VMware AirWatch Datamax-O'Neil Integration Guide

Workspace ONE UEM v8.4 and higher

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Table of Contents

Chapter 1:
Datamax-O'Neil Printers

Overview

You can configure Datamax printers with Workspace ONE UEM using Datamax's NET-ira CA software. Datamax's NET-ira CA software communicates with the Datamax printers within a customer's network.

You can enroll Datamax printers to send commands to the printers. Enrollment is initiated from NETira-CA and once Workspace ONE UEM receives the enrollment request from NETira-CA, it displays the printer's record on the UEM console along with all the details of the printer grouped in different tabs on the Device Details page.

Supported Devices & Requirements

Workspace ONE UEM Mobile Device Management (MDM) solution supports a number of Datamax-O'Neil printers. To integrate Workspace ONE UEM with the Datamax-O'Neil print server, it is essential to meet the necessary requirements.

Supported Devices

Workspace ONE UEM supports the following Datamax-O'Neil printers:

- RL3 (firmware version 8.05_0051 or newer)
- RL4 (firmware version 8.05_0051 or newer)
- RL3e (firmware version 18.05_0051 or newer)
- RL4e (firmware version 18.05_0051 or newer)
- LP3e

Requirements

There are three sets of requirements that needs to be met before integrating Workspace ONE UEM and Datamax-O'Neil printers.

Server Requirements

You can install the Datamax-O'Neil print server on a Workspace ONE UEM server or any other server that can communicate with a Workspace ONE UEM server.

Software Requirements

In addition to Windows Server 2008, the overall system is comprised of three programs: Workspace ONE UEM, NETira-CA and NETira-CT.

- Windows Server 2008 or R2

- Workspace ONE UEM 8.0 or greater

  - Subscription to Workspace ONE UEM services and all related information:

    - Workspace ONE UEM customer number

    - Login Screen URL

    - Username & password

    - Printer Server Registration URL

- Datamax-O'Neil NETira-CA software

  - Public-facing IP address of server hosting NETira-CA

- Datamax-O'Neil NETira-CT software

NETira-CA and Workspace ONE UEM work together to send commands to the Datamax printers, and in turn receive input from the printers. In short, they work together to manage the Datamax printers. In this case, the NET-ira CA functions as the print server between the UEM console and the Datamax printers.

Through the UEM console, you can view details, troubleshoot, configure, and monitor enrolled Datamax printers.

Device Firmware Requirements

- Firmware versions vary based on model

Chapter 2:
Printer Server Integration

Add a Print Server in Workspace ONE UEM

The print server must be added in the UEM console.

To add a print server in the UEM console:

1. Launch your browser and navigate to Workspace ONE UEM environment URL.

2. Login to the UEM console using the SSO credentials.

3. Ensure that the correct Organization Group is displayed at the top of the console page.

4. Navigate to **Devices >Printers > Printer Settings > Print Server** and select **Add Print Server**. The **Add Print Server** page displays.

5. Complete the fields mentioned in the following table and select **Save**.

Fields	Description
Friendly Name	Choose a meaningful name to identify the Datamax print server.
HMAC Token	Add this 32-character alphanumeric value. The UEM console randomly generates this token. This token enables all subsequent requests from the print server to be HMAC signed. Select the entire 32-character string and copy it to the clipboard (Ctrl+C).
User ID	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.
Service UID	Enter the Service UID or select **Generate UID**. 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 configuration page.

Install the Print Server (NETira-CA Software)

Installing the print server is the most important step in establishing a link between Workspace ONE UEM and the printer. Installation of the print server can be accomplished from the Datamax-O'Neil website.

To install the print server:

1. Navigate to Datamax-O'Neil website by selecting www.datamax-oneil.com.

2. Select **Support & Downloads > Downloads & Drivers**.

3. From the drop-down menu, select your product and then select **RL4e**.

4. Under **Software & Tools**, select **Utility** and download NETira-CA_Setup.msi.

5. Once the file is downloaded, execute the downloaded NETira-CA_Setup.msi file and install the print server.

6. After completion, an icon labeled **NETira-CA** appears on the desktop.

7. Run this program to load it in the System Tray. Now, double-click the icon in the System Tray to login to the **Datamax-O'Neil Printer Server**.
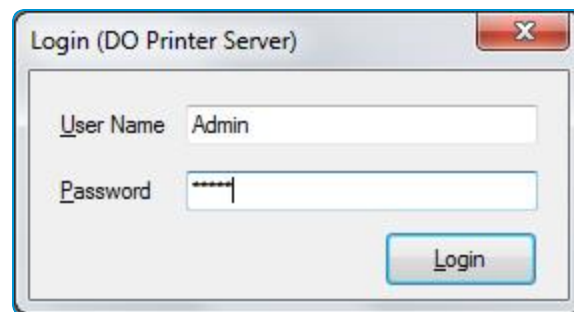
8. In the **User Name** field, enter **Admin**. In the **Password** field, enter **adm1n** and select **Login**.

Configure the Print Server

After logging into the print server, the **NETira Connect for AirWatch (Configuration)** screen displays.

To configure the print server:

1. Click once in the empty **HMAC Key** field and paste the contents of the clipboard.

2. Complete the **Registration URL** field by appending /deviceservices/peripheralservice/v1/register/ to the URL found by navigating to **Groups & Settings > All Settings > System > Advanced > Site URLs > Device Services URL** (minus 'DeviceServices' at the end).

3. In the **AirWatch Notify Point** field, enter the **DNS name** associated with a signed certificate. Follow the DNS name with a colon and the appropriate port number followed by */aw-notify*. Example: *http://airwatchdops.com:9090/aw-notify*.

4. In the **Group ID** field, enter the group ID used while registering the print server in Workspace ONE UEM.

5. Select the "…" option to the right of the **Certificate file** field to browse for the .pfx file you created earlier.

6. Navigate to and select the .pfx file from the certificate folder on your desktop and select **Open**.

7. The .pfx file gets listed in the box next to the **Certificate file** field.

8. Select the contents of the **Print Server UID** field and copy the entire string to the clipboard and select **Register Server**.

Chapter 3:
Printers Management

Printer Profiles

Profiles are settings that consists of one or more payloads that you can configure in the Workspace ONE UEM console and deploy it to enrolled devices, Datamax - O' Neil Printers in this case.

To create a printer profile. you must first configure the General settings for the profile. and then configure any of the following payloads:

- Media Label
- Print Control
- System Settings
- Auto Update
- General Network
- RS232
- Wi-Fi
- Miscellaneous
- Bluetooth
- Custom Settings

Create Printer Profiles

Create printer profiles containing the printer attributes and settings from the UEM console and push it to devices. You can also create multiple profiles as required.

To create printer profiles:

1. Log into the UEM console.

2. Navigate to **Devices > Printers > Printer Settings > Printer Profiles**.

3. Select **Add Profile** to add a new printer profile.

4. Select **DataMax-O'Neil**.

5. You will be redirected to the **General** tab of the **Add Profile** screen. Enter **Name** and **Description** of the printer profile in the respective fields.

6. For **Assignment Type**, select from the two choices from the drop-down menu.

    • **Auto** – The profile is sent 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** – The profile is assigned to the selected smart groups but it must be manually pushed to the groups by the IT admin.To manually push the profiles:

        a. Navigate to **Devices > Printer Settings > Printer Profiles**.

        b. Select the [🔍] icon of the profile that must be manually pushed.

        c. From the **View Devices** screen displays, select **Install Profile**.

7. Different payloads relevant to the Datamax-O'Neil printers appear on the left-side of the screen.

8. When you have completed entering the desired fields in the profile category, select **Save & Publish**.

> **Note:** Until Workspace ONE UEM receives acknowledgment from the print server that a print profile has been installed for a particular printer ID, the profile will be in the 'Pending Install' state for that device. Once acknowledgment is received for a particular printer, the status changes to 'Installed' for the specified printer with the appearance of a green check mark.

Upload a Datamax-O'Neil Printer File

Workspace ONE UEM enables you to deploy files over-the-air to Datamax-O'Neil printers.

To upload a Datamax-O'Neil printer file:

1. Download and install the D-O Package Builder from the Datamax-O'Neil website. This helps in creating packages that can be pushed through Workspace ONE UEM to certain assigned printers. The D-O Package Builder creates a .zip file of the files selected for the printer file. Rename the .zip file extension to .dat, as the AirWatch Printer File uploader does not recognize .zip files.

2. In the UEM console, navigate to **Devices >Printers > Printer Settings > Printer Files**. Select **Add New File**.

3. Select **Datamax-O'Neil**.

4. Fill all the fields on the **Add New File** page.

5. Enter a name in the **Name** field. This name is not necessarily the name of the file being uploaded, but rather the name of the printer file profile that can be assigned selectively.

6. Provide a meaningful **Description** for the printer file profile.

7. Under **Assignment Type**, select either **Auto** or **Optional**.

8. Select the desired **Assigned Smart Groups**.

9. Select **File** and then select **Configure**.

10. Select **Upload** to choose the file package you want to include in the printer file profile.

11. Enter the **File Version** that needs to be displayed in the UEM console.

12. Select **Save** to save the file or select **Save and Publish** to deploy the file. Screen shows a list of the printers installed in the selected Smart Groups that receives the new files with a status of **Added**.

13. Select **Publish** to finalize the changes. If necessary, republish the required profile.

14. The screen now returns to the list of the printer files. If a file is labeled **Optional** to install and you want to install it, select the [icon] icon next to the desired file.

15. Click the arrow down circle option to install the files. The LCD screen on the printer shows the progress or status of the installation and the file status in the UEM console is labeled as **Installed** upon completion.

Enrolled Datamax-O' Neil Printers' Status

Printers List View page of the UEM console enables you to monitor and manage the enrolled Datamax-O'Neil printers. You can view the list of printers by navigating to **Devices > Printers > List View**. Select the **Friendly Name** of any of the listed printers to access the **Details View**.

Select **More** from the **Details View** page to perform different administrative actions.

Action	Description
Query All	Retrieves all updated device details of a printer and displays it on the UEM console.
Soft Reset	Restarts the printer.
Change Organization Group	Changes the currently-assigned organization group of the printer.
Delete printer	Using Datamax's NETira-CA software as the intermediary, a delete command is sent to the print server which in turn removes the printer from its database and conveys the status to the UEM console.

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 **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**.

View Printer Alerts

The Alerts view displays every alert and the status of each alert sent from the Datamax-O'Neil printer to the UEM console. You can navigate to **Devices > Printers > Alerts** to view generated alerts for all the printers in the organization group.

To understand how the generated alerts manifest themselves on the UEM console:

1. Navigate to **Devices > Printers > List View**.

2. Select the **Friendly Name** of the printer that you want to test.

3. From the **Details View**, select **More** and then **Alerts**. A list of possible alert types gets displayed with the current status of each alert for that printer.

4. Open the media door on the printer and leave it open. The printer must be turned on.

5. Press the **F5** key after 10 secs on the computer keyboard 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 for the printer.

7. Close the media door.

8. Press the **F5** key after 10 secs to refresh the console.

9. After the screen refreshes, you see the *Head Open* alert, but the orange triangle with an exclamation mark is replaced by a blue circle with a check mark showing 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
1	HEAD OPEN	Print-head is not locked-on position
2	HEAD TOO HOT	Print-head temperature reached above max
3	TOF FAULT	Top-of-form not found
4	PAPER OUT	Out of paper
5	VERIFIER FAULT	Verifier fault

6	ADC ERROR	A/D conversion error
7	DMA FAULTS	Dma faults
8	SW FAULT	Software faults
9	POSITION FAULT	PIP position fault
10	CLEAN PRINT HEAD	Head needs cleaning
11	BAD DOTS	Dots out after dot check
12	STOP SIGNAL	Stop signal asserted
13	RFID FAULT	RFID fault
14	CLOSE HEAD LATCH	Soft headup fault
15	MOTOR HOT	Motor temperature reached above max
16	INVALID DATA	Invalid data
17	BATTERY VOLT TOO LOW	Battery voltage too low to move paper
18	BATTERY MISSING	Battery missing
19	HEAD WARM	Print-head temperature is above the ambient temperature
20	LOW VOLTAGE	Low voltage warning
21	TPH HIGH	TPH 24v high
22	POWER DOWN	Power down
23	HEAD NEED CLEANING	Head needs cleaning
24	REWINDER FULL	Ribbon is below the fixed threshold
25	HEAD MISMATCH	Head mismatch
26	MOTOR WARM	Motor temperature is above the ambient temperature
27	MEDIA LOW	Media low sensor
28	BATTERY LOW	Battery charge low

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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**.

Troubleshoot Printer Issues

Various NETira-CA Registration errors and encountered HTTP status codes are given in the tables below.

NETira-CA Registration Errors

Error Message	Cause	Action
Registration failed: (500) InternalServerError	Occurs when incorrect data is sent to Workspace ONE UEM from NETira-CA.	Retry registration with the correct values.
Registration failed: (400)Bad Request	Occurs when an incorrect server registration URL is sent to Workspace ONE UEM from NET-ira CA .	Retry registration with the correct URL.
Registration request failed: (403)Forbidden	The HMAC key provided by Workspace ONE UEM for a particular print server has to be used in NETira-CA configuration window. Occurs when the Print server UID provided in the NETira-CA does not match with UID of the Print server added in Workspace ONE UEM.	Provide the correct Group ID which is provided in UEM console, under **Groups & Settings > Groups > Organization Groups > Organization Group Details**.

HTTP Status Codes

Status Code	Cause
200 Ok	Indicates that the HTTP GET or HTTP POST was successful.

401 Unauthorized	Indicates that the printer either needs to authenticate with the server or that it failed to authenticate with the remote server.
403 Forbidden	Indicates that the authentication was provided and is valid. However, the user does not have access to the requested resource.
404 Not Found	Indicates that the remote URL provided points to an invalid location on the server.
500 Internal Server Error	Indicates that the server encountered an unexpected condition that prevented it from fulfilling the request.