



# **Tungsten TotalAgility**

## **Administrator's Guide for Ricoh MFPs**

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**TUNGSTEN**  
**AUTOMATION**

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# Preface

This guide describes how to install the client software that resides on the MFP and has options that appear on the device's front panel. After performing this procedure, you can create and update device profiles with shortcuts from Devices whenever needed. When the MFP connects with Tungsten TotalAgility, the updated device profiles are retrieved and display on the MFP.

Tungsten TotalAgility supports Ricoh devices with the Smart Operation Panel. The instructions in this guide apply to all devices unless otherwise noted.

 If you are upgrading Tungsten TotalAgility, you must upgrade the client software on all MFPs to implement the latest security features.

## Related documentation

The product documentation set for Tungsten TotalAgility is available at the following location.

<https://docshield.tungstenautomation.com/Portal/Products/KTA/8.1.0-rmx0b1ux3q/KTA.htm>

In addition to this guide, Tungsten TotalAgility includes the following documentation:

### ***Tungsten TotalAgility Installation Guide***

The *Tungsten TotalAgility Installation Guide* provides installation instructions and other information that helps you successfully set up Tungsten TotalAgility.

### ***Release Notes***

Release notes provides late-breaking product information that may not be included in other Tungsten TotalAgility documentation. The release notes are available for viewing or downloading from the Tungsten website.


## Training

Tungsten Automation offers both on-demand and instructor-led training to help you make the most of your product. To learn more about training courses and schedules, visit the [Tungsten Automation Learning Cloud](#).

## Getting help with Tungsten Automation products

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

To access the Tungsten Automation Knowledge Portal, go to <https://knowledge.tungstenautomation.com/>.

 The Tungsten Automation Knowledge Portal is optimized for use with Google Chrome, Mozilla Firefox, or Microsoft Edge.

The Tungsten Automation Knowledge Portal 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.  
To locate articles, go to the Knowledge Portal home page and select the applicable Solution Family for your product, or click the View All Products button.

From the Knowledge Portal home page, you can:

- Access the Tungsten Automation Community (for all customers).  
On the Resources menu, click the **Community** link.
- Access the Tungsten Automation Customer Portal (for eligible customers).  
Go to the [Support Portal Information](#) page and click **Log in to the Customer Portal**.
- Access the Tungsten Automation Partner Portal (for eligible partners).  
Go to the [Support Portal Information](#) page and click **Log in to the Partner Portal**.
- Access Tungsten Automation support commitments, lifecycle policies, electronic fulfillment details, and self-service tools.  
Go to the [Support Details](#) page and select the appropriate article.

## Chapter 1

# Features

The following Tungsten TotalAgility features are available with the Ricoh MFP. See the Help for Devices for more information.

- Management through Devices in the Tungsten TotalAgility Designer

MFPs are able to self-register with Devices and automatically activate licenses. (This feature is optional and is not available in cloud configurations.) You can also manually activate, deactivate, or remove MFPs whenever needed. In Devices, you can open the Web page for the MFP if Tungsten TotalAgility can communicate over the network with the MFP.

- Client software on the MFP

When the client software is installed, a button is added to the front panel of the MFP to provide access to Tungsten TotalAgility features. The appearance of the front panel depends on the MFP model.

- Log on

This feature enables you to log on to the MFP as a Tungsten TotalAgility user. Logging on may provide additional options.

- Shortcuts

This feature facilitates the sending of documents. In Tungsten TotalAgility Designer, use Device Create New Job to create forms that appear as shortcut buttons on the MFP front panel.

- Scan history

At the MFP, you can press the Scan History button on the main menu to view the scan history. If you are logged on, the history shows transactions you sent to the server from any connected device. If you are not logged on, the history shows transactions sent from all anonymous users on the device, as well as any transactions that are waiting to be sent to the server from the device.

Status	Description
Pending*	The job is waiting to be sent to the server.
Completed	Successfully sent to destination.
Pending Retry*	The job failed to be sent and another attempt will be made. This message indicates the number of the retry attempt.
Deleted	User deleted transaction from the inbox, or the administrator removed it during transaction review.

\* Can be cancelled manually on devices if the user has the FullControl access type or the proper permissions in Devices. The number of attempts and the behavior for handling a failed job is configured in Devices. The duration between attempts is set in Designer with a Tungsten TotalAgility system task. If the failed job is retried or cancelled, the device processes it after finishing all other jobs pending for process.

- Display confirmation messages

You can enable confirmation messages to be sent from Tungsten TotalAgility to this MFP so that users can see status information about their transactions. Messages appear on the MFP front panel when each scanned transaction reaches the server, or if a problem occurs. See the Devices Help for instructions on setting up confirmation messages.

- Language support

At the MFP front panel, you can specify the language. If the language specified is not supported by Tungsten TotalAgility, English is used by default.

- Form fields

You can enter values for form fields at the MFP. When you define forms in Devices, you can enter default values into fields for these shortcuts. The data is also validated for an appropriate type and length. You can also customize the validation and field lookup options.

- Customized validation and lookup options

You can customize validation and a variety of field lookup options for forms in the Tungsten TotalAgility Designer. For more information, see Tungsten TotalAgility Help.

- Device logging

Log messages from the device are stored in the Tungsten TotalAgility database. Download the log from Devices by going to the General tab for the device and clicking Download Log.

- Scanned page count

This feature displays the number of pages that have been scanned. When you add pages to a document, the front panel displays the number of newly scanned pages and the total number of pages in the document.

- Help

Help is available at the MFP touch screen. Users can press the question mark or Help button on the touch screen to view information about the screen.



## Chapter 2

# System requirements

The primary source of information about supported devices and other Tungsten TotalAgility requirements is the Technical Specifications document. The document is updated regularly, and we recommend that you review it carefully to ensure success with your product.

Before installing the client software for the Ricoh MFP, do the following:

- Install Tungsten TotalAgility.
- Download the Ricoh client software from Devices.
- Make sure you have sufficient licenses to use your MFPs.
- Make sure that you use a supported Ricoh MFP. See the Tungsten TotalAgility Support pages on the Tungsten website for supported MFPs.
- Increase the default heap memory size for applications when both Card Authentication Package (CAP) and Tungsten TotalAgility operate simultaneously on the same device. Ricoh supports Card Authentication Package (CAP) on versions 4, 5, and 6 of the Ricoh JDK. However, Tungsten only supports CAP with Tungsten TotalAgility on versions 5 and 6, not 4.
- When using device authentication with Tungsten, make sure that the timeout setting is set to enable the device to prepare the largest likely scanned documents for sending to Tungsten. If the device logs out before finishing, the scan job is lost.
- If you are using a 10.x or later device, you can use IPv4 and IPv6 addresses. For devices using earlier versions of Ricoh software, only IPv4 addresses can be used.

## Cards for Ricoh MFPs

You may need to install cards in the MFP to support Tungsten TotalAgility features.

### Embedded Software Architecture card

To install the client software, you must install an Embedded Software Architecture card. Tungsten TotalAgility supports Embedded Software Architecture versions 2 and 4. See the Tungsten website for a list of supported Ricoh MFPs and the cards required for each. Install the card as shown in the Ricoh MFP documentation.

To purchase an Embedded Software Architecture card, contact your Ricoh dealer or Tungsten.

### PostScript card for discovery support

To use the automatic discovery feature in Devices to detect the MFP, install a PostScript card, which includes software needed for the feature. If the MFP cannot be discovered automatically, or if it is

outside a firewall, add it manually in the Devices. The PostScript card and the automatic discovery feature are not required to use a Ricoh MFP with Tungsten TotalAgility.

To purchase a PostScript card, contact your Ricoh dealer or partner.

## Cloud configuration for TLS

The TLS and cipher settings on the device must match the TLS and cipher settings on the server. You may need to add and remove ciphers on the server to allow communication with the device.

If you plan to use SSL with a cloud configuration, your device needs to support TLS 1.2 and the following cipher suites:

- TLS\_RSA\_WITH\_AES\_128\_GCM\_SHA256
- TLS\_RSA\_WITH\_AES\_256\_CBC\_SHA

The following cipher suites are *not* supported:

- TLS\_DHE\_RSA\_WITH\_AES\_128\_CBC\_SHA
- TLS\_DHE\_RSA\_WITH\_AES\_128\_CBC\_SHA

You must remove these cipher suites or lower their priority on the server.

Some older Ricoh devices do not support TLS 1.2. Contact your Ricoh sales and service representative to see if there is a version of the firmware for the device that supports the required security protocols. For devices that rely on SunJSSE, you may be able to obtain an update with HTLS that enables you to switch to RsaJSSE, which supports TLS 1.2 with a limited number of cipher suites.

## Network configuration

Make sure the Ricoh devices are able to connect with the server, especially if you are using SSL or connecting with a cloud configuration. This section describes basic network configuration tasks for Ricoh Android and Java devices. There may be differences in menus, depending on your device. For more information, refer to the Ricoh documentation. For tips to troubleshoot the network configuration, see [Troubleshooting network connectivity](#).

### Ricoh Android network configuration

1. Start the Web Image Monitor as shown in the Ricoh documentation.
2. Select **Device Management** > **Configuration**.
3. Under **Security**, click **SSL/TLS**.
4. Select the highest version of TLS that your server and device supports.

In most cases, this is TLS 1.2. Devices may only support a lower version of TLS. If you need to use a higher version to connect with the server, contact Ricoh about available HTLS firmware upgrades.

## Ricoh Java client network configuration

Before you begin, make sure you have the latest firmware for your device.

1. Start the Web Image Monitor as shown in the Ricoh documentation.
2. Select **Device Management** > **Configuration**.

## Chapter 3

# Installing the client software

You can install the Tungsten TotalAgility app on the MFP using one of the following methods:

- For an Android device with the Smart Operation Panel, use the Ricoh Android Registration Client.
- For other Ricoh devices, use either Devices or the internal Web pages of the MFP, depending on whether or not the device can be discovered by Tungsten TotalAgility.

The Ricoh Android Client requires second-generation SOP (SOP G2) and SmartSDK Service 2.1 or later. For SOP G1 and Java devices, install the Ricoh Java Client.

Before installing the client software on the MFP, do the following:

- Install Tungsten TotalAgility.
- Download the Ricoh client software from Devices. (See the *Help for Devices* for instructions.) Then extract ricoh.zip to a folder on your computer. It contains the following files.
  - ricoh\_smart\_operation\_panel.zip: For devices with a Smart Operation Panel.
  - TungstenRicoClient.zip: For Ricoh devices that have Java Platform 7.x or higher.
  - RegistrationAnroidRicoClient.zip: A tool to register ricoh\_smart\_operation\_panel.zip to Ricoh Smart Operation Panel devices.
- Make sure that Embedded Software Architecture is installed on the Ricoh MFP.
- Make sure port 80 or 443 is open for communication between Tungsten TotalAgility and the MFP.

❗ If the MFP already has the client software, unregister or uninstall it before installing the new version.

## Installing on Ricoh Android devices

For Ricoh Android devices, use the Ricoh Android Registration Client to install the Tungsten TotalAgility client software to one or more devices with the Smart Operation Panel.

Note the following:

- The Ricoh Android Registration Client requires Java Runtime Environment (JRE) version 6 or later.
  - You can pre-configure settings by editing the TungstenRicoAndroid.dalp file before deploying the Tungsten Ricoh Android client to Ricoh Smart Operator Panel devices. See [Pre-configured settings for Ricoh Android devices](#).
1. In the folder where you downloaded and extracted the client software, run TungstenRicoAndroidRegistration.exe.  
The **Ricoh Android Registration Client** window opens.

2. In the **MFP Host Names or IP Addresses (comma separated)** field, provide information for the MFPs you are registering. To register multiple MFPs at one time, use one of the following options.
  - Enter MFP host names or IP addresses separated by commas into the **MFP Host Names or IP Addresses (comma separated)** field.
  - If you have a file that is generated by MFP management software, select the character used to separate each entry (a comma, tab, or semicolon) in the **Delimiter**. Make sure each MFP is on a separate line and the IP address or host name is the first entry. In this example, the IP address, host name, MAC address, and model name are delimited by commas.

```
173.21.45.23,purchasing01,11-22-33-44-55-66,Purchasing 1
173.21.45.24,purchasing02,11-22-33-44-55-67,Purchasing 2
173.21.45.25,purchasing03,11-22-33-44-55-68,Purchasing 3
173.21.45.26,purchasing04,11-22-33-44-55-69,Purchasing 4
173.21.45.27,purchasing05,11-22-33-44-55-70,Purchasing 5
```

If the first entry is not an IP address or host name, correct it before attempting to import the file.

- Create a text file to import with all your IP addresses or host names with a line break after each, as shown in the following example. If you use this method, it does not matter what is selected in the **Delimiter** field.

```
173.21.45.28
173.21.45.29
173.21.45.30
173.21.45.31
173.21.45.32
```

If you have a file to import, click **CSV File** and select the file. The registration program registers each MFP in order until all of the ones listed in the file are registered.

3. Enter the credentials for the device administrator. Enter the user name in the **Device Administrator ID** field and the password in the **Device Administrator Password** field.

! To register multiple MFPs, the administrator credentials must be the same on every MFP.

4. Select the type of connection in **MFP Protocol** field, either **http** or **https**.
5. In the **Ricoh Client File** field, click **Browse**. and select the ricoh\_smart\_operation\_panel.zip file.
6. Click **Register**.  
The Ricoh Android Registration Client validates the fields and indicates any missing fields. The progress bar at the bottom of the window indicates the status of the registration.  
When the registration process is completed, the **Registration Results** window lists successful deployments as well as any errors. Right-click and copy one or more selected items or select them all.
7. When you finish viewing the **Registration Results** window, click **OK** and close the Ricoh Android Registration Client.

## Pre-configured settings for Ricoh Android devices

You can pre-configure settings by editing the TungstenRicoAndroid.dalp file before deploying the Tungsten Ricoh Android client to Ricoh Smart Operator Panel devices. This enables you to deploy the same settings to multiple devices. This feature requires a minimum of G2 firmware.

**i** If an SOP device does not support pre-configured settings, a settings window appears on the device the first time you run the Tungsten client.

To use this feature, do the following:

1. From the folder where the Ricoh client software is located, locate `ricoh-smart-operation.zip`.
2. Extract `ricoh-smart-operation.zip`.
3. Edit `TungstenRicoAndroid.dalp` to enter connection information for Tungsten TotalAgility and other settings.  
For example, to enable logging so you can perform network troubleshooting, set `-a` to `true`. See the comments in the `TungstenRicoAndroid.dalp` file for information.
4. Compress `TungstenRicoAndroid.dalp` and `TungstenRicoAndroid.apk` into a single `.zip` file.
5. Deploy the `.zip` file to Ricoh Smart Operator Panel devices using either the Ricoh Android Registration Client tool or WIM.

## Installing on Ricoh Java devices

For Ricoh Java devices, the installation process depends on whether Tungsten TotalAgility can discover the MFP. For an MFP to be discovered, the Tungsten TotalAgility computer must be able to communicate with the MFP over the network traffic. Use Ping to test the connection. Then do the following:

- If the MFP can be discovered, deploy the software from Devices.
- If the MFP cannot be discovered, install the software using the internal Web pages of the MFP.

**i** Although you can use the internal Web pages even if the MFP can be discovered, deploying from the Devices requires fewer steps.

### If the MFP can be discovered

1. Start the Devices and log on as a user with administrator rights.
2. In Devices on the **Settings - Advanced** tab, locate the `kfs.properties` namespace. Set the following properties.
  - **ProxyServer**: Enter the host name or IP address of the server (or the proxy server for a cluster configuration) used by Tungsten TotalAgility.
  - **ProxyServerProtocol**: Select a secure (HTTPS) or unsecure (HTTP) connection.
  - **ProxyServerPort** or **ProxyServerSecurePort**: Enter the port number used by Tungsten TotalAgility in **ProxyServerPort** for an HTTP connection or **ProxyServerSecurePort** for an HTTPS connection.

When you have set these options, click **Save**.

3. In Devices, discover and add the MFP. For instructions, see the Devices Help.
4. On the available devices list, select the MFP and click **Deploy**. A Tungsten button appears on the MFP Home screen.


5. Create a device profile, and associate the profile with the MFP. Follow the instructions in Devices Help.

## If the MFP cannot be discovered

1. Start the Devices and log on as a user with administrator rights.
2. In Devices on the **Settings - Advanced** tab, locate the kfs.properties namespace. Set the following properties.
  - **ProxyServer**: Enter the host name or IP address of the server (or the proxy server for a cluster configuration) used by Tungsten TotalAgility.
  - **ProxyServerProtocol**: Select a secure (HTTPS) or unsecure (HTTP) connection.
  - **ProxyServerPort** or **ProxyServerSecurePort**: Enter the port number used by Tungsten TotalAgility in **ProxyServerPort** for an HTTP connection or **ProxyServerSecurePort** for an HTTPS connection.

When you have set these options, click **Save**.

3. Start the Ricoh Web Image Monitor using a browser, and enter the IP address of the MFP as the URL.
4. Log on as a user with administrator rights.
5. On the left panel, select **Configuration**.
6. In the **Extended Feature Settings** area, select **Install**
7. On the **Install** window, select **Local File** and browse to TungstenRicoClient.zip.
8. Click **Display Extended Feature List**.
9. In the **Extended Feature List** area, select your installation target settings.
10. Select **Tungsten\_Client** and then click **Install**.  
The MFP will be added in the Devices the first time it contacts Tungsten TotalAgility.
11. On the confirmation screen, click **OK**.

 Depending on the model, the Ricoh MFP may restart after the client software is installed.

## Chapter 4

# Uninstalling the client software

As with installation, uninstall the Tungsten TotalAgility app on the MFP using one of the following methods:

- For an Android device with the Smart Operation Panel, use the Ricoh Android Registration Client.
- For other Ricoh devices, use either Devices or the internal Web pages of the MFP, depending on whether or not the device can be discovered by Tungsten TotalAgility.


## Uninstalling with the Ricoh Android Registration Client

Use the Ricoh Android Registration Client to uninstall the app by following these steps:

1. In the folder where you downloaded and extracted the client software, run TungstenRicoAndroidRegistration.exe.  
The **Ricoh Android Registration Client** window opens.
2. In the **MFP Host Names or IP Addresses (comma separated)** field, provide information for the MFPs from which you are uninstalling the app. To uninstall the app from multiple MFPs at one time, do one of the following:
  - Enter MFP host names or IP addresses separated by commas into the **MFP Host Names or IP Addresses (comma separated)** field.
  - Use the file containing a comma, tab, or semicolon delimited list of host names or IP addresses of the MFPs. In the **Delimiter** field of the registration client, select the type of delimiter that is used in the file. Click the **CSV File** button and select the file.

See [Installing on Ricoh Android devices](#) for instructions on using a comma-delimited list or specifying IP addresses or host names without a list.

3. Enter the credentials for the device administrator. Enter the user name in the **Device Administrator ID** field and the password in the **Device Administrator Password** field.

 To register multiple MFPs, the administrator credentials must be the same on every MFP.

4. Select the type of connection in **MFP Protocol** field, either **http** or **https**.
5. Click **Unregister**.

The Ricoh Android Registration Client validates the fields and indicates any missing fields. The progress bar at the bottom of the window indicates the status. When the process is completed, the **Results** window lists successful uninstallations as well as any errors. Right-click and copy one or more selected items or select them all.

6. When you finish viewing the **Results** window, click **OK** and close the Ricoh Android Registration Client.



## Uninstalling the client software from other Ricoh devices

Uninstall the client software if you are no longer using Tungsten TotalAgility with the MFP or to deploy an updated version of the client software. Uninstall the current version of the client software before deploying a new one.


**i** The commands and buttons vary depending on device model. Refer to the documentation provided with the Ricoh MFP for instructions.

1. On the front panel, select **User Tools > Machine Features > Extended Feature Settings > Extended Feature Settings**.
2. Shut down the client software as follows:
  - a. Press the **Startup Setting** tab.  
The tab has a **Tungsten MFP Client** button showing the status to the left.
  - b. If the status is **Stop**, go to the next step. If the status is **Active**, **Starting Up**, or **Suspend**, press **Tungsten MFP Client** to stop the client software.
3. Uninstall the client software as follows:
  - a. Press the **Uninstall** tab.  
The tab has a **Tungsten MFP Client** button.
  - b. Press **Tungsten MFP Client**.
  - c. When prompted to confirm that you are uninstalling the client software. Press **Yes**.
  - d. When notified that the removal is completed, press **Exit** in succession to close the Extended Feature Settings and the User Tools page.
4. Turn off the power switch on the front panel (wait until the lights are off) and then the main power switch.
5. Leave the MFP off for 15 seconds or until the main power light goes off. Then, turn on the MFP.
6. If you are upgrading, follow the instructions in [Installing the client software](#).

## Chapter 5

# Starting the client software for the first time

After installing the client software, follow these steps to run it for the first time. This task only needs to be performed once.

 The commands and buttons vary depending on device model. Refer to the documentation provided with the Ricoh MFP for instructions.

1. Set the function priority to **Home** to ensure that the device connects to the server reliably.
  - a. On the front panel, select **User Tools > Screen Features > Screen Device Settings > Function Priority**.
  - b. Make sure **Home** is selected. If not, change the setting.
  - c. If you changed the function priority to **Home**, restart the device.
2. Start the **Tungsten MFP Client** app, if it is not already started.
  - a. On the front panel, select **User Tools > Machine Features > Extended Feature Settings > Extended Feature Settings**.
  - b. Press the **Startup Setting** tab.  
The tab should have a **Tungsten MFP Client** button.
  - c. If the status does not indicate that the app has started, press the **Tungsten MFP Client** button to start it.

After completing this procedure, use the information in [Displaying the client software on the MFP front panel](#) to display the client software on the front panel.

## Displaying the client software on the MFP front panel

On a Smart Operation Device, press **Tungsten** on the main menu.

On other Ricoh devices, press the **Other Function** button. Depending on the other functions assigned to the button, the following happens:

- If there are no other functions assigned to the button, the client software appears on the front panel immediately.
- If other functions are assigned to that button, a menu of buttons appears. Press **Tungsten MFP Client**.

If the client software does not appear on the front panel, make sure you started the software on the Startup Setting tab.

## Chapter 6

# Additional information

The following is additional information which may be of interest to you when working with Tungsten TotalAgility and the MFP.

## Disconnected processing

If the MFP is disconnected from the network, or if Tungsten TotalAgility is down, scanned documents are saved on the MFP hard drive until the connection to Tungsten TotalAgility is restored. This feature enables you to keep scanning documents, but with the following limitations:

- New users cannot log on at the MFP.
- Device profiles cannot be retrieved from Tungsten TotalAgility.
- Documents are not delivered until the connection to Tungsten TotalAgility is restored.
- If the hard drive on the MFP is full, no more documents can be scanned.

When the connection to Tungsten TotalAgility is restored, the documents on the MFP hard drive are sent to the specified destinations.

## Troubleshooting network connectivity

To troubleshoot network connectivity, enable logging by editing the `TungstenRicoAndroid.dalp` and set `-a` to true. See [Pre-configured settings for Ricoh Android devices](#) for instructions on modifying `TungstenRicoAndroid.dalp`.

If the device has a web browser, you can use it to check connectivity. Enter the URL to the server and verify that you can connect. You can also check the certificate installed on the server and make sure it matches the one on the device.

## Port 4242 requirement for Telnet commands

For Ricoh Android MFPs, port 4242 needs to be redirected to the client by default so that Telnet can be used for log tracking data and other commands. Follow these steps:

1. Open the device IP on the Telnet console.
2. Log on as a user with administrator rights.
3. Enter the following commands to configure port forwarding.

```
nat_ui machine_port <xy> 4242
nat_ui ui_port <xy> 4242
```

Where <xy> is the position of the modified forwarding setting, which can be from 1 to 10. For example, to use position 1, enter the following commands.

```
nat_ui machine_port 1 4242
nat_ui ui_port 1 4242
```

For information about these positions, enter the `help nat_ui` command.

4. Enter `logout`. When prompted to save changes, enter `yes`.
5. On the MFP, start the Tungsten client.
6. Go back to the Telnet console and enter the following command:

```
telnet <MFP IP Address> 4242
```

This command creates the connection to the MFP client.

7. Enter the following command to send the log to the server:

```
sendlogs
```

8. Close the console window.

## JPEG compression level

JPEG compression level for scanning can be adjusted on version 11x devices. Use the Ricoh device web interface and select **Device Management > Configuration > Send Settings**.

For Ricoh Android MFPs, image compression can be preconfigured by specifying the compression mode in the `.dalp` file. For the best results with black and white images, specify `MH` for `-compression_BW_method`. For color images, select `LEVEL1` for `-compression_Color_Level`. The settings and their available options appear as follows in the `.dalp` file.

```
<!-- #OPTIONAL# set default B&W compression method, one of MH|MR|MMR|JBIG2 -->
<argument>-compression_BW_method MMR</argument>
<!-- #OPTIONAL# set default Color compression level, one of LEVEL1|LEVEL2|LEVEL3|
LEVEL4|LEVEL5-->
<argument>-compression_Color_level LEVEL4</argument>
```

## Device profiles updates

When a device profile associated with an MFP changes, the changes are reflected on the front panel of the MFP when it polls Tungsten TotalAgility. This poll occurs when the Tungsten TotalAgility client software button is pressed. To ensure the MFP contains the most current device profile information, do the following:

- Make changes to device profiles when there is low user activity, such as at night.
- Set the Auto Logout Time to a short period, such as 60–180 seconds, so that the next user who presses the Tungsten button retrieves the latest profile.

## Support for single sign on

Tungsten TotalAgility supports single sign on for users who are also registered users on the Ricoh MFP. Users who log on to the MFP are also logged on automatically to Tungsten TotalAgility.

To use single sign on, the user name for the MFP must exactly match the user name for logging on to Tungsten TotalAgility. User names for a Ricoh MFP are set using the User Name property of the device. See the Ricoh documentation for instructions.

Ricoh also supports SafeQ SSO. To enable this feature, use this setting in the Devices app by selecting **Settings > Advanced**.

- Namespace: mfp.ricoh.properties
- Name: sso.activedirectory.domain
- Value: The domain associated with the authenticated MFP user.

A backslash (\) separates the domain from the user name for single sign-on, such as domain \username.

## Support for custom languages

If there is a language that is not available for a Ricoh device, you can create a properties file with strings in the desired language and upload it to the device. Make sure that the localized strings are the same length or shorter than the English version so that the text does not get cut off. Do the following:

1. Download and unzip ricoh.zip file from the Administration Console.
2. Extract TungstenRicoClient.jar. One of the files is a template language file, mfp.customizelanguage.properties.
3. In mfp.customizelanguage.properties, add the strings for your language.
4. In the Devices, select **Settings** and click the **Advanced** tab. Go to the **mfp.ricoh.properties** namespace.
5. Depending on which devices the custom language applies, do either of the following:
  - If the language applies to all devices, select **mfp.customize.language** and upload the customized mfp.customizelanguage.properties file.
  - If different languages are used for specific devices, create a new advanced setting for **mfp.ricoh.properties** named **mfp.customize.language\_xx** where xx is the ISO 639-1 code for the custom language (such as **mfp.customize.language\_cs** for Czech). Assign the mfp.customizelanguage.properties file as its value.
6. Redeploy the Tungsten Ricoh client to a sample device and make sure that the localized strings appear correctly. If any corrections are needed, repeat the previous steps and adjust the localized strings as needed.
7. If localized strings appear correctly, redeploy the Tungsten Ricoh Client to all applicable devices.

## Configuring a secure connection with SSL

The default connection protocol between the MFP and Tungsten TotalAgility is set to http for an unsecured connection. You can change the protocol to HTTPS for a secured connection with SSL. After you change the connection protocol, you need to redeploy the Ricoh client to each device using Devices.

### SSL configuration for Ricoh Java devices

For Ricoh Java devices, use the settings on the device to configure SSL. For other devices, follow these instructions.

1. If you want to add external server certificates to use with the Ricoh client, do the following before downloading the Ricoh client. This enables the certificates to be included in the ricoh.zip file.
  - a. Make sure that the certificate is in Base-64 encoded X.509 format.  
You can use IIS or the Certificate Export Wizard to export the certificate in the correct format.
  - b. On the server where Tungsten TotalAgility is installed, locate the `Program Files \TotalAgility\Agility.Server.Web\Resources\Share` folder.
  - c. Create a new subfolder named `externalcerts`.
  - d. Copy the certificate files to the `externalcerts` folder.
2. Download the client software from Devices.
3. Extract `ricoh.zip` or open the `Ricoh` folder in `MFPClients.zip` and then extract `TungstenRicoClient.zip`.

This creates a `TungstenRicoClient` folder containing the `TungstenRicoClient.dalp` file.

4. Open the `TungstenRicoClient.dalp` file with a text editor.
5. Edit the port in the following argument to change the Tungsten TotalAgility URL and corresponding host name or IP address to use SSL:

```
<argument>-s https://<server>:443/TotalAgility/Kofax/KFS/Legacy/Java</argument>
```

6. Edit the following arguments to indicate which server certificates can be trusted:

```
<argument>-ssl_trust_all_certificates true</argument>  
<argument>-ssl_trust_all_hosts true</argument>
```

You can change the arguments as follows:

- Keep both arguments set to true if you want the Ricoh client to trust all server certificates.
- Change both arguments to false if you only want the Ricoh client to trust the Tungsten TotalAgility server certificate or the external server certificates you add in step [1](#). This option is more secure.

7. Save your changes and close the file.
8. Zip the `TungstenRicoClient` folder with the updated `TungstenRicoClient.dalp` file. Make sure the .zip file is named `TungstenRicoClient.zip`.
9. Uninstall and reinstall Tungsten TotalAgility MFP client on each MFP using the updated `TungstenRicoClient.dalp` file.

10. After updating each MFP, restart it.

## SSL configuration for Ricoh Android devices

The Ricoh Android client collects the Tungsten TotalAgility server certificate during the first connection. It then pins the server certificate to the device for subsequent requests from the client to the server. If the server certificate is changed, you must uninstall Ricoh Android Client to remove the pinned certificate and install the Ricoh Android client again.

## Configuring retries

You can set the number of times a job is retried and the interval between retries in Devices.

For devices with Smart Operation Panel, use the settings on the device to configure retries in Advanced Settings. For other devices, follow these instructions.

1. In Devices on the **Settings - Advanced** tab, change the following settings in the `mfp.ricoh.properties` namespace:
  - **mfp.retry.count:** Number of attempts to send images to server before failing without requeuing. When this happens, an error appears, and the job is deleted. If you want to requeue a failed job instead of deleting it, disable this property and use `mfp.retry.count` in the `mfp.properties` namespace instead by entering -1.  
To disable retries, enter 0. To keep retrying without failing, enter any negative number except -1. The default value is -1.
  - **mfp.retry.interval:** Seconds between retries. To retry without delays, enter 0. The default value is 30.
2. Restart the Ricoh client in the settings panel or website of the MFP to update the values.

## Flash memory support

You can configure Ricoh MFPs with the latest version of Java Platform 11 and SDK/J to use flash memory. Modify the `.dalp` file to specify the storage device to be used to install and store data for the Tungsten Client.

Add or locate the following element to the Tungsten `.dalp` file.

```
<install mode="manual" destination="device" workDir="device">
```

Where `destination` is the storage device where the Tungsten Client is installed, and `workDir` is the storage device where the working folder is created and used for data.

The following table shows the codes for the devices that are used for `destination` and `workDir`.

Code	Description
hdd	Hard drive
sdcard	SD card slot where CVM is installed
sdcard1	SD card in slot 1

Code	Description
sdcard2	SD card in slot 2
sdcard3	SD card in slot 3
sdcard4	SD card in slot 4

### Example: Configuration for SD card storage

If you want to install the Tungsten Client on the same card where CVM is installed and use the SD card in slot 1 as storage, add or modify the following element in the Tungsten .dalp file:

```
<install mode="manual" destination="sdcard" workDir="sdcard1">
```

## Smart-card authentication

Tungsten TotalAgility supports Ricoh smart-card authentication on MFPs that use Card Authentication Package (CAP). All four CAP authentication modes are supported: Device Authentication, LDAP, Active Directory, and CAP Enterprise Server. The domain is not passed from CAP. Tungsten TotalAgility matches users by user ID regardless of how the user is registered on CAP.

To ensure correct authentication:

- Have a Tungsten TotalAgility/Tungsten Capture user with a matching user ID.
- Have unique user IDs on all domains connected with Tungsten TotalAgility.

## Improving image quality for the Ricoh Aficio MP C2500 MFP

If you use the Ricoh Aficio MP C2500 MFP, change device settings as follows to improve image quality.

1. At the Ricoh front panel, press the following buttons in order:
  - a. To the left of the screen, press **Scanner**.
  - b. Above the numeric keypad, press the yellow **Clear Modes** button.
  - c. On the numeric keypad, press **1**, **0**, and **7**.
2. Press and hold the red **Clear/Stop** button until the SP Mode menu appears on the screen.
3. On the panel, press **Copy Sp**.  
**Example:** The **SP Mode (Service)** menu appears.
4. On the left side of the screen for **Scanner** settings, press **SP-4XXX**.  
 The list expands to show numbered buttons with additional options.
5. Press the button to go down a page until you see the **4565** button for grayscale options. Press the button.  
 The list expands to show options for changing the settings.
6. Under the **4565** button, press the following buttons:
  - a. Press **5** for **MTF**. The option, which appears on the right side of the screen, should be set to **8**. If it is not, on the numeric keypad, press **8** and then **#**.



- b. Press **6** for **Smoothing**. The option should be set to **4**. If it is not, on the numeric keypad, press **4** and then **#**.
- c. Press **7** for **Brightness**. On the numeric keypad, type **108** and then press **#**.
- d. Press **8** for **Contrast**. The option should be set to **128**. If it is not, on the numeric keypad, type **128** and then press **#**.
- e. Press **9** for **Independent Dot Erase**. The option should be set to **0**. If it is not, press **0** and then **#**.

Changes that you make to the settings take effect immediately.

- 7. In the upper right corner of the screen, press **Exit** to exit the **SP Mode (Service)** menu.
- 8. Below the **Scanner** button, press **Other Function**.
- 9. Press **Exit** again to exit the **SP Mode** menu.

You can resume using the MFP, and the new settings are used.

## Options for Scan/VRS profiles

The Scan/VRS Profiles Configuration page in Tungsten TotalAgility Designer has the following options under Allow Run Time Edit to enable scan settings to be changed during runtime:

- Paper Size
- Duplex
- Resolution
- Color

By default, these options are set to Yes, and Resolution is automatically mapped to the nearest lower DPI value supported by the MFP. If a setting cannot be changed for an MFP model at runtime, it is disabled or removed on the MFP, and the setting specified in the Scan/VRS Profile is used for scanning.

## Text field limits

Text fields support a maximum of 256 characters. Any characters over 256 are truncated.


## Displaying categories and forms on the front panel

You can display buttons for Tungsten TotalAgility categories and forms on the main menu of the MFP. You can organize the forms by placing them in categories and specifying which categories of forms appear on the main menu. The forms for that category appear on the main menu. Categories can be nested, like folders in a hierarchy. The forms and nested subcategories appear for the category you specified appear on the main menu. In the following example, Cat1 in the root of the hierarchy and its subcategory Cat22 was specified as the category to appear on the main menu. The forms and subcategories nested in Cat1/Cat22 appear on the main menu.

To use this feature, set up the folders and access rights in Tungsten TotalAgility Designer and define the categories that appear on the device's main menu in Devices.

For more information about setting up forms and categories, see the Tungsten TotalAgility Designer Help.

1. Define the categories you want to appear on the front panel.
  - a. In Tungsten TotalAgility Designer, select **System Settings > Categories** and do the following:
  - b. Assign access rights to the categories using **Category Access**.
  - c. When you are finished defining categories and their access rights, return to Tungsten TotalAgility Designer home page.
2. Assign the forms to categories and set access rights.
  - a. Click **Form Designer**.
  - b. In the **General** tab, assign the form to the category you want. When you are finished defining categories and their access rights, return to Tungsten TotalAgility Designer home page.

 Associate a form with only one category.

3. Select the forms to appear on the front panel by assigning them to the device profile.
  - a. Click **System Settings > Devices**.  
Devices appears in a separate browser window.
  - b. Click **Device Profiles**.
  - c. Select the profile you want to use for the device.
  - d. Click the **Associated Forms** tab.
  - e. Assign the forms you want to appear on the front panel.
4. While you are in Devices, use the advanced setting mfp.root.category to define which categories appear on the front panel.
  - a. In Devices, select **Settings > Advanced**.
  - b. In the mfp.ricoh.properties namespace, locate mfp.root.category.
  - c. Specify the categories you want to appear on the main menu of the front panel in the following ways:
    - To specify a category, type its name.  
Example: Cat1 puts the forms and nested subcategories for Cat1 on the main menu.
    - To specify more than one category, separate each one with a comma (.). Do not put a space after the comma.  
Example: Cat1,Cat2 puts those categories' forms and nested subcategories on the main menu.
    - To specify a nested subcategory, provides its path.  
Example: Cat1/SubcatA/SubcatB puts SubcatB's forms and nested subcategories on the main menu.

- To specify the root to enable all top-level categories to appear, type a slash (/).
- To use a category that contains a comma in its name, delimit the comma with a backslash (\).

Example: /Invoices \, POs puts the forms and subcategories of the root category Invoices, POs on the main menu.

## Hiding and showing information after scanning

When you finish scanning pages, New Pages Scanned information appears. You can change a setting so that information does not appear until a user clicks Add New Pages by doing the following:

1. In Devices, select **Settings > Advanced**.
2. In the mfp.ricoh.properties namespace, locate mfp.hide.new.scanned.pages.on.first.scan and specify either of the following:
  - true: Hide **New Pages Scanned** information until a user clicks **Add New Pages**,
  - false: Always display the information.

## Customizing the name of the client software

By default, Tungsten appears as the name of the client software on the front panel of the device. You can change the name by editing the TungstenRicoClient.dalp file before you deploy the client software.

1. Download the ricoh.zip file from Devices to your computer.
2. Extract ricoh.zip or open the **Ricoh** folder in MFPClients.zip and then extract TungstenRicoClient.zip, which contains TungstenRicoClient.dalp.
3. Open the TungstenRicoClient.dalp file in a text editor.
4. Locate the following line in the file:

```
<name lang="en">Tungsten</name>
```
5. Edit the name between the <name> tags as in this example:

```
<name lang="en">Your Company</name>
```
6. Save and close the TungstenRicoClient.dalp file.
7. Follow the instructions in [If the MFP cannot be discovered](#) to deploy the client software. When required, upload the ricoh.zip file you modified.

## Image preview

Ricoh MFPs can display a preview of the image in the Scan Preview window.

Enable the feature in the Devices. In the **Advanced - Settings** tab, set mfp.scan.preview in the mfp.ricoh.properties namespace to true.

The Scan Preview window shows the document you scanned and enables you to process it. Use these buttons to view the pages scanned:

- Drag the image to view more of the page.
- Press **Previous** or **Next** to move to the previous or next page of the document.
- Press **Delete** to delete the currently displayed page.

Then use these buttons to process the document:

- Press **Send** to send this scan job and return to the main menu.
- Press **Send and Scan Again** to send this scan job and start a new scan job to the same location.
- Press **Add More Pages** to scan more pages to the current scan job.
- Press **Cancel** if you do not want to send this scan job.

After a period of inactivity, the MFP automatically sends the scan job and returns to the main menu. Images in the device are deleted when the job is sent or canceled.

## Jobs with no pages

You can configure Ricoh MFP clients to prevent jobs with no pages from being submitted. Use this advanced setting:

- Namespace: mfp.ricoh.properties
- Name: job.empty.submit.enabled
- Value: true or false

If the value is false (default), jobs cannot be submitted with no pages. A message appears to the user indicating the error. If set to true, jobs with no pages can be submitted.

For Ricoh Android devices, a confirmation message can be displayed when submitting a job with no pages. Use this advanced setting:

- Namespace: kfs.properties
- Name: job.empty.confirmation
- Value: true or false

If the value is false (default), no confirmation message is displayed. If set to true, a confirmation message appears each time you submit a job with no pages. Depending on the setting of job.empty.submit.enabled, the job with no pages can be sent, or an error appears.

## Chapter 7

# Frequently asked questions

If you cannot successfully install the software, or if you have questions about how the software operates, see the information in this section. For additional information and software updates on the Tungsten website.

### **Why doesn't clicking Discover find the MFP?**

Use the Refresh command to update the list of discovered devices. The MFP may be offline, on a separate network, outside a firewall, or does not have a PostScript card installed. See the MFP documentation for instructions. If the Refresh option still does not find the MFP, add the MFP manually. See the Devices Help for instructions.

### **Why am I unable to add MFPs?**

There may not be sufficient licensing available to support the MFPs you want to add. Deactivate or remove MFPs from the available devices list or purchase a license for additional devices.

### **Why am I unable to install the client software on the Ricoh MFP?**

Before you can install the client software, you must install the Embedded Software Architecture on the Ricoh MFP. To purchase an Embedded Software Architecture card, see your Ricoh reseller or Tungsten. Install the card as shown in the Ricoh MFP documentation.

If you already have the client software installed on the MFP, uninstall it before installing the new version.

### **Why does the client software not appear when I press the button assigned for Embedded Software Architecture applications?**

Make sure that you installed the client software and started it from the Startup Setting tab. See [Installing the client software](#).

If you have more than one Embedded Software Architecture application installed, a menu appears when you press the button. Press the **Tungsten\_Client** button.

### **Why do forms not appear on the Ricoh MFP?**

Before you can see forms on the MFP, install and start the client software on the Ricoh MFP. See [Installing the client software](#) for instructions.

### **Why do I get an error telling me that no more documents can be scanned until the connection to the server is restored?**

The error occurs when the MFP cannot connect to Tungsten TotalAgility. In these situations, documents can continue to be scanned until the MFP hard drive is full. Make sure that the MFP is connected and Tungsten TotalAgility is running.

When the connection to the server is restored, the documents on the MFP hard drive are sent, freeing space to resume scanning.

**I entered my user name and password correctly at the MFP. Why am I unable to log on?**

The MFP may not be able to retrieve authentication information if the connection to Tungsten TotalAgility is down. Make sure that the MFP is connected to the network and Tungsten TotalAgility is running.

**When I start the client software on the MFP, an error indicates that the device is unlicensed.**

The device may have been deactivated or removed in Devices. Run Devices and make sure that the MFP is on the Added Devices tab.

**The Tungsten front panel displays only a limited number of buttons. Where are the rest of the buttons?**

Use the Tungsten TotalAgility Designer to create device job forms. The forms appear as shortcut buttons on the MFP front panel when you associate them with a device profile. When the MFP retrieves the device profile, the buttons should appear.

**Why do some scanned images scan sideways?**

This may occur when the color selection is grayscale. Grayscale scans product JPEG image files and the Ricoh interprets them sideways. This is a Ricoh device limitation. To correct the problem, rotate the page before scanning.

**Why does an error appear when I attempt to scan on a Ricoh Android MFP?**

The following errors may occur on a Ricoh Android MFP when a user attempts to scan:

- 401 – Unauthorized: This indicates that the user has not logged on, and the scan resource requires authentication.
- 403 – Forbidden: This indicates that user has logged on, but does not have permission to scan.
- 503 – Service Unavailable: For Smart Operator Panel devices, this indicates that the device SP mode 5-976-001 Copy Server function must be enabled. This requires assistance from Ricoh Technical Support or your Ricoh partner.