



IBM Software Group

# IBM WebSphere Application Server V6.1

## *Web Server Plug-in Installation*



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This presentation will focus on the installation of the Web Server Plug-in for i5/OS® and support for the IBM HTTP Server for i5/OS and Lotus® Domino® for i5/OS web servers.

## Agenda

- Overview of the supported i5/OS web servers
- Web server plug-in installation
- Managing plug-in configuration files for Web servers



This presentation will begin by providing an overview of the supported i5/OS web servers and how to install the web server plug-in on i5/OS for when you are running your web server on a remote i5/OS system. It will then show basic administration of Web servers using WebSphere Application Server, including certain features that are specific to IBM HTTP Server. In order for WebSphere Application Server to manage a Web server, an administrative object called a Web server definition must be created. This presentation will explain the process for creating a Web server definition for different installations. Lastly, this presentation will cover new features in WebSphere Application Server V6.1 that make managing a Web server easier. These features include enhanced ability to edit the 'httpd.conf' configuration file in addition to the Web server plug-in configuration; it also includes a new wizard for creating virtual hosts for a Web server.

## Section

# ***Supported i5/OS Web servers***



The next section will cover the supported i5/OS Web servers.

## Supported i5/OS Web servers

- IBM HTTP Server for i5/OS
  - ▶ i5/OS V5R3M0 and higher
  - ▶ Product 5722-DG1
    - Bundled with the i5/OS operating system
- Lotus Domino Web Server for i5/OS
  - ▶ i5/OS V5R3M0 and higher
  - ▶ Lotus Domino V6 and V7
    - 5733-LD6, 5733-L65, 5733-LD7
- Note: Supported web servers on other platforms are also supported when running your application server on i5/OS
  - ▶ For example, IIS on Windows®
  - ▶ See documentation for the distributed platforms for details



There are two web servers supported on i5/OS: IBM HTTP Server for i5/OS and Lotus Domino for i5/OS. 5722-DG1 is the product identifier for IBM HTTP Server for i5/OS. It is available free of charge and is included with the i5/OS operating system bundle. The IBM HTTP Server for i5/OS includes an administration HTTP server instance which allows you to easily setup and manage HTTP server instances and WebSphere Application Server profiles among other things.

The Lotus Domino Web Server for i5/OS is also supported. Versions 6.0.5, 6.5 and 7.0 are supported.

You can also choose to run your web server on a platform other than i5/OS such as Linux® or Windows. Any supported web server on any platform can be used with your application server running on i5/OS. See the distributed platforms documentation for details on installing and using the web server plug-in on a platform other than i5/OS.

## Section

# ***Web server plug-in installation***



The next section will cover the Web server plug-in installation.

## Web server plug-in installation

- Web server plug-ins are installed on the same machine where your Web servers are installed
  - ▶ Remote: the Web server and the plug-in are on a different machine from the WebSphere Application Server
- When running Web server and application server on same i5/OS system or partition, Web server plug-in is not required
  - ▶ Web server plug-in code included with server install
- No configuration done during install on i5/OS
  - ▶ Use IBM Web Administration for i5/OS to configure Web server after install



The Plug-in can be installed as a separate process in version 6.1. There are two types of Web server topologies: local and remote. A local installation has the Web server and plug-in installed on the same machine as WebSphere Application Server, whereas a remote installation has them on a separate machine. On i5/OS, you only need to install the Web server plug-in for the remote Web server topology. The Web server plug-in code already is included with the WebSphere Application Server Express, Base and Network Deployment installations. The Web server plug-in installation on i5/OS does not offer any configuration choices during install. For the local Web server topology, you use the IBM Web Administration for i5/OS to associate your Web server with your application server. For the remote Web server topology, you use the `configureOS400WebServerDefinition` command line tool to create a script that can be used to create a Web server definition for your application server on the system hosting WebSphere Application Server.

## Plug-in installation

- Remote graphical, remote silent or local silent install
  - ▶ Web Server Plug-ins installer can be initiated from Launch pad
  - ▶ Plug-in installer can be directly launched from the command line



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There are a number of options for installing the Plug-in. Plug-in installation is a separate installation process that can be initiated remotely from a Windows workstation using the Launch pad tool. The installation application can also be directly invoked from the /plugin directory on the Supplements CD.

## Command-line installation

- **Installer binary location:**
  - ▶ CD:
    - <IMAGE\_DIR>\plugin\install.exe for remote install
    - /QOPT/WEBSPPHERE/plugin/install for local install
  - ▶ DVD:
    - <IMAGE\_DIR>\OS400PPC\plugin\install.exe for remote install
    - /QOPT/WEBSPPHERE/OS400PPC/plugin/install for local install
- **Silent installation option uses a response file for options to install Web server plug-in binaries**
  - ▶ install –options “response\_file\_name”
  - ▶ Sample file: <IMAGE\_DIR>/plugin/responsefile.txt
  - ▶ License acceptance must be changed to “true”
  - ▶ Optional: installLocation, defaultProfileLocation



The Web server plug-in installer can be directly invoked by using the “install” command from the “plugin” directory on the CD image. During a silent installation, a response file is used to obtain the input for the installation process. A sample response file is provided to help you get started and to show you the available options. An important thing to remember is that you must indicate your agreement with the license agreement by changing the silentInstallLicenseAcceptance option from “false” to “true” in the sample response file. Optionally, you can change the installation location and default profile location. The Web server plug-in installer creates an http “profile” for you during installation. This profile provides the directory structure, properties files, and configuration files needed to run your Web Server on a system remote from the application server.

## Install log files for problem determination

Group	Log Files (default)	Description
Web server plug-in installation logs	<Install_root>/logs/install/ <b>log.txt</b>	This is the primary ISMP install log. Look for one of the following messages: <ul style="list-style-type: none"> <li>▪ <b>INSTCONFSUCCESS</b> – All configuration actions executed successfully</li> <li>▪ <b>INSTCONFPARTIALSUCCESS</b> – Implies some non-fatal configuration actions failed</li> <li>▪ <b>INSTCONFFAILED</b> – Indicates total failure,</li> </ul>
	<install_root>/logs/install/ <b>installconfig.log</b>	XML-based file contain Logs the activities of ANT configuration scripts that run at the end of the installation procedure



A log.txt file is created during the Plug-in installation. After the installation is complete, this log file should be examined to ensure that the installation was a success. An install status of partial success is often enough to have the Plug-in work correctly. If the installation ends with the INSTCONFFAILED message, then problem resolution must be done, and the Plug-in will need to be successfully reinstalled.

## Installation log files (cont.)

Group	Log Files (default)	Description
i5/OS product configuration	Located under <install_root>/logs/install: os400Inst.log _setupNative.log _postinstallexit.log os400CrtPrf.log	Logs for the i5/OS specific actions which occur when creating and restoring native i5/OS objects for the product.
Profile Creation	Under <default_profile_location>/profileRegistry/logs/manageprofiles/ create.log or <profile_name>_create.log <profile_name>/<component>.log	Problems when creating profiles – used by the installer and also when creating profiles outside the installation process



This slide lists the different log files that can contain information obtained during post install configuration actions and the profile creation process. In V6.1 all the profile creation logs are also saved under the <default\_profile\_location>/profileRegistry/logs directory, which will help resolve profile creation problems, and remain in the logs location even after the profile has been deleted. The i5/OS product configuration logs can be useful when the install does not complete with a return code of INSTCONFSUCCESS.

## Web server plug-in: uninstall

- Qshell script located in the Web Server Plug-in “bin” directory
  - ▶ Command : **Uninstall**
- Should always use the uninstaller to remove Web server plug-in
- After uninstall, only the log directory and files remain



During the plug-in installation, an InstallShield uninstaller will be created for the Plug-in. This is no different than the uninstaller created for WebSphere Application Server during its installation. The uninstall Qshell script is located in the <install\_root>/bin directory. This uninstaller is what should be used to remove the Plug-in. Any other process used is not guaranteed to remove all of the components created during the installation process.

## Section

# ***Web server plug-in configuration management***



The next section will explain how to manage Web server plug-in configurations.

## Generating plug-in: administrative console

The screenshot shows the administrative console interface. At the top, there are buttons: 'Generate Plug-in', 'Propagate Plug-in', 'New', 'Delete', 'Templates...', 'Start', 'Stop', and 'Terminate'. Below these is a table with columns: 'Select', 'Name', 'Node', 'Version', and 'Status'. The table contains two entries: 'WebServer2' (selected) and 'webservice1'. A yellow callout box points to the 'Generate Plug-in' button, and another points to the 'WebServer2' row.

Select	Name	Node	Version	Status
<input checked="" type="checkbox"/>	WebServer2	wsbeta026Node02	6.0.0.0	○
<input type="checkbox"/>	webservice1	wsbeta026Node01	6.0.0.0	✖

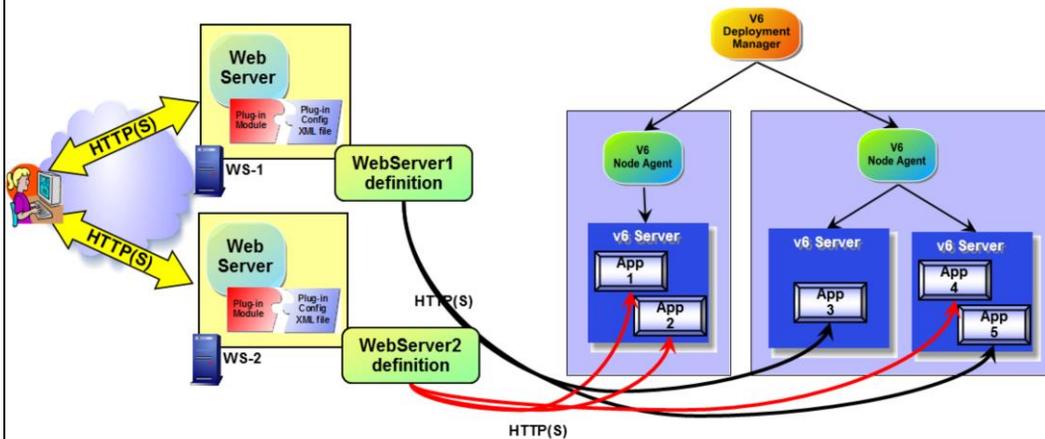
Total 2

- Plug-in configuration file can be generated using the administrative console after defining a Web server and mapping the applications
- Only applications mapped to the Web server will be added to the plug-in configuration
- Plug-in files are generated automatically for any application or virtual host changes
  - ▶ This default behavior can be changed by modifying the plug-in properties
- Generated plug-in files are saved in the repository under the Web server directory
  - ▶ config\cells\CellName\nodes\NodeName\servers\webServer1\plugin-cfg.xml



Once a Web server definition has been created, you can generate a plug-in for that Web server through the administrative console. Plug-in configurations generated this way are specific to a Web server, including only the applications that have been mapped to that Web server. Plug-in files will contain all the URIs for applications mapped to the Web server. By default the plugin-cfg.xml files are generated automatically when there is any change to application or virtual host settings. Generated plug-in files are always saved in the master repository under the defined directory for the Web server, as shown in this example.

## Web server topology: application focused

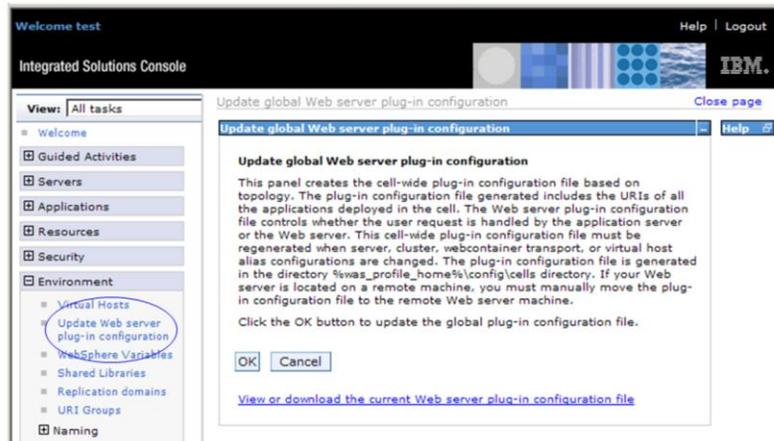


- Custom Plug-in files are generated for Web servers to send requests for only their mapped applications

This slide shows how applications can be mapped to specific Web servers. These specific Web servers will then be responsible for handling the requests for the application that is mapped to that Web server only. These mappings result in the deployment manager creating custom plug-in configuration files. The information contained in the plug-in can also contain other customizations, such as caching and balancing features.

Note: although this slide depicts a Network Deployment environment, you can also create multiple web server definitions within a stand-alone application server in order to map different applications to different Web server instances. For the Express product, you must have fix pack 4 installed to do this.

## Topology-centric plugin-cfg.xml



- V6.1 has the capability to generate cell-wide plug-in configuration file
- Include URIs for all deployed applications
- Location <profile>/config/cells/plugin-cfg.xml

There is also the ability to generate a Cell-wide or topology-centric plug-in configuration file. In this case the plug-in configuration will contain the URIs for all of the applications that have been deployed to the cell. The topology-centric plug-in configuration can be found under the deployment manager profile's "config/cells" directory.

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## Propagation of the plug-in configuration file

Select	Name	Node	Version	Status
<input type="checkbox"/>	WebServer2	wsbeta026Node02	6.0.0.0	OK
<input type="checkbox"/>	webserv1	wsbeta026Node01	6.0.0.0	Error
Total 2				

- The plug-in configuration can be propagated to a remote IBM HTTP Server Web server
  - ▶ HTTP(S) protocol is used for transferring the plug-in file
- In V6.1, after propagation, file placed at `<plug-in>/config/<WebServerName>/plugin-cfg.xml`
- For Web servers on managed nodes the propagate action invokes the "nodeSync" operation
  - ▶ Node agent handles replicating the repository on the remote machine
- For Web servers on unmanaged nodes the propagation is possible only with IBM HTTP Server
  - ▶ Administrative console communicates with IBM HTTP Server administrative server configured on the remote machine

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Once a plug-in file has been created, it must be copied or propagated to the appropriate location on the system where the Web server is installed. Plug-in configuration files can be propagated to Web servers on managed nodes through the use of the nodesync operation. This will force the local node agent to update the repository on the machine, updating the plug-in. For machines that are not managed nodes, and thus have no node agents, the choices are more restricted. If the Web server on a remote machine is an IBM HTTP Server, then the separate administrative server process has been installed. This allows WebSphere Application Server to communicate with and manage the Web server, similar to a node agent. This allows for the propagation of plug-ins to IBM HTTP Server Web servers on remote systems. If the remote Web server is not an IBM HTTP Server, then the plug-in configuration will have to be manually copied.

## Section

# ***Summary and reference***

Next will be the summary and reference section.

## Summary

- There is now a separate Web server plug-in installer for i5/OS
  - ▶ Use when running the Web server on an i5/OS system or partition separate from the application server system
  - ▶ Not required when running Web server and application server on the same i5/OS system or partition
- V6.1 includes expanded plug-in administration functionality in the administrative console
  - ▶ Allows management of your IBM HTTP Server instance
  - ▶ Supports multiple web servers per application server
  - ▶ Generate topology-centric plug-in



The installation process for the Web server plug-in has been enhanced in version 6.1. Optionally the Web server plug-in can be installed from the launch pad or tools CD Plugin directory. You only need to install the Web server plug-in on i5/OS when your Web server is not on the same i5/OS system as your application server. V6.1 also includes expanded administrative capabilities for managing and generating Web server plug-ins from the administrative console, including the ability to generate a topology-centric plug-in. Enhanced management capabilities allow you to start and stop, view the logs for, and edit the httpd.conf file for your i5/OS IBM HTTP Server instance from the WebSphere administration console.

## Reference

- IBM HTTP Server for i5/OS
  - ▶ <http://publib.boulder.ibm.com/infocenter/series/v5r4/topic/rzaie/rzaiemain.htm>
- IBM Web Administration for i5/OS
  - ▶ <http://publib.boulder.ibm.com/infocenter/series/v5r4/topic/rzaie/rzaieconadmin.htm>

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