



Getting Started

Note

Before using this information, be sure to read the general information under Appendix A, "Notices," on page 53.

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- To send comments on articles in the WebSphere Application Server information center:
 1. Display the article in your Web browser and scroll to the end of the article.
 2. Click on the **Feedback** link at the bottom of the information center article, and a separate window containing an e-mail form appears.
 3. Fill out the e-mail form as instructed, and click **Submit feedback** .
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Be sure to include the document name and number, the WebSphere Application Server version that you are using, and (if applicable) the specific page, table, or figure number on which you are commenting.

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Chapter 1. Directory conventions

References in product information to *app_server_root*, *profile_root*, and other directories infer specific default directory locations. This topic describes the conventions in use for WebSphere Application Server.

Default product locations z/OS

smpe_root

Refers to the root directory for product code installed with SMP/E.

The corresponding product variable is `smpe.install.root`.

The default is `/usr/lpp/zWebSphere/V6R1`.

configuration_root

Refers to the mount point for the configuration file system (formerly, the configuration HFS) in WebSphere Application Server for z/OS.

The `configuration_root` contains the various `app_server_root` directories and certain symbolic links associated with them. Each different node type under the `configuration_root` requires its own cataloged procedures under z/OS.

The default is `/WebSphere/V6R1`.

app_server_root

Refers to the top directory for a WebSphere Application Server node.

The node may be of any type—application server, deployment manager, or unmanaged for example. Each node has its own `app_server_root`. Before Version 6.0 of the product information, this was referred to as the "WAS_HOME" directory. Corresponding product variables are `was.install.root` and `WAS_HOME`.

The default varies based on node type. Common defaults are `configuration_root/AppServer` and `configuration_root/DeploymentManager`.

profile_root

Refers to the home directory for a particular instantiated WebSphere Application Server profile.

Corresponding product variables are `server.root` and `user.install.root`.

In general, this is the same as `app_server_root/profiles/profile_name`. On z/OS, this will be always be `app_server_root/profiles/default` because only the profile name "default" is used in WebSphere Application Server for z/OS.

Default product locations i5/OS

These file paths are default locations. You can install the product and other components in any directory where you have write access. You can create profiles in any valid directory where you have write access. Multiple installations of WebSphere Application Server products or components require multiple locations.

app_server_root - the install_root for WebSphere Application Server

The default installation root directory for WebSphere Application Server is the `/QIBM/ProdData/WebSphere/AppServer/V61/product` directory.

profile_root

The default directory for a profile named *profile_name* for WebSphere Application Server is the /QIBM/UserData/WebSphere/AppServer/V61/*product*/profiles/*profile_name* directory.

user_data_root

The default user data directory for WebSphere Application Server is the /QIBM/UserData/WebSphere/AppServer/V61/*product* directory.

The profiles and profileRegistry subdirectories are created under this directory when you install the product.

plugins_root

The default installation root directory for Web server plug-ins is the /QIBM/ProdData/WebSphere/Plugins/V61/webserver directory.

plugins_user_data_root

The default Web server plug-ins user data root is the /QIBM/UserData/WebSphere/Plugins/V61/webserver directory.

plugins_profile_root

The default Web server plug-ins profile root is the /QIBM/UserData/WebSphere/Plugins/V61/webserver/profiles/*profile_name* directory.

app_client_root

The default installation root directory for the J2EE WebSphere Application Client is the /QIBM/ProdData/WebSphere/AppClient/V61/client directory.

app_client_user_data_root

The default J2EE WebSphere Application Client user data root is the /QIBM/UserData/WebSphere/AppClient/V61/client directory.

app_client_profile_root

The default J2EE WebSphere Application Client profile root is the /QIBM/UserData/WebSphere/AppClient/V61/client/profiles/*profile_name* directory.

web_server_root

The default web server path is /www/*web_server_name*.

shared_product_library

The shared product library, which contains all of the objects shared by all Version 6.1 installations on the system, is QWAS61. This library contains objects such as the product definition, the subsystem description, the job description, and the job queue.

product_library**product_lib**

This is the product library for the installed product. The product library for each Version 6.1 installation on the system contains the program and service program objects (similar to .exe, .dll, .so objects) for the installed product. The product library name is QWAS61*x* (where *x* is A, B, C, and so on). The product library for the first WebSphere Application Server Version 6.1 product installed on the system is QWAS61A. The *app_server_root*/properties/product.properties file contains the value for the product library of the installation located under the *app_server_root* directory.

updi_root

The default installation root directory for the Update Installer for WebSphere Software is the /QIBM/ProdData/WebSphere/UpdateInstaller/V61/updi directory.

cip_app_server_root

The default installation root directory is the /QIBM/ProdData/WebSphere/AppServer/V61/product/cip/cip_uid directory for a customized installation package (CIP) produced by the Installation Factory.

A CIP is a WebSphere Application Server product bundled with optional maintenance packages, an optional configuration archive, one or more optional enterprise archive files, and other optional files and scripts.

cip_user_data_root

The default user data root directory is the /QIBM/UserData/WebSphere/AppServer/V61/product/cip/cip_uid directory for a customized installation package (CIP) produced by the Installation Factory.

cip_profile_root

The default profile root directory is the /QIBM/UserData/WebSphere/AppServer/V61/product/cip/cip_uid/profiles/profile_name directory for a customized installation package (CIP) produced by the Installation Factory.

Default product locations when the root user or an administrator user installs the product Distributed platforms

The root user or administrator user (on a Windows system) is capable of registering shared products and installing into system-owned directories. The following default directories are system-owned directories.

These file paths are default locations. You can install the product and other components in any directory where you have write access. You can create profiles in any valid directory where you have write access. Multiple installations of WebSphere Application Server products or components require multiple locations.

app_server_root - the install_root for WebSphere Application Server

The following list shows default installation root directories for WebSphere Application Server Network Deployment:

AIX	/usr/IBM/WebSphere/AppServer
HP-UX	/opt/IBM/WebSphere/AppServer
Linux	/opt/IBM/WebSphere/AppServer
Solaris	/opt/IBM/WebSphere/AppServer
Windows	C:\Program Files\IBM\WebSphere\AppServer

profile_root

The following list shows the default directory for a profile named *profile_name* on each distributed operating system:

AIX	/usr/IBM/WebSphere/AppServer/profiles/ <i>profile_name</i>
HP-UX	/opt/IBM/WebSphere/AppServer/profiles/ <i>profile_name</i>
Linux	/opt/IBM/WebSphere/AppServer/profiles/ <i>profile_name</i>
Solaris	/opt/IBM/WebSphere/AppServer/profiles/ <i>profile_name</i>
Windows	C:\Program Files\IBM\WebSphere\AppServer\profiles\ <i>profile_name</i>

plugins_root

The following default installation root is for the Web server plug-ins for WebSphere Application Server:

AIX	/usr/IBM/HTTPServer/Plugins
HP-UX	/opt/IBM/HTTPServer/Plugins
Linux	/opt/ibm/HTTPServer/Plugins
Solaris	/opt/IBM/HTTPServer/Plugins
Windows	C:\Program Files\IBM\HTTPServer\Plugins

web_server_root

The following default installation root directories are for the IBM HTTP Server:

AIX	/usr/IBM/HTTPServer
HP-UX	/opt/IBM/HTTPServer
Linux	/opt/ibm/HTTPServer
Solaris	/opt/IBM/HTTPServer
Windows	C:\Program Files\IBM\HTTPServer

gskit_root

The following list shows the default installation root directories for Version 7 of the IBM Global Security Kit (GSKit):

AIX	/usr/ibm/gsk7
HP-UX	/opt/ibm/gsk7
Linux	/opt/ibm/gsk7
Solaris	/opt/ibm/gsk7
Windows	C:\Program Files\IBM\GSK7

app_client_root

The following default installation root directories are for the WebSphere Application Client:

AIX	/usr/IBM/WebSphere/AppClient (J2EE Application client only)
HP-UX	/opt/IBM/WebSphere/AppClient (J2EE Application client only)
Linux	/opt/IBM/WebSphere/AppClient (J2EE Application client only)
Solaris	/opt/IBM/WebSphere/AppClient (J2EE Application client only)
Windows	C:\Program Files\IBM\WebSphere\AppClient

updi_root

The following list shows the default installation root directories for the Update Installer for WebSphere Software:

AIX	/usr/IBM/WebSphere/UpdateInstaller
HP-UX	/opt/IBM/WebSphere/UpdateInstaller
Linux	/opt/IBM/WebSphere/UpdateInstaller
Solaris	/opt/IBM/WebSphere/UpdateInstaller
Windows	C:\Program Files\IBM\WebSphere\UpdateInstaller

cip_app_server_root

The following list shows the default installation root directories for a customized installation package (CIP) produced by the Installation Factory.

A CIP is a WebSphere Application Server product bundled with one or more maintenance packages, an optional configuration archive, one or more optional enterprise archive files, and other optional files and scripts:

AIX	/usr/IBM/WebSphere/AppServer/cip/cip_uid
HP-UX	/opt/IBM/WebSphere/AppServer/cip/cip_uid
Linux	/opt/IBM/WebSphere/AppServer/cip/cip_uid
Solaris	/opt/IBM/WebSphere/AppServer/cip/cip_uid
Windows	C:\Program Files\IBM\WebSphere\AppServer\cip\cip_uid

The *cip_uid* variable is the CIP unique ID generated during creation of the build definition file. You can override the generated value in the Build definition wizard. Use a unique value to allow multiple CIPs to install on the system.

component_root

The component installation root directory is any installation root directory described in this topic. Some programs are for use across multiple components. In particular, the Update Installer for WebSphere Software is for use with WebSphere Application Server Network Deployment, Web server plug-ins, the Application Client, and the IBM HTTP Server. All of these components are part of the product package.

Default product locations when a non-root user or a non-administrator user installs the product Distributed platforms

The non-root user or non-administrator user (on a Windows system) is not capable of registering shared products and installing into system-owned directories. The following default directories are user-owned directories in the home directory of the non-root installer as opposed to being globally shared resources that are available to all users.

app_server_root

The following list shows the default installation directories for non-root installation of WebSphere Application Server:

AIX	<i>user_home</i> /IBM/WebSphere/AppServer
HP-UX	<i>user_home</i> /IBM/WebSphere/AppServer
Linux	<i>user_home</i> /IBM/WebSphere/AppServer
Solaris	<i>user_home</i> /IBM/WebSphere/AppServer
Windows	C:\IBM\WebSphere\AppServer

profile_root

The following list shows the default directories for creating profiles:

AIX	<i>user_home</i> /IBM/WebSphere/AppServer/profiles/
HP-UX	<i>user_home</i> /IBM/WebSphere/AppServer/profiles/
Linux	<i>user_home</i> /IBM/WebSphere/AppServer/profiles/
Solaris	<i>user_home</i> /IBM/WebSphere/AppServer/profiles/
Windows	C:\IBM\WebSphere\AppServer\profiles\

web_server_root

The following default installation root directories are for the IBM HTTP Server:

AIX	<i>user_home/IBM/HTTPServer</i>
HP-UX	<i>user_home/IBM/HTTPServer</i>
Linux	<i>user_home/ibm/HTTPServer</i>
Solaris	<i>user_home/IBM/HTTPServer</i>
Windows	<i>C:\IBM\HTTPServer</i>

plugins_root

The following list shows the default installation root directories for the Web server plug-ins for WebSphere Application Server:

AIX	<i>user_home/IBM/HTTPServer/Plugins</i>
HP-UX	<i>user_home/IBM/HTTPServer/Plugins</i>
Linux	<i>user_home/ibm/HTTPServer/Plugins</i>
Solaris	<i>user_home/IBM/HTTPServer/Plugins</i>
Windows	<i>C:\IBM\HTTPServer\Plugins</i>

app_client_root

The following list shows the default installation root directories for the WebSphere Application Client:

AIX	<i>user_home/IBM/WebSphere/AppServer/AppClient (J2EE Application client only)</i>
HP-UX	<i>user_home/IBM/WebSphere/AppClient (J2EE Application client only)</i>
Linux	<i>user_home/IBM/WebSphere/AppClient (J2EE Application client only)</i>
Solaris	<i>user_home/IBM/WebSphere/AppClient (J2EE Application client only)</i>
Windows	<i>C:\IBM\WebSphere\AppClient</i>

updi_root

The following list shows the default installation directories for non-root installation of WebSphere Application Server:

AIX	<i>user_home/IBM/WebSphere/UpdateInstaller</i>
HP-UX	<i>user_home/IBM/WebSphere/UpdateInstaller</i>
Linux	<i>user_home/IBM/WebSphere/UpdateInstaller</i>
Solaris	<i>user_home/IBM/WebSphere/UpdateInstaller</i>
Windows	<i>C:\Program Files\IBM\WebSphere\UpdateInstaller</i>

cip_app_server_root

The following list shows the default installation root directories for a WebSphere Application Server product CIP:

AIX	<i>user_home/IBM/WebSphere/AppServer/cip/cip_uid</i>
HP-UX	<i>user_home/IBM/WebSphere/AppServer/cip/cip_uid</i>
Linux	<i>user_home/IBM/WebSphere/AppServer/cip/cip_uid</i>

Solaris *user_home/IBM/WebSphere/AppServer/cip/cip_uid*

Windows *C:\IBM\WebSphere\AppServer\cip\cip_uid*

Chapter 2. Installing the Feature Pack for Web Services on distributed operating systems

Run the Feature Pack for Web Services installation program to install the feature pack on an existing installation of a WebSphere Application Server Version 6.1 product.

The WebSphere Application Server Version 6.1 Feature Pack for Web Services extends the capabilities of WebSphere Application Server Version 6.1 to enable Web services messages to be sent asynchronously, reliably, and securely, focusing on interoperability with other vendors and to provide support for the Java API for XML Web Services (JAX-WS) 2.0 programming model.

Before starting this installation, do the following:

1. Read “Planning to install the Feature Pack for Web Services” on page 13.
2. Install a Version 6.1 WebSphere Application Server product if you have not done so already.
3. Download and extract the Feature Pack for Web Services.
For example, create two directories, `wssrv_download` and `wssrv_installation_image`. Then, download the feature pack to the `wssrv_download` directory and then extract the downloaded file to the `wssrv_installation_image` directory. Do not move any files out of the `wssrv_installation_image` directory.
4. The operating system requirements for a feature pack are the same as for a Version 6.1 application server installation. However, you need to ensure that you have enough free disk space to install the feature pack and the included maintenance onto the application server installation.
 - 1450 MB of free space available in your target installation directory for the feature pack and included maintenance. This is in addition to the required Version 6.1 application server product.
 - 600 MB of free space available in your temporary directory

This topic describes how to install the feature pack using the installation wizard graphical interface.

The installation program installs the following program files if they are not already installed:

- WebSphere Application Server V6.1 Fix Pack 9 (6.1.0.9)
- Java SDK 1.5 SR5 Cumulative Fix for WebSphere Application Server (6.1.0.9)
- Feature pack enablement extensions
- WebSphere Application Server Version 6.1 Feature Pack for Web Services

Note: Consider your current product topography before installing the Feature Pack for Web Services because it installs maintenance packages which may affect the version of your application server product. If the application server is already at or above the levels of maintenance included with the feature pack, then the installation of these maintenance packages will be skipped.

1. Log on as the user who installed the Version 6.1 WebSphere Application Server product.

- **AIX** **HP-UX** **Linux** **Solaris** Log on using the same user ID that was used when the product was installed.
Run the `ls -al` command at the root of the WebSphere Application Server installation to find the user ID that was used to install the product.
 - **Windows** Log on as a user who belongs to the administrator group or as the user who installed the product.
2. Stop all processes for the Version 6.1 product on which you are installing the feature pack.
Stop the application server and any other product processes. For example, for the Network Deployment product, stop the deployment manager, the node agent, and all application server processes.
 3. Run the Feature Pack for Web Services installation program.
Extract the downloaded product files and run the program manually. To run the program manually, run the install executable file in the WEBSV directory of the feature pack installation image:
 - **AIX** **HP-UX** **Linux** **Solaris** `/WEBSV/install`
 - **Windows** `\WEBSV\install`
 4. Complete the steps in the Feature Pack for Web Services installation wizard.
 - a. On the Welcome panel, click **Next**.
 - b. On the Software License Agreement panel, select **I accept both the IBM and the non-IBM terms** and click **Next**.
 - c. On the System prerequisites check panel, do the following:
 - Read the panel information. The panel informs you whether your machine has a supported operating system with all service packs and patches needed by the feature pack installed.
 - If the system prerequisite check shows **Passed**, click **Next**.
 - If the system prerequisite check shows **Failed**, click **Cancel** and add operating system patches if necessary, or see WebSphere Application Server detailed system requirements and if your system is supported, click **Next** to continue.
 - d. On the Installation Directory panel, specify the location of the `app_server_root` directory of your existing WebSphere Application Server installation and click **Next**.
The program will add new files to the existing product installation.
 - e. On the Version Prerequisites Check panel, click **Next**.
The feature pack installation uses WebSphere Application Server Version 6.1.0.9 or later. This panel informs you that Version 6.1 maintenance packages need to be installed. If you click **Next**, the installation program installs the maintenance packages for you and continues the installation.
The Version Prerequisites Check panel is not displayed if the Version 6.1.0.9 maintenance packages are already installed.
Click **Back** to select a different product installation.
 - f. On the Installation Summary panel, click **Next**.
Provided that the only WebSphere Application Server Java process running on your machine is this installation program when you click **Next**, the installation program copies feature pack program files on your product installation.
 - g. On the Installation Results panel, click **Finish**.

The panel instructs you to run the `manageProfiles` command or to use the Profile Management tool to create or augment profiles to enable functionality provided by the feature pack.

If you want to use the feature pack functionality now, keep the **Launch the Profile management tool console** checkbox selected.

The installation wizard installs the feature pack and records installation events in the installation log files in the `app_server_root/logs/install/webservices` directory.

Tip: If you are logged in as non-root or non-admin user, you may not always find a log in the application server directory after a failed installation or uninstallation attempt. When the installer runs, a log file is created in your user home directory. If the installation fails, an attempt is made to move the log to the `app_server_root` directory; however, without the necessary permission to move the file to the `app_server_root` directory, the attempt to move fails and the log remains in your home directory. Look for the following log files in the `user_home/webserviceslogs` directory:

- `log.txt`
- `trace.txt.gz`
- `trace.xml.gz`

Troubleshooting

If the installation program is interrupted for any reason while feature pack files are being installed, examine the messages that the installation program displays and the information in the installation logs. Correct the problems identified and try installing the product again. Since the feature pack installation contains the feature pack and various fix packs, an installation failure might occur at different points in the process.

- If the installation program is interrupted while feature pack files are being installed, a later attempt to install the feature pack might fail with the following message:

```
Failure Recovery Complete
```

```
Failure recovery unsuccessful: The failed installation or uninstallation  
of maintenance package fep.websv.primary.pak was not recovered.
```

```
Click Cancel to exit the installation wizard.
```

Exit the installer and then perform the following manual steps:

1. Remove the `fep.websv.primary.pak` file from the `app_server_root/properties/version/nif/backup/` directory
2. Remove the `app_server_root/properties/version/nif/backup/legal.websv` directory.
3. Remove the `app_server_root/lafiles/websv` directory.
4. Make a backup copy of `app_server_root/properties/version/nif/backup/updateStatus.xml`. Look for the section beginning with the `<package>` entry associated with `fep.websv.primary.pak` and ending with `</package>`, remove it, and save the file:

```
<package MaintenanceNamesOfPackagesToBeCleared=""  
URIsOfPackagesToBeCleared=""  
URIsOfPackagesToBeExecuted="zip:///home/<user_name>/IBM/WebSphere/WASND0405/properties/version/nif/backup/fep.websv.primary.pak"  
isprimary="true"  
maintenancefilename="fep.websv.primary.pak"  
maintenancename="fep.websv.primary.pak" mode="installconfig" modified="true"  
timestamp="2007-04-05 19:16:22-0400"  
uritoinstall=""  
uritoinstall="zip:///home/<user_name>/IBM/WebSphere/WASND0405/properties/version/nif/backup/fep.websv.primary.pak">  
...  
</package>
```

5. Remove the WEBSERVICES entries from the WebSphere registry with the InstallRegistryUtils utility in the *app_server_root/bin* directory.
 6. Run the install executable file in the WEBSV directory of the Feature Pack for Web Services installation image and install the feature pack.
- If the installation program is interrupted while the fix pack files are being installed, a later attempt to install the feature pack might fail with an error similar to the following message:

A failure from a previous installation or uninstallation attempt has been detected. The failed package is 6.1.0-WS-WASSDK-WinX32-FP0000009. Click Next to initiate automated recovery.

Since the failure occurred during the fix pack installation, the Update Installer must be used to recover after the failure. The feature pack installer cannot automatically recover the installation. Cancel the automated recovery process and perform the following actions to recover the installation.

1. Install the Update Installer and launch the wizard.
2. On the product selection panel, select or enter the location of the application server product directory which you used in part d of step 4 in the Procedure.
3. The Update Installer will detect that there was an update failure.
4. Click **Next** to start the automated recovery process.

best-practices: Certain events can prevent ISMP from starting the installation wizard. Such an event is not enough disk space to launch the installation wizard for example. If your installation fails and there is no information in the installation logs, use the `-is:javaconsole` parameter to record entries for events that cause the ISMP program to fail to start the installation wizard. The syntax of the **install** command for observing such events is:

AIX	HP-UX	Linux	Solaris
-----	-------	-------	---------

```
./install -is:javaconsole
```

Windows

```
install.exe -is:javaconsole
```

In order to use the feature pack functionality, you must first create a new profile enabled with the feature pack, or augment an existing deployment manager profile using the Profile Management tool.

Restriction: For the Feature Pack for Web Services you can only augment an existing deployment manager profile. It is recommended that you create a new deployment manager profile or a new application server profile that is already enabled with the feature pack functionality. Use the profile creation tasks to create these profiles. The deployment manager and application server are the only profile types which can be created with the feature pack functionality.

- To create a new profile enabled with the feature pack functionality, see the information center.
- To augment an existing deployment manager profile with the feature pack functionality see the information center.

The Feature Pack for Web Services provides several sample applications that you can install onto an application server profile that has been created with the feature pack functionality.

Use the Update Installer to install maintenance packages for any of the installable WebSphere software components in the product package. See Chapter 5, “Applying maintenance for the Feature Pack for Web Services with the Update Installer,” on page 35 for more information.

Planning to install the Feature Pack for Web Services

Consider these basic installation scenarios to determine how to install Feature Pack for Web Services onto your existing application server environment. This topic links to procedures for installing each scenario.

The Feature Pack for Web Services introduces a set of Web services standards that support interoperable and reliable Web services applications.

To use the functionality provided in the Feature Pack for Web Services, you must perform two actions: First, you must install the feature pack onto an existing WebSphere Application Server Version 6.1 installation. Second, a profile must be created and enabled with the feature pack functionality. The standalone deployment manager and standalone application server profiles are the only profiles that can be created and enabled with the feature pack. An existing standalone deployment manager profile can be augmented later with the feature pack, but is the only profile type which can be augmented after creation. See the information center for more information.

Note:  i5/OS users must use the `manageprofiles` command line tool to augment profiles with the feature pack.

Installation scenarios

The following information describes scenarios for installing and uninstalling the feature pack in various topologies on one or more machines:

- **Scenario 1:** Single-machine installation and augmentation of the feature pack
- **Scenario 2:** Multiple-machine cluster installation and augmentation of the feature pack

Some scenarios are more typical in production environments. For example, although Scenario 1 is a fully functional environment, it supports a lighter workload than Scenario 2. A *cluster* might consist of application servers and nodes and is responsible for balancing workload among servers. A *cell* consists of one deployment manager and one or more federated application servers that are *managed nodes*. See “Planning to install Network Deployment” in Network Deployment documentation for more information on application server topologies.

- **Scenario 1:** Install the Feature Pack for Web Services on an existing WebSphere Application Server Network Deployment 6.1 installation. You have an existing Network Deployment Version 6.1 installation with a deployment manager profile and an application server profile on one machine.

To use the functionality of the Feature Pack for Web Services with the existing installation, you must install the feature pack, augment the deployment manager profile, create a new application server profile with the feature pack functionality, and federate the new application server profile. The existing application server profile cannot take advantage of the new feature pack functionality and should be backed up accordingly. However, the existing standalone deployment manager profile can be augmented with the feature pack.

Table 1. Single-machine installation and augmentation of the feature pack

Step	Task
1	Download the Feature Pack for Web Services and extract the feature pack files.
2	Stop all Java processes, including the deployment manager and application server.
3	Back up the deployment manager and application server profiles. See the information center for more information.
4	Install the feature pack on the existing Version 6.1 application server installation.
5	Create an application server profile that is enabled with the feature pack by using either the Profile Management tool or the manageprofiles command. Note: i5/OS i5/OS users must use the manageprofiles command line tool.
6	Augment the existing deployment manager profile. See the information center for more information.
7	Start the deployment manager.
8	Start the application server.
9	Open the deployment manager administrative console. If the feature pack has been installed and the profile is augmented or enabled correctly, there should be a Services choice in the console navigation tree.
10	Federate the new application server into the cell, which will convert it to a managed node of the deployment manager.
11	Optional: To replace the old application server with the new application server, map any applications deployed to the old application server to the new one by adding the new application server as an additional deployment target. See the information center for more information. Any node-specific configuration (such as JDBC Datasource configuration) from the old node should be recreated on the new node.
12	Optional: Consider whether there is a reason to keep the old non-augmented application server profile. Although the old application server profile is not augmented with the feature pack, it will still be a usable profile and you do not have to remove it from the cell. If you wish to remove this node, then run the removeNode command from that node.
13	Optional: Install the Web services samples. See the information center for more information.

- **Scenario 2:** Install the Feature Pack for Web Services on an existing WebSphere 6.1 cluster across multiple machines.

Because the Feature Pack for Web Services does not support augmenting a managed node, you cannot augment the existing node profiles directly. In addition, for clusters where some cluster members are augmented with the feature pack and some cluster members are not augmented, installed applications must support both augmented and unaugmented cluster members.

The following procedure to replace an existing cluster with a new cluster is recommended, where *app server* is the application server node and *dmgr* is the deployment manager node:

Table 2. Multiple-machine cluster installation and augmentation of the feature pack

Step	Machine	Task
1		Download the Feature Pack for Web Services and extract the feature pack files.
2	dgmr	Stop all Java processes, including the deployment manager and application server.
3	dmgr	Use the backupConfig utility against the deployment manager's master repository to backup the configuration for all of the nodes in the cell. See the information center for more information.
4	dmgr	Install the Feature Pack for Web Services on the computer which hosts the Deployment Manager.
5	dmgr	Augment the existing deployment manager profile. See the information center for more information.
6	app server	Install the feature pack product on one of the computers that is a node in the cell where one of the cluster member application servers resides.
7	app server	Create an application server profile that is enabled with the feature pack by using either the Profile Management tool or the manageprofiles command. Note: i5/OS i5/OS users must use the manageprofiles command line tool.
8	dmgr,app server	Federate the new application server profile to the deployment manager using the addNode command.
9	dmgr,app server	Create a new cluster definition in the cell and create the first cluster member on the new application server node, using the server configuration template from the original cluster.

Table 2. Multiple-machine cluster installation and augmentation of the feature pack (continued)

Step	Machine	Task
10	dmgr,app server	Map any applications deployed to the old cluster to the new cluster by adding the new cluster as an additional deployment target. See the information center for more information.
11		Follow steps 6 - 9 for the remaining application server nodes that will host cluster member application servers, except that instead of creating a new cluster for step 9, simply expand the new cluster to include a member on the new node
12		Any node-specific configuration (such as JDBC Datasource configuration) from each old node should be recreated on the corresponding new augmented node.
13		Decide whether the old non-augmented cluster is necessary to keep or if its configuration can be deleted
14		Consider whether there is a reason to keep the old non-augmented application server nodes in the cell. If the cluster members were the only application servers on those nodes, then perhaps they can be removed from the cell by running the removeNode command from those nodes.

Note: The application server created in step 7 is only used to create an augmented node via the addNode command. It may be deleted if it will not be used for any other purpose.

Following this procedure results in reviewing common feature pack installation scenarios to find a possible match for the topology that you intend to install. Each high-level procedure shows the installation order for the components that comprise the topology.

Install the feature pack on your existing application server environment. See the information center for more information.

Installing the Feature Pack for Web Services silently

Run the Feature Pack for Web Services installation program to silently install the feature pack on an existing installation of a WebSphere Application Server Version 6.1 product.

The WebSphere Application Server Version 6.1 Feature Pack for Web Services extends the capabilities of WebSphere Application Server Version 6.1 to enable Web services messages to be sent asynchronously, reliably, and securely, focusing on interoperability with other vendors and to provide support for the Java API for XML Web Services (JAX-WS) 2.0 programming model.

Before starting this installation, do the following:

1. Read "Planning to install the Feature Pack for Web Services" on page 13.
2. Install a Version 6.1 WebSphere Application Server product if you have not done so already.
3. Download and extract the Feature Pack for Web Services.
For example, create two directories, wssrv_download and wssrv_installation_image. Then, download the feature pack to the wssrv_download directory and then extract the downloaded file to the wssrv_installation_image directory. Do not move any files out of the wssrv_installation_image directory.
4. The operating system requirements for a feature pack are the same as for a Version 6.1 application server installation. However, you need to ensure that you have enough free disk space to install the feature pack and the included maintenance onto the application server installation.

- 1450 MB of free space available in your target installation directory for the feature pack and included maintenance. This is in addition to the required Version 6.1 application server product.
- 600 MB of free space available in your temporary directory

This topic describes how to install the Feature Pack for Web Services silently using the installation program.

The installation program installs the following program files if they are not already installed:

- WebSphere Application Server V6.1 Fix Pack 9 (6.1.0.9)
- Java SDK 1.5 SR5 Cumulative Fix for WebSphere Application Server (6.1.0.9)
- Feature pack enablement extensions
- WebSphere Application Server Version 6.1 Feature Pack for Web Services

Note: Consider your current product topography before installing the Feature Pack for Web Services because it installs maintenance packages which may affect the version of your application server product. If the application server is already at or above the levels of maintenance included with the feature pack, then the installation of these maintenance packages will be skipped.

1. Log on as the user who installed the Version 6.1 WebSphere Application Server product.

- **AIX** **HP-UX** **Linux** **Solaris** Log on using the same user ID that was used when the product was installed.

Run the `ls -al` command at the root of the WebSphere Application Server installation to find the user ID that was used to install the product.

- **Windows** Log on as a user who belongs to the administrator group or as the user who installed the product.

2. Extract the downloaded product files. The WEBSV directory is the main directory of the Feature Pack for Web Services installation image. Save a backup copy of the `responsefile.WEBSV.txt` file somewhere on your system.
3. Edit `responsefile.WEBSV.txt` and customize it for your environment.

Set values for the following options:

Option	Description
<code>-OPT silentInstallLicenseAcceptance="true"</code>	Accept the enclosed license agreement.
<code>-OPT disableNonBlockingPrereqChecking="true"</code>	This will notify the installer to continue with the installation and log the warnings even though the prerequisite checking has failed. This will also allow the installation to proceed if you are below the required level of maintenance. The feature pack installer will install the included maintenance packages.
<code>-OPT installLocation=<i>app_server_root</i></code>	Set <i>app_server_root</i> to the root directory of your application server product.

To override any option in the response file with command-line options, include the following option in the response file:

`-OPT overrideResponsefileOptions=true`

4. Optional:

You can set values to create new application server and deployment manager profiles which are already augmented with the feature pack, or you can augment existing deployment manager profiles. You can also choose to create and augment profiles after installation. See "What to do next" on this page for more information. Change the following values in the response file to work with profiles during installation:

Restriction: For the Feature Pack for Web Services you can only augment an existing deployment manager profile. It is recommended that you create a new deployment manager profile or a new application server profile that is already enabled with the feature pack functionality. Use the profile creation tasks to create these profiles. The deployment manager and application server are the only profile types which can be created with the feature pack functionality.

- To create a new standalone application server or deployment manager profile already augmented with the feature pack:
 - a. Uncomment the following line: `-OPT createProfile="true"`
 - b. Uncomment and edit the following line: `-OPT profileType="standAlone"`. You can choose *standAlone* or *deploymentManager*
 - c. Go to either the stand alone application server section or the deployment manager section near the bottom of the file and uncomment and edit the values as needed.
 - To augment an existing deployment manager profile, uncomment the following line and edit the values for `<profile_name>` and `<WAS_HOME>`:

```
-OPT PROF_augment="-profileName <profile_name> -templatePath
<WAS_HOME>/profileTemplates/WEBSERVICES/dmgr.wsfep"
```
5. Stop all processes for the Version 6.1 product on which you are installing the feature pack.
- Stop the application server and any other product processes. For example, for the Network Deployment product, stop the deployment manager, the node agent, and all application server processes.
6. Run the Feature Pack for Web Services silent installation program.
- At a command prompt for the WEBSV directory, enter the following command:
- ```
install -options responsefile.WEBSV.txt -silent
```
- The installation program runs silently in the background.

The installation wizard installs the feature pack and records installation events in the installation log files in the `app_server_root/logs/install/webservices` directory.

**Tip:** If you are logged in as non-root or non-admin user, you may not always find a log in the application server directory after a failed installation or uninstallation attempt. When the installer runs, a log file is created in your user home directory. If the installation fails, an attempt is made to move the log to the `app_server_root` directory; however, without the necessary permission to move the file to the `app_server_root` directory, the attempt to move fails and the log remains in your home directory. Look for the following log files in the `user_home/webserviceslogs` directory:

- log.txt
- trace.txt.gz
- trace.xml.gz

## Troubleshooting

If the installation program is interrupted for any reason while feature pack files are being installed, examine the messages that the installation program displays and the information in the installation logs. Correct the problems identified and try installing the product again. Since the feature pack installation contains the feature pack and various fix packs, an installation failure might occur at different points in the process.

- If the installation program is interrupted while feature pack files are being installed, a later attempt to install the feature pack might fail with the following message:

```
Failure Recovery Complete

Failure recovery unsuccessful: The failed installation or uninstallation
of maintenance package fep.websv.primary.pak was not recovered.

Click Cancel to exit the installation wizard.
```

Exit the installer and then perform the following manual steps:

1. Remove the `fep.websv.primary.pak` file from the `app_server_root/properties/version/nif/backup/` directory
2. Remove the `app_server_root/properties/version/nif/backup/legal.websv` directory.
3. Remove the `app_server_root/lafiles/websv` directory.
4. Make a backup copy of `app_server_root/properties/version/nif/backup/updateStatus.xml`. Look for the section beginning with the `<package>` entry associated with `fep.websv.primary.pak` and ending with `</package>`, remove it, and save the file:

```
<package MaintenanceNamesOfPackagesToBeCleaned=""
URIsOfPackagesToBeCleaned=""
URIsOfPackagesToBeExecuted="zip:///home/<user_name>/IBM/WebSphere/WASND0405/properties/version/nif/backup/fep.websv.primary.pak"
isprimary="true"
maintenancefilename="fep.websv.primary.pak"
maintenancename="fep.websv.primary.pak" mode="installconfig" modified="true"
timestamp="2007-04-05 19:16:22-0400"
uritoreinstall=""
uritouninstall="zip:///home/<user_name>/IBM/WebSphere/WASND0405/properties/version/nif/backup/fep.websv.primary.pak">
...
</package>
```

5. Remove the `WEBSERVICES` entries from the WebSphere registry with the `InstallRegistryUtils` command in the `app_server_root/bin` directory.
  6. Run the `install` executable file in the `WEBSV` directory of the Feature Pack for Web Services installation image and install the feature pack.
- If the installation program is interrupted while the fix pack files are being installed, a later attempt to install the feature pack might fail with an error similar to the following message:

```
A failure from a previous installation or uninstallation attempt has been
detected. The failed package is 6.1.0-WS-WASSDK-WinX32-FP0000009. Click Next to
initiate automated recovery.
```

Since the failure occurred during the fix pack installation, the Update Installer must be used to recover after the failure. The feature pack installer cannot automatically recover the installation. Cancel the automated recovery process and perform the following actions to recover the installation.

1. Install the Update Installer and launch the wizard.
2. On the product selection panel, select or enter the location of the application server product directory which you used in part d of step 4 in the Procedure.
3. The Update Installer will detect that there was an update failure.
4. Click **Next** to start the automated recovery process.

**best-practices:** Certain events can prevent ISMP from starting the installation wizard. Such an event is not enough disk space to launch the installation wizard for example. If your installation fails and there is no information in the installation logs, use the `-is:javaconsole`

parameter to record entries for events that cause the ISMP program to fail to start the installation wizard. The syntax of the **install** command for observing such events is:

```
AIX HP-UX Linux Solaris
./install -is:javaconsole

Windows
install.exe -is:javaconsole
```

In order to use the feature pack functionality, you must first create a new profile enabled with the feature pack, or augment an existing deployment manager profile using the Profile Management tool.

**Restriction:** For the Feature Pack for Web Services you can only augment an existing deployment manager profile. It is recommended that you create a new deployment manager profile or a new application server profile that is already enabled with the feature pack functionality. Use the profile creation tasks to create these profiles. The deployment manager and application server are the only profile types which can be created with the feature pack functionality. See the information center for more information.

- To create a new profile enabled with the feature pack functionality, see the information center.
- To augment an existing deployment manager profile with the feature pack functionality see the information center.

The Feature Pack for Web Services provides several sample applications that you can install onto an application server profile that has been created with the feature pack functionality.

Use the Update Installer to install maintenance packages for any of the installable WebSphere software components in the product package. See Chapter 5, “Applying maintenance for the Feature Pack for Web Services with the Update Installer,” on page 35 for more information.

---

## Uninstalling the feature pack

Uninstall the feature pack product files leaving the application server product intact.

The uninstaller program is customized for each product installation, with specific disk locations and routines for removing installed features.

If you have a feature pack installed, uninstalling the WebSphere Application Server product using the Version 6.1 uninstaller program causes the feature pack to stop working because the uninstallation removes the server. However, you can uninstall the feature pack after uninstalling the WebSphere Application Server product. This same limitation applies if you are uninstalling a *customized installation package* (CIP) created with the Installation Factory.

Uninstallation will unaugment application server profiles that were previously augmented for the feature pack, rendering them unusable. It is recommended that you delete these profiles. However, deployment manager profiles will still be usable after unaugmentation.

1. **AIX** **HP-UX** **Linux** **Solaris** Log on using the same user ID that was used when the product was installed.  
Issue the `ls -al` command at the root of the WebSphere Application Server installation to find the user ID that was used to install the product.
2. **Windows** Log on as a user who belongs to the administrators group or as the user who installed the product.
3. If the feature pack is installed on a Network Deployment product, stop the node agent process with the `stopNode` command.  
Stop the node agent process that might be running on the machine. For example, issue the following command from the `profile_root/bin` directory of a federated node on a Linux machine to stop the node agent process:  
`./stopNode.sh`  
If servers are running and security is enabled, use the following command:  
`./stopNode.sh -user user_ID -password password`
4. If the feature pack is installed on a Network Deployment product, stop the deployment manager `dmgr` process with the `stopManager` command.  
For example, issue this command on a Linux machine from the `profile_root/bin` directory of the deployment manager profile:  
`./stopManager.sh -user user_ID -password password`
5. Stop each running application server with the `stopServer` command.  
Stop all server processes in all profiles on the machine. For example, issue the following command from the `profile_root/bin` directory to stop the `server1` process in the application server profile:  
`./stopServer.sh server1`  
If a server is running and security is enabled, use the following command:  
`./stopServer.sh server1 -user user_ID -password password`  
If you have multiple servers, you can use the `serverStatus` command to find running application servers. Issue the following command from the `profile_root/bin` directory to determine which servers, if any, are running:  
`./serverStatus.sh -all`
6. Optional: Back up configuration files, profiles, and log files to refer to them later if necessary.  
Use the `backupConfig` command to back up configuration files and profiles.
7. Run the `uninstall` command in the `app_server_root/uninstall_websv` directory:
  - **AIX** **HP-UX** **Linux** **Solaris** `uninstall.sh`
  - **Windows** `uninstall.exe`
 The uninstaller wizard begins and displays the Welcome panel.  
You can also uninstall silently by running the `uninstall` command with the following parameters:

Table 3. Silent installation options

| Command                        | Description                                                                                                              |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| <code>uninstall -silent</code> | Use this command to uninstall the feature pack silently on the Base or Express editions of WebSphere Application Server. |

Table 3. Silent uninstallation options (continued)

| Command                                                          | Description                                                                                                                                                                                                                                                                     |
|------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <pre>uninstall -silent -OPT   unaugmentDmgrProfiles="true"</pre> | Use this command to uninstall the feature pack silently on the Network Deployment edition of WebSphere Application Server. The <code>-OPT unaugmentDmgrProfiles="true"</code> option is required only if you have a deployment manager profile augmented with the feature pack. |

8. If you are using the wizard, click **Next** to begin uninstalling the product. The uninstaller wizard displays a confirmation panel that lists a summary of the components that you are uninstalling.
  - a. Click **Next** to continue uninstalling the product.
 

After uninstalling profiles, the uninstaller program deletes the core product files in component order.
  - b. Click **Finish** to close the wizard after the wizard removes the product.
9. If the uninstallation program did not uninstall the feature pack enablement extensions, use the Update Installer to uninstall the enablement extensions. See “Uninstalling a fix pack, interim fix, interim feature or test fix using the graphic user interface” on page 50.
10. Review the uninstallation log files located in `app_server_root/logs/uninstall/webservices`.
11. Delete the application server profiles that are no longer usable with the `manageprofiles` command. The list of the invalid profiles are displayed by the uninstall wizard and logged in the log file.
12. If necessary, delete the `uninstall_websv` directory for Feature Pack for Web Services.

This procedure results in uninstalling the feature pack product.

Any application server profile that previously was enabled with the feature pack is no longer usable. Any deployment manager profile that previously was augmented for the feature pack is unaugmented resulting in a deployment manager profile that is still usable.

See Chapter 2, “Installing the Feature Pack for Web Services on distributed operating systems,” on page 9 if you want to reinstall the feature pack.



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## Chapter 3. Installing the Feature Pack for Web Services on i5/OS

Install a feature pack directly from your iSeries server on which the WebSphere Application Server Version 6.1 installation runs.

The WebSphere Application Server Version 6.1 Feature Pack for Web Services extends the capabilities of WebSphere Application Server Version 6.1 to enable Web services messages to be sent asynchronously, reliably, and securely, focusing on interoperability with other vendors and to provide support for the Java API for XML Web Services (JAX-WS) 2.0 programming model.

Before starting this installation, do the following:

1. Read “Planning to install the Feature Pack for Web Services” on page 13.
2. Ensure that your user profile has \*ALLOBJ and \*SECADM special authorities.
3. Determine if WebSphere Application Server is already installed on your server. The feature pack must be installed on an existing WebSphere Application Server Version 6.1 installation.
  - a. Enter the Display Software Resources (DSPSFWRSC) command on a CL command line.
  - b. Look for an entry with the product Resource ID 5733W61.
    - If you do not find the product Resource ID, then this product has not been installed on your iSeries server.
    - If you find the product Resources ID, ensure that at least one of the following entries is displayed:
      - 5733W61 1 5101 WebSphere Application Server V6.1 Express
      - 5733W61 2 5102 WebSphere Application Server V6.1 (“Base”)
      - 5733W61 3 5103 WebSphere Application Server V6.1 Network Deployment
4. Install a WebSphere Application Server Version 6.1 product if you have not done so already.
5. Download the Feature Pack for Web Services and extract the contents to an Integrated File System (IFS) directory on the iSeries system you will install to. For example, create two directories, wssrv\_download and wssrv\_installation\_image. Then, download the feature pack to the wssrv\_download directory and then extract the downloaded file to the wssrv\_installation\_image directory. Do not move any files out of the image directory.
6. The operating system requirements for a feature pack are the same as for a Version 6.1 application server installation. However, you need to ensure that you have enough free disk space to install the feature pack and the included maintenance onto the application server installation.
  - 1450 MB of free space available in your target installation directory for the feature pack and included maintenance. This is in addition to the required Version 6.1 application server product.
  - 600 MB of free space available in your temporary directory

This topic describes how to install the Feature Pack for Web Services silently using the installation program. You can install the feature pack from Qshell using the INSTALL command. You can also use the RUNJAVA command to invoke the installation wizard.

The installation program installs the following program files if they are not already installed:

- WebSphere Application Server V6.1 Fix Pack 9 (6.1.0.9)
  - Feature pack enablement extensions
  - WebSphere Application Server Version 6.1 Feature Pack for Web Services
1. Sign on the iSeries system with a user profile that has \*ALLOBJ and \*SECADM special authorities.
  2. Copy the responsefile.WEBSV.txt file located in the WEBSV subdirectory of the extracted install image.
  3. Edit the copy of the responsefile.WEBSV.txt file. You can edit the file using a mapped drive and a text editor or by using the EDTF CL command from the i5/OS command line.

Set values for the following options where *app\_server\_root* is the directory path to your WebSphere Application Server Version 6.1 installation:

```
-OPT silentInstallLicenseAcceptance="true"
-OPT installLocation=app_server_root
```

To override any option in the response file with command-line options, include the following option in the response file:

```
-OPT overrideResponsefileOptions=true
```

4. Optional:

You can set values to create new application server and deployment manager profiles which are already augmented with the feature pack, or you can augment existing deployment manager profiles. You can also choose to create and augment profiles after installation. See "What to do next" on this page for more information. Change the following values in the response file to work with profiles during installation:

**Restriction:** For the Feature Pack for Web Services you can only augment an existing deployment manager profile. It is recommended that you create a new deployment manager profile or a new application server profile that is already enabled with the feature pack functionality. Use the profile creation tasks to create these profiles. The deployment manager and application server are the only profile types which can be created with the feature pack functionality.

- To create a new standalone application server or deployment manager profile already augmented with the feature pack:
  - a. Uncomment the following line: `-OPT createProfile="true"`
  - b. Uncomment and edit the following line: `-OPT profileType="standAlone"`. You can choose *standAlone* or *deploymentManager*
  - c. Go to either the stand alone application server section or the deployment manager section near the bottom of the file and uncomment and edit the values as needed.
- To augment an existing deployment manager profile, uncomment the following line and edit the values for `<profile_name>` and `<WAS_HOME>`:

```
-OPT PROF_augment="-profileName <profile_name> -templatePath
<WAS_HOME>/profileTemplates/WEBSERVICES/dmgr.wsfep"
```

5. Stop all processes for the Version 6.1 product on which you are installing the feature pack.

Stop the application server and any other product processes. For example, for the Network Deployment product, stop the deployment manager, the node agent, and all application server processes.

6. Verify that the host server jobs have started on your iSeries server.

The host server jobs allow the installation code to run on iSeries. On a CL command line, enter the following command:

```
STRHOSTSVR SERVER(*ALL)
```

7. If you have not already done so, read the IBM International Program License Agreement located in the `lafiles` directory.

If you agree to the terms of the agreement, continue with the installation process.

8. Invoke the installation program for the feature pack.

Run the `INSTALL` command from Qshell or use the `RUNJVA` command from the CL command line.

In the following example commands, *path/responsefile* represents the fully-qualified path of the response file that you edited.

- Run the `INSTALL` command from Qshell.
  - a. On a CL command line, issue the `STRQSH` command to start the Qshell command shell.
  - b. Issue the `install` command from the `WEBSV` subdirectory of the directory containing the extracted install image to start the installation program:

```
install -options path/responsefile
```

**Important:** Do not exit the Qshell session (PF3) until the installation has completed. Doing so might cause the installation to stop prematurely.

- Issue the `RUNJVA` command from the CL command line:

At the CL command line, change to the `WEBSV` subdirectory of the directory containing the extracted install image before issuing the following commands:

```
chdir '/pathToExtractedImage/WEBSV'
```

Enter the `RUNJVA` command on one line. The command is shown on more lines for formatting clarity:

```
RUNJVA
CLASS(run) PARM('-options' 'path/responsefile')
CLASSPATH('setup.jar')
PROP(
 ('Xbootclasspath/p' 'java/endorsed/xml.jar')
 (java.version 1.5)
 (is.debug 1)
)
```

9. For security purposes, if the host servers were not running prior to installation, it is recommended that you run the End Host Server (`ENDHOSTSVR`) command after the installation is complete.

The installation program records events in the log files and installs the feature pack.

## Troubleshooting

If the installation program is interrupted for any reason while feature pack files are being installed, examine the messages that the installation program displays and the information in the installation logs. Correct the problems identified and try installing the product again. Since the feature pack installation contains the feature pack and various fix packs, an installation failure might occur at different points in the process.

- If the installation program is interrupted while feature pack files are being installed, a later attempt to install the feature pack might fail with the following message:

```
Failure Recovery Complete

Failure recovery unsuccessful: The failed installation or uninstallation
of maintenance package fep.websv.primary.pak was not recovered.

Click Cancel to exit the installation wizard.
```

Exit the installer and then perform the following manual steps:

1. Remove the `fep.websv.primary.pak` file from the `app_server_root/properties/version/nif/backup/` directory
2. Remove the `app_server_root/properties/version/nif/backup/legal.websv` directory.
3. Remove the `app_server_root/lafiles/websv` directory.
4. Make a backup copy of `app_server_root/properties/version/nif/backup/updateStatus.xml`. Look for the section beginning with the `<package>` entry associated with `fep.websv.primary.pak` and ending with `</package>`, remove it, and save the file:

```
<package MaintenanceNamesOfPackagesToBeCleaned=""
URIsOfPackagesToBeCleaned=""
URIsOfPackagesToBeExecuted="zip:///home/<user_name>/IBM/WebSphere/WASND0405/properties/version/nif/backup/fep.websv.primary.pak"
isprimary="true"
maintenancefilename="fep.websv.primary.pak"
maintenancename="fep.websv.primary.pak" mode="installconfig" modified="true"
timestamp="2007-04-05 19:16:22-0400"
uritoinstall=""
uritouninstall="zip:///home/<user_name>/IBM/WebSphere/WASND0405/properties/version/nif/backup/fep.websv.primary.pak">
...
</package>
```

5. Remove the `WEBSERVICES` entries from the WebSphere registry with the `InstallRegistryUtils` utility in the `app_server_root/bin` directory.
  6. Run the `install` executable file in the `WEBSV` directory of the Feature Pack for Web Services installation image and install the feature pack.
- If the installation program is interrupted while the fix pack files are being installed, a later attempt to install the feature pack might fail with an error similar to the following message:

```
A failure from a previous installation or uninstallation attempt has been
detected. The failed package is 6.1.0-WAS-WAS-15osPPC64-FP0000009. Click Next to
initiate automated recovery.
```

Since the failure occurred during the fix pack installation, the Update Installer must be used to recover after the failure. The feature pack installer cannot automatically recover the installation. Cancel the automated recovery process and perform the following actions to recover the installation.

1. Install the Update Installer and launch the wizard.
2. On the product selection panel, select or enter the location of the application server product directory which you used in part d of step 4 in the Procedure.
3. The Update Installer will detect that there was an update failure.
4. Click **Next** to start the automated recovery process.

In order to use the feature pack functionality, you must first create a new profile enabled with the feature pack, or augment an existing deployment manager profile.

**Restriction:** For the Feature Pack for Web Services you can only augment the deployment manager profile type. It is recommended that you create a new deployment manager profile or a new application server profile that is already enabled for the feature pack. Use the profile creation tasks to create these profiles.

- To create a new profile enabled with the feature pack functionality, see the information center.
- To augment an existing deployment manager profile with the feature pack functionality see the information center.

Installing the Feature Pack for Web Services adds sample files to the *profile\_root/samples/lib/WebServicesSamples* directory of your product installation. You can install the files on an application server profile that has been created with the feature pack augmentation.

---

## Uninstalling the feature pack on i5/OS

You can uninstall a feature pack product by running the feature pack for Web Services uninstall command from your iSeries server.

The uninstaller program is customized for each product installation, with specific disk locations and routines for removing installed features.

If you have a feature pack installed, uninstalling the WebSphere Application Server product using the Version 6.1 uninstaller program causes the feature pack to stop working because the uninstallation removes the server. However, you can uninstall the feature pack after uninstalling the WebSphere Application Server product. This same limitation applies if you are uninstalling a *customized installation package* (CIP) created with the Installation Factory.

Use this procedure to uninstall a feature pack from a WebSphere Application Server for i5/OS Version 6.1 installation. Uninstallation will unaugment application server profiles that were previously augmented for the feature pack, rendering them unusable. It is recommended that you delete these profiles. However, deployment manager profiles will still be usable after unaugmentation.

1. Sign on the iSeries system with a user profile that has \*ALL0BJ special authority.
2. Stop all processes for the Version 6.1 product for which you are uninstalling the feature pack.

Stop the application server and any other product processes. For example, for the Network Deployment product, stop the deployment manager, the node agent, and all application server processes.

3. Verify that the host server jobs have started on your iSeries server.

The host server jobs allow the installation code to run on iSeries. On a CL command line, enter the following command:

```
STRHOSTSVR SERVER(*ALL)
```

4. Uninstall the feature pack from your WebSphere Application Server for i5/OS installation on your iSeries server.

To uninstall the Web Services feature pack, run the one of the following commands from the Qshell command line:

Table 4. Uninstallation commands

| Command                                                              | Description                                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>uninstall -silent</code>                                       | Use this command to uninstall the feature pack silently on the Base or Express editions of WebSphere Application Server for i5/OS.                                                                                                                                                            |
| <code>uninstall -silent -OPT<br/>unaugmentDmgrProfiles="true"</code> | Use this command to uninstall the feature pack silently on the Network Deployment edition of WebSphere Application Server for i5/OS. The <code>-OPT<br/>unaugmentDmgrProfiles="true"</code> option is required only if you have a deployment manager profile augmented with the feature pack. |

Uninstalling the feature pack from the iSeries server removes feature pack libraries and directories. If you do not specify the option to delete all the profiles when you invoke the `uninstall` command, the user-defined information is not removed but you can reuse the information only if you reinstall the feature pack. If you later decide that you do not need the user-defined data, you can manually remove it.

User data consists of directories and files under the *profile\_root* directory, which is the directory specified as the value for the `profilePath` parameter when creating the profile with the `manageprofiles` command. Manually delete any files or directories that you no longer need.

5. If the uninstallation program did not uninstall the feature pack enablement extensions, use the Update Installer to uninstall the enablement extensions. See "Uninstalling a fix pack, interim fix, interim feature or test fix using the graphic user interface" on page 50.
6. Review any log files if necessary. Log files are located in the *app\_server\_root/logs/uninstall/webservices* directory.
7. Delete the application server profiles that can no longer be used with the `manageprofiles` command. The invalid profiles are listed in the log file.

After completing the procedure, the feature pack is uninstalled.

If the feature pack does not uninstall successfully, examine the logs in the *app\_server\_root/logs/uninstall/webservices* directory to identify why the uninstall failed. Correct the problems identified and try uninstalling the product again.

Any application server profile that previously was enabled with the feature pack is no longer valid. Any deployment manager profile that previously was augmented for the feature pack is unaugmented resulting in a deployment manager profile that is still valid.

---

## Chapter 4. Installing the Feature Pack for Web Services on z/OS systems

Use this task to install the Feature Pack for Web Services on z/OS Version 6.1.

Install the z/OS system product code and optional materials. See the information center.

The Feature Pack for Web Services is included as service with the WebSphere Application Server on z/OS optional materials. This task provides instructions for installing the Feature pack for Web Services product code and enabling your runtime environment to use the Feature Pack for Web Services functions.

Perform the following steps to install the Feature Pack for Web Services on z/OS systems:

1. From the WebSphere Application Server for z/OS support Web site, obtain the PTF numbers for the Feature Pack for Web Services product code. Verify that you are running the minimum required WebSphere Application Server for z/OS level, and install any WebSphere Application Server on z/OS maintenance that is required by the Feature Pack for Web Services.
2. Install the Feature Pack for Web Services installation support PTF. This PTF includes JCL to allocate and initialize a file system to hold the Feature pack for Web Services product code. Follow the instructions contained in this PTF to create the Feature Pack for Web Services file system.
3. Install the Feature pack for Web Services product PTF. This PTF contains the Feature pack for Web Services product code, which is installed into the FPWS subdirectory of the Optional Materials directory.

When you have finished the installation process, create a WebSphere Application Server on z/OS runtime environment that includes the Feature Pack for Web Services functions. A Feature Pack for Web Services plugin is available on the Profile Management tool for z/OS. You can create new stand-alone application servers and deployment managers that are enabled for the Feature Pack for Web Services. (The ISPF Customization Dialog can not be used to create feature pack enabled environments.)

To create a stand-alone application server that is enabled for the Feature Pack for Web Services:

1. Install the Feature Pack for Web Services plugin for the z/OS Profile Management tool.
2. Follow the instructions in “Creating a z/OS application server with the Feature Pack for Web Services installed” on page 30.

Use the following steps to create a deployment manager that is enabled for Feature Pack for Web Services or to work with an existing deployment manger:

1. Install the Feature Pack for Web Services plugin for the z/OS Profile Management tool.
2. Enable a deployment manager for the Feature Pack for Web Services:

- If you are creating a new network deployment cell, follow the instructions in “Creating a z/OS deployment manager with the Feature Pack for Web Services installed” on page 31.
- If you are working with an existing deployment manager, refer to “Enabling an existing z/OS deployment manager for Feature Pack for Web Services” on page 32.

**Note:** The managed node and cell profiles do not provide support for the Feature Pack for Web Services. To add the Feature Pack for Web Services -enabled application servers to a network deployment cell, create one or more stand-alone application servers using the procedure above and federate them into the cell. The cell’s deployment manager must be enabled for the Feature Pack for Web Services before any application servers that are enabled for this feature pack can be federated.

---

## Creating a z/OS application server with the Feature Pack for Web Services installed

You can use the Profile Management tool to generate the required jobs to create an application server. On completion, this includes the Feature Pack for Web Services.

Complete the following steps to set up a new application server for a z/OS stand-alone application server cell. This includes the Feature Pack for Web Services when the process is complete.

1. Create a customization profile that includes the Feature Pack for Web Services.
  - a. Launch the Profile Management tool for z/OS.
  - b. Select **Feature Pack for Web Services for application environment type**.
  - c. Select **z/OS Application Server with Feature Pack for Web Services for environment type**.
  - d. Enter the values.

After all the required values are entered, select **Finish** to create the customization definition.

**Note:** If an error should occur during the process of creating the customization profile, a window will display the location of a log file. Review the log file for more details about the issue.

2. Review the stand-alone application server definition file to confirm that the values are correct.
3. Upload the customization jobs and scripts to the target z/OS system. Refer to the information center for instructions.
4. Follow the generated instructions, which can be viewed using one of the following method:
  - In the Profile Management tool, select the desired customization profile and click **View**.
  - After you have uploaded the definition, view member BBOSSINS in config.hlq.CNTL.
5. Fix any problems.

If you encounter problems caused by your values in the customization profile, modify your variables using the Profile Management tool, regenerate the instructions, and upload the customization definitions again.

**Note:** Do not attempt to fix a typographical error or make a change by modifying the generated output. Many of the variables are used in multiple members of the target data sets; if you do not change them all, therefore, you will run into problems that are very difficult to diagnose.

**Note:** Remember that you cannot upload new customization jobs while either configuration data set is open.

You have set up a new z/OS system stand-alone application server cell with the Feature Pack for Web Services installed.

---

## Creating a z/OS deployment manager with the Feature Pack for Web Services installed

You can use the Profile Management tool to create a z/OS system deployment manager, that includes the Feature Pack for Web Services.

Create a custom definition file. See the information center.

Use the following steps to create a network deployment cell with the Feature Pack for Web Services installed:

1. Create a customization definition file for the network deployment cell.
  - a. Launch the Profile Management tool for z/OS.
  - b. Select **Feature Pack for Web Services for application environment type**.
  - c. Select **z/OS deployment manager with Feature Pack for Web Services for environment type**.
  - d. Enter the values.

After all the required values are entered, select **Finish** to create the customization definition.

**Note:** If an error should occur during the process of creating the customization profile, a window will display the location of a log file. Review the log file for more details about the issue.

2. Review the network deployment definition to confirm that the values are correct. Refer to the information center for instructions.
3. Upload the customization jobs and scripts to the target z/OS system. Refer to the information center for instructions.
4. Follow the generated instructions, which can be viewed using one of the following method:
  - In the Profile Management tool, select the desired customization profile and click **View**.
  - After you have uploaded the definition, view member BBOCCINS in config.hlq.CNTL.
5. Fix any problems.

If you encounter problems caused by your Customization profile values, modify your variables using the Profile Management tool, regenerate the instructions, upload the customization definitions again.

**Note:** Do not attempt to fix a typographical error or make a change by modifying the generated output. Many of the variables are used in multiple members of the target data sets; if you do not change them all, therefore, you will run into problems that are very difficult to diagnose.

**Note:** Remember that you cannot upload new customization jobs while either configuration data set is open.

You have set up a new z/OS system deployment manager with the Feature Pack for Web Services installed.

---

## Enabling an existing z/OS deployment manager for Feature Pack for Web Services

You can use the Profile Management tool to enable the Feature Pack for Web Services on an existing z/OS system deployment manager. This topic includes steps to enable the Feature Pack for Web Services on an existing deployment manager. When this task is complete, you can federate the Feature Pack for Web Services-enabled application servers.

Install the Feature Pack for Web Services and mount the Feature Pack for Web Services product file system. Refer to the information center for more information.

Select the deployment manager that you want to enable for the Feature Pack for Web Services.

Install the Feature Pack for Web Services plug-in on the Profile Management tool for z/OS. For more information about this tool, refer to the information center.

Use the following steps to enable the Feature Pack for Web Services on an existing deployment manager.

1. Start the Profile Management tool for z/OS.
2. From the customization profile type pane, select **Feature Pack for Web Services > Enable an existing deployment manager with Feature Pack for Web Services**. Check these values for verification.
3. Provide the requested values for the customization profile and create the profile.

**Note:** If an error should occur during the process of creating the customization profile, a window will display the location of a log file. Review the log file for more details about the issue.

4. Select the customization profile you have created and do one of the following:
  - Perform the **upload** action. The upload action uploads the customization job and associated data that was created to the target z/OS system. Submit the customization job to generate the required symbolic links and update the target profile. For more information, refer to the topic “Using the upload action to install the Feature Pack for Web Services for an existing z/OS system deployment manager” on page 33.
  - Perform the **run** action.

**Note:** The run action is not yet supported.

The run action generates the required symbolic links and updates the target profile. This action requires an active remote exec daemon (rexecd) on the target z/OS system. For more information, refer to the topic “Using the run action to install the Feature Pack for Web Services on an existing z/OS system deployment manager” on page 33.

Your existing WebSphere Application Server for z/OS deployment manager is now enabled for the Feature Pack for Web Services.

## Using the upload action to install the Feature Pack for Web Services for an existing z/OS system deployment manager

Using the upload action is one of two ways to install the Feature Pack for Web Services on an existing z/OS system deployment manager.

The upload action uploads the customization job and associated data that was created to the target z/OS system. After you complete the upload, you need to submit the customization job to generate the required symbolic links and update the target profile.

1. Upload the customization jobs. Use the Profile Management tool upload action to upload the customization job and associated data to target z/OS system. The data is written to the following partitioned data sets:
  - HLQ.CNTL
  - HLQ.DATA
2. Stop the target deployment manager.
3. Back up the target configuration file system.
4. Run the job WSDMJOB. This job generates two sets of symbolic links. The first set of symbolic links is for the target configuration file system to the feature pack enablement code install image. The second set of symbolic links is to the Feature Pack for Web Services install image. It also updates the profile in the target configuration file system for the Feature Pack for Web Services.
5. Restart the deployment manager.

The target deployment manager is now included in the Feature Pack for Web Services.

## Using the run action to install the Feature Pack for Web Services on an existing z/OS system deployment manager

Using the run action is one of two ways to install the Feature Pack for Web Services on an existing z/OS system deployment manager.

**Note:** The run action is not yet supported. The run action generates the required symbolic links and updates the target profile. The run action requires an active remote exec daemon (rexecd) on the target z/OS system. Complete the following steps to perform this task:

**Note:** Use this procedure only if the target z/OS system has an active remote exec daemon (rexecd).

1. Stop the target deployment manager.
2. Back up the target configuration file system.
3. Update the target profile. Use the Profile Management tool run action to update the target profile. The run action generates two sets of symbolic links. The first set of symbolic links is for the target configuration file system to the feature pack enablement code install image. The second set of symbolic links is to the Feature Pack for Web Services install image. The action completes both of these before it updates the profile.
4. Restart the deployment manager.

The target deployment manager is updated to include the Feature Pack for Web Services.



---

## Chapter 5. Applying maintenance for the Feature Pack for Web Services with the Update Installer

The IBM Update Installer for WebSphere Software allows for installing and uninstalling interim fixes, fix packs, and refresh packs. The Update Installer for WebSphere Software is also known as the Update Installer program, the UpdateInstaller program, and the Update installation wizard.

Use the proper authorizations to successfully install product updates.

**Distributed platforms** Use the Update Installer program from the same installer ID that installed the product that you are updating. Otherwise, the file ownership mismatches might require correction by the root user. For detailed information about the limitations of non-root installers in a distributed environment, consult the installing chapter of the *Installing your application serving environment* PDF book.

**i5/OS** Use the Update Installer program from a user profile with \*ALLOBJ special authority.

### Overview of the enhancements with the Feature Pack for Web Services

The Feature Pack for Web Services includes these enhancements for the Update Installer:

- Upgrading software for the Update Installer
- Installing multiple fixes to multiple products during the maintenance installation process
- Enabling interim fix installation support.
- Allowing for operating system prerequisite checking
- Linking to the maintenance download wizard to obtain the latest maintenance

### Overview of installing WebSphere Application Server fix packs with feature packs

The feature pack enabling interim fix contains the WebSphere Application Server enablement code that is used by all feature packs. It is packaged inside each WebSphere Application Server fix pack. When a fix pack is installed and no feature packs have been installed, this interim fix will be saved for future use. The interim fix will be installed when ever a feature pack is installed. The enabling interim fix contains the changes for all feature packs. This interim fix will not be accessible through the support pages or available as a separate user installable or uninstalleable maintenance package.

When installing a fix pack, the Update Installer will inform you about changes to support the feature pack. When uninstalling fix packs, the enabling interim fix associated with the fix pack is uninstalled and a previous version of enabling interim fix associated with older fix pack will be installed. The versionInfo utility can be used to show any interim fixes which have been installed.

For an overview of the procedure for installing maintenance using the Update Installer, refer to the information center.

Now you can upgrade the Update Installer and get the latest version. The maintenance download wizard will step you through the required selection panels to identify the recommended version for your environment. For more information, refer to “Upgrading the Update Installer” on page 51.

The Update Installer wizard **installs** maintenance packages in two modes: the silent mode and the graphical user interface mode.

**i5/OS** The i5/OS platform installs in only silent mode, working at the Qshell command line.

There are three types of **silent install** procedures that can be used with the Feature Pack for Web Services. They are listed below:

1. Installing a fix pack or refresh pack, refer to “Installing a fix pack with silent install” for more information.
2. Installing an interim fix or interim feature or test fix, refer to “Installing an interim fix, interim feature, or test fix with silent install” on page 39 for more information.
3. Installing multiple maintenance packs, refer to “Installing multiple maintenance packs with silent install” on page 41 for more information.

There are three types of **installs using the graphical user interface** with the Feature Pack for Web Services. They are as follows:

1. Installing a fix pack or refresh pack, refer to “Installing a fix pack using the graphical user interface” on page 44 for more information.
2. Installing an interim fix or interim feature or test fix, refer to “Installing an interim fix, interim feature, or test fix using the graphical user interface” on page 45 for more information.
3. Installing multiple maintenance packs, refer to “Installing multiple maintenance packs using the graphical user interface” on page 47 for more information.

The Update Installer wizard **uninstalls** in two modes: the silent mode and the graphical user interface mode.

- Using the silent uninstall, the procedure for uninstalling a fix pack, or interim fix, or interim feature are similar. For more information about uninstalling using the silent uninstall, refer to “Uninstalling a fix pack, an interim fix, or a test fix using the silent uninstall” on page 48.
- Using the graphical user interface, the procedure for uninstalling is similar for both fix packs, interim fixes, or interim features. The Update Installer allows for only one fix pack, interim fix, or interim feature to be uninstalled at a time. To uninstall more than one, you need to re-start the Update Installer. To find out more about uninstalling a fix pack or refresh pack, refer to “Uninstalling a fix pack, interim fix, interim feature or test fix using the graphic user interface” on page 50.

---

## Installing a fix pack with silent install

This topic describes how to use the Update Installer for WebSphere Software to install the fix pack using the silent install option.

The most recent version of the Update Installer needs to be installed on a target system locally.

**i5/OS** Use the Update Installer program from a user profile with \*ALLOBJ special authority.

The most recent version of the Update Installer needs to be installed on a target system locally.

1. Download the required fix pack from the official IBM support Web site into the *updi\_root*/maintenance directory.
2. Ensure that all running processes have been stopped.
3. **i5/OS** Verify that the host server jobs are started on your iSeries server. The host server jobs allow the installation code to run on iSeries.

Enter this command on a CL command line:

```
STRHOSTSVR SERVER(*ALL)
```

4. Edit a response file. The one located at the bottom of the pane can be used as an example. There are also sample response files found in the *updi\_root*/responsefiles directory.

- a. Specify the location of the product to the response file.
- b. Specify the choice of *install* maintenance in the response file. For example:  
-W update.type="install"
- c. Add the maintenance location where packages can be found to the response file.

When you install the fix pack, certain logic is used to determine which packages to install. To find out more, refer to "Logic that the Update Installer uses for system recommended installations," found at the bottom of this topic.

5. Run the Update Installer.

For example:

**Windows**

```
update.bat -silent -options "responsefiles\file_name"
```

**Vista**

```
update.exe -silent -options "responsefiles\file_name"
```

**AIX**

**HP-UX**

**Linux**

**Solaris**

```
./update.sh -silent -options "responsefiles/file_name"
```

**i5/OS**

```
update -silent -options "responsefiles/file_name"
```

6. Review the log file to verify maintenance has been installed successfully. The log can be found at *app\_server\_root*/logs/update/maintenance\_package.install. If for some reason the maintenance package is not applicable to install, a log file found in *updi\_root*/logs/tempX will list the reason for the failure. The most recent log file, tmpX, where X refers to the first available empty directory, will be created to reflect the status for this attempted install.

One of the following results will appear in the log.

#### **INSTCONFSUCCESS**

The operation was a success.

#### **INSTCONFPARTIALSUCCESS**

The operation was partially successful, refer to the log for more details.

## INSTCONFFAILED

The operation failed, refer to the log for more details.

The following is an sample response file used by the Update Installer to install a fix pack using the silent installer.

```


This is the silent install response file for installing maintenance packages
using the update installer.

A common use of an options file is to run the wizard in silent mode. This lets
the options file author specify wizard settings without having to run the
wizard in graphical or console mode. To use this options file for silent mode
execution, *uncomment* and modify the parameters defined within.

Use the following command line when running the wizard from the update
installer directory:

update -options responsefiles/install.txt -silent

Please enclose all values within a single pair of double quotes.

This section describes how to apply a maintenance package using the full
filename specifications to be installed.
There are three ways you can specify installing a maintenance package.
They are the following:
(Use the examples below and edit where appropriate.)

1. Specify a single maintenance package full filename to be installed.

For example:
-W maintenance.package="C:\Program Files\IBM\WebSphere\AppServer\
UpdateInstaller\maintenance\PQ20029.pak"

2. Specify a multiple maintenance package full filename to be installed.
- Use a semicolon to separate the full filename specifications.
- Update Installer will install the latest applicable maintenance in the order ## listed.

For example:
-W maintenance.package="C:\maintenance\PQ20029.pak;C:\maintenance\PK31008.pak;
D:\6.1.0-WS-WAS-WinX32-FP0000001.pak"

3. Specify a full folder name that contains the maintenance packages.
Update Installer will install the latest applicable maintenance in the order
listed in the folder.

For example:
-W maintenance.package="D:\UpdateInstaller\maintenance"

Notes: If no package is specified, maintenance packages from the default folder
(such as, UpdateInstaller_HOME/maintenance)
will be installed.

-W maintenance.package="D:\UpdateInstaller\maintenance\6.1.0-WS-WAS-WinX32-FP0000001.pak"

Prerequisite Checking

The update installer checks the system for prerequisites by default.
```

```

#
Uncomment the following option to notify the installer to continue with
the update and log the warnings even though prerequisite checking
failed.
#
#-OPT disableNonBlockingPrereqChecking="true"

#####
#
Used to input the product install location that will be updated.
#
such as, -W product.location="C:\Program Files\IBM\WebSphere\AppServer"
#
Note: The product install location should always been specified, and it should
always be the full path.
#
-W product.location="D:\Program Files\IBM\WebSphere\AppServer"

#####
#
Do not edit these values.
#
#
-W update.type="install"

```

---

## Installing an interim fix, interim feature, or test fix with silent install

This topic describes how to use the Update Installer for WebSphere Software to install the interim fix, interim feature, or test fix using the silent install option.

The most recent version of the Update Installer needs to be installed on a target system locally.

**i5/OS** Use the Update Installer program from a user profile with \*ALLOBJ special authority.

The following steps lead you through the process of applying maintenance to an interim fix, interim feature, or test fix pack using the silent mode.

1. The most recent version of the Update Installer needs to be installed on a target system locally.
2. Download the required interim fix, interim feature, or test fix pack from the official IBM support Web site into the *updi\_root/maintenance* directory.
3. Ensure that all running processes have been stopped.
4. **i5/OS** Verify that the host server jobs are started on your iSeries server. The host server jobs allow the installation code to run on iSeries.  
Enter this command on a CL command line:  
STRHOSTSVR SERVER(\*ALL)
5. Edit the response file. An example of a response file is located at the bottom of this article.
  - a. The location of the product needs to be added to the response file.
  - b. Specify the choice of *Install* maintenance in the response file.
  - c. Add the maintenance location where packages can be found to the response file. The user enters the directory name containing the packages.  
In the response file, point to interim fix, interim feature, or test fix directory containing the package that needs to be installed.

When you install the fix pack, certain logic is used to determine which packages to install. To find out more, refer to the information center.

6. Run the Update Installer.

For example:

```
Windows
update.bat -silent -options "responsefiles\file_name"

Vista
update.exe -silent -options "responsefiles\file_name"

AIX HP-UX Linux Solaris
./update.sh -silent -options "responsefiles/file_name"

i5/OS
update -silent -options "responsefiles/file_name"
```

7. Review the log to verify that the maintenance was applied successfully. The log can be found at *app\_server\_root/logs/update/maintenance\_package.install*.

One of the following results will appear in the log.

**INSTCONFSUCCESS**

The operation was a success.

**INSTCONFPARTIALSUCCESS**

The operation was partially successful, refer to the log for more details.

**INSTCONFFAILED**

The operation failed, refer to the log for more details.

The following is a sample of a response file used by the Update Installer to install an interim fix, interim feature, or test fix using the silent installer.

```
#####
#
This is the silent install response file for installing maintenance packages
using the update installer.
#
A common use of an options file is to run the wizard in silent mode. This lets
the options file author specify wizard settings without having to run the
wizard in graphical or console mode. To use this options file for silent mode
execution, *uncomment* and modify the parameters defined within.
#
Use the following command line when running the wizard from the update
installer directory:
#
update -options responsefiles/install.txt -silent
#
Please enclose all values within a single pair of double quotes.
#
#####

#####
#
This section describes how to apply a maintenance package using the full filename
specifications to be installed.
There are three ways you can specify installing a maintenance package. They are
the following:
(Use the examples below and edit where appropriate.)
#
1. Specify a single maintenance package full filename to be installed.
```

```

#
For example:
-W maintenance.package="C:\Program Files\IBM\WebSphere\AppServer\UpdateInstaller
\maintenance\PQ20029.pak"
#
2. Specify a multiple maintenance package full filename to be installed.
- Use a semicolon to separate the full filename specifications.
- Update Installer will install the latest applicable maintenance in the order listed.
#
For example:
-W maintenance.package="C:\maintenance\PQ20029.pak;C:\maintenance\PK31008.pak;
D:\6.1.0-WS-WAS-WinX32-FP0000001.pak"
#
3. Specify a full folder name that contains the maintenance packages.
Update Installer will install the latest applicable maintenance in the order
listed in the folder.
#
For example:
-W maintenance.package="D:\UpdateInstaller\maintenance"
#
Notes: If no package is specified, maintenance packages from the default folder
(such as, UpdateInstaller_HOME/maintenance)
will be installed.
#
-W maintenance.package="D:\UpdateInstaller\maintenance\6.1.0.1-WS-WAS-IFPK21009.pak"

#####
#
Prerequisite Checking
#
The update installer checks the system for prerequisites by default.
#
Uncomment the following option to notify the installer to continue with
the update and log the warnings even though prerequisite checking
failed.
#
#-OPT disableNonBlockingPrereqChecking="true"

#####
#
Used to input the product install location that will be updated.
#
ie. -W product.location="C:\Program Files\IBM\WebSphere\AppServer"
#
Note: The product install location should always been specified, and it should
always be the full path.
#
-W product.location="D:\Program Files\IBM\WebSphere\AppServer"

#####
#
Do not edit these values.
#
#
-W update.type="install"

```

---

## Installing multiple maintenance packs with silent install

This topic describes how to use the Update Installer for WebSphere Software to install multiple maintenance packages using the silent install option. This feature can install maintenance for WebSphere Application Server and all stack products installed in the same WebSphere Application Server home directory. It is capable of

automatically selecting the recommended maintenance for product stack and determine the appropriate installation sort order of the maintenance packages. For example, if multiple feature packs are both installed and there is a recommended fix pack and interim fix for each product, the Update Installer will determine if this maintenance is applicable and install them in the correct order. It will install in the appropriate sequence.

The most recent version of the Update Installer needs to be installed on a target system locally.

**i5/OS** Use the Update Installer program from a user profile with \*ALLOBJ special authority.

The following steps lead you through the process of installing multiple maintenance packages using the silent mode.

1. The most recent version of the Update Installer needs to be installed on a target system locally.
2. Download all the required maintenance packages from the official IBM support Web site into the *updi\_root/maintenance* directory.
3. Ensure that all running processes have been stopped.
4. **i5/OS** Verify that the host server jobs are started on your iSeries server. The host server jobs allow the installation code to run on iSeries.  
Enter this command on a CL command line:  
STRHOSTSVR SERVER(\*ALL)
5. Edit the response file. An example of a response file is located at the bottom of this pane.

- a. The location of the product needs to be added to the response file.
- b. Specify the choice of *Install* maintenance in the response file.
- c. Add the maintenance location where packages can be found to the response file.

There are two options for installing the fix pack:

- 1) In the response file, point to the directory containing the fix packages and allow the Update Installer to determine which maintenance packages to install.
- 2) In the response file, provide a list of all the maintenance packages you want installed, with their complete file path.

When you install the fix pack, certain logic is used to determine which packages to install. To find out more, refer to the information center.

6. Run the Update Installer.

For example:

**Windows**  
update.bat -silent -options "responsefiles\*file\_name*"

**Vista**  
update.exe -silent -options "responsefiles\*file\_name*"

**AIX** **HP-UX** **Linux** **Solaris**  
./update.sh -silent -options "responsefiles/*file\_name*"

**i5/OS**  
update -silent -options "responsefiles/*file\_name*"

7. Review the log to ensure maintenance was applied successfully. The log can be found at *app\_server\_root/logs/update/maintenance\_package.install*.

One of the following results will appear in the log.

**INSTCONFSUCCESS**

The operation was a success.

**INSTCONFPARTIALSUCCESS**

The operation was partially successful, refer to the log for more details.

**INSTCONFFAILED**

The operation failed, refer to the log for more details.

The following is a sample response file used by the Update Installer to install multiple maintenance packages using the silent installer.

```


This is the silent install response file for installing maintenance packages
using the update installer.

A common use of an options file is to run the wizard in silent mode. This lets
the options file author specify wizard settings without having to run the
wizard in graphical or console mode. To use this options file for silent mode
execution, *uncomment* and modify the parameters defined within.

Use the following command line when running the wizard from the update
installer directory:

update -options responsefiles/install.txt -silent

Please enclose all values within a single pair of double quotes.

This section describes how to apply a maintenance package using the full
filename specifications to be installed.
There are three ways you can specify installing a maintenance package.
They are the following:
(Use the examples below and edit where appropriate.)

1. Specify a single maintenance package full filename to be installed.

For example:
-W maintenance.package="C:\Program Files\IBM\WebSphere\AppServer\UpdateInstaller
\maintenance\PQ20029.pak"

2. Specify a multiple maintenance package full filename to be installed.
- Use a semicolon to separate the full filename specifications.
- Update Installer will install the latest applicable maintenance in the order listed.

For example:
-W maintenance.package="C:\maintenance\PQ20029.pak;C:\maintenance\PK31008.pak;
D:\6.1.0-WS-WAS-WinX32-FP0000001.pak"

3. Specify a full folder name that contains the maintenance packages.
Update Installer will install the latest applicable maintenance in the order listed in the folder.

For example:
-W maintenance.package="D:\UpdateInstaller\maintenance"

Notes: If no package is specified, maintenance packages from the default folder (such as,
```

```

UpdateInstaller_HOME/maintenance) will be installed.
#
-W maintenance.package="D:\UpdateInstaller\maintenance\6.1.0-WS-WAS-WinX32-FP0000001.pak"

#####
#
Prerequisite Checking
#
The update installer checks the system for prerequisites by default.
#
Uncomment the following option to notify the installer to continue with
the update and log the warnings even though prerequisite checking
failed.
#
#-OPT disableNonBlockingPrereqChecking="true"

#####
#
Used to input the product install location that will be updated.
#
ie. -W product.location="C:\Program Files\IBM\WebSphere\AppServer"
#
Note: The product install location should always been specified, and it should
always be the full path.
#
-W product.location="D:\Program Files\IBM\WebSphere\AppServer"

#####
#
Do not edit these values.
#
#
-W update.type="install"

```

---

## Installing a fix pack using the graphical user interface

This topic describes how to install a fix pack using the Update Installer. WebSphere Application Server fix packs contain enabling code to ensure feature packs continue to function when maintenance is applied.

The most recent version of the Update Installer needs to be installed on a target system locally.

The following steps will lead you through installing the maintenance fix pack.

1. Download the required fix pack from the official IBM support Web site into the *updi\_root*/maintenance directory.
2. Make the current working directory: *updi\_root*.
3. Ensure that you stop all running processes.
4. Launch the Update Installer.

For example:

**Windows**

update.bat

**Vista**

update.exe

**AIX**

**HP-UX**

**Linux**

**Solaris**

./update.sh

5. The Welcome panel will display. Click **Next**.
6. The system will prompt for the location of the product that you want updated. Click **Next**.
7. The system will present the choices of Install or Uninstall maintenance. The install option is the default. Click **Next**.
8. The system will prompt for the maintenance location where packages can be found. Enter the directory name containing the packages, or browse for the required directory. Click **Next**.

For a list of the recommended fixes for WebSphere Application Server, refer to the support Web site located at the following location <http://www.ibm.com/support/docview.wss?rs=180&uid=swg27004980#ver61>

When you install the fix pack, certain logic is used to determine which packages are selected for the install. To find out more, refer to the information center.

These following options exist for installing a fix pack:

- a. For installing the fix pack without the feature pack, select the desired fix pack. Click **Next**. For more information about this type of installation, refer to the information center.
- b. For installing the fix pack with the feature pack, select the desired fix pack. Another panel is displayed that prompts you to install the enabling interim fix. Click **Next**. For more information about this type of install, refer to the the information center.

If any of the maintenance packages are grayed out with the designation *Not applicable* on the selection panel, you can review the logs in the *updi\_root/logs/latest\_temp\_folder* to find out why the maintenance package is not currently appropriate for installation.

9. Before the installation, the Confirmation panel will confirm which packages have been installed.
10. After the installation, the Summary panel will list which packages have been installed.
11. After you install the fix pack, check the installation log to verify that the install was successful. The log can be found at *app\_server\_root/logs/update/maintenance\_package.install*.

One of the following results will appear in the log.

**INSTCONFSUCCESS**

The operation was a success.

**INSTCONFPARTIALSUCCESS**

The operation was partially successful, refer to the log for more details.

**INSTCONFFAILED**

The operation failed, refer to the log for more details.

---

## Installing an interim fix, interim feature, or test fix using the graphical user interface

This topic describes how to install an interim fix, interim feature, or test fix using the Update Installer for WebSphere Software.

The most recent version of the Update Installer needs to be installed on a target system locally.

The following steps outline the process of installing an interim fix, interim feature, or test fix pack.

1. Download the required interim fix, interim feature, or test fix pack from the official IBM support Web site into the *updi\_root*/maintenance directory.
2. Make the current working directory: *updi\_root*.
3. Ensure that you stop all running processes.
4. Launch the Update Installer.

For example:

**Windows**

update.bat

**Vista**

update.exe

**AIX**

**HP-UX**

**Linux**

**Solaris**

./update.sh

5. The Welcome panel is displayed. Click **Next**.
6. Specify the location of the product that you want updated.
7. Select either to Install or Uninstall maintenance, the default is the install option. Click **Next**.
8. The system will prompt for the maintenance location where packages can be found. Enter the directory name containing the packages. Click **Next**.
9. Select to install an interim fix, interim feature, or test fix.  
The system will automatically determine the appropriate maintenance packages based on the versions of the products that is installed.  
When you chose to select for yourself the interim fix, interim feature, or test fix, certain logic is used to determine which packages are installed. To find out more, refer to the information center.  
When you select the interim fix, interim feature, or test fix, certain logic is used to determine which packages are installed. To find out more, refer to the information center.
10. Before the installation, the Confirmation panel will confirm which packages will be installed.  
If any of the maintenance packages are grayed out with the designation *Not applicable* on the selection panel, you can review the logs in the *updi\_root*/logs/*latest\_temp\_folder* to find out why the maintenance package is not currently appropriate for installation.
11. After the installation, the Summary panel will list which packages have been installed.
12. After the interim fix, interim feature, or test fix has been installed, check the installation log to verify the install was successful. The log can be found at *app\_server\_root*/logs/update/*maintenance\_package*.install.

One of the following results will appear in the log.

#### **INSTCONFSUCCESS**

The operation was a success.

#### **INSTCONFPARTIALSUCCESS**

The operation was partially successful, refer to the log for more details.

## INSTCONFFAILED

The operation failed, refer to the log for more details.

---

## Installing multiple maintenance packs using the graphical user interface

This topic describes how to install multiple maintenance packages using the Update Installer. This feature can install maintenance for WebSphere Application Server and all stack products installed in the same WebSphere Application Server home directory. It is capable of automatically selecting the recommended maintenance for product stack and determine the appropriate installation sort order of the maintenance packages. For example, if multiple feature packs are both installed and there is a recommended fix pack and interim fix for each product, the Update Installer will determine if this maintenance is applicable and install them in the correct order. It will install in the appropriate sequence.

The most recent version of the Update Installer needs to be installed on a target system locally.

The following steps lead you through the process of installing multiple maintenance packages.

1. Download the required packages from the official IBM support Web site into the *updi\_root*/maintenance directory. It is also recommended you download the maintenance for any stack products in this same directory.
2. Make the current working directory: *updi\_root*.
3. Ensure that you stop all running processes.
4. Launch the Update Installer.

For example:

**Windows**

update.bat

**Vista**

update.exe

**AIX**

**HP-UX**

**Linux**

**Solaris**

./update.sh

5. The system displays the Welcome panel. Click **Next**.
6. The system prompts for the location of the product that needs to be updated.
7. Select Install. Click **Next**.
8. The system will prompt for the maintenance location where packages can be found.

**Note:** Before entering the directory name of the location that contains the maintenance packages, notice there are links to obtain recommended maintenance for WebSphere Application Server. We recommend to click the link to **Recommended fixes for Websphere application Server** to verify the latest maintenance available for WebSphere Application Server has been downloaded. Also download maintenance for any stack products installed under the same location as you selected in step 6. Enter the directory name containing the packages. Click **Next**.

9. The system displays a list of maintenance packages available for installation. Select Recommended updates or select the packages you need installed. The

Recommended updates selects the most recent applicable pack. Click **Next**. To find out more about how the multiple installation works, refer to the information center. If you choose to make your own selection, the system logically changes the remaining packages available for selection based on product, prerequisite and containment relationships.

10. Confirm the information from the pre-installation confirmation Summary panel. This panel highlights the maintenance packages to be installed and products to be updated.

If any of the maintenance packages are grayed out with the designation *Not applicable* on the selection panel, you can review the logs in `updi_root/logs/latest_temp_folder` to find out why the maintenance package is not currently appropriate for installation. Confirm the information and click **Next**.

11. The Update Installer shows progress as backup and installation of maintenance packages are completed.

After all maintenance packages have been selected and verified to be installable as a group, the installer installs the packages in the following sequence:

- a. Refresh packs
- b. Fix packs
- c. Enabling interim fixes (automatically installed)
- d. Interim fixes
- e. Interim features.

Prerequisite checking continues to apply as each maintenance package is installed. Any failure that is detected stops the install flow. The message is displayed and you can find details in the installation logs covering the failure.

12. A final panel displays the Summary panel. This panel reports information about the completed install action taken. The user is prompted to click **Finish** to exit the wizard.
13. Review the log to verify maintenance was installed successfully. The log can be found at `app_server_root/logs/update/maintenance_package.install`.

One of the following results will appear in the log.

**INSTCONFSUCCESS**

The operation was a success.

**INSTCONFPARTIALSUCCESS**

The operation was partially successful, refer to the log for more details.

**INSTCONFFAILED**

The operation failed, refer to the log for more details.

---

## Uninstalling a fix pack, an interim fix, or a test fix using the silent uninstall

This topic describes how to uninstall the fix pack, an interim fix, or a test fix using the silent installation option from the Update Installer.

To uninstall using the Update Installer, the response file needs to be provided. Refer to the example response file, located at the bottom of this topic, for more details.

The following steps lead you through the process of uninstalling maintenance using the silent mode.

1. Edit a response file. The one located at the bottom of the pane can be used as an example.
2. Specify the location of the product that will be uninstalled in the response file.
3. Specify the choice of *Uninstall* maintenance in the response file.
4. Specify the maintenance pack to be uninstalled in the response file.  
This is the same filename as the package that was originally installed. A maintenance package can only be uninstalled if a backup package exists, such as, `-W backup.package="PQ20029.pak"`

**Note:** If no package is specified, a default of the last installed maintenance (#) package will be used.

To uninstall a maintenance pack using the silent mode, the order of uninstalling needs to be in reverse order of installing. To find out more, refer to the information center.

5. Ensure that all running processes have been stopped.
6.  Verify that the host server jobs are started on your iSeries server. The host server jobs allow the installation code to run on iSeries. Enter this command on a CL command line: `STRHOSTSVR SERVER(*ALL)`.
7. Launch the Update Installer.
8. Review the log file to verify maintenance has been installed successfully. The log can be found at `WAS_HOME\logs\update\.install`.

One of the following results will appear in the log.

#### **INSTCONFSUCCESS**

The operation was a success.

#### **INSTCONFPARTIALSUCCESS**

The operation was partially successful, refer to the log for more details.

#### **INSTCONFFAILED**

The operation failed, refer to the log for more details.

The following response file demonstrates how to uninstall a fix pack in the silent mode.

```


This is the silent install response file for uninstalling maintenance packages
using the update installer.

A common use of an options file is to run the wizard in silent mode. This lets
the options file author specify wizard settings without having to run the
wizard in graphical or console mode. To use this options file for silent mode
execution, *uncomment* and modify the parameters defined within.

Use the following command line when running the wizard from the update
installer directory:

update -options responsefiles/uninstall.txt -silent

Enclose all values within a single pair of double quotes.

#####
```

```

#
Used to input the maintenance backup package filename to be uninstalled.
This is the same filename as the package that was originally installed.
A maintenance package can only be uninstalled if a backup package exists.
#
For example: -W backup.package="PQ20029.pak"
#
Note: If you do not specify a package, then a default of the last installed maintenance
package is used, as the following example demonstrate:
#
-W backup.package="6.1.0.1-WEBSV-FEP-WinX32-FP000001.pak"

#####
#
Used to modify the product install location that will be updated.
This value should be left commented out if the Update Installer is
being run from the recommended location, as the following example demonstrates:
#
For example: -W product.location="C:\Program Files\IBM\WebSphere\AppServer"
#
Note: The product install location needs to be specified, and it needs to
be the full path.
#
-W product.location="D:\IBM\WebSphere\AppServerNonroot3"

#####
#
AIX Non-root user limitation
#
The AIX user account running the Update Installer program also must be able to
run the slibclean command; otherwise, a root user must run the slibclean command
before the Update Installer program runs.
#
Uncomment the following option to notify the installer that a root user has run
the slibclean command before the Update Installer program runs.
#
#-OPT rootUserHasRunSlibcleanCommandSuccessfully="true"

#####
#
Do not edit these values.
#
-W update.type="uninstall"

```

---

## Uninstalling a fix pack, interim fix, interim feature or test fix using the graphic user interface

This topic describes how to use the Update Installer for WebSphere Software to uninstall the fix pack, an interim fix, or a test fix.

The following steps are required to uninstall maintenance using the graphical user interface.

1. The latest version of the Update Installer needs to be installed on a target system locally.
2. Make the current working directory *updi\_root*.
3. Ensure that all running processes have been stopped.
4. Launch the Update Installer.
5. The system will present the Welcome panel. Click **Next**.
6. The system will prompt for the location of the product you want to uninstall.

7. The system will present the choice to *Install* or *Uninstall* maintenance. Select the *Uninstall* option. Click **Next**
8. The system will prompt for the maintenance package you want to uninstall.
  - For uninstalling maintenance in an environment without a feature pack installed, select the package to be uninstalled. Click **Next**.
  - For uninstalling in an environment with a feature pack installed, select the package to be uninstalled. In certain cases the enabling ifix will require that you uninstall in a particular order. The additional maintenance remove panel will show the feature packs that depend on an enabling ifix.Select the maintenance package, click **Next**.

When you uninstall the pack, certain logic is used to determine which maintenance package to uninstall. To find out more, refer to the information center.
9. Before the uninstallation, the Confirmation panel will confirm which package has been uninstalled.
10. After the installation, the Summary panel will list which package has been uninstalled.
11. Review the log file to verify maintenance has been uninstalled successfully. The log can be found in the `app_server_root\logs\update\<Maintenance name.install>` directory.

One of the following results will appear in the log.

**INSTCONFSUCCESS**

The operation was a success.

**INSTCONFPARTIALSUCCESS**

The operation was partially successful, refer to the log for more details.

**INSTCONFFAILED**

The operation failed, refer to the log for more details.

---

## Upgrading the Update Installer

While applying maintenance, the system checks the current release of the Update Installer. If it is below the required release, the Update Installer for WebSphere Software will need to be upgraded.

If the system prevented you from applying maintenance because the Update Installer software did not meet the required release level, you will need to upgrade your Update Installer installation.

For precautions, back up your current Update Installer installation.

Refer to the readme file located with the upgrade software for similar information.

**Distributed platforms** The Update Installer can be upgraded either using the silent mode or using the graphical user interface.

**i5/OS** The Update Installer can be upgraded from the Qshell command line or remotely from a Windows workstation.

The following procedure describes how to upgrade the Update Installer using the graphical user interface.

1. Link to the current download site for the official IBM site at <http://www.ibm.com/support/docview.wss?rs=180&uid=swg24012718>.
2. Ensure that no processes are accessing the Update Installer directory that is to be updated.
3. **i5/OS** Verify that the host server jobs are started on your iSeries server. The host server jobs allow the installation code to run on iSeries. Enter this command on a CL command line:  
STRHOSTSVR SERVER(\*ALL)
4. Download the installation wizard for Update Installer from the Web site referred to above.  
This is a zip file.
5. Unzip the file to a temporary local directory or Windows workstation. This process creates two directories that are directly under the temporary directory: the JDK directory and the UpdateInstaller directory.
6. Change the current working directory to the temporary UpdateInstaller directory.
7. Launch the installation.  
Use the following command:
  - **Windows** install.exe
  - **AIX** **HP-UX** **Linux** **Solaris** install.sh
  - **i5/OS** install
8. **i5/OS** Optional: If you are using Windows to remote install to i5/OS, enter the name of the iSeries server where you are installing WebSphere Application Server for i5/OS as well as your corresponding i5/OS login information and then click **OK**.
9. If the installer detects that a lower level of Update Installer is installed in the system, a panel appears asking if you want to update it or install to a newer location. To avoid confusion, you should upgrade the current version instead of having multiple versions installed.
10. A final panel displays the Summary panel. This panel reports information about the completed upgrade action taken. Click **Finish** to exit the wizard.

The Update Installer is now upgraded.

You can view the installation logs in the *updi\_root/logs/install* directory

Launch the Update Installer and apply the necessary maintenance.

---

## Appendix A. Notices

References in this publication to IBM products, programs, or services do not imply that IBM intends to make these available in all countries in which IBM operates. Any reference to an IBM product, program, or service is not intended to state or imply that only IBM's product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any of IBM's intellectual property rights may be used instead of the IBM product, program, or service. Evaluation and verification of operation in conjunction with other products, except those expressly designated by IBM, is the user's responsibility.

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## **Appendix B. Trademarks and service marks**

For trademark attribution, visit the IBM Terms of Use Web site (<http://www.ibm.com/legal/us/>).