PaperCut MF - Sharp OSA (HTML Browser n2.0+) Embedded Manual

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1 Document revision history

Published date or release	Details of changes made
21.2	5.3 Phonebook contacts
21.0.0	2.2 Compatible devices 4.12 Config Editor
20.0.0	Restructured 2.4.4 to include enhanced deployment changes.
19.2.0	4.11.2 Header logo
19.1.5	4.12 Config Editor
19.1.0	Document restructure
19.0.3	8 FAQ & Troubleshooting
19.0.0	2 Overview; 3 Installation; 5.3 Authentication Methods; 5.5 Held print job settings at the device; 5.12 SNMP; 5.13 Config Editor; 8 FAQ & Troubleshooting
18.3.6-Sharp-showroom-V5+	New guide

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2 Installation

This section covers the installation of *PaperCut MF - Sharp OSA (HTML Browser n2.0+)*.

2.1 Supported devices

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

2.2 Compatible devices

Ensure that the supported Sharp devices on the network are compatible with PaperCut's embedded software solution *PaperCut MF - Sharp OSA (HTML Browser n2.0+)*:

- they are running Sharp OSA 5.1+ firmware dated December 2018 or later
- they have a touch-screen interface
- they are configured to support the HTML Browser n2.0+
- they have the External Account Module (MX-AMX3), and
- (optional) they have the Application Communication Module (MX-AMX2)

For more information, see 2.4.1 Log in to the device's web interface and 2.4.2 Determine the device's Sharp platform, version, and browser. The MX-AMX2 and MX-AMX3 modules come pre-installed on most Sharp OSA devices.

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

2.3 System requirements

Ensure that the following system requirements are met:

- The following entities are available:
  - Physical device – administrator and user access, and credentials
  - Device's web interface – administrator access, URL, and credentials
  - PaperCut MF Admin web interface – administrator access, URL, and credentials
- The latest version of PaperCut MF is installed and running on the network. For more information, see the PaperCut MF manual.

  Note: The minimum compatible version is PaperCut MF 18.3.6 or above.
- The networking/firewall configuration allows:
  - Inbound connections to the PaperCut MF Application Server from the devices on the configured ports. For example:
    - 9191 (TCP/HTTP)
    - 9192 (SSL/TLS/HTTPS)
  - Outbound connections from the PaperCut MF Application Server to the devices on the configured ports. For example:
    - 80 (TCP/HTTP)
    - 443 (SSL/TLS/HTTPS)

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2.4 Setup procedure

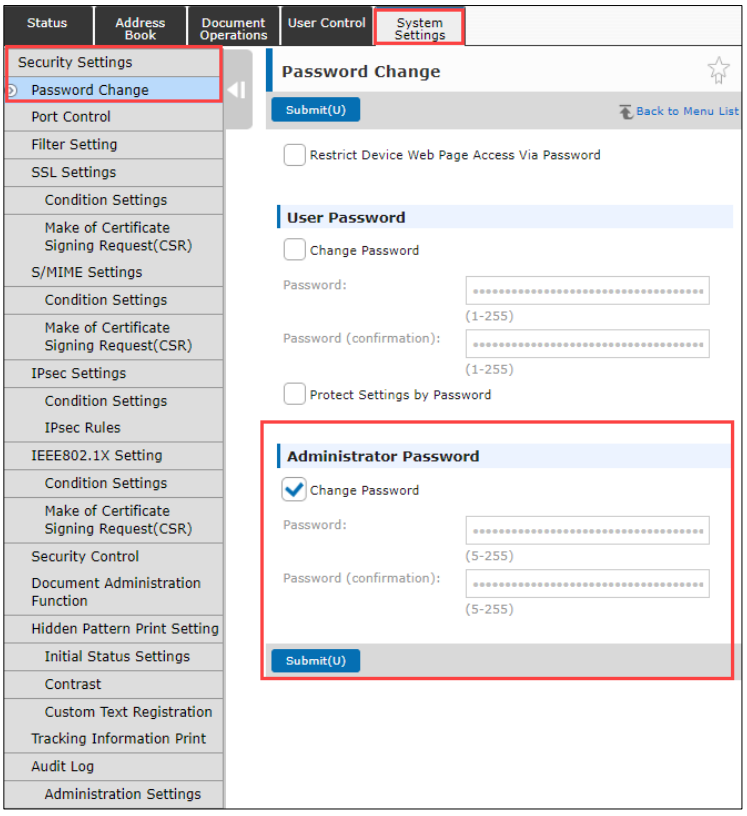
To install PaperCut MF (i.e. device registration and integration):

- 2.4.1 Log in to the device's web interface as an administrator
- 2.4.2 Determine the device's Sharp platform, version, and browser
- 2.4.4 Install PaperCut MF
  - 2.4.4.1 Install PaperCut MF on multiple devices
  - 2.4.4.2 Install PaperCut MF on each device using Auto setup
  - 2.4.4.3 Manually install PaperCut MF on each device
- 2.4.5 Create PaperCut MF icons
- 2.4.6 Configure the display of PaperCut MF icons
- 2.4.7 Delete PaperCut MF icons

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

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

1. Log in to the device's web interface.
2. If this device's web interface is being accessed for the first time:
   a. Enter the default administrator username and password.
   b. Click **Login**.
   c. Navigate to **System Settings > Security Settings > Password Change > Administrator Password**.
   d. Select **Change Password**, and enter the required administrator credentials:



   e. Click **Submit**.
3. If this device's web interface has been accessed previously:
   a. Enter the required administrator credentials.

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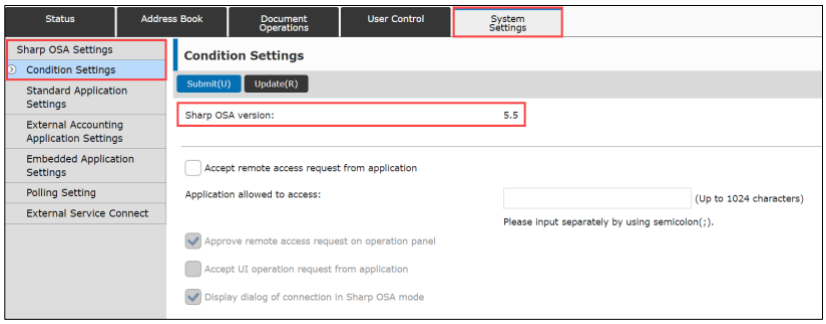
b. Click **Login**.

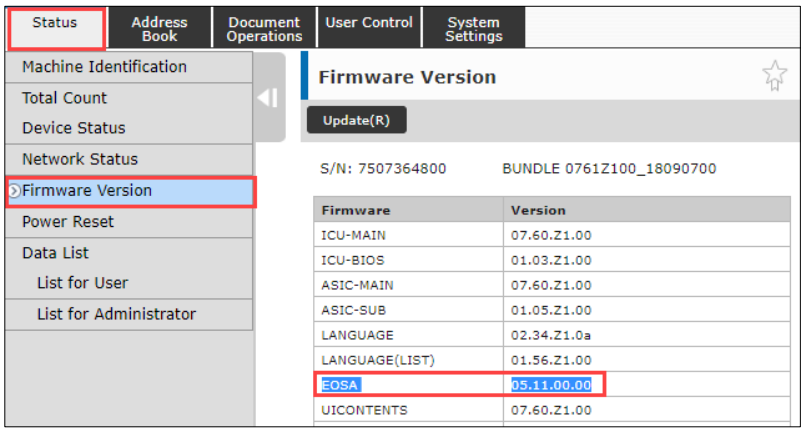
2.4.2 Determine the device's Sharp platform, version, and browser

To determine the device's Sharp platform, version, and browser:

1. Log in to the device's web interface as an administrator.
   Note: The navigation path and menu options available differ based on the device's Sharp platform and version.
2. If the option **System Settings > Sharp OSA Settings > Condition Settings** is available, then check that the **Sharp OSA version** is **5.5** or higher:



3. If the above option is unavailable, then check if the option **Status > Firmware Version** is available and the **Firmware** and **Version** column displays the values **EOSA** and **05.1x.xx.xx,** respectively.



4. If neither option is available or applicable, it implies that the device is not compatible with PaperCut's embedded software solution *PaperCut MF - Sharp OSA (HTML Browser n2.0+)*.

Note: This manual is only relevant to supported Sharp OSA 5.1+ devices with HTML Browser n2.0+ running the firmware dated December 2018 or later. For more information on PaperCut's embedded software solutions for other devices and platforms, contact your reseller or Authorized Solution Center. You can find their contact information in your PaperCut MF Admin web interface, on the **About** page.

2.4.3 Uninstall *PaperCut MF - Sharp OSA*

If PaperCut's embedded software solution *PaperCut MF - Sharp OSA* is already installed, then ensure to first uninstall it before attempting to install *PaperCut MF - Sharp OSA (HTML Browser n2.0+)*.
To uninstall *PaperCut MF - Sharp OSA*:

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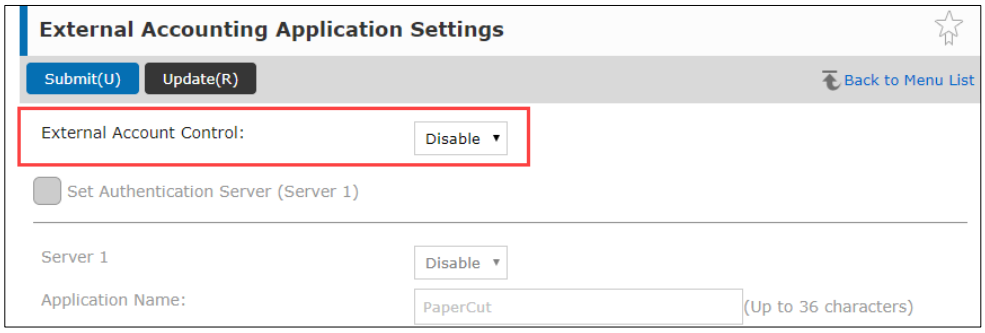
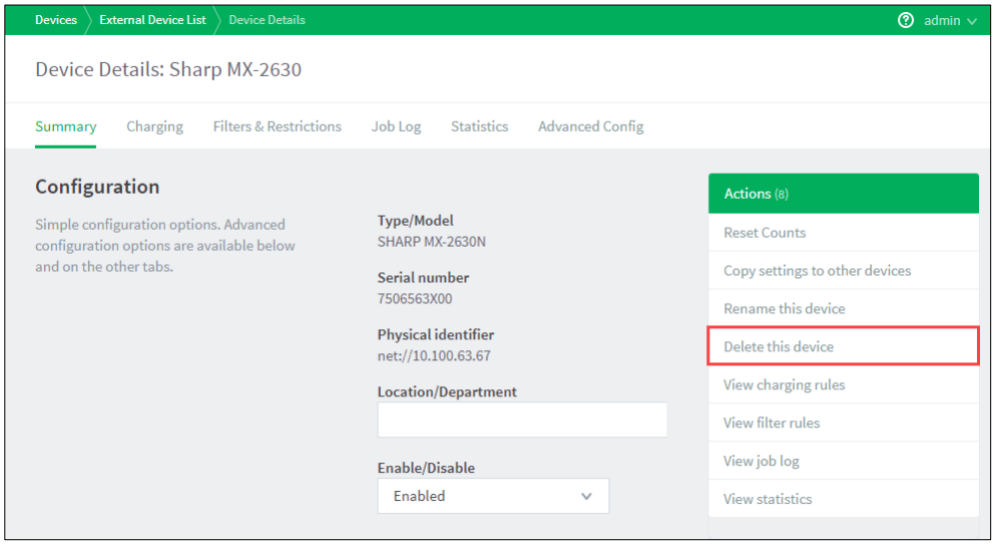
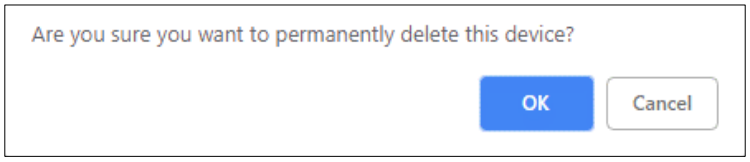
1. Log in to the device's web interface as an administrator.
2. Navigate to **System Settings > Sharp OSA Settings > External Accounting Application Settings.**
3. In **External Account Control**, select **Disable:**



4. Click **Submit**.
5. Click **Reboot Now**.
6. Log in to the PaperCut MF Admin web interface.
7. Navigate to **Devices**.
8. Select the required device.
9. Click **Actions > Delete this device**:



10. Click **Ok:**



11. Click **Devices** and verify that the device is no longer listed.
12. Verify that *PaperCut MF - Sharp OSA* is not available on the device to users:

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2.4.4 Install PaperCut MF

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

1. Log in to the PaperCut MF Admin web interface.
2. Navigate to **Options > Advanced**.
3. In the **External Hardware Integration** area, select **Enable external hardware integration (for supported devices only)**.
4. Click **Apply**.
5. You can use any one of the following options:

- 2.4.4.1 Install PaperCut MF on multiple devices, or
- 2.4.4.2 Install PaperCut MF on each device using Auto setup, or
- 2.4.4.3 Manually install PaperCut MF on each device

2.4.4.1 Install PaperCut MF on multiple devices

PaperCut MF 19.2.0 introduced a feature to create multiple devices in bulk through a CSV file via server commands. In 20.0.0 we added a way to load this CSV file via the PaperCut MF UI. You can find the feature under: PaperCut MF > Devices > Create multiple devices.
Using this feature increases your operational efficiency by significantly reducing the time taken to add devices to PaperCut MF. From version 20.0, this feature also allows for you to add devices to PaperCut MF before such devices are delivered to their installation site, such devices are added with a “Staged” status. The scenario for “Staged” devices applies when the system admin already knows all the device’s attributes prior to its delivery. For more information, see the Enhanced Deployment Project.

2.4.4.2 Install PaperCut MF on each device using Auto setup

Note: This is only applicable to PaperCut MF 19.0.0 or above.
This option minimizes human errors, but does not improve your operational efficiency.
To install PaperCut MF (i.e. device registration and integration):

1. Log in to the PaperCut MF Admin web interface.
2. Navigate to **Options > Advanced**.
3. In the **External Hardware Integration** area, select **Enable external hardware integration (for supported devices only)**.
4. Click **Apply**.

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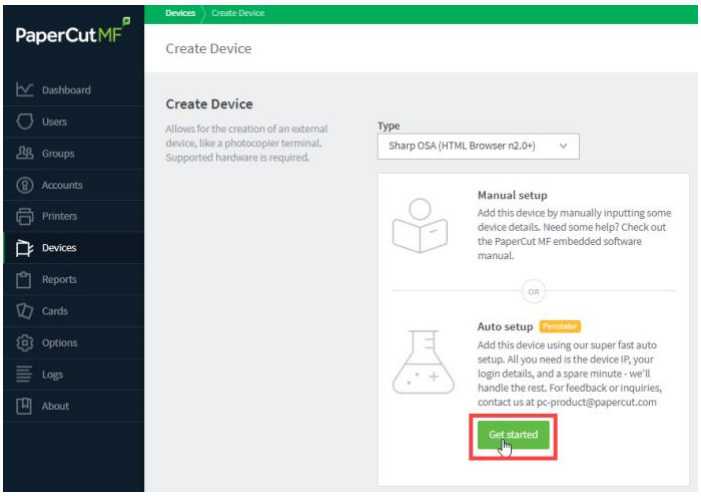
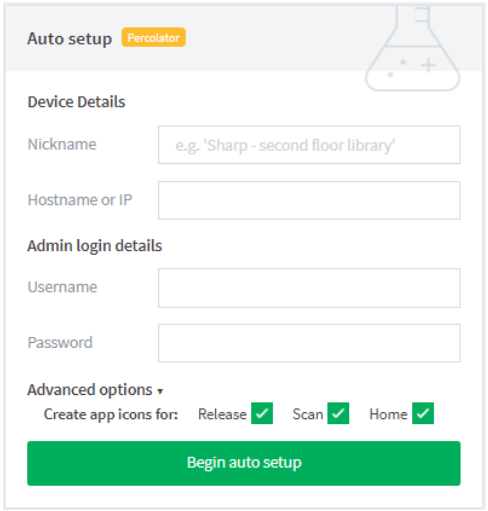
5. Navigate to **Devices.**
6. Click **Create Device.**
7. In **Type**, select **Sharp OSA (HTML Browser n2.0+)**.
8. In **Auto setup**, click **Get started**.



9. In **Device Details > Nickname**, enter a descriptive name for the device. This is the device's name on the PaperCut MF Admin web interface.
10. In **Device Details > Hostname / IP**, enter the network name or IP address of the device.
11. In **Admin login details > Username** and **Admin login details > Password**, enter the same administrator credentials (username and password) used for the device's web interface. For more information, see 2.4.1 Log in to the device's web interface.
12. To enable users on the device's Home screen to be able to easily navigate to and access PaperCut MF screens, expand **Advanced options** and in **Create app icons for**, select the required PaperCut MF icons you want the Auto setup to create:
    - Release
    - Scan
    - Home
13. Click **Begin auto setup**.



14. Click **Configure your new device here:**

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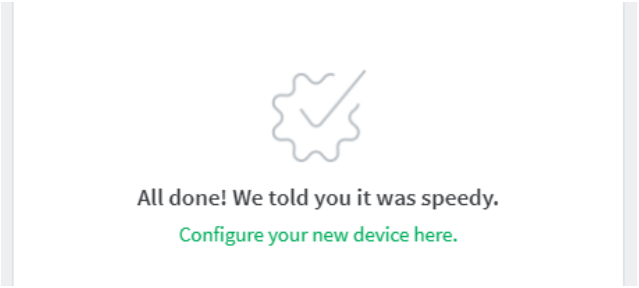
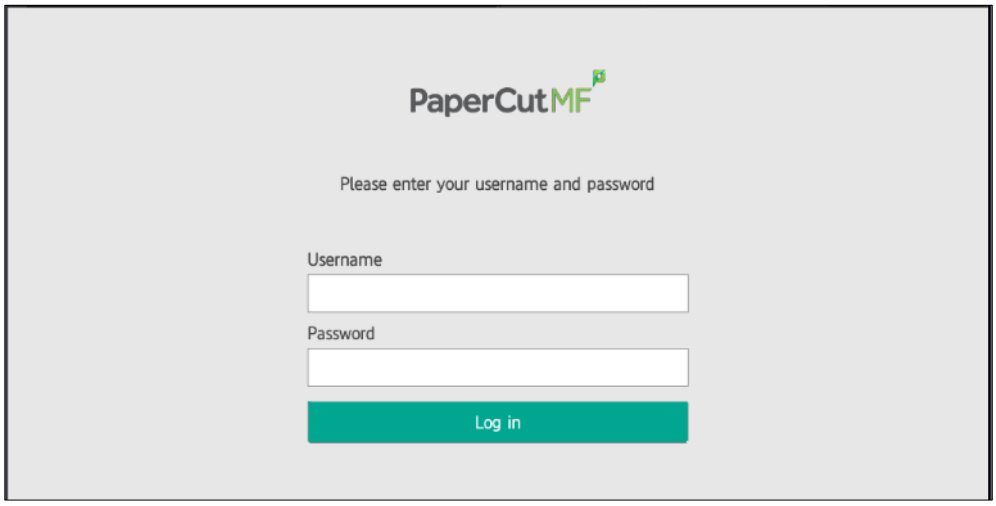


Note: If the Auto setup displays any other message, then see 6.3 Auto setup errors.

15. Verify that the **Device Status** displays the status **Started - Device is ready for user to login**.
16. Click **Log out**.
17. Access the physical device.
18. Verify that the first screen on the device is PaperCut MF Login screen:



19. For more information about configuring the display of the PaperCut MF icons that have been created by the Auto setup, see 2.4.6 Configure the display of PaperCut MF icons.

2.4.4.3 Manually install PaperCut MF on each device

Note: If you are running a version prior to PaperCut MF 19.0.0, then this is the only applicable option.
This is the least recommended option, because it neither improves your operational efficiency nor does it minimize human errors.
To install PaperCut MF (i.e. device registration and integration):

1. Log in to the PaperCut MF Admin web interface.
2. Navigate to **Options > Advanced**.
3. In the **External Hardware Integration** area, select **Enable external hardware integration (for supported devices only)**.
4. Click **Apply**.
5. Click **Log out**.
6. Log in to the device's web interface as an administrator.
7. If this is a Sharp OSA 5.5+ device, then:
    a. Navigate to **System Settings > Authentication Settings > Default Settings.**

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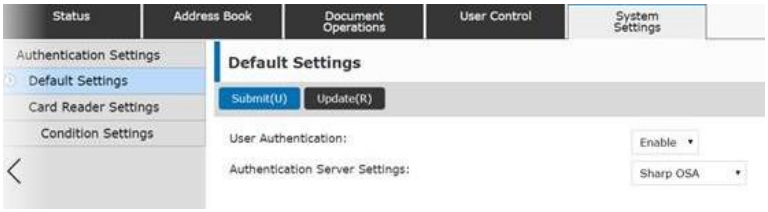
b. In **User Authentication**, select **Enable**; in **Authentication Server Settings**, select **Sharp OSA**.



c. Click **Submit**.

8. Navigate to **System Settings > Sharp OSA Settings > External Accounting Application Settings.**
9. In **External Account Control**, select **Enable**.
10. Select the **Set Authentication Server (Server 1)** checkbox.
11. In **Application Name**, enter **PaperCut**.
12. In **Address for Application UI**, enter:
    `https://<PaperCut+MF+Application+Server+IP+address>:9192/device-web/sharp-osa-n2/index`
    For example:
    https://10.100.65.19:9192/device-web/sharp-osa-n2/index
    Note:
    - Ensure there are no spaces in the URL. Use the special character `+` to represent spaces.
    - If this contains an incorrect or invalid hostname / IP address / DNS, then the following occurs:
        - the device is successfully created and displayed on the PaperCut MF Admin web interface, but
        - PaperCut MF is unavailable on the device (i.e. the first screen on the device is not the PaperCut MF Login screen; it is the "Could not access accounting server" error.). For more information, see 6.4 "Could not access accounting server" error.
13. In **Address for Web Service**, enter:
    `https://<PaperCut+MF+Application+Server+IP+address>:9192/device-web/sharp-osa-n2/soap?name=<device+name+location>`
    For example:
    https://10.100.65.19:9192/device-web/sharp-osa-n2/soap?name=Sharp+MX2630+Level1
    Note:
    - The value entered after the special character `=` is the device's name on the PaperCut MF Admin web interface.
    - Ensure there are no spaces in the URL. Use the special character `+` to represent spaces.
    - If this contains an incorrect or invalid hostname / IP address / DNS, then the following occurs:

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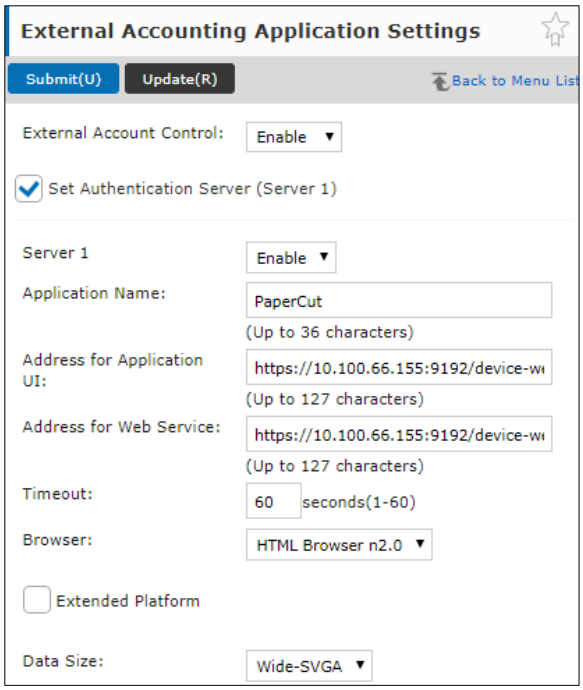
- the device is NOT created and displayed on the PaperCut MF Admin web interface, and
- PaperCut MF is unavailable on the device (i.e. the first screen on the device is not the PaperCut MF Login screen; it is the "Could not access accounting server" error.). For more information, see 6.4 "Could not access accounting server" error.

14. In **Browser**, select **HTML Browser n2.0**.
    Note: If this is incorrect or invalid, then PaperCut MF is unavailable on the device (i.e. the first screen on the device is not the PaperCut MF Login screen; it is the "Unsupported browser version" error.). For more information, see 6.5 "Unsupported browser version" error.
15. Uncheck the **Extended Platform** checkbox.
16. In **Data Size**, select **Wide-SVGA.**
17. Click **Submit**.



18. Click **Reboot Now**.
    Note: If the device's web interface displays the error "ERROR[5000]:Processing is in motion. This function cannot be executed.", then see 6.6 Device's web interface error "ERROR[5000]:Processing is in motion".
19. Log in to the PaperCut MF Admin web interface.
20. Navigate to **Devices**.
21. Verify the device is created and displayed.
    Note: The **Device Name** column displays the newly created device's name, which is the same as the value entered in the **Address for Web Service** field after the special character =
    (`https://<PaperCut+MF+Application+Server+IP+address>:9192/`

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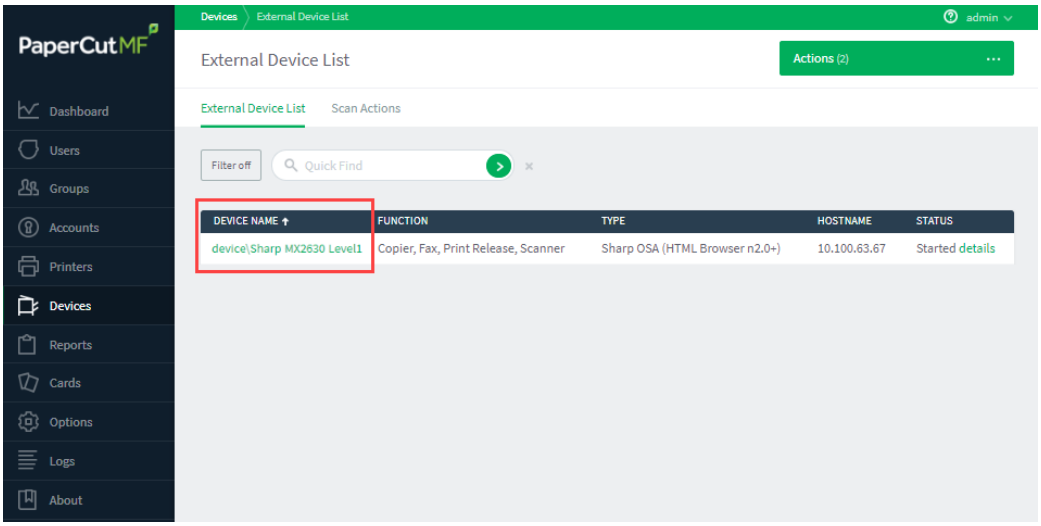
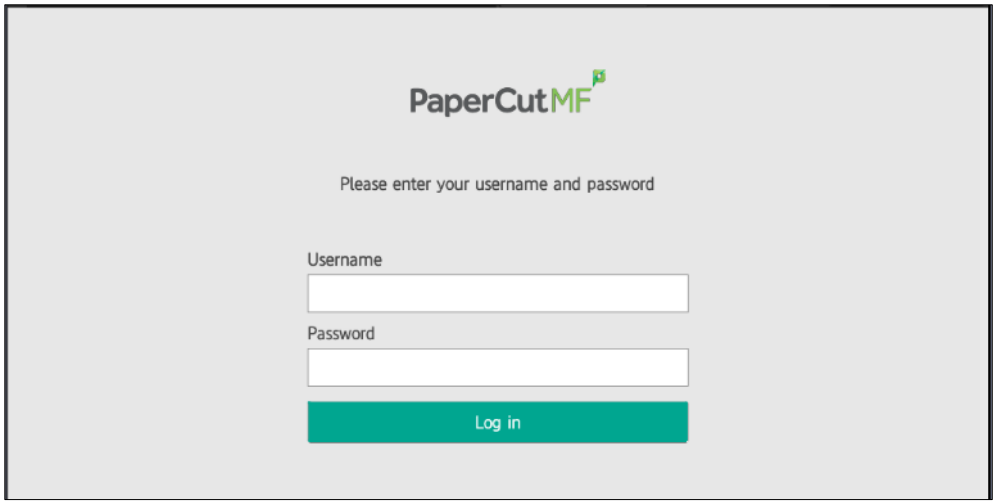
`device-web/sharp-osa-n2/soap?name=`).



22. Select the required device.
23. Verify that the **Device Status** displays the status **Started - Device is ready for user to login**.

    Note: If the **Device Status** displays any other status, then see:

    - 6.7 Device status "Started (with errors)": device firmware
    - 6.9 Device status "Started (with errors)": incompatible device
24. Click **Log out**.
25. Access the physical device.
26. Verify that the first screen on the device is PaperCut MF Login screen:



Note: If the first screen on the device is any other message, then see:

- 6.4 "Could not access accounting server" error
- 6.5 "Unsupported browser version" error
- 6.8 "Sharp OSA (HTML Browser n2.0+) device firmware" error
- 6.10 "Incompatible device" error

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2.4.5 Create PaperCut MF icons

To enable users on the device's Home screen to be able to easily navigate to and access PaperCut MF screens, you must create the following required PaperCut MF icons:

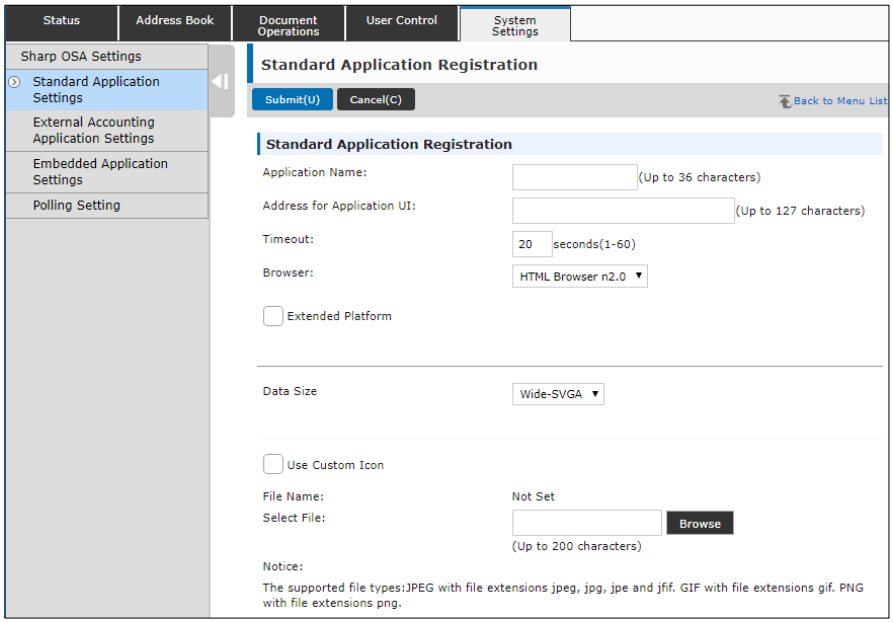
- 2.4.5.1 PaperCut MF Home icon
- 2.4.5.2 PaperCut MF Print icon
- 2.4.5.3 PaperCut MF Scan icon

2.4.5.1 PaperCut MF Home icon

To enable users on the device's Home screen to be able to easily navigate to and access the PaperCut MF Home screen, you must create the required PaperCut MF Home icon.

To create the PaperCut MF Home icon:

1. Log in to the device's web interface as an administrator.
2. Navigate to **System Settings > Sharp OSA Settings > Standard Application Settings**.
3. Click **Add**.



4. In **Application Name**, enter the name of the icon displayed on the device. For example, *PaperCut Home*.

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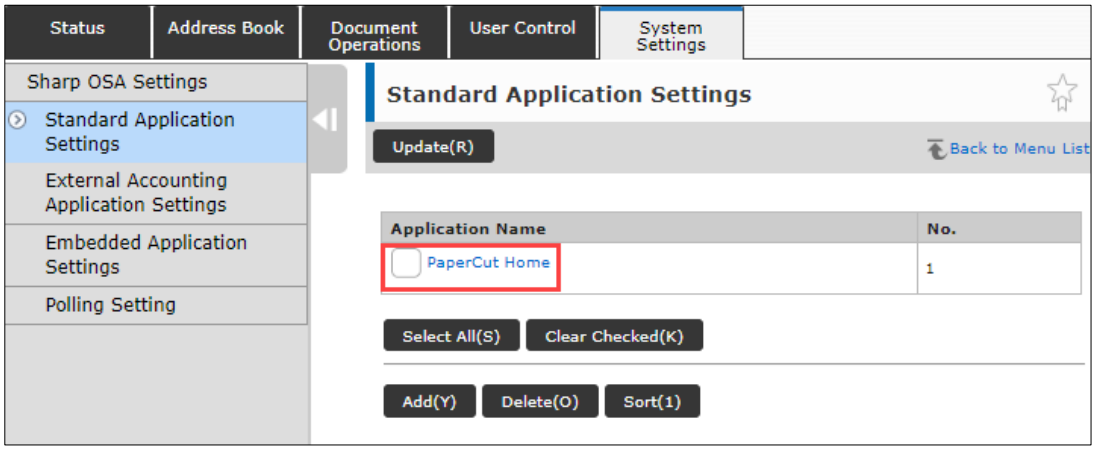
5. In **Address for Application UI**, enter: `https://<PaperCut+MF+Application+Server+IP+address>:9192/device-web/sharp-osa-n2/home-app`
6. In **Browser**, select **HTML Browser n2.0**.
7. Uncheck the **Extended Platform** checkbox.
8. In **Data Size**, select **Wide-SVGA.**
9. Select the **User Custom Icon** checkbox; then in **Select File**, either:
    - click **Browse;** navigate to the network directory path with the required icon; click **Open**, or
    - enter the following: `[PaperCut MF Application Server Location]/providers/hardware/sharp/home-app.png`
10. Click **Submit**.
11. Verify that the **Standard Application Settings** page's **Application Name** column displays the new PaperCut MF Home icon. For example, *PaperCut Home:*



12. For more information about configuring the display of the PaperCut MF Home icon that has been created, see 2.4.6 Configure the display of PaperCut MF icons.

2.4.5.2 PaperCut MF Print icon

To enable users on the device's Home screen to be able to easily navigate to and access the PaperCut MF Print Release screen, you must create the required PaperCut MF Print icon.

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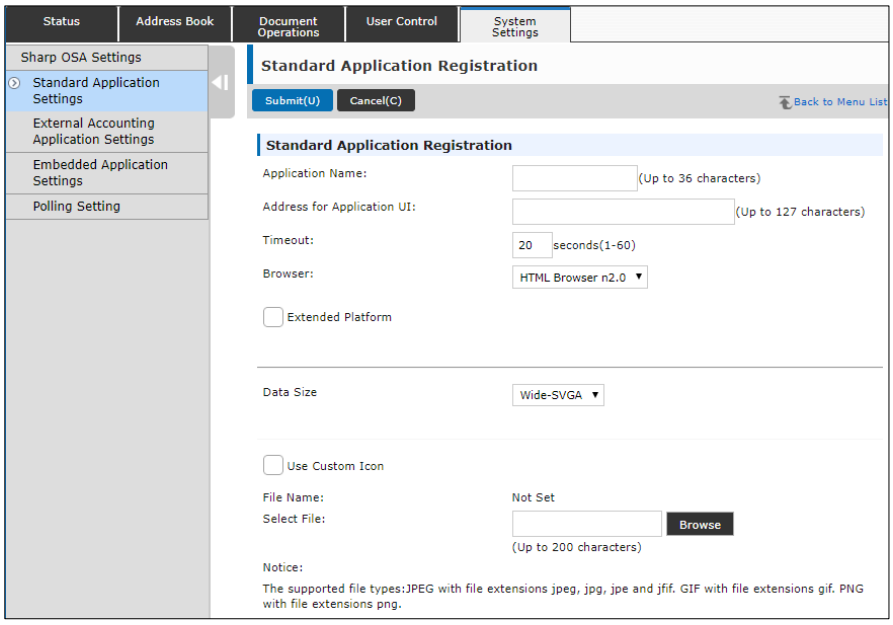
To create the PaperCut MF Print icon:

1. Log in to the device's web interface as an administrator.
2. Navigate to **System Settings > Sharp OSA Settings > Standard Application Settings**.
3. Click **Add**.



4. In **Application Name**, enter the name of the icon displayed on the device. For example, *Print Release*.
5. In **Address for Application UI**, enter:
   `https://<PaperCut+MF+Application+Server+IP+address>:9192/device-web/sharp-osa-n2/print-release-app`
6. In **Browser**, select **HTML Browser n2.0**.
7. Uncheck the **Extended Platform** checkbox.
8. In **Data Size**, select **Wide-SVGA.**
9. Select the **User Custom Icon** checkbox; then in **Select File**, either:
   - click **Browse;** navigate to the network directory path with the required icon; click **Open**, or

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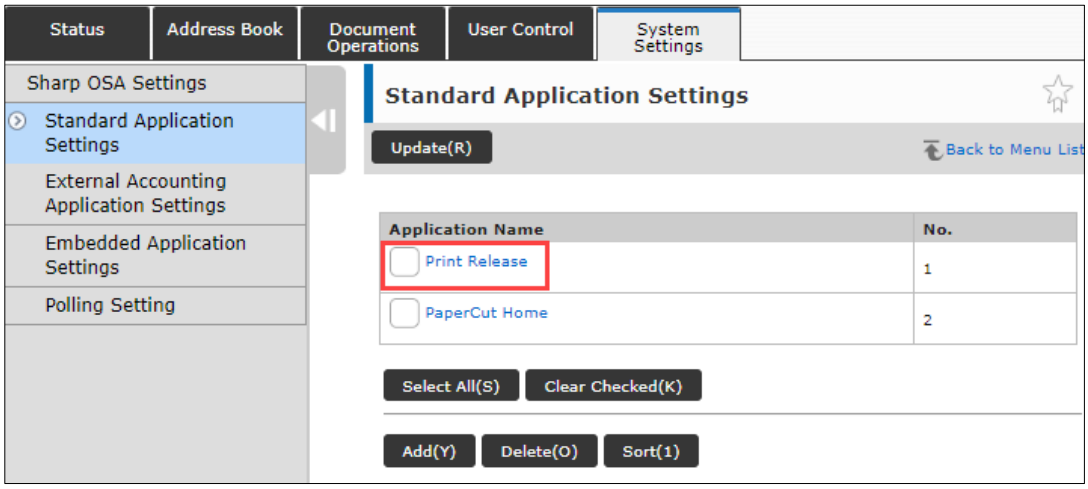
- enter the following:
  `[PaperCut MF Application Server Location]/providers/hardware/sharp/print-release-app.png`

10. Click **Submit**.
11. Verify that the **Standard Application Settings** page's **Application Name** column displays the new PaperCut MF Print icon. For example, *Print Release:*



12. For more information about configuring the display of the PaperCut MF Print icon that has been created, see 2.4.6 Configure the display of PaperCut MF icons.

2.4.5.3 PaperCut MF Scan icon

Note: This is only applicable after PaperCut MF's Integrated Scanning is configured. For more information, see 4.8.5 PaperCut MF's Integrated Scanning.

To enable users on the device's Home screen to be able to easily navigate to and access the PaperCut MF Scan screen, you must create the required PaperCut MF Scan icon.

To create the PaperCut MF Scan icon:

1. Log in to the device's web interface as an administrator.
2. Navigate to **System Settings > Sharp OSA Settings > Standard Application Settings**.

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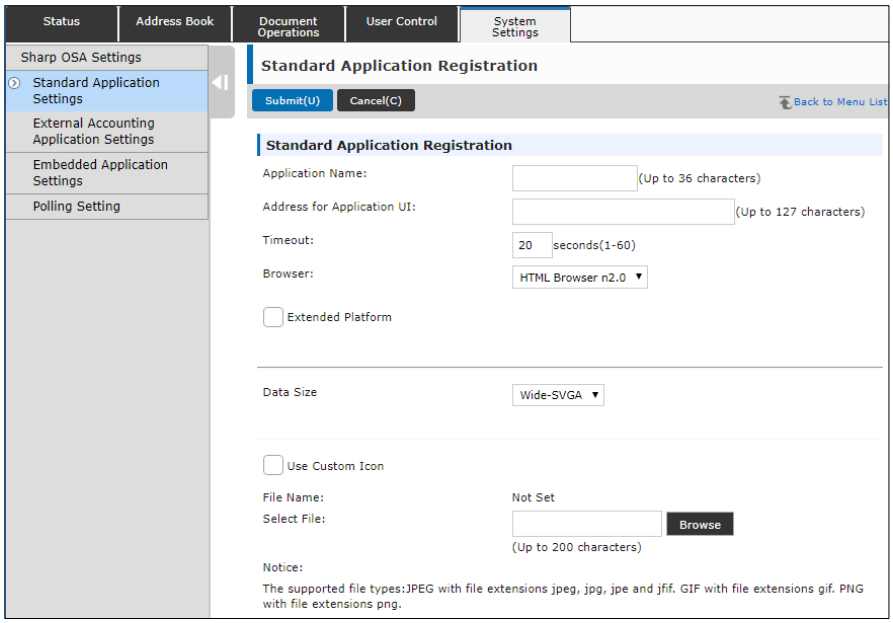
3. Click **Add**.



4. In **Application Name**, enter the name of the icon displayed on the device. For example, *PaperCut Scanning*.
5. In **Address for Application UI**, enter: `https://<PaperCut+MF+Application+Server+IP+address>:9192/device-web/sharp-osa-n2/scan-app`
6. In **Browser**, select **HTML Browser n2.0**.
7. Uncheck the **Extended Platform** checkbox.
8. In **Data Size**, select **Wide-SVGA.**
9. Select the **User Custom Icon** checkbox; then in **Select File**, either:
    - click **Browse;** navigate to the network directory path with the required icon; click **Open**, or
    - enter the following: `[PaperCut MF Application Server Location]/providers/hardware/sharp/scan-app.png`
10. Click **Submit**.

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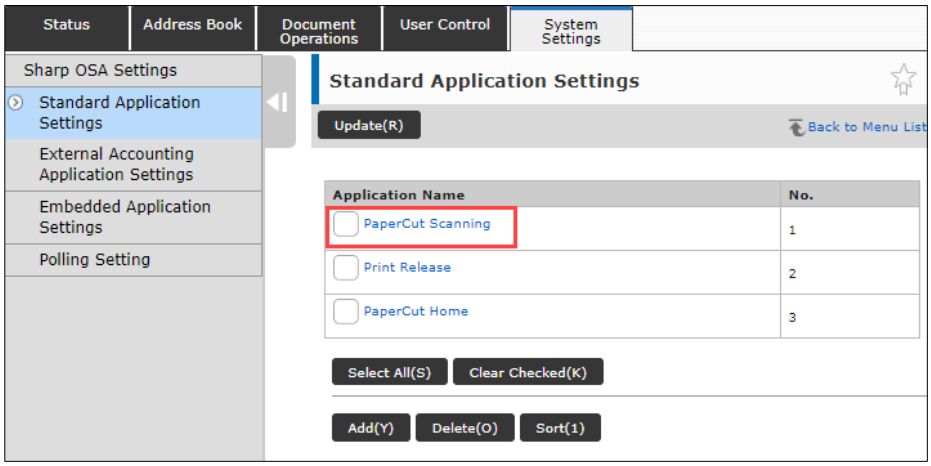
11. Verify that the **Standard Application Settings** page's **Application Name** column displays the new PaperCut MF Print icon. For example, *PaperCut Scanning:*



12. For more information about configuring the display of the PaperCut MF Scan icon that has been created, see 2.4.6 Configure the display of PaperCut MF icons.

2.4.6 Configure the display of PaperCut MF icons

To enable users on the device's Home screen to be able to easily navigate to and access PaperCut MF screens, you must configure the display of the required PaperCut MF icons that have been created:

- 2.4.6.1 PaperCut MF Home icon
- 2.4.6.2 PaperCut MF Print icon
- 2.4.6.3 PaperCut MF Scan icon

2.4.6.1 PaperCut MF Home icon

To configure the display of the PaperCut MF Home icon that has been created:

1. Log in to the device's web interface as an administrator.
2. Navigate to **System Settings > Home Screen Settings > Condition Settings**.

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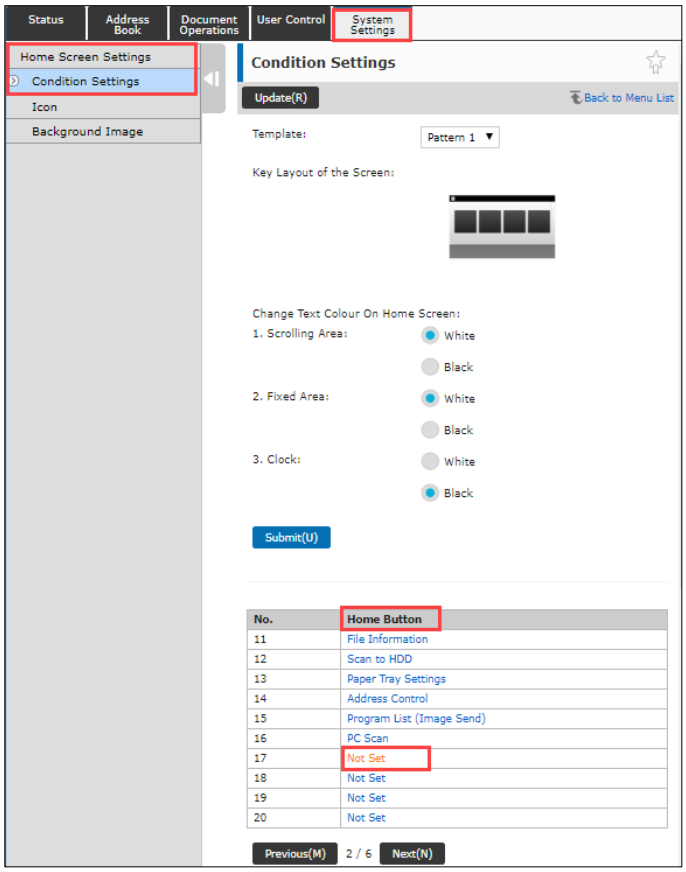
3. In the first table's **Home Button** column, click any row titled **Not Set**:



Note: The larger the row number, the further out the new PaperCut MF Home icon is in the order of icons on the device's Home screen. For example, if you select row 17, then the new PaperCut MF Home icon will be the 17th icon on the device's Home screen. As a result, users may need to scroll through several paginated screens with all the other available icons before they see this new PaperCut MF Home icon.
To shuffle the order of the icons on the device, you need to make an existing row that is already being used by an existing icon, available (**Not Set**). To do so, first migrate the details of the existing icon to another available row; then select the row that you have just made available for your new PaperCut MF Home icon.

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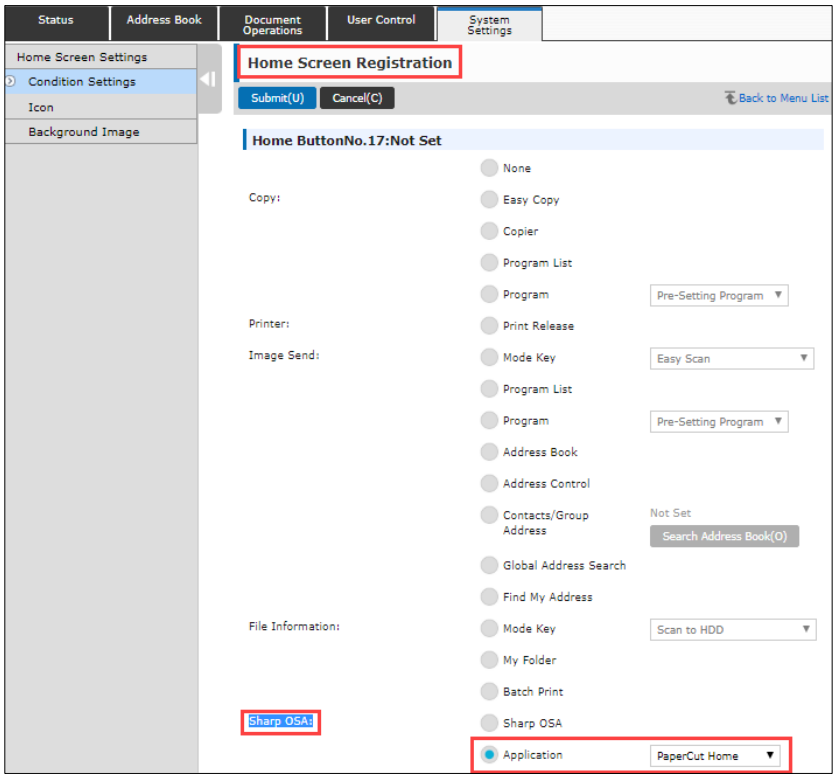
4. In the **Home Screen Registration** page's **Sharp OSA** field, select **Application**; then select the name of the new PaperCut MF Home icon. For example, *PaperCut Home*:



5. Click **Submit**.
6. Verify that the **Condition Settings** page's first table's **Home Button** column has now replaced the row titled **Not Set** with the name of the new PaperCut MF Home icon.

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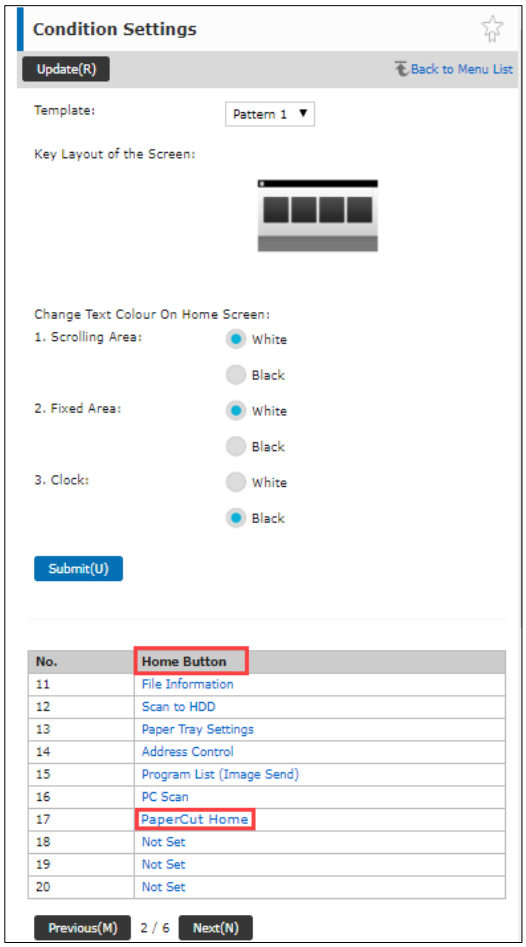
For example, *PaperCut Home:*



To test the new PaperCut MF Home icon:

1. Log in to the device.
2. Navigate to the device's Home screen.
3. Verify that the new PaperCut MF Home icon is displayed:

4. Click the new PaperCut MF Home icon.
5. Verify that the PaperCut MF Home screen is displayed.

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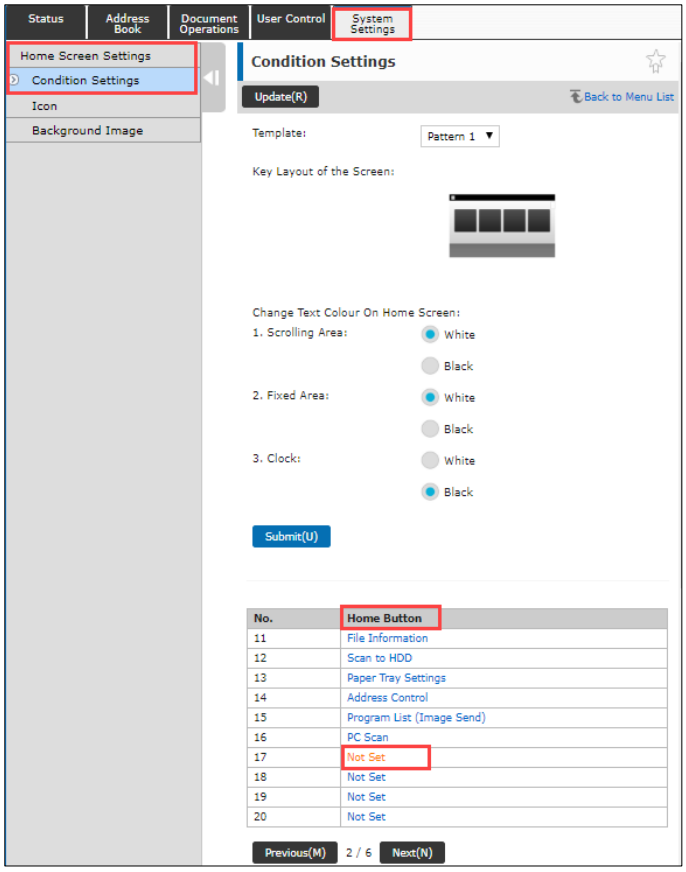
2.4.6.2 PaperCut MF Print icon

To configure the display of the PaperCut MF Print icon that has been created:

1. Log in to the device's web interface as an administrator.
2. Navigate to **System Settings > Home Screen Settings > Condition Settings**.
3. In the first table's **Home Button** column, click any row titled **Not Set**:



Note: The larger the row number, the further out the new PaperCut MF Print icon is in the order of icons on the device's Home screen. For example, if you select row 17, then the new PaperCut MF Print icon will be the 17th icon on the device's Home screen. As a result, users may need to scroll through several paginated screens with all the other available icons before they see this new PaperCut MF Print icon.

To shuffle the order of the icons on the device, you need to make an existing row that is already being used by an existing icon, available (**Not Set**). To do so, first migrate the details of the existing icon to another available row; then select the row that you have just made available for your new PaperCut MF Print icon.

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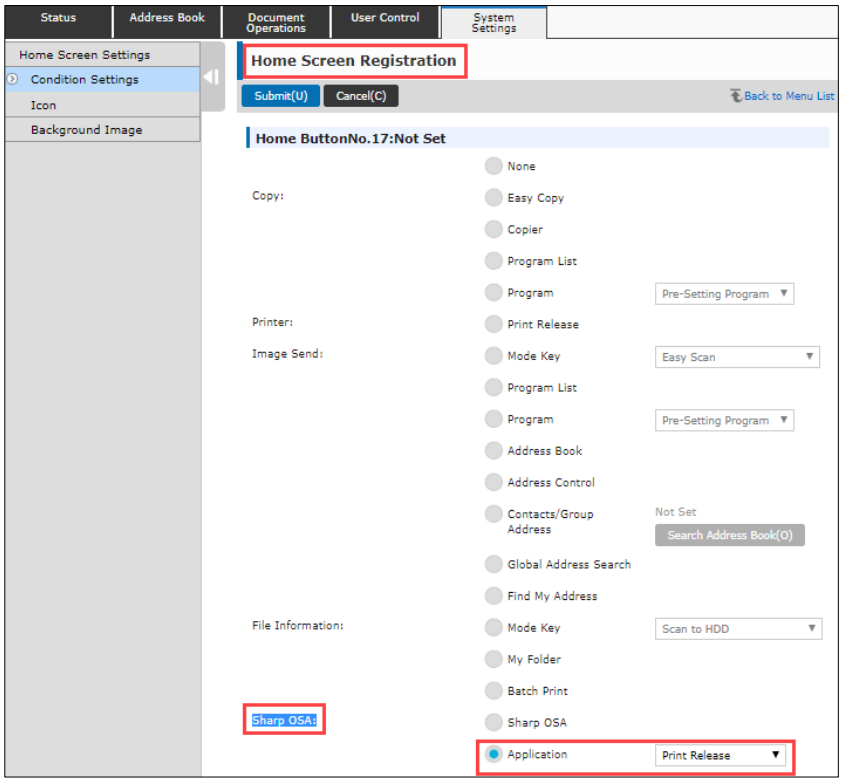
4. In the **Home Screen Registration** page's **Sharp OSA** field, select **Application**; then select the name of the new PaperCut MF Print icon. For example, *PaperCut Home*:



5. Click **Submit**.
6. Verify that the **Condition Settings** page's first table's **Home Button** column has now replaced the row titled **Not Set** with the name of the new PaperCut MF Print icon.

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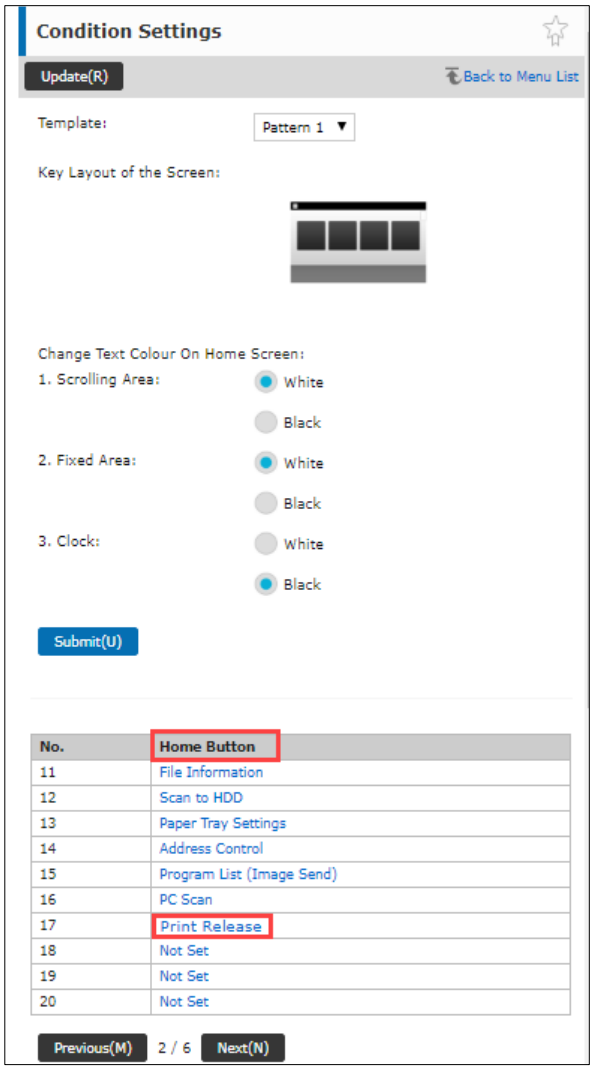
For example, *Print Release:*



To test the new PaperCut MF Print icon:

1. Log in to the device.
2. Navigate to the device's Home screen.

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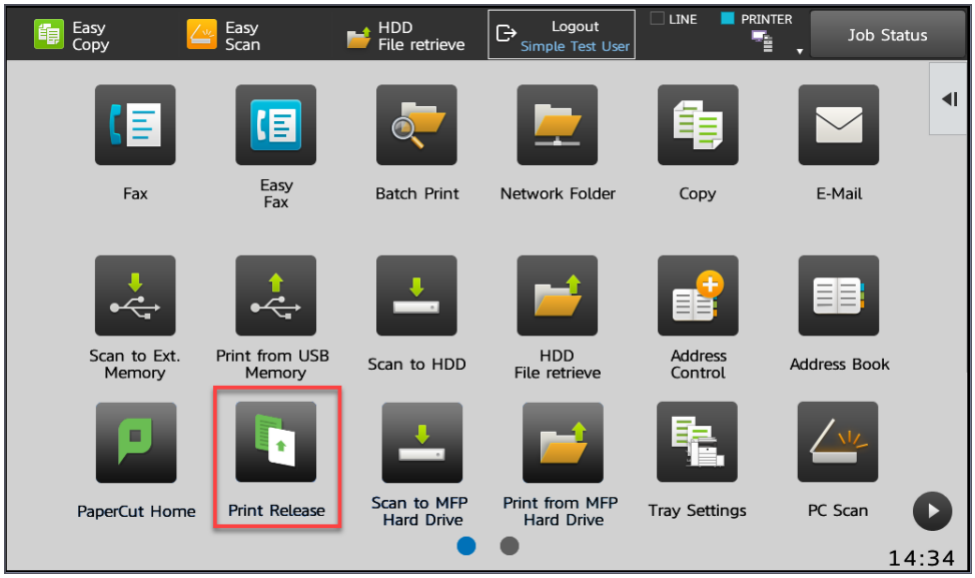
3. Verify that the new PaperCut MF Print icon is displayed:



4. Click the new PaperCut MF Print icon.
5. Verify that the PaperCut MF Print Release screen is displayed.

2.4.6.3 PaperCut MF Scan icon

Note: This is only applicable after PaperCut MF's Integrated Scanning is configured. For more information, see 4.8.5 PaperCut MF's Integrated Scanning.

To configure the display of the PaperCut MF Scan icon that has been created:

1. Log in to the device's web interface as an administrator.
2. Navigate to **System Settings > Home Screen Settings > Condition Settings**.

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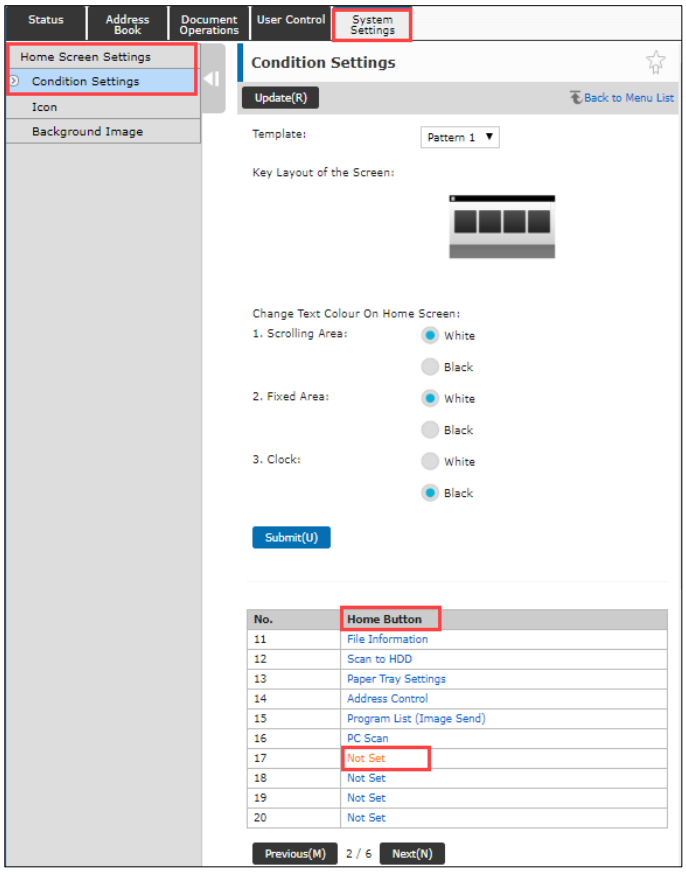
3. In the first table's **Home Button** column, click any row titled **Not Set**:



Note: The larger the row number, the further out the new PaperCut MF Scan icon is in the order of icons on the device's Home screen. For example, if you select row 17, then the new PaperCut MF Scan icon will be the 17th icon on the device's Home screen. As a result, users may need to scroll through several paginated screens with all the other available icons before they see this new PaperCut MF Scan icon.
To shuffle the order of the icons on the device, you need to make an existing row that is already being used by an existing icon, available (**Not Set**). To do so, first migrate the details of the existing icon to another available row; then select the row that you have just made available for your new PaperCut MF Scan icon.

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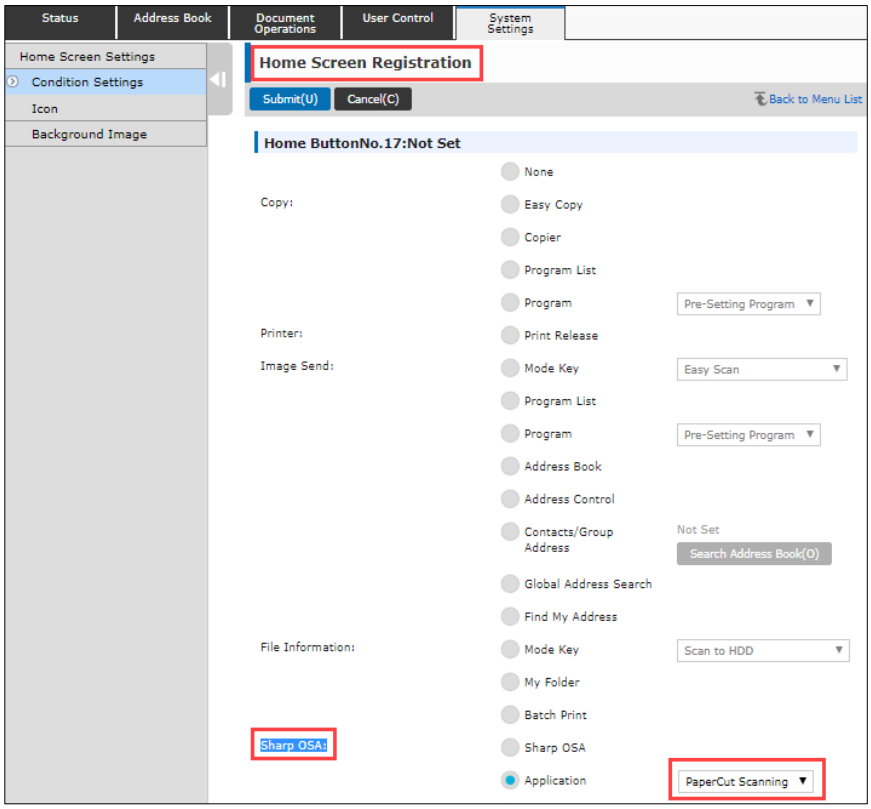
4. In the **Home Screen Registration** page's **Sharp OSA** field, select **Application**; then select the name of the new PaperCut MF Scan icon. For example, *PaperCut Scanning*:



5. Click **Submit**.
6. Verify that the **Condition Settings** page's first table's **Home Button** column has now replaced the row titled **Not Set** with the name of the new PaperCut MF Scan icon.

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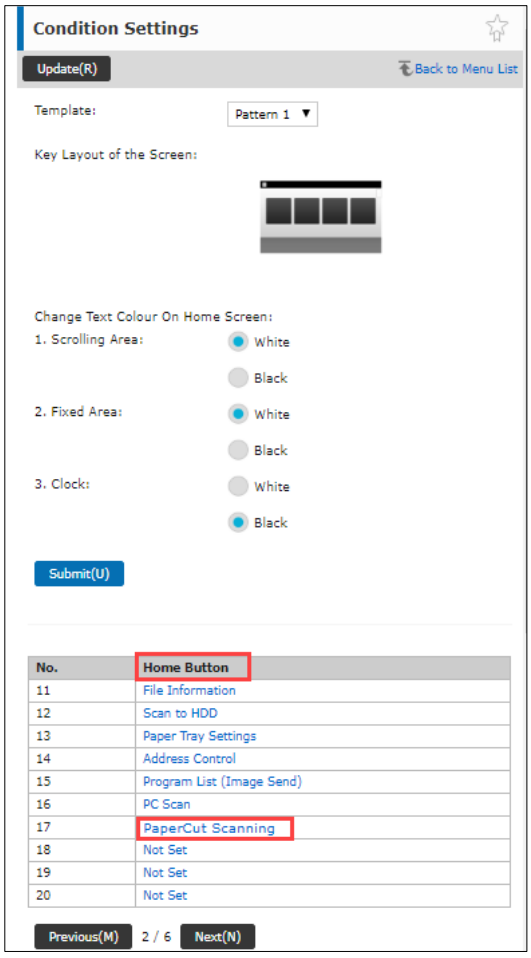
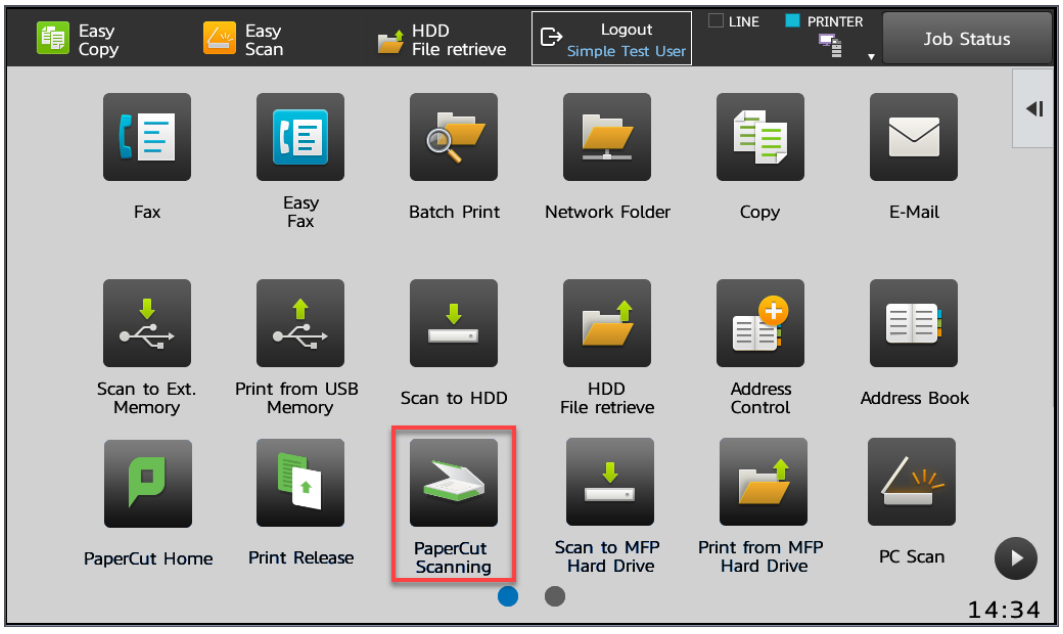
For example, *PaperCut Scanning:*



To test the new PaperCut MF Scan icon:

1. Log in to the device.
2. Navigate to the device's Home screen.
3. Verify that the new PaperCut MF Scan icon is displayed:



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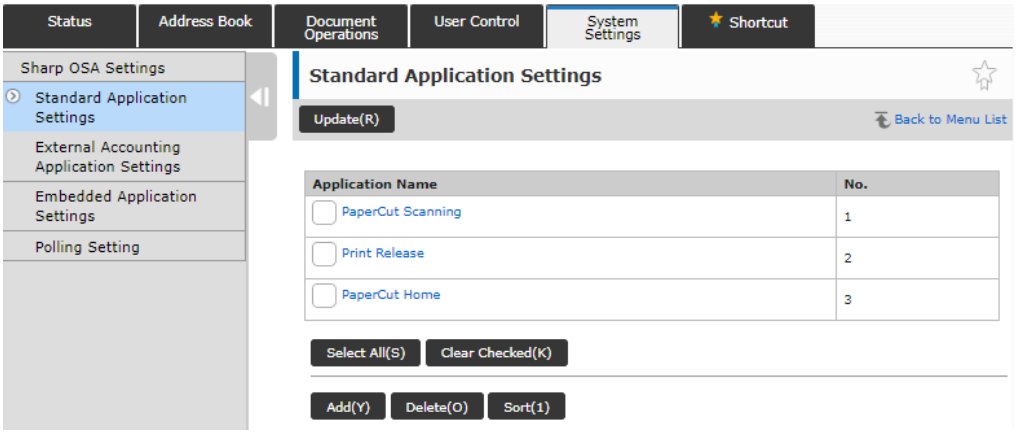
4. Click the new PaperCut MF Scan icon.
5. Verify that the PaperCut MF Scan screen is displayed.

2.4.7 Delete PaperCut MF icons

To delete PaperCut MF icons that have been created:

1. Log in to the device's web interface as an administrator.
2. Navigate to **System Settings > Sharp OSA Settings > Standard Application Settings**.



3. Select the required PaperCut MF icons.
4. Click **Delete**.

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 - Sharp OSA (HTML Browser n2.0+)*:

- 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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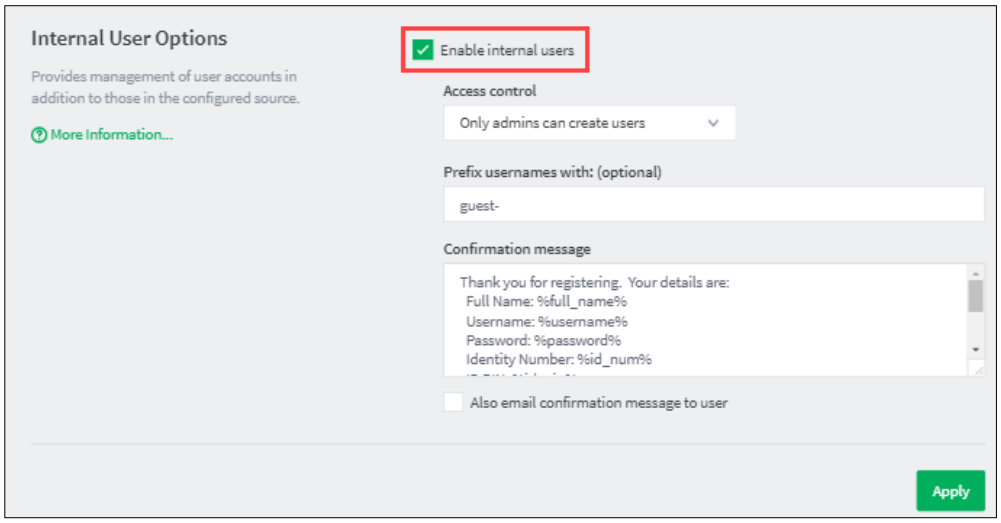
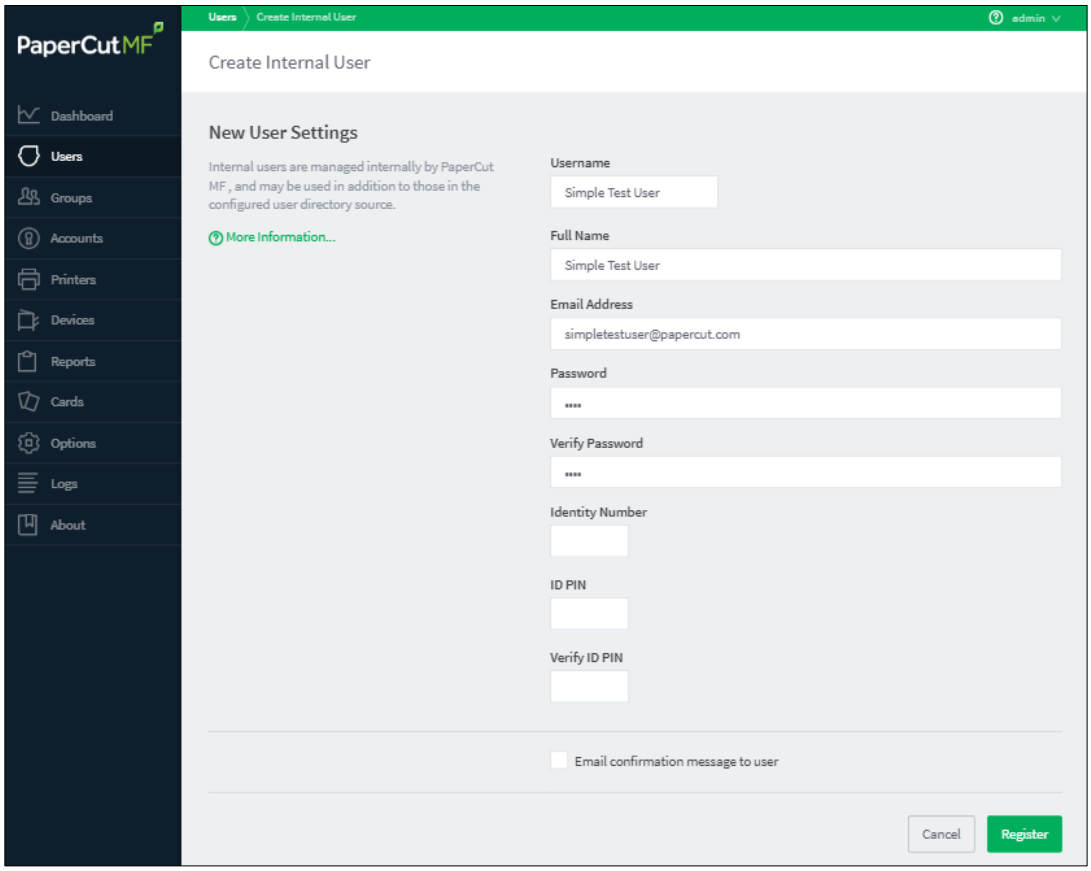


5. Navigate to **Users**.
6. Click **Create internal user…**
7. Enter the required details for the test users as required (simple test user, advanced test user):



8. Click **Register**.

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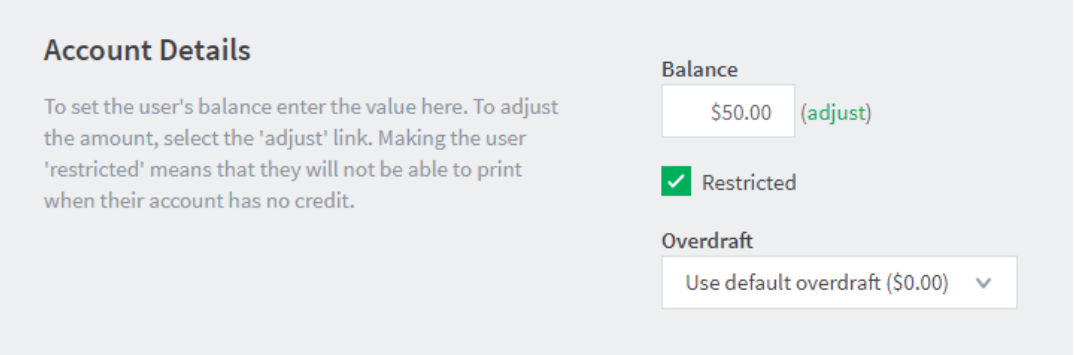
3.2 Simple printing and copying

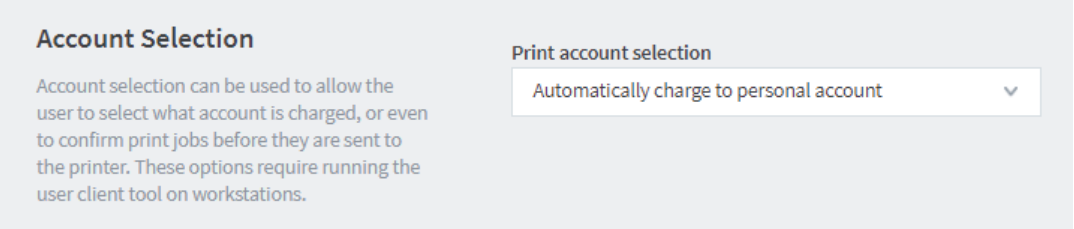
3.2.1 Test preparation: configure simple test user

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:
  1. Log in to the PaperCut MF Admin web interface.
  2. Navigate to **Printers**.
  3. Select the Printer that is applicable to the device being tested.

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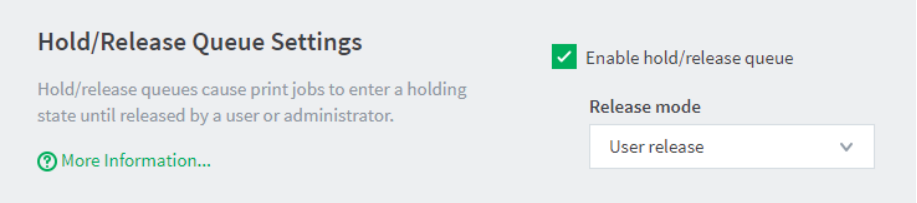
4. In the **Hold/Release Queue Settings** area, select the **Enable hold/release queue**.

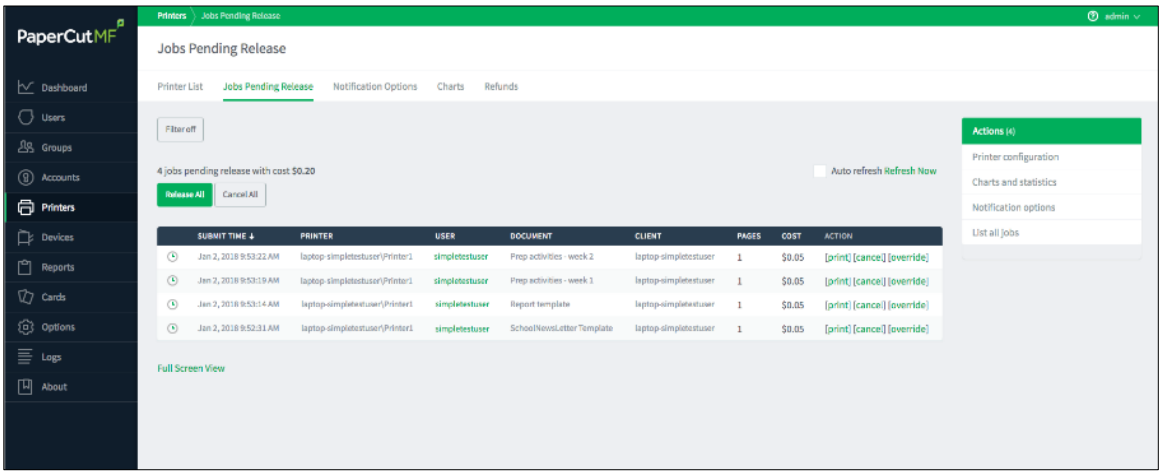


5. Click **Apply**.
   Print jobs to this printer queue are held until released by a user.

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

To test simple printing:

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



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

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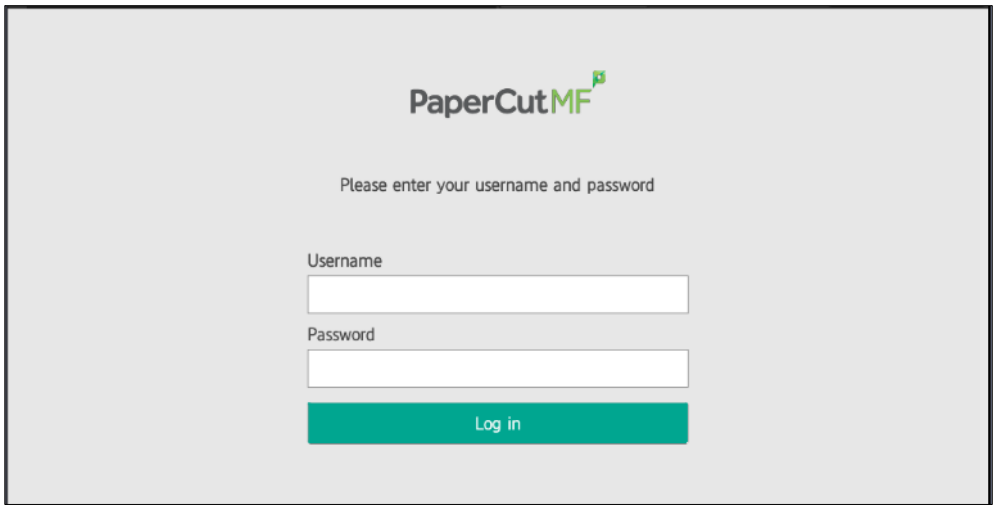
7. Log in to the device as the simple test user:



8. Select **Print Release**:

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

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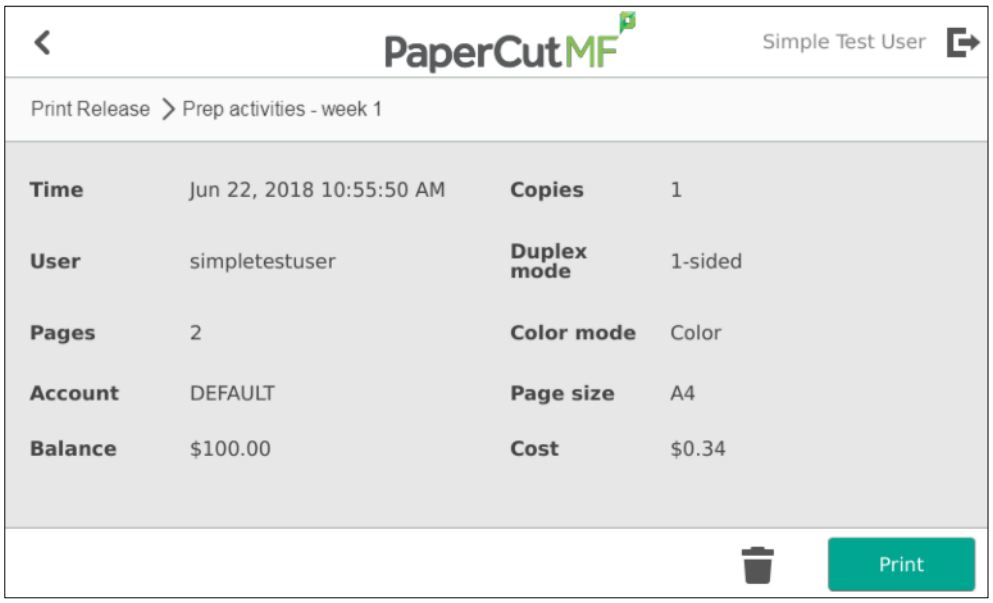
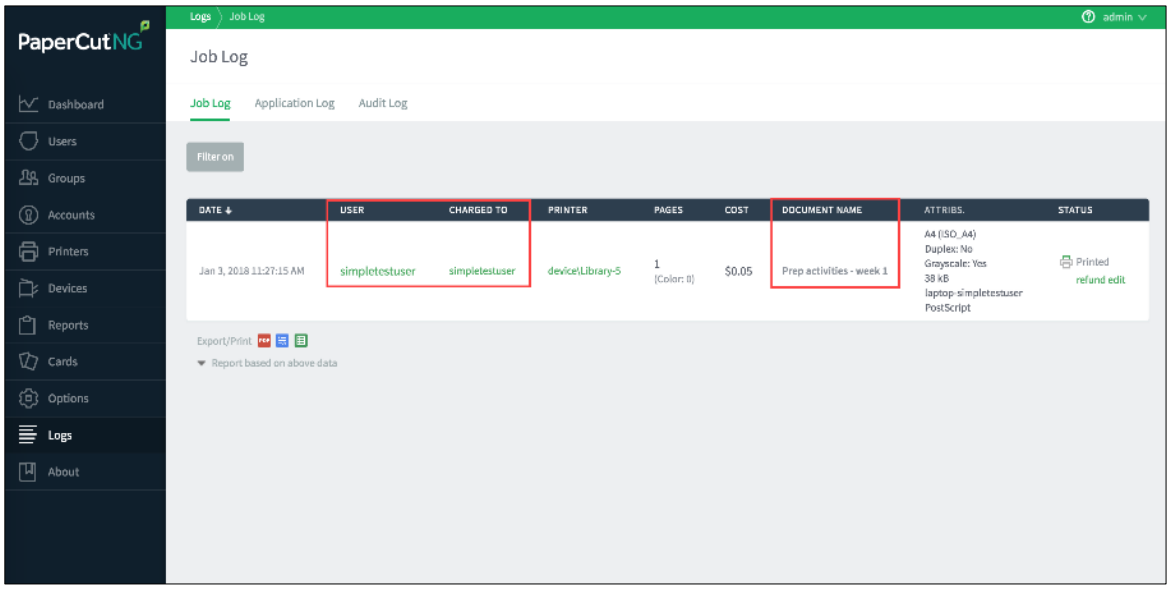
10. To release one or many held print jobs at once, select all the required held print jobs and click **Print**.
11. To delete one or many held print jobs at once, select all the required held print jobs and click the **Bin** icon.
12. To view and take actions on a single held print job, click the chevron:

Details of the held print job are displayed:



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



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

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3.2.3 Simple copying

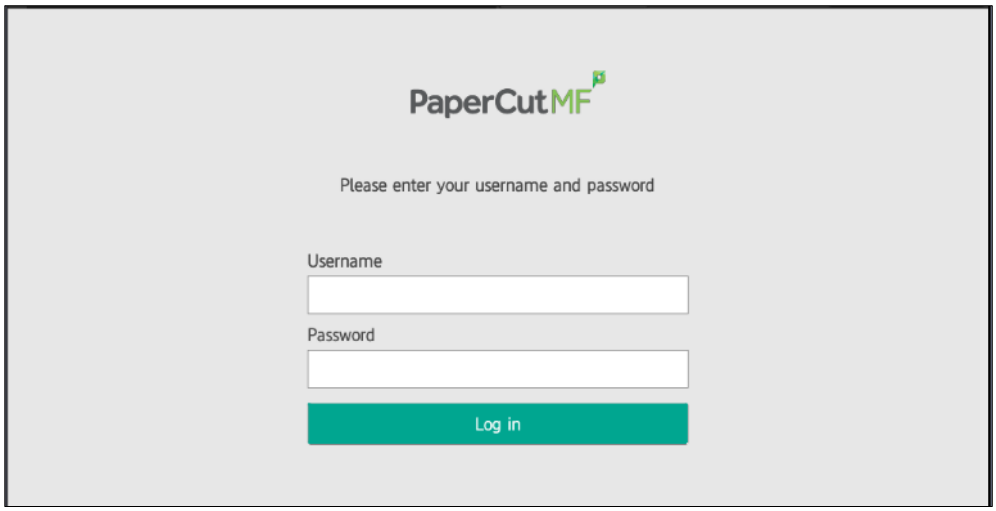
Simple copying does not involve providing the simple test user with a choice of accounts to choose from. Copying is charged to the simple test user's default My Personal Account.

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

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

To test simple copying:

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



2. Select **Access Device**:

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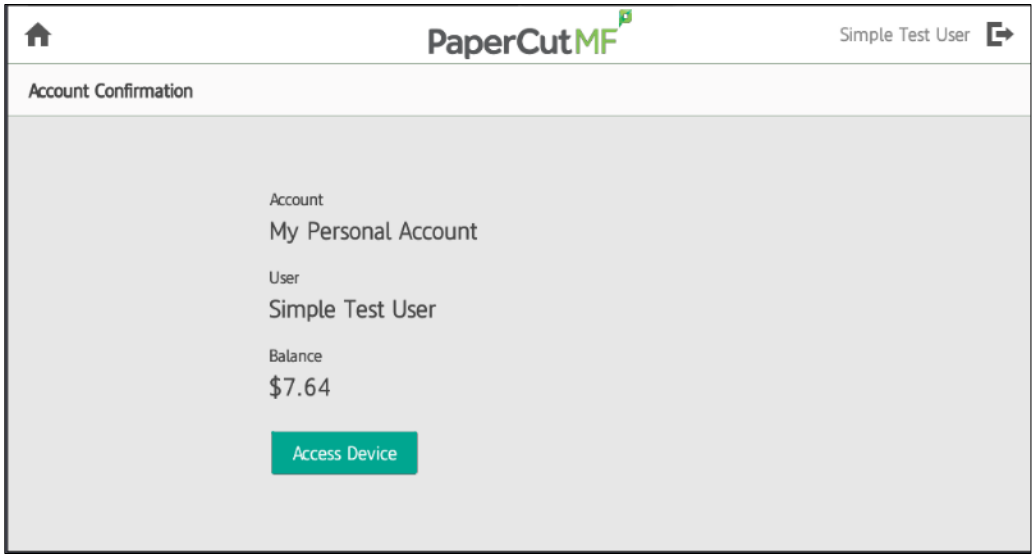
3. Verify that the PaperCut MF Account Confirmation screen does not provide the simple test user with a choice of accounts to choose from, and charges copying to the simple test user's default My Personal Account:



4. Click **Access Device.**
5. Select **Copy**.
6. Complete copying by following the device's workflow.
7. Log out of the device.
8. Log in to the PaperCut MF Admin web interface.
9. Navigate to **Logs**.

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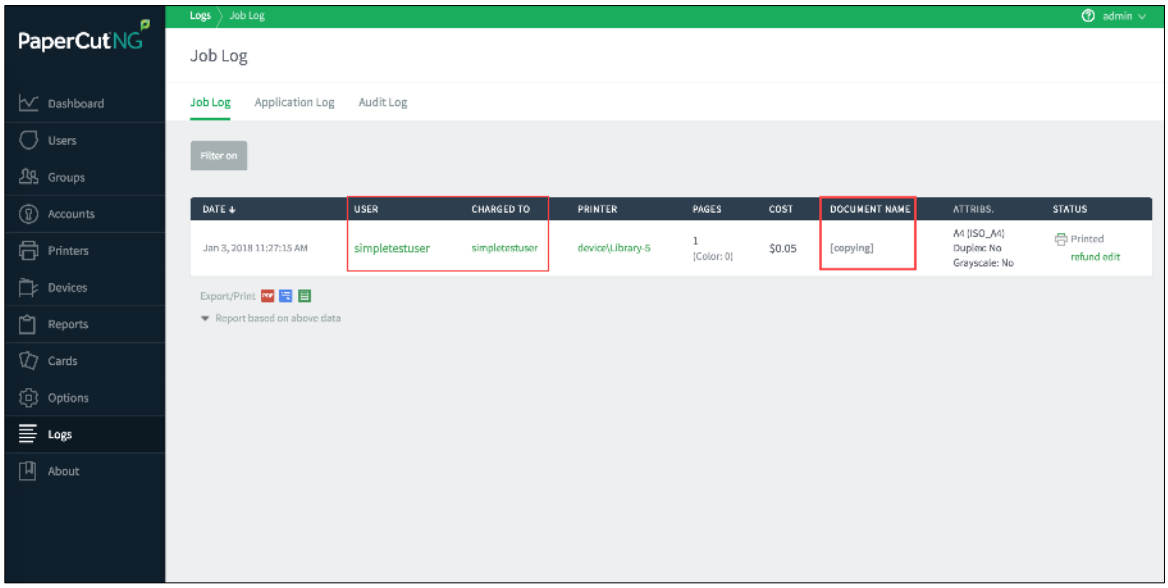
10. After copying is completed, verify that **Job Log** page displays the test user's name, simple test user, in the **User** column and the **Charged To** column:



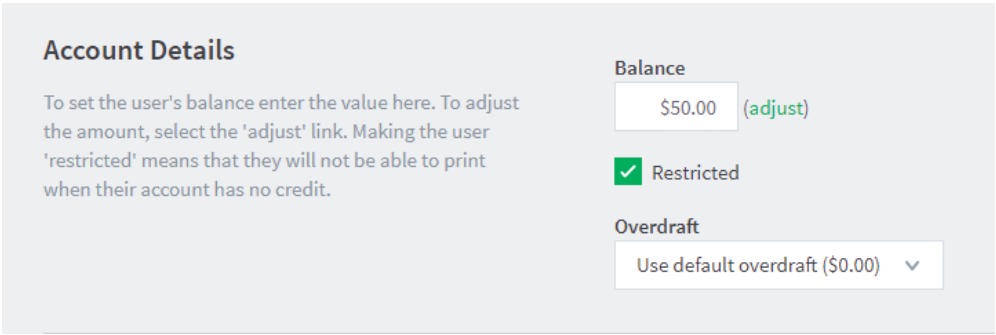
11. Log out of the PaperCut MF Admin web interface.

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



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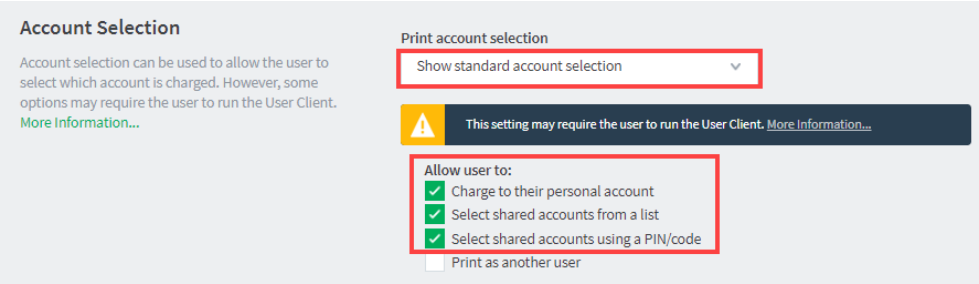
5. In the **Account Selection** area's **Print account selection**, select **Show standard account selection** and select the required options:



6. Click Apply.

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

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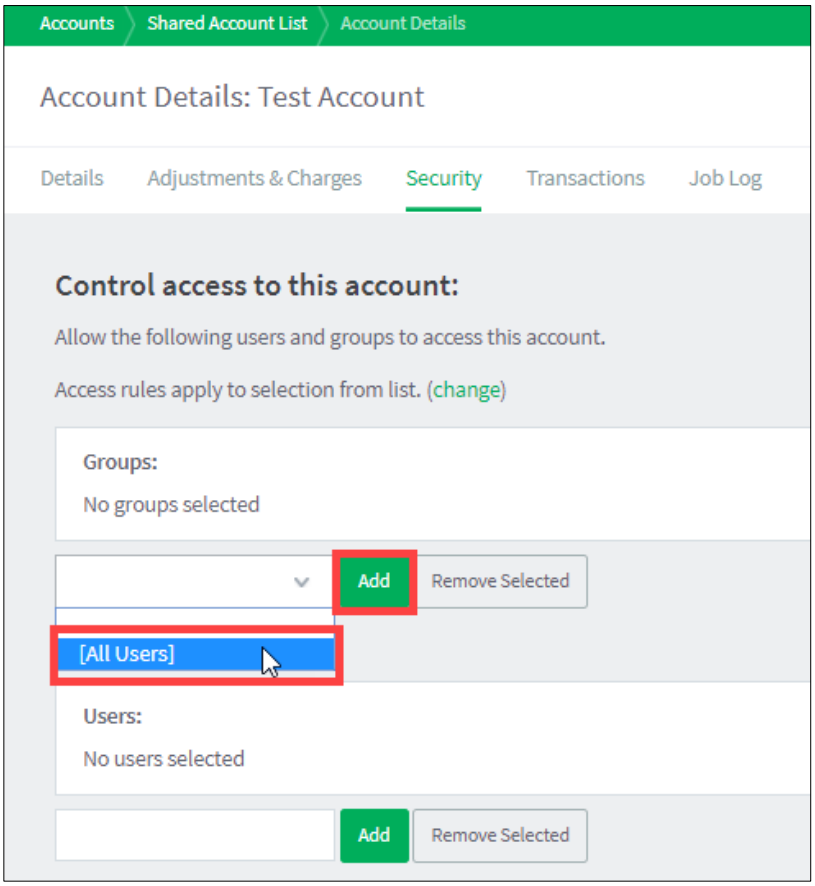
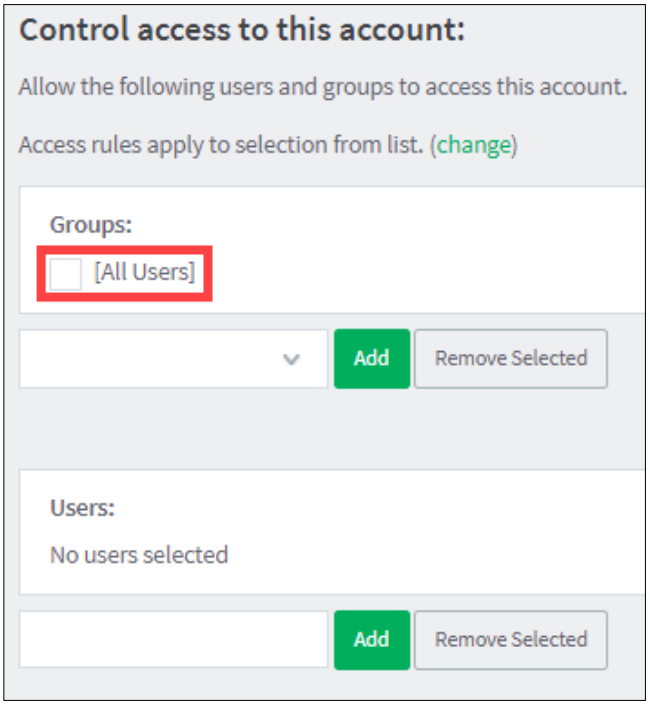
9. In the **Control access to this account > Groups** area, select **[All Users]**; then click **Add**:



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



To test advanced copying:

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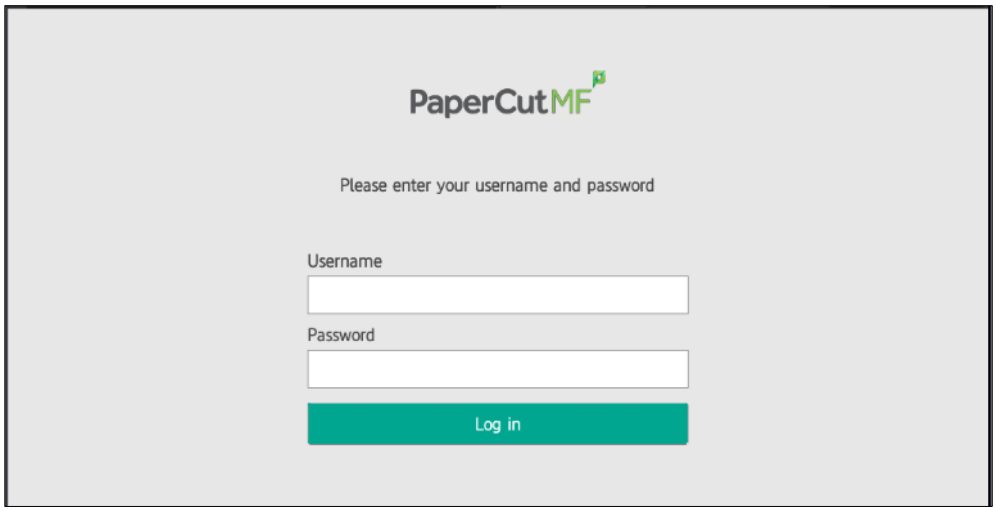
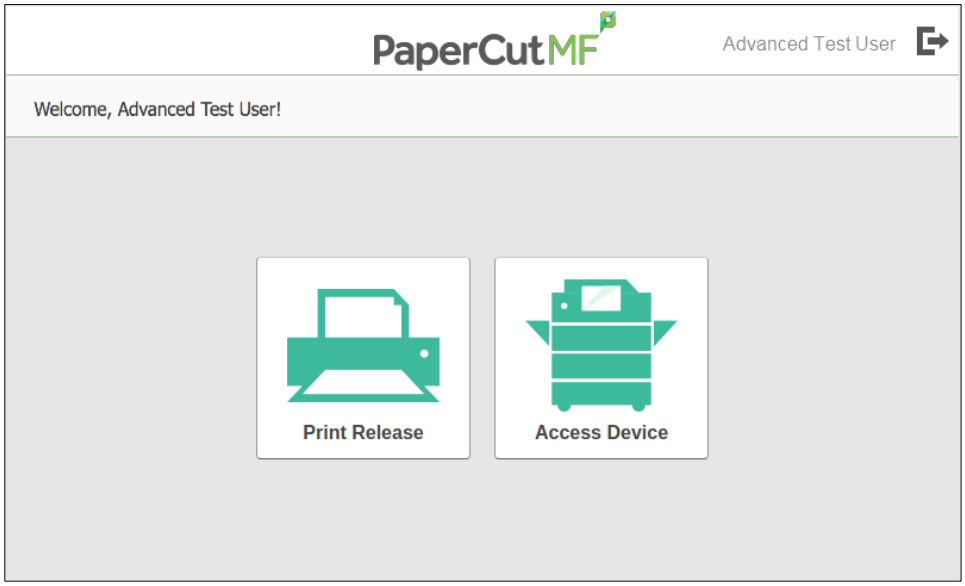
1. Log in to the device as the advanced test user:



2. Select **Access Device**:



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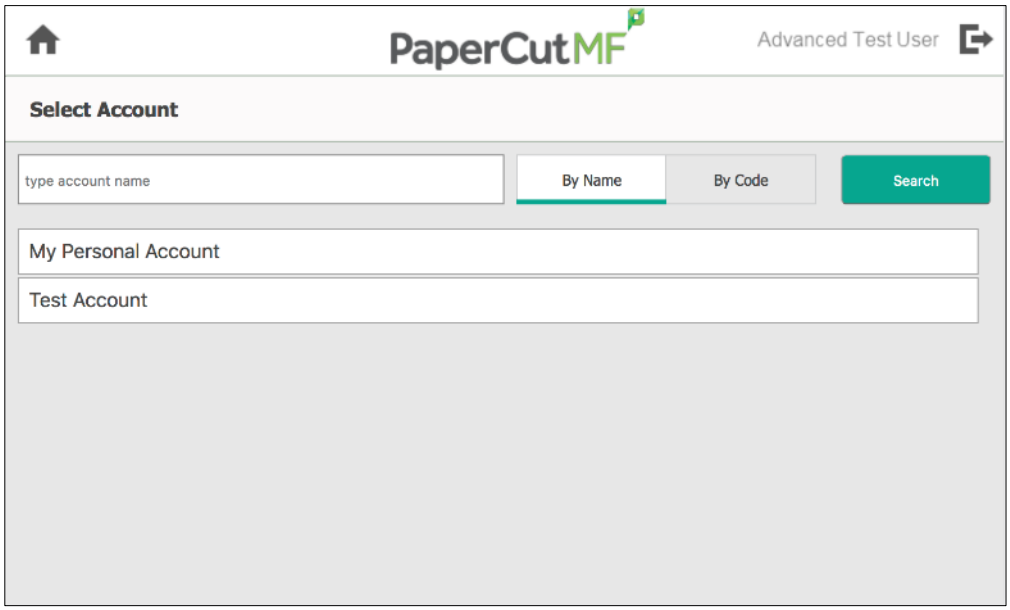
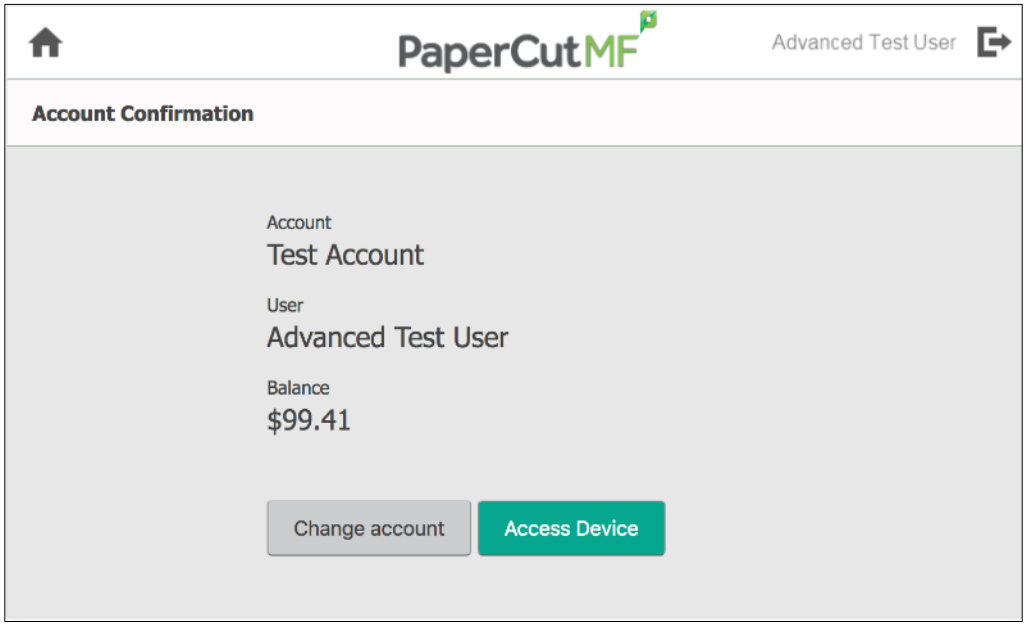
3. Verify that the PaperCut MF Select Account screen provides the advanced test user with a choice of accounts to choose from:



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



6. Click **Access Device.**
   Copying is charged to the account selected by the advanced test user, test account.
7. Select **Copy**.
8. Complete copying by following the device's workflow.
9. Log out of the device.
10. Log in to the PaperCut MF Admin web interface.
11. Navigate to **Logs**.

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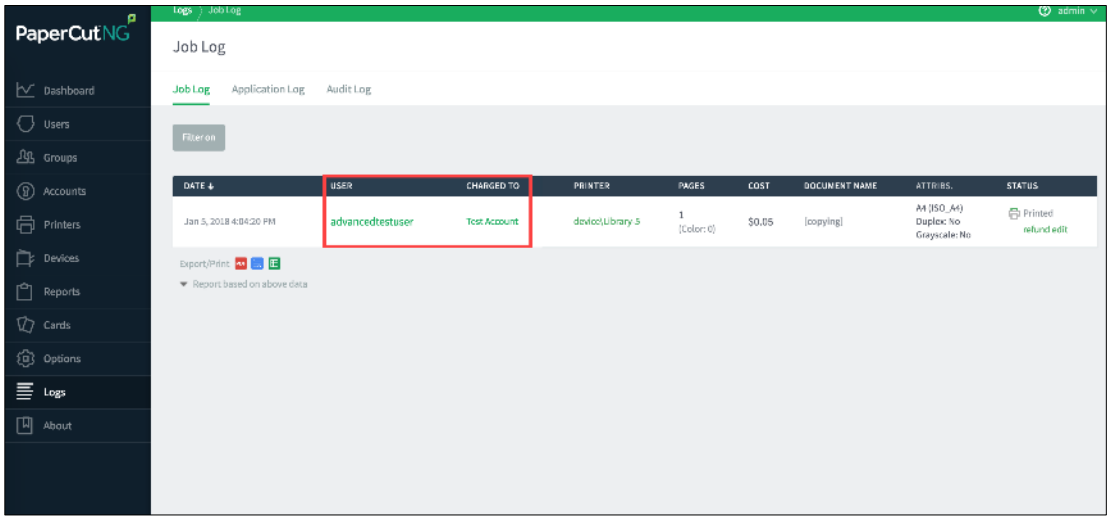
12. After copying is completed, verify that **Job Log** page displays the test user's name, advanced test user, in the **User** column and the selected account's name, test account, in the **Charged To** column:



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

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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 - Sharp OSA (HTML Browser n2.0+)*.

4.1 Inbound connections

4.1.1 Inbound connections to PaperCut MF Application Server

To configure PaperCut MF to allow inbound connections from the device to the PaperCut MF Application Server, use the config key **system.network-address**. For more information, see 4.12 Config Editor.

4.1.2 Inbound connections to PaperCut MF Site Servers

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

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

4.2 Additional network security

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

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

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

4.3 User authentication options

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

To configure the device's user authentication:

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

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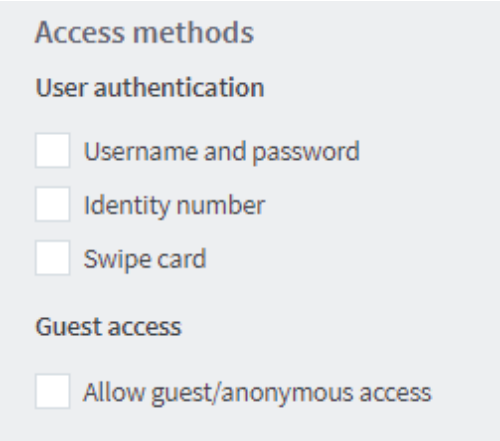
2. Navigate to **Devices**.
3. Select the required device.
   The available authenticate options are in the **Device Details** page's **External Device Settings** area:



   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:

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. **Note:** You may use the config key **ext-device.sharp-osa-n2.id.number-pad.** For more information, see 4.12 Config Editor. • **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. You may use the config key **ext-device.sharp-osa-n2.pin.number-pad.** For more information, see 4.12 Config Editor.
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.

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Note: If you select this option, then see 4.4 User authentication via swipe cards.

- **Require PIN:** With this option, users use their registered swipe card and the PIN associated with the card.
  Note: Users can use a swipe card with or without a pre-set and associated PIN. If using a swipe card without a pre-set and associated PIN, users are prompted to set a valid PIN to associate with the swipe card. You may use the config key **ext-device.sharp-osa-n2.pin.number-pad.** For more information, see 4.12 Config Editor
- **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 4.12 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.

- **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,

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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.sharp-osa-n2.guest-access.label.** For more information, see 4.12 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.

4.4 User authentication via swipe cards

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

1. Ensure the card reader is a supported card reader (see 4.4.1 Supported card readers).
2. Log in to the device's web interface as an administrator.
3. Navigate to **User Control > Default Settings.**
4. Based on the type of keyboard used by the device (see 4.10 Keyboard), set the **Card Setting: Use IC Card for Authentication** checkbox as required:
   - If the device uses a soft keyboard and a USB card reader, then you must uncheck the **Card Setting: Use IC Card for Authentication** checkbox.

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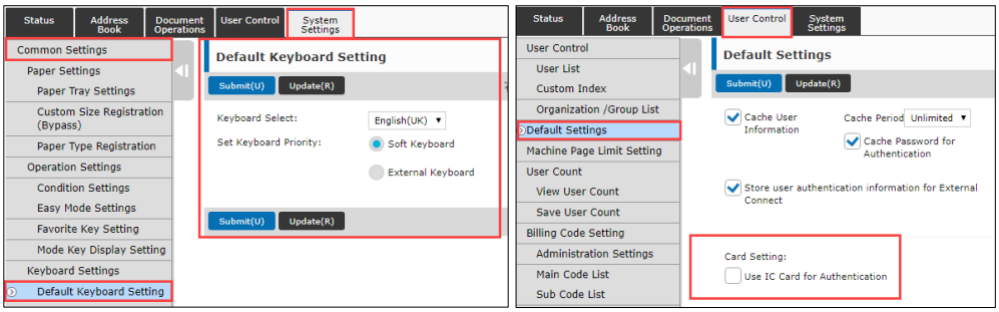
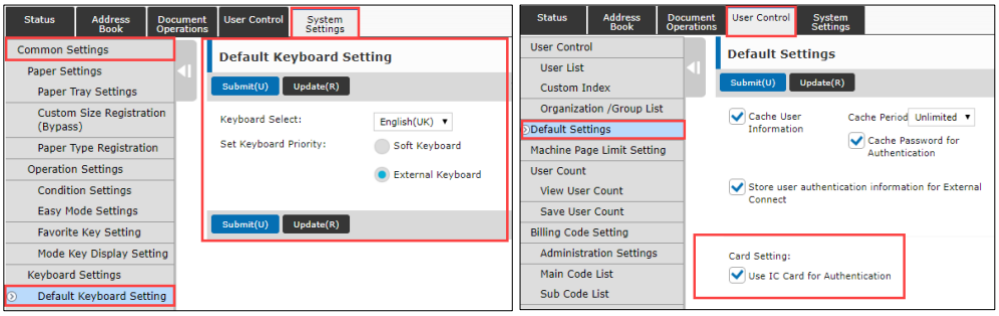


Note: This setting allows the USB card reader to be treated like a keyboard emulating external peripheral device connected to the device.

- If the device uses a USB card reader and either an external keyboard or the numeric keypad, then you must select the **Card Setting: Use IC Card for Authentication** checkbox.



Note:

- This setting:
  - registers the USB card reader,
  - ensures that the USB card reader is NOT treated like a keyboard emulating external peripheral device connected to the device,
  - helps the device differentiate between the two external peripheral devices connected to it (i.e. the external keyboard and the USB card reader).
- Do not toggle this setting from checked to unchecked. Doing so could cause some problems. For more information, see 6.12 Swipe card authentication anomalies.
- Set the config key **ext-device.sharp-osa-n2.card-number-ends-with-newline** as required. For more information, see 4.12 Config Editor.

5. Click **Submit**. Reboot the device (Login as an administrator, then Navigate to **Status > Machine Identification >Reboot the MFP**) for the changes to apply.

Note: Do not use the hard button to restart to device. Follow the step above instead.

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4.4.1 Supported card readers

PaperCut MF - Sharp OSA (HTML Browser n2.0+) supports the following configured and compatible keyboard emulating USB card readers*:*

- Elatec TWN3 Prox
- Elatec TWN4
- Equitrac Y591-EHID-201 v01
- Onmikey 5427
- MAGTEK 21040110
- RF IDEAS AIR ID Enroll Proximity Reader RDR-7081AKU
- RF IDEAS RDR-6081AKU
- RF IDEAS RDR-7582AKU
- RF IDEAS RDR-80581AKU
- RF IDEAS RDR-805H1AKU
- RF IDEAS RDR-805T1AKU

4.4.2 Handling card identifiers

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

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

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

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

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

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

4.4.2.1 Regular expression filters

To extract card identifiers using regular expression filters, use the config keys **ext-device.self-association-allowed-card-regex** and **ext-device.card-no-regex**. For more information, see 4.12 Config Editor.

Some regular expression filters include:

Expression	Description	Example

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(.{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

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

4.4.2.2 Standard format converters

To modify card identifiers using standard format converters, use the config key **ext-device.card-no-converter**. For more information, see 4.12 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.	

4.4.2.3 Custom JavaScript converters

To use a custom JavaScript converter:

1. Create a JavaScript file. For example:
   [install-path]/server/custom/card.js
2. Define a single JavaScript function in this file called **convert**. It must accept and return a single string. For example:
   ```
   function convert(cardNumber) {
     return cardNumber.substring(3,10).toLowerCase();
   }
   ```
3. Include a converter in the form: **javascript:custom/card.js**

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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 4.12 Config Editor.

4.5 Offline Mode

Note: This is only applicable if the device already has Offline Mode enabled via the Soft Switch - Simulation 55-03, SW24, Bit 8 (changed to 1). For more information, contact your Sharp service technician.
If PaperCut MF is unable to connect to the device, then after a configurable period of time, the device enters Offline Mode. Users are still able to use the device in Offline Mode. However, in this mode, PaperCut MF is unable to track and control printing, copying, scanning, or faxing.
To specify the interval of time (minutes) from the time PaperCut MF is unable to connect to the device, after which the device enters the Offline Mode, use the config key **ext-device.sharp-osa-n2.offline-awake-interval-minutes**. For more information, see 4.12 Config Editor.

Offline mode is only available to certain device users, such as users who have been manually added into the user list found in the device's web page.

4.6 SNMP

Note: This is only applicable if the device already has Printer Error Reporting enabled via the Soft Switch - Access Test Simulation 55-03, SW9, Bit 5 (changed to 0). For more information, contact your Sharp service technician.
You must configure the device and PaperCut MF to use SNMPv1/v2c or SNMPv3, which is used to:

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

For more information about SNMP, see the PaperCut MF manual.
To configure the device to use SNMP:

1. Log in to the device's web interface as an administrator.
2. Navigate to **System Settings > Network Settings > Services Settings > SNMP.**
3. To enable the device to use:
    - SNMPv1/v2c, ensure **SNMP v1 Settings** is set to **Enable**; and **SNMP v3 Settings** is set to **Disable.**
    - SNMPv3, ensure **SNMP v3 Settings** is set to **Enable**; and **SNMP v1 Settings** is set to **Disable.**
4. Click **Submit**.

To configure PaperCut MF to use SNMP:

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 **External Device Settings,** to enable PaperCut MF to use:
    - SNMPv1/v2c, ensure the **Use SNMPv3 for Toner Retrieval and Device Error Monitoring** checkbox is not selected (default).
    - SNMPv3, select the **Use SNMPv3 for Toner Retrieval and Device Error Monitoring** checkbox; and enter the following fields:
        - **Context name, Username, Privacy password, Authentication password** - If these values are available at the device'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.**

4.7 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.

4.7.1 User selection of an account

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

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

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

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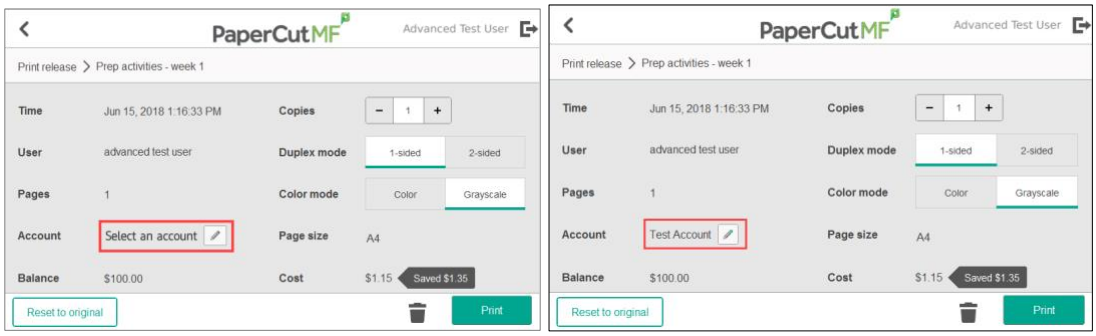
- allocate the same account to *multiple* held print jobs without an account:

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

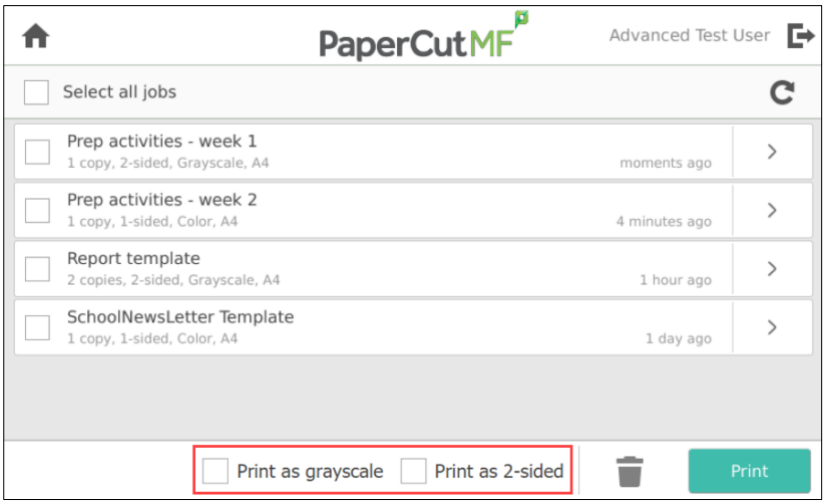


Note: By default, PaperCut MF allows users to select accounts at the device. However, you also have the option of disabling this. For more information, see the PaperCut MF manual.

4.7.2 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)



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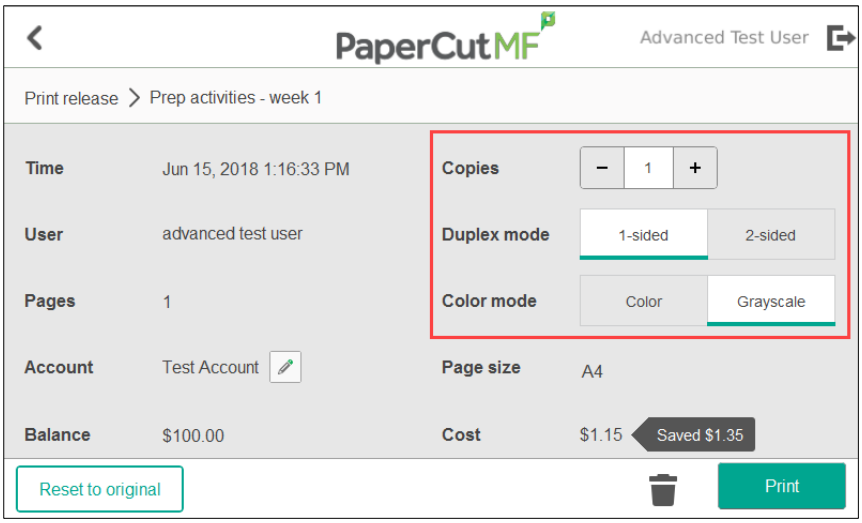
Clicking the arrow to the right of a single held print job displays all the attributes for that job, allowing users to make the following additional changes:

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



To toggle the display of the cost of held print jobs on the PaperCut MF Print Release and Print Settings screens on the device, use the config key **ext-device.sharp-osa-n2.release-show-cost**. For more information, see 4.12 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.

4.8 Device jobs

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

4.8.1 Tracking device jobs

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

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

4.8.2 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

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- 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**).

4.8.3 Job costs and account balances (Zero Stop)

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

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

- If restricted user's account balance is insufficient for even one Reference Page Allowed, then PaperCut MF prevents the user from being able to start a copy or on-device print job.
- If restricted user's account balance is sufficient for at least one Reference Page Allowed, then PaperCut MF allows the user to start a copy or on-device print job. As the job is in progress, if the maximum number of Reference Pages Allowed is reached, then PaperCut MF:
    - stops the job,
    - prevents it from being completed, and
    - deletes the job from the device's Job Status screen.

This ensures that the restricted user's account balance never drops below zero for copy and on-device print jobs. For more information, see 4.8.3.1 Reference Page Cost and maximum number of Reference Pages Allowed.

When scanning or faxing, PaperCut MF compares the cost of a single scan or fax page configured in the PaperCut MF Admin web interface page (**Devices > External Device List > Device Details > Summary > External Device Settings** area) against the restricted user's account balance.

- If a restricted user's account balance is lower than the configured cost of a single scan or fax page, then PaperCut MF prevents the user from being able to start a scan or fax job.
- However, when scan or fax job is in progress, if the restricted user's account balance drops below the configured cost of a single scan or fax page, then PaperCut MF is unable to stop the job. As a result, the job is completed, allowing the restricted user's account balance to drop below zero.

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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 4.8.3.2 Multiple Jobs.

4.8.3.1 Reference Page Cost and maximum number of Reference Pages Allowed

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

- ext-device.sharp-osa-n2.limit-reference.duplex
- ext-device.sharp-osa-n2.limit-reference.paper-size

For more information, see 4.12 Config Editor.
Note: This Reference Page Cost that is used to calculate the maximum number of Reference Pages Allowed for copy and on-device print jobs has some limitations. For more information, see 5.1 Limitations of the configured Reference Page Cost and maximum number of Reference Pages Allowed.

4.8.3.2 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.sharp-osa-n2.restricted.multiple-txns**. For more information, see 4.12 Config Editor.

4.8.4 On-device printing

By default, PaperCut MF only allows unrestricted users (**Users > User List > User Details > Account Details >** unchecked **Restricted** checkbox) to access the device for any of the following on-device print jobs:

- USB print jobs
- SMB pull print jobs (from the device's network folders)
- FTP pull print jobs
- Print jobs retrieved from the device's hard drive.

To extend this to restricted users, set the config key **ext-device.sharp-osa-n2.allow-on-device-print-for-restricted-users** to **Y**. For more information, see 4.12 Config Editor.
Although PaperCut MF supports on-device printing, it has the following limitations:

1. All on-device print jobs are tracked as copy jobs on the PaperCut MF Admin web interface (**Logs > Job Log**).
2. Chargeable on-device print jobs are charged as copy jobs.

4.8.5 PaperCut MF's Integrated Scanning

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

1. Ensure that the device pre-requisites are met:
    a. Log in to the device's web interface as an administrator.
    b. Navigate to **System Settings > Common Settings > Product Key**.

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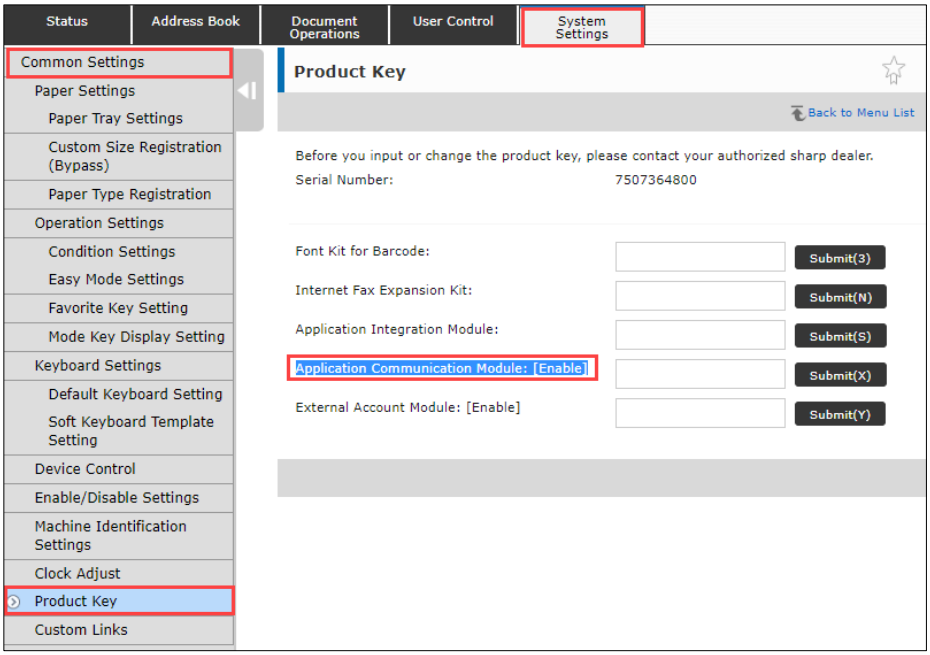
c. Verify that **Application Communication Module: [Enable]** is displayed:



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.sharp-osa-n2.scan.high-compression.enabled**
   - **ext.device.sharp-osa-n2.scan.pdf-option**
   - **ext-device.sharp-osa-n2.scan.prompt.checkbox.checked**
   - **ext-device.sharp-osa-n2.timeout.scan-prompt-send.secs**
   - **ext-device.sharp-osa-n2.timeout.complete-scan-job.secs**

   For more information, see 4.9 Timeouts, 4.12 Config Editor.
4. To enable users on the device's Home screen to be able to easily navigate to and access the PaperCut MF Scan screen, you must add and configure the required PaperCut MF Scan icon. For more information, see 2.4.5 Create PaperCut MF icons, 2.4.6 Configure the display of PaperCut MF icons.

4.8.5.1 Integrated scan workflow

If Integrated Scanning is enabled, then you can use the config key **ext-device.sharp-osa-n2.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 4.12 Config Editor).

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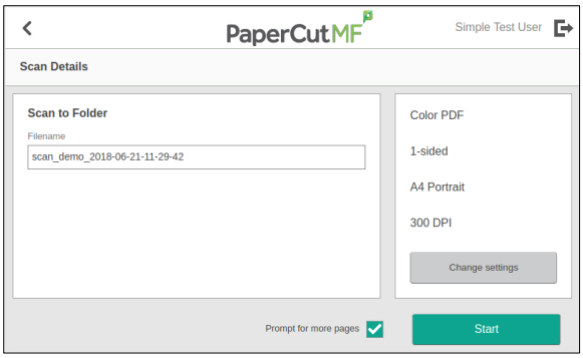
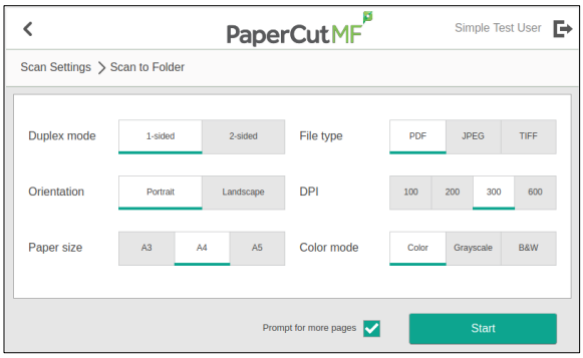
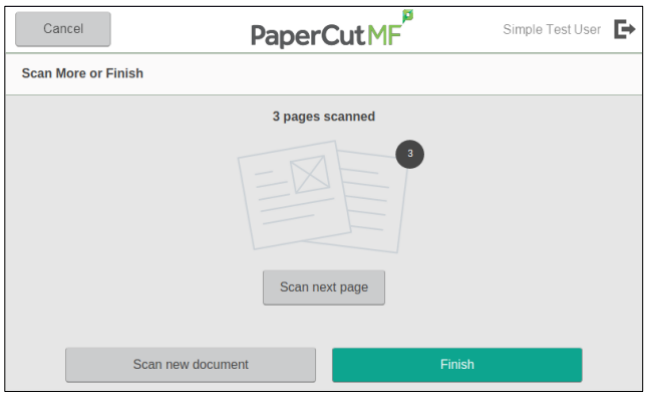


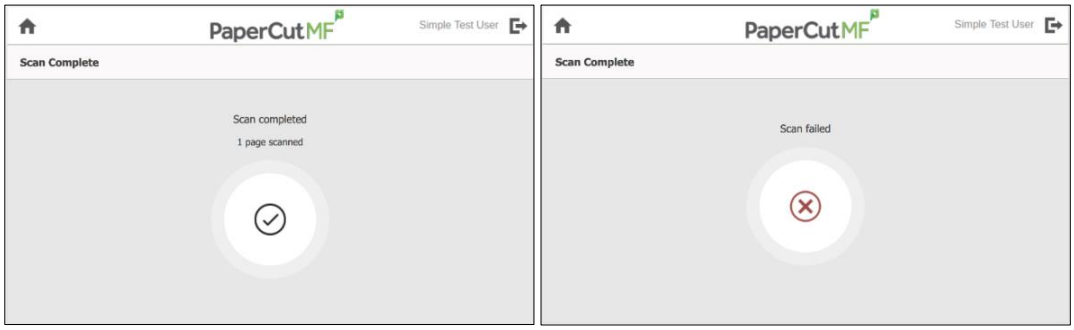


- A checked **Prompt for more pages** checkbox enables the device to display the Scan More or Finish screen, providing users with the ability to add more pages to the current scan job or start new scan jobs retaining the current scan job's settings and account selection attributes:



Note: To specify the user inactivity timeout on this screen, use the config key **ext-device.sharp-osa-n2.timeout.scan-prompt-send.secs**. For more information, see 4.9 Timeouts, 4.12 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.sharp-osa-n2.timeout.complete-scan-job.secs**. For more information, see 4.9 Timeouts, 4.12 Config Editor.

4.9 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:

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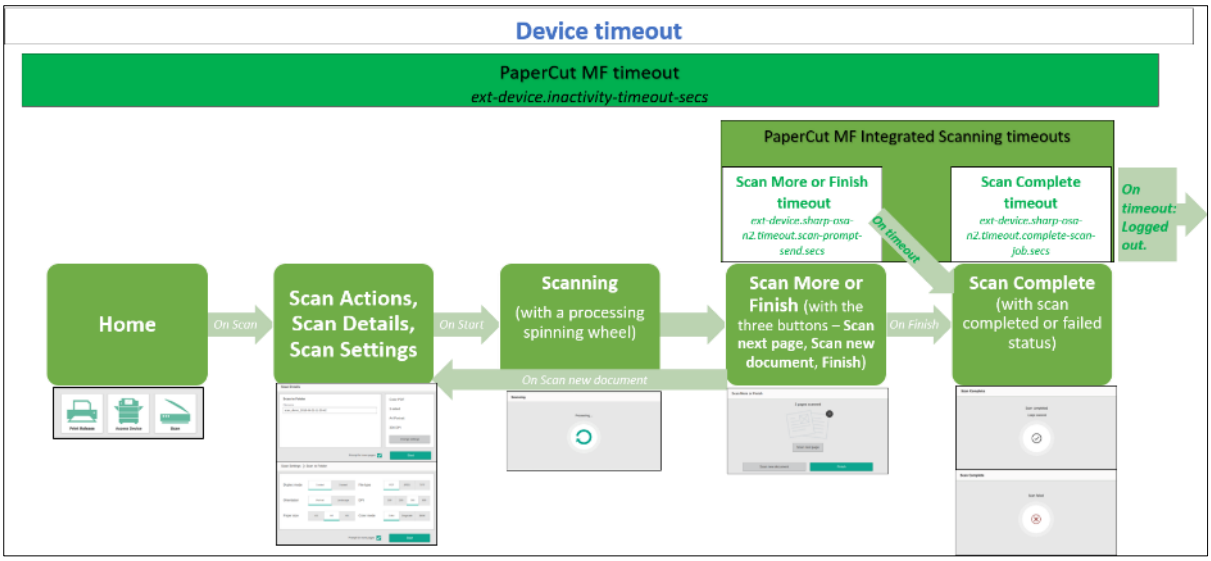
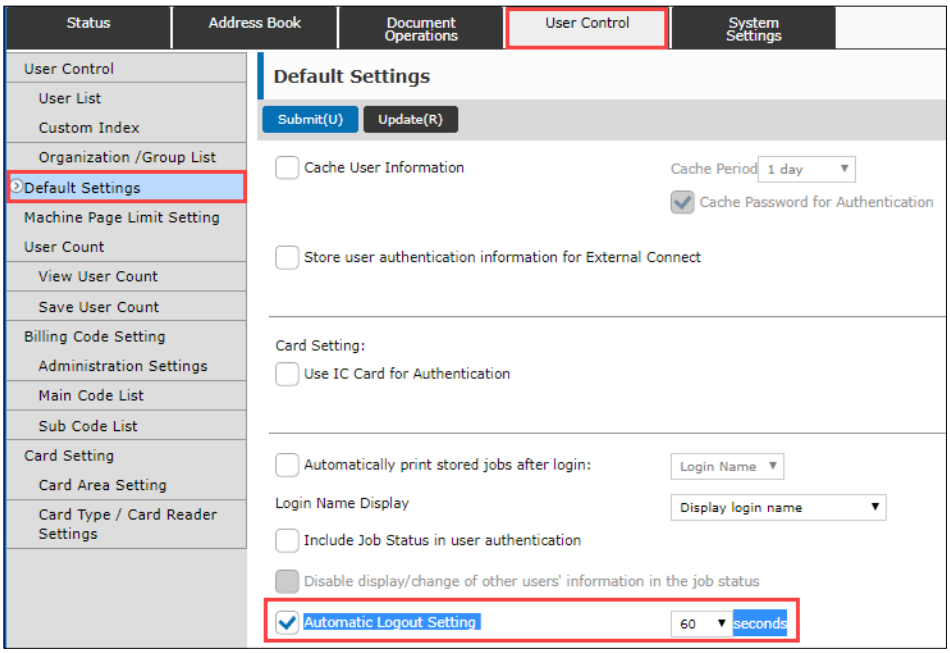


- **Device timeout** - If the user is idle on a non-PaperCut MF device screen, then the user is logged out based on the device's timeout.
  To configure the device's timeout:
  a. Log in to the device's web interface as an administrator.
  b. Navigate to **User Control > Default Settings.**
  c. Select the **Automatic Logout Setting** checkbox; then select the required device timeout in seconds:



  Note: If the user is idle on a non-PaperCut MF device screen, then the user is logged out based on this value.
  d. Click **Submit.**
- **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**. For more information, see 4.12 Config Editor.

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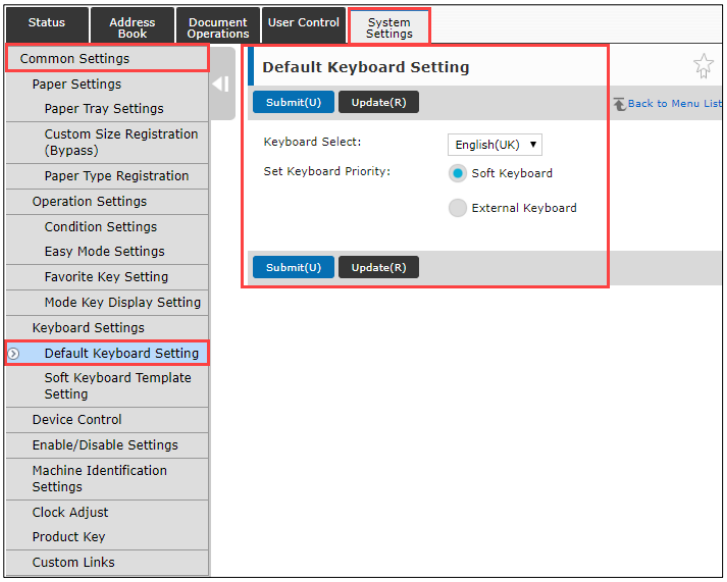
- **PaperCut MF integrated scanning timeouts** – If the user is using Integrated Scanning, then timeouts are based on the following config keys:
    - **PaperCut MF Scan More or Finish timeout** - ext-device.sharp-osa-n2.timeout.scan-prompt-send.secs
    - **PaperCut MF Scan Complete timeout** - ext-device.sharp-osa-n2.timeout.complete-scan-job.secs

  For more information, see 4.12 Config Editor

4.10 Keyboard

Based on the type of keyboard used by the device, ensure that the **Default Keyboard Setting** is configured as required:

1. Log in to the device's web interface as an administrator.
2. Navigate to **System Settings > Common Settings > Default Keyboard Setting.**



3. Based on the type of keyboard used by the device, set the **Set Keyboard Priority** as required:
    - **Soft Keyboard** – If the device uses a soft keyboard, ensure this default option is selected.
    - **External Keyboard** – If the device uses an external keyboard, select this option.
4. Click **Submit**.
5. Restart the device.

4.11 Screen headers

4.11.1 Header colors

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

1. Use the following config keys:
    - **ext-device.sharp-osa-n2.header.color**
    - **ext-device.sharp-osa-n2.header.textcolor**

  For more information, see 4.12 Config Editor.

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2. Log in to the device as a test user (simple test user).
3. Verify that the device's header background and text colors are as required.

4.11.2 Header logo

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

1. Create the device's header logo as per the following specifications:
   - Image height = 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\sharp-osa-n2\`
2. Log in to the device as a test user (simple test user).
3. Verify that the device's header logo is as required.

4.12 Config Editor

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

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

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

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

The available config keys are:

Config name	Description
Device screens	
ext-device.sharp-osa-n2.locale-override	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.

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	• 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.
ext-device.sharp-osa-n2.header.color	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 (dark green) **Note:** For more information, see 4.11.1 Header colors.
ext-device.sharp-osa-n2.header.textcolor	Customize the text 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 4.11.1 Header colors.
ext-device.sharp-osa-n2.login-instruction	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.sharp-osa-n2.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 4.3 User authentication options.
ext-device.sharp-osa-n2.welcome-text	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.sharp-osa-n2.access-device.label	Customize the text of the **Access Device** icon that appears on the PaperCut MF Home screen. This is a device-specific config key. • Values: Any text, DEFAULT • Default: DEFAULT (Access Device)
ext-device.sharp-osa-n2.device-functions-on-login	Configure the workflow after users have successfully logged in to the device to: • Either, show the PaperCut MF Home screen with the configured PaperCut MF buttons • Or, show the device's home screen with all the device jobs This is a device-specific config key. • Values: N, Y • Default: N **Note:** • Setting this to N – ○ displays the PaperCut MF Home screen with the configured PaperCut MF

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	buttons, after users have successfully logged in to the device and after the completion of a job (such as, after PaperCut MF's Integrated Scanning), ○ displays the PaperCut MF **Home** button on the PaperCut MF screens (such as, on the Print Release and Integrated Scanning screens), ○ enables the following config keys to take effect: ▪ **ext-device.sharp-osa-n2.direct-to-release-page** ▪ **ext-device.sharp-osa-n2.skip-release-screen-when-no-jobs** ▪ **ext-device.home-screen.force-show** • Setting this to Y – ○ displays the device's home screen with all the device jobs, after users have successfully logged in to the device and after the completion of a job (such as, after PaperCut MF's Integrated Scanning). ○ does not display the PaperCut MF **Home** button on the PaperCut MF screens (such as, on the Print Release and Integrated Scanning screens).
ext-device.sharp-osa-n2.direct-to-release-page	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.sharp-osa-n2.device-functions-on-login** is set to **N**). • Setting this to N – ○ enables the config key **ext-device.home-screen.force-show** to take effect.

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	• Setting this to Y –
	  ○ is required if **Enable print release** is selected
	  ○ enables the config key **ext-device.sharp-osa-n2.skip-release-screen-when-no-jobs** to take effect.

ext-device.sharp-osa-n2.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:** This is only applicable if the device is configured to: • show the PaperCut MF Home screen (i.e. the config key **ext-device.sharp-osa-n2.device-functions-on-login** is set to **N)**, and • show the PaperCut MF Print Release screen screen (i.e. the config key **ext-device.sharp-osa-n2.direct-to-release-page** is set to **Y**).
ext-device.home-screen.force-show	When the device is configured to only show the PaperCut MF Home screen, further configure the workflow to**:** • Either, always show the PaperCut MF Home screen • Or, hide the PaperCut MF Home screen, if BOTH **Enable print release** AND **Integrated Scanning** are not enabled This is a global config key. • Values: N (hide the PaperCut MF Home screen, based on other settings), Y (always show the PaperCut MF Home screen)

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	• 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.sharp-osa-n2.device-functions-on-login** and **ext-device.sharp-osa-n2.direct-to-release-page** are set to **N**).
ext-device.sharp-osa-n2.release-show-cost	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 4.7.2 User selection of job attributes.
ext-device.sharp-osa-n2.scan.high-compression.enabled	Specify the compression level that PaperCut MF applies to color scans, when using Integrated Scanning: • either, high compression, • or, medium compression. This is a device-specific config key. • Values: Y (high compression), N (medium compression) • Default: N **Note:** • Setting this to Y – ○ applies the high compression mode ○ increases the time taken to complete the scan ○ reduces the fidelity of the scan ○ reduces the time take to transfer the completed scan job ○ creates a smaller file size of the scan job • Setting this to N –

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	○ applies the medium compression mode ○ does not increase the time taken to complete the scan ○ does not reduce the fidelity of the scan ○ increases the time take to transfer the completed scan job ○ creates a larger file size of the scan job • Starting from PaperCut MF 22.0, scan actions can now have 3 levels of compression via PaperCut's document processing engine: low, medium, high. If you are using the high compression config key above, we advise against using the new compression settings in the scan action editor, to prevent double compression which could degrade the image quality. We recommend either using the device compression from the config key above, or using the scan action's compression from the scan action output settings. Please make sure no other compression setting is enabled natively in the device.
ext.device.sharp-osa-n2.scan.pdf-option	Specify the type of PDF scan file PaperCut MF produces, when using Integrated Scanning for PDF scans. This is a device-specific config key. • Values: any one of the following: ○ PDF ○ PDFA ○ PDFA_1A ○ COMPACT_PDF ○ COMPACT_PDF_ULTRA_FINE ○ COMPACT_PDFA ○ COMPACT_PDFA_ULTRA_FINE ○ COMPACT_PDFA_1A ○ COMPACT_PDFA_1A_ULTRA_FINE ○ PRIORITY_BLACK_PDF ○ PRIORITY_BLACK_PDFA ○ PRIORITY_BLACK_PDFA_1A • Default: PDFA

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ext-device.sharp-osa-n2.scan.prompt.checkbox.checked	Specify the default setting of the PaperCut MF Scan screens' **Prompt for more pages** checkbox (checked or unchecked) and the display of the PaperCut MF Scan More or Finish screen (with the three buttons – **Scan next page, Scan new document, Finish**). This is a device-specific config key. • Values: Y (checked by default; can be changed by the user), N (unchecked by default; can be changed by the user) • Default: Y **Note:** For more information, see 4.8.5.1 Integrated scan workflow
ext-device.scan.paper-sizes	Specify an override to the default Integrated Scanning source paper sizes. Up to three paper sizes can be specified. The value format is comma-separated without spaces e.g. letter,legal,ledger or A3,A4,A5. A special paper size **auto_mixed** enables automatic page size detection by the device. Please note: Most automatic document feeders are capable of detecting the paper size but most scanning platens cannot. Remember to configure the default paper size of a Scan Action or use the **ext-device.scan.default-paper-size** config key override. Default: <not present>
ext-device.scan.default-paper-size	Specify a device-level override to the default Integrated Scanning paper size. Default: <not present>
"Swipe card" authentication option	
ext-device.sharp-osa-n2.card-number-ends-with-newline	Specify when and how PaperCut MF initiates the user authentication process: • either, after receiving a hard return response, • or, after the expiry of a set timeout. This is a device-specific config key. • Values: Y (user authentication begins after receiving a hard return response), N (user authentication begins after the expiry of a set timeout) • Default: Y **Note:**

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	• This is only applicable if:
	  ○ the **Swipe card** authentication option is selected, and
	  ○ the device uses a keyboard emulating USB card reader (the **Card Setting: Use IC Card for Authentication** checkbox is unchecked)
	For more information, see 4.3 User authentication options and 4.4 User authentication via swipe cards.
	• Setting this to Y –
	  ○ is only applicable if the swipe cards being used generate a hard return/ keystroke response to signal the end of a card swipe (i.e. their card numbers end with a new line).
	  ○ causes PaperCut MF to initiate user authentication after receiving a hard return/ keystroke response.
	• Setting this to N –
	  ○ is required if the swipe cards being used do not generate a hard return/ keystroke response to signal the end of a card swipe (i.e. their card numbers do not end with a new line).
	  ○ causes PaperCut MF to initiate user authentication after the expiry of a set timeout.

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

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	Note: This is only applicable if the **Swipe card** - **Enable self-association with existing user accounts** authentication option is selected. For more information, see 4.3 User authentication options.
ext-device.self-association-allowed-card-regex	Specify the regular expression filter to be used to validate card identifiers during card self-association. This is a device-specific config key. • Values: Any valid regular expression, DEFAULT • Default: DEFAULT **Note:** This is only applicable if the **Swipe card** - **Enable self-association with existing user accounts** authentication option is selected. For more information, see 4.3 User authentication options and 4.4.2 Handling card identifiers.
ext-device.card-no-regex	Specify the regular expression filter to be used to extract card identifiers for authentication. This is a global and device-specific config key. Device-specific: • Values: Any valid regular expression, GLOBAL (inherited from global settings) • Default: GLOBAL (inherited from global settings) Global: • Values: Any valid regular expression **Note:** This is only applicable if the **Swipe card** authentication option is selected. For more information, see 4.3 User authentication options and 4.4.2 Handling card identifiers.
ext-device.card-no-converter	Specify the converters (standard format converters, custom JavaScript converters, or both) to be used to modify card identifiers for authentication. This is a global and device-specific config key. Device-specific: • Values: Any valid converter (standard format converters, custom JavaScript converters, or both), GLOBAL (inherited from global settings) • Default: GLOBAL (inherited from global settings) Global:

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	• 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 4.3 User authentication options and 4.4.2 Handling card identifiers.

ext-device.sharp-osa-n2.id.number-pad	Specify whether or not the PaperCut MF Login screen displays a soft numeric keyboard for entering an ID number during the user authentication process.
	This is a device-specific config key.
	• Values: N (does not display soft numeric keyboard), Y (displays soft numeric keyboard)
	• Default: N
	
	Note:
	• This is only applicable if the **Identity number** authentication option is selected. For more information, see 4.3 User authentication options.
	• If this config key is enabled and **Swipe card** authentication option is also selected, register your card reader to the device to ensure that the soft numeric keyboard will work. See 4.4 User authentication via swipe cards.
	• Setting this to Y –
	  ○ displays the soft numeric keyboard only if the device does not already have a built-in numeric keyboard on the panel.
	  ○ is only recommended if the ID numbers of all users only consist of positive integers.

ext-device.sharp-osa-n2.pin.number-pad	Specify whether or not the PaperCut MF Login screen displays a soft numeric keyboard for entering a PIN during the user authentication process. This is a device-specific config key. • Values: N (does not display soft numeric keyboard), Y (displays soft numeric keyboard) • Default: N

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	Note: • This is only applicable if the **Identity number** and/ or **Swipe card** authentication option is selected together with the **Require PIN** option. For more information, see 4.3 User authentication options. • If this config key is enabled and **Swipe card** authentication option is also selected, register your card reader to the device to ensure that the soft numeric keyboard will work. See 4.4 User authentication via swipe cards. • Setting this to Y – displays the soft numeric keyboard only if the device does not already have a built-in numeric keyboard on the panel.
Job costs and account balances (Zero Stop)	
ext-device.sharp-osa-n2.allow-on-device-print-for-restricted-users	Specify whether or not on-device printing is extended to restricted users. This is a device-specific config key. • Values: Y (on-device printing is extended to restricted users), N (on-device printing is only available to unrestricted users) • Default: N **Note:** For more information, see 4.8.4 On-device printing.
ext-device.sharp-osa-n2.limit-reference.duplex	When configuring the Reference Page Cost that is used to calculate the maximum number of Reference Pages Allowed for copy and on-device print jobs, specify whether the Reference Page used is a simplex page or a duplex page. This is a device-specific config key. • Values: N (simplex), Y (duplex) • Default: N **Note:** For more information, see 4.8.3.1 Reference Page Cost and maximum number of Reference Pages Allowed.
ext-device.sharp-osa-n2.limit-reference.paper-size	When configuring the Reference Page Cost that is used to calculate the maximum number of Reference Pages

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	Allowed for copy and on-device print jobs, specify the paper size of the Reference Page used. This is a device-specific config key. • Values: Any valid paper size • Default: A4|Letter (Worldwide: A4; North America: Letter) **Note:** For more information, see 4.8.3.1 Reference Page Cost and maximum number of Reference Pages Allowed.
ext-device.sharp-osa-n2.restricted.multiple-txns	Specify whether or not restricted users are permitted to perform multiple transactions simultaneously on the device. For example, perform a copy job while another print job is in progress. This is a device-specific config key. • Values: N (multiple transactions not permitted), Y (multiple transactions permitted) • Default: N **Note:** • This is only applicable to restricted users. • Setting this to N – is recommended to ensure that restricted users' account balances do not drop below zero. • For more information, see 4.8.3.2 Multiple Jobs.
Network resilience, security, logs, uninstallation	
ext-device.sharp-osa-n2.verify-device-compatibility	Enable or disable the firmware compatibility check during PaperCut MF installation. The firmware compatibility check ensures that the Sharp OSA 5.1+ device is running a firmware version dated December 2018 or later. This is to ensure it is compatible with PaperCut's embedded software solution *PaperCut MF - Sharp OSA (HTML Browser n2.0+)*. This is a device-specific config key. • Values: Y (enable the firmware compatibility check), N (disable the firmware compatibility check) • Default: Y **Note:** For more information, see 6.7 Device status "Started (with errors)": device firmware or 6.8 "Sharp OSA (HTML Browser n2.0+) device firmware" error.

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system.network-address	Specify the network IP address or FQDN (Fully Qualified Domain Name) of the PaperCut MF Application Server that the device uses to make inbound connections. This is a global config key. • Values: Network IP address or FQDN (Fully Qualified Domain Name) of the PaperCut MF Application Server used by the device for inbound connections. **Note:** For more information, see 4.1.1 Inbound connections to PaperCut MF Application Server.
ext-device.sharp-osa-n2.period.error	Specify the interval of time (seconds) between each attempt made by PaperCut MF to connect to the device, after encountering an error when installing PaperCut MF on the device (i.e. device registration and integration). This is a device-specific config key. • Values: 1-3600 (seconds) • Default: 120 (seconds)
ext-device.sharp-osa-n2.period.ping	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) • Default: 300 (seconds)
ext-device.sharp-osa-n2.offline-awake-interval-minutes	Specify the interval of time (minutes) that PaperCut MF waits, from the time that is unable to connect to the device, after which the device enters Offline Mode. This is a device-specific config key. • Values: 1-1440 (minutes) • Default: 5 (minutes) **Note:** For more information, see 4.5 Offline Mode.
ext-device.sharp-osa-n2.duplicate-authorize-secs	Specify the interval of time (seconds) that PaperCut MF waits, from the time that a job is authorized to start, after which a subsequent job authorization request received is treated as a new job that requires authorization. This is a device-specific config key.

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	• Values: 0.0-1.0 (seconds) • Default: 0.3 (seconds)
ext-device.sharp-osa-n2.security.native-user-authentication	Specify how users are authenticated on the device: • either, by PaperCut MF • or, by the printer's driver. This is a device-specific config key. • Values: Y (PaperCut MF authenticates users), N (Printer's driver authenticates users) • Default: Y **Note:** For more information, see 6.13 Released print jobs are not printed.
ext-device.sharp-osa-n2.acl-deny-access	Specify the device jobs that only authenticated administrators can access. This is a device-specific config key. • Values: Any one or a comma-separated combination of device jobs that only authenticated administrators can access. • Default: SETTINGS.WEB-SETTINGS,#SYS.JOB-PROGRAM-STORE,#SYS.CLOCK,#SYS.KEYBOARD-SELECT,#SYS.USER-CONTROL,#SYS.ENERGY-SAVE,#SYS.OPERATION-SETTINGS,#SYS.DEVICE-SETTINGS,#SYS.COPY-SETTINGS,#SYS.NETWORK-SETTINGS,#SYS.PRINTER-SETTINGS,#SYS.IMAGESEND-OPERATION-SETTINGS,#SYS.IMAGESEND-SCANNER-SETTINGS,#SYS.IMAGESEND-FAX-SETTINGS,#SYS.IMAGESEND-IFAX-SETTINGS,#SYS.DOC-FILING-SETTINGS,#SYS.LIST-PRINT-ADMIN,#SYS.SECURITY-SETTINGS,#SYS.PRODUCT-KEY,#SYS.ESCP-SETTINGS,#SYS.ENABLE-DISABLE-SETTINGS,#SYS.FIELD-SUPPORT-SYSTEM,#SYS.CHANGE-ADMIN-PASSWORD,#SYS.RETENTION-CALLING,#SYS.OSA-SETTINGS

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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.sharp-osa-n2.page-count-multiplier	Specify the page count multiplier for required paper sizes for copy, on-device print, scan, and fax job logs. This is a device-specific config key.

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	• Values: Any one or a comma-separated/ semi-colon separated combination of <papersize - not case sensitive>:<multiplier - real number greater than zero> mapping. • Default: A3:0.5,11X17:0.5,LEDGER:0.5 **Note:** • This is only applicable to job logs for copy, on-device print, scan, or fax jobs. • For more information, see 5.2 Larger paper sizes are incorrectly logged.
Timeouts	
ext-device.sharp-osa-n2.timeout.native-job-commit.secs	Specify the interval of time (seconds) from the time when a device job is completed, after which if no job charge notification is received for the completed job, PaperCut MF forces the job to be charged and closed. This is a device-specific config key. • Values: 1-300 (seconds) • Default: 5 (seconds)
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:** For more information, see 4.9 Timeouts.
ext-device.sharp-osa-n2.timeout.scan-prompt-send.secs	**PaperCut MF Scan More or Finish timeout:** Specify the interval of time (seconds) after which a user who is detected as being idle on the PaperCut MF Scan More or Finish screen (with the three 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)

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	Note: This timeout temporarily deactivates the PaperCut MF timeout (**ext-device.inactivity-timeout-secs**) and the device timeout. For more information, see 4.9 Timeouts.
ext-device.sharp-osa-n2.timeout.complete-scan-job.secs	**PaperCut MF Scan Complete timeout:** Specify the interval of time (seconds) after which a user who is detected as being idle on the PaperCut MF Scan Complete screen (with scan completed or failed status), is automatically logged out. This is a device-specific config key. • Values: 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 4.9 Timeouts.

5 Known Limitations

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

The Reference Page Cost that is used to calculate the maximum number of Reference Pages Allowed for copy and on-device print jobs has the following limitations.

5.1.1 Limitation 1: Reference Page Cost is unavailable for scan and fax jobs

The Reference Page Cost that is used to calculate the maximum number of Reference Pages Allowed for device jobs is only available for copy and on-device print jobs. It is unavailable for scan and fax jobs. When scanning or faxing, PaperCut MF compares the cost of a single scan or fax page configured in the PaperCut MF Admin web interface page (**Devices > External Device List > Device Details > Summary > External Device Settings** area) against the restricted user's account balance.

- As a result, if a restricted user's account balance is lower than the configured cost of a single scan or fax page, then PaperCut MF prevents the user from being able to start a scan or fax job.
- However, when scan or fax job is in progress, if the restricted user's account balance drops below the configured cost of a single scan or fax page, then PaperCut MF is unable to stop the job. As a result, the job is completed, allowing the restricted user's account balance to drop below zero.

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

If the Reference Page Cost is lower than the actual per page cost of the restricted user's copy or on-device print 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:**
    - Configured attribute of one Reference Page = A4
    - Calculated cost of one Reference Page = $1.00
    - Maximum number of Reference Pages Allowed = 4
    - Total cost of maximum number of Reference Pages Allowed = $4
    - **Account's closing balance using References** = *$0.50 (actual job is allowed)*
- **Attributes and costs of actuals:**
    - Attribute of actual page = Letter
    - Cost of actual page = $1.50
    - Number of actual pages = 4
    - Total cost of actual pages = $6
    - **Account's closing balance using actuals** = *$-1.50 (account balance is negative)*

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

If the Reference Page Cost is higher than the actual per page cost of the restricted user's copy or on-device print 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 copy or on-device print job,
- the user could be prematurely stopped in the middle of a copy or on-device print 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

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- Calculated cost of one Reference Page = $2.00
- Maximum number of Reference Pages Allowed = 0 *(actual job is not allowed)*

- **Attributes and costs of actuals:**
  - Attribute of actual page = A4
  - Cost of actual page = $0.50
  - Number of actual pages = 2
  - Total cost of actual pages = $1.00
  - **Account's closing balance using actuals** = *$0.50 (account balance would not have been negative, if the actual job was allowed)*

5.1.4 Limitation 4: Actual page is for a large paper size

When an actual copy or on-device job is for a large paper size (such as, A3), because the device incorrectly counts a single page of the larger paper size (such as, A3) as 2 A4 sheets, the number of Reference Pages Allowed is reached prematurely. As a result, a restricted user's account balance must always have at least twice as much funds as that of the Reference Page Cost to ensure that the user is allowed to:

- start a copy or on-device print job for a larger paper size
- continue and complete the copy or on-device print job for a larger paper size

Example 3 – Actual job is for a large paper size

The following is an example of what could happen if the actual copy or on-device job is for a large paper size (such as, A3). 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 = A4
  - Calculated cost of one Reference Page = $1.00
  - Maximum number of Reference Pages Allowed = 1
- **Attributes and costs of actuals:**
  - Attribute of actual page = A3
  - Cost of actual page = $1.50
  - Number of actual pages = 1
  - Number of actual pages counted by the device = 2 *(actual job is not allowed because the maximum number of Reference Pages Allowed appears to have been reached)*

5.2 Larger paper sizes are incorrectly logged

Copy, on-device print, scan, and fax jobs are incorrectly logged for some larger paper sizes (such as, A3). To ensure the correct number of pages are logged, a page count multiplier must be applied to the detected sheet count of the job. By default, PaperCut MF applies a multiplier of 0.5 to A3, 11x17 and LEDGER paper sizes. To specify the page count multiplier for required paper sizes use the config key **ext-device.sharp-osa-n2.page-count-multiplier**. For more information, see 4.12 Config Editor.

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5.3 Phonebook contacts

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

6 FAQ & Troubleshooting

6.1 IP addresses of the PaperCut MF Application Server

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

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

6.2 Command Prompt errors

6.2.1 Command Prompt error "Duplicate deviceName in csv"

After attempting to install PaperCut MF on the device, if the Command Prompt displays the following message, it implies that PaperCut MF installation is unsuccessful:

```
Duplicate deviceName in csv: "The device name '<deviceName>' is already specified for a device in this csv"
```

This is because the value of the CSV header **deviceName** is duplicated in other rows in the **batch-devices.csv** file.

To resolve this, ensure that the value of the CSV header **deviceName** for each device is unique (and not duplicated in any row). Then resume installing PaperCut MF. For more information, see 2.4.4.1 Install PaperCut MF on multiple devices.

6.2.2 Command Prompt error "Duplicate deviceHostnameOrIp in csv"

After attempting to install PaperCut MF on the device, if the Command Prompt displays the following message, it implies that PaperCut MF installation is unsuccessful:

```
Duplicate deviceHostnameOrIp in csv: "The address '<deviceHostnameOrIp>' is already specified for a device in this csv"
```

This is because the value of the CSV header **deviceHostnameOrIp** is duplicated in other rows in the **batch-devices.csv** file.

To resolve this, ensure that the value of the CSV header **deviceHostnameOrIp** for each device is unique (and not duplicated in any row). Then resume installing PaperCut MF. For more information, see 2.4.4.1 Install PaperCut MF on multiple devices.

6.2.3 Command Prompt error "Sharp device is not supported"

After attempting to install PaperCut MF on the device, if the Command Prompt displays the following message, it implies that PaperCut MF installation is unsuccessful:

```
'<deviceName>' => "Sharp device is not supported"
```

This is because the device is not supported.

To resolve this, verify that the device is a Sharp OSA 5.1+ device with HTML Browser n2.0+ running the firmware dated December 2018 or later that is listed as a supported device on the PaperCut MF for Sharp page. For more information, see 2 Installation.

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6.2.4 Command Prompt error "This device is not compatible with the Sharp OSA (HTML Browser n2.0+)"

After attempting to install PaperCut MF on the device, if the Command Prompt displays the following message, it implies that PaperCut MF installation is unsuccessful:

```
'<deviceName>' => "This device is not compatible with the Sharp OSA (HTML Browser n2.0+)"
```

This is because the device is not compatible with the embedded software solution specified in the **batch-devices.csv** file's CSV header **deviceType** (i.e. **SHARP_OSA_N2**). This manual is only relevant to supported Sharp OSA 5.1+ devices with HTML Browser n2.0+ running the firmware dated December 2018 or later. For more information on PaperCut's embedded software solutions for other devices and platforms, contact your reseller or Authorized Solution Center. You can find their contact information in your PaperCut MF Admin web interface, on the **About** page.

6.2.5 Command Prompt error "Admin login details were incorrect"

After attempting to install PaperCut MF on the device, if the Command Prompt displays the following message, it implies that PaperCut MF installation is unsuccessful:

```
'<deviceName>' => "Admin login details were incorrect"
```

This is because the administrator credentials for the device's web interface in the **batch-devices.csv** file's CSV headers **deviceAdminUser, deviceAdminPass** are invalid or incorrect. To resolve this, ensure that administrator credentials for the device's web interface in the **batch-devices.csv** file's CSV headers **deviceAdminUser, deviceAdminPass** are accurate. Then resume installing PaperCut MF. For more information, see 2.4.4.1 Install PaperCut MF on multiple devices.

6.2.6 Command Prompt error "The operation has timed out"

After attempting to install PaperCut MF on the device, if the Command Prompt displays the following message, it implies that PaperCut MF installation is unsuccessful:

```
'<deviceName>' => "The operation has timed out"
```

This is because the Command Prompt has timed-out due to various reasons (some CSV headers in the **batch-devices.csv** file for the device have errors, the device is switched off, there are other network connectivity issues in your environment, etc).
To resolve this, address the root cause of the time-out. Then resume installing PaperCut MF. For more information, see 2.4.4.1 Install PaperCut MF on multiple devices.

6.2.7 Command Prompt error "Processing is in motion"

After attempting to install PaperCut MF on the device, if the Command Prompt displays the following message, it implies that PaperCut MF installation is unsuccessful:

```
'<deviceName>' => "Processing is in motion"
```

This is because the Sharp device is detected as being locked. This prevents Command Prompt from being able to access it to change its settings. As a result, the device's web interface displays the error:

```
"ERROR[5000]:Processing is in motion. This function cannot be executed."
```

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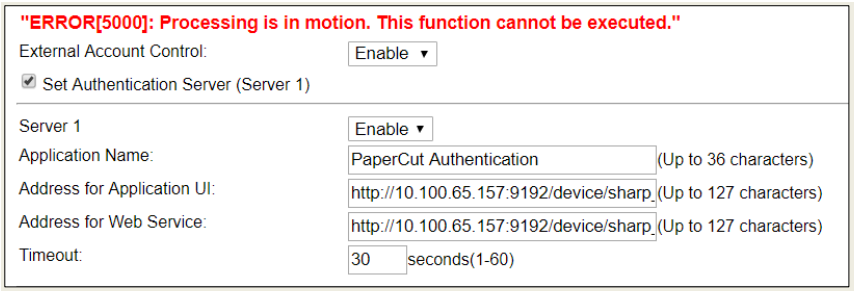

To resolve this:

1. Access the physical device.
2. Unlock the device:
    a. On the device's screen, click the **COPY** soft tab**.**
    b. If the device displays the COPY screen, it implies you have successfully unlocked the device.
    c. However, if the device does not respond, then on the device's panel, click the **System Settings** hard button.
    The device displays the message **Log in as administrator?**
    d. Click **Yes**.
    e. If the device displays the Administrator password screen, it implies you have successfully unlocked the device.
3. After unlocking the device, resume installing PaperCut MF. For more information, see 2.4.4.1 Install PaperCut MF on multiple devices.

6.2.8 Command Prompt error "Unable to install PaperCut MF on the device"

After attempting to install PaperCut MF on the device, if the Command Prompt displays the following message, it implies that PaperCut MF installation is unsuccessful:

```
'<deviceName>' => "Unable to install PaperCut MF on the device"
```

This could be because of any of the following reasons:

- the device is not supported, or the device is not compatible with the embedded software solution specified in the **batch-devices.csv** file's CSV header **deviceType** (i.e. **SHARP_OSA_N2**),
- the supported Sharp OSA 5.1+ device is running a firmware version that is older than December 2018, making it incompatible with PaperCut's embedded software solution *PaperCut MF - Sharp OSA (HTML Browser n2.0+)*,
- PaperCut MF cannot be installed on the device using Command Prompt.

To resolve this:

1. First, verify that the device is a Sharp OSA 5.1+ device with HTML Browser n2.0+ running the firmware dated December 2018 or later that is listed as a supported device on the PaperCut MF for Sharp page. For more information, see 2 Installation.
2. Then, upgrade the device to the firmware dated December 2018 or later.

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3. Then, manually install PaperCut MF. For more information, 2.4.4.3 Manually install PaperCut MF on each device.

6.2.9 Command Prompt warning "Device of that name already exists"

After attempting to install PaperCut MF on the device, Command Prompt displays the following message, it implies there is no further action required:

```
'<deviceName>' => "Device of that name already exists"
```

This is because, the device specified in the **batch-devices.csv** file's CSV header **deviceName** is already registered in the PaperCut MF Admin web interface (i.e. PaperCut MF is already installed on the device).

6.2.10 Command Prompt warning "Device with that hostname already exists"

After attempting to install PaperCut MF on the device, Command Prompt displays the following message, it implies there is no further action required:

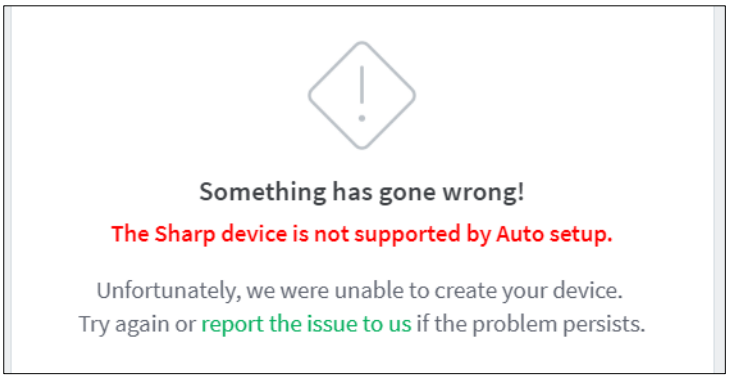
```
'<deviceName>' => "Device with that hostname already exists"
```

This is because, the device specified in the **batch-devices.csv** file's CSV header **deviceHostnameOrIp** is already registered in the PaperCut MF Admin web interface (i.e. PaperCut MF is already installed on the device).

6.3 Auto setup errors

6.3.1 Auto setup error "Sharp device is not supported"

After attempting to install PaperCut MF on the device, if the Auto setup displays the following message, it implies that PaperCut MF installation is unsuccessful:



This is because the device is not supported.
To resolve this, verify that the device is a Sharp OSA 5.1+ device with HTML Browser n2.0+ running the firmware dated December 2018 or later that is listed as a supported device on the PaperCut MF for Sharp page. For more information, see 2 Installation.

6.3.2 Auto setup error "This device is not compatible with the Sharp OSA (HTML Browser n2.0+)"

After attempting to install PaperCut MF on the device, if the Auto setup displays the following message, it implies that PaperCut MF installation is unsuccessful:

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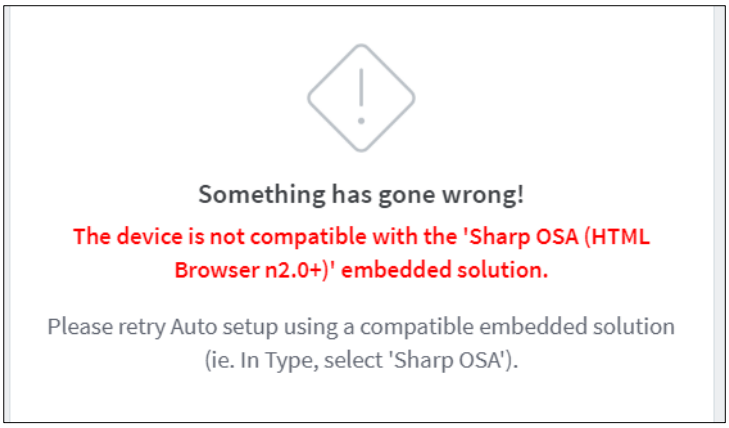
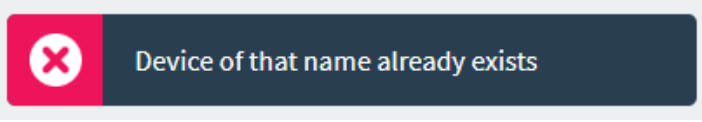


This is because the device is not compatible with the embedded software solution specified in the **Type** field (i.e. **Sharp OSA (HTML Browser n2.0+)**). This manual is only relevant to supported Sharp OSA 5.1+ devices with HTML Browser n2.0+ running the firmware dated December 2018 or later. For more information on PaperCut's embedded software solutions for other devices and platforms, contact your reseller or Authorized Solution Center. You can find their contact information in your PaperCut MF Admin web interface, on the **About** page.

6.3.3 Auto setup error "Device of that name already exists"

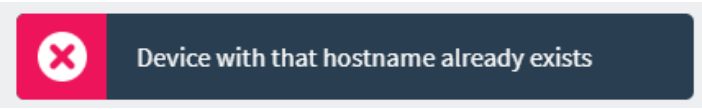
After attempting to install PaperCut MF on the device, if the Auto setup displays the following message, it implies that PaperCut MF installation is unsuccessful:



This is because the Auto setup's **Device Details > Nickname** field contains an incorrect, invalid or duplicate device name.
To resolve this, ensure that the **Nickname** field is accurate. Then resume installing PaperCut MF. For more information, see 2.4.4.2 Install PaperCut MF on each device using Auto setup.

6.3.4 Auto setup error "Device with that hostname already exists"

After attempting to install PaperCut MF on the device, if the Auto setup displays the following message, it implies that PaperCut MF installation is unsuccessful:



This is because the Auto setup's **Device Details > Hostname or IP** field contains an incorrect, invalid or duplicate hostname / IP address / DNS.
To resolve this, ensure that the **Hostname or IP** field is accurate. Then resume installing PaperCut MF. For more information, see 2.4.4.2 Install PaperCut MF on each device using Auto setup.

6.3.5 Auto setup error "Admin login details were incorrect"

After attempting to install PaperCut MF on the device, if the Auto setup displays the following message, it implies that PaperCut MF installation is unsuccessful:

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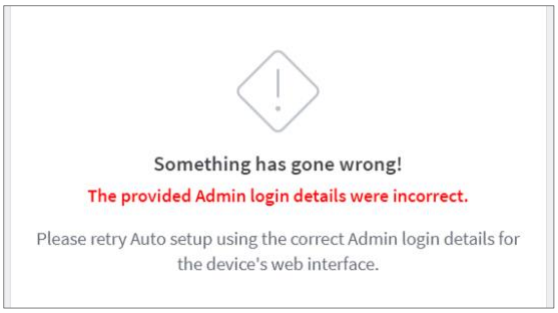
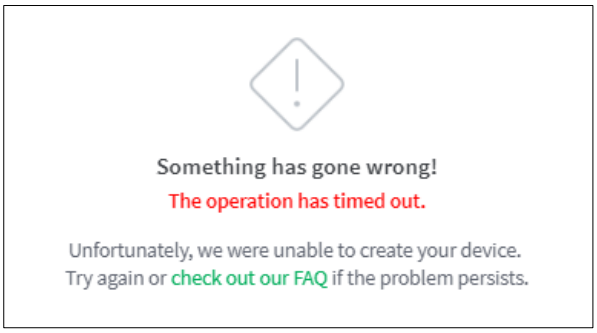


This is because the Auto setup's **Admin login details > Username** and/or **Password** fields contain incorrect or invalid credentials.
To resolve this, ensure that the **Admin login details** fields (i.e. the Administrator credentials of the device's web interface) are accurate. Then resume installing PaperCut MF. For more information, see 2.4.1 Log in to the device's web interface and 2.4.4.2 Install PaperCut MF on each device using Auto setup.

6.3.6 Auto setup error "The operation has timed out"

After attempting to install PaperCut MF on the device, if the Auto setup displays the following message, it implies that PaperCut MF installation is unsuccessful:



This is because the Auto setup has timed-out due to various reasons (some fields have errors, the device is switched off, there are other network connectivity issues in your environment, etc).
To resolve this, address the root cause of the time-out. Then resume installing PaperCut MF. For more information, see 2.4.4.2 Install PaperCut MF on each device using Auto setup.

6.3.7 Auto setup error "Processing is in motion"

After attempting to install PaperCut MF on the device, if the Auto setup displays the following message, it implies that PaperCut MF installation is unsuccessful:

This is because your Sharp device is detected as being locked. This prevents Auto setup from being able to access it to change its settings. As a result, the device's web interface displays the error:

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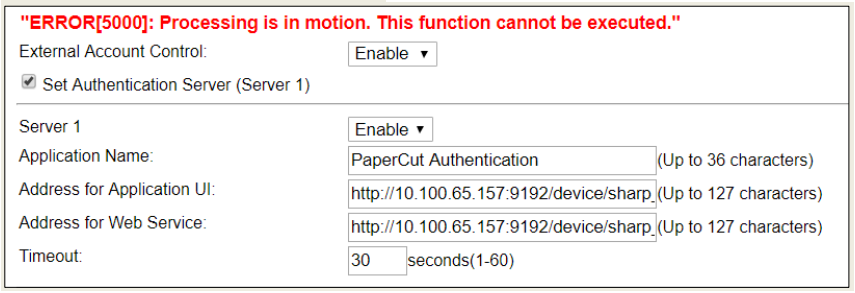
```
"ERROR[5000]:Processing is in motion. This function
cannot be executed."
```

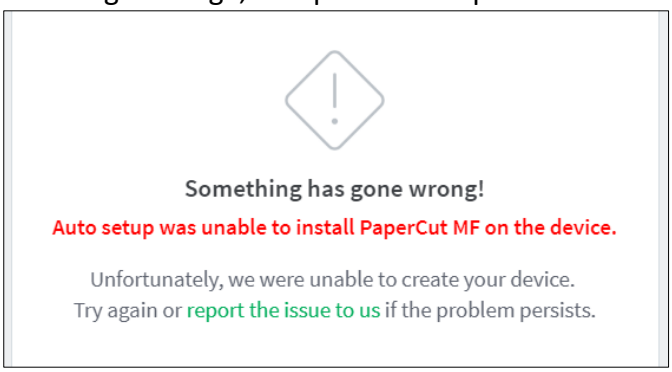


To resolve this:

1. Access the physical device.
2. Unlock the device:
    a. On the device's screen, click the **COPY** soft tab**.**
    b. If the device displays the COPY screen, it implies you have successfully unlocked the device.
    c. However, if the device does not respond, then on the device's panel, click the **System Settings** hard button.
    The device displays the message **Log in as administrator?**
    d. Click **Yes**.
    e. If the device displays the Administrator password screen, it implies you have successfully unlocked the device.
3. After unlocking the device, resume installing PaperCut MF. For more information, see 2.4.4.2 Install PaperCut MF on each device using Auto setup.

6.3.8 Auto setup error "Unable to install PaperCut MF on the device"

After attempting to install PaperCut MF on the device, if the Auto setup displays the following message, it implies that PaperCut MF installation is unsuccessful:



This could be because of any of the following reasons:

- the device is not supported, or the device is not compatible with the embedded software solution specified in the **Type** field (i.e. **Sharp OSA (HTML Browser n2.0+)**),
- the supported Sharp OSA 5.1+ device is running a firmware version that is older than December 2018, making it incompatible with PaperCut's embedded software solution *PaperCut MF - Sharp OSA (HTML Browser n2.0+)*,
- PaperCut MF cannot be installed on the device using Auto setup.

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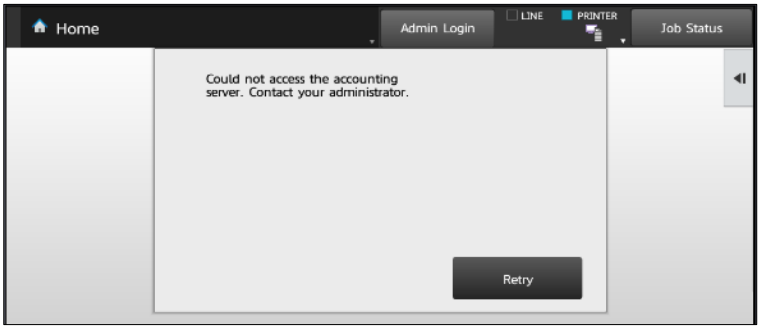
To resolve this:

1. First, verify that the device is a Sharp OSA 5.1+ device with HTML Browser n2.0+ running the firmware dated December 2018 or later that is listed as a supported device on the PaperCut MF for Sharp page. For more information, see 2 Installation.
2. Then, upgrade the device to the firmware dated December 2018 or later.
3. Then, manually install PaperCut MF. For more information, 2.4.4.3 Manually install PaperCut MF on each device.

6.4 "Could not access accounting server" error

After attempting to install PaperCut MF on the device, if the device displays the following message, it implies that PaperCut MF installation is unsuccessful:



This is because the **External Accounting Application Settings** configuration on the device's web interface has errors in any one or both the following fields:

- **Address for Application UI -** If this contains an incorrect or invalid hostname / IP address / DNS, then the following occurs:
    - the device is successfully created and displayed on the PaperCut MF Admin web interface, but
    - PaperCut MF is unavailable on the device (i.e. the first screen on the device is not the PaperCut MF Login screen; it is the "Could not access accounting server" error.).
- **Address for Web Service -** If this contains an incorrect or invalid hostname / IP address / DNS, then the following occurs:
    - the device is NOT created and displayed on the PaperCut MF Admin web interface, and
    - PaperCut MF is unavailable on the device (i.e. the first screen on the device is not the PaperCut MF Login screen; it is the "Could not access accounting server" error.).

To resolve this:

1. Log in to the device's web interface as an administrator.
2. Navigate to **System Settings > Sharp OSA Settings > External Accounting Application Settings.**
3. Verify that the information in the following fields is accurate:
    - **Address for Application UI**
    - **Address for Web Service**

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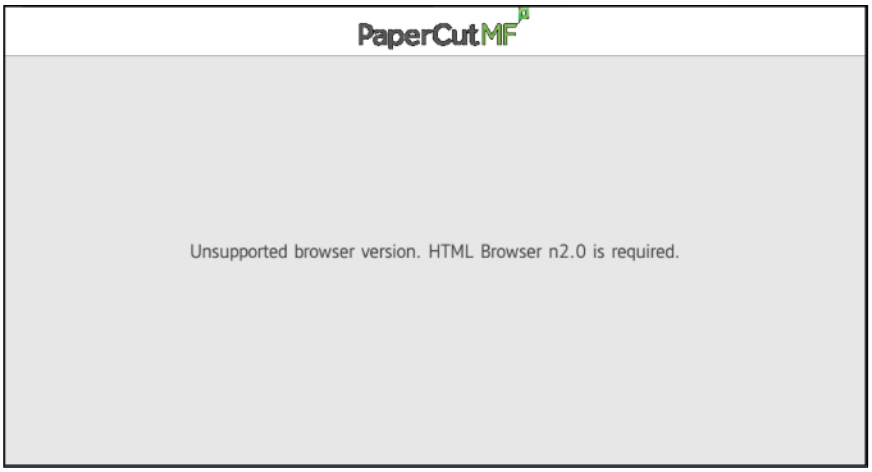
4. Resume installing PaperCut MF. For more information, see 2.4.4.3 Manually install PaperCut MF on each device.

6.5 "Unsupported browser version" error

After attempting to install PaperCut MF on the device, if the device displays the following message, it implies that PaperCut MF installation is unsuccessful:



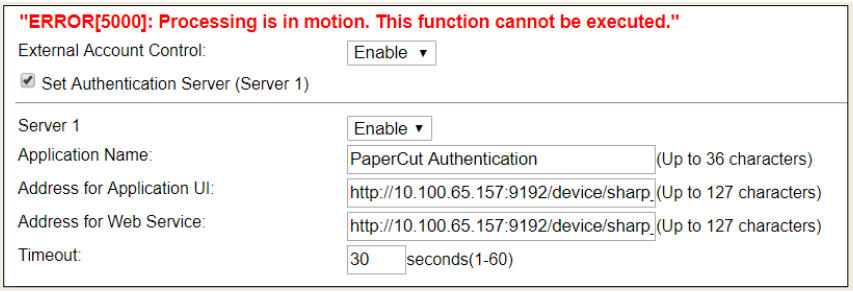
This is because the **External Accounting Application Settings' Browser** configuration on the device's web interface is incorrect.

To resolve this:

1. Log in to the device's web interface as an administrator.
2. Navigate to **System Settings > Sharp OSA Settings > External Accounting Application Settings.**
3. In **Browser**, select **HTML Browser n2.0**.
4. Resume installing PaperCut MF. For more information, see 2.4.4.3 Manually install PaperCut MF on each device.

6.6 Device's web interface error "ERROR[5000]:Processing is in motion"

After attempting to install PaperCut MF on the device, if the device's web interface displays the following error, it implies that PaperCut MF installation is unsuccessful:



This is because your Sharp device is detected as being locked, preventing you from accessing it to change its settings to install PaperCut MF.

To resolve this:

1. Access the physical device.
2. Unlock the device:
    a. On the device's screen, click the **COPY** soft tab**.**

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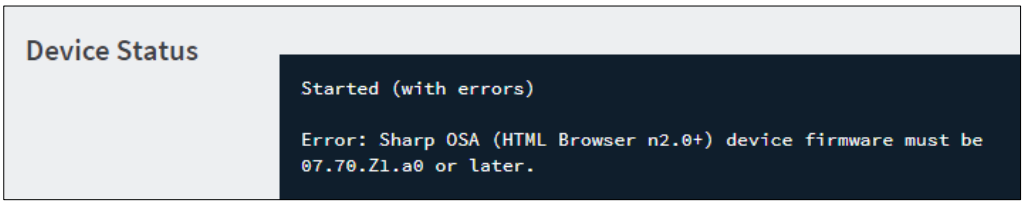
b. If the device displays the COPY screen, it implies you have successfully unlocked the device.
c. However, if the device does not respond, then on the device's panel, click the **System Settings** hard button.
The device displays the message **Log in as administrator?**
d. Click **Yes**.
e. If the device displays the Administrator password screen, it implies you have successfully unlocked the device.

3. After unlocking the device, resume installing PaperCut MF. For more information, see 2.4.4.3 Manually install PaperCut MF on each device.

6.7 Device status "Started (with errors)": device firmware

After attempting to install PaperCut MF on the device, if the **Device Status** displays the following message, it implies that PaperCut MF installation is unsuccessful:



This is because the supported Sharp OSA 5.1+ device is running a firmware version that is older than December 2018, making it incompatible with PaperCut's embedded software solution *PaperCut MF - Sharp OSA (HTML Browser n2.0+)*.
To resolve this:

- Either, upgrade the device to the firmware dated December 2018 or later,
- Or, disable PaperCut MF's firmware compatibility check (set the config key **ext-device.sharp-osa-n2.verify-device-compatibility** to **N**. For more information, see 4.12 Config Editor.)

6.8 "Sharp OSA (HTML Browser n2.0+) device firmware" error

After attempting to install PaperCut MF on the device, if the device displays the following message, it implies that PaperCut MF installation is unsuccessful:

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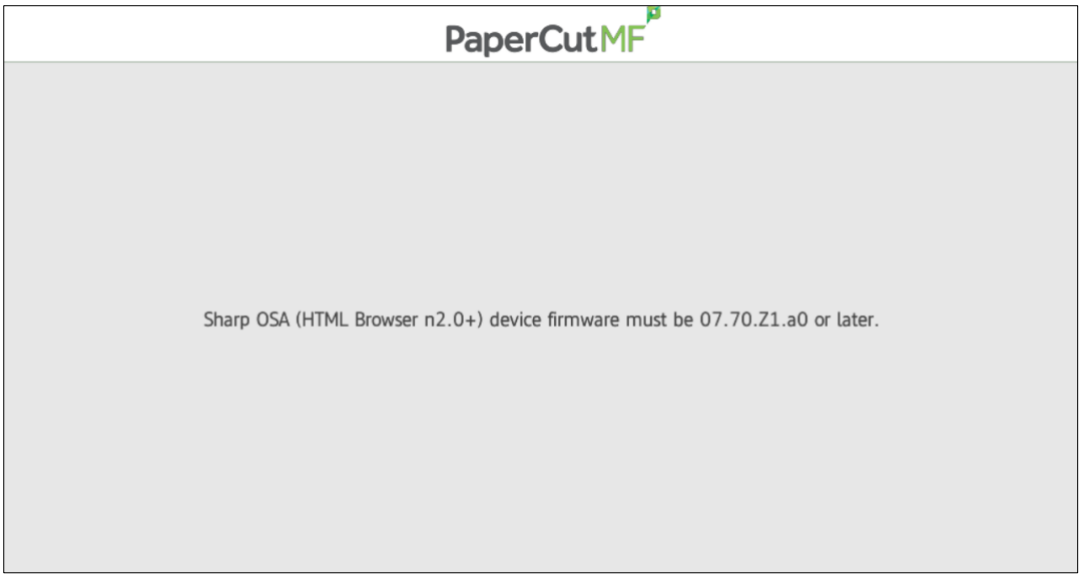
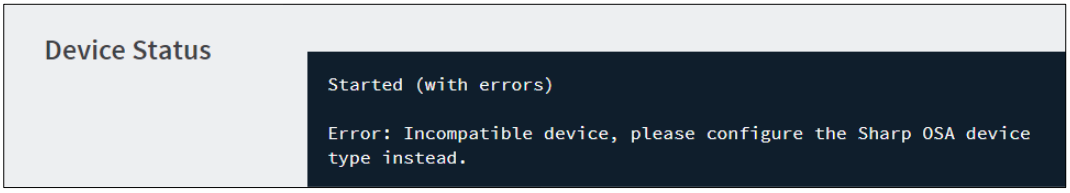


This is because the supported Sharp OSA 5.1+ device is running a firmware version that is older than December 2018, making it incompatible with PaperCut's embedded software solution *PaperCut MF - Sharp OSA (HTML Browser n2.0+)*.
To resolve this:

- Either, upgrade the device to the firmware dated December 2018 or later,
- Or, disable PaperCut MF's firmware compatibility check (set the config key **ext-device.sharp-osa-n2.verify-device-compatibility** to **N**. For more information, see 4.12 Config Editor.)

6.9 Device status "Started (with errors)": incompatible device

After attempting to install PaperCut MF on the device, if the **Device Status** displays the following message, it implies that PaperCut MF installation is unsuccessful:



This is because the device is not compatible with the embedded software solution specified in the **Type** field (i.e. **Sharp OSA (HTML Browser n2.0+)**). This manual is only relevant to supported Sharp OSA 5.1+ devices with HTML Browser n2.0+ running the firmware dated December 2018 or later. For more information on PaperCut's embedded software solutions for other devices and platforms, contact your reseller or Authorized Solution Center. You can find their contact information in your PaperCut MF Admin web interface, on the **About** page.

6.10 "Incompatible device" error

After attempting to install PaperCut MF on the device, if the device displays the following message, it implies that PaperCut MF installation is unsuccessful:

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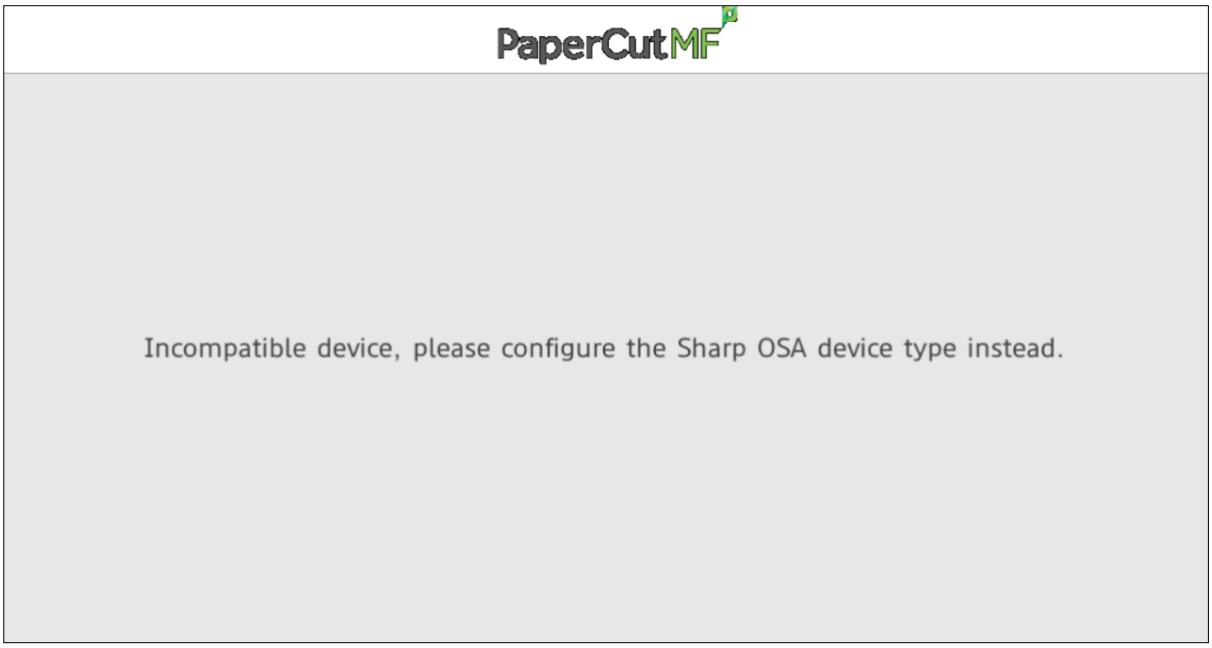

This is because the device is not compatible with the embedded software solution specified in the **Type** field (i.e. **Sharp OSA (HTML Browser n2.0+)**). This manual is only relevant to supported Sharp OSA 5.1+ devices with HTML Browser n2.0+ running the firmware dated December 2018 or later. For more information on PaperCut's embedded software solutions for other devices and platforms, contact your reseller or Authorized Solution Center. You can find their contact information in your PaperCut MF Admin web interface, on the **About** page.

6.11 Swipe card authentication is unavailable when "Auto Power Shut-Off" is enabled and "Sleep Mode Power Level" is "Low Power"

If the **Swipe card** authentication option is enabled, but **Auto Power Shut-Off** is enabled and **Sleep Mode Power Level** is **Low Power**, then when the device wakes up from sleep mode the card reader is unavailable, preventing user authentication via a swipe card.

To resolve this:

1. Log in to the device's web interface as an administrator.
2. Navigate to **System Settings > Energy Save > Eco Setting.**
3. Select the **Auto Power Shut-Off** checkbox.

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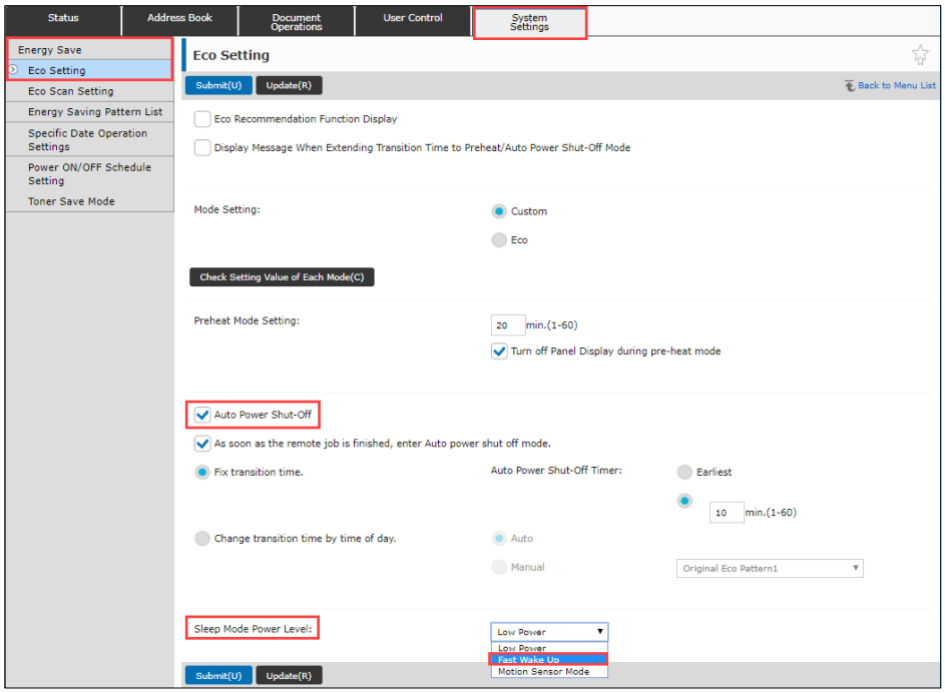
4. In **Sleep Mode Power Level**, select **Fast Wake Up:**

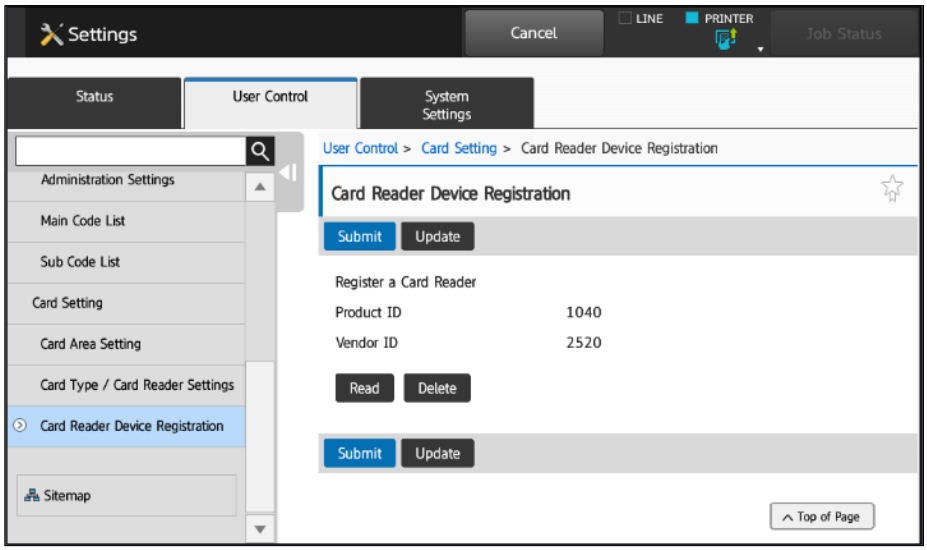


5. Click **Submit**.

6.12 Swipe card authentication anomalies

If the **Swipe card** authentication option is enabled, but if swipe card authentication causes some problems, it could be because the **Card Setting: Use IC Card for Authentication** checkbox on the device's web interface was changed from checked to unchecked.
To resolve this:

1. Log in to the device as an administrator.
2. Navigate to **User Control > Card Setting > Card Reader Device Registration**:



Note: This is only available via the physical device. This is unavailable via the device's web interface.

3. Click **Delete**.
4. Click **Submit**.

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Note: If the **Swipe card** authentication option is selected, then based on the type of keyboard used by the device, ensure that the following are configured as required:

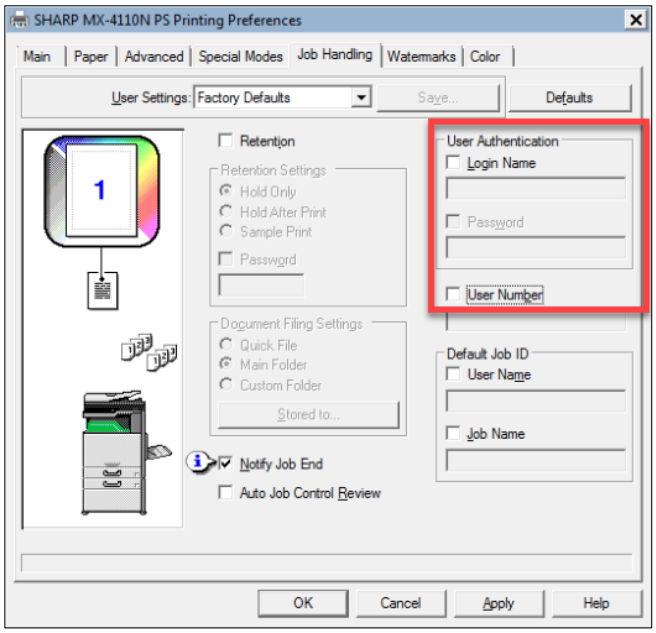
- the **Default Keyboard Setting** on the device's web interface. For more information, see 4.10 Keyboard.
- the **Card Setting: Use IC Card for Authentication** on the device's web interface. For more information, see 4.4 User authentication via swipe cards.

6.13 Released print jobs are not printed

After PaperCut MF is successfully installed on the device, if released print jobs are not printed, the device's **Job Logs** page on the PaperCut MF Admin web interface displays a Sharp error number (such as, *042F*), it implies that the Windows Sharp Print Driver could be incorrectly configured.

You can resolve this using any *one* of the following options:

- *Either* in the **Printer driver's configuration** (navigate to the driver's **Job Handling** tab, and ensure the **Login Name** and the **User Number** are not checked)



- *Or,* via the config key **ext-device.sharp-osa-n2.security.native-user-authentication** (set to **Y**). For more information, see 4.12 Config Editor.

7 Uninstall *PaperCut MF - Sharp OSA (HTML Browser n2.0+)*

7.1 Temporarily disable *PaperCut MF - Sharp OSA (HTML Browser n2.0+)*

To temporarily disable *PaperCut MF - Sharp OSA (HTML Browser n2.0+)*:

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

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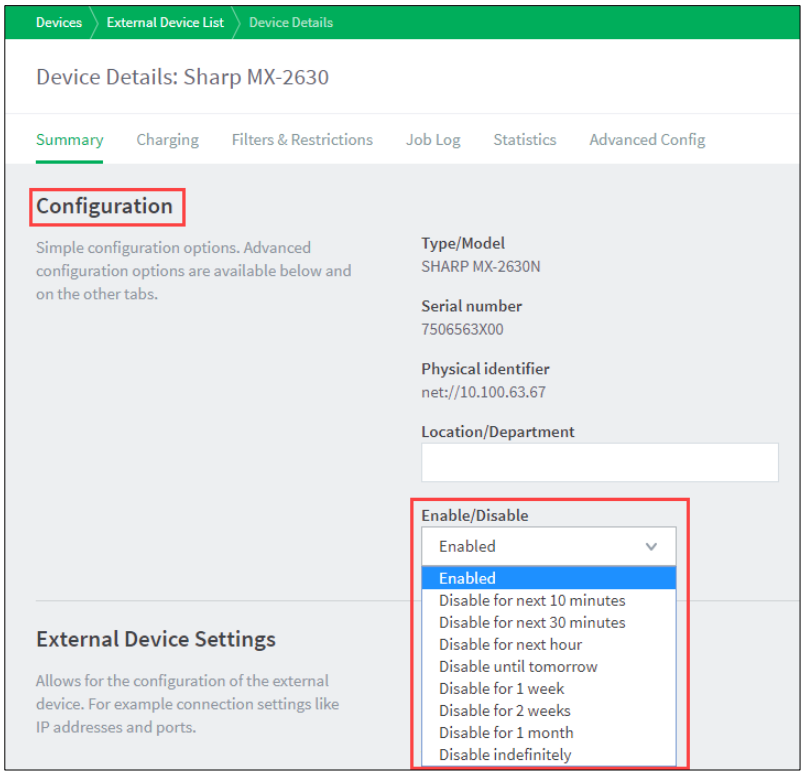
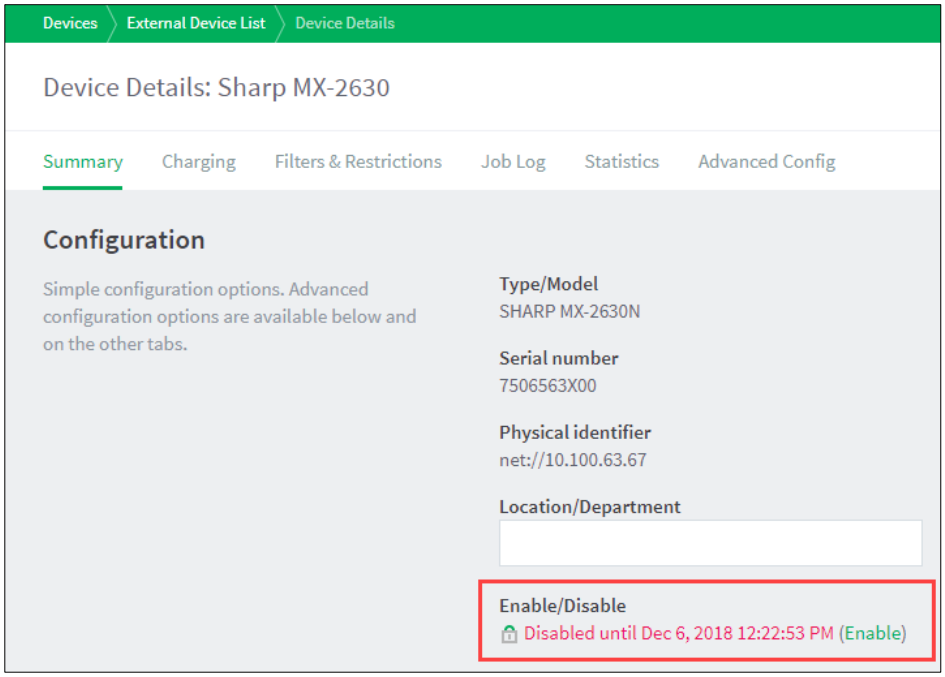
4. In the **Configuration** area's **Enable/Disable**, select a **Disable** option:



5. Verify that *PaperCut MF - Sharp OSA (HTML Browser n2.0+)* is disabled:



6. Verify that *PaperCut MF - Sharp OSA (HTML Browser n2.0+)* is not available on the device to users:

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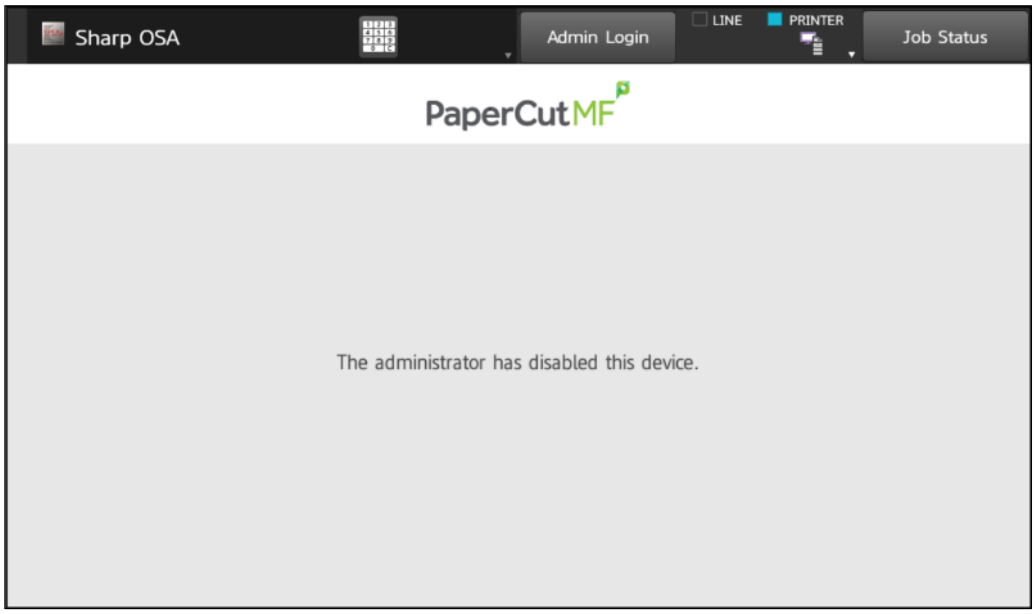
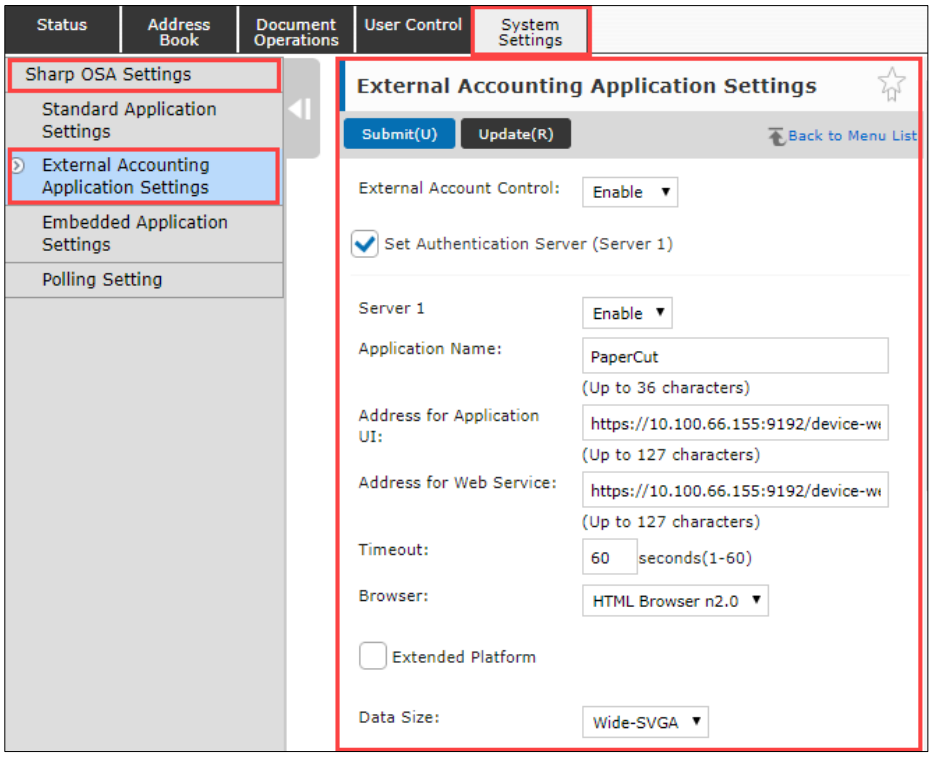


7.2 Permanently uninstall *PaperCut MF - Sharp OSA (HTML Browser n2.0+)*

To permanently uninstall *PaperCut MF - Sharp OSA (HTML Browser n2.0+)*:

1. Log in to the device's web interface as an administrator.
2. Navigate to **System Settings > Sharp OSA Settings > External Accounting Application Settings:**



3. In **External Account Control**, select **Disable:**

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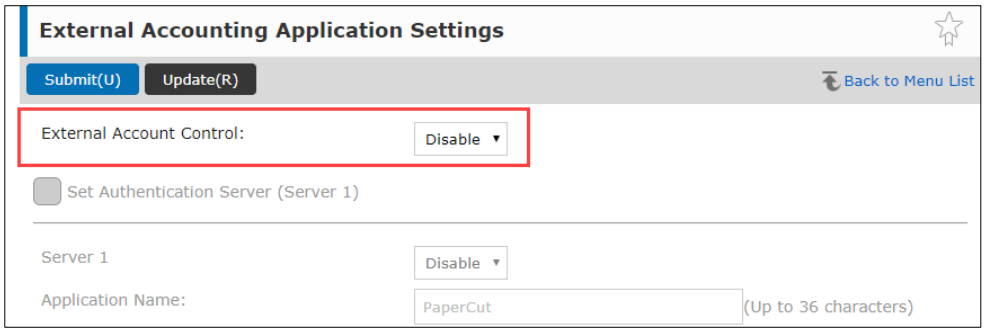
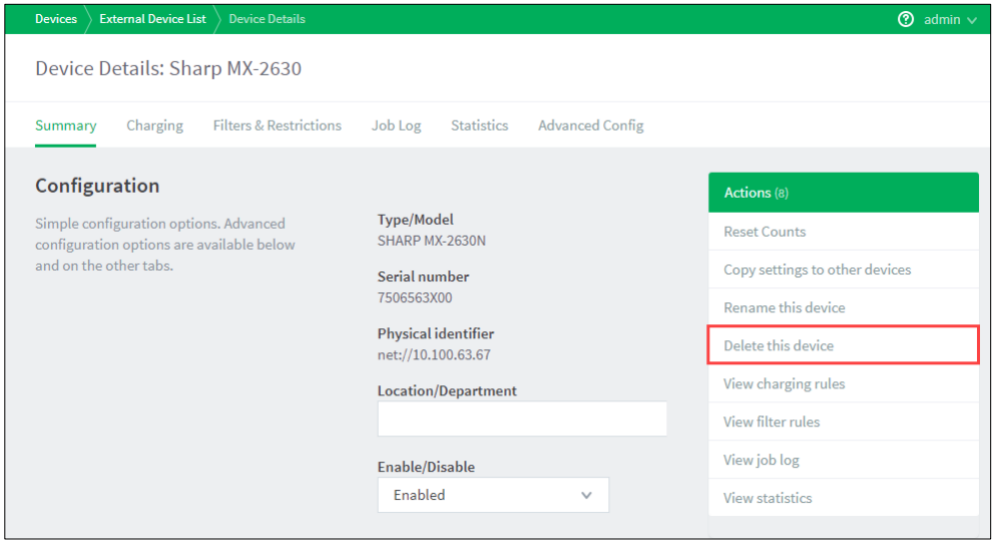
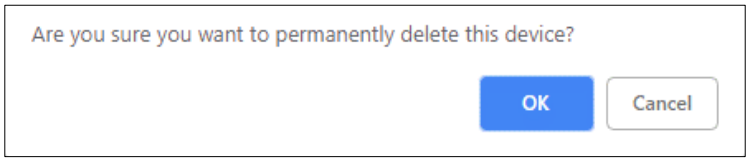


4. Click **Submit**.
5. Click **Reboot Now**.
6. Log in to the PaperCut MF Admin web interface.
7. Navigate to **Devices**.
8. Select the required device.
9. Click **Actions > Delete this device**:



10. Click **Ok:**



11. Click **Devices** and verify that the device is no longer listed.
12. Verify that *PaperCut MF - Sharp OSA (HTML Browser n2.0+)* is not available on the device to users:

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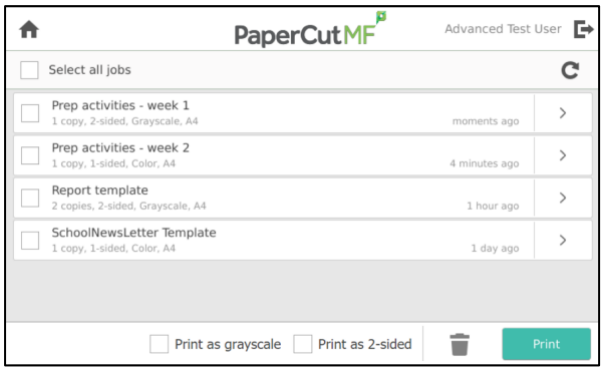
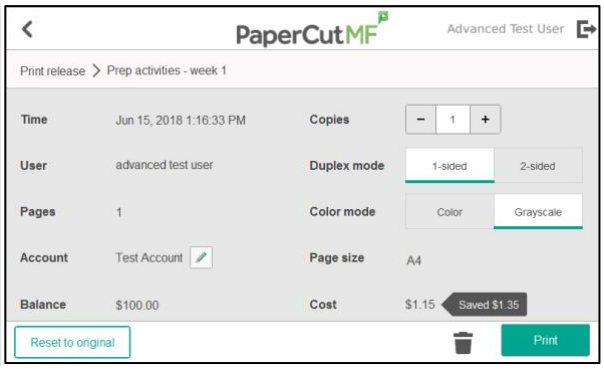
8 Appendix A: Device screens

User authentication:

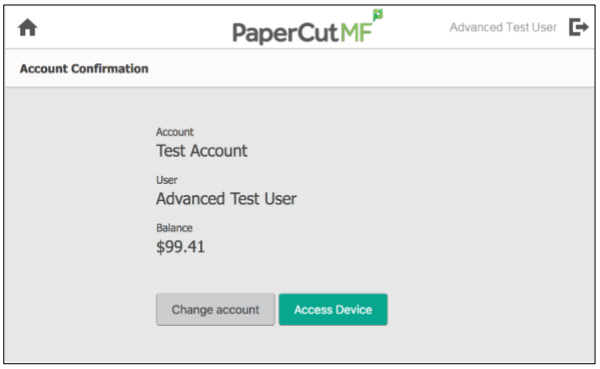
Home:

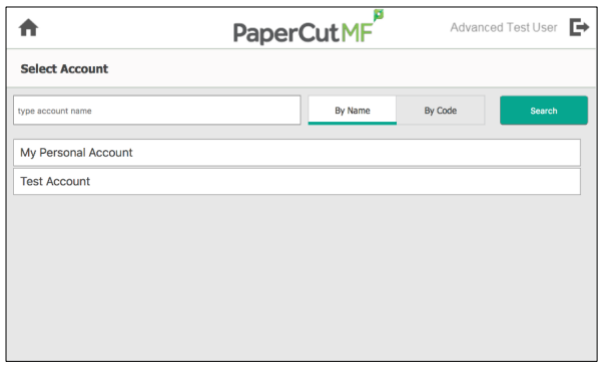
Secure Print Release:





Charging of jobs:





PaperCut MF Integrated Scanning:

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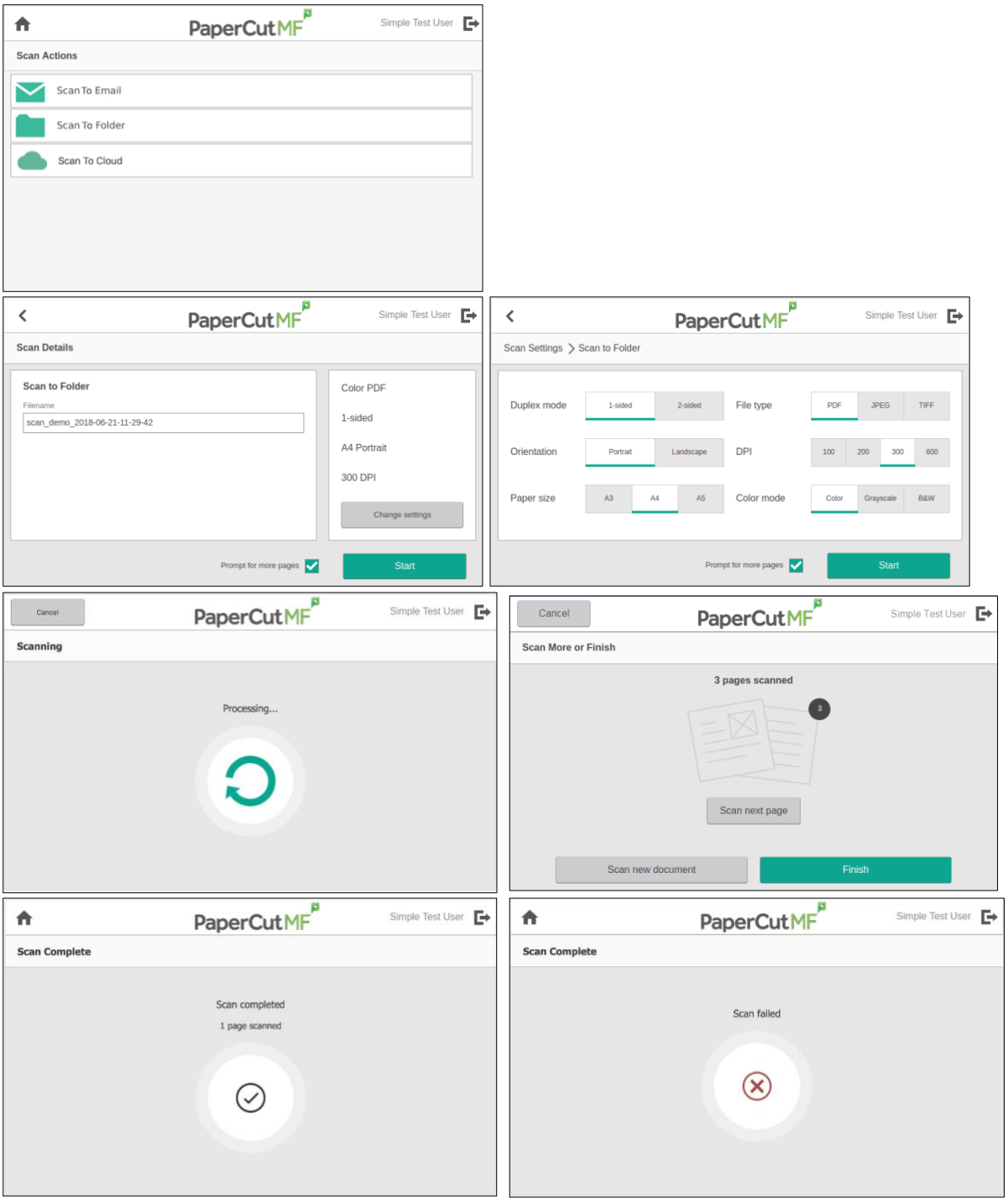

Figure 1 PaperCut MF Integrated Scanning:

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Basic experience:

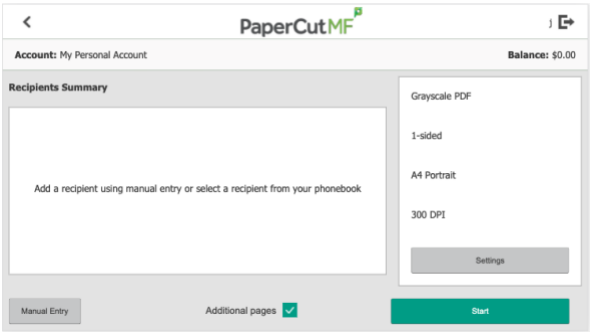

Figure 2 Empty state - Add a recipient using manual entry

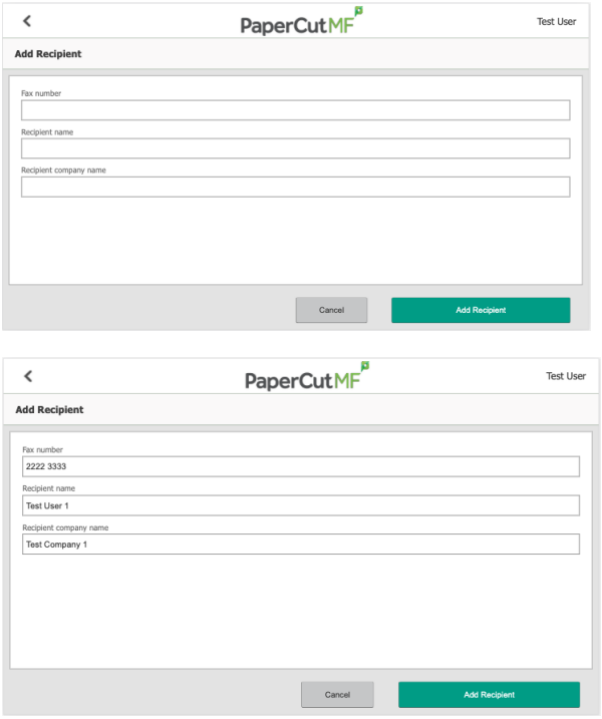

Figure 3 Manual entry - Enter a Fax number, Recipient name and Recipient company name.

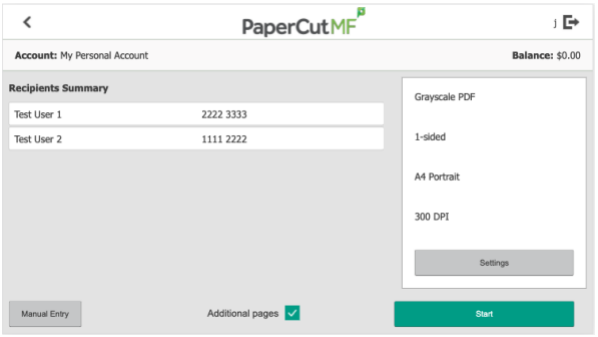

Figure 4 Multiple recipients

Advanced experience

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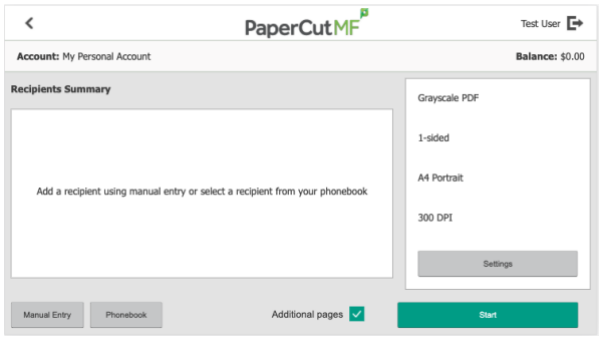


Figure 5 Empty state - Add a recipient using manual entry or select a recipient from the phonebook

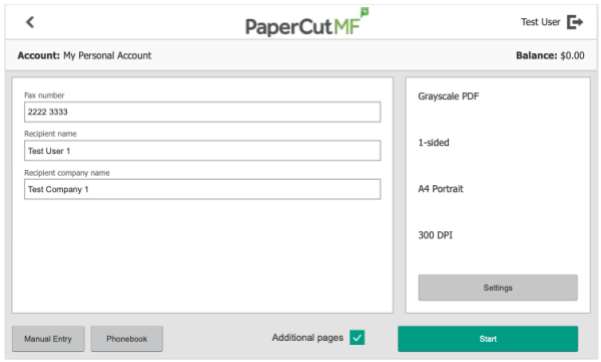
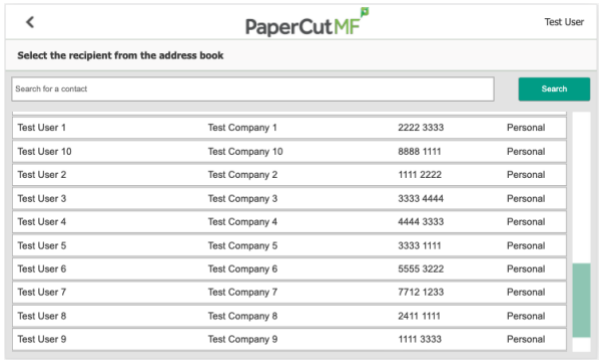


Figure 6 Manual entry - First manual entry can be edited.



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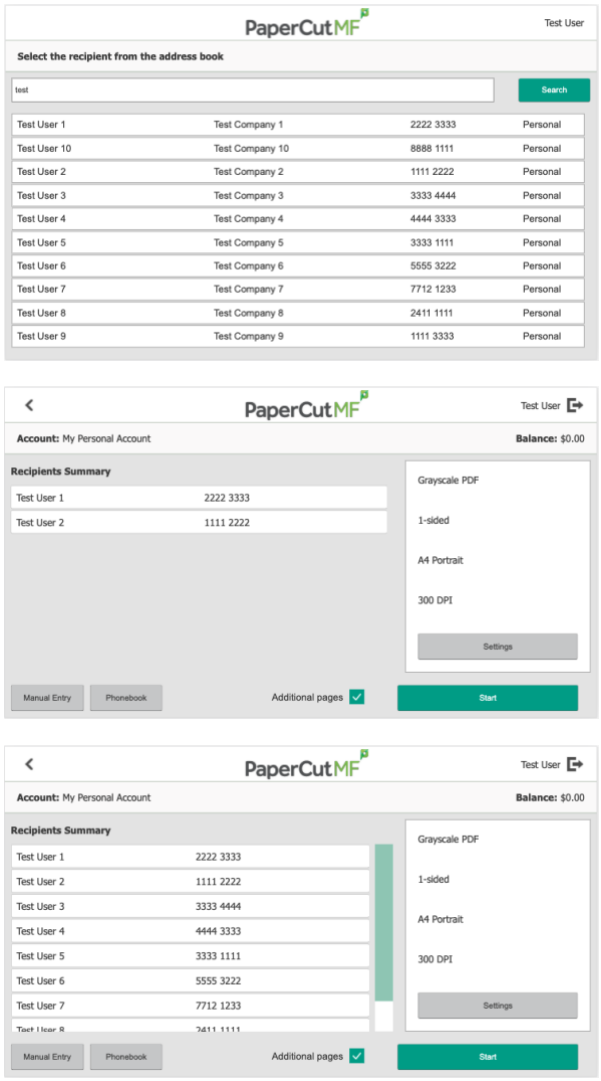

Figure 7 Select a recipient using search on the phone book and add to the scrollable list.

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