

## IBM® Feature Pack for Web Services– LAB EXERCISE

# WebSphere Application Server V6.1 Feature Pack for Web Services installation guide

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## What this exercise is about

The objective of this lab is to show you how to install the Feature Pack for Web Services for WebSphere Application Server V6.1 on distributed platforms. This lab will guide you through the installation process, including verifying your WebSphere Application Server V6.1 installation, acquiring and unpacking the Feature Pack for Web Services installation image, installing the Feature Pack and augmenting or creating profiles.

## Lab requirements

The system on which you are installing WebSphere Application Server must be running a supported distributed operating system. For more information on supported operating systems, see the WebSphere Application Server V6.1 information center. In addition, the system must have the following resources available:

- Approximately 500MB of hard drive space to store the installation images
- An appropriate installation of WebSphere Application Server V6.1
- A utility to unzip the installation image
- Another 500MB of hard drive space for the installed product

## What you should be able to do

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

- Install the WebSphere Application Server V6.1 Feature Pack for Web Services
  - Verify the installation
  - Augment existing profiles, and create new profiles
- 

## Introduction

The Feature Pack for Web Services builds on Web Services technologies available in WebSphere Application Server V6.1. A few of the major enhancements introduced in this Feature Pack are:

- A new JAX-WS programming model ( with support for JAX-B, annotations, SOAP 1.2 and more )
- Support for WS-Reliable Messaging and WS-Secure Conversation
- Improved administration of Web Services configuration through the use of Policy Sets

This lab is divided into the following parts, some of which are optional exercises.

### **Part 1: Verify the installation of WebSphere Application Server V6.1**

This portion of the lab will verify the existing installation of WebSphere Application Server.

### **Part 2: Prepare the installation image**

This section of the lab will prepare the installation image for installation.

### **Part 3: Perform the installation**

This section will show how to perform the actual product install for the Feature Pack for Web Services on WebSphere Application Server V6.1. While it is possible to augment a profile during the installation procedure, this lab will bypass that step and create a profile after the installation is finished.

### **Part 4: Create a profile**

This piece of will show the creation of a profile containing the new configurations for the Feature Pack for Web Services.

### **Part 5: Optional – Troubleshoot the installation**






If any errors are encountered during the installation process, this section shows how to find the appropriate logs to help with troubleshooting.

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## Exercise instructions

This lab assumes that WebSphere Application Server V6.1 has already been installed to the <WAS\_HOME> directory. And that the Installable image for the Feature Pack for Web Services has been placed in the C:\LabFiles\Install directory.

Instructions and subsequent documentation use symbolic references to directories which are listed as follows:

Reference Variable	 Windows Location	 Linux  UNIX Location
<WAS_HOME>	C:\WebSphere\AppServer	 /opt/WebSphere/AppServer  /usr/WebSphere/AppServer
<TEMP>	C:\temp	/tmp
<hostname>	Host name or host address for the machine where the profiles are being created	Host name or host address for the machine where the profiles are being created

### Note:

If you have previously installed an Alpha version of the WebSphere Application Server V6.1 Feature Pack for Web Services, you should uninstall it before installing a new version. Refer to the Uninstall section for instructions to uninstall the WebSphere Application Server V6.1 Feature Pack for Web Services.

## Part 1: Verify the installation of WebSphere Application Server V6.1

\_\_\_ 1. Login as Administrator, there is no password, so leave it blank.



\_\_\_ 2. Change to the <WAS HOME>\bin directory.

\_\_\_ a. **Windows** Example:

```
cd C:\WebSphere\Appserver\bin
```

\_\_\_ 3. Run the versionInfo command.

\_\_\_ a. **Windows** Example:

```
versionInfo.bat
```

- \_\_\_ 4. Verify the output includes WebSphere Application Server V6.1

```

C:\WebSphere\AppServer\bin>versionInfo
WUER00101: Copyright (c) IBM Corporation 2002, 2005; All rights reserved.
WUER00121: VersionInfo reporter version 1.15.1.13, dated 3/29/06

-----
IBM WebSphere Application Server Product Installation Status Report
-----
Report at date and time October 4, 2006 3:59:11 PM CDT
Installation
-----
Product Directory      C:\WebSphere\AppServer
Version Directory     C:\WebSphere\AppServer\properties\version
DTD Directory         C:\WebSphere\AppServer\properties\version\.dtd
Log Directory         C:\WebSphere\AppServer\logs
Backup Directory      C:\WebSphere\AppServer\properties\version\nif\backup
TMP Directory         C:\DOCUME~1\26ib515\LOCALS~1\Temp

Product List
-----
ND                    installed

Installed Product
-----
Name                  IBM WebSphere Application Server - ND
Version               6.1.0.0
ID                   ND
Build Level           b0620.14
Build Date            5/16/06

-----
End Installation Status Report
-----

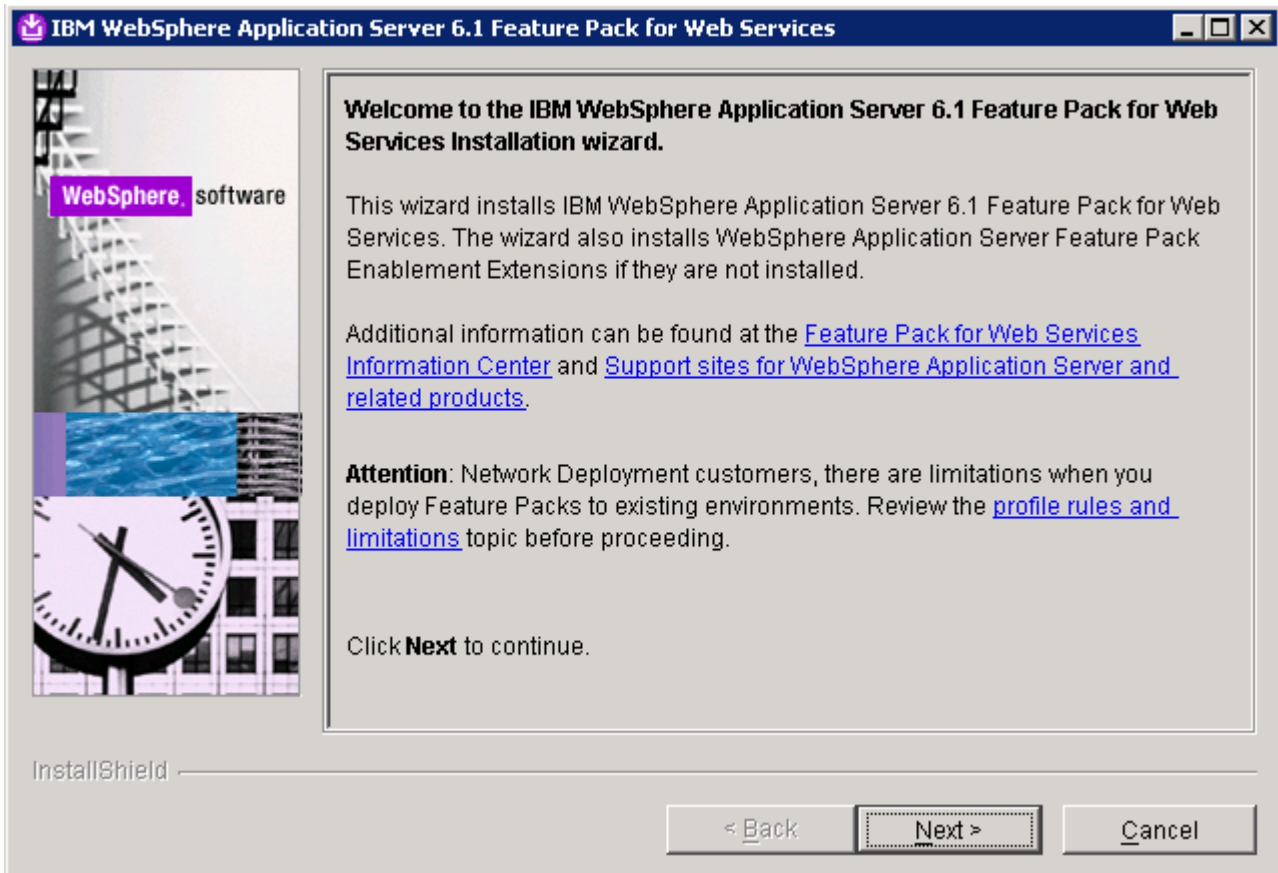
```

- \_\_\_ 5. In order to install the Feature Pack, all WebSphere Application Server processes must be stopped on the installation that is being upgraded. Run the command **serverstatus -all** to verify that all the servers are stopped.

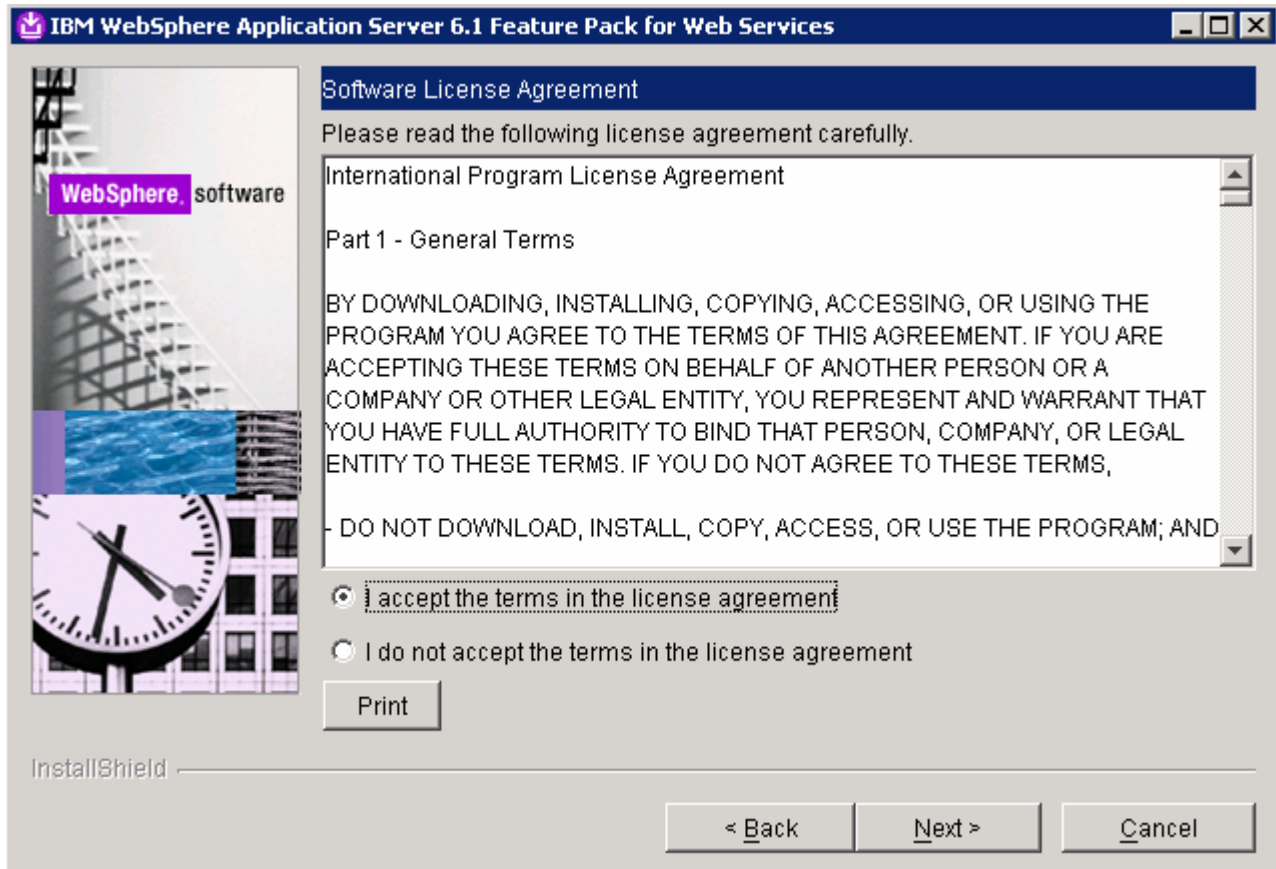
- \_\_\_ a. Stop any running servers.

## Part 2: Perform the installation

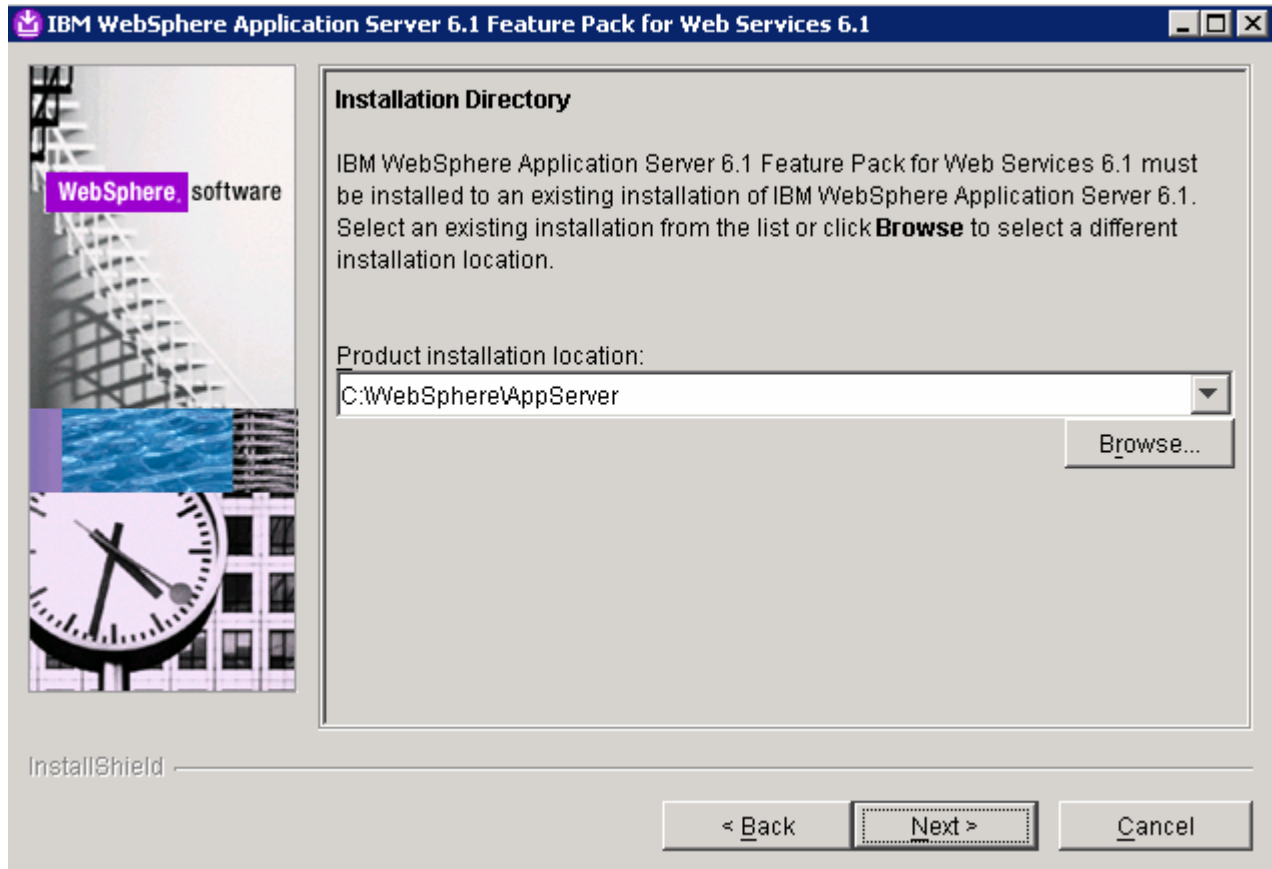
- \_\_\_ 1. Start the Feature Pack Installer.
  - \_\_\_ a. At a command prompt, navigate to the  
C:\Labfiles\Install\fp.61.webservices.windows.ia32\WEBSV\ directory.
  - \_\_\_ b. Run the installation command, **Install.exe**.
  - \_\_\_ c. The following Install Wizard screen will appear. Click **Next**.



\_\_\_ 2. Review and **Accept** the license agreement. Click **Next**.

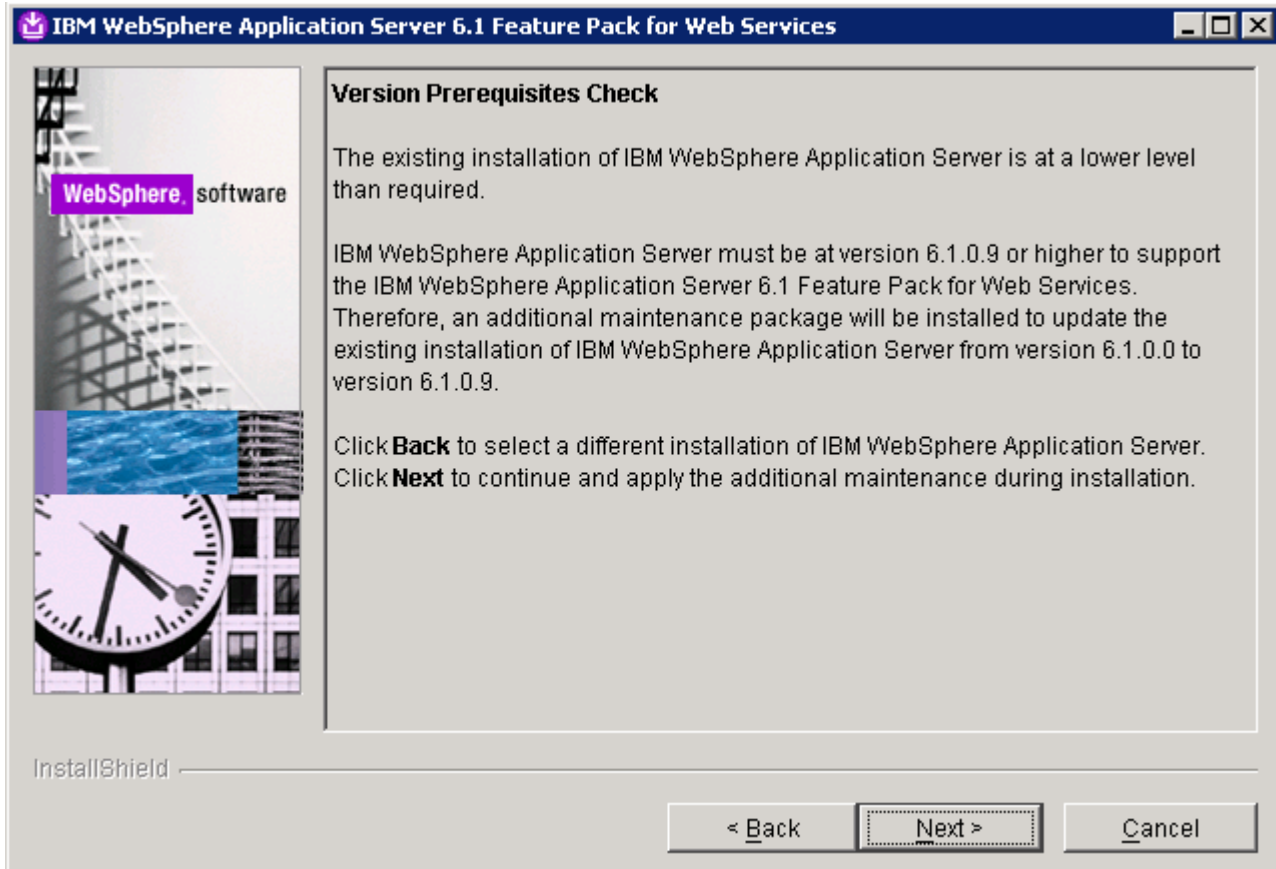


- \_\_\_ 3. Insure you system passes the prerequisites check. When done click **Next**.
- \_\_\_ 4. **Specify** the directory where WebSphere Application Server V6.1 is installed on the system, for this lab it has been installed in **C:\WebSphere\AppServer**. When done click **Next**.

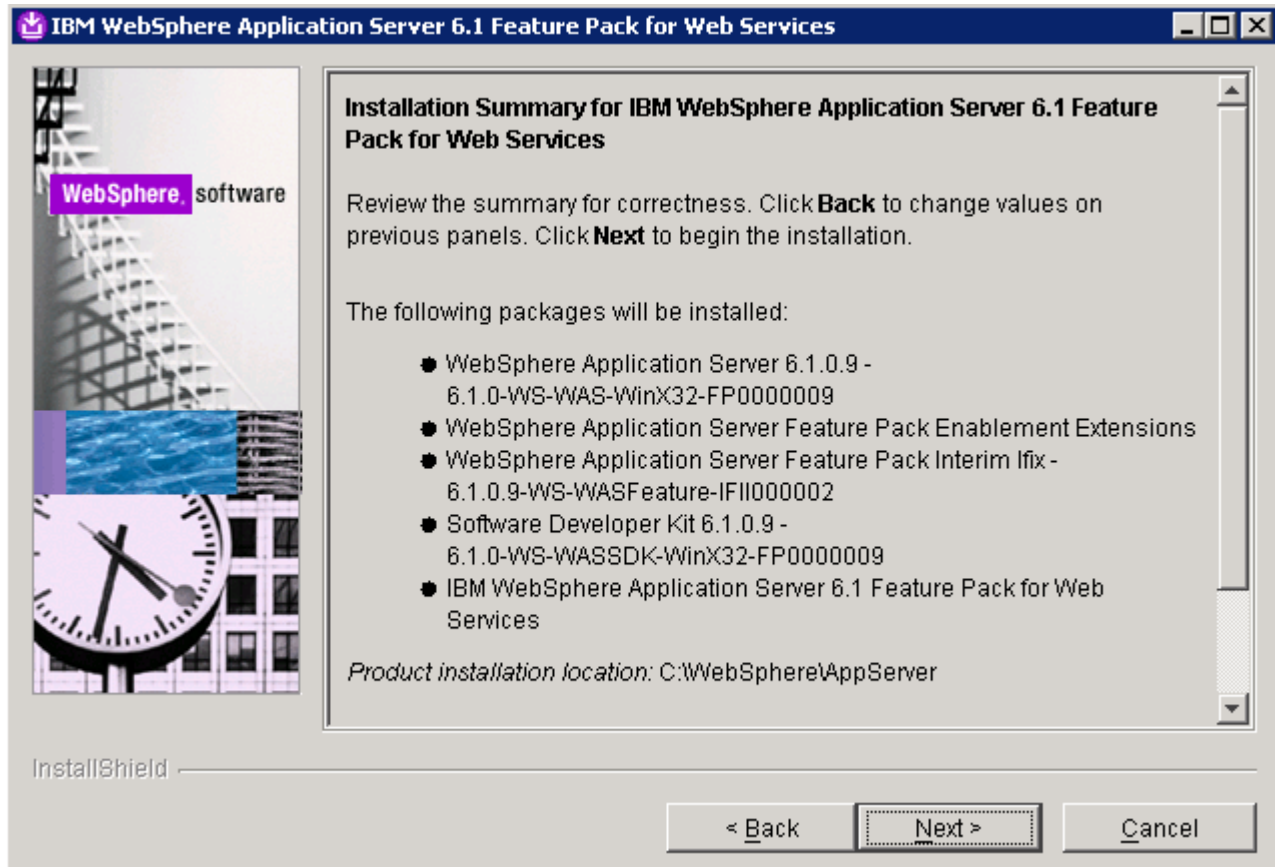




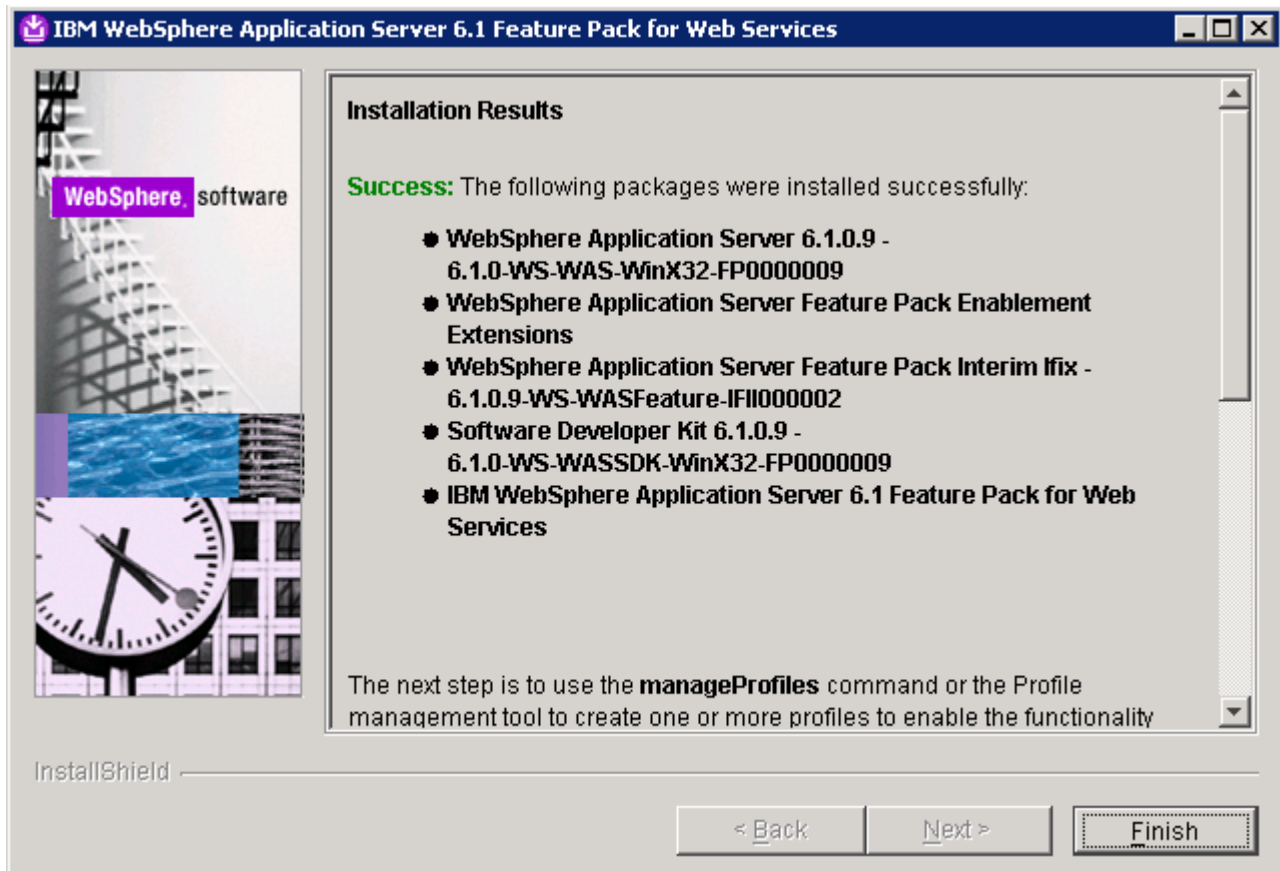
5. The next screen a prerequisite check on the installed version of WebSphere Application Server. The Feature Pack for Web Services requires WebSphere Application Server V6.1.0.9 or higher, if the installation is below that level, the Feature Pack installer will upgrade the installation to the required level. Click **Next**.



\_\_\_ 6. Verify the installation choices made and click **Next**.



7. The installation will begin. The installation should take about 20 minutes, depending on the system. When the installation completes, results will be displayed. Review these results for a successful installation. Select the option to **Launch the Profile management tool console**. Click **Finish**.



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**NOTE:** In order for a WebSphere Application Server environment to be complete, at least one profile must be created. The first profile is often created at install time. However, for this lab the profile will be created separately using Profile Management tool. Both strategies – creating a default profile during the installation and creating a default profile after the product installation, are perfectly acceptable, and both will result in a fully functional WebSphere Application Server environment. The Profile Management tool provides advanced features to customize and augment existing profiles.

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## Part 3: Create a profile

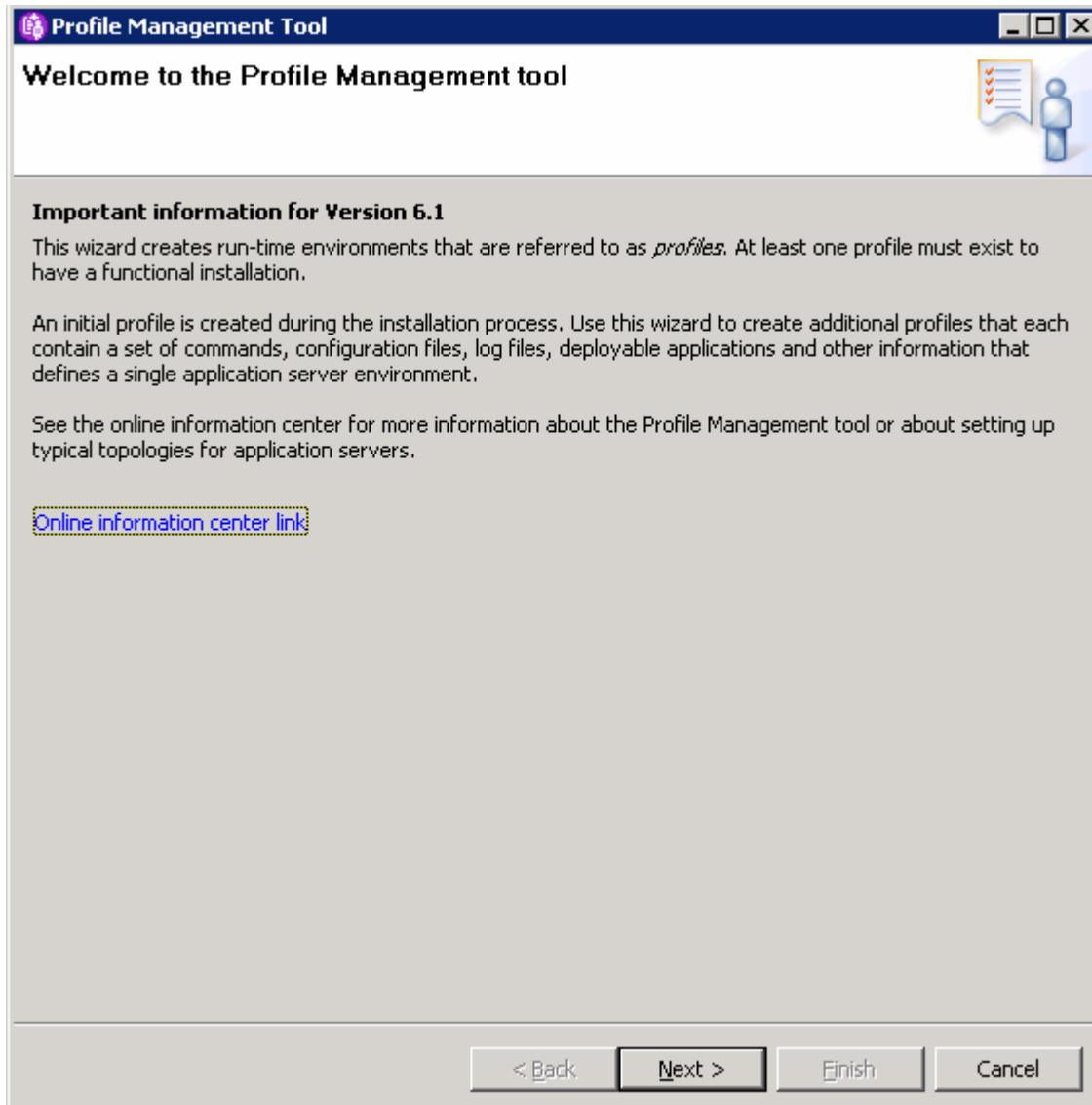
In this section of the lab, you will be using the Profile Management Tool (PMT) to create a profile.

- \_\_\_ 1. If the Profile Management Tool (PMT) is not open, open it.
  - \_\_\_ a. Open a command prompt and navigate to <WAS\_HOME>/bin/ProfileManagment.
  - \_\_\_ b. Run the PMT.bat (or pmt.sh) executable.
  - \_\_\_ c. Alternatively, some platforms provide a menu option for launching the profile management tool. In Windows, for example, you can go to **Start > Programs > IBM WebSphere > Application Server Network Deployment V6.1 > Profile Management Tool**. Some Linux environments may also provide a menu option for the PMT, depending on their configuration.

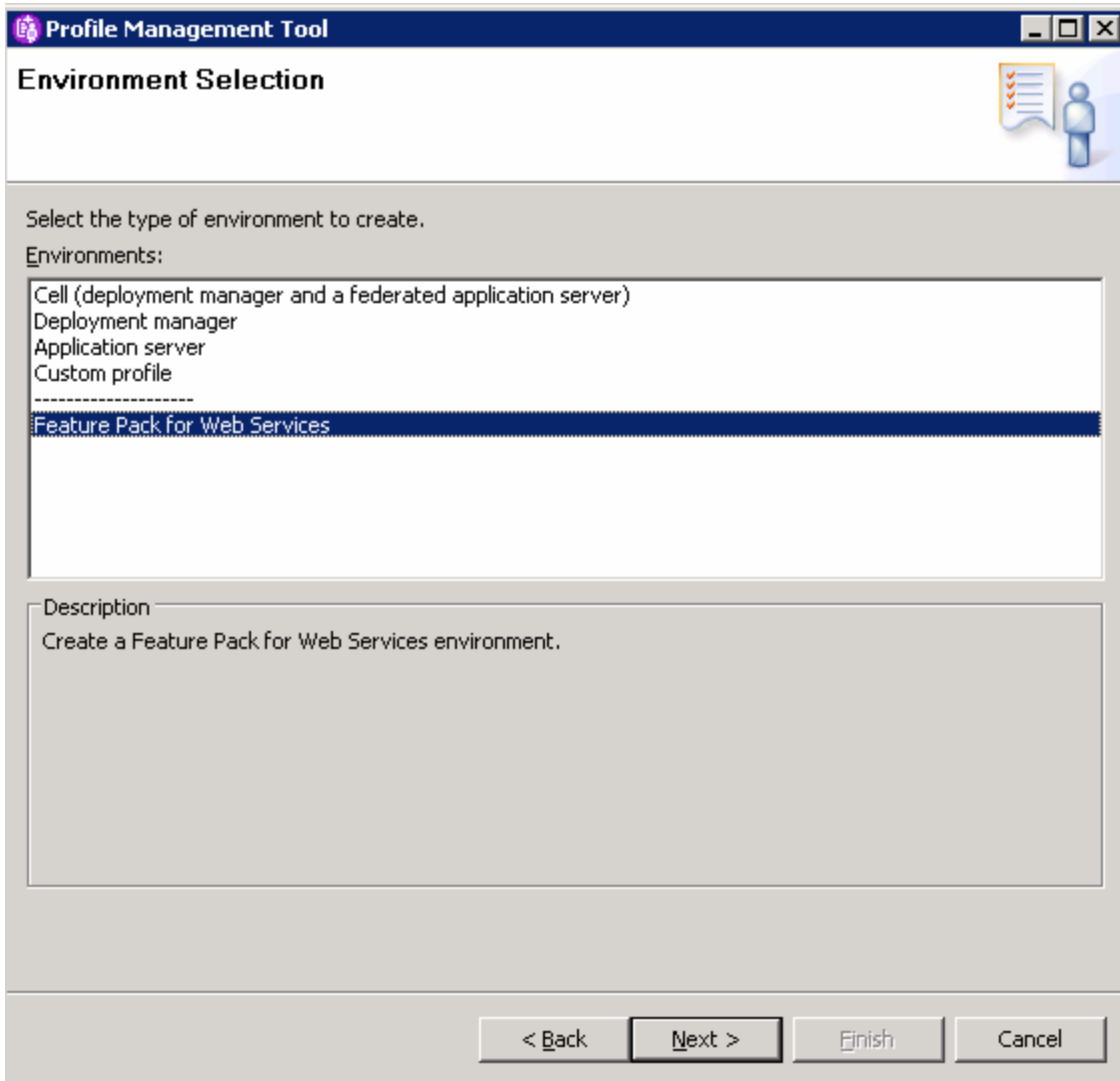
\_\_\_ 2. Step through the wizard to create a profile.

\_\_\_ a. On the welcome screen, click **Next**.

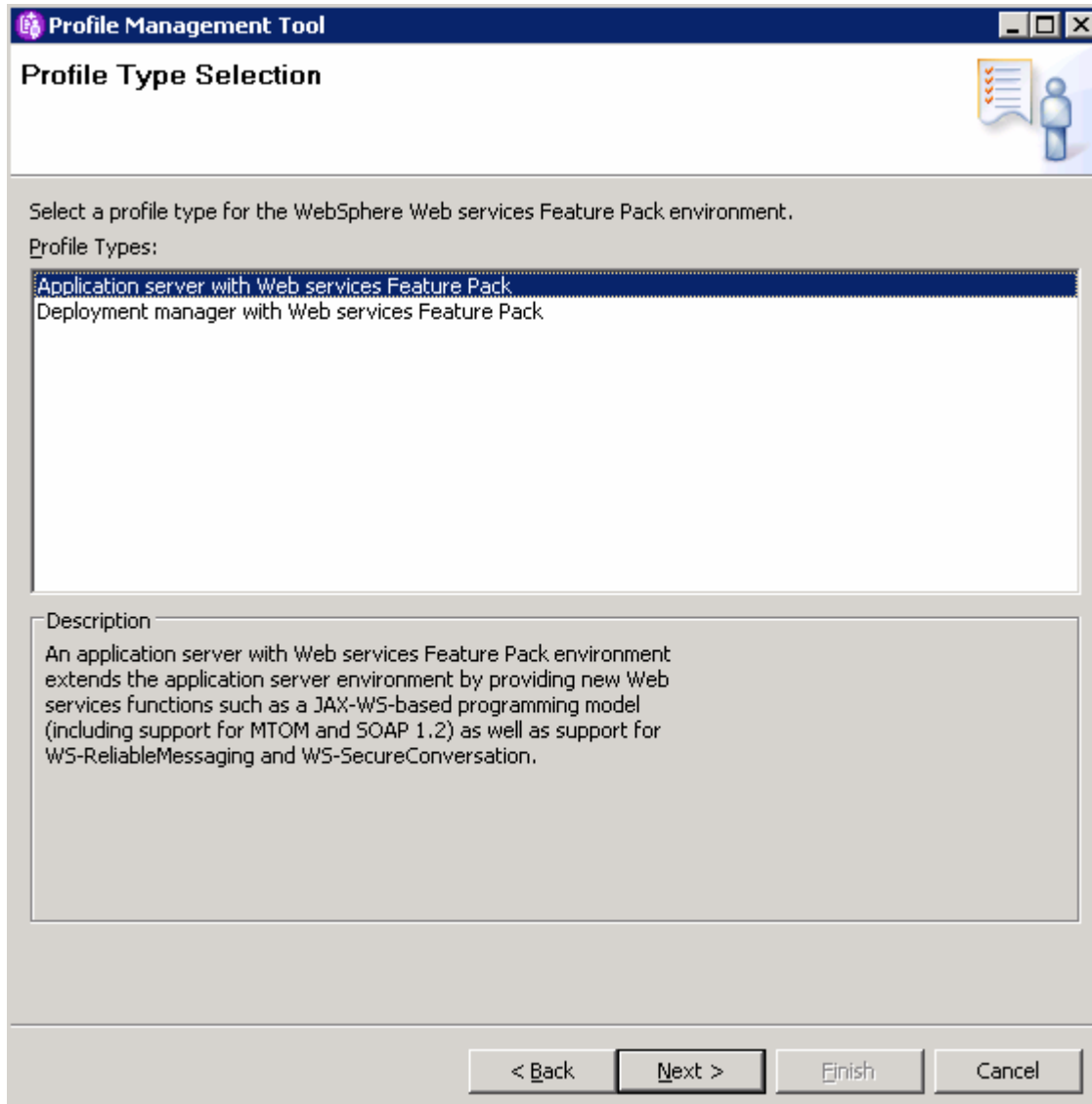
- 1) Optionally the PMT tool can be used to augment an existing profile, if profiles already exist on the system a panel offering the choice to create new profiles or augment existing profiles will be displayed. Choose to **Create** a new profile in this case.



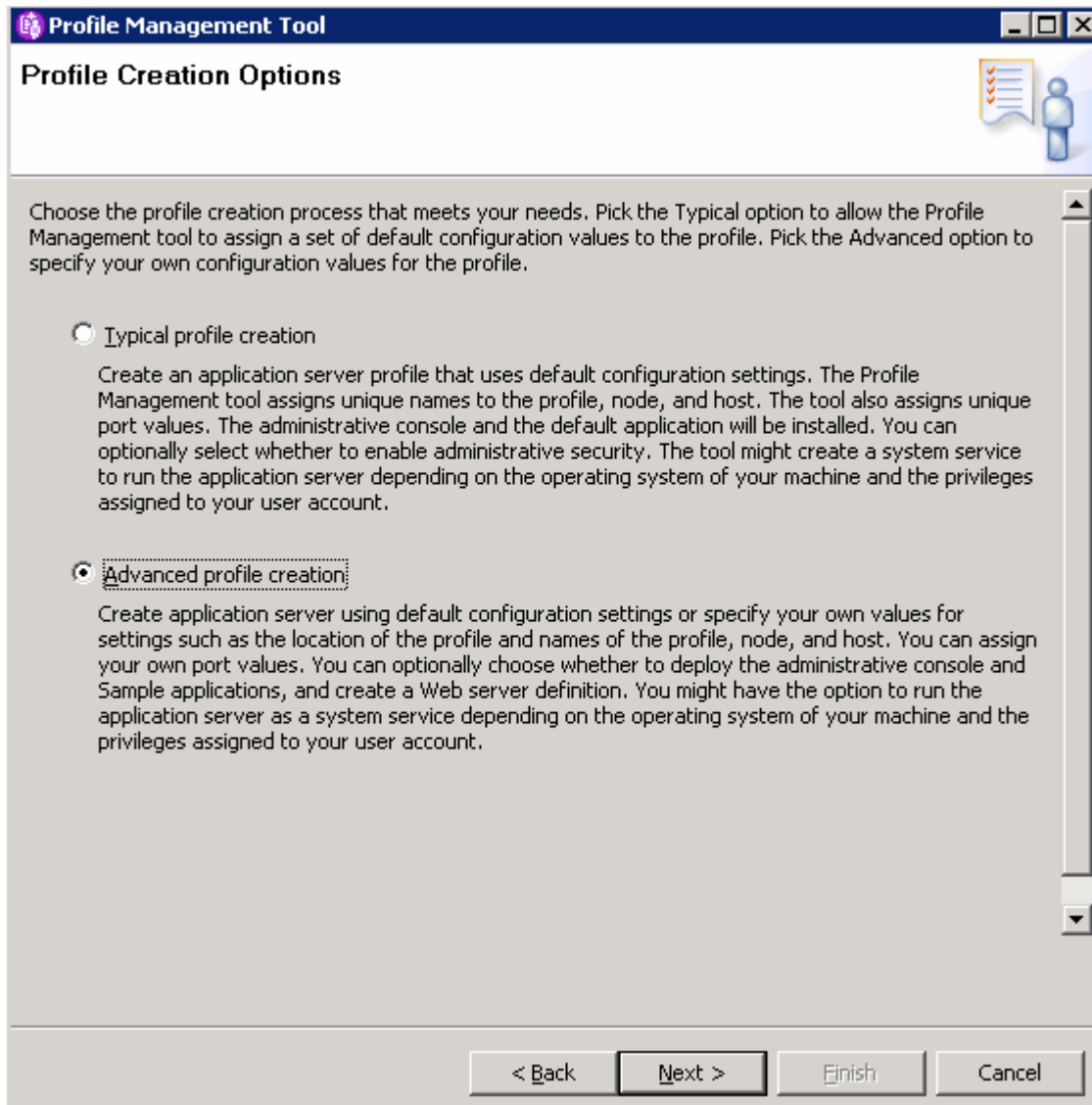
- \_\_\_ b. After installing the Feature Pack, there will be new options for profile creation. Select the option to create an **Feature Pack for Web Services** environment. This will allow you to create a profile with the additional configuration to support the advanced Web Services functions. Click **Next**.



\_\_\_ c. Select the option for **Application server with Web services Feature Pack**. Click **Next**.

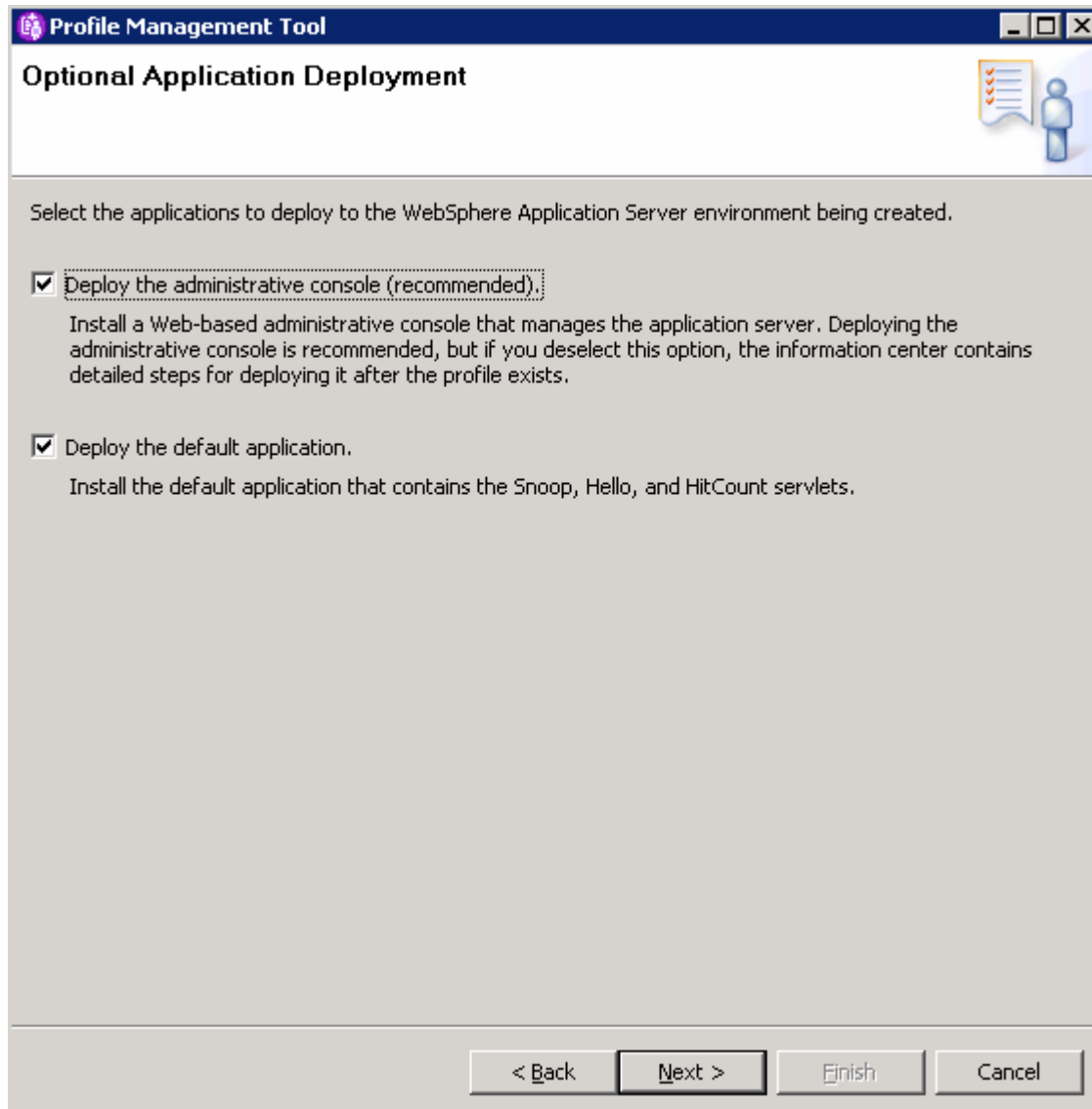


\_\_\_ d. Select the option for **Advanced profile creation**. Click **Next**.

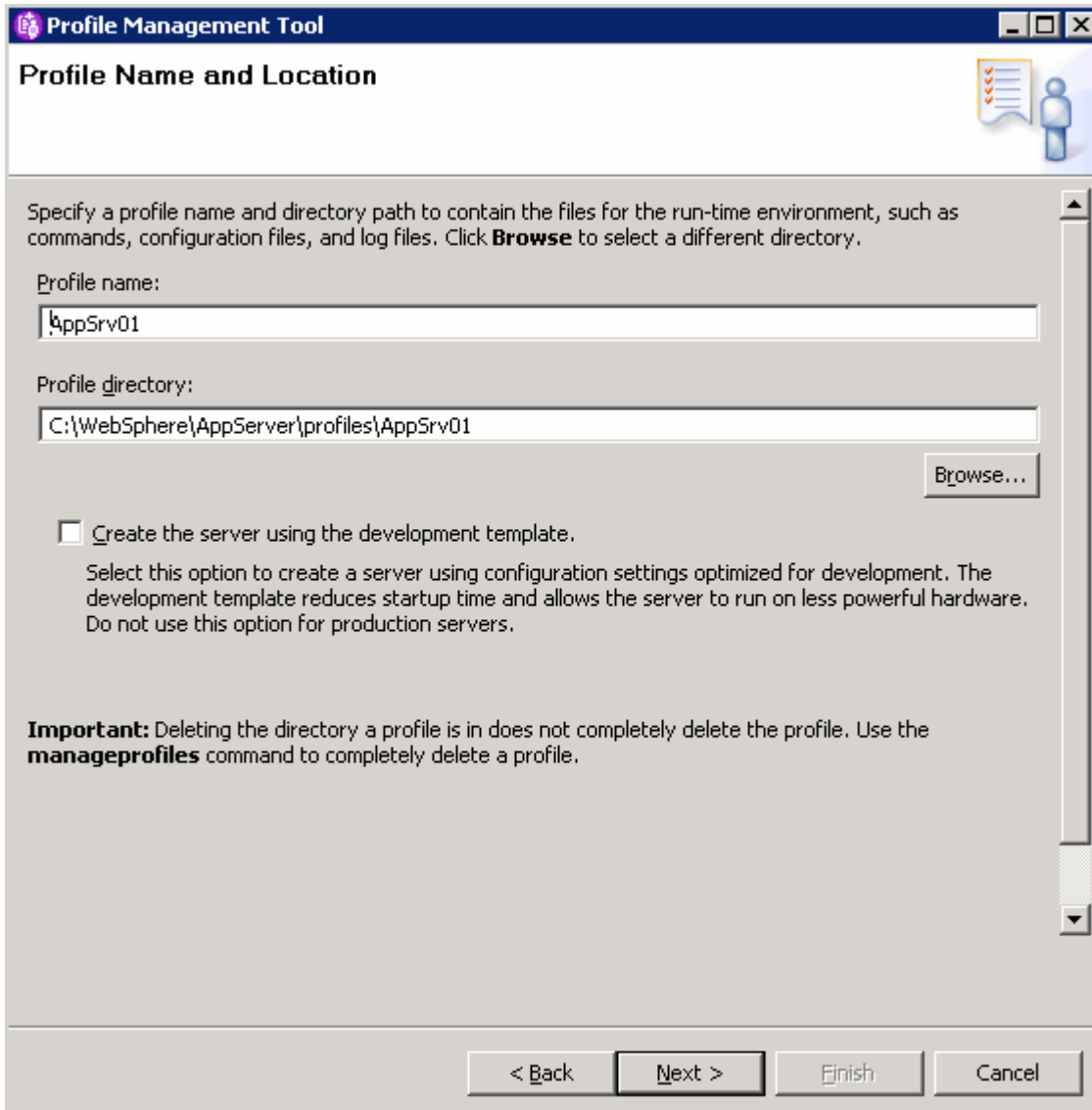




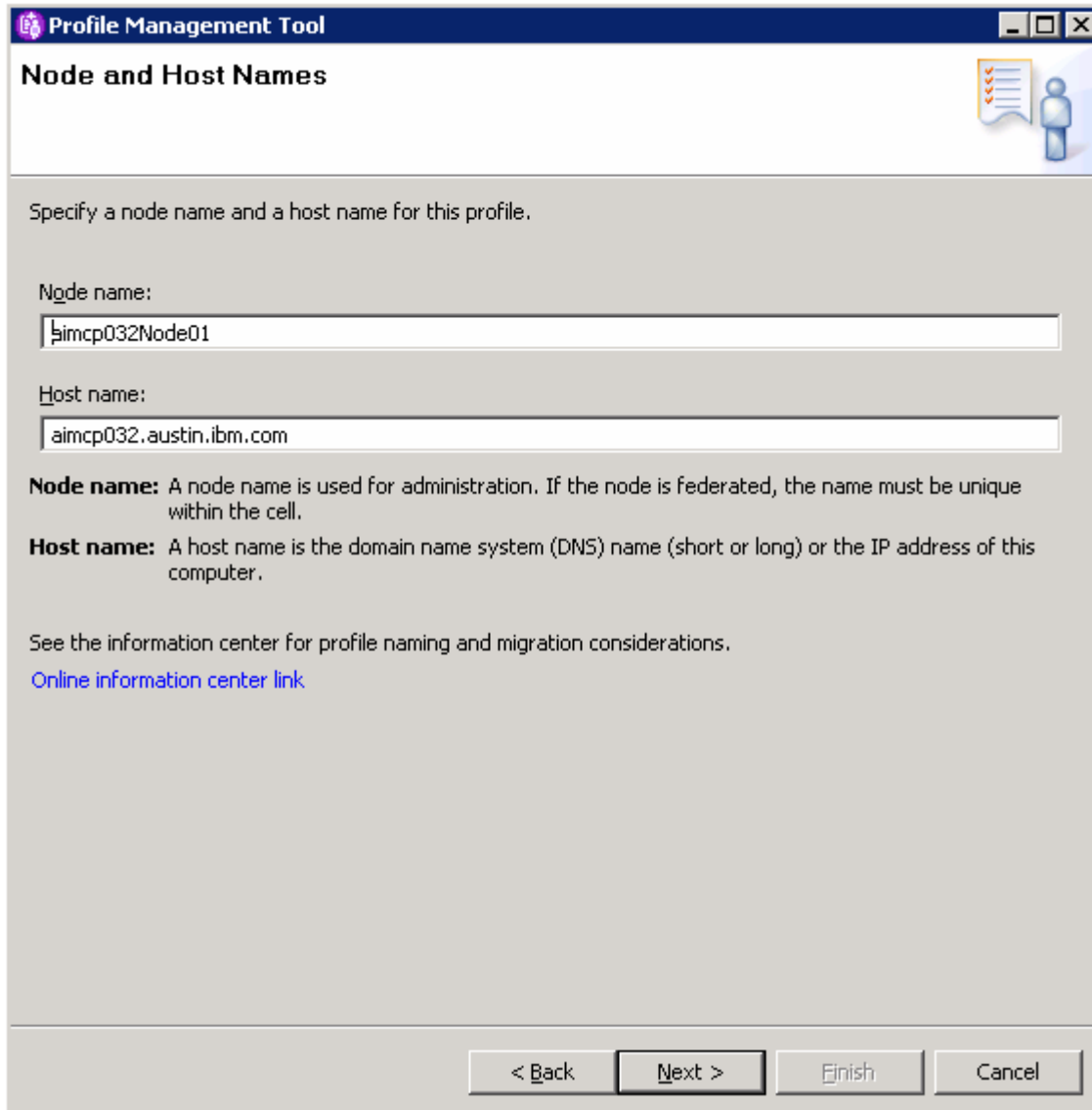
- \_\_\_ e. Insure both check boxes are selected for deploying the administrative console and deploying the default application. Click **Next**.



- \_\_\_ f. On the Profile Name and Location panel, retain all of the defaults. The Profile Management Tool will always supply default non-conflicting names during profile creation. Since this is the first profile being created under this installation of WebSphere Application Server, it will automatically become the default profile. As you create other profiles in the future, there will be an additional option on this screen asking if you would like to make the profile that you are creating the default profile. Click **Next** to continue.



\_\_\_ g. Leave the default Node and Host name on the next screen. Click **Next**.



The screenshot shows a Windows-style dialog box titled "Profile Management Tool" with a sub-header "Node and Host Names". The dialog contains the following elements:

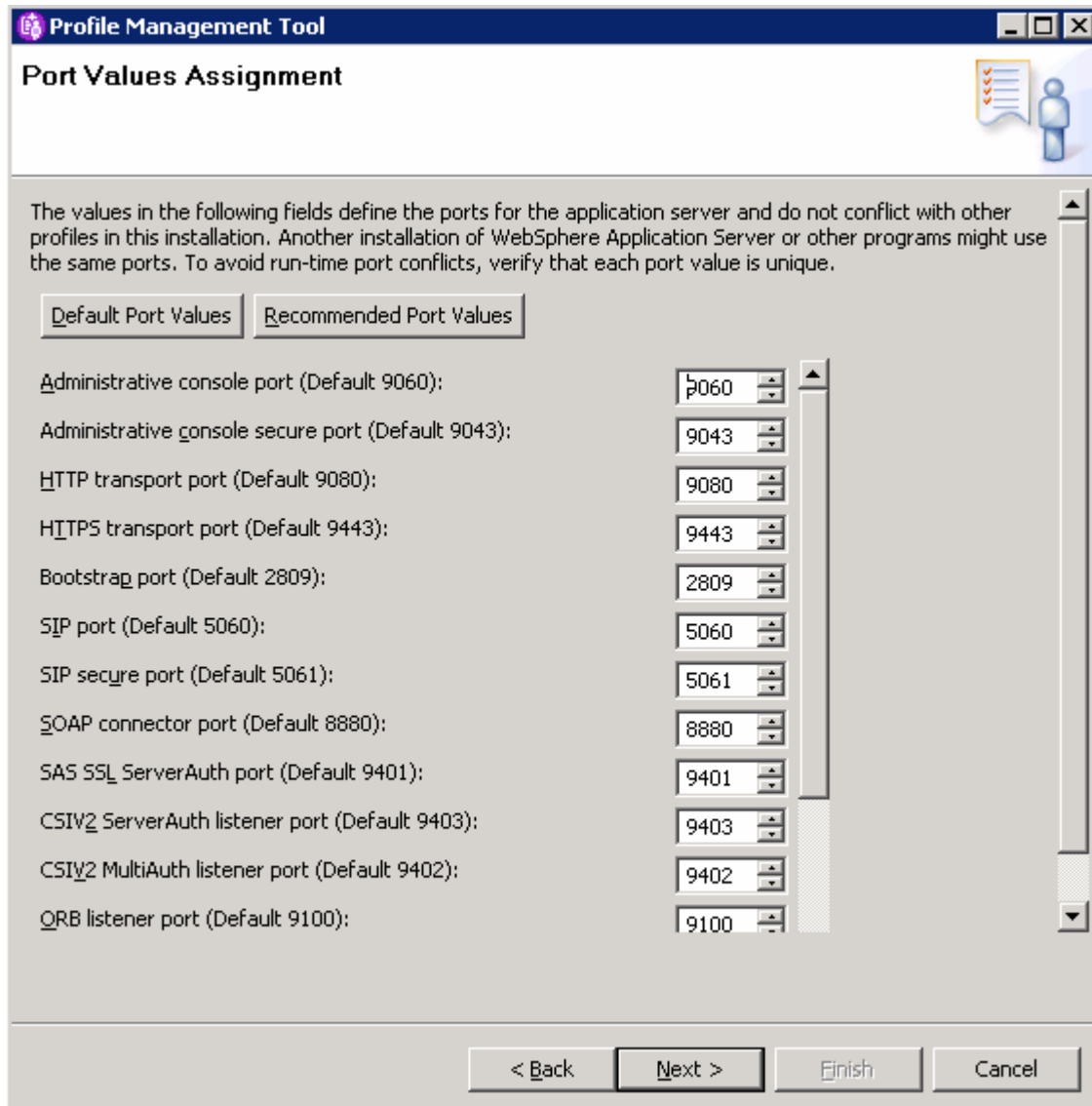
- A title bar with the text "Profile Management Tool" and standard window control buttons (minimize, maximize, close).
- A sub-header "Node and Host Names" in the top left, with a help icon (person with speech bubble) in the top right.
- Instructional text: "Specify a node name and a host name for this profile."
- A "Node name:" label followed by a text input field containing "aimcp032Node01".
- A "Host name:" label followed by a text input field containing "aimcp032.austin.ibm.com".
- Two explanatory paragraphs:
  - Node name:** A node name is used for administration. If the node is federated, the name must be unique within the cell.
  - Host name:** A host name is the domain name system (DNS) name (short or long) or the IP address of this computer.
- A link: "See the information center for profile naming and migration considerations." followed by a blue hyperlink "Online information center link".
- A footer bar with four buttons: "< Back", "Next >", "Finish", and "Cancel". The "Next >" button is highlighted with a dark border.

- \_\_\_ h. Uncheck the box next to **Enable administrative security**; you won't use this feature during this lab. Administrative security can be enabled after installation if desired. Click **Next**.

The screenshot shows a window titled "Profile Management Tool" with a sub-header "Administrative Security". The window contains the following elements:

- A scrollable text area with the instruction: "Choose whether to enable administrative security. To enable security, supply a user name and password for logging into administrative tools. This administrative user is created in a repository within the application server. After profile creation finishes, you can add more users, groups, or external repositories."
- A checkbox labeled "Enable administrative security" which is currently unchecked.
- Three text input fields labeled "User name:", "Password:", and "Confirm password:".
- A blue hyperlink: "Online information center link".
- A footer bar with four buttons: "< Back", "Next >", "Finish", and "Cancel".

- \_\_\_ i. The next panel lists all of the port values that will be assigned to the application server. Port values can be changed, though conflicts should be avoided. The PMT performs automatic port conflict resolution and suggests ports on which it doesn't find any conflicts. It is important to note any port values that differ from the defaults. Click **Next**.

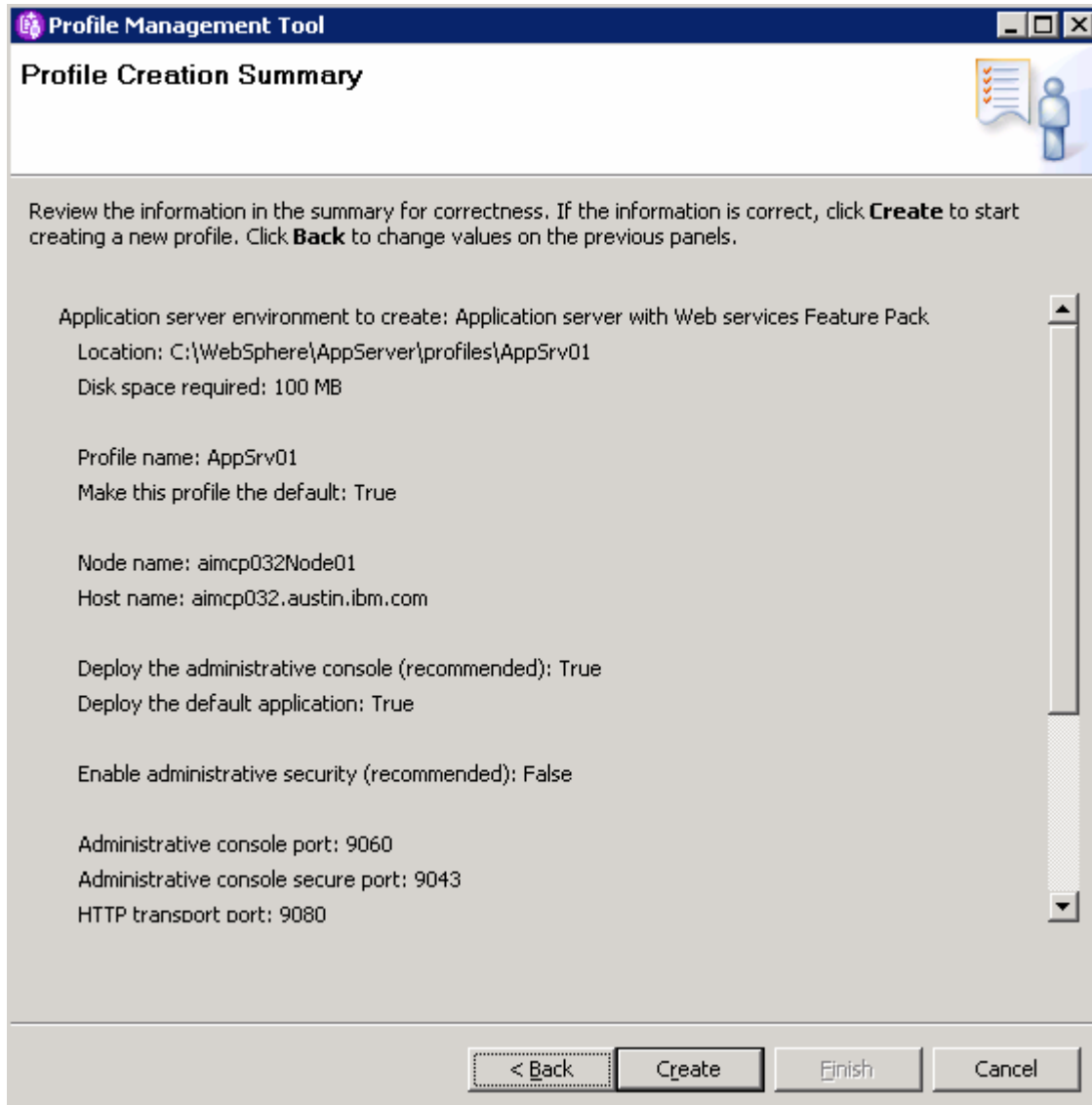


- \_\_\_ j. On a Windows platform, the next panel will be the Windows Service Definition screen. Uncheck the box next to Run the deployment manager process as a Windows service and click **Next**.

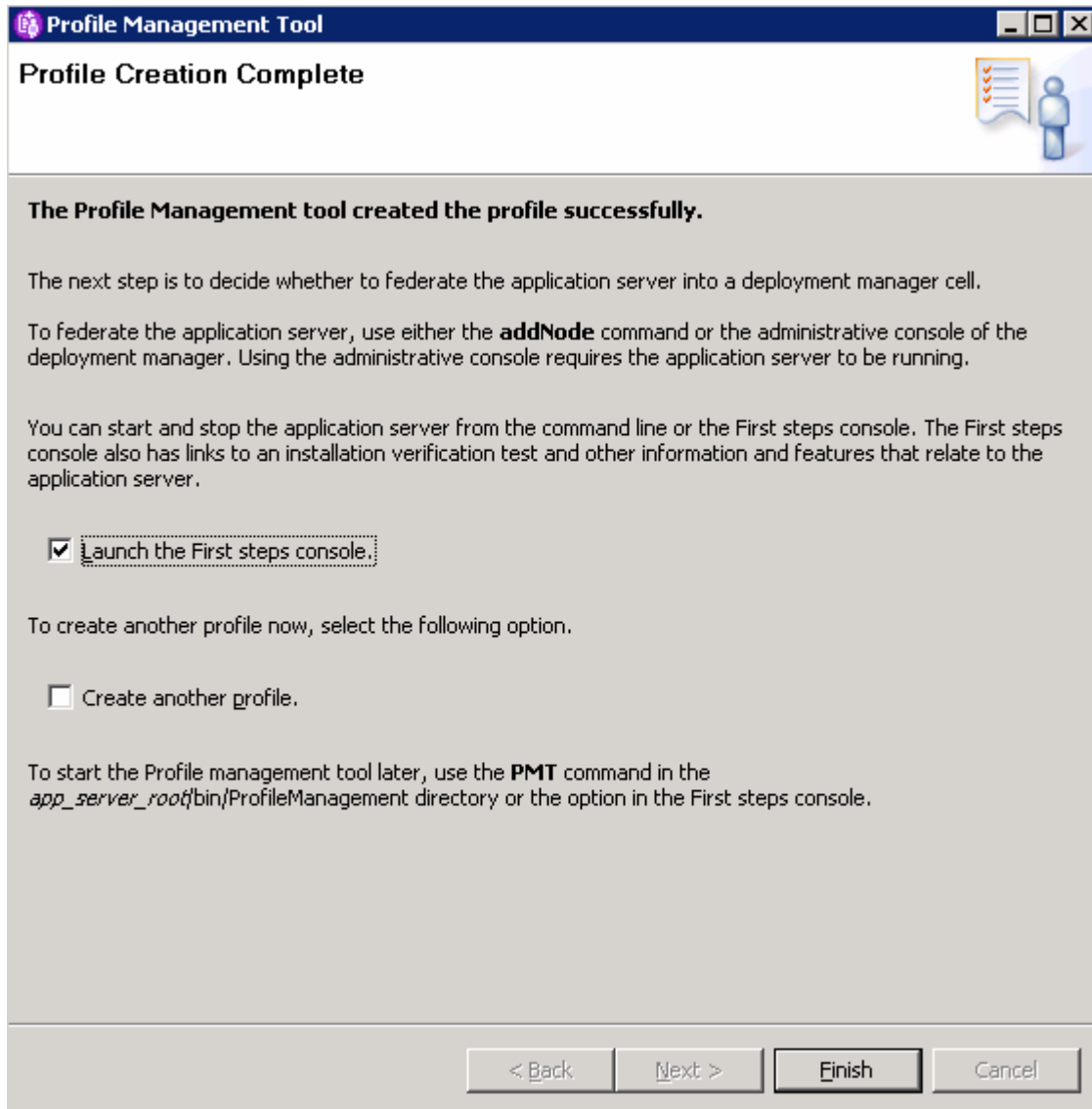
The screenshot shows a window titled "Profile Management Tool" with a sub-header "Windows Service Definition". The window contains the following elements:

- A header bar with the title "Profile Management Tool" and standard window controls (minimize, maximize, close).
- A sub-header "Windows Service Definition" with a help icon (person with speech bubble) on the right.
- Instructional text: "Choose whether to use a Windows service to run WebSphere Application Server. Windows services can start and stop WebSphere Application Server, and configure startup and recovery actions."
- A checkbox labeled "Run the application server process as a Windows service." which is currently unchecked.
- Two radio button options:
  - Selected: "Log on as a local system account."
  - Unselected: "Log on as a specified user account."
- Input fields for "User name:" (containing "Administrator") and "Password:" (empty).
- A "Startup type:" dropdown menu set to "Automatic".
- Text: "The user account that runs the Windows service must have the following user rights:" followed by a list item "- Log on as a service".
- Navigation buttons at the bottom: "< Back", "Next >", "Finish", and "Cancel".

- \_\_\_ k. The next panel gives the option to create a Web Server definition for this profile. Notice that the default is not to create a Web server definition. For this lab, there is no need to define a web server at this time. Leave the checkbox **unselected**. Click **Next** to continue.
- \_\_\_ l. The final screen allows you to review all of the profile creation details. Review the selections, and click **Create**.



- m. After the profile creation has completed, verify that the box next to **Launch the First steps console** is checked and click **Finish**.



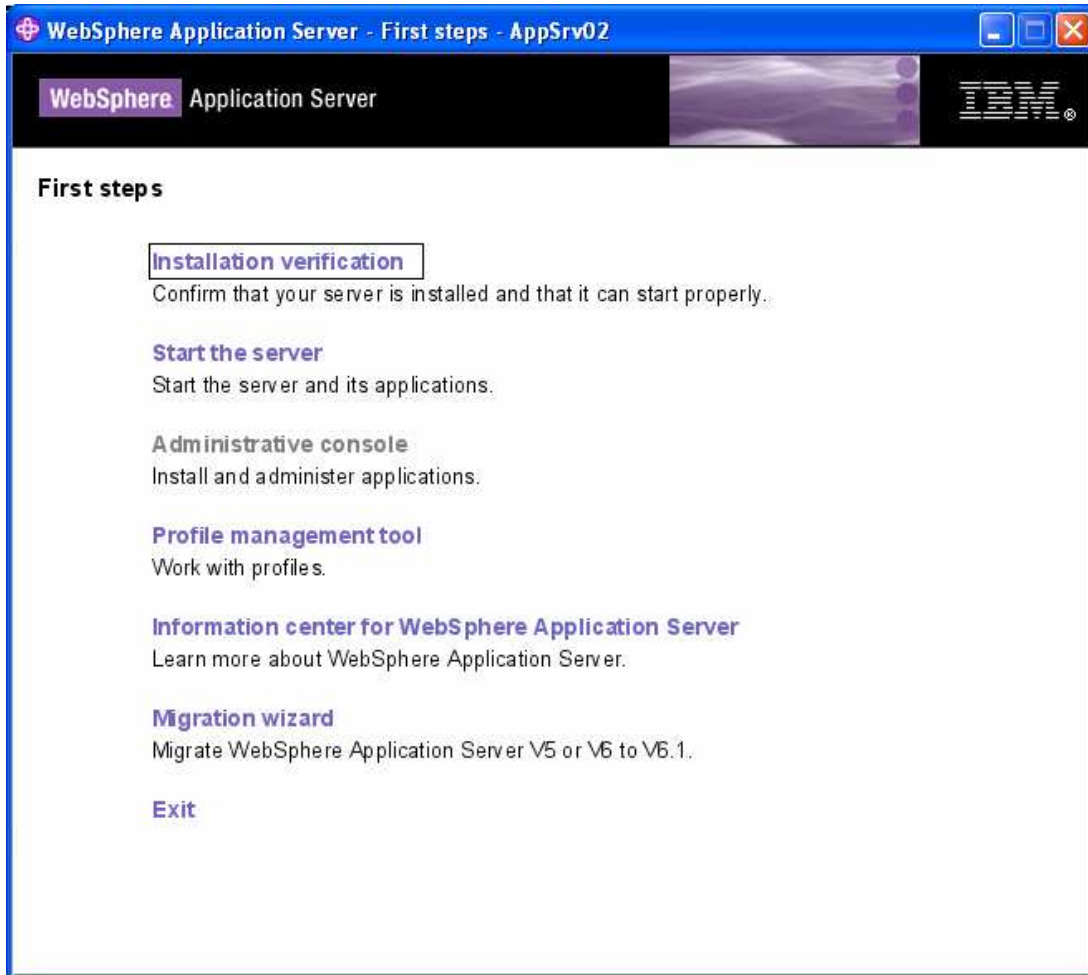


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## Part 4: Installation verification

This section will cover verifying the installation using the Installation Verification application and starting the Application Server.

- \_\_\_ 1. From the previous section the first steps console will be launched. If not, it can be manually invoked from FirstSteps in the <WASInstall>\profiles\AppSrv01\firststeps directory.
- \_\_\_ 2. From the first steps console, choose **Installation verification**.



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**Note:** Install verification will start the application server if it is not already started. The process will then verify the state of installation and the profile creation of the application server.

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- \_\_\_ 3. The output from the verification process should look like the following. There will be a number of warnings detected, this is to be expected. **Verify** that the verification succeeded. **Close** the windows when complete.

```

First steps output - Installation verification
IVTL0010I: Connecting to the WebSphere Application Server aimcp032.austin.ibm.com on port: 9080
IVTL0020I: The Installation Verification Tool cannot connect to WebSphere Application Server; waiting for the server to start.
Start running the following command:cmd.exe /c "C:\WebSphere\AppServer\profiles\AppSrv01\bin\startServer.bat" server1 -profileName Ap
>ADMU0116I: Tool information is being logged in file
> C:\WebSphere\AppServer\profiles\AppSrv01\logs\server1\startServer.log
>ADMU0128I: Starting tool with the AppSrv01 profile
>ADMU3100I: Reading configuration for server: server1
>ADMU3200I: Server launched. Waiting for initialization status.
>ADMU3000I: Server server1 open for e-business; process id is 2660
IVTL0015I: WebSphere Application Server aimcp032.austin.ibm.com is running on port: 9080 for profile AppSrv01
Testing server using the following URL:http://aimcp032.austin.ibm.com:9080/ivt/ivtserver?parm2=ivtServlet
IVTL0050I: Servlet engine verification status: Passed
Testing server using the following URL:http://aimcp032.austin.ibm.com:9080/ivt/ivtserver?parm2=ivtAddition.jsp
IVTL0055I: JavaServer Pages files verification status: Passed
Testing server using the following URL:http://aimcp032.austin.ibm.com:9080/ivt/ivtserver?parm2=ivtEjb
IVTL0060I: Enterprise bean verification status: Passed
IVTL0035I: The Installation Verification Tool is scanning the file C:\WebSphere\AppServer\profiles\AppSrv01\logs\server1\SystemOut.log for
[6/20/07 20:34:41:515 CDT] 0000000a WSKeystore W CWPki0041W: One or more key stores are using the default password.
[6/20/07 20:34:56:296 CDT] 0000000a ThreadPooMgr W WSVR0626W: The ThreadPool setting on the ObjectRequestBroker service is c
IVTL0040I: 2 errors/warnings are detected in the file C:\WebSphere\AppServer\profiles\AppSrv01\logs\server1\SystemOut.log
IVTL0070I: The Installation Verification Tool verification succeeded.
IVTL0080I: The installation verification is complete.

```

- \_\_\_ 4. Installation logs can be found in **<WAS HOME>\logs\install\webservices**.
- \_\_\_ 5. Profile creation logs are still found under **<WAS HOME>\logs\manageprofiles**.
- \_\_\_ 6. If you run the versionInfo command now, it will display additional information about the Feature Pack.

## **What you did in this exercise**

This lab showed how to install the WebSphere Application Server V6.1 Feature Pack for Web Services and verify the installation.

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