WebSphere Business Monitor V7.0: Clustering
Single cluster deployment environment pattern

What this exercise is about

The objective of this exercise is to provide step by step instructions for installing WebSphere® Business Monitor V7.0 binaries and eventually create a single cluster deployment environment pattern in a three machine topology good for 32-bit and 64-bit system users.

Exercise requirements

List of software required for the student to complete the exercise:

- IBM Installation Manager V1.3.3

- WebSphere Application Server V7.0.0.7

- WebSphere Business Monitor V7.0

- DB2

What you should be able to do

At the end of this exercise you should be able to:

- Install IBM Installation Manager V1.3.3

- Install WebSphere Application Server V7.0.0.7

- Install WebSphere Business Monitor V7.0

    o WebSphere Business Monitor V7.0 binaries including Alphablox

    o WebSphere Application Server V7 Feature Pack for XML

- Create these WebSphere Business Monitor V7.0 profiles

    o A Deployment Manager profile

    o Two custom profiles

- Generate a Single Cluster deployment environment pattern

Exercise Instructions

Some instructions in this exercise might be Windows operating-system specific. If you plan on running the exercise 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 exercise instructions using symbolic references, as follows:

Reference Variable	Windows Location	AIX® Location
WBM Deployment Manager Profile & DB2 (Machine 1)		
`<WBM_HOME>`	`C:\IBM\WebSphere\MonServer`	
`<DMGR_PROFILE_HOME>`	`<WBM_HOME>\profiles\Dmgr01`	
`<DB2_HOME>`	`C:\IBM\DB2\SQLLIB`	
WBM Custom Profile 01 (Machine 2)		
`<WBM_HOME>`	`C:\IBM\WebSphere\MonServer`	
`<CUSTOM01_PROFILE_HOME>`	`<WBM_HOME>profiles\Custom01`	
WBM Custom Profile 02 (Machine 3)		
`<WBM_HOME>`	`C:\IBM\WebSphere\MonServer`	
`<CUSTOM02_PROFILE_HOME>`	`<WBM_HOME>\profiles\Custom02`	

Windows users' note: When directory locations are passed as parameters to a Java program such as EJBdeploy or wsadmin, it is necessary to replace the backslashes with forward slashes to follow the Java convention.

The following is the installation file you need to complete the exercise:

Product	File Name
WebSphere Business Monitor V7.0	Monitor_V7.0_Windows_32.zip

Introduction

IBM® WebSphere® Business Monitor is a comprehensive business activity monitoring (BAM) software that provides an up-to-date view of your business performance and provides predictions so that you can take action before problems occur. Personalized business dashboards process business events and data, and calculate key performance indicators (KPIs) and metrics. WebSphere Business Monitor can collect events and data from a wide variety of sources including WebSphere Process Server and IBM FileNet® P8 BPM. In addition, you can use WebSphere Adapters to collect events from additional sources.

In this exercise, you will install and configure WebSphere Business Monitor in a single cluster deployment environment. The single cluster deployment environment pattern is a pre-defined one-cluster topology pattern in which all the monitor components and resources are allocated to one cluster. In this pattern, the Monitor Models, Event service, Message engines, Data Scheduler service, Action service, REST services, Business Space and other related components run on a single cluster. This topology is suitable for scenarios that are focused on running applications and on synchronous invocations. Note the messaging requirements should be kept to a minimum if using this pattern. The Service Component Architecture (SCA) internal asynchronous invocations, the Java Messaging Service (JMS) and MQ messaging bindings do not support multiple messaging engines in the same cluster.

In this exercise, the Single Cluster deployment environment pattern has two member servers assigned to a cluster which is spread across two nodes as shown in the diagram below:
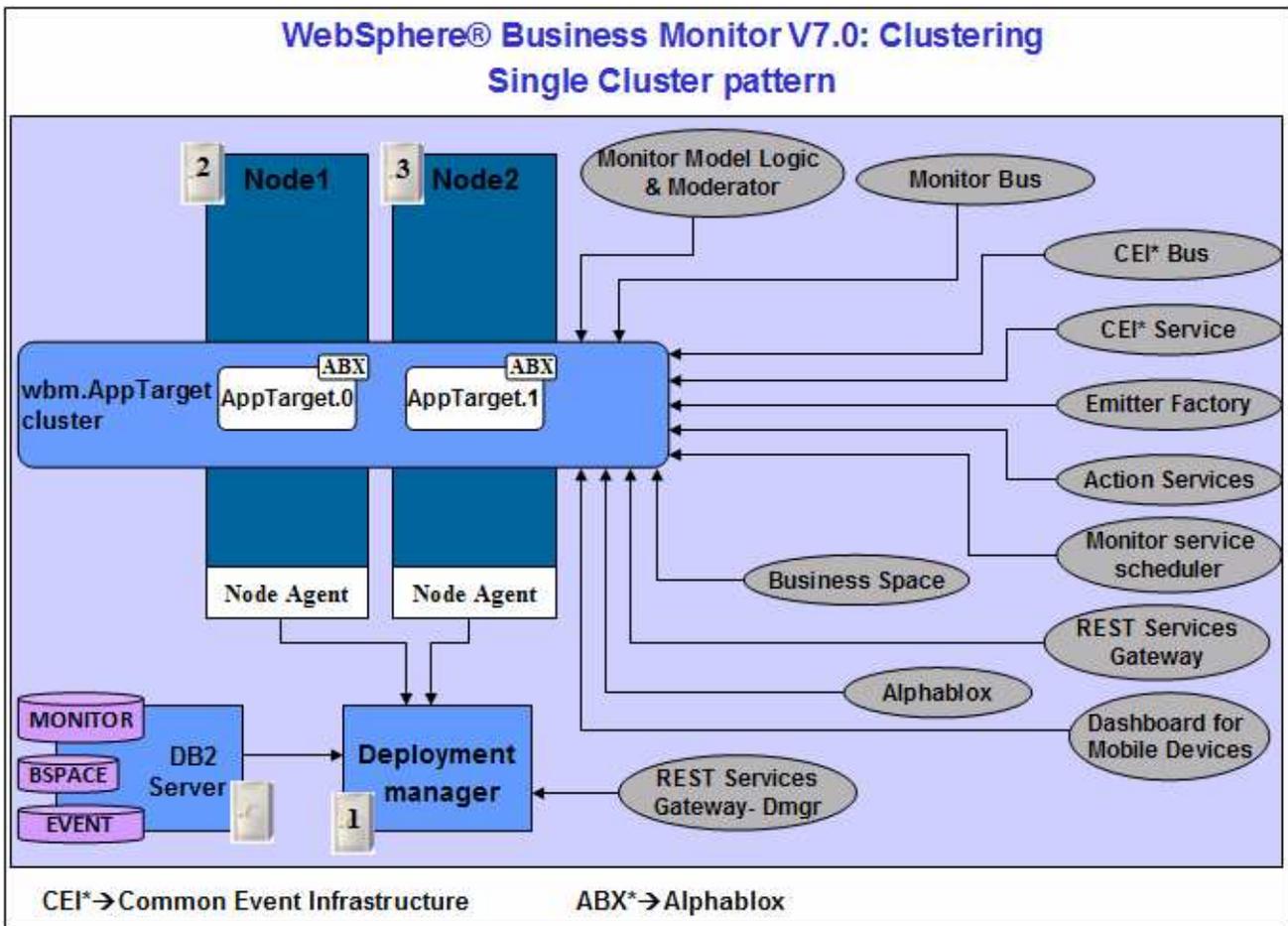
The topology mapping table below, gives you an opportunity to foresee the naming pattern and helps with assigning the member servers to a cluster. On generating the deployment environment, the clusters and their member servers are named by appending to the Deployment Environment name and the node name. Remember the cluster and their member server names can get lengthy if the Deployment Environment and the node names are long.

Clusters → Nodes → Member Servers mapping (Topology) table:

Clusters	Nodes	Member Servers	Host Name
wbm.AppTarget	Custom01Node01	wbm.AppTarget.Custom01Node01.0	custom01.austin.ibm.com
	Custom02Node02	wbm.AppTarget.Custom02Node02.1	custom02.austin.ibm.com

Node → Server assignment table:

Nodes	Application Deployment Target
Custom01Node01	1
Custom02Node02	1

Utilize the tables below to plan the naming pattern and the member servers for you environment:

Clusters → Nodes → Member Servers mapping (Topology) table:

Clusters	Nodes	Member Servers	Host Name

Node → Server assignment table:

Nodes	Application Deployment Target

Part 1: Preparing for the WebSphere Business Monitor installation image

In this part of the exercise, the WebSphere Business Monitor V7.0 DVD image is obtained and extracted -- creating the correct on-disk structure for the installation image.

____ 1. The following is the installation file needed to install the WebSphere Business Monitor V7.0 binaries on Windows operation system:

Product	File Name
WebSphere Business Monitor V7.0	Monitor_V7.0_Windows_32.zip

____ 2. Obtain the WebSphere Business Monitor DVD image and extract in such a way to create the correct on-disk structure for the installation image

____ 3. Extract the archive to a directory (for example **C:\WBM70CDImage**) and confirm that the directories and files are extracted correctly; it should appear similar to the picture below:
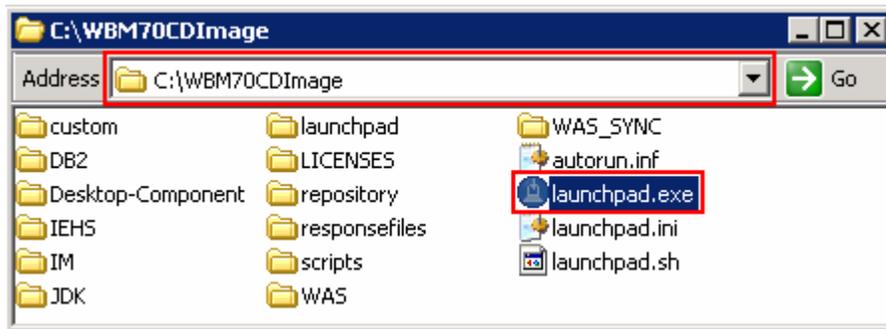
Part 2: Installing WebSphere Business Monitor V7.0 binaries

In this part of the exercise, you will install the WebSphere Business Monitor V7.0 binaries using the Installation Manager on an existing WebSphere Application Server – ND package group.

You will use the WebSphere Business Monitor V7.0 Common Launchpad to silently install WebSphere Application Server V7.0.0.7 and then launch the Installation Manager from the Common Launchpad to install the WebSphere Business Monitor V7.0 binaries on the WebSphere Application Server - ND package group.

If you are installing WebSphere Business Monitor V7.0 for the first time on this machine, you have the opportunity to update it with the latest available refresh pack, fixes and extensions at the same time when you install WebSphere Business Monitor V7.0.

Pre-requisite: Before going to the next step, ensure you have enough disk space to install WebSphere Application Server V7.0.0.7 and then the WebSphere Business Monitor binaries.

Complete the instructions below to install the WebSphere Business Monitor V7.0 binaries:

____ 1.   Navigate to the directory where the correct on-disk structure for the installation image was created
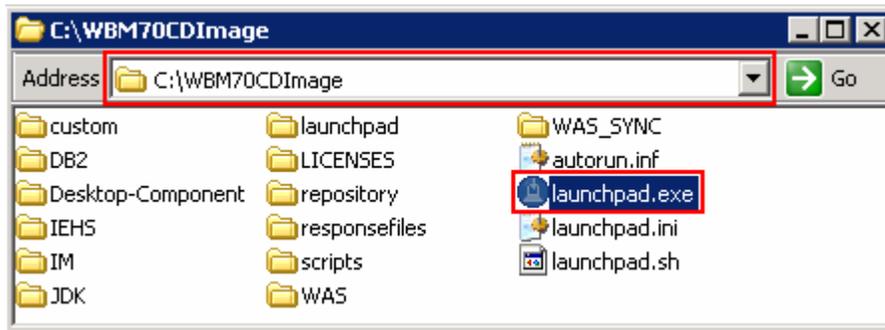
____ 2.   Double-click `launchpad.exe` to launch the WebSphere Business Monitor Common Launchpad

IBM WebSphere Business Monitor V7.0 Launchpad

IBM WebSphere Business Monitor V7.0 Launchpad

Select a language: English

WebSphere Business Monitor

New installation

Installation on existing WebSphere Process Server or WebSphere Enterprise Service Bus

Installation on existing WebSphere Application Server

Nonadministrative or nonroot installation

WebSphere Business Monitor database scripts

Migration information

Additional software installation

Exit

IBM WebSphere Business Monitor

IBM® WebSphere® Business Monitor Version 7.0 provides the business community with the capability of monitoring work flow performance, which improves work flow quality and productivity. This launchpad serves as a single point of reference for installing your monitoring environment.

WebSphere Business Monitor installation roadmap

- To install a new WebSphere Business Monitor environment, click here.
- To install WebSphere Business Monitor to an existing WebSphere Process Server or WebSphere Enterprise Service Bus (ESB) environment, click here.
- To install WebSphere Business Monitor to an existing WebSphere Application Server environment, click here.
- To install WebSphere Business Monitor when the user does not have administrative or root privileges, click here.

Installation-related information

- The latest critical fixes and information about this release
- Hardware and software requirements
- WebSphere Business Monitor Web site
- WebSphere Business Monitor information center
- WebSphere Application Server information center
- IBM AlphaBlox information center

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IBM.

____ 3.   On the left navigation pane of the WebSphere Business Monitor Common Launchpad, click the **WebSphere Business Monitor → New Installation** link
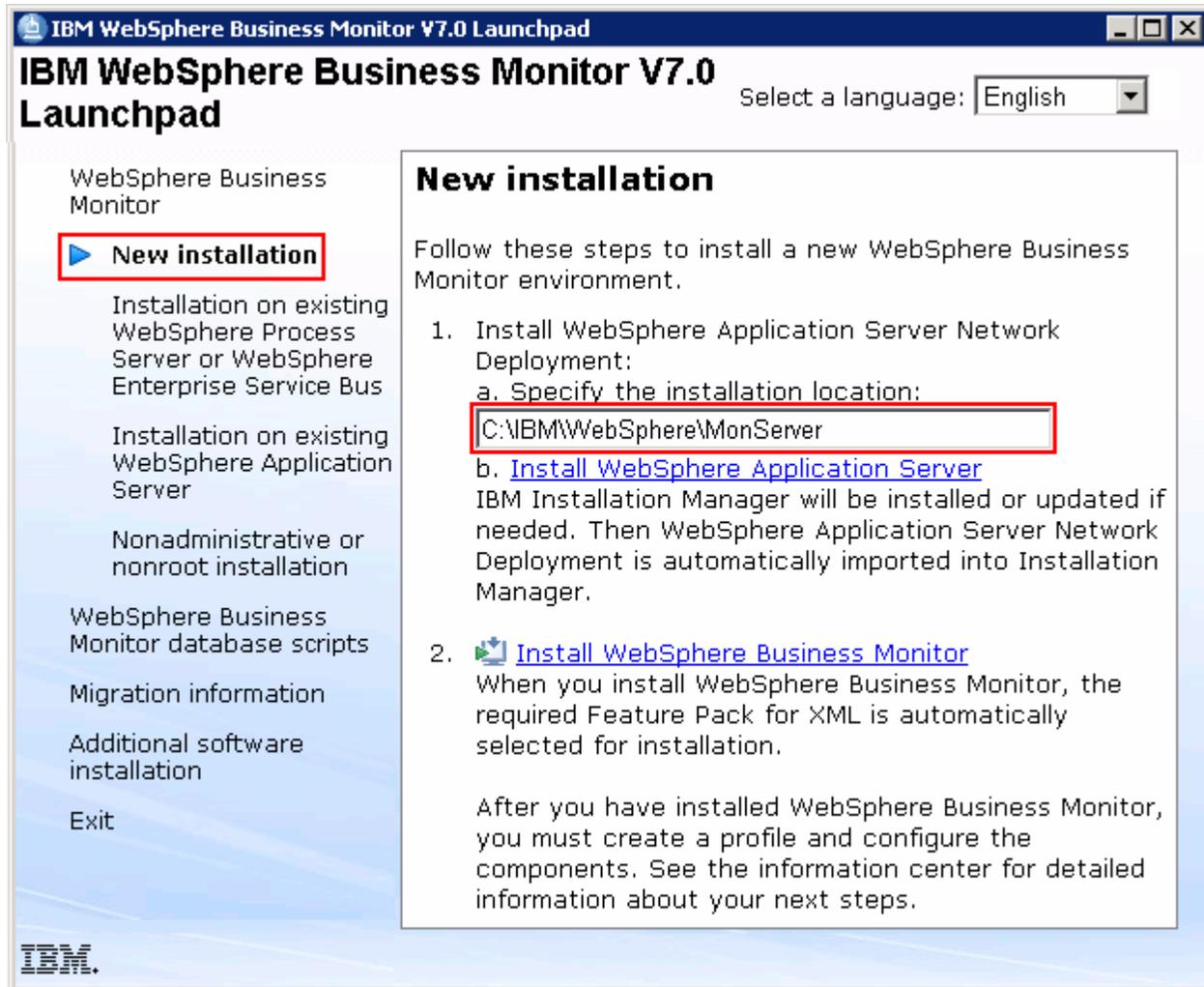
___ 4. Specify the **Installation Location** for WebSphere Application Server Network Deployment in the text field

__ a. Specify the Installation Location : Ex: `C:\IBM\WebSphere\MonServer`

Note: Ensure the specified WebSphere Application Server installation location does not exist. If so, you should see the warning dialog shown below, when you click the 'Install WebSphere Application Server' link.
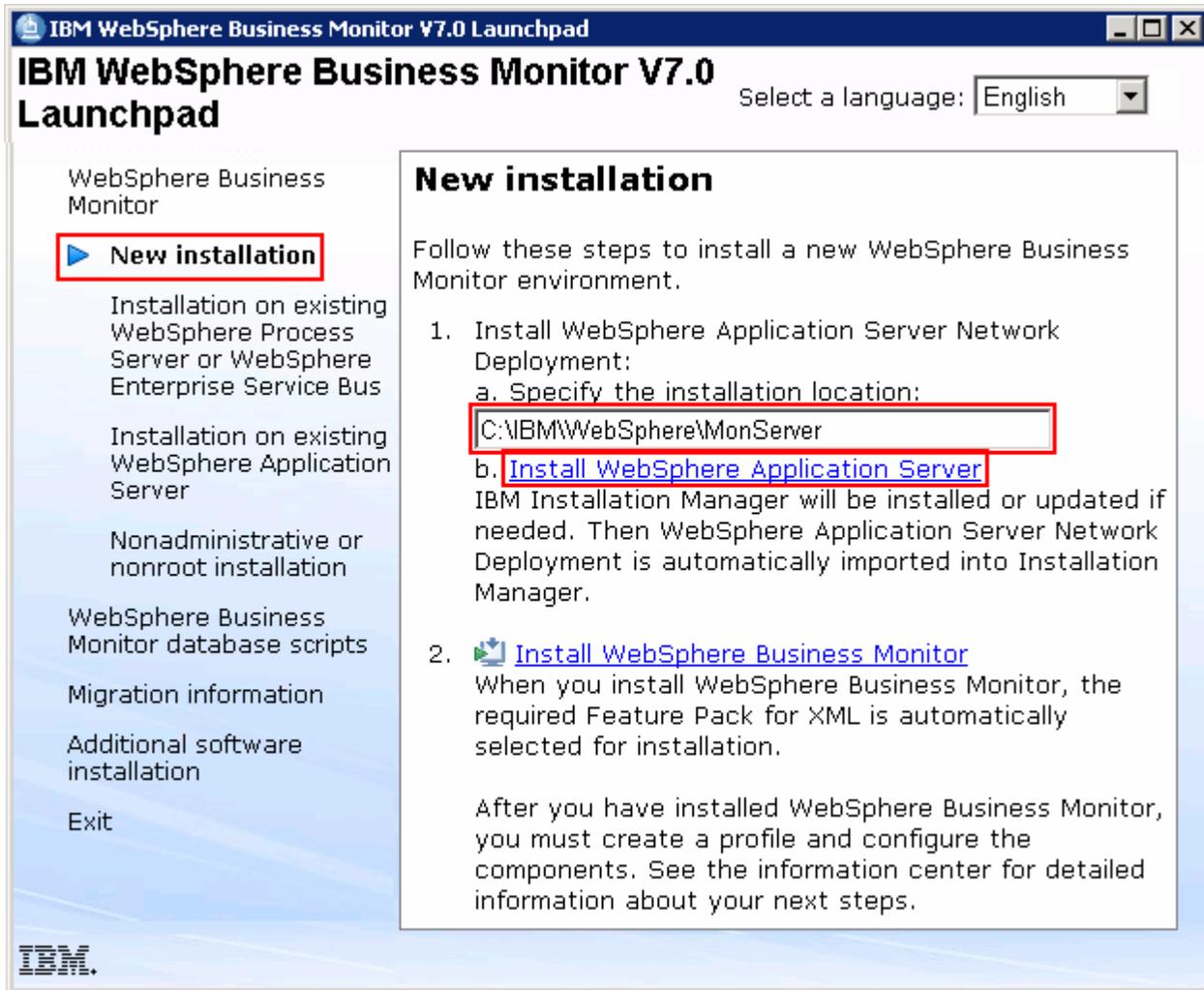
____ 5. Now, click the **Install WebSphere Application Server** link. This action silently installs IBM Installation Manager V1.3.3 to a default location, WebSphere Application Server V7.0.0.7 to the specified location and then imports the WebSphere Application Server repository to the Installation Manager.

____ 6. A warning dialog pops-up, requesting to close the IBM Installation Manager if it is already installed and running at this time. Close the Installation Manager if it is already installed and running
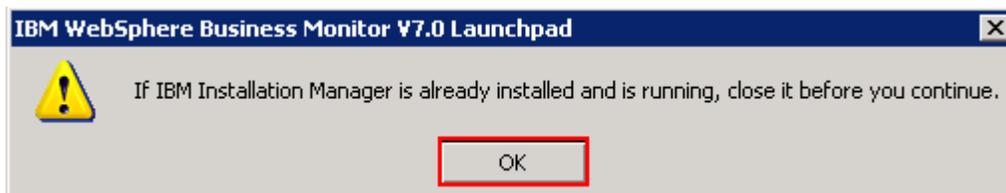
____ 7. Click **OK**. The WebSphere Application Server V7.0.0.7 installation progresses
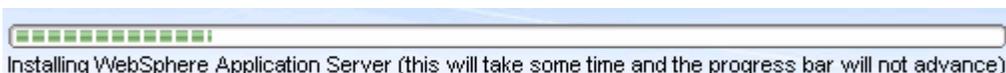
____ 8. Once the installation is complete, you should see a pop-up stating that the WebSphere Application Server installation is successful and imported into Installation Manager
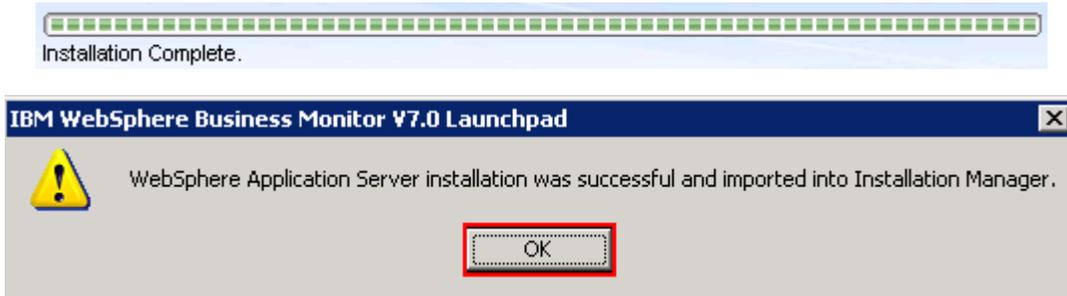
____ 9. Click **OK**

Note: Navigate to the WebSphere Application Server installation home **logs** directory, **<WBM_HOME>\logs\install** to verify the installation status. Open the **log.txt** file and scroll to the end of the file. You should see the status reported as **INSTCONFSUCCESS**

Note: The Installation Manager is installed to a default location. For Example on Windows, it is installed at **C:\Program Files\IBM\BPMShared**

____ 10. Back to the WebSphere Business Monitor Common Launchpad, click the **Install WebSphere Business Monitor** link
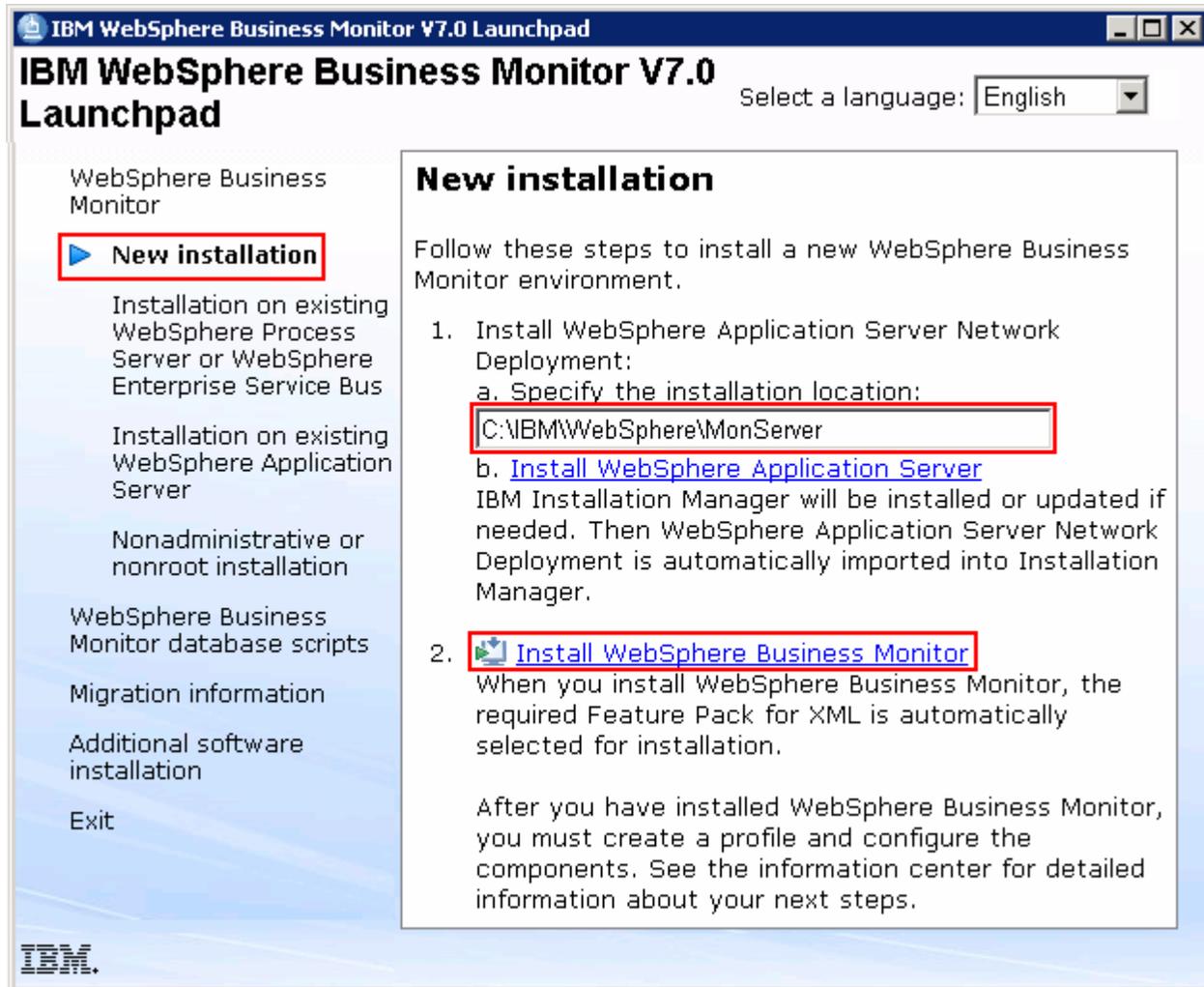
____ 11. The Installation Manager is launched as shown in the picture below. You should see a list of the packages shown below:

  __ a. **IBM WebSphere Business Monitor → Version 7.0.0.0**

  __ b. **IBM WebSphere Application Server V7 Feature Pack for XML → Version 1.0.0.0**

Note: If you do not select any features in this panel, Business Space and WebSphere Business Monitor license files are installed on the WebSphere Application Server package group.
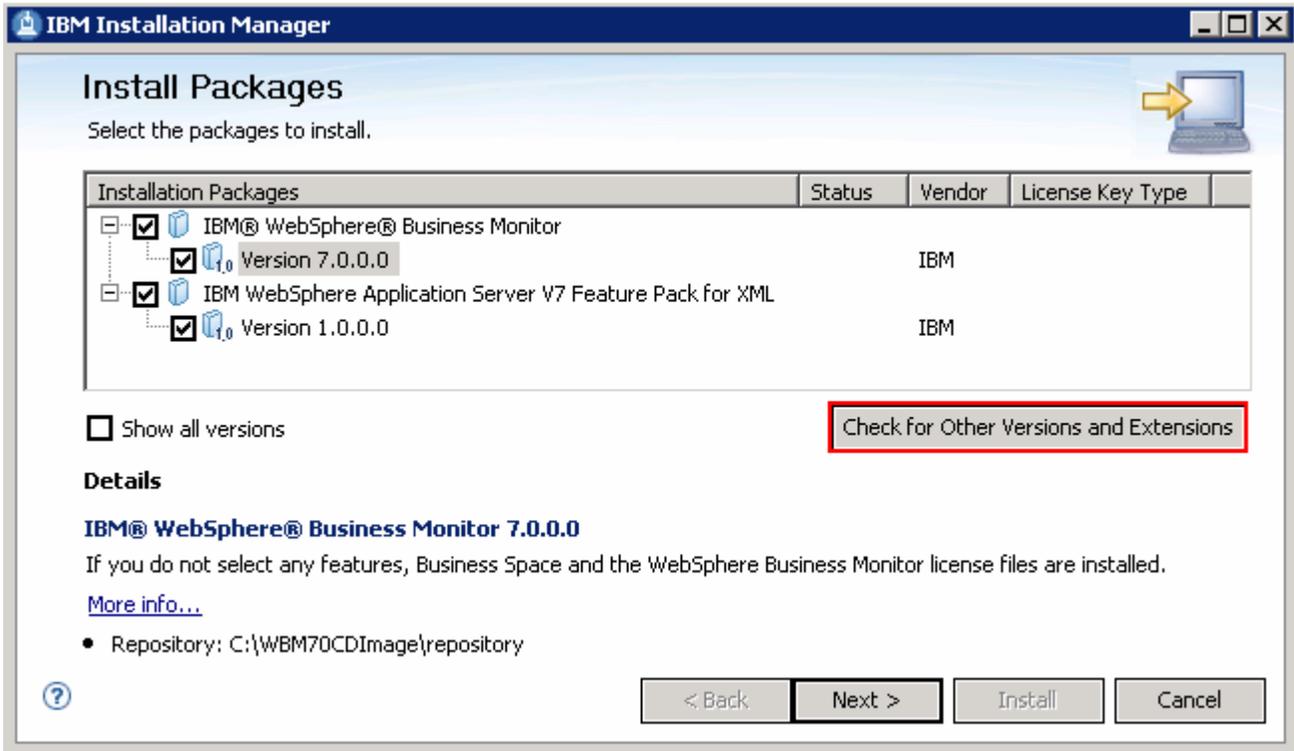
Note: If you do **not** want to update with the latest available refresh pack, fixes and extensions, do not click the `Check for Other Versions and Extensions` button. Select the required packages and click **Next**

____ 12. Click `Check for Other Versions and Extensions` button to search for the available refresh packs, fixes and extensions. This action gives an opportunity to update packages with latest refresh packs, fixes and extensions at the same time when you install WebSphere Business Monitor V7.0

Note: At the time of writing this document, there is no refresh pack available for monitor. However the XML feature pack Version 1.0.0.1 Fix Pack is available. Ensure your machine is connected to the network accessible to the WebSphere Business Monitor live repository Web site.

____ 13. Once the search is complete, you should see an information dialog similar to the one shown in the picture below, displaying the number of other versions found
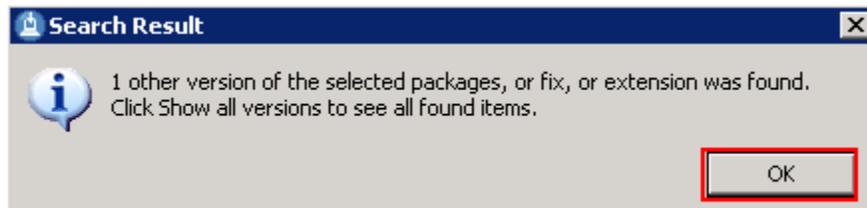
____ 14. Click **OK**. You should see the Install Packages panel updated with the latest available packages, for example WebSphere Application Server V7 XML Feature Pack Version 1.0.0.1

Note: The Installation Manager only lists and selects recommended versions of the packages available at the time of search. If you want to install an older version, select the **Show all versions** check box. You should see all the available versions as shown below:
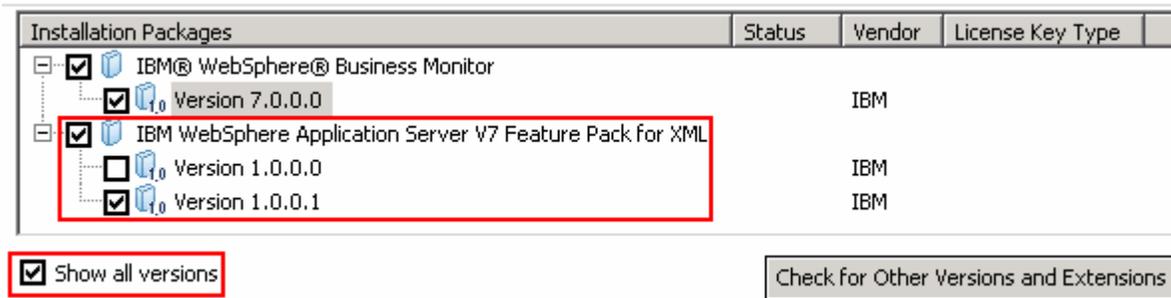
In this exercise, you will install WebSphere Business Monitor V7.0 with WebSphere Application Server V7 Feature Pack for XML Version 1.0.0.1 selected.

_____ 15. In the select packages panel, select the packages with the appropriate versions you like to install

    __ a. Select **IBM WebSphere Business Monitor → Version 7.0.0.0**

    __ b. Select **IBM WebSphere Application Server V7 Feature Pack for XML →**
           Version 1.0.0.1
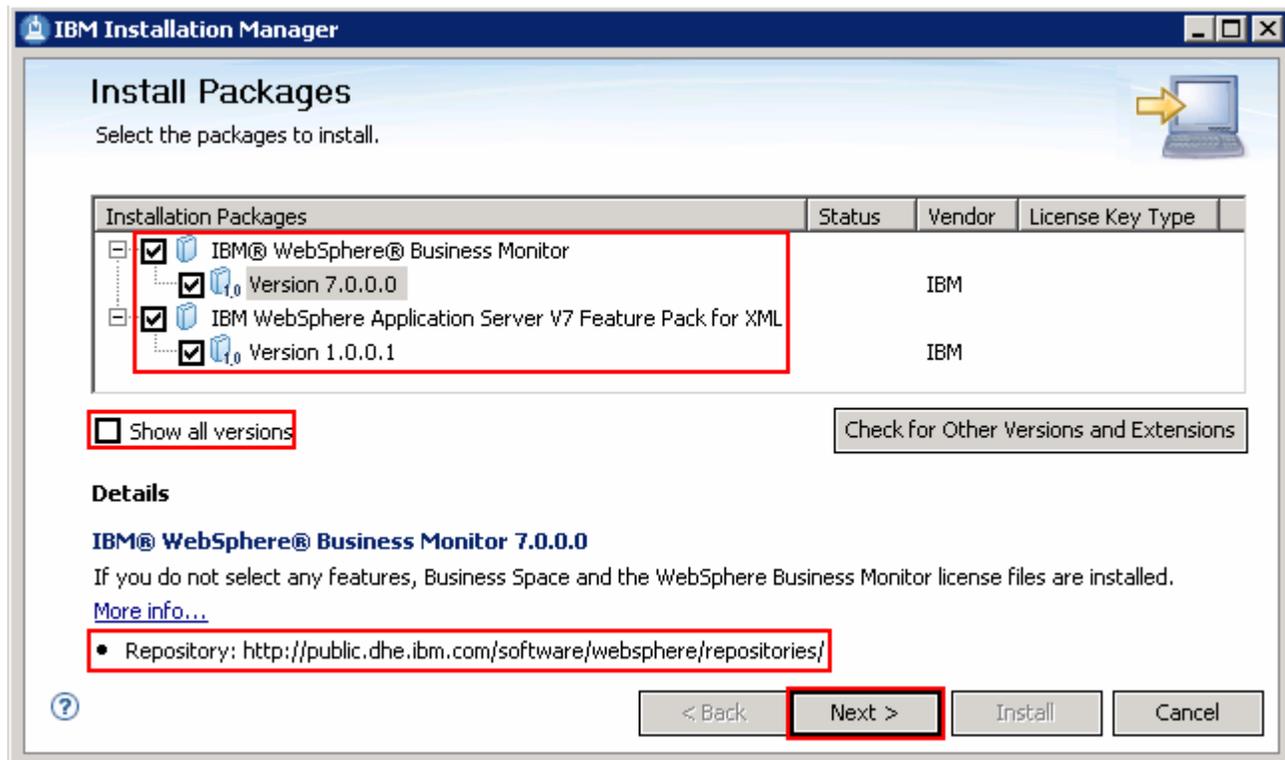
Note: If you do not select any features in this panel, Business Space and WebSphere Business Monitor license files are installed on the WebSphere Application Server package group.

_____ 16. Click **Next**

____ 17. In the next panel, read the license agreements. If you agree to the terms, select the radio button next to **I accept the terms in the license agreements** and Click **Next**

____ 18. In the next panel, select the radio button for **Use the existing package group** and then select **IBM WebSphere Application Server – ND** as the **Package Group Name**
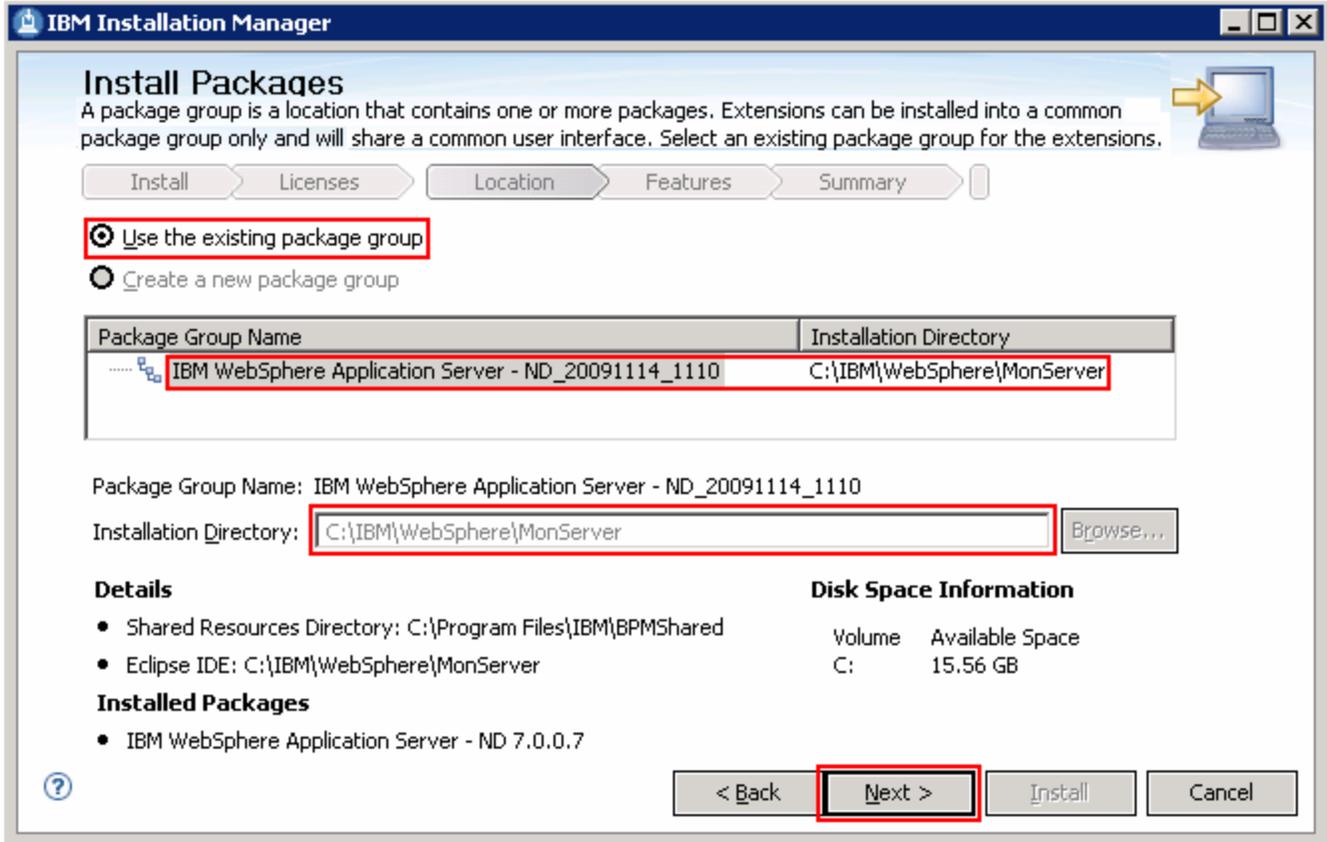
____ 19. Click **Next**

____ 20. In the next panel, click the **Expand All** button to see all the features. Accept the defaults but ensure the features listed below are selected. Do not select any stand-alone profile options.

    __ a. **IBM WebSphere Business Monitor Server 7.0.0.0 → WebSphere Business Monitor Server**

        1) Alphablox

    __ b. **IBM WebSphere Application Server V7 Feature Pack for XML 1.0.0.1**
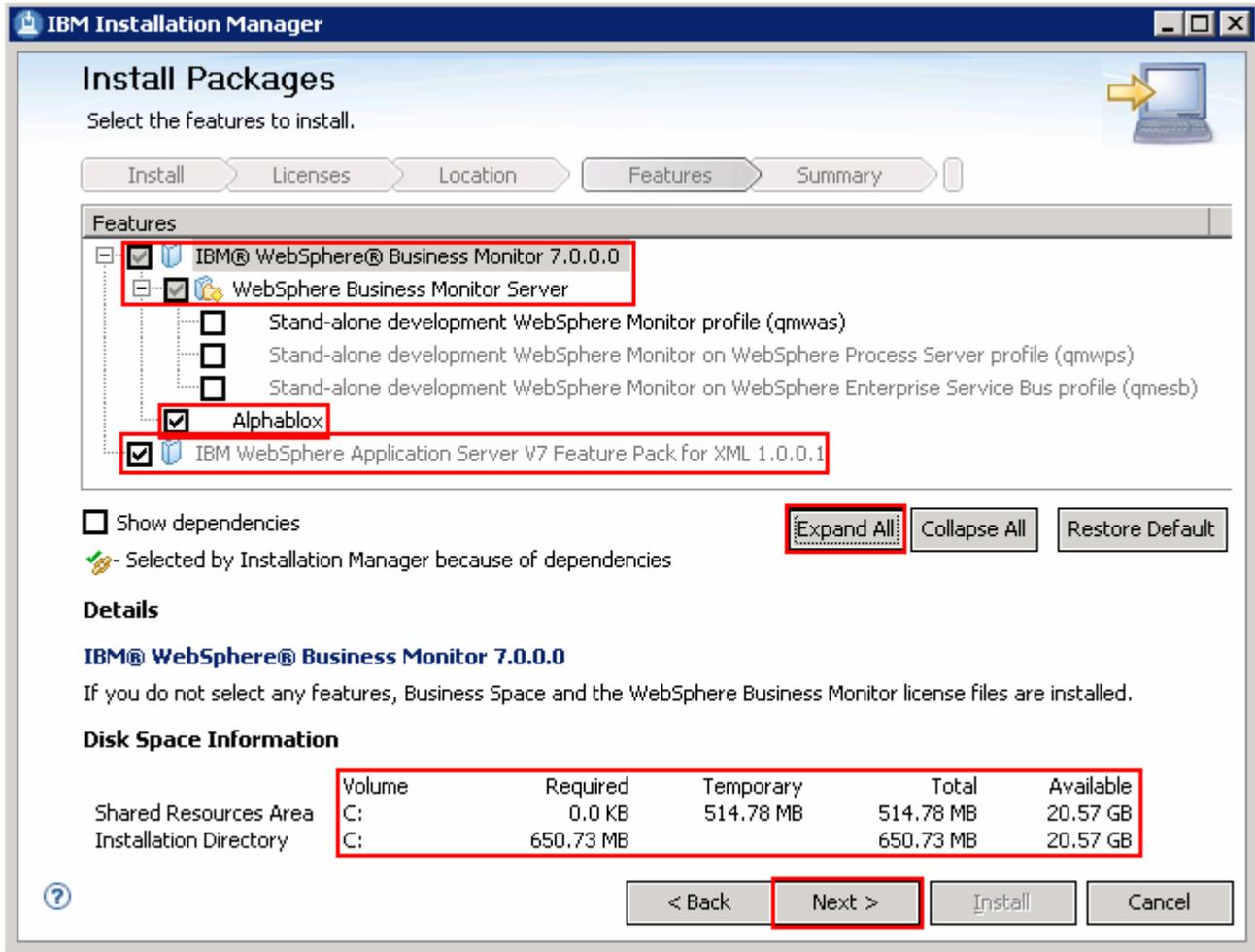
____ 21. Click **Next**

____ 22. In the next panel, verify the WebSphere Business Monitor installation summary
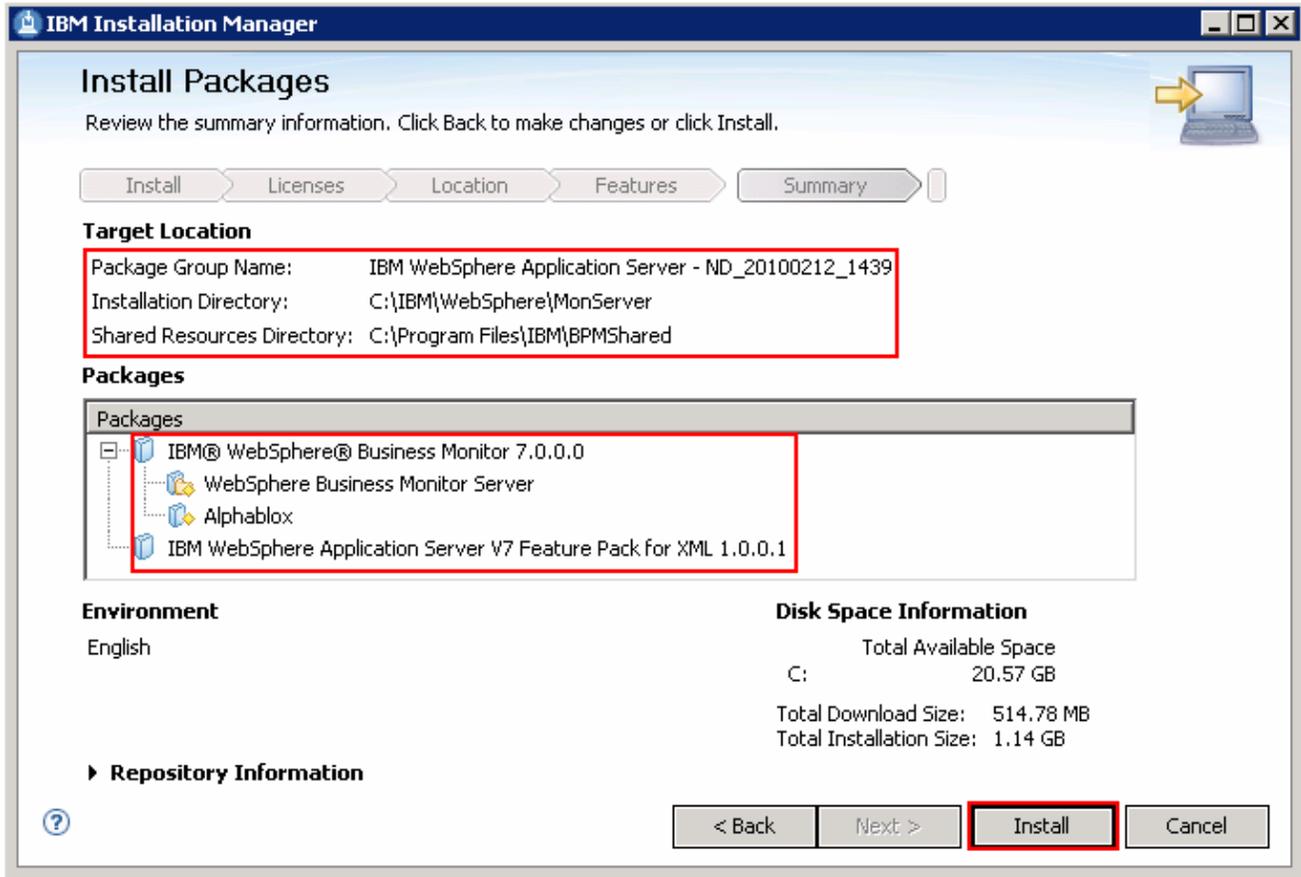
____ 23. Click **Install** to continue with the installation. The WebSphere Business Monitor V7.0 installation progresses
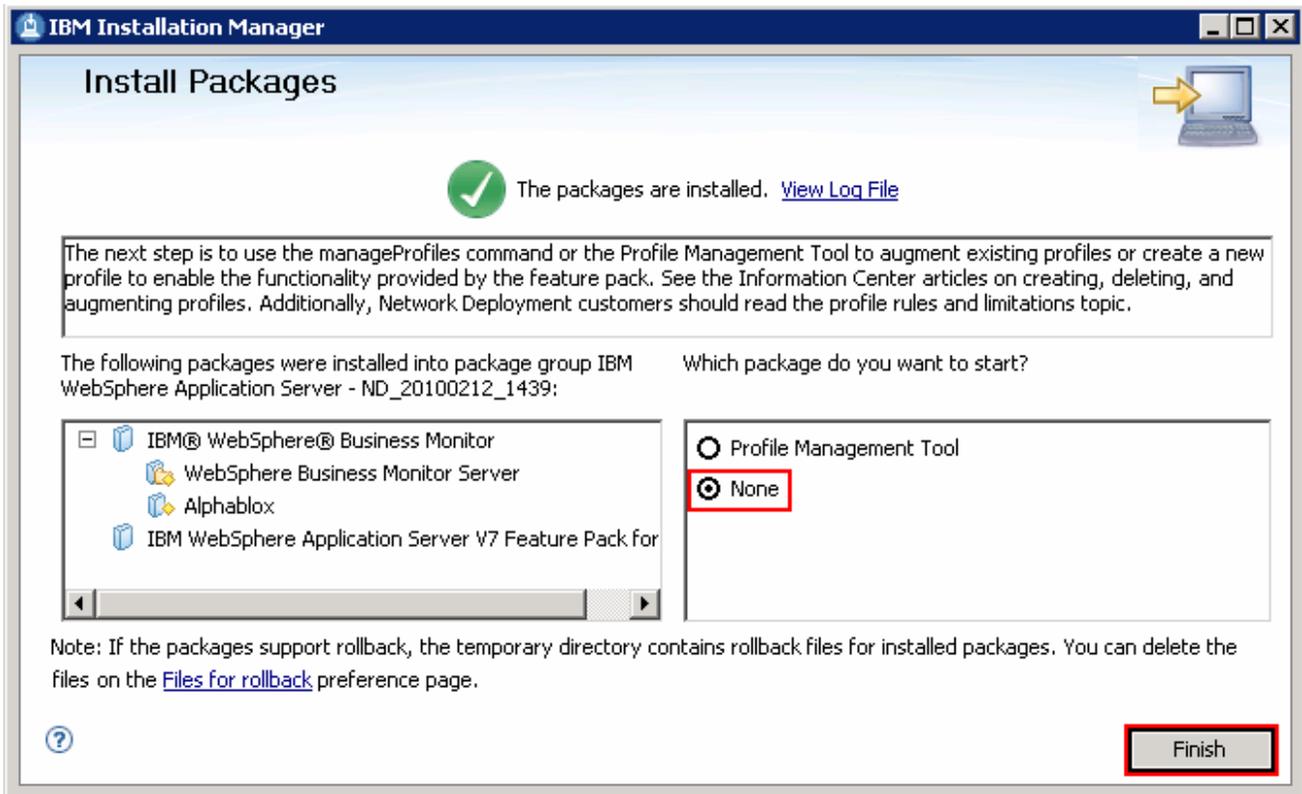
_____ 24. Select the radio button for **Profile Management Tool** and click **Finish** when the installation is complete

Note: Optionally select the radio button for **None** to quit the Installation Manager. You can launch the WebSphere Business Monitor **Profile Management Tool** at a later time.

Alternative: Silently install WebSphere Business Monitor V7.0 binaries

In this part of the exercise, you will install WebSphere Business Monitor binaries in a silent mode using a readily available script supported by a response file. If you are installing WebSphere Business Monitor for the first time on this machine, the features are updated with the latest available recommended refresh packs, fixes and extensions at the same time when you install WebSphere Business Monitor V7.0 provided the correct live repository locations is/are defined.

WebSphere Business Monitor core files can be installed in a silent mode which can be helpful in the event of the graphical user interface not available due to operating system restrictions. To achieve this, you will modify the readily available WebSphere Business Monitor installation script template (run_template.bat) and the response file template (template_response.xml) to suit your installation needs.

What the **run_template.bat** script template does**?**

- Sets the parameters mentioned below:

    o Sets the path to the WebSphere Application Server - Network Deployment installation image (WAS)

    o Sets the path of the WebSphere Application Server Network Deployment installation location (WAS_LOCATION)

    o Sets the path to the Installation Manager Installation image (IM)

- Silently installs the WebSphere Application Server - Network Deployment core file to the specified location

- Finally runs the Installation Manager executable file with **template_response.xml** response file as input

What the Installation Manager **template_response.xml** response file template does**?**

- Installs or updates the Installation Manager

- Synchronizes the WebSphere Application Server installation with the Installation Manager and creates a package group with the name; IBM WebSphere Application Server – ND

- Installs the WebSphere Application Server V7 Feature Pack for XML using the Installation Manager

- Installs IBM WebSphere Business Monitor and features using the Installation Manager

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Note: Visit **Part 1: Preparing for the WebSphere Business Monitor installation image** to extract and create the correct on-disk structure for the WebSphere Business Monitor V7.0 installation image.

Complete the instructions below to install WebSphere Business Monitor in a silent mode:

____ 1.   Create an on-disk WebSphere Business Monitor installation image

____ 2.   Navigate through the **responsefiles\WBM** directories (Ex: **C:\WBM70CDImage\ responsefiles\WBM**). You should see two files, a script and a response file as shown below:
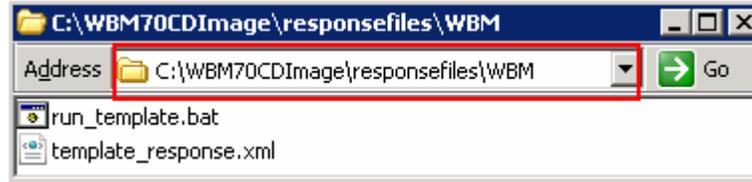
____ 3. Make a copy of the **run_template.bat** and **template_response.xml** files and name them, for example **silent_run_template.bat** and **silent_template_response.xml**
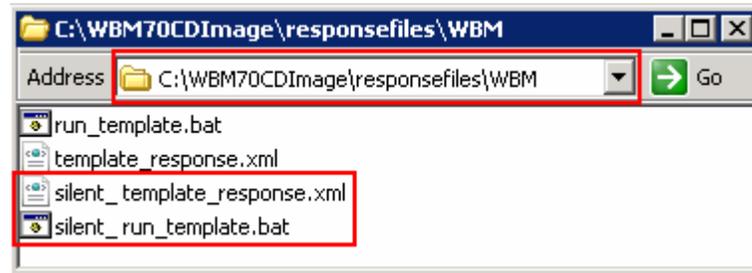
Note: Ensure both the files exist in the **\repositories\WBM** directory of the installation image. Running the files from this location helps with using the relative paths set for the installation image, repository locations and so on in these files.

____ 4. Modify the **silent_run_template.bat** script to suit your installation needs

Note: In this exercise, you will modify the value for the **WAS_LOCATION** variable and then the name of the response file if you named it different from the original file name.

____ a. Edit the **silent_run_template.bat** file using a text editor

____ b. Under the **PARAMETRS** section, modify the value for the **WAS_LOCATION** variable

Ex: **set WAS_LOCATION = C:\IBM\WebSphere\MonServer**

```
REM     ###### PARAMETERS #######

set WAS_IMAGE=..\..\WAS
set WAS_LOCATION=C:\IBM\WebSphere\MonServer
set IM_IMAGE=..\..\IM
set KEYRING=
```

Note: You need **not** modify the **WAS_IMAGE** and **IM_IMAGE** values unless this script template is moved to a different location or the installation image is created than the usual.

____ c. The next section of the script template, silently installs WebSphere Application Server Network Deployment to a specified installation location. You need not make any modifications to this section. Accept the defaults

```
"%WAS_IMAGE%\install" -silent -OPT silentInstallLicenseAcceptance=true -OPT
allowNonRootSilentInstall=true -OPT disableOSPrereqChecking=true -OPT
disableNonBlockingPrereqChecking=true -OPT installType=installNew -OPT
profileType=none -OPT feature=samplesSelected -OPT feature=languagepack.console.all
-OPT feature=languagepack.server.all -OPT installLocation="%WAS_LOCATION%"
```

```
REM ################################################
REM  Install WebSphere Application Server Network Deployment using a silent installation.
REM
REM   Note: Comment out this section if WebSphere Application Server Network Deployment is already installed
REM ################################################
"%WAS_IMAGE%\install" -silent -OPT silentInstallLicenseAcceptance=true -OPT allowNonRootSilentInstall=true -O
```

Note: Comment the WebSphere Application Server Network Deployment installation command, if it is already installed.

> __ d. The final section of the script runs the response file template and logs the trace to a file in XML format. Modify the name of the response file if you have named it different from the original. In this exercise, the file is renamed to **silent_template_response.xml**

```
echo "%IM_IMAGE%\installc"  --launcher.ini "%IM_IMAGE%\silent-install.ini" -input "%PROGDIR%\silent_template_response.xml" -
"%IM_IMAGE%\installc"  --launcher.ini "%IM_IMAGE%\silent-install.ini" -input "%PROGDIR%\silent_template_response.xml" -log "
```

> echo "%IM_IMAGE%\installc" --launcher.ini "%IM_IMAGE%\silent-install.ini" -input
> "%PROGDIR%**silent_template_response.xml**" -log
> "%WAS_LOCATION%\logs\wbm\silent_install.log"
>
> "%IM_IMAGE%\installc" --launcher.ini "%IM_IMAGE%\silent-install.ini" -input
> "%PROGDIR%**silent_template_response.xml**" -log
> "%WAS_LOCATION%\logs\wbm\silent_install.log"

> __ e. Save and close the **silent_run_template.bat** script

____ 5. Now, modify the **silent_template_response.xml** file to suit your installation needs. The response file defines a set of sequential activities called nodes which run specific tasks defined in that node

> __ **a. Node 1:** **<server></server>** → the **server** node defines all the local and (or) live repository locations. You need not make any modifications to the **location** of the repositories, unless the response file and the script template are moved and run from a different location

```
<!-- ################################################################
All repositories are listed here.
A repository can be either a local location or a live repository.

If you have a local repository, replace the appropriate value below.
You do not need to remove the repository from this section if you decide not to install
that product.
################################################################-->
<server>
        <!-- ################## IM Repository Location ##################-->
        <repository location='../../IM/' temporary='true'/>
        <!-- ##############  WebSphere Application Server Import Repository Location #####
        <repository location="../../WAS_SYNC/" />
        <!-- ##############  WebSphere Application Server Feature Pack for XML Repository L
        <repository location="../../repository/" />
        <!-- ################ WebSphere Business Monitor ##################-->
        <repository location="../../repository/" />
        <!-- ################ WebSphere Application Server Live Update Repository #########
        <repository location="http://public.dhe.ibm.com/software/websphere/repositories/" />
</server>
```

Note: If you do not want the Installation Manager to update WebSphere Business Monitor and features to the latest available refresh packs, fixes and extensions at same time when you install WebSphere Business Monitor V7.0 binaries, remove the **repository** element (marked with an arrow in the picture shown above) with a live repository location defined.

__ **b. Node 2: `<profile></profile>`** → the **`profile`** node defines where the Installation Manager is installed. Note that the **installLocation** and the value for the **eclipseLocation** must be same. In this exercise you will set both the values to **`C:/IBM/IM/eclipse`**

```
<!-- ######################################################################
This profile node defines where IBM Installation Manager (IM) is/or will be installed.

If you want to modify where IM is installed modify both the
installLocation and eclipseLocation values to specify the correct directory
######################################################################-->
<profile kind='self' installLocation='C:/IBM/IM/eclipse' id='IBM Installation Manager'>
        <data key='eclipseLocation' value='C:/IBM/IM/eclipse'/>
</profile>
```

Note: The Installation Manager expects only one eclipse cache location. Modify the eclipse cache location to suit your needs, only if this is a new Installation Manager installation. In this exercise, the eclipse cache location is set to **`C:/IBM/IM/eclipseCache`**

```
<!-- ###################################################################
Modify to change the location of the eclipseCache (only if no cache has been created yet)
###################################################################-->
<preference value="C:/IBM/IM/eclipseCache" name="com.ibm.cic.common.core.preferences.eclipseCache"/>
```

__ **c. Node 3: `<install></install>`** → the **`install`** node directs the Installation Manager installer to install the Installation Manager if not already installed. This node is ignored/skipped if the Installation Manager is already installed on this machine. In either case, you need not make any modifications to this node

```
<!-- ######################################################################
This installation node directs the IM installer to install IM.
You do not need to edit this line. If IM is already installed, this instruction
######################################################################-->
<install>
        <offering features='agent_core,agent_jre' id='com.ibm.cic.agent'/>
</install>
```

__ **d. Node 4: `<profile></profile>`** → the **`profile`** node defines where the WebSphere Application Server Network Deployment is installed. Specify the correct location where the WebSphere Application Server is installed. Note that the **installLocation** and the value for the **eclipseLocation** must be same. In this exercise the WebSphere Application Server is installed at **`C:\IBM\WebSphere\MonServer`**

```
<!-- ######################################################################
This profile node defines where IBM WebSphere Application Server Network Deployment is installed

Modify the installLocation and eclipseLocation values to the proper to specify the correct direct

If the specified profile ID exists, you must also change the profile ID.

If you would like to create the default profile uncomment and provide valid values for the ID and
######################################################################-->
<profile installLocation='C:/IBM/WebSphere/MonServer' id='IBM WebSphere Application Server - ND'>
        <data key='eclipseLocation' value='C:/IBM/WebSphere/MonServer'/>
        <data key="cic.selector.nl" value="en" />
        <data key="user.cic.imported.com.ibm.websphere.ND.70" value="WAS" />
        <!-- ##############################
        <data key='user.bpm.admin.username' value='admin'/>
        <data key='user.bpm.admin.password' value='admin'/>
        ##################################-->

</profile>
```

Note: The default profile ID (or Package Group name) for a WebSphere Application Server installation is IBM WebSphere Application Server – ND. If you are installing WebSphere Business Monitor on an existing

WebSphere Application Server which is already synchronized to the Installation Manager, meaning it already has a profile ID, provide the correct profile ID of that installation.

> __ e. **Node 4: `<import></import>`** → the `import` node directs the Installation Manager to import the WebSphere Application Server Network Deployment installation location into the Installation Manager and creates a package group named after the profile ID you specified, which is IBM WebSphere Application Server - ND

```
<!-- ##################################################################
This command directs IM to import WebSphere Application Server Network Deployment, w
If you changed the profile ID above, you must also change the profile ID here.
################################################################-->
<import profile="IBM WebSphere Application Server - ND" type="WAS" />
```

> __ f. **Node 5: `<install></install>`** → the `install` node directs the Installation Manager to install the defined offerings under the specified profile group also called as the package group. There are two offerings defined. Accept the defaults

>> 1) **`com.ibm.websphere.XML.v10`** offering installs the XML feature pack

>> 2) **`com.ibm.ws.WBM`** offering installs the Monitor feature including Alphablox

```
<!-- ##################################################################
This installation node directs the IM installer to install IM-based offering.

The ID must match a valid offering ID of a repository that is specified in the first section of thi
The features value is optional.  If it is ommitted, the default feature set is installed

See the online documentation for more information about modifying
this node.
If you would like to create the default profile, you will need to enable the proper feature id
The format is: <prod>.profile.feature   for example wdpe.profile.feature
For example your WDPE install node would become:
<offering profile="IBM WebSphere Application Server - ND" id="com.ibm.ws.WDPE" feature="wdpe.profil

If you changed the profile ID above, you must also change the profile ID here.
################################################################-->
<install>
        <offering profile="IBM WebSphere Application Server - ND" id="com.ibm.websphere.XML.v10" />
        <offering profile="IBM WebSphere Application Server - ND" id="com.ibm.ws.WBM" />
</install>
```

Note: If the live repository location is defined for the mentioned offerings, the Installation Manager installs and updates the offerings with the latest available recommended refresh packs, fixes, and so on.

> __ g. Save and close the response file

____ 6.   Complete the instructions below to run the installation:

> 1) Open a command window and change directories to **`C:\WBM70CDImage\responsefiles\WBM`** and run the command as shown below:

> • Type **`silent_run_template.bat`** and press the **Enter** key

```
C:\WINDOWS\system32\cmd.exe                                    _ □ X
C:\WBM70CDImage\responsefiles\WBM>silent_run_template.bat_
```
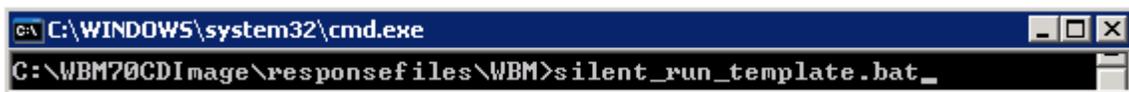
> __ b. The WebSphere Business Monitor V7.0 installation progresses and in the sequence mentioned below:

>> • Installs WebSphere Application Server V7.0.0.7

- Installs Installation Manager V1.3.3 or a recommended latest available version

- Imports the WebSphere Application Server V7.0.0.7 installation location to the Installation Manager repository and creates a package group (profile ID) named IBM WebSphere Application Server - ND

- Installs the XML feature pack, WebSphere Business Monitor including the Alphablox feature to the package group named IBM WebSphere Application Server –ND and updates with the available refresh packs, fixes and extensions if the live repository reference is made available

```
C:\WBM70CDImage\responsefiles\WBM>silent_run_template.bat
0
"..\..\IM\installc"  --launcher.ini "..\..\IM\silent-install.ini" -input "C:\WBM
70CDImage\responsefiles\WBM\\silent_template_response.xml" -log "C:\IBM\WebSpher
e\MonServer\logs\wbm\silent_install.log"
The next step is to use the manageProfiles command or the Profile Management Too
l to augment existing profiles or create a new profile to enable the functionali
ty provided by the feature pack. See the Information Center articles on creating
, deleting, and augmenting profiles. Additionally, Network Deployment customers
should read the profile rules and limitations topic.

C:\WBM70CDImage\responsefiles\WBM>_
```

____ 7.   Verify the WebSphere Application Server installation

__ a. Navigate to the **logs** directory, **<WBM_HOME>\logs\install** to verify the installation status. Open the **log.txt** file and scroll to the end of the file. You should see the status reported as **INSTCONFSUCCESS** at the end of the file

____ 8.   Verify the XML feature pack installation

__ a. Navigate to the **logs** directory, **<WBM_HOME>\logs\xml** to verify the installation status. From the **install** directory, open the **installconfig.log** file. You should see the status reported as **INSTCONFSUCCESS** at the end of the file
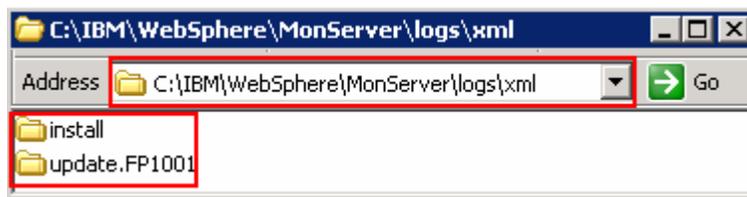
Note: If the live repository location is defined, the installation Manager updates the offering with the available fix packs, fixes and so on. In this case, you see an update directory with the version appended as shown in the picture above. Verify if the update is installed successfully by opening the **installconfig.log** file from the **update.FP1001** directory.

____ 9.   Verify the WebSphere Business Monitor and alphablox installation

__ a. Navigate to the **logs** directory, **<WBM_HOME>\logs\wbm** to verify the installation status. From the **install** directory, open the **installconfig_wbm.log** and **installconfig_abx.log** file. You should see the status reported as **INSTCONFSUCCESS** at the end of the files

_____ 10. Run the Version Information command. Open a command window, change directories to **<WBM_HOME>\bin** and the **versionInfo.bat**. You should see the version information for all the offerings installed.

Part 3: Create WebSphere Business Monitor Server Dmgr profile

In this part of the exercise, you will create a WebSphere Business Monitor deployment manager profile using the Profile Management Tool (32 bit users only). If you are on a 64 bit operating system, you can use the manage profiles command.

Note: - For manual profile creation, visit: **Alternative: Manually create WebSphere Business Monitor deployment manager profile**.

Complete the instructions below to create a WebSphere Business Monitor V7.0 deployment manager profile:

____ 1.   Launch the Profile Management Tool

__ a. From the start menu, select `IBM WebSphere` → `Business Monitor 7.0` → `Profile Management Tool`

Note: Alternatively to launch the Profile Management Tool, navigate to `<WBM_HOME>\bin\ ProfileManagement`, double click `pmt.bat`
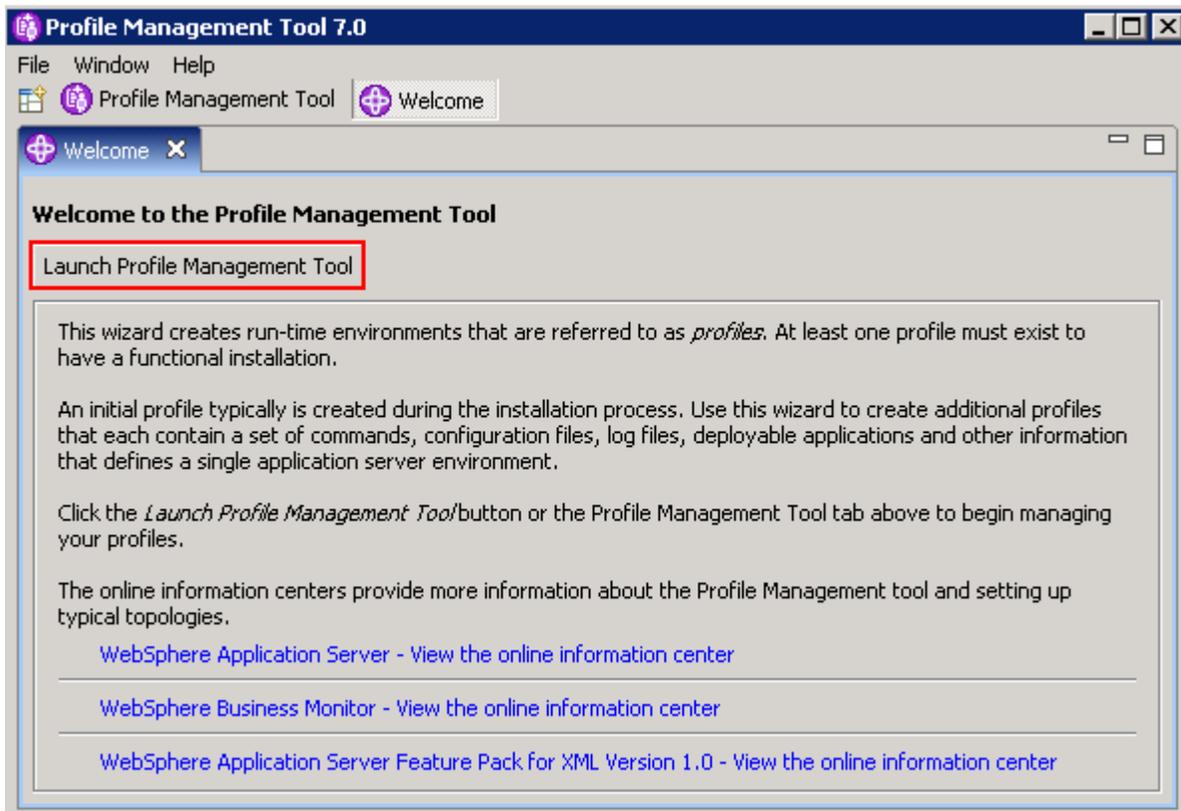
____ 2.   Select the `Profile Management Tool` button
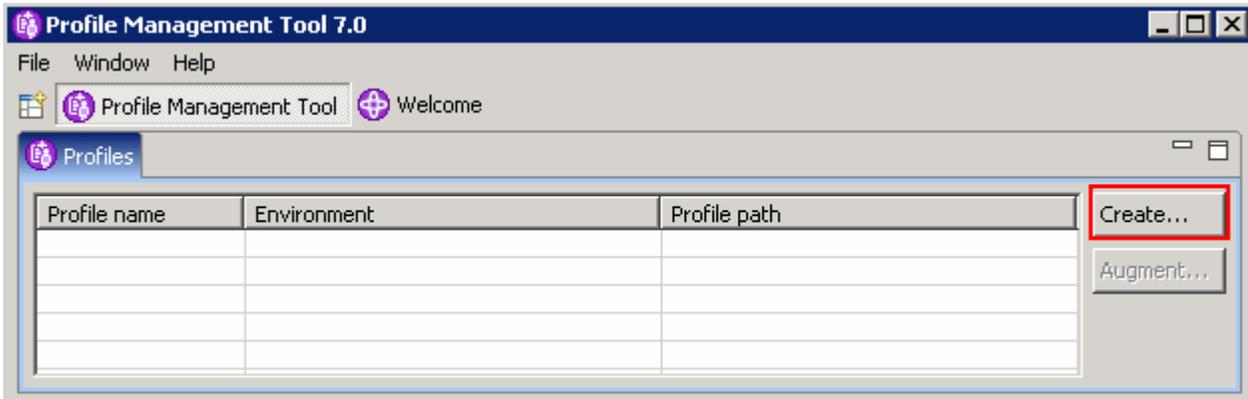
____ 3. Click the **Create** button. The **Environment** selection panel is launched

____ 4. In the **Environment Selection** panel, expand **WebSphere Business Monitor** and select **Monitor server deployment manager**
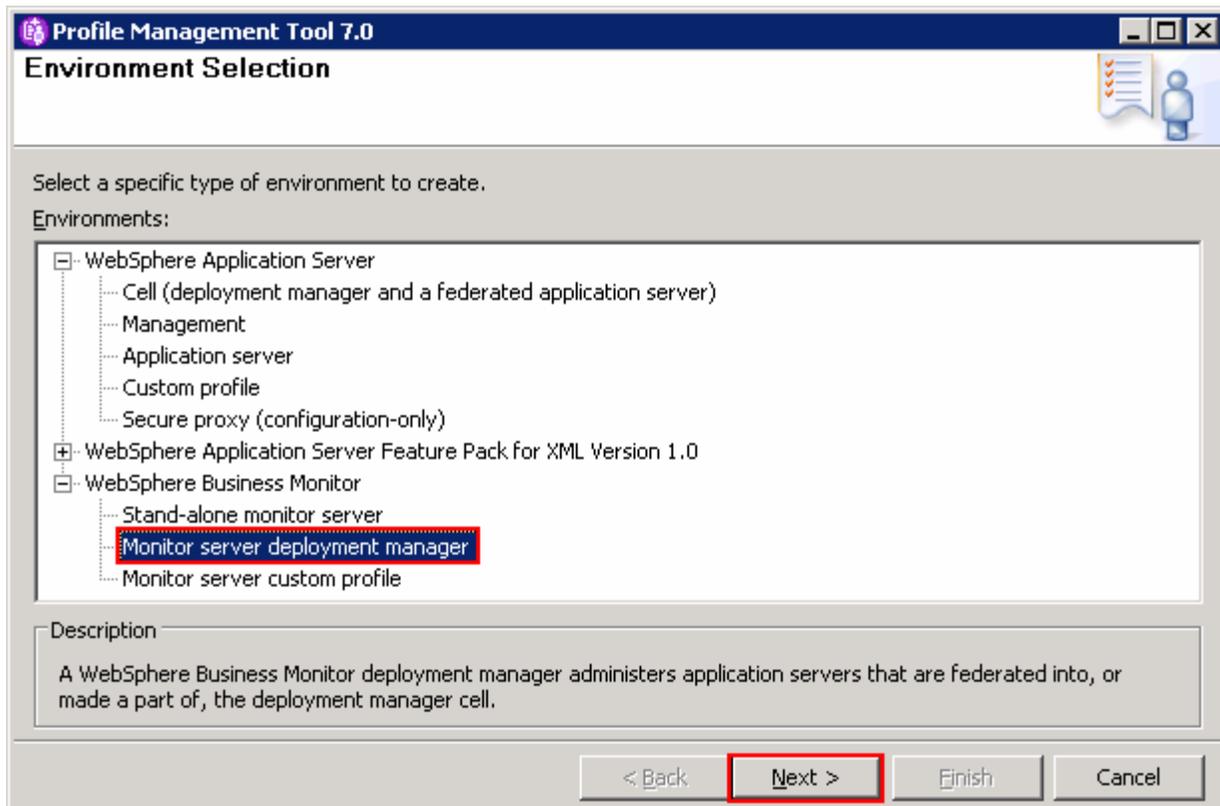
____ 5. Click **Next**

____ 6. In the next **Profile Creation Options** panel, select the radio button for **Advanced profile creation**
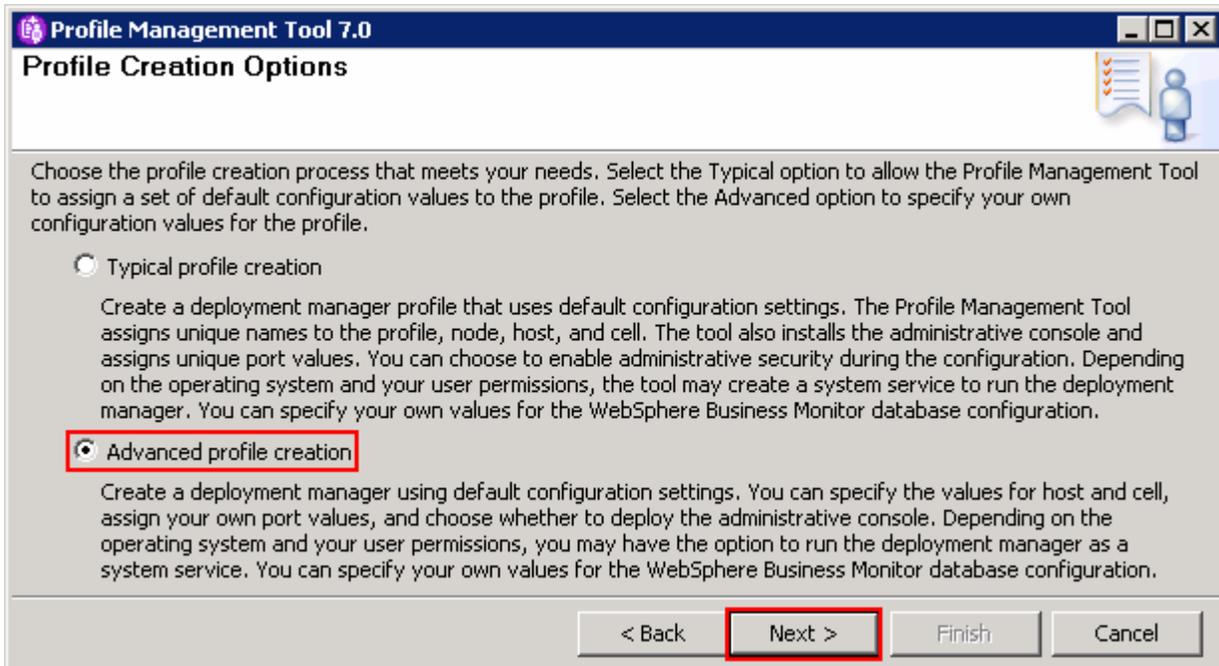
_____ 7. Click **Next**

_____ 8. In the next **Optional Application Deployment** panel, select the application to deploy to the WebSphere Business Monitor environment being created:

    __ **a. Deploy the administrative console (recommended)**
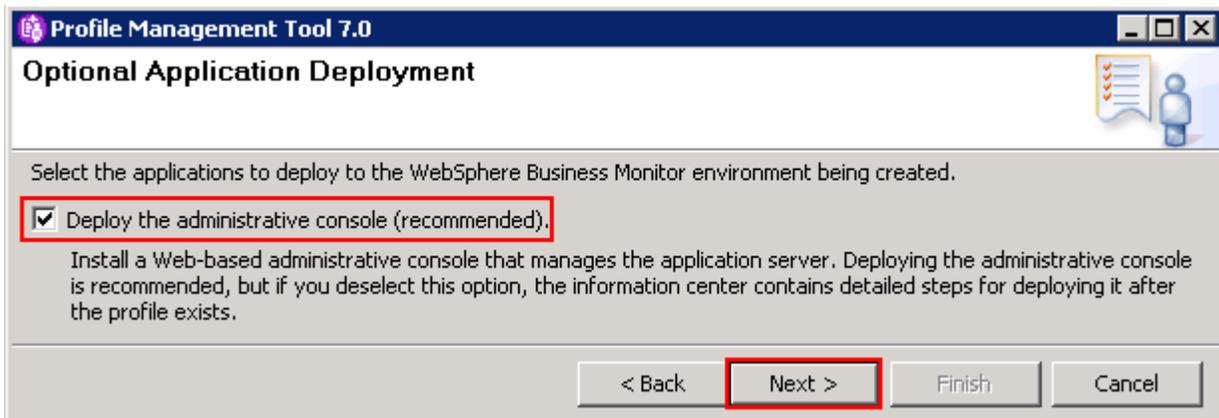
_____ 9. Click **Next**

_____ 10. In the next **Profile Name and Location** panel, specify the profile name and the profile directory path to the profile being created

    __ a. Profile name   : **Dmgr01**

    __ b. Profile Directory : **<WBM_HOME>\profiles\Dmgr01**

                      Ex: C:\IBM\WebSphere\MonServer\profiles\Dmgr01

_____ 11. Click **Next**

_____ 12. In the next **Node Host and Cell Names** panel, specify the node name, host name and cell name for the deployment manager profile

__ a. Node name   : **wbmCellManager01**

__ b. Host name   : Ex: **dmgr.austin.ibm.com**

__ c. Cell Name   : **wbmCell01**

____ 13. Click **Next**

____ 14. In the next **Administrative Security** panel, select the check box for **Enable administrative security** and then type the administrative username and password:

____ a. User name   : **admin**

____ b. Password   : **superSecret**

____ c. Confirm Password : **superSecret**

____ 15. Click **Next**

____ 16. In the next **Security Certificate (Part 1)** panel, accept the defaults
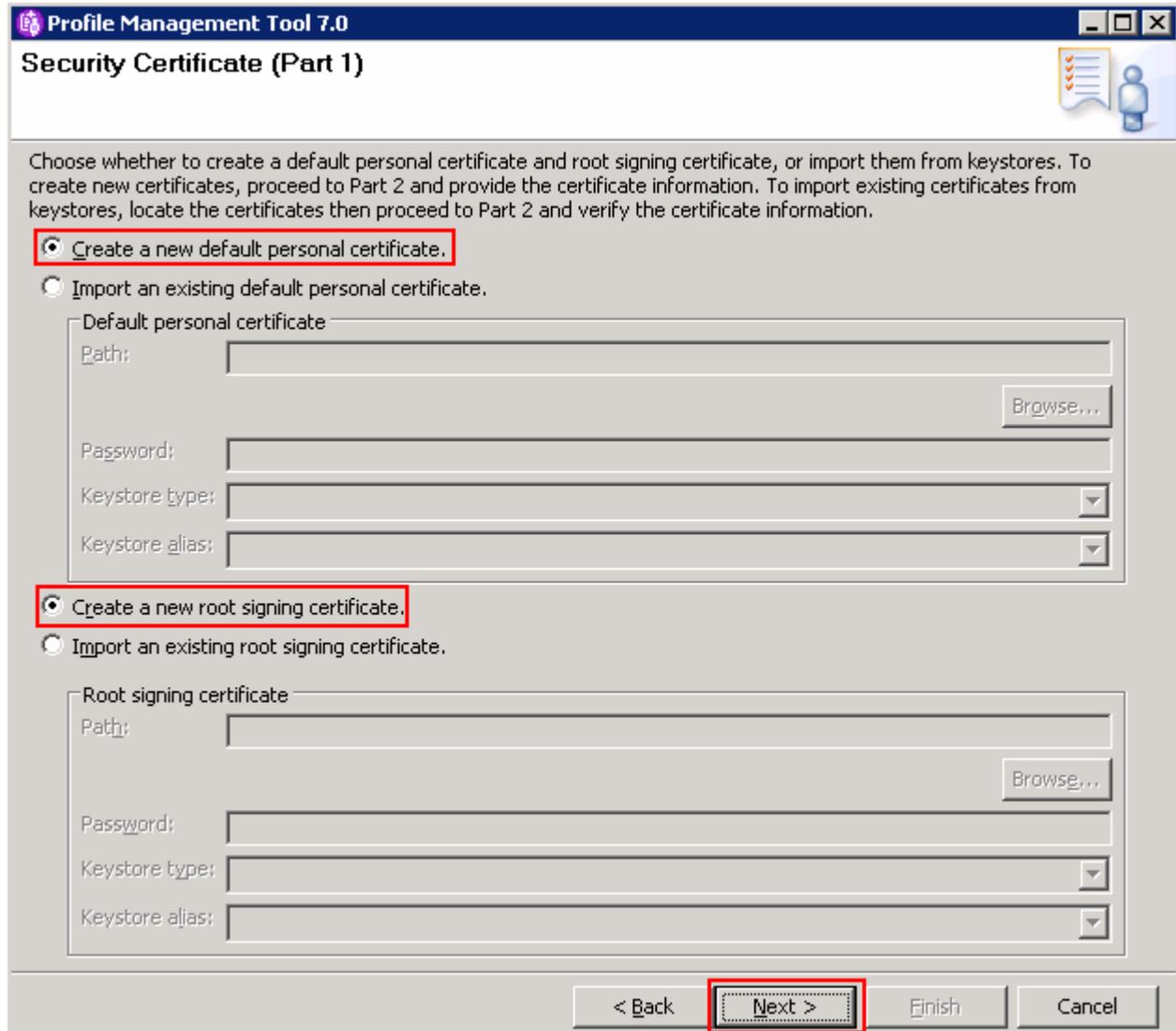
____ 17.   Click **Next**

____ 18.   In the next **Security Certificate (Part 2)** panel, accept the defaults

____ 19. Click **Next**

____ 20. In the next **Port Values Assignment** panel, review the ports assigned. You can change them to the required values, but ensure that the port numbers do not conflict with other services running on this machine

____ 21. Click **Next**

____ 22. In the next **Widows Service Definition** panel, clear the check box for `Run the deployment manager process as a Windows service`
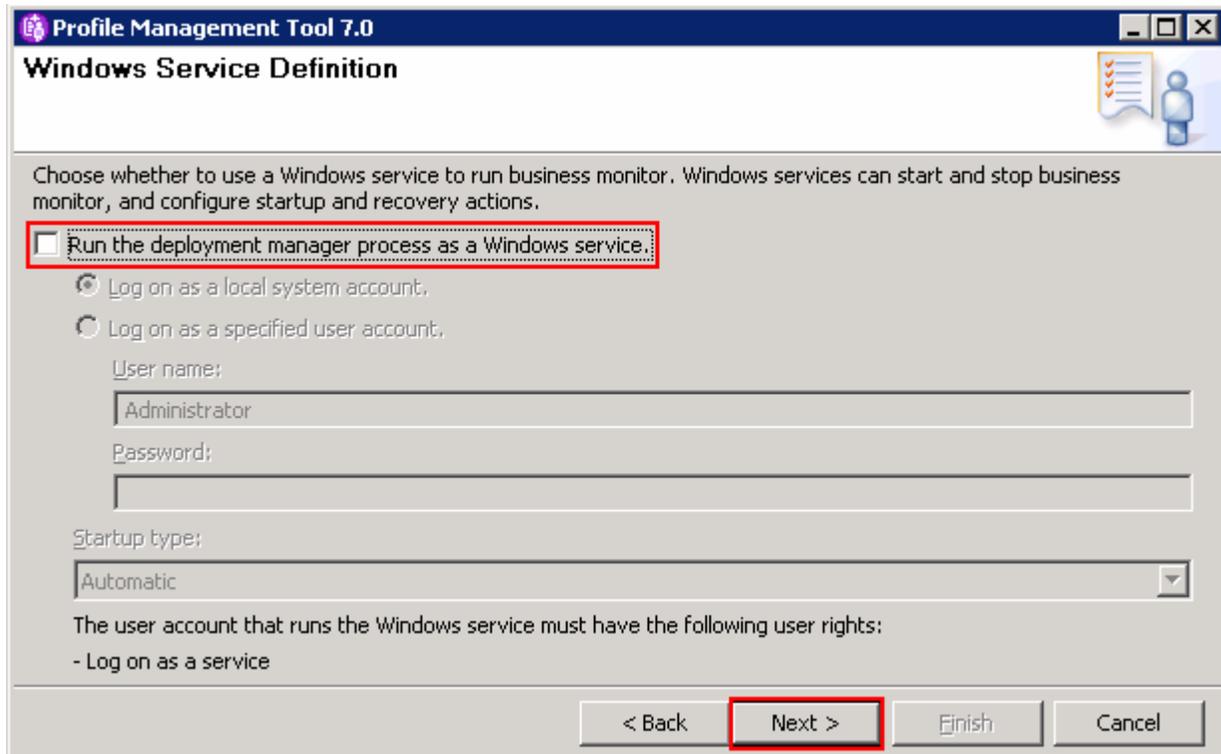
____ 23. Click **Next**

____ 24. In the next **Database Configuration** panel, specify the information for the monitor database type:

     __ a. Database product: **DB2 Universal Database**

     __ b. Common Database name   : **MONITOR**

     __ c. Schema name   : **MONITOR**

     __ d. Select the check box for **Delay execution of database scripts** (must select if using a remote database)

____ 25. Click **Next**

____ 26. In the next **Database Configuration (Part 2)** panel, provide the additional monitor database configuration information:

  __ a. User name: **db2admin**

  __ b. Password: **superSecret**

  __ c. Confirm password: **superSecret**

  __ d. Location (directory) of JDBC driver classpath files: **<WBM_HOME>\universalDriver.wbm/lib**

  __ e. JDBC driver type: **4**

  __ f. Database server host name: Ex: **dbserver.austin.ibm.com**

  __ g. Server Port: **50000** (default)

____ 27. Click **Next**

____ 28. The **Database validation failure** dialog pops-up

____ 29. Click **Yes** to proceed to the next step

____ 30. In the next **Profile Creation Summary** panel, verify the profile creation summary
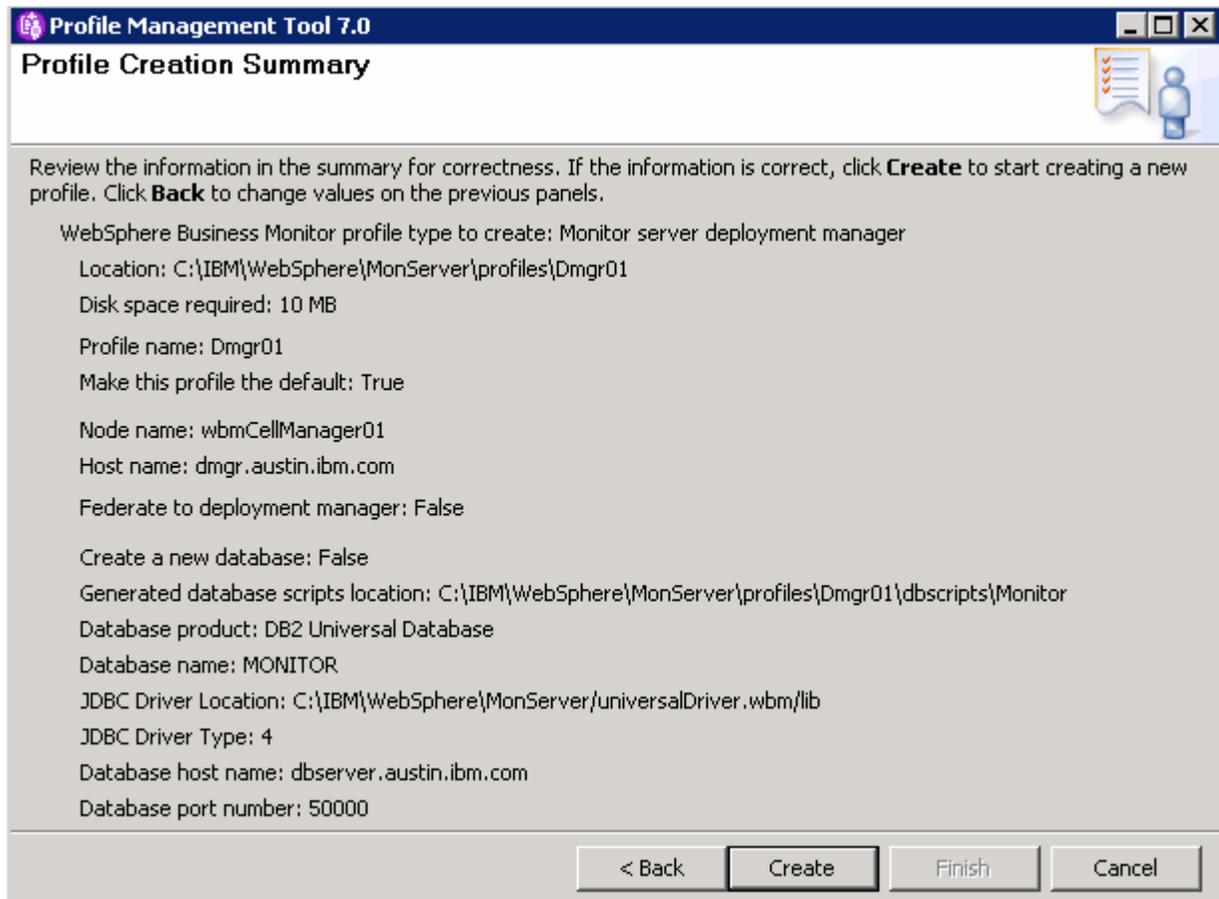
____ 31. Click **Create**

____ 32. Once the installation is complete, clear the check box for **Launch the WebSphere Business Monitor first steps** console in the **Profile Creation Complete** panel
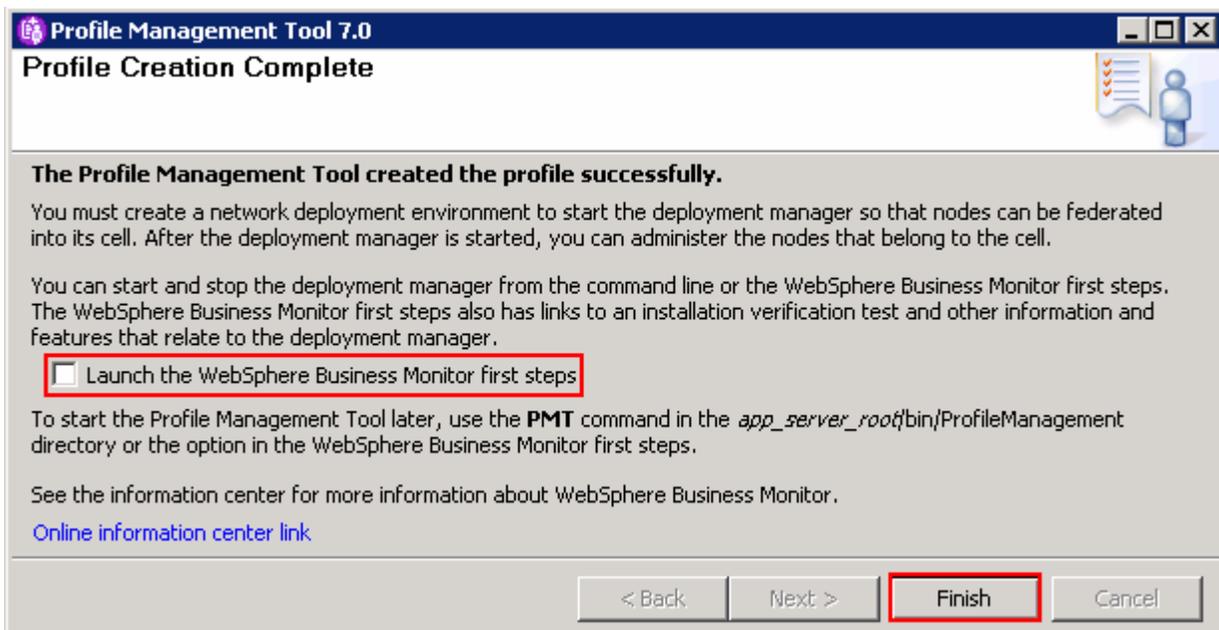
____ 33. Click **Finish**

Note: If you chose DB2 as the database and delayed running the database scripts, visit **Task 1: Manually create WebSphere Business Monitor database and tables**.

Verify the WebSphere Business Monitor administrative console menus

____ 34. Start the WebSphere Business Monitor deployment manager process, launch the administrative console and log in using the security credentials

____ 35. In the left navigation pane, click the **Welcome** link and ensure the correct WebSphere Business Monitor version is displayed
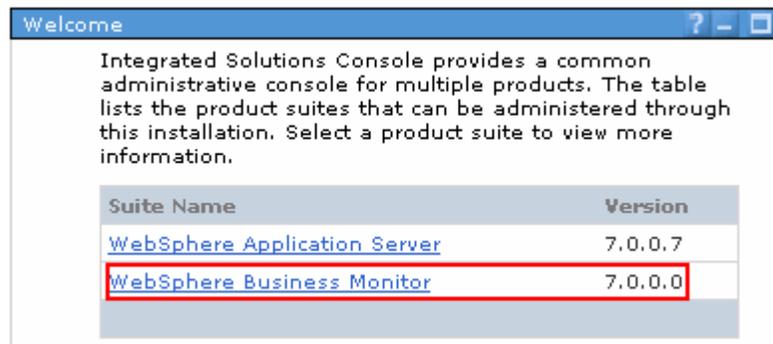
____ 36. In the left navigation pane, expand **Servers** and ensure the **WebSphere Business Monitor configuration** menu exists. Make sure the link works

____ 37. 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 make sure the links work
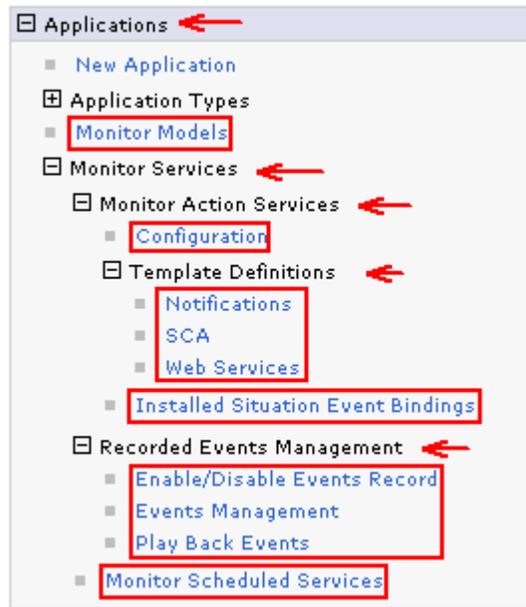
____ 38. In the left navigation pane, expand **Security** and ensure **Monitor Data Security** menu exists. Make sure the link works

____ 39. In the left navigation pane, expand **Troubleshooting** → **Monitor Models** and ensure **Failed Event Sequences** and **Unrecoverable Events** menus exist. Ensure the links work

Alternative: Manually create WebSphere Business Monitor deployment manager profile

WebSphere Business Monitor deployment manager profile can be created manually using the **manageprofiles** command with the help of WebSphere Business Monitor deployment manager profile template. The manageprofiles command comes handy when creating profiles on 64-bit platforms.

Download: Profile creation scripts good for Windows and UNIX are available for download from the IBM Education Assistant. These scripts also use manageprofiles command. You can update the scripts with required options and then create profiles.

Note: For more options, navigate to **<WBM_HOME>/bin** and run the command below:

manageprofiles.bat –create –templatePath <WBM_HOME>/profileTemplates/wbmonitor/dmgr -help

Complete the instructions below to create WebSphere Business Monitor deployment manager profile using the manageprofiles command:

____ 1.   The following are the options commonly used to create a WebSphere Business Monitor deployment manager profile:

Parameter	Value
-create	*N/A*
-templatePath	<WBM_HOME>**/**profileTemplates/wbmonitor/dmgr
-profileName	Ex: Dmgr01
-profilePath	<WBM_HOME>/profiles/Dmgr01
-nodeName	Ex: wbmCellManager01
-cellName	Ex: wbmCell01
-hostName	Ex: dmgr.austin.ibm.com
-enableAdminSecurity	true
-adminUserName	Ex : admin
-adminPassword	Ex : superSecret
-winserviceCheck	false (windows only)
-wbmDBType	**DB2_Universal** for a DB2 Universal database **DB2UDBOS390_V8_1** for a DB2 for z/OS V8 database **DB2UDBOS390_V9_1** for a DB2 for z/OS V9 database **Oracle11g** for Oracle 11g database
-wbmDBDelayConfig	true

-wbmDBName	Ex : MONITOR
-wbmDBSchemaName	Ex : MONITOR
-wbmDBDriverType	4
-wbmDBUserId	Ex : db2admin
-wbmDBPassword	Ex : superSecret
-wbmDBHostName	Ex : dbserver.austin.ibm.com
-wbmDBServerPort	Ex : 50000 (default)
-wbmDBJDBCClasspath	<WBM_HOME>\universalDriver.wbm\lib

____ 2. Run the manageprofiles script. Navigate to the **<WBM_HOME>/bin** directory and run the manageprofiles script along with the options

Ex: For DB2_UNIVERSAL as database type

```
manageprofiles.bat -create -templatePath <WBM_HOME>\profileTemplates\wbmonitor\dmgr -
profileName Dmgr01 -profilePath <WBM_HOME>\profiles\Dmgr01 -nodeName wbmCellManager01
-cellName wbmCell01 -hostname dmgr.austin.ibm.com -enableAdminSecurity true -
adminUserName admin -adminPassword superSecret -winserviceCheck false -wbmDBType
DB2_Universal -wbmDBDelayConfig true -wbmDBName MONITOR -wbmDBSchemaName MONITOR -
wbmDBDriverType 4 -wbmDBUserId db2admin -wbmDBPassword superSecret -wbmDBHostName
dbserver.austin.ibm.com -wbmDBServerPort 50000 -wbmDBJDBCClasspath
<WBM_HOME>\universalDriver.wbm\lib
```

Note: If you chose DB2 as the database and delayed running the database scripts, visit **Task 1: Manually create WebSphere Business Monitor database and tables**.

____ 3. Verify the installation

__ a. Navigate to <WBM_HOME>/logs/manageprofiles and locate the **<profile_name>_create.log** file

 Ex: C:\IBM\WebSphere\MonServer\logs\manageprofiles\Dmgr01_create.log

__ b. You should see a string, **INSTCONFSUCCESS** written to the last line of the file. If so the installation is successful

__ c. If you **INSTCONFPARTIALSUCCESS** or **INSTCONFFAILED** appear in the last line of the log file, problems encountered during the installation

____ 4. Run the installation verification test

__ a. Navigate to **<WBM_HOME>/bin** and run the **ivt** command with appropriate parameters

 ivt.bat <SERVER_NAME> <PROFILE_NAME> -username <USER_NAME> -password <PASSWORD>

 Ex: **ivt.bat dmgr Dmgr01 -username admin -password superSecret**

____ 5. Ensure the verification is successful. While the verification is complete, examine the **SystemOut.log** file. The file is located at **<WBM_HOME>/profiles/Dmgr01/logs/dmgr**

# Part 4: Create WebSphere Business Monitor custom profiles

In this part of the exercise, you will create WebSphere Business Monitor custom profiles on all the designated machines using the Profile Management Tool (32 bit users only). A custom profile is an empty profile that gets created and eventually has to federate itself to the WebSphere Business Monitor deployment manager profile. If you are on a 64 bit operating system, you can use the manageprofiles command.

Note: - For manual profile creation, visit: **Alternative: Manually create WebSphere Business Monitor custom profile**

Prerequisites: -

- Before proceeding to the next step, ensure the deployment manager you want to federate this custom 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 a 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 security is enabled

Complete the instructions below to create a WebSphere Business Monitor custom profile:

____ 1.   Launch the Profile Management Tool

    __ a. From the start menu, select `IBM WebSphere → Business Monitor 7.0 → Profile Management Tool`

Note: Alternatively to launch the Profile Management Tool, navigate to `<WBM_HOME>\bin\ ProfileManagement`, double click `pmt.bat`

____ 2.   Select the **Profile Management Tool** button

____ 3.   Click the `Create` button. The **Environment** selection panel is launched

____ 4.   In the Environment selection panel, expand `WebSphere Business Monitor` and select `Monitor server custom profile`
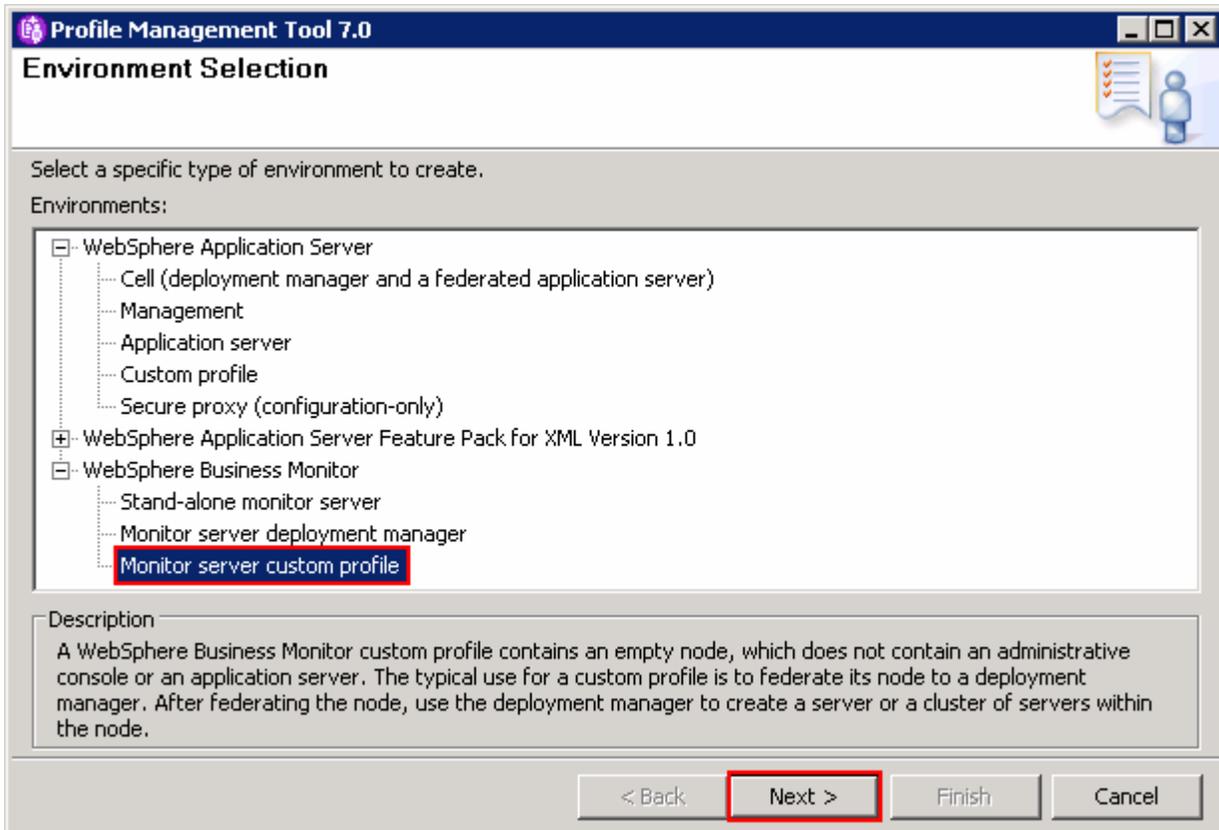
_____ 5.   Click **Next**

_____ 6.   In the next **Profile Creation Options** panel, select the radio button for **Advanced profile
             creation**
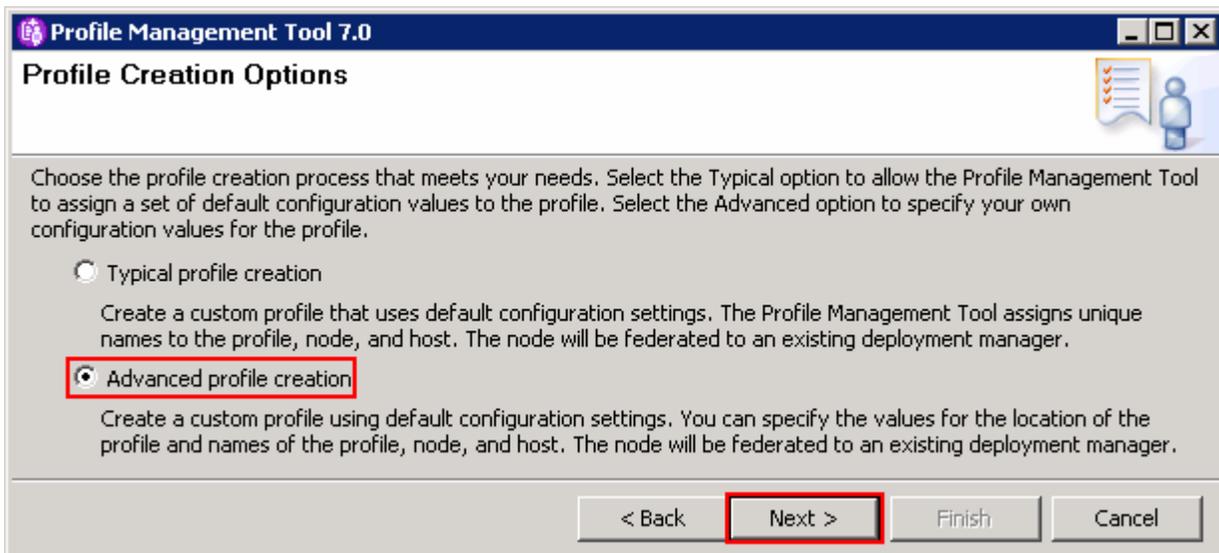
_____ 7.   Click **Next**

____ 8. In the next **Profile Name and Location** panel, specify the custom profile name and the location where the profile is created

    __ a. Profile name   : **Custom01**

    __ b. Profile Directory : **<WBM_HOME>\profiles\Custom01**

                Ex: C:\IBM\WebSphere\MonServer\profiles\Custom01
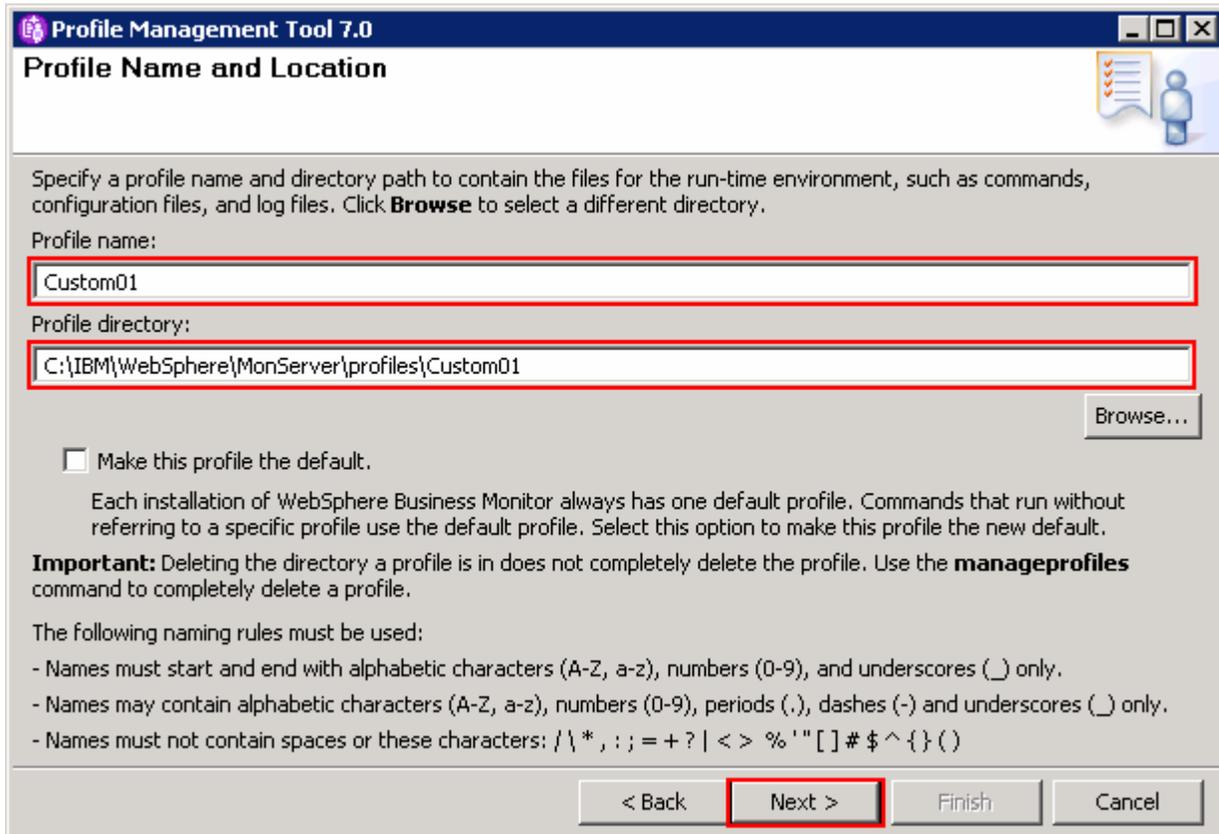
____ 9. Click **Next**

____ 10. In the next **Node and Host Names** panel, specify the node name and host name for this profile:

    __ a. Node name : **Custom01Node01**

    __ b. Host name   : **custom01.austin.ibm.com** (fully qualified host name)

**Best Practice**: Keep the node name short.

Note: The topology mapping table (Visit the **Introduction** or **Part 5** sections), gives you an opportunity to foresee the naming pattern and helps assigning the member servers to a cluster. On generating the deployment environment, the clusters and their member servers are named by appending to the Deployment Environment name and the node name. The clusters and their member server names can be lengthy if the node name is long.

____ 11. Click **Next**

____ 12. In the next **Federation** panel, provide the node federation information below:

__ a. Deployment manager host name or IP address : Ex: `dmgr.austin.ibm.com` (fully qualified host name of the deployment manager host machine)

__ b. Deployment manager SOAP port number : Ex: `8879` (default)

__ c. Deployment manager authentication:

- User name : Ex: `admin`

- Password   : Ex: `superSecret`

__ b. Clear the check box for `Federate this node later`

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

____ 13. Click **Next**

____ 14. In the next **Port Values Assignment** panel, review the ports assigned. You can change them to the required values, but ensure that the port numbers do not conflict with other services running on this machine

____ 15. In the next **Database Configuration** panel, specify the information for the WebSphere Business Monitor database:

__ a. Select **DB2 Universal Database** for the database product used on the deployment manager

__ b. Location (directory) of JDBC driver classpath files: **<WBM_HOME>\universalDriver.wbm\lib**
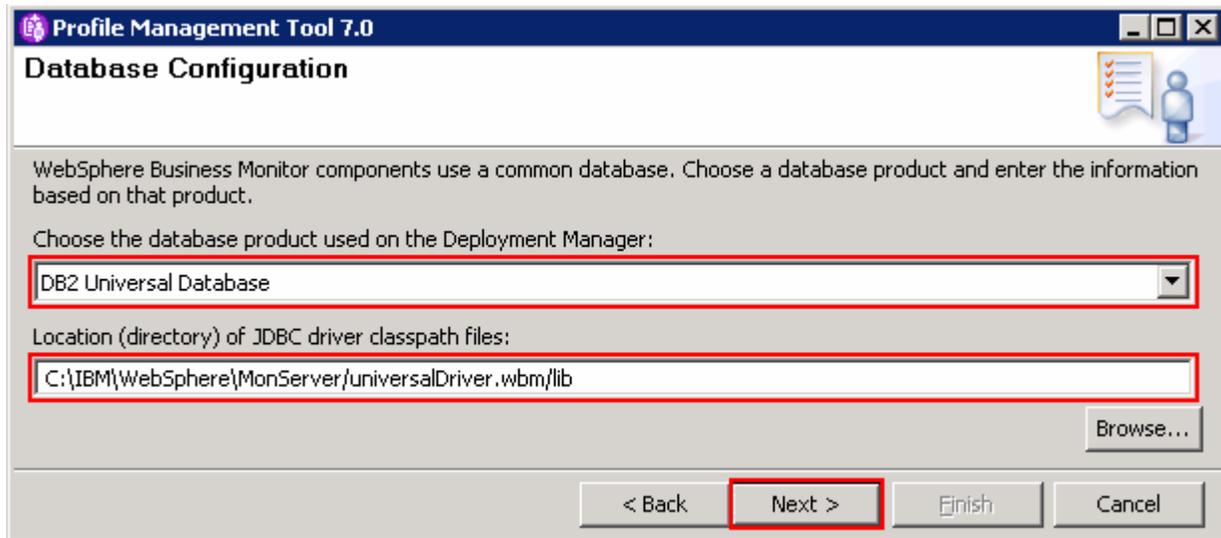
_____ 16. Click **Next**

_____ 17. In the next panel, verify the custom profile creation summary information
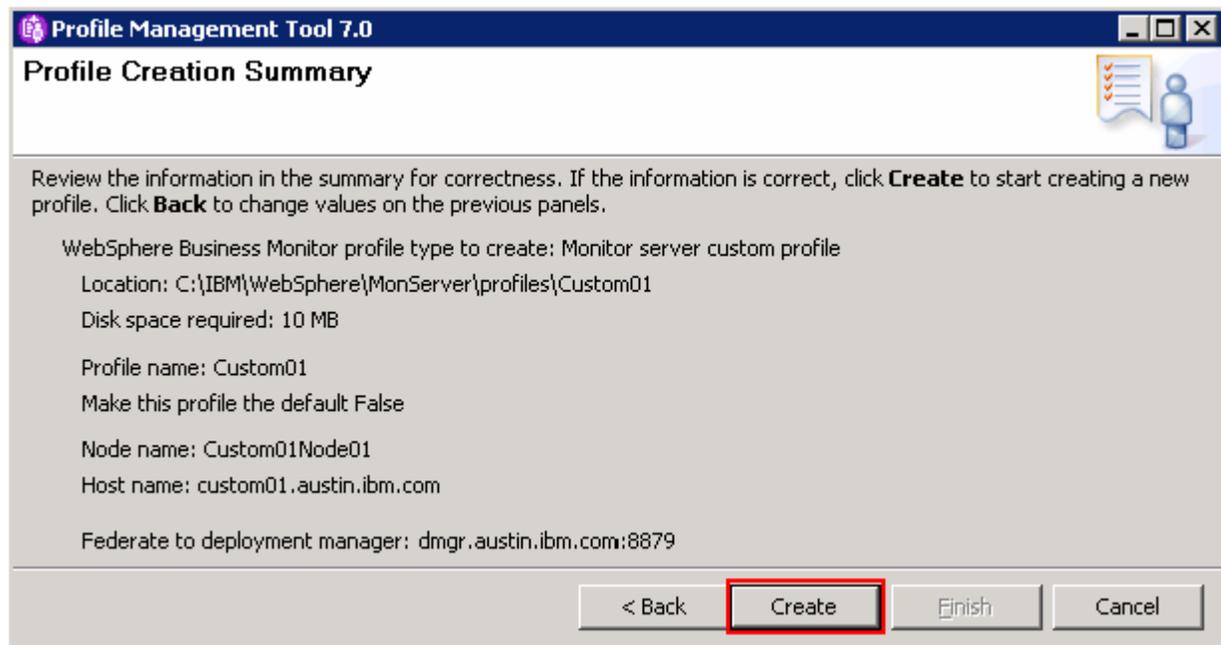
_____ 18. Click **Create**. The profile creation progresses
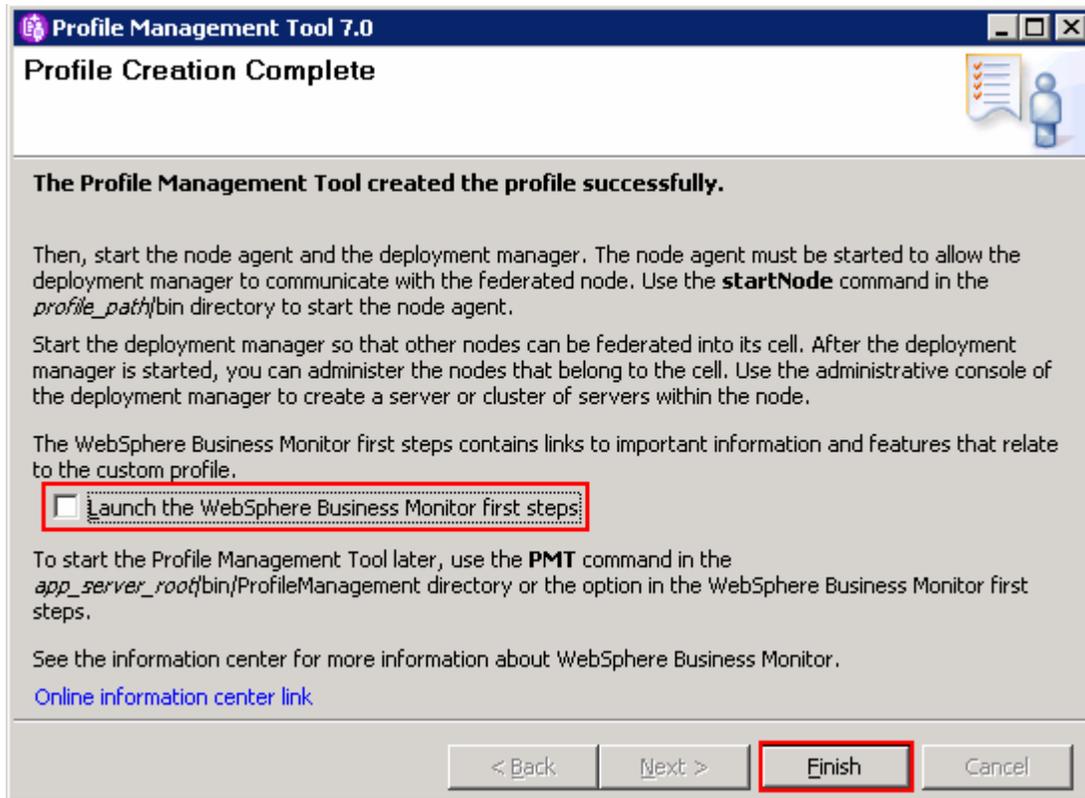
___ 19. Once the profile creation is complete, clear the check box for **Launch the First steps** console and click **Finish**

___ 20. Similarly create the remaining custom profile and name it as **Custom02** by repeating these instructions on the designated host machine. In this exercise, the node is named as **Custom02Node02**

___ 21. 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 the nodes you added display the correct versions (see the Version column) for WebSphere Application Server, XML Feature pack and WebSphere Business Monitor

Select	Name	Host Name	Version	Discovery Protocol	Status
	You can administer the following resources:				
☐	Custom01Node01	custom01.austin.ibm.com	ND 7.0.0.7 WBM 7.0.0.0 XML FEP 1.0.0.0	TCP	⊕
☐	Custom02Node02	custom02.austin.ibm.com	ND 7.0.0.7 WBM 7.0.0.0 XML FEP 1.0.0.0	TCP	⊕
	wbmCellManager01	dmgr.austin.ibm.com	ND 7.0.0.7 WBM 7.0.0.0 XML FEP 1.0.0.0	TCP	⊕
Total 3					

Alternative: Manually create WebSphere Business Monitor custom profile

WebSphere Business Monitor custom profile can be created manually using the **manageprofiles** command with the help of WebSphere Business Monitor custom profile template. The manageprofiles command comes handy when creating profiles on 64-bit platforms.

Prerequisites: -

- Before proceeding to the next step, ensure the deployment manager you want to federate this custom 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 a 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 security is enabled

Download: Profile creation scripts good for Windows and UNIX are available for download from the IBM Education Assistant. These scripts also use manageprofiles command. You can update the scripts with required options and then create profiles.

Note: For more options, navigate to `<WBM_HOME>/bin` and run the command:

manageprofiles.bat –create –templatePath <WBM_HOME>**/**profileTemplates/wbmonitor/managed -help

____ 1. The following are the options commonly used to create a WebSphere Business Monitor custom profile:

Parameter	Value
-create	*N/A*
-templatePath	<WBM_HOME>**/**profileTemplates/wbmonitor/managed
-profileName	Custom01
-profilePath	<WBM_HOME>/profiles/Custom01
-nodeName	Ex: Custom01Node01, Custom02Node02
-hostName	Ex: custom01.austin.ibm.com
-dmgrHost	Ex : dmgr.austin.ibm.com
-dmgrPort	8879 (default)
-dmgrAdminUserName	Ex : admin
-dmgrAdminPassword	Ex : superSecret
-federateLater	false

-wbmDBType	**DB2_Universal** for a DB2 Universal database
	DB2UDBOS390_V8_1 for a DB2 for z/OS V8 database
	DB2UDBOS390_V9_1 for a DB2 for z/OS V9 database
	Oracle11g for Oracle 11g database
-wbmDBJDBCClasspath	<WBM_HOME>\universalDriver.wbm\lib

____ 2.   Run the manageprofiles script

__ a. Navigate to the **<WBM_HOME>/bin** directory and run the manageprofiles script along with the options

For DB2_UNIVERSAL as the database type:

```
manageprofiles.bat -create -templatePath <WBM_HOME>\profileTemplates\wbmonitor\managed
-profileName Custom01 -profilePath <WBM_HOME>\profiles\Custom01 -nodeName
Custom01Node01 -hostName custom01.austin.ibm.com -dmgrHost dmgr.austin.ibm.com -
dmgrPort 8879 -dmgrAdminUserName admin -dmgrAdminPassword superSecret -federateLater
false -wbmDBType DB2_Universal -wbmDBJDBCClasspath <WBM_HOME>\universalDriver.wbm\lib
```

____ 3.   Verify the installation

__ a. Navigate to **<WBM_HOME>/logs/manageprofiles** and locate the **<profile_name>_create.log** file

Ex: C:\IBM\WebSphere\MonServer\logs\manageprofiles\Custom01_create.log

__ b. You should see a string, **INSTCONFSUCCESS** written to the last line of the file. If so the installation is successful

__ c. If **INSTCONFPARTIALSUCCESS** or **INSTCONFFAILED** appear in the last line of the log file, problems encountered during the installation

____ 4.   Similarly create the remaining custom profile and name it as **Custom02** by repeating these instructions on the designated host machine. In this exercise, the node is named as **Custom02Node02**

____ 5.   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 display the correct versions (see the Version column) for WebSphere Application Server, XML Feature pack and WebSphere Business Monitor

Part 5: Generate the Single Cluster Deployment Environment pattern

In this part of the exercise, you will use the administrative console to generate a single cluster deployment environment. A single cluster pattern defines one cluster for all the WebSphere Business Monitor components like the application deployment (monitor models), messaging infrastructure, Common Event Infrastructure and other support applications plus Business Space and other Web components.

As you know one cluster is being created using the single cluster deployment environment pattern option, it is a best practice to plan for the number of member servers the cluster will manage and on which managed node the member servers are created. In this exercise, you will assign two member servers for the cluster as shown below:

Note: The topology mapping table below, gives you an opportunity to foresee the naming pattern and helps assigning the member servers to a cluster. On generating the deployment environment, the cluster and their member servers are named by appending to the Deployment Environment and the node names. Remember the cluster and their member server names can get lengthy if the Deployment Environment and node names are long.

The table below shows the naming pattern used in the exercise and the deployment environment is named; **wbm**:

Clusters → Nodes → Member Servers mapping (Topology) table:

Clusters	Nodes	Member Servers	Host Name
wbm.AppTarget	Custom01Node01	**wbm**.AppTarget.Custom01Node01.0	custom01.austin.ibm.com
	Custom02Node02	**wbm**.AppTarget.Custom02Node02.1	custom02.austin.ibm.com

Node → Server assignment table:

Nodes	Application Deployment Target
Custom01Node01	1
Custom02Node02	1

Utilize the tables below to plan the naming pattern and the member servers for your environment:

Clusters → Nodes → Member Servers mapping (Topology) table:

Clusters	Nodes	Member Servers	Host Name

Node → Server assignment table:

Nodes	Application Deployment Target

Pre-requisites:

- Ensure the Deployment Manager process is running

- Ensure all the node agents are running

  o In the left navigation pane of the deployment manager administrative console, expand `System administration` and then click `Node agents`

 o In the **Node agents** panel to the right, ensure that all the node agents display the start status (➡)

Select	Name ⬍	Node ⬍	Host Name ⬍	Version ⬍	Status ⟳
You can administer the following resources:					
☐	nodeagent	Custom01Node01	custom01.austin.ibm.com	ND 7.0.0.7 WBM 7.0.0.0 XML FEP 1.0.0.0	➡
☐	nodeagent	Custom02Node02	custom02.austin.ibm.com	ND 7.0.0.7 WBM 7.0.0.0 XML FEP 1.0.0.0	➡
Total 2					

Complete the instructions below to generate the deployment environment using the administrative console:

____ 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 `Deployment Environments`

____ 3. In the **Deployment Environments** panel, click `New…` to launch the Deployment Environments wizard
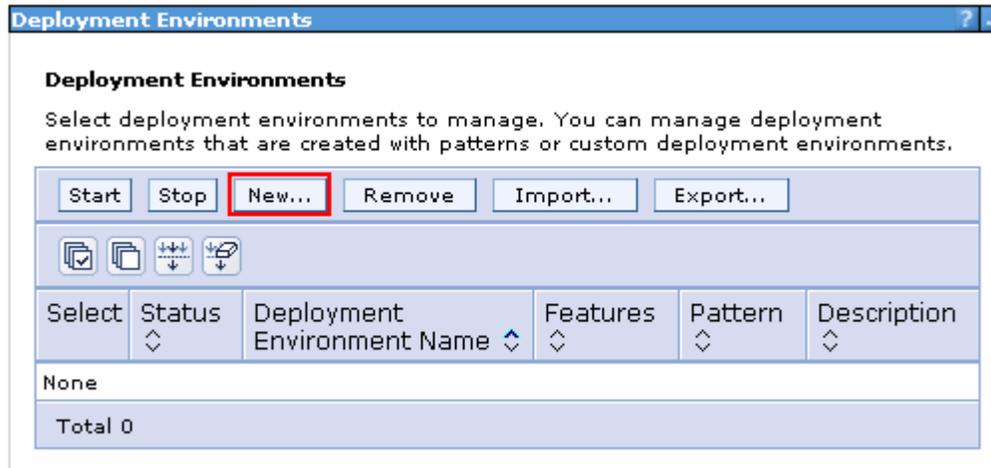
____ 4.   In the next **Create new deployment environment** panel, provide the instructions below:

- Select the radio button for `Create a new deployment environment based on a pattern`

- Deployment environment name : Ex: `wbm`

- Select the radio button for `Detailed: Show all steps`
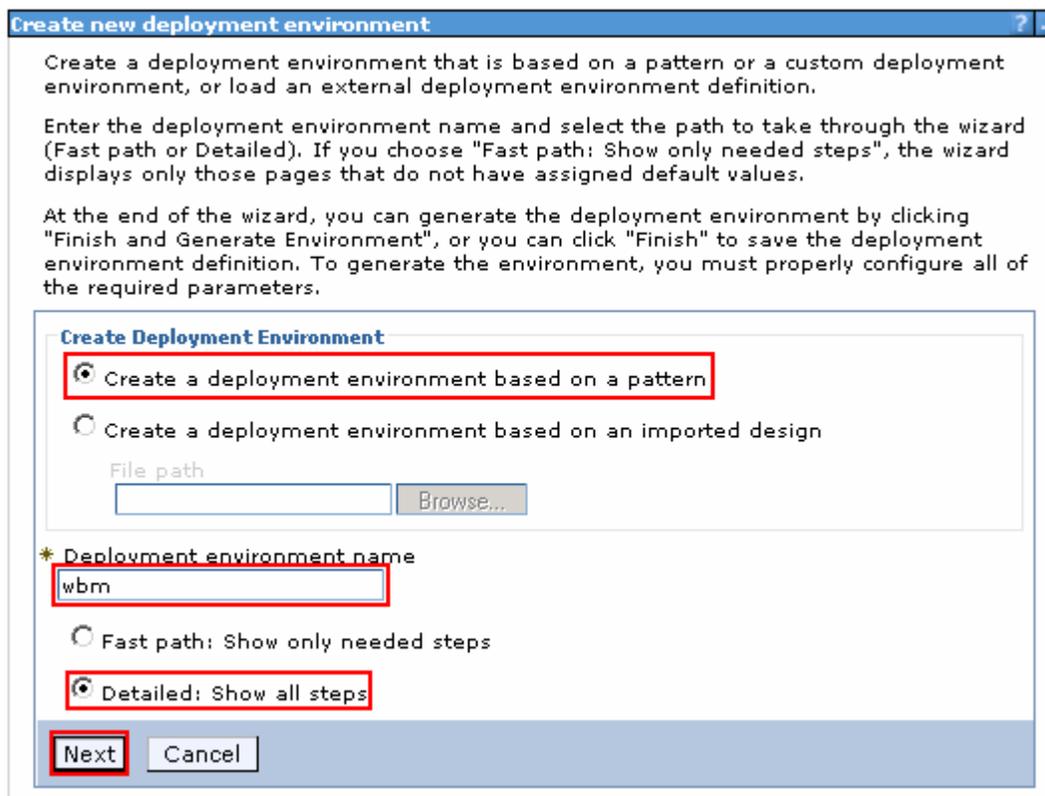
____ 5.   Click `Next`

____ 6.   In the next feature selection panel, select the radio button for the **WBM** feature

Select	Features	Description
⊙	WBM	WebSphere Business Monitor

Previous   Next   Cancel

____ 7.   Click **Next**

____ 8.   In the next new deployment environment pattern panel, select the radio button for the **Single Cluster** pattern

Deployment environment patterns are rules-based configurations of the most commonly used business integration topologies. A pattern provides a template for an environment configuration. Deployment environment patterns represent well-known, tested topologies with component configurations that work together; using patterns ensures reliable deployment environment functionality. You can create custom deployment environments if you require a configuration other than those supplied by the patterns.

Select a pattern that provides the topological characteristics of the deployment environment:

| Select	Deployment Environment Patterns	Description
⊙	Single Cluster	The single cluster pattern is the simplest pattern. It defines one application deployment target cluster, which includes the messaging infrastructure, the Common Event Infrastructure (CEI), and supporting applications.
○	Remote Messaging, Remote Support, and Web	The remote messaging, remote support, and Web pattern defines one cluster for application deployment; one remote cluster for the messaging infrastructure; one remote cluster for the Common Event Infrastructure (CEI) and other supporting applications; and one cluster for Business Space and REST services related Web applications.

Previous   Next   Cancel

____ 9.   Click **Next**

____ 10. In the next **Step 1: Select Nodes** panel, select the check boxes for all the nodes you want to use in this deployment environment. In this exercise, two nodes are used for the single cluster environment

**Note:** Ensure the nodes you select are of the WebSphere Business Monitor version (**WBM 7.0.0.0**)
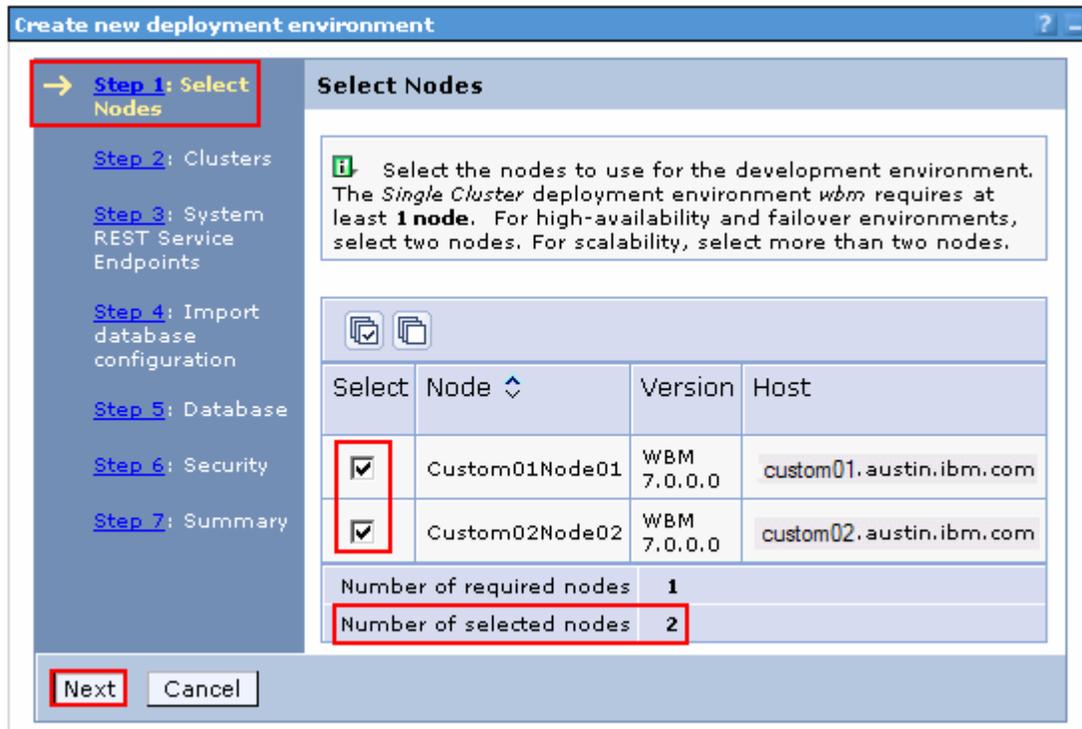
____ 11. Click **Next**

____ 12. In the next **Step 2: Clusters** panel, enter **1** to assign a member server to a cluster on a designated node and assign **0** to **not** assign a member server (**Note:** Refer to the `Clusters → Node → Member Server mapping (Topology) table`)

Note: By default every cluster in the configuration is mapped to all the nodes in the selection. Assign a number **0** to not assign a member server. The nodes you select must be of WebSphere Business Monitor Version 7.0.
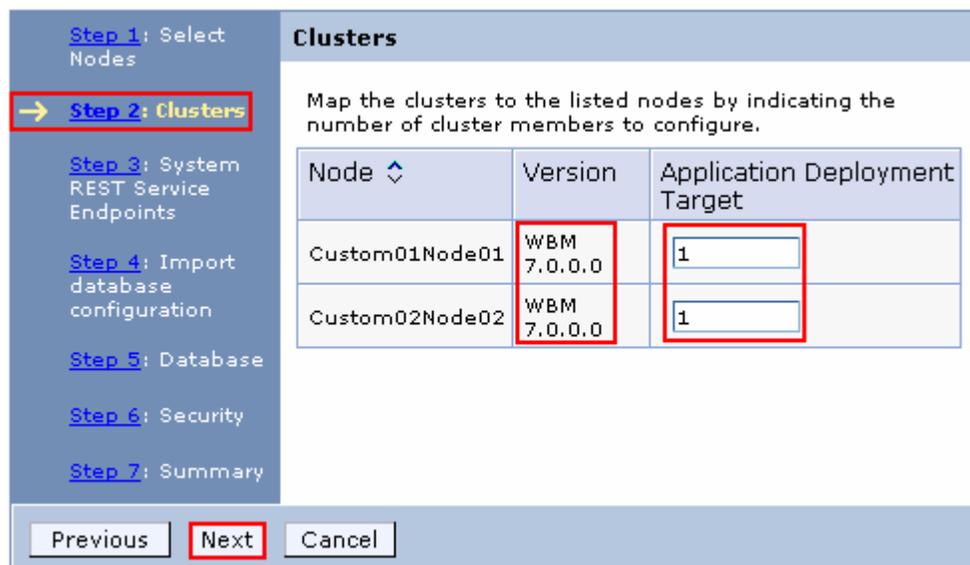
____ 13. Click **Next**

____ 14. In the next **Step 3: System REST Service Endpoints** panel, accept the defaults

Note: If you do not have the information for the http protocol, host name and port number for the REST service endpoints, accept the defaults. You can update the values post environment configuration.

____ 15. Click `Next`

____ 16. In the next **Step 4 : Import Database configuration** panel, accept the defaults

Note: Database configuration is out of scope to the document.
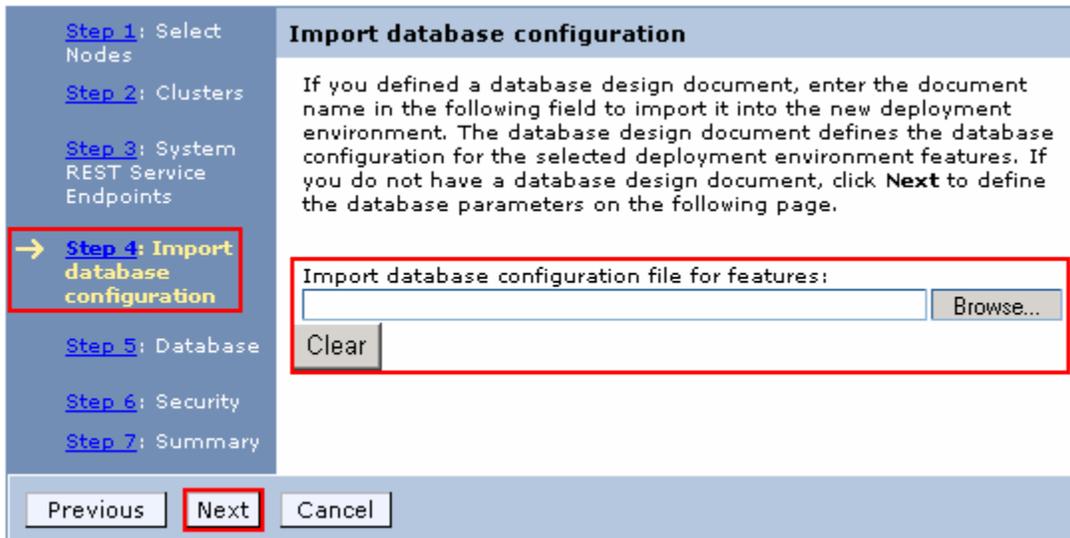
_____ 17. Click **Next**

_____ 18. In the next **Step 5 : Database** window, accept the defaults or input the values of your choice

---

Note: By default the monitor common database name is populated for all the components. If you planned on having exclusive database instances and schema names for various WebSphere Business Monitor components, you should input the values of your choice. For example you can give a different database name to the Message Engine, Business Space and the Common Event Infrastructure databases.

Note: To not create database tables during the deployment environment configuration, clear all the check boxes for **Create Tables** for the data sources where applicable. You might have to clear for creating tables if the database user has insufficient privileges.
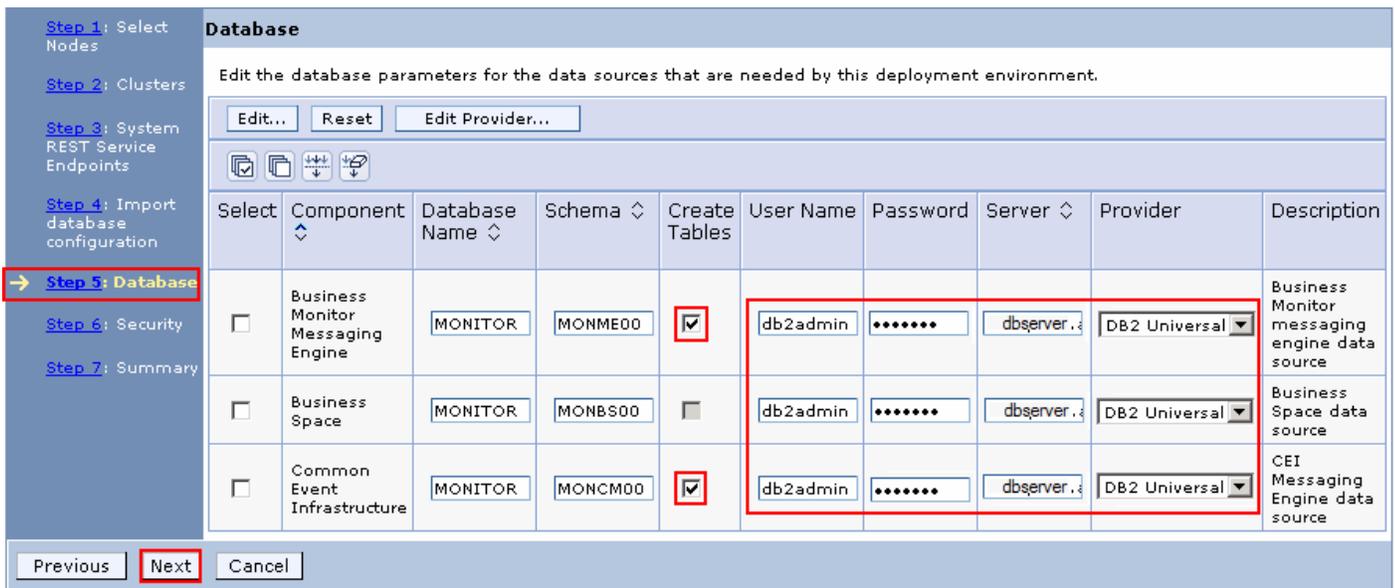

_____ 19. Click **Next**

____ 20. In the next **Step 6 : Security** panel, ensure the administrative security credentials are filled for the authentication aliases mentioned below:

__ a. Common Event Infrastructure

__ b. WBM_Alphablox

Ex: User name: **admin**

Password: **superSecret**

____ 21. Click **Next**

____ 22. In the next **Step 9: Summary** panel, verify the deployment environment configuration summary

Step 1: Select Nodes	**Summary**		
Step 2: Clusters	This summary shows an overview of your new deployment environment. To save the deployment environment definition, click on "Finish". To save the definition and generate the deployment environment, click on "Finish and Generate Environment".		
Step 3: System REST Service Endpoints			
Step 4: Import database configuration			

Overview

Parameter	Value
Deployment Environment Pattern	Single Cluster
Deployment environment name	wbm
Features	WBM
Deployment Environment Status	Incomplete

Deployment Targets

Cluster	Nodes
Application Deployment Target	Custom01Node01 Custom02Node02

Data Sources

Component	Database Name	Schema	Database Provider	Database Host
Business Space	MONITOR	MONBS00	DB2_UNIVERSAL	dbserver.austin.ibm.com
Common Event Infrastructure	MONITOR	MONCM00	DB2_UNIVERSAL	dbserver.austin.ibm.com
Business Monitor Messaging Engine	MONITOR	MONME00	DB2_UNIVERSAL	dbserver.austin.ibm.com

Security

Component	Authentication	User Name
Common Event Infrastructure	CommonEventInfrastructureJMSAuthAlias	admin
WBM_Alphablox	MonitorAlphabloxWASAlias	admin

Previous   Finish   Finish and Generate Environment   Cancel

Note: Click `Finish` to save this deployment environment configuration session. Verify and generate the environment at a later time. To verify, navigate through `Servers` → `Deployment Environments` and then click the name of the deployment environment (Ex: `wbm`) you saved. On this deployment environment panel, you can verify the topology, data sources, and authentication aliases that are created during the environment generation. Click `Generate Environment` on verification.

____ 23. Click `Finish and Generate Environment` to generate the WebSphere Business Monitor deployment environment

____ 24. Once the environment generation is complete, verify the `Configuration Status` and ensure that every action is successful

📄	2010-01-20 11:20:39	Beginning configuration ...
📄	2010-01-20 11:20:39	CWLDB9015I: Deployment environment wbm is being generated.
📄	2010-01-20 11:20:39	CWLDB9009I: Creating cluster wbm.AppTarget.
📄	2010-01-20 11:20:40	CWLDB9010I: Creating cluster member wbm.AppTarget.Custom01Node01.0 on node Custom01Node01 for cluster wbm.AppTarget.
📄	2010-01-20 11:20:47	CWLDB9010I: Creating cluster member wbm.AppTarget.Custom02Node02.0 on node Custom02Node02 for cluster wbm.AppTarget.
📄	2010-01-20 11:20:51	CWLDB9013I: Configuring component WBI_CEI on deployment target wbm.AppTarget.
📄	2010-01-20 11:21:07	CWLDB9022I: Creating authentication alias CEIME_wbm.AppTarget_Auth_Alias for component WBI_CEI.
📄	2010-01-20 11:21:10	CWLDB9021I: Datasource CEI ME data source is configured at scope Cluster=wbm.AppTarget
📄	2010-01-20 11:21:10	CWLDB9022I: Creating authentication alias CEIME_wbm.AppTarget_Auth_Alias for component WBI_CEI.
📄	2010-01-20 11:21:25	CWLDB9013I: Configuring component WBM_MessagingEngine on deployment target wbm.AppTarget.
📄	2010-01-20 11:21:26	CWLDB9022I: Creating authentication alias MonitorME_wbm.AppTarget_Auth_Alias for component WBM_MessagingEngine.
📄	2010-01-20 11:21:29	CWLDB9021I: Datasource Monitor ME data source is configured at scope Cluster=wbm.AppTarget
📄	2010-01-20 11:21:29	CWLDB9022I: Creating authentication alias MonitorME_wbm.AppTarget_Auth_Alias for component WBM_MessagingEngine.
📄	2010-01-20 11:21:32	CWLDB9013I: Configuring component WBM_EventEmitterFactory on deployment target wbm.AppTarget.
📄	2010-01-20 11:21:32	CWLDB9013I: Configuring component WBM_ActionServices on deployment target wbm.AppTarget.
📄	2010-01-20 11:22:21	CWLDB9013I: Configuring component WBI_RESTSERVICES on deployment target wbm.AppTarget.
📄	2010-01-20 11:22:22	CWLDB9013I: Configuring component WBM_Alphablox on deployment target wbm.AppTarget.
📄	2010-01-20 11:22:44	CWLDB9013I: Configuring component WBI_BSPACE on deployment target wbm.AppTarget.
📄	2010-01-20 11:24:37	CWLDB9022I: Creating authentication alias BSPACE_Auth_Alias for component WBI_BSPACE.
📄	2010-01-20 11:25:07	CWLDB9021I: Datasource Business Space data source is configured at scope Cluster=wbm.AppTarget
📄	2010-01-20 11:25:08	CWLDB9013I: Configuring component WBM_MobileDashboard on deployment target wbm.AppTarget.
📄	2010-01-20 11:25:14	CWLDB9013I: Configuring component WBM_ScheduledServices on deployment target wbm.AppTarget.
📄	2010-01-20 11:25:32	CWLDB9013I: Configuring component WBM_EventEmitterServices on deployment target wbm.AppTarget.
📄	2010-01-20 11:25:58	CWLDB9013I: Configuring component WBI_BSPACE on deployment target wbm.AppTarget.
📄	2010-01-20 11:25:58	The configuration has ended.

[Show Changes] [Save Changes] [Discard Changes] [Close]

Note: Ensure the all the node agents are running at this time (`System Administration` ➔ `Nodes`)

____ 25. Click `Save Changes`

____ 26. Synchronize changes with the nodes

__ a. In the left navigation pane, expand `System Administration` and click `Save changes to master repository`
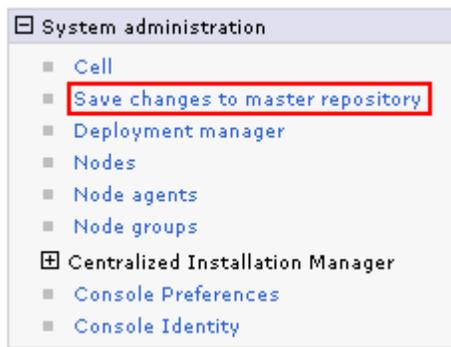
__ b. In the `Save` window, select the check box for **Synchronize changes with Nodes**
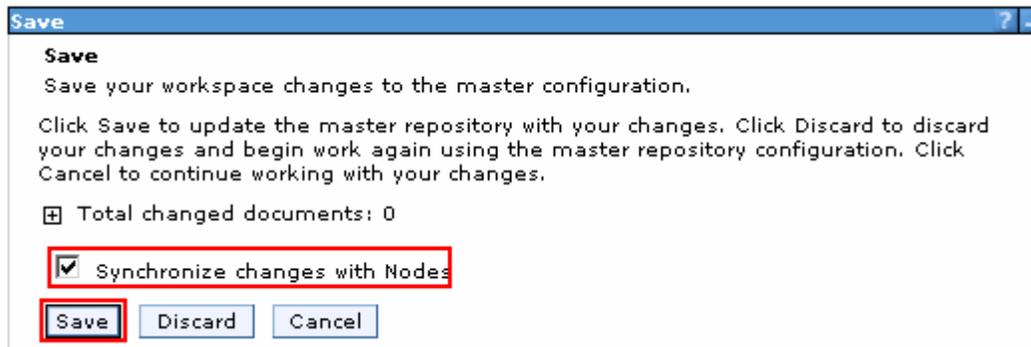
__ c. Click `Save`. The next window shows the status of the synchronization. Ensure there is no failure
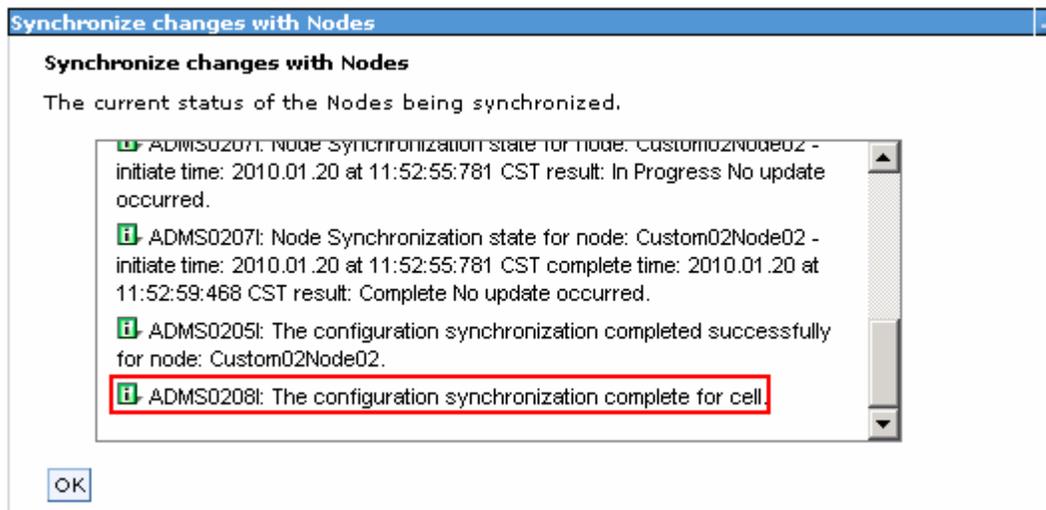
__ d. Click `OK`

____ 27. Restart the deployment manager

____ 28. Restart all the node agents

Part 6: Verify and update the deployment environment configuration

In this part of the exercise, you will verify the functions, resources and applications configured during the deployment environment configuration.

Pre-requisites:

- Ensure the DB2 server is running

- Restart the deployment manager

- Restart the node agents

Deployment Environment Status icons:

Status icon	Warning icon	State	Description
⑦	None	Unknown	The system cannot determine the current state of the deployment environment.
		Incomplete	The deployment environment is not missing any elements but is incomplete in some way. The warning message contains additional details.
		Not configured	The configuration is known and complete but has not yet been generated.
		Deferred configuration	The deployment environment has been generated but deferred configuration has not been completed.
		Unavailable	The deployment environment is complete but at least one function is unavailable.
		Partially stopped	The deployment environment is available but at least one function is stopped or partially stopped.
		Stopped	All functions are stopped.
		Partially running	The deployment environment is available but at least one function is partially running.
		Running	The deployment environment is available and all functions are running.

Complete the instructions below to verify the deployment environment configuration:

_____ 1.   In the left navigation pane of the administrative console, expand `Servers` and then click the `Deployment Environments` link. The status of the deployment environment should display either as **Stopped** (Red Icon) or **Started** (Green Icon)

____ 2.   Click the **wbm** (the name of the deployment environment) link
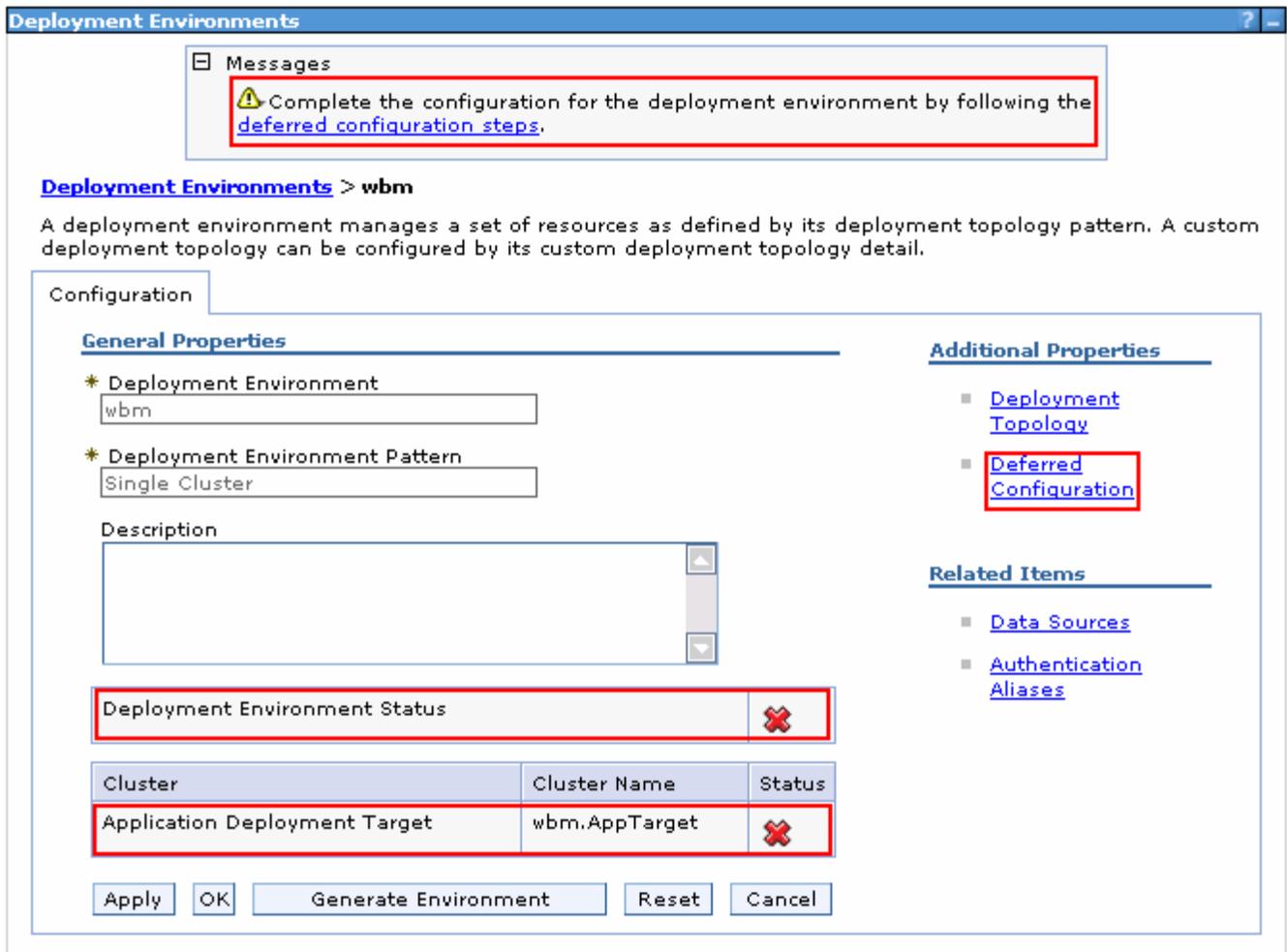
____ 3.   You should see a cluster listed and a warning in the **Messages** box over the top, referring to a deferred configuration. Click the **Deferred Configuration** link under the **Additional Properties** section
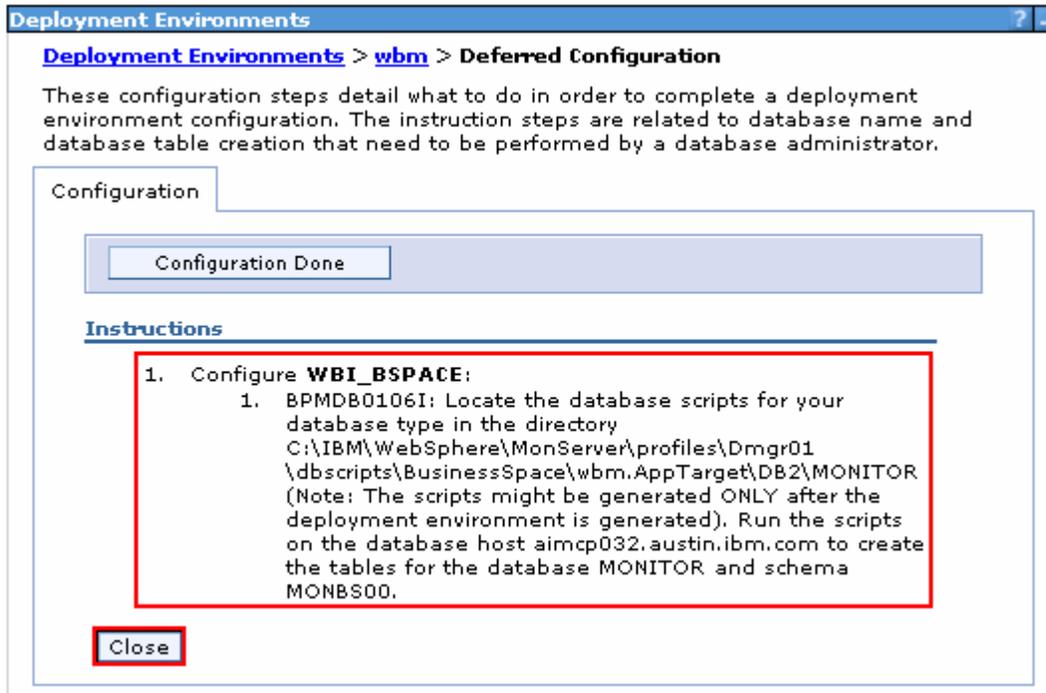
____ 4.   Read the instructions. As per the instruction, you have to manually run a Business Space database script, which is done later in this exercise. Click **Close**

____ 5.   Click **Cancel** over the Deployment Environments panel

____ 6.   Now, verify the cluster that was created. In the left navigation pane of the administrative console, expand **Servers** ➔ **Clusters** and then click **WebSphere application server clusters** link
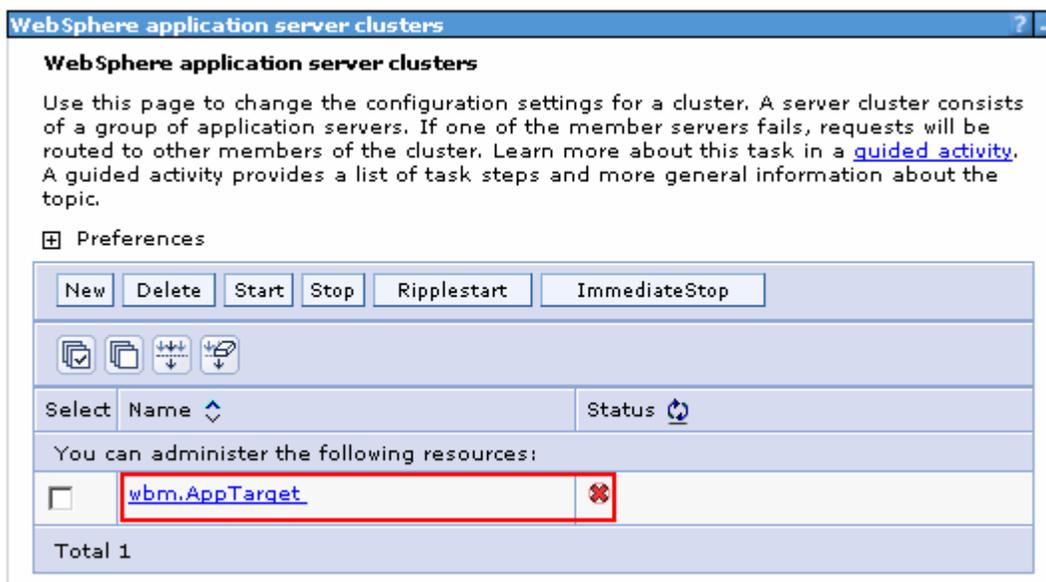
____ 7. Now, verify the member servers. In the left navigation pane, expand **Servers** → **Server Types** and then click **WebSphere application servers** link. You should see two member servers listed as shown below:

Select	Name ⬍	Node ⬍	Host Name ⬍	Version ⬍	Cluster Name ⬍	Status ⟳
	You can administer the following resources:					
☐	wbm.AppTarget.Custom01Node01.0	Custom01Node01	custom01.austin.ibm.com	ND 7.0.0.7 WBM 7.0.0.0 XML FEP 1.0.0.0	wbm.AppTarget	✖
☐	wbm.AppTarget.Custom02Node02.0	Custom02Node02	custom02.austin.ibm.com	ND 7.0.0.7 WBM 7.0.0.0 XML FEP 1.0.0.0	wbm.AppTarget	✖
Total 2						

____ 8. Verify the Cluster Topology. In the left navigation pane, expand **Servers** → **Clusters** and then click the **Cluster Topology** link. This a clear picture of The picture shown below is of the **Cluster** → **Nodes** → **Cluster Members** relationship
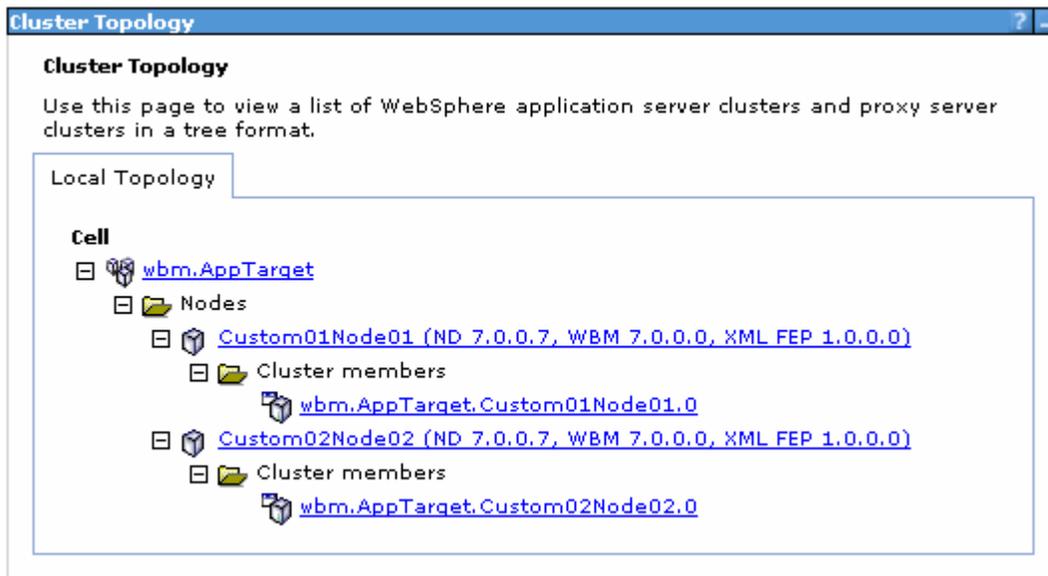
____ 9. Restart the **Node Agents** if not done earlier. In the left navigation pane, expand **System Administration** and then click **Node agents**. You should see two node agents listed

    __ a. Select the check boxes for all the node agents and then click **Restart**

Stop	Restart	Restart all Servers on Node			
Select	Name ⬍	Node ⬍	Host Name ⬍	Version ⬍	Status ⟳
☑	nodeagent	Custom01Node01	AIMCP032	ND 7.0.0.7 WBM 7.0.0.0 XML FEP 1.0.0.1	➡
☑	nodeagent	Custom02Node02	AIMCP032	ND 7.0.0.7 WBM 7.0.0.0 XML FEP 1.0.0.1	➡

____ 10. Start the deployment environment. In the left navigation pane, expand **Servers** and then click **Deployment Environments**

__ a. Select the check box for **wbm** (the name of the deployment environment) and then click **Start**

____ 11. This action starts the cluster. Ensure all the member servers are successfully started

Verify the messaging engines configured on the cluster:

____ 12. In the left navigation pane, expand **Servers** → **Clusters** and then click **WebSphere application server clusters**

____ 13. In the **WebSphere application server clusters** panel to the right, click **wbm.AppTarget**

____ 14. In the next **WebSphere application server clusters** → **wbm.AppTarget** panel, ensure the **Configuration** tab is selected and then click **Messaging Engines** under the **Cluster Messaging** section. You should see two messaging engines listed. Ensure they are running properly

Verify the Event Service and components configured on the cluster:

In this section, you will verify the Common Event Infrastructure server support and Event emitter factories, configured on the cluster

____ 15. In the left navigation pane, expand **Service Integration** → **Common Event Infrastructure** and then click **Event service**
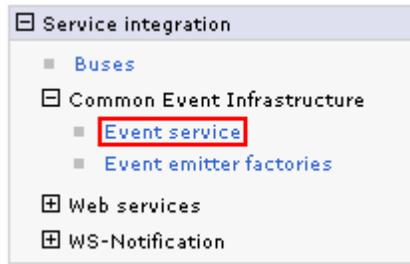
____ 16. In the **Event service** panel, click the `Event services` link under the `Additional Properties` section

____ 17. In the next panel, click the `Default Common Event Infrastructure event server` link

____ 18. In the next panel, verify the configuration

____ 19. Click the `Event groups` link to verify the event groups created. You should see two groups created

____ 20. In the left navigation pane, expand `Service Integration` → `Common Event Infrastructure` and then click `Event emitter factories`
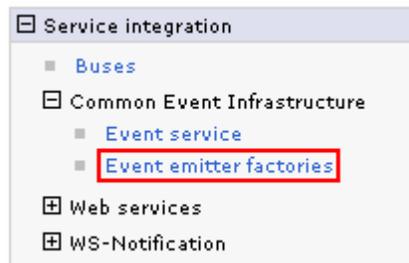
____ 21. In the next panel, verify all the event emitter factory configurations listed. You should see four emitter factories listed


Verify the Business Space and REST services configured on the cluster:

____ 22. In the left navigation pane, expand `Servers` → `Clusters` and then click `WebSphere application server clusters`

____ 23. In the **WebSphere application server clusters** panel, click the `wbm.AppTarget`

____ 24. In the **WebSphere application server clusters → wbm.AppTarget** window, ensure the `Configuration` tab is selected, click `Business Space Configuration` under the `Business Integration` section

__ a. Ensure the **Business Space Configuration** panel indicates that business space has already been installed. You should see all the configuration parameter fields are not available indicating the Business Space is already installed
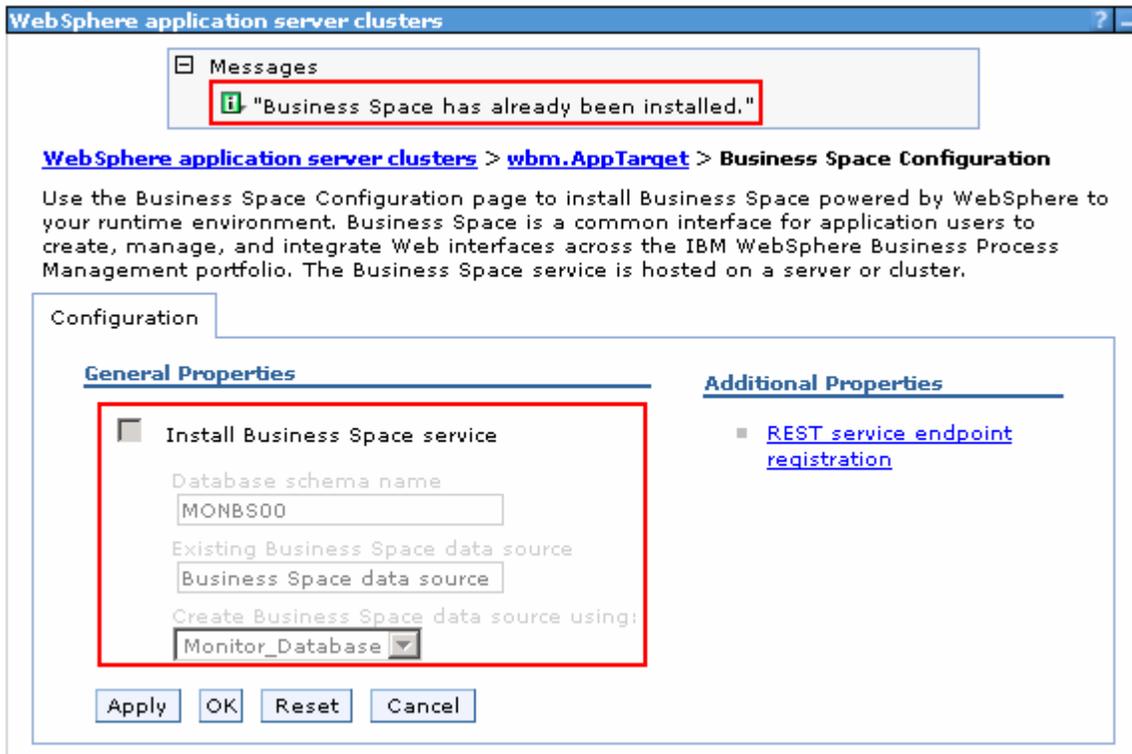
____ 25. Click **Cancel**

____ 26. In the **WebSphere application server clusters → wbm.AppTarget** window, ensure the `Configuration` tab is selected, click `REST Services` under the `Business Integration` section

   __ a. Ensure the **REST Services** panel indicates that the REST service endpoints are configured. verify all the default configuration

Note: If you did not provide the protocol, host name and the http port for the REST services configuration values during the deployment environment generation, the end points are configured to a default cluster member. Provide the correct information once you have it handy and save to the master configuration.

____ 27. Click **Cancel**

_____ 28. Launch the Business Space site

       URL: `http://<hostname:port>/BusinessSpace`

        Ex: `http://bspace.austin.ibm.com:9080/BusinessSpace`

Note 1: Use the host name and port of a member server of that cluster. In this exercise, you have only a cluster and two member servers configured.

Note 2: If you had turned on security during the profile creation, the Business Space security credentials are same as credentials used to configure WebSphere Business Monitor security.

_____ 29. Login to the Business Space site and verify

Verify the Alphablox service:

_____ 30. Launch the Alphablox administrative console and type the user name and password when prompted

   **URL: `http://<Alphablox_hostname:port>/AlphabloxAdmin/home`**

       Ex: `http://hostname.austin.ibm.com:9080/AlphabloxAdmin/home`

Note 1: The Alphablox service is deployed to a cluster where the Business Space is running. Use the host name and port of a member server of that cluster. In this exercise, you have only a cluster and two member servers configured.

Note 2: If you had turned on security during the profile creation, the Alphablox security credentials are same as credentials used to configure WebSphere Business Monitor security.
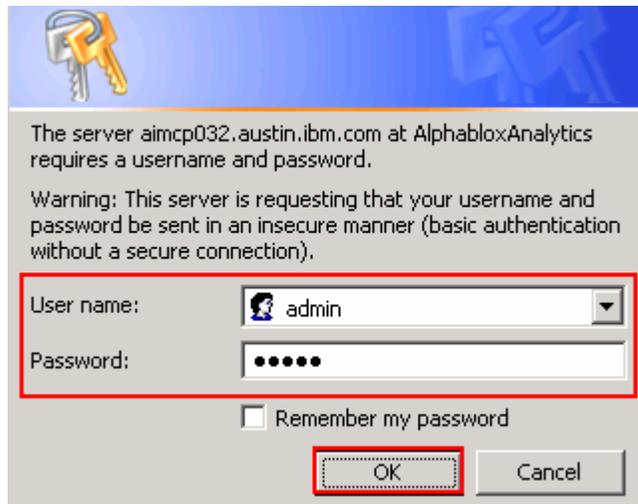

_____ 31. The Alphablox administrative console is launched as shown in the picture below:

APPLICATIONS **ADMINISTRATION** ASSEMBLY

Version 9.5.7.0 Build 51 [GA]

Application Sorting: ◉ Alphabetical ○ Recently Used

IBM Alphablox FastForward
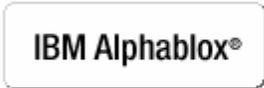
IBM Alphablox®   A sample IBM Alphablox application

IBM Alphablox Query Builder
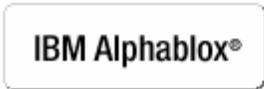
IBM Alphablox®   Tool to generate queries and IBM Alphablox tags

_____ 32. Select the **ADMINISTRATION** tab and navigate through general management activities you can perform as an Alphablox Administrator

APPLICATIONS **ADMINISTRATION** ASSEMBLY

Version 9.5.7.0 Build 51 [GA]

| **General** | **Groups** | **Users** | **Applications** | **Data Sources** | **Cubes** |

General Properties

Startup
System
Telnet Console
Repository Manager
IBM Alphablox Cube
Manager
Cluster Options

Custom Properties

User Definitions
Application Definitions

Runtime Management

Comments
IBM Alphablox Cubes
Application Sessions
PDF Reports (DHTML)

Console

Start Console Session

Utilities

Essbase Setup

_____ 33. Now select **ADMINISTRATION** → **Data Sources** tab. You should see three data sources. Select **MONITOR** from the data sources text area as shown in the picture below:
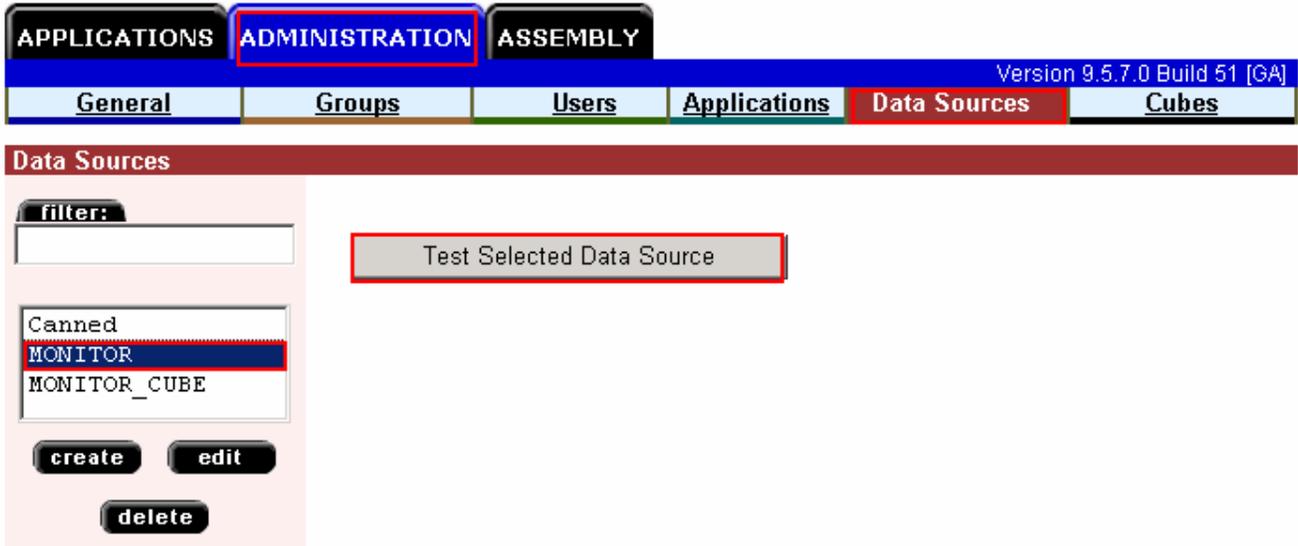
_____ 34. Click the **Test Selected Data Source** button and ensure the data base connection is successful
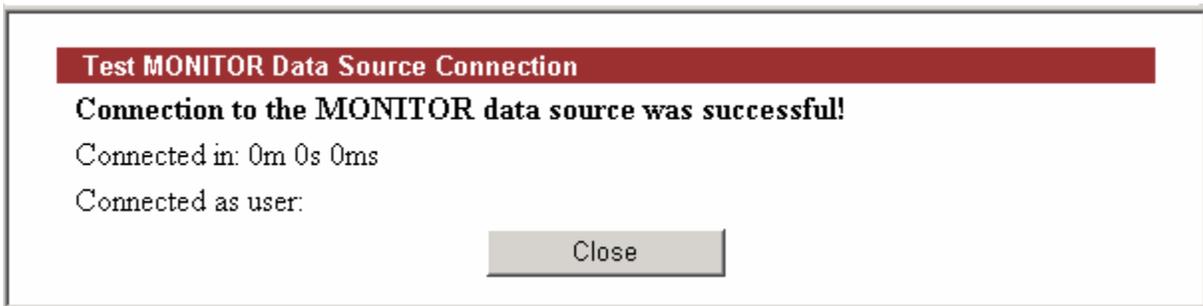
_____ 35. Click **Close**

_____ 36. Similarly select **MONITOR_CUBE** from the data source text area and test for a successful database connection

_____ 37. Now, navigate through the remaining administration activities like managing groups, users, applications and cubes.

Verify the WebSphere Business Monitor components:

_____ 38. In the left navigation pane, expand **Servers** and then click **WebSphere Business Monitor configuration**

____ 39. In the **WebSphere Business Monitor configuration** panel to the right, verify each component and to a cluster the components are deployed.

____ 40. Click each of the component link, to verify the specific configuration of that component

Part 7: Create Business Space database tables

In this part of the exercise, you will create the business space database tables using the generated scripts. Eventually you will mark the Deployment Environment's deferred configuration as done.

Complete the instructions below to manually create Business Space database tables:

_____ 1.   The Business Space database scripts are generated to the location mentioned below, on the business monitor deployment manager machine:

         <DMGR_PROFILE_HOME>\dbscripts\BusinessSpace\DB2

         Ex: C:\IBM\WebSphere\MonServer\profiles\Dmgr01\dbscripts\BusinessSpace\

_____ 2.   Open the DB2 command window from **Start → Programs → IBM DB2 → Command Line Tools → Command Window** and change the directory to the location of the scripts

    __ a. Edit this script, modify to suit your needs and run with the recommended usage to create the Business Space tables against the specified database:

         • **configBusinessSpaceDB.bat**

    __ b. Ensure the Business Space tables are created successfully. In this exercise the Business Space tables are created against the MONTIOR database

_____ 3.   Close the DB2 command window

_____ 4.   Mark the deferred configuration as done, for the Deployment Environment

    __ a. In the left navigation pane of the administrative console, expand **Servers** and then click **Deployment Environments**

    __ b. Click **wbm**, the name of the deployment environment in the right panel

    __ c. In the next panel, click **Deferred Configuration** under the **Additional Properties** section
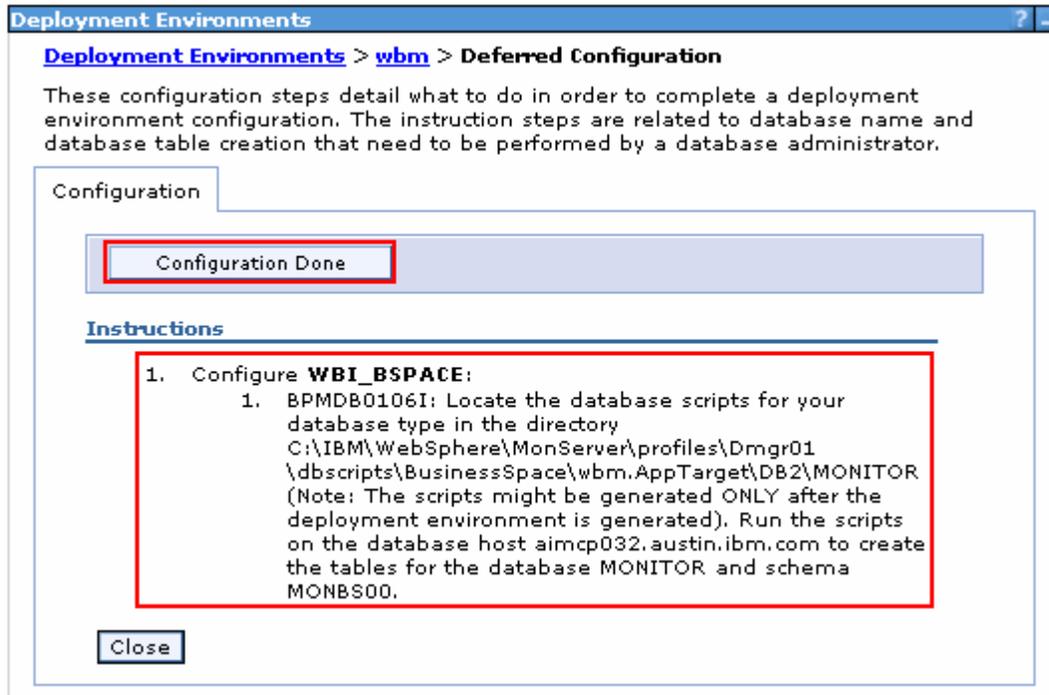
__ d. Click **Configuration Done**. You should see a message indicating the configuration is complete

__ e. Save the changes to the master configuration

____ 5. You should see a message stating the configuration is done as shown below:
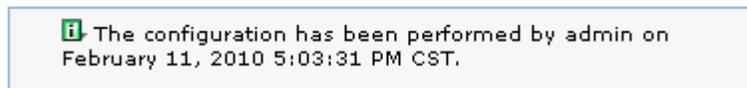
____ 6. Click **Close**

Task 1: Manually create WebSphere Business Monitor database and tables

In this part of the exercise, you will create the WebSphere Business Monitor Common database and tables.

Pre-requisites:-

- Install and configure the WebSphere Business Monitor supported database product on a designated host machine. In this exercise, a supported DB2 version is used and the instructions are based on the DB2 product. Ensure the DB2 server is running at this time

- Copy the WebSphere Business Monitor Common database scripts to a temporary location of your database product host machine. The database scripts are generated to the location mentioned below:

    <DMGR_PROFILE_HOME>\dbscripts

    Ex: C:\IBM\WebSphere\MonServer\profiles\Dmgr01\dbscripts*

Complete the instructions below to create the common database:

____ 1.   Open the DB2 command window from **Start → Programs → IBM DB2 → Command Line Tools → Command Window** and change the directory to the temporary directory where the scripts are copied, Ex: **C:\temp\dbscripts**

____ 2.   Run these scripts with the recommended usage to create the MONITOR database:

- **db2 –tf createDatabase.sql**

- **db2 -tf createTables.sql** (**Note:** Connect to the MONITOR database before running this script)

____ 3.   These scripts create the Monitor database, that is MONITOR and create Monitor database tables

____ 4.   Close the DB2 command window