

Web server installation



Unit objectives

After completing this unit, you should be able to:

- Explain the installation process for IBM HTTP Server
- Verify the installation of IBM HTTP Server
- Explain the installation process for WebSphere Customization Toolbox
- Install web server plug-ins for WebSphere Application Server
- Use the Plug-in Configuration Tool to configure the web server plug-in

Topics

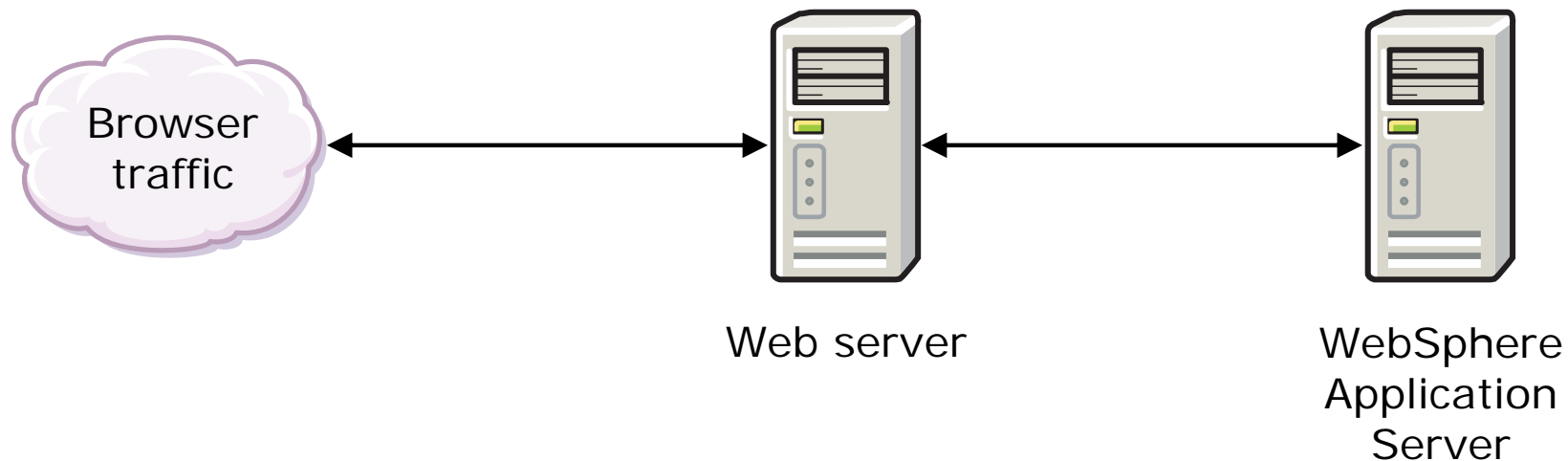
- Installing IBM HTTP Server
- WebSphere Customization Toolbox overview
- Installing web server plug-ins

Topic: Installing IBM HTTP Server



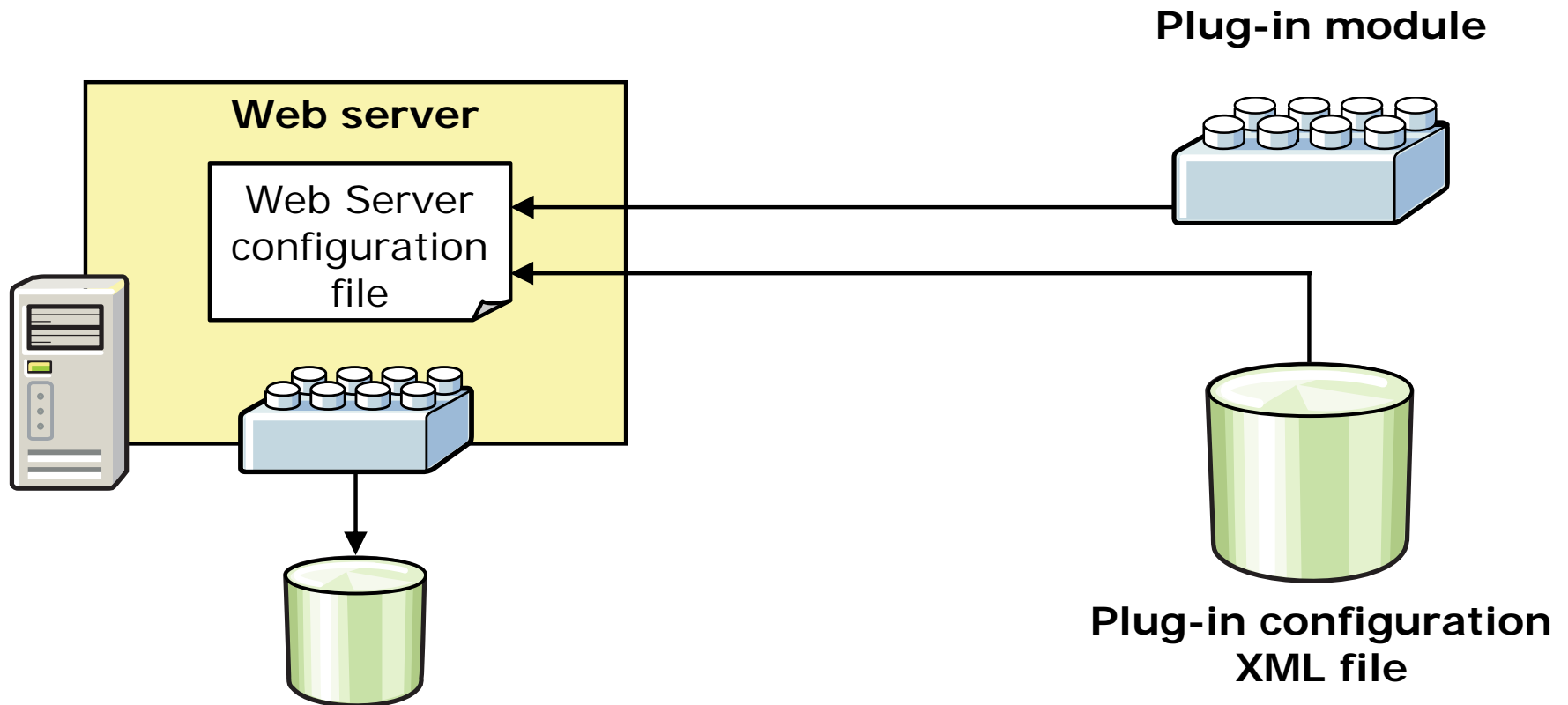
Web servers for WebSphere Application Server

- Supported web servers include:
 - Apache HTTP Server
 - Lotus Domino Web Server
 - IBM HTTP Server
 - Microsoft Internet Information Services
 - Sun Java System Web Server
- For the latest specifics on versions and patch levels, check:
 - <http://www-01.ibm.com/support/docview.wss?uid=swg27038218>



Web server plug-in installation

- Plug-in is a separate installation package
- Typical plug-in installation action
 - Installs the plug-in binary files for the web server
 - Updates the web server configuration file
















IBM HTTP Server: Installation

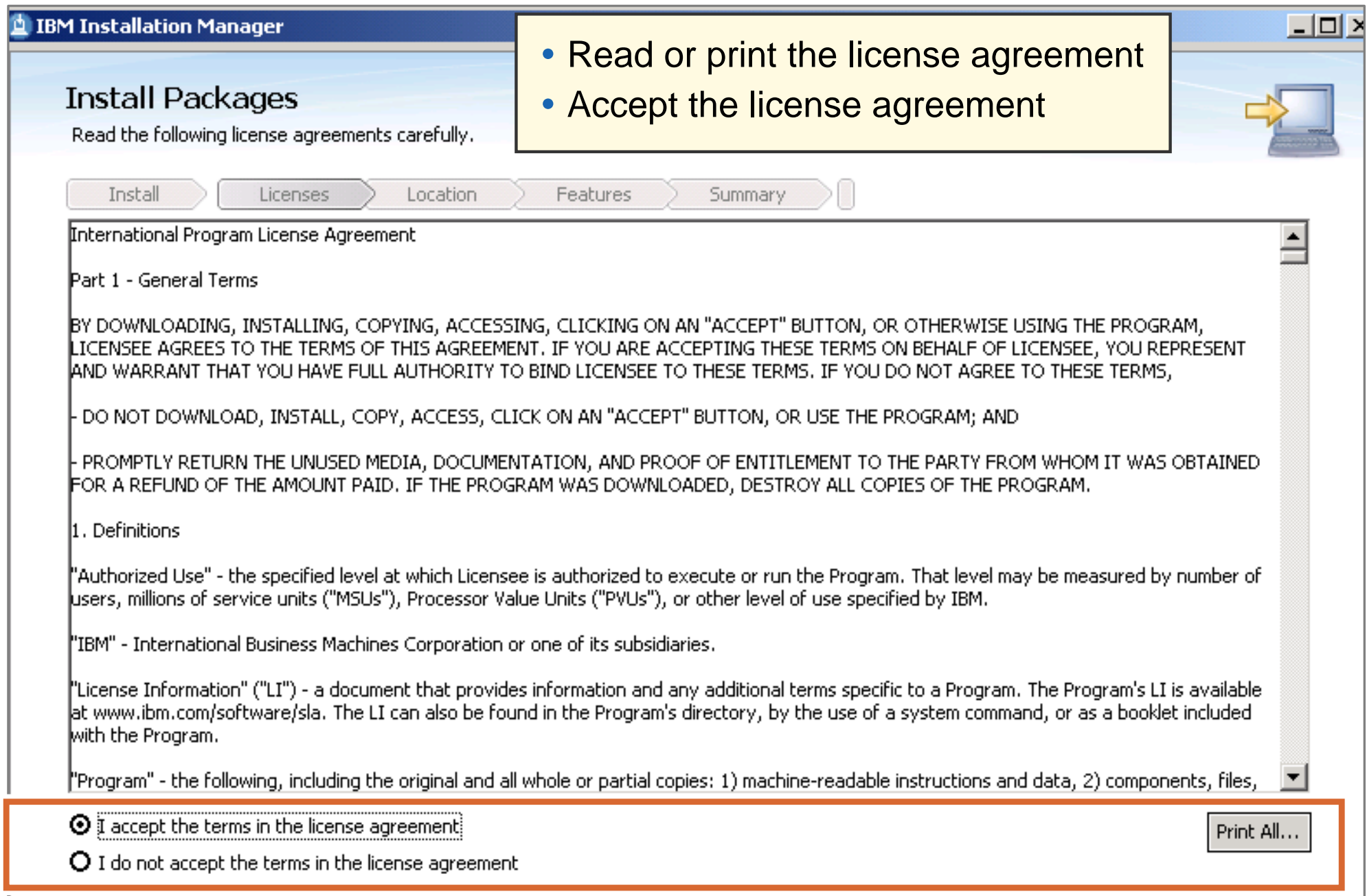
- IBM Installation Manager used for product installation
- Silent installation
 - Uses a response file as an input

```
install -options "responsefile.txt" -silent
```
- Option to change the installation location
 - Support for local and remote web server installations
- User ID and password with appropriate authority is required for Windows platform

IBM HTTP Server: Select package

Installation Packages	Status	Vendor
<div> <div>▼</div> <div> <input type="checkbox"/>  Application Client for IBM WebSphere Application Server </div> <div> <input type="checkbox"/>  Version 8.5.5.0 </div> </div>		IBM
<div> <div>▼</div> <div> <input checked="" type="checkbox"/>  IBM HTTP Server for WebSphere Application Server </div> <div> <input checked="" type="checkbox"/>  Version 8.5.5.0 </div> </div>	Will be installed	IBM
<div> <div>▼</div> <div> <input type="checkbox"/>  IBM WebSphere Application Server Network Deployment </div> <div> <input type="checkbox"/>  Version 8.5.5.0 </div> <div> <input type="checkbox"/>  Pluggable Application Client for IBM WebSphere Application Server </div> </div>	Installed	IBM
<div> <div>▼</div> <div> <input type="checkbox"/>  Web Server Plug-ins for IBM WebSphere Application Server </div> <div> <input type="checkbox"/>  Version 8.5.5.0 </div> </div>		IBM
<div> <div>▼</div> <div> <input type="checkbox"/>  WebSphere Customization Toolbox </div> <div> <input type="checkbox"/>  Version 8.5.5.0 </div> </div>		IBM

IBM HTTP Server: License agreement



IBM Installation Manager

Install Packages
Read the following license agreements carefully.

- Read or print the license agreement
- Accept the license agreement

Install Licenses Location Features Summary

International Program License Agreement

Part 1 - General Terms

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"IBM" - International Business Machines Corporation or one of its subsidiaries.

"License Information" ("LI") - a document that provides information and any additional terms specific to a Program. The Program's LI is available at www.ibm.com/software/sla. The LI can also be found in the Program's directory, by the use of a system command, or as a booklet included with the Program.

"Program" - the following, including the original and all whole or partial copies: 1) machine-readable instructions and data, 2) components, files,

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☐ I do not accept the terms in the license agreement

Print All...

IBM HTTP Server: Installation directory and package group

Install Packages

A package group is a location that contains one or more packages. Some compatible packages can be into a common package group and will share a common user interface. Select an existing package group or a new one.

Install Licenses Location Features Summary

☐ Use the existing package group
☒ Create a new package group

Package Group Name	Installation Directory
IBM HTTP Server V8.5	/opt/IBM/HTTPServer

Package Group Name: IBM HTTP Server V8.5

Installation Directory: /opt/IBM/HTTPServer

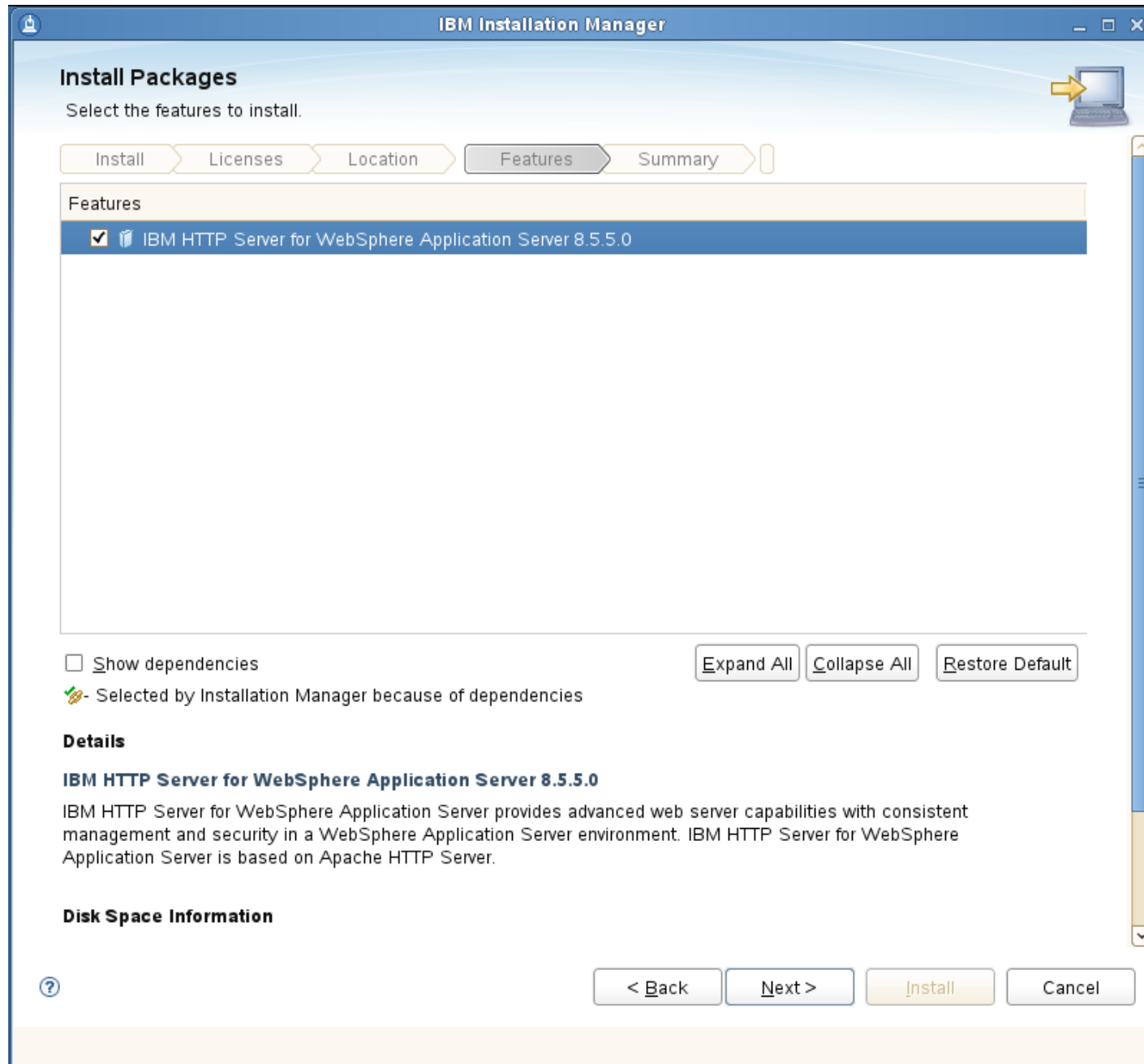
Details
Shared Resources Directory: /opt/IBM/IMShared

Disk Space Information

Volume	Available Space
/	18.29 GB

- Create a package group
- Specify the directory location for the product installation

IBM HTTP Server: Features



IBM HTTP Server: Port values

Install Packages

Fill in the configurations for the packages.

Install
Licenses
Location
Features
Summary

<div> <div>IBM HTTP Server for WebSph</div> <div>Web Server Configuration</div> </div>	<h4>Configuration for IBM HTTP Server for WebSphere</h4> <h5>Web Server Configuration</h5> <p>Specify a port number for IBM HTTP Server to comm default port is already in use, then change to anothe Server without root or Administrative privileges might</p> <div> HTTP port: <input type="text" value="80"/> </div>
--	--

- Verify the assigned port values

IBM HTTP Server: Summary

Install Packages

Review the summary information.

[Install](#)[Licenses](#)[Location](#)[Features](#)[Summary](#)

Target Location

Package Group Name: IBM HTTP Server V8.5

Installation Directory: /opt/IBM/HTTPServer

Shared Resources Directory: /opt/IBM/IMShared

Packages

Packages

IBM HTTP Server for WebSphere Application Server 8.5.5.0

Environment

English

Disk Space Information

Total Available Space

/

23.27 GB

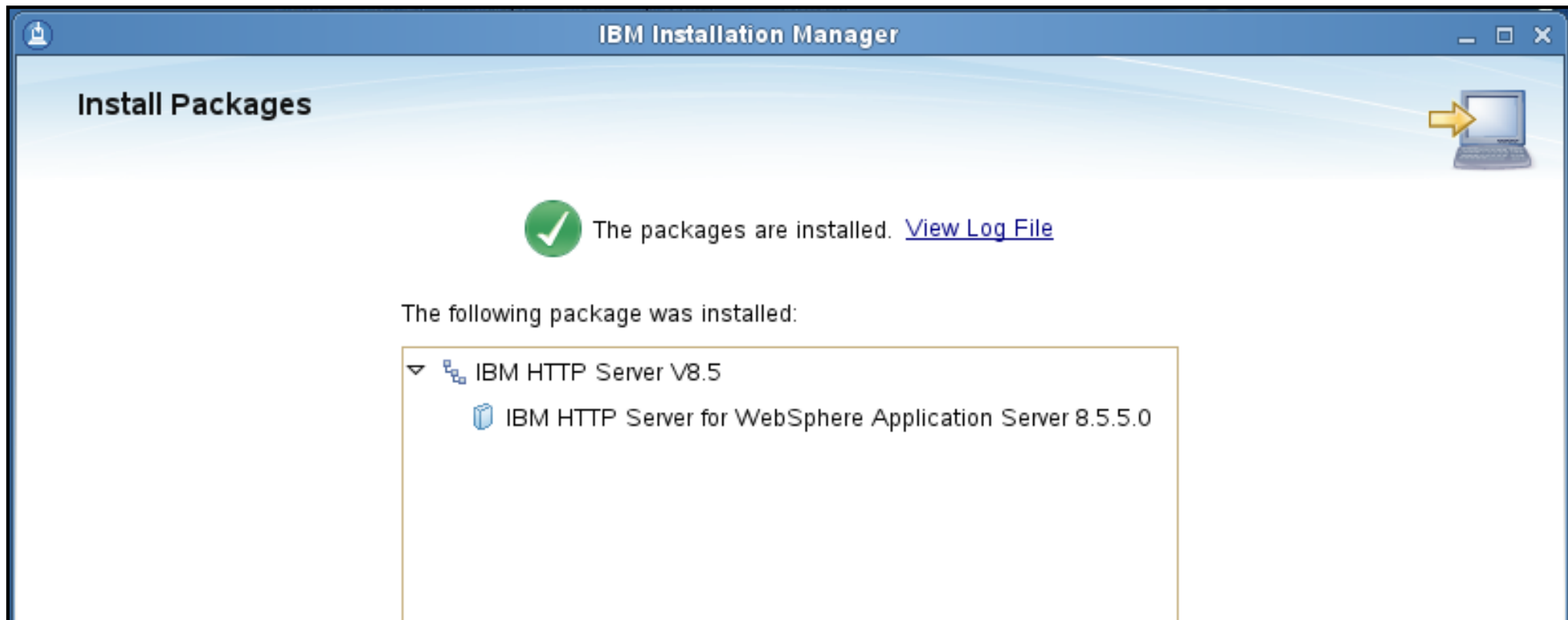
Total Download Size: 31.49 MB

Total Installation Size: 209.95 MB

► Repository Information

[< Back](#)[Next >](#)[Install](#)[Cancel](#)

IBM HTTP Server: Results



- Review the results

Topic: WebSphere Customization Toolbox overview



WebSphere Customization Toolbox

- WebSphere Customization Toolbox includes tools for managing, configuring, and migrating various parts of the WebSphere environment
 - Plug-ins Configuration Tool (PCT) is available
 - Other tools that existed earlier in previous versions are incorporated into the WebSphere Customization Toolbox group of tools
- WebSphere Customization Toolbox comes in two offerings with varying tool combinations based on the platform
 - Embedded WebSphere Customization Toolbox is included as part of a WebSphere Application Server installation
 - Stand-alone WebSphere Customization Toolbox

WebSphere Customization Toolbox: Offerings

- Embedded WebSphere Customization Toolbox
 - Included with WebSphere Application Server installation
 - Available on all architectures wherever WebSphere Application Server is supported
 - Contains Profile Management Tool (PMT) and Configuration Migration Tool (CMT)
- Stand-alone WebSphere Customization Toolbox
 - Distributed as a product offering
 - A command-line version comes with it
 - Operates as a 32-bit component on a 32-bit JDK in either a 32 or 64 operating system
 - Contains Web Server Plug-ins Configuration Tool (PCT), Remote Installation for IBM i Tool, z/OS Profile Management Tool (zPMT), and z/OS Migration Management Tool (zMMT)

WebSphere Customization Toolbox: Installation

- Installation Manager is used to install WebSphere Customization Toolbox
- Each underlying tool can be selected individually during installation
- WebSphere Customization Toolbox maintains a repository to store its metadata
 - Its location is tied to the user who started WebSphere Customization Toolbox
 - `C:\Documents and Settings\Administrator\AppData\Local\IBM\WebSphere (Windows)`
 - `/root/.ibm/WebSphere/AppServer/ (UNIX)`
- Multiple launches of WebSphere Customization Toolbox allowed if there are no workspace collisions

WebSphere Customization Toolbox: Selective tool installation

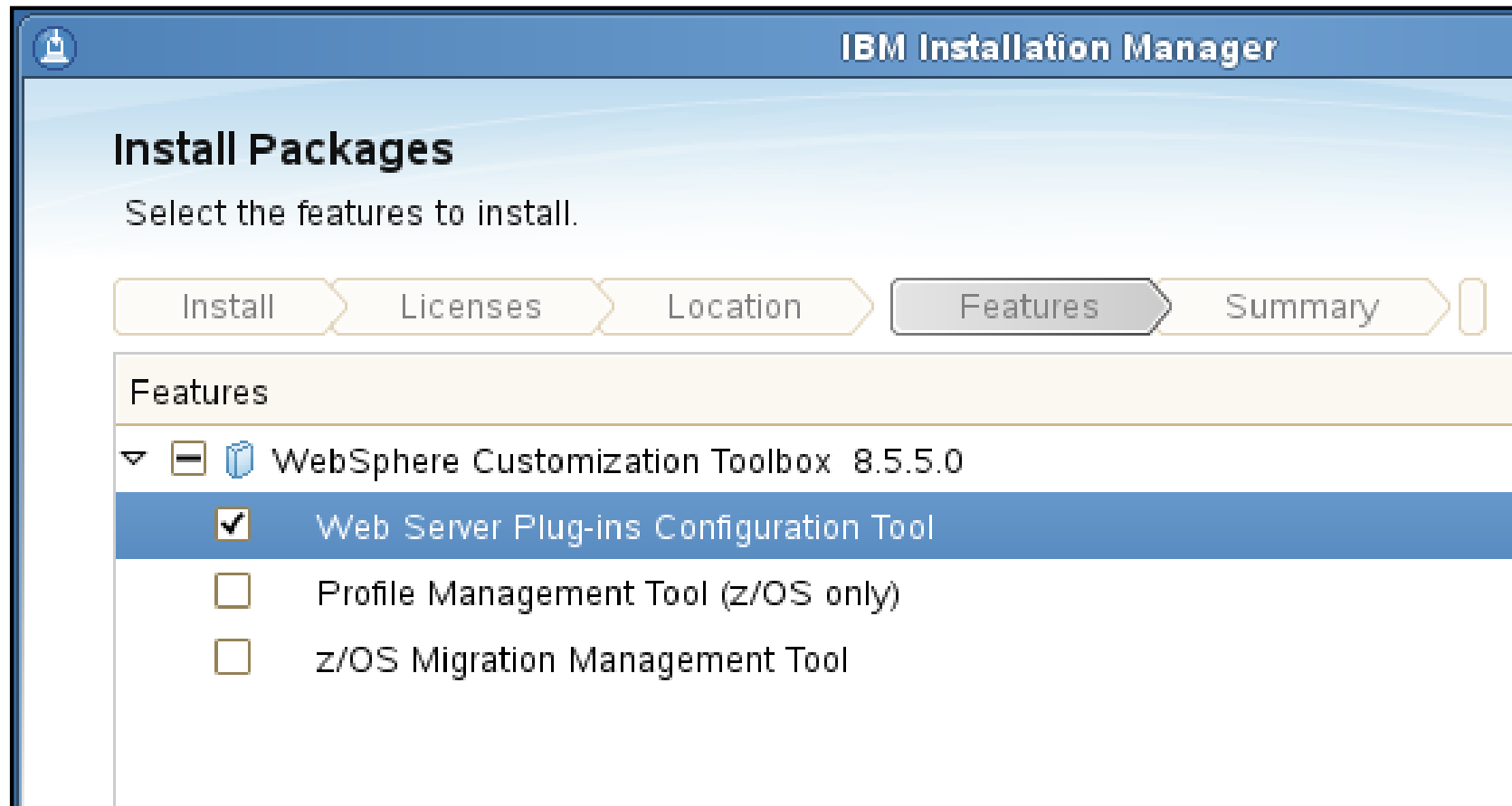
Install Packages

Select packages to install:



Installation Packages	Status	Vendor	License Key Type
<div>▼ <input type="checkbox"/> Application Client for IBM WebSphere Application Server</div> <div><input type="checkbox"/> Version 8.5.5.0</div>		IBM	
<div>▼ <input type="checkbox"/> IBM HTTP Server for WebSphere Application Server</div> <div><input type="checkbox"/> Version 8.5.5.0</div>	Installed		
	Installed	IBM	
<div>▼ <input type="checkbox"/> IBM WebSphere Application Server Network Deployment</div> <div><input type="checkbox"/> Version 8.5.5.0</div>	Installed		
	Installed	IBM	
<input type="checkbox"/> Pluggable Application Client for IBM WebSphere Application			
<div>▼ <input type="checkbox"/> Web Server Plug-ins for IBM WebSphere Application Server</div> <div><input type="checkbox"/> Version 8.5.5.0</div>	Installed		
	Installed	IBM	
<div>▼ <input checked="" type="checkbox"/> WebSphere Customization Toolbox</div> <div><input checked="" type="checkbox"/> Version 8.5.5.0</div>	Will be installed	IBM	

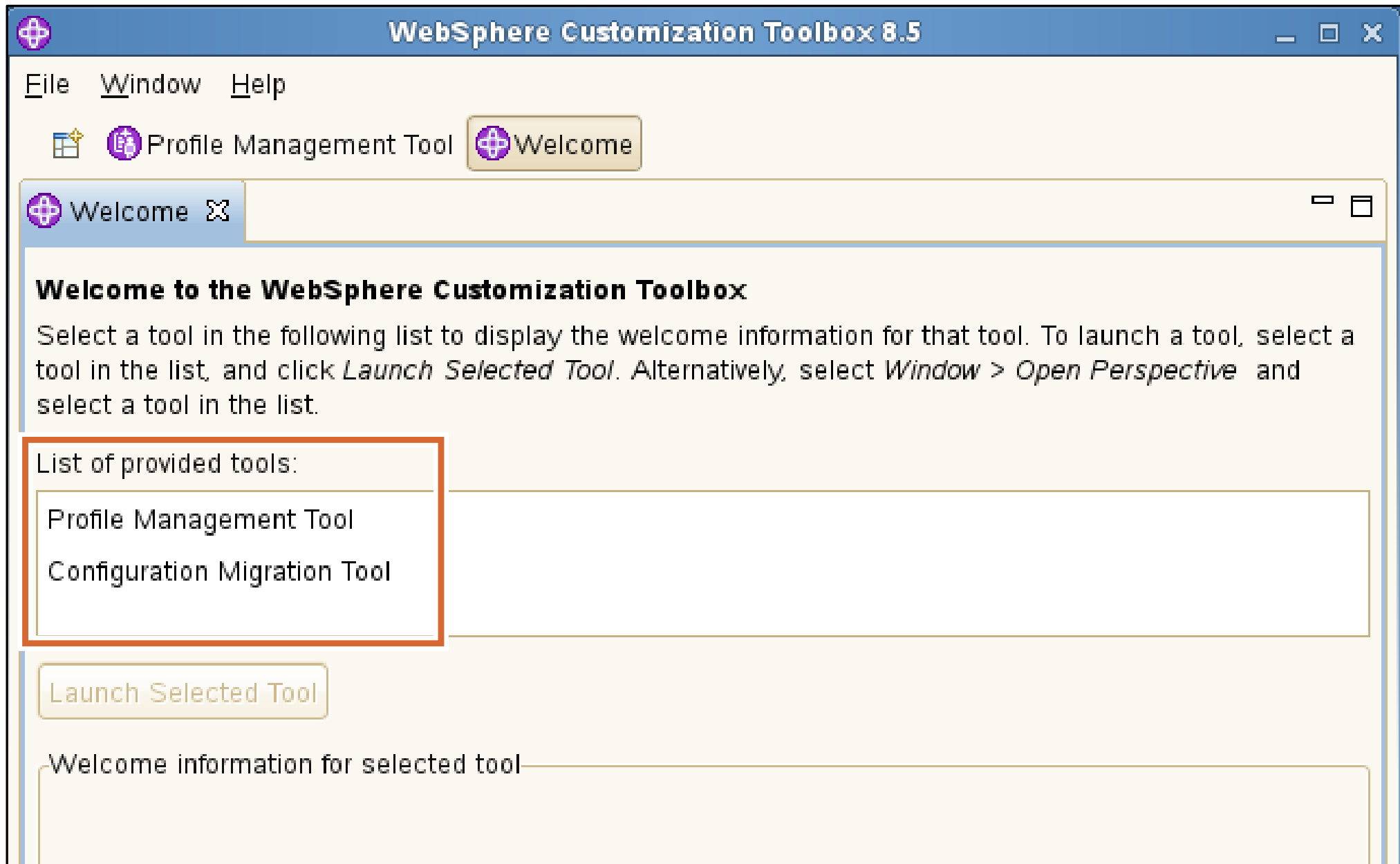
WebSphere Customization Toolbox: Features



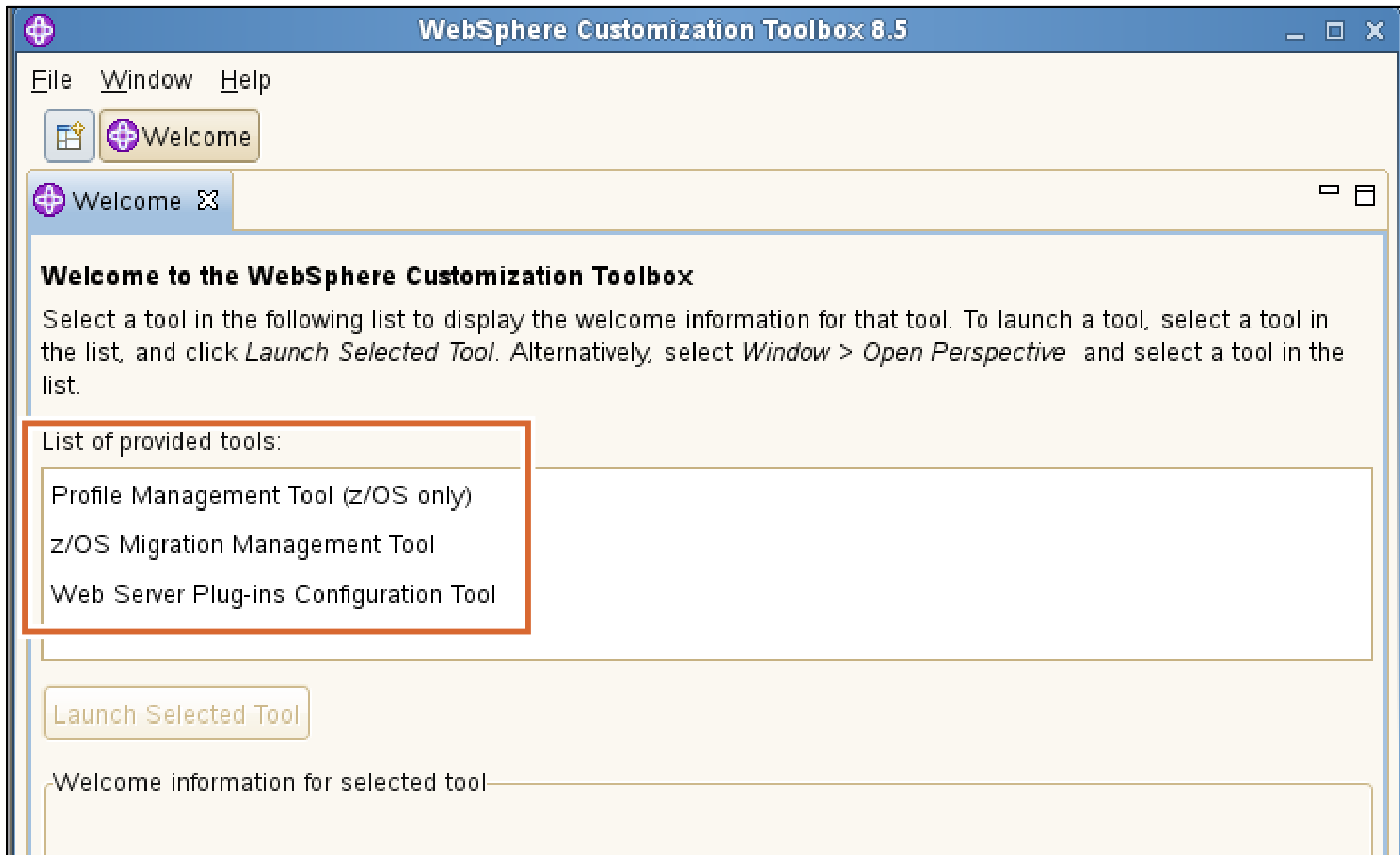
Starting WebSphere Customization Toolbox

- For Windows and Linux systems, a Start menu shortcut is created during installation
- On all supported platforms, a shell script can be used to start WebSphere Customization Toolbox
 - Stand-alone: `<WCT-INSTALL-HOME>\WCT\wct.sh(bat)`
 - Embedded: `<WAS_INSTALL-HOME>\bin\ProfileManagement\WCT\wct.sh(bat)`
- A `pmt.sh(bat)` shell script is provided for compatibility with earlier versions but is deprecated in version 8

Embedded WebSphere Customization Toolbox



Stand-alone WebSphere Customization Toolbox



WebSphere Customization Toolbox: Command line

- WebSphere Customization Toolbox stand-alone includes a command-line version
- Can be used to configure a web server to use an application server as a hosting server
 - For example: `wctcmd.sh -tool pct -createDefinitionLocation -defLocName WCTCmdTest2 -defLocPathname/WAS85/Plugins -response/Temp/response.wct.txt`
- Command-line arguments are documented in the information center

WebSphere Customization Toolbox: Restrictions

- You cannot have the following tools or two instances of either tool open at the same time:
 - Profile Management Tool for distributed operating systems
 - Migration Management Tool for distributed operating systems
- You cannot have the following tools within the WebSphere Customization Toolbox or two instances of any one tool open at the same time:
 - Web Server Plug-ins Configuration Tool
 - Profile Management Tool (z/OS only), which runs on Windows or Linux operating systems that are based on Intel
 - z/OS Migration Management Tool, which runs on Windows or Linux operating systems that are based on Intel

Topic: Installing web server plug-ins














Web server plug-ins: Package installation

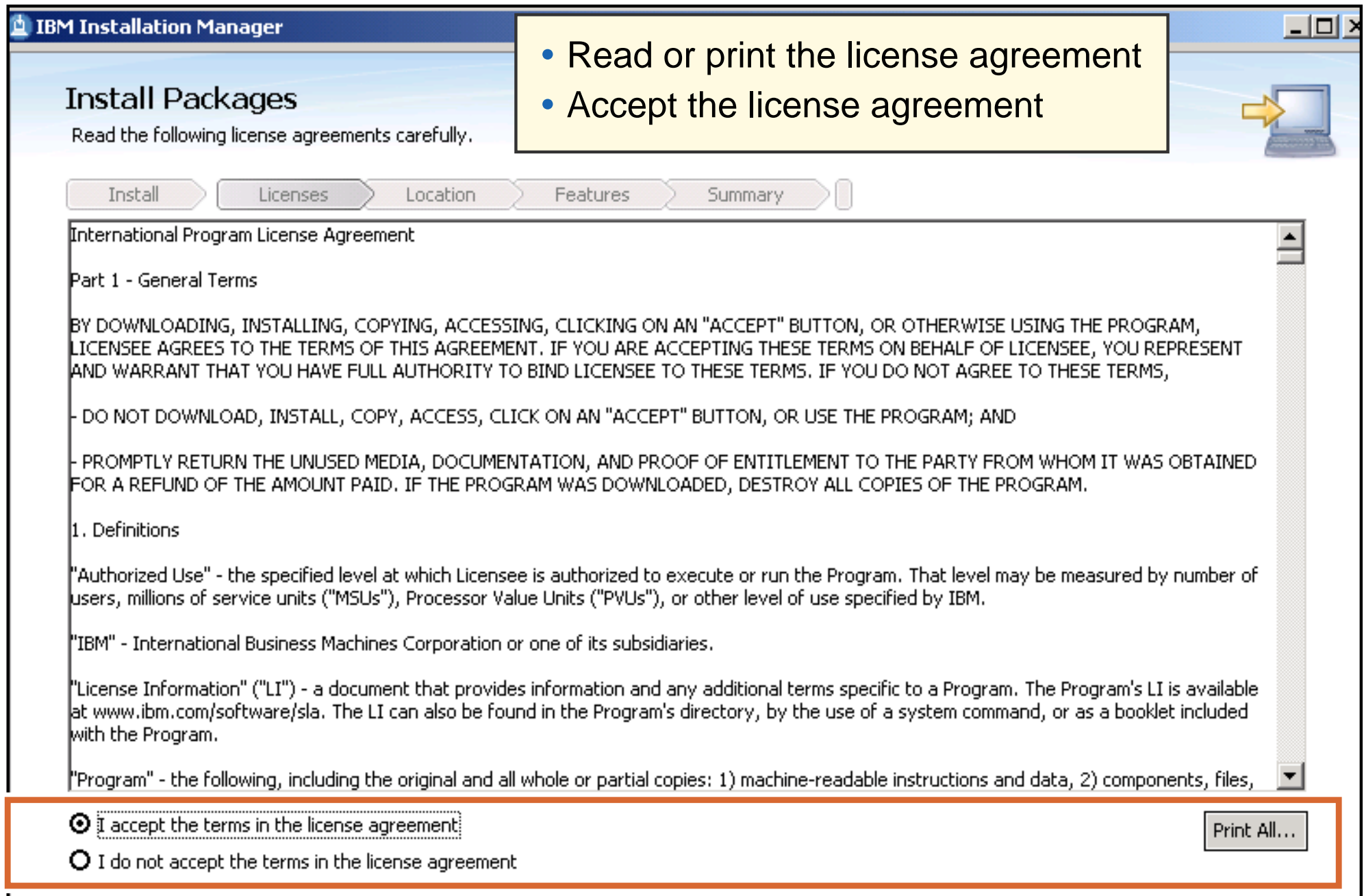
Install Packages

Select packages to install:



Installation Packages	Status	Vendor	License Key Type
<div> <div>▼</div> <div> <input type="checkbox"/>  Application Client for IBM WebSphere Application Server </div> <div> <input type="checkbox"/>  Version 8.5.5.0 </div> </div>		IBM	
<div> <div>▼</div> <div> <input type="checkbox"/>  IBM HTTP Server for WebSphere Application Server </div> <div> <input type="checkbox"/>  Version 8.5.5.0 </div> </div>	Installed	IBM	
<div> <div>▼</div> <div> <input type="checkbox"/>  IBM WebSphere Application Server Network Deployment </div> <div> <input type="checkbox"/>  Version 8.5.5.0 </div> <div> <input type="checkbox"/>  Pluggable Application Client for IBM WebSphere Application Server </div> </div>	Installed	IBM	
<div> <div>▼</div> <div> <input checked="" type="checkbox"/>  Web Server Plug-ins for IBM WebSphere Application Server </div> <div> <input checked="" type="checkbox"/>  Version 8.5.5.0 </div> </div>	Will be installed	IBM	
<div> <div>▼</div> <div> <input type="checkbox"/>  WebSphere Customization Toolbox </div> <div> <input type="checkbox"/>  Version 8.5.5.0 </div> </div>		IBM	

Web server plug-ins: License agreement



IBM Installation Manager

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"License Information" ("LI") - a document that provides information and any additional terms specific to a Program. The Program's LI is available at www.ibm.com/software/sla. The LI can also be found in the Program's directory, by the use of a system command, or as a booklet included with the Program.

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Print All...



Web server plug-ins: Package group and installation directory

Install Packages



A package group is a location that contains one or more packages. Some compatible packages can be installed into a common package group and will share a common user interface. Select an existing package group, or create a new one.

Install

Licenses

Location

Features

Summary

☐ Use the existing package group

☒ Create a new package group

Package Group Name

Installation Directory

Web Server Plug-ins for IBM WebSphere Application Serv /opt/IBM/WebSphere/Plugins

Package Group Name: Web Server Plug-ins for IBM WebSphere Application Server V8.5

Installation Directory: /opt/IBM/WebSphere/Plugins

Browse...

Details

Shared Resources Directory: /opt/IBM/IMShared

Disk Space Information

Volume	Available Space
/	8.54 GB

Web server plug-ins: Features

Install Packages

Select the features to install.



Install

Licenses

Location


Features

Summary

Features

☒  Web Server Plug-ins for IBM WebSphere Application Server 8.5.5.0

☐ Show dependencies

 - Selected by Installation Manager because of dependencies

Expand All

Collapse All

Restore Default

Web server plug-ins: Summary and results

Install Packages

Review the summary information.

[Install](#)[Licenses](#)[Location](#)[Features](#)[Summary](#)

Target Location

Package Group Name: Web Server Plug-ins for IBM WebSphere Application Server V8.5

Installation Directory: /opt/IBM/WebSphere/Plugins

Shared Resources Directory: /opt/IBM/IMShared

Packages

Packages

 Web Server Plug-ins for IBM WebSphere Application Server 8.5.5.0

- Verify the package
- Review the results

Install Packages

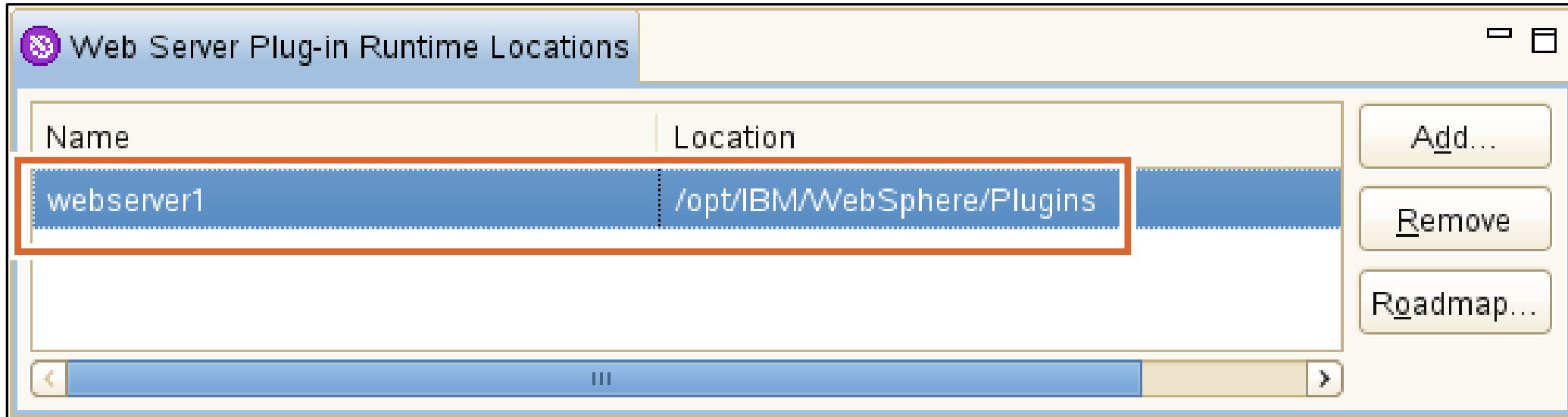


The packages are installed. [View Log File](#)

The following package was installed:

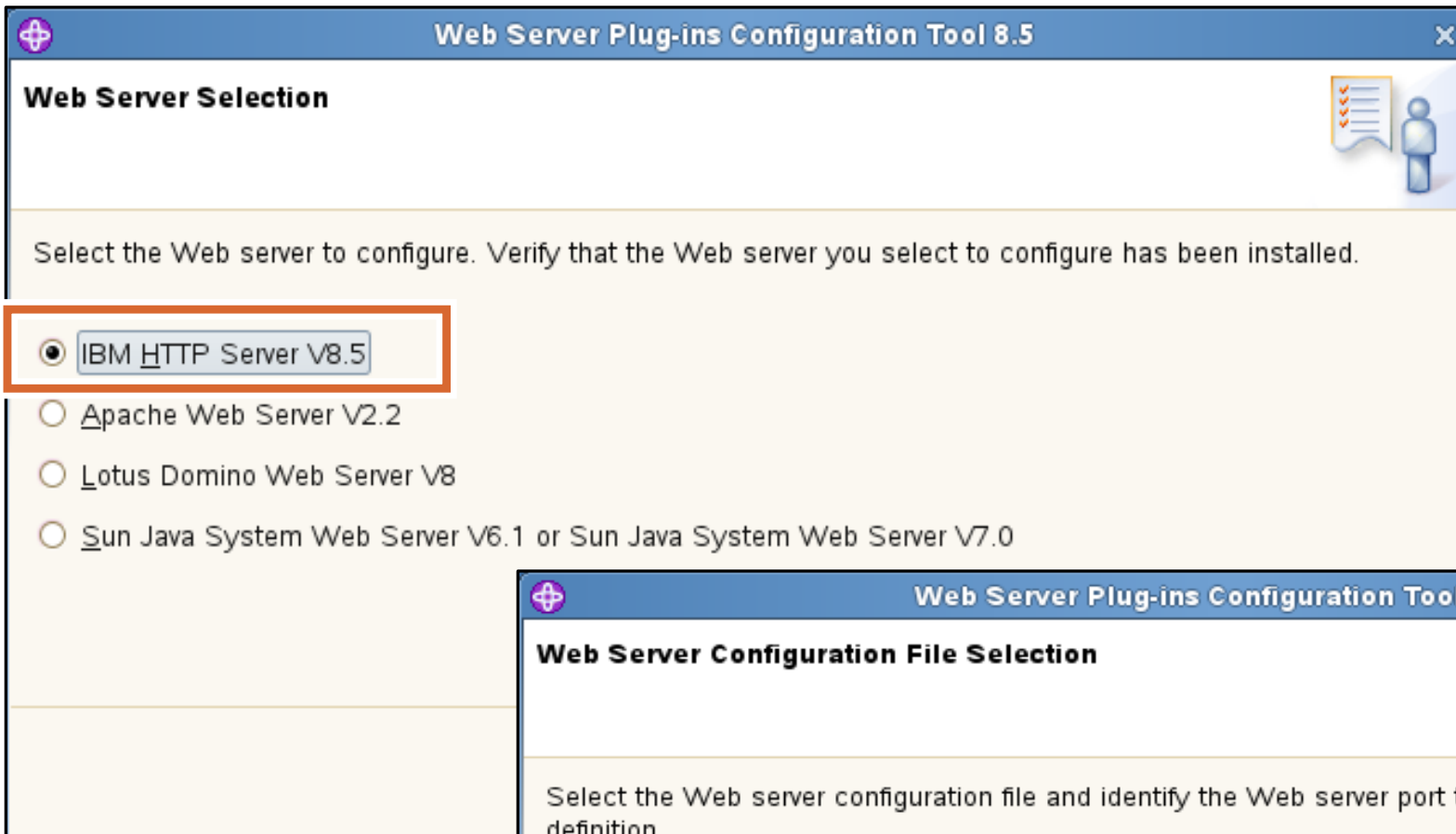
▼  Web Server Plug-ins for IBM WebSphere Application Server V8
 Web Server Plug-ins for IBM WebSphere Application Server

Plug-ins Configuration Tool: Add location



- After the plug-in is installed, it must be configured
- Start the Web Server Plug-ins Configuration Tool from the WebSphere Customization Toolbox
- Select the installation location

Plug-ins Configuration Tool: Web server selection



Web Server Selection

Select the Web server to configure. Verify that the Web server you select to configure has been installed.

☒ IBM HTTP Server V8.5

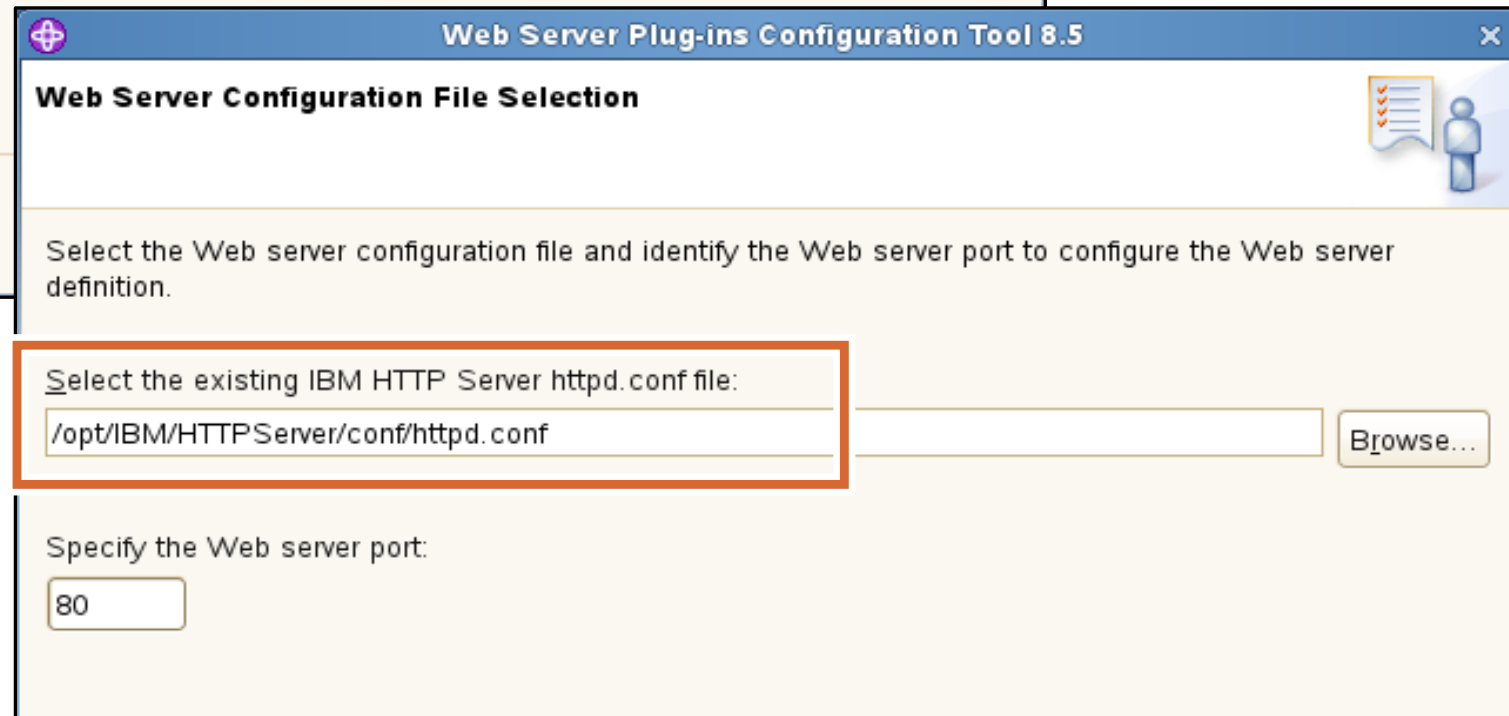
☐ Apache Web Server V2.2

☐ Lotus Domino Web Server V8

☐ Sun Java System Web Server V6.1 or Sun Java System Web Server V7.0

- Select the web server

- Select the location of the httpd.conf file



Web Server Configuration File Selection

Select the Web server configuration file and identify the Web server port to configure the Web server definition.

Select the existing IBM HTTP Server httpd.conf file:

Specify the Web server port:



Plug-ins Configuration Tool: Administration server

Web Server Plug-ins Configuration Tool 8.5

Setup IBM HTTP Server Administration Server

Optionally configure an administrative server to administer the Web server. You can manage the Web server from a WebSphere Application Server administrative console by using the IBM HTTP Server administrative server to control the communication between them.

☒ Setup IBM HTTP Server Administration Server

Specify a port number for IBM HTTP Server administration server to communicate. The default port is 8008. If the default port is already in use, then change to another port that is available. Running IBM HTTP Server administration server without root or Administrative privileges might restrict use of ports below 1024.

HTTP Administration Port:

Optionally create a user ID and password to authenticate to the IBM HTTP Server Administration Server from the WebSphere Application Server administrative console. The user ID and password is encrypted and stored in the conf/admin.passwd file. You can create additional user IDs after the configuration by using the htpasswd utility.

☒ Create a user ID for IBM HTTP Server Administration Server authentication

User ID:

Password:

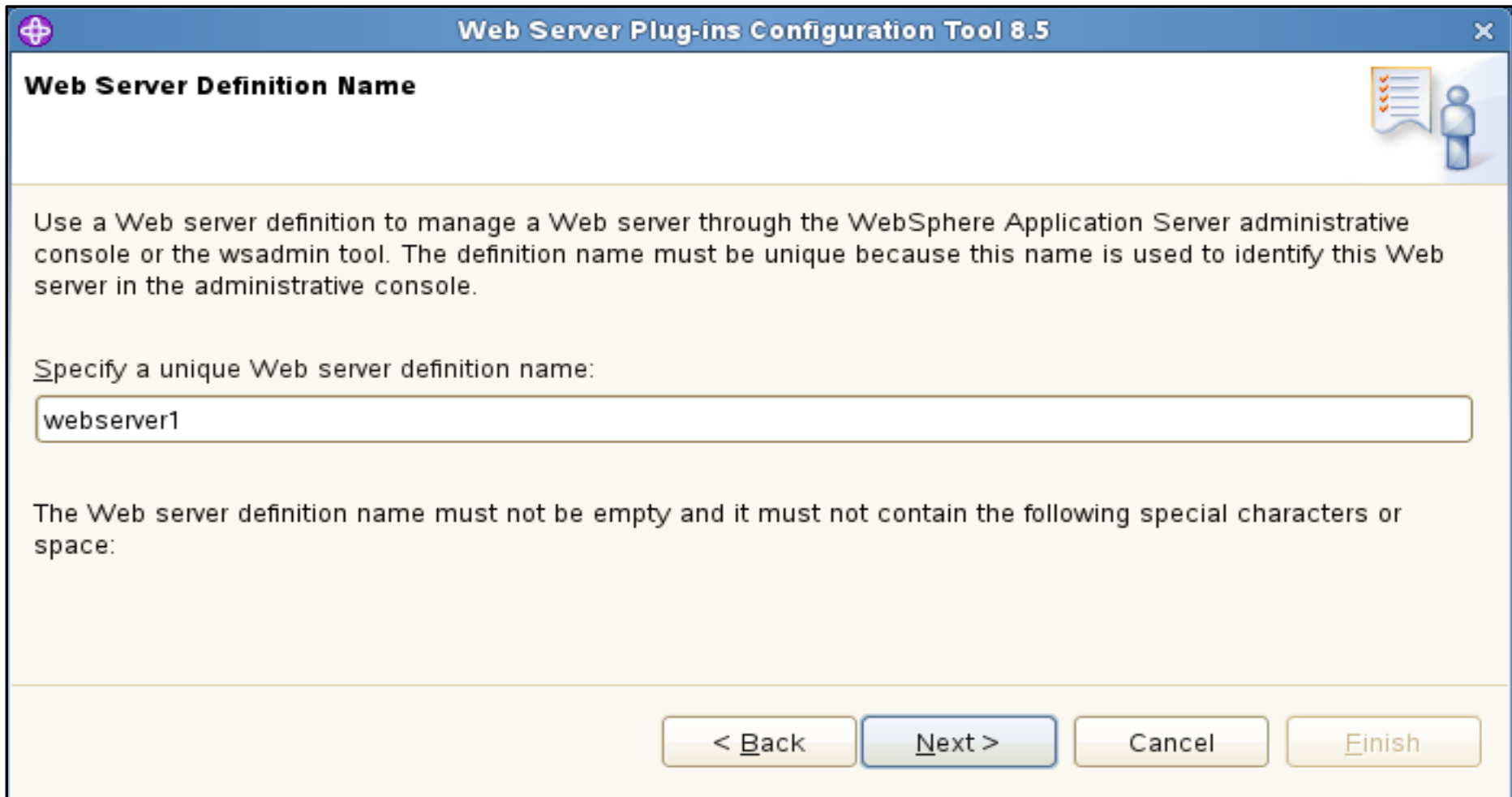
Confirm password:

< Back Next > Cancel Finish

- Configure IBM HTTP Server Administrative Server when administering IBM HTTP Server from the administrative console

Plug-ins Configuration Tool: Web server definition name

- Web server name is used to identify the web server in the administrative console



The screenshot shows a Windows-style dialog box titled "Web Server Plug-ins Configuration Tool 8.5". The main heading inside is "Web Server Definition Name". Below this, there is a paragraph explaining that a Web server definition is used to manage a Web server through the WebSphere Application Server administrative console or the wsadmin tool, and that the definition name must be unique. A text input field is provided with the label "Specify a unique Web server definition name:" and the text "webserver1" is entered. Below the input field, a note states: "The Web server definition name must not be empty and it must not contain the following special characters or space:". At the bottom of the dialog, there are four buttons: "< Back", "Next >", "Cancel", and "Finish".

Web Server Plug-ins Configuration Tool 8.5

Web Server Definition Name

Use a Web server definition to manage a Web server through the WebSphere Application Server administrative console or the wsadmin tool. The definition name must be unique because this name is used to identify this Web server in the administrative console.

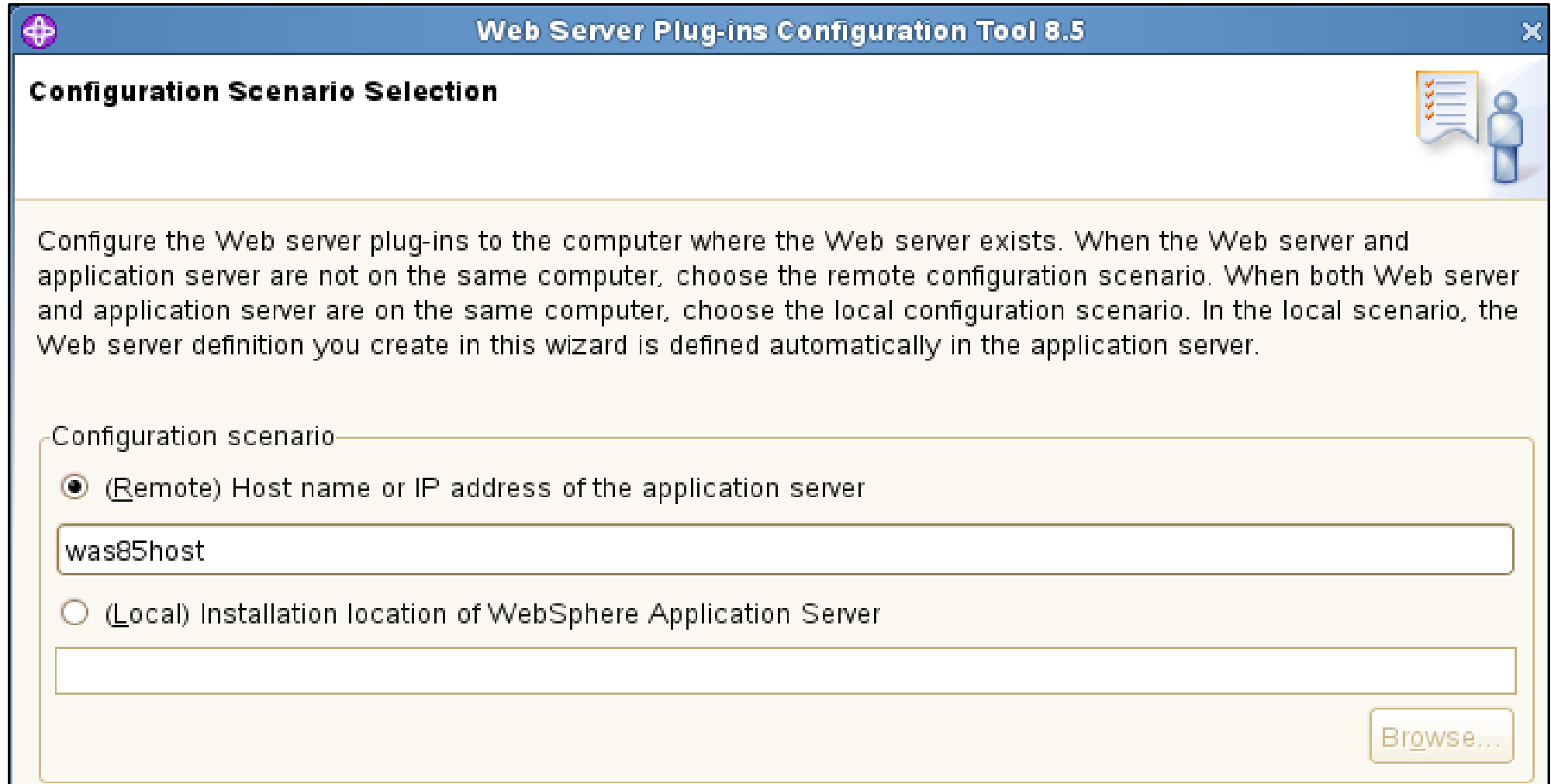
Specify a unique Web server definition name:

webserver1

The Web server definition name must not be empty and it must not contain the following special characters or space:

< Back Next > Cancel Finish

Plug-ins Configuration Tool: Configuration scenario



The image shows a screenshot of the 'Web Server Plug-ins Configuration Tool 8.5' window. The title bar is blue with a plus icon on the left and a close 'X' icon on the right. The main content area has a light beige background. At the top left of the content area is the text 'Configuration Scenario Selection'. At the top right is an icon of a document with a checklist and a person. Below this is a paragraph of instructional text. Underneath the text is a section titled 'Configuration scenario' with a thin border. Inside this section, there are two radio buttons. The first radio button is selected and is labeled '(Remote) Host name or IP address of the application server'. Below this label is a text input field containing the text 'was85host'. The second radio button is unselected and is labeled '(Local) Installation location of WebSphere Application Server'. Below this label is an empty text input field. In the bottom right corner of the 'Configuration scenario' section is a button labeled 'Browse...'.

Web Server Plug-ins Configuration Tool 8.5

Configuration Scenario Selection

Configure the Web server plug-ins to the computer where the Web server exists. When the Web server and application server are not on the same computer, choose the remote configuration scenario. When both Web server and application server are on the same computer, choose the local configuration scenario. In the local scenario, the Web server definition you create in this wizard is defined automatically in the application server.

Configuration scenario

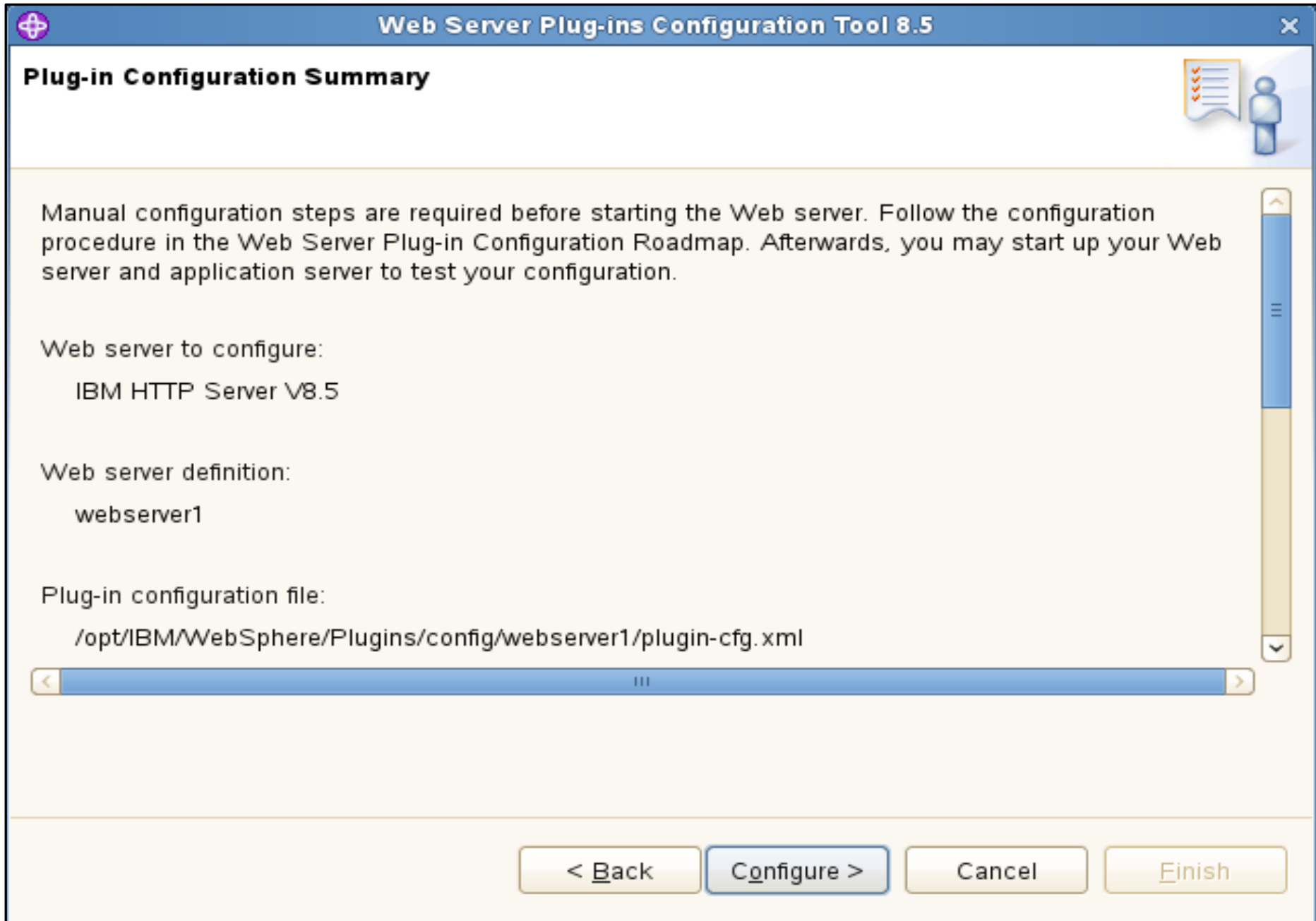
☒ (Remote) Host name or IP address of the application server

was85host

☐ (Local) Installation location of WebSphere Application Server

Browse...

Plug-ins Configuration Tool: Summary



The image shows a screenshot of the 'Web Server Plug-ins Configuration Tool 8.5' window. The title bar is blue with a plus icon on the left and a close icon on the right. The main content area has a light beige background. At the top left of the main area is the text 'Plug-in Configuration Summary'. At the top right is an icon of a person with a checklist. Below this is a paragraph of text: 'Manual configuration steps are required before starting the Web server. Follow the configuration procedure in the Web Server Plug-in Configuration Roadmap. Afterwards, you may start up your Web server and application server to test your configuration.' Below the paragraph are three labels and their corresponding values: 'Web server to configure:' followed by 'IBM HTTP Server V8.5', 'Web server definition:' followed by 'webserver1', and 'Plug-in configuration file:' followed by '/opt/IBM/WebSphere/Plugins/config/webserver1/plugin-cfg.xml'. At the bottom of the window are four buttons: '< Back', 'Configure >', 'Cancel', and 'Finish'. The 'Configure >' button is highlighted with a blue border. There is a vertical scrollbar on the right side of the main content area and a horizontal scrollbar at the bottom.

Web Server Plug-ins Configuration Tool 8.5

Plug-in Configuration Summary

Manual configuration steps are required before starting the Web server. Follow the configuration procedure in the Web Server Plug-in Configuration Roadmap. Afterwards, you may start up your Web server and application server to test your configuration.

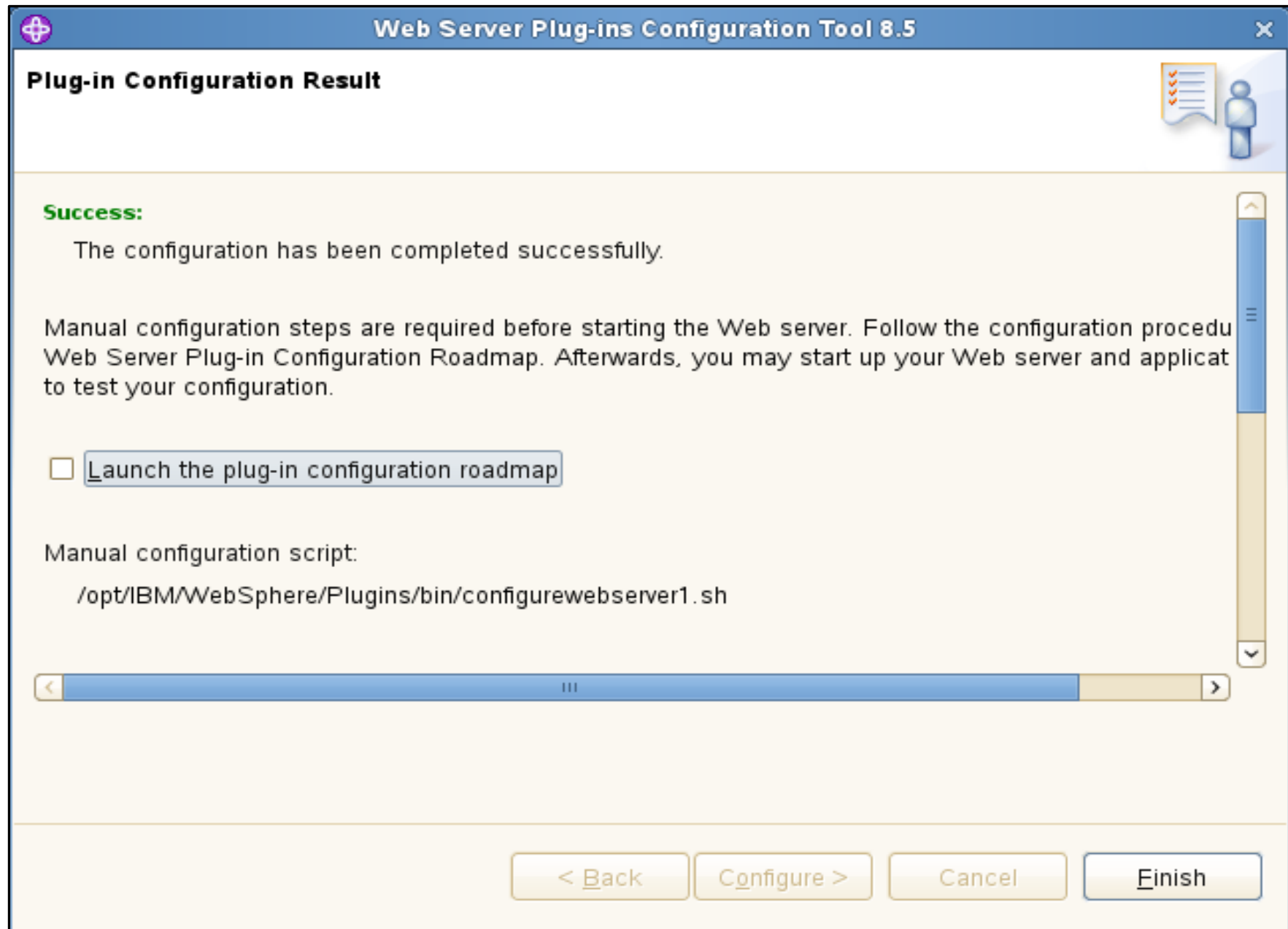
Web server to configure:
IBM HTTP Server V8.5

Web server definition:
webserver1

Plug-in configuration file:
/opt/IBM/WebSphere/Plugins/config/webserver1/plugin-cfg.xml

< Back Configure > Cancel Finish

Plug-ins Configuration Tool: Results



Unit summary

Having completed this unit, you should be able to:

- Explain the installation process for IBM HTTP Server
- Verify the installation of IBM HTTP Server
- Explain the installation process for WebSphere Customization Toolbox
- Install web server plug-ins for WebSphere Application Server
- Use the Plug-in Configuration Tool to configure the web server plug-in

Checkpoint questions

1. What are the two platforms for the WebSphere Configuration Tool?
2. What is the reason for configuring HTTP Server Administrative Server?
3. When running IBM HTTP Server as a Windows Service, what user rights are required for the user account?

Checkpoint answers

1. What are the two platforms for the WebSphere Configuration Tool?
 - Embedded and stand-alone
2. What is the reason for configuring HTTP Server Administrative Server?
 - The Administrative Server controls communication between the administrative console and IBM HTTP Server
3. When running IBM HTTP Server as a Windows Service, what user rights are required for the user account?
 - Act as part of the operating system
 - Log on as a service

Exercise 1

Installing IBM Installation Manager

Exercise objectives

After completing this exercise, you should be able to:

- Install IBM Installation Manager
- View the installation log file
- Confirm the installation of Installation Manager

Exercise 2

Installing WebSphere Application Server

Exercise objectives

After completing this exercise, you should be able to:

- Use IBM Installation Manager to install WebSphere Application Server Network Deployment
- Use IBM Installation Manager to modify a product feature
- Use the Profile Management Tool to create a profile
- Verify that the installation was successful by examining log files
- Start and stop the application server

Exercise 3

Installing IBM HTTP Server

Exercise objectives

After completing this exercise, you should be able to:

- Install IBM HTTP Server with IBM Installation Manager
- Confirm and test the installation of IBM HTTP Server
- Install Web Server Plug-ins for WebSphere Application Server
- Install WebSphere Customization Toolbox
- Configure the Web Server Plug-ins for WebSphere Application Server
- Examine the installed directories and files for IBM HTTP Server and the plug-ins