

Dell OpenManage Essentials Database

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Revisions

Date	Description
May 2015	Initial release
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Table of contents

Re	visions	S	2
1	SQL	Server requirements – OpenManage Essentials	4
	1.1	Minimum login roles for Microsoft SQL Server	4
	1.2	Database size and scalability	4
	1.3	Considerations when installing OpenManage Essentials on a domain controller	5
	1.4	Setting up OpenManage Essentials database on a remote SQL Server	5
2	Data	base maintenance – OpenManage Essentials	6
3	Data	base backup and restore – OpenManage Essentials	7
	3.1	SQL Server backup and restore instructions	7
	3.2	Prerequisites	7
	3.3	Backing up the database	7
	3.4	Restoring the database	10
	3.5	Resolving issues with duplicate backup databases	14
4	Reta	rgeting OpenManage Essentials	16
	4.1	Creating a SQL Server login	16
	4.2	Disabling the 'OMEService' SQL Server login account	20



1 SQL Server requirements – OpenManage Essentials

1.1 Minimum login roles for Microsoft SQL Server

The following table provides information about the minimum permissions for SQL Server based on different installation and upgrade use cases.

Number	Use Case	Minimum Login Roles for SQL Server
1	Installing OpenManage Essentials for the first time and you select the Typical option during the installation process.	sysadmin access on the installed instance.
2	Installing OpenManage Essentials for the first time, you select the Custom option during the installation process and an empty OpenManage Essentials database is present (locally or remotely). NOTE: If you select the Custom install option and do not enter any credentials then the installation is considered as a Typical installation and sysadmin rights are required.	db_owner access on the OpenManage Essentials database.
3	You are installing OpenManage Essentials for the first time, you select the Custom option during the installation process, and an empty OpenManage Essentials database is not present.	dbcreator access on the server.
4	Upgrading OpenManage Essentials from version 1.3, 2.0, or 2.0.1 to version 2.1 and an OpenManage Essentials database is present (locally or remotely).	db_owner access on the OpenManage Essentials

Table 1 Minimum login roles

1.2 Database size and scalability

The following table provides information about the changes to the database size in an environment with 4000 devices based on alerts, tasks, and alert actions.

Events	Database Size
Initial database size	60 MB
After discovery and inventory of 4000 devices	65 MB
After 2000 alerts are generated	73 MB
After tasks (status polling, OpenManage Server Administrator deployment tasks, remote tasks, and system update tasks) against these alerts are executed	77 MB
After deleting all the alerts and sending 20,000 alerts with all the alert actions configured	127 MB
After sending 40,000 alerts with all alert actions configured	230 MB

1.3 Considerations when installing OpenManage Essentials on a domain controller

When installing OpenManage Essentials on a domain controller:

- You must install Microsoft SQL Server manually.
- If SQL Server is installed locally, the SQL Server service must be configured to run using a domain user account.

Note: The SQL Server service will not start if you are using the default NETWORK SERVICE or LOCAL SYSTEM accounts.

After OpenManage Essentials is installed on a domain controller:

- By default, the Domain Admins group is added as a member of the OmeAdministrators and OmePowerUsers roles.
- Local Windows user groups are not included in the OpenManage Essentials roles. OmeAdministrators, OmePowerUsers, or OmeUsers rights can be granted to users or user groups by adding them to the OpenManage Essentials Windows groups. OmeSiteAdministrators rights can be granted by OmeAdministrators through the Device Group Permissions portal.

1.4 Setting up OpenManage Essentials database on a remote SQL Server

You can configure OpenManage Essentials to use an SQL Server present on a remote system. Before setting up the OpenManage Essentials database on the remote system, check for the following prerequisites:

- Network communication between the OpenManage Essentials system and the remote system is functioning.
- SQL connection works between the OpenManage Essentials system and the remote system for the specific database instance. You can use the Microsoft SQL Server Express 2012 Management Studio tool to verify the connection. On the remote database server, enable TCP/IP protocol and if you are using SQL Authentication, enable mixed mode on the remote SQL Server.

You can retarget the database for the following:

- SQL credentials to the SQL Server fails.
- Windows credentials to the SQL Server fails.
- Login credentials have expired.
- Database is moved.

Database maintenance – OpenManage Essentials

OpenManage Essentials maintains its database with stored procedures that run periodically and also when all sessions expire. Therefore, no user actions are required.

2



3 Database backup and restore – OpenManage Essentials

3.1 SQL Server backup and restore instructions

For information on backup and restore of SQL Server, see <u>https://msdn.microsoft.com/en-IN/library/ms187510.aspx.</u>

3.2 Prerequisites

- Microsoft SQL Server Management Studio must be installed on the server running OpenManage
 Essentials
- OpenManage Essentials must be installed using the Typical Installation method
- Ensure that you stop Internet Information Services (IIS)
- Ensure that you stop all OpenManage Essentials services

3.3 Backing up the database

- 1. On the server running OpenManage Essentials, open SQL Server Management Studio.
- 2. Right-click the OpenManage Essentials database (**OMEssentials**) \rightarrow **Tasks** \rightarrow **Back Up**.





The Back U	p Database –	OMEssentials	window	is	display	/ed.
------------	--------------	---------------------	--------	----	---------	------

3. Click OK.

0	Back Up Database - (OMEssentials		_ D X
Select a page General	Script 🔻 📑 Help			
	Source			
	Database:	OM	Essentials	~
	Recovery model:	SIM	IPLE	
	Backup type:	Full		~
	Copy-only Backup			
	Backup component:			
	Database			
	Packup set			
	Name:	OMEssentials-Full Da	atabase Backup	
	Description:			
	Backup set will expire:			
Connection	After:	0	🗘 days	
Server: WIN2012R2VM2\SQLEXPRESS(On: Destination	4/20/2015		
Connection:	Back up to:	Disk	🔿 Tape	
View connection properties	c:\Program Files\Microsoft SQL Se	rver\MSSQL11.SQLE	EXPRESSOME\MSSQ	Add
Progress	< 111		>	Remove
Ready				Contents
			ОК	Cancel

Figure 2 Back Up Database window

4. At the back up completed successfully message, click OK.

Û	Back Up Database - OMEssent	tials 📃 🗖 🗙	
Select a page	🔄 Script 👻 🎼 Help		
Coptions	Source		-
	Database:	OMEssentials 🗸 🗸	
	Recovery model:	SIMPLE	
	Backup type:	Full 🗸	
	Copy-only Backup		
	Backup component:		
	 Database 		
	Microsoft SQL Server Managemen	t Studio 🛛 🗙	
The backup of	database 'OMEssentials' completed successfully.		
E Conn		ОК	
Server:	O On: 4/20/2015	5 🗐 🔻	
WIN2012R2VM2\SQLEXPRESS(Destination		-
Connection: WIN2012P2V/M2VAdministrator	Back up to: Disk	O Tape	
View connection properties	c:\Program Files\Microsoft SQL Server\MSSQL	L11.SQLEXPRESSOME\MSSQ Add	
	< III	> Remove	
Progress			
Executing (100%)		Contents	
Stop action now			
		OK Cancel	H

Figure 3 Back up successful message

The OpenManage Essentials database back up file (**OMEssentials.bak**) is saved at **C:\Program Files\Microsoft SQL Server\MSSQL11.SQLEXPRESSOME\MSSQL\Backup**.

5. Copy the back up file (**OMEssentials.bak**) and paste it on another server.

3.4 Restoring the database

- 6. Open SQL Server Management Studio.
- 7. Right-click **Databases** \rightarrow **Restore Database**.



Figure 4 Restore Database option

The **Restore Database** window is displayed.

8. Select the **Device** and click the browse button.

5	Restor	e Database -		_ 🗆 X
🐼 No backupset selected to be resto	red.			
Select a page	Script 👻 📑 Help			
Select a page General Files Options	Script			V V V Timeline
	Restore plan			
	Backup sets to restore:	e Server Database Po	peition Firet ISN Laet ISN	Checkpoint SN Full
Connection WIN2012RVM3 [WIN2012RVM3\Administrator] <u>View connection properties</u>				
Progress	<	Ш		>
C Ready				Verify Backup Media
			OK	ncel Help

Dél

Figure 5 Restore Database window

The **Select backup devices** window is displayed.

- 9. Click Add and browse to select the back up file.
 10. Click OK.

%		Rest	tore Databa	se -			-	- 🗆	x
🐼 No backupset selected to be rest	ored.								
Select a page	🔄 Script 🕞 📑 Help								
General Files Options	Source								
	O Database:								¥
	Oevice:								
	Database	e:							~
	Destination								
	Database:								~
	Restore to:						Т	imeline.	
	Restore plan			Select h	ackup devices		_ □	x	1
	Backup sets to r			Sciection	actup actives				
	nesule Name	Specify the Backup me Backup me C:\OMEsse	backup media a dia type: dia: entials.bak	File	your restore operation	•	Add Remove		<u>, </u>
Connection WIN2012RVM3 [WIN2012RVM3\Administrator] <u>View connection properties</u>							Contents		
Progress									
Ready	×				ОК	Cancel	Help		ia
					ОК	Can	cel	Help	

Figure 6 Select backup devices window

The database is restored successfully.

%	Restore Dat	base - OMEssentials	
🕕 Ready			
Select a page	🔄 Script 👻 🛐 Help		
😭 General 😭 Files			
Protions	Source		
	O <u>D</u> atabase:		V
	● Device:	\OMEssentials.bak	
	D <u>a</u> tabase:	MEssentials	v
	Destination		
	Data <u>b</u> ase:	MEssentials	~
	Restore to:	ne last backup taken (Mor	nday, April 20, 2015 2:22:19 PM) <u>T</u> imeline
	Restore plan		
	Backup sets to restore:		
	Restore Name	Component	t Type Server Database
	OMEssentials-Full Data	base Backup 🛛 Database	Full WIN2012R2VM2\SQLEXPRESSOME OMEsser
Connection			
WIN2012RVM3 [WIN2012RVM3\Administrator]			
View connection properties			
Progress			
Done Done	< III		> Verify Backup Media
			OK Cancel Help

Figure 7 Restore Database window



Figure 8 OMEssentials database

3.5 Resolving issues with duplicate backup databases

If there are multiple instances of the back up file (**OMEssentials.bak)**, the database cannot be restored.

ķ	Restore D	Database - OMEssentials		_ 🗆 X
🚳 🕕 Ready				
Select a page	🔄 Script 👻 🚺 Help			
 General Image: Second se	Source			
	Oevice:	C:\OMEssentials.bak		
	Database:	OMEssentials		
	Destination			
	Database:	OMEssentials		¥
	Restore to:	The last backup taken (Tues	day, April 21, 2015 6:22:13 PM)	Timeline
	Restore plan			
	Backup sets to restore:			
	Restore Name	Component	Type Server	Database
	OMEssentials-Full I	Database Backup Database	Full WIN2012R2VM2\SQLEXPRESS	SOME OMEsser
Connection				
₩IN2012RVM3 [WIN2012RVM3\Administrator]				
View connection properties				
Progress				
Restore of database 'OMEssentials2' failed.	X III		Verif	y Backup Media
			OK Cancel	Activate W Gonepsystem

Figure 9 Restore Database window

To resolve the issue, rename both the files (OMEssentials and OMEssentials_log) and then try restoring the database.

To rename the files, edit the file names in the **Restore As** field.

%		Restore I	Database -	OMEssential	s			_ 🗆 X
🚳 🕕 Ready								
Select a page Providential	Sc.	ript 👻 📑 Help						
Files Options	Re	store database files as ——						
		Relocate all files to fold	er					
		Data file folder :		C:\Program File	s\Microsoft	SQL Server\MSSQL11.N	/ISSQLS	Έf
		Log file folder :		C:\Program File	s\Microsoft	SQL Server\MSSQL11.N	/ISSQLS	Ef
		Logical File Name	File Type	Original File N	Restore As			
		OMEssentials	Rows Da	c:\Program	SQL\DATA	\OMEssentials2.MDF		
		OMEssentials_log	Log	c:\Program	C:\Program	n Files\Microsoft S		
Connection								
WIN2012RVM3 [WIN2012RVM3\Administrator]								
View connection properties								
Progress								
Restore of database 'OMEssentials2' failed.								
						OK Canc	el	Activate W Go Help System

Figure 10 Edit database file name

4 Retargeting OpenManage Essentials

4.1 Creating a SQL Server login

- 1. Open SQL Server Management Studio.
- 2. Click Security \rightarrow New Login.



Figure 11 New Login option

The Login - New window is displayed.

3. Type a login name and click SQL Server Authentication or Windows Authentication.

B	Login -	New		_ D X
Select a page	🔄 Script 🔻 🛐 Help			
Server Roles User Mapping Securables Status	Login name: O Windows authentication © SQL Server authentication	Test		Search
	Password:	•••••		
	Confirm password:	•••••		
	Specify old password			
	Old password Enforce password policy Enforce password expira User must change passw	tion vord at next login	Optional	
	 Mapped to certificate 			×
	 Mapped to asymmetric key 			<u> </u>
Connection	Map to Credential			Add
Server: WIN2012RVM3	Mapped Credentials	Credential	Provider	
Connection: WIN2012RVM3\Administrator				
View connection properties				
Progress				Remove
Ready	Default database:	OMEssentials		▼
<i>ν</i> 4 β ν	Default language:	<default></default>		¥
			ОК	Cancel

Figure 12 Login – New window

4. On the **Server Roles** page, select **public**.



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Figure 13 Server Roles

5. On the User Mapping page, select OMEssentials.

đ	Login - N	lew	_ 🗆 X
Select a page	🖾 Script 🔻 📑 Help		
General Server Roles User Mapping Securables	Users mapped to this login: Map Database master model msdb OMEssentials ReportServerTempDB tempdb	User Test	Default Schema
	Guest account enabled for: OME Database role membership for: OME	Essentials	
Connection	db_accessadmin		
Server: WIN2012RVM3 Connection: WIN2012RVM3\Administrator WIN2012RVM3\Administrator	db_backupoperator db_datareader db_datawriter db_ddladmin db_denydatareader db_denydatawriter db_denydatawriter		
Progress	db_securityadmin		
Ready			
			OK Cancel

Figure 14 User Mapping

6. Click **OK**.

The new user is created.



Figure 15 Users

4.2 Disabling the 'OMEService' SQL Server login account

1. On the system where OpenManage Essentials is installed, run following command from the command prompt:

```
sqlcmd -E -S ".\SQLEXPRESSOME" -Q "ALTER LOGIN [OMEService] WITH
PASSWORD='DummyPassword'"
```

Note: Please verify if SQLEXPRESSOME is the name used for the Typical installation.

Note: Copying and pasting from the command from a website or email may result in incorrect characters. It is recommended to type the complete command.

2. Open OpenManage Essentials. A database login error is displayed.



Figure 16 Database login error

3. Click OK.

The Database Connection Error window is displayed.
The Database Connection Error window is displayed.

Figure 17 Database Connection Error

4. Type the name of the server where OpenManage Essentials database was restored, and the user name and password of the new user you created.

	Database Connect Unable to connect Please enter a vali	tion Setup to database. id server, user name and password.
	Server Name :	WIN2012RVM3
	Authentication:	SQL Server Authentication
ノ	User Name:	Test
	Password:	•••••
		Connect

Figure 18 Connecting to the database

5. Click Connect.

- 6. Open OpenManage Essentials.
- 7. Reset Internet Information Services (IIS).
- 8. Restart the OpenManage Essentials services or restart the server.

You may delete the database where OME was installed after retargeting of the database is completed.

