



Getting Started

Note

Before using this information, be sure to read the general information under Appendix A, "Notices," on page 13.

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Chapter 1. Migrating from previous releases of IBM HTTP Server

This section provides information on what to look for when you are migrating IBM HTTP Server V6.0 and later from a previous release.

If you are upgrading from a previous version of IBM HTTP Server and you want to install the new version in the same directory location, you must first uninstall the previous version of IBM HTTP Server.

Consider the following items when upgrading IBM HTTP Server.

- **Saving customized configuration files from your previous IBM HTTP Server installation.**

This is only necessary if you want to install the new version of IBM HTTP Server in the same directory location as the old version.

1. Uninstall the previous IBM HTTP Server version. This will leave behind any customized configuration files added after the initial installation.
2. Rename the directory containing the files of the uninstalled IBM HTTP Server
3. Install the new IBM HTTP Server
4. Overwrite the new IBM HTTP Server configuration files with the saved files from the renamed directory

- **Upgrading from IBM HTTP Server V2.0.** The configuration directives are compatible; however, on some platforms, the Application Programming Interface (API) for third-party modules has changed as follows:

- IPv6 support is provided on HP-UX and Solaris platforms. Because of this change, third-party modules that use fields in the `apr_sockaddr_info_t` structure may need to be recompiled. Providers of such modules need to look at how the definition of `apr_sockaddr_info_t` varies when IPv6 is supported in order to determine if their module has to be recompiled.

- **Upgrading from IBM HTTP Server V1.3.** The main task of upgrading from IBM HTTP Server V1.3 is obtaining versions of third-party modules which are compatible with IBM HTTP Server V6.1 or Apache HTTP Server V2.0.

Configuration changes will be required as well. These are described in the section "Run-time configuration changes" at <http://publib.boulder.ibm.com/httserv/manual60/upgrading.html>.

IBM HTTP Server modules retain the same configuration directives from IBM HTTP Server V1.3 to IBM HTTP Server V6.1, with the exception of Fast Response Cache Accelerator (FRCA). Using the **Port** directive to define the port number FRCA will listen on is replaced by the **AfpaPort** directive.

The following features in IBM HTTP Server V1.3 are not available in IBM HTTP Server V6.1:

- Disk caching proxy
- Digest authentication
- Simple Network Management Protocol (SNMP) agent
- Windows performance monitor

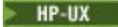
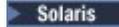
The new **htdbm** command is the preferred way to manipulate user ID databases when using `mod_auth_dbm`. The `htdbm` and `mod_auth_dbm` modules are consistent

in the set of supported database formats. By default, the **dbmmanage** command may use a database format which is not supported by `mod_auth_dbm`.

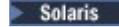
Chapter 2. Installing IBM HTTP Server

This article describes installing IBM HTTP Server using the launchpad.

1. Prepare your operating platform for installing IBM HTTP Server as you would for installing any of the installable components on the product disc.
2. Insert the product disc and mount the disc if necessary.

    See "Mounting CD-ROMS on AIX, HP-UX, Linux and Solaris systems" on page 4 for information about mounting the product disc.

3. Start the installation with the launchpad command:

-     **launchpad.sh**
-  **launchpad.bat**

You can also start the installation using the `/IHS/install` command, where IHS is the installable component directory on the product disc.

When using the launchpad, launch the Installation wizard for IBM HTTP Server.

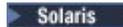
After launching the Installation wizard from the launchpad or from the command line, the ISMP wizard initializes and then presents the Welcome panel.

4. Click **Next** to display the License agreement panel.
5. Accept the license agreement and click **Next** to display the operating system prerequisites check panel.
6. Click **Next** to display the installation root directory panel.
7. Specify the root directory information and click **Next** to display the port specification panel. The port specification panel enables you to modify the ports to use for IBM HTTP Server and the IBM HTTP administration server. The default port values are 80 for IBM HTTP Server and 8008 for the IBM HTTP administration module. Specify unique port values if the default ports are already in use by another application.

Tip: Issue `netstat -an` from the command prompt to display a list of active ports.

8.  Click **Next** to display the Windows Service Definition panel. You have the option to create a Windows service for IBM HTTP Server and the IBM HTTP administration server on this panel. You can configure the services to run as Local System account or a user ID that you specify. The user ID requires the following advanced user rights:
 - Act as part of the operating system and Log on as a service.
 - If you are planning to administer IBM HTTP Server using the WebSphere Application Server administrative console, select Run IBM HTTP Administration as a Windows Service with Log on as Local System account. A user name and password is not required for this selection.
 - If you will not administer IBM HTTP Server using the WebSphere Application Server administrative console, select Run IBM HTTP Administration as a Windows Service with Log on as a specified user account. Specify your user ID and password information.
9. Click **Next** to display the HTTP Administration Server Authentication panel. If selected, this panel creates a user ID and password to authenticate to the IBM

HTTP administration server using the WebSphere Application Server administrative console. This user ID and password can optionally be created after installation using the `htpasswd` utility .

10.     Click **Next** to display the IBM HTTP Administration Server setup panel. This panel collects information to enable the installation to grant a user ID write access to the necessary IBM HTTP Server and plug-in configuration files. The IBM HTTP administration server runs as the specified user ID.
11. Click **Next** to display the IBM HTTP Server Plug-in for WebSphere Application Server panel. This panel collects information to install the WebSphere Application Server Plug-in into a directory that is relative to the IBM HTTP Server installation location, using the remote setup type.

Important: If the plugin directory does not exist at the same level as the IBM HTTP Server directory, the prompt panel for selecting the plug-ins installer does not display.

12. Click **Next** to review the confirmation panel to verify your selections. Click **Back** to change any of your specifications.
13. Click **Next** to begin installing IBM HTTP Server.

After displaying installation status, the wizard displays the completion status panel that indicates a successful installation.

Important: Restrict the characters that you use in installation directory names to printable US ASCII characters.

    The `{ } ~ ! & * () | : ^ ; < > ? " \ , = +` characters and spaces are not allowed.

 The `{ } ; * ? ? < > | % , = + & ? # ^ ! ~ $ []` characters are not allowed, but spaces are allowed. For information on problems when using non-US-ASCII directory names, search for Technote 1237598 on the WebSphere Application Server support page at: <http://www.ibm.com/software/webservers/appserv/support.html>.

Set up IBM HTTP Server administration authentication, using the `htpasswd` utility.

You can get started using Secure Sockets Layer (SSL) connections by making only a few configuration changes.

  You can configure the Fast Response Cache Accelerator to boost performance.

You can also make many other configuration changes with Apache directives.

Mounting CD-ROMS on AIX, HP-UX, Linux and Solaris systems

This section describes how to mount the CD-ROM for IBM HTTP Server on AIX, HP-UX, Linux and Solaris operating systems.

After inserting a CD-ROM into a drive, some operating systems require you to mount the drive.

Use these procedures to mount the product discs for IBM HTTP Server.

- **AIX** **Mount the CD-ROM using the System Management Interface Tool (SMIT) as follows:**
 1. Log in as a user with root authority.
 2. Insert the CD-ROM in the drive.
 3. Create a CD-ROM mount point by entering the `mkdir -p /cdrom` command, where `cdrom` represents the CD-ROM mount point directory.
 4. Allocate a CD-ROM file system using SMIT by entering the **smit storage** command.
 5. After SMIT starts, click **File Systems > Add / Change / Show / Delete File Systems > CDRom File Systems > Add CDRom File System**.
 6. In the Add a File System window:
 - Enter a device name for your CD-ROM file system in the **DEVICE Name** field. Device names for CD-ROM file systems must be unique. If there is a duplicate device name, you may need to delete a previously-defined CD-ROM file system or use another name for your directory. The example uses `/dev/cd0` as the device name.
 - Enter the CD-ROM mount point directory in the **MOUNT POINT** window. In our example, the mount point directory is `/cdrom`.
 - In the **Mount AUTOMATICALLY at system restart** field, select yes to enable automatic mounting of the file system.
 - Click **OK** to close the window, then click **Cancel** three times to exit SMIT.
 7. Next, mount the CD-ROM file system by entering the **smit mountfs** command.
 8. In the Mount a File System window:
 - Enter the device name for this CD-ROM file system in the **FILE SYSTEM name** field. In our example, the device name is `/dev/cd0`.
 - Enter the CD-ROM mount point in the **Directory over which to mount** field. In our example, the mount point is `/cdrom`.
 - Enter `cdrfs` in the **Type of Filesystem** field. To view the other kinds of file systems you can mount, click **List**.
 - In the **Mount as READ-ONLY system** field, select yes.
 - Accept the remaining default values and click **OK** to close the window.

Your CD-ROM file system is now mounted. To view the contents of the CD-ROM, place the disk in the drive and enter the `cd /cdrom` command where `cdrom` is the CD-ROM mount point directory.
- **HP-UX** **Mount the CD-ROM.** Because WebSphere Application Server contains several files with long file names, the mount command can fail. The following steps let you successfully mount your WebSphere Application Server product CD-ROM.
 1. Log in as a user with root authority.
 2. In the `/etc` directory, add the following line to the `pfs_fstab` file:

```
/dev/dsk/c0t2d0 mount_point pfs-rrip ro,hard
```

where `mount_point` represents the mount point of the CD-ROM.
 3. Start the `pfs` daemon by entering the following commands (if they are not already running):

```
/usr/sbin/pfs_mountd &
/usr/sbin/pfsd 4 &
```
 4. Insert the CD-ROM in the drive and enter the following commands:

```
mkdir /cdrom
/usr/sbin/pfs_mount /cdrom
```

The `/cdrom` variable represents the mount point of the CD-ROM.

5. Log out.

• **Linux** Mount the CD-ROM using the following steps.

1. Log in as a user with root authority.
2. Insert the CD-ROM in the drive and enter the following command:

```
mount -t iso9660 -o ro /dev/cdrom /cdrom
```

The `/cdrom` variable represents the mount point of the CD-ROM.

3. Log out.

Some window managers can automatically mount your CD-ROM for you. Consult your system documentation for more information.

• **Solaris** Mount the CD-ROM using the following steps.

1. Log in as a user with root authority.
2. Insert the CD-ROM into the drive.
3. If the Volume Manager is not running on your system, enter the following commands to mount the CD-ROM:

```
mkdir -p /cdrom/unnamed_cdrom
mount -F hsfs -o ro /dev/dsk/c0t6d0s2 /cdrom/unnamed_cdrom
```

The `/cdrom/unnamed_cdrom` variable represents the CD-ROM mount directory and the `/dev/dsk/c0t6d0s2` represents the CD-ROM drive device.

If you are mounting the CD-ROM drive from a remote system using NFS, the CD-ROM file system on the remote machine must be exported with root access. You must also mount that file system with root access on the local machine.

If the Volume Manager (vold) is running on your system, the CD-ROM is automatically mounted as:

```
/cdrom/unnamed_cdrom
```

4. Log out.

Return to the installation procedure to continue.

Installing IBM HTTP Server with a non-administrator user ID

The common way to install IBM HTTP Server is to run the installation program using an administrator user ID. However, it is sometimes necessary to install IBM HTTP Server using a non-administrator (non-root) user ID.

Launching the IBM HTTP Server installation program is done the same way for a non-root installation as it is for a root installation, but there are several installation steps that require root privileges that cannot be completed or must be completed separately. Complete the installation steps as follows:

- **Register the installed program with the operating system.** This cannot be done for a non-root installation. The non-root IBM HTTP Server installation is not listed when using operating system facilities to display installed programs.
- **Install GSKit.** Complete this task separately, using the root user ID if SSL configuration is required and no version of GSKit is installed, or if the installed version is down-level. Launch the GSKit installation from the WebSphere Application Server CDROM as follows:

– **AIX** **HP-UX** **Linux** **Solaris** GSKit/gskit.sh

- **Windows** GSKit\setup.exe "IHS6.1"
- If GSKit is not installed, the following configurations will not work:
- SSL between client (browser) and IBM HTTP Server.
 - SSL between the WebSphere Application Server plug-in that is running in IBM HTTP Server and WebSphere Application Server.
 - SSL between IBM HTTP Server and LDAP server.
- **Windows** **Create the Windows service entries for IBM HTTP Server and IBM HTTP Administration Server.** This cannot be done for a non-root installation. Neither of these service entries are created and IBM HTTP Server cannot start as a service.
Start IBM HTTP Server as follows:
`<ihs_install_directory>/bin/apache.exe`
Start the IBM HTTP administration server as follows:
`<ihs_install_directory>/bin/apache.exe -f <ihs_install_directory>/conf/admin.conf`
Stop IBM HTTP server as follows:
 - Press Control+C in the IBM HTTP Server window, or
 - End the Apache.exe processes using the Windows Task Manager
 - **Windows** **Create an entry in Start > Programs.** This cannot be done for a non-root installation. No entries are created..
 - **Windows** **Create an entry in Add/Remove programs.** This cannot be done for a non-root installation. No entry is created.
 - **Windows** **Install AFP.** This cannot be done for a non-root installation. Do not enable AFP for the non-administrator IBM HTTP Server installation, even if AFP is already installed from a previous administrator installation. Only enable AFP for one instance of IBM HTTP Server.
 - **Silent installations.** To enable a non-root installation, add the following option to the silent installation response file:
`-OPT allowNonRootSilentInstall="true"`

Uninstall a non-root installation of IBM HTTP as follows:

Linux

Solaris

AIX

HP-UX

`<ihs_install_directory>/uninstall/uninstall`

Windows

`<ihs_install_directory>\uninstall\uninstall.exe`

Creating multiple instances of IBM HTTP Server on Windows operating systems

On Windows operating systems, you can create multiple instances of IBM HTTP Server by manually creating additional service names.

When you install IBM HTTP Server, you create one IBM HTTP Server as a Windows service with a default name. If you need to run with more than one IBM HTTP Server instance, you can manually create additional service names.

1. Install a new service name. Use the apache.exe program, which is located in the bin directory of the IBM HTTP Server installation. The command syntax for installing a new service name is:

```
apache -k install -n <new_service_name> -f
<path_to_new_configuration_file>
```

This command allows you to associate a unique configuration file with each service name.

2. Specify different IP addresses or ports in the Listen directives of each configuration file and specify different log file names.
3. **Optional:** Change settings of the new service using the Windows Services control panel. The new service name will have "Log On" set to "Local System Account" and will have "Startup Type" set to "Automatic." You can change these default settings using the Windows Services control panel. It might be necessary to change the "Log On" setting of the new service name to match the "Log On" of the main installation in order to ensure that file permissions will allow the new service name to run.
4. Disable the Fast Response Cache Accelerator (FRCA). When running multiple instances of IBM HTTP Server, you must disable the FRCA (AFPA directives) in all configuration files.

After creating a new service name, you can add it to the WebSphere Administration Server administrative console by creating a new Web server definition and specifying the new service name and the path to the new configuration file.

The syntax for uninstalling an existing service name is:

```
apache -k uninstall -n <service_name>
```

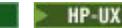
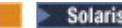
Chapter 3. Installing IBM HTTP Server silently

A silent installation uses the installation wizard to install the product in silent mode, without the graphical user interface. Instead of displaying a wizard interface, the silent installation enables the installation program to read all of your responses from a file that you provide.

Installing IBM HTTP Server using silent installation refers to using a file to supply installation options without user interaction. To configure the installation, change the options in the response file before you issue the installation command. Silent installation mode does not accept interactive installation options. To specify non-default options during a silent installation, you must use the response file. To install silently, you must accept the license agreement in the agreement option.

Verify that the required disk space is available.

See Preparing the operating system for product installation for more information. Do not use the default response file that is shipped on the product disc to install the product, because the value of the `silentInstallLicenseAcceptance` bean is "false". Copy the file to change the value to "true".

-     Log on as root.
 -  Log on as a member of the administrator group. Considerations for Windows operating systems follow:
 - Some steps for installing silently require the administrator group user to have the following advanced user rights:
 - Act as part of the operating system*
 - Log on as a service*
 - The installation wizard grants your Windows user ID the advanced user rights, if the user ID belongs to the administrator group. The silent installation does not grant these rights. If you create a new user ID on a Windows platform to perform the silent installation, you must restart the system to activate the proper authorizations for the user ID, before you can perform a successful silent installation.
 - When installing IBM HTTP Server as a Windows service, do not use a user ID that contains spaces. A user ID with spaces cannot be validated. Such a user ID is not allowed to continue the installation. To work around this problem, install with the service configured to run as LocalSystem, and then modify the user ID after install.
 - Copy the `responsefile.txt` file to your disk drive and rename it, for example `myoptionsfile.txt`. You can now customize it. Accept the IBM HTTP Server license by setting `-W silentInstallLicenseAcceptance.value="true"` in your response file.
 - Issue the proper command to use your custom response file. For example, issue one of the following commands:
 -     `mnt_cdrom/IHS/install -options myoptionsfile.txt -silent`
 -  `"CD-ROM drive:\IHS\install" -options "myoptionsfile.txt" -silent`
-     To silently install IBM HTTP Server, the X Windows software must be installed on the system.

You can find the sample options response file in the IBM HTTP Server directory on the product CD.

The installation of the IBM HTTP Server product is successful with no error messages.

 The IBM HTTP Server installation may hang during the silent install of GSKit. The following message displays in the installConfig.log file:

```
<message>error: failed to stat /mnt/xxx: Stale NFS file handle</message>
```

This problem might occur if the system has an unresponsive Network File System (NFS) mount, then the Linux rpm command, which is used to install the GSKit, attempts to query the unresponsive file system mount until it times out. To work around this problem, unmount the stale NFS mount, and then mount it again.

Chapter 4. Uninstalling IBM HTTP Server

This section contains procedures for uninstalling the IBM HTTP Server. The uninstaller program is customized for each product installation, with specific disk locations and routines for removing installed features. The uninstaller program does not remove configuration and log files.

1. Stop IBM HTTP Server.
2. Go to the directory where you installed the IBM HTTP Server. Change to the `uninstall` directory located in the root directory.
3. Double-click **uninstall** to launch the uninstallation program. You can also choose to do a silent uninstall by running the `uninstall -silent` command.
 The uninstall process does not automatically uninstall the GSKit. You have to uninstall the GSKit manually by using the native uninstall method.
4. Click **Next** to begin uninstalling the product. The Uninstaller wizard displays a Confirmation panel that lists the product and features that you are uninstalling.
5. Click **Next** to continue uninstalling the product. The Uninstaller wizard deletes existing profiles first. After deleting profiles, the Uninstaller wizard deletes core product files by component.
6. Click **Finish** to close the wizard after the wizard removes the product.

The IBM HTTP Server uninstallation is now complete. The uninstallation is logged in the `log.txt` file in the `<lhs_install_directory>/logs/uninstall` directory.

Appendix A. Notices

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