

# Kofax SafeCom HP Unified Client Administrator's Guide

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**KOFAX**

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# Preface

This guide is intended for administrators who are responsible for integrating Kofax SafeCom Unified Client software for use with HP MFP devices.

## Training


Kofax offers both classroom and online training to help you make the most of your product. To learn more about training courses and schedules, visit the [Kofax Education Portal](#) on the Kofax website.

## Getting help with Kofax products

The [Kofax Knowledge Base](#) repository contains articles that are updated on a regular basis to keep you informed about Kofax products. We encourage you to use the Knowledge Base to obtain answers to your product questions.

To access the Kofax Knowledge Base:

1. Go to the [Kofax website](#) home page and select **Support**.
2. When the Support page appears, select **Customer Support > Knowledge Base**.

 The Kofax Knowledge Base is optimized for use with Google Chrome, Mozilla Firefox, or Microsoft Edge.

The Kofax Knowledge Base provides:

- Powerful search capabilities to help you quickly locate the information you need.  
Type your search terms or phrase into the **Search** box, and then click the search icon.
- Product information, configuration details, and documentation, including release news.  
Scroll through the Kofax Knowledge Base home page to locate a product family. Then click a product family name to view a list of related articles. Please note that some product families require a valid Kofax Portal login to view related articles.

From the Knowledge Base home page, you can:

- Access the Kofax Community (for all customers).  
Click the **Community** link at the top of the page.
- Access the Kofax Customer Portal (for eligible customers).

Click the **Support** link at the top of the page. When the Customer & Partner Portals Overview appears, click **Log in to the Customer Portal**.

- Access the Kofax Partner Portal (for eligible partners).

Click the **Support** link at the top of the page. When the Customer & Partner Portals Overview appears, click **Log in to the Partner Portal**.

- Access Kofax support commitments, lifecycle policies, electronic fulfillment details, and self-service tools.

Go to the **General Support** section, click **Support Details**, and then select the appropriate tab.

## Chapter 1

# Introduction

## SafeCom HP Unified Client

SafeCom HP Unified Client is a solution for HP LaserJet, LaserJet Enterprise and PageWide Enterprise MFPs. It integrates with the touch-screen control panel of the HP MFP and offers user authentication by code and/or card.

SafeCom HP Unified Client works together with the SafeCom G4 Server software and is designed to help companies and organizations gain control over their printing costs and document security. The SafeCom solution can be enhanced with add-on modules to build customer specific and scalable solutions.

## Supported languages

SafeCom HP Unified Client supports the following display and input languages on the device:

- Chinese (S)
- Chinese (T)
- Czech
- Danish
- Dutch
- English
- Finnish
- French
- German
- Hungarian
- Italian
- Japanese
- Korean
- Norwegian
- Polish
- Portuguese
- Russian
- Spanish
- Swedish




- Thai
- Turkish

Safecom G4 Server and Safecom Administrator supports English only.

## Requirements

- Any networked HP LaserJet, LaserJet Enterprise and PageWide Enterprise MFP, printer, and scanner listed [here](#).
- SafeCom G4 Server installed
  - This release of SafeCom HP Unified Client requires SafeCom G4 Server version 5.10.0.10005.10.0.100 or above.
- HP device requirements in details:
  - Firmware 4.7.2 or newer
  - Touch screen resolution 800×600 or better
  - Partial clean should be performed if you are installing the SafeCom HP Unified Client onto a device which had the SafeCom Go HP client earlier or it was added to Device Server.

 If your SafeCom solution uses both Device Web Server and Device Server instances, then these must be installed on a separate server.

## Network requirements

The network must allow communication through certain network ports, including TCP ports 7500 and 7700, and UDP port 5742. If there is a Device Web Server in use, then port 8444 should be open too.

Refer to chapter TCP and UDP port numbers used by SafeCom in *SafeCom G4 Server Administrator's Guide*.


## Partial Disk Clean on supported devices

To remove the SafeCom Go solution from the device, first perform a partial disk clean.

To perform a partial disk clean:

1. Delete the device from the **SafeCom Device Server** where the device is added. See [Uninstall SafeCom HP Unified Client](#) for details.

The device must be in the idle state  in order for the deletion to be performed correctly.

 If the device is configured to another server, click the **Reconfigure Device** to force a reconfiguration of the device to your server.

2. Turn off the device.
3. Turn the device back on again.


4. Tap the HP icon when it appears.
5. When the next HP icon appears, tap it as soon as the device starts counting (for example 1/8) to enter the **Administrator** menu.
6. Select the **Partial clean** option.
7. Press **OK**.
8. Press **Back**.
9. Press **Continue**.

## SafeCom ID Devices

SafeCom HP Unified Client supports the following SafeCom ID devices:

- Kofax Micro Card Reader
- Kofax MX
- Kofax MX (Keyboard)
- HP Reader (CZ208A/X3D03A)
- Elatec TWN3
- Elatec TWN3 (Keyboard)
- RFIDeas pcProx (Y7C05A)

For additional information on the ID devices, see *Kofax SafeCom G4 Administrator's Guide*.

 ID devices require unique ID Device Licenses. SafeCom ID devices come with ID device licenses. ID device licenses for third-party ID devices must be purchased separately.

## HP Universal Print Driver

Download HP Universal Print Driver from the HP website. It can be used for PCL5, PCL6 and PostScript with SafeCom Pull Print if it is installed and run in Traditional mode, where UPD forwards the print data to the SafeCom Pull Port.

- The installation of the UPD can take several minutes, be patient.
- The print jobs produced with UPD can be large as everything is always rendered in color, even if the device does not support color. This goes for PCL5, PCL6, and PostScript. To improve performance, it can be necessary to use the model-specific driver of the printer. To investigate, print to a file with both methods and compare the file sizes.
- In a Microsoft Clustered Environment, the UPD must be installed on the virtual server. However, if you wish the UPD to appear on the nodes that make up the cluster server it must be installed on each of these nodes.

The HP Universal Print Driver can also be used together with the SafeCom Push Port for tracking of documents that are sent directly to the device.

**i** Some applications can split the print job at the device to multiple jobs, for example, when using mixed page size. This is tracked and charged for the start-up cost separately.

Any paper sizes, that cannot be specified in the charging scheme, are tracked as Other.

## Install HP Universal Print Driver

To install HP Universal Print Driver do the following:

1. Obtain a copy of the HP Universal Print Driver and unpack it. Double-click install.exe that came with the HP Universal Print Driver.
2. Click **Yes** to accept the license agreement.
3. Select **Traditional mode** and click **Install**.  
The Add Printer Wizard appears.
4. Click **Add a local printer**.
5. Select **Create a new port** and select **Standard TCP/IP Port** from the dropdown list. Click **Next**.

**i** To allow the UPD to optimize its output and reduce print files it should connect to the HP device through a Standard TCP/IP port once before it is changed to use a SafeCom Pull Port.

The Add Standard TCP/IP Printer Port Wizard appears.

6. Click **Next**.
7. Enter **Printer Name or IP Address**. Click **Next**. Click **Finish**.
8. Select the HP Universal Printing variant (PCL5, PCL6 or PS) that matches your needs and click **Next**.
9. Enter a **Printer Name** and choose whether or not this printer should be your default Windows printer. Click **Next**.
10. Select **Share this printer...** and enter **Share name**. Click **Next**.  
Do not click **Print a test page** to verify the system.
11. Click **Finish**.

The UPD is now installing which can take some minutes. Please be patient.


When the HP Universal Printing Installation dialog reports that the installation has completed you can click Finish.

## Check the Printer properties

1. Right-click the printer and click **Printer properties**.
2. On the **Device Settings** tab, scroll to **Installable options** and change **Automatic Configuration** to **Update Now**.  
This makes the UPD contact the device and get information about its configuration.
3. Click **Apply**.
4. On the **Advanced** tab, check **Start printing after last page is spooled** for faster spooling.
5. Click **Apply**.

## Make the printer use the SafeCom Pull Port

1. Click on the **Ports** tab in the **Printer properties** dialog.
2. Clear **Enable bidirectional support**. Click **Apply**.
3. Click **Add Port...**
4. Choose **Create a new port** and select **SafeCom Pull Port** from the dropdown list. Click **Next**.
5. Enter a unique name for the port in **Port Name**. Click **OK**.
6. Enter the IP address or host name of the **SafeCom Server** and choose **Use network logon** as method of **Authentication** in the **Configure SafeCom Pull Port** dialog. Click **OK**.

 The SafeCom Pull Port can be configured to override the HP Universal Printing driver name.

7. Click **OK**.  
The **SafeCom User Logon** dialog appears.
8. Enter **User logon** and **Password** of a user that has SafeCom Administrator or Technician rights.
9. Click **OK**.
10. Click **Apply**.

## Print a test page

1. Click on the **General** tab in the **Printer properties** dialog.
2. Click **Print Test Page** to verify the system.
3. Click **Close** when prompted to confirm that the test page is printed correctly.

For high load systems you can minimize the wait for documents to be processed and transferred to the SafeCom server by checking Enable printer pooling on the Ports tab and add multiple identically configured SafeCom Pull Ports. In our experience 1-4 ports is sufficient and no more than 12 ports should be added.

## Available documentation

### SafeCom G4:

- *Kofax SafeCom G4 Administrator's Guide* — A comprehensive manual that the administrator should consult to set up a successful SafeCom solution. Includes information about SafeCom Tracking, SafeCom Rule Based Printing, SafeCom Client Billing, and SafeCom Pay.

### SafeCom HP Unified Client:

- *SafeCom HP Unified Client Administrator's Guide* — (this guide) Guide on how to install, configure and use SafeCom HP Unified Client.

## Chapter 2

# SafeCom HP Unified Client - Device Web Server

## Installation

After installing SafeCom G4 Server and HP Universal Print Driver complete the following steps to install the Device Web Server (DWS):

To install SafeCom Device Web Server, do the following:

1. Select and run the installer file to launch the Setup Wizard.
2. On the Welcome screen, click **Next** to begin the installation process.
3. Read and accept the terms of the End User License Agreement and click **Next**.
4. On the Destination Folder dialog, accept the default installation folder or click **Change** to select a new folder.

Application data for SafeCom Device Web Server is stored at:

```
c:\Windows\System32\config\systemprofile\AppData\Local\Nuance\
```

5. Click **Next**.
6. Review settings before copying the files starts. Click **Install**.
7. Click **Finish**.

## Windows Firewall - ports that must be opened

If Windows Firewall is enabled, it can prevent the SafeCom solution from working. Disable the firewall or open the following port.

TCP	Inbound on SafeCom Device Web Server	Protocol
8444	Device Web Server communication	SafeCom

**i** If the Device Web Server and G4 Server are installed on the same server, then additional port configuration is required. Refer to the Kofax SafeCom G4 Administrator's Guide for details.

## Add the device through SafeCom Administrator

Before adding a device, IPP (Internet Printing Protocol) has to be enabled for device discovery to work properly. As IPP is disabled by default in recent HP devices, make sure to enable it. See [Problems when adding a device - device is not discoverable](#) for detailed instructions. After configuration is completed, you can disable IPP protocol on the device again. Both IPP and IPPS protocols can be used for this purpose. IPPS is an HTTPS based secure protocol.

To add a device do the following:

1. Click the **Devices** container, right-click the content area and then click **Add device**.

The Add Device Wizard displays.

Backwards compatibility: G4 versions prior to 520.12 are not supported with DWS 5.10, which is the DWS component of HP UC 1.1. G4 520.12 supports DWS version 5.9, which is the DWS component of HP UC 1.0.

2. From the **Device server** menu, select the desired server. If the server is not listed, then type the host name or the IP.



- If the server runs on Windows Server 2012 R2, then specifying Device Web Server by IP address can not work, in this case use host name instead.
- Name resolution is essential for certification in the SafeCom solution. If the Device Web Server is in a network environment where name resolution does not work, devices can not be added to the server properly. Ensure that the server has a valid FQDN, and DNS name resolution works.
- SNMP is not used during discovering HP Unified Clients. The Community name property is requested here only for supporting devices from other vendors.

3. Click **Next**.

If the device discovered properly, a summary of device information appears. Click **Next**.

4. Enter the **Printer address** (the device IP address or host name) and click **Next**.
5. Provide administrator credentials for the device. These must match with the ones specified in the security settings of the device:

Administrator credentials are used for the registration of buttons and agents at the device.


The administrator password of the device cannot be changed after the device is added to SafeCom. To change the administrator password, remove the device from SafeCom, change the password, and add the device again to SafeCom using the new password.

- a. Enter the **User name** and **Password** as specified on the device web page.
  - b. If Kofax authorization check box is selected, the function access control of the device can be managed by a SafeCom Administrator. Otherwise, to manage permissions, visit **Security/ Access control** page on the EWS of the device. For details on this setting, see [Mixed mode authentication](#).
  - c. Click **Next**.
6. Select a Card Reader:

**i** If your card reader is not in the list, then you must add it to SafeCom. For details, see [Card reader configuration](#).

Some card readers can not work right after the device installation. In this case unplug the card reader and plug it in again.

7. Fill the list of SafeCom server endpoints:

- a. Choose one of the **Add hostname** or **Add IP** address options to determine the way addressing the server.
- b. Select a server in the **Server address** list.
- c. Click **Add** to add the selected server to the **Server addresses** list. Optionally, use the  button on the right to add the current server. Repeat steps from step 7.b if you want to add multiple servers to the list.
- d. Use the **Move up** and **Move down** buttons to define the order of the servers. Move the Master server to the top.

**i** It is recommended to add secondary servers only to the list of server. Primary server is less effective at device control.

The **Device Properties** dialog now opens.

8. Complete the fields in the **Device Properties** dialog.

The **Name** parameter can only contain alphanumeric characters, underscore ( \_ ) and hyphen ( - ), and must be unique. By default, this parameter contains the host name of the device.

9. Click **Add** to register the device and save it in the database.

After approximately 1 minute, the device is added to the server, and listed under **Devices**.

In case of any problems while adding a device, check [Troubleshooting](#).

## Configure device in SafeCom Administrator

Use the **Device properties** dialog to configure the behavior of HP Unified client on the device.

Tab name	Description
Settings	Set or verify general settings, such as device name, server, and address. Control capabilities such as duplex or color. See <a href="#">Settings tab</a> for details.
Charging scheme	Select from available primary and secondary charging schemes for the device. See <a href="#">Charging scheme tab</a> for details.
Device configuration	Set access control, licenses, log on methods, printing engine and toner options, tracking on device, and menu elements. See <a href="#">Device configuration</a> for details.
Application access control	For details on client application access control, see <a href="#">Application access control</a> .


## Settings tab

This tab provides basic information on the device and the client.

### Device name

The title section displays the following information:

- Device name: It must be a unique alphanumeric text. DWS uses this property as a unique identifier.

 Device name has to be set at device addition and cannot be changed later.

- Version
- Status
- MAC address
- Serial
- ID (in the upper right corner)


Move the pointer over the device name to display the following wiring information:

- Authentication
- Card reader information
- SafeCom server IPs

### General section

This section contains the following properties:

- Name: Device name

 Changing the host name or the IP address of the device after installation is not supported.

- Model: Device model name
- Home server: G4 Server instance name, always disabled
- Device server: DWS name, always disabled
- Org. unit: organization unit
- Location: Geographical location
- Device address: IP address of the device (read only)

### Capabilities section

This section offers the following capability options. Clear the corresponding box to turn off the feature or select the check box to turn on.

- Duplex supported
- Color supported
- Large format print




- Restricted access
- Push print
- Allow Pay user

## Charging scheme tab

Select and edit the primary and secondary charging schemes for the device in this tab.

Select an item from the lists, and click the corresponding **View** button to edit the selected scheme.

 Secondary prices may be different, as they are calculated only on the server side.

## Device configuration

Use the **Device configuration** tab to configure SafeCom HP Unified Client.

- **Access control (authorization):** Authentication and authorization.
- **Licenses:** Settings involved in licensing.
- **Login:** Login methods, card, domain and masking options.
- **Printing:** Printing engine, toner and driver options.
- **Tracking:** Tracking on device and timeout options.
- **User interface:** Menu elements and order.

### Access control (authorization)

- **Lock device:**

Using this property, you simply revoke all permissions from the device guest user. If the property is set to true, authentication is required for using any feature of the device. The control panel shows the HP Mandatory sign-in screen. The user can swipe their card or start manual login procedure by pressing the sign-in button. If the property is false, the device home screen is visible on the control panel, and users can log in by their card or by pressing the sign-in button or any icons marked with the lock icon.

Terms in use:

- Device Level Authentication mode (DLA): the device is locked
- Function Level Authentication mode (FLA): the device is unlocked because guest is allowed to use the device at some extent.

- **Permission control:**

This set of properties is visible when Kofax authorization is selected during device registration. It shows all access points and the associated permissions available on the device. Note that this list is actively queried from the device and it shows the available features. The list depends on the device capabilities and the installed applications. See Mixed mode authentication.

## Licenses

**i** For details on licensing refer to chapter *Device license and user settings dependencies* in the *SafeCom G4 Server Administrator's Guide*.

- **Tracking:** This license is needed for tracking activities, such as copy or scan at the device.
- **Rule-based printing:** This license is needed if you want to enable the Rule-based printing feature for the users on this device.
- **Client billing:** If this license is allocated, the users who have billing codes can select one of them immediately after login or can create Personal jobs.
- **Pay:** A Pay user (where cost control is Pay) can log in to a device with a SafeCom Pay license and to a device with a Tracking license provided.
- **Pull Print:** Set to True to enable pull printing on the device.
- **ID device:** ID devices require unique ID device licenses. SafeCom ID devices come with ID device licenses, whereas ID device licenses for third-party ID devices must be purchased separately.


## Login

**i** For Windows authentication, the card reader cannot be used. To use a card reader and Windows authentication, users should select **Auto-sense**.


- **Login method:** This determines how users log in. Choose one of the following options:
  - Auto-sense:
    - If there is a card reader connected to the device, then users can login by **Card**, or by **Windows authentication**.
    - If there is no card reader connected to the device, then users can login by **ID code**.
  - Card: Users can log in by card-swipe only, entering user credentials or ID is not allowed. The **Sign in** button is always visible and enabled on HP device screens, with or without the **Mandatory sign-in** screen, in other words, in FLA (Function Level Authentication) or DLA (Device Level Authentication) modes.
    - In FLA mode: Pressing the Sign in button shows a message box instructing the user to swipe his card. When the device is idle, the device home screen is displayed with small lock symbols on locked applications.
    - In DLA mode - Pressing the Sign in button shows the Welcome screen with a label Swipe your card. When the device is idle, a sign-in screen (also called the mandatory sign-in screen) covers the home screen.

**i** The Quick Select bar is always visible, this allows the user to change the default application to be launched after a successful login. Welcome screen does not accept tapping.

- **ID code (default):** Users need to use the authentication screen to enter one of their ID codes manually. Card-swipe is not allowed if **ID code** is selected.


 Tap **Sign in** to reach the authentication screen.

- **Card or ID code:** Both card-swipe and **ID code** are allowed. For details see the **Card** or the **ID code** option.
- **Windows authentication:** Allows the user to log in by entering their Windows user name, password, and domain. The SafeCom administrator can configure the way how user domains display on the screen.


 The option **Windows authentication** allows the user to log in by entering their Windows user name, password, and domain. The SafeCom G4 server must be a member of the domain or trusted by the domain.

Card identification cannot be used if **Windows authentication** is selected. If you want to use Windows authentication with card-swipe, then choose **Auto-sense** as **Login method** instead.


- **Mask user code:** Set this value to True to mask the ID code with asterisk (\*) when entered at the device.
- **Login without pin:** Set this value to True if users do NOT need to enter a 4-digit PIN code at login. This setting applies to the device and overrides the equivalent user property on the SafeCom G4 server. Use of PIN code is possible on devices with touch-screen, keypad or optional external keyboard.
- **Length of user ID code:** Specify the maximum length of the ID code (typed or read from the card). Default value is 39.
- **Default domain name:** Specify the domain to pre-fill the domain for users when logging into a device. If using SafeCom Mobile Pull Print the domain must be specified, as the users are not prompted for domain when logging into a device using a smart phone. If the default domain is not specified, but the users are required to use domains, they can enter the domain with their username (domain\username).
- **Hide domain name:** This option can be used if you specified a default domain name. Set this value to True to allow the users to log in without typing in the domain.
- **Show domain list:** Set this value to True to enable SafeCom to offer the list of domains registered in SafeCom Administrator.
- **Inactivity timeout:** Specifies the amount of time of inactivity (in seconds) after which a user is automatically logged out.
- **Guest login ID:** Specify an existing user ID for the rule of the guest user. This allows users to tap a Guest button on the SafeCom HP Unified Client login screen. All guest activities are tracked according to that user's settings. Device guest user is different from SafeCom guest, because a guest user is allowed to use the device without authentication.

 For Guest login, the user's Login without PIN setting controls if the Guest user must enter a PIN code. It is recommended to allow that Guest users log in without a PIN code.

- **Register card by Windows credentials:** Set this value to True to let the users assign a new card by providing their Windows credentials, without entering a PUK code.

 DWS restart can be needed for this server setting to take effect.

## Printing

- **Reverse document list:** Set this value to **True** to show the latest printed documents at the top of the document list.
- **Allow changing print settings:** Set this to **Enabled** to let all users change their finishing options on this device. Select the **Per user settings** value to manage this feature on a per user basis.
- **Prevent printing on low toner:** Set this value to **True** to disable printing activities if the toner is low.
- **Print Engine access method:** Set the method for finding the print engine.
- **Print Engine resolution rule:** Specify the identifiers and their precedence to use to find the print engine by editing the print engine resolution configuration. Click the browse button on the right of the value to display the Print Engine resolution configuration dialog. Select (enable) or clear (disable) the items of the list and use drag and drop to reorder items. Click OK to save the settings and close the dialog.
- **Supported drivers:** When Pull Printing, SafeCom compares the driver name embedded in the print job with its list of driver names. If no match is found and **Show fidelity warning** is checked in the **Server properties** in **SafeCom Administrator**, the document appears with a fidelity warning icon [] in the document list. This way the user is warned that fidelity is low and the document can print incorrectly.


## Tracking

- **Print post-tracking:** Set this value to True to track pull and push print jobs based on statistics reported by the device.
- **Timeout for tracking push-print jobs:** Specify the time (in hours) that the server waits for job statistics to arrive from the device. If statistics data does not arrive in this time period, the job are tracked as an Unattended job. The default value is 48.

In this group of properties, you can specify which types of jobs must be tracked:

- Copy
- Mail
- Folder
- Save to job storage
- Print from job storage
- Fax

## User interface

 In case of DLA, the content of the Quick Select bar is also configurable in this group.

- **Visibility and order of menu elements:** Set the visibility and order of the menu items of the Pull Print screen. Click the browse button on the right of the value to display the **Client menu**

**configuration** dialog box. Select (enable) or clear (disable) the items of the list and use drag and drop to reorder items. Click OK to save the settings and close the dialog.

## Application access control

HP Unified Client controls the access to third-party applications. These applications are automatically detected when [adding the device to SafeCom](#), but they are accessible to SafeCom only after a successful login. Permission for third-party applications can also be managed on **Device properties > Configure Device > Applications of Access** .

## Card reader configuration

All card reader hardware should be added to SafeCom to appear in the **Add device** list (see [Add a card reader](#) for details).

### Supported card readers

The following readers are included in the default configuration:

- Kofax Micro Card Reader
- Kofax MX
- Kofax MX (Keyboard)
- HP Reader (CZ208A/X3D03A)
- Elatec TWN3
- Elatec TWN3 (Keyboard)
- RFIDEas pcProx (Y7C05A)

## Add a card reader

Add a card reader to SafeCom by specifying the appropriate Vendor ID (VID) and Product ID (PID) values. Refer to the card reader documentation for these values, then proceed with the following steps:

1. Open `scCardReaders.ini` in a plain text editor, such as Notepad.

If you used the default installation path, the `scCardReaders` file is located on the computer running the SafeCom G4 Server, in the following folder: `c:\Program Files\SafeCom\SafeComG4\Device_software`.

2. Navigate to the `[HPUC]` section, then add a new line for the card reader, following this scheme:

```
<name>=<VID>,<PID>,<is keyboard>
```

- `name`: The name of the device to display in the list of card readers when adding a device.
- `VID`: The VID specified in the documentation of the card reader.
- `PID`: The PID specified in the documentation of the card reader.
- `is keyboard`: Use either `1` for keyboard readers or use `0` for non-keyboard readers.

**Example:** `RFIDEas pcProc,0104,3BFA,0`

3. Save the changes.

## DWS failover and groups

### Failover service notification

SafeCom Administrator allows you to group your Device Web Servers, enabling a failover solution.

SafeCom failover service monitors the status of the group members, and in case of a group member failing or shutting down, the rest of the device server group distributes the workload of the offline server among the rest.

DWS Failover service notifies the job-server service when controllers of devices are changing either due to outage of a DWS node or restoring the original controller of devices. It implies database change and the DeviceServerId field of scDeviceInfo table in scCore database is updated accordingly. The **Device properties** dialog shows the controller server in the **Device Server** field.

### Device server & DWS group representation in SafeCom Administrator

Device servers node in tree view has two types of child nodes:

- DS / DWS groups
- DS / DWS servers that are not members of any group

The group member servers are child elements of group nodes.

Selecting a node makes the right pane of SafeCom Administrator adopt to the type of the node:

- **Device servers:** List of DS / DWS server that are not organized into groups
- **Device server group:** List of group members
- **DS /DWS:** List of devices controlled by the server (DS / DWS)

Double clicking on any list item displays the appropriate property dialog box:

- Clicking on a Device Server or Device Web Server (DS / DWS) shows the **Server properties** dialog. **Failover** tab appears in case of DWS group members that shows the list of controlled devices and their primary DWS.
- Clicking on a device shows the **Device properties** dialog.

### Configure Device Web Server failover

Follow these steps to add and populate a DWS failover group:

1. Log in to **SafeCom Administrator**.
2. Open the **Device Servers** list.
3. Right click on the node, and select **Add device server group** in the context menu.
4. Enter a name and optionally a description for the device server group.
5. Select the **DWS servers** option.  
The **Failover controller** list gets populated according to the selected option.
6. Select the controller from the list to use for failover.
7. Click **Add**.

The newly added group shows up under the **Device servers** node.

8. Drag and drop the device servers to incorporate them into the newly created group.

## SafeCom Mass Deployment Tool (Device Clone Tool)

### Introduction

The SafeCom Mass Deployment Tool (MDT) provides a convenient way for administrators to add a device to the SafeCom system, customize its configuration, then easily add any number of devices with the same configuration.

SafeCom includes a separate tool to setup and configure multiple devices running the HP Unified Client. This helps expediting a deployment, and ensures uniform configuration across multiple devices.

The tool can run as a standalone executable without special installation, although it is part of both the Server and the Tools flavors of the SafeCom Server Installer. The tool can also be invoked from SafeCom Administrator.

The tool can run as a standalone executable without special installation, although it is part of both the Server and the Tools flavors of the SafeCom Server Installer. The tool can also be invoked from SafeCom Administrator.

The administrator must register one or more devices with a given set of features and configure it using the Add Device Wizard in SafeCom Administrator. Then the tool can be utilized to create clones of these devices. Initial parameters of new printers (like IP address or admin credentials) must be specified either manually or by importing an INI file in order to register them in SafeCom.

It is recommended to differentiate the original devices based on their functionality in terms of capabilities (SFP / MFP) and installed applications. Different HP UC configurations are another grouping factor. It is recommended to add representative devices first for all different groups, and then create the clones.

**i** Cloning devices with different screen sizes can cause problems. For example, settings, like requiring a PIN code can make devices with a screen of 2.7" size unusable. It is recommended to specify batches of devices with similar capabilities and screen sizes, and perform individual cloning on these batches. It must be assured that all applications which are installed on the target device exist on the source device, so authorization settings for these applications can be transferred properly.

In case of an error, click on the device with the error status. The status message about the error appears at the bottom of the window.

### Launch the SafeCom Mass Deployment Tool

The tool as a standalone executable accepts the following command line options:

- `/usr`: the administrator's username

- /pwd: the administrator's password
- /srv: SafeCom server name to connect to (optional, local server can be used by default)
- /devid: Id of registered HP Unified client to clone (optional)
- /imp: name of import file

The tool can also be launched directly from SafeCom Administrator using the system overview panel or the context menu of an existing HP Unified client.

## Registry settings of the SafeCom Mass Deployment Tool

The Mass Deployment Tool can be configured through the following parameters specified in the registry.

### Registry path:

[HKEY\_CURRENT\_USER\Software\SafeCom\scDeviceClone]

### Settings:

- "Admin"="admin" is the user name used for the last successful login
- "Servername"="SERVER\_NAME" is the server name used for the last successful login
- "AutoMode"=dword:00000000 handles if automatic mode is enabled by default
- "ThreadCount"=dword:00000004 is the number of worker threads executing the device registration  
(default is 8, accepted values are between 4 and 16)


## Usage

The following is an example workflow of using the SafeCom MDT tool.

1. Add and configure a SafeCom HP Unified Client device in SafeCom Administrator.
2. Start the SafeCom Mass Deployment Tool by running scDeviceClone.exe in the folder where SafeCom G4 Server is installed.
3. Authenticate as a SafeCom administrator user. If the tool is running on a machine where SafeCom G4 Server is hosted, the **Server name** field is optional. Otherwise specify the SafeCom G4 Server in the **Server name** field.
4. In the **Device to clone** combo box, select the device to be cloned.
5. In the **Target Device Web Server** combo box, select the DWS server where to add the clones.
6. Add target devices.
  - To add target devices manually:
    - a. Click **Devices > Add device**.
    - b. Fill in the **IP address** or the **Hostname** of the device.
    - c. Specify the administrator credentials for the device.
    - d. Optional: select the **Use as default** boxes if you would like to use the same user name or password for subsequently added devices.
    - e. Click **Add**.



- f. Repeat this process for all devices you would like to include in the cloning process.
- To add target devices by importing a list of devices in an INI file:
  - a. Click **Devices > Import devices** .
  - b. Select the INI files that contains the list of target devices. The devices are automatically added to the list of devices to be cloned. For details on the format of the INI file, see [Parameter file format for importing a list of new devices](#).
- 7. To remove any device from the list of new devices, select the device or devices, then click **Devices > Delete devices** .
- 8. To start the cloning process for the devices in the **New devices** list, click **Devices > Clone** .

 The **About** dialog of the SafeCom Mass Deployment Tool is accessible by clicking the top left icon in the application screen.


## Converting an existing SafeCom Go HP FutureSmart fleet to a HP Unified Client fleet

MDT enables administrators to automatically convert an existing Go HP FutureSmart fleet to a HP Unified Client fleet. To do so, manually add or import target devices to the tool, then select **Devices > Convert** . MDT guides you through the conversion process.

The embedded software must be removed from these devices in advance. The user name and password of the device administrator must be provided using the **Devices > Troubleshooting** menu.

## Parameter file format for importing a list of new devices

The tool enables importing parameter files that contain initial data of new devices. This ini file has a predefined structure. Certain settings are optional.

 This file contains sensitive data, such as device administrator passwords. It is recommended to store it at a secure place, and delete it after the import process is completed.

### Defaults

In the **Defaults** section of the INI file the administrator can provide data that is applicable for multiple or all devices. The Administrator and Password settings are used for devices where the administrator does not specify the device's administrator credentials.

All properties in this section are optional.

#### Default properties

Value name	Description	Example
<b>Administrator</b>	Administrator's user name at the device	admin

Value name	Description	Example
<b>Password</b>	Administrator's password at the device	password
<b>UseHostname</b>	Specifies the name – identifier – of the device at g4 and dws servers. 1 – use the device host name discovered during identification process 0 – use the name specified in this ini file	1

## HPUC

The devices to add must be specified in this section. Each entry has the following format:

```
{devicename}={device IP address},{administrator name},{administrator password}
```

The device name and IP address are mandatory parameters. When these parameters are not specified for a device, the values from the **Defaults** section are used. Note the following:

- The device name can only contain alphanumeric characters.
- The comma separator has to be added to each line even if the default values are used.

See the contents of the following sample parameter file:

```
[Defaults]
Administrator=admin
Password=defaultpassword
UseHostname=0
[HPUC]
Device1=192.168.1.101,,
Device2=192.168.1.102,,custompassword
```

Device1 is going to be added with the default administrator credentials. In case of Device2, the administrator password is different, and other parameters are the defaults.






**i** The Administrator and Password values must be predefined in the Defaults section when importing from a file, even if these values are not used later in the file. Omitting these values can cause an unsuccessful import.

## Cloning workflow

Once the administrator has created one device, the cloning process can start. When cloning a device, the tool performs the same steps as the Add Device Wizard in SafeCom Administrator.


## Identification

When a new device is added to the MDT target list, the tool attempts to identify the device. The identification process can have the following results, indicated by a status icon and a status message in the **New devices** list.

Icon	Indicated status
	The device identification has not started yet. The operation starts as soon as a processing thread becomes available.
	Identification completed, the device is an HP FutureSmart device, and it is not added to any existing servers.
	Identification failed for the device. If the IP address specified for the device is incorrect, the device must be removed from the list. Errors causing this status are usually unrecoverable, the device must be removed from the list and added again.
	There were problems found during the identification process that can likely be corrected by updating parameters of the device. To start troubleshooting, double-click the device in the list, or select the device in the list, and click <b>Devices &gt; Troubleshooting</b> .
	The device has been cloned successfully, it is registered in G4 and DWS.

In case of invalid device administrator credentials, a warning appears, and the Troubleshooting command allows changing both the username and password specified for the device. Please note that this warning can also result from other issues, for example inappropriate device or DWS certificates. For more information on requirements, see [Requirements](#).

## Cloning

When the identification process is completed, the administrator can select the devices with  **Identified** status, and start the cloning process by clicking **Devices > Clone** . Properties of the source device – except the administrator credentials – are used in the configuration process when adding the new device.

When the cloning procedure succeeds, the **Registered** status message appears in the list and the  icon indicates this state.

## Performance, logging, error handling

Time-consuming procedures like identification, device registration and deletion are performed on background worker threads. These procedures can run simultaneously. The number of working threads is configurable depending on the number of devices to be added. The number of processing threads can be configured between 4 and 16 (the default number is 8).

If SafeCom logging is enabled on the computer where the tool is running, the details of each run can be checked in the DeviceClone\*.trc logfiles.

## Support for 4.3" and 2.7" devices

### Overview

Starting with version 1.1, SafeCom HP Unified Client supports devices with screen sizes 4.3" and 2.7".

For 4.3" screen devices, the same workflows are supported as on 8" screen devices. For information on 8" screen devices, refer to [Use SafeCom HP Unified Client](#).

**i** On 4.3" screen devices, users can specify their domain and username using the `username@domain` or the `domain\username` format.

For 2.7" screen devices, SafeCom HP Unified Client only supports Print All at Login workflows with Card only authentication. In this workflow, users swipe their card at a card reader which is attached to the device to authenticate. After authentication, all jobs in the user queue are printed automatically. User interaction is not involved on the screen in case of these small screen devices.

### Screen sizes and resolutions supported by the HP Unified Client

Starting with version 1.1, SafeCom HP Unified Client supports the following HP FutureSmart screen sizes and resolutions.

#### Screen sizes and resolutions supported by the HP Unified Client

Screen size	Pixels	HPUC 1.1
8"	1024x768	All workflows are supported
8"	800x600	All workflows are supported
4.3"	480x272	All workflows are supported (screens are optimized for smaller size)
2.7"	320x240	Swipe and release (Print All at Login)


These properties are determined by property ControlPanelID of the device indirectly in case of FutureSmart 4 devices. FutureSmart 5 devices provide information about the screen width and height. The software uses these properties directly.

### Device settings for 2.7" devices

When a 2.7" screen device is added, SafeCom Administrator applies the following preset properties:

Starting with version 1.1, SafeCom HP Unified Client supports the following HP FutureSmart screen sizes and resolutions.

Setting	Value	Comments
<b>Licenses</b>		
Client billing	False	Hidden field to prevent appearance of billing code screen
<b>Login</b>		
Login method	Card	To force the Swipe & Release feature. Property is visible with single choice
Mask user code	False	Hidden field due to lack of login screen support
Login without PIN	True	Avoid displaying login screen. Property is visible with single choice
Print All at login	True	To force the Swipe & Release feature Property is visible with single choice
Length of user ID code	39	Hidden field due to lack of login screen support
Default domain	Empty string	Hidden field due to lack of login screen support
Hide domain name	False	Hidden field due to lack of login screen support
Show domain list	False	Hidden field due to lack of login screen support
Guest login	Empty string	Hidden field due to lack of login screen support
Register card by Windows credentials	False	Hidden field due to lack of login screen support
<b>User Interface</b>		
Visibility of menu elements		Hidden field due to lack of Pull Print application support

 The device stays logged in after printing all documents. Logout is required manually.

## Support for scanners

Devices supplied with different feature set are distinguished by G4 Server and SafeCom Administrator. Devices fall in the following three categories:


- Printers
- Scanners
- Multi-function devices

Device capabilities are queried during the registration process when the Add Device Wizard is running in the SafeCom Administrator. The workflow and the prompted information do not change in the wizard. The configuration settings in **Device properties** dialog are different according to the device capabilities.

The following settings are not available for scanner in the property window:

- **License:** Pull Print and Rule-based Printing licenses are not allocated.
- **Printing:** Settings in this section are not displayed.
- **Tracking:** Filtered according to the feature set of the device.  
Print from internal storage is hidden.
- **User Interface** section is hidden due to the missing Pull Print application. The configuration of application drop-down menu is meaningless.

The rest of the properties are not changed.

 The list of permissions is queried from the device. It also indicates the type of the device because it does not contain elements related to print or copy features.

The top level buttons, **Pull Print** and **Print All**, do not appear on the **Home** screen of the device after device is added to the server. Only the presence of Kofax sign-in method on the device shows that it is controlled by SafeCom.

Job tracking works in the same way as on other types of devices.

## Mixed mode authentication

### Introduction

Starting with version 1.1, SafeCom HP Unified Client supports configurations where external authentication/authorization agents are set up on a HP FutureSmart device. SafeCom Pull Print and Print All are still available to users, but require further authentication to access documents in the SafeCom user's queue.

## Authentication

HP Unified Client registers authentication agent when the device is added to SafeCom. HP devices enable authentication agent selection. It is designed this way to avoid scenarios when devices become inaccessible due to the failure of external authentication server. It means that the Unified Client manages authentication by third-party agents. Version 1.1 can cooperate with those authentication agents which share the domain and the user name of the logged-in user.

If the user is authenticated by Kofax, all operations are controlled by HP UC. This includes SafeCom features and job tracking.

The user can select other third-party authentication. HP UC does not control the activities of users in this case, they can run jobs freely. HP UC tracks these activities according to the tracking settings. These tracking records are not linked to SafeCom users, they are recorded in SafeCom tracking database as unattended jobs. They indicate the appropriate device and job data.

If users who are authenticated by a third-party agent want to use SafeCom features, for example Pull Print or Print All, an extra user identification must be performed. The Identification screen is displayed on the device when the top-level button is selected which prompts for the Windows password of the user. If the G4 server can find an associated SafeCom user for the provided credentials, and the Windows login succeeds, the requested operation can continue. This then shows the Pull Print application or prints all non-retained documents.

## Authorization

HP Unified Client 1.0 registers authorization agent. It locks EWS, Security, or Access control page, which is not desirable in certain configurations. With HP UC 1.1, agent registration is optional. The Add Device Wizard feature of Administrator enables the activation of Kofax agent or the access control managed by other application, for example by EWS.

### Kofax authorization

If Kofax authorization is selected, the Property page of device in Administrator shows all access points and related permissions which are installed on the device. The access points are grouped under two nodes of Applications and Device features. The set of permissions associated with a given access point can be managed in a separate dialog box. The following levels of access rights exist:

- Disabled: the feature is inaccessible.
- Administrator: only SafeCom administrators are allowed to perform the operation.
- Authenticated user: the feature is accessible after successful authentication.
- Guest: the feature can be used by anyone without authentication.

Changing the permission level of a parent node modifies the permission level of each child to the same value. The child permissions are manageable individually. The parent node shows the most permissive access right of its children if they had different values. It is also true for the access points in Device

The Lock device property refers to the initial screen, which is displayed to the user. When it is set to True, the mandatory sign-in screen is visible on the device. Otherwise, the home screen of


the device is displayed. This behavior is bound to the permissions which are granted for guest users. If all permissions are revoked from guest users, the device is locked. The behavior of the property indicates this relation between the permissions and the user experience. If the property is set to True, all permissions that was previously set to Guest are changed to Authenticated user. Also, when a permission is granted to the Guest the property is changed to False. So, the level of permissions and the value of the property is continuously synchronized.

## HP authorization

If Kofax authorization is not selected in Add Device Wizard, the agent is not registered on the device. The Device Properties window does not show the tree of access points and permissions. The access control of the device must be managed in the standard user interface of EWS or by another third-party tool.

The granted permissions affect how HP UC presents the Welcome and Login screens. When the device is locked, these screens allow the preselection of the function before login. This is done by displaying the Quick Select Bar.

The only property in the Access Control group in the Device Properties window is the Lock device in this mode. It must be set according to the final set of permissions. If guest users are not allowed to use the device, the value of this property must be set to True. Synchronization of the permissions and the Lock device property is important to show Quick Select Bar.

 Pull Print and Print All buttons must be set up to have Kofax authentication as default.

# SafeCom HP Unified Client - How to

## Select login method

To set the method of user identification:

1. Log in to SafeCom Administrator.
2. Click **Devices** in the left-hand menu, and then select the desired device in the list.
3. Right-click on the device, then select **Device properties** from the context menu.

The **Device properties** dialog box appears.


4. On the **Device configuration** page, go to the **Login** section, and select one of the values for the **Login methods** property.

Choose from the following:

- Auto-sense
  - If there is a card reader attached, then login by card or entering Windows credentials are enabled.
  - If there is no reader attached, then user can authenticate by entering ID code (and possibly PIN code).
- ID code
- Card
- ID code or card



- Windows authentication

 Identification by card requires the installation of a SafeCom ID Device (card reader).

5. Click **OK** to save the settings and close the dialog.


## Control user access rights

An initial decision about authorization must be made when a new device is added to SafeCom. SafeCom is allowed to control access rights to the device or another application – typically by EWS by Security or Access control page. Permissions can be granted for a certain group of users. A device or its access points can be used by the following categories:

- Used by administrators
- Used by every authenticated user
- Used by anybody without authentication (also called guest access)
- Disabled and prohibited to use by anyone


## Kofax authorization

This option can be set at the Basic settings page of the Add Device Wizard in SafeCom Administrator. The Device properties dialog box presents a complete permission set, which is retrieved from the device in a form of permission tree. This is similar to how the EWS page shows it. Lock device property handles guest access, which means that anybody without authentication can use the device.

 Choosing this option, Kofax authentication is set as default for each access point, but users can select other authentication method if it is allowed.

## Third-party authorization

If the Kofax authorization check box is turned off at the Basic settings page of the Add Device Wizard in SafeCom Administrator, SafeCom does not install the authorization agent at the device. EWS, Security, Access Control page, or other third-party applications can be used to set up function access control.

 Depending on the enabled guest permissions in the third-party application, the Lock device property must be set properly in SafeCom Administrator. If the guest does not have permission on the device, the device is locked.

It is mandatory to set Kofax authentication as default for Print All and Pull Print applications.


## User level permissions

The Kofax authenticated users are those users who selected the Kofax authentication at login. The function access of the Kofax authenticated users can be controlled by user properties on the Settings tab of User properties dialog box, in the Access rights section if Kofax authorization is selected. Selecting the appropriate check box enables a function, and clearing the box disables it.

You can control access rights for the following features:

- Copy
- Copy in color
- E-mail
- Scan
- Fax
- USB memory print
- USB memory scan
- Print all button

This means that the permissions of authenticated users can be fine tuned per user basis.


 These settings are user-based and device capabilities are not considered. For example Scan permission is not applicable on printer only devices.

## Further considerations

HP Unified client has complete control over the access control if the user is logged in by the Kofax agent and the Kofax authorization is enabled.

If the user is logged in by third-party authentication, and Kofax authorization is enabled, all access rights are granted to the user because SafeCom user is not associated with this user and no user level permissions are available.

In case of third-party authorization, access control is not managed by the Unified Client.

 SafeCom functions can be used by users logged in through Kofax authorization, or in case of 3rd party authentication, after a user identification.

## Enable Client Billing on the device

Note that the following two settings must be set up in SafeCom Administrator for the billing code to become part of the tracking record.

1. Enable **Client Billing** on the **Device configuration** tab in the **Device properties** dialog in SafeCom Administrator:
  - a. Log in to SafeCom Administrator.
  - b. Click **Devices** in the left-hand menu, and then select the desired device in the list.
  - c. Right-click on the device, then select **Device properties** from the context menu. The **Device properties** dialog box appears.
  - d. On the **Device configuration** page in the **Licenses** section select the **True** value for the **Client billing** property.
  - e. Click **OK** to save the settings and close the dialog.
2. Enable **Bill clients for cost** on the **Settings** tab in the **User properties** dialog in SafeCom Administrator.

- a. Log in to SafeCom Administrator.
- b. Click **Users** in the left-hand menu, and then select the desired user(s) in the list. You may select multiple users.
- c. Right-click on the users, then select **User properties** from the context menu.
- d. Make sure that **Bill clients for cost** is selected in the **Print documents** section of the **Settings** page.

**i** If the **Bill clients for cost** check box is disabled, then select either the **Tracking** or the **Pay** option in the **Cost control** section.

- e. Click **OK** to save the settings and close the dialog.

## Enable using the Home Folder

The Home Folder feature allows users to save their work to a personal network folder. Using the folder requires meeting the following conditions:

- The folder name is given as a fully qualified domain name.
- The users to be assigned for using the feature must be members of the domain.
- The default domain must be set through the SafeCom Go web page.
- The applications (scan, fax, email, and so forth) to be used for jobs destined to the Home Folder must have the proper access rights for the folder (read, write).
- The applications (scan, fax, email, and so forth) to be used for jobs destined to the Home Folder must have the relevant credentials to access the folder (preferably the user's own credentials should be used).
- Home Folder name must not contain the % character.

To set the usage of the Home Folder, do the following:

1. Open the device's embedded web server web page in a web browser and log in.
2. Click the **Scan/Digital Send** tab.
3. Click **Scan to Network folder** > **Quick Sets** on the left menu.

**i** A Quick Set for Scan to Network Folder requires user credentials to retrieve the network folder path from the network directory. A network sign-in method should be selected for the device before using the Home Folder feature.

4. Select **Add** or **Configure**, as appropriate.

**i** Use the **Previous**, **Next**, **Finish** and **Cancel** buttons on the bottom right to navigate between the pages of the wizard.

5. Specify **Quick Set Name**, **Quick Set Description** and **Quick Set Start Options**.
6. Navigate to the **Folder options** page. Select the **Save to a personal shared folder** option and enter **HomeFolder** in the **Retrieve the device user's home folder using this attribute** field. **HomeFolder** field is case sensitive.

7. Optionally, navigate between the rest of the pages and set up details in the Notification, Scan Settings, and File Settings pages.
8. Click **Finish** to save the Quick Set.
9. Login to SafeCom Administrator.
10. Set the Home Folder for users through either:
  - Enter the **Home folder** property on the **Identification** tab of **User Properties**.
  - Use the **Import Home Folder** AD field in the **Active directory configuration** page of **User Import Configuration**.

When using CSV import with Home Folder, ensure that you use the full folder path of the users:  
<address>\Home\<username>.

## Determine the DWS version

Check the version of the SafeCom Device Web Server the following way:

In **SafeCom Administrator**, select **Device servers** from the left-hand pane. The version number is displayed in the **Version** column.

If the server is the member of a group, the group must be selected in the tree view. The left pane shows the version number.

## Determine the HP Unified Client version


Check the version of the HP Unified Client the following way:

At the device, tap **About** in the menu.

The version number is displayed in the about box. The device shows version 1.1.<revision>.<build number> in Safecom Administrator device pane.

## Configure Push Print Post Tracking

SafeCom Push Print Post Tracking is an extension of the tracking feature of the SafeCom solution. The tracking and charging data was based on the information that former versions of SafeCom components were able to collect while documents were printing at the workstation or the server. This data is not accurate enough to calculate the precise tracking information and the price of the jobs. The software utilizes the detailed information that is sent by the printing device itself and all information is calculated from these reports.

 The device needs to be up and running, connected to the network, to be able to send tracking data to the SafeCom server. Disconnecting or powering off the device while some tracking data is still pending may result in inaccurate tracking.

## Configure Post Tracking push print jobs

The feature does not require extra steps to configure devices for post tracking push print jobs, as all SafeCom components automatically recognize whether the feature is available in the specific configuration. You simply have to add the device to the SafeCom G4 server and associate it to a

Safecom Push port. By enabling the Print post-tracking device configuration setting in SafeCom Administrator, both push and pull jobs are tracked based on the job information reported by the device itself.

## Use Push Print Post Tracking

SafeCom push print post tracking extends the usage of the existing tracking feature, allowing you to track push print jobs in more detail.

All Push Print jobs for which Post Tracking is enabled are created in a **Pending** state, and remain in this state while awaiting post tracking data; this state can last up to 48 hours. The length of time jobs spend in **Pending** state can be configured using the `CleanPushTrackPendingInterval` 32-bit DWORD registry setting under `HKEY_LOCAL_MACHINE\SOFTWARE\SafeCom\SafeComG4`. The default value is 48 hours. The system updates the track list every 6 hours.

- If the post tracking data is received within the **Pending** time period, the tracking record is updated with the precise counters (based on the cost calculated from the post tracking data), and the job status is set to **Completed**. In pay environments, the price is recalculated and the pay user's balance is modified through an **Adjustment** transaction. Be aware that while the job is in **Pending** state, the pay user's balance is reduced according to the initial job data.
- If no post tracking data is received within the specified **Pending** duration, the job goes into **Completed** state, and in case of pay users, all costs are refunded through a **Withdrawal** transaction. These jobs are marked accordingly in the SafeCom Tracking database.


User transactions can be checked in the scPurse database directly or in Safecom Administrator, under **User properties > Account** . Safecom Web Interface provides a UI for the end-users to review their transactions.

In pay environments, the Push Printing, Adjustment and Withdrawal transactions are performed on the accounts of the users accordingly. Both accounts can be changed with each transaction.

If the push print post tracking requirements are not met during printing (for example, due to an older version of Print Client or SafeCom Go software), the job immediately goes into a **Completed** state, the pay user's balance is reduced accordingly, and the post tracking data is not taken into account by the SafeCom G4 server.

The Tracking service can be configured in online or offline mode in a multiserver environment. The final storage location of the tracking data is always the Safecom Master server. In online mode, the records are created on the master server database immediately. In offline tracking mode, the records are stored temporarily on the server that is bound to the Safecom Push port until the job reaches **Completed** state. The records are then moved to the master server depending on the scheduled tracking collection.

If the device fails to send the post tracking data because of the device home server is unavailable, it is stored and the device resends it after the next printing.


 Since the SafeCom Web Interface is configured to use the master server, users see their tracking data after the scheduled tracking collection.

Secondary prices may be different, as they are calculated only on the server side.

## Configure users and devices to allow modifying job settings

The Force Mono-Duplex (FMD) feature allows the users to force monochrome and/or duplex printing on the device. The feature can be enabled and disabled per user and per device. To control this user setting, open SafeCom Administrator and bring up the **User Properties** dialog.


The figure above indicates how the feature can be enabled for a user by setting the **Allow changing print settings** option. The setting can be managed for a group of users if the **Property** dialog is opened when multiple users are selected from the user list. If applied, users can see the relevant control icons on the device.

 If this setting is applied to the Default user correctly, all new users inherit this setting.

The setting for the device can be controlled in SafeCom Administrator.


Open the device property page in SafeCom Administrator. On the **Device configuration** page you can find the following options:

- **Enabled:** the device allows users to control their print jobs independently from the settings of the specific user.
- **Disabled:** the device hides the options from all users and the job settings cannot be changed.
- **Per user setting:** the device enables or disables the features according to the currently logged on user's settings.

 To properly calculate job prices, ensure that the duplex and color capabilities of the device are set correctly on the **Settings** tab of the **Device Properties** in SafeCom Administrator.

In pay environment the prices of jobs are recalculated if the user requests B&W or duplex printing. The new prices are shown in the job list. The displayed prices are just estimates, as they are based on not necessarily accurate data coming from the server side calculated when the documents were printed. The correct price can be calculated knowing the accurate page counters, the number of color pages and page sizes.

## Uninstall SafeCom HP Unified Client

 Deleting the device not only detaches it from the SafeCom server but also uninstalls the HP Unified Client from the device. If the same device connects to multiple SafeCom servers, then uninstallation makes the device inaccessible to those servers also.

1. Log in to SafeCom Administrator.
2. Click devices in the left-hand menu, and then select the device from which the SafeCom solution must be uninstalled.
3. Perform any of the following steps to remove the device:
  - a. Right-click on the device, then select **Delete device** from the context menu.
  - b. Click the **Delete** icon in the top menu.

#### 4. Click **Yes**.

**i** After uninstalling a device the icons on the device screen do not disappear automatically, it must be reset. In other cases, the KOFAX sign-in method remains registered on the device.

## Relocate DWS application log folder

Relocation of your log folder to a more accessible path pays off when archiving log files or contacting support. Do the following to relocate log files to the `C:\safecom_trace` folder, which is the established position of application logs in SafeCom solutions.

1. Locate your DWS folder, which is `C:\Windows\System32\config\systemprofile\AppData\Local\Nuance\Integrated\DWS\webserver\conf` by default.
2. Open the `DWSSettings.properties` file in a plain text editor, such as Notepad.
3. Append a new line with the `LOG_FILE_PATH` setting, specifying the new location for log files:

```
LOG_FILE_PATH=C:\\safecom_trace
```

**i** If the file already has the `LOG_FILE_PATH` setting, then edit the existing line instead. Make sure to use a double backslash when separating the drive name (C:) from the path.

4. Save the changes and close the plain text editor.
5. Restart the Device Web Server service.

SafeCom DWS saves the application log files into the `C:\safecom_trace` folder from now on.

## SafeCom HP Unified Client device trace facility

Use the SafeCom trace facility only if SafeCom Support instructs you to do so.

1. Log in to SafeCom Administrator.
2. Click **Servers** in the left-hand menu, and then select the desired server in the list.
3. Right-click on the server, and select **Server properties** from the context menu.
4. Make sure that the **Write event to Windows event log** box is selected on the **Server** page.
5. Click **OK** to save the settings and close the dialog.

To check the logged events, right-click on the server, then select Event log from the context menu.

In case you need to provide logs, visit the following locations and gather the files within.

**i** Compress the log files in ZIP format prior to sending to the support team.

- Client side log:

```
https://<your device ip address>/hp/device/oxpd/oxpdlog.txt
```

- Application log:

```
C:\Windows\System32\config\systemprofile\AppData\Local\Nuance\Integrated\
```

```
DWS\webserver\webapps\DwsMain\WEB-INF\felix-cache\<<bundle folder with log>\data
```

Locate the DATA folder under the bundle\*\*\* folders, such as. bundle176.

**i** It is recommended to set up a more accessible location, `C:\safecom_trace` by standard, for the application log files. See [Relocate DWS application log folder](#) for details.

- Web server log:

```
C:\Windows\System32\config\systemprofile\AppData\Local\Nuance\  
Integrated\DWS\webserver\logs
```



## Chapter 3

# Use SafeCom HP Unified Client

## Login

The login sequence is initiated if you are not already logged in and tapped any icon, such as **Pull Print** or **Copy**, that requires SafeCom to handle **MFP authentication**.

If the copy function requires SafeCom authentication pressing the green **Copy** button initiates also the login sequence. Once logged in the documents placed in the automatic document feeder (ADF) are copied. If **Print all at login** is selected on the server in **User properties > Settings** then HP Unified Client devices print all documents at login, excluding retained ones.

The recommended login sequences are described in the following chapters:<sup>1</sup>

- [Login with card](#)
- [Login with card and PIN code](#)
- [Login with ID code](#)
- [Login with ID code and PIN code](#)
- [Login with Windows](#)

**i** Do not power off the device prior to Logout, see [Logout](#). The device needs to be up and running, connected to the network, to be able to send tracking data to the SafeCom server. Disconnecting or powering off the device while some tracking data is still pending may result in inaccurate tracking.

**i** After adding the device to SafeCom, the first login can take a longer time.

## Login with card

Use the card reader.

## Login with card and PIN code

1. Use the card reader.

---

<sup>1</sup> A PIN code only is required if both the user and the device is set up to require PIN code. This applies to both the login sequences and when the user registers a card using a PUK code.

2. Enter **PIN code** on the touchscreen or on an optional external keyboard.
3. Tap **OK**.

## Login with ID code

1. Tap **Sign In** (or press the green **Copy** button to copy).
2. Enter **ID code** on the touchscreen or on an optional external keyboard.
3. Tap **OK**.

## Login with ID code and PIN code

1. Tap **Sign In** (or press the green **Copy** button to copy).
2. Enter **ID code** on the touchscreen or on an optional external keyboard.
3. Tap **OK**.
4. Enter **PIN code**.
5. Tap **OK**.

## Login with Windows

If Login method is set to Windows authentication, it is possible to log in by entering your Windows login credentials:

1. Tap **Domain** and specify the Domain.
2. Tap **User name** and enter username on the touch-screen. Tap **OK**.

**i** **User name** cannot be blank.

3. Tap **Password** and enter password on the touch-screen. Tap **OK**.

**i** **Password** cannot be blank

4. Tap **OK**.

## Register card at device with Windows credentials

**i** If there is an available PUK code in the SafeCom system, the user also has the option to register the card using a PUK code, see [Register card at device with PUK code](#).

**i** For Windows authentication, the card reader cannot be used. To use a card reader and Windows authentication, users should select **Auto-sense**.

1. Use the card reader and if the card is unknown the **SafeCom Card Registration** page appears.

2. Specify the appropriate domain in the **Domain** field.
3. Tap the **User name** field and enter the Windows user name on the touchscreen or on an optional external keyboard. Tap **OK**.
4. Tap the **Password** field and enter the Windows password. Tap **OK**.
5. Tap **OK**.

The card is now registered and the user is logged in.

## Register card at device with PUK code

1. When using a card reader, if the card is unknown and there is an available PUK code in the SafeCom system, the **SafeCom Card Registration** page appears with the options to register the card using a PUK code or Windows credentials.
2. Tap the **PUK** field and enter the PUK code on the touchscreen or on an optional external keyboard.
3. The card is now registered.

## Change PIN code

If users are allowed to change their PIN, **Change PIN** screen appears after successful card registration. The new PIN code must be confirmed by entering it twice.

If the card was registered by PUK code the Change PIN screen appears after the user's first successful login.


## Server status verification

Users can check the availability of the server using the drop-down menu of the Login screen. DWS and SafeCom G4 server status can be verified this way. It is useful in case of failover situations, because the window shows the current state of the controlling DWS server and G4 server.

### Server information

The server information window has the following statuses:








- The green Online label shows that indicates that the servers are available, they function normally.
- The yellow connecting status message shows that the server is available, but the connection is not established yet.
- The red Offline label means disconnected servers. The device is only usable if both G4 and DWS are online.

 The device show another error message if it has no direct connection to its controller DWS server.


## Pull Print - Document list


Tap the **Pull Print** icon to access the **Document list** that allows you to print individual documents. Documents appear in chronological order with the newest at the top of the list.

In the document list, the following icons can mark the document:

- : shows the document is retained.
- : shows the document has a billing code.
- : shows the document is delegated. Tap the **Info** button to see information about who delegated the document.
- : shows the document is group printed.
- : shows the document is forced to print in black and white.
- : shows the document is forced to print in duplex.
- : shows the document fidelity is low and the document can print incorrectly.

The printing cost of the document (for example, **1.60**) is below the document name.

- Tap **Print all** to print all documents, excluding any retained documents. Documents are printed in chronological order (oldest first).
- Tap **Refresh** to update the list of documents with pending documents that has finished spooling after the user logged in.
- Tap **Print** to print the selected documents.
- Tap **Retain** if you want the selected documents to remain on the list (server) after they have been printed. A retained document is marked with a preceding .
- Tap **Delete** to delete the selected documents.
- Tap **Info** to see information about the selected documents, including cost, driver name, use of color and duplex.
- Tap **Copies** to request multiple copies of a document. **Print all** always prints one copy of each document.

 The controls of the finishing options, Force duplex and Force mono print, are shown before the control of the copy number if the user is allowed to perform these operations.

## Copy

Tap the green **Copy** icon to copy the documents placed in the automatic document feeder (ADF).

## Folder

Tap the **Scan** icon, then tap the **Scan to Network Folder** icon to scan and send the document to a folder.

## E-mail

Tap the **Scan** icon, then tap the **Scan to Email** icon. It is configurable if the fields should be editable or not. For each field tap the field button and enter the value on the touchscreen or on an optional external keyboard. Tap the **Send** button to scan and e-mail the document.

## Select a Billing Code

If billing codes are enabled by the administrator, the user is required to select a billing code.

The Billing Details screen offers the following options:

- **Select filter type:** Filter the list of billing codes by the following options:
  - Favorites
  - Last used
  - Personal


**i** If **Personal** is selected, the tracking data contains "Personal" as the code, and "Used for personal billing" as the description. This differentiates it from the tracking data not subjected to billing, for example data from a device which does not have a billing license.

- **Select Details:** This box is active if **Favorites** or **Last used** was chosen in **Select filter type**. This option lets the user search among billing codes.
- **Billable:** Select this check box to use the selected billing code in invoicing. If this check box is cleared, the selected billing code is still applied, but not detailed in the customer invoice.

**i** This check box is only available if the administrator has recorded the selected billing code as billable.


## Logout

There is a configurable Inactivity timeout that defaults to 60 seconds. The logout process is initiated if the user does not interact with the screen or any other device buttons.

 Set a high Inactivity timeout value in order to avoid undesired automatic log out during those time-consuming operations not requiring any user interaction on the device screen. See [At the Printer: Undesired timeout](#) as a troubleshooting example.

To log out actively perform one of the following actions:

- Tap **Sign Out**.
- Swipe a card again (if a card reader is connected and you logged in by card).

 The Cancel print jobs after unattended error feature is disabled by default. If this feature is enabled, then jobs pending due to unattended errors, such as paper jam or out of paper, are automatically deleted from the print queue as the user logs out. Visit **Security > General Security > Printing > Cancel print jobs after unattended error** on the HP device web page to enable or disable this feature.

If you experience users being intermittently logged out during workflows, check [At the Printer: Undesired timeout](#) for a solution.

## Chapter 4

# Troubleshooting

## Introduction

This chapter contains troubleshooting hints for the SafeCom HP Unified Client product. Additional troubleshooting hints are available in the Troubleshooting chapter in the *Kofax SafeCom G4 Administrator's Guide*.

## At the Printer: Card reading does not work

Check the following points:

- Is the card reader powered and firmly connected?
- Is the card compatible with the reader?
- Make sure you used the correct VID/PID values when adding the device to SafeCom Administrator.
- If the card reader was added or changed after adding the device to SafeCom Administrator, then you need to remove the device and add it again together with its card reader.

## At the printer: Card swipe results in unexpected behaviour when using third-party authorization

Card swipe results in unexpected behavior when using third-party authorization.

**Solution:** Do not use card authentication when using third-party authorization, because this is not a supported scenario.

## At the Printer: Device freezes as Register with Windows credentials pressed

If the device is installed in DLA mode and **Card** is selected for login method then tapping the **Register with Windows credentials** button can result in a freeze. The **Present your card** screen appears and the device does not react to further card swipes.

**Solution:** Use HP devices with firmware version 24.7.2 or newer.

## At the printer: Handling stale connections by G4 server

After a longer period of inactivity (sleep) of device time, the G4 server closes connection. It can cause issues, for example failed login or connection problems in the first user session, which reactivates the device. The second login attempt is successful.

**Solution:** The G4 side behavior is configurable with the following registry settings:

HKEY\_LOCAL\_MACHINE\SOFTWARE\SafeCom\SafeComG4

TcpServerLogicalSocketTimeout (default is 3600000 ms, 1 hour): logical connections represented by devices

TcpServerSocketTimeout (default is -1 infinite): physical connections.

## At the Printer: SafeCom inactivity timeout does not work on device home screen

SafeCom timeout does not work on the home screen or on native application screens, for example Copy.

SafeCom timeout does not work on screens other than SafeCom screens.

**Solution:** Please use the device timeout.

## At the Printer: Sign-in failed

If a DWS is registered by host name, Sign-in on the device fails in network environments lacking name resolution.

**Solution:** Provide name resolution on the network.

**Workaround:** Open the **Server Properties** dialog box in **SafeCom Administrator** and update the IP address manually in the **Server address** box.

## At the Printer: Source not reachable / Job inaccessible

The user is trying to collect a document that resides in a folder on a computer that is not reachable for the printer.

The Job inaccessible message can also result from improper licensing. Ensure that the **Pull Print** value is set to **True** under **Device properties** > **Licenses** in SafeCom Administrator.



## At the Printer: Undesired timeout

If you experience users being intermittently logged out during workflows, it is recommended to use the device's native timeout feature instead of SafeCom's inactivity timeout to control automatic logout.

To do so, increase the SafeCom inactivity timeout to a large value, such as 3600 seconds, and set the timeout of the device at **General > Control Panel Customization > Display Settings > Inactivity Timeout** to the desired timeout value. For more information, see [Inactivity timeout](#) for details.

## At the Printer: USB Error

If you get the message The USB storage device that was just inserted is not supported, it is likely that you have installed the USB ID Device on the device *before* installing the SafeCom solution on the device.

This error disappears when SafeCom is installed on the device.

This error can also occur if the card reader was added with an invalid VID/PID.

## At the Printer: User cannot log out until the last job is spooled

When printing a large number of jobs or a large number of copies of the same job, a user cannot log out from the device until the last job is spooled to ensure correct accounting. This can cause a delay in logging out for users who are printing a large number of documents.

## Add device to device controller service failed error

SafeCom HP Unified Client allows using special characters in device passwords but using some of these characters can result in unexpected behavior. The following special characters are safe to use:

- + \* ? ! % = . \$ / { } \_ , ( ) :

**Workaround:** It is not recommended to use any special characters other than the ones in listed above in device passwords.

## Certificate generation for DWS fails

If certificate generation fails for the DWS server, ensure that the server has a valid FQDN (Fully Qualified Domain Name), and DNS name resolution works.

## Incorrect tracking information

Using non-supported drivers for Pull Print can result in incorrect tracking information. There are known issues with Kyocera ClassicUniversalDriver\_v31.

**Solution:** Use a supported driver.

## OXPd Application Error - Mime type not supported

This error message appears if you try to print to a device which has a name that includes accented characters.

**Solution:** Remove the device from SafeCom, then add the device again, specifying a name without accented characters in **Name**. For details, see step 8.

## Prevent low toner feature does not work

Some HP devices do not notify on low toner level, though **Low Warning Thresholds** are set correctly and **Low Warning Threshold Message** is enabled on the device. Meanwhile, the Document Feeder Kit Low message displays correctly. This causes SafeCom's Prevent low toner feature fail.

## Prices do not match

Price1 and Price2 can be different in case of using a paper size unsupported by SafeCom or the device.

Use the kind of media supported by both SafeCom and the printing devices in order to keep consistency.

## Problems when adding a device - valid certificate required

To install SafeCom HP Unified Client on a HP device, a valid certificate must be present on the device. If the certificate is invalid, then adding the device fails.

Possible causes:

- If the certificate changes on the device (for example, due to certificate regeneration) then the device can need to be re-added to SafeCom.
- Using Partial Disk Clean can result in invalid certification if using a self-signed certificate.
- Any changes altering time zone settings can result in a certificate validation failure.

**Solution:** Remove the device, then create a new certificate and add the device again.

## Problems when adding a device - device already configured

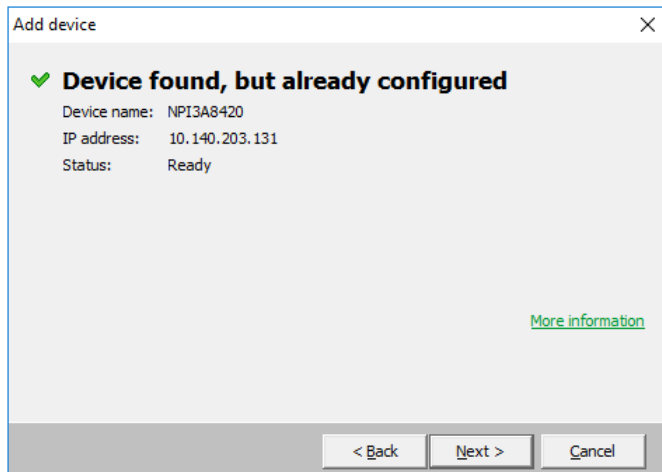
It might happen that the device to be added to the SafeCom system has been configured before. In this case, follow the troubleshooting procedure that fits your situation.

- The device is registered in the SafeCom database:

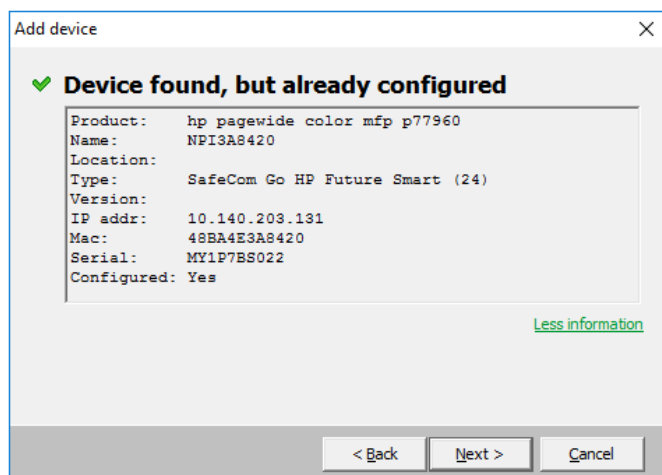
If the device exists in the SafeCom database and it is assigned to one or more servers then there is no way to add it again. The SafeCom Administrator displays a warning and optionally shows the property dialog of the device.

- The device is registered in the DWS:

It can lead to inconsistency if a device has been deleted from the SafeCom database while the corresponding Device Web Server was temporarily out of order. The device remains registered in the Device Web Server, but it is missing from the SafeCom database. When you try to add this device again, the Add Device Wizard displays the following screen:



Optionally, click **More information** to verify that the device already has been added to the selected Device Web Server:



If you continue with the Add Device Wizard (click **Next**), the wizard performs the following steps:

1. Removes the device from the Device Web Server.
2. Registers the same device to the Device Web Server again.
3. Adds the device to the SafeCom database as a new device.

## Problems when adding a device - device is not discoverable

If IPP (Internet Printing Protocol) is not enabled on an HP device, then the Add Device Wizard fails to add the device. Do the following to fix the problem:

1. Log in to the device.
2. Navigate to **Networking > Other Settings > Misc. Settings** on the device web page.
3. Make sure to enable Internet Printing Protocol by selecting the **IPP Printing** or **IPPS Printing** boxes, then save the settings.
4. Start over the Add Device Wizard and complete the installation.

For more information, see [Add the device through SafeCom Administrator](#) for details.

## SafeCom HP Unified Client has incorrect IP address

SafeCom does not support TCP/IPv6, so if you are in such an environment you must disable the use of TCP/IPv6.

## Sign-In methods are disabled on the device

Installing an authorization agent (such as SafeCom) on HP FutureSmart 4 devices disables all manual authorization controls. Users can not be able to manually configure authorization on the affected devices once SafeCom is installed.

## Signing in message appears while canceling

"Signing in" message appears if the user taps **Cancel** during authentication on the ID Code screen. This issue has no effect on functionality.

## Unable to find device

When using a push port, the `Unable to find device` error message appears after a device was removed and then added again.

To solve this problem, remove the device in SafeCom Administrator, then add it again with another push port.

## Unexpected unattended push prints appear

If you see any unsolicited unattended push prints, then make sure that the device is not in use as a TCP/IP printer.

## Wrong tracking or negative balance of the user in case of duplex printing

When using duplex printing or printing more copies of the same document, the balance of the user can go under zero. Normally, when not using duplex or printing more copies of the same document, SafeCom does not allow that the balance goes under zero. The user cannot continue printing if the balance is under zero.