WebSphere Business Monitor V7.0: Clustering - Remote messaging, remote support, and Web 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 remote messaging, remote support, and Web deployment environment pattern in a five 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
    - WebSphere Business Monitor V7.0 binaries including Alphablox
    - WebSphere Application Server V7 Feature Pack for XML
- Create these WebSphere Business Monitor V7.0 profiles
    - A deployment manager profile
    - Four custom profiles
- Generate a remote messaging, remote support, and Web 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 and 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	
WBM custom profile 03 (Machine 4)		
<WBM_HOME>	C:\IBM\WebSphere\MonServer	
<CUSTOM03_PROFILE_HOME>	<WBM_HOME>\profiles\Custom03	
WBM custom profile 04 (Machine 5)		
<WBM_HOME>	C:\IBM\WebSphere\MonServer	
<CUSTOM04_PROFILE_HOME>	<WBM_HOME>\profiles\Custom04	

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 are the installation files you need to complete the exercise:

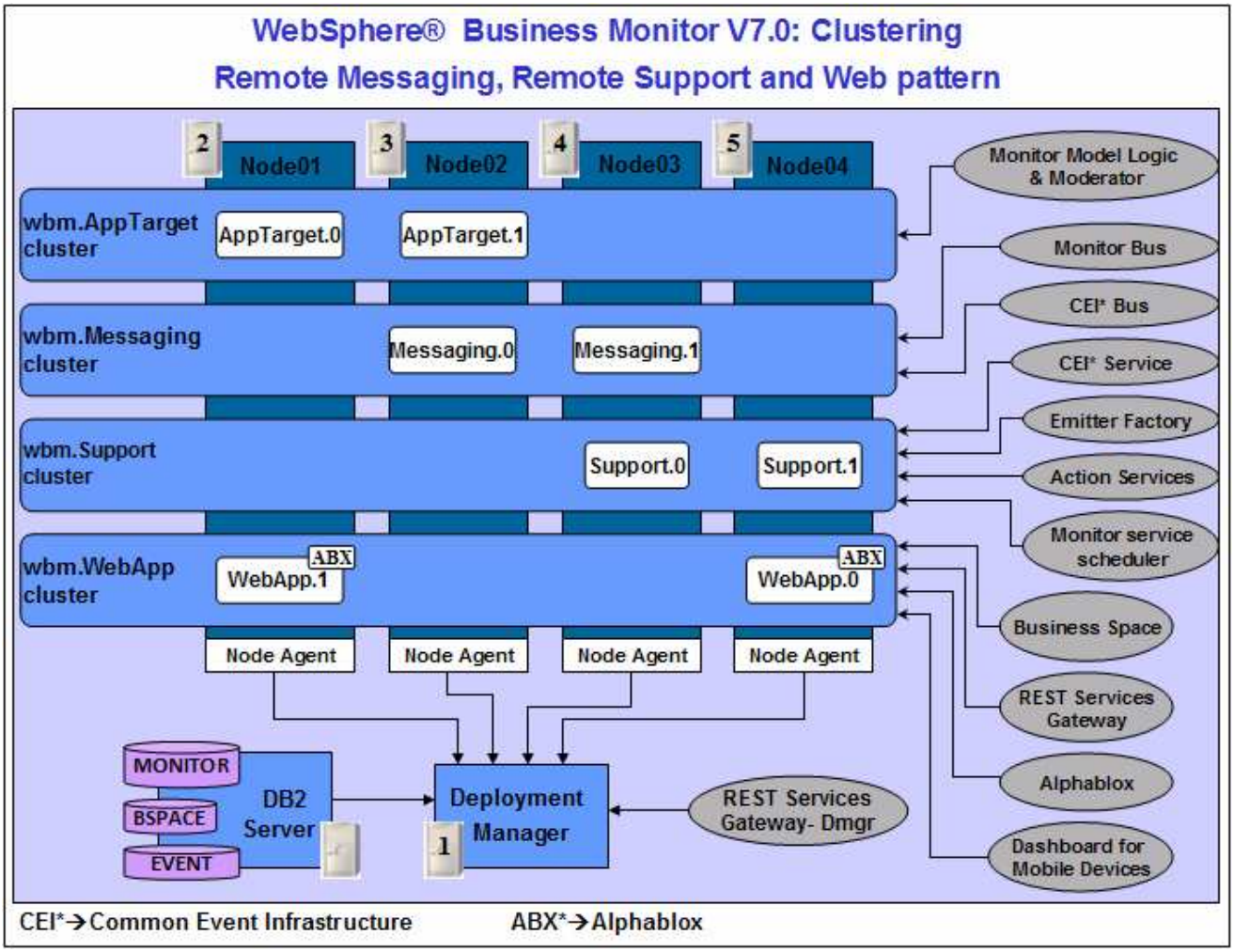
Product	File Name
WebSphere Business Monitor V7.0	Monitor_V7.0_Windows_32.zip

Introduction

IBM WebSphere Business Monitor is a comprehensive business activity monitoring 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 remote messaging, remote support, and Web deployment environment pattern. The remote messaging, remote support, and Web deployment environment pattern is a pre-defined four-cluster topology pattern in which the monitor components and resources are allocated accordingly to the cluster that handles the highest loads. This topology is the most flexible and versatile, and is proffered by most users. The components are divided between the four clusters.

In this exercise, the remote messaging, remote support, and Web deployment environment pattern has two member servers assigned to each of the clusters which are spread across four nodes as shown in the diagram below:



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 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.

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.Custom02Node02.0	custom02.austin.ibm.com
wbm.Messaging	Custom02Node02	**wbm**.Messaging.Custom02Node02.0	custom02.austin.ibm.com
	Custom03Node03	**wbm**.Messaging.Custom03Node03.0	custom03.austin.ibm.com
wbm.Support	Custom03Node03	**wbm**.Support.Custom03Node03.0	custom03.austin.ibm.com
	Custom04Node04	**wbm**.Support.Custom04Node04.0	custom04.austin.ibm.com
wbm.WebApp	Custom04Node04	**wbm**.WebApp.Custom04Node04.0	custom04.austin.ibm.com
	Custom01Node01	**wbm**.WebApp.Custom01Node01.0	custom01.austin.ibm.com

Node → Server assignment table:

Nodes	Application Deployment Target	Messaging Infrastructure	Support Infrastructure	Web Infrastructure
Custom01Node01	1	0	0	1
Custom02Node02	1	1	0	0
Custom03Node03	0	1	1	0
Custom04Node04	0	0	1	1

Use 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	Messaging Infrastructure	Support Infrastructure	Web Infrastructure

Part 1: Preparing for the WebSphere Business Monitor installation image

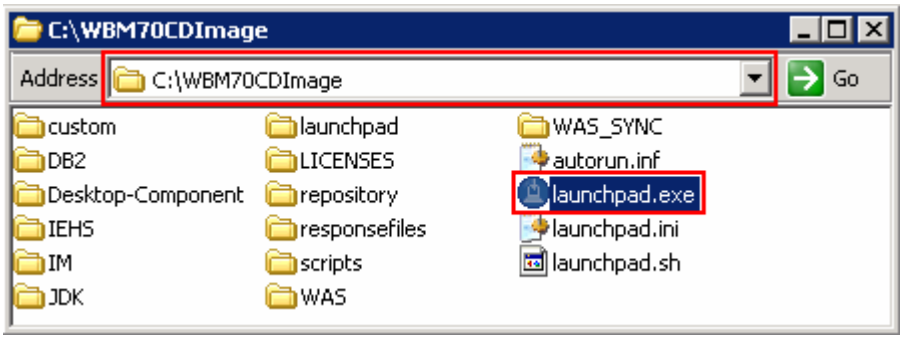
In this part of the exercise, the WebSphere Business Monitor V7.0 DVD image is obtained and extracted -- creating the correct on-disk structure for the installation image.

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

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.

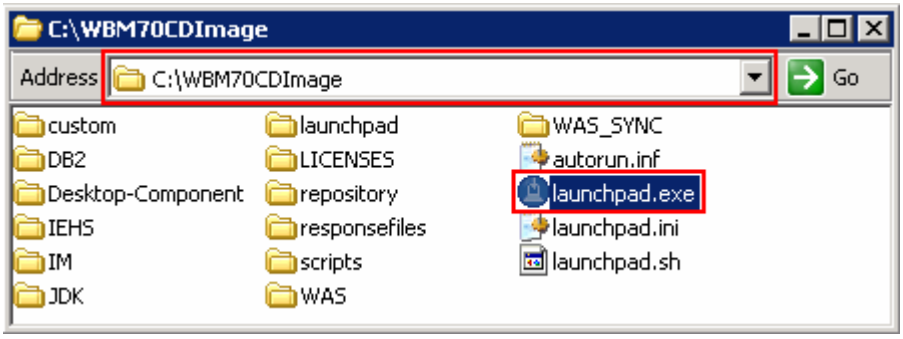
You will use the WebSphere Business Monitor V7.0 Common Launchpad to silently install WebSphere Application Server V7.0.0.7 and then launch the Installation Manager from the Common Launchpad to install the WebSphere Business Monitor V7.0 binaries on the WebSphere Application Server - ND package group.

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.

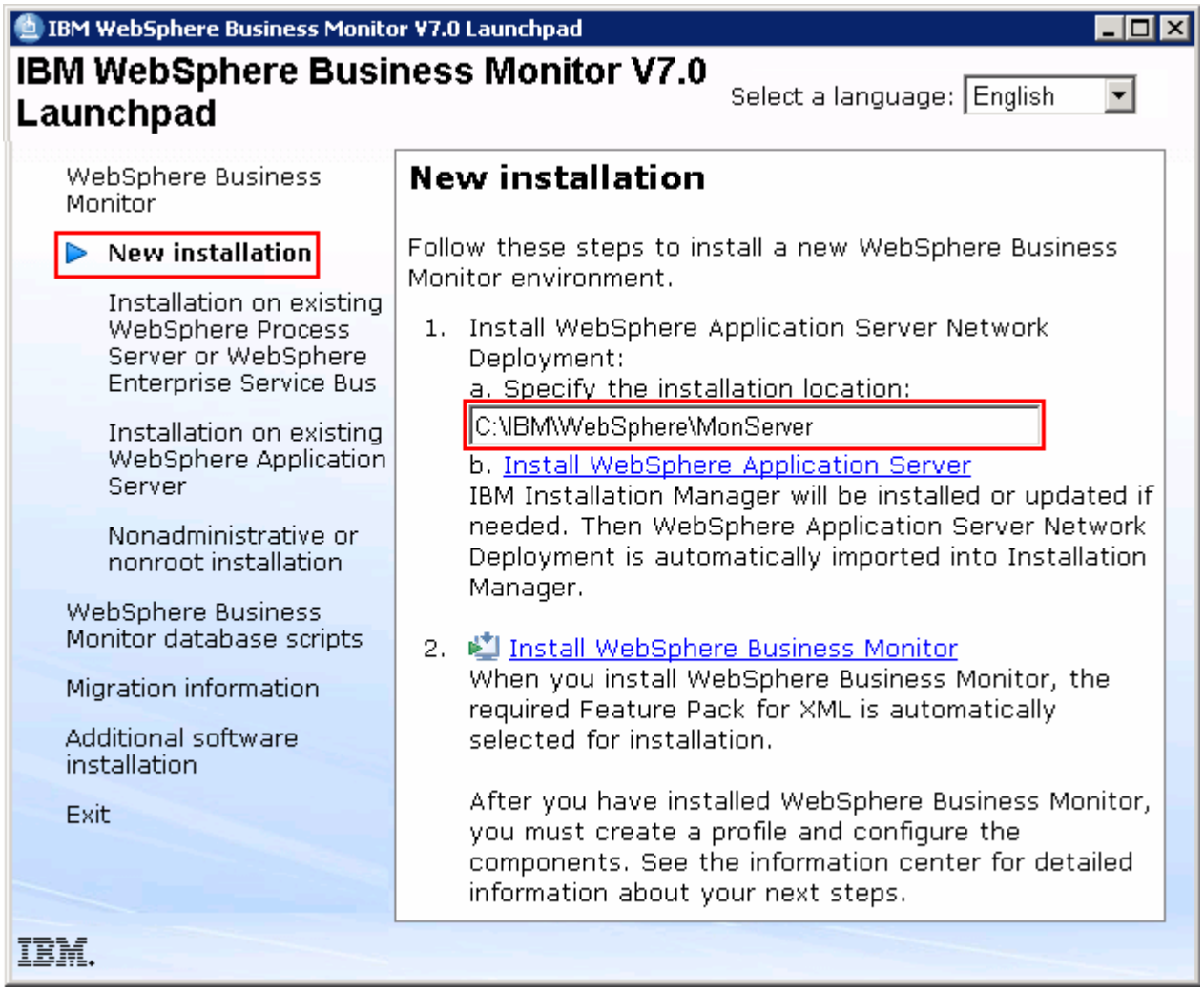
Complete the instructions below to install the WebSphere Business Monitor V7.0 binaries:

____ 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

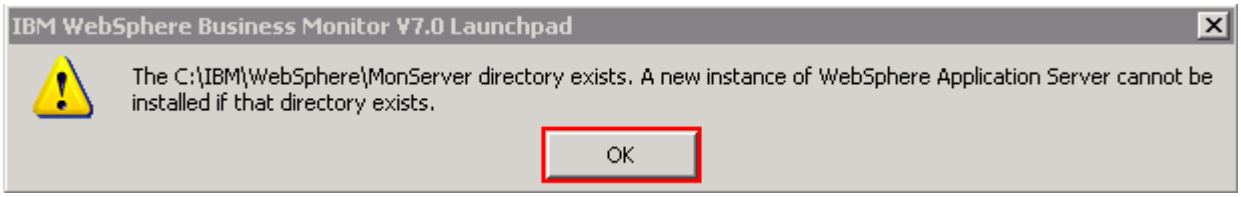
____ 3. On the left navigation pane of the WebSphere Business Monitor Common Launchpad, click the **`WebSphere Business Monitor → New Installation`** link

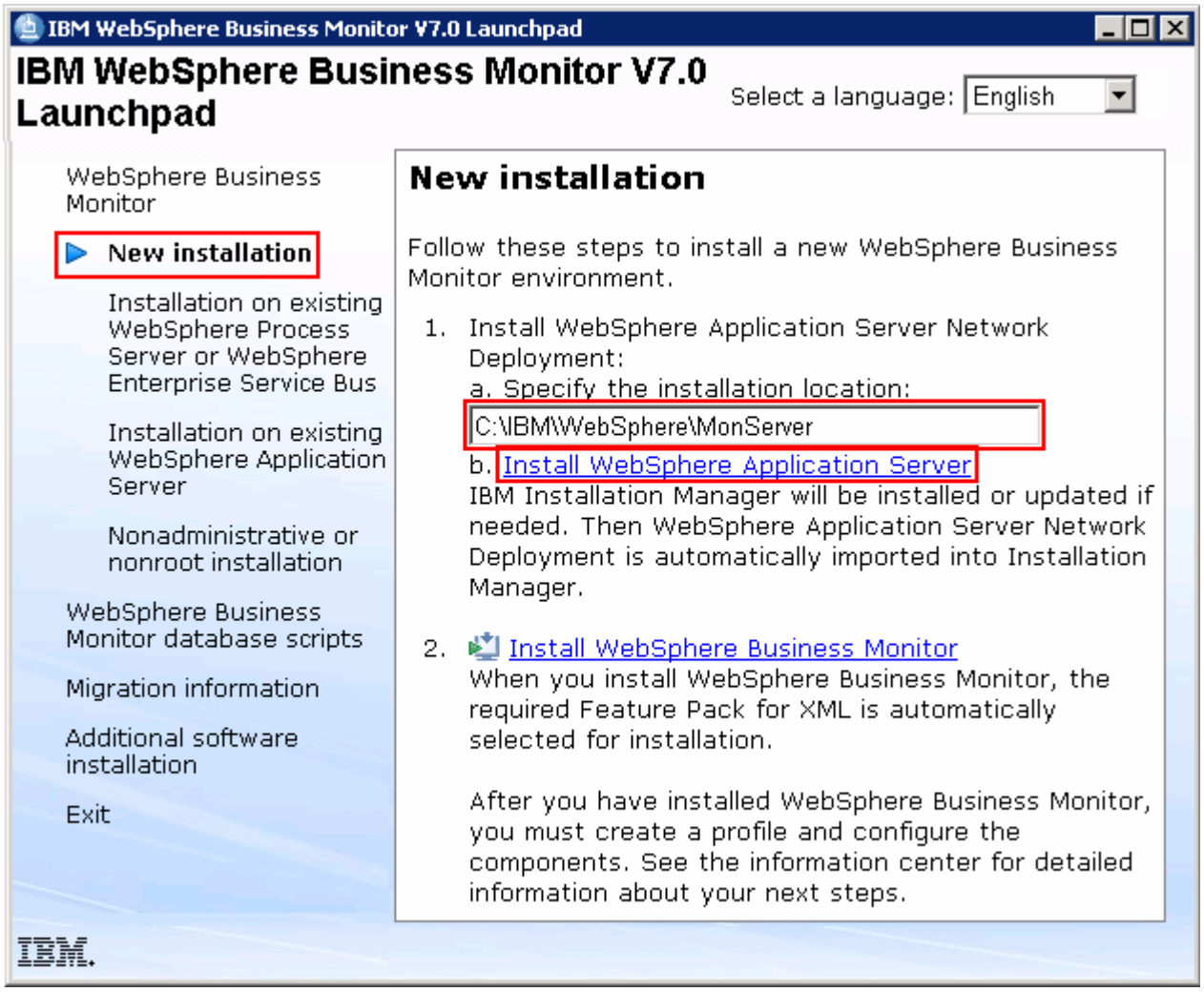


____ 4. Specify the **Installation Location** for WebSphere Application Server Network Deployment in the text field

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

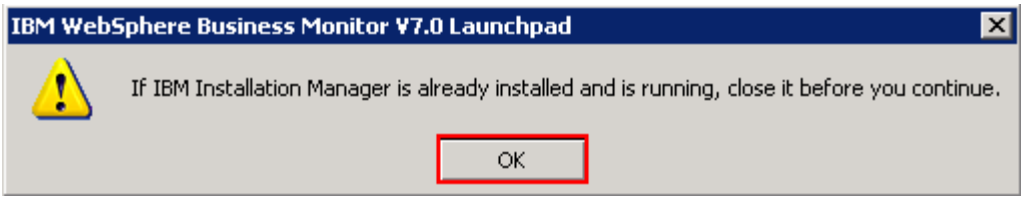
Note: Ensure the specified WebSphere Application Server installation location does not exist. If so, you should see the warning dialog shown below, when you click the 'Install WebSphere Application Server' link.



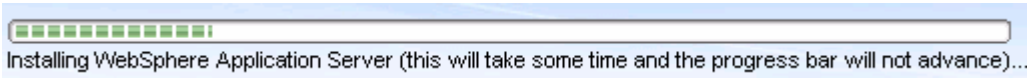


____ 5. Now, click the **`Install WebSphere Application Server`** link. This action silently installs IBM Installation Manager V1.3.3 to a default location, WebSphere Application Server V7.0.0.7 to the specified location and then imports the WebSphere Application Server repository to the Installation Manager.

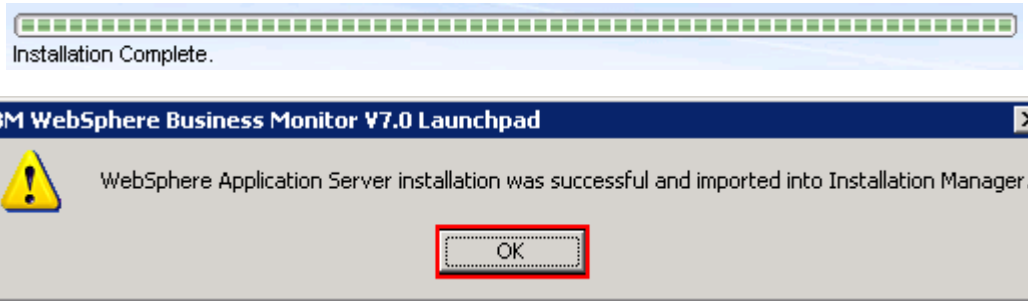
____ 6. A warning dialog pops-up, requesting to close the IBM Installation Manager if it is already installed and running at this time. Close the Installation Manager if it is already installed and running



____ 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

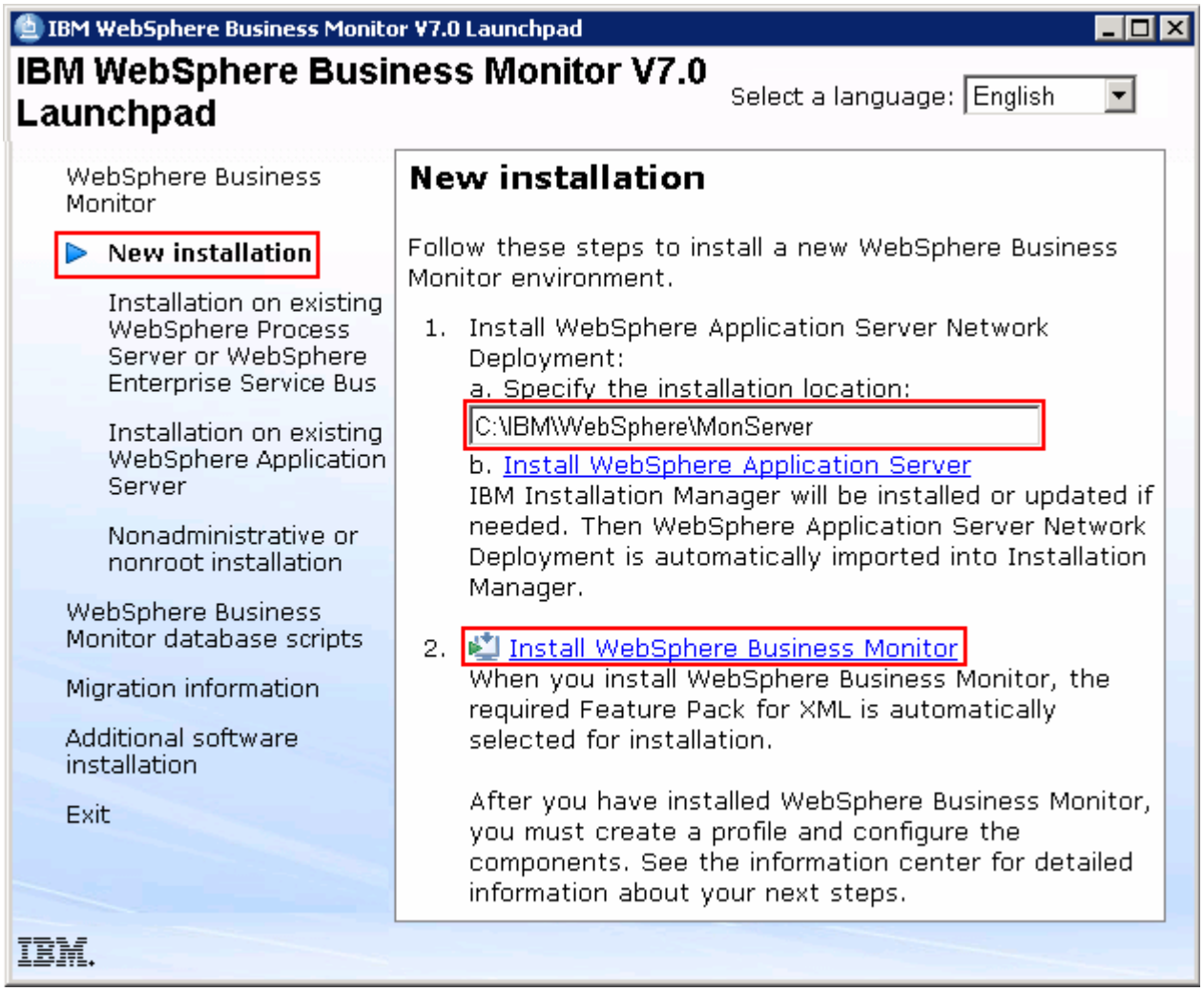


____ 9. Click **OK**

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

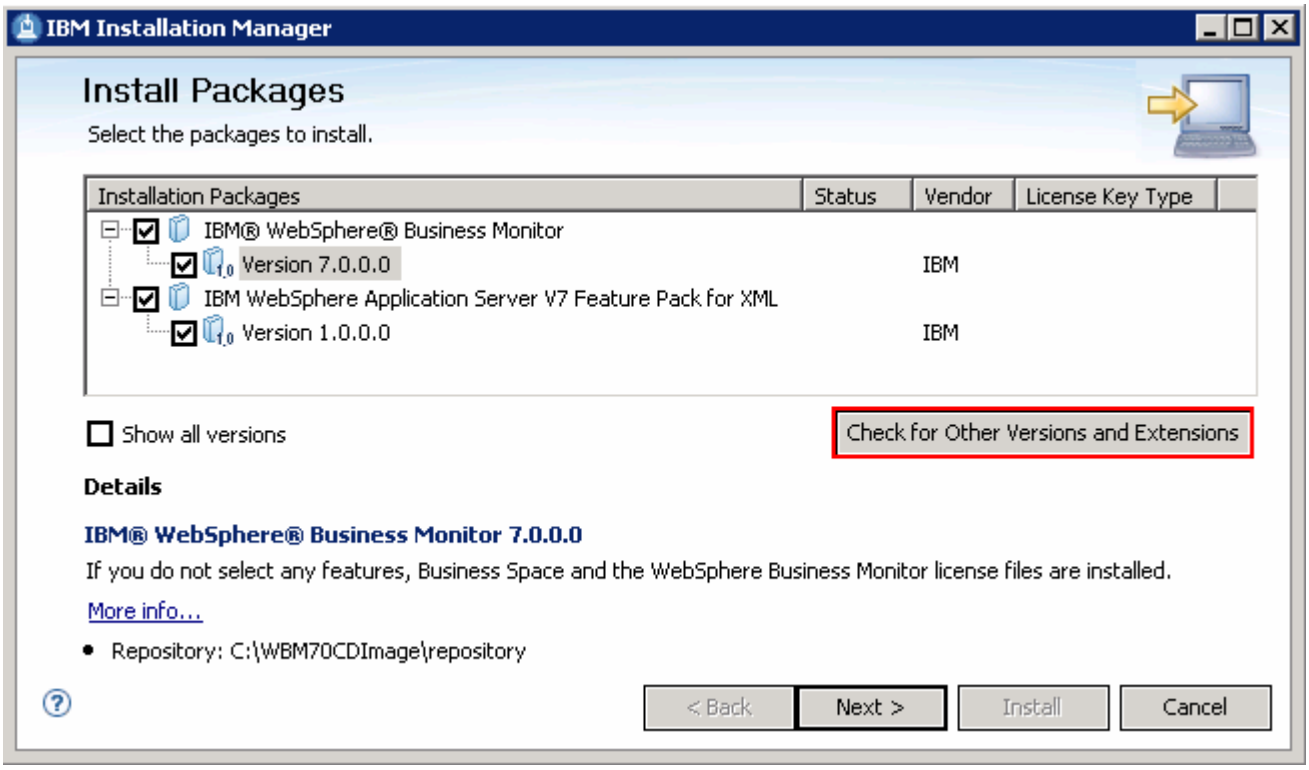


____ 11. The Installation Manager is launched as shown in the picture below. You should see a list of the packages shown below:

1) **IBM WebSphere Business Monitor → Version 7.0.0.0**

2) **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.

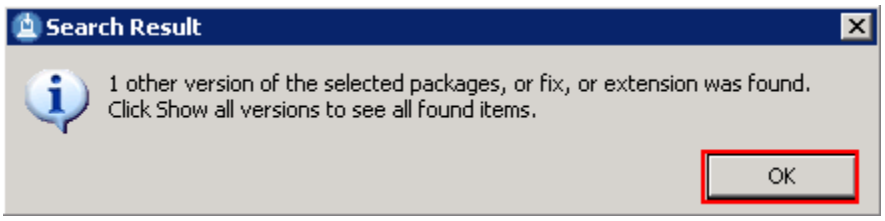


Note: If you do **not** want to update with the latest available refresh pack, fixes and extensions, do not click the **`Check for Other Versions and Extensions`** button. Select the required packages and click **`Next`**

____ 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 the packages with the latest refresh packs, fixes and extensions at the same time when you install WebSphere Business Monitor V7.0

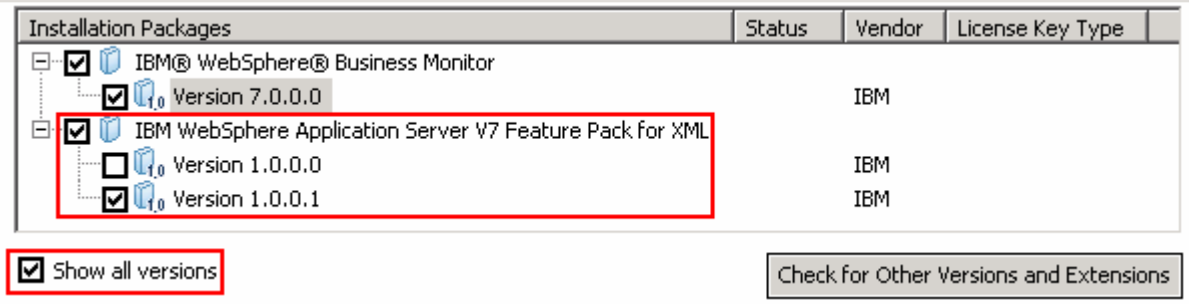
Note: At the time of writing this document, there is no refresh pack available for monitor. However the XML feature pack Version 1.0.0.1 Fix Pack is available. Ensure your machine is connected to the network accessible to the WebSphere Business Monitor live repository Web site.

____ 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:

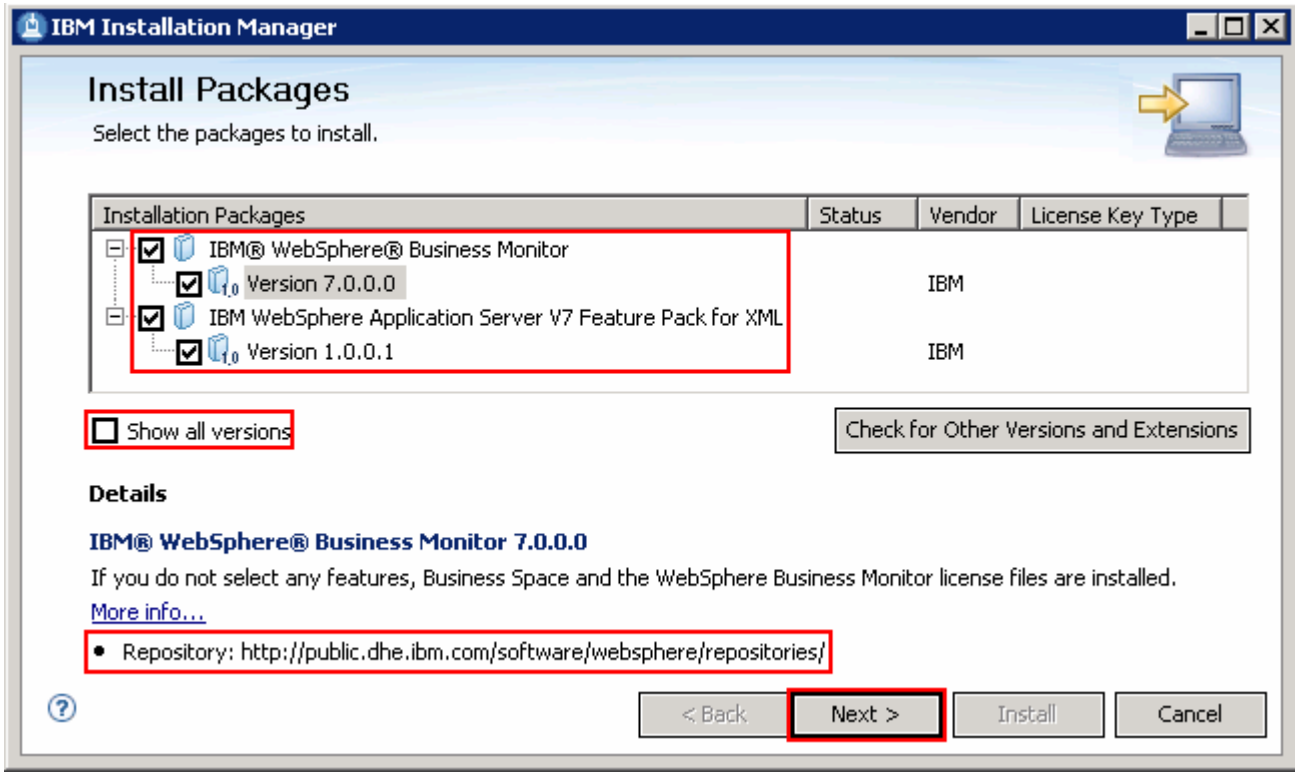


In this exercise, you will install WebSphere Business Monitor V7.0 with WebSphere Application Server V7 Feature Pack for XML Version 1.0.0.1 selected.

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

1) Select **IBM WebSphere Business Monitor → Version 7.0.0.0**

2) Select **IBM WebSphere Application Server V7 Feature Pack for XML → Version 1.0.0.1**

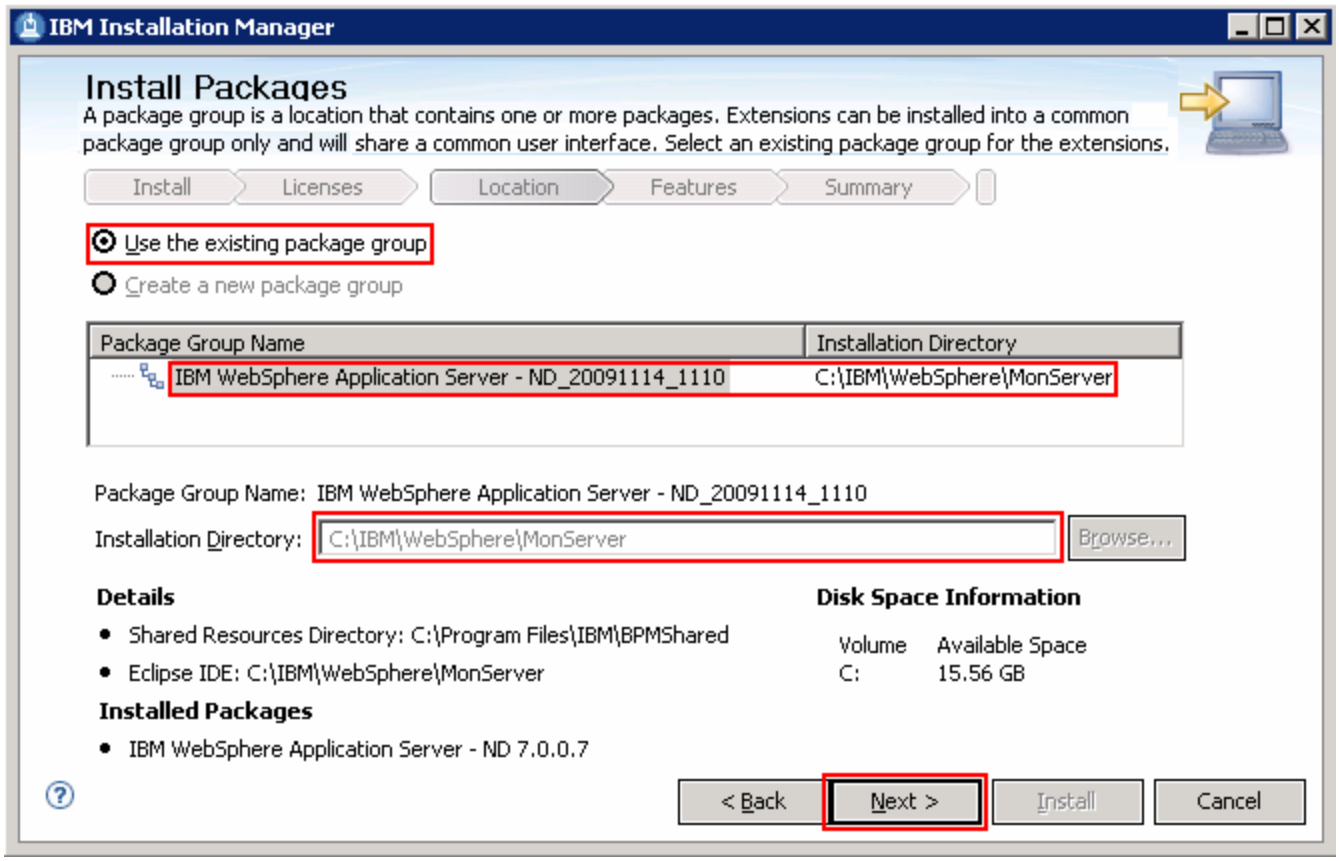


Note: If you do not select any features in this panel, Business Space and WebSphere Business Monitor license files are installed on the WebSphere Application Server package group.

____ 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**



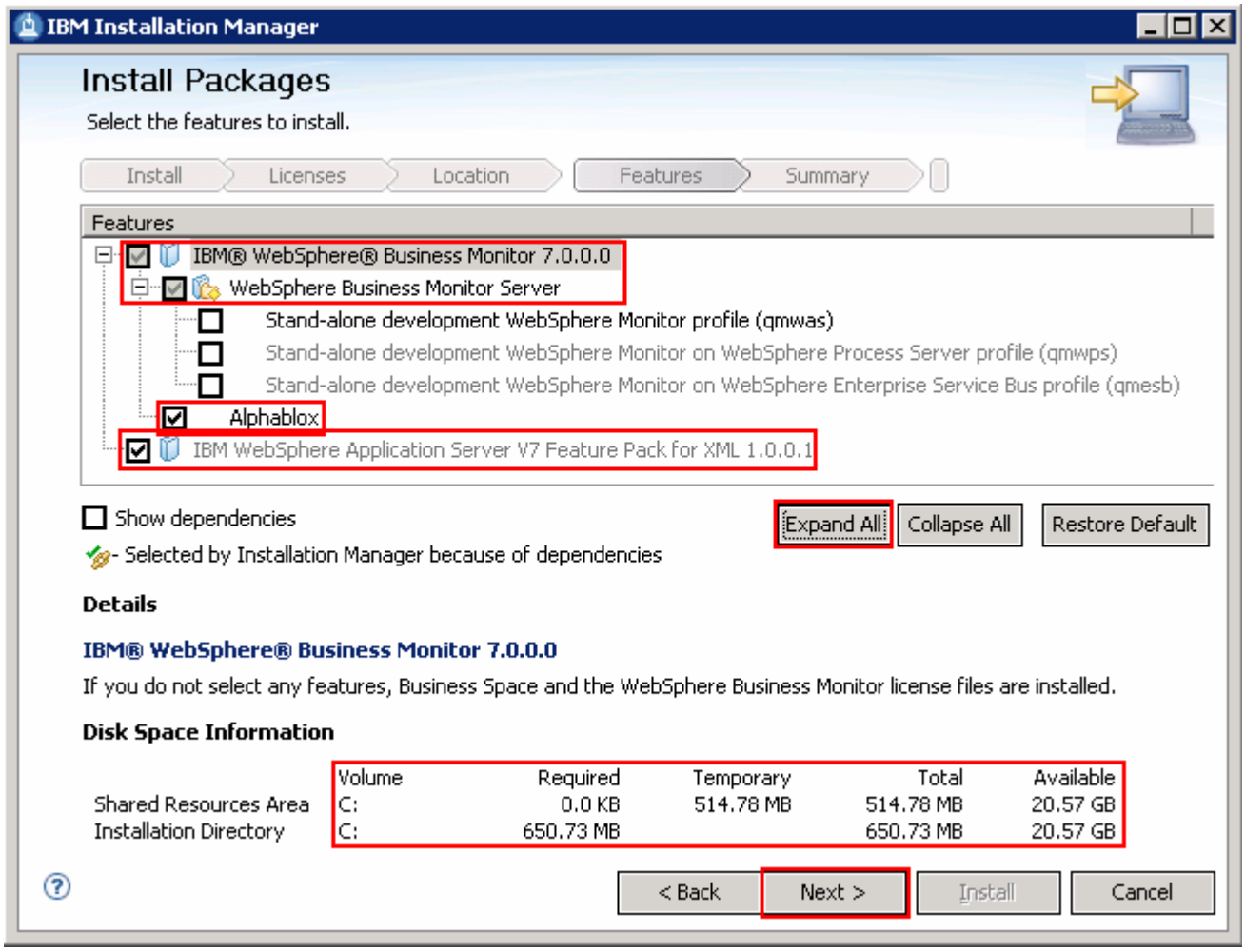
____ 19. Click **Next**

____ 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.

1) **IBM WebSphere Business Monitor Server 7.0.0.0 → WebSphere Business Monitor Server**

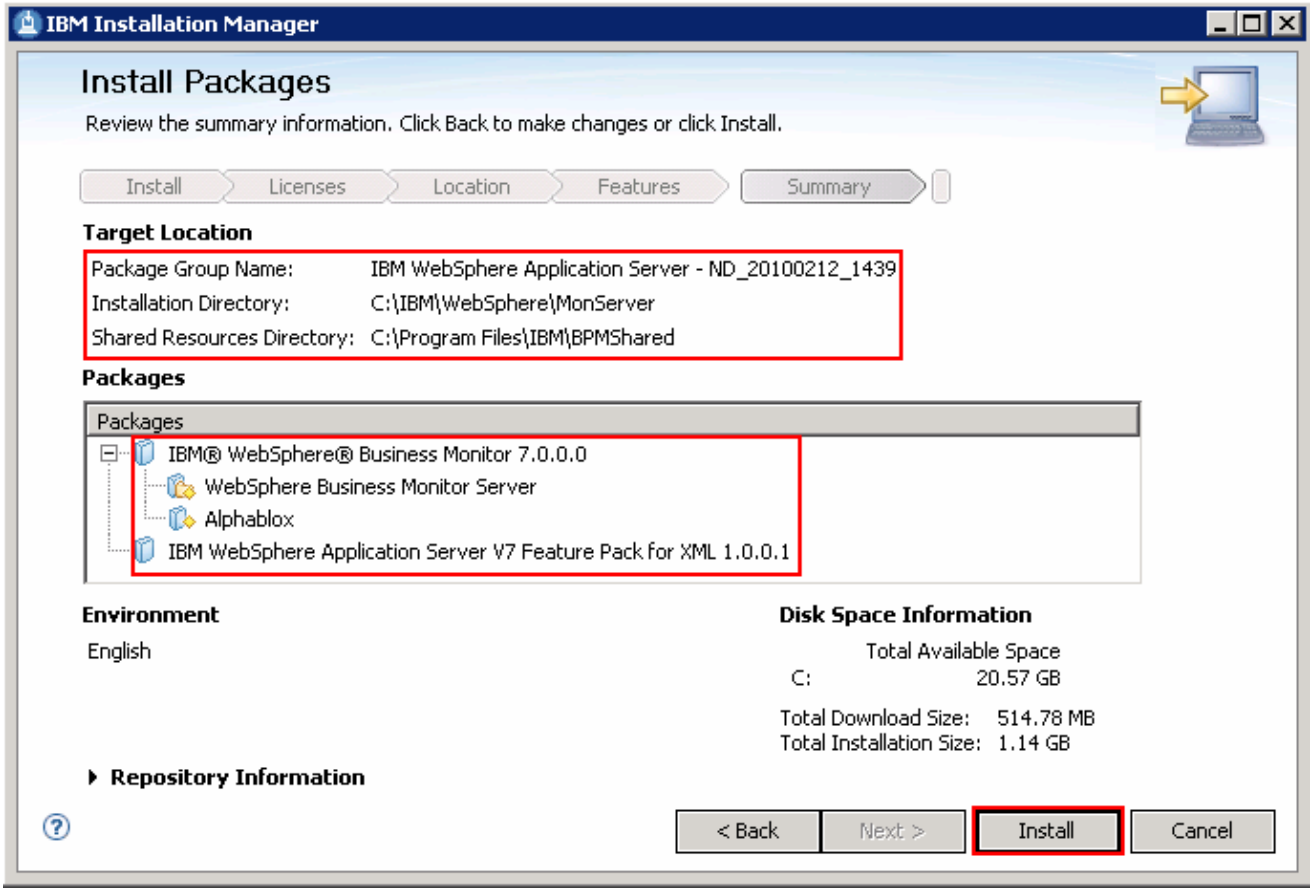
    a) **Alphablox**

2) **IBM WebSphere Application Server V7 Feature Pack for XML 1.0.0.1**

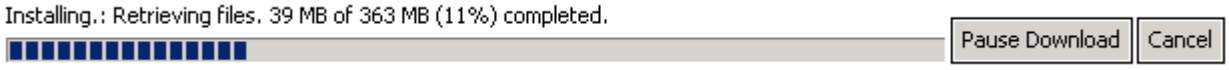


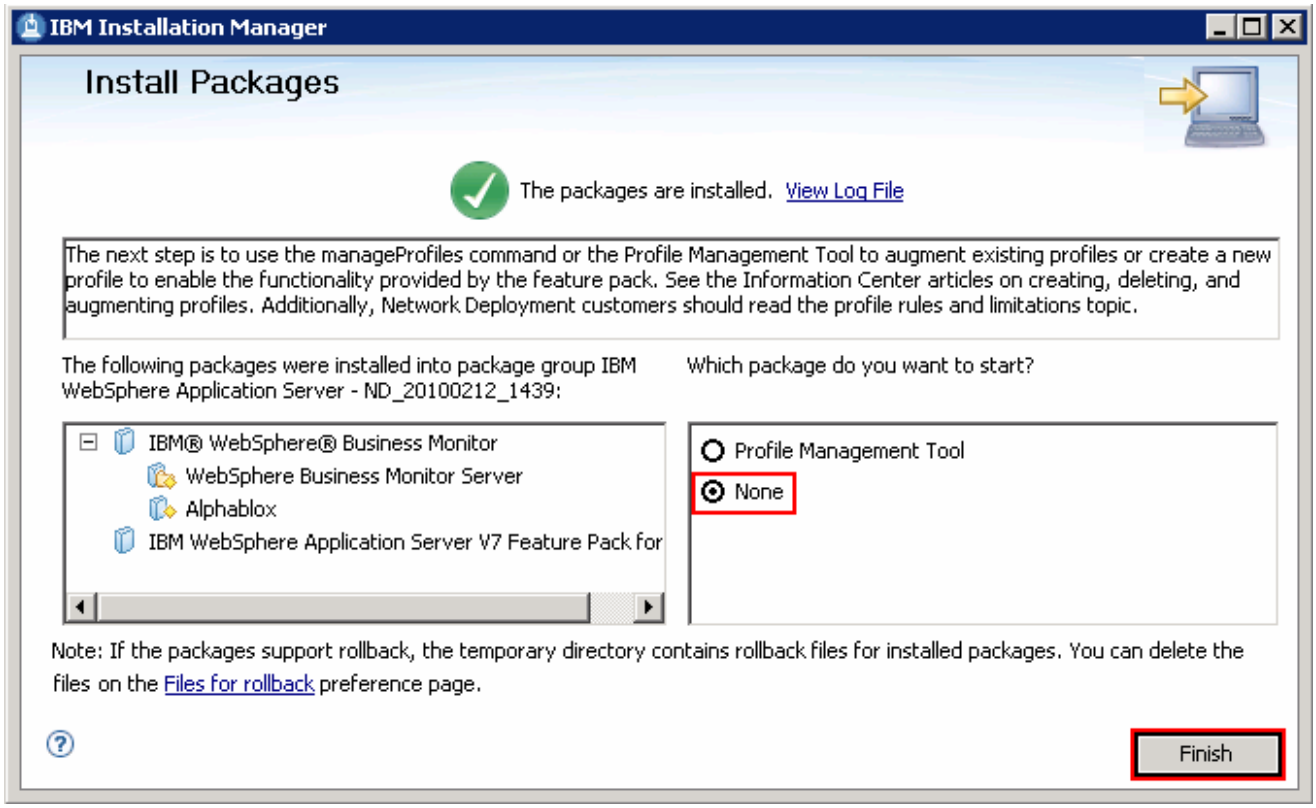
____ 21. Click **`Next`**

____ 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

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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, 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 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:
    - Sets the path to the WebSphere Application Server - Network Deployment installation image (WAS)
    - Sets the path of the WebSphere Application Server Network Deployment installation location (WAS_LOCATION)
    - 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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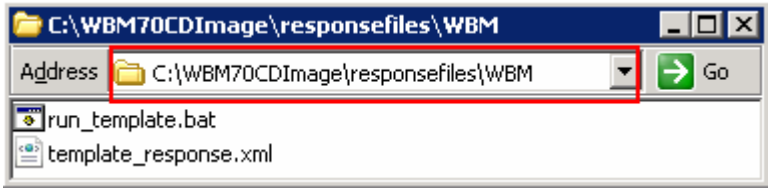
Note: Visit **Part 1: Preparing for the WebSphere Business Monitor installation image** to extract and create the correct on-disk structure for the WebSphere Business Monitor V7.0 installation image.

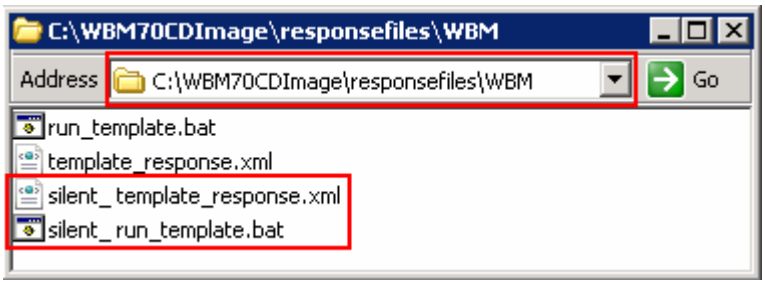
Complete the instructions below to install WebSphere Business Monitor in a silent mode:

____ 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

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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 -(
```

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 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 IUpdate 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 this
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.profile

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:

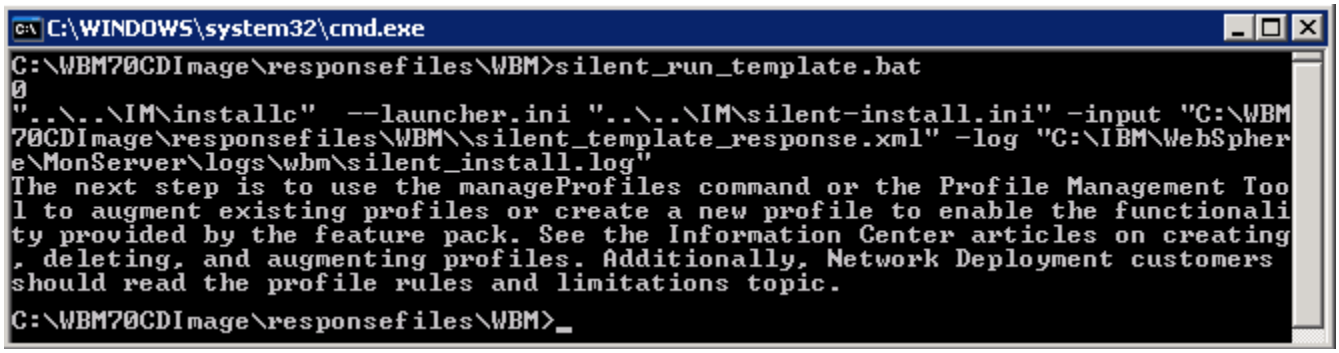
1) Open a command window and change directories to **C:\WBM70CDImage\responsefiles\WBM** and run the command as shown below:

- Type **silent_run_template.bat** and press the **Enter** key

__ 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



____ 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 deployment manager 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.

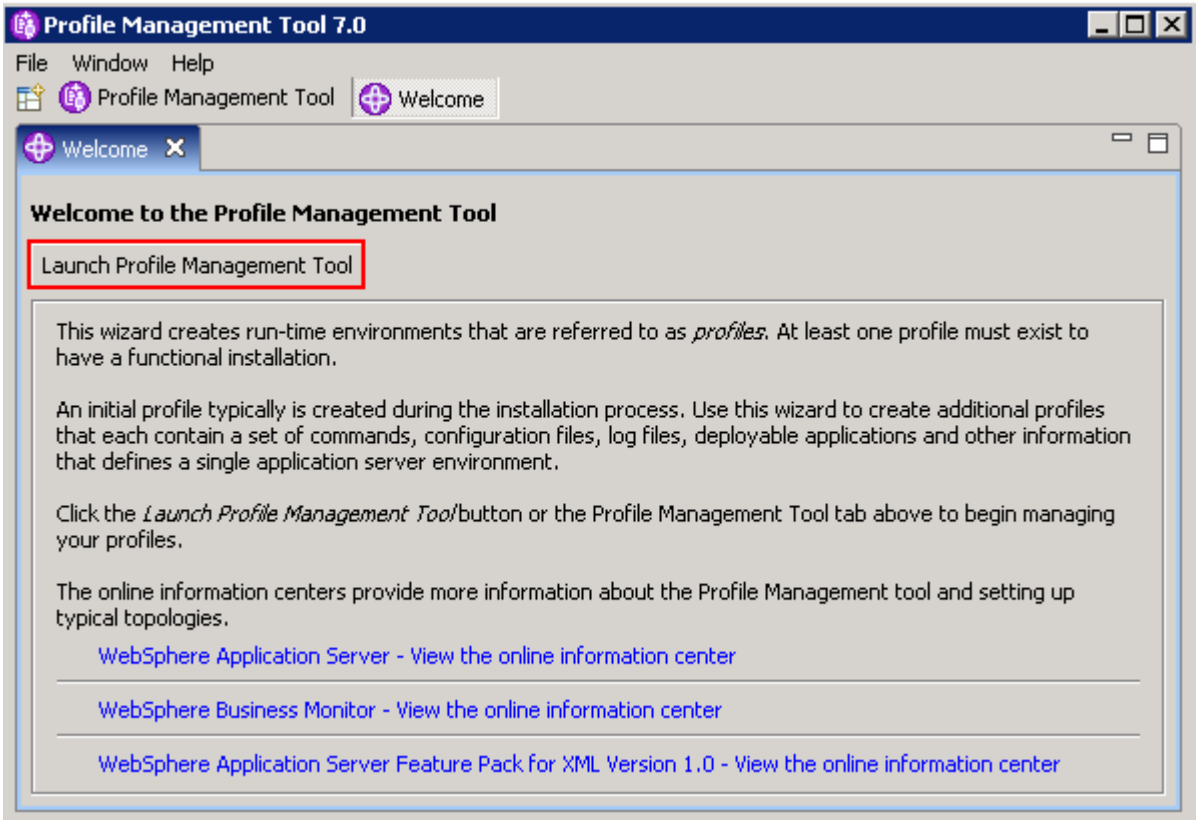
Note: - For manual profile creation, visit: **Alternative: Manually create WebSphere Business Monitor deployment manager profile**.

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

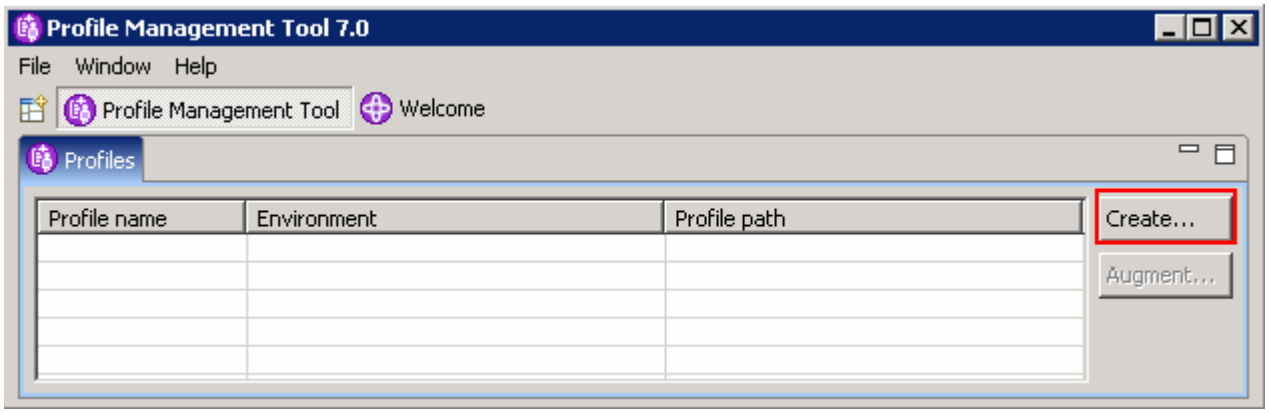
____ 1. Launch the profile management tool

__ a. From the start menu, select 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`**

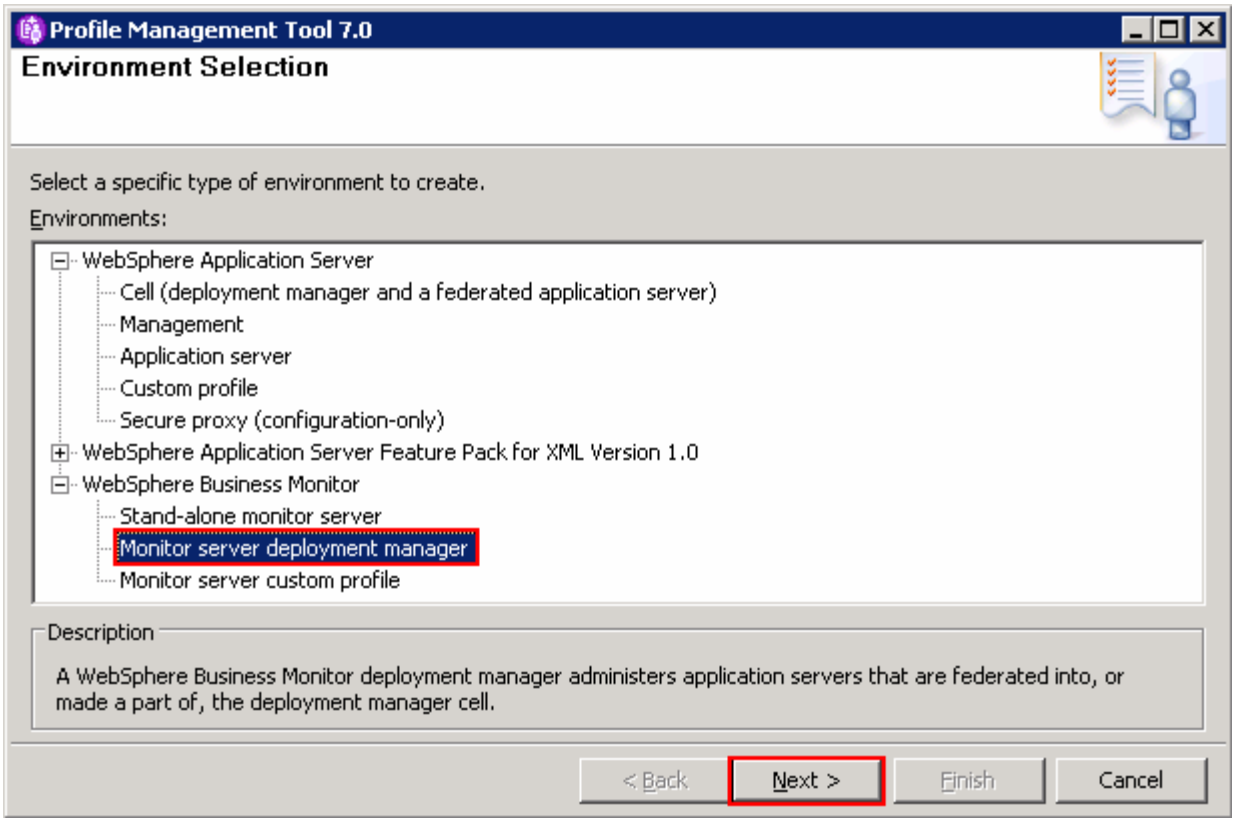


____ 2. Select the **`Profile Management Tool`** button



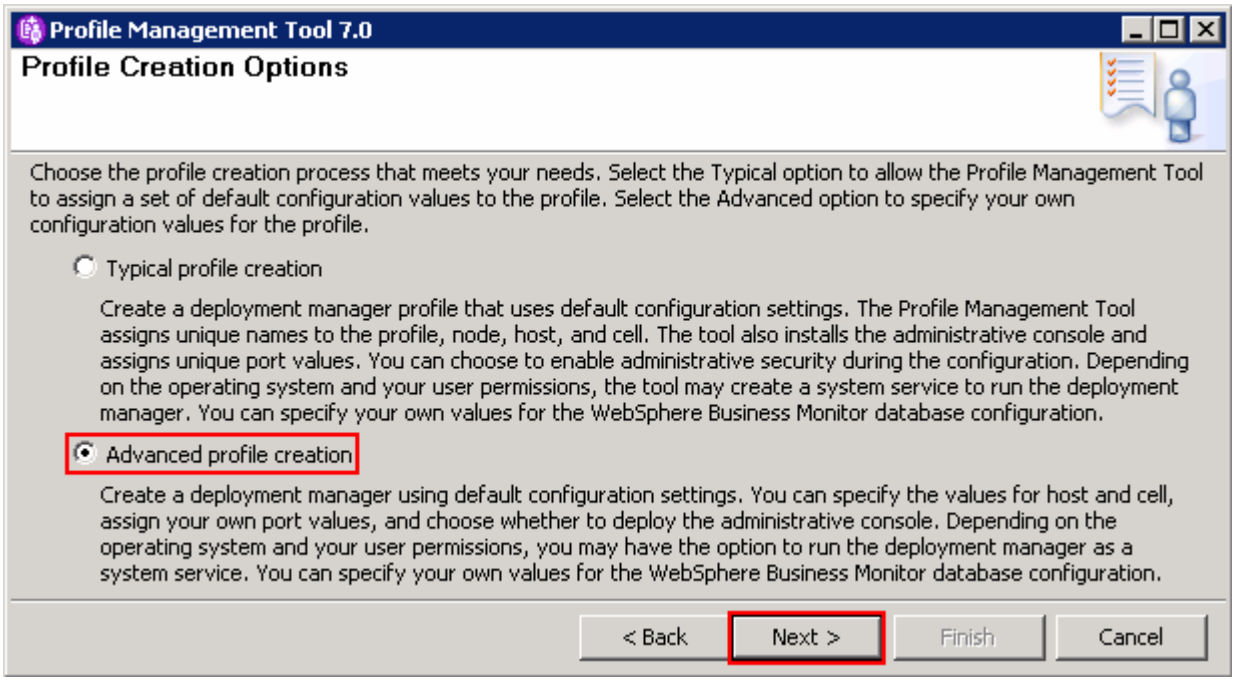
____ 3. Click the **`Create`** button. The **Environment** selection panel is launched

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



____ 5. Click **`Next`**

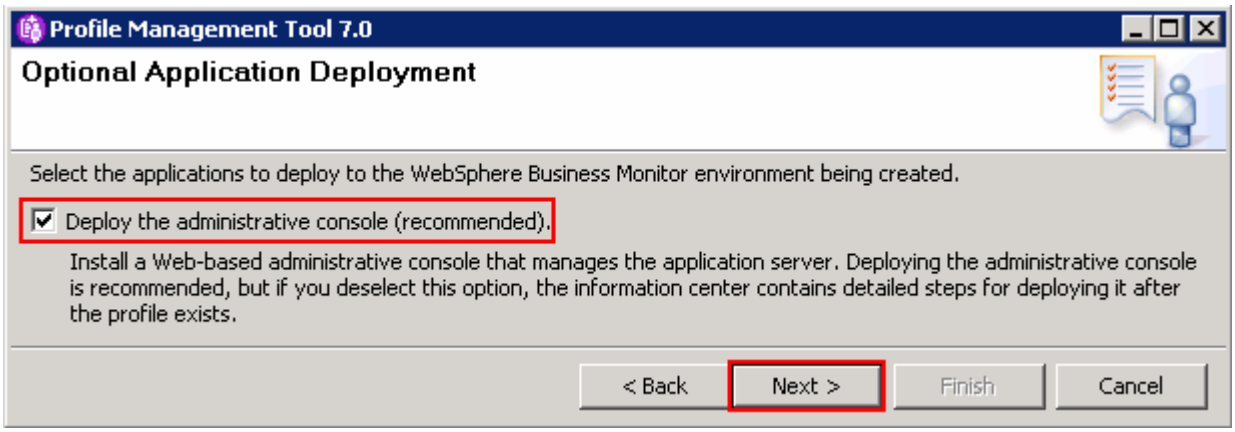
____ 6. In the next **Profile Creation Options** panel, select the radio button for **`Advanced profile creation`**



____ 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)`**



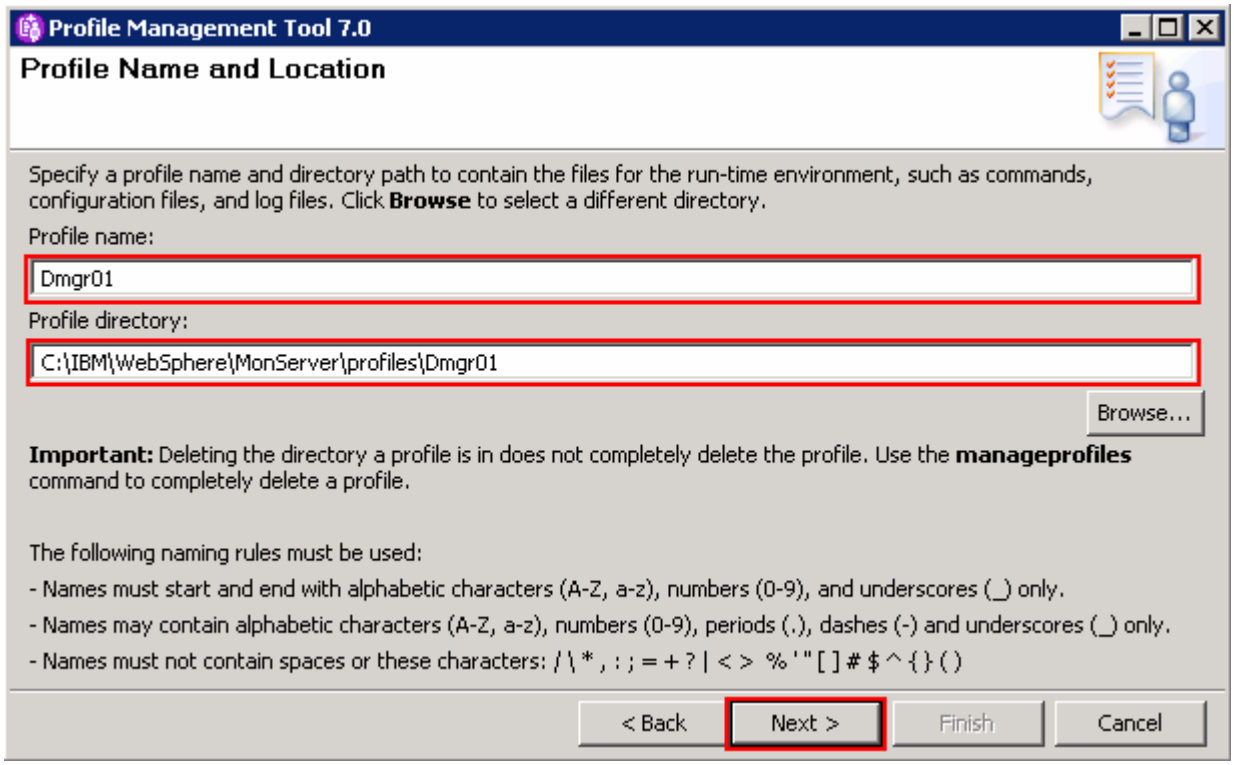
____ 9. Click **`Next`**

____ 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`



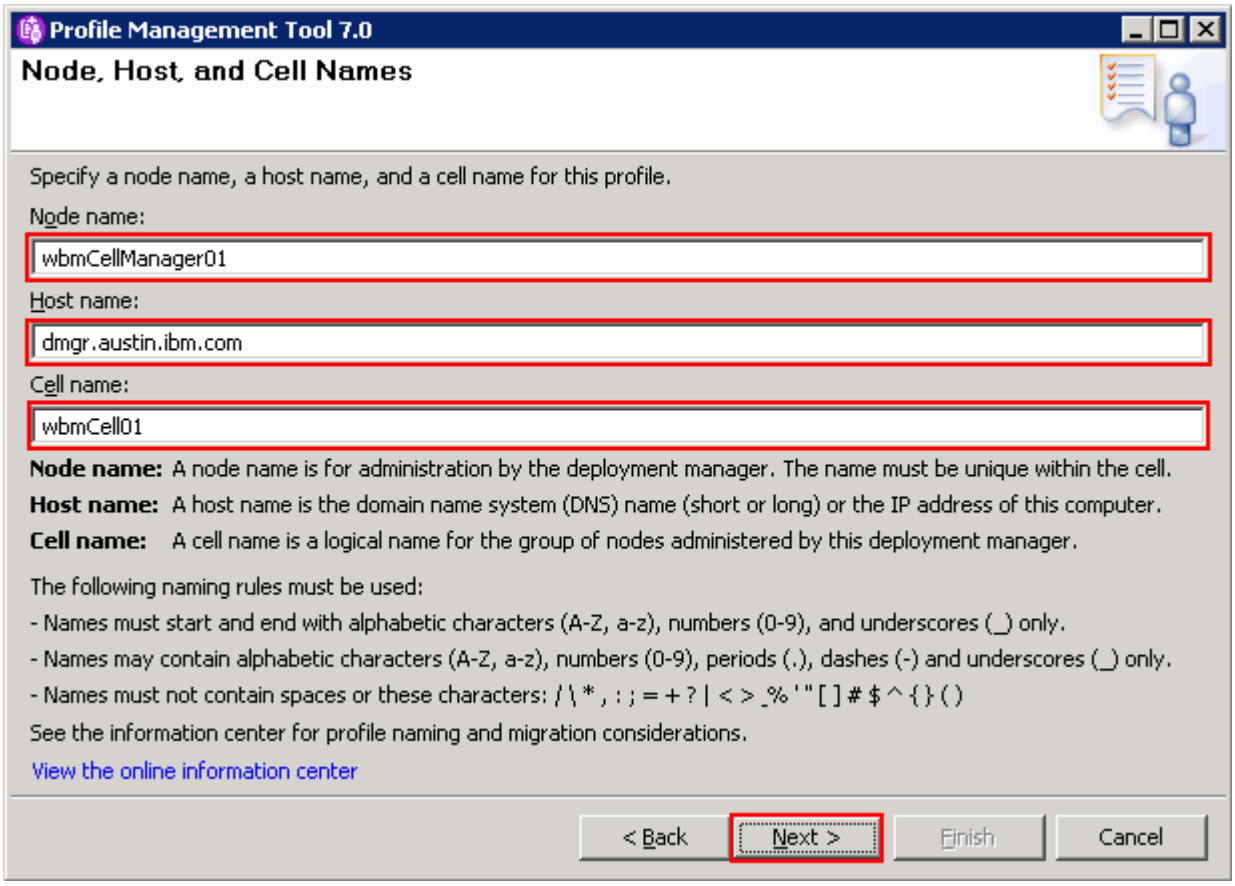
____ 11. Click **Next**

____ 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`**



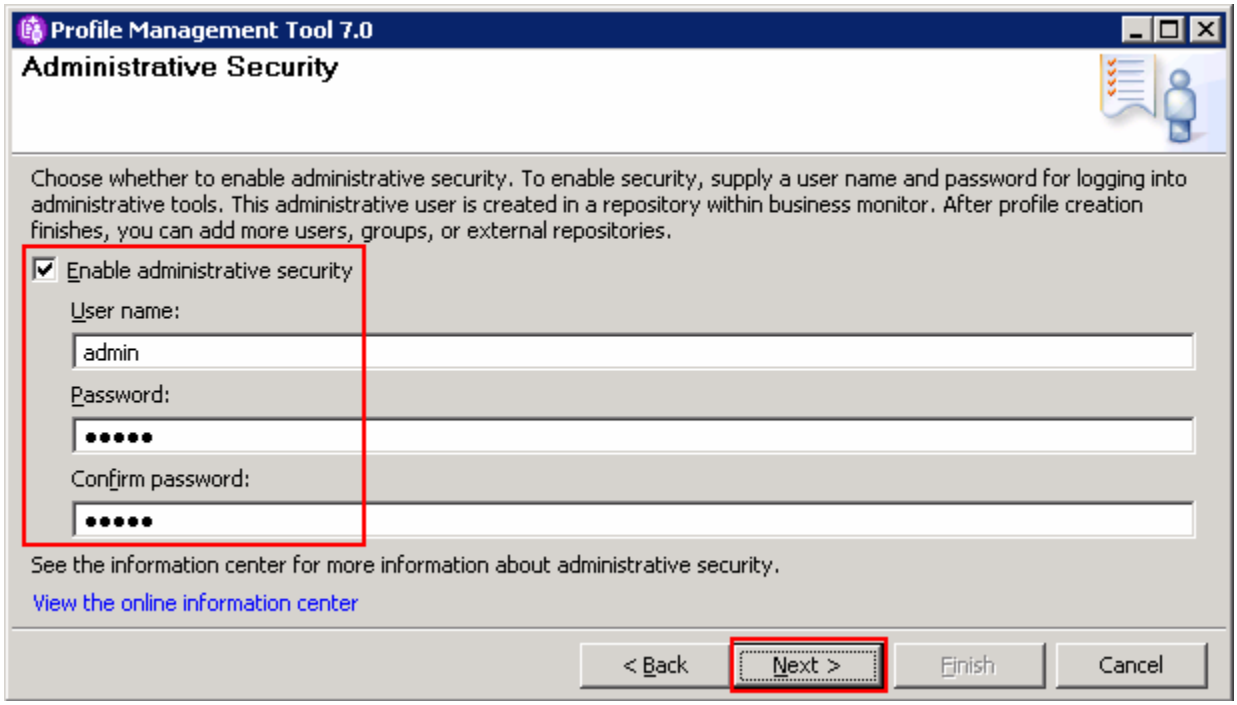
____ 13. Click **`Next`**

____ 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`**

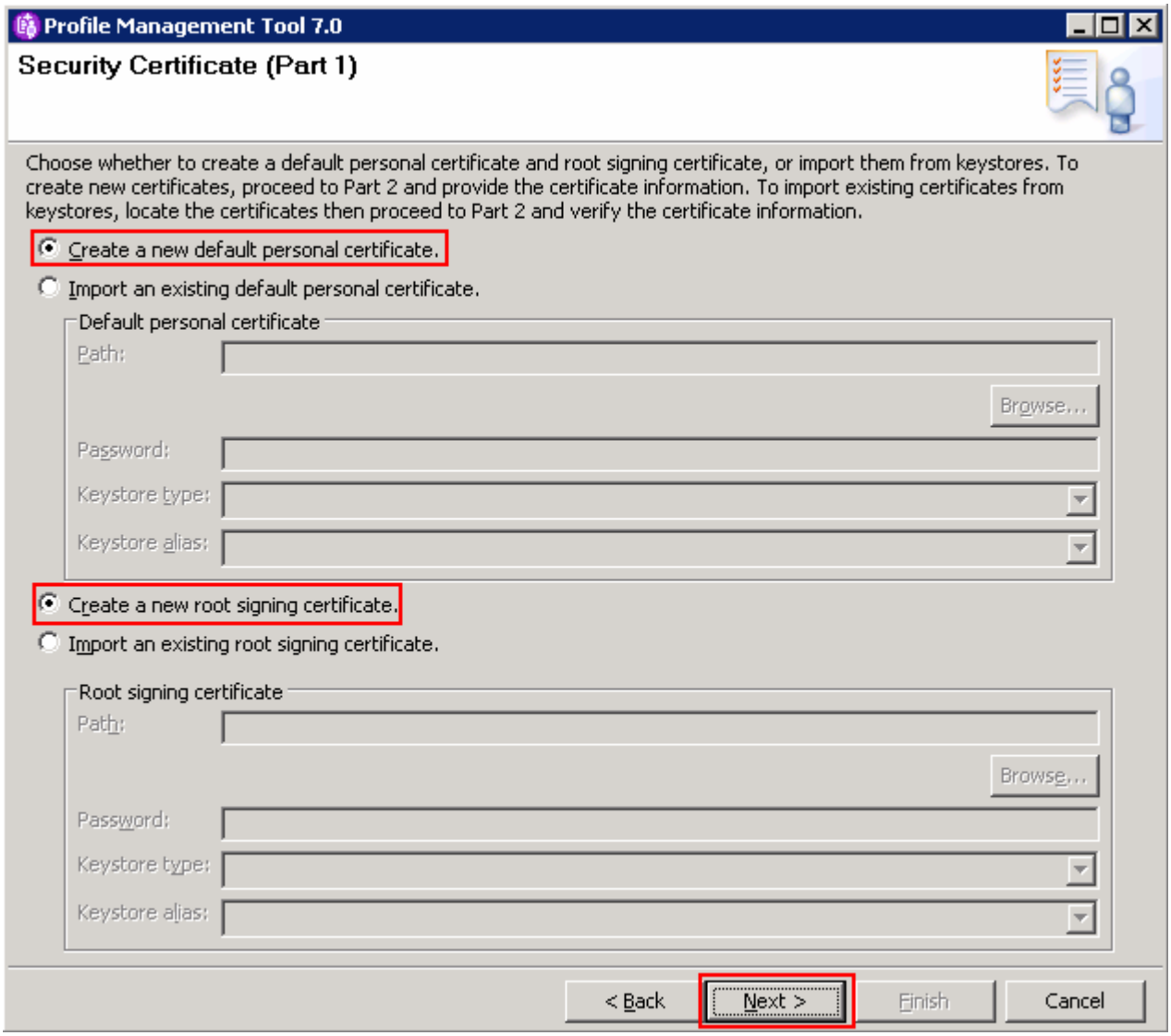
__ b. Password : **`superSecret`**

__ c. Confirm Password : **`superSecret`**



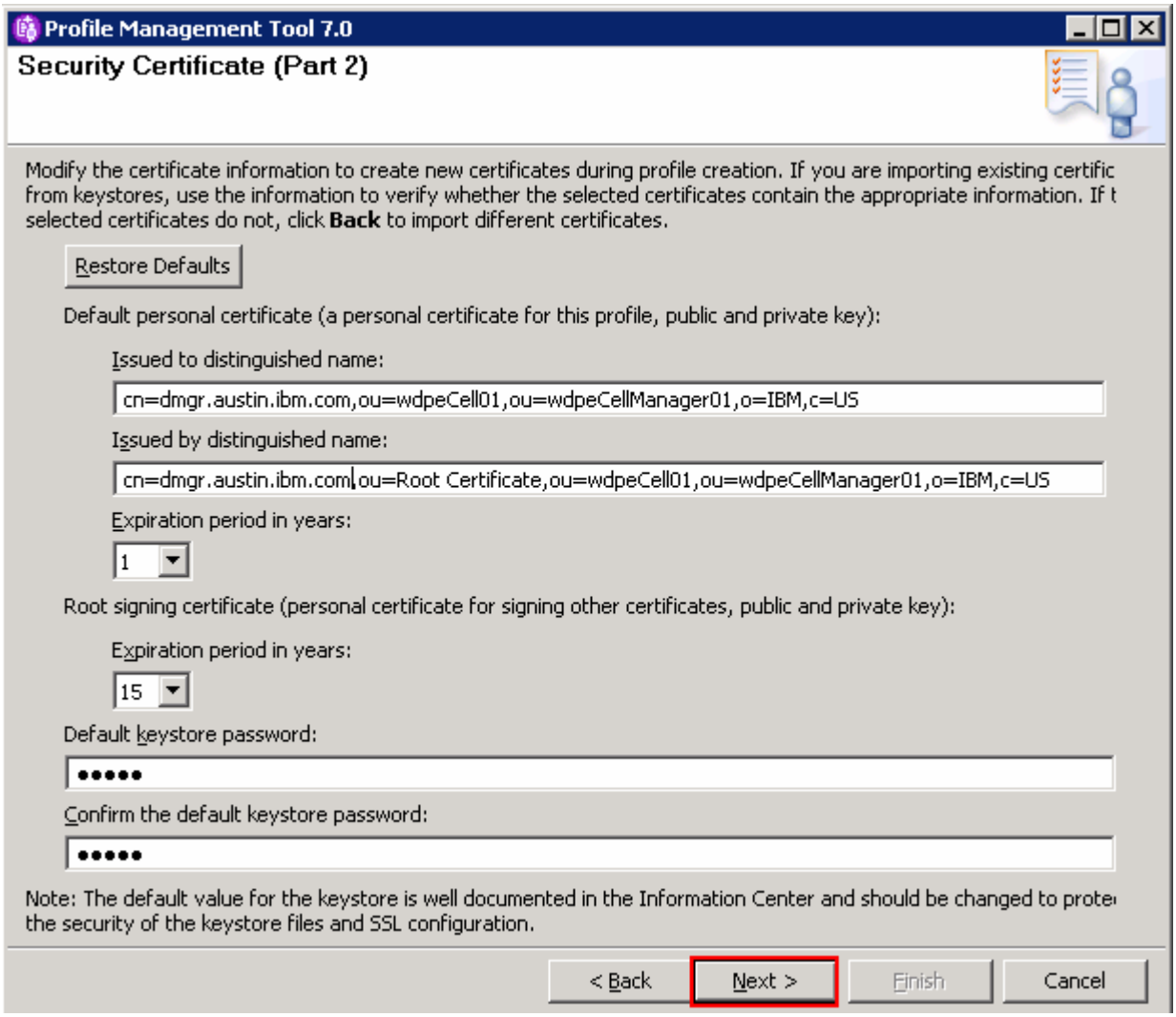
____ 15. Click **`Next`**

____ 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

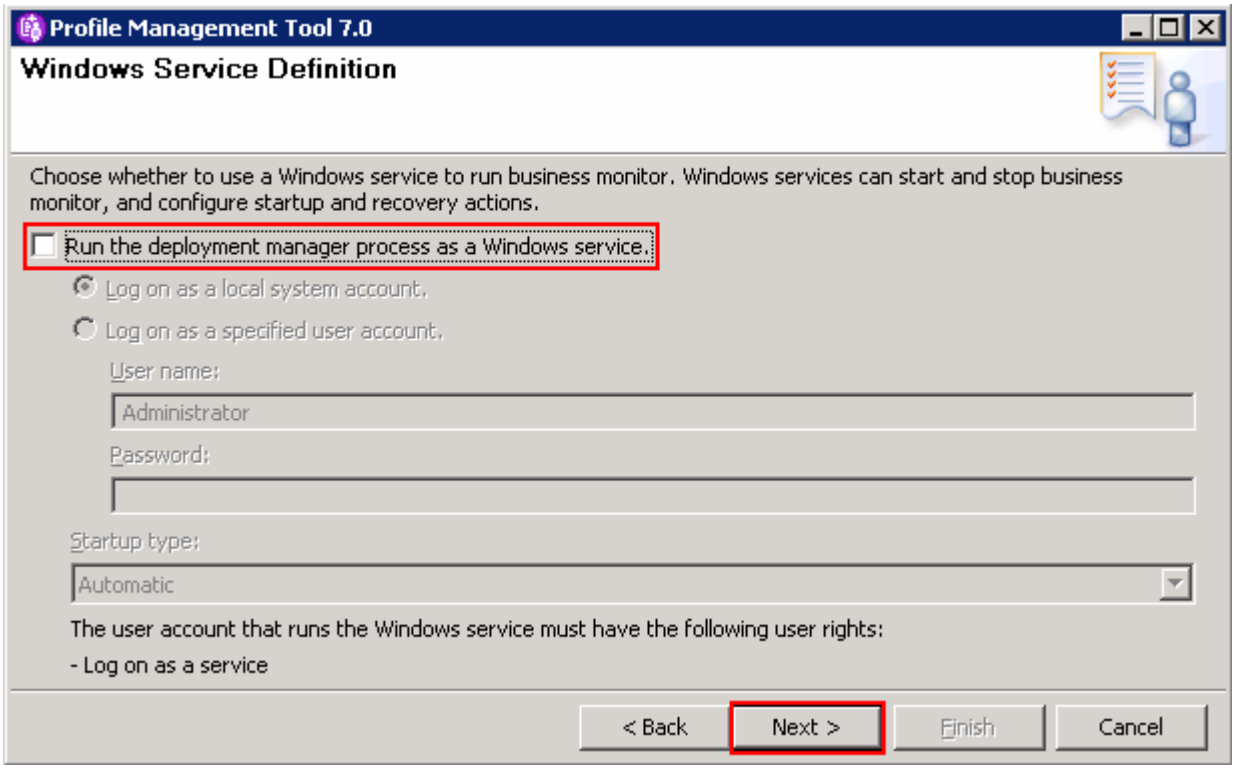


____ 19. Click **`Next`**

____ 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`**

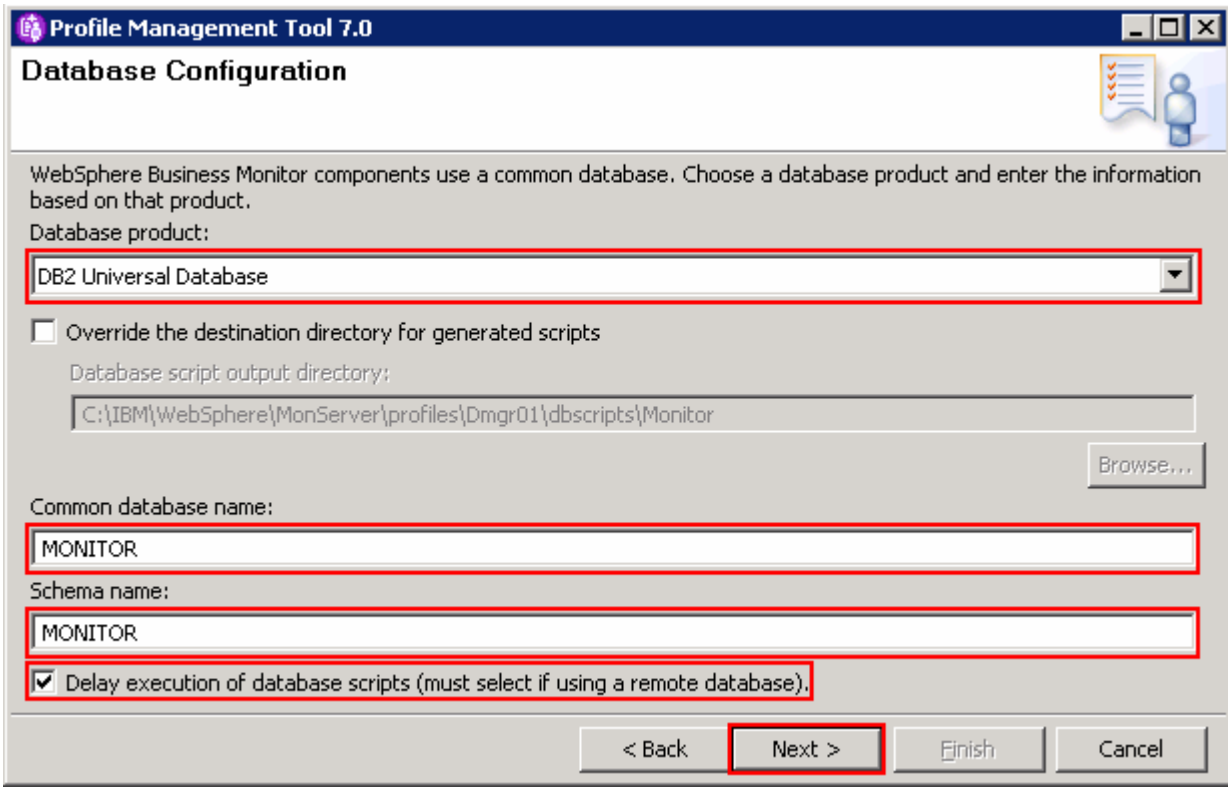
____ 24. In the next **Database Configuration** panel, specify the parameters for the monitor database type:

__ 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, specify the additional monitor database configuration information:

__ a. User name: **`db2admin`**

__ b. Password: **`superSecret`**

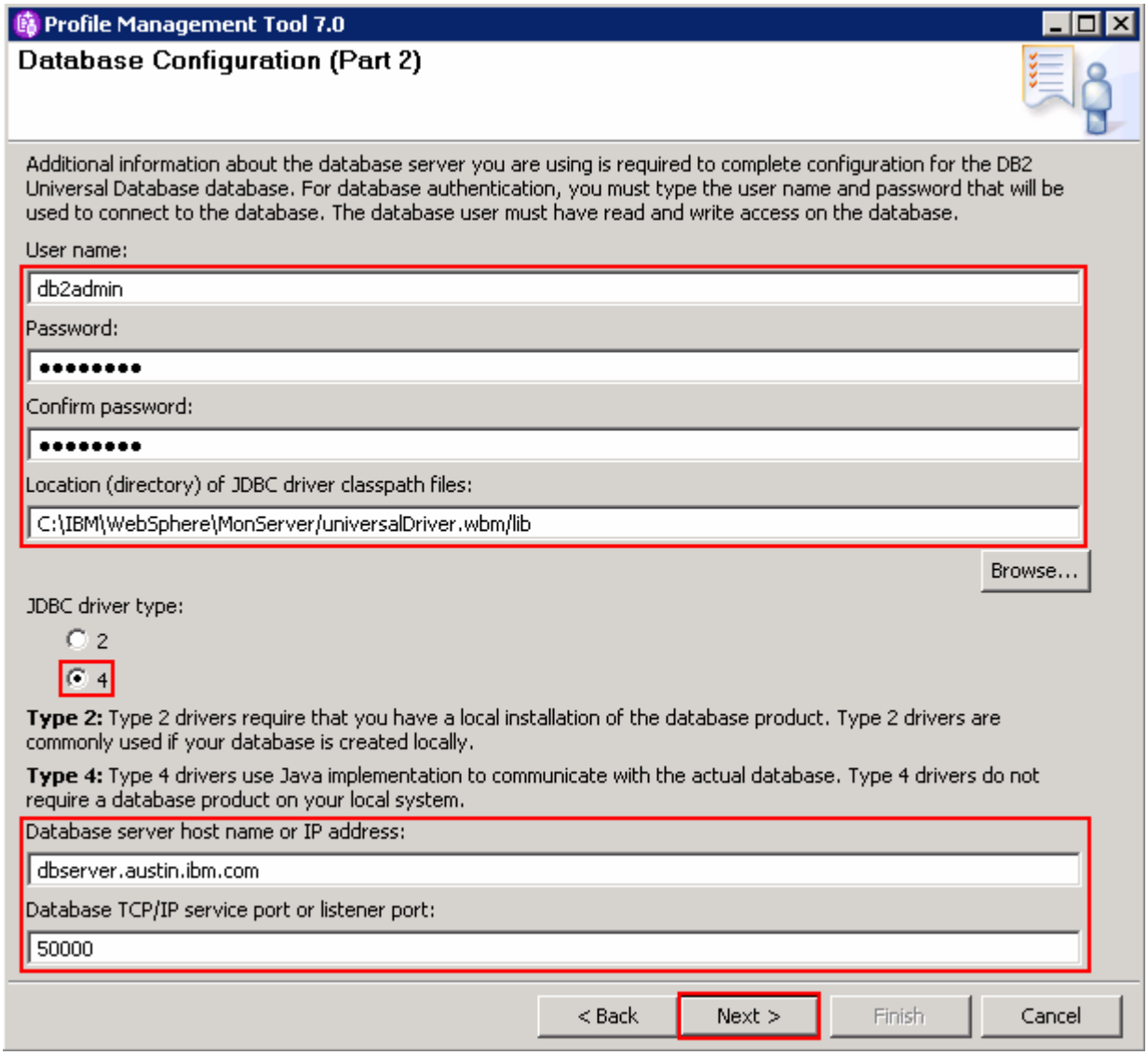
__ c. Confirm password: **`superSecret`**

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

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

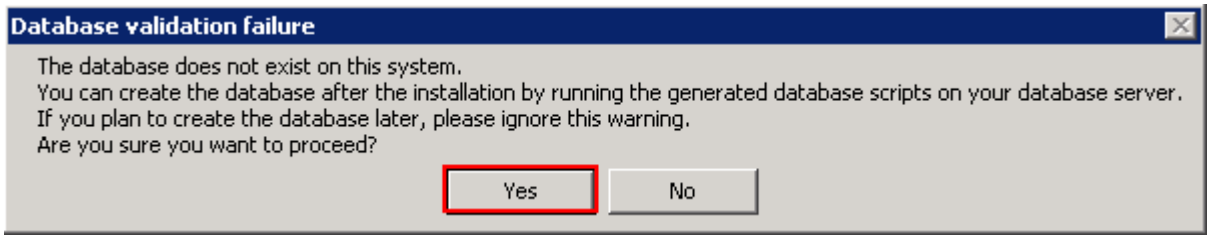
__ f. Database server host name: Ex: **`dbserver.austin.ibm.com`**

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



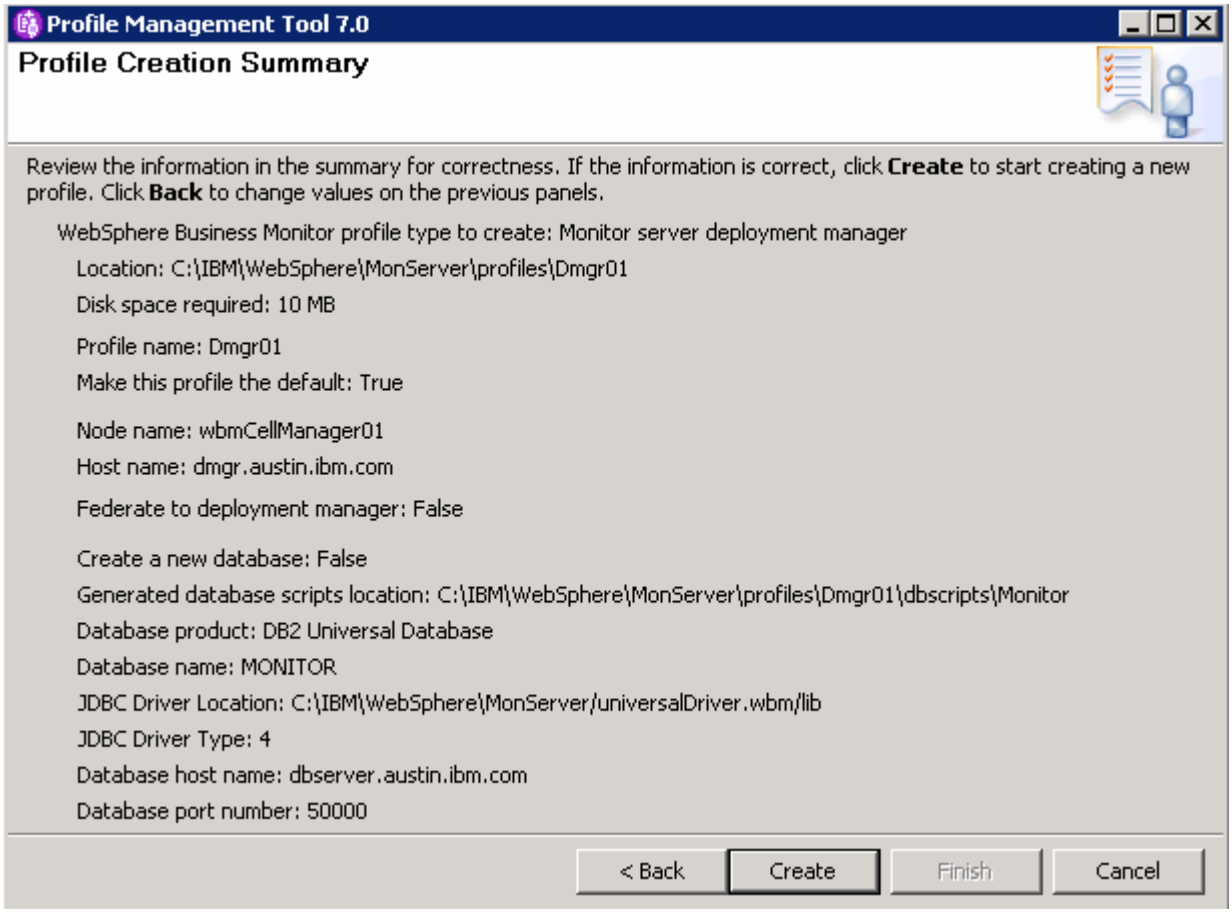
____ 27. Click **`Next`**

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



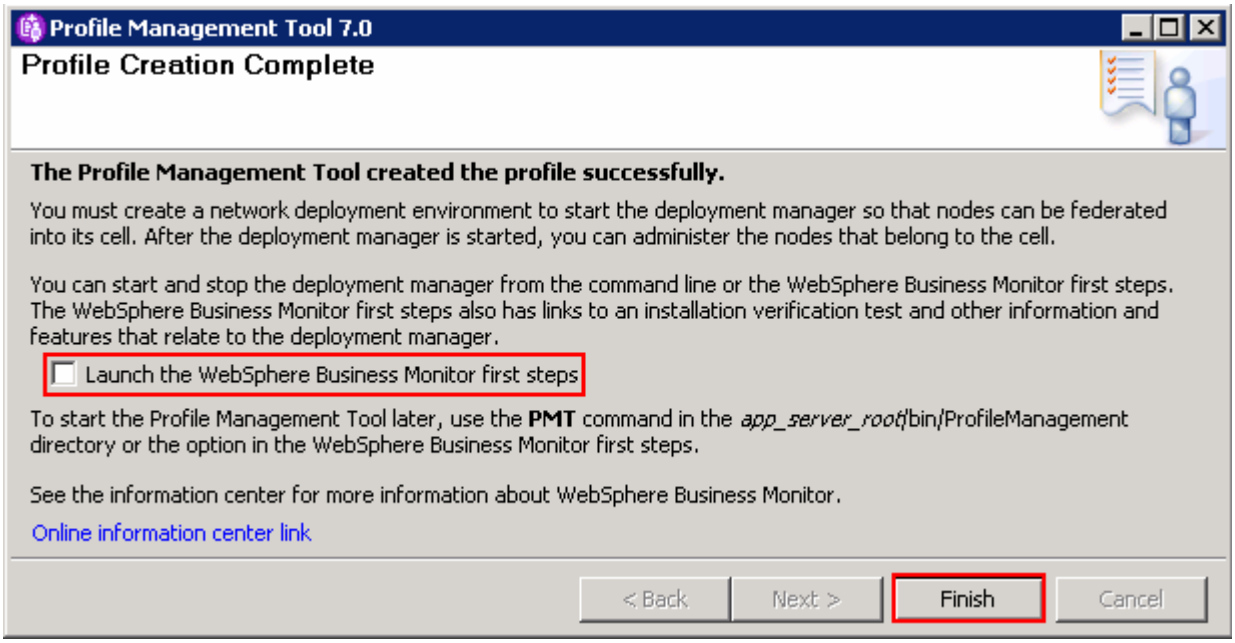
____ 29. Click **`Yes`** to proceed to the next step

____ 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**.

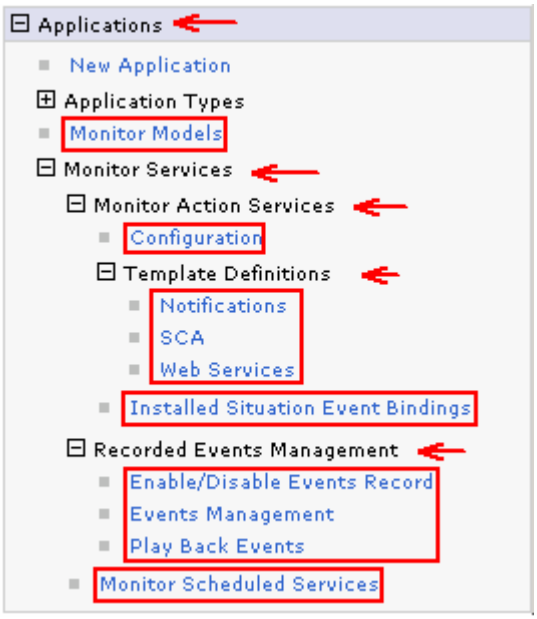
Verify the WebSphere Business Monitor administrative console menus

____ 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

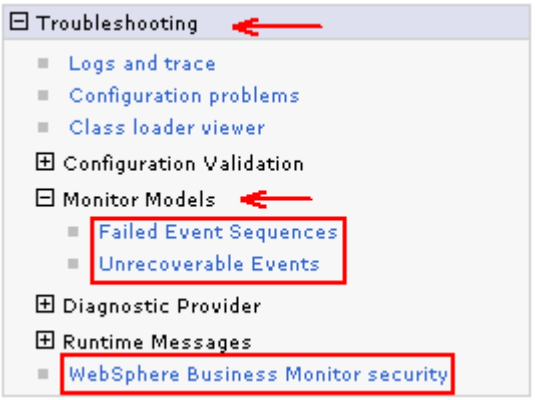
____ 36. In the left navigation pane, expand **Servers** and ensure the **WebSphere Business Monitor configuration** menu exists. Make sure the link works

____ 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

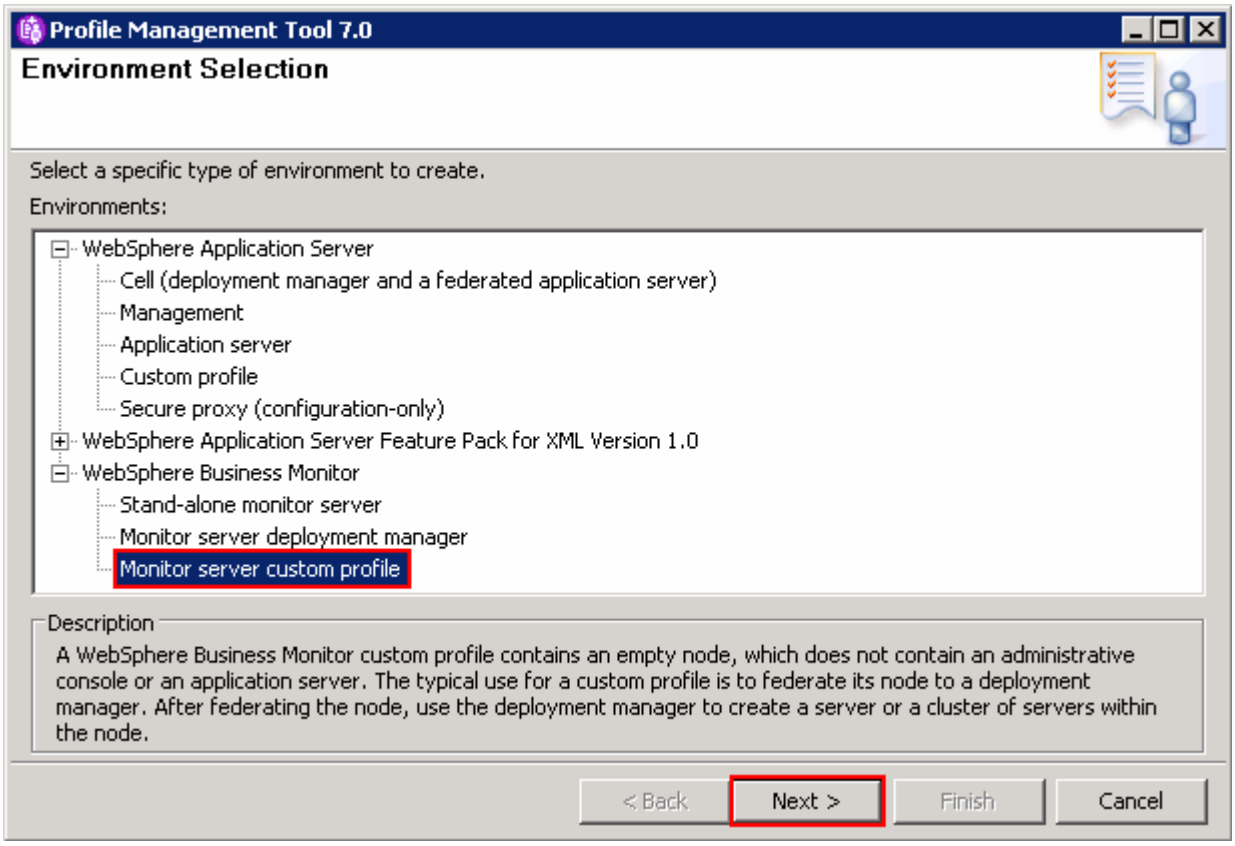
__ a. From the start menu, select **`IBM WebSphere → Business Monitor 7.0 → Profile Management Tool`**

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

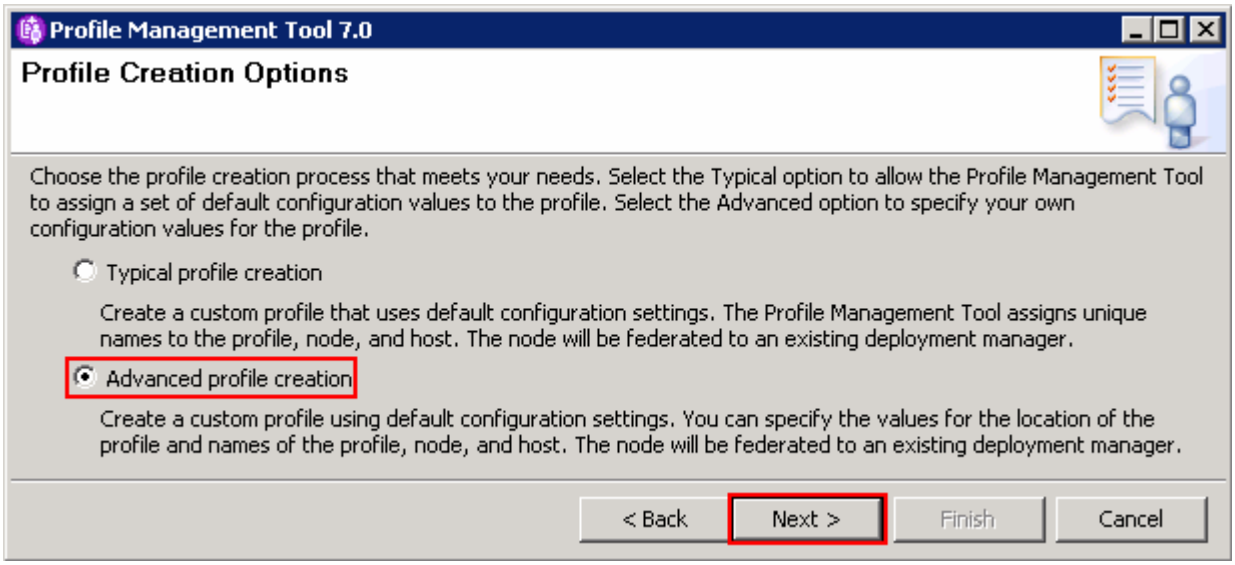
____ 3. Click the **`Create`** button. The **Environment** selection panel is launched

____ 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`**



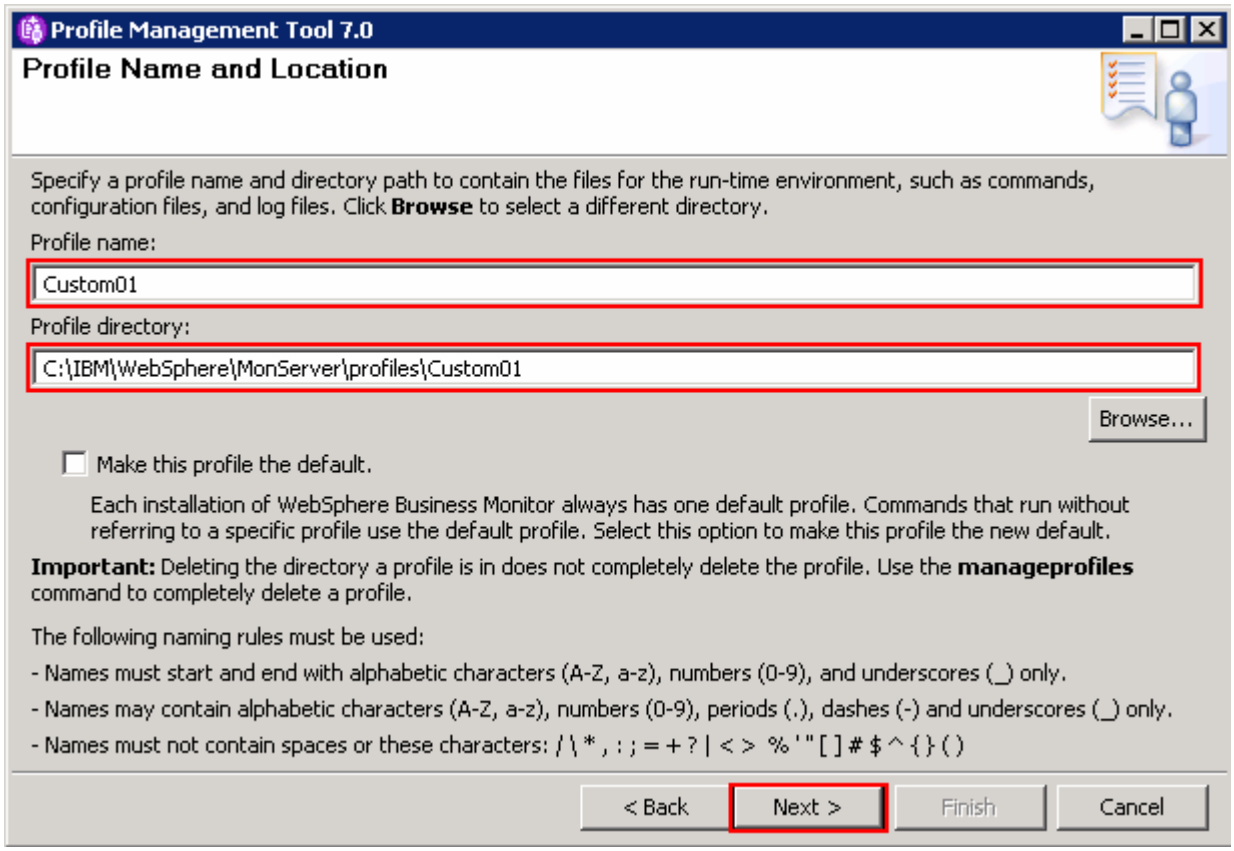
____ 7. Click **`Next`**

____ 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`**

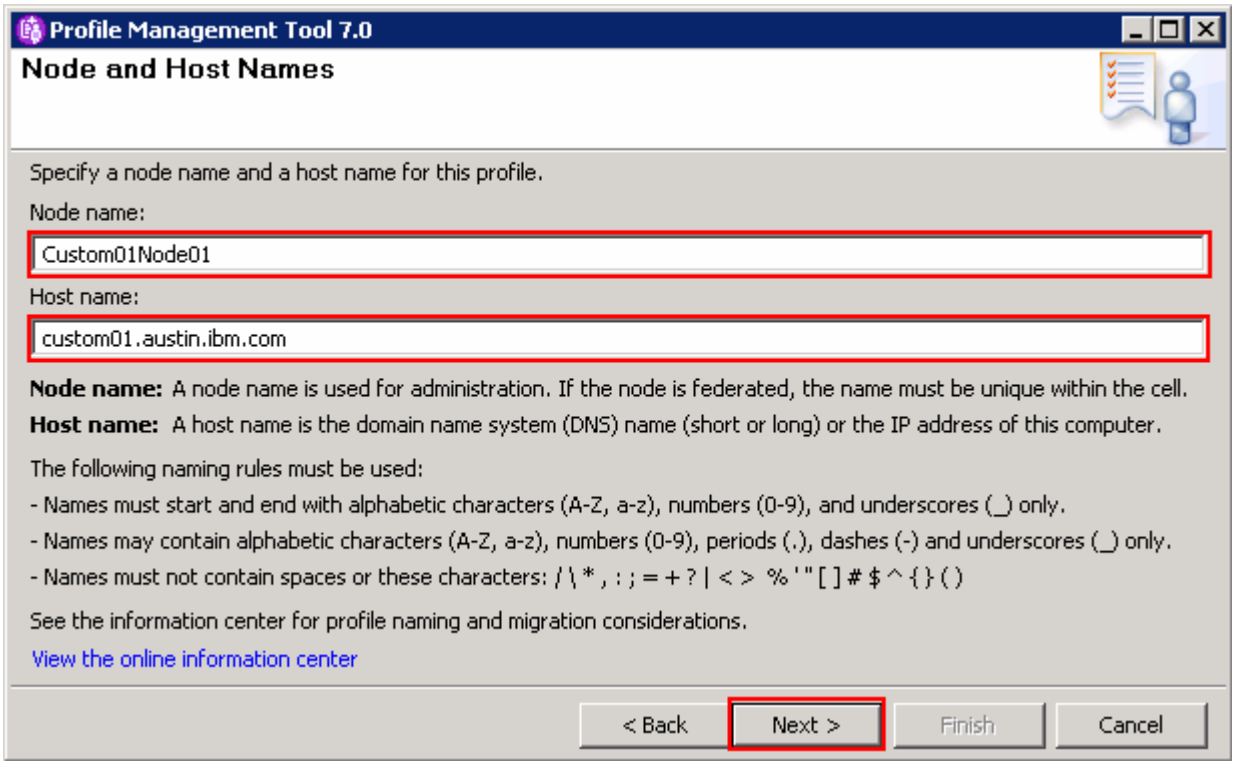
____ 10. In the next **Node and Host Names** panel, specify the node name and host name for this profile

__ 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. Remember 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, specify the node federation parameters:

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

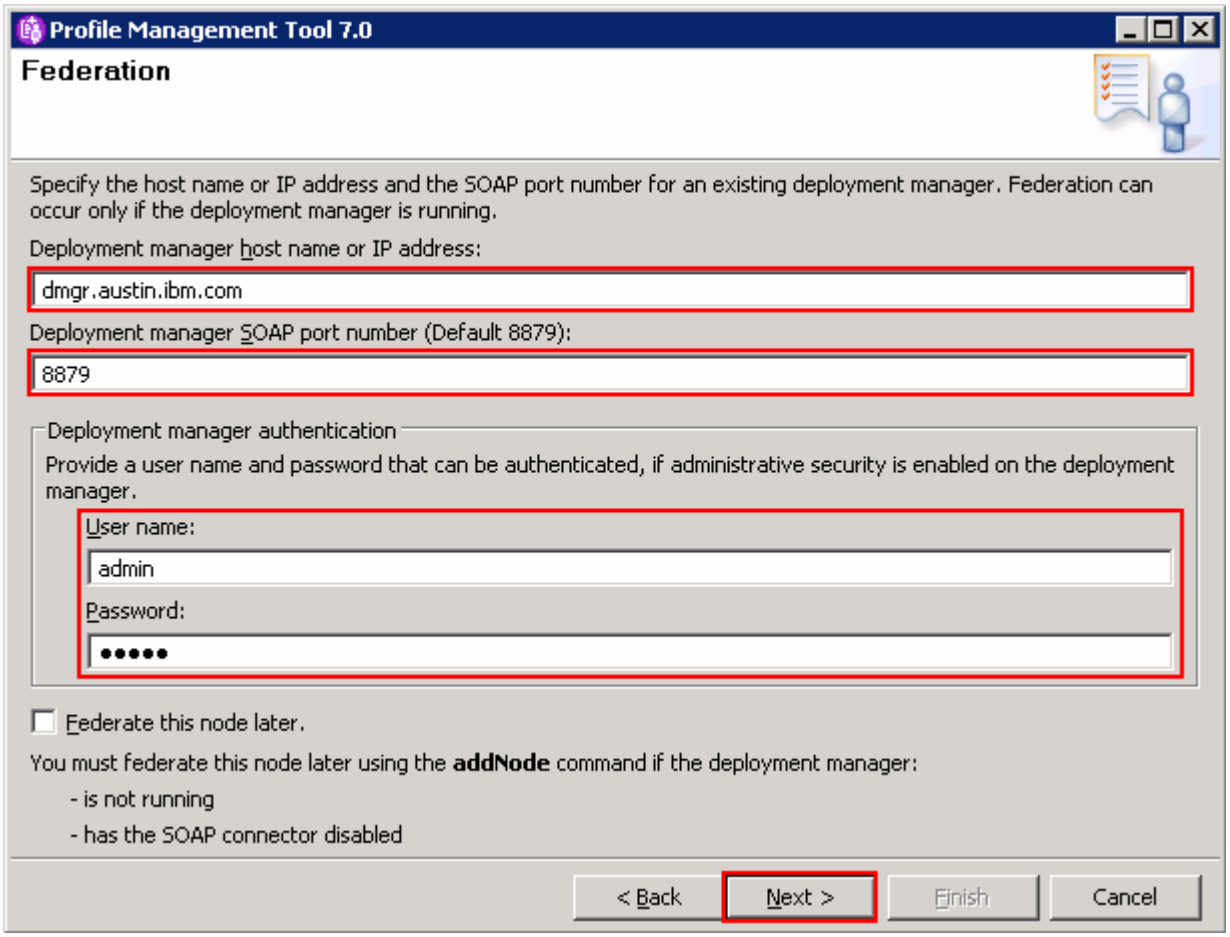
__ b. Deployment manager SOAP port number : **`8879`** (default)

__ c. Deployment manager authentication:

- User name : **`admin`**
- Password : **`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**

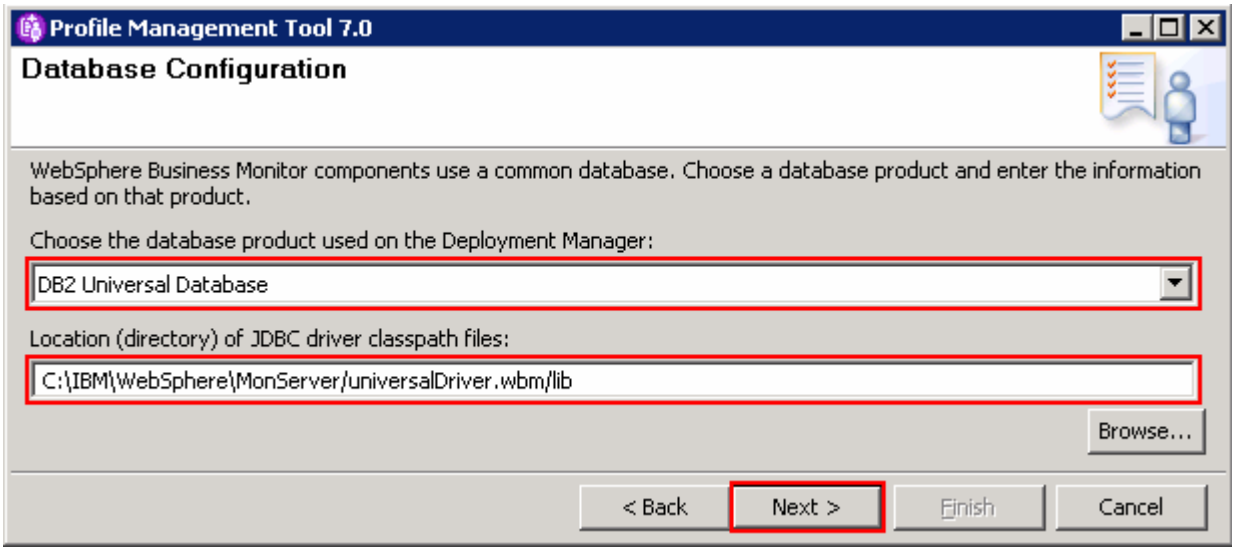
____ 14. In the next **Port Values Assignment** panel, review the ports assigned. You can change them to the required values, but ensure that the port numbers do not conflict with other services running on this machine

____ 15. Click **Next**

____ 16. In the next **Database Configuration** panel, specify these parameters for the WebSphere Business Monitor database:

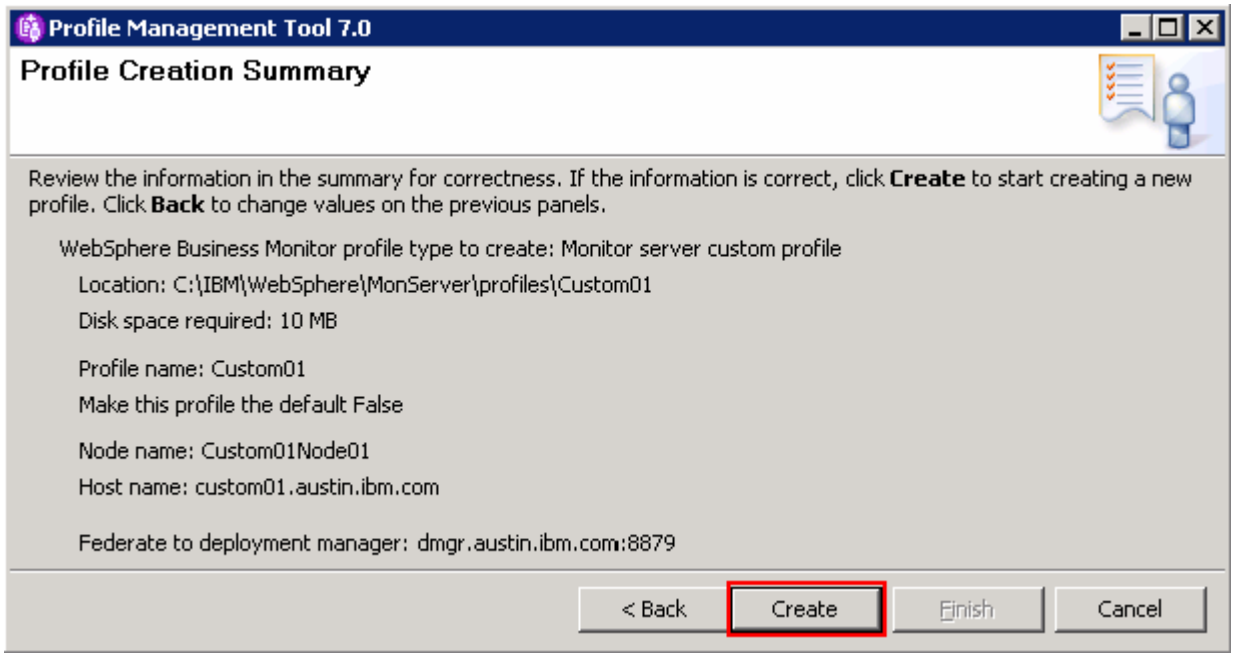
__ a. Select **DB2 Universal Database** for the database product used by the deployment manager

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

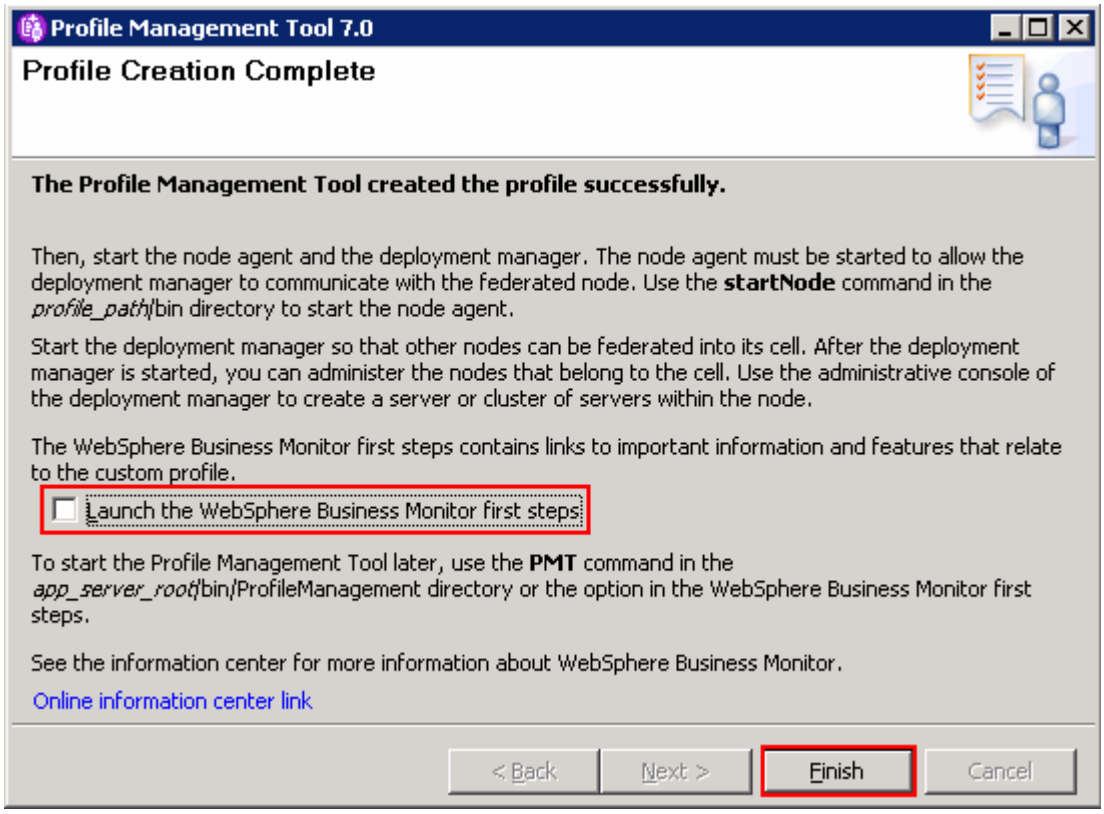


____ 17. Click **`Next`**

____ 18. In the next panel, verify the custom profile creation summary information



____ 19. Click **`Create`**. The profile creation progresses



____ 20. Once the profile creation is complete, clear the check box for **`Launch the WebSphere Business Monitor First steps`** console and click **`Finish`**

____ 21. Similarly create the remaining custom profiles and name them as **`Custom02`**, **`Custom03`** and **`Custom04`** by repeating these instructions on the designated host machines. In this exercise, the nodes are named as **`Custom02Node02`**, **`Custom03Node03`** and **`Custom04Node04`**

____ 22. 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

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	
☐	Custom03Node03	custom03.austin.ibm.com	ND 7.0.0.7 WBM 7.0.0.0 XML FEP 1.0.0.0	TCP	
☐	Custom04Node04	custom04.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 5					

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 below:

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

---

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

____ 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, Custom03Node03, Custom04Node04
-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 profiles and name them as **Custom02**, **Custom03** and **Custom04** by repeating these instructions on the designated host machines. In this exercise, the nodes are named as **Custom02Node02**, **Custom03Node03** and **Custom04Node04**

____ 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 a remote messaging, remote support, and Web pattern

In this part of the exercise, you will use the administrative console to generate a remote messaging, remote support, and Web deployment environment. The remote messaging, remote support, and Web pattern defines four clusters, which is a cluster for the application deployment (monitor models), a cluster for the messaging infrastructure, a cluster for the Common Event Infrastructure and other support applications plus a cluster for Business Space and other Web components. This pattern configures an environment that performs well for most of your business integration needs.

As you know four clusters are being created using the remote messaging, remote support, and Web deployment environment pattern option, it is a best practice to plan for the number of member servers each cluster will manage and on which managed node the member servers are created. In this exercise, you will assign two member servers for each 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. 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.Custom02Node02.0	custom02.austin.ibm.com
wbm.Messaging	Custom02Node02	**wbm**.Messaging.Custom02Node02.0	custom02.austin.ibm.com
	Custom03Node03	**wbm**.Messaging.Custom03Node03.0	custom03.austin.ibm.com
wbm.Support	Custom03Node03	**wbm**.Support.Custom03Node03.0	custom03.austin.ibm.com
	Custom04Node04	**wbm**.Support.Custom04Node04.0	custom04.austin.ibm.com
wbm.WebApp	Custom04Node04	**wbm**.Web.Custom04Node04.0	custom04.austin.ibm.com
	Custom01Node01	**wbm**.Web.Custom01Node01.0	custom01.austin.ibm.com

Node → Server assignment table:

Nodes	Application Deployment Target	Messaging Infrastructure	Support Infrastructure	Web Infrastructure
Custom01Node01	**1**	0	0	**1**
Custom02Node02	**1**	**1**	0	0
Custom03Node03	0	**1**	**1**	0
Custom04Node04	0	0	**1**	**1**

Use 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	Messaging Infrastructure	Support Infrastructure	Web Infrastructure

Pre-requisites:

- Ensure the deployment manager process is running
- Ensure all the node agents are running
    - In the left navigation pane of the deployment manager administrative console, expand System administration and then click Node agents
    - In the **Node agents** panel to the right, ensure that all the node agents display the start status ( )

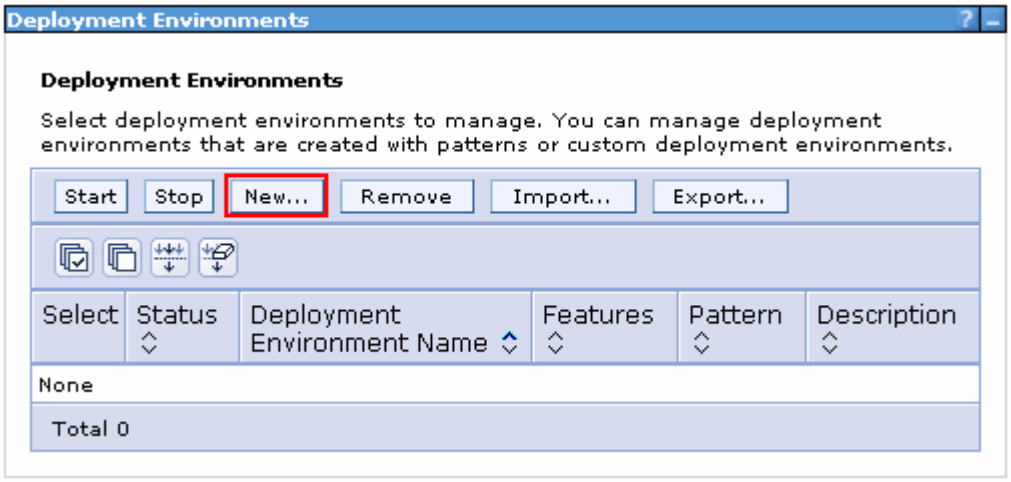
Select	Name	Node	Host Name	Version	Status
You can administer the following resources:					
☐	nodeagent	Custom01Node01	custom01.austin.ibm.com	ND 7.0.0.7 WBM 7.0.0.0 XML FEP 1.0.0.0	
☐	nodeagent	Custom02Node02	custom02.austin.ibm.com	ND 7.0.0.7 WBM 7.0.0.0 XML FEP 1.0.0.0	
☐	nodeagent	Custom03Node03	custom03.austin.ibm.com	ND 7.0.0.7 WBM 7.0.0.0 XML FEP 1.0.0.0	
☐	nodeagent	Custom04Node04	custom04.austin.ibm.com	ND 7.0.0.7 WBM 7.0.0.0 XML FEP 1.0.0.0	
Total 4					

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`**

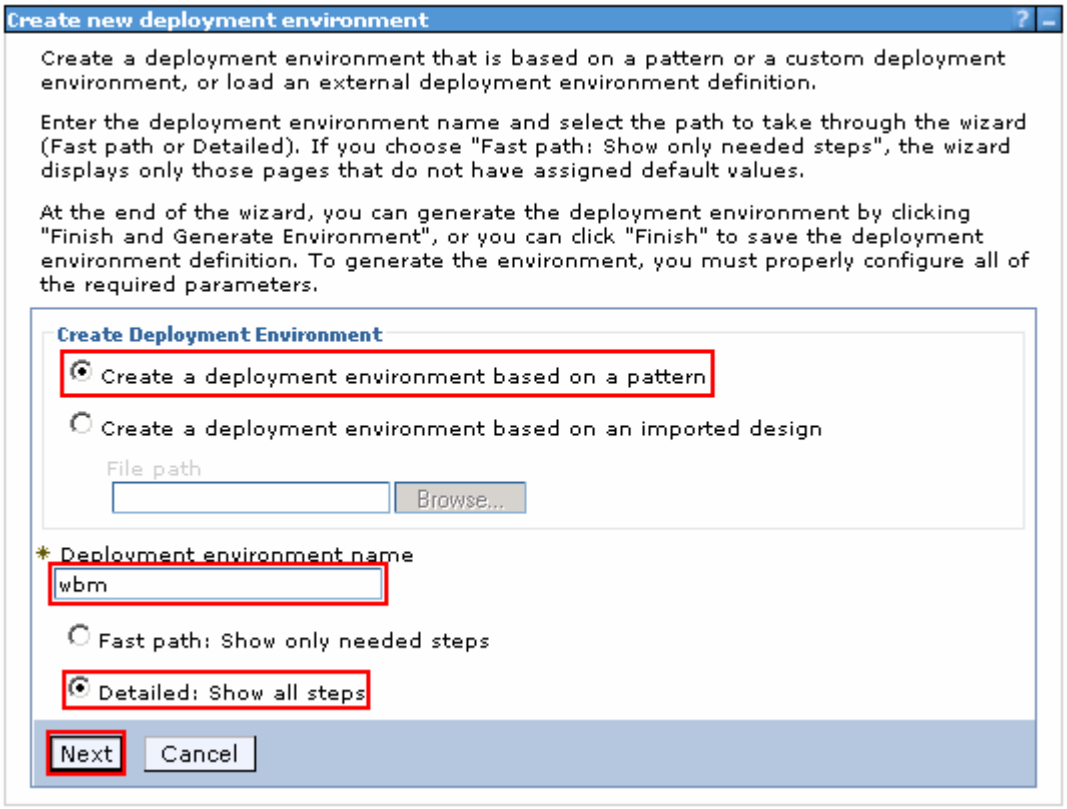
____ 2. In the left navigation pane of the administrative console, expand **`Servers`** and click **`Deployment Environments`**

____ 3. In the **Deployment Environments** panel, click **`New...`** to launch the Deployment Environments wizard



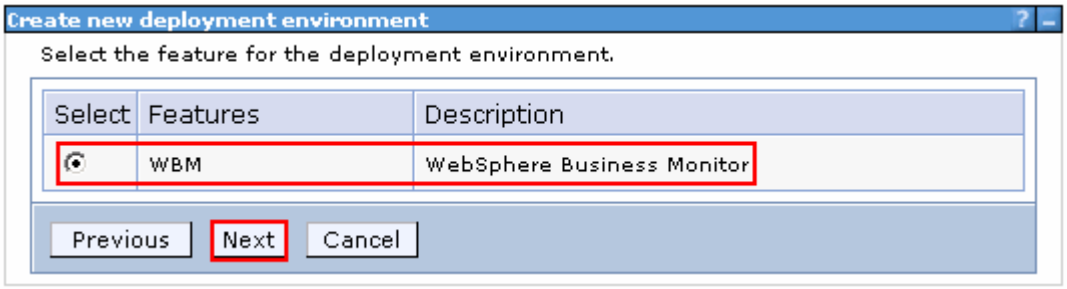
____ 4. In the next **Create new deployment environment** panel, provide the information below:

- Select the radio button for **`Create a new deployment environment based on pattern`**
- Deployment environment name : Ex: **`wbm`**
- Select the radio button for **`Detailed: Show all steps`**



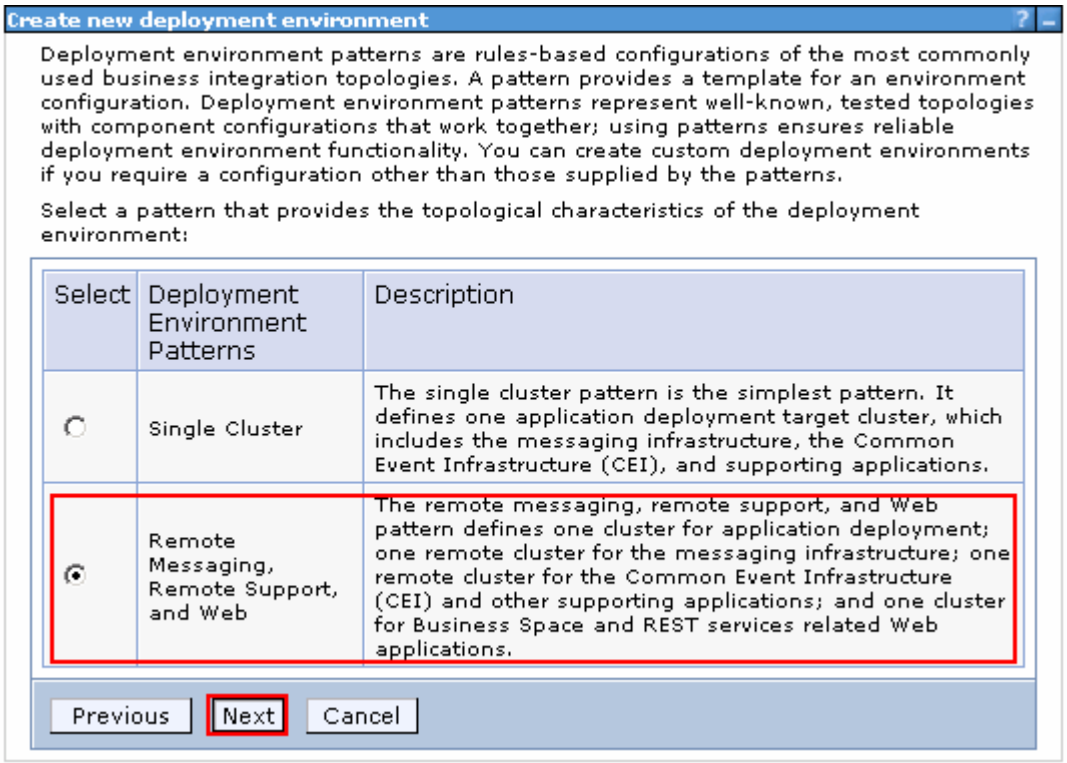
____ 5. Click **`Next`**

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



____ 7. Click **Next**

____ 8. In the next deployment environment pattern panel, select the radio button for the **Remote Messaging, Remote Support and Web** pattern



____ 9. Click **Next**

____ 10. In the next **Step 1: Select Nodes** panel, select the check boxes for all the four nodes to use in this deployment environment

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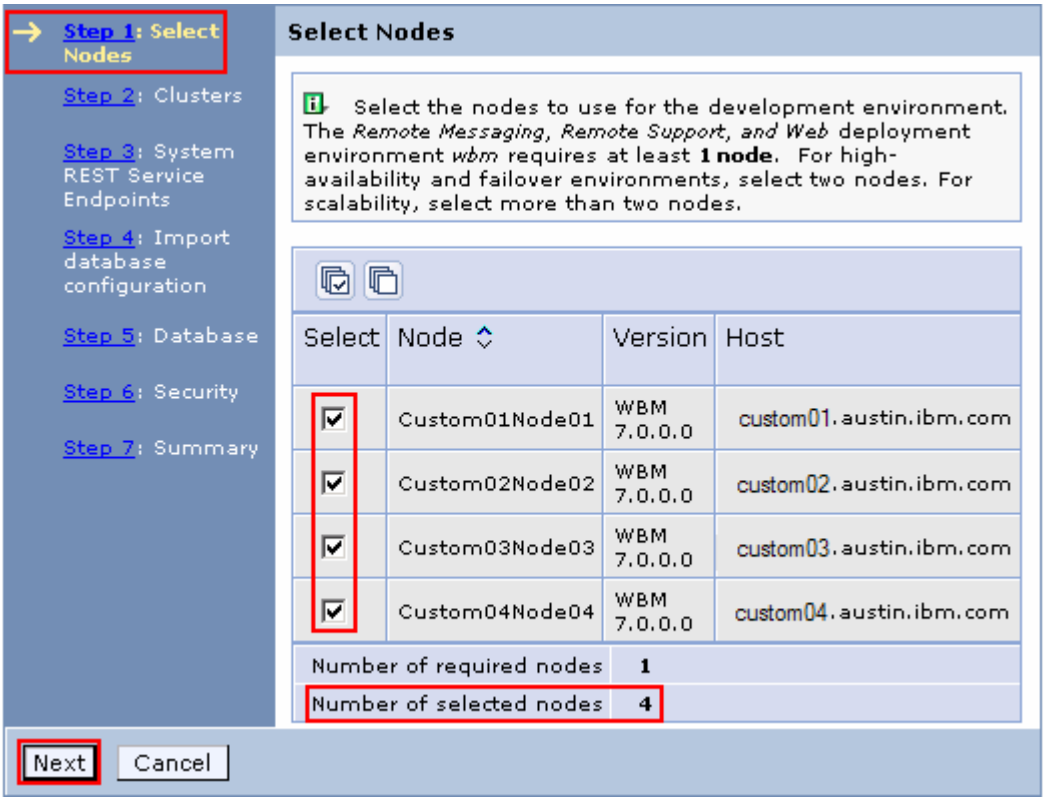
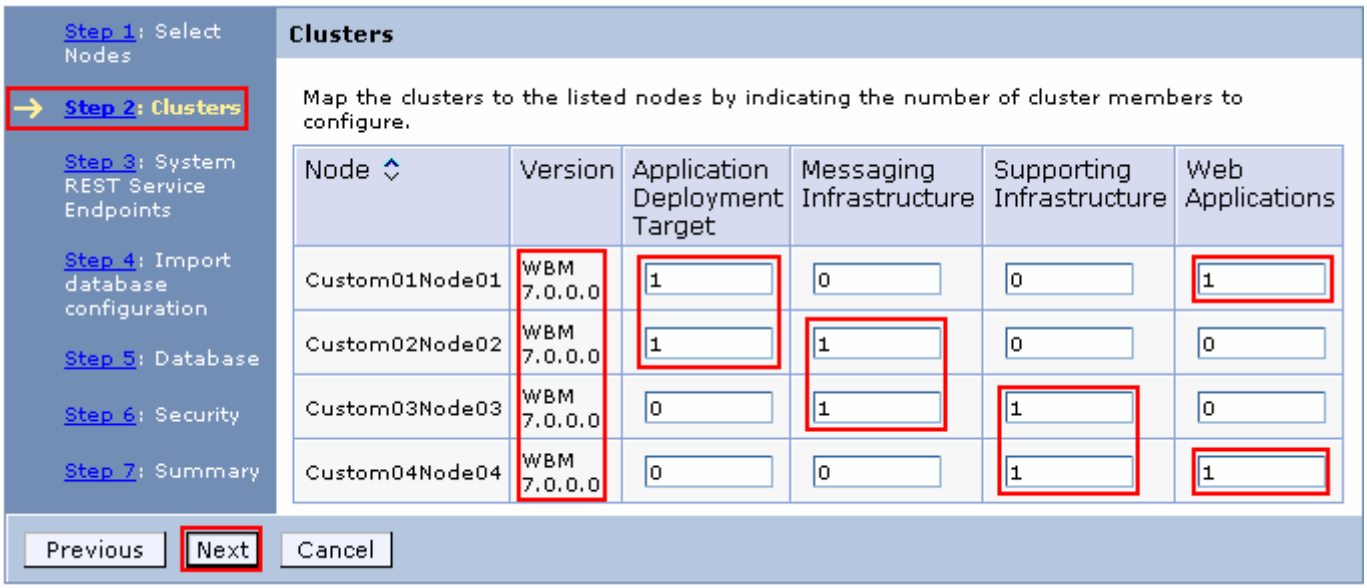
Note: Ensure the nodes you select are of the WebSphere Business Monitor version (**WBM 7.0.0.0**)



____ 11. Click **`Next`**

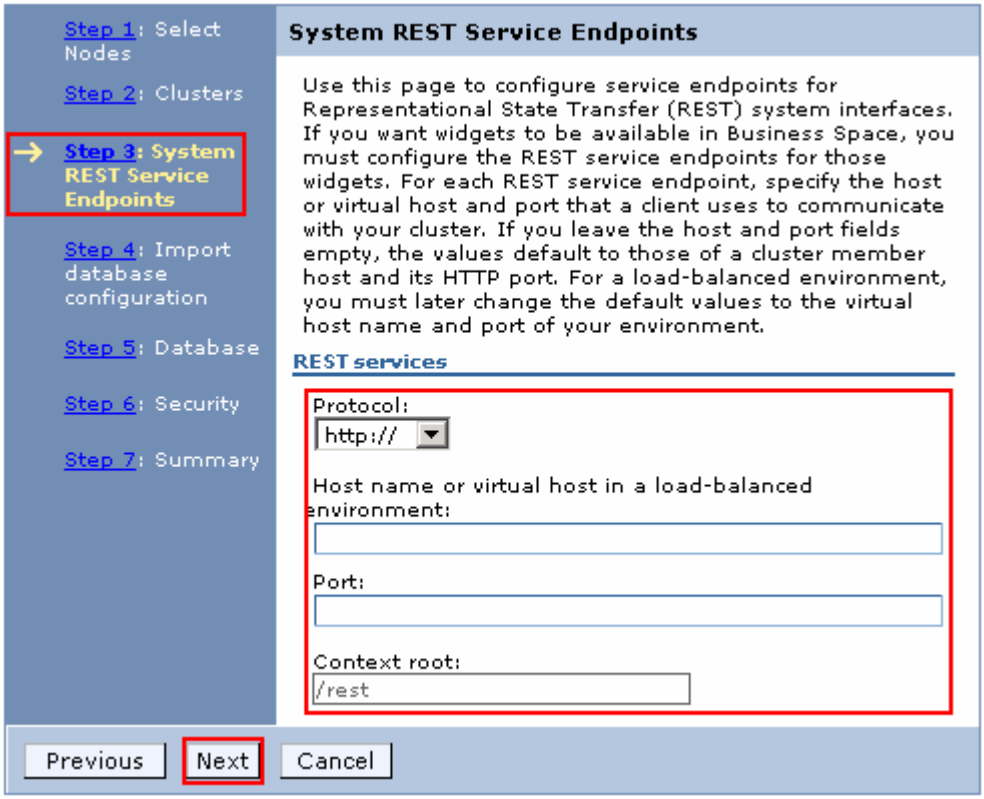
____ 12. In the next **Step 2: Clusters** panel, enter **1** to assign a member server to a cluster on a designated node and assign **0** to not assign a member server (**Note:** Refer to `the` **`Clusters → Node → Member Server mapping (Topology) table`**)

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



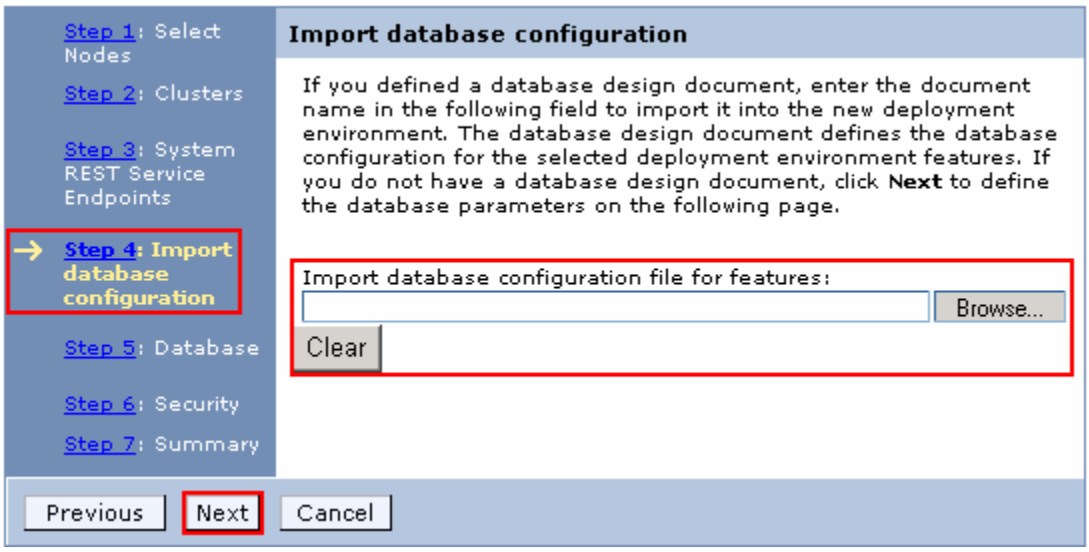
Note: If you do not have the information for the http protocol, host name and port number for the REST service endpoints, accept the defaults. You can update the values post environment configuration.

____ 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.



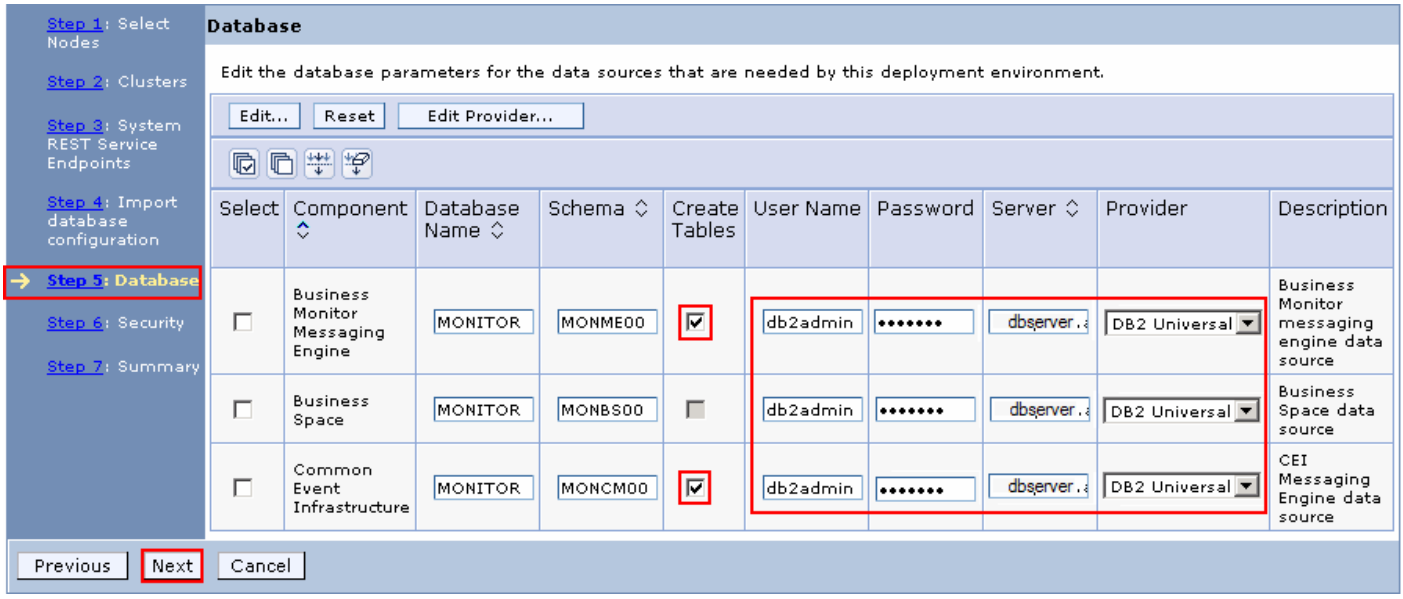
____ 17. Click **`Next`**

____ 18. In the next **Step 5 : Database** window, accept the defaults

---

Note: By default the monitor common database name is populated for all the components. If you plan to have exclusive database instances and schema names for various WebSphere Business Monitor components, you should input the values of your choice. 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 to create tables.



____ 19. Click **`Next`**

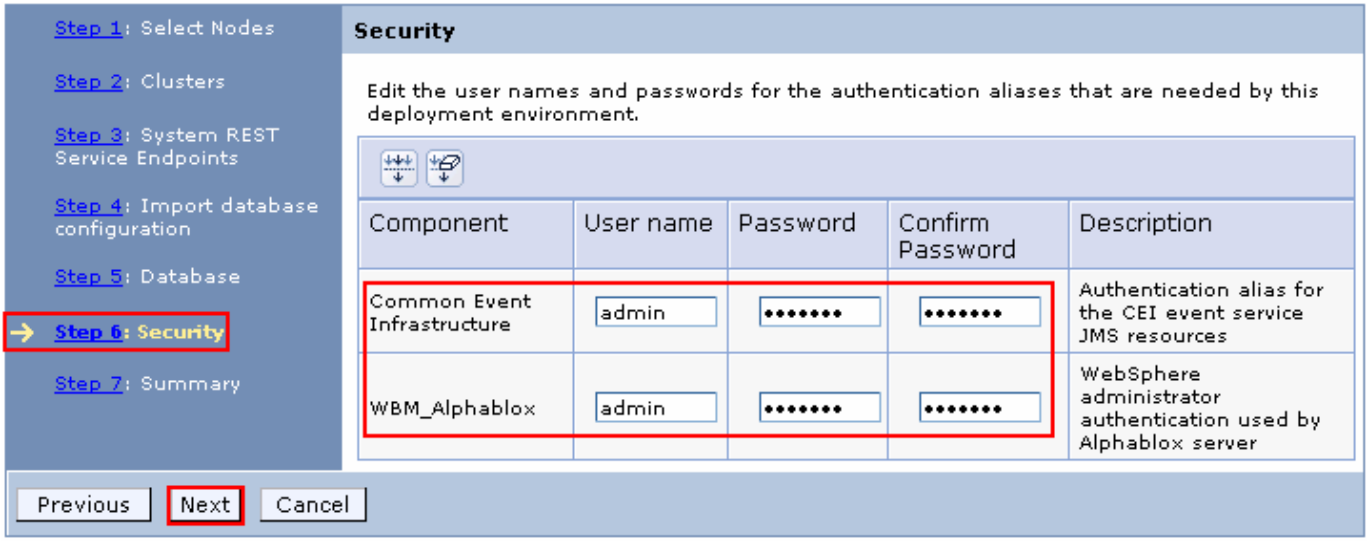
____ 20. In the next **Step 6 : Security** panel, ensure the administrative security credentials are filled for the authentication aliases mentioned below:

__ a. Common Event Infrastructure

__ b. WBM_Alphablox

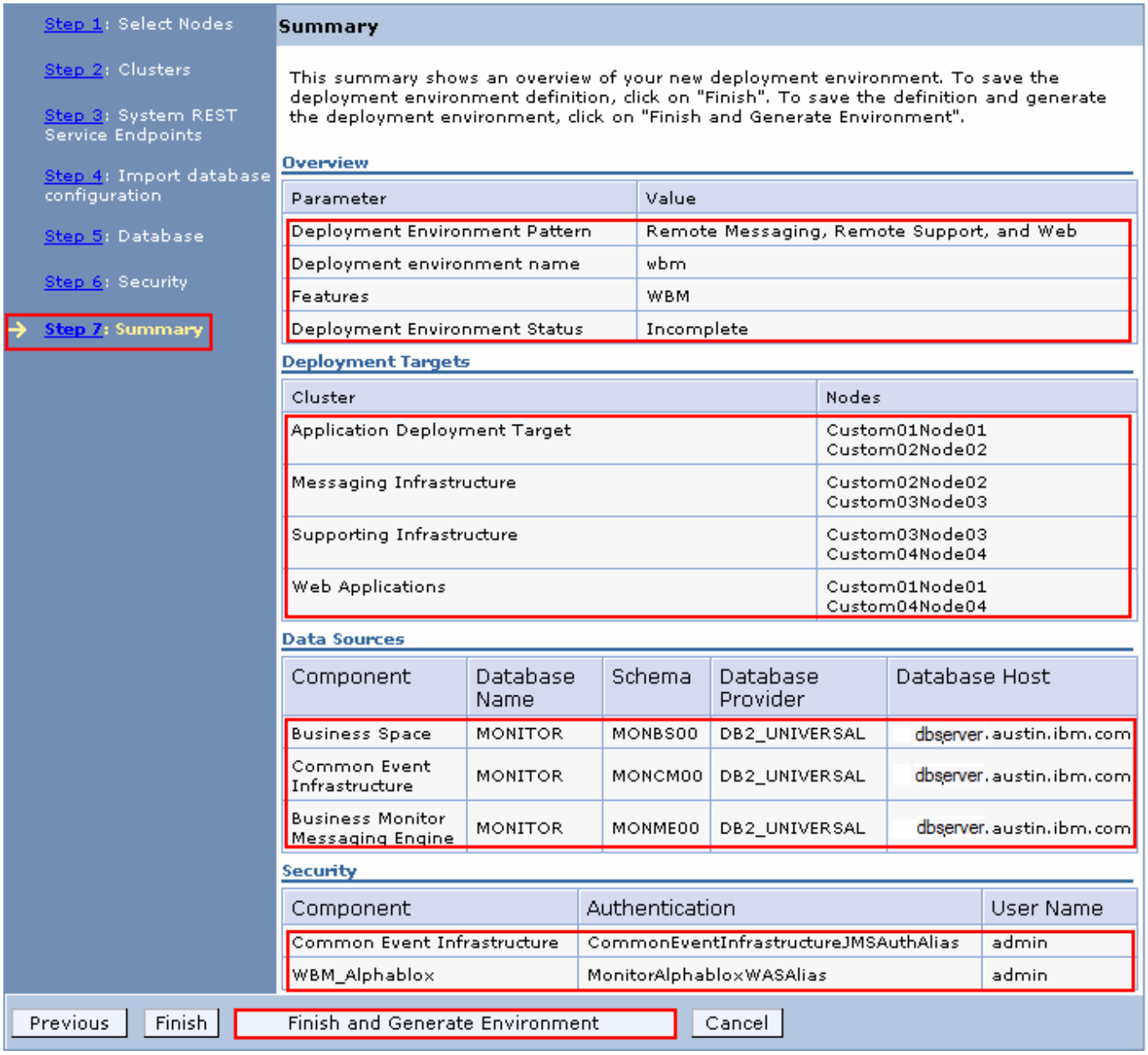
Ex: User name: **`admin`**

Password: **`superSecret`**



____ 21. Click **Next**

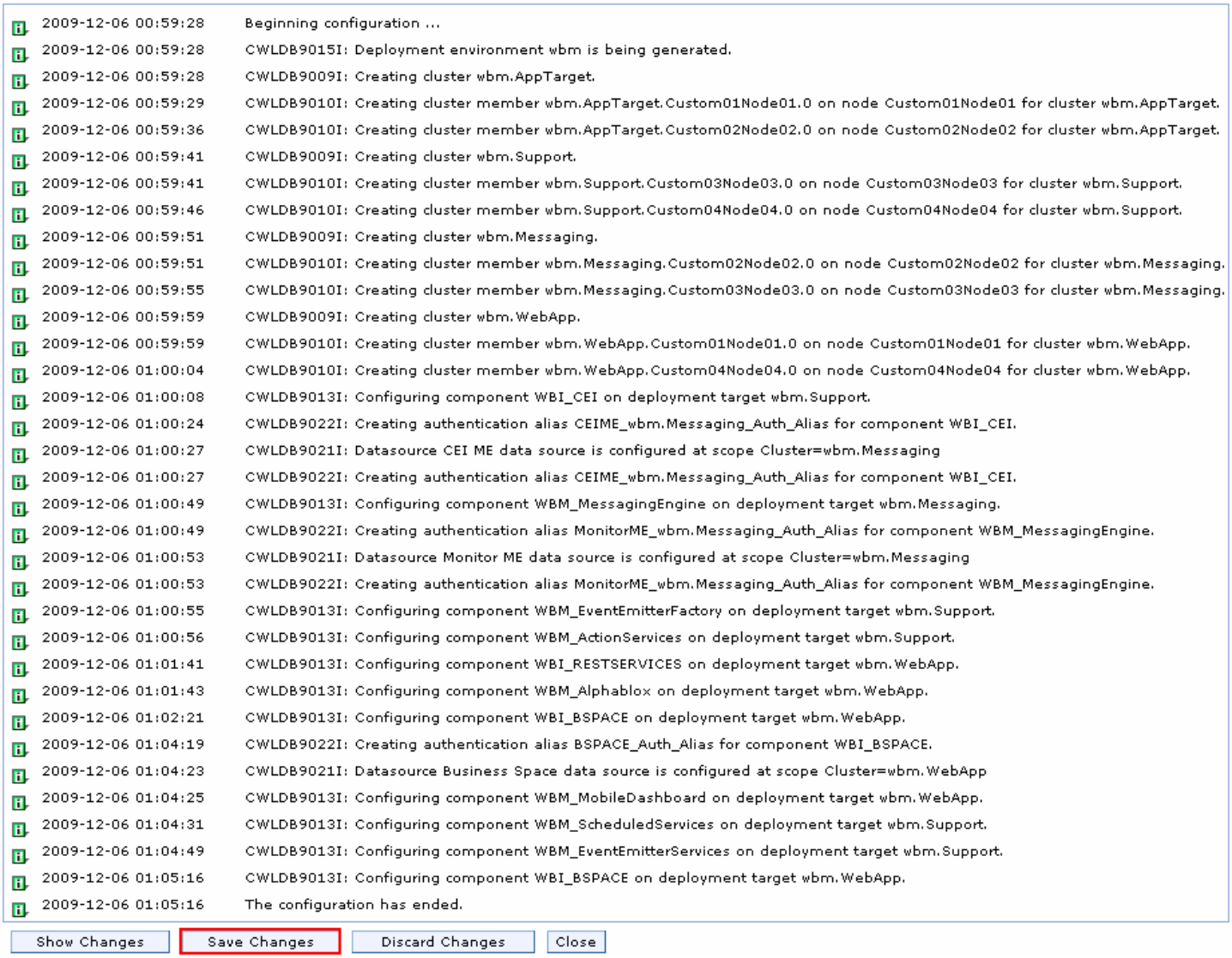
____ 22. In the next **Step 9: Summary** panel, verify the deployment environment configuration summary



Note: Click **`Finish`** to save this deployment environment configuration session. You can 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 the deployment environment panel, you can verify the topology, data sources, and authentication aliases that are created during the environment generation. Click **`Generate Environment`** once the verification is complete.

____ 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

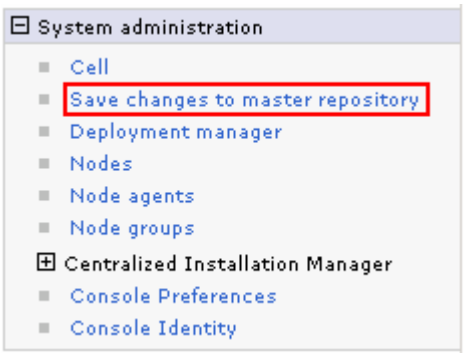


Note: Ensure the all the node agents are running at this time (**`System Administration → Nodes`**)

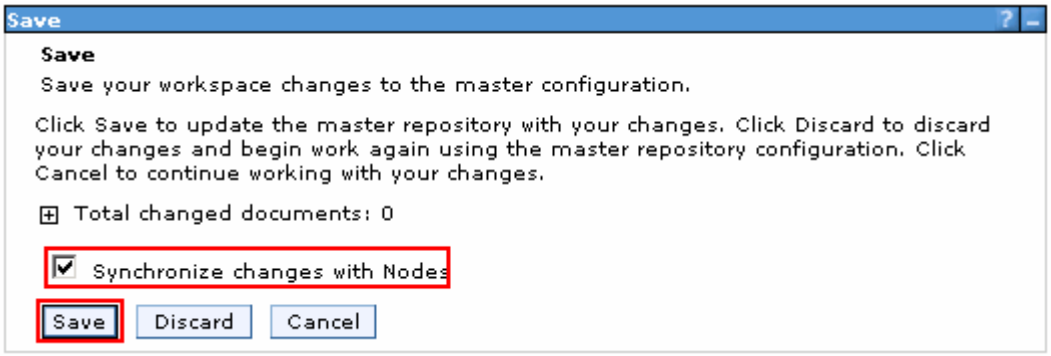
____ 25. Click **`Save Changes`**

____ 26. Synchronize changes with the nodes

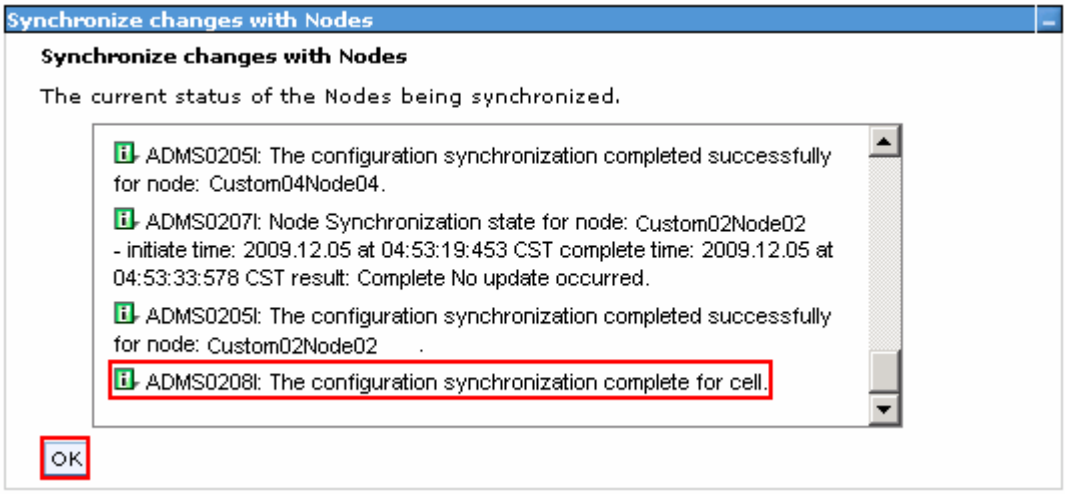
__ a. In the left navigation pane, expand **`System Administration`** and click **`Save changes to master repository`**



__ 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:

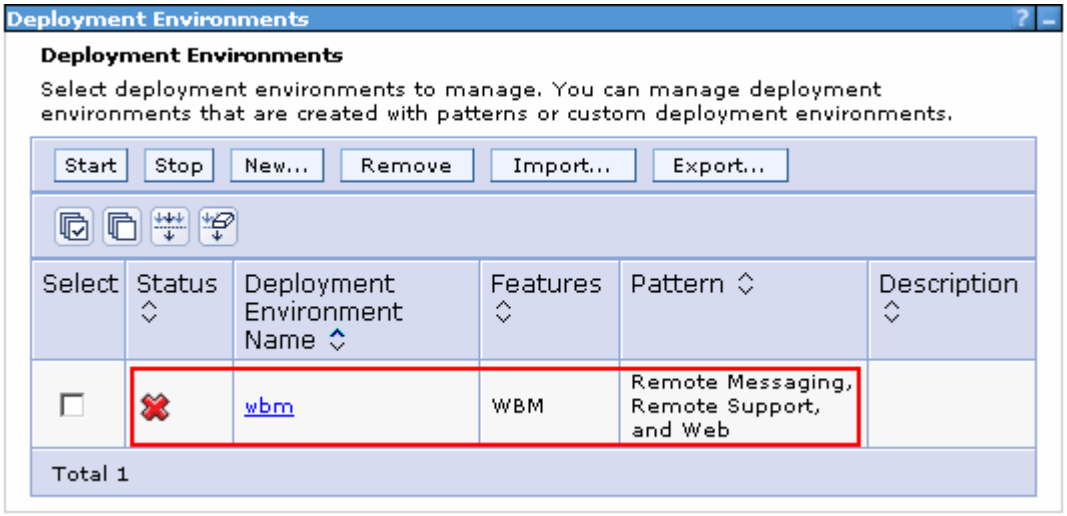
- Ensure the DB2 server is running
- Restart the deployment manager
- Restart the node agents

Deployment Environment Status icons:

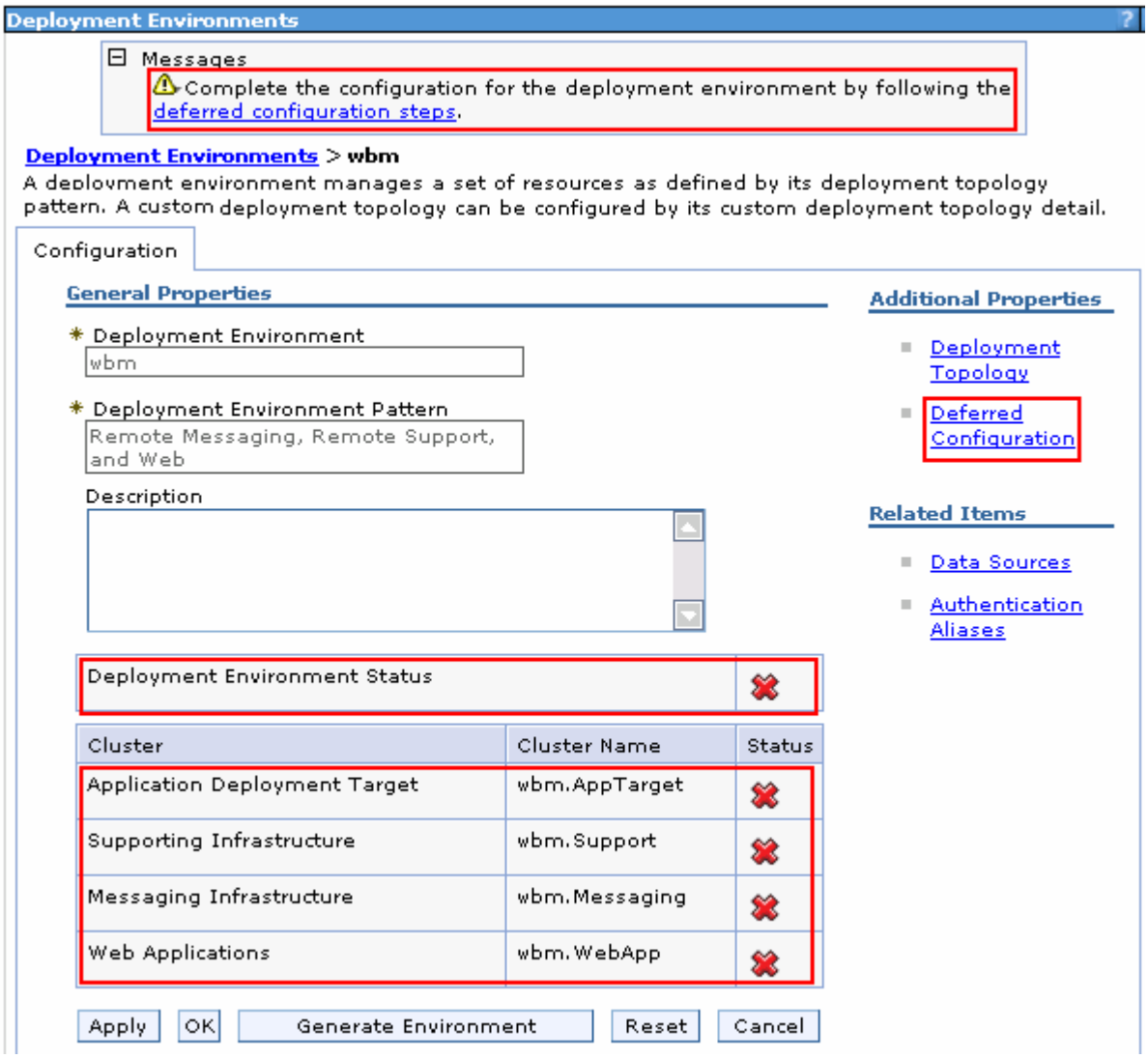
Status icon	Warning icon	State	Description
	None	Unknown	The system cannot determine the current state of the deployment environment.
		Incomplete	The deployment environment is not missing any elements but is incomplete in some way. The warning message contains additional details.
		Not configured	The 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:

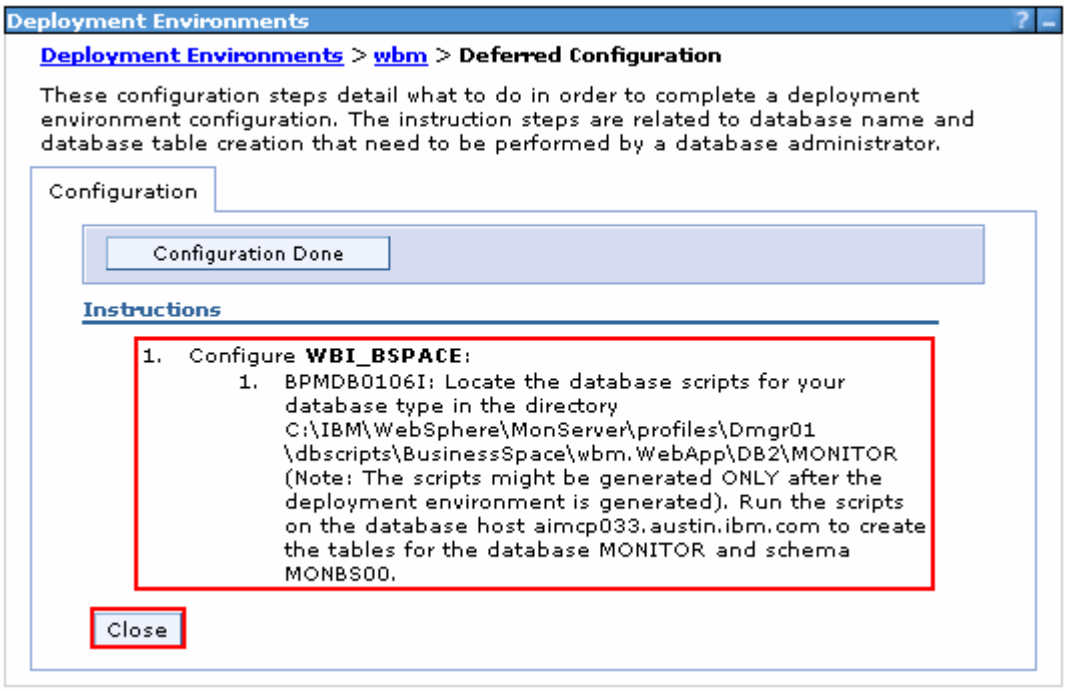
____ 1. In the left navigation pane of the administrative console, expand **`Servers`** and then click the **`Deployment Environments`** link. The status of the deployment environment should display either as **Stopped** (Red Icon) or **Started** (Green Icon)



____ 2. Click the **wbm** (the name of the deployment environment) link



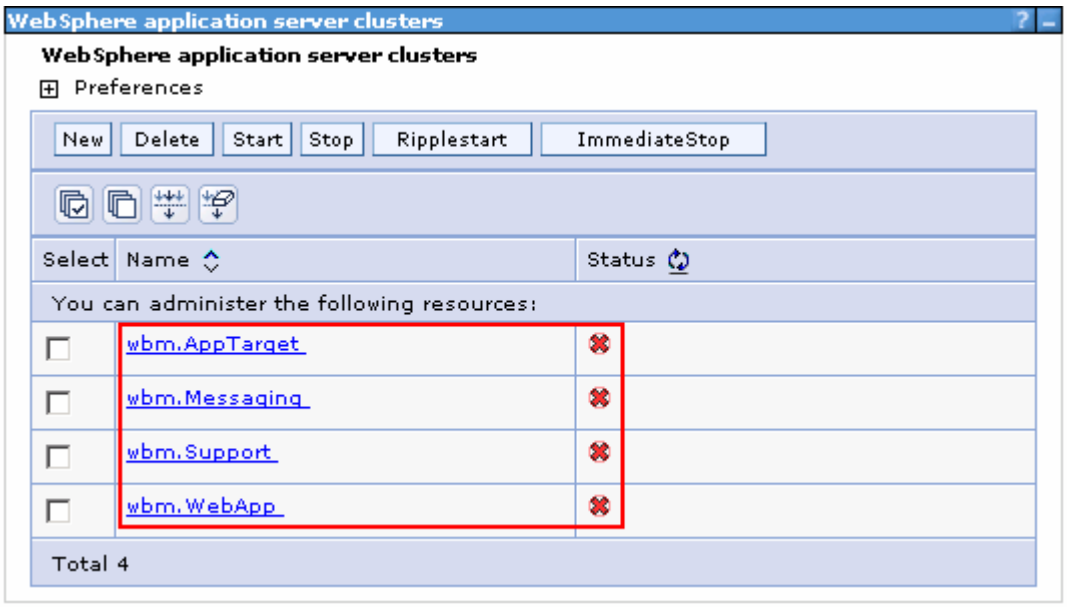
____ 3. You should see four clusters listed and a warning in the **Messages** box over the top, referring to a deferred configuration. Click the **`Deferred Configuration`** link under the **`Additional Properties`** section



____ 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

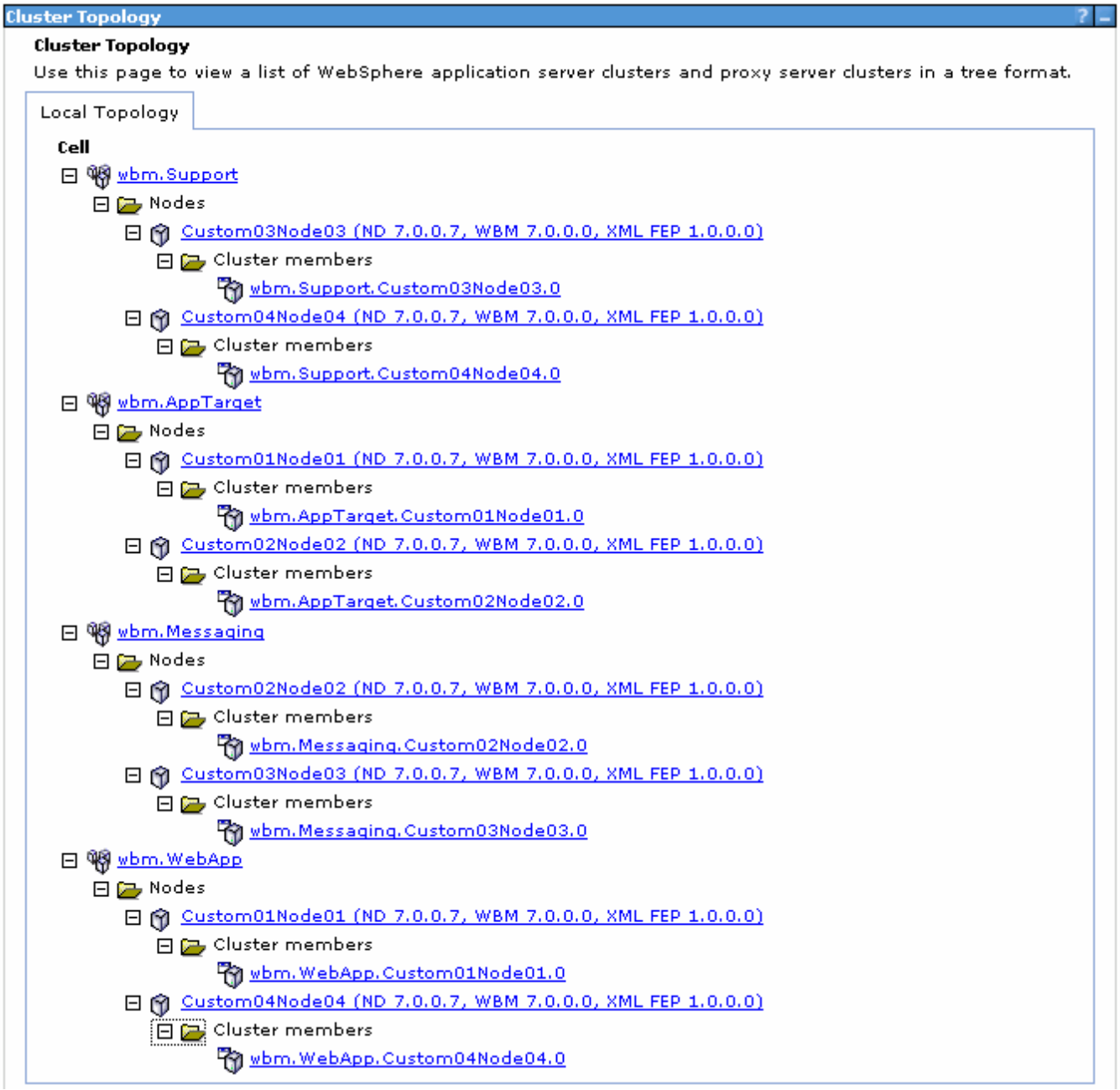
____ 6. Now, verify the four clusters that were created. In the left navigation pane of the administrative console, expand **`Servers → Clusters`** and then click **`WebSphere application server clusters`** link



____ 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 eight 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	✖
☐	wbm.Messaging.Custom02Node02.0	Custom02Node02	custom02.austin.ibm.com	ND 7.0.0.7 WBM 7.0.0.0 XML FEP 1.0.0.0	wbm.Messaging	✖
☐	wbm.Messaging.Custom03Node03.0	Custom03Node03	custom03.austin.ibm.com	ND 7.0.0.7 WBM 7.0.0.0 XML FEP 1.0.0.0	wbm.Messaging	✖
☐	wbm.Support.Custom03Node03.0	Custom03Node03	custom03.austin.ibm.com	ND 7.0.0.7 WBM 7.0.0.0 XML FEP 1.0.0.0	wbm.Support	✖
☐	wbm.Support.Custom04Node04.0	Custom04Node04	custom04.austin.ibm.com	ND 7.0.0.7 WBM 7.0.0.0 XML FEP 1.0.0.0	wbm.Support	✖
☐	wbm.WebApp.Custom01Node01.0	Custom01Node01	custom01.austin.ibm.com	ND 7.0.0.7 WBM 7.0.0.0 XML FEP 1.0.0.0	wbm.WebApp	✖
☐	wbm.WebApp.Custom04Node04.0	Custom04Node04	custom04.austin.ibm.com	ND 7.0.0.7 WBM 7.0.0.0 XML FEP 1.0.0.0	wbm.WebApp	✖
Total 8						

____ 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

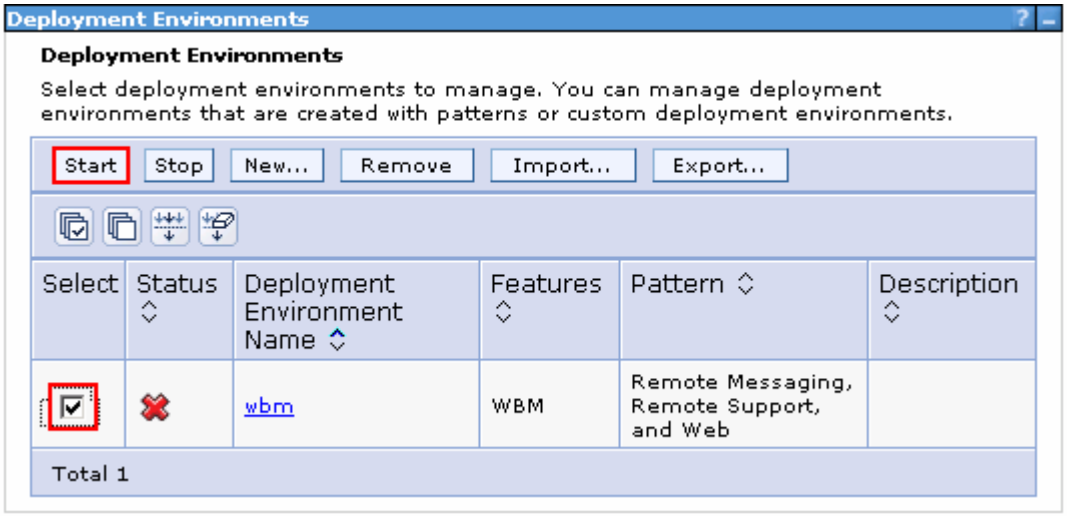


____ 9. Restart the **Node Agents** if not done earlier. In the left navigation pane, expand **`System Administration`** and then click **`Node agents`**. You should see three node agents listed

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

____ 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 all the four clusters. Ensure all the member servers are successfully started

Verify the components and functions configured on the Messaging Cluster:

In this section, you will verify the messaging engines configured on the **wbm.Messaging** cluster.

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

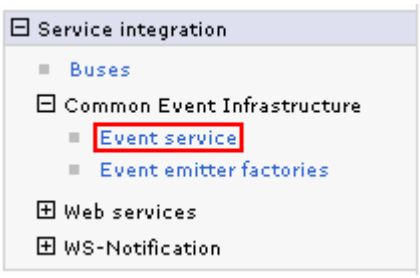
____ 13. In the **WebSphere application server clusters** panel to the right, click **wbm.Messaging**

____ 14. In the next **WebSphere application server clusters → wbm.Messaging** 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 components and functions configured on the Support Cluster:

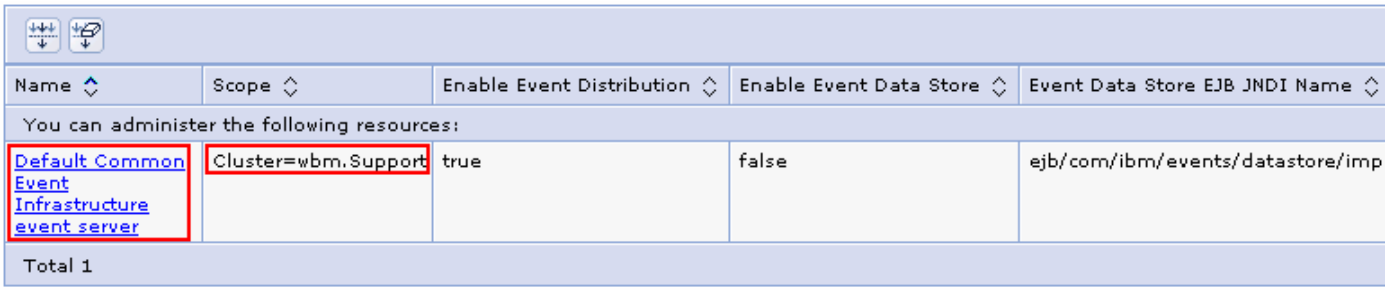
In this section, you will verify the Common Event Infrastructure server support and Event emitter factories, configured on the **wbm.Support** cluster

____ 15. In the left navigation pane, expand **Service Integration → Common Event Infrastructure** and then click **Event service**

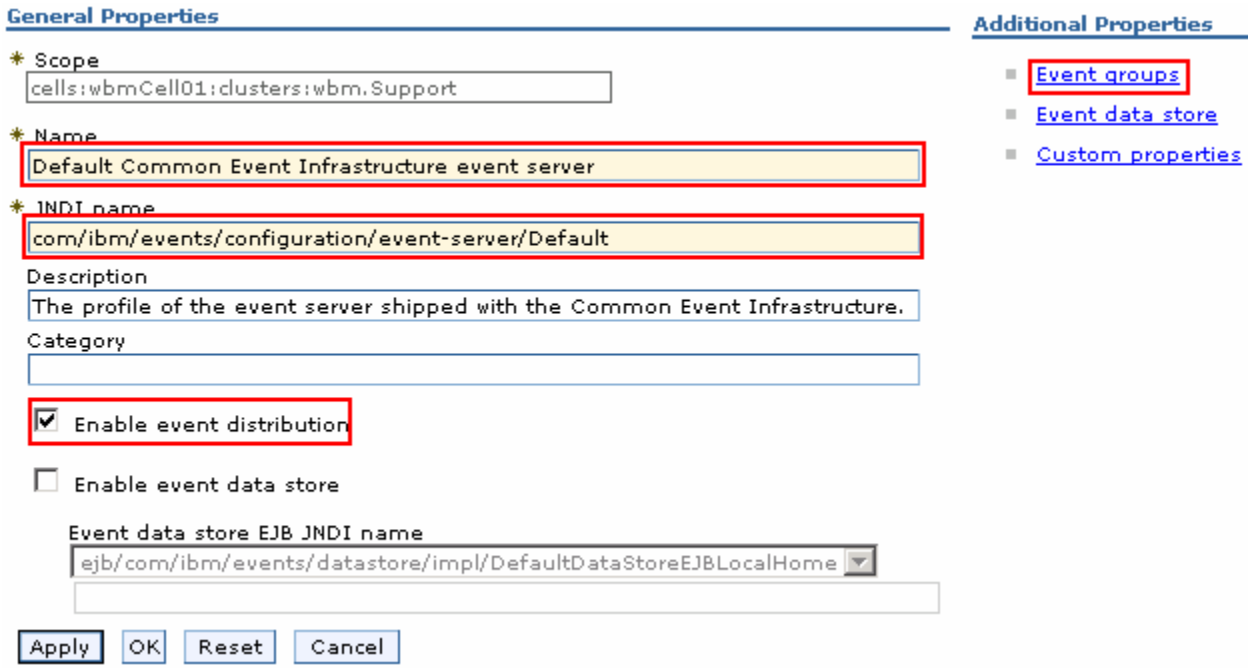


____ 16. In the **Event service** panel, click the **`Event services`** link under the **`Additional Properties`** section

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



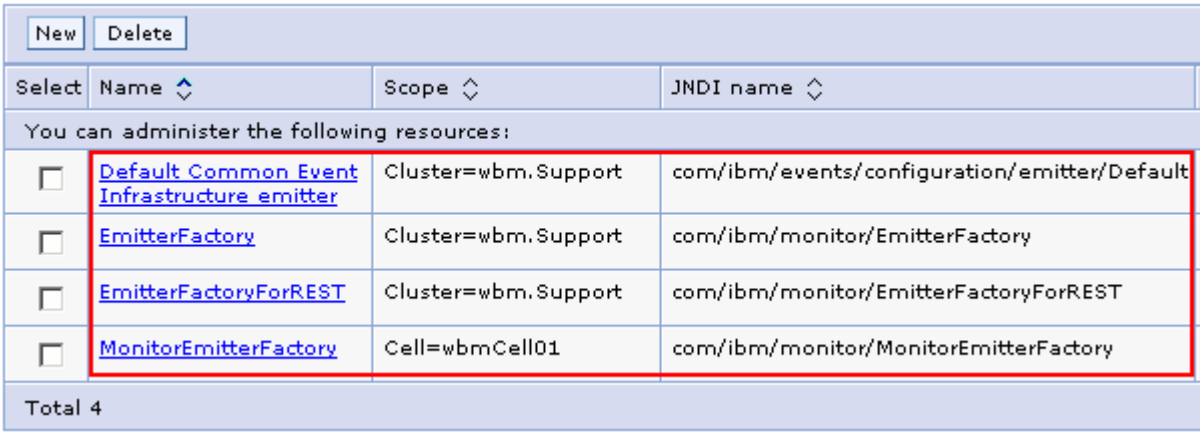
____ 18. In the next panel, verify the configuration



____ 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



New | Delete

Select	Name	Scope	JNDI name
You can administer the following resources:			
☐	Default Common Event Infrastructure emitter	Cluster=wbm.Support	com/ibm/events/configuration/emitter/Default
☐	EmitterFactory	Cluster=wbm.Support	com/ibm/monitor/EmitterFactory
☐	EmitterFactoryForREST	Cluster=wbm.Support	com/ibm/monitor/EmitterFactoryForREST
☐	MonitorEmitterFactory	Cell=wbmCell01	com/ibm/monitor/MonitorEmitterFactory

Total 4

Verify the components and functions configured on the WebApp Cluster:

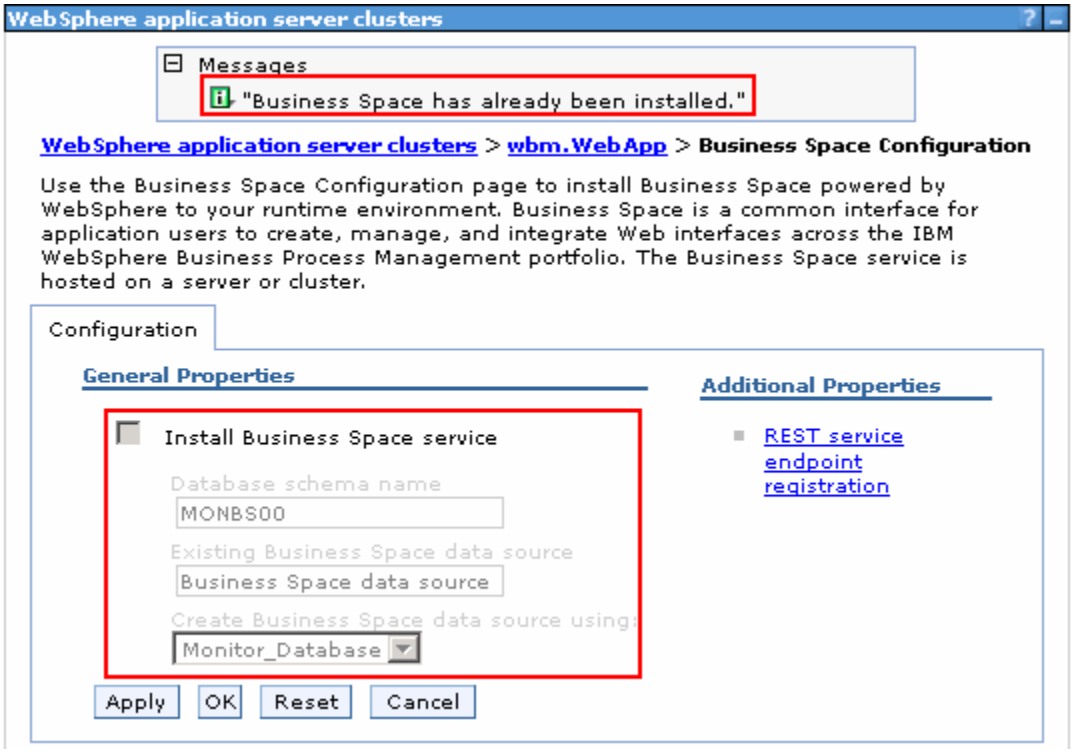
In this section, you will verify the Business Space and REST services on the **wbm.WebApp** cluster

____ 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.WebApp**

____ 24. In the **WebSphere application server clusters → wbm.WebApp** 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



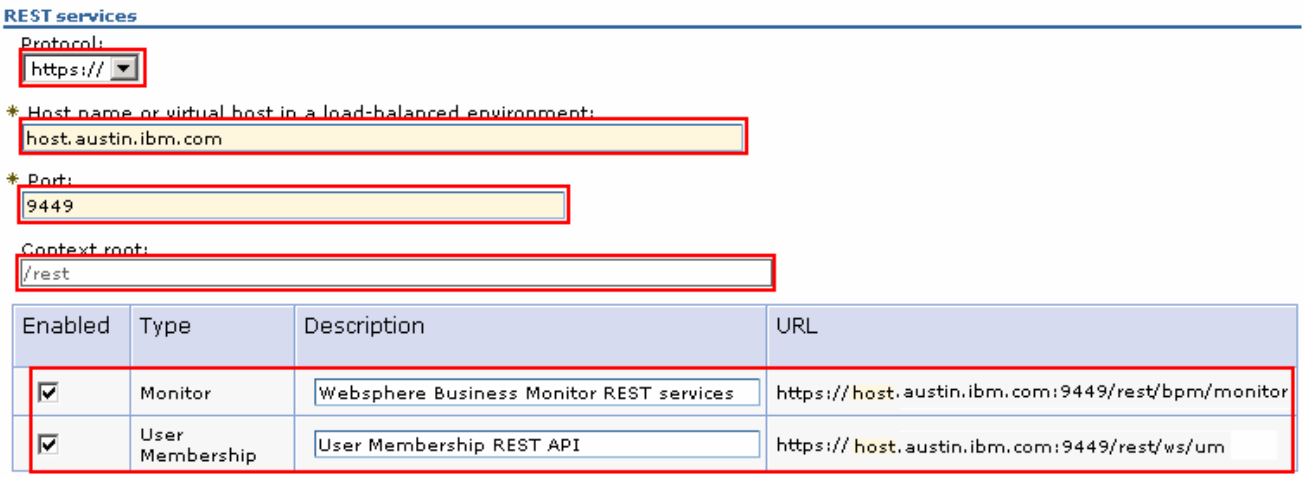
____ 25. Click **`Cancel`**

____ 26. In the **WebSphere application server clusters → wbm.WebApp** 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, the host name and the http port for the REST services configuration values during the deployment environment generation, the end points can be configured to a server member of the WebApp cluster. 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://<WebApp_hostname:port>/BusinessSpace`

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

Note 1: Business Space is deployed to the WebApp cluster. 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:

In this section, you will verify the Business Space and REST services on the **`wbm.WebApp`** cluster

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

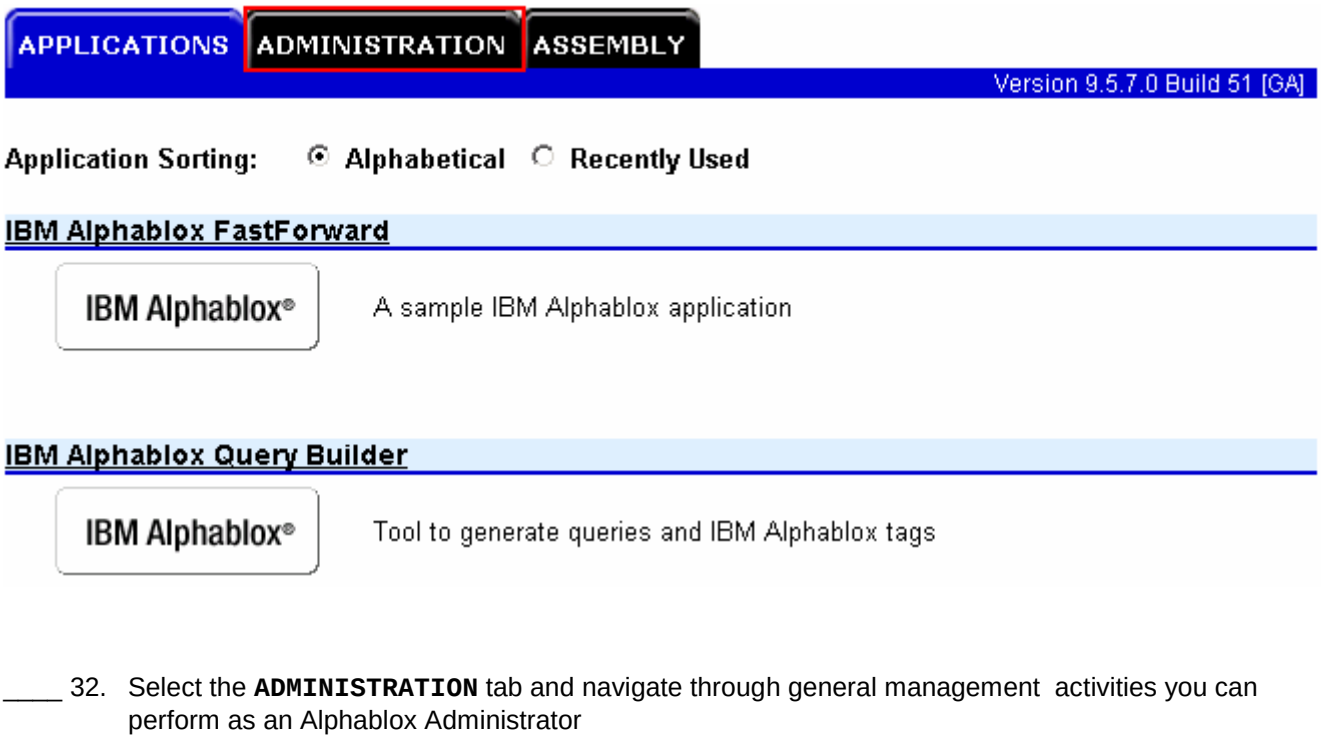
URL: `http://<Alphablox_hostname:port>/AlphabloxAdmin/home`

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

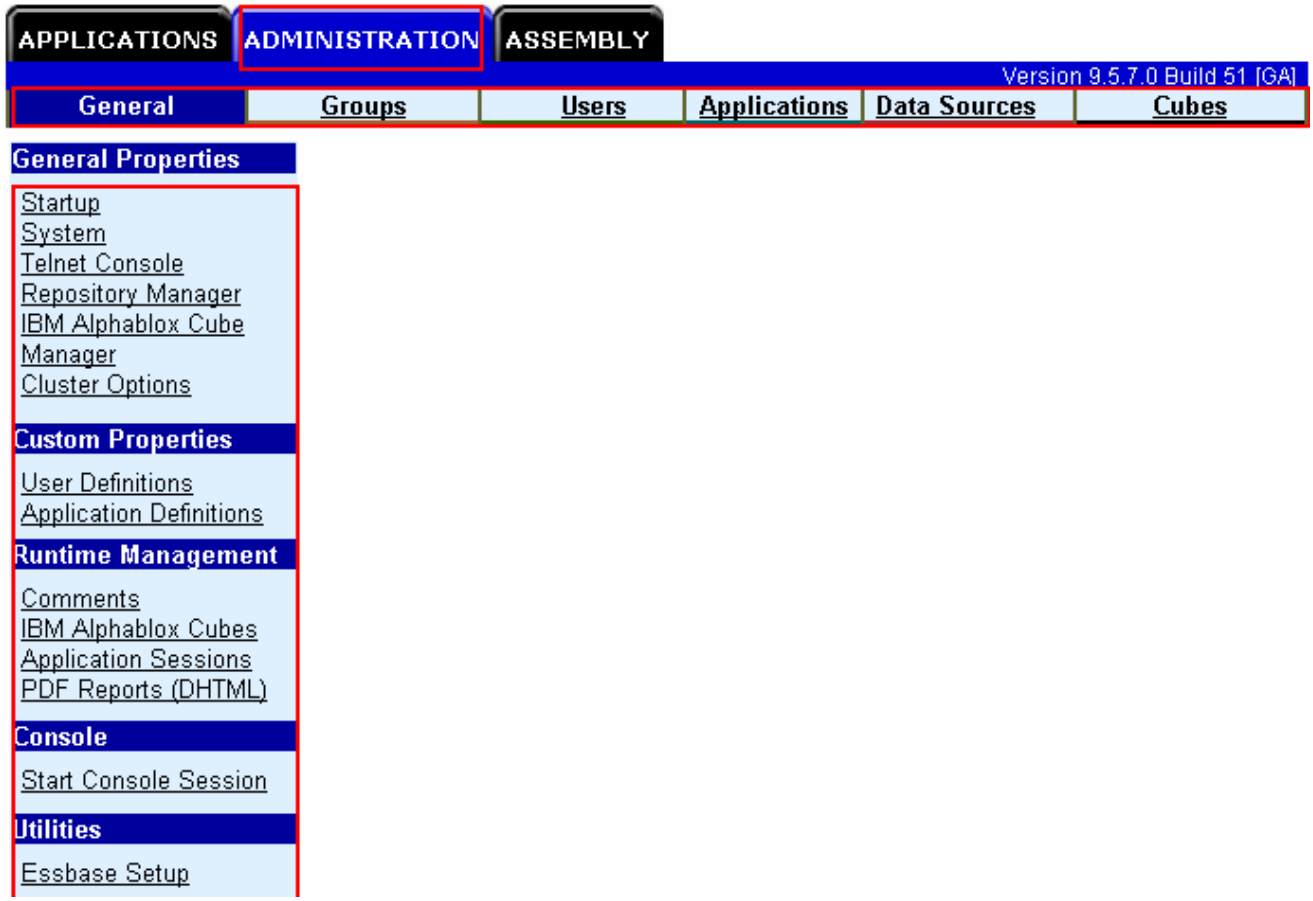
Note 1: The Alphablox service is deployed to a cluster where the Business Space is running. Use the host name and port of a member server of that cluster. In this exercise, you have only a cluster and two member servers configured.

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.

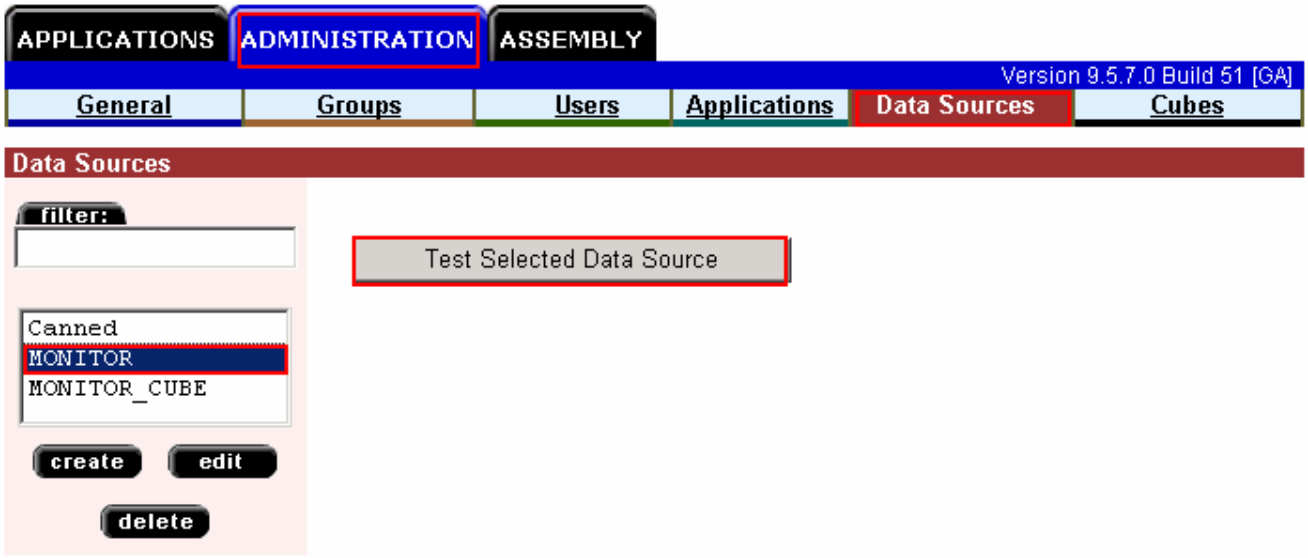
____ 31. The Alphablox administrative console is launched as shown in the picture below:



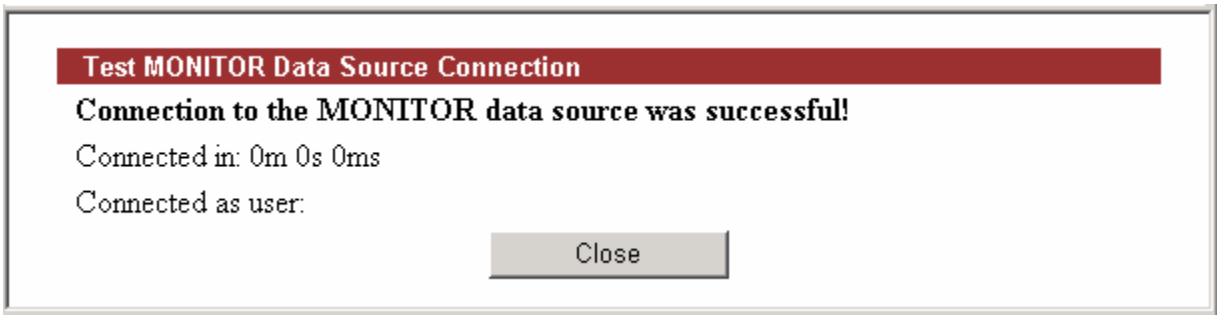
____ 32. Select the **ADMINISTRATION** tab and navigate through general management activities you can perform as an Alphablox Administrator



____ 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**

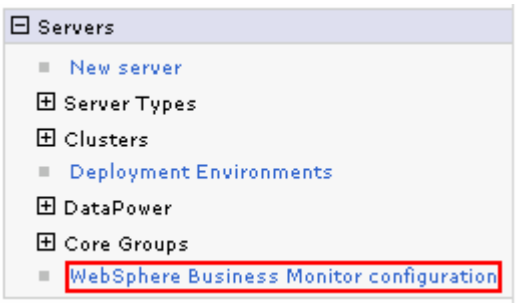
____ 36. Similarly select **MONITOR_CUBE** from the data source text area and test for a successful database connection

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

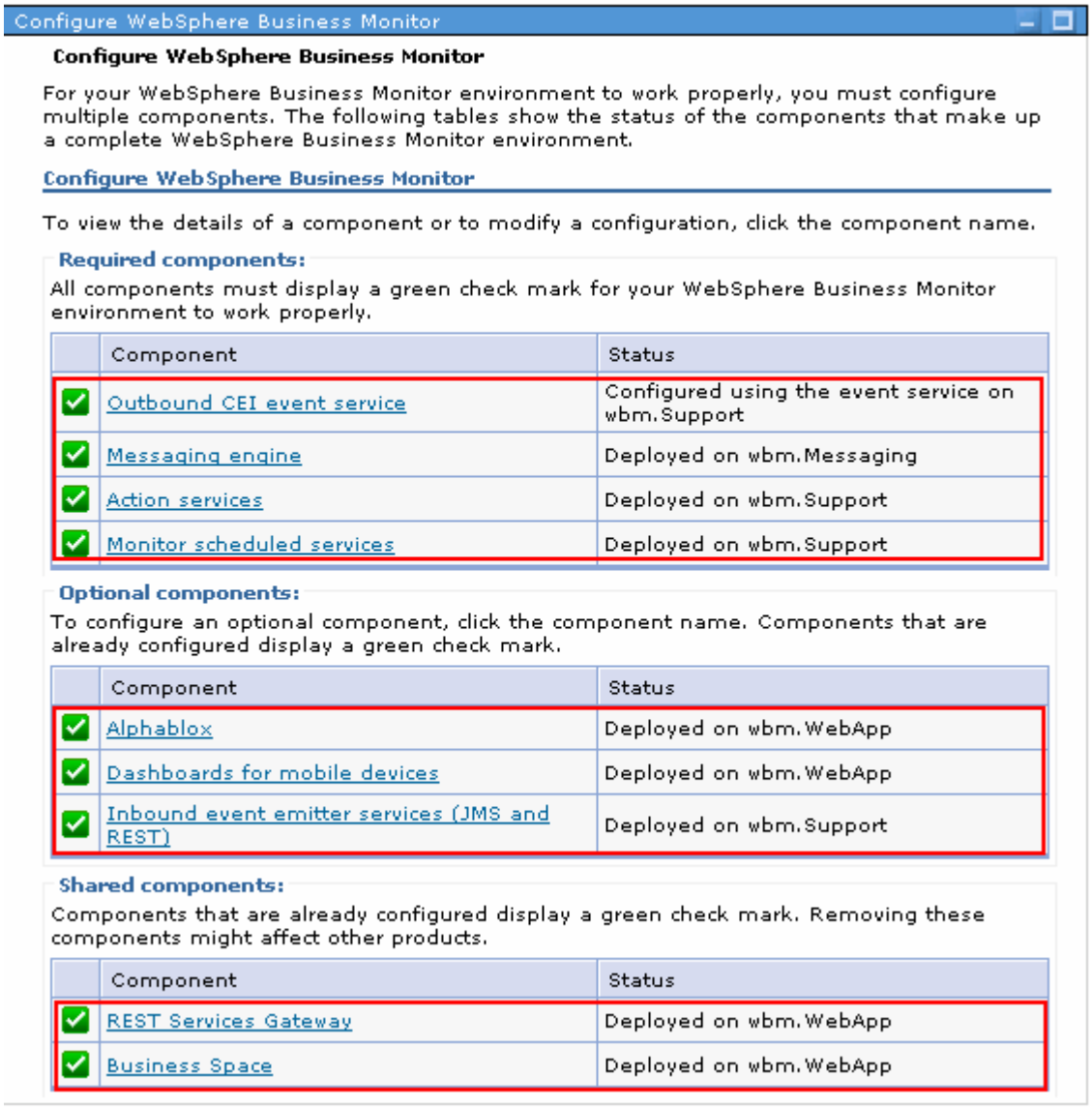
Verify the WebSphere Business Monitor components

In this section, you will 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

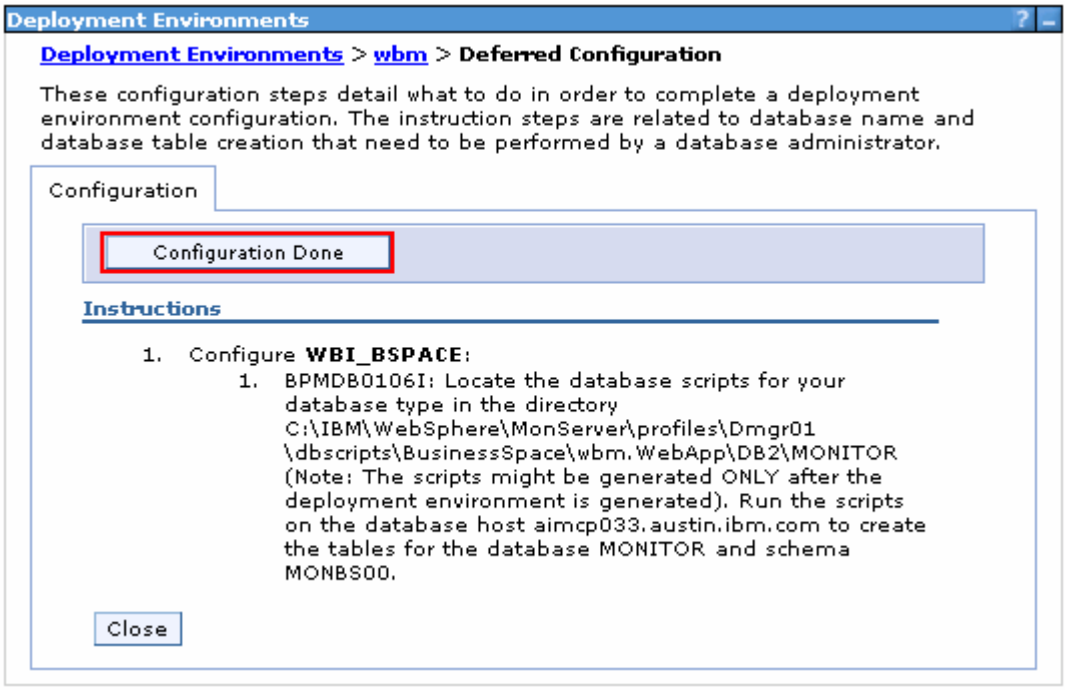
____ 3. Close the DB2 command window

____ 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

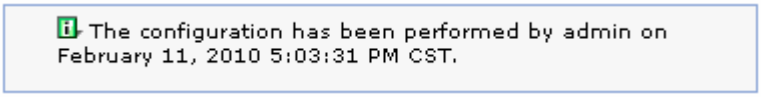
__ c. In the next panel, click **Deferred Configuration** under the **Additional Properties** section



__ 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 this script 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. The scripts create the Monitor database, that is MONITOR and create Monitor database tables

____ 4. Close the DB2 command window

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