PaperCut Xerox Secure Access Manual

Contents

This manual covers Xerox Secure Access setup. For general PaperCut MF documentation, please see the PaperCut MF manual.

1 Overview

This manual provides an overview of the installation, configuration and operation of PaperCut's embedded software MFD (Multi-Function Device) solutions. Today's MFDs are smarter – they have touch screens and offer the ability to run applications directly on the device. The goal of PaperCut Software's embedded MFD solution is to leverage these smart devices and to provide walk-up copier users with the same set of rich application features provided in the print control area. These include:

- End user authentication including integration with single sign-on environments
- Monitoring and control of photocopying, scanning and faxing (quotas, charging, allocation and logging)
- Allocation of copying, scanning and faxing to accounts/departments/cost-centers/projects
- Release jobs from a hold/release queue (secure printing)
- Group based access control: Limit access to the device to members of selected user groups.

Highlights of the embedded solution include:

1.1 Consistency:

The embedded solutions are developed in-house by the PaperCut Software development team. This ensures that the copier interface is consistent with the workstation print interface, meaning users only have to learn one system.

1.2 Integration:

PaperCut is a single integrated solution where print, internet and copier control are all managed in the one system. Users have a single account and administrators have the same level of reporting and administration for all services. The embedded solution interacts with the PaperCut server using a Service Oriented Architecture (SOA) and web services based protocols.

1.3 Rate of development:

PaperCut is developed under a release-often policy where new features are made available to users as soon as they are complete. Unlike hardware based solutions, new versions can be delivered to users regularly as software updates.

1.4 Vendor Neutral:

PaperCut remains true to its vendor neutral stance. All embedded solutions are equal and support all server OS's including Windows, Linux and Mac.

1.5 Security:

A large percentage of PaperCut's user base is in Education environments where security is important. All embedded solutions are developed with security in mind. Where security objectives can't be satisfied, any deficiencies are fully disclosed.

2 Installation

This section covers the installation of the PaperCut embedded application for compatible Xerox devices. The embedded application will allow the control, logging and monitoring of walk-up off-the-glass MFD usage and may serve as a print release station for network prints (for information on just tracking network printing see the PaperCut user manual).

2.1 Xerox Device Compatibility

This document covers the devices that support Xerox Secure Access feature. Xerox Secure Access (XSA) allows the MFP to communicate with the PaperCut server to authenticate users to use the MFP device.

For recent Xerox MFP's that support the Extensible Interface Platform version 2 or higher, we recommend that you use the PaperCut embedded application for Xerox Secure Access EIP2.

Most recent Xerox MFPs support the Xerox Secure Access feature. You can verify this by checking for the "Xerox Secure Access" function in the device authentication options on the device web interface.

The list of devices that support Xerox Secure Access can be found on the following page (click on the "Compatible Products" tab section):

http://www.office.xerox.com/software-solutions/xerox-secure-access/enus.html

To track the device usage, you must also enable the Xerox Network Accounting module (Network Accounting is also known as JBA accounting). The "Network Accounting" module is often included with the device, but for some devices you need to have this enabled by your Xerox supplier. Please contact your Xerox supplier for details.

Secure Print Release and Find-Me printing is also supported on Xerox devices. The administrator has the option to automatically release all pending jobs when the user logs in, or give the user the option to release these documents at the time of login.

NOTE: The FujiXerox devices available in the Asia-Pacific region do not support Xerox Secure Access. These devices can use the Network Accounting features to control access to the copier. See the PaperCut Xerox Network Accounting Embedded manual for information.

2.2 Requirements

Ensure that the following points are checked off before getting started:

- PaperCut is installed and running on your network. Please see the 'Introduction -> Quick Start Guide' section of the PaperCut user manual for assistance.
- Your Xerox MFD requires support for the "Xerox Secure Access" authentication method.

- Your Xerox MFD requires that the “Network Accounting” is installed/enabled including off-box authentication support. (Network accounting is also known as JBA accounting.) You may need to contact Xerox to enable this functionality.
- Have available the network name and IP address of the system running PaperCut (e.g. the print server).
- Ensure that the Xerox MFD is connected to the network.
- Have available the network address of the Xerox MFD. It is recommended that the MFD is configured with a static IP.

2.3 Card Reader support

PaperCut supports using swipe card for authentication at the copier. This is often more convenient than entering username/password or ID/pin numbers to login.

Xerox devices can support 2 general classes of card readers:

- Network card readers (i.e. not physically connected to the MFP. The PaperCut server communicates with these over the network)
- USB card readers (some recent Xerox devices with updated firmware now support a limited number of USB card readers – contact Xerox for details).

The Network Card Reader option will work with any Xerox device supporting “Xerox Secure Access”.

2.3.1 Network Card Readers

Network card readers may be used on any Xerox device. PaperCut supports two cost effective network card readers:

- Elatec TWN3 with the TCP Converter
- RFIdeas Ethernet card readers

These readers are available directly from the card reader distributors and PaperCut Authorized Solution Centers in your region.

These network card readers are located on the MFP device and are connected to the network. When a user swipes their card at the reader the card number is sent to the PaperCut server for validation. If the card number is valid the user will be granted access to the MFP.

2.3.2 USB Card Readers

Xerox updated their platform in late 2011 to support USB card readers through Xerox Secure Access. At the present time (April 2012) only a subset of current devices support USB card readers and they may require firmware upgrades, and include:

- ColorQube 9301/9302/9303 (firmware 061.180.221.31500 and above)
- WorkCentre 5735/5740/5745/5755/5765/5775/5790 (firmware 061.132.222.03800 and above)
- WorkCentre 7525/7530/7535/7545/7556 (firmware 061.121.221.29800 and above).

The following card readers are supported by Xerox:

- Proximity card readers – RFIdeas, Elatec TWN3, HID OmniKey 525/5325

- Magstripe card readers – Magtek and "IDTech MiniMag"

1.1 EFI Fiery Network Controller Support

The configuration of an EFI Fiery Network Controller with the Xerox MFP's controller is also supported for this embedded solution. To ensure it works, however, it is necessary to use the same xadmin username/password on the Fiery controller as the Xerox MFP. This will ensure that the SNMP v3 messages will be forwarded from the Fiery controller onto the Xerox MFP; if this is not done then you will likely see error messages of the form: "Unable to discover SNMPv3 Engine ID of Xerox device".

2.4 Setup Procedure – 7655 etc

2.4.1 Introduction

This procedure describes the process of setting up Xerox Secure Access on newer models such as Xerox 7655. The specific steps, screen layouts and button/label names can differ between device models. However the general process is the same for all supported devices.

NOTE The screens and menus shown in this document differ between device models. The menus may be located and named slightly differently on different devices. See section 2.5 for prior models.

2.4.2 Networking/Firewall Configuration

Ensure that your networking/firewall configuration allows:

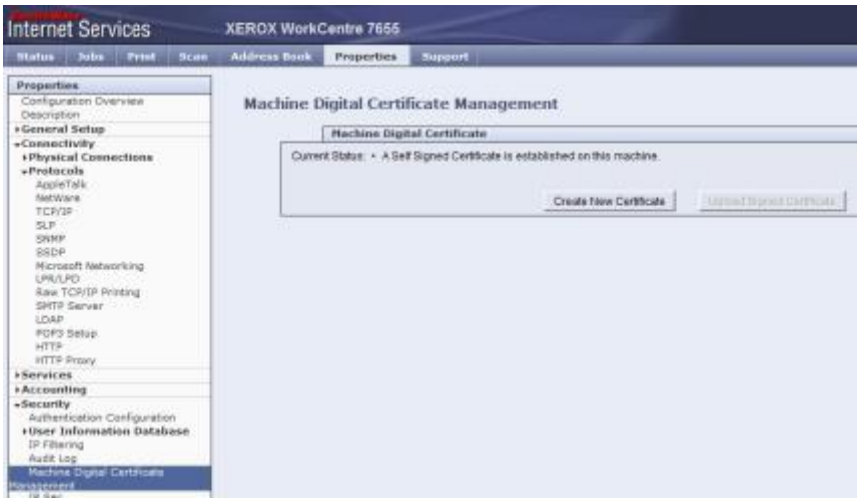
- inbound connections from the Xerox devices to the PaperCut server on ports 9191 and 9192.
- outbound connections from the PaperCut server to the Xerox device on ports 80 and 443.

2.4.3 Enable the HTTPS/SSL protocol

Xerox Secure Access requires the use of HTTPS/SSL for communications. This must be enabled before completing any of the subsequent steps.

This involves generating an SSL certificate for the device:

1. Login to the device's web admin.
2. Navigate to Properties->Security->Machine Digital Certificate Management
3. Press "Create New Self Signed Certificate".



Machine Digital Certificate Management

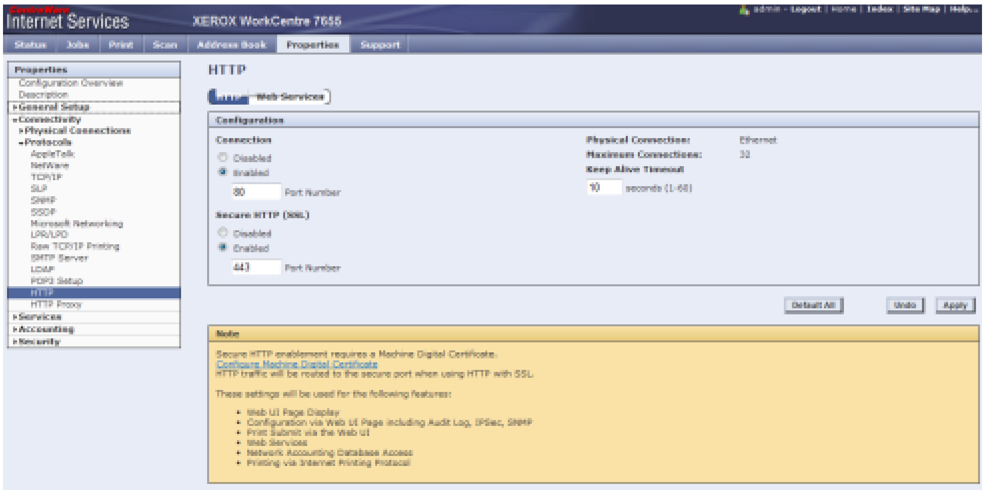
Machine Digital Certificate

Current Status: • A Self Signed Certificate is established on this machine.

4. Complete the required information
5. Press Apply.

Now enable the HTTP/SSL/TLS protocol:

1. Navigate to Properties->Connectivity->Protocols->HTTP
2. Enable the "Secure HTTP (SSL)" option



HTTP

Configuration

Connection

○ Disabled
● Enabled
80 Port Number

Physical Connection: Ethernet
Maximum Connections: 32
Keep Alive Timeout
10 seconds (1-60)

Secure HTTP (SSL)

○ Disabled
● Enabled
443 Port Number

Note

Secure HTTP enablement requires a Machine Digital Certificate.
Configure Machine Digital Certificate
HTTP traffic will be routed to the secure port when using HTTP with SSL.

These settings will be used for the following features:

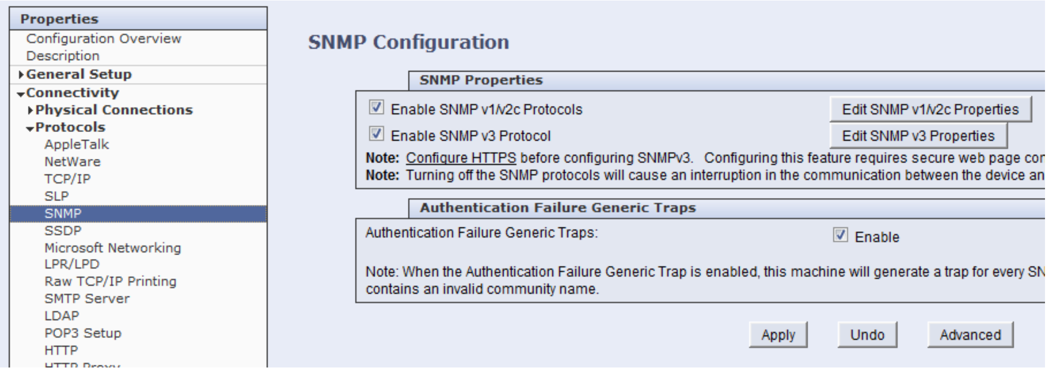
- Web UI Page Display
- Configuration via Web UI Page including Audit Log, IPSec, SNMP
- Print Submit via the Web UI
- Web Services
- Network Accounting Database Access
- Printing via Internet Printing Protocol

3. Press Apply

2.4.4 Enable SNMP v3 support

The Xerox Secure Access feature is configured by PaperCut using SNMP v3. This protocol must be enabled before configuring the Xerox device in PaperCut.

1. Login to the device’s web admin.
2. Navigate to Properties -> Connectivity -> Protocols -> SNMP Configuration.



SNMP Configuration

SNMP Properties

☑ Enable SNMP v1/v2c Protocols

☑ Enable SNMP v3 Protocol

Note: Configure HTTPS before configuring SNMPv3. Configuring this feature requires secure web page cor

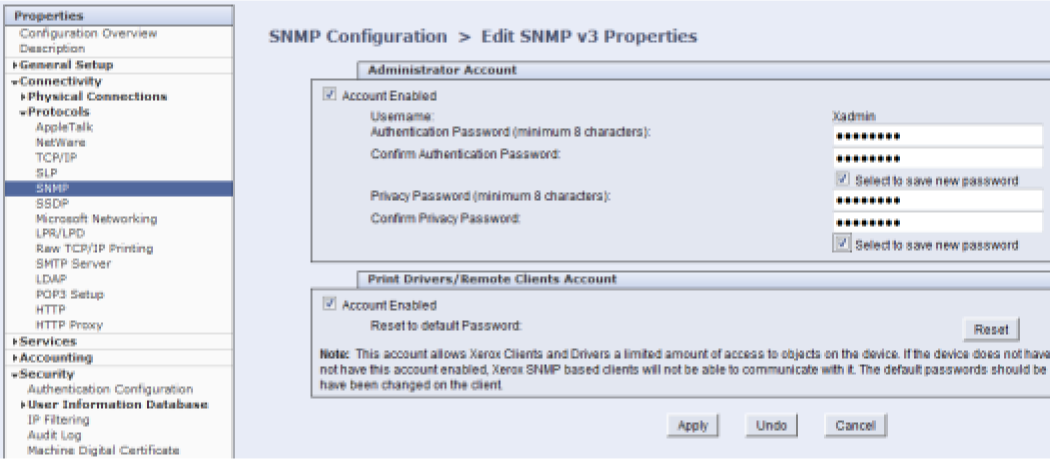
Note: Turning off the SNMP protocols will cause an interruption in the communication between the device an

Authentication Failure Generic Traps

Authentication Failure Generic Traps: ☑ Enable

Note: When the Authentication Failure Generic Trap is enabled, this machine will generate a trap for every SN contains an invalid community name.

3. Enable the SNMP v3 option and press "Apply".
4. Go back to the SNMP page and press the "Edit SNMP v3 properties" button.
5. Enable the "Administrator" account.
6. Enter the authentication and privacy passwords. Take note of this and the username (usually “Xadmin”) as these will be required later with the configuration of the device in PaperCut.



SNMP Configuration > Edit SNMP v3 Properties

Administrator Account

☑ Account Enabled

Username: Xadmin

Authentication Password (minimum 8 characters): ••••••••

Confirm Authentication Password: ••••••••

☑ Select to save new password

Privacy Password (minimum 8 characters): ••••••••

Confirm Privacy Password: ••••••••

☑ Select to save new password

Print Drivers/Remote Clients Account

☑ Account Enabled

Reset to default Password:

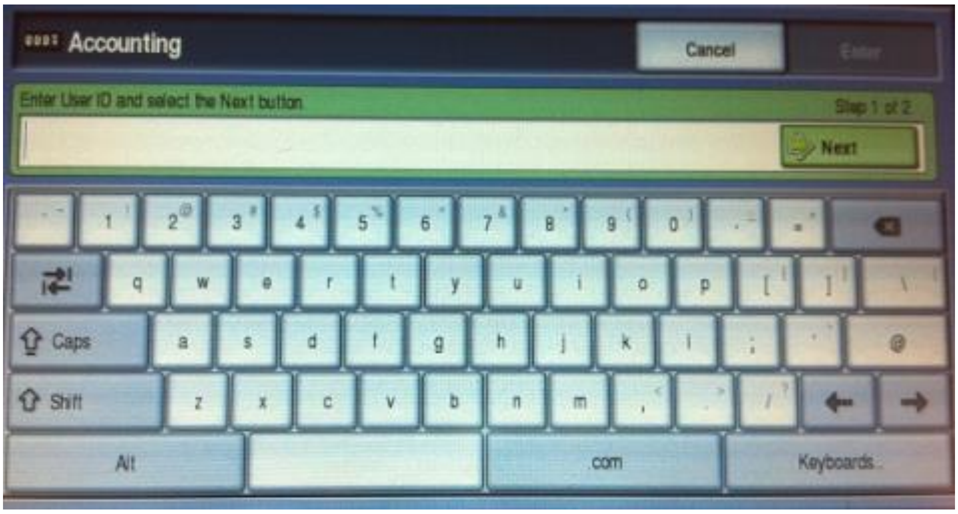
Note: This account allows Xerox Clients and Drivers a limited amount of access to objects on the device. If the device does not have not have this account enabled, Xerox SNMP based clients will not be able to communicate with it. The default passwords should be have been changed on the client.

7. Press Apply to save the changes.

2.4.5 Configure the Network Accounting Options

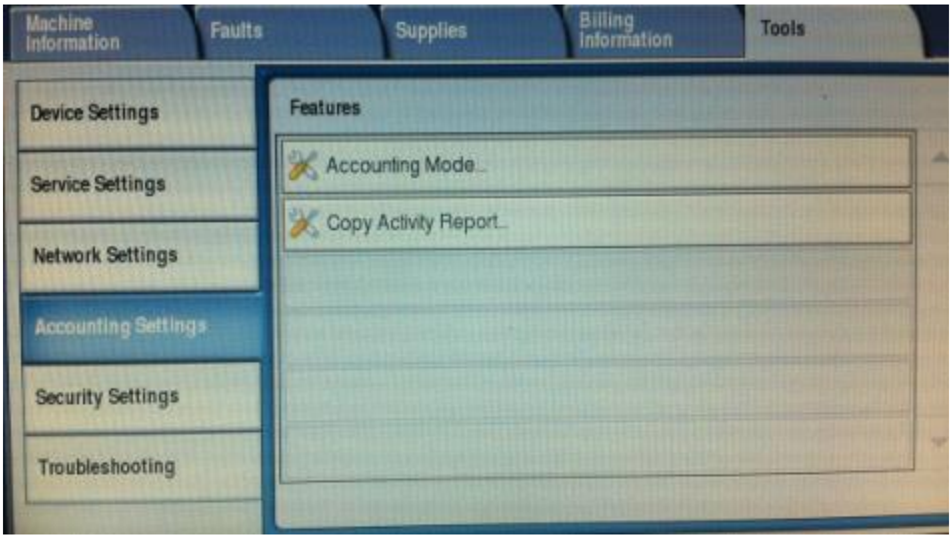
The following Network Accounting options should be changed to integrate with Xerox Secure Access:

1. At the copier, Press the Login/Out button
2. Login with the following account information:
   Username: admin
   Password: 1111

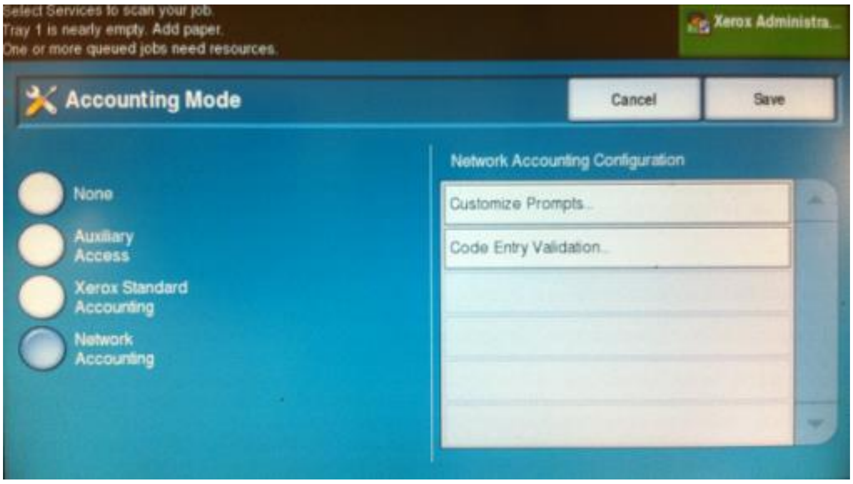


Enter User ID and select the Next button

3. Press the Machine Status button
4. Select the Tools tab at the top
5. Select Accounting button on the left
6. Select Accounting Mode on the right panel

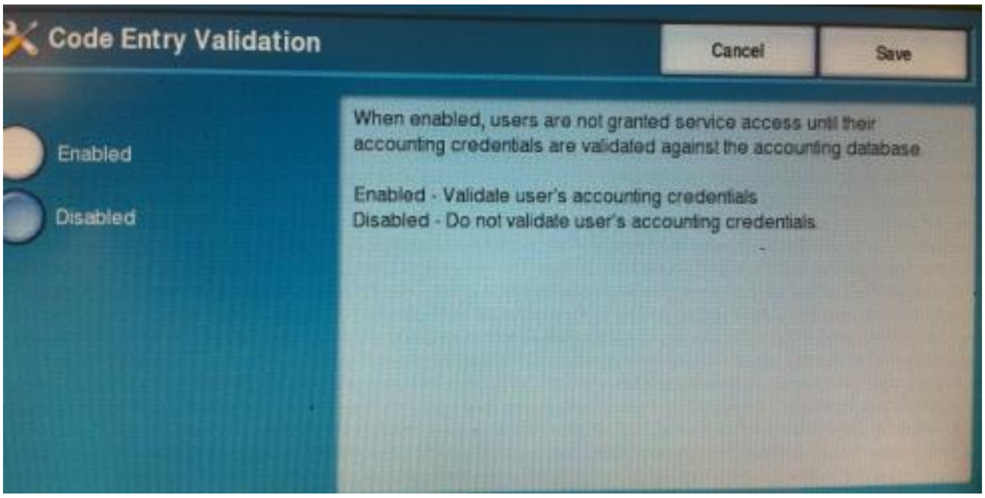


7. Select the Network Accounting button on the left
8. Then select Code Entry Validation on the right



Select Services to scan your job.
Tray 1 is nearly empty. Add paper.
One or more queued jobs need resources.

9. Select Disabled on the Code Entry Validation screen and press Save



When enabled, users are not granted service access until their accounting credentials are validated against the accounting database

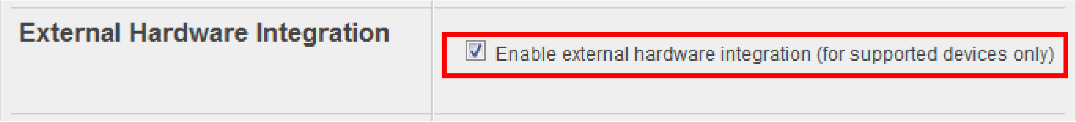
Enabled - Validate user's accounting credentials
Disabled - Do not validate user's accounting credentials

10. Press Save then press the LogOut/In button to Logout

Once these settings are changed you might need to reboot the Xerox for them to have an effect. The device usually prompts you when a reboot is required.

2.4.6 Create/setup the Xerox device in PaperCut

1. Log in to the PaperCut administration interface using a web browser (e.g. http://papercut-server:9191/admin).
2. Navigate to 'Options -> Advanced' and ensure the option 'Enable external hardware integration' is enabled.

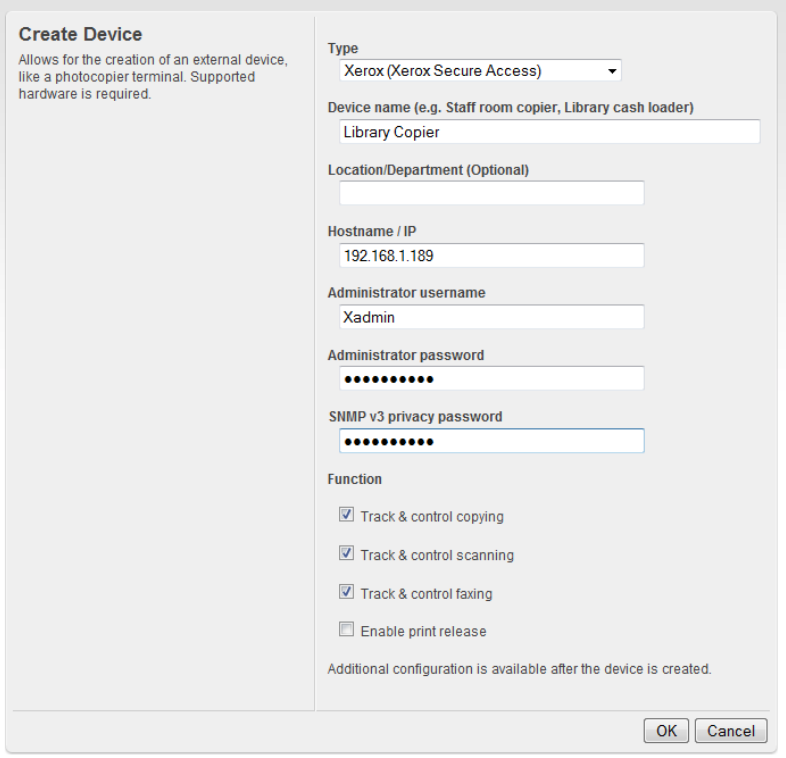


External Hardware Integration

☑ Enable external hardware integration (for supported devices only)

3. Press 'Apply'.
4. Navigate to the 'Devices' tab.
5. Click "Create Device" action from the left.

6. Select the "Xerox (Xerox Secure Access)" device type.



Create Device

Allows for the creation of an external device, like a photocopier terminal. Supported hardware is required.

Type: Xerox (Xerox Secure Access)

Device name (e.g. Staff room copier, Library cash loader): Library Copier

Location/Department (Optional):

Hostname / IP: 192.168.1.189

Administrator username: Xadmin

Administrator password: ••••••••••

SNMP v3 privacy password: ••••••••••

Function

☑ Track & control copying

☑ Track & control scanning

☑ Track & control faxing

□ Enable print release

Additional configuration is available after the device is created.

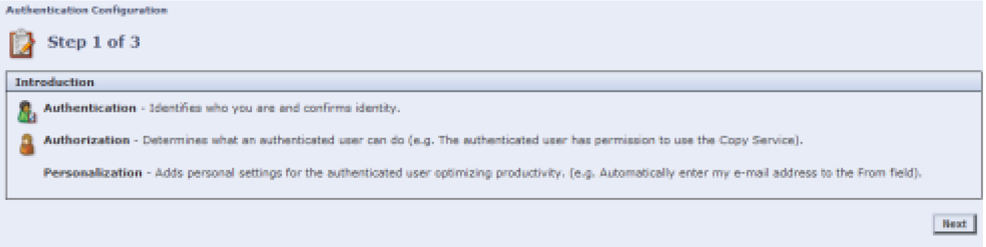
7. Enter a descriptive name for the device under “Device name”.
8. Enter the Xerox device’s IP address under “Hostname/IP”.
9. Optionally enter location/department information.
10. Enter the admin username and password and privacy password (those entered in the SNMPv3 settings on the MFP). NOTE: The username is case-sensitive and is usually “Xadmin”.
11. Under “Function” tick the options you would like to enable. E.g. “Track & control copying”.
12. Click “OK”.

At this point PaperCut should try to connect to the device to configure various options over SNMP. The page displayed after the device is created displays the device status. If there are problems communicating with the device then the status will show an error message. Press the "Refresh" link next to the status to see if the status is updated.

2.4.7 Enable Xerox Secure Access Authentication

At this point the Xerox Secure Access can be enabled. While on some devices, XSA gets enabled automatically via SNMP, others require XSA to be manually configured and enabled via the device’s web admin page.

1. Login to the device’s web admin.
2. Navigate to Properties->Security->Authentication Configuration.



Authentication Configuration

Step 1 of 3

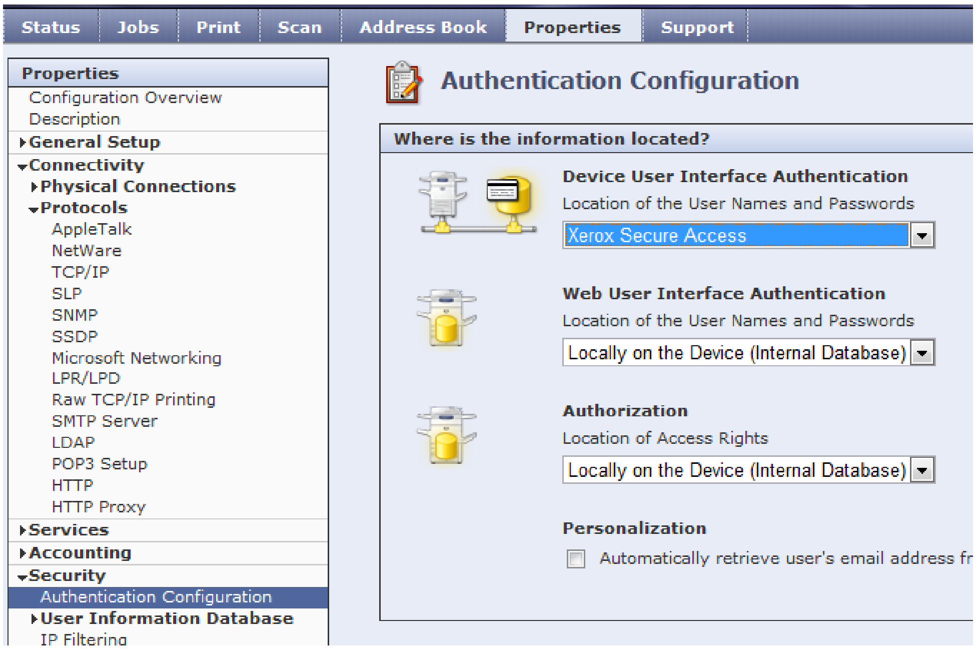
Introduction

Authentication - Identifies who you are and confirms identity.

Authorization - Determines what an authenticated user can do (e.g. The authenticated user has permission to use the Copy Service).

Personalization - Adds personal settings for the authenticated user optimizing productivity. (e.g. Automatically enter my e-mail address to the From field).

3. Select Next.



Authentication Configuration

Where is the information located?

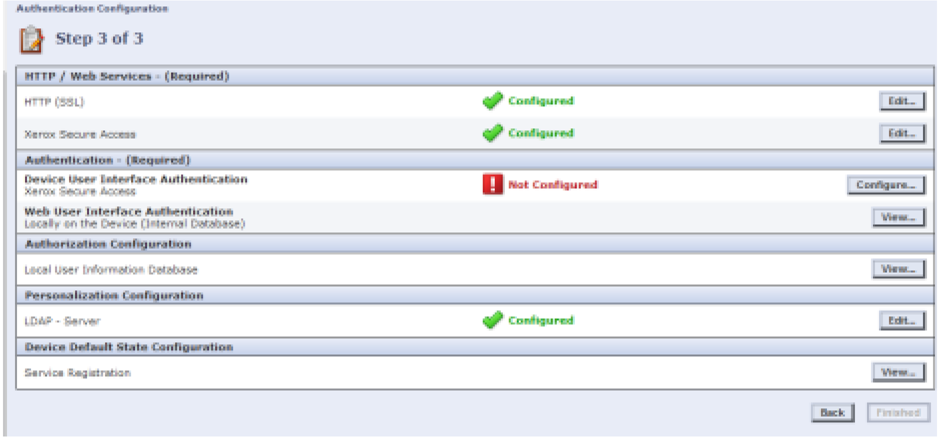
Device User Interface Authentication
Location of the User Names and Passwords: Xerox Secure Access

Web User Interface Authentication
Location of the User Names and Passwords: Locally on the Device (Internal Database)

Authorization
Location of Access Rights: Locally on the Device (Internal Database)

Personalization
□ Automatically retrieve user's email address fr

4. Change Device User Interface Authentication to Xerox Secure Access and press Next



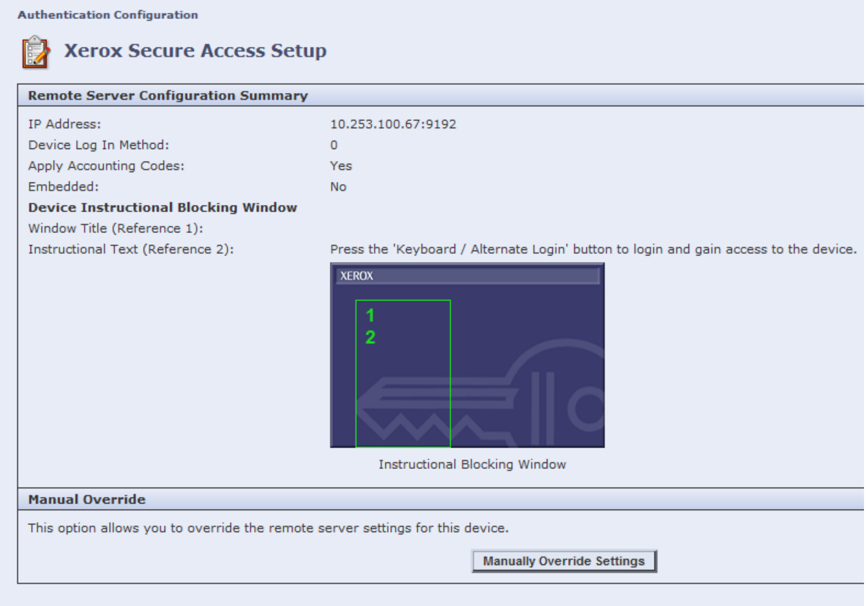
Authentication Configuration

Step 3 of 3

HTTP / Web Services - (Required)		
HTTP (SSL)	✓ Configured	Edit...
Xerox Secure Access	✓ Configured	Edit...
Authentication - (Required)		
Device User Interface Authentication Xerox Secure Access	! Not Configured	Configure...
Web User Interface Authentication Locally on the Device (Internal Database)		View...
Authorization Configuration		
Local User Information Database		View...
Personalization Configuration		
LDAP - Server	✓ Configured	Edit...
Device Default State Configuration		
Service Registration		View...

5. Click on Configure for Device User Interface Authentication

6. Click on Manually Override Settings



Authentication Configuration

Xerox Secure Access Setup

Remote Server Configuration Summary

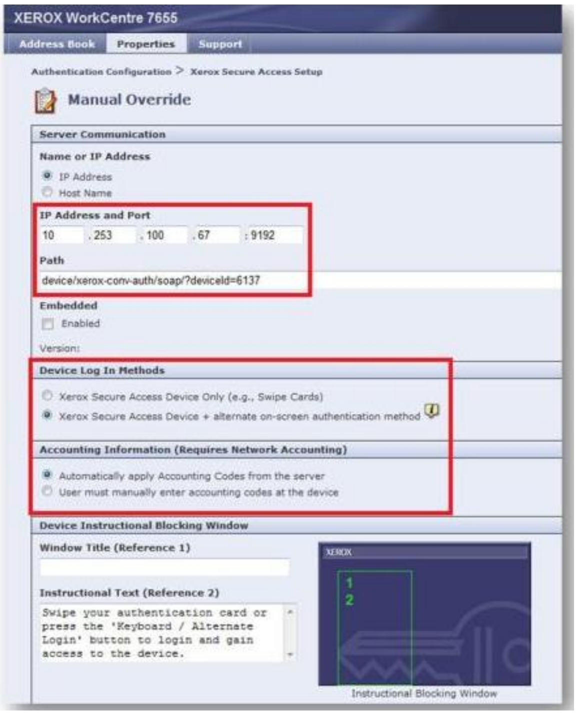
IP Address:	10.253.100.67:9192
Device Log In Method:	0
Apply Accounting Codes:	Yes
Embedded:	No
Device Instructional Blocking Window	
Window Title (Reference 1):	
Instructional Text (Reference 2):	Press the 'Keyboard / Alternate Login' button to login and gain access to the device.

Instructional Blocking Window

Manual Override

This option allows you to override the remote server settings for this device.

7. Verify that the correct PaperCut Server IP Address is listed
8. Change Log In Methods to Xerox Secure Access + alternate on-screen authentication method
9. Change Accounting Information to Automatically apply Accounting Codes from the server then press Save



XEROX WorkCentre 7655

Authentication Configuration > Xerox Secure Access Setup

Manual Override

Server Communication

Name or IP Address

● IP Address
○ Host Name

IP Address and Port

10 . 253 . 100 . 67 : 9192

Path

device/xerox-conv-auth/soap/?deviceId=6137

Embedded

□ Enabled

Version:

Device Log In Methods

○ Xerox Secure Access Device Only (e.g., Swipe Cards)
● Xerox Secure Access Device + alternate on-screen authentication method

Accounting Information (Requires Network Accounting)

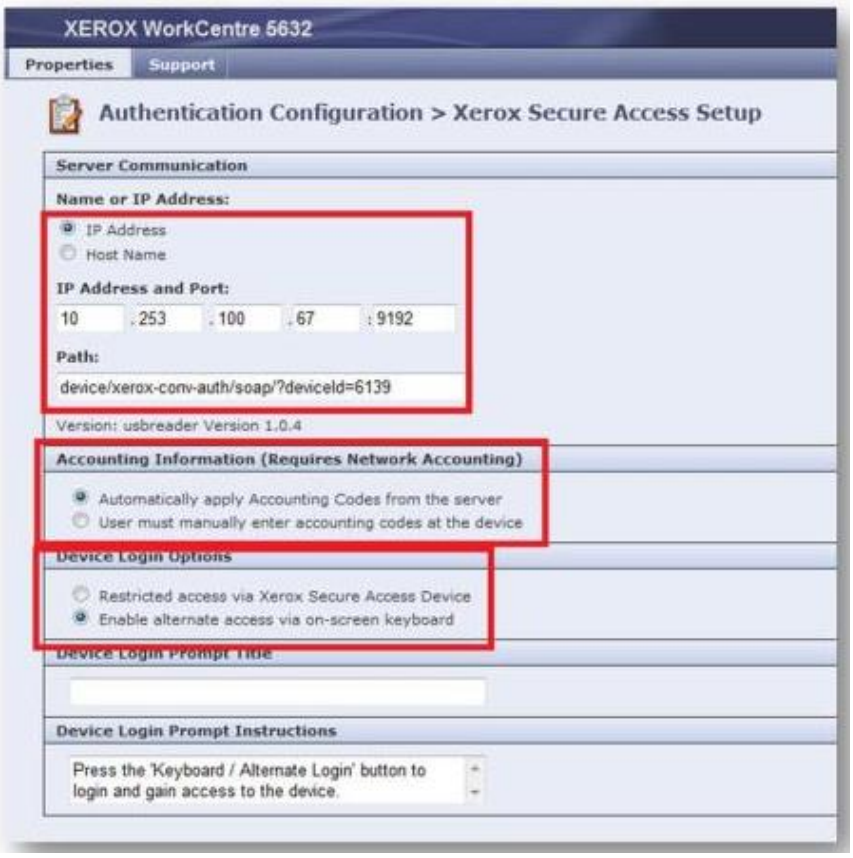
● Automatically apply Accounting Codes from the server
○ User must manually enter accounting codes at the device

Device Instructional Blocking Window

Window Title (Reference 1)

Instructional Text (Reference 2)

Swipe your authentication card or press the 'Keyboard / Alternate Login' button to login and gain access to the device.



XEROX WorkCentre 5632

Authentication Configuration > Xerox Secure Access Setup

Server Communication

Name or IP Address:

● IP Address
○ Host Name

IP Address and Port:

10 . 253 . 100 . 67 : 9192

Path:

device/xerox-conv-auth/soap/?deviceId=6139

Version: usbreader Version 1.0.4

Accounting Information (Requires Network Accounting)

● Automatically apply Accounting Codes from the server
○ User must manually enter accounting codes at the device

Device Login Options

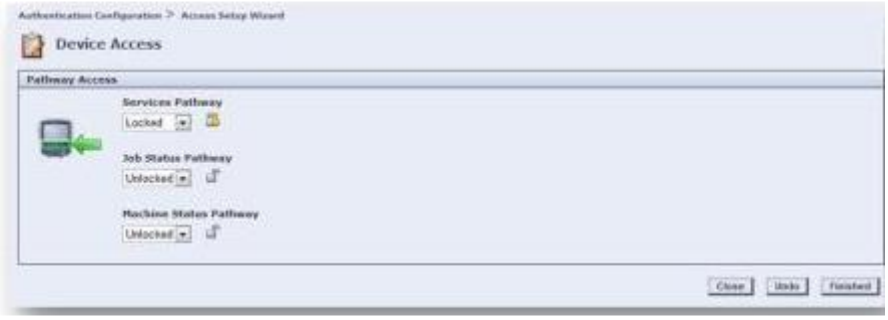
○ Restricted access via Xerox Secure Access Device
● Enable alternate access via on-screen keyboard

Device Login Prompt Title

Device Login Prompt Instructions

Press the 'Keyboard / Alternate Login' button to login and gain access to the device.

10. Change the Services Pathway setting to Locked. This locks access to the copier functions unless the user is logged in



Authentication Configuration > Access Setup Wizard

Device Access

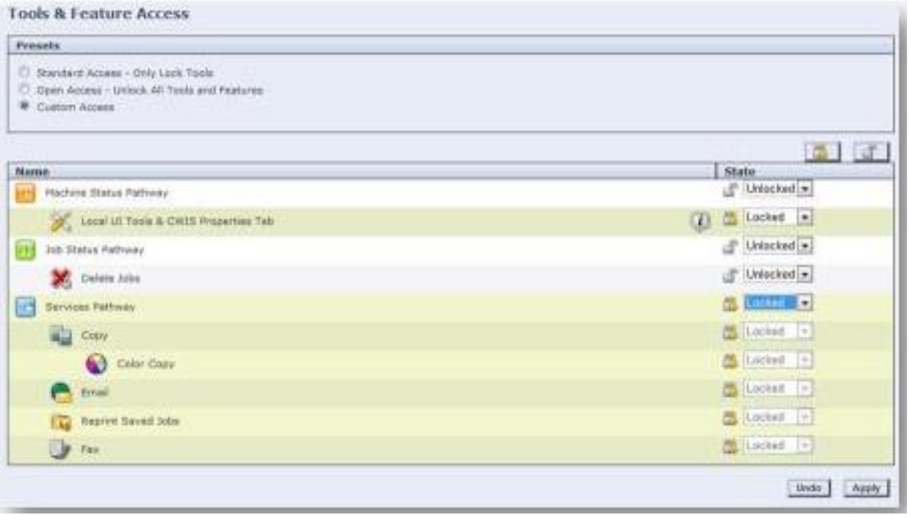
Pathway Access

Services Pathway: Locked

Job Status Pathway: Unlocked

Machine Status Pathway: Unlocked

NOTE: On newer devices the Pathway Options screen may look different such as the screen below



Tools & Feature Access

Presets

○ Standard Access - Only Lock Tools
○ Open Access - Unlock All Tools and Features
● Custom Access

Name	State
Machine Status Pathway	Unlocked
Local UI Tools & CWIS Properties Tab	Locked
Job Status Pathway	Unlocked
Delete Jobs	Unlocked
Services Pathway	Locked
Copy	Locked
Color Copy	Locked
Email	Locked
Reprint Saved Jobs	Locked
Fax	Locked

You may need to reboot the device for the settings to take effect.

Once the device is rebooted the device should display a screen to login. Perform testing and verify you can login and that copies are tracked by PaperCut.

2.4.8 (Optional) Additional Network Security

The MFP communicates with the PaperCut server over the network (e.g. to authenticate users or release print jobs). To provide an additional level of security, PaperCut may be configured to only allow device connections from a restricted range of network addresses. This ensures that only approved devices are connected to the PaperCut server.

By default PaperCut will allow device connections from any network address. To restrict this to a subset of IP addresses or subnets:

1. Logon to the PaperCut administration web interface at http://<papercut-server>:9191/admin
2. Go to the Options→Advanced tab and find the “Security” section.
3. In the “Allowed device IP addresses” field enter a comma-separated list of device IP addresses or subnets (in the format <ip-address>/<subnet-mask>).
4. Press the “Apply” button.
5. Test the devices to ensure they can continue to contact the PaperCut server.

2.5 Setup Procedure – 7345, 5325 etc.

2.5.1 Introduction

This procedure describes the process of setting up Xerox Secure Access on older devices such as a Xerox 7345. The specific steps, screen layouts and button/label names can differ between device models. However the general process is the same for all supported devices.

NOTE 1: The screens and menus shown in this document differ between device models. The menus may be located and named slightly differently on different devices.

2.5.2 Networking/Firewall Configuration

Ensure that your networking/firewall configuration allows:

- inbound connections from the Xerox devices to the PaperCut server on ports 9191 and 9192.
- outbound connections from the PaperCut server to the Xerox device on ports 80 and 443.

2.5.3 Enable the HTTPS/SSL protocol

Xerox Secure Access requires the use of HTTPS/SSL for communications. This must be enabled before completing any of the subsequent steps.

This involves generating an SSL certificate for the device:

1. Login to the device’s web admin.
2. Navigate to Properties->Security->Machine Digital Certificate Management
3. Press "Create New Self Signed Certificate".
4. Leave default options and press "Apply"

Now enable the HTTP/SSL/TLS protocol:

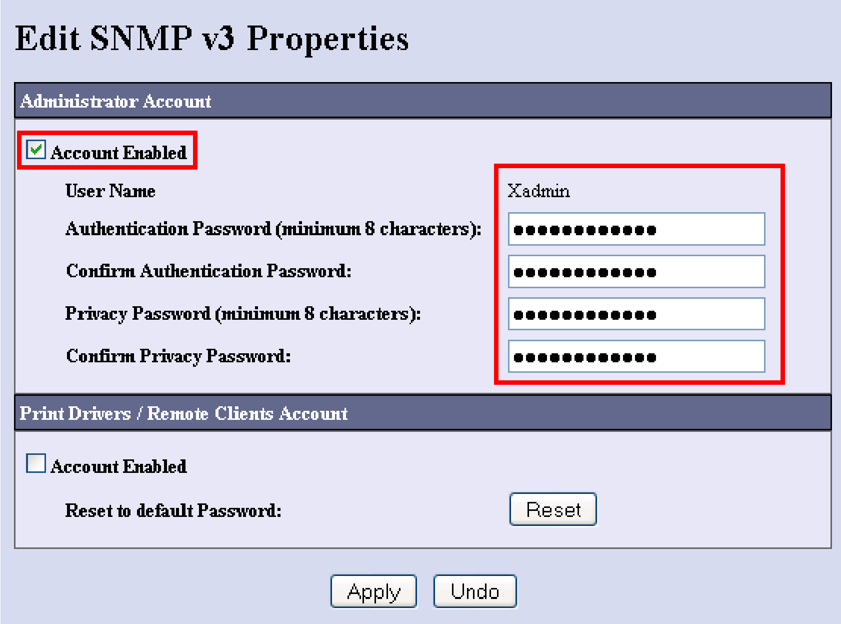
1. Navigate to Properties->Security->SSL/TLS Settings
2. Enable the "HTTP – SSL / TLS Communication" option
3. Verify that the “Verify Remote Server Certificate” option is **Disabled**.
4. Press Apply
5. Navigate to Properties->Connectivity->Protocols->HTTP
6. Enable the "Secure HTTP (SSL)" option
7. Press Apply

2.5.4 Enable SNMP v3 support

The Xerox Secure Access feature is configured by PaperCut using SNMP v3. This protocol must be enabled before configuring the Xerox device in PaperCut.

1. Login to the device’s web admin.
2. Navigate to Properties->Connectivity->Protocols->SNMP Configuration.
3. Enable the SNMP v3 option and press "Apply".
4. Go back to the SNMP page and press the "Edit SNMP v3 properties" button.
5. Enable the "Administrator" account.
6. Enter the authentication and privacy passwords. Take note of this and the username (usually “Xadmin”) as these will be required later with the configuration of the device in

PaperCut.



Edit SNMP v3 Properties

Administrator Account

☑ Account Enabled

User Name Xadmin

Authentication Password (minimum 8 characters): ●●●●●●●●●●●●

Confirm Authentication Password: ●●●●●●●●●●●●

Privacy Password (minimum 8 characters): ●●●●●●●●●●●●

Confirm Privacy Password: ●●●●●●●●●●●●

Print Drivers / Remote Clients Account

□ Account Enabled

Reset to default Password:

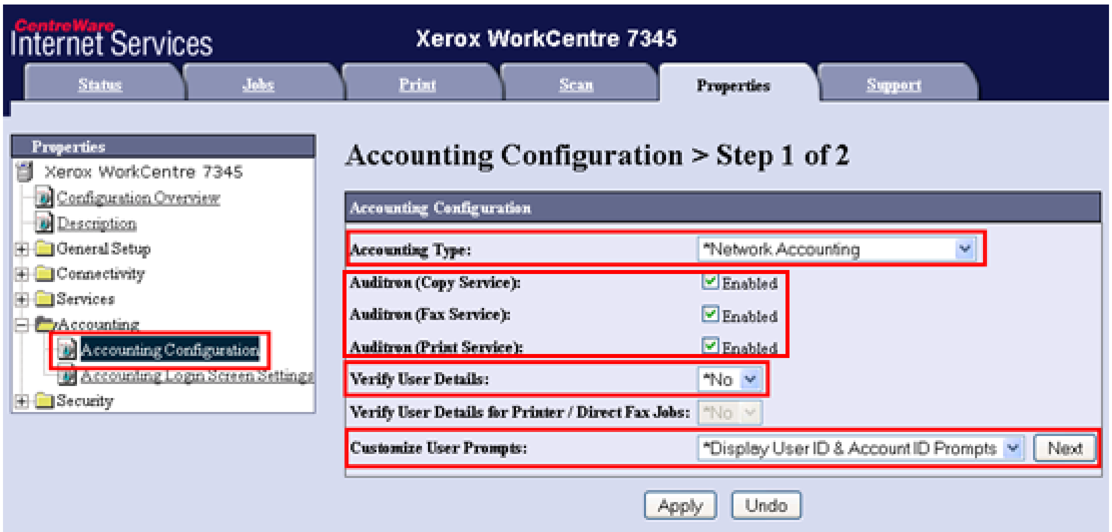
7. Press Apply to save the changes.

2.5.5 Configure the Network Accounting Options

The following Network Accounting options should be changed to integrate with Xerox Secure Access:

- Login to the device web admin.
- Navigate to Properties->Accounting->Accounting Configuration.
- Change the Accounting Type to: Network Accounting.
- Set the "Verify User Details" setting to "Off".
- **IMPORTANT:** Set "Customize User Prompts" to "Display User ID & Account ID Prompts". If both “prompts” are not enabled, jobs may not be tracked properly.

- Ensure that all the Auditron modes are enabled.

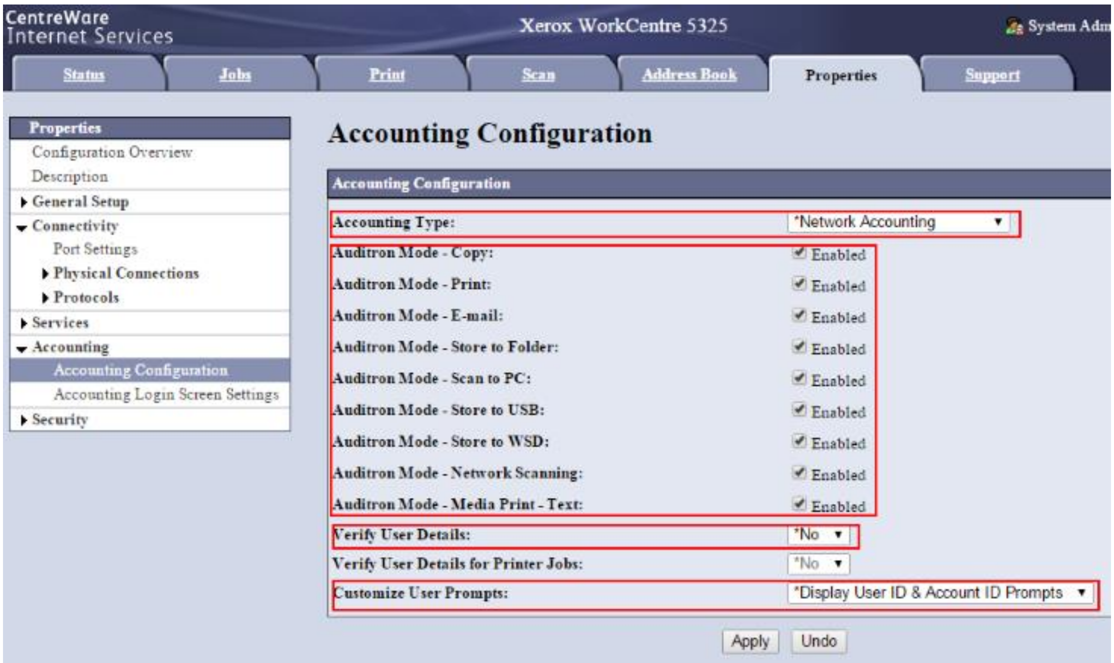


Accounting Configuration > Step 1 of 2

Accounting Configuration

Accounting Type:	*Network Accounting
Auditron (Copy Service):	☑ Enabled
Auditron (Fax Service):	☑ Enabled
Auditron (Print Service):	☑ Enabled
Verify User Details:	*No
Verify User Details for Printer / Direct Fax Jobs:	*No
Customize User Prompts:	*Display User ID & Account ID Prompts

On the WorkCentre 5325, it looks like:



Accounting Configuration

Accounting Configuration

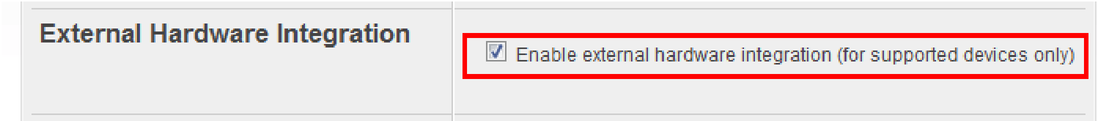
Accounting Type:	*Network Accounting
Auditron Mode - Copy:	☑ Enabled
Auditron Mode - Print:	☑ Enabled
Auditron Mode - E-mail:	☑ Enabled
Auditron Mode - Store to Folder:	☑ Enabled
Auditron Mode - Scan to PC:	☑ Enabled
Auditron Mode - Store to USB:	☑ Enabled
Auditron Mode - Store to WSD:	☑ Enabled
Auditron Mode - Network Scanning:	☑ Enabled
Auditron Mode - Media Print - Text:	☑ Enabled
Verify User Details:	*No
Verify User Details for Printer Jobs:	*No
Customize User Prompts:	*Display User ID & Account ID Prompts

- Press the "Apply" button.

Once these settings are changed you might need to reboot the Xerox for them to have an effect. The device usually prompts you when a reboot is required.

2.5.6 Create/setup the Xerox device in PaperCut

1. Log in to the PaperCut administration interface using a web browser (e.g. http://papercut-server:9191/admin).
2. Navigate to ‘Options -> Advanced’ and ensure the option ‘Enable external hardware integration’ is enabled.

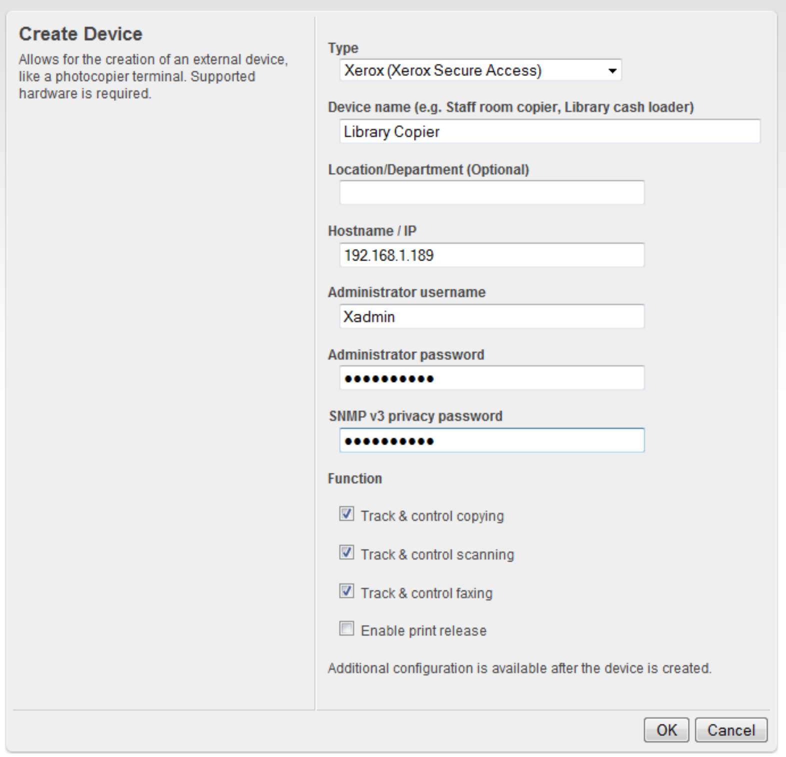


External Hardware Integration

☑ Enable external hardware integration (for supported devices only)

3. Press ‘Apply’.

4. Navigate to the 'Devices' tab.
5. Click "Create Device" action from the left.
6. Select the "Xerox (Xerox Secure Access)" device type.



Create Device

Allows for the creation of an external device, like a photocopier terminal. Supported hardware is required.

Type: Xerox (Xerox Secure Access)

Device name (e.g. Staff room copier, Library cash loader): Library Copier

Location/Department (Optional):

Hostname / IP: 192.168.1.189

Administrator username: Xadmin

Administrator password: ●●●●●●●●●●

SNMP v3 privacy password: ●●●●●●●●●●

Function

☑ Track & control copying

☑ Track & control scanning

☑ Track & control faxing

□ Enable print release

Additional configuration is available after the device is created.

7. Enter a descriptive name for the device under "Device name".
8. Enter the Xerox device's IP address under "Hostname/IP".
9. Optionally enter location/department information.
10. Enter the admin username and password and privacy password (those entered in the SNMPv3 settings on the MFP). NOTE: The username is case-sensitive and is usually "Xadmin".
11. Under "Function" tick the options you would like to enable. E.g. "Track & control copying".
12. Click "OK".

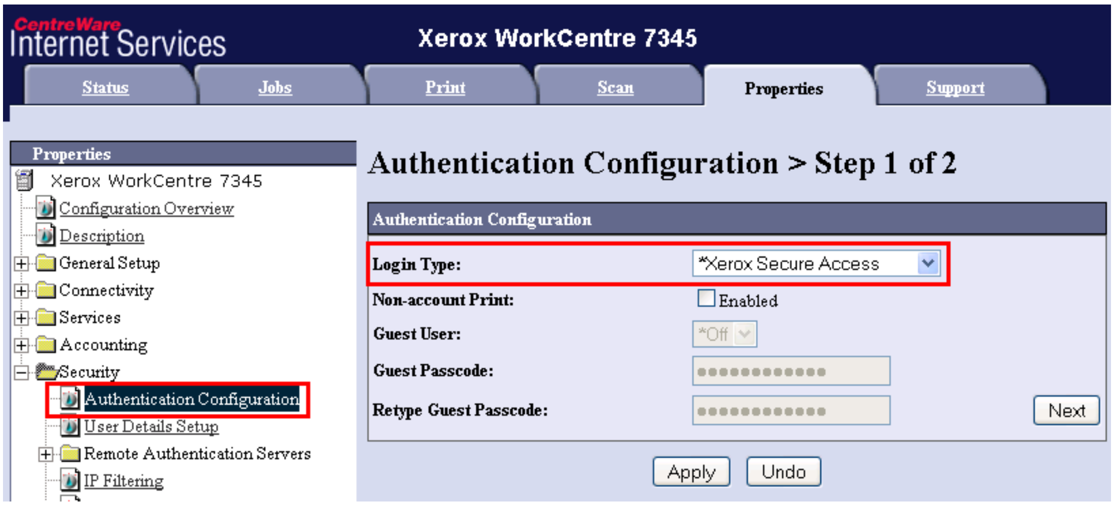
At this point PaperCut should try to connect to the device to configure various options over SNMP. The page displayed after the device is created displays the device status. If there are problems communicating with the device then the status will show an error message. Press the "Refresh" link next to the status to see if the status is updated.

2.5.7 Enable Xerox Secure Access authentication

At this point the Xerox Secure Access can be enabled:

1. Login to the device web admin.
2. Navigate to Properties->Security->Authentication Configuration.

3. Set the Login Type to "Xerox Secure Access".



Authentication Configuration > Step 1 of 2

Authentication Configuration

Login Type: *Xerox Secure Access

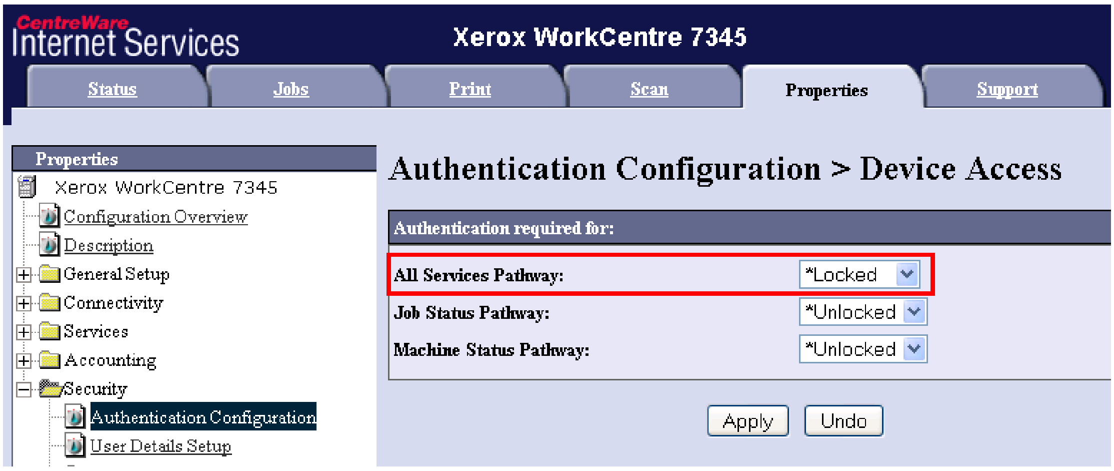
Non-account Print: □ Enabled

Guest User: *Off

Guest Passcode: ●●●●●●●●●●●●

Retype Guest Passcode: ●●●●●●●●●●●●

4. Press "Apply" to save the settings.
5. In Properties->Security->Authentication Configuration, press the "Next" button and then the "Device Access" button.
6. Change the "All Services Pathway" setting to "Locked". This locks access to the copier functions unless the user is logged in.



Authentication Configuration > Device Access

Authentication required for:

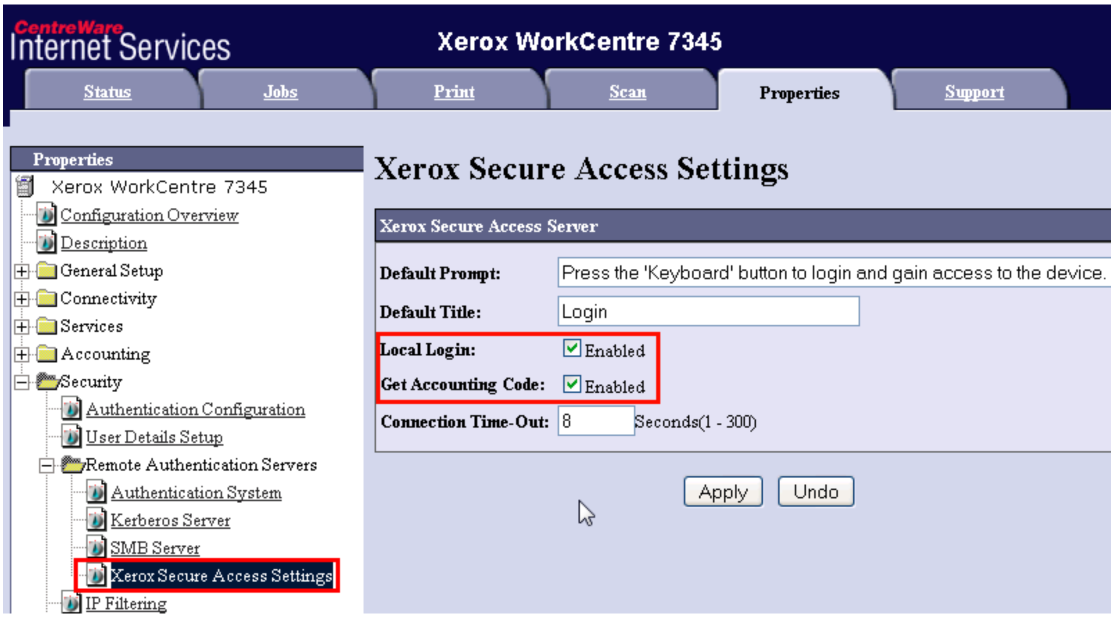
All Services Pathway: *Locked

Job Status Pathway: *Unlocked

Machine Status Pathway: *Unlocked

7. Navigate to Properties->Security->Remote Authentication Servers->Xerox Secure Access Settings.
8. Enable the "Local Login" option. (On some devices this option is called “Allow Local Interface Initiation”)

9. Enable the "Get Accounting Code" option. (On some devices this is option is called “Accounting codes provided by server”).



Xerox Secure Access Settings

Xerox Secure Access Server

Default Prompt: Press the 'Keyboard' button to login and gain access to the device.

Default Title: Login

Local Login: ☑ Enabled

Get Accounting Code: ☑ Enabled

Connection Time-Out: 8 Seconds(1 - 300)

10. Press the "Apply" Button.

You may need to reboot the device for the settings to take effect.

Once the device is rebooted the device should display a screen to login. Perform testing and verify you can login and that copies, etc are tracked by PaperCut.

2.5.8 (Optional) Enable network card reader

This section describes how to configure a network card reader for authentication at the MFP. For more information on the supported card readers see Section 2.3 Card Reader support.

To enable the network card reader:

1. Log in to the PaperCut administration interface using a web browser (e.g. http://papercut-server:9191/admin).
2. On the “Devices” tab, select the MFP device.
3. Under the “Authentication Methods” option, enable the “Swipe Card” authentication option.
4. Select the “Enable network card reader” option.

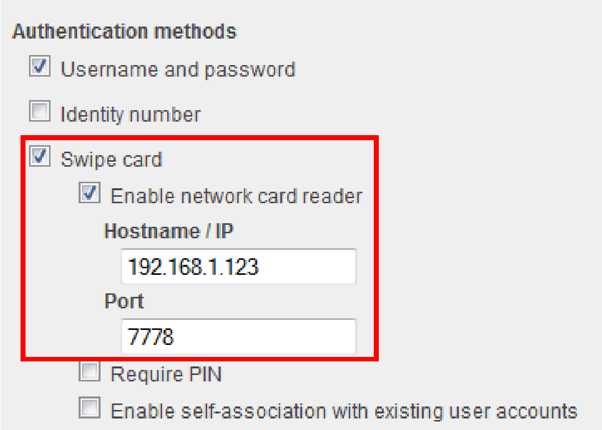
2.5.9 (Optional) Additional Network Security

The MFP communicates with the PaperCut server over the network (e.g. to authenticate users or release print jobs). To provide an additional level of security, PaperCut may be configured to only allow device connections from a restricted range of network addresses. This ensures that only approved devices are connected to the PaperCut server.

By default PaperCut will allow device connections from any network address. To restrict this to a subset of IP addresses or subnets:

6. Logon to the PaperCut administration web interface at http://<papercut-server>:9191/admin

7. Go to the Options→Advanced tab and find the “Security” section.
8. In the “Allowed device IP addresses” field enter a comma-separated list of device IP addresses or subnets (in the format <ip-address>/<subnet-mask>).
9. Press the “Apply” button.
10. Test the devices to ensure they can continue to contact the PaperCut server.
11. Enter the network address and the port of the network card reader.



Authentication methods

☑ Username and password

□ Identity number

☑ Swipe card

☑ Enable network card reader

Hostname / IP

192.168.1.123

Port

7778

□ Require PIN

□ Enable self-association with existing user accounts

12. Press “OK” or “Apply” to save the changes.
13. At this point PaperCut will establish the connection to the card reader. The status of the connection to the network card reader is displayed below the settings. If there is a problem connecting to the card reader any errors will be displayed here.

3 Post-install testing

After completing installation and basic configuration it is recommended to perform some testing of the common usage scenarios. This important for two reasons:

1. To ensure that the embedded application is working as expected
2. To familiarize yourself with the features and functionality of PaperCut and the embedded application.

This section outlines four test scenarios that are applicable for most organizations. Please complete all the test scenarios relevant for your site.

3.1 Test Preparation

To complete these tests it is recommended you use two test users so that each can be configured differently. These users are:

- ‘testusersimple’ – is used to perform basic copier monitoring and control and to perform print release tests.
- ‘testuseradvanced’ – is used to perform copier monitoring and control with the account selection enabled (i.e. to charge copying to accounts/departments/cost-centers/etc).

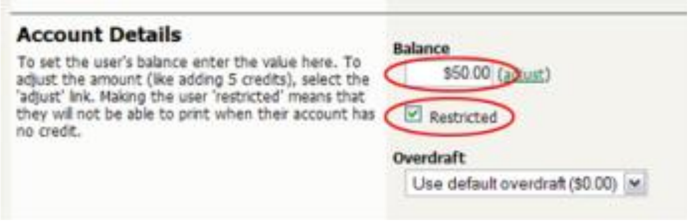
If you have existing users that can be used for these tests, then they can be used instead.

To setup these users in PaperCut:

1. Create the ‘testusersimple’ and ‘testuseradvanced’ users in your Active Directory or LDAP directory.
2. Login to the PaperCut’s admin web interface
3. Go to the “Options->User/Group sync” page and press “Synchronize Now”.
4. Once the sync is complete, the users will be added to PaperCut.

The next step is to configure the users. To configure ‘testusersimple’:

1. In PaperCut, select the “Users” tab
2. Select the ‘testusersimple’ user.
3. Set the user’s balance to $50.00 and verify the account is set to “Restricted”.



Account Details

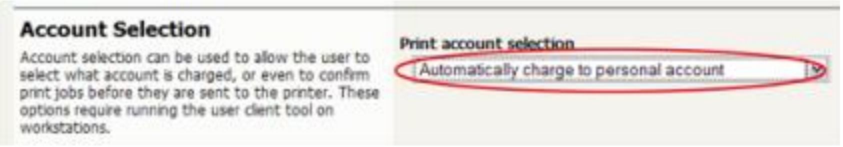
To set the user's balance enter the value here. To adjust the amount (like adding 5 credits), select the 'adjust' link. Making the user 'restricted' means that they will not be able to print when their account has no credit.

Balance: $50.00 (adjust)

☑ Restricted

Overdraft: Use default overdraft ($0.00)

4. Verify that this user is set to “Automatically charge to personal account” in the “Account selection” options.



Account Selection

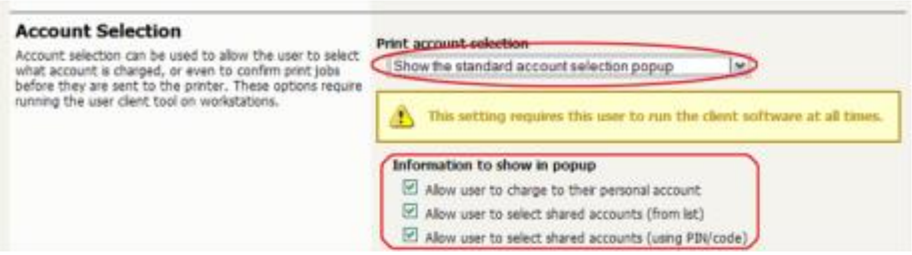
Account selection can be used to allow the user to select what account is charged, or even to confirm print jobs before they are sent to the printer. These options require running the user client tool on workstations.

Print account selection: Automatically charge to personal account

5. Press the “OK” button to save.

To configure ‘testuseradvanced’:

1. In PaperCut, select the “Users” tab
2. Select the ‘testuseradvanced’ user.
3. Change the “Account Selection” option to “Standard account selection popup” and enable all the account selection options.



Account Selection

Account selection can be used to allow the user to select what account is charged, or even to confirm print jobs before they are sent to the printer. These options require running the user client tool on workstations.

Print account selection: Show the standard account selection popup

This setting requires this user to run the client software at all times.

Information to show in popup
- ☑ Allow user to charge to their personal account
- ☑ Allow user to select shared accounts (from list)
- ☑ Allow user to select shared accounts (using PIN/code)

4. Press the “OK” button to save.

3.2 Scenario 1: Standard copying

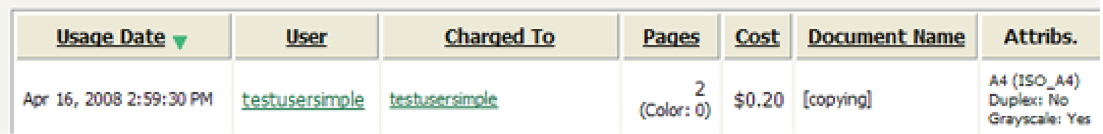
Standard copying involves monitoring/charging printing to a user’s personal account. This is the most commonly used for student printing or basic staff monitoring. Users can also be configured for unrestricted printing, which is commonly used for staff/employee use.

At the photocopier:

1. The photocopier should be displaying a screen to prompt the user to login. Follow the prompts to login.
2. When prompted username (‘testusersimple’) and password in the login fields.
3. At this point the copier will be enabled for usage.
4. Follow the onscreen instructions and perform some test copying, i.e. press the “Copy” key on the device and perform a copy as normal.
5. Once completed copying press the “Logout” button on the device’s keypad.

Back in the PaperCut application verify that the copier activity was recorded and the user’s account deducted.

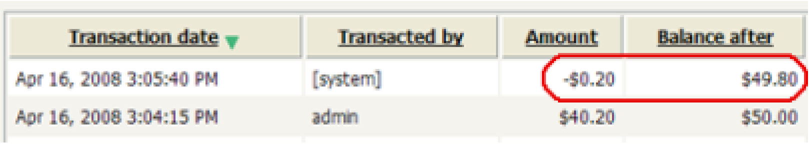
1. Log in to PaperCut.
2. Select the device from the “Devices” tab.
3. Select the “Job Log” tab. This will list all recent copying activity on the copier. The copying just performed as the test user should be listed. Verify the details of the copy job that was just performed.



Usage Date ▼	User	Charged To	Pages	Cost	Document Name	Attribs.
Apr 16, 2008 2:59:30 PM	testusersimple	testusersimple	2 (Color: 0)	$0.20	[copying]	A4 (ISO_A4) Duplex: No Grayscale: Yes

4. Click on the user’s name in the user column to view the user’s account details
5. Select the “Job Log” tab to display all print/copy activity for the user.

6. Select the “Transaction History” tab and verify that the cost of the photocopying was deducted from the user’s account.



Transaction date ▾	Transacted by	Amount	Balance after
Apr 16, 2008 3:05:40 PM	[system]	-$0.20	$49.80
Apr 16, 2008 3:04:15 PM	admin	$40.20	$50.00

3.3 Scenario 2: Copying with account selection

For this test the Account ID prompt has to have been enabled as described in the “Installation” chapter of this manual.

Firstly a test account should be created:

1. Log into PaperCut, select the “Accounts” tab.
2. Select the “Create a new account…” action link on the left.
3. Enter an account name “Test Account 1”.
4. Enter PIN/Code “2233”.
5. Select the “Security” tab and allow all users to access that account by adding the “[All Users]” group.
6. Press “OK”.

At the photocopier:

1. The photocopier should be displaying a screen to prompt the user to login. Follow the prompts to login.
2. When prompted username (‘testuseradvanced’) and password in the login fields.
3. The user will then be prompted to enter the account code/PIN. Enter the account code of “2233” to select the “Test Account 1” created earlier.
4. At this point the copier will be enabled for usage. Follow the onscreen instructions and perform some test copying. I.e. press the “Copy” key on the device and perform a copy as normal.
5. Once completed copying press “Logout” button.

Back in the PaperCut application verify that the copier activity was recorded and the user’s account deducted.

1. Log in to PaperCut
2. Select the device from the “Devices” tab
3. Select the “Job Log” tab. This will list all recent copying activity on the copier. The copying just performed as the test user should be listed.
4. Verify the details of the job (i.e. that the job was charged to the selected account).
5. In the log details, click on the “Charged To” account name to view the account’s details.
6. Selecting the “Job Log” tab will display all print/copy activity for the account, and will show the test photocopying that was performed.

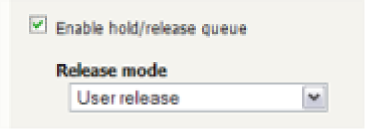
3.4 Scenario 3: Print release

The embedded application may also be used for print release. For full description of PaperCut hold/release queues and release stations, please read the PaperCut manual.

Skip this scenario if hold/release queues will not be used at your site.

To perform print release testing a hold/release queue must be enabled:

1. In PaperCut, select the "Printers" tab.
2. Select the print queue (i.e. not the 'device') for the Xerox MFD that will be used for testing.
3. Enable the "Hold/release queue" option.



☑ Enable hold/release queue

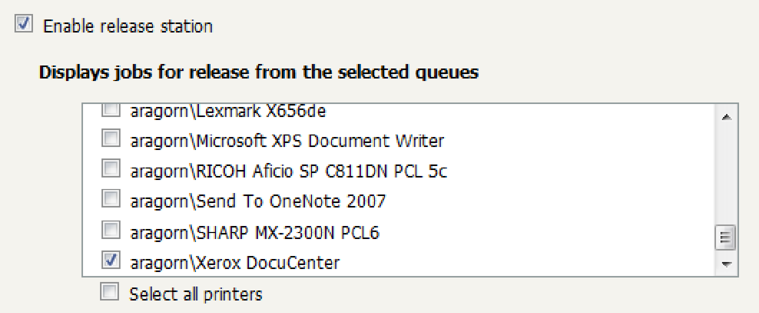
Release mode

User release

4. Press OK/Apply to save the changes. All printing to this queue will now be held until released by a user.

The photocopier device must also be enabled as a "Print Release Station":

1. In PaperCut, select the "Devices" tab.
2. Select the Xerox MFD device.
3. Under "Device Function" tick "Enable release station".
4. Select the print queue that was enabled for hold/release above. The Xerox device will allow jobs on the selected queues to be released.



☑ Enable release station

Displays jobs for release from the selected queues

□ aragorn\Lexmark X656de
□ aragorn\Microsoft XPS Document Writer
□ aragorn\RICOH Aficio SP C811DN PCL 5c
□ aragorn\Send To OneNote 2007
□ aragorn\SHARP MX-2300N PCL6
☑ aragorn\Xerox DocuCenter

□ Select all printers

5. Press "OK" to save.
6. Login to a computer workstation as 'testusersimple'.
7. Print a few jobs to the print queue that was configured above. The jobs will be held in the hold/release queue.
8. Confirm that the jobs are held, by checking that the jobs are listed in the "Printers -> Jobs Pending Release" page of the PaperCut administration interface.
9. Confirm that the username is 'testusersimple'.

At the device:

1. Login to the device as "testusersimple" as described above.

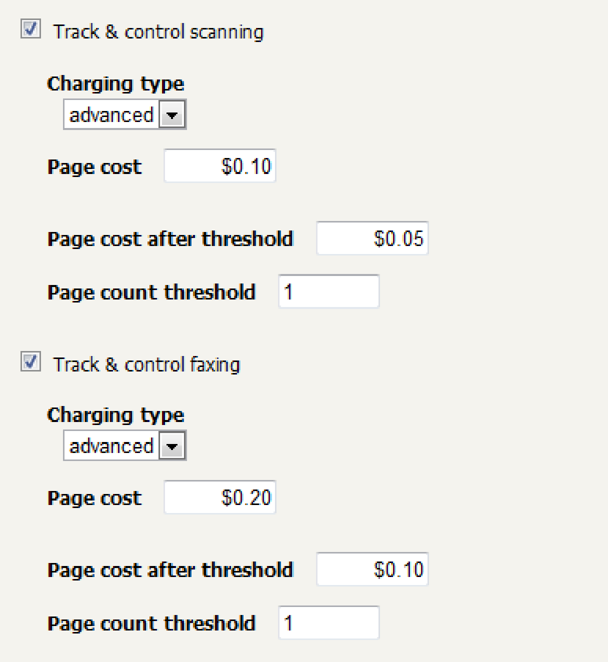
2. Upon successful login you will be prompted whether to release the waiting print jobs. Select the "Yes" button to release the jobs to print.
3. The jobs will begin to print to the destination printer.
4. Once completed press the "Logout" button on the device keypad.

3.5 Scenario 4: Scanning and faxing

Xerox devices can also scan documents and send them by email. If a phone line is attached, they can send faxes. You can enable tracking scanning and faxing. Users can be prevented from scanning or faxing when they are out of credit.

To enable tracking of scans and faxes:

1. In PaperCut, select the "Devices" tab.
2. Select the MFD device.
3. Under "Device function" tick "Track & control scanning" and tick "Track & control faxes".
4. Select the charging type "advanced" in both cases and set some numbers for page costs and thresholds. The cost after the threshold should be lower than the standard cost as it represents a volume discount. As an example, the screen shot below shows that the first page of a fax is charged at $0.20 and any subsequent page at $0.10.



☑ Track & control scanning

Charging type advanced

Page cost $0.10

Page cost after threshold $0.05

Page count threshold 1

☑ Track & control faxing

Charging type advanced

Page cost $0.20

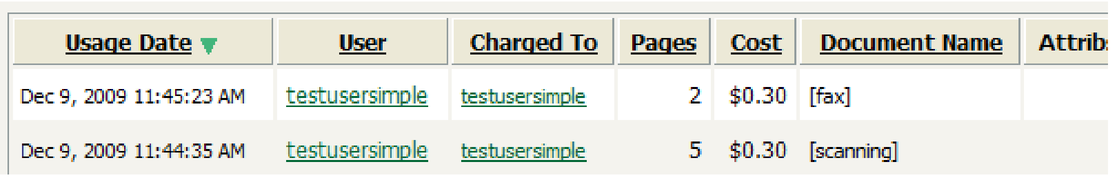
Page cost after threshold $0.10

Page count threshold 1

At the photocopier, log in and scan a few documents and send a few faxes. At the end, make sure to press the "Logout" button on the device's keypad.

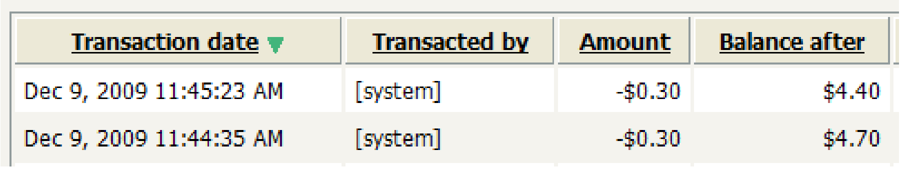
In the PaperCut administration interface verify that the scan and fax activities were recorded and the user's account was deducted. This can be done as follows:

1. Log in to the PaperCut administration interface.
2. Select the device from the "Devices" tab.
3. Select the "Job Log" tab. This will list all recent activity on the copier, including copying, scanning and faxing. The jobs just performed as the test user should be listed. Verify the details of the jobs that were just performed.



Usage Date ▼	User	Charged To	Pages	Cost	Document Name	Attrib
Dec 9, 2009 11:45:23 AM	testusersimple	testusersimple	2	$0.30	[fax]	
Dec 9, 2009 11:44:35 AM	testusersimple	testusersimple	5	$0.30	[scanning]	

4. Click on the user's name in the user column to view the user's account details.
5. Select the "Job log" tab to display all activity for the user.
6. Select the "Transaction History" tab and verify that the cost of the scans and faxes was deducted from the user's account.



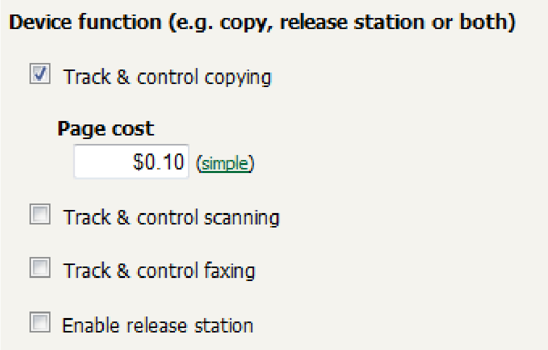
Transaction date ▼	Transacted by	Amount	Balance after
Dec 9, 2009 11:45:23 AM	[system]	-$0.30	$4.40
Dec 9, 2009 11:44:35 AM	[system]	-$0.30	$4.70

4 Configuration

After completing the Installation section and registering the device with PaperCut, it will have been configured with reasonable default settings that are suitable for most environments. This section covers how to change the default settings. All the following settings are available via the device's 'Summary' tab in the PaperCut administration interface.

4.1 Device Function

The device function setting defines which functions will be available on the device and how it will be used. Not all function settings are supported on all devices.



Device function (e.g. copy, release station or both)

☑ Track & control copying

Page cost

$0.10 (simple)

☐ Track & control scanning

☐ Track & control faxing

☐ Enable release station

Each device function is discussed in the following table.

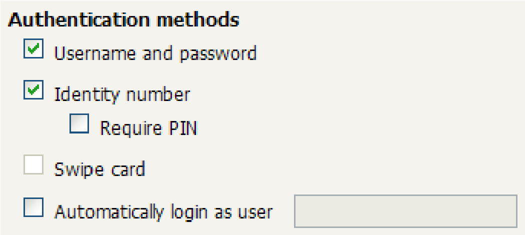
Device Function	Description
Track & control copying	The device will track walk-up off-the-glass copying.
Track & control scanning	The device will track scanning such as scan-to-email or scan-to-file.

Track & control faxing	The device will track the sending of faxes.
Enable release station	The device will act as a print release station.

4.2 Authentication Methods

PaperCut supports a number of different ways to authenticate users who walk-up to the devices to perform copying. The default authentication method is username and password authentication.

The available authentication methods can be modified in the 'External Device Settings -> Authentication methods' section.



Authentication methods
☑ Username and password
☑ Identity number
□ Require PIN
□ Swipe card
□ Automatically login as user

Authentication methods available for a device

Not all authentication methods are supported on all devices. A grayed-out option indicates that the option is not supported on this device.

Each authentication method is discussed in the following table.

Authentication Method	Description
Username and password	The user may use their domain/network username and password to log into the device.
Identity number	The user may log in with their identity number. Identity numbers are convenient when usernames are long or cumbersome to enter. For example, rather than entering a username like 'john.smith.001', it may be more convenient to enter an employee ID of '1234'. See the PaperCut user manual for information about user identity numbers, including importing identity numbers from an external source.
Identity number -> Require PIN	When a user logs in with their identity number, they must also provide their associated PIN. This provides additional security for identity number logins.
Automatically login as	Specifies that this device should always automatically log in as the given

user	user. This option overrides all other authentication methods

Description of authentication methods

4.3 Configuring Swipe Card Readers

Swipe cards contain numbers which are used to identify users according to the card number configured in the User Details screen under "Card/Identity" number. Some readers report information in addition to the number encoded on the card, such as checksums. PaperCut can treat these cases in two ways:

- A typical case is the checksum being reported after the card number, separated by an equals sign, such as in 5235092385=8. PaperCut can handle this case by default; it will extract the number before the equal sign as the card number: 5235092385.
- For some cases, a "regular expression" *may* be required that will filter the card number from the complete string of characters reported by the card reader. Documentation on regular expressions can be found on the Internet, e.g. at www.regular-expressions.info.
    - The regular expression must be fashioned so that the card number is returned as the first match group.
    - Usually one regular expression will be used for all the devices managed by PaperCut; this must be entered in the "Config editor (advanced)" which you will find on the Options tab under Actions. The key is called "ext-device.card-no-regex".
    - The global setting however can be overridden on a per-device basis: The key "ext-device.card-no-regex" can also be found on the "Advanced Config" tab in the device details screen. This setting will override the global setting unless the keyword "GLOBAL" is specified.
    - PaperCut developers will gladly assist in producing a regular expression when supplied with a few sample outputs from your card reader. Contact your reseller or Authorized Solution Center for help with regular expressions. You can find their contact information in your PaperCut Admin interface on the **About** page.
    - If you would like to write your own regular expressions, here are some examples:
        - Use the first 10 characters (any character): (.{10})
        - Use the first 19 digits: (\d{19})
        - Extract the digits from between the two "=" characters in "123453=292929=1221": \d*=(\d*)=\d*

4.4 Single Sign On (SSO)

No further configuration is required as PaperCut passes all the known information about the logged in user to the MFP at the time of login such as the Full Name, email address, and more. This information can then be used by other components on the MFP (or possibly other 3rd party applications).

One example is that when you use the scanner functionality, the MFP can use your email address, provided by PaperCut, to simplify scan-to-me style work-flows.

5 Known Limitations and Security

The Xerox environment has a number of limitations that have impacted on functionality and security.

5.1 Zero Stop

In an ideal implementation, PaperCut would be able to control exactly how many pages a user can copy and always prevent the user from overdrawing their account. The Xerox Secure Access / Network Accounting environment has some limitations in controlling copying.

PaperCut will only enable the copier when an authorized user has authenticated at the device (and has enough credit to begin copying). If a restricted user attempts to login and they have no available credit, they will be denied access to photocopying. However, the Xerox environment has the following limitation:

- Once the user starts copying it is not possible to forcibly stop the copying and log them out of the system.

The implication of this limitation is:

- Restricted users with available credit can start copying and continue copying even once they have used their credit. Their copier usage will still be recorded in PaperCut and the cost will be deducted from their account (which will go into negative balance).

NOTE: PaperCut will forcibly logout the user if the user’s job completes and they have no credit remaining. PaperCut can only force them out after the job is completed. This is because we are only informed of completed jobs, and it’s only after the job is charged that the user’s credit will be reduced.

This is a limitation of the Xerox Secure Access and Network Accounting module.

5.2 Fax Tracking

Many Xerox MFPs do not log sent faxes in the Network Accounting / JBA logs. On these devices PaperCut cannot track any outbound faxes.

Please check with Xerox whether your device model supports fax tracking via Network Accounting.

The following list of Xerox devices that do and do not support tracking faxes (at the time of writing on 25th Jan 2013).

Devices **NOT** supporting tracking faxes:

- ColorQube 8700
- ColorQube 8900
- ColorQube 9201/9202/9203
- ColorQube 9301/9302/9303
- Phaser 3635MFP
- WorkCentre 232/238
- WorkCentre 245/255
- WorkCentre 265/275
- WorkCentre 4250

- WorkCentre 4260
- WorkCentre 5030/5050
- WorkCentre 5135/5150
- WorkCentre 5632/5638
- WorkCentre 5645/5655
- WorkCentre 5665/5675/5687
- WorkCentre 5735/5740/5745/5755
- WorkCentre 5765/5775/5790
- WorkCentre 6400
- WorkCentre 7525/7530/7535/7545/7556
- WorkCentre 7655/7665/7675

Devices supporting tracking faxes (those using Fuji-Xerox controller):

- WorkCentre 7120/7125
- WorkCentre 7132
- WorkCentre 7232/7242
- WorkCentre 7328/7335/7345/7346
- WorkCentre 7425/7428/7435
- Xerox Color 550/560
- WorkCentre 5222
- WorkCentre 5225/5230
- WorkCentre 5325/5330/5335

If your device is not listed, please check with Xerox on whether the device supports tracking faxes.

5.3 User Interface

The interface displayed during the user login process has some limitations. The Xerox Secure Access features allow us to display any number of screens with either one of the following features:

1. A text input field (which can be optionally masked for password input)
2. A prompt with “Yes” and “No” buttons.

These limitations restrict the richness and flexibility that we can provide in the login process.

This is a limitation of the Xerox Secure Access system.

5.4 Bypassing the System

It is important that the administrators take care to prevent users from bypassing the system and directly accessing the copier.

To ensure the system is secure administrations should take the following precautions:

- The copier’s built in admin password should be changed from the default and always kept secure.

5.5 Card Reader support for authentication

PaperCut does support network card readers that support common card formats. For more information contact the PaperCut Authorized Solution Center in your region.

The Xerox Secure Access environment has begun to start supporting USB card readers (as of late 2011). Support for USB card readers is only available on some MFP devices with the latest firmware. Some devices (like the WC53XX require an additional plugin install available from Xerox). Xerox will be gradually rolling out support for USB card readers across their device range. Contact Xerox for information on what devices and firmware is required for USB card reader support.

6 Advanced Configuration

6.1 Config Editor

The common configuration options for a device in PaperCut are available on the device's 'Summary' tab, and are discussed in more detail in the Configuration section. This section covers the more advanced or less common configuration options which are available via the 'Advanced Config' tab.

Config name	Description
ext-device.card-self-association.use-secondary-card-number	Select whether user self-association should occupy the primary or secondary card number. It overrides the global setting unless the keyword "GLOBAL" is specified. This is useful when there is a mix of different non-configurable card readers that read different numbers from an ID card. Set to "Y" to use the secondary card number, "N" to use the primary card number. Default: "GLOBAL" to defer to the global configuration option.
ext-device.xerox.limit-reference.paper-size and ext-device.xerox.limit-reference.duplex	PaperCut will deny device access to restricted users who do not have enough balance to copy. To determine if a user has enough balance to copy a reference copy is required. By default, PaperCut checks if the user has enough balance to copy one single sided Letter (North America) or A4 (worldwide) page. In some situations, it may be desirable to change the reference copy, such as when the device allows smaller page sizes like A5. Default for ext-device.xerox.limit-reference.duplex: N (No) Default for ext-device.xerox.limit-reference.paper-size in North America: Letter Default for ext-device.xerox.limit-reference.paper-size worldwide: A4
ext-device.xerox.login-instruction	Defines the text to display on the initial login screen displayed by the Xerox device. Valid values are: • **DEFAULT**—PaperCut will set this message based on the authentication settings of the device. • **DONOTSET**—the instructional text specified in the CWIS admin web

	interface will be used. IMPORTANT: The Xerox device has very limited support for non-ASCII characters. If you have problems, use only ASCII characters.
ext-device.xerox.job-download-after-login-period-secs	The number of seconds between PaperCut downloading/polling the device job logs after the user is logged in. The default for this is every 10 seconds. The minimum this can be set to is 5 seconds. Default: DEFAULT (which allows PaperCut to choose the most appropriate time – usually 10 seconds).
ext-device.xerox.auth-user-prefix	When user's login to the Xerox their credentials like username (and password if provided) are passed to the Xerox device by PaperCut. This allows the device to use these credentials for other authentication. E.g. To authenticate the use when using the "Scan to Home" features. In some environments, the username must be prefixed with the windows domain for this to work properly. This setting allows the domain to be prefixed to the username so that the user does not need to enter it manually. For example, if this setting this set to: "DOMAIN\" and the user names "john" log's in, PaperCut will pass the username "DOMAIN\john" to the Xerox.
ext-device.xerox.card.magstripe-track-no	When a USB Magstripe card reader is used, the card data can be found on one of 3 tracks. Typically, the track of interest is track number 2. This configuration parameter specifies a comma separated list of track numbers to look at in order to retrieve the card data. For example, if the list was: ***2, 3*** then it would look to see if there was data for track ***2*** and if there wasn't then it would look to see if there was data for track ***3***. If it can't find any valid track data, then it will show an error message on the Xerox Panel and a more detailed message in the logs. **Note:** Prior to PaperCut 13.4, this list can only contain one value. Default: 2 (by default only look at the data associated with track 2)
ext-device.xerox.swipe-to-logout	Specify whether swiping a card when a user is logged in will log them out or be ignored. Values: Y, N. Default: Y. If set to N, then when a user is logged in and they swipe their card, they will no longer be logged out and the swipe will be ignored.
ext-device.xerox.use-job-owner	Specify the source of the user Id used to identify the owner of a job from the Xerox Job Logs: • **Y**—use the Job-Owner field to determine the user Id. • **N**—use the Accounting-User-Id field to determine the user Id.

ext-device.xerox.track-scan-to-ifax-as-fax-jobs	Track scan to fax jobs as scan jobs or fax jobs. Set this to Y to track as fax jobs. Set this to DEFAULT to track as scan jobs. Values: Y, DEFAULT Default: DEFAULT (N)
ext-device.xerox.enable-secure-access	Automatically enable Secure Access configuration. Set this to Y to automatically enable Secure Access configuration via SNMP. Set this to N to opt to manually enable Secure Access configuration via the device's web admin page. Values: Y, N Default: Y (automatically enable Secure Access)
enable-usb-print	Toggle USB printing. Values: Y, N Default: Y Setting this to Y, enables USB printing when either of the following conditions are also met: • Either, copy jobs are not tracked on the device, • Or, if copy jobs are tracked on the device, the user has sufficient credit to perform a copy job Setting this to N, disables USB printing.

6.2 Setting an explicit PaperCut Server Network Address

The copier connects to the PaperCut server to validate user credentials, display print jobs for release, etc. The device makes inbound network connections to the PaperCut server using a network address of the PaperCut server. By default, PaperCut will use the server's IP address (if the server has multiple IPs (i.e. multi-homed) then PaperCut will select one of them), but on some networks this address may not be publicly accessible from other parts of the network.

If the PaperCut server has a “public” IP address or DNS name then this can be used instead, which allows the copiers to use the “public” network address instead of the IP address that PaperCut detects. To do this:

- Login to PaperCut
- Go to the "Options" tab.
- Select "Config Editor (advanced)", from the action links on the left.
- Find the "system.network-address" setting.
- Enter the public network address for the PaperCut server.
- Press the "Update" button next to the setting and confirm the setting is updated.

When connecting devices to a PaperCut site server, you can configure the sites' "Network address used by devices":

- Login to PaperCut
- Go to the "Sites" tab.
- Select the site to edit.
- Change the "Network address used by devices".
- Save the site details.

To have either of these changes take effect immediately, restart the PaperCut Application Server service (i.e. on Windows use: Control Panel->Admin Tools->Services).

7 How it works

The following section gives a brief overview of the internal workings of PaperCut's on-board solution for Xerox devices. It's provided as background information and may be useful for technical administrators troubleshooting problems.

Typical function workflow:

1. A user logs into the MFP via the panel. The MFP is configured to contact PaperCut (via SOAP web sevices) to verify login information.
2. The user ID and password is validated and devices access is granted as appropriate.
3. If "release jobs on login" is enabled any waiting jobs are immediately queued for printing. (called secure print release or find-me printing)
4. If the user performs any device functions such as Copy, Fax or Scan, these are recorded against the user ID in the device's onboard logs.
5. At regular periods (e.g. every minute) PaperCut contacts the device looking for new log entries (logs are downloaded via HTTP using JBA network accounting).
6. Any new log entries are analyzed and recorded in PaperCut's usage database. Any cost associated with the usage is charged from the user's account (or their selected Shared Account).

8 FAQ & Troubleshooting

PaperCut shows an error status for the device. What could cause this?

In the "Devices" list the Xerox device may appear with an error status (hover your mouse over the status to see the full status message). The status message will help understand the cause of the error. The most common cause of problems is due to a networking issue, to resolve:

- Verify that the device network address (or IP) is entered correctly in PaperCut
- Verify that networking and firewalls allow PaperCut to establish a connection to the device on TCP ports 80 and 443 and UDP port 161 for SNMP.
- Verify that networking and firewall settings allow the device to establish connections to the PaperCut server on ports 9191 and 9192.

Another common cause of errors is that "Network Accounting / JBA" has not been enabled/configured on the device. Ensure that the Network Accounting is enabled as described in section 1.1.

Another possible cause of problems is if the device firmware does not support the "Off-box validation" features required by PaperCut. This feature should be available for recent Xerox copiers supporting "Network Accounting", however sometimes a firmware upgrade is required.

How often does PaperCut poll for accounts?

Account validation is done in real-time using the Xerox authentication web services methods. Hence and changes made to Shared Accounts, user rights, or user passwords are available immediately.

How often does PaperCut poll for job activity?

After PaperCut detects a login it will check for the completion of the job(s) every 2 minutes. Hence on average the job will appear in, and be charged by PaperCut on average no longer than a minute after the job completes and the user logs out of the copier.

During no activity, the copier status is checked every 10 minutes.

Can I use a hostname rather than an IP address in the URL's when configuring the release station settings?

Using a hostnames relies on the MFD using your DNS and ensuring that your DNS is correctly configured. The quickest failsafe option is to use the server's IP. If you have advanced networking skills, you may wish to investigate using a hostname.

The device displays an error when authenticating the user.

The most likely cause of problems is that the device cannot establish a connection to the PaperCut server. Make sure that your networking/firewalls allow network connections from the device to the PaperCut server on ports 9191 and 9192.

Also ensure that the device SSL/HTTPS options are enabled. Ensure that the option to "Verify the remote server certificate" is disabled.

If your PaperCut server has multiple IP addresses or you use NAT on your network, see section 6.2 on how to explicitly configure the PaperCut server's network address.

I see an error on the Xerox LCD screen?

This may indicate networking issue, a configuration issue, or maybe a software bug. Re-check your settings and restart the MFD (i.e. power off and power on the copier). If problems continue, contact your reseller or Authorized Solution Center. You can find their contact information in your PaperCut Admin interface on the **About** page.

PaperCut is not tracking copy/scan/fax jobs.

If the App Log message is also mentioning "Invalid Job details" then it may be caused by not enabling the following two items in the device's web admin page (CWIS):

1. Automatically apply accounting codes from the server.
2. User Accounting Display Prompts for both the user ID and the account ID.
3. Ensure all the Auditron Modes are enabled in the Account settings (if available).

PaperCut is tracking the copy/scan/fax jobs to the personal account instead of the specified shared account.

Please ensure that the Accounting Display Prompts are set for both the user ID and ***the account ID***.