

Upgrade Guide

for on-premises and SaaS deployments

VMware Workspace ONE UEM 1903

You can find the most up-to-date technical documentation on the VMware website at:

<https://docs.vmware.com/>

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Introduction to the Workspace ONE UEM Upgrade Guide

1

In order to take advantage of the latest features available in Workspace ONE UEM, you must keep your Workspace ONE UEM environment up to date with the latest version.

This documentation discusses how to upgrade your VMware Workspace ONE™ UEM infrastructure regardless of your specific topology model. As new versions of Workspace ONE UEM are introduced to the marketplace, you must go through a standard upgrade procedure on your existing Workspace ONE UEM infrastructure.

When you upgrade your Workspace ONE UEM console, you should also upgrade any peripheral components, such as the VMware AirWatch Cloud Connector or the Secure Email Gateway, to ensure full feature compatibility and optimal performance.

To guide your upgrade process, use the [Upgrade Procedure Checklist](#).

To enhance your preparation, see [Workspace ONE UEM Upgrade Prerequisites](#) and [Upgrade Procedure Context Notes](#) for additional upgrade considerations.

Prepare for Your Upgrade

The first step of the upgrade process is to take note of your existing Workspace ONE UEM console configurations to ensure everything is set up and functioning properly before the upgrade procedure. This also includes verifying you meet the minimum hardware requirements and have the appropriate SQL permissions.

For more information, see [Chapter 2 Prepare for Your Upgrade](#).

Back Up Databases and Servers

After stopping the appropriate services, you are ready to perform a back up of your components. This ensures you have an effective restore point should you need to roll back your deployment at any time. Workspace ONE UEM does not automatically back up your servers as part of the upgrade process. Please contact your server vendor to follow the best recommended practice for backing up your servers.

For more information, see [Back up the Workspace ONE UEM Database](#).

Stop All Websites and Services

Stop all the Workspace ONE UEM Services and disable Internet Information Services (IIS) websites on each Console and Device Services server. By disabling these, Workspace ONE UEM is effectively down and the database can be upgraded without interference.

For more information, see [Chapter 4 Stop Workspace ONE UEM Services](#).

Upgrade the Workspace ONE UEM Database

Run the database installers according to your current Workspace ONE UEM version to upgrade to the latest version.

For more information, see [Chapter 5 Upgrade Database, Console Server, and Device Services Server](#).

Upgrade Each Workspace ONE UEM Console and Device Services Servers

Once the database has been upgraded, the installer can be completed on each Workspace ONE UEM console and Device Services Server to finish up the upgrade process.

Dedicated API and AWCM servers are considered application servers, similar to the UEM console and Device Services. You should therefore perform the steps below on these servers if you have dedicated servers for these components.

For more information, see [Chapter 5 Upgrade Database, Console Server, and Device Services Server](#).

Apply the Latest Patch

After you upgrade the database and application services servers, apply the latest patch.

For more information, see [Perform a Patch Upgrade](#)

Post-Upgrade Validation

After you complete the upgrade procedure, verify that the Workspace ONE UEM services are started, and then verify that you successfully upgraded Workspace ONE UEM.

For more information, see [Chapter 6 Post-Upgrade Validation](#).

To verify that you have successfully completed the upgrade process, [Verify the Upgrade](#).

This chapter includes the following topics:

- [Workspace ONE UEM Upgrade Prerequisites](#)
- [Obtain the Upgrade Package Files](#)

- [Determine Your Workspace ONE UEM Version](#)
- [Upgrade Procedure Context Notes](#)
- [Upgrade Procedure Checklist](#)

Workspace ONE UEM Upgrade Prerequisites

Before you begin to upgrade Workspace ONE UEM, complete the prerequisites.

Obtain the Latest Version of this Document

Ensure you are using the latest version of this guide by downloading the latest copy of the document from docs.vmware.com. Workspace ONE UEM will make updates to these documents from time to time, and having the latest version ensures you are following the Workspace ONE UEM recommended practices and procedures.

Obtain the Upgrade Package Files

Next, ensure you have downloaded the upgrade package files from Workspace ONE UEM that are required to perform the upgrade procedure. For more information, see [Obtain the Upgrade Package Files](#).

Meet the Requirements

You should meet all of the requirements needed for a Workspace ONE UEM installation, which are outlined in the **Workspace ONE UEM Recommended Architecture Guide**. This is because requirements may have changed since you originally installed Workspace ONE UEM. In addition, if your device count has changed since performing the initial installation please reference this documentation to ensure your systems are still compatible.

Note As of AirWatch Version 9.2 we have changed our supported SQL versions. Please check the latest list of prerequisites in the Recommended Architecture Guide to ensure your current version is supported.

Note While it is not required on your database server, .NET is required to run the installer. If you would like to avoid installing .NET on your database server and a potential reboot you can run the installer from one of the Workspace ONE UEM application servers.

Prepare for Downtime

During the upgrade process, the Workspace ONE UEM console, enrollment, and device management will be down. For change window request purposes, the upgrade process typically takes a minimum of four hours. This number may vary based on the number of devices, number of services, and number of versions you are upgrading.

Contact Your On-Call Resources

Before you begin, ensure you have the proper on-call resources available should you need them. This would include technical resources such as the Database Analyst, Change Manager, Server Administrator, Network Engineer and MDM System Administrator.

Determine Your Workspace ONE UEM Version

Determine what version of Workspace ONE UEM you are running so you can follow the version-dependent instructions in this guide. For more information, see [Determine Your Workspace ONE UEM Version](#).

Obtain the Upgrade Package Files

Next, ensure you have downloaded the upgrade package files from Workspace ONE UEM that are required to perform the upgrade procedure.

Procedure

- 1 Navigate to resources.workspaceone.com.
- 2 Ensure your **current** Workspace ONE UEM version is selected in the top-left.
- 3 Select **Workspace ONE UEM Software** and then select **Console**.
- 4 Search for the installer.

If you are on AirWatch v9.3 or below: Navigate to **MyWorkspaceONE > Software > Upgrades** and download the database upgrade package needed to bring the database version up to v9.3.
- 5 Download the installer, which includes the application server installer and database installer for the latest version.

Workspace ONE UEM highly recommends that you retain the latest installer files.

Determine Your Workspace ONE UEM Version

Determine what version of Workspace ONE UEM you are running so you can correctly identify version-specific prerequisites and instructions.

Prerequisites

Your database version, which you may need to know as part of the upgrade process, should be the same as your Workspace ONE UEM version. If it is not, then contact Workspace ONE Support.

Procedure

- 1 Navigate to your Workspace ONE UEM console login page, or any other console page.

2 Select **About VMware AirWatch**.

The version you are running is listed in the **Version** field.

Upgrade Procedure Context Notes

Before you begin the Workspace ONE UEM upgrade procedure, review the information in this section.

Single Server vs. Multi Server Topologies

In order to streamline the Workspace ONE UEM Upgrade Procedure, the document refers to both Workspace ONE UEM console Servers and Workspace ONE UEM Device Services Servers. Before proceeding, it is important to understand each of these components and what they mean to your specific topology model.

- The **Workspace ONE UEM console Server** refers to the component of Workspace ONE UEM that renders and displays the UEM console. It is designed to present and send data to the database directly from the Workspace ONE UEM UI.
- The **Workspace ONE UEM Device Services Server** refers to the component of Workspace ONE UEM that communicates with all the managed devices. This server executes all processes involved in receiving and transmitting information from devices to other components of the system. It is the Workspace ONE UEM end-point.

If your instance of Workspace ONE UEM operates on a single application server alongside a database, then both of these components are installed on your individual application server. Wherever this documentation references the Console and Device Services server, simply perform the steps once on your individual application server.

If your instance of Workspace ONE UEM contains multiple application servers, then these two components have been logically separated. In this case, the Workspace ONE UEM Installer will automatically detect which components must be installed on each server without any user input. For each step listed that describes both the Console and Device Services components, complete the procedure on all Workspace ONE UEM servers.

Upgrade Note for SQL Jobs

Upgrade Note for Deployments Using VMware Tunnel

The VMware Tunnel server requires communication with AWCM to authenticate devices. Because of this requirement, end user devices cannot use the VMware Tunnel during the upgrade process.

Refer to the **VMware Tunnel** guide for additional information, which are available on docs.vmware.com.

Upgrade Note for Deployments Using Classic SEG

Because the SEG server is an auxiliary component of the Workspace ONE UEM architecture that does not communicate with the Workspace ONE UEM database, it is neither affected by, nor needs to be altered during the Workspace ONE UEM Upgrade process. That said, all devices that communicate through the SEG to receive mail will continue to receive mail during the upgrade, provided that the SEG is installed on its own server. If you are running the SEG on the **same** server as the UEM console or Workspace ONE UEM Device Services servers, then refer to the notices throughout the guide that contain special instructions regarding the EAS Integration and World Wide Web Publishing services.

Refer to the **Workspace ONE UEM Classic Secure Email Gateway (SEG)** guide for additional information, which are available on docs.vmware.com.

Troubleshooting

You can find several troubleshooting articles on myWorkspaceONE by executing the search parameter 'Troubleshooting Upgrades' at support.workspaceone.com. The articles you find with this search may help you address issues you encounter during the upgrade.

Upgrade Procedure Checklist

Use the Upgrade Procedure Checklist to track your progress as you upgrade your instance of Workspace ONE UEM.

Step	Task
Step 1: Prepare for Your Upgrade	
	Take Note of Workspace ONE UEM Configurations
	Verify Site URLs
	Validate Directory Service Connectivity
	Check validity of your APNs Certificate
	Verify Hardware Requirements
	Perform SQL Preparations
	Verify SQL User Permissions
	Stage your Installer files on all servers
Step 2: Stop All Websites and Services on All Console and Device Services Servers	
	Stop Application Server Services
Step 3: Backup the Workspace ONE UEM Database and VM Snapshot the Device Services and Console Servers	
	Back up the Workspace ONE UEM Database
	Back up the Workspace ONE UEM console and Device Services Server (if your servers are virtualized)
Step 4: Upgrade Your Workspace ONE UEM Database, Console Server, and Device Services Server	
	Upgrade to latest database version

Step	Task
	Update API Keys (for 1810+)
	Run the Workspace ONE UEM Application Installer
	Run the latest patch installer
Step 7: Validate the Upgrade	
	Verify Workspace ONE UEM Services are Running
	Verify the Installation
	Validate Custom Administrator Roles
	Verify Directory Service Settings
	Verify the Site URLs
	Validate GEM Functionality
	Complete the Post Upgrade Checklist

Prepare for Your Upgrade

2

The first step of the upgrade process is to take note of your existing Workspace ONE UEM console configurations to ensure everything is set up and functioning properly before the upgrade procedure. This also includes verifying you meet the minimum hardware requirements and have the appropriate SQL permissions.

Meet the Hardware and Software Requirements

Meet all of the requirements needed for a Workspace ONE UEM installation. You can find the hardware, software and network requirements in the Workspace ONE UEM Recommended Architecture Guide. If your device count has changed since performing the initial installation, reference this documentation to ensure your application and database servers still meet the minimum requirements.

Other prerequisite steps are outlined in [Before You Begin Tasks](#).

Important Do not uninstall previous versions of Workspace ONE UEM software, including Identity Manager and the UEM console. The upgrade process overwrites the relevant files. Uninstalling existing versions deletes previous configurations from your deployment.

Upgrade Preparations

To prepare for your upgrade, follow these steps:

- 1 [Verify Workspace ONE UEM Configurations](#)
- 2 [Perform SQL Preparations](#)
- 3 Stage all the Upgrade files on the Application Servers

This chapter includes the following topics:

- [Verify Workspace ONE UEM Configurations](#)
- [Perform SQL Preparations](#)

Verify Workspace ONE UEM Configurations

Confirm that your Workspace ONE UEM environment is ready to upgrade.

Procedure

- 1 Log in to the Workspace ONE UEM console and navigate to **Groups & Settings > All Settings > System > Advanced > Site URLs**. Verify the following Site URLs are correct:
 - a The **Console URL** should be "https://{CONSOLE_URL}/AirWatch, where {CONSOLE_URL} is the URL of your UEM console Server.
 - b The **Device Services URL** should be "https://{AW_DS_URL}/DeviceServices, where {AW_DS_URL} is the URL of your Device Services server.
 - c The **REST API** should be "https://{AW_API_URL}/API, where {AW_API_URL} is the URL of your API server.
 - d For a typical configuration, nothing should appear as "localhost" except for the Google Play Service URL.
- 2 Navigate to **Groups & Settings > All Settings > System > Enterprise Integration > Directory Services**.
- 3 Select the **Test Connection** button to verify connectivity.
- 4 Navigate to **Groups & Settings > All Settings > Devices & Users > Apple > APNs for MDM**. Double-check the expiration date of your APNs certificate and ensure it does not expire before the upgrade procedure completes.
- 5 Navigate to **Hub > Reports & Analytics > Reports > List View** and try running a report (for example, Admin User Roles) to ensure reports are working correctly.

Perform SQL Preparations

Verify that your database configuration is ready for the Workspace ONE UEM upgrade.

Procedure

- 1 Open SQL Server Management Studio.
- 2 Log in to the DB server containing the Workspace ONE UEM database.
- 3 Locate your DB user in the Object Explorer by navigating to **Security > Logins > [Your DB User]**, right-click, and select **Properties**.
- 4 Navigate to the **Server Roles** tab. Set the server role as **Public**.
- 5 Select **User Mapping**.. Select the Workspace ONE UEM Database. Then, select the **db_owner** role. For a successful installation, you must ensure that the SQL User you are planning to run the Workspace ONE UEM Database Script with has the database db_owner role selected.
- 6 Select the msdb database. Then, select the **SQLAgentUserRole** and **db_datareader** roles.

Back Up Databases and Servers

3

Before you upgrade Workspace ONE UEM, create a backup of your databases and servers.

After stopping the appropriate services, you are ready to perform a back up of your components. This ensures you have an effective restore point should you need to roll back your deployment at any time.

Caution Workspace ONE UEM does not automatically back up your servers as part of the upgrade process. Please contact your server vendor to follow the best recommended practice for backing up your servers. The following sections offer some basic guidance but your procedures may vary. You are responsible for creating backups of your Workspace ONE UEM servers. Failure to do so can result in unrecoverable data loss.

Backup Procedure

To back up your databases and servers in preparation for the upgrade, follow these steps:

- 1 [Back up the Workspace ONE UEM Database](#)
- 2 [Back up the Workspace ONE UEM console and Device Services Servers \(if virtualized\)](#)

This chapter includes the following topics:

- [Back up the Workspace ONE UEM Database](#)
- [Back up the Workspace ONE UEM console and Device Services Servers \(if virtualized\)](#)

Back up the Workspace ONE UEM Database

Perform a database backup in case your upgrade of Workspace ONE UEM fails or you need to restore the database later.

Procedure

- 1 Make sure to [Chapter 4 Stop Workspace ONE UEM Services](#).
- 2 Open the **SQL Server Management Studio**.
- 3 Log into the DB server containing the Workspace ONE UEM database.

- 4 Find the Workspace ONE UEM database in the Object Explorer on the left, right-click and choose **Tasks > Backup**.
- 5 Specify a backup location and type, and then select **OK** to complete the database backup.

Back up the Workspace ONE UEM console and Device Services Servers (if virtualized)

Perform an app server backup in case your upgrade fails or you need to restore the servers later.

Procedure

- 1 Open up the **VMware vSphere Client** and log-in.
- 2 Locate and select the UEM console or DS server on the left, then press the **Take a Snapshot** button at the top.
- 3 Specify a snapshot name, description, and confirm that:
 - a **Snapshot the virtual machine's memory** is checked.
 - b **Quiesce guest file system** is unchecked.

Stop Workspace ONE UEM Services

4

To continue upgrading Workspace ONE UEM, you must disable Workspace ONE UEM services.

After staging the appropriate files, you are almost ready to back up your servers. However, to back up all the necessary components, you must:

- Stop all Workspace ONE UEM Services on each application server (Console, Device Services, API).
- Stop the Workspace ONE Intelligence Connector service on the Workspace ONE Intelligence Connector server.
- Disable Internet Information Services (IIS) websites on each each application server (Console, Device Services, API).

By disabling these, Workspace ONE UEM is effectively down and the database can be upgraded without interference.

Note SEG, VMware Tunnel, and VMware AirWatch Cloud Connector are considered auxiliary components and you do not need to stop their services as part of this step.

Restart all services and components after the upgrade completes. For more information, see [Verify Workspace ONE UEM Services are Running](#).

This chapter includes the following topics:

- [Disable the World Wide Web Publishing Service](#)
- [Start the Workspace ONE UEM Application Installer](#)

Disable the World Wide Web Publishing Service

Before starting the upgrade process, you must stop and disable the World Wide Web Publishing Service.

Procedure

- 1 Open the **Server Manager**.
- 2 Navigate to **Tools > Services**.
- 3 Scroll to the bottom until you see the **World Wide Web Publishing Service**.

4 Right-click **World Wide Web Publishing Service**.

5 Select **Properties** and select **Disable**.

What to do next

After disabling the World Wide Web Publishing Service, run the Workspace ONE UEM Application Installer on all of your Workspace ONE UEM application servers. The installer stops all the services on the App server automatically. For more information, see [Start the Workspace ONE UEM Application Installer](#).

Start the Workspace ONE UEM Application Installer

To begin upgrading Workspace ONE UEM, run the Workspace ONE UEM installer.

After stopping and disabling the World Wide Web Publishing Service, start the Workspace ONE UEM Application Installer on all of your Workspace ONE UEM application servers. The installer stops all the services on the App server automatically.

Procedure

1 On each application server, open the application folder and run the **Workspace ONE UEM Application X.X.X Full Install.exe**. Execute the Workspace ONE UEM installer from an account with administrator privileges.

If you do not have administrative privileges, right-click and choose **Run as Administrator** to run the installer.

2 The installer installs pending server prerequisites, if any. Certain software components you might be prompted to download, such as .NET and TLS, require a reboot. Proceed with the installer until finished and reboot when you are done.

3 If requested, reboot the server. Once the server reboots, the Workspace ONE UEM Application Installer restarts automatically. If not, please restart the installer to continue. The installer continues installing any prerequisites. When finished, a prompt displays asking you to update your Workspace ONE UEM database.

4 Do not select **Yes** until you the database upgrade has successfully completed. When the upgrade completes successfully, click **Yes** to continue.

5 If the database upgrade fails, select **No** to cancel the upgrade and contact Workspace ONE UEM Support for assistance.

What to do next

Complete these steps on each application server before continuing. After reaching the database prompt on each application server, upgrade your Workspace ONE UEM Database. For more information, see [Upgrade the Workspace ONE UEM Database](#).

Upgrade Database, Console Server, and Device Services Server

5

Continue your upgrade by running the database installers according to your current Workspace ONE UEM version.

Caution Before continuing with the following steps, ensure you have properly backed up your Workspace ONE UEM database. If you have not properly backed up your database server and an error occurs during the upgrade process, you could lose all of your Workspace ONE UEM data and you must start your deployment of Workspace ONE UEM from scratch.

Follow the applicable procedure to upgrade to the latest version of Workspace ONE UEM depending on your current version. You can find out which version you are running by opening the Workspace ONE UEM console and selecting **About Workspace ONE UEM** from the bottom left hand corner of any page.

If you are on a database version older than AirWatch v9.3, then you should reference previous versions of the Upgrade Documentation, which include instructions for bringing older versions up to date.

This chapter includes the following topics:

- [Upgrade the Workspace ONE UEM Database](#)
- [Upgrade Servers](#)
- [Perform a Patch Upgrade](#)

Upgrade the Workspace ONE UEM Database

Upgrade your Workspace ONE UEM database to a newer version.

Prerequisites

- [Chapter 3 Back Up Databases and Servers](#)
- [Chapter 4 Stop Workspace ONE UEM Services](#)

Procedure

- 1 Verify that you are using the correct Windows authentication credentials.

If you are not using the Windows authentication credentials of the current user to connect to the database you are installing to, you will need to either:

- Shift+right-click to run as a different user and log in as the Windows account you are using to authenticate.
- Log into the server as the Windows account you are using to authenticate, if you have not already.

- 2 From a server connected to the database, perform the following:

- a Open the **Workspace ONE UEM Database XXXX Setup.exe** executable by right-clicking and running as administrator, where XX is the next Workspace ONE UEM version from the one you are running.

Certain software components you might be prompted to download, such as .NET and TLS, require a reboot. Workspace ONE UEM recommends proceeding with the installer until finished and rebooting when you are done.

- b If your server is missing any essential components, the DB installer will automatically prompt you to install them. The DB installer requires .NET 4.6.2 to run. If you do not want to install .NET on your SQL server, you can run the installer from the application server. When complete, select **Next**.
- c Accept the Workspace ONE UEM EULA and select **Next**.
- d Select a location to install the Workspace ONE UEM Database Files. Best practice is to install wherever the Workspace ONE UEM folder exists on your system. Click **Next**.
- e Review the information about the Workspace ONE UEM database: specifically, the server name, the user account with correct privileges, and the database name. Once complete, select **Next**.
- f You will be warned to make sure that your user account has enough permissions. Select **OK**.
- g Select **Install** to begin the database installation process.
- h Once the database upgrade process has completed, select **Finish**.

Upgrade Servers

Once the database has been upgraded, the installer can be completed on each Workspace ONE UEM console and Device Services Server to finish up the upgrade process.

Resume the installer on each server and complete the Wizard.

For deployments with dedicated API and AWCM servers:

- Dedicated API and AWCM servers are considered application servers, similar to the UEM console and Device Services. You should therefore perform the steps below on these servers if you have dedicated servers for these components.
- On each of your Console and Device Services servers, run the **Workspace ONE UEM Application XXXX Full Install.exe** by right-clicking and running as administrator. The installer detects a previous version of Workspace ONE UEM and prompts you to upgrade. During this process, the Workspace ONE UEM Installer will stop IIS and all Workspace ONE UEM services and prompt the administrator to update the Workspace ONE UEM database. However, since you have already upgraded the database scripts, you can continue without taking any extra actions.

The upgrade process does not differ from the installation process. The values and settings you configured for your Workspace ONE UEM installation should be automatically populated, meaning you can verify them and select Next through the installer. For specific details on each of these installer screens, refer to the Workspace ONE UEM Installation Guide.

Classic SEG Upgrade Note

If you are running the Workspace ONE UEM Classic Secure Email Gateway (SEG) on the same server as the Workspace ONE UEM console or Workspace ONE UEM Device Services servers, then you will need to manually **Start** the World Wide Web Publishing Service at this time. After the application upgrade completes, restart World Wide Web Publishing Service. The Workspace ONE UEM EAS Integration Service is not affected. This is done to ensure email traffic is not blocked while you are upgrading.

Perform a Patch Upgrade

When you have the latest versions of Workspace ONE UEM installed, you need to add the latest patches. Instructions for installing the patch are included with the installer, as the installation specifics change with each patch.

Prerequisites

Make sure you have fully installed Workspace ONE UEM on your database, console servers, and device services servers before attempting a patch upgrade.

Procedure

- 1 Download the most current Patch Installer.

The Patch Installer files can be downloaded from my.workspaceone.com by navigating to **Menu > Software > Console**.

- 2 Unzip the Patch Installer.

- 3 Follow the instructions for implementing the patch located in the **###.###.###_Deployment_Instructions.txt** file. (###.###.### is UEM version and Patch number associated with the update)

Post-Upgrade Validation

6

After you complete the upgrade procedure, verify that the Workspace ONE UEM services are started, and then verify that you successfully upgraded Workspace ONE UEM.

To verify that all services and components have upgraded, see [Verify Workspace ONE UEM Services are Running](#) and [Verify the Upgrade](#).

To verify that you have successfully completed the upgrade process, [Post-Upgrade Checklist](#).

This chapter includes the following topics:

- [Verify Workspace ONE UEM Services are Running](#)
- [Verify the Upgrade](#)
- [Post-Upgrade Checklist](#)

Verify Workspace ONE UEM Services are Running

Verify that Workspace ONE UEM services are started before you perform the other validation tasks.

Procedure

- 1 Open the **Server Manager**.
- 2 From the left pane, select your local server and navigate to **Tools > Services**.

You will see all Workspace ONE UEM Services at the top of the services list in alphabetical order. Each of these services start with Workspace ONE in the name.
- 3 Verify that each of these services show **Started** as the Status.
- 4 Verify the **World Wide Web Publishing** service is **Started**.

Verify the Upgrade

Perform verification steps to ensure you successfully upgraded Workspace ONE UEM.

Procedure

- 1 First, validate your Administrator Roles.
 - a Log in to the Workspace ONE UEM console and navigate to **Accounts > Administrators > Roles**.
 - b Verify that the update did not remove any of your custom administrator roles. If they are missing, you will have to recreate them manually.
- 2 Next, verify your Directory Service settings.
 - a Navigate to **Groups & Settings > All Settings > System > Enterprise Integration > Directory Services**. Select the **User** tab.
 - b Select **Show Advanced**. Verify that **Auto Merge** is checked. Select the **Group** tab.
 - c Select **Show Advanced**. Verify **Auto Sync** and **Auto Merge** are checked.
 - d Workspace ONE UEM recommends a minimum of **100** for the Maximum Allowable Changes. That way, the Console will not need to sync with your directory service as much.
- 3 Next, verify the Site URLs.
 - a Navigate to **Groups & Settings > All Settings > System > Advanced > Site URLs**.
 - b Verify the **REST API URL** and **Sync Appcast URL** are configured correctly:

Option	Description
Console URL	"https://{CONSOLE_URL}/AirWatch", where {CONSOLE_URL} is the URL of your UEM console Server
Device Services URL	"https://{AW_DS_URL}/DeviceServices", where {AW_DS_URL} is the URL of your Device Services server
REST API URL	"https://{AW_API_URL}/API", where {AW_API_URL} is the URL of your API server
SCL Sync Appcast URL	"https://{AW_DS_URL}/DeviceServices/AirWatchSyncAppcast.xml", where {AW_DS_URL} is the URL of your Device Services server
MdmAgentAppcast URL	"https://{AW_DS_URL}/DeviceServices/AirWatchAgentAppcast.xml", where {AW_DS_URL} is the URL of your Device Services server
Outlook Add-In SCL Appcast URL	"https://{AW_DS_URL}/DeviceServices/OutlookSCLAppcast.xml", where {AW_DS_URL} is the URL of the Device Services server
SCL Appcast URL	"https://{AW_DS_URL}/DeviceServices/SCLAppcast.xml", where {AW_DS_URL} is the URL of the Device Services server. Nothing should appear as "localhost" except for the Google Play Service URL

- 4 Next, validate GEM Functionality.
 - a your Console server, navigate to **C:\AirWatch\Logs\Services**. Delete the AirWatchGemAgent.log file.
 - b Open the **Server Manager**.

- c From the left pane, select Local Server and navigate to **Tools > Services**.
- d You will see all Workspace ONE UEM Services at the top of the services list in alphabetical order. Each of these services start with Workspace ONE UEM in the name. For the **GEM Inventory Service**, right-click and select **Restart**.
- e Check your [Install Directory]\Logs\Services\ folder to see if a log regenerates. If a log regenerates with errors, contact Workspace ONE Support for further assistance. If you do not see a log file in this folder, then this is normal and you do not need to contact Workspace ONE Support.

Post-Upgrade Checklist

Use the Post-Upgrade Checklist to ensure your upgrade completed properly. For the following items, verify that the ones that are applicable to your deployment are working correctly.

Status	Functionality	Verification
Workspace ONE UEM console Testing		
	Directory Services	Navigate to Groups & Settings > All Settings > System > Enterprise Integration > Directory Services and select Test Connection.
	Email (SMTP)	Navigate to Groups & Settings > All Settings > System > Enterprise Integration > Email (SMTP) and select Test Connection.
	AWCM	Attempt to access "https://<AWCM URL>:<port>/awcm/status", where <AWCM URL> is the URL of your AWCM and <port> is the port you configured it on. If functioning correctly you should see an "OK" status message.
	Devices are checking in	Verify on the Devices > List View page that devices are checking in by looking at the Last Seen column.
	Console Access using LDAP	Verify that AD or LDAP users work by logging into the Console with one (if applicable).
	Executing a Report	Try running an Admin User Roles report by navigating to Hub > Reporting & Analytics > Reports > List View .
	Content Management (if applicable)	Try downloading a piece of content from a device.
iOS device testing		
	Enrollment	Try enrolling an iOS device.
	Sending Commands (e.g. Device Lock)	Try sending a command to an enrolled iOS device.
	Create and Push Profile	Try creating and sending a profile from the Console to an iOS device.
	Create and Push Application	Try to create and send an application from the Console to an iOS device.
	Public Applications	Try to recommend a public application from the Console to an iOS device.
	Internal Applications	Try to push an internal application from the Console to an iOS device.
Android device testing		
	Enrollment	Try enrolling an Android device.

Status	Functionality	Verification
	Sending Commands (e.g. Device Lock)	Try sending a command to an enrolled Android device.
	Create and Push Profile	Try creating and sending a profile from the Console to an Android device.
	Create and Push Application	Try to create and send an application from the Console to an Android device.
	Public Applications	Try to recommend a public application from the Console to an Android device.
	Internal Applications	Try to push an internal application from the Console to an Android device.
Windows Rugged device testing		
	Device Check-In	Verify that Windows Mobile devices are checking in after the upgrade process.
	Create and Push Provisioning Product	Try to create and push a provisioning product to a Windows Mobile device.
	AWCM Testing	Verify on the Device Details page for a Windows Mobile device that AWCM is Connected.
	Remote Control	Try to activate Remote Control for a Windows Mobile device on the Device Details page. (Ensure Privacy Settings are enabled to allow you to do this.)
	Screenshot/Send Message	Try to take a screenshot or send a message Windows Mobile on the Device Details page.
Windows Phone device testing		
	Enrollment	Try enrolling a Windows Phone device.
	Sending Commands (e.g. Device Lock)	Try sending a command to an enrolled Windows Phone device.
	Create and Push Profile	Try creating and sending a profile from the Console to a Windows Phone device.

If Problems are Detected After the Upgrade

If during any of the verification steps listed above you are unsuccessful, check the following:

- If all Workspace ONE UEM Services are up and running on the server with proper paths to the Workspace ONE UEM folder.
- If all Workspace ONE UEM Websites are listed in IIS.
- If the Windows Application Log shows any errors originated from the Workspace ONE UEM application.
- If any Workspace ONE UEM logs show any errors that have occurred.
- If you are still having issues and need to contact Workspace ONE Support, then ensure you have the logs mentioned above to expedite resolution. Please include the log located at [Install Directory]\Database\AWDatabaseLog_MM-DD-YYYY_XX-XX-XX.txt.