

Xerox CentreWare™ Web

Printer Administration for Windows

Release 1.0

User Guide



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Introducing CentreWare Web

CentreWare Web is a multi-vendor printer management, installation, and troubleshooting application which can remotely manage, install, and troubleshoot printers on your network using a web browser. Printers are found through network or print server discovery and managed over TCP/IP networks using SNMP (Simple Network Management Protocol).

Functions of CentreWare Web include printer discovery, installation, troubleshooting, managing groups of printers, managing printers/queues, firmware upgrade, cloning settings from one printer to others of the same type, wizards, and reporting. The way CentreWare Web displays information can also be customized.

Features

Some of the features provided by CentreWare Web are:

- Ability to remotely add ports, queues, and drivers to Windows 2000 and NT4 SP6 print servers.
- Install, Troubleshoot, Upgrade, and Clone wizards to aid all users in performing administrative tasks.
- Install CentreWare Web on a server for availability to all clients on the network that have Intranet access with a browser.
- Support multiple users and provide for different levels/privileges of user access, such as administrators or guests.
- Discover printers on local and remote subnets.
- Automatically discover printers as scheduled.
- Generate reports.
- Connect to printer web servers for additional printer-specific features, including help.

Documentation

User Guide

The CentreWare Web User Guide is available in PDF format on the web at www.xerox.com/centrowareweb/support.

Help System

CentreWare Web has an online help system that contains information about the features and functions and how to use the application.

Using CentreWare Web

The CentreWare Web user interface includes features that provide access and control of the application.

Accessing the Application

- 1 On the server where CentreWare Web is installed, access CentreWare Web from the **Start>Programs>Xerox CentreWare Web>Xerox CentreWare Web** shortcut.
- 2 From a remote computer, access CentreWare Web by typing in the name of the server where CentreWare Web is installed. For example **http://MyServer/CentreWareWeb**.
- 3 When CentreWare Web's home page appears, click one of the links to access other pages where you can start using the features/functions of CentreWare Web.

Navigating

- To navigate through CentreWare Web, click the tabs, links, or buttons.
- Click **Home** to return to the CentreWare Web home page.
- On the CentreWare Web home page, click **Configure** to access the Administrator page where you can set site and support contact information.

Getting Started

Home Page

The Home page is the access point for CentreWare Web functionality and provides the following features:

- **Printers**

The Printers page enables you to display and manage printers/queues.

- **Wizards**

The Wizards page steps you through the process of installing printers/queues, upgrading printer firmware, cloning printers, or troubleshooting printers/queues.

- **Reports**

An Asset, Status, Accounting, or Alert History report can be created and distributed using this page.

- **Administration**

The Administration page enables you to perform Discovery and change/view CentreWare Web's administrator, network, SNMP, and statistical data gathering settings.

- **Configure Button**

Allows you to view/modify support information about this CentreWare Web installation.

Product Support Information

Internet Support

Visit Xerox on the Internet at www.Xerox.com/centrowareweb/support. The web site contains support links for all the latest Xerox products.

Telephone Support

For additional assistance, you may contact the Xerox Welcome Center by telephone to speak with a Product Support Analyst. The Welcome Center telephone numbers are:

- UNITED STATES 800-821-2797
- CANADA 800-939-3769 (800-93-XEROX)

Installation

This chapter describes the process of installing the CentreWare Web application software on a network server.

System Requirements

CentreWare Web operates using the following:

- Internet Information Services (IIS) 5.0 or higher
- Windows 2000 Professional, Server, and Advanced Server workstations/servers. To install onto a Windows 2000 Professional system, you must install IIS from the Windows 2000 Professional installation media.

Note that Windows 2000 Server and Advanced Server install IIS by default.

- TCP/IP
- Installation onto a hard disk formatted with NTFS is recommended since NTFS is required to enable security within CentreWare Web. For more information see the **Supported Browsers** and **Unsupported and Untested** sections in the Readme file for further information.

See the Readme file for any updates to system requirements.

Operating System Memory and Hardware

The CentreWare Web application is a web site designed to service simultaneous users. The following factors impact the ability to service these users:

- installed software
- number of processors
- processor type
- processor speed
- memory (RAM)
- hard disk space

Minimum hardware requirements to install CentreWare Web are 200 MB of free disk space and 128 MB RAM.

CentreWare Web includes the Microsoft Data Engine (MSDE) Edition of SQL Server 2000 database software. MSDE is designed to handle up to 5 concurrent users.

Acceptable levels of performance were achieved with CentreWare Web running on a Pentium II 400 MHz, 256 MB RAM, with an EIDE 7200 RPM hard drive. Acceptable is defined as the application handling 10 or more requests per second. The software installed on this type of system was Microsoft Windows 2000, Windows 2000 Service Pack 1, and CentreWare Web. Your performance with CentreWare Web will vary depending on the factors listed above.

Browser Settings

If you are using a proxy server to connect to the Internet, CentreWare Web requires that you change settings in your browser application to prevent the proxy server from interfering with browser authentication to CentreWare Web.

Perform the following procedure to modify proxy server settings in Internet Explorer.

Note that depending on your browser vendor and version, the following procedure and options may vary. Netscape users should consult the Netscape documentation for information about changing proxy server settings.

Internet Explorer

Perform one of the following procedures:

- 1 Access **Internet Options** and select the Connections Tab.
- 2 Click **LAN Settings....**
- 3 If **Use a proxy server** is selected, select **Bypass proxy server for local addresses**.
- 4 Click **Advanced**.
- 5 Enter the CentreWare Web IP addresses that need to bypass the proxy server.
- 6 When finished, click **OK** on all screens.

OR

- 1 Access **Internet Options** and select the Security Tab.
- 2 Select Local Intranet.
- 3 Click **Sites**.
- 4 Click **Advanced** and add the CentreWare Web Server IP address.
- 5 When finished, click **OK** on all screens.

Installation Considerations

Consider the following before installing CentreWare Web.

NTFS

For security functionality, CentreWare Web should be installed on systems running NTFS. If you do not have NTFS, there will be no security access checking.

Other Configurations

If you need to install CentreWare Web in other configurations, or if you are having problems with access, see Appendix A on page A-1 for more information. You can use the information in this appendix as a review of Windows security permissions.

Selecting a CentreWare Web Account

During software installation, you will be prompted to select an account for CentreWare Web. You can use an existing administrator account or create a new one to use specifically for CentreWare Web. The advantage of creating a new account is that if you set the password to never expire, then there won't be any issues later when passwords expire. A typical account could be an existing domain administrator account.

Depending on your site, network security issues such as password expiration/change may be an issue if you are using an existing account. Creating a specific account for CentreWare Web can resolve this issue, but may add a security issue if the password never expires.

The account that you use for CentreWare Web must provide the privileges that allow you to manage printer queues on each server that will be managed by the application. It is best to select the appropriate account during installation, so that you will not have to change it manually later. For more information on modifying the user account and/or password, see [Modifying the CentreWare Web Account](#) on page 1-9 .

Windows 2000 Active Directory / NT 4 Domains

The recommended installation configuration for CentreWare Web in a Windows 2000 environment is to install CentreWare Web using the domain administrator's account of the highest domain in the Active Directory tree or NT4 domain. This will allow CentreWare Web to have permissions to manage (add, and remove) queues throughout the directory tree or NT4 domain.

See Appendix A on page A-1 for domain security diagrams, and Modifying the CentreWare Web Account on page 1-9 for account modification information.

Security

There are three areas of security to consider: client, server, and remote server. Within these three areas, authentication and authorization ensure that a user account is identified and has permission to perform certain tasks.

For the purpose of administering printer queues, CentreWare Web runs with the credentials of the user account that is configured during installation. This account must have administrative privileges on any servers where CentreWare Web will manage queues.

See Modifying the CentreWare Web Account on page 1-9 for information on viewing the CentreWare Web account.

CentreWare Web works with Microsoft's Active Directory and NTFS security. For more information, see Appendix A on page A-1 or visit the following Microsoft websites:

<http://www.microsoft.com/technet/win2000/win2ksrv/add.asp>

<http://www.microsoft.com/windows2000/guide/server/features/directory.asp>

Installation Location

Physical sites and network band width should be considered when choosing the installation location of the CentreWare Web server.

Installing CentreWare Web

From the Xerox Website

- 1 Access the Xerox website at www.xerox.com/centrewareweb and locate the CentreWare Web Executable (EXE) file.
- 2 Download the **XeroxCentreWareWeb.exe** file.

Running the CentreWare Web Installer

When installing CentreWare Web software, the administrator must be logged into the target server with administrator privileges or as the server administrator.

- 1 Double-click the installation package, after reading and accepting the license agreement.
- 2 On the next three screens, configuration settings are required. When finished, click **Next** to proceed to the next screen. For more detailed information about these settings, click **View Readme**.

Run As

For managing printer queues on Windows 2000 and NT 4.0 SP6 servers, select an administrator account and password. This account must have administrative privileges on any servers where CentreWare Web will manage queues. From **Log On To**, select a trusted domain for the account.

Note that this account drives all the processes of CentreWare Web. It is important to consider the account's rights/privileges for using the management features of the application. See Installation Considerations on page 1-4 for more information.

SMTP Server

Optionally, enter the name of the SMTP server and From address for email functionality within CentreWare Web. You can set up this functionality later, if desired, from the Network page within the Administration page.

Allow Basic Authentication

This option is **not** selected by default. Basic Authentication, supported by most browser applications, transmits readable, formatted text for usernames and passwords. Encoded usernames and passwords are used when the system prompts for Windows user account information. This setting is either on or off.

- 3 Accept the default destination folder for the CentreWare Web application, or click **Change** to select another folder location. Click **Next** to install CentreWare Web.
- 4 When the install completes, a reboot may be necessary. If it is, you will be asked if you want to reboot after you select **Finish** to exit the installation wizard. Otherwise, you can select to run CentreWare Web and/or view the Readme file. Click **Finish** to exit the installation wizard

Uninstalling

Use the Windows 2000 Add/Remove Programs application to uninstall CentreWare Web.

- 1 Select **Start>Settings>Control Panel**.
- 2 Double-click **Add/Remove Programs**.
- 3 Select Xerox CentreWare Web and click **Remove**.

Upgrade

You can upgrade the CentreWare Web software by obtaining an upgrade MSI file from the Xerox website at www.xerox.com/centwareweb.

CentreWare Web can be upgraded without loss of historical data, configuration settings (e.g., discovery, polling), or user-created groups.

To upgrade CentreWare Web software:

- 1 Access the CentreWare Web Help page. Click **About** to display the current software version.
- 2 Access www.xerox.com/centwareweb/support and locate the appropriate upgrade file.
- 3 Download the file and follow the instruction provided with the file to perform the upgrade.

Modifying the CentreWare Web Account

CentreWare Web runs as the user account that is configured during installation. The CentreWare Web account is visible by opening Windows 2000 Administrative Tools and viewing properties and identity. This account determines the security permissions of CentreWare Web.

After installation, you can modify this account using Windows 2000 Administrative Tools.

To modify the account:

- 1 Select **Start>Programs>Administrative Tools>Component Services** to access Component Services in the Administrative Tools.
- 2 From the Component Services tree, select **Component Services>Computers>My Computer>COM+ Applications>Xerox CentreWare Web**.
- 3 Right-click Xerox CentreWare Web Application and then select **Properties** to access CentreWare Web properties.
- 4 Select the Identity tab and modify the User and Password fields as desired. Click **OK** to exit the Identity tab.
- 5 Close the Xerox CentreWare Web Application by right-clicking **Xerox CentreWare Web Application** and selecting **Shut Down**. The components will then automatically start as the newly selected user the next time they are used.

CentreWare Web Users Group

During installation, a group named CentreWare Web Users is created in the location where CentreWare Web is installed. Members of this group have access to CentreWare Web.

The group is a standard Microsoft users group and is managed as other groups on your system. Use Windows Administration Tools to add or delete users in this group.

Anonymous Access

Anyone who has access to the network where CentreWare Web is installed can view portions of the application. The areas that anonymous or unauthenticated users can access are limited to viewing groups, printers, servers and queues, report generation, and troubleshooting.

Administrative functions require an authenticated user, which is defined as:

- an administrator of the server where CentreWare Web is installed

OR

- a member of the CentreWare Web Users group where CentreWare Web is installed

Unauthenticated users will be prompted for a valid username and password in the following areas of the application:

- New Group
- Printer/queue install
- Add/Delete server
- Configure group
- Install, Upgrade, or Clone Wizard
- Reports
- Administration

Printers

The Printers page allows you to select Printers or Queues for configuration and management. You can install, configure, troubleshoot, and view information about printers on your network. Depending on how you want to view the information using CentreWare Web, you can select either Printers or Queues. You can also customize the manner in which printer and queue information is displayed in the interface.

Viewing Queues

When you select Queues, servers and queues appear in the left pane navigation tree. The Queue management features include:

- Installation
- Troubleshooting
- Printer/queue management
- Detailed printer information
- Refresh queue information
- Configure status retrieval

Add Server

To add a server:

- 1 Select **Add/Delete Server** from the tree.
- 2 Enter a server IP address or DNS name and click **Add**.

CentreWare Web will add the specified server and enumerate all the print queues. For CentreWare Web to associate a print queue with a printer discovered on the network, CentreWare Web must be able to get the IP address of the port associated with the print queue. This is sometimes not possible for printers configured with queues printing through non-TCP/IP protocols.

Note that if the IP address is used in Add Server, the DNS name may not appear in the list. For example, the entry may be prefaced with dhcp-39-91, where 39 and 91 represent the last 2 numbers in the IP address. This typically happens for servers that are automatically assigned IP addresses through DHCP, but their hostnames are not automatically updated in DNS.

Any queues installed on the server that have an IP address or DNS name will be added to CentreWare Web.

Delete Server

To delete a server:

- 1 Select **Add/Delete Server** from the tree.
- 2 Select a server from the list of Current Servers and click **Delete**.
- 3 Click **Confirm** to accept the deletion. CentreWare Web will no longer manage the server. The server's queues are not deleted.

Configure Status Retrieval

- Click **Configure Server** to display server information, then click **Configure**.

Status retrieval for printers attached to queues on this server are configured by selecting **Use System Default**, **Never**, or **Regularly**.

Viewing Printers

When you select Printers, printer groups appear in the navigation tree in the left pane. The Printer Management features include installation, troubleshooting, and detailed printer information.

Find Printers

You can find specific printers in CentreWare Web's database by entering printer characteristics as search criteria in the Find field and then clicking **Go**.

The following printer characteristics are searched for matches:

- System Name
- DNS Name
- IP Address
- MAC Address
- Printer Location
- Printer Description
- Printer Manufacturer
- Custom Field(s)
- Server Name
- Share Name
- Subnet Address

Finds are performed on the All group, so the results displayed are always a subset of this group. In Queues view, CentreWare Web will be reset to Printers view and the All group will be selected as the current group being viewed.

How Printers are Grouped

Discovered printers are automatically placed in the following groups:

- **Error**

Only those discovered printers that have a critical fault condition are automatically placed in this group.

- **Unconfigured**

Discovered printers that have not been installed (queue created) using CentreWare Web are automatically placed in this group.

- **All**

Every discovered printer is automatically placed in this group.

- **Custom**

Discovered printers that reside in a group that you have created. Any printers CentreWare Web has discovered can be placed into these groups.

- **Newly Discovered**

Only those printers detected during the latest Discovery process, which did not previously exist within the CentreWare Web server's database, are automatically placed in this group. The Newly Discovered group allows you to obtain an accurate listing of printers which could be added to your network without the proper authorization.

If these printers are not manually moved to a custom group, they will continue to accumulate within the Newly Discovered group every time a Discovery is performed.

Note: To use the Newly Discovered group effectively, it is recommended that the printers be moved to a custom group before the next Discovery is performed.

Group Information

Information about printer groups is available for viewing and configuring. You can define groups of printers and configure information about these groups. You can also add and delete printers from custom groups.

View/Configure Groups

To view and/or configure group information:

- 1 Select a group from the tree and click **Configure Group**.
- 2 Information about the selected group appears. This information may be modified by clicking **Configure**.
- 3 Status retrieval for the group can be configured by selecting **Use System Default**, **Never**, or **Regularly**.

Add Printers to a Custom Group

To add printers:

- 1 Select a custom group from the tree and click **Configure Group**.
- 2 Click **Add Printers**.

Delete Printers from a Custom Group

To delete printers:

- 1 Select a custom group from the tree and click **Configure Group**.
- 2 Click **Delete Printers**.

Delete Custom Group

To delete a custom group:

- 1 Select a custom group from the tree and click **Configure Group**.
- 2 Click **Delete Group**.
- 3 Verify that you want to delete the group by clicking **Confirm**. The group is then deleted.

Create New Group

To create a new group:

- 1 Select **Create New Group**.
- 2 Enter information about the group. A group name is required. Group names are not case sensitive. For example, you cannot create a new group called **Group1** if a group named **group1** already exists.
- 3 When finished, click **Continue** to add printers to the new group.
- 4 Select printers from the listing that you want added to the new group. You can sort the list as desired. When finished with your selections, click **Add**. The group is created and appears in the tree. Clicking **Cancel** will create a group with no printers.

Note that when a new group is created and the printers are added to the group, they must be installed.

Display/Sort Printer Information

When you select a group of printers, information is displayed for all printers in that group. Selecting a specific printer, by clicking the IP address or system name, displays detailed information about that particular printer's configuration.

Clicking the heading name will sort the information based upon that heading. Choosing a filtering option from the drop-down lists will sort the information displayed based upon that selection.

Note that if the printer status indicates that a printer(s) is not responding, description information may not be displayed.

Entries for the drop list filter selections under the **Printer Status**, **Description**, **Location**, **Manufacturer**, **Server Name**, and **Queue Status** columns are determined as follows:

- **Printer Status**
All, plus the statuses of the printers in the current group.
- **Description**
All, plus each type of printer in the current group.
- **Location**
All, plus each location reported by the printers in the current group.
- **Manufacturer**
All, plus each manufacturer of the printers in the current group.
- **Server Name**
All, plus the names of the servers on which printers in the current group have queues installed.
- **Queue Status**
All, plus the statuses of the print queues for all printers in this group.

Printer Detail Information

Detailed information about a single printer can be viewed and updated (through the printer's web server) while viewing a group of printers or queues.

- Click a printer's IP address or system name to view detailed printer information.

Install and Troubleshoot Buttons

- Select a printer and click **Install** to install it.
- Select a printer and click **Troubleshoot** to help diagnose problems with the printer or queue.
- Click **Refresh Status** to retrieve the latest information from the printer.

Queues

If the printer has been installed, then all of its associated queues are displayed on the page.

- Click **Manage Queue** to manage a specific queue. If the queue is on a Windows 2000 system, then Microsoft's built-in queue and job management web site is displayed. If the queue is on a Windows NT4 server, then CentreWare Web's Windows NT4 queue management page is displayed.
- Click **Delete Queue** to delete a specific queue. This will remove the queue from CentreWare Web and delete it from the server. Select the IP address of the printer that has a queue to delete the queue.

Printer

This area lists detailed information about the printer.

Printer Details

- Click **Manage Printer** to access the printer's web server. This provides access to all of the printer's internal settings. **Note that some older printers may not have an embedded web server.**
- For custom defined printer information, click **Edit Properties** and modify or enter new information, such as a serial number or inventory control information, then click **Save**.

Status Details

Printer Status, Page Count, Discovery Date, and Last Communication provide details about the printer's state.

Note that Page Count is only retrieved with status updates. When printers first appear or are discovered in CentreWare Web, the Page Count will be zero.

Group Membership

Since a printer can be a member of many groups, the Group Membership field enables you to determine which default or user-defined group(s) contain the current printer.

Printer Alerts

Printer Alerts shows the faults detected from the current printer. This area contains three basic elements: an overall status icon, a skill level, and a detailed printer alert description. The status icon displays a graphic of the fault condition (e.g. red/yellow/green). The Skill Level indicates the complexity of the repair action required to resolve the problem. The description typically contains more robust fault information, sometimes even the necessary repair actions, for understanding and resolving the problem.

- Select **Refresh Status** prior to viewing Printer Alerts to ensure that the fault information is current and accurate.

Preferences

Preferences control the way you view the information in CentreWare Web. The preferences settings control how the application will present information when displaying lists of printers.

To set preferences for CentreWare Web:

- 1 Click **Preferences**.
- 2 Make changes to the information.
- 3 Click **Save**.

Display Fields

- Use the arrows to include or exclude data from the display.
- Use the Move Up and Move Down buttons to rearrange the order of the columns in which the data will be displayed.

Wizards

The Wizards page provides step-by-step procedures for accomplishing tasks using CentreWare Web. Hints are available on screen which will help you to install, troubleshoot, upgrade, and clone printers on your network.

Install Wizard

A port, queue, and Windows printer driver can be installed for one or multiple printers. The installation can occur on the CentreWare Web server or a remote server. You can also customize the queue names to use for installation. You can select up to 25 printers at one time to install.

Printer Install Considerations

- CentreWare Web can only install print queues on those servers which have been added to CentreWare Web. To add a server, select the Printers tab, then click **Queues**, and select **Add/Delete Server**. You will be able to add only those servers for which the CentreWare Web account has administrative privileges. See *Selecting a CentreWare Web Account* on page 1-4 for more information.
- Windows 2000 print servers enable the most current printer drivers to be downloaded to a client automatically using the Microsoft process known as "Point and Print." When a printer is added, the Add Printer Wizard detects the client's operating system and automatically downloads the correct version of the printer driver to the client.
- Driver Signing
 - If File Signature Verification is set on the target server to Ignore, then CentreWare Web will proceed with the installation.
 - If Warn or Block is set, then a message appears during the installation process noting this condition. If you have selected to use an unsigned printer driver and attempt to proceed with the installation, the installation will not occur.
- Printer pooling is not supported.
- Only Intel and compatible architectures are supported. Alpha, MIPS, PowerPC, etc. are not supported.
- Clusters represent a number of physical computers, but are represented as a single IP address (for redundancy). Installing printers on multiple systems within a cluster is not supported.

Using the Install Wizard

To use the Install wizard:

- 1 From the Wizards page, click **Install**.
- 2 Select the group containing printers to be installed. Click **Continue**.
- 3 Select the specific printers to be installed. Click **Continue**.
- 4 Select the server on which the printers are to have queues installed. Click **Continue**.
- 5 Review the installation settings. Enter a queue name for each printer. If a queue name matches an existing queue on the server where the printers are being installed, the existing queue will be deleted and a new queue of the same name will be created based upon the settings specified for this printer installation.
- 6 Select whether each printer is to be shared. **Note that if a printer is not shared, then users will not be able to browse to the print server and select the queue, and the queue will not be available for management through Microsoft's built-in queue and job management website.**
- 7 To change other installation settings, click **Configure**.
 - **Port** specifies which port to use, and optionally the LPR queue name.
 - **Share By Default** specifies if printers of this type are to be shared by default when they are installed. If multiple printers of the same type are installed, the share name will follow Microsoft's naming convention. If the printer is not shared, its queue will not be accessible through CentreWare Web.
 - **Queue Naming** specifies how queues for this type of printer are to be named by default.

Notes: Custom queue names can be specified before clicking Finish to complete the printer installation.

If you are creating a new queue from an existing one, you must rename the queue.

If the <Host>_<Domain> option is selected and the printer is not registered in DNS, then the <Printer Type>_<IP> queue naming method will be used for that printer.

Microsoft allows only 12 characters for Windows 95/98/Me queue names and share names. Queue names that are longer than 12 characters will not be viewable.

The queue name and the share name are initially the same upon creation. The share name is an optional display field.

- **Printer Drivers** specifies which printer drivers to install and use for this type of printer. Select a printer driver for each operating system for which the install server supports printing operations. If the printer driver you wish to use does not appear in the list of available printer drivers, then click **Have Disk** to browse and select one.

Notes: If files are missing from the driver when **Have Disk** is selected, you will be prompted for the missing files.

If your site allows the use of unsigned print drivers and you want to enable the print server to accept unsigned drivers, right-click **My Computer** and select **Properties**. Select the **Hardware** tab and then select **Driver Signing**. Change the "File Signature Verification" setting to "Ignore - Install all files, regardless of file signature." This setting enables the unsigned print drivers to install on the print server.

- Click **Save** to save the settings and return to the previous page.
- 8 To complete the printer installation, click **Finish**.
 - 9 When the installation completes, the Install Results page appears. Then, you can optionally add the installed printers to a group by selecting a group and clicking **OK**, or just click **OK** to exit the Install wizard without adding the installed printers to a group.

Troubleshoot Wizard

For printers that have an error or fault condition, you can view/monitor the condition and troubleshoot the problem using the Troubleshoot wizard. You can also query printers in a group and view the results. You can select up to 25 printers at one time to troubleshoot.

To use the Troubleshoot wizard:

- 1 From the Wizards page, click **Troubleshoot**.
- 2 Follow the instructions on each page of the Troubleshoot wizard. To continue to the next step, click **Continue**.
- 3 Click **Finish** on the last page of the wizard to start the troubleshooting process.
- 4 After the process completes, the Troubleshoot Results page appears. To optionally perform further tests of printers/queues, click **Test**. When finished, click **Back**.
- 5 When you are finished testing, click **Back** to exit the wizard.

Upgrade Wizard

The Upgrade wizard steps you through the upgrade of printer controller firmware (flash file). The Upgrade wizard installs a new version of firmware to the selected printers. You can select up to 25 printers at one time to upgrade.

Note that the time to complete the upgrade depends on the number of printers selected and the size of the new firmware file.

To use the Upgrade wizard:

- 1 From the Wizards page, click **Upgrade**. The first page of the wizard appears.
- 2 Select the appropriate upgrade file and click **Continue**.
- 3 If the file that you need is not listed, click **Add/Delete Files**. The Add/Delete Upgrade Files page appears.
 - Click **Browse** to locate the flash file that you need. When located, click **Add**. The file is added to the Current Files list.
 - Optionally, if you wish to delete a file from the list, select the file from the current files list and click **Delete**.
 - Click **Back** to return to the Upgrade wizard.
- 4 Select the group that you want to upgrade and click **Continue**.
- 5 Select the printer type for the upgrade from the drop-down list and click **Continue**. **Only one printer type can be upgraded at a time.**
- 6 Select printers from the list that you want upgraded. Click **Finish** to start the upgrade process. The Upgrade Results page appears when the upgrade is complete. Click **OK** to exit the wizard.

Note that even though CentreWare Web may show that the upgrade is complete, the printer may still be rebooting or may still be finishing the upgrade. The printer may not be available immediately.

Clone Wizard

The Clone wizard copies the settings from one printer to other printers of the same model and firmware level. The wizard clones printers with Xerox CentreWare Internet Services web servers that have the cloning feature. You can select up to 25 printers at one time to clone.

Note that the time to complete the cloning depends on the number of printers selected.

Not all printer types support cloning. Cloning only works between printers of the same model that have the same version of firmware installed.

Firmware is not copied from one printer to another. Only the settings normally available via Xerox CentreWare Internet Services and/or the printer's control panel are copied.

To use the Clone wizard:

- 1 From the Wizards page, click **Clone**.
- 2 Select the group that contains the printer from which the settings will be copied and click **Continue**.
- 3 Select the printer from which to copy the settings, and click **Continue**.
- 4 Select the group containing the target printer(s) for the clone and click **Continue**.
- 5 Select the individual target printer(s) for the clone. Click **Finish** to start the cloning process.
- 6 The Results page appears. Click **OK** to exit the wizard.

Reports

The Reports page enables you to create and email links to reports about assets, status, accounting, or printer alert history information. For accounting and alert history reports, you define the information to collect for the report on the Statistical Data page of the Administration page.

Creating a Report

Select a report type on the Reports page using the appropriate link. You can select one of the following reports:

- **Asset**

Lists all printers discovered by CentreWare Web on your network.

- **Status**

Reports printers that need attention.

- **Accounting**

Reports the printer page counts only for printers in a selected group and not their associated queues. Statistical data collection must be enabled from the Administration page. Information provided in the printers SNMP page count will be requested by CentreWare Web on a daily basis as scheduled. The date and time reflected in the report indicates when the information was requested from the printer, not the actual date and time the fault may have occurred.

- **Alert History**

Reports the alerts for the printers in a selected group. Statistical data collection must be enabled from the Administration page. Information provided in the printers SNMP alert table will be requested by CentreWare Web on a daily basis as scheduled. The date and time reflected in the report indicates when the information was requested from the printer, not the actual date and time the fault may have occurred.

Configure Information for the Report

You define the desired options for the report, which appear after you select a report type.

General Settings

Enter a comment to help identify the report, and select the format for the report.

Report Parameters

For Accounting and Alert History reports, specify the group to report on and the date range of data to include in the report.

Data Fields

You can select the information to include in the report, for example, Printer Status and Skill Level for an Alert History report, or a Custom Field for an Accounting report.

Use the arrow buttons to choose what data to include in the report. Use the **Move Up** and **Move Down** buttons to arrange the order of the columns of data included in the report.

Recipients

Enter the email addresses of those who are to receive a link to the report.

- To add a recipient, enter a New Recipient and then click **Add**. To delete a recipient, select one of the Current Recipients and then click **Delete**.
- Save your settings and email the report link by clicking **Send Now**.

Note that links to reports are sent instead of report attachments due to site policies that may vary on attachment size.

Administration

The Administration page contains options for customizing printer discovery methods, CentreWare Web administrator information, network settings, SNMP settings, statistical data collection settings, and configuring custom fields.

Discovery

Discovery finds printers on the network. By configuring subnet and IP address information, Discovery can be tailored to find individual printers or specific groups of printers. You can also specify the frequency, date, and time for scheduling automatic Discovery.

When Discovery is initiated, CentreWare Web checks IP address ranges, and individual IP addresses that it is configured to search. For each SNMP compliant printer that responds, CentreWare Web identifies the printer and stores information about it.

Discovery Status

If Discovery is currently taking place, its progress is indicated on the page. A Discovery in progress can also be stopped. Information is also provided about the last Discovery processed, the Discovery type, and the next Discovery that will occur.

Starting a Discovery Now

To start a printer Discovery:

- 1 On the Administration page, click **Discovery**.
- 2 From one of the Discovery mechanisms, click **Discover Now**. The Discovery process proceeds using the selected Discovery mechanism's settings.

While the Discovery operation is processing, its progress is displayed on the page. Once it is complete, click **Back** to return to the main Discovery settings page. The newly found printers will be available to manage using the Printers page shortly (normally 1-2 minutes) after the Discovery is complete.

Queuing up Discovery Mechanisms

While one Discovery operation is in progress you can click on **Discover Now** to queue up a different Discovery mechanism. Once the first Discovery is completed, CentreWare Web will immediately start the second Discovery.

Note that you cannot queue up multiple Discoveries of the same Discovery mechanism, for example, run an SNMP Broadcast and then queue up another SNMP Broadcast. Use a scheduled Discovery time to repeat the same Discovery type.

Returning to the Discovery in Progress Page

You can return to the Discovery in Progress page by clicking **Discover Now** on the page that corresponds to the Discovery mechanism which is currently processing. The Discovery in Progress page is automatically refreshed to show the current progress of Discovery.

Stopping Discovery

You can stop a Discovery during processing by clicking **Stop Discovery**. The Discovery process is halted after the current portion of discovery completes; it may not stop immediately. If a scheduled Discovery is configured in either of the Discovery mechanisms, it will process as scheduled and is not affected by this option.

Configuring Discovery

To configure options for a specific Discovery mechanism:

- 1 On the Administration page, click **Discovery**.
- 2 Click **Configure** from one of the Discovery Mechanisms (SNMP Broadcast or SNMP Sweep).
- 3 When finished, click **Save** to save the SNMP Broadcast or Sweep configuration settings.

SNMP Broadcast Configuration Settings

SNMP Broadcast is a Discovery mechanism that will broadcast SNMP GET REQ packets to all the nodes within a subnet. CentreWare Web utilizes IP addresses and subnet masks to calculate the subnet.

The subnet address is a modified form of an IP address. An IP address is modified by setting all of the bits within the Node Number portion of the address to the numeral '0.'

Example:

IP Address = 13.175.109.146

Subnet Mask = 255.255.252.0

Subnet Address = 13.175.108.0

SNMP Broadcast Considerations

Consider the following issues when using the SNMP Broadcast Discovery mechanism:

- Any SNMP compliant printer that is properly configured for TCP/IP connectivity can be discovered via this mechanism, including printers on remote subnets.
- SNMP Broadcast Discovery is generally fast, but places a short term, high demand on networks. A large number of printers will cause packet collisions and reduce the accuracy of SNMP Broadcast Discovery.
- SNMP Broadcast discovery can not guarantee discovery of printers; however SNMP Sweep Discovery does.
- If routers are configured to filter broadcast traffic, Discovery on remote subnets will not occur.

Notes: The SNMP Broadcast configuration page has a limit of 3400 subnets that can be entered. If there are more entries needed, perform SNMP Broadcast Discovery in two or more separate runs.

If your network does not have a subnet mask, enter a subnet mask that matches your IP address class, Class A = 255.0.0.0, Class B=255.255.0.0, Class C=255.255.255.0

Schedule

This option enables or disables this Discovery mechanism as well as controlling how often it will be run.

Note that more network traffic occurs with more frequent Discovery processing.

For SNMP Broadcast configuration, enable a **Scheduled Discovery**, enter the **Frequency**, and set when the next Discovery is to be processed.

Timeout Per Subnet

This option sets the amount of time the application will wait for responses when discovering printers on each subnet.

Subnets

Subnets on which this Discovery mechanism will search for printers are displayed on the page.

Subnets can be added and removed using one of the following methods:

- Select subnet information for Discovery by entering IP addresses and subnet mask information and clicking **Add**. The subnets are added to the **Current Subnets** list box.
- The current subnets that are used for Discovery can be removed by selecting a subnet/IP address from the list and clicking **Remove**.

SNMP Sweep Configuration Settings

SNMP Sweep is a Discovery mechanism that will send SNMP GET REQ packets to a range of IP addresses on your network. This option will attempt to query all the IP addresses that you specify, regardless of the printer type or the validity of the address. You can configure an SNMP Sweep by entering a single address, an address range, or a subnet (IP address, subnet mask).

SNMP Sweep Considerations

Consider the following issues when using the SNMP Sweep Discovery mechanism:

- Any SNMP complaint printer that is properly configured for TCP/IP connectivity can be discovered via this mechanism, including devices on remote subnets.
- While SNMP Sweep is slower than SNMP Broadcast, it provides the best Discovery accuracy (within the specific parameters/addresses you specify).
- Discovery speed is proportional to the number of IP addresses searched.

Notes: Using SNMP Sweep to discover large numbers of IP address requires a large amount of memory on the server. For example, sweeping a million IP addresses would require approximately 512 MB of server RAM.

The SNMP Sweep configuration page has a limit of 3400 individual IP Addresses and a limit of 2275 ranges. There can also be 3400 individual IP addresses with 2275 ranges at the same time since the ranges from the individual IP addresses are split before they are sent to the server. If more entries are needed, process SNMP Sweep Discovery in two or more separate runs.

Schedule

This option enables or disables this Discovery mechanism as well as controlling how often it will be run.

Note that more network traffic occurs with more frequent Discovery processing.

For SNMP Sweep configuration, enable a **Scheduled Discovery**, enter the **Frequency**, and set when the next Discovery is to be processed.

Timeout Per Printer

This option sets the amount of time CentreWare Web will wait for a response from a printer during Discovery.

IP Addresses

The specific IP addresses and ranges of IP addresses that are searched display on the page.

New IP addresses and ranges of IP addresses can be added and current ones can be removed using one of the following:

- Select a single IP address, a range of IP addresses, or a subnet for Discovery and click **Add**. The IP addresses are added to the Current IP Addresses list box. The subnet mask is used for each type of entry for validation, and in the case of subnets, automatic range calculation.
- The current IP addresses or ranges that are used for Discovery can be removed by selecting an IP Address or Range from the list box and clicking **Remove**.

Clearing the Discovery Database

Discovered printers are stored in CentreWare Web's database. You can clear the database manually by selecting options from the Discovery page to remove previously discovered printers.

If you rearranged your network or moved printers, you may want to clear the Discovery database and perform a new Discovery on the network.

Queues with Undiscovered Printers

When adding a server through Add/Delete server, CentreWare Web may find printers that have queues on the server being added, but have not yet been discovered by CentreWare Web. These printers are indicated by blue icons that contain a "?" symbol, and have a printer status of Not Found.

CentreWare Web will try to automatically find these printers on the network. If they are still not found, it is a good indication that the print queue on the server points to a printer that is no longer on the network.

Note that it may take a few minutes to discover these printers after the server has been added to CentreWare Web.

Manually Clear Database

All printers can be cleared, or only printers with which CentreWare Web has not communicated in a specified amount of time. Only printers are cleared from the database. Groups and other settings in the application are retained.

Any printers deleted from the database are also removed from any groups of which they are members.

Note that deleted printers do not have their print queues deleted from the print servers.

- To clear the database immediately, click **Clear Database Now**. The database is cleared.

Administrator

The Administrator page enables you to enter system administrator or support contact information for this CentreWare Web installation. The information is then available to all users from the Home page by clicking **Configure**.

Site

This option defines the name for the CentreWare Web web site.

Identity

This option defines the name and contact information of the CentreWare Web administrator.

Network

The Network page enables you to specify configuration options for CentreWare Web that specify how the application will work on your network.

Status Retrieval

This option controls when the application will retrieve printer status information. The application can be set to **Never** retrieve this information or to retrieve it **Regularly** at a specified interval. The more frequently printer status information is retrieved, the more load there will be on the network.

You can select a custom polling interval for a specific group. CentreWare Web will then retrieve status for the printers in the selected group at the custom interval specified, regardless of the polling interval specified for the entire network.

Mail Server

This option specifies which Simple Mail Transport Protocol (SMTP) mail server to use when reports are emailed from CentreWare Web, and the email address to use as the sender of reports.

DNS Resolution

This option should be used if the application is to use DNS names instead of IP addresses when communicating with printers via the HTTP protocol. This is useful in environments that block HTTP requests to IP addresses. If printers are not registered in DNS, this option can affect features such as linking to a printer's embedded web server and printer cloning.

SNMP

The SNMP page enables you to specify options for how CentreWare Web operates when using the SNMP network protocol.

SNMP Get Community Names

This option specifies what SNMP community names to use when retrieving information from printers via SNMP. The number of community names affects the time to complete a Discovery as the operation is repeated for each community name.

- To add a community name, enter a New Name and then click **Add**.
- To remove a community name, select a Current Name and click **Remove**.

Statistical Data

Statistical data gathering must be enabled to obtain full use of the Accounting and Alert History reports. Specific information can be gathered at a specified time and for selected groups of printers.

Statistical data is kept in CentreWare Web's database for one year. Any statistical data older than one year is automatically removed.

Schedule for Retrieval

This option specifies if and when statistical data gathering is to occur.

Note that the time set to gather statistical data may differ from the Last Communication, which is displayed in the detailed printer information. The Last Communication time is always the last time that the printer was communicated with, regardless of the type of communication (status, page count, alerts, etc.).

Data to Collect

This option specifies the types of data to collect from printers. The types of data include the number of pages that each printer has output, and the history of alerts for each printer.

For report generation, select either **Page Count** for Accounting Reports, or **Alert History** for Alert History Reports.

Select Groups Used in Retrieval

This option specifies from which groups of printers to gather statistical data.

Custom Fields

CentreWare Web enables you to specify up to five custom fields for each printer. Each custom field includes the name of the custom field and a value associated with the custom field, which you enter.

- Enter the **Name** of the custom field. The custom field value is entered by clicking **Edit Properties** on the printer detail page.
- Select **Enable Filter** to allow drop list filter selections to appear on the Printers tab.
- Select **Enforce Uniqueness** to ensure that the custom field value is unique for every printer.

Problem Solving and FAQs

Application, printer, and network errors can occur in a variety of printing situations. In many cases, simply restarting the application, the workstation, or the printer will resolve the problem. This chapter includes some of the common problems and Frequently Asked Questions that pertain to CentreWare Web.

Problem Solving

When a problem persists, document the error messages and gather information to define the problem. The following problem solving procedures are recommended:

- Accurately define the problem. When, where, and how does the problem occur?
- Reproduce the problem. Can the problem be reproduced consistently or is it an intermittent problem?
- Ask other users if they have encountered the problem, and keep a log to track problem occurrences.
- Examine the data for trends and the common attributes that may be related to the problem. For example, does the problem occur only with a specific printer or on a specific workstation/network configuration?
- Review the product documentation, including the Readme file and the online help topics, to see if any similar problems are documented.

If a cause and solution to the problem cannot be identified, call the Xerox Welcome Center to report the error information. Provide the support representative with the documentation that you have gathered to define the problem.

Frequently Asked Questions

Why can't I install a printer driver from an INF file?

The most common reason is that the driver signing policy of the server where you are attempting to install the driver is set to Warn or Block. This server property will prevent the installation of any driver that is not signed by the driver manufacturer.

Why can't I clone one printer to another?

Both printers must be of the same model and firmware level. Both printers must also contain Xerox CentreWare Internet Services web servers that have the type of cloning feature supported by the cloning wizard.

If the source printer and destination printer(s) are not compatible for cloning, then the cloning operation will fail. This is always true for printers that are not the same model.

Sometimes, even two printers of the same model cannot be cloned to one another. If one printer model's cloning feature changes between controller firmware versions, the cloning operation will fail because each printer will be supporting different types of cloning.

Why can't I upgrade a printer?

The selected firmware file must be compatible with the model and firmware level of the printers being upgraded.

Why can't I see the embedded web server?

If HTTP is disabled from the printer control panel, the printer appears to not have a web server. This means that cloning will not work and the **Manage Device** button on the printer's information page will not appear in CentreWare Web.

Why can't I add a server to CentreWare Web? I receive an Access Denied message.

When administering printer queues, CentreWare Web runs with the credentials of the user account that is configured during installation. This account must have administrative privileges on any servers where CentreWare Web will manage queues. To view/modify the account currently being used by CentreWare Web, see Modifying the CentreWare Web Account on page 1-9 .

When only a Windows 2000 driver was selected for a printer install, why are multiple drivers associated with the queue?

If a printer driver was previously installed on the print server, then Windows 2000 associates it with the newly created queue.

I chose <Host>_<Domain> default queue naming. Why do some queue names default to <Printer-Type>_<IP> naming?

If a printer cannot be looked up via DNS, then the queue name will default to <Device-Type>_<IP>.

I selected all printers, but not all printers were installed or added.

The **Select All** checkbox only selects the printers displayed on the page.

Why does CentreWare Web say that a particular printer does not support cloning when the printer does have this feature?

The cloning feature of some printers is not compatible with CentreWare Web. Consult the printer's documentation on how to use its cloning feature outside of CentreWare Web.

I cannot see a specific printer.

Solution 1

Printer's IP addresses can change if they are moved from one subnet to another, their static IP addresses are manually changed, or Dynamic Host Configuration Protocol (DHCP) gives the printer a new address.

Note that a printer's previous IP address is displayed as a printer with a status of Not Found. The printer with the "new" IP address will not appear in the database until Discovery is processed again.

From the **Administration>Discovery>SNMP Broadcast Discovery** mechanism page, click **Discover Now** to view the current printer information.

Solution 2

Print a configuration page from the printer and locate the IP address of the printer. Enter this address into CentreWare Web's SNMP Sweep Configuration page, then run SNMP Sweep Discovery.

Test the communications with the printer by pinging the printer from the computer where CentreWare Web is running. At a command prompt, type **ping W.X.Y.Z**, where W.X.Y.Z is the IP address of the printer. If the printer has a web server, open your browser and enter the IP address of that printer.

Verify that the printer's SNMP GET community name string is listed in CentreWare Web's Network page from the Administration page.

Verify that the printers support SNMP. This can be done with a commercially available SNMP tool, or by contacting the printer vendor. See Appendix B on page B-1 and/or the Readme file for known Xerox printers that do not support SNMP.

As a diagnostic tool you can dump all the information found during Discovery by running a test Visual Basic Script (VBS) file. From the location where CentreWare Web is installed, find the subdirectory named **DB Create**. Run the script named **discoDBdumpAll.vbs**; this will create a comma separated value file that can be easily viewed with a spreadsheet program, such as Microsoft Excel. Any printer that answered to the SNMP requests will be in this file. Printers with the PRINTER column as TRUE should appear in CentreWare Web.

If you still cannot see a specific printer, see the next FAQ.

Why do I have to enter a subnet mask for Discovery properties?

Certain IP addresses on a network are used for special purposes. The network address (usually ending in .0) indicates the subnet, and the broadcast address (usually ending in .255) indicates an address for all printers on that subnet. Entering correct subnet masks in the Discovery mechanism pages allows CentreWare Web to calculate other information, check that the information entered is correct, and ignore the special addresses when appropriate.

On the SNMP Broadcast mechanism page, entering the correct subnet allows any IP address for the subnet. CentreWare Web will then calculate the correct network address.

For example, if a printer's IP address is 13.231.37.5, entering this IP address with the correct mask of 255.255.252.0, enables CentreWare Web to calculate the correct subnet address and display 13.231.36.0 in the list box. This is the subnet address for the subnet where the printer resides.

Not all printers answer to the subnet address. When SNMP Broadcast Discovery runs, it uses the subnet address and the mask to calculate the broadcast address (13.231.39.255 in the previous example) and this address is sent.

On the SNMP Sweep mechanism page, entering the correct subnet allows CentreWare Web to ignore addresses for which no printer should be configured.

In the following example, compare entering two ranges, each with the correct subnet mask, versus entering one large range with a subnet mask that does not match the true network configuration.

Sweep Property Setting A with Two Ranges

128.222.254.185 - 128.222.254.186 | 255.255.255.252

128.222.254.189 - 128.222.254.190 | 255.255.255.252

Sweep Property Setting B with One Large Range

128.222.254.185 - 128.222.254.190 | 255.255.255.224

In setting B the following addresses are sent:

128.222.254.185

128.222.254.186

128.222.254.187

128.222.254.188

128.222.254.189

128.222.254.190

Address 128.222.254.187 is the true network address for which no printer should be configured.

Address 128.222.254.188 is the true broadcast address for the network. A broadcast address will find all printers on the subnet. No printer should be configured to this address. Additionally, this generates additional network traffic and could cause packet collisions, reducing the accuracy of SNMP Sweep Discovery.

If reducing network traffic and increasing Discovery accuracy is important in your environment, then you should enter the true subnet mask for each range.

I cannot discover any printers.

Ensure that your computer is connected to the network and that there are printers directly attached to the network. If the computer where CentreWare Web is running or the printers are attached to the network via a switch, use the SNMP Sweep Discovery mechanism.

Broadcast SNMP packets often do not pass through switches. If there is a router between the computer where CentreWare Web is running and the printers, verify that the router is not blocking the SNMP packets to the printers.

Test the communications with the printer by pinging the printer from the computer where CentreWare Web is running. At a command prompt, type **ping W.X.Y.Z**, where W.X.Y.Z is the IP address of the printer. If the printer has a web server, open your browser and enter the IP address of that printer.

Verify that the printer's SNMP GET community name string is listed in CentreWare Web's Network page from the Administration page.

Verify that the printers support SNMP. This can be done with a commercially available SNMP tool, or by contacting the printer vendor. See Appendix B on page B-1 and/or the Readme file for known Xerox printers that do not support SNMP.

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I see unusual IP addresses of printers in CentreWare Web.

CentreWare Web can be used as a tool to find printers on your network that are misconfigured or have an invalid IP address. For example, a printer might appear with the loopback address of 127.0.0.1, or any IP address that doesn't match your configured subnets or IP address class. These misconfigured printers appear in CentreWare Web because the printers answer to broadcast SNMP requests, but don't respond to directed SNMP requests or other troubleshooting techniques. To correct printers in this state, you can determine the subnet that the printer is on by clearing CentreWare Web's database and narrowing the list of configured SNMP Broadcast Discovery subnets. Then, for each printer on the subnet, print a configuration page from the printer's control panel. Once the printer is located, you can correctly configure it from the printer's control panel.

I upgraded my print server from Windows NT to Windows 2000, but CentreWare Web still views it as a Windows NT server.

CentreWare Web does not constantly scan print servers to determine their operating system type. Delete the print server from CentreWare Web and then add it again to update the information in CentreWare Web's database.

CentreWare Web indicated that my server is low on disk space.

If the volume on which CentreWare Web is installed has less than 50MB of free space, then a message is displayed to alert you to this condition. Most servers require more than this amount of free disk space in order to operate correctly.

CentreWare Web reports that files in the driver repository are in use by another user when there are currently no other users of the application.

To resolve this issue, restart IIS on the server where CentreWare Web is installed.

Why does the message, "Unable to Determine Driver Signing Policy" appear?

Check the server when this message appears. It may be that the server's name resolved incorrectly. If the IP address was previously entered, try entering the DNS name instead and vice versa. In Queues view, select **Add/Delete Server**, and delete the server entry.

Why can't I open an XML formatted report from my Microsoft Outlook?

The version of Outlook you are using may not allow you to access this report. Save the attachments to your hard disk first and then open it.

When using the Upgrade wizard, a message appears stating that CentreWare Web cannot communicate with the printer, yet the printer is online and on the network.

The standard ports that the Upgrade wizard uses to send the upgrade file are not supported by the printer. Upgrade the printer by using the printer's web server.

Why doesn't CentreWare Web retain selections made in Preferences or the number of printers shown per page?

Cookies control the storage of Preferences and the number of printers shown per page. Check to see if the browser is enabled for cookies.

Appendix A

CentreWare Web has the capability to monitor print queues on Win NT/2000 machines in addition to the printers. Printing problems can occur on the printer queues or on the printers. The queue management capability allows CentreWare Web to monitor and troubleshoot problems in more of an end-to-end fashion (from queue to actual printer).

Getting detailed information on a print queue requires local Administrator privileges on the actual server where the print queue is attached. CentreWare Web has the ability to "run as" a particular domain user, and if this user is in the local Administrators group of a particular server then the software can monitor and troubleshoot all of the printer queues on that server.

Security Diagrams

Choose a diagram from this section which most closely resembles your network configuration and then use the table that accompanies the diagram to determine how CentreWare Web can manage all your printer queues.

For more information visit the following Microsoft websites:

<http://www.microsoft.com/technet/>

<http://www.microsoft.com/windows2000/>

Windows NT Single Domain

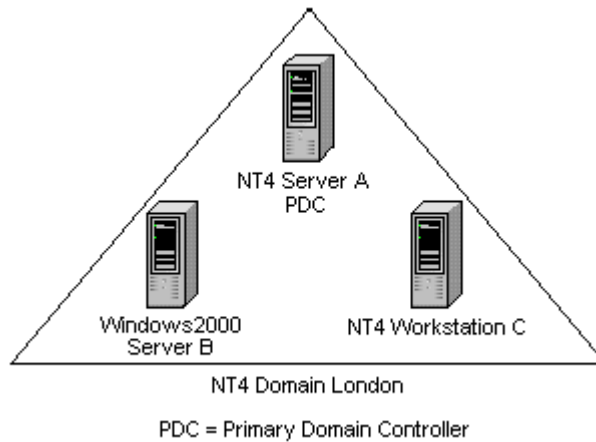


Figure A-1: Simple NT4 Single Domain

CentreWare Web Installation location	CentreWare Web User Account	Location to Manage Queues
Windows 2000 Server B	User in London\Domain Admins global group.	Server A Server B WorkstationC
Windows 2000 Server B	Local user AdministratorB Note that AdministratorB has administrator rights on the local server B	Server A , if AdministratorB is in the London\Domain Admin group. Server B. Workstation C , if AdministratorB is in the London\Domain Admin group.

Table A-1: Locations where CentreWare Web can Manage Queues in an NT4 Single Domain

Two Windows NT Domains

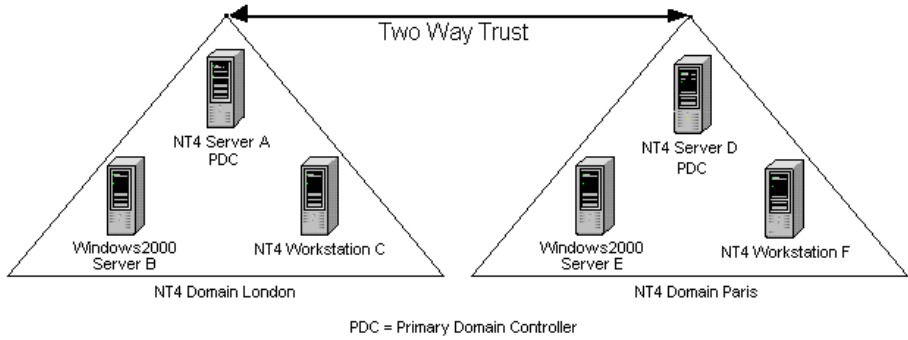


Figure A-2: Two NT4 Domains

CentreWare Web Installation location	CentreWare Web User Account	Location to Manage Queues
Windows 2000 Server B (Recommended installation)	User in London\Domain Admins global group.	Server A. Server B. Workstation C. Server D, if London\Domain Admin is in Server D's local administrators group. Server E, if London\Domain Admin is in Server E's local administrators group. Workstation F, if London\Domain Admin is in Workstation F's local administrators group.

Table A-2: Locations where CentreWare Web can Manage Queues in Two NT4 Domains

CentreWare Web Installation location	CentreWare Web User Account	Location to Manage Queues
Windows 2000 Server B	User in Paris\Domain Admins global group.	<p>Server A, if Paris\Domain Admin is in Server A's local administrators group.</p> <p>Server B, if Paris \Domain Admin is in Server B's local administrators group.</p> <p>Workstation C, if Paris\Domain Admin is in Workstation C's local administrators group.</p> <p>Server D</p> <p>Server E</p> <p>Server F</p>
Windows 2000 Server B	<p>Local user AdministratorB</p> <p>Note that AdministratorB has administrator rights on the local server B</p>	<p>Server A, if AdministratorB is in the London\Domain Admin group.</p> <p>Server B.</p> <p>Workstation C, if AdministratorB is in the London\Domain Admin group.</p> <p>Server D, if AdministratorB is in the Paris\Domain Admin group.</p> <p>Server E, if AdministratorB is in the Paris\Domain Admin group.</p> <p>Server F, if AdministratorB is in the Paris\Domain Admin group.</p>

Table A-2: Locations where CentreWare Web can Manage Queues in Two NT4 Domains

Three NT4 Domains

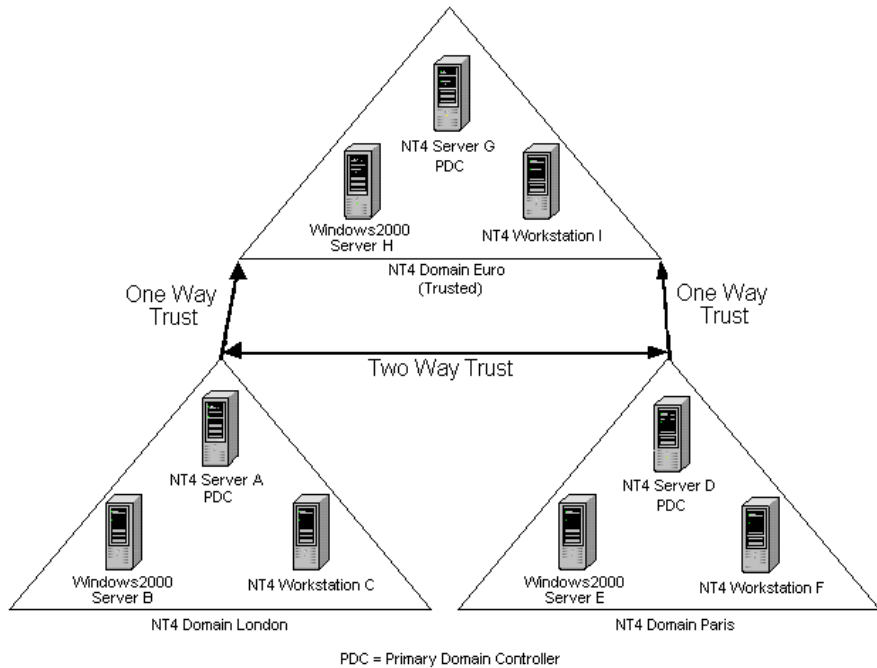


Figure A-3: Three NT4 Domains

CentreWare Web Installation location	CentreWare Web User Account	Location to Manage Queues
Windows 2000 Server H	User in Euro\Domain Admins global group.	<p>Server A, if Euro\Domain Admin is in Server A's local administrators group.</p> <p>Server B, if Euro\Domain Admin is in Server B's local administrators group.</p> <p>Workstation C, if Euro\Domain Admin is in Workstation C's local administrators group.</p> <p>Server D, if Euro\Domain Admin is in Server D's local administrators group.</p> <p>Server E, if Euro\Domain Admin is in Server E's local administrators group.</p> <p>Workstation F, if Euro\Domain Admin is in Workstation F's local administrators group.</p> <p>Server G.</p> <p>Server H.</p> <p>Workstation I.</p>

Table A-3: Locations where CentreWare Web can Manage Queues in Three NT4 Domains

CentreWare Web Installation location	CentreWare Web User Account	Location to Manage Queues
Windows 2000 Server H	User in Paris\Domain Admins global group.	<p>Server A, if Paris\Domain Admin is in Server A's local administrators group.</p> <p>Server B, if Paris \Domain Admin is in Server B's local administrators group.</p> <p>Workstation C, if Paris \Domain Admin is in Workstation C's local administrators group.</p> <p>Server D.</p> <p>Server E.</p> <p>Workstation F.</p> <p>Server G, if Paris \Domain Admin is in Server G's local administrators group.</p> <p>Server H, if Paris \Domain Admin is in Server H's local administrators group.</p> <p>Workstation I, if Paris \Domain Admin is in Workstation I's local administrators group.</p>

Table A-3: Locations where CentreWare Web can Manage Queues in Three NT4 Domains

CentreWare Web Installation location	CentreWare Web User Account	Location to Manage Queues
Windows 2000 Server H	User in London\Domain Admin global group.	<p>Server A. Server B. Workstation C. Server D, if London\Domain Admin is in Server D's local administrators group. Server E, if London\Domain Admin is in Server E's local administrators group. Workstation F, if London\Domain Admin is in Workstation F's local administrators group. Server G, if London\Domain Admin is in Server G's local administrators group. Server H, if London\Domain Admin is in Server H's local administrators group. Workstation I, if London\Domain Admin is in Workstation I's local administrators group.</p>

Table A-3: Locations where CentreWare Web can Manage Queues in Three NT4 Domains

CentreWare Web Installation location	CentreWare Web User Account	Location to Manage Queues
Windows 2000 Server H	Local user AdministratorH. Note that AdministratorH has administrator rights on the local server H.	Server A , if AdministratorH is in the London\Domain Admin group. Server B , if AdministratorH is in the London\Domain Admin group. Workstation C , if AdministratorH is in the London\Domain Admin group. Server D , if AdministratorH is in the Paris\Domain Admin group. Server E , if AdministratorH is in the Paris\Domain Admin group. Workstation F , if AdministratorH is in the Paris\Domain Admin group. Server G , if AdministratorH is in the Euro\Domain Admin group. Server H . Workstation I , if AdministratorH is in the Euro\Domain Admin group.

Table A-3: Locations where CentreWare Web can Manage Queues in Three NT4 Domains

CentreWare Web Installation location	CentreWare Web User Account	Location to Manage Queues
Windows 2000 Server B	User in Euro\Domain Admins global group.	<p>Server A, if Euro\Domain Admin is in Server A's local administrators group.</p> <p>Server B, if Euro\Domain Admin is in Server B's local administrators group.</p> <p>Workstation C, if Euro\Domain Admin is in Workstation C's local administrators group.</p> <p>Server D, if Euro\Domain Admin is in Server D's local administrators group.</p> <p>Server E, if Euro\Domain Admin is in Server E's local administrators group.</p> <p>Workstation F, if Euro\Domain Admin is in Workstation F's local administrators group.</p> <p>Server G.</p> <p>Server H.</p> <p>Workstation I.</p>

Table A-3: Locations where CentreWare Web can Manage Queues in Three NT4 Domains

CentreWare Web Installation location	CentreWare Web User Account	Location to Manage Queues
Windows 2000 Server B	Local user AdministratorB. Note that AdministratorB has administrator rights on the local server B.	Server A , if AdministratorB is in the London\Domain Admin group. Server B . Workstation C , if AdministratorB is in the London\Domain Admin group. Server D , if AdministratorB is in the Paris\Domain Admin group. Server E , if AdministratorB is in the Paris\Domain Admin group. Workstation F , if AdministratorB is in the Paris\Domain Admin group. Server G , if AdministratorB is in the Euro\Domain Admin group. Server H , if AdministratorB is in the Euro\Domain Admin group. Workstation I , if AdministratorB is in the Euro\Domain Admin group.

Table A-3: Locations where CentreWare Web can Manage Queues in Three NT4 Domains

Simple Active Directory Single Domain

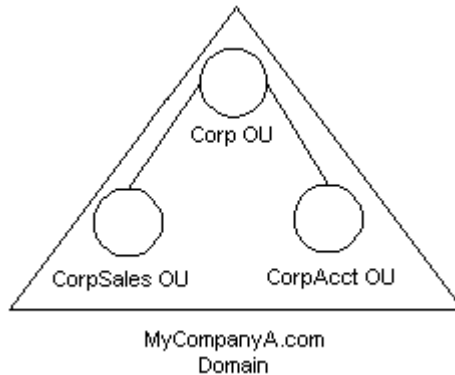


Figure A-4: Active Directory Single Domain

CentreWare Web User Account	Location to Manage Queues
AdminA in MyCompanyA\Domain Admins global group (recommended installation).	Corp OU (Organizational Unit) CorpSales OU CorpAcct OU
AdminA in MyCompanyA\CorpSales OU.	Corp OU , if AdminA is in the MyCompanyA\Domain Admin group. CorpSales OU . CorpAcct OU , if AdminA is in the MyCompanyA\Domain Admin group.

Table A-4: CentreWare Web User Accounts and Locations for Queue Management in an Active Directory Single Domain

Active Directory Tree

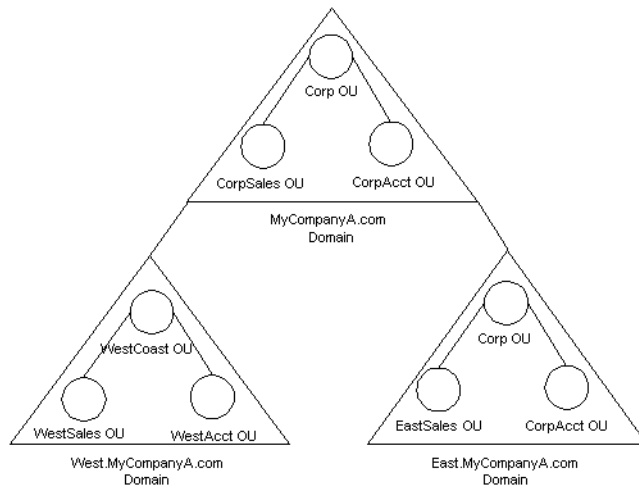


Figure A-5: Active Directory Tree

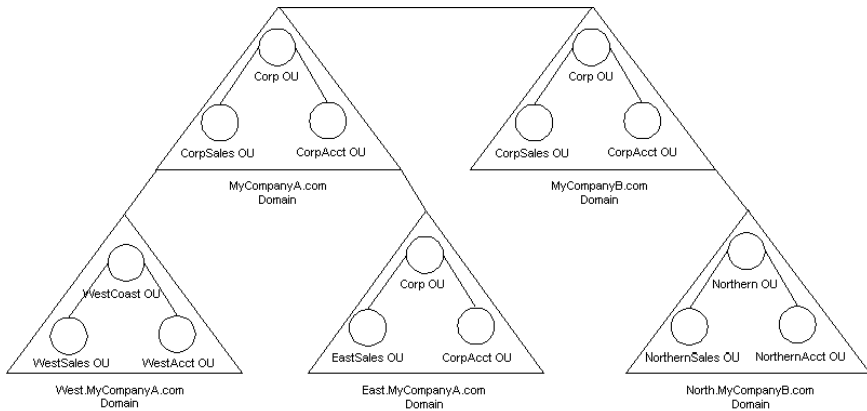
CentreWare Web User Account	Location to Manage Queues
AdminA in MyCompanyA\Domain Admins global group (recommended installation).	Corp OU (Organizational Unit) CorpSales OU CorpAcct OU WestCoast OU WestSales OU WestAcct OU EastCoast OU EastSales OU EastAcct OU

Table A-5: CentreWare Web User Accounts and Locations for Queue Management in an Active Directory Tree

CentreWare Web User Account	Location to Manage Queues
AdminA in MyCompanyA\WestSales with admin permissions in WestSales OU.	<p>Corp OU, if AdminA is in the MyCompanyA\Domain Admin group.</p> <p>CorpSales OU, if AdminA is in the MyCompanyA\Domain Admin group.</p> <p>CorpAcct OU, if AdminA is in the MyCompanyA\Domain Admin group.</p> <p>WestCoast OU, if AdminA is in the West.MyCompanyA\Domain Admin group.</p> <p>WestSales OU.</p> <p>WestAcct OU, if AdminA is in the West.MyCompanyA\Domain Admin group.</p> <p>EastCoast OU, if AdminA is in the MyCompanyA\Domain Admin group.</p> <p>EastSales OU, if AdminA is in the MyCompanyA\Domain Admin group.</p> <p>EastAcct OU, if AdminA is in the MyCompanyA\Domain Admin group.</p>

Table A-5: CentreWare Web User Accounts and Locations for Queue Management in an Active Directory Tree

Active Directory Forest of Trees



Assume that the default two way transitive trust exists between the top level domains in the forest.

Figure A-6: Active Directory Forest of Trees

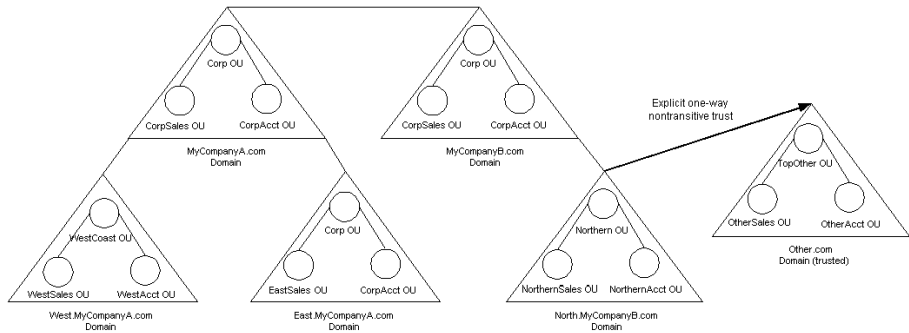
CentreWare Web User Account	Location to Manage Queues
AdminA in MyCompanyA\Domain Admins global group (recommended installation).	Corp OU (Organizational Unit) CorpSales OU CorpAcct OU WestCoast OU WestSales OU WestAcct OU EastCoast OU EastSales OU EastAcct OU Artic OU ArticSales OU ArticAcct OU Northern OU NorthernSales OU NorthernAcct OU

Table A-6: CentreWare Web User Accounts and Locations for Queue Management in an Active Directory Forest of Trees

CentreWare Web User Account	Location to Manage Queues
AdminA in MyCompanyA\WestSales with admin permissions in WestSales OU.	<p>Corp OU, if AdminA is in the MyCompanyA\Domain Admin group.</p> <p>CorpSales OU, if AdminA is in the MyCompanyA\Domain Admin group.</p> <p>CorpAcct OU, if AdminA is in the MyCompanyA\Domain Admin group.</p> <p>WestCoast OU, if AdminA is in the West.MyCompanyA\Domain Admin group.</p> <p>WestSales OU.</p> <p>WestAcct OU, if AdminA is in the West.MyCompanyA\Domain Admin group.</p> <p>EastCoast OU, if AdminA is in the MyCompanyA\Domain Admin group.</p> <p>EastSales OU, if AdminA is in the MyCompanyA\Domain Admin group.</p> <p>EastAcct OU, if AdminA is in the MyCompanyA\Domain Admin group.</p> <p>Artic OU, if AdminA is in the MyCompanyA\Domain Admin group.</p> <p>ArticSales OU, if AdminA is in the MyCompanyA\Domain Admin group.</p> <p>ArticAcct OU, if AdminA is in the MyCompanyA\Domain Admin group.</p> <p>Northern OU, if AdminA is in the MyCompanyA\Domain Admin group.</p> <p>NorthernSales OU, if AdminA is in the MyCompanyA\Domain Admin group.</p> <p>NorthernAcct OU, if AdminA is in the MyCompanyA\Domain Admin group.</p>

Table A-6: CentreWare Web User Accounts and Locations for Queue Management in an Active Directory Forest of Trees

Active Directory with an Explicit Trust



Assume that the default two way transitive trust exists between the top level domains in the forest.

Figure A-7: Active Directory with Explicit Trust

CentreWare Web User Account	Location to Manage Queues
AdminA in Other\Domain Admins global group (recommended installation).	TopOther OU (Organizational Unit). OtherSales OU. OtherAcct OU. Northern OU , if AdminA is in the Northern\Domain Admin group. NorthernSales OU , if AdminA is in the Northern\Domain Admin group. NorthernAcct OU , if AdminA is in the Northern\Domain Admin group.
AdminA in Other\OtherSales with admin permissions in OtherSales OU.	TopOther OU , if AdminA is in the Other\Domain Admin group. OtherSales OU. OtherAcct OU , if AdminA is in the Other\Domain Admin group. Northern OU , if AdminA is in the Northern\Domain Admin group. NorthernSales OU , if AdminA is in the Northern\Domain Admin group. NorthernAcct OU , if AdminA is in the Northern\Domain Admin group.

Table A-7: CentreWare Web User Accounts and Locations for Queue Management in an Active Directory with an Explicit Trust

Appendix B

RFC 1759 MIB Reference

Any printer directly attached to the network that fully supports SNMP and the standard printer MIB (RFC 1759) is supported by CentreWare Web.

The SNMP Object Identifiers (OID's), **prtGeneralReset** (1.3.6.1.2.1.43.5.1.1.3.1) and **ifPhysicalAddress** (1.3.6.1.2.1.2.2.1.6.1 or 1.3.6.1.2.1.2.2.1.6.2), are used to determine whether the device is a printer, and to determine its physical address, respectively.

The following Xerox printers are **not** supported:

- Tektronix Phaser 200e / 200i / 220e / 220i series printers
- Tektronix Phaser 300i
- Tektronix Phaser III PXi
- Xerox 4505 / 4508 / 4510 / 4520 series printers
- Xerox WorkCentre Pro 315 / 320 series printers
- Xerox XPrint 4915 / 4920 / 4925 series printers

Refer to the Readme file for the most recent list of unsupported printers.

SNMP OIDs

The following SNMP OIDs are used to communicate with all printers:

1.3.6.1.2.1.2.2.1.6.1	ifPhysAddress
1.3.6.1.2.1.43.5.1.1.3.1	prtGeneralReset
1.3.6.1.2.1.1.1.0	sysDescr
1.3.6.1.2.1.1.2.0	sysObjectID
1.3.6.1.2.1.1.5.0	sysName
1.3.6.1.2.1.1.6.0	sysLocation
1.3.6.1.2.1.25.3.2.1.5.1	hrDeviceStatus
1.3.6.1.2.1.25.3.5.1.1.1	hrPrinterStatus
1.3.6.1.2.1.25.3.5.1.2.1	hrPrinterDetectedErrorState
1.3.6.1.2.1.43.10.2.1.4.1.1	prtMarkerLifeCount
1.3.6.1.2.1.25.3.2.1.3.1	hrDeviceDescr
1.3.6.1.2.1.43.18.1.1	prtAlertTable

Network Discovery

During network discovery a request for **ifPhysAddress** and **prtGeneralReset** is sent to all printers specified within the scope of the discovery parameters.

ifPhysAddress is used to track the printer even when IP addresses are changed on a printer. **prtGeneralReset** is used to determine if the device is a printer.

After a device is determined to be a printer, the following additional OIDs are requested from the printer:

- **sysDescr**
- **sysObjectID**
- **sysName**
- **sysLocation**
- **hrDeviceStatus**
- **hrPrinterStatus**
- **hrPrinterDetectedErrorState**
- **hrDeviceDescr**

Reporting and Statistical Data

PrtMarkerLifeCount and **PrtAlertTable** are used for reporting and statistical data.

Status Icons and Messages

The following table indicates the SNMP OIDs and values used to determine a printer's state.

Icon / String	hrDeviceStatus	hrPrinterStatus	hrPrinterDetected ErrorState
Green / Up and Running	Running(2)	idle(3)	none set
Green / Printing	Running(2)	printing(4)	Don't care
Yellow / Service Required, Toner Low, Low Paper	warning(3)	idle(3) or printing(4)	could be: SERVICE REQUIRED TONER LOW LOW PAPER
Red / Service Required, Paper Jam, Door Open, No Toner, No Paper	down(5)	other(1)	could be: SERVICE REQUIRED PAPER JAM DOOR OPEN NO TONER NO PAPER
Yellow / Offline	warning(3)	idle(3) or printing(4)	could be: OFFLINE
Red / Offline	down(5)	other(1)	could be: OFFLINE
Green / Up and Running	running(2)	other(1)	

Table 2-1: Status Table

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