

# PaperCut MF - HP OXP Embedded Manual

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## Contents

|       |  |    |
|-------|--|----|
| 1     | Document revision history .....                                | 5  |
| 2     | Installation.....  | 6  |
| 2.1   | Supported devices .....  | 6  |
| 2.2   | Compatible devices.....  | 6  |
| 2.3   | System requirements.....                                       | 6  |
| 2.4   | Setup procedure .....  | 7  |
| 2.4.1 | Log in to the device’s web interface as an administrator ..... | 7  |
| 2.4.2 | Determine the device’s HP platform.....                        | 8  |
| 2.4.3 | Uninstall <i>PaperCut MF - HP FutureSmart Legacy</i> .....     | 9  |
| 2.4.4 | Configure the device’s Hold Off Print Job settings.....        | 10 |
| 2.4.5 | Install PaperCut MF.....                                       | 10 |
| 3     | Post-install testing .....                                     | 12 |
| 3.1   | Test preparation: create test users .....                      | 12 |
| 3.2   | Simple printing and copying .....                              | 14 |
| 3.2.1 | Test preparation: configure simple test user .....             | 14 |
| 3.2.2 | Simple printing.....   | 14 |
| 3.2.3 | Simple copying.....  | 17 |
| 3.3   | Advanced copying.....  | 20 |
| 3.4   | Enhanced user workflow .....                                   | 26 |
| 3.4.1 | Printing.....  | 26 |
| 4     | Configuration.....   | 28 |
| 4.1   | Inbound connections .....                                      | 28 |
| 4.1.1 | Inbound connections to PaperCut MF Application Server.....     | 28 |
| 4.1.2 | Inbound connections to PaperCut MF Site Servers .....          | 28 |
| 4.2   | Security settings.....   | 28 |
| 4.2.1 | HTTPS Security (recommended).....                              | 28 |
| 4.2.2 | Additional network security.....                               | 31 |



|        |   |    |
|--------|---|----|
| 4.3    | User authentication options .....   | 31 |
| 4.4    | User authentication via swipe cards.....  | 33 |
| 4.4.1  | Supported card readers .....  | 34 |
| 4.4.2  | Handling card identifiers.....  | 36 |
| 4.5    | SNMP .....  | 38 |
| 4.6    | Secure print release.....   | 39 |
| 4.6.1  | User selection of an account.....   | 39 |
| 4.6.2  | User selection of job attributes.....   | 40 |
| 4.7    | Device jobs.....  | 41 |
| 4.7.1  | Tracking device jobs .....  | 41 |
| 4.7.2  | User selection of an account.....   | 44 |
| 4.7.3  | Job costs and account balances (Zero Stop) .....  | 45 |
| 4.7.4  | Device’s scanning .....   | 46 |
| 4.7.5  | PaperCut MF’s Integrated Scanning.....  | 54 |
| 4.8    | Timeouts.....   | 57 |
| 4.9    | Device’s Manage Trays settings .....  | 59 |
| 4.10   | Device’s Control Panel Language and Keyboard Layouts settings .....   | 60 |
| 4.11   | Device’s first screen message .....   | 60 |
| 4.12   | Screen headers .....  | 61 |
| 4.12.1 | Header colors.....  | 61 |
| 4.12.2 | Header logo.....  | 61 |
| 4.13   | Config Editor .....   | 62 |
| 4.14   | Customization.....  | 78 |
| 4.14.1 | Home screen Application Icons:.....   | 78 |
| 5      | Known Limitations.....  | 78 |
| 5.1    | Limitations of the configured Reference Page Cost and maximum number of Reference Pages Allowed.....          | 78 |
| 5.1.1  | Limitation 1: Reference Page Cost is unavailable for on-device print jobs .....                               | 78 |
| 5.1.2  | Limitation 2: Reference Page Cost is lower than the actual per page cost.....                                 | 78 |
| 5.1.3  | Limitation 3: Reference Page Cost is higher than the actual per page cost.....                                | 79 |
| 5.1.4  | Limitation 4: Application of Reference Page Cost is slightly delayed for copy, fax and simplex scan jobs..... | 79 |

- 5.2 The configured user home directory network path is not auto-populated on the device's Scan to Network Folder ..... 80
- 5.3 Some paper sizes are unsupported ..... 80
- 5.4 Scanning continues even if the feeder or glass is empty..... 82
- 5.5 The "Cancel" and "Logout" buttons behave inconsistently on the PaperCut MF Integrated Scanning screens..... 82
- 5.6 Impact of environmental factors on Integrated Scanning ..... 83
- 5.7 Attributes of scan job logs are unavailable ..... 84
- 5.8 Phonebook contacts ..... 84
- 5.9 In enhanced mode, pressing the 'Sign In' button before swiping an authentication card might cause unexpected behaviours ..... 85
- 6 FAQ & Troubleshooting ..... 85
  - 6.1 IP addresses of the PaperCut MF Application Server ..... 85
  - 6.2 Device Status "Started (with errors)" ..... 85
  - 6.3 Device's first screen and login workflow ..... 86
    - 6.3.1 Screen with icons ..... 86
    - 6.3.2 White screen with a message ..... 87
  - 6.4 Swipe card authentication anomalies..... 88
  - 6.5 "Device is not available to use" error ..... 88
  - 6.6 Device Status "Started (with errors) – Certificate error" ..... 89
  - 6.7 The device is unable to connect to the PaperCut MF Application Server using HTTPS (SSL/TLS) ..... 89
    - 6.7.1 Config keys ..... 90
    - 6.7.2 FQDN (or IP Address) ..... 90
    - 6.7.3 Root and Intermediary Certificates for CA-signed SSL certificates ..... 90
    - 6.7.4 Self-signed SSL certificates ..... 90
  - 6.8 "Quota service error" ..... 91
  - 6.9 Accessing "locked" administrative jobs ..... 91
  - 6.10 Paper trays are not configurable ..... 93
    - 6.10.1 Using PaperCut MF ..... 94
    - 6.10.2 Using the device's web interface ..... 94
  - 6.11 Third-party applications are unable to use card readers..... 94



- 6.12 Support for legacy firmware versions..... 95
- 6.13 Can I improve the time it takes between swiping a card and logging in? ..... 95
- 7 Uninstall PaperCut MF - HP OXP..... 95
  - 7.1 Temporarily disable *PaperCut MF - HP OXP*..... 95
  - 7.2 Permanently uninstall *PaperCut MF - HP OXP*..... 96
- 8 Appendix A: Device screens ..... 98



# 1 Document revision history

| Published date or release | Details of changes made   |
|---------------------------|---|
| <b>22.0</b>               | 5.9 In enhanced mode, pressing the 'Sign In' button before swiping an authentication card might cause unexpected behaviours.  |
| <b>21.2</b>               | 5.8 Phonebook contacts<br>Added Scan to Fax device screens  |
| <b>21.0</b>               | Enhanced workflow<br>Introduction of new config keys  |
| <b>19.2.2</b>             | ext-device.hp-oxpd.login.id-field.numeric   |
| <b>19.2.0</b>             | 2.4.5 Install PaperCut MF; 4.5 SNMP; 4.12.2 Header logo;<br>4.13 Config Editor  |
| <b>19.1.0</b>             | Document restructure  |
| <b>19.0.0</b>             | 2 Overview; 5.7 Held print job settings at the device   |
| <b>18.3.6</b>             | 3.4.1 Install PaperCut MF; 5.2 Security settings; 5.5.2 Device functions not controlled and tracked by PaperCut MF; 5.6 Manage Trays; 5.11 Device's first screen's message; 5.14 Config Editor; 8.3 Device's first screen and login workflow; 8.7 The HTTPS (SSL/TLS) setup does not work; 8.9 The ability to modify trays is unavailable |
| <b>18.3.4</b>             | 5.4 "Swipe card" authentication method; 5.13 Config Editor  |
| <b>18.3.3</b>             | 3.2 System, access, and device requirements   |
| <b>18.3.0</b>             | 5.12 Timeouts; 5.13 Config Editor; 6 Known Limitations; 9 Appendix A: Device screens  |

## 2 Installation

This section covers the installation of *PaperCut MF - HP OXP*.

### 2.1 Supported devices

Ensure that the devices on the network are listed as supported devices on the [PaperCut MF for HP](#) page.

### 2.2 Compatible devices

Ensure that supported HP devices on the network are compatible with PaperCut's embedded software solution *PaperCut MF - HP OXP*:

- they are running HP FutureSmart 4.  
For more information, see [2.4.1 Log in to the device's web interface](#) and [2.4.2 Determine the device's HP platform](#).

**Note:** This manual is only relevant to supported and compatible HP devices. For more information on PaperCut's embedded software solutions for other devices and platforms, contact your reseller or Authorized Solution Center. You can find their contact information in your PaperCut MF Admin web interface, on the **About** page.

### 2.3 System requirements

Ensure that the following system requirements are met:

- The following entities are available:
  - Physical device – administrator and user access, and credentials
  - Device's web interface – administrator access, URL, and credentials
  - PaperCut MF Admin web interface – administrator access, URL, and credentials
- The latest version of the PaperCut MF Application Server is installed and running on the network. For more information, see the [PaperCut MF manual](#).  
**Note:** The minimum compatible version is 18.0.2 or above.
- The networking/firewall configuration allows:
  - Inbound connections to the PaperCut MF Application Server from the devices on the configured ports. For example:
    - 9191 (TCP/HTTP)
    - 9192 (SSL/TLS/HTTPS)
  - Outbound connections from the PaperCut MF Application Server to the devices on the configured ports. For example:
    - 7627 (TCP/HTTPS)
    - 80 (TCP/HTTP)
    - 443 (SSL/TLS/HTTPS)
- The firmware is v4.6 or greater if using the [enhanced user flow](#).

## 2.4 Setup procedure

To install PaperCut MF (i.e. device registration and integration):

- 2.4.1 Log in to the device’s web interface as an administrator
- 2.4.2 Determine the device’s HP platform
- 2.4.3 Uninstall *PaperCut MF - HP FutureSmart Legacy*
- 2.4.4 Configure the device’s Hold Off Print Job setting
- 2.4.5 Install PaperCut MF
  - 2.4.5.1 Install PaperCut MF on multiple devices
  - 2.4.5.2 Install PaperCut MF on each device

### 2.4.1 Log in to the device’s web interface as an administrator

To access the device’s web interface as an administrator:

1. Log in to the device’s web interface.
2. In **Local Device Account**, select **Administrator**:

The screenshot shows a 'Sign In' form with the following fields:

- Sign In Method:** Local Device
- Local Device Account:** Administrator (highlighted with a red box)
- Password:** (empty text box)

3. If this device’s web interface is being accessed for the first time:
  - a. Do not enter a password
  - b. Click **Sign in**.
  - c. Navigate to **Security > General Security**.
  - d. Set the administrator credentials:

The screenshot shows the 'Security' menu with 'General Security' selected. The 'General Security' page contains the following information:

- Set the Local Administrator Password**
- An administrator password can be set to prevent unauthorized users from remotely configuring the device or gaining access to functionality through the network administrator at the control panel. This password is also the Device Administrator Access Code at the device.
- User Name:** admin
- Old Password:** (empty text box)
- New Password:** (empty text box)
- Verify Password:** (empty text box)

- e. Click **Apply**.
4. If this device’s web interface has been accessed previously:

- a. Enter the administrator password.
- b. Click **Sign in**:

### 2.4.2 Determine the device’s HP platform

To determine the device’s HP platform:

1. Log in to the device’s web interface as an administrator.
2. Navigate to **Information > Configuration Page**.
3. Verify that the **Device Information** area’s field **HP FutureSmart Level** displays **HP FutureSmart 4**:

| Device Information           |                               |
|------------------------------|-------------------------------|
| Product Name:                | HP Color LaserJet Flow E77830 |
| Nickname:                    | HP Color LaserJet Flow E77830 |
| Model Number:                | X3A83A                        |
| Engine Firmware Revision:    | V6.A1.10.03                   |
| Product Serial Number:       | CN48JCW01W                    |
| Formatter Number:            | 6W001X7                       |
| SCB:                         | V3.00.00.47 02-09             |
| Firmware Bundle Version:     | 4.4.1                         |
| Firmware Revision:           | 2404001_014114                |
| Firmware Datecode:           | 20170804                      |
| <b>HP FutureSmart Level:</b> | <b>HP FutureSmart 4</b>       |
| NFC revision:                | Not Installed                 |

**Note:** This manual is only relevant to supported HP FutureSmart 4 devices. For more information on PaperCut’s embedded software solutions for other devices and platforms, contact your reseller or

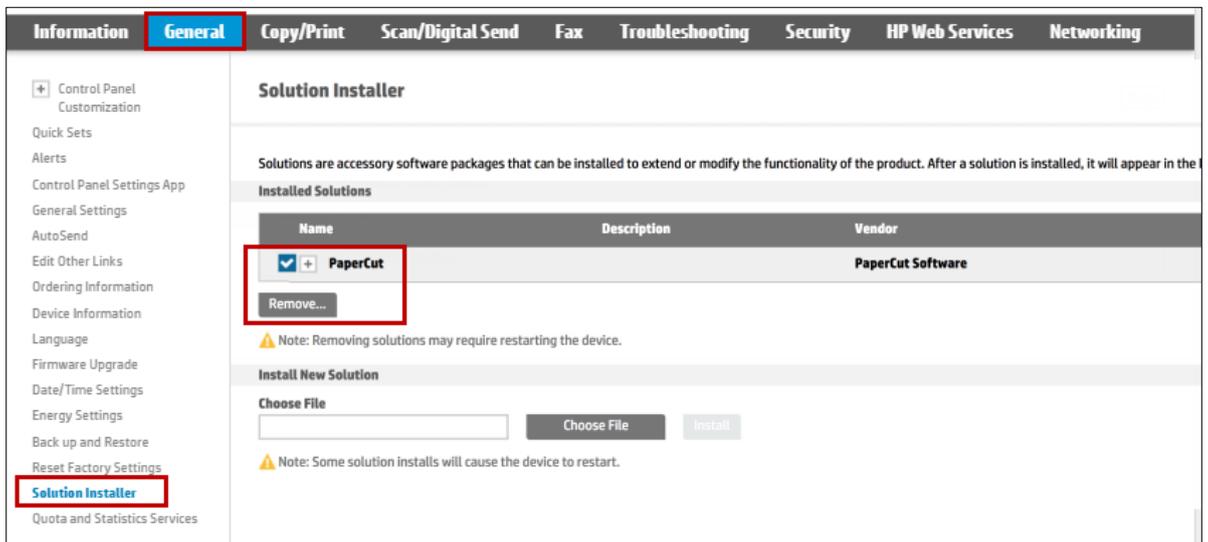
Authorized Solution Center. You can find their contact information in your PaperCut MF Admin web interface, on the **About** page.

### 2.4.3 Uninstall PaperCut MF - HP FutureSmart Legacy

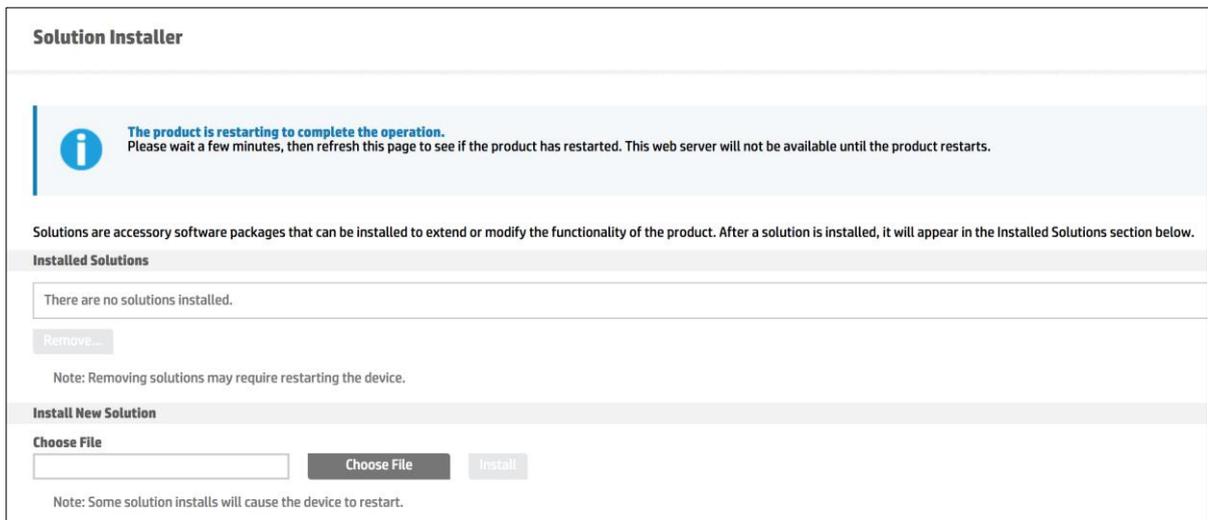
If PaperCut’s embedded software solution *PaperCut MF - HP OXP* is already installed, then ensure to first uninstall it before attempting to install *PaperCut MF - HP OXP*.

To uninstall *PaperCut MF - HP FutureSmart Legacy*:

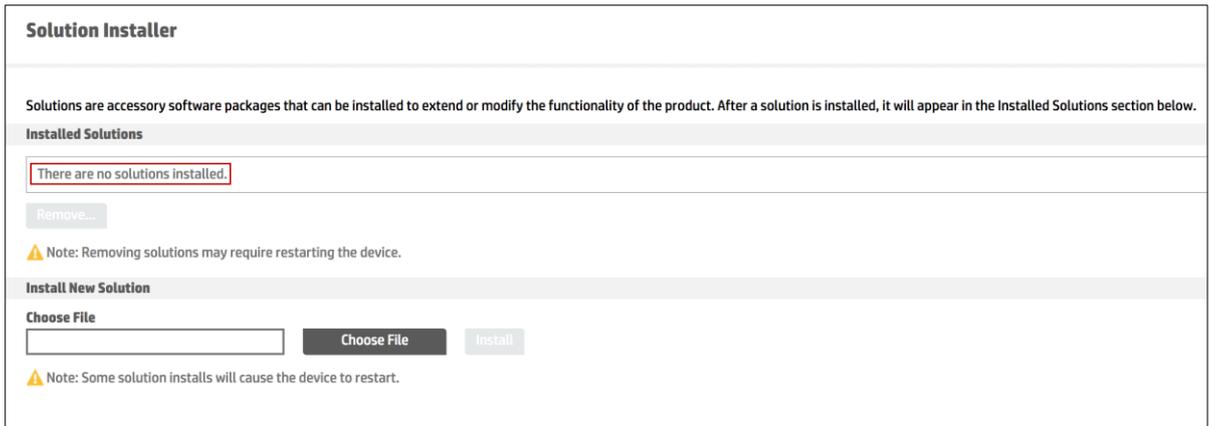
1. Log in to the device’s web interface as an administrator.
2. Navigate to **General > Solution Installer**.
3. Select **PaperCut**.
4. Click **Remove...**



The device reboots and restarts to uninstall *PaperCut MF - HP FutureSmart Legacy* from the device:



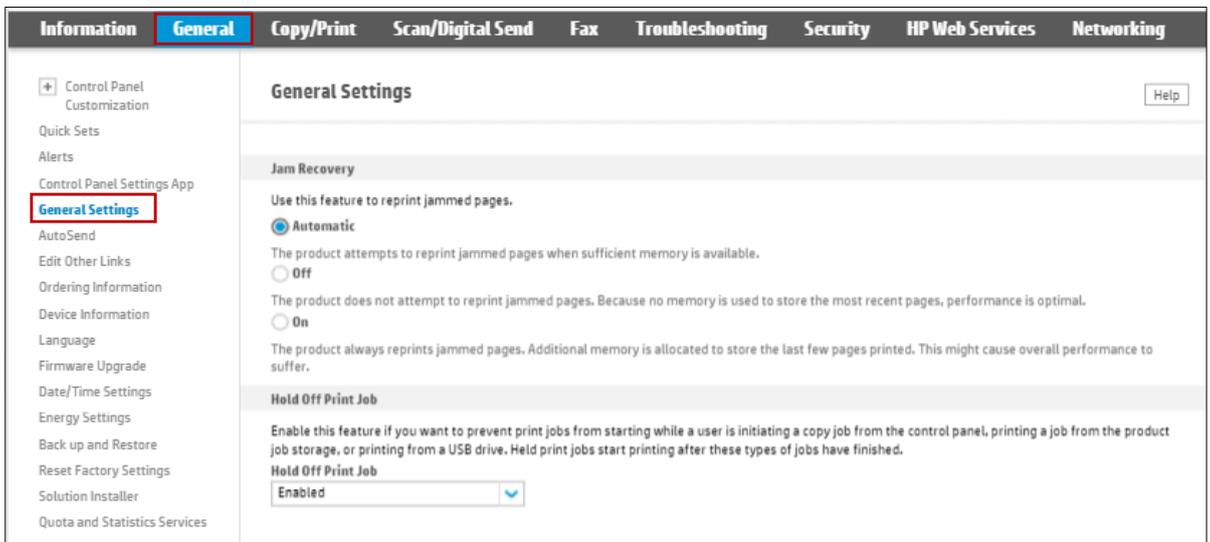
5. Verify that *PaperCut MF - HP FutureSmart Legacy* is uninstalled from the device:



### 2.4.4 Configure the device’s Hold Off Print Job settings

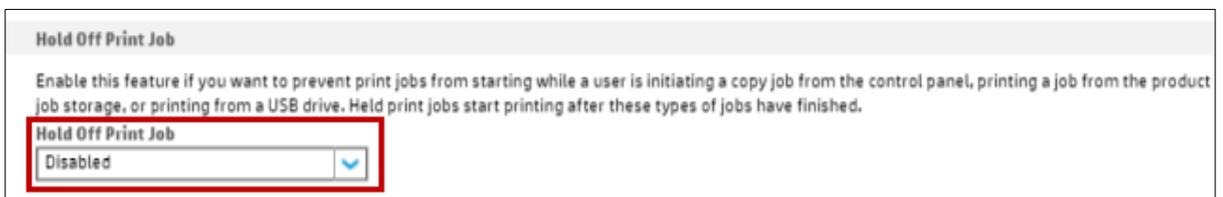
To configure the device’s Hold Off Print Job setting:

1. Log in to the device’s web interface as an administrator.
2. Navigate to **General > General Settings**:



3. Change the **Hold Off Print Job** setting from **Enabled** to **Disabled**.

**Note:** This setting is enabled by default, delaying printing by 15 seconds.



4. Click **Apply**.

### 2.4.5 Install PaperCut MF

To install PaperCut MF (i.e. device registration and integration):

1. Log in to the PaperCut MF Admin web interface.
2. Navigate to **Options > Advanced**.

3. In the **External Hardware Integration** area, select **Enable external hardware integration (for supported devices only)**.
4. Click **Apply**.
5. You can use any one of the following options:
  - [2.4.5.1 Install PaperCut MF on multiple devices](#)
  - [2.4.5.2 Install PaperCut MF on each device](#)

#### 2.4.5.1 Install PaperCut MF on multiple devices

PaperCut MF 19.2.0 introduced a feature to create multiple devices in bulk through a CSV file via server commands. In 20.0.0 we added a way to load this CSV file via the PaperCut MF UI. You can find the feature under: PaperCut MF > Devices > Create multiple devices.

Using this feature increases your operational efficiency by significantly reducing the time taken to add devices to PaperCut MF. From version 20.0, this feature also allows for you to add devices to PaperCut MF before such devices are delivered to their installation site, such devices are added with a “Staged” status. The scenario for “Staged” devices applies when the system admin already knows all the device’s attributes prior to its delivery. For more information, see the [Enhanced Deployment Project](#).

#### 2.4.5.2 Install PaperCut MF on each device

**Note:** If you are running a version prior to PaperCut MF 19.2.0, then this is the only applicable option.

To install PaperCut MF on each device:

1. Log in to the PaperCut MF Admin web interface.
2. Navigate to **Devices**.
3. Click **Create Device**.
4. In **Type**, select **HP OXP**.
5. In **Device name**, enter a descriptive name for the device.
6. Optionally, in **Location/Department**, enter location or department details of the device.
7. In **Hostname / IP**, enter the network name or IP address of the device.
8. In **Device's administrator username** and **Device's administrator password**, enter the same administrator credentials (username and password) used for the device’s web interface. For more information, see [2.4.1 Log in to the device’s web interface](#).
9. In **Function**, select the required device jobs:
  - **Track & control copying**
  - **Track & control scanning**
  - **Track & control faxing**
  - **Enable print release**

**Note:** For more information, see [4.6 Secure print release](#) and [4.7 Device jobs](#).

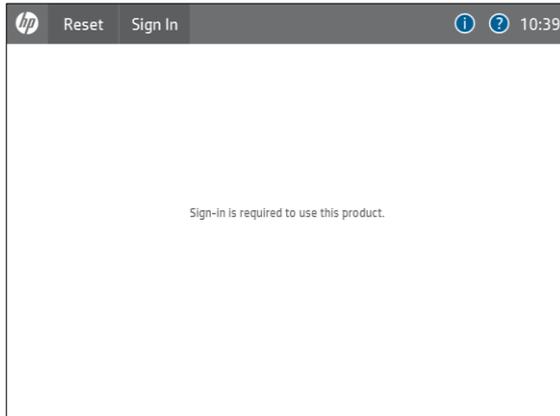
10. Click **Ok**.
11. Verify that PaperCut MF is installed on the device (i.e. device registration and integration is completed):
  - The PaperCut MF Admin web interface’s **Device Status** displays the status **Started - Device is ready for user to login**.

**Note:**

- If the **Device Status** displays any other status, then see [6.2 Device Status "Started \(with errors\)"](#).
- If the PaperCut MF Admin web interface displays the following warning, then see [4.2.1 HTTPS Security \(recommended\)](#):



- If the device's **HP FutureSmart 4 Firmware Bundle Version** is **4.5.5 or above**, then the device displays a white screen with the following default message (to customize this message, see [4.11 Device's first screen message](#)):



Clicking **Sign In**, displays the PaperCut MF Login screen.

**Note:** If the device's **HP FutureSmart 4 Firmware Bundle Version** is **below 4.5.5**, then see [6.3 Device's first screen and login workflow](#).

## 3 Post-install testing

After PaperCut MF is installed on the device (i.e. device registration and integration is completed), it is recommended that you test some common usage scenarios. This is important for two reasons:

- To ensure that PaperCut MF works as expected.
- To familiarize yourself with the features and functionality of PaperCut MF.

This section covers the following post-install testing scenarios for *PaperCut MF - HP OXP*:

- [3.2 Simple printing and copying](#)
- [3.3 Advanced copying](#)

### 3.1 Test preparation: create test users

To execute the post-install testing scenarios, ensure at least two test users are created:

- **Simple test user** – A user who performs simple printing and copying.
- **Advanced test user** – A user who performs advanced copying.

To create test users:

1. Log in to the PaperCut MF Admin web interface.
2. Navigate to **Options > User/Group Sync**.

3. In **Internal User Options**, select **Enable internal users**.
4. Click **Apply**.

**Internal User Options**

Provides management of user accounts in addition to those in the configured source.

[More Information...](#)

**Enable internal users**

**Access control**

Only admins can create users

**Prefix usernames with: (optional)**

guest-

**Confirmation message**

Thank you for registering. Your details are:  
Full Name: %full\_name%  
Username: %username%  
Password: %password%  
Identity Number: %sid\_num%

Also email confirmation message to user

**Apply**

5. Navigate to **Users**.
6. Click **Create internal user...**
7. Enter the required details for the test users as required (simple test user, advanced test user):

**Users** > Create Internal User

**Create Internal User**

**New User Settings**

Internal users are managed internally by PaperCut MF, and may be used in addition to those in the configured user directory source.

[More Information...](#)

**Username**

Simple Test User

**Full Name**

Simple Test User

**Email Address**

simpletestuser@papercut.com

**Password**

\*\*\*\*

**Verify Password**

\*\*\*\*

**Identity Number**

**ID PIN**

**Verify ID PIN**

Email confirmation message to user

**Cancel** **Register**

8. Click **Register**.

## 3.2 Simple printing and copying

### 3.2.1 Test preparation: configure simple test user

To test the simple test scenarios, ensure at least one simple test user is created. For more information, see [3.1 Test preparation: create test users](#). Once created, ensure the simple test user is configured.

To configure the simple test user:

1. Log in to the PaperCut MF Admin web interface.
2. Navigate to **Users**.
3. From the **User List**, select the simple test user.
4. In the **Account Details** area, set the **Balance** to **\$50.00** and select **Restricted**:

The screenshot shows the 'Account Details' configuration page. On the left, there is a text box explaining that the balance is set here and that 'restricted' means the user cannot print without credit. On the right, there are three fields: 'Balance' set to '\$50.00' with an '(adjust)' link, a checked 'Restricted' checkbox, and an 'Overdraft' dropdown menu set to 'Use default overdraft (\$0.00)'.

5. In the **Account Selection** area's **Print account selection**, select **Automatically charge to personal account**:

The screenshot shows the 'Account Selection' configuration page. On the left, there is a text box explaining that account selection allows users to choose what account is charged. On the right, there is a 'Print account selection' dropdown menu set to 'Automatically charge to personal account'.

6. Click **Apply**.

### 3.2.2 Simple printing

Simple printing does not involve providing the simple test user with a choice of accounts to choose from. Printing is charged to the simple test user's default My Personal Account.

To test simple printing, ensure the following test preparation requirements are met:

- **Simple test user** - A simple test user is created and configured. For more information, see [3.1 Test preparation: create test users](#) and [3.2.1 Test preparation: configure simple test user](#).
- **Printer queue settings** - The printer queue's Hold/Release Queue Settings are configured. For more information, see the [PaperCut MF manual](#).

To configure the printer queue's Hold/Release Queue Settings:

1. Log in to the PaperCut MF Admin web interface.
2. Navigate to **Printers**.
3. Select the Printer that is applicable to the device being tested.
4. In the **Hold/Release Queue Settings** area, select the **Enable hold/release queue**.

### Hold/Release Queue Settings

Hold/release queues cause print jobs to enter a holding state until released by a user or administrator.

[More Information...](#)

Enable hold/release queue

Release mode

User release ▼

5. Click **Apply**.  
Print jobs to this printer queue are held until released by a user.
- **Device functions** – Printing is enabled. To enable printing:
  1. Log in to the PaperCut MF Admin web interface.
  2. Navigate to **Devices**.
  3. Select the required device being tested.
  4. In the **Print Release** area, select **Enable print release**.
  5. In the **This device will display jobs for release from the selected source queues**, select at least one source queue for print release that corresponds to this device's configured printer queue.
  6. Click **Apply**.
  7. Verify that the **Devices > External Device List** displays the device with **Print Release** in the **Function** column.

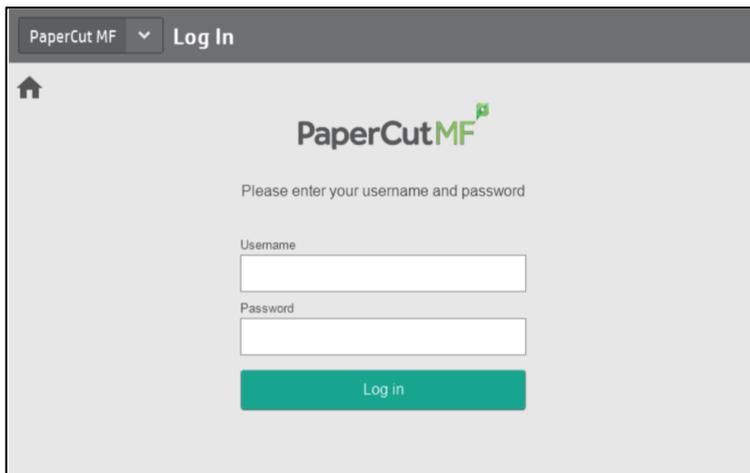
To test simple printing:

1. Log in to a computer as the simple test user.
2. Print a few jobs to the source queue that was selected in the **Devices > External Device List > Device Details > Print Release > Enable print release** area of the device being tested.
3. Log in to the PaperCut MF Admin web interface.
4. Navigate to **Printers > Jobs Pending Release**.
5. Verify that the print jobs for the simple test user are being held and listed:

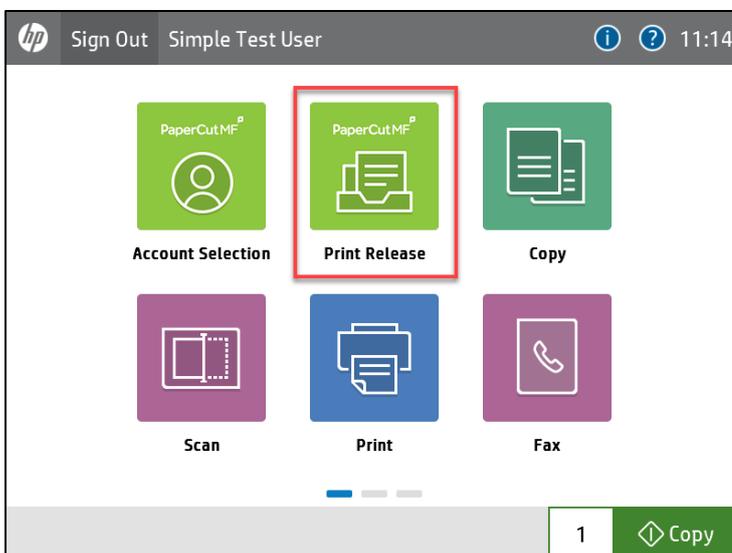
| SUBMIT TIME            | PRINTER                         | USER           | DOCUMENT                  | CLIENT                | PAGES | COST   | ACTION                      |
|------------------------|---------------------------------|----------------|---------------------------|-----------------------|-------|--------|-----------------------------|
| Jan 2, 2018 9:53:22 AM | laptop-simpletestuser(Printer1) | simpletestuser | Prep activities - week 2  | laptop-simpletestuser | 1     | \$0.05 | [print] [cancel] [override] |
| Jan 2, 2018 9:53:19 AM | laptop-simpletestuser(Printer1) | simpletestuser | Prep activities - week 1  | laptop-simpletestuser | 1     | \$0.05 | [print] [cancel] [override] |
| Jan 2, 2018 9:53:14 AM | laptop-simpletestuser(Printer1) | simpletestuser | Report template           | laptop-simpletestuser | 1     | \$0.05 | [print] [cancel] [override] |
| Jan 2, 2018 9:52:31 AM | laptop-simpletestuser(Printer1) | simpletestuser | SchoolNewsLetter Template | laptop-simpletestuser | 1     | \$0.05 | [print] [cancel] [override] |

6. Log out of the PaperCut MF Admin web interface.

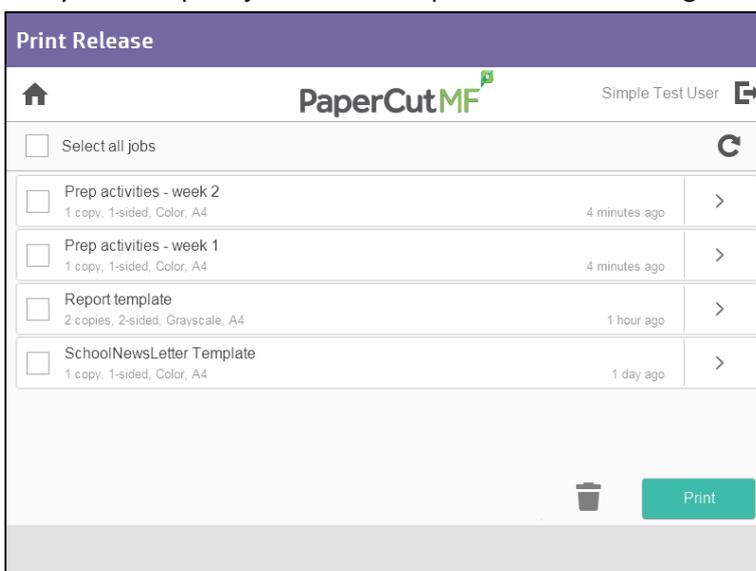
7. Log in to the device as the simple test user:



8. Select **Print Release**:



9. Verify that the print jobs for the simple test user are being held and listed:

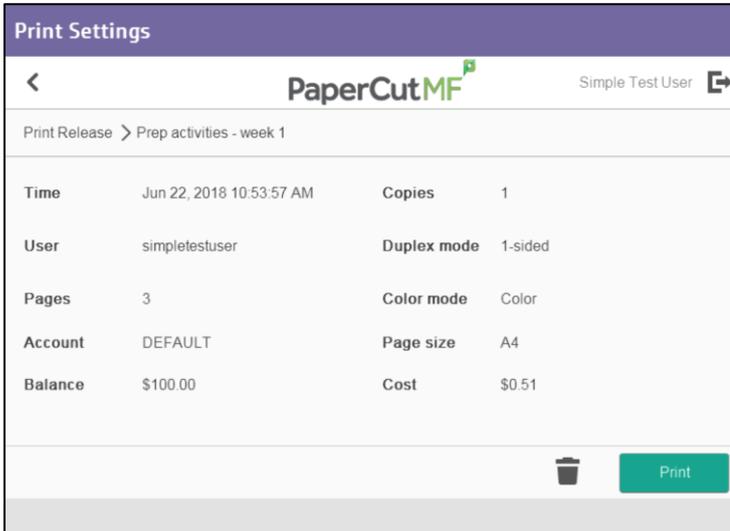


10. To release one or many held print jobs at once, select all the required held print jobs and click **Print**.

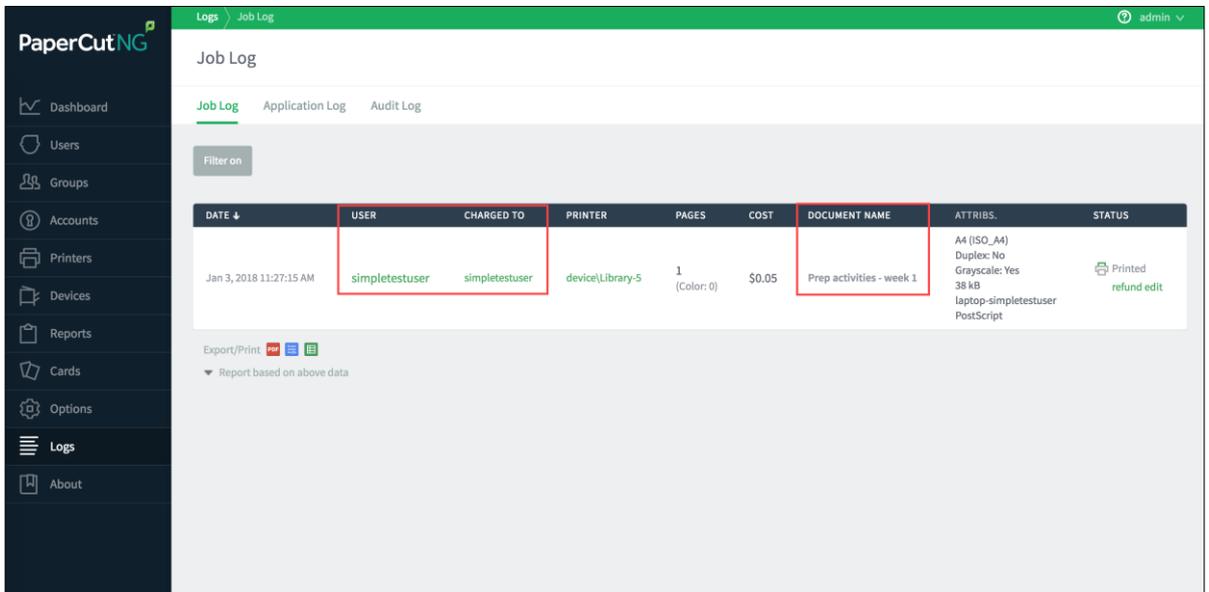
11. To delete one or many held print jobs at once, select all the required held print jobs and click the **Bin** icon.
12. To view and take actions on a single held print job, click the chevron:



Details of the held print job are displayed:



13. Log out of the device.
14. Log in to the PaperCut MF Admin web interface.
15. Navigate to **Logs**.
16. After printing is completed, verify that **Job Log** page displays the test user's name, simple test user, in the **User** column and the **Charged To** column:



17. Log out of the PaperCut MF Admin web interface.

When enhanced workflow is enabled, the steps from 7 to 12 are captured [here](#).

### 3.2.3 Simple copying

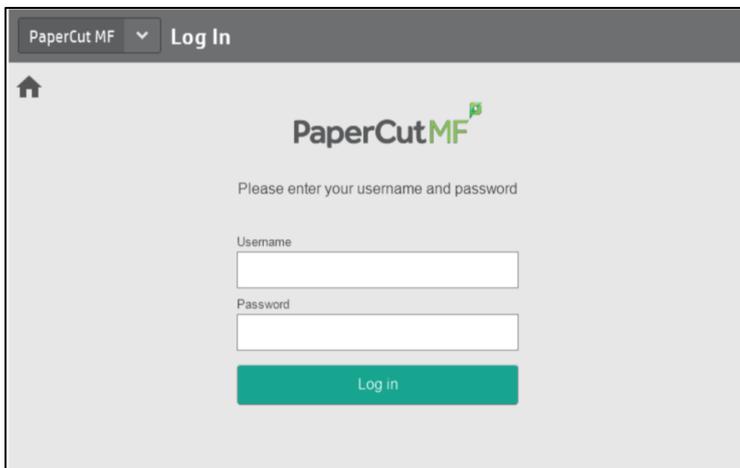
Simple copying does not involve providing the simple test user with a choice of accounts to choose from. Copying is charged to the simple test user's default My Personal Account.

To test simple copying, ensure the following test preparation requirements are met:

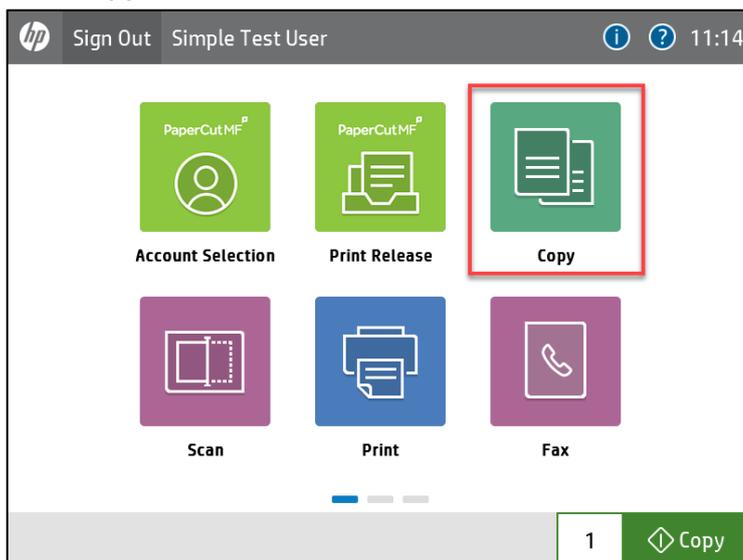
- **Simple test user** - A simple test user is created and configured. For more information, see [3.1 Test preparation: create test users](#) and [3.2.1 Test preparation: configure simple test user](#).
- **Device functions** – Copying is enabled. To enable copying:
  1. Log in to the PaperCut MF Admin web interface.
  2. Navigate to **Devices**.
  3. Select the required device being tested.
  4. In the **External Device Settings > Tracking** area, select **Track & control copying**.
  5. Click **Apply**.
  6. Verify that the **Devices > External Device List** displays the device with **Copier** in the **Function** column.

To test simple copying:

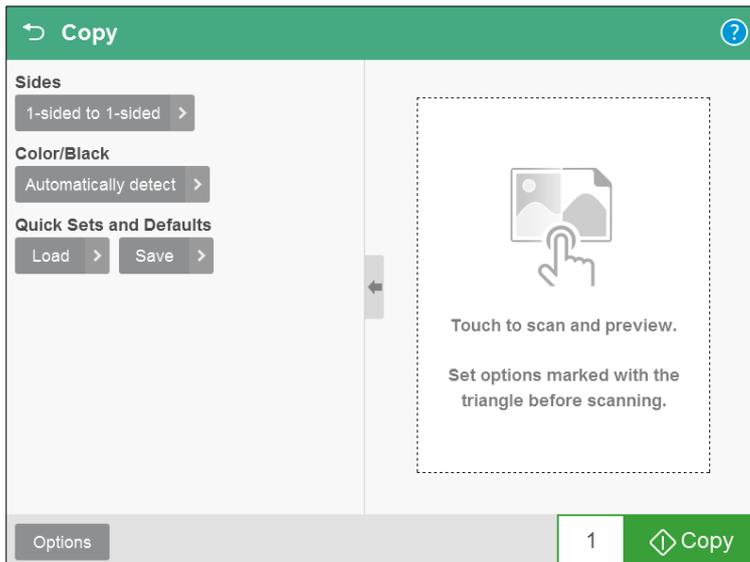
1. Log in to the device as the simple test user:



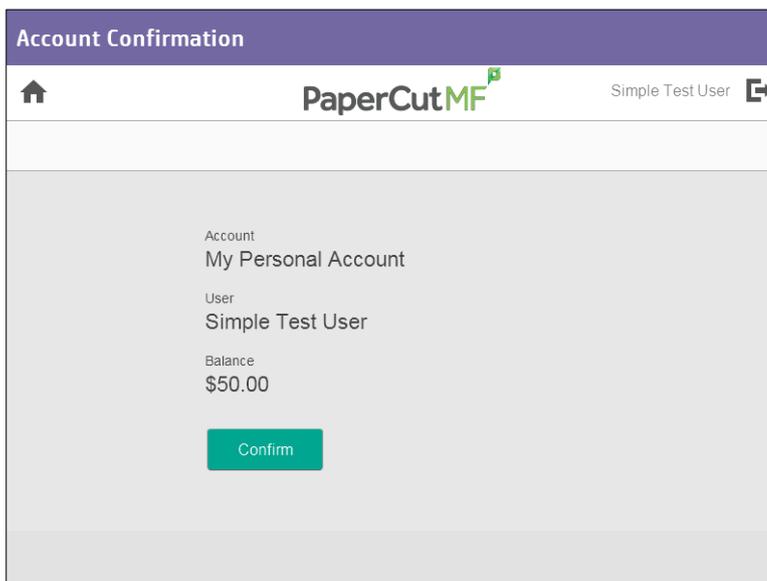
2. Select **Copy**:



3. Continue copying by following the device's workflow:

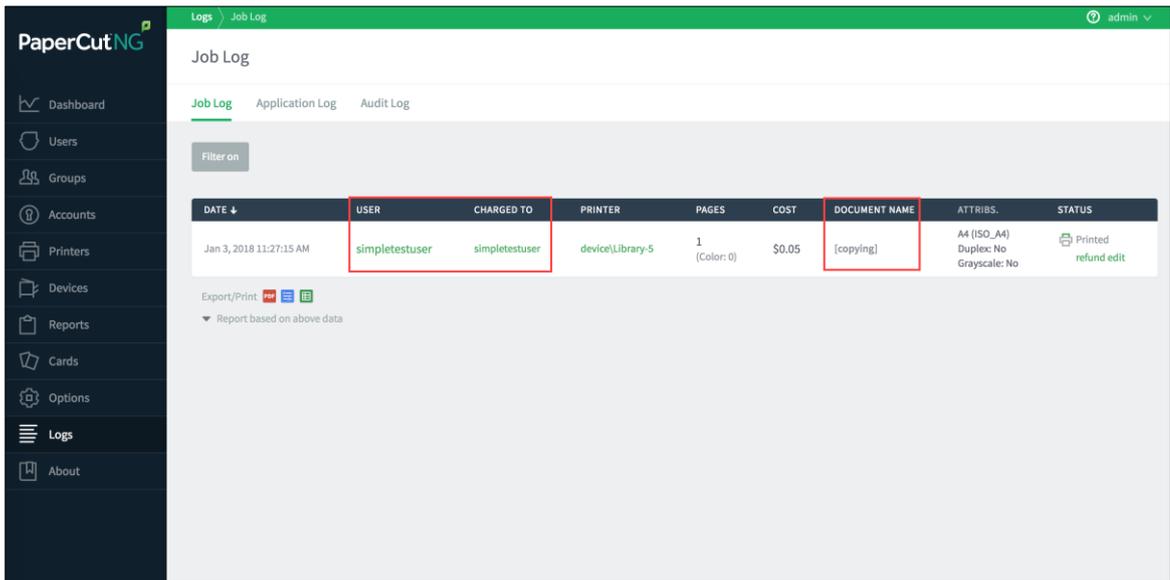


4. Verify that the PaperCut MF Account Confirmation screen does not provide the simple test user with a choice of accounts to choose from, and charges copying to the simple test user's default My Personal Account:



5. Click **Confirm**.
6. Complete copying.
7. Log out of the device.
8. Log in to the PaperCut MF Admin web interface.
9. Navigate to **Logs**.

- After copying is completed, verify that **Job Log** page displays the test user’s name, simple test user, in the **User** column and the **Charged To** column:



- Log out of the PaperCut MF Admin web interface.

### 3.3 Advanced copying

Advanced copying involves providing the advanced test user with a choice of accounts to choose from. Copying is charged to the account that is selected by the advanced test user.

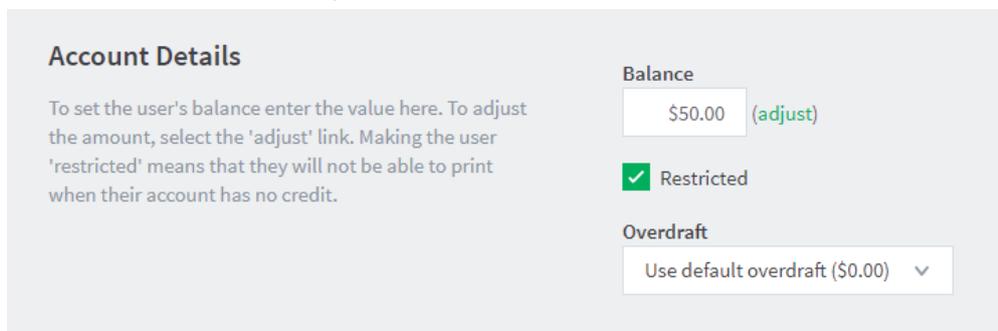
To test advanced copying, ensure the following test preparation requirements are met:

- Advanced test user** – An advanced test user must be created. For more information, see [3.1 Test preparation: create test users](#).

Once created, the advanced test user must be configured.

To configure the advanced test user:

- Log in to the PaperCut MF Admin web interface.
- Navigate to **Users**.
- From the **User List**, select the advanced test user.
- In the **Account Details** area, set the **Balance** to **\$50.00** and select **Restricted**:



5. In the **Account Selection** area's **Print account selection**, select **Show standard account selection** and select the required options:

**Account Selection**

Account selection can be used to allow the user to select which account is charged. However, some options may require the user to run the User Client. [More Information...](#)

**Print account selection**

Show standard account selection

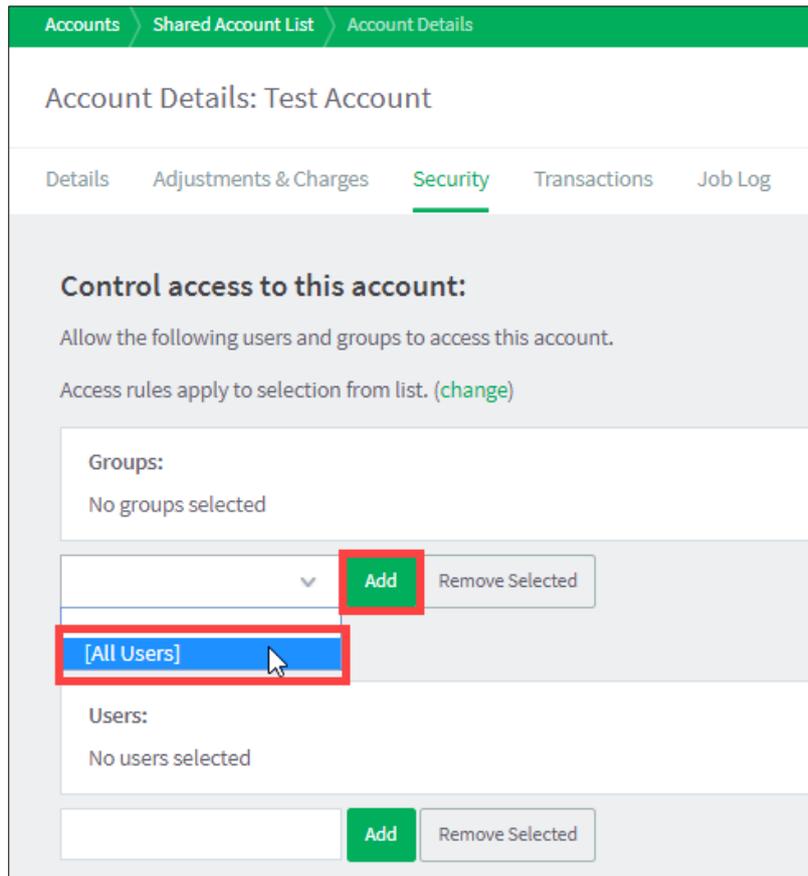
**Warning:** This setting may require the user to run the User Client. [More Information...](#)

**Allow user to:**

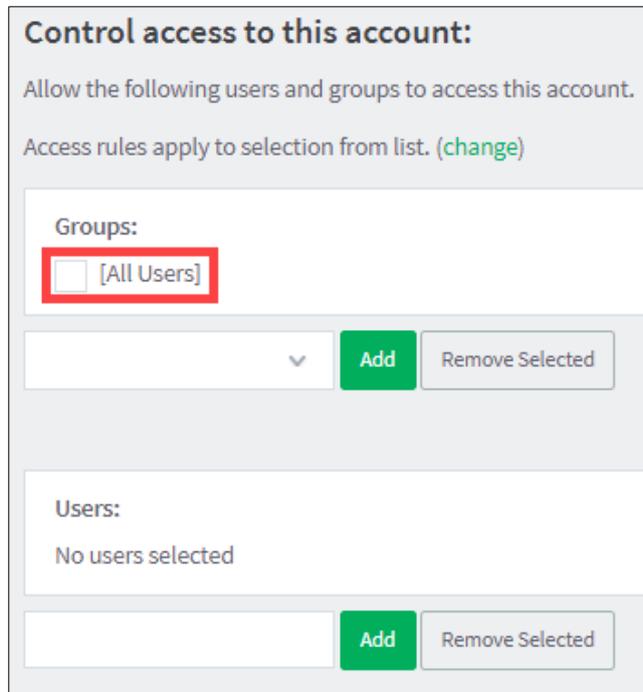
- Charge to their personal account
- Select shared accounts from a list
- Select shared accounts using a PIN/code
- Print as another user

6. Click **Apply**.
- **Device functions** – Copying is enabled. To enable copying:
    1. Log in to the PaperCut MF Admin web interface.
    2. Navigate to **Devices**.
    3. Select the required device being tested.
    4. In the **External Device Settings > Tracking** area, select **Track & control copying**.
    5. Click **Apply**.
    6. Verify that the **Devices > External Device List** displays the device with **Copier** in the **Function** column.
  - **Advanced account** – A test account is created. To create a test account:
    1. Log in to the PaperCut MF Admin web interface.
    2. Navigate to **Accounts**.
    3. Click **Create a new account...**
    4. In the **Details & Balance** area's field **Account Name**, enter the name of the test account (test account).
    5. Click **Apply**.
    6. Verify that the **Accounts > Shared Account List** page displays the test account created.
    7. Click the test account.
    8. Navigate to **Security**.

- In the **Control access to this account > Groups** area, select [All Users] and click Add:

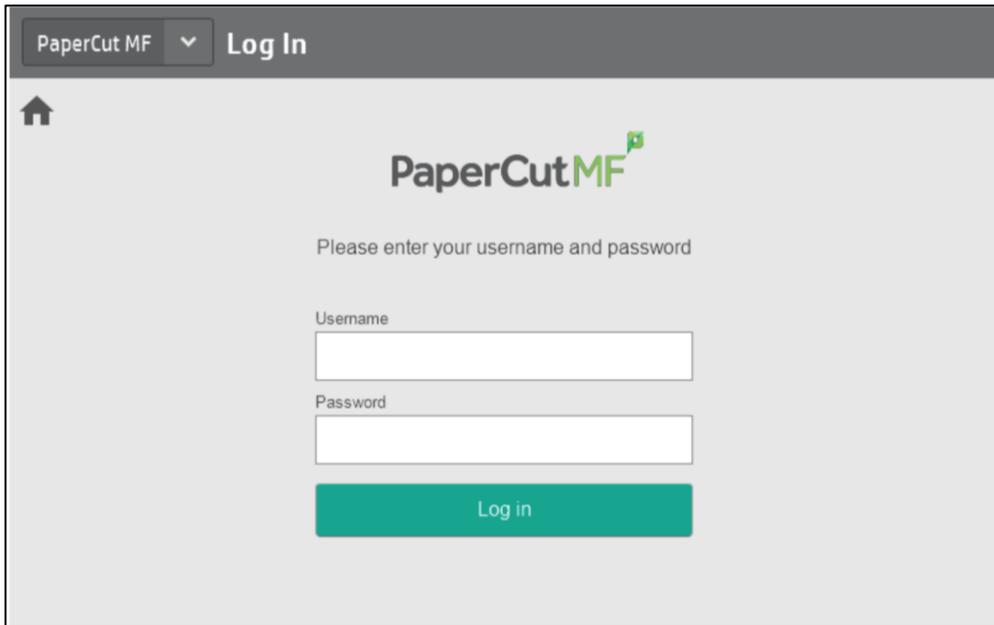


- Verify that the **Control access to this account > Groups** area displays **[All Users]**:

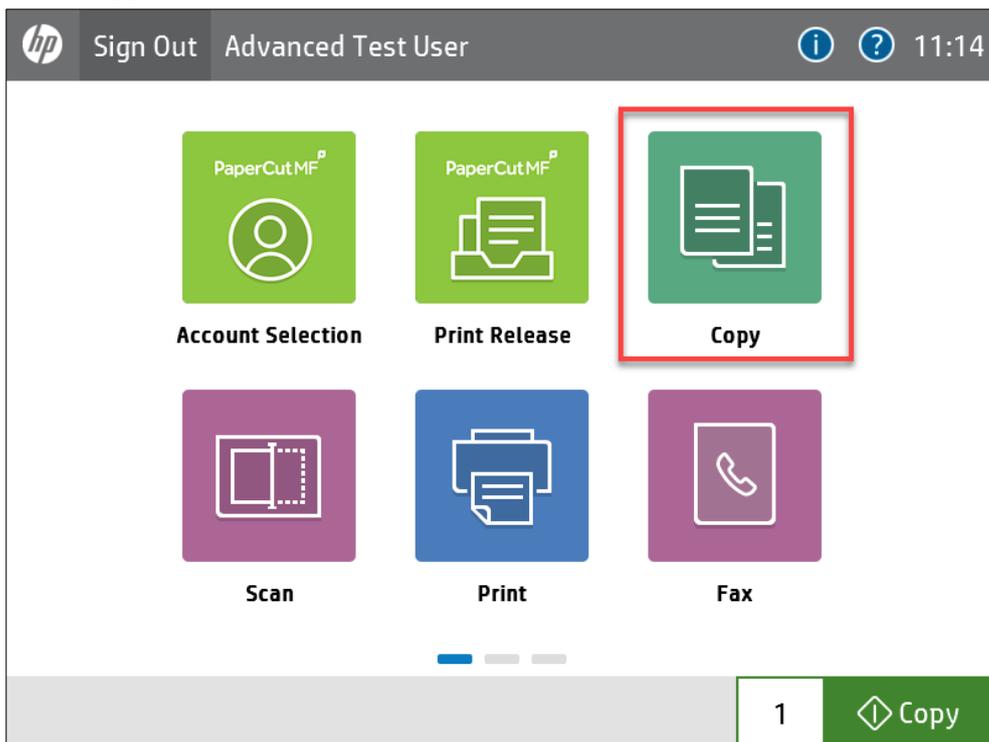


To test advanced copying:

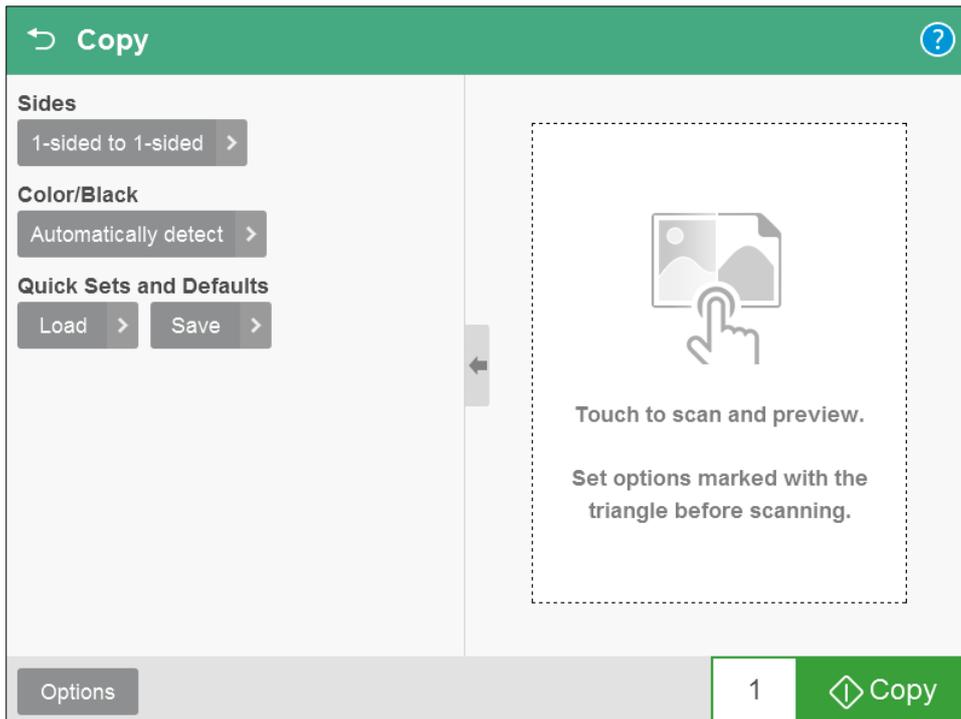
1. Log in to the device as the advanced test user:



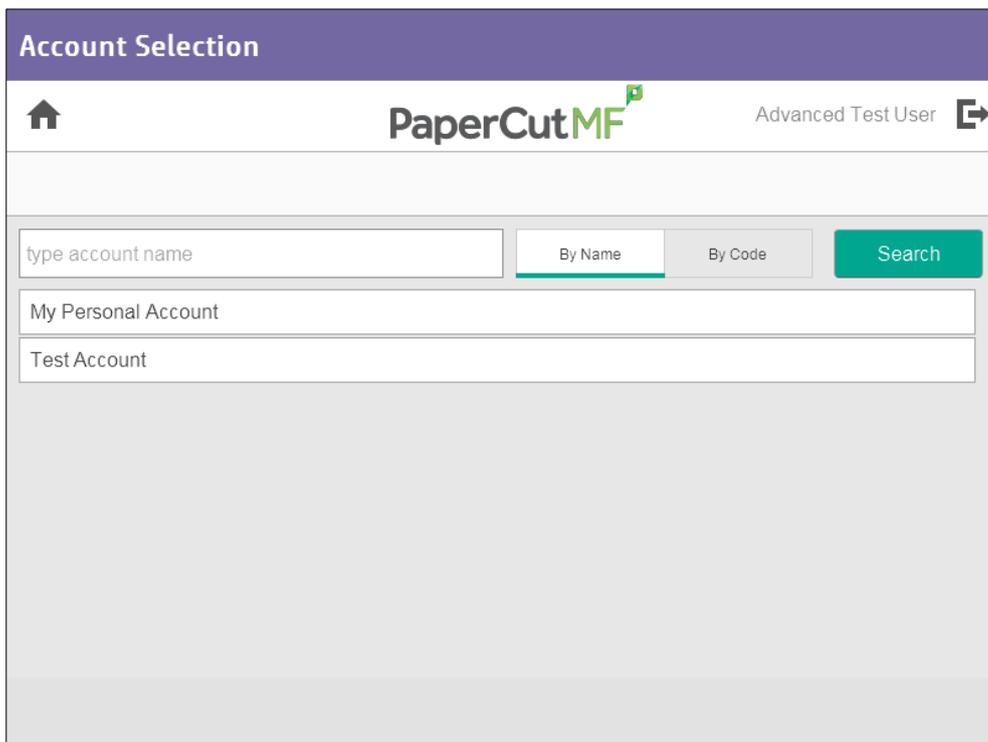
2. Select **Copy**:



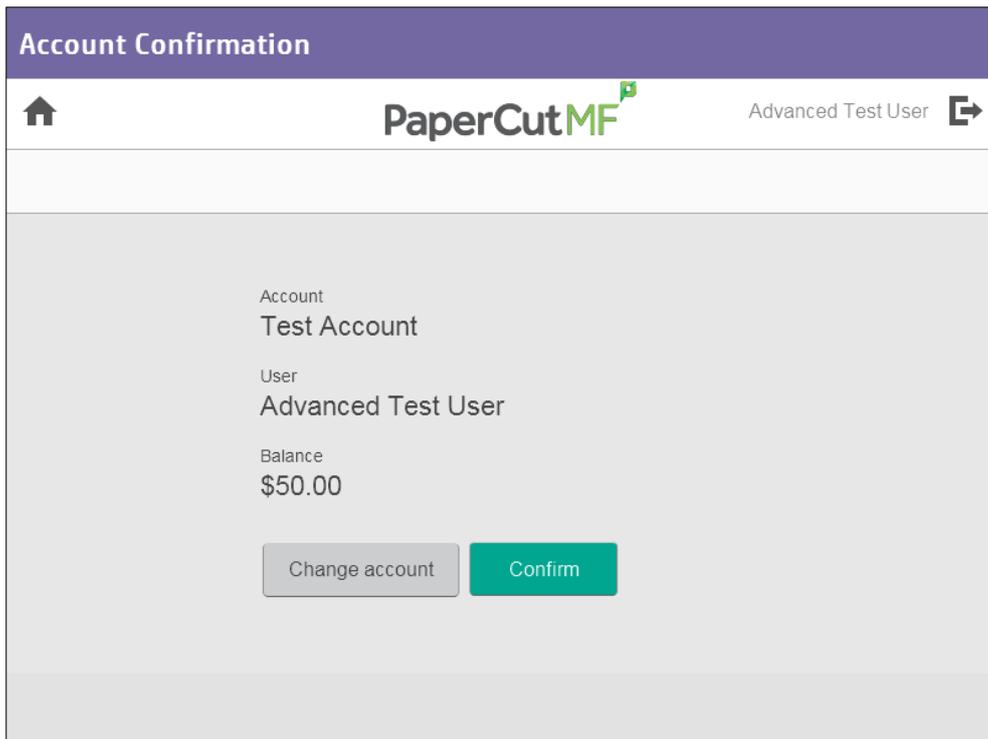
- Continue copying by following the device's workflow:



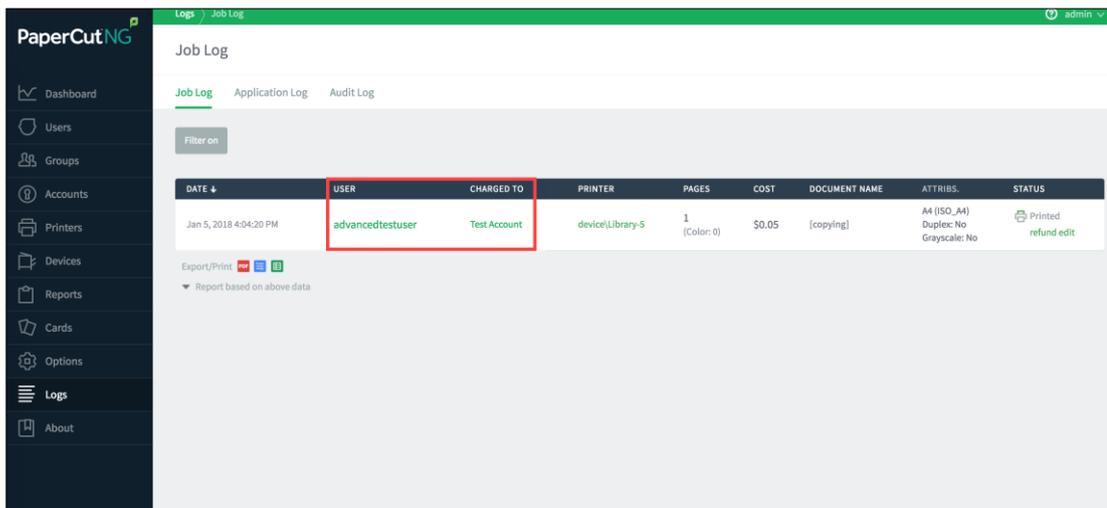
- Verify that the PaperCut MF Account Selection screen provides the advanced test user with a choice of accounts to choose from:



- Select the required account, test account.
- Verify that the PaperCut MF Account Confirmation screen displays the selected account, test account, but continues to provide the advanced test user with the option of changing the account:



7. Click **Confirm**.  
Copying is charged to the account selected by the advanced test user, test account.
8. Complete copying.
9. Log out of the device.
10. Log in to the PaperCut MF Admin web interface.
11. Navigate to **Logs**.
12. After copying is completed, verify that **Job Log** page displays the test user's name, advanced test user, in the **User** column and the selected account's name, test account, in the **Charged To** column:



13. Log out of the PaperCut MF Admin web interface.

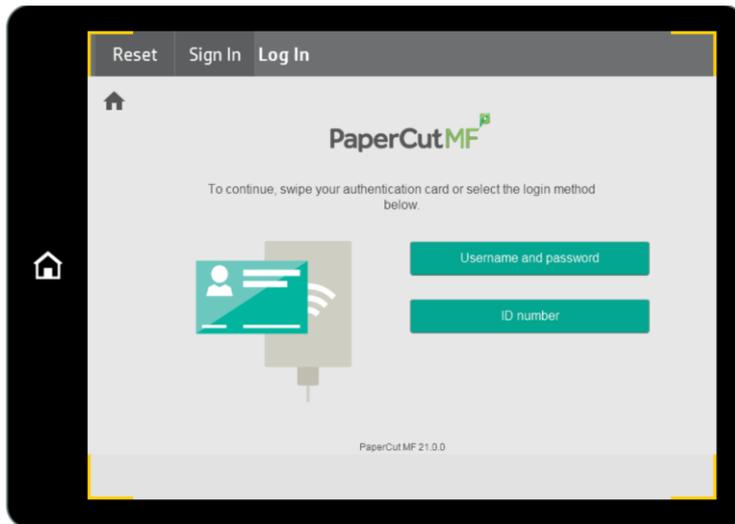
## 3.4 Enhanced user workflow

HP Enhanced mode can be enabled via a config key `ext-device.hp-oxpd.enhanced-mode`. This user workflow presents PaperCut login and directs user to PaperCut home screen. When disabled, user workflow presents PaperCut login and directs user to Device home screen.

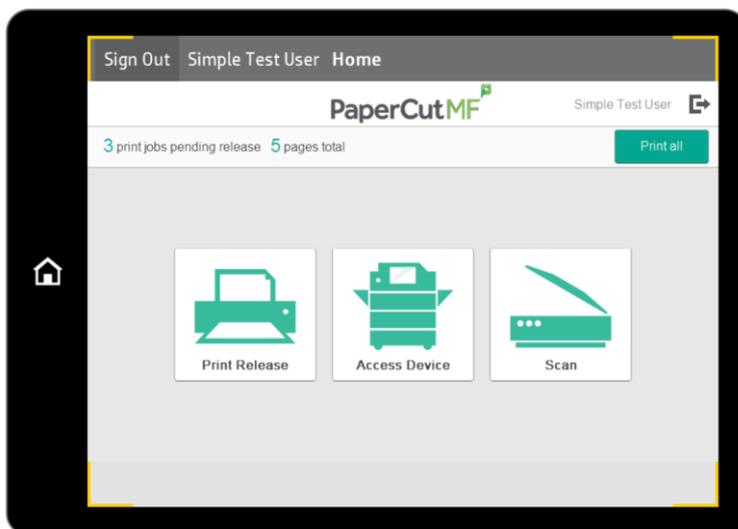
### 3.4.1 Printing

When testing the [simple print workflow](#), the enhanced user flow at the device is altered as follows:

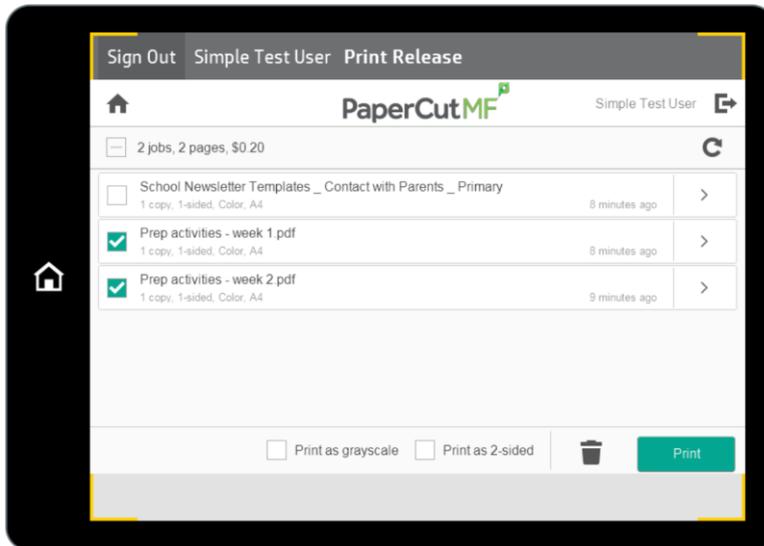
1. Log in to the device as the simple test user:



2. Select **Print Release**:



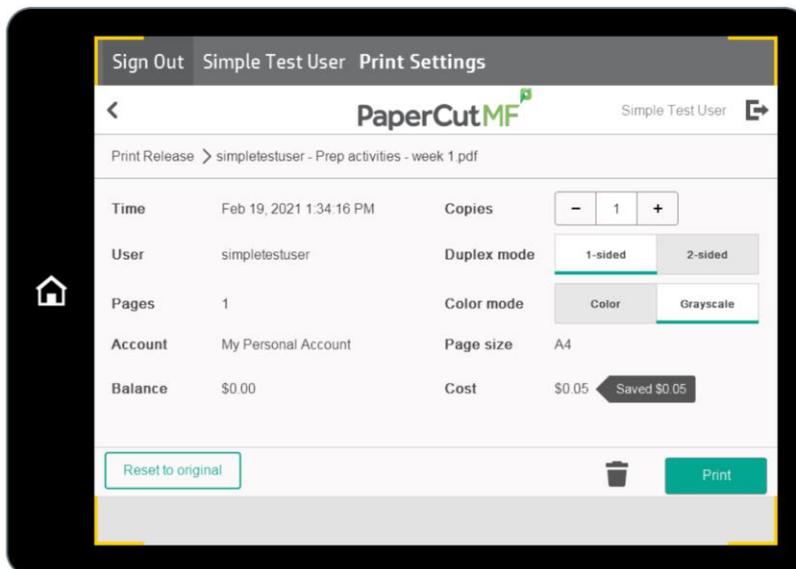
3. Verify that the print jobs for the simple test user are being held and listed:



4. To release one or many held print jobs at once, select all the required held print jobs and click **Print**.
5. To delete one or many held print jobs at once, select all the required held print jobs and click the **Bin** icon.
6. To view and take actions on a single held print job, click the chevron:



Details of the held print job are displayed:



7. Log out of the device.

## 4 Configuration

PaperCut MF is installed on the device with default settings, which are reasonable for most environments. However, these settings can be further tweaked to suit your environment.

This section covers the configuration changes that can be made to the default settings of *PaperCut MF - HP OXP*.

### 4.1 Inbound connections

#### 4.1.1 Inbound connections to PaperCut MF Application Server

To configure PaperCut MF to allow inbound connections from the device to the PaperCut MF Application Server, use the config key **system.network-address**. For more information, see [4.13 Config Editor](#).

#### 4.1.2 Inbound connections to PaperCut MF Site Servers

To configure PaperCut MF to allow inbound connections from the device to PaperCut MF Site Servers:

1. Site Servers must already be installed and configured. For more information, see the [PaperCut MF manual](#).
2. Log in to the PaperCut MF Admin web interface.
3. Navigate to **Sites**.
4. Select the Site Server.
5. In the **Configuration** area, enter the IP address or DNS name of the PaperCut MF Site Server that the device uses to make inbound connections.
6. Click **Apply**.

### 4.2 Security settings

#### 4.2.1 HTTPS Security (recommended)

PaperCut MF can be configured to communicate with the device using the HTTPS (SSL/TLS) protocol, which is a more secure and encrypted protocol.

**Note:** Until HTTPS is configured, the following warning is displayed on the PaperCut MF Admin web interface:



To enable HTTPS, you must have an SSL certificate installed on the PaperCut MF Application Server. The certificate must use the server's Fully Qualified Domain Name (FQDN) or IP address. This must be defined either in the **Common Name** (CN) field or included in the **Alternative Names** (AN) of the subject of the certificate. Without this, the device cannot connect to the server, since devices do not work with hostname-only certificates (i.e. not fully qualified).

You can use either a **self-signed SSL certificate** or a **CA-signed SSL certificate**:

- **Self-signed SSL certificate** – To use a self-signed SSL certificate that is generated by default when installing PaperCut MF:
  1. Regenerate it using PaperCut MF's `create-ssl-keystore` tool in:  
`[PaperCut MF Install Location]\server\bin\[platform]`

**Note:** When regenerating it, ensure:

    - to include the command's required parameters and arguments.
      - On newer HP Gemstone devices, you may need to set the country code by using the Country (C) key of the `RDN` parameter to ensure that the certificate is valid.
    - that the `<SYSTEM-NAME>` parameter contains the same Fully Qualified Domain Name (or IP address) as that of the config key `system.network-address`. For example, `"myserver.fullname.com"`. This is because the default self-signed certificate generated during PaperCut MF installation (device registration and integration) is issued using a hostname, instead of the IP address.
    - that the keystore location only contains one, most recently generated self-signed certificate.

For more information, see the [PaperCut MF manual](#).
  2. Restart the PaperCut MF Application Server.
  3. Set the config key `ext-device.hp-oxpd.use-ssl` to **Y**. For more information, see [4.13 Config Editor](#).
  4. It is recommended that you set the config key `ext-device.hp-oxpd.port-num` to **443**. For more information, see [4.13 Config Editor](#).
- **CA-signed SSL certificates** – To use a CA-signed SSL certificate (for example, Verisign, Thawte):
  1. Ensure that the `<SYSTEM-NAME>` parameter contains the same Fully Qualified Domain Name (or wildcard) as that of the config key `system.network-address`. This is because Certificate Authorities generally no longer accept certificate requests for either intranet names or IP addresses. For more information, see the [PaperCut MF manual](#).
  2. Set the config key `ext-device.hp-oxpd.use-ssl` to **Y**. For more information, see [4.13 Config Editor](#).
  3. It is recommended that you set the config key `ext-device.hp-oxpd.port-num` to **443**. For more information, see [4.13 Config Editor](#).
  4. Log in to the device's web interface as an administrator.
  5. Navigate to **Security > Certificate Management**.
  6. In the **CA Certificates > Certificates** table, verify that the required Root and any required Intermediary Certificates are listed.

For example:

| Issued To             | Issued By                                     | Expiration Date       | Certificate Type            | Certificate Usage |
|-----------------------|---|-----------------------|-----------------------------|-------------------|
| <input type="radio"/> |   |                       |                             |                   |
| <input type="radio"/> | COMODO RSA Certification Authority            | 18 Jan, 2038 23:59:59 | Root CA Certificate         |                   |
| <input type="radio"/> | COMODO RSA Domain Validation Secure Server CA | 11 Feb, 2029 23:59:59 | Intermediate CA Certificate |                   |

**Note:**

- If the required Root Certificate is not listed, click **Choose File**; select the required Root Certificate, click **Open**, and then click **Install**.
- If the required Intermediary Certificate is not listed, click **Choose File**; select the required Intermediary Certificate, click **Open**, and then click **Install**.

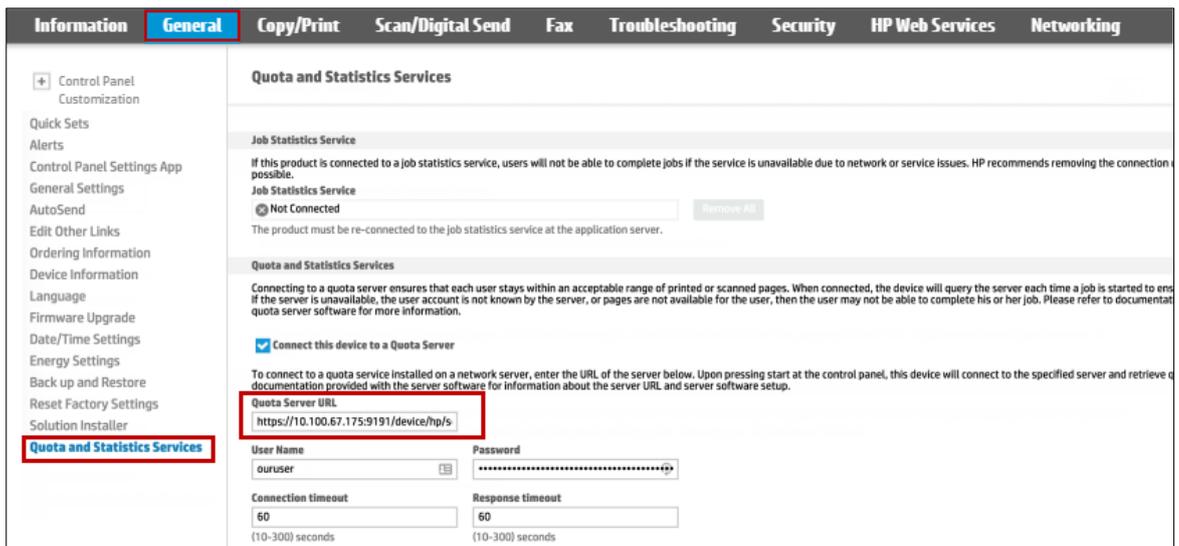
**Note:** After attempting to enable HTTPS, if the **Device Status** displays **Started (with errors) – Unknown error**, then see [6.6 Device Status "Started \(with errors\) – Certificate error"](#).

To test HTTPS:

1. Log in to the PaperCut MF Admin web interface.
2. Navigate to **Devices**.
3. Select the required device.
4. Verify that the following warning message is not displayed:



5. Log in to the device’s web interface as an administrator.
6. Navigate to **General > Quota and Statistics Services**.
7. Verify that **Quota Server URL** displays the URL as HTTPS and that its Fully Qualified Domain Name (or IP address) is the same as that of the config key **system.network-address**.



8. Verify that you are able to log in to the device as a test user (simple test user).

### 4.2.2 Additional network security

By default, the PaperCut MF Application Server allows device connections from any network address. However, communication between the PaperCut MF Application Server and the device can be further restricted to a set range of network addresses. This provides an additional level of security and ensures that only approved devices are connected to the PaperCut MF Application Server.

To restrict communication between the PaperCut MF Application Server and the device to a subset of IP addresses or subnets:

1. Log in to the PaperCut MF Admin web interface.
2. Navigate to **Options > Advanced**.
3. In the **Security** area's field **Allowed device IP addresses**, enter a comma-separated list of device IP addresses or subnets (<ip-address1 or subnet-mask1>, <ip-address2 or subnet-mask2>).
4. Click **Apply**.

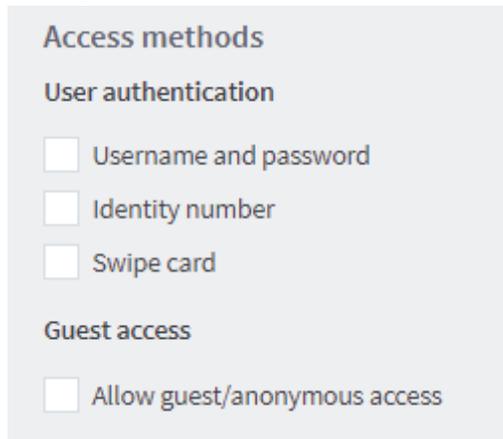
### 4.3 User authentication options

PaperCut MF provides you with several authentication options to authenticate users when logging in to PaperCut MF on the device.

To configure the device's user authentication:

1. Log in to the PaperCut MF Admin web interface.
2. Navigate to **Devices**.
3. Select the required device.

The available user authentication options are in the **Device Details** page's **External Device Settings** area:



**Note:** You may use any one or a combination of all the available user authentication options, including the anonymous and guest access authentication.

The available user authentication options are:

| User authentication option | Description                                |
|----------------------------|--|
| Username and password      | This is the default authentication option. |

---

With this option, users use their domain/network username and password.

---

### Identity number

With this option, users use their ID number. For more information, see the [PaperCut MF manual](#).

- **Require PIN:** With this option, users use their id number and the PIN associated with the id number.

**Note:** Users can use an id number with or without a pre-set and associated PIN. If using an id number without a pre-set and associated PIN, users are prompted to set a valid PIN to associate with the id number.

---

### Swipe card

With this option, users use their registered swipe card (e.g. magnetic strip, smart card, RFID). For more information, see the [PaperCut MF manual](#).

**Note:** If you select this option, then see [4.4 User authentication via swipe cards](#).

- **Require PIN:** With this option, users use their registered swipe card and the PIN associated with the card.  
**Note:** Users can use a swipe card with or without a pre-set and associated PIN. If using a swipe card without a pre-set and associated PIN, users are prompted to set a valid PIN to associate with the swipe card.
  - **Enable self-association with existing user accounts:** With this option, users can use a registered swipe card or a new, unregistered swipe card. If using new, unregistered swipe cards, users are prompted to complete card self-association using their username and password (i.e. associating a new unregistered card with a required, valid user account). After card self-association is completed, subsequent use of the registered swipe card does not require users to enter their credentials. You may use the config keys: **ext-device.card-self-association.use-secondary-card-number** and **ext-device.self-association-allowed-card-regex**. For more information, see [4.13 Config Editor](#).
  - **Configure HP Universal USB Proximity Card Reader (P/N:X3D03A):** If you use the HP Universal USB Proximity Card Reader (Part Number X3D03A) or RF IDEas RDR-805H3AKU Card Reader, then you must select this. You must configure your HP Universal USB Proximity Card Reader (Part Number X3D03A) or RF IDEas RDR-805H3AKU Card Reader to read the card types being used. For more information, see [4.4.1.1 HP](#)
-

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[Universal USB Proximity Card Reader \(Part Number X3D03A\)](#) or [RF IDEas RDR-805H3AKU Card Reader](#). With this option, users use their registered swipe card on the configured HP Universal USB Proximity Card Reader (Part Number X3D03A) or RF IDEas RDR-805H3AKU Card Reader.

---

#### Allow guest/anonymous access

With this option, you may choose to activate **guest** or **anonymous access**, enabling users to be authenticated as a guest user or an anonymous user, as per the user specified in the **Inherit settings from user** field.

- **Inherit settings from user:** Enter the username of the PaperCut MF user's profile that is used while authenticating users as a guest user or an anonymous user on the device.
- **Guest access** - Selecting **Allow guest/anonymous access** *and also* selecting one or more of the other options (Username and password, Identity number, Swipe card), activates **Guest access**. With this option:
  - A **Guest** button, which may be customized, is displayed on the PaperCut MF Login screen on the device, together with the other options selected. **Note:** To customize the text of the **Guest** button that appears on the PaperCut MF Login screen, use the config key **ext-device.hp-oxpd.guest-access.label**. For more information, see [4.13 Config Editor](#)
  - A user clicking this **Guest** button is authenticated as a guest user, as per the user specified in the **Inherit settings from user** field.
- **Anonymous access** - Only selecting **Allow guest/anonymous access** *without* selecting any other option, activates **Anonymous access**. With this option:
  - A user is authenticated as an anonymous user, as per the user specified in the **Inherit settings from user** field.
  - This anonymous user can view held print jobs belonging to all users.

---

## 4.4 User authentication via swipe cards

If the **Swipe card** authentication option is selected (see [4.3 User authentication options](#), [4.4.2 Handling card identifiers](#)), then:

1. Ensure the card reader is a supported card reader (see [4.4.1 Supported card readers](#)).

2. The config key **ext-device.hp-oxpd.register.card-reader** is automatically set to **Y**, to allow PaperCut MF to register and establish an exclusive lock on card readers that are detected on the device. For more information, see [4.13 Config Editor](#).
3. The config key **ext-device.hp-oxpd.fast-swipe-login-flow** is automatically set to **DEFAULT (N)**, to disable quick swipe-to-login. For more information, see [4.13 Config Editor](#).
4. The config key **ext-device.hp-oxpd.skip-hid-restart** is automatically set to **DEFAULT (N)**, to disable HID restart when a user logs in with a swipe card. For more information, see [4.13 Config Editor](#).

#### 4.4.1 Supported card readers

*PaperCut MF - HP OXP* supports the following configured and compatible card readers:

- Elatec TWN3 HID Prox
- Elatec TWN3 iCLASS
- Elatec TWN3 Mifare
- Elatec TWN4 Mifare
- HP Proximity Reader (CZ208A)
- HP Proximity Reader (CE931A)
- HP Proximity Reader (CE983A)
- HP Universal USB Proximity Card Reader (Part Number X3D03A)
- RF IDEas RDR-805H1AKU
- RF IDEas RDR-805H3AKU
- RF IDEas RDR-805T1AKU
- RF IDEas RDR 80581AKU-PPCT
- Securakey ET4-AUS-D

**Note:** In addition to the above card readers, you may configure *PaperCut MF - HP OXP* to support other card readers by using the config key **ext-device.hp-oxpd.additional-card-readers.vid-pid.hex**. For more information, see [4.13 Config Editor](#).

##### 4.4.1.1 HP Universal USB Proximity Card Reader (Part Number X3D03A) or RF IDEas RDR-805H3AKU Card Reader

If the **Swipe card** authentication option is selected and you are using the HP Universal USB Proximity Card Reader (Part Number X3D03A) or RF IDEas RDR-805H3AKU Card Reader, then you must configure it to read the card types being used. This is because your card reader's existing configurations are cleared and reset during PaperCut MF installation (device registration and integration).

To configure your HP Universal USB Proximity Card Reader (Part Number X3D03A) or RF IDEas RDR-805H3AKU Card Reader:

1. Log in to the PaperCut MF Admin web interface.
2. Navigate to **Devices**.
3. Select the required device.
4. In the **External Device Settings**, select the **Swipe card** user authentication access option:

**External Device Settings**

Allows for the configuration of the external device. For example connection settings like IP addresses and ports.

Device type  
HP (FutureSmart)

Device's administrator username

Device's administrator password

Access methods

User authentication

Username and password

Identity number

Swipe card

5. Select **Configure HP Universal USB Proximity Card Reader (P/N:X3D03A)**.

Require PIN

Enable self-association with existing user accounts

Configure HP Universal USB Proximity Card Reader (P/N:X3D03A)

Card type #1

Card type #2

Card type #3

Card type #4

6. Select the card type to be read by your HP Universal USB Proximity Card Reader (Part Number X3D03A) or RF IDEas RDR-805H3AKU card reader:

Card type #1

- Farpointe Data UID
- Farpointe Data (Pyramid) PSC-1 26 Bit
- FeliCa
- HID iClass CSN
- HID iClass ID
- HID Prox
- HID Prox UID
- HiTag 1 and S (RDR-6H8x Compatible)
- HiTag 1 and S Alternate
- HiTag 2 (RDR-6H8x Compatible)
- HiTag 2 Alternate
- Gprox-II ID
- Gprox-II UID (HP)
- GProx-II UID (RDR-6G8x Compatible)
- I-Code CSN (Philips, NXP)
- I-tag CSN (IBM)
- iClass CSN, ISO1443A CSN, ISO15693A CSN (RDR-758x Compatible)
- ID Teck (RDR-6A8x Compatible)
- ID Teck Alternate
- Indala ASP 26 Bit (Motorola)

- You can configure up to four card types:

Card type #1

Card type #2

Card type #3

Card type #4

- If you are not using all four card types, select "--Not Configured--" for the unused card types.

|              |  |
|--------------|--|
| Card type #1 | MiFare Ultralight CSN (Philips, NXP) ▼ |
| Card type #2 | HID Prox ▼                             |
| Card type #3 | -- Not Configured -- ▼                 |
| Card type #4 | -- Not Configured -- ▼                 |

- Some card types conflict with other card types. Hence, avoid selecting such conflicting card types, because this causes some problems if using swipe card authentication for logging in and self-association. For more information, see [6.4 Swipe card authentication anomalies](#).
7. Click **Apply**.
  8. Verify that your card reader can read the card types configured.

**Note:** Your card reader's configuration is reset and you must re-configure your card reader every time any one of the following occurs:

- your card reader is disconnected from and reconnected to your device's USB port
- your device is restarted
- your PaperCut MF Application Server is restarted
- your device's details are modified on the PaperCut MF Admin web interface's **Device Details** page

#### 4.4.2 Handling card identifiers

By default, PaperCut MF handles each card's unique identifier using the following pre-configured option:

- Cards whose identifiers consist of a number followed by special character and a checksum, are modified to include only the number (the special character and everything after it is ignored). This extracted, shortened identifier is used to identify the card and the corresponding user within PaperCut MF. For example, a card with the unique identifier 5235092385=8 is modified to 5235092385.

You can also tweak the way PaperCut MF handles each card's identifier by using any of the following options:

- Using utility or configuration tools directly on the card reader's hardware.
- Using third party applications to decrypt card identifiers. For more information, contact your reseller or Authorized Solution Center.
- Using the following options within PaperCut MF:
  - Regular expression filters
  - Converters (standard format converters and custom JavaScript converters)

**Note:** If you use both an expression *and* a converter, then the card's identifier is handled first by the expression and then further by the converter

Verify the results of the expressions, convertors, or both applied using the PaperCut MF Admin web interface's **Application Log**.

#### 4.4.2.1 Regular expression filters

To extract card identifiers using regular expression filters, use the config keys **ext-device.self-association-allowed-card-regex** and **ext-device.card-no-regex**. For more information, see [4.13 Config Editor](#).

Some regular expression filters include:

| Expression                 | Description   | Example  |
|----------------------------|---|--|
| <code>(.{10})</code>       | Extract the first 10 characters                           | AST%123456789 is modified to AST%123456            |
| <code>(\d{5})</code>       | Extract the first 5 numbers                               | AST%123456789 is modified to 12345                 |
| <code>\d*=(\d*)=\d*</code> | Extract only the numbers between the 2 special characters | 123453=292929=1221 is modified to 1234532929291221 |

For more information, see [www.regular-expressions.info](http://www.regular-expressions.info).

#### 4.4.2.2 Standard format converters

To modify card identifiers using standard format converters, use the config key **ext-device.card-no-converter**. For more information, see [4.13 Config Editor](#).

Some examples of standard format converters are:

| Converter                | Description  | Example  |
|--------------------------|--|--|
| <b>hex2dec</b>           | Convert a hexadecimal (base 16) encoded card identifier to the decimal format. <b>Note:</b> Hexadecimal numbers usually contain 0-9 and A-F. | 946EBD28 is modified to 2490285352                       |
| <b>dec2hex</b>           | Convert a decimal encoded card identifier to the hexadecimal format.   | 2490285352 is modified to 946EBD28                       |
| <b>ascii-enc</b>         | Unpack an ASCII encoded card identifier to its encoded ASCII number.   | 3934364542443238 is modified to its ASCII code 946EBD28. |
| <b>ascii-enc hex2dec</b> | First unpack an ASCII encoded card identifier to its encoded ASCII number. Then convert it to the decimal format.                            |  |

---

**Note:** Use a delimiting pipe (|) to chain or pipeline converters.

---

#### 4.4.2.3 Custom JavaScript converters

To use a custom JavaScript converter:

1. Create a JavaScript file. For example:  
**[install-path]/server/custom/card.js**
2. Define a single JavaScript function in this file called **convert**. It must accept and return a single string. For example:  
**function convert(cardNumber) {  
    return cardNumber.substring(3,10).toLowerCase();  
}**
3. Include a converter in the form: **javascript:custom/card.js**
4. Optionally, include a JavaScript script in the pipeline. For example:  
**ascii-enc|hex2dec|javascript:custom/card.js**
5. Verify the JavaScript converter from the following log:  
**[install-path]/server/log/server.log**
6. Use the config key **ext-device.card-no-converter** to modify card identifiers using custom JavaScript converters. For more information, see [4.13 Config Editor](#).

## 4.5 SNMP

PaperCut MF uses SNMP to:

- [block the release of jobs to the device when it is in error](#), and
- [retrieve the device's printer toner levels](#).

By default, PaperCut MF uses SNMPv1/v2c to perform these actions. You can, however, select to use SNMPv3 for better security and encryption.

For more information about SNMP, see the [PaperCut MF manual](#).

To configure PaperCut MF to use SNMP:

1. Log in to the PaperCut MF Admin web interface.
2. Navigate to **Devices**.
3. Select the device.
4. In the **External Device Settings**, to enable PaperCut MF to use:
  - SNMPv1/v2c, ensure the **Use SNMPv3 for Toner Retrieval and Device Error Monitoring** checkbox is not selected (default).
  - SNMPv3, select the **Use SNMPv3 for Toner Retrieval and Device Error Monitoring** checkbox; and enter the following fields:
    - **Context name, Username, Privacy password, Authentication password** - If these values are available at the device web interface, then use the same values. If not, leave them blank or enter your own value.
    - **Authentication protocol** – Select either **MD5** or **SHA**.
    - **Privacy protocol** – Select either **DES** or **AES**.

5. Click **Apply**.

## 4.6 Secure print release

Secure Print Release causes all print jobs to be held at the device until a user releases the job. If the device is configured with Secure Print Release, then when releasing held print jobs, users can select the following:

- [the account](#)
- [the job attributes](#)

To configure Secure Print Release:

1. Log in to the PaperCut MF Admin web interface.
2. Navigate to **Devices**.
3. Select the required device.
4. In the **Print Release** area, select **Enable print release**.
5. In the **This device will display jobs for release from the selected source queues**, select the required Hold/Release queue. For more information, see the [PaperCut MF manual](#).

### 4.6.1 User selection of an account

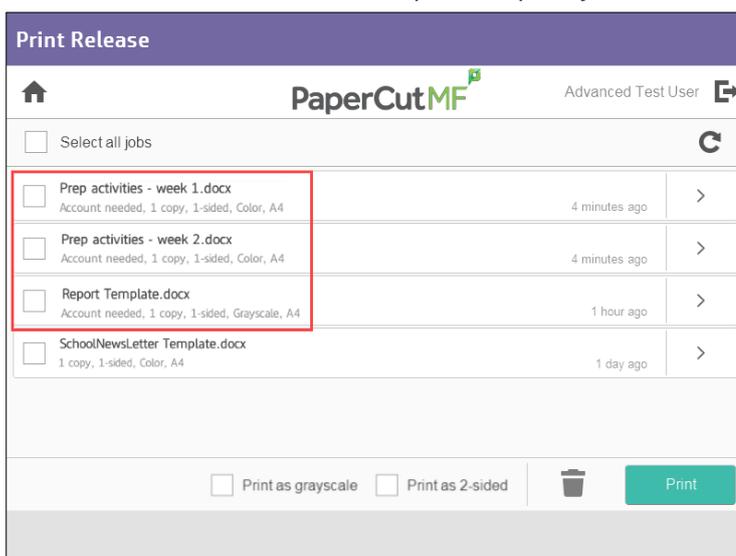
All print jobs must be allocated to an account before they can be released (printed). This account can be either:

- a user's personal account, or
- a shared account for cost center, faculty, or client billing purposes.

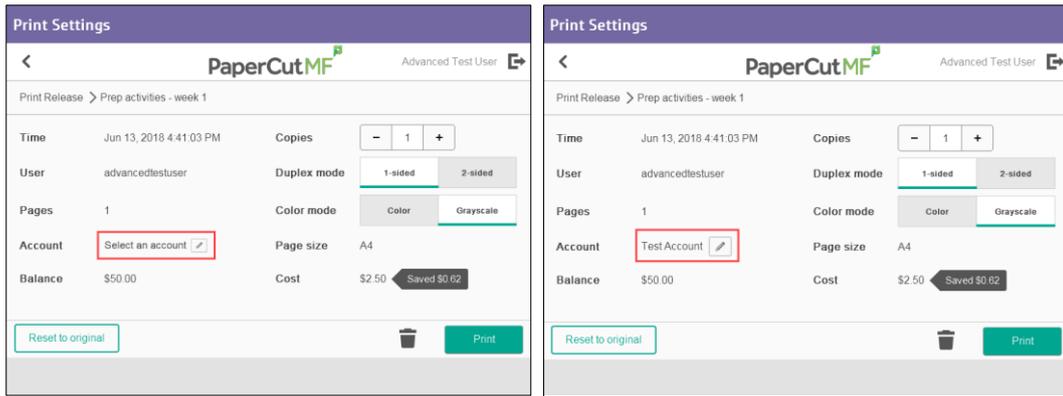
Users can allocate an account to a print job via the User Client and/or at the device. For more information about configuring cost allocation for users, see the [PaperCut MF manual](#).

At the device, users can:

- allocate the same account to *multiple* held print jobs without an account:



- allocate an account to a *single* held print job without an account or change a previously allocated account:



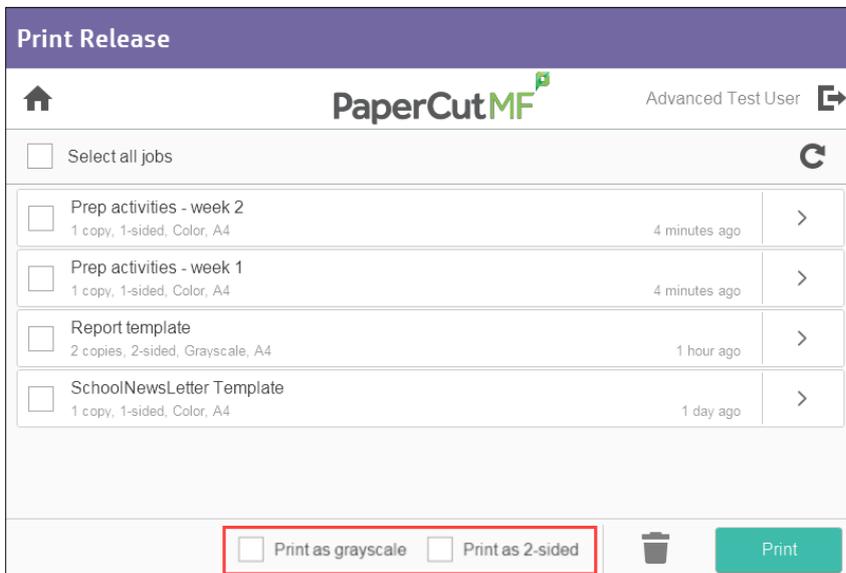
**Note:** By default, PaperCut MF allows users to select accounts at the device. However, you also have the option of disabling this. For more information, see the [PaperCut MF manual](#).

### 4.6.2 User selection of job attributes

PaperCut MF allows users to change the attributes of held print jobs at the device, before releasing (printing) them. Based on the changes made, PaperCut MF shows the updated cost and savings, to give immediate positive feedback to the user, encouraging behavior change.

Users can make the following changes to one or many jobs, simultaneously:

- **Print as grayscale** (from color to grayscale)
- **Print as 2-sided** (from 1-sided to 2-sided)



Clicking the arrow to the right of a single held print job displays all the attributes for that job, allowing users to make the following additional changes:

- **Copies**
- **Duplex mode** (from 1-sided to 2-sided)
- **Color mode** (from color to grayscale)

To toggle the display of the cost of held print jobs on the PaperCut MF Print Release and Print Settings screens on the device, use the config key `ext-device.hp-oxpd.release-show-cost`. For more information, see [4.13 Config Editor](#).

**Note:** By default, PaperCut MF allows users to select jobs attributes at the device. However, you also have the option of disabling this. For more information, see the [PaperCut MF manual](#).

## 4.7 Device jobs

Device jobs include jobs initiated at the device, such as, scan, copy, fax, on-device printing.

### 4.7.1 Tracking device jobs

To specify the device jobs that PaperCut MF tracks and controls:

1. Log in to the PaperCut MF Admin web interface.
2. Navigate to **Devices**.
3. Select the required device.
4. In the **External Device Settings** area, select the required device jobs:
  - **Track & control copying** – PaperCut MF tracks and controls copy jobs and on-device print jobs
  - **Track & control scanning** – PaperCut MF tracks and controls scan jobs
  - **Track & control faxing** – PaperCut MF tracks and controls fax jobs

**Note:** Ensure this does not contradict the settings configured for the additional device jobs (see [4.7.1.1 Additional device jobs](#)). If there is a contradiction, the device displays the **Quota service error** (see [6.8 "Quota service error"](#)).

#### 4.7.1.1 Additional device jobs

The device also offers some additional jobs, which you can configure access permissions for, using any one of the following options:

- [4.7.1.1.1 Using PaperCut MF](#)

- 4.7.1.1.2 Using the device’s web interface

#### 4.7.1.1.1 Using PaperCut MF

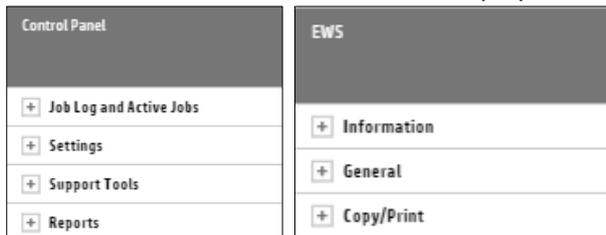
To configure access permissions for the additional device jobs using PaperCut MF:

- Set the config key **ext-device.hp-oxpd.permission.server-managed** to **Y**. For more information, see [4.13 Config Editor](#).
- To specify the additional device jobs that:
  - only authenticated users can access, use the config key **ext-device.hp-oxpd.permission.whitelist**. For more information, see [4.13 Config Editor](#).
  - unauthenticated users can access, use the config key **ext-device.hp-oxpd.guest.permission.whitelist**. For more information, see [4.13 Config Editor](#).

#### 4.7.1.1.2 Using the device’s web interface

To configure access permissions for the additional device jobs using the device’s web interface:

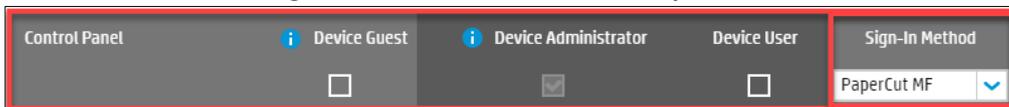
- Ensure the config key **ext-device.hp-oxpd.permission.server-managed** is set to **N**. For more information, see [4.13 Config Editor](#).
- Log in to the device’s web interface as an administrator.
- Navigate to **Security > Access Control > Sign-In and Permission Policies**.
  - The **Control Panel** and **EWS** columns display rows of all the additional device jobs:



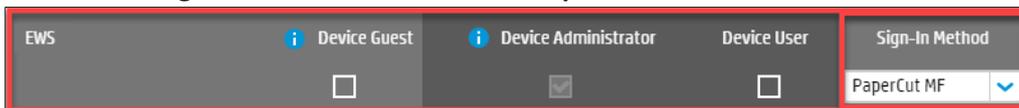
- By default, all authenticated administrators can access all the additional device jobs:

| Control Panel           | Device Guest             | Device Administrator                | Device User              | Sign-In Method |
|-------------------------|--------------------------|-------------------------------------|--------------------------|----------------|
|                         | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | PaperCut MF    |
| Job Log and Active Jobs | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Use Default    |
| Settings                | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Use Default    |
| Support Tools           | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Use Default    |

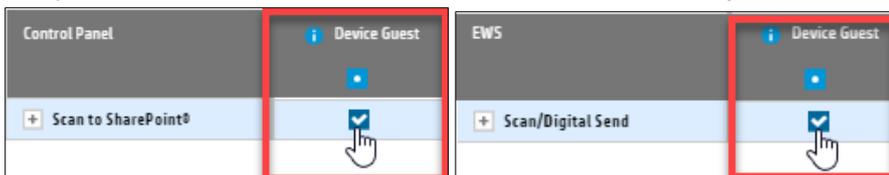
- In the **Control Panel’s Sign-In Method** column, select **PaperCut MF**:



- In the **EWS’s Sign-In Method** column, select **PaperCut MF**:



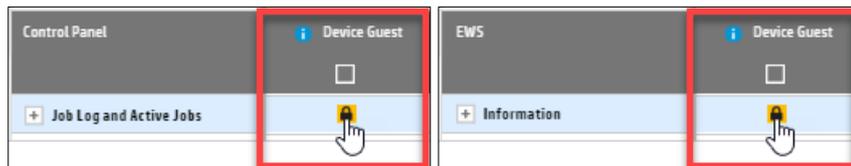
- Jobs that unauthenticated users can access:** In the required row(s) of the **Control Panel/ EWS**, ensure the **Device Guest** column’s checkbox is **checked/ ticked**:



**Note:**

- Ensure this does not contradict the settings configured on the PaperCut MF Admin web interface (see [4.7.1 Tracking device jobs](#)). For example, if unauthenticated users can access **Scan to SharePoint®**, then PaperCut MF must NOT track scanning (i.e. the **Track & control scanning** checkbox must not be selected). If there is a contradiction, the device displays the **Quota service error** (see [6.8 "Quota service error"](#)).
  - This overrides any existing **Filters and Restrictions** that may be configured in the PaperCut MF Admin web interface for the device's printer. For example, if the device's Printer (**Printers > Printer List > Printer Details > Filters & Restrictions** page) has **Groups With Color Access > Only allow the following groups to print in color** set to a specific group of users, but if the **Device Guest** column is enabled with **Print in color**, then all users can print in color.
  - This alters the device's first screen and the resulting login workflow on devices running **HP FutureSmart 4 Firmware Bundle Version is 4.5.5 or above**. For more information, see [6.3 Device's first screen and login workflow](#).
  - To ensure the device's paper trays are configurable, ensure the **Ability to modify tray size and type settings** is **checked/ ticked**, and not **Locked**. For more information, see [6.10 Paper trays are not configurable](#).
7. **Jobs that only authenticated, non-administrative users can access:** In the required row(s) of the **Control Panel/ EWS:**

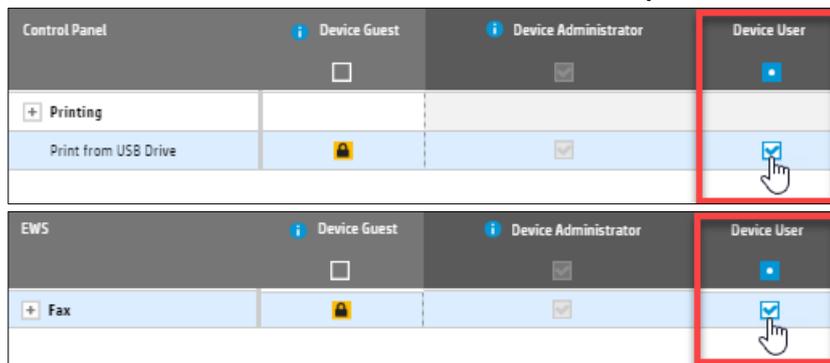
- i. ensure the **Device Guest** column's checkbox is **Locked**:



**Note:**

- Ensure this does not contradict the settings configured on the PaperCut MF Admin web interface (see [4.7.1 Tracking device jobs](#)). For example, if **Scan to SharePoint®** can only be accessed by authenticated users, then PaperCut MF must track scanning (i.e. the **Track & control scanning** checkbox must be selected). If there is a contradiction, the device displays the **Quota service error** (see [6.8 "Quota service error"](#)).
- To ensure the device's paper trays are configurable, ensure the **Ability to modify tray size and type settings** is **checked/ ticked**, and not **Locked**. For more information, see [6.10 Paper trays are not configurable](#).

- ii. ensure the **Device User** column's checkbox is **checked/ ticked**:

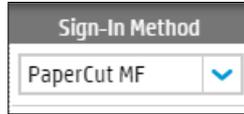


**Note:**

- Ensure this does not contradict the settings configured on the PaperCut MF Admin web interface (see [4.7.1 Tracking device jobs](#)).

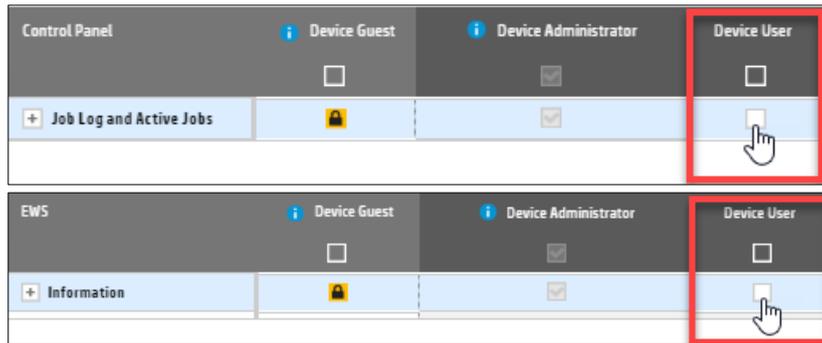
For example, if **Scan to SharePoint®** can only be accessed by authenticated users, then PaperCut MF must track scanning (i.e. the **Track & control scanning** checkbox must be selected). If there is a contradiction, the device displays the **Quota service error** (see 6.8 "Quota service error").

- iii. ensure the **Sign-In Method** column's dropdown is either **PaperCut MF** or **Use Default**:



- 8. **Jobs that only authenticated administrators can access (i.e. non-administrative users cannot access):** In the required row(s) of the **Control Panel/ EWS**:

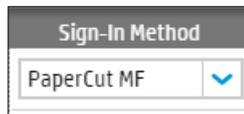
- i. ensure the **Device User** column's checkbox is **unchecked/ unticked**:



**Note:**

- These jobs appear “locked” to non-administrative users. Only authenticated administrators can access them. Only authenticated administrators can access them. For more information, see 6.9 [Accessing "locked" administrative jobs](#).
- Ensure this does not contradict the settings configured on the PaperCut MF Admin web interface (see 4.7.1 [Tracking device jobs](#)). For example, if **Scan to SharePoint®** can only be accessed by authenticated users, then PaperCut MF must track scanning (i.e. the **Track & control scanning** checkbox must be selected). If there is a contradiction, the device displays the **Quota service error** (see 6.8 "Quota service error").

- ii. ensure the **Sign-In Method** column's dropdown is either **PaperCut MF** or **Use Default**.



- 9. Click **Apply**.

### 4.7.2 User selection of an account

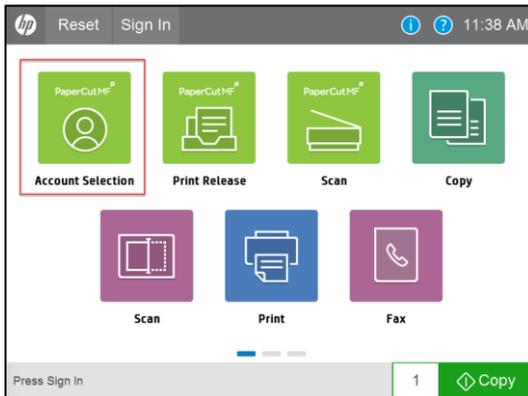
If tracked device jobs (scan, copy, fax, on-device printing) are also being charged, then users must allocate them to an account.

This account can be either:

- a user's personal account, or
- a shared account for cost center, faculty, or client billing purposes.

The options available to users at the device, is based on the way users and the device are configured:

- For more information about configuring cost allocation for users, see the [PaperCut MF manual](#).
- To toggle the display of the PaperCut MF Account Confirmation screen, use the **Show account confirmation** checkbox on the PaperCut MF Admin web interface (**Devices Details > Summary > External Device Settings > Device Options**).
- To toggle the display of the PaperCut MF **Account Selection** icon on the device's Home screen, use the config key **ext-device.hp-oxpd.register.account-selection**. For more information, see [4.13 Config Editor](#).



- To configure the PaperCut MF Account Selection screen, use the config key **ext-device.hp-oxpd.account-list.limit**. For more information, see [4.13 Config Editor](#)

### 4.7.3 Job costs and account balances (Zero Stop)

When printing, if a restricted user's account balance is insufficient to cover the cost of the restricted user's entire print job, PaperCut MF prevents the user from being able to start the print job. This ensures that the restricted user's account balance never drops below zero for print jobs.

When scanning, copying, or faxing, PaperCut MF calculates the cost of a single page (i.e. the Reference Page Cost, which is based on configured values). Using this Reference Page Cost, PaperCut MF calculates the number of reference pages that the restricted user's account balance will allow (i.e. the maximum number of Reference Pages Allowed). As a result:

- If a restricted user's account balance is insufficient for even one Reference Page Allowed, then PaperCut MF prevents the user from being able to start a scan, copy, fax job.
- If a restricted user's account balance is sufficient for at least one Reference Page Allowed, then PaperCut MF allows the user to start a scan, copy, fax job.

As the job is in progress, if the maximum number of Reference Pages Allowed is reached, then PaperCut MF:

- stops the job,
- prevents it from being completed, and
- deletes the job from the device's Job Status screen.

This ensures that the restricted user's account balance never drops below zero for copy, scan and fax jobs. For more information, see [4.7.3.1 Reference Page Cost and maximum number of Reference Pages Allowed](#).

Further restrictions can also be applied to restricted users to prevent their account balances from dropping below zero. For more information, see [4.7.3.2 Multiple Jobs](#).

#### 4.7.3.1 Reference Page Cost and maximum number of Reference Pages Allowed

To configure the Reference Page Cost that is used to calculate the maximum number of Reference Pages Allowed for copy, scan and fax jobs, use the following config keys:

- **ext-device.hp-oxpd.limit-reference.duplex**
- **ext-device.hp-oxpd.limit-reference.grayscale**
- **ext-device.hp-oxpd.limit-reference.paper-size**

For more information, see [4.13 Config Editor](#)

**Note:** This Reference Page Cost that is used to calculate the maximum number of Reference Pages Allowed for copy, scan and fax jobs have some limitations. For more information, see [5.1 Limitations of the configured Reference Page Cost and maximum number of Reference Pages Allowed](#).

#### 4.7.3.2 Multiple Jobs

To further prevent restricted users' account balances from dropping below zero, you can prevent restricted users from being able to perform multiple transactions simultaneously on the device, by using the config key **ext-device.hp-oxpd.restricted.multiple-txns**. For more information, see [4.13 Config Editor](#).

### 4.7.4 Device's scanning

Ensure that the following are configured as required:

- [4.7.4.1 Device's Scan to Email settings](#)
- [4.7.4.2 Device's Scan to Network Folder settings](#)

#### 4.7.4.1 Device's Scan to Email settings

To enable users to use **Scan to Email** on the device, you must configure the device's Scan to Email settings:

1. Ensure that users' email addresses are already configured while creating and configuring users in PaperCut MF (**Users > User List > User Details > Primary email**).
2. Log in to the device's web interface as an administrator.
3. Navigate to **Scan/Digital Send > Email Setup > Default Job Options**.
4. Select **Enable Scan to Email**.
5. In **Outgoing Email Servers (SMTP)**, enter the required details and click **Add**:

**Email Setup > Default Job Options**

This feature allows users to scan documents and send them as email attachments to one or more email addresses.

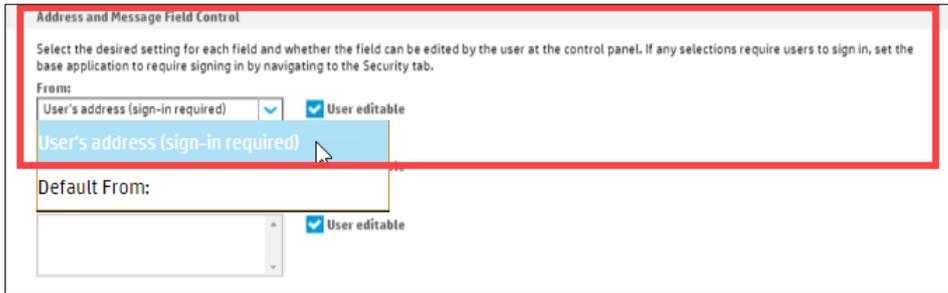
Enable Scan to Email

**Outgoing Email Servers (SMTP)**

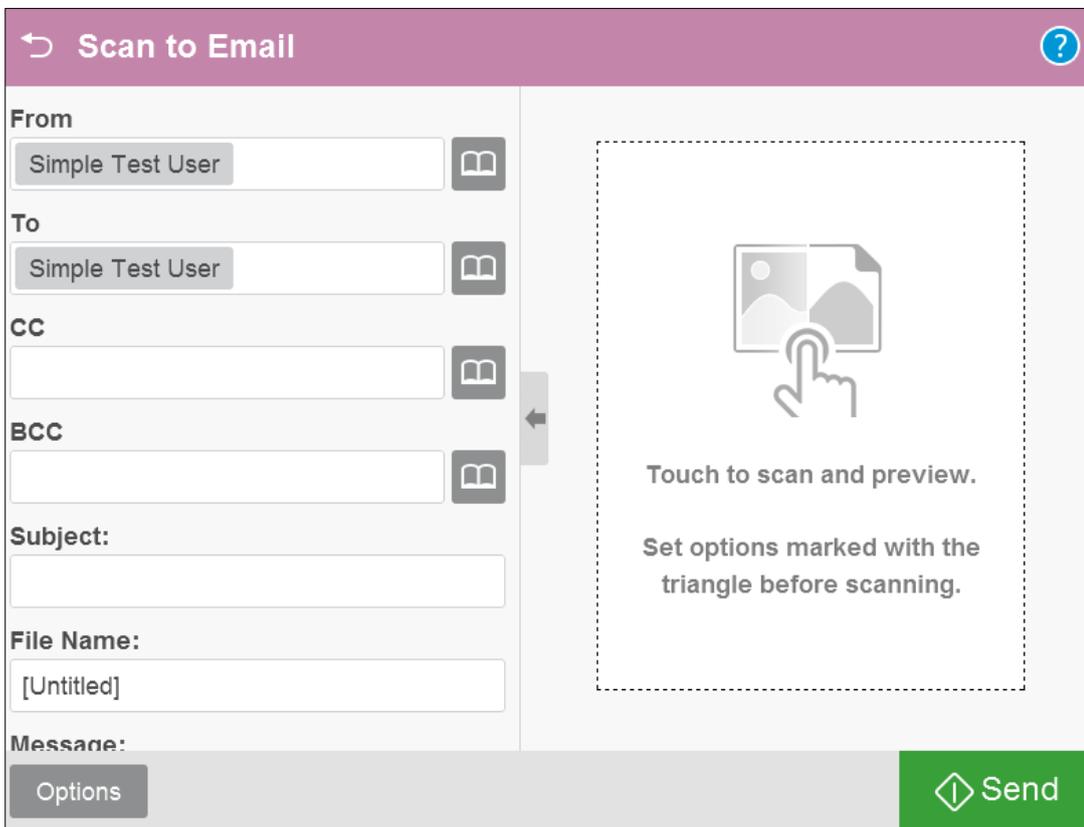
| Server Name   | Port Number | Server Usage   |
|---------------|-------------|--|
| 10.100.64.203 | 5000        | Send Email, Internet Fax, Automated Emails, AutoSend |

Add... Edit... Remove...

- In the **Address and Message Field Control** area's **From** field, select **User's address (sign-in required)**:



- Click **Apply**.
- Log in to the device as a test user (simple test user).
- Verify that the **Scan to Email** screen's **From** and **To** fields display details of a test user (simple test user):



#### 4.7.4.2 Device's Scan to Network Folder settings

To enable users to use **Scan to Network Folder** on the device, you must configure the device's Scan to Network Folder settings. This is because the user home directory network path that is configured while creating and configuring users in PaperCut MF (**Users > User List > User Details > Home directory**) is *NOT* auto-populated on the device's **Scan to Network Folder > Folder Path**. For more information, see [5.2 The configured user home directory network path is not auto-populated on the device's Scan to Network Folder](#).

To configure the device's Scan to Network Folder settings:

- Log in to the device's web interface as an administrator.
- Navigate to **Scan/Digital Send > Scan to Network Folder > Default Job Options**.

3. Select **Enable Scan to Network Folder**.
4. Click **Apply**.
5. Navigate to **Quick Sets**.
6. Click **Add**.
7. Follow the **Quick Sets Wizard**'s prompts:
  - a. In **Quick Set Name** enter a required name; click **Next**:

- b. In **Folder Settings**, select **Save to shared folders or FTP folders**; click **Add**:

**Note:** Do *NOT* select and configure the **Save to a personal shared folder** option.

- c. Select **Save to a Standard shared network folder** and in **UNC Folder Path** enter the required directory's network path:

**Save to a standard shared network folder**

**UNC Folder Path:** \*

(\\path\path)

- d. Optionally, in the **Custom Subfolder** select the required option that is to be appended to the **UNC Folder Path**; to apply further access restrictions, select **Restrict subfolder access to user**:

**Custom Subfolder:**

Appends a custom subfolder at end of the folder path.

**Restrict subfolder access to user**

- e. Click **Update Preview**.
- f. Verify that the **Folder Path Preview** displays both the **UNC Folder Path** and the value of the **Custom Subfolder** (if configured):

**Edit Network Folder Path**

**Save to a standard shared network folder**

**UNC Folder Path:** \*

(\\path\path)

**Custom Subfolder:**

Appends a custom subfolder at end of the folder path.

**Restrict subfolder access to user**

**Folder Path Preview:**

Some Custom Subfolder values will be updated only when the Quick Set is used.

- g. In **Authentication Settings**, select **Always use these credentials**:

**Authentication Settings:**

- h. Enter the required details in **Windows Domain**, **User Name**, **Password**:

**Windows Domain:**

**User Name:**

**Password:**

- i. Click **Verify Access**:

- j. Click **Ok**.
- k. Verify that **Folder Settings > Save to shared folders or FTP folders > Network Folder Path** displays the configured **UNC Folder Path** and **Custom Subfolder** (if configured); click **Next**:

- l. In **Notification** select and configure the required notification; click **Next**:

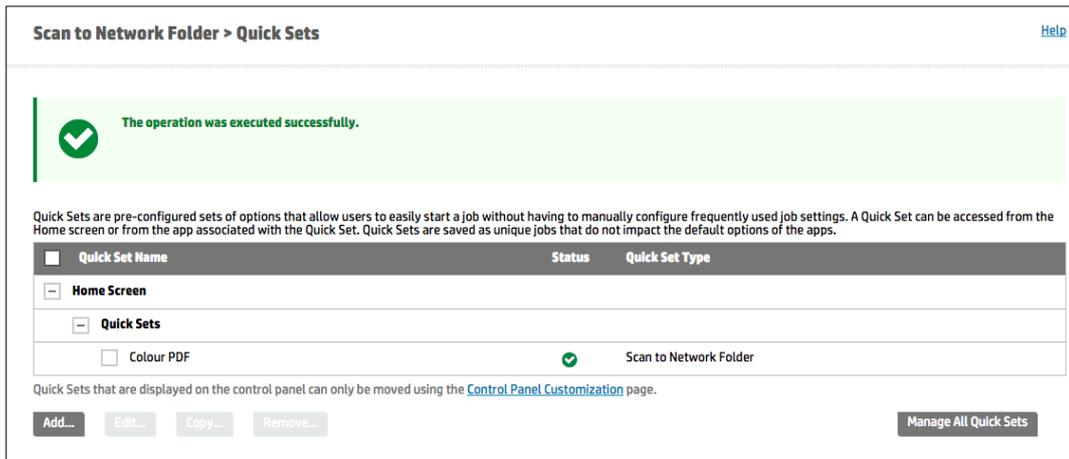
m. In **Scan Settings** select and configure the required scan settings; click **Next**:

n. In **File Settings** select and configure the required scan settings; click **Next**:

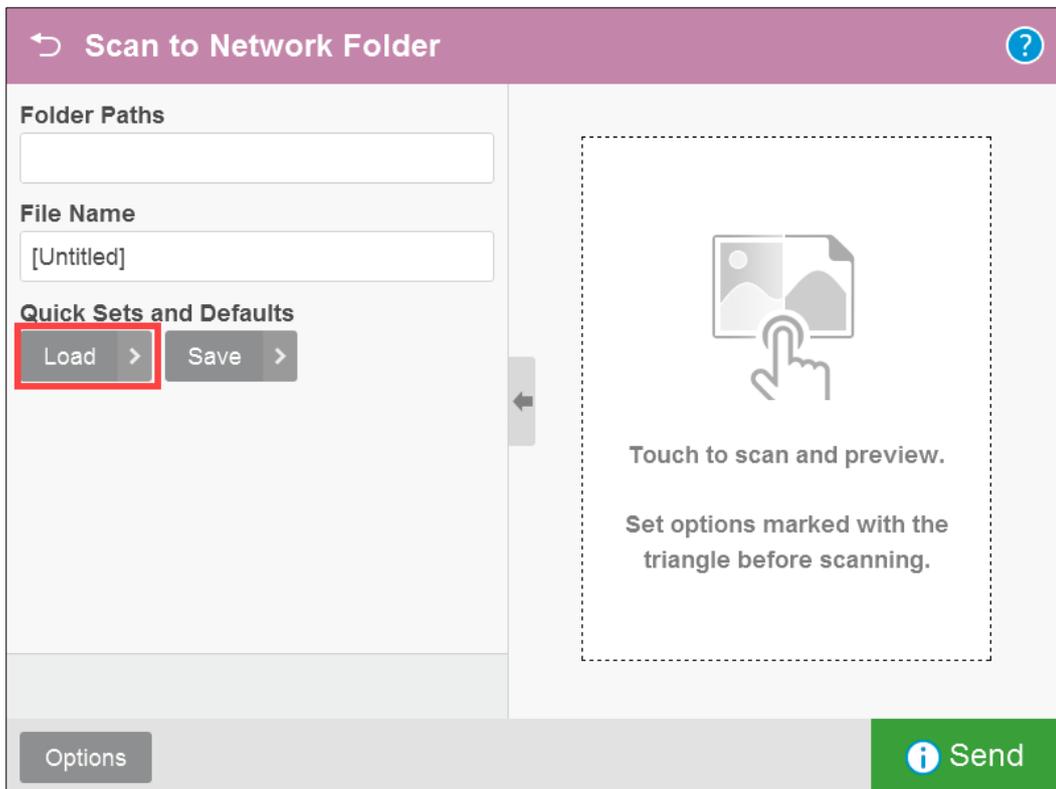
o. Verify that the **Summary** displays the summary of the configured Quick Set; click **Finish**:

8. Verify that on the **Scan/Digital Send > Scan to Network Folder > Quick Sets** page, the **Quick Set Name** is the name of the configured Quick Set, **Status** is a green tick icon, and **Quick Set**

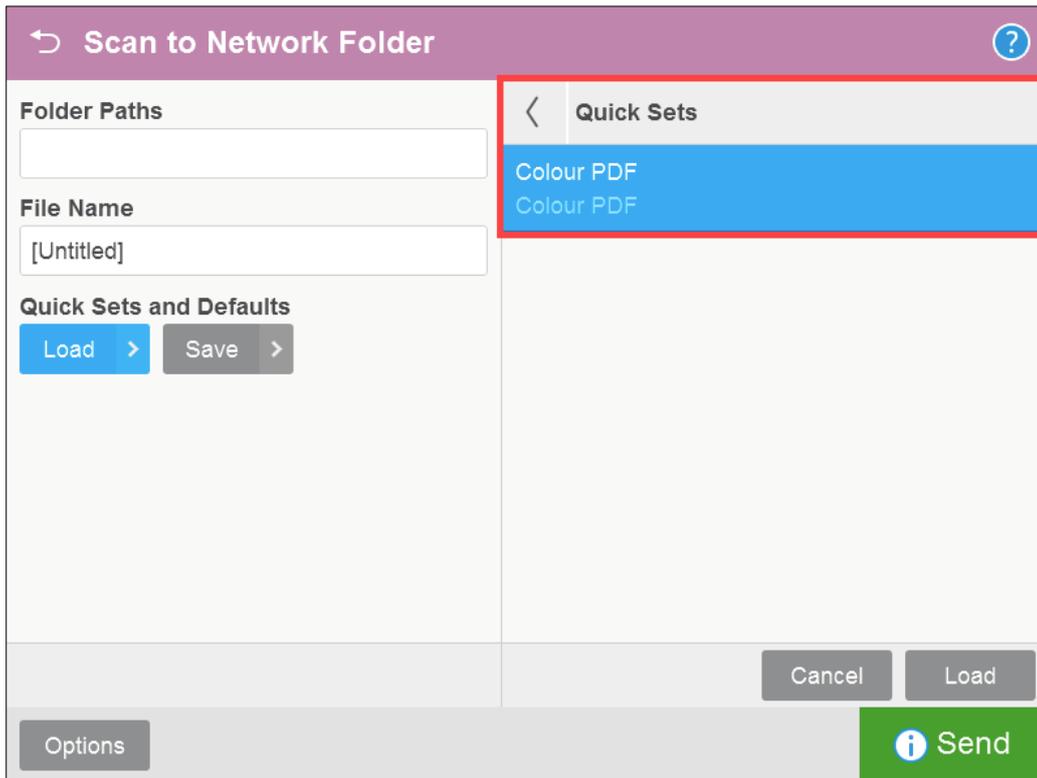
**Type is Scan to Network Folder:**



10. Log in to the device as a test user (simple test user).
11. On the **Scan to Network Folder** screen, click **Load**:

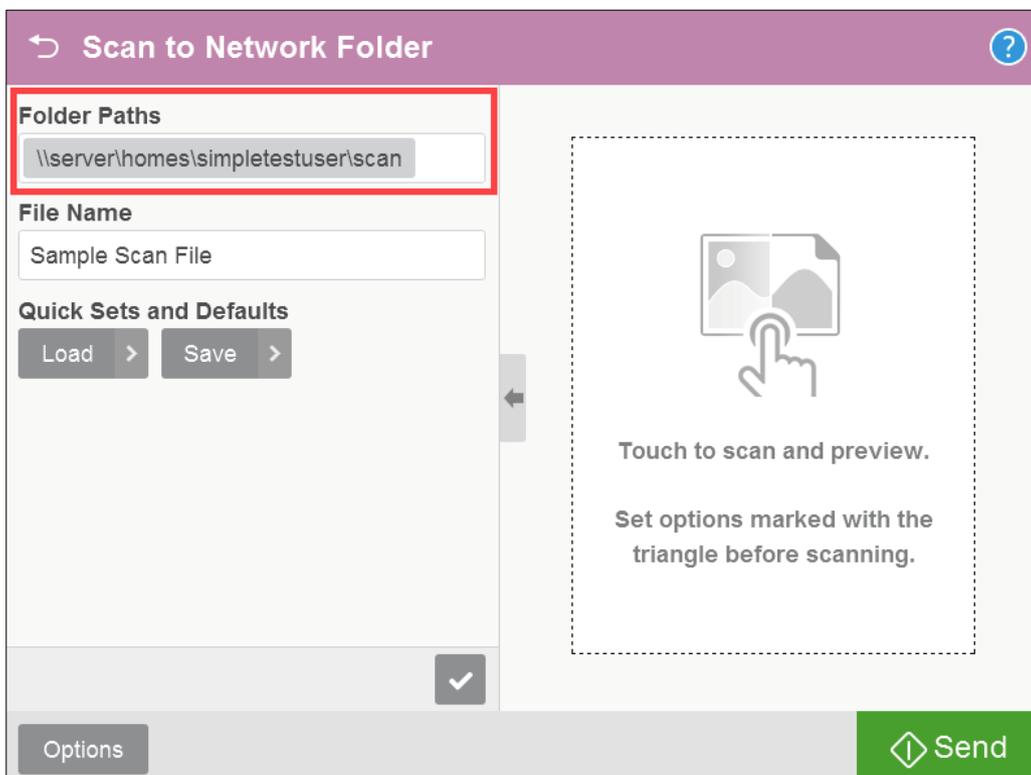


12. Verify that the **Scan to Network Folder** screen displays the configured Quick Set:



13. Select the **Quick Set** and click **Load**.

14. Verify that **Folder Path** displays the network path as configured in the device's web interface (**Scan/Digital Send > Scan to Network Folder > Quick Sets**):



### 4.7.5 PaperCut MF's Integrated Scanning

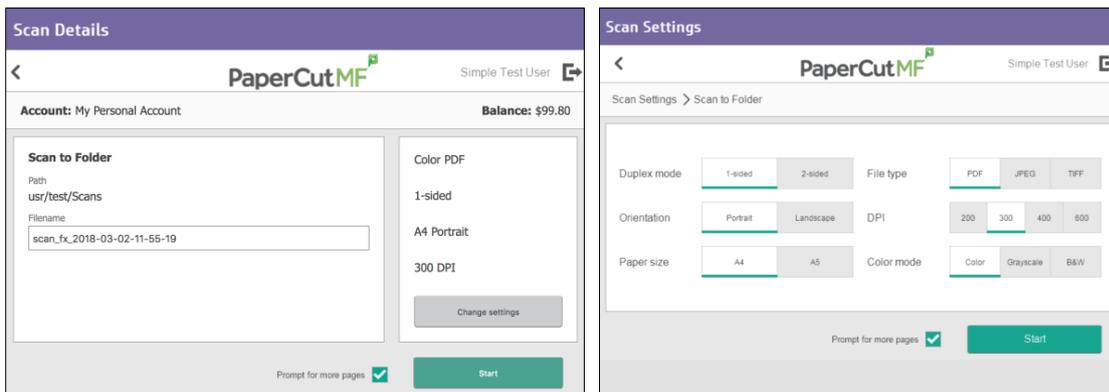
To enable users to use PaperCut MF's Integrated Scanning:

1. Configure it on the PaperCut MF Admin web interface.  
For more information, see [Integrated Scanning](#) or the [PaperCut MF manual](#).
2. Depending on the needs of your environment, you may need to change the default settings of the following config keys:
  - **ext-device.hp-oxpd.scan.prompt.checkbox.checked**
  - **ext-device.hp-oxpd.timeout.scan-prompt-send.secs**
  - **ext-device.hp-oxpd.timeout.complete-scan-job.secs**

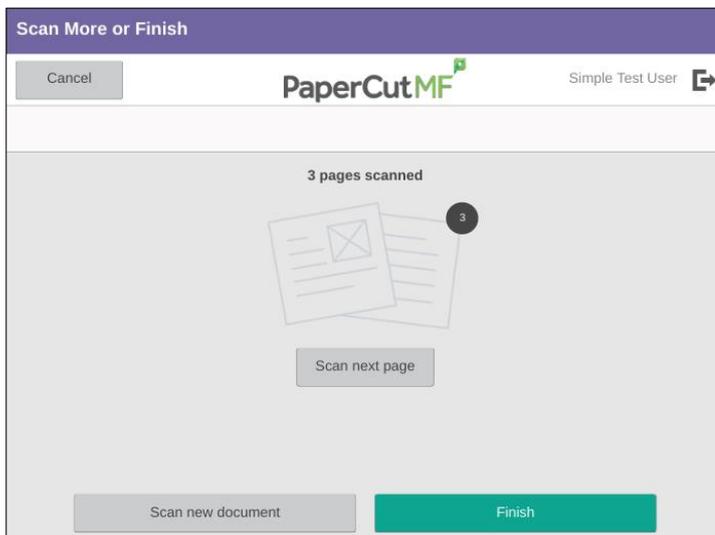
For more information, see [4.7.5.1 Integrated scan workflow](#), [4.8 Timeouts](#), [4.13 Config Editor](#).

#### 4.7.5.1 Integrated scan workflow

If Integrated Scanning is enabled, then you can use the config key **ext-device.hp-oxpd.scan.prompt.checkbox.checked** to specify whether the **Prompt for more pages** checkbox on the Scan Details screen and the Scan Settings screen, is checked or unchecked by default (See [4.13 Config Editor](#)).

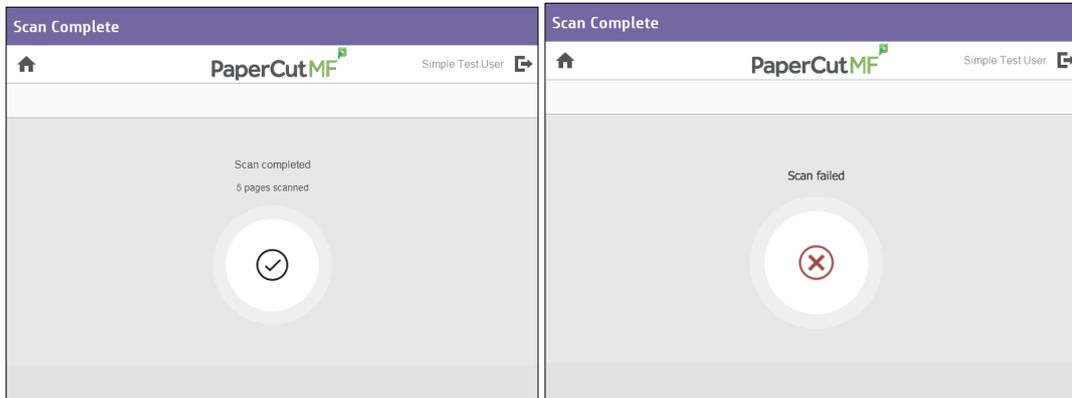


- A checked **Prompt for more pages** checkbox enables the device to display the Scan More or Finish screen, providing users with the ability to add more pages to the current scan job or start new scan jobs retaining the current scan job's settings and account selection attributes:



**Note:** To specify the user inactivity timeout on this screen, use the config key **ext-device.hp-oxpd.timeout.scan-prompt-send.secs**. For more information, see [4.8 Timeouts](#), [4.13 Config Editor](#).

- An unchecked **Prompt for more pages** checkbox enables the device to complete the current scan and send it to the user (scan transfer).

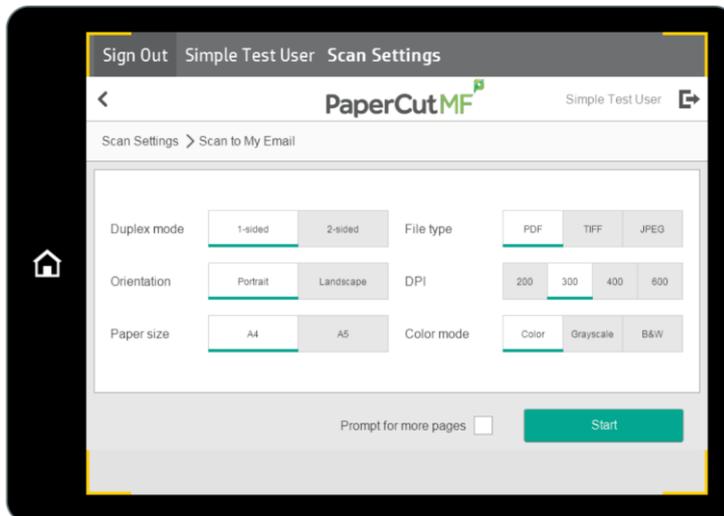
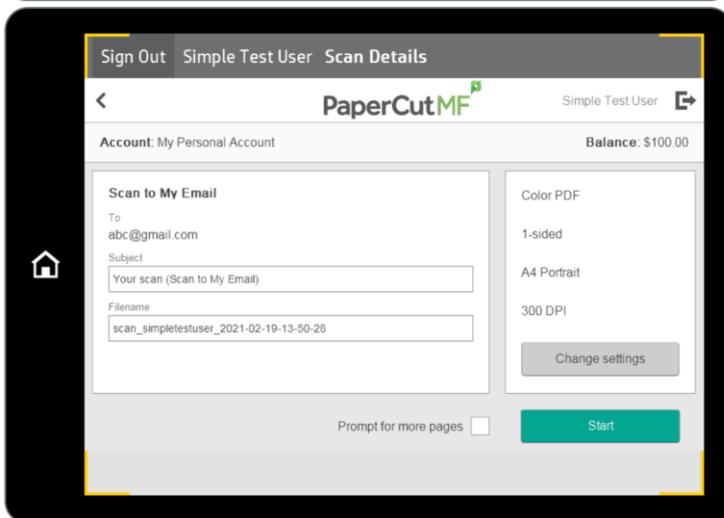
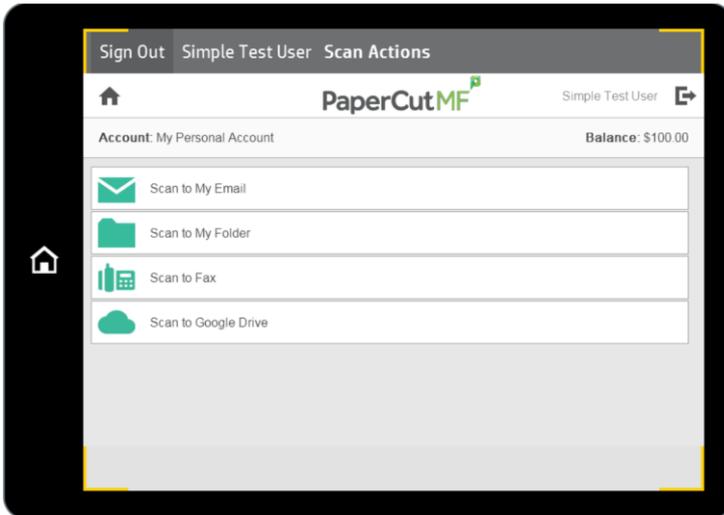


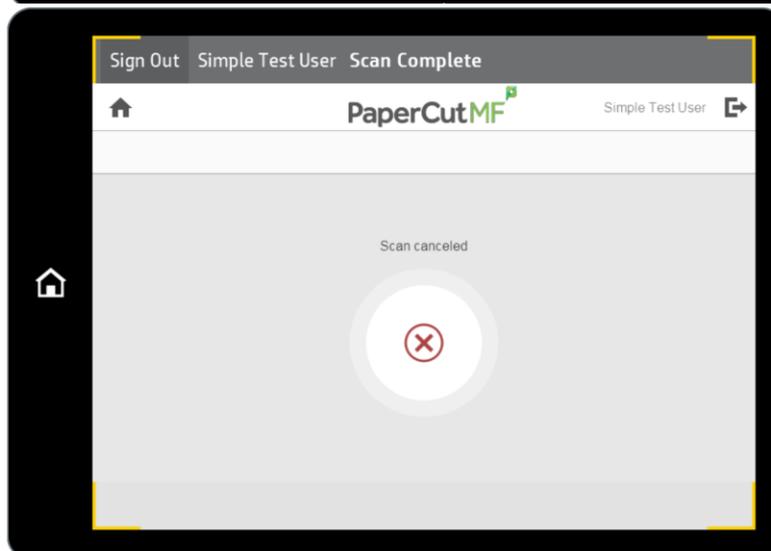
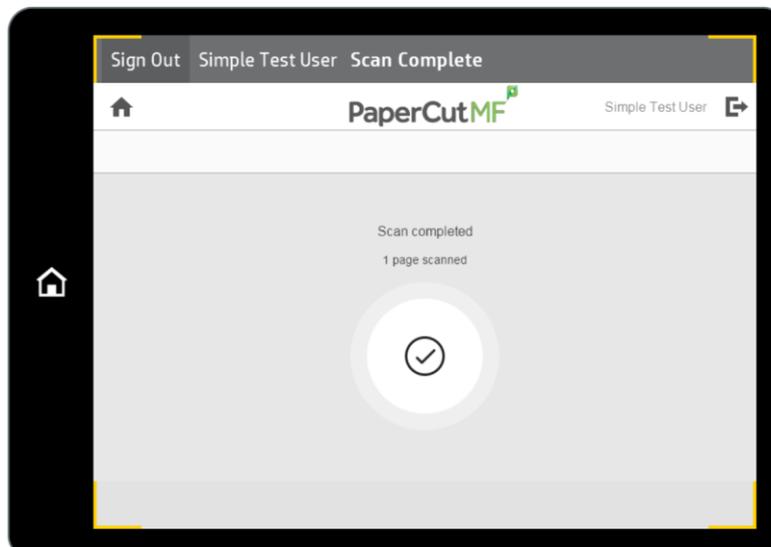
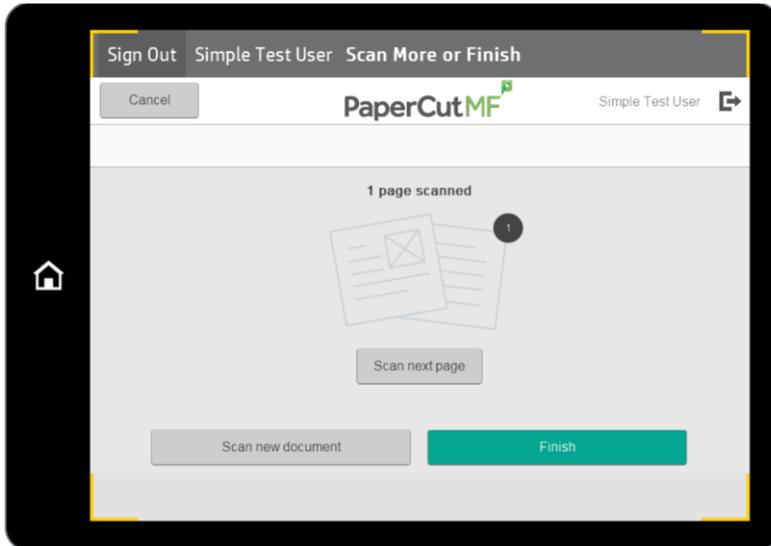
**Note:** To specify the user inactivity timeout on this screen, use the config key **ext-device.hp-oxpd.timeout.complete-scan-job.secs**. For more information, see [4.8 Timeouts](#), [4.13 Config Editor](#).

#### 4.7.5.2 Enhanced mode - Integrated scan workflow

HP Enhanced mode can be enabled via a config key `ext-device.hp-oxpd.enhanced-mode`. This user workflow presents PaperCut login and directs user to PaperCut home screen. When disabled, user workflow presents PaperCut login and directs user to Device home screen.

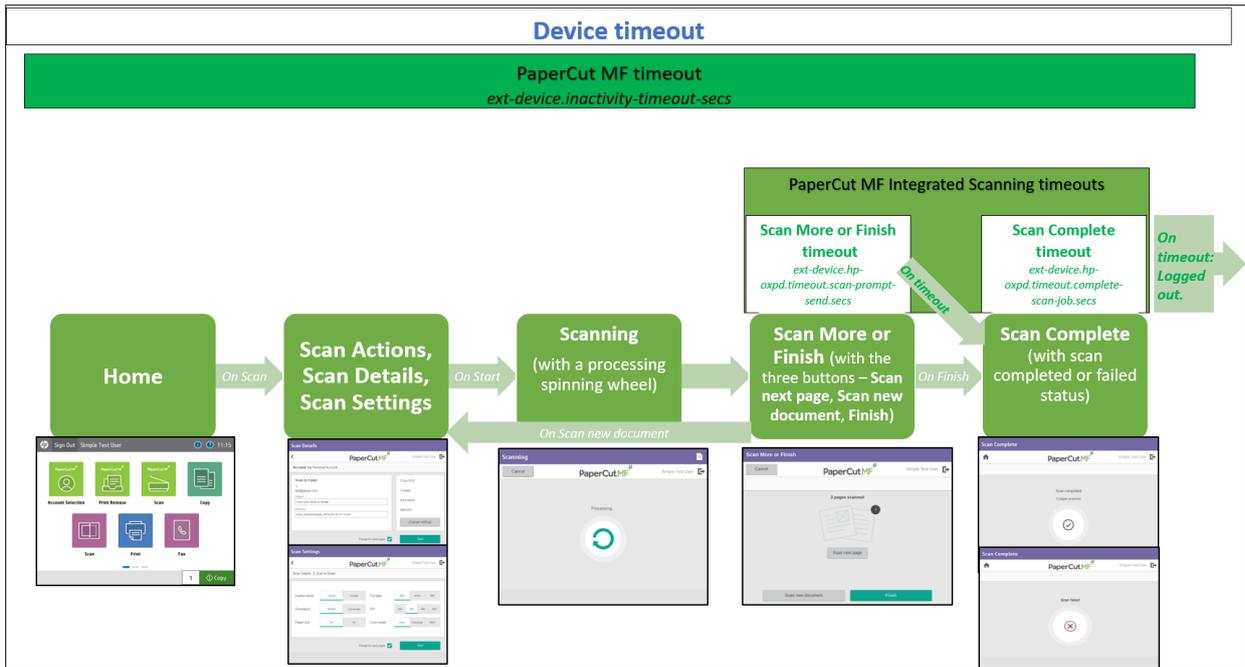
The enhanced integrated scan workflow at the device is altered as follows:



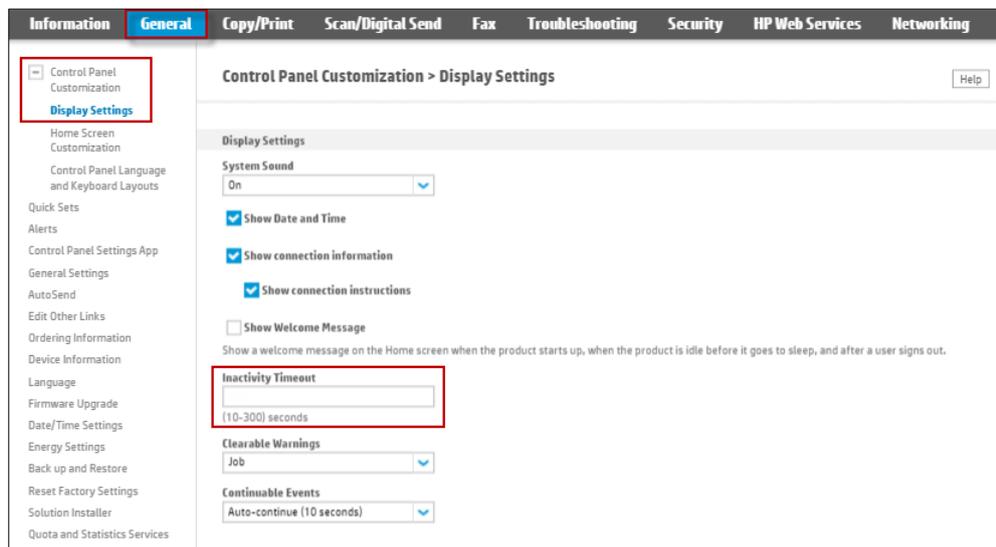


## 4.8 Timeouts

A user who is detected as being idle (on a PaperCut MF screen or a non-PaperCut MF device screen) is automatically logged out after a certain interval of time, based on the following conditions:



- **Device timeout** - If the user is idle on a non-PaperCut MF device screen, then the user is logged out based on the device’s timeout. To configure the device’s timeout:
  - a. Log in to the device’s web interface as an administrator.
  - b. Navigate to **General > Control Panel Customization > Display Settings**.
  - c. In **Inactivity Timeout**, enter the required device timeout.



**Note:** If the user is idle on a non-PaperCut MF device screen, then the user is logged out based on this value. However, if the user is idle on a PaperCut MF screen and if this value is lower than the PaperCut MF timeout (the config key **ext-device.inactivity-timeout-secs**), then the user is logged out based on this value (i.e. this value supersedes and overrides the higher value of the config key). For more information, see [4.8 Timeouts](#) and [4.13 Config Editor](#).

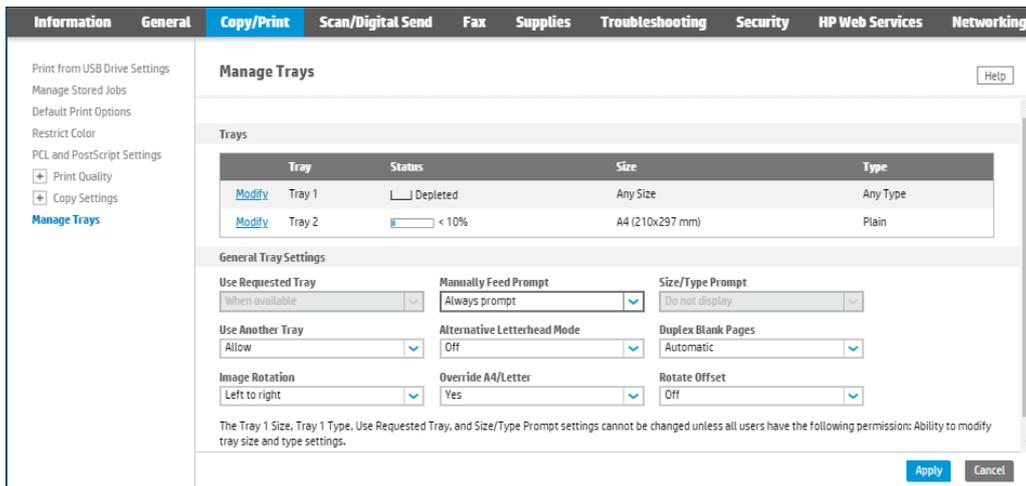
- d. Click **Apply**.

- **PaperCut MF timeout** - If the user is idle on a PaperCut MF screen, then the user is logged out based on the config key **ext-device.inactivity-timeout-secs** or the device’s timeout, whichever has the lower value. For more information, see [4.13 Config Editor](#).
- **PaperCut MF integrated scanning timeouts** – If the user is using Integrated Scanning, then timeouts are based on the following config keys:
  - **PaperCut MF Scan More or Finish timeout** - ext-device.hp-oxpd.timeout.scan-prompt-send.secs
  - **PaperCut MF Scan Complete timeout** - ext-device.hp-oxpd.timeout.complete-scan-job.secs
 For more information, see [4.13 Config Editor](#)

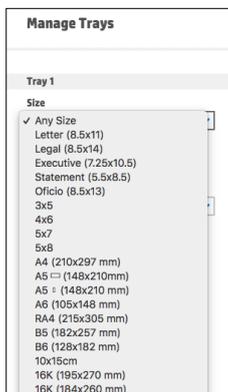
## 4.9 Device’s Manage Trays settings

To configure the device’s Manage Trays settings:

1. Log in to the device’s web interface as an administrator.
2. Navigate to **Copy/Print > Manage Trays**:



3. In **Trays**, click **Modify** for the required tray you are modifying.
4. In **Size** and **Type**, select the required paper size and type for this tray:



5. Click **Apply**.

**Note:** If the **Size** and **Type** fields do not display required dropdown options, then see [6.10 Paper trays are not configurable](#).

## 4.10 Device's Control Panel Language and Keyboard Layouts settings

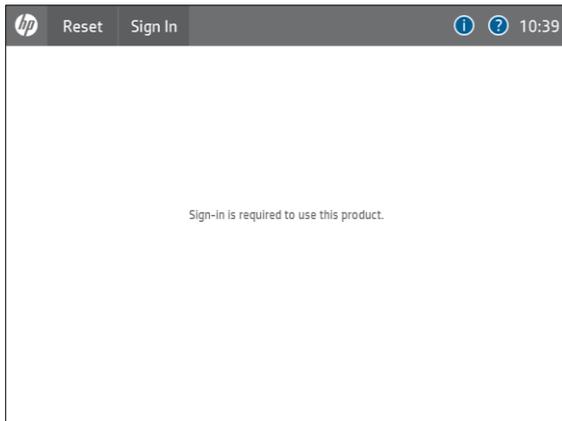
To configure the device's Control Panel Language and Keyboard Layouts settings:

1. Log in to the device's web interface as an administrator.
2. Navigate to **General > Control Panel Customization > Control Panel Language and Keyboard Layouts**.
3. Set the **Control Panel Language and Keyboard Layouts** fields as required.
4. Click **Apply**.

## 4.11 Device's first screen message

**Note:** This is only applicable to devices running **HP FutureSmart 4 Firmware Bundle Version 4.5.5 or above**. For more information, see [6.3 Device's first screen and login workflow](#).

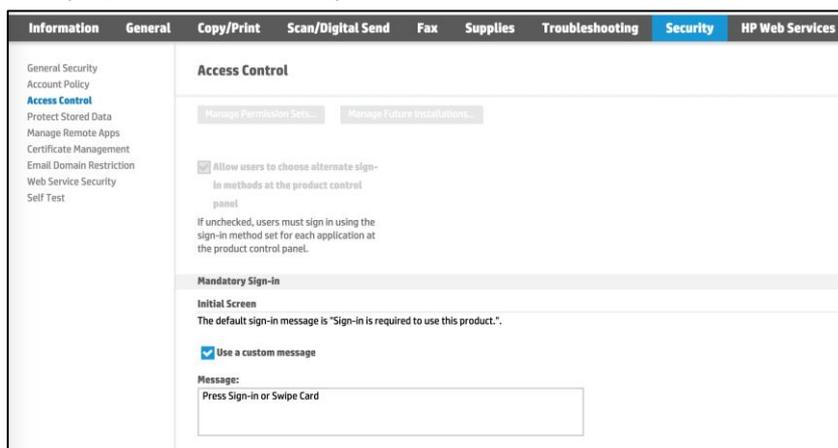
The first screen on devices running **HP FutureSmart 4 Firmware Bundle Version 4.5.5 or above**, is usually a white screen with the following default message, which you can customize:



To customize the device's first screen message:

1. Log in to the device's web interface as an administrator.
2. Navigate to **Security > Access Control**.
3. In **Mandatory Sign-In > Initial Screen**, select **Use a custom message**.
4. In **Message**, enter the required text.

For example, instructions to help users access the device.



5. Click **Apply**.

## 4.12 Screen headers

### 4.12.1 Header colors

To customize the colors (background and text) of the headers on all PaperCut MF screens:

1. Use the following config keys:  
**ext-device.hp-oxpd.header.color**  
**ext-device.hp-oxpd.header.textcolor**  
 For more information, see [4.13 Config Editor](#).
2. Log in to the device as a test user (simple test user).
3. Verify that the device's header background and text colors are as required.

### 4.12.2 Header logo

To customize the logo on the headers of all PaperCut MF screens:

1. Create the device’s header logo as per the following specifications:
  - Image height = 50 pixels
  - Image width = 360 pixels
  - Image file format = .png
  - Image filename = logo.png
  - Image file location = [PaperCut Install Location]\server\custom\web\device\hp-oxp\
2. Log in to the device as a test user (simple test user).
3. Verify that the device’s header logo is as required.

### 4.13 Config Editor

PaperCut MF provides you with several global and device-specific config keys that you can modify to suit your environment. While some keys are *only* global (impacting PaperCut MF on all devices) or *only* device-specific (impacting PaperCut MF on the selected device), other keys are *both* global *and* device-specific simultaneously. Such keys initially inherit their global settings (GLOBAL) as their default settings. However, changes made at the device-level overrides these globally inherited default settings.

To configure the device using the available global config keys (impact PaperCut MF on all devices):

1. Log in to the PaperCut MF Admin web interface.
2. Navigate to **Options > Actions > Config editor (advanced)**.  
**Note:** For more information, see the [PaperCut MF manual](#).

To configure the device using the available device-specific config keys (impact PaperCut MF on the selected device):

1. Log in to the PaperCut MF Admin web interface.
2. Navigate to **Devices**.
3. Select the required device.
4. Click **Advanced Config**.

The available config keys are:

| Config name                                 | Description   |
|---|---|
| <b>Device screens</b>                       |   |
| <b>ext-device.hp-oxpd.login-instruction</b> | <p>Customize the text that appears on the PaperCut MF Login screen. For example, instructions to help users log in to PaperCut MF on the device.</p> <p>This is a device-specific config key.</p> <ul style="list-style-type: none"> <li>• Values: Any text, DEFAULT</li> </ul> |

- 
- Default: DEFAULT (device-specific PaperCut MF text)

**Note:** To add a line break, use `\n`. For example, *PaperCut Software\nSwipe your card to log in.*

---

**ext-device.hp-oxpd.login.id-field.numeric**

Toggle whether the login ID field contains only numbers. When enabled a soft number pad is displayed in place of the soft keyboard.

This is a device-specific config key.

- Values: Y, N, DEFAULT
- Default: DEFAULT (N)

**Note:** Some device/firmware combinations may not have this feature, and will display the soft keyboard instead.

---

**ext-device.hp-oxpd.guest-access.label**

Customize the text of the **Guest** button that appears on the PaperCut MF Login screen.

This is a device-specific config key.

- Values: Any text, DEFAULT
- Default: DEFAULT (Guest)

**Note:** This is only applicable if **guest access** is activated (**Allow guest/anonymous access** is selected and at least any one other option is also selected). For more information, see [4.3 User authentication options](#).

---

**ext-device.hp-oxpd.header.color**

Customize the background color of headers on all PaperCut MF screens.

This is a device-specific config key.

- Values: #RRGGBB (hexadecimal web/ HTML notation of Red:Green:Blue), DEFAULT
- Default: DEFAULT (dark green)

**Note:** For more information, see [4.12.1 Header colors](#).

---

**ext-device.hp-oxpd.header.textcolor**

Customize the text color of headers on all PaperCut MF screens.

This is a device-specific config key.

- Values: #RRGGBB (hexadecimal web/ HTML notation of Red:Green:Blue), DEFAULT

- 
- Default: DEFAULT (white)

**Note:** For more information, see [4.12.1 Header colors](#).

---

**ext-device.hp-oxpd.release-show-cost**

Toggle the display of the cost of held print jobs on the PaperCut MF Print Release and Print Settings screens.

This is a device-specific config key.

- Values: Y, N
- Default: Y

**Note:** Setting this to N –

- hides the account balance, and
- does not display the savings based on other changes made to held print job settings.

For more information, see [4.6.2 User selection of job attributes](#).

---

**ext-device.hp-oxpd.register.account-selection**

Toggle the display of the **PaperCut MF Account Selection** icon on the device' Home screen.

This is a device-specific config key.

- Values: Y, N
- Default: Y

**Note:** For more information, see [4.7.2 User selection of an account](#).

---

**ext-device.hp-oxpd.account-list.limit**

Specify the maximum number of applicable shared accounts displayed on the PaperCut MF Account Selection screen.

This is a device-specific config key.

- Values: 1-500
- Default: 100

**Note:** For more information, see [4.7.2 User selection of an account](#).

---

**ext-device.hp-oxpd.release.list-limit**

Specify the maximum number of print jobs that display on the Papercut MF Print Release screen.

This is a device specific config key.

- Values: any positive integers
-

- 
- Default: DEFAULT

Default setting will display all print jobs accessible by the user.

---

**ext-device.hp-oxpd.permission.server-managed**

Configure access permissions for the additional device jobs using:

- PaperCut MF, or
- the device's web interface

This is a device-specific config key.

- Values: Y (configure access permissions using PaperCut MF), N (configure access permissions using device's web interface)
- Default: Y

**Note:**

- Setting this to Y –
    - uses PaperCut MF to configure access permissions for the additional device jobs.
    - requires PaperCut MF's config keys **ext-device.hp-oxpd.permission.whitelist** and **ext-device.hp-oxpd.guest.permission.whitelist** to be configured.
    - overrides access permissions configured on the device's web interface.
  - Setting this to N –
    - uses the device's web interface to configure access permissions for the additional device jobs.
    - requires the device's web interface's Access Control settings to be configured.
    - overrides access permissions configured via PaperCut MF's config keys **ext-device.hp-oxpd.permission.whitelist** and **ext-device.hp-oxpd.guest.permission.whitelist**
  - For more information, see [4.7.1.1 Additional device jobs](#).
-

---

**ext-device.hp-oxpd.permission.whitelist**

Specify the additional device jobs that only authenticated users can access.

This is a device-specific config key.

- Values: \* (all the following additional device jobs), any one or a comma-separated combination of the following additional device jobs (not case sensitive):
  - Copy
  - Copy/Print
  - Scan
  - USB Drive
  - Network Folder
  - Email
  - Scan to USB Drive
  - Scan to Job Storage
  - Scan to Network Folder
  - Scan to SharePoint<sup>®</sup>
  - Print from Job Storage
  - Print from USB Drive
  - Print in color
  - Scan/Digital Send
  - Ability to edit the network folder path
  - Load Scan to Network Folder Quick Set
  - Load Scan to USB Drive Quick Set
  - 1-sided copy output
  - Make a Color Copy
  - Load Copy Quick Set
  - Fax
  - Load Fax Quick Set
  - Ability to edit the From field for email
  - Ability to edit the To field for email
  - Ability to edit the CC field for email
  - Ability to edit the BCC field for email
  - Ability to edit the Subject field for email
  - Ability to edit the body of an email
  - Load Email Quick Set
- Default: \* (all the above additional device jobs)

**Note:**

- This is only applicable if the config key **ext-device.hp-oxpd.permission.server-managed** is set to **Y**.

- 
- This is not an exhaustive list of all the additional device jobs. For more information, see the log file located in: `[PaperCut MF Install Location]\server\logs\hp-oxp-installed-apps.log`
  - Ensure this does not contradict the settings configured on the PaperCut MF Admin web interface (see [4.7.1 Tracking device jobs](#)). For example, if this config key contains **Scan to SharePoint<sup>®</sup>**, then PaperCut MF must track scanning (i.e. the **Track & control scanning** checkbox must be selected). If there is a contradiction, the device displays the **Quota service error** (see [6.8 "Quota service error"](#)).
  - To ensure the device's paper trays are configurable, do not include the value **Ability to modify tray size and type settings**. For more information, see [4.9 Device's Manage Trays settings](#) and [6.10 Paper trays are not configurable](#).

---

**ext-device.hp-oxpd.guest.permission.whitelist**

Specify the additional device jobs that unauthenticated users can access.

This is a device-specific config key.

- Values: any one or a comma-separated combination of the additional device jobs (not case sensitive) listed in the log file located in: `[PaperCut MF Install Location]\server\logs\hp-oxp-installed-apps.log`

**Note:**

- This is only applicable if the config key **ext-device.hp-oxpd.permission.server-managed** is set to **Y**.
  - Ensure this does not contradict the settings configured on the PaperCut MF Admin web interface (see [4.7.1 Tracking device jobs](#)). For example, if this config key contains **Scan to SharePoint<sup>®</sup>**, then PaperCut MF must track scanning (i.e. the **Track & control scanning** checkbox must be selected). If there is a
-

contradiction, the device displays the **Quota service error** (see [6.8 "Quota service error"](#)).

- This alters the device's first screen and the resulting login workflow on devices running **HP FutureSmart 4 Firmware Bundle Version is 4.5.5 or above**. For more information, see [6.3 Device's first screen and login workflow](#).
- To ensure the device's paper trays are configurable, include the value **Ability to modify tray size and type settings**. For more information, see [4.9 Device's Manage Trays settings](#) and [6.10 Paper trays are not configurable](#)

**ext-device.hp-oxpd.scan.prompt.checkbox.checked**

Specify the default setting of the PaperCut MF Scan screens' **Prompt for more pages** checkbox (checked or unchecked) and the display of the PaperCut MF Scan More or Finish screen (with the three buttons – **Scan next page, Scan new document, Finish**).

This is a device-specific config key.

- Values: Y (checked by default; can be changed by the user), N (unchecked by default; can be changed by the user)
- Default: Y

**Note:** For more information, see [4.7.5.1 Integrated scan workflow](#).

## "Swipe card" authentication option

**ext-device.hp-oxpd.fast-swipe-login-flow**

Enable or disable quick swipe-to-login.

This is a device-specific config key.

- Values: Y (quick swipe-to-login), N (standard swipe-to-login), DEFAULT
- Default: DEFAULT (N)

**Note:**

- This is only applicable if the **Swipe card** authentication option is selected. For more information, see [4.3 User authentication options](#) and [4.4 User authentication via swipe cards](#).
- Setting this to Y –

- 
- enables quick swipe-to-login
  - could also cause some issues, based on the device's **HP FutureSmart 4 Firmware Bundle Version**. For more information about compatible versions, see the [Known Issues with HP \(PaperCut MF\)](#) page.

---

**ext-device.hp-oxpd.skip-hid-restart**

Specify whether or not the device skips the HID restart when a user logs in with a swipe card.

This is a device-specific config key.

- Values: Y, N
- Default: DEFAULT (N)

**Note:**

- Setting this to Y – Enables skipping the HID restart during card swiping. The login time might be reduced to approximately 3-6 seconds.
- Setting this to N – Disables skipping the HID restart during card swiping.

---

**ext-device.hp-oxpd.register.card-reader**

Specify whether or not PaperCut MF is allowed to automatically register and establish an exclusive lock on card readers that are detected on the device.

This is a device-specific config key.

- Values: Y, N
- Default: Y

**Note:**

- Setting this to Y – only allows PaperCut MF to exclusively use card readers, preventing third-party applications from using them. This is only recommended if the **Swipe card** authentication option is selected. For more information, see [4.3 User authentication options](#) and [4.4 User authentication via swipe cards](#)
  - Setting this to N – allows third-party applications to use card readers. This is recommended if card readers are not used
-

---

by PaperCut MF for swipe card authentication.

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---

**ext-device.hp-oxpd.additional-card-readers.vid-pid.hex**

Specify the card readers that are supported by PaperCut MF, in addition to the list of already supported card readers.

This is a device-specific config key.

- Values: any one or a comma-separated list of *0xVID:0xPID* of card readers (hexadecimal web/HTML notation). For example, for the *Bio-Buddy Converter*, specify *0x2f9f:0x0110*.

**Note:** This is only applicable if the **Swipe card** authentication option is selected. For more information, see [4.3 User authentication options](#) and [4.4 User authentication via swipe cards](#), [4.4.1 Supported card readers](#).

---

**ext-device.card-self-association.use-secondary-card-number**

Specify the use of the primary or the secondary card number slot to save card identifiers during card self-association.

This is a global and device-specific config key.

Device-specific:

- Values: Y, N, GLOBAL (inherited from global settings)
- Default: GLOBAL (inherited from global settings)

Global:

- Values: N (Primary), Y (Secondary)
- Default: N

**Note:** This is only applicable if the **Swipe card - Enable self-association with existing user accounts** authentication option is selected. For more information, see [4.3 User authentication options](#)

---

**ext-device.self-association-allowed-card-regex**

Specify the regular expression filter to be used to validate card identifiers during card self-association.

This is a device-specific config key.

- Values: Any valid regular expression, DEFAULT
-

- 
- Default: DEFAULT

**Note:** This is only applicable if the **Swipe card - Enable self-association with existing user accounts** authentication option is selected. For more information, see [4.3 User authentication options](#) and [4.4.2 Handling card identifiers](#).

---

**ext-device.card-no-regex**

Specify the regular expression filter to be used to extract card identifiers for authentication.

This is a global and device-specific config key.

Device-specific:

- Values: Any valid regular expression, GLOBAL (inherited from global settings)
- Default: GLOBAL (inherited from global settings)

Global:

- Values: Any valid regular expression

**Note:** This is only applicable if the **Swipe card** authentication option is selected. For more information, see [4.3 User authentication options](#) and [4.4.2 Handling card identifiers](#).

---

**ext-device.card-no-converter**

Specify the converters (standard format converters, custom JavaScript converters, or both) to be used to modify card identifiers for authentication

This is a global and device-specific config key.

Device-specific:

- Values: Any valid converter (standard format converters, custom JavaScript converters, or both), GLOBAL (inherited from global settings)
- Default: GLOBAL (inherited from global settings)

Global:

- Values: Any valid converter (standard format converters, custom JavaScript converters, or both)

**Note:** This is only applicable if the **Swipe card** authentication option is selected. For more information,

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see [4.3 User authentication options](#) and [4.4.2 Handling card identifiers](#).

### Job costs and account balances (Zero Stop)

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#### **ext-device.hp-oxpd.limit-reference.duplex**

When configuring the Reference Page Cost that is used to calculate the maximum number of Reference Pages Allowed for copy, scan and fax jobs, specify whether the Reference Page used is a simplex page or a duplex page.

This is a device-specific config key.

- Values: N (simplex), Y (duplex)
- Default: N

**Note:** For more information, see [4.7.3.1 Reference Page Cost and maximum number of Reference Pages Allowed](#).

---

#### **ext-device.hp-oxpd.limit-reference.grayscale**

When configuring the Reference Page Cost that is used to calculate the maximum number of Reference Pages Allowed for copy, scan and fax jobs, specify whether the Reference Page used is a color page or a grayscale page

This is a device-specific config key.

- Values: Y (grayscale), N (color)
- Default: Y

**Note:** For more information, see [4.7.3.1 Reference Page Cost and maximum number of Reference Pages Allowed](#).

---

#### **ext-device.hp-oxpd.limit-reference.paper-size**

When configuring the Reference Page Cost that is used to calculate the maximum number of Reference Pages Allowed for copy, scan and fax jobs, specify the paper size of the Reference Page used.

This is a device-specific config key.

- Values: Any valid paper size, DEFAULT
- Default: DEFAULT (Worldwide: A4; North America: Letter)

**Note:** For more information, see [4.7.3.1 Reference Page Cost and maximum number of Reference Pages Allowed](#).

---

#### **ext-device.hp-oxpd.restricted.multiple-txns**

Specify whether or not restricted users are permitted to perform multiple transactions simultaneously on the

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device. For example, perform a copy job while another print job is in progress.

This is a device-specific config key.

- Values: N (multiple transactions not permitted), Y (multiple transactions permitted)
- Default: N

**Note:**

- This is only applicable to restricted users.
- Setting this to N – is recommended to ensure that restricted users' account balances do not drop below zero.
- For more information, see [4.7.3.2 Multiple Jobs](#).

## Network resilience, security, debug logs, uninstallation

### **system.network-address**

Specify the network IP address or FQDN (Fully Qualified Domain Name) of the PaperCut MF Application Server that the device uses to make inbound connections.

This is a global config key.

- Values: Network IP address or FQDN (Fully Qualified Domain Name) of the PaperCut MF Application Server used by the device for inbound connections.

**Note:** For more information, see [4.1.1 Inbound connections to PaperCut MF Application Server](#).

---

### **ext-device.hp-oxpd.use-ssl**

Toggle the use of the encrypted, secure HTTPS (SSL/TLS) protocol for communication between PaperCut MF and the device.

This is a device-specific config key.

- Values: N (TCP/HTTP), Y (SSL/TLS/HTTPS)
- Default: N (TCP/HTTP)

**Note:** Ensure to set the config key **ext-device.hp-oxpd.port-num** as required.

For more information, see [4.2.1 HTTPS Security \(recommended\)](#).

---

---

**ext-device.hp-oxpd.port-num** Specify the port of the device to be used for communication between PaperCut MF and the device.

This is a device-specific config key.

- Values: 80 (TCP/HTTP), 443 (SSL/TLS/HTTPS), any other valid port number based on your networking/firewall configuration
- Default: 80 (TCP/HTTP)

**Note:** Ensure to set the config key **ext-device.hp-oxpd.use-ssl** as required.

For more information, see [4.2.1 HTTPS Security \(recommended\)](#).

---

**ext-device.hp-oxpd.period.ping** Specify the interval of time (seconds) between each attempt made by PaperCut MF to connect to the device.

This is a device-specific config key.

- Values: 1-3600 (seconds)
- Default: 300 (seconds)

---

**ext-device.hp-oxpd.period.error** Specify the interval of time (seconds) between each attempt made by PaperCut MF to connect to the device, after encountering an error when installing PaperCut MF on the device (i.e. device registration and integration).

This is a device-specific config key.

- Values: 1-3600 (seconds)
- Default: 60 (seconds)

---

**ext-device.hp-oxpd.device-setup-complete.delay-secs** Specify the interval of ramp-up time (seconds) following device registration after which the device can be used.

This is a device-specific config key.

- Values: 0-20 (seconds)
- Default: 5 (seconds)

**Note:** Use this only if there is an open support ticket with PaperCut Support.

---

**ext-device.block-release-on-error.snmp-error-list** Specify the errors that will prevent jobs from being released.

This is a global config key.

---

- Values: DEFAULT, any one or a comma-separated combination of the following printer error types (not case sensitive):
  - lowPaper
  - noPaper
  - lowToner
  - noToner
  - doorOpen
  - jammed
  - offline
  - serviceRequested
  - inputTrayMissing
  - outputTrayMissing
  - markerSupplyMissing
  - outputNearFull
  - outputFull
  - inputTrayEmpty
  - overduePreventMaint
- Default: DEFAULT (noPaper, doorOpen, jammed, offline, inputTrayMissing, outputTrayMissing, markerSupplyMissing, outputFull)

---

**ext-device.block-release-on-error.snmp-byte-order-mode**

Specify the byte order used to notify PaperCut MF of printer errors.

This is a global config key.

- Values: FORWARD, REVERSE, DEFAULT
- Default: DEFAULT (FORWARD)

**Note:**

- Setting this to DEFAULT – is recommended if you do not know the byte order used by the device.
- Setting this to REVERSE – is recommended if SNMP notifications are incorrect.

## Timeouts

**ext-device.inactivity-timeout-secs**

**PaperCut MF timeout:** Specify the interval of time (seconds) after which a user who is detected as being idle on PaperCut MF is automatically logged out.

This is a device-specific config key.

- Values: Any positive number (seconds)

- Default: 60 (seconds)

**Note:** This is only applicable if it is lower than the value of the device's timeout. However, if it is higher, then it is overridden by the lower value of device's timeout. For more information, see [4.8 Timeouts](#).

**ext-device.hp-oxpd.timeout.scan-prompt-send.secs**

**PaperCut MF Scan More or Finish timeout:** Specify the interval of time (seconds) after which a user who is detected as being idle on the PaperCut MF Scan More or Finish (with the three buttons – **Scan next page**, **Scan new document**, **Finish**) screen is automatically taken to the PaperCut MF Scan Complete (with scan completed or failed status). The process of sending the completed scan job to the user (scan transfer) is also automatically initiated, and the user is logged out.

This is a device-specific config key.

- Values: Any positive integer, DEFAULT
- Default: DEFAULT (30 seconds)

**Note:** This timeout temporarily deactivates the PaperCut MF timeout (**ext-device.inactivity-timeout-secs**) and the device timeout. For more information, see [4.8 Timeouts](#).

**ext-device.hp-oxpd.timeout.complete-scan-job.secs**

**PaperCut MF Scan Complete timeout:** Specify the interval of time (seconds) after which a user who is detected as being idle on the PaperCut MF Scan Complete screen (with scan completed or failed status), is automatically logged out.

This is a device-specific config key.

- Values: Any positive integer, DEFAULT
- Default: DEFAULT (5 seconds)

**Note:** This timeout temporarily deactivates the PaperCut MF timeout (**ext-device.inactivity-timeout-secs**) and the device timeout. For more information, see [4.8 Timeouts](#).

## Enhanced user workflow

**ext-device.hp-oxpd.enhanced-mode**

This is a global and device-specific config key.

Global:

- Values: Y, N, DEFAULT (currently N)

- 
- Default: DEFAULT

**Note:** If you have a firmware that supports enhanced mode, and want a consistent experience across your fleet change the PaperCut MF global configuration key `ext-device.hp-oxpd.enhanced-mode` From DEFAULT to Y. DEFAULT behavior is off in 21.0.

Device-specific:

- Values: Y, N, GLOBAL
- Default: GLOBAL (inherited from global settings)

**Note:**

- Setting this to Y or N overrides the Global Config key

---

**ext-device.hp-oxpd.direct-to-release-page**

This is a device-specific config key.

Device-specific:

- Values: Y, N
- Default: N

**Note:**

Setting this to Y configures to login directly to print release.

---

**ext-device.hp-oxpd.skip-release-screen-when-no-jobs**

This is a device-specific config key.

Device-specific:

- Values: Y, N
- Default: N

**Note:**

This key is relevant only if **ext-device.hp-oxpd.direct-to-release-page** is set to Y. Setting this also to Y, configures to login directly to print release, but to home screen if no jobs to release

---

---

## 4.14 Customization

### 4.14.1 Home screen Application Icons:

From version 20.0.3, to customize Papercut MF application logos on the device Home screen, put the logo images under the custom folder on the server:

```
<Papercut MF Installed folder>/server/custom/web/device/hp-oxp
```

The custom icons should match the respective app icon name to replace default Papercut MF icon

- **account\_icon\_big.png**: Account Selection app
- **release\_icon\_big.png**: Print Release app
- **scan\_icon\_big.png**: Integrated Scanning app

To change logos on an existing device, apply some changes that triggers device re-registration such as changing authentication method.

## 5 Known Limitations

### 5.1 Limitations of the configured Reference Page Cost and maximum number of Reference Pages Allowed

The Reference Page Cost that is used to calculate the maximum number of Reference Pages Allowed for copy, scan and fax jobs have the following limitations.

#### 5.1.1 Limitation 1: Reference Page Cost is unavailable for on-device print jobs

The Reference Page Cost that is used to calculate the maximum number of Reference Pages Allowed for device jobs is only available for copy, scan and fax jobs. It is unavailable for on-device print jobs. As a result, when printing from a USB or storage device, a restricted user's account balance can drop below zero.

#### 5.1.2 Limitation 2: Reference Page Cost is lower than the actual per page cost

If the Reference Page Cost is lower than the actual per page cost of the restricted user's copy, scan or fax job, then the restricted user's account balance could drop below zero. This is because the cost of the equivalent number of pages of the actual job would be much higher than the cost of the same number of Reference Pages Allowed.

#### Example – Reference Page Cost is lower than actual job cost

The following is an example of what could happen if the Reference Page Cost is based on an A4 paper size (which costs less than Letter), but the actual job is a Letter paper size. The job is allowed, and the restricted user's account balance drops below zero.

- **Account's opening balance = \$4.50**
- **Attributes and costs of references:**
  - Configured attribute of one Reference Page = A4
  - Calculated cost of one Reference Page = \$1.00

- Maximum number of Reference Pages Allowed = 4
- Total cost of maximum number of Reference Pages Allowed = \$4
- **Account's closing balance using References** = \$0.50 (*actual job is allowed*)
- **Attributes and costs of actuals:**
  - Attribute of actual page = Letter
  - Cost of actual page = \$1.50
  - Number of actual pages = 4
  - Total cost of actual pages = \$6
  - **Account's closing balance using actuals** = \$-1.50 (*account balance is negative*)

### 5.1.3 Limitation 3: Reference Page Cost is higher than the actual per page cost

If the Reference Page Cost is higher than the actual per page cost of the restricted user's copy, scan or fax job, then even if the restricted user's account balance has enough funds to cover the actual cost of the job, the following could occur:

- the user could be incorrectly prevented from starting a scan, copy, fax job,
- the user could be prematurely stopped in the middle of a scan, copy, fax job.

This is because the cost of the number of Reference Pages Allowed would be higher than the cost of the equivalent number of pages of the actual job.

#### Example – Reference Page Cost is higher than actual job cost

The following is an example of what could happen if the Reference Page Cost is based on a Letter paper size (which costs more than A4), but the actual job is an A4 paper size. The job is not allowed although the account balance has enough funds to cover the job without dropping below zero.

- **Account's opening balance** = \$1.50
- **Attributes and costs of references:**
  - Configured attribute of one Reference Page = Letter
  - Calculated cost of one Reference Page = \$2.00
  - Maximum number of Reference Pages Allowed = 0 (*actual job is not allowed*)
- **Attributes and costs of actuals:**
  - Attribute of actual page = A4
  - Cost of actual page = \$0.50
  - Number of actual pages = 2
  - Total cost of actual pages = \$1.00
  - **Account's closing balance using actuals** = \$0.50 (*account balance would not have been negative, if the actual job was allowed*)

### 5.1.4 Limitation 4: Application of Reference Page Cost is slightly delayed for copy, fax and simplex scan jobs

While a restricted user's copy, scan or fax job is in progress, if the maximum number of Reference Pages Allowed is reached, then PaperCut MF's ability to stop the job is delayed by:

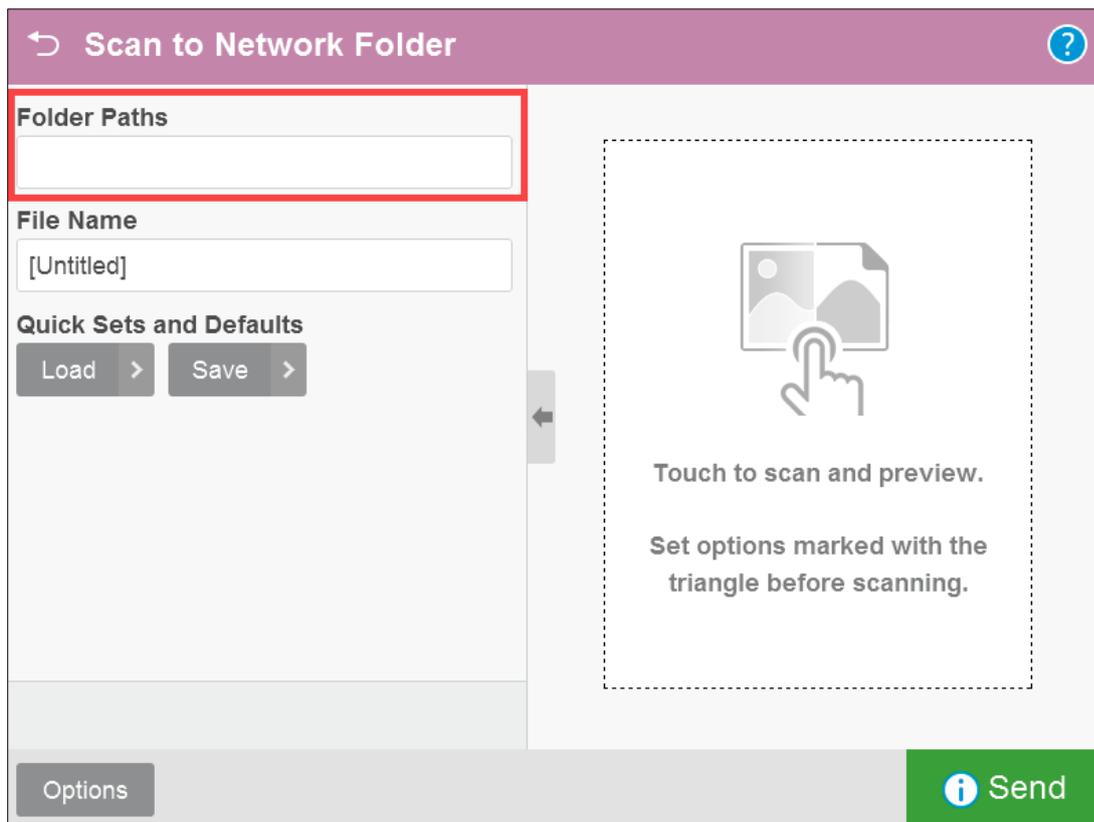
- 8 copied or faxed sheets of paper from when it is detected. As a result, when copying or faxing, a restricted user's account balance can drop below zero for a maximum of the cost of

8 copied or faxed sheets of paper. The 8 copied or faxed sheets of paper could be 8 simplex or 16 duplex copied or faxed pages.

- 1 simplex scanned page from when it is detected. As a result, when simplex scanning, a restricted user's account balance can drop below zero for a maximum of the cost of 1 simplex scanned page.

## 5.2 The configured user home directory network path is not auto-populated on the device's Scan to Network Folder

While creating and configuring users in PaperCut MF, the user home directory network path is usually configured for all users (**Users > User List > User Details > Home directory**). However, this path is *NOT* auto-populated on the **Scan to Network Folder** screen's **Folder Path**:



As a result, to enable users to use **Scan to Network Folder** on the device, you must configure it on the device's web interface. For more information, see [4.7.4.2 Device's Scan to Network Folder settings](#).

## 5.3 Some paper sizes are unsupported

Charges for some unsupported paper sizes cannot be configured on the device's **Device Details > Charging** page (they do not appear as an option in the **Add Size** field). As a result, the charge applied if using any of these paper sizes, is the default charge that is set on the **Device Details > Charging** page.

The list of unsupported paper sizes includes:

- Envelope\_A2\_4point375x5point75in

- Envelope\_Catalog1\_6x9in
- Envelope\_Comm6point75\_3point625x6point5in
- Envelope\_Monarch\_3point875x7point5in
- Envelope\_Windsor\_3point875x8point875in
- Invoice\_5point5x8point5in
- JBusinessCard\_55x91mm
- JDoublePostcard\_148x200mm
- JDoublePostcard\_Rotated\_148x200mm
- JIS\_Chou3\_120x235mm
- JIS\_Chou4\_90x205mm
- JIS\_Exec\_216x330mm
- JIS\_Kaku2\_240x332mm
- JPostcard\_100x148mm
- LongScan\_8point5x34in
- Mutsugiri\_203x254mm
- ISO\_A\_8\_52\_X\_74\_MM
- ISO\_A\_9\_37\_X\_52\_MM
- ISO\_A\_10\_26\_X\_37\_MM
- ISO\_B\_8\_62\_X\_88\_MM
- ISO\_B\_9\_44\_X\_62\_MM
- ISO\_B\_10\_31\_X\_44\_MM
- ISO\_C\_0\_917\_X\_1297\_MM
- ISO\_C\_1\_648\_X\_917\_MM
- ISO\_C\_2\_458\_X\_648\_MM
- ISO\_C\_7\_81\_X\_114\_MM
- ISO\_C\_8\_57\_X\_81\_MM
- ISO\_C\_9\_40\_X\_57\_MM
- ISO\_C\_10\_28\_X\_40\_MM
- JIS\_B\_0\_1030\_X\_1456\_MM
- JIS\_B\_6\_128\_X\_182\_MM
- JIS\_B\_7\_91\_X\_128\_MM
- JIS\_B\_8\_64\_X\_91\_MM
- JIS\_B\_9\_45\_X\_64\_MM
- JIS\_B\_10\_32\_X\_45\_MM
- DIN\_2\_A\_0\_1189\_X\_1682\_MM
- DIN\_4\_A\_0\_1682\_X\_2378\_MM
- ENVELOPE\_DL\_110\_X\_220\_MM
- GENERAL\_3\_POINT\_5\_X\_5\_IN
- GENERAL\_3\_X\_5\_IN
- GENERAL\_4\_X\_6\_IN
- GENERAL\_4\_X\_8\_IN
- GENERAL\_4\_X\_12\_IN
- GENERAL\_5\_X\_7\_IN

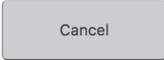
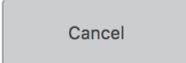
- GENERAL\_5\_X\_8\_IN
- GENERAL\_6\_X\_8\_IN
- GENERAL\_7\_X\_9\_IN
- GENERAL\_10\_X\_13\_IN
- GENERAL\_10\_X\_15\_IN
- GENERAL\_11\_X\_12\_IN
- GENERAL\_11\_X\_14\_IN
- GENERAL\_11\_X\_19\_IN
- GENERAL\_12\_X\_12\_IN
- GENERAL\_12\_X\_14\_IN
- GENERAL\_12\_X\_19\_IN

### 5.4 Scanning continues even if the feeder or glass is empty

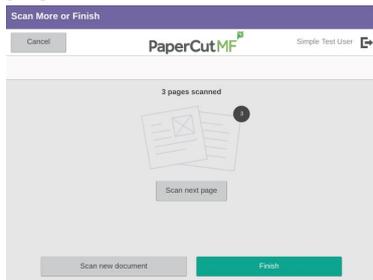
If using Integrated Scanning, the pages to be scanned must be placed on the document feeder or the glass before starting the scan. If the document feeder or the glass is empty, the device does not prompt users with a required message. Scanning continues, producing a blank scanned page that is tracked and charged.

### 5.5 The "Cancel" and "Logout" buttons behave inconsistently on the PaperCut MF Integrated Scanning screens

The "Cancel" and "Logout" buttons behave inconsistently on the PaperCut MF Integrated Scanning screens:

| PaperCut MF screen  | "Cancel" or "Logout"  | Impact  |
|---|---|---|
| The PaperCut MF Scanning screen (with a processing spinning wheel)<br> |  | <ul style="list-style-type: none"> <li>• The scan job is aborted</li> <li>• The scan job not sent to the user</li> <li>• The scan job is tracked</li> <li>• The user is charged</li> </ul>                                      |
|   |  | <ul style="list-style-type: none"> <li>• The user is logged out</li> <li>• The scan job is not aborted</li> <li>• The scan job is sent to the user</li> <li>• The scan job is tracked</li> <li>• The user is charged</li> </ul> |
| PaperCut MF Scan More or Finish screen (with the three buttons – <b>Scan next</b>   |  | <ul style="list-style-type: none"> <li>• The scan job is not aborted</li> <li>• The scan job is not sent to the user</li> <li>• The scan job is tracked</li> </ul>  |

**page, Scan new document, Finish)**



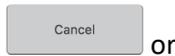
- The user is charged



- The user is logged out
- The scan job is not aborted
- The scan job is sent to the user
- The scan job is tracked
- The user is charged

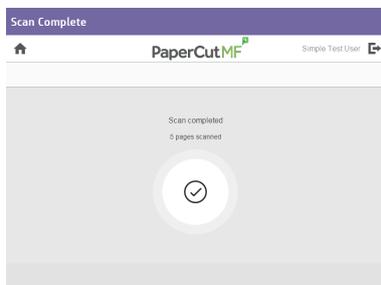


followed by



- The current scan job is aborted; it is not sent to the user; it is not tracked; the user is not charged.
- However, if there were other scan jobs before the last scan job, then those scan jobs are not aborted; the scan jobs are sent to the user; they are tracked, and the user is charged.

The PaperCut MF Scan Complete screen (with scan completed status)



- The user is logged out
- The scan job is not aborted
- The scan job is sent to the user
- The scan job is tracked
- The user is charged

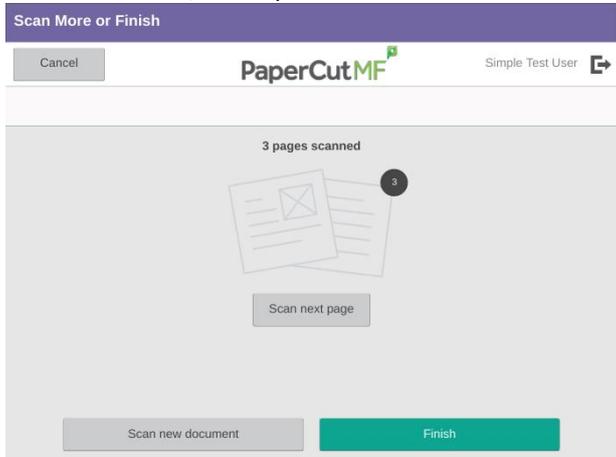
## 5.6 Impact of environmental factors on Integrated Scanning

If using Integrated Scanning, then the occurrence of some environmental changes (such as, Application Server outage, device is disconnected and restarted, network outage) when the user is on any of the following screens, causes the scan job to be tracked and the user is charged, although the scan job is not sent to the user:

- The PaperCut MF Scanning screen (with a processing spinning wheel), or



- The PaperCut MF Scan More or Finish screen (with the three buttons – **Scan next page**, **Scan new document**, **Finish**)



## 5.7 Attributes of scan job logs are unavailable

The PaperCut MF Admin web interface (**Logs > Job Log**) does not display the Attributes (page size, duplex or simplex, and color or grayscale) of scan jobs. The column is either blank or just displays invoice comments (if any).

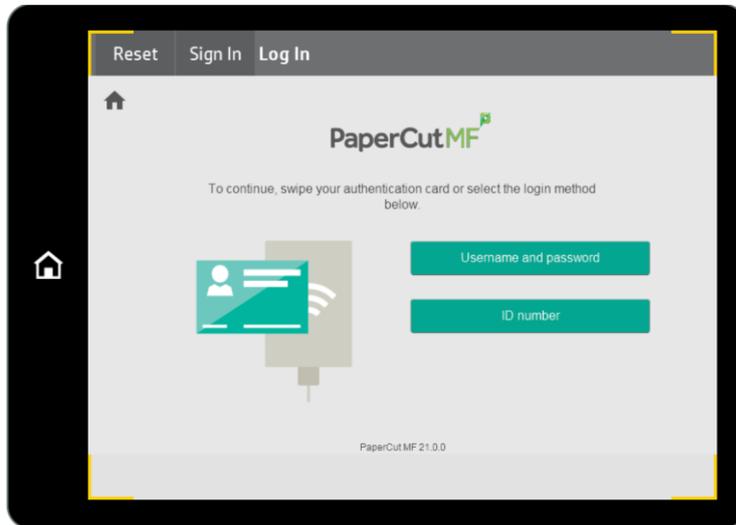
| DATE ▼                      | USER           | CHARGED TO     | PAGES | COST   | DOCUMENT NAME                                 | ATTRIBS.   | STATUS                      |
|-----------------------------|----------------|----------------|-------|--------|---|--|-----------------------------|
| Apr 26, 2018<br>10:17:30 AM | simpletestuser | simpletestuser | 1     | \$0.11 | [scanning] - scan ...<br>-5c7ba703c959-01.pdf | <br>Comment | ← Scanned<br>refund<br>edit |

## 5.8 Phonebook contacts

The list of phonebook contacts visible on the MFD can be limited using the config key **system.scan.fax.contact.max-limit**. The default limit is set to 50.

## 5.9 In enhanced mode, pressing the 'Sign In' button before swiping an authentication card might cause unexpected behaviours

When a user uses an authentication card swipe to log in in enhanced mode, they should not (and do not need to) press the **Sign In** button before swiping the card.



Pressing the Sign In button could cause the following:

- If the card is not associated with any user, and card association is not enabled, the card swipe will fail without displaying any error message.
- If the card is not associated with any user, and card association is enabled, after swiping the card, the card association screen will not be displayed.
- If the card is associated with a user, and the card swipe requires PIN, after swiping the card, the enter PIN screen will not be displayed.

## 6 FAQ & Troubleshooting

### 6.1 IP addresses of the PaperCut MF Application Server

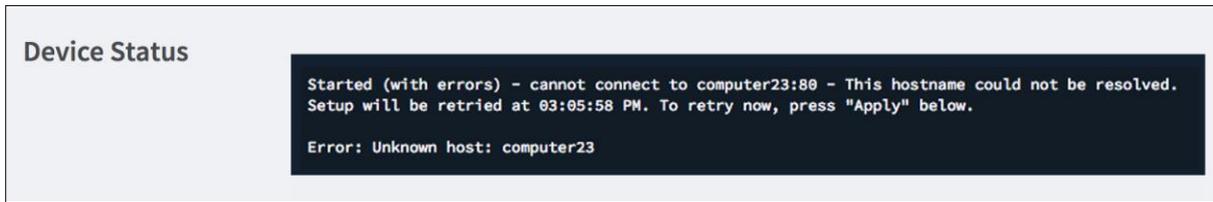
To get the IP addresses of the PaperCut MF Application Server, run any one of the following applicable commands from the command line prompt:

- For Windows: `ipconfig`
- For Linux, Mac OS: `ifconfig`

### 6.2 Device Status "Started (with errors)"

After attempting to install PaperCut MF on the device, if the **Device Status** displays **Started (with errors)**, it implies that PaperCut MF installation is unsuccessful because there are errors in the **Create**

**Device fields (Type, Device name, Hostname / IP, Device's administrator credentials)** or errors on the device or both.



To resolve this:

1. Address any device-specific errors outlined on the device.
2. Log in to the PaperCut MF Admin web interface.
3. Navigate to **Devices**.
4. Click the **Device Name** of the device displaying the error status in the **Status** column.
5. Resolve the error based on the cause and resolution as outlined in the **Device Status**.
6. Click **Apply**.

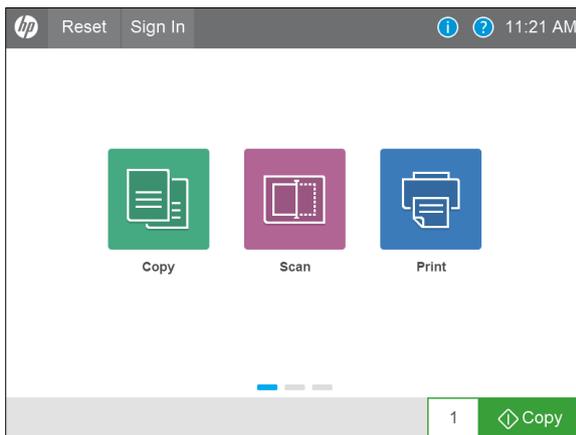
### 6.3 Device's first screen and login workflow

After PaperCut MF is successfully installed on the device, the **HP FutureSmart 4 Firmware Bundle Version** of the device determines its first screen and the resulting login workflow and actions, which could be either:

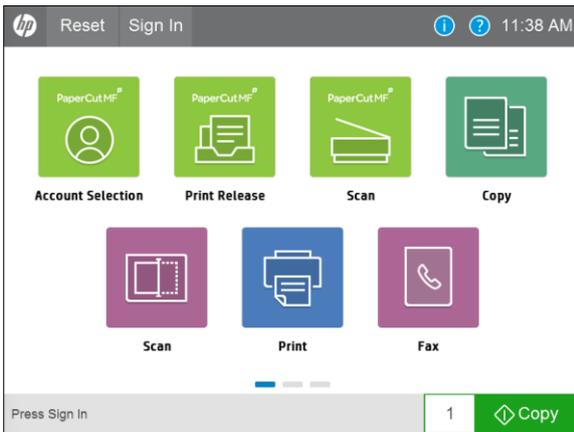
- [6.3.1 Screen with icons](#)
- [6.3.2 White screen with a message](#)

#### 6.3.1 Screen with icons

If the device's **HP FutureSmart 4 Firmware Bundle Version** is **below 4.5.5**, then the device displays a screen with the following icons:



Clicking **Reset**, displays PaperCut MF icons:

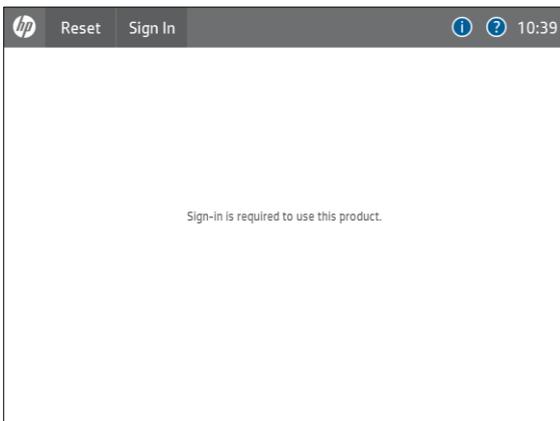


Users can access the PaperCut MF Login screen by any of the following options:

- clicking **Sign In**,
- using their swipe cards (if the **Swipe card** authentication option is selected),
- clicking any other application on the device.

### 6.3.2 White screen with a message

If the device's **HP FutureSmart 4 Firmware Bundle Version** is **4.5.5 or above**, and it does not allow unauthenticated users to access device jobs, then the device displays a white screen with the following default message (to customize this message, see [4.11 Device's first screen message](#)):



Users can access the PaperCut MF Login screen by any of the following options:

- clicking **Sign In**,
- using their swipe cards (if the **Swipe card** authentication option is selected)

**Note:** However, if unauthenticated users are allowed to access device jobs, (see, [4.7.1.1 Additional device jobs](#)) then, the device's first screen and the resulting login workflow and actions reverts to that of devices running **HP FutureSmart 4 Firmware Bundle Version below 4.5.5**. As a result, the device's first screen is a screen with the non-PaperCut MF icons, instead of the white screen with a message (see, [6.3.1 Screen with icons](#)).

## 6.4 Swipe card authentication anomalies

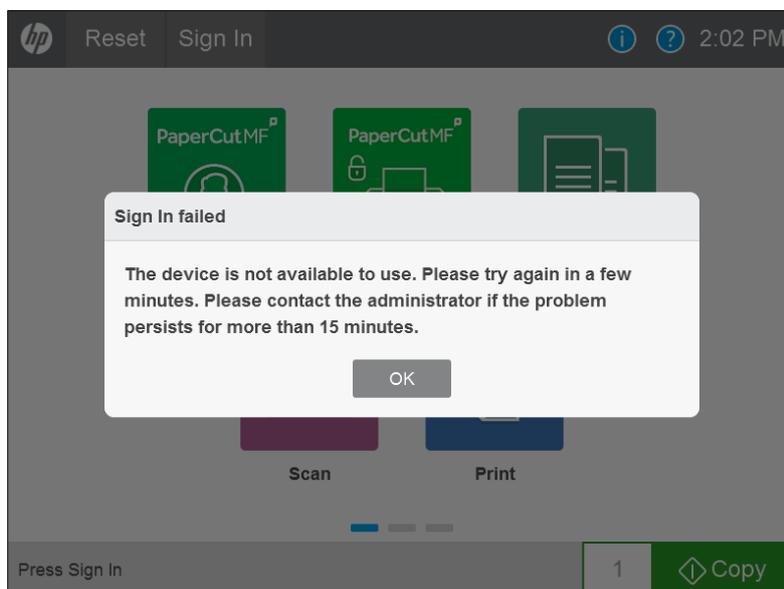
After PaperCut MF is successfully installed on the device, if swipe card authentication causes some problems during login or during card self-association, it implies that the card reader configuration on the PaperCut MF Admin web interface is incorrect.

To resolve this:

1. Log in to the PaperCut MF Admin web interface.
2. Navigate to **Devices**.
3. Select the required device.
4. In the **External Device Settings** area's **Swipe card > Configure HP Universal USB Proximity Card Reader (P/N:X3D03A)** ensure that if any one of the following card types is selected, then its conflicting other is not also selected as another card type:
  - **Either** HID Prox **or** HID Prox UID
  - **Either** MiFare CSN (Philips, NXP) **or** MiFare Ultralight CSN (Philips, NXP)
  - **Either** MiFare CSN (Philips, NXP) **or** iClass CSN, ISO1443A CSN, ISO15693A (RDR-758x Compatible)

## 6.5 "Device is not available to use" error

After PaperCut MF is successfully installed on the device, if the device displays the following error when users attempt to log in, it implies that incorrect modifications have been made to the device's settings on the **Devices > External Device List > Device Details** page:



To resolve this:

1. Log in to the PaperCut MF Admin web interface.
2. Navigate to **Devices**.
3. Click the **Device Name** of the device displaying the error status in the **Status** column.
4. Resolve the error based on the cause and resolution as outlined in the **Device Status** area.
5. Click **Apply**.

## 6.6 Device Status "Started (with errors) – Certificate error"

After attempting to enable HTTPS, if the **Device Status** displays **Started (with errors) – Certificate error**, it implies that the limited number of certificates allowed on the device has been exceeded:

**Device Status**

Started (with errors) - Certificate error.

Error: Device's certificate store has reached its maximum size. Delete unused certificates.

Last updated Mar 5, 2018 2:42:57 PM Refresh

To resolve this:

1. Log in to the device's web interface as an administrator.
2. Navigate to **Security > Certificate Management**:

| Issued To  | Issued By  | Expiration Date       | Certific |
|--|--|-----------------------|----------|
| <input checked="" type="radio"/> hp-477830.papercutssoftware.com                   | hp-477830.papercutssoftware.com                              | 13 Aug. 2022 04:18:52 | Self-Sig |
| <input type="radio"/> Baltimore CyberTrust Root                                    | Baltimore CyberTrust Root                                    | 12 May. 2025 06:59:00 | Root CA  |
| <input type="radio"/> DigiCert Assured ID Root CA                                  | DigiCert Assured ID Root CA                                  | 9 Nov. 2031 05:00:00  | Root CA  |
| <input type="radio"/> Equifax Secure Certificate Authority                         | Equifax Secure Certificate Authority                         | 21 Aug. 2018 23:41:51 | Root CA  |
| <input type="radio"/> GlobalSign Root CA   | GlobalSign Root CA   | 27 Jan. 2028 17:00:00 | Root CA  |
| <input type="radio"/> VeriSign Class 3 Public Primary Certification Authority - G5 | VeriSign Class 3 Public Primary Certification Authority - G5 | 16 Jul. 2036 06:59:59 | Root CA  |
| <input type="radio"/> hp-477830.papercutssoftware.com                              | hp-477830.papercutssoftware.com                              | 13 Aug. 2022 04:18:52 | Self-Sig |
| <input type="radio"/> hello  | hello  | 5 Oct. 2037 01:22:55  | Root CA  |

3. Delete any unused certificates.
4. Log in to the PaperCut MF Admin web interface.
5. Navigate to **Devices**.
6. Select the required device.
7. Click **Apply**.

## 6.7 The device is unable to connect to the PaperCut MF Application Server using HTTPS (SSL/TLS)

If the device is unable to connect to the PaperCut MF Application Server using HTTPS (SSL/TLS), it is because there are errors in the HTTPS configuration. To resolve this, ensure the following are configured appropriately:

- [6.7.1 Config keys](#)
- [6.7.2 FQDN \(or IP Address\)](#)

- [6.7.3 Root and Intermediary Certificates for CA-signed SSL certificates](#)
- [6.7.4 Self-signed SSL certificates](#)

### 6.7.1 Config keys

- Ensure the config key **ext-device.hp-oxpd.use-ssl** is set to **Y**. For more information, see [4.13 Config Editor](#).
- It is recommended that you set the config key **ext-device.hp-oxpd.port-num** to **443**. For more information, see [4.13 Config Editor](#).

### 6.7.2 FQDN (or IP Address)

Ensure that the Fully Qualified Domain Name (or IP address) is the same in each of the following:

- the value of the PaperCut MF config key **system.network-address**
- the `<SYSTEM-NAME>` parameter used in the `create-ssl-keystore` command when either re-generating the PaperCut MF self-signed SSL certificate or when importing an official CA-signed, trusted SSL certificate into the PaperCut MF keystore
- the **Quota Server URL** in the device’s web interface (**General > Quota and Statistics Services**)

### 6.7.3 Root and Intermediary Certificates for CA-signed SSL certificates

If using a CA-signed SSL certificate, ensure that the required Root and any required Intermediary Certificates are installed and listed on the device’s web interface:

1. Log in to the device’s web interface as an administrator.
2. Navigate to **Security > Certificate Management**.
3. In the **CA Certificates > Certificates** table, verify that the required Root and any required Intermediary Certificates are listed.

For example:

| Issued To             | Issued By                                     | Expiration Date       | Certificate Type            | Certificate Usage |
|-----------------------|---|-----------------------|-----------------------------|-------------------|
| <input type="radio"/> |   |                       |                             |                   |
| <input type="radio"/> | COMODO RSA Certification Authority            | 18 Jan, 2038 23:59:59 | Root CA Certificate         |                   |
| <input type="radio"/> | COMODO RSA Domain Validation Secure Server CA | 11 Feb, 2029 23:59:59 | Intermediate CA Certificate |                   |

**Note:**

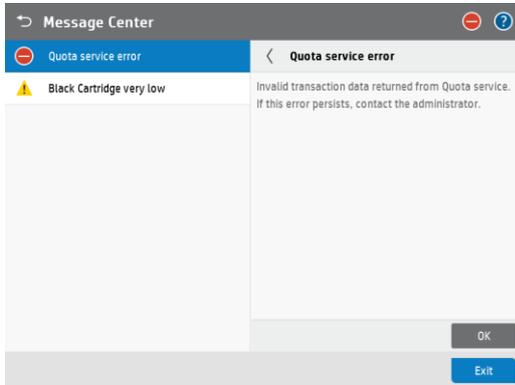
- If the required Root Certificate is not listed, click **Choose File**; select the required Root Certificate, click **Open**, and then click **Install**.
- If the required Intermediary Certificate is not listed, click **Choose File**; select the required Intermediary Certificate, click **Open**, and then click **Install**.

### 6.7.4 Self-signed SSL certificates

On newer HP Gemstone devices, it may be required for self-signed certificates to include a country code. The Country (C) key of the `RDN` parameter in the `create-ssl-keystore` command can be used to set the country code and ensure that the certificate is valid. Refer to the [PaperCut MF manual](#) for more details.

## 6.8 "Quota service error"

After PaperCut MF is successfully installed on the device, if the device displays the following error when users attempt to access device jobs, it implies that there are contradictions in the configured settings (see [4.7.1 Tracking device jobs](#) and [4.7.1.1 Additional device jobs](#)):



The device's web interface also displays a similar error:

| Input/Output | Status   | Capacity   | Size            | Type     |
|--------------|----------|------------|-----------------|----------|
| Tray 1       | Depleted | 100 sheets | Any Size        | Any Type |
| Tray 2       | ~ 30%    | 520 sheets | A4 (210x297 mm) | Plain    |
| Tray 3       | 30 - 70% | 520 sheets | A3 (297x420 mm) | Plain    |
| Standard bin | OK       | 500 sheets | N/A             | N/A      |

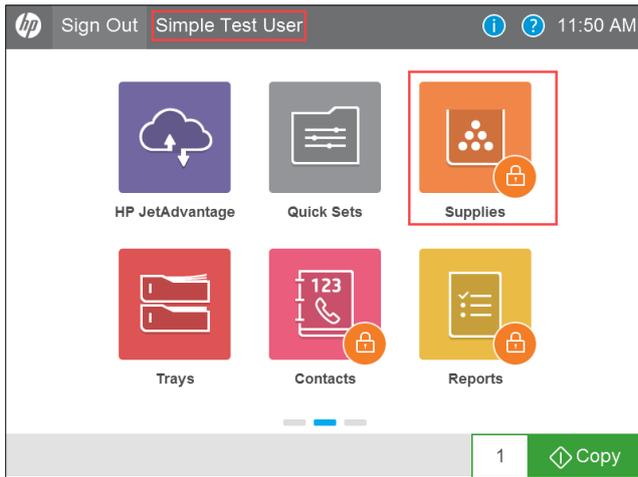
This prevents users from being able to use the device jobs that have contradicting configurations.

To resolve this, ensure that there are no contradictions in the configured settings.

- For example, if **Track & control scanning** is selected (i.e. tracked by PaperCut MF), then its related device jobs (such as, **Scan to SharePoint<sup>®</sup>**, **Scan to Network Folder**, **Scan to USB Drive**) must be made accessible to authenticated users.
- Similarly, if **Track & control scanning** is NOT selected (i.e. NOT being tracked by PaperCut MF), then its related device jobs (such as, **Scan to SharePoint<sup>®</sup>**, **Scan to Network Folder**, **Scan to USB Drive**) must be made accessible to unauthenticated users.

## 6.9 Accessing "locked" administrative jobs

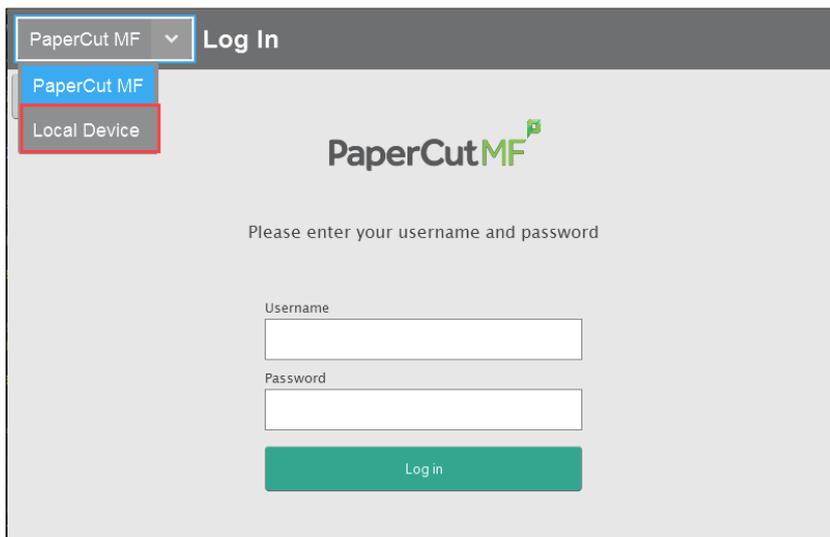
By default, PaperCut MF "locks" certain device jobs (such as, Supplies, Contacts, Reports, Settings, Support Tools, Job Log). They appear "locked" to non-administrative users (such as, the simple test user). Only authenticated administrators can access them.



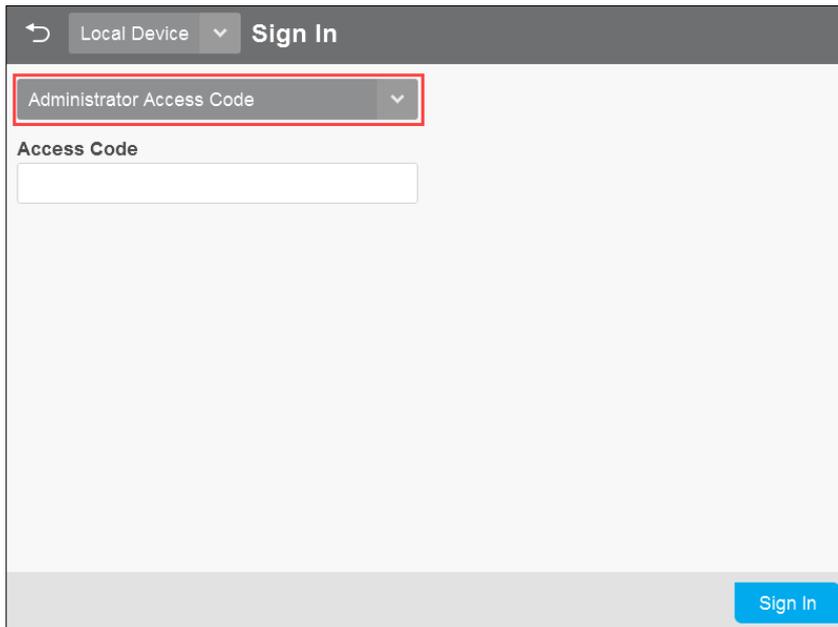
**Note:** For more information about configuring access permissions for required device jobs, see [4.7.1.1 Additional device jobs](#).

To access "locked" administrative jobs:

1. Navigate to the PaperCut MF Login screen on the device.
2. Select **Local Device**:

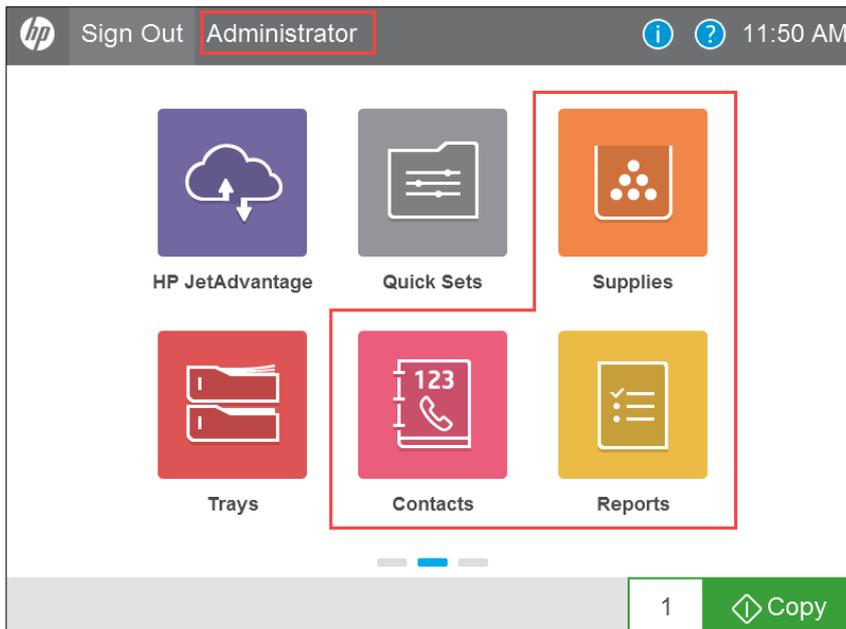


### 3. Select **Administrator Access Code**:



The screenshot shows the 'Sign In' page for a 'Local Device'. At the top, there is a dropdown menu set to 'Local Device' and a 'Sign In' button. Below this, there is a dropdown menu labeled 'Administrator Access Code' which is highlighted with a red box. Underneath is an 'Access Code' input field. At the bottom right, there is a blue 'Sign In' button.

4. In **Access Code**, enter the administrator credentials (password) used for the device's web interface. For more information, see [2.4.1 Log in to the device's web interface as an administrator](#).
5. Click **Sign In**.
6. Select the required job (such as, Supplies):



7. For more information about each job, consult the applicable third-party documentation available.

## 6.10 Paper trays are not configurable

If the device's paper trays are not configurable, it is because unauthenticated users have been prevented from accessing the device job **Ability to modify tray size and type setting**:

- Either, on the PaperCut MF Admin web interface, the **Ability to modify tray size and type setting** is not a value of the config key **ext-device.hp-oxpd.guest.permission.whitelist**, or it is a value of the config key **ext-device.hp-oxpd.permission.whitelist**,
- Or, on the device’s web interface, the **Control Panel’s Ability to modify tray size and type settings** checkbox of the **Device Guest** column is **Locked**.

For more information, see [4.7.1.1 Additional device jobs](#).

To resolve this, use any one of the following options:

- [6.10.1 Using PaperCut MF](#)
- [6.10.2 Using the device’s web interface](#)

### 6.10.1 Using PaperCut MF

To resolve this using PaperCut MF, ensure that the config key:

1. **ext-device.hp-oxpd.permission.server-managed** is set to **Y**.
2. **ext-device.hp-oxpd.guest.permission.whitelist** contains the value **Ability to modify tray size and type settings**.
3. **ext-device.hp-oxpd.permission.whitelist** does not contain the value **Ability to modify tray size and type settings**.

For more information, see [4.13 Config Editor](#).

### 6.10.2 Using the device’s web interface

To resolve this using the device’s web interface:

1. Ensure that the config key **ext-device.hp-oxpd.permission.server-managed** is set to **N**. For more information, see [4.13 Config Editor](#).
2. Log in to the device’s web interface as an administrator.
3. Navigate to **Security > Access Control > Sign-In and Permission Policies**.
4. In the **Control Panel > Trays’**:
  - a. **Sign-In Method** column, select **PaperCut MF**:

| Control Panel                                 | Sign-In Method |
|---|----------------|
| [-] Trays                                     | PaperCut MF    |
| Ability to modify tray size and type settings |                |

- b. **Device Guest** column, ensure the checkboxes are **checked/ ticked**, and not **Locked**:

| Control Panel                                 | Device Guest                        |
|---|-------------------------------------|
| [-] Trays                                     | <input checked="" type="checkbox"/> |
| Ability to modify tray size and type settings | <input checked="" type="checkbox"/> |

5. Click **Apply**.

## 6.11 Third-party applications are unable to use card readers

PaperCut MF automatically registers and establishes an exclusive lock on card readers that are detected on the device. As a result, they cannot be used by any other third-party applications. If the **Swipe card** authentication option is not selected (PaperCut MF is not being used for swipe card

authentication), but third-party applications require access to card readers, then ensure to set the config key **ext-device.hp-oxpd.register.card-reader** to **Y**. For more information, see [4.13 Config Editor](#).

## 6.12 Support for legacy firmware versions

PaperCut recommends running a firmware greater than 4.11 on HP OXP devices. If it is not possible to run a version this recent there may be some issues with PaperCut MF being able to update the device configuration successfully when updating settings in the device configuration screen. If you are running an older firmware and are finding that settings are not being updated on your device when you update them in PaperCut, then the config key **ext-device.hp-oxpd.force-auth-unregister** can be updated to **Y** (default N) to make PaperCut use an older method to ensure settings are applied correctly.

## 6.13 Can I improve the time it takes between swiping a card and logging in?

Yes. To reduce the login time, PaperCut recommends you set the following config keys:

- **ext-device.hp-oxpd.fast-swipe-login-flow=Y**
- **ext-device.hp-oxpd.skip-hid-restart=Y**

For more information, please refer to [4.4 User authentication via swipe cards](#).

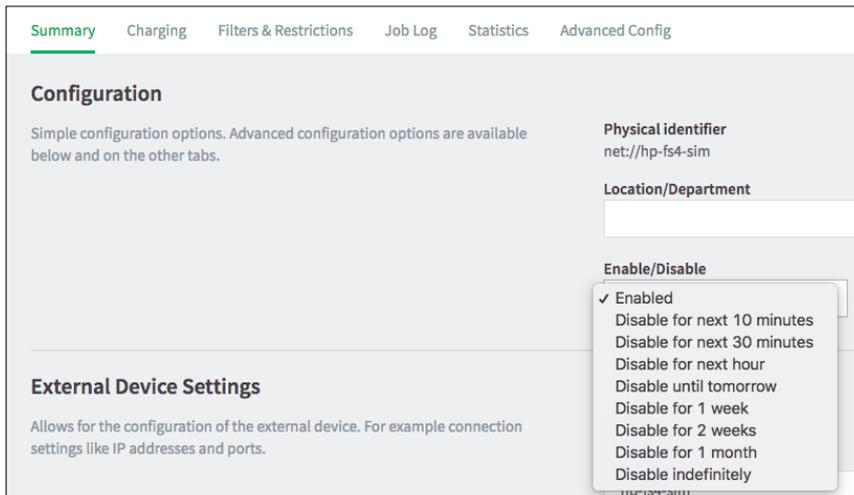
# 7 Uninstall PaperCut MF - HP OXP

## 7.1 Temporarily disable *PaperCut MF - HP OXP*

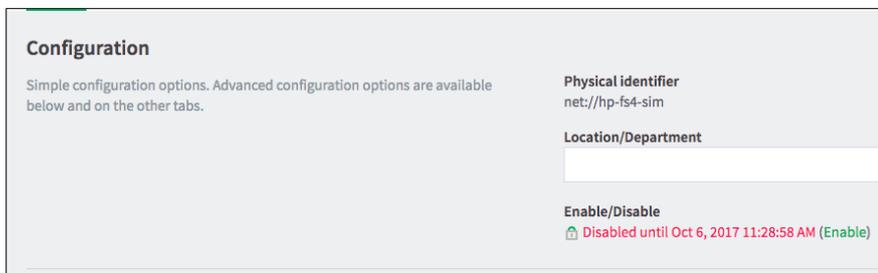
To temporarily disable *PaperCut MF - HP OXP*:

1. Log in to the PaperCut MF Admin web interface.
2. Navigate to **Devices**.
3. Select the required device.

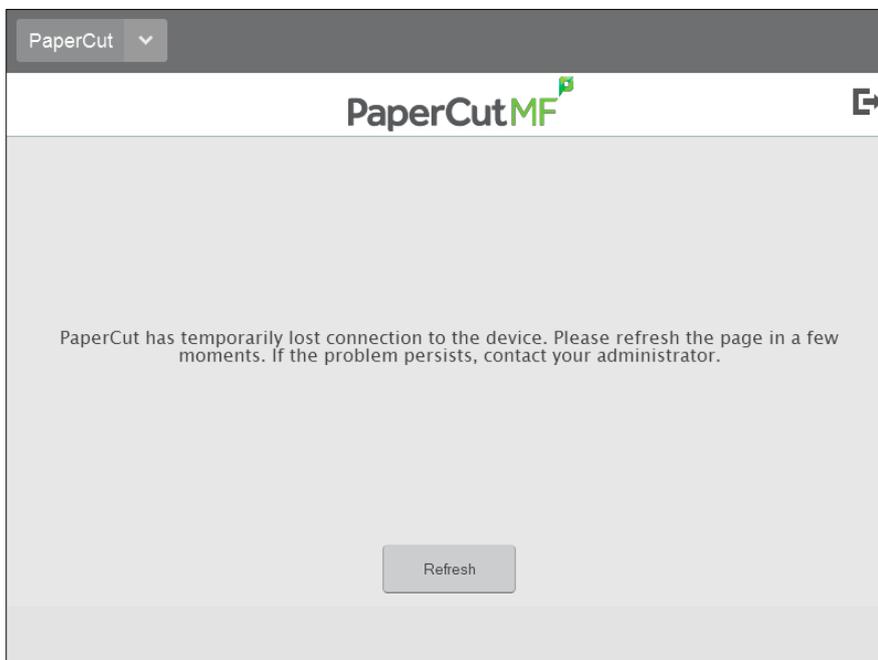
- In the **Configuration** area's **Enable/Disable**, select a **Disable** option:



- Verify that *PaperCut MF - HP OXP* is disabled:



- Verify that *PaperCut MF - HP OXP* is not available on the device to users:

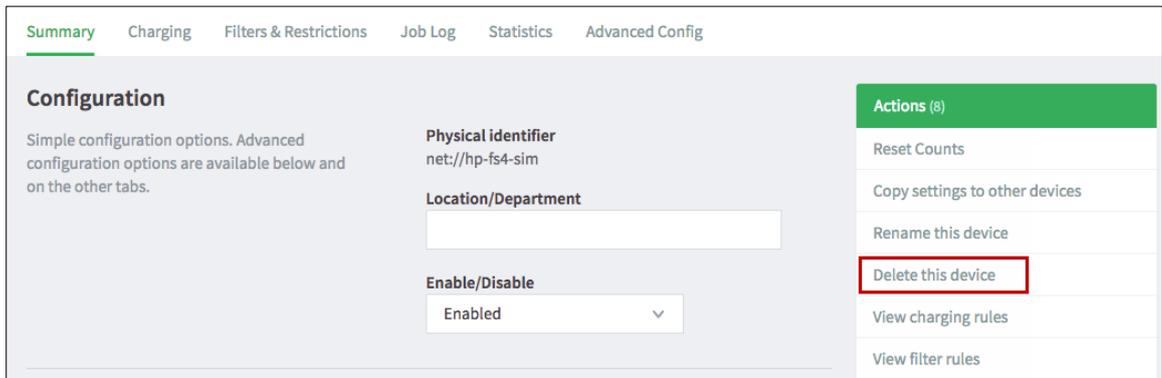


## 7.2 Permanently uninstall *PaperCut MF - HP OXP*

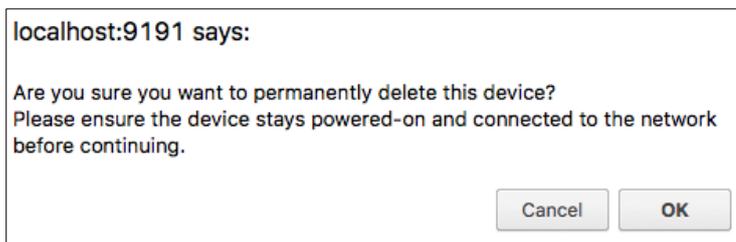
To permanently uninstall *PaperCut MF - HP OXP*:

- Log in to the PaperCut MF Admin web interface.
- Navigate to **Devices**.

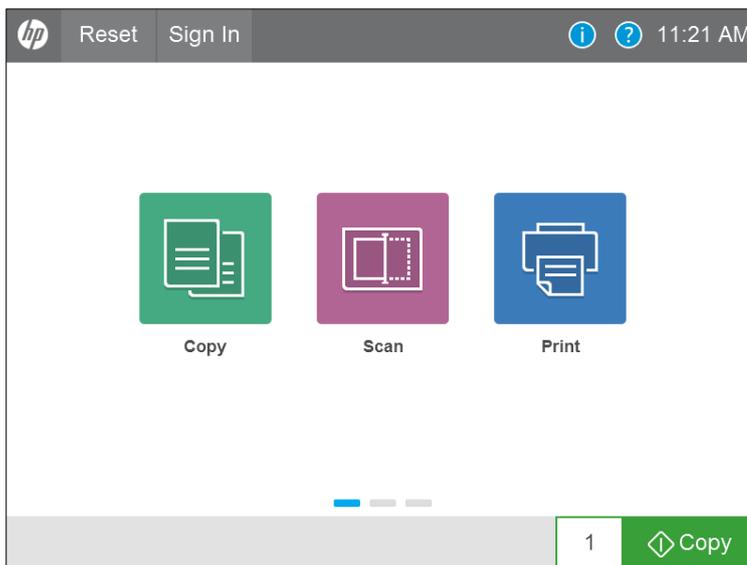
3. Select the required device.
4. Click **Actions > Delete this device**:



5. Click **Ok**:

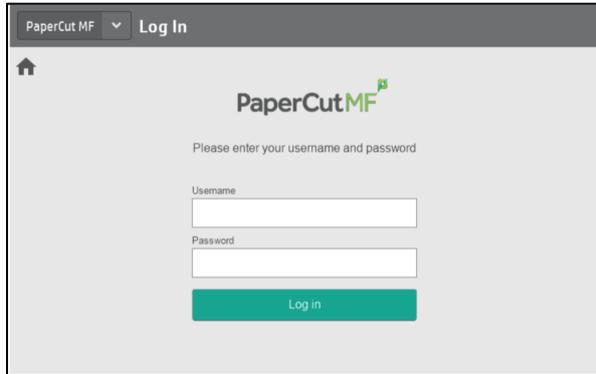


6. Click **Devices** and verify that the device is no longer listed (*PaperCut MF - HP OXP* is permanently uninstalled).
7. Verify that *PaperCut MF - HP OXP* is not available on the device to users:

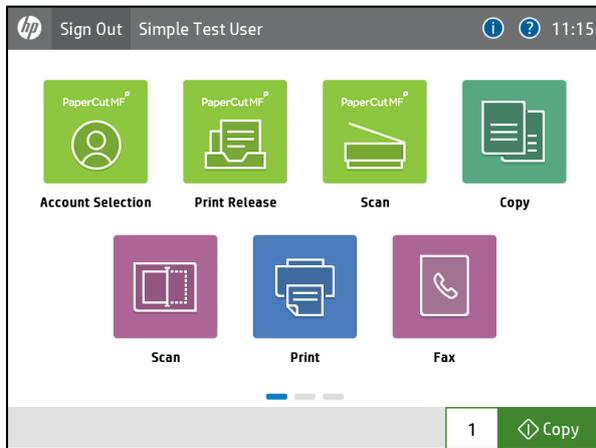


## 8 Appendix A: Device screens

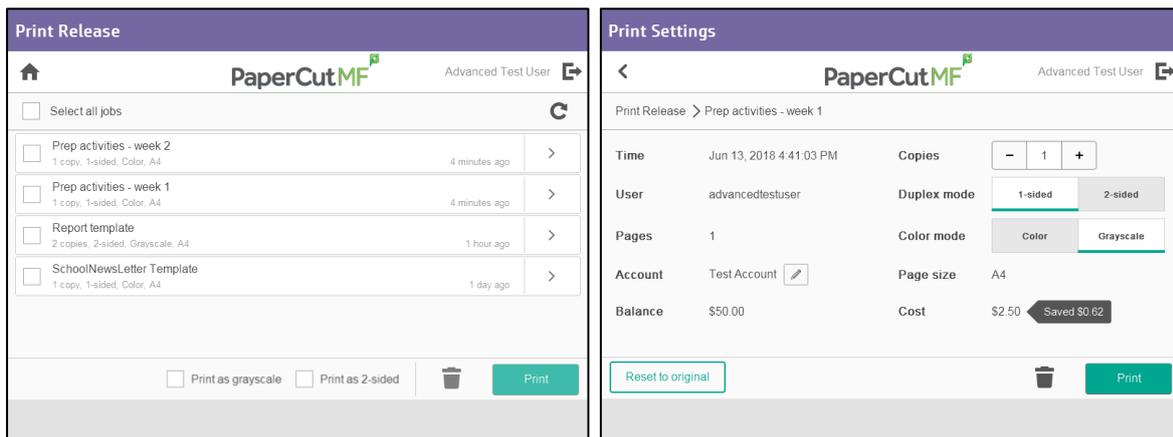
User authentication:



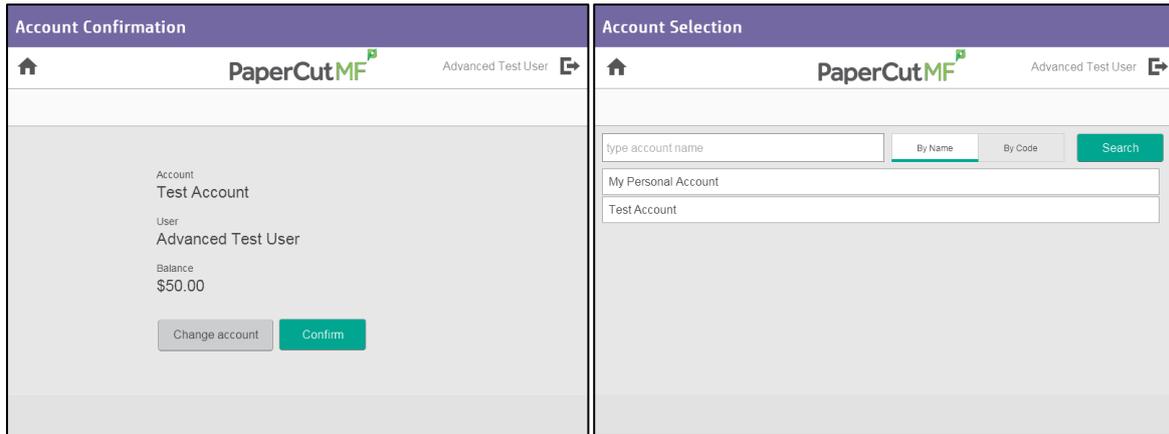
Home:



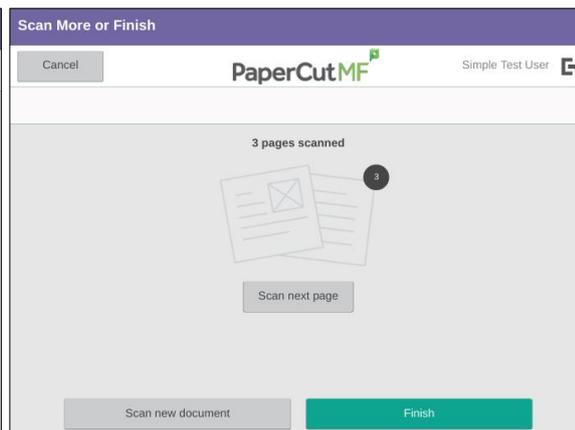
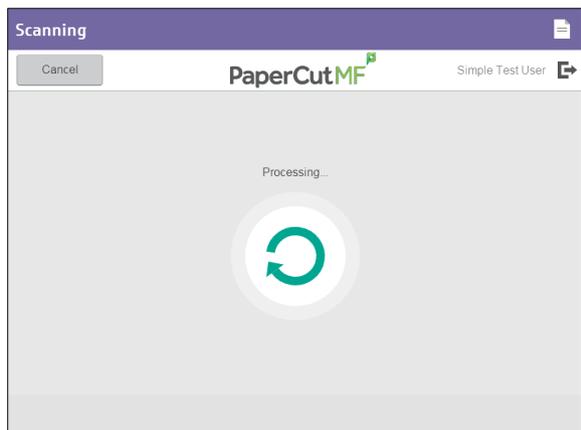
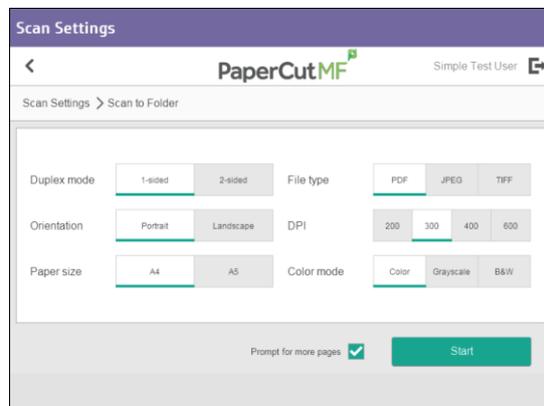
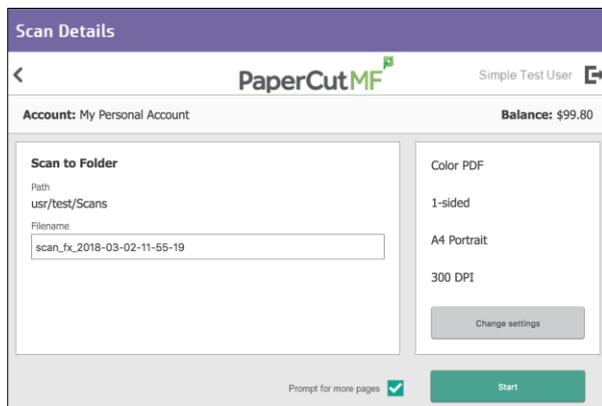
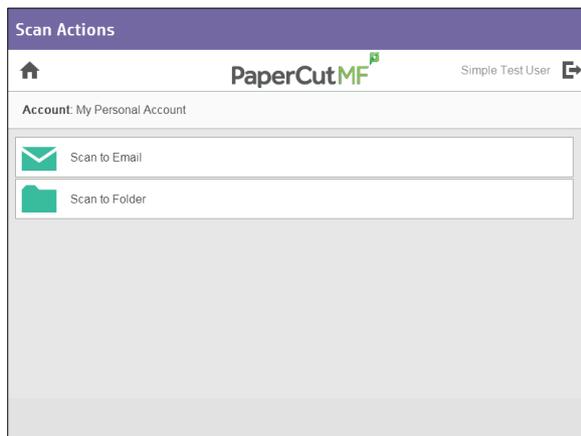
Secure Print Release:

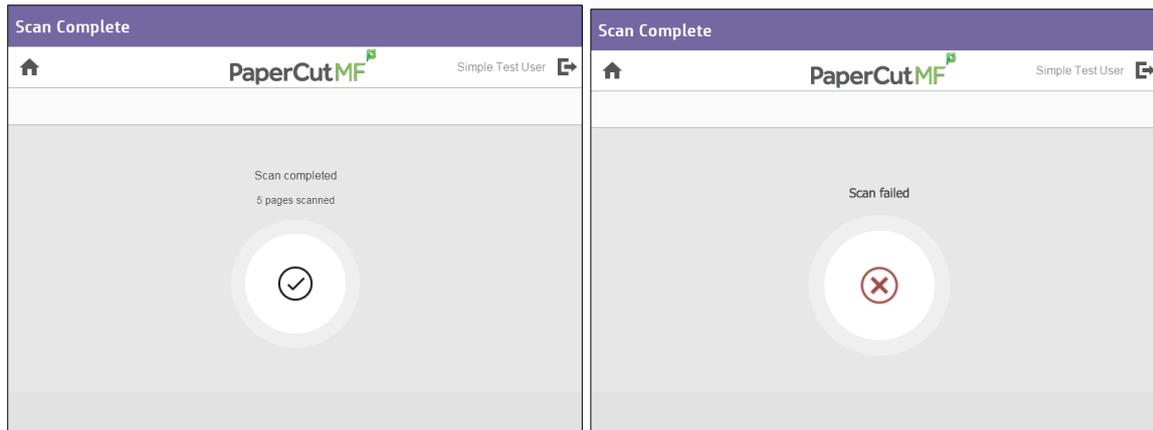


Charging of jobs:



PaperCut MF Integrated Scanning:





### Basic Scan to Fax experience:

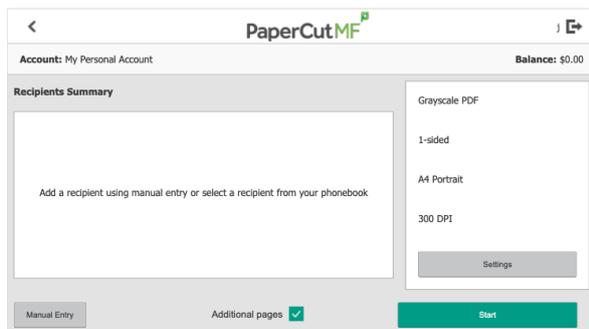


Figure 1 Empty state - Add a recipient using manual entry

Figure 2 Manual entry - Enter a Fax number, Recipient name and Recipient company name.

| Recipients Summary |           |
|--------------------|-----------|
| Test User 1        | 2222 3333 |
| Test User 2        | 1111 2222 |

Figure 3 Multiple recipients

### Advanced Scan to Fax experience

Figure 4 Empty state - Add a recipient using manual entry or select a recipient from the phonebook

**Account:** My Personal Account **Balance:** \$0.00

Fax number: 2222 3333

Recipient name: Test User 1

Recipient company name: Test Company 1

Grayscale PDF

1-sided

A4 Portrait

300 DPI

Settings

Manual Entry Phonebook Additional pages  Start

Figure 5 Manual entry - First manual entry can be edited.

Select the recipient from the address book

Search for a contact Search

|              |                 |           |          |
|--------------|-----------------|-----------|----------|
| Test User 1  | Test Company 1  | 2222 3333 | Personal |
| Test User 10 | Test Company 10 | 8888 1111 | Personal |
| Test User 2  | Test Company 2  | 1111 2222 | Personal |
| Test User 3  | Test Company 3  | 3333 4444 | Personal |
| Test User 4  | Test Company 4  | 4444 3333 | Personal |
| Test User 5  | Test Company 5  | 3333 1111 | Personal |
| Test User 6  | Test Company 6  | 5555 3222 | Personal |
| Test User 7  | Test Company 7  | 7712 1233 | Personal |
| Test User 8  | Test Company 8  | 2411 1111 | Personal |
| Test User 9  | Test Company 9  | 1111 3333 | Personal |

Select the recipient from the address book

test Search

|              |                 |           |          |
|--------------|-----------------|-----------|----------|
| Test User 1  | Test Company 1  | 2222 3333 | Personal |
| Test User 10 | Test Company 10 | 8888 1111 | Personal |
| Test User 2  | Test Company 2  | 1111 2222 | Personal |
| Test User 3  | Test Company 3  | 3333 4444 | Personal |
| Test User 4  | Test Company 4  | 4444 3333 | Personal |
| Test User 5  | Test Company 5  | 3333 1111 | Personal |
| Test User 6  | Test Company 6  | 5555 3222 | Personal |
| Test User 7  | Test Company 7  | 7712 1233 | Personal |
| Test User 8  | Test Company 8  | 2411 1111 | Personal |
| Test User 9  | Test Company 9  | 1111 3333 | Personal |

**Account:** My Personal Account **Balance:** \$0.00

**Recipients Summary**

|             |           |
|-------------|-----------|
| Test User 1 | 2222 3333 |
| Test User 2 | 1111 2222 |

Grayscale PDF

1-sided

A4 Portrait

300 DPI

Settings

Manual Entry Phonebook Additional pages  Start

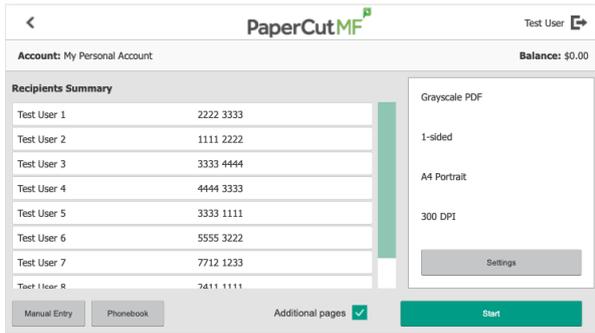


Figure 6 Select a recipient using search on the phone book and add to the scrollable list.