

# WebSphere Business Monitor V6.2 Advanced Installation

## Highly available and scalable environment

What this exercise is about .....	2
Lab requirements .....	2
Introduction .....	4
Part 1: Preparing for the WebSphere Business Monitor installation.....	6
Part 2: Installing the WebSphere Business Monitor core product files .....	8
Part 3: Create WebSphere Business Monitor deployment manager profile .....	16
Part 4: Manually create MONITOR database and tables .....	27
Part 5: Create WebSphere Business Monitor custom profiles.....	31
Part 6: Create clusters and member servers .....	38
Part 7: Deploy and configure the common event infrastructure.....	45
Part 8: Configuring the WebSphere Business Monitor environment .....	48
Part 9: Configure business space on a cluster and create database tables.....	59
Part 10: Enabling business space widgets .....	63
Part 11: Install and configure Alphablox in a cluster .....	65
What you did in this exercise .....	66
Appendix: Troubleshooting CEI deployment .....	67

## What this exercise is about

The objective of this lab is to provide instructions for installing WebSphere Business Monitor V6.2 product in a Deployment Manager Environment using the '**Advanced**' installation type.

This lab uses a five machine topology in a deployment manager environment:

- **Machine 1:** WebSphere Business Monitor V6.2 deployment manager and DB2 for the MONITOR database
- **Machine 2:** WebSphere Business Monitor V6.2 custom profile
- **Machine 3:** WebSphere Business Monitor V6.2 custom profile
- **Machine 4:** WebSphere Business Monitor V6.2 custom profile
- **Machine 5:** WebSphere Business Monitor V6.2 custom profile

If you are not setting up a production environment but you are using this lab for learning purposes, you could reduce the number of machines in the environment to just two. You could install the deployment manager and DB2 on machine 1. For machine 2, the number of cluster members that you can run simultaneously is limited by the amount of memory you have on the machine, so if you do not have a lot of memory, then you can create just two clusters, an application cluster and a support cluster, thus you will have only two cluster members that are running simultaneously on the machine.

## Lab requirements

List of system and software required for the student to complete the lab:

- WebSphere Business Monitor V6.2
- WebSphere Application Server V6.1.0.21
- DB2 UDB ESE V9.5
- Alphablox V9.5
- IBM Information Center

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Some instructions in this lab are Windows® operating-system specific. If you plan on running the lab on an operating-system other than Windows, you will need to run the appropriate commands, and use appropriate files (.sh or .bat) for your operating system. The directory locations are specified in the lab instructions using symbolic references, as follows:

Reference Variable	Windows Location	AIX®/UNIX® Location
<b>Monitor Deployment Manager Environment (Machine 1)</b>		
<WAS62_HOME>	C:\IBMWebSphere\MonServer	
<DMGR_HOME>	<WAS62_HOME>\profiles\Dmgr62	
<DB2_HOME>	C:\IBM\DB2\SQLLIB	
<b>Monitor Custom Profile 01 (Machine 2)</b>		
<WAS62_HOME>	C:\IBMWebSphere\MonServer	
<WBMONITOR_HOME>	<WAS62_HOME>\profiles\Custom01	
<ALPHABLOX_HOME>	C:\IBMWebSphere\Alphablox_server	
<b>Monitor Custom Profile 02 (Machine 3)</b>		
<WAS62_HOME>	C:\IBMWebSphere\MonServer	
<WBMONITOR_HOME>	<WAS62_HOME>\profiles\Custom02	
<b>Monitor Custom Profile 03 (Machine 4)</b>		
<WAS62_HOME>	C:\IBMWebSphere\MonServer	
<WBMONITOR_HOME>	<WAS62_HOME>\profiles\Custom03	
<b>Monitor Custom Profile 04 (Machine 5)</b>		
<WAS62_HOME>	C:\IBMWebSphere\MonServer	
<WBMONITOR_HOME>	<WAS62_HOME>\profiles\Custom04	
<ALPHABLOX_HOME>	C:\IBMWebSphere\Alphablox_server	

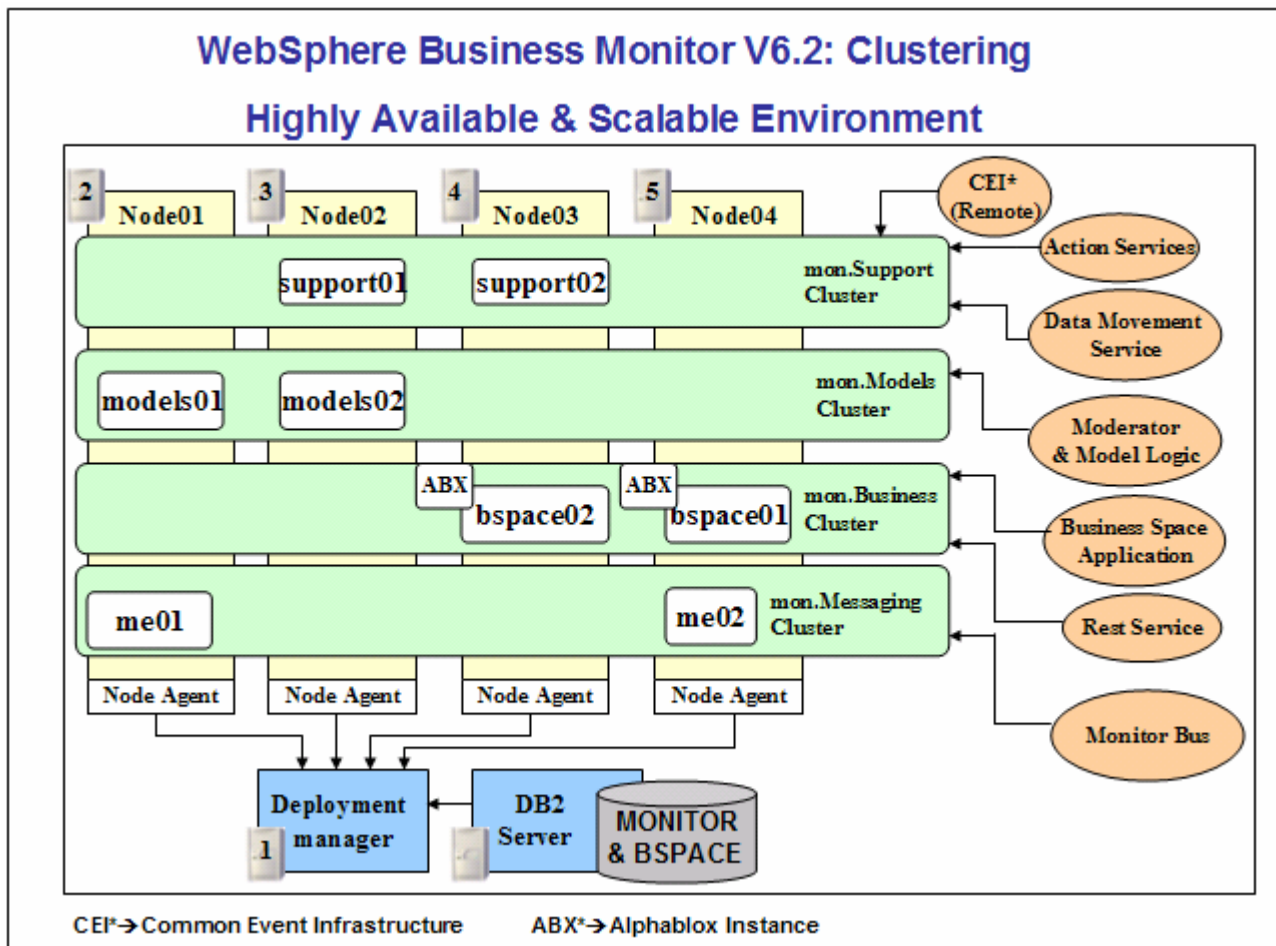
## Introduction

WebSphere Business Monitor V6.2, Advanced installation allows you to customize the installation of the Monitor components on one or multiple machines and it can be used for small to large production systems.

WebSphere Application Server V6.1.0.21 is the only mandatory prerequisite for WebSphere Business Monitor V6.2 installation. When it comes to the Advanced installation type, the InstallShield wizard installs the WebSphere Application Server V6.1.0.21 and silently uses the customized “Profile Management Tool (PMT)” to create and augment the WebSphere Business Monitor (WBM) profiles. This is only done silently if you choose to create a profile at the time of installation. You can also install without creating the profile and then create/augment manually later. In this installation document you will augment profiles manually for each install. The advanced installation type supports the standard profile management for network deployment flexibility.

WebSphere Business Monitor V6.2 installation supports Derby (Cloudscape V10), DB2 and Oracle for the MONITOR database.

In the following diagram you can see the topology for the installation in this lab. Machine 1 contains the deployment manager and DB2. Machine 2, 3, 4 and 5 contain various clusters for the monitor models, support applications, business space and Alphablox.

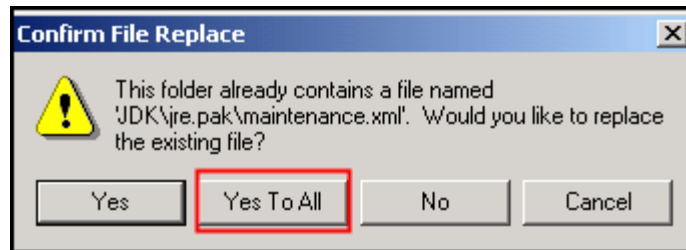


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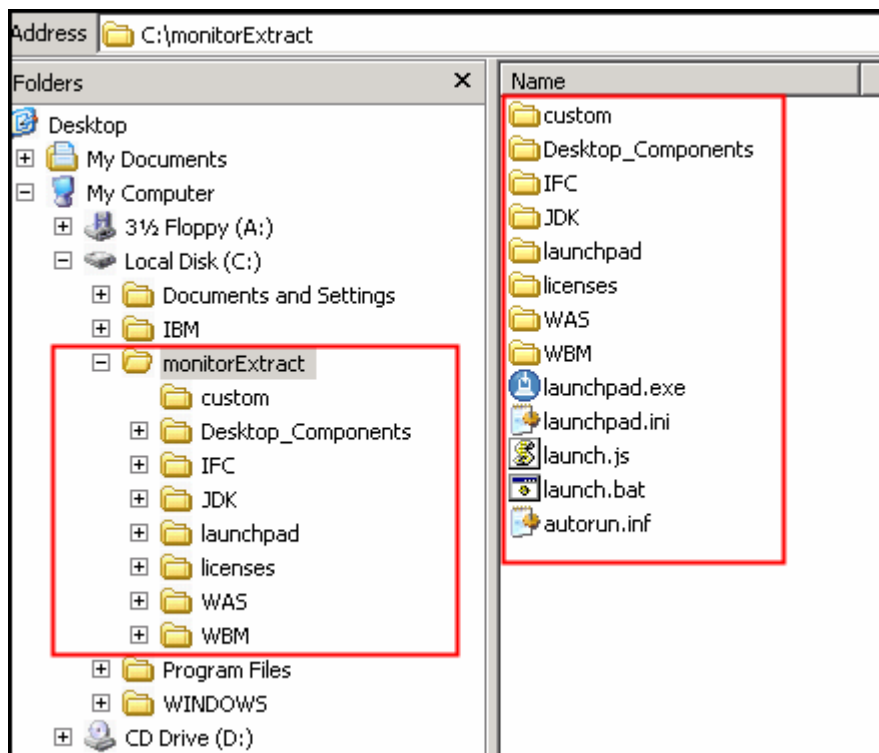
## Part 1: Preparing for the WebSphere Business Monitor installation

In this section of the lab, the pre-requisite software will be obtained and extracted in such a way that an on-disk WebSphere Business Monitor V6.2 installation image is created on all the machines where the monitor deployment manager and custom profiles will be installed. Note: For V6.2, the installation image is bundled in a DVD. You can copy the contents from the DVD to the hard disk, then skip to part 2 in this document to run the launchpad. If you are assembling the image from separate binaries, then you may need this document part to build the Monitor image.

1. Obtain the pre-requisite software and extract all the software except Alphablox in one folder. If while extracting you get a message prompting to replace any jdk files then click **Yes to All**.



In the diagram below, you will see a folder named **monitorExtract** that contains the extracted WebSphere Application Server, WebSphere Business Monitor, and Information Center software.



### Note:

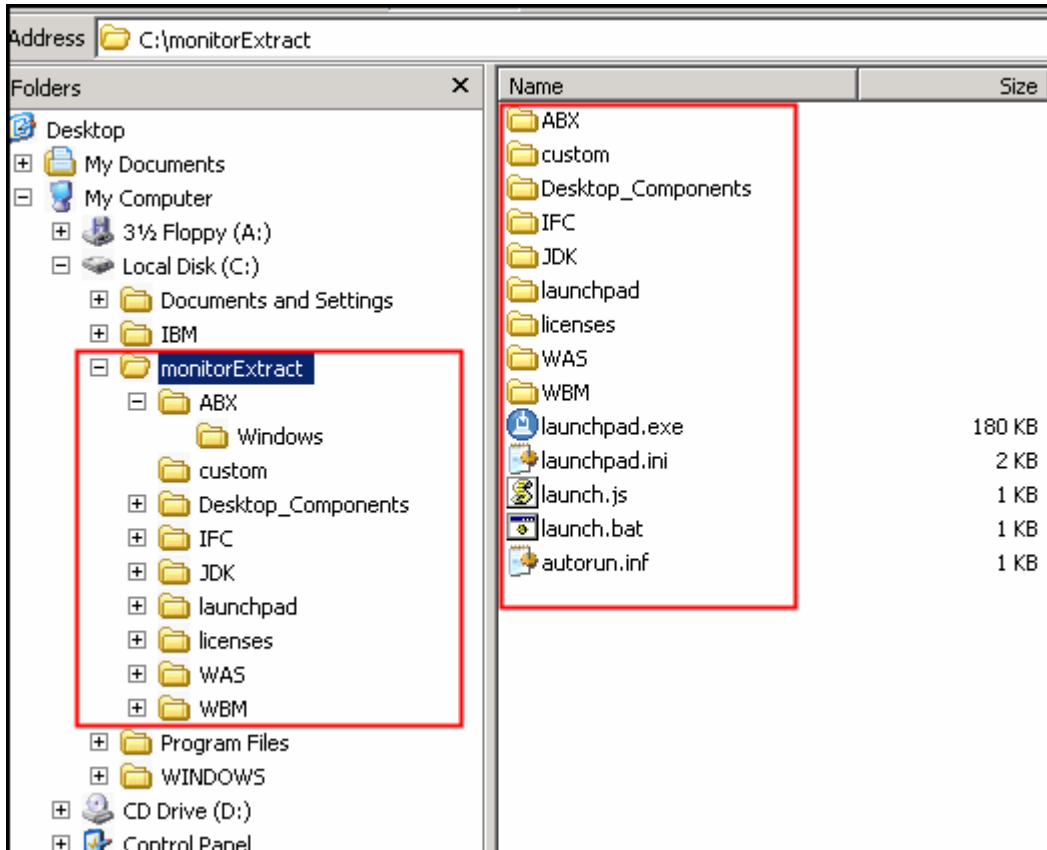
Executables should be placed directly under the directories specified above, so that **install.exe** or **install.sh** can be silently launched. Add subdirectories only when directed to do so otherwise creation of those will prevent your installation from successful completion.

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- \_\_\_ 2. Create a new folder under the monitor extract and call it **ABX**.
- \_\_\_ 3. Create a subfolder under **ABX** and call it **Windows**. Copy the **install.exe** for Alphablox under **Windows** folder. The path to the Alphablox installer should look as below:

C:\monitorextract\ABX\Windows\installer

The final directory structure will display as below. You are now ready to begin the installation.

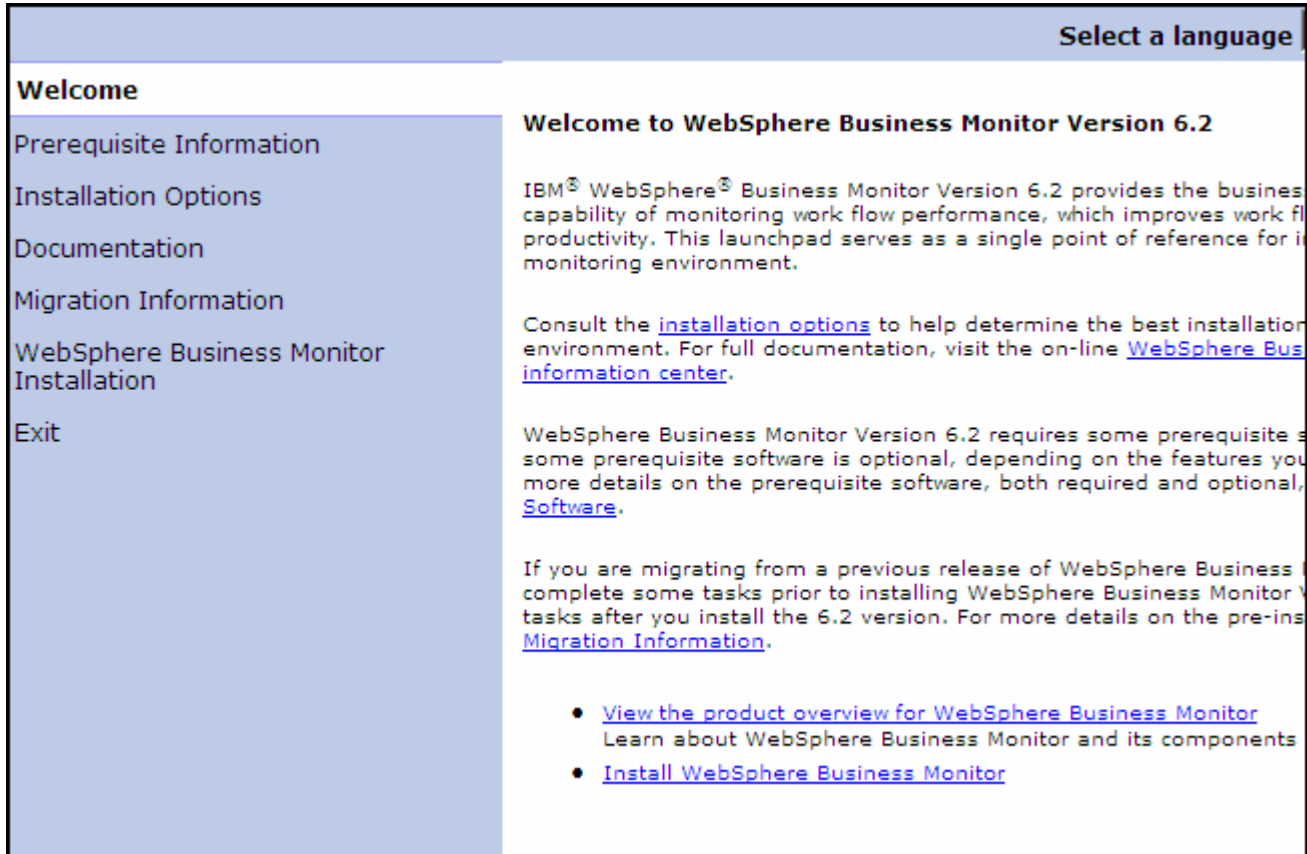


## Part 2: Installing the WebSphere Business Monitor core product files

In this part of the lab you will install WebSphere Business Monitor core product files on the host machines where you will be creating monitor deployment manager and custom profiles.

Complete the following instructions to install the WebSphere Business Monitor core product files using the WebSphere Installation Manager:

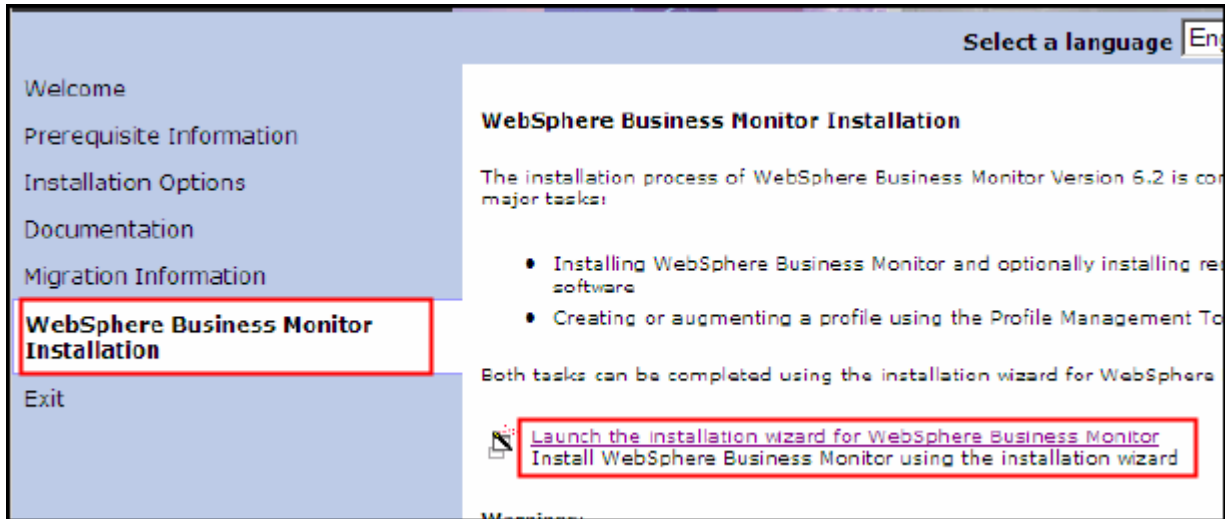
1. From the directory containing the pre-requisites and the WebSphere Business Monitor software, double click **launchpad.exe** to launch the Common Launchpad program



2. On the welcome screen, click **WebSphere Business Monitor Installation** in the left pane and click **Launch the installation wizard for WebSphere Business Monitor** to the right. This launches the WebSphere Business Monitor V6.2 InstallShield wizard



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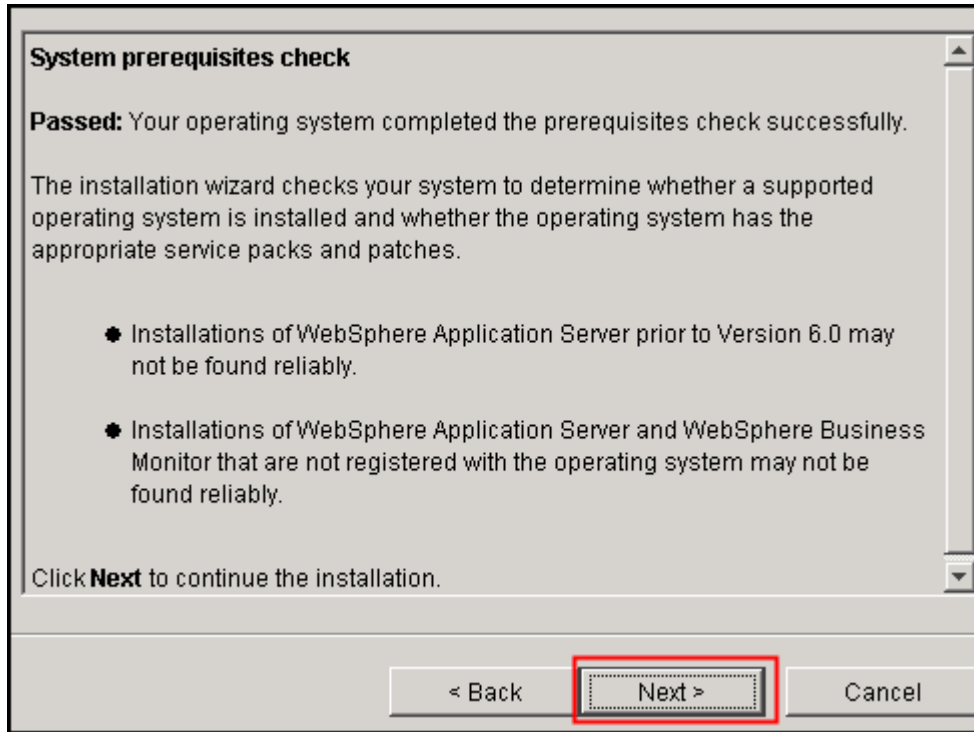
3. In the IBM WebSphere Business Monitor 6.2 installation wizard panel click **Next**



4. In the next window, read the license agreement. If you agree to the terms, select the radio button next to **I accept the terms in the license agreement**.

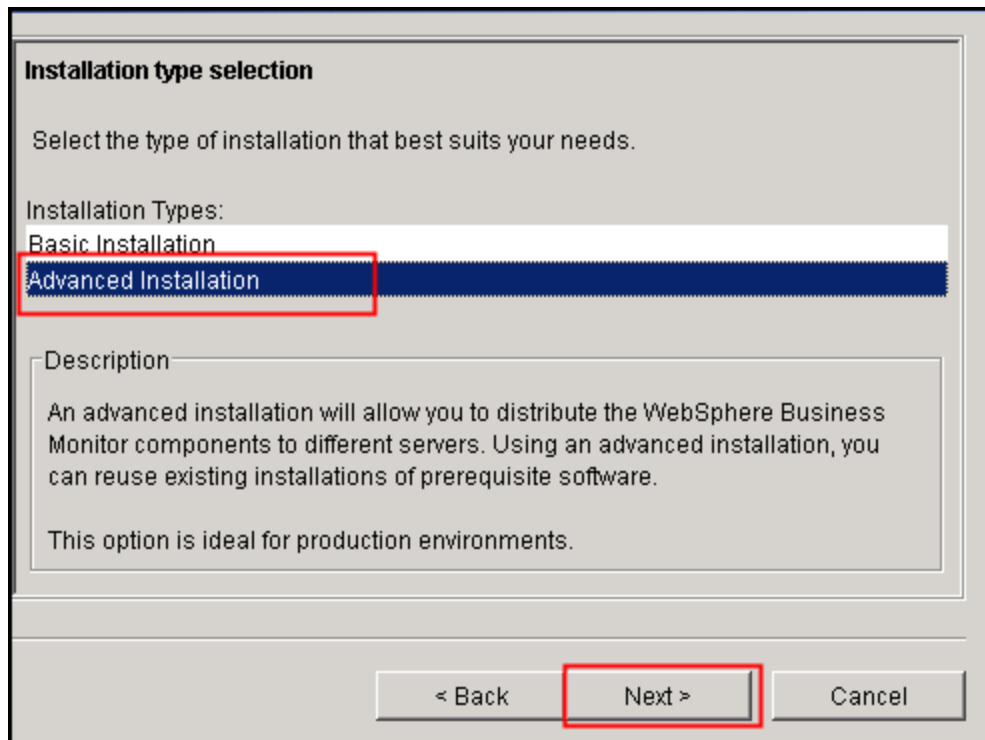
5. Click **Next**. The monitor installation program performs an operating system prerequisite check and warns you if the product installation is not supported

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\_\_\_ 6. Click **Next**

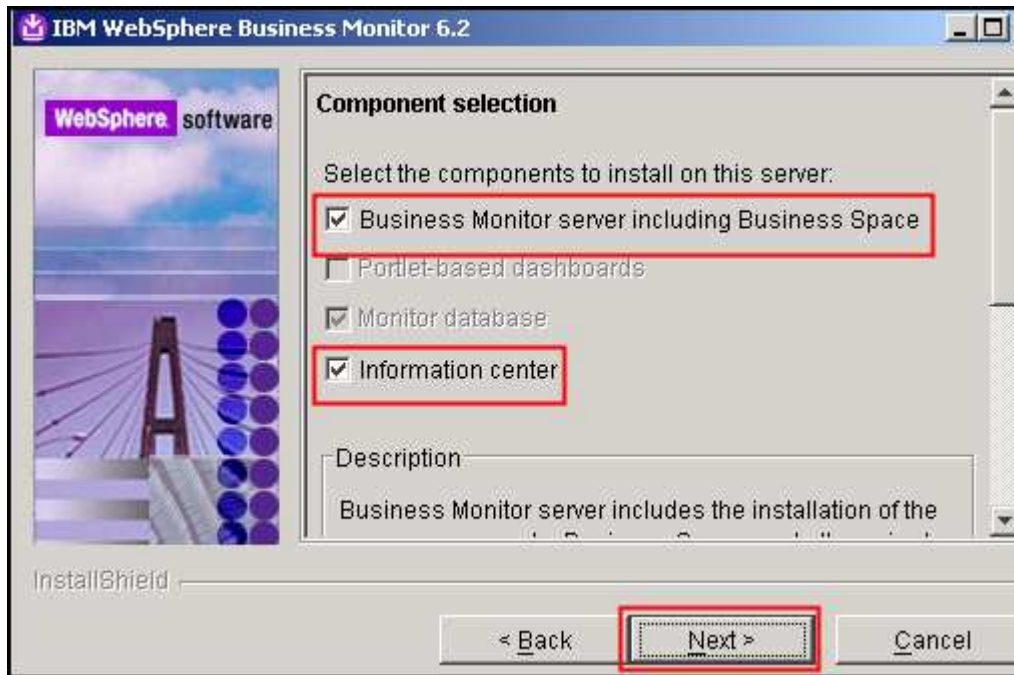
\_\_\_ 7. In the **Installation type selection** window, select **Advanced Installation**



\_\_\_ 8. Click **Next**

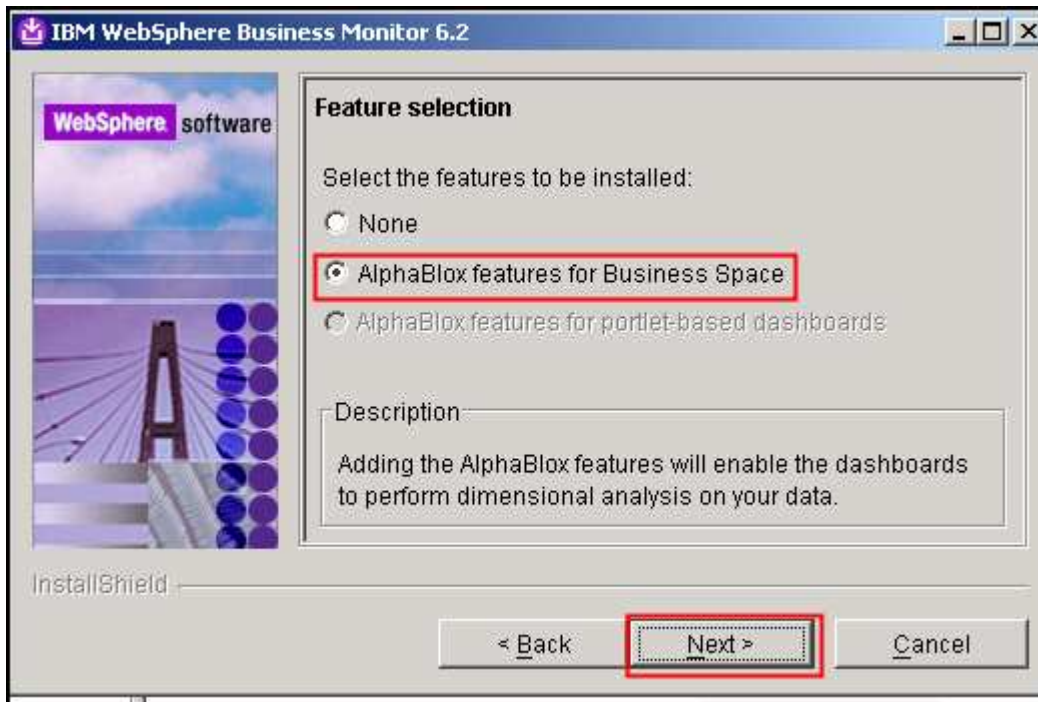
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9. In the **Component selection** window, select **Business Monitor server including Business Space**. The **Monitor database** check box is selected by default and not selectable, indicating that the monitor database creation is mandatory. Optionally, select the check box for **Information Center**.



10. Click **Next**

11. In the **Feature selection** window, select **AlphaBlox features for Business Space**

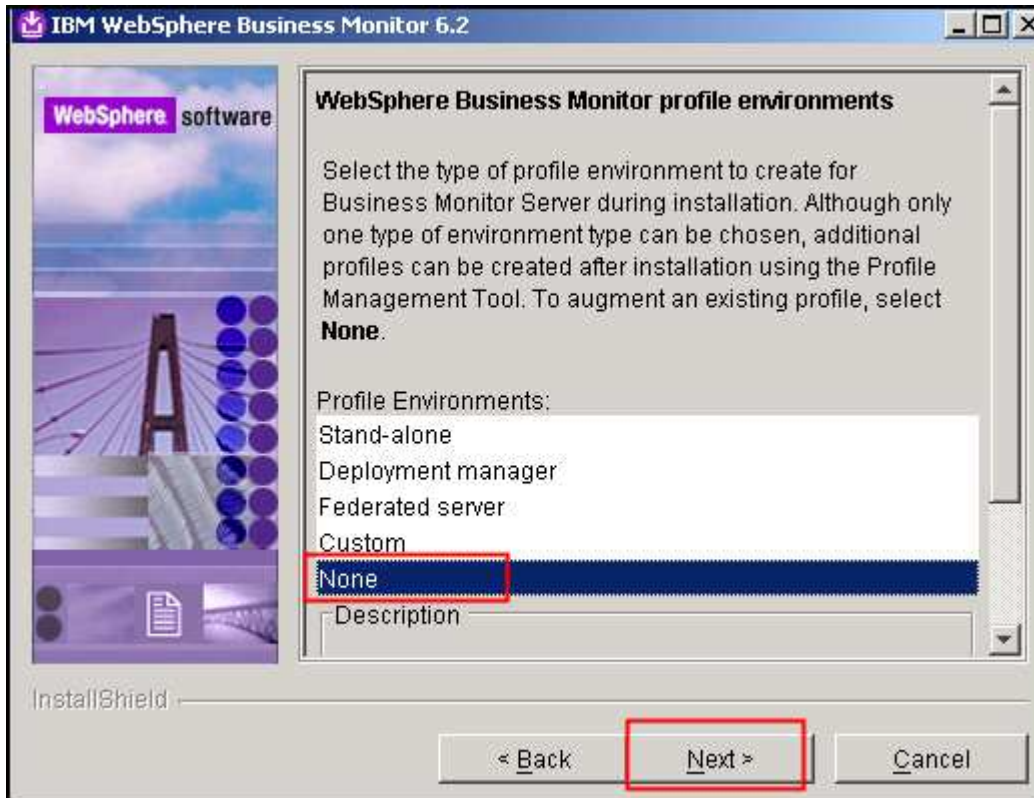


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- \_\_\_ 12. Click **Next**
- \_\_\_ 13. In the **Installation directory** window, click **Browse** to specify a different directory for **Business Monitor server installation location**. Change the path to C : \ IBM \ WebSphere \ MonServer



- \_\_\_ 14. Click **Next**
- \_\_\_ 15. In the **WebSphere Business Monitor profile environments** window, select **None** for **Profile Environments**



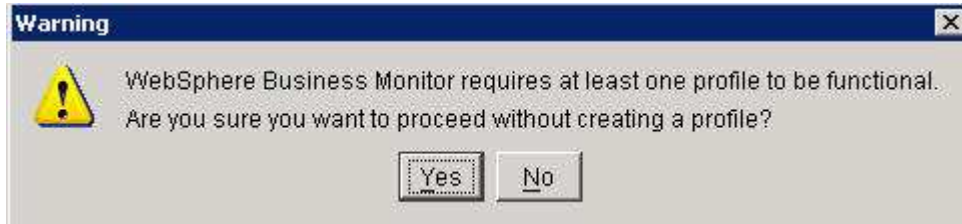
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**Note:** Selecting **None** for WebSphere Business Monitor profile environments, installs the core product files and does not create any profiles or runtime servers. You can use the Profile Management Tool (PMT) which provides several options for creating or augmenting new WebSphere Business Monitor profiles.

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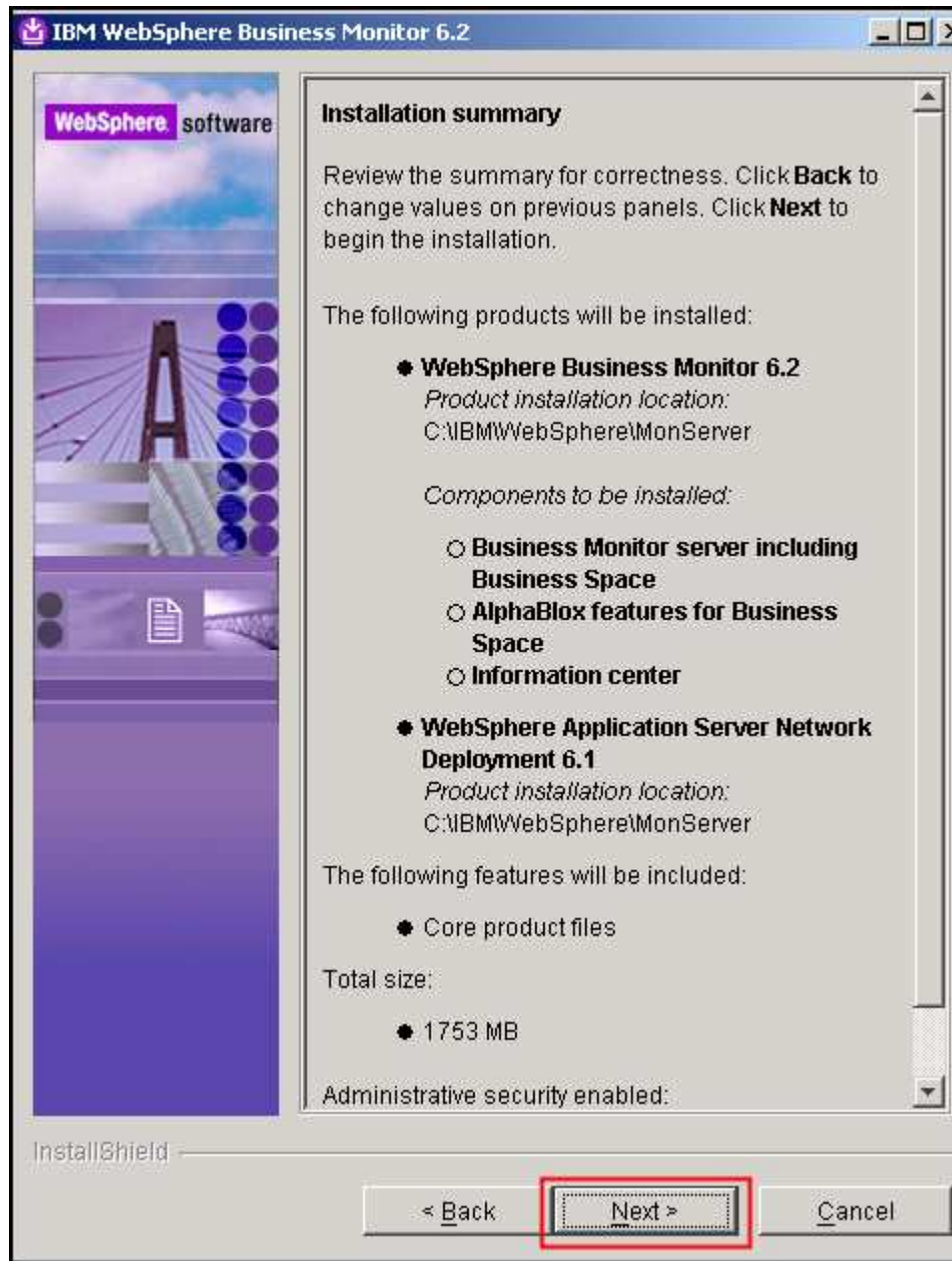
\_\_\_ 16. Click **Next**

\_\_\_ 17. Click **Yes** for the warning



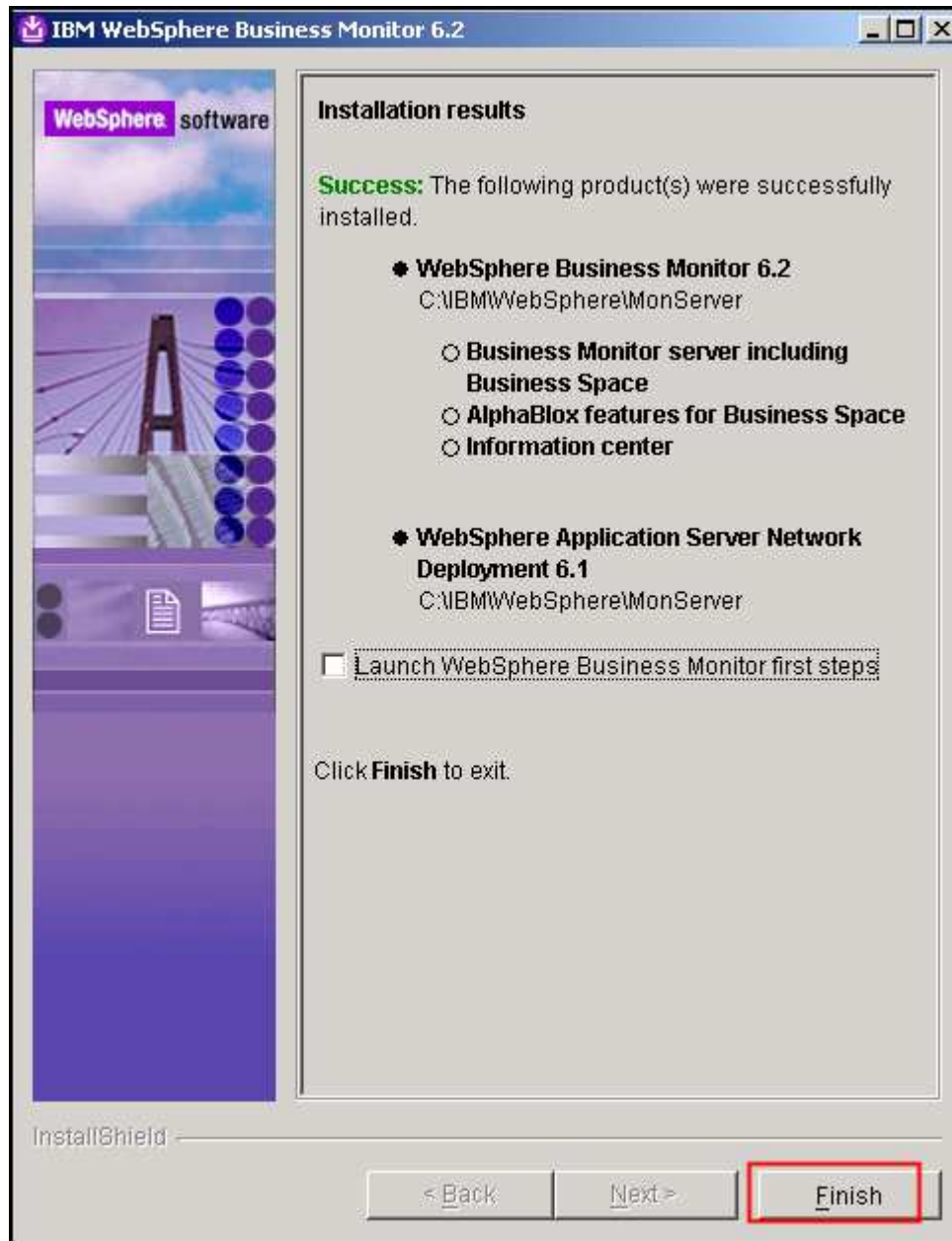
\_\_\_ 18. In the following **Installation Summary** window, review the business monitor installation summary

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19. Click **Next** to continue with the installation. The installation progresses and will take a couple of minutes to complete. Once the installation is complete, review the **Installation Results** window.

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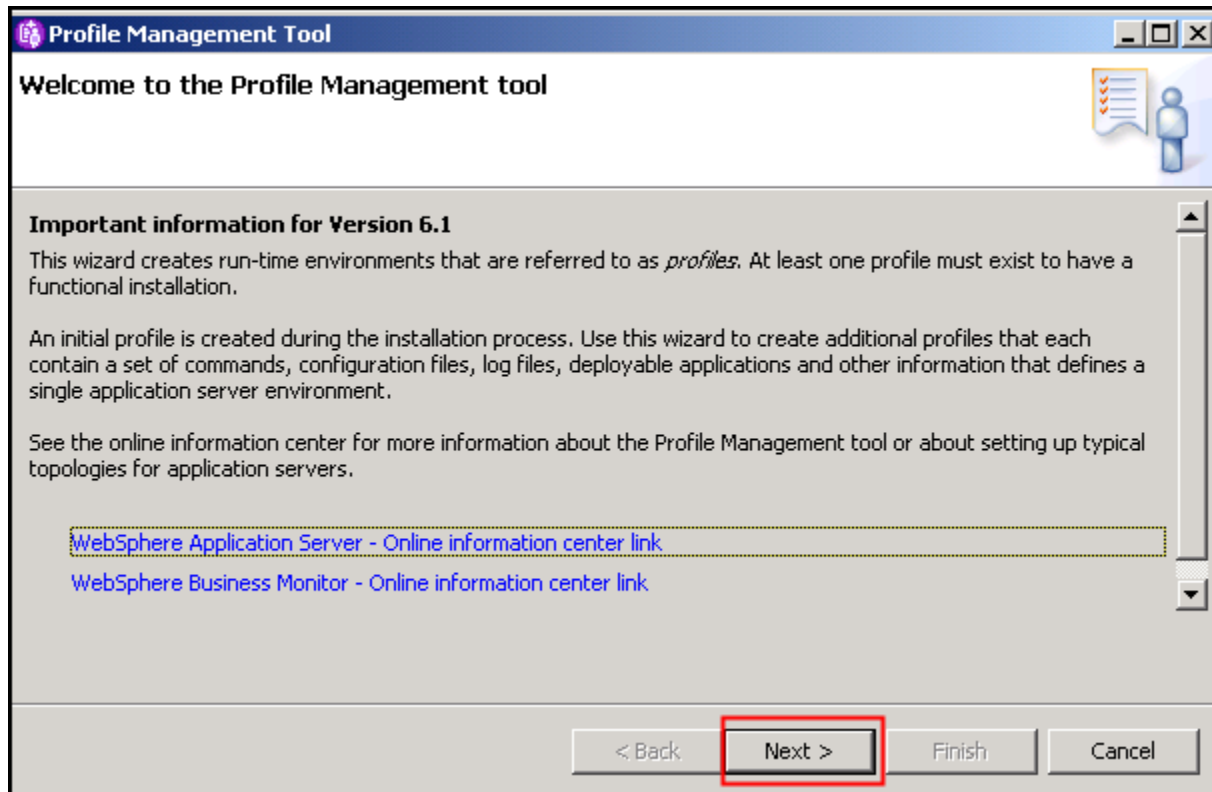
\_\_\_ 20. Deselect the check box for launching the profile management tool and click **Finish**

## Part 3: Create WebSphere Business Monitor deployment manager profile

Complete the following instructions to create a WebSphere Business Monitor V6.2 deployment manager profile using the **Profile Management Tool**.

1. From the start menu navigate to **Programs**→ **IBM WebSphere** → **Business Monitor 6.2** and select **Profile Management Tool**. The WebSphere Business Monitor Profile Management Tool is launched.

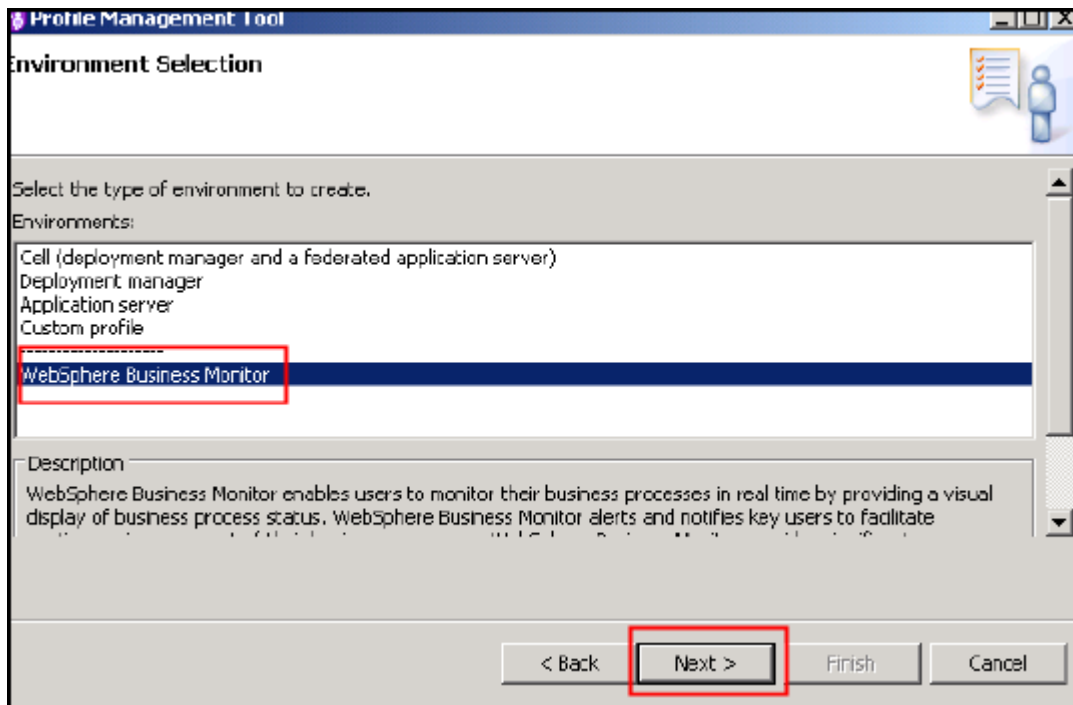
**Note:** Alternatively, you can launch the Profile Management Tool by running the '**pmt.bat (sh)**' script located at '**<WAS61\_HOME>\bin\ProfileManagement**'



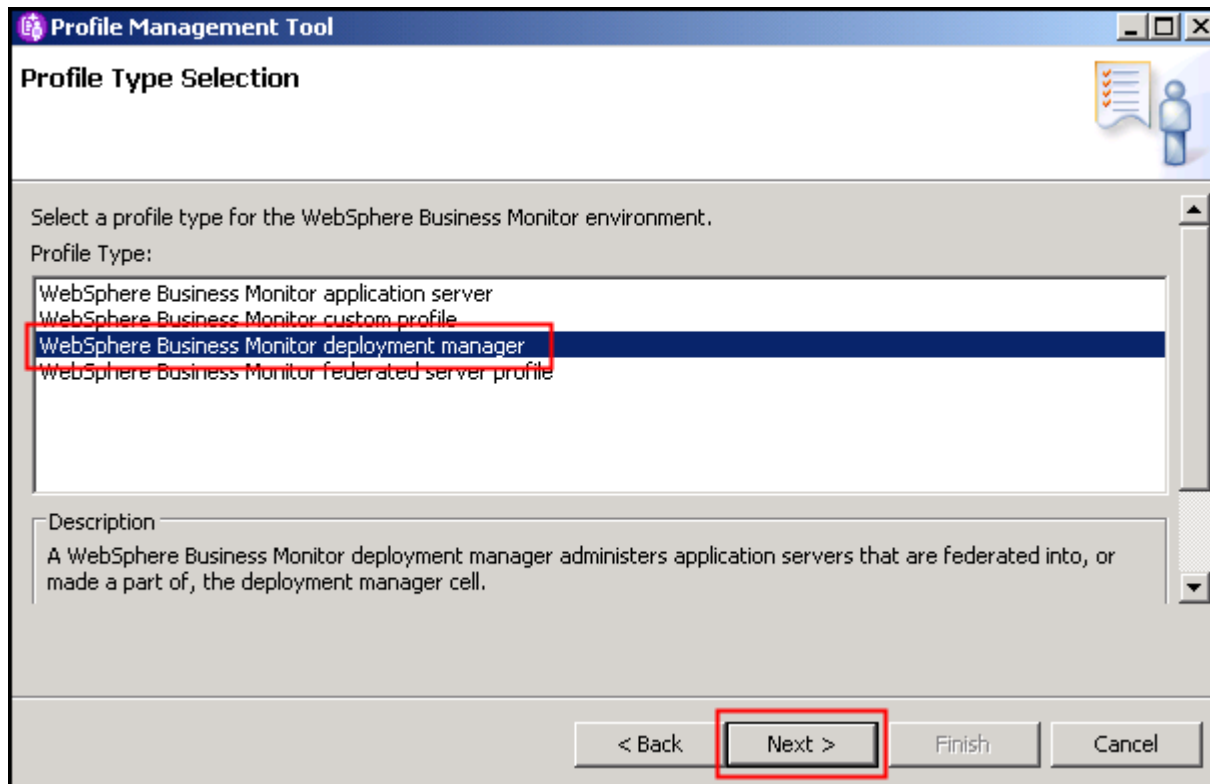
2. Click **Next** in the **Welcome to the Profile Management tool** window
3. In the **Environment Selection** window select **WebSphere Business Monitor**



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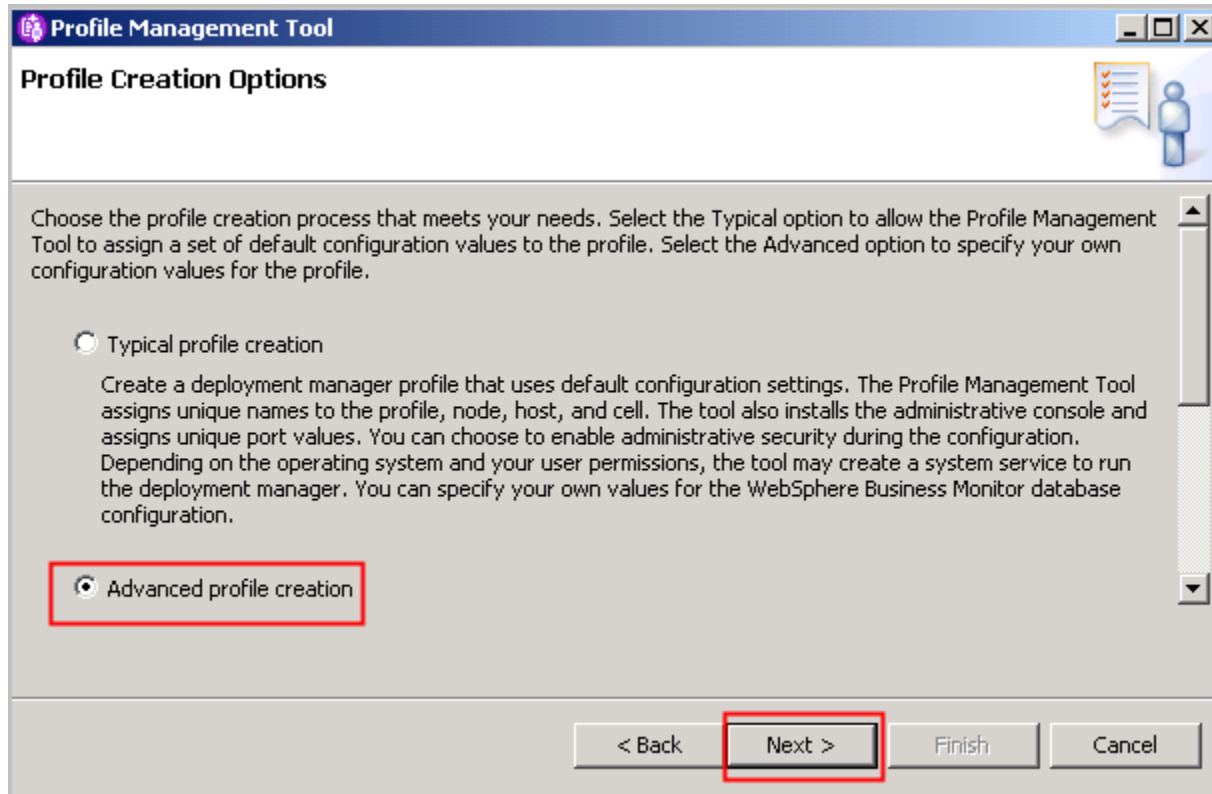


- \_\_\_ 4. Click **Next**
- \_\_\_ 5. In the **Profile Type Selection** window, select **WebSphere Business Monitor deployment manager**



\_\_\_ 6. Click **Next**

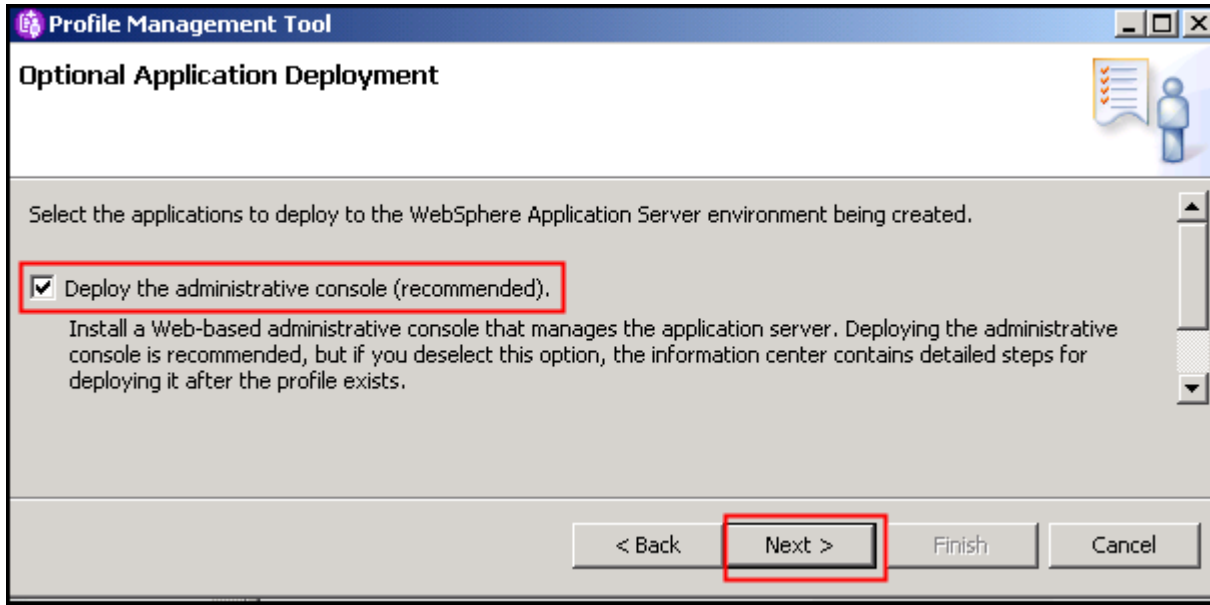
\_\_\_ 7. In the **Profile Creation Options** window, select **Advanced profile creation**



\_\_\_ 8. Click **Next**

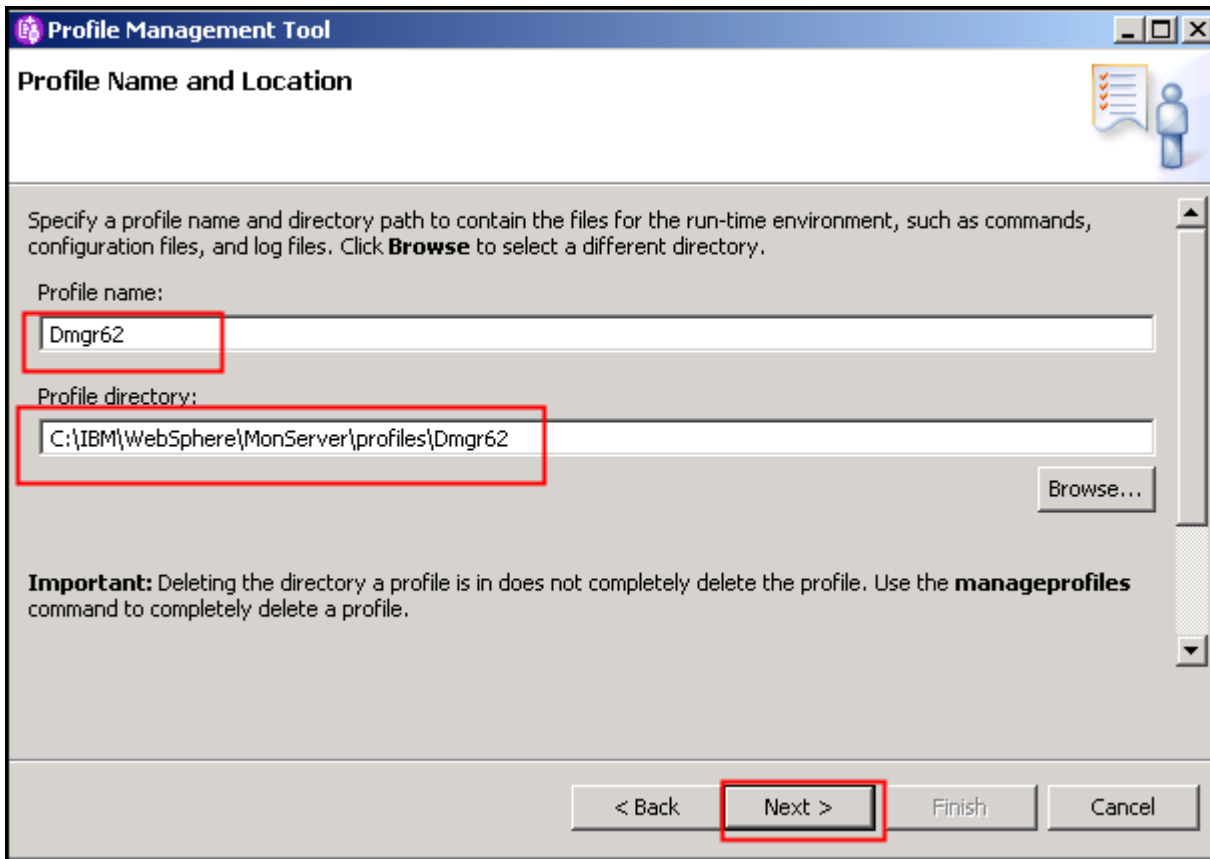
\_\_\_ 9. In the **Optional Application Deployment** window, ensure the check box for **Deploy the administrative console** is selected.

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10. Click **Next**

11. In the **Profile Name and Location** window, enter **DMgr62** as the **profile name** and enter **C:\IBM\WebSphere\MonServer\profiles\DMgr62** as the **Profile directory**.



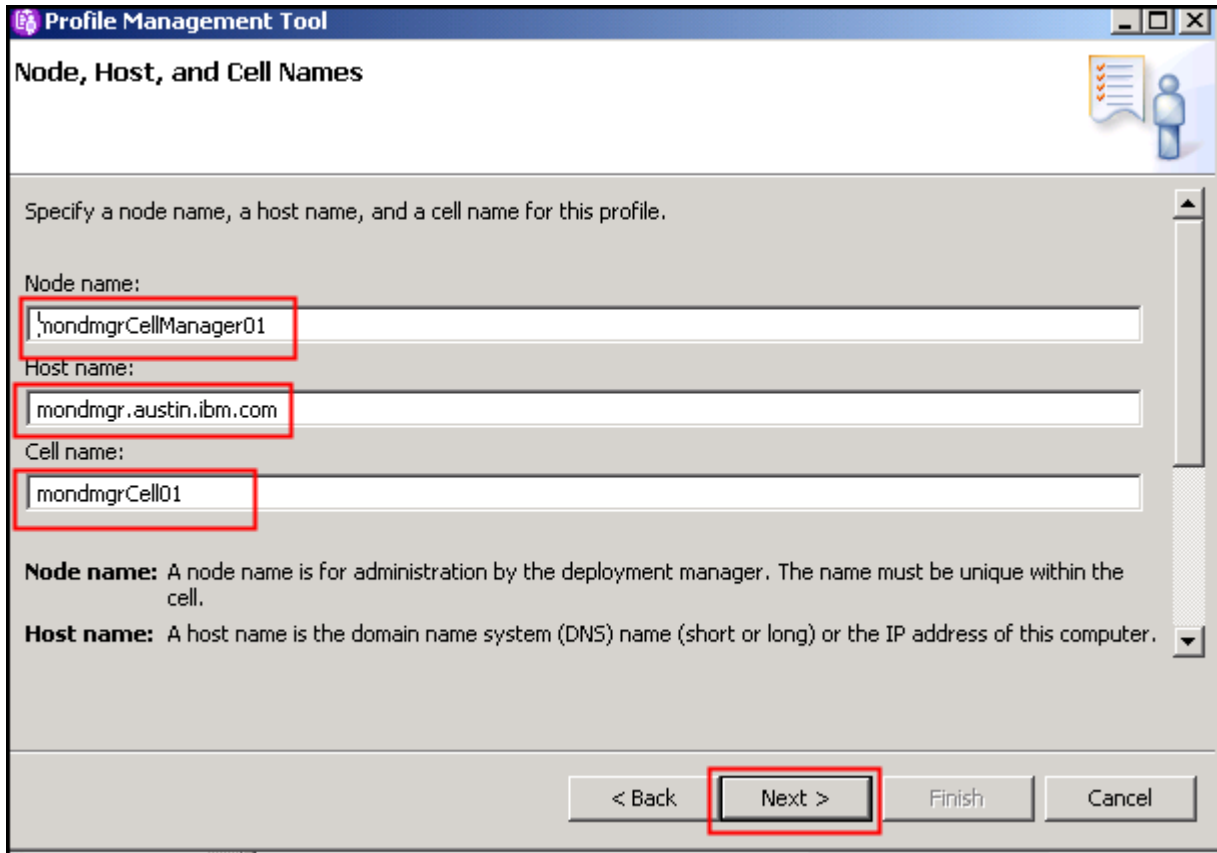
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- \_\_\_ 12. Click **Next**
- \_\_\_ 13. In the **Node, Host and Cell Name** window, enter the following values:

**Node name** : mondmgrCellManager01

**Host name** : mondmgr.austin.ibm.com ( fully qualified host name of the host machine)

**Cell name** : mondmgrCell01



- \_\_\_ 14. Click **Next**
- \_\_\_ 15. In the **Administrative Security** window, ensure the **Enable administrative security** checkbox is selected and then enter `monadmin` as the **user name** and `websphere` as the **password**. Enter `websphere` again as **confirm password**.

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**Profile Management Tool**  
Administrative Security

Choose whether to enable administrative security. To enable security, supply a user name and password for logging into administrative tools. This administrative user is created in a repository within the application server. After profile creation finishes, you can add more users, groups, or external repositories.

**Enable administrative security:**

User name:  
monadmin

Password:  
.....

Confirm password:  
.....

< Back   **Next >**   Finish   Cancel

- \_\_\_ 16. Click **Next**
- \_\_\_ 17. In the **Port Values Assignment** window, review the ports assigned. You may change them to the desired values, but ensure that the port number do not conflict with other services running on this machine
- \_\_\_ 18. Click **Next**
- \_\_\_ 19. In the **Windows Service Definition** window, deselect **Run the deployment manager process as a Windows service** and click **Next**
- \_\_\_ 20. In the **Database configuration** window, select the following:

**Database Product : DB2 Universal Database**

**Database creation option : Use existing database**

**Database name :** MONITOR

**Schema name :** MONITOR

---

**Note:**

**Database creation method:** Upon choosing the **Use existing database** option, the profile management tool creates the required resources and configures the connections for an existing or non existing MONITOR database. If the MONITOR database is not yet created, you must manually run the generated scripts to create the database after the installation is complete.

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Profile Management Tool

## Database Configuration

WebSphere Business Monitor components use a common database. Choose a database product and enter the information based on that product.

Database product:

DB2 Universal Database

Override the destination directory for generated scripts

Database script output directory:

C:\IBM\WebSphere\MonServer62\profiles\Dmgr62\dbscripts.wbm

Browse...

Database creation options:

Create a new local database  
The chosen database product must already be installed and configured on the local system.

Use an existing database:  
You must run the generated scripts manually to create the database.

Database name:

MONITOR

Schema name:

MONITOR

< Back   **Next >**   Finish   Cancel

\_\_\_ 21. Click **Next**

\_\_\_ 22. In the **Database configuration (Part 2)** window, enter the following information :

**User name** : db2admin

**Password** : db2admin

**Confirm Password** : db2admin

**Location (directory) of JDBC driver classpath files:**

C:\IBM\WebSphere\MonServer62\universalDriver.wbm\lib

**JDBC driver type** : 4

**Database server host name or IP address:** <your-IP-address> for example:  
dbserver.austin.ibm.com

**Server port** : 50000

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**Profile Management Tool**

### Database Configuration (Part 2)

Additional information about the database server you are using is required to complete configuration for the DB2 Universal Database database. For database authentication, you must type the user name and password that will be used to connect to the database. The database user must have read and write access on the database.

User name:

Password:

Confirm password:

Location (directory) of JDBC driver classpath files:

JDBC driver type:  
 2  
 4

**Type 2:** Type 2 drivers require that you have a local installation of the database product. Type 2 drivers are commonly used if your database is created locally.

**Type 4:** Type 4 drivers use Java implementation to communicate with the actual database. Type 4 drivers do not require a database product on your local system.

Database server host name or IP address:

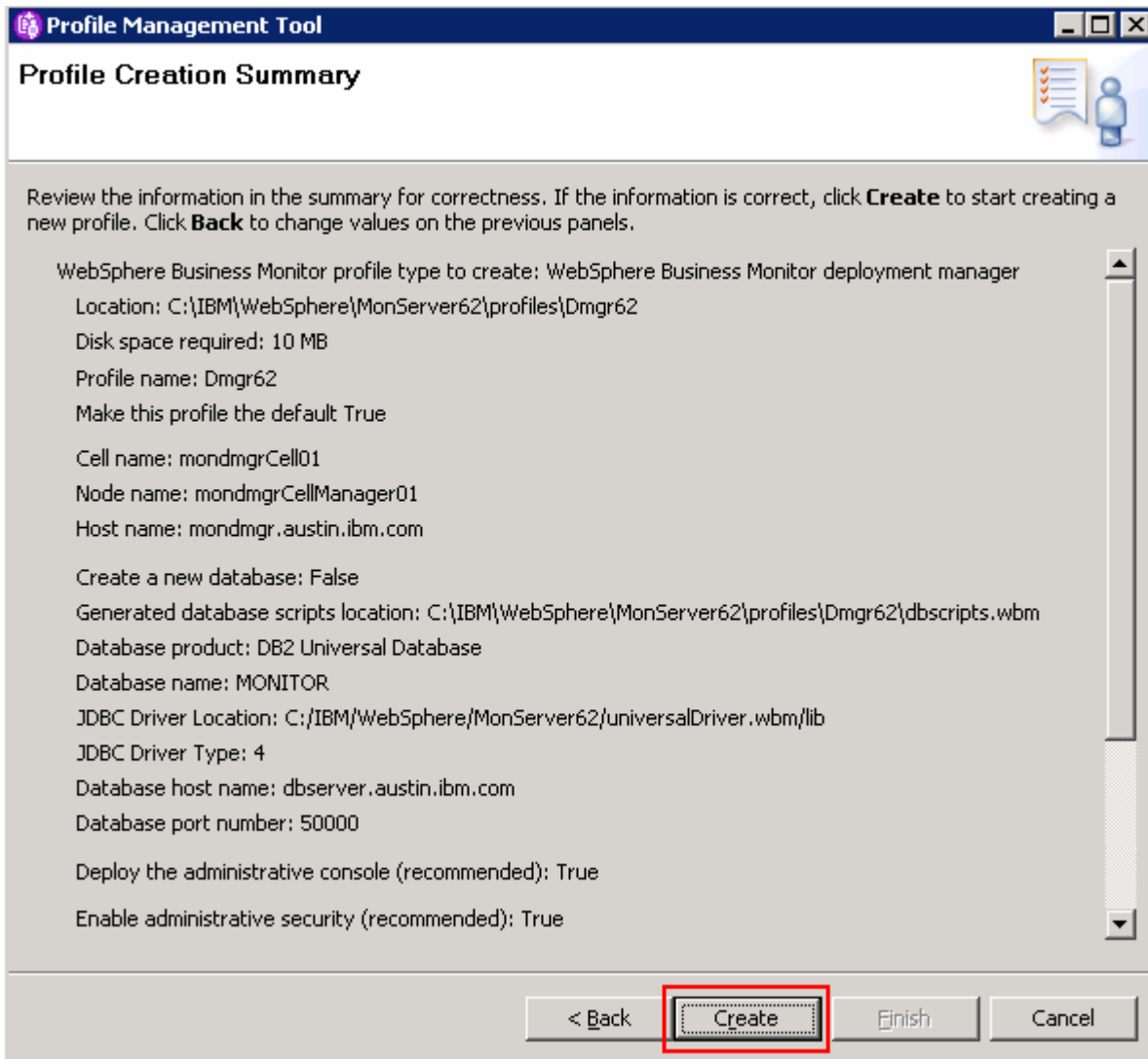
Database TCP/IP service port or listener port:

< Back 

**Note:** The profile management tool uses the information provided in this window to verify the database connection and to verify that the database is installed and running. If the MONITOR database does not exist at this time, click **Yes** in the warning dialog and continue with the profile creation. You can use the database scripts that are generated and manually create the database once the installation is complete.

- \_\_\_\_ 23. Click **Next**
- \_\_\_\_ 24. In the following **Profile Creation Summary** window, review the deployment manager profile creation summary and click **Create**. The profile creation begins.

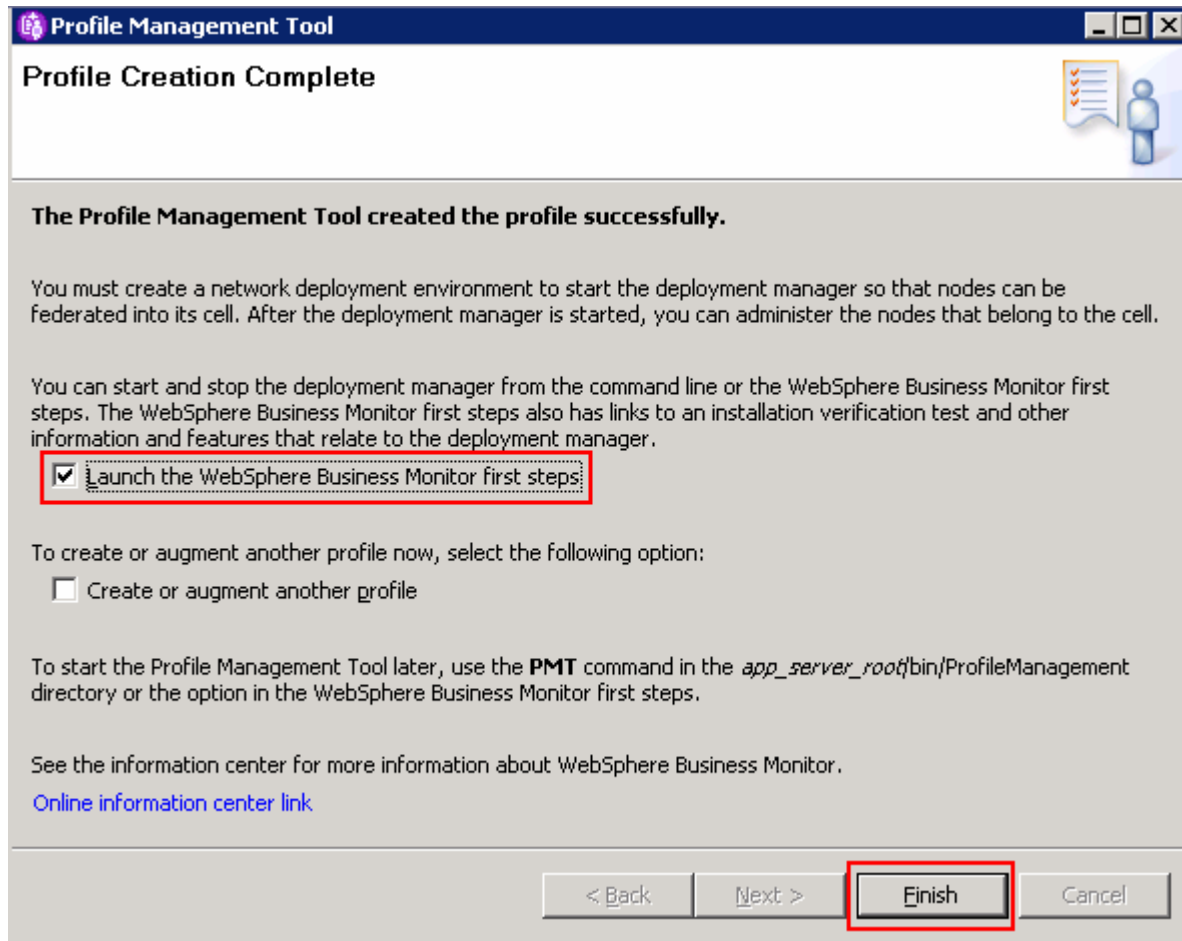
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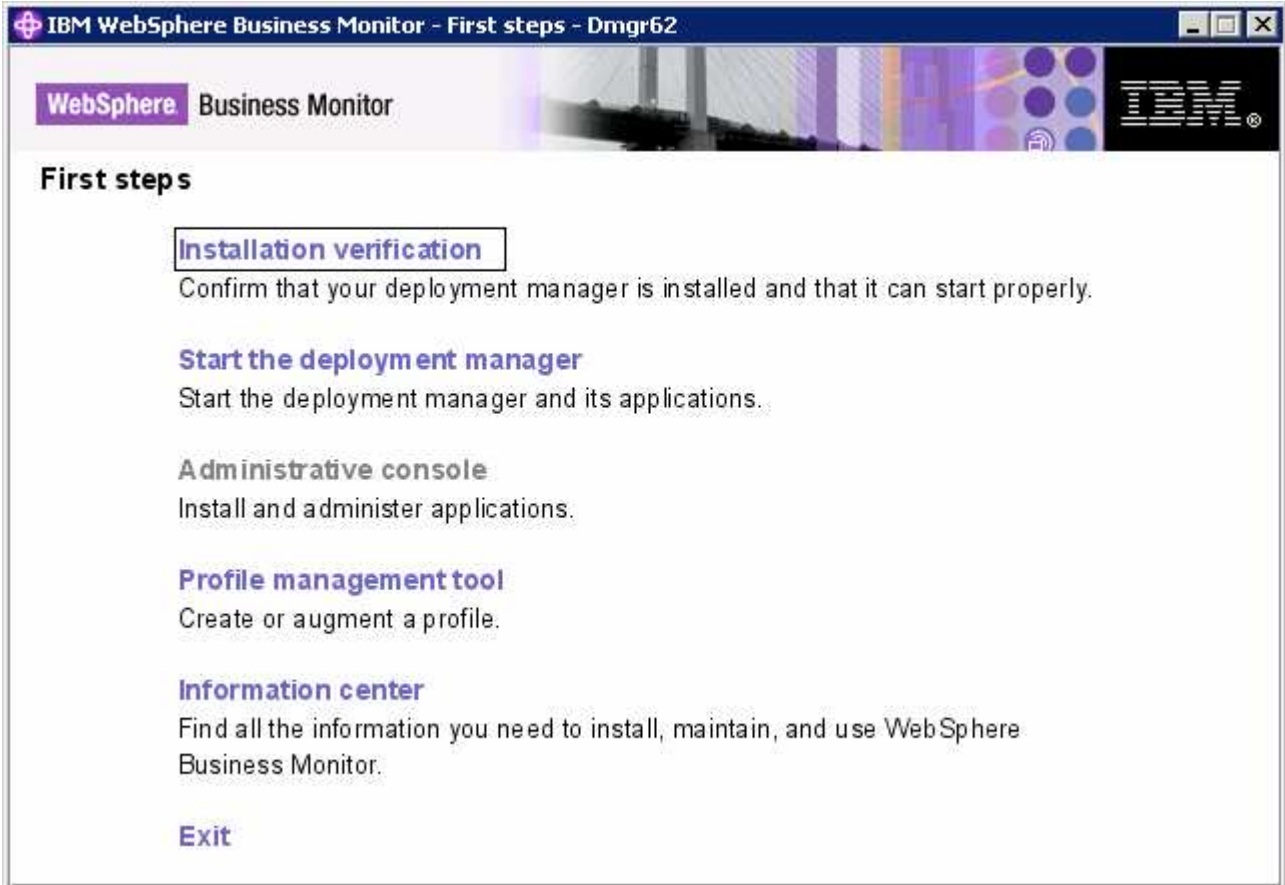
- \_\_\_\_ 25. Once the installation is complete, select **Launch the WebSphere Business Monitor first steps** check box in the **Profile Creation Complete** window.



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- \_\_\_ 26. Click **Finish**
- \_\_\_ 27. In the **WebSphere Business Monitor - First Steps – DMgr62** window, click **Installation verification** to verify the installation was a success.



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**Note:** Now that you successfully created the WebSphere Business Monitor deployment manager profile, run the generated database scripts to create the MONITOR database and tables. The next section shows you how to create the database.

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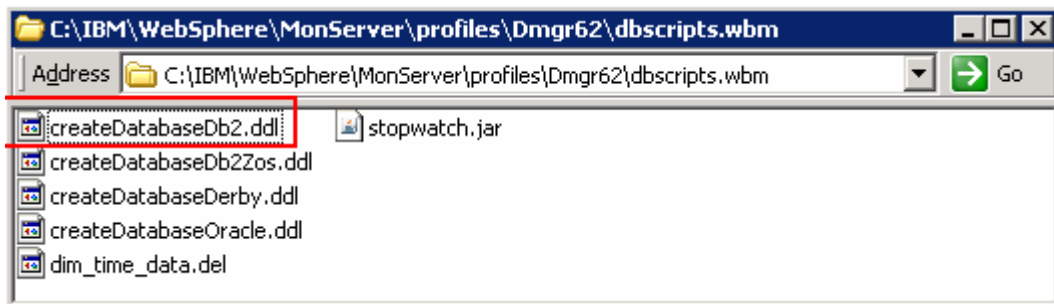
## Part 4: Manually create MONITOR database and tables

In this part of the lab, you will create the MONITOR database and tables.

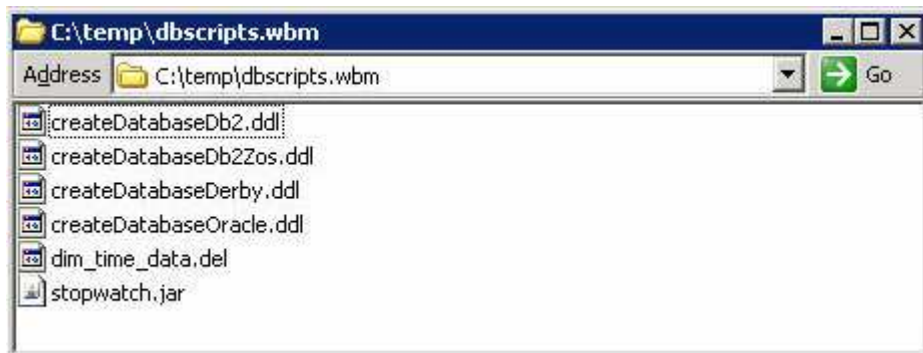
### Pre-requisites:

- Install and configure the WebSphere Business Monitor supported database product on a designated host machine. In this lab, a supported DB2 version is used and the instructions are based on the DB2 product.
- Ensure the DB2 server is running at this time
- The MONITOR database scripts are generated to the following location on the Monitor deployment manager machine:
  - <DMGR\_HOME>\dbscripts.wbm\

Example: C:\IBM\WebSphere\MonServer\profiles\Dmgr62\dbscripts.wbm



- Copy the MONITOR database scripts to a temporary location in your database host machine:



- Use the database script for your database product

Complete the following instructions to manually create the MONITOR database:

- \_\_\_\_ 1. Open the DB2 command window from **Start → Programs → IBM DB2 → Command Line Tools → Command Window** and change the directory to **C:\temp\dbscripts.wbm**
- \_\_\_\_ 2. Run the **createDatabaseDb2.ddl** script using the following command:
  - db2 -tf createDatabaseDb2.ddl

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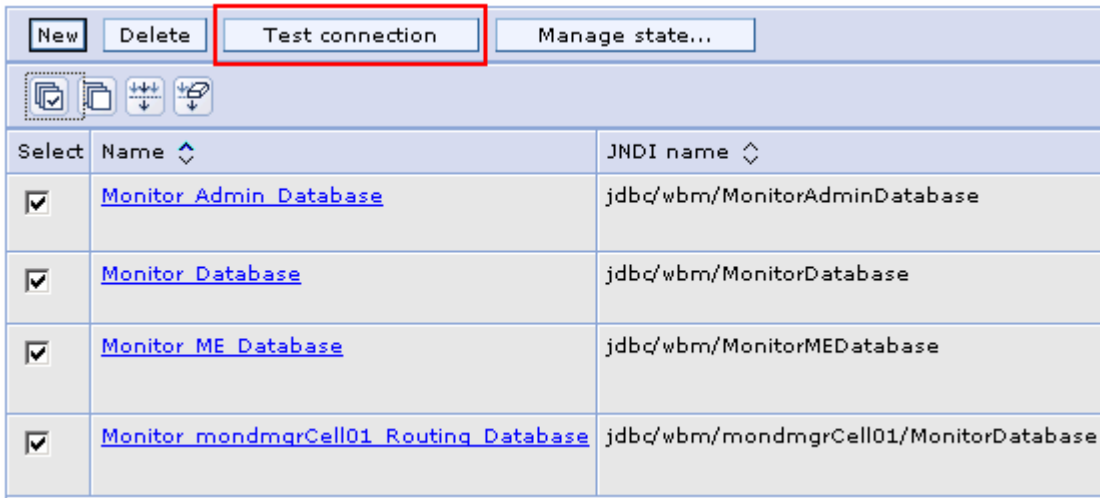
```

C:\DB2 CLP - DB2COPY1
C:\IBM\SQLLIB\BIN>cd C:\temp\dbscripts.wbm
C:\temp\dbscripts.wbm>db2 -tf createDatabaseDb2.ddl_
    
```

```

C:\DB2 CLP - DB2COPY1
DB20000I The SQL command completed successfully.
DB20000I The SQL command completed successfully.
DB20000I The SQL command completed successfully.
DB20000I The SQL command completed successfully.
DB20000I The SQL command completed successfully.
C:\temp\dbscripts.wbm>
    
```

- \_\_\_ 3. Close the DB2 command window
- \_\_\_ 4. Start the deployment manager and ensure it starts successfully. Review the SystemOut.log for any database related failure messages
  - <DMGR\_HOME>\bin\startManager.bat
- \_\_\_ 5. Test the data sources for connection to the MONITOR database. The following are the data sources of interest:
  - \_\_\_ a. Login in to the deployment manager administrative console. In the left navigation pane, expand **'Resources → JDBC'** and click the **'Data Sources'**



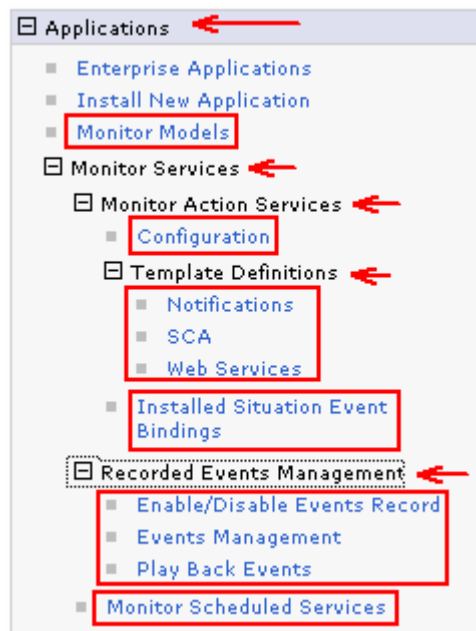
- \_\_\_ b. Select the check boxes for all of the Monitor data sources listed and then click the **'Test connection'** button
- \_\_\_ c. Ensure the database is successfully connected
- \_\_\_ 6. Review the Monitor administrative console menus

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- \_\_\_ a. In the left navigation pane, expand **Servers** and ensure the **WebSphere Business Monitor configuration** menu exists. Ensure the link works



- \_\_\_ b. In the left navigation pane, expand **Applications → Monitor Services → Monitor Action Services → Template Definitions**. Also expand **Recorded Events Management**. Ensure all the menus marked in the picture below exist. Also ensure all the links work

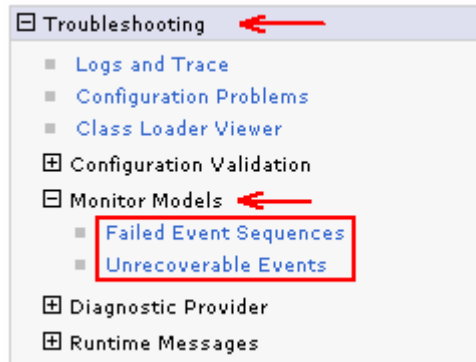


- \_\_\_ c. In the left navigation pane, expand **Security** and ensure **Monitor Data Security** menu exists. Ensure the link works

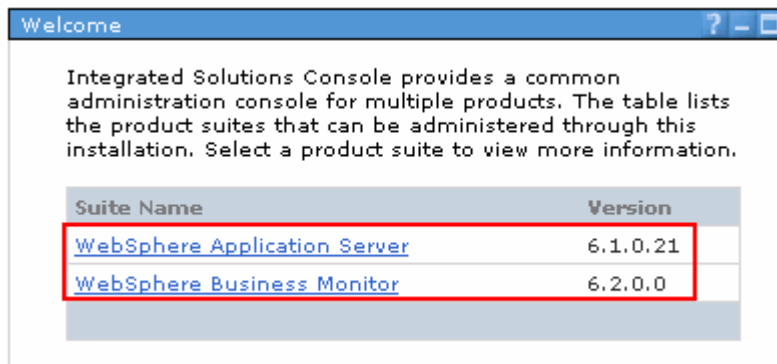


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- \_\_\_ d. In the left navigation pane, expand **Troubleshooting** → **Monitor Models** and ensure **Failed Event Sequences** and **Unrecoverable Events** menus exist. Ensure the links work



- \_\_\_ e. In the left navigation pane, click the **Welcome** link and ensure the WebSphere Application Server and WebSphere Monitor Server versions are correct



## Part 5: Create WebSphere Business Monitor custom profiles

In this part of the lab, you will create WebSphere Business Monitor custom profiles on all the designated machines. A custom profile is an empty profile that gets created and eventually federates itself to the WebSphere Business Monitor deployment manager profile.

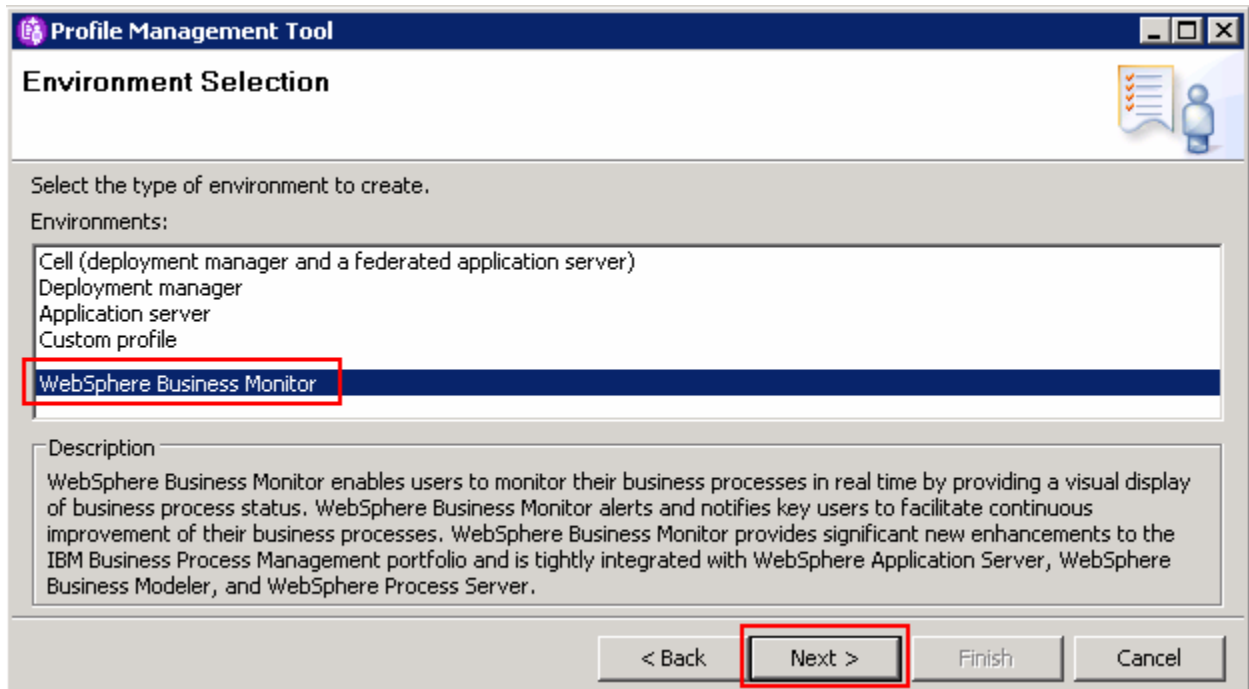
**Note:** It is mandatory that you create a custom profile, which is an empty node that has no runtime servers created or any configuration changes and then federate it to the deployment manager.

### Prerequisites:

- Before proceeding further, ensure the deployment manager profile is installed and running successfully at this time
- Make a note of the fully qualified host name of the deployment manager host machine
- Make note of the deployment manager SOAP port number
- Make a note of the primary user name and password of the deployment manager administrative security credentials, if enabled
- From the start menu navigate to **Programs** → **IBM WebSphere** → **Business Monitor 6.2** and select **Profile Management Tool**. The WebSphere Business Monitor Profile Management Tool is launched.

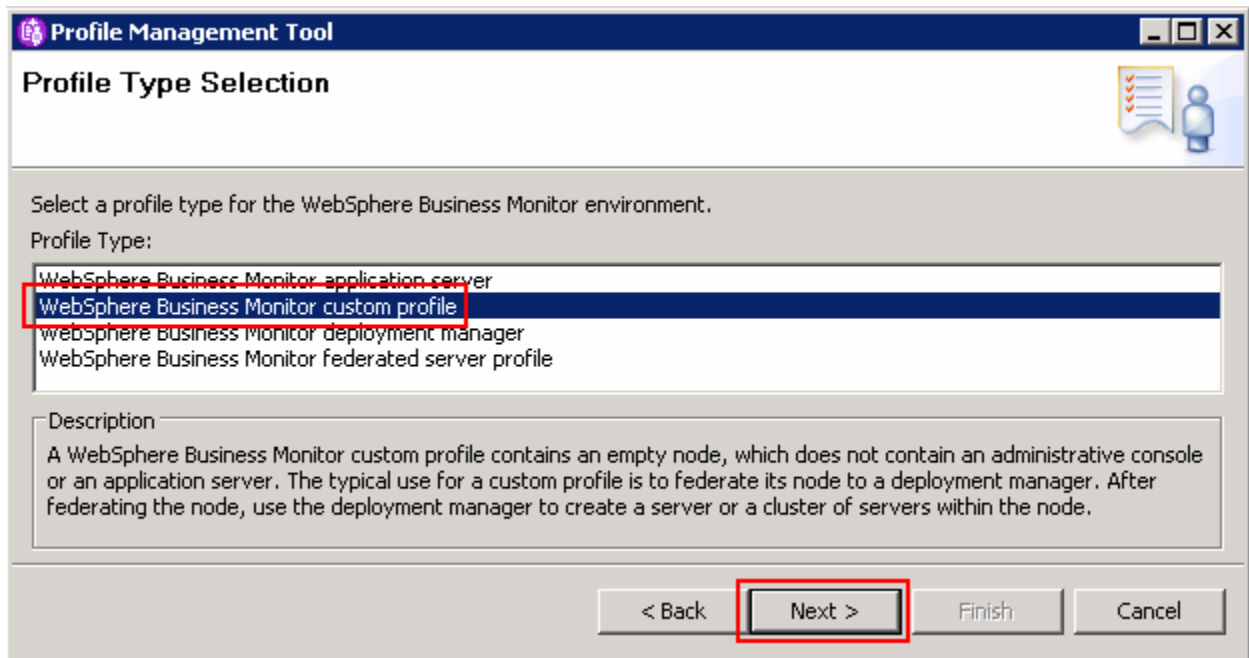
**Note:** Alternatively, you can launch the Profile Management Tool by running the 'pmt.bat (sh)' script located at '<WAS61\_HOME>\bin\ProfileManagement'

1. Click **Next** in the **Welcome** window.
2. In the **Environment Selection** window, select **WebSphere Business Monitor**.

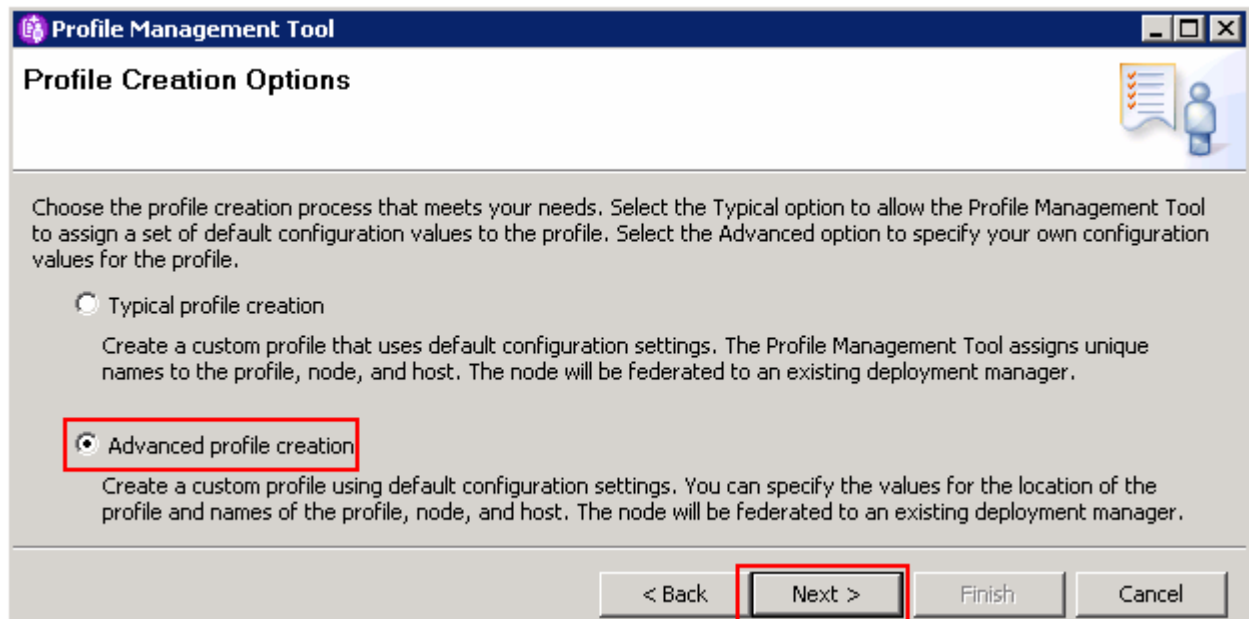


IBM WEBSHERE BUSINESS MONITOR 6.2 – LAB EXERCISE

- \_\_\_ 3. Click **Next**
- \_\_\_ 4. In the following **Profile Type Selection** window, select **WebSphere Business Monitor custom profile**



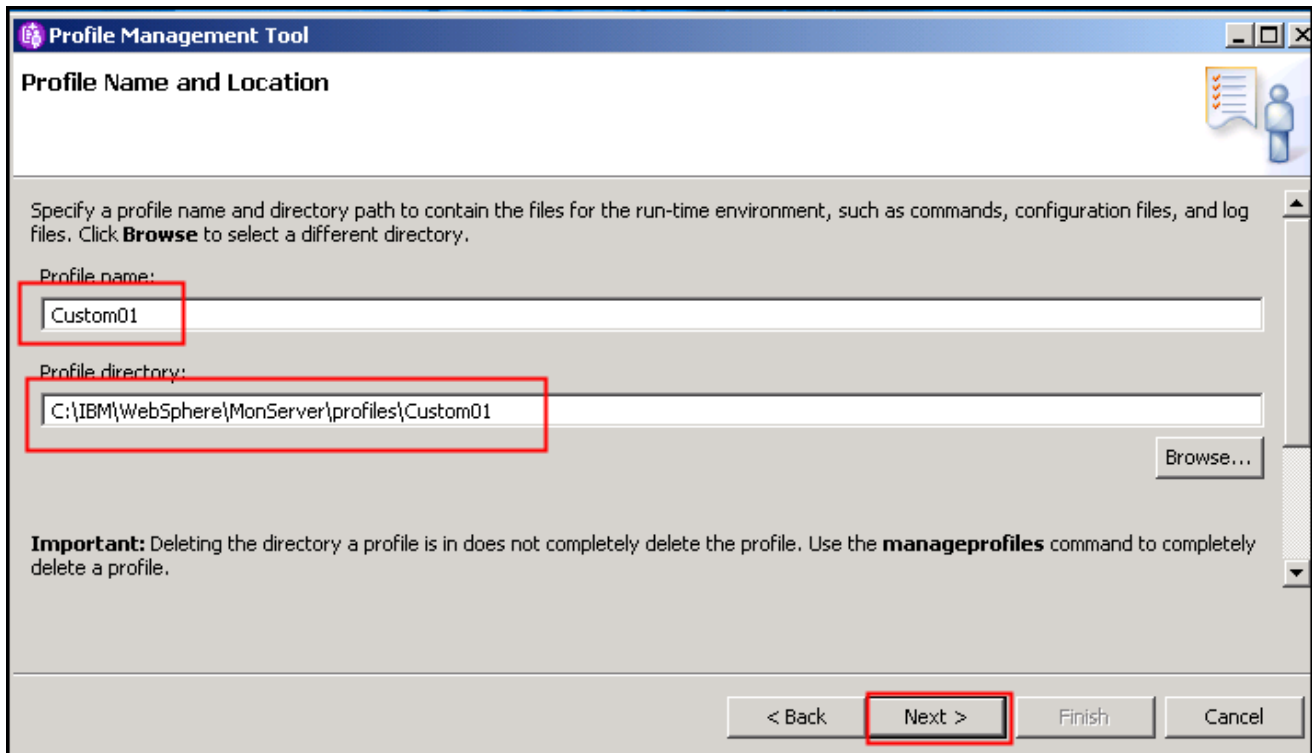
- \_\_\_ 5. Click **Next**
- \_\_\_ 6. In the **Profile Creation Options** window, select **Advanced profile creation**



- \_\_\_ 7. Click **Next**
- \_\_\_ 8. In the **Profile Name and Location** window, enter `Custom01` as the **profile name** and enter `C:\IBM\WebSphere\MonServer\profiles\Custom01` as the **Profile directory**



IBM WEBSHERE BUSINESS MONITOR 6.2 – LAB EXERCISE



\_\_\_ 9. Click **Next**

\_\_\_ 10. In the **Node and Host Names** window, enter the following values:

**Node name** : Custom01Node01

**Host name** : <your host name>, for example: custom01.austin.ibm.com (fully qualified host name)

**Profile Management Tool**

### Node and Host Names

Specify a node name and a host name for this profile.

Node name:

Host name:

**Node name:** A node name is used for administration. If the node is federated, the name must be unique within the cell.  
**Host name:** A host name is the domain name system (DNS) name (short or long) or the IP address of this computer.

See the information center for profile naming and migration considerations.  
[Online information center link](#)

< Back   **Next >**   Finish   Cancel

\_\_\_ 11. Click **Next**

\_\_\_ 12. In the **Federation** window, enter the following parameters:

**Deployment manager host name or IP address:** <your DMgr host name> , for example:  
mondmgr.austin.ibm.com (fully qualified host name)

**Deployment manager SOAP port number :** 8879 (Default)

**Deployment manager authentication** (if administrative security is enabled)

- **User name** : monadmin
- **Password** : webSphere

## IBM WEBSHERE BUSINESS MONITOR 6.2 – LAB EXERCISE

**Profile Management Tool**

## Federation

Specify the host name or IP address and the SOAP port number for an existing deployment manager. Federation can occur only if the deployment manager is running. If security is enabled on the deployment manager, you must specify a user name and password.

Deployment manager host name or IP address:

Deployment manager SOAP port number (Default port number is 8879):

Deployment manager authentication

If administrative security is enabled on the deployment manager, you must provide a user name and password to authenticate with the server.

User name:

Password:

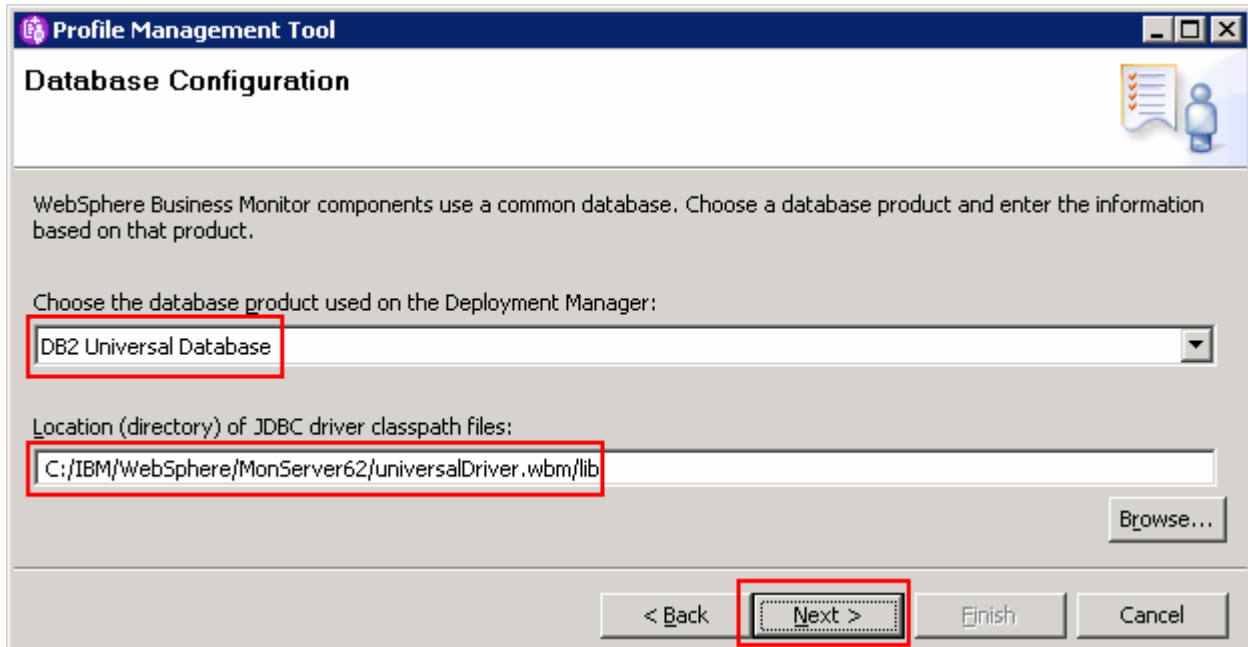
See the information center for more information about deployment manager profiles.  
[Online information center link](#)

< Back   **Next >**   Finish   Cancel

**Note:** The **User name** and **Password** must match the deployment manager **Administrative Security** credentials. Also ensure that the deployment manager SOAP port number is correct. If you are unable to connect, then the deployment manager may not be running or the information you provided in the **Federation** window is not correct.

- \_\_\_ 13. Click **Next**
- \_\_\_ 14. In the **Port Values Assignment** window, review the custom profile port values assigned. You can change them to the new values, but ensure that the port numbers do not conflict with other services running on this machine. Click **Next**
- \_\_\_ 15. In the **Database Configuration** window, ensure that **DB2 Universal Database** is selected. Enter `C:/IBM/WebSphere/MonServer612/universalDriver.wbm/lib` as the **location of JDBC driver classpath files**.

IBM WEBSHERE BUSINESS MONITOR 6.2 – LAB EXERCISE



- \_\_\_ 16. Click **Next**
- \_\_\_ 17. In the **Profile Creation Summary** window, review the custom profile creation summary information and click **Create**. The profile creation begins.
- \_\_\_ 18. Once the installation is complete, deselect the **Launch the WebSphere Business Monitor first steps** check box and click Finish.
- \_\_\_ 19. Click **Finish**

**Note:** The above instructions lead you to create a WebSphere Business Monitor custom profile and federate it with the WebSphere Business Monitor deployment manager. The node agent should have been started. Remember that this is an empty node as no server is created at this time.

- \_\_\_ 20. Similarly create the remaining custom profiles and name them as **Custom02**, **Custom03** and **Custom04** by repeating the above instructions on the designated host machines. In this lab, the nodes are named as **Custom02Node02**, **Custom03Node03** and **Custom04Node04B**
- \_\_\_ 21. After creating all of the custom profiles, login to the administrative console. In the left navigation pane, expand **System Administration** and click the **Nodes** link. Ensure the nodes you added are listed and ensure that the nodes you added show version WBM 6.2.0.0.

Select	Name	Version	Discovery Protocol	Status
<input type="checkbox"/>	<a href="#">Custom01Node01</a>	ND 6.1.0.21 WBM 6.2.0.0	TCP	
<input type="checkbox"/>	<a href="#">Custom02Node02</a>	ND 6.1.0.21 WBM 6.2.0.0	TCP	
<input type="checkbox"/>	<a href="#">Custom03Node03</a>	ND 6.1.0.21 WBM 6.2.0.0	TCP	
<input type="checkbox"/>	<a href="#">Custom04Node04</a>	ND 6.1.0.21 WBM 6.2.0.0	TCP	
<input type="checkbox"/>	<a href="#">mondmqrCellManager01</a>	ND 6.1.0.21 WBM 6.2.0.0	TCP	

IBM WEBSHERE BUSINESS MONITOR 6.2 – LAB EXERCISE

## Part 6: Create clusters and member servers

In this part of the lab, you will create four clusters and their member servers to accommodate the various Business Monitor functions and components.

It is a best practice to plan for the number of clusters you will be creating. Also plan for the number of member servers, which cluster will be managing the member servers and on which managed node the member servers will be created.

**Clusters → Node → Member Server topology mapping table:**

Clusters	Nodes	Member Servers
mon.Models	Custom01Node01	models.Custom01Node01.0
	Custom02Node02	models.Custom02Node02.1
mon.Support	Custom02Node02	support.Custom02Node02.0
	Custom03Node03	support.Custom03Node03.1
mon.Messaging	Custom01Node01	msg.Custom01Node01.0
	Custom04Node04	msg.Custom04Node04.1
mon.Business	Custom03Node03	business.Custom03Node03.0
	Custom04Node04	business.Custom04Node04.1

### Pre-requisites:

- Ensure the Deployment Manager server is running
- Ensure all the node agents of the custom profiles federated to this deployment manager are running
  - In the left navigation pane of the deployment manager administrative console, expand **System administration** and then click **Node agents**
  - In the **Node agents** panel to the right, ensure that all of the node agents display the status as green (➡)

Select	Name	Node	Version	Status
<input type="checkbox"/>	<a href="#">nodeagent</a>	Custom02Node02	ND 6.1.0.21 WBM 6.2.0.0	➡
<input type="checkbox"/>	<a href="#">nodeagent</a>	Custom04Node04	ND 6.1.0.21 WBM 6.2.0.0	➡
<input type="checkbox"/>	<a href="#">nodeagent</a>	Custom03Node03	ND 6.1.0.21 WBM 6.2.0.0	➡
<input type="checkbox"/>	<a href="#">nodeagent</a>	Custom01Node01	ND 6.1.0.21 WBM 6.2.0.0	➡

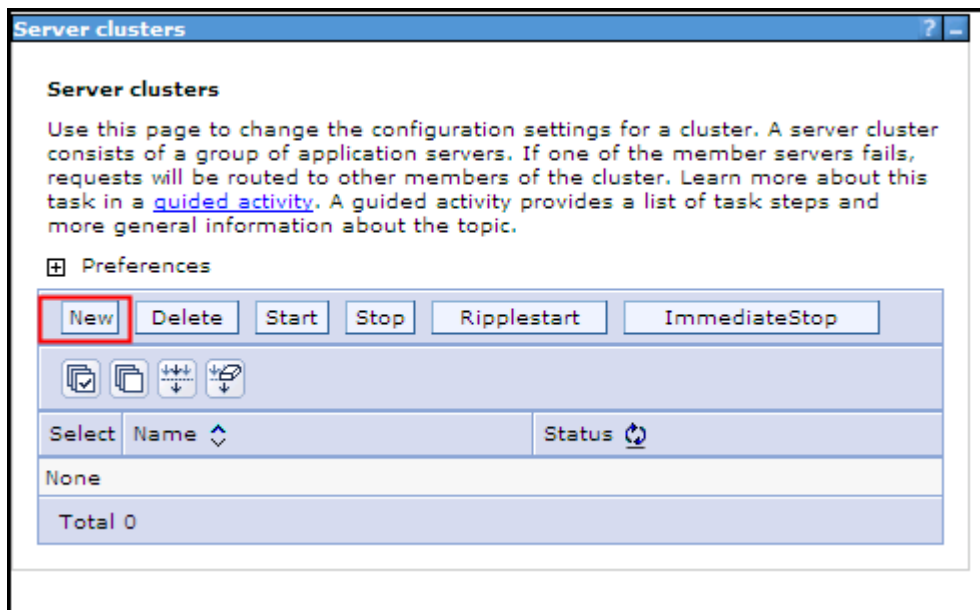
Complete the following instructions to create the clusters and their member servers:

IBM WEBSHERE BUSINESS MONITOR 6.2 – LAB EXERCISE

- \_\_\_ 1. Launch the WebSphere Business Monitor deployment manager administrative console, enter the security credentials and then click **Log in**. The default URL is: **http://localhost:9060/admin**
- \_\_\_ 2. In the left navigation pane of the administrative console, expand **Servers** and click **Clusters**.

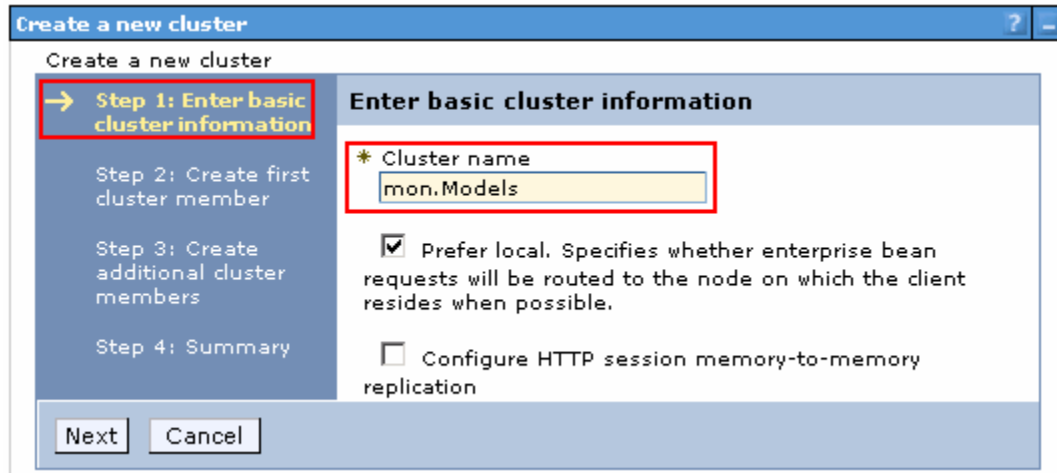


- \_\_\_ 3. In the **Server clusters** window, click **New** to launch the **cluster creation wizard**.



- \_\_\_ a. In the **Step 1: Enter basic cluster information** section, enter **mon.Mode1s** as the **Cluster name** and leave the rest default.

IBM WEBSHERE BUSINESS MONITOR 6.2 – LAB EXERCISE



- \_\_\_ 4. Click **Next**
- \_\_\_ 5. In **Step 2: Create first cluster member**, enter `models.Custom01Node01.0` as the **member name** and select `Custom01Node01` from the **Select node** dropdown.
- \_\_\_ 6. Enter 2 as the **Weight**.
- \_\_\_ 7. Select **Generate unique HTTP ports**
- \_\_\_ 8. Select **Create the member using an application server template** and select **default\_defaultWBM**.



IBM WEBSHERE BUSINESS MONITOR 6.2 – LAB EXERCISE

9. Click **Next**

10. In **Step 3: Create additional cluster members**, enter the following values to create the second cluster member on **Custom02Node02**:

Member name : **models.Custom02Node02.1**

Select node : **Custom02Node02**

Weight : **2** (default).

Select **Generate unique HTTP ports**.

IBM WEBSHERE BUSINESS MONITOR 6.2 – LAB EXERCISE

Step 1: Enter basic cluster information

Step 2: Create first cluster member

→ Step 3: Create additional cluster members

Step 4: Summary

### Create additional cluster members

Enter information about this new cluster member, and click Add Member to add this cluster member to the member list. A server configuration template is created from the first member and stored as part of the cluster data. Additional cluster members are copied from this template.

\* Member name  
models.Custom02.Node02.1

Select node  
Custom02Node02(ND 6.1.0.21)

\* Weight  
2 (0..20)

Generate unique HTTP ports

Add Member

Use the Edit function to edit the properties of a cluster member that is already included in this list. Use the Delete function to remove a cluster member from this list. You are not allowed to edit or remove the first cluster member or an already existing cluster member.

Edit Delete

☑ 📄

Select	Member name	Nodes	Version	Weight
<input type="checkbox"/>	models.Custom01Node01.0	Custom01Node01	ND 6.1.0.21 WBM 6.2.0.0	2

Previous
Next
Cancel

\_\_\_ 11. Click **Add Member**. This action adds the additional cluster member server to the table as shown below:

Edit Delete

☑ 📄

Select	Member name	Nodes	Version	Weight
<input type="checkbox"/>	models.Custom01Node01.0	Custom01Node01	ND 6.1.0.21 WBM 6.2.0.0	2
<input type="checkbox"/>	models.Custom02Node02.1	Custom02Node02	ND 6.1.0.21 WBM 6.2.0.0	2

\_\_\_ 12. Click **Next**

\_\_\_ 13. In **Step 4: Summary**, review the summary of actions and click **Finish**.

IBM WEBSPHERE BUSINESS MONITOR 6.2 – LAB EXERCISE

Step 1: Enter basic cluster information

Step 2: Create first cluster member

Step 3: Create additional cluster members

→ Step 4: Summary

### Summary

Summary of actions:

Options	Values
Cluster Name	mon.Models
Core Group	DefaultCoreGroup
Node group	DefaultNodeGroup
Prefer local	true
Configure HTTP session memory-to-memory replication	false
Server name	models.Custom01Node01.0
Node	Custom01Node01(ND 6.1.0.21 WBM 6.2.0.0)
Weight	2
Clone Template	default_defaultWBM
Clone Type	default
Generate unique HTTP ports	true
Server name	models.Custom02.Node02.1
Node	Custom02Node02(ND 6.1.0.21 WBM 6.2.0.0)
Weight	2
Clone Template	default_defaultWBM
Clone Type	default
Generate unique HTTP ports	true

Previous
Finish
Cancel

- \_\_\_ 14. **Save to the master configuration** and synchronize changes with the nodes
- \_\_\_ 15. Repeat the above steps to create the **mon.Support**, **mon.Messaging** and **mon.Business** clusters and their member servers. Use the **Cluster → Node → member server mapping table** as a reference
- \_\_\_ 16. Start the clusters

---

**Note:** Ensure all node agents are running at this time. (**System Administration → Node agents**)

---

- \_\_\_ a. In the left navigation pane of the administrative console, expand **Servers** and click **Clusters**.
- \_\_\_ b. In the **Clusters** section, select the check box for all of the clusters listed
- \_\_\_ c. Click **Start**. This action starts all the member servers assigned to the respective clusters. Review the runtime logs for all the member servers.

IBM WEBSHERE BUSINESS MONITOR 6.2 – LAB EXERCISE




**Server clusters** ?

**Server clusters**

Use this page to change the configuration settings for a cluster. A server cluster consists of a group of application servers. If one of the member servers fails, requests will be routed to other members of the cluster. Learn more about this task in a [guided activity](#). A guided activity provides a list of task steps and more general information about the topic.

⊞ Preferences

New Delete **Start** Stop Ripplestart ImmediateStop

Select	Name ↕	Status ↻
<input checked="" type="checkbox"/>	<a href="#">mon.Business</a>	✘
<input checked="" type="checkbox"/>	<a href="#">mon.Messaging</a>	✘
<input checked="" type="checkbox"/>	<a href="#">mon.Models</a>	✘
<input checked="" type="checkbox"/>	<a href="#">mon.Support</a>	✘

Total 4

## Part 7: Deploy and configure the common event infrastructure

In this part of the lab, you will deploy and configure the common event infrastructure (CEI) service. In this lab, you will deploy the CEI event service on the **mon.Support** cluster.

**Note:** You can skip the instructions in this part of the lab if you plan to use an existing CEI service in the cell or a remote cell. However you must configure the Monitor **Event Emitter Factory** and **Event Service Transmission** to use the existing CEI service.

**Note:** The instructions in this part of the lab must be completed on the deployment manager machine. You may have to complete some instructions on a different machine for creating the event database depending on where the database server is located.

Complete the following instructions to deploy and configure the CEI service on a cluster:

\_\_\_ 1. Open a **Command Window** and change directory to **<DMGR\_HOME>\bin**  
(C:\IBM\WebSphere\MonServer\profiles\Dmgr62\bin)

\_\_\_ 2. Run the wsadmin command line utility using the following command:

- **wsadmin -username monadmin -password web1sphere**

```
C:\IBM\WebSphere\MonServer\bin>wsadmin -username monadmin -password web1sphere_
```

\_\_\_ 3. Deploy the CEI service to a cluster using the following command:

- **\$AdminTask deployEventService { -clusterName <CLUSTER\_NAME> }**

Example: **\$AdminTask deployEventService { -clusterName mon.Support }**

```
C:\IBM\WebSphere\MonServer\bin>wsadmin -username monadmin -password web1sphere
WASX72091: Connected to process "dmgr" on node mondmgrCellManager01 using SOAP
connector; The type of process is: DeploymentManager
WASX70291: For help, enter: "$Help help"
wsadmin>$AdminTask deployEventService -clusterName mon.Support_
```

\_\_\_ 4. Save the changes to the master configuration using the following command

- **\$AdminConfig save**

```
wsadmin>$AdminConfig Save
```

**Note:** By default, the CEI service uses Derby as the database. As the CEI service is deployed to a cluster, you should use a supported database other than Derby. The next steps shows you how to configure it for DB2.

\_\_\_ 5. Generate the database configuration scripts using the following command:

- **\$AdminTask configEventServiceDB2DB { -clusterName <CLUSTER\_NAME> - jdbcClassPath <WAS61\_HOME>\universalDriver.wbm\lib -dbHostName <HOST\_NAME> -dbName <DATABASE\_NAME> dbUser <USER\_NAME> -dbPassword <PASSWORD> }**

## IBM WEBSHERE BUSINESS MONITOR 6.2 – LAB EXERCISE

```
Example: $AdminTask configEventServiceDB2DB { -clusterName mon.Support -
jdbcClassPath C:\IBM\WebSphere\MonServer612\universalDriver.wbm\lib -
dbHostName dbserver.austin.ibm.com -dbName MONITOR -dbUser db2admin -
dbPassword superSecret }
```

```
wsadmin>$AdminTask configEventServiceDB2DB { -clusterName mon.Support -jdbcClass
Path C:\IBM\WebSphere\MonServer\universalDriver.wbm\lib -dbHostName mondmgr.aust
in.ibm.com -dbName MONITOR -dbUser db2admin -dbPassword db2admin }
```

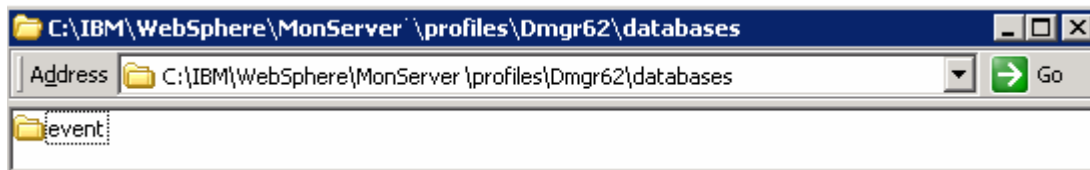
\_\_\_ 6. Save changes to the master configuration using the following command:

- `$AdminConfig save`

\_\_\_ 7. Complete the following instructions to create the EVENT database

\_\_\_ a. The EVENT database scripts are generated to the following location on the deployment manager machine:

- `<DMGR_HOME>\databases\`



\_\_\_ b. Copy the 'event' database scripts directory to a temporary location in your database host machine:



\_\_\_ c. Open the DB2 command window from **Start → Programs → IBM DB2 → Command Line Tools → Command Window** and change the directory to **C:\temp\event\mon.Support\dbscripts\db2**

\_\_\_ d. Run the 'cr\_event\_db2.bat' script using the following command:

- `cr_event_db2.bat server db2admin`

## IBM WEBSHERE BUSINESS MONITOR 6.2 – LAB EXERCISE

```

C:\DB2 CLP - DB2COPY1
C:\IBM\SQLLIB\BIN>cd C:\temp\event\mon.Support\dbscripts\db2
C:\temp\event\mon.Support\dbscripts\db2>cr_event_db2.bat server db2admin_

```

\_\_ e. Ensure the script runs successfully

```

C:\DB2 CLP - DB2COPY1
INSERT INTO cei_t_cat_eventdef (event_def_name, parent_name) VALUES( 'cei_event_
definition_removed', 'cei_event_definition' )
DB20000I The SQL command completed successfully.
COMMIT
DB20000I The SQL command completed successfully.
The Event Service DB2 database MON612 created successfully.
connect reset
DB20000I The SQL command completed successfully.
C:\temp\event\mon.Support\dbscripts\db2>_

```

\_\_ f. Close the command window

\_\_\_ 8. Back to the deployment manager machine, run the following command to enable the CEI service

\_\_ a. `$AdminTask enableEventService { -clusterName <CLUSTER_NAME> }`

Example: `$AdminTask enableEventService { -clusterName mon.Support }`

```

C:\IBM\WebSphere\MonServer\bin>wsadmin -username monadmin -password webSphere
WASX7209I: Connected to process "dmgr" on node mondmgrCellManager01 using SOAP
connector; The type of process is: DeploymentManager
WASX7029I: For help, enter: "$Help help"
wsadmin>$AdminTask deployEventService -clusterName mon.Support_

```

\_\_\_ 9. Save the changes using the following command:

- `$AdminConfig save`

\_\_\_ 10. Restart the deployment manager, all the node agents and the member servers. Ensure the CEI service, the CEI Bus and the message engine start successfully.

---

**Note:** Visit **Appendix: Troubleshooting CEI deployment** at the end of the document to resolve any issues.

---

## Part 8: Configuring the WebSphere Business Monitor environment

You have already created the clusters and configured CEI in the previous sections. Now, you will configure multiple components that are needed for your WebSphere Business Monitor environment to function properly. These components can be configured using the WebSphere Business Monitor configuration section of the administrative console. Required components include the messaging engine and the event emitter factory. Optionally, you will deploy and configure other WebSphere Business Monitor supporting applications using the same method in later sections.

Pre-requisites:

You must have completed the following tasks:

- Created clusters and their member servers
- Deployed CEI to a cluster

This table lists the components to be installed and the target clusters:

Component	Target Cluster
Messaging Engine	mon.Messaging
Event Emitter Factory	mon.Support
REST API service	mon.Business
Action services	mon.Support
Data service scheduler	mon.Support
Dashboard for mobile devices	mon.Business

**Note:** The instructions in this part of the lab must be completed on the deployment manager machine.

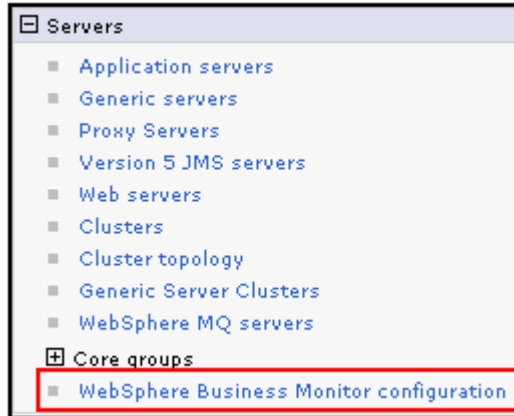
\_\_\_ 1. Configure the **messaging engine**.

\_\_\_ a. Login to the Administrative console for the deployment manager

\_\_\_ b. In the navigation panel, click **Servers** → **WebSphere Business Monitor configuration**. A list of required and optional components is displayed. Review the status of each component. Since this is a custom node, none of the components are installed or configured, and you must complete the remaining steps to install or configure the components



IBM WEBSHERE BUSINESS MONITOR 6.2 – LAB EXERCISE



You will next create a bus and configure the message engine by completing the following steps. A bus is a managed communication mechanism that supports service integration through synchronous and asynchronous messaging. A bus consists of interconnecting messaging engines that manage bus resources

The status for the service integration bus and the messaging engine is on this window. If you have an existing bus, the bus name will be listed in the status box. If you have not previously created a bus, one will be created when you configure the messaging engine

\_\_\_ c. In the **WebSphere Business Monitor Configuration** window, click **Messaging Engine** under **Component**

**WebSphere Business Monitor configuration**

For your WebSphere Business Monitor environment to work properly, you must configure multiple components.

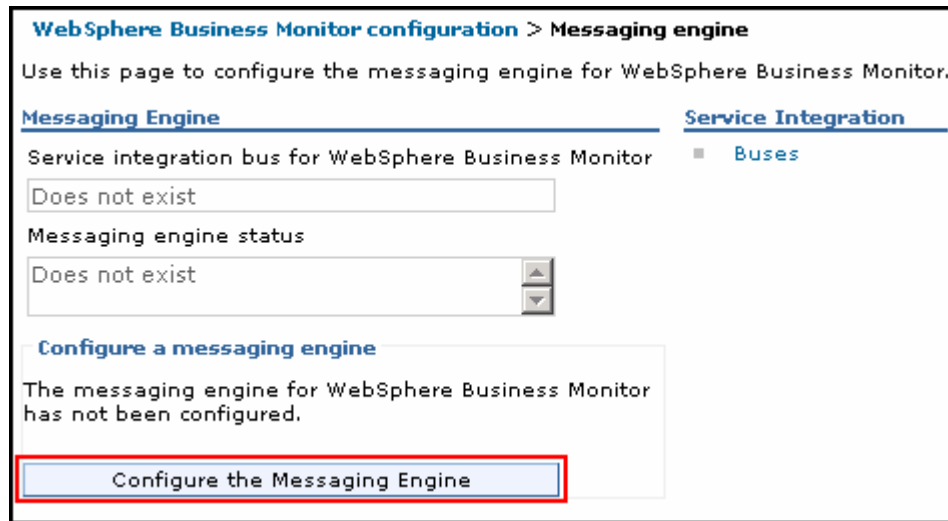
[WebSphere Business Monitor Configuration](#)

This page shows the status of the components that make up a complete WebSphere Business Monitor environment. To modify the configuration of a component, click the component name to display the details.

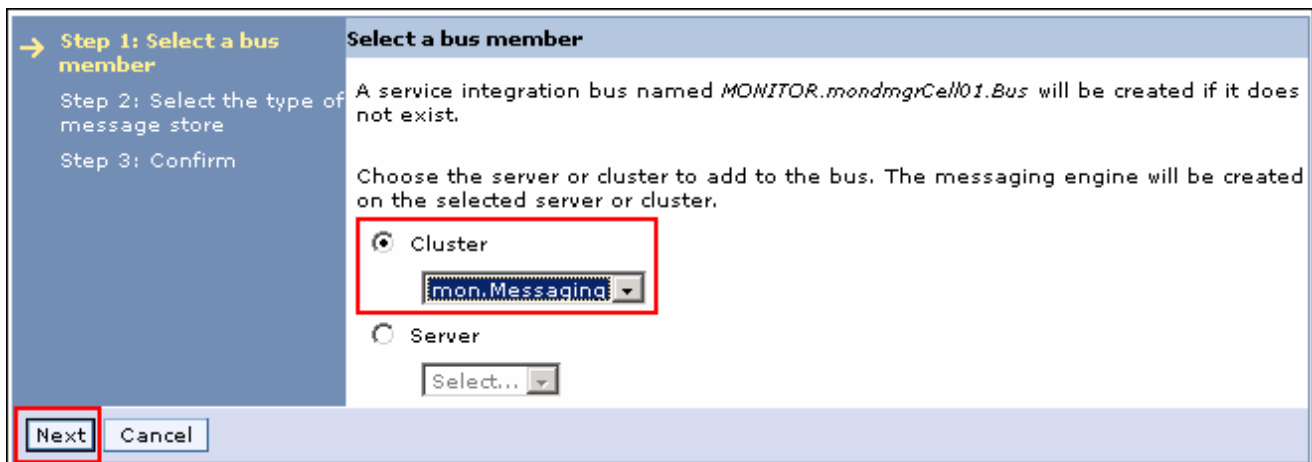
	Component	Status
<input checked="" type="radio"/>	<a href="#">Messaging engine</a>	Does not exist
<input checked="" type="radio"/>	<a href="#">Event emitter factory</a>	Does not exist
<input type="radio"/>	<a href="#">REST API service</a>	Not deployed
<input type="radio"/>	Business Space	Not deployed
<input type="radio"/>	<a href="#">Action services</a>	Not deployed
<input type="radio"/>	<a href="#">Data services scheduler</a>	Not deployed
<input type="radio"/>	<a href="#">Dashboard for mobile devices</a>	Not deployed
<input type="radio"/>	AlphaBlox	Not deployed

\_\_\_ d. In the next window, click **Configure the Messaging Engine**. This launches the configuration wizard

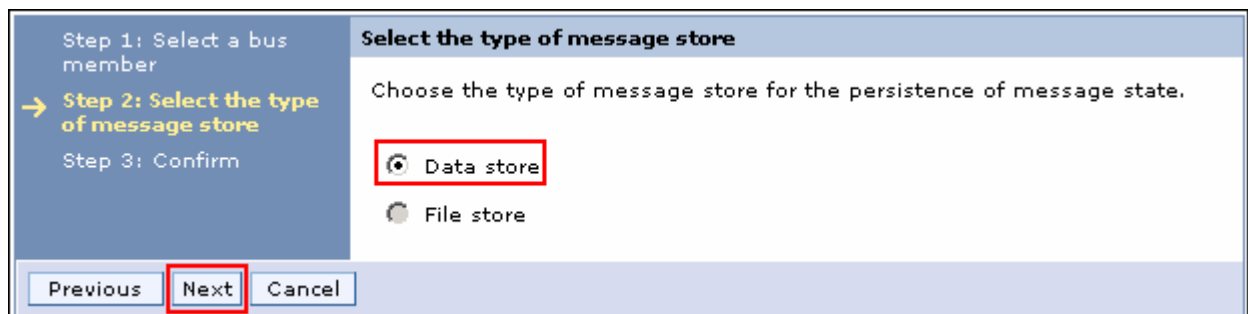
IBM WEBSHERE BUSINESS MONITOR 6.2 – LAB EXERCISE



- \_\_\_ e. In the **Create a new messaging engine** window, under **Select a bus member** section, select **Cluster** radio button and select **mon.Messaging**



- \_\_\_ f. Click **Next**
- \_\_\_ g. In the **Create a new messaging engine** window, under **Select the type of message store** section, select **Data store**



- \_\_\_ h. Click **Next**
- \_\_\_ i. In the **Create a new messaging engine** window

IBM WEBSHERE BUSINESS MONITOR 6.2 – LAB EXERCISE

- 1) In section **Provide the message store properties**, select **Use existing data source**.
- 2) Select jdbc/wbm/MonitorMEDatabase for **Data source JNDI name**
- 3) Enter MONITOR as the **Schema name**
- 4) Select Monitor\_JDBC\_Alias for **Authentication Alias**
- 5) Select **Create Tables**

**Provide the message store properties**

Select properties for the data store.

Create default data source with generated JNDI name.

**Use existing data source**

Data source JNDI name

Schema name

Authentication Alias

Create tables

Previous **Next** Cancel

\_\_ j. Click **Next**

\_\_ k. Review the summary of actions

**Confirm**

The following is a summary of your selections. To complete the messaging engine creation, click Finish. If there are settings that you want to change, click Previous to review your selections.

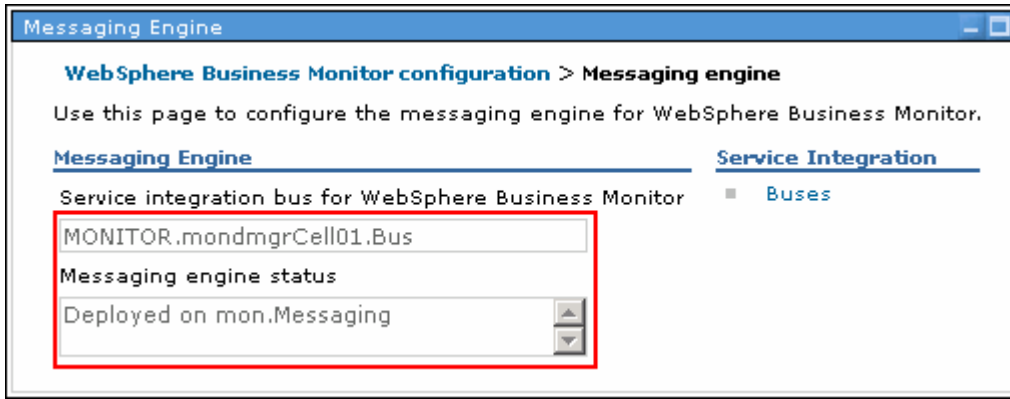
Summary of actions:

Service integration bus	The bus MONITOR.mondmgrCell01.Bus will be created
Bus member	WebSphere:cell=mondmgrCell01,cluster=mon.Messaging
Message store type	Database store
Create default datasource	No
Message store type	jdbc/wbm/MonitorMEDatabase
Message store type	MONITOR
Datasource authentication alias	Monitor_JDBC_Alias
Create tables	Yes

Previous **Finish** Cancel

IBM WEBSHERE BUSINESS MONITOR 6.2 – LAB EXERCISE

- \_\_\_ l. Click **Finish** to complete the configuration
- \_\_\_ m. Ensure the service integration bus for WebSphere Business Monitor is successfully configured and ensure the messaging engine is deployed successfully on the **mon.Messaging** cluster



- \_\_\_ n. In the left navigation pane of the administrative console, click **Servers → WebSphere Business Monitor configuration**. Ensure the **Messaging Engine** is deployed (Green) as shown below:

	Component	Status
<input checked="" type="checkbox"/>	<a href="#">Messaging engine</a>	Deployed on mon.Messaging
<input checked="" type="checkbox"/>	<a href="#">Event emitter factory</a>	Does not exist
<input type="checkbox"/>	<a href="#">REST API service</a>	Not deployed
<input type="checkbox"/>	Business Space	Not deployed
<input type="checkbox"/>	<a href="#">Action services</a>	Not deployed
<input type="checkbox"/>	<a href="#">Data services scheduler</a>	Not deployed
<input type="checkbox"/>	<a href="#">Dashboard for mobile devices</a>	Not deployed
<input type="checkbox"/>	AlphaBlox	Not deployed

\_\_\_ 2. Configure the **Event emitter factory**

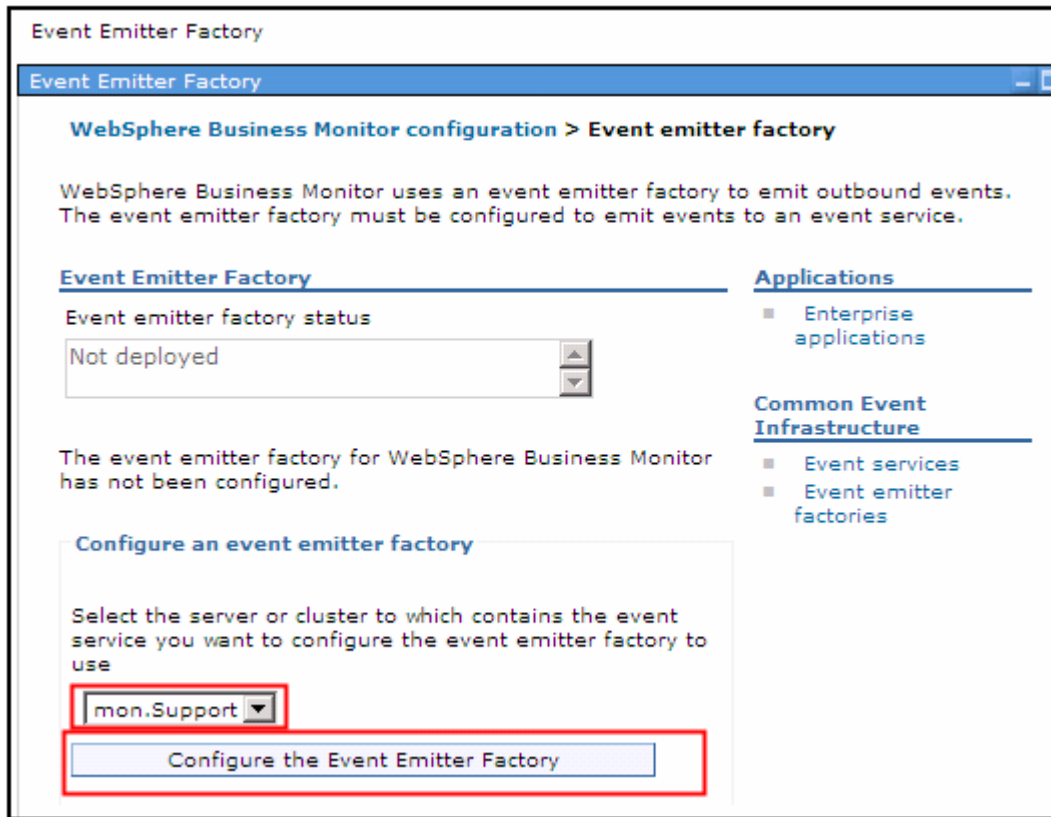
- \_\_\_ a. In the navigation panel, click **Servers → WebSphere Business Monitor configuration**

	Component	Status
<input checked="" type="checkbox"/>	<a href="#">Messaging engine</a>	Deployed on mon.Messaging
<input checked="" type="checkbox"/>	<a href="#">Event emitter factory</a>	Does not exist
<input type="checkbox"/>	<a href="#">REST API service</a>	Not deployed
<input type="checkbox"/>	Business Space	Not deployed
<input type="checkbox"/>	<a href="#">Action services</a>	Not deployed
<input type="checkbox"/>	<a href="#">Data services scheduler</a>	Not deployed
<input type="checkbox"/>	<a href="#">Dashboard for mobile devices</a>	Not deployed
<input type="checkbox"/>	AlphaBlox	Not deployed

- \_\_\_ b. In the **WebSphere Business Monitor Configuration** window, click **Event emitter factory**

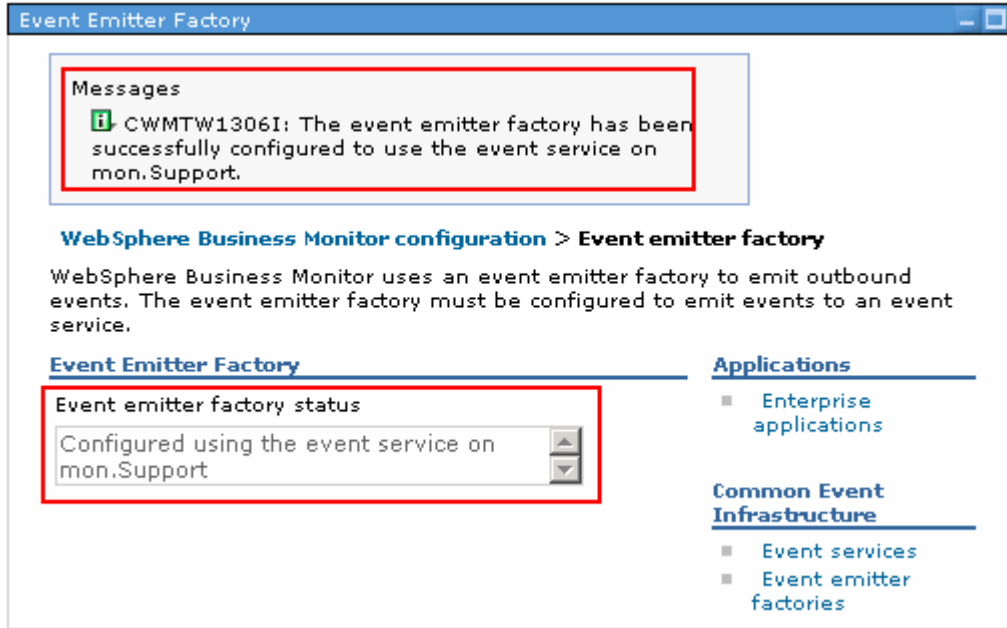
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- \_\_\_ c. This launches the configuration wizard. To configure the event service to a cluster, select **mon.Support** from the dropdown.



- \_\_\_ d. Click **Configure the Event Emitter Factory**
- \_\_\_ e. Ensure the event emitter factory is configured successfully

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\_\_\_ f. In the left navigation pane of the administrative console, click **Servers → WebSphere Business Monitor configuration**. Ensure the **Event emitter factory** is deployed (Green) as shown below:

	Component	Status
<input checked="" type="checkbox"/>	<a href="#">Messaging engine</a>	Deployed on mon.Messaging
<input checked="" type="checkbox"/>	<a href="#">Event emitter factory</a>	Configured using the event service on mon.Support
<input type="checkbox"/>	<a href="#">REST API service</a>	Not deployed
<input type="checkbox"/>	Business Space	Not deployed
<input type="checkbox"/>	<a href="#">Action services</a>	Not deployed
<input type="checkbox"/>	<a href="#">Data services scheduler</a>	Not deployed
<input type="checkbox"/>	<a href="#">Dashboard for mobile devices</a>	Not deployed
<input type="checkbox"/>	AlphaBlox	Not deployed

\_\_\_ 3. Configure the **REST API service**. WebSphere Business Monitor uses REST services to extract monitored data or to create custom dashboards and reports based on monitored data

\_\_\_ a. In the navigation panel, click **Servers → WebSphere Business Monitor configuration**

IBM WEBSHERE BUSINESS MONITOR 6.2 – LAB EXERCISE

Component	Status
<input checked="" type="checkbox"/> <a href="#">Messaging engine</a>	Deployed on mon.Messaging
<input checked="" type="checkbox"/> <a href="#">Event emitter factory</a>	Configured using the event service on mon.Support
<input type="checkbox"/> <a href="#">REST API service</a>	Not deployed
<input type="checkbox"/> Business Space	Not deployed
<input type="checkbox"/> <a href="#">Action services</a>	Not deployed
<input type="checkbox"/> <a href="#">Data services scheduler</a>	Not deployed
<input type="checkbox"/> <a href="#">Dashboard for mobile devices</a>	Not deployed
<input type="checkbox"/> AlphaBlox	Not deployed

\_\_\_ b. Click **REST API service**

\_\_\_ c. To deploy **REST API service** to a cluster, select mon.Business from the dropdown

**REST API Service**

WebSphere Business Monitor configuration > REST API service

Use this page to deploy the REST API service for WebSphere Business Monitor.

**REST API Service** **Applications**

REST API service status: Not deployed

Enterprise applications

The REST API service for WebSphere Business Monitor has not been deployed.

**Deploy REST API service**

Select the server or cluster to which you want to deploy the REST API service

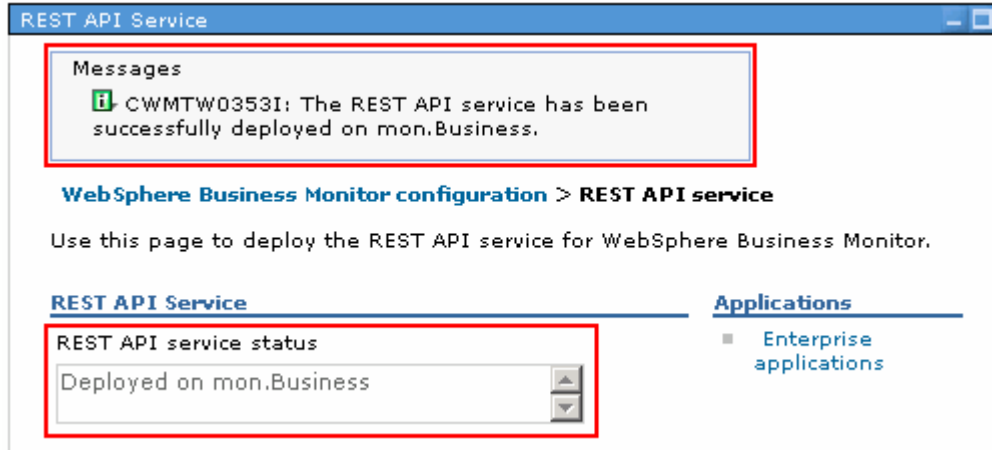
mon.Business

Deploy REST API Service

\_\_\_ d. Click **Deploy REST API service**

\_\_\_ e. Ensure the **REST API service** application is successfully deployed

IBM WEBSHERE BUSINESS MONITOR 6.2 – LAB EXERCISE



\_\_\_ 4. Configure **Dashboard for mobile devices**

\_\_\_ a. In the navigation panel, click **Servers** → **WebSphere Business Monitor configuration**

**WebSphere Business Monitor Configuration**

This page shows the status of the components that make up a complete WebSphere Business Monitor environment. To modify the configuration of a component, click the component name to display the details.

	Component	Status
<input checked="" type="checkbox"/>	<a href="#">Messaging engine</a>	Deployed on mon.Messaging
<input checked="" type="checkbox"/>	<a href="#">Event emitter factory</a>	Configured using the event service on mon.Support
<input checked="" type="checkbox"/>	<a href="#">REST API service</a>	Deployed on mon.Business
<input type="checkbox"/>	<a href="#">Business Space</a>	Not deployed
<input type="checkbox"/>	<a href="#">Action services</a>	Not deployed
<input type="checkbox"/>	<a href="#">Data services scheduler</a>	Not deployed
<input type="checkbox"/>	<a href="#">Dashboard for mobile devices</a>	Not deployed
<input type="checkbox"/>	<a href="#">AlphaBlox</a>	Not deployed

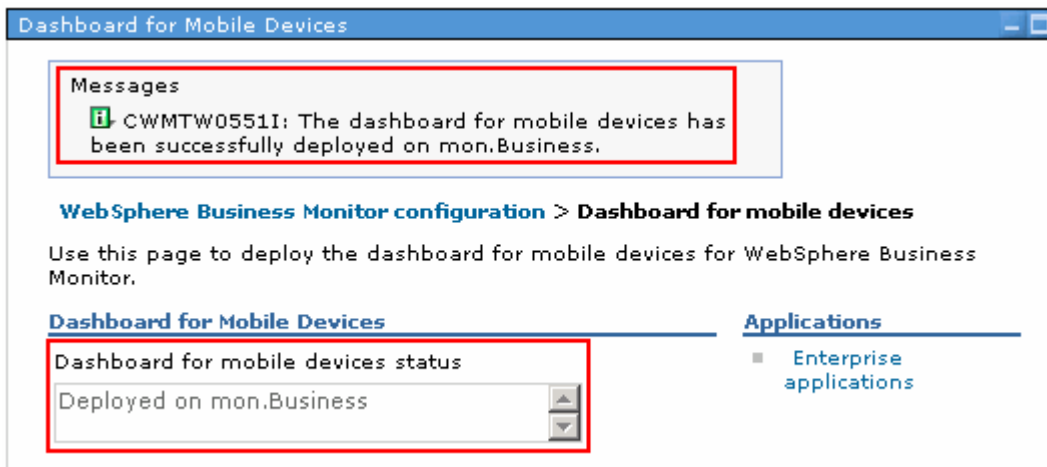
\_\_\_ b. Click **Dashboard for mobile devices**



IBM WEBSHERE BUSINESS MONITOR 6.2 – LAB EXERCISE



- \_\_\_ c. To deploy dashboard for mobile devices to a cluster, select `mon.Business` from the dropdown
- \_\_\_ d. Click **Deploy Dashboard for mobile devices**
- \_\_\_ e. Ensure the dashboard for mobile devices application is successfully deployed to the designated cluster



- \_\_\_ 5. You may similarly deploy the **action services** and **data services scheduler** to the **mon.Support** cluster

---

**Note:** To verify the WebSphere Business Monitor related configuration and supporting applications are installed, deployed, or configured properly, navigate to **Servers → WebSphere Business Monitor configuration**. Verify that all items are complete and marked as a green.

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## IBM WEBSHERE BUSINESS MONITOR 6.2 – LAB EXERCISE

WebSphere Business Monitor Configuration

### WebSphere Business Monitor configuration

For your WebSphere Business Monitor environment to work properly, you must configure multiple components.

#### WebSphere Business Monitor Configuration

This page shows the status of the components that make up a complete WebSphere Business Monitor environment. To modify the configuration of a component, click the component name to display the details.

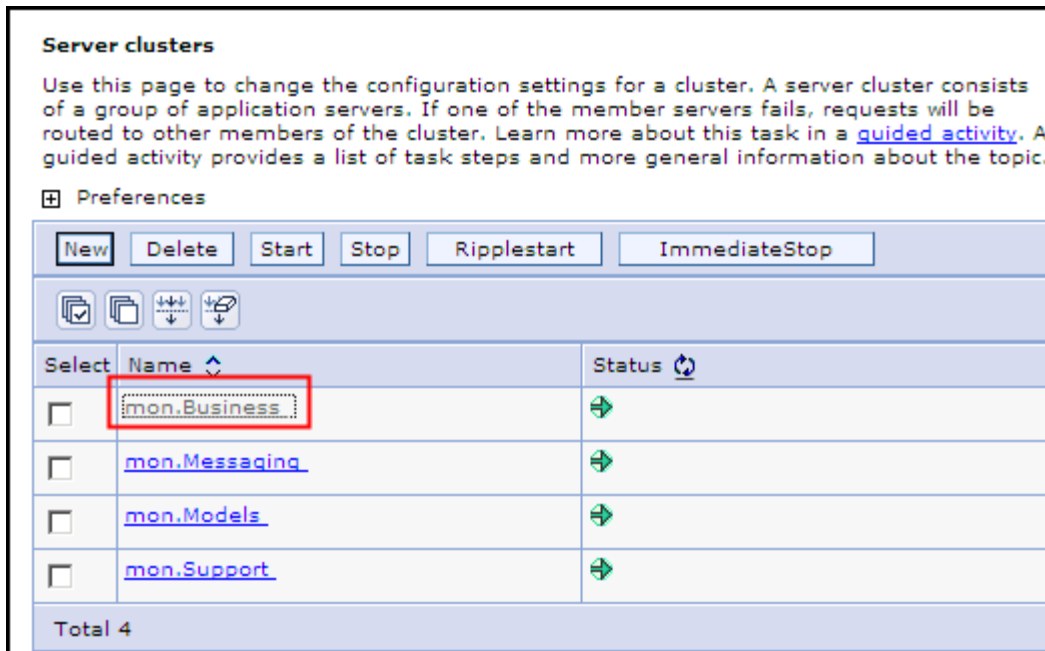
	Component	Status
<input checked="" type="checkbox"/>	<a href="#">Messaging engine</a>	Deployed on mon.Messaging
<input checked="" type="checkbox"/>	<a href="#">Event emitter factory</a>	Configured using the event service on mon.Support
<input checked="" type="checkbox"/>	<a href="#">REST API service</a>	Deployed on mon.Business
<input type="checkbox"/>	Business Space	Not deployed
<input checked="" type="checkbox"/>	<a href="#">Action services</a>	Deployed on mon.Support
<input checked="" type="checkbox"/>	<a href="#">Data services scheduler</a>	Deployed on mon.Support
<input checked="" type="checkbox"/>	<a href="#">Dashboard for mobile devices</a>	Deployed on mon.Business
<input type="checkbox"/>	AlphaBlox	Not deployed

## Part 9: Configure business space on a cluster and create database tables

In this part of the lab, you will be installing and configuring **Business Space** on the mon.Business cluster. Configuring Business Space sets up a browser-based graphical user interface for the business users of your application and cluster that are running with the profile you set up. In Business Space, you and your application users can customize content from products in the WebSphere Business Process Management portfolio.

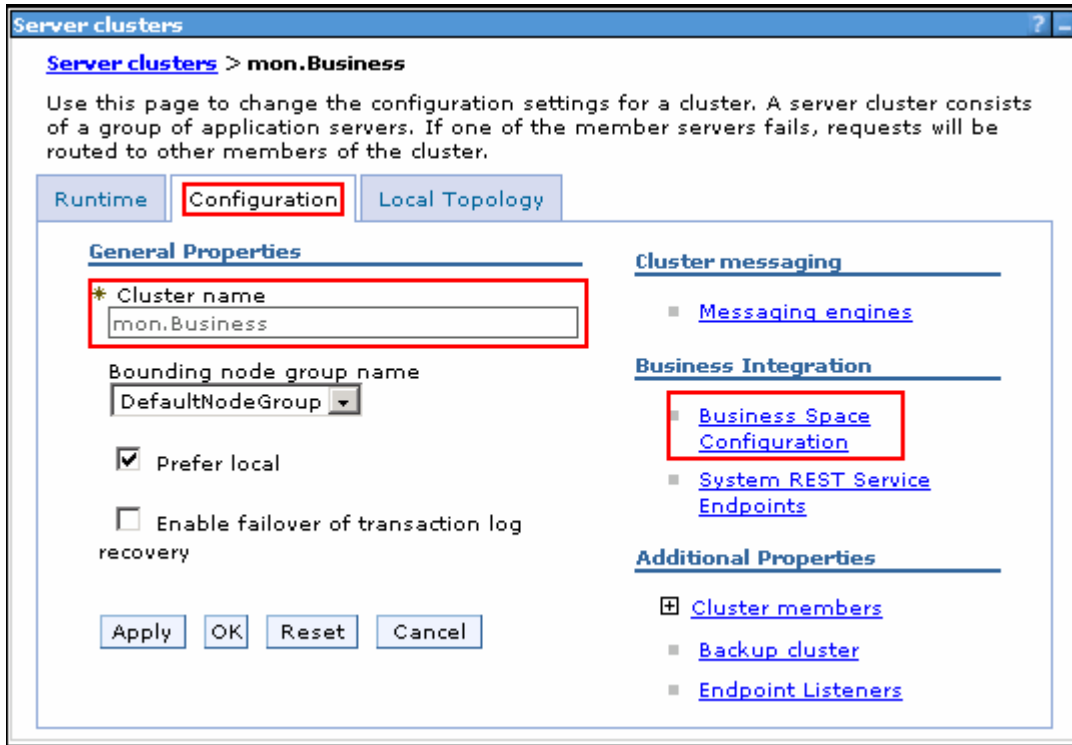
Complete the following instructions to install and configure Business Space:

- \_\_\_ 1. In the Administrative console for the deployment manager, navigate to **Servers → Clusters**



- \_\_\_ 2. Click **mon.Business** cluster
- \_\_\_ 3. In the **Configuration** window, ensure the **Configuration** tab is selected

IBM WEBSHERE BUSINESS MONITOR 6.2 – LAB EXERCISE



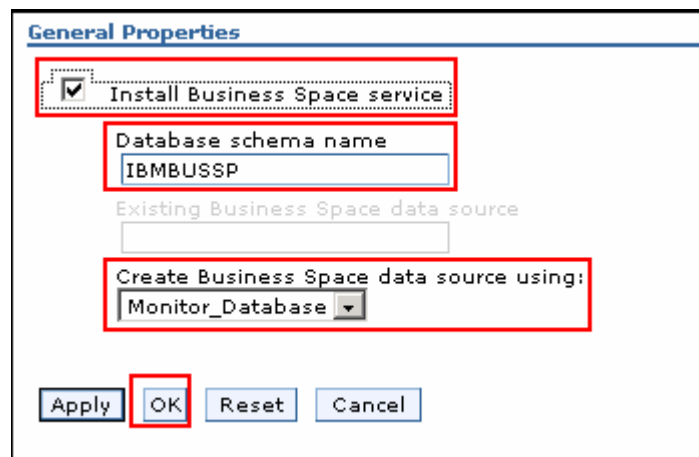
\_\_\_ 4. Click **Business Space Configuration** under the **Business Integration** section

\_\_\_ 5. In the **Business Space Configuration** page complete the following:

Select **Install Business Space service**

Enter **IBMBUSSP** (or a different database name configured in your environment) as the **Database schema name**

Select **Monitor\_Database** in the **Create Business Space data source using** drop down



\_\_\_ 6. Click **OK**

\_\_\_ 7. Save to the master configuration. Synchronize changes with the nodes

Complete the following instructions to manually create the Business Space database:

## IBM WEBSHERE BUSINESS MONITOR 6.2 – LAB EXERCISE

8. The Business Space database scripts are generated to the following location on the Monitor deployment manager machine:

- `<DMGR_HOME>\dbscripts\BusinessSpace\DB2\<Monitor_DB_Name>`

Example: `C:\IBM\WebSphere\MonServer\profiles\Dmgr62\dbscripts\BusinessSpace\DB2\MONITOR`



9. Copy the Business Space database scripts to a temporary location in your database host machine:



10. Open the DB2 command window from **Start → Programs → IBM DB2 → Command Line Tools → Command Window** and change the directory to `C:\temp\dbscripts\DB2`

11. Connect to the monitor database you created using the following command:

- `db2 connect to MONITOR user <USER_NAME> using <PASSWORD>`

Example: `db2 connect to MONITOR user db2admin using db2admin`

```

G:\ DB2 CLP - DB2COPY1
C:\temp\dbscripts\DB2>db2 connect to MONITOR user db2admin using db2admin

Database Connection Information
Database server           = DB2/NT 9.5.0
SQL authorization ID     = DB2ADMIN
Local database alias     = MONITOR

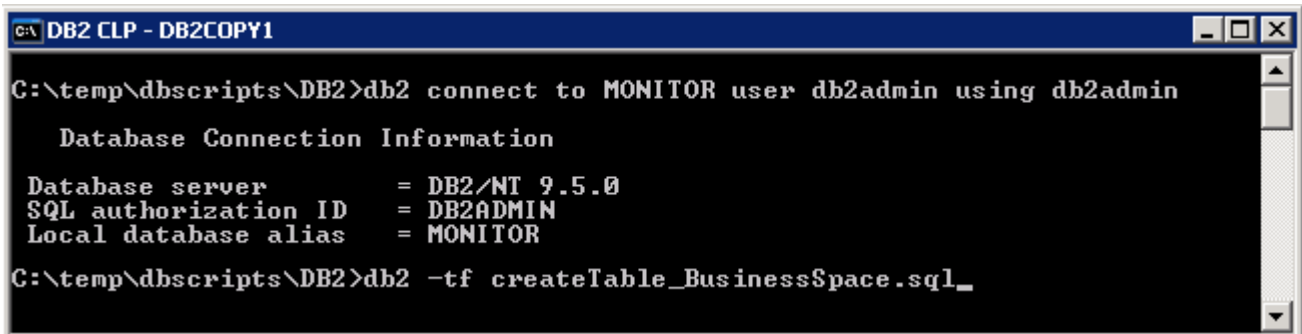
C:\temp\dbscripts\DB2>_

```

12. Run the `createTable_BusinessSpace.sql` script using the following command:

- `db2 -tf createTable_BusinessSpace.sql`

IBM WEBSHERE BUSINESS MONITOR 6.2 – LAB EXERCISE



```
C:\temp\dbscripts\DB2>db2 connect to MONITOR user db2admin using db2admin

Database Connection Information

Database server          = DB2/NT 9.5.0
SQL authorization ID    = DB2ADMIN
Local database alias    = MONITOR

C:\temp\dbscripts\DB2>db2 -tf createTable_BusinessSpace.sql_
```

- \_\_\_ 13. Close the DB2 command window
- \_\_\_ 14. Ensure the Business Space applications are installed successfully (Application → Enterprise Applications). The applications are named BusinessSpaceManager and IBM\_BSPACE\_WIDGETS.
- \_\_\_ 15. Restart the **mon.Business** cluster. Ensure you do not see any Business Space database related error messages in the runtime logs (SystemOut.log).

## Part 10: Enabling business space widgets

In this part of the lab, you will deploy and register the Representational State Transfer (REST) endpoints for the monitor and alphablox widgets with Business Space.

### Pre-requisites:

- Create **BusinessSpace/registryData** directory on all the nodes in the Business Space cluster
  - **<WAS61\_HOME>\profiles\Custom01\BusinessSpace\registryData**

Example: C:\IBM\WebSphere\MonServer612\profiles\Custom04\BusinessSpace\registryData

C:\IBM\WebSphere\MonServer612\profiles\Custom01\BusinessSpace\registryData

### Enabling widgets with Business Space

By default the Business Space widgets are not enabled. You should enable the widgets before using the Business Space. You should edit the Business Space end point registration files, make necessary changes and then copy the files to the **BusinessSpace\registryData** directory on all the nodes where Business Space is installed.

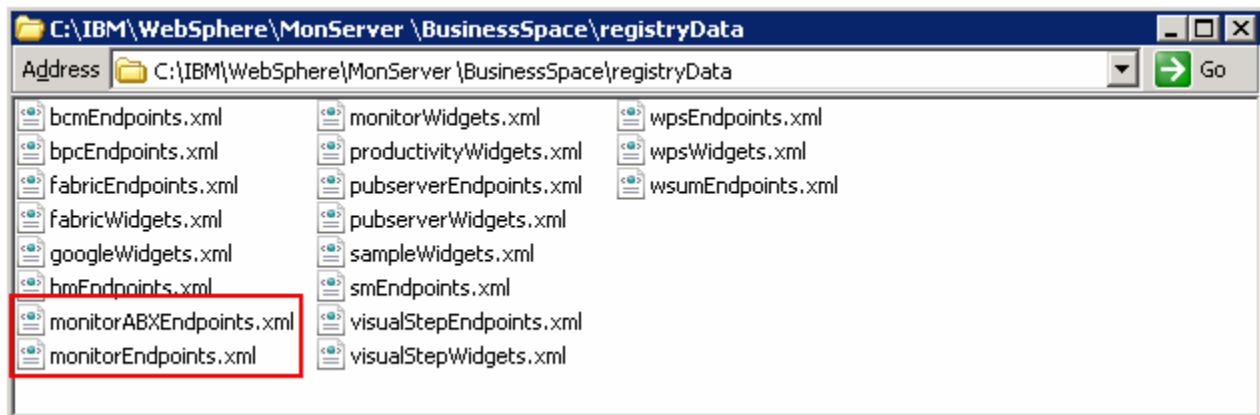
**Note:** The instructions must be completed on all the machines (cluster members) where the business space is installed.

Complete the following instructions to enable the Business Space widgets:

\_\_\_\_ 1. The Business Space end point registration files are located at:

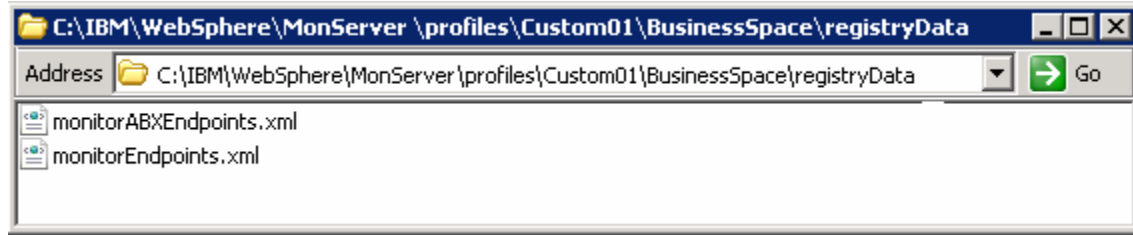
- **<WAS62\_HOME>\BusinessSpace\registryData** on the all the custom profiles where Business Space is installed

Example: C:\IBM\WebSphere\MonServer\BusinessSpace\registryData



\_\_\_\_ 2. Copy the '**monitorEndpoints.xml**' and '**monitorABXEndpoints.xml**' file to **<WAS61\_HOME>\profiles\Custom01\BusinessSpace\registryData** on all the nodes where Business Space is installed

## IBM WEBSHERE BUSINESS MONITOR 6.2 – LAB EXERCISE



\_\_\_ 3. Restart the '**mon.Business**' cluster

Complete the following instructions if you have REST Services application running in a different cell than that of the Business Space cluster.

\_\_\_ 4. Take a backup of the '**monitorEndpoints.xml**' and '**monitorABXEndpoints.xml**' file and then edit it using a text editor.

\_\_\_ a. For **monitorEndpoints.xml**, type the <HOST\_NAME>:<PORT> as shown below:

```
<tns:Endpoint action="addUpdate">
  <tns:id>{com.ibm.wbimonitor}monitorServiceRootId</tns:id>
  <tns:version>1.0.0.0</tns:version>
  <tns:url>http://restservice_hostname:9080/rest</tns:url>
  <tns:description>Location of backing services for Monitor widgets</tns:description>
</tns:Endpoint>
```

Where HOST\_NAME is the fully qualified host name of the machine where the REST services is running.

\_\_\_ b. For **monitorABXEndpoints.xml**, type the <HOST\_NAME>:<PORT> as shown below:

```
<tns:Endpoint action="addUpdate">
  <tns:id>{com.ibm.wbimonitor}monitorABXServiceRootId</tns:id>
  <tns:version>1.0.0.0</tns:version>
  <tns:url>http://restservice_hostname:9080/rest</tns:url>
  <tns:description>Location of backing services for Monitor widgets</tns:description>
</tns:Endpoint>
```

Where HOST\_NAME is the fully qualified host name of the machine where the REST services is running.

Save the endpoint registry files and ensure you copy them to the **BusinessSpace\registryData** directory you created under the profile directory of the custom nodes.

Restart the **mon.Business** cluster and review the runtime logs. You should not see any JSP related warning messages



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## Part 11: Install and configure Alphablox in a cluster

For instructions on Alphablox installation and configuration in a cluster refer to **WBMonitorV61\_AlphabloxClustering.pdf** which is a separate lab document.

## What you did in this exercise

In this lab you installed the Monitor core product files on nodes in your topology. You created the deployment manager profile and the Monitor database. You created custom profiles, clusters and cluster member servers. Also, you configured CEI and Monitor supporting applications. Finally, you configured business space in the cluster.

## Appendix: Troubleshooting CEI deployment

**Issue 1:** If you encounter the following message:

*CWSIS0002E: The messaging engine encountered an exception while starting. Exception: com.ibm.ws.sib.msgstore.MessageStoreRuntimeException: CWSIS1524E: Data source, jdbc/com.ibm.ws.sib/mon.Support-CommonEventInfrastructure\_Bus, not found.*

**Resolution:** Create a new data source using *jdbc/com.ibm.ws.sib/mon.Support-CommonEventInfrastructure\_Bus* as JNDI name

**Issue 2:** Missing bus connector role

- In the navigation pane of the administrative console, click **Service Integration → Busses**
- Under Security, click **Enabled** corresponding to **CommonEventInfrastructure\_Bus**
- Select an authentication alias from the dropdown for **Inter-engine authentication alias**
- Click **Apply**
- Under **Additional properties**, click **Users and groups in the bus connector role**
- In the next panel, click **New**
- In the next panel, select **User name** radio button and enter the administrative user name (Example: monadmin)
- Click **OK**
- Save to the master configuration

**Issue 3:** Missing Authentication Alias for **CommonEventInfrastructure\_ActivationSpec** resource adapter

- In the navigation pane of the administrative console, click **Resources → Resource Adapters → J2C activation specifications**
- In the next panel, click **CommonEventInfrastructure\_ActivationSpec**
- Set the appropriate authentication alias
- Click **OK**
- Save to the master configuration
- Restart the cluster

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