

# Installing Enterprise Workload Manager on Windows 2003 Server

IBM Virtualization Engine technology adoption series

.

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# Abstract

This white paper provides an easy-to-follow, step-by-step guide for installing and configuring IBM Virtualization Engine Enterprise Workload Manager (EWLM) 2.0, domain manager and the managed-server products. You will focus on the installation and configuration of EWLM domain manager on Microsoft Windows 2003 Server only. The steps are similar for other platforms, such as the IBM AIX 5L<sup>™</sup> and Linux® operating systems.

### Introduction

Virtualization improves IT resource utilization by allowing system administrators to access and manage resources across a heterogeneous environment. These resources are available virtually, as a single pool, rather than by physical location. The IBM<sup>®</sup> Virtualization Engine<sup>™</sup> is a set of technologies and systems services that lead you into on-demand computing and, therefore, simplify IT resource management by virtualizing data, applications, servers and network resources.

IBM Virtualization Engine Enterprise Workload Manager (EWLM) 2.0 is a product in the IBM Virtualization Engine solution that can monitor and manage distributed heterogeneous workloads to achieve userdefined business goals. The first release of EWLM offers the following performance-monitoring capabilities with the help of instrumented middleware:

- Dynamic detection of system and application topologies to identify the likely origin of performance problems rapidly and efficiently
- Construction of an end-to-end view of business transactions and the processing segments performed by each participating middleware product
- Support for user-defined performance goals in policies that are similar to service-level agreements
- Support for middleware and software vendors to instrument their applications with the Open Group Application Response Measurement (ARM) 4.0 application programming interfaces (APIs), which EWLM requires for applications to take full advantage of its functionality

This release of Virtualization Engine EWLM 2.0 introduces IBM POWER5<sup>™</sup> processor-based CPU resource-management functionality. Over time, EWLM capabilities will expand to more automation and integration with other system resource tools, such as the IBM Tivoli<sup>®</sup> Intelligent Orchestrator and Tivoli Provisioning Manager.

For details about IBM Virtualization Engine and EWLM, see the IBM eServer<sup>™</sup> Software Information Center: http://publib.boulder.ibm.com/infocenter/eserver/v1r1/en\_US/index.htm?info/veicinfo/eicarplangeneral.htm.

# **Planning for the EWLM installation**

The EWLM installation requires you to:

- Ensure that your system meets the minimum hardware and software requirements.
- Complete a planning checklist for your platform.

You can accomplish both of these tasks by following the directions that are provided under "EWLM" at the IBM eServer Software Information Center:

http://publib.boulder.ibm.com/infocenter/eserver/v1r1/en\_US/index.htm?info/veicinfo/eicarplangeneral.htm.



At this Web site, you can find detailed information about the hardware and software required to use EWLM. For example, an IBM eServer<sup>™</sup> xSeries<sup>®</sup> system with a 2-gigahertz processor, 512 megabytes of memory and 2 gigabytes of disk space can be the domain manager for a domain of up to 50 managed servers with moderate policy definitions. You can also find the planning worksheets at this site that help you adequately plan your EWLM implementation strategy.

### Acquiring the installation images

To get the set of Virtualization Engine installation CDs, you must purchase the product through IBM or your IBM Business Partner.

### **Installing EWLM**

ELWM configuration requires that you have the following privileges:

- Your user ID must be able to act as part of the operating system (that is, it must be in a Microsoft® Windows® Administrator group).
- You must be able to log on as a service.
- You must be able to log onto the Microsoft Windows system as an Administrator.

To ensure that you have these privileges, perform the following steps:

- 1. Click Start > Settings > Control Panel > Administrative Tools > Local Security Policy > Local Policies > user Rights Assignments.
- 2. Create a user, such as tester.
- 3. Make the **tester** user part of the **Administrator** group.
- 4. Figure 1 shows how the **Users**' subdirectory changes in this example, with the addition of the **tester** user. (**Note:** The EWLM domain manager installation creates other users.)



Figure 1. Users' subdirectory.



5. Figure 2 shows the **Groups** subdirectory used in this example.



Figure 2. "Groups" subdirectory

6. Figure 3 shows the Administrator group that is used in this example:

Administrators Properties	? ×
General	
Administrators	
Description: mplete and u	unrestricted access to the computer/domain
Members:	
Administrator & db2inst1 & tester	
Add <u>R</u> emove	]
Computer 🛛 🔤 Command Pro	mpt 🛛 🔤 Command Prompt 🛛 😢 IBM Virtua

Figure 3. Administrator Group



7. Figure 4 shows the **db2admns** group that is used in this example. (**Note:** The member is created automatically.)

DB2ADMN5 Properties	<u>?</u> ×
General	
DB2ADMNS	
Description: access to all DB2 objects through the operating sys	tem.
Members:	
📓 db2inst1	
Add <u>B</u> emove	
OK Cancel AP	ply

Figure 4. The db2admns group

8. Figure 5 shows an example of a **DB2USERS** screen. (**Note:** No members are created automatically.)

DB2USERS Properties	<u>?</u> ×
General	
DB2USERS	
Description: access to all DB2 objects through the operating sys	tem.
Members:	
Add Remove	
OK Cancel Ap	ply

Figure 5. No members are in the DB2USERS group.



9. Figure 6 shows the system resources used in this example.

System Properties		? ×
Advanced General	Automatic Updates Computer Name	Remote Hardware
	System: Microsoft Win Enterprise Edi Service Pack Registered to: joe joe 69763-011-57 Computer: Intel(R) Pentiu processor 796 MHz, 512	dows Server 2003 tion 1 59862-43851 m(R) III MB of RAM
	ОК С	ancel Apply

Figure 6. System Properties (information)

- 10. Log in as Administrator.
- 11. Ensure that you have at least 4 gigabytes of disk space. Copy all installation image files into one directory. These image files include the common run time that is shared by all Virtualization Engine components and the EWLM domain manager product.
- 12. Run the tracert <host name> command to ensure that you have the correct host name and IP address to use in the installation and configuration process.
- Check the managed server or domain manager level by examining the <EWLM home>/vefixlvl.xml file. (Note: This information will be useful after the installation.)
- 14. Start the installation process by running the installVEWin.bat command in the installation directory where you copied all of the installation images.



### 15. Click Next (see Figure 7).

皆 IBM Virtualization Engine Installation Wizard			
	IBM Virtualization Engine Installation Wizard		
TEN	Welcome		
*****	This wizard guides you through the process of installing the IBM Virtualization Engine services. Installing the Virtualization Engine consists of the following steps:		
	<ol> <li>Establishing the Virtualization Engine environment</li> <li>Selecting the Virtualization Engine services to install</li> <li>Copying the installation media</li> <li>Performing pre-installation configuration</li> <li>Installing the selected Virtualization Engine services</li> <li>Performing post-installation configuration</li> </ol>		
	To begin installing the Virtualization Engine, click Next.		
	To cancel the installation process, click Cancel.		
CIS010	<u>N</u> ext ≻ <u>C</u> ancel		



#### 16. Accept the license agreement (see Figure 8):

皆 IBM Virtualization Eng	gine Installation Wizard	_
	IBM Virtualization Engine Installation Wizard	
THENE	Software Agreements	
	The following software agreements apply to the Virtualization Engine services that install with this wizard. Click a button to view the terms and conditions for each se must accept the terms of the software agreements to continue with the installatior	tyou can rvice. You n.
K 25.4	IBM Tivoli Directory Server	
	IBM WebSphere Application Server	
	IBM Director with Virtualization Engine Console	
	IBM Enterprise Workload Manager Domain Manager	
	<ul> <li>I accept the terms of the license agreements</li> <li>I do not accept the terms of the license agreements</li> </ul>	
CIS050	< <u>B</u> ack <u>N</u> ext ≻	<u>C</u> ancel

Figure 8. Accept the software license agreement



17. Accept the default destination directory. Click Next (see Figure 9).

皆 IBM Virtualization Engi	ine Installation Wizard	<u> </u>
	IBM Virtualization Engine Installation Wizard	
TELL	Installation Destination Directory	
	Select where you want the installation wizard to install the Virtualization Engine.	
	Click Next to accept the default destination directory, or click Browse to select a different directory	
	Directory name:	_
	C:\Program Files\IBM\VE2	
	Brows	2
CIS020	< <u>B</u> ack <u>Next&gt;</u> <u>C</u> anc	el

Figure 9. Accept default destination directory

18. Accept the default destination directory for log files. Click **Next** (see Figure 10).

🔮 IBM Virtualization Eng	ine Installation Wizard	<u> </u>
	IBM Virtualization Engine Installation Wizard	
THEN	Log File Destination	
	During the installation process, the installation wizard writes errors and other messages set of log files. Other Virtualization Engine services will also use this directory when writir files.	to a Ig log
	Click Next to accept the default directory as the location for Virtualization Engine log files, click Browse to select a different directory	or
	Directory name:	
	C:\Program Files\IBM\VE2\Logs	
	Brow	se
CIS027	Help Cano	el

Figure 10. Accept default log file destination directory



 Assume that you do not have an existing directory server. Select Install IBM Tivoli Directory Server on this system and click Next (see Figure 11).

皆 IBM Virtualization Eng	ine Installation Wizard
	IBM Virtualization Engine Installation Wizard
THEIM	Directory Server Installation Preference
	The Virtualization Engine requires the use of an IBM Tivoli Directory Server, which is a Lightweight Directory Access Protocol (LDAP) server. The Virtualization Engine uses the directory server to store environment information, including installation and configuration settings. You can choose to use an existing IBM Tivoli Directory Server, or you can choose to install IBM Tivoli Directory Server on this system.
	<ul> <li>If you select to use an existing directory server, you must provide connection information for the existing directory server. The wizard validates the connection before installing any other Virtualization Engine services.</li> <li>If you select to install a directory server on this system, the installation wizard guides you through the installation of IBM Tivoli Directory Server. The wizard performs these installation steps before installing any other Virtualization Engine services.</li> </ul>
	<ul> <li>Use an existing IBM Tivoli Directory Server</li> <li>Install IBM Tivoli Directory Server on this system</li> </ul>
CIS055	<u>H</u> elp < <u>B</u> ack <u>N</u> ext > <u>C</u> ancel



The installation wizard takes a few minutes to perform the installation tasks. It also requires an automatic restart of the client operating system (see Figure 12).

🞽 IBM Virtualization Engine Installation Wizard				
BM Virtualization Eng	IBM Virtualization Engine Installation Wizard Installation Wizard Restart The installation wizard is restarting in order to process your selections. This may take a few moments.			
CIS104	<u>H</u> elp			

Figure 12. The Virtualization Engine Installation Wizard performs several tasks.



Then, the Installation Wizard determines whether to copy additional media (see Figure 13).

🔮 IBM Virtualization Eng	ine Installation Wizard	_ 🗆 X
	IBM Virtualization Engine Installation Wizard	
TERM	Media Copy	
	The installation wizard is checking to determine if additional media needs to be copied.	
CIS090	Help < Back Can	el

Figure 13. Installation Wizard checks for the necessity of copying additional media

#### 20. Click Next (see Figure 14).

🔮 IBM Virtualization Eng	ine Installation Wizard	<u> </u>
	IBM Virtualization Engine Installation Wizard	
THEAT	Media Copy	
	No additional media needs to be copied. Click Next to continue with the installation proce	SS.
CIS090	<u>H</u> elp < <u>B</u> ack <u>Next</u> > <u>C</u> ance	эI

Figure 14. Installation process



The installation process restarts automatically with the following display (see Figure 15).

🔮 IBM Virtualization Eng	ine Installation Wizard
	IBM Virtualization Engine Installation Wizard
The state	Installation Wizard Restart
	The installation wizard is restarting in order to process your selections. This may take a few moments.
CIS103	<u>H</u> elp <u>C</u> ancel

Figure 15. Installation Wizard restarts

In Figure 16, the Installation Wizard unpacks installation files.

🔮 IBM Virtualization Engi	ine Installation Wizard	_ 🗆 🗙
	IBM Virtualization Engine Installation Wizard	
THEME	File Unpacking Process	
	The installation wizard is unpacking the installation files. This may take a few moments.	
CI8115	<u>H</u> elp <u>C</u> anc	el

Figure 16. Unpacking installation files



21. Select Create a new operating system user ID for the DB2 instance owner (see Figure 17).

🔮 IBM Virtualization Eng	ine Installation Wizard
	IBM DB2 UDB Enterprise Server Edition
TEN	Directory Server Prerequisite
	The installation of IBM Tivoli Directory Server (ITDS) requires the installation of an associated IBM DB2 Server instance. The following panels guide you through the process of providing information for this DB2 installation.
	You need to specify an instance owner for the DB2 server installation. You can select either to use an existing operating system user ID for the DB2 instance owner or to create a new operating system user ID for the DB2 instance owner.
	<ul> <li>Create a new operating system user ID for the DB2 instance owner</li> <li>Use an existing operating system user ID for the DB2 instance owner</li> </ul>
DB2056	<u>H</u> elp < <u>B</u> ack <u>Next</u> <u>C</u> ancel

Figure 17. Creating a new operating system user ID for the DB2 instance owner

22. For this example installation, type a user ID called db2inst1 instead of the default user ID "vedbusr" (see Figure 18).

🔮 IBM Virtualization Eng	jine Installation Wizard
	IBM DB2 UDB Enterprise Server Edition
THEAT	New Operating System User
	Specify a user ID and password for the new operating system user that you want to create for the DB2 instance owner.
	* User ID:
	db2inst1
	* Password:
1 114	******
++	* Confirm password:
	*****
DB2070	Help < Back Next > Cancel

Figure 18. Create the db2inst1 user ID



23. For the directory server ports, accept the default values and click **Next** (see Figure 19).

皆 IBM Virtualization Engi	ine Installation Wizard	<u> </u>
	IBM Tivoli Directory Server Directory Server Ports The directory server uses two different ports for communications. The Server port is for common connections with the directory server and the Administrator port is for administra connections with the directory server. You can either accept the default port numbers, or y can specify a port number for each type of connection.  *Server port: 389 *Administrator port: 3538	tor
ITD002	Help < Back Next > Cance	el

Figure 19. Accept default values for directory server ports

24. Type an encryption seed string of your choice. This example uses veewlmveewlm (see Figure 20). Click **Next**.

皆 IBM Virtualization Eng	ine Installation Wizard	_ 🗆 🗙	
	IBM Tivoli Directory Server		
TERM	Encryption Seed String		
	Specify a string of characters for the directory server to use as an encryption seed. The directory server uses this seed to generate a cryptographic key, which the server uses to secure passwords in the directory server. Record the value that you specify and store the record in a secure location. You must supply this seed string if you ever export directory s data to an LDAP Interchange Format (LDIF) file for use by another directory server or application.	erver	
	The value that you enter must be at least 12 characters in length and no longer than 1016 characters in length		
	*Encryption seed string:		
	veewImveewIm		
ITD003	Help < Back Next > Cano	el	

Figure 20. Enter an encryption seed string



25. Type a user ID for the operating system. (This example uses tester as the user ID.) Then, create the password of your choice for this ID (see Figure 21). Click **Next**.

皆 IBM Virtualization Eng	jine Installation Wizard	- 🗆 ×
	IBM Tivoli Directory Server	
TEIN	Directory Server and Database Instance Owner	
	The configuration of the IBM Tivoli Directory Server instance requires the configuration of an IBM DB2 Server instance. You need to specify an owner for the directory server instance and corresponding database instance.	d its
	You must specify an existing operating system user with a valid password to be the instanc owner. The operating system user ID that you specify must be a member of the Administrat group.	e tors
	*Operating system user ID:	
	tester	
	* Password:	
ITD005	Help < Back Next > Cancel	

Figure 21. Create an operating system user ID and password

#### 26. Create a directory server password of your choice (see Figure 22).

🔮 IBM Virtualization Eng	ine Installation Wizard	<u> </u>
	IBM Tivoli Directory Server	
TEN	Directory Server Administrator	
	Provide information to identify the directory server administrator. The administrator user ID the form of a distinguished name (DN); for example, cn=Admin.	is in
	*Directory server administrator user ID:	
	cn=Admin	
	* Password:	
	******	
	*Confirm password :	
1/	****	
ITD006	Help < Back Next > Cance	<u>با</u>

Figure 22. Create directory server password



Figure 23 provides a summary of items for installation.



Figure 23. Summary of Virtualization Engine services for installation

The Virtualization Engine base component installation starts (see Figure 24).

皆 IBM Virtualization Eng	jine Installation Wizard	- 🗆 ×
	IBM Virtualization Engine Installation Wizard	
HEAL	Installation Progress	
	Installing base support. Please wait	
	C:\Program Files\IBM\VE2\lib\vei\jt400.jar	
	Product Install Progress	
A since man	45%	
	Suite Install Progress	
	1%	
CI8133	<u>H</u> elp <u>C</u> ancel	

Figure 24. Installing base support



27. After the base installation completes, move to the IBM DB2<sup>®</sup> software installation by clicking **Next** (see Figure 25).

😫 IBM Virtualization Eng	ine Installation Wizard	<u> </u>
	IBM DB2 UDB Enterprise Server Edition	
THEINE	Post-Installation Configuration	
	The installation wizard is ready to configure your DB2 installation. Click Next to begin.	
DB2235	<u>H</u> elp < <u>B</u> ack <u>Next &gt;</u> <u>C</u> an	el

Figure 25. Ready to configure DB2 installation

The Installation Wizard processes three, quick, automatic steps and then presents a DB2 configuration summary (see Figure 26).

🛂 IBM Virtualization Eng	ine Installation Wizard				_ 🗆 🗙
JEENS	IBM DB2 UDB Enterprise Configuration Summary The DB2 post-installatio following configuration in Virtualization Engine ins	e Server Edition n configuration process is com nformation for your DB2 installa tallation.	nplete. Reviev ation. Click Ne	r and record the ext to continue the	*
2: 4		Description	Value		
		DB2 Server Instance Name	VE2INST1		
		DB2 Server Instance Owner	db2inst1		
112 -		DB2 Server Port Number	50000		
		Local Node Name	velocal		
		TCPIP Node Name	vetcpip		
					-
DB2300	Help	< <u>B</u> ack	<u>N</u> ext >	Cano	el

Figure 26. DB2 configuration summary



#### IBM Tivoli Directory Server starts (see Figure 27).





The Installation Wizard completes six steps automatically. Figure 28 illustrates step 2 (of 6) where the wizard is deploying the Web Administration Tool.

🔮 IBM Virtualization Eng	jine Installation Wizard	
- M	IBM Tivoli Directory Server	
The second	Post Installation Configuration Processing	
	The installation wizard is performing post-installation configuration for the IBM Tivoli Director Server (ITDS). This process may take several minutes. Please wait while the process completes.	ory
	Current configuration step: Deploying the Web Administration Tool (Step 2 of 6)	
ITD102	<u>Cancel</u>	

Figure 28. Deploying the Web Administration Tool



28. The Registration panel represents the completion of this part of the Virtualization Engine Installation Wizard. Click **Next** (see Figure 29).

업 IBM Virtualization Eng	ine Installation Wizard	<u> </u>
	IBM Virtualization Engine Installation Wizard	
TELL	Service Registration	
	One or more components failed to register successfully. This registration failure will not a the function of the installed components; however, it will impact your ability to acquire and install fixes for the unregistered products. See the installation log file for more information about the specific components that did not register.	affect I 1
	To ensure that you can install fixes for the unregistered products at a later time, go to: http://techsupport.services.ibm.com/server/VirtualizationEngine/si.html and follow the instructions to register the products.	
	Click Next to continue your installation.	
CIS136	Help <u>C</u> anc	el

Figure 29. Registration panel completed

29. You might get a message that explains, "One or more components failed to register successfully." Ignore this panel and click **Next**. Then, click **Finish** (see Figure 30). As mentioned earlier, a reboot is required to continue with this wizard.

皆 IBM Virtualization Eng	jine Installation Wizard	×
	IBM Virtualization Engine Installation Wizard	
TIENC	Reboot Required	
	The wizard has installed IBM Tivoli Directory Server. The system needs to be rebooted before you can continue the installation process.	
	After you have rebooted your system, start the installation process again <b>by loading the installation media.</b> Then, you can complete the configuration of the Virtualization Engine environment and perform the installation of Virtualization Engine services.	
CIS170	Help	

Figure 30. Successful Virtualization Engine installation



30. When you see a screen that says, "Environment Configuration Complete," ensure that **Continue with the Virtualization Engine installation** is selected; then click **Next** (see Figure 31).

😫 IBM Virtualization Eng	jine Installation Wizard	×
	IBM Virtualization Engine Installation Wizard	
TEM	Environment Configuration Complete	
	The wizard has completed the Virtualization Engine environment configuration and is ready to begin the installation of Virtualization Engine services.	
	Continue with the Virtualization Engine installation Exit the install now	
CIS137	Help < <u>B</u> ack <u>Next &gt;</u> <u>C</u> ancel	

Figure 31. Ready to install Virtualization Engine services

31. Now, you will be setting up the Virtualization Engine Environment. Click **Next** (see Figure 32).

🔮 IBM Virtualization Eng	gine Installation Wizard
	Virtualization Engine Environment Introduction A Virtualization Engine environment is a logical grouping of systems with Virtualization Engine software installed on them. As part of the Virtualization Engine installation, the wizard creates a configuration repository in a Lightweight Directory Access Protocol (LDAP) server. This directory server can be either an IBM Tivoli Directory Server (ITDS) or an IBM Directory Server for iSeries. The wizard uses this configuration repository on the directory server to store information about your Virtualization Engine environment, including installation and configuration settings. Click help for more detailed information about the Virtualization Engine environment. Click next to begin.
VEE003	Help < <u>B</u> ack <u>Next &gt;</u> <u>C</u> ancel



Figure 32. To begin setting up the Virtualization Engine environment, click Next

32. All of the environment fields are filled in automatically. Click Next (see Figure 33).

🔮 IBM Virtualization Eng	jine Installation Wizard	<u> </u>
	Virtualization Engine Environment	
TIEW	Directory Server Connection Information	
	Identify a directory server for storing Virtualization Engine environment information for this system. You can join any existing environment or create a new environment on the director server.	у
	*Directory server host name:	
K 8. 4	joe-d1x4p3rhwfp.gateway.2wire.net	
	*Directory server port:	
A Wish	389	
	*Directory server administrator user ID:	
	cn=Admin	
	*Password:	
	*****	
VEE005	<u>H</u> elp < <u>B</u> ack <u>N</u> ext > <u>C</u> ance	ı

Figure 33. Directory Server connection information is populated automatically

#### 33. Type your own name for New environment name and click Next (see Figure 34)

. . .

🔮 IBM Virtualization Eng	ine Installation Wizard	
	Virtualization Engine Environment	
TEW	Environment Creation	
	There are no existing environments on the directory server or you selected to specificall a new environment for this installation.	y create
1 22 4	Provide a name for the new Virtualization Engine environment for this installation. Optio you can provide a description for the environment to help distinguish it from other environments.	nally,
	*New environment name:	
	V2 EWLM ENV	
	Environment description:	
VEE007	<u>H</u> elp < <u>B</u> ack <u>N</u> ext > <u>C</u> ar	ncel

Figure 34. Provide an environment name



34. Select **IBM Enterprise Workload Manager Domain Manager** and click **Next** (see Figure 35).

😫 IBM Virtualization Engi	ine Installation Wizard		_ <b>_</b> X
	IBM Virtualization Engine Installation Wizard Service Selection Select the services that you wish to install.	Total Diskspace Required (in MB): Total Diskspace Available (in MB):	1633 11812
CISO80	Help < Back	<u>N</u> ext >	<u>C</u> ancel

Figure 35. Select the services that you wish to install

35. Review the Service Selection Summary and then click **Next** (see Figure 36).

🔮 IBM Virtualization Eng	jine Installation Wizard	_ 🗆 🗙
	IBM Virtualization Engine Installation Wizard	
TEIN	Service Selection Summary	
	Based on your selections, the following Virtualization Engine services and common components will be installed:	
	Virtualization Engine base support Virtualization Engine updates WebSphere Application Server JViews Enterprise Workload Manager	
	To perform the configuration of these services and components, click the Next button. To change your selections, click the Back button.	
CIS082	Help < Back Next > Cano	el

Figure 36. Summary of chosen services



36. The wizard now begins to copy the media that is related to the Virtualization Engine installation. When you see this introductory message screen, click Next (see Figure 37).





The wizard displays a progress panel (see Figure 38).

😫 IBM Virtualization Engi	ne Installation Wizard	<u> </u>
	IBM Virtualization Engine Installation Wizard	
THEINE	Please Wait	
	Files are being copied from the installation media.	
CISO90	Help < Back Can	cel

Figure 38. Copying of files from installation media



37. After the wizard copies all the media, you see this screen. Click Next (see Figure 39).

TET Mea	I <b>Virtualization Engine Installat</b> dia Copy additional media needs to be (	t <b>ion Wizard</b> copied. Click Next to co	ontinue with the insta	allation process.
Mec. No a	dia Copy additional media needs to be (	copied. Click Next to co	ontinue with the insta	allation process.
No	additional media needs to be (	copied. Click Next to co	ontinue with the insta	allation process.
CISO90	Help	< Back	Next >	Cancel

Figure 39. Click Next to continue installation process

38. The next screen (see Figure 40) is an informational screen. You do not need to take any action.

皆 IBM Virtualization Eng	ine Installation Wizard	<u> </u>
	IBM Virtualization Engine Installation Wizard	
TEIN	Installation Wizard Restart	
	The installation wizard is restarting in order to process your selections. This may take a fi moments.	₽₩
CIS102	<u>H</u> elp <u>C</u> anc	el

Figure 40. Restarting of Installation Wizard in order to process your selections



39. Read the screen that explains the need for an identity mapping repository. Then click **Next** (see Figure 41).



- Figure 41. Identity Mapping Repository
  - 40. In the next set of panels, you must provide details about the identity mapping repository. If you do not have an existing identity mapping repository, select Create a new identity mapping repository and the installation wizard creates one for you. Then, click Next (see Figure 42).



Figure 42. Specify new or existing repository



41. Select the default option Use recommended default values to configure the server for identity mapping and click Next (see Figure 43).

😫 IBM ¥irtualization Eng	ine Installation Wizard
	Identity Mapping Repository
TEIN	Directory Server Configuration Preference
	Select whether to use default values or values that you choose to configure a new identity mapping repository on the directory server. These values provide information about the user registry settings, the location for the repository (directory server host name and port number), and other settings which are required to successfully configure identity mapping for the Virtualization Engine.
	Directory server host name and port: joe-d1x4p3rhwfp.gateway.2wire.net:389
11 + -	O Use recommended default values to configure the server for identity mapping
	O Use the values that I specify to configure the server for identity mapping
IMR003	<u>H</u> elp < <u>B</u> ack <u>N</u> ext > <u>C</u> ancel

Figure 43. Select the default value

42. The wizard displays a Configuration Summary for the identity mapping repository. Click **Next** (see Figure 44).

🔮 IBM Virtualization Eng	ine Installation Wizard		<u> </u>
	Identity Mapping Repository		
THEN	Configuration Summary		
	The installation wizard will use the for repository for the Virtualization Engin	llowing settings to create a new identity mapping e. Click Next to continue the installation process.	
	*Directory server host:	joe-d1x4p3rhwfp.gateway.2wire.net	
	*Directory server port:	389	
	*Repository name:	IBM identity mapping repository	
11 th	Repository parent DN:		
	Repository description:	Created by IBM Virtualization Engine Install	
IMR004	Help	< <u>B</u> ack <u>Next &gt;</u> <u>C</u> and	cel

Figure 44. Identity Mapping Repository Configuration Summary



43. Now, the wizard asks you to provide a directory name in which it will store the EWLM domain manager information. If this directory does not already exist, EWLM creates it. Accept the default and click **Next** (see Figure 45).

皆 IBM Virtualization Eng	ine Installation Wizard	_ 🗆 🗵
IBM Virtualization Eng	Ine Installation Wizard Specify a directory to store EWLM domain manager information. If the directory does not exist, EWLM will create it. C:\Program Files\IBM\VE2\EWLM\ewImdm Browse	
IMR004	Help < Back Next > (	<u>C</u> ancel

Figure 45. Specify a directory to store EWLM domain manager information

44. The wizard displays a selection summary listing the Virtualization Engine services to install. Click **Install** and the wizard installs these services. (See Figure 46).

皆 IBM Virtualization Eng	ine Installation Wizard	
	IBM Virtualization Engine Installation Wizard	
TEN	Selection Summary	
00000000000000000000000000000000000000	The wizard will install IBM Virtualization Engine in the following location:	
	C:\Program Files\IBM\VE2	
	The wizard will install the following Virtualization Engine services:	
	Virtualization Engine base support Virtualization Engine updates WebSphere Application Server JViews Enterprise Workload Manager	
	The total size of the installation is: 1633MB	
CIS130	Help < Back Install Can	cel

Figure 46. Selection summary of services for installation



45. After the wizard installs the Virtualization Engine services, the next step is to perform a post-installation system setup. Click **Next** (see Figure 47).



Figure 47. Click **Next** to begin EWLM post-installation system setup



# **Configuring EWLM domain server**

The next requirement in the installation process is configuring the EWLM domain manager. If you do not want to perform the configuration now, you can stop the installation and resume the domain manager configuration later. In either case, you need to understand some EWLM configuration terms.

### **EWLM configuration terms**

The next several screens in the installation display the terms defined below:

- **Configuration ID:** This identifies the domain manager instance in use. Many domain manager commands require this domain manager Configuration ID.
- adminUser Administrator: This is the administrator for the EWLM domain manager and IBM WebSphere<sup>®</sup> instance. This example uses *root* as the adminUser. If you use another administrator, such as "ewImadm," that is what you need to specify here.
- adminPW <password for the adminUser >: This is the password for the user ID that you specified for adminUser (see the preceding definition).
- wasPorts 5775: This assigns WebSphere Application Server ports on the domain manager. The number you specify becomes the first in a range of 15 ports used by the EWLM WebSphere Application Server instance. You need to verify that no other applications use them.
- **jmxport/jp 5800**: This is the port number used for any communication between the EWLM Control Center and the EWLM domain manager. Again, you need to verify that this port is not already in use.

### **Opting to configure EWLM domain server now**

In this example, you continue with the EWLM domain manager installation.

1. Select Now to launch the configuration wizard and then click Next (see Figure 48).

😫 IBM EWLM Installer		
TEN	Enterprise Workload Manager (EWLM) post-installation setup is complete. Before you can use EWLM, you must configure the domain manager. The EWLM configuration wizard helps you configure the domain manager.	
	Click Help for more information about the EWLM configuration wizard.	
	© Now C Later	
EWL003	Help < Back Next > Can	pel

Figure 48. Configure the domain manager



2. Accept the default **Create domain manager and Control Center** option. Click **Next** (see Figure 49).



Figure 49. Accept Create domain manager and Control Center

3. Type an ID name of your choice. The ewlmdm configuration ID is used here as an example (see Figure 50). Click **Next**.

📴 EWLM Configu	ration Wizard	
	Create domain manager and Control Center(Step 1 of 8)	
	Configuration ID:	
	ewimdm	
576		
1		
TBM.	Back Next Cancel	Help

Figure 50. Provide configuration ID (Step 1 of 8)



4. Type a domain name of your choice. Then, type the IP address of the system where the domain manager was installed earlier (see Figure 51). Click **Next**.

📴 EWLM Configur	ration Wizard	_ 🗆 🗙
	Create domain manager and Control Center(Step 2 of 8)	
10 GAN		
	Domain name:	
	test domain	
	Domain manager IP address or host name:	
	172.16.1.33	
	Domain manager port:	
	5773	
	WebSphere starting port:	
\· _	Control Contor to domain manager parts	
17		
PASS		
6		
19		
10-1-1-		
IBM.	Post No.4	
	Back Next Cancel	нер

Figure 51. Create domain manager and Control Center (Step 2 of 8)

5. Click **Next** to select the default security level of **None** (see Figure 52). (**Note:** You should answer this according to your security considerations and needs.)

📴 EWLM Configu	ration Wizard	_ 🗆 🗙
	Create domain manager and Control Center(Step 3 of 8)	
	Security level for communications between the domain manager and the managed servers:           None         Client-Server SSL           Server SSL         Server SSL	
	Back Next Cancel	Help

Figure 52. Create domain manager and Control Center (Step 3 of 8)



6. In this example, **Next** is clicked to select the **EWLM default** choice (see Figure 53. Create domain manager and Control Center (Step 4 of 8)). (**Note:** You should answer this according to your security considerations and needs.)

📴 EWLM Configu	ration Wizard	_ 🗆 🗙
	Create domain manager and Control Center(Step 4 of 8)	
	Source for the SSL certificates for secure communication between the browser and the Contro Center:	bl
	EVVLM default Administrator-defined	
×12		
23		
IBM.	Back Next Cancel	Help

Figure 53. Create domain manager and Control Center (Step 4 of 8)

7. Click **Next**. For the purposes of this example, nothing is selected on this screen (see Figure 54). (**Note:** Answer this according to your firewall considerations and needs.)

📴 EWLM Configur	ation Wizard	×
	Create domain manager and Control Center(Step 5 of 8)	
	$\Box$ Enable firewall broker(s) for communication between the domain manager and managed server	
	Firewall broker to domain manager port: 5802	
	Access the firewall broker using a SOCKS server	
	Firewall broker SOCKS server IP address or host name:	
	Firewall broker SOCKS server port:	
	Domain manager to firewall broker(s) information:	
	SOCKS IP Address or Host Name Port	
TBM.	Add Remove Back Next Cancel Help	]



Figure 54. Create domain manager and Control Center (Step 5 of 8)

8. Type the Windows Administrator ID and password for WebSphere. Then, click **Next** (see Figure 55).

📴 EWLM Configu	ration Wizard	
	Create domain manager and Control Center(Step 6 of 8)	
	WebSphere administrator user ID: Administrator	
	WebSphere administrator password:	
	Confirm WebSphere administrator password:	
CK		
6		
A Sta		
IBM.	Back Next Cancel Help	3

Figure 55. Create domain manager and Control Center (Step 6 of 8)



 Type the Windows Administrator ID for the three EWLM roles (Administrator users, Operator users and Monitor users). Then, click Next (see Figure 56. Create domain manager and Control Center (Step 7 of 8)).

📴 EWLM Configur	ation Wizard	<u> </u>
	Create domain manager and Control Center(Step 7 of 8)	
LATER V	Add Users Add Groups	
	Assign users to the Control Center roles.	
	Administrator users:	
	Add .> Add inistrator	
	<- Remove	
	Operator users:	
	Add .> Add inistrator	
	<- Remove	
STR.		
C.K.	Monitor users:	
6	Add .> Administrator	
	<- Remove	
1 28		
TEM		
	Back Next Cancel	Help

Figure 56. Create domain manager and Control Center (Step 7 of 8)

10. Click the "Start the domain manager and the Control Center" check box. Then, click **Finish** (see Figure 57).





Figure 57. Create domain manager and Control Center (Step 8 of 8)

Figure 58 and Figure 59 show the configuration output, based on the previous steps.

📴 EWLM Configur	ation Wizard	_ 🗆 🗙
	Creating domain manager	
	Configuration Output	
	Processing createDM request. Please be patient as this may take awhile	
	Configuring EWLM domain manager EWLM domain manager configuration completed	
STA.	Configuring EWLM Control Center	
2		
IBM.	Display WebSphere ports Home	Help

Figure 58. Processing the create domain manager request: Configuring EWLM domain manager



Figure 59. Processing the create domain manager request: Configuring EWLM Control Center



Figure 60 shows the progress screen for adding and removing users and groups to the Control Center.

📴 EWLM Configur	ation Wizard	_ 🗆 🗙
	Adding or removing users and groups to Control Center	
	processing ook complete	
	EWM Control Co	
	Ports assigned to EWLM Control Center:	
	- HTTP 5775	
	- HTTPS 5///	
\·		
X	Ports assigned to WebSphere Application Server Administration Console: - HTTP 5776 - HTTP 5779	
	Use -changeCC -adminConsolePorts to change these ports if desired.	
	Port assigned to WebSphere Application Server Administration: 5780	
7.3	Use -changeCC -adminPort to change this port if desired.	
	PROCESSING COMPLETE	
	Processing changeCC addUser request. Please be patient as this may take awhile	
	processing 33% complete	
X	processing 66% complete	
1000		
	Processing changeCC -addUser request. Please be patient as this may take awhile	-
IBM.	Display WebSphere ports Home	Help

Figure 60. Adding or removing users and groups to the Control Center

#### Figure 61 shows that the Domain manager configuration is complete.

📴 EWLM Configur	ration Wizard	_ 🗆 ×
ICGAN V	Domain manager configuration complete.	
	Ports assigned to WebSphere Application Server Administration Console: - HTTP 5776 - HTTPS 5778	
	Use -changeCC -adminConsolePorts to change these ports if desired.	
	Port assigned to WebSphere Application Server Administration: 5780 Use -changeCC -adminPort to change this port if desired.	
X	PROCESSING COMPLETE Processing changeCC -addUser request. Please be patient as this may take awhile processing 33% complete processing 66% complete	
	PROCESSING COMPLETE Processing changeCC - addUser request. Please be patient as this may take awhile processing 33% complete processing 66% complete PROCESSING COMPLETE	
//	Processing changeCC -addUser request. Please be patient as this may take awhile processing 33% complete processing 66% complete PROCESSING COMPLETE	
X	Processing startDM request. Please be patient as this may take awhile PROCESSING COMPLETE	-
	Control Center Web address: https://172.16.1.33:5777/webui	
<u>iem</u> .	Display WebSphere ports Home	Help

Figure 61. Domain manager configuration complete



### **Opting to configure the EWLM domain server later**

You can defer the EWLM domain manager configuration until a later time. If you choose this option, be sure to refresh your understanding of the configuration terms explained earlier.

1. To start the domain manager configuration later, run the configuration-wizard GUI tool by entering the following:

C:\program files\IBM\VE\EWLM\bin\configWizzardDM.sh

Or, use the equivalent EWLM command-line interface (see Figure 62 for command output):

>createDM.bat <DM name> -adminUser Administrator -adminPW <passwd>
-wasPorts 5775 -jp 5800 -ma <host name> -mp 5773 -auth None

test domain	×
<u>F</u> ile	
WebSphere port assignments	
Ports assigned to EW/I M Control Center	
- HTTP 5775	
- HTTPS 5777	
Ports assigned to WebSphere Admin Console:	
- HTTP 5776	
- HITPS 5778 Port accigned to WebSphere Admin:	
5780	
Control Center Web address:	
https://172.16.1.33:5777/webui	

Figure 62. Test domain file: WebSphere port assignments

2. Figure 63 by entering the following command:

>cd \program files\IBM\VE2\ewlm\bin
>displayDM.bat ewlmdm <the domain manager configuration ID>

🚳 Command Prompt	
C:\Program Files\IBM\VE2\EWLM\bin>displayDM.bat testdm1	
auth(None)	
sslps(****password suppressed***)	
ma(9,53,193,172)	
Jp(5881)	
dn(testdomain)	
fb(mul)	
sa(null)	
lbp(Off)	
1bs<0ff> nt<250	
ct(250)	
et (250) ht (50)	
m1<250>	
16t(250) tcomm(0)	
tl <min></min>	
dpn (25)	
£1(58)	
PROCESSING COMPLETE	
C:\Program Files\IBM\VE2\EWLM\bin>_	<b>•</b>

Figure 63. Response screen



The displayed values have the following meanings:

- auth: Authority level
- ssiks: SSL key store
- ma: Domain manager address
- **mp:** Domain manager port
- jp: Jmx port
- dn: Domain name
- fp: Firewall broker port
- **fb:** Firewall broker list
- sa: Socks host
- sp: Socks port
- Ibp: LB public port
- Ibs: LB secure port
- **nt**; Communication trace
- ct: Component trace
- et: Event trace
- rt; Reporting trace
- ml: Message log
- Ibt: Load balancing trace
- tcomm: Trace distribution hub broker
  - tl: Trace level

- tlog: Trace plug-in
- **dpa:** Dump retention age
- dpn: Dump retention quantity
- fl: Failure limit

3. It is also possible to check:

- The various user roles for using the Control Center (see Figure 64)
- The various ports used by the domain manager (see Figure 64)

🗠 Command Prompt	
C:\Program Files\IBM\UE2\EWLM\bin>displayCC.bat -users testdm1 -adminUser Admin strator -adminPW junk123 Processing displayCC request. Please be patient as this may take awhile processing 33% complete Role: Administrator Mapped Users: Administrator Role: Operator Mapped Users: Administrator Role: Monitor Mapped Users: Administrator Anapped Users: Administrator processing 66% complete PROCESSING COMPLETE	
C:\Program Files\IBM\UE2\EWLM\bin>displayCC.bat —ports testdm1 —adminUser Admin strator —adminPW junk123 Processing displayCC request. Please be patient as this may take awhile processing 33% complete	i
Ports assigned to EWLM Control Center: - HITP 5775 - HTTPS 5777 Use -changeCC -controlCenterPorts to change these ports if desired.	
Ports assigned to WebSphere Application Server Administration Console: - HITP 5776 - HITPS 5778 Use -changeCC -adminConsolePorts to change these ports if desired.	
Port assigned to WebSphere Application Server Administration: 5780 Use -changeCC -adminPort to change this port if desired.	
processing 66% complete PROCESSING COMPLETE	
C:\Program Files\IBM\UE2\EWLM\bin>	

Figure 64. Checking the different user roles





# **Verifying EWLM and Control Center work**

You can verify that your EWLM domain manager is installed and configured correctly.

1. Open a browser from any PC client on the network. Then, specify the URL with the domain manager host name and port number that is assigned to the EWLM Control Center in your environment:

https://<Domain Manager hostname>:5777/webui

This brings up the Control Center (see Figure 65).

A Fatavanica Warkland Maanaan Caatuu Caatuu Misuocoft Tatavant Sunlavan	
Enterprise workloau Manager Control Center - Microsoft Internet explorer	
<u>E</u> lle <u>E</u> dit <u>Vi</u> ew F <u>a</u> vorites <u>I</u> ools <u>H</u> elp	
🔾 Back 🔻 🕤 👻 😰 🏠 🔎 Search 👷 Favorites 🛛 😥 🖉 💭	
Address 🕘 https://172.16.1.33:5777/webui/welcome/WelcomeLaunch.jsp 💽 🎅 Go	Links »
Enterprise Workload Manager Control Center	BM. 🖻
Welcome to the IBM Enterprise Workload Manager Control Center	
Log in to the EWLM Control Center	
Begin working with the Control Conter	
Provides a series of tasks that guide you through using the Control Center.	
Description of how EWLM works	
Describes the different types of work that EWLM monitors and manages. EWLM can monitor application-level	44.0
actual performance against the expected goal.	tue
Components of a domain policy	
Describes the components of a domain policy.	
	20000000

Figure 65. Log in to the EWLM Control Center

2. Enter one of the user IDs that is mapped to the EWLM Control Center role. In this sample environment, it is *Administrator* (see Figure 66).



Figure 66. Log in as Administrator



A successful login will bring up a top-level Control Center page (see Figure 67).



Figure 67. Top-level Control Center page

EWLM domain manager has a runtime dependency on LDAP and DB2. In this installation example, all of these components are installed on a single Windows 2003 Server system and are presented as services. To ensure a successful invocation of EWLM domain manager, it is a good practice to check the state of these services from the Windows Services panel.

Figure 68 and Figure 69 show the state details of these services.

🍇 Services					_	
<u>File Action View</u>	Help					
	〕 <mark>②</mark> → → ■ Ⅱ ■→					
Services (Local)	🍇 Services (Local)					
	Select an item to view its description.	Name 🛆	Description	Status	Startup Type	
	· ·	Cryptographic Services	Provides th	Started	Automatic	
		🏶 DB2 - TESTER	Allows appl	Started	Manual	
		🏶 DB2 - VE2INST1-0	Allows appl	Started	Automatic	
		🆓 DB2 Governor	Collects st		Manual	
		🏶 DB2 JDBC Applet Server	Provides J	Started	Automatic	- I
		🖏 DB2 License Server	Monitors D	Started	Manual	- I
		DB2 Remote Command Ser	Supports r	Started	Automatic	
		🖏 DB2 Security Server	Authentica	Started	Automatic	- I
		🆏 DB2DAS - DB2DAS00	Supports lo	Started	Automatic	
		🏶 DCOM Server Process Lau	Provides la	Started	Automatic	- I
		🆏 DHCP Client	Registers a	Started	Automatic	1
		🍓 Distributed File System	Integrates		Manual	1
		🏶 Distributed Link Tracking Cl	Enables cli	Started	Automatic	- I
		🏶 Distributed Link Tracking S	Enables th		Disabled	1
		🍓 Distributed Transaction Co	Coordinate	Started	Automatic	
			Decelues a	Charlad	Automotic	1
		<u> </u>				<u> </u>
	Lxtended A Standard /					

Figure 68. Services (Local) screen



File Action View Help	,				
	,				
Servic 🍇 Services (Local)					
Select an item to view its description.	Name 🔺	Description	Status	Startup Type	Log On As 🔺
	DNS Client	Resolves a	Started	Automatic	Network S
6	Error Reporting Service	Collects, st	Started	Automatic	Local System
6	Event Log	Enables ev	Started	Automatic	Local System
6	File Replication	Allows files		Manual	Local System
6	Help and Support	Enables He	Started	Automatic	Local System
6	HTTP SSL	This servic		Manual	Local System
6	Human Interface Device Access	Enables ge		Disabled	Local System
6	BIBM EWLM Domain Manager Service 1	Working dir	Started	Manual	.\eWLMDo
6	BIBM Tivoli Directory Admin Daemon V6.0 - tester		Started	Automatic	Local System
6	BIBM Tivoli Directory Server Instance V6.0 - tester		Started	Manual	Local System
6	BIBM WebSphere Application Server V6 - IBM EWLM	Controls th	Started	Manual	Local System
6	MAPI CD-Burning COM Service	Manages C		Disabled	Local System
6	indexing Service	Indexes co		Disabled	Local System
6	🙀 Intersite Messaging	Enables me		Disabled	Local System
6	PSEC Services	Provides e	Started	Automatic	Local System
	Korboros Kou Distribution Contor	On domain		Dicabled	Local Surton
Extended / Standard /					

Figure 69. Select service to view description

3. From the PC client, select the following:

#### Start -> Administrator -> Services

The start sequences are as follows:

- a. Start DB2 Tester
- b. Start IBM Tivoli Directory Server instance
- c. Start IBM WebSphere Application Server V6
- d. Start IBM EWLM domain manager Service 1
- 4. After changing the IP address for the domain manager, you must update the **hosts** file (\Windows\system32\drivers\etc\hosts) accordingly.

For example, an entry in the file looks like this:

38.25.63.10 x.acme.com



# Installing EWLM managed server

Now, you can move on to the EWLM managed server (MS) installation process.

1. There are three files in the EWLM domain manager product package. Put all three of these files into one directory and run the EWLMMSWin.exe program (see Figure 70).



Figure 70. The EWLMMSWin.exe program

You can now install the IBM EWLM managed server. Click Next (see Figure 71).

皆 IBM EWLM Installer	
BM EWLM Installer	Welcome to the InstallShield Wizard for IBM Enterprise Workload Manager - Managed Server The InstallShield Wizard will install IBM Enterprise Workload Manager - Managed Server on your computer. To continue, choose Next. IBM Enterprise Workload Manager - Managed Server IBM http://www.ibm.com
	< Back Next > Cancel

Figure 71. Ready to install IBM Enterprise Workload Manager



2. Accept the default directory name and click **Next** (see Figure 72):



Figure 72. Use default directory name

3. Accept the default directory again by clicking Next (see Figure 73).

업 IBM EWLM Installer		. 🗆 ×
THEM	Specify a directory to store EWLM managed server information. If the directory does not exist, EWLM will create it.	,
	C:\Program Files\IBM\VE2\EWLMMS\ewImms	
	Browse	
F +		
	< <u>B</u> ack <u>Next</u> <u>C</u> ance	1

Figure 73. Accept the default directory again



4. Select the **Managed Server** option and click **Next** (see Figure 74).



Figure 74. Select Managed Server



5. Review the EWLM manager server summary information and then click **Next** (see Figure 75).





6. After reading this explanatory message, click **Next** (see Figure 76).

😫 IBM EWLM Installer	
	Please read the information below. Choose Next to begin executing the EWLM post-install system setup. This may take a few minutes. Please wait.
	< <u>B</u> ack <u>Next</u> > <u>C</u> ancel

Figure 76. Next begins the EWLM post-install system setup



# **Configuring EWLM managed server**

You can launch the EWLM managed server configuration wizard now or choose to do so later (just as you can for the ESLM domain server configuration).

### **Opting to configure EWLM domain server now**

In this example, you continue with the EWLM managed manager installation.

1. To launch the EWLM managed server configuration wizard, accept the **Now** default and click **Next** (see Figure 77).



Figure 77. Selecting Now launches the EWLM managed server configuration wizard



2. Select **Reboot now** and click **Next** (see Figure 78).



Figure 78. Reboot required for the EWLM configuration

3. Click Finish to complete the EWLM managed server installation (see Figure 79).

🔮 IBM EWLM Installer		<u>-                                    </u>
	Please read the summary information below.	
	The InstallShield Wizard has successfully installed IBM Enterprise Workloa Manager - Managed Server. Choose Finish to exit the wizard.	d
	< <u>B</u> ack <u>N</u> ext > Fin	ish

Figure 79. Successful installation of managed server

4. Now, configure the managed-server environment by running the following command: c:\Program Files\IBM\VE2\EWLMMS\bin\configWizardMS.bat.



5. You will see the screen shown in Figure 80. Select **Create managed server** and click **Next**.



Figure 80. Create managed server

6. Type your configuration ID. This example uses ewlmms as the ID (see Figure 81).

📴 EWLM Configu	ration Wizard	
	Create managed server(Step 1 of 4)	
	Configuration ID:	
	ewimms	
1944. 1944.	Back Next Cancel He	lp

Figure 81. Type ID of choice



7. Enter the system's IP address. In this example, it is 172.16.1.33 (see Figure 82).

📴 EWLM Configur	ation Wizard	
Chay V	Create managed server(Step 2 of 4)	
	Managed server connects to: Domain manager	
	IP address or host name: 172.16.1.33 Port:	
	5773 Firewall broker IP address or bost name:	
	Port: 5805	
- K		
IBM.	Back Next	Cancel Help

Figure 82. System's IP address

8. Select **None** as the security level for communication between the managed server and domain server. Then click **Next** (see Figure 83).

EWLM Configuration Wizard	
Create managed server(Step 3 of 4)	
Security level for communications between the managed server and domain manager: None Client-Server SSL Server SSL	
Back Next Cancel	Help

Figure 83. Choosing security level between managed server and domain manager



9. You can ignore the proxy server prompt and click Finish (see Figure 84).

📴 EWLM Configurat	ion Wizard	
C	Create managed server(Step 4 of 4)	
	Use proxy server to connect to domain manager IP address or host name:	
	Port:	
IBM.	Back Finish Cancel	Help

Figure 84. Configuration steps complete

Finally, the wizard presents the screen shown in Figure 85 (a successful installation).



Figure 85. Successful creation of a managed server



### **Using the EWLM Control Center**

The following two screen captures (Figure 86 and Figure 87) show how to start the EWLM domain manager and managed-server processes. The first step is to start a special WebSphere Application Server instance because EWLM domain manager runs in a WebSphere environment.

1. Enter the following commands:

```
>cd c:\program Files\IBM\VE2\EWLM\bin
>startwas.bat ewlmdm
>startdm.bat ewlmdm
```

🐼 Command Prompt	
07/22/2005 10:56 AM 3,050 st 07/22/2005 10:57 AM 1,979 st 2 File(s) 5,029 b 0 Dir(s) 12,014,075,904 b	artDM.bat artWAS.bat ytes ytes free
C:\Program Files\IBM\VE2\EWLM\bin>startwa Processing startWAS request. Please be p Server started successfully. PROCESSING COMPLETE	s.bat ewlmdm atient as this may take awhile
C:\Program Files\IBM\VE2\EWLM\bin>startdm Processing startDM request. Please be pa PROCESSING COMPLETE	.bat ewlmdm tient as this may take awhile
C:\Program Files\IBM\VE2\EWLM\bin>cd\.	.\ewlmms
C:\Program Files\IBM\VE2\EWLMMS>cd bin	
C:\Program Files\IBM\VE2\EWLMMS\bin>dir * Volume in drive C has no label. Volume Serial Number is 3810-1544	.bat
Directory of C:\Program Files\IBM\UE2\EW	LMMS\bin

Figure 86. How to start the EWLM domain manager and managed server

 Start the EWLM managed server process by entering the following command (see Figure 87):

>startms.bat ewlmms

📾 Command Prompt - startms.bat ewimms	_ 🗆 ×
PROCESSING COMPLETE	<b>A</b>
C:\Program Files\IBM\UE2\EWLM\bin>cd\\ewlmms	
C:\Program Files\IBM\VE2\EWLMMS>cd bin	
C:\Program Files\IBM\UE2\EWLMMS\bin≻dir *.bat Volume in drive C has no label. Volume Serial Number is 3810-1544	
Directory of C:\Program Files\IBM\VE2\EWLMMS\bin	
07/22/2005       10:49 AM       1,644 changeMS.bat         07/22/2005       10:50 AM       2,097 configWizardMS.bat         07/22/2005       10:51 AM       3,078 createMS.bat         07/22/2005       10:51 AM       2,145 deleteMS.bat         07/22/2005       10:55 AM       1,651 displayMS.bat         07/22/2005       10:55 AM       1,651 displayMS.bat         12/17/2005       08:30 AM       1,313 ewImms_environment.bat         07/22/2005       10:57 AM       3,232 startMS.bat         07/22/2005       10:57 AM       1,742 stopMS.bat         07/22/2005       10:59 AM       1,742 stopMS.bat         07/22/2005       10:59 AM       12,017,094,656 bytes free	
C:\Program Files\IBM\UE2\EWLMMS\bin>startms.bat ewlmms	-



### Figure 87. Starting the managed server process

From the EWLM Control Center, you can view (or disable) an EWLM-managed server in the EWLM domain (see Figure 88).

🚈 test domain - IBM Enterprise V	Vorkload Manager - Microsoft Inte	ernet Explo	rer		_1	
Enterprise Workload Manager (	Control Center				1 IBM.	<b>A</b>
Home   Log out   Preferences	Help			User: administrator Ro	ole: Administrator	
Active service policy: System d	lefault service policy   Domain	policy: De	fault policy   Domain Settings		¢9	
Active service policy: System of Active service policy: System of Domain policies Applications Platforms Manage Service policies Managed servers Monitor Exceptions Service classes Transaction classes Process classes Partition classes Managed servers Load balancers Partitions	Iefault service policy   Domain Managed Servers View or disable a managed server Select Managed server ▲ ○ joe-d1x4p3rhwfp Page 1 of 1	policy: De rer in the E State ^ Active Total: 1	fault policy   <u>Domain Settings</u> WLM domain. Co Active service policy ^ System default service policy Filtered: 1 Displayed: 1	Operating system A Windows	Release ^ 5.2.1.0	
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Figure 88. View or disable a managed server



### **Summary**

You should now have a better understanding of how to install the IBM Enterprise Workload Manager products, including the EWLM Virtualization Engine domain manager and managed server components on a Microsoft Windows 2003 Server.





### Resources

These Web sites provide useful references to supplement the information contained in this document:

- IBM eServer iSeries<sup>™</sup> Information Center http://publib.boulder.ibm.com/iseries/
- IBM System p<sup>™</sup> and AIX Information Center http://publib.boulder.ibm.com/infocenter/pseries/index.jsp
- IBM Publications Center www.elink.ibmlink.ibm.com/public/applications/publications/cgibin/pbi.cgi?CTY=US
- IBM Redbooks<sup>™</sup> www.redbooks.ibm.com/
- IBM eServer Software Information Center http://publib.boulder.ibm.com/infocenter/eserver/v1r1/en\_US/index.htm?info/veicinfo/ eicarplangeneral.htm

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