**BEA**WebLogic
Platform™

# 8.1 Supported Configurations: IBM AIX 5.1 on pSeries

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**Product Components Supported on this Configuration**

|  | WebLogic Server | WebLogic Workshop | WebLogic Integration | WebLogic Portal |
|---|:---:|:---:|:---:|:---:|
| Run-time | ✔ | ✔ | ✔ | ✔ |
| Design/Dev Tools* | ✔ | ✘ | ✘ | ✘ |

\* For design and development tools support, see the "Configuration Requirements" section below.

✔ Supported
✘ Not supported

This section provides the following information:

- Related Information

- Configuration Requirements

- Known Issues

- Download and Installation Instructions

## Related Information

- For information about supported database configurations, Web servers, and browsers, plus support for interoperability tools and WebLogic Platform product support information, see *WebLogic Platform 8.1 Supported Configurations.*

- For information about IBM AIX 5.1, visit IBM's Web site: `http://www.ibm.com`.

# Configuration Requirements

**Table 1-1  Requirements for 8.1 SP6 on IBM AIX 5.1 on pSeries**

| | | |
|---|---|---|
| **Operating System Version and Patches** | AIX 5L v5.1-ML8 | |
| **Chip Architecture and Minimum Processor Speed** | • POWER3 (450 MHz)<br>• POWER4 (1.1 GHz)<br>• POWER5 (1.5 GHz) | |
| **SDK** | • 1.4.2 SR5:<br>IBM JDK 142 SR5 Java version 1.4.2 Java™ 2 Runtime Environment, Standard Edition (build 1.4.2) Classic VM (build 1.4.2, J2RE 1.4.2 IBM AIX build ca142-20060421 (SR5) (JIT enabled: jitc))<br>• 1.4.2 SR7:<br>IBM JDK 142 SR7 Java(TM) 2 Runtime Environment, Standard Edition (build 1.4.2) Classic VM (build 1.4.2, J2RE 1.4.2 IBM AIX build ca142-20061124 (SR7) (JIT enabled: jitc)) | • The IBM SDK is not delivered with WebLogic Platform; you must download it from the IBM Web site and install it, manually, before installing WebLogic Platform. For instructions, see "Download and Installation Instructions" on page 1-8.<br>• Use of JVM debug mode with IBM JVMs significantly degrades application performance and debugging effectiveness. The JVM debug mode is enabled by default on WebLogic Platform; BEA strongly recommends that you manually disable it when running WebLogic Platform on AIX. For instructions, see "JVM Debug Mode Impact" on page 1-5.<br>• If you already have WebLogic Platform 8.1 SP6 installed with IBM 1.4.2 SR5, the 1.4.2 SR7 SDK is optional. |
| **Design and Development Tools** | Supports WebLogic Server design and development tools. | |
| **RAM** | 512 MB required; 1 GB recommended | |
| **Performance Pack** | Included | `lib/aix/libmuxer.so` |
| **Node Manager** | Included | Native |

**Table 1-1 Requirements for 8.1 SP6 on IBM AIX 5.1 on pSeries (Continued)**

| BEA jDrivers for Oracle | For this Oracle client version: | The following shared libraries are provided: |
|---|---|---|
| | • Oracle 9.2.0.5 | • `lib/aix/oci920_8/libweblogicoci39.so` |
| | • Oracle 9.2.0.5 with XA | • `lib/aix/oci920_8/libweblogicoxa39.so` |

# Known Issues

This section provides workarounds for the following problems:

- IBM JVM Updates For DST

- WebLogic Server Clustering Limitation

- IIOP Thin Client Not Supported

- Insufficient Buffer Size for UDP_SENDSPACE

- GUI-based Installation Fails Due to FileSystemPreferences

- JVM Debug Mode Impact

- JAXP Incompatibility Causes Portability Issues with WebLogic Server 8.1 SP6

- Upgrade to WebLogic Platform 8.1 SP6 Requires Library Cleanup

For more information about known issues with this release, see the *Release Notes* for WebLogic Platform 8.1 or the appropriate product component of WebLogic Platform. For a list of available *Release Notes* documents, see:

http://e-docs.bea.com/platform/docs81/interm/relnotes.html

## IBM JVM Updates For DST

IBM has released a Timezone Update Utility to update DST data without the need to upgrade Java. See IBM Time Zone Update Utility for Java™.

## WebLogic Server Clustering Limitation

If you want to support WebLogic Server clustering on an AIX 5.1 configuration, open the file `$BEA_HOME/weblogic81/common/bin/commEnv.sh` in a text editor, and append the following line to the IBM section under `$JAVA_VENDOR`:

```
export JAVA_OPTIONS="$JAVA_OPTIONS -Djava.net.preferIPv4Stack=true"
```

## IIOP Thin Client Not Supported

The IIOP thin client is not supported on AIX due to dependencies on the JVM. Only thin-client applications are affected by this issue.

To work around this issue, run WebLogic Server on AIX and your thin client on another operating system.

## Insufficient Buffer Size for UDP_SENDSPACE

The default size of the buffer for `UDP_SENDSPACE` is 9216 (9 KB), but WebLogic Server sends fragments, up to 32 KB in size, to `UDP_SENDSPACE`. As a result, use of a buffer size smaller than 32 KB may cause an I/O exception.

To prevent such I/O exceptions:

1. Set the buffer size to 32 KB:

   ```
   no -o udp_sendspace=32768
   ```

2. Reboot WebLogic Server.

## GUI-based Installation Fails Due to FileSystemPreferences

If your system does not include a directory called `/etc/.java`, GUI-mode installation fails with one of the following error messages:

- `ERROR-WARNING: Could not create system preferences directory. System preferences are unusable.`

- `ERRORjava.util.prefs.FileSystemPreferences checkLockFile0ErrorCode`

- `ERROR>WARNING: Could not lock System prefs. Unix error code 1103701049.`

To work around this problem, implement one of the following steps:

- Before installing WebLogic Platform, log in as root and create a directory called `/etc/.java`.

- Specify the following option when you enter the `java` command to install WebLogic Platform:
  `-Djava.util.prefs.userRoot=$HOME/temp_directory`

  **Note:** If you enter the latter option on the `java` command line, make sure the value of `temp_directory` is a directory for which you have full permissions.

# JVM Debug Mode Impact

Use of the JVM debug mode with the IBM JVM significantly degrades application performance. Therefore, whenever you run WebLogic Platform on an AIX configuration, BEA strongly recommends that you disable the JVM debug mode (which, by default, is enabled by WebLogic Platform). Disabling debug mode is recommended for all domains, both existing ones and domains created using the Configuration Wizard.

## How to Disable JVM Debug Mode

To disable JVM debug mode, you have a choice of two methods, which are described in the following sections.

### Method 1

1.  Go to the target domain directory.

2.  In the `setDomainEnv.sh` file, find the first occurrence of `debugFlag=true`.

3.  Change it to: `debugFlag=false`.

4.  If you are going to use QuickStart, repeat steps 2 and 3 in the `setDomainEnvQS.sh` file.

**Note:**  If you are going to perform this procedure, you must do so before launching QuickStart.

### Method 2

Pass the '`nodebug`' command-line argument to the server startup script. For example:

```
$ ./startWebLogic.sh nodebug
```

# JAXP Incompatibility Causes Portability Issues with WebLogic Server 8.1 SP6

**Note:**  This limitation is reported, in CR135846, in the "Known Limitations" section of the *WebLogic Platform 8.1 Release Notes*.

Because the Xalan transformer shipped with the IBM SDK 1.4.2 is JAXP 1.2-compliant, but WebLogic Server only supports applications based on JAXP 1.1, you must set the Transformer Factory to `weblogic.apache.xalan.processor.TransformerFactoryImpl`.

To set the XML Transformer and Parser Factories, you have a choice of three methods:

● Method 1: Edit setDomainEnv.sh

- Method 2: Uncomment JAXP Properties Lines for JAXP 1.1 Parser and Transformer Factories

- Method 3: Create the XML Registry

A procedure for each method is provided in the following sections.

## Method 1: Edit setDomainEnv.sh

1. In a text editor, open the `setDomainEnv.sh` script.

2. Append the following values to `JAVA_OPTIONS`:
   ```
   "-Djavax.xml.transform.TransformerFactory=weblogic.apache.xalan.process
   or.TransformerFactoryImpl
   -Djavax.xml.parsers.SAXParserFactory=weblogic.apache.xerces.jaxp.SAXPar
   serFactoryImpl
   -Djavax.xml.parsers.DocumentBuilderFactory=weblogic.apache.xerces.jaxp.
   DocumentBuilderFactoryImpl"
   ```

## Method 2: Uncomment JAXP Properties Lines for JAXP 1.1 Parser and Transformer Factories

1. Copy the `$JAVA_HOME/jre/lib/jaxp.properties.sample` file to `$JAVA_HOME/jre/lib/jaxp.properties`.

2. Uncomment the last three lines so that they point to JAXP 1.1 parser and transformer factories. The JAXP 1.1 parser and transformer factories provided by WebLogic Platform are:

   – `javax.xml.transform.TransformerFactory=weblogic.apache.xalan.processo
   r.TransformerFactoryImpl`

   – `javax.xml.parsers.SAXParserFactory=weblogic.apache.xerces.jaxp.SAXPar
   serFactoryImpl`

   – `javax.xml.parsers.DocumentBuilderFactory=weblogic.apache.xerces.jaxp.
   DocumentBuilderFactoryImpl`

## Method 3: Create the XML Registry

- If WebLogic Server boots successfully, create the XML Registry, using the WebLogic transformer and parser factories for the required values.

- If WebLogic Server fails to boot and you cannot create an XML Registry, you can manually add the XML Registry to the `config.xml` file. In a text editor, open `config.xml` and make the following changes:

  – Change the Server Tag to the following format:

  ```
  <Server Name="Server_Name"

      ...

      ...

      ...

  XMLRegistry="SampleXMLRegistry">
  ```

  – Add the XML Registry entry for `SampleXMLRegistry`, as follows:

  ```
  <XMLRegistry Name="SampleXMLRegistry"
  TransformerFactory="weblogic.apache.xalan.processor.TransformerFacto
  ryImpl"
  SAXParserFactory="weblogic.apache.xerces.jaxp.SAXParserFactoryImpl"
  DocumentBuilderFactory="weblogic.apache.xerces.jaxp.DocumentBuilderF
  actoryImpl"/>
  ```

For more information, see:

http://e-docs.bea.com/wls/docs81/ConsoleHelp/xml.html

# Upgrade to WebLogic Platform 8.1 SP6 Requires Library Cleanup

Before you can upgrade your WebLogic Platform system from a pre-8.1 SP6 version to 8.1 SP6 on AIX, you must clean out any unused libraries manually. If you have not done such a cleanup before trying to upgrade your system, the upgrade installation may fail with the following message:

```
Fatal error. Cannot move libmuxer.so which is in use.
```

To perform a proper memory cleanup, log in as root and run `slibclean`, an AIX utility. Then re-start the upgrade procedure. For more information, see the instructions for upgrading from SP1 to SP3 in the *Release Notes* for WebLogic Platform 8.1:

http://e-docs.bea.com/platform/docs81/relnotes/relnotes.html#cr206782

**Note:** The instructions provided in the *Release Notes* were originally written to explain how to upgrade from SP1 to SP3, but they are also valid for performing an upgrade to 8.1 SP6 from any pre-SP6 version of WebLogic Platform 8.1.

# Download and Installation Instructions

Complete the following procedures:

- Downloading and Installing IBM SDK 1.4.2

- Downloading and Installing IBM SDK 1.4.2 SR5/SR7

- Downloading and Installing WebLogic Platform or WebLogic Server 8.1 SP6

- Switching from IBM SDK 1.4.2 SR5 to SR7

## Downloading and Installing IBM SDK 1.4.2

Complete the following procedure to download and install the IBM SDK 1.4.2 on IBM AIX (32-bit) build ca1420-20060421:

1. Go to the IBM download site:

   `http://www-106.ibm.com/developerworks/java/jdk/aix/service.html`

2. Download the GA version of the IBM SDK 1.4.2.

3. Install the IBM SDK 1.4.2 on your system.

## Downloading and Installing IBM SDK 1.4.2 SR5/SR7

To download and install IBM SDK 1.4.2 SR5 (IY84053) or IBM SDK 1.4.2 SR7 (IY91756) on AIX system, complete the following procedure:

1. Verify that the GA version of the IBM SDK 1.4.2 for AIX is installed on your system:

   – If it is already installed, skip to step 2.

   – If it is not installed, download it from the IBM SDK download site and install it on your system. For instructions, see the previous section, "Downloading and Installing IBM SDK 1.4.2."

2. Set the search criteria to the following:

   – Product family: From the drop-down list, select the following entry: "System p"

   – Product: From the drop-down list, select the following entry:

   "AIX operating system"

   – Version: From the drop-down list, select the following entry: "5.1"

      – Fix type: From the drop-down list, select the following entry: "Specific fixes"

3. Click "Continue."

4. Search by: Specify an APAR number or abstract

      – For SR5: In Search string: Specify "IY84053."

      – For SR7: In Search string: Specify "IY91756"

5. Following the instructions displayed on the screen, make the selections necessary to download and install the specified APAR.

6. To verify that the required SDK fix is now installed on your system, run the following command:

```
/usr/java14/bin/java -version
```

Make sure the following output is displayed:

For SR5:

```
java version "1.4.2"
Java(TM) 2 Runtime Environment, Standard Edition (build 1.4.2)
Classic VM (build 1.4.2, J2RE 1.4.2 IBM AIX build ca1420-20060421
(SR5) (JIT enabled: jitc))
```

For SR7:

```
java version "1.4.2"
Java(TM) 2 Runtime Environment, Standard Edition (build 1.4.2)
Classic VM (build 1.4.2, J2RE 1.4.2 IBM AIX build ca142-20061124 (SR7)
(JIT enabled: jitc))
```

## Downloading and Installing WebLogic Platform or WebLogic Server 8.1 SP6

To install WebLogic Platform 8.1 SP6 on an IBM AIX 5.1 configuration:

1. Go to the BEA download site:

   http://commerce.bea.com

2. Click on "BEA WebLogic" link to go to "BEA WebLogic Product Family" page. Then click on "BEA WebLogic Platform 8.1SP6".

3. Go to "WebLogic Platform 8.1 with SP6" under "WebLogic Platform Package Installer" section.

4. From the list of installers for WebLogic Platform 8.1 SP6 or WebLogic Server 8.1 SP6, select "IBM AIX (5.1, 5.2, 5.3)."

5. Download the IBM AIX-specific package installer for the appropriate product:

   – For WebLogic Platform: `pj_platform816_generic.jar`

   – For WebLogic Server: `pj_server816_generic.jar`

6. Install WebLogic Platform 8.1 SP6 or WebLogic Server 8.1 SP6 using the instructions provided for `.jar` installation files, as described in *Installing WebLogic Platform*. For example, if you are installing in console mode, enter the following on the command line:

   ```
   $ java -jar pj_platform816_generic.jar -mode=console
   ```

   For detailed instructions, see "Starting Console-Mode Installation on UNIX Systems" in *Installing BEA WebLogic Platform*:

   http://e-docs.bea.com/platform/docs81/install/console.html#instcon003

For more information, see *Installing BEA WebLogic Platform*.

## Switching from IBM SDK 1.4.2 SR5 to SR7

The following instructions provide one method to switch from IBM SDK 1.4.2 SR5 to 1.4.2 SR7:

1. Modify the `startWebLogic.sh` script located in your domain's root directory.

   Update all references of the `JAVA_HOME` variable to point to the install directory for IBM 1.4.2 SR7.

2. Modify the `setDomainEnv.sh` script located in your domain's bin directory.

Update all references of the JAVA_HOME variable to point to the install directory for IBM 1.4.2 SR7.

3. Modify the commEnv.sh script located at *BEA_HOME*/weblogic81/common/bin directory.

Update all references of the JAVA_HOME variable to point to the install directory for IBM 1.4.2 SR7.

A server restart is required to implement the change in SDK.

IBM AIX 5.1 on pSeries with 8.1 SP6

# IBM AIX 5.1 on pSeries with 8.1 SP5

**Product Components Supported on this Configuration**

| | WebLogic Server | WebLogic Workshop | WebLogic Integration | WebLogic Portal |
|---|---|---|---|---|
| Run-time | ✔ | ✔ | ✔ | ✔ |
| Design/Dev Tools* | ✔ | ✘ | ✘ | ✘ |

\* For design and development tools support, see the "Configuration Requirements" section below.

✔ Supported
✘ Not supported

This section provides the following information:

- Configuration Requirements

- Known Issues

- Download and Installation Instructions

## Related Information

- For information about supported database configurations, Web servers, and browsers, plus support for interoperability tools and WebLogic Platform product support information, see *WebLogic Platform 8.1 Supported Configurations.*

- For information about IBM AIX 5.1, visit IBM's Web site: `http://www.ibm.com`.

# Configuration Requirements

**Table 2-1  Requirements for 8.1 SP5 on IBM AIX 5.1 on pSeries**

| | |
|---|---|
| **Operating System Version and Patches** | AIX 5L v5.1-ML8 |
| **Chip Architecture and Minimum Processor Speed** | • POWER3 (450 MHz)<br>• POWER4 (1.1 GHz)<br>• POWER5 (1.5 GHz) |
| **SDK** | 1.4.2 SR3—IBM SDK 1.4.2 32-bit Java™ 2 Runtime Environment, Standard Edition (build 1.4.2) Classic VM (build 1.4.2, J2RE 1.4.2 IBM AIX build ca142-20050929a (SR3) (JIT enabled: jitc))  •  The IBM SDK is not delivered with WebLogic Platform; you must download it from the IBM Web site and install it, manually, before installing WebLogic Platform. For instructions, see "Download and Installation Instructions" on page 2-8.<br>•  Use of JVM debug mode with IBM JVMs significantly degrades application performance and debugging effectiveness. The JVM debug mode is enabled by default on WebLogic Platform; BEA strongly recommends that you manually disable it when running WebLogic Platform on AIX. For instructions, see "JVM Debug Mode Impact" on page 2-5. |
| **Design and Development Tools** | The WebLogic Workshop IDE and WebLogic Integration Format Builder are not supported on IBM AIX systems. IBM AIX is supported for the production deployment of applications developed in the WebLogic Workshop IDE. Debugging of applications developed in the WebLogic Workshop IDE, for deployment on AIX, should be accomplished to the extent possible on the Workshop development system; use of JVM debug mode with the IBM JVM significantly degrades application performance and debugging effectiveness. IBM AIX is also supported for the development and production deployment of WebLogic Server applications developed with other tools. |
| **RAM** | 512 MB required; 1 GB recommended |
| **Performance Pack** | Included                    `lib/aix/libmuxer.so` |
| **Node Manager** | Included                    Native |

**Table 2-1  Requirements for 8.1 SP5 on IBM AIX 5.1 on pSeries (Continued)**

| BEA jDrivers for Oracle | For this Oracle client version: | The following shared libraries are provided: |
|---|---|---|
| | Oracle 9.2.0.5 | • `lib/aix/oci920_8/libweblogicoci39.so`<br>• `lib/aix/oci920_8/libweblogicoxa39.so` |

# Known Issues

This section provides workarounds for the following problems:

- IBM JVM Updates For DST

- WebLogic Server Clustering Limitation

- IIOP Thin Client Not Supported

- Insufficient Buffer Size for UDP_SENDSPACE

- GUI-based Installation Fails Due to FileSystemPreferences

- JVM Debug Mode Impact

- JAXP Incompatibility Causes Portability Issues with WebLogic Server 8.1 SP5

- Upgrade to WebLogic Platform 8.1 SP5 Requires Library Cleanup

For more information about known issues with this release, see the *Release Notes* for WebLogic Platform 8.1 or the appropriate product component of WebLogic Platform. For a list of available *Release Notes* documents, see:

http://e-docs.bea.com/platform/docs81/interm/relnotes.html

## IBM JVM Updates For DST

IBM has released a Timezone Update Utility to update DST data without the need to upgrade Java. See IBM Time Zone Update Utility for Java™.

## WebLogic Server Clustering Limitation

If you want to support WebLogic Server clustering on an AIX 5.1 configuration, open the file `$BEA_HOME/weblogic81/common/bin/commEnv.sh` in a text editor, and append the following line to the IBM section under `$JAVA_VENDOR`:

```
export JAVA_OPTIONS="$JAVA_OPTIONS -Djava.net.preferIPv4Stack=true"
```

## IIOP Thin Client Not Supported

The IIOP thin client is not supported on AIX due to dependencies on the JVM. Only thin-client applications are affected by this issue.

To work around this issue, run WebLogic Server on AIX and your thin client on another operating system.

## Insufficient Buffer Size for UDP_SENDSPACE

The default size of the buffer for UDP_SENDSPACE is 9216 (9 KB), but WebLogic Server sends fragments, up to 32 KB in size, to UDP_SENDSPACE. As a result, use of a buffer size smaller than 32 KB may cause an I/O exception.

To prevent such I/O exceptions:

1. Set the buffer size to 32 KB:

   ```
   no -o udp_sendspace=32768
   ```

2. Reboot WebLogic Server.

## GUI-based Installation Fails Due to FileSystemPreferences

If your system does not include a directory called `/etc/.java`, GUI-mode installation fails with one of the following error messages:

- `ERROR-WARNING: Could not create system preferences directory. System preferences are unusable.`

- `ERRORjava.util.prefs.FileSystemPreferences checkLockFile0ErrorCode`

- `ERROR>WARNING: Could not lock System prefs. Unix error code 1103701049.`

To work around this problem, implement one of the following steps:

- Before installing WebLogic Platform, log in as root and create a directory called `/etc/.java`.

- Specify the following option when you enter the `java` command to install WebLogic Platform:
  `-Djava.util.prefs.userRoot=$HOME/`*`temp_directory`*

  **Note:** If you enter the latter option on the `java` command line, make sure the value of *`temp_directory`* is a directory for which you have full permissions.

# JVM Debug Mode Impact

Use of the JVM debug mode with the IBM JVM significantly degrades application performance. Therefore, whenever you run WebLogic Platform on an AIX configuration, BEA strongly recommends that you disable the JVM debug mode (which, by default, is enabled by WebLogic Platform). Disabling debug mode is recommended for all domains, both existing ones and domains created using the Configuration Wizard.

If you would still like to enable JVM debug mode, see "How to Enable JVM Debug Mode" on page 2-5 for the procedure.

## How to Disable JVM Debug Mode

To disable JVM debug mode, you have a choice of two methods, which are described in the following sections.

### Method 1

1. Go to the target domain directory.

2. In the `setDomainEnv.sh` file, find the first occurrence of `debugFlag=true`.

3. Change it to: `debugFlag=false`.

4. If you are going to use QuickStart, repeat steps 2 and 3 in the `setDomainEnvQS.sh` file.

**Note:** If you are going to perform this procedure, you must do so before launching QuickStart.

### Method 2

Pass the '`nodebug`' command-line argument to the server startup script. For example:

```
$ ./startWebLogic.sh nodebug
```

## How to Enable JVM Debug Mode

**Note:** Enabling debug mode is not recommended because this mode affects server performance.

1. In a text editor, open the `setDomainEnv.sh` script and comment the following line:

   ```
   JAVA_OPTIONS="${JAVA_OPTIONS} -ea -da:com.bea... -da:javelin ...
   -da:weblogic ..."
   ```

2. Save your changes. Then start (or restart) the WebLogic domain.

# JAXP Incompatibility Causes Portability Issues with WebLogic Server 8.1 SP5

**Note:** This limitation is reported, in CR135846, in the "Known Limitations" section of the *WebLogic Platform 8.1 Release Notes*.

Because the Xalan transformer shipped with the IBM SDK 1.4.2 is JAXP 1.2-compliant, but WebLogic Server only supports applications based on JAXP 1.1, you must set the Transformer Factory to `weblogic.apache.xalan.processor.TransformerFactoryImpl`.

To set the XML Transformer and Parser Factories, you have a choice of three methods:

- Method 1: Edit setDomainEnv.sh
- Method 2: Uncomment JAXP Properties Lines for JAXP 1.1 Parser and Transformer Factories
- Method 3: Create the XML Registry

A procedure for each method is provided in the following sections.

## Method 1: Edit setDomainEnv.sh

1. In a text editor, open the `setDomainEnv.sh` script.

2. Append the following values to `JAVA_OPTIONS`:
   ```
   "-Djavax.xml.transform.TransformerFactory=weblogic.apache.xalan.process
   or.TransformerFactoryImpl
   -Djavax.xml.parsers.SAXParserFactory=weblogic.apache.xerces.jaxp.SAXPar
   serFactoryImpl
   -Djavax.xml.parsers.DocumentBuilderFactory=weblogic.apache.xerces.jaxp.
   DocumentBuilderFactoryImpl"
   ```

## Method 2: Uncomment JAXP Properties Lines for JAXP 1.1 Parser and Transformer Factories

1. Copy the `$JAVA_HOME/jre/lib/jaxp.properties.sample` file to `$JAVA_HOME/jre/lib/jaxp.properties`.

2. Uncomment the last three lines so that they point to JAXP 1.1 parser and transformer factories. The JAXP 1.1 parser and transformer factories provided by WebLogic Platform are:

   – `javax.xml.transform.TransformerFactory=weblogic.apache.xalan.processo r.TransformerFactoryImpl`

   – `javax.xml.parsers.SAXParserFactory=weblogic.apache.xerces.jaxp.SAXPar`
`serFactoryImpl`

   – `javax.xml.parsers.DocumentBuilderFactory=weblogic.apache.xerces.jaxp.`
`DocumentBuilderFactoryImpl`

## Method 3: Create the XML Registry

- If WebLogic Server boots successfully, create the XML Registry, using the WebLogic transformer and parser factories for the required values.

- If WebLogic Server fails to boot and you cannot create an XML Registry, you can manually add the XML Registry to the `config.xml` file. In a text editor, open `config.xml` and make the following changes:

   – Change the Server Tag to the following format:

```
<Server Name="Server_Name"

    .

    .

    .

XMLRegistry="SampleXMLRegistry">
```

   – Add the XML Registry entry for `SampleXMLRegistry`, as follows:

```
<XMLRegistry Name="SampleXMLRegistry"
TransformerFactory="weblogic.apache.xalan.processor.TransformerFacto
ryImpl"
SAXParserFactory="weblogic.apache.xerces.jaxp.SAXParserFactoryImpl"
DocumentBuilderFactory="weblogic.apache.xerces.jaxp.DocumentBuilderF
actoryImpl"/>
```

For more information, see:

http://e-docs.bea.com/wls/docs81/ConsoleHelp/xml.html

# Upgrade to WebLogic Platform 8.1 SP5 Requires Library Cleanup

Before you can upgrade your WebLogic Platform system from a pre-8.1 SP5 version to 8.1 SP5 on AIX, you must clean out any unused libraries manually. If you have not done such a cleanup

before trying to upgrade your system, the upgrade installation may fail with the following message:

```
Fatal error. Cannot move libmuxer.so which is in use.
```

To perform a proper memory cleanup, log in as root and run slibclean, an AIX utility. Then re-start the upgrade procedure. For more information, see the instructions for upgrading from SP1 to SP3 in the *Release Notes* for WebLogic Platform 8.1:

http://e-docs.bea.com/platform/docs81/relnotes/relnotes.html#cr206782

**Note:** The instructions provided in the *Release Notes* were originally written to explain how to upgrade from SP1 to SP3, but they are also valid for performing an upgrade to 8.1 SP5 from any pre-SP5 version of WebLogic Platform 8.1.

# Download and Installation Instructions

Complete the following procedures:

- Downloading and Installing IBM SDK 1.4.2

- Downloading and Installing IBM SDK 1.4.2 SR3

- Downloading and Installing WebLogic Platform or WebLogic Server 8.1 SP5

## Downloading and Installing IBM SDK 1.4.2

Complete the following procedure to download and install the IBM SDK 1.4.2 on IBM AIX (32-bit) build ca1420-20040626:

1. Go to the IBM download site:

   http://www-106.ibm.com/developerworks/java/jdk/aix/service.html

2. Download the GA version of the IBM SDK 1.4.2.

3. Install the IBM SDK 1.4.2 on your system.

## Downloading and Installing IBM SDK 1.4.2 SR3

**Note:** This SDK patch is optional for existing applications based on IBM SDK 1.4.2 GA.

To download and install IBM SDK 142SR3 (IY75003) on an AIX system, complete the following procedure:

1. Verify that the GA version of the IBM SDK 1.4.2 for AIX is installed on your system:

   – If it is already installed, skip to step 2.

   – If it is not installed, download it from the IBM SDK download site and install it on your system. For instructions, see the previous section, "Downloading and Installing IBM SDK 1.4.2."

2. Go to the following IBM download site:

   https://techsupport.services.ibm.com/server/aix.fdc

   Set the search criteria to the following:

   – Server: From the drop-down list, select the following entry:

     ```
     eServerp5, pSeries, OpenPower, and bladeCentre JS20
     ```

   – Product or fix type: From the drop-down list, select the following entry:

     ```
     AIX operating system, cluster software and Java
     ```

   – Click `Continue`.

   – Quick links for AIX fixes: Under "Specific Fixes" select the appropriate OS level, such as "AIX 5.1."

   – Search by: Specify an APAR number or abstract

   – Search string: Specify "IY75003."

3. Following the instructions displayed on the screen, make the selections necessary to download and install the specified APAR.

4. To verify that the required SDK fix is now installed on your system, run the following command:

   ```
   /usr/java14/bin/java -version
   ```

   Make sure the following output is displayed:

   ```
   java version "1.4.2"
   Java(TM) 2 Runtime Environment, Standard Edition (build 1.4.2)
   Classic VM (build 1.4.2, J2RE 1.4.2 IBM AIX build ca142-20050929a
   (SR3) (JIT enabled: jitc))
   ```

# Downloading and Installing WebLogic Platform or WebLogic Server 8.1 SP5

To install WebLogic Platform 8.1 SP5 on an IBM AIX 5.1 configuration:

1. Go to the BEA download site:

   http://commerce.bea.com

2. From the list of installers for WebLogic Platform 8.1 SP5 or WebLogic Server 8.1 SP5, select "IBM AIX (5.1, 5.2, 5.3)."

3. Download the IBM AIX 5.1-specific package installer for the appropriate product:

   – For WebLogic Platform: `pj_platform815_generic.jar`

   – For WebLogic Server: `pj_server815_generic.jar`

4. Install WebLogic Platform 8.1 SP5 or WebLogic Server 8.1 SP5 using the instructions provided for `.jar` installation files, as described in *Installing WebLogic Platform*. For example, if you are installing in console mode, enter the following on the command line:

   ```
   $ java -jar pj_platform815_generic.jar -mode=console
   ```

   For detailed instructions, see "Starting Console-Mode Installation on UNIX Systems" in *Installing BEA WebLogic Platform*:

   http://e-docs.bea.com/platform/docs81/install/console.html#instcon003

   **Note:** When using an Asian version of an installer (such as an installer for Japanese, Korean, or Simplified Chinese), you need to increase the maximum heap size to 256 MB by specifying the -Xmx256m argument on the command line. For example, if you are using a Japanese installer, enter the following command:
   ```
   $ java -Xmx256m -jar pj_platform815_ja_generic.jar -mode=console
   ```

For more information, see *Installing BEA WebLogic Platform*.

# IBM AIX 5.1 on pSeries with 8.1 SP4

**Product Components Supported on this Configuration**

|  | WebLogic Server | WebLogic Workshop | WebLogic Integration | WebLogic Portal |
|---|---|---|---|---|
| Run-time | ✔ | ✔ | ✔ | ✔ |
| Design/Dev Tools* | ✔ | ✘ | ✘ | ✘ |

\* For design and development tools support, see the "Configuration Requirements" section below.

✔ Supported
✘ Not supported

This section provides the following information:

- Configuration Requirements

- Known Issues

- Download and Installation Instructions

## Related Information

- For information about supported database configurations, Web servers, and browsers, plus support for interoperability tools and WebLogic Platform product support information, see *WebLogic Platform 8.1 Supported Configurations.*

- For information about IBM AIX 5.1, visit IBM's Web site: `http://www.ibm.com`.

# Configuration Requirements

**Table 3-1  Requirements for 8.1 SP4 on IBM AIX 5.1 on pSeries**

| Operating System Version and Patches | AIX 5L v5.1-ML6 and higher MLs | |
|---|---|---|
| Chip Architecture and Minimum Processor Speed | • POWER3 (450 MHz)<br>• POWER4 (1.1 GHz)<br>• POWER5 (1.5 GHz) | |
| SDK | • 1.4.2 GA—IBM SDK 1.4.2 32-bit Java™ 2 Runtime Environment, Standard Edition (build 1.4.2) Classic VM (build 1.4.2, J2RE 1.4.2 IBM AIX build ca1420-20040626 (JIT enabled: jitc))<br>• 1.4.2 SR2—IBM SDK 1.4.2 32-bit Java™ 2 Runtime Environment, Standard Edition (build 1.4.2) Classic VM (build 1.4.2, J2RE 1.4.2 IBM AIX build ca142-20050609 (JIT enabled: jitc)) | • If you are installing WebLogic Platform 8.1 SP4 on your IBM AIX configuration for the first time, we recommend that you install the 1.4.2 SR2 SDK.<br>• If you already have WebLogic Platform 8.1 SP4 installed with the 1.4.2 GA version, the 1.4.2 SR2 SDK is optional.<br>• The IBM SDKs are not delivered with WebLogic Platform; you must download them from the IBM Web site and install them, manually, before installing WebLogic Platform. For instructions, see "Download and Installation Instructions" on page 3-9.<br>• Use of JVM debug mode with IBM JVMs significantly degrades application performance and debugging effectiveness. The JVM debug mode is enabled by default on WebLogic Platform; BEA strongly recommends that you manually disable it when running WebLogic Platform on AIX. For instructions, see "JVM Debug Mode Impact" on page 3-5. |

**Table 3-1  Requirements for 8.1 SP4 on IBM AIX 5.1 on pSeries (Continued)**

| | | |
|---|---|---|
| Design and Development Tools | The WebLogic Workshop IDE and WebLogic Integration Format Builder are not supported on IBM AIX systems. IBM AIX is supported for the production deployment of applications developed in the WebLogic Workshop IDE. Debugging of applications developed in the WebLogic Workshop IDE, for deployment on AIX, should be accomplished to the extent possible on the Workshop development system; use of JVM debug mode with the IBM JVM significantly degrades application performance and debugging effectiveness. IBM AIX is also supported for the development and production deployment of WebLogic Server applications developed with other tools. | |
| RAM | 512 MB required; 1 GB recommended | |
| Performance Pack | Included | `lib/aix/libmuxer.so` |
| Node Manager | Included | Native |
| BEA jDrivers for Oracle | **For this Oracle client version:** | **The following shared libraries are provided:** |
| | Oracle 8.1.7 | • `lib/aix/oci817_8/libweblogicoci39.so`<br>• `lib/aix/oci817_8/libweblogicoxa39.so` |
| | Oracle 9.2.0 | • `lib/aix/oci920_8/libweblogicoci39.so`<br>• `lib/aix/oci920_8/libweblogicoxa39.so` |

# Known Issues

This section provides workarounds for the following problems:

- IBM JVM Updates For DST

- WebLogic Server Clustering Limitation

- IIOP Thin Client Not Supported

- Insufficient Buffer Size for UDP_SENDSPACE

- GUI-based Installation Fails Due to FileSystemPreferences

- Oracle 8.1.7 jDriver Not Supported on AIX 64-bit Kernel

- JVM Debug Mode Impact

- JAXP Incompatibility Causes Portability Issues with WebLogic Server 8.1 SP4

- Upgrade to WebLogic Platform 8.1 SP4 Requires Library Cleanup

For more information about known issues with this release, see the *Release Notes* for WebLogic Platform 8.1 or the appropriate product component of WebLogic Platform. For a list of available *Release Notes* documents, see:

http://e-docs.bea.com/platform/docs81/interm/relnotes.html

# IBM JVM Updates For DST

IBM has released a Timezone Update Utility to update DST data without the need to upgrade Java. See IBM Time Zone Update Utility for Java™.

# WebLogic Server Clustering Limitation

If you want to support WebLogic Server clustering on an AIX 5.1 configuration, open the file $BEA_HOME/weblogic81/common/bin/commEnv.sh in a text editor, and append the following line to the IBM section under $JAVA_VENDOR:

```
export JAVA_OPTIONS="$JAVA_OPTIONS -Djava.net.preferIPv4Stack=true"
```

# IIOP Thin Client Not Supported

The IIOP thin client is not supported on AIX due to dependencies on the JVM. Only thin-client applications are affected by this issue.

To work around this issue, run WebLogic Server on AIX and your thin client on another operating system.

# Insufficient Buffer Size for UDP_SENDSPACE

The default size of the buffer for UDP_SENDSPACE is 9216 (9 KB), but WebLogic Server sends fragments, up to 32 KB in size, to UDP_SENDSPACE. As a result, use of a buffer size smaller than 32 KB may cause an I/O exception.

To prevent such I/O exceptions:

1. Set the buffer size to 32 KB:

   ```
   no -o udp_sendspace=32768
   ```

2. Reboot WebLogic Server.

# GUI-based Installation Fails Due to FileSystemPreferences

If your system does not include a directory called `/etc/.java`, GUI-mode installation fails with one of the following error messages:

- `ERROR-WARNING: Could not create system preferences directory. System preferences are unusable.`

- `ERRORjava.util.prefs.FileSystemPreferences checkLockFile0ErrorCode`

- `ERROR>WARNING: Could not lock System prefs. Unix error code 1103701049.`

To work around this problem, implement one of the following steps:

- Before installing WebLogic Platform, log in as root and create a directory called `/etc/.java`.

- Specify the following option when you enter the `java` command to install WebLogic Platform:
  `-Djava.util.prefs.userRoot=$HOME/temp_directory`

    **Note:**  If you enter the latter option on the `java` command line, make sure the value of `temp_directory` is a directory for which you have full permissions.

# Oracle 8.1.7 jDriver Not Supported on AIX 64-bit Kernel

The jDriver for Oracle 8.1.7.4 is supported on the AIX 32-bit kernel, but it is not supported on the AIX 64-bit kernel. For a list of AIX versions on which Oracle 8.1.7.4 is supported, see the Oracle support site:

http://metalink.oracle.com

# JVM Debug Mode Impact

Use of the JVM debug mode with the IBM JVM significantly degrades application performance. Therefore, whenever you run WebLogic Platform on an AIX configuration, BEA strongly recommends that you disable the JVM debug mode (which, by default, is enabled by WebLogic Platform). Disabling debug mode is recommended for all domains, both existing ones and domains created using the Configuration Wizard.

If you would still like to enable JVM debug mode, see "How to Enable JVM Debug Mode" on page 3-6 for the procedure.

### How to Disable JVM Debug Mode

To disable JVM debug mode, you have a choice of two methods, which are described in the following sections.

#### Method 1

1. Go to the target domain directory.

2. In the `setDomainEnv.sh` file, find the first occurrence of `debugFlag=true`.

3. Change it to: `debugFlag=false`.

4. If you are going to use QuickStart, repeat steps 2 and 3 in the `setDomainEnvQS.sh` file.

**Note:** If you are going to perform this procedure, you must do so before launching QuickStart.

#### Method 2

Pass the '`nodebug`' command-line argument to the server startup script. For example:

```
$ ./startWebLogic.sh nodebug
```

### How to Enable JVM Debug Mode

**Note:** Enabling debug mode is not recommended because this mode affects server performance.

1. In a text editor, open the `setDomainEnv.sh` script and comment the following line:

   ```
   JAVA_OPTIONS="${JAVA_OPTIONS} -ea -da:com.bea... -da:javelin ...
   -da:weblogic ..."
   ```

2. Save your changes. Then start (or restart) the WebLogic domain.

# JAXP Incompatibility Causes Portability Issues with WebLogic Server 8.1 SP4

**Note:** This limitation is reported, in CR135846, in the "Known Limitations" section of the *WebLogic Platform 8.1 Release Notes*.

Because the Xalan transformer shipped with the IBM SDK 1.4.2 is JAXP 1.2-compliant, but WebLogic Server only supports applications based on JAXP 1.1, you must set the Transformer Factory to `weblogic.apache.xalan.processor.TransformerFactoryImpl`.

To set the XML Transformer and Parser Factories, you have a choice of three methods:

- Method 1: Edit setDomainEnv.sh

- Method 2: Uncomment JAXP Properties Lines for JAXP 1.1 Parser and Transformer Factories

- Method 3: Create the XML Registry

A procedure for each method is provided in the following sections.

## Method 1: Edit setDomainEnv.sh

1. In a text editor, open the `setDomainEnv.sh` script.

2. Append the following values to `JAVA_OPTIONS`:
```
"-Djavax.xml.transform.TransformerFactory=weblogic.apache.xalan.process
or.TransformerFactoryImpl
-Djavax.xml.parsers.SAXParserFactory=weblogic.apache.xerces.jaxp.SAXPar
serFactoryImpl
-Djavax.xml.parsers.DocumentBuilderFactory=weblogic.apache.xerces.jaxp.
DocumentBuilderFactoryImpl"
```

## Method 2: Uncomment JAXP Properties Lines for JAXP 1.1 Parser and Transformer Factories

1. Copy the `$JAVA_HOME/jre/lib/jaxp.properties.sample` file to `$JAVA_HOME/jre/lib/jaxp.properties`.

2. Uncomment the last three lines so that they point to JAXP 1.1 parser and transformer factories. The JAXP 1.1 parser and transformer factories provided by WebLogic Platform are:

   - `javax.xml.transform.TransformerFactory=weblogic.apache.xalan.processo
r.TransformerFactoryImpl`

   - `javax.xml.parsers.SAXParserFactory=weblogic.apache.xerces.jaxp.SAXPar
serFactoryImpl`

   - `javax.xml.parsers.DocumentBuilderFactory=weblogic.apache.xerces.jaxp.
DocumentBuilderFactoryImpl`

## Method 3: Create the XML Registry

- If WebLogic Server boots successfully, create the XML Registry, using the WebLogic transformer and parser factories for the required values.

- If WebLogic Server fails to boot and you cannot create an XML Registry, you can manually add the XML Registry to the `config.xml` file. In a text editor, open `config.xml` and make the following changes:

  – Change the Server Tag to the following format:

```
<Server Name="Server_Name"

    .

    .

    .

XMLRegistry="SampleXMLRegistry">
```

– Add the XML Registry entry for `SampleXMLRegistry`, as follows:

```
<XMLRegistry Name="SampleXMLRegistry"
TransformerFactory="weblogic.apache.xalan.processor.TransformerFacto
ryImpl"
SAXParserFactory="weblogic.apache.xerces.jaxp.SaxParserFactoryImpl"
DocumentBuilderFactory="weblogic.apache.xerces.jaxp.DocumentBuilderF
actoryImpl"/>
```

For more information, see:

http://e-docs.bea.com/wls/docs81/ConsoleHelp/xml.html

# Upgrade to WebLogic Platform 8.1 SP4 Requires Library Cleanup

Before you can upgrade your WebLogic Platform system from a pre-8.1 SP4 version to 8.1 SP4 on AIX, you must clean out any unused libraries manually. If you have not done such a cleanup before trying to upgrade your system, the upgrade installation may fail with the following message:

```
Fatal error. Cannot move libmuxer.so which is in use.
```

To perform a proper memory cleanup, log on as root and run `slibclean`, an AIX utility. Then re-start the upgrade procedure. (It is not necessary to re-boot your machine after running `slibclean`.)

# Download and Installation Instructions

Complete the following procedures:

- Downloading and Installing the IBM SDK 1.4.2

- Downloading and Installing IBM SDK 1.4.2 SR2

- Downloading and Installing WebLogic Platform 8.1 SP4

- Downloading and Installing the WebLogic Platform 8.1 SP4 AIX Patch

# Downloading and Installing the IBM SDK 1.4.2

Complete the following procedure to download and install the IBM SDK 1.4.2 on IBM AIX (32-bit) build ca142-20050929a (SR3):

1. Go to the IBM download site:

   http://www-106.ibm.com/developerworks/java/jdk/aix/service.html

2. Download the IBM SDK 1.4.2 (GA version).

3. Install the IBM SDK 1.4.2 on your system.

For caveats about using WebLogic Platform 8.1 SP5 on an IBM AIX 5.2 configuration, see "Known Issues" on page 3-3.

# Downloading and Installing IBM SDK 1.4.2 SR2

**Note:** This SDK patch is optional for existing applications based on IBM SDK 1.4.2 GA.

Complete the following procedure to download and install IBM SDK 142sr2 (IY72469) on AIX:

1. Check whether the GA version of the IBM SDK 1.4.2 for AIX is installed on your system:

   – If it is already installed, skip to step 2.

   – If it is not installed, download it from the IBM SDK download site, and install it on your system. For instructions, see "Downloading and Installing the IBM SDK 1.4.2" on page 3-10.

2. Go to the following IBM download site:

   https://techsupport.services.ibm.com/server/aix.fdc

   Set the search criteria to the following:

   – Product family: From the drop-down list, select the following entry:

   "System p"

   – Product: From the drop-down list, select the following entry:

   "AIX operating system"

   – Version: From the drop-down list, select the following entry:

   "5.1"

   – Fix type: From the drop-down list, select the following entry:

"Specific fixes"

– Click "Continue".

– Search by: APAR number or abstract

– Search string: IY72469

3. Following the instructions displayed on the screen, make the selections necessary to download and install the specified APAR.

4. To verify that  the required SDK fix is now installed on your system, run the following command:

```
/usr/java14/bin/java -version
```

Make sure the following output is displayed:

```
java version "1.4.2"
Java(TM) 2 Runtime Environment, Standard Edition (build 1.4.2)
Classic VM (build 1.4.2, J2RE 1.4.2 IBM AIX build ca142-20050609
(JIT enabled: jitc))
```

# Downloading and Installing WebLogic Platform 8.1 SP4

To install WebLogic Platform 8.1 SP4 on an IBM AIX 5.1 configuration:

1. Go to the BEA download site:

   http://commerce.bea.com

2. Download the WebLogic Platform package installer for IBM AIX 5.1.

3. Install WebLogic Platform 8.1 SP4 for IBM AIX 5.1 using the instructions provided for .jar installation files, as described in *Installing WebLogic Platform*. For example, if you

   are installing in console mode, enter the following on the command line:

   ```
   $ java -jar pj_platform814_generic.jar -mode=console
   ```

   For detailed instructions, see "Starting Console-Mode Installation on UNIX Systems" in *Installing BEA WebLogic Platform*:

   http://e-docs.bea.com/platform/docs81/install/console.html#instcon003

   **Note:** When using an Asian version of an installer (such as an installer for Japanese, Korean, or Simplified Chinese), you need to increase the maximum heap size to 256 MB by specifying the -Xmx256m argument on the command line. For example, if you are using a Japanese installer, enter the following command:
   ```
   $ java -Xmx256m -jar pj_platform814_ja_generic.jar -mode=console
   ```

For more information, see *Installing BEA WebLogic Platform*.

# Downloading and Installing the WebLogic Platform 8.1 SP4 AIX Patch

On an AIX 5.1 system, WebLogic Platform 8.1 SP4 requires a patch, which is delivered in `wl81sp4_platform_aix_patch.zip`. This zip file contains two files:

- `CR209405_temp.jar` is the patch itself.

- `81sp4-CR209405-patch-README.txt` provides instructions for setting up your environment and installing the patch.

To obtain the patch and instructions, complete the following procedure:

1. Go to the BEA download site:

   http://commerce.bea.com

2. From the OS Platform menu, select AIX 5.1 and download the installer.

3. When prompted, select and download `wl81sp4_platform_aix_patch.zip`, the supplemental JAR file.

4. Unzip the contents of the supplemental JAR file to a temporary location, such as `<your_home>/temp`.

5. Complete the instructions in `81sp4-CR209405-patch-README.txt`.

# IBM AIX 5.1 on pSeries with 8.1 SP3

**Product Components Supported on this Configuration**

|  | WebLogic Server | WebLogic Workshop | WebLogic Integration | WebLogic Portal |
|---|---|---|---|---|
| Run-time | ✔ | ✔ | ✔ | ✔ |
| Design/Dev Tools* | ✔ | ✘ | ✘ | ✘ |

\* For design and development tools support, see the "Configuration Requirements" section below.

✔ Supported
✘ Not supported

This section provides the following information:

- Configuration Requirements

- Known Issues

- Download and Installation Instructions

## Related Information

- For information about supported database configurations, Web servers, and browsers, plus support for interoperability tools and WebLogic Platform product support information, see *WebLogic Platform 8.1 Supported Configurations.*

- For information about IBM AIX 5.1, visit IBM's Web site: `http://www.ibm.com`.

# Configuration Requirements

**Table 4-1  Requirements for 8.1 SP3 on IBM AIX 5.1 on pSeries**

| | | |
|---|---|---|
| **Operating System Version and Patches** | AIX 5L v5.1-ML6 and higher MLs | |
| **Chip Architecture and Minimum Processor Speed** | • POWER3 (450 MHz)<br>• POWER4 (1.1 GHz)<br>• POWER5 (1.5 GHz) | |
| **SDK** | IBM SDK 1.4.2 32-bit Java™ 2 Runtime Environment, Standard Edition (build 1.4.2) Classic VM (build 1.4.2, J2RE 1.4.2 IBM AIX build ca1420-20040626 (JIT enabled: jitc)) | Download the IBM SDK from the IBM Web site and install it, manually, before installing WebLogic Server. For instructions, see "Download and Installation Instructions" on page 4-8.<br><br>Use of JVM debug mode with the IBM JVM significantly degrades application performance and debugging effectiveness. The JVM debug mode is enabled by default on WebLogic Platform; BEA strongly recommends that you manually disable it when running WebLogic Platform on AIX. For instructions, see "JVM Debug Mode Impact" on page 4-4. |
| **Design and Development Tools** | The WebLogic Workshop IDE and WebLogic Integration Format Builder are not supported on IBM AIX systems. IBM AIX is supported for the production deployment of applications developed in the WebLogic Workshop IDE. Debugging of applications developed in the WebLogic Workshop IDE, for deployment on AIX, should be accomplished to the extent possible on the Workshop development system; use of JVM debug mode with the IBM JVM significantly degrades application performance and debugging effectiveness. IBM AIX is also supported for the development and production deployment of WebLogic Server applications developed with other tools. | |
| **RAM** | 512 MB required; 1 GB recommended | |
| **Performance Pack** | Included | `lib/aix/libmuxer.so` |
| **Node Manager** | Included | Native |

**Table 4-1  Requirements for 8.1 SP3 on IBM AIX 5.1 on pSeries (Continued)**

| BEA jDrivers for Oracle | For this Oracle client version: | The following shared libraries are provided: |
|---|---|---|
| | Oracle 8.1.7 | • `lib/aix/oci817_8/libweblogicoci39.so`<br>• `lib/aix/oci817_8/libweblogicoxa39.so` |
| | Oracle 9.2.0 | • `lib/aix/oci920_8/libweblogicoci39.so`<br>• `lib/aix/oci920_8/libweblogicoxa39.so` |

# Known Issues

This section provides workarounds for the following problems:

- IBM JVM Updates For DST
- WebLogic Server Clustering Limitation
- IIOP Thin Client Not Supported
- Insufficient Buffer Size for UDP_SENDSPACE
- JVM Debug Mode Impact
- JAXP Incompatibility Causes Portability Issues with WebLogic Server 8.1 SP3
- Upgrade from WebLogic Platform 8.1 SP2 to 8.1 SP3 Requires Library Cleanup

For more information about known issues with this release, see the *Release Notes* for WebLogic Platform 8.1 or the appropriate product component of WebLogic Platform. For a list of available *Release Notes* documents, see:

`http://e-docs.bea.com/platform/docs81/interm/relnotes.html`

## IBM JVM Updates For DST

IBM has released a Timezone Update Utility to update DST data without the need to upgrade Java. See IBM Time Zone Update Utility for Java™.

## WebLogic Server Clustering Limitation

If you want to support WebLogic Server clustering on an AIX 5.1 configuration, open the file `$BEA_HOME/weblogic81/common/bin/commEnv.sh` in a text editor, and append the following line to the IBM section under `$JAVA_VENDOR`:

```
export JAVA_OPTIONS="$JAVA_OPTIONS -Djava.net.preferIPv4Stack=true"
```

# IIOP Thin Client Not Supported

The IIOP thin client is not supported on AIX due to dependencies on the JVM. Only thin-client applications are affected by this issue.

To work around this issue, run WebLogic Server on AIX and your thin client on another operating system.

# Insufficient Buffer Size for UDP_SENDSPACE

The default buffer size for UDP_SENDSPACE is 9216 (9 KB), but WebLogic Server sends fragments, up to 32 KB in size, to UDP_SENDSPACE. As a result, use of a buffer size smaller than 32 KB may cause an I/O exception.

To prevent such I/O exceptions:

1. Set the buffer size to 32 KB:

   ```
   no -o udp_sendspace=32768
   ```

2. Reboot WebLogic Server.

# JVM Debug Mode Impact

Use of the JVM debug mode with the IBM JVM significantly degrades application performance. Therefore, whenever you run WebLogic Platform on an AIX configuration, BEA strongly recommends that you disable the JVM debug mode (which, by default, is enabled by WebLogic Platform). Disabling debug mode is recommended for all domains, both existing ones and domains created using the Configuration Wizard.

If you would still like to enable JVM debug mode, see for the procedure.

## How to Disable JVM Debug Mode

To disable JVM debug mode, you have a choice of two methods, which are described in the following sections.

### Method 1

1. Go to the target domain directory.

2. In the `setDomainEnv.sh` file, find the first occurrence of `debugFlag=true`.

3. Change it to: `debugFlag=false`.

4. If you are going to use QuickStart, repeat steps 2 and 3 in the `setDomainEnvQS.sh` file.

**Note:** If you are going to perform this procedure, you must do so before launching QuickStart.

### Method 2

Pass the 'nodebug' command-line argument to the server startup script. For example:

```
$ ./startWebLogic.sh nodebug
```

## How to Enable JVM Debug Mode

**Note:** Enabling debug mode is not recommended because this mode affects server performance.

1. In a text editor, open the setDomainEnv.sh script and comment the following line:

   ```
   JAVA_OPTIONS="${JAVA_OPTIONS} -ea -da:com.bea... -da:javelin ...
   -da:weblogic ..."
   ```

2. Save your changes. Then start (or restart) the WebLogic domain.

# JAXP Incompatibility Causes Portability Issues with WebLogic Server 8.1 SP3

**Note:** This limitation is reported, in CR135846, in the "Known Limitations" section of the *WebLogic Platform 8.1 Release Notes*.

Because the Xalan transformer shipped with the IBM SDK 1.4.2 is JAXP 1.2-compliant, but WebLogic Server only supports applications based on JAXP 1.1, you must set the Transformer Factory to weblogic.apache.xalan.processor.TransformerFactoryImpl.

To set the XML Transformer and Parser Factories, you have a choice of three methods:

- Method 1: Edit setDomainEnv.sh
- Method 2: Uncomment JAXP Properties Lines for JAXP 1.1 Parser and Transformer Factories
- Method 3: Create the XML Registry

A procedure for each method is provided in the following sections.

## Method 1: Edit setDomainEnv.sh

1. In a text editor, open the setDomainEnv.sh script.

2. Append the following values to JAVA_OPTIONS:
   ```
   "-Djavax.xml.transform.TransformerFactory=weblogic.apache.xalan.process
   or.TransformerFactoryImpl
   ```

```
-Djavax.xml.parsers.SAXParserFactory=weblogic.apache.xerces.jaxp.SAXPar
serFactoryImpl
-Djavax.xml.parsers.DocumentBuilderFactory=weblogic.apache.xerces.jaxp.
DocumentBuilderFactoryImpl"
```

## Method 2: Uncomment JAXP Properties Lines for JAXP 1.1 Parser and Transformer Factories

1. Copy the `$JAVA_HOME/jre/lib/jaxp.properties.sample` file to `$JAVA_HOME/jre/lib/jaxp.properties`.

2. Uncomment the last three lines so that they point to JAXP 1.1 parser and transformer factories. The JAXP 1.1 parser and transformer factories provided by WebLogic Platform are:

   – `javax.xml.transform.TransformerFactory=weblogic.apache.xalan.processo r.TransformerFactoryImpl`

   – `javax.xml.parsers.SAXParserFactory=weblogic.apache.xerces.jaxp.SAXPar serFactoryImpl`

   – `javax.xml.parsers.DocumentBuilderFactory=weblogic.apache.xerces.jaxp. DocumentBuilderFactoryImpl`

## Method 3: Create the XML Registry

- If WebLogic Server boots successfully, create the XML Registry, using the WebLogic transformer and parser factories for the required values.

- If WebLogic Server fails to boot and you cannot create an XML Registry, you can manually add the XML Registry to the `config.xml` file. In a text editor, open `config.xml` and make the following changes:

  – Change the Server Tag to the following format:

    ```
    <Server Name="Server_Name"

        .

        .

        .

    XMLRegistry="SampleXMLRegistry">
    ```

– Add the XML Registry entry for `SampleXMLRegistry`, as follows:

```
<XMLRegistry Name="SampleXMLRegistry"
TransformerFactory="weblogic.apache.xalan.processor.TransformerFacto
ryImpl"
SAXParserFactory="weblogic.apache.xerces.jaxp.SaxParserFactoryImpl"
DocumentBuilderFactory="weblogic.apache.xerces.jaxp.DocumentBuilderF
actoryImpl"/>
```

For more information, see:

http://e-docs.bea.com/wls/docs81/ConsoleHelp/xml.html

## Upgrade from WebLogic Platform 8.1 SP2 to 8.1 SP3 Requires Library Cleanup

Before you can upgrade your WebLogic Platform system from 8.1 SP2 to 8.1 SP3 on AIX, you must clean out any unused libraries manually. For instructions, see the *Release Notes* for WebLogic Platform 8.1:

http://e-docs.bea.com/platform/docs81/relnotes/relnotes.html#cr206782

# Download and Installation Instructions

Complete the following procedures:

- Downloading and Installing IBM SDK 1.4.2
- Downloading and Installing WebLogic Platform 8.1 SP3

## Downloading and Installing IBM SDK 1.4.2

Complete the following procedure to download and install the IBM SDK 1.4.2 on IBM AIX (32-bit) build ca1420-20040626:

1. Go to the IBM download site:

   http://www-106.ibm.com/developerworks/java/jdk/aix/service.html

2. Download the IBM SDK 1.4.2 (GA version).

   **Note:** Currently there is no APAR or PTF for the IBM SDK 1.4.2; you do not need to apply any patches on top of this SDK.

3. Install the IBM SDK 1.4.2 on your system.

For caveats about using WebLogic Platform 8.1 SP3 on an IBM AIX 5.1 configuration, see "Known Issues" on page 4-3.

# Downloading and Installing WebLogic Platform 8.1 SP3

To install WebLogic Platform 8.1 SP3 on an IBM AIX 5.1 configuration:

1. Go to the BEA download site:

   http://commerce.bea.com

2. Download the WebLogic Platform package installer for IBM AIX 5.1.

3. Install WebLogic Platform 8.1 SP3 for IBM AIX 5.1 using the instructions provided for .jar installation files, as described in *Installing WebLogic Platform*. For example, if you are installing in console mode, enter the following on the command line:

   ```
   $ java -jar pj_platform813_generic.jar -mode=console
   ```

   For detailed instructions, see "Starting Console-Mode Installation on UNIX Systems" in *Installing BEA WebLogic Platform*:

   http://e-docs.bea.com/platform/docs81/install/console.html#instcon003

   **Note:** When using an Asian version of an installer (such as an installer for Japanese, Korean, or Simplified Chinese), you need to increase the maximum heap size to 256 MB by specifying the -Xmx256m argument on the command line. For example, if you are using a Japanese installer, enter the following command:
   ```
   $ java -Xmx256m -jar pj_platform813_ja_generic.jar -mode=console
   ```

For more information, see *Installing BEA WebLogic Platform*.

IBM AIX 5.1 on pSeries with 8.1 SP3

# IBM AIX 5.1 on pSeries with 8.1 SP2

**Product Components Supported on this Configuration**

|  | WebLogic Server | WebLogic Workshop | WebLogic Integration | WebLogic Portal |
|---|---|---|---|---|
| Run-time | ✔ | ✔ | ✔ | ✔ |
| Design/Dev Tools* | ✔ | ✘ | ✘ | ✘ |

\* For design and development tools support, see the "Configuration Requirements" section below.

✔ Supported
✘ Not supported

This section provides the following information:

- Configuration Requirements

- Known Issues

- Download and Installation Instructions

## Related Information

- For information about supported database configurations, Web servers, and browsers, plus support for interoperability tools and WebLogic Platform product support information, see *WebLogic Platform 8.1 Supported Configurations.*

- For information about IBM AIX 5.1, visit IBM's Web site: `http://www.ibm.com`.

# Configuration Requirements

**Table 5-1  Requirements for 8.1 SP2 on IBM AIX 5.1 on pSeries**

| | | |
|---|---|---|
| **Operating System Version and Patches** | AIX 5L v5.1-ML4 with Recommended Maintenance Package AIX 5100-04; APAR IY39794 and any later compatible level | |
| **Chip Architecture and Minimum Processor Speed** | • POWER3 (450 MHz) <br> • POWER4 (1 GHz) | |
| **SDK** | IBM SDK 1.4.1 32-bit (IY48525) Java™ 2 Runtime Environment, Standard Edition (build 1.4.1) Classic VM (build 1.4.1, J2RE 1.4.1 IBM AIX build ca1411-20030930 (JIT enabled: jitc)) | Download the IBM SDK from the IBM Web site and install it, manually, before installing WebLogic Server. For instructions, see see "Download and Installation Instructions" on page 5-5. <br><br> Use of JVM debug mode with the IBM JVM significantly degrades application performance and debugging effectiveness. The JVM debug mode is enabled by default on WebLogic Platform; BEA strongly recommends that you manually disable it when running WebLogic Platform on AIX. For instructions, see "JVM Debug Mode Impact" on page 5-4. |
| **Design and Development Tools** | The WebLogic Workshop IDE and WebLogic Integration Format Builder are not supported on IBM AIX systems. IBM AIX is supported for the production deployment of applications developed in the WebLogic Workshop IDE. Debugging of applications developed in the WebLogic Workshop IDE, for deployment on AIX, should be accomplished to the extent possible on the Workshop development system; use of JVM debug mode with the IBM JVM significantly degrades application performance and debugging effectiveness. IBM AIX is also supported for the development and production deployment of WebLogic Server applications developed with other tools. | |
| **RAM** | 512 MB required; 1 GB recommended | |
| **Performance Pack** | Included | `lib/aix/libmuxer.so` |
| **Node Manager** | Included | Native |

**Table 5-1  Requirements for 8.1 SP2 on IBM AIX 5.1 on pSeries (Continued)**

| BEA jDrivers for Oracle | For this Oracle client version: | The following shared libraries are provided: |
|---|---|---|
| | Oracle 8.1.7 | • `lib/aix/oci817_8/libweblogicoci39.so`<br>• `lib/aix/oci817_8/libweblogicoxa39.so` |
| | Oracle 9.2.0 | • `lib/aix/oci920_8/libweblogicoci39.so`<br>• `lib/aix/oci920_8/libweblogicoxa39.so` |

# Known Issues

This section provides workarounds for the following problems:

- IBM JVM Updates For DST

- WebLogic Server Clustering Limitation

- IIOP Thin Client Not Supported

- Insufficient Buffer Size for UDP_SENDSPACE

- JVM Debug Mode Impact

- JAXP Incompatibility Causes Portability Issues with WebLogic Platform 8.1 SP2

For more information about known issues with any components of this release, see the appropriate *Release Notes* document. For a complete list of *Release Notes* supporting WebLogic Platform 8.1, see:

`http://e-docs.bea.com/platform/docs81/interm/relnotes.html`

## IBM JVM Updates For DST

IBM has released a Timezone Update Utility to update DST data without the need to upgrade Java. See IBM Time Zone Update Utility for Java™.

## WebLogic Server Clustering Limitation

If you want to support WebLogic Server clustering on an AIX 5.1 configuration, open the file `$BEA_HOME/weblogic81/common/bin/commEnv.sh` in a text editor, and append the following line to the IBM section under `$JAVA_VENDOR`:

`export JAVA_OPTIONS="$JAVA_OPTIONS -Djava.net.preferIPv4Stack=true"`

# IIOP Thin Client Not Supported

The IIOP thin client is not supported on AIX due to dependencies on the JVM. Only thin-client applications are affected by this issue.

To work around this issue, run WebLogic Server on AIX and your thin client on another operating system.

# Insufficient Buffer Size for UDP_SENDSPACE

The default buffer size for UDP_SENDSPACE is 9216 (9 KB), but WebLogic Server sends fragments up to 32 KB. As a result, use of a buffer size smaller than 32 KB may cause an I/O exception.

To prevent such I/O exceptions:

1. Set the buffer size to 32 KB:

   ```
   no -o udp_sendspace=32768
   ```

2. Reboot WebLogic Server.

# JVM Debug Mode Impact

Use of JVM debug mode with the IBM JVM significantly degrades application performance and debugging effectiveness. Therefore, whenever you run WebLogic Platform on an AIX configuration, BEA strongly recommends that you disable the JVM debug mode (which, by default, is enabled by WebLogic Platform). Disabling debug mode is recommended for all domains, both existing ones and domains created using the Configuration Wizard.

To disable JVM debug mode:

1. Go to the target domain directory.

2. In the setDomainEnv.sh file, find the first occurrence of debugFlag=true.

3. Change it to: debugFlag=false.

4. If you are going to use QuickStart, repeat steps 2 and 3 in the setDomainEnvQS.sh file.

   **Note:** If you are going to perform this procedure, you must do so before launching QuickStart.

## JAXP Incompatibility Causes Portability Issues with WebLogic Platform 8.1 SP2

**Note:** This limitation is reported, in CR135846, in the "Known Limitations" section of the *WebLogic Platform 8.1 Release Notes*.

Because the Xalan transformer shipped with the IBM SDK 1.4.1 is JAXP 1.2-compliant, but WebLogic Platform only supports applications based on JAXP 1.1, you must set the Transformer Factory to `weblogic.apache.xalan.processor.TransformerFactoryImpl`.

For more information, see:

`http://e-docs.bea.com/wls/docs81/ConsoleHelp/xml.html`

# Download and Installation Instructions

Complete the procedures provided in the following sections:

- Step 1: Download and Install Operating System Patch
- Step 2: Download and Install the IBM SDK
- Step 3: Download and Install WebLogic Platform 8.1 SP2

Once you have completed these procedures, you must also download and install the SDK/Database Patch. See the note at the end of this section.

**Note:** If you plan to use the WebLogic Integration sample DBMS adapter for DB2, you may want to install an additional patch. For more information, or to obtain the patch, contact BEA Customer Support and specify the patch for CR134068.

For caveats about using this version of WebLogic Platform on an AIX configuration, see "Known Issues" on page 5-3.

## Step 1: Download and Install Operating System Patch

To download and install operating patch IY46667, complete the following steps:

1. Go to the IBM download site:

   `https://techsupport.services.ibm.com/server/aix.fdc`

2. Set the search criteria to the following:

   – OS level: *From the drop-down list, select the appropriate OS level.*

– Search by: APAR number or abstract

– Search string: IY46667

3. Following the instructions and/or prompts displayed on the screen, make the appropriate selections to have IY46667 downloaded and installed on your system.

# Step 2: Download and Install the IBM SDK

To run WebLogic Platform 8.1 SP2 on an IBM AIX 5.1 configuration, your environment must include IBM SDK 1.4.1 32-bit PTF: ca1411-20030930. This SDK is not delivered with WebLogic Platform; you must download and install it manually before installing 8.1 SP2.

**Note:**   You cannot use an older version of the IBM SDK, even if one is already installed on your system. You must download and install IBM SDK 1.4.1 32-bit PTF with the following APARs: IY43555, IY46206, IY47536, and IY48525.

To download and install IBM SDK 1.4.1 32-bit PTF: ca1411-20030930, complete the following procedure:

1. Go to the IBM download site:

   https://techsupport.services.ibm.com/server/aix.fdc

2. Set the search criteria to the following:

   – OS level: *From the drop-down list, select the appropriate OS level.*

   – Search by: APAR number or abstract

   – Search string: IY43555

   Following the instructions and/or prompts displayed on the screen, make the selections required for your configuration and proceed to the next step.

3. When a list of filesets is displayed, download and install the following filesets:

   – `Java14.ext.commapi.1.4.1.0`

   – `Java14.ext.javahelp.1.4.1.0`

   – `Java14.license.1.4.1.0`

   – `Java14.sdk.1.4.1.0`

4. Repeat steps 1-3 with the following changes:

   – In step 2, specify the following value for Search string: IY46206.

    – In step 3, download and install one fileset: `Java14.sdk.1.4.1.1`.

5. Repeat steps 1-3 with the following changes:

    – In step 2, specify the following value for Search string: IY47536.

    – In step 3, download and install one fileset: `Java14.sdk.1.4.1.2`.

6. Repeat steps 1-3 with the following changes:

    – In step 2, specify the following value for Search string: IY48525.

    – In step 3, download and install the following filesets: `Java14.sdk.1.4.1.3` and `Java14.ext.javahelp.1.4.1.1`.

7. After all packages are installed, verify that all of them are also applied. To do so, run the following commands:

```
$ instfix -ivqk IY43555
$ instfix -ivqk IY46206
$ instfix -ivqk IY47536
$ instfix -ivqk IY48525
```

8. To verify that the required SDK fixes are now installed on your system, run the following command:

```
/usr/java14/bin/java -version
```

Make sure that the output contains the following string:

```
IBM AIX build ca1411-20030930
```

# Step 3: Download and Install WebLogic Platform 8.1 SP2

To install WebLogic Platform 8.1 SP2 on IBM AIX 5.1, complete the following procedure:

1. From the BEA download site (`http://commerce.bea.com`), download:

    – AIX-specific installer for WebLogic Platform 8.1 SP2

    – Supplemental JAR file for 8.1 SP2: `wls81sp2_AIX_supp.jar`

2. Run the installer:

```
java -jar filename.jar
```

    **Note:** For details, see *Installing BEA WebLogic Platform* at the following URL: `http://e-docs.bea.com/platform/docs81/install/index.html`

3. Unjar the contents of `wls81sp2_AIX_supp.jar` and copy the `libwlenv.so` file into the following directory: `$BEA_HOME/weblogic81/server/lib/aix`.

For example, if you saved `wls82sp2_AIX_supp.jar` in `/tmp`, run the following commands:

```
cd $BEA_HOME
jar -xvf /tmp/wls81sp2_AIX_supp.jar
```

**Note:** You must also apply the SDK/Database Patch for WebLogic Platform 8.1 SP2. The patch is available for download from:
http://dev2dev.bea.com/products/wlplatform81/patch/wlplat81sp2_patc
h.jsp. For more information, see "SDK/Database Patch" in "What Is New in WebLogic Platform 8.1 SP2" in the *WebLogic Platform 8.1 Release Notes*:
http://e-docs.bea.com/platform/docs81/relnotes/relnotes.html#sdk_db
_patch

# IBM AIX 5.1 on pSeries with WebLogic Platform 8.1

**Product Components Supported on this Configuration**

|  | WebLogic Server | WebLogic Workshop | WebLogic Integration | WebLogic Portal |
|---|---|---|---|---|
| Run-time | ✔ | ✔ | ✔ | ✔ |
| Design/Dev Tools* | ✔ | ✘ | ✘ | ✘ |

\* For design and development tools support, see the "Configuration Requirements" section below.

✔ Supported
✘ Not supported

**Note:** WebLogic Platform 8.1 includes WebLogic Server 8.1 Service Pack 1 (SP1).

This section provides the following information:

- Configuration Requirements

- Known Issues

- Download and Installation Instructions

## Related Information

- For information about supported database configurations, Web servers, and browsers, plus support for interoperability tools and WebLogic Platform product support information, see *WebLogic Platform 8.1 Supported Configurations.*

- For information about IBM AIX 5.1, visit IBM's Web site: `http://www.ibm.com`.

# Configuration Requirements

**Table 6-1  Requirements for WebLogic Platform 8.1 on IBM AIX 5.1 on pSeries**

| | | |
|---|---|---|
| **Operating System Version and Patches** | AIX 5L V5.1-ML4 with Recommended Maintenance Package AIX 5100-04; APAR IY39794 and any later compatible level | |
| **Chip Architecture and Minimum Processor Speed** | • POWER3 (450 MHz)<br>• POWER4 (1 GHz) | |
| **SDK** | IBM SDK 1.4.1 32-bit (IY47536) Java™ 2 Runtime Environment, Standard Edition (build 1.4.1) Classic VM (build 1.4.1, J2RE 1.4.1 IBM AIX build ca141-20030703a (JIT enabled: jitc)) | Download the IBM SDK from the IBM Web site and install it, manually, before installing WebLogic Platform. For instructions, see "Download and Installation Instructions" on page 6-7.<br><br>Use of JVM debug mode with the IBM JVM significantly degrades application performance and debugging effectiveness. The JVM debug mode is enabled by default on WebLogic Platform; BEA strongly recommends that you manually disable it when running WebLogic Platform on AIX. For instructions, see "JVM Debug Mode Impact" on page 6-4. |
| **Design and Development Tools** | The WebLogic Workshop IDE and WebLogic Integration Format Builder are not supported on IBM AIX systems. IBM AIX is supported for the production deployment of applications developed in the WebLogic Workshop IDE. Debugging of applications developed in the WebLogic Workshop IDE, for deployment on AIX, should be accomplished to the extent possible on the Workshop development system; use of JVM debug mode with the IBM JVM significantly degrades application performance and debugging effectiveness. IBM AIX is also supported for the development and production deployment of WebLogic Server applications developed with other tools. | |
| **RAM** | 512 MB required; 1 GB recommended | |
| **Performance Pack** | Included | `lib/aix/libmuxer.so` |
| **Node Manager** | Included | Native |

**Table 6-1  Requirements for WebLogic Platform 8.1 on IBM AIX 5.1 on pSeries (Continued)**

| BEA jDrivers for Oracle | For this Oracle client version: | The following shared libraries are provided: |
|---|---|---|
| | Oracle 8.1.7 | • `lib/aix/oci817_8/libweblogicoci39.so`<br>• `lib/aix/oci817_8/libweblogicoxa39.so` |
| | Oracle 9.2.0 | • `lib/aix/oci920_8/libweblogicoci39.so`<br>• `lib/aix/oci920_8/libweblogicoxa39.so` |

# Known Issues

This section provides workarounds for the following problems:

- IBM JVM Updates For DST

- WebLogic Server Clustering Limitation

- IIOP Thin Client Not Supported

- Insufficient Buffer Size for UDP_SENDSPACE

- JVM Debug Mode Impact

- JAXP Incompatibility Causes Problems with Using SDK Built-in XML Parsers on WebLogic Platform 8.1 GA

- Database Cannot Be Loaded on AIX

- Problem in getClass.getResourceAsStream()

- Running xbean.jar with the JIT Enabled May Cause Problem

For more information about known issues with any components of this release, see the appropriate *Release Notes* document. For a complete list of *Release Notes* supporting WebLogic Platform 8.1, see:

`http://e-docs.bea.com/platform/docs81/interm/relnotes.html`

## IBM JVM Updates For DST

IBM has released a Timezone Update Utility to update DST data without the need to upgrade Java. See IBM Time Zone Update Utility for Java™.

## WebLogic Server Clustering Limitation

If you want to support WebLogic Server clustering on an AIX 5.1 configuration, open the file `$BEA_HOME/weblogic81/common/bin/commEnv.sh` in a text editor, and append the following line to the IBM section under `$JAVA_VENDOR`:

```
export JAVA_OPTIONS="$JAVA_OPTIONS -Djava.net.preferIPv4Stack=true"
```

## IIOP Thin Client Not Supported

The IIOP thin client is not supported on AIX due to dependencies on the JVM. Only thin-client applications are affected by this issue.

To work around this issue, run WebLogic Server on AIX and your thin client on another operating system.

## Insufficient Buffer Size for UDP_SENDSPACE

The default buffer size for `UDP_SENDSPACE` is 9216 (9 KB), but WebLogic Server sends fragments up to 32 KB [to `UDP_SENDSPACE`]. As a result, use of a buffer smaller than 32 KB may cause an I/O exception.

To prevent I/O exceptions due to insufficient space in the `UDP_SENDSPACE` buffer:

1. Set the buffer size to 32 KB:

   ```
   no -o udp_sendspace=32768
   ```

2. Reboot WebLogic Server.

## JVM Debug Mode Impact

Use of JVM debug mode with the IBM JVM significantly degrades application performance and debugging effectiveness. Therefore, whenever you run WebLogic Platform on an AIX configuration, BEA strongly recommends that you disable the JVM debug mode (which, by default, is enabled by WebLogic Platform). Disabling debug mode is recommended for all domains, both existing ones and domains created using the Configuration Wizard.

To disable JVM debug mode:

1. Go to the target domain directory.

2. In the `startWebLogic.sh` file, find the first occurrence of `debugFlag=true`.

3. Change it to: `debugFlag=false`.

4. If you are going to use QuickStart, repeat steps 2 and 3 in the `startWebLogicQS.sh` file.

   **Note:** If you are going to perform this procedure, you must do so before launching QuickStart.

## JAXP Incompatibility Causes Problems with Using SDK Built-in XML Parsers on WebLogic Platform 8.1 GA

**Note:** This limitation is reported, in CR112245, in the "Known Limitations" section of the *WebLogic Platform 8.1 Release Notes*.

WebLogic Platform 8.1 is based on JAXP 1.1, and IBM SDK 1.4.1.2 is based on JAXP 1.2. This incompatibility causes problems with using the JDK built-in XML parsers.

To compensate for this incompatibility:

1. Open the following file in a text editor:

   `$BEA_HOME/weblogic81/common/bin/commEnv.sh`

2. Append the following line:

```
export IBM_JAVA_OPTIONS="$IBM_JAVA_OPTIONS -Djavax.xml.parsers.SAXParser
Factory=weblogic.xml.jaxp.RegistrySAXParserFactory
-Djavax.xml.parsers.Document
BuilderFactory=weblogic.xml.jaxp.RegistryDocumentBuilderFactory -Djavax.xml.
transform.TransformerFactory=weblogic.xml.jaxp.RegistrySAXTransformerFactory"
```

## Database Cannot Be Loaded on AIX

**Note:** This limitation is reported, in CR112867, in "Problems Fixed in Service Pack 2" in the *WebLogic Platform 8.1 Release Notes*.

Using the Configuration Wizard on an AIX platform, you can perform all but one of the steps necessary to configure a domain. The exception is the task of loading the database. This task must be performed on an operating system other than AIX. The remainder of this section provides instructions for doing so.

**Note:** The alternative procedure for loading the database must be performed for any template in which WebLogic Portal and/or WebLogic Integration functionality is included. If you are using a custom template, this procedure is necessary only if your template includes a script that initializes the database. Keep in mind that a template may not provide all the connection pools required for your domain or application.

Before you begin . . .

1. On your AIX system, open the Configuration Wizard.

2. Select the Create a new WebLogic configuration option.

3. Configure your new domain by completing all the necessary steps except one: do not load the database.

   When the "Test JDBC Connection Pools and Setup JDBC Database" window is displayed, proceed to the next window without clicking Load Database.

Now load your database by completing the following steps:

1. On an operating system other than AIX, open the Configuration Wizard.

2. Select the Create a new WebLogic configuration option. The Select a Configuration Template window is displayed.

3. Select the same template you used to create a new domain on your AIX system. Click Next. The Choose Express or Custom Configuration window is displayed.

4. Select Custom and click Next. The Configure the Administration Server window is displayed.

5. Click Next. The Managed Servers, Clusters, and Machines Options window is displayed.

6. Select No and click Next. The Database (JDBC) Options window is displayed.

7. Select Yes and click Next. The Configure JDBC Connection Pools window is displayed.

8. For each connection pool listed, enter the information about your database.

   **Note:**  If multiple connection pools reference the same database, perform this step for only one of them.

   After you finish configuring all connection pools, click Next. The Configure JDBC MultiPools window is displayed.

9. Click Next. The Configure JDBC Data Sources window is displayed.

10. Click Next. The Test JDBC Connection Pools and Setup JDBC Database window is displayed.

11. For each connection pool:

    a. Test the connection for the pool.

b. Select a database from the drop-down menu in the DB Version field.

c. Click Load Database.

When all the desired databases are loaded, click Exit.

Now all your databases are loaded. You can return to the domain that you created initially, on your AIX system, and start running it with the fully populated databases.

# Problem in getClass.getResourceAsStream()

A problem in `getClass.getResourceAsStream()`, IBM PMR 16136,004, prevents installation of some examples and turns off the execution bit for all run scripts upon completion of the installation.

To avoid these limitations, download and apply the vendor fix APAR IY46206.

# Running xbean.jar with the JIT Enabled May Cause Problem

Sometimes the JVM crashes when the `xbean.jar` is run while the JIT is enabled (IBM PMR 19060,004).

To work around this issue, run either of the following commands:

- `-Dcom.ibm.jit.compileopt=NQCOMMONING_COSTBENEFIT`
- `-Dcom.ibm.jit.compileopt=NQCOMMONING_COSTBENEFIT{com/bea/xbean/common/XmlWhitespace}{collapse}`

# Download and Installation Instructions

This section provides instructions for the following tasks:

- Downloading and Installing the IBM SDK
- Downloading and Installing WebLogic Platform 8.1

# Downloading and Installing the IBM SDK

Before you can run WebLogic Platform 8.1 on IBM AIX, you must have an SDK at the following level: IBM SDK 1.4.1 32-bit PTF: ca141-20030703a. Because this SDK is not delivered with WebLogic Platform, you must download and install it manually before installing WebLogic Platform.

**Note:** You cannot use an older version of the IBM SDK, even if one is already installed on your system. You must download and install IBM SDK 1.4.1 32-bit PTF with APAR IY43555, APAR IY46206, and APAR IY47536.

To download IBM SDK 1.4.1 32-bit PTF: ca141-20030703a, complete the following procedure:

1. Go to the following IBM download site:

   https://techsupport.services.ibm.com/server/aix.fdc

2. Set the search criteria to the following:

   – OS level: *From the drop-down list, select the appropriate OS level.*

   – Search by: APAR number or abstract

   – Search string: IY43555

   Following the instructions and/or prompts displayed on the screen, make the selections required for your configuration and proceed to the next step.

3. When a list of filesets is displayed, download and install the following filesets:

   – `Java14.ext.commapi.1.4.1.0`

   – `Java14.ext.javahelp.1.4.1.0`

   – `Java14.license.1.4.1.0`

   – `Java14.sdk.1.4.1.0`

4. Repeat steps 1-3 with the following changes:

   – In step 2, specify the following value for Search string: IY46206.

   – In step 3, download and install one fileset: `Java14.sdk.1.4.1.1.`

5. Repeat steps 1-3 with the following changes:

   – In step 2, specify the following value for Search string: IY47536.

   – In step 3, download and install one fileset: `Java14.sdk.1.4.1.2.`

6. After all packages are installed, verify that all of them are also applied. To do so, run the following commands:

   ```
   $ instfix -ivqk IY43555
   $ instfix -ivqk IY46206
   $ instfix -ivqk IY47536
   ```

7. To verify that the required SDK fixes are now installed on your system, run the following command:

   ```
   /usr/java14/bin/java -version
   ```

Make sure that the output contains the following string:

```
IBM AIX build ca141-20030703a
```

# Downloading and Installing WebLogic Platform 8.1

Complete the following procedure:

1. From the BEA download site (`http://commerce.bea.com`), download:

   – AIX-specific installer for BEA WebLogic Platform 8.1

   – Supplemental JAR file for 8.1: `aix_supplement.jar`

2. Run the installer:

   ```
   java -jar filename.jar
   ```

   **Note:** For details, see *Installing BEA WebLogic Platform* at the following URL:
   `http://e-docs.bea.com/platform/docs81/install/index.html`

3. Rename the `aix_supplement.jar` file as `weblogic_knex_patch.jar`, and save the file in `$BEA_HOME/weblogic81/server/lib`.

4. Go to `$BEA_HOME/weblogic81/server/lib` and run the `ln` command to create a link to the `weblogic_knex_patch.jar` file. The link must be called `weblogic_sp.jar`. For example:

   ```
   ln weblogic_knex_patch.jar weblogic_sp.jar
   ```

5. In your `CLASSPATH` definition, specify the `aix_supplement.jar` file before the `weblogic.jar` and `knex.jar` files.