Dell Provisioning for VMware Workspace ONE

VMware Workspace ONE UEM 1902

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Dell Provisioning for VMware Workspace ONE

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In partnership with Dell Configuration Services, Workspace ONE UEM supports creating provisioning packages to install applications and configurations on your Dell Windows 10 devices before they leave the factory.

Dell Provisioning for VMware Workspace ONE requires on-premises customers to install the Factory Provisioning service onto an application server.

This Dell Provisioning for VMware Workspace ONE service exports applications from the Workspace ONE UEM console and converts them into .PPKG files. You create this provisioning package in the Workspace ONE UEM console using a wizard. The wizard covers configuring the package, adding apps, and exporting the package.

To use Dell Provisioning for VMware Workspace ONE, you must participate in Dell Configuration Services. For more information, see https://www.dell.com/en-us/work/learn/system-configuration.

This chapter includes the following topics:

- Dell Provisioning for VMware Workspace ONE Requirements

Dell Provisioning for VMware Workspace ONE Requirements

Before creating provisioning packages, you must meet the Dell Provisioning for VMware Workspace ONE requirements.

Dell Provisioning for VMware Workspace ONE Requirements by Deployment Type

The following table shows the requirements for Dell Provisioning for VMware Workspace ONE for each type of deployment. Consider these requirements before using Dell Provisioning for VMware Workspace ONE.

Workspace ONE UEM Deployment	Software Distribution	File Storage	CDN
SaaS Shared	Enabled, if licensed	N/A	Enabled and Required
SaaS Dedicated version 9.7 and above	Enabled, if licensed	N/A	Enabled and Required

Workspace ONE UEM Deployment	Software Distribution	File Storage	CDN
On-premises version 9.7	Disabled by default, but required	Required	Disabled by default, but required
On-premises version 1810 and above	Enabled by default	Optional but recommended	Disabled by default and optional

Note Any application uploaded before you enable Software Distribution must be uploaded again.

Install the Factory Provisioning Service

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Before you can use Dell Provisioning for VMware Workspace ONE , you must install the Factory Provisioning Service in your environment.

Prerequisites

This process installs the Factory Provisioning Service into your environment. Only On-Premises customers must install this service. Consider reviewing the VMware Workspace ONE UEM Recommended Architecture Guide before installing the service.

Ensure that the servers the Factory Provisioning Service are installed on can reach and connect to your REST API server. The URL for REST API is set under **Groups & Settings > All Settings > System > Advanced > Site URLs > REST API URL**.

Use TLS to ensure that the traffic between the Factory Provisioning Service server and the Workspace ONE UEM console is secured. To use TLS, you must install a certificate for the Factory Provisioning Service server and enable HTTPS.

Procedure

1   On the server you want to install the Factory Provisioning Service onto, downloade the Factory Provisioning Service.

    If you are using a version of the Workspace ONE UEM console before 1811, download the installer from https://resources.workspaceone.com/view/cqp8nwklnmwnddgpphjv. If you are using version 1811 or later, download the installer from https://resources.workspaceone.com/view/gn7wrl7bbbtwzttgsm3r/en.

2   Run the Factory Provisioning Service installer.

3   In the Workspace ONE UEM console, navigate to **Groups & Settings > All Settings > System > Advanced > Site URLs**.

4   Ensure that the correct URL is entered: `https://[FPS URL]/FactoryProvision/Package`.

The Factory Provisioning Service is now installed. You can validate the installation by checking the communication between the various components used.

Factory Provisioning Service and the following:

- REST API over HTTPS

- Device Services over HTTPS

- CDN (if configured)

■ Network file share access

The Workspace ONE UEM console and the REST API server communicate with the Factory Provisioning Service server over HTTPS.

What to do next

Configure a provisioning package. For more information, see Chapter 3 Create a Dell Provisioning for VMware Workspace ONE Provisioning Package

Create a Dell Provisioning for VMware Workspace ONE Provisioning Package

3

Create a Dell Provisioning for VMware Workspace ONE provisioning package. This package contains the configuration file and the applications to install on to your Windows 10 devices.

Prerequisites

Meet the Dell Provisioning for VMware Workspace ONE Requirements. See Dell Provisioning for VMware Workspace ONE Requirements.

Procedure

1 Navigate to **Devices > Lifecycle > Staging > Windows** and select **New**

2 Enter the general settings including the **Provisioning Package Name**, **Description**, and the smart group the package is **Managed By**.

3 Select **Next**.

4 Configure the **Configurations** settings. The settings that display depend on the **Active Directory Type** selected. Consider the following information when configuring the settings:

Settings	Description
Domain Username	Enter the username that has Domain Join privileges. This setting displays when you set the AD type to On-Prem AD Join.
	Note This information is saved in plain text in the XML file. Ensure this file is always secured and not sent over insecure connections.
Domain Password	Enter the password for the Domain Join user. This setting displays when you set the **AD type** to **On-Prem AD Join**.
	Note This information is saved in plain text in the XML file. Ensure this file is always secured and not sent over insecure connections.
AD Organization Unit (OU)	Enter the organization unit for the AD. The OU must follow the correct formatting: `OU=,OU=,DC=Company,DC=com` This setting displays when you set the AD type to **On-Prem AD Join**.

Settings	Description
Product Key	Enter the Windows 10 product key. You must follow the correct format: `12345-54CDE-XYZ78-0NM98-456TY`
Make Administrator?	You must make the local user account an administrator to start Workspace ONE enrollment automatically. During OOBE, the device prompts the user to enter their enrollment credentials. This setting displays when you set the AD type to **Workgroup** or **Azure AD**.
Computer Name	The computer name is randomly generated by default so that every system coming from the factory is unique. To create a naming convention, use the Registered Owner and Registered Organization settings. The computer name takes the first 7 characters from Registerd Organization or Registered Owner as the prefix and then randomizes the rest of the characters up to the 15 character maximum.
Remove Windows 10 Consumer Apps	Select **Yes** to prevent consumer apps from appearing in Windows 10. This setting is only supported for Windows 10 Enterprise or Education.You must enter a Windows 10 Enterprise or Education key.
Additional Synchronous Commands	Add commands that automatically run at the end of the Windows setup process but before any user logs in.
First Logon Commands	Add commands that automatically run the first time a user logs in. This setting requires the user have local admin privileges.
Enrollment Server	Enter your Workspace ONE UEM enrollment server URL. Find the enrollment URL by navigating in the Workspace ONE UEM console to **Groups & Settings > All Settings > System > Advanced > Site URLS**. This setting displays when you set the AD type to **On-Prem AD Join** or **Workgroup**.
Staging Account	Enter the username for the staging account. Find this username by navigating in the Workspace ONE UEM console to **Groups & Settings > All Settings > Devices & Users > Windows > Windows Desktop > Staging & Provisioning**. This setting displays when you set the AD type to **On-Prem AD Join** or **Workgroup**.
Device Services URL	Enter your device services URL. Find the device services URL by navigating in the Workspace ONE UEM console to **Groups & Settings > All Settings > System > Advanced > Site URLS**. This setting only displays when you set the AD type to **Azure AD - No Premium**.

5   Select **Next**.

6   Select the apps to include in the provisioning package. The apps that display are those apps available to the smart group set during the General settings step.

Only Win32 apps recognized through Software Distribution display.

7   If the app requires transforms and patches (MST and MSP files), select the **Arrow** icon to add ˃ the necessary transforms and patches. You must add these transforms from the **Edit Application** modal before creating a provisioning package.

8   Select **Next**.

9   Review the summary and select **Save and Export**.

The provisioning package is exported. Send the package to Dell Configuration Services to provision your Windows 10 devices.

If you want to change any settings in a provisioning package after creating one, you must repeat the process and send the package to Dell Configuration Service again.

Test a Dell Provisioning for VMware Workspace ONEConfiguration File

4

After creating a configuration file for Dell Provisioning for VMware Workspace ONE, test the file to ensure your devices are correctly configured. Testing configuration files requires a test device or virtual machine.

Prerequisites

You need the following:

- You must have a test device or virtual machine. To test the file, you must run the System Provisioning Tool in audit mode.

- You must have one of the following items to test:

    - A PPKG containing the apps you want to install onto the device.

    - A Dell Provisioning for VMware Workspace ONE configuration file.

Procedure

1 Download the VMware Workspace ONE Provisioning Tool to the test device.

2 Start the VMware Workspace ONE Provisioning Tool.

3 In the tool, select a PPKG or a Configuration to test.

4 Select the test method you want to use. Select **Apply Apps Only** to only apply the apps in the PPKG to the device. Select **Apply Full Process** to apply the apps and the settings in the configuration file.

   a If you select a configuration file to test, you can select what happens after by setting **After Applying Sysprep**. You can choose to shutdown or restart after configuration. If you restart the machine, the OOBE runs.

   Only device-context apps are applied during this test. As there is no user for the device, user-context apps do not apply. If an app requires a reboot to finish installation, the tool prompts you to schedule a reboot. During the reboot, the device is told to resume installation after reboot and the tool relaunches.

The VMware Workspace ONE Provisioning Tool applies the PPKG and the configuration file based on the test method selected. On the right-side of the tool, you can see the status of each step. You can view the logs after running the tool. The logs are found in `C:\ProgramData\Airwatch\UnifiedAgent\Logs\PPKGFinalSummary.log`.

VMware Workspace ONE Provisioning Tool Considerations

The VMware Workspace ONE Provisioning tool allows you to test your Dell Provisioning for VMware Workspace ONE configuration files. The tool also allows you configure the tool settings and use command line actions to run tests.

Command Line Actions

You can choose to run your tests using command line actions.

Table 4-1. VMware Workspace ONE Provisioning Tool Command Line Actions

Command Line Action	Description
-a, --action	Required. Action to perform (AppsOnly or Full).
-p, --ppkg	Required. PPKG File path.
-u, --unattend	Unattend XML File path.
-s, --shutdown	Shuts down the computer after the Sysprep command finishes running.
-r, --reboot	Restarts the computer after Sysprep. You can use this option to audit the computer and to verify that the first-run experience operates correctly. The tool reboots by default if no option is specified.
--help	Display the help screen.
--version	Display the version information.

After running the action, exit codes display. These codes report the outcome of the action. The exit codes are as follows:

- 0 - Success

- 1 - Failure

- 2 - Reboot Required

- 3 - Timeout

Some examples include:

- Display the help screen: `VMwareWS1ProvisioningTool --help`

- Apply apps only (PPKG): `VMwareWS1ProvisioningTool -a appsonly -p 'C:\MyProvisioningPackage.ppkg'`

- Apply full process (ppkg & XML) - shutting down the system at the end: `VMwareWS1ProvisioningTool -a full -p 'C:\MyProvisioningPackage.ppkg' -u 'C:\MyAnswer.xml' -s`

- Apply full process (ppkg & XML) - rebooting the system at the end: `VMwareWS1ProvisioningTool -a full -p 'C:\MyProvisioningPackage.ppkg' -u 'C:\MyAnswer.xml' -r`

VMware Workspace ONE Provisioning Tool Configuration Options

You can change the configuration settings for the VMware Workspace ONE Provisioning Tool to meet your needs. To change the settings, you must edit the VMwareWS1ProvisioningTool.exe.config file.

The config file contains the settings that control how the VMware Workspace ONE Provisioning Tool runs. Here are some commonly used settings for consideration. More settings are found in the config file. Consider reviewing the following settings to best meet your needs.

Table 4-2. VMware Workspace ONE Provisioning Tool Configuration Settings

Setting	Description
loggingConfiguration	Enter the file path, logging level, file size, and maximum number of archived files. The level= value controls the log level. The default value is "Information". For troubleshooting, consider changing the level to "Verbose".
"TimeoutMinutes"	Enter a value, in minutes, for how long the tool should attempt to apply the PPKG before timing out. Consider keeping this value below 90 minutes.
"RefreshRateSeconds"	Enter a value, in seconds, for how frequently the tool refreshes the installation progress of the PPKG.
"BitLockerDecryptionTimeoutMinutes"	Enter a value, in minutes, for how long the tool should wait for BitLocker Decryption to finish before timing out.
"UnattendXmlCleanup"	Set to True to remove the Unattended XML file after the configuration process finishes.

Reading the PPKG Final Summary Log

After the VMware Workspace ONE Provisioning Tool finishes applying the PPKG to the device, a summary log generates. You can find the logs in C:\ProgramData\Airwatch\UnifiedAgent\Logs \PPKGFinalSummary.log. These logs are useful for troubleshooting. Dell may ask for these logs if there are issues provisioning devices.

The logs cover important information such as the OS details, client network details, and PPKG details. You can also see a log of the status updates that displayed in the tool during processing.