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PIX Firewall Manager Version 4.1.5 Release Notes

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This document describes how to install and configure Cisco's PIX Firewall Manager version 4.1.5c.

The following topics are covered in these release notes:

- "Important Notes" on page 1
- "Introduction" on page 2
- "Installing PIX Firewall Manager" on page 6
- "Starting the Management Client" on page 12
- "Using the Management Client" on page 13
- "Cisco Connection Online" on page 15
- "CD-ROM Documentation" on page 16

Important Notes

Note Each PIX Firewall you manage must have previously been configured with the PIX Firewall **telnet** command to permit access to the PIX Firewall from the PIX Firewall Manager's Management Server. Refer to "PIX Firewall Requirements" for other requirements.

Note Each PIX Firewall you wish to manage must be running PIX Firewall version 4.1.4 or 4.1.5.

Note The Windows NT workstation or server on which you install PIX Firewall Manager must be running version 4.0 or later. Refer to "Management Server Requirements" for other requirements.

Note Selecting a menu item (or screen) is indicated by the following convention:
Select **screen1>screen2>screen3**.

Corporate Headquarters

Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA

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Introduction

Cisco's PIX Firewall Manager lets you administer one or more PIX Firewall units, view SYSLOG messages, and define customized alarms for each type of SYSLOG message. You can use the PIX Firewall Manager to view, add, and modify the configuration of each PIX Firewall unit.

PIX Firewall Manager software includes these components:

- Management Server—a Windows NT service that runs in the background and receives requests from the Management Client, sends them to the specified PIX Firewall unit, and then passes the PIX Firewalls' responses back to the Management Client. The Management Server starts automatically when the installation completes or when a user logs in. An icon for the server does not display in the task bar.
- Management Client—a Java applet that you access from a network browser such as Netscape Navigator or Microsoft Internet Explorer. Refer to "Management Client Requirements" for more information.

PIX Firewall Manager provides two access levels: user-level with read-only (non-modifying) access and administrator-level with read and write access.

Diskettes for installing PIX Firewall Manager are provided in the PIX Firewall accessory kit.

PIX Firewall Manager can be installed and uninstalled correctly with the English, Japanese, and German versions of Windows NT 4.0.

New Features

The following features are available in PIX Firewall Manager version 4.1.5c:

- Manage up to 10 PIX Firewall units from the PIX Firewall Manager.
- The Reload Configuration button on the Administrator main window now retrieves the most current PIX Firewall configuration.
- Reports are generated from the Alarm and Report tab by clicking a PIX Firewall folder and clicking the Report button.
- The report wizard generates a three-dimensional bar chart report on PIX Firewall network traffic data. Information on up to 50 hosts inside or outside of the PIX Firewall can now be reported. Reports can be viewed but not printed from PIX Firewall Manager. You can use the extended reporting capability with Microsoft Excel 97 to print and export report information. The PIX Firewall Manager Excel database supports up to 64,000 entries.
- The report wizard reports FTP and HTTP file transfer activity by host, including source IP address and file name. These reports are not available using Microsoft Excel 97.
- If you have both Open Systems Solutions Private I and PIX Firewall Manager installed on the same system, you can use the SYSLOG Redirection button on the Setting tab to avoid conflicts between these products. The SYSLOG Redirection button copies SYSLOG event information received from port 514 to port 515.
- The **Information>Xlate** page now supports host names. Both connection slot and translation slot information are available on this page.
- The ARP table updates each time you choose the ARP table entry from the Main Tree.
- The Settings tab provides an option for setting the time interval for updating SYSLOG message files.

Usage Notes

- The PIX Firewall Manager cannot be installed or uninstalled under Windows NT domain administration logins. If you attempt to install PIX Firewall Manager on this type of login, the following message appears:

```
You are not authorized to run this installer.
Terminating...
```

- PIX Firewall Manager does not support the following PIX Firewall commands. To view, add, or change these configuration features, use the PIX Firewall's console port or start a Telnet session to access the PIX Firewall.
 - **tftp-server**—specify a TFTP server for reading or saving the configuration.
 - **config net**—read the configuration from the TFTP server.
 - **write net**—save the configuration to the TFTP server.
 - **hostname**—change the PIX Firewall host name. You can view the host name with the Failover item in the Administration folder on the Administrator tab.
 - **name** or **names**—permits users to map hostnames to IP addresses, thus allowing users to specify hostnames in the places where IP addresses are permitted.
 - **virtual http**—prevents AAA credentials from being included in information exchanges with a web server.
- The following configuration features can be viewed on the Manager Client but must be added or changed at the PIX Firewall's console port or Telnet session:
 - MTU size. You only need to change this if you have a Token-Ring interface. Use the **mtu** command.
 - Interface configuration. Use the **interface**, **nameif**, and **ip address** commands to change the values if needed.
 - Failover. Use the **failover** command if needed.
 - Private Link. Use the **link** and **linkpath** commands.
- If a help topic is not available, information on the topic can be found in the *PIX Firewall Series Configuration Guide*. Also view the *PIX Firewall Series Version 4.1.5 Release Notes*.
- When a Management Client is running, only the following configuration changes to the PIX Firewall units made through the console or Telnet sessions are reflected in the client applet: **conduit**, **static**, **mailhost**, **global**, **nat**, **outbound**, **apply**, and **alias**. To view the updated configuration, click a PIX Firewall folder, then click the **Reload Configuration** button.
- If a client is already connected to a Management Server and a second client on the same machine tries to connect to the same Management Server, then the first client will be disconnected and the second client will be connected.
- After installation and setup, if you change the IP address of the Windows NT system, you need to update the two FIREWALL.HTML files installed on the system. The files are in the following subdirectories on the Management Server's target directory:
 - JClient\Netscape
 - JClient\Others
 In the FIREWALL.HTML file, replace the old IP address with the current IP address, which is only visible in the inside network.

- All members in the PIX Admins group have read and write access, and all members in the PIX Users group can only read, but not change the PIX Firewall configurations. User names that do not belong to one of these two groups cannot use the Management Client applet.

Bug Fixes in This Release

The following PIX Firewall Manager bugs have been fixed. Bug fixes for version 4.1.4 are included for reference.

Bug Number	Description of Fix	Fixed in Release
CSCdk39378	A vulnerability in the PIX Firewall Manager HTTP server allowed any attacker who could connect to the server to retrieve any file known in advance to exist on the Windows NT host. In almost all cases, this meant that the host was vulnerable to attack by any user inside the PIX Firewall, but not by users outside the PIX Firewall. This has been fixed.	4.1.5c
CSCdj86302	Special characters, such as “#,” in the PIX Firewall configuration file no longer cause the PIX Firewall Manager to stop downloading the configuration file.	4.1.5
CSCdj79959	The PIX Firewall Manager properly removes all previous versions of PIX Firewall server files during installation, eliminating messages that the files are in use.	4.1.5
CSCdj79957	The PIX Firewall Manager now properly installs on a Windows NT server designated as a backup domain controller.	4.1.5
CSCdj76724	The PIX Firewall Manager now automatically deletes conduit entries when deleting static or mailhost entries. There is a one-to-many correspondence between a static entry and a conduit. Deleting a static without removing the associated conduits makes some entries in the conduit table invalid. The mailhost entry is a static setting.	4.1.5
CSCdj76715	The PIX Firewall Manager client now displays the conduit entry for the mailhost. A mailhost entry in the PIX Firewall automatically generates a conduit entry for port 25 (mail server port). This conduit entry was not showing up in the PIX Firewall Manager client (GUI display).	4.1.5
CSCdj76711	The PIX Firewall Manager checks static address entries for valid global address entries. The PIX Firewall disallows a static entry where the global IP address is a host address and the local IP address is a network address, or vice versa.	4.1.5
CSCdj76708	Configuration download from the PIX Firewall to the PIX Firewall Manager now uses caching to improve performance.	4.1.5
CSCdj76705	The PIX Firewall Manager periodically checks and updates DNS entries, maintaining host name information for use with the report building feature.	4.1.5
CSCdj76702	The Settings tab in the PIX Firewall Manager includes an option for setting the time interval for updating SYSLOG message files.	4.1.5
CSCdj46774	The Management Client now shows host names and service names in the Information>Xlate page.	4.1.4
CSCdj46771	The Management Client now lists the connection slots in a separate table from translation slots on the Information>Xlate page.	4.1.4

Bug Number	Description of Fix	Fixed in Release
CSCdj46768	The Reload Configuration button was added to the Contents window to let you view the most current configuration for a PIX Firewall.	4.1.4
CSCdj46759	PIX Firewall Manager now works with Netscape Navigator 4.0.	4.1.4
CSCdj46758	The Management Client now shows well-known ports as names on the Information>Xlate page.	4.1.4
CSCdj46748	PIX Firewall Manager now clears buffers correctly after an error is processed.	4.1.4
CSCdj36126	A check was added so that authentication cannot be added unless an authentication server was previously identified.	4.1.4
CSCdj36120	PIX Firewall Manager now deletes corresponding conduits when a static is deleted.	4.1.4
CSCdj32083	The PIX Firewall Manager now detects when IP addresses are entered incorrectly.	4.1.4
CSCdj31847	PIX Firewall Manager provides new information in the Information>System page.	4.1.4
CSCdj31844	The Management Client now works correctly when the Management Server goes offline.	4.1.4
CSCdj31807	The PIX Firewall Manager Excel reporting macro, report.xls, no longer displays an error message when started.	4.1.4
CSCdj2395	Global and Outbound list IDs can now only be entered as positive numbers.	4.1.4
CSCdj12370	A button problem on the Routing>RIP page was fixed.	4.1.4

Installing PIX Firewall Manager

The sections that follow describe how to install PIX Firewall Manager.

The following topics are described in this section:

- “Information Requirements”
- “Software Requirements”
- “Installing PIX Firewall Manager”
- “Changing Passwords”
- “Limiting Access to the Management Client”

Information Requirements

Before installing PIX Firewall Manager, you need the following:

- Passwords—you need these passwords:
 - PIX Firewall privileged mode password. This is set by the **enable password** command at the PIX Firewall console. Once set, the password cannot be viewed and must be obtained from its creator.
 - PIX Firewall Telnet password. The default value is **cisco**, but if this is changed with the PIX Firewall’s **passwd** console command, you must get the password from the PIX Firewall’s system administrator because you cannot display this value at the PIX Firewall console.
 - Windows NT Administrator password.
- Configuration—for each PIX Firewall you manage, you need to configure it as explained in “PIX Firewall Requirements.” After configuring the PIX Firewall, determine its inside IP address with the **show ip address** console command.
- IP address—you need the IP address of the Windows NT system running PIX Firewall Manager. If the computer has more than one network interface and you do not know which one connects to the same network as the PIX Firewall, contact your network administrator.

To view the IP address:

- Step 1** Select **Start>Settings>Control Panel**.
 - Step 2** Double-click the **Network** icon.
 - Step 3** Click the **Protocols** tab and select **TCP/IP Protocols>Properties**.
 - Step 4** When the Microsoft TCP/IP Properties dialog box opens, click the **IP Address** tab. The IP address appears on the lower part of this tab.
 - Step 5** If the **Obtain an IP address from a DHCP server** item is checked, click it to disable it. Then click **Specify an IP address** and enter an IP address, subnet mask, and default gateway IP address for this system.
- Port number—during installation, you are asked to supply a port number for the PIX Firewall Manager’s built-in web server. The default port for this server is 8080. It is very unlikely, but possible that this port could be in use by another server. If that is the case, pick another port for the web server. To pick a port, view <ftp://ftp.isi.edu/in-notes/iana/assignments/port-numbers> to find the ports in use.

Software Requirements

The following sections list software requirements for using PIX Firewall Manager.

PIX Firewall Requirements

Note Each PIX Firewall you manage must have been configured with the PIX Firewall **telnet** command to permit the Management Server to access the PIX Firewall.

All PIX Firewall units managed by PIX Firewall Manager version 4.1.5c must be running PIX Firewall version 4.1.4 or 4.1.5. To check the version of the PIX Firewall software, go to the PIX console and enter the **show version** command.

If you intend to manage PIX Firewall units on the outside network, each foreign unit must run Private Link and at least one firewall on the local network must also run Private Link. The local PIX Firewall must be configured to communicate with the foreign Private Link firewalls.

You must have console access to each local PIX Firewall you manage. If you are managing remote firewalls, work with the site administrator to get the PIX Firewall to communicate with PIX Firewall Manager.

To configure each PIX Firewall unit, enter these commands at the PIX Firewall console:

- Step 1** **enable**—to enter privileged mode. When prompted, enter the privileged mode password. The default is no password and you can press the **Enter** key at the prompt.
- Step 2** **configure terminal**—to enter configuration mode.
- Step 3** **nameif**—to specify the name or security level of the outside or optional third interface on the PIX Firewall. The inside interface cannot be renamed or given a different security level. Each security level must be a unique number between 0 and 99.
- Step 4** **interface**—to set options for the Ethernet or Token Ring network interfaces.
- Step 5** **ip address**—to assign IP addresses and network masks to each interface.
- Step 6** **telnet**—to let the PIX Firewall communicate with the PIX Firewall Manager:

```
: Telnet for PIX Firewall Manager
telnet Windows_NT_IP_Address 255.255.255.255
```

Replace *Windows_NT_IP_Address* with the IP address of the Windows NT system.

Add the comment before the **telnet** statement to ensure that the next person configuring the firewall knows the purpose of this **telnet** statement.

- Step 7** **link** and **linkpath**—If you are managing remote PIX Firewall units, configure each for Private Link access. Refer to Chapter 2, “Configuring the PIX Firewall” in the *PIX Firewall Series Configuration Guide* for information on configuring Private Link, and Chapter 3, “Command Reference,” to view the **link** command page for more information.
- Step 8** **write memory**—save the configuration in flash memory.

All commands are described in the *PIX Firewall Series Configuration Guide* supplied in your PIX Firewall accessory kit.

Windows NT System Requirements

The Windows NT system on which you install the Management Server requires the following:

- Windows NT Workstation or Windows NT Server version 4.0. The system running Windows NT must contain a Pentium processor and have at least 32 MB RAM.
- TCP/IP must be enabled and the system's IP address must not be dynamically allocated, such as with DHCP.
- The Windows NT system must be on the PIX Firewall's inside network.
- Users must be part of the PIX Admins or PIX Users groups on the Windows NT system. Refer to "Limiting Access to the Management Client" for more information on how to add users to these groups.
- PIX Firewall Manager can be installed and uninstalled correctly with the English, Japanese, and German versions of Windows NT 4.0.

Management Server Requirements

The Management Server has the following requirements:

- All machines running the Management Server must be on the PIX Firewall's "inside" (most secure) network.
- PIX Firewall Manager comes with a sound file, T1.AU, for the SYSLOG audio alarm. All sound files must be in .AU format. To use another .AU format sound file:

Step 1 Place the sound file on the Windows NT system running the Management Server in the following subdirectories of the Management Server's target directory:

- JClient\Netscape
- JClient\Others

Step 2 Click the Management Client's **Setting** tab to modify the audio filename.

Management Client Requirements

All machines running the Management Client must be on the PIX Firewall's inside network.

The Management Client network browser must be Java 1.02 or 1.1 compliant.

The following browsers are supported:

- Netscape Navigator version 3.0 or 3.01.
- Netscape Navigator Gold version 3.0 or 3.01.
- Netscape Communicator version 4.0 or 4.03.
- Netscape Navigator (standalone) version 4.03.

Note Using Netscape Communicator version 4.03 or Netscape Navigator version 4.03, the Management Client cannot run on the same system as the Management Server.

- Netscape Communicator version 4.04.
- Netscape Navigator (standalone) version 4.04.
- Microsoft Internet Explorer version 4.0.

The system running the browser must use Windows 95, Windows NT 4.0 Workstation, Windows NT 4.0 Server, or Solaris. On Windows 95 or Windows NT 4.0, 32 MB RAM is highly recommended.

Installing PIX Firewall Manager

Note Only users with Windows NT Administrator privileges can run the installer or uninstaller.

During installation, if a previous version of the PIX Firewall Manager is found, the installation program replaces the old version with the new.

To install PIX Firewall Manager:

Step 1 Verify network connectivity before starting. This consists of successfully performing the following:

- (a) From each PIX Firewall you intend to manage, ping the Windows NT system. Use the PIX Firewall **ping inside** command. The ping is successful if the “response received” message appears. If the ping is unsuccessful, verify the IP address of the Windows NT system and check the network cabling. For example, if the Windows NT system has an IP address of 192.168.42.42, you would use the following commands from the PIX Firewall to enter configuration mode and run the **ping** command:

```
enable
Password: (press Enter)
ping inside 192.168.42.42
```

- (b) From the Windows NT system, ping the inside interface of each PIX Firewall. To ping from Windows NT, click the **Start** menu. Then choose the **Run...** item and enter the **ping** command, or select the **Programs>Command Prompt** and enter the command there. The ping is successful if the “Reply from” message appears. If the ping is unsuccessful, verify the IP address of the inside interface of the PIX Firewall and check the network cabling. For example, if a PIX Firewall has an inside IP address of 192.168.42.54, you would enter this command:

```
ping 192.168.42.54
```

- (c) From the Windows NT system, establish a Telnet session with each target PIX Firewall. The Telnet is successful if the “PIX password” prompt appears. The default password is **cisco**. Enter the password and after messages appear, you then receive access to the PIX Firewall command prompt. If the Telnet is unsuccessful, go to the PIX Firewall console and use the **show telnet** command to ensure that the configuration has a **telnet** command entry for the IP address of the Windows NT system. Refer to “PIX Firewall Requirements” for information on how to enter the PIX Firewall console commands to get to configuration mode, give Telnet access, and to store the configuration in flash memory. For example, if a PIX Firewall has

an IP address of 192.168.42.54, enter these commands to access configuration mode, let administrators start Telnet sessions to the PIX Firewall console, and store the configuration in flash memory:

```
enable
Password: (press Enter)
configure terminal
: Created for PIX Firewall Manager
telnet 192.168.42.54
write memory
```

- Step 2** Exit all Windows programs.
- Step 3** Log in to the Windows NT system as **Administrator** or as any user who is a member of the **Administrator** group.
- Step 4** From the Windows NT system, insert the first PIX Firewall Manager diskette in the diskette drive. You can install the software:
- From the Add/Remove Programs icon in the Control Panel, accessed by choosing the Settings item from the **Start** menu.
 - From My Computer by double-clicking the diskette icon and then double-clicking the miniature computer Setup icon.
 - By choosing the Run item from the **Start** menu and entering the starting file name as **a:\setup.exe**. (If the 3.5-inch diskette is in another drive, use that drive's letter instead.)
- Step 5** Once the installation program starts, you are prompted with a series of dialog boxes. You can simply click **Next** and the installation will proceed without interruption. Alternately, you can designate an installation directory other than the default.
- Step 6** During the installation you are prompted for a port number for the PIX Firewall Manager's built-in web server, use the default, 8080, unless that port is in use already. Any port between 1025 and 64000 can be entered as an alternative. To pick another port, view <ftp://ftp.isi.edu/in-notes/iana/assignments/port-numbers> to find the ports in use. The installation program then copies its files and prompts you to insert the second diskette. Insert the diskette and the remaining files are copied.
- Step 7** At the last dialog box, click **Finish**. The Management Server starts automatically.
- Step 8** To check whether the Management Server is running, select **Start>Settings>Control Panel** and double-click the **Services** icon. Look for the "PIX Firewall Management Server" service name. A server is running if its status appears as Started. If the status field is blank, you may run the server by selecting its name and then clicking **Start**. If you need to stop the Management Server, refer to the instructions for doing so in "Management Server Requirements."
- Step 9** After the software setup completes, change the default passwords of the **pixadmin** and **pixuser** users with the Windows NT User Manager program described in the following section, "Changing Passwords."

Changing Passwords

To change passwords for the **pixadmin** and **pixuser** default user names:

- Step 1** Select **Start>Programs>Administrative Tools (Common)>User Manager**. If your Windows NT system is a domain controller, select **User Manager for Domains**.

-
- Step 2** When the User Manager starts, locate the two users, **pixadmin** and **pixuser** in the Username section of the screen.
 - Step 3** Select the **pixadmin** user name and select **User>Properties**.
 - Step 4** In the User Properties dialog box, enter the new password in the Password and Confirm Password fields.
 - Step 5** In the User Properties dialog box, check **Password Never Expires** to prevent the password from expiring. If the box is not checked, the password expires after the number of days set in the Account Policy Maximum Password Age configured in the Windows NT system. The default value set during Windows NT system installation is 42 days. Click **OK** to exit.
 - Step 6** Select the **pixuser** user name and select **User>Properties**. Enter the new password in the Password and Confirm Password fields.
 - Step 7** In the User Properties dialog box, check **Password Never Expires** to prevent the password from expiring. If the box is not checked, the password expires after the number of days set in the Account Policy Maximum Password Age configured in the Windows NT system. The default value set during Windows NT system installation is 42 days. Click **OK** to exit.
 - Step 8** Click **OK** to exit and select **User>Exit** to leave the User Manager.

Limiting Access to the Management Client

You can specify which users can access the Management Client by creating user accounts on the Windows NT system on which PIX Firewall Manager is installed and giving the user either PIX Firewall Manager administrative or read-only access privileges. When the Management Client starts, users enter their login ID and password and, if accepted, can then run PIX Firewall Manager.

Note Before limiting access to the Management Client, change the default password to a new value as described in the preceding section, “Changing Passwords.”

To limit access to the Management Client:

- Step 1** Start the User Manager as described in Step 1 in the preceding section, “Changing Passwords.” The User Manager dialog box appears. If you want to authorize access for users who already have accounts on the Windows NT system, proceed to Step 2. To add new users to the Windows NT system, select **User>New User**. Specify the information for the user including the user’s login name, full name, and password.
- Step 2** To give a user access to the Management Client, locate the Groups area at the bottom of the User Manager dialog box.
- Step 3** From the Groups area, if you want users to be able to change PIX Firewall settings, double-click **PIX Admins**. If you want users to only have read access and no change privileges, double-click **PIX Users**. The Local Group Properties dialog box then appears.
- Step 4** Click **Add** to add an existing user to the selected group. The Add Users and Groups dialog box appears.
- Step 5** From the Names field, select the name of the user you wish to add, click **Add**, and then click **OK** to complete adding this user. Control returns to the Local Group Properties dialog box where you can continue adding users. To exit back to the User Manager dialog box, click **OK**. Then exit User Manager by clicking **OK**.

Note Do not assign a user to both the PIX Admins and PIX Users groups.

Starting the Management Client

To start the Management Client, start the network browser, disable proxies and then access the Management client:

Windows 95, Windows NT, Solaris Netscape Navigator Version 3.x

- Step 1** Choose the **Network Preferences** option from the **Options** menu.
- Step 2** Click the **Proxies** tab, check the **No Proxies** option, and click **OK**.
- Step 3** Choose the **Open Location** option from the **File** menu, enter **^L**, or click **Open**, and enter the following:

`http://IP_address:port`

IP_address is the system running PIX Firewall Manager Server. *port* is the Management Server's web server port that you defined in Step 6 of "Installing PIX Firewall Manager."

Windows 95, Windows NT, Solaris Netscape Communicator 4.0, 4.03, 4.04, Netscape Navigator 4.03, 4.04

- Step 1** Choose the **Preferences...** item from the **Edit** menu. A dialog box appears.
- Step 2** In the hierarchy display at the left, double-click the **Advanced** item. (In Solaris, click the arrow beside **Advanced**.) The hierarchy expands to display additional choices.
- Step 3** Click the **Proxies** item from the expanded hierarchy list.
- Step 4** Check the **Direct connection to the Internet** option, and click **OK**.
- Step 5** Choose the **Open Location** option from the **File** menu, enter **^L**, or click **Open**, and enter the following:

`http://IP_address:port`

IP_address is the system running PIX Firewall Manager Server. *port* is the Management Server's web server port that you defined in Step 6 of "Installing PIX Firewall Manager."

Windows 95 or Windows NT Microsoft Internet Explorer 4.0

- Step 1** Choose the **Internet Options...** item from the **View** menu.
- Step 2** Click the **Connections** tab.
- Step 3** In the **Proxies Server** group box, disable the **Access the Internet using a proxy server** option.
- Step 4** Return to the main menu and enter the following:

`http://IP_address:port`

IP_address is the system running PIX Firewall Manager Server. *port* is the Management Server's web server port that you defined in Step 6 of "Installing PIX Firewall Manager."

Using the Management Client

You can view the Management Client applet with any network browser described in “Management Client Requirements.”

- Step 1** After you have disabled browser proxies as described in “Starting the Management Client” and started the Management Client, the home page appears.
- Step 2** You can generate reports from the Information section or start the Management Client at the bottom of the screen depending on the type of browser you are using.
- Step 3** You are then prompted for a user name and password. For the user name, enter **pixadmin** for read-write access, or **pixuser** for read-only access. Enter either the default password, **cisco**, or the new password entered in Step 9 in “Installing PIX Firewall Manager.”

You can use the **Enter** key to move between the user name and password fields (the Tab key has no effect). When you complete entering a user name and password, click **OK**. The Management Client then opens after it loads into memory.

Note When the program is loading, do not minimize the web browser.

- Step 4** If you need to restart the applet, you must first close and restart the Web browser, then load the applet again. Do not click the browser's **Reload** button because the browser may run out of memory, crash with a page fault, or become non-responsive.

Navigating the Management Client

After you enter your login credentials, the Management Client window appears.

- Step 1** To view or modify the PIX Firewall configuration, go to the Main Tree window on the left side of the window and double-click a PIX Firewall folder. If the Main Tree window is empty, click **Add A PIX Firewall** in the Contents window to add PIX Firewall units to the Main Tree. Click the **Reload Configuration** button in the Contents window to get the most current configuration.

Note Any change to the configuration of a PIX Firewall made in the Management Client is sent immediately to the firewall and automatically saved in the firewall's RAM.

Note If you have upgraded PIX Firewall software as described in *Installing PIX Firewall and PIX10000*, click the Reload Configuration button following the upgrade to get the current configuration information.

The areas of the screen are as follows:

- The tabs:
 - Administrator tab lets you view and change information for a firewall unit.
 - Alarm and Report tab lets you receive notification when errors occur and display system usage reports.
 - Setting tab lets you set information used by the Alarm and Report tab.

- The Save to Flash Mem of PIX button saves all configuration changes to flash memory in the PIX Firewall. Flash memory retains configuration information when the system power is lost for any reason.
- The Main Tree lists the PIX Firewall folders. The PIX Firewall Manager assigns a folder icon to each PIX Firewall unit available on the network. When you double-click the top level firewall icon, it displays the possible task areas for which you can view or change information. By double-clicking each subsequent folder, you work down to the individual task options that have the file icon.
- The PIX Firewall IP Addresses area keeps interface information visible at all times while configuring the PIX Firewall unit. Use the scroll bar to view all interfaces.
- The Contents area displays task information based on the PIX Firewall folder selection from the Main Tree. This area has several functions:
 - Displays help information on PIX Firewall folders and on other task selections.
 - Displays the configuration for the current task.
 - Provides button selections for viewing and changing configuration settings. Button selection varies based on the task selection. Buttons include Add, Delete, Help, Refresh, Edit, and Cancel. Use the **Save to Flash Mem of PIX** button to save all changes made in this area.

Step 2 Double-click the configuration option you want from the folder in the Main Tree. The folder then opens into a series of subfolders or files for each configuration feature. The Contents area displays information about each configuration feature. Use the button selections to get help information, view current configuration information, or change configuration settings.

Step 3 To ensure that the firewall can reload the new configuration after reboot, save the configuration in the firewall's flash memory by clicking the **Save to Flash Mem of PIX** button. To back up the configuration to a diskette, follow these steps:

- (a) Place an IBM-formatted diskette in the PIX Firewall's drive.
- (b) In the PIX Firewall Manager's Main Tree window, click the PIX Firewall folder's **Administration** folder.
- (c) Select **Save/Erase Config**, and click **to Floppy**.

Stopping the Management Client

To stop the Management Client, stop the network browser on which it runs.

Stopping the Management Server

If you need to stop the Management Server:

Step 1 Select **Start>Settings>Control Panel>Services**.

Step 2 When the Services dialog box opens, select the "PIX Firewall Management Server" item from the Service list. You can stop this service by clicking the **Stop** button.

Generating and Printing SYSLOG Reports

The PIX Firewall Manager provides two ways to view SYSLOG connection information: using the PIX Firewall Management Client graphical user interface, or using a Microsoft Excel macro and data files provided for Microsoft Excel 97. Options for printing reports are available only using Microsoft Excel 97.

To view SYSLOG reports from the PIX Firewall Management Client, follow the instructions for “Navigating the Management Client.” From the Management Client, click the Alarm and Report tab to view options for generating reports.

To view and print SYSLOG reports from the macro, follow the instructions for “Starting the Management Client” to display the PIX Firewall Manager home page. From the home page, click “how to log in” and “SYSLOG Reports Generation Procedure” for complete instructions on how to log in and generate reports. The login procedure requires you to use the default login name and password provided for PIX Firewall Manager installation.

Note The files you download for the macro program must be placed in the same directory.

Note The macro does not support viewing or printing detailed reports of FTP and HTTP file transfers as provided in reports generated by the PIX Firewall Management Client.

Cisco Connection Online

Cisco Connection Online (CCO) is Cisco Systems’ primary, real-time support channel. Maintenance customers and partners can self-register on CCO to obtain additional information and services.

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CCO serves a wide variety of users through two interfaces that are updated and enhanced simultaneously: a character-based version and a multimedia version that resides on the World Wide Web (WWW). The character-based CCO supports Zmodem, Kermit, Xmodem, FTP, and Internet e-mail, and it is excellent for quick access to information over lower bandwidths. The WWW version of CCO provides richly formatted documents with photographs, figures, graphics, and video, as well as hyperlinks to related information.

You can access CCO in the following ways:

- WWW: <http://www.cisco.com>
- WWW: <http://www-europe.cisco.com>
- WWW: <http://www-china.cisco.com>
- Telnet: cco.cisco.com
- Modem: From North America, 408 526-8070; from Europe, 33 1 64 46 40 82. Use the following terminal settings: VT100 emulation; databits: 8; parity: none; stop bits: 1; and connection rates up to 28.8 kbps.

For a copy of CCO’s Frequently Asked Questions (FAQ), contact cco-help@cisco.com. For additional information, contact cco-team@cisco.com.

Note If you are a network administrator and need personal technical assistance with a Cisco product that is under warranty or covered by a maintenance contract, contact Cisco's Technical Assistance Center (TAC) at 800 553-2447, 408 526-7209, or tac@cisco.com. To obtain general information about Cisco Systems, Cisco products, or upgrades, contact 800 553-6387, 408 526-7208, or cs-rep@cisco.com

CD-ROM Documentation

Cisco documentation and additional literature are available in a CD-ROM package, which ships with your product. The Documentation CD-ROM, a member of the Cisco Connection Family, is updated monthly. Therefore, it might be more current than printed documentation. To order additional copies of the Documentation CD-ROM, contact your local sales representative or call customer service. The CD-ROM package is available as a single package or as an annual subscription. You can also access Cisco documentation on the World Wide Web at <http://www.cisco.com>, <http://www-china.cisco.com>, or <http://www-europe.cisco.com>.

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This document is to be used in conjunction with the *PIX Firewall Series Configuration Guide* publication.

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