

# VMware AirWatch Epson Printer Integration Guide

Using Epson printers with Workspace ONE UEM

Workspace ONE UEM v9.6

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# Chapter 1:

## Introduction to Epson Printers

### Overview

This guide provides details on Epson printer and Workspace ONE UEM integration. The Epson Printer Server for Workspace ONE UEM is an application developed on Ubuntu or Linux using the Mono framework and GTK# or GTK+. Using Workspace ONE UEM, you can manage Epson printers and control its working from the Workspace ONE UEM console by configuring and deploying the following printer profiles.

- Wi-Fi
- Credentials
- Device Settings
- Custom Settings
- Simple Certificate Enrollment Protocol (SCEP)

**Note:** This guide assumes that you have the correct Epson software installed, and the necessary software to configure your printers. If you need more information or guidance on how to install this software, then please contact your Epson representative.

### Supported Devices

Workspace ONE UEM supports the following Epson printer models:

- TM-T88V-i
- TM-T88VI and TM-T88VI-iHub. These models do not support SCEP.

### Prerequisites to configure the Print Server

The following programs must be installed before running the Epson printer application:

- Mono Runtime Common 4.2.1 - If Ubuntu is used, the minimum required version is Ubuntu 16.04.
- GTK# version 2 - If Ubuntu is used, install the *gtk-sharp2* package.

# Chapter 2:

## Install and Register the Print Server

### Installing the Print Server

The Epson printer application consists of three files:

- `EpsonAWPrintServer.exe` - The Epson printer server application .exe file
- `EpsonAWPrinterServerData.xml` - Application settings
- `Newtonsoft.Json.dll` - A library to handle JSON data

To install the print server, copy the above mentioned files to a folder. To start the application, double-click the **EpsonAWPrintServer.exe** file or in a terminal cd to that folder and run `./EpsonAWPrintServer.exe`. Alternatively, enter `mono EpsonAWPrintServer.exe` to start explicitly with the mono runtime.

Once you start the Epson printer server application, the **EPSON AirWatch Print Server** window opens. In this window, you have to provide the print server information.

### Adding the Print Server

To add a printer server in Workspace ONE UEM, perform the following steps:

1. Login to the UEM console.
2. Ensure that the correct Organization Group is displayed at the top of the page.
3. Navigate to **Devices > Peripherals > Settings > Server**, and then select **Add Server**.
4. On the **Add Server** page, complete the following fields:

| Fields               | Description  |
|----------------------|--|
| <b>Friendly Name</b> | Choose a meaningful name to identify the Epson print server. |

|                    |  |
|--------------------|--|
| <b>HMAC Token</b>  | The UEM console randomly generates this token. This token enables all subsequent requests from the Epson print server to be HMAC signed. Select the entire 32-character string and copy it to the clipboard (Ctrl+C).  |
| <b>User ID</b>     | This field contains the user ID or username associated with a print server on the console. Printers subsequently enrolled to the print server have this username associated with them.   |
| <b>Service UID</b> | Enter the Service UID or select <b>Generate UID</b> . The service UID is expected to be between 16 to 36 character long alphanumeric value. Once you enter the Service UID in the UEM console, copy the same to the relevant field in the Epson configuration page . |

5. Select **Save**. The status displays *pending registration*.

## Registering the Print Server

To register the printer, perform the following steps:

1. Update the **EpsonAWPrinterServerConfig.xml** with your print server details and save the file.
2. Open **Terminal** and change to the directory containing Epson print server files.
3. Run the **mono EpsonAWPrintServer.exe -r** command to start the print server.  
Your print server is registered and the terminal output displays following information about the printer server:

```
EPSON Airwatch Print Server Version: X.X.X.XXXXX
-----
Parameters:
Server UID=a1234b5c-1ab2-1234-a123-12a3b1234a12 GroupID=1234 Vendor=Epson
HMAC=12a1ab1a-1a23-123a-ab12-1234ab1234a1b
RegisterURL=https://www.acme.com/deviceservices/peripheralservice/v1/register
ServerIPAddressFromAirwatch=xx.xx.xxx.xx
UseHTTPS(from Airwatch)=True
HTTPPrefixToPrinter=https://
Periodic Check-ins=False
CheckInPeriod=0.5
SendAlertsToAirWatch=True
SendCheckInOnStatusUpdate=True
SSLPort=xxxx
SSLCertificateFileName=xxxxx.xx
-----
System Info:
Thread pool size: xx
No. of Worker threads: x
No. of async. I/O threads: x
-----
UNIX Signal listner started.
Registering Printer Server with Airwatch...
Send registration to Airwatch...
Registration OK.
Recieved URLs:
EnrollmentURL=https://www.acme.com/deviceservices/peripheralservice/v1/enrollde
vice
CommandURL=https://www.acme.com/deviceservices/peripheralservice/v1/checkin
AlertURL=https://www.acme.com/deviceservices/peripheralservice/v1/alert
-----
Webserver: SSL certificate is valid. Issued for XXXX by XXXX, expires of xx-xx-
xxxx
Webserver: Listening on port xxxx
```

## Enrolling the Printer

1. Go to the printer admin page.
2. Select **Edit Status Notification** settings and select **Apply**.
3. Select **Enable** to enable status notification.
4. Select **ID** text field and enter **Printer ID**.  
The Password field should be left blank.
5. Select **URL** text field and enter printer server URL.
6. Select **Interval(s)** text field and enter the notification interval in minutes.
7. Select **Disable** to disable server authentication.
8. Select **Apply**.



# Chapter 3:

## Managing Epson Printers

### Overview

This section provides information on the following:

- Creating printer profiles
- Viewing device details functions
- Printer alerts
- Uploading printer firmware image

### Creating Printer Profiles


You must create a printer profile containing the printer attributes and settings. Multiple profiles can be created as required. To create a printer profile, perform the following steps:

1. Open and log into the UEM console.
2. Navigate to **Devices > Peripherals > Settings > Profiles**.
3. From the **Printer Profiles** page, select **Add Profile** to add a new printer profile.
4. Select **Epson** as the printer brand for which to add a profile. You are redirected to the **General** tab of the **Add Profile** page.
5. In the **Add profile** page, enter the **Name** and **Description** of the printer profile.
6. In the **Assignment Type** drop-down menu, select either of the following profile types:
  - **Auto** – The profile is pushed automatically to the printers within the assigned smart groups. For more information on smart groups, please refer to the **VMware Workspace ONE UEM Mobile Device Management Guide**.
  - **Optional** – You must manually push the profile.

7. The relevant payloads appear on the left side of the screen. You may need to consult the printer manual to complete some of the fields.
8. Select **Save & Publish** after you complete the required payload settings.

## Deploy Profiles

Perform the following steps to manually push the profile:

1. Navigate to **Devices > Peripherals > Settings > Profiles**.
2. Select the  icon next to the profile that you want to manually push.
3. In the **View Devices** page, select **Install Profile** to push the profile to the required printer.

Until Workspace ONE UEM receives acknowledgment from the print server that a print profile has been installed for a particular printer ID, the profile remains in the *Pending Install* state for that device. Once Workspace ONE UEM receives the acknowledgment for a particular printer, the status changes to *Installed* for the particular printer and then a green check mark appears.

## Epson SCEP Profile

Configure the Simple Certificate Enrollment Protocol (SCEP) in UEM console to permit your Epson printers to communicate with your SCEP servers over Wireless LAN (WLAN). This helps you to validate and manage your SCEP certificates remotely at defined intervals.

### Prerequisites

- Certificate Authority and the corresponding request template. For more information about creating a Certificate Authority, see *VMware AirWatch Certificate Authentication for EAS with NDES-MSCEP guide*.
- Enable *Create the self-signed certificate* at Epson printer settings webpage.

To configure SCEP:

1. Navigate to **Peripherals > Settings > Profiles > Epson > SCEP** and select **Configure**.
2. From the Credential Source drop-down menu, select **Defined Certificate Authority**.
3. From Certificate Authority drop-down menu, select the appropriate Certificate Authority. The corresponding Certificate Template is automatically selected.
4. Select the Update Interval value text-box and enter the desired value. The value is represented in milliseconds.

## Verify SCEP Profile

To verify the SCEP profile status:

- Navigate to **Printer Server Terminal**. SCEP profile installation details are displayed in the terminal window.
- The printer generates a confirmation output. You can connect to a wireless network to test the connectivity.
- Navigate to **https://<printer IPAddress>/webconfig/config\_scep\_init.cgi** and verify the SCEP certificates on the printer.

- On the printer webpage and navigate to **System Settings > Network > Wireless > WPA/WPA2 Enterprise Authentication**

## Viewing Device Details Functions and Epson Printer Alerts

Device details functions and printer alerts can be viewed by performing the steps below.

### Device Details Functions

The Printers List View of the UEM console allows you to monitor and manage all enrolled Epson printers.

1. Navigate to **Devices > Peripherals > List View** to display the dashboard.
2. Select the **Friendly Name** of the required printer.
3. In the **Details View** page, select **More**, located on the top left side of the page to see a list of available actions and perform the desired action. The actions that are present is mentioned in the following table:

| Actions                          | Description  |
|----------------------------------|--|
| <b>Query All</b>                 | Retrieves all updated device details of a printer and displays it on the UEM console.  |
| <b>Soft Reset</b>                | Restarts the printer.  |
| <b>Factory Reset</b>             | Resets the printer to factory settings.  |
| <b>Change Organization Group</b> | Changes the currently-assigned organization group of the printer.  |
| <b>Delete printer</b>            | Deletes the printer from Workspace ONE UEM. Using Epson software as the intermediary, Workspace ONE UEM sends the delete command to the print server, which in turn removes the printer from its database and conveys the status to the UEM console. |
| <b>Test Print</b>                | Ensures that the printer is working correctly.   |

## Epson Printer Alerts

To view alerts, navigate to **Devices > Peripherals > Alerts**. The **Alerts** view displays every alert and alert status sent from the Epson printer to Workspace ONE UEM as well as the status of the alert.

To understand how alerts generated on the printer, manifest themselves on the UEM console, perform the following steps:


1. Navigate to **Devices > Peripherals > List View**.
2. Select the **Friendly Name** of printer you want to test from the list.
3. In the **Details View** page, select **Alerts**. A list of possible alert types gets displayed with the current status of each alert for that printer.
4. Turn on the printer and open the media door on the printer.
5. Press the F5 key after 10 secs to refresh the UEM console.
6. In the **Alert Type** column, you should now see the *Head Open* alert with an orange triangle with an exclamation mark in the **Status** column of that printer.
7. Close the media door.
8. Press the F5 key after 10 secs to refresh the console.
9. After the screen refreshes, you can see the *Head Open* alert. A blue circle check mark replaces the orange triangle with an exclamation mark. This shows that there is no longer an alert for that function. If this test is successful, you have verified that the printer is able to send alerts to the UEM console.

| Serial No. | Alert Type                 | Description                          | Severity |
|------------|----------------------------|--------------------------------------|----------|
| 1          | Power On                   | Printer is powered on                | 1        |
| 2          | Power Off                  | Printer is powered off               | 1        |
| 3          | Cover Open                 | Printer cover open                   | 1        |
| 4          | Print Ready                | Printer is ready                     | 1        |
| 5          | Less Receipt Paper         | Receipt paper is less                | 1        |
| 6          | Receipt Paper Out          | Receipt paper is out                 | 1        |
| 7          | Slip in Printer            | Slip in Printer                      | 1        |
| 8          | Error                      | Error                                | 1        |
| 9          | Auto-Cutter Error          | Auto-cutter error present            | 1        |
| 10         | Fatal Error                | Fatal error present                  | 1        |
| 11         | Recovering Error           | Recovering error is present          | 1        |
| 12         | Printer Offline            | Printer is offline                   | 1        |
| 13         | Printer Status Unavailable | Status of the printer is unavailable | 1        |
| 14         | Undefined Status Reply     | Status reply is undefined            | 1        |

## 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 is 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 **Settings > Devices & Users > Printers/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**.

## Uploading a Printer File or Firmware Package

Perform the following to upload an Epson printer file:

1. Navigate to **Devices > Peripherals > Settings > Files** in the UEM console and then select **Add New File**.
2. Select **Epson**.
3. On the **Add New File** page, fill all the required fields.
4. Enter a name in the **Name** field. This name is not necessarily the name of the file being uploaded, but rather name of the printer file profile that can be assigned selectively.
5. Fill in a meaningful description of the printer file profile.
6. Under **Assignment Type**, select **Auto** or **Optional**.
7. Select any desired assigned smart groups. Smart groups should be created beforehand.
8. Select **File** in the left column, and then select **Configure**.
9. Select **Upload** to choose the file package that you want to include in the printer file profile.
10. Enter the **File Version** that you want to display in the UEM console.
11. Select **Save** to save the file, or **Save and Publish** to deploy the file. The page shows a list of the printers installed in the selected Smart Groups that receives the new files with status as *Added*.
12. Select **Publish** to finalize the changes. If necessary, republish any required profile.
13. If a printer file that you want to install is labeled as **Optional**, then select the  icon.
14. Select the arrow down circle button to install the files.

15. To verify the upload, go to the printer server terminal or the print server log files. The print server terminal displays the following output:

```
Printer EpsonXX: AW Sent Installfile command. Filename: 'SampleFile1.txt'  
PrintServerFile SampleFile1.txt: Receiving file from Workspace ONE UEM...  
PrintServerFile SampleFile1.txt: Receiving file from Workspace ONE UEM  
successfully complete. Bytes downloaded: xxxx  
PrintServerFile SampleFile1.txt: Loading file from disk...  
PrintServerFile SampleFile1.txt: Loading image to printer  
PrintServerFile SampleFile1.txt: Sending to printer  
PrintServerFile SampleFile1.txt: AW responded with 'OK'  
PrintServerFile SampleFile1.txt: File 'SampleFile.txt' successfully loaded to  
printer  
PrintServerFile SampleFile1.txt: Checking in...  
PrintServerFile SampleFile1.txt: AW responded with 'OK'  
PrintServerFile SampleFile1.txt: Checking in done. AW Response: Response Status:  
OK
```

# Chapter 4:

## Troubleshooting

### Overview

This section provides details of various troubleshooting procedures that needs to be carried out if required. This section includes details of various HTTP status codes that are involved.

### HTTP Status Codes

| Status Code                      | Cause   |
|----------------------------------|---|
| <b>200 Ok</b>                    | Indicates that the HTTP GET or HTTP POST command was successful.  |
| <b>401 Unauthorized</b>          | Indicates that the printer either needs to authenticate with the server or that it failed to authenticate with the remote server. |
| <b>403 Forbidden</b>             | Indicates that the authentication was provided and valid; however, the user does not have access to the requested resource.       |
| <b>404 Not Found</b>             | Indicates that the remote URL provided points to an invalid location on the server.   |
| <b>500 Internal Server Error</b> | Indicates that the server encountered an unexpected condition that prevented it from fulfilling the request.                      |