VMware Workspace ONE UEM Upgrade Guide

Upgrading your version of Workspace ONE UEM

Workspace ONE UEM v9.6

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Table of Contents

Chapter 1:
Overview

Introduction to the Workspace ONE UEM Upgrade Guide

This documentation discusses how to upgrade your VMware Workspace ONE™ UEM infrastructure regardless of your specific topology model. 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. 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.

To guide your upgrade process, use the Upgrade Procedure Checklist on page 10.

If you are performing a feature pack update rather than a full upgrade, see Performing a Feature Pack Update for Workspace ONE UEM on page 41.

To enhance your preparation, see Before You Begin Tasks on page 6 and Before You Begin Notes on page 8 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 Prepare for Your Upgrade Overview on page 13.

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 Create Backups for Database and App Servers on page 21.

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 Stop Services Overview on page 26.

Upgrade the AirWatch Database

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

For more information, see Database Upgrade Overview on page 29.

Upgrade Each AirWatch 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 Upgrade AirWatch Console and Device Services Servers Overview on page 33.

Post-Upgrade Validation

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

For more information, see Post-Upgrade Validation Overview on page 35.

To verify that you have successfully completed the upgrade process, Complete the Post Upgrade Checklist on page 38.

Before You Begin Tasks

Follow the tasks below before you begin the upgrade procedure.

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 the AirWatch Resources Portal (https://resources.air-watch.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. To do this:

1. Navigate to https://resources.air-watch.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 using the following format: "9.4.X Installer", where X is the FP you want to download.

   Note: If you are on AirWatch v8.4 or below: Navigate to **AirWatch Software > Upgrades** and download the database upgrade package needed to bring the database version up to v9.0. For example, if you are on AirWatch v8.3, you would download the v8.3 to v9.0 database upgrade package.

5. Download the installer, which includes the v9.4 application server installer and v9.4 database installer for v9.4.X.

   Note: Workspace ONE UEM highly recommends that you retain the latest installer 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

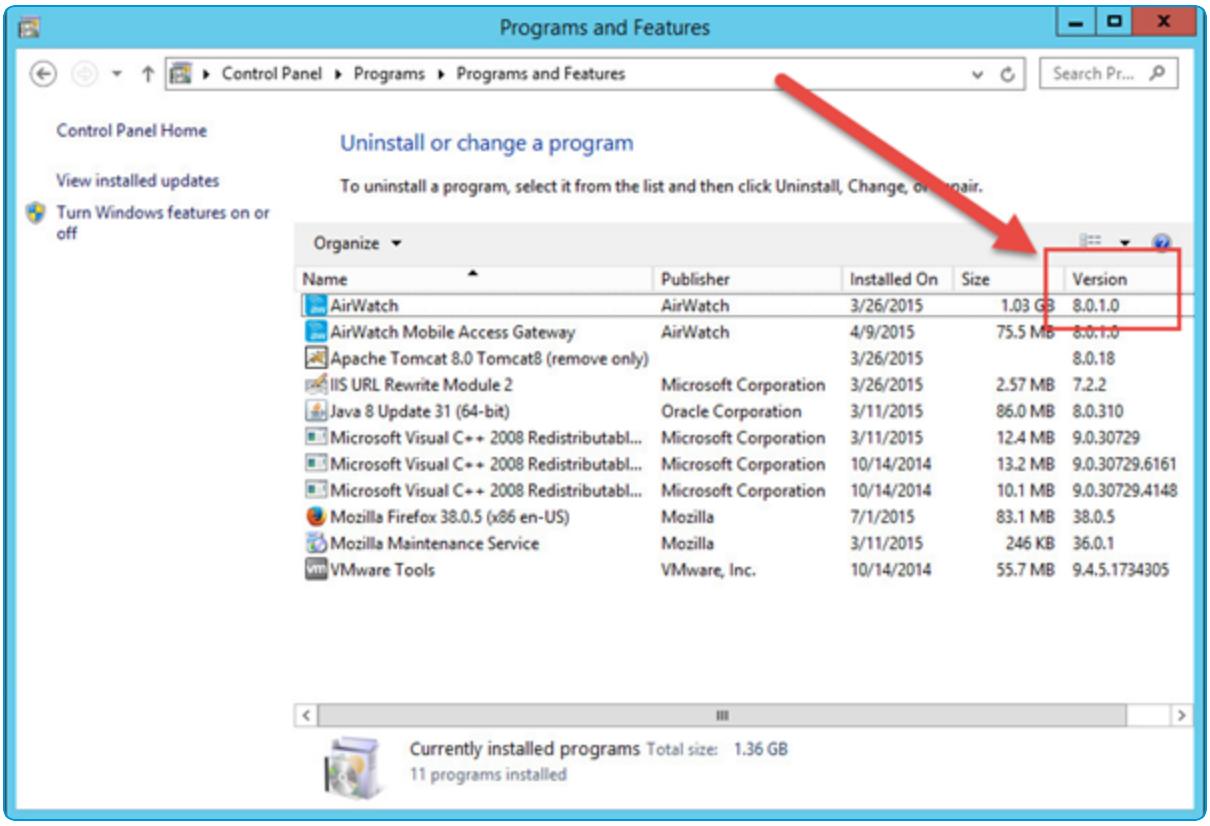
Before you begin, ensure you have the proper on-call resources available should you need them. This would include technical resources such as the Database Analyst, Change Manager, Server Administrator, Network Engineer and MDM System Administrator.

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. To determine your version of Workspace ONE UEM:

1. Log in to the server where Workspace ONE UEM is installed.
2. Navigate to **Start > Control Panel > Programs and Features** and locate Workspace ONE UEM in the program list.

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



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.

Before You Begin Notes

Review the information in this section before you begin the upgrade procedure.

Feature Pack Upgrades

If you are performing a feature pack upgrade (for example, from AirWatch v8.0.1 to AirWatch v8.0.3), then refer to the Performing a Feature Pack Update for Workspace ONE UEM appendix. Otherwise, read the system requirements below and then proceed with Prepare for Your Upgrade.

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 Smart Groups

Note that if you have smart groups with over 500 devices when using the **Select Devices and Users** option for smart groups then you will not be able to upgrade until these groups have been limited to a maximum of 500 individual devices. If you encounter a scenario where you must add more than 500 devices while utilizing the **Select Devices or Users** option, consider instead enabling the **Select Criteria** option for that main bulk of devices that share a general criteria and, if required, create multiple **Select Devices or User** smart groups for those devices that fall outside of the general criteria.

Upgrade Note for AWCM

For customers upgrading from AWCM 4.x (AirWatch v6.4–v7.0) to AWCM 6.x (AirWatch v8.0-9.2) and wanting to use explicit clustering, please refer to the following KB article: https://support.air-watch.com/articles/115001665788.

For more information about configuring AWCM clustering, see the VMware Workspace ONE UEM Installation Guide (VMware provides this documentation to you as part of the on-premises installation process) and the Appendix – Deployment Options section of the **AWCM Guide**.

Upgrade Note for VMware Enterprise Systems Connector

The VMware Enterprise Systems Connector auto-update feature will not function correctly until your VMware Enterprise Systems Connector server is updated to .NET Framework 4.6.2. The VMware Enterprise Systems Connector auto-update feature will not update the .NET Framework automatically. Please install .NET 4.6.2 manually on the VMware Enterprise Systems Connector server before performing an upgrade.

The VMware Enterprise Systems Connector replaces the AirWatch Cloud Connector.

What about the SEG and VMware Tunnel Servers?

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. 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 Secure Email Gateway (SEG)** and **VMware Tunnel** guides for additional information, which are available on docs.vmware.com.

Troubleshooting

You can find several troubleshooting knowledge base articles on myAirWatch by executing the search parameter 'Troubleshooting Upgrades' at the following link: https://support.air-watch.com/kb/. The articles you find with this search may help you address issues you encounter during the upgrade.

Upgrade Procedure Checklist

Use this checklist to track your progress as your perform the upgrade steps.

Status (Mark Complete as Needed)	Task
Step 1: Prepare for Your Upgrade	
	Take Note of Workspace ONE UEM Configurations
	Task: Verify Site URLs
	Task: Validate Directory Service Connectivity
	Task: Check validity of your APNs Certificate
	Task: Verify Reports Functionality
	Task: Verify Require Google Account is Checked at Global
	Verify Hardware Requirements
	Perform SQL Preparations
	Task: Enable Full-Text Search Component (if upgrading from below v7.0)
	Task: Verify SQL User Permissions
	Task: 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	
	Upgrade to AirWatch database v8.4, if applicable
	Upgrade to AirWatch database v9.0, if applicable
	Upgrade to AirWatch database v9.2
Step 5: Upgrade Each Workspace ONE UEM console and Device Services Server	
	Run the Workspace ONE UEM Application Installer

Status (Mark Complete as Needed)	Task
Step 6: Upgrade Reports	
	Run the Workspace ONE UEM Reporting Installer
Step 7: Validate the Upgrade	
	Verify Workspace ONE UEM Services are Running
	Verify the Installation
	Task: Validate Custom Administrator Roles
	Task: Verify Directory Service Settings
	Task: Verify the Site URLs
	Task: Validate GEM Functionality
	Task: Disable Services on Multiple Console Servers
	Complete the Post Upgrade Checklist

Chapter 2:
Prepare for Your Upgrade

Prepare for Your Upgrade Overview

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 the VMware Workspace ONE UEM Installation Guide (VMware provides this documentation to you as part of the on-premises installation process).

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 on page 13
2. Perform SQL Preparations on page 16
3. Stage Upgrade Files on page 20

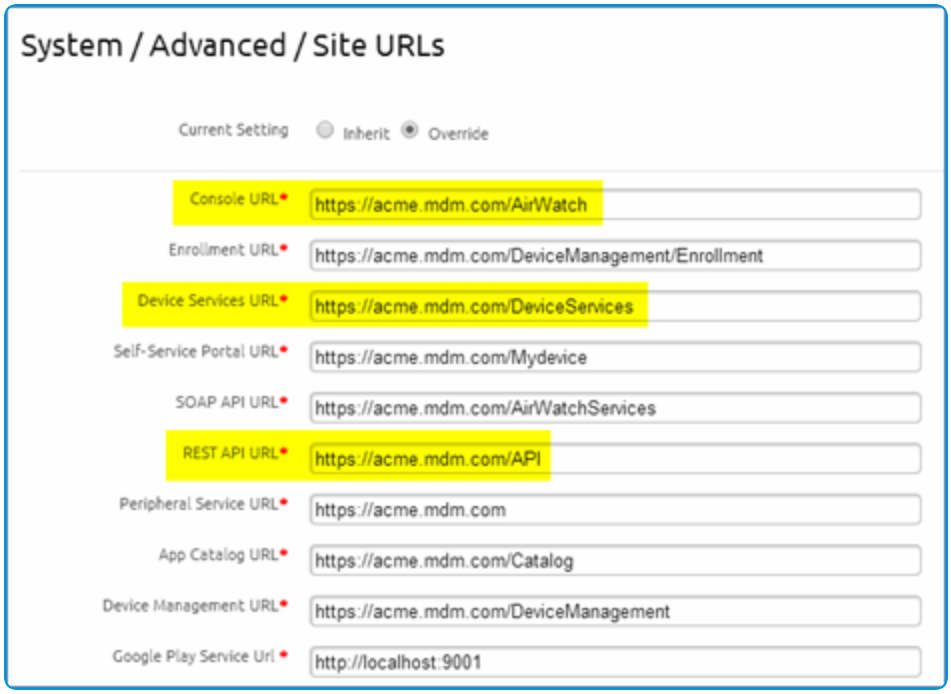
Verify Workspace ONE UEM Configurations

Perform these steps to verify that your Workspace ONE UEM environment is ready to upgrade.

First, verify Site URLs.

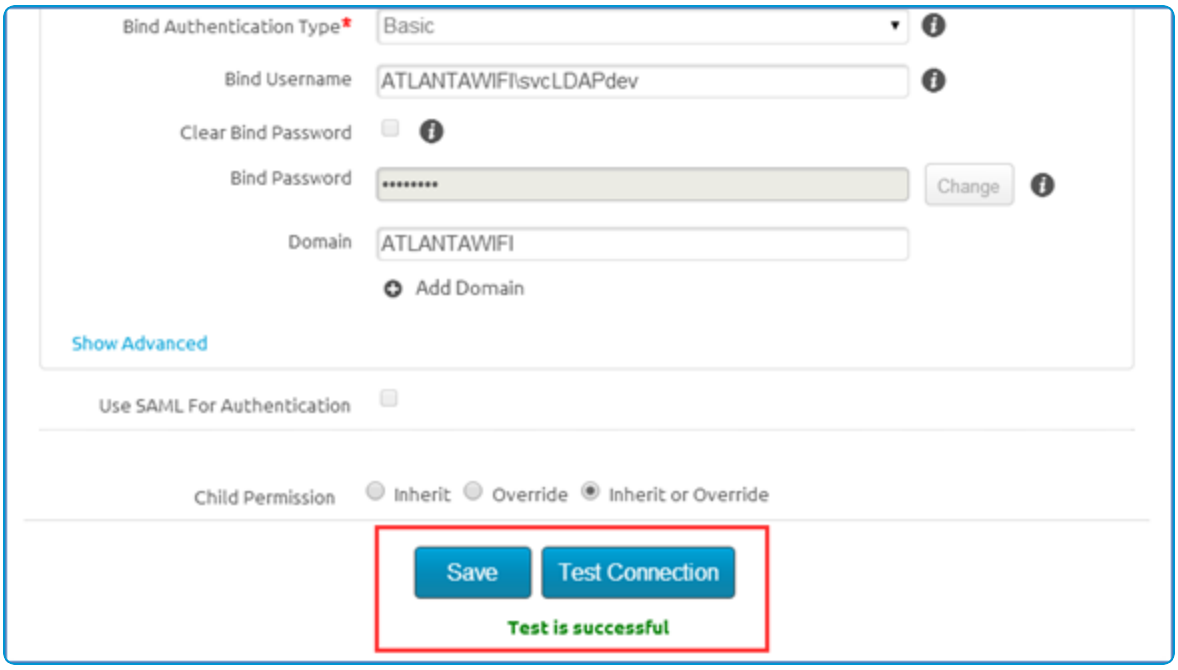
1. Log in to the Workspace ONE UEM console and navigate to **Groups & Settings > All Settings > System > Advanced > Site URLs**
2. Verify the following Site URLs are correct:
   - The **Console URL** should be "https://{CONSOLE_URL}/AirWatch, where {CONSOLE_URL} is the URL of your UEM console Server.
   - The **Device Services URL** should be "https://{AW_DS_URL}/DeviceServices, where {AW_DS_URL} is the URL of your Device Services server.
   - The **REST API** should be "https://{AW_API_URL}/API, where {AW_API_URL} is the URL of your API server.

- For a typical configuration, nothing should appear as "localhost" except for the Google Play Service URL.



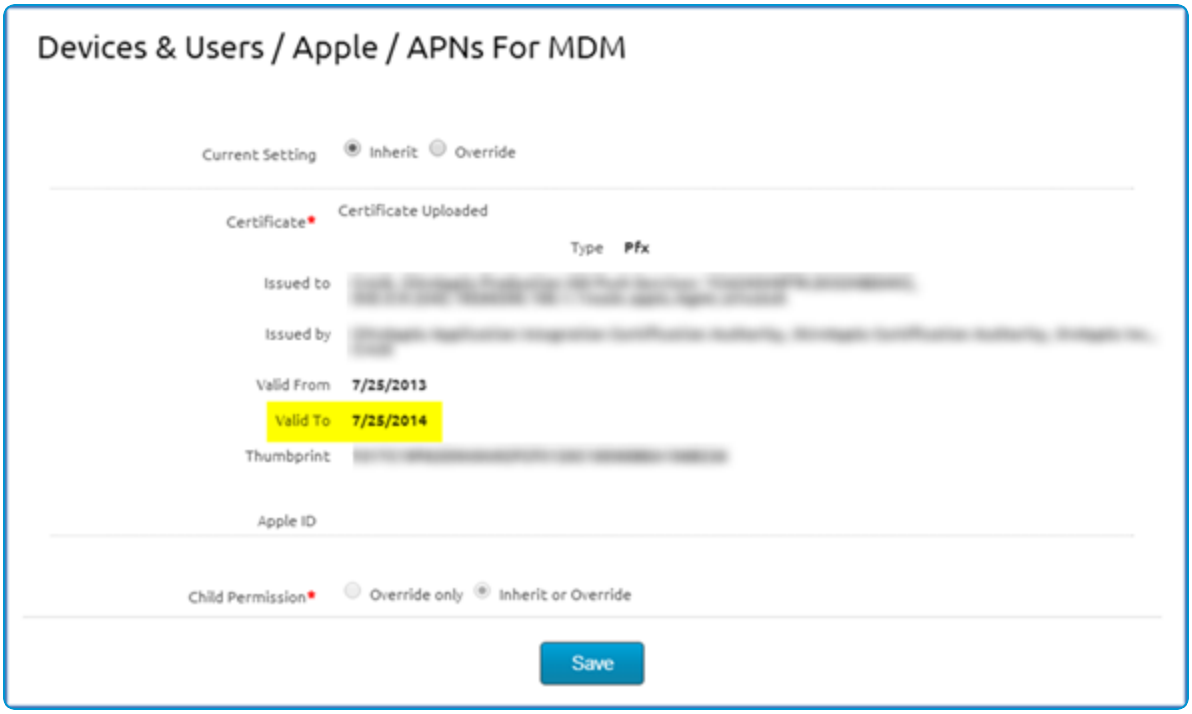
Next, validate your Directory Service connectivity.

3. Navigate to **Groups & Settings > All Settings > System > Enterprise Integration > Directory Services.**
4. Select the **Test Connection** button to verify connectivity.



Next, check the validity of your APNs certificate.

5. Navigate to **Groups & Settings > All Settings > Devices & Users > Apple > APNs for MDM**.
6. Double-check the expiration date of your APNs certificate and ensure it will not occur before the upgrade procedure.

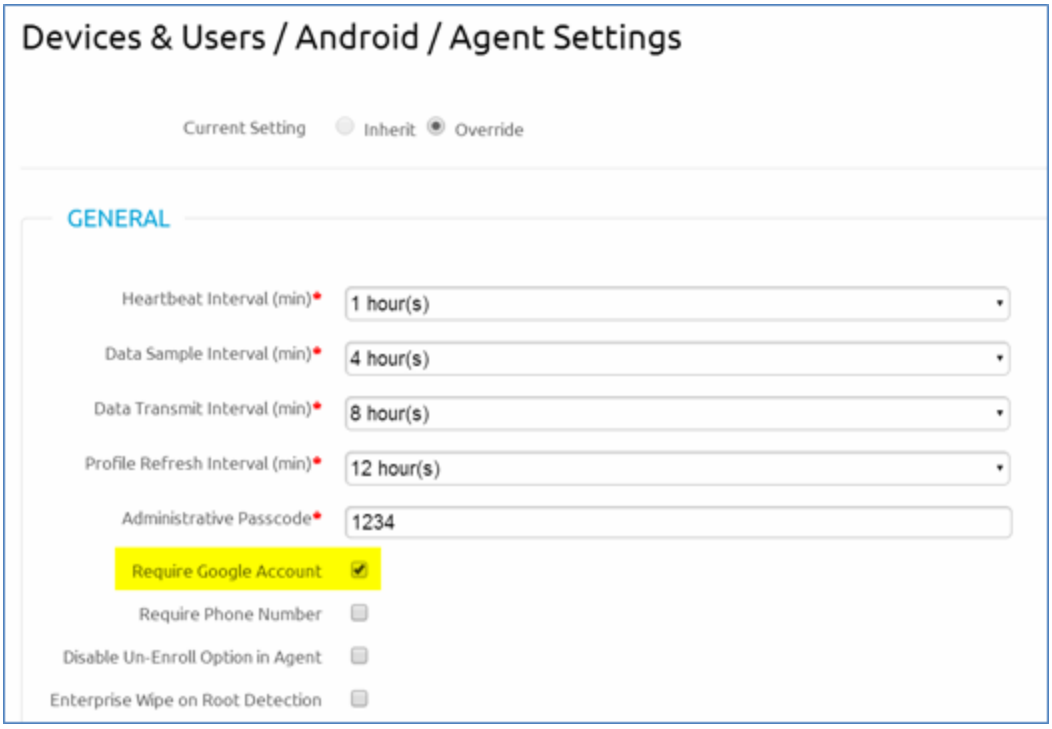


Next, verify your Reports functionality.

7. Navigate to **Groups & Settings > All Settings > Installation > Reports.**
8. Confirm reports are configured with the proper **Server URL.** For example: http://SERVER_NAME/ReportServer
9. Close the settings page and navigate to **Hub > Reports & Analytics > Reports > List View** and try running a report (for example, Admin User Roles) to ensure reports are working correctly.

   Next, verify that Require Google Account is checked at the Global level.

10. From your Global organization group, navigate to **Groups & Settings > All Settings > Devices & Users > Android > Agent Settings**.
11. Confirm that **Require Google Account** is checked.



Perform SQL Preparations

Perform these steps to verify that your Workspace ONE UEM database is ready to upgrade.

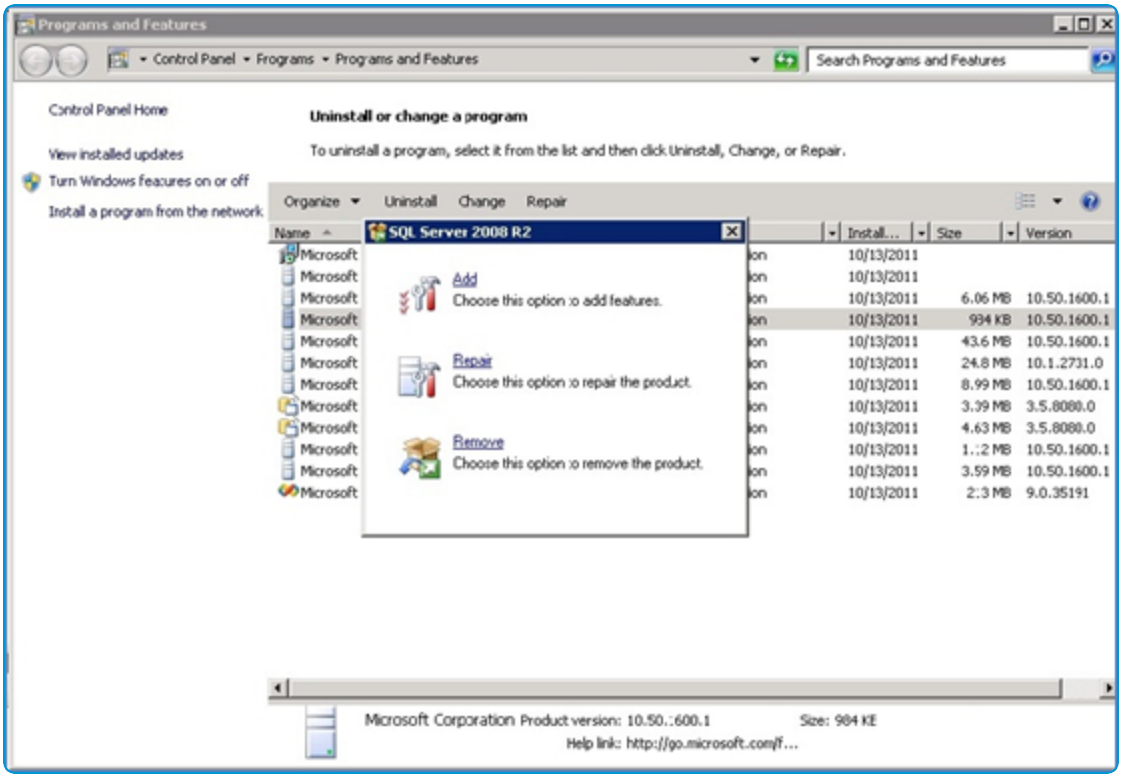
Task: Enable Full-Text Search Component (If upgrading from a version below 7.0)

If you are upgrading from AirWatch v7.0 or higher, then this feature should already be enabled. The Global search function of the Workspace ONE UEM console uses full text search indexes and requires the appropriate service to be running on the SQL server. Ensure this component is running on your SQL instance.

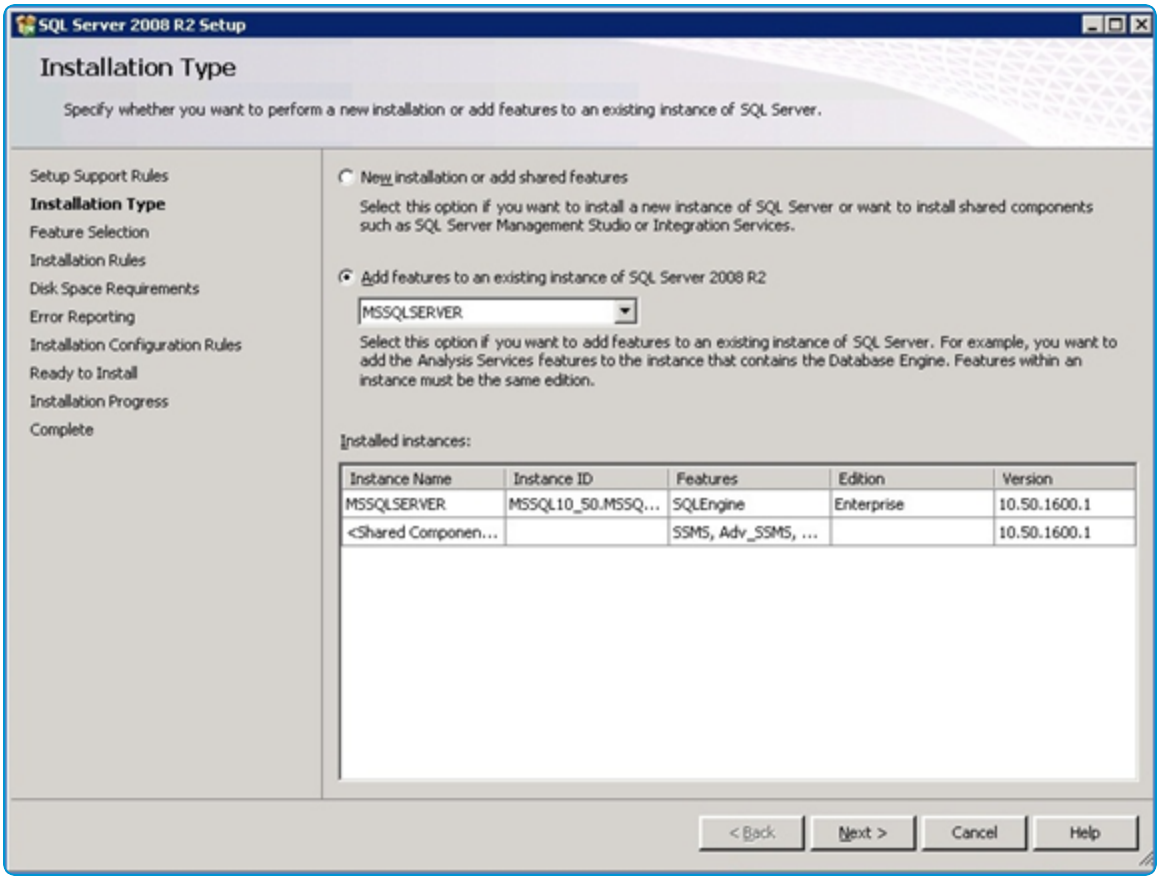
On-premises customers will need the following to install the Full-Text feature:

- Access to the SQL Server installation media.
- Windows rights to run the media on the server.

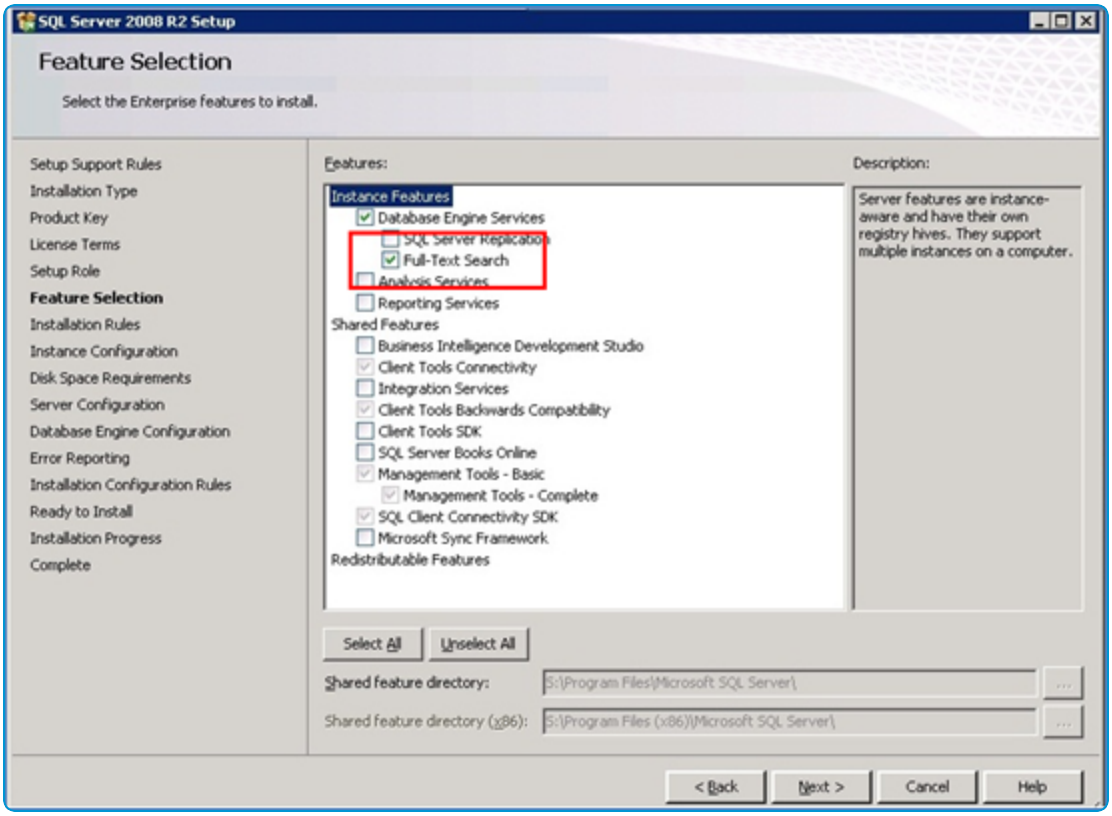
1. RDP into your Workspace ONE UEM database server.
2. From **Programs and Features**, run the **Microsoft SQL Server** program.
3. Choose **Add** to add features.



4. In the SQL Server Setup wizard, select the SQL instance.



5. In the **Feature Selection** section, check the **Full-Text Search** feature.



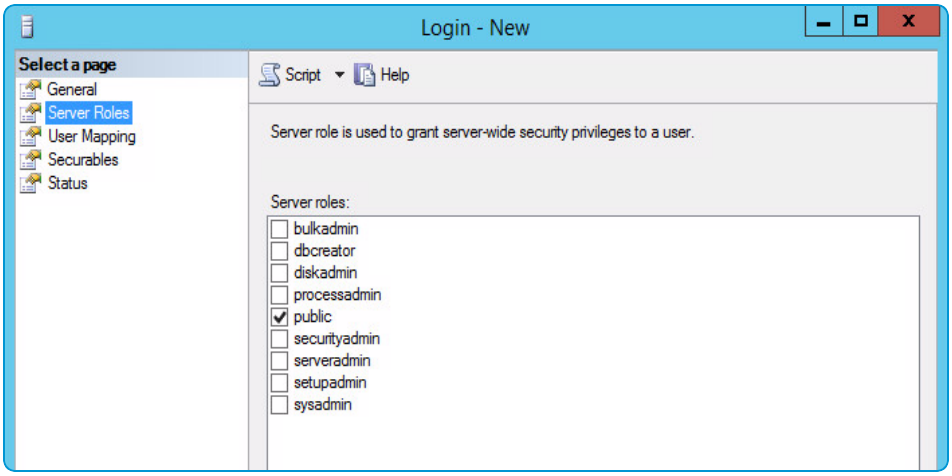
On Windows Server 2008, the default account assigned to the SQL Full-text Filter Daemon Launcher service is the Local Service account. SQL Server uses security features available in Windows Server 2008 to provide a high level of security and isolation for the service. For enhanced security, you should not configure the SQL Full-text Filter Daemon Launcher service to run under any other account.

Task: Verify SQL User Permissions

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**.

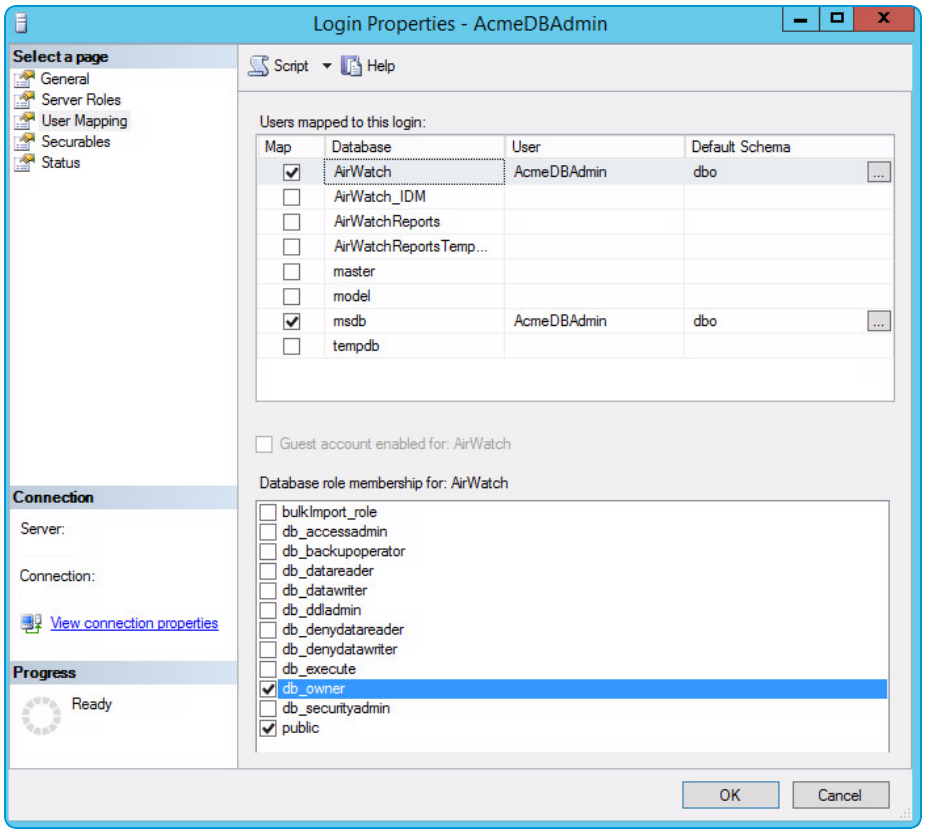
4. Navigate to the **Server Roles** tab. Select server role as **Public**.



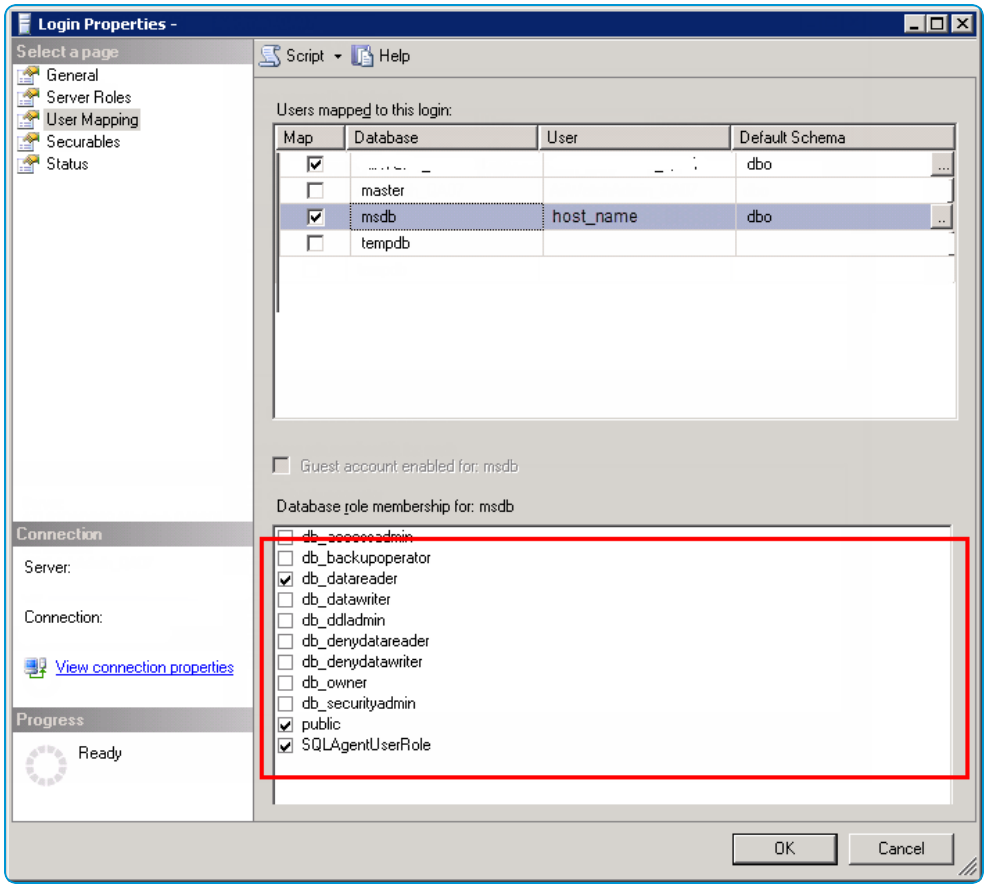
5. Select **User Mapping.**

   - 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.



- Select the msdb database. Then, select the **SQLAgentUserRole** and **db_datareader** roles.



Task: Export and Reimport SQL Jobs (SQL Server AlwaysOn)

If you have deployed SQL AlwaysOn for your database servers, you must export and reimport the required SQL jobs before you upgrade your database servers.

For instructions on exporting and reimporting SQL jobs, see **Replicate SQL Agent Jobs on Additional Database Servers** in the **Workspace ONE UEM Installation Guide**, available on docs.vmware.com.

Stage Upgrade Files

After performing the necessary preparatory steps, you can stage all the unzipped installer files on their appropriate servers. Place the files (in .zip format) that you received from the Resources Portal on the following servers, then extract the contents:

- All Workspace ONE UEM Application servers
- All Workspace ONE UEM Database servers
- All Workspace ONE UEM Reports servers

Chapter 3:
Create Backups for Database and App Servers

Back Up Databases and Servers Overview

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:

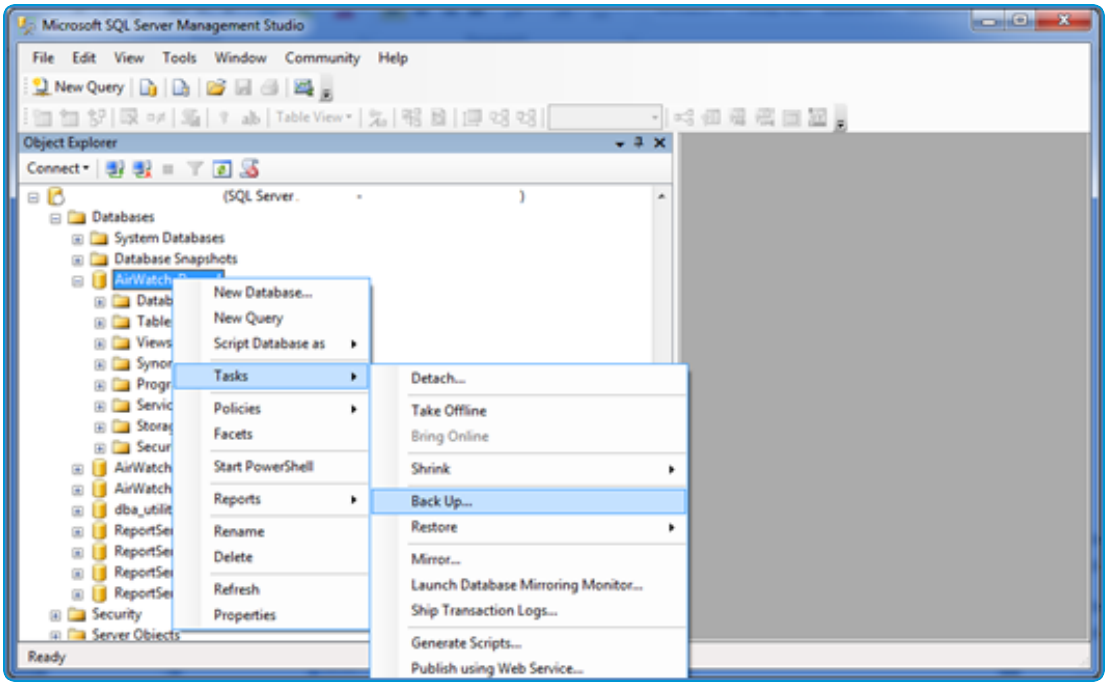
1. Back up the Workspace ONE UEM Database on page 22
2. Back up the Workspace ONE UEM console and Device Services Servers (if virtualized) on page 23

Back up the Workspace ONE UEM Database

Perform a database backup in case your upgrade fails or you need to restore it later.

1. Make sure to stop all the Workspace ONE UEM services and websites.
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**.



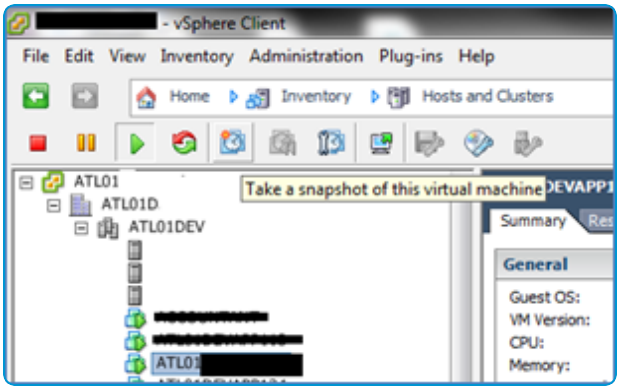
5. Specify a backup location and type, and then select OK to complete the database backup.

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

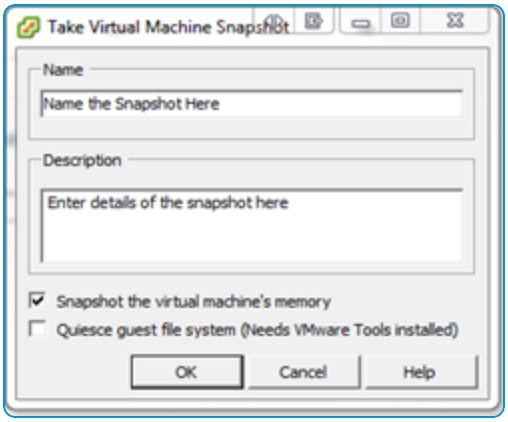
Perform an app server backup in case your upgrade fails or you need to restore them later.

1. Open up the **VMwave 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.



- Specify a snapshot name, description, and then make sure:
  - **Snapshot the virtual machine's memory** is checked
  - **Quiesce guest file system** is unchecked



Chapter 4:
Stop All Websites and Services

Stop Services Overview

After staging the appropriate files, you are almost ready to back up your servers.

However, to back up all the necessary components, you must first 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.

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

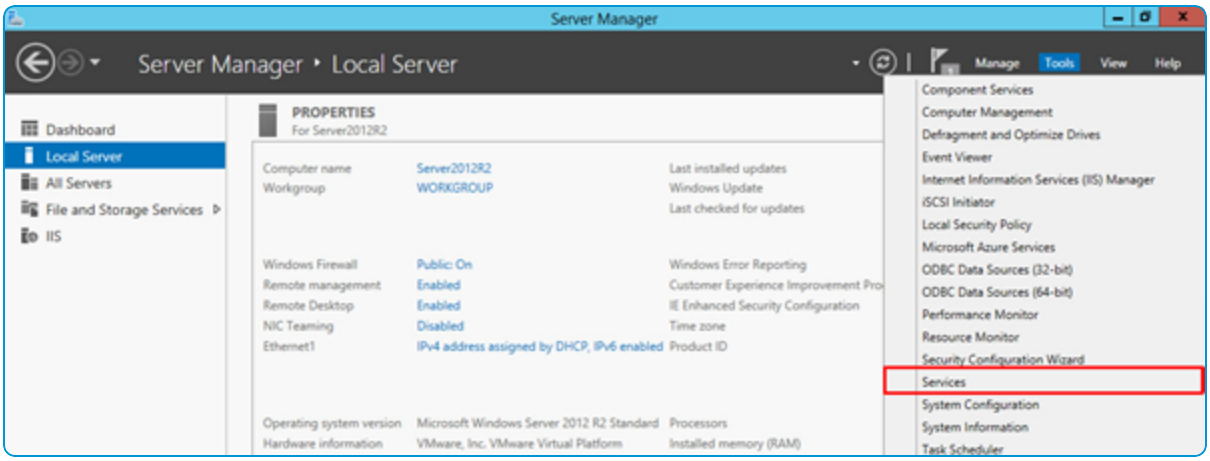
To disable World Wide Web Publishing Services, see: Disable the World Wide Web Publishing Service on page 26.

To stop Workspace ONE UEM Services, start the Workspace ONE UEM Application Server installation. For more information, see: Start the Workspace ONE UEM Application Installer on page 27.

Disable the World Wide Web Publishing Service

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

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**.

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 on page 27.

Start the Workspace ONE UEM Application 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.

To start the installer:

1. On each application server, open the **9.4 Application** folder and run the **Workspace ONE UEM Application 9.4.X Full Install.exe.**

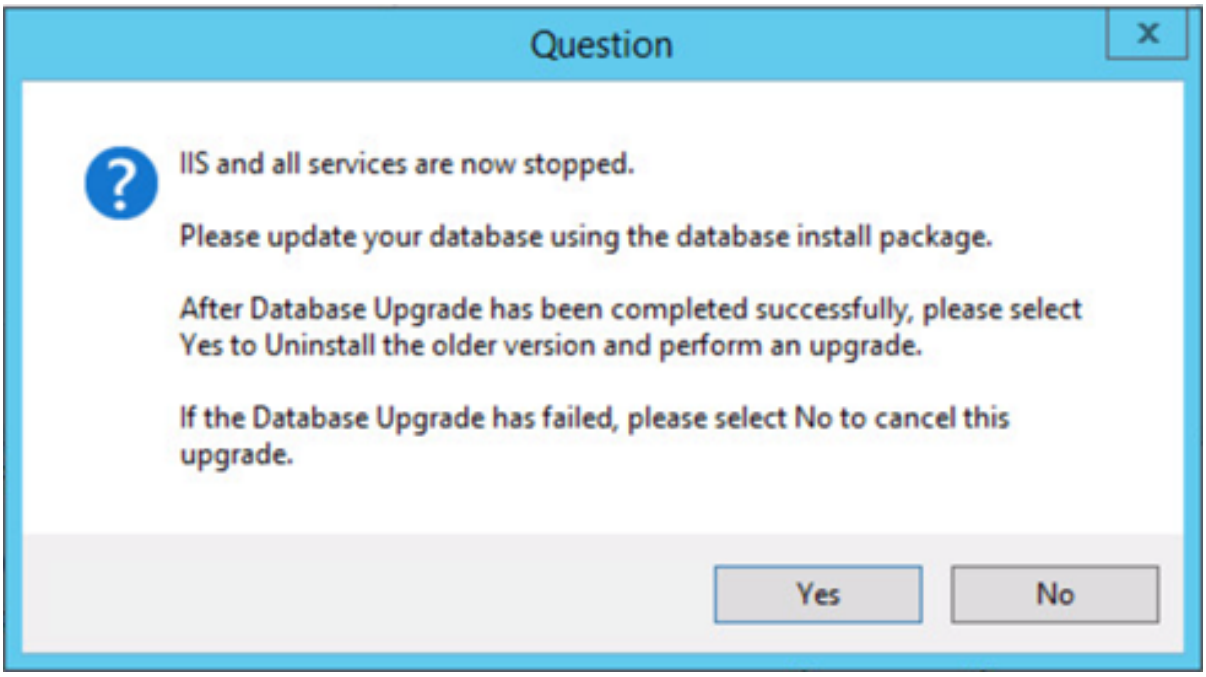
   Execute the Workspace ONE UEM installer from an account with administrator privileges. If you do not have administrative privileges, right-click and choose **Run as Administrator** to run the installer.

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.



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 on page 29.

Chapter 5:
Upgrade the Workspace ONE UEM Database

Database Upgrade Overview

In this step you will run the actual 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 Workspace ONE UEM 9.4 depending on your current AirWatch version. You can find out which version of AirWatch 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 the versions listed here and require instructions to upgrade the database, then you should reference previous versions of the VMware Workspace ONE UEM Upgrade Guide (available to partners and existing customers at: https://resources.air-watch.com/view/xm92c772sbl39zg658k9), which include instructions for older versions.

When you have determined the proper upgrade for your database, Upgrade the Workspace ONE UEM Database on page 29

Upgrade the Workspace ONE UEM Database

Perform the following steps to upgrade your database to the current version.

Prerequisites

- Make sure to stop all the Workspace ONE UEM services and websites.
- Back up your Workspace ONE UEM Application Servers and Workspace ONE UEM Database.

How To Execute the Database Setup Utility

Use the following step-by-step instructions to perform the necessary database upgrades for each Workspace ONE UEM version as applicable to your setup. For example, upgrading from 9.0 to 9.3 will require you to follow the procedure below three times – 9.0 to 9.1, 9.1 to 9.2, 9.2 to 9.3. The procedure itself is the same for each incremental upgrade, but it must be performed for each version until you reach 9.3.

Important: After AirWatch v9.3, you can skip to the latest version.

If you will be 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.

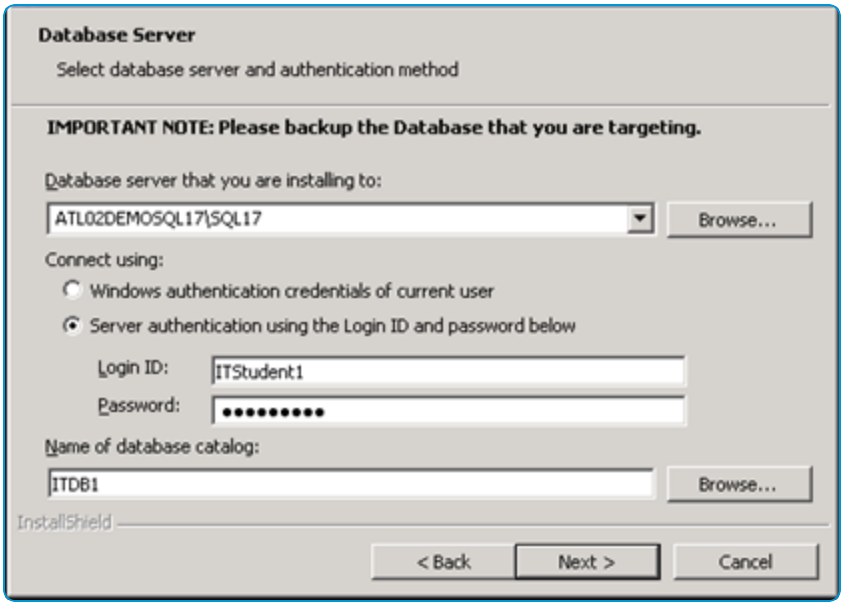
From a server connected to the database, perform the following:

1. Make sure to stop all the Workspace ONE UEM services and websites.
2. Open the **Workspace ONE UEM Database 9.x Setup.exe** executable by right-clicking and running as administrator, where 9.x is the next Workspace ONE UEM version from the one you are running. (If you are currently on 9.3, you would run 9.4.)

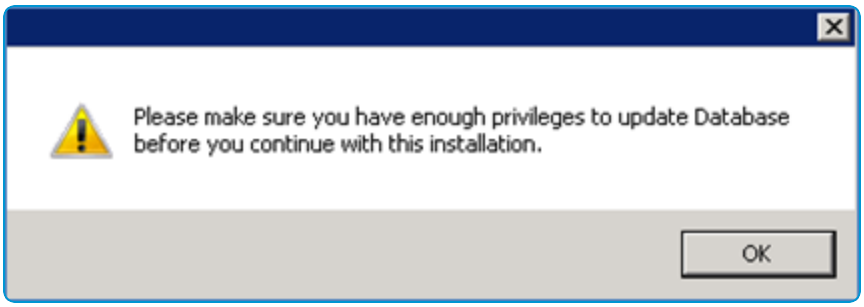
   Certain software components you might be prompted to download, such as .NET and TLS, require a reboot. Workspace ONE UEM recommends proceeding with the installer until finished and rebooting when you are done.
3. If your server is missing any essential components, the DB installer will automatically 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 form the application server.

   When complete, select **Next**.
4. Accept the Workspace ONE UEM EULA and select **Next**.
5. 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. For example, C:\Workspace ONE UEM. Click **Next**.
6. Next, 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, choose **Next**.



7. Before proceeding, you will be warned to make sure that your user account has enough permissions. Click **OK**.



8. Next, choose **Install** to begin the database installation process.
9. Once the database upgrade process has completed, choose **Finish**.

Chapter 6:
Upgrade the Workspace ONE UEM console and Device Services Servers

Upgrade AirWatch Console and Device Services Servers Overview

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.

If you have previously started the installer to stop all websites and services, 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.

To upgrade your application servers, see Upgrade Application Servers on page 33.

Upgrade Application Servers

On each of your Console and Device Services servers, run the **Workspace ONE UEM Application 9.4.X 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 VMware Workspace ONE UEM Installation Guide (VMware provides this documentation to you as part of the on-premises installation process).

IMPORTANT: Do not change any of the pre-populated fields as part of your upgrade **without first confirming with Workspace ONE UEM**, as this could adversely affect your deployment and in some cases prevent Workspace ONE UEM from functioning.

SEG Upgrade Note

If you are running the Workspace ONE UEM 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.

Chapter 7:
Validate the Upgrade

Post-Upgrade Validation Overview

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

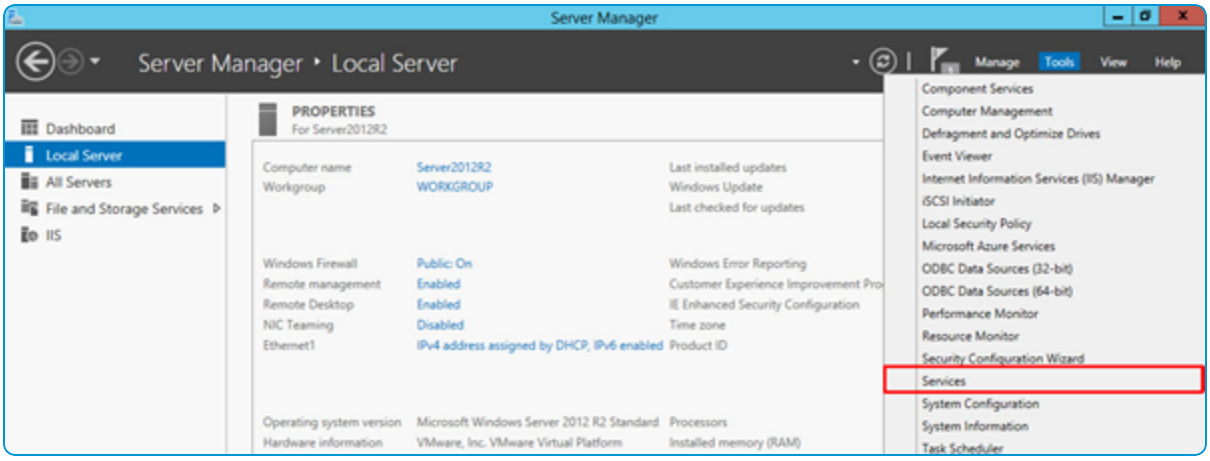
For more information, see Verify Workspace ONE UEM Services are Running on page 35 and Verify the Upgrade on page 35.

To verify that you have successfully completed the upgrade process, Complete the Post Upgrade Checklist on page 38.

Verify Workspace ONE UEM Services are Running

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

1. Open the **Server Manager**.
2. From the left pane, select your local server 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 AirWatch 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 the following verification steps to ensure you successfully upgraded Workspace ONE UEM.

First, validate your Administrator Roles.

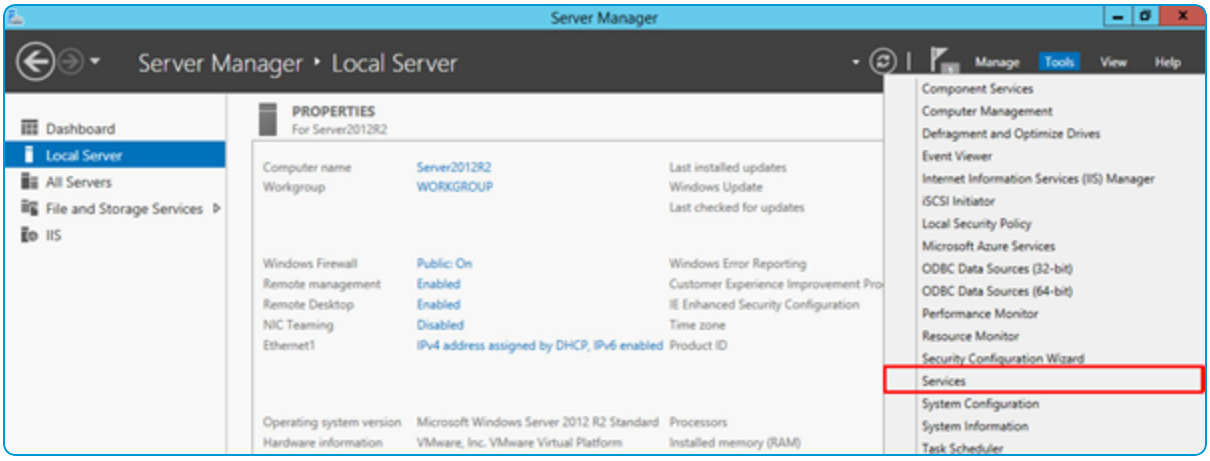
1. Log in to the Workspace ONE UEM console and navigate to **Accounts > Administrators > Roles.**
2. Verify that the update did not remove any of your custom administrator roles. If they are missing, you will have to recreate them manually.

   Next, verify your Directory Service settings.

3. Navigate to **Groups & Settings > All Settings > System > Enterprise Integration > Directory Services**. Select the **User** tab.
4. Select **Show Advanced**. Verify that **Auto Merge** is checked. Select the **Group** tab.
5. Select **Show Advanced**. Verify **Auto Sync** and **Auto Merge** are checked.
6. 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.

   Next, verify the Site URLs.
7. Navigate to **Groups & Settings > All Settings > System > Advanced > Site URLs.**
8. Verify the **REST API URL** and **Sync Appcast URL** are configured correctly:
   - The **Console URL** should be "https://{CONSOLE_URL}/AirWatch", where {CONSOLE_URL} is the URL of your UEM console Server.
   - The **Device Services URL** should be "https://{AW_DS_URL}/DeviceServices", where {AW_DS_URL} is the URL of your Device Services server.
   - The **REST API** should be "https://{AW_API_URL}/API", where {AW_API_URL} is the URL of your API server.
   - The **SCL Sync Appcast URL** should be “https://{AW_DS_URL}/DeviceServices/AirWatchSyncAppcast.xml", where {AW_DS_URL} is the URL of your Device Services server.
   - The **MdmAgentAppcast URL** should be "https://{AW_DS_URL}/DeviceServices/AirWatchAgentAppcast.xml", where {AW_DS_URL} is the URL of your Device Services server.
   - The **Outlook Add-In SCL Appcast URL** should be "https://{AW_DS_URL}/DeviceServces/OutlookSCLAppcast.xml", where {AW_DS_URL} is the URL of the Device Services server.
   - The **SCL Appcast URL** should be "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.

   Next, validate GEM Functionality/
9. On your Console server, navigate to **C:\AirWatch\Logs\Services**. Delete the AirWatchGemAgent.log file.
10. Open the **Server Manager**.
11. From the left pane, select Local Server and navigate to **Tools > Services.**



12. 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**.

13. Check your C:\AirWatch\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.

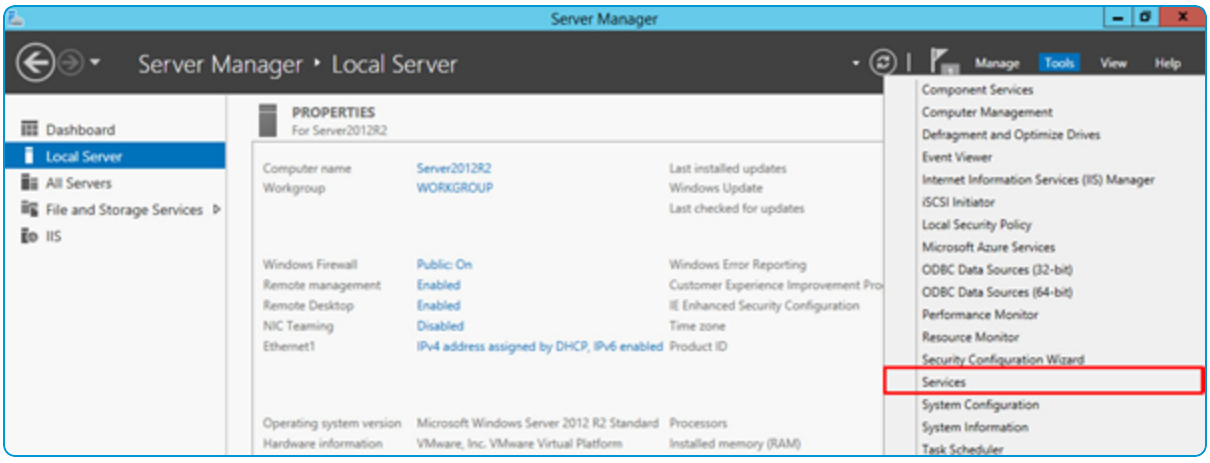
    Next, disable services on Mmultiple Console servers.

    This task is only applicable if you have **multiple Console servers.**

    The two services mentioned (Workspace ONE UEM Device Scheduler and Workspace ONE UEM GEM Inventory Service) must only be active on one primary Console server. Disable these services on any Console servers other than the primary by following the step-by-step instructions.

14. On your non-primary Console servers, open the **Server Manager**.

15. From the left pane, select Local Server and navigate to **Tools > Services**.



16. You see all Workspace ONE UEM Services at the top of the services list in alphabetical order. Each of these services starts with AirWatch in the name. For the **AirWatch Device Scheduler** and **AirWatch GEM Inventory Service**, right-click and select **Stop**.

Appendix:
Complete the Post Upgrade Checklist

In addition to the items in the previous section, use the following 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.

Status	Functionality	Verification
Android device testing		
	Enrollment	Try enrolling an Android device.
	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		
	Devce 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 9.4 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 C:\AirWatch\AirWatch X.X\Database\AWDatabaseLog_MM-DD-YYYY_XX-XX-XX.txt.

Appendix:
Performing a Feature Pack Update for Workspace ONE UEM

Procedure

Use the following step-by-step instructions to apply a Feature Pack to your version of Workspace ONE UEM.

1. Stop all the Workspace ONE UEM services and websites on Workspace ONE UEM console and Device Services servers.

   If your SEG is on the same server as your Workspace ONE UEM console or Device Services servers, refer to the notices throughout the guide that contain special instructions regarding the EAS Integration and World Wide Web Publishing services.

2. Back up your Workspace ONE UEM Application Servers and Workspace ONE UEM Database.

3. Obtain the **AirWatch_Application_9.4.X_Install.exe.** and **AirWatch_Database_9.4.X_Setup.exe** files from AirWatch Resources (resources.air-watch.com).

   These will be the full installer files, which you will run on your servers to apply the upgrade.

   Workspace ONE UEM recommends that you retain these *.exe install files.

4. Execute the **AirWatch_Application_9.4.X_Install.exe.** by right-clicking and running as administrator on each Console and Device Services server up until the point where all application servers state "IIS and all services are now stopped. Please upgrade your Workspace ONE UEM database using the provided script", then immediately proceed to the next step.

   Workspace ONE UEM recommends that you retain these *.exe install files.

5. Run the **AirWatch_Database_9.4.X_Setup.exe** executable on the Workspace ONE UEM database server.

   Workspace ONE UEM highly recommends that you retain these *.exe install files.

6. Finish running the installers on each Console and Device Services server.