

PaperCut MF - Toshiba MDS V3 Embedded Manual

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1 Document revision history

| Published date or release | Details of changes made |
|---------------------------|--|
| 21.2.0 | 5.6 Phonebook contacts, 10 Appendix C Device Screens |
| 21.0.0 | 4.8 PaperCut MF's Language Selection |
| 20.0.3 | Added advanced device configs to control scanning files on the device. These included: ext-device.toshiba.scan.*.device-compression and ext-device.toshiba.scan.*.device-preferred-format |
| 19.2.0 | 2.4.16 Install PaperCut MF; 4.9.2 Header logo |
| 19.1.0 | Document restructure |
| 19.0.0 | 2 Overview; 4.15 Create Toshiba MFD device in PaperCut; 6.5 Held print job settings at the device; 6.8 SNMP; 6.12 Config Editor |
| 18.3.6 | 6.6 Authentication Methods; 6.12 Config Editor; 8 Known Limitations and Security |
| 2018-11-07 | 3.3 Supported devices |
| 18.3.0 | 6.12 Config Editor; 13 Appendix C: Device screens |
| 18.2.0 | 2 Overview; 5 Post-install testing; 6 Configuration; 13 Appendix C: Device screenshots for user documentation |
| 18.1.1 | 5 Post-install testing; 6.1 HTTPS Security (recommended); 6.3 Inbound connections; 6.6 Shared Account Selection; 6.11 Config Editor; Appendix C: Device screenshots for user documentation |

2 Installation

This section covers the installation of the PaperCut embedded application for compatible Toshiba devices. The embedded application allows the control, logging, and monitoring of walk-up off-the-glass copier, fax, and scanner usage, and can serve as a Release Station for network prints (for information on tracking network printing, see the [PaperCut manual](#)).

2.1 Supported devices

Ensure that the devices on the network are Toshiba Open Platform SDK version 3 devices that are listed as supported devices on the [PaperCut MF for Toshiba](#) page.

2.2 Requirements

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

- PaperCut is installed and running on your network. For more information, see [Installation](#) in the PaperCut manual.
- Ensure that your Toshiba MFD supports Open Platform SDK version 3 and is in the list of supported devices (see 2.1 Supported devices)
- The Toshiba devices must be directly accessible over the network by the PaperCut server (i.e. not via a NAT network).
- Verify that the Toshiba Embedded Web Browser (EWB) is enabled on your device. This is enabled through the “External Interface Enabler” (Code: GS-1020). This is an option in some markets and you should check with your Toshiba representatives.
- Have available the network name and IP address of the system running PaperCut (e.g. the print server).
- Ensure that the Toshiba MFD is connected to the network.
- Have available the network address of the Toshiba MFD. It is recommended that the MFD is configured with a static IP.
- 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 (TCP/HTTPS).
 - Outbound connections from the PaperCut MF Application Server to the devices on the configured ports. For example:
 - 49629 (TCP/HTTP)
 - 49630 (TCP/HTTPS)
 - 50083 (TCP/HTTP) (or any other customized port for scanning services)

2.3 Installing Toshiba v3+ devices

The following approach is recommended when installing Toshiba v3+ devices:-

1. Set device [08] codes. See [2.4 Setup procedure](#)
2. Add Toshiba v3+ device in PaperCut. See [2.4 Setup procedure](#)
3. Quick confirmation test. See [3 Post-install testing](#)
4. PaperCut configuration. See [4 Configuration](#)

2.4 Setup procedure

This section describes the MFD device configuration using “Service Mode” and “TopAccess”

Note: All 08 “service mode” changes should be done **only by a qualified Toshiba technician**. If many 08 codes need to be set, do **not** restart the MFD until all the required settings have been made.

Detailed instructions below (consolidated matrix see Appendix A: 08 Code Check list)

Important Note: Confirm Toshiba V3+ MFDs code 08-9132 is set to 6 (default setting). This can also be set in <TopAccess/Administration/Setup/General/Panel Setting/Default Screen> = <Home Screen>.

2.4.1 Verify Access to the Toshiba Administrative Web Interface

The Toshiba devices have an embedded web server that provides an alternate administration interface. The web interface is used to configure the MFD to connect to PaperCut.

To verify admin access:

1. On a computer, open your web browser
2. Enter the URL of the Toshiba device.
E.g. <http://xxx.xxx.xxx.xxx/> (device-ip address) or <https://xxx.xxx.xxx.xxx/> (device-ip address)
3. Click the "Administration" tab at the top right of the page.
4. Enter the device administrator username and password; then press "Login". By default, this is Admin/123456.

2.4.2 ODCA (Off Device Customization Architecture) (mandatory)

ODCA is mandatory for MDS V3, you can either use a non-secure or secure port for communication.

Non-Secure ODCA using Service Mode is enabled by default (confirmation):

1. Enter FS service mode, enter 08 service mode.
2. Enter “Classic” mode.
3. Enter: 9820
4. Press the “Start” button.
5. Enter: 1 (default value 1)
6. On the LCD screen, press “OK”.
7. Restart the MFD by holding down the “Main Power” button until it stops.
8. Press “Main Power” again to restart.

To enable Secure ODCA using Service Mode (optional):

1. Enter FS service mode, enter 08 service mode.
2. Enter “Classic” mode.
3. Enter: 9819
4. Press the “Start” button.
5. Enter: 1 (default value 0)
6. On the LCD screen, press “OK”.
7. Restart the MFD by holding down the “Main Power” button until it stops.
8. Press “Main Power” again to restart.

Note: you are also required to enable secure ODCA in PaperCut.

2.4.3 Set an "Auto Clear" timeout (recommended)

For security purposes, set the "Auto Clear" timeout to automatically log out MFD users after a specific period of inactivity. PaperCut recommends a value of 60 seconds.

To set an "Auto Clear" timeout value in [08] service Mode:

1. Enter FS service mode, enter 08 service mode.
2. Enter "Classic" mode.
3. Enter: 9110, press "Start".
4. Enter: 4 (default value 3)
5. On the LCD screen, press "OK".
6. Restart the MFD by holding down the "Main Power" button until it stops.
7. Press "Main Power" again to restart

2.4.4 Disable Logout pop-up dialogue display (optional)

Sets whether the pop-up dialogue confirmation for user logging out will be displayed

1. Enter FS service mode, enter 08 service mode.
2. Enter "Classic" mode.
3. Enter: 8723, press "Start".
4. Enter: 0 (default value 1)
5. On the LCD screen, press "OK".
6. Restart the MFD by holding down the "Main Power" button until it stops.
7. Press "Main Power" again to restart.

2.4.5 Disable Automatic logout of users during fax send (optional)

Disables automatic logout of users whilst sending a fax

1. Enter FS service mode, enter 08 service mode.
2. Enter "Classic" mode.
3. Enter: 9987, press "Start".
4. Enter: 2 (default value 0)
5. On the LCD screen, press "OK".
6. Restart the MFD by holding down the "Main Power" button until it stops.
7. Press "Main Power" again to restart.

2.4.6 Additional 08 code setting (optional)

When using a supported USB card reader for authentication, an additional 08 code setting is required. For more information about the supported card readers and required 08 codes, see 4.4.1 Supported card readers and Appendix A: 08 Code Check list.

To enable the card reader:

1. Enter FS service mode, enter 08 service mode.
2. Enter "Classic" mode.
3. Look up the required config code in 4.4.1 Supported card readers and Appendix A: 08 Code Check list. For example, Generic Keyboard mode readers, use code 60001.
4. Change setting 3500 to the code for the given card reader:
5. Enter: 3500, press "Start".
6. Enter the appropriate code, example 60001
7. On the LCD screen, press "OK".
8. Restart the MFD by holding down the "Main Power" button until it stops.
9. Press "Main Power" again to restart.

2.4.7 Enable OCR on the device (optional)

If you have installed MFD Embedded OCR and PaperCut Integrated Scanning enabled, you need to enable OCR using service mode.

1. Enter FS service mode, enter 08 service mode.
2. Enter "Classic" mode.
3. Enter: 3786, press "Start".
4. Enter: 0, press "Start".
5. Enter: 0 (default value of code is 1).
6. On the LCD screen, press "OK".
7. Restart the MFD by holding down the "Main Power" button until it stops.
8. Press "Main Power" again to restart.

2.4.8 Enable Zero Stop functionality for Copy and Scan (optional)

To enable the Zero Stop functionality for both Copy and Scan walk up functions, "Quota Setting" needs to be set to "Job Quota"

1. Enter FS service mode, enter 08 service mode.
2. Enter "Classic" mode.
3. Enter: 6084, press "Start".
4. Enter: 1 (default value of code is 0)
5. On the LCD screen, press "OK".
6. Restart the MFD by holding down the "Main Power" button until it stops.
7. Press "Main Power" again to restart

2.4.9 Disable MFD control of print jobs (mandatory)

Note: service code replaces the need for the Print Data Converter and affects Authentication, Quota Management and Permissions

1. Enter FS service mode, enter 08 service mode.
2. Enter "Classic" mode.
3. Enter: 3642, press "Start".
4. Enter: 0, press "Start".
5. Enter: 1 (default value of sub code 0)
6. On the LCD screen, press "OK".
7. Restart the MFD by holding down the "Main Power" button until it stops.
8. Press "Main Power" again to restart.

2.4.10 Allow anyone to manage print jobs at the MFD (mandatory)

1. Enter FS service mode, enter 08 service mode.
2. Enter "Classic" mode.
3. Enter: 8726, press "Start".
4. Enter: 1 (default value 0)
5. On the LCD screen, press "OK".
6. Restart the MFD by holding down the "Main Power" button until it stops.
7. Press "Main Power" again to restart.

2.4.11 Allow all users to delete their jobs from the Private/Hold screen on the copier (mandatory)

1. Enter FS service mode, enter 08 service mode.
2. Enter "Classic" mode.

3. Enter: 9236, press "Start".
4. Enter: 3 (default value 1)
5. On the LCD screen, press "OK".
6. Restart the MFD by holding down the "Main Power" button until it stops.
7. Press "Main Power" again to restart.

Note: print jobs will only need to "managed" after being secularly release from PaperCut.

2.4.12 Configure the Web Services Scan Port (optional)

If a print job was released in error and needs to be deleted or the device has run out of paper and cannot be replenished then you may need to configure the Web Services Scan Port:

1. Enter FS service mode, enter 08 service mode.
2. Enter "Classic" mode.
3. Enter 3760, press "Start"
4. Enter the desired numeric port value (default is 50083)
5. On the LCD screen, press "OK"
6. Restart the MFD by holding down the "Main Power" button until it stops.
7. Press "Main Power" again to restart.

2.4.13 WSD scanning (confirmation)

This is only required when using PaperCut Integrated Scanning (enabled by default)

1. Enter FS service mode, enter 08 service mode.
2. Enter "Classic" mode.
3. Enter: 3755, press "Start".
4. Enter: 1 (default value 1)
5. On the LCD screen, press "OK".
6. Restart the MFD by holding down the "Main Power" button until it stops.
7. Press "Main Power" again to restart.

2.4.14 Disable authentication for WSD scanning (optional)

This disables automatic logout of users whilst sending a fax.

1. Enter FS service mode, enter 08 service mode.
2. Enter "Classic" mode.
3. Enter: 3642 sub-code 2, press "Start".
4. Enter: 1 (default value 0)
5. On the LCD screen, press "OK".
6. Restart the MFD by holding down the "Main Power" button until it stops.
7. Press "Main Power" again to restart.

2.4.15 Disable the "missing home directory" warning (optional)

This disables the missing home directory message. It is optional for MFD native scan to home.

1. Enter FS service mode, enter 08 service mode.
2. Enter "Classic" mode.
3. Enter: 8722, press "Start".
4. Enter: 1 (default value 0)
5. On the LCD screen, press "OK".
6. Restart the MFD by holding down the "Main Power" button until it stops.

7. Press “Main Power” again to restart.

2.4.16 Disable the REST Port (Mandatory)

For firmware versions v17.0.0 onwards, the REST port needs to be disabled for PaperCut MF to be able to communicate to the device.

1. Log in to the MFP web interface (TopAccess) with your web browser.
2. Log in as the “Admin” user and select the “Administration” tab.
3. Select “Setup” sub-section and the “ODCA” option.
4. Under “REST”, ensure that Enable Port setting is set to Disable.
5. Press the “Save” button for the changes to apply.

The screenshot shows the TopAccess web interface. At the top, there's a navigation bar with tabs: Device, Job Status, Logs, Registration, Counter, User Management, and Administration. Below this is a sub-navigation bar with links: Setup, Security, Maintenance, Registration, AirPrint, Application, and License. The 'Setup' link is selected. Under 'Setup', there are links: General, Network, Copier, Save as file, Email, InternetFax, Printer/Filing, Printer, Print Service, ICC Profile, Print Data Converter, MFP Collaboration, EWB, ODCA, and Version. The 'ODCA' link is highlighted. Below the navigation bar, there are 'Save' and 'Cancel' buttons. The main content area is titled 'Off Device Customization Architecture Setting'. Under this, there's a 'Network' section. In the 'Network' section, there's a 'SOAP' subsection with settings: 'Enable Port' (set to 'Enable'), 'Port Number' (49629), 'Enable SSL/TLS Port' (set to 'Enable'), and 'SSL/TLS Port Number' (49630). Below the 'SOAP' section is the 'REST' section, which is highlighted with a red box. In the 'REST' section, 'Enable Port' is set to 'Disable', 'Port Number' is 49631, 'Enable SSL/TLS Port' is set to 'Disable', and 'SSL/TLS Port Number' is 49632. Below the 'REST' section is a 'Configuration' section with 'Session Timeout(60-99999)' set to 90 seconds. At the bottom, there's a 'Notification Events' section with a 'Delete All' button and a note: '*Delete all notification events that were registered from an application.'

2.4.17 Set the Confidentiality Setting (Mandatory)

In newer devices, the Confidentiality Setting has been added which masks usernames in the Toshiba job logs. For job tracking to work in PaperCut MF alongside this setting, the Log Data Privacy Setting needs to be set to “Store”.

1. Log in to the MFP web interface (TopAccess) with your web browser.
2. Log in as the “Admin” user and select the “Administration” tab.
3. Select “Setup” sub-section.
4. Under “Confidentiality Setting”, ensure that Log Data Privacy Setting is set to Store.
5. Press the “Save” button for the changes to apply.

| Confidentiality Setting | |
|--------------------------|-----------------------|
| Target of Restriction | None ▾ |
| Document Name | Disable ▾ |
| User Name | Disable ▾ |
| TO | Disable ▾ |
| FROM | Disable ▾ |
| Agent | Disable ▾ |
| Log Data Privacy Setting | Store ▾ |
| SNMP Data Restriction | Store Not to Store |

2.4.18 Install PaperCut MF

Now that the MFD default settings have been configured PaperCut will perform all remaining MFD settings automatically, as listed (“Toshiba v3+” see below)

- MDS Mode
- Programmable Hard Key “1”
- EWB Login and Home pages
- MFD security settings

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

1. Log in to the PaperCut MF Admin web interface.
2. Navigate to Options > Advanced.
3. In the External Hardware Integration area, select Enable external hardware integration (for supported devices only).
4. Click Apply.
5. You can use any one of the following options:
 - [2.4.18.1 Install PaperCut MF on multiple devices](#)
 - [2.4.18.2 Install PaperCut MF on each device](#)

2.4.18.1 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](#).

2.4.18.2 Install PaperCut MF on each device

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

To install PaperCut MF on each device:

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

2. Select the “Devices” tab.
3. In the Actions menu, click “Create device”.
4. In “Type”, select “Toshiba v3+”.
5. Enter the device details, including the network address / IP address of the Toshiba device.
6. Select the device functions to control/log (e.g. copying, scan, fax, etc). For more information, see [4.6 Secure Print Release](#) and [4.7 Device jobs](#).
7. Click “OK”.
The Device Details page is displayed.
8. Change any options as required. For example, you can change the costs of copying, scanning, and faxing. You can also select the print queues for which this device will act as a “Print Release Station”.
9. Click “OK”.
The device is displayed in the Device List. If the connection to the device is established, the Status column will not display “Error”.

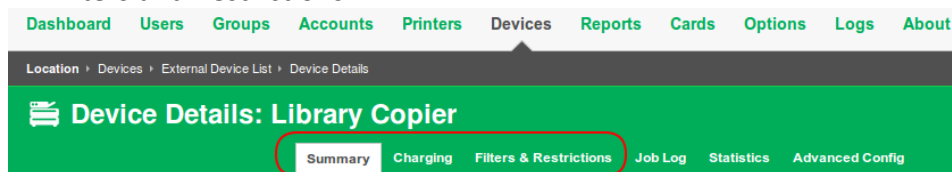
| Device Name | Function | Type | Hostname | Status |
|---------------------------------------|----------------------|------------|---------------|---------|
| device/Library Copier | Copier, Scanner, Fax | Toshiba v3 | toshiba5005ac | Started |

2.5 Migrating from SDK 2 to Toshiba v3+ Devices

If you have a compatible device (see 2.1 Supported devices), that is currently using the non-SDK 3 integration, then you need to perform some additional configuration to take advantage of this.

To migrate your current Toshiba SDK2 device (now known as “Toshiba v2”) to MDS V3 device (known as “Toshiba v3+”):

1. In the PaperCut Admin web interface Device section, take the following screenshots for the existing Toshiba device:
 - Summary
 - Charging
 - Filters and Restrictions



You will use these as a reference when filling out the new device settings.

2. Delete the existing “Toshiba v2” device.
3. Wait a few minutes so that PaperCut can fully finish all necessary maintenance/uninstall tasks on the device.
4. Create a new “Toshiba v3+” device with the same name you gave the “Toshiba v2” device; then apply any relevant settings from the screenshots.
5. To verify that the “Toshiba v3+” has been successfully registered, check the following:
 - The External Device List page displays “Started – Awaiting user login” in the Status column.
 - The device panel displays the PaperCut login page (you might need to refresh the screen by clicking the “Access” hard key button).

NOTE: When the original device is deleted, all historical log records in the PaperCut database will not be deleted. This data will still be available in all the available usage reports.

2.6 Log in as device Administrator

To display the device Administrator login screen from the PaperCut login screen:

- On Toshiba e-BRIDGE Next models, press shortcut key “1”

Note: This is only available after performing [2.4.18 Install PaperCut MF](#).

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 - Toshiba v3+*:

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

3.1 Test preparation: create test users

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

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

To create test users:

1. Log in to the PaperCut MF Admin web interface.
2. Navigate to **Options > User/Group Sync**.
3. In **Internal User Options**, select **Enable internal users**.
4. Click **Apply**.

Internal User Options

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

[More Information...](#)

☒ **Enable internal users**

Access control

Only admins can create users

Prefix usernames with: (optional)

guest-

Confirmation message

Thank you for registering. Your details are:
Full Name: %full_name%
Username: %username%
Password: %password%
Identity Number: %sid_num%

☐ Also email confirmation message to user

Apply

5. Navigate to **Users**.
6. Click **Create internal user...**

7. Enter the relevant details for the test users as required (simple test user, advanced test user):

The screenshot shows the 'Create Internal User' form in the PaperCut MF Admin web interface. The form is titled 'Create Internal User' and is located under the 'Users' menu. It contains the following fields and options:

- Username:** Simple Test User
- Full Name:** Simple Test User
- Email Address:** simpletestuser@papercut.com
- Password:** ****
- Verify Password:** ****
- Identity Number:** [Empty field]
- ID PIN:** [Empty field]
- Verify ID PIN:** [Empty field]
- Email confirmation message to user:** ☐

At the bottom right of the form are 'Cancel' and 'Register' buttons.

8. Click **Register**.

3.2 Simple printing and copying

3.2.1 Test preparation: configure simple test user

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

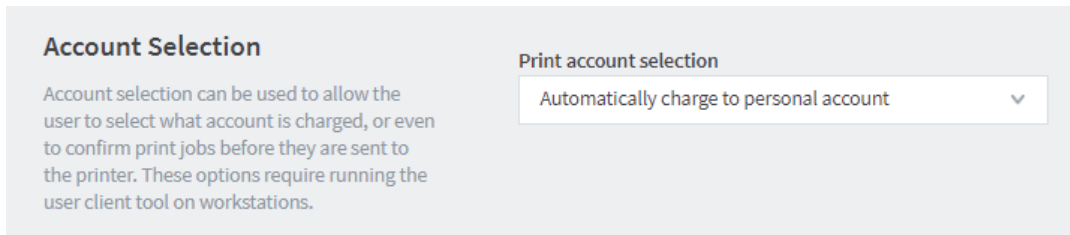
To configure the simple test user:

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

The screenshot shows the 'Account Details' form for a user. It contains the following fields and options:

- Balance:** \$50.00 (adjust)
- Restricted:** ☒
- Overdraft:** Use default overdraft (\$0.00) (dropdown menu)

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



The screenshot shows a web interface with a section titled "Account Selection". Below the title is a descriptive paragraph: "Account selection can be used to allow the user to select what account is charged, or even to confirm print jobs before they are sent to the printer. These options require running the user client tool on workstations." To the right of this text is a dropdown menu labeled "Print account selection". The dropdown menu is open, showing the selected option "Automatically charge to personal account" with a downward arrow icon.

6. Click **Apply**.

3.2.2 Simple printing

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

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

- **Simple test user** - A simple test user is created and configured. For more information, see [3.1 Test preparation: create test users](#) and [3.2.1 Test preparation: configure simple test user](#).

- **Printer queue settings** - The printer queue's Hold/Release Queue Settings are configured. For more information, see the [PaperCut MF manual](#).

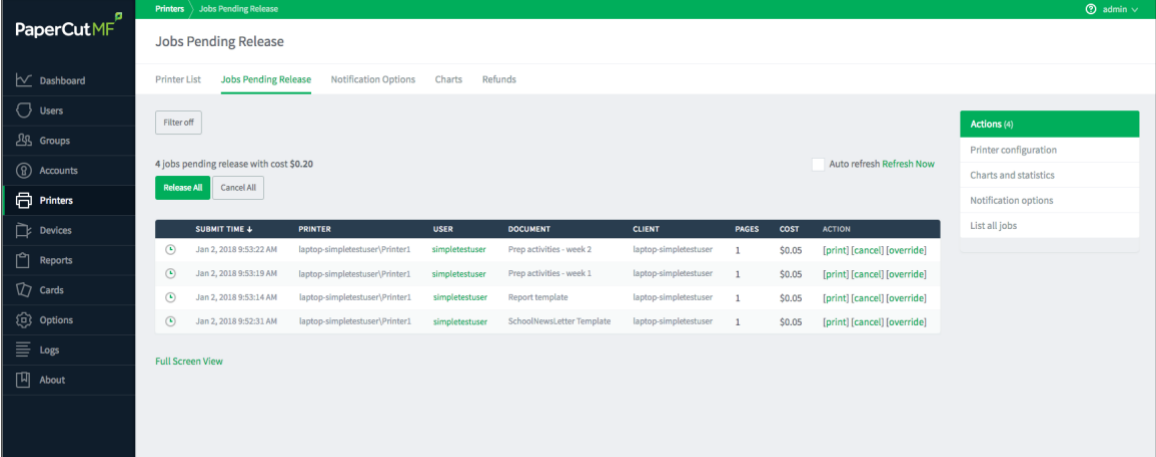
To configure the printer queue's Hold/Release Queue Settings:

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

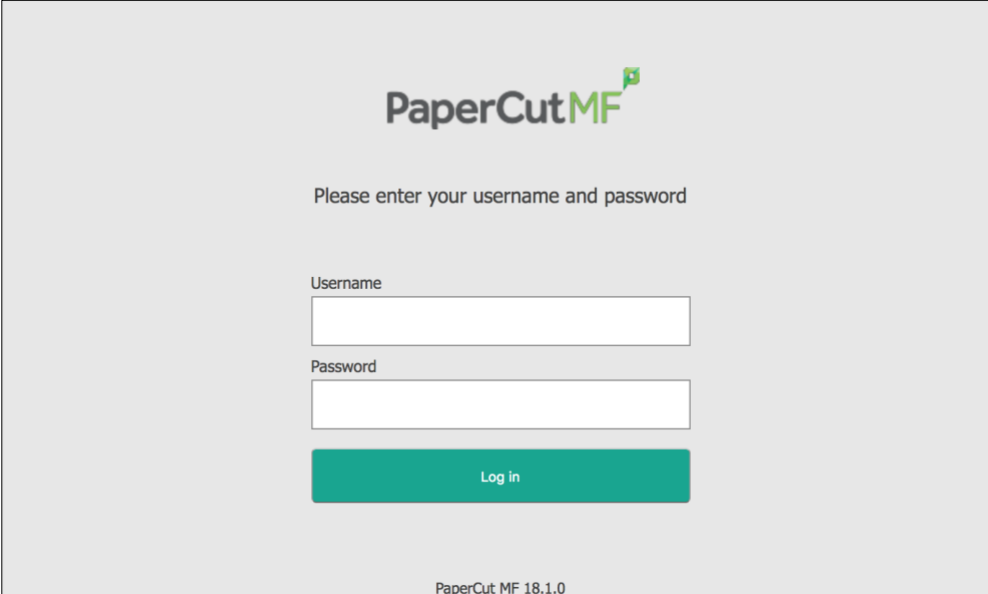


The screenshot shows the 'Jobs Pending Release' page in the PaperCut MF Admin interface. The page has a sidebar with navigation links: Dashboard, Users, Groups, Accounts, Printers (selected), Devices, Reports, Cards, Options, Logs, and About. The main content area is titled 'Jobs Pending Release' and includes a 'Printer List' tab, a 'Filter off' button, and a summary: '4 Jobs pending release with cost \$0.20'. There are 'Release All' and 'Cancel All' buttons. A table lists the pending jobs:

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

Below the table is a 'Full Screen View' link. On the right, there is an 'Actions (4)' menu with options: Printer configuration, Charts and statistics, Notification options, and List all jobs. At the top right, there is an 'Auto refresh Refresh Now' button.

6. Log out of the PaperCut MF Admin web interface.
7. Log in to the device as the simple test user:



The screenshot shows the PaperCut MF login page. It features the PaperCut MF logo at the top. Below the logo, it says 'Please enter your username and password'. There are two input fields: 'Username' and 'Password'. Below these fields is a green 'Log in' button. At the bottom of the page, it says 'PaperCut MF 18.1.0'.

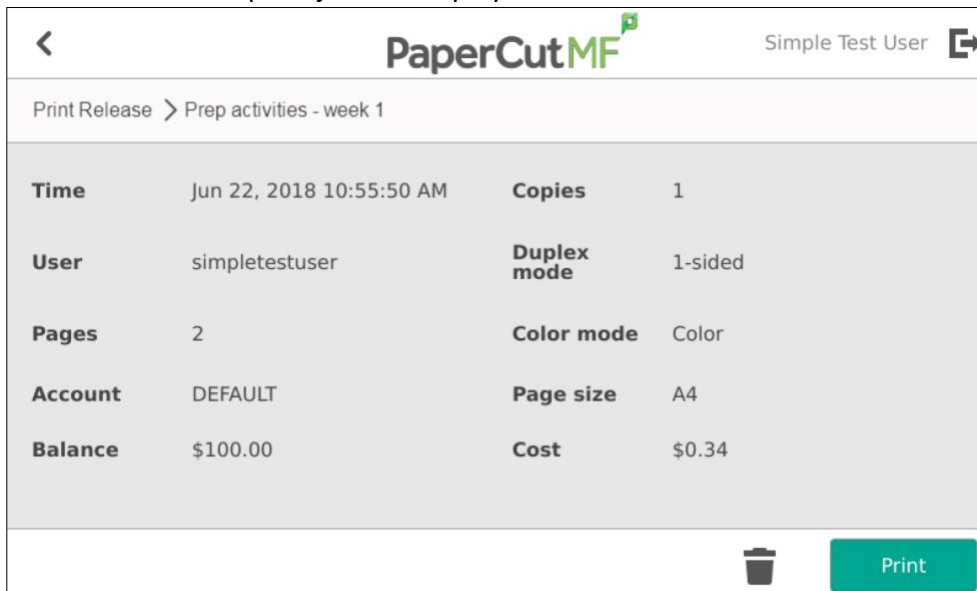
8. Verify that the print jobs for the simple test user are being held and listed:



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



Details of the held print job are displayed:



12. Log out of the device.
13. Log in to the PaperCut MF Admin web interface.
14. Navigate to **Logs**.

15. 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:

| DATE | USER | CHARGED TO | PRINTER | PAGES | COST | DOCUMENT NAME | ATTRIBS | STATUS |
|-------------------------|----------------|----------------|-----------------|-----------------|--------|--------------------------|---|------------------------|
| Jan 3, 2018 11:27:15 AM | simpletestuser | simpletestuser | deviceLibrary-S | 1 (Color: 0) | \$0.05 | Prep activities - week 1 | A4 (ISO_A4) Duplex: No Grayscale: Yes 38 kB laptop-simpletestuser PostScript | Printed refund edit |

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

3.2.3 Simple copying

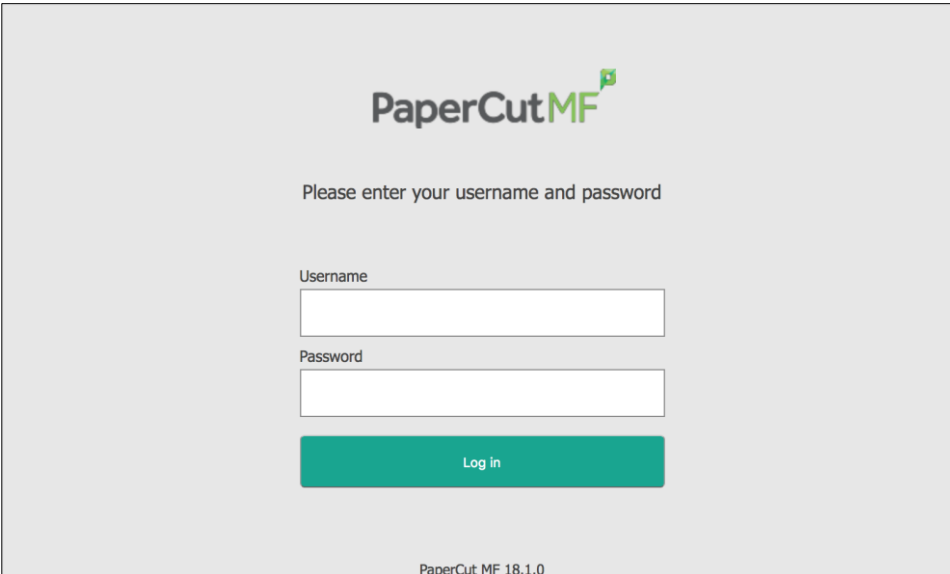
Simple copying does not involve providing the simple test user with a choice of accounts to choose from. Copying is charged to the simple test user's default My Personal Account.

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

- **Simple test user** - A simple test user is created and configured. For more information, see [3.1 Test preparation: create test users](#) and [3.2.1 Test preparation: configure simple test user](#).
- **Device functions** – Copying is enabled. To enable copying:
 1. Log in to the PaperCut MF Admin web interface.
 2. Navigate to **Devices**.
 3. Select the 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:

The image shows the PaperCut MF login interface. At the top is the PaperCut MF logo. Below it, the text "Please enter your username and password" is displayed. There are two input fields: "Username" and "Password". Below these fields is a green "Log in" button. At the bottom of the screen, the version "PaperCut MF 18.1.0" is visible.

PaperCut^{MF}

Please enter your username and password

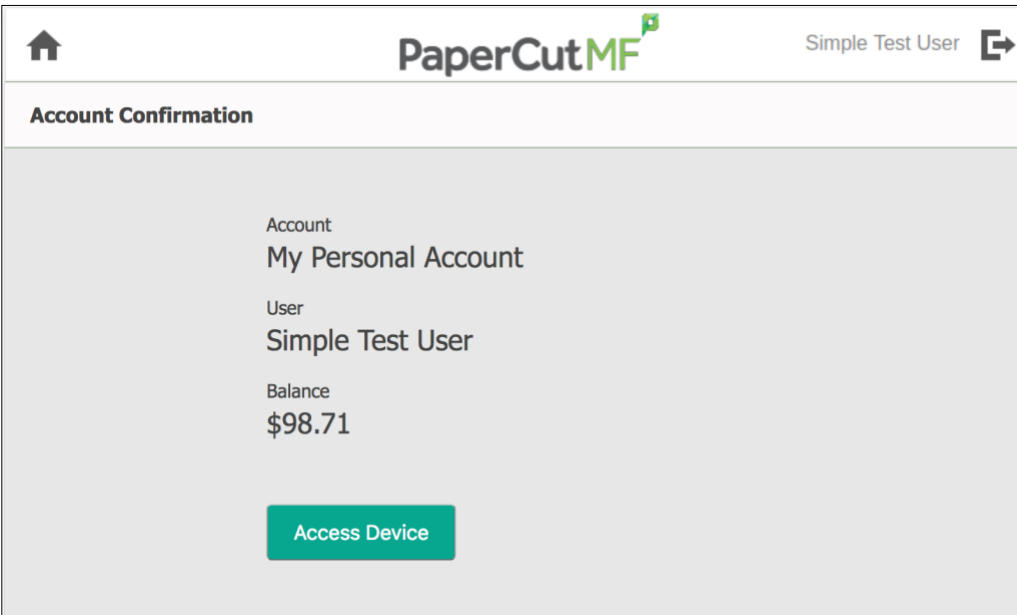
Username

Password

Log in

PaperCut MF 18.1.0

2. Select **Access Device**.
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:

The image shows the PaperCut MF Account Confirmation screen. At the top, there is a home icon, the PaperCut MF logo, and the text "Simple Test User" with an external link icon. Below this is a header "Account Confirmation". The main content area displays the following information: "Account: My Personal Account", "User: Simple Test User", and "Balance: \$98.71". At the bottom is a green "Access Device" button.

Home icon

PaperCut^{MF}

Simple Test User

Account Confirmation

Account
My Personal Account

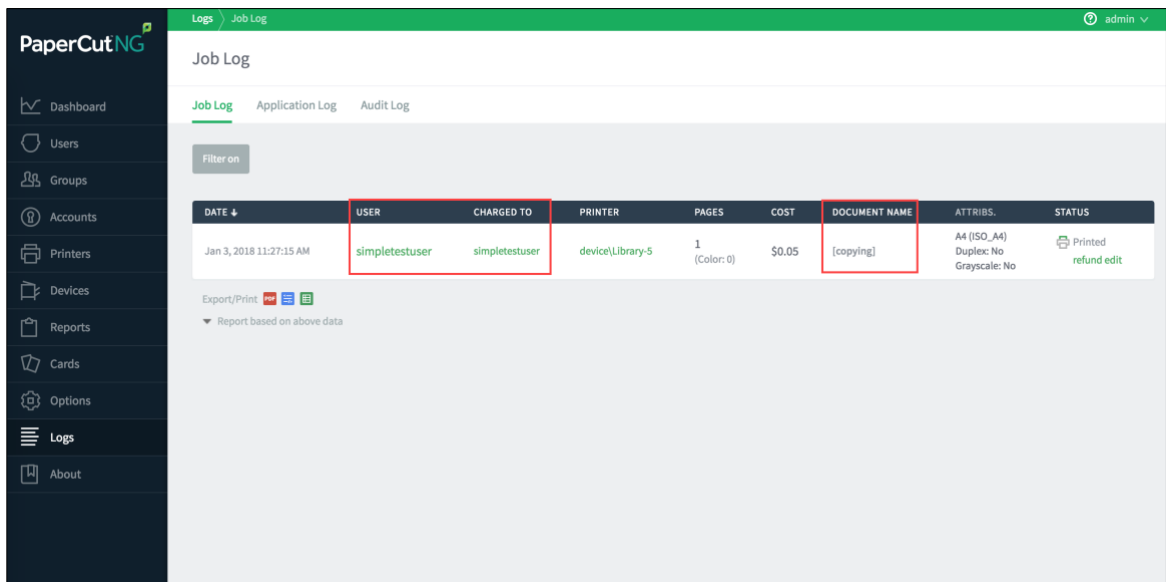
User
Simple Test User

Balance
\$98.71

Access Device

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**.

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:



| DATE | USER | CHARGED TO | PRINTER | PAGES | COST | DOCUMENT NAME | ATTRIBS | STATUS |
|-------------------------|----------------|----------------|------------------|-----------------|--------|---------------|--|------------------------|
| Jan 3, 2018 11:27:15 AM | simpletestuser | simpletestuser | device/Library-5 | 1 (Color: 0) | \$0.05 | [copying] | A4 (ISO_A4) Duplex: No Grayscale: No | Printed refund edit |

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.

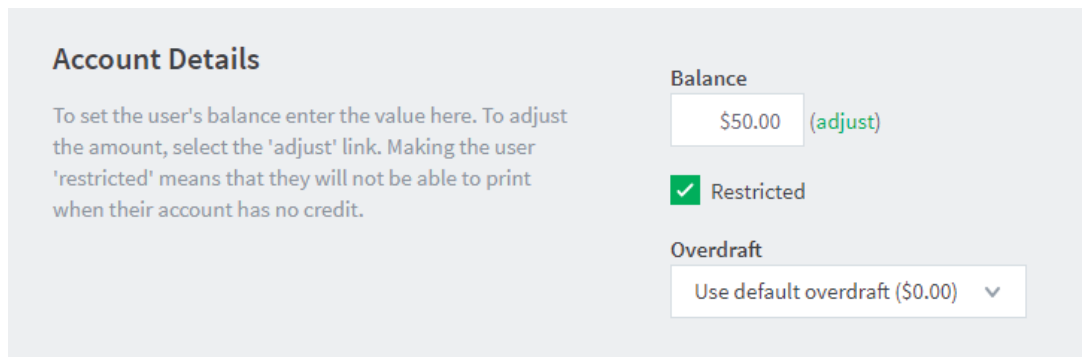
To test advanced copying, ensure the following test preparation requirements are met:

- **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**:



Account Details

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

Balance
\$50.00 (adjust)

☒ Restricted

Overdraft
Use default overdraft (\$0.00) ▼

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

Account Selection

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

Print account selection

Show standard account selection ▼

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

Allow user to:

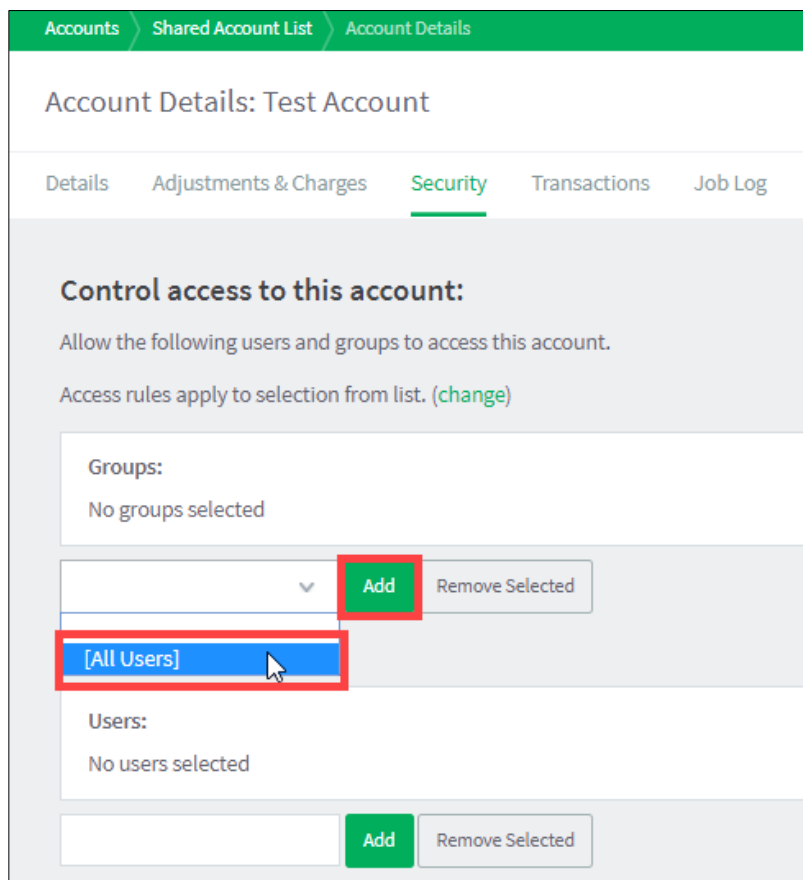
- ☒ Charge to their personal account
- ☒ Select shared accounts from a list
- ☒ Select shared accounts using a PIN/code
- ☐ Print as another user

6. Click **Apply**.
- **Device functions** – Copying is enabled. To enable copying:
 1. Log in to the PaperCut MF Admin web interface.
 2. Navigate to **Devices**.
 3. Select the 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:

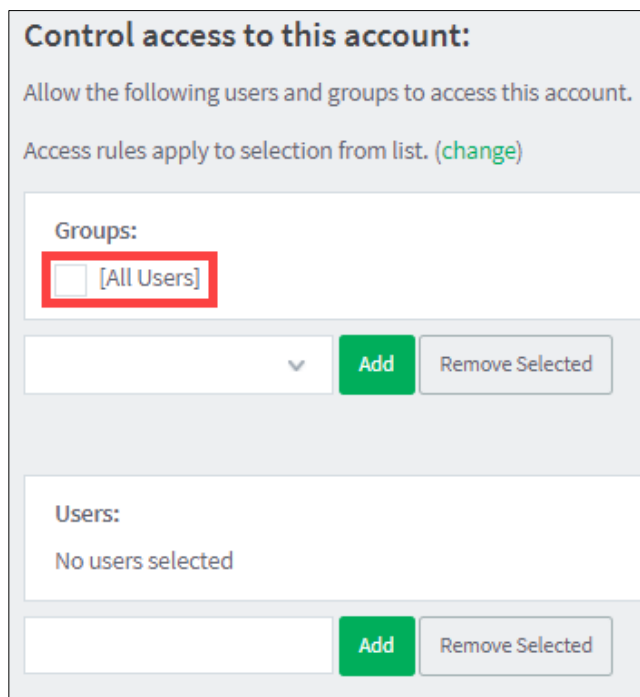
 1. Log in to the PaperCut MF Admin web interface.
 2. Navigate to **Accounts**.
 3. Click **Create a new account...**
 4. In the **Details & Balance** area's field **Account Name**, enter the name of the test account (test account).
 5. Click **Apply**.
 6. Verify that the **Accounts > Shared Account List** page displays the test account created.
 7. Click the test account.
 8. Navigate to **Security**.

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



The screenshot shows the 'Account Details: Test Account' page with the 'Security' tab selected. Under the 'Control access to this account:' section, the 'Groups:' area shows 'No groups selected'. Below this is a dropdown menu with a red box around it containing '[All Users]'. To the right of the dropdown is a green 'Add' button, also highlighted with a red box, and a 'Remove Selected' button. Below the 'Groups' section is the 'Users:' section, which shows 'No users selected' and its own 'Add' and 'Remove Selected' buttons.

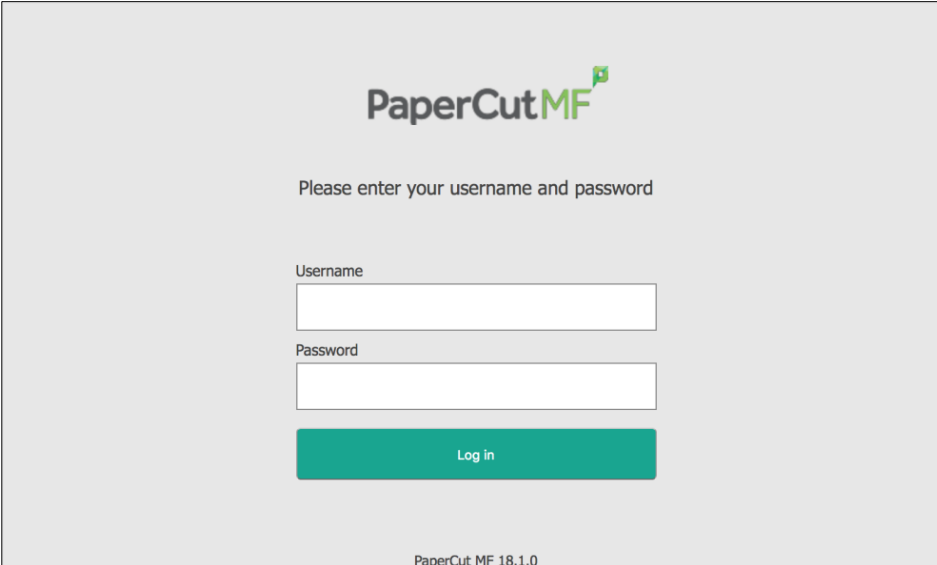
10. Verify that the **Control access to this account > Groups** area displays **[All Users]**:



This screenshot shows the same 'Control access to this account:' page, but now '[All Users]' is selected in the 'Groups:' dropdown menu, which is highlighted with a red box. The 'Add' button remains highlighted with a red box. The 'Users:' section is unchanged, showing 'No users selected' and its respective buttons.

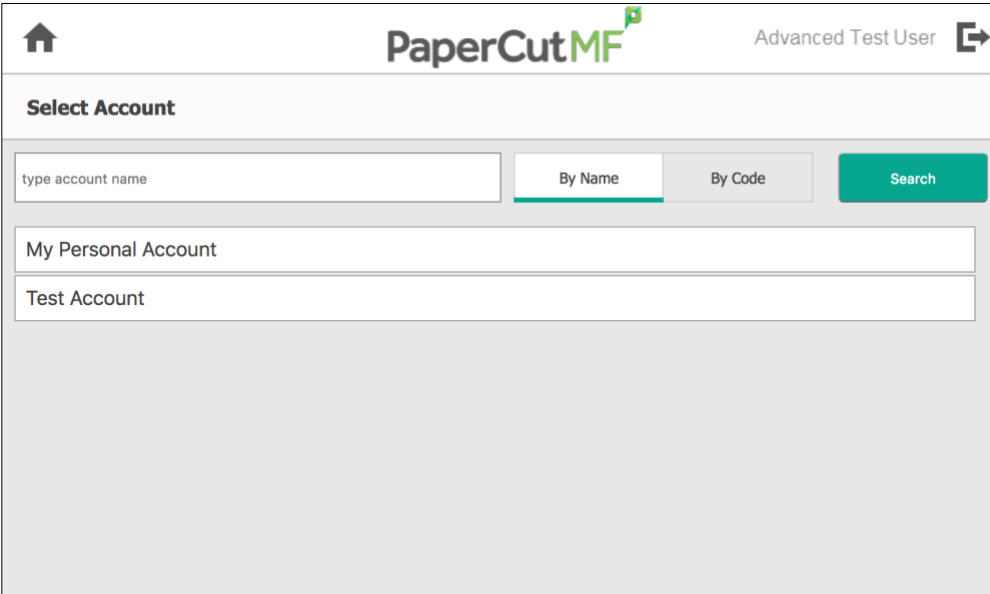
To test advanced copying:

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



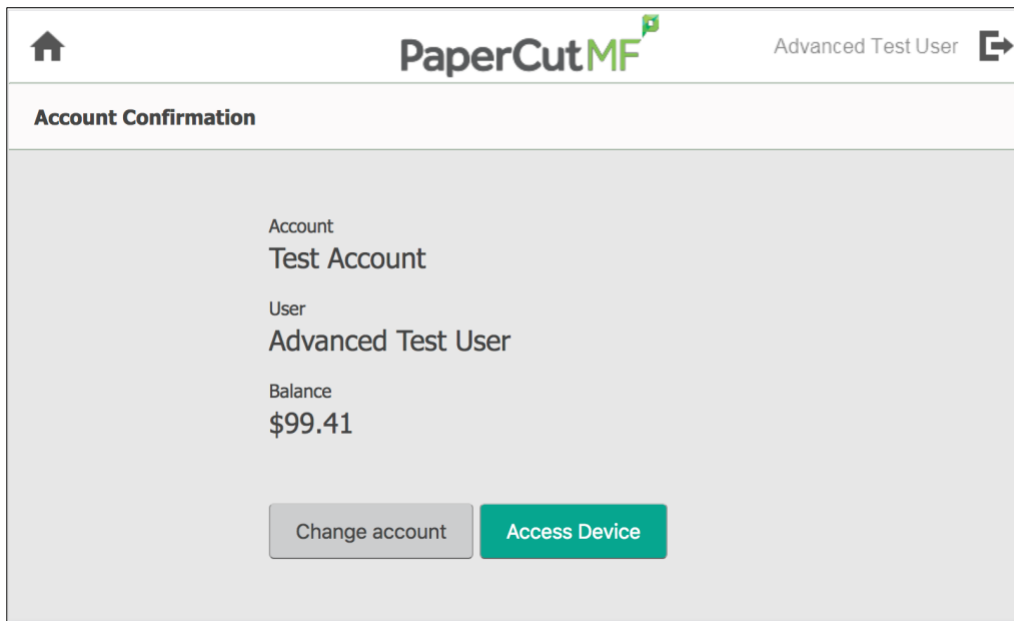
The login screen for PaperCut MF 18.1.0. It features the PaperCut MF logo at the top. Below the logo, it says "Please enter your username and password". There are two input fields: "Username" and "Password". Below these fields is a green "Log in" button. At the bottom of the screen, it says "PaperCut MF 18.1.0".

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



The "Select Account" screen in PaperCut MF. It has a header with a home icon, the PaperCut MF logo, and the text "Advanced Test User" with an exit icon. Below the header, there is a search bar with the placeholder text "type account name". To the right of the search bar are two tabs: "By Name" (which is selected) and "By Code". To the right of the tabs is a green "Search" button. Below the search bar and tabs, there is a list of accounts: "My Personal Account" and "Test Account".

4. Select the relevant 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:

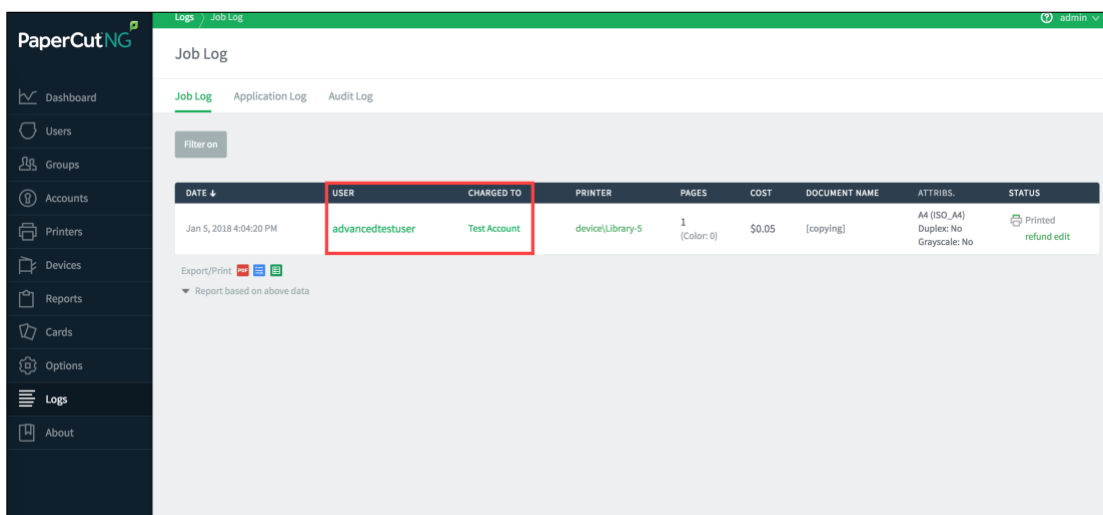


The screenshot shows the 'Account Confirmation' page in the PaperCut MF web interface. At the top, there is a home icon, the 'PaperCutMF' logo, and the text 'Advanced Test User' with an external link icon. The main content area displays the following information:

- Account: Test Account
- User: Advanced Test User
- Balance: \$99.41

At the bottom, there are two buttons: 'Change account' (grey) and 'Access Device' (green).

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**.
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:



The screenshot shows the 'Job Log' page in the PaperCut MF Admin web interface. The page has a sidebar with navigation links: Dashboard, Users, Groups, Accounts, Printers, Devices, Reports, Cards, Options, Logs, and About. The main content area shows the 'Job Log' with tabs for 'Job Log', 'Application Log', and 'Audit Log'. A 'Filter on' button is present. Below is a table with the following data:

| DATE | USER | CHARGED TO | PRINTER | PAGES | COST | DOCUMENT NAME | ATTRIBS. | STATUS |
|------------------------|------------------|--------------|------------------|-----------------|--------|---------------|--|------------------------|
| Jan 5, 2018 4:04:20 PM | advancedtestuser | Test Account | device/Library-5 | 1 (Color: 0) | \$0.05 | [copying] | A4 (ISO_A4) Duplex: No Grayscale: No | Printed refund edit |

Below the table, there are links for 'Export/Print' and a note: 'Report based on above data'.

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

4 Configuration

After completing the Installation section and registering the device with PaperCut, it has been configured with reasonable default settings that are suitable for most environments.

This section covers how to change the default settings. All the following settings are available via the device's 'Summary' tab in the PaperCut administration interface.

4.1 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 [4.10 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 on the PaperCut MF Admin web interface:

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

4.2 Security settings

4.2.1 Enable secure ODCA in PaperCut

1. In a web browser, log in to the PaperCut Admin web interface (e.g. <http://papercut-server:9191/admin>).
2. Select the "Devices" tab.
3. Select a device.
4. Click "Advanced Config".
5. set the `ext-device.toshiba.secure-odca` config key to "Y". For more information, see [4.10 Config Editor](#).

NOTE: If the Toshiba Device Advance Configuration parameter of `ext-device.toshiba.port-num` is set to "49629", change it to either "49630" or "DEFAULT". For more information, see [4.10 Config Editor](#).

4.2.2 HTTPS Security (recommended)

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

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

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

- **Self-signed SSL certificate** – To use a self-signed SSL certificate that is generated by default when installing PaperCut MF:

1. Regenerate it using PaperCut MF's `create-ssl-keystore` tool in:
[PaperCut MF Install
Location]\server\bin\[platform]

Note: When regenerating it, ensure:

- to include the command's required parameters and arguments.
- that the `<SYSTEM-NAME>` parameter contains the same Fully Qualified Domain Name (or IP address) as that of the config key **system.network-address**. For example, `"myserver.fullname.com"`. This is because the default self-signed certificate generated during PaperCut MF installation (device registration and integration) is issued using a hostname, instead of the IP address.
- that the keystore location always contains only one, most recently generated self-signed certificate.

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

2. Restart the PaperCut MF Application Server.
- **CA-signed SSL certificates** – To use a CA-signed SSL certificate (for example, Verisign, Thawte), ensure that the `<SYSTEM-NAME>` parameter contains the same Fully Qualified Domain Name (or wildcard) as that of the config key **system.network-address**. This is because Certificate Authorities generally no longer accept certificate requests for either intranet names or IP addresses. For more information, see the [PaperCut MF manual](#).

To upload the certificate on the device's web interface (TOPACCESS):

1. Log in to the device's web interface (TOPACCESS) as an administrator.
2. Navigate to **Administration > Security > Certificate Management**
3. In the **CA Certificate** section, select **CA Certificate (PEM)**.
4. Click **Choose file** and follow the prompts to upload your **CA-signed** certificate or the **Self-signed** certificate from your PaperCut server in **PEM** format:

The screenshot shows the PaperCut MF web interface. The top navigation bar includes 'Device', 'Job Status', 'Logs', 'Registration', 'Counter', 'User Management', 'Administration', and 'My Account'. The 'Administration' section is expanded, showing 'Security', 'Certificate Management', 'Password Policy', and 'Security Alerts'. The 'Certificate Management' section is active, showing 'Self-signed certificate' and 'Import' options. The 'Self-signed certificate' option is selected, and the 'Import' sub-section is expanded. The 'Import' sub-section shows a 'Choose file' button and a 'No file chosen' message. The 'Certificate Files' section shows a file named 'jmy.pem' uploaded.

5. Click **Save**.

4.2.3 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 on the PaperCut MF Admin web interface:

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

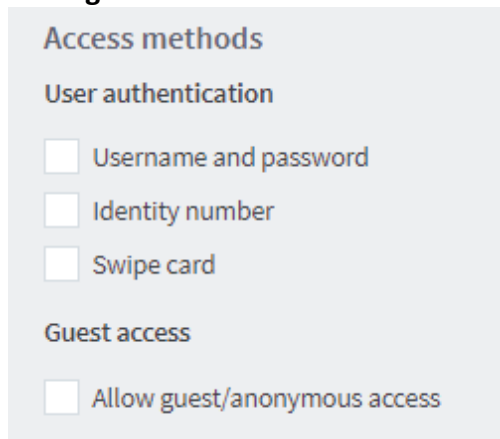
4.3 User authentication options

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

To configure the device's user authentication:

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

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



Access methods

User authentication

☐ Username and password

☐ Identity number

☐ Swipe card

Guest access

☐ Allow guest/anonymous access

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](#).

- **Require PIN:** With this option, users use their id number and the PIN associated with the id number. To configure the PaperCut MF Login screen to mask the characters entered in the **ID number** field with asterisks (*), use the global config key **ext-device.id-number.mask**. For more information, see [4.10 Config Editor](#).

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

Swipe card

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

- **Require PIN:** With this option, users use their registered swipe card and the PIN associated with the card.
Note: Users can use a swipe card with or without a pre-set and associated PIN. If using a swipe card without a pre-set and associated PIN, users are prompted to set a valid PIN to associate with the swipe card.
- **Enable self-association with existing user accounts:** With this option, users can use a registered swipe card or a new, unregistered swipe card. If using new, unregistered swipe cards, users are prompted to complete card self-association using their username and password (i.e. associating a new unregistered card with a relevant, 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 [4.10 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, 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.toshiba.guest-access.label**. For more information, see [4.10 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.
 - This guest user is shown the PaperCut MF Account Confirmation screen only if the user profile of the user specified in the **Inherit settings from user** field is entitled with the option of account selection, irrespective of the **External Device Settings > Device Options > Show account confirmation** checkbox setting.
- **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

4.4.1 Supported card readers

The Toshiba devices support the following card reader types. Each card reader type requires a different 08 service mode setting configuration which is typically done in the section “Configuring the ‘08 Service Mode’ MFD settings” and is described in the table below.

| Card Reader Type | 08 Service Code | Service Mode Setting |
|-------------------------------|-----------------|----------------------|
| Elatec TWN3 | 3500 | 90001 |
| Magtek Dynamag | 3500 3501 | 70001 1 or 2 or 3 |
| e-Bridge IDGATE - HID iClass | 3500 | 40002 |
| e-Bridge IDGATE - Mifare | 3500 | 30001 |
| Generic Keyboard mode readers | 3500 | 60001 |

NOTE: e-Bridge IDGATE in the table refers to Toshiba's own brand of card readers.

4.4.1.1 Elatec TWN3

The Elatec TWN3 card reader can support a large variety of card types including:

- HID PROX (HID PROX)
- HID iCLASS (HID iCLASS)
- Multi125 (EM410x, HITAG 1, HITAG 2, HITAG S, EM4150, T5567/Q5)
- Inditag (Indala)
- MIFARE (MIFARE, Ultralight, MIFARE Mini, MIFARE 1k/4k, MIFARE DESfire)
- Legic (Legic Prime, Legic Advant)

For this card reader set 08 service mode **3500** setting to: **90001**.

NOTE: The Elatec TWN3 might require special firmware to use on the Toshiba devices. This is available from PaperCut. Download and firmware upgrade instructions can be found on the PaperCut knowledge base at the link below:

<http://www.papercut.com/kb/Main/ElatecFirmwareForToshibaMFD>

4.4.1.2 Magtek Dynamag

Toshiba has magnetic card reader support for the Magtek Dynamag card reader. This is set using the 08 code of **3500** with a mode setting of **70001**. As well as setting the type of reader using the **3500** code, one also needs to set the **3501** code to specify which track data to use as specified in the table below.

| Track data | 08 service mode setting 3501 |
|------------------|------------------------------|
| Use track 1 data | 1 |
| Use track 2 data | 2 |
| Use track 3 data | 3 |

When entering the track number (for example, track 2 has been used for the banking industry), you will be shown boxes with the letters A to F. Please ignore this and just enter one of the digits 1 to 3 on the key pad. Then press OK. You will be asked to repeat this for confirmation and so just enter the same digit again and press OK.

4.4.1.3 Generic Keyboard Mode Readers

Card readers in generic keyboard mode are supported in all e-BRIDGE Next Toshiba models. The following card reader models below have been tested and are supported in generic keyboard mode. Other models not in the table might be supported by calling a Toshiba technician to make the necessary change (to register the new card reader's Product ID (PID) and Vendor ID (VID)).

| Vendor | Product Name |
|---------------------------|---|
| Elatec | TWN4 TWN3 |
| RFIdeas | pcProx Plus pcProx Enroll iCLASS ID# pcSwipe Enroll RDR-8058AKU-PPCT RDR-80581AKU RDR-805H1AKU RDR-805T1AKU |
| IDTECH | OMNI combined barcode and magnetic stripe reader |
| Datalogic | Magellan 800i 2D barcode reader |
| Magtek | Dynamag |
| Cartadis | TCM2MIFARE/HID TCM3 13.56 MIFARE TCM3 125KK HID |
| FTDI | FT232R USB UART IC USB UART IC |
| Zebra (formerly Motorola) | DS9208 2D Orbital Head |
| Zebra (formerly Motorola) | DS457 1D/2D barcode imager |

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, converters, or both applied using the PaperCut MF Admin web interface's **Application Log**.

4.4.2.1 Regular expression filters

To extract and validate card identifiers using regular expression filters, use the config keys **ext-device.card-no-regex**, **ext-device.self-association-allowed-card-regex**.

Note: If you customize BOTH the config keys **ext-device.card-no-regex** and **ext-device.self-association-allowed-card-regex**, then you must ensure that:

- **ext-device.card-no-regex** is the extraction pattern (i.e. the "full regular expression filter" based on which card identifiers are extracted)
- **ext-device.self-association-allowed-card-regex** is the validation pattern (i.e. validates only the "truncated part of the card identifier" that was extracted by the extraction pattern of **ext-device.card-no-regex**)

For example:

if, **ext-device.card-no-regex** = `\d{6}(\d{8})`

then, **ext-device.self-association-allowed-card-regex** = `\d{8}`

For more information, see [4.10 Config Editor](#).

Some regular expression filters include:

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

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

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 [4.10 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**
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 4.10 Config Editor.

4.5 SNMP

PaperCut MF uses SNMP to:

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

By default, PaperCut MF uses SNMPv1/v2c to perform these actions. You can, however, select to use SMPv3 for better security and encryption. For more information about SNMP, see the [PaperCut MF manual](#).

To configure PaperCut MF to use SNMP:

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

4.6 Secure Print Release

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

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

To configure Secure Print Release on the device:

1. Log in to the PaperCut MF Admin web interface.
2. Navigate to **Devices**.
3. Select the 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 relevant Hold/Release queue. For more information, see the [PaperCut MF manual](#).

4.6.1 User selection of an account

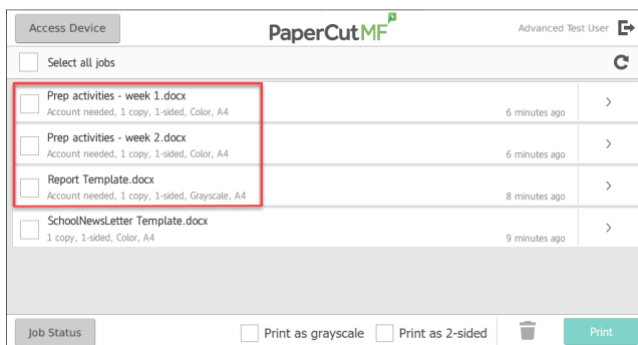
All print jobs must be allocated to an account before they can be released (printed). This account can be either:

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

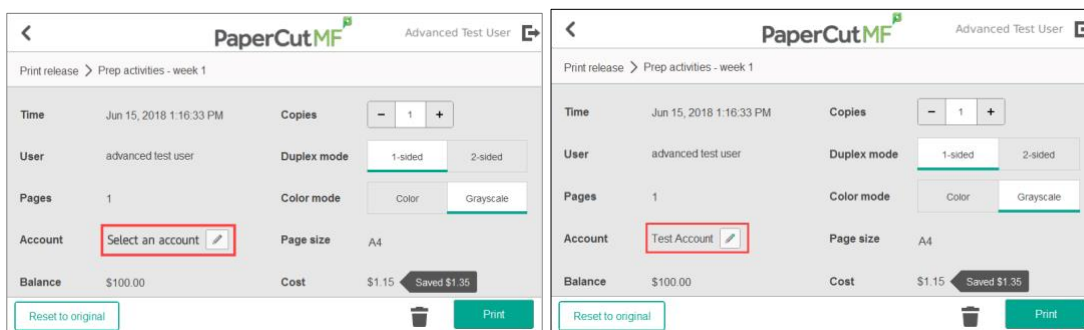
Users can allocate an account to a print job via the User Client and/or at the device. For more information about configuring cost allocation for users, see the [PaperCut MF manual](#).

At the device, users can:

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



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

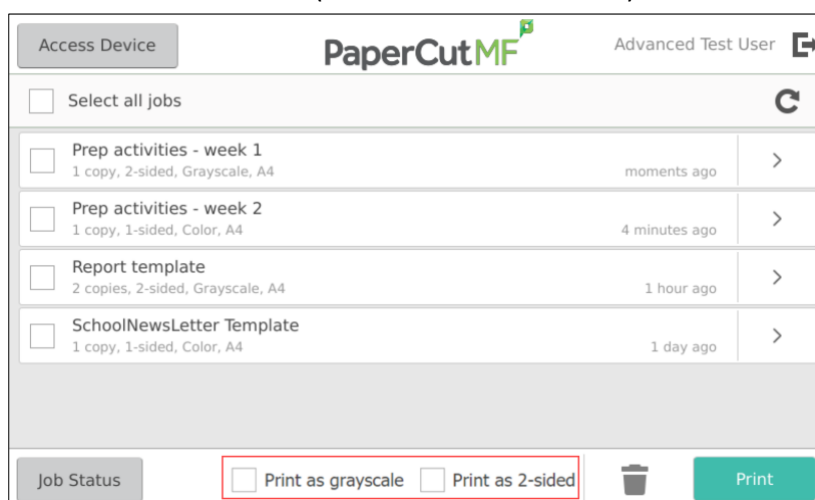


Note: By default, PaperCut MF allows users to select accounts at the device. However, you also have the option of disabling this. For more information, see the [PaperCut MF manual](#).

4.6.2 User selection of job attributes

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

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



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

- **Copies**

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

The screenshot shows the PaperCut MF interface for an 'Advanced Test User'. The top bar includes the PaperCut MF logo and a back arrow. Below the bar, the breadcrumb 'Print release > Prep activities - week 1' is visible. The main content area is divided into two columns. The left column displays user and job information: Time (Jun 15, 2018 1:16:33 PM), User (advanced test user), Pages (1), Account (Test Account with an edit icon), Balance (\$100.00), and Cost (\$1.15 with a 'Saved \$1.35' indicator). The right column contains the print settings, which are highlighted by a red rectangular box. These settings include 'Copies' (a numeric control set to 1), 'Duplex mode' (a toggle between '1-sided' and '2-sided', currently on '1-sided'), and 'Color mode' (a toggle between 'Color' and 'Grayscale', currently on 'Grayscale'). Below the settings, there are three buttons: 'Reset to original' (green), a trash icon, and 'Print' (green).

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.toshiba.release-show-cost**. For more information, see [4.1010 Config Editor](#).

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

4.7 Device jobs

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

4.7.1 Tracking of 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 device.
4. In the **External Device Settings** area, select the relevant 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

4.7.2 User selection of an account

If tracked device jobs (scan, copy, fax, on-device printing) are also being charged, then users must

allocate them to an account.

This account can be either:

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

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

- For more information about configuring cost allocation for users, see the [PaperCut MF manual](#).
- To toggle the display of the PaperCut MF Account Confirmation screen, use the **Show account confirmation** checkbox on the PaperCut MF Admin web interface (**Devices Details > Summary > External Device Settings > Device Options**).
- To hide or show the PaperCut MF Select Account screen, based on whether or not the user has been configured with a **Default shared account**, use the config key **ext-device.toshiba.account-selection.bypass-for-default-account**. For more information, see [4.1010 Config Editor](#).

4.7.3 Device's scanning

Ensure that the following are configured as required:

- [4.7.3.1 Device's "Scan-to-Network Folder"](#)
- [4.7.3.2 Device's "Scan-to-Email Address"](#)

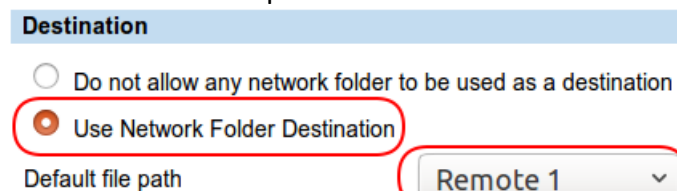
4.7.3.1 Device's "Scan-to-Network Folder"

Toshiba devices can be configured to scan to network folders that can be predetermined for each user. This functionality **requires** PaperCut MF version 16.4 or later. To configure scan to network folders:

1. Under the Toshiba TopAccess configuration, navigate to Administration > Security.
2. In the "Home Directory Setting" area:



3. Click "Save".
4. Under the Toshiba TopAccess configuration, navigate to Administration > Setup > Save As File.
5. In the "Destination" area:



6. In the "Remote 1 and Remote 2 Settings" area:
- a. Complete the settings under "Remote 1". This is the network location that will be overwritten by the user's home directory attribute. This is used as the default if the user's home directory is not specified in PaperCut.

- b. Enter the Login User Name and Password for a user account that has read/write permissions to all user home directories. These credentials are used to authenticate to the shared drive if the user authenticates with card authentication. If the user logs into the device with standard credentials, those will be used to authenticate against the network folder.

Remote 1 and Remote 2 Settings

☒ Remote 1 ☐ Allow the following network folder to be used as a destination Remote Setting List

Protocol ☒ SMB ☐ FTP ☐ FTPS ☐ NetWare IPX/SPX ☐ NetWare TCP/IP

Server Name

Port Number(Command) -

Network Path \\default_network_folder\\

Login User Name defaultaccess

Password ***** Retype Password *****

Connection Test Execute

☐ Allow user to select network folder to be used as a destination

- c. Click "Save".
7. Optionally, you can configure the device to skip showing a warning message on login when the user has no home directory specified by setting the 08 code "8722" to "1".

4.7.3.2 Device's "Scan-to-Email Address"

Toshiba devices can be configured to scan to e-mail addresses that can be predetermined for each user. This functionality **requires** PaperCut MF version 16.4 or later. The process to configure this functionality is:

1. Under the Toshiba TopAccess configuration, navigate to Administration -> Security.
2. In the "Email Address Setting" are, if the "Use Email Address which was registered Local User" option is available under "From Address" (on newer devices), then the device can use the logged in user's email address. In this case, set the following values.
 - a. Set the "From Address" value to "Use Email Address which was registered Local User".
 - b. Set the "From Name" value to "Login User Name".
 - c. Set the "Restriction setting for Email Destination" value to "To".
 - d. Click Save.

If the "Use Email Address which was registered Local User" option is **not** available under "From Address" (on older devices), then the device still needs an LDAP server to detect the user's email address. In this case, refer to the Toshiba SDK v2 manual - Enable LDAP User Authentication for how to set up an email address.

4.7.4 PaperCut MF's Integrated Scanning

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

1. Ensure that the device is configured as required:
 - a. Log in to the device's web interface as an administrator.
 - b. Navigate to **Administration > Setup > Network > WSD**.
 - c. In the scan section, configure the following fields:
 - i. In **Web Services Scan**, select **Enable**.
 - ii. In **Authentication for PC Initiated Scan**, select **Accept any job**.

| Scan | |
|--|---------------------------------|
| Web Services Scan | Enable |
| Scanner Name | TOSHIBA e-STUDIO5005AC-11699189 |
| Scanner Information | |
| Authentication for PC Initiated Scan | Accept any job |
| Note: Accept any job : Accounted as Guest if user name is invalid. (Enable Guest account with Remote Scan permission.) | |

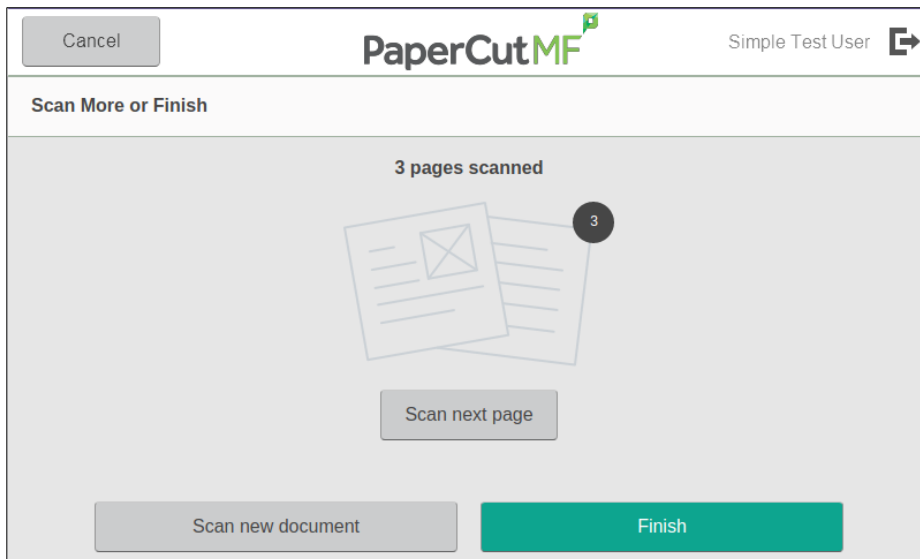
- d. Click **Save**.
 - e. If MFD Embedded OCR is installed, see 2.4.7 Enable OCR on the device (optional).
- Configure Integrated Scanning on the PaperCut MF Admin web interface. For more information, see [Integrated Scanning](#) or the [PaperCut MF manual](#).
 - Depending on the needs of your environment, you may need to change the default settings of the following config keys:
 - ext-device.toshiba.scan-port-num**
 - ext-device.toshiba.secure-scanning**
 - ext-device.toshiba.scan.prompt.checkbox.checked**
 - ext-device.toshiba.timeout.scan-prompt-send.secs**
 - ext-device.toshiba.timeout.complete-scan-job.secs**

For more information, see [4.1010 Config Editor](#).

4.7.4.1 Integrated scan workflow

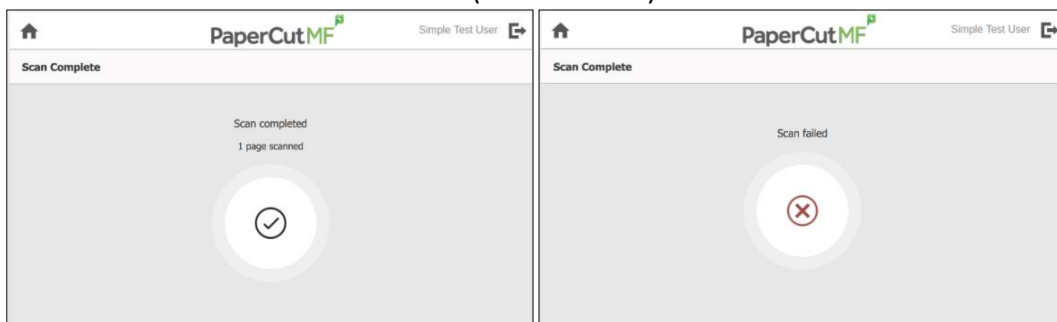
If Integrated Scanning is enabled, then you can use the config key **ext-device.toshiba.scan.prompt.checkbox.checked** to specify whether the **Prompt for more pages** checkbox on the Scan Details screen and the Scan Settings screen, is checked or unchecked by default (See [4.10 Config Editor](#)).

- A checked **Prompt for more pages** checkbox enables the device to display the Scan More or Finish screen, providing users with the ability to carry out multiple scan jobs with the same scan settings as the first scan job:



Note: To specify the user inactivity timeout on this screen, use the config key **ext-device.toshiba.timeout.scan-prompt-send.secs**. For more information, see [4.1010 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.toshiba.timeout.complete-scan-job.secs**. For more information, see [4.1010 Config Editor](#).

4.8 PaperCut MF's Language Selection

PaperCut MF allows authenticated users to select their preferred language at the device. After a user has selected a language, that language is used when they log in to any device that supports language selection at any location. This is particularly useful in multilingual and bilingual countries, such as Canada, Singapore, and India and for the *set-and-forget convenience*.

Note: The language selected at the device:

- does not persist for **Guest or anonymous** logins
- does not change the device's currency and paper size values to correspond to the geographical locale of the changed language. For example, if the device is installed in Canada, and a user changes the device's language to French, then the currency does not automatically change to Euros.
- overrides the device's default language.

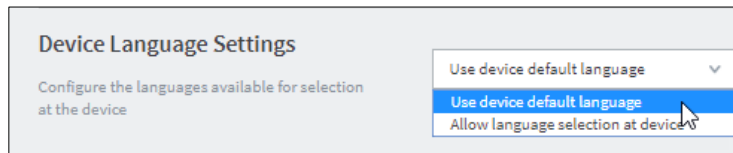
To configure PaperCut MF's Language Selection:

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

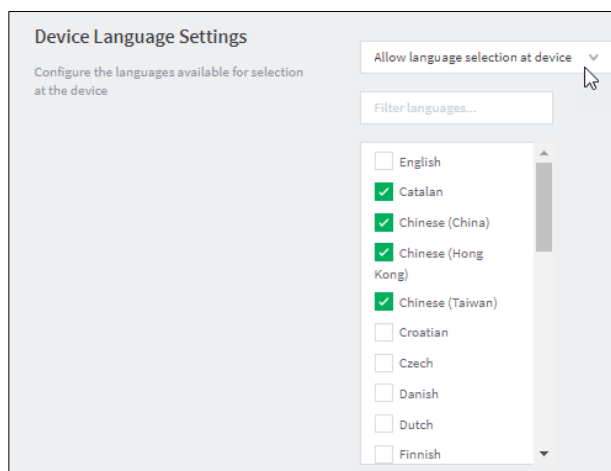
2. Navigate to **Devices**.
3. Select the required device.
4. In the **Device Language Settings** area, select either:

- **Use device default language**—users cannot select their preferred language via PaperCut MF's Language Selection.

The language used is the device's default language.



- **Allow language selection at device**—allow users to select their preferred language via PaperCut MF's Language Selection:

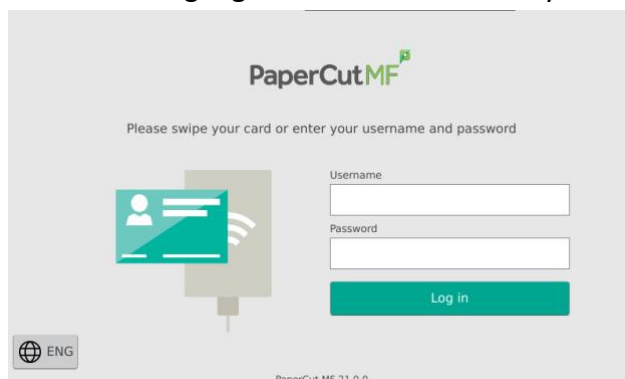


5. If you selected **Allow language selection at device**, select the languages you want to make available for users.
6. Click **OK**.

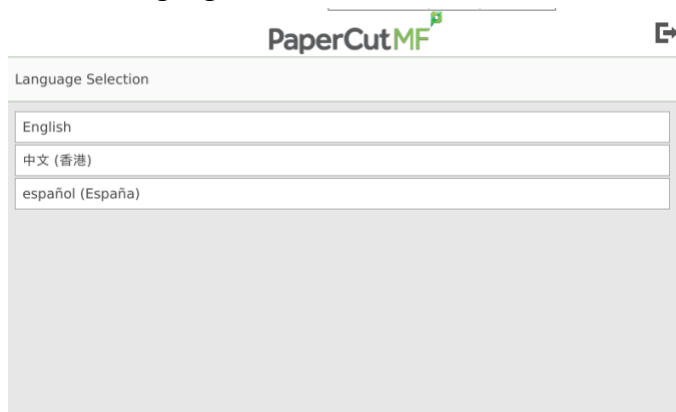
After configuring PaperCut MF's Language Selection, check that it works at the device:

1. Tap the globe button with the 3-letter language code to display the list of available languages.

Note: The language code is determined by the device's default language.



2. Select a language.

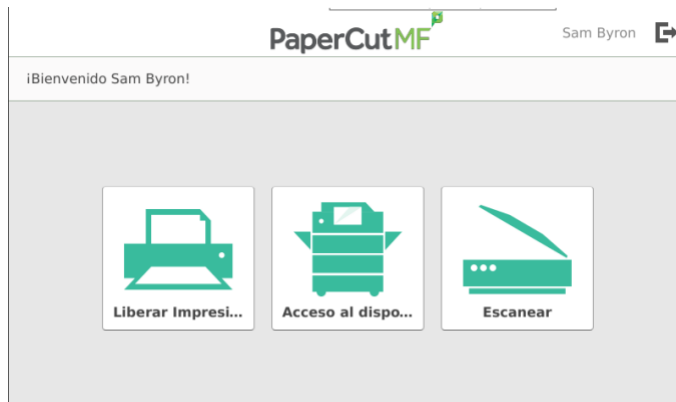


The PaperCut MF Login screen is displayed with the 3-letter language code for the selected language.



3. Log in to the device as a test user.

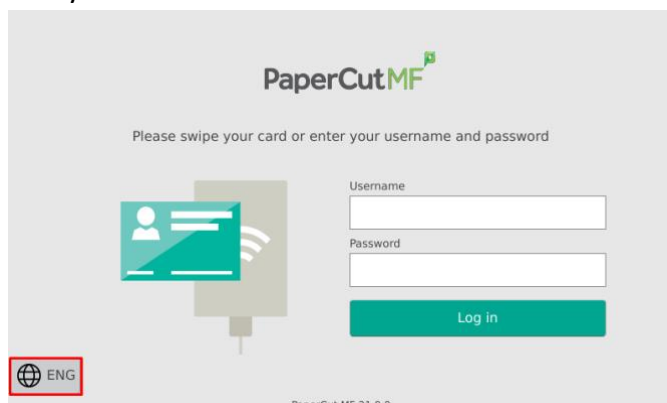
The text on all the PaperCut MF screens is displayed in the selected language:



4. Log out of the device.

The globe button's 3-letter language code reverts to the device's default language

ready for the next user.



5. Log in to the device as the same test user.

Check that the text on all the PaperCut MF screens is displayed in the previously selected language:



4.9 Screen headers

4.9.1 Header colors

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

1. Use the following config keys:
ext-device.toshiba.header-background-color
ext-device.toshiba.header-font-color
For more information, see [4.10 Config Editor](#)
2. Log in to the device as a test user (simple test user).
3. Verify that the device's header background and text colors are as required.

4.9.2 Header logo

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

1. Create the device's header logo as per the following specifications:
 - Image height = 50 pixels
 - Image width = 360 pixels
 - Image file format = `.png`

- Image filename = `logo.png`
 - Image file location = `[PaperCut Install Location]\server\custom\web\device\toshiba-v3\`
2. Log in to the device as a test user (simple test user).
 3. Verify that the device's header logo is as required.

4.10 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 relevant device.
4. Click **Advanced Config**.

The available config keys are:

| Config name | Description |
|---------------------------|--|
| ext-device.admin.password | The admin password for the Toshiba copier. |
| ext-device.admin.username | The admin username for the copier, by default it is "admin". |
| ext-device.card-no-regex | <p>Customize the regular expression filter to be used to extract card identifiers for authentication. This is a global and device-specific config key.</p> <p>Device-specific:</p> <ul style="list-style-type: none">• Values: Any valid regular expression, GLOBAL (inherited from global settings)• Default: GLOBAL (inherited from global settings) <p>Global:</p> |

- Values: Any valid regular expression

Note:

- This is applicable only if the **Swipe card** authentication option is selected. For more information, see [4.3 User authentication](#) and [4.4.2 Handling card identifiers](#).
- Changing the default value of this config key requires you to ensure that the value of the config key **ext-device.self-association-allowed-card-regex** is only the “extracted, truncated part of the card identifier” of this config key. For example, if the config key `ext-device.card-no-regex = \d{6}(\d{8})`, then the config key `ext-device.self-association-allowed-card-regex = \d{8}`. For more information, see [4.4.2.1 Regular expression filters](#).

`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: `.*`

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](#) and [4.4.2 Handling card identifiers](#).
- Changing the default value of the config key **ext-device.card-no-regex** (extracting card identifiers using customized regular expression filters) requires you to ensure that the value of this config key is only the “truncated part of the card identifier” that was extracted by the extraction pattern of **ext-device.card-no-regex**. For example, if the config key `ext-device.card-no-regex = \d{6}(\d{8})`, then the config key `ext-device.self-association-allowed-card-regex = \d{8}`. For more information, see [4.4.2.1 Regular expression filters](#).

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

Select whether user self-association should occupy the primary or secondary card number. It overrides the global setting unless the keyword "GLOBAL" is specified. This is

| | |
|------------------------------------|--|
| | <p>useful when there is a mix of different non-configurable card readers that read different numbers from an ID card.</p> <p>Set to "Y" to use the secondary card number, "N" to use the primary card number. Default: "GLOBAL" to defer to the global configuration option.</p> |
| ext-device.id-number.label | <p>Customize the "ID Number" field label on the login page.</p> <p>An organization might want to do this if, for example, users need to enter their employee number to log in. Changing the "ID Number" field label to "Employee Number" makes the user experience more intuitive.</p> |
| ext-device.id-number.in-prompt | <p>Customize the "ID Number" field label on user credential prompts.</p> <p>An organization might want to do this if, for example, users need to enter their employee number to log in. Changing the "ID Number" field label to "Employee Number" makes the user experience more intuitive.</p> |
| ext-device.id-number.mask | <p>Specify whether or not the PaperCut MF Login screen masks the characters entered in the ID number field with asterisks (*).</p> <p>This is a global config key.</p> <p>Values: Y (mask with asterisks), N (do not mask with asterisks; display characters)</p> <p>Default: Blank (N)</p> <p>Note: This is applicable only if the Identity number authentication option is selected. For more information, see 4.3 User authentication.</p> |
| ext-device.toshiba.welcome-text | <p>The text displayed on the 'welcome screen' (the screen displayed after pressing 'Start' from the ready screen). This text can be used to provide specific information about logging in to the device. Default: DEFAULT (uses the default application text).</p> <p>Note: This setting is overridden by the ext-device.home-screen.show-balance setting for users who have an auto-chargeable account.</p> |
| ext-device.toshiba.locale-override | <p>Used to override the language displayed on the device. This is the 4-letter language code for the required language. E.g. "FR_fr" for French.</p> |

`ext-device.toshiba.limit-reference.duplex`

Used at log in time, to assume whether the copying is going to be duplex or not. This is used to decide if we have enough quota to do a single copy.

Note: The limit quota reference configurations are used in a different way than the standard limit references, such as, *ext-device.toshiba.limit-reference.duplex*. The standard ones are used at log in time to decide if the user has permission to do copies, assuming they are going to try to do at least one page of a certain page size and whether it will be duplex or not. The limit quota reference configurations are used to set the page costs for quotas on the copier. For example, if PaperCut is told to charge \$0.50 for A3 pages, and *ext-device.toshiba.limit-reference.quota.large-paper-size* is set to A3, then this will tell the copier that large-pages cost \$0.50.

`ext-device.toshiba.limit-reference.grayscale`

Used at log in time, to assume whether the copying is going to be grayscale or not. This is used to decide if we have enough quota to do a single copy. By default, this is set to *N* and we assume a color copy.

Note: The limit quota reference configurations are used in a different way than the standard limit references, such as, *ext-device.toshiba.limit-reference.duplex*. The standard ones are used at log in time to decide if the user has permission to do copies, assuming they are going to try to do at least one page of a certain page size and whether it will be duplex or not. The limit quota reference configurations are used to set the page costs for quotas on the copier. For example, if PaperCut is told to charge \$0.50 for A3 pages, and *ext-device.toshiba.limit-reference.quota.large-paper-size* is set to A3, then this will tell the copier that large-pages cost \$0.50.

`ext-device.toshiba.limit-reference.paper-size`

Used at log in time, to assume what page size the copying is going to use. This is used to decide if we have enough quota to do a single copy. By default, for the United States this size is *Letter* and elsewhere it is *A4*.

Note: The limit quota reference configurations are used in a different way than the standard limit references, such as, *ext-device.toshiba.limit-reference.duplex*. The standard ones are used at log in time to decide if the user has permission to do copies, assuming they are going to try to do at least one page of a certain page size and whether it will be duplex or not. The limit quota reference configurations are used to set the page costs for quotas

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| | <p>on the copier. For example, if PaperCut is told to charge \$0.50 for A3 pages, and <i>ext-device.toshiba.limit-reference.quota.large-paper-size</i> is set to A3, then this will tell the copier that large-pages cost \$0.50.</p> |
| ext-device.toshiba.limit-reference.quota.duplex | <p>Whether we consider the page to be duplex for the page quota. By default, we consider the page to be duplex so we don't overcharge the user.</p> <p>Note: The limit quota reference configurations are used in a different way than the standard limit references, such as, <i>ext-device.toshiba.limit-reference.duplex</i>. The standard ones are used at log in time to decide if the user has permission to do copies, assuming they are going to try to do at least one page of a certain page size and whether it will be duplex or not. The limit quota reference configurations are used to set the page costs for quotas on the copier. For example, if PaperCut is told to charge \$0.50 for A3 pages, and <i>ext-device.toshiba.limit-reference.quota.large-paper-size</i> is set to A3, then this will tell the copier that large-pages cost \$0.50.</p> |
| ext-device.toshiba.limit-reference.quota.large-paper-size | <p>The reference paper size that we consider to be a large paper size for the zero stop page costs. By default, for the United States this size is <i>Ledger</i> and elsewhere it is A3.</p> <p>Note: The limit quota reference configurations are used in a different way than the standard limit references, such as, <i>ext-device.toshiba.limit-reference.duplex</i>. The standard ones are used at log in time to decide if the user has permission to do copies, assuming they are going to try to do at least one page of a certain page size and whether it will be duplex or not. The limit quota reference configurations are used to set the page costs for quotas on the copier. For example, if PaperCut is told to charge \$0.50 for A3 pages, and <i>ext-device.toshiba.limit-reference.quota.large-paper-size</i> is set to A3, then this will tell the copier that large-pages cost \$0.50.</p> |
| ext-device.toshiba.limit-reference.quota.small-paper-size | <p>The reference paper size that we consider to be a small paper size for the zero stop page costs. By default, for the United States this size is <i>Letter</i> and elsewhere it is A4.</p> <p>Note: The limit quota reference configurations are used in a different way than the standard limit references, such as, <i>ext-device.toshiba.limit-reference.duplex</i>. The standard ones are used at log in time to decide if the user has permission to do copies, assuming they are going to try to</p> |

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| | do at least one page of a certain page size and whether it will be duplex or not. The limit quota reference configurations are used to set the page costs for quotas on the copier. For example, if PaperCut is told to charge \$0.50 for A3 pages, and <i>ext-device.toshiba.limit-reference.quota.large-paper-size</i> is set to A3, then this will tell the copier that large-pages cost \$0.50. |
| <code>ext-device.toshiba.log-highest-id</code> | <p>The highest log id that we have processed so far. Used to determine what log entries to look at next from the copier.</p> <p>If the device's hard disk drive has been erased or replaced, it might stop sending copy job logs to PaperCut. To prevent this from happening, set this value to -1 after erasing the drive.</p> |
| <code>ext-device.toshiba.port-num</code> | The port number used for ODCA (Off Device Customization Architecture) as set up in TopAccess. |
| <code>ext-device.toshiba.scan-port-num</code> | The Web Services Scan port as configured on the Toshiba MFD that is used to access the device's scanning service. On eBN devices, the value is updated automatically to reflect the value read from the device. On eBX devices, the value needs to be updated manually, depending on the value set. |
| <code>ext-device.toshiba.serial-number</code> | The serial number of the device that was last queried from the device. This is used so that we know if the device changes across restarts of the PaperCut Application Server. |
| <code>system.network-address</code> | <p>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.</p> <ul style="list-style-type: none">Values: Network IP address or FQDN (Fully Qualified Domain Name) of the PaperCut MF Application Server used by the device for inbound connections. <p>Note: For more information, see 4.1.1 Inbound connections to PaperCut MF Application Server</p> |

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| ext-device.toshiba.secure-app-server-url | <p>When set to “Y”, the MFP will use SSL for EWB (Embedded Web Browser) login/logout events and for integrated scanning events sent to the PaperCut server.</p> <p>Default: “N” (EWB requests and events will not be encrypted).</p> <p>For more information, see 4.2.2 HTTPS Security (recommended)</p> |
| ext-device.toshiba.secure-odca | <p>When set to “Y”, PaperCut will use SSL for the SOAP communications with ODCA. This will ensure the setting of quotas and the Toshiba log information is encrypted.</p> <p>Default: “N” (ODCA messages will not be encrypted).</p> <p>For more information, see 4.2.1 Enable secure ODCA in PaperCut and 4.2.2 HTTPS Security (recommended)</p> |
| ext-device.toshiba.secure-scanning | <p>When set to “Y”, PaperCut will use SSL for the SOAP communications to control integrated scanning. This will, for example, ensure the retrieval of scanned images are encrypted.</p> <p>Default: “N” (Integrated scanning messages will not be encrypted).</p> <p>For more information, see 4.2.2 HTTPS Security (recommended)</p> |
| ext-device.toshiba.overrun-offset | <p>Used to reduce the chance of the overrun of zero stop causing the balance to go negative. It works by submitting to the MFD for its quota, the balance of the account minus the overrun offset. For example, if the account had \$2 and the overrun-offset was \$0.20 then the MFD would be told the account has a balance of \$1.80 to make sure it stops printing earlier to avoid overrun.</p> <p>NOTE: The problem with modifying this setting is that it can then prevent the user from doing any printing when they reach below that threshold. For example, if this amount is set to \$0.20, and they have enough money to print a \$0.10 job, they will be denied (which might not be expected by the user). Do not change this setting unless you understand the repercussions.</p> <p>Default: “0” (Do not subtract anything from the account balance sent to the MFD)</p> |

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| ext-device.toshiba.login-credit-check | <p>When set to "Y" it will always do a credit check at login time to decide whether to allow the user copier access. If set to "N", then PaperCut will rely on the zero-stop mechanism on the device to prevent doing a copier function without enough credit. Since zero-stop is not supported for Faxing, having this configuration enabled might be useful to prevent users from faxing without enough credit.</p> <p>Default: N (don't do credit check on login; rely on zero-stop)</p> |
| ext-device.toshiba.direct-to-release-page | <p>Configure the workflow to display the PaperCut MF Print Release screen after login.</p> <p>Values: Y, N</p> <p>Default: N</p> |
| ext-device.toshiba.show-printer-errors | <p>When set to "Y", MFD errors will be shown on the Print Release page.</p> <p>Default: Y</p> |
| ext-device.toshiba.no-access-on-printer-errors | <p>When set to "Y", MFD errors will be shown on the Welcome page and the MFD will be locked down so that no operations are allowed.</p> <p>Default: N</p> |
| ext-device.toshiba.delete-suspended-jobs-on-logout | <p>When set to "Y", any jobs in suspended state on the MFD (such as jobs which cannot continue because of an error on the MFD) will be deleted when the user logs out.</p> <p>Default: N</p> |
| ext-device.toshiba.calculate-printer-errors-using-tray-data | <p>When set to "Y", we will only consider the MFD to be in "No Paper" error state if all the trays of a particular paper size are out of paper. When set to "N", any tray out of paper will cause the MFD to be in error.</p> <p>Default: Y (always look at the MFD's tray data to determine "No Paper")</p> |
| ext-device.block-release-on-error.snmp-error-list | <p>Specify the errors that will prevent jobs from being released. This is a global config key.</p> <ul style="list-style-type: none">• DEFAULT—includes noPaper, doorOpen, jammed,offline, inputTrayMissing, outputTrayMissing, markerSupplyMissing, outputFull |

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| | <ul style="list-style-type: none"> A comma-separated list of error types. Valid error types include lowPaper, noPaper, lowToner, noToner, doorOpen, jammed, offline, serviceRequested, inputTrayMissing, outputTrayMissing, markerSupplyMissing, outputNearFull, outputFull, inputTrayEmpty, overduePreventMaint |
| ext-device.toshiba.initial-native-screen | <p>Choose the first native device screen that is displayed, when the user clicks Access Device from the PaperCut Home screen. The native device screens available are: Menu, Home, Scan, Fax, Print, eFiling, and Copy.</p> <p>Values: Any one of the above native device screens, entered using any case (not case sensitive).</p> <p>Default: DEFAULT (Copy screen)</p> |
| ext-device.toshiba.header-background-color | <p>The background color of the header.</p> <p>Values: Any valid HTML color name or hexadecimal notation of the color (#RRGGBB); where "RR" is the red component, "GG" is the green component and "BB" is the blue component.</p> <p>Default: DEFAULT (#fbfafa)</p> <p>See 4.9.1 Header colors</p> |
| ext-device.toshiba.header-font-color | <p>The color of the text in the header.</p> <p>Values: Any valid HTML color name or hexadecimal notation of the color (#RRGGBB); where "RR" is the red component, "GG" is the green component and "BB" is the blue component.</p> <p>Default: DEFAULT (#888888)</p> <p>See 4.9.1 Header colors</p> |
| ext-device.home-screen.show-balance | <p>Configure the PaperCut Home screen to display the following based on the type of user (restricted or unrestricted):</p> <ul style="list-style-type: none"> auto-chargeable account details AND balance on the PaperCut Home screen – for restricted users only auto-chargeable account details on the PaperCut Home screen – for unrestricted users <p>This is applicable only to users who have either of the following Account Selection options enabled on the Admin web interface (Users > User List > User Details):</p> <ul style="list-style-type: none"> Automatically charge to personal account OR Automatically charge to a single shared account <p>This key can set in Options > Config editor (advanced).</p> <p>Values: Y, N, Default</p> <p>Default: DEFAULT (N)</p> <p>Setting this to Y displays the auto-chargeable account and balance, based on the type of user (restricted or unrestricted).</p> <p>Note: This overrides the ext-device.toshiba.welcome-text config key.</p> |

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| | <p>Note: If the user has print jobs waiting to be released, then the PaperCut Home screen displays only the print jobs waiting to be released. After the user has actioned the print jobs waiting to be released, the PaperCut Home screen reverts to the display based on the type of user (restricted or unrestricted) as per the config key setting.</p> |
| <code>ext-device.toshiba.show-job-status-button</code> | <p>Configure the PaperCut Print Release page to display the Job Status button on the Print Release page to allow users to access the native device's job status page and view the status of print/fax/scan jobs.</p> <p>This is applicable only to Toshiba devices with no printer error, running the Embedded Web Browser (EWB) version 2.1.37+.</p> <p>Values: Y, N, Default</p> <p>Default: DEFAULT (Y)</p> |
| <code>ext-device.toshiba.device-functions-on-login</code> | <p>Configure the workflow to suppress the display of the PaperCut MF Home screen after login.</p> <p>Values: Y, N</p> <p>Default: N</p> <p>Setting this to N – does not suppress the PaperCut MF Home screen after login. Any one of the following screens maybe displayed, based on other settings:</p> <ul style="list-style-type: none">• the PaperCut MF Home screen, <i>or</i>• the PaperCut MF Print Release screen, <i>or</i>• the PaperCut MF Select Account screen, <i>or</i>• the PaperCut MF Account Details screen, <i>or</i>• the PaperCut MF Account Confirmation screen <p>Setting this to Y – suppresses the PaperCut MF Home screen after login. Any one of the following screens maybe displayed, based on other settings:</p> <ul style="list-style-type: none">• the PaperCut MF Select Account screen, <i>or</i>• the PaperCut MF Account Details screen, <i>or</i>• the PaperCut MF Account Confirmation screen, <i>or</i>• the native device functions screen |
| <code>ext-device.home-screen.force-show</code> | <p>After accessing PaperCut MF on the device, configure the workflow to display the PaperCut MF Home screen, irrespective of whether or not Integrated Scanning is enabled and irrespective of whether or not print jobs are waiting to be released.</p> <p>Set this global config key in the PaperCut MF Admin web interface: Options > Config editor (advanced).</p> <p>Values: Y, N</p> <p>Default: N</p> |

ext-device.toshiba.skip-release-screen-when-no-jobs

After accessing PaperCut MF on the device, configure the workflow to suppress the PaperCut MF Print Release screen, when there are no print jobs waiting to be released and either of the following conditions are met:

- either the config key ext-device.toshiba.direct-to-release-page is set to Y, or
- Integrated Scanning is not enabled and the config key ext-device.toshiba.app-buttons.enabled is set to N

Values: Y, N

Default: N

Setting this to Y, suppresses the PaperCut MF Print Release screen. Any one of the following screens is displayed, based on other settings:

- the PaperCut MF Home screen, or
- the PaperCut MF Select Account screen, or
- the PaperCut MF Account Details screen, or
- the PaperCut MF Account Confirmation screen, or
- the native device functions screen

Note: This is recommended only if the device is used more for copying rather than printing.

Setting this to N, displays the PaperCut MF Print Release screen.

Note: This is recommended if the device is used for all functions (printing, scanning, copying).

ext-device.toshiba.app-buttons.enabled

Toggle the display of additional buttons to access a third party application from the PaperCut MF Home screen.

Values: Y, N

Default: N

Setting this to Y requires you to configure at least one of the following:

- ext-device.toshiba.app-button1.label and ext-device.toshiba.app-button1.url, or
- ext-device.toshiba.app-button2.label and ext-device.toshiba.app-button2.url

Setting this to N overrides the configuration of:

- ext-device.toshiba.app-button1.label
- ext-device.toshiba.app-button1.url
- ext-device.toshiba.app-button2.label
- ext-device.toshiba.app-button2.url

ext-device.toshiba.app-button1.label

Toggle the display of an additional button to access a third party application from the PaperCut MF Home screen by configuring the text of the button.

Values: Relevant button text

Note: You must set the config keys ext-device.toshiba.app-buttons.enabled and ext-device.toshiba.app-button1.url.

Default: NONE

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| ext-device.toshiba.app-button1.url | <p>Specify the relevant third party application's URL that the the additional button on the PaperCut MF Home screen links to.</p> <p>Values: URL of the relevant third party application</p> <p>Note: You must set the config keys ext-device.toshiba.app-buttons.enabled and ext-device.toshiba.app-button1.label.</p> <p>Default: NONE</p> |
| ext-device.toshiba.app-button2.label | <p>Toggle the display of an additional button to access a third party application from the PaperCut MF Home screen by configuring the text of the button.</p> <p>Values: Relevant button text</p> <p>Note: You must set the config keys ext-device.toshiba.app-buttons.enabled and ext-device.toshiba.app-button2.url.</p> <p>Default: NONE</p> |
| ext-device.toshiba.app-button2.url | <p>Specify the relevant third party application's URL that the additional button on the PaperCut MF Home screen links to.</p> <p>Values: URL of the relevant third party application</p> <p>Note: You must set the config keys ext-device.toshiba.app-buttons.enabled and ext-device.toshiba.app-button2.label.</p> <p>Default: NONE</p> |
| ext-device.toshiba.release-show-cost | <p>Toggle the display of the cost of held print jobs on the PaperCut MF Print Release screens on the device.</p> <p>This is a device-specific config key.</p> <ul style="list-style-type: none"> • Values: Y, N • Default: Y <p>Note: Setting this to N also hides the account balance and does not display the savings based on other changes made to held print job settings. For more information, see 4.6.2 User selection of job attributes</p> |
| ext-device.toshiba.login-instruction | <p>Customize the text that appears on the PaperCut MF Login screen. For example, instructions to help users log in to PaperCut MF on the device.</p> <p>Values: Any text, DEFAULT</p> <p>Default: DEFAULT (device-specific PaperCut MF text)</p> <p>Note: To add a line break, use \n. For example, PaperCut Software\nSwipe your card to log in.</p> |
| ext-device.toshiba.disable-ocr | <p>This configuration is only applicable to devices which have MFD embedded OCR installed on them. If set to "Y" and Integrated Scanning is used to produce a PDF format document, it prevents it from producing a searchable PDF file using the MFP's OCR software. This should also speed up the scanning process evident particularly on high page count jobs, as no native OCR software is needed to be run.</p> |

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| | <p>Values: Y, N, DEFAULT Default: DEFAULT (N)</p> |
| <p>ext-device.toshiba.scan.prompt.checkbox.checked</p> | <p>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).</p> <p>This is a device-specific config key.</p> <ul style="list-style-type: none"> • Values: Y (checked by default; can be changed by the user), N (unchecked by default; can be changed by the user) • Default: Y <p>Note:</p> <ul style="list-style-type: none"> • A checked Prompt for more pages checkbox displays the PaperCut MF Scan More or Finish screen (with the three buttons – Scan next page, Scan new document, Finish), to provide users with the option of adding more pages to the scan job. • An unchecked Prompt for more pages checkbox causes the PaperCut MF Scan More or Finish screen (with the three buttons – Scan next page, Scan new document, Finish) to not be displayed; the process of sending the completed scan job to the user (scan transfer) is automatically initiated, and only the PaperCut MF Scan Complete screen (with scan completed or failed status) is displayed. As a result, users are not provided with the option of starting a new scan job. • For more information, see 4.7.4.1 Integrated scan workflow. |
| <p>ext-device.toshiba.scan.jpeg.device-compression</p> | <p>Specify the level of compression used on the device for creating JPEG type scan files. Higher compressed files are smaller in size but can have reduced quality.</p> <p>This is a device-specific config key.</p> <ul style="list-style-type: none"> • Values: low, medium, high or default • Default: DEFAULT (medium) |

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| ext-device.toshiba.scan.jpeg.d evice-preferred-format | <p>Specify the preferred file format created by the device for the file type of JPEG. The format chosen depends on the format supported by the device and the priority PaperCut uses. For example, on a 5005AC and 2505AC, it only supports JFIF format.</p> <p>This is a device-specific config key.</p> <ul style="list-style-type: none">• Values: jfif, exif and jpeg2k• Default: DEFAULT (default priority: jfif, exif, jpeg2k) |
| ext-device.toshiba.scan.pdf.d evice-compression | <p>Specify the level of compression used on the device for creating PDF type scan files. Higher compressed files are smaller in size but can have reduced quality.</p> <p>This is a device-specific config key.</p> <ul style="list-style-type: none">• Values: low, medium, high or default• Default: DEFAULT (medium) |
| ext-device.toshiba.scan.pdf.d evice-preferred-format | <p>Specify the preferred file format created by the device for the file type of PDF. The format chosen depends on the format supported by the device and the priority PaperCut uses. For example, searchable formats are only supported if the OCR feature is installed on the device.</p> <p>Note: the slim-pdf format is considerably smaller in size but also takes considerably longer to generate the file.</p> <p>This is a device-specific config key.</p> <ul style="list-style-type: none">• Values: searchable-pdf, pdf, searchable-pdf-a, pdf-a, searchable-slim-pdf, slim-pdf• Default: DEFAULT (searchable-pdf with device OCR or pdf) |
| ext-device.toshiba.scan.tiff.d evice-compression | <p>Specify the level of compression used on the device for creating TIFF type scan files. Higher compressed files are smaller in size but can have reduced quality.</p> <p>This is a device-specific config key.</p> <ul style="list-style-type: none">• Values: low, medium, high or default• Default: DEFAULT (medium) |
| ext-device.toshiba.scan.tiff.d evice-preferred-format | <p>Specify the preferred file format created by the device for the file type of TIFF. The format chosen depends on the format supported by the device, the priority PaperCut uses and whether colour or black & white is chosen. The color setting does not support the following formats: tiff-multi-g4, tiff-multi-g3mh, tiff-single-g4, tiff-single-g3mh. For an example of model support, the 2505AC supports: tiff-single-g4, tiff-single-jpeg-tn2, tiff-multi-g4, tiff-multi-jpeg-tn2.</p> <p>This is a device-specific config key.</p> |

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| | <ul style="list-style-type: none">• Values: tiff-multi-g4, tiff-multi-g3mh, tiff-multi-uncompressed, tiff-multi-jpeg-tn2, tiff-single-g4, tiff-single-g3mh, tiff-single-uncompressed, tiff-single-jpeg-tn2• Default: DEFAULT (tiff-multi-g4) |
| ext-device.inactivity-timeout-secs | <p>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.</p> <ul style="list-style-type: none">• Values: Any positive number (seconds)• Default: 60 (seconds) <p>Note: This comes into effect only if it is lower than the value of the device's timeout. However, if it is higher, then it is overridden by the lower value of device's timeout.</p> |
| ext-device.toshiba.timeout.scan-prompt-send.secs | <p>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.</p> <ul style="list-style-type: none">• Values: 1-300 (seconds)• Default: 30 (seconds) <p>Note: This timeout temporarily deactivates the PaperCut MF timeout (ext-device.inactivity-timeout-secs) and the device timeout.</p> |
| ext-device.toshiba.timeout.complete-scan-job.secs | <p>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 Completes screen (with scan completed or failed status), is automatically logged out. This is a device-specific config key.</p> <ul style="list-style-type: none">• Values: 1-300 (seconds)• Default: 5 (seconds) <p>Note: This timeout temporarily deactivates the PaperCut MF timeout (ext-device.inactivity-timeout-secs) and the device timeout.</p> |
| ext-device.toshiba.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 applicable only 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](#).

ext-device.toshiba.access-device.label

Customize the text of the **Access Device** icon that appears on PaperCut MF screens.

This is a device-specific config key.

- Values: Any text, DEFAULT
- Default: DEFAULT (Access Device)

ext-device.toshiba.account-selection.bypass-for-default-account

Customize the workflow to toggle the display of the PaperCut MF Select Account screen.

This is a device-specific config key.

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

Note:

- Setting this to Y – enables the device to hide the PaperCut MF Select Account screen only if ALL the following conditions are also met:
 - the device is enabled with **Show account confirmation**,
 - the user is already configured with a **Default shared account**, and this account does not require user interaction for invoice comments,
 - the user is accessing device functions.
 - Setting this to N – enables the device to show the PaperCut MF Select Account screen.
-

5 Known Limitations

5.1 Zero stop when Copying and Scanning

Since SDK version 2, we introduced the Zero Stop capability, enabling jobs to potentially be stopped part way through when the user runs out of quota in PaperCut. In an ideal implementation, PaperCut would be able to control exactly how many pages a user can copy and always prevent the user from overdrawing their account. Toshiba offers the ability to limit page counts but has the following limitations:

- The copier does not seem to stop immediately when limits are reached for copying. There is a small delay meaning that users can overrun their account below zero by about 2 pages. This can be avoided by using `ext-device.toshiba.overrun-offset` and setting to an appropriate amount (please see the advanced configuration section for more details), however, there are drawbacks with doing this.
- Ideally PaperCut would be informed of the user selection prior to copying or scanning and can accept/reject the job at this point. Current Toshiba API implementations prevent this level of pre-approval.
- SDK version 3 supports the page costs of color, grayscale, small page size and large page size. It does not support costs or discounts for duplex and individual pages sizes other than the 2 sizes of small and large. By default, the small paper size is set to `ext-device.toshiba.limit-reference.quota.small-paper-size` which is *US letter* in the United States and *A4* everywhere else. The large paper size is set to `ext-device.toshiba.limit-reference.quota.large-paper-size` which is *Ledger* in the United States and *A3* everywhere else.

When the quota limit is exceeded a popup message on the device will alert the user to having run out of quota.



If the scanning is stopped midway through when scanning off the platen, then the Toshiba error message is different to above, instead it says, *"The quota has been reached. Only the previously scanned documents will be processed"*. Zero stop is not supported when scanning (PaperCut MF's Integrated Scanning and device's scanning). If the scanning is denied from the outset, then the standard message above will be shown.

5.2 Zero stop when Faxing

Toshiba devices currently do not stop fax jobs mid-way when users run out of credit. Instead, users can complete the fax job and possibly incur an overdraft in their accounts.

5.3 Internal MFD usernames

Logging in to the MDS session is not available for usernames registered internally on the device. These usernames typically include:

- Undefined
- Admin
- Service
- Auditor

- Guest

NOTE: Other internal users can be added by an administrator.

If a PaperCut username matches an internal username (not case sensitive), login will fail and an error message will be displayed.

The complete list of internal MFD usernames is available in TopAccess under “User Management > User Accounts”.

5.4 Bypassing the System

It is important that the administrators take care to prevent users from bypassing the system and directly accessing the copier. Likewise, it’s also important that administrators know how to bypass/disable the system if direct copier access is required – say to change advanced system settings. Administrators should take the following precautions:

- The copier’s built in admin password should be changed and always kept secure.
- The power and network cable should be securely connected. The system is designed to be robust and record copier usage if the power is lost during copying, but it is possible to start copying before the embedded application starts after restarting the copier.
- Apply IP filtering settings in the MFD to restrict unauthorised direct printing (for more information please refer to online Help in TopAccess or the Administrator Guide)

5.5 Scan from feeder

When scanning from the document feeder, the specified paper size and orientation is ignored. The scan job is always the full size of the original document. For example, if the original document is A3 landscape, and you specify to scan it to A4 portrait, the scan will be A3 landscape.

5.6 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

I can’t see the PaperCut login screen on the device panel.

If the PaperCut login screen is not displayed, check the following:

- **Check the MFD Embedded Web Browser (EWB) is installed**
- **Ensure the EWB settings are correct**
- **Check MDS mode is enabled**

Check the MFD Embedded Web Browser (EWB) is installed

The Toshiba Embedded Web Browser (EWB) is an optional module licensed from Toshiba. It provides a web-based interface for print release, to select accounts/cost-centers, and to associate unknown card numbers from users. If your Toshiba MFD does not have the EWB module enabled, contact your Toshiba dealer.

Ensure the EWB settings are correct

With “Toshiba v3+”, Papercut updates the EWB settings automatically on registration of a new device. There are two EWB settings updated. If you cannot see the PaperCut login screen, review the settings as follow:

1. In your web browser, log in to the MFD web interface (TopAccess) as the “Admin” user.
2. Select the “Administration” tab.
3. Navigate to the “Administration” -> “EWB” page.
4. Under the “Home Page Setting”, set the “Home Page” by changing “server-address” to the address of your PaperCut server, and “device-id” to the device id as set up in PaperCut.

`http://server-address:9191/device-web/toshiba/device-id/home`

Alternatively, to use an encrypted HTTPS connection (advisable when using card-association) enter: `https://server-address:9192/device-web/toshiba/device-id/home`

5. Under the “Login URL Setting in MDS Mode”, in “Login URL in MDS Mode”, change “server-address” to the address of your PaperCut server, and “device-id” to the device id as set up in PaperCut

`http://server-address:9191/device-web/toshiba/device-id/login`

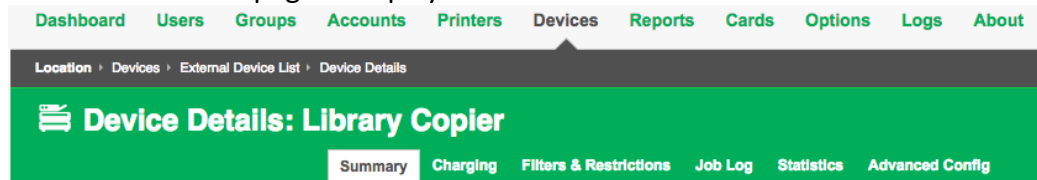
Alternatively, to use an encrypted HTTPS connection (advisable when using card-association) enter: `https://server-address:9192/device-web/toshiba/device-id/login`

NOTE: To use HTTPS, you must have an officially signed SSL certificate (e.g. from Verisign, Thawte, etc) installed on the PaperCut Application Server and use the server’s DNS name. Without this, the Toshiba embedded web browser displays a certificate warning message before displaying the page. For more information, see [Generating an SSL/HTTPS Key](#) in the PaperCut manual.

Determine the device Id

1. Log in to the PaperCut Admin web interface as an Administrator.
2. Click “Devices”.
3. Select a device.

The Device Details page is displayed.



4. The browser’s URL has the following pattern in the query parameters:
`?service=direct/1/DeviceList/selectDevice&sp=1<device-id>`
 where <device-id> is the Id of the device.

Check MDS mode is enabled

Toshiba MDS V3 offers a new authentication mode called MDS. With MDS mode, an external authentication server can control the authentication process.

When you register a new “Toshiba v3+” device in PaperCut, the device’s MDS mode is enabled. This includes any dependency, such as, the Authentication Type, which is set to MFD Local Authentication.

If you cannot see the PaperCut login screen, review the setting in TopAccess:

1. In your web browser, log in to the MFD web interface (TopAccess) as the “Admin” user.
2. Navigate to “Administration > Setup > General”.
3. Under “Device Information”, check that the “MDS Mode” setting is enabled

| | |
|---|--|
| General Setting | |
| Device Information | |
| Name | MFP11699189 |
| Copier Model | TOSHIBA e-STUDIO5005AC |
| Serial Number | CFEF32919 |
| MAC Address | 00:80:91:b2:83:f5 |
| Save as File & e-Filing Space Available | 120827 MB |
| Fax Space Available | 958 MB |
| MDS Mode | Enable  |
| Data Cloning Function | Enable  |
| USB Direct Print | Enable  |
| Location | |
| Geo Location | geo:00,180 |
| Contact Information | |
| Service Phone Number | 1300-887-600 |
| Administrative Message | |

NOTE: If MDS mode is set to disabled, and you are unable to change it manually, click the question mark next to it to check which of the dependencies you need to update first.

My Toshiba device is not logging any copy/fax/scan jobs? What's wrong?

There are several possible problems. Check the following:

- In the PaperCut admin site, go to the “Devices” tab and select the device:
 - Verify that the “Device hostname / IP” is correct.
 - Verify that the appropriate “Device Functions” are enabled. i.e. To track faxes, ensure “Track & control faxing” is enabled.
 - Check the Device Status on this page (or in Status column of Device List) to ensure no errors are occurring.
 - Check that the Device’s administrator username and password are correct.
- Verify that the 08 service mode settings have been changed.
- Verify that ODCA has been enabled and the default port of 49629 was used.
- Verify the correct version of the firmware is running.

A user has overrun their quota during a copy job. Why didn't it stop them earlier?

There are several possible reasons for this:

- A copy job tends to overrun its quota by at least 2 pages probably because there are at least 2 pages in the device that have not yet come out of the copier. This is a restriction of the device.
- You have used more advanced costs than just color, grayscale, small paper size, or large paper size, which are all that MDS V3 provides direct support for. For example, you have set a duplex discount and by default PaperCut assumes all pages are duplex (according to *ext-device.toshiba.limit-reference.quota.duplex*).

The card reader isn't working? What's wrong?

Firstly, ensure that you are using a compatible card reader (see 4.4.1 Supported card readers).

If you are using a compatible card reader the most likely cause is a configuration issue:

- Make sure the card reader is connected while the device is booting up. Try rebooting the device.
- Check the 08 codes used to enable the card reader (e.g. 3500)

What is the IP address of my PaperCut Server?

Use operating system command-line tools such as ipconfig or ifconfig to determine this.

I have thousands of accounts representing my clients. Will the system handle this?

Yes. We have designed the system to handle thousands of Shared Accounts. Users with many accounts will also be presented with some “power options” to help them find accounts including keywords based search.

Login on my Toshiba device is very slow

This can be caused by incorrect network settings on the copier such as incorrect DNS servers, subnet masks and similar. We recommend checking all network settings. If this fails to address the issue, review the following:

1. Make sure you are running PaperCut 16.4 or above and the latest device firmware.
2. On the device in TopAccess, switch off all DNS servers and enter all network addresses as IP numbers. Bad DNS server settings, or slow reverse DNS can slow down login times.

Card self-association is enabled but the user is still prompted for a PIN. If they enter their PIN it doesn't work. What is wrong?

If Card Authentication is requiring a PIN and card self-association is enabled, then the user must enter a PIN of "0" when prompted for a PIN. If they enter any other PIN including their own PIN associated with the PaperCut account, it will not work.

I have enabled Identity Number authentication in PaperCut but it doesn't prompt me for the ID number. Why not?

You might not have enabled PIN code authentication in TopAccess on the MFD. With the correct firmware on the MFD, you must enable "PIN Code Authentication" in the "PIN Code Authentication Setting" under the Security tab. This requires a firmware version that supports this feature. Please check your device firmware is at or above the version listed in section 2.1 Supported devices.

I have enabled Swipe Card requiring a PIN in PaperCut but it doesn't prompt me for the PIN. Why not?

You might not have enabled "Require PIN Code" in the "Card Authentication Setting" in the Security tab in TopAccess. This requires the correct firmware on the MFD mentioned in section 2.1 Supported devices.

Users are unable to cancel their print jobs at the MFD. How can I fix this?

This is explained in section "2.4.9 Disable MFD control of print jobs (mandatory)" (Authenticate/Quota/Permission). Basically, to support the zero stop functionality, we have to force network print jobs to be owned by "printope" instead of the real username. Therefore, by default the MFD won't let the authenticated user delete the print jobs which it believes are owned by "printope". To override this, an 08 code needs to be set (it is also listed in the 08 code checklist in the appendix).

When a user chooses to copy using the Erasable Blue color option, why does the copy cost always default to 1.0 per page?

Even after setting copy color job costs for the "Small Erasable Blue" and "Large Erasable Blue" on the Admin web interface, the costs default to 1.00 on the device's web admin. To override this, manually set the copy color job costs on the device's web admin (**Counter > Quota Setting**) and click **Save**.

The screenshot shows the 'Quota Setting' web interface. At the top, there are 'Save' and 'Cancel' buttons. Below them is a section titled 'Quota Setting' with two radio buttons: 'Black Quota' and 'Job Quota'. The 'Job Quota' option is selected. Under 'Job Quota', there are two main categories: 'Print' and 'Scan'. Under 'Print', there are four items: 'Small Erasable Blue' (cost 1.00), 'Large Erasable Blue' (cost 1.00), 'Small Black' (cost 0.05), and 'Large Black' (cost 0.05). Under 'Scan', there are three items: 'Colour' (cost 0.10), 'Black' (cost 0.10), and 'Quota Near Empty Limitation' (cost 0.00). Each item has a text input field for the cost and a range indicator in parentheses, such as '(0.00-99.99)'.

| Category | Item | Cost | Range |
|----------|-----------------------------|------|--------------|
| Print | Small Erasable Blue | 1.00 | (0.00-99.99) |
| | Large Erasable Blue | 1.00 | (0.00-99.99) |
| | Small Black | 0.05 | (0.00-99.99) |
| | Large Black | 0.05 | (0.00-99.99) |
| Scan | Colour | 0.10 | (0.00-99.99) |
| | Black | 0.10 | (0.00-99.99) |
| | Quota Near Empty Limitation | 0.00 | (0.00-99.99) |

7 Uninstall PaperCut MF

To stop the Toshiba MFD from trying to authenticate with PaperCut and allow free copying on the device, the simplest option is to delete the device from PaperCut and then disable the “User Authentication Setting.” If all you do is this step, then it is very simple to re-enable the MFD for PaperCut again if you change your mind.

To disable the PaperCut authentication:

1. Log in to the device’s web administration (TopAccess) with a web browser.
2. In TopAccess, select “Administration” -> “Security”.
3. In the “User Authentication Setting” area, change “User Authentication” to “Disable”.
4. Click “Save”.

The screenshot shows the PaperCut MF web administration interface. At the top, there is a navigation bar with tabs: Setup, Security, Maintenance, and Registration. Below this, the 'Security' section is active, with sub-tabs for Authentication, Certificate Management, and Password Policy. A 'Save' button is visible. The main content area is divided into three sections: Department Setting, User Authentication Setting, and Card Authentication Setting. In the 'User Authentication Setting' section, the 'User Authentication' dropdown menu is set to 'Disable', which is highlighted with a red circle. Other settings in this section include 'Authentication failed print job/Raw Print Job' set to 'Print', 'Auto Release on Login' set to 'Disable', and 'Authentication Type' set to 'MFP Local Authentication'. The 'Card Authentication Setting' section at the bottom has two checkboxes: 'Card ID is used as User Name' and 'Create User Information Automatically', both of which are unchecked.

When you delete the device from PaperCut, it is making all necessary changes to device configuration to avoid the device communicating with the server in the future.

NOTE: Leave the MFD idle without any user interaction for at least the duration of the selected “Auto Clear” option, before deleting the device from PaperCut. If you do not, some of the PaperCut settings might remain on the device and an error message might be displayed.

Theoretically, you could reverse all the steps that you followed during the setup process. You could revert the 08 codes back to what they were and change all the TopAccess menu options back to what they were. However, disabling the authentication would be the prime thing that is required. Some other steps to be more complete could include:

- Disabling or Removing device in PaperCut device administration
- Disabling MDS Mode (if not done automatically)
- Disabling the ODCA option
- Unselecting the Job Quota Setting
- Reverting EWB settings
- Reverting email settings
- Reverting Home Directory settings
- Reverting settings for PaperCut shortcut on keys “1”

8 Appendix A: 08 Code Check list

| Description | Code | Setting | Factory Default | Category |
|--|--------|--|-----------------|-------------|
| ODCA Non Secure (Off Device Customisation Architecture) | 9820 | 1 | 1 | mandatory |
| ODCA Secure | 9819 | 1 | 0 | mandatory |
| Auto Clear timeout | 9110 | 4 | 3 | recommended |
| Disable Logout popup | 8723 | 0 | 1 | optional |
| Disable automatic Logout after fax send | 9987 | 2 | 0 | optional |
| USB Card Reader | 3500 | 60001 (e.g. Generic Keyboard Reader) – see 4.4.1 Supported card readers | 0 | optional |
| Setting when MFD embedded OCR is installed and PaperCut Integrated Scanning is enabled | 3786-0 | Sub-code 0 = 0 | Sub-code 0 = 1 | optional |
| Zero Stop for Copy and Scan | 6084 | 1 | 0 | optional |
| Disable MFD control of print jobs (Authenticate/Quota/Permission) | 3642 | Sub-code 0 = 1 | Sub-code 0 = 0 | mandatory |
| Description | Code | Setting | Factory Default | Category |

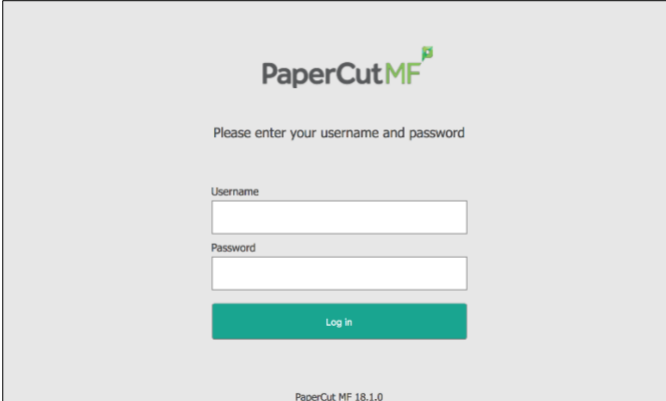
| | | | | |
|--|------|---|----------------|--------------|
| Allow anyone to manage print jobs at the MFD | 8726 | 1 | 0 | mandatory |
| Allow all users to delete their jobs from Private/Proof print screen on the copier | 9236 | 3 | 1 | mandatory |
| Web Services Scan Port | 3760 | Enter alternative port number if required | 50083 | optional |
| WSD scanning | 3755 | 1 | 1 | confirmation |
| No authentication for WSD scanning | 3642 | Sub-code 2 = 1 | Sub-code 2 = 0 | optional |
| Do not show missing home directory warning | 8722 | 1 | 0 | Optional |

9 Appendix B: TopAccess Settings Check list

| Description | Menu |
|----------------------------------|---|
| Review EWB (optional) | Administration -> Setup -> EWB |
| Review MDS Mode (optional) | Administration -> Setup -> General |
| ODCA Enabling | Administration -> Setup -> ODCA |
| Configure Home Directory & Email | Administration -> Security |
| Configure Home Directory | Administration -> Setup -> Save As File |

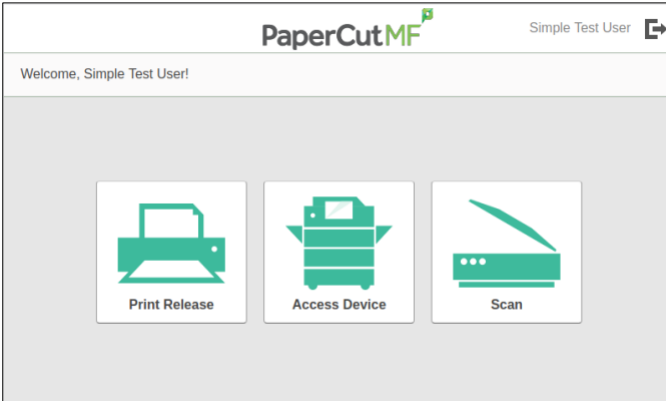
10 Appendix C: Device screens

User authentication:



The screenshot shows the PaperCut MF 18.1.0 user authentication interface. It features the PaperCut MF logo at the top, followed by the instruction "Please enter your username and password". Below this are two input fields: "Username" and "Password". A green "Log in" button is positioned below the password field. The version "PaperCut MF 18.1.0" is displayed at the bottom of the screen.

Home:



The screenshot shows the PaperCut MF home screen for a user named "Simple Test User". The header includes the PaperCut MF logo and the user's name with a profile icon. Below the header, a welcome message "Welcome, Simple Test User!" is displayed. The main area contains three large icons: "Print Release" (a printer icon), "Access Device" (a printer icon with a document), and "Scan" (a scanner icon). Each icon is labeled with its respective function.

Secure Print Release:

Access Device

PaperCut^{MF}

Advanced Test User

Select all jobs

Prep activities - week 1

1 copy, 2-sided, Grayscale, A4

moments ago

>

Prep activities - week 2

1 copy, 1-sided, Color, A4

4 minutes ago

>

Report template

2 copies, 2-sided, Grayscale, A4

1 hour ago

>

SchoolNewsLetter Template

1 copy, 1-sided, Color, A4

1 day ago

>

Job Status

☐ Print as grayscale
 ☐ Print as 2-sided

Print

<

PaperCut^{MF}

Advanced Test User

Print release > Prep activities - week 1

Time

Jun 15, 2018 1:16:33 PM

Copies

- 1 +

User

advanced test user

Duplex mode

1-sided 2-sided

Pages

1

Color mode

Color Grayscale

Account

Test Account

Page size

A4

Balance

\$100.00

Cost

\$1.15 Saved \$1.35

Reset to original

Print

Charging of jobs:

Account Confirmation

Account

Test Account

User

Advanced Test User

Balance

\$99.41

Change account

Access Device

Select Account

type account name

By Name By Code Search

My Personal Account

Test Account

PaperCut MF Integrated Scanning:

Scan Actions

Scan To Email

Scan To Folder

Scan To Cloud

Scan Details

Scan to Folder

Filename

scan_demo_2018-06-21-11-29-42

Color PDF

1-sided

A4 Portrait

300 DPI

Change settings

Prompt for more pages

Start

Scan Settings > Scan to Folder

Duplex mode

1-sided 2-sided

File type

PDF JPEG TIFF

Orientation

Portrait Landscape

DPI

100 200 300 600

Paper size

A3 A4 A5

Color mode

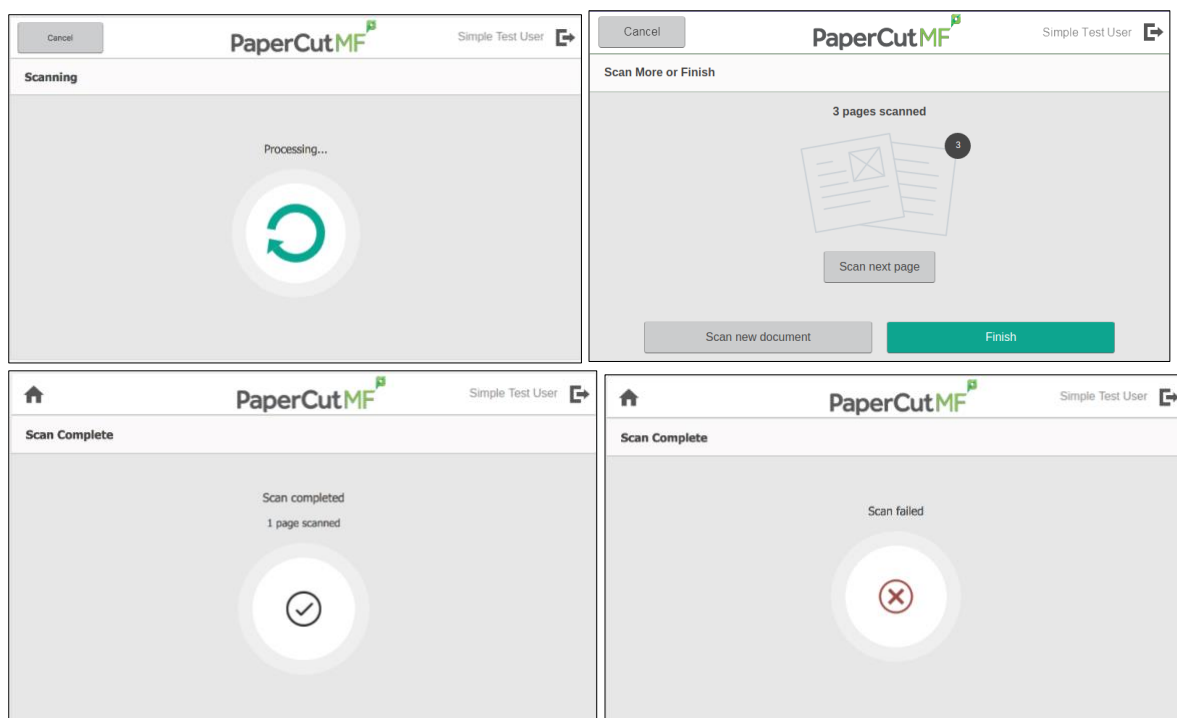
Color Grayscale B&W

Prompt for more pages

Start

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Basic experience:

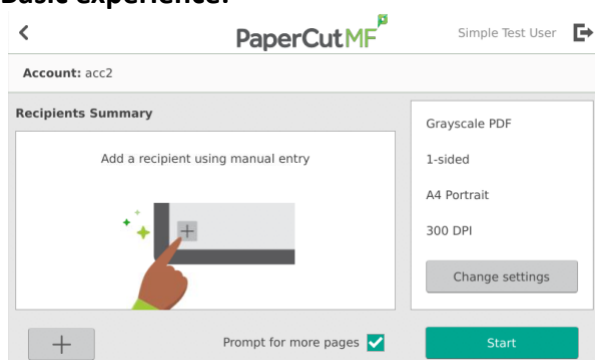


Figure 1 Empty state - Add a recipient using manual entry

Add Recipient

Fax number

Recipient name

Recipient company name

Cancel Add Recipient

Add Recipient

Fax number
2222 3333

Recipient name
Test User 1

Recipient company name
Test Company 1

Cancel Add Recipient

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

Recipients Summary

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

Grayscale PDF

1-sided

A4 Portrait

300 DPI

Settings

Manual Entry Additional pages ☒ Start

Figure 3 Multiple recipients

Advanced experience

Recipients Summary

Add a recipient using manual entry or phonebook

Grayscale PDF

1-sided

A4 Portrait

300 DPI

Change settings

+ Prompt for more pages ☒ Start

Figure 3 Empty state - Add a recipient using manual entry or select a recipient from the phonebook

PaperCut^{MF}

Test User

Account: My Personal Account

Balance: \$0.00

Fax number

2222 3333

Recipient name

Test User 1

Recipient company name

Test Company 1

Grayscale PDF

1-sided

A4 Portrait

300 DPI

Settings

Manual Entry

Phonebook

Additional pages

Start

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

PaperCut^{MF}

Test User

Select the recipient from the address book

Search for a contact

Search

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

PaperCut^{MF}

Test User

Select the recipient from the address book

test

Search

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

PaperCut^{MF}

Test User

Account: My Personal Account

Balance: \$0.00

Recipients Summary

Test User 1

2222 3333

Test User 2

1111 2222

Grayscale PDF

1-sided

A4 Portrait

300 DPI

Settings

Manual Entry

Phonebook

Additional pages

Start

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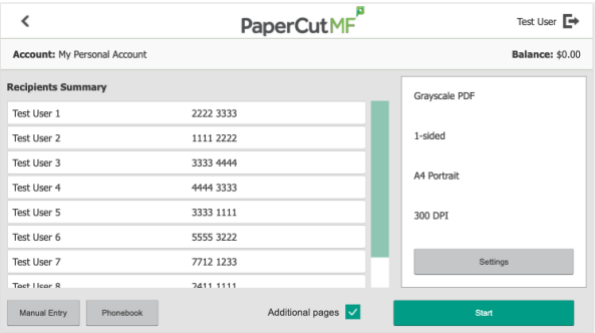


Figure 6 Select a recipient using search on the phone book and add to the scrollable list.