IBM WEBSPHERE 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></wps_home>	C:\IBM\WebSphere\ProcServer	
<dmgr_profile_home></dmgr_profile_home>	<wps_home>\profiles\Dmgr01</wps_home>	
<custom01_profile_home></custom01_profile_home>	<wps_home>\profiles\Custom01</wps_home>	
<custom02_profile_home></custom02_profile_home>	<wps_home>\profiles\Custom02</wps_home>	
<web_server_home></web_server_home>	C:\IBM\HTTPServer	
<http_plugin_home></http_plugin_home>	<web_server_home>\Plugins</web_server_home>	

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:

- 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

🎒 IBM WebSphere Process Server 🗉	5.1 _ 🗆 🗙
WebSphere. Process Server	Launchpad
	Language selection: English
Welcome	
WebSphere Process Server installation <	WebSphere Process Server for Multiplatforms installation
Message service clients	Launch the installation wizard for WebSphere Process Server
Additional software installation	for Multiplatforms Install WebSphere Process Server for Multiplatforms using the installation wizard.
IBM Update Installer for WebSphere Software installation	NOTE: While installing from CD-ROM, the initialization of the installer may take a considerable amount of time. Please do not click on this link again as doing so may cause the
IBM Installation Factory for WebSphere Process Server	initialization of installer to fail.
IBM WebSphere Process Server Help System installation	Open the information center Complete technical product documentation available online, in PDF book format, or as Eclipse document plug- ins, which you can download and install on a local system.
IBM Support Assistant installation	Read product overview and installation information
Exit	Overview material and step-by-step instructions for installing the product, provided in PDF book format for

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

	WebSphere, software	This wizard installs IBM WebSphere Process Server 6.1.0.0 on your comp For more information, see the <u>information center</u> . Click Next to continue.
--	---------------------	---

- ____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'

-	WebSphere Process Server Installation Type Selection
	Select the type of installation that best suits your needs.
WebSphere software	Installation Types:
1 den	Typical Installation
	Deployment Environment Installation
	Client Installation
	Description This is a full installation of WebSphere Process Server that allows you to define an initial WebSphere Process Server environment of one stand-alone server, deployment manager, or custom profile. Alternatively, it allows you to run the Profile Management Tool in order to create your environment.
stallShield	< Back Next > Cancel

____9. Click Next

_____ 10. In the following 'Feature Selection' panel, accept the defaults

t IBM WebSphere Process Server features to install. See the information r for descriptions of the features. Isiness Rule Beans (deprecated)
isiness Rule Beans (deprecated)
tended Messaging Service(deprecated)
ebSphere Process Server samples
e samples include both source code files and integrated enterprise olications that demonstrate some of the latest Java (TM) 2 Platform, terprise Edition (J2EE) and WebSphere technologies. The Samples are ommended for installation to learning and demonstration environment ch as development environments. However, they are not recommended installation to production server environments.

- ____ 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

	Installation Root Directory for WebSphere Process Server
WebSphere, software	WebSphere Process Server will be installed to the specified directory. You can specify a different directory or click Browse to select a directory.
	Note: The Windows operating system limits the length of a fully qualified path to 256 characters. A long path name for the installation root directory makes it more likely that this limit will be exceeded when files are created during normal product use. Keen the name of the installation root directory as short as
	possible. Product installation location:
	Product installation location: C:\IBM\VebSphere\ProcServer
	Product installation location: C:\IBM\WebSphere\ProcServer Browse

____ 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.

	websphere Process Server Environments
WebSphere, software	Select the type of WebSphere Process Server environment to create during installation. Although only one environment type can be chosen, additional profiles can be created after installation using the Profile Management Tool.
-Nape-	Stand-alone server
	Deployment manager
	Custom
	None
	Description WebSphere Process Server requires at least one profile to be functional. Select this option only if one or more profiles will be created using the Profile Management Tool after installation.
a deal 10 million a fail	

- _____15. Click Next
- _____16. Click **Yes** over the warning dialog

Warning	×
	WebSphere Process Server requires at least one profile to be functional. Are you sure you want to proceed without creating a profile?

_____ 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**'

Welcome to the Profile Management to	loc
Important information for Version 6.1	
This wizard creates run-time environments that are rel to have a functional installation.	ferred to as <i>profiles</i> . At least one profile must exist
An initial profile is created during the installation proce each contain a set of commands, configuration files, lo that defines a single application server environment. See the online information center for more information	ess. Use this wizard to create additional profiles that og files, deployable applications and other informati n about the Profile Management tool or about settin
up typical topologies for application servers.	raboar are mone management coor or aboar secon
	on center link
WebSphere Application Server - Online information	
WebSphere Application Server - Online informatio WebSphere Enterprise Service Bus - Online inform	nation center link

- _____2. Click **Next** on the **Welcome** panel
- 3. In the following 'Environment Selection' panel select 'WebSphere Process Server'

🚯 Profile Management Tool				
Environment Selection				
Select the type of environment to create. Environments:				
Cell (deployment manager and a federated Deployment manager Application server Custom profile	d application se	erver)		
WebSphere Enterprise Service Bus WebSphere Process Server				
 Description WebSphere Process Server is the next ge evolved from proven business integration open standards. 	neration busir concepts, app	iess process integ blication server te	gration server th echnologies, and	at has the latest
ĺ	< <u>B</u> ack	Next >	Einish	Cancel

- _____4. Click Next
 - 5. In the following '**Profile Type Selection**' panel, select '**Deployment manager profile**' for the profile type.

🎼 Profile Management Tool				_ 🗆 🗙
Profile Type Selection				Eg
Select a profile type for the WebSpi Profile Types:	here Process Server e	environment.		
Deployment manager profile Stand-alone process server profile Custom profile				
Description A WebSphere Process Server dep federated into (made a part of) it:	loyment manager adn s cell.	ninisters applicati	on servers that a	re
	< <u>B</u> ack	Next >	Einish	Cancel

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

🚯 Profile Management Tool				_ 0
Profile Creation Options				
Choose the profile creation process Management tool to assign a set of specify your own configuration valu	that meets your need default configuration ues for the profile.	ls. Pick the Typica values to the pro	al option to allow file. Pick the Ad) the Profile vanced option
C Typical profile creation				
Create a deployment management tool assigns un unique port values. The adn whether to enable administr deployment manager depen assigned to your user accou	ger profile that uses de nique names to the pro ninistrative console will ative security. The too iding on the operating unt. The Common data	fault configuratic file, node, host, be installed, and of might create a s system of your m base will be set to	in settings. The and cell. The too you can option system service t achine and the Derby Network	Profile of also assign: ally select o run the privileges < Server,
• <u>Advanced profile creation</u>				. O
Create a deployment manage values for settings such as t You can assign your own po administrative console. You service depending on the op account. You can also assig	ger profile using defaul the location of the prof rt values. You can opt might have the option perating system of you n your own configurati	t configuration se file and names of ionally choose wh to run the deploy ir machine and th on values for the	ttings, or specif the profile, nod ether to deploy ment manager e privileges assi Common datab	y your own e, host, and the as a system gned to your ase.
Deployment environment po	rofile creation 🦳 🗲			
Create a deployment manager profile creation with the add manager.	ger profile using the sa lition of choosing a dep	me configuration ployment evironm	options as those ent pattern for	e in advanceα the deploymε
	1	20 N	2	

____ 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

Profile Management Tool	
Profile Name and Location	
Specify a profile name and directory path to contain the files for I commands, configuration files, and log files. Click Browse to sele <u>P</u> rofile name:	the run-time environment, such as ect a different directory.
Dmgr01	
Profile directory:	
C:\IBM\WebSphere\ProcServer\profiles\Dmgr01	
	Browse
Important: Deleting the directory a profile is in does not comple	etely delete the profile. Use the
manageprofiles command to completely delete a profile.	
manageprofiles command to completely delete a profile.	

_____ 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

🚯 Profile Management Tool 📃 🗌 🗙
Node, Host, and Cell Names
Specify a node name, a host name, and a cell name for this profile. Node name:
dmgr01CellManager01
Host name:
dmgr01.austin.ibm.com
C <u>el</u> l name:
dmgr01Cell01
For more information about profile naming and augmentation considerations, see the online information center. Online information center link
< <u>B</u> ack <u>Next</u> <u>Finish</u> Cancel

____ 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

Administrative Security	
Thable security by supplying a user name and password for logging into administrative tools. This administrative user is created in a repository within the process server. After profile creation finisher ou can add more users, groups, or external repositories. Jser name: wps61admin assword:	
Jser name: wps61admin assword:	es,
wps61admin /assword:	
assword:	i i
	j.
Ionfirm password:	

ee the information center for more information about administrative security.	
Online information center link	

____ 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

🕼 Profile Management Tool	
Port Values Assignment	a la
The values in the following fields define the ports for the deployment me profiles in this installation. Another installation of WebSphere Application WebSphere Enterprise Service Bus, or other programs might use the se conflicts, verify that each port value is unique.	nanager and do not conflict with other on Server, WebSphere Process Server, ame ports. To avoid run-time port
Default Port Values Recommended Port Values	
Administrative console port (Default 9060):	9060
Administrative console secure port (Default 9043):	9043 🕂
Bootstrap port (Default 9809)(<u>W</u>):	9809
SOAP connector port (Default 8879)(<u>X</u>):	8879
SAS SSL ServerAuth port (Default 9401)(\underline{Z}):	9401
CSIV2 ServerAuth listener port (Default 9403)(]):	9403
CSIV2 MultiAuth listener port (Default 9402)(K):	9402
ORB listener port (Default 9100)(<u>5</u>):	9100
Cell discovery port (Default 7277)(<u>6</u>):	7277 🛨
High availability manager communication port (DCS)(Default 9352)(7):	9352 🕂
< <u>B</u> ack	> Einish Cancel

- _____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

🚯 Pro	ofile Management Tool	
Depl	loyment Environment Configuration	E g
Choos deploy	se the deployment environment pattern to use for the deployment environment on this yment manager profile.	
0	Remote Messaging and Remote Support	
	This pattern defines one cluster for application deployment, one remote cluster for th messaging infrastructure, and one remote cluster for the common event infrastructur other supporting applications. This pattern configures a setup that performs well for n your business needs. If in doubt, select this pattern.	e e and nost of
C	Remote Messaging	
	The remote messaging pattern defines one cluster for application deployment and one cluster for messaging infrastructure. The common event infrastructure and other supj applications are configured on the application deployment target cluster.	e remote porting
6	Single Cluster	
	The single cluster is the simplest pattern that defines one cluster for application deplo Both messaging infrastructure and common event infrastructure with supporting appli are configured on the application deployment target cluster.	yment. cations
	< <u>Back</u> Next > Einish	Cancel

- _____ 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

Database Configuration				4446
Various components use WebSphere Pr enter the information based on that typ Choose a database product:	rocess Server co pe.	mmon database. Cł	noose a database ty	pe ar
Derby Network Server				
Database script output directo C:\JBM\WebSphere\ProcServ Create a new local database. Use an existing database.	rýi er\profiles\Dmgr	01\dbscripts\Comm	onDB\Derby\WPRCS	DB gows
Database name:				
WPRCSDB				
Delay execution of database script:	s for new or exis	ting database.		
	< <u>B</u> ack	Next >	Einish	Ca
Click Next				_
In the following 'Database Confi	ouration (Pa	rt 2)' panel ente	er the following n	ara

- b. Password for database authentication
 c. Confirm Password
 derbyadmin
- ____ d. Database server host name : **localhost** (or fully qualified host name)
- ___ e. Server port

: 1527

🚯 Profile Management Tool	
Database Configuration (Part 2)	
Additional information is required to complete o	configuration for the Derby Network Server database.
User name to authenticate with the database:	4
derbyadmin	
Password for database authentication:	
•••••	
Confirm password:	
•••••	
Database server <u>h</u> ost name (for example IP as	address):
dmgr01.austin.ibm.com	
Server por <u>t</u> :	
1527	
	< Back Next > Einish Cancel

- ____ 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'

🚯 Profile Management Tool				
Environment Selection				E g
Select the type of environment to cre Environments:	ate.			
Cell (deployment manager and a fed Deployment manager Application server Custom profile WebSphere Enterprise Service Bus WebSphere Process Server	erated application se	erver)		
Description WebSphere Process Server is the ne evolved from proven business integ open standards.	ext generation busin ration concepts, app	ness process inte plication server t	gration server th echnologies, and	at has the latest
	< <u>B</u> ack	Next >	Einish	Cancel

- ____4. Click Next
- 5. In the following 'Profile Type Selection' panel, select 'Custom profile' from 'Profile Types'

a Fronie Hanagemene roor		_ O ×
Profile Type Selection		Ela
Select a profile type for the WebSphere Process Server Profile Types:	r environment.	
Deployment manager profile Stand-alone process server profile		
Custom profile		
Description		1
Description A WebSphere Process Server custom profile contains console or servers. The typical use for a custom profil federating the node, use the deployment manager to	an empty node, which does not conta le is to federate its node to a deploym create a server or a cluster of server	ain an administrative Ient manager, After 's within the node,

____6. Click Next

7. In the following '**Profile Creation Options**' panel, select the radio button for '**Deployment** environment profile creation'

Profile Management Tool				_ 0
Profile Creation Options				
Choose the profile creation process that i Management tool to assign a set of defau specify your own configuration values for	meets your neec Ilt configuration r the profile.	ls. Pick the Typica values to the pro	al option to allow file. Pick the Ad) the Profile vanced option
C Typical profile creation				
Create a deployment manager pro Management tool assigns unique r unique port values. The administra- whether to enable administrative s deployment manager depending o assigned to your user account. Th	ofile that uses de names to the pro ative console will security. The too in the operating ne Common datal	fault configuration file, node, host, be installed, and of might create a system of your m base will be set to	in settings. The and cell. The too you can option system service t achine and the Derby Network	Profile of also assign: ally select o run the privileges < Server.
C Advanced profile creation				
Create a deployment manager pro values for settings such as the loc You can assign your own port valu administrative console. You might service depending on the operatin account. You can also assign your	oble using defaul ation of the prof ues, You can opt have the option ng system of you own configurati	t configuration se ile and names of ionally choose wh to run the deploy r machine and th on values for the	ettings, or specif the profile, nod lether to deploy ment manager e privileges assi Common datab	y your own e, host, and the as a system gned to your ase.
Deployment environment profile of the second sec	reation 🖌 🗲			
Create a deployment manager pro profile creation with the addition o manager.	ofile using the sa of choosing a dep	me configuration bloyment evironm	options as those ent pattern for	e in advance: the deployme

____ 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

🔋 Profile Management Tool			
Profile Name and Location			E g
Specify a profile name and directory path to contain the configuration files, and log files. Click Browse to select a <u>P</u> rofile name:	files for the run-time e a different directory.	environment, such a	is commands,
Custom01			1
Profile <u>d</u> irectory:			
C:\IBM\WebSphere\ProcServer\profiles\Custom01			
			Browse
Make this profile the default.			
Each installation of WebSphere Process Server alw referring to a specific profile use the default profile	ays has one default p Select this option to	profile. Commands th p make this profile th	nat run without ie new default.
Important: Deleting the directory a profile is in does no command to completely delete a profile.	ot completely delete th	ne profile. Use the n	nanageprofiles

____ 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)

🚯 Profile Management Tool				
Node and Host Names				a a a a a a a a a a a a a a a a a a a
Specify a node name and a host name for this profile	e.			
Node name:				
custom01Node01				
Host name:				
custom01.austin.ibm.com				
Node name: A node name is used by the deployme Host name: A host name is the domain name syste For more information about profile naming and augm Online information center link	ent manager fo em (DNS) nam entation consi	or administration. e (short or long) c iderations, see the	The name must b ir the IP address e online informati	be unique within of this computer ion center.
	< <u>B</u> ack	Next >	Einish	Cancel

- ____ 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

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.

🚯 Profile Management Tool	
Federation	
Specify the host name or IP address and the SOA occur only if the deployment manager is running.	AP port number for an existing deployment manager. Federation can
dmgr01 auctin ibm com	
Deployment manager SOAP port number (Default	t 8879):
8879	
Deployment manager authentication	
Provide a user name and password that can be deployment manager.	authenticated, if administrative security is enabled on the
User name:	
wps61admin	
Password:	
•••••	
, , ,	
	< <u>B</u> ack <u>N</u> ext > Einish Cancel

- _____ 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'

🚯 Profile Management Tool		_ 🗆 >
Deployment Environment Configurat	ion	E g
Choose at least one cluster to assign this node to	on the network deployment topology:	
Application Deployment Target		
Consists of a cluster to which user applicati environment pattern, the application deplo and the supporting infrastructure clusters.	ons need to be deployed. Depending o yment target cluster may also assume I	n the chosen deployment the functionality of the messaging
	(April New S	1 mark 1 from
	<u> </u>	Enish Cancel

- ____ 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

🚯 Profile Management Tool	
Database Configuration	E g
Various components use the WebSphere Proces used on the deployment manager. Database type used on the deployment manage	ss Server Common database. Enter the information for the database type er:
Derby Network Server	
Location (directory) of JDBC driver classpath file	es:
C:\IBM\WebSphere\ProcServer\derby\lib	
	Browse
	< <u>Back</u> Next > Einish Cancel

____ 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

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.

_____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

🖄 IBM WebSphere Process Server (5.1 _ 🗖	x
WebSphere. Process Server	Launchpad	-
	Language selection: English 🗾	
Welcome		
WebSphere Process Server installation	IBM HTTP Server installation	
Message service clients	Launch the installation wizard for IBM HTTP Server Install IBM HTTP Server using the installation wizard.	
Additional software 🥠	View the installation guide for IBM HTTP Server Stop by stop instructions for installing IBM HTTP	
	Server.	
Web Server Plug-ins installation Application Clients installation	View the readme file for IBM HTTP Server Provides links to the latest information about IBM HTTP Server.	
Application Server Toolkit installation		

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

	Welcome to IBM HTTP Server 6.1
WebSphere software	This wizard installs IBM HTTP Server 6.1 on your computer. See the <u>IBM HTTP Server 6.1 Installation Guide</u> to learn more about this installation.
	Click Next to continue.

- _____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

	Enter the install location	
	Product install location:	
tware	C:\IBM\HTTPServer	
		Brow

- ____ 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)

WebSphere, software	Port Values Assignment IBM HTTP Server communi ports are already in use by change the port numbers f	icates using the IBM HTTP Serve rom their default	port numbers lister er or another applica values.	d below. If these ation, then
A	HTTP Port:	80		
	HTTP Administration Port:	8008		
stallShield				
		< <u>B</u> ack	Next >	<u>C</u> ancel

____ 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
 - ____d. Startup Type : Select 'Automatic' from the drop down list

皆 IBM HTTP Server V6.1.0	.3	
WebSphere. software	Windows Service Definition Choose whether to use a Windows service to run IBM HTTP Server and IB HTTP Administration Server. Optionally the IBM HTTP Server and IBM HTTP Administration Server can be started from the command line. Configure th startup type to have the Windows services start manually or automatically when rebooting the system.	M c
ANT -	Run IBM HTTP Server as a Windows Service	
THE A	Run IBM HTTP Administration as a Windows Service	
	🔘 Log on as a local system account	
	Log on as a specified user account User name:	
	Administrator	
	Password:	

	Startup type:	-
	Automatic	
	The user account that runs the Windows service must have the following user rights:	•
InstallShield		
	< <u>B</u> ack <u>N</u> ext > <u>C</u> ance	el

____ 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

WebSphere, software	HTTP Administration Server Authentication Create a user ID and password to authenticate to the IBM HTTP administration server using the WebSphere Application Server administ console. The newly-created user ID and password is encrypted and stor the conf/admin.passwd file. You can create additional user IDs after the installation by using the htpasswd utility.	rative red in
	Create a user ID for IBM HTTP administration server authentication User ID:	
	websrvadmin	
	Password	

	Confirm Password:	
al data dur	<u>************</u>	

- ____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

쒈 IBM WebSphere Process Server (5.1 _ 🗌 🗙
WebSphere. Process Server	Launchpad IBM.
	Language selection: English 🗾
Welcome WebSphere Process Server installation Message service clients installation	Web server plug-ins installation Important! Before installing a Web server plug-in, WebSphere Application Server and a supported Web server must be installed. For more information, see the installation roadmaps for Web server plug-ins.
HTTP Server installation	Launch the installation wizard for Web server plug-ins Install Web server plug-ins using the installation wizard.
Web Server Plug-ins	View the installation roadmaps for Web server plug-ins Guided instructions for installing and configuring
Application Clients installation Application Server Toolkit installation	Web server plug-ins. Image: Web server plug-ins Image: Web server plug-ins Step-by-step instructions for installing Web server plug-ins.
IBM Update Installer for WebSphere Software installation	View the readme file for Web server plug-ins Provides links to the latest information about Web server plug-ins.

- ____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'.

皆 Web server plug-ins for	IBM WebSphere Application Server V6.1.0.3
WebSphere, software	 Welcome to Web server plug-ins for IBM WebSphere Application Server V6.1. This wizard installs Web server plug-ins for IBM WebSphere Application Server V6.1 on your computer. Select an item from the following list to learn more about the installation: ✓ Installation roadmap: Overview and installation scenarios ✓ Plug-ins section of the Getting Started guide Installing the plug-ins also installs the required level of GSKit. Click Next to continue.
InstallShield	
	< <u>B</u> ack <u>N</u> ext > <u>C</u> ancel

- ____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'

🝟 Web server plug-ins fo	r IBM WebSphere Application Server V6.1.0.3
	Select the Web server to configure. All plug-in binaries are installed, but only the selected Web server will be configured.
WebSphere, software	O None
North Contraction	IBM HTTP Server V6 or V6.1
Etter	C Apache Web Server V2
PART	O Lotus Domino Web Server V6 or V6.5
	O Lotus Domino Web Server V7
	O Sun ONE Web Server 6.0 or Sun Java System Web Server V6.1
	C Microsoft Internet Information Services V6
	O Microsoft Internet Information Services V5
InstallShield	
	< <u>B</u> ack <u>N</u> ext > <u>C</u> ancel

9. Click Next

___10. In the following panel, select the radio button for 'WebSphere Application Server machine (local)'

🝟 Web server plug-ins fo	r IBM WebSphere Application Server ¥6.1.0.3	
WebSphere, software	Install the Web server plug-ins to the machine where the Web server exists. When the Application Server and Web server exist on the same machine, choose the local installation scenario. When the Application Server and the Web server are not on the same machine, choose the remote installation scenario. For a stand-alone application server, the webserver definition is created automatically.	
A	For more information about installation scenarios, see the Installation roadmap on the Welcome panel.	
	Select the installation scenario that matches your environment:	
C Web server machine (remote)		
	WebSphere Application Server machine (local)	
InstallShield		
	< <u>B</u> ack <u>N</u> ext > <u>C</u> ancel	

- ____ 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\PI	ugins
--------------------------	-------

省 Web server plug-ins for	IBM WebSphere Application Server V6.1.0.3	
WebSphere, software	Installation directory Web server plug-ins for IBM WebSphere Application Server, Version 6.1 will installed to the specified directory. Specify a different directory or click Browse to select a different install locati Product install location:	on.
		/se
instalionield -	< <u>B</u> ack <u>Next > C</u> a	ncel

- ____ 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

🗳 Web server plug-ins fo	r IBM WebSphere Application S	erver ¥6.1.0.3		
H	Provide the installation location	n of WebSphere	Application Server V	ersion 6.1.
	Installation location of WebS	phere Applicatio	on Server:	
WebSphere, software	C:\IBM\WebSphere\ProcServ	er		
				Browse
InstallShield				
		< <u>B</u> ack	<u>N</u> ext ≻	<u>C</u> ancel

_____ 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

	Select the WebSphere Application Server voltors install:
WebSphere, software	Dmgr01
InstallShield	
	< <u>B</u> ack <u>N</u> ext > <u>C</u> ancel

- _____ 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

🝟 Web server plug-ins fo	r IBM WebSphere Application Server V6.1.0.3
	Select the Web server configuration files and identify the Web server port to configure the Web server definition.
WebSphere, software	Select the existing IBM HTTP Server httpd.conf file: C:\IBM\HTTPServer\conf\httpd.conf
	Browse Specify the Web server port:
	80
magnamera -	< <u>B</u> ack <u>N</u> ext > <u>C</u> ancel

- ____ 19. Click Next
- _____ 20. In the following panel, specify a unique Web server definition name
 - ____a. Web server definition name : webserver1

🝟 Web server plug-ins fo	r IBM WebSphere Application Server ¥6.1.0.3
	A Web server definition lets you manage a Web server through the administrative console.
WebSphere, software	Specify a unique Web server definition name: webserver1
InstallShield	< <u>B</u> ack <u>N</u> ext > <u>C</u> ancel

- ____ 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

🗳 Web server plug-ins fo	r IBM WebSphere Application Server V6.1.0.3
	The following plug-in configuration file (plugin-cfg.xml) will be created and used for configuring the selected Web server. This default location can be changed to specify another existing plug-in configuration file.
websphere, sortware	Web server plugin-cfg.xml file:
	Browse
InstallShield	
	< <u>B</u> ack <u>Next</u> > <u>C</u> ancel

- 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

🖄 Web server plug-ins fo	r IBM WebSphere Application Server ¥6.1.0.3
	Manual configuration steps are required before starting the Web server. Follow the configuration procedure in the roadmap document that is launched at the end of the install.
WebSphere. software	Web server to configure: IBM HTTP Server V6 or V6.1 Web server definition: webserver1 Plug-in configuration file: C:/IBM/HTTPServer/Plugins/config/webserver1/plugin-cfg.xml
InstallShield	
	< <u>B</u> ack <u>N</u> ext > <u>C</u> ancel

- ____ 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

🗳 Web server plug-ins fo	r IBM WebSphere Application Server ¥6.1.0.3
	Manual configuration steps are required before starting the Web server. Follow the configuration procedure in the roadmap document that is launched at the end of the install.
WebSphere, software	Manual configuration script:
- Come	C:\IBM\HTTPServer\Plugins\bin\configurewebserver1.bat
Dest	Web server to configure:
	IBM HTTP Server V6 or V6.1
	Web server definition:
	webserver1
	Plug-in configuration file:
	C:/IBM/HTTPServer/Plugins/config/webserver1/plugin-cfg.xml
InstallShield	·
	< <u>B</u> ack <u>Next > C</u> ancel

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

皆 Web server plug-ins for	r IBM WebSphere Application Server ¥6.1.0.3	
WebSphere. software	Success: The following product was installed successfully.	
InstallShield	< <u>B</u> ack <u>N</u> ext > F i	nish

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

 </pre
 - <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

C:\WINDOWS\system32\cmd.exe

Processing the application sca.sib.mediation. Get the current target mapping for the application sca.sib.mediation. Computed the current target mapping for the application sca.sib.mediation. Start updating the target mappings for the application sca.sib.mediation. Target mapping is updated for the application sca.sib.mediation. Processing the application wpsFEMgr_6.1.0. Get the current target mapping for the application wpsFEMgr_6.1.0. Computed the current target mappings for the application wpsFEMgr_6.1.0. Start updating the target mappings for the application wpsFEMgr_6.1.0. Start updating the target mappings for the application wpsFEMgr_6.1.0. Start saving the configuration. Configuration save is complete. C:\IBM\WebSphere\WPScluster\bin>_

_____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 though 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.

Ado	Add Node Remove Node Force Delete Synchronize Full Resynchronize Stop						
	d 🗰 📽						
Select	Name 🛟	Version 🗘	Discovery Protocol 🗘	Status ሷ			
	dmqr01CellManager01	Business Process Choreographer 6.1.0.0 ND 6.1.0.13	тср	⊕			
	custom01Node01_	Business Process Choreographer 6.1.0.0 ND 6.1.0.13	тср	⊕			
	custom02Node02_	Business Process Choreographer 6.1.0.0 ND 6.1.0.13	тср	•			
Total	3	·					

_____ c. Select Servers → Deployment Environments → default → Deployment Topology. The deployment target should show a running status.

nfiguration			
General Properties	Additional Properties		
Deployment Environment default Deployment Environment Pattern Single Cluster	 <u>Deployment</u> <u>Topology</u> <u>Deferred</u> Configuration 		
Description			
	3		Related Items Data Sources
			Authentication
Deployment Environment Status		⇒	<u>Aliases</u>
Cluster	Cluster Name	Status	
Application Deployment Target	default.AppTarget	⇒	
Apply OK Generate Environ	ment Reset	Cancel	

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

 Applications				
-	Enterprise Applications Install New Application < SCA modules			

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

paring for the application installation Specify the EAR, WAR, JAR, or SAR module to upload and install.
Path to the new application Cocal file system Full path iles61\TestAsyncApp.ear Browse
C Remote file system Full path Browse
Context root Used only for standalone Web modules (.war files) and SIP nodules (.sar files)
 How do you want to install the application? Prompt me only when additional information is required. Show me all installation options and parameters.
Next Cancel

- 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:

Install New Application	ew Application ? ep 1 Select allation options Map modules to servers > 2: Map lules to servers Specify targets such as application servers or clusters of application servers where you want to install the modules that are contained in your application. Modules can be installed on the same application server or dispersed among several application servers. Also, specify the Web servers as targets that serve as routers for requests to this application. The plug-in configuration file (plugin-cfg.xml) for each Web server is generated, based on the applications that are routed through. Clusters and Servers: WebSphere:cell=aimcp098Cell01,duster=default.AppTarget WebSphere:cell=aimcp098Cell01,node=aimcp098Node01,server=webserver1 Apply Select Module URI Server			
<u>Step 1</u> Select	Map m	odules to serv	vers	
→ Step 2: Map modules to servers Step 3 Summary	Specify modul disper for req genera	y targets such a es that are cont sed among seve juests to this ap ated, based on t	s application servers or clu ained in your application, aral application servers. Al plication. The plug-in conf the applications that are re	isters of application servers where you want to install the Modules can be installed on the same application server or so, specify the Web servers as targets that serve as routers figuration file (plugin-cfg.xml) for each Web server is outed through.
	Cluste Web9 Web9	rs and Servers; Sphere:cell=aim Sphere:cell=aim	cp098Cell01,cluster=defau cp098Cell01,node=aimcp(ult.AppTarget 098Node01,server=webserver1 Apply <
	D	6		
	Select	Module	URI	Server
		TestAsyncEJB	TestAsyncEJB.jar,META- INF/ejb-jar.xml	WebSphere:cell=aimcp098Cell01,cluster=default.AppTarget
		TestAsyncWeb	TestAsyncWeb.war,WEB- INF/web.xml	WebSphere:cell=aimcp098Cell01,cluster=default.AppTarget
Previous Next	1 Select ation options : Map es to servers Specify targets such as application servers or clusters of application servers where you want to install the modules that are contained in your application. Modules can be installed on the same application server or dispersed among several application servers. Also, specify the Web servers as targets that serve as routers for requests to this application. The plug-in configuration file (plugin-cfg.xml) for each Web server is generated, based on the applications that are routed through. 2 Summary 3 Summary Clusters and Servers: WebSphere:cell=aimcp098Cell01,duster=default.AppTarget WebSphere:cell=aimcp098Cell01,node=aimcp098Node01,server=webserver1 Apply Clusters and Servers: WebSphere:cell=aimcp098Cell01,node=aimcp098Node01,server=webserver1 Apply Cluster=default.AppTarget WebSphere:cell=aimcp098Cell01,duster=default.AppTarget WebSphere:cell=aimcp098Cell01,duster=default.AppTarget INF/ejb-jar.xml Vet TestAsyncEJB TestAsyncEJB,jar,META- INF/ejb-jar.xml WebSphere:cell=aimcp098Cell01,duster=default.AppTarget INF/web.xml s Next Cancel			

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

Ins	stall N	lew App	lication			2 -
	<u>St</u>	<u>ep 1</u> So	elect	Мар п	nodules to servers	
-	• Ste mo	p 2: Maj dules to	p) servers ummary	Specify targets such as application servers or clusters of application servers where you want to install the modules that are contained in your application. Modules can be installed on the same application server or dispersed among several application servers. Also, specify the Web servers as targets that serve as routers for requests to this application. The plug-in configuration file (plugin-cfg.xml) for each Web server is generated, based on the applications that are routed through. Clusters and Servers:		
				Clust Web Web	ers and Servers: Sphere:cell=aimcp098Cel Sphere:cell=aimcp098Cel	101,cluster=default.AppTarget 101,node=aimcp098Node01,server=webserver1
			ß			
		Select	Module		URI	Server
			TestAsy	ncEJB	TestAsyncEJB.jar,META- INF/ejb-jar.xml	WebSphere:cell=aimcp098Cell01,cluster=default.AppTarget WebSphere:cell=aimcp098Cell01,node=aimcp098Node01,server=webserver1
			TestAsy	ncWeb	TestAsyncWeb.war,WEB- INF/web.×ml	WebSphere:cell=aimcp098Cell01,cluster=default.AppTarget WebSphere:cell=aimcp098Cell01,node=aimcp098Node01,server=webserver1
	Prev	vious	Next	Cance	el	

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:

- <u>Save</u> directly to the master configuration.
- <u>Review</u> 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 ሷ			
	AppScheduler	€			
	BPCECollector_default.AppTarget_	€			
	BPCExplorer default.AppTarget bpc	€)			
	BPCObserver_default.AppTarget_	∌			
	BPEContainer default.AppTarget	€			
	BusinessRulesManager_	€			
	RemoteAL	€			
	TaskContainer default.AppTarget	€			
	TestAsyncApp_	8			
	persistentLkMgr	∌			
	sca.sib.mediation	∌			
	wpsFEMgr 6.1.0	⇒			
Total	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 a 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

New	Delete Templates Start	Stop Immed	iateStop T	erminate	
	Ē ‡ ₽				
Select	Name 💠	Node 🗘	Version 🗘	Cluster Name 🗘	Status ሷ
	default.AppTarget.aimcp095Node01.0	aimcp095Node01	Business Process Choreographer 6.1.0.0 ND 6.1.0.11	default.AppTarget	\$
	default.AppTarget.aimcp095Node02.0	aimcp095Node02	Business Process Choreographer 6.1.0.0 ND 6.1.0.11	default.AppTarget	•

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:

SCA Async Invocation Test - M	icrosoft Internet Explorer
dress 🧃 http://localhost/TestAsyi	ncWeb/input.jsp 🗾 Links
SCA Async	Invocation Test
Case ID:	oneway01 💌
Name:	(i18nstring)
Rate:	(float)
Date:	(date, like MM/dd/yy)
The following fileds w	ill be used for CEICONCURRENCY03 :
threadNum:	
startTime:	
	submit reset

SCA Async Invocation Test - Mic	rosoft Internet Explorer		
Address 🕘 http://localhost/TestAsync	Web/input.jsp		 Links »
SCA Async	Invocation	Test	
Case ID:	oneway01 💌		
Name:	NoBody	(i18nstring)	
Rate:	100.01	(float)	
Date:	11/1/2007	(date, like MM/dd/yy)	
The following fileds will b	e used for CEICONCL	IRRENCY03:	
threadNum:	1		
startTime:	11.20		
	submit reset		

_____6. Enter the required information

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	t	
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

plication servers				
Application servers Use this page to view a list of the applica You can also use this page to change the	tion servers in your envi a status of a specific app	ronment and the lication server.	status of each of th	ese servers,
Preferences				
New Delete Templates St	tart Stop Immed	iateStop T	erminate	
Select Name 🗢	Node 🗘	Version 🗘	Cluster Name 🗘	Status ሷ
default.AppTarget.aimcp095Node	01.0 aimcp095Node01	Business Process Choreographer 6.1.0.0 ND 6.1.0.11	default.AppTarget	€
default.AppTarget.aimcp095Node	02.0 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

<u>12.</u> 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

Veb servers				? .		
Web servers						
Use this page to view a list of the	installed Web servers.					
Generate Plug-in Propagate Plug-in New Delete Templates Start Stop Terminate						
Select Name 🛟	Web server Type 🛟 _	Node 🐎 _	Version 🔶	Status ሷ		
None						
Total 0						

- _____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

Cr	Create new Web server definition						
Use this page to create a new Web server.							
		Step 1: Select a	Select	a Web server to	emplate	•	
server and select the Web server type		Select the template that corresponds to the server that you want to create.					
→ Step 2: Select a Web server							
		template	Select	Template Name	Туре	Decription	
		Step 3: Enter the properties for the pew Web server	œ	IHS	System	The IHS Web Server Template	
		Step 4: Confirm new Web server					
	Previous Next Cancel						

- ____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

Ξ	Messages
	🗓 New server is created successfully.
	Modify variables, resources, and other server configuration settings, such as message broker queue names before running the newly created server.
	 Changes have been made to your local configuration. You can: <u>Save</u> directly to the master configuration. <u>Review</u> changes before saving or discarding. An option to synchronize the configuration across multiple nodes after saving can be enabled in <u>Preferences.</u> The server may need to be restarted for these changes to take effect.

- ____ 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

eb serve	ers				2
Web servers					
Use thi	is page to view a list of the i	nstalled Web servers.			
🕀 Pref	erences				
Generate Plug-in Propagate Plug-in New Delete Templates Start Stop Terminate					
Select	Name 🛟	Web server Type 💲	Node 😂 🔤	Version 😂 🔤	Status ሷ
webserver1 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 'webserver1' and click the 'Generate Plug-in' button
 - ____b. Locate the plugin-cfg.xml file at <WEBSERVER_HOME>\Plugins\config\webserver1
 - Ex : C :\IBM\HTTPServer\Plugins\config\webserver1
 - ____ 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

🖄 Installation Wizard for 1	the Update Installer 6.1.0.13	×
	Installation Wizard for the Update Installer	
WebSphere, software	Welcome to the Installation Wizard for the IBM Update Installer for WebSphere Software. Additional information can be found at the <u>Information</u> <u>Centers and Support sites for WebSphere and related products</u> home page.	
Katta-	Click Next to continue.	
InstallShield		-
	< <u>B</u> ack <u>Next ></u> <u>C</u> ancel	

- ____ 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\UpdataInstaller**

省 Installation Wizard for	the Update Installer 6.1.0.13	
WebSphere, software	Installation Directory IBM Update Installer for Websphere Software, Version 6.1.0.13 will be installed to the specified directory. You can specify a different directory or click Browse to select a directory. Directory path: C:\IBM\WebSphere\UpdateInstaller	
	Brows	se
instanoment /	< <u>B</u> ack <u>Next</u> ≻ <u>C</u> an	icel

- _____ 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

皆 Installation Wizard for th	ne Update Installer 6.1.0.13	_ 🗆 🗵
WebSphere, software	Installation Complete Success: The following product was successfully installed: ● IBM Update Installer for WebSphere Software Path: C:\/IBM/WebSphere\UpdateInstaller Image: C:\/IBM/WebSphere\UpdateInstaller Image: C:\/IBM/WebSphere\UpdateInstaller Image: C:\/IBM/WebSphere Image: C:\/IBM/WebSphere <th>ind in</th>	ind in
InstallShield	< <u>B</u> ack <u>N</u> ext > Fin	ish

_____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

🗁 C:\IBM\WebSphere\UpdateInstaller\maintenance	
Address C:\IBM\WebSphere\UpdateInstaller\maintenance	💌 ラ Go
Name A	outes

- 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

🝟 IBM Update Installer fo	r WebSphere Software 6.1.0.13	
WebSphere, software	Product Selection Enter the installation location of the product that you want to update.	
	You can select a different directory from the drop-down list, specify a different directory, or click Browse to select a directory. Directory path:	
	C:\IBM\WebSphere\ProcServer	
	Browse	
InstallShield	< <u>B</u> ack <u>N</u> ext > <u>C</u> ancel	

- ____7. Click Next
 - __ 8. In the following panel, select the radio button for 'Install maintenance package'

省 IBM Update Installer fo	[•] WebSphere Software 6.1.0.13	
WebSphere, software	Maintenance Operation Selection Install maintenance package. Uninstall maintenance package.	
InstallShield	< <u>B</u> ack <u>N</u> ext >	<u>C</u> ancel

- 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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