

Customer Tips

dc07cc0432
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... for the user

Xerox Network Scanning – TWAIN Configuration for the WorkCentre 7328/7335/7345

Purpose

This document contains the procedure to configure the Xerox multifunction device and user workstations to enable network scanning using the TWAIN driver.

Background

TWAIN is an industry standard or protocol for applications that interface with scanning devices. The Xerox TWAIN driver for Microsoft Windows 2000/2003/XP provides scanning from the WorkCentre to applications that are compliant with the TWAIN standard.

Configuring the Xerox multifunction device for network scanning using the TWAIN Driver

To enable TWAIN scanning on the Xerox multifunction device there are a number of steps that need to be completed for this functionality to work. They are:

- Creation of a device digital certificate
- Enabling of the SSL (Secure Socket Layer) protocol
- Enabling of Scan Template Management

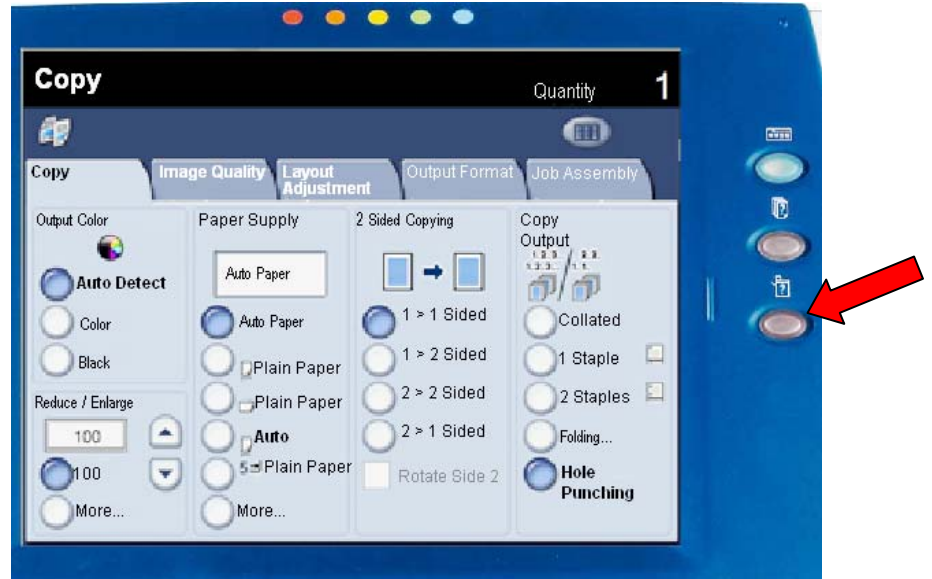
This document applies to these Xerox products:

X	WC 7328/7335/7345
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Verify Device Settings via the Configuration Report

At the Machine

1. Press the **[Machine Status]** button.



2. Touch the **[Print Reports]** button and then the **[Printer Reports]** button.
3. Touch the **[Configuration Report]** button and press the green start button to print the report.
4. On the configuration report verify that within the **Communication Settings** section on page 4 that **TCP/IP** is **enabled** with an existing IP Address; and **HTTP** is **enabled** with a valid **Server Name / IP Address**.

i *Retain the Configuration Report as the IP address will be used in subsequent steps.*

Creation of a Device Digital Certificate

To enable SSL on a device, it needs to have its own digital certificate. When clients make a request to the device, it exports the certificate to the client providing an encrypted channel.

There are two options available to obtain a server certificate for the device:

- **Have the device create a Self Signed Certificate**
 - A self signed certificate means that the device signs its own certificate as trusted and creates the public key for the certificate to be used in SSL encryption.
- **Upload a certificate from a Certificate Authority or a server functioning as a Certificate Authority to the device.**

i *Note: A Self Signed Certificate must be created and stored on the device before a signed certificate from a Certificate Authority can be uploaded.*

i *A separate request is required for each device.*

Accessing the Machine Digital Certificate Configuration Screen

1. Open your Web browser and enter the TCP/IP address of the WorkCentre in the Address bar. Press **[Enter]**.
2. Click the **[Properties]** tab, select the **[Security]** folder and click on **[Machine Digital Certificate Management]**.



Creating a Self Signed Certificate

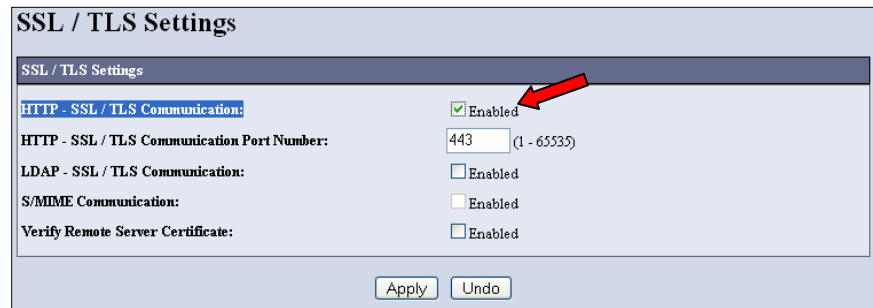
1. Click **[Create New Self Signed Certificate]**.
2. Select a Public Key Size of 512 or 1024 Bits.
3. Complete the Issuer field. The default is a variation of the WorkCentre's MAC Address.

Self-Signed Certificate	
Public Key Size:	512 Bits
Issuer:	XC-36F07A
Apply Undo	

4. Click **[Apply]**. A 'Settings have been changed' confirmation message will appear when successful.

Enable the SSL (Secure Socket Layer) protocol

1. Within the same Security folder select **[SSL / TLS Settings]**.
2. Click the **Enabled** box for **HTTP - SSL / TLS Communication** and click **[Apply]**. A 'Settings have been changed' message will appear when successful.



SSL / TLS Settings

SSL / TLS Settings

HTTP - SSL / TLS Communication: Enabled

HTTP - SSL / TLS Communication Port Number: 443 (1 - 65535)

LDAP - SSL / TLS Communication: Enabled

S/MIME Communication: Enabled

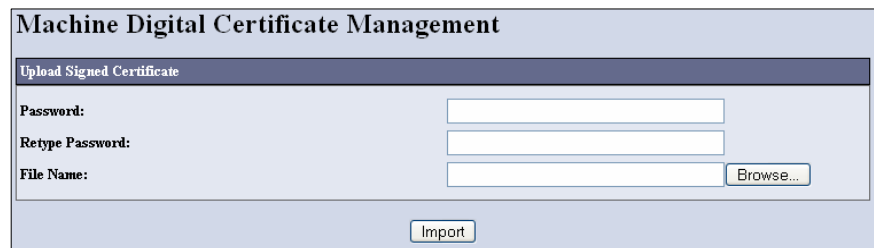
Verify Remote Server Certificate: Enabled

Apply Undo

3. Click **[Reboot machine]**. The machine will be unavailable for a short period of time.
4. Close your web browser and re-open your web browser and enter the TCP/IP address of the WorkCentre in the Address bar. Two security warnings will appear questioning the validity of the self signed certificate. Click **[OK]** on both screens to continue. You will notice on the address bar of the browser that you are now using the HTTPS protocol to communicate with the browser.
5. If you will be using the device's self signed certificate proceed to the 'Verify Scan Template Management' section other wise proceed to next section.

Upload Signed Certificate from a Certificate Authority / Certificate Server

1. Click the **[Properties]** tab, select the **[Security]** folder and click on **[Machine Digital Certificate Management]**.
2. Within the **Machine Digital Certificate Management** screen click **[Upload Signed Certificate]**.
2. Enter and confirm a password (if needed).
3. Browse and select the signed certificate file and click **[Import]**. If successful a confirmation message will appear.



Machine Digital Certificate Management

Upload Signed Certificate

Password:

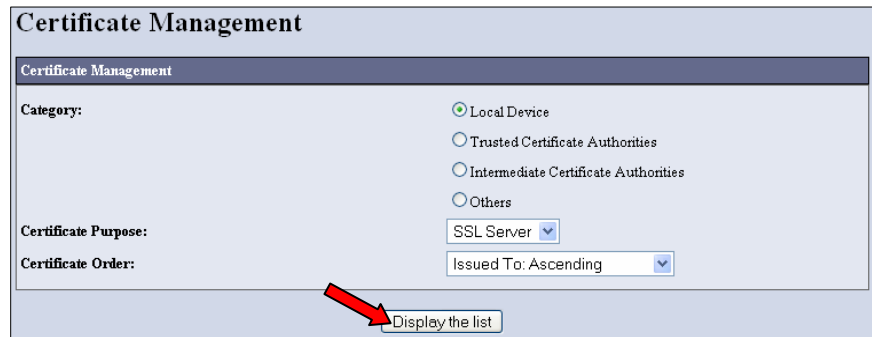
Retype Password:

File Name: Browse...

Import

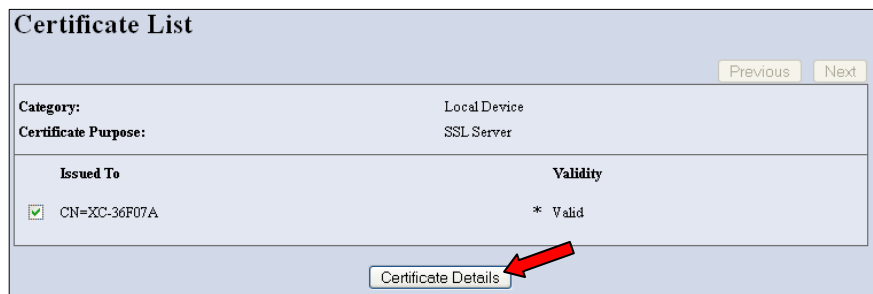
4. To enable the newly imported certificate. Select **[Certificate Management]** within the Security folder.

5. Select the category that best describes the signed certificate uploaded and click on **[Display the list]**.



The screenshot shows the 'Certificate Management' interface. It includes a 'Category' section with radio buttons for 'Local Device', 'Trusted Certificate Authorities', 'Intermediate Certificate Authorities', and 'Others'. Below this are 'Certificate Purpose' and 'Certificate Order' dropdown menus. A red arrow points to the 'Display the list' button at the bottom right.

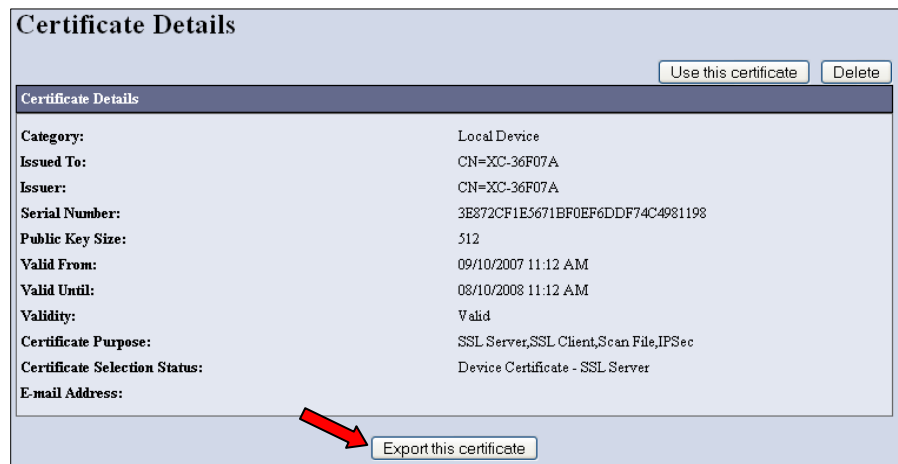
6. Within the Certificate List screen select the box next to the certificate that should be used on the device and click the **[Certificate Details]** button.



The screenshot shows the 'Certificate List' interface. It displays a table with columns for 'Issued To' and 'Validity'. A red arrow points to the 'Certificate Details' button at the bottom right.

Issued To	Validity
<input checked="" type="checkbox"/> CN=XC-36F07A	* Valid

7. Within the Certificate Details window click on **[Use this certificate]**. When successful a 'Settings have been changed' message will appear as well as a request to reboot.



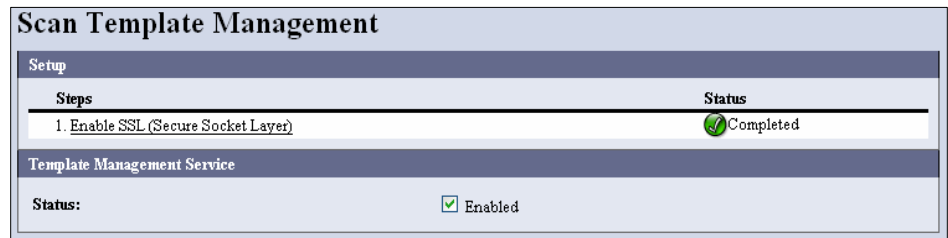
The screenshot shows the 'Certificate Details' interface. It displays a list of certificate attributes and their values. A red arrow points to the 'Export this certificate' button at the bottom right.

Category:	Local Device
Issued To:	CN=XC-36F07A
Issuer:	CN=XC-36F07A
Serial Number:	3E872CF1E5671BF0EF6DDF74C4981198
Public Key Size:	512
Valid From:	09/10/2007 11:12 AM
Valid Until:	08/10/2008 11:12 AM
Validity:	Valid
Certificate Purpose:	SSL Server,SSL Client,Scan File,IPSec
Certificate Selection Status:	Device Certificate - SSL Server
E-mail Address:	

8. Click **[Reboot Machine]**. The machine will be unavailable for a short period of time.
9. After a short period of time refresh the browser.

Verify Scan Template Management Enabled

1. Within the properties tab click **[Services, Network Scanning, Scan Template Management]**.
2. Verify that the Scan Template Management - Enabled box is checked. If it hasn't been enabled automatically, check the box now.




Xerox TWAIN Driver Installation

Installation Requirements

The following are required for installing the TWAIN driver:

- The workstation must be running Microsoft Windows XP, Windows 2003, or Windows 2000 operating systems.
- You must possess Administrator rights on the workstation to install the driver.
- The workstation must have TCP/IP and HTTP enabled.
- Simple File Sharing must be disabled on the workstation to allow for proper device authentication.
- The device must have the network scanning option enabled.

 **Windows XP Professional Service Pack 2 has Windows Firewall turned on by default or your site may have Windows Firewall enabled for security reasons. If Windows Firewall is enabled, you must set up Exceptions for print and file sharing to ensure that scanning with the TWAIN driver works properly.**

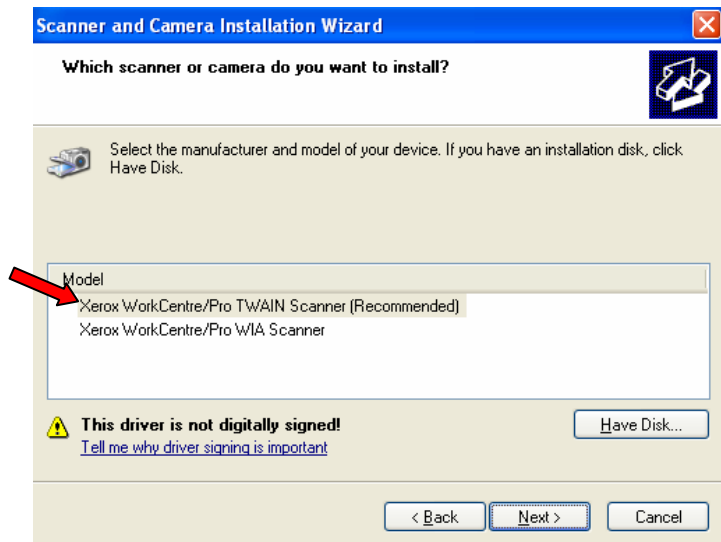
Obtaining the Driver Installation Files

To ensure that the latest release of the driver is installed, it is recommended to download the latest driver from the Xerox support web site.

1. Within your browser window type <http://www.xerox.com>
2. At the Xerox home page select **[Support & Drivers]**, enter the product number in the field provided and select **[Search]**.
3. Select **[Drivers & Downloads]** for your specific product.
4. Select **[Xerox Scan Drivers]** that is listed within the Drivers section.
5. Review the End-User License Agreement, and select either **[Accept]** or **[Decline]**.
6. Clicking Accept will cause a File Download window to appear.
7. Select **[Save]** and download the file to a known location on your workstation.
8. Browse to the location where you saved the zip file and unzip all contents.

Installing the TWAIN Driver

1. Logged on to the workstation or server as an administrator, open the Windows Control Panel.
2. Click **[Scanners and Cameras]** and then **[Add an imaging device]**. For Windows 2000, click **[Add]**.
3. The Scanners and Camera Installation Wizard opens. Click **[Next]**.
4. Click **[Have Disk]** and browse to where the unzipped files are located, select the .inf file.
5. Click **[Open]** and **[OK]**.
6. Select **Xerox WorkCentre/Pro TWAIN Scanner**. Click **[Next]**.
For Windows 2000 select the scanner then **[Automatic Port Select]** and click **[Next]**.



7. Accept the default scanner name or enter a new name. Click **[Next]**.
8. Click **[Finish]**. Files are copied to the workstation.
9. For Windows XP, the Hardware Update Wizard opens. Click **[Next]**.
For Windows 2000, a dialog opens.
10. Enter the Host Name or IP Address of the desired scanner and Click **[Confirm]**. At the top of the gray area of the window a message confirming that the device was found should appear.

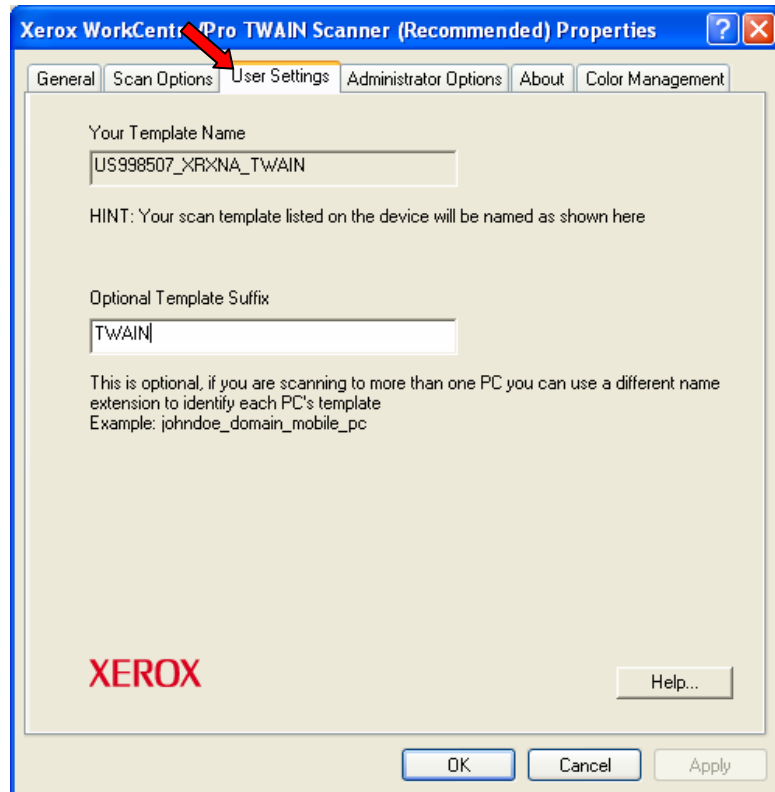
If a specific scanner is not identified at this time, you will be able to select one after the driver has been installed
11. For Windows XP, if prompted, select **[Yes]** to disable Simple File Sharing.
12. Click **[Next]** and then click **[Finish]** to complete the installation.
13. If prompted, reboot the workstation to finish the installation. If not prompted, close the 'Scanners and Cameras' windows.

Configuring the TWAIN Driver

Once you install the driver, you must establish a user profile. You should be logged onto the PC with your personal Windows user account when you establish your profile.

To set your profile and access driver properties:

1. Open the Windows Control Panel.
2. Select **[Scanners and Cameras]**.
3. Right-click the scanning icon for the WorkCentre and choose **[Properties]**.
4. Select the **[User Settings]** tab. This tab displays the default settings for your scan template. A scan template is automatically created on the device and is named based on your Windows logon name. Any existing templates of the same name will be overwritten.



- ⓘ If you would like an identifying suffix added to the template name, type it in the Optional Template Extension field. The default is 'TWAIN'.***

5. Select the **[Scan Options]** tab and select default settings for your scan template and click **[Apply]**.

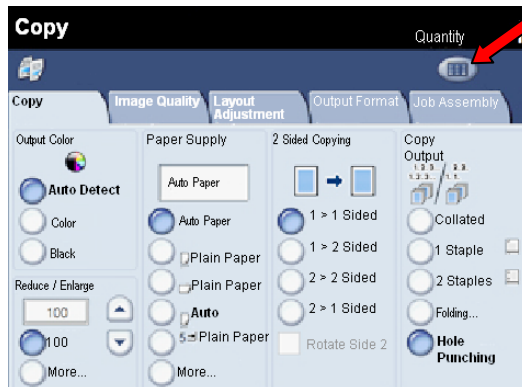
Any of these settings can be overridden directly at the WorkCentre.

- **Output Color:** Select whether you want scanned documents saved in color, grayscale (shades of gray to depict color variances), or black and white.
 - **Resolution:** The resolution setting affects the amount of detail reproduced on scanned images.
 - **Document Format:** Select the file format in which your scanned documents should be saved.
 - **JPG:** A graphic format ideal for complex pictures or photographs. Each document page becomes a separate JPG image. (Color scanners only.)
 - **TIFF:** A file format for bitmap images; simulates grayscale shading. Each document page becomes a separate TIFF image.
 - **Multi-Page TIFF:** TIFF file output in which all pages of a document are scanned into a single file.
 - **PDF:** A universal file format that preserves all fonts, formatting, graphics, and color in a source document regardless of the application and platform used to create it. All pages in the document are saved in a single file.
 - **Sides To Scan:** Select whether your original document is one-sided or two-sided.
 - **Original Size:** If you scan a document from the platen glass rather than the document feeder, you can specify a particular scan size. This enables you to scan only a specific portion of a document page.
6. If during driver installation you did not specify a device IP address and you have Administrator rights on the workstation, click the **[Administrator Options]** tab and enter the IP address of the WorkCentre Device.
 7. Click **[Apply]** and **[OK]**.

Scanning a Document

To scan using the driver:

1. Your PC must be on and you must be logged on using the same user account you used when you created your user profile.
2. At the device, touch **[All Services]**



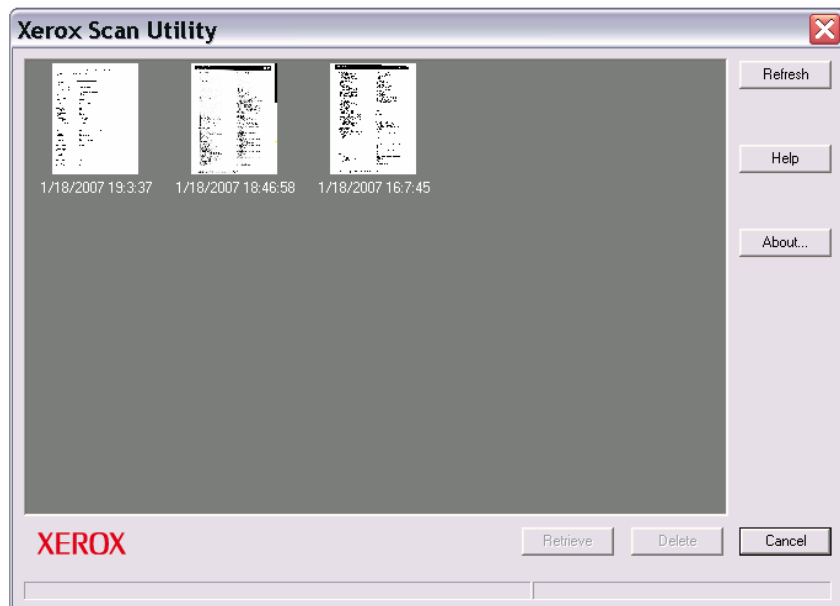
3. Touch **[Network Scanning]** and select the desired template. Option changes can be made at this time.

4. Press the green start button.
5. Enter the password for the workstation you will be scanning to and touch **[Save]**.
6. Place hardcopy(s) either on the platen or in the document feeder and hit the green **[Start]** button to start the scan.
7. The scanned images will be stored at C:\Documents and Settings\All Users\Application Data\Xerox\WCProTWAIN\0000\<user name>\Documents\DOC.xsm\

Processing Scanned Images

Scanned documents are named based on the template used and a numbering sequence (for example, Doc001, Doc002).

Scanned images are placed in a location on the Workstation and are viewable via the Xerox Scan Utility window using a supported application's image capture option. Property information about a scanned image appears when the cursor is hovered over an image. The scanned images are stored at C:\Documents and Settings\All Users\Application Data\Xerox\WCProTWAIN\0000\<user name>\Documents\Doc<suffix>\



The following options are available for the scanned images:

Refresh—updates the scanned images which appear in the window.

Retrieve—imports a scanned image into the application.

Delete—removes a scanned image from the window.

If a repository location has been specified on the WorkCentre, the scanned images will be placed in that location.

Scanning Using an Application

If you have not specified a scan repository location on the WorkCentre, you can scan and import a document into an application that does not use the Xerox Scan Utility interface or that supplies its own scan user interface.

i *Some steps of this procedure that pertain to the import options may vary by application.*

To scan a document into an application:

1. Create a user template on the WorkCentre from which you intend to scan by performing the steps in the Configuring the TWAIN Driver procedure.
2. At the workstation, open the application you use to import the scan document.
3. From the application interface, select an option to import from a scanner.
4. Select the WorkCentre (that has your scan template) from which you are scanning.
5. Select scanning options and start the scan from the application interface as described in your application's user guide. The device template that you created at the device is overwritten with the scanning options selected in the application.
6. At the device, touch **[Network Scanning]**, then select the desired template, and change the default options if desired.
7. Place hardcopy(s) either on the platen or in the document feeder and hit the green **[Start]** button.
8. When prompted at the WorkCentre touch screen, enter the password for your Windows account and touch **[Save]**.
9. Hit the green [Start] button again to start the scan.

Security and Network Impact

Using the TWAIN driver has the following impacts:

- The protocols used are:
 - SNMP for discovery and setup of each Xerox device
 - HTTP for setup
 - SMB for file transfer
- The user's login is used to deliver scanned images to the workstation or server.
- Simple File Sharing is disabled
- The scan data is sent to a folder on the workstation during scan to file operation. The desktop does not poll the Xerox device for scan data.
- When you logon to the workstation, a user template is sent to the Xerox device using the logon ID. When you logoff from the workstation, the scan template is removed from the Xerox device.

Additional Information

Xerox Customer Support welcomes feedback on all documentation - send feedback via e-mail to: USA.DSSC.Doc.Feedback@mc.usa.xerox.com.

You can reach Xerox Customer Support at 1-800-821-2797 (USA); TTY 1-800-855-2880 or at <http://www.xerox.com>.

Other Tips about Xerox multifunction devices are available at the following URL: <http://www.office.xerox.com/support/dctips/dctips.html>.

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