

Windows Desktop Device Management

VMware Workspace ONE UEM 1909



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Introduction to Windows Desktop

1

Workspace ONE UEM powered by AirWatch provides you with a robust set of mobility management solutions for enrolling, securing, configuring, and managing your Windows 10 device deployment.

Through the Workspace ONE UEM console, you have several tools and features for managing the entire lifecycle of corporate and employee-owned devices. You can also enable end users to perform tasks themselves, for example, through the Self-Service Portal and user self-enrollment, which saves you vital time and resources.

Workspace ONE UEM allows you to enroll both corporate and employee-owned devices to configure and secure your enterprise data and content. By using of our device profiles, you can properly configure and secure your Windows devices. Detect compromised devices and remove their access to corporate resources using the compliance engine.

Enrolling your devices into Workspace ONE UEM allows you to secure and configure devices to meet your needs.

This chapter includes the following topics:

- [Windows Desktop Enrollment Requirements](#)
- [Supported Windows Desktop Devices](#)

Windows Desktop Enrollment Requirements

Before enrolling your Windows Desktop devices, ensure you have met the requirements. These requirements include important information to provide end users enrolling their own devices.

Requirements

- **Active Environment** – Your active Workspace ONE UEM environment and your access to the Workspace ONE UEM Console.
- **Appropriate Admin Permissions** – A type of permission that allows you to create profiles, determine policies, and manage devices within the UEM Console.
- **Enrollment URL** – This URL is unique to your enrollment environment and takes you directly to the enrollment screen. For example, **mdm.example.com**.

- **Group ID** – This Group ID associates your device with your corporate role and is defined in the UEM Console.

Important If your enrollment server is behind a proxy, you must configure the Windows service WINHTTP to be proxy-aware when configuring your network settings.

Supported Windows Desktop Devices

The Windows Desktop platform includes versions of the Windows operating system ranging from Windows 8.0 to Windows 10 and the various versions of each iteration.

Platforms and Devices Supported

Devices running the following operating systems:

- Windows 10 Pro
- Windows 10 Enterprise
- Windows 10 Education
- Windows 10 Home
- Windows 10 S

Important: To see the OS version each update branch supports, see Microsoft's documentation on Windows 10 release information: <https://technet.microsoft.com/en-us/windows/release-info.aspx>.

Windows 10 Version Matrix

Compare the MDM functionality available in each version of the Windows 10 OS. Workspace ONE UEM supports all versions of Windows 10 OS and the functions they support.

The different editions of Windows 10 (Home, Professional, Enterprise, and Education) have different functionality. Windows 10 Home edition does not support the advanced functionality available to the Windows 10 OS. Consider using Enterprise or Education editions for the most functionality.

Feature	Windows 10 OS Home	Windows 10 OS Professional	Windows 10 OS Enterprise	Windows 10 OS Education
Native Client Enrollment	✓	✓	✓	✓
Agent Based Enrollment	✓	✓	✓	✓
Requires a Windows Account ID				
Force EULA/Terms of Use Acceptance	✓	✓	✓	✓
Support for Option Prompts during Enrollment	✓	✓	✓	✓
Active Directory/ LDAP	✓	✓	✓	✓
Cloud Domain Join Enrollment		✓	✓	✓
Out of Box Experience Enrollment		✓	✓	✓

Feature	Windows 10 OS Home	Windows 10 OS Professional	Windows 10 OS Enterprise	Windows 10 OS Education
Bulk Provisioning Enrollment		✓	✓	✓
Device Staging	✓	✓	✓	✓
SMS				
Email Messages		✓	✓	✓
Password Policy	✓	✓	✓	✓
Enterprise Wipe	✓	✓	✓	✓
Full Device Wipe	✓	✓	✓	✓
Email & Exchange ActiveSync	✓	✓	✓	✓
Wi-Fi	✓	✓	✓	✓
VPN	✓	✓	✓	✓
Certificate Management	✓	✓	✓	✓
Device Restrictions and Settings	✓	✓	✓	✓
Windows Hello	✓	✓	✓	✓
Personalization			✓	✓
Encryption	✓ ³	✓	✓	✓
Application Control (AppLocker)			✓	✓
Health Attestation	✓	✓	✓	✓
Windows Update for Business		✓	✓	✓
Assigned Access			✓	✓
Application Management		✓	✓	✓
Workspace ONE Content	✓	✓	✓	✓
Asset Tracking		✓	✓	✓
Device Status		✓	✓	✓
IP Address				
Location	✓	✓	✓	✓
Network		✓	✓	✓
Send Support Message (Email and SMS only)		✓	✓	✓

1 – Enterprise also includes IoT Enterprise and Long-Term Servicing Branch (LTSB). LTSB is a separate Windows 10 Enterprise image with many native apps, including Microsoft Edge, Cortana, and the Microsoft Store, removed. Some Workspace ONE UEM functionality which leverage these features will not be supported.

2 – Microsoft Passport requires TPM 1.2 or 2.0 hardware based protection of credentials or keys; if no TPM exists or is configured, credentials and keys protection will be OS-based.

3 – Device encryption for home does not include BitLocker encryption.

- 4 – Can be downloaded from the Microsoft Store only. Windows 10 Home does not support pushing internal apps.
- 5 – Requires the Workspace ONE Intelligent Hub downloaded from the Microsoft Store.

Windows Desktop Enrollment Overview

2

The enrollment methods for Windows Desktop devices vary based on your Workspace ONE UEM deployment, enterprise integrations, and device operating system. The Windows Desktop platform supports various OS versions and SKUs for Windows devices.

Enrollment Basics

Before enrolling devices, ensure that you have the required enrollment information. See [Windows Desktop Enrollment Requirements](#) for more information.

Simplify end-user enrollment by setting up the Windows Auto-Discovery Services (WADS) in your Workspace ONE UEM environment. WADS supports an on-premises solution and cloud-based WADS.

The enrollment methods use either the native MDM functionality of the Windows operating system, the Workspace ONE Intelligent Hub for Windows, or Azure AD integration.

If you want to use Workspace ONE UEM to manage Windows devices managed by SCCM, you must download the VMware AirWatch SCCM Integration Client. Use this client to enroll SCCM-managed devices into Workspace ONE UEM.

Workspace ONE Intelligent Hub for Windows Enrollment

The simplest enrollment workflow uses the Workspace ONE Intelligent Hub for Windows to enroll devices. End users simply download the Workspace ONE Intelligent Hub from [awagent.com](#) and follow the prompts to enroll.

Consider using the Workspace ONE Intelligent Hub for the Windows Enrollment workflow. Workspace ONE UEM supports additional enrollment flows that meet specific use cases.

Azure AD Integration Enrollment

Through integration with Microsoft Azure Active Directory, Windows devices automatically enroll into Workspace ONE UEM with minimal end-user interaction. Azure AD integration enrollment simplifies enrollment for both end users and admins. Azure AD integration enrollment supports three different enrollment flows: Join Azure AD, Out of Box Experience enrollment, and Office 365 enrollment. All methods require configuring Azure AD integration with Workspace ONE UEM.

Before you can enroll your devices using Azure AD integration, you must configure Workspace ONE UEM and Azure AD.

Native MDM Enrollment

Workspace ONE UEM supports enrolling Windows Desktop devices using the native MDM enrollment workflow. The name of the native MDM solution varies based on the version of Windows. This enrollment flow changes based on the version of Windows and if you use WADS.

Only users with local admin permissions on the device can enroll a device into Workspace ONE UEM and enable MDM.

Device Staging

If you want to configure device management on a Windows 10 device before shipping a device to your end user, consider using Windows Desktop device staging. This enrollment workflow allows you to enroll a device through the Workspace ONE Intelligent Hub, install device-level profiles, and then ship the device to end users. The two methods of device staging are manual installation and command-line installation. Manual installation requires devices to be domain-joined to an Azure AD integration. Command-line installation works for all Windows 10 devices.

Windows Desktop Auto-Enrollment

Workspace ONE UEM supports the auto-enrollment of specific Windows Desktop devices purchased from Dell. Auto-enrollment simplifies the enrollment process by automatically enrolling registered devices following the Out-of-Box-Experience.

Windows 10 Provisioning Service by VMware AirWatch only applies to select Dell Enterprise devices with the correct Windows 10 image. The auto-enrollment functionality must be purchased as part of the purchase order from Dell.

Bulk Provisioning and Enrollment

Bulk provisioning creates a pre-configured package that stages Windows 10 devices and enrolls them into Workspace ONE UEM. Bulk provisioning requires downloading the Microsoft Assessment and Development Kit and installing the Imaging and Configuration Designer tool. This tool creates the provisioning packages used to image devices.

With the bulk provisioning workflow, you can include Workspace ONE UEM settings in the provisioning package so that provisioned devices automatically enroll during the initial Out of Box Experience.

This chapter includes the following topics:

- [Workspace ONE Intelligent Hub for Windows Enrollment](#)
- [Native MDM Enrollment for Windows Desktop](#)
- [Device Staging Enrollment](#)
- [Windows 10 Provisioning Service by VMware AirWatch](#)
- [Enrollment Through Azure AD Integration](#)

■ Bulk Provisioning and Enrollment

Workspace ONE Intelligent Hub for Windows Enrollment

The Workspace ONE Intelligent Hub provides a single resource for enrollment and facilitates communication between the device and the Workspace ONE UEM Console. Use the Workspace ONE Intelligent Hub to simplify enrollment and enable full MDM functionality.

Consider using the Workspace ONE Intelligent Hub for Windows to enroll your Windows Desktop devices as the Workspace ONE Intelligent Hub provides the simplest enrollment flow for users. If you have Workspace ONE configured, downloading the Workspace ONE Intelligent Hub from awagent.com also downloads the Workspace ONE app. When you finish enrolling with the Workspace ONE Intelligent Hub, the Workspace ONE app auto-launches and configures based on your Workspace ONE UEM deployment.

The Workspace ONE Intelligent Hub provides extra functionality to your Windows Desktop devices including location services.

You can simplify enrollment for your end users by using Windows Auto-Discovery. Windows Auto-Discovery enables end users to enter their email address to fill in the text boxes automatically with their enrollment credentials.

AirWatch Cloud Messaging

AirWatch Cloud Messaging (AWCM) enables real-time policy and command delivery to the Workspace ONE Intelligent Hub. Without AWCM, the Workspace ONE Intelligent Hub only receives policy and command delivery during its normal check-in intervals set in the AirWatch console. Consider using AWCM for real-time policy and command delivery to Windows Desktop devices.

Enroll With the VMware Workspace ONE Intelligent Hub

Use Workspace ONE Intelligent Hub to start enrollment of your Windows Desktop devices. Workspace ONE Intelligent Hub provides a simplified enrollment flow for end users that is quick and easy enrollment.

Procedure

- 1 On the Windows Desktop device, navigate to <https://getwsone.com>.
- 2 Install the Workspace ONE Intelligent Hub. When the installation is finished, start Workspace ONE Intelligent Hub.
- 3 Select **Connect a work or school account**. Workspace ONE Intelligent Hub then opens the Workplace native app to complete enrollment.
- 4 Enter the email address and select **Next**.

- 5 If you are not using Windows Auto-Discovery, complete the following settings:
 - a Enter the **Server URL** and select **Next**.
 - b Enter the **Group ID** and select **Next**.
 - c Enter the **Username** and **Password**.
- 6 **Accept** the terms of use.
- 7 Select **Done**.
- 8 Open Workspace ONE Intelligent Hub and complete the enrollment.

Native MDM Enrollment for Windows Desktop

Windows Desktop enrollment methods all use the Work Access native MDM Client. Use the native MDM enrollment to enroll both corporate owned and BYOD devices through the same enrollment flow.

Work Access first processes an Azure AD work flow for domains connected to Office 360 or Azure AD when you select **Connect** and does not automatically complete the enrollment workflow. If you use Office 365 or Azure AD without a premium license, consider using the Workspace ONE Intelligent Hub to enroll Windows 10 devices instead of native MDM enrollment. To complete the enrollment workflow using native MDM enrollment, select **Connect** twice. If you have an Azure AD premium license, you can enable **Require Management** in your Azure instance to have native MDM enrollment complete the enrollment flow after the Azure work flow. You can use native MDM enrollment without issue if you do not use Office 365 or Azure AD.

Only users who have local admin permissions on the device can enroll a device into Workspace ONE UEM and enable MDM. Domain Admin permissions do not work for enrolling a device. To enroll a device with a standard user, you must use Bulk Provisioning for Windows 10 devices.

By using the Windows Auto-Discovery Service, you simplify enrollment for your end user by reducing the necessary interaction during enrollment. Using the Windows Auto-Discovery Service requires you to follow the steps outlined in the **VMware AirWatch Windows Auto-Discovery Service Installation Guide**.

Devices joined to a domain can enroll using the native Workplace enrollment. The email address entered in the settings is auto-populated with the Active Directory UPN attribute. If the end user wants to use a different email address, they must download the optional update.

Enroll Through Work Access With Windows Auto Discovery

Work Access is the native MDM enrollment method for Windows 10 devices. Enrolling through Work Access and using Windows Auto Discovery provides a quick and easy enrollment flow for end users.

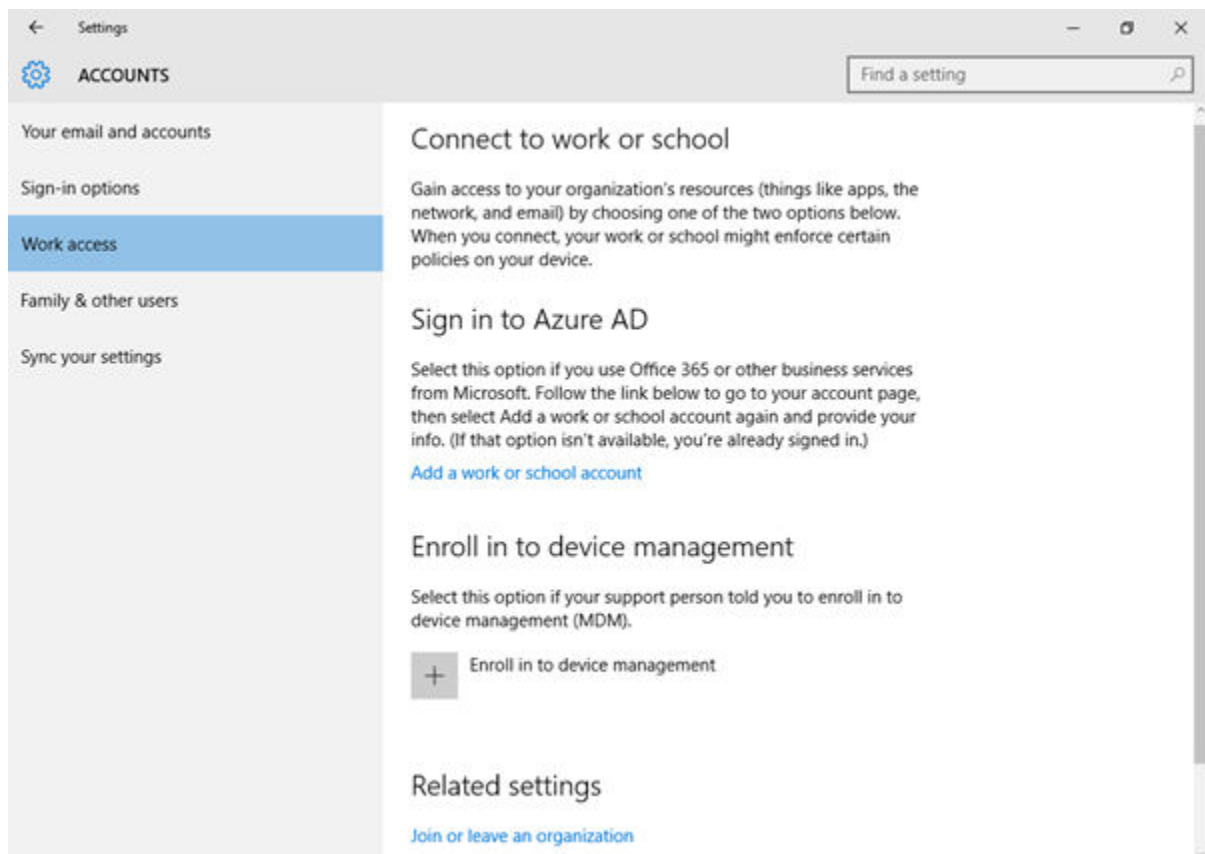
Prerequisites

Registering your domain in Workspace ONE UEM removes the need to enter the Group ID during enrollment.

Note Consider using the Workspace ONE Intelligent Hub for Windows to enroll your Windows 10 devices instead of using native MDM enrollment. The native MDM enrollment flow does not enroll devices into MDM if you use Office 365 or Azure AD on the same domain.

Procedure

- 1 Navigate on the device to **Settings > Accounts > Work Access** and select **Enroll in to device management**.

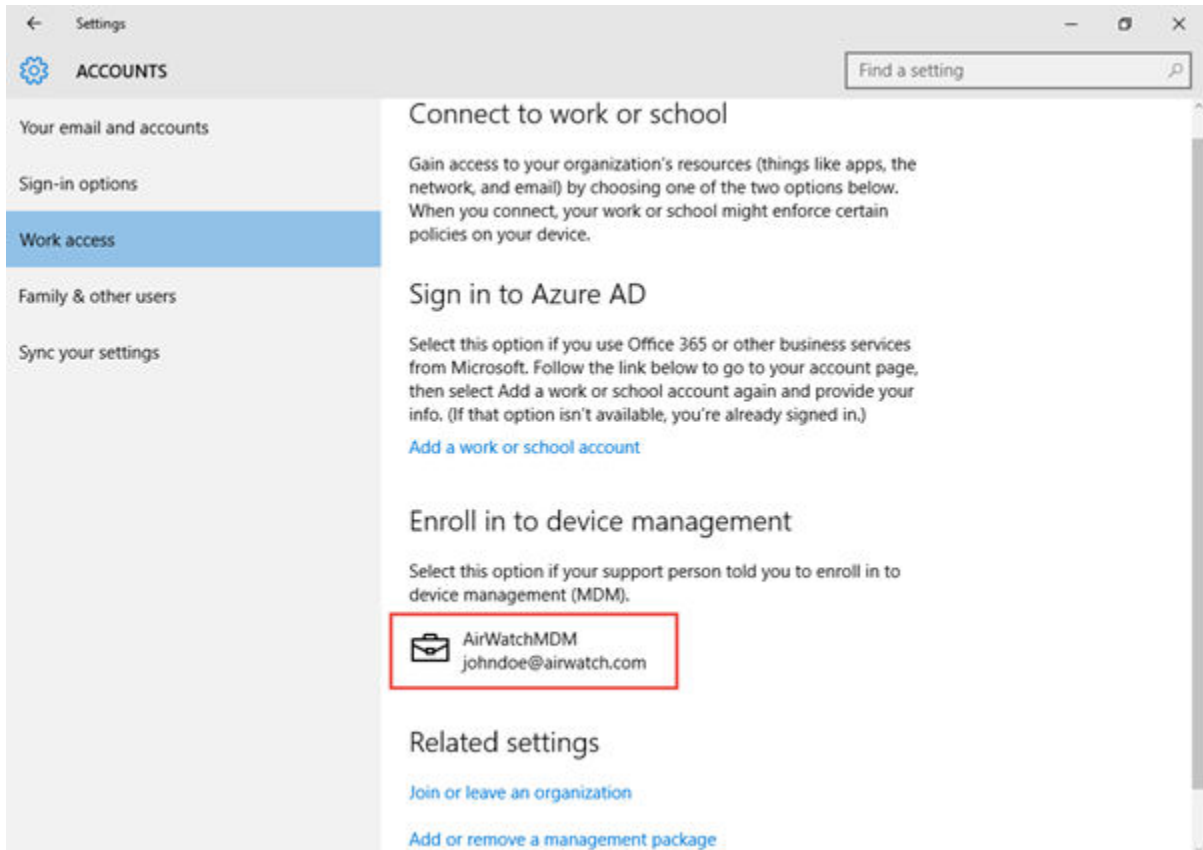


- 2 Enter the user name you provided to your end user into the **Email** text box, followed by the domain for the environment in the format Username@domain.com (such as jdoe1@acme.com). Select **Continue**.
- 3 Enter the **Group ID** and select **Next**.
- 4 Enter your **username** and **password** and select **Next**.

These credentials may be your directory services credentials or dedicated credentials specific to your Workspace ONE UEM environment.

- 5 (Optional) Review the End User License Agreement and select **Accept** to agree to the terms of use.
This step is optional and only displays if enabled in the Workspace ONE UEM Console.
- 6 (Optional) Select **Yes** to save sign-in info.

The device then attempts to connect to Workspace ONE UEM. If it connects successfully, a briefcase icon displays with Workspace ONE UEM written next to it. This icon shows your successful connection to Workspace ONE UEM.



Enroll Through Work Access Without Windows Auto Discovery

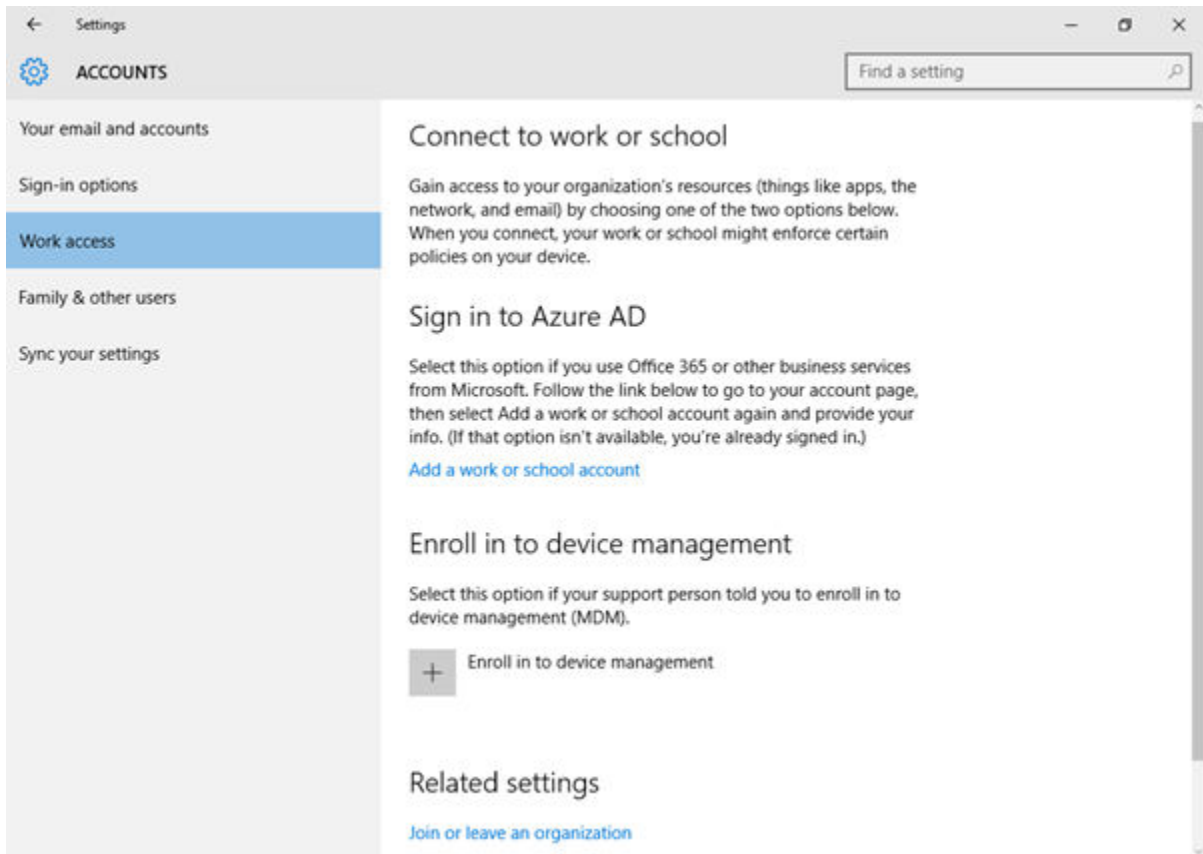
Work Access is the native MDM enrollment method for Windows 10 devices. Enrolling through Work Access without WADS requires manually entering end-user credentials.

Prerequisites

Note Consider using the Workspace ONE Intelligent Hub for Windows to enroll your Windows 10 devices instead of using native MDM enrollment. The native MDM enrollment flow does not enroll devices into MDM if you use Office 365 or Azure AD on the same domain.

Procedure

- 1 Navigate on the device to **Settings > Accounts > Work Access** and select **Enroll in to device management**.



- 2 Enter the user name you provided to your end user into the **Email** text box, followed by the domain for the environment in the format Username@domain.com (such as jdoe1@acme.com).
- 3 **Enter server address** as follows: <DeviceServicesURL>/DeviceServices/Discovery.aws. Do not include 'https://' in the URL.

ds156.awmdm.com/deviceservices/discovery.aws.

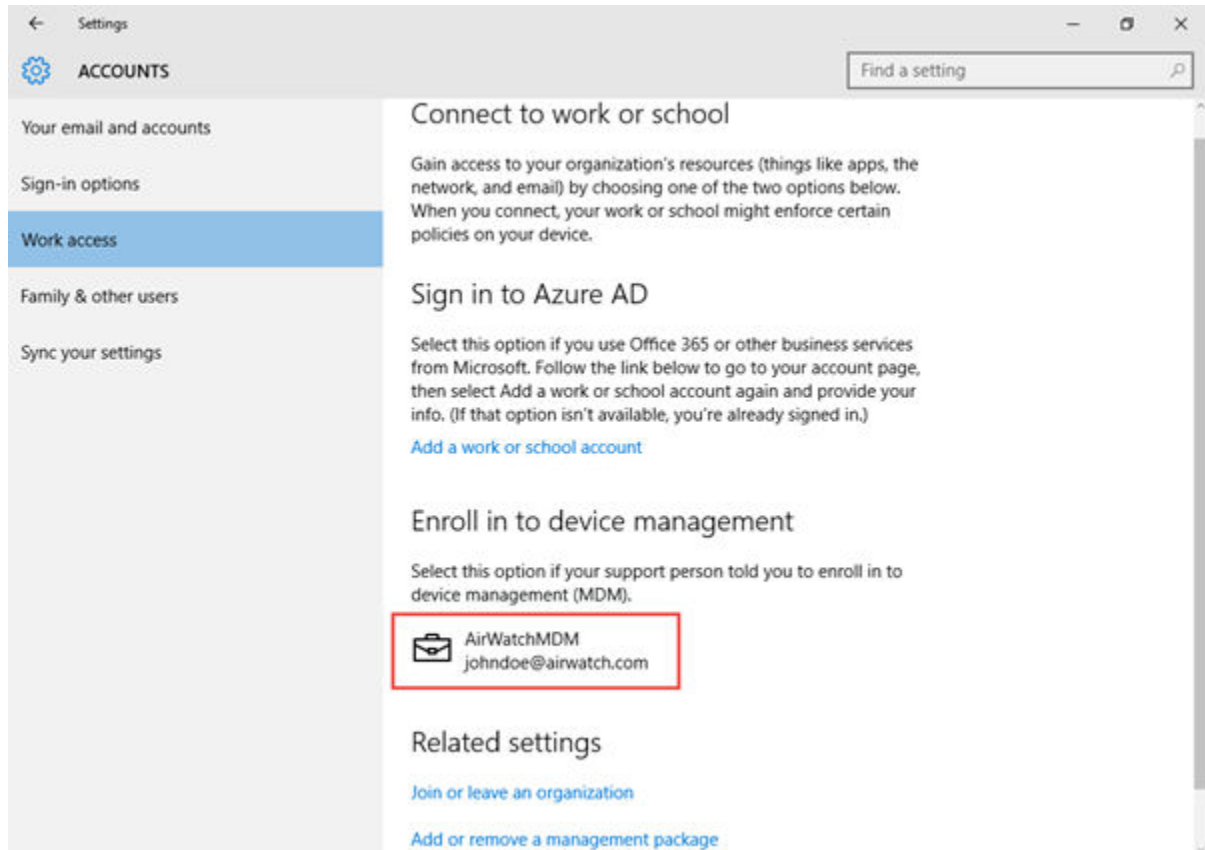
- 4 Select **Continue**.
- 5 Enter the **Group ID** and select **Next**.
- 6 Enter your **username** and **password** and select **Next**.

These credentials may be your directory services credentials, or dedicated credentials specific to your Workspace ONE UEM environment.

- 7 (Optional) Review the End-User License Agreement and select **Accept** to agree to the terms of use.
This step is optional and only displays if you choose to enable it.

8 (Optional) Select **Yes** to save sign-in info.

The device then attempts to connect to Workspace ONE UEM. If it connects successfully, a briefcase icon displays with Workspace ONE UEM written next to it. This icon shows your successful connection to Workspace ONE UEM.



Device Staging Enrollment

Admins often prefer to configure device management before shipping a device to an end user. By using device staging enrollment, you can enroll a device with the Workspace ONE Intelligent Hub, install device-level profiles, and ship it to an end user.

Device staging enrollment enables you to enroll your Windows 10 device into Workspace ONE UEM. This enrollment requires the Workspace ONE Intelligent Hub to start. After the device enrolls, any assigned device-level profiles download to the device. Once the device is fully enrolled and configured, you can ship the device to your end users. When the end user signs in to the device, the Workspace ONE Intelligent Hub updates the device record in the Workspace ONE UEM console. Workspace ONE UEM reassigns the device to the end user and pushes any user-level profiles to the device.

The two staging methods are:

- **Manual Installation** – Download and install the Workspace ONE Intelligent Hub and enter enrollment credentials. This method requires devices to be domain-joined before enrollment.

- **Command Line Installation** – Download the Workspace ONE Intelligent Hub and then install and enroll the device using the command line.

The enrollment completes by either updating the UEM console device registry when a user enrolls into a domain-joined device or by comparing the enrolled user name against a list of previously registers serial numbers.

Bulk Import Device Serial Numbers

Import device serial numbers for use with device staging to quickly add devices to the Workspace ONE UEM Console. The bulk import requires a CSV file with all the serial numbers to import.

Procedure

- 1 Navigate to **Accounts > Users > List View** or **Devices > Lifecycle > Enrollment Status**.
 - a Select **Add** and then **Batch Import** to display the **Batch Import** screen.
- 2 Complete each of the required options. **Batch Name**, **Batch Description**, and **Batch Type**.
- 3 Within the **Batch File (.csv)** option is a list of task-based templates you can use to load users and their devices in bulk.
- 4 Select the appropriate download template and save the comma-separated values (CSV) file to somewhere accessible.
- 5 Locate the saved CSV file, open it with Excel, and enter all the relevant information for each of the devices that you want to import. Each template is pre-populated with sample entries demonstrating the type of information (and its format) intended to be placed in each column.

Fields in the CSV file denoted with an asterisk (*) are required.
- 6 Save the completed template as a CSV file. In the UEM console, select the **Choose File** button from the **Batch Import** screen, navigate to the path where you saved the completed CSV file and select it.
- 7 Select **Save** to complete registration for all listed users and corresponding devices.

Enroll through Command Line Staging

Simplify enrollment for end users by staging your Windows Desktop devices using the Windows Command Line. This enrollment method enrolls the device and downloads device-level profiles base on the user credentials entered.

Important Do not change the name of the AirWatchAgent.msi file as this breaks the staging command. Also, Do not use bulk serial number import if you want to use command-line staging.

Note This product should not be used to silently install Workspace ONE Intelligent Hub for Windows on BYOD devices. If you silently install onto BYOD devices, you are solely responsible for providing any necessary notices to your device end users regarding your use of silent installation and the data collected from the silently installed apps, obtaining any legally required consents from your device end users, and otherwise complying with all applicable laws.

Procedure

- 1 Navigate to awagent.com to download the Workspace ONE Intelligent Hub for Windows.
Only download the Workspace ONE Intelligent Hub. Do not start the executable or select **Run** as that initiates a standard enrollment process and defeats the purpose of silent enrollment. If necessary, move the Workspace ONE Intelligent Hub from the download folder to a local or network drive folder.
- 2 Open a command line or create a BAT file and enter all the necessary paths, parameters, and values using information shown in [Silent Enrollment Parameters and Values](#).
- 3 Run the command. For examples of syntax, see [Silent Enrollment Parameters and Values](#).
After the command runs, the device enrolls into Workspace ONE UEM. If the device is domain-joined, the Workspace ONE Intelligent Hub updates the Workspace ONE UEM Console device registry with the correct user.

Enroll through Manual Device Staging

Simplify enrollment for end users by staging your Windows 10 devices using the Workspace ONE Intelligent Hub. This enrollment method enrolls the device and downloads device-level profiles so the end user must only log in to the device to begin using it.

Prerequisites

These devices must be joined to a domain.

Procedure

- 1 Navigate to www.awagent.com to download the Workspace ONE Intelligent Hub Installer.
- 2 Start the installer once the download completes.
- 3 Select **Run** to begin the installation.
- 4 Select **Email** if you have AirWatch Auto-Discovery enabled, otherwise select **Server Detail**.
- 5 Complete the settings required based on the authentication type selected:
 - a Enter the email address to auto-fill the server details screen. Select **Next** and the details are entered.
 - b Enter the Server Name and Group ID if you are not using AirWatch Auto-Discovery to complete the settings. Select **Next**.
- 6 Enter the staging **Username** and **Password** and select **Next**.
- 7 Complete any optional screens.

8 Select **Finish** to complete the enrollment.

Once the Workspace ONE Intelligent Hub detects a staging user, the Workspace ONE Intelligent Hub listener runs and listens for the next Windows login. When the end user logs into the device, the Workspace ONE Intelligent Hub listener reads the user UPN and email from the device registry. This information is sent to the Workspace ONE UEM Console and the device registry is updated to register the device to the user.

Silent Enrollment Parameters and Values

Silent enrollment requires command-line entries or a BAT file to control how the Workspace ONE Intelligent Hub downloads and installs onto the device.

Note This product should not be used to silently install Workspace ONE Intelligent Hub for Windows on BYOD devices. If you silently install onto BYOD devices, you are solely responsible for providing any necessary notices to your device end users regarding your use of silent installation and the data collected from the silently installed apps, obtaining any legally required consents from your device end users, and otherwise complying with all applicable laws.

The following table lists all the possible enrollment parameters you can enter into a command line or into a BAT file, and the respective values for each parameter. Parameters highlighted in blue and green are the minimum parameters required for enrollment. Blue designates image only. Blue plus green designates user enrollment.

Enrollment Parameters	Values to Add to Parameter
ENROLL	Select 'Y' to enroll. Select 'N' for image only.
IMAGE	Select 'Y' for image. Select 'N' for enrollment.
SERVER	Enter the enrollment URL.
LGName	Enter organization group name.
USERNAME	Enter the user name for the user being enrolled or the staging user name if staging the device on the behalf of a user.
PASSWORD	Enter the password for the user being enrolled or the staging user password if staging the device on the behalf of a user.
ASSIGNTOLOGGEDINUSER	Select 'Y' to assign the device to the logged in domain user.
STAGEUSERNAME	Enter user name for the enrolling user.
SECURITYTYPE	Needed if user account is added to Workspace ONE UEM console during enrollment process: <ul style="list-style-type: none"> ■ Select 'D' for Directory. ■ Select 'B' for Basic User type.
STAGEEMAILUSRNAME*	Enter the email user name for the user being enrolled.
STAGEPASSWORD	Enter the password for the user being enrolled.
STAGEEMAIL*	Enter the email address for the user being enrolled.

Enrollment Parameters	Values to Add to Parameter
DEVICEOWNERSHIPTYPE*	Select 'CD' for Corporate Dedicated. Select 'CS' for Corporate Shared. Select 'EO' for Employee Owned. Select 'N' for None.
INSTALLDIR*	Enter the directory path if you want to change installation path. Note Note: If this parameter is not present, the Workspace ONE Intelligent Hub uses the default path: C:\Program Files (x86)\AirWatch.
DOWNLOADWSBUNDLE	Select 'Y' to download the VMware Workspace ONE catalog along with the Workspace ONE Intelligent Hub for Windows.
Items denoted with an asterisk (*) are optional.	

Examples of Silent Enrollment

Below are examples of various use cases using enrollment parameters and the values that you can enter into a command line or use to create a BAT file. Initiating any one of these examples silently enrolls the Windows device without prompting the user to select any of the acknowledgment buttons.

Agent Install for Image Only Without Enrollment

The following is an example of installing the Workspace ONE Intelligent Hub for image only without enrollment using minimum parameters required for image only.

```
AirwatchAgent.msi /quiet ENROLL=N IMAGE=Y
```

Basic User Enrollment

The following is an example of using minimum parameters required for basic enrollment only:

```
AirwatchAgent.msi /quiet ENROLL=Y IMAGE=n SERVER=companyURL.com LGName=locationgroupid  
USERNAME=TestUsr PASSWORD=test
```

Workspace ONE Intelligent Hub Installed Elsewhere

The following is an example of the AirwatchAgent.msi located in a different location:

```
C:\AirwatchAgent.msi /quiet ENROLL=Y IMAGE=n SERVER=companyURL.com  
LGName=locationgroupid USERNAME=TestUsr PASSWORD=test
```

Installation Directory and Workspace ONE Intelligent Hub on Network Drive

The following is an example of the installation directory parameter with the Workspace ONE Intelligent Hub on a network drive.

Important Add extra quotes for the INSTALLDIR parameter when there is space within the parameter.

```
Q:\AirwatchAgent.msi /quiet INSTALLDIR="E:\Install Win32\" ENROLL=Y IMAGE=n  
SERVER=companyURL.com LGName=locationgroupid USERNAME=TestUsr PASSWORD=test
```

All Available Parameters and Values

The following is an example of the syntax using all available parameters and values shown in the previous table.

```
<AirwatchAgent.msi>/quiet INSTALLDIR="<Directory Path>" ENROLL=<Y/N>IMAGE=<Y/N>SERVER=<CompanyURL>LGNAME=<Location Group ID>USERNAME=<Username>PASSWORD=<Username Password>STAGEUSERNAME=<Stager Username>SECURITYTYPE=<D/B>STAGEEMAILUSRNAME=<User Enrolling>STAGEPASSWORD=<Password for User Enrolling>STAGEEMAIL=<Email Address for User Enrolling>DEVICEOWNERSHIPTYPE<CD/CS/EO/N>ASSIGNTOLOGGEDINUSER=<Y/N>
```

Windows 10 Provisioning Service by VMware AirWatch

Workspace ONE UEM supports the auto-enrollment of specific Windows Desktop devices purchased from Dell. Windows 10 Provisioning Service by VMware AirWatch simplifies the enrollment process by automatically enrolling registered devices following the Out-of-Box-Experience.

Windows 10 Provisioning Service by VMware AirWatch only applies to select Dell devices with the correct Windows 10 image. The auto-enrollment functionality must be purchased as part of the purchase order from Dell. Workspace ONE UEM only supports Windows 10 Pro, Enterprise, and Education SKUs for Cloud Provisioning.

Windows 10 Provisioning Service by VMware AirWatch matches registered devices with users and automatically enrolls the device following the Out-of-Box-Experience. When the end user signs in to the device, the provisioning agent on the device receives the profiles and apps assigned to the device and user. This functionality works similar to the Apple Device Enrollment Program.

When you purchase your Dell devices, Dell supplies Workspace ONE UEM with the device details of the purchased devices. To use auto-enrollment, you must register the serial numbers for all the devices purchased from Dell. Workspace ONE UEM matches the serial number to the ones provides by dell for use with AirWatch Auto-Discovery.

You must register the devices with a user account before sending the devices to end users.

For a seamless enrollment experience, consider configuring the External Access Token authentication method for VMware Identity Manager. The External Access Token authentication enables Workspace ONE UEM to open automatically and deliver apps to the device. When the feature is enabled, Workspace ONE UEM automatically authenticates and provides the user with the first-launch experience that shows the application and policy installation progress.

Important "Devices enrolled through Windows 10 Provisioning Service by VMware AirWatch will not automatically re-enroll during a factory reset. The Windows 10 Provisioning Service by VMware AirWatch only works for the first time enrollment."

Configure Windows 10 Provisioning

Configure Windows 10 Provisioning Service by VMware AirWatch to enroll Dell Windows Desktop devices automatically. Auto-enrollment compares registered device serial numbers against a list provided by Dell to enroll devices as part of the Out-of-Box-Experience.

Prerequisites

Purchase Windows 10 Provisioning Service by VMware AirWatch as part of your purchase order from Dell.

Procedure

- 1 Navigate to **Groups & Settings > All Settings > Devices & Users > Windows > Windows Desktop > Auto Enrollment**.
- 2 Configure the Auto Enrollment settings:

Settings	Description
Auto Enrollment	Select Enable to use Windows 10 Provisioning Service by VMware AirWatch.
Sync Interval	Select the amount of time between sync attempts between the Workspace ONE Intelligent Hub and the Workspace ONE UEM Console.
Enforce Policies Before Log In	Select Enable to enforce the device policies before the user logs in to the device.
Maximum Time Before Log In	Select the maximum number of minutes that may pass before a user logs in after completing the Out-of-Box-Experience.

- 3 Select **Save**.
- 4 Register the device serial numbers with Workspace ONE UEM. Only required for On-premises customers, this step is completed for SaaS customers. Validate that device registration records exist, if not complete the following steps. There are three workflows for registering devices:
 - a Navigate to **Accounts > Users > Add > Add User** and add the user account. When you are done adding the user, select **Save and Add Device**. Then complete the Add Device settings. You must set the **Platform** to **Windows Desktop**.
 - b Navigate to **Accounts > Users > Add > Batch Import**. Download and complete the CSV template for User and/or Device. Upload the CSV and select **Import**. You must enter **Windows Desktop** as the **Device Platform** when completing the template. You must set the **Platform** to **Windows Desktop**.
 - c Navigate to **Devices Lifecycle > Enrollment Status > Add > Register Device**. You must set the **Platform** to **Windows Desktop**.

Enrollment Through Azure AD Integration

Through integration with Microsoft Azure Active Directory, Windows devices can automatically enroll into Workspace ONE UEM with minimal end-user interaction. Azure AD integration enrollment simplifies enrollment for both end users and admins.

Before you can enroll your devices using Azure AD Integration, you must configure Workspace ONE UEM and Azure AD. The configuration requires entering information into your Azure AD and Workspace ONE UEM deployments to facilitate communication.

Azure AD integration enrollment supports three different enrollment flows: Join Azure AD, Out of Box Experience enrollment, and Office 365 enrollment. All methods require configuring Azure AD integration with Workspace ONE UEM.

Important Enrollment through Azure AD integration requires Windows 10 and Azure Active Directory Premium License.

Configure Azure AD Identity Services Integration

Before you can use Azure AD to enroll your Windows devices, you must configure Workspace ONE UEM to use Azure AD as an Identity Service. Enabling Azure AD is a two-step process which requires the MDM-enrollment details to be added to Azure.

Prerequisites

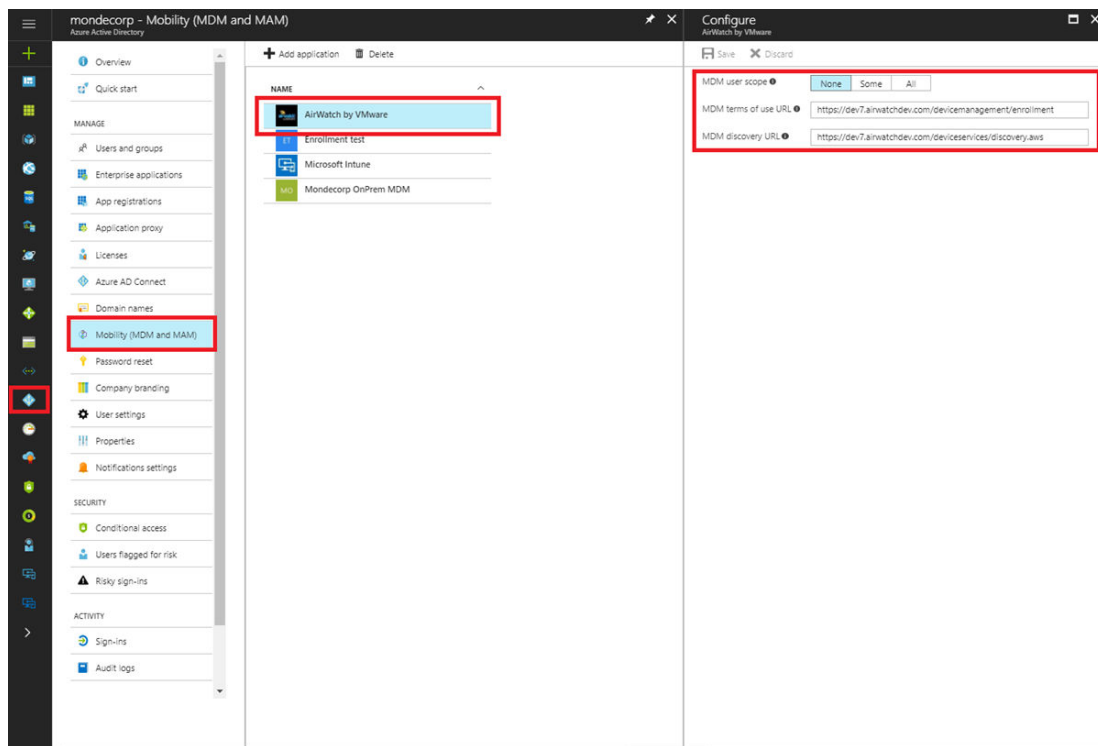
You must have a Premium Azure AD P1 or P2 subscription to integrate Azure AD with Workspace ONE UEM. Azure AD integration with Workspace ONE UEM must be configured at the tenant where Active Directory (such as LDAP) is configured.

Important If you are setting the **Current Setting** to **Override** on the Directory Services system settings page, the LDAP settings must be configured and saved before enabling Azure AD for Identity Services.

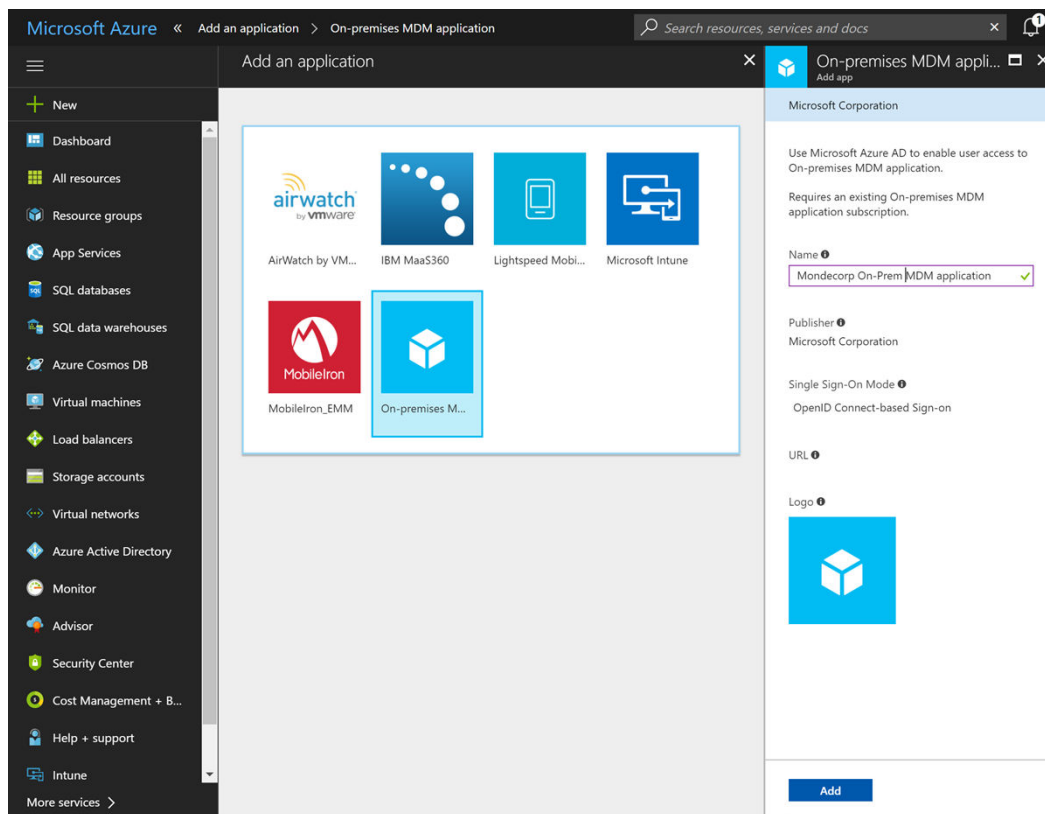
Procedure

- 1 Navigate to **Groups & Settings > All Settings > System > Enterprise Integration > Directory Services**.
- 2 Enable **Use Azure AD for Identity Services** under **Advanced** settings. Once enabled, take note of the MDM Enrollment and MDM Terms of Use URLs as they are needed when configuring the Azure directory.
- 3 Log in to the Azure Management Portal with your Microsoft account or organizational account.
- 4 Select your directory and navigate to the **Mobility (MDM and MAM)** tab. This tab was formerly the Applications tab.
- 5 Select **Add Application** and select the AirWatch by VMware application.

You can use the default URLs if the user scope is set to none. If needed, you can also use placeholder URLs.



- 6 Leave the AirWatch by VMware application on the default settings. Change the **MDM user scope** to **None**.

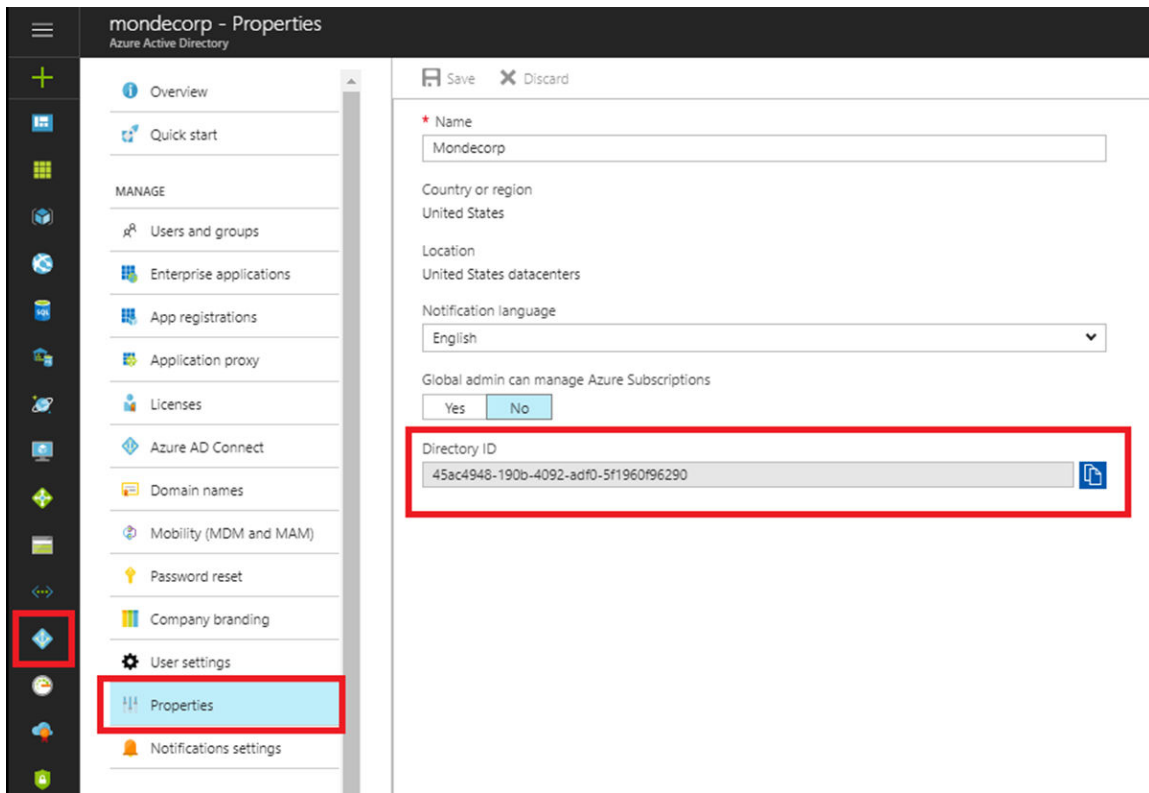


- 7 Select **Add Application** again and select the **On Premises MDM application**. You can rename the application when you add it.
- 8 Configure the On-Premises MDM application by entering the **MDM Enrollment URL** and **MDM Terms of Use** URLs from the Workspace ONE UEM Console.
- 9 Select **On-premises MDM application settings** then select **Required Permissions > Windows Azure Active Directory**.
- 10 Change the Application Permissions as follows:
 - a Select **Read and write directory data**.
 - b Select **Read and write devices**.
- 11 Change the Delegated Permissions as follows:
 - a Select **Access the directory as the signed-in user**.
 - b Select **Read directory data**.
 - c Select **Sign in and read user profile**.
- 12 Select the Properties settings and enter your device services host in the **APP ID URI** text box.

Use the same host that you used in the **MDM Enrollment URL** and **MDM Terms of Use** text boxes.
https:// <MDM DS SERVER>
- 13 Set **MDM user scope** to **All** to apply these settings to all users.

You can also limit the OOBЕ enrollment to selected Azure AD groups by selecting **Some** and adding the preferred groups.
- 14 Select **Save** to continue.

- 15 Navigate to the Properties tab and find the Azure Directory ID. This setting was formerly called the **Tenant ID**.



- 16 Select **User Account Details** in the top right corner. The Azure **Tenant Name** is the name of your Azure Directory. You can find the name under the **Domain** tab.
- 17 Return to the UEM Console and select **Use Azure AD for Identity Services** to configure Azure AD Integration.
- 18 Enter the **Azure Directory ID** as the **Tenant Identifier**. Enter the default domain as your Azure Directory **Tenant Name**.
- 19 Select **Save** to finish the process.

Enroll a Device With Azure AD

Enroll devices with Azure AD integration to enroll a device into the correct organization group in Workspace ONE UEM automatically. Devices enrolled through Azure AD join completely, meaning all users on the device join the domain.

This enrollment flow is for devices not already joined to Azure AD. For more information on enrolling an Azure AD managed device, see [Enroll an Azure AD Managed Device into Workspace ONE UEM](#).

Procedure

- 1 Navigate on the Windows 10 device to **Settings > Accounts > Access Work or School**. Select **Continue**.
- 2 Enter your **Email Address**. Select **Next**.

- 3 Ensure that the Workspace ONE UEM welcome page displays. Select **Continue**.
- 4 Select **Accept** if terms of use are enabled.
- 5 Select **Join** to confirm that you want to enroll in Workspace ONE UEM.
- 6 Select **Finish** to complete joining your device to Workspace ONE UEM. Your device now downloads the applicable policies and profiles.

Enroll an Azure AD Managed Device into Workspace ONE UEM

Devices that are joined to Azure AD use a different enrollment flow than devices enrolling through Azure AD integration. Use this enrollment flow to enroll a device that is already joined to Azure AD into Workspace ONE UEM.

Prerequisites

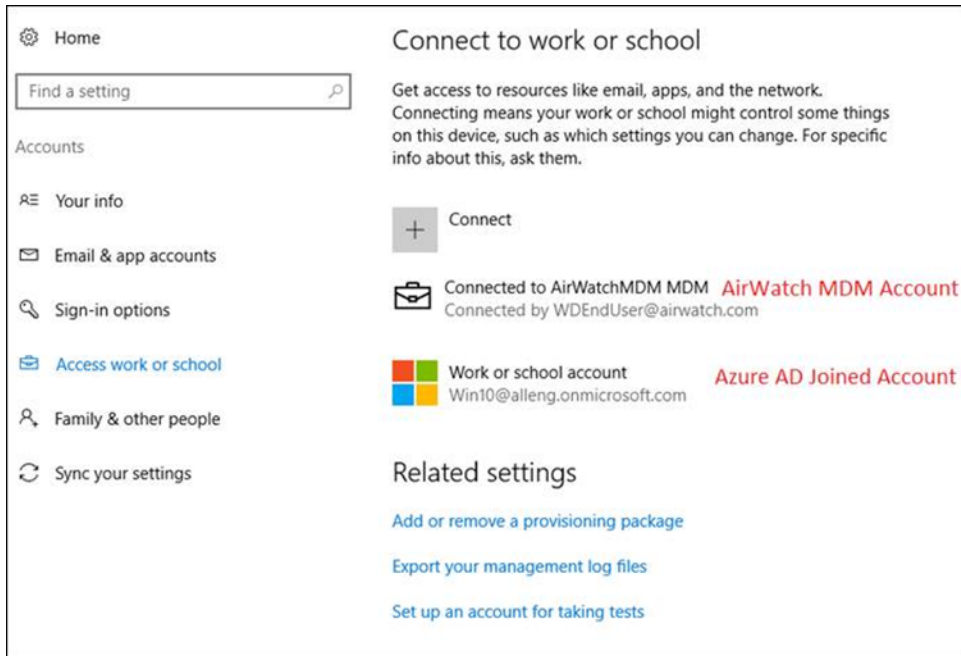
- Windows 10 OS build 14393.82 and above.
- KB update KB3176934 installed.
- No MDM applications installed under your Azure AD management portal.
- Azure AD account configured on the device.

Procedure

- 1 On the device, navigate to **Settings > Accounts > Access work or school** and select **Enroll only in device management**.

You may also enroll through the VMware Workspace ONE UEM Unified Agent for Windows.
- 2 Complete the enrollment process. You must enter an email address with a different domain than your Azure AD account.
 - a If you are using Windows Auto-Discovery, see [Enroll Through Work Access With Windows Auto Discovery](#).
 - b If you are not using Windows Auto-Discovery, see [Enroll Through Work Access With Windows Auto Discovery](#).

- 3 Navigate to **Settings > Accounts > Access work or school** and ensure there is an Azure AD account and a Workspace ONE UEM MDM account added.



Enroll Through Out of Box Experience

Out of Box Experience (OOBE) enrollment automatically enrolls a device into the correct organization group as part of the initial setup and configuration of a Windows 10 device.

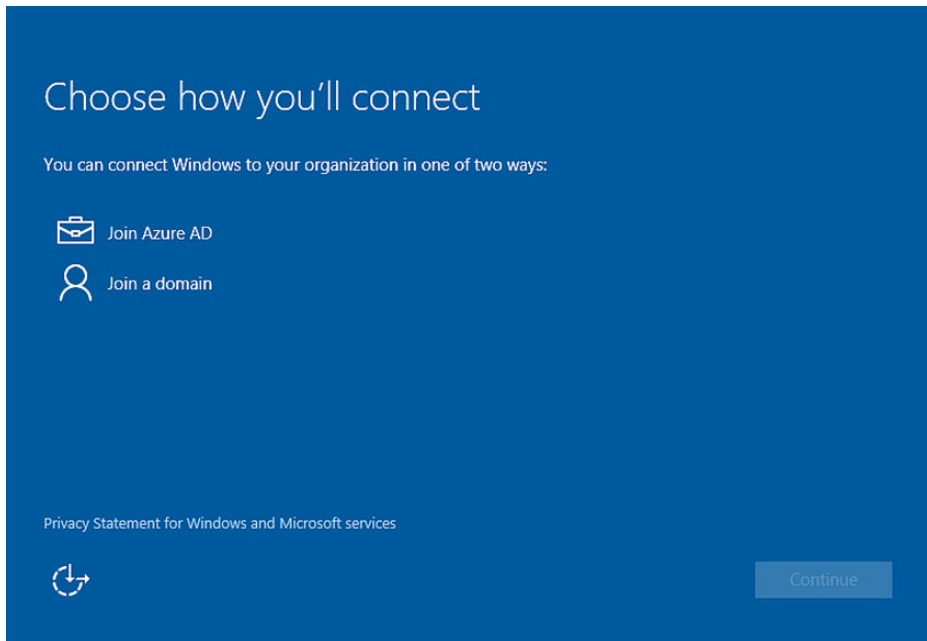
Important The OOBE enrollment flow does not support Enterprise Wipe. If you perform an enterprise wipe, users cannot log into the device as connection to Azure AD has been broken. You must create a local admin account before sending an Enterprise Wipe or you will be locked out of the device and forced to reset the device.

Prerequisites

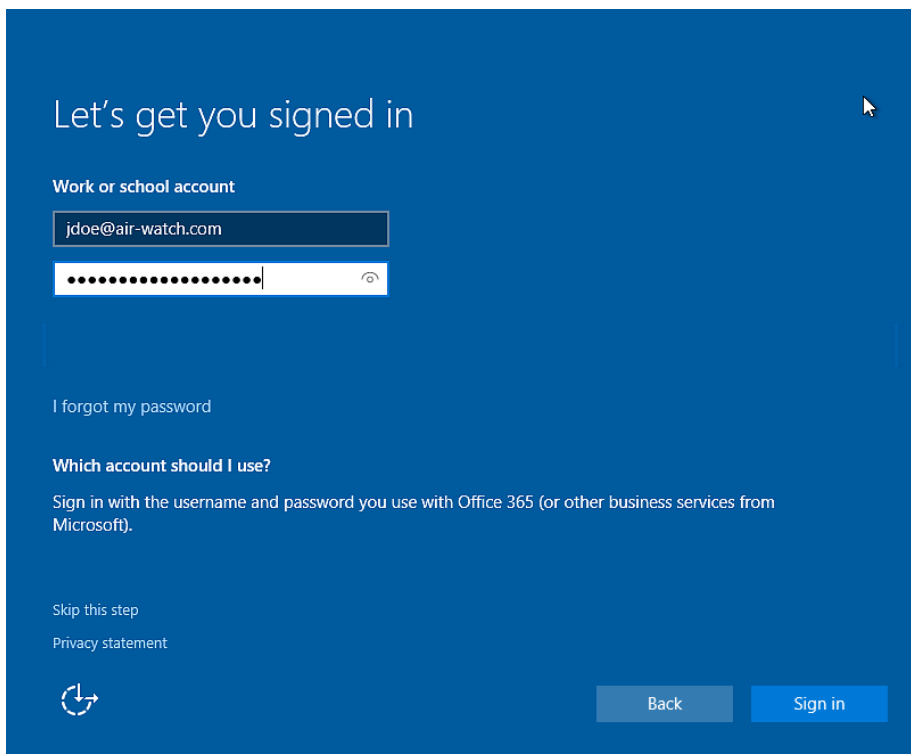
The OOBE process can take some time to complete on end-user devices. Consider enabling the progress display for the install status. This display allows end users to know where they are in the process. To enable the display, navigate to **Groups & Settings > All Settings > General > Enrollment > Optional Prompt**.

Procedure

- 1 Power on the device and follow the steps to configure Windows until you reach the **Choose how you'll connect** screen.

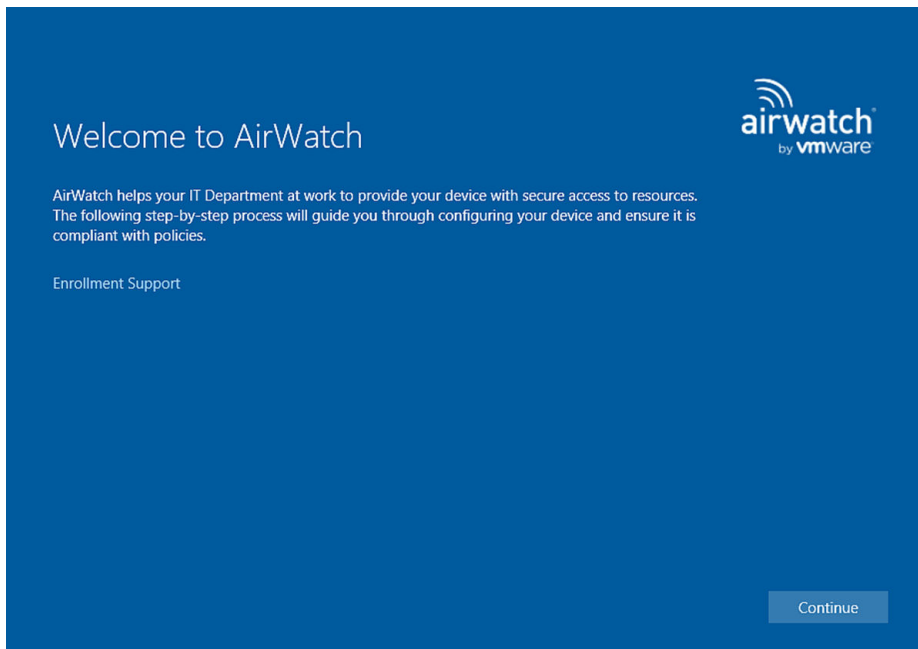


- 2 Select **Join Azure AD**. Select **Continue**.
- 3 Enter your Azure AD/Workspace ONE UEM email address as the **Work or school account**.



- 4 Enter your **Password**. Select **Sign In**.

- 5 Ensure that the **Welcome to AirWatch** screen displays. Select **Continue**.



- 6 Select **Accept** if terms of use are enabled.
- 7 Select **Join** to confirm that you want to enroll in Workspace ONE UEM.
- 8 Select **Finish** to complete joining your device to Workspace ONE UEM. Your device now downloads the applicable policies and profiles.

Enroll Through Office 365 Apps

If your organization uses Office 365 and Azure AD integration, end users can enroll their devices the first time they open an Office 365 app.

Procedure

- 1 Select **Add a Work Account** the first time you open an Office 365 application.
- 2 Enter your **Email Address** and **Password**. Select **Sign In**.
- 3 Ensure that the Workspace ONE UEM welcome page displays. Select **Continue**.
- 4 Select **Accept** if terms of use are enabled.
- 5 Select **Join** to confirm that you want to enroll in Workspace ONE UEM.
- 6 Select **Finish** to complete joining your device to Workspace ONE UEM. Your device now downloads the applicable policies and profiles.

Bulk Provisioning and Enrollment

Bulk provisioning creates a pre-configured package that stages Windows 10 devices and enrolls them into Workspace ONE UEM. Use bulk provisioning to enroll and configured multiple devices with a standard user account quickly.

This enrollment flow is the only way to enroll a device with a standard user account. Admin permissions are still required run the pre-configured package. Bulk provisioning only supports single user standard staging.

To use bulk provisioning, download the Microsoft Assessment and Development Kit and installing the Imaging and Configuration Designer (ICD) tool. The ICD creates provisioning packages used to image devices. As part of these provisioning packages, you can include Workspace ONE UEM configuration settings so that provisioned devices are automatically enrolled into Workspace ONE UEM during the initial Out of Box Experience (OOBE).

To map the devices to the correct end user automatically, register the devices per user or using a bulk import before creating the provisioning package.

Enroll With Bulk Provisioning

The Microsoft Imaging and Configuration Designer tool allows you to create a provisioning package to enroll multiple Windows 10 devices into Workspace ONE UEM quickly and easily. Once the package is installed, the device automatically enrolls into Workspace ONE UEM.

Procedure

- 1 Download the Microsoft Assessment and Deployment Kit for Windows 10 and install the Windows Imaging and Configuration Designer tool (ICD).

- 2 Start the Windows ICD and select **New Provisioning Package**.

- 3 Enter a **Project Name** and select the settings to view and configure.

The typical choice is the **Common to all Windows desktop editions** option.

- 4 (Optional) Import a provisioning package if you want to create a provisioning package based on the settings of a previous package.

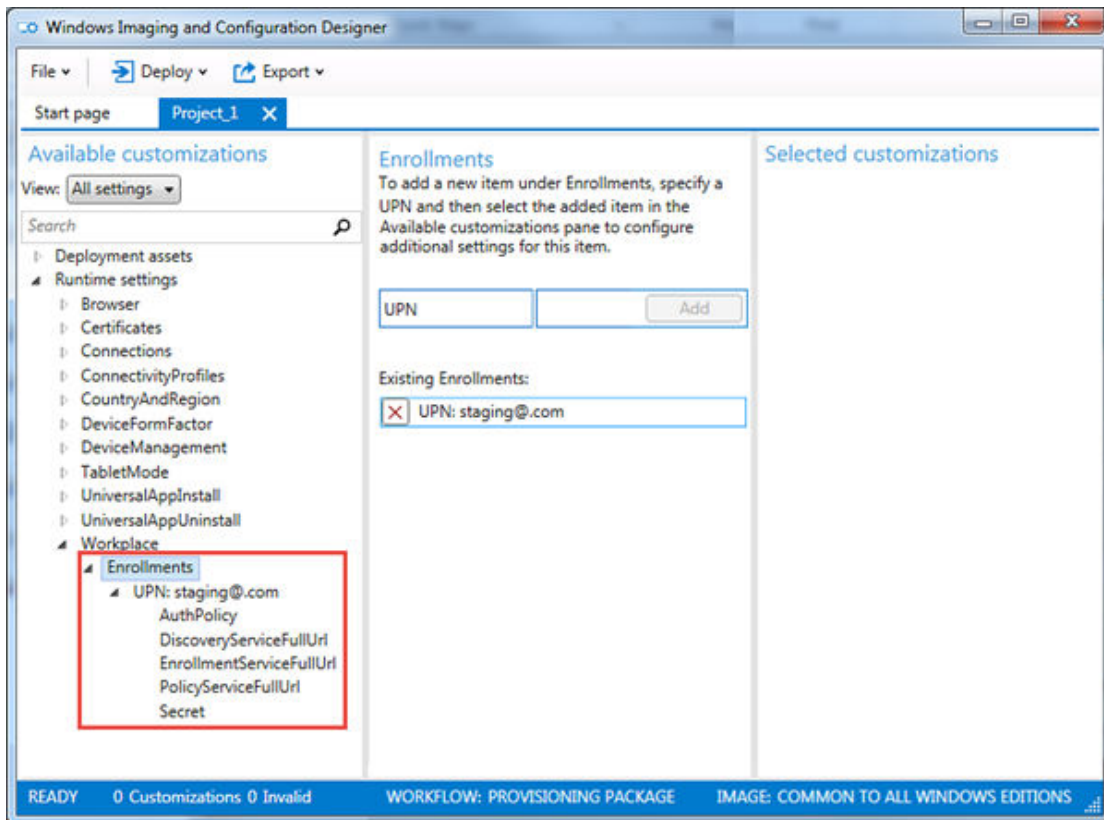
- 5 Navigate to **Runtime Settings > Workplace > Enrollments**.

- 6 In the Workspace ONE UEM console, navigate to **Groups & Settings > All Settings > Devices & Users > Windows > Windows Desktop > Staging and Provisioning**.

When you navigate to this settings page, a staging user is created and URLs pertaining to the created staging user display. You can create your own staging user for use with bulk provisioning but the settings displayed on this settings page do not apply to any created users.

- 7 Copy the **UPN** and paste it into the **UPN** text box of the ICD.

- 8 Select the down arrow next to **Enrollments** in the **Available Customizations** window.



- 9 Configure the following settings:
- Select **AuthPolicy** and select the value displayed in the UEM console.
 - Select **DiscoveryServiceFullURL** and copy the URL displayed in the UEM console.
 - Select **EnrollmentServiceFullURL** and copy the URL displayed in the UEM console.
 - Select **PolicyServiceFullURL** and copy the URL displayed in the UEM console.
 - Select **Secret** and copy the value displayed in the UEM console.
- 10 Select **File > Save** to save the project.
- 11 Select **Export > Provisioning Package** to create a package for use with bulk provisioning then select **Next**.
- 12 Save the **Encryption password** for later use if you choose to encrypt the package and then select **Next**.
- 13 Save the package to a USB drive for transfer to each device you want to provision. You can also email the package to the device.
- 14 Select **Build** to create the package.

What to do next

Next you must install the bulk provisioning package. For more information, see [Install Bulk Provisioning Packages](#).

Install Bulk Provisioning Packages

After you create the provisioning packages using the Microsoft Imaging and Configuration Designer, you must install the provisioning package onto the end-user devices.

Procedure

- 1 On the device you want to provision, navigate to **Settings > Accounts > Work Access** and select **Add or remove a package for work or school**. If the package was emailed, start the package from your mail client.
- 2 Select **Add a package** and select the **Removable Media** choice as the method to add the package.
- 3 Select the correct package from the list provided.

If you added the device to the user account in the Workspace ONE UEM Console before provisioning, the device is assigned upon enrollment.

Windows Desktop Profiles Overview

3

Profiles are the primary means to manage devices. Configure profiles so your Windows Desktop devices remain secure and configured to your preferred settings.

Overview

You can think of profiles as the settings and rules that, when combined with compliance policies, help you enforce corporate rules and procedures. They contain the settings, configurations, and restrictions that you want to enforce on devices.

A profile consists of the general profile settings and a specific payload. Profiles work best when they contain only a single payload.

Windows Desktop profiles apply to a device at either the user level or the device level. When creating Windows Desktop profiles, you select the level the profile applies to. Some profiles can only be applied to the user level or device level. Workspace ONE UEM executes commands that apply to the device context even if the device has no active enrolled user login. User-specific profiles require an active enrolled user login.

Baselines

Maintaining the best configurations to keep your devices secure can be a challenge. Workspace ONE UEM curates the best practices as Baselines. This feature allows you to simplify the process by applying industry-recommended settings and configurations. With Baselines, you only need to select a Smart Group and a baseline and your devices will remain up-to-date with industry favorites such as Microsoft Baselines or CIS Benchmarks. For more information on Baselines, see [Chapter 4 Using Baselines](#).

This chapter includes the following topics:

- [Configure a Passcode Profile \(Windows Desktop\)](#)
- [Configure a Wi-Fi Profile \(Windows Desktop\)](#)
- [VPN Profile \(Windows Desktop\)](#)
- [Credentials Profile \(Windows Desktop\)](#)
- [Configure a Restrictions Payload \(Windows Desktop\)](#)
- [Windows Defender Exploit Guard Profile \(Windows Desktop\)](#)
- [Data Protection Profile \(Windows Desktop\)](#)

- [Windows Hello Profile \(Windows Desktop\)](#)
- [Configure a Firewall \(Legacy\) Profile \(Windows Desktop\)](#)
- [Configure a Firewall Profile \(Windows Desktop\)](#)
- [Configure a Single App Mode Profile \(Windows Desktop\)](#)
- [Configure an Antivirus Profile \(Windows Desktop\)](#)
- [Encryption Profile \(Windows Desktop\)](#)
- [Configure a Windows Updates Profile \(Windows Desktop\)](#)
- [Create a Proxy Profile \(Windows Desktop\)](#)
- [Configure a Web Clips Profile \(Windows Desktop\)](#)
- [Exchange ActiveSync Profile \(Windows Desktop\)](#)
- [SCEP Profile \(Windows Desktop\)](#)
- [Application Control Profile \(Windows Desktop\)](#)
- [Configure an Exchange Web Services Profile \(Windows Desktop\)](#)
- [Create a Windows Licensing Profile \(Windows Desktop\)](#)
- [Configure a BIOS Profile \(Windows Desktop\)](#)
- [Configure the OEM Updates Profile \(Windows Desktop\)](#)
- [Configure a Kiosk Profile \(Windows Desktop\)](#)
- [Configure a Personalization Profile \(Windows Desktop\)](#)
- [Peer Distribution with Workspace ONE](#)
- [Use Custom Settings \(Windows Desktop\)](#)

Configure a Passcode Profile (Windows Desktop)

Enforce a Passcode profile to protect devices with passcodes each time they return from an idle state. A passcode ensures that all sensitive corporate information on managed devices remains protected.

Passcodes set using this payload only take effect if the passcode is stricter than existing passcodes. For example, if the existing Microsoft Account passcode requires stricter settings than the Passcode payload requirements, the device continues to use the Microsoft Account passcode.

Important The Passcode payload does not apply to domain-joined devices.

Procedure

- 1 Navigate to **Devices > Profiles > List View > Add** and select **Add Profile**.
- 2 Select **Windows** and then select **Windows Desktop**.
- 3 Select **Device Profile**.

- 4 Configure the profile **General** settings.
- 5 Select the **Passcode** profile.
- 6 Configure the Passcode settings:

Settings	Descriptions
Password Complexity	Set to Simple or Complex to your preferred level of password difficulty.
Require Alphanumeric	Enable to require the passcode to be an alphanumeric passcode.
Minimum Password Length	Enter the minimum number of characters a Password must contain.
Maximum Password Age (days)	Enter the maximum number of days that may elapse before the end user is required to change the Password.
Minimum Password Age (days)	Enter the minimum number of days that must elapse before the end user is required to change the Password.
Device Lock Timeout (in Minutes)	Enter the number of minutes before the device automatically locks and requires a passcode re-entry.
Maximum Number of Failed Attempts	Enter the maximum number of attempts the end user may enter before the device is restarted.
Password History (occurrences)	Enter the number of occurrences a password is remembered. If the end user reuses a password within the number of recorded occurrences, they cannot reuse that password. For example, if you set the history to 12, an end user cannot reuse the past 12 passwords.
Reversible Encryption for Password Storage	Enable to set the operating system to store passwords using reversible encryption. Storing passwords using reversible encryption is essentially the same as storing plain text versions of the passwords. For this reason, do not enable this policy unless application requirements outweigh the need to protect password information.
Use Protection Agent for Windows 10 Devices	Enable to use the Workspace ONE Intelligent Hub to enforce Password profile settings instead of the native DM functionality. Enable this settings if you have issues using the native DM functionality.
Windows 8.0 Password Policy	Enable to use the legacy Windows 8.0 Password Policy.
Expire Password	Enable to expire the existing password on the device and require a new password to be created. Requires Workspace ONE Intelligent Hub to be installed on the device.

- 7 Select **Save & Publish** when you are finished to push the profile to your devices.

Configure a Wi-Fi Profile (Windows Desktop)

Create a Wi-Fi profile to connect devices to hidden, encrypted, or password-protected corporate networks. Wi-Fi profiles are useful for end users who need access to multiple networks or for configuring devices to connect automatically to the appropriate wireless network.

Procedure

- 1 Navigate to **Devices > Profiles > List View > Add** and select **Add Profile**.
- 2 Select **Windows** and then select **Windows Desktop**.
- 3 Select **Device Profile**.
- 4 Configure the profile **General** settings.
- 5 Select the **Wi-Fi** profile.
- 6 Configure the **General** settings:

Settings	Descriptions
Service Set Identifier	Enter an identifier that is associated with the name (SSID) of the desired Wi-Fi network. The SSID cannot contain spaces.
Hidden Network	Enable if the network is not open to broadcast.
Auto-Join	Enable to set the device to join the network automatically.
Security Type	Use the drop-down menu to select the security type (for example, WPA2 Personal) for the Wi-Fi network.
Encryption	Use the drop-down menu to select the encryption type used. Displays based on the Security Type .
Password	Enter the password required to join the Wi-Fi network for networks with static passwords. Select the Show Characters check box to disable hidden characters within the text box. Displays based on the Security Type .
Proxy	Enable to configure proxy settings for the Wi-Fi connection.
URL	Enter the URL for the proxy.
Port	Enter the port for the proxy.
Protocols	Select the type of protocols to use: Certificate: PEAP-MsChapv2 EAP-TTLS: Custom This section displays when the Security Type is set to WPA Enterprise or WPA2 Enterprise.
Inner Identity	Select the method of authentication through EAP-TTLS: <ul style="list-style-type: none"> ■ Username/Password ■ Certificate This section displays when the Protocols option is set to EAP-TTLS or PEAP-MsChapv2.
Require Crypto Binding	Enable to require cryptographic binding on both authentications. This limits man-in-the-middle attacks.
Use Windows Log On Credentials	Enable to use the Windows login credentials are the user name/password to authenticate. Displays when Username/Password is set as the Inner Identity .

Settings	Descriptions
Identity Certificate	Select an Identity Certificate, which you can configure using the Credentials payload. See Credentials Profile (Windows Desktop) for more information. Displays when Certificate is set as the Inner Identity .
Trusted Certificates	Select Add to add Trusted Certificates to the Wi-Fi profile. This section displays when the Security Type is set to WPA Enterprise or WPA2 Enterprise.
Allow Trust Exceptions	Enable to allow trust decisions to be made by the user through a dialog box.

- 7 Select **Save & Publish** when you are finished to push the profile to devices.

VPN Profile (Windows Desktop)

Workspace ONE UEM supports configuring device VPN settings so end users can remotely and securely access your organizations internal network. The VPN profile provides detailed VPN settings control including specific VPN provider settings and Per-App VPN access.

Workspace ONE UEM supports specific VPN connection types for various third-party VPN providers, including:

Per-app VPN

Per-app VPN lets you to configure VPN traffic rules based on specific applications. When configured, the VPN connects automatically when a specified app starts and sends the application traffic through the VPN connection but not traffic from other applications. With this flexibility, you can ensure that your data remains secure while not limiting device access to the Internet at large.

Each rule group under the Per-App VPN Rules section uses the logical OR operator. So if traffic matches any of the set policies, it is allowed through the VPN.

VPN Traffic Rules

Per-App VPN Rules

App Identifier

Store App

VMware Tunnel

AirWatchLLC.AirWatchTunnel_htcwk4rx2gx4

VPN On Demand
☒

Routing Policy

Allow Direct Access to External Resources

VPN Traffic Filters
☒

Filter Type	Filter value	
IP Address	10.64.0.123	✕
Port	8443	✕
IP Protocol	6	✕

+ ADD NEW FILTERS

The applications for which Per-app VPN traffic rules apply can be legacy Windows applications such as EXE files or modern apps downloaded from the Microsoft Store. By designating specific applications to start and use the VPN connection, only the traffic from those apps uses the VPN and not all device traffic. This logic allows you to keep corporate data secure while reducing the bandwidth sent through your VPN.

To help you reduce VPN constraint, you can set DNS routing rules for the Per-app VPN connection. These routing rules limit traffic sent through the VPN to only that traffic that matches the rules. The logic rules use the AND operator so if you set an IP Address, Port, and IP Protocol, the traffic much match EACH of these filters to pass through the VPN.

Per-app VPN allows you to create granular, detailed control over your VPN connections on an app by app basis.

Configure a VPN Profile (Windows Desktop)

Configure device VPN settings to access corporate infrastructure remotely and securely. You can also configure Per-app VPN connections that limit traffic through the VPN to specific applications and set the VPN to connect automatically whenever the specified application starts.

Procedure

- 1 Navigate to **Devices > Profiles > List View > Add** and select **Add Profile**.
- 2 Select **Windows** and then select **Windows Desktop**.
- 3 Select **User Profile** or **Device Profile**.
- 4 Configure the profile **General** settings.

5 Select the **VPN** profile.

6 Configure the **Connection Info** settings:

Settings	Descriptions
Connection Name	Enter the name of the VPN connection.
Connection Type	Select the type of VPN connection:
Server	Enter the VPN server hostname or IP Address.
Port	Enter the port the VPN server uses.
Advanced Connection Settings	Enable to configure advanced routing rules for device VPN connection.
Routing Addresses	Select Add to enter the IP Addresses and Subnet Prefix Size of the VPN server. You may add more routing addresses as needed.
DNS Routing Rules	Select Add to enter the Domain Name that governs when to use the VPN. Enter the DNS Servers and Web Proxy Servers to use for each specific domain.
Routing Policy	Choose either to Force All Traffic Through VPN or Allow Direct Access to External Resources . <ul style="list-style-type: none"> ■ Force All Traffic Through VPN (Force Tunnel): For this traffic rule, all IP traffic must go through the VPN Interface only. ■ Allow Direct Access to External Resources (Split Tunnel): For this traffic filter rule, only the traffic meant for the VPN interface (as determined by the networking stack) goes over the interface. Internet traffic can continue to go over the other interfaces.
Proxy	Select Auto Detect to detect automatically any proxy servers used by the VPN. Select Manual to configure the proxy server.
Server	Enter the IP Address for the proxy server. Displays when Proxy is set to Manual .
Proxy Server Config URL	Enter the URL for the proxy server configuration settings. Displays when Proxy is set to Manual .
Bypass proxy for local	Enable to bypass the proxy server when the device detects it is on the local network.
Protocol	Select the authentication protocol for the VPN: <ul style="list-style-type: none"> ■ EAP – Allows for various authentication methods ■ Machine Certificate – Detects a client certificate in the device certificate store to use for authentication.
EAP Type	Select the type of EAP authentication: <ul style="list-style-type: none"> ■ EAP-TLS – Smart Card or client certificate authentication ■ EAP-MSCHAPv2 – User name and Password ■ EAP-TTLS ■ PEAP ■ Custom Configuration – Allows all EAP configurations Displays only if Protocol is set to EAP .
Credential Type	Select Use Certificate to use a client certificate. Select Use Smart Card to use a Smart Card to authenticate. Displays when EAP Type is set to EAP-TLS .

Settings	Descriptions
Simple Certificate Selection	<p>Enable to simplify the list of certificates from which the user selects. The certificates display by the most recent certificated issued for each entity.</p> <p>Displays when EAP Type is set to EAP-TLS.</p>
Use Windows Log On Credentials	<p>Enable to use the same credentials as the Windows device.</p> <p>Displays when EAP Type is set to EAP-MSCHAPv2.</p>
Identity Privacy	<p>Enter the value to send servers before the client authenticates the server identity.</p> <p>Displays when EAP Type is set to EAP-TTLS.</p>
Inner Authentication Method	<p>Select the authentication method for inner identity authentication.</p> <p>Displays when EAP Type is set to EAP-TTLS.</p>
Enable Fast Reconnect	<p>Enable to reduce the delay in time between an authentication request by a client and the response from the server.</p> <p>Displays when EAP Type is set to PEAP.</p>
Enable Identity Privacy	<p>Enable to protect the user identity until the client authenticates with the server.</p>
Per-app VPN Rules	<p>Select Add to add traffic rules for specific Legacy and Modern applications. For more information on Per-app VPN, see VPN Profile (Windows Desktop)</p>
Application ID	<p>First select whether the app is a Store App or a Desktop App. Then enter the application file path for Desktop apps or package family name for Store Apps to specify the app the traffic rules apply to.</p> <ul style="list-style-type: none"> ■ File Path example: %ProgramFiles%/ Internet Explorer/iexplore.exe ■ Package Family Name example: AirWatchLLC.AirWatchMDMAgent_htcwk4rx2gx4 <p>The PFN Lookup allows you to search for the application PFN by selecting the Search icon. A display window opens allowing you to select the app you want to configure Per-app VPN rules to govern. The PFN is then autopopulated.</p>
VPN On Demand	<p>Enable to have the VPN connection automatically connect when the application is launched.</p>
Routing Policy	<p>Select the routing policy for the app.</p> <ul style="list-style-type: none"> ■ Allow Direct Access to External Resources allows for both VPN traffic and traffic through the local network connection. ■ Force All Traffic Through VPN forces all traffic through the VPN.
DNS Routing Rules	<p>Enable to add DNS routing rules for the app traffic.</p> <p>Select Add to add Filter Types and Filter Values for the routing rules. Only traffic from the specified app that matches these rules can be sent through the VPN.</p> <ul style="list-style-type: none"> ■ IP Address: A list of comma-separated values specifying remote IP address ranges to allow. ■ Ports: A list of comma-separated values specifying remote port ranges to allow. For example, 100–120, 200, 300–320. Ports are only valid when the protocol is set to TCP or UDP. ■ IP Protocol: Numeric value from 0-255 representing the IP protocol to allow. For example, TCP = 6 and UDP = 17. <p>For more information on how these filters and policies function and the logic used, see VPN Profile (Windows Desktop).</p>

Settings	Descriptions
Device Wide VPN Rules	<p>Select Add to add traffic rules for the entire device.</p> <p>Select Add to add Filter Types and Filter Values for the routing rules. Only traffic that matches these rules can be sent through the VPN.</p> <ul style="list-style-type: none"> ■ IP Address: A list of comma-separated values specifying remote IP address ranges to allow. ■ Ports: A list of comma-separated values specifying remote port ranges to allow. For example, 100–120, 200, 300–320. Ports are only valid when the protocol is set to TCP or UDP. ■ IP Protocol: Numeric value from 0–255 representing the IP protocol to allow. For example, TCP = 6 and UDP = 17. For a list of the numeric value of all protocols, see https://www.iana.org/assignments/protocol-numbers/protocol-numbers.xhtml.
Remember Credentials	Enable to remember the end user login credentials.
Always On	Enable to force the VPN connection to be always on.
VPN Lockdown	<p>Enable to force the VPN to always be on, never disconnect, disable any network access if the VPN is not connected, and prevent other VPN profiles from connecting on the device.</p> <p>A VPN profile with VPN Lockdown enabled must be deleted before you push a new VPN profile to the device.</p> <p>This feature only displays if the profile is set to Device context.</p>
Bypass for Local	Enable to bypass the VPN connection for local intranet traffic.
Trusted Network Detection	Enter, separated by commas, trusted network addresses. The VPN does not connect when a trusted network connection is detected.
Domain	<p>Select Add New Domain to add domains to resolve through the VMware Tunnel server.</p> <p>Any domains added resolve through the VMware Tunnel server regardless of the app originating the traffic. For example, vmware.com will resolve through the VMware Tunnel server if you use the whitelisted Chrome or the non-whitelisted Edge apps.</p> <p>This option only displays when you create the VPN profile as a user profile.</p>

7 Select **Save & Publish** when you are finished to push the profile to devices.

Credentials Profile (Windows Desktop)

A Credentials profile allows you to push Root, Intermediate, and Client certificates to support any Public Key Infrastructure (PKI) and certificate authentication use case. The profile pushes configured credentials to the proper credentials store on the Windows Desktop device.

Even with strong passcodes and other restrictions, your infrastructure remains vulnerable to brute force, dictionary attacks, and employee error. For greater security, you can implement digital certificates to protect corporate assets. To use certificates in this way, you must first configure a Credentials payload with a certificate authority, and then configure your Wi-Fi and VPN payloads. Each of these payloads has settings for associating the certificate authority defined in the Credentials payload.

The Credentials profile also allows you to push S/MIME certificates to devices. These certificates are uploaded under each user account and controlled by the Credentials profile.

Configure a Credentials Profile (Windows Desktop)

A Credentials profile pushes certificates to devices for use in authentication. With Workspace ONE UEM, you can configure credentials for personal, intermediate, trusted root, trusted publisher, and trusted people certificate stores.

Procedure

- 1 Navigate to **Devices > Profiles > List View > Add** and select **Add Profile**.
- 2 Select **Windows** and then select **Windows Desktop**.
- 3 Select **User Profile** or **Device Profile**.
- 4 Configure the profile **General** settings.
- 5 Select the **Credentials** payload and configure the following settings:

Settings	Descriptions
Credential Source	<p>Select the credential source as either an Upload, a Defined Certificate Authority, or User Certificate</p> <p>The remaining payload options are source-dependent.</p> <ul style="list-style-type: none"> ■ If you select Upload, you must upload a new certificate. ■ If you select Defined Certificate Authority, you must choose a predefined certificate authority and Template. ■ If you select User Certificate, you must select how the S/MIME certificate is used.
Upload	<p>Select to navigate to the desired credential certificate file and upload it to the Workspace ONE UEM console.</p> <p>This setting displays when Upload is selected as the Credential Source.</p>
Certificate Authority	<p>Use the drop-down menu to select a predefined certificate authority.</p> <p>This setting displays when Defined Certificate Authority is selected as the Credential Source.</p>
Certificate Template	<p>Use the drop-down menu to select a predefined certificate template specific to the selected certificate authority.</p> <p>This setting displays when Defined Certificate Authority is selected as the Credential Source.</p>
Export Private Key	<p>Select Allow to let end users export certificates using Windows Certificate Manager.</p> <p>Select Don't Allow to prohibit end users from exporting certificates.</p>

Settings	Descriptions
Key Location	<p>Select the location for the certificate private key:</p> <ul style="list-style-type: none"> ■ TPM If Present – Select to store the private key on a Trusted Platform Module if one is present on the device, otherwise store it in the OS. ■ TPM Required – Select to store the private key on a Trusted Platform Module. If a TPM is not present, the certificate does not install and an error displays on the device. ■ Software – Select to store the private key in the device OS. ■ Passport – Select to save the private key within the Microsoft Passport. This option requires the Azure AD integration.
Certificate Store	<p>Select the appropriate certificate store for the credential to reside in on the device:</p> <ul style="list-style-type: none"> ■ Personal – Select to store personal certificates. Personal certificates require the Workspace ONE Intelligent Hub on the device or using the SCEP payload. ■ Intermediate – Select to store certificates from Intermediate Certificate Authorities. ■ Trusted Root – Select to store certificates from Trusted Certificate Authorities and root certificates from your organization and Microsoft. ■ Trusted Publisher – Select to store certificates from Trusted Certificates Authorities trusted by software restriction policies. ■ Trusted People – Select to store certificates from trusted people or end entities that are explicitly trusted. Often these certificates are self-signed certificates or certificates explicitly trusted in an application such as Microsoft Outlook.
Store Location	Select User or Machine to define where the certificate is located.
S/MIME	Select whether the S/MIME certificate is for encryption or signing.

6 Select **Save & Publish** to push the profile to devices.

Configure a Restrictions Payload (Windows Desktop)

Deploy a restrictions payload for added security on Windows Desktop devices. Use the Restrictions payload to disable end-user access to device features to ensure that devices are not tampered with.

The Windows version and edition you use change what restrictions apply to a device.

To enforce a Restrictions profile:

Procedure

- 1 Navigate to **Devices > Profiles > List View** and select **Add**.
- 2 Select **Windows** and then select **Windows Desktop**.
- 3 Select **Device Profile**.
- 4 Configure the profile **General** settings.
- 5 Select the **Restrictions** profile.

6 Configure the **Administration** settings:

Settings	Description
Allow Manual MDM Unenrollment	Allow the end user to unenroll from Workspace ONE UEM manually through the Workplace/Work Access enrollment. This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.
Runtime Configuration Hub to Install Provisioning Packages	Enable to allow the use of provisioning packages to enroll devices into Workspace ONE UEM (bulk provisioning). This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.
Location	Select how location services run on the device. This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.
Runtime Configuration Agent to Remove Provisioning Packages	Enable to allow the removal of provisioning packages. This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.
Send Diagnostic and Usage Telemetry Data	Select the level of of telemetry data to send to Microsoft . This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.
Require Microsoft Account for MDM	Enable to require a Microsoft Account for devices to receive policies or applications.
Require of Microsoft Account for Modern Applications	Enable to require a Microsoft Account for devices to download and install Windows Apps.
Provisioning Packages Must Have a Certificate Signed by a Device Trusted Authority	Enable to require a trusted certificate for all provisioning packages (bulk provisioning). This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.
Allow User to Change Auto Play Settings	Allow the user to change what program is used for Auto Play of file types. This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.
Allow User to Change Data Sense Settings	Allow the user to change the Data Sense settings to restrict data use on the device. This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.
Date/Time	Allow the user to change the Date/Time settings. This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.
Language	Allow the user to change the language settings. This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.
Allow User to Change Power and Sleep Settings	Allow the user to change the Power and Sleep settings. This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.

Settings	Description
Region	Allow the user to change the region. This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.
Allow User to Change Sign-In Options	Allow the user to change the Sign-In Options. This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.
VPN	Allow the user to change the VPN settings. This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.
Allow User to Change Workplace Settings	Allow the user to change Workplace settings and change how MDM functions on the device. This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.
Allow the User to Change Account Settings	Allow the user to change Account settings. This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.
Bluetooth	Allow the use of Bluetooth on the device. This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.
Device Bluetooth Advertising	Allow the device to broadcast Bluetooth Advertisements. This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.
Bluetooth-enabled devices can discovery the device	Allow Bluetooth discovery of the device by other Bluetooth devices. This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.
Camera	Allow access the camera function of the device. This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.
Cortana	Allow access to the Cortana application. This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.
Device Discovery UX on the Lock Screen	Allow the device discovery UX on the lock screen to discover projectors and other displays. When enabled, the Win+P and Win+K shortcuts do not work. This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.
IME Logging	Enable to allow the user to turn on and off the logging for incorrect conversions and saving of auto-tuning result to a file and history-based predictive input. This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.

Settings	Description
IME Network Access	<p>Enable to allow the user to turn on the Open Extended Dictionary to integrate Internet searches to provide input suggestions that do not exist in a devices local dictionary.</p> <p>This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.</p>
Smart Screen	<p>Enable to allow the end user to use the Microsoft SmartScreen feature, which is a form of security requesting the end user to draw shapes on an image to unlock the device. This option also allows end users to use PINs as their passcode.</p> <p>Note After you disable function, you cannot reenale it through Workspace ONE UEM MDM. To reenale it, you must factory reset the device.</p> <p>The restriction does not apply to Windows 10 Home edition devices.</p>
Search to Leverage Location Information	<p>Allow the search to use the device location information.</p> <p>This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.</p>
Storage Card	<p>Enable to allow the use of an SD card and the device USB ports.</p> <p>This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.</p>
Windows Sync Settings	<p>Allow user to sync Windows settings across devices.</p> <p>This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.</p>
Windows Tips	<p>Allow Windows Tips on the device to help the user.</p> <p>This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.</p>
User Account Control Setting	<p>Select the level of notification sent to end users when a change to the operating system requires device admin permission.</p>
Allow Non-Microsoft Store Trusted Applications	<p>Allows the downloading and installation of applications not trusted by the Microsoft Store.</p> <p>This restriction applies to all Windows 10 devices.</p>
App Store Auto Updates	<p>Enable to allow apps downloaded from the Microsoft Store to update automatically when new versions are available.</p> <p>This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.</p>
Allow Developer Unlock	<p>Allows the use of the Developer Unlock setting for sideloading applications onto devices.</p> <p>This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.</p>
Allow DVR & Game Broadcasting	<p>Enable to allow the recording and broadcasting of games on the device.</p> <p>This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.</p>
Allow Share Data Among Multiple Users of the Same App	<p>Allows sharing of data between multiple users of an app.</p> <p>This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.</p>

Settings	Description
Restrict App Data to System Volume	<p>Restricts app data to the same volume as the OS instead of secondary volumes or removable media.</p> <p>This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.</p>
Restrict Installation of Applications to System Drive	<p>Restricts the installation of apps to the system drive instead of secondary drives or removable media.</p> <p>This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.</p>
Auto Connect to Wi-Fi Hotspots	<p>Enable to allow the device to connect to Wi-Fi hotspots automatically using the Wi-Fi Sense functionality.</p> <p>This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.</p>
Cellular Data On Roaming	<p>Enable to allow cellular data use while roaming.</p> <p>This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.</p>
Internet Sharing	<p>Enable to allow Internet sharing between devices.</p> <p>This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.</p>
Data Usage on Roaming	<p>Enable to allow end users to transmit and receive data while roaming.</p> <p>This restriction applies to all Windows devices.</p>
VPN Over Cellular	<p>Allow the use of a VPN over cellular data connections.</p> <p>This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.</p>
VPN Roaming Over Cellular	<p>Allow the use of a VPN while on roaming cellular data connections.</p> <p>This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.</p>
Auto fill	<p>Allow the use of Auto fill to complete user information.</p> <p>This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.</p>
Cookies	<p>Allow the use of cookies.</p> <p>This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.</p>
Do Not Track	<p>Allow the use of Do Not Track requests.</p> <p>This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.</p>
Password Manager	<p>Allow the use of a password manager.</p> <p>This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.</p>
Pop-ups	<p>Allow pop-up browser windows.</p> <p>This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.</p>

Settings	Description
Search Suggestions in Address Bar	Allow search suggestions to appear in address bar. This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.
Smart Screen	Allow the use of the SmartScreen malicious site and content filter. This restriction applies to Windows 10 devices only and is not supported for Windows 10 Home edition devices.
Send Intranet Traffic to Internet Explorer	Allow intranet traffic to use Internet Explorer. This restriction applies to all Windows 10 devices.
Enterprise Site List URL	Enter the URL for an enterprise site list. This restriction applies to all Windows 10 devices.

- 7 Select **Save & Publish** when you are finished to push the profile to devices.

Windows Defender Exploit Guard Profile (Windows Desktop)

Protect your Windows 10 devices from exploits and malware with the Windows Defender Exploit Guard profile. Workspace ONE UEM uses these settings to protect your devices from exploits, reduce attack surfaces, control folder access, and protect your network connections.

Windows Defender Exploit Guard

Various malware and exploits use vulnerabilities in your Windows 10 devices to gain access to your network and devices. Workspace ONE UEM uses the Windows Defender Exploit Guard profile to protect your devices from these bad actors. The profile uses the Windows Defender Exploit Guard settings native to Windows 10. The profile contains four different methods of protection. These methods cover different vulnerabilities and attack vectors.

Exploit Protection

Exploit protection automatically applies exploit mitigations to both the operating system and apps. These mitigations also work with third-party antivirus and Windows Defender antivirus. In the Windows Defender Exploit Guard profile, you configure these settings by uploading a configuration XML file. This file must be created using the Windows Security App or PowerShell.

Attack Surface Reduction

Attack surface reduction rules help prevent the typical actions malware use to infect devices. These rules target actions such as:

- Executable files and scripts used in Office apps or web mail that try to download or run files
- Obfuscated or otherwise suspicious scripts
- Actions that apps do not usually use

Attack surface reduction rules require Windows Defender Real Time Protection enabled.

Controlled Folder Access

Controlled folder access helps protect your valuable data from malicious apps and threats including ransomware. When enabled, Windows Defender Antivirus reviews all apps (.EXE, .SCR, .DLL, and so on). Windows Defender then determines if the app is malicious or safe. If the app is marked as malicious or suspicious, then Windows prevents the app from changing files in protected folders.

Protected folders include common system folders. You can add your own folders to Controlled Folder Access. Most known and trusted apps can access protected folders. If you want an internal or unknown app to access protected folders, you must add the app file path when creating the profile.

Controlled folder access requires Windows Defender Real Time Protection enabled.

Network Protection

Network protection helps protect users and data from phishing scams and malicious websites. These settings prevent users from using any app to access dangerous domains that might host phishing attacks, exploits, or malware.

Network protection requires Windows Defender Real Time Protection enabled.

Additional Information

For more information on the specific exploit protections and settings configured, see <https://docs.microsoft.com/en-us/sccm/protect/deploy-use/create-deploy-exploit-guard-policy>.

Create a Defender Exploit Guard Profile (Windows Desktop)

Create a Defender Exploit Guard profile to protect your Windows 10 devices against exploits and malware. The profile configures the Windows Defender Exploit Guard settings on your Windows 10 devices.

Prerequisites

To use the Exploit Protection settings in this profile, you must create a configuration XML file using Windows Security App or PowerShell on an individual device before creating the profile.

Procedure

- 1 Navigate to **Devices > Profiles > List View > Add** and select **Add Profile**.
- 2 Select **Windows** and then select **Windows Desktop**.
- 3 Select **Device Profile**.
- 4 Configure the profile **General** settings.
- 5 Select the **Defender Exploit Guard** payload.

6 Upload **Exploit Protection Settings** configuration XML file.

These settings automatically apply exploit mitigation techniques to both the operating system and individual apps. You must create the XML file using the Windows Security App or PowerShell on an individual device.

7 Configure the **Attack Surface Reduction** settings. These rules help prevent the typical actions malware uses to infect devices with malicious code. Select **Add** to add additional rules.

The description of each rule describes what apps or file types the rule applies to. Attack surface reduction rules require Windows Defender Real Time Protection enabled.

8 Configure the **Controlled Folder Access** settings. Set **Controlled Folder Access** to **Enabled** to use these settings. When enabled, the setting protects several folders by default. To see the list, point to over the ? icon.

- a Add additional folders to protect by selecting **Add New** and enter the folder file path.
- b Add applications that can access protected folders by selecting **Add New** and entering the application file path. Most known and trusted apps can access the folders by default. Use this setting to add internal or unknown apps to access protected folders.

These settings automatically protect your data from malware and exploits. Controlled folder access requires Windows Defender Real Time Protection enabled.

9 Configure the Network Protection settings. Set **Network Protection** to **Enabled** to use these settings.

These settings protect users and data from phishing scams and malicious websites. Network protection requires Windows Defender Real Time Protection enabled.

10 Select **Save and Publish** when you are finished to push the profile to devices.

Data Protection Profile (Windows Desktop)

The Data Protection profile configures rules to control how enterprise applications access data from multiple sources in your organization. Using Data Protection ensures that your data is only accessible by secured, approved applications.

With personal and work data on the same device, accidental data disclosure is possible through services that your organization does not control. With the Data Protection payload, Workspace ONE UEM controls how your enterprise data moves between applications to limit leakage with a minimal impact on end users. Workspace ONE UEM uses the Microsoft Windows Information Protection (WIP) feature to protect your Windows 10 devices.

Data Protection works by whitelisting enterprise applications to give them permission to access enterprise data from protected networks. If end users move data to non-enterprise applications, you can act based on the selected enforcement policies.

WIP treats data as either unencrypted personal data or corporate data to protect and encrypt. Applications whitelisted for Data Protection fall into four different types. These types determine how the app interacts with protected data.

- **Enlightened Apps** – These apps fully support WIP functionality. Enlightened apps can access both personal and corporate data without issues. If data is created with an enlightened app, you can save the data as unencrypted personal data or encrypted corporate data. You can restrict users from saving personal data with enlightened apps using the Data Protection profile.
- **Allowed** – These apps support WIP-encrypted data. Allowed apps can access both corporate and personal data but the apps save any accessed data as encrypted corporate data. Allowed apps save personal data as encrypted corporate data that cannot be accessed outside of WIP-approved apps. Consider slowly whitelisting allowed apps on a case-by-case basis to prevent issues accessing data. Reach out to software providers for information on WIP approval.
- **Exempt** – You determine which apps are exempt from WIP policy enforcement when you create the Data Protection profile. Exempt any apps that do not support WIP-encrypted data. If an app does not support WIP-encryption, the apps break when attempting to access encrypted corporate data. No WIP policies apply to exempt apps. Exempt apps can access unencrypted personal data and encrypted corporate data. Because exempt apps access corporate data without WIP policy enforcement, use caution when whitelisting exempt apps. Exempt apps create gaps in data protection and leak corporate data.
- **Not Allowed** – These apps are not whitelisted or exempted from WIP policies and cannot access encrypted corporate data. Not allowed apps can still access personal data on a WIP-protected device.

Important The Data Protection profile requires Windows Information Protection (WIP). This feature requires the Windows Anniversary Update. Consider testing this profile before deploying to production.

Configure a Data Protection Profile (Windows Desktop)


Create the Data Protection (Preview) profile to use the Microsoft Windows Information Protection feature to limit user and application access to your organizational data to approved networks and applications. You can set detailed controls over data protection.

Procedure

- 1 Navigate to **Devices > Profiles > List View > Add** and select **Add Profile**.
- 2 Select **Windows** and choose **Windows Desktop** as the platform.
- 3 Select **Device Profile**.
- 4 Configure the profile **General** settings.
- 5 Select the **Data Protection** payload.

6 Configure the Enterprise Data Protection settings:

Settings	Descriptions
Add	Select to add enterprise applications to the enterprise allowed list. Applications added here are trusted to use enterprise data.
App Type	Select whether the application is a traditional desktop application or a Microsoft Store app. You can also select an application publisher for desktop applications or store apps. Selecting a publisher whitelists all apps from the publisher.
Name	Enter the app name. If the app is a Microsoft Store app, select the Search icon (🔍) to search for the app Package Family Name (PFN).
Identifier	Enter the file path for a desktop application or the package family name for a store app.
Exempt	Select the check box if the app does not support full data protection but still needs access to enterprise data. Enabling this option exempts the app from data protection restrictions. These apps are often legacy apps not yet updated for data protection support. Creating exemptions creates gaps in data protection. Only create exemptions when necessary.
Primary Domain	Enter the primary domain that your enterprise data uses. Data from protected networks is accessible by enterprise applications only. Attempting to access a protected network from an application not on the enterprise allowed list results in enforcement policy action. Enter domains in lowercase characters only.
Enterprise Protected Domain Names	Enter a list of domains (other than your primary domain) used by the enterprise for its user identities. Separate the domains with the vertical bar character (). Enter domains in lowercase characters only.
Enterprise IP Ranges	Enter the enterprise IP ranges that define the Windows 10 devices in the enterprise network. Data that comes from the devices in range are considered part of the enterprise and are protected. These locations are considered a safe destination for enterprise data sharing.
Enterprise Network Domain Names	Enter the list of domains that are the boundaries of the enterprise network. Data from a listed domain that is sent to a device is considered enterprise data and is protected. These locations are considered a safe destination for enterprise data sharing.
Enterprise Proxy Servers	Enter the list of proxy server that the enterprise can use for corporate resources.
Enterprise Cloud Resources	Enter the list of enterprise resource domains hosted in the cloud that need to be protected by routing through the enterprise network through a proxy server (on port 80). If Windows cannot determine whether to allow an app to connect to a network resource, it will automatically block the connection. If you want Windows to default to allow the connections, add the /*AppCompat*/ string to the setting. For example: <div style="border: 1px solid #ccc; padding: 5px; margin: 10px 0;"> www.air-watch.com /*AppCompat*/ </div> Only add the /*AppCompat*/ string once to change the default setting.

Settings	Descriptions
Application Data Protection Level	Set the level of protection and the actions taken to protect enterprise data.
Show EDP Icons	Enable to display an EDP icon() in the Web browser, file explorer, and app icons when accessing protected data. The icon also displays in enterprise-only app tiles on the Start menu.
Revoke on Unenroll	Enable to revoke Data Protection keys from a device when the device unenrolls from Workspace ONE UEM.
User Decryption	<p>Enable to allow users to select how data is saved using an enlightened app. They can select Save as Corporate or Save as Personal.</p> <p>If this option is not enabled, all data saved using an enlightened app will save as corporate data and encrypt using the corporate encryption.</p>
Direct Memory Access	Enable to allow users direct access to device memory.
Data Recovery Certificate	Upload the special Encrypting File System certificate to use for file recovery if your encryption key is lost or damaged. For more information, see Create an Encrypting File System Certificate (Windows Desktop) .

- 7 Select **Save & Publish** to push the profile to devices.

Create an Encrypting File System Certificate (Windows Desktop)

The Data Protection profile encrypts enterprise data and restricts access to approved devices. Create an EFS certificate to encrypt your enterprise data protected by a Data Protection profile.

Procedure

- 1 On a computer without an EFS certificate, open a command prompt (with admin rights) and navigate to the certificate store you where you want to store the certificate.
- 2 Run the command: `cipher /r:<EFSRA>`
The value of <EFSRA> is the name of the .cer and .pfx files that you want to create.
- 3 When prompted, enter the password to help protect your new .pfx file.
- 4 The .cer and .pfx files are created in the certificate store you selected.
- 5 Upload your .cer certificate to devices as part of a Data Protection profile. For more information, see [Configure a Data Protection Profile \(Windows Desktop\)](#).

Windows Hello Profile (Windows Desktop)

Windows Hello provides a secure alternative to using passwords for security. The Windows Hello profile configures Windows Hello for Business for your Windows Desktop devices so end users can access your data without sending a password.

Protecting devices and accounts with a user name and password creates potential security exploits. Users can forget a password or share it with non-employees, putting your corporate data at risk. Using Windows Hello, Windows 10 devices securely authenticate the user to applications, Web sites, and networks on the behalf of the user without sending a password. The user does not need to remember passwords, and man-in-the-middle attacks are less likely to compromise your security.

Windows Hello requires users to verify possession of a Windows 10 device before it authenticates with either a PIN or Windows Hello biometric verification. After authentication through Windows Hello, the device gains instant access to Web sites, applications, and networks.

Important Windows Hello for Business requires Azure AD integration to work.

Create a Windows Hello Profile (Windows Desktop)

Create a Windows Hello profile to configure Windows Hello for Business for your Windows Desktop devices so end users can access your applications, websites, and networks without entering a password.

Important Windows Hello profiles only apply to devices enrolled through Azure AD integration.

Procedure

- 1 Navigate to **Devices > Profiles > List View > Add** and select **Add Profile**.
- 2 Select **Windows** and then select **Windows Desktop**.
- 3 Select **Device Profile**.
- 4 Configure the profile **General** settings.
- 5 Select the **Windows Hello** profile and configure the settings:

Settings	Descriptions
Biometric Gesture	Enable to allow end users to use the device biometric readers.
TPM	Set to Require to disable Passport use without a Trusted Protection Module installed on the device.
Minimum PIN Length	Enter the minimum number of digits a PIN must contain.
Maximum PIN Length	Enter the maximum number of digits a PIN can contain.
Digits	Set the permissions level for using digits in the PIN.
Upper Case Letters	Set the permissions level for using upper case letters in the PIN.
Lower Case Letters	Set the permissions level for using lower case letters in the PIN.
Special Characters	>Set the permissions level for using special characters (! " # \$ % & ' () * + , - . / : ; < = > ? @ [\] ^ _ ` { } ~) in the PIN.

- 6 Select **Save & Publish** to push the profile to devices.

Configure a Firewall (Legacy) Profile (Windows Desktop)

The Firewall (Legacy) profile for Windows Desktop devices allows you to configure the Windows Firewall settings for devices. Consider using the new Firewall profile for Windows Desktop as the new profile uses new Windows features.

Prerequisites

Important The Firewall profile requires the Workspace ONE Intelligent Hub to be installed on the device.

Procedure

- 1 Navigate to **Devices > Profiles > List View > Add** and select **Add Profile**.
- 2 Select **Windows** and then select **Windows Desktop**.
- 3 Select **Device Profile**.
- 4 Configure the profile **General** settings.
- 5 Select the **Firewall (Legacy)** payload.
- 6 Enable **Use Windows Recommended Settings** to use the Windows Recommended Settings and disable all other options available in this profile. The settings will automatically change to the recommended settings and you cannot change them.
- 7 Configure the **Private Network** settings:

Settings	Description
Firewall	Enable to use the firewall when the device is connected to private network connections.
Block All Incoming Connections, Including Those on the List of Allowed Apps	Enable to block all incoming connections. This setting allows outbound connections.
Notify User when Windows Firewall Blocks a New App	Enable to allow notifications to display when the Windows Firewall blocks a new app.

- 8 Configure the **Public Network** settings:

Settings	Description
Firewall	Enable to use the firewall when the device is connected to private network connections.
Block All Incoming Connections, Including Those on the List of Allowed Apps	Enable to block all incoming connections. This setting allows outbound connections.
Notify User when Windows Firewall Blocks a New App	Enable to allow notifications to display when the Windows Firewall blocks a new app.

- 9 Select **Save and Publish** when you are finished to push the profile to devices.

Configure a Firewall Profile (Windows Desktop)

Create a Firewall profile to configure the native Windows Desktop firewall settings. This profile uses more advanced functionality than the Firewall (Legacy) profile.

Workspace ONE UEM whitelists the OMA-DM agent automatically to ensure the Workspace ONE UEM console can always communicate with devices.

Procedure

- 1 Navigate to **Devices > Profiles > List View > Add** and select **Add Profile**.
- 2 Select **Windows** and then select **Windows Desktop**.
- 3 Select **Device Profile**.
- 4 Configure the profile **General** settings.
- 5 Select the **Firewall** payload.
- 6 Configure the **Global** settings.

Setting	Description
Stateful FTP	Set how the firewall handles FTP traffic. If you select Enable , the firewall tracks all FTP traffic. If you select Disable , the firewall does not inspect FTP traffic.
Security Association Idle Time	Select Configured and set the maximum amount of time (in seconds) the device waits before deleting idle security associations. Security associations are an agreement between two peers or endpoints. These agreements contain all the information required to securely exchange data.
Preshared Key Encoding	Select the type of encoding used for the preshared key.
IPSec Exemptions	Select the IPSec exemptions to use.
Certification Revocation List Verification	Select how to enforce the certificate revocation list verification.
Opportunity Match Auth Set Per KM	Select how key modules ignore authentication suites. Enabling this option forces key modules to ignore only the authentication suites they do not support. Disabling this option forces key modules to ignore the entire authentication set if they do not support all the authentication suites in the set.
Enable Packet Queue	Select how packet queuing works on the device. This setting allows you to ensure proper scaling.

7 Configure how the firewall behaves when connected to **Domain**, **Private**, and **Public** networks.

Setting	Description
Firewall	Set to Enable to enforce policy settings on the network traffic. If disabled, the device allows all network traffic, regardless of other policy settings.
Outbound Action	Select the default action the firewall takes on outbound connections. If you set this setting to Block , the firewall blocks all outbound traffic unless explicitly specified otherwise.
Inbound Action.	Select the default action the firewall takes on inbound connections. If you set this setting to Block , the firewall blocks all inbound traffic unless explicitly specified otherwise.
Unicast Responses to Multicast or Broadcast Network Traffic	Set the behavior for the responses to multicast or broadcast network traffic. If you disable this option, the firewall blocks all responses to multicast or broadcast network traffic.
Notify User When Windows Firewall Blocks a New App	Set the notification behavior for the firewall. If you select Enable , the firewall may send notifications to the user when it blocks a new app. If you select Disable , the firewall does not send any notifications.
Stealth Mode	To set the device in stealth mode, select Enable . Stealth mode helps prevent bad actors from gaining information about network devices and services. When enabled, stealth mode blocks outgoing ICMP unreachable and TCP reset messages from ports without an app actively listening on that port.
Allow IPSec Network Traffic in Stealth Mode	Set how the firewall handles unsolicited traffic secured by IPSec. If you select Enable , the firewall allows unsolicited network traffic secure by IPSec. This setting only applies when you enable Stealth Mode .
Local Firewall Rules	Set how the firewall interacts with local firewall rules. If you select Enable , the firewall follows local rules. If you select Disable , the firewall ignores local rules and does not enforce them.
Local Connection Rules	Set how the firewall interacts with local security connection rules. If you select Enable , the firewall follows local rules. If you select Disable , the firewall ignores local rules and does not enforce them, regardless of the schema and connection security versions.
Global Port Firewall Rules	Set how the firewall interacts with global port firewall rules. If you select Enable , the firewall follows the global port firewall rules. If you select Disable , the firewall ignores the rules and does not enforce them.
Authorized Application Rules	Set how the firewall interacts with local authorized application rules. If you select Enable , the firewall follows local rules. If you select Disable , the firewall ignores local rules and does not enforce them.

8 To configure you own firewall rules, select **Add Firewall Rule**. After adding a rule, configure the settings as needed. You can add as many rules as you need.

9 When finished, select **Save And Publish** to push the profile to devices.

Configure a Single App Mode Profile (Windows Desktop)

The Single App Mode profile allows you to limit access on the device to a single application. With Single App Mode, the device is locked into a single application until the payload is removed. The policy enables after a device reboot.

Prerequisites

Single App Mode has some restrictions and limitations.

- Windows Universal or Modern apps only. Single App Mode does not support legacy .msi or .exe applications.
- Users must be local standard users only. They cannot be a domain user, admin user, Microsoft account, or guest. The Standard User must be a Local User. Domain Accounts are not supported.

Procedure

- 1 Navigate to **Devices > Profiles > List View > Add** and select **Add Profile**.
- 2 Select **Windows** and then select **Windows Desktop**
- 3 Select **User Profile**.
- 4 Configure the profile **General** settings.
- 5 Select the **Single App Mode** Profile.
- 6 Configure the **Single App Mode** settings:

Settings	Descriptions
Application Name	<p>Enter the application friendly name.</p> <p>For Windows apps, the friendly name is the Package Name or Package ID.</p> <p>Run a PowerShell command to get the friendly name of the app installed on the device. The command "Get-AppxPackage" returns the application friendly name as "name."</p>

- 7 After configuring a Single App Mode profile, you must set up Single App Mode on the device.
 - a After receiving the Single App Mode profile on the device, reboot the device to begin.
 - b Once the device restarts, you are prompted to sign into the device with the Standard User account.

Once signed in, the policy launches and Single App Mode is ready for use.

If you must sign out of Single App Mode, press the Windows key 5X fast to launch the login screen to log in to a different user.

Configure an Antivirus Profile (Windows Desktop)

Create an Antivirus profile to configure the native Windows Defender antivirus on Windows Desktop devices. Windows Defender configured for all your devices ensures that your end users are protected as they use the device.

Important This profile only configures native Windows Defender and not other third-party antivirus appliances.

Procedure

- 1 Navigate to **Devices > Profiles > List View > Add** and select **Add Profile**.
- 2 Select **Windows** and then select **Windows Desktop**.
- 3 Select **Device Profile**.
- 4 Configure the profile **General** settings.
- 5 Select the **Antivirus** Profile.
- 6 Configure the **Antivirus** settings:

Settings	Descriptions
Real Time Monitoring	Enable to configure Windows Defender to monitor the device in real time.
Full Scan	Enable to schedule when a full system scan runs. Select the time interval (in hours) between scans.
Quick Scan	Enable to schedule when a quick system scan runs. Select the time interval (in hours) between scans.
Exclusions	Select the file paths or processes to exclude from the Windows Defender scans. Select Add New to add an exception.
Threat Default Action (Low, Moderate, High, Severe threats)	Set the default action for the different threat levels found during scans. <ul style="list-style-type: none"> ■ Clean – Select to clean the issues with the threat. ■ Quarantine – Select to separate the threat into a quarantine folder. ■ Remove – Select to remove the threat from your system. ■ Allow – Select to let the threat stay. ■ User Defined – Select to let the user decide what to do with the threat. ■ No Action – Select to take no action with the threat. ■ Block – Select to block the threat from accessing the device.
Scan Avg CPU Load Factor	Set the maximum average percentage of CPU Windows Defender can use during scans.
UI Lockdown	Enable to lock down completely the UI so end users cannot change settings.
Catchup Full Scan	Enable to allow run a full scan that was interrupted or missed previously. A catch-up scan is a scan that is initiated because a regularly scheduled scan was missed. Usually these scheduled scans are missed because the computer was turned off at the scheduled time.

Settings	Descriptions
Catchup Quick Scan	Enable to allow run a quick scan that was interrupted or missed previously. A catch-up scan is a scan that is initiated because a regularly scheduled scan was missed. Usually these scheduled scans are missed because the computer was turned off at the scheduled time.
Behavior Monitoring	Enable to set the virus scanner to send an activity log to Microsoft.
Intrusion Prevention System	Enable to configure the network protection against exploitation of known vulnerabilities. This option enables Windows Defender to monitor the connections continuously and identify potentially malicious behavior patterns. In this respect, the software behaves like a classic virus scanner, except that instead of scanning files it now scans network traffic.
Scan Email	Enable to allow Windows Defender to scan emails.
Scan Mapped Network Drives	Enable to allow Windows Defender to scan network drives mapped to devices.
Scan Archives	Enable to allow Windows Defender to run a full scan archived folders.
Scan Removable Drives	Enable to allow Windows Defender to scan any removable drives attached to the device.
Remove Quarantined Files After	Set how long files are quarantined before being removed.

7 Select **Save & Publish**.

Encryption Profile (Windows Desktop)

Secure your organization data on Windows Desktop devices with the Encryption profile. The Encryption profile sets the native BitLocker encryption policy on your Windows Desktop devices to ensure data remains secure.

BitLocker encryption is only available on Windows 8 Enterprise and Pro and Windows 10 Enterprise, Education, and Pro devices.

Because laptops and tablets are mobile devices by design, they risk your organization data being lost or stolen. By enforcing an encryption policy through Workspace ONE UEM, you can protect data on the hard drive. BitLocker is the native Windows encryption and Dell Data Protection | Encryption is a third-party encryption solution from Dell. With the Encryption profile enabled, the Workspace ONE Intelligent Hub continually checks the encryption status of the device. If the Workspace ONE Intelligent Hub finds that the device is not encrypted, it automatically encrypts the device.

If you decide to encrypt with BitLocker, a recovery key created during encryption is stored in the Workspace ONE UEM console and in the Self-Service Portal.

The Encryption profile requires the Workspace ONE Intelligent Hub to be installed on the device.

Note The Encryption profile does not configure or enable Dell Data Protection | Encryption. The status of the encryption is reported to the Workspace ONE UEM console and Self-Service Portal, but the encryption must be configured manually on the device.

Caution Windows 10 does not support devices without a pre-boot onscreen keyboard. Without a keyboard, you cannot enter the start up pin necessary to unlock the hard drive and start Windows on the device. Pushing this profile to devices without a pre-boot onscreen keyboard breaks your device.

BitLocker Functionality

The Encryption profile uses advanced BitLocker functionality to control authentication and deployment of BitLocker encryption.

BitLocker uses the Trusted Platform Module (TPM) on devices to store the recovery password on the device to decrypt hard drives connected to the motherboard. If the drive is removed from the motherboard, the drive does not decrypt. For enhanced authentication, you can enable an encryption PIN to confirm user authentication. You can also require a password for devices as a fallback for when the TPM is not available.

Deployment Behavior

The Windows-native BitLocker encryption secures data on Windows Desktop devices. Deploying the encryption profile requires more actions from the end user.

If the Encryption profile is pushed to an encrypted device and the current encryption settings match the profile settings, the Workspace ONE Intelligent Hub adds a new recovery key and sends it to the Workspace ONE UEM console. This new recovery key is also stored in an encrypted database on the device. With this feature, if a user or an admin attempts to decrypt the device, the Encryption profile re-encrypts the device with the new recovery key. The encryption is enforced even if the device is offline.

If the existing encryption does not meet the authentication settings of the Encryption profile, the existing protectors are removed and new protectors are applied that meet the Encryption profile settings.

If the existing encryption method does not match the Encryption profile, Workspace ONE UEM leaves the existing method in place and does not override it. This functionality also applies if you add a new version of the Encryption profile to a device managed by an existing Encryption profile. The existing encryption method is not changed.

If BitLocker is enabled and in use, you can see status reports about the encryption status in the following areas:

- Workspace ONE UEM Dashboard
 - Device Details displays recovery key information.
 - BitLocker protection displays as enabled.

- Workspace ONE UEM Self-Service Portal
 - Self-Service Portal displays that the recovery key is stored, but not the recovery key details.
 - BitLocker protection displays as enabled.

Removal Behavior

If the profile is removed from the Workspace ONE UEM console, Workspace ONE UEM no longer enforces the encryption and the device automatically decrypts. Enterprise wiping or manually uninstalling the Workspace ONE Intelligent Hub from the Control Panel disables BitLocker encryption.

If the end user decides to unenroll during the BitLocker encryption process, the encryption process continues unless it is turned off manually from the Control Panel.


Configure an Encryption Profile (Windows Desktop)

Create an Encryption profile to secure your data on Windows Desktop devices using the native BitLocker encryption.

Procedure

- 1 Navigate to **Devices > Profiles > List View > Add** and select **Add Profile**.
- 2 Select **Windows** and then select **Windows Desktop**.
- 3 Select **Device Profile**.
- 4 Configure the profile **General** settings.
- 5 Select the **Encryption** profile and configure the settings:

Settings	Descriptions
Encrypted Volume	Use the drop-down menu to select the type of encryption as follows: <ul style="list-style-type: none"> ■ Complete Hard Disk – Encrypts the entire hard disk on the device, including the System Partition where the OS is installed. ■ System Partition – Encrypts a partition or drive in the same location Windows is installed and from which it boots.
Encryption Method	Select the encryption method for the device.
Only encrypt used space during initial encryption	Enable to limit the BitLocker encryption to only the used space on the drive at the time of encryption.
Recovery Key URL	Enter the URL to display on the lock screen directing end users to get the recovery key. Consider entering the Self Service Portal URL as Workspace ONE UEM hosts the recovery key there.
Force Encryption	Enable to force encryption on the device. This enforcement means that the device immediately re-encrypts if BitLocker is manually disabled. Consider disabling this setting to prevent issues during upgrades or Enterprise Wipes.

Settings	Descriptions
Authentication Mode	Select the method for authenticating access to a BitLocker encrypted device. <ul style="list-style-type: none"> ■ TPM — Uses the devices Trusted Platform Module. Requires a TPM on the device. ■ Password — Uses a password to authenticate.
Enforce Encryption PIN on Login	Select the check box to require users to enter a PIN to unlock the device. This option locks out the OS start up and auto-resume from suspend or hibernate until the user enters the correct PIN.
Use Password if TPM Not present	Select the check box to use a password as a fallback to decrypt the device if the TPM is unavailable. If this settings is not enabled, any devices without a TPM do not encrypt.
Minimum Password Length	Select the minimum number of characters a password must be. Displays if the Authentication Mode is set to Password or if Use Password if TPM Not Available is enabled.
Create Static BitLocker Password	Select the check box if a static recovery key is enabled.
BitLocker Recovery Password	Select the Generate icon () to generate a new recovery key.
Rotation Period	Enter the number of days until the recovery key rotates.
Grace Period	Enter the number of days after rotation that the previous recovery key still works.
Enable BitLocker Suspend	Select the check box to enable BitLocker Suspension. This functionality suspends BitLocker encryption during a specified time period. Use this feature to suspend BitLocker when updates are scheduled so devices can reboot without requiring end users to enter the Encryption PIN or password.
Suspend BitLocker Type	Select the type of suspension. <ul style="list-style-type: none"> ■ Schedule — Select to enter the specific time period that BitLocker suspends. Then set the schedule repeat to daily or weekly. ■ Custom — Select to enter the day and time to begin and end BitLocker suspension.
BitLocker Suspend Start Time	Enter the time to start BitLocker suspension.
BitLocker Suspend End Time	Enter the time to end BitLocker suspension.
Scheduled Repeat Type	Set whether the scheduled suspension repeats daily or weekly. If you select weekly, select the days of the week to repeat the schedule.

6 Select **Save & Publish** when you are finished to push the profile to devices.

Configure a Windows Updates Profile (Windows Desktop)

Create a Windows Updates profile to manage the Windows Updates settings for Windows Desktop devices. The profile ensures that all your devices are up-to-date, which improves device and network security.

Prerequisites

To use advanced settings, the Windows Update profile requires the Workspace ONE Intelligent Hub to be installed on the device.

Important: To see the OS version each update branch supports, see Microsoft's documentation on Windows 10 release information: <https://technet.microsoft.com/en-us/windows/release-info.aspx>.

To enforce a Windows Update profile:

Procedure

- 1 Navigate to **Devices > Profiles > List View** and select **Add Profile**.
- 2 Select **Windows** and then select **Windows Desktop**.
- 3 Select **Device Profile**.
- 4 Configure the profile **General** settings.
- 5 Select the **Windows Updates** profile.
- 6 Configure the Windows Updates settings:

Settings	Descriptions
Windows Update Source	<p>Select the source for Windows Updates:</p> <ul style="list-style-type: none"> ■ Microsoft Update Service– Select to use the default Microsoft Update Server. ■ Corporate WSUS – Select to use a corporate server and enter the WSUS Server URL and WSUS Group. <p>The device must contact the WSUS at least once for this setting to take effect.</p> <p>Selecting Corporate WSUS as a source allows your IT Admin to view updates installed and device status of devices in the WSUS Group.</p>
Update Branch	<p>Select the update branch to follow for updates.</p> <ul style="list-style-type: none"> ■ Windows Insider Branch - Slow ■ Windows Insider Branch - Fast ■ Release Windows Insider Build ■ Semi-Annual Channel (Targeted) <ul style="list-style-type: none"> ■ Device receives all applicable feature updates immediately after the release of a new Windows version. Consider using this channel for your organization's testing process. ■ Semi-Annual Channel <ul style="list-style-type: none"> ■ This channel is the phase following targeted deployment. Consider using this channel after your testing process provides successful findings.
Defer Feature Updates Period in Days	<p>Select the number of days to delay feature updates before installing the updates on the device.</p> <p>The maximum number of days you can defer an update changed in Windows 10 version 1703. Devices running a version before 1703 can only defer for 180 days. Devices running a version after 1703 can defer up to 365 days.</p> <p>If you defer an update for longer than 180 days and push the profile to a device running a version of Windows 10 before the 1703 update, the profile fails to install on the device.</p>
Pause Feature Updates	<p>Enable to pause all feature updates for 60 days or until disabled. This setting overrides the Defer Feature Updates Period in Days setting.</p> <p>Use this option to delay an update that causes issues that can normally install following your deferral settings.</p>

Settings	Descriptions
Defer Quality Updates Period In Days	Select the number of days to delay quality updates before installing the updates on the device.
Pause Quality Updates	<p>Enable to pause all quality updates for 60 days or until disabled. This setting overrides the Defer Quality Updates Period in Days setting.</p> <p>Use this option to delay an update that causes issues that can normally install following your deferral settings.</p>
Enable Settings for Previous Windows versions	<p>Select to enable deferral settings for previous versions of Windows. The settings include:</p> <ul style="list-style-type: none"> ■ Defer New Features (months) ■ Defer New Updates (weeks) ■ Pause Deferrals
Automatic Updates	<p>Set how updates from the selected Update Branch are handled:</p> <ul style="list-style-type: none"> ■ Install updates automatically. ■ Install Updates but let the user schedule the computer. ■ Install updates automatically and restart at specified time. ■ Install updates automatically and prevent user from modifying the control panel settings. ■ Check for updates but let the user choose whether to download and install them. ■ Never check for updates.
Active Hours Start Time	<p>Enter the start time for active hours.</p> <p>Set the active hours to prevent the system from rebooting during these hours.</p>
Active Hours End Time	<p>Enter the end time for active hours.</p> <p>Set the active hours to prevent the system from rebooting during these hours.</p>
Allow Update Service	<p>Allow updates from the public Windows Update service.</p> <p>Not allowing this service can cause issues with the Microsoft Store.</p>
Allow MU Updates	Allow updates from Microsoft Update.
Update Other Microsoft Products When Updating Windows	Allow other Microsoft Products to update when Windows is updated.
Install Signed Updates from 3rd Party Entities	Allow the installation of updates from approved third parties.
Insider Builds	Allow the download of Windows Insider builds of Windows 10.
Require Update Approval	<p>Enable to require updates to have approval before downloading to the device.</p> <p>Enable to require admins explicitly approve updates before downloading to the device. This approval is either through Update Groups or individual update approval.</p> <p>This option requires you to accept any required EULA on behalf of your end users before the update pushes to devices. If a EULA must be accepted, a dialog box opens displaying the EULA.</p> <p>To approve updates, navigate to Lifecycle > Windows Updates. For more information, see Approve Windows Updates.</p>

Settings	Descriptions
Auto-Approved Updates	<p>Enable this option to set update groups that are automatically approved for download on end-user devices.</p> <p>This option requires you to accept any required EULA on behalf of your end users before the update pushes to devices. If a EULA must be accepted, a dialog box opens displaying the EULA.</p>
Feature Updates	<p>Set to Allowed to approve all feature updates for download to assigned devices automatically.</p> <p>Displays if Auto-Approved Updates is enabled.</p>
Application	<p>Set to Allowed to approve all app updates for download to assigned devices automatically.</p> <p>Displays if Auto-Approved Updates is enabled.</p>
Connectors	<p>Set to Allowed to approve all Office 365 connectors updates for download to assigned devices automatically.</p> <p>Displays if Auto-Approved Updates is enabled.</p>
Critical	<p>Set to Allowed to approve all critical updates for download to assigned devices automatically.</p> <p>Displays if Auto-Approved Updates is enabled.</p>
Definition	<p>Set to Allowed to automatically approve all Windows Defender definition updates for download to assigned devices.</p> <p>Consider setting this option to Allowed to ensure that your devices remain protected by Windows Defender. This option is enabled by default.</p> <p>Displays if Auto-Approved Updates is enabled.</p>
Developer Kit	<p>Set to Allowed to approve all developer kit updates for download to assigned devices automatically.</p> <p>Displays if Auto-Approved Updates is enabled.</p>
Drivers	<p>Set to Allowed to approve all driver updates for download to assigned devices automatically.</p> <p>Displays if Auto-Approved Updates is enabled.</p>
Feature Pack	<p>Set to Allowed to automatically approve all feature pack updates for download to assigned devices.</p> <p>Displays if Auto-Approved Updates is enabled.</p>
Guidance	<p>Set to Allowed to automatically approve all guidance updates for download to assigned devices.</p>
Security	<p>Set to Allowed to automatically approve all security updates for download to assigned devices.</p> <p>Consider setting this option to Allowed to ensure that your devices remain secure. This option is enabled by default.</p>
Service Pack	<p>Set to Allowed to approve all service pack updates for download to assigned devices automatically.</p> <p>Displays if Auto-Approved Updates is enabled.</p>
Tool Updates	<p>Set to Allowed to approve all tool updates for download to assigned devices automatically.</p> <p>Displays if Auto-Approved Updates is enabled.</p>

Settings	Descriptions
Update Rollups	Set to Allowed to automatically approve all update rollups for download to assigned devices. Displays if Auto-Approved Updates is enabled.
General	Set to Allowed to approve all general updates for download to assigned devices automatically. Displays if Auto-Approved Updates is enabled.
Peer-to-Peer Updates	Allow the use of peer-to-peer downloading of updates.
Allowed Peer-to-Peer Method	Select the method of peer-to-peer connection you want to allow.
Limit Peer Usage to Member with the Same Group ID	Limit peer-to-peer downloading to devices within the same organization group.
Maximum time each file is held in the delivery optimization cache (seconds)	Set the number of seconds a file is held in the delivery optimization cache before being pushed to devices. The optimization cache keeps updates available on other peers that the device can reach for quicker downloading of updates.
Maximum cache size that delivery optimization can utilize (%)	Enter the percentage of the cache that delivery optimization can use.
Maximum upload bandwidth that a device will use across all concurrent upload activity (KB/second)	Enter the maximum upload bandwidth in KB/second that a device uses when sending updates to peers.

7 Select **Save & Publish** to push the profile to devices.

Lifecycle Updates List View

Workspace ONE UEM supports reviewing and approving OS and OEM updates for Windows 10 devices and OS updates for specific Android updates. The Updates console page lists all updates available for Windows 10 devices enrolled in the current Organization Group.

Windows Updates

From this tab, you can approve updates and assign the updates to the specific smart groups as meets your business needs. This tab displays all updates with their published date, platform, classification, and assigned group. Only the updates available for the Windows 10 devices enrolled in the current Organization Group display. If you do not have any Windows 10 devices enrolled in the OG, no updates display.

Selecting the update name displays a window with detailed information, a link to the Microsoft KB page for the update, and the status of update installation.

For more information on approving an update, see [Approve Windows Updates](#).

The update installation status shows the deployment of the update across your devices. See the status of the update deployment by selecting **View**.

Status	Descriptions
Assigned	The update is approved and assigned to the device
Approved	The approved update is successfully assigned to the device.
Available	The update is available on the device for installation
Pending Installation	The installation is approved and available but not yet installed.
Pending Reboot	Installation is paused until the device reboots.
Installed	The update successfully installed
Failed	The updated failed to install.

OEM Updates

From this tab, you can see all OEM updates deployed to your Windows Desktop devices. You can order the list view by name, level, type, and device category. You can also filter the displayed updates with filters including audio drivers, chipset drivers, BIOS updates, and more.

See the installation status of the update deployment by selecting the update name.

For more information on pushing OEM updates to devices, see [Configure the OEM Updates Profile \(Windows Desktop\)](#)

Approve Windows Updates

Review and approve Windows Updates for installation on your Windows 10 devices. This feature allows you to ensure your devices remain up-to-date while controlling the distribution of updates to meet your business needs.

Prerequisites

You must publish a Windows Update profile with **Require Update Approval** enabled.

Procedure

- 1 Navigate to **Lifecycle > Updates > Windows**.
- 2 Select the check box on the left of the update. Select the **Assign** button.
- 3 Enter the smart groups to which the update applies.
- 4 Select **Add**.

What to do next

For more information on the Windows Updates console page, see [Lifecycle Updates List View](#).

Create a Proxy Profile (Windows Desktop)

Create a Proxy profile to configure a proxy server for your Windows Desktop devices. These settings do not apply to VPN connections.

Procedure

- 1 Navigate to **Devices > Profiles > List View > Add** and select **Add Profile**.
- 2 Select **Windows** and then select **Windows Desktop**.
- 3 Select **Device Profile**.
- 4 Configure the profile **General** settings.
- 5 Select the **Proxy** profile and configure the settings:

Settings	Description
Automatically Detect Settings	Enable to have the system automatically try to find the path to a proxy auto-config (PAC) script.
Use Setup Script	Enable to enter the file path to the PAC script.
Script Address	Enter the file path to the PAC script. This option displays when Use Setup Script is enabled.
Use Proxy Server	Enable to use a static proxy server for Ethernet and Wi-Fi connections. This proxy server is used for all protocols. These settings do not apply to VPN connections.
Address to Proxy Server	Enter the proxy server address. The address must follow the format: <server>[": "<port>].
Exceptions	Enter any addresses that should not use the proxy server. The system will not use the proxy server for these addresses. Separate entries with a semicolon (;).
User Proxy for Local (Intranet) Addresses	Enable to use the proxy server for local (intranet) addresses.

- 6 Select **Save And Publish**.

Configure a Web Clips Profile (Windows Desktop)

A Web Clips Profile allows you to push URLs on to end-user devices for easy access to important Web sites.

Procedure

- 1 Navigate to **Devices > Profiles > List View > Add** and select **Add Profile**.
- 2 Select **Windows** and then select **Windows Desktop**.
- 3 Select **User Profile**.
- 4 Configure the profile **General** settings.
- 5 Select the **Web Clips** profile.

6 Configure the **Web Clips** settings, including:

Settings	Description
Label	Enter a description for the Web clip.
URL	Enter the target URL for the Web clip.
Show in App Catalog	Enable to show the Web clip in the app catalog.

7 Select **Save & Publish** when you are finished to push the profile to devices.

Exchange ActiveSync Profile (Windows Desktop)

The Exchange ActiveSync profiles enable you to configure your Windows Desktop devices to access your Exchange ActiveSync server for email and calendar use.

Use certificates signed by a trusted third-party certificate authority (CA). Mistakes in your certificates expose your otherwise secure connections to potential man-in-the-middle attacks. Such attacks degrade the confidentiality and integrity of data transmitted between product components, and might allow attackers to intercept or alter data in transit. See [Configure a Credentials Profile \(Windows Desktop\)](#) for more information.

The Exchange ActiveSync profile supports the native mail client for Windows Desktop. The configuration changes based on which mail client you use.

Removing Profile or Enterprise Wiping

If the profile is removed using the remove profile command, compliance policies, or through an enterprise wipe, all email data is deleted, including:

- User account/login information.
- Email message data.
- Contacts and calendar information.
- Attachments that were saved to the internal application storage.

Username and Password

If you have email user names that are different than user email addresses, you can use the **{EmailUserName}** text box, which corresponds to the email user names imported during directory service integration. Even if your user user names are the same as their email addresses, use the **{EmailUserName}** text box, because it uses email addresses imported through the directory service integration.

Configure an Exchange ActiveSync Profile (Windows Desktop)

Create an Exchange ActiveSync profile to give Windows Desktop devices access to your Exchange ActiveSync server for email and calendar use.

Note Workspace ONE UEM does not support Outlook 2016 for Exchange ActiveSync profiles.

Procedure

- 1 Navigate to **Devices > Profiles > List View > Add** and select **Add Profile**.
- 2 Select **Windows** and choose **Windows Desktop** as the platform.
- 3 Select **User Profile**.
- 4 Configure the profile **General** settings.
- 5 Select the **Exchange ActiveSync** payload.
- 6 Configure the Exchange ActiveSync settings:

Settings	Descriptions
Mail Client	Select the Mail Client that the EAS profile configures. Workspace ONE UEM supports the Native Mail Client.
Account Name	Enter the name for the Exchange ActiveSync account.
Exchange ActiveSync Host	Enter the URL or IP Address for the server hosting the EAS server.
Use SSL	Enable to send all communications through the Secure Socket Layer.
Domain	Enter the email domain. The profile supports lookup values for inserting enrollment user login information. For more information, see the Username and Password section at the bottom of the page.
Username	Enter the email user name.
Email Address	Enter the email address. This text box is a required setting.
Password	Enter the email password.
Identity Certificate	Select the certificate for the EAS payload. See Configure a Credentials Profile (Windows Desktop) for more information.
Next Sync Interval (Min)	Select the frequency, in minutes, that the device syncs with the EAS server.
Past Days of Mail to Sync	Select how many days of past emails sync to the device.
Diagnostic Logging	Enable to log information for troubleshooting purposes.
Require Data Protection Under Lock	Enable to require data to be protected when the device is locked.
Allow Email Sync	Enable to allow the syncing of email messages.
Allow Contacts Sync	Enable to allow the syncing of contacts.
Allow Calendar Sync	Enable to allow the syncing of calendar events.

- 7 Select **Save** to keep the profile in the Workspace ONE UEM console or **Save & Publish** to push the profile to the devices.

SCEP Profile (Windows Desktop)

Simple Certificate Enrollment Protocol (SCEP) profiles enable you to install certificates onto devices silently without interaction from the end user.

Even with strong passcodes and other restrictions, your infrastructure remains vulnerable to brute force, dictionary attacks, and employee error. For greater security, you can implement digital certificates to protect corporate assets. To use SCEP to install these certificates to devices silently, you must first define a certificate authority, then configure a **SCEP** payload alongside your **EAS**, **Wi-Fi**, or **VPN** payload. Each of these payloads has settings for associating the certificate authority defined in the SCEP payload.

To push certificates to devices, configure a **SCEP** payload as part of the profiles you created for EAS, Wi-Fi, and VPN settings.

Configure a SCEP Profile (Windows Desktop)

A SCEP profile silently installs certificates onto devices for use with device authentication.

Procedure

- 1 Navigate to **Devices > Profiles > List View > Add** and select **Add Profile**.
- 2 Select **Windows** and then select **Windows Desktop**.
- 3 Select **User Profile** or **Device Profile**.
- 4 Configure the profile **General** settings.
- 5 Select the **SCEP** profile.
- 6 Configure the SCEP settings, including:

Settings	Descriptions
Credential Source	This drop-down menu is always set to defined certificate authority.
Certificate Authority	Select the certificate authority you want to use.
Certificate Template	Select the template available for the certificate.
Issuer	Enter the issuer of the certificate. The issuer can be found in the subject line of the certificate.
Store Location	Select where the SCEP stores on the machine: <ul style="list-style-type: none">■ Context User – Stores the SCEP with the specific user.■ Context Machine – Stores the SCEP for all users on the machine.

- 7 Configure the Wi-Fi, VPN, or EAS profile.
- 8 Select **Save & Publish** when you are finished to push the profile to devices.

Application Control Profile (Windows Desktop)

Limit which applications can be installed onto Windows Desktop devices with the Application Control profile. Limiting application installs protects your data from malicious apps and prevents end users from accessing unwanted apps on corporate devices.

To allow or prevent installation of applications on devices, you can enable Application Control to whitelist and blacklist specific applications. While the compliance engine monitors devices for whitelisted and blacklisted apps, Application Control prevents users from even attempting to add or remove applications. For example, prevent a certain game application from ever installing on a device, or allow only specific apps whitelisted to be installed on a device. Blacklisted apps installed on the device before the Application Control payload is pushed to the device are disabled after the profile is pushed.

The Application Control profile helps reduce the cost of device management by preventing user from running prohibited apps that cause issues. Preventing apps from causing issues reduces the number of calls your support staff must answer.

Configure an Application Control Profile (Windows Desktop)

Enable Application Control to whitelist and blacklist specific applications to allow or prevent use of applications on devices. Application Control uses Microsoft AppLocker configurations to enforce app control on Windows 10 devices.

Important

- Create policies using Audit Only mode first. After verifying with the Audit Only version on a test device, create an Enforce mode version for use with your devices. Failing to test policies before general use may result in your devices becoming unusable.
 - Create default rules and any other desired rules for your organization to reduce chances of locking the default configurations or breaking devices after reboot. For more information on creating rules, see the Microsoft TechNet article on AppLocker.
-

Prerequisites

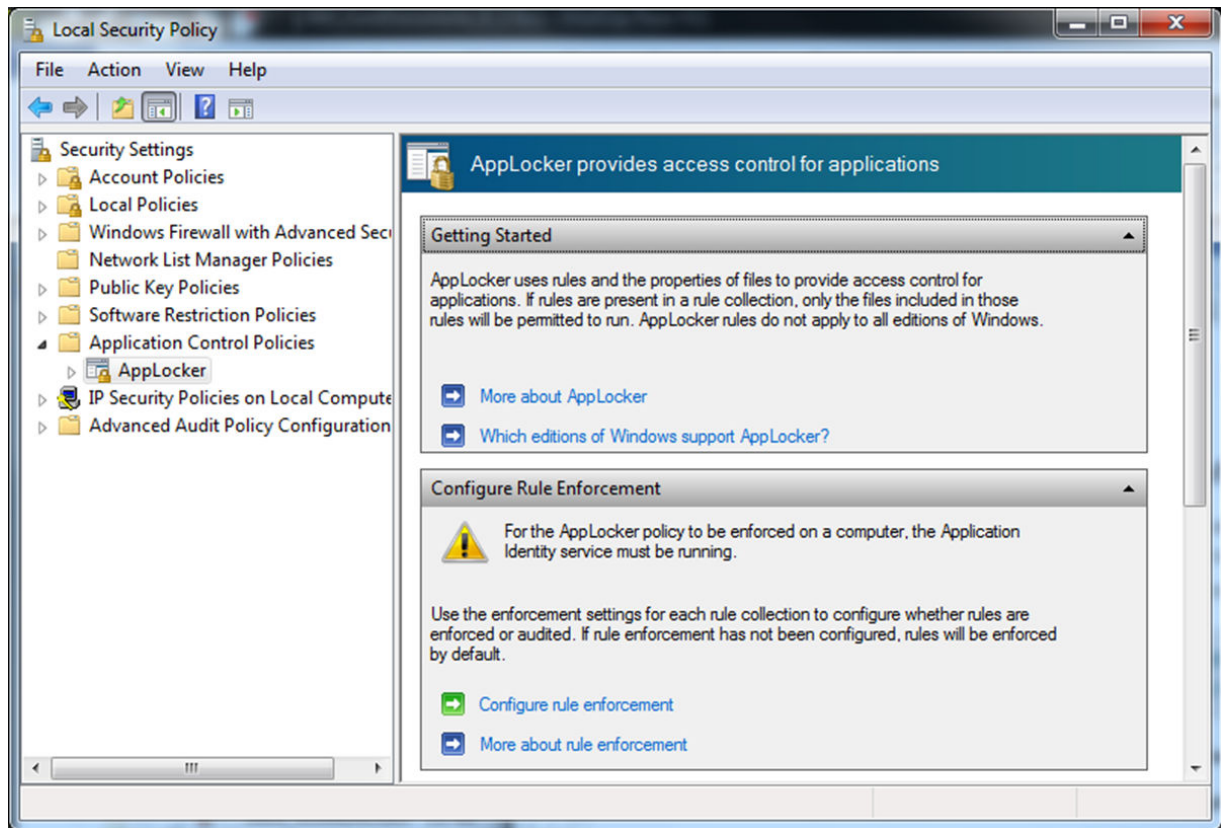
To configure an XML configuration file, you must configure the AppLocker settings on a device and export the file for use with the profile.

The Application Control profile requires Windows 10 Enterprise or Education.

Procedure

- 1 On the configuration device, start the **Local Security Policy** editor.

- 2 Navigate to **Application Control Policies > AppLocker** and select **Configure Rule Enforcement**.



- 3 Enable **Executable Rules**, **Windows Installer Rules**, and **Script Rules** enforcement by selecting **Enforce Rules**.
- 4 Create **Executable Rules**, **Windows Installer Rules**, and **Script Rules** by selecting the folder on the right then right-clicking the folder and selecting **Create New Rule**.
Remember to create Default Rules to reduce chances of locking the default configuration or breaking the device.
- 5 After creating all the rules you want, right-click **AppLocker** and select **Export Policy** and save the XML configuration file.
- 6 Navigate in the Workspace ONE UEM console to **Devices > Profiles > List View > Add** and select **Add Profile**.
- 7 Select **Windows** and then select **Windows Desktop**.
- 8 Select **Device Profile**.
- 9 Configure the profile **General** settings.
- 10 Select the **Application Control** payload.
- 11 Select **Import Sample Device Configuration** and select **Upload** to add your **Policy Configuration File**.
- 12 Select **Save & Publish**.

Configure an Exchange Web Services Profile (Windows Desktop)

Create an Exchange Web Services profile to allow end users to access corporate email infrastructures and Microsoft Outlook accounts from their devices.

Prerequisites

Important During first-time configuration, the device must have access to the Internal Exchange Server.

Procedure

- 1 Navigate to **Devices > Profiles > List View > Add** and select **Add Profile**.
- 2 Select **Windows** and then select **Windows Desktop**.
- 3 Select **User Profile**.
- 4 Configure the profile **General** settings.
- 5 Select the **Exchange Web Services** profile and configure the settings:

Settings	Descriptions
Domain	Enter the name of the email domain to which the end user belongs.
Email Server	Enter the name of the Exchange server.
Email Address	Enter the address for the email account.

- 6 Select **Save & Publish** when you are finished to push the profile to devices.

Removing an Exchange Web Services profile removes all Outlook accounts from the device.

Create a Windows Licensing Profile (Windows Desktop)

Configure a Windows Licensing profile to provide your Windows 10 devices with a Windows 10 Enterprise or Windows 10 Education license key. Use this profile to upgrade devices that do not come with Windows 10 Enterprise.

Important This upgrade cannot be reversed. If you publish this profile to BYOD devices, you cannot remove the licensing through MDM. Windows 10 can only upgrade following a specific upgrade path:

- Windows 10 Enterprise to Windows 10 Education
- Windows 10 Home to Windows 10 Education
- Windows 10 Pro to Windows 10 Education
- Windows 10 Pro to Windows 10 Enterprise

Procedure

- 1 Navigate to **Devices > Profiles > List View > Add** and select **Add Profile**.

- 2 Select **Windows** and then select **Windows Desktop**.
- 3 Select **Device Profile**.
- 4 Configure the profile **General** settings.
- 5 Select the **Windows Licensing** profile and configure the following settings:

Settings	Descriptions
Windows Edition	Select either Enterprise or Education edition.
Please Enter valid License Key	Enter the license key for the edition of Windows that you are using.

- 6 Select **Save & Publish** to push the profile to devices.

Configure a BIOS Profile (Windows Desktop)

Configure BIOS settings for select Dell enterprise devices with the BIOS profile. This profile requires integration with Dell Command | Monitor.

Support for the BIOS profile settings varies by Dell Enterprise device. Workspace ONE UEM only pushes the settings a device supports. If you push this profile to devices, Workspace ONE UEM automatically pushes the Dell Command | Monitor app to the devices.

For more information on supported devices, see [Chapter 9 Dell Command | Monitor Integration](#).

Prerequisites

If you want to use the configuration package feature, you must push the Dell Command | Configure app to devices. For more information, see [Chapter 8 Dell Command | Configure Integration](#).

Procedure

- 1 Navigate to **Devices > Profiles > List View > Add** and select **Add Profile**.
- 2 Select **Windows** and then select **Windows Desktop**.
- 3 Select **Device Profile**.
- 4 Configure the profile **General** settings.
- 5 Select the **BIOS** payload and configure the following settings:

Settings	Descriptions
BIOS Password	Enter the password used to unlock the BIOS of the device. This field is required.
TPM Chip	Select Enable to enable the device Trusted Platform Module chip.
Boot Mode	Select whether the device boots in BIOS or UEFI mode.
Boot Mode Protection	Select Enable to prevent issues with the OS installed on the device from booting. This protection prevents a change in Boot Mode on a device with an installed OS.

Settings	Descriptions
Secure Boot	<p>Select Enable to use Secure Boot settings on the device. You cannot disable Secure Boot with DCM. If your devices already use Secure Boot, you must manually disable the settings on the device.</p> <p>Secure Boot requires Boot Mode to be set to UEFI and Legacy Option ROMs to be set to Disable.</p>
Legacy Option ROMs	Select Enable to allow the use of legacy option ROMs during the boot process.
CPU Virtualization	Select Enable to allow hardware virtualization support.
Virtualization IO	Select Enable to allow input/output virtualization.
Trusted Execution	<p>Select Enable to allow the device to use the TPM chip, CPU Virtualization, and Virtualization IO for trust decisions.</p> <p>Trust Execution requires the TPM Chip, CPU Virtualization, and Virtualization IO settings to be set to Enabled.</p>
Wireless LAN	Select Enable to allow use of the device wireless LAN functionality.
Cellular Radio	Select Enable to allow use of the device cellular radio functionality.
Bluetooth	Select Enable to allow use of the device Bluetooth functionality.
GPS	Select Enable to allow use of the device GPS functionality.
SMART Reporting	Select Enable to use SMART monitoring of the device storage solutions.
Primary Battery Charge	<p>Select the charging rules for the device:</p> <ul style="list-style-type: none"> ■ Standard Charge - Consider using this option for users who switch between battery power and an external power source. This option fully charges the battery at a standard rate. Charge time varies by device model. ■ Express Charge - Consider using this option for users who need the battery charged over a short time period. Dell's fast charging technology allows a completely discharged battery to typically charge to 80% in about 1 hour when the computer is turned off and to 100% in approximately 2 hours. Charge time may be longer with the computer turned on. ■ AC Charge - Consider using this option for users who primarily operate their system while plugged in to an external power source. This setting may extend your battery's lifespan by lowering the charge threshold. ■ Auto Charge - Consider using this option for users who want to set the option and not change it. This option lets the system adaptively optimize your battery settings based on your typical battery usage pattern. ■ Custom Charge - Consider using this option for advanced users that desire greater control over when their battery starts and stops charging. <p>These rules control when the battery starts and stops charging. If you select Custom Charge, you can manually set the charge percentage to start and stop charging the battery.</p>
Primary Battery Custom Charge Start Limit	Set the battery charge percentage that must be reached before the device starts charging the battery.
Primary Battery Custom Charge Stop Limit	Set the battery charge percentage that must be reached before the device stops charging the battery.
Peak Shift	<p>Select Enable to use peak shift to control when a device uses battery charge or AC current. Peak shift allows you to use battery power instead of AC current during specified times.</p> <p>To set the schedule for Peak Shift, select the calendar icon.</p>

Settings	Descriptions
Peak Shift Scheduling	<p>The three parameters for peak shift scheduling control when a device uses battery or AC current and when the device charges the battery.</p> <ul style="list-style-type: none"> ■ Peak Shift Start – Set the start time for Peak Shift when devices switch to battery power. ■ Peak Shift End – Set the end time for Peak Shift when devices switch to AC current. ■ Peak Shift Charge Start – Set the start time for Peak Shift Charge when the devices charge the batteries while using AC current.
Peak Shift Battery Threshold	<p>Set the battery charge percentage that must be reached before devices switch back to AC current from battery power.</p> <p>The Peak Shift Charge Start setting controls the time when devices charge the batteries after switching to AC current.</p>
System Properties	<p>Select Add System Properties to add a custom system property. Select the button again to add additional properties.</p> <p>These properties are advanced options. Consider reviewing Dell documentation before using these settings.</p> <p>System Properties override any pre-defined settings configured in the profile.</p>
Class	<p>Enter a class and select it from the drop-down menu.</p> <p>Displays after selecting Add System Properties.</p>
System Property	<p>Enter a system property and select it from the drop-down menu.</p> <p>Displays after selecting Add System Properties.</p>
BIOS Attributes	<p>Select Add BIOS Attribute to add a custom BIOS attribute. Select the button again to add additional attributes.</p> <p>These attributes are advanced options. Consider reviewing Dell documentation before using these settings.</p> <p>BIOS Attributes override any pre-defined settings configured in the profile.</p>
BIOS Attribute	<p>Enter a BIOS attribute and select it from the drop-down menu.</p> <p>Displays after selecting Add BIOS Attribute.</p>
Value	<p>Select a value for the BIOS attribute. If a value is not supplied, the BIOS Attribute is read only.</p> <p>Displays after selecting Add BIOS Attribute.</p>
Configuration Package	<p>Select Upload to add a Dell Command Configure configuration package. Uploading a package allows you to configure multiple Dell devices with a single configuration.</p> <p>Configuration packages override any custom system properties or attributes.</p> <p>If you whitelist the file extensions allowed, you must add the CCTK file extension to the whitelist. Navigate to Groups & Settings > All Settings > Content > Advanced > File Extensions to add the file extension.</p>

6 Select **Save & Publish**.

Configure the OEM Updates Profile (Windows Desktop)

Configure OEM Update settings for select Dell enterprise devices with the OEM Updates profile. This profile requires integration with Dell Command | Update.

Support for the OEM Update profile settings varies by Dell Enterprise device. Workspace ONE UEM only pushes the settings a device supports.

For more information on supported devices, see [Chapter 10 Dell Command | Update Overview](#).

Note The OEM Updates profile only supports Dell Command | Update v2.4.

Procedure

- 1 Navigate to **Devices > Profiles > List View > Add** and select **Add Profile**.
- 2 Select **Windows** and then select **Windows Desktop**.
- 3 Select **Device Profile**.
- 4 Configure the profile **General** settings.
- 5 Select the **OEM Updates** payload and configure the following settings:

Settings	Description
Check for Updates	Select the interval used to check for updates.
Day of the Week	Select the day of the week to check for updates. Only displays when Check for Updates is set to Weekly .
Day of the Month	Select the day of the month to check for updates. Only displays when Check for Updates is set to Monthly .
Time	Select the time of day to check for updates.
Update Behavior	Select the actions to take when checking for updates. <ul style="list-style-type: none"> ■ Select Scan Notify to scan for updates and notify the user that updates are available. ■ Select Scan Download Notify to scan for updates, download any available, and notify the user that updates are available for installation. ■ Select Scan Notify Apply Reboot to scan for updates, download any available, install the updates, and reboot the device.
Reboot Delay	Select the amount of time the device delays rebooting after downloading updates.
Urgent Updates	Select Enable to apply Urgent Updates to the device.
Recommended Updates	Select Enable to apply Recommended Updates to the device.
Optional Updates	Select Enable to apply Optional Updates to the device.
Hardware Drivers	Select Enable to apply hardware driver updates provided by the OEM to the device.
Application Software	Select Enable to apply application software updates provided by the OEM to the device.
BIOS Updates	Select Enable to apply BIOS updates provided by the OEM to the device. Consider disabling any BIOS passwords if you want to use the OEM Update profile to manage BIOS updates. Some BIOS updates prompt users to enter the BIOS password.
Firmware Updates	Select Enable to apply firmware updates provided by the OEM to the device.
Utility Software	Select Enable to apply utility software updates provided by the OEM to the device.

Settings	Description
Other	Select Enable to apply other updates provided by the OEM to the device.
Audio	Select Enable to apply audio device updates provided by the OEM to the device.
Chipset	Select Enable to apply chipset device updates provided by the OEM to the device.
Input	Select Enable to apply input device updates provided by the OEM to the device.
Network	Select Enable to apply network device updates provided by the OEM to the device.
Storage	Select Enable to apply storage device updates provided by the OEM to the device.
Video	Select Enable to apply video device updates provided by the OEM to the device.
Others	Select Enable to apply other device updates provided by the OEM to the device.

6 Select **Save & Publish**.

Configure a Kiosk Profile (Windows Desktop)

Configure a Kiosk profile to turn your Windows Desktop device into multi-app kiosk device. This profile allows you to configure the apps that display in the device start menu.

You can upload your own custom XML to configure the Kiosk profile or create your kiosk as part of the profile. This profile does not support domain accounts or domain groups. The user is a built-in user account created by Windows.

■ Supported Apps

■ .EXE apps

- MSI and ZIP files require you to add the file path.

■ Built-In apps

- Select built-in apps are automatically added to the designer. These apps include:
- News
- Microsoft Edge
- Weather
- Alarms & Clock
- Sticky Notes
- Maps
- Calculator and Photos.

Procedure

- 1 Navigate to **Devices > Profiles > List View > Add** and select **Add Profile**.
- 2 Select **Windows** and then select **Windows Desktop**.
- 3 Select **Device Profile**.

4 Configure the profile **General** settings.

You must add an assignment before configuring the Kiosk profile.

5 Select the **Kiosk** profile.

6 If you have your custom XML already, select Upload Kiosk XML and complete the settings.

Settings	Description
Assign Access Configuration XML	Select Upload and add your Assigned Access Configuration XML. You can also paste your XML into the text box. For more information, see https://docs.microsoft.com/en-us/windows/client-management/mdm/assignedaccess-csp .

7 If you do not have any custom XML, select Create Your Kiosk and configure the app layout.

This layout is the device Start Menu in a grid. The apps that display on the left are the apps assigned to the assignment group you selected. Some apps have a gear icon with a red dot in the top-right corner. This icon displays for apps that require additional settings when added to the kiosk layout. After you configure the settings, the red dot disappears but the icon remains. You can select the arrow icon to change the size of the apps. For classic desktop apps, you can only select Small or Medium.

Kiosk

✕

Applications

BUILT-IN, WIN32, UWP

Start Menu Screens

Group Title

↖ ↗

🗑

Microsoft Edge

↖ ↗

🗑

Photos

Number of Groups:

1

SAVE

CANCEL

- 8 Drag all the apps you want to add to the start menu to the center. You can create up to four groups for your apps. These groups combine your apps into sections on the start menu.
- 9 Once you have added all the apps and groups you want, select **Save**.
- 10 On the Kiosk profile screen, select **Save & Publish**.

The profile does not install onto the device until all apps included in the profile are installed. Once the device receives the profile, the device restarts and runs in Kiosk mode. If you remove the profile from the device, the device disables Kiosk mode, restarts, and removes the Kiosk user.

Configure a Personalization Profile (Windows Desktop)

Configure a Personalization profile for Windows Desktop devices to configure the Windows Personalization settings. These settings include the desktop background and the start menu settings.

The options in this profile are all optional. Consider only configuring the settings you need to meet your Personalization requirements.

This profile does not create a multi-app kiosk device like the Kiosk profile. If you want to create a kiosk device, see [Configure a Kiosk Profile \(Windows Desktop\)](#).

Procedure

- 1 Navigate to **Devices > Profiles & Resources** and select **Add**.
- 2 Select **Windows** and then select **Windows Desktop**.
- 3 Select **Device Profile**.
- 4 Configure the profile **General** settings.
- 5 Select the **Personalization** profile.
- 6 Configure the **Images** settings:

Settings	Descriptions
Desktop Image	Select Upload to add an image to use as the desktop background.
Lock Screen Image	Select Upload to add an image to use as the lock screen background.

- 7 **Upload** a start layout XML. This XML file overrides the default start menu layout and prevents users from changing the layout. You can configure the layout of tiles, the number of groups, and the apps in each group. You must create this XML yourself. For more information on creating a start layout XML, see <https://docs.microsoft.com/en-us/windows/configuration/customize-and-export-start-layout>.
- 8 Configure the **Start Menu Policies** settings. These settings allow you to control which shortcuts are allowed in the start menu. You can also choose to **Hide** or **Show** certain options such as the **Shut Down** option or the **App List**.
- 9 Select **Save & Publish**.

What to do next

Peer Distribution with Workspace ONE

Workspace ONE peer distribution uses the native Windows BranchCache feature that is built into the Windows operating system. This feature provides an alternative peer-to-peer technology for customers to use instead of Adaptiva.

Configure peer distribution on your Windows 10 devices with the **Peer Distribution Windows Desktop** Profile. Peer distribution supports **Distributed**, **Hosted** and **Local** BranchCache modes along with their configuration settings; disk space percentage and max cache age.

Configure a Peer Distribution Profile (Windows Desktop)

Peer distribution with Workspace ONE allows you to deploy your Windows apps to enterprise networks. This profile uses the native Windows BranchCache functionality built into the the Windows operating system.

Prerequisites

Before you can use the Peer Distribution profile for peer-to-peer distribution, you must meet the peer distribution with Workspace ONE requirements. For more information, see [Requirements for Workspace ONE Peer Distribution](#).

Procedure

- 1 Navigate to **Devices > Profiles & Resources** and select **Add**.
- 2 Select **Windows** and then select **Windows Desktop**.
- 3 Select **Device Profile**.
- 4 Configure the profile **General** settings.
- 5 Select the **Peer Distribution** profile and select **Configure**.

You must have File Storage configured before you can create a Peer Distribution profile. For more information, see [Requirements for Workspace ONE Peer Distribution](#).

- 6 Select the **Workspace ONE Peer Distribution Mode** you want to use.

Setting	Description
Distributed	Select this option to have your devices download apps from peers in a local subnet.
Hosted	Select this option to have your devices to download apps from a hosted cache server.
Local	Select this option to have your devices to download apps from local device caching only.
Disabled	Select this option to disable peer distribution.

7 Configure the **Cache** settings:

Setting	Description
Maximum Cache Age (days)	Enter the maximum number of days that peer distribution items should remain in the cache before the device purges the items.
Percentage of Disk Space Used for BranchCache	Enter the amount of local disk space the device should allow peer distribution to use.

8 If you set the distribution mode to Hosted, configure the **Hosted Cache Servers** settings. You must add at least one hosted cache server for devices to download and upload content to and from.

9 Select **Save & Publish**.

Use Custom Settings (Windows Desktop)

The Custom Settings payload provides a way to use Windows Desktop functionality that Workspace ONE UEM does not currently support through its native payloads. If you want to use the new features, you can use the **Custom Settings** payload and XML code to enable or disable certain settings manually.

Prerequisites

You must write your own SyncML code for Windows Desktop profiles. Microsoft publishes a Configuration Service Provider reference site available on their website.

Example code:

```
<characteristic>
  <Replace>
    <CmdID>2</CmdID>
    <Item>
      <Target>
        <LocURI>./Device/Vendor/MSFT/AssignedAccess/KioskModeApp</LocURI>
      </Target>
      <Meta>
        <Format xmlns="syncml:metinf">chr</Format>
      </Meta>
      <Data>{"Account":"standard","AUMID":"AirWatchLLC.AirWatchBrowser_htcwk4rx2gx4!
App"}</Data>
    </Item>
  </Replace>
</characteristic>
```

Consider visiting <https://vmwarepolicybuilder.com> for help creating your custom profile XML.

Procedure

- 1 Navigate to **Devices > Profiles > List View > Add** and select **Add Profile**.
- 2 Select **Windows** and then select **Windows Desktop**.
- 3 Select **User Profile** or **Device Profile**.

4 Configure the profile **General** settings.

5 Configure the applicable payload (for example, Restrictions or Passcode).

You can work on a copy of your profile, saved under a "test" organization group, to avoid affecting other users before you are ready to Save and Publish.

6 **Save**, but do not publish, your profile.

7 Select the radio button from the **Profiles List View** for the row of the profile you want to customize.

8 Select the **XML** button at the top to view the profile X

9 Find the section of text starting with <characteristic> ... <characteristic> that you configured previously, for example, Restrictions or Passcode. The section contains a configuration type identifying its purpose, for example, restrictions.

10 Copy this section of text and close the XML View. Open your profile.

11 Select the **Custom Settings** payload and select **Configure**.

- a Paste the XML you copied in the **Install Settings** text box. The XML code you paste must contain the complete block of code, from <[characteristic]> to </[characteristic]>.
- b Add the removal code to the Delete Settings text box. The removal code must contain <replace></replace> or <delete></delete>.

This code enables Workspace ONE UEM functionality such as Remove Profile and Deactivate Profile. Without the removal code, you cannot remove the profile from the devices besides pushing a second Custom Settings profile. For more information, see <https://docs.microsoft.com/en-us/windows/client-management/mdm/configuration-service-provider-reference>.

12 Remove the original payload you configured by selecting the base payload section and selecting the minus [-] button. You can now enhance the profile by adding custom XML code for the new functionality.

Any device not upgraded to the latest version ignores the enhancements you create. Since the code is now custom, test the profile devices with older versions to verify the expected behavior.

13 Select **Save & Publish**.

Prevent Users from Disabling the AirWatch Service

Use a Custom Settings profile to prevent end users from disabling the AirWatch Service on their Windows 10 devices. Preventing end users from disabling the AirWatch Service ensures that the Workspace ONE Intelligent Hub runs regular check-ins with the Workspace ONE UEM console and receives the latest policy updates.

Procedure

1 Create a **Custom Settings** profile. For more information, see [Use Custom Settings \(Windows Desktop\)](#).

- 2 Set the **Target** to **Protection Agent**.
- 3 Copy the following code and paste it into the **Custom Settings** text box:

```
<wap-provisioningdoc id="c14e8e45-792c-4ec3-88e1-be121d8c33dc" name="customprofile">  
  <characteristic type="com.airwatch.winrt.awservicelockdown"  
    uuid="7957d046-7765-4422-9e39-6fd5eef38174">  
    <parm name="LockDownAwService" value="True"/>  
  </characteristic>  
</wap-provisioningdoc>
```

- 4 Select **Save & Publish**.

If you want to remove the restriction from end user devices, you must push a separate profile using the following code:

```
<wap-provisioningdoc id="c14e8e45-792c-4ec3-88e1-be121d8c33dc" name="customprofile">  
  <characteristic type="com.airwatch.winrt.awservicelockdown"  
    uuid="7957d046-7765-4422-9e39-6fd5eef38174">  
    <parm name="LockDownAwService" value="False"/>  
  </characteristic>  
</wap-provisioningdoc>
```


Using Baselines

Keep your Windows Desktop devices secure with Baselines. Workspace ONE UEM curates industry-recommended settings into one configuration to simplify securing your devices.

Keeping your devices configured to best practices is a time-consuming process. With Baselines, you can keep all your devices secure with industry-recommended settings and configurations. Workspace ONE UEM curates these best practices into configurations called Baselines. These configurations significantly reduce the time it takes to set up and configure Windows devices.

Baselines uses a cloud-based micro service that handles the policy catalog. If you are an on-premises customer, ensure that your environment can communicate with the micro-service. For more information, see the Workspace ONE UEM Recommended Architecture documentation.

To ensure that Baselines use only the best settings and configurations, CIS certifies VMware to provide industry favorites such as CIS Benchmarks for Windows 10. Baselines are based on the Windows OS version of your devices. You can change the OS version of the baseline later when editing. During configuration, you can choose which baseline to use and customize any of the baseline policies. You can also add any additional policies you need as part of the configuration process. These policies are the Microsoft ADMX policies.

If you have an existing Group Policy Object (GPO) backup file, you can create a custom baseline with those policies. You add additional policies to your existing GPO when creating a custom baseline.

After enrolling a device into Workspace ONE UEM, you can add the device to a Smart Group and assign a baseline to the group. The device receives and applies all the settings and configurations in the baseline after a device restart. The device checks for the baseline configurations upon publishing the baseline and at the defined check-in intervals. When you push a baseline to a device, Workspace ONE UEM stores a snapshot of the device settings.

You can manage your baselines from the Baselines list view. From here, you can edit and delete existing baselines. If you delete a baseline that was pushed to devices, the device settings revert to the settings before the baseline was published based on the snapshot stored by Workspace ONE UEM.

You can see which baselines are applied to a device in the Device Details page.

This chapter includes the following topics:

- [Create a Baseline](#)

Create a Baseline

Create a baseline that configures your devices to industry-recommended settings and configurations. Workspace ONE UEM curates Baselines based on industry favorites including CIS Benchmarks and Microsoft's Windows 10 security baselines.

Prerequisites

Baselines require that devices are enrolled in Workspace ONE UEM and have the Workspace ONE Intelligent Hub installed.

If you are publishing a custom baseline, you must add the LGPO.exe to all devices that you want to assign a baseline to. You must install the EXE at C:\ProgramData\Airwatch\LGPO\LGPO.exe. If you are using the CIS Benchmark or Windows 10 Security baselines, you do not need to add this file.

Procedure

- 1 Navigate to **Devices > Profiles & Resources > Baselines** and select **New**
- 2 Enter a **Baseline Name**, **Description**, and select the smart group the baseline is **Managed By**. Then select **Next**.
- 3 Select a baseline:

Setting	Description
CIS Windows 10 Benchmarks	This baseline applies the configuration settings recommended by CIS Benchmarks. Select the OS version and benchmark level to apply.
Windows 10 Security Baseline	This baseline applies the configuration settings recommended by Microsoft. Select the OS version and benchmark level to apply.
Custom Baseline	Upload a ZIP file with a GPO backup. You must create this baseline outside of Workspace ONE UEM. The backup must be less than 5 MB with at least one GPO folder.

- 4 Select **Next**.
- 5 Customize the baseline as needed. You can change any of the existing ADMX policies configured in the baseline.

When creating a custom baseline from a GPO baseline, you cannot customize the existing ADMX policies.
- 6 Select **Next**.
- 7 Add any additional policies to the baseline. These policies come from Microsoft ADMX files. Search for any policy to add and configure the policy.
- 8 Select **Next**.
- 9 Review the summary and select **Save & Assign**. The summary includes any customized or added policies.

Workspace ONE UEM assigns the baseline to all devices in the smart group.

What to do next

You must restart the device for the baseline to take effect.

Compliance Policies

The compliance engine is an automated tool by Workspace ONE UEM that ensures all devices abide by your policies. These policies can include basic security settings such as requiring a passcode and having a minimum device lock period.

For certain platforms, you can also decide to set and enforce certain precautions. These precautions include setting password strength, blacklisting certain apps, and requiring device check-in intervals to ensure that devices are safe and in-contact with Workspace ONE UEM. Once devices are determined to be out of compliance, the compliance engine warns users to address compliance errors to prevent disciplinary action on the device. For example, the compliance engine can trigger a message to notify the user that their device is out of compliance.

In addition, devices not in compliance cannot have device profiles assigned to it and cannot have apps installed on the device. If corrections are not made in the amount of time specified, the device loses access to certain content and functions that you define. The available compliance policies and actions vary by platform.

For more information about compliance policies, including which policies and actions are supported for a particular platform, see the **Managing Devices** documentation on docs.vmware.com.

This chapter includes the following topics:

- [Dell BIOS Verification for Workspace ONE UEM](#)
- [Compromised Device Detection with Health Attestation](#)

Dell BIOS Verification for Workspace ONE UEM

Ensure that your Dell Windows Desktop devices remain secure with Dell BIOS Verification. This service analyses the BIOS of your Dell devices and reports the status to Workspace ONE UEM so you can act against any compromised devices.

Benefits of Dell BIOS Verification

The BIOS is an integral part in maintaining the overall device health and security. Modern computer systems rely on BIOS firmware to initialize hardware during the boot process and for runtime services that support the operating system and applications. This privileged position within the device architecture makes unauthorized modification of the BIOS firmware a significant threat. The Dell BIOS Verification service provides secure BIOS validation using a secure signed response model. The status of the secure validation helps you act on compromised devices with the compliance policy engine.

Prepare Your Devices for Dell BIOS Verification

To use Dell BIOS Verification on your Windows Desktop devices, you must install the Dell BIOS Verification service on the device. You must download the latest client from Dell (<https://www.dell.com/support/home/us/en/04/product-support/product/bios-verification/drivers>). Consider using Software Distribution to install the client on your Dell Windows Desktop devices.

Dell BIOS Verification Statuses

After you install the client onto your devices, you can see the reported status in the Device Details page. The statuses are as follows:

- Pass - The Dell BIOS Verification client is installed on the device and the device is secure.
- Fail - The Dell BIOS Verification client is installed and one of the following issues is present:
 - The Pre-Check event returns a fail result. This result happens when the client detects an invalid binary signature.
 - The BIOS Utility event returns a fail result for the validation test.
 - The BIOS Server Processing event returns a fail result for an invalid signature, invalid exit code, or the payload status is out of sync.
- Warning - The Dell BIOS Verification is installed and the client detects an issue. The device might not be secured and you should investigate the issue. Causes for a Warning status might include:
 - No network connection
 - Invalid command-line argument
 - Application is running with insufficient privileges.
 - Internal errors in the client
 - Server responds with an error.
 - Driver issues with the client
 - Unknown results in the BIOS verification
- If you see a gray warning icon, the Dell BIOS Verification client is not installed on the device.

Compromised Device Detection with Health Attestation

Health Attestation scans devices during startup for failures in device integrity. Use Health Attestation to detect compromised Windows Desktop devices.

In both BYOD and Corporate-Owned device deployments, it is important to know that devices are healthy when accessing corporate resources. The Windows Health Attestation Service accesses device boot information from the cloud through secure communications. This information is measured and checked against related data points to ensure that the device booted up as intended and is not victim to security vulnerabilities or threat. Measurements include Secure Boot, Code Integrity, BitLocker, and Boot Manager.

Workspace ONE UEM enables you to configure the Windows Health Attestation service to ensure device compliance. If any of the enabled checks fail, the Workspace ONE UEM compliance policy engine applies security measures based on the configured compliance policy. This functionality allows you to keep your enterprise data secure from compromised devices. Since Workspace ONE UEM pulls the necessary information from the device hardware and not the OS, compromised devices are detected even when the OS kernel is compromised.

Configure the Health Attestation for Windows Desktop Compliance Policies

Keep your devices secured by using Windows Health Attestation Service for compromised device detection. This service allows Workspace ONE UEM to check the device integrity during startup and take corrective actions.

Procedure

- 1 Navigate to **Groups & Settings > All Settings > Devices & Users > Windows > Windows Desktop > Windows Health Attestation**.
- 2 (Optional) Select **Use Custom Server** if you are using a custom on-premises server running Health Attestation. Enter the **Server URL**.
- 3 Configure the Health Attestation settings:

Table 5-1. Compromised Status Definition

Settings	Descriptions
Use Custom Server	Select to configure a custom server for Health Attestation. This option requires a server running Windows Server 2016 or newer. Enabling this option displays the Server URL field.
Server URL	Enter the URL for your custom Health Attestation server.
Secure Boot Disabled	Enable to flag compromised device status when Secure Boot is disabled on the device. Secure Boot forces the system to boot to a factory trusted state. When Secure Boot is enabled, the core components used to boot the machine must have the correct cryptographic signatures that the OEM trusts. The UEFI firmware verifies the trust before it allows the machine to start. Secure boot prevents the startup if any it detects any tampered files.
Attestation Identity Key (AIK) Not Present	Enable to flag compromised device status when the AIK is not present on the device. Attestation Identity Key (AIK) is present on a device, it indicates that the device has an endorsement key (EK) certificate. It can be trusted more than a device that does not have an EK certificate.
Data Execution Prevention (DEP) Policy Disabled	Enable to flag compromised device status when the DEP is disabled on the device. The Data Execution Prevention (DEP) Policy is a memory protection feature built into the system level of the OS. The policy prevents running code from data pages such as the default heap, stacks, and memory pools. DEP is enforced by both hardware and software.
BitLocker Disabled	Enable to flag compromised device status when BitLocker encryption is disabled on the device.
Code Integrity Check Disabled	Enable to flag compromised device status when the code integrity check is disabled on the device. Code integrity is a feature that validates the integrity of a driver or system file each time it is loaded into memory. Code integrity checks for unsigned drivers or system files before they load into the kernel. The check also scans for users with administrative privileges running system files modified by malicious software.

Table 5-1. Compromised Status Definition (continued)

Settings	Descriptions
Early Launch Anti-Malware Disabled	Enable to flag compromised device status when the early launch anti-malware is disabled on the device. Early launch anti-malware (ELAM) provides protection for the computers in your network when they start up and before third-party drivers initialize.
Code Integrity Version Check	Enable to flag compromised device status when the code integrity version check fails.
Boot Manager Version Check	Enable to flag compromised device status when the boot manager version check fails.
Boot App Security Version Number Check	Enable to flag compromised device status when the boot app security version number does not meet the entered number.
Boot Manager Security Version Number Check	Enable to flag compromised device status when the boot manager security version number does not meet the entered number.
Advanced Settings	Enable to configure advance settings in the Software Version Identifiers section.

4 Select **Save**.

Windows Desktop Application Overview

6

You can use Workspace ONE UEM applications in addition to Workspace ONE UEM MDM features to further secure devices and configure them with added functionality.

Use the VMware Content Locker to safeguard corporate content on mobile devices and deploy the VMware Browser to enable secure Web browsing for your end users. Download the Workspace ONE Intelligent Hub for Windows to monitor your devices on a more granular level.

Deploying Win32 apps to Windows Desktop devices requires the Workspace ONE Intelligent Hub to be present on the device.

Important All public applications deployed to Windows Desktop devices are unmanaged applications. Unmanaged apps cannot be pushed to devices (end users must download the app themselves) nor can unmanaged apps be removed from devices through Enterprise Wipe.

This chapter includes the following topics:

- [VMware Workspace ONE for Windows Desktop](#)
- [Configure the Workspace ONE Intelligent Hub for Windows Devices](#)

VMware Workspace ONE for Windows Desktop

When the Workspace ONE application is installed on devices, users can sign in to Workspace ONE to securely access a catalog of applications that your organization enabled for them. When the application is configured with single sign-on, users do not need to reenter their sign-in credentials when they launch the app.

The Workspace ONE user interface works similarly on phones, tablets, and desktops. Workspace ONE opens to a Launcher page that displays resources that have been pushed to Workspace ONE. Users can tap or click to search, add, and update apps; right-click on an app to remove it from the page, and go to the Catalog page to add entitled resources.

If an app requires device enrollment, Workspace ONE uses adaptive management to start the enrollment process for the end user. For more information on Workspace ONE, see [Setting up the VMware Workspace ONE Application on Devices](#) available on the VMware Identity Manager Documentation Center (<https://docs.vmware.com>).

Configure the Workspace ONE Intelligent Hub for Windows Devices

The Workspace ONE Intelligent Hub for Windows devices is pre-configured with AirWatch. Change these settings when you need the Workspace ONE Intelligent Hub to meet certain business needs.

Procedure

- ◆ Navigate to **Groups & Settings > All Settings > Devices & Users > Windows > Windows Desktop > Hub Settings** to edit the Workspace ONE Intelligent Hub Settings:

- a Configure the **Modern Agent** settings so that the Workspace ONE Intelligent Hub transmits the desired data to the AirWatch Console:

Settings	Descriptions
Heartbeat Interval (min)	Defines the intervals at which the Workspace ONE Intelligent Hub and the Workspace ONE UEM console confirm a continued connection and synchronize.
Data Sample Interval (min)	Defines the intervals at which the Workspace ONE Intelligent Hub takes samples of data.
Administrative Passcode	Sets the passcode to access administrative settings on the device.
MDM Channel Security	Defines the app layer security between Workspace ONE UEM and the Workspace ONE Intelligent Hub. This secure channel uses the enrollment certificate to sign, encrypt, or sign and encrypt communications between the UEM console and the Workspace ONE Intelligent Hub.

- b Configure the **AirWatch Protection Agent** settings to ensure prompt communication between the device and the AirWatch Console.

Settings	Descriptions
Data Sample Interval (min)	Defines the intervals at which the AirWatch Protection Agent takes samples of data.

- c Configure the **Remote Management** settings to enable communication between the Workspace ONE Intelligent Hub and the Remote Management Server.

Setting	Description
Download Remote Control Cab	Select this link to download the cabinet (CAB) installer file for Workspace ONE UEM Remote Management.
Seek Permission	<p>Enable Seek Permission if you want to prompt the end user to accept or decline the remote management request from the admin.</p> <ul style="list-style-type: none"> ■ Enter a Seek Permission Message that the end user sees when a remote request is sent. ■ Enter the Yes Caption message for the accept button the end user sees on the Seek Permission request. ■ Enter the No Caption message for the decline button the end user sees on the Seek Permission request.

What to do next

You can prevent end users from disabling the AirWatch Service on their device using a custom XML profile. For more information, see [Prevent Users from Disabling the AirWatch Service](#).

Creating Sensors for Windows Desktop Devices

7

Windows Desktop devices contain multiple attributes such as hardware, OS, certificates, patches, apps, and more. Track these attributes in the Workspace ONE UEM console with the Sensors feature.

Devices have a huge number of attributes associated with them. This number increases when you start tracking the different apps, OS versions, patches, and other continually changing variables. It can be difficult to track all of these attributes to ensure your devices meet your needs.

Workspace ONE UEM tracks a limited number of device attributes by default. With Sensors, you can track the specific device attributes you want. For example, you can create a sensor that track the driver details for a mouse driver, the warranty information for the OS, and the registry value for your internal apps. Sensors allows you to track all of these across your devices. Another use case for Sensors involves creating a sensor that reports a "Retired Date" so you can keep track of devices that are no longer managed by your server.

Taking the tracking functionality to the next logical step, Workspace ONE UEM integrates Sensors with smart groups so you can provision apps, profiles, baselines, and more to your devices based on specific attributes. With a compliance policy, you can enforce actions when a device attribute changes value.

When configuring Sensors, you can control when the device reports the sensor data back to the Workspace ONE UEM console with triggers. These triggers can be a scheduled time based on the Windows Sample Schedule or specific device events such as login/logout, startup, or switching users.

The value of each sensor is determined by the PowerShell script you create. For examples of what scripts you can create, see [PowerShell Script Examples for Sensors](#).

This chapter includes the following topics:

- [PowerShell Script Examples for Sensors](#)
- [Create a Sensor for Windows Desktop Devices](#)

PowerShell Script Examples for Sensors

When you create a sensor, you must upload a PowerShell script or enter the PowerShell commands in the text box provided during configuration. These commands return the values for the sensor attributes.

PowerShell Script Examples

The following examples contain the settings and code needed. You can also visit <https://code.vmware.com/samples?id=4930> for more Sensors samples.

Note Any sensor that returns a date-time data type value uses the ISO format.

- Check remaining battery

- **Value Type:** integer
- **Execution Context:** User

```
$battery_remain=(Get-WmiObject win32_battery).estimatedChargeRemaining |
Measure-Object -Average | Select-Object -ExpandProperty Averageecho $battery_remain
```

- Get Serial Number

- **Value Type:** String
- **Execution Context:** User

```
$os=Get-WmiObject Win32_bios -ComputerName $env:computername -ea silentlycontinue
echo $os.SerialNumber
```

- Get system date

- **Value Type:** DateTime
- **Execution Context:** User

```
$date_current = get-Date -format s -DisplayHint Date
echo $date_current
```

- Check if TPM is enabled

- **Value Type:** Boolean
- **Execution Context:** Administrator

```
$obj = get-tpm
echo $obj.TpmReady
```

- Check if TPM is locked

- **Value Type:** Boolean
- **Execution Context:** Administrator

```
$obj = get-tpm
echo $obj.LockedOut
```

- Get TPM Locked Out Heal Time

- **Value Type:** String

- **Execution Context:** Administrator

```
$tpm=get-tpm
echo $tpm.LockoutHealTime
```

- Check if SMBIOS is present

- **Value Type:** Boolean

- **Execution Context:** User

```
$os = Get-WmiObject Win32_bios -ComputerName $env:computername -ea silentlycontinue
echo $os.SMBIOSPresent
```

- Check SMBIOS BIOSVersion

- **Value Type:** Boolean

- **Execution Context:** User

```
$os = Get-WmiObject Win32_bios -ComputerName $env:computername -ea silentlycontinue
echo $os.SMBIOSBIOSVersion
```

- Get BIOS version

- **Value Type:** String

- **Execution Context:** User

```
$os = Get-WmiObject Win32_bios -ComputerName $env:computername -ea silentlycontinue
echo $os.Version
```

- Get BIOS status

- **Value Type:** String

- **Execution Context:** User

```
$os = Get-WmiObject Win32_bios -ComputerName $env:computername -ea silentlycontinue
echo $os.Status
```

- Get average CPU usage (%)

- **Value Type:** Integer

- **Execution Context:** User

```
cpu_usage= Get-WmiObject win32_processor | Select-Object -ExpandProperty LoadPercentage
echo $cpu_usage
```

- Get average memory usage

- **Value Type:** Integer

- **Execution Context:** User

```
$os = Get-WmiObject win32_OperatingSystem
$used_memory = $os.totalvisiblememorysize - $os.freephysicalmemory
echo $used_memory
```

- Get average virtual memory usage

- **Value Type:** Integer

- **Execution Context:** User

```
$os = Get-WmiObject win32_OperatingSystem
$used_memory = $os.totalvirtualmemorysize - $os.freevirtualmemory
echo $used_memory
```

- Get average network usage

- **Value Type:** Integer

- **Execution Context:** User

```
$Total_bytes=Get-WmiObject -class Win32_PerfFormattedData_Tcpip_NetworkInterface
|Measure-Object -property BytesTotalPersec -Average |Select-Object -ExpandProperty Average
echo ([System.Math]::Round($Total_bytes))
```

- Get average memory usage for a process

- **Value Type:** String

- **Execution Context:** User

```
$PM = get-process chrome |Measure-object -property PM -Average|Select-Object -ExpandProperty
Average
$NPM = get-process chrome |Measure-object -property NPM -Average|Select-Object -
ExpandProperty Average
echo [System.Math]::Round(($PM+$NPM)/1KB)
```

- Check if a process is running or not

- **Value Type:** Boolean

- **Execution Context:** User

```
$chrome = Get-Process chrome -ea SilentlyContinue
if($chrome){
    echo $true
}
else{
    echo $false
}
```

- Check if Secure Boot is enabled

- **Value Type:** Boolean

- **Execution Context:** Administrator

```
try { $bios=Confirm-SecureBootUEFI }
catch { $false }
echo $bios
```

- Active Network Interface

- **Value Type:** String

- **Execution Context:** User

```
$properties = @('Name','InterfaceDescription')
$physical_adapter = get-netadapter -physical | where status -eq "up"
|select-object -Property $properties
echo $physical_adapter
```

- Check the PowerShell version

- **Value Type:** String

- **Execution Context:** User

```
$x = $PSVersionTable.PSVersion
echo "$($x.Major).$($x.Minor).$($x.Build).$($x.Revision)"
```

- Check Battery max capacity

- **Value Type:** Integer

- **Execution Context:** User

```
$max_capacity = (Get-WmiObject -Class "BatteryFullChargedCapacity" -Namespace "ROOT
\WMI").FullChargedCapacity | Measure-Object -Sum |
Select-Object -ExpandProperty Sum
echo $max_capacity
```

- Check Battery Charging Status

- **Value Type:** String

- **Execution Context:** User

```
$charge_status = (Get-CimInstance win32_battery).batterystatus
$charging = @(2,6,7,8,9)
if($charging -contains $charge_status[0] -or $charging -contains $charge_status[1] )
{
    echo "Charging"
}else{
    echo "Not Charging"
}
```

- Active Power Management Profile

- **Value Type:** String

- **Execution Context:** Administrator

```
$plan = Get-WmiObject -Class win32_powerplan -Namespace root\cimv2\power
-FILTER "isActive='true'"
echo $plan
```

- Check if Wireless is present

- **Value Type:** Boolean

- **Execution Context:** User

```
$wireless = Get-WmiObject -class Win32_NetworkAdapter -filter "netconnectionid like 'Wi-Fi%'"
if($wireless){echo $true}
else {echo $false}
```

- Get Java version

- **Value Type:** String

- **Execution Context:** User

```
$java_ver = cmd.exe /c "java -version" '2>&1'
echo $java_ver
```

Create a Sensor for Windows Desktop Devices

Create a sensor to track specific device attributes such as remaining battery, OS version, average CPU usage, and more. You can use these sensors with smart groups to provision profiles or create compliance policies.

Sensors use PowerShell scripts to gather attribute values. You must create these scripts yourself either before creating a sensor or during configuration in the scripting window. Each script should contain only one sensor. If a script returns multiple values, VMware Workspace ONE Intelligence reads only the first value as the response from the script. If a script returns a null value, VMware Workspace ONE Intelligence does not report the sensor.

Prerequisites

You must opt into VMware Workspace ONE Intelligence before using Sensors.

Procedure

- 1 Navigate to **Devices > Provisioning > Custom Attributes > Sensors**.
- 2 Select **New > Windows**.

3 Configure the Sensor settings:

Setting	Description
Name	Enter a name for the sensor. The name must start with a lowercase letter followed by alpha-numeric characters and underscores. The name must be between 2-255 characters.
Description	Enter a description for the sensor.
Value Type	<p>Select the sensor value type. You can choose between:</p> <ul style="list-style-type: none"> ■ String ■ Integer ■ Boolean ■ Date Time
Triggers	<p>Select the trigger for the sensor reporting the device attribute value.</p> <p>If you select Schedule, the device reports the value to the Workspace ONE UEM console based on the Windows Sample Schedule.</p> <p>If you select Event, you can choose a device event to trigger when to record the value. The triggers include:</p> <ul style="list-style-type: none"> ■ Login ■ Logout ■ Startup ■ User Switch

4 Select **Next**.

5 Select the **Execution Context**. This setting controls whether the script executes on a user or system context.

6 Upload a **Script/Command** or write your own in the text box provided.

The sensor is created and appears in the Sensors list view.

What to do next

After creating a sensor, assign the sensor to a smart group by selecting the **Assign** button on the Sensors list view.

Dell Command | Configure Integration

8

Integrate Workspace ONE UEM with Dell Command | Configure to configure device BIOS settings. This integration enables the full functionality of the BIOS profile for Windows Desktop devices.

Basics

Integrating with Dell Command | Configure to enhance the device management of Dell enterprise devices. If you want to use the configuration packages feature of the BIOS profile, you must add this integration to your environment.

Supported Devices

- Dell OptiPlex™ desktop devices
- Dell Precision Workstation™ desktop and laptop devices
- Dell Latitude™ laptop devices

Add Dell Command | Configure to Workspace ONE UEM

To integrate Dell Command | Configure with Workspace ONE UEM, add the program as an internal Win32 application in the Workspace ONE UEM. For more information, see [Add Dell Command | Configure to Workspace ONE UEM](#).

BIOS Profile

Configure certain BIOS settings on Dell enterprise devices using a BIOS profile. The settings allow you to control hardware virtualization and BIOS security. For more information, see [Configure a BIOS Profile \(Windows Desktop\)](#).

This chapter includes the following topics:

- [Add Dell Command | Configure to Workspace ONE UEM](#)

Add Dell Command | Configure to Workspace ONE UEM

Add Dell Command | Configure to the Workspace ONE UEM console to enhance management of your Dell enterprise devices. If you want to use the configuration packages feature of the BIOS profile, you must add this integration to your environment.

Prerequisites

You must enable Software Distribution to push Dell Command | Configure to your devices.

Procedure

- 1 Navigate to <https://www.dell.com/support/article/us/en/04/sln311302/dell-command-configure?lang=en> and download the latest version of Dell Command | Configure.
- 2 Open the EXE and select **Extract**. Save the extracted files into a folder.
- 3 Navigate to the folder and find the MSI file.
- 4 In the UEM console, add the extracted MSI file as an internal application. Make sure to set the Supported Processor Architecture to 32-bit or 64-bit based on the device OS.
- 5 In the Deployment Options tab, set the **Admin Privileges** to **Yes**.
- 6 Add an assignment of the application to your Dell enterprise devices.

The application downloads and installs on assigned devices and you can now push BIOS profiles to the device.

Dell Command | Monitor Integration

9

Integrate Workspace ONE UEM with Dell Command | Monitor to enhance the information Workspace ONE UEM collects from enrolled Dell enterprise devices. This integration also allows you to configure device BIOS settings.

Basics

Integrating with Dell Command | Monitor to enhance the device management of Dell enterprise devices. With this integration, Workspace ONE UEM reports the device battery health status and certain BIOS settings.

Supported Devices

- Dell OptiPlex™ desktop devices
- Dell Precision Workstation™ desktop and laptop devices
- Dell Latitude™ laptop devices

BIOS Profile

Configure certain BIOS settings on Dell enterprise devices using a BIOS profile. The settings allow you to control hardware virtualization and BIOS security. For more information, see [Configure a BIOS Profile \(Windows Desktop\)](#).

Battery Health Status

The overall health of a battery affects the lifespan of a device. With Dell Command | Monitor, monitor the health of your Dell enterprise device batteries. This health does not show the current charge of the battery but reports status of the ability to hold a charge, time to charge to full, and other factors as a percentage. According to Dell, any battery with a status under 25% should be replaced.

Dell Command | Update Overview

10

Dell Command | Update is a client-side management software and part of the Dell Client Command Suite. The software enables updating firmware, drivers, and applications for supported Dell devices.

Basics

Integrate with Dell Command | Update to enhance the update management of Dell enterprise devices. With this integration, Workspace ONE UEM supports remotely updating firmware, drivers, and other applications. You can control when and what types of updates deploy to devices.

Supported Devices

- Dell OptiPlex™ desktop devices
- Dell Precision Workstation™ desktop and laptop devices
- Dell Latitude™ laptop devices

Add Dell Command | Update to Workspace ONE UEM

To integrate Dell Command | Update with Workspace ONE UEM, add the application as an internal Win32 application in the Workspace ONE UEM Console. For more information, see [Add Dell Command | Update to Workspace ONE UEM](#).

Configure the OEM Updates Profile

Configure the OEM Updates profile to enabled Dell Command | Update on end-user devices. For more information, see [Configure the OEM Updates Profile \(Windows Desktop\)](#).

This chapter includes the following topics:

- [Add Dell Command | Update to Workspace ONE UEM](#)

Add Dell Command | Update to Workspace ONE UEM

To enhance management of your Dell enterprise devices, add the Dell Command | Update to the Workspace ONE UEM Console. The OEM Update profile requires this application before pushing to devices.

Prerequisites

You must enable Software Distribution to push Dell Command | Update to your devices.

Procedure

- 1 Navigate to <http://en.community.dell.com/techcenter/enterprise-client/w/wiki/7534.dell-command-update> and download the latest version of Dell Command | Update.
- 2 In the UEM Console, add the EXE file as an internal application. Make sure to set the Supported Processor Architecture to 32-bit or 64-bit based on the device OS.
- 3 In the Deployment Options tab, set the **Admin Privileges** to **Yes**.
- 4 Add an assignment of the application to your Dell enterprise devices.

The application downloads and installs on assigned devices and you can now push OEM Update profiles to the device.

Windows Desktop Device Management

11

After your devices are enrolled and configured, manage the devices using the Workspace ONE™ UEM console. The management tools and functions enable you to keep an eye on your devices and remotely perform administrative functions.

You can manage all your devices from the UEM console. The Dashboard is a searchable, customizable view that you can use to filter and find specific devices. This feature makes it easier to perform administrative functions on a particular set of devices. The Device List View displays all the devices currently enrolled in your Workspace ONE UEM environment and their status. The **Device Details** page provides device-specific information such as profiles, apps, Workspace ONE Intelligent Hub version and which version of any applicable OEM service currently installed on the device. You can also perform remote actions on the device from the Device Details page that are platform-specific.

This chapter includes the following topics:

- [Device Dashboard](#)
- [Device List View](#)
- [Windows Desktop Device Details Page](#)
- [Workspace ONE Assist](#)
- [Product Provisioning Overview](#)

Device Dashboard

As devices are enrolled, you can manage them from the Workspace ONE UEM powered by AirWatch **Device Dashboard**.

The **Device Dashboard** provides a high-level view of your entire fleet and allows you to act on individual devices quickly.

You can view graphical representations of relevant device information for your fleet, such as device ownership type, compliance statistics, and platform and OS breakdowns. You can access each set of devices in the presented categories by selecting any of the available data views from the **Device Dashboard**.

From the **List View**, you can take administrative action: send messages, lock devices, delete devices, and change groups associated with the device.

- **Security** – View the top causes of security issues in your device fleet. Selecting any of the doughnut charts displays a filtered **Device List** view comprised of devices affected by the selected security issue. If supported by the platform, you can configure a compliance policy to act on these devices.
 - **Compromised** – The number and percentage of compromised devices (jailbroken or rooted) in your deployment.
 - **No Passcode** – The number and percentage of devices without a passcode configured for security.
 - **No Encryption** – The number and percentage of devices that are not encrypted for security. This reported figure excludes Android SD Card encryption. Only those Android devices lacking disc encryption are reported in the donut graph.
- Ownership** – View the total number of devices in each ownership category. Selecting any of the bar graph segments displays a filtered **Device List** view comprised of devices affected by the selected ownership type.
- **Last Seen Overview/Breakdown** – View the number and percentage of devices that have recently communicated with the Workspace ONE UEM MDM server. For example, if several devices have not been seen in over 30 days, select the corresponding bar graph to display only those devices. You can then select all these filtered devices and send them a message requesting that they check in.
- **Platforms** – View the total number of devices in each device platform category. Selecting any of the graphs displays a filtered **Device List** view comprised of devices under the selected platform.
- **Enrollment** – View the total number of devices in each enrollment category. Selecting any of the graphs displays a filtered **Device List** view comprised of devices with the selected enrollment status.
- **Operating System Breakdown** – View devices in your fleet based on operating system. There are separate charts for Apple iOS, Android, Windows Phone, and Windows Rugged. Selecting any of the graphs displays a filtered **Device List** view comprised of devices running the selected OS version.

Device List View

Use the Device List View to see a full listing of devices in the currently selected organization group.

The **Last Seen** column displays an indicator showing the number of minutes elapsed since the device has checked-in. The indicator is red or green, depending on the number of minutes defined in **Device Inactivity Timeout (min)**. This indicator can be set by navigating to **Groups & Settings > All Settings > Devices & Users > General > Advanced**.

Select a device-friendly name in the **General Info** column at any time to open the details page for that device. A **Friendly Name** is the label you assign to a device to help you differentiate devices of the same make and model.

Sort by columns and configure information filters to review activity based on specific information. For example, sort by the **Compliance Status** column to view only devices that are currently out-of-compliance and target only those devices. Search all devices for a friendly name or user name to isolate one device or user.

Customize Device List View Layout

Display the full listing of visible columns in the **Device List** view by selecting the **Layout** button and select the **Custom** option. This view enables you to display or hide Device List columns per your preferences.

There is also an option to apply your customized column view to all administrators. For instance, you can hide 'Asset Number' from the **Device List** views of the current OG.

Once all your customizations are complete, select the **Accept** button to save your column preferences and apply this new column view. You can return to the **Layout** button settings at any time to tweak your column display preferences.

Search in Device List View

You can search for a single device for quick access to its information and take remote action on the device.

To run a search, navigate to **Devices > List View**, select the **Search List** bar and enter a user name, device-friendly name, or other device-identifying element. This action initiates a search across all devices, using your search parameter, within the current organization group and all child groups.

Windows Desktop Device Details Page

Use the Device Details page to track detailed device information for Windows Desktop devices and quickly access user and device management actions.

You can access Device Details by selecting a Friendly Name from the Device List View, using one of the Dashboards, or with any of the search tools.

From the Device Details page, you can access specific device information broken into different menu tabs. Each menu tab contains related device information depending on your Workspace ONE UEM deployment.

Windows Notification Service Details

You can see the status of device communication with the Windows Notification Service(WNS) from the Network tab of the Device Details page. The WNS supports sending your devices notifications. If a device is not currently online, the service caches the notifications until the device connects again.

The WNS statuses include the following:

- **WNS Server Status** - displays the state of your WNS server.

- **Last WNS Renewal Request** - The date and time of last attempt made to renew the Windows Notification Services (WNS) connection with the device. This connection allows Workspace ONE UEM to query and push policies to the device in real time (Networking, Battery Sense, and Data Sense conditions permitting). For more information on WNS, please refer to <https://docs.microsoft.com/en-us/windows/client-management/mdm/push-notification-windows-mdm>.
- **Next WNS Get Request** - The date and time of the next scheduled attempt to renew the connection between WNS and the device.
- **WNS Channel URI** - The WNS communication endpoint that devices and Workspace ONE UEM use. This endpoint uses the following format: `https://*.notify.windows.com/?token=_{TOKEN}`

Remote Actions

The **More Actions** drop-down on the Device Details page enables you to perform remote actions over the air to the selected device.

The actions vary depending on factors such as the device platform, Workspace ONE UEM console settings, and enrollment status:

- **Add Tag** – Assign a customizable tag to a device, which can be used to identify a special device in your fleet.
- **Apps (Query)** – Send an MDM query command to the device to return a list of installed apps.

The Apps (Query) action requires an active enrolled user login.

- **Certificates (Query)** – Send an MDM query command to the device to return a list of installed certificates.

The Certificates (Query) requires an active enrolled user login.

- **Change Organization Group** – Change the device's home organization group to another pre-existing OG. Includes an option to select a static or dynamic OG.
- **Request Device Log** – Request the debug log on the selected device, after which you may view the log by selecting the **More** tab and choosing **Attachments > Documents**. You cannot view the log within the Workspace ONE UEM console. The log is delivered as a ZIP file that can be used to troubleshoot and provide support.

When you request a log you can choose to receive the logs from the **System** or the **Hub**. **System** provides system-level logs. **Hub** provides logs from the multiple agents running on the device.

Android Only: you can retrieve detailed logs from corporate-owned Android devices and view them in the console to quickly resolve issues on the device.

- **Delete Device** – Delete and unenroll a device from the console. Sends the enterprise wipe command to the device that gets wiped on the next check-in and marks the device as **Delete In Progress** on the console. If the wipe protection is turned off on the device, the issued command immediately performs an enterprise wipe and removes the device representation in the console.
- **Device Information (Query)** – Send an MDM query command to the device to return basic information on the device such as friendly name, platform, model, organization group, operating system version and ownership status.
- **Device Wipe** – Send an MDM command to wipe a device clear of all data and operating system. This puts the device in a state where recovery partition will be needed to reinstall the OS. This action cannot be undone.
 - iOS Device Wipe Considerations
 - For iOS 11 and below devices, the device wipe command would also wipe the Apple SIM data associated with the devices.
 - For iOS 11+ devices, you have the option to preserve the Apple SIM data plan (if existed on the devices). To do this, select the **Preserve Data Plan** checkbox on the Device Wipe page before sending the device wipe command.
 - For iOS 11.3+ devices, you have an additional option to enable or disable to skip the **Proximity Setup** screen while sending down the device wipe command. When the option is enabled, the Proximity Setup screen will be skipped in the Setup Assistant and thus preventing the device user from seeing the Proximity Setup option.
 - For Windows Desktop Devices, you can choose the type of device wipe.
 - **Wipe** - This option wipes the device of all content.
 - **Wipe Protected** - This option is similar a normal device wipe, but this option cannot be circumvented by the user. The Wipe Protected command keeps trying to reset the device until it is successful. In some device configurations, this command can leave the device unable to boot.

- **Wipe and Persist Provisioning Data** - This option wipes the device but specifies that provisioning data should be backed up to a persistent location. After the wipe executes, the provisioning data is restored and applied to the device. The provisioning folder is saved. You can find the folder by navigating on the device to %ProgramData%\Microsoft\Provisioning .
- **Edit Device** – Edit device information such as **Friendly Name**, **Asset Number**, **Device Ownership**, **Device Group** and **Device Category**.
- **Enterprise Wipe** – Enterprise Wipe a device to unenroll and remove all managed enterprise resources including applications and profiles. This action cannot be undone and re-enrollment will be required for Workspace ONE UEM to manage this device again. Includes options to prevent future re-enrollment and a **Note Description** field for you to add any noteworthy details about the action.
 - Enterprise Wipe is not supported for cloud domain-joined devices.
- **Enterprise Reset** – Enterprise Reset a device to factory settings, keeping only the Workspace ONE UEM enrollment.
- **Windows Desktop Only:** Enterprise Reset restores a device to a Ready to Work state when a device is corrupted or has malfunctioning applications. It re-installs the Windows OS while preserving user data, user accounts and managed applications. The device will re-sync auto-deployed enterprise settings, policies, and apps after reset while remaining managed by Workspace ONE.
- **Lock Device** – Send an MDM command to lock a selected device, rendering it unusable until it is unlocked.

Important When locking a device, an enrolled user must be signed into the device for the command to process. The lock command locks the device and any user signed in must reauthenticate with Windows. If an enrolled user is signed-in to the device, a lock device command locks the device. If an enrolled user is not signed in, the lock device command is not processed.

- **Query All** – Send a query command to the device to return a list of installed apps (including Workspace ONE Intelligent Hub, where applicable), books, certificates, device information, profiles and security measures.
- **Reboot Device** – Reboot a device remotely, reproducing the effect of powering it off and on again.
- **Remote Management** – Take control of a supported device remotely using this action, which launches a console application that enables you to perform support and troubleshoot on the device. Android devices require Remote Control Service to be installed on the device.
- **Security (Query)** – Send an MDM query command to the device to return the list of active security measures (device manager, encryption, passcode, certificates, etc.).
- **Send Message** – Send a message to the user of the selected device. Choose between **Email**, **Push Notification** (through AirWatch Cloud Messaging), and **SMS**.

Workspace ONE Assist

Workspace ONE Assist, previously named Advanced Remote Management (ARM), allows you to connect remotely to end-user devices so you can help with troubleshooting and maintenance. Assist requires your computer and the end-user device to connect to the Assist Server to facilitate communication between the Workspace ONE UEM console and the end-user device.

For more information, see **VMware Workspace ONE Assist Documentation** on docs.vmware.com.

Product Provisioning Overview

Product provisioning enables you to create, through Workspace ONE™ UEM, products containing profiles, applications, files/actions, and event actions (depending on the platform you use). These products follow a set of rules, schedules, and dependencies as guidelines for ensuring your devices remain up-to-date with the content they need.

Product provisioning also encompasses the use of relay servers. These servers are FTP(S) servers designed to work as a go-between for devices and the UEM console. Create these servers for each store or warehouse to store product content for distribution to your devices.

For more information, see Product Provisioning documentation.