

## Installing the Advanced Edition using IBM HTTP Server and Oracle8i on AIX

The steps that follow describe how to install a single configuration of WebSphere Application Server Advanced Edition that uses the following--

- AIX 4.3.3 or AIX 5.1
- IBM Java 2™ Software Developer's Kit (SDK) 1.3.0
- IBM HTTP Server 1.3.19
- Oracle8i Release 3 (8.1.7)
- A single node

See the WebSphere Application Server Supported Hardware, Software, and APIs Web site at [www.ibm.com/software/webervers/appserv/doc/latest/prereq.html](http://www.ibm.com/software/webervers/appserv/doc/latest/prereq.html) to learn which products and fix levels are supported for your level of WebSphere Application Server.

### Steps for installation

[Deciding which steps to follow](#)  
[Installing Oracle8i Release 3 \(8.1.7\)](#)  
[Configuring Oracle8i Release 3 \(8.1.7\)](#)  
[Installing WebSphere Application Server 4.0](#)  
[Testing the installation](#)  
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### Deciding which steps to follow

First, check the WebSphere Application Server Supported Hardware, Software, and APIs Web site at [www.ibm.com/software/webervers/appserv/doc/latest/prereq.html](http://www.ibm.com/software/webervers/appserv/doc/latest/prereq.html) to ensure that you have the correct prerequisites, including operating system patches. If you have not already done so, install Oracle8i and obtain the product CD for WebSphere Application Server or download the product from the WebSphere Application Server Download Web site at [www.ibm.com/software/webervers/appserv/download.html](http://www.ibm.com/software/webervers/appserv/download.html). WebSphere Application Server comes with the IBM Java 2™ Software Developer's Kit (SDK) and IBM HTTP Server. Instructions for installation follow:

1. [Installing Oracle8i Release 3 \(8.1.7\)](#) describes how to install Oracle8i.
2. [Configuring Oracle8i Release 3 \(8.1.7\)](#) describes how to configure Oracle8i for use with WebSphere Application Server.
3. [Installing WebSphere Application Server 4.0](#) describes how to install WebSphere Application Server by using the **Custom Installation** option.
4. [Testing the installation](#) describes how to test the installation and configuration of your WebSphere system.
5. [Testing with an enterprise bean](#) describes how to test your WebSphere configuration by using an enterprise bean and the Increment sample.

### Installing Oracle8i Release 3 (8.1.7)

This article describes how to install and configure Oracle on a local AIX machine. The instructions assume the following:

- You have enough memory and disk space for your installation. See the Oracle product documentation on the Oracle Web site at [docs.oracle.com/database\\_mp\\_8i.html](http://docs.oracle.com/database_mp_8i.html) for the requirements.
- You do not have a previous version of Oracle already installed on your machine. If you have a previous version of Oracle installed, you might need to migrate databases, depending on the version installed. In this case, do not follow these instructions. Instead, refer to Oracle product documentation on the Oracle Web site at [docs.oracle.com/database\\_mp\\_8i.html](http://docs.oracle.com/database_mp_8i.html).
- Your Oracle database server will be located on the same machine as WebSphere Application Server. This

configuration and the use of default settings documented in these instructions are appropriate only for development and small production environments. For information on more complicated scenarios, refer to the IBM Redbook *WebSphere V3.5 Handbook* at [www.redbooks.ibm.com/redbooks/SG246161.html](http://www.redbooks.ibm.com/redbooks/SG246161.html).

**Note:** Install Oracle before installing WebSphere Application Server.

Perform the following steps to install Oracle8i from the product CD-ROM:

1. Ensure that you are logged into the machine with superuser (root) privileges.
2. Ensure that the **DISPLAY** and **TERM** environment variables are set correctly for your environment.
3. Create a file system, logical volume, or directory to hold the Oracle software. Ensure that the location you choose has enough free disk space to accommodate a Typical installation. This file system, logical volume, or directory represents the the value for the **ORACLE\_BASE** environment variable and the home directory of the user named **oracle**.
4. If you plan to use Oracle in a production environment, it is recommended that you create a file system on a separate partition to store the database files. Refer to the *Oracle8i Installation Guide* and your AIX documentation for information about creating and mounting a file system.
5. If the groups named **dba** and **oinstall** do not already exist, use the AIX System Management Interface Tool (SMIT) to create them. Perform the following steps for each group you are creating:
  - a. Invoke SMIT for creating a group by entering the following command:

```
# smitty mkgroup
```

The Add a Group screen displays.

- b. In the **Group NAME** field, type the name of the group you are creating.
  - c. In the **USER list** field, type **root**.
  - d. In the **ADMINISTRATOR list** field, type **root**.
  - e. Press Return to create the group. When the group creation process is complete, press F3 to exit from SMIT.
6. Use SMIT to create the operating system user named **oracle**:
  - a. Invoke SMIT for creating a user by entering the command

```
# smitty mkuser
```

The Add a User screen displays.

- b. In the **User NAME** field, type **oracle**.
  - c. In the **Primary GROUP** field, type **oinstall**.
  - d. In the **Group SET** field, type **dba**.
  - e. In the **HOME directory** field, specify the home directory for the user **oracle**. The value of this field represents the full pathname of the file system, logical volume, or directory you created to contain the Oracle software.
  - f.
  - g. In the **Initial PROGRAM** field, specify the initial shell for the user **oracle**. The steps in this article use the Korn shell (**/usr/bin/ksh**).
  - h. Press Return to create the user. When the user creation process is complete, press F3 to exit from SMIT.
7. Create a **.profile** file in the home directory of the user named **oracle** and ensure that the file contains the following information. Note that your Oracle SID may differ. If you are using a different shell, edit the appropriate file accordingly.

```
#-----
# Oracle environment setup
#-----
#
ORACLE_BASE=oracle_home_directory
export ORACLE_BASE
ORACLE_SID=ORA817
export ORACLE_SID
ORACLE_HOME=$ORACLE_BASE/$ORACLE_SID
export ORACLE_HOME
PATH=$PATH:$ORACLE_HOME/bin
export PATH
LIBPATH=$LIBPATH:$ORACLE_HOME/lib
```

```
export LIBPATH
ORA_CLIENT_LIB=shared
export ORA_CLIENT_LIB
echo 'The Oracle 8.1.7 environment is set'
```

In the example text above, the variable *oracle\_home\_directory* represents the file system, logical volume, or directory you created to contain the Oracle software and the home directory for the user oracle.

8. Ensure that the /tmp directory has at least 200 MB of free disk space.
9. Ensure that the Oracle directory structure you created has the correct permissions. If necessary, change to the directory structure you plan to use for Oracle installation and enter the following **chmod** command:

```
# chmod 777 .
```

10. Insert the Oracle8i product CD-ROM into the CD-ROM drive and mount it using the steps below. Note that the steps assume that you have already created and properly configured a CD-ROM mount point (for example, /cdrom). Refer to your AIX operating system documentation for more information about mounting a CD-ROM drive.
  - a. Invoke SMIT for mounting a file system:

```
# smitty mountfs
```

- b. With the cursor in the **FILE SYSTEM name** field, press F4, and then choose the appropriate CD-ROM file system that you want to mount.
  - c. In the **DIRECTORY over which to mount** field, type the name of the mount point for the CD-ROM. (These steps assume you are using the /cdrom mount point.)
  - d. With the cursor in the **TYPE of file system** field, press F4, and then choose the **cdarfs** option.
  - e. Verify or change the entries in the remaining fields, depending on how you want to mount the CD, and then press Return. SMIT mounts the CD as a file system. When the process is complete, exit from SMIT by pressing F3.
11. Run the **rootpre.sh** script to install the Oracle post-wait kernel extension:

```
# cd /cdrom
# ./rootpre.sh
```

12. After executing the **rootpre.sh** script navigate out of the /cdrom directory, as follows:

```
# cd $HOME
```

13. Authenticate as the user oracle by using the **su** command, as follows:

```
# su - oracle
```

14. Ensure that the TERM and DISPLAY environment variables are still set correctly.
15. Enter the following commands to launch the Oracle Universal Installer:

```
$ cd /cdrom
$ ./runInstaller
```

When you are asked if you have run the **rootpre.sh** script, press y. The Oracle Universal Installer opens, displaying the Welcome screen.

16. Click **Next**. The File Locations screen displays.
17. Verify the values in the **Source** and **Destination** fields. The value of the **Source** field must be **/cdrom/stage/products.jar**, and the value of the **Destination** field must be the same as the value you set for the ORACLE\_HOME environment variable.
18. Click **Next**. If this is the first Oracle installation on the machine, the Inventory Location screen opens, prompting you to specify the base directory for installation files.
19. Accept the default value (\$ORACLE\_BASE/oraInventory) or specify a different base directory, and then click **Next**. The UNIX Group Name screen displays.

20. Type `oinstall` in the **UNIX Group Name** field, and then click **Next**.

**Note:** If the `/var/opt/oracle` directory does not exist or cannot be written to by the user `oracle`, you are prompted to run the `/oracle/ORA817/orainstRoot.sh` script, where `ORA817` is the Oracle SID. Open another terminal, log in as root, and run the script. After the script runs, return to the Oracle Universal Installer to continue the installation process.

21. In the Available Products screen, verify that the **Oracle8i Enterprise Edition 8.1.7.0.0** option is selected, and click **Next**.
22. In the Installation Types screen, choose the **Typical** option and click **Next**.
23. In the Choose JDK Home Directory screen, accept the default location or specify a different directory, and click **Next**.
24. In the Database Identification screen, type a global database name in the **Global Database Name** field (for example, `ORA817.machine_name`) and verify that the value in the **SID** field is the same as the value you set for the `ORACLE_SID` environment variable. Then click **Next**.
25. In the Database File Location screen, specify the installation location for the Oracle database files in the **Directory for Database Files** field, and then click **Next**. The Summary screen opens, summarizing the installation choices that you have made so far.
26. Verify the information on the Summary screen. After you determine that it is correct, click **Install**. The Install screen displays; it tracks the status of the Oracle installation.
27. When prompted to run the `root.sh` configuration script to set necessary file permissions for Oracle products, open another terminal, log in as root, and run the script. After the script runs, return to the Oracle Universal Installer to finish the installation process.
28. After the installation and linking processes finish, the Configuration Tools screen displays. The Net8 Configuration Assistant and Oracle Database Configuration Assistant are automatically configured, along with an Oracle database.

After the configuration process is complete, click **Next**. The End of Install screen displays, enabling you to exit from the Oracle Universal Installer.

29. Proceed to the article [Configuring Oracle8i Release 3 \(8.1.7\)](#) to configure Oracle for use with WebSphere Application Server.

## Configuring Oracle8i Release 3 (8.1.7)

This article describes how to create the Oracle user or users required by WebSphere Application Server. These instructions assume that you have installed Oracle8i.

Perform the following steps to configure Oracle8i for use with WebSphere Application Server:

1. Ensure that you are logged in as the user `oracle`.
2. Edit the initialization file `$ORACLE_HOME/dbs/inityour_SID.ora` as follows:
  - o If necessary, add the line `open_cursors = 300`.
  - o Ensure that the default value of 150 for the `processes` parameter is sufficient for your database by reading the information in your `inityour_SID.ora` file. To increase the value of this parameter, add and remove comment markers to specific lines related to `processes`.
3. Restart your Oracle database. Start the database by entering the following commands:

```
$ svrmgrl
SVRMGR> connect internal
SVRMGR> startup
SVRMGR> quit
```

**Note:** You might need to stop the database before you are able to restart it. Stop the Oracle database by using the **shutdown** command, as follows:

```
$ svrmgrl
SVRMGR> connect internal
SVRMGR> shutdown
SVRMGR> quit
```

4. Ensure that the Oracle listener is started or start it by entering the following commands:

```
$ lsnrctl
LSNRCTL> start
LSNRCTL> quit
```

5. Create the Oracle users named EJSADMIN and EJB required by WebSphere Application Server. You might or might not want to grant user EJSADMIN dba authority. Create these users with the proper authorities, by entering the following set of commands using these values: SYSTEM is user account created by the Oracle Database Configuration Assistant; manager is the default password for the SYSTEM account; and the *EJSADMIN\_password* is the password you specify for the user named EJSADMIN.

- o If you do want to grant dba authority to the user EJSADMIN, enter the following commands:

```
$ sqlplus SYSTEM/manager
SQL> create user EJSADMIN identified by EJSADMIN_password;
SQL> grant connect, resource, dba to EJSADMIN;
SQL> create user EJB identified by EJB;
SQL> grant connect, resource to EJB;
SQL> quit
```

- o If you do **not** want to grant dba authority to the user EJSADMIN, enter the following commands:

```
$ sqlplus SYSTEM/manager
SQL> create user EJSADMIN identified by EJSADMIN_password quota 100M \
on SYSTEM;
SQL> create user EJB identified by EJB quota 100M on USERS;
SQL> grant connect, resource to EJSADMIN;
SQL> grant connect, resource to EJB;
SQL> quit
```

6. If any of your applications use JTA datasources, enter the following commands using these values: SYS is user account created by the Oracle Database Configuration Assistant; change\_on\_install is the default password for the SYS account.

```
$ sqlplus SYS/change_on_install
SQL> grant select on dba_pending_transactions to EJB;
SQL> quit
```

7. Test access to the new database with the EJSADMIN user ID by doing the following:
  - a. Enter the command `$ sqlplus ejssadmin/EJSADMIN_password`. A message opens indicating a successful connection.
  - b. Enter the command `SQL> exit` to log out as the EJSADMIN user.

## Installing WebSphere Application Server 4.0

This article describes how to install WebSphere Application Server on an AIX machine by using the Custom Installation option.

These instructions assume the following:

- The machine has enough memory and disk space for your installation. See the WebSphere Application Server Supported Hardware, Software, and APIs Web site at [www.ibm.com/software/webservers/appserv/doc/latest/prereq.html](http://www.ibm.com/software/webservers/appserv/doc/latest/prereq.html) for the requirements.
- If you plan to use IBM HTTP Server, you will select it for installation during the WebSphere Application Server installation process. If you plan to use a different supported Web server with WebSphere, you have already installed it on the same machine that will contain WebSphere Application Server.
- You have installed and configured a supported database for use with WebSphere Application Server.
- You do not have a previous version of WebSphere Application Server already installed on this machine. If you do have a previous version of WebSphere Application Server already installed, do not follow these instructions. Instead,

see the article [Migration overview](#).

**Note:** IBM HTTP Server is provided with WebSphere Application Server. If you want to install and use a different supported Web server, you must purchase and install it separately.

Perform the following steps to install WebSphere Application Server:

1. Ensure that you are logged into the machine with superuser (root) privileges.
2. If IBM HTTP Server or another Web server is running on your system, stop the Web server.
3. If you have a version of IBM HTTP Server older than version 1.3.19 installed on your machine, you must uninstall it before using the WebSphere Application Server installation program to install IBM HTTP Server 1.3.19.
4. Insert the WebSphere Application Server CD-ROM into the CD-ROM drive.
5. If necessary, use the **mkdir** command to create a mount point for the CD-ROM. The following command creates a mount point at the directory /cdrom; you can mount the CD-ROM at any location on the machine's local file system.

```
# mkdir /cdrom
```

The commands in these steps assume the CD-ROM is mounted at /cdrom. If you mount the CD-ROM at a different location, use that location when issuing commands.

6. Mount the CD-ROM drive by entering the following command:

```
# mount -o ro -v cdrfs /dev/cdnumber /cdrom
```

In this command, *number* is the CD-ROM number for your system, usually 0 (zero). Note that this command assumes that the CD-ROM is mounted at /cdrom.

7. Ensure that your DISPLAY and TERM environment variables are set properly.
8. If the supported Web server or database you plan to use with WebSphere is newer than the version currently required by WebSphere Application Server, you must update the prereq.properties file or disable the prerequisite checking functionality before installing WebSphere Application Server.

To obtain an updated prereq.properties file, download the latest version from the WebSphere Application Server Tools Web site at [www.ibm.com/software/webservers/appserv/tools.html](http://www.ibm.com/software/webservers/appserv/tools.html). Ensure that the updated prereq.properties file is downloaded or copied into the local /tmp directory.

To disable prerequisite checking functionality, perform the following steps:

- a. Copy the prereq.properties file from the /cdrom directory to the /tmp directory on the machine on which you plan to install WebSphere Application Server.
  - b. Open the prereq.properties file in a text editor and disable prerequisite checking for an individual component by changing the value of the specific key from 1 to 0.
  - c. Save the edited prereq.properties file.
9. Navigate to the /cdrom/aix directory.
  10. If you have not downloaded an updated prereq.properties file or disabled the prerequisite checking functionality, start the WebSphere Application Server installation program by using the **install.sh** command, as follows:

```
# ./install.sh
```

If you have downloaded an updated prereq.properties file or disabled the prerequisite checking functionality as detailed in [Step 8](#), start the WebSphere Application Server installation program by using the **install.sh** command, as follows:

```
# ./install.sh -prereqfile /tmp/prereq.properties
```

11. The Welcome to the IBM WebSphere Application Server Setup program dialog box opens. Click **Next** to continue.

12. The Install Options dialog box opens. Select **Custom Installation**, and click **Next**.
13. The Choose Application Server Components dialog box opens. Select the components you want to install and deselect the components you do not want to install. Note the following information:
  - o The Java 2 Software Developer's Kit (SDK) is installed by default.
  - o The **Server**, **Admin**, **Samples**, **Application Assembly and Deployment Tools**, **IBM HTTP Server 1.3.19**, and **WebServer Plugins** components are selected for installation by default.
  - o If you plan to use WebSphere Application Server with IBM HTTP Server, ensure that the **IBM HTTP Server 1.3.19** and **Web Server Plugins** options are selected.
  - o If you plan to use WebSphere Application Server with a different supported Web server, ensure that the **Web Server Plugins** option is selected.

**Note:** No plug-ins are required to launch the Application Server or the administrative console. However, for production applications, you will not be able to serve servlets without having installed a supported Web server and corresponding Web server plug-in.

For non-production applications, you can use the internal HTTP transport system to serve servlets without installing a Web server plug-in by using the internal HTTP transport port 9080. For example, to serve the sample snoop servlet by using the internal HTTP transport, enter the URL `http://local_host:9080/servlet/snoop`. The internal HTTP transport mechanism is not designed for use in a production environment.

- o If you plan to install the Web server plug-in for IBM HTTP Server, you must select the **IBM HTTP Server 1.3.19** option, or have it already installed on the machine.
- o These instructions assume that you are installing all of the components.

Click **Next** to continue.

14. If you selected the **Web Server Plugins** option, the Choose Application Server Components dialog box opens. Select the appropriate plug-in for your Web server, and click **Next**.
15. The Database Options dialog opens. Depending on the database you have installed, complete one of the following set of instructions:
  - o If you are using DB2, perform the following steps in the Database Options dialog:
    - a. In the **Database Type** field, select **DB2** from the pull-down menu.
    - b. Ensure that **Remote DB** is not selected. For this example, the database and WebSphere Application Server are installed on the same node.
    - c. In the **Database Name (Database SID)** field, type the name of the database, `was40`.
    - d. In the **DB Home** field, type the full pathname of the home directory of the DB2 instance owner, `/home/db2inst1`, or specify the full pathname of the home directory by using the **Browse** button.
    - e. The **DB URL** field cannot be edited.
    - f. The **Server Name** field cannot be edited.
    - g. The **Port Number** field cannot be edited.
    - h. In the **Database User ID** field, type the name of the database instance owner, `db2inst1`.
    - i. In the **Database Password** field, type the current password for the database instance owner.
    - j. Click **Next** to continue.
  - o If you are using Oracle, perform the following steps in the Database Options dialog:
    - a. In the **Database Type** field, select **Oracle** from the pull-down menu.
    - b. Ensure that **Remote DB** is not selected. For this example, the database and WebSphere Application Server are installed on the same node.
    - c. In the **Database Name (Database SID)** field, type the name of the Oracle database you created. For example, `ORA817.machine_name`.
    - d. In the **DB Home** field, type the full pathname of the directory you created to contain the Oracle software and to be the home directory of the user named oracle, or specify the full path name of the directory by using the **Browse** button. This path should also be the value of the `ORACLE_HOME` environment variable.
    - e. In the **DB URL** field, accept the default value `jdbc:oracle:thin:@fully_qualified_domain_name:port_number:database_name`, or specify a different URL for accessing the database.



- f. In the **Server Name** field, type the name of the machine on which the database is installed.
  - g. In the **Port Number** field, type the port number used to access the database.
  - h. In the **Database User ID** field, type the name of the database owner, `EJSADMIN`.
  - i. In the **Database Password** field, type the current password for the database owner.
  - j. Click **Next** to continue.
- o If you are using Sybase, perform the following steps in the Database Options dialog:
  - a. In the **Database Type** field, select **Sybase** from the pull-down menu.
  - b. Ensure that **Remote DB** is not selected. For this example, the database and WebSphere Application Server are installed on the same node.
  - c. In the **Database Name (Database SID)** field, type the name of the database, `was40`.
  - d. In the **DB Home** field, type the path of the Sybase installation directory, or specify the full pathname of the directory by using the **Browse** button.
  - e. The **DB URL** field cannot be edited.
  - f. In the **Server Name** field, type the name of the machine on which the database is installed.
  - g. In the **Port Number** field, type the port number used to access the database.
  - h. In the **Database User ID** field, type the name of the database user for example, `EJSADMIN`.
  - i. In the **Database Password** field, type the current password for the database user.
  - j. Click **Next** to continue.
16. The Select Destination Directory dialog opens. Specify the directory in which you want to install WebSphere Application Server. You can either accept the default destination directory or specify a different one by typing the full pathname or by clicking **Browse**. Note that if you've selected IBM HTTP Server for installation, you cannot modify the destination directory. Click **Next** to continue.
17. The Install Options Selected dialog box opens. Verify that the information is correct and click **Install** to complete the installation.
18. Depending on the machine's configuration, the Location of Configuration files dialog box can open. It prompts you to enter the full pathname of the directory in which you want to store the specified Web server configuration file. Specify the full pathname of the file by typing it in the field or by clicking **Browse**.
19. The Setup Complete dialog box opens. To view the ReadMe file, ensure that **Yes, I want to view the ReadMe File** is selected and click **Finish**; the ReadMe file is displayed in a default browser window. To view the ReadMe file at a later time, deselect **Yes, I want to view the ReadMe File** and click **Finish** to exit from the WebSphere Application Server installation program.
20. The WebSphere Application Server - First Steps dialog box opens. You can use this GUI to access product information in the InfoCenter, start the administrative server, launch the administrative console, or launch the application assembly tool. Because you must first start and possibly configure the Web server before using WebSphere, close this dialog for now. You can launch the First Steps GUI at a later time by running the `firststeps.sh` script located in the `/usr/WebSphere/AppServer/bin` directory.
21. Unmount the CD-ROM before removing it from the CD-ROM drive by using the **umount** command, as follows:

```
# umount /cdrom
```

22. If you are using a Web server other than IBM HTTP Server, start the server. If you are using IBM HTTP Server and have installed it during the WebSphere Application Server installation, you may need to configure the Web Server to run it successfully.

Perform the following steps to verify that IBM HTTP Server is installed and configured correctly:

- a. Ensure that the Web server is running. If not, start it by entering the following command:

```
# /usr/HTTPServer/bin/apachectl start
```

- b. Start a browser and enter the name of the local machine as the URL. If you see the IBM HTTP Server Web page, the server is installed and configured correctly.

See the IBM HTTP Server documentation Web site at [www.ibm.com/software/webservers/httpservers/library.html](http://www.ibm.com/software/webservers/httpservers/library.html) for more information about configuring IBM HTTP Server.

To enable the Secure Sockets Layer (SSL) for IBM HTTP Server, see the IBM HTTP Server documentation Web site at [www.ibm.com/software/webservers/httpservers/doc/v1319/index.html](http://www.ibm.com/software/webservers/httpservers/doc/v1319/index.html) for more information.

23. Proceed to the article [Testing the installation](#).



## Testing the installation

This article describes how to test the installation and configuration of your WebSphere Application Server system. These instructions assume that you have installed a supported Web server, database, and the WebSphere Application Server component.

Perform the following steps to test your WebSphere installation:

1. Ensure that you are logged into the machine with superuser (root) privileges.
2. Start the WebSphere administrative server by executing the **startupServer** script, as follows:

```
# cd /usr/WebSphere/AppServer/bin
# ./startupServer.sh
```

Ensure that the administrative server has started successfully by checking the file named tracefile located in the /usr/WebSphere/AppServer/logs directory. The message `Server open for e-business` appears in this file when the server has started successfully.

3. Start the administrative console by running the **adminclient** script, as follows:

```
# cd /usr/WebSphere/AppServer/bin
# ./adminclient.sh
```

4. When the console displays the message `Console Ready`, administer the application server by performing the following steps:
  - a. When the administrative console opens, a tree view is displayed. Click the plus sign (+) next to **WebSphere Administrative Domain** entry to expand the view.
  - b. Expand the view of the **Nodes** entry.
  - c. Identify the name of your host machine and expand the view of that entry.
  - d. Expand the view of the **Application Servers** entry.
  - e. Select the **Default Server** entry and click the **Start** icon located on the toolbar. An information window opens and indicates that the server has started. Click **OK** to close the information window.

After the default server is started initially, it will start automatically if it stops or if you restart the machine. If the administrative server fails, the default server continues to run.

5. Ensure that the Web server is running. If the Web server is not running, start it.
6. Start a browser and enter the URL for the snoop servlet, which is a sample servlet that is installed by default, as follows:

```
http://machine_name/servlet/snoop
```

Information about /servlet/snoop is displayed.

7. Proceed to the article [Testing with an enterprise bean](#).

## Testing with an enterprise bean

This article describes how to test your WebSphere configuration by using an enterprise bean and the Increment sample. These instructions assume that you have installed your WebSphere Application Server system and have tested the installation by using the instructions in the article [Testing the installation](#).

Perform the following steps to test your WebSphere configuration using an enterprise bean:

1. Ensure that you are logged into the machine with superuser (root) privileges.
2. Ensure that the administrative console is running.
3. Ensure that the default server (located under **WebSphere Administrative Domain > Nodes > node\_name > Application Servers**) is running.
4. Start a Web browser and specify the following URL:

file:///D:/working/AE/aix\_adv\_ihs\_oracle.html

8/9/2001

```
http://machine_name/webapp/examples/HitCount
```

In this command, *machine\_name* represents the name of the machine on which WebSphere is running. When the Web page opens, several selection options are displayed.

5. Under the heading **Generate hit count using**, click the radio button for the **Enterprise Java Bean** option.
6. Under the heading **Transaction Type**, click the radio button for the **None** option.
7. Click **Increment**.

If the number of hits is displayed, WebSphere is functioning properly.

## Uninstalling WebSphere Application Server

Perform the following steps to uninstall WebSphere Application Server from a UNIX machine:

1. Ensure that you are logged into the machine with superuser (root) privileges.
2. If IBM HTTP Server or another Web server is running on your system, stop the Web server.

**Note:** Although IBM HTTP Server can be installed using the WebSphere Application Server installation program, it is not uninstalled when you uninstall WebSphere Application Server. It must be uninstalled separately. See the IBM HTTP Server Library Web site at [www.ibm.com/software/webservers/htpservers/library.html](http://www.ibm.com/software/webservers/htpservers/library.html) for more information.

3. Ensure that your DISPLAY and TERM environment variables are set properly.
4. Navigate to the root installation directory (/opt/WebSphere/AppServer on HP-UX, Linux, and Solaris; /usr/WebSphere/AppServer on AIX) and execute the **uninstall.sh** script as follows:

```
# ./uninstall.sh
```

5. The uninstallation program starts and the Uninstall dialog box opens. Click **Uninstall** to remove WebSphere Application Server from the machine.
6. To ensure that subsequent installations of WebSphere Application Server do not conflict with files left on the machine from a previous installation, use the **rm -r** command to remove the WebSphere directory structure. Use caution when executing this command to prevent the unintentional removal of portions of the file system.