

**XEROX.**

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Phaser® 6360 color laser printer

Phaser® 8560 color printer

Phaser® 4510 laser printer

# System Administrator Guide

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# 1 Overview

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- [PrintingScout Alerts](#) on page 1-2
- [PhaserSMART Technical Support](#) on page 1-2
- [Xerox Support Centre](#) on page 1-4
- [CentreWare Internet Services \(IS\)](#) on page 1-5

You can obtain information regarding your printer and its capabilities from the following sources.

## Resources

Information	Source
Installation Guide*	Packaged with printer
Quick Use Guide*	Packaged with printer
User Guide (PDF)*	<i>Software and Documentation CD-ROM</i>
Advanced Features Guide (PDF)	<a href="http://www.xerox.com/support">www.xerox.com/support</a>
Quick Start Tutorials	<a href="http://www.xerox.com/support">www.xerox.com/support</a>
Video Tutorials	<a href="http://www.xerox.com/support">www.xerox.com/support</a>
Recommended Media List	<a href="http://www.xerox.com/paper">www.xerox.com/paper</a> (US version) <a href="http://www.xerox.com/paper">www.xerox.com/paper</a> (European version)
Printer Management Tools	<a href="http://www.xerox.com/office/pmtools">www.xerox.com/office/pmtools</a>
Online Support Assistant	<a href="http://www.xerox.com/support">www.xerox.com/support</a>
PhaserSMART	<a href="http://www.phaserSMART.com">www.phaserSMART.com</a>
Technical Support	<a href="http://www.xerox.com/support">www.xerox.com/support</a>
Information about menu selection or error messages on control panel	Control panel <b>Help</b> (?) button
Information pages	Control panel menu

\* Also available on the Support website.

## PrintingScout Alerts

PrintingScout is an automated tool that is installed with the Xerox printer driver. It automatically checks the printer status when a print job is sent. If the printer is unable to print a job, PrintingScout automatically displays an alert on the user's computer screen to let them know that the printer needs attention. The user can click the alert to view instructions explaining how to fix the problem. PrintingScout provides real-time support to users, while eliminating many of the help calls requesting printer support. PrintingScout saves you time for more critical tasks.

## PhaserSMART Technical Support

PhaserSMART Technical Support is an automated, internet-based support system that uses the user's default web browser to send diagnostic information from their printer to the Xerox website for analysis. PhaserSMART Technical Support examines the information, diagnoses the problem, and proposes a solution. If the problem is not resolved with the solution, PhaserSMART Technical Support assists the user in opening a Service Request with Xerox Customer Support.

PhaserSMART provides support to users, while eliminating many of the help calls requesting printer support. PhaserSMART Technical Support saves you time for more critical tasks.

## How to Access PhaserSMART

Use one of the following options to access PhaserSMART Technical Support:

- PrintingScout
- Web
- CentreWare IS
- The printer driver
- Xerox Support Centre

### Using PrintingScout Software

If PrintingScout displays an alert on your screen, do the following:

1. Click the alert to view instructions explaining how to fix the problem.
2. Follow the instructions on the screen.

### Using a Web Browser

To access PhaserSMART Technical Support from the web:

1. Open your browser and go to [www.phaserSMART.com](http://www.phaserSMART.com).
2. Enter your printer's IP address in the browser window.
3. Follow the instructions on the screen.



## Using CentreWare IS

To access PhaserSMART Technical Support from CentreWare IS:

1. Launch your web browser.
2. Enter your printer's IP address in the browser's **Address** field (<http://xxx.xxx.xxx.xxx>).
3. Click the **Support** tab.
4. Select the **PhaserSMART Diagnostic Tool** link.
5. Follow the instructions on the screen.

## Using a Windows Printer Driver

To access PhaserSMART Technical Support from your printer driver:

1. Select **Start**, select **Settings**, and then select **Printer and Faxes**.
2. Right-click the printer name, and then select **Properties**.
3. Select the **Troubleshooting** tab.
4. Select the **PhaserSMART Technical Support** link.
5. Follow the instructions on the screen.

## Using the Xerox Support Centre

To access PhaserSMART Technical Support from the Xerox Support Centre:

1. Select one of the following options:
  - **Windows:** Double-click the **Xerox Support Centre** icon on your desktop.
  - **Macintosh:** Click the **Xerox Support Centre** icon in the dock.
2. Select your printer from the **Select Printer** drop-down list.
3. Select the **Solutions** tab.
4. Select the **Advanced Solutions** link.
5. Select the **Technical Support** link.
6. Click the **PhaserSMART** icon.



Xerox Support Centre

*See also:*

[Xerox Support Centre](#) on page 1-4

## Xerox Support Centre

The **Xerox Support Centre** is a utility that is installed when running the driver installer. It is available for systems with Windows 2000 and later or Mac OS X, version 10.2 and higher.

The **Xerox Support Centre** appears on the desktop for Windows systems or is placed in the Mac OS X dock. It provides a central location for accessing the following information:

- User manuals and video tutorials
- Solutions to troubleshooting problems
- Printer and supplies status
- Supplies ordering and recycling
- Answers to frequently asked questions
- Default printer driver settings (Windows only)

**Note:** Xerox recommends that the Xerox driver installer be used to add a printer instead of the Microsoft Add Printer Wizard. If the Microsoft Add Printer Wizard is used, the Xerox Support Centre is not installed on the PC. Also, the Xerox driver installer installs the Xerox printer driver, enabling users to work more efficiently by accessing printer features and resources to solve simple problems. This eliminates many of the help calls requesting printer support, saving you time for more critical tasks.

To start the Xerox Support Centre utility:

1. Select one of the following options:
  - **Windows:** Double-click the **Xerox Support Centre** icon on your desktop.
  - **Macintosh:** Click the **Xerox Support Centre** icon in the dock.
2. Select your printer from the **Select Printer** drop-down list.



**Xerox Support Centre**

## CentreWare Internet Services (IS)

CentreWare IS provides a simple interface that enables you to manage, configure, and monitor networked printers from your desktop using an embedded web server. CentreWare IS gives administrators easy access to printer status, configuration, and diagnostic functions. It also provides users with access to printer status and special printing functions such as printing saved jobs. With CentreWare IS software, you can access and manage your printers over a TCP/IP network using a web browser.

CentreWare IS enables you to:

- Check supplies status from your desktop, saving a trip to the printer. Access job accounting records to allocate printing costs and plan supplies purchases.
- Define a network printer search and view a list of printers using Printer Neighborhood. The list provides current status information and allows you to manage printers independent of network servers and operating systems.
- Configure printers from your desktop. CentreWare IS makes it easy to copy settings from one printer to another.
- Define network, administration, and security features for a network printer.
- Set up and use a simple web-browser-based printing system. Marketing collateral, sales materials, business forms, or other standardized, frequently used documents can be saved as a group with their original driver settings then reprinted on demand at high speed from any user's browser. A printer with a hard drive is required to support these functions. In some printer models, a DX configuration is required to support these functions.
- Troubleshoot print-quality problems using built-in diagnostics.
- Define a link to your local web server's support page.
- Access online manuals and technical support information located on the Xerox website.

**Note:** CentreWare IS requires a web browser and a TCP/IP connection between the printer and the network (in Windows, Macintosh, or UNIX environments). TCP/IP and HTTP must be enabled in the printer. JavaScript is required to access the pages in Printer Neighborhood. If JavaScript is disabled, a warning message appears and the pages do not function properly.

To access CentreWare IS:

1. Launch your web browser.
2. Enter you printer's IP address in the browser's **Address** field (<http://xxx.xxx.xxx.xxx>).

For complete information about CentreWare IS, click the **Help** button in CentreWare IS to go to the *CentreWare IS Online Help*.

# 2 Network Installation Features

This chapter includes:

- [Using a Startup Network Configuration File](#) on page 2-2
- [Printer Driver Installation Features](#) on page 2-3
- [Discovery Protocols](#) on page 2-5

*See also:*

*Advanced Features Guide* at [www.xerox.com/support](http://www.xerox.com/support)

## Using a Startup Network Configuration File

This section includes:

- [About the Configuration File](#) on page 2-2
- [Configuration File Requirements](#) on page 2-2
- [Specifying the Location of the Configuration File](#) on page 2-2

### About the Configuration File

To configure printer settings or to perform other tasks, such as loading fonts, color tables, and job patches, you can create a startup network configuration file. Every time the printer is turned on or reset, the TFTP service on the TFTP server downloads the configuration file once an IP address is acquired and confirmed in the printer. The TFTP service processes the data in the configuration file as if it were a standard print job.

### Configuration File Requirements

The configuration file must be:

- A valid PostScript or PCL file that contains the appropriate PostScript, PCL, or PJJ commands. For a list of the Xerox-unique PCL and PJJ commands, see [Printer Commands on page B-1](#).
- Stored on a TFTP server that the printer can access over the TCP/IP network.

### Specifying the Location of the Configuration File

To specify the location of the configuration file, do one of the following:

- If the printer is connected to a TCP/IP network in a DHCP/BOOTP environment.
  - Use DHCP option 66 to specify the TFTP server IP address or hostname.
  - Use DHCP option 67 to specify the pathname of the configuration file.

For information on how to set these parameters, refer to your DHCP or BOOTP server documentation.

- If the printer is connected to a TCP/IP network in a non-DHCP environment, use CentreWare Internet Services (IS).

#### Using CentreWare IS

1. Click the **Properties** tab and expand the **Protocols** menu.
2. Select **TCP/IP**.
3. Under **TFTP Settings**, set the following:
  - Enter the TFTP server IP address or hostname in the **TFTP Server Name** field.
  - Enter the pathname of the configuration file in the **Boot File Name** field.
4. Click the **Save Changes** button.

For more information, see the *CentreWare IS Online Help*.

# Printer Driver Installation Features

This section includes:

- [Walk-Up Printing Driver](#) on page 2-3
- [Walk-Up Installation](#) on page 2-3
- [Installation from the Printer's Hard Drive or the Web](#) on page 2-4
- [Discovery Protocols](#) on page 2-5

## Walk-Up Printing Driver

The Xerox Walk-Up Printing Driver enables printing from a PC to any Xerox PostScript-enabled printer. This is especially helpful for mobile professionals who travel to multiple locations and need to print to different printers. Instead of installing the printer drivers for each printer, you can download this driver from the web. Although it doesn't enable access to all printer-specific features, it does enable access to common printing features, such as 2-sided printing.

The driver contains basic features that are common to most of the PostScript-enabled printers, including:

- Portrait, landscape, and rotated landscape orientations
- Single-sided or two-sided printing
- Single or multiple pages per sheet (including booklet printing)
- Paper or transparency printing
- Page size selection

**Note:** For information about Xerox printer driver features that are available with specific operating systems, see [Printer Driver Features](#) in the *Advanced Features Guide* for your printer at [www.xerox/support](http://www.xerox/support).

## Walk-Up Installation

The Xerox Installer enables quick and easy installation of the printer driver. The installer is included on the *Software and Documentation CD-ROM*, supplied with the printer, and is available on the web. When you run the installer, the main screen lists the Xerox printers of that model discovered on the network or connected via USB. You can choose one of the discovered printers, enter the IP address of the desired printer, or use Walk-Up Technology.

This technology is especially helpful when there is more than one Xerox printer on the discovered printers list and you don't know the printer's IP address.

To use Walk-Up installation:

1. Select **Walk-Up Technology**, and then click the **Next** button on the main installer screen.
2. Walk up to the printer, select **Walk-Up Features**, and then **Select for Installation** on the control panel.

The installer connects the computer to the printer, completes the driver installation, and then the printer prints a confirmation page.

## Installation from the Printer's Hard Drive or the Web

You can install the printer driver from the printer's hard drive. This is especially useful if you do not have the *Software and Documentation CD-ROM*.

**Note:** If the printer doesn't have a hard drive but is connected to the internet, you can use this procedure to automatically connect to the web to install the driver.

To install the printer driver either from the hard drive or the web:

1. Launch your web browser.
2. Enter your printer's IP address in the browser's **Address** field (<http://xxx.xxx.xxx.xxx>).
3. Click **Support**.
4. Select **Software Installation** on the left navigation panel.
5. Select the **Printer Drivers** link.
6. Do one of the following:
  - If you are a Windows user, click **Windows Driver Installer** to install the driver, and then click the **Install** button to install the printer.
  - If you are a Macintosh user, click **Macintosh Driver Installer** to download the driver.

## Auto-Configuring Driver

During installation, the bi-directional communication between the driver and a printer connected to a network identifies the printer's configuration (N, DN, DX, etc.) and the features available with the configuration such as, duplexing capability, additional trays, or a hard drive. The controls for settings, such as 2-sided printing, tray selection, and secure printing are displayed or hidden/grayed out, and the mimic displays the correct printer configuration. This driver feature prevents users from making incorrect selections during installation.

# Discovery Protocols

This section includes:

- [DDNS/WINS](#) on page 2-5
- [DNS \(Domain Name Services\)](#) on page 2-6
- [Service Location Protocol](#) on page 2-6
- [UPnP \(Universal Plug and Play\)](#) on page 2-7

## DDNS/WINS

DDNS/WINS settings can be obtained from the BOOTP or DHCP server, if enabled. These settings enable the printer to register its IP name and address so other devices on the network can refer to it by name.

To change the DDNS/WINS settings:

1. Launch your web browser.
2. Enter your printer's IP address in the browser's **Address** field (<http://xxx.xxx.xxx.xxx>).
3. Click the **Properties** tab.
4. Click the **Protocols** folder on the left navigation panel.
5. Select **TCP/IP**.
6. If prompted, enter your Admin or Key User name and password.
7. Under **DDNS/WINS Settings** select one of the following:
  - **On**: You can enter a DDNS/WINS Name and DDNS Domain Name.
  - **Off**: The values may be set by BOOTP/DHCP.
8. If you selected **On**, follow the instructions on the page. For more information, including a description of the fields, click the **Help** button in CentreWare IS to view the online help.
9. Click the **Save Changes** button.



## DNS (Domain Name Services)

DNS settings reference servers by name and allow you to enter and view host names rather than IP addresses.

**Note:** Turning Multicast DNS ON allows the printer to be automatically discovered on a TCP/IP network by Apple Macintosh OS X Bonjour technology.

To change the DNS settings:

1. Launch your web browser.
2. Enter your printer's IP address in the browser's **Address** field (<http://xxx.xxx.xxx.xxx>).
3. Click the **Properties** tab.
4. Click the **Protocols** folder on the left navigation panel.
5. Select **TCP/IP**.
6. If prompted, enter your Admin or Key User name and password.
7. Follow the instructions on the page. For more information, including a description of the fields, click the **Help** button in CentreWare IS to view the online help.
8. Click the **Save Changes** button.

## Service Location Protocol

To change the configuration of the Service Location Protocol (SLP) Service Agent in the printer:

1. Launch your web browser.
2. Enter your printer's IP address in the browser's **Address** field (<http://xxx.xxx.xxx.xxx>).
3. Click **Properties**.
4. Click the **Protocols** folder on the left navigation panel.
5. Select **TCP/IP**.
6. If prompted, enter your Admin or Key User name and password.
7. Under **Service Location Protocol (SLP) Settings**, in the **SLP Enable** field, select **On** or **Off**.
8. If you selected **On**, follow the instructions on the page. For more information, including a description of the fields, click the **Help** button in CentreWare IS to view the online help.
9. Click the **Save Changes** button.

## UPnP (Universal Plug and Play)

UPnP provides a simplified method to obtain an IP Address for a printer, locate devices on the network, and display those devices on desktop computers.

1. Launch your web browser.
2. Enter your printer's IP address in the browser's **Address** field (<http://xxx.xxx.xxx.xxx>).
3. Click **Properties**.
4. Click the **Protocols** folder on the left navigation panel.
5. Select **TCP/IP**.
6. If prompted, enter your Admin or Key User name and password.
7. Under **Universal Plug and Play (UPnP) Settings**, in the **Auto IP Enable** field, select **On** or **Off**.
8. Select **On** or **Off** for **SSDP Enable**:
  - **On**: will enable the printer to send and receive Simple Device Discovery Protocol announcements and requests.
  - **Off**: The printer will not issue nor respond to SSDP requests.
9. Set the **SSDP TTL** value. This value specifies the multicast radius, often referred to as *hop count* or *time-to-live*, for SSDP. The valid range is between 0-255.
10. Click the **Save Changes** button.

# 3 Network Administration Features

This chapter includes:

- [Printer Neighborhood](#) on page 3-2
- [Job Accounting](#) on page 3-3
- [Usage Profile Reports](#) on page 3-4
- [Xerox Usage Analysis Tool](#) on page 3-5
- [Protocol Control](#) on page 3-6
- [Cloning](#) on page 3-14

## Printer Neighborhood

Printer Neighborhood is a tool in CentreWare IS that enables you to search for printers on your network, check their status, and manage them remotely. You can also install, manage, and view printer usage information. Access to the embedded server in each printer enables you to perform other management tasks.

The default printer search mode is **Quick Phaser Search**, which quickly finds the Phaser printers on your local subnet. To search for all types of printers or to change other defaults, click the **Preferences** tab.

**Note:** Javascript is required in order to access and use pages in Printer Neighborhood. If Javascript is disabled, a warning message is displayed and the pages will not function properly.

To access Printer Neighborhood:

1. Launch your web browser.
2. Enter your printer's IP address in the browser's **Address** field (<http://xxx.xxx.xxx.xxx>).
3. Click the **Printer Neighborhood** button.

A list of network printers is displayed.

## Job Accounting

The printer stores information about print jobs. This information is stored in a log file, which lists job records. Each job record contains fields such as user name, job name, pages printed, job times, and toner or ink used. Not all fields are supported by all printers. For more information about the fields supported, go to the *CentreWare IS Online Help* or *CentreWare Web Online Help*.

The actual values reported can vary depending on the protocol and printer driver being used when each job was printed. For example, using NPRINT over NetWare provides the printer with the most information about the job being printed. When using Windows and NetWare, the job name is often LST: or LST:BANNER. Other jobs from other ports may provide even less information about the job.

The log file is stored either in the printer's RAM memory or on the hard drive if one is installed in the printer. Xerox recommends that a hard drive be used for job accounting.

- With a hard drive, the printer can store information about 5000 print jobs. The data in the log file is saved when the printer is turned off or reset.
- Without a hard drive, the printer can store information about the most recent 500 print jobs. The data in the log file is not saved when the printer is turned off or reset.

**Note:** Data in job accounting records may be a security risk because the names of users, as well as the titles, date, time, and length of printed jobs can be exposed. The content of print job pages is not stored in the job accounting system.

Job accounting can be enabled or disabled through CentreWare IS and CentreWare Web.

To access job accounting information using CentreWare IS:

1. Launch your web browser.
2. Enter the printer's IP address in the browser's **Address** field (<http://xxx.xxx.xxx.xxx>).
3. Click **Jobs**.

The **Job Accounting Links** page provides links that enable you to browse, download, clear, or disable job accounting records. For complete information on CentreWare IS job accounting, including clearing job information, downloading job information to a file, and job accounting file formats, click the **Help** button in CentreWare IS to view the online help.

To access CentreWare Web, go to [www.xerox.com/office/pmtools](http://www.xerox.com/office/pmtools).

### To Enable or Disable Job Accounting

1. Launch your web browser.
2. Enter the printer's IP address in the browser's **Address** field (<http://xxx.xxx.xxx.xxx>).
3. Click the **Properties** tab.
4. Select **Printer Security Settings** on the left navigation panel.
5. In the Job Accounting field, **enabled** is checked by default. To disable all job accounting uncheck the enabled check box.
6. Click the **Save Changes** button.

## Usage Profile Reports

Usage Profile reports provide information on many aspects of printer usage, such as ink or toner used, number of pages printed, and paper types used, gathered during the life of the printer. From this page you can view or print a report, and also send it to an email address you enter below, or to users who are specified in the Usage Profile Properties page.

### Setting Up Usage Profile Reporting

To set up usage profile reporting:

1. Launch your web browser.
2. Enter the printer's IP address in the browser's **Address** field (<http://xxx.xxx.xxx.xxx>).
3. Click **Jobs**.
4. Select **Usage Profile Reports** on the left navigation panel.
5. Click the **Usage Profile Properties** link.
6. Follow the instructions on the page to set up reports. For more information, including a description of the fields, click the **Help** button in CentreWare IS to view the online help.
7. Click the **Save Changes** button.

### Sending Usage Profile Reports

To send a usage profile report:

1. Launch your web browser.
2. Enter the printer's IP address in your browser's **Address** field (<http://xxx.xxx.xxx.xxx>).
3. Click **Jobs**.
4. Select **Usage Profile Reports** on the left navigation panel.
5. Enter the desired email address in the **Send to Specific Address** field.
6. Click the **Send Usage Profile Report** button.

**Note:** To send usage profile reports using email, MaiLinX must be properly set up. See [MaiLinX Remote Printing](#) on page 3-11.

## **Xerox Usage Analysis Tool**

The Xerox Usage Analysis Tool (UAT) enables you to collect and analyze enterprise-wide Xerox network printer usage data with customizable features:

- **Cost Analysis:** Track printing costs by groups of users or by groups of printers.
- **Print Job Analysis:** Analyze print jobs to review media type, color coverage, paper source, and other job specifics. Plan your next consumable order based on prior usage.
- **Printer Usage Analysis:** Track printer usage patterns to identify printers that are underworked or overused.
- **Reports:** Collect and present printer data in a number of formats with complete transaction and summary reports designed for Excel or other custom billing systems.

**Note:** Job accounting is enabled by default in the printer for the Usage Analysis Tool to be used. If job accounting is disabled, there are no records created in order for the Usage Analysis tool to function.

To ensure job accounting is enabled:

1. Launch your web browser.
2. Enter the printer's IP address in your browser's **Address** field (<http://xxx.xxx.xxx.xxx>).
3. Click **Properties**.
4. Select the **Security** folder on the left navigation panel.
5. Select **Printer Security Settings**.
6. In the **Job Accounting Record** field ensure the box **Enabled** is checked.

For complete information about using the Xerox Usage Analysis Tool provided by the application's online help system, go to [www.xerox.com/office/uat](http://www.xerox.com/office/uat).

## **System Requirements**

- IP network
- Xerox printer with Ethernet interface (optional hard drive recommended)
- Xerox Usage Analysis Tool client:
  - A PC with an Intel Pentium III processor or higher, at least 128 MB of RAM, and at least 500 MB of hard drive space recommended.
  - Operating systems supported: Windows 2000 Professional or later and Windows XP or later.
- Xerox Usage Analysis Tool server:
  - A PC with an Intel Pentium III processor or higher, at least 256 MB of RAM, and at least 1 GB of hard drive space recommended.
  - Operating systems supported: Windows 2000 or later, Windows XP or later, and Windows 2003 server or later.
- Framework: .NET Framework 1.1 (included with the Xerox Usage Analysis Tool)

# Protocol Control

This section includes:

- HTTP on page 3-6
- TCP/IP on page 3-7
- Port 9100 on page 3-7
- LPR on page 3-8
- IPP (Internet Printing Protocol) on page 3-8
- SNMP (Simple Network Management Protocol) on page 3-9
- FTP (File Transfer Protocol) on page 3-9
- Email Server or SMTP (Simple Mail Transfer Protocol) on page 3-10
- MaiLinX Remote Printing on page 3-11
- MaiLinX Alerts on page 3-12

*See also:*

Discovery Protocols on page 2-5

All network protocols, including network printing, printing services, printer discovery, and management protocols can be enabled or disabled on the printer. If a protocol is enabled, you can set configuration parameters.

**Note:** To secure protocols, disable any protocols you are not using. This prevents unauthorized access through applications that use these protocols. For example, if you want to use IPP for a secure printing channel, disable the other printing protocols, Port 9100 and LPR.

## HTTP

By default, HTTP is enabled. For information on disabling HTTP, contact Xerox Technical Support at [www.xerox.com/support](http://www.xerox.com/support).

*See also:*

About HTTP, HTTPS, and SSL/TLS on page 4-3



## TCP/IP

To change TCP/IP settings:

1. Launch your web browser.
2. Enter your printer's IP address in the browser's **Address** field (<http://xxx.xxx.xxx.xxx>).
3. Click **Properties**.
4. Select the **Protocols** folder on the left navigation panel.
5. Select **TCP/IP**.
6. If prompted, enter your Admin or Key User name and password.
7. In the **BOOTP/DHCP** box, select one of the following:
  - **On**: The printer issues BOOTP and DHCP requests on startup.
  - **Off**: The printer does not issue BOOTP or DHCP requests on startup.
8. If you selected **Off**, follow the instructions in the **TCP/IP Settings** section to manually enter the printer's TCP/IP information.
  - Enter the TFTP server IP address or hostname in the **TFTP Server Name** field.
  - Enter the pathname of the configuration file in the **Boot File Name** field.
9. Under **DDNS/WINS Settings**, in the **DDNS** box, select one of the following:
  - **On**: The printer registers its IP name and address so other devices on the network can refer to it by name.
  - **Off**: The printer does not register its IP name and address. If **DDNS** is **Off**, these values may be set by **BOOTP/DHCP** if enabled.
10. If you selected **On**, follow the instructions in **DDNS/WINS Settings** to manually enter settings to identify the printer. For more information, including a description of the fields, click the **Help** button in CentreWare IS to view the online help.
11. Click the **Save Changes** button.

## Port 9100

The Port 9100 protocol is also known as AppSocket, RAW, or Windows TCPmon.

To change Port 9100 settings:

1. Launch your web browser.
2. Enter your printer's IP address in the browser's **Address** field (<http://xxx.xxx.xxx.xxx>).
3. Click **Properties**.
4. Select the **Protocols** folder on the left navigation panel.
5. Select **Port 9100**.
6. If prompted, enter your Admin or Key User name and password.
7. Select **On** or **Off** in the **Port 9100** box.
8. If you selected **On**, follow the instructions on the page to select Port 9100 settings. For more information, including a description of the fields, click the **Help** button in CentreWare IS to view the online help.
9. Click the **Save Changes** button.

## LPR

LPR is an application-level printing protocol that uses TCP/IP to establish connections between printers and workstations on a network.

To change LPR settings:

1. Launch your web browser.
2. Enter your printer's IP address in the browser's **Address** field (<http://xxx.xxx.xxx.xxx>).
3. Click **Properties**.
4. Select the **Protocols** folder on the left navigation panel.
5. Select **LPR**.
6. If prompted, enter your Admin or Key User name and password.
7. Select **On** or **Off** in the **LPR** box.
8. If you selected **On**, follow the instructions on the page to select LPR settings. For more information, including a description of the fields, click the **Help** button in CentreWare IS to view the online help.
9. Click the **Save Changes** button.

## IPP (Internet Printing Protocol)

IPP is an industry standard protocol for printing, as well as managing print jobs and media sizes, and supports authentication and encryption, making it a capable and secure printing solution. IPP is an IP-based protocol and can be used locally or over the internet.

**Note:** To configure IPP for secure/encrypted printing, specify a user name, password, and digest authentication (for Windows only). Every client that tries to print to the printer over IPP must enter this information. The user name and password are sent in plain text to the printer. If you specify digest authentication, the password is secured before it is sent to the printer.

To change IPP settings:

1. Launch your web browser.
2. Enter your printer's IP address in the browser's **Address** field (<http://xxx.xxx.xxx.xxx>).
3. Click **Properties**.
4. Select the **Protocols** folder on the left navigation panel.
5. Select **IPP**.
6. If prompted, enter your Admin or Key User name and password.
7. Select **On** or **Off** in the **IPP (Internet Printing Protocol)** box.
8. If you selected **On**, follow the instructions on the page to select IPP settings. For more information, including a description of the fields, click the **Help** button in CentreWare IS to view the online help.
9. Click the **Save Changes** button.

## SNMP (Simple Network Management Protocol)

SNMP is a set of protocols designed to help manage complex networks. SNMP-compliant devices store data about themselves in MIBs and return this data to the SNMP requesters. The SNMP Configuration pages provide control over SNMP security, including methods to configure:

- Administrative and Key User accounts with privacy and authentication protocols and keys associated with each account.
- SNMP user account read or read/write access.
- An access control list that limits SNMP access to the printer to specific hosts.

For information on configuring SNMP, see [Configuring SNMP](#) on page 4-17.

## FTP (File Transfer Protocol)

FTP is a protocol for exchanging files over any network supporting the TCP/IP protocol, such as the internet or an intranet. You can use FTP to send print-ready files to the printer or to retrieve Job Accounting records from the printer.

To change FTP settings:

1. Launch your web browser.
2. Enter your printer's IP address in the browser's **Address** field (<http://xxx.xxx.xxx.xxx>).
3. Click **Properties**.
4. Select the **Protocols** folder on the left navigation panel.
5. Select **FTP**.
6. If prompted, enter your Admin or Key User name and password.
7. Select **On** or **Off** in the **FTP** box.
8. If you selected **On**, follow the instructions on the page to select FTP settings. For more information, including a description of the fields, click the **Help** button in CentreWare IS to view the online help.
9. Click the **Save Changes** button.

### Retrieving the Job Accounting file via HTTP or FTP

To access the job accounting file via FTP:

1. Connect to your printer via FTP using the following command `FTP Printer_IP_Address`.
2. Type `get jobacct.log` to retrieve the job accounting file.

**Note:** The files on the printer cannot be displayed using the `dir/ls` commands

To access the job accounting file via HTTP:

1. Enter `http://Printer_IP_Address/jobacct.dat` in your web browser.

## Email Server or SMTP (Simple Mail Transfer Protocol)

The Email server settings page enables you to configure email server settings and to specify a return email address for undeliverable email.

You can configure email server settings in CentreWare IS by either:

- Automatically identifying the SMTP email server (recommended).
- Manually specifying the SMTP email server.

You can also specify a return email address for undeliverable email, such as MaiLinX alerts and usage profile reports, to your email address.

To configure email server settings:

1. Launch your web browser.
2. Enter the printer's IP address in the browser's **Address** field (<http://xxx.xxx.xxx.xxx>).
3. Click **Properties**.
4. Select the **Protocols** folder on the left navigation panel.
5. Select **Email Server**.
6. If prompted, enter your Admin or Key User name and password.
7. Do one of the following:
  - To automatically identify the SMTP email server, click the **Use DNS to Identify SMTP Server (Automatic)** option, and then enter the **Primary Name Server IP Address** and the **Secondary Name Server IP Address** using the 4-byte IP address of the email server.
  - To manually specify the SMTP email server, click the **Specify SMTP Server Manually** option, and then enter the information for the email server. Set the 4-byte IP address of the SMTP Email Server to send alert notifications. If there is no DNS server, then only the IP Address is allowed.
8. (Optional) To specify an email address for returning undeliverable email, enter your email address in the **Return Email Address** field.
9. Click the **Save Changes** button.

*See also:*

[MaiLinX Alerts](#) on page 3-12

[Usage Profile Reports](#) on page 3-4

## MaiLinX Remote Printing

MaiLinX Remote Printing provides the following key features:

- The ability to send print jobs to a group of printers.
- Print services across firewalls and proxies.
- Status reporting using email messages.

MaiLinX Remote Printing consists of two parts:

- Client software installed on each user's workstation or PC enables users to send print jobs from Windows applications to Xerox printers over the Internet. The client software enables users to set up their Internet-connected printers and create groups and subgroups of printers for easy distribution of print jobs.
- A CentreWare IS Printing Service on a Xerox printer processes the print jobs from the clients.

### System Requirements

- The client software requires an SMTP-capable email server/forwarder through which the client software on the user's computer can send email.
- Each printer requires an account on a POP3-capable email server from which it can retrieve email.

### Setting Up MaiLinX Remote Printing

To set up your printer for remote printing:

1. Launch your web browser.
2. Enter the printer's IP address in the browser's **Address** field (<http://xxx.xxx.xxx.xxx>).
3. Click **Properties**.
4. Select the **Protocols** folder on the left navigation panel.
5. Select **Remote Printing**.
6. If prompted, enter your Admin or Key User name and password.
7. Set the **MaiLinX Remote Printing** box to **On**. Follow the instructions on the **MaiLinX Remote Printing** page to set up your printer for remote printing. For more information including a description of the fields, click the **Help** button in CentreWare IS to view the online help.

## MaiLinX Alerts

### About MaiLinX Alerts

MaiLinX alerts enable the printer to automatically send email to you and/or specified users when the following conditions occur:

- The printer requires attention or when service is needed.
- The printer displays an error, warning, or alert.
- A reply to a MaiLinX Remote Printing message is desired.

For more information, click the **Help** button in CentreWare IS to view the online help.

### Setting Up MaiLinX Alerts

To enable MaiLinX alerts:

1. Launch your web browser.
2. Enter the printer's IP address in the browser's **Address** field (<http://xxx.xxx.xxx.xxx>).
3. Click **Properties**.
4. Select the **General** folder on the left navigation panel.
5. Select **Mail Alerts**.
6. If prompted, enter your Admin or Key User name and password.
7. Select **On** in the **MaiLinX (and Usage Profile Properties)** box.
8. Follow the instructions on the page to specify up to three users to receive messages: Admin, Key User, and Service. You can also select advanced settings for:
  - Specifying email server settings.
  - Reading or changing default messages.
  - Reading or changing conditions and trigger settings.
9. Click the **Save Changes** button.

## **EtherTalk**

To change EtherTalk settings:

1. Launch your web browser.
2. Enter the printer's IP address in the browser's **Address** field (<http://xxx.xxx.xxx.xxx>).
3. Click **Properties**.
4. Select the **Protocols** folder on the left navigation panel.
5. Select **EtherTalk**.
6. If prompted, enter your Admin or Key User name and password.
7. Select **On** or **Off** in the **EtherTalk** box.
8. If you selected **On**, follow the instructions on the page to select EtherTalk options. For more information, including a description of the fields, click the **Help** button in CentreWare IS to view the online help.
9. Click the **Save Changes** button.

## Cloning

Cloning enables you to configure one printer and then copy that configuration to another printer on the same network. You can access cloning using CentreWare IS or CentreWare Web. Using CentreWare IS, you can select the settings you want to clone from one printer to another printer. Using CentreWare Web, you can select the settings you want to clone from one printer to one or more printers.

To clone settings from one printer to another printer using CentreWare IS:

1. Launch your web browser.
2. Enter your printer's IP address in the browser's **Address** field (<http://xxx.xxx.xxx.xxx>).
3. Click **Properties**.
4. Select **Clone Printer** on the left navigation panel.
5. If prompted, enter your Admin or Key User name and password.
6. On the **Clone Printer** page, select the settings you want to clone from the source printer or click **Check All** to select all the settings. The settings are:
 

■ 802.1X	■ Control Panel Lockout
■ Custom Paper Types	■ Date and Time
■ Email Server	■ E-Supplies
■ EtherTalk	■ FTP
■ HTTPS	■ Information Forwarding
■ Input Trays	■ Interfaces
■ IPP	■ LPR
■ Mail Alerts	■ PCL
■ Port 9100	■ PostScript
■ Printer Defaults	■ Printing Security Settings
■ Remote Printing	■ Security
■ SNMP	■ TCP/IP
■ Usage Profile Properties	■ Warmup
■ Web Links	
7. Enter the IP address or DNS Name of the destination printer in the **IP Address** or **DNS Name** field.
8. (Optional) To assign a printer name to the destination printer, enter this name in the **Printer Name (SNMP System Name)** field.
9. If the destination printer is located in a different domain/zone, modify the information in the **EtherTalk Zone** and/or **IP Domain Name** fields.
10. Click the **Clone Selected Settings** button.  
A list of the selected settings to clone is displayed.
11. Click the **Clone** button to clone the destination printer with the selected settings from the source printer.

To access CentreWare Web, go to [www.xerox.com/office/pmtools](http://www.xerox.com/office/pmtools).



# 4 Security Features

This chapter includes:

- [Basic Concepts](#) on page 4-2
- [Securing the Printer in a High Security Environment](#) on page 4-5
- [Managing Certificates](#) on page 4-6
- [Configuring SSL](#) on page 4-7
- [Configuring Administrator and Key User Settings](#) on page 4-8
- [Configuring the Print Host Access List](#) on page 4-9
- [Controlling Access to Color Printing](#) on page 4-10
- [Securing the Hard Drive](#) on page 4-11
- [802.1X Configuration](#) on page 4-14
- [Locking the Control Panel Menus](#) on page 4-16
- [Configuring SNMP](#) on page 4-17

## Basic Concepts

This section includes:

- [About Admin and Key User Accounts](#) on page 4-2
- [About HTTP, HTTPS, and SSL/TLS](#) on page 4-3
- [About Certificates](#) on page 4-3
- [About Access Control Lists](#) on page 4-4

### About Admin and Key User Accounts

Admin and Key User accounts in CentreWare IS enable you to limit access to specific printer functions by specifying passwords for user classes. CentreWare IS requires a name and password before access to the controlled printer functions are allowed.

The user classes are:

- **Admin:** The person with the ultimate management responsibility and authority for controlling all functions of the printer.
- **Key User:** A person who has some administrative responsibilities and who manages some or all of the printer functions.
- **Any User:** Includes the majority of people who will be sending print jobs to the printer.

Once the passwords are set, select the printer functions from the Feature Authorization list that each user class has the right to access. The three categories of printer functions are:

- Administrative
- Web Server Printing
- Printer Neighborhood

*See also:*

- [Configuring Administrator and Key User Settings](#) on page 4-8

## About HTTP, HTTPS, and SSL/TLS

HTTP (Hyper Text Transfer Protocol) is the protocol used to communicate across the internet between the printer web server and the web browser (clients). Because the data is transmitted in plain text and passwords are only slightly encrypted, it is not secure; the data can be read or intercepted by other people.

HTTPS (Secure Hyper Text Transfer Protocol) is a secure version of HTTP. HTTPS provides authentication and encrypted communication to preserve the confidentiality of your data. Instead of using plain text, HTTPS uses either the SSL (Secure Socket Layer) protocol or the TLS (Transport Layer Security) protocol to encrypt data, thus ensuring reasonable protection from eavesdroppers and man-in-the-middle attacks.

Before using HTTPS, you must set up a certificate and select when to use SSL to encrypt data. You can set the printer to use SSL either to secure web pages that use passwords or to secure all web pages.

*See also:*

[About Certificates](#) on page 4-3

[Managing Certificates](#) on page 4-6

[Configuring SSL](#) on page 4-7

## About Certificates

A certificate is an electronic message containing information about the printer and a digital signature.

Before configuring passwords, set up a certificate and then configure SSL to encrypt data including passwords for maximum security. You can set up a self-signed certificate or download a root-signed certificate, depending on your requirements.

### Device Certificates:

A device certificate is stored in the printer and is used to validate the identity of the printer to clients and network servers and to allow encrypted communication. If you do not install a device certificate signed by a Certificate Authority (CA), a default self-signed device certificate is automatically established on the printer when it is needed. A CA signed device certificate is needed to log into the network when using 802.1X EAP authentication with TLS.

### Self-Signed Certificates

Setting up a self-signed certificate is a quick and easy way to establish a certificate on the printer. The printer automatically generates a default self-signed certificate when the printer is turned on for the first time. To modify the certificate so it is specific to your printer, use CentreWare IS to enter information about the location of the printer.

While self-signed certificates are safe for most applications and allow data encryption, they do not ensure valid authentication. Self-signed certificates are not necessarily secure because the certificate owner is only confirming his own identity instead of verification by a trusted third party. Although self-signed certificates encrypt the data that is exchanged, they do not prevent man-in-the-middle attacks.

If you want to use HTTPS, each printer must have a unique certificate that is accepted by each browser used to access the printer. This allows the printer web server to use HTTPS and encrypt data between the web browser and the printer. In addition, because each printer's certificate is unique, you must load a different certificate into the browser for each printer the browser will access.

*See also:*

[Self-Signed Certificates](#) on page 4-3

## Root-Signed Certificates

Root-signed certificates are from a trusted Certificate Authority (CA). Using a certificate signed by a CA enables you to load one certificate into each browser, allowing access to all printers. Certificates from a trusted third party are considered more secure than self-signed certificates. Unlike self-signed certificates, root-signed certificates are not susceptible to man-in-the-middle attacks.

*See also:*

[Root-Signed Certificates](#) on page 4-4

[Managing Certificates](#) on page 4-6

[Configuring SSL](#) on page 4-7

## About Access Control Lists

Access control lists enable you to limit access to devices, as well as device configuration and management features. By default, access control lists are unrestricted, which means all computers and host systems are allowed access.

The printer has five access control lists that may be configured using CWIS:

- **Print Host Access List:** The computers from which users can print. For information on setting up the Print Host Access List, see [Configuring the Print Host Access List](#) on page 4-9.
- **Color Access Control:** A 4-digit numeric password is required in order for users to print in color. Color access control is available on color printers only.
- **Administrator Access List:** The computers from which you can change printer settings. For information on setting up the Administrator Access List, see [Configuring Administrator and Key User Settings](#) on page 4-8.
- **Key User Access List:** The computers from which key users can change printer settings. For information on setting up the Key User Access List, see [Configuring Administrator and Key User Settings](#) on page 4-8.
- **SNMP Access List:** The host machines that are authorized to access the printer using SNMP. For information on setting up the SNMP Access List, see [Configuring the SNMP Access Control List](#) on page 4-22.

## Securing the Printer in a High Security Environment

If you are concerned about the security of your printer in a high security environment, such as a college or printing kiosk, you can configure settings in CentreWare IS to “lockdown” or fully secure the printer. If you are not concerned about the security of your printer, you may only need to set up a certificate and then configure SSL to encrypt data including passwords.

To fully secure a printer:

1. Set up a certificate. (See [Managing Certificates](#) on page 4-6.)
2. Select when to use SSL. (See [Configuring SSL](#) on page 4-7.)

**Note:** The following steps may be completed in any order.

3. Select the Administrator and Key User Settings. (See [Configuring Administrator and Key User Settings](#) on page 4-8.)

**Note:** To prevent users from changing settings, clear the **Modify Configuration Web Pages** check box. To prevent users from viewing settings, clear the **View Configuration Web Pages** check box.

4. Set up the Print Host Access List. (See [Configuring the Print Host Access List](#) on page 4-9.)
5. Set up the removal of Unprinted Personal, Secure, and Proof Print Jobs. (See [Selecting the Automatic Removal of Secure, Personal, and Proof Jobs Option](#) on page 4-12.)
6. Select the **Hard Drive Overwrite** option. (See [Securing the Hard Drive](#) on page 4-11.)
7. Select the **Jam Recovery** option. (See [Jam Recovery](#) on page 5-3.)
8. Lock the control panel menus. (See [Locking the Control Panel Menus](#) on page 4-16.)
9. Configure SNMP. (See [Configuring SNMP](#) on page 4-17.)
10. Disable unused protocols. (See [Protocol Control](#) on page 3-6.)
11. Disable **Job Accounting**. (See [To Enable or Disable Job Accounting](#) on page 3-3.)

**Note:** To secure protocols, disable any protocols you are not using. This prevents unauthorized access through applications that use these protocols. For example, if you want to use IPP for a secure printing channel, disable the other printing protocols, Port 9100 and LPR. Disabling some protocols also disables some printer functions, such as printer discovery and PrintingScout.

## Managing Certificates

To modify a self-signed certificate so it is specific to your printer or to install a downloaded root-signed certificate on the printer:

1. Launch your web browser.
2. Enter your printer's IP address in the browser's **Address** field (<http://xxx.xxx.xxx.xxx>).
3. Click **Properties**.
4. Expand the **Security** folder on the left navigation panel.
5. Select **Certificates**.
6. If prompted, enter your Admin or Key User name and password.
7. All of the certificates created will appear in the **Friendly Name** list. From here you can delete existing certificates or Add/Create a new certificate.

To create a new certificate or CSR:

1. Click the **Add/Create Certificate** button.
2. Select from one of the following:
  - **Install a new Root Certificate:** Installs a new root certificate that is needed to validate the authentication server's certificate when using 802.1X EAP authentication.
  - **Install a CA signed Device Certificate:** Installs a device certificate signed by a certificate authority (CA) that validates the identity of the printer to the network.
  - **Create Certificate Signing Request (CSR):** Once a CSR is created, you can send it to a trusted CA for signing, and when returned, install the CA signed device certificate on the printer.
  - **Create Self-Signed Device Certificate:** Modifies the default self-signed device certificate that is automatically established on the printer by adding the details of your organization and location, etc.
3. Click the **Next** button, and follow the on screen prompts.

For information on configuring certificates, click the **Help** button in CentreWare IS to go to the *CentreWare IS Online Help*.

*See also:*

[About Certificates](#) on page 4-3

## Configuring SSL

Once a certificate is set up, you can select when to use SSL to secure the connection between the printer and the server.

**Note:** You can restrict user access to SSL pages in CentreWare IS. For more information, see [Configuring Administrator and Key User Settings](#) on page 4-8.

To configure SSL:

1. Launch your web browser.
2. Enter your printer's IP address in the browser's **Address** field (<http://xxx.xxx.xxx.xxx>).
3. Click **Properties**.
4. Select the **Security** folder on the left navigation panel.
5. Select **HTTPS**.
6. If prompted, enter your Admin or Key User name and password.
7. In the **Use SSL** box, select one of the following options:
  - **Never** (the default): SSL authentication is not required.
  - **To Secure Passwords**: Secures web pages that use passwords. A certificate must exist on the printer before you can use this setting.
  - **To Secure Pages and Passwords**: Secures all web pages.
8. Click the **Save Changes** button.

*See also:*

[Managing Certificates](#) on page 4-6

## Configuring Administrator and Key User Settings

To prevent unauthorized changes to printer settings:

1. Launch your web browser.
2. Enter your printer's IP address in the browser's **Address** field (http://xxx.xxx.xxx.xxx).
3. Click **Properties**.
4. Select the **Security** folder on the left navigation panel.
5. Select **Administrative Security Settings**.
6. If prompted, enter your Admin or Key User name and password.
7. In the **Administrator Settings** box, do one or both of the following:
  - In the **Host Access List** field, enter the IP addresses or host names of the computers allowed to change printer settings. Separate entries with a blank or a comma, specify ranges with a hyphen (-), and use an asterisk (\*) to represent a group of numbers (e.g., 13.62.156.\*). The default setting is **Unrestricted**, which allows all users to change printer settings.
  - In the **User Name** and **Password** fields, enter your user name and password (up to 10 alphanumeric characters). In **Verify Password**, re-enter the password. The user name and password should be kept secure.
8. Repeat Step 7 in the **Key User** box. When entering the user name and password, enter the user name and password for key users.

**Note:** If you want to use the Key User account, you must configure an Administrator account. If the Administrator account is empty, then Any User has the same permissions as the Administrator user.

9. In the **Feature Authorization Settings** box, select the check boxes next to the settings you want to enable for each type of user. Clear the check boxes next to the settings you want to prevent users from changing. The administrator has full rights and access to all functions. Any User may not have greater access to a function than the Key User.

**Note:** If you want to prevent users in the **Key User** or **Any User** classes from using CentreWare IS to change printer settings, clear the **Modify Configuration Web Pages** check box. If you want to prevent users in the **Key User** or **Any User** classes from viewing CentreWare IS pages that control printer settings, clear the **View Configuration Web Pages** check box.

10. Click the **Save Changes** button.

See also:

[About Admin and Key User Accounts](#) on page 4-2



## **Configuring the Print Host Access List**

To prevent unauthorized printing to your printer:

1. Launch your web browser.
2. Enter your printer's IP address in the browser's **Address** field (<http://xxx.xxx.xxx.xxx>).
3. Click **Properties**.
4. Select the **Security** folder on the left navigation panel.
5. Select **Printing Security Settings**.
6. If prompted, enter your Admin or Key User name and password.
7. Enter the IP addresses or host names of the computers allowed printing access in the **Host Access List** field. Separate entries with a blank or a comma, specify ranges with a hyphen (-), and use an asterisk (\*) to represent a group of numbers (e.g., 13.62.156.\*). The default setting is **Unrestricted**, which allows all users to access the printer to print their jobs.
8. Click the **Save Changes** button.

*See also:*

[About Access Control Lists](#) on page 4-4

## **Controlling Access to Color Printing**

**Note:** Color access controls are available on color printers only.

To control the user's access to color printing, you can require the use of a 4-digit numeric password to print in color.

To require a password:

1. Launch your web browser.
2. Enter your printer's IP address in the browser's **Address** field (<http://xxx.xxx.xxx.xxx>).
3. Click **Properties**.
4. Select the **Security** folder on the left navigation panel.
5. Select **Printing Security Settings**.
6. Enter a 4-digit numeric password in the **Color Permission PIN** field.
7. Click the **Save Changes** button.

**Note:** Users will not be able to use the color options in the printer driver without entering a numeric password.

# Securing the Hard Drive

This section includes:

- [Selecting the Hard Drive Overwrite Security Option](#) on page 4-11
- [Selecting the Automatic Removal of Secure, Personal, and Proof Jobs Option](#) on page 4-12

## Selecting the Hard Drive Overwrite Security Option

When a file is deleted from the printer's hard drive, only the file name is deleted; the data in the file remains on the hard drive, regardless of the operating system. An unauthorized person could, possibly, retrieve the data in the file that was deleted.

Printers with a hard drive have a Hard Drive Overwrite Security option. This option overwrites the data stored on the hard drive of a file marked for deletion using DOD5200.28-M, a U.S. Department of Defense three-pass overwriting process: first with a pattern of 0's, next with a pattern of 1's, and finally with a random pattern of bits. This is done before the file's directory entry is removed and the storage space on the hard drive is marked as available for reuse. The random pattern of bits stays on the hard drive until it is overwritten by another file.

By default, the Hard Drive Overwrite Security option is disabled. To select the Hard Drive Overwrite Security option, you can use one of the following methods:

- The printer's control panel.
- CentreWare IS

### Using the Control Panel

To select the automatic removal of secure, personal, and proof print files from the hard drive:

1. On the control panel, select **Printer Setup**, and then press the **OK** button.
2. Select **File Security**, and then press the **OK** button.

**Note:** If File Security is locked on the control panel, use CentreWare IS to select the Hard Drive Overwrite Security option.

3. To remove all secure, personal, and proof print job files:
  - a. Select **Overwrite Removals**, and then press the **OK** button to select **On** or **Off**.

**Note:** Remove Job Files does not remove saved or protected print job files.

## Using CentreWare IS

To select the Hard Drive Overwrite Security option:

1. Launch your web browser.
2. Enter the printer's IP address in the browser's **Address** field (http://xxx.xxx.xxx.xxx).
3. Click **Properties**.
4. Select the **Security** folder on the left navigation panel.
5. Select **Printing Security Settings**.
6. If prompted, enter your Admin or Key User name and password.
7. Under **Hard Drive Overwrite Security Options**, select one of the following options:
  - **Never overwrite files/jobs**: Disables the printer's overwrite feature.
  - **Always overwrite when deleting files/jobs**: Sets the printer to always overwrite the files on the hard drive when they are deleted.
8. Click the **Save Changes** button.

## Selecting the Automatic Removal of Secure, Personal, and Proof Jobs Option

The printer enables you to store secure, personal, and proof jobs on the hard drive and then print them later. You can choose how long these jobs remain on the hard drive. This feature is useful when someone:

- Forgets about an unprinted secure, personal, or proof job that was stored on the hard drive.
- Sends a secure job to the printer, but does not walk to the printer to print the job.
- Stores a proof job, prints it once, and then forgets to delete it.

To set the automatic removal of secure, personal, and proof print files from the hard drive, use one of the following methods:

- The printer's control panel
- CentreWare IS

## Using the Control Panel

To select the automatic removal of secure, personal, and proof print files from the hard drive:

1. On the control panel, select **Printer Setup**, and then press the **OK** button.
2. Select **File Security**, and then press the **OK** button.

**Note:** If File Security is locked on the control panel, use CentreWare IS to select the Hard Drive Overwrite Security option.

3. To remove all secure, personal, and proof print job files:
  - a. Select **Overwrite Removals**, and then press the **OK** button to select **On** or **Off**.

**Note:** Remove Job Files does not remove saved or protected print job files.

4. To remove all secure, personal, and proof print files every day at a set time:
  - a. Select **Daily Removal**, and then press the **OK** button to select **On** or **Off**.
  - b. Select **Remove At HH:MM**, and then press the **OK** button.
  - c. Enter the hour, and then press the **OK** button.
  - d. Enter the minute, and then press the **OK** button.
5. To remove all secure, personal, and proof print files after the files are a certain age or older:
  - a. Select **Age-based Removal**, and then press the **OK** button to select **On** or **Off**.
  - b. If you selected **On**, select **Remove At Age**, and then press the **OK** button.
  - c. Enter **1** to **999** hours, and then press the **OK** button.

**Note:** To reset all items in the File Security menu to their default values, select **Reset File Security**.

### Using CentreWare IS

To select the automatic removal of secure, personal, and proof print files from the hard drive:

1. Launch your web browser.
2. Enter the printer's IP address in the browser's **Address** field (<http://xxx.xxx.xxx.xxx>).
3. Click **Properties**.
4. Select the **Security** folder on the left navigation panel.
5. Select **Printing Security Settings**.
6. If prompted, enter your Admin or Key User name and password.
7. Under **Remove Unprinted Personal, Secure and Proof Jobs**, select one or more of the following options:
  - **Upon Save Changes:** All personal, secure, and proof jobs are removed when you click the **Save Changes** button.
  - **At this time each day (24hr):** All unprinted personal, secure, and proof jobs are removed at this time each day.
  - **When jobs are:** All unprinted, personal, secure, and proof jobs are removed when they are this age or older.

**Note:** Files deleted using one of these options are overwritten if the Hard Drive Overwrite Security option has been enabled. For more information, see [Selecting the Hard Drive Overwrite Security Option](#) on page 4-11.

8. Click the **Save Changes** button.

# 802.1X Configuration

## Introduction to 802.1X and EAP

The 802.1X IEEE standard defines port-based, authenticated network access control for Ethernet local area networks (LANs). With 802.1X, the user or device must pass network access control by successfully authenticating with credentials, such as a name and password, or network access is denied. 802.1X uses the Extensible Authentication Protocol (EAP) to relay port access requests between LAN stations/the clients being authenticated (supplicants), Ethernet switches or wireless access points (authenticators) and RADIUS servers (authentication servers).

EAP is the standard authentication mechanism carried over 802.1X. The EAP method is an inner authentication protocol that provides the secure mechanism for the authentication exchange. Multiple EAP methods can be used. EAP methods are defined in International Engineering Task Force (IETF) Requests for Comments (RFC) documents, RFC drafts, or they can be proprietary. EAP methods have a significant influence on how your network is designed and implemented, because not all supplicants, not all access points, and not all RADIUS servers support all EAP methods. A careful evaluation of standards can help with selecting appropriate LAN components that will avoid vendor lock-in or dead-end technology.

## 802.1X Configuration in CentreWare IS

Use the 802.1X configuration pages in CentreWare IS to perform the following tasks. Required information varies depending on the EAP method(s) that you select.

**Note:** Access to the 802.1x configuration pages in CentreWare IS can be restricted by the passwords and feature authorization settings under Administrative Security.

1. Launch your web browser.
2. Enter the printer's IP address in the browser's **Address** field (<http://xxx.xxx.xxx.xxx>).
3. Click **Properties**.
4. Open the **Security** folder on the left navigation panel and select **802.1X**.
5. Click the **Advanced** button for more experienced users or click the **Configuration Wizard** button which will guide you through the setup.

For more information, click the **Help** button in CentreWare IS to view the online help.

6. **Select EAP authentication method(s)** – Select one or more authentication methods:
  - MD5 Challenge
  - TLS
  - PEAP-MS-CHAPv2 (PEAP)

If you selected a method that uses X.509 security certificates (**TLS** or **PEAP**), you can use use a root certificate to validate the authenticating server's certificate.

If you have selected **TLS** authentication, you must either install a signed device certificate that is trusted by the authenticating server, or add the device's self-signed certificate to the authenticating server's trusted certificate store.

7. **Install root certificate** – If you select **EAP** method(s) that require a root certificate, you can:
  - Install a new root certificate.
  - Use the already existing root certificate.
  - Choose not to validate server.
8. **Install device certificate** – If you select EAP method(s) that require a device certificate, you can:
  - Install a new device certificate.
  - Use the default self-signed certificate.
  - Use a custom self-signed certificate.
  - Use the already existing signed device certificate – if one exists.
9. **Enter credentials** – Specify the user name and password that users must provide, if you select EAP method(s) that require credentials.

## Locking the Control Panel Menus

To prevent others from changing settings in the printer setup menus, you can lock some of the control panel menus. This is useful when printers are located in public places, such as schools, libraries, and office/print centers.

Use CentreWare IS to lock or unlock the control panel menus:

1. Launch your web browser.
2. Enter your printer's IP address in the browser's **Address** field (<http://xxx.xxx.xxx.xxx>).
3. Click **Properties**.
4. Select the **Security** folder on the left navigation panel.
5. Select **Control Panel Lockout**.
6. If prompted, enter your Admin or Key User name and password.
7. Select the check box of each control panel menu item you want to lock.

**Note:** If you lose the Admin password and **Reset NVRAM** is locked on the control panel, a Fee-For-Service call is required to reset the password and to enable changes to printer settings. When the password is reset, you must reconfigure the printer settings because all the stored data is deleted.

8. Click the **Save Changes** button.



## Configuring SNMP

This section includes:

- [Configuring SNMP for Maximum Security](#) on page 4-17
- [Configuring SNMP v1/v2c](#) on page 4-18
- [Configuring SNMP v3](#) on page 4-20
- [Configuring the SNMP Access Control List](#) on page 4-22
- [Disabling SNMP](#) on page 4-23

If you are using SNMP, you must configure it using CentreWare IS. If you are not using SNMP, disable it to prevent unauthorized access through applications that use SNMP. For information on disabling SNMP, see [Disabling SNMP](#) on page 4-23.

SNMP is a set of protocols designed to help manage complex networks. SNMP compliant devices store data about themselves in MIBs and return this data to the SNMP requestors. The SNMP configuration pages provide control over SNMP security, including the methods to configure:

- Administrative and Key User Accounts with privacy and authentication protocols and keys associated with each account.
- SNMP user account read or read/write access.
- An access control list that limits SNMP access to the printer specific hosts.

**Note:** The **Current State** field on the **SNMP Configuration** page identifies the SNMP enable/disable status. Possible values include **SNMP v3 Enabled**, **SNMP v1/v2c Enabled**, and **All SNMP Protocols Disabled**.

### Configuring SNMP for Maximum Security

**Note:** A SSL certificate must be established on the printer to enable SNMP v3. In most cases, a certificate is automatically established when the printer is first turned on and no other action is required.

Use CentreWare IS to configure SNMP for maximum security:

1. Launch your web browser.
2. Enter the printer's IP address in the browser's **Address** field (<http://xxx.xxx.xxx.xxx>).
3. Click **Properties**.
4. Select **SSL**:
  - a. Select the **Security** folder on the left navigation panel, and then select **SSL**.
  - b. If prompted, enter your Admin or Key User name and password.
  - c. On the **SSL** page, for **Use SSL**, select **To Secure Pages and Passwords**.
5. Restrict access to the CentreWare IS SNMP and SSL pages:
  - a. On the **Properties** tab, select **Security**.
  - b. Select **Administrative Security Settings** on the left navigation panel.
  - c. If prompted, enter your Admin or Key User name and password.



## Adding or Editing Traps for SNMP v1/v2c

To add or edit traps for SNMP v1/v2c:

1. On the **SNMP Configuration** page: Click the **Configure SNMP v1/v2c** button, and then click the **Configure Traps** button.

The **Configure Traps** page lists the current Trap Destination Addresses for the SNMP protocol.

- The **Address** column lists the Trap Destination IP address or DNS Name.
  - The **Version/Type** column lists the SNMP Trap version or Inform Request for sending to the specified trap address. SNMP Trap versions include SNMP v1 Traps, SNMP v2c Traps, and SNMP v2c Inform Requests.
  - The **Traps** column lists the types of traps to send to the Trap Destination Address. Traps to be received include Printer Traps, Job Monitoring Traps, Cold Start, and Authentication Traps.
2. Do one of the following:
    - To add traps for SNMP v1/v2c, click the **Add Destination** button, and then go to Step 3.
    - To edit the settings for a Trap Destination Address, click the corresponding **Edit** button, and then go to Step 3.
    - To delete a Trap Destination Address, click the corresponding **Delete** button.
  3. To add or edit a Trap Destination IP Address, click the **IP Address** radio button, and then enter the IP Address in the fields.
  4. To add or edit a Trap Destination DNS Name, click the **DNS Name** radio button, and then enter the DNS Name in the field.
  5. For a non-standard UDP port, enter the UDP Port Number in the field.
  6. Select the SNMP trap version to send to the specified address. SNMP versions include SNMP v1 Traps (default), SNMP v2c Traps, and SNMP v2c Inform Requests. SNMP v1 Traps is the default.
  7. Enter the community name of the destination device in the **Community Name** field.
  8. For **Traps to be received**, select the check boxes of the different types of traps to send to the specified address. Traps to be received include Printer Traps (default), Job Monitoring Traps, Cold Start Traps, and Authentication Traps. At least one trap type must be selected.
  9. Click the **Apply** button to save the changes.

## Configuring SNMP v3

When configuring SNMP v3, you can set up:

- Administrative, Key, Any User, and Driver accounts with Privacy and Authentication Keys associated with each account.
- SNMP user read and write access.
- An access control list that limits SNMP printer access to the specific hosts. See [Configuring the SNMP Access Control List](#) on page 4-22.

To configure and enable SNMP v3:

1. Launch your web browser.
2. Enter the printer's IP address in the browser's **Address** field (<http://xxx.xxx.xxx.xxx>).
3. Click **Properties**.
4. Select the **Protocols** folder on the left navigation panel.
5. Select **SNMP**.
6. If prompted, enter your Admin or Key User name and password.
7. On the **SNMP Configuration** page, click the **Configure SNMP v3** button.
8. Click the **Configure Account(s)** button. A series of pages display that enable you to configure SNMP v3 and the **Administrative User**, **Key User**, and **Any User/Driver** settings. The first page displays Administrative User account information after the account has been created.
9. Do one of the following:
  - To create the Administrative User account and to enable SNMP v3, enter a user name or accept the default name **admin**, and then click the **Create** button.
  - To configure the Key User and other account settings, click the **Next** button.
  - To delete the Administrative User account and disable SNMP v3, click the **Delete** button. This also deletes all other accounts, including the Key User and Any User settings.

### The Administrative User Account Settings

- **User Name:** The Administrative User account name defined on the **Configure SNMP v3: Administrative User Account** page.
- **Authentication Protocols:** The protocol associated with the Authentication Key; selected on the **Configure SNMP v3: Administrative User Account** page.
- **Authentication Key:** The Authentication Key defined on the **Configure SNMP v3: Administrative User Account** page is displayed as a row of asterisks (\*) here.
- **Privacy Protocol:** The protocol associated with the Privacy Key; selected on the **Configure SNMP v3 Administrative User Account** page.
- **Privacy Key:** The Privacy Key defined on the **Configure SNMP v3: Administrative User Account** page is displayed as a row of asterisks (\*) here.
- **MIB Access:** The Administrative User account's MIB access permissions, which are set to **Read/Write** by default.

## The Key User Account Settings

- **User Name:** The Key User account name defined on the **Configure SNMP v3: Key User Account** page.
- **Authentication Protocol:** The protocol associated with the Authentication Key; selected on the **Configure SNMP v3 Key User Account** page.
- **Authentication Key:** The **Authentication Key** defined on the **Configure SNMP v3: Key User Account** page is displayed as a row of asterisks (\*) here.
- **Privacy Protocol:** The protocol associated with the Privacy Key; selected on the **Configure SNMP v3: Key User Account** page.
- **Privacy Key:** The privacy key defined on the **Configure SNMP v3: Administrative User Account** page is displayed as a row of asterisks (\*) here.
- **MIB Access:** The Key User account's MIB access permissions selected on the **Configure SNMP v3: Key User Account** page. MIB access for the Key User account can be set to **Read** or **Read/Write**.

**Note:** SNMP Read and SNMP Write access for the Any User account must be equal to or less than the read and write access privileges set for the Key User account. Once the Key User account is created, if the Any User account is set to have read and/or write access, but the Key User account access is not set, the Key User account is set with the same access privileges as the Any User account by default. Similarly, if the Key User account does not have SNMP Write access, the Any User account cannot be set with write access.

## The Any User/Driver Account Settings

- **User Name:** Displays **anyuser** by default and cannot be changed.
- **MIB Access:** Displays the Any User account's MIB access permissions selected on the **Configure SNMP v3: Other Account Settings** page. This can be set to **Read** or **Read/Write**.
- **SNMP Read:** Displays a check symbol if SNMP Read access is enabled. SNMP Read access can be enabled for the Any User account after the Key User account is created.
- **SNMP Write:** Displays a check symbol if SNMP Write access is enabled. SNMP Write access can be enabled for the Any User account after the Key User account is created.
- **Driver Account Enabled:** Displays a check symbol if the **Driver Account** is enabled (default).

**Note:** If the **Driver Account** is disabled, it breaks communication between the printer and any applications using SNMP v3, such as Xerox printer drivers and PrintingScout. For a complete list of applications disabled, see [Disabling SNMP](#) on page 4-23.

## Configuring the SNMP Access Control List

To set up a list of hosts that are authorized to access the printer using SNMP:

1. Launch your web browser.
2. Enter your printer's IP address in the browser's **Address** field (<http://xxx.xxx.xxx.xxx>).
3. Click **Properties**.
4. Select the **Protocol** folder on the left navigation panel.
5. Select **SNMP**.
6. If prompted, enter your Admin or Key User name and password.
7. Enter up to ten host IP addresses in the **SNMP Access Control List** field. Separate entries with a blank or a comma, specify ranges with a hyphen (-), and use an asterisk (\*) to represent a group of numbers (e.g., 13.62.156.\*).
8. Click the **Save Changes** button.

*See also:*

[About Access Control Lists](#) on page 4-4

## Disabling SNMP

If you are not using SNMP, disable it to prevent unauthorized access through applications that use these protocols. If you disable SNMP, the following driver features are also disabled:

- PrintingScout alerts
- Walk-Up Printing Installer
- Smart Trays
- PhaserSMART
- Auto supplies ordering
- Consumable levels
- Warning and error status
- Synchronization with installed options, such as hard drive, memory, and extra trays

To disable SNMP:

1. Launch your web browser.
2. Enter your printer's IP address in the browser's **Address** field (<http://xxx.xxx.xxx.xxx>).
3. Click **Properties**.
4. Select the **Protocols** folder on the left navigation panel.
5. Select **SNMP**.
6. If prompted, enter your Admin or Key User name and password.
7. Click the **Disable SNMP Now** button.
8. Click the **Save Changes** button.

# 5 Printing Features

This chapter includes:

- [Secure, Personal, Personal Saved, Proof, Print With and Saved Print Jobs](#) on page 5-2
- [Smart Trays](#) on page 5-2
- [Jam Recovery](#) on page 5-3



## Secure, Personal, Personal Saved, Proof, Print With and Saved Print Jobs

These features are available if your printer has an internal hard drive. These jobs are stored on the hard drive and remain in the printer even when it is turned off.

**Note:** For information about special job types, see [Printing Special Job Types](#) in the *Advanced Features Guide* for your printer at [www.xerox.com/support](http://www.xerox.com/support).

Select one of the following special job types:

- **Normal:** Prints the job without requiring a password.
- **Personal Print:** Prints the job when you select your user name on the control panel or in CentreWare IS from the Personal Jobs page on the Print tab. Job is deleted after printing.
- **Personal Saved Jobs:** Stores the job on the hard drive with your four-digit numeric password so you can print it on demand from the control panel or in CentreWare IS from the Personal Jobs page on the Print tab. The job is not deleted after printing.
- **Secure Print:** Prints the job only after you enter the four-digit numeric password on the control panel.
- **Proof Print:** Prints only one copy of the job so that you can proof the copy. If you want to print the remaining copies, select the job name on the control panel.
- **Saved Print:** Stores the job on the hard drive so you can print it on demand from the control panel. The job is not deleted after printing. This is useful for any document you frequently print, such as tax forms, personnel forms, or requisition forms.
- **Print With:** Prints the current job with existing jobs that are stored on the printer's hard drive that you specify in the **Print With Settings** dialog box when you click the **Print With** button.

## Smart Trays

The Smart Trays feature in the Windows drivers enables you to view the size and type of media in each tray of the printer before sending the job. In Windows environments, when you access the printer properties, the driver queries the printer for the current paper and tray configuration and displays that information on the **Paper/Quality** tab.

# Jam Recovery

**Note:** Jam recovery is not available on all printers, check the documentation that came with your printer for more information.

The jam recovery settings enable you to select how the printer handles jobs that are in the process of printing when a media jam occurs. Jam recovery settings are especially important to consider when printing checks. Normally when a media jam occurs, you can pull out the jammed media and the printer reprints that page and then the rest of the job. While printing checks, someone could cause a media jam as the media is exiting the printer so that a check is reprinted. To prevent the printer from printing two copies of the same check, you can set the printer to begin printing the job from the point where the media jammed through the end of the job, or cancel the job completely.

To configure the jam recovery setting, use one of the following methods:

- The printer's control panel
- CentreWare IS

## Using CentreWare IS

To configure the jam recovery setting:

1. Launch your web browser.
2. Enter the printer's IP address in the browser's **Address** field (<http://xxx.xxx.xxx.xxx>).
3. Click **Properties**.
4. Select the **Security** folder on the left navigation panel.
5. Select **Printing Security Settings**.
6. If prompted, enter your Admin or Key User name and password.
7. Under **Jam Recovery Options**, select one of the following options:
  - **Reprint the jammed page and continue printing the rest of the job:** After the jam is cleared, the printer begins printing the job from the point where the media jammed, including the jammed page, through the end of the job.
  - **Immediately cancel the entire print job:** After the jam is cleared, the printer cancels the rest of the print job.
8. Click the **Save Changes** button.

# 6 Glossary

## Terms and Abbreviations

<b>Terms and Abbreviations</b>	<b>Definitions</b>
access control list	A CentreWare IS feature that enables you to limit access to devices, as well as device configuration and management features.
Admin account	A CentreWare IS feature that enables you to limit access to specific printer functions by specifying a name and password. The Admin account has the most permissions. The administrator must know the Admin name and password to access the printer functions in CentreWare IS.
authentication	A CentreWare IS feature that requires users to login with a network user ID and password for security and tracking purposes.
bi-directional	A type of connection in which communications are sent and received simultaneously.
BOOTP	BOOTP (Boot Parameter Protocol) is a protocol that allows a network user to be automatically configured (receive an IP address) and have an operating system boot or initiated without user involvement.
CentreWare Internet Services (IS)	CenterWare IS is a printer administration and support tool. With CenterWare IS software, you can access printer status and manage your printer over a TCP/IP network using a web browser.
CentreWare Web	A web-based, device-management solution for Windows 2000 environments where you use a browser for administration.
certificate	An electronic message containing information about the printer and a digital signature, which is stored in the printer. A certificate is used to validate the identity of the printer to clients and network servers and to allow encrypted communication.
DHCP	DHCP (Dynamic Host Configuration Protocol) is a protocol in which UNIX, Windows, NT, and Window 2000 servers can dynamically allocate TCP/IP addresses.
DNS	DNS (Domain Name System) is used in the Internet for translating names of network nodes into addresses.

<b>Terms and Abbreviations</b>	<b>Definitions</b>
driver	Software that is loaded on the client workstation that prepares data to be sent to the printer.
EAP	EAP(Extensible Authentication Protocol) is the standard authentication mechanism carried over 802.1X. The EAP method is an inner authentication protocol that provides the secure mechanism for the authentication exchange.
EtherTalk	A type of network connection (provided by EtherTalk software installed in a Macintosh computer) that enables use of AppleTalk network services on an Ethernet network.
FTP	FTP (File Transfer Protocol) is a basic TCP/IP connectivity utility used to transfer data between computers.
host	A computer or other device on a TCP/IP network.
HTTP	HTTP (Hyper Text Transfer Protocol) is a non-secure protocol used to communicate across the internet between the printer web server and the web browser (clients).
HTTPS	HTTPS (Secure Hyper Text Transfer Protocol) is a secure protocol used to provide authentication and encrypted communication to preserve the confidentiality of your data.
Internet	The global collection of networks that are connected together and share a common range of IP addresses.
IP	IP (Internet Protocol) is a network protocol used for sending network packets over a TCP/IP network.
IP address	A unique 32-bit address for a host on a TCP/IP network or Internet working.
IPP	IPP (Internet Printing Protocol) is an application-level protocol that is used for distributed printing on the Internet and intranets, designed and implemented by Xerox research to validate the IPP specification and as an aid in developing IPP servers.
job accounting	The purpose of job accounting is to collect and report information about all jobs that print. The information collected identifies the submitter of the job and the resources used to print the job.
Key User account	A CentreWare IS feature that enables you to limit access to specific printer functions by specifying a name and password. You can set up a Key User account that is password protected. The Key User has the ability to change some printer settings. CentreWare IS requires the name and password before access to the printer function is allowed.
LPR	LPR (Line Printer Remote) is an application-level printing protocol that uses TCP/IP to establish connections between printers and workstations on a network.
MaiLinX alerts	A feature in CentreWare IS that allows the printer to automatically send email to you and others under certain conditions.
MaiLinX remote printing	A feature in CentreWare IS that enables you to print to Xerox printers over the Internet, directly from Windows applications. The print jobs are sent as email.

<b>Terms and Abbreviations</b>	<b>Definitions</b>
mDNS	mDNS (multicast DNS) is a multicast-based discovery protocol that enables you to find your printer on an Apple network or another device that uses multicast-based discovery.
MIB	MIB (Management Information Base) provides specific information about the state of hardware components and software processes. MIB is used as part of network management tools and functions.
network	A collection of connected devices, such as computers and printers. A network is a tool for communication that allows users to store and retrieve information, share printers, and exchange information.
network address	The network portion of an IP address. For a class A network, the network address is the first byte of the IP address. For a class B network, the network address is the first two bytes of the IP address.
network connection	The software and protocol that connect network devices, such as PCs and printers.
PCL	PCL (Printer Control Language) is the PDL language created by Hewlett-Packard. It became an industry standard and is now available in almost all printer platforms for the office (e.g., PCL 5).
PJL	PJL (Printer Job Language) and PCL commands are used in application programs to control job settings and printer defaults.
PhaserSMART Technical Support	PhaserSMART Technical Support is an automated, internet-based support system that uses the user's default web browser to send diagnostic information from their printer to the Xerox website for analysis.
Port 9100	A printing protocol known as AppSocket, RAW, or Windows TCPmon.
PostScript	A page description language created by Adobe and used in most Xerox Phaser printers.
printer driver	Enables your computer and printer to communicate; provides access to the features of your printer.
printer discovery	Software mechanism for finding printers typically on a network.
Printer Neighborhood	A tool in CentreWare IS that enables you to search for printers on your network, check their status, and manage them remotely.
PrintingScout alerts	PrintingScout is a tool that is installed with the Xerox printer driver. It automatically checks the printer status when a print job is sent. If the printer is unable to print a job, PrintingScout automatically displays an alert on the user's computer screen to let them know that the printer needs attention. The user can click the alert to view instructions explaining how to fix the problem.
printing kiosk	A digital imaging/print platform that is used to connect a laptop computer to a network for printing to a printer, and then paying for the output. A printing kiosk is sometimes located in an airport or library.
protocol	The rules that control the transmitting and receiving of data.

Terms and Abbreviations	Definitions
RADIUS	Radius (Remote Authentication Dial In User Service) is a server used for remote user authentication and accounting. It can be used on any network that needs a centralized authentication and/or accounting service for its workstations.
SLP	SLP (Service Location Protocol) is a protocol that provides a flexible and scalable framework for providing hosts with access to information about the existence, location, and configuration of networked services. SLP is useful in enterprise networks.
Smart Trays	A driver feature that displays the current paper type and size available in each printer tray.
SMTP	SMTP (Simple Mail Transfer Protocol) is a protocol for sending e-mail messages between servers.
SNMP	SNMP (Simple Network Management Protocol) is a protocol used to help manage complex networks. SNMP-compliant devices store data about themselves in MIBs (Management Information Bases) and return this data to the SNMP requestors.
SSL	SSL (Secure Socket Layer) is a protocol that has become the universal standard on the Web for authenticating sites and for encrypting communications between users and Web servers. Because SSL is built into all major browsers and Web servers, simply installing a digital certificate or Server ID enable SSL capabilities.
TCP/IP	TCP/IP (Transmission Control Protocol/Internet Protocol) is a set of communication protocols that is supported by a variety of computer platforms. TCP controls data transfer, and IP controls data routing.
TFTP	TFTP (Trivial File Transfer Protocol) is a version of the TC/IP FTP protocol that uses UDP and has no directory or pass capability.
TLS	TLS (Transport Layer Security) is a protocol for establishing a secure connection between the client and the server. TLS is capable of authenticating both the client and the server and creating an encrypted connection between the two. HTTP uses TLS to establish secure connections.
UDP	UDP (User Datagram Protocol) is a minimal message-oriented transport layer protocol found on domain name servers (DNS).
Walk-Up Printing Driver	The Xerox Walk-Up Printing Driver enables printing from a PC to any Xerox Postscript-enabled printer. For more information, see <a href="#">Walk-Up Printing Driver</a> on page 2-3.
Walk-Up Technology	The Xerox Print Driver Installer (Windows) is a software utility that provides for quick and easy installation of the printer driver. One choice for installation is Walk-Up Technology. For more information, see <a href="#">Walk-Up Installation</a> on page 2-3.
Xerox Usage Analysis Tool	The Xerox Usage Analysis Tool enables you to collect and analyze enterprise-wide Xerox network printer usage data with customizable features.

# A Configuration Card Parameters

The printer has a configuration card that stores network parameters and configuration (N, DN, DX, etc.) data. The configuration card is hot swappable, enabling you to share or replace it, providing an alternative to on-site service.

Network settings are saved on the configuration card. If the configuration card is removed from an old printer and inserted into a new printer, the saved settings on the configuration card are copied to the new printer when it is powered on. The new printer assumes the identity of the old printer, eliminating the need to reconfigure network settings.

This appendix includes:

- [General Information Parameters](#) on page A-2
- [PostScript Parameters](#) on page A-2
- [PCL Parameters](#) on page A-3
- [USB 2.0 Parameters](#) on page A-3
- [Hard Drive Parameters](#) on page A-3
- [Network Information Parameters](#) on page A-3
- [PhaserShare Series B Interface for Ethernet Network Parameters](#) on page A-3
- [EtherTalk Parameters](#) on page A-4
- [TCP/IP Parameters](#) on page A-4
- [DNS Parameters](#) on page A-5
- [SLP Parameters](#) on page A-5
- [SSDP Parameter](#) on page A-5
- [NBNS \(WINS\) Parameters](#) on page A-5
- [Access Control Parameter](#) on page A-5
- [LPR Parameters](#) on page A-5
- [AppSocket \(Port 9100\) Parameters](#) on page A-6
- [IPP \(Internet Printing Protocol\) Parameters](#) on page A-6
- [SNMP Parameters](#) on page A-6
- [CentreWare IS \(HTTP\) Parameters](#) on page A-6
- [FTP Parameters](#) on page A-6
- [Status Notification Parameter](#) on page A-7
- [MaiLinX Remote Printing Parameters](#) on page A-7

## General Information Parameters

- Printer Name
- Startup Page Enabled
- Printer ID
- Sys/Start Job
- Job Timeout
- Load Paper Timeout
- Menu Timeout
- Power Saver Timeout
- Intelligent Ready
- Paper Source
- Tray 1 or Tray 1 (MPT)
- Tray 2
- Tray 3
- Tray 4
- Tray 5

**Note:** The Tray 3, Tray 4, and Tray 5 parameters are only stored on the printer configuration card if the optional trays are available for your printer and installed.

- Tray 1 or Tray 1 (MPT) Mode
- Tray 1 or Tray 1 (MPT) Prompt
- Tray 2 - N Prompt
- Tray 2 - N Mode
- Letter/A4 Substitution
- 2-Sided Printing
- Metric Defaults

## PostScript Parameters

- Printer Quality
- Color Correction
- Error Info
- Image Smoothing



## **PCL Parameters**

- Font Number
- Pitch
- Point Size
- Symbol Set
- Orientation
- Form Length
- Line Termination
- Color Mode (on color printers)
- Wide A4

## **USB 2.0 Parameters**

- Language
- Wait Timeout

## **Hard Drive Parameters**

The hard drive parameters are only stored on the configuration card if the printer has an internal hard drive.

- Overwrite Deleted Files
- Daily Removal
- Age-based Removal

## **Network Information Parameters**

- Wait Timeout
- Sys Admin Contact
- Printer Location

## **PhaserShare Series B Interface for Ethernet Network Parameters**

- Network Speed/Type
- Network Address

## **Certificates**

- Device Certificate
- Friendly Name
- Root Certificate

## **802.1x**

- Enabled
- Disabled

## **EtherTalk Parameters**

- Enabled
- Disabled
- Language
- Filtering
- Name
- Printer Type
- Zone
- Network Node

## **TCP/IP Parameters**

- Enabled
- Disabled
- Host Name
- Host Name Requested
- IP Address
- Network Mask
- Router/Gateway
- DHCP/BOOTP
- IP Address Source
- DDNS
- SMTP Server
- SMTP Reverse Path

## DNS Parameters

- Primary Server
- Secondary Server
- Multicast DNS (Bonjour) Enable

## SLP Parameters

- Enabled
- Disabled
- Directory Agent Discovery Enable
- Directory Agent
- Scope 1
- Scope 2
- Scope 3
- SLP Multicast Enable
- SLP Multicast TTL
- SLP MTU

## SSDP Parameter

- Enabled
- Disabled
- SSDP TTL

## NBNS (WINS) Parameters

- Node Type
- WINS Servers

## Access Control Parameter

- Host Access List

## LPR Parameters

- Enabled
- Disabled
- Filtering
- Enable Banners

## **AppSocket (Port 9100) Parameters**

- Enabled
- Disabled
- Language
- Filtering

## **IPP (Internet Printing Protocol) Parameters**

- Enabled
- Disabled
- Language
- Filtering
- Network Path

## **SNMP Parameters**

- SNMP v1/v2c
- SNMP v3
- Host Access List

## **CentreWare IS (HTTP) Parameters**

- Enabled
- Disabled
- Custom Link
- Refresh Delay
- Administrator Password
- Key User Password
- Use SSL

## **FTP Parameters**

- Enabled
- Disabled
- Language
- Filtering
- Login Password

## **Status Notification Parameter**

- Disabled
- Enabled
- SysAdmin Email Address
- Service Email Address
- Key User email Address

## **MaiLinX Remote Printing Parameters**

- Language
- Filtering
- POP3 Server
- POP3 User Name
- POP3 Password
- POP3 Polling Interval
- Printing Password
- Authorized Users

# B Printer Commands

Printer Control Language (PCL) and Printer Job Language (PJM) commands can be used to control print job settings and printer defaults. In addition to the standard PCL and PJL commands, the Phaser printers support Xerox-unique PCL and PJL commands. This appendix lists the most commonly used standard and Xerox-unique PCL and PJL commands.

This appendix includes:

- [Phaser PCL Commands](#) on page B-2
- [Phaser PJL Commands](#) on page B-5

*See also:*

*HP PCL 5 Printer Language Reference Manual* for standard PCL commands.

# Phaser PCL Commands

This section includes:

- [Media Size](#) on page B-2
- [Media Type](#) on page B-3
- [Input Trays](#) on page B-4
- [Output Trays](#) on page B-4

## Media Size

The following table lists the most common PCL commands for supported media sizes. For information on which media sizes are supported in your printer, and the trays that support them, print the Paper Tips page from your printers control panel.

Media Size	PCL 5 Command*
A3 (297 x 420 mm)	<Esc>&I27A
A4 (210 x 297 mm)	<Esc>&I26A
A5 (148 x 210 mm)	<Esc>&I25A
A6 (105 x 148 mm)	<Esc>&I24A
B4-JIS (176 x 257 mm)	<Esc>&I46A
B5 Envelope (176 x 250 mm)	<Esc>&I100A
B5-ISO (176 x 257 mm)	<Esc>&I65A
B5-JIS (182 x 257mm)	<Esc>&I45A
SRA3 (320 x 450 mm)	<Esc>&I202A
Statement (5.5 x 8.5 in.)	<Esc>&I15A
Tabloid (11 x 17 in.)	<Esc>&I6A
Tabloid Extra (12 x 18 in.)	<Esc>&I201A
Executive (7.25 x 10.5 in.)	<Esc>&I1A
Letter (8.5 x 11 in.)	<Esc>&I2A
US Folio (8.5 x 13 in.)	<Esc>&I10A
Legal (8.5 x 14 in.)	<Esc>&I3A
A7 Envelope (5.25 x 7.25 in.)	<Esc>&I84A
#10 Commercial Envelope (4.1 x 9.5 in.)	<Esc>&I81A
Monarch Envelope (3.8 x 7.5 in.)	<Esc>&I80A
C4 Envelope (162 x 229 mm)	<Esc>&I93A
C5 Envelope (162 x 229 mm)	<Esc>&I91A

Media Size	PCL 5 Command*
DL Envelope (110 x 220 mm)	<Esc>&I90A
C6 Envelope (114 x 162 mm)	<Esc>&I92A
Choukei 3 Gou	<Esc>&I87A
Choukei 4 Gou	<Esc>&I86A
Custom	<Esc>&I101A

\* The character that follows the "&" in the command is the lowercase letter "L".

## Media Type

The following table lists the most common PCL commands for supported media types. For information on which media sizes are supported in your printer, and the trays that support them, print the Paper Tips page from your printers control panel.

Media Type	PCL 5 Command
Plain Paper	<Esc>&n6WdPaper
Card Stock	<Esc>&n10WdCardStock
Heavy Plain Paper	<Esc>&n11WdHeavyPaper
Transparency	<Esc>&n13WdTransparency
Thin Card Stock	<Esc>&n14WdThinCardStock
Thick Card Stock	<Esc>&n15WdThickCardStock
Extra Thick Card Stock	<Esc>&20WdExtraThickCardStock
Envelope	<Esc>&n9WdEnvelope
Labels	<Esc>&n6WdLabel
Letterhead	<Esc>&n11WdLetterhead
Glossy Paper	<Esc>&n12WdPaper
Colored Paper	<Esc>&n13WdColoredPaper
Preprinted	<Esc>&n11WdPreprinted
Prepunched	<Esc>&n11WdPrepunched
Custom	<Esc>&n12WdCustomType1 through <Esc>&n12WdCustomType5



## Input Trays

The following table lists the most common PCL commands for the input trays supported by your printer. The table also lists the alternate tray used if the optional input tray is not installed.

**Note:** When more than one command is listed, you can use either command.

Input Trays	Phaser 8560 Phaser 6360		Phaser 4510	
	PCL 5 Command	Alternate Tray	PCL 5 Command	Alternate Tray
Tray 1	n/a	n/a	<Esc>&l2H <Esc>&l3H <Esc>&l4H <Esc>&l6H	n/a
Tray 1 (MPT) in multi-sheet mode	<Esc>&l4H <Esc>&l6H	n/a	n/a	n/a
Tray 1 (MPT) in manual feed mode	<Esc>&l2H <Esc>&l3H	n/a	n/a	n/a
Tray 2	<Esc>&l1H	n/a	<Esc>&l1H <Esc>&l21H <Esc>&l22H	n/a
Tray 3	<Esc>&l5H	Tray 2	<Esc>&l5H	Tray 2
Tray 4	<Esc>&l8H <Esc>&l20H	Tray 1	<Esc>&l8H <Esc>&l20H	Tray 1
Tray 5	<Esc>&l21H	Tray 1	n/a	n/a
Autoselect	<Esc>&l7H	n/a	<Esc>&l7H	n/a
Current tray/page eject	<Esc>&l0H	n/a	<Esc>&l0H	n/a
* The character that follows the "&" in the command is the lowercase letter "L".				

## Output Trays

The following table lists the PCL commands and PJI values for the output trays supported by your printer, if applicable.

Output Tray	PCL 5 Command*	PJI Value
Top output tray	<Esc>&l1G	FACEDOWN, UPPER, STANDARD, or OFFSET

\* The character that follows the "&" in the command is the lowercase letter "L".

\*\* The PJI Value is used with the PJI "OUTBIN" variable.

## Phaser PJJ Commands

The following table lists the most commonly used HP PJJ and Xerox-unique PJJ commands.

See also:

*HP Printer Job Language Technical Reference* for the standard set of PJJ commands.

PJJ Command	Values	Description
@PJJ FSDELETE NAME= <i>pathname</i>	*	Deletes a file from the internal hard drive.
@PJJ FSDIRLIST NAME= <i>pathname</i>	*	Lists PJJ system files and directories.
@PJJ FSDOWNLOAD FORMAT: BINARY SIZE= <i>size</i> NAME= <i>pathname</i>	*	Downloads a file to the internal hard drive.
@PJJ FSINIT VOLUME= <i>value</i>	*	Initializes the internal hard drive.
@PJJ FSMKDIR NAME= <i>pathname</i>	*	Creates the specified directory on the internal hard drive.
@PJJ FSUPLOAD NAME= <i>pathname</i>	*	Uploads file from the printer to the host.
@PJJ USTATUS	*	Allows the printer to send unsolicited status messages for device status changes, end-of-job status, and pages printed. Status can be sent at specified time intervals.
@PJJ USTATUSOFF	n/a	Turns off all status responses.
@PJJ FSAPPEND	n/a	Appends data to an existing file, or if the file doesn't exist, creates the file and loads it with the given data.
@PJJ XCLIENTJOBID= <i>value</i>	Exactly 48 bytes (first byte is 8 and the 8 last bytes represent a time in the format <i>hhmmssshs</i> ).	Sets the client job id used with PrintingScout.
@PJJ XJAFILENAME= <i>filename</i>	Roman-8 characters 1-255	Sets the file name for Job Accounting.
@PJJ XJAHOSTNAME= <i>hostname</i>	Roman-8 characters 1-255	Sets the host name for Job Accounting.
@PJJ XJAJOBNAME= <i>jobname</i>	Roman-8 characters 1-255	Sets the job name for Job Accounting.

<b>PJJL Command</b>	<b>Values</b>	<b>Description</b>
@PJJL XJAUSERNAME= <i>“username”</i>	Roman-8 characters 1-255	Sets the user name for Job Accounting.
@PJJL XJOBPASSWORD= <i>value</i>	4-digit string (1-9)	Assigns the job password used by Secure Print.
@PJJL XPERSONALJOB	n/a	Starts a Personal Print job.
@PJJL XPROOFJOB	n/a	Starts a Proof Print job.
@PJJL XSAVEDJOB	n/a	Starts a Saved Print job.
@PJJL XSECUREJOB	n/a	Starts a Secure Print job.
@PJJL XIGNOREFF	ON, OFF	Ignores FormFeed commands when printing PCL blank pages.
@PJJL XLINETERMINATION= <i>value</i>	ON, OFF	Terminates a line.
@PJJL XMBFSIZE= <i>value</i>	ANY or any supported media size, such as LETTER, STATEMENT, and EXECUTIVE.	Sets the media size for Tray 1.
@PJJL XMEDIASOURCE= <i>value</i>	ANY, TRAY <i>n</i>	Sets the media source.
@PJJL XMEDIATYPE= <i>value</i>	ANY or any supported media type, such as PAPER and LABEL.	Sets the media type.
@PJJL XPCLTRAYSWITCH= <i>value</i>	ON, OFF	Switches trays when a tray goes empty. If AutoSelect is chosen as the paper source (tray) in PCL, then tray switching is always active, regardless of the value. When the current tray goes empty, the printer attempts to switch to another tray containing the same size and type of paper. This command only takes effect when a specific tray, such as Tray 2, is selected in the job. When this command is ON, tray switching still occurs when the tray goes empty. When this command is OFF, no switching occurs and the user is prompted to load paper.

PJJ Command	Values	Description
@PJJ XPCLPAPERSRCx = y	<p>x is 0, 1, 2, 3, 4, 5, 6, 7, 8, 20, 21, 22, 23, which is the number in the &lt;Esc&gt;#H tray selection commands.</p> <p>y is -1 for AutoSelect, 0 for the current tray (eject page), 1 for Tray 1, 2 for Tray 2, etc., and 99 for the factory defaults.</p>	<p>Overrides the tray selected in the &lt;Esc&gt;#H PCL tray selection commands.</p>

\* See the *HP Printer Job Language Technical Reference* for the values.

# C Acknowledgements

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Version 1.3a

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