

# Zebra Printer Management

VMware Workspace ONE UEM 1902



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# Zebra Printers

## Overview

Workspace ONE UEM can integrate with Zebra printers and manage them in both SaaS and on-premises environments using the Workspace ONE UEM console.

UEM console contains a dedicated Printer Management dashboard that displays printer-specific information such as hardware monitoring, reporting, and alerts as well as actions like deploying profiles and files.

**Note** This guide assumes basic familiarity with Zebra printer and print server functionality and configuration. If you determine you require additional assistance, please refer to the applicable Zebra product documentation or contact Workspace ONE Support.

This chapter includes the following topics:

- [Supported Devices](#)
- [Integration Requirements](#)

## Supported Devices

Workspace ONE UEM supports the following Zebra printer models.

Models					
iMZ	QLn	ZD	ZQ	ZR	ZT
iMZ220™	QLn320™	ZD500R™ Passive RFID Printer	ZQ510™ Series		ZT210™ Series
iMZ320™	QLn220™	ZD500	ZQ520™ Series	ZT200™ Series	
QLn420™	ZT230™ Series				
ZT420™ Series					
ZT410™ Series					
ZT220™ Series					
Following models have been whitelisted and tested through APIs, but the physical printers have not been validated					
		ZD410	ZQ310	ZR638	ZT510
ZD410-HC	ZQ320	ZT610			

ZD420	ZT620
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ZD420-HC
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ZD620
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## Integration Requirements

You must meet the requirements listed below to integrate Workspace ONE UEM with the Zebra Print server and manage the printers from the UEM console.

## Server Requirements

You can install the Zebra Print Server on a Workspace ONE UEM server or any other server that can communicate with a Workspace ONE UEM server. The best practice is to install the Zebra Print server on a server that is independent of Workspace ONE UEM.

## Software Requirements

- Windows Server 2008 or R2 (32-bit or 64-bit)
- Zebra AirWatch Connector Installer
- Zebra Setup Utilities, which also packages Zebra Direct Communications
- Java Runtime version 7 or greater
- Latest version of OpenSSL

## Device Firmware Requirements

- Firmware versions vary based on model

## Workspace ONE UEM Requirements

- Workspace ONE UEM console 6.3 or higher
- At least one Organization Group configured in the UEM console dedicated solely to Zebra peripheral device management

# Setup Zebra Printers

## Integrate Workspace ONE UEM with the Zebra Print Server

Initiate the integration between Workspace ONE UEM and the Zebra print server by sharing the UID and HMAC Tokens between servers and adding the Zebra print server to a dedicated Organization Group from the UEM console. You can enroll a print server to a parent organization group and if required move it to a child organization group using the Change Organization Group option in the List View page.

To integrate Workspace ONE UEM and Zebra print server:

- 1 Navigate to **Devices > Peripherals > Settings > Server**.
- 2 Ensure that the correct Organization Group is displayed at the top of the page.
- 3 Select **Add Print Server**.
  - 1 Copy the **HMAC Token** that was automatically generated.
  - 2 Select the enrollment user associated with the print server from the **User ID** drop-down menu. Please note that the users created in parent organization group are not available for selection in the child organization group.
  - 3 Enter the **Service UID** or use the **Generate UID** option. The service UID should be a 16 to 36 character alphanumeric value (applicable only when manually entered by the IT admin). Once entered on the UEM console, the value has to be copied to the **Unique ID for Zebra Server** field on the installation page of the Zebra AirWatch connector. Click **Save**.

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**Note** 1) Use the Zebra AirWatch Connector Installer software to create a new Zebra Print Server for use with Workspace ONE UEM. Workspace ONE UEM does not recommend installing the Zebra Print Server and Workspace ONE UEM server on the same hardware. However, you can install both servers within the same firewall (http) or behind different firewalls (https), if desired. (2) UID and HMAC are unique for a user and the related print server and cannot be interchanged with another user.

---

- 1 Run the Zebra Connector software on the selected server. IIS must not be installed on the relevant server, as the Zebra connector uses Tomcat as its server. A screen that collects certificate details from the end is displayed.

**Zebra Airwatch Connector Setup**

**Certificate Details**  
Please provide the required details for your certificate

Company

Department

Address

City

State

Country

Postal Code

Email Address

Phone Number

Server Name (FQDN)

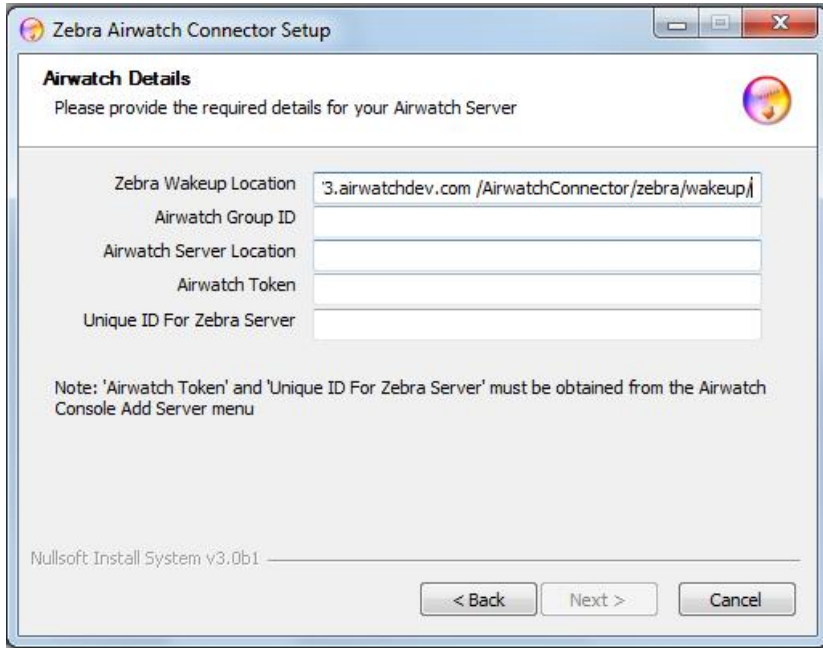
Nullsoft Install System v3.0b1

< Back   Next >   Cancel

1 The Workspace ONE UEM Details page displays the following:

- **Zebra Wakeup Location** - Zebra endpoint that Workspace ONE UEM needs to connect to, for pushing management commands. This is automatically generated. After the registration process is successful, send this endpoint to Workspace ONE UEM and it must appear on the **Print Server** page.
- **Workspace ONE UEM Group ID** - Group ID of the server where the print server record has been added.
- **Workspace ONE UEM Server Location** - Print server application sends its registration request to registration endpoint URL for Workspace ONE UEM, to associate itself within a certain organization group within Workspace ONE UEM.
- **Workspace ONE UEM Token** - Copy this into the print server application. This gets automatically generated on UEM console. All subsequent requests from print server are signed with the HMAC Token.

- **Unique ID for Zebra Server-** Copy this into the print server application. It is created on the UEM console or created and copied by the IT admin.



**Zebra Airwatch Connector Setup**

**Airwatch Details**  
Please provide the required details for your Airwatch Server

Zebra Wakeup Location: 3.airwatchdev.com /AirwatchConnector/zebra/wakeup/

Airwatch Group ID:

Airwatch Server Location:

Airwatch Token:

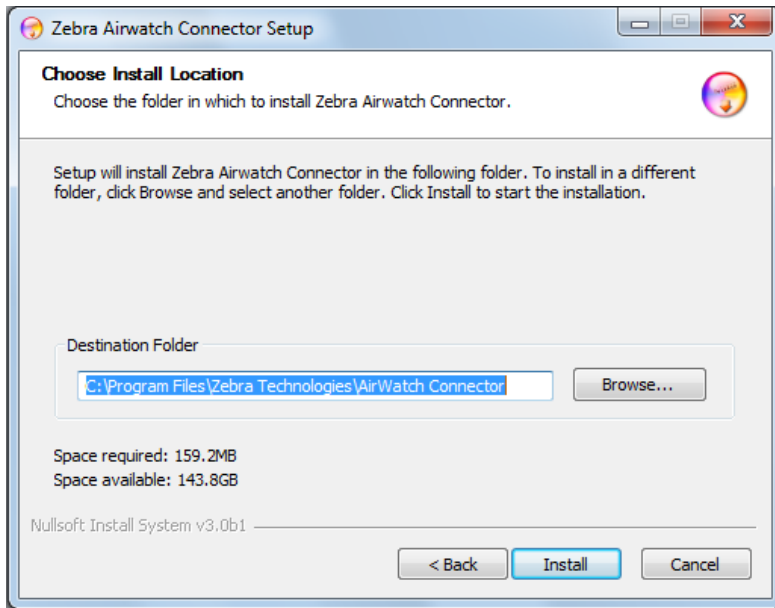
Unique ID For Zebra Server:

Note: 'Airwatch Token' and 'Unique ID For Zebra Server' must be obtained from the Airwatch Console Add Server menu

Nullsoft Install System v3.0b1

< Back   Next >   Cancel

- 1 Select **Browse** to choose a destination folder, where the downloaded printer server is installed. Select **Install**.



**Zebra Airwatch Connector Setup**

**Choose Install Location**  
Choose the folder in which to install Zebra Airwatch Connector.

Setup will install Zebra Airwatch Connector in the following folder. To install in a different folder, click Browse and select another folder. Click Install to start the installation.

Destination Folder  
C:\Program Files\Zebra Technologies\AirWatch Connector   Browse...

Space required: 159.2MB  
Space available: 143.8GB

Nullsoft Install System v3.0b1

< Back   Install   Cancel

- 1 At this point, the certificate request is created and the signed certificate is received back from Zebra.
- 2 To check if the Zebra Connector has been installed successfully, navigate to the UEM console and check if the 'Notification Endpoint' (earlier automatically filled in by the print server as the 'Zebra Wakeup Location'), has been changed to the URL (It was 'Pending Registration' earlier).



This chapter includes the following topics:

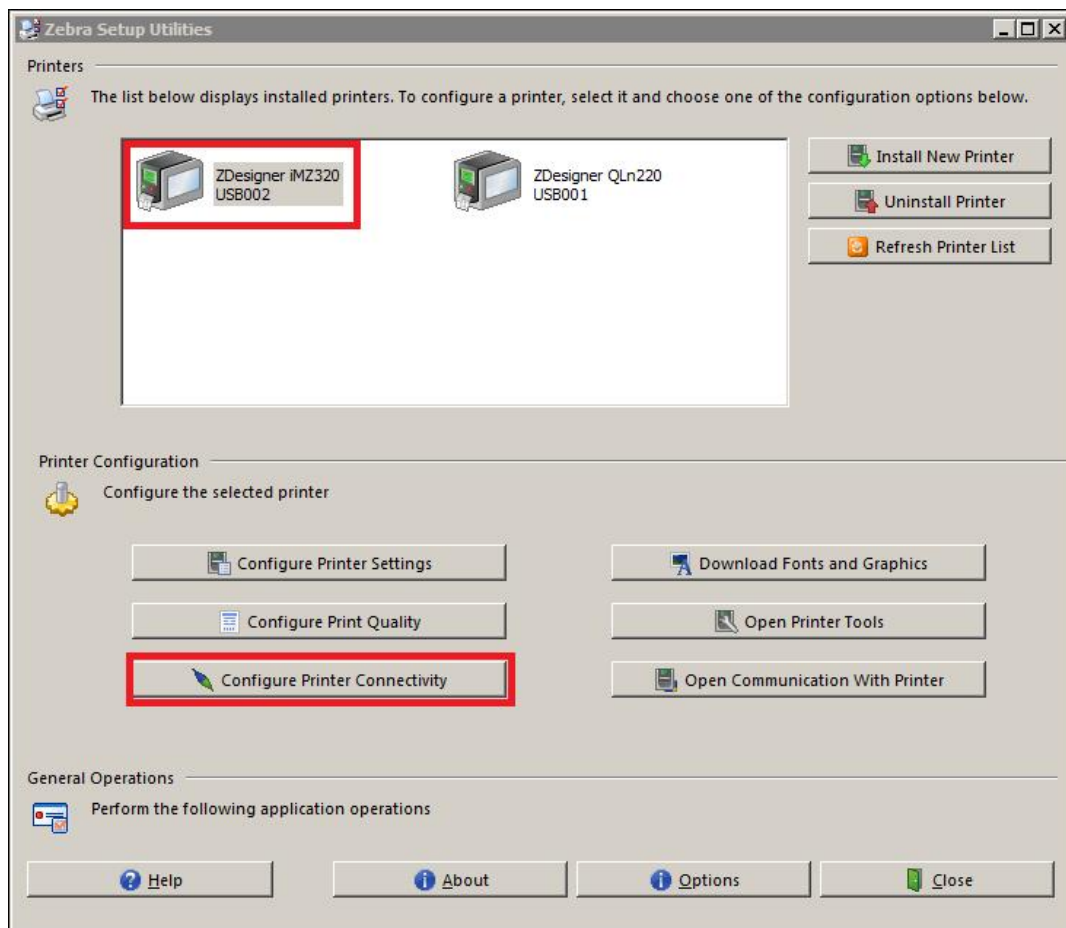
- [Configure a Wireless Connection](#)
- [Configure a USB connection](#)
- [Test the Connection](#)

## Configure a Wireless Connection

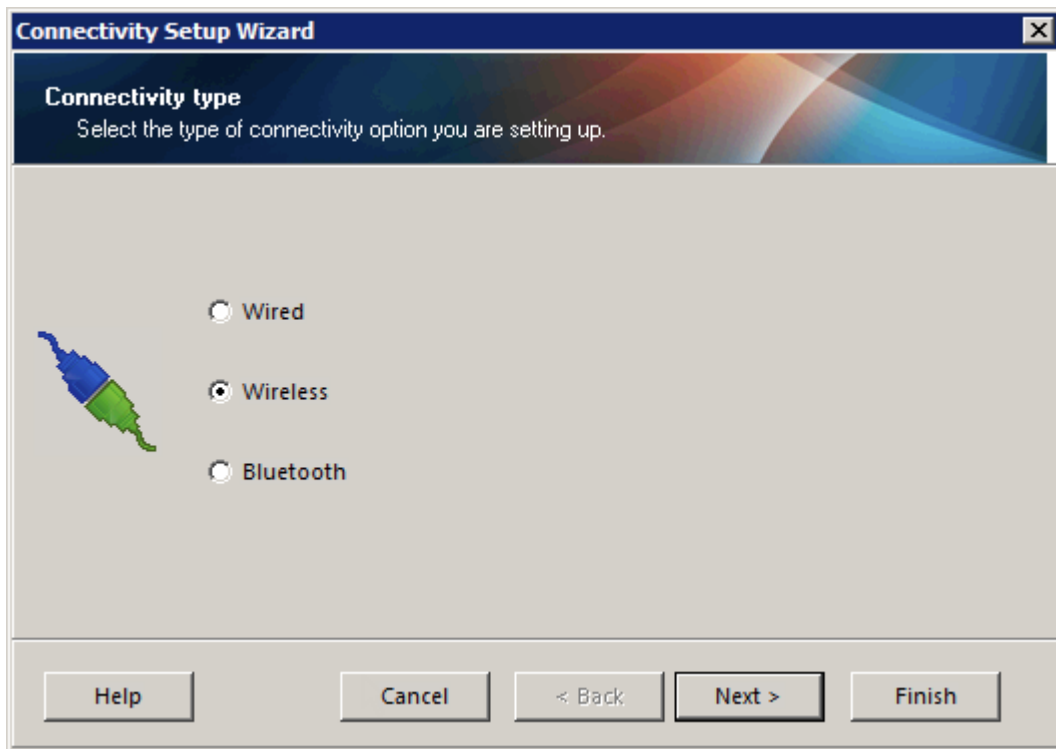
Configure a wireless connection using the Connectivity Setup Wizard, that is part of the Zebra Setup Utilities software and this configuration is the first step in establishing the Zebra connection.

To configure a wireless connection:

- 1 Connect a Zebra printer to any computer that has Zebra Setup Utilities software installed.
- 2 Launch the Zebra Setup Utilities software.
- 3 Select the Zebra printer you want to configure.
- 4 Turn on the printer.
- 5 Select **Configure Printer Connectivity**. The displayed configuration options are dependent on your individual network settings and configuration.

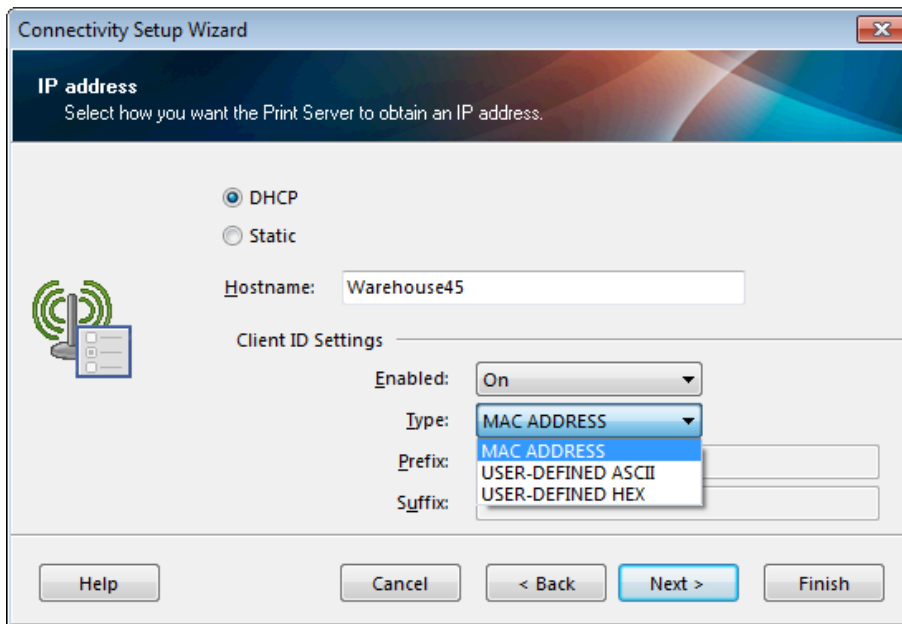


- 6 Select **Wireless** to enable Wi-Fi, and then select **Next**.



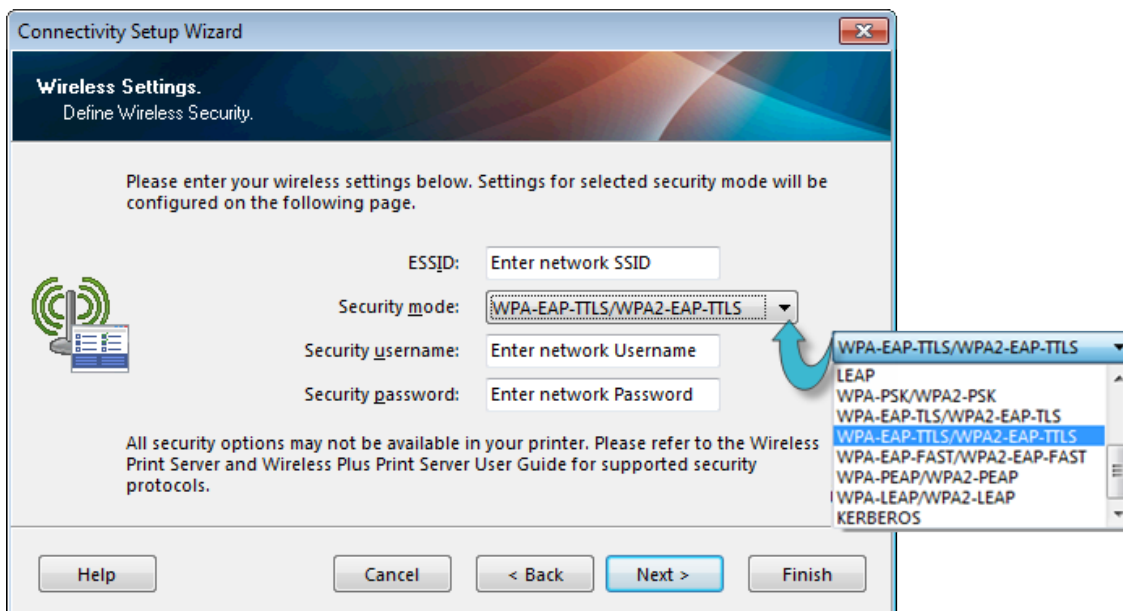
- 7 Select **DHCP**. This enables the Zebra Print Server to assign a dynamic IP address automatically to the Zebra printer.
- 8 Enter the **Hostname**. This is the name that is assigned to a Zebra printer connected to your WiFi network and is used to identify the printer when it communicates with the Zebra Print Server.
- 9 Select **On** from the **Enabled** drop-down menu.

- 10 Select **MAC ADDRESS** from the **Type** drop-down menu and select **Next**.



The screenshot shows the 'Connectivity Setup Wizard' window with the 'IP address' tab selected. The window title is 'Connectivity Setup Wizard'. The main heading is 'IP address' with the instruction 'Select how you want the Print Server to obtain an IP address.' There are two radio buttons: 'DHCP' (selected) and 'Static'. Below them is a 'Hostname' field with the value 'Warehouse45'. To the left is a wireless printer icon. Below the hostname is the 'Client ID Settings' section. It has an 'Enabled' dropdown set to 'On'. The 'Type' dropdown is open, showing 'MAC ADDRESS' (selected), 'USER-DEFINED ASCII', and 'USER-DEFINED HEX'. There are also empty fields for 'Prefix' and 'Suffix'. At the bottom are buttons: 'Help', 'Cancel', '< Back', 'Next >', and 'Finish'.

- 11 Enter the name or Extended Service Set Identifier (ESSID) of the network to which you want to connect the printer in the **ESSID** field. If you are managing multiple printers in the UEM console, each printer must connect to the same ESSID.
- 12 Select the correct security protocol for your wireless network from the **Security mode** drop-down menu.
- 13 Enter the **Security username** and **Security password** for your wireless network. One, both, or neither of these fields gets displayed depending on the **Security mode** selected.
- 14 Select **Next** and select **Finish**.



The screenshot shows the 'Connectivity Setup Wizard' window with the 'Wireless Settings' tab selected. The window title is 'Connectivity Setup Wizard'. The main heading is 'Wireless Settings.' with the instruction 'Define Wireless Security.' Below this is a text box: 'Please enter your wireless settings below. Settings for selected security mode will be configured on the following page.' There is a wireless printer icon on the left. The 'ESSID' field contains 'Enter network SSID'. The 'Security mode' dropdown is open, showing a list of options: 'WPA-EAP-TTLS/WPA2-EAP-TTLS' (selected), 'LEAP', 'WPA-PSK/WPA2-PSK', 'WPA-EAP-TLS/WPA2-EAP-TLS', 'WPA-EAP-TTLS/WPA2-EAP-TLS', 'WPA-EAP-FAST/WPA2-EAP-FAST', 'WPA-PEAP/WPA2-PEAP', 'WPA-LEAP/WPA2-LEAP', and 'KERBEROS'. Below the dropdown are fields for 'Security username' (containing 'Enter network Username') and 'Security password' (containing 'Enter network Password'). At the bottom is a note: 'All security options may not be available in your printer. Please refer to the Wireless Print Server and Wireless Plus Print Server User Guide for supported security protocols.' At the bottom are buttons: 'Help', 'Cancel', '< Back', 'Next >', and 'Finish'.

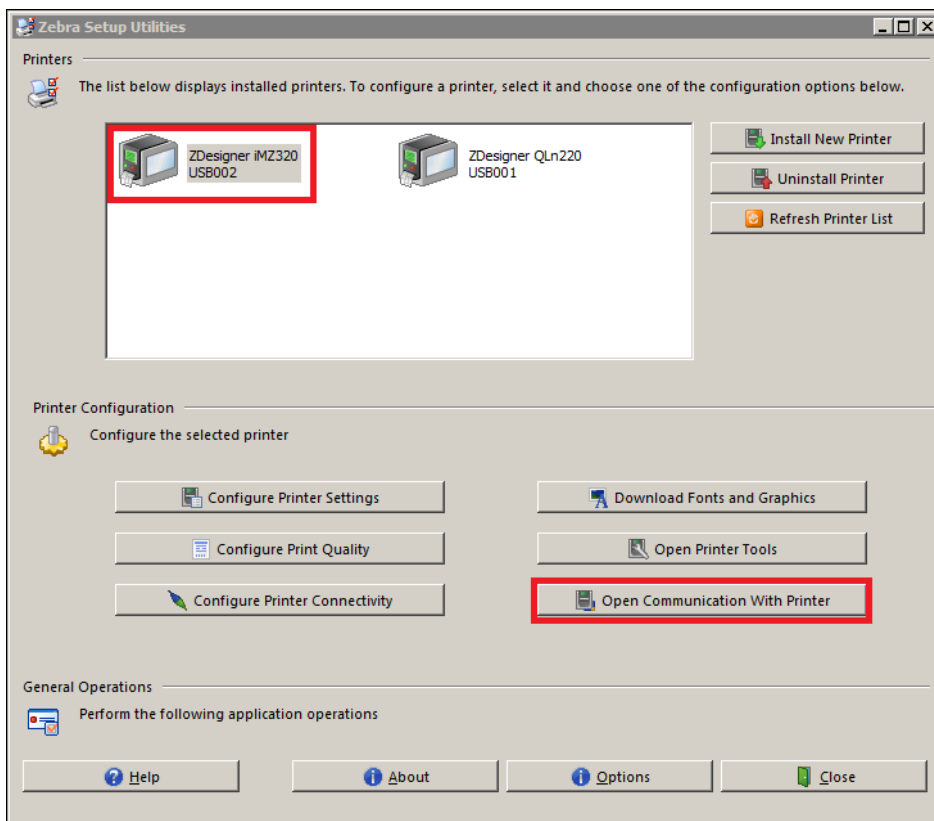
## Configure a USB connection

Configure the Zebra printer, with the URL associated with the Zebra print server which allows the printer and the server to communicate with each other.

Setvar are commands used to configure printer operating parameters to specified values. Since command codes and strings vary between printers, go to Zebra's website, download the manual for the Zebra printer model, and find the list of command codes needed.

To configure the Zebra printer with the URL associated with the Zebra print server:

- 1 Select **Open Communications With Printer**. The **Direct Communication** screen displays.



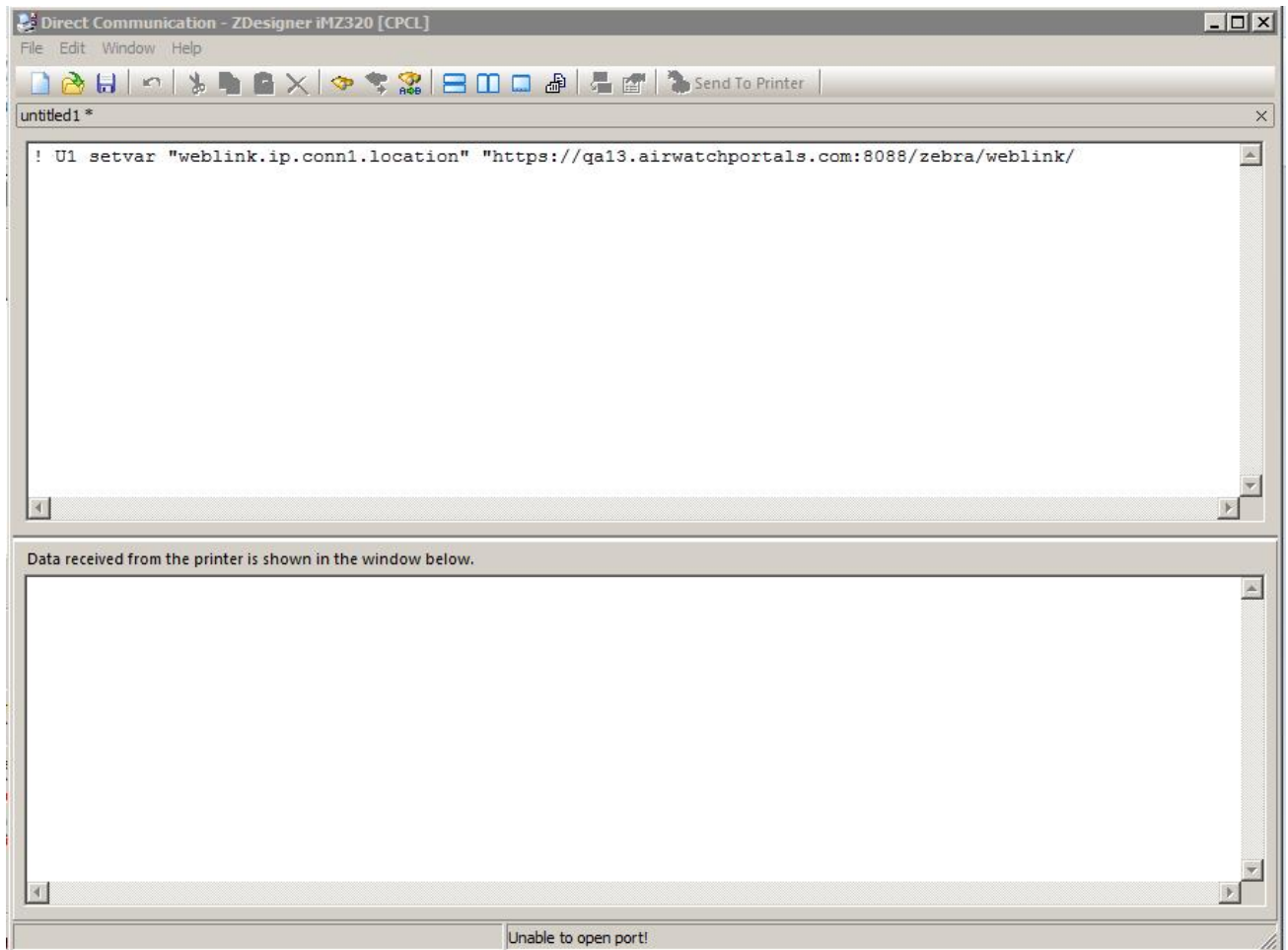
- 2 In the Direction Communication screen, enter the **Weblink** location and command codes. The URL in this command is the URL pointing to the location of the Zebra endpoint.

If any of the following are true, you may need to do more than the basic configuration. In such situations, refer to the Zebra documentation for more information on specific configurations and setvar commands.

- The remote server that the printer connects to is outside the corporate firewall.
- The firewall requires a username and a password to access the remote server.
- The printer requires a proxy to access the remote server.
- The firewall does not accept initial HTTPS connections (must be HTTP).

The format of the basic configuration is as follows (the trailing / is required):

```
! U1 setvar "weblink.ip.conn1.location"
"https://&lt;PrintServerURL&gt;/zebra/weblink/".
```



- 3 Turn off the printer and then turn it on to reset it.
- 4 In the UEM console, navigate to **Devices > Peripherals > List View**. The Zebra printer appears online.

## Test the Connection

You can test the connection between Workspace ONE UEM, Zebra printer and the print server to ensure that the connection is established correctly and accurately.

To test the connection:

- 1 Navigate to **Devices > Peripherals > List View** and locate the Zebra printer you connected to the network.
- 2 Turn On the Zebra printer. The printer should appear in the UEM console within 60 seconds.
- 3 Verify that the **Last Seen** column shows the printer to be checked in and is online.

- 4 Select the printer's **Friendly Name** to launch a device summary window.
- 5 Select **Device Query** and then select **Soft Reset**.
- 6 Select the **Event Log** tab and verify that the Event Log shows both the **Device Query** and **Soft Reset** actions that you initiated.
- 7 Make sure that the Zebra printer is rebooted.

# Zebra Printer Profiles

## Overview

Profiles are settings that consists of one or more payloads that you can configure in the UEM console and deploy it to enrolled devices, Zebra Printers in this case.

To create a printer profile, you must first configure the General settings for the profile and then any of the following payload settings as required:

- **Device**
- **Wi-Fi**
- **Credentials**
- **Power**
- **Mirror**
- **ZPL**
- **CPCL**
- **Custom Settings**

This chapter includes the following topics:

- [Configure General Profile Settings](#)
- [Configure Device Profile Settings](#)
- [Configure Wi-Fi Profile Settings](#)
- [Configure Credentials Profile Settings](#)
- [Configure Power Profile Settings](#)
- [Configure Mirror Profile Settings](#)
- [Configure ZPL Profile Settings](#)
- [Configure CPCL Profile Settings](#)
- [Custom Settings](#)

## Configure General Profile Settings

It is essential to configure printer profile General settings as it is the first step in creating a profile and deploying it to devices within an organization group.

To configure printer profile General settings:

- 1 Navigate to **Devices > Peripherals > Settings > Profiles**.
- 2 Select **Add Profile** and select **Zebra**.
- 3 Select the **General** settings for your profile using the following fields and drop-down menus.

Fields	Description
<b>Name</b>	Name of the profile to be displayed in the UEM console.
<b>Version</b>	Version number is auto-populated.
<b>Description</b>	Brief description of the profile that indicates its purpose.
<b>Assignment Type</b>	Setting that determines how the profile is deployed to devices: <ul style="list-style-type: none"> <li>■ <b>Auto</b> – Profile is deployed to all devices automatically.</li> <li>■ <b>Optional</b> – Administrator can deploy the profile to an end-user at their discretion.</li> </ul>
<b>Managed By</b>	Organization Group from which the profile is created, assigned, deployed, edited, and removed.
<b>Assigned Smart Groups</b>	One or more Organization Groups that receive the profile.

- 1 Select **Save & Publish**.

## Configure Device Profile Settings

Device profiles configure a number of printer-specific options such as location, connection timeout, printer speed, and print darkness.

To configure the device settings:

- 1 Select **Device** from the options on the left.
- 2 Select **Configure**.

3	Settings	Description
	<b>Device Location</b>	Provide a name that describes the physical location of the Zebra printer.
	<b>Enable CPH</b>	Select the check box to enable a clean print head alert. The time interval is determined by the value you enter in the CPH Interval field.
	<b>CPH Interval</b>	Enter a value that represents the number of meters of print media that passes through the Zebra printer before a clean print head alert is triggered. Enter 0 (zero) if you did not check the Enable CPH check box, otherwise enter a value from 0 to 65,535 meters (215,009 feet 10 7/64 inches).
	<b>User Specific String Variable (role)</b>	Presently, this field is not used.
	<b>User Specific String Variable</b>	Presently, this field is not used.



<b>Download Connection Timeout (second)</b>	Enter time from 0 (zero) to 65535s (18h 12m 15s) before Zebra printer will timeout after losing connection with Zebra Print Server while performing a firmware download.
<b>Media Speed</b>	Enter a value of 1.0 to 5.0 for the speed in inches per second that you want media (e.g., label, thermal paper, etc.) to travel through the Zebra printer. You can enter a decimal up to one digit (e.g., 2.5).
<b>Printer Darkness</b>	Enter a value of -100 to 200 to adjust the level of print darkness.

- 1 Select **Save and Publish** to deploy the profile immediately.

## Configure Wi-Fi Profile Settings

Configuring a Wi-Fi profile allows devices to connect to corporate networks, even if they are hidden, encrypted, or password protected.

To configure the Wi-Fi settings:

- 1 Select **Wi-Fi** from the options on the left.
- 2 Select **Configure**.

Settings	Description
Service Set Identifier (SSID)	Enter the Service Set Identifier network name for the Print server connection with the Wi-Fi.
Security Type	Select the appropriate security type for the connection.
Username	Enter the User name for the account.
Password	Enter the password for the account.
Identity Certificate	Select the Identity certificate for authenticating the connection.
Root Certificate	Select the Root certificate for authenticating the connection.
Enable Dynamic IP Addressing	Enable the check-box for the IP address to change automatically at a predetermined time frame.
IP Protocol	Select the IP Protocol type for the printer to communicate with the Print Server (BOOTP, DHCP, DHCP and BOOTP, or All).
Primary Communication Port	Enter the primary port number for the Print Server and the printer communication.
Secondary Communication Port	Enter the secondary port number as an alternate port in case the primary communication port is inactive.
Settings Only Port	Enter the port number for transmitting Print Server configurations to the printer.
Enable Connection Timeout	Enable to set the time interval for Wi-Fi connection between the Print Server and printer to timeout.
Connection Timeout (sec)	Enter the time interval in seconds before the printer times-out after losing Wi-Fi connection with the Print Server.

- 3 Select **Save & Publish**.

## Configure Credentials Profile Settings

To assign certificates, you must first define a certificate authority. Then, configure a **Credentials** payload alongside your **Wi-Fi** profile.

To configure the Credentials settings:

- 1 Select **Credentials** from the options on the left.
- 2 Select **Configure**.
- 3 Choose one option from the **Credentials Source** menu:
  - Choose to **Upload** a certificate and enter the **Certificate Name**.
  - Choose **Defined Certificate Authority** and select the appropriate **Certificate Authority** and **Certificate Template**.
- 4 Select **Save & Publish**.

## Configure Power Profile Settings

Power profile specifies printer-specific power options such as low battery, inactivity, and cradle functionality.

To configure the Power settings:

- 1 Select **Power** from the options at left.
- 2 Select **Configure**.

Settings	Description
<b>Low Battery Timeout</b>	Enter time in seconds before a Zebra printer detects a low battery and automatically shuts off. The default timeout is 60s. Range is from 0 (zero) to 8191s (2 h 16m 31s).
<b>Inactivity Timeout</b>	Enter a time in seconds before a Zebra printer automatically shuts Off when it is inactive. The default timeout is 1200s. Range is from 0 (zero) to 65535s (18h 12m 15s).
<b>Battery Audio Timeout</b>	Enter a time in seconds before a Zebra printer triggers an audible alarm when it detects a low battery. The default timeout is 0 (Off). Range is from 0 (zero) to 65535s (18h 12m 15s), which is divided by eight so the actual time is 0 (zero) to 8191s (2h 16m 31s).
<b>Cradle Shutdown Timeout</b>	Enter time in minutes before a Zebra printer detects it being in a charger, is idle, and automatically shuts off. The default timeout is 0. Range is from 0 (zero) to 720m (12h).
<b>Label Queue Shutdown</b>	Select the check box if you want the Zebra printer to stay powered on regardless of all configurations, if there are print jobs in its queue. If the check box is not selected, the printer adheres to all configurations and shuts Off, even if print jobs are in the queue.

- 1 Select **Save and Publish** to deploy the profile immediately.

## Configure Mirror Profile Settings

Mirror profile specifies printer-specific data mirroring criteria such as IP address of the mirroring server, file path, and transfer protocol.

To configure the Mirror settings:

- 1 Select **Mirror** from the options at left.
- 2 Select **Configure**.

Settings	Description
<b>Server IP Address</b>	Enter the IP address of the FTP server with which the zebra server makes a FTP connection. The default is <b>127.0.0.1</b> .
<b>Username</b>	Enter the username (up to 20 characters) that is associated to the FTP server used by the Zebra printer.
<b>Password</b>	Enter the password (up to 20 characters) that is associated to the FTP server used by the Zebra printer.
<b>File Path On Server</b>	Enter the path (up to 51 characters) to the folder on the FTP server being used by the Zebra printer. If the FTP connection is successful, the printer attempts to perform an Update operation using the root directory (default is <b>Zebra</b> ).
<b>Mode</b>	Select from the drop-down either <b>Secure FTP</b> or <b>regular FTP</b> (default).
<b>Automatically Manage Files On Local Server</b>	Select the check box if you want the Zebra printer to perform a Mirror Update operation at start-up. If you select this check box, <b>Get Local Feedback</b> field appears.
<b>Get Local Feedback</b>	Select the check box if you want the Zebra printer to perform an automatic Mirror Feedback operation at start-up. This only appears if <b>Automatically Manage Files On Local Server</b> checkbox is selected.
<b>Feedback File Path</b>	Enter the path of the Zebra printer to upload the resulting Feedback file to the designated directory on the FTP server. The default is <b>Zebra feedback</b> .

- 1 Select **Save and Publish** to deploy the profile immediately.

## Configure ZPL Profile Settings

ZPL profile provides Z-level Programming Language (ZPL) commands to the Zebra printer to control various printer-specific functionality such as label length, position, language, paper width and type, and other printer controls.

To configure the ZPL settings:

- 1 Select **ZPL** from the options at left.
- 2 Select **Configure**.

Settings	Description
<b>Length Of Printer Label (in dots)</b>	Enter the length of the media (e.g., label, thermal paper, etc.) being used by the Zebra printer. The default is <b>2030</b> dots. Range is from 0 (zero) to 32,000 dots.
<b>Adjust Label Position Left</b>	Enter the left-edge position of the media being used by the Zebra printer. The default is <b>0</b> (zero) dots. Range is from -9,999 to 9,999 dots.
<b>Alternative Print Language</b>	Select from the drop-down the language used by the Zebra printer to communicate with the Zebra Print Server. The default is <b>None</b> .

<b>Media Width (in dots)</b>	Enter the width of the media being used by the Zebra printer. The default is <b>384</b> dots. Range is from 2 to 812 dots.
<b>Media Type</b>	<p>Select from the drop-down the gap marker used by the Zebra printer. The default is <b>Continuous</b>. If you select Gap/Notch or Mark, there is a sensor in the printer to pick up the gap, notch, or mark to ensure proper media registration.</p> <ul style="list-style-type: none"> <li>■ <b>Continuous Media</b> – Media has no physical characteristic (i.e., web, notch, perforation, black mark) to separate labels. Label length is determined by the Length Of Printer Label (in dots) setting.</li> <li>■ <b>Gap/Notch or Mark</b> – Media has some type of physical characteristic (i.e., web, notch, perforation, black mark) to separate the labels. Zebra printer senses this physical characteristic and stops feeding media.</li> </ul>
<b>Print Method</b>	Select from the drop-down either <b>Thermal Trans</b> or <b>Direct Thermal</b> for the method the Zebra printer uses to print on media. The default is <b>Direct Thermal</b> . Direct Thermal uses heat to create a dark mark wherever a heated element on the print head comes in contact with the media.
<b>Length Between Label Gap And Mark (in dots)</b>	Enter the length of the media between the label gap or label mark. The default is 0 (zero) dots. Range is from -120 to 120 dots.
<b>Print Mode</b>	<p>Select from the drop-down the action the printer takes after a label or group of labels has printed. The default is Rewind.</p> <ul style="list-style-type: none"> <li>■ <b>Tear off</b> – Label advances after printing so the web is over the tear bar. The label, with liner attached, can be torn off manually.</li> <li>■ <b>Peel off</b> – Label after printing moves forward and activates a Label Available Sensor. Printing stops until the label is removed manually from the printer.</li> <li>■ <b>Rewind</b> – Label and liner are rewound on an (optional) external rewind device. The next label is positioned under the printhead (no back feed motion).</li> <li>■ <b>Cutter</b> – Media after printing feeds forward and is automatically cut into predetermined lengths.</li> <li>■ <b>Delayed Cut</b> – Media after printing feeds forward and then waits for a command before it cuts the media into predetermined lengths.</li> <li>■ <b>Linerless Peel</b> – Media after printing feeds forward and activates a Label Available Sensor. Printing stops until the label is removed manually from the printer.</li> <li>■ <b>Linerless Rewind</b> – Linerless media automatically rewinds using an optional internal rewind spindle.</li> <li>■ <b>Linerless Tear</b> – Label after printing advances so the web is over the tear bar. The linerless label can be torn off manually.</li> </ul>

Action After Closing The Media Door	<p>Select from the drop-down the action the printer takes after the Media Cover is closed and Latch Release Lever is secured. The default is <b>Feed</b>.</p> <ul style="list-style-type: none"> <li>■ <b>Feed</b> – Label advances upon closing media cover to the first web after sensor.</li> <li>■ <b>Length</b> – Label advances upon closing media cover based upon the setting in <b>Length Of Printer Label</b> (in dots).</li> <li>■ <b>No Motion</b> – Label does not advance upon closing media cover and remains in the same position it was in before opening the Media Cover.</li> </ul>
Action After Powering The Printer On	<p>Select from the drop-down the action the printer takes after the Zebra printer is powered On. The default is <b>No Motion</b>.</p> <ul style="list-style-type: none"> <li>■ <b>Feed</b> – Label advances upon powering On the printer to the first web after sensor.</li> <li>■ <b>Length</b> – Label advances upon powering On the printer based upon the setting in <b>Length Of Printer Label</b> (in dots).</li> <li>■ <b>No Motion</b> – Label does not advance upon powering On the printer and remains in the same position it was in before the printer was powered Off.</li> </ul>

- 1 Select **Save and Publish** to deploy the profile immediately.

## Configure CPCL Profile Settings

CPCL profile provides various commands in Camero Printer Command Language (CPCL) to utilize the built in text, graphics, bar code printing, and communication capabilities of Zebra printers.

To configure the CPCL settings:

- 1 Select **CPCL** from the options on the left.
- 2 Select **Configure**.

Settings	Description
Label Gap Marker	Select the label gap marker as either Bar or Gap.
Length Between Label Gap And Mark (in dots)	Enter the length of the media between the label gap or label mark. The default is 0 (zero) dots. Range is from -120 to 120 dots.
Media Type	Select from the drop-down the gap marker used by the Zebra printer. The default is <b>Label</b> .

Print Mode	<p>Select from the drop-down the action the printer takes after a label or group of labels has printed. The default is Rewind.</p> <ul style="list-style-type: none"> <li>■ <b>Tear off</b> – Label advances after printing so the web is over the tear bar. The label, with liner attached, can be torn off manually.</li> <li>■ <b>Peel off</b> – Label after printing moves forward and activates a Label Available Sensor. Printing stops until the label is removed manually from the printer.</li> <li>■ <b>Rewind</b> – Label and liner are rewound on an (optional) external rewind device. The next label is positioned under the printhead (no back feed motion).</li> <li>■ <b>Cutter</b> – Media after printing feeds forward and is automatically cut into predetermined lengths.</li> <li>■ <b>Delayed Cut</b> – Media after printing feeds forward and then waits for a command before it cuts the media into predetermined lengths.</li> <li>■ <b>Linerless Peel</b> – Media after printing feeds forward and activates a Label Available Sensor. Printing stops until the label is removed manually from the printer.</li> <li>■ <b>Linerless Rewind</b> – Linerless media automatically rewinds using an optional internal rewind spindle.</li> <li>■ <b>Linerless Tear</b> – Label after printing advances so the web is over the tear bar. The linerless label can be torn off manually.</li> </ul>
Feed Length (in dots)	Length of media being used by the printer.
Feed Skip (in dots)	Length of media between label bar or gap.
Line Print Buffer Height	Size of the printer buffer that is accepting job files.

### 3 Select **Save & Publish**.

## Custom Settings

Custom Settings profiles allow custom XML profiles to be included in the profile payload. Custom settings allow custom XML profiles to be included in the profile payload. For example:

```
<?xml version="1.0" standalone="no"?><!DOCTYPE labels SYSTEM "label.dtd"><labels
_FORMAT="E:INFORMAT.lbl" _QUANTITY="1" PRINTERNAME="ZDesigner S4M-203dpi ZPL"
_JOBNAME="CRM101"><label><variable name="mediaTitle_1">Title</variable><variable
name="mediaTitle_2"></variable><variable name="episodeTitle_1"></variable><variable
name="episodeTitle_2"></variable><variable name="materialID">TitleID</variable><variable
name="som">10:00:00:00</variable><variable name="duration">02:00:00:00</variable><variable
name="mediaNo">DP\07059</variable></label></labels>
```

# Zebra Printer Management

## Enrolled Zebra Printers Status

Zebra printers that are enrolled with Workspace ONE UEM are listed in the printer management dashboard. There are a number of functions that can be performed from the dashboard.

### Dashboard

The Printer management dashboard of the UEM console enables you to monitor and manage all enrolled Zebra printers. The dashboard selections are displayed by navigating to **Devices > Printers**.

Selections	Description
<b>List View</b>	Contains a list of high-level information about your entire zebra printer deployment, including graphs depicting quantities of specific models and historic data on when printers were last seen, as well as a list of deployed printers, when it was last seen, its type and model, and the Organization Group in which it resides.
<b>Alerts</b>	Displays a list of printer-specific event data including the Friendly Name of the affected device, Sample Time, Transmit Time, Alert Type, Alert Data, Condition, and Severity.
<b>Printer Settings</b>	Provides links to printer-specific configuration dashboards where you can create and manage profiles, as well as upload files for deployment. You can also create and manage your Zebra Print Server.

### Device Details

You can view the data specific to an individual Zebra printer by selecting the device's **Friendly Name** from either the **List View** or **Alerts** dashboard. This launches the **Device Details** page for the printer.

The **Device Details** page contains the tabs mentioned in the table, along with the tabs that depict the payloads that can be configured from **Printer Profiles** page, such as Device, WiFi and so on.

Tabs	Description
<b>Alerts</b>	Displays a list of alerts generated by the device.
<b>Profiles</b>	Displays a list of printer profiles deployed to the device.
<b>Files</b>	Displays a list of files deployed to the device.

You can also perform administrative actions directly by selecting **More** drop-down menu on the top-right of the **Device Details** page.

Actions	Description
<b>Device Query</b>	Returns the most up-to-date device data available to the UEM console.


**Soft Reset** Reboots the Zebra printer.

**Factory Reset** Removes all Workspace ONE UEM profiles and files and restore all settings to factory default.

## Configuring Sample Schedule

You can configure sample schedule in the UEM console to permit the printers to perform automated check-ins to Workspace ONE UEM at scheduled intervals. The automated check-ins help Workspace ONE UEM to manage printers effectively by getting the printer status at regular intervals. Sample Schedule is configured at Organization Group level. Increasing the check-in frequency can impact performance. You can test different schedules to understand the check-in frequency that suitable for your environment. This helps you to configure sample schedule without impacting performance.

To configure sample schedule:

- 1 Log in to the UEM console and navigate to **Groups & Settings > Settings > Devices & Users > Peripherals > Sample Schedule**.
- 2 In the Device Details Sample, select the value text box and enter a desired numerical value. You can also select  to increase or decrease the entered value.
- 3 Select the type drop-down menu and then select **minutes**, **hours**, or **days**. The option you select applies to the numerical value entered in the value text box. Sample schedule runs at the interval you set.
- 4 Select the Child Permission option as per your requirement and select **Save**.

This chapter includes the following topics:

- [Configure Printer Sample Schedule](#)
- [Upload a Zebra Printer File](#)
- [Zebra Printer Alerts](#)
- [Troubleshoot Zebra Printer Issues](#)

## Configure Printer Sample Schedule

You can configure sample schedule in the UEM console to permit the printers to perform automated check-ins to Workspace ONE UEM at scheduled intervals. The automated check-ins help Workspace ONE UEM to manage printers effectively by getting the printer status at regular intervals.


Sample Schedule is configured at Organization Group level. Increasing the check-in frequency can impact performance. You can test different schedules to understand the check-in frequency that suitable for your environment. This helps you to configure sample schedule without impacting performance.

### Procedure

- 1 Log in to the UEM console and navigate to **Groups & Settings > Settings > Devices & Users > Peripherals > Sample Schedule**.



- 2 In the Device Details Sample, select the value text box and enter a desired numerical value.

You can also select  to increase or decrease the entered value.

- 3 Select the type drop-down menu and then select **minutes**, **hours**, or **days**.

The option you select applies to the numerical value entered in the value text box. Sample schedule runs at the interval you set.

- 4 Select the Child Permission option as per your requirement and select **Save**.

## Upload a Zebra Printer File

You can deploy files over-the-air to Zebra printers. This feature is useful in terms of sending down a .zpl or a .cpcl file that configures the printer to connect to a wireless network.

To upload a Zebra printer file:

- 1 Navigate to **Devices > Peripherals > Settings > Files**.
- 2 Select **Add New File** and select **Zebra**.
- 1 Select **Configure**.
- 2 Specify the **General** settings for the file deployment just as you would for a printer profile.
- 3 Navigate to **File > Configure**.
- 1 Select **Upload** and navigate to the printer file to add and subsequently deploy.
- 2 Enter the **File Version** that needs to be displayed in the UEM console.
- 3 Select **Save** to save the file or select **Save and Publish** to deploy the file.

## Zebra Printer Alerts

The Alerts page provides an overall view of the status of the enrolled Zebra printers. The alerts list the various errors that you might encounter while managing the printers.

You can view the alerts by navigating to **Devices > Peripherals > Alerts**. The Alerts view displays all the alerts sent from a Zebra printer to Workspace ONE UEM. Different alerts associated with Zebra printers are listed below.


■ Battery Low	■ Paper Out
■ Clean Print Head (clean printhead)	■ Power On
■ Cold Start	■ Replace Head
■ Cutter Jammed (cut error)	■ Rewind (rewind full)
■ Head Cold (printhead under-temp)	■ Ribbon In [ribbon-in warning (Direct Thermal Mode)]
■ Head Element Bad (head element out)	■ Ribbon Low
■ Head Open	■ Ribbon Out

■ Head Too Hot (printhead over-temp)	■ SGD Set
■ Media Low	■ Supply Too Hot (power supply over-temp)
■ Unknown – label ready, PQ job completed, printer paused, RFID error (in RFID printers only), ZBI (Zebra BASIC Interpreter) forced error, ZBI (Zebra BASIC Interpreter) runtime error.	

## Configure Sample Schedule

You can configure sample schedule in the UEM console to permit the printers to perform automated check-ins to Workspace ONE UEM at scheduled intervals. The automated check-ins help Workspace ONE UEM to manage printers effectively by getting the printer status at regular intervals. Sample Schedule is configured at Organization Group level. Increasing the check-in frequency can impact performance. You can test different schedules to understand the check-in frequency that suitable for your environment. This helps you to configure sample schedule without impacting performance.

To configure sample schedule:

- 1 Log in to the UEM console and navigate to **Groups & Settings > Settings > Devices & Users > Peripherals > Sample Schedule**.
- 2 In the **Device Details Sample**, select the value text box and enter a desired numerical value. You can also select  to increase or decrease the entered value.
- 3 Select the type drop-down menu and then select **minutes**, **hours**, or **days**. The option you select applies to the numerical value entered in the value text box. Sample schedule runs at the interval you set.
- 4 Select the Child Permission option as per your requirement and select **Save**.

## Troubleshoot Zebra Printer Issues

When troubleshooting a Zebra printer, it is helpful to print a configuration report for reference. The configuration report provides details on what is wrong with the working of the printer. To print a report, press and hold **Feed** while pressing **Power On**.

The following table provides details on the various issues encountered by Zebra printer users and the actions to be taken to encounter the same.

Issues	Actions to be taken
Clicking <b>Soft Reset</b> does not reboot the Zebra printer or other commands that require an action fail.	The connection between the Zebra printer and Zebra Print Server is lost or has not been successfully established. Reestablish the connection and retry the <b>Soft Reset</b> .
Zebra printer not showing signs of receiving a profile	The printer profile was not successfully pushed to the device. Save and publish the profile again. Then, reboot the printer.
“ <b>Pending Registration</b> ” still appears in the UEM console after installing the signed Zebra certificate.	Verify that the certificate was installed in the same directory location used to create the certificate and reinstall the certificate if needed.