

IBM WEBSHERE PROCESS SERVER 6.1 – LAB EXERCISE

# WebSphere Process Server V6.1: Clustering

## Single cluster deployment environment pattern

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## What this exercise is about

The objective of this lab is to provide you with an understanding of how to use the IBM supplied deployment environment pattern. This lab will step you through the process of installing and creating a single clustered deployment environment pattern. Eventually you will install a supported Web server, a supported Web server plug-in and configure the single cluster environment to achieve fail over support. A quick test will be run to show the fail over capability. Besides the fail over capability, the clustered environment will also provide work load distribution using a round-robin algorithm.

## Lab requirements

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

- WebSphere Process Server version 6.1
- A Windows® XP or 2003 server OS
- A system with a minimum of 1Gig of memory, 2Gig is recommended

## What you should be able to do

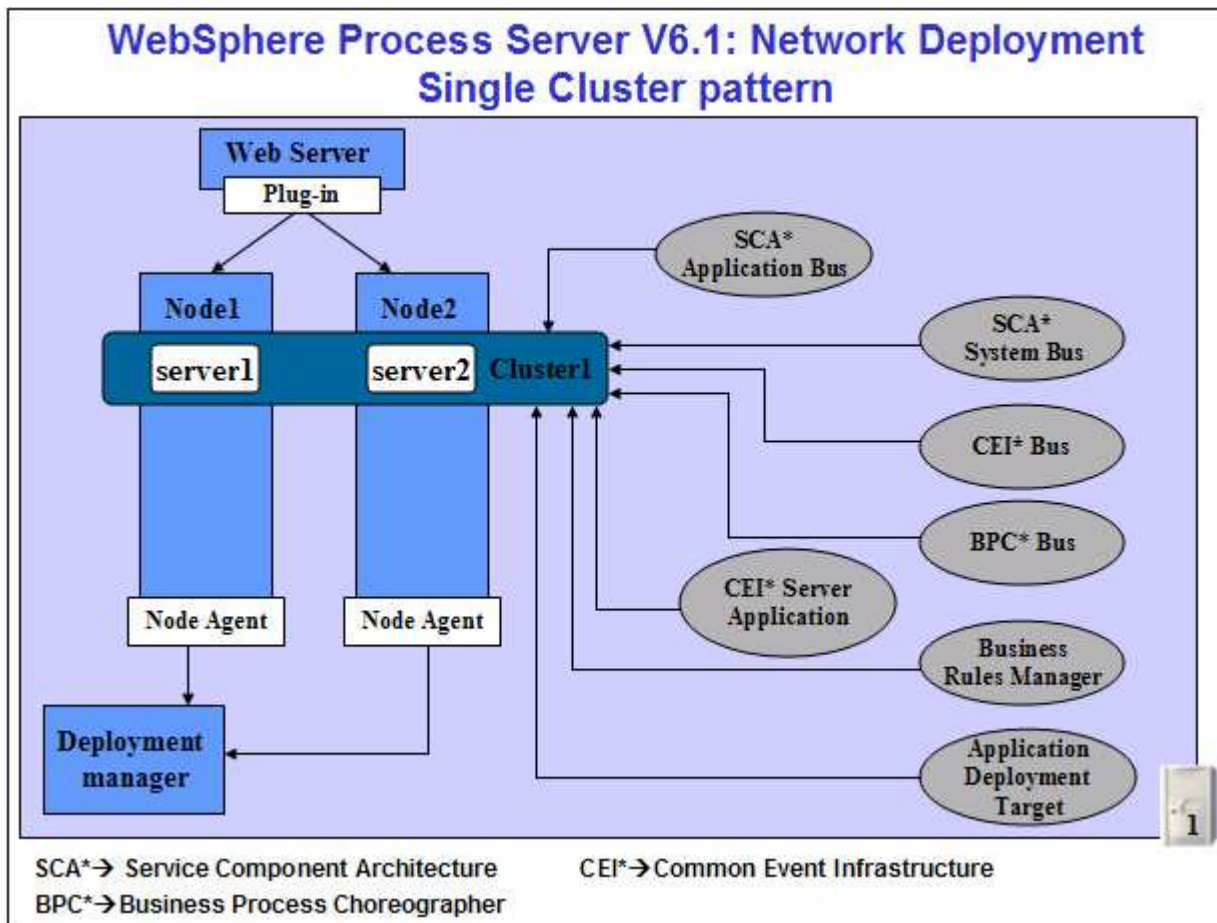
At the end of this lab you should be able to set up a single cluster deployment environment pattern using one of the IBM supplied deployment environment patterns, install a Web server, plug-in module and configure them with the cluster environment.

## Introduction

The single cluster deployment environment pattern is suitable for scenarios that are focused on running applications and on synchronous invocations. Any messaging requirements should be kept to a minimum with this pattern. All components and functions, that is, messaging, Service Component Architecture (SCA) support, Common Event Infrastructure (CEI) support and application support are configured run on a single cluster, to be precise, a single deployment target.

In this lab, the single cluster deployment environment will have two nodes with one runtime server created on each of them and support the necessary messaging engines, CEI Server support, and application support. Eventually you configure Web server and Web server plug-in for fail over.

The following diagram depicts the functions and components assigned to the single cluster:



## Exercise Instructions

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

Reference variable	Windows location	AIX®/UNIX® location
<WPS_HOME>	C:\IBM\WebSphere\ProcServer	--
<DMGR_PROFILE_HOME>	<WPS_HOME>\profiles\Dmgr01	--
<CUSTOM01_PROFILE_HOME>	<WPS_HOME>\profiles\Custom01	--
<CUSTOM02_PROFILE_HOME>	<WPS_HOME>\profiles\Custom02	--
<WEB_SERVER_HOME>	C:\IBM\HTTPServer	--
<HTTP_PLUGIN_HOME>	<WEB_SERVER_HOME>\Plugins	--

**Note for Windows users:** 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. For example, replace C:\LabFiles61\ with C:/LabFiles61/

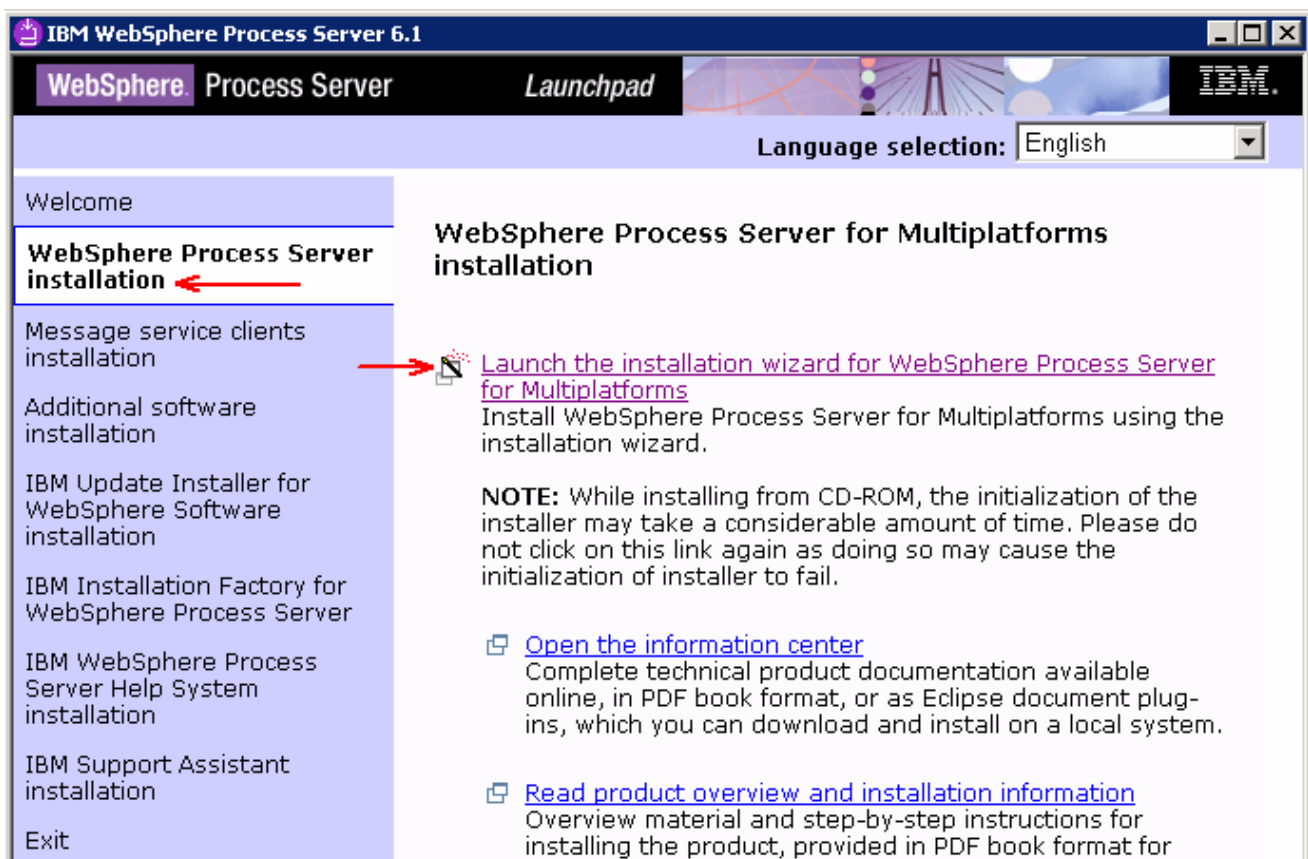
## Part 1: Installing the WebSphere Process Server core product files

In this part of the lab you will install WebSphere Process Server core product files on the designated host machine. This gives an opportunity to update the installation with available critical fixes or refresh packs and create profiles of your choice using the WebSphere Process Server 'Profile Management Tool (PMT)'.

**Note:** Installing only the WebSphere Process Server core product files, that is without any profiles being created allows you to update the installation with available critical fixes or refresh packs. Visit '[Appendix 2: Installing the Update Installer for WebSphere Software](#)' at the end of this document.

Complete the instructions below, to install the WebSphere Process Server core product files using the WebSphere Installation Manager:

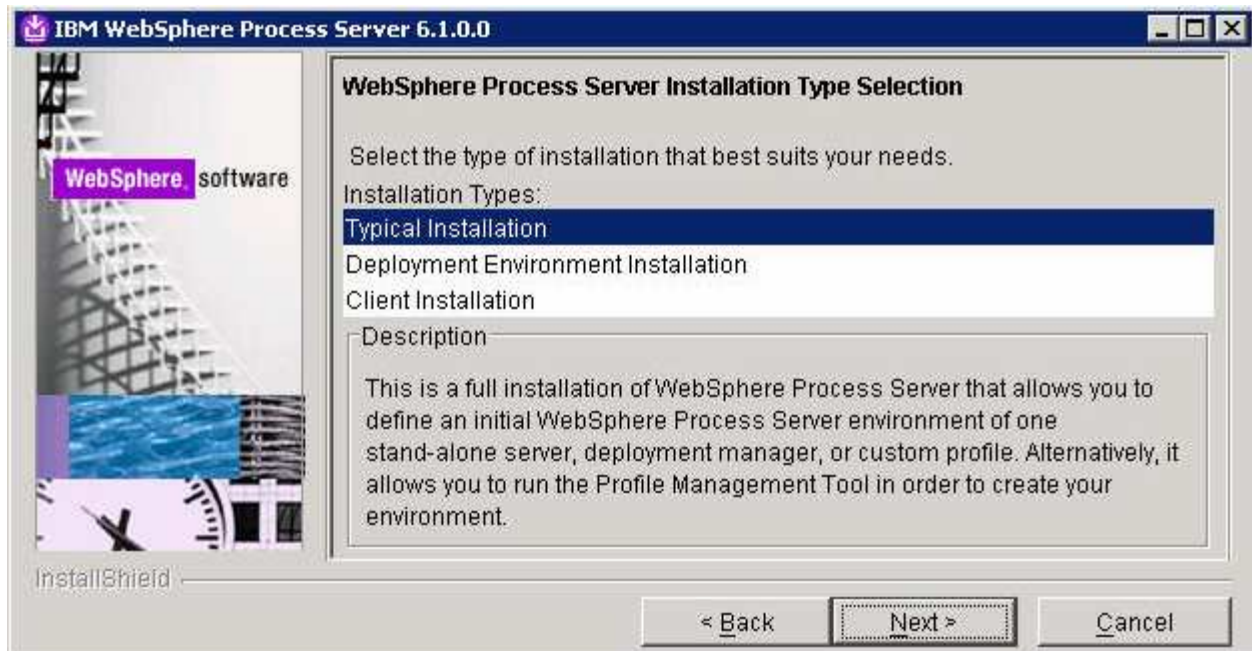
- \_\_\_ 1. Unpack the WebSphere Process Server installation archive file into a directory to create an on-disk image. ( Example:- **C:\CDImageV61\** ), double click on **launchpad.exe** to launch the Common Launchpad program
- \_\_\_ 2. Double click **launchpad.exe** to launch the WebSphere Process Server common launchpad
- \_\_\_ 3. On the welcome screen, click on the '**WebSphere Process Server Installation**' link in the left pane and then click the '**Launch the installation wizard for WebSphere Process Server for Multiplatforms**' link to the right to launch the Install Shield wizard



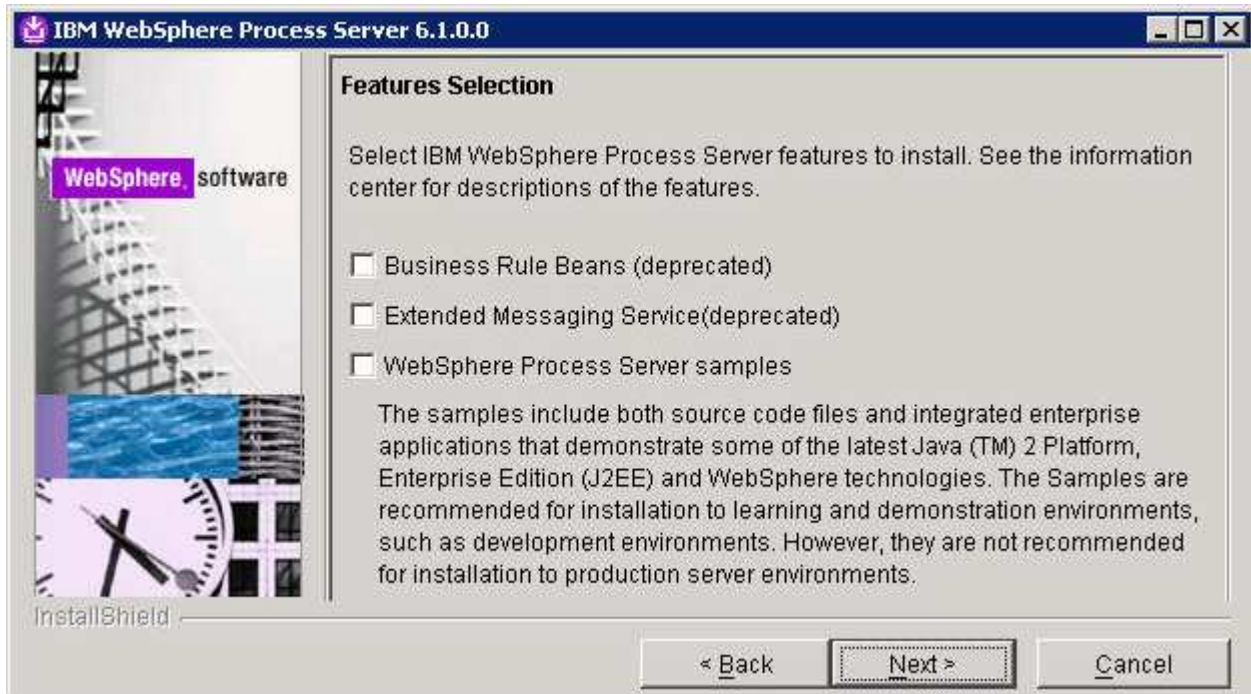
- \_\_\_ 4. The install shield wizard for the WebSphere Process Server is launched



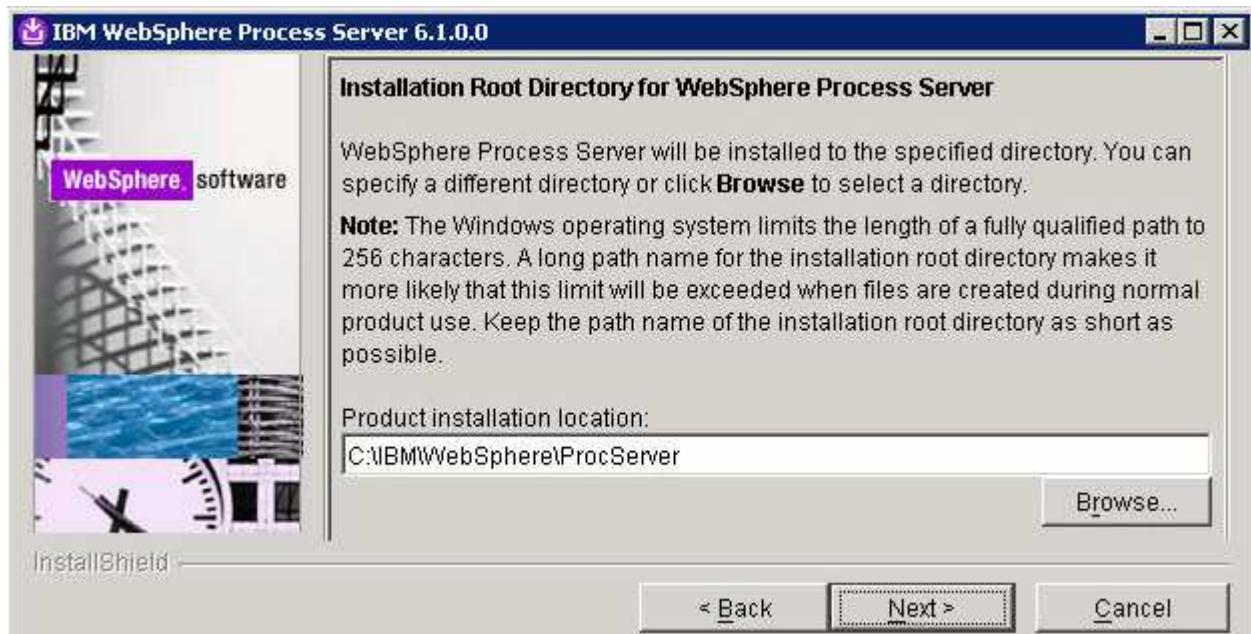
- \_\_\_ 5. Click **Next**
- \_\_\_ 6. In the following panel, read the license agreement. If you agree to the terms, select the radio button next to '**I accept both the IBM and the non-IBM terms**'. Click **Next**
- \_\_\_ 7. In the following panel, review the system pre-requisite information panel. Click **Next**
- \_\_\_ 8. In the following '**WebSphere Process Server Installation Type Selection**' panel, select '**Typical Installation**' from the available '**Installation Types**'



- \_\_\_ 9. Click **Next**
- \_\_\_ 10. In the following '**Feature Selection**' panel, accept the defaults

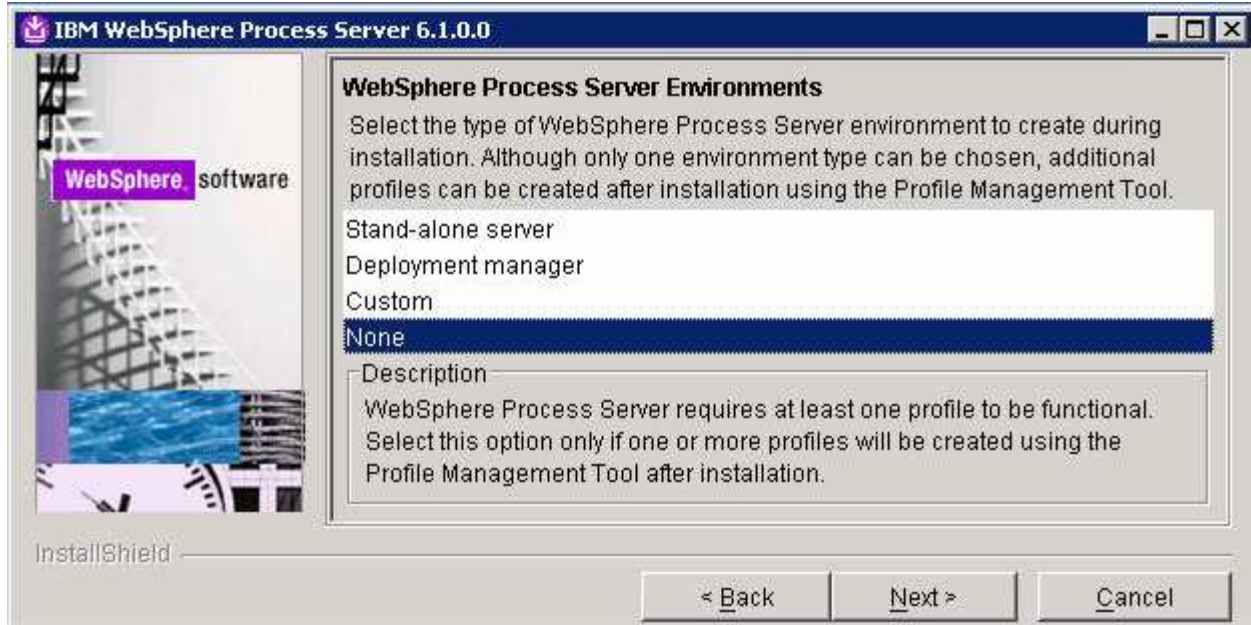


- \_\_\_ 11. Click **Next**
- \_\_\_ 12. In the following 'Installation Root Directory for WebSphere Process Server' panel, to specify a different directory for the 'Product installation location', click the **Browse** button
  - Product installation location : **C:\IBM\WebSphere\ProcServer**



- \_\_\_ 13. Click **Next**
- \_\_\_ 14. In the following '**WebSphere Process Server Environments**' panel, select **None**

**Note:** Selecting 'None' for WebSphere Process Server environment, installs the core product files and does not create any profiles or runtime servers. By doing this you have the opportunity to update the installation with the available critical fixes or refresh packs and use the Profile Management Tool (PMT) which provides several options for creating or augmenting new WebSphere Process Server profiles.

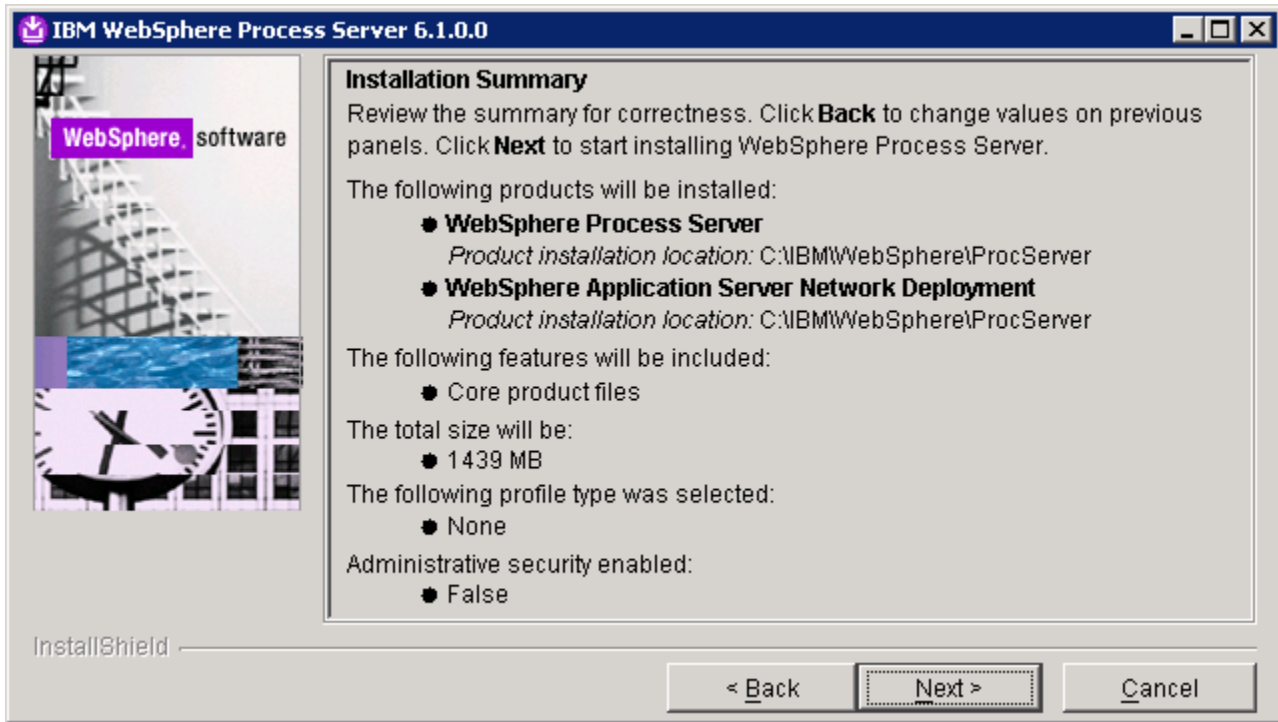


- \_\_\_ 15. Click **Next**
- \_\_\_ 16. Click **Yes** over the warning dialog

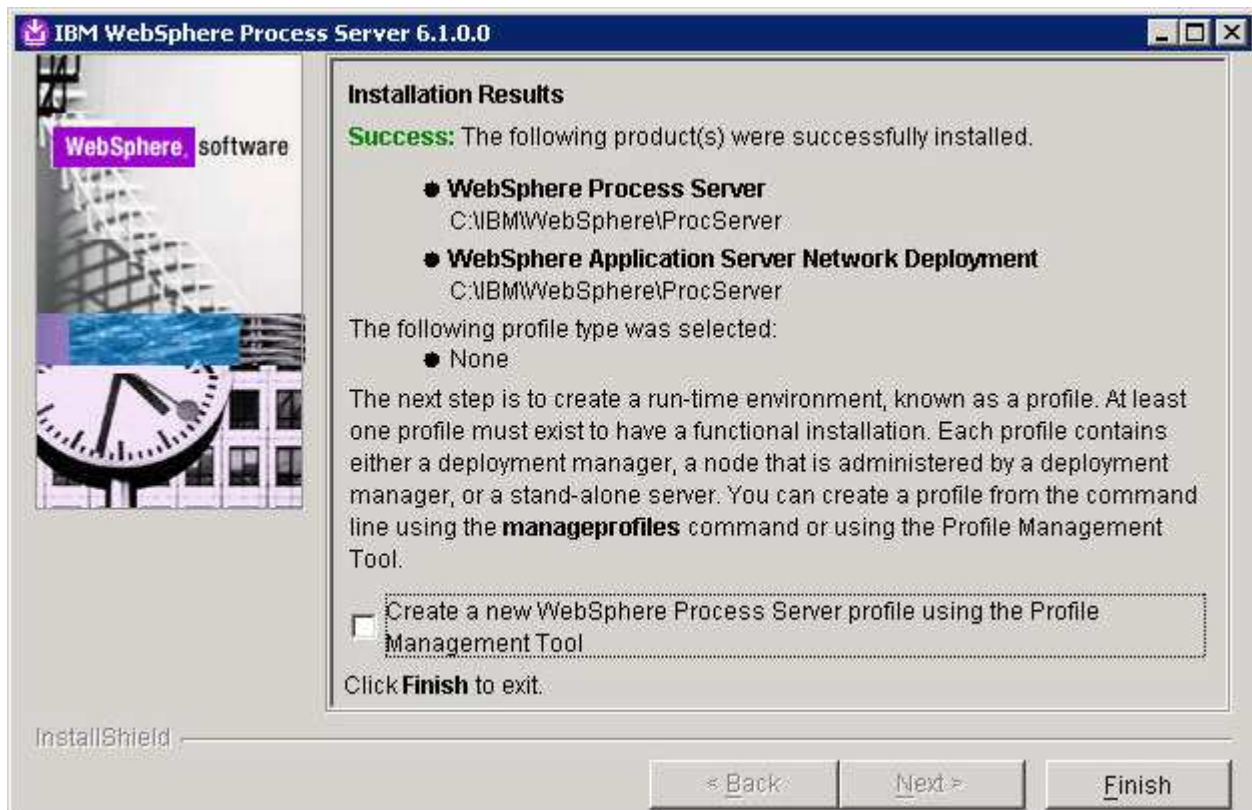


- \_\_\_ 17. In the following 'Installation Summary' panel, review the process server installation summary





18. Click **Next** to continue with the installation. The installation progresses and takes a couple of minutes to complete. Once the installation is complete, review the 'Installation Results' panel



19. Unselect the check box for launching the profile management tool and click **Finish**

## Part 2: Creating the deployment manager profile

In order to have a network deployment environment which will support failover scenarios for applications, a deployment manager and at least two nodes must be created. This part of the lab will step through the creation of the WebSphere Process Server deployment manager profile with the single cluster deployment environment pattern option, using the Profile Management Tool (PMT). In this process you will select 'Derby Network', a Java based as the database product to create WebSphere Process Server database named, WPRCSDB and tables.

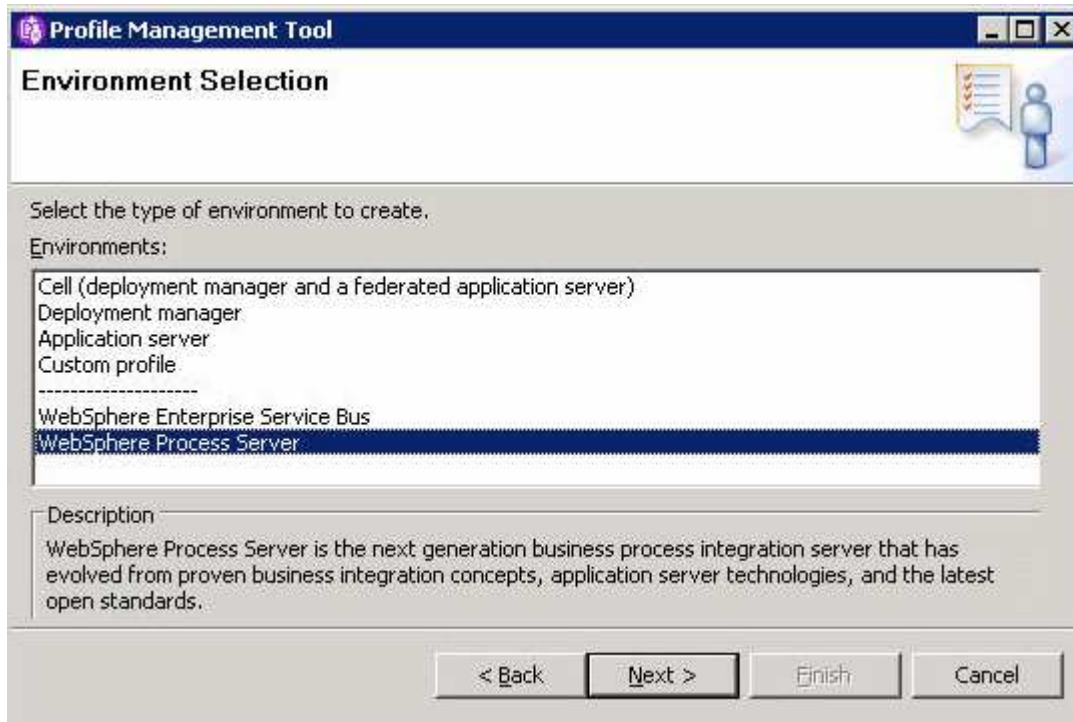
Complete the following instructions to create a WebSphere Process Server deployment manager profile using the **Profile Management Tool**:

1. From the start menu under **IBM WebSphere> Process Server 6.1** select the **Profile Management Tool**. The WebSphere Process Server Profile Management Tool is launched.

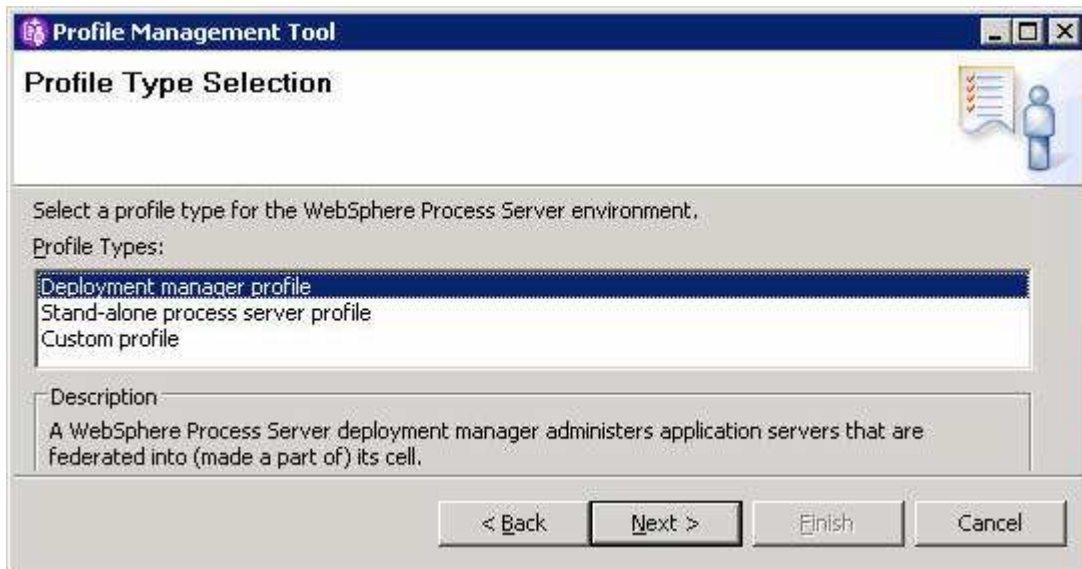
**Note:** Alternatively, you can launch the Profile Management Tool by running the '**pmt.bat (sh)**' script located at '**<WPS\_HOME>\bin\ProfileManagement'**



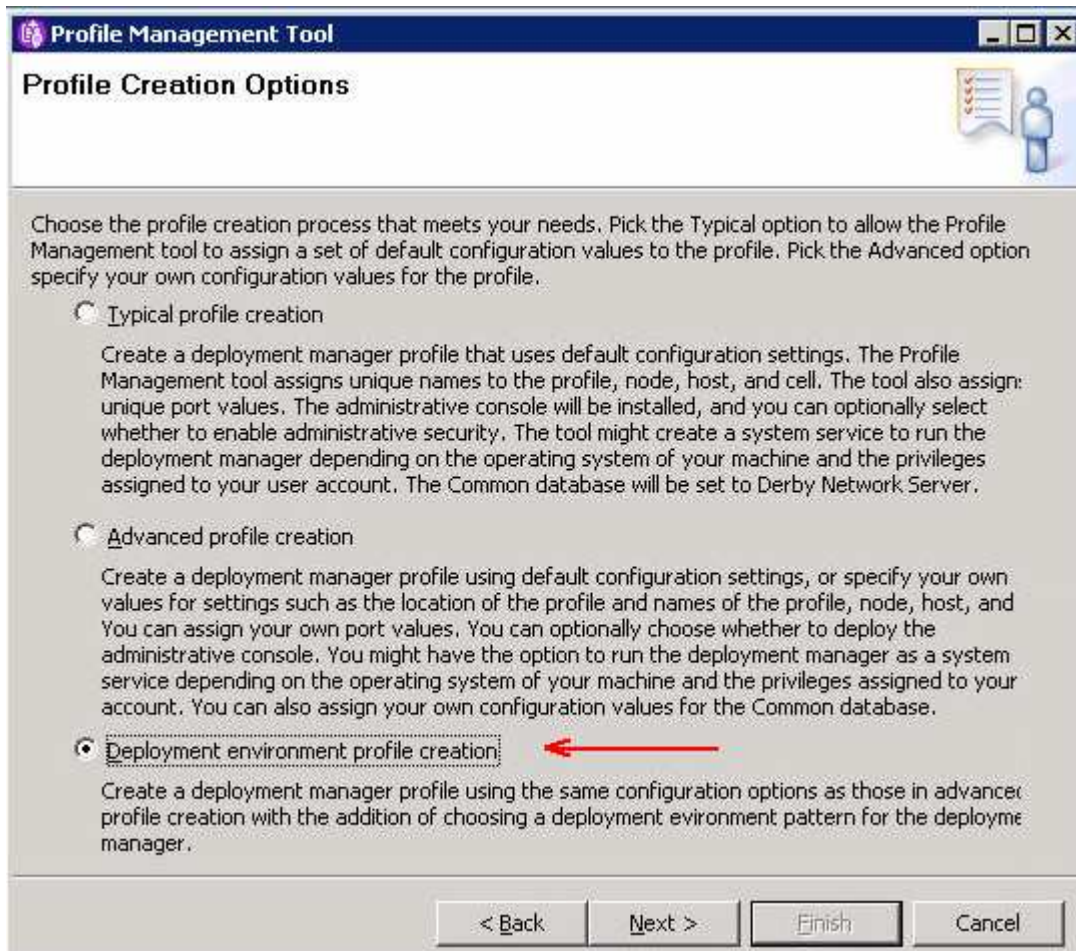
2. Click **Next** on the **Welcome** panel
3. In the following '**Environment Selection**' panel select '**WebSphere Process Server**'



- \_\_\_ 4. Click **Next**
- \_\_\_ 5. In the following '**Profile Type Selection**' panel, select '**Deployment manager profile**' for the profile type.

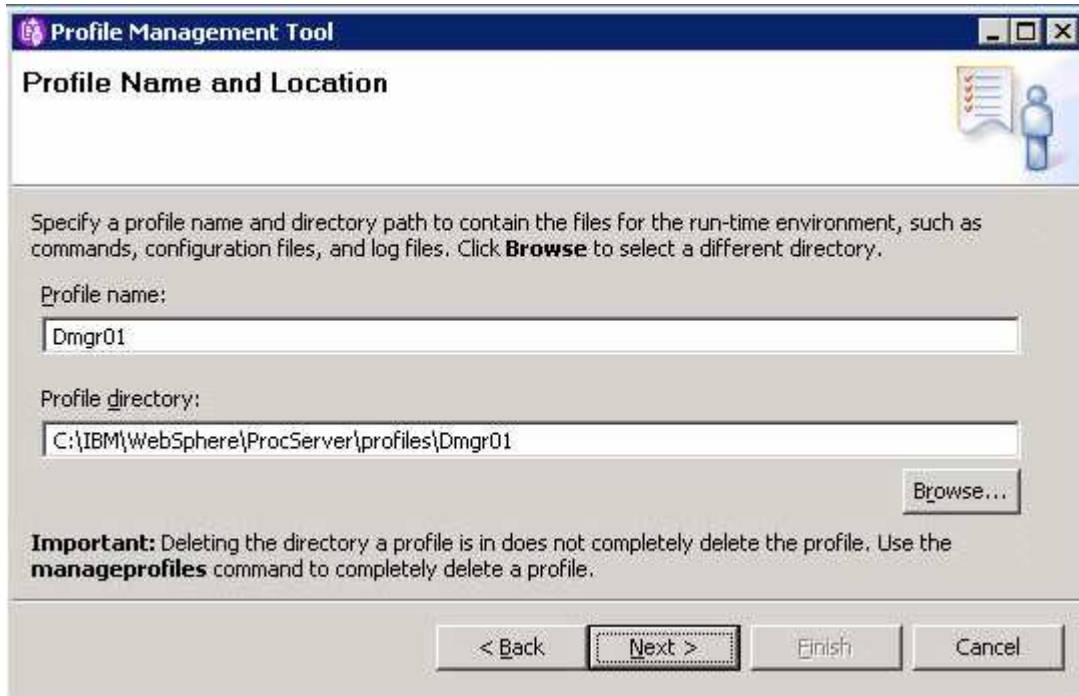


- \_\_\_ 6. Click **Next**
- \_\_\_ 7. In the following '**Profile Creation Options**' select the radio button for '**Deployment environment profile creation**'



- \_\_\_ 8. Click **Next**
- \_\_\_ 9. In the following '**Profile Name and Location**' panel, enter the deployment manager profile name and the location where it will be created
- \_\_\_ a. Profile name : **Dmgr01**
- \_\_\_ b. Profile Directory : **<WPS\_HOME>\profiles\Dmgr01**

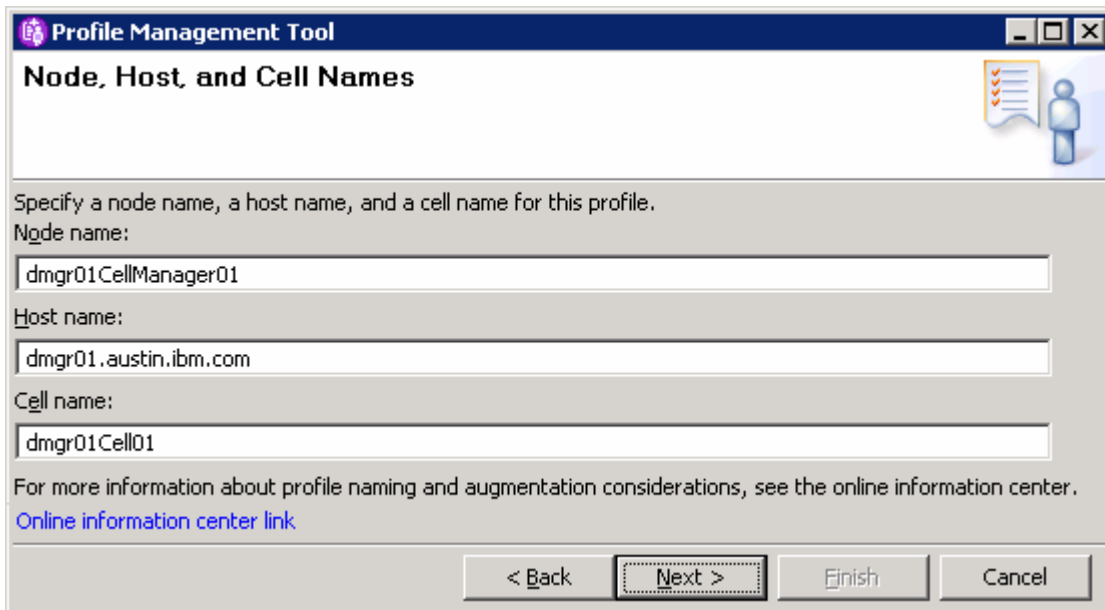
Ex: - C:\IBM\WebSphere\ProcServer\profiles\Dmgr01



\_\_\_ 10. Click **Next**

\_\_\_ 11. In the following 'Node, Host and Cell Name' panel, enter the following parameters:

- \_\_\_ a. Node name : **dmgr01CellManager01**
- \_\_\_ b. Host name : **dmgr01.austin.ibm.com** ( fully qualified host name of the host machine)
- \_\_\_ c. Cell name : **dmgr01Cell01**



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

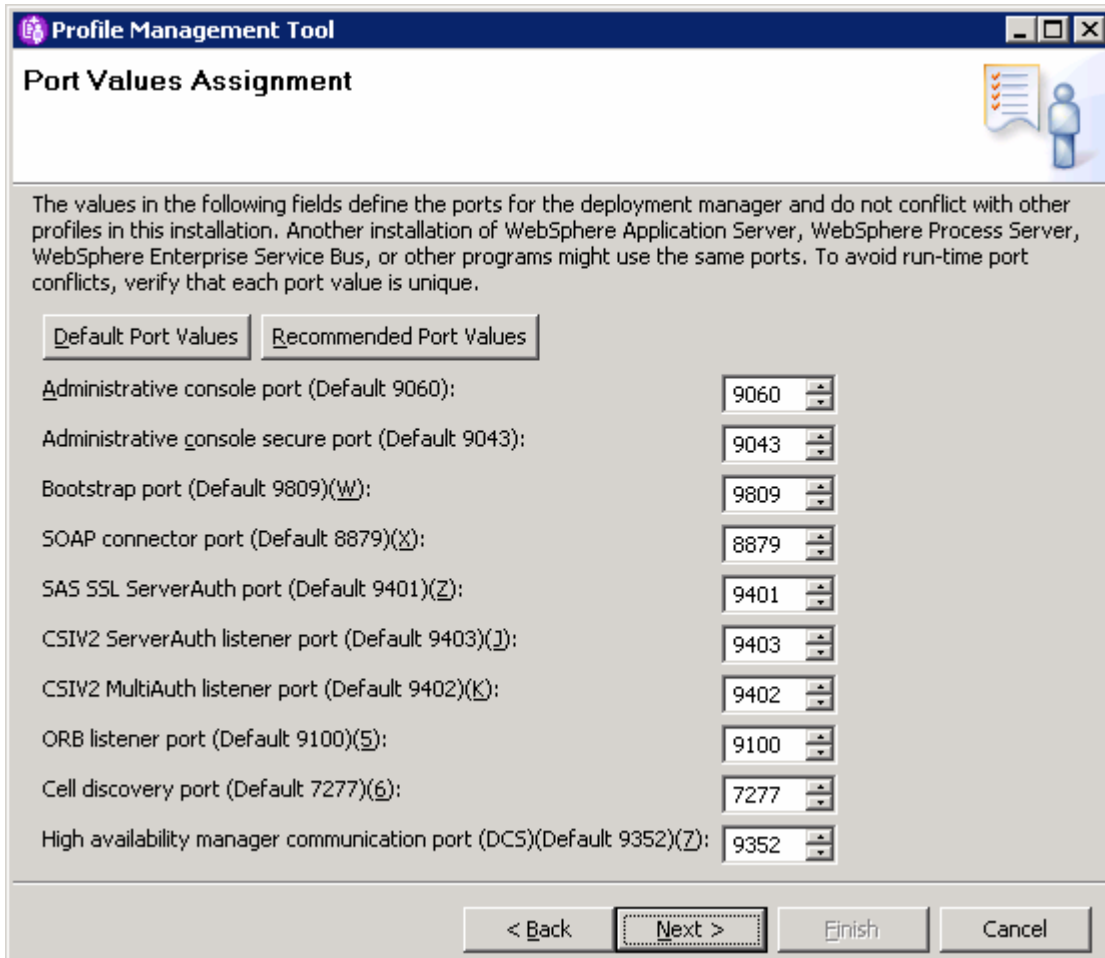
\_\_\_ 13. In the following '**Administrative Security**' panel, enter user name and password

- \_\_\_ a. User name : **wps61admin**
- \_\_\_ b. Password : **wps61admin**
- \_\_\_ c. Confirm Password : **wps61admin**

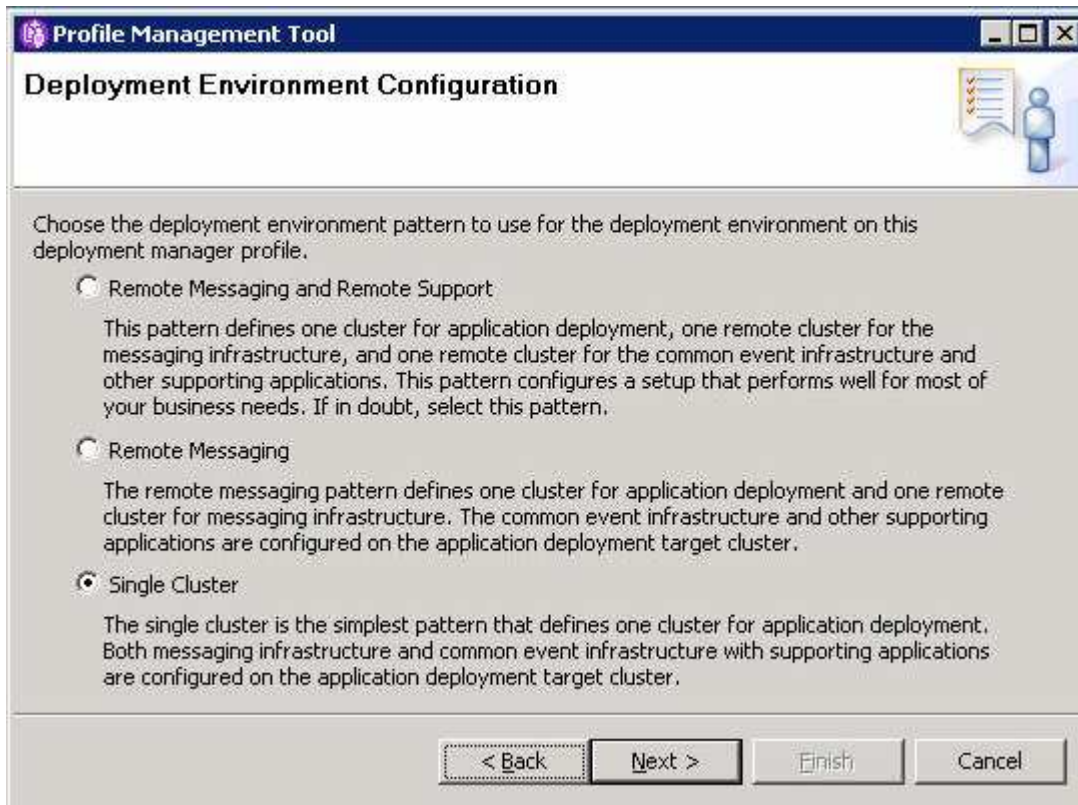


\_\_\_ 14. Click **Next**

\_\_\_ 15. In the following '**Port Values Assignment**' panel, review the ports assigned. You can change them to the new values, but ensure that the port number do not conflict with other services running on this machine



- \_\_\_ 16. Click **Next**
- \_\_\_ 17. In the following '**Windows Service Definition**' panel, clear the check box for '**Run the deployment manager process as a Windows service**' and click **Next**
- \_\_\_ 18. In the following '**Deployment Environment Configuration**' panel, select the radio button for '**Single Cluster**'. This will create a single clustered environment, which is suitable for scenarios that are focused on running applications and on synchronous invocations

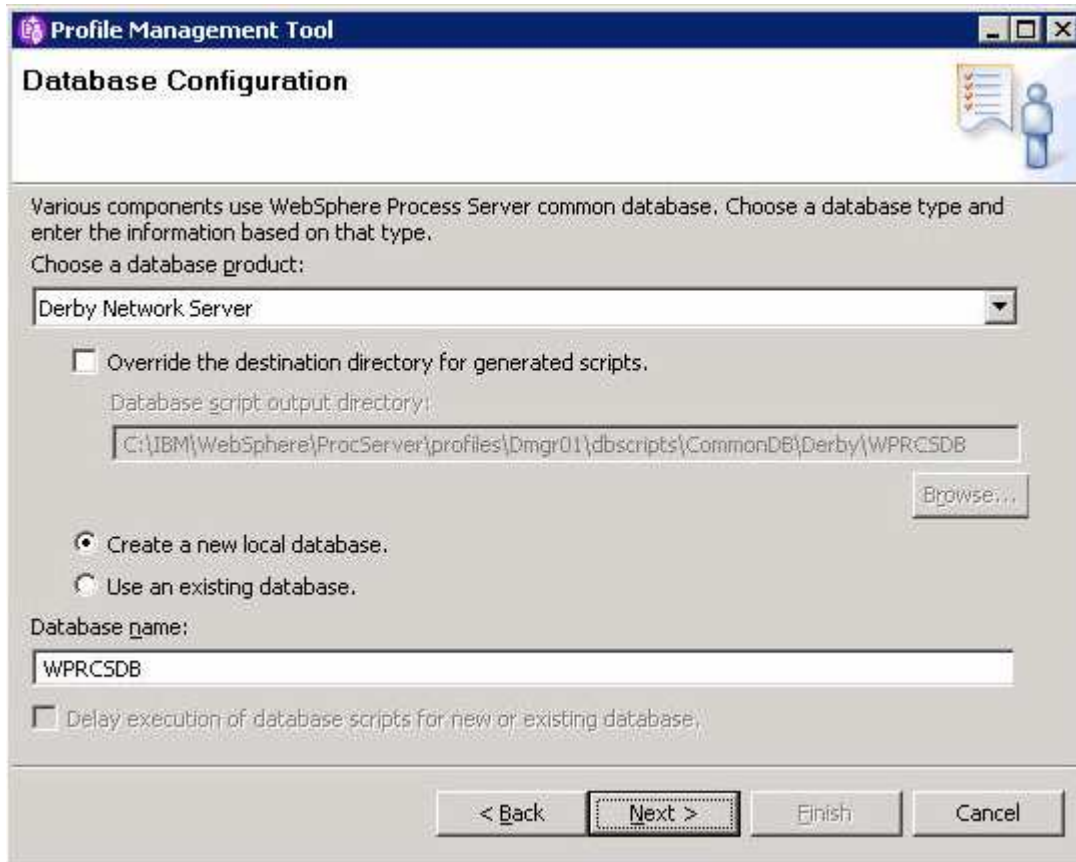


\_\_\_ 19. Click **Next**

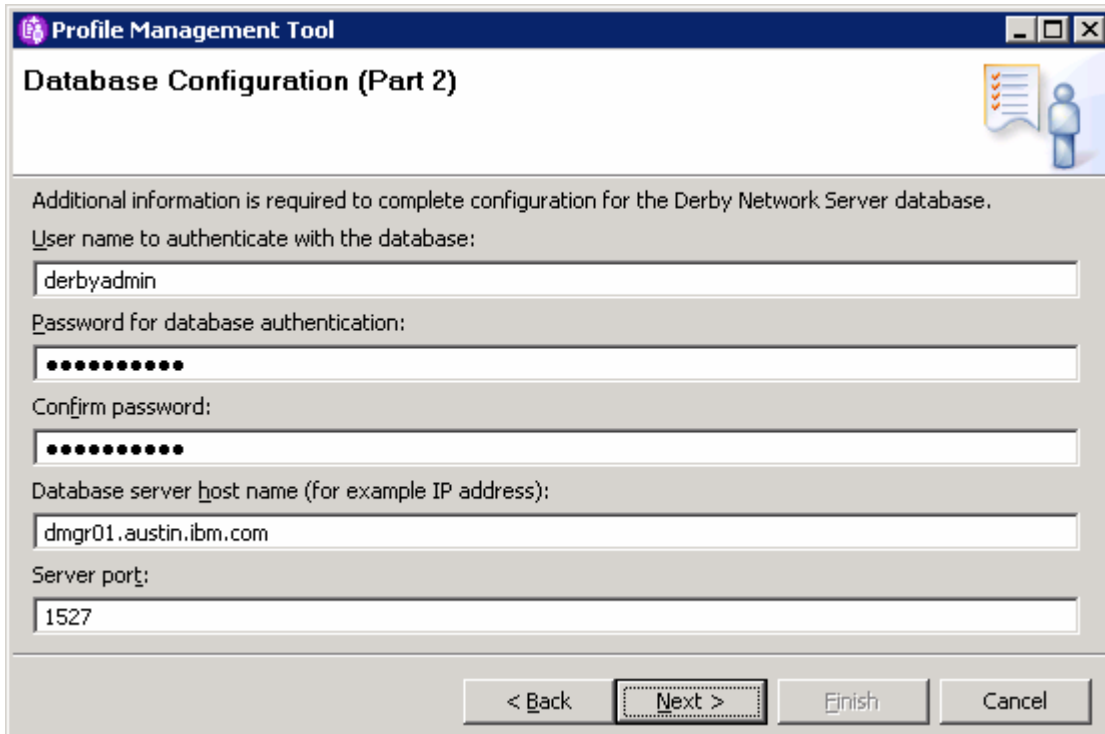
\_\_\_ 20. In the following '**Database Configuration**' panel, ensure the following parameters are set:

- \_\_\_ a. Choose a database product : **Derby Network Server**
- \_\_\_ b. Select the radio button for '**Create a new local database**'
- \_\_\_ c. Database name : **WPRCSDB**

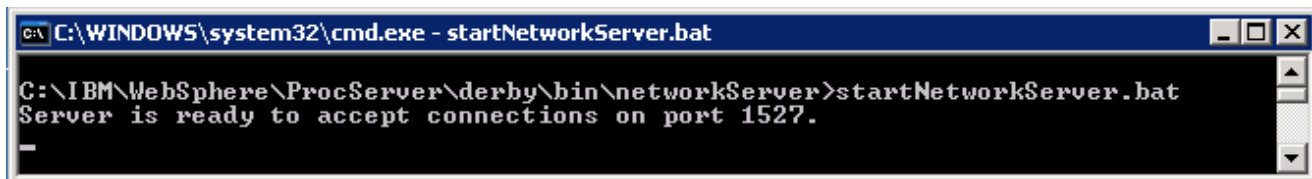




- \_\_\_ 21. Click **Next**
- \_\_\_ 22. In the following '**Database Configuration (Part 2)**' panel, enter the following parameters:
- \_\_\_ a. User name to authenticate with the database : **derbyadmin**
  - \_\_\_ b. Password for database authentication : **derbyadmin**
  - \_\_\_ c. Confirm Password : **derbyadmin**
  - \_\_\_ d. Database server host name : **localhost** (or fully qualified host name)
  - \_\_\_ e. Server port : **1527**



- \_\_\_ 23. Click **Next**
- \_\_\_ 24. In the following '**Profile Creation Summary**' panel, review the deployment manager profile creation summary and click '**Create**' button. The profile creation progresses. Once the installation is complete, ensure the check box next to '**Launch the First steps console**' to launch the installation verification tool
- \_\_\_ 25. Click **Finish**
- \_\_\_ 26. Stop the deployment manager profile if it is running at this time
- \_\_\_ 27. Start the derby network database
  - \_\_\_ a. Open a command window and change directory to **<WPS\_HOME>\derby\bin\networkServer** and run the following script:
    - **startNetworkServer.bat**



- \_\_\_ 28. Now start the deployment manager and ensure that it runs successfully

**Ex: <DMGR\_PROFILE\_HOME>\bin\startManager.bat**

**Note:** The above instructions lead you to create the WebSphere Process Server deployment manager profile. It is mandatory that the deployment manager and the Derby Network server are running in order to create and federate any profiles using the Profile Management Tool.

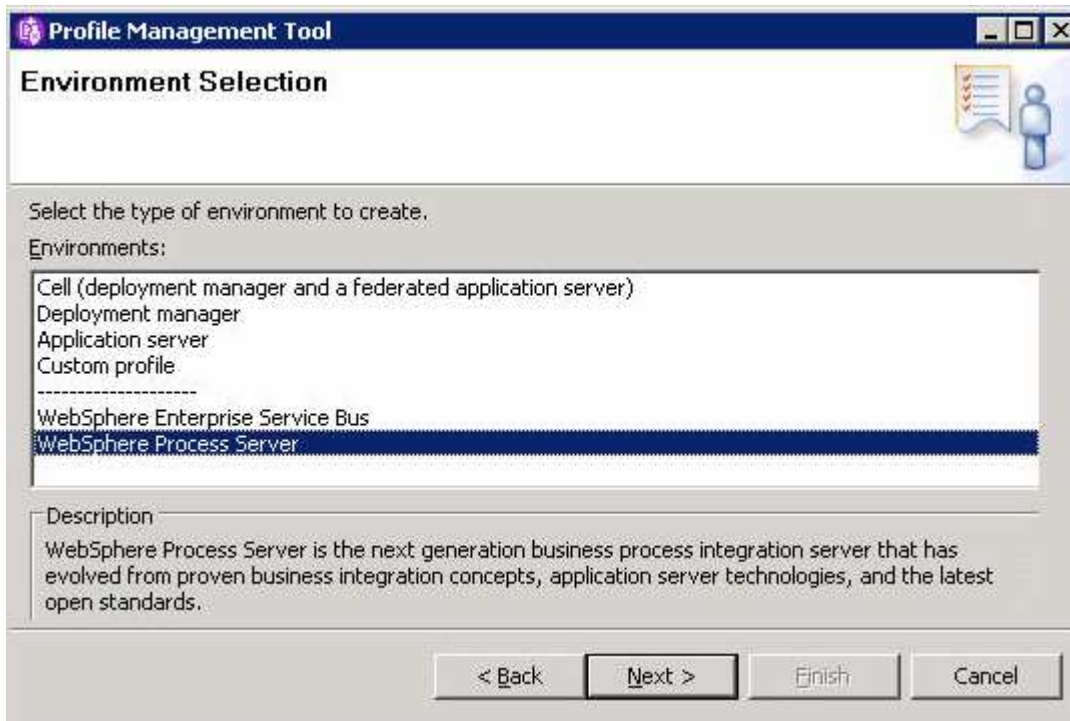
## Part 3: Creating the WebSphere Process Server custom profiles

In this part of the lab, you will create a WebSphere Process Server custom profile. A custom profile is an empty profile that gets created and eventually federates itself to the WebSphere Process Server deployment manager profile.

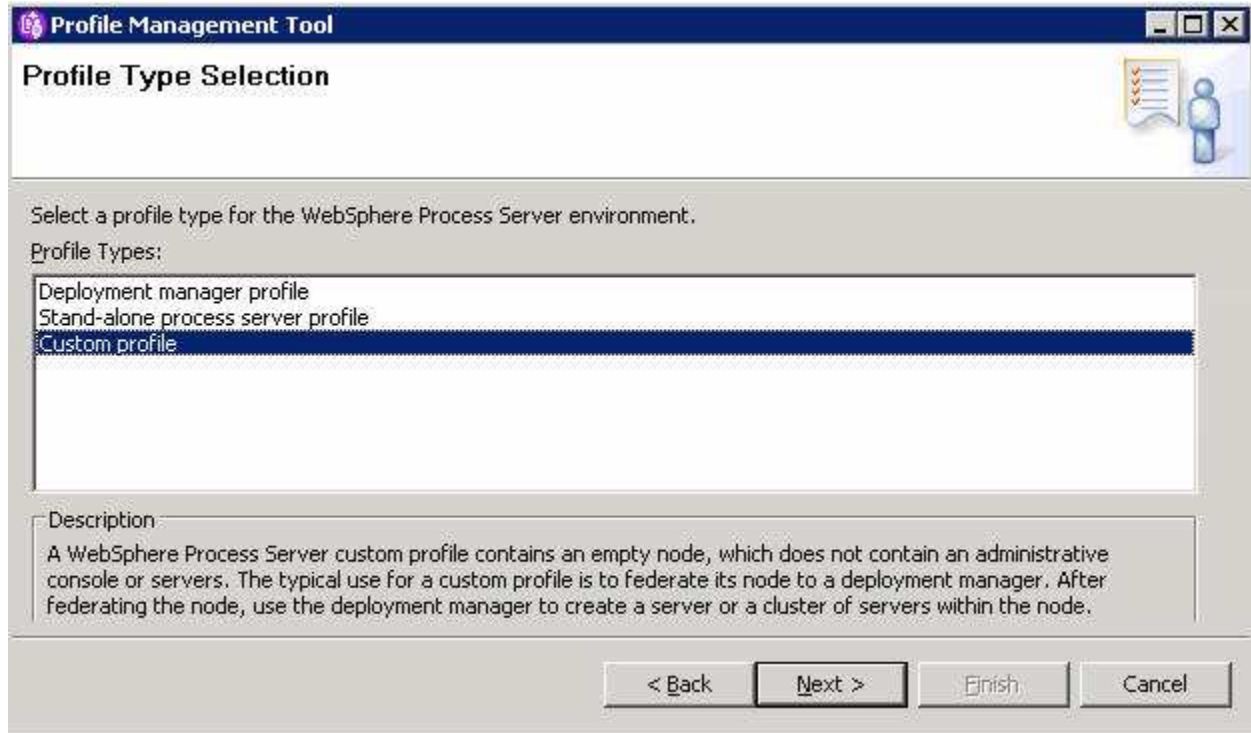
### Prerequisites: -

- Before proceeding further, ensure the deployment manager you want to federate this custom node is installed and running successfully at this time
- Make a note of the fully qualified host name of the deployment manager host name
- Make note of the deployment manager SOAP port number
- Make a note of the primary user name and password of the deployment manager administrative security credentials

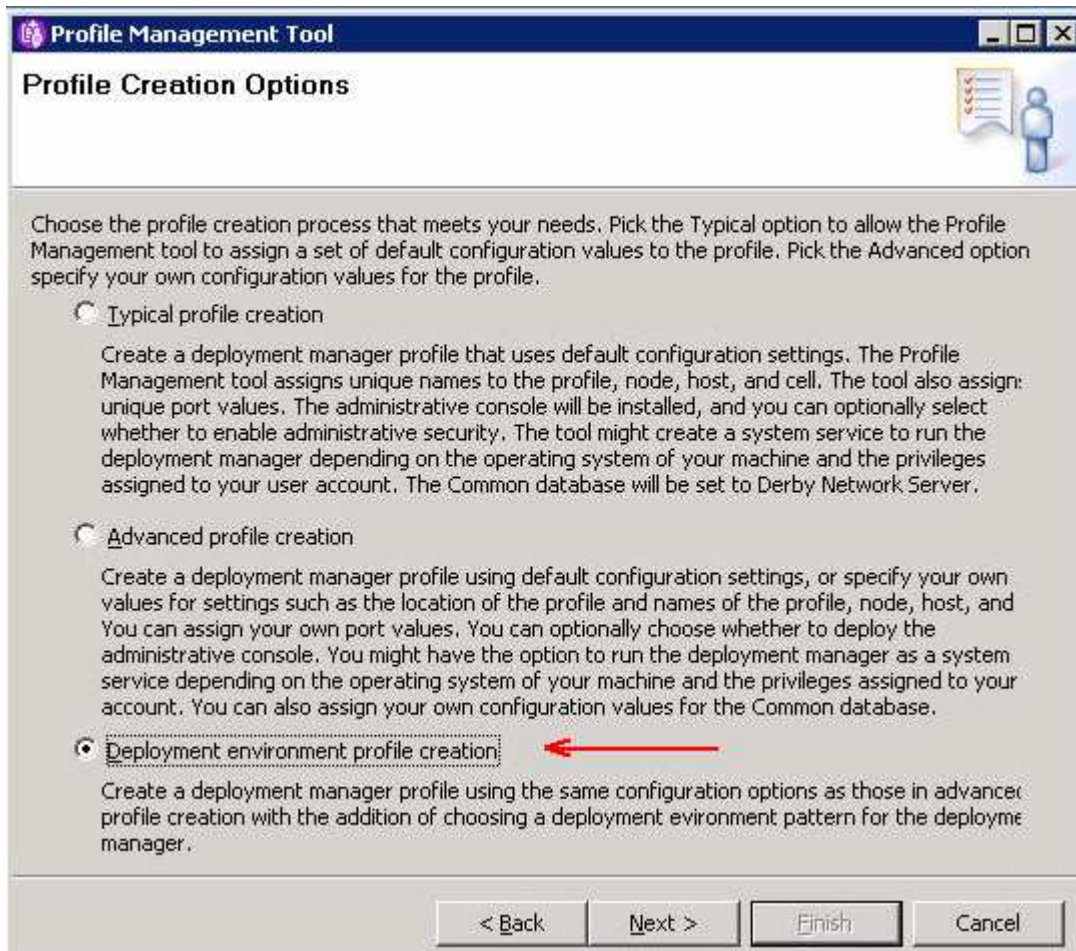
- \_\_\_ 1. From the start menu under IBM WebSphere> Process Server 6.1> Profile Management Tool select the Profile Management Tool. The profile management tool is launched
- \_\_\_ 2. Click **Next** on the **Welcome** panel
- \_\_\_ 3. In the following '**Environment Selection**' panel, select '**WebSphere Process Server**'



- \_\_\_ 4. Click **Next**
- \_\_\_ 5. In the following '**Profile Type Selection**' panel, select '**Custom profile**' from '**Profile Types**'



- \_\_\_ 6. Click **Next**
- \_\_\_ 7. In the following '**Profile Creation Options**' panel, select the radio button for '**Deployment environment profile creation**'



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

\_\_\_ 9. In the following 'Profile Name and Location' panel, enter the custom profile name and the location where it will be created

\_\_\_ a. Profile name : **Custom01**

\_\_\_ b. Profile Directory : **<WPS\_HOME>\profiles\Custom01**

Ex: - C:\IBM\WebSphere\ProcServer\profiles\Custom01

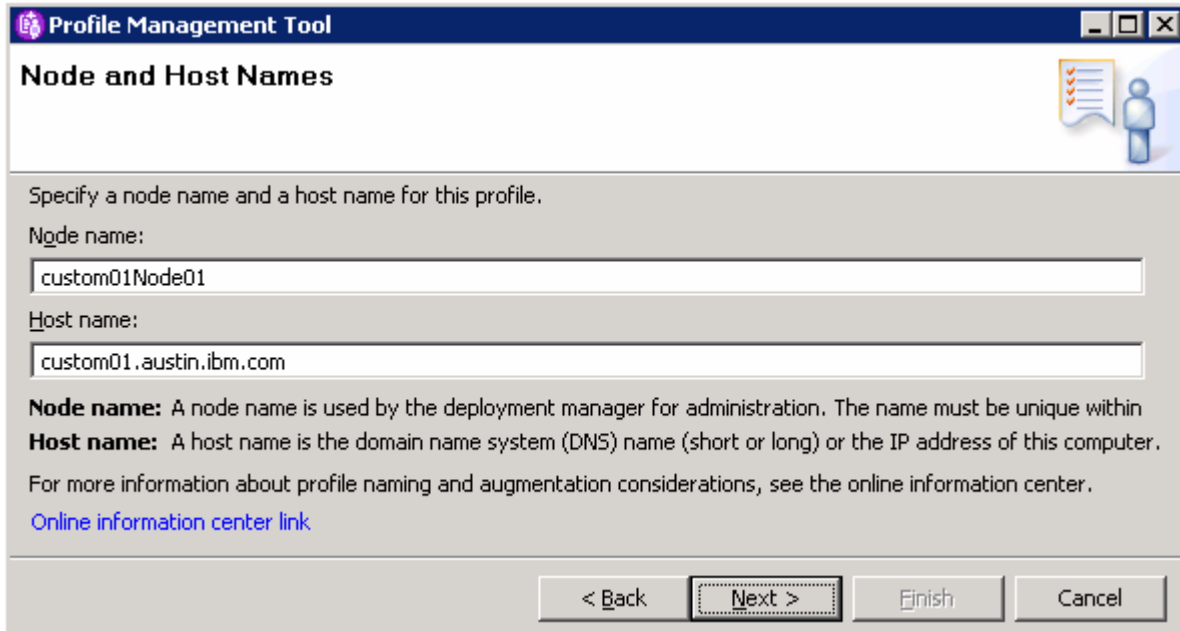


\_\_\_ 10. Click **Next**

\_\_\_ 11. In the following '**Node, Host and Cell Name**' panel, enter the following parameters:

\_\_\_ a. Node name : **custom01Node01**

\_\_\_ b. Host name : **custom01.asutin.ibm.com** (fully qualified host name)



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

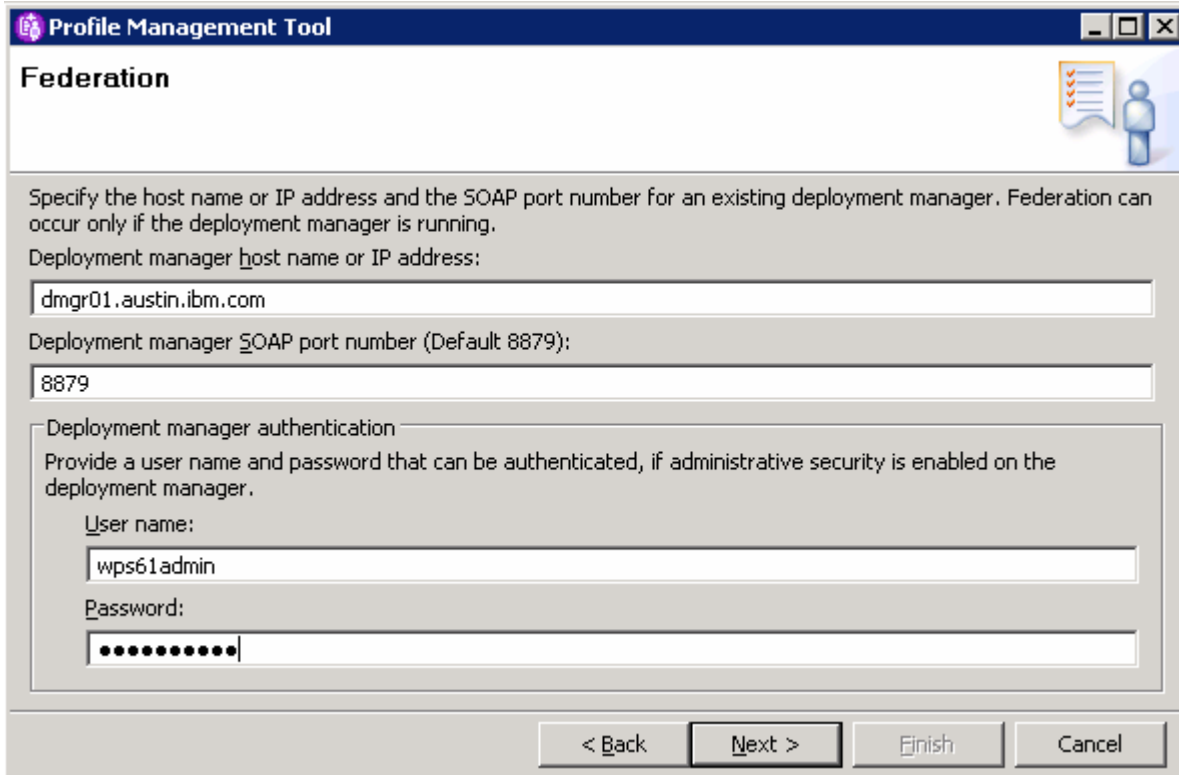
\_\_\_ 13. In the following '**Federation**' panel, enter the following parameters:

- \_\_\_ a. Deployment manager hot name or IP address : Ex: **dmgr01.austin.ibm.com** (host name of the system)
- \_\_\_ b. Deployment manager SOAP port number : **8879** (Default)
- \_\_\_ c. Deployment manager authentication
  - User name : **wps61admin**
  - Password : **wps61admin**

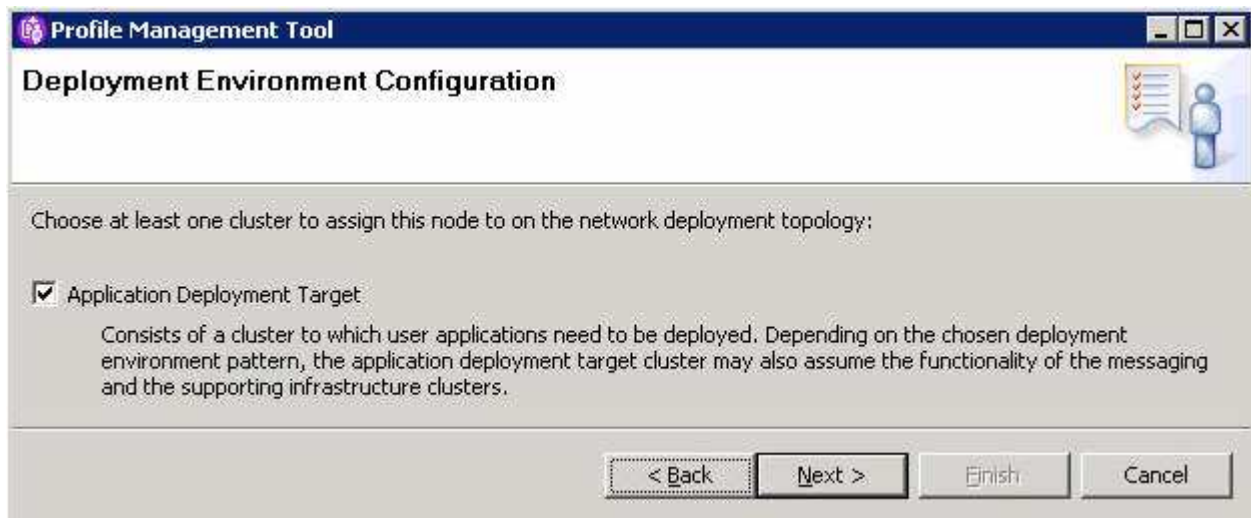
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**Note:** The **User name** and **Password** must match the deployment manager **Administrative Security** credentials, which is the primary user. Also ensure that the deployment manager SOAP port number is correct. If you are unable to connect, then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

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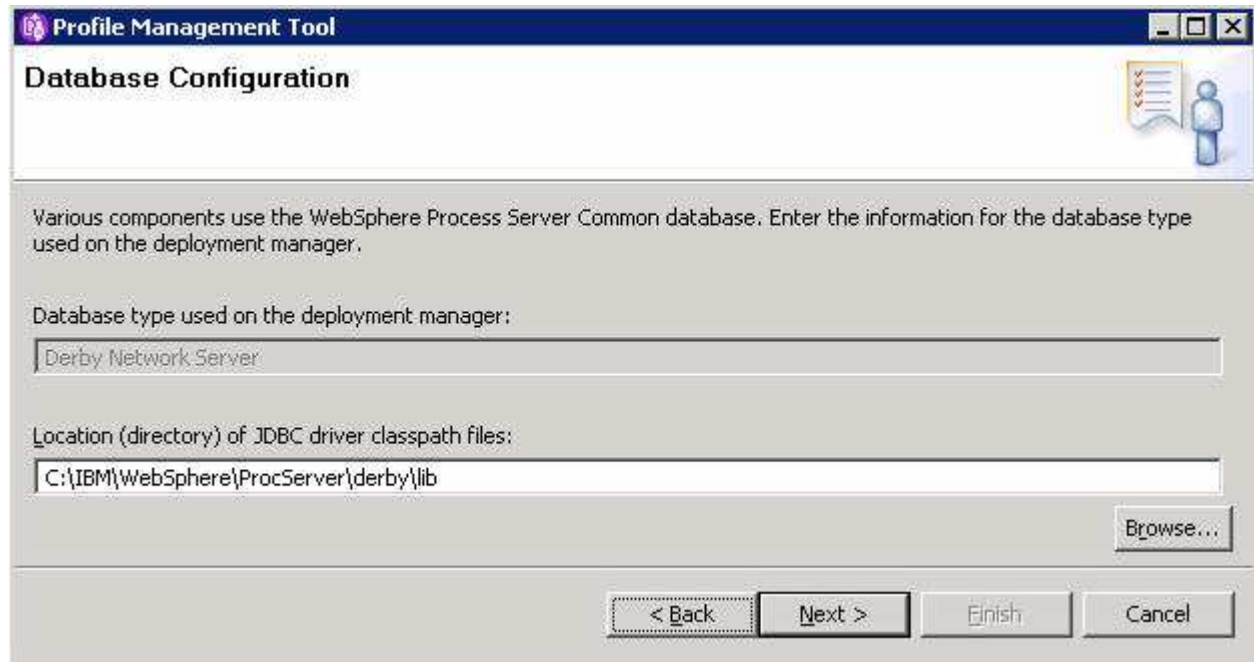
- \_\_\_ 14. Click **Next**
- \_\_\_ 15. In the following **'Port Values Assignment'** panel, review the custom profile port values assigned. You can change them to the new values, but ensure that the port numbers do not conflict with other services running on this host machine. Click **Next**
- \_\_\_ 16. In the following **'Deployment Environment Configuration'** panel, select the check box for **'Application Deployment Target'**



- \_\_\_ 17. Click **Next**
- \_\_\_ 18. In the following **'Database Configuration'** panel, enter the following parameters:



\_\_\_ a. Location (directory) of JDBC driver classpath files: <WPS\_HOME>\derby\lib



\_\_\_ 19. Click **Next**

\_\_\_ 20. In the following panel, review the custom profile creation summary information and click **Create**. The profile creation progresses

\_\_\_ 21. Click **Finish** once the profile creation is complete

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**Note:** The above instructions lead you to create a custom node profile and federated it to the WebSphere Process Server deployment manager. The node should have been started during federation. The servers can be started using the administrative console.

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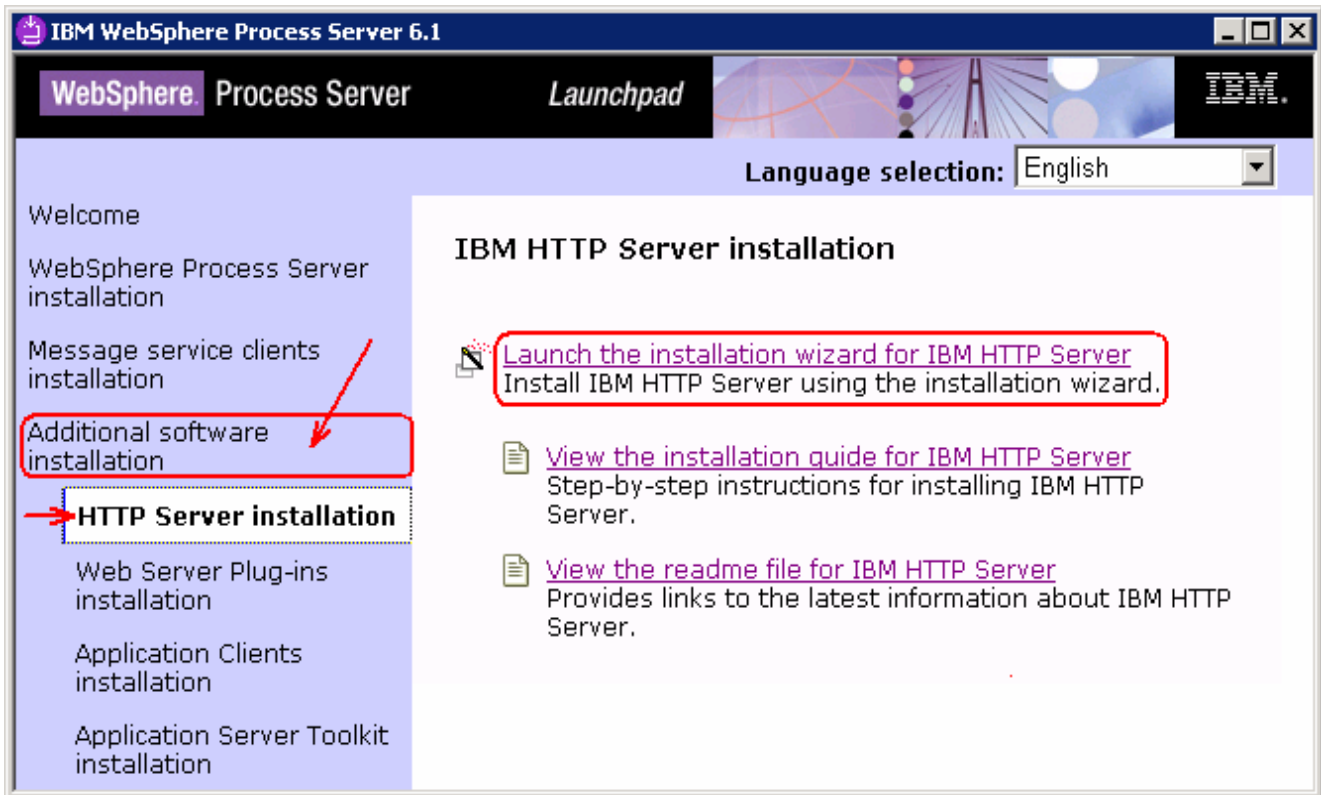
\_\_\_ 22. Create the second custom profile named **Custom02** by repeating the above instructions. In this lab, the second node is named as **custom02Node02**

## Part 4: Installing IBM HTTP Server V6.1

In this part of the lab, you will install a local IBM HTTP Server V6.1 that will act as a gateway to the process server cluster.

Complete the following instructions to install the IBM HTTP Server:

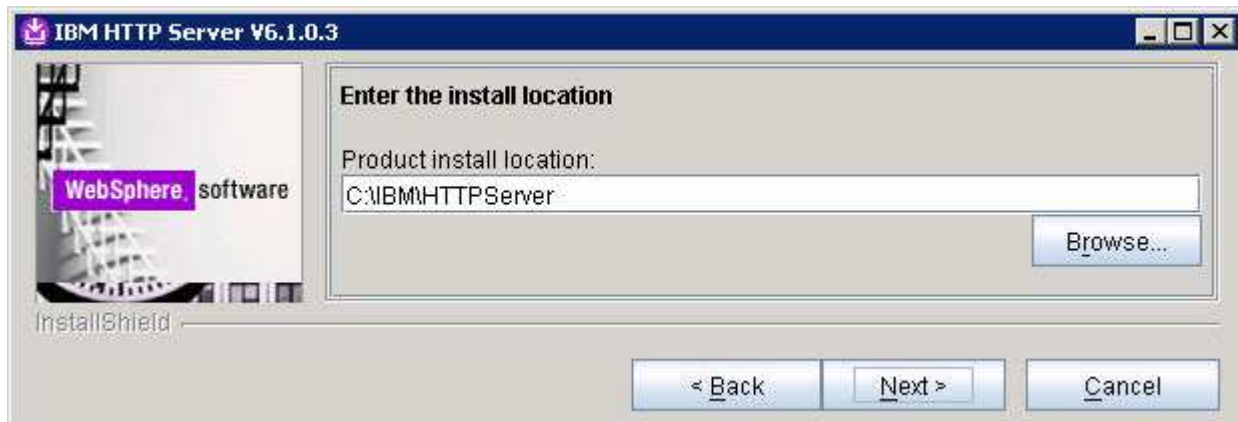
- \_\_\_ 1. Double click **launchpad.exe** to launch the WebSphere Process Server, common launchpad
- \_\_\_ 2. On the welcome screen, click the '**Additional software installation**' link and then the '**HTTP server installation**' link in the left pane. Now click the '**Launch the installation wizard for IBM HTTP Server**' link to the right, to launch the HTTP Server install shield wizard



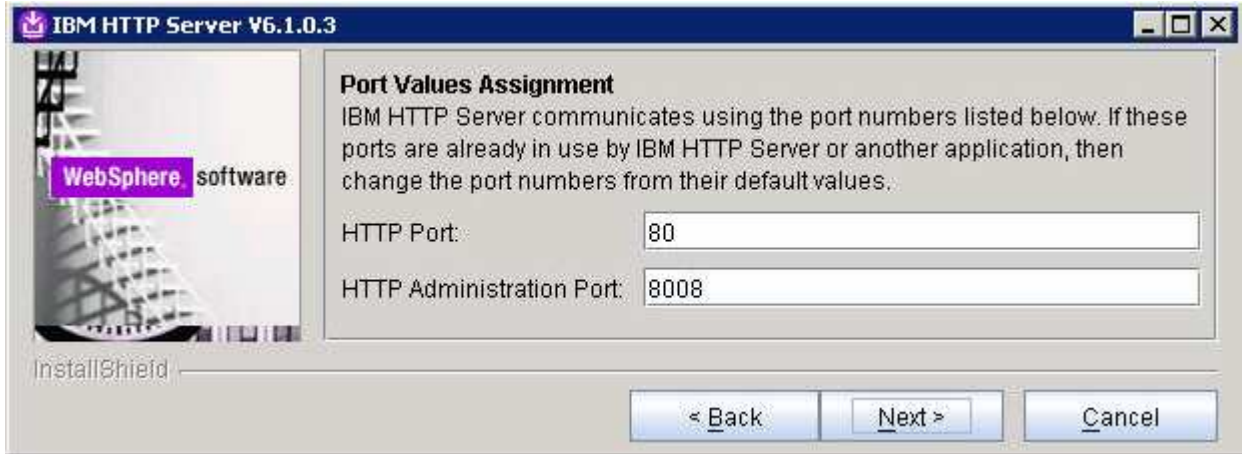
- \_\_\_ 3. The IBM HTTP Server V6.1 installation wizard is launched



- \_\_\_ 4. Click **Next**
- \_\_\_ 5. In the following panel, read the license agreement. If you agree to the terms, select the radio button next to "**I accept both the IBM and the non-IBM terms**". Click **Next**
- \_\_\_ 6. In the following panel, review the system pre-requisite information. Click **Next**
- \_\_\_ 7. In the following panel, click the **Browse** button to specify a different directory for '**Product install location**'
  - \_\_\_ a. Product install location : **C:\IBM\HTTPServer**



- \_\_\_ 8. Click **Next**
- \_\_\_ 9. In the following '**Port Values Assignment**' panel, assign the unique '**HTTP Port**' and '**HTTP Administration Port**'
  - \_\_\_ a. HTTP Port : **80** (default)
  - \_\_\_ b. HTTP Administration Port : **8008** (default)



\_\_\_ 10. Click **Next**

\_\_\_ 11. In the following '**Windows Service Definition**' panel, complete the following instructions:

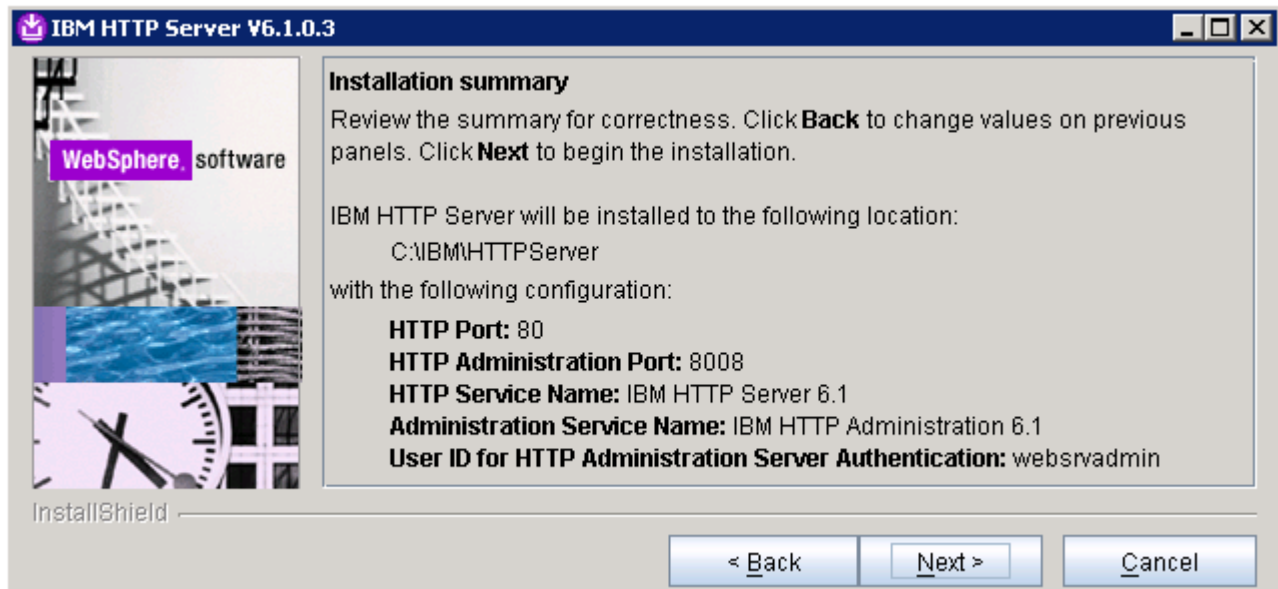
- \_\_\_ a. Select the check box for '**Run IBM HTTP Server as a Windows Service**'
- \_\_\_ b. Select the check box for '**Run IBM HTTP Administration Server as a Windows Service**'
- \_\_\_ c. Select the radio button for '**Log on as a specified user account**'
  - User name : **Ex: Administrator**
  - Password : **\*\*\*\*\***
- \_\_\_ d. Startup Type : Select '**Automatic**' from the drop down list



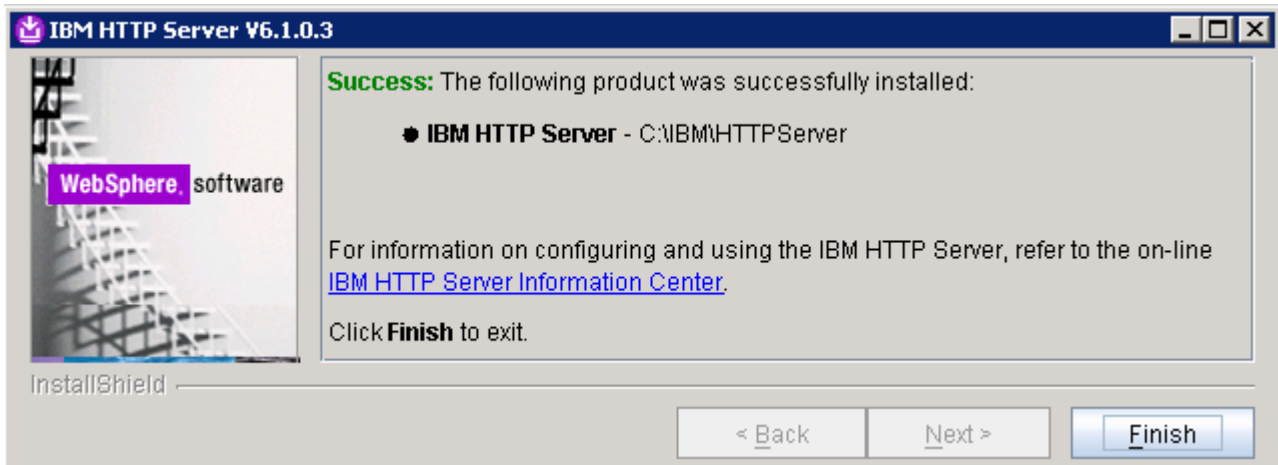
- \_\_\_ 12. Click **Next**
- \_\_\_ 13. In the following '**HTTP Administration Server Authentication**' panel, enter the following parameters:
  - \_\_\_ a. Select the check box for '**Create a User ID for IBM HTTP administration server authentication**'
  - \_\_\_ b. User ID : **websrvadmin**
  - \_\_\_ c. Password : **websrvadmin**
  - \_\_\_ d. Confirm Password : **websrvadmin**



- \_\_\_ 14. Click **Next**
- \_\_\_ 15. In the following 'Installation Summary' panel, review the HTTP Server installation summary information



- \_\_\_ 16. Click **Next** to continue with the installation

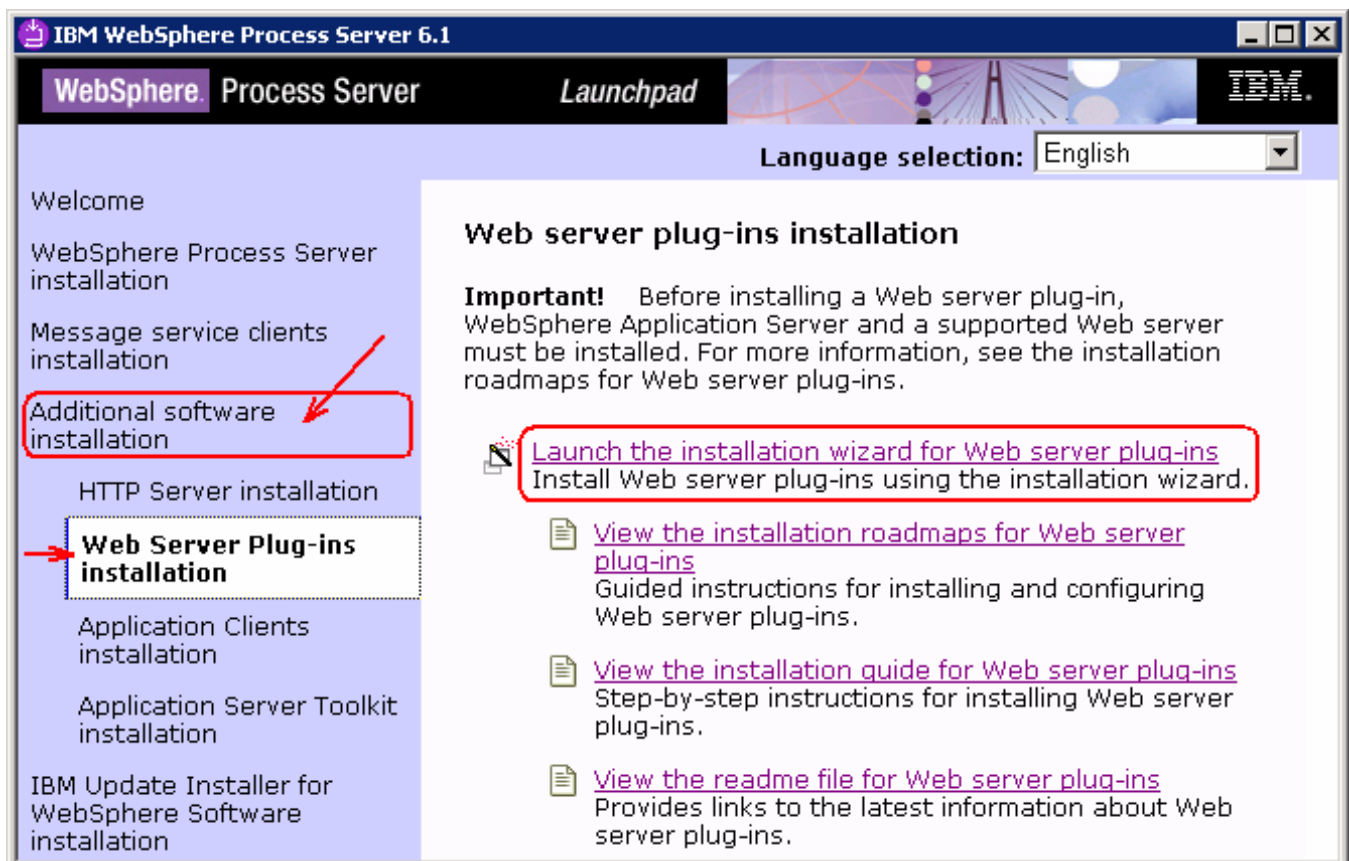


\_\_\_\_ 17. Click **Finish** once the installation is complete

## Part 5: Installing IBM HTTP Server V6.1 plug-in

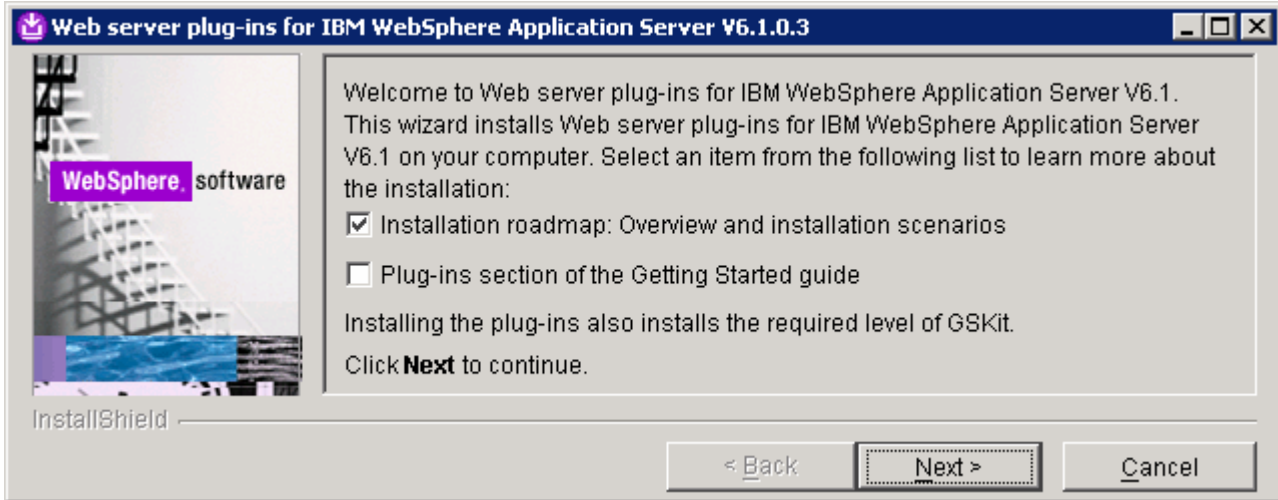
In this part of the lab, you will use the Web Server Plug-ins installation wizard to install the plug-in module, configure the Web server to communicate with the application server cluster, and create a Web server configuration definition in the deployment manager. In this lab scenario, you install the Web server plug-in local to the WebSphere Process Server, deployment manager installation.

- \_\_\_ 1. Double click **launchpad.exe** to launch the WebSphere Process Server, common launchpad
- \_\_\_ 2. On the welcome screen, click the '**Additional software installation**' link and then the '**Web Server Plug-ins installation**' link in the left pane. Now click the '**Launch the installation wizard for Web server plug-in**' link to the right, to launch the Web server plug-ins install shield wizard

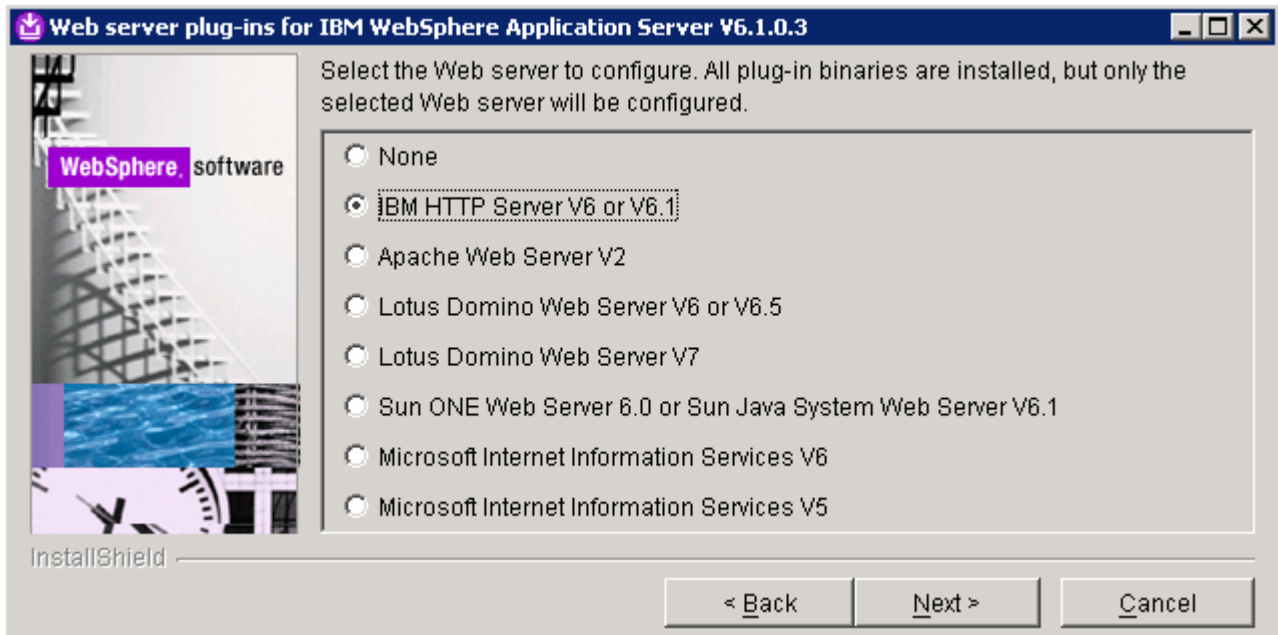


- \_\_\_ 3. The Web server plug-ins installation wizard is launched
- \_\_\_ 4. On the welcome screen, select the check box for '**Installation roadmap: Overview and installation scenarios**'.

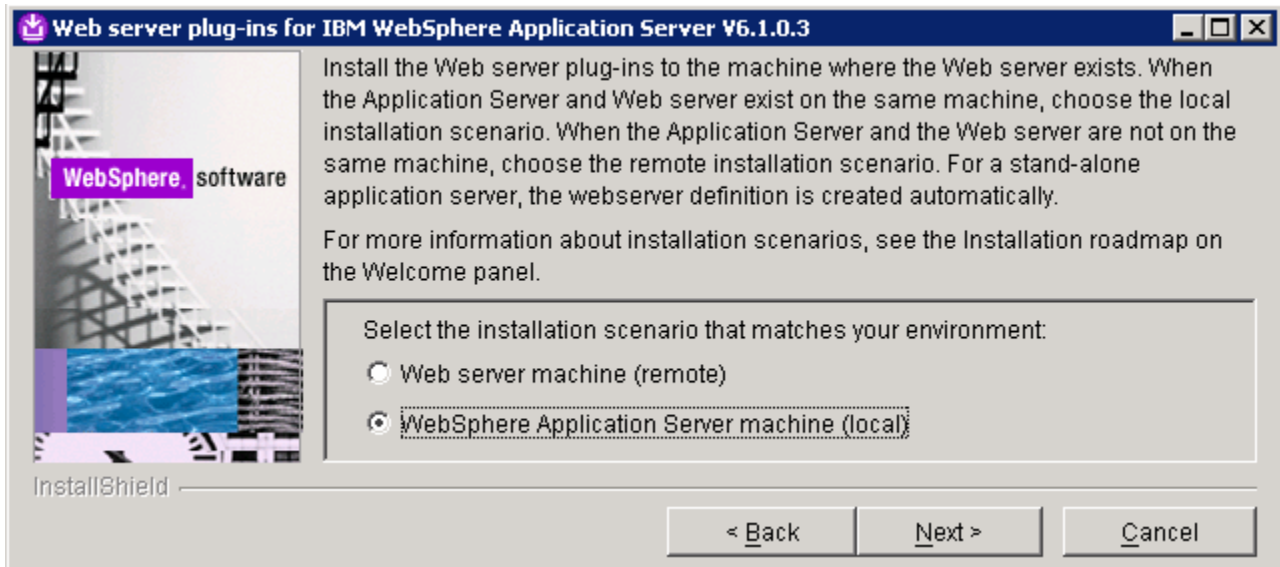




- \_\_\_ 5. Click **Next**. A default Web browser is launched with the installation roadmap and guides you through various installation scenarios
- \_\_\_ 6. In the following panel, read the license agreement. If you agree to the terms, select the radio button next to "I accept both the IBM and the non-IBM terms". Click **Next**
- \_\_\_ 7. In the following panel, review the system pre-requisite information. Click **Next**
- \_\_\_ 8. In the following panel, select the radio button for 'IBM HTTP Server V6 or V6.1'



- \_\_\_ 9. Click **Next**
- \_\_\_ 10. In the following panel, select the radio button for 'WebSphere Application Server machine (local)'

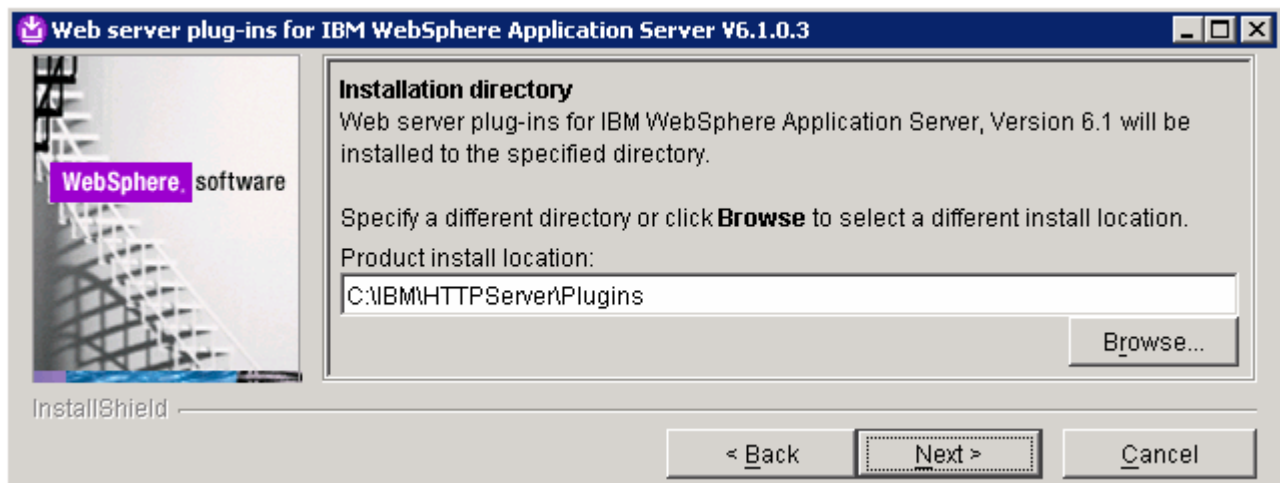


\_\_\_ 11. Click **Next**

\_\_\_ 12. In the following panel, click the **Browse** button to specify a different directory for '**Product install location**'

\_\_\_ a. Product install location : **<WEB\_SERVER\_HOME>\Plugins**

Ex: C:\IBM\HTTPServer\Plugins

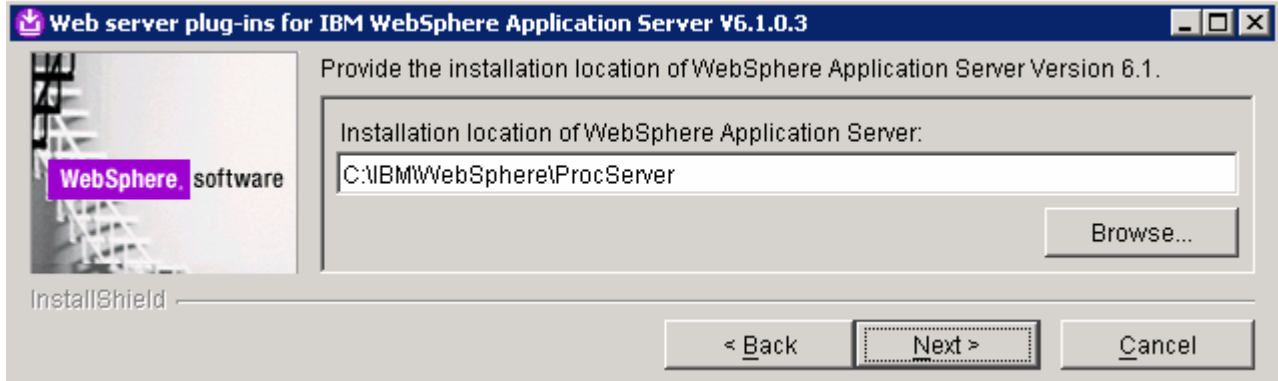


\_\_\_ 13. Click **Next**

\_\_\_ 14. In the following panel, click the **Browse** button to specify the '**Installation location of WebSphere Application Server**'

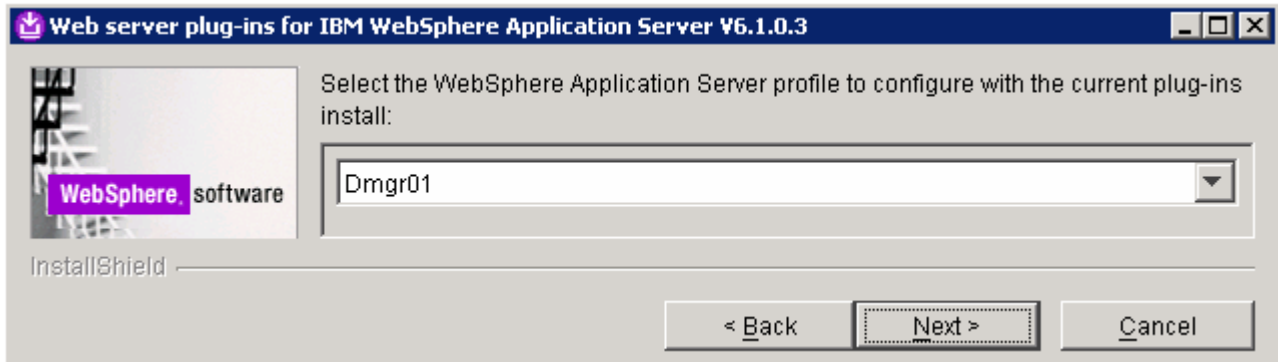
\_\_\_ a. Installation location of WebSphere Application Server : **<WPS\_HOME>**

Ex: C:\IBM\WebSphere\ProcServer



\_\_\_ 15. Click Next

\_\_\_ 16. In the following panel, select the deployment manager profile from the drop down list. In this lab scenario, the deployment manager profile is where the Web server plug-in is configured

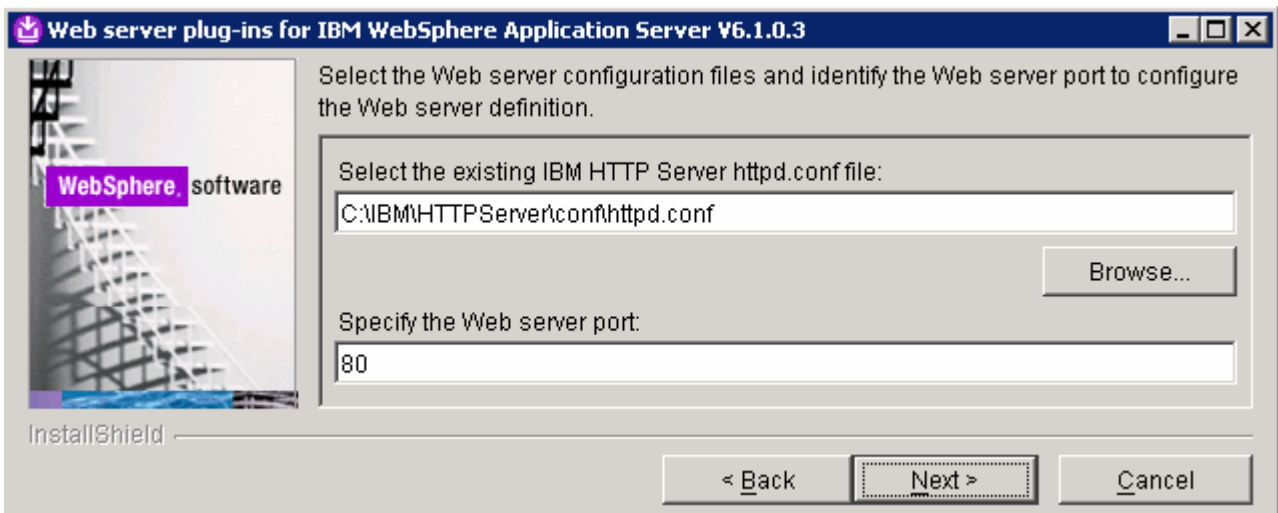


\_\_\_ 17. Click **Next**

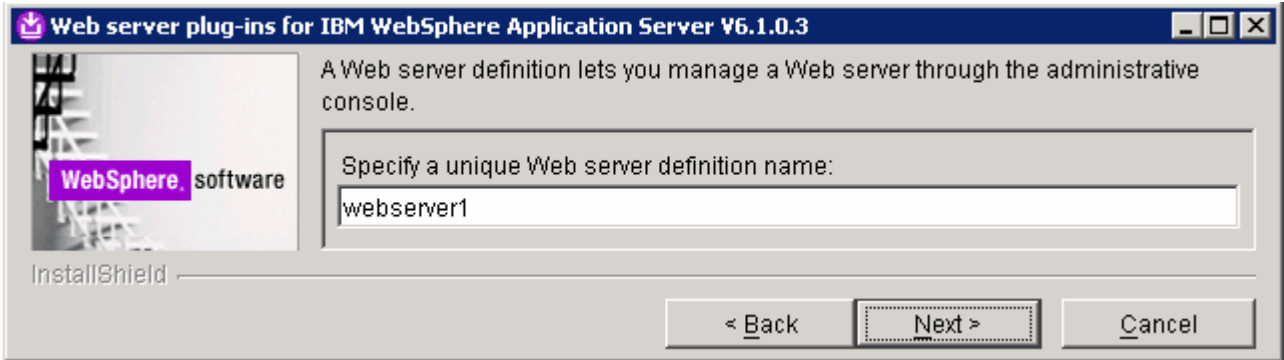
\_\_\_ 18. In the following panel, click the **Browse** button to locate the existing '**httpd.conf**' file and specify the Web server port number

\_\_\_ a. Existing HTTP Server httpd.conf file : **<WEB\_SERVER\_HOME>\conf\httpd.conf**

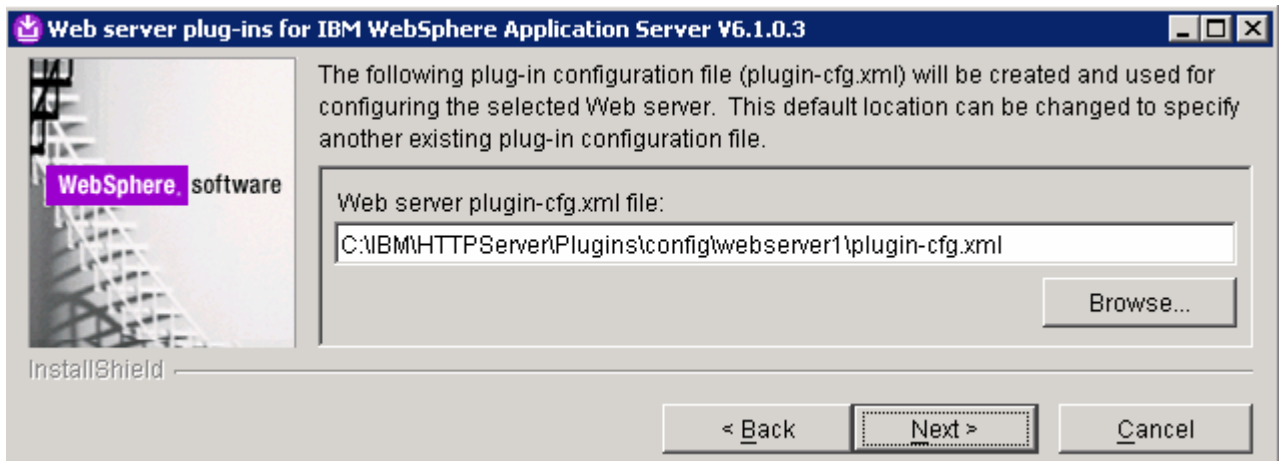
\_\_\_ b. Web server port : **80**



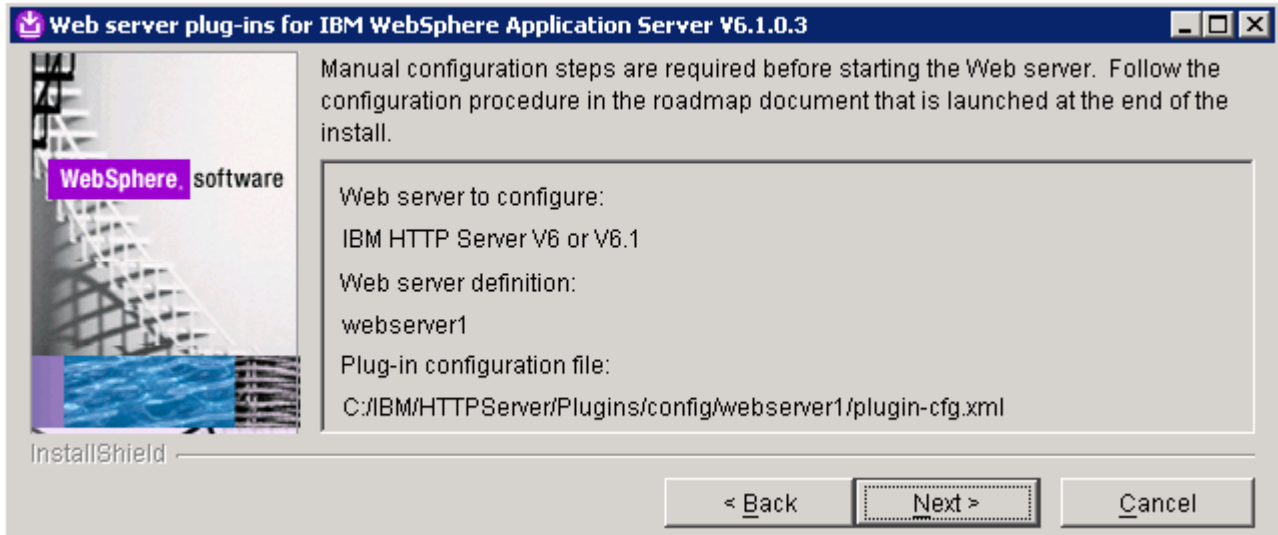
- \_\_\_ 19. Click **Next**
- \_\_\_ 20. In the following panel, specify a unique Web server definition name
  - \_\_\_ a. Web server definition name : **webserver1**



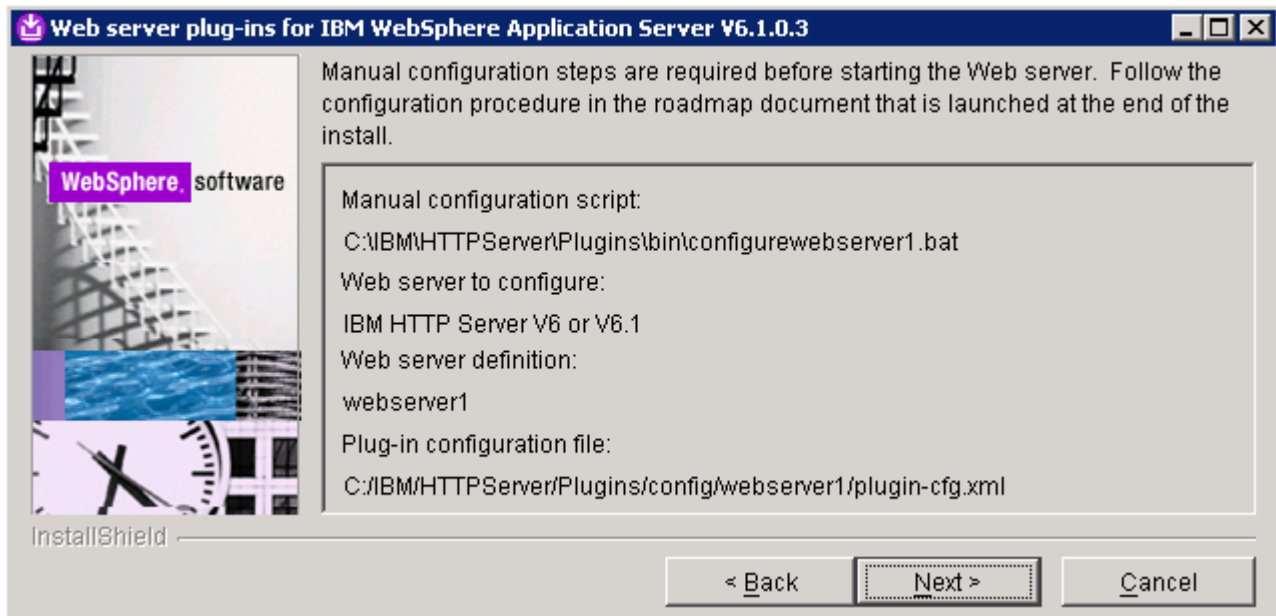
- \_\_\_ 21. Click **Next**
- \_\_\_ 22. In the following panel, accept the default plug-in configuration file location or click the **Browse** button to specify a different location
  - \_\_\_ a. <WEB\_SERVER\_HOME> \Plugins\config\webserver1\plugin-cfg.xml



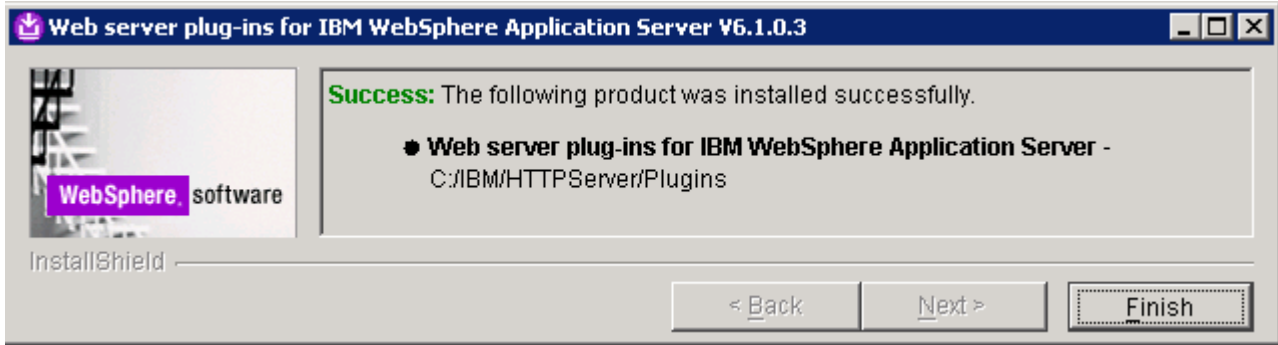
- \_\_\_ 23. Click **Next**
- \_\_\_ 24. Manual configuration steps are required before starting the Web server. Once the installation is complete, follow the configuration procedure from the roadmap document



- \_\_\_ 25. Click **Next**
- \_\_\_ 26. Review the Web server plug-in installation summary in the following panel and click **Next**. The IBM HTTP Server V6.1 plug-in installation progresses
- \_\_\_ 27. Once the installation is complete, follow the instructions from the following panel. You have to run a manual configuration script (**configurewebserver1.bat**) before starting the Web server



- \_\_\_ 28. Click **Next**. A default browser is launched with the roadmap document which instructs about the configuration procedure



\_\_\_ 29. Click the **Finish** button to exit the installation wizard

**Note:** The Web server definition is automatically created and configured during the installation of the plug-ins in a **local** Web server plug-in installation scenario. Follow the instructions below if your Web server is remote to the process server installation.

\_\_\_ 30. Create a Web server definition. You do not have to follow the instructions below if your webserver is local to the deployment manager

\_\_\_ a. Copy the Web server manual configuration script, '**configurewebserver1.bat**' located at **<WEB\_SERVER\_HOME>\Plugins\bin** and paste it to the following location:

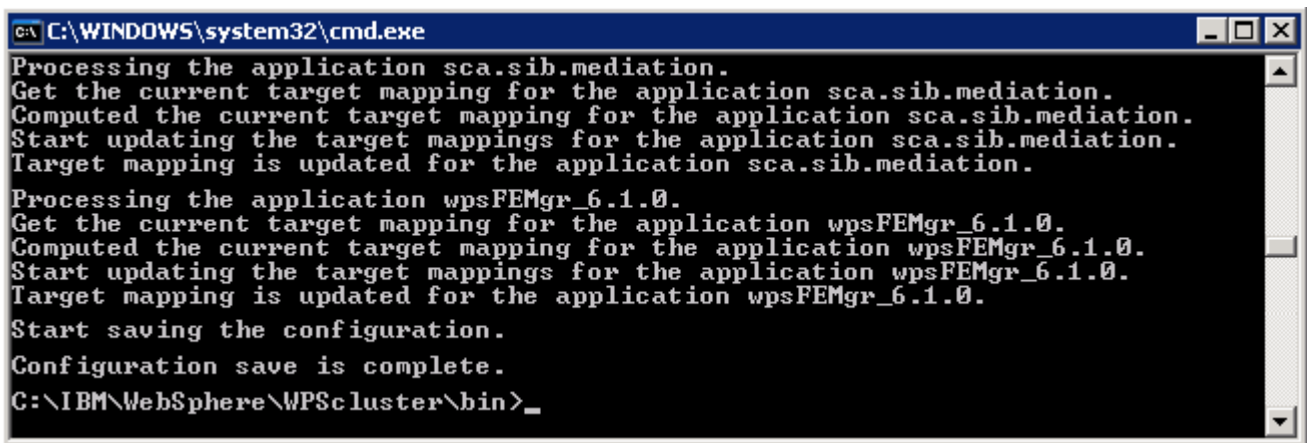
- **<WPS\_HOME>\bin**

\_\_\_ b. Ensure the WebSphere Process Server Deployment manager profile is started at this time

\_\_\_ c. Open a command window and change directory to **<WPS\_HOME>\bin**

\_\_\_ d. Run the '**configurewebserver1.bat**' script

\_\_\_ e. Enter user name and password when prompted



\_\_\_ f. Ensure the configuration is successful

\_\_\_ 31. Start the IBM HTTP Server

## Part 6: Install the test application to the cluster

In this part of the lab, you install a test application to the cluster environment and then access the test application's Web resource through the IBM HTTP Server and test for fail over.

- \_\_\_ 1. Install a test application
  - \_\_\_ a. Start the administrative console through the start menu **IBM WebSphere> WebSphere Process 6.1> Profiles> Dmgr01> Administrative Console**.
  - \_\_\_ b. Login in and review created nodes. Select **System Administration> Nodes**. There should be a deployment manager node and two managed nodes.

Select	Name	Version	Discovery Protocol	Status
<input type="checkbox"/>	<a href="#">dmgr01CellManager01</a>	Business Process Choreographer 6.1.0.0 ND 6.1.0.13	TCP	
<input type="checkbox"/>	<a href="#">custom01Node01</a>	Business Process Choreographer 6.1.0.0 ND 6.1.0.13	TCP	
<input type="checkbox"/>	<a href="#">custom02Node02</a>	Business Process Choreographer 6.1.0.0 ND 6.1.0.13	TCP	

Total 3

- \_\_\_ c. Select **Servers → Deployment Environments → default → Deployment Topology**. The deployment target should show a running status.

Configuration

**General Properties**

\* Deployment Environment:

\* Deployment Environment Pattern:

Description:

Deployment Environment Status:

Cluster	Cluster Name	Status
Application Deployment Target	default.AppTarget	

**Additional Properties**

- [Deployment Topology](#)
- [Deferred Configuration](#)

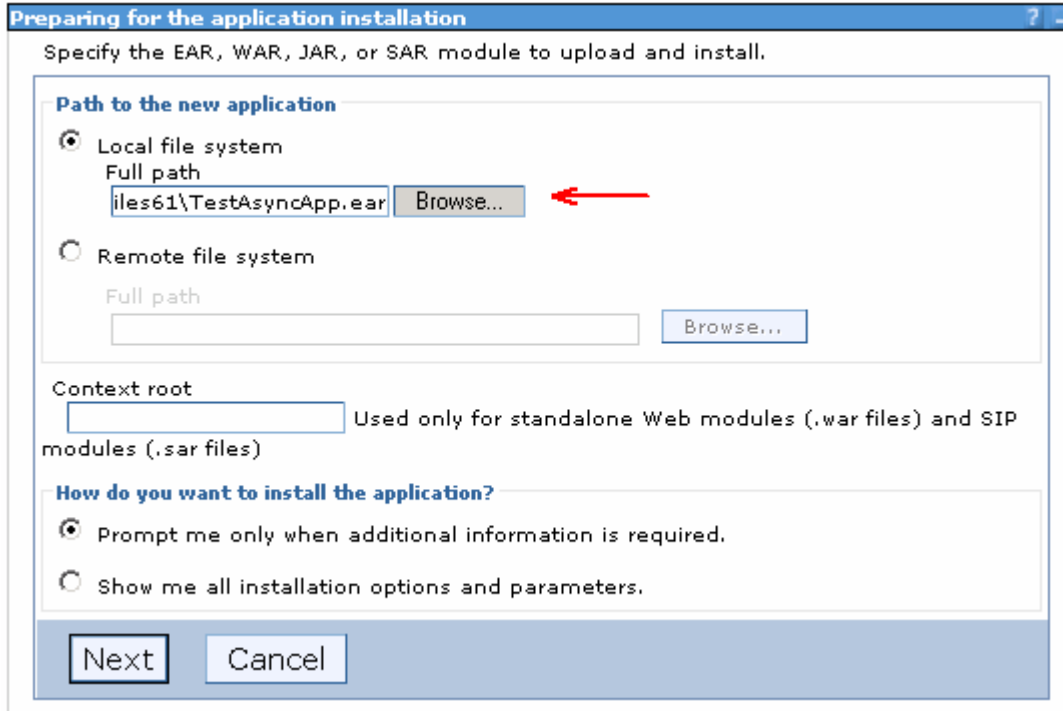
**Related Items**

- [Data Sources](#)
- [Authentication Aliases](#)

- \_\_\_ 2. Now, expand '**Applications**' in the left navigation pane, and click the '**Install New Application**' link

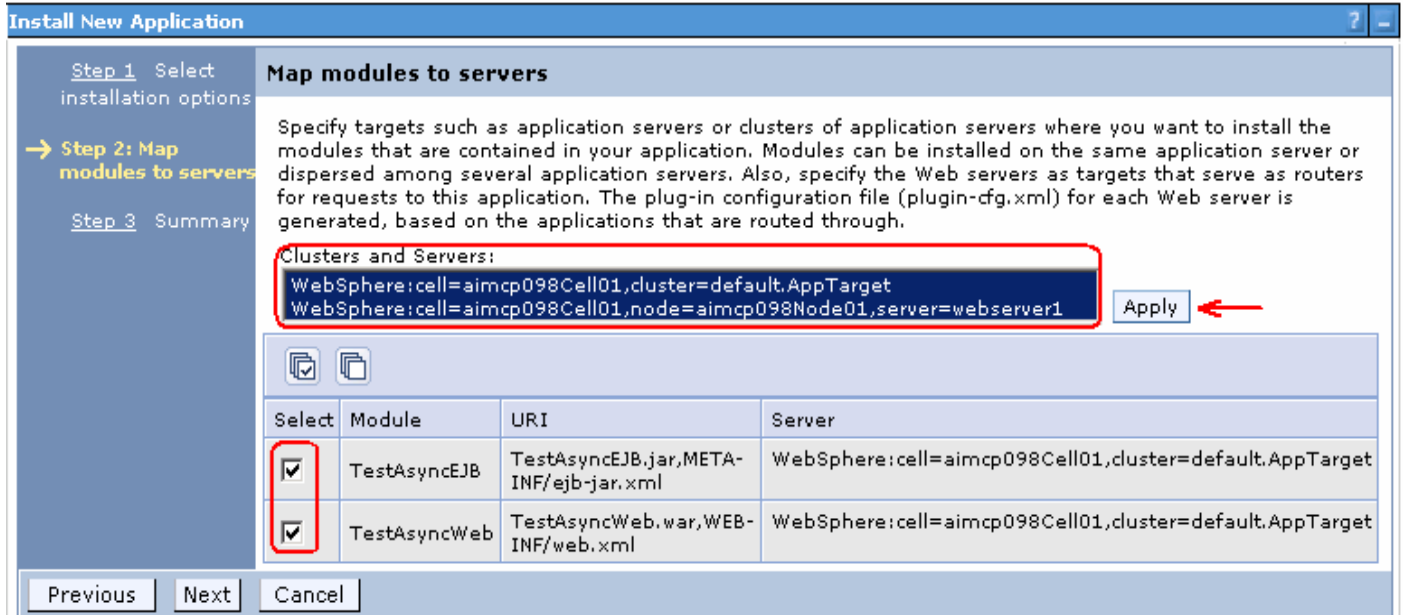


- \_\_\_ 3. In the following '**Preparing for the application installation**' panel, select the radio button for '**Local file system**' and click the **Browse** button to select the full path of the enterprise application residing on the local system. Accept the defaults for the remaining parameters

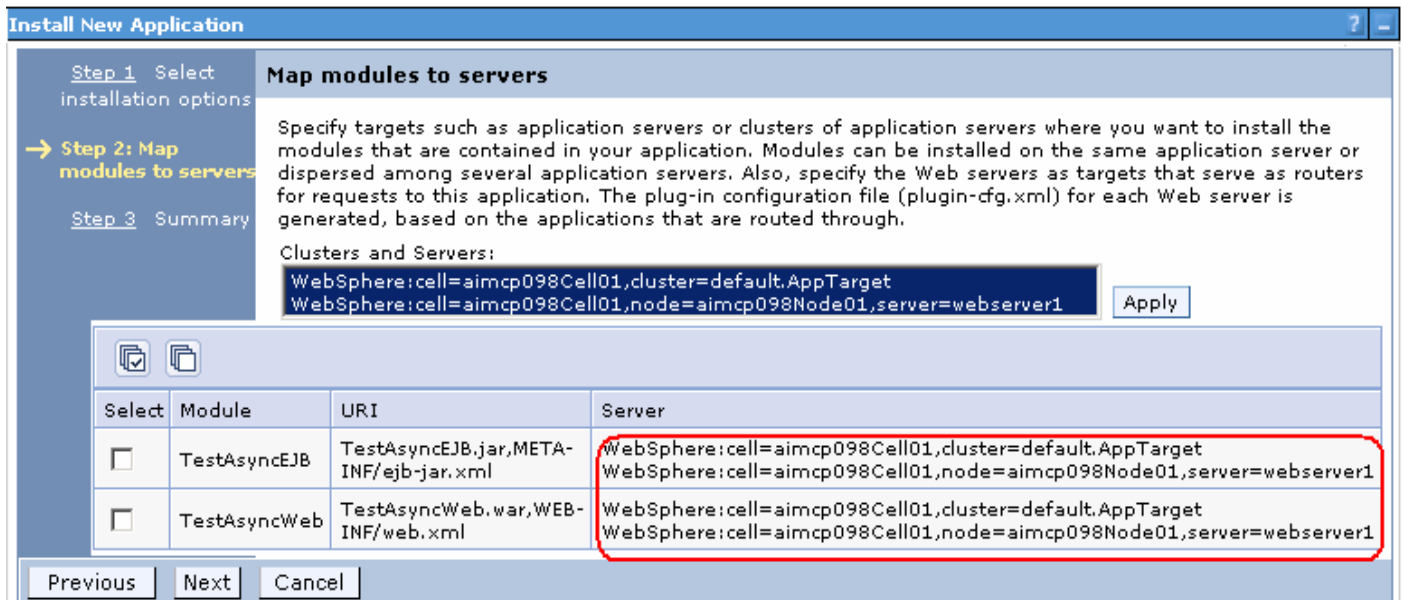


- \_\_\_ 4. Click **Next**
- \_\_\_ 5. In the following '**Step 1: Select installation options**' panel, accept the defaults and click **Next**
- \_\_\_ 6. In the following '**Step 2: Map modules to servers**' panel, select the check boxes for the Web and ejb modules and then select the cluster and Web server as shown below:





7. Click **Apply**. Ensure that both the Web and ejb modules are mapped to the cluster and Web server as shown below:



**Note:** The plug-in configuration (plugin-cfg.xml) file for each Web server is generated based on the application modules which are mapped to it, therefore no Web servers will route request to an application if is not mapped to the Web server.

8. Click **Next**
9. In the following '**Step 3: Summary**' review the application installation summary and click **Finish**
10. Ensure the application is installed successfully as shown below:

Application TestAsyncApp installed successfully.

To start the application, first save changes to the master configuration.

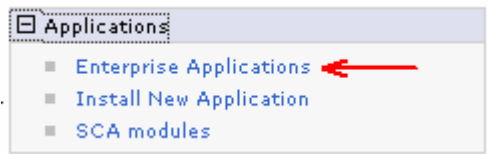
Changes have been made to your local configuration. You can:

- [Save](#) directly to the master configuration. ←
- [Review](#) changes before saving or discarding.

\_\_\_ 11. Click the **Save** link to save to the master configuration

\_\_\_ 12. Start the Test Application

\_\_\_ a. In the left navigation pane of the administrative console, expand '**Applications**' and click the '**Enterprise Applications**' link



\_\_\_ b. In the following '**Enterprise Applications**' panel, you must the test application listed marked with a stop status

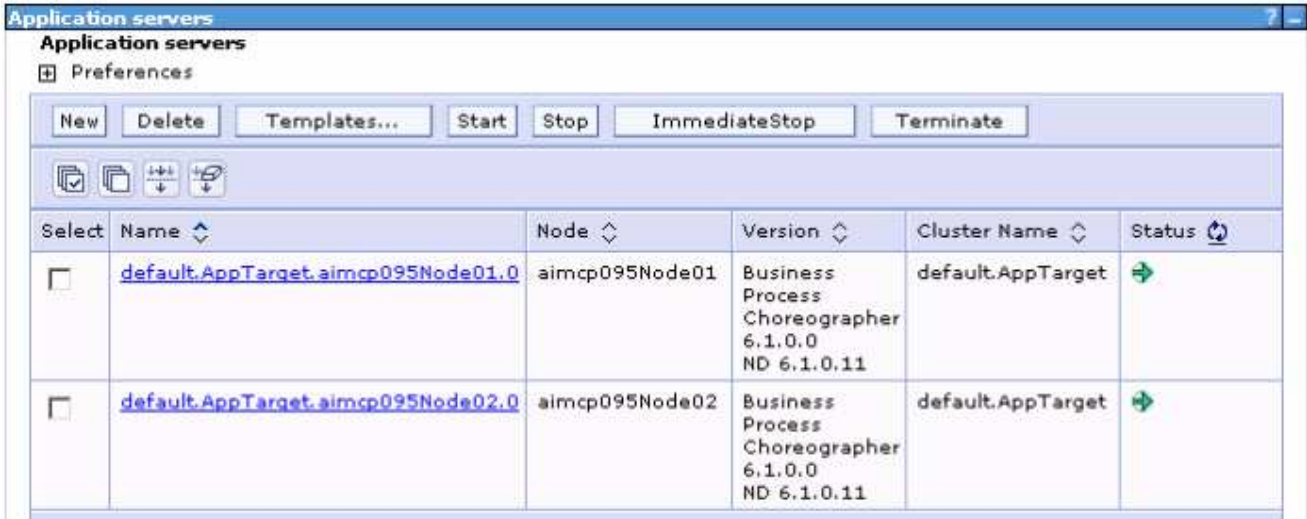
Select	Name	Application Status
<input type="checkbox"/>	<a href="#">AppScheduler</a>	➔
<input type="checkbox"/>	<a href="#">BPCECollector default.AppTarget</a>	➔
<input type="checkbox"/>	<a href="#">BPCEXplorer default.AppTarget bpc</a>	➔
<input type="checkbox"/>	<a href="#">BPcObserver default.AppTarget</a>	➔
<input type="checkbox"/>	<a href="#">BPEContainer default.AppTarget</a>	➔
<input type="checkbox"/>	<a href="#">BusinessRulesManager</a>	➔
<input type="checkbox"/>	<a href="#">RemoteAL</a>	➔
<input type="checkbox"/>	<a href="#">TaskContainer default.AppTarget</a>	➔
<input checked="" type="checkbox"/>	<a href="#">TestAsyncApp</a>	✖
<input type="checkbox"/>	<a href="#">persistentLkMqr</a>	➔
<input type="checkbox"/>	<a href="#">sca.sib.mediation</a>	➔
<input type="checkbox"/>	<a href="#">wpsFEMqr 6.1.0</a>	➔
Total 12		

\_\_\_ c. Select the check box for '**TestAsyncApp**' and click the '**Start**' button over the top

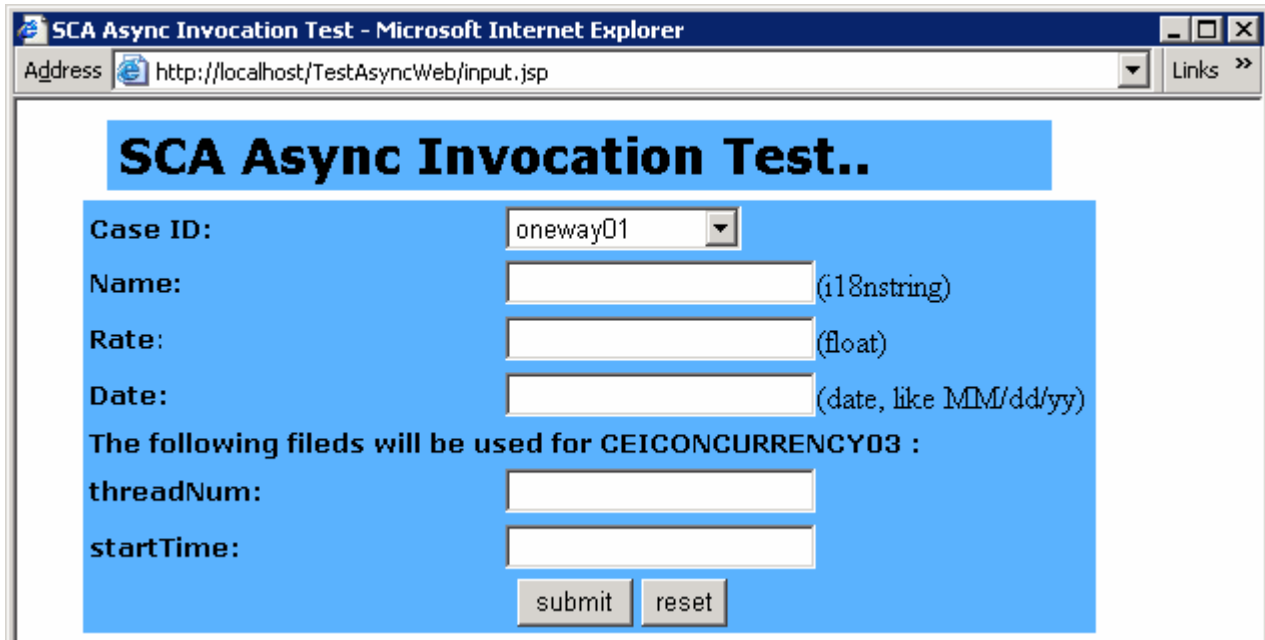
\_\_\_ d. Ensure the application is started successfully

## Part 7: Test the application for fail over

- \_\_\_ 1. Ensure both the managed nodes are running
- \_\_\_ 2. In the left navigation pane of the administrative console, expand '**Servers**' and click '**Application Servers**' link. Ensure the managed nodes are successfully running. Alternatively, you can click '**Clusters**' and select the simple cluster that was configured and click the '**Start**' button



- \_\_\_ 3. Open a Web browser and enter the following URL to access the Web module of the test application:
  - \_\_\_ a. URL: <http://localhost/TestAsyncWeb/input.jsp>
- \_\_\_ 4. If WebSphere Process Server security is enabled, a login page is displayed. Enter user name and password. Click the **Login** button.
- \_\_\_ 5. You should see the following screen:



\_\_\_ 6. Enter the required information

SCA Async Invocation Test - Microsoft Internet Explorer  
Address <http://localhost/TestAsyncWeb/input.jsp> Links >>

## SCA Async Invocation Test..

Case ID: oneway01  
Name: NoBody (18string)  
Rate: 100.01 (float)  
Date: 11/1/2007 (date, like MM/dd/yy)  
The following fields will be used for CEICONCURRENCY03 :  
threadNum: 1  
startTime: 11.20  
submit reset

\_\_\_ 7. Click **Submit**. The resultant screen is shown below:

index.jsp - Microsoft Internet Explorer  
Address <http://localhost:9080/TestAsyncWeb/index.jsp?caseid=oneway01&na> Go Links >>

## SCA Async Invocation JService Test

Test oneway01 with Monitor Component  
float fRate = 100.01  
Success

\_\_\_ 8. Now review the Web server plug-in log file located at

<WEBSERVER\_HOME>\Plugins\logs\webserver1\http\_plugin.log

\_\_\_ a. Ex : C:\IBM\HTTPServer\Plugins\logs\webserver1\http\_plugin.log

\_\_\_ b. Ensure that there is no failure message pointing to a particular managed node

\_\_\_ 9. Now stop one of the managed nodes to test the application fail over

\_\_\_ a. In the administrative console, expand '**Servers**' and click '**Application Servers**' link in the left navigation pane

\_\_\_ b. Select the check box next to one of the managed nodes and click the '**Stop**' button

**Application servers**

Use this page to view a list of the application servers in your environment and the status of each of these servers. You can also use this page to change the status of a specific application server.

☏ Preferences

New Delete Templates... Start **Stop** ImmediateStop Terminate

Select	Name	Node	Version	Cluster Name	Status
<input checked="" type="checkbox"/>	<a href="#">default.AppTarget.aimcp095Node01.0</a>	aimcp095Node01	Business Process Choreographer 6.1.0.0 ND 6.1.0.11	default.AppTarget	➔
<input type="checkbox"/>	<a href="#">default.AppTarget.aimcp095Node02.0</a>	aimcp095Node02	Business Process Choreographer 6.1.0.0 ND 6.1.0.11	default.AppTarget	➔

Total 2

\_\_\_ c. In the following panel, click **OK** to confirm

\_\_\_ d. Ensure the managed node you selected is stopped

\_\_\_ 10. Now open a Web browser again and enter the following URL to access the Web module of the test application:

\_\_\_ a. URL: **http://localhost/TestAsyncWeb/input.jsp**

\_\_\_ 11. Review the Web server plug-in log file. You might see failure messages saying that the application is not accessible as a managed node or the application is down.

*websphereExecute: Failed to read from a new stream; App Server may have gone down during read*

*[Thu Nov 01 10:23:31 2007] 00001eb8 00001114 - ERROR: ws\_server: serverSetFailoverStatus: Marking aimcp095Node01\_default.AppTarget.<NODE\_NAME>.0 down*

\_\_\_ 12. Continue test the application for fail over by stopping and starting the managed nodes alternatively

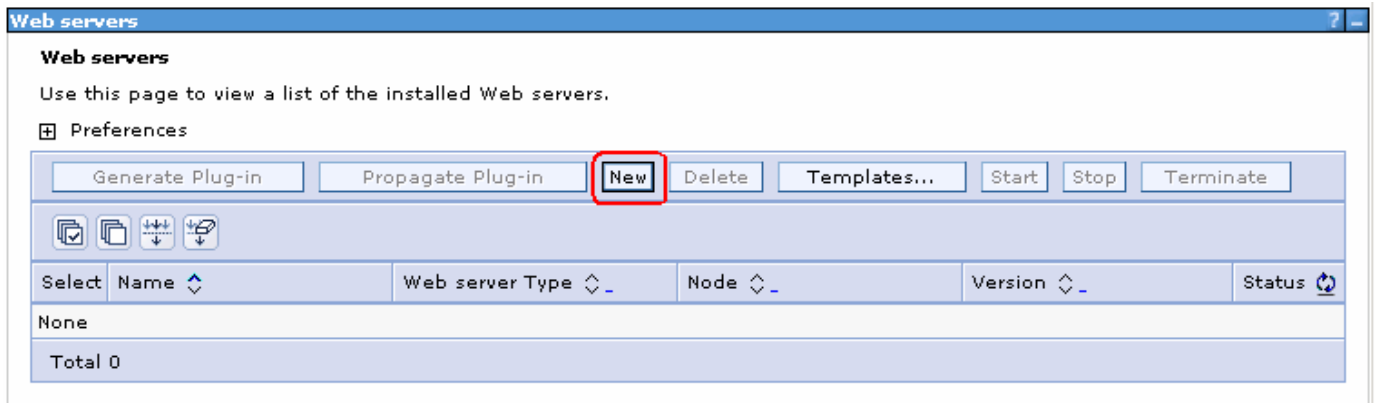
## Appendix 1: Configure a local Web server with deployment manager

To manually configure the Web server definition with the deployment manager profile, follow the instructions below:

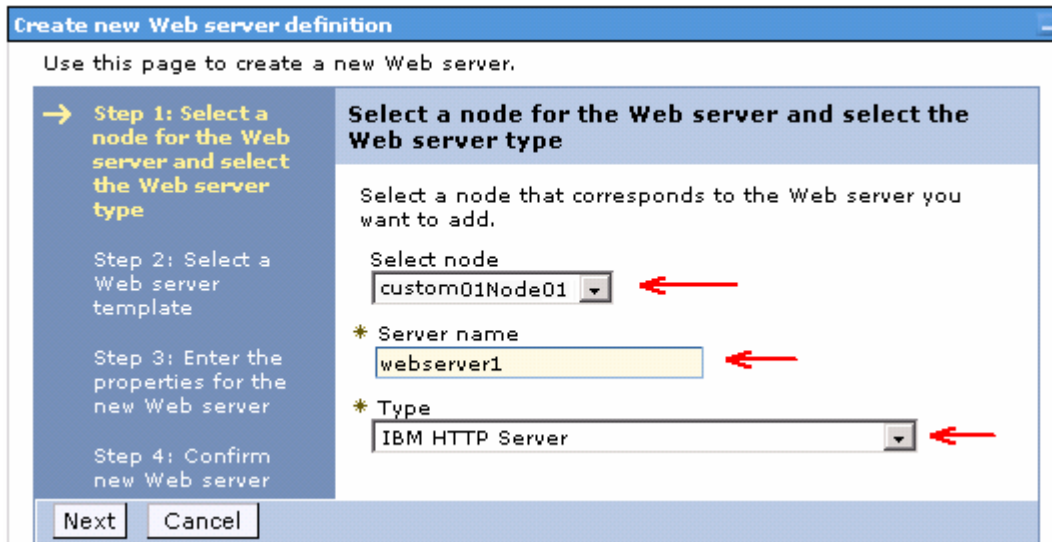
- \_\_\_ 1. Launch the deployment manager administrative console, enter user name and password and login to the administrative console
- \_\_\_ 2. In the left navigation pane of the administrative console, expand '**Servers**' and click the '**Web Servers**' link



- \_\_\_ 3. In the following '**Web servers**' panel, click the **New** button to create a new Web server definition

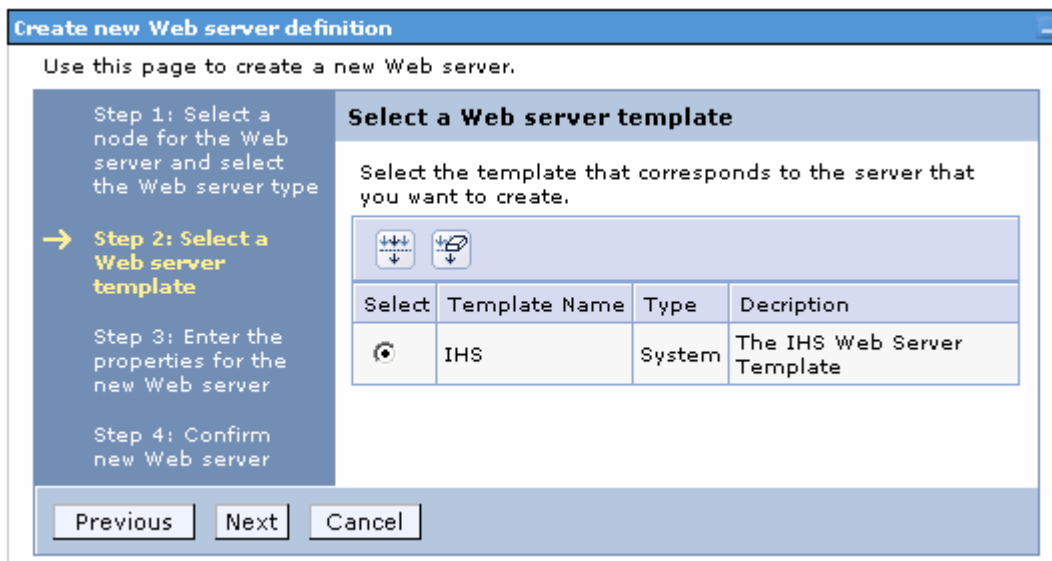


- \_\_\_ 4. In the following '**Create a new Web server definition**' panel, enter the following parameters:
  - \_\_\_ a. Select a node : <available managed node>
  - \_\_\_ b. Server name : **webserver1** (Must match the Web server definition name you had defined during the '**IBM HTTP Server Web Server Plug-in for WebSphere Application Server**')
  - \_\_\_ c. Type : **IBM HTTP Server**



\_\_\_ 5. Click **Next**

\_\_\_ 6. In the following “**Select a Web server template**” select the ‘**IBM HTTP Server (IHS)**’ template



\_\_\_ 7. Click **Next**

\_\_\_ 8. In the following ‘**Enter the properties for the new Web server**’ panel, enter the following parameters:

- \_\_\_ a. Port : **80** (The port number the Web server is running using)
- \_\_\_ b. Web Server Installation location : **C:\IBM\HTTPServer** (must match the local Web server installation location)
- \_\_\_ c. Service name : **IBMHTTPServer6.1**
- \_\_\_ d. Plug-in installation location : **C:\IBM\HTTPServer\Plugins** (Must match the Web server plug-in installation location)

- \_\_\_ e. Application mapping to the Web server : Select **All** from the drop down list

- \_\_\_ 9. Click **Next**
- \_\_\_ 10. In the following panel, review the summary of actions
- \_\_\_ 11. Click **Finish**. You will be prompted to save the changes to the master configuration

- \_\_\_ 12. Click the **Save** link
- \_\_\_ 13. The new Web server definition is created and started show a start status. If the status is in a stop mode, start the IBM HTTP Server. You can use the Windows services utility to start the Web server



**Web servers**

Use this page to view a list of the installed Web servers.

⊕ Preferences

Generate Plug-in Propagate Plug-in **New** Delete Templates... Start Stop Terminate

⊞ ⊞ ⊞ ⊞

Select	Name	Web server Type	Node	Version	Status
<input type="checkbox"/>	<a href="#">webserv1</a>	IBM HTTP Server	aimcp095Node01	Business Process Choreographer 6.1.0.0 ND 6.1.0.11	

Total 1

\_\_\_ 14. Generate the Plug-in configuration file

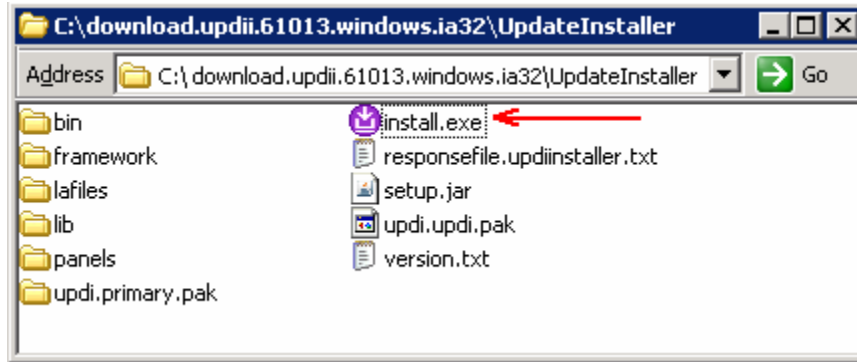
- \_\_\_ a. Select the check box next to '**webserv1**' and click the '**Generate Plug-in**' button
- \_\_\_ b. Locate the plugin-cfg.xml file at **<WEBSERVER\_HOME>\Plugins\config\webserv1**
  - Ex : **C:\IBMHTTPServer\Plugins\config\webserv1**
- \_\_\_ c. Restart the Web server

## Appendix 2: Installing the Update Installer for WebSphere software

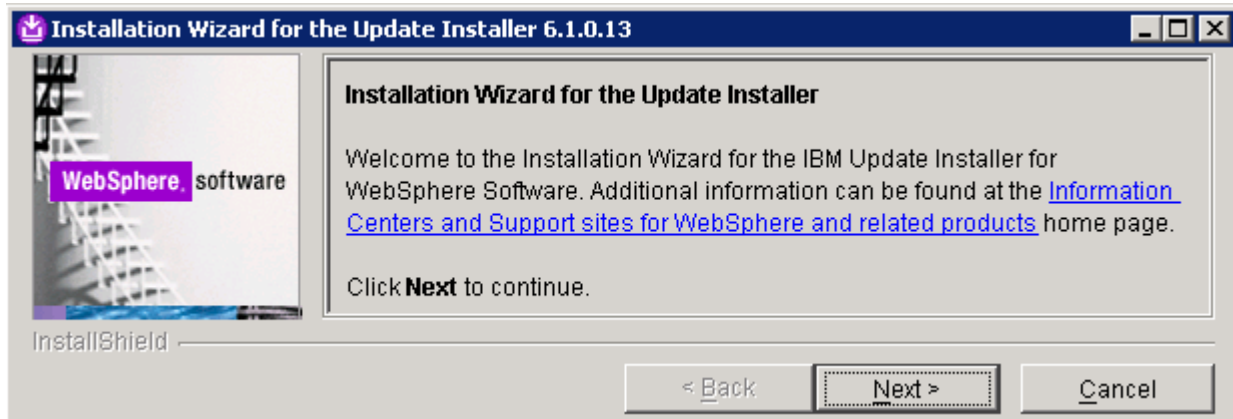
The Update Installer for WebSphere Software has a new installation program for Version 6.1, Installation Wizard for the Update Installer. The Update Installer now uses the Common Install Engine for WebSphere Software.

Obtain the update installer archive; **download.updii.61013.windows.ia32.zip** and extract it.

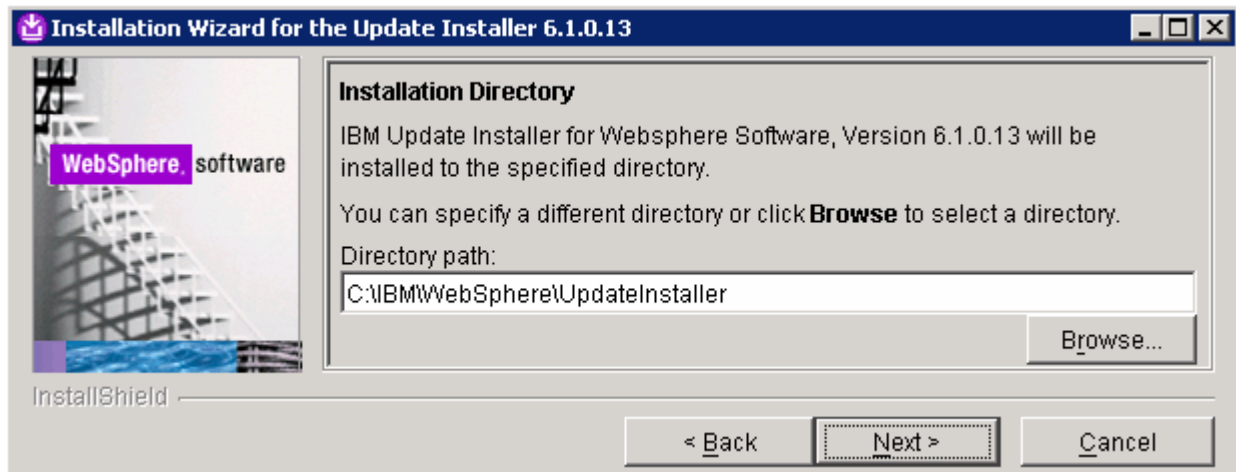
1. To install the Update Installer, navigate to the directory **UpdateInstaller** directory and double click **install.exe** to launch the installer



2. Read the instruction on the Welcome screen



3. Click **Next**
4. In the following panel, read the license agreement and select the radio button next to **I accept both the IBM and non-IBM terms** and click **Next**
5. The installation wizard runs the system prerequisite check
6. Click **Next**
7. Click the **Browse** button to set the installation path to **C:\IBM\WebSphere\UpdateInstaller**



- \_\_\_ 8. Click **Next**. In the following panel, review the installation summary
- \_\_\_ 9. Click **Next** to continue with the installation
- \_\_\_ 10. Once the installation is complete, ensure the check box next to '**Launch IBM Update Installer for WebSphere Software on exit**' if you want to do the update task at this time or else you can always launch the Update Installer from start menu

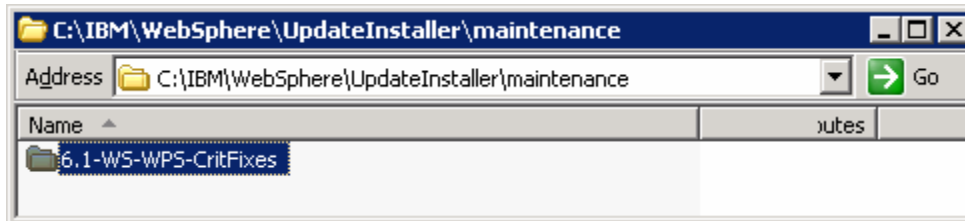


- \_\_\_ 11. Click **Finish**. The IBM Update Installer is launched

## →Updating the WebSphere Process Server V6.1

Update the WebSphere Process Server with the patches. It is a best practice to update the WebSphere Process Server installation with the patches before creating any profiles. This is done using the UpdateInstaller tool.

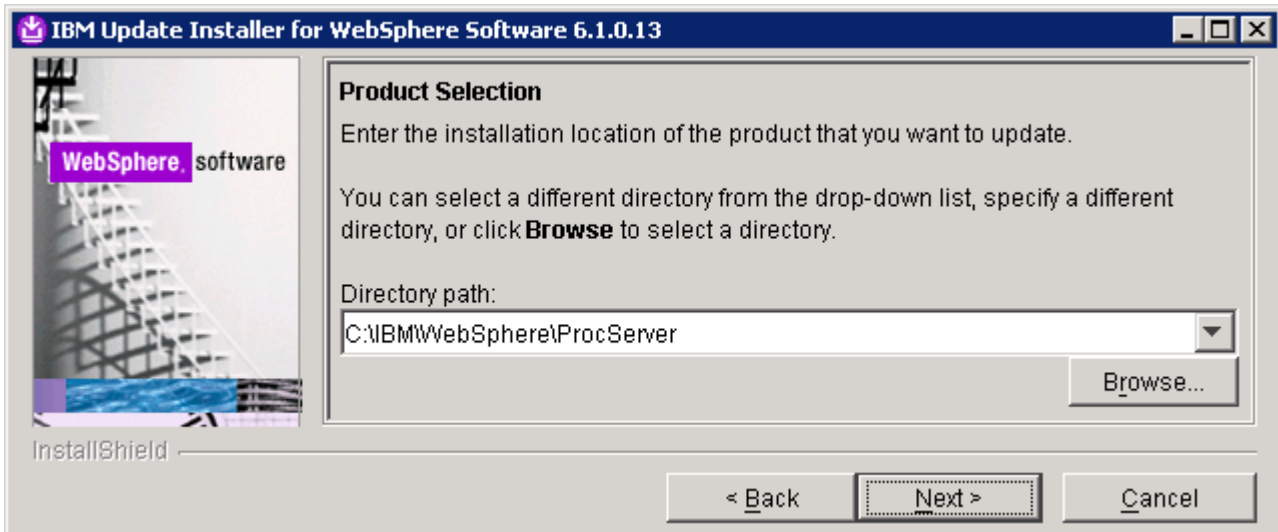
- \_\_\_ 1. Obtain and copy the WebSphere Process Server V6.1 patches to the **maintenance** directory located at **C:\IBM\WebSphere\UpdateInstaller**, that is the Update Installer installation location



- \_\_\_ 2. Launch the WebSphere Application Server update installer from the start menu
- \_\_\_ 3. Read the instructions carefully on the Welcome page

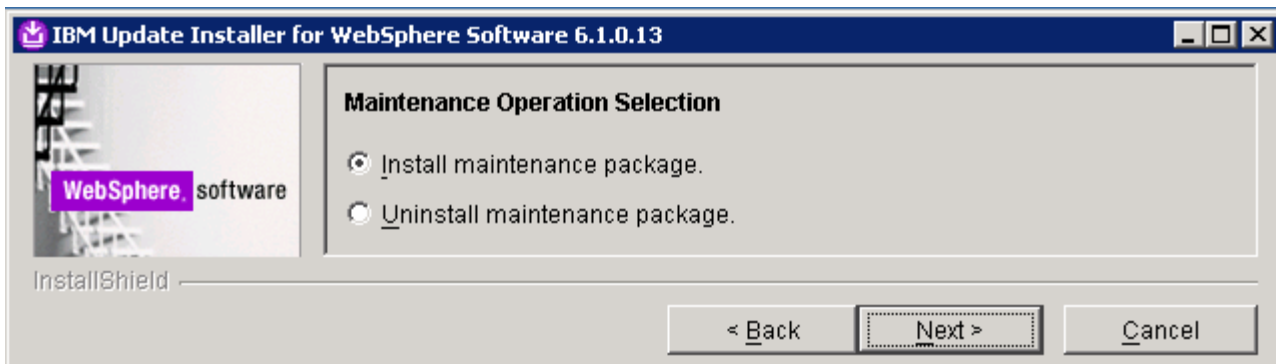


- \_\_\_ 4. In the following panel, ensure the WebSphere Process Server V6.1 installation root is correct
- \_\_\_ 5. Click **Next**
- \_\_\_ 6. In the following panel, click the **Browse** button to specify the '**Directory Path**' of the WebSphere Process Server installation



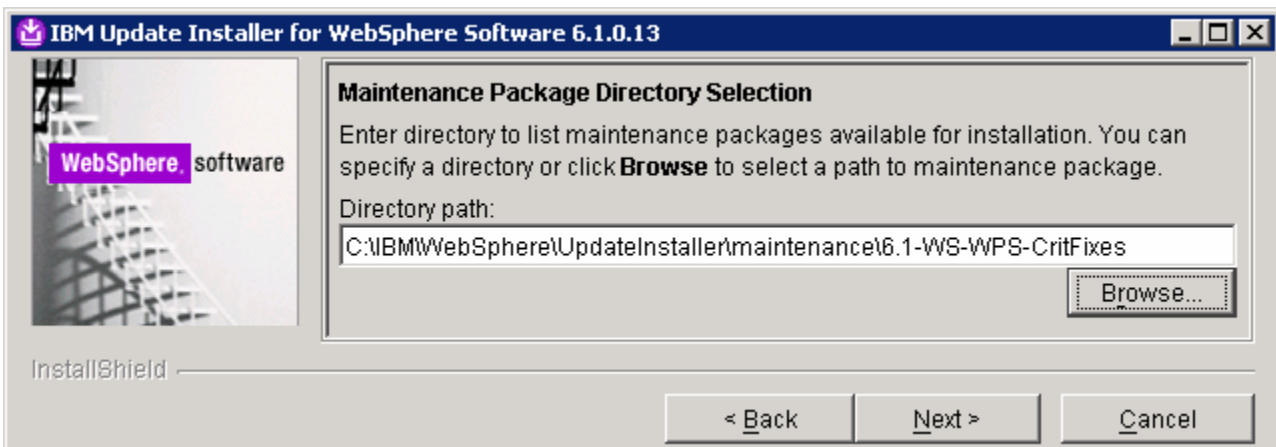
\_\_\_ 7. Click **Next**

\_\_\_ 8. In the following panel, select the radio button for '**Install maintenance package**'



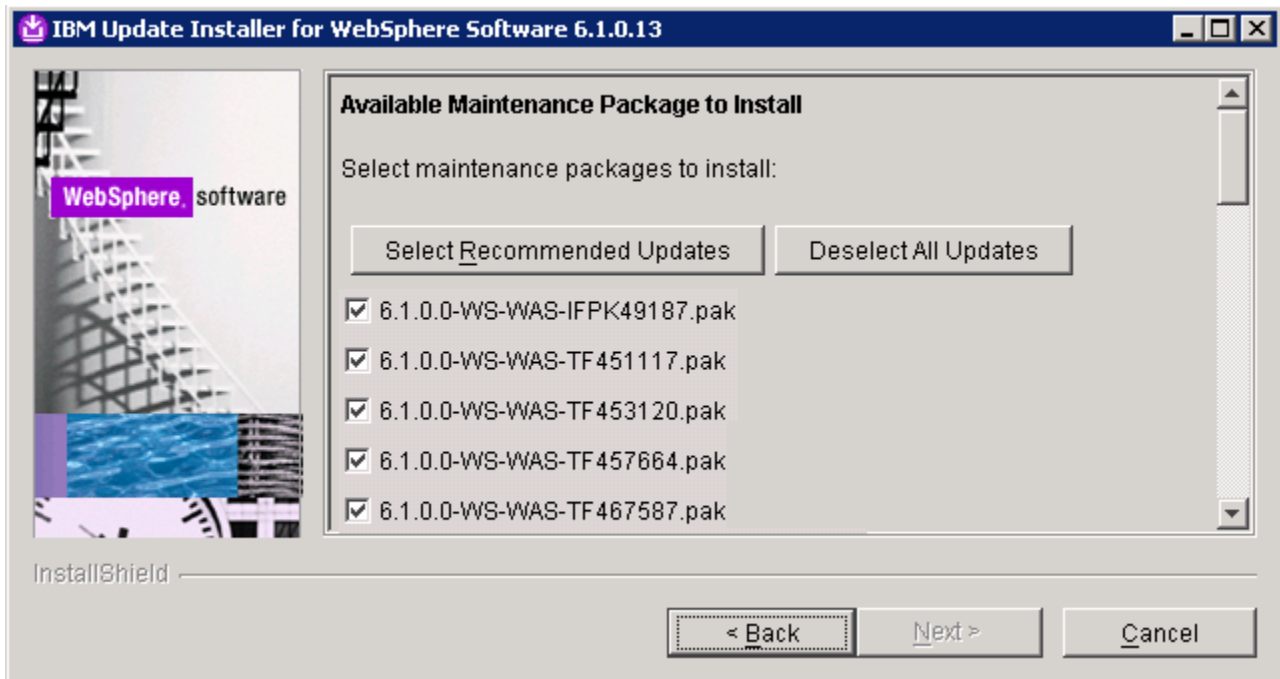
\_\_\_ 9. Click **Next**

\_\_\_ 10. In the following panel, click the **Browse** button to select the maintenance packages directory



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

\_\_\_ 12. In the following panel, select the check boxes next to **all the interim fixes listed**



\_\_\_ 13. Click **Next**

\_\_\_ 14. In the following panel, review the installation summary

\_\_\_ 15. Click **Finish** when the installation is complete

## What you did in this exercise

In this lab exercise you created a single clustered network deployment environment to support failover and workload distribution. To complete this lab you went through the following steps:

1. Installed the WebSphere Process Server.
2. Installed the required iFixes.
3. Created a deployment manager profile
4. Created a single cluster with two custom node profiles
5. Installed a Web server
6. Installed and configured a Web server plug-in module with the cluster environment
7. Installed a test application
8. Tested the failover capability of the network deployment environment.

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