

vmware® PROFESSIONAL SERVICES

VMware® User Environment Manager

Deployed in 60 Minutes or Less

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April 2015

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VMware User Environment Manager Deployed in 60 Minutes or Less

1. VMware User Environment Overview

With the VMware acquisition of Immidio, announced in February 2015, just two months later VMware has now released VMware User Environment Manager (UEM). In the last several weeks I have been doing some internal testing with UEM; looking at the different capabilities the software has, and how this application will help administrators manage users and improve the user experience.

UEM is straightforward to deploy and get up-and-running, as there is no extra infrastructure needed to configure UEM. All that is required to configure UEM is:

- A couple of file shares
- Configuration of group policy objects (GPOs) on the user organizational unit (OU)
- Installation of UEM agent and manager software

There is no management server component other than network file shares and configuration of a few GPOs.

This example shows how you can perform a basic deployment for 50 linked clone virtual machines in 60 minutes. For an enterprise with many sites, decisions will need to be made about configuring network shares and where to place them on the network. But most of the work, as you will see, can easily be accomplished in 60 minutes or less.

2. Installation Steps

2.1 Create two file shares (10 minutes or less)

UEM Configuration Share

This share contains the central configuration for UEM. The UEM Management Console is used to create and edit the UEM configuration. Administrators use the UEM Management Console, so they need “change” permissions to be able to create and edit the UEM configuration. When a user logs on, the UEM FlexEngine reads the configuration in this share to determine which configuration should be applied. That is why users only need “read” permissions. This share can be any central share on a file server, or a CIFS share from a SAN/NAS device. For multi-site scenarios this share can be replicated as long as the path to the share is the same for all client devices. DFS namespaces are supported.

Example share name: `\\server\UEMshare`

The minimum share permissions are “change” for administrators and “read” for users. Set the following NTFS security permissions on this share:

- For administrators of UEM: “Full control”
- For users of UEM: “Read & execute”

UEM Profile Archive Share

This share is used to store the personal settings for all the users. A unique subfolder is created for each user. The personal user settings are read from this share at logon or application start, and are written back at logoff or application exit. Users need “change” permissions to store their personal settings in this share.

This share contains mostly .ZIP files, the so-called UEM profile archives. The total storage space for this share depends on the number of users, applications, and backups.

Example share name: `\\server\UEMprofiles`

The minimum share permissions should be “change” for all users. Set the following NTFS security permissions on this share:

- For UEM administrators or Helpdesk: “Full control”
 - Apply to: This folder, subfolders and files
- For users of UEM: “Read & execute” and “Create folders/append data”
 - Apply to: This folder only
- For creator/owner: “Full control”
 - Apply to: Subfolders and files only

Figure 1 shows the configured permissions.

Type	Name	Permission	Inherited From	Apply To
Allow	CREATOR OWNER	Special	<not inherited>	Subfolders and files only
Allow	SYSTEM	Full control	<not inherited>	This folder, subfolders and files
Allow	Administrators (DEMO\Administrators)	Full control	<not inherited>	This folder, subfolders and files
Allow	Users (DEMO\Users)	Read & execute	<not inherited>	This folder, subfolders and files
Allow	Users (DEMO\Users)	Special	<not inherited>	This folder and subfolders

Figure 1. Configured permissions

2.2 Configure Windows GPOs (10 Minutes or Less)

Copy the VMware User Environment Manager GPOs

Before creating the VMware UEM GPOs you need to copy the GPOs to the correct location.

Both the .admx and .adml files can be downloaded as part of the VMware UEM download. Copy these files to one of your Active Directory Servers in the following locations:

- Copy the .admx files to:

C:\Windows\SYSTEM32\sysvol\domainname\Policies\PolicyDefinitions

- Copy the .adml files to:

C:\Windows\SYSTEM32\sysvol\domainname\Policies\PolicyDefinitions\en-US

Creating the VMware User Environment Manager GPO

1. Open the Group Policy Management Console. Create a new GPO that will be applied to the users who will be managed by the UEM FlexEngine.
2. Right-click on the newly created GPO and click "Edit."
3. Configure the following UEM Group Policy settings:

Note: The policies are found under:

User Configuration -> Administrative Templates -> VMware UEM -> FlexEngine

- a. **UEM config files:** Use this setting to configure the central location of the UEM config files for uses by the UEM FlexEngine.
 - i. Enter the following value: \\UEMServer\UEMShare\general
 - ii. Note: Always include the "general" folder at the end of the path
 - iii. Enable the option "Process folder recursively"
- b. **Profile archives:** Use this setting to configure the location that is used by the UEM FlexEngine to read and store user profile archives and other settings related to profile archives.

It is necessary to use a location that is unique for each user, which is why the variable %username% is used. This way, a unique folder is created for each user.

- i. Enter the following value: `\\Server\UEMprofiles\%username%\archives`
 - ii. Enable the option “Compress profile archives”
 - c. **Profile archive backups:** Use this setting to configure the location that is used by the FlexEngine to store backups of profile archives.
 - i. Enter the following value: `\\Server\UEMprofiles\%username%\backups`
 - ii. At “Number of backups per profile archive”: Choose the required number
 - c. **Profile archive backups:** Use this setting to configure the location that is used by the FlexEngine to store backups of profile archives.
 - d. **Run FlexEngine as Group Policy Extension:** Enable this setting to run FlexEngine automatically during logon by running as a Group Policy client-side extension.
 - i. Important: To guarantee the UEM FlexEngine Group Policy client-side extension will run during each logon, you must enable the Computer Group Policy setting to *“Always wait for the network at computer startup and logon.”* This policy is available under:
 - “Computer Configuration/Policies/Administrative Templates/System/Logon”
 - ii. Be sure to apply this Group Policy to an OU in Active Directory where all the Windows clients are located.
 - e. **FlexEngine logging:** Use this setting to configure the location of the UEM FlexEngine log file, the level of log detail, and the maximum size of the log file.
 - ii. Enable the option “Compress profile archives”
 - i. Enter the following value: `\\Server\UEMprofiles\%username%\logs`
 - ii. Log level: Debug
 - Log level should be changed to “Warn” in a production environment.
 - iii. Maximum log file size in kB: 512
4. It is always necessary to configure the UEM FlexEngine logoff command to run from a logoff script. This way, the personal settings or users are exported at logoff. In the same GPO, go to User Configuration\Windows Settings\Scripts and configure the logoff command. The UEM FlexEngine logoff command that needs to run during the logoff process is:
- ```
“C:\Program Files\Immidio\Flex Profiles\FlexEngine.exe” -s
```
5. As a best practice the following GPO should also be configured:  
*Computer Configuration\Administrative Templates\System\Logon\Always Wait for the network at computer startup and logon*

### 2.3 UEM Management Console Install (10 Minutes or Less)

Install the VMware UEM Management Console on an administrator's machine. This can be any computer, whether it's a desktop or a central server used for administrative tasks.

Install the VMware UEM Management Console by executing "VMware User Environment Manager 8.6 x.msi." The VMware UEM Setup Wizard will guide you through the steps required to install the software on your computer:

1. Run VMware User Environment Manager 8.6 x.msi
2. Click *Next*
3. Accept the license agreement and click *Next*
4. Select the install location and click *Next*
5. Select *Custom*
6. Ensure the Management Console is selected and click *Next*

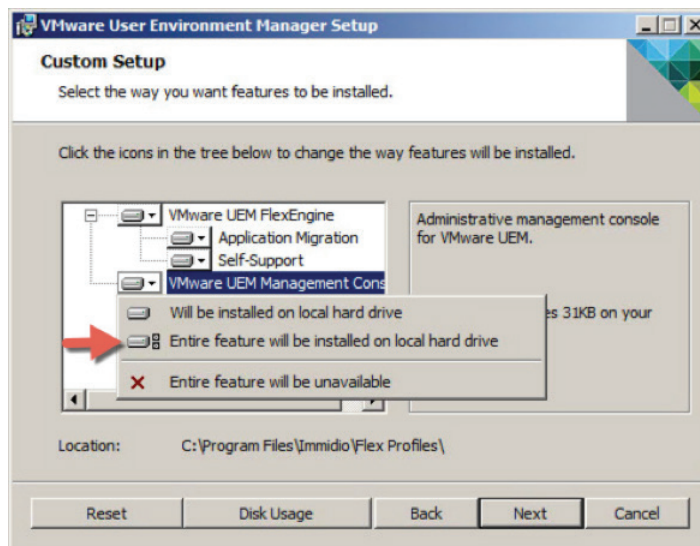


Figure 2. VMware User Environment Manager Setup widget

7. Browse to a license file and click *Next*
8. Click *Install*
9. Click *Finish*

## 2.4 UEM Management Console Configuration (One Minute)

Start the UEM Management Console to complete the initial configuration. You will see the following dialog the first time you start the UEM Management Console.

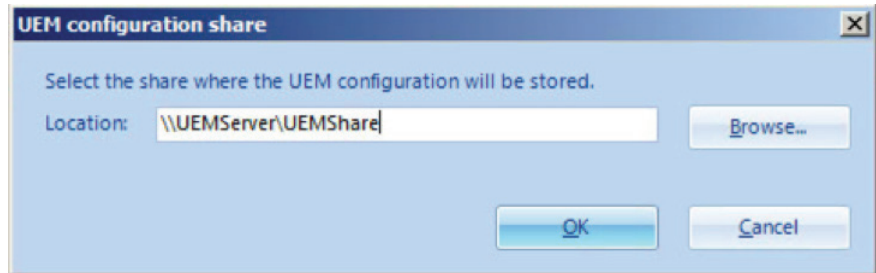


Figure 3. UEM Management Console

Fill in the Universal Naming Convention (UNC) path to the UEM configuration share created earlier, and click OK. After this step you will be presented with a settings screen. Keep the default settings and press OK. This completes the initial configuration of the UEM Management Console.

## 2.5 Easy Start Configuration (Two Minutes)

Easy Start installs a default set of UEM configuration files that allow you to quickly get a feel for the functionalities of:

- UEM Personalization
- User Environment
- Condition Sets

In addition to the default configuration files, you can also choose to have Easy Start create UEM config files and user environment shortcuts for one or more versions of Microsoft Office.

To use this option simply click Easy Start in the ribbon.



Figure 4. VMware User Environment Manager - Easy Start



After that you are presented with an option to include UEM config files and user environment shortcuts for one or more versions of Microsoft Office.

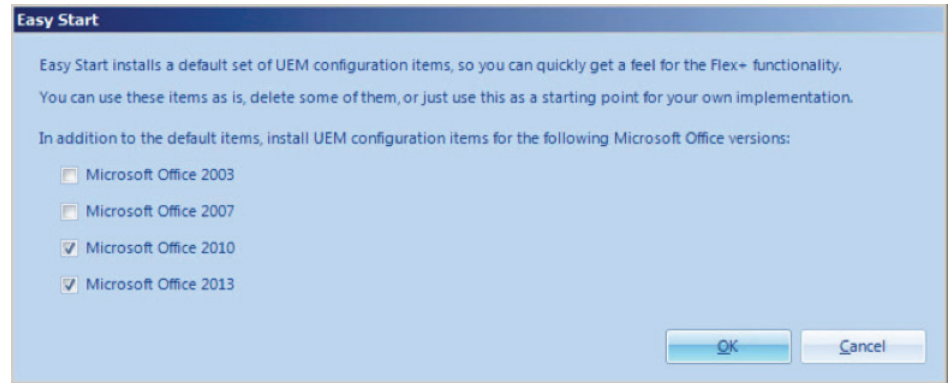


Figure 5. UEM Easy Start Microsoft Office menu

Select the Office version(s) you are using and click OK. A popup message confirms the Easy Start configuration is complete.

## 2.6 UEM Agent Installation (10 Minutes or Less)

For this configuration I'll install the agent on a "golden image" desktop to deploy 50 linked clone desktops.

The UEM FlexEngine is the UEM agent component and needs to be installed on all computers managed by UEM. You can install the UEM FlexEngine on physical desktops and laptops, virtual desktops and terminal servers.

The steps to install the VMware UEM FlexEngine are:

1. Run VMware User Environment Manager 8.6 x.msi
2. Click *Next*
3. Accept the license agreement and click *Next*
4. Select the install location and click *Next*
5. Select *Custom*
6. Ensure the Management Console is NOT selected and click *Next*

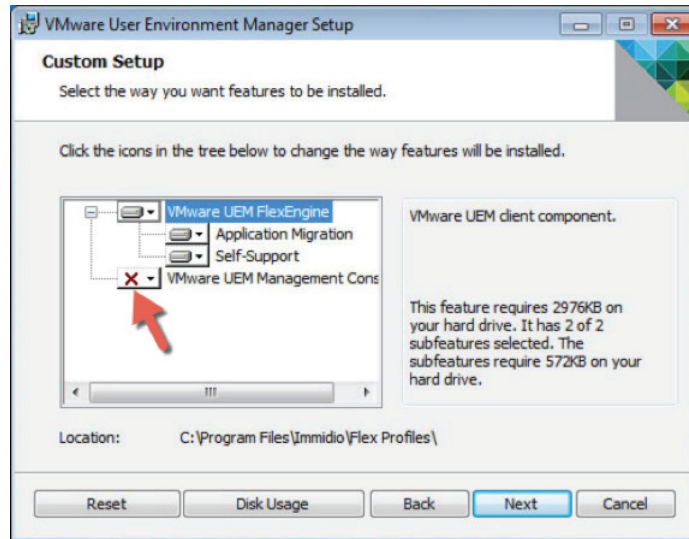


Figure 6. UEM Setup screen

7. Browse to a license file and click *Next*
8. Click *Install*
9. Click *Finish*

## 2.6 Deploy 50 Horizon Linked Clone Desktops (15 Minutes or Less)

For this test I have created a new desktop pool within my VMware Horizon environment. I will use the golden image I installed in the VMware UEM Agent as the master image, and deploy 50 desktops. These desktops will be added to an OU in active directory that has the UEM GPOs configured on the OU.

## 2.7 Summary

As you can see from this test, I was able to deploy UEM in around 43 minutes, and it took 15 minutes to deploy desktop pool of 50 desktops. The result: Configuring VMware UEM in less than 60 minutes for a small group of 50 virtual desktop users.

To deploy this solution in a large enterprise, there will need to be more planning and more decisions than I needed in my test environment, but this approach is a great starting point for a small pilot of what I am finding to be a fantastic solution for user management.

For more information on VMware User Environment Manager, be sure to visit: [www.vmware.com/products/user-environment-manager/](http://www.vmware.com/products/user-environment-manager/)