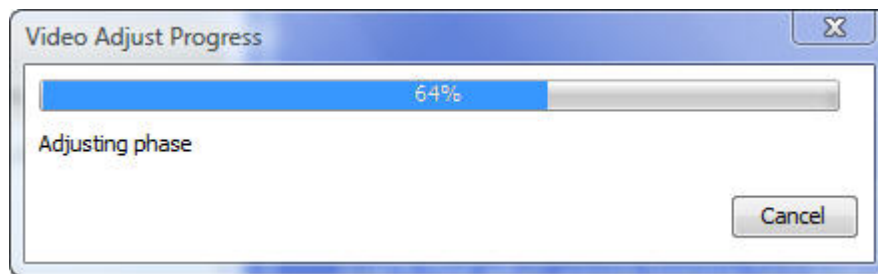


Figure 36 – Video Adjust Progress

The process takes a few seconds. If the process runs more than a few times, it is an indication that there is an abnormal noise level. Check the video cable and verify that no dynamic video application is running on the target server's desktop.

4.9.3 Manually Adjusting Video Settings


Although automatic adjustment of video generally optimizes the video view, you may want to fine-tune the results.

You can use the advanced video adjustment options:

- To fine-tune the target server video settings after auto adjustment
- To adapt to a noisy environment or a nonstandard VGA signal
- When in full-screen DOS/CLI mode

After adjusting the video settings manually, you can always revert to automatically adjusting the video settings, as explained in Section 4.9.2.

➔ **To manually adjust the video settings:**

1. On the toolbar, select  > **Advanced**.

The manual controls appear.

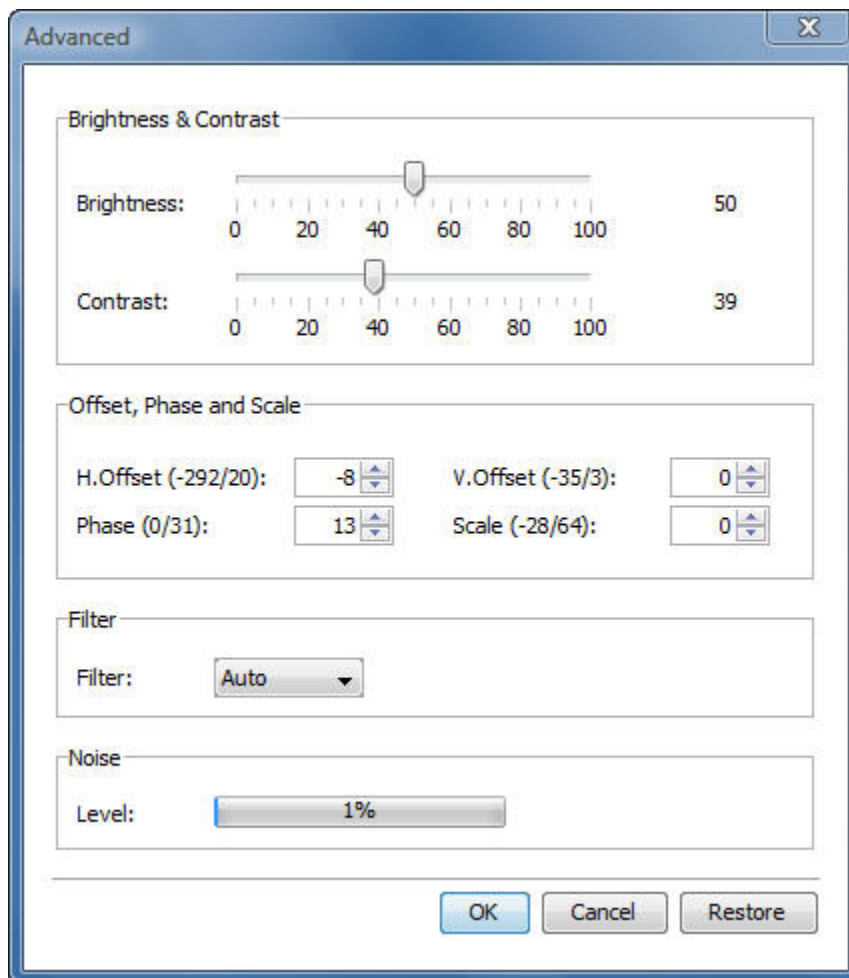


Figure 37 – Manual Video Adjustments Controls

2. In **Brightness** and **Contrast**, use the scales to adjust the brightness and contrast of the displayed image, respectively. Move the sliders to change the displayed image. Click in the area of the sliders for fine-tuning.
3. In the **Offset, Phase and Scale** section:
 - In **H. Offset**, select the starting position of each line on the displayed image.
 - In **V. Offset**, select the vertical starting position of the displayed image.
 - In **Phase**, select the point at which each pixel is sampled.
 - In **Scale**, select the scale resolution of the session image.


Adjust **Phase** and **Scale** to reduce the noise level to a minimum.
4. In **Filter**, select the filter of the input video from the server. A higher filter reduces the noise level but makes the image heavier. Options are: **Auto**, **No Filter**, **Low**, **Medium**, and **High**.

5. **Level** displays the Video "noise" level when a static screen is displayed.
6. Click **OK**.

4.10 Power Managing the Target Servers

When a Minicom Remote Power switch or POC is connected to the Serial port of the PX unit, you can power manage the target servers via the Power menu.

➔ To power manage the target servers:

1. On the toolbar, click .

The Power menu appears.

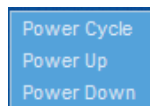



Figure 38 – Power Menu

2. Select one of the following options:
 - **Power Cycle** – to send a power cycle to the currently accessed target server, meaning that the target server is first powered down and then powered up
 - **Power Up** – to power up the currently accessed target server
 - **Power Down** – to power down the currently accessed target server



Only the currently accessed target server is affected. Therefore, to power manage other target servers, you must access each one individually.

4.11 Managing Keyboard Sequences

You can select any keyboard sequence (a combination of keys that performs a specific process) that appears in the dropdown menu of the toolbar button  to send it to the target server to initiate its associated process. For example, selecting **Ctrl-Alt-Del** sends this three-key sequence to the target server to initiate its Shutdown/Login process.


When clicked, these key sequences transmit directly to the target server, and do not affect the client computer.

This section describes how to:

- Add predefined keyboard sequences to the list of keyboard sequences

- Create customized keyboard sequences
- Edit existing keyboard sequences
- Delete existing keyboard sequences

4.11.1 Adding a Keyboard Sequence

You can add predefined keyboard sequences to the list of keyboard sequences that can be accessed directly from the dropdown list of the toolbar item .

➔ **To add a keyboard sequence:**

1. On the toolbar, click  > **Special Keys**.

The Special Key Manager box appears.

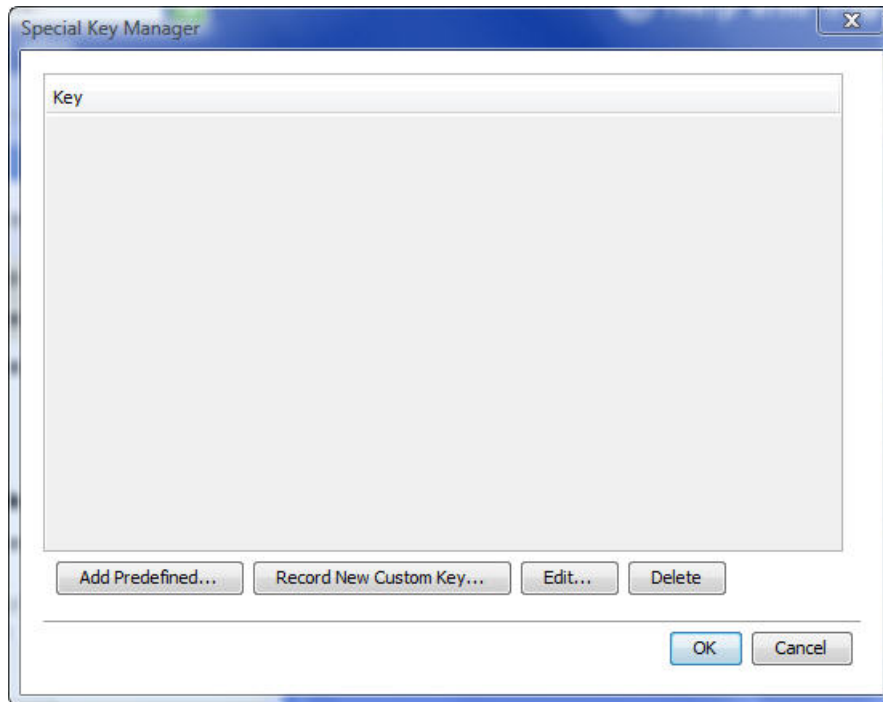


Figure 39 – Special Key Manager

2. Click the **Add Predefined** button.

A list of existing sequences appears.

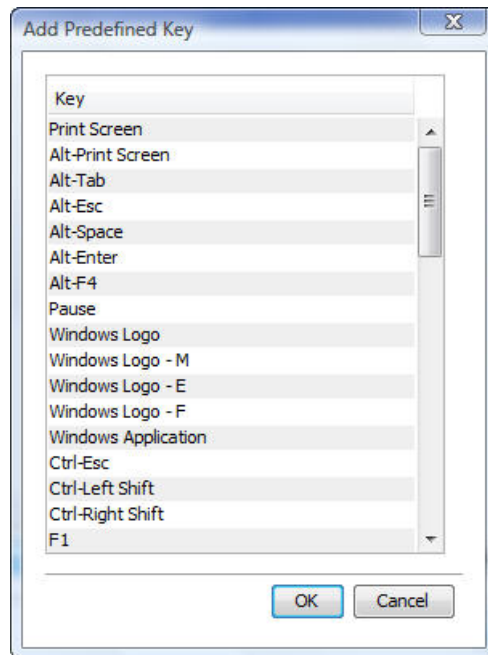


Figure 40 – Add a Predefined Key Dialog Box


3. Select a key sequence and click **OK**.

The sequence appears in the Special Key Manager box.

4. In the Special Key Manager box, click **OK**.

The sequence appears in the Keyboard Key sequence list.

4.11.2 Recording a New Custom Key

This section describes how to define a new keyboard sequence. After defining the keyboard sequence, you can add it to the list of keyboard sequences that can be accessed directly from the dropdown list of the toolbar item  (see Section 4.11.1).

➔ To record a keyboard sequence:

1. In the Special Key Manager box (see Figure 39), click **Record New Custom Key**.

The Record Macro box appears.

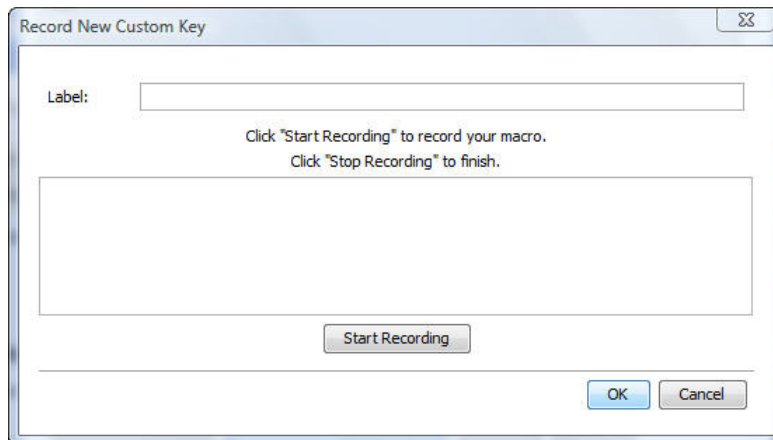


Figure 41 – Record Macro Box

2. In **Label**, type a name for the new key sequence.
3. Click **Start Recording**.
4. On your keyboard, press the keys to include in the key sequence.
The names of the pressed keys appear in the provided area.
5. Click **Stop Recording**.
6. Click **OK**.
The new key sequence is now on the list of predefined key sequences.

4.11.3 Editing a Key Sequence

➔ **To edit a predefined keyboard sequence:**

1. In the Special Key Manager box (see Figure 39), select the desired key sequence and click **Edit**.
The Record Macro box appears (see Figure 41). The name of the key sequence to edit appears in the **Label** field.
2. Click **Start Recording**.
3. On your keyboard, press the keys to include in the key sequence.
The names of the pressed keys appear in the provided area.
4. Click **Stop Recording**.
5. Click **OK**.
The key sequence definition is updated in the system.

4.11.4 Deleting Key Sequence(s)

You can delete a single or multiple key sequences from the system.

➔ **To delete a keyboard sequence:**

1. In the Special Key Manager box (see Figure 39), select the desired key sequence(s) to delete. Select a group of keys by selecting the first key in the group, pressing the **Shift** button, and then selecting the last key.
2. Click **Delete**.

The delete confirmation box appears.

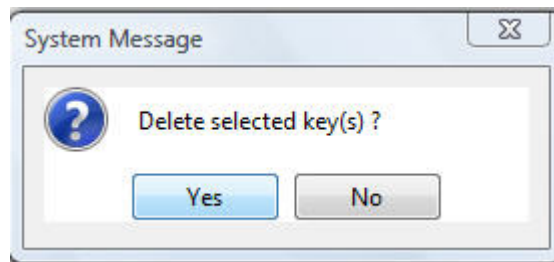


Figure 42 – Delete Key(s) Confirmation Box

4.12 Synchronizing Mouse Pointers

For best mouse performance and superior customer experience, Minicom recommends that you set certain mouse settings in the target operating system. This applies to all targets running Windows, such as XP, Windows 7, Windows Server 2003, and Windows Server 2008.

When working at the client computer, two mouse pointers appear – one of the client computer and one of the target server; the former is on top of the latter. The mouse pointers should be synchronized. The following explains what to do if they are not synchronized.



Before synchronizing mouse pointers, adjust the video of the target server (see Section 4.9); otherwise, mouse synchronization may not work.



The **Align** and **Calibrate** options are available from the **Mouse** menu, only for **Relative Mouse Position** mode.

4.12.1 Manually Synchronizing the Mouse

If the mouse settings on the target server have been changed, or when the operating system on the target server is Windows XP / 2003 Server / 7 / 2008 Server, Linux, Novell, SCO UNIX, or SUN Solaris, you must synchronize the mouse pointers manually.

➔ **To manually synchronize mouse pointers:**

1. On the toolbar, select  > **Mouse Settings**.

The Mouse Settings box appears.

For **PX PS/2** devices, the default mode is **Relative Mouse Position** (see Figure 43); for **PX USB** devices, the default mode is **Absolute Mouse Position** (see Figure 44)

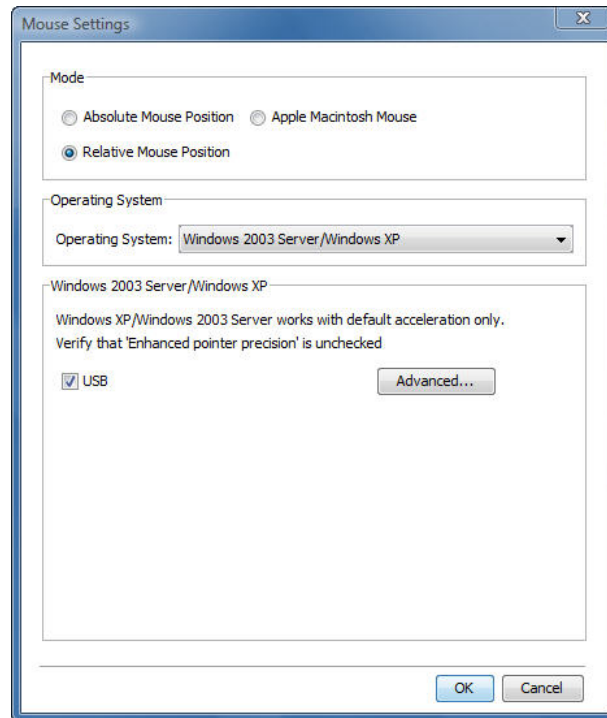


Figure 43 – Relative Mouse Settings

Conducting a Remote Session

Synchronizing Mouse Pointers

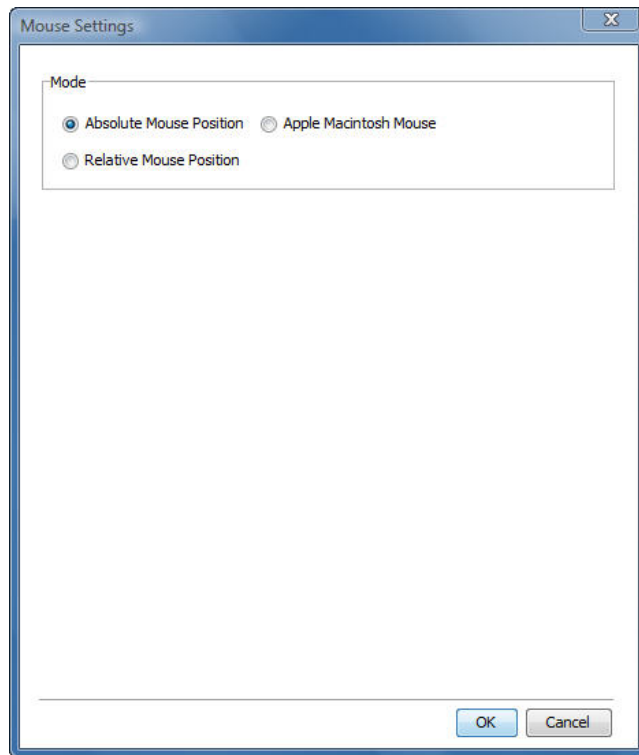


Figure 44 – Absolute Mouse Settings

Selecting the Mouse Mode

On the Mouse Settings page, there are three selectable modes:

- Absolute Mouse Position
- Apple Macintosh Mouse
- Relative Mouse Position

The mouse mode that you can select depends on the type of PX device and on the target operating system / computer:

- For **PX USB** devices:
 - If the operating system on the Target is Windows ME or later, select **Absolute Mouse Position** mode (see Figure 44); this is the default mode for PX USB devices.
 - If the operating system on the target is Windows 98 or Linux, Novell, UNIX or SUN, select **Relative Mouse Position** mode.
 - If the target is a MAC computer, select **Apple Macintosh Mouse** mode.

- For **PX PS/2** devices: **Relative Mouse Position** is the only possible mode.

Relative Mouse Position Mode

Selecting **Relative Mouse Position** mode enables you to configure mouse settings, set the USB option (see The USB Option), and advanced settings (see Advanced Mouse Emulation).

➔ **To configure settings for the Relative Mouse Position mode:**

1. In **Operating System**, from the dropdown menu, select the target’s operating system.

Instructions and sliders appear.

2. Follow the instructions and set any relevant sliders to the same values as set in the target’s Mouse Properties window.

3. Click **OK**.

The mouse pointers are synchronized.

Examples

The following are examples of the instructions for two different target operating systems. After performing the instructions for the selected operating system, you should click **OK** to synchronize the mouse pointers.

1. For **Windows 7**: Go to the Mouse Properties on the Target and clear the **Enhance pointer precision** checkbox.

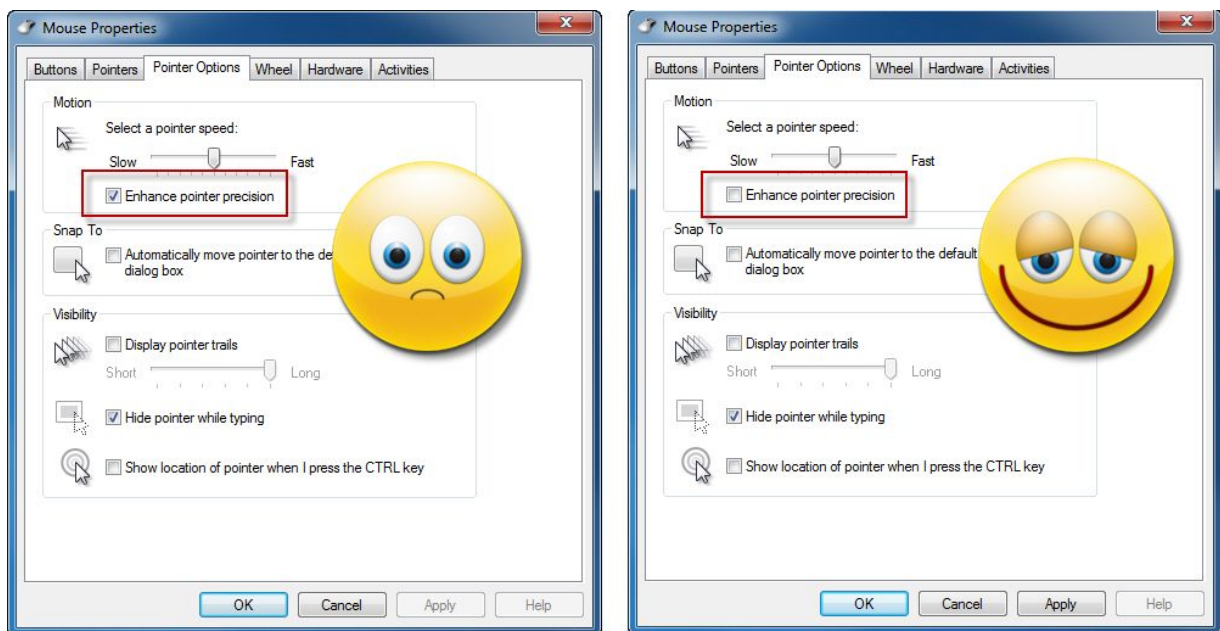


Figure 45 – Windows 7 Mouse Properties

Conducting a Remote Session

Synchronizing Mouse Pointers

2. For **Windows 2000**: If Mouse Properties were ever changed for the target – even if they have been returned to their original state – clear the **Default** checkbox

Default

The USB Option

You can use the **USB** option if you have USB to PS2 conversion between PX and the target server via any of the following:

- USB-to-PS/2 adapter
- Unsupported operating systems
- SUN Solaris

Use this option if you are sure of the custom acceleration algorithm you are using, or have been informed to do so by customer support.

Advanced Mouse Emulation

In the Advanced Mouse settings, you can set the type of mouse that you would like PX to emulate. It is recommended not to change the advanced settings unless there is erratic mouse behavior (for example, the mouse is making random clicks and jumping arbitrarily around the screen).

➔ To set the type of mouse that you want PX to emulate:

1. In the **Mouse Settings box** (see Figure 44), click **Advanced**.

The Mouse Emulation box appears.

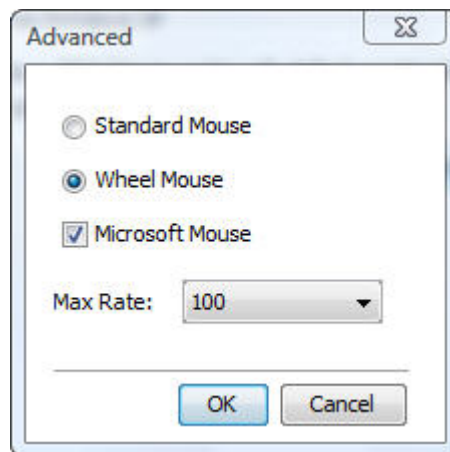


Figure 46 – Mouse Emulation Box


2. Select the mouse connected to the Local Console port on the PX, as follows:

- **Standard Mouse** – if the local mouse is a non-Microsoft two-button mouse; in this case, clear the **Microsoft Mouse** checkbox.
 - **Wheel Mouse** – Microsoft mouse or Microsoft optical mouse
3. In **Max Rate**, select the maximum mouse report rate.
For Sun Solaris the default value is 20 in order to support older Sun versions.
 4. Click **OK**.

4.12.2 Aligning the Mouse Pointers

When accessing the target server, the mouse pointers may appear at a distance to each other, due to the mouse on PX losing sync with the mouse on the host system. You can align the local mouse pointer with the remote target device's mouse pointer.

➔ To align the mouse pointers:

1. On the toolbar, select  > **Align** (or press **Ctrl+M**).
The mouse pointers align.


4.12.3 Calibrating Mouse Pointers

A target server may have a different mouse pointer speed than the client computer. Calibrating automatically discovers the mouse speed of the target server and aligns the two pointers.

You can perform automatic calibration when the target server operating system is Windows NT4, 2000, or 98.

PX saves this alignment so that calibration is only needed once per target server.

➔ To perform the calibration:

1. On the toolbar, select  > **Calibrate**.

If the Video Noise Level is above zero, calibration may not work. In this case, go to Video Adjustment and try to eliminate the noise by automatically adjusting the video (see Section 4.9.2) and/or adjusting the bars in manual video adjust (see Section 4.9.3), and then performing the mouse calibration.




If the mouse settings on the target server have been changed, you must synchronize mouse pointers manually, as explained below.

4.13 Switching to a Different Server/Device

In the middle of a remote session, you can switch to a different server or device.

➔ **To connect to a different server or device:**

1. On the toolbar, click .


A list of connected servers/devices appears. There is a checkmark near the server/device of the remote session.

2. Click the desired server or Serial device.

The screen of the server or Serial device terminal emulation window appears.

4.14 Disconnecting the Remote Session

➔ **To disconnect the session:**

1. On the toolbar, click .

The Login Web page appears. You can re-login or close the browser window.

5 Troubleshooting

This chapter describes how to:

- Restore factory defaults from the PX unit
- Boot up in Safe mode (when the password has been forgotten)

5.1 Restoring Factory Defaults

Section 3.10.3 describes how to restore factory settings from the Web interface. When you cannot access the system (for example, you have forgotten the Username or Password), you can restore factory defaults from the PX unit in Safe mode.

To restore a PX USB to the factory default settings, the PX USB must be connected to the PoE switch and a powered on computer.

➔ To restore factory defaults:

1. Press the PX USB's **Reset** button (see Figure 4) for a second.

The Power LED blinks once and the PX USB reboots with the factory default settings.

5.2 Booting the PX Unit in Safe Mode

If you have forgotten the administrator password or need to upgrade the PX, you can boot the PX in Safe mode and reconfigure the password or upgrade PX.

➔ To boot PX in Safe mode:

1. Disconnect the network cable from the PX USB.
2. Press and hold the **Reset** button and reconnect the PX USB to the PoE switch.
3. Continue pressing the **Reset** button for three to five seconds after reconnecting.
4. Release the **Reset** button.
 - If a DHCP server is available, PX USB picks up an IP address from it.
 - If there is no DHCP server, PX USB boots with static IP 192.168.2.155.
5. Type <http://192.168.2.155/config> (HTTP and not HTTPS), or type the IP address received from the DHCP server.
6. Log in with User name **admin** and Password **SAFEmode** (case sensitive).
7. Restore PX USB default settings from the Safe mode or perform a firmware upgrade if PX USB fails to boot with its normal firmware.

Troubleshooting

Booting the PX Unit in Safe Mode

Contact Minicom Technical Support for special firmware for upgrading PX USB from Safe mode.

6 Technical Specifications

Specification	Description
Operating systems	<p>Target server – DOS, Windows, Novell, Linux, or SUN Solaris for PC</p> <p>Client computer – Windows 2000 or later with Internet Explorer 7.0 / Firefox 3.0 and later; Linux x86 with Firefox 3.0 and later</p>
Resolution	<p>Host computer – Up to 1600 x 1200 @ 85 Hz</p> <p>Client computer – Recommended that resolution should be higher than on local computer</p>
Video and mouse synchronization	Both auto and manual modes
Security	SSL, high grade 256-bit AES encryption
Connections	<p>Ethernet – RJ45 – 10/100 Mbit/sec autosensing</p> <p>26-pin connector for Video and USB (keyboard, mouse, and virtual media) cable (and for optional Serial cable)</p>
Product Weight	0.3 kg / 0.66 lbs
Product Dimensions (H x D x W)	33 x 80 x 105 mm / 1.3 x 3.15 x 4.13 in
Shipping Weight	0.7 kg / 1.54 lbs
Shipping Dimensions (H x D x W)	105 x 150 x 230 mm / 4.1 x 5.9 x 9.0 in
Power supply	PoE 4.5W or external power supply 12V, 1000mA
Operating temperature	0°C to 40°C / 32°F to 104°F
Storage temperature	-40°C to 70°C / -40°F to 158°F
Humidity	80% non-condensing relative humidity

7 Video Resolution and Refresh Rates

Hz →	56	60	65	66	70	72	73	75	76	85	86
640x480		x		x	x	x		x		x	
720x400					x					x	
800x600	x	x				x		x		x	x
1024x768		x			x	x	x	x	x	x	
1152x864								x			
1152x900				x					x		
1280x720		x									
1280x768		x						x			
1280x960		x								x	
1280x1024		x				x		x	x	x	
1600x1200		x	x		x			x		x	

