PaperCut MF - Canon (MEAP) Embedded Manual

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1 Document revision history

Published date or release	Details of changes made
19.2.0	4.9.2 Header logo
19.1.3	Document restructure (to support the PaperCut MF embedded application ***PaperCut Gen3+***)
19.0.4	4.6 Card Reader support
19.0.0	4.4 Application Settings; 7.3 SNMP; 11.6 Why is the device unable to connect to the PaperCut MF Application Server over TLS 1.1/1.2?
2018-11-07	4.2.3 Timeouts, 4.2.3.1 Auto Reset Time 4.2.8 Scan to Folder Settings 8 Advanced Configuration

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2 Installation

This section covers the installation of *PaperCut MF – Canon (MEAP).*

2.1 Supported devices

Ensure that the devices on the network are listed as supported devices on the PaperCut MF for Canon page.

2.2 Compatible devices

Ensure that the supported Canon devices on the network are compatible with PaperCut's embedded software solution *PaperCut MF – Canon (MEAP):*

- they are any of the following:
  - 1st generation device with 2nd generation firmware - are ONLY compatible with the PaperCut MF embedded application ***PaperCut***
  - 2nd generation device - are ONLY compatible with the PaperCut MF embedded application ***PaperCut***
  - 3rd generation device - are compatible with BOTH:
    - the PaperCut MF embedded application ***PaperCut Gen3+*** (this is recommended, because it has more features)
    - the PaperCut MF embedded application ***PaperCut*** (this is not recommended, because it has limited features)

  For more information, see 6.1 Determine the Canon platform.
- they have Canon's Access Management System (AMS) installed and available

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 (`http://[Device IP Address]:8000`), 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: 3rd generation devices running the PaperCut MF embedded application ***PaperCut Gen3+*** require PaperCut MF 19.1.3 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 or 9193 (SSL/TLS/HTTPS)

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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 Configure the administrator login screen of the device's web interface
- 2.4.3 Configure the device's use of peripheral devices
- 2.4.4 Configure the device to allow PaperCut MF to track device jobs
- 2.4.6 Configure the device's scanning
- 2.4.7 Configure the device's timeout
- 2.4.8 Configure the device's Status Monitor screen
- 2.4.10 Install the PaperCut MF embedded application
- 2.4.11 Enable communication with the PaperCut MF Application Server
- 2.4.12 Verify PaperCut MF installation

Note: The navigation, instructions and images of the device and the device's web interface are of Canon iR-ADV C5240 of the Canon Grasmere Series. This could vary on other Canon devices.

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 (`http://[Device IP Address]:8000`).
2. Enter the required administrator credentials (such as, **User Name** and **Password** or **System Manager ID** and **System PIN**).
3. Click **Administrator Login** or **Log In**.

2.4.2 Configure the administrator login screen of the device's web interface

To configure the administrator login screen of the device's web interface to default to **System Manager ID** and **System PIN** for all devices:

1. Log in to the device's web interface as an administrator.
2. Navigate to **Settings/Registration > User Management > System Manager/Contact Person Information Settings**.
3. Select the **Set ID and PIN** checkbox.
4. In **System Manager ID**, enter the required administrator credentials (ID).
5. Select the **Change PIN** checkbox.
6. In **System PIN**, enter the required administrator credentials (PIN).
7. Click **OK**.
   Note: By default, the administrator login screen of the device's web interface now only displays these two administrator authentication fields (**System Manager ID** and **System PIN**). Accessing the device's web interface as an administrator is now only possible by entering the required administrator credentials for these two fields.

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2.4.3 Configure the device's use of peripheral devices

Depending on the needs of your environment, you can configure the device's use of the following peripheral devices:

- 2.4.3.1 USB storage devices
- 2.4.3.2 USB card readers
- 2.4.3.3 USB keyboards
- 2.4.3.4 USB card readers AND USB keyboards

2.4.3.1 USB storage devices

To configure the device to allow the use of USB storage devices for on-device printing and scanning:

1. Log in to the device's web interface as an administrator.
2. Navigate to **Settings/Registration > Preferences > External Interface > USB Settings.**
3. Select the **Use as USB Device** checkbox.
4. Ensure the **Use MEAP Driver for USB External Device** checkbox is not selected.
5. Navigate to **Settings/Registration > Function Settings > Store/Access Files > Memory Media Settings.**
6. Configure the **Use Scan Function** and **Use Print Function**, as required.
7. Click **Ok**.
8. Access the physical device and restart it.

2.4.3.2 USB card readers

To configure the device to register the peripheral input device as a keyboard emulating USB card reader:

1. Ensure the card reader is a supported card reader (see 4.3.1 Supported card readers).
2. Log in to the device's web interface as an administrator.
3. Navigate to **Settings/Registration > Preferences > External Interface > USB Settings.**
4. Select the **Use as USB Device** checkbox.
5. Select the **Use MEAP Driver for USB Input Device** checkbox.
   Note: If you are using BOTH USB card readers AND USB keyboards, then see 2.4.3.4 USB card readers AND USB keyboards.
6. Click **Ok**.
7. Access the physical device.
8. Restart the device.
9. Connect the supported card reader to the device.
10. Complete the installation of PaperCut MF (i.e. device registration and integration). For more information, see 2.4.10 Install the PaperCut MF embedded application, 2.4.11 Enable communication with the PaperCut MF Application Server, 2.4.12 Verify PaperCut MF installation.
11. After PaperCut MF is installed on the device, configure PaperCut MF as required (i.e. enable the **Swipe card** authentication option). For more information, see 4.2 User authentication options.

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2.4.3.3 USB keyboards

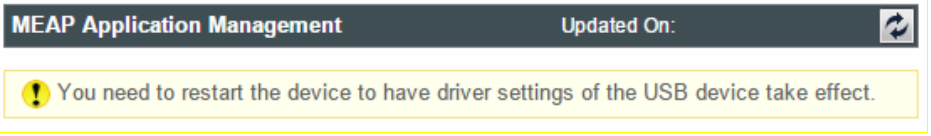
To configure the device to register the peripheral input device as a USB keyboard:

1. Log in to the device's web interface as an administrator.
2. Navigate to **Settings/Registration > Preferences > External Interface > USB Settings.**
3. Select the **Use as USB Device** checkbox.
4. Ensure the **Use MEAP Driver for USB Input Device** checkbox is not selected.
   Note: If you are using BOTH USB card readers AND USB keyboards, then see 2.4.3.4 USB card readers AND USB keyboards.
5. Click **Ok**.
6. Access the physical device and restart it.

2.4.3.4 USB card readers AND USB keyboards

To configure the device to register and differentiate between the TWO peripheral input devices, i.e. keyboard emulating USB card readers AND USB keyboards:

1. Log in to the device's web interface as an administrator.
2. Navigate to **Settings/Registration > Preferences > External Interface > USB Settings.**
3. Select the **Use as USB Device** checkbox.
4. To configure the device to register USB keyboards as peripheral input devices, ensure the **Use MEAP Driver for USB Input Device** checkbox is not selected.
5. Access the physical device and restart it.
6. To configure the device to register the keyboard emulating USB card readers as peripheral input devices:
   a. Ensure the card reader is a supported card reader (see 4.3.1 Supported card readers).
   b. Complete the installation of PaperCut MF (i.e. device registration and integration). For more information, see 2.4.10 Install the PaperCut MF embedded application, 2.4.11 Enable communication with the PaperCut MF Application Server, 2.4.12 Verify PaperCut MF installation.
   c. After PaperCut MF is installed on the device, configure PaperCut MF as required (i.e. enable the **Swipe card** authentication option). For more information, see 4.2 User authentication options.
   d. Use the config key **ext-device.canon.card-reader-ids** to list the card reader IDs (i.e. the hexadecimal web/ HTML notation of VendorID:ProductID; for example, *09d8:0310*) of the card readers that you are using. For more information, see 4.13 Config Editor.
   e. Access the physical device.
   f. Connect the supported card reader to the device.
   g. Verify that the device's web interface displays the following message, and then restart the device as per the message:



   Note: This message confirms that the device has registered the USB card reader as peripheral input device. However, if this is not displayed then:

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a. Restart the device to prompt the device to register the USB card reader as peripheral input device.
b. Verify that the device's web interface displays the required message.
c. Restart the device as per the message.

2.4.4 Configure the device to allow PaperCut MF to track device jobs

To configure the device to allow PaperCut MF to track device jobs (such as, scan, copy, fax, on-device printing):

1. Log in to the device's web interface as an administrator.
2. Navigate to **Settings/Registration > Management Settings > Device Management > Display Log.**
3. Select the **Obtain Job Log from Management Software** checkbox.
4. Click **OK**.

2.4.5 Configure the device to allow PaperCut MF to apply color copy restrictions

To configure the device to allow PaperCut MF to apply color copy restrictions:

1. Log in to the device's web interface as an administrator.
2. Navigate to **Settings/Registration > Management Settings > License/Other > ACCESS MANAGEMENT SYSTEM Settings.**
   Note: If **ACCESS MANAGEMENT SYSTEM Settings** is unavailable, it implies that it is not installed. For more information, contact your reseller or Authorized Solution Center. You can find their contact information in your PaperCut MF Admin web interface, on the **About** page.
3. Select the **Use ACCESS MANAGEMENT SYSTEM** checkbox.
4. Click **Ok**.

2.4.6 Configure the device's scanning

Depending on the needs of your environment, you can configure the device to:

- 2.4.6.1 Allow the use of USB storage devices
- 2.4.6.2 Allow the use of the device's Scan to Personal Folder
- 2.4.6.3 Suppress the SMTP verification prompt

2.4.6.1 Allow the use of USB storage devices

To configure the device to allow the use of USB storage devices for scanning (i.e. scanning to USB storage devices):

1. Log in to the device's web interface as an administrator.
2. Navigate to **Settings/Registration > Preferences > External Interface > USB Settings.**
3. Select the **Use as USB Device** checkbox.
4. Ensure the **Use MEAP Driver for USB External Device** checkbox is not selected.
5. Navigate to **Settings/Registration > Function Settings > Store/Access Files > Memory Media Settings.**
6. Configure the **Use Scan Function**, as required.
7. Click **Ok**.
8. Access the physical device and restart it.

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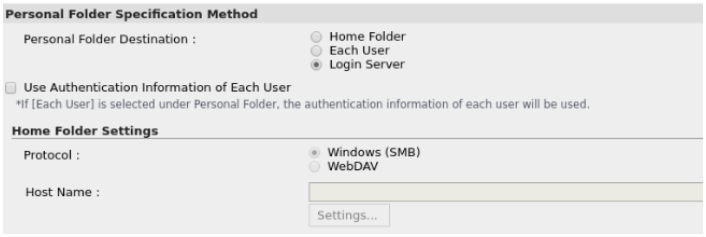
2.4.6.2 Allow the use of the device's Scan to Personal Folder

To configure the device to allow the use of the device's Scan to Personal Folder:

1. Log in to the device's web interface as an administrator.
2. Navigate to **Settings/Registration > Function Settings > Send > Limit Send Destination.**
3. In **Personal Folder Destination**, select **Login Server**.



4. Click **Ok**.
5. Access the physical device and restart it.

2.4.6.3 Suppress the SMTP verification prompt

To configure the device to suppress the SMTP verification prompt when using the device's Scan to Email:

1. Log in to the device's web interface as an administrator.
2. Navigate to **Settings/Registration > Function Settings > Common Settings > Set Authentication Method > Device Settings.**
3. Configure **Information Used for SMTP Server Authentication** as required.
4. Click **Ok**.
5. Access the physical device and restart it.

2.4.7 Configure the device's timeout

To configure the device's timeout:

1. Log in to the device's web interface as an administrator.
2. Navigate to **Settings/ Registration > Preferences > Timer/Energy Settings.**
3. In **Auto Reset Time**, enter the required device timeout.
4. Click **Ok.**

2.4.8 Configure the device's Status Monitor screen

By default, the device's Status Monitor screen always displays its two tabs - Job Status and Job Log. These tabs contain sensitive and personally identifiable user information (such as, usernames, e-mail addresses, document names).

Depending on the needs of your environment, you can configure the device's Status Monitor screen to:

- 2.4.8.1 Always hide the Job Log tab
- 2.4.8.2 Conditionally hide the Job Status and the Job Log tab

2.4.8.1 Always hide the Job Log tab

To configure the device's Status Monitor screen to always hide the Job Log tab:

1. Log in to the device's web interface as an administrator.
2. Navigate to **Settings/Registration > Management Settings > Device Management > Display Log**.

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3. Ensure the **Display Job Log** checkbox is not selected.
   Note: The device always hides the Job Log tab.
4. Click **Ok**.

2.4.8.2 Conditionally hide the Job Status and the Job Log tab

To configure the device's Status Monitor screen to conditionally hide the Job Status and the Job Log tab (i.e. display only to authenticated users):

1. Log in to the device's web interface as an administrator.
2. Navigate to **Settings/Registration > Management Settings > Device Management > Display Job Status Before Authentication**
3. Ensure the **Display Job Status Before Authentication** checkbox is not selected.
   Note: The device conditionally displays the Job Status tab and the Job Log (i.e. displays only to authenticated users). However, if the device is configured to always hides the Job Log tab, then upon authentication, the device displays only the Job Status tab. The device always hides the Job Log tab.
4. Click **Ok**.

2.4.9 Configure the device's first screen and workflow

On some devices, after a user logs in, the device displays a white screen.

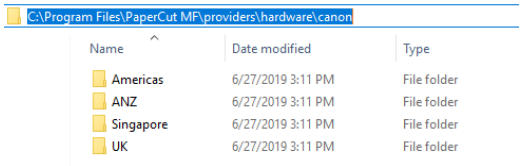
To configure the device's first screen and workflow (preventing it from displaying a white screen):

1. Log in to the device's web interface as an administrator.
2. Navigate to **Settings/Registration > User Management > Department ID Management > Settings.**
3. Ensure **Enable Department ID Management** is not selected.
4. Click **Ok.**

2.4.10 Install the PaperCut MF embedded application

To install the PaperCut MF embedded application on a device:

1. On your PaperCut MF Application Server, navigate to the following location:
   `[PaperCut MF Install Location]\providers\hardware\canon\[your region]`



2. Depending on your region, any one of the following is displayed:
   - either, a **README.txt** file
   - or, the PaperCut MF embedded application **JAR** file
3. If a **README.txt** file is displayed, then contact your reseller or Authorized Solution Center. You can find their contact information in your PaperCut MF Admin web interface, on the **About** page.
   Note:
   - For 3rd generation devices, the recommended PaperCut MF embedded application versions are:
     - either, ***PaperCut Gen3+ 1.0.0*** or above

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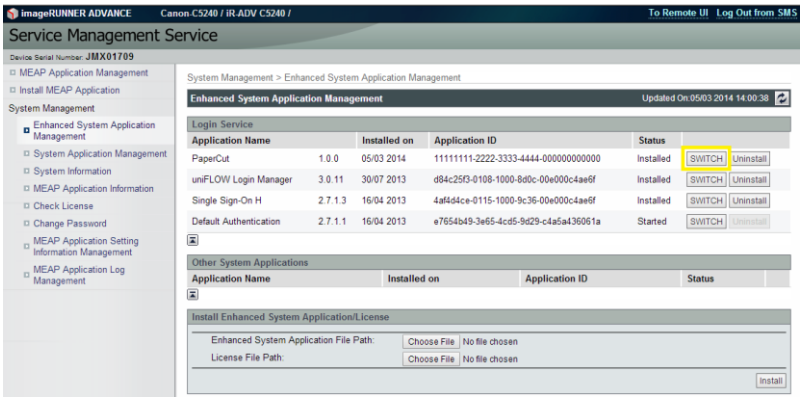
        - or, ***PaperCut 1.7.1*** or above
    - For 2nd generation devices, the recommended PaperCut MF embedded application version is ***PaperCut 1.7.1*** or above.
4. If the PaperCut MF embedded application **JAR** file is displayed, then you must:
    a. Log in to the device's web interface as an administrator.
    b. Navigate to **Enhanced System Application Management**.
    c. In **Enhanced System Application File Path**, click **Choose File**.
    d. Navigate to the following location:
    `[PaperCut MF Install Location]\providers\hardware\canon\[your region]`
    e. Depending on the device's Canon platform, select the applicable PaperCut MF embedded application **JAR** file:
        - For 3rd generation devices, select any one of the following:
            - either, **pc-meap-gen3.jar**
            - or, **pc-meap.jar**
        - For 2nd generation devices, select **pc-meap.jar.**
    f. In **License File Path**, click **Choose File**.
    g. Navigate to the location of the dealer supplied license file and select it.
    h. Click **Install**; and then click **Yes**.
    i. Verify that the PaperCut MF embedded application is installed:
        - the **Enhanced System Application Management's Login Service** table now displays a new row.
        - the new row's **Application Name** column displays any one of the following, together with the corresponding version number of the PaperCut MF embedded application:
            - For 3rd generation devices, this could be any one of the following:
                - either, ***PaperCut Gen3+ x.x.x*** (***PaperCut Gen3+ 1.0.0*** or above is recommended)
                - or, ***PaperCut x.x.x*** (***PaperCut 1.7.1*** or above is recommended)
            - For 2nd generation devices, this is ***PaperCut x.x.x*** (***PaperCut 1.7.1*** or above is recommended)
        - the new row's **Status** column displays ***Installed***.
    j. In the new row (***PaperCut*** *or* ***PaperCut Gen3+***), click **SWITCH**.



    k. Verify that the new row's **Status** column displays ***Start after Restart***.

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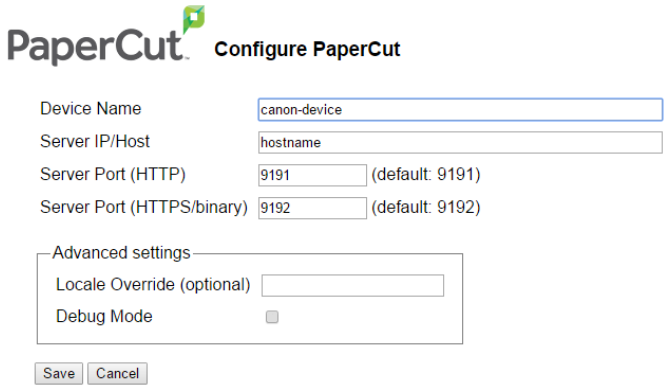
l. Access the physical device and restart it.

2.4.11 Enable communication with the PaperCut MF Application Server

To enable communication between the PaperCut MF Application Server and the devices that have been installed with the PaperCut MF embedded application:

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. Click **Log out**.
6. Log in to the device's web interface as an administrator.
7. Click **Configure PaperCut**.
8. On the Configure PaperCut screen, enter the required details of the PaperCut MF Application Server:



- **Device Name** — The unique name for the device that is used when registering the device on the PaperCut MF Admin web interface.
- **Server IP/Host** — The IP or network address of the PaperCut MF Application Server.
- **Server Port (HTTP)** — The fallback HTTP port used to communicate with the PaperCut MF Application Server (see 2.3 System requirements).
  Note: If device is unable to communicate via the HTTPS/SSL port specified in the **Server port (HTTPS/binary)** field, then the device attempts to communicate with the PaperCut MF Application Server via this fallback HTTP port.
- **Server Port (HTTPS/binary)** — The HTTPS/ SSL port used to communicate with the PaperCut MF Application Server (see 2.3 System requirements).
  Note:
  - This is mandatory for 3rd generation devices (running the PaperCut MF embedded application ***PaperCut Gen3+***) that will be configured with PaperCut MF's Integrated Scanning. This is to ensure that scanned documents, which could have sensitive and personally identifiable user information, are always transmitted over a secure connection.
  - Ensure HTTPS/ SSL is enabled on the device.
  - If device is unable to communicate via this HTTPS/SSL port, then the device attempts to communicate with the PaperCut MF Application Server via the fallback HTTP port specified in the **Server Port (HTTP)** field.
- **Locale Override (optional)** — Specify the default language of the device, if it is different to the language of the locale in which the device is installed. The accepted

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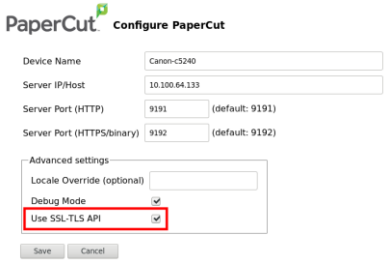
values are: xx (language), xx_XX (language_region). For example, ja (Japanese), en_US (English_United States of America).

Note:

- This is only relevant to 2nd generation devices (running the PaperCut MF embedded application ***PaperCut***).
- If this is not configured, then the device's default language is the language of the PaperCut MF Application Server (via the PaperCut MF Admin web interface's **Options > General > Display Options > Location**).
- Configuring this, however, does not change the device's currency and paper size values to correspond to the geographical locale of value. For example, if the device is installed in Canada, and this field's value is fr (French), the device's currency does not change to Euros. It remains Canadian Dollar.
- On 3rd generation devices (running the PaperCut MF embedded application ***PaperCut Gen3+***), this value is overridden by the value of the config key **ext-device.canon.locale-override.**

- **Debug mode** — To view and access the PaperCut MF debug log files from the device's web interface, select the **Debug mode** checkbox. For more information, see Obtaining debug logs from Canon Multi-Function Devices.
- **Use SSL-TLS API** — To enable 2nd generation devices (running the PaperCut MF embedded application ***PaperCut***) to communicate with the PaperCut MF Application Server using the TLS 1.1/1.2 communication protocol, select the **Use SSL-TLS API** checkbox.



Note: This is only applicable to relevant 2nd generation devices (running the PaperCut MF embedded application ***PaperCut***) that support the TLS 1.1/1.2 communication protocol (i.e. only devices with **MEAP Specification Version 98**). For more information, see 6.4 The device is unable to connect to the PaperCut MF Application Server using TLS 1.1/1.2.

9. Click **Save**.

   Note: If the **Server Port** is an HTTPS/ SSL port, then the device prompts you to accept the PaperCut MF Application Server's SSL certificate. If the device's SHA-1 fingerprint matches the PaperCut MF Application Server's SSL certificate, click **Accept**. For more information, see

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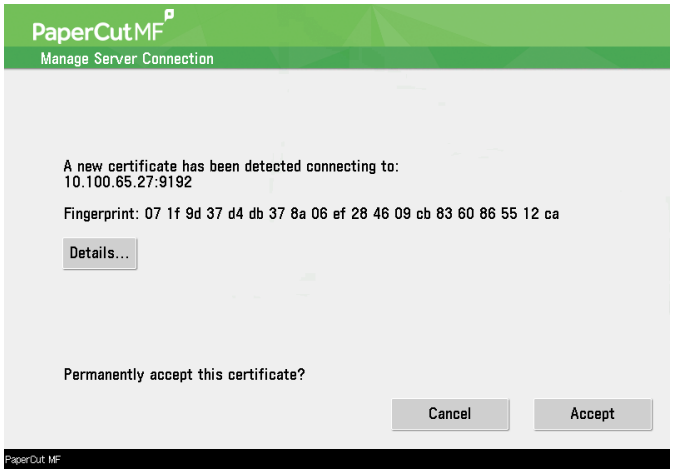
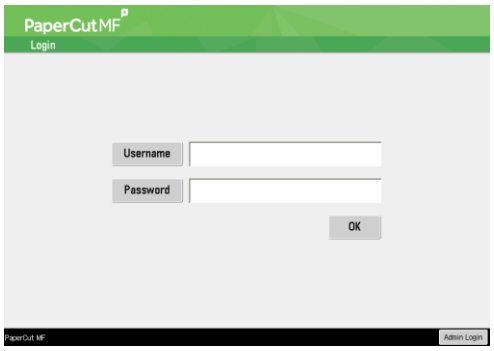
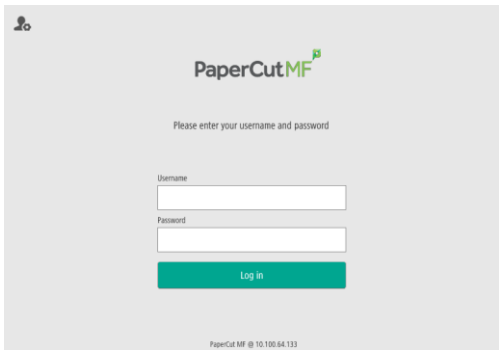
the PaperCut MF manual, Where is the “Fingerprint” of my Server?



2.4.12 Verify PaperCut MF installation

To verify that PaperCut MF is successfully installed (i.e. device registration and integration) on the required devices:

1. Log in to the PaperCut MF Admin web interface.
2. Navigate to **Devices.**
3. Verify that the required devices are listed without any errors in the **Status** column.
4. Click **Log out**.
5. Access the physical device.
6. Verify that the first screen on the device displays the PaperCut MF Login screen:

2nd generation devices running the PaperCut MF embedded application, *PaperCut*	3rd generation devices running the PaperCut MF embedded application, *PaperCut Gen3+*
	

2.5 Upgrade the PaperCut MF embedded application on the device

- Devices running the PaperCut MF embedded application 1.1.1 or below, cannot be seamlessly upgraded to a newer version; and must be first uninstalled before newer version is installed. Other settings previously configured are not retained.
- Devices running the PaperCut MF embedded application 1.2.0 or above can be seamlessly upgraded to a newer version, while also retaining all other settings previously configured. To upgrade the PaperCut MF embedded application on the device:
    - Ensure that the device is connected to the PaperCut MF Application Server.

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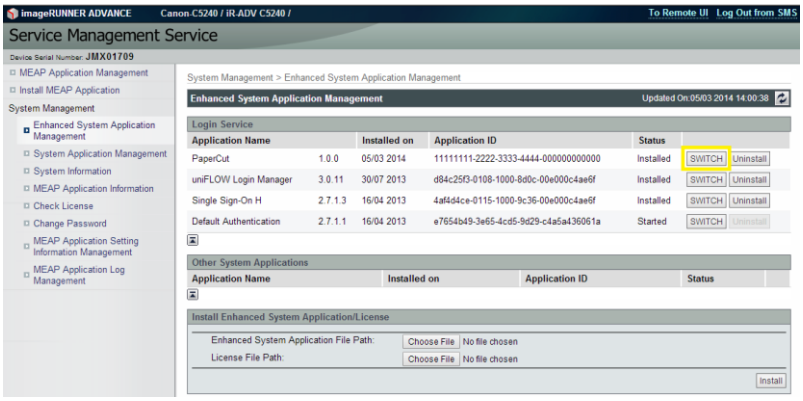
- Disable the existing PaperCut MF embedded application on the device:
  a. Log in to the device's web interface as an administrator.
  b. Navigate to **Enhanced System Application Management**.
  c. In the **Login Service** table's ***Default Authentication*** row, click **SWITCH**:



  d. Access the physical device and restart it.
- Install *PaperCut MF – Canon (MEAP)* on the device. For more information, see 2 Installation.
- Verify that the PaperCut MF embedded application's version number reflects the expected value.

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 – Canon (MEAP).*

- 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**.

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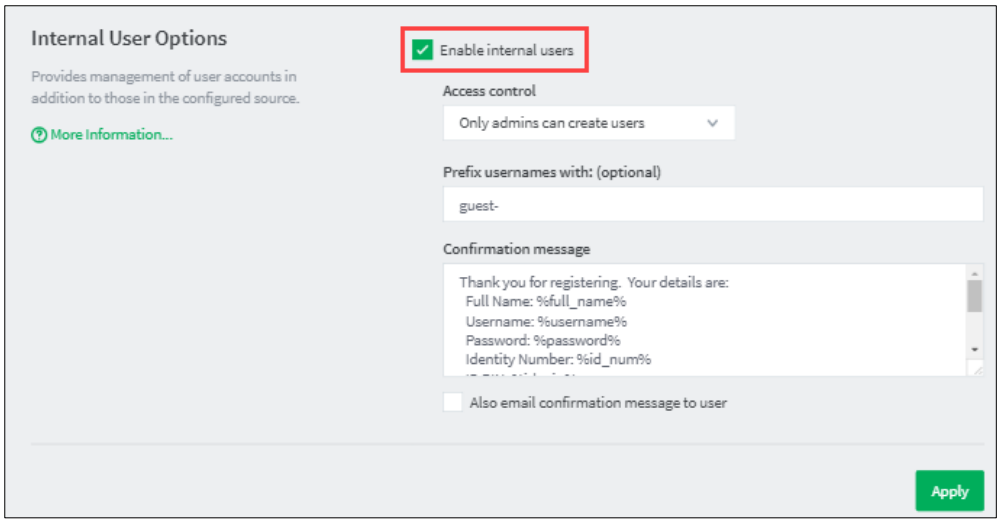
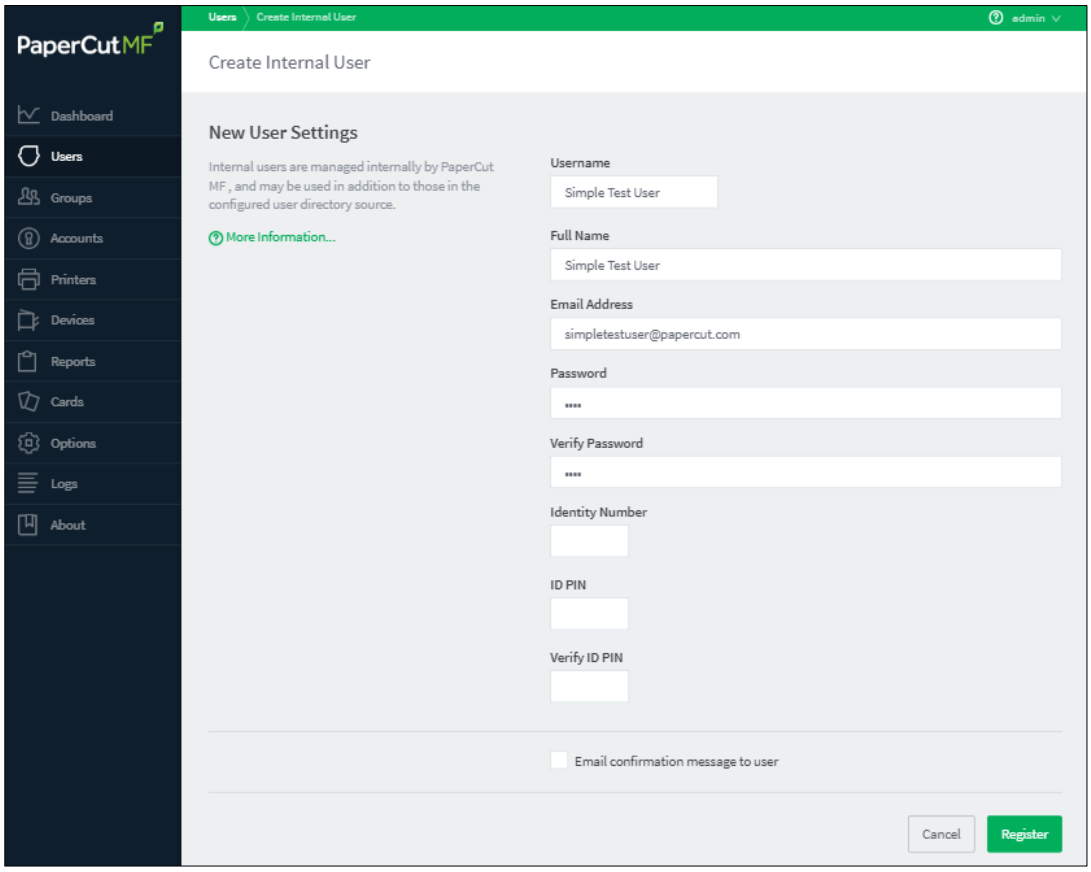


5. Navigate to **Users**.
6. Click **Create internal user…**
7. Enter the required details for the test users as required (simple test user, advanced test user):



8. Click **Register**.

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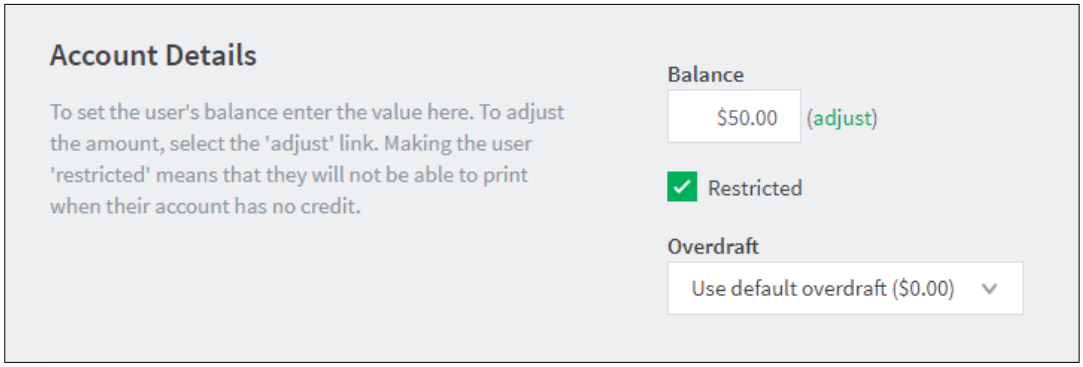
3.2 Simple printing and copying

3.2.1 Test preparation: configure simple test user

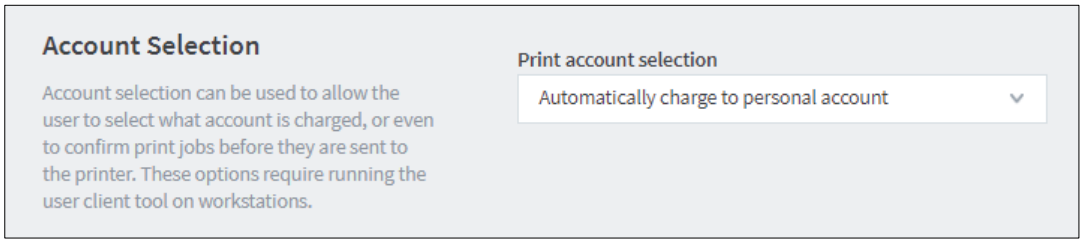
To test the simple test scenarios, ensure at least one simple test user is created. For more information, see 3.1 Test preparation: create test users. Once created, ensure the simple test user is configured.

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:**



5. In the **Account Selection** area's **Print account selection**, select **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:
  - Log in to the PaperCut MF Admin web interface.
  - Navigate to **Printers**.
  - Select the Printer that is applicable to the device being tested.
  - In the **Hold/Release Queue Settings** area, select the **Enable hold/release queue**.

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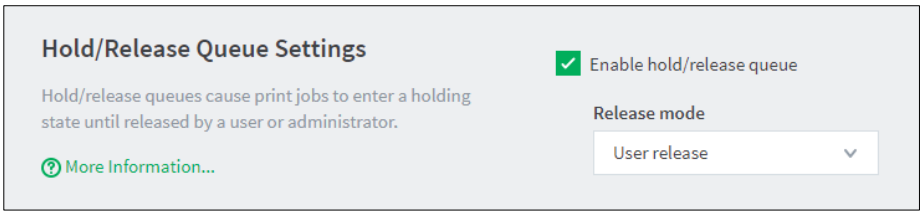
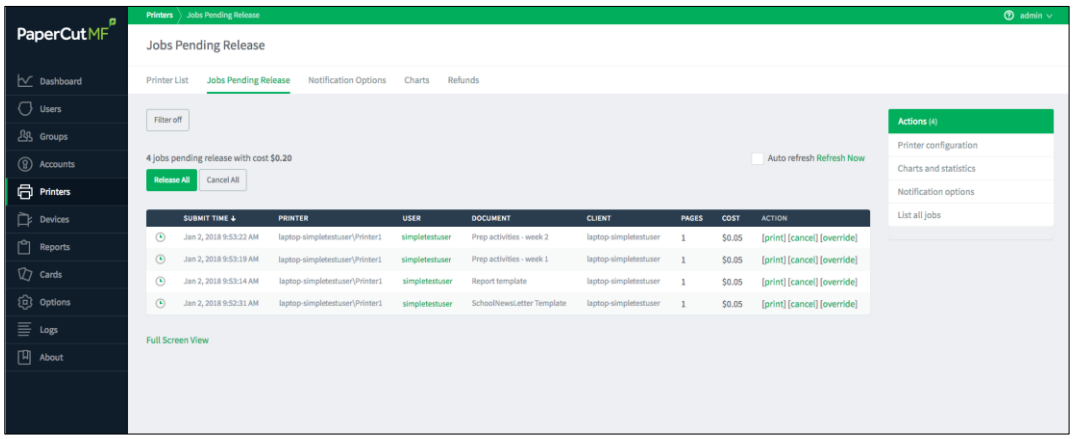


- Click **Apply**.
  Print jobs to this printer queue are held until released by a user.

- **Device functions** – Printing is enabled. To enable printing:
  - Log in to the PaperCut MF Admin web interface.
  - Navigate to **Devices**.
  - Select the required device being tested.
  - In the **Print Release** area, select **Enable print release**.
  - 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.
  - Click **Apply**.
  - 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:



6. Log out of the PaperCut MF Admin web interface.
7. Log in to the device as the simple test user.
8. Verify that the print jobs for the simple test user are being held and listed.
9. To release one or many held print jobs at once, select all the required held print jobs and click **Print**.
10. To delete one or many held print jobs at once, select all the required held print jobs and click the **Bin** icon.
11. Log out of the device.

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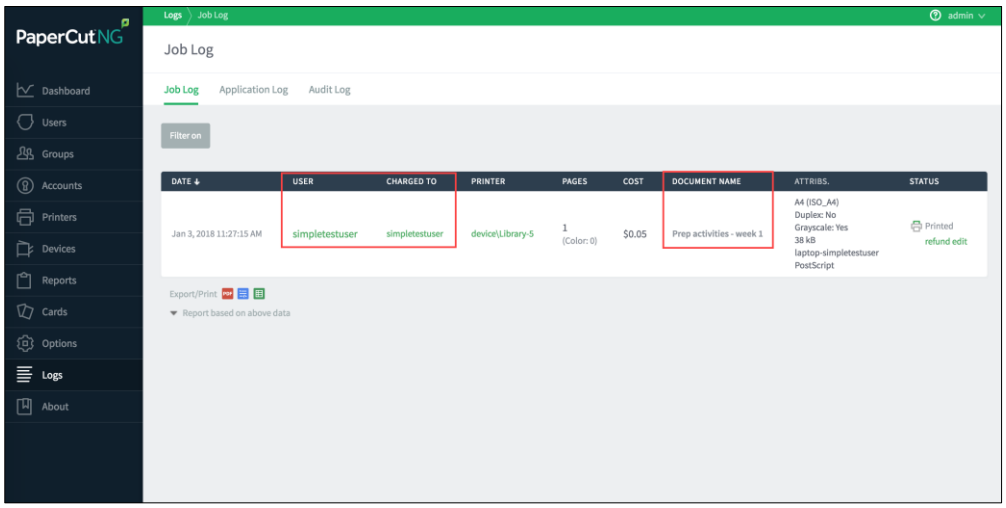
12. Log in to the PaperCut MF Admin web interface.
13. Navigate to **Logs**.
14. After printing is completed, verify that **Job Log** page displays the test user's name, simple test user, in the **User** column and the **Charged To** column:



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

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:
  - Log in to the PaperCut MF Admin web interface.
  - Navigate to **Devices**.
  - Select the required device being tested.
  - In the **External Device Settings > Tracking** area, select **Track & control copying.**
  - Click **Apply**.
  - 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. Verify that the simple test user is not provided with a choice of accounts to choose from, and copying is charged to the simple test user's default My Personal Account.
3. Complete copying.
4. Log out of the device.
5. Log in to the PaperCut MF Admin web interface.
6. Navigate to **Logs**.

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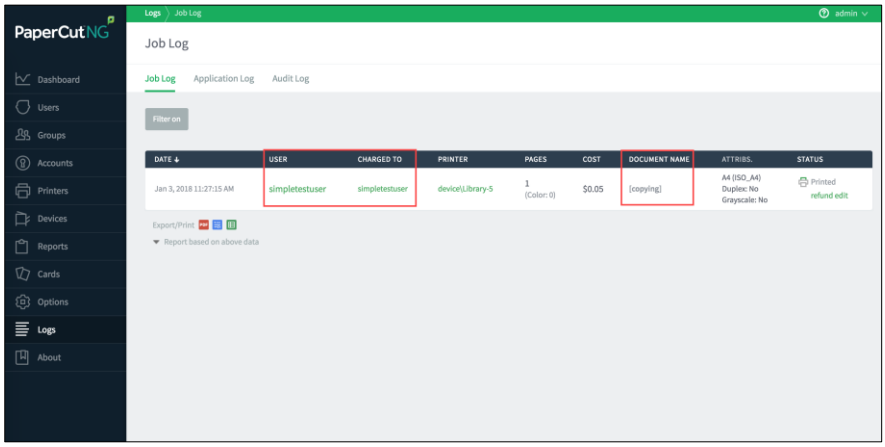
7. After copying is completed, verify that **Job Log** page displays the test user's name, simple test user, in the **User** column and the **Charged To** column:



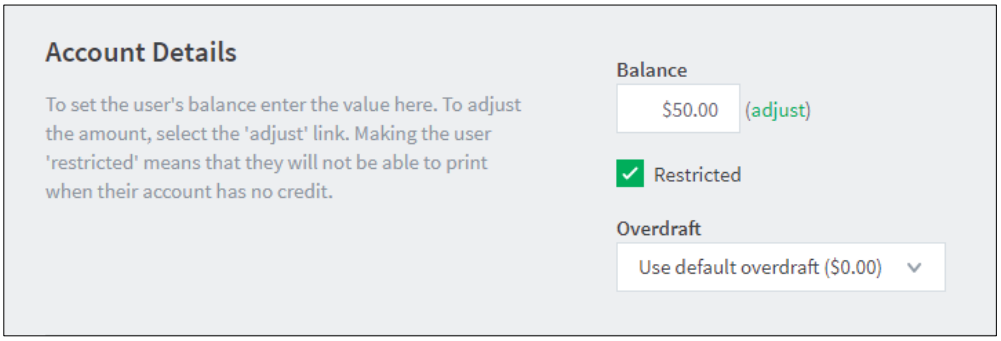
8. Log out of the PaperCut MF Admin web interface.

3.3 Advanced copying

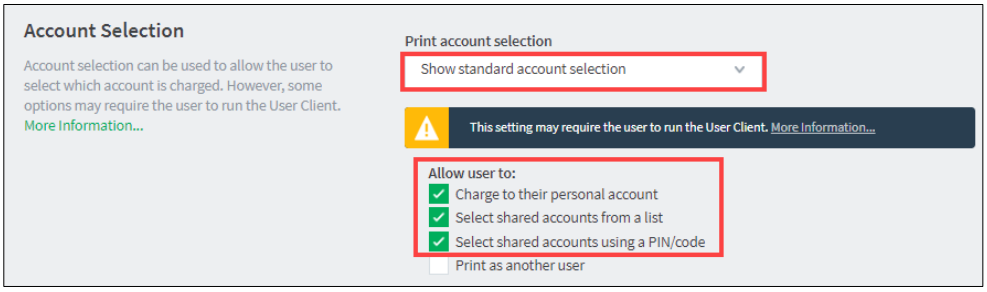
Advanced copying involves providing the advanced test user with a choice of accounts to choose from. Copying is charged to the account that is selected by the advanced test user.

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:**



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



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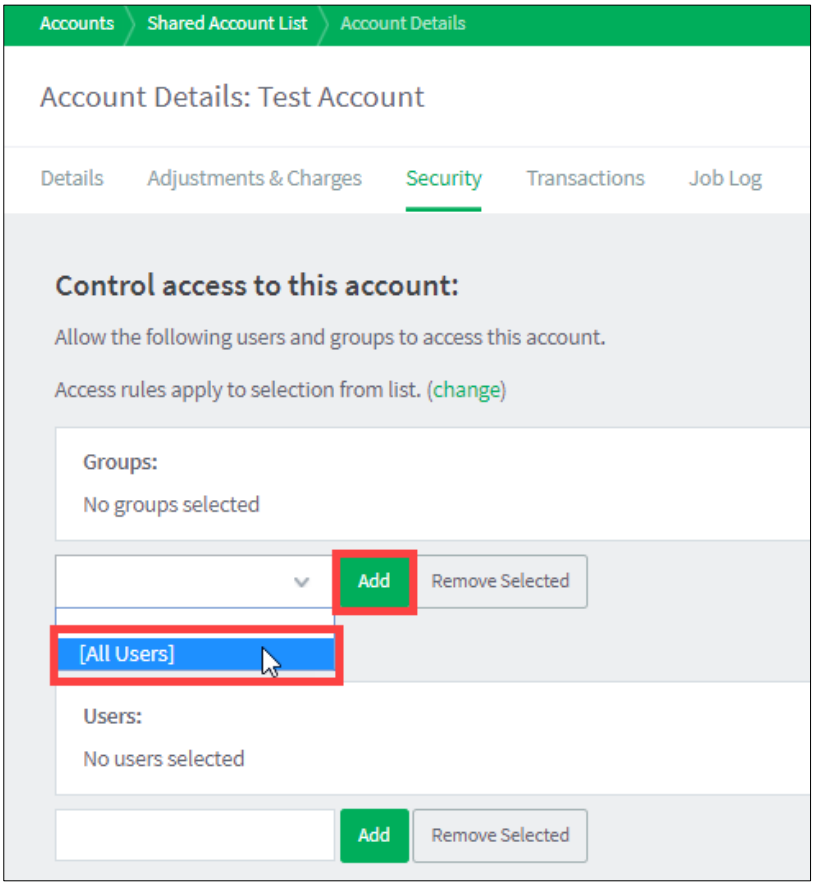
- Click Apply.

- **Device functions** – Copying is enabled. To enable copying:
  - Log in to the PaperCut MF Admin web interface.
  - Navigate to **Devices**.
  - Select the required device being tested.
  - In the **External Device Settings > Tracking** area, select **Track & control copying.**
  - Click **Apply**.
  - 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:
  - Log in to the PaperCut MF Admin web interface.
  - Navigate to **Accounts**.
  - Click **Create a new account…**.
  - In the **Details & Balance** area's field **Account Name**, enter the name of the test account (test account).
  - Click **Apply**.
  - Verify that the **Accounts > Shared Account List** page displays the test account created.
  - Click the test account.
  - Navigate to **Security**.
  - In the **Control access to this account > Groups** area, select **[All Users]**; then click **Add**:



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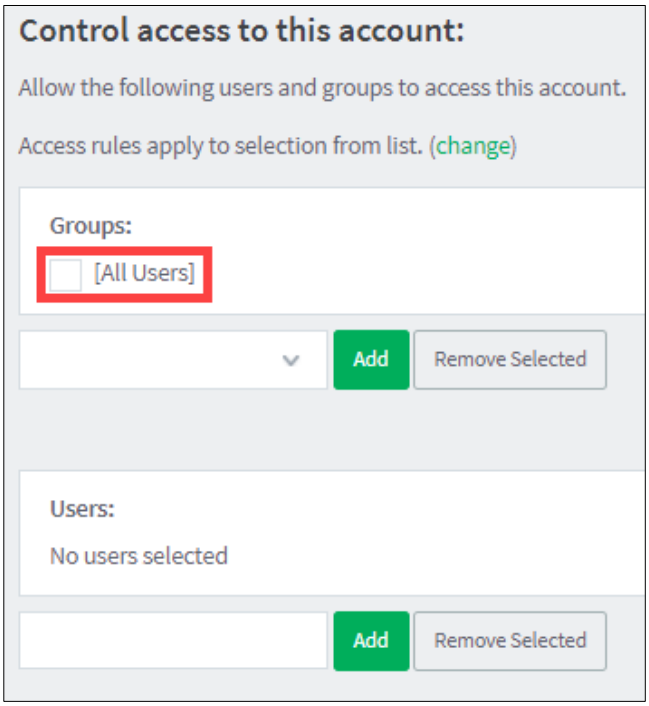
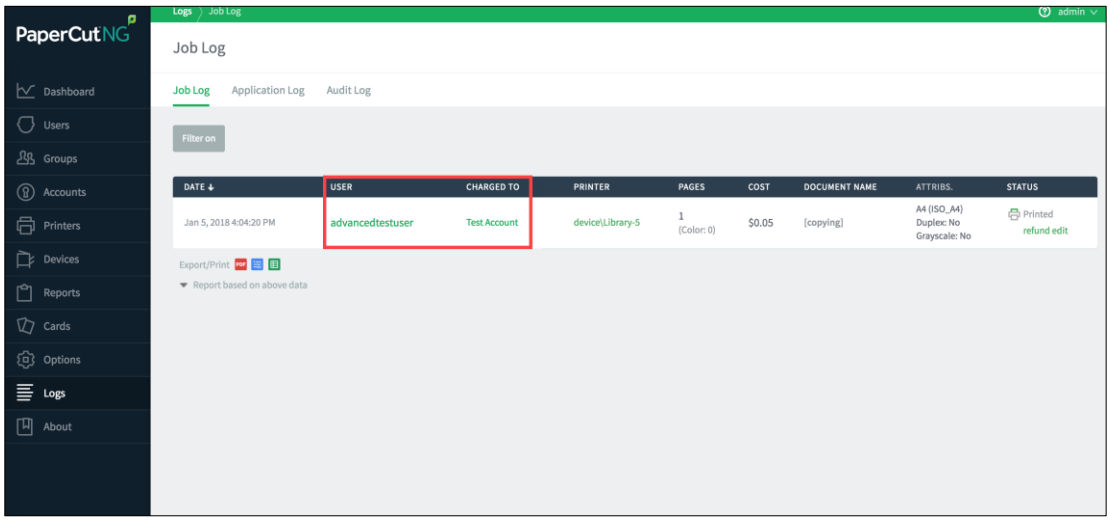
- Verify that the **Control access to this account > Groups** area displays **[All Users]:**



To test advanced copying:

1. Log in to the device as the advanced test user.
2. Verify that the advanced test user is provided with a choice of accounts to choose from.
3. Select the required account, Test account 1.
4. Continue copying by following the device's workflow.
5. Copying is charged to the account selected by the advanced test user, Test account 1.
6. Log out of the device.
7. Log in to the PaperCut MF Admin web interface.
8. Navigate to **Logs**.
9. 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:



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

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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 – Canon (MEAP).*

4.1 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:

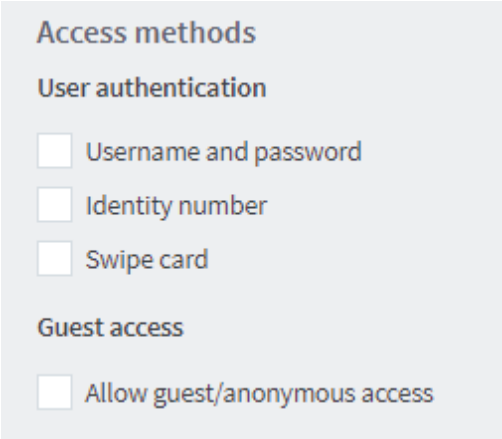
1. Log in to the PaperCut MF Admin web interface.
2. Navigate to **Options > Advanced**.
3. In the **Security** area's field **Allowed device IP addresses**, enter a comma-separated list of device IP addresses or subnets (<ip-address1 or subnet-mask1>, <ip-address2 or subnet-mask2>).
4. Click **Apply**.

4.2 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 authenticate 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 authentication options, including the guest and anonymous access authentication options.

The available user authentication options are:

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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 4.3 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.
Allow guest/anonymous access	With this option, you may choose to activate **guest** or **anonymous access**, enabling users to be authenticated as guest or anonymous users, as per the user specified in the **Inherit settings from user** field.

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- **Inherit settings from user:** Enter the username of the PaperCut MF user's profile that is used while authenticating users as guest or anonymous users on the device.
  - **Guest access** - Selecting the **Allow guest/anonymous access** authentication option *and also* selecting one or more of the other authentication 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 authentication 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.canon.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 the **Allow guest/anonymous access** authentication option *without* selecting any other authentication 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.

4.3 User authentication via swipe cards

If the **Swipe card** authentication option is selected (see 4.2 User authentication options, 4.3.2 Handling card identifiers), then:

1. Ensure the card reader is a supported card reader (see 4.3.1 Supported card readers).
2. For 2nd generation devices (running the PaperCut MF embedded application ***PaperCut***), ensure that the version of the PaperCut MF embedded application installed on the device is at least 1.7.0 or above.
3. Depending on the peripheral input devices required, configure the following accordingly:
   - **ONLY USB card readers**:
     i. Log in to the device's web interface as an administrator.
     ii. Navigate to **Settings/Registration > Preferences > External Interface > USB Settings**.

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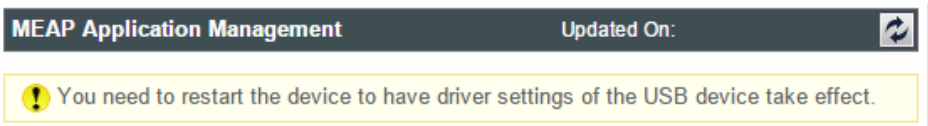
iii. Select the **Use as USB Device checkbox.**
iv. Select the **Use MEAP Driver for USB Input Device** checkbox.
v. Click **Ok**.
vi. Access the physical device.
vii. Restart the device.
viii. Connect the supported card reader to the device.

- **BOTH USB card readers AND USB keyboards**:
  i. Log in to the device's web interface as an administrator.
  ii. Navigate to **Settings/Registration > Preferences > External Interface > USB Settings**.
  iii. Select the **Use as USB Device checkbox.**
  iv. Ensure the **Use MEAP Driver for USB Input Device** checkbox is not selected. This enables the device to register USB keyboards as peripheral input devices.
  v. Log in to the PaperCut MF Admin web interface.
  vi. Ensure the config key **ext-device.canon.card-reader-ids** lists the card reader IDs (i.e. the hexadecimal web/ HTML notation of VendorID:ProductID; for example, *09d8:0310*) of the card readers that you are using. This enables the device to register keyboard emulating USB card readers as peripheral input devices. For more information, see 4.13 Config Editor.
  vii. Access the physical device.
  viii. Connect the supported card reader to the device.
  ix. Verify that the device's web interface displays the following message, and then restart the device as per the message:



Note: This message confirms that the device has registered the USB card reader as peripheral input device. However, if this is not displayed then:
  a. Restart the device to prompt the device to register the USB card reader as peripheral input device.
  b. Verify that the device's web interface displays the required message.
  c. Restart the device as per the message.

4. You may also use the config key **ext-device.canon.swipe-to-logout** to allow users to use their swipe cards to log out. For more information, see 4.13 Config Editor

4.3.1 Supported card readers

PaperCut MF – Canon (MEAP) supports the following configured and compatible keyboard emulating USB card readers:

- Elatec TWN3 and TWN4
- RF IDeas PcProx Plus
- RF IDeas MS3-00m1aku Mag reader
- RFIDeas RDR-80581AKU
- RFIDeas RDR-805H1AKU

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- RFIDeas RDR-805T1AKU
- NTWare MiCard PLUS
- MiFare and HID iClass Readers
- RD300-FH1-G (RD300 series) Fingerprint Readers

4.3.2 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**.

4.3.2.1 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
(.{10})	Extract the first 10 characters	AST%123456789 is modified to AST%123456
(\d{5})	Extract the first 5 numbers	AST%123456789 is modified to 12345
\d*=(\d*)=\d*	Extract only the numbers between the 2 special characters	123453=292929=1221 is modified to 1234532929291221

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For more information, see www.regular-expressions.info.

4.3.2.2 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
hex2dec	Convert a hexadecimal (base 16) encoded card identifier to the decimal format. **Note:** Hexadecimal numbers usually contain 0-9 and A-F.	946EBD28 is modified to 2490285352
dec2hex	Convert a decimal encoded card identifier to the hexadecimal format.	2490285352 is modified to 946EBD28
ascii-enc	Unpack an ASCII encoded card identifier to its encoded ASCII number.	3934364542443238 is modified to its ASCII code 946EBD28.
ascii-enc|hex2dec	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.	

4.3.2.3 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.

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4.4 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 SMPv3 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** – Enter **GWNCS.**
        - **Username, Privacy password, Authentication password** - If these values are available at the device's web interface, then use the same values. It 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 .**

4.5 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.

4.5.1 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

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- 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.

4.5.2 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 screens use the following config keys:

- on 2nd generation devices (running the PaperCut MF embedded application ***PaperCut***), use the config key **ext-device.canon.release.show-cost**
- on 3rd generation devices (running the PaperCut MF embedded application ***PaperCut Gen3+***), use the config key **ext-device.canon.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.

4.6 Device jobs

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

4.6.1 Tracking device jobs

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

1. Log in to the device's web interface as an administrator.
2. Navigate to **Settings/Registration > Management Settings > Device Management > Display Log.**
3. Select the **Obtain Job Log from Management Software** checkbox.
4. Click **OK**.
5. Log in to the PaperCut MF Admin web interface.

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6. Navigate to **Devices**.
7. Select the required device.
8. In the **External Device Settings** area, select the required device jobs:
    - **Track & control copying** – PaperCut MF tracks and controls copy jobs, and tracks 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: If both **Track & control scanning** and **Track & control faxing** are selected, then use the config key **ext-device.canon.timeout.complete-scan-job.secs.** For more information, see 4.13 Config Editor.

4.6.2 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 configure the PaperCut MF Select Account screen, use the config key **ext-device.canon.accounts.initial-tab.** For more information, see 4.13 Config Editor.

4.6.3 Job costs and account balances (Zero Stop)

When scanning, copying, or faxing, as a restricted user's job proceeds, PaperCut MF recalculates the restricted user's account balance after each sheet of paper is produced, based on a Reference Page Cost. As soon as the balance reaches zero, PaperCut MF attempts to stop the job. However, depending on the device's capabilities, the job could overrun a few pages, causing the account's balance to drop below zero.

The Reference Page Cost works as follows:

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

For more information, see 4.6.3.1 Reference Page Cost and maximum number of Reference Pages Allowed.

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Further restrictions can also be applied to restricted users to prevent their account balances from dropping below zero. For more information, see 4.6.3.2 Multiple Jobs.

4.6.3.1 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 scan, copy, or fax jobs, use the following config keys:

- **ext-device.canon.limit-reference.duplex**
- **ext-device.canon.limit-reference.grayscale**
- **ext-device.canon.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 scan, copy, or fax jobs, has some limitations. For more information, see: 5.1 Limitations of the configured Reference Page Cost and maximum number of Reference Pages Allowed.

4.6.3.2 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.canon.restricted.allow-multiple-login.**

For more information, see 4.13 Config Editor.

4.6.4 Color copying

If PaperCut MF is configured to apply color copy restrictions (i.e. on the PaperCut MF Admin web interface's **Devices > External Device List > Device Details > Filters & Restrictions**), then ensure the device is also configured as required:

1. Log in to the device's web interface as an administrator.
2. Navigate to **Settings/Registration > Management Settings > License/Other > ACCESS MANAGEMENT SYSTEM Settings.**
   Note: If **ACCESS MANAGEMENT SYSTEM Settings** is unavailable, it implies that it is not installed. For more information, contact your reseller or Authorized Solution Center. You can find their contact information in your PaperCut MF Admin web interface, on the **About** page.
3. Select the **Use ACCESS MANAGEMENT SYSTEM** checkbox.
4. Click **Ok**.

4.6.5 On-device printing

On-device printing or box printing refers to print jobs that are initiated from within the device. For example, printing documents stored in local mailbox inside the device, from a network shared folder accessible from the device, or from USB storage media. On most devices, users can access this from the **Access Stored Files** menu option.

To configure the device to allow the use of USB storage devices for on-device printing (i.e. printing from USB storage devices):

1. Log in to the device's web interface as an administrator.
2. Navigate to **Settings/Registration > Preferences > External Interface > USB Settings.**
3. Select the **Use as USB Device** checkbox.
4. Ensure the **Use MEAP Driver for USB External Device** checkbox is not selected.

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5. Navigate to **Settings/Registration > Function Settings > Store/Access Files > Memory Media Settings.**
6. Configure the **Use Print Function** as required.
7. Click **Ok**.
8. Access the physical device and restart it.

4.6.6 Device's scanning

Depending on the needs of your environment, you can configure the device to:

- 2.4.6.1 Allow the use of USB storage devices
- 2.4.6.2 Allow the use of the device's Scan to Personal Folder
- 2.4.6.3 Suppress the SMTP verification prompt

4.6.7 PaperCut MF's Integrated Scanning

Note: This is only applicable to 3rd generation device (running the PaperCut MF embedded application ***PaperCut Gen3+***).

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

1. Ensure that the device is configured communicate with the PaperCut MF Application Server using HTTPS/ SSL:
    a. Log in to the device's web interface as an administrator.
    b. Click **Configure PaperCut**.
    c. On the Configure PaperCut screen's Server **Port (HTTPS/binary)** field, enter the HTTPS/ SSL port used to communicate with the PaperCut MF Application Server (see 2.3 System requirements).
    Note: This is to ensure that scanned documents, which could have sensitive and personally identifiable user information, are always transmitted over a secure connection. For more information, see 2.4.11 Enable communication with the PaperCut MF Application Server.
2. Configure Integrated Scanning on the PaperCut MF Admin web interface. For more information, see Integrated Scanning or the PaperCut MF manual.
3. Depending on the needs of your environment, you may need to change the default settings of the following config keys:
    - **ext-device.canon.scan.high-compression-pdf.enabled** (see 4.13 Config Editor)
    - **ext-device.canon.scan.prompt.checkbox.checked** (see 4.6.7.1 Integrated scan workflow)
    - **ext-device.canon.timeout.scan-prompt-send.secs** (see 4.6.7.1 Integrated scan workflow, 4.12 Timeouts)
    - **ext-device.canon.timeout.complete-scan-job-screen.secs** (see 4.6.7.1 Integrated scan workflow, 4.12 Timeouts)

4.6.7.1 Integrated scan workflow

If Integrated Scanning is enabled, then you can use the config key **ext-device.canon.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):

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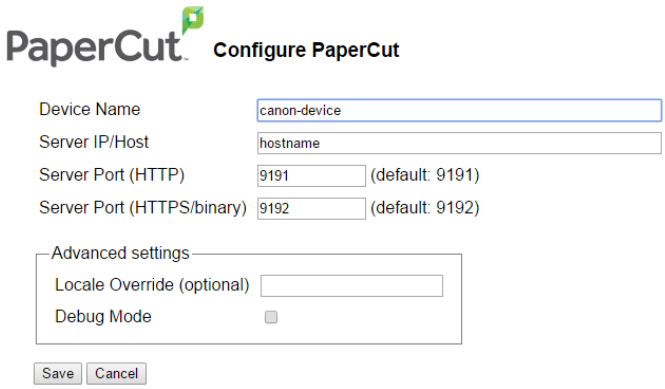
- A checked **Prompt for more pages** checkbox enables the device to display the Scan More or Finish screen, providing users with the ability to add more pages to the current scan job or start new scan jobs retaining the current scan job's settings and account selection attributes.
  Note: To specify the user inactivity timeout on this screen, use the config key **ext-device.canon.timeout.scan-prompt-send.secs**. For more information, see 4.12 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.canon.timeout.complete-scan-job-screen.secs**. For more information, see 4.12 Timeouts, 4.13 Config Editor.

4.7 Language

To configure the device's default language:

- On 3rd generation devices (running the PaperCut MF embedded application ***PaperCut Gen3+***), use the config key **ext-device.canon.locale-override.** For more information, see 4.13 Config Editor.
- On 2nd generation devices (running the PaperCut MF embedded application ***PaperCut***):
  - Log in to the device's web interface as an administrator.
  - Click **Configure PaperCut**.
  - On the Configure PaperCut screen's **Locale override (optional)** field, specify the default language of the device, if it is different to the language of the locale in which the device is installed. The accepted values are: xx (language), xx_XX (language_region). For example, ja (Japanese), en_US (English_United States of America).



Note:

- If this is not configured, then the device's default language is the language of the PaperCut MF Application Server (via the PaperCut MF Admin web interface's **Options > General > Display Options > Location**).
- Configuring this, however, does not change the device's currency and paper size values to correspond to the geographical locale of value. For example, if the device is installed in Canada, and this field's value is fr (French), the device's currency does not change to Euros. It remains Canadian Dollar.
- On 3rd generation devices (running the PaperCut MF embedded application ***PaperCut Gen3+***), this value is overridden by the value of the config key **ext-device.canon.locale-override.**

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4.8 Keyboards

To configure the device to allow the use of USB keyboards:

1. Log in to the device's web interface as an administrator.
2. Navigate to **Settings/Registration > Preferences > External Interface > USB Settings**.
3. Select the **Use as USB Device checkbox.**
4. Ensure the **Use MEAP Driver for USB Input Device** checkbox is not selected.
   Note: If you are using BOTH USB card readers AND USB keyboards, then this setting disables the device's ability to register USB card readers as peripheral input devices. For more information, see 4.3 User authentication via swipe cards
5. Click **Ok**.
6. Access the physical device and restart it.

4.9 Screen headers

4.9.1 Header colors

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

1. For all devices, use the config key **ext-device.canon.header.textcolor.** For more information, see 4.13 Config Editor.
2. Only on 3rd generation devices (running the PaperCut MF embedded application ***PaperCut Gen3+***), use the config key, **ext-device.canon.header.color.** For more information, see 4.13 Config Editor.
3. Log in to the device as a test user (simple test user).
4. Verify that the device's header background and text colors are as required.

4.9.2 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:
   - On 3rd generation devices (running the PaperCut MF embedded application ***PaperCut Gen3+***):
     - Image height = 45 pixels
     - Image width = 360 pixels
     - Image file format = `.png`
     - Image filename = `logo.png`
     - Image file location = `[PaperCut MF Application Server Location]\server\custom\web\device\canon\`
   - On 2nd generation devices (running the PaperCut MF embedded application ***PaperCut***):
     - Image height = 80 pixels (50 + 30).
       Note: Of the 80 pixels, ensure that the logo is first 50 pixels, while the remaining 30 pixels is any background color:

     - Image file format = `.png`

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Note: Some devices do not support PNG images with an alpha channel (transparency). It is recommended that you use an image editing tool to remove the alpha channel.

- Image filename = `header.png`
- Image file location = `[PaperCut MF Application Server Location]\server\custom\web\device\canon\`

2. Log in to the device as a test user (simple test user).
3. Verify that the device's header logo is as required.

4.10 Device's Status Monitor screen

By default, the device's Status Monitor screen always displays its two tabs - Job Status and Job Log. These tabs contain sensitive and personally identifiable user information (such as, usernames, e-mail addresses, document names). Depending on the needs of your environment, you can configure the device to:

- always hide the Job Log tab,
- conditionally hide the Job Status and the Job Log tab

To configure the device's Status Monitor screen to always hide the Job Log tab:

1. Log in to the device's web interface as an administrator.
2. Navigate to **Settings/Registration > Management Settings > Device Management > Display Log**.
3. Ensure the **Display Job Log** checkbox is not selected.
   Note: The device always hides the Job Log tab.
4. Click **Ok**.

To configure the device's Status Monitor screen to conditionally hide the Job Status and the Job Log tab (i.e. display only to authenticated users):

1. Log in to the device's web interface as an administrator.
2. Navigate to **Settings/Registration > Management Settings > Device Management > Display Job Status Before Authentication**
3. Ensure the **Display Job Status Before Authentication** checkbox is not selected.
   Note: The device conditionally displays the Job Status tab and the Job Log (i.e. displays only to authenticated users). However, if the device is configured to always hides the Job Log tab, then upon authentication, the device displays only the Job Status tab. The device always hides the Job Log tab.
4. Click **Ok**.

4.11 Device's first screen and workflow

On some devices, after a user logs in, the device displays a white screen. To configure the device to prevent it from displaying this white screen:

1. Log in to the device's web interface as an administrator.
2. Navigate to **Settings/Registration > User Management > Department ID Management > Settings.**
3. Ensure **Enable Department ID Management** is not selected.
4. Click **Ok.**

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4.12 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:
    1. Log in to the device's web interface as an administrator.
    2. Navigate to **Settings/ Registration > Preferences > Timer/Energy Settings.**
    3. In **Auto Reset Time**, 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 4.13 Config Editor.
    4. Click **Ok.**
- **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.canon.timeout.scan-prompt-send.secs
    - **PaperCut MF Scan Complete timeout** – ext-device.canon.timeout.complete-scan-job-screen.secs

    For more information, see 4.6.7.1 Integrated scan workflow, 4.13 Config Editor.

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.**

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The available config keys are:

Config name	Description
Device screens	
ext-device.canon.locale-override	This is only applicable to 3rd generation devices (running the PaperCut MF embedded application ***PaperCut Gen3+***). Specify the default language of the device, if it is different to the language of the locale in which the device was installed. This is a device-specific config key. • Values: xx (language), xx_XX (language_region), DEFAULT For example, ja (Japanese), en_US (English_United States of America) • Default: DEFAULT (language of the locale in which the device was installed) **Note:** • Changing this config key's default value does not change the device's currency and paper size values to correspond to the geographical locale of config key's value. For example, if the device is installed in Canada, and this config key's value is French, the device's currency does not change to Euros. It remains Canadian Dollar. • This config key's value overrides the value of the Configure PaperCut screen's **Locale override (optional)** field. For more information, see 2.4.11 Enable communication with the PaperCut MF Application Server, 4.7 Language.
ext-device.canon.header.color	This is only applicable to 3rd generation devices (running the PaperCut MF embedded application ***PaperCut Gen3+***). Customize the background color of headers on all PaperCut MF screens. This is a device-specific config key. • Values: Valid CSS color specifications (color names or HTML RGB, HEX #rrggbb, HSL, RGBA, HSLA values), DEFAULT • Default: DEFAULT (white) **Note:** For more information, see 4.9.1 Header colors.
ext-device.canon.header.textcolor	Customize the text color of headers on all PaperCut MF screens.

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	This is a device-specific config key. • Values: Valid CSS color specifications (color names or HTML RGB, HEX #rrggbb, HSL, RGBA, HSLA values), DEFAULT • Default: DEFAULT (white for 2nd generation devices running the PaperCut MF embedded application ***PaperCut***; black for 3rd generation devices running the PaperCut MF embedded application ***PaperCut Gen3+***) **Note:** For more information, see 4.9.1 Header colors.
ext-device-msg.welcome	This is only applicable to 2nd generation devices (running the PaperCut MF embedded application ***PaperCut***). Customize the text that appears on the PaperCut MF Login screen, when the device is online. For example, instructions to help users log in to PaperCut MF on the device. This is a device-specific config key. • Values: Any text, DEFAULT • 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.canon.login-instruction	This is only applicable to 3rd generation devices (running the PaperCut MF embedded application ***PaperCut Gen3+***). Customize text that appears on the PaperCut MF Login screen. For example, instructions to help users log in to PaperCut MF on the device. This is a device-specific config key. • Values: Any text, DEFAULT • 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*.

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ext-device.canon.welcome-text	This is only applicable to 3rd generation devices (running the PaperCut MF embedded application ***PaperCut Gen3+***). Customize text on the PaperCut MF Home screen's header (after users have successfully logged in to the device from the PaperCut MF Login screen). For example, "Hello there!". This is a device-specific config key. • Values: Any text, patterns using {0} for username substitution, DEFAULT • Default: DEFAULT ("Welcome, {0}", where "{0}" is used to substitute the user's name) **Note:** To add a line break, use *\n.* For example, *PaperCut Software\nHello there!*
ext-device. canon.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 (the **Allow guest/anonymous access** authentication option is selected and at least any one other authentication option is also selected). For more information, see 4.2 User authentication options.
ext-device.canon.device-functions-on-login	This is only applicable to 3rd generation devices (running the PaperCut MF embedded application ***PaperCut Gen3+***). Configure the workflow after users have successfully logged in to the device to: • Either, show the PaperCut MF Home screen • Or, show the screen with all the device jobs This is a device-specific config key. • Values: N (show the PaperCut MF Home screen), Y (show the screen with all the device jobs) • Default: N **Note:** Setting this to N – enables the following config keys to take effect on 3rd generation devices (running the PaperCut MF embedded application ***PaperCut Gen3+***): • **ext-device.canon.direct-to-release-page** • **ext-device.canon.skip-release-screen-when-no-jobs**

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ext-device.canon.direct-to-release-page	This is only applicable to 3rd generation devices (running the PaperCut MF embedded application ***PaperCut Gen3+***).
	
	When the device is configured to show the PaperCut MF Home screen, further configure the workflow to**:**
	• Either, show the PaperCut MF Home screen
	• Or, show the PaperCut MF Print Release screen
	
	This is a device-specific config key.
	• Values: N (show the PaperCut MF Home screen), Y (show the PaperCut MF Print Release screen)
	• Default: N
	
	Note:
	• This is only applicable if the device is configured to show the PaperCut MF Home screen (i.e. the config key **ext-device.canon.device-functions-on-login** is set to **N**).
	• Setting this to Y –
	  ○ is required if **Enable print release** is selected.
	  ○ enables the config key **ext-device.canon.skip-release-screen-when-no-jobs** to take effect on 3rd generation devices (running the PaperCut MF embedded application ***PaperCut Gen3+***.

ext-device.canon.skip-release-screen-when-no-jobs	When the device is configured to show the PaperCut MF Home screen and the PaperCut MF Print Release screen, further configure the workflow to**:** • Either, always show the PaperCut MF Print Release screen • Or, hide the PaperCut MF Print Release screen, if there are no held print jobs waiting to be released This is a device-specific config key. • Values: N (always show the PaperCut MF Print Release screen), Y (hide the PaperCut MF Print Release screen, based on other settings) • Default: N **Note:** On 3rd generation devices (running the PaperCut MF embedded application ***PaperCut Gen3+***), this is only applicable if the device is configured to: • show the PaperCut MF Home screen (i.e. the config key **ext-device.canon.device-functions-on-login** is set to **N)**, and • show the PaperCut MF Print Release screen screen (i.e. the config key **ext-device.canon.direct-to-release-page** is set to **Y**).

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ext-device.canon.release.show-cost	This is only applicable to 2nd generation devices (running the PaperCut MF embedded application ***PaperCut***). Toggle the display of the cost of held print jobs on the PaperCut MF Print Release 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 4.5.2 User selection of job attributes.
ext-device.canon.release-show-cost	This is only applicable to 3rd generation devices (running the PaperCut MF embedded application ***PaperCut Gen3+***). Toggle the display of the cost of held print jobs on the PaperCut MF Print Release 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 4.5.2 User selection of job attributes.
ext-device.canon.email.personalized-sender	Specify whether or not the device's scan to email (Scan-to-Me) auto-populates the **From** and **Sender** fields with the user's email address as configured in PaperCut MF. This is a device-specific config key. • Values: Y (auto-populate **From** and **Sender** fields with users' PaperCut MF email address), N (do not auto-populate **From** and **Sender** fields) • Default: Y **Note:** This is only applicable if users' email addresses are already configured while creating and configuring users in PaperCut MF (**Users > User List > User Details > Primary email**).

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ext-device.canon.scan.high-compression-pdf.enabled	This is only applicable to 3rd generation devices (running the PaperCut MF embedded application ***PaperCut Gen3+***). Specify whether or not PaperCut MF attempts to produce high-compression PDFs (if possible), when using Integrated Scanning for PDF scans. This is a device-specific config key. • Values: Y (high-compression PDFs), N (standard PDFs) • Default: DEFAULT (N) **Note:** This is only applicable to color and grayscale Integrated Scan PDFs at 300dpi; this has no effect on monochrome (black & white) Integrated Scan PDFs or other file types or resolutions. For more information, see 4.6.7 PaperCut MF's Integrated Scanning
ext-device.canon.scan.prompt.checkbox.checked	This is only applicable to 3rd generation devices (running the PaperCut MF embedded application ***PaperCut Gen3+***). 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 4.6.7.1 Integrated scan workflow.

ext-device.canon.accounts.initial-tab	Specify the tab that is displayed by default on the PaperCut MF Select Account screen.
	
	This is a device-specific config key.
	
	• Values: Any one of the following tabs:
	  ○ LIST
	  ○ SEARCH
	  ○ CODE
	• Default: LIST
	
	Note: This is only applicable to users configured with the required Account Selection options. For more information about configuring cost allocation for users, see the PaperCut MF manual.

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"Swipe card" authentication option	
ext-device.canon.swipe-to-logout	Enable or disable swipe-to-logout. This is a device-specific config key. • Values: Y (swipe-to-logout), N (no swipe-to-logout), • Default: Y **Note:** This is only applicable if the **Swipe card** authentication option is selected. For more information, see 4.2 User authentication options and 4.3 User authentication via swipe cards.
ext-device.canon.card-reader-ids	Specify the card reader IDs of the card readers that you are using. This is a device-specific config key. • Values: any one or a comma-separated list of required card reader IDs (hexadecimal web/ HTML notation of VendorID:ProductID; for example, *09d8:0310*) **Note:** This is only applicable if the **Swipe card** authentication option is selected. For more information, see 4.2 User authentication options and 4.3 User authentication via swipe cards, 4.3.1 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 4.2 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

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	• 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 4.2 User authentication options and 4.3.2 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 4.2 User authentication options and 4.3.2 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, see 4.2 User authentication options and 4.3.2 Handling card identifiers.
Job costs and account balances (Zero Stop)	
ext-device.canon.limit-reference.duplex	When configuring the Reference Page Cost that is used to calculate the maximum number of Reference Pages Allowed for

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	device jobs (such as, scan, copy, fax), 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 4.6.3.1 Reference Page Cost and maximum number of Reference Pages Allowed.
ext-device.canon.limit-reference.grayscale	When configuring the Reference Page Cost that is used to calculate the maximum number of Reference Pages Allowed for device jobs (such as, scan, copy, fax), 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 4.6.3.1 Reference Page Cost and maximum number of Reference Pages Allowed.
ext-device.canon.limit-reference.paper-size	When configuring the Reference Page Cost that is used to calculate the maximum number of Reference Pages Allowed for device jobs (such as, scan, copy, fax), 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 4.6.3.1 Reference Page Cost and maximum number of Reference Pages Allowed.
ext-device.canon.restricted.allow-multiple-login	Specify whether or not restricted users are permitted to perform multiple transactions simultaneously on the device, charging the jobs to the same restricted account. For example, perform a copy job while another print job is in progress, and charge them both to the same account. 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.

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	• Setting this to N – is recommended to ensure that restricted users' account balances do not drop below zero. • For more information, see 4.6.3.2 Multiple Jobs.

ext-device.canon.timeout.complete-scan-job.secs	Specify the interval of time (seconds) that the device waits after the completion of a scan job, before starting a new fax job.
	This is a device-specific config key.
	• Values: Any positive number (seconds), DEFAULT
	• Default: DEFAULT (60 seconds)
	Note:
	• This is only applicable if:
	  ○ PaperCut MF is configured to track scanning and faxing (see 4.6.1 Tracking device jobs), but only scanning is charged.
	  ○ A completed scan job is immediately followed by a fax job.
	• Setting this value – ensures that the user is not charged for the scanning component of the fax job.

Network resilience, security, debug logs, uninstallation	
ext-device.canon.period.error	This is only applicable to 3rd generation devices (running the PaperCut MF embedded application ***PaperCut Gen3+***). 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.canon.period.ping	This is only applicable to 3rd generation devices (running the PaperCut MF embedded application ***PaperCut Gen3+***). Specify the interval of time (seconds) between each attempt made by PaperCut MF to connect to the device, after successfully installing PaperCut MF on the device (i.e. device registration and integration). This is a device-specific config key. • Values: 1-3600 (seconds)

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	• Default: 300 (seconds)

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.
ext-device.canon.timeout.session.mins	Specify the interval of time (hours and minutes) after which a user's session details are discarded. This is a device-specific config key.

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	• Values: Any positive numbers (hours and minutes), DEFAULT For example, for 60 hours and 1440 minutes specify *60, 1440*. • Default: DEFAULT (24 hours, 1440 minutes) **Note:** A user's session details are stored on the device if the user has logged out while there are jobs in progress.
Timeouts	
ext-device.canon.message-timeout.secs	Specify the interval of time (seconds) for which messages are displayed on the device. This is a device-specific config key. • Values: Any positive or negative number (seconds) • Default: DEFAULT (10 seconds) **Note:** • Setting this to a positive number – displays all device messages for the duration of the value, after which they disappear. • Setting this to a negative number – displays all device messages for the entire duration of the user's active session, and they do not disappear.
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 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 4.12 Timeouts.
ext-device.canon.timeout.scan-prompt-send.secs	This is only applicable to 3rd generation devices (running the PaperCut MF embedded application ***PaperCut Gen3+***). **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 screen (with the three

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	buttons – **Scan next page, Scan new document, Finish**) is automatically taken to the PaperCut MF Scan Complete screen (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: 1-300 (seconds) • 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 4.6.7.1 Integrated scan workflow, 4.12 Timeouts.
ext-device.canon.timeout.complete-scan-job-screen.secs	This is only applicable to 3rd generation devices (running the PaperCut MF embedded application ***PaperCut Gen3+***). **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: 1-300 (seconds) • 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 4.6.7.1 Integrated scan workflow, 4.12 Timeouts.

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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 scan, copy, fax jobs, has the following limitations.

5.1.1 Limitation 1: Reference Page Cost is unavailable when using USB storage devices for on-device printing and scanning

The Reference Page Cost that is used to calculate the maximum number of Reference Pages Allowed for device jobs is unavailable when using USB storage devices for on-device printing or scanning. As a result, when printing from or scanning to a USB storage device, a restricted user's account balance can drop below zero.

However, you can configure the device to prevent the use of USB storage devices for on-device printing and scanning:

1. Log in to the device's web interface as an administrator.
2. Navigate to **Settings/Registration > Function Settings > Store/Access Files > Memory Media Settings.**
3. Configure the **Use Scan Function** and **Use Print Function**, as required.

5.1.2 Limitation 2: Reference Page Cost is unavailable for fax jobs on some devices

The Reference Page Cost that is used to calculate the maximum number of Reference Pages Allowed for device jobs is unavailable for fax jobs on some devices. This is because these devices do not have the mechanisms required for the application of PaperCut MF's Zero Stop. As a result, if faxing is charged, then when faxing on these devices, a restricted user's account balance can drop below zero.

In addition, these jobs are logged as scan jobs on the PaperCut MF Admin web interface (**Logs > Job Log**), if PaperCut MF is configured to track and control scanning (see, 4.6.1 Tracking device jobs)

For more information about these devices, see the PaperCut MF for Canon page or contact your reseller or Authorized Solution Center. You can find their contact information in your PaperCut MF Admin web interface, on the **About** page.

5.1.3 Limitation 3: 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 scan, copy, 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 1 – 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:**

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    - 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)*

5.1.4 Limitation 4: 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 scan, copy, 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, or fax job
- the user could be prematurely stopped in the middle of a scan, copy, or 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 2 – 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)*

5.2 Limitations with PaperCut MF's Integrated Scanning

- PaperCut MF's Integrated Scanning is unavailable on 2nd generation devices (running the PaperCut MF embedded application ***PaperCut***).
- PaperCut MF's Integrated Scanning is only available on 3rd generation device (running the PaperCut MF embedded application ***PaperCut Gen3+***).

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- Although PaperCut MF's Integrated Scanning is available on 3rd generation devices (running the PaperCut MF embedded application ***PaperCut Gen3+***), it does not support the following **File Type** and **Color mode** combinations on the Scan Settings screen:
    a. ***JPEG > B&W*** scanning is unavailable
    b. ***TIFF > Color*** and ***TIFF > Grayscale*** scanning is unavailable

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6 FAQ & Troubleshooting

6.1 Determine the Canon platform

To determine whether the device is a 2nd or 3rd generation device:

1. Log in to the device's web interface as an administrator.
2. Navigate to **Service Management Service > System Management > System Information**.
3. The **Platform Information** table's **MEAP Specifications** row determines whether the device is a 2nd or 3rd generation device:
    - **123** indicates this is a 3rd generation device
    - any other number indicates this is a 2nd generation device

6.2 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`

6.3 "Device Setup: failed to connect to ..." error

If the device displays **Device Setup: failed to connect to …**, it implies that the device is unable to establish connection with the PaperCut MF Application Server. This occurs because of any one of the following reasons:

- There is a network outage that is preventing network connection
- The PaperCut MF Application Server is not running
- The PaperCut MF Application Server's firewall or network routing configuration is preventing network connection
- The details of the PaperCut MF Application Server are incorrect.

To resolve this, ensure the following:

- there is no network outage
- the PaperCut MF Application Server is running
- the PaperCut MF Application Server's firewall or network routing configuration is not preventing network connection
- the PaperCut MF Application Server details are accurate. For more information, see 2.4.11 Enable communication with the PaperCut MF Application Server, 6.4 The device is unable to connect to the PaperCut MF Application Server using TLS 1.1/1.2.

6.4 The device is unable to connect to the PaperCut MF Application Server using TLS 1.1/1.2

ALL 3rd generation devices (running the PaperCut MF embedded application ***PaperCut Gen3+***) not only support the TLS 1.1/1.2 communication protocol, but also seamlessly communicate with the PaperCut MF Application Server using this protocol.

However, if a 2nd generation device (running the PaperCut MF embedded application ***PaperCut***) is unable to connect to the PaperCut MF Application Server using TLS 1.1/1.2, it displays **Device Setup: failed to connect to …**.

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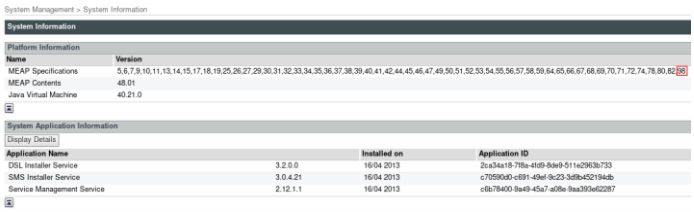
This is because:

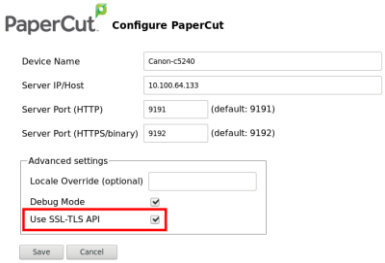
- Only some 2nd generation devices running the PaperCut MF embedded application ***PaperCut***, support the TLS 1.1/1.2 communication protocol (i.e. only devices with **MEAP Specification Version 98**).
- These devices need to be manually configured to enable them to communicate with the PaperCut MF Application Server using this protocol (i.e. they do not seamlessly use this protocol)

To enable relevant 2nd generation devices (running the PaperCut MF embedded application ***PaperCut***) to communicate with the PaperCut MF Application Server using the TLS 1.1/1.2 communication protocol:

1. Ensure that the 2nd generation device (running the PaperCut MF embedded application ***PaperCut***) supports the TLS 1.1/1.2 communication protocol:
    a. Log in to the device's web interface as an administrator.
    b. Navigate to **Service Management Service > System Management > System Information**.
    c. Verify that the **Platform Information** table's **MEAP Specifications** row displays **98**:



2. Log in to the device's web interface as an administrator.
3. Click **Configure PaperCut**.
4. On the Configure PaperCut screen, select the **Use SSL-TLS API** checkbox:



5. Click **Save.**

6.5 Sleep mode

Enabling sleep mode on a device helps minimize the device's energy consumption. However, on some devices, users need click the **Energy Saver** hard button to wake the device's touchscreen and use the device.

7 Uninstall *PaperCut MF – Canon (MEAP)*

7.1 Temporarily disable *PaperCut MF – Canon (MEAP)*

To temporarily disable *PaperCut MF – Canon (MEAP):*

1. Log in to the PaperCut MF Admin web interface.

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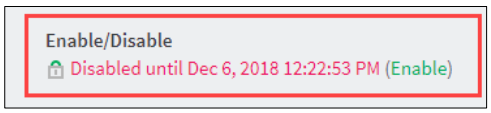
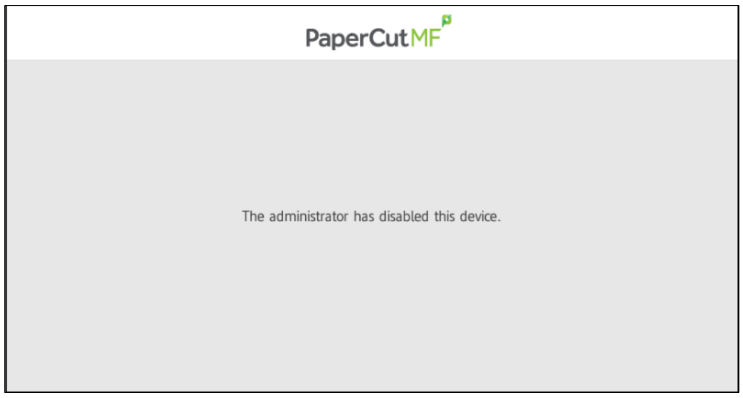
2. Navigate to **Devices**.
3. Select the required device.
4. In the **Configuration** area's **Enable/Disable**, select a **Disable** option.
5. Verify that *PaperCut MF – Canon (MEAP)* is disabled:



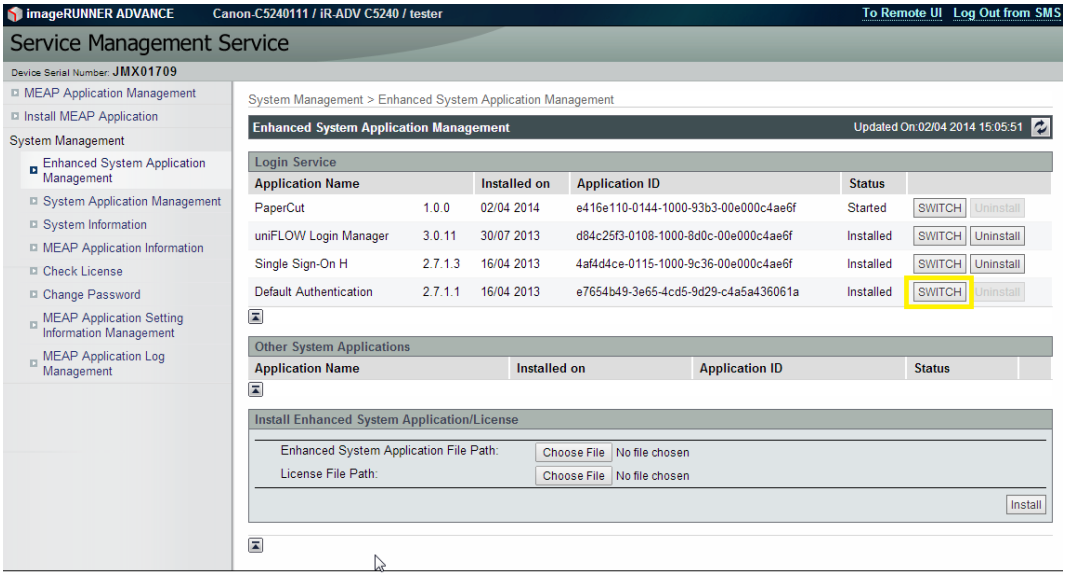
6. Verify that *PaperCut MF – Canon (MEAP)* is not available on the device to users:



7.2 Permanently uninstall *PaperCut MF – Canon (MEAP)*

To permanently uninstall *PaperCut MF – Canon (MEAP):*

1. Log in to the device's web interface as an administrator.
2. Navigate to **Enhanced System Application Management**.
3. In the **Login Service** table's ***Default Authentication*** row, click **SWITCH**:



4. Access the physical device and restart it.
5. In the **Login Service** table's ***PaperCut*** *or* ***PaperCut Gen3+*** row, click **Uninstall.**

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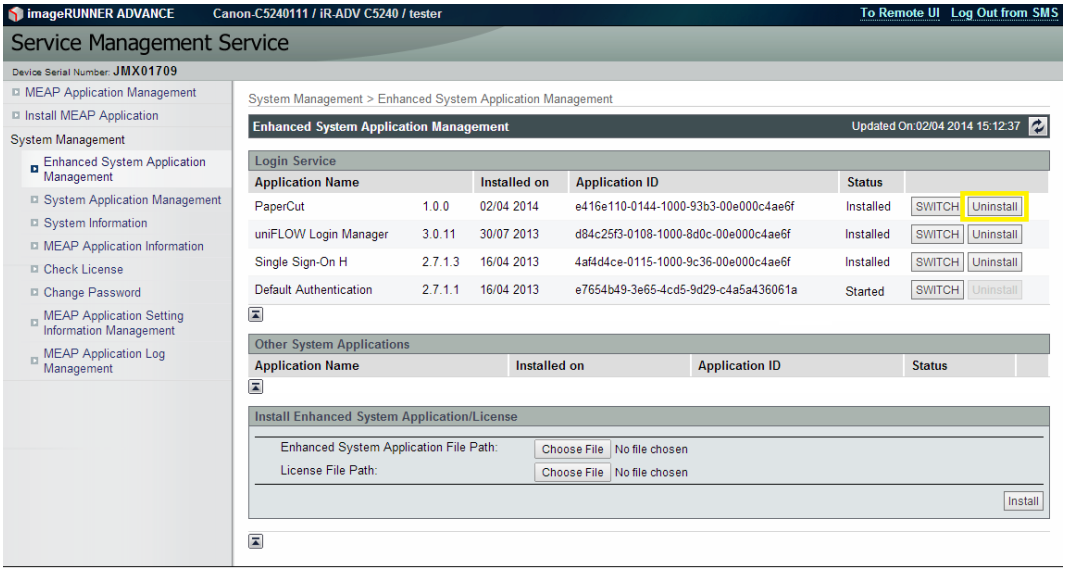

6. Confirm this by clicking **Yes**.
7. Log in to the PaperCut MF Admin web interface.
8. Navigate to **Devices**.
9. Select each required device.
10. Click **Actions > Delete this device**.
11. Click **Devices** and verify that the required devices are no longer listed.
12. Click **Log out**.
13. Access the physical devices.
14. Verify that *PaperCut MF – Canon (MEAP)* is not available on the required devices.

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