



BEA WebLogic Platform™

8.1 Supported Configurations: IBM AIX 5.3 on pSeries

Copyright

Copyright © 2005-2006 BEA Systems, Inc. All Rights Reserved.

Restricted Rights Legend

This software and documentation is subject to and made available only pursuant to the terms of the BEA Systems License Agreement and may be used or copied only in accordance with the terms of that agreement. It is against the law to copy the software except as specifically allowed in the agreement. This document may not, in whole or in part, be copied, photocopied, reproduced, translated, or reduced to any electronic medium or machine readable form without prior consent, in writing, from BEA Systems, Inc.

Use, duplication or disclosure by the U.S. Government is subject to restrictions set forth in the BEA Systems License Agreement and in subparagraph (c)(1) of the Commercial Computer Software-Restricted Rights Clause at FAR 52.227-19; subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.227-7013, subparagraph (d) of the Commercial Computer Software--Licensing clause at NASA FAR supplement 16-52.227-86; or their equivalent.

Information in this document is subject to change without notice and does not represent a commitment on the part of BEA Systems. THE SOFTWARE AND DOCUMENTATION ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND INCLUDING WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. FURTHER, BEA Systems DOES NOT WARRANT, GUARANTEE, OR MAKE ANY REPRESENTATIONS REGARDING THE USE, OR THE RESULTS OF THE USE, OF THE SOFTWARE OR WRITTEN MATERIAL IN TERMS OF CORRECTNESS, ACCURACY, RELIABILITY, OR OTHERWISE.

Trademarks or Service Marks

BEA, BEA Liquid Data for WebLogic, BEA WebLogic Server, Built on BEA, Jolt, JoltBeans, SteelThread, Top End, Tuxedo, and WebLogic are registered trademarks of BEA Systems, Inc. BEA Builder, BEA Campaign Manager for WebLogic, BEA eLink, BEA Manager, BEA MessageQ, BEA WebLogic Commerce Server, BEA WebLogic Enterprise, BEA WebLogic Enterprise Platform, BEA WebLogic Enterprise Security, BEA WebLogic Express, BEA WebLogic Integration, BEA WebLogic Java Adapter for Mainframe, BEA WebLogic JDriver, BEA WebLogic JRockit, BEA WebLogic Log Central, BEA WebLogic Personalization Server, BEA WebLogic Platform, BEA WebLogic Portal, BEA WebLogic Server Process Edition, BEA WebLogic WorkGroup Edition, BEA WebLogic Workshop, and Liquid Computing are trademarks of BEA Systems, Inc. BEA Mission Critical Support is a service mark of BEA Systems, Inc. All other company and product names may be the subject of intellectual property rights reserved by third parties.

All other trademarks are the property of their respective companies.

Content

1. IBM AIX 5.3 on pSeries with 8.1 SP6

Configuration Requirements	1-2
Known Issues	1-3
IBM JVM Updates For DST	1-3
IIOP Thin Client Not Supported	1-3
Insufficient Buffer Size for UDP_SENDSpace	1-4
GUI-based Installation Fails Due to FileSystemPreferences	1-4
JVM Debug Mode Impact	1-4
How to Disable JVM Debug Mode	1-5
How to Enable JVM Debug Mode	1-5
JAXP Incompatibility Causes Portability Issues with WebLogic Server 8.1 SP6	1-6
Method 1: Edit setDomainEnv.sh	1-6
Method 2: Uncomment JAXP Properties Lines for JAXP 1.1 Parser and Transformer Factories	1-6
Method 3: Create the XML Registry	1-7
Upgrade to WebLogic Platform 8.1 SP6 Requires Library Cleanup	1-7
Download and Installation Instructions	1-8
Downloading and Installing IBM SDK 1.4.2	1-8
Downloading and Installing IBM SDK 1.4.2 SR5/SR7	1-8
Downloading and Installing WebLogic Platform or WebLogic Server 8.1 SP6	1-11
Switching from IBM SDK 1.4.2 SR5 to SR7	1-11
Downloading and Installing WebLogic Platform 8.1 SP6 with Azul Virtual Machine	1-12

2. IBM AIX 5.3 on pSeries with 8.1 SP5

Configuration Requirements	2-2
----------------------------------	-----

Known Issues	2-3
IBM JVM Updates For DST	2-3
Azul Virtual Machine Support-Related Issues	2-4
IIOP Thin Client Not Supported.	2-4
Insufficient Buffer Size for UDP_SENDSPACE.	2-4
GUI-based Installation Fails Due to FileSystemPreferences	2-5
JVM Debug Mode Impact	2-5
How to Disable JVM Debug Mode	2-5
How to Enable JVM Debug Mode.	2-6
JAXP Incompatibility Causes Portability Issues with WebLogic Server 8.1 SP5.	2-6
Method 1: Edit setDomainEnv.sh.	2-7
Method 2: Uncomment JAXP Properties Lines for JAXP 1.1 Parser and Transformer Factories.	2-7
Method 3: Create the XML Registry.	2-7
Upgrade to WebLogic Platform 8.1 SP5 Requires Library Cleanup	2-8
Download and Installation Instructions	2-9
Downloading and Installing IBM SDK 1.4.2	2-9
Downloading and Installing IBM SDK 1.4.2 SR3	2-9
Downloading and Installing WebLogic Platform or WebLogic Server 8.1 SP5	2-10
Downloading and Installing WebLogic Platform 8.1 SP5 with Azul Virtual Machine.	2-11

3. IBM AIX 5.3 on pSeries with 8.1 SP4

Configuration Requirements	2-2
Known Issues	2-3
IBM JVM Updates For DST	2-4
IIOP Thin Client Not Supported.	2-4
Insufficient Buffer Size for UDP_SENDSPACE.	2-4
GUI-based Installation Fails Due to FileSystemPreferences	2-4

Oracle 8.1.7 jDriver Not Supported on AIX 64-bit Kernel	2-5
JVM Debug Mode Impact	2-5
How to Disable JVM Debug Mode	2-5
How to Enable JVM Debug Mode	2-6
JAXP Incompatibility Causes Portability Issues with WebLogic Platform 8.1 SP4	2-6
Method 1: Edit setDomainEnv.sh	2-6
Method 2: Uncomment JAXP Properties Lines for JAXP 1.1 Parser and Transformer Factories	2-7
Method 3: Create the XML Registry	2-7
Upgrade to WebLogic Platform 8.1 SP4 Requires Library Cleanup	2-8
Download and Installation Instructions	2-8
Downloading and Installing the Operating System Patch	2-9
Downloading and Installing IBM SDK 1.4.2	2-9
Downloading and Installing IBM SDK 1.4.2 SR2	2-10
Downloading and Installing WebLogic Platform 8.1 SP4	2-11
Downloading and Installing the WebLogic Platform 8.1 SP4 AIX Patch	2-11

4. IBM AIX 5.3 on pSeries with 8.1 SP3

Configuration Requirements	3-2
Known Issues	3-3
IBM JVM Updates For DST	3-3
IIOP Thin Client Not Supported	3-3
Insufficient Buffer Size for UDP_SENDSIZE	3-4
JVM Debug Mode Impact	3-5
How to Disable JVM Debug Mode	3-5
How to Enable JVM Debug Mode	3-6
JAXP Incompatibility Causes Portability Issues with WebLogic Server 8.1 SP3	3-6
Method 1: Edit setDomainEnv.sh	3-6

Method 2: Uncomment JAXP Properties Lines for JAXP 1.1 Parser and Transformer Factories.....	3-7
Method 3: Create the XML Registry.....	3-7
Download and Installation Instructions	3-8
Downloading and Installing IBM SDK 1.4.2	3-8
Downloading and Installing WebLogic Platform 8.1 SP3.....	3-8

IBM AIX 5.3 on pSeries with 8.1 SP6

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 5.3, visit IBM's Web site: <http://www.ibm.com>.
- For information about known issues with the Azul Virtual Machine, see <http://www.azulsystems.com>.

Configuration Requirements

Table 1-1 Requirements for 8.1 SP6 on IBM AIX 5.3 on pSeries

Operating System Version and Patches	AIX 5L v5.3-ML2 and higher MLs	
Chip Architecture and Minimum Processor Speed	<ul style="list-style-type: none"> • POWER3 (450 MHz) • POWER4 (1.1 GHz) • POWER5 (1.5 GHz) 	
SDK	<ul style="list-style-type: none"> • 1.4.2 SR5: 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)) • 1.4.2 SR7: 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)) 	<ul style="list-style-type: none"> • 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. • 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 1-4. • If you already have WebLogic Platform 8.1 SP6 installed with IBM 1.4.2 SR5, the 1.4.2 SR7 SDK is optional.
	Azul Virtual Machine 2.2.1.0 and later patches	
Design and Development Tools	Supports WebLogic Server design and development tools.	
RAM	512 MB required; 1 GB recommended	
Performance Pack	Included	<code>lib/aix/libmuxer.so</code>

Table 1-1 Requirements for 8.1 SP6 on IBM AIX 5.3 on pSeries (Continued)

Node Manager	Included	Native
BEA jDrivers for Oracle	For this Oracle client version:	The following shared libraries are provided:
	<ul style="list-style-type: none"> • Oracle 9.2.0.5 • Oracle 9.2.0.5 with XA 	<ul style="list-style-type: none"> • lib/aix/oci920_8/libweblogicoci39.so • lib/aix/oci920_8/libweblogicoxa39.so

Known Issues

This section lists known issues pertaining to WebLogic Platform 8.1 SP6, and where available, provides workarounds:

- [IBM JVM Updates For DST](#)
- [IIOP Thin Client Not Supported](#)
- [Insufficient Buffer Size for UDP_SENDSIZE](#)
- [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™](#).

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_SENDSPEACE

The default size of the buffer for UDP_SENDSPEACE is 9216 (9 KB), but WebLogic Server sends fragments, up to 32 KB in size, to UDP_SENDSPEACE. 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 1-5 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 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.processor.TransformerFactoryImpl
-Djavax.xml.parsers.SAXParserFactory=weblogic.apache.xerces.jaxp.SAXParserFactoryImpl
-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.processor.TransformerFactoryImpl
```

- `javax.xml.parsers.SAXParserFactory=weblogic.apache.xerces.jaxp.SAXParserFactoryImpl`
- `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.TransformerFactoryImpl"
SAXParserFactory="weblogic.apache.xerces.jaxp.SAXParserFactoryImpl"
DocumentBuilderFactory="weblogic.apache.xerces.jaxp.DocumentBuilderFactoryImpl"/>
```

- 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 WebLogic Platform 8.1 SP6 with Azul Virtual Machine](#)

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. 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: “5.3”
 - 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)
```

IBM AIX 5.3 on pSeries with 8.1 SP6

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 5.3 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.

Downloading and Installing WebLogic Platform 8.1 SP6 with Azul Virtual Machine

1. Download and install IBM JDK 1.4.2 as described in [Downloading and Installing IBM SDK 1.4.2 SR5/SR7](#).
2. Download Azul Virtual Machine from <http://www.azulsystems.com>.
3. Install Azul Virtual Machine following the instructions provided in the Azul Virtual Machine installation documents.
4. Set the `AZUL_JAVAHOME` to Azul Virtual Machine installation path.
5. From `AZUL_JAVAHOME`, run `domain_specify` script. The script prompts for the Azul domain and policy server host: specify appropriate values.
6. Follow the installation instructions provided under [Downloading and Installing WebLogic Platform or WebLogic Server 8.1 SP6](#) for installing WebLogic Platform 8.1 SP6.

IBM AIX 5.3 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 5.3, visit IBM's Web site: <http://www.ibm.com>.
- For information about known issues with the Azul Virtual Machine, see <http://www.azulsystems.com>.

Configuration Requirements

Table 2-1 Requirements for 8.1 SP5 on IBM AIX 5.3 on pSeries

Operating System Version and Patches	AIX 5L v5.3-ML2
Chip Architecture and Minimum Processor Speed	<ul style="list-style-type: none"> POWER3 (450 MHz) POWER4 (1.1 GHz) POWER5 (1.5 GHz)
SDK	<p>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))</p> <ul style="list-style-type: none"> 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 2-9. 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.
	Azul Virtual Machine 2.2.1.0 and later patches
Design and Development Tools	<p>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.</p> <p>Weblogic Platform 8.1 SP5 with the Azul Virtual Machine does not support any development tools.</p>
RAM	512 MB required; 1 GB recommended

Table 2-1 Requirements for 8.1 SP5 on IBM AIX 5.3 on pSeries (Continued)

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 9.2.0.5	<ul style="list-style-type: none"> • lib/aix/oci920_8/libweblogicoci39.so • lib/aix/oci920_8/libweblogicoxa39.so

Known Issues

This section lists known issues pertaining to WebLogic Platform 8.1 SP5, and where available, provides workarounds:

- [IBM JVM Updates For DST](#)
- [Azul Virtual Machine Support-Related Issues](#)
- [IIOP Thin Client Not Supported](#)
- [Insufficient Buffer Size for UDP_SENDSIZE](#)
- [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™](#).

Azul Virtual Machine Support-Related Issues

- The Azul Virtual Machine supports only Type 4 JDBC (thin) drivers.
- The default number of open file descriptors allocated for the JDK may be insufficient for the Azul Virtual Machine.

In most circumstances, the number of open file descriptors allocated for the SDK, in the proxy machine, should be at least three times the number of file descriptors allocated for IBM JVM. If you are going to run file-intensive operations, be sure to allocate seven to eight times the existing value for the number of open file descriptors in the proxy machine. If no value has been set, set the value to 8192.

To change the specified number of open file descriptors, enter the `ulimit -n` command. For example, if the number of file descriptors allocated for IBM JVM is 1024, raise that number to 8192 by entering the following command:

```
ulimit -n 8192
```

Note: Keep in mind that the BEA WebLogic jDriver has been deprecated in WebLogic Platform 8.1. BEA does not support the use of the WebLogic jDriver with WebLogic Server 8.1 SP5 with the Azul Virtual Machine.

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_SENDSIZE

The default size of the buffer for `UDP_SENDSIZE` is 9216 (9 KB), but WebLogic Server sends fragments, up to 32 KB in size, to `UDP_SENDSIZE`. 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_sendsize=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 2-6](#) 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 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.processor.TransformerFactoryImpl
-Djavax.xml.parsers.SAXParserFactory=weblogic.apache.xerces.jaxp.SAXParserFactoryImpl
-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.processor.TransformerFactoryImpl
- javax.xml.parsers.SAXParserFactory=weblogic.apache.xerces.jaxp.SAXParserFactoryImpl
- 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 WebLogic Platform 8.1 SP5 with Azul Virtual Machine](#)

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 5.3.”

- 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 5.3 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 5.3-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*.

Downloading and Installing WebLogic Platform 8.1 SP5 with Azul Virtual Machine

1. Download and install IBM JDK 1.4.2 SR3 as described in [Downloading and Installing IBM SDK 1.4.2](#) and [Downloading and Installing IBM SDK 1.4.2 SR3](#).
2. Download Azul Virtual Machine from <http://www.azulsystems.com>.
3. Install Azul Virtual Machine following the instructions provided in the Azul Virtual Machine installation documents.
4. Set the `AZUL_JAVAHOME` to Azul Virtual Machine installation path.
5. From `AZUL_JAVAHOME`, run `domain_specify` script. The script prompts for the Azul domain and policy server host: specify appropriate values.
6. Follow the installation instructions provided under [Downloading and Installing WebLogic Platform or WebLogic Server 8.1 SP5](#) for installing WebLogic Platform 8.1 SP5.

IBM AIX 5.3 on pSeries with 8.1 SP5

IBM AIX 5.3 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 5.3, visit IBM's Web site: <http://www.ibm.com>.

Configuration Requirements

Table 3-1 Requirements for 8.1 SP4 on IBM AIX 5.3 on pSeries

Operating System Version and Patches	AIX 5L v5.3 with APAR IY58143	
Chip Architecture and Minimum Processor Speed	<ul style="list-style-type: none"> • POWER3 (450 MHz) • POWER4 (1.1 GHz) • POWER5 (1.5 GHz) 	
SDK	<ul style="list-style-type: none"> • 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)) • 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)) 	<ul style="list-style-type: none"> • 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 SR 2 SDK. • 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. • 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 3-8. • 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 5.3 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	<code>lib/aix/libmuxer.so</code>
Node Manager	Included	Native
BEA jDrivers for Oracle	For this Oracle client version:	The following shared libraries are provided:
	Oracle 8.1.7	<ul style="list-style-type: none"> • <code>lib/aix/oci817_8/libweblogicoci39.so</code> • <code>lib/aix/oci817_8/libweblogicoxa39.so</code>
	Oracle 9.2.0	<ul style="list-style-type: none"> • <code>lib/aix/oci920_8/libweblogicoci39.so</code> • <code>lib/aix/oci920_8/libweblogicoxa39.so</code>

Known Issues

This section provides workarounds for the following problems:

- [IBM JVM Updates For DST](#)
- [IIOP Thin Client Not Supported](#)
- [Insufficient Buffer Size for UDP_SENDSIZE](#)
- [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 Platform 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™](#).

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_SENDSPEACE

The default size of the buffer for UDP_SENDSPEACE is 9216 (9 KB), but WebLogic Server sends fragments, up to 32 KB in size, to UDP_SENDSPEACE. 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 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.

Note: 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 'nodelbug' command-line argument to the server startup script. For example:

```
$ ./startWebLogic.sh nodelbug
```

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 Platform 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 Platform supports only 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.

- Append the following values to `JAVA_OPTIONS`:


```
"-Djavax.xml.transform.TransformerFactory=weblogic.apache.xalan.processor.TransformerFactoryImpl
-Djavax.xml.parsers.SAXParserFactory=weblogic.apache.xerces.jaxp.SAXParserFactoryImpl
-Djavax.xml.parsers.DocumentBuilderFactory=weblogic.apache.xerces.jaxp.DocumentBuilderFactoryImpl"
```

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

- Copy the `$JAVA_HOME/jre/lib/jaxp.properties.sample` file to `$JAVA_HOME/jre/lib/jaxp.properties`.
- 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.processor.TransformerFactoryImpl`
 - `javax.xml.parsers.SAXParserFactory=weblogic.apache.xerces.jaxp.SAXParserFactoryImpl`
 - `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 `slibc`, an AIX utility. Then re-start the upgrade procedure. For more information, see the instructions in the *Release Notes* for WebLogic Platform 8.1, for upgrading from SP1 to SP3:

<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 SP4 from any pre-SP4 version of WebLogic Platform 8.1.

Download and Installation Instructions

Complete the following procedures:

- [Downloading and Installing the Operating System Patch](#)
- [Downloading and Installing 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 Operating System Patch

To download and install operating system patch IY58143 for IBM AIX 5.3, 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:
 - Server: From the drop-down list, select “pSeries family.”
 - Product or fix type: From the drop-down list, select “AIX OS, Java, Compilers.”
 - Ordering Option: From the drop-down list, select “Specific Fixes.”
 - OS level: From the drop-down list, select the appropriate OS level: “AIX 5.3.”
 - Click “Continue.”
 - Search by: APAR number or abstract
 - Search string: IY58143
3. When prompted by queries or instructions displayed on the screen, make the selections required to have the IY58143 patch downloaded and installed on your system.

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).
3. Install the IBM SDK 1.4.2 on your system.

For caveats about using WebLogic Platform 8.1 SP4 on an IBM AIX 5.3 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 IBM SDK 1.4.2” on page 3-9](#).

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:
“5.3”
 - 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 5.3 configuration:

1. Go to the BEA download site:

<http://commerce.bea.com>

2. Download the WebLogic Platform package installer for IBM AIX 5.3.
3. Install WebLogic Platform 8.1 SP4 for IBM AIX 5.3 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_platform813_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 5.3 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 5.3 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 5.3 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 5.3, visit IBM's Web site: <http://www.ibm.com>.

Configuration Requirements

Table 4-1 Requirements for 8.1 SP3 on IBM AIX 5.3 on pSeries

Operating System Version and Patches	AIX 5L v5.3	
Chip Architecture and Minimum Processor Speed	<ul style="list-style-type: none"> • POWER3 (450 MHz) • POWER4 (1.1 GHz) • POWER5 (1.5 GHz) 	
SDK	<p>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))</p>	<p>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.</p> <p>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 “Download and Installation Instructions” on page 4-8.</p>
Design and Development Tools	<p>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.</p>	
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 5.3 on pSeries (Continued)

BEA jDrivers for Oracle	For this Oracle client version:	The following shared libraries are provided:
	Oracle 8.1.7	<ul style="list-style-type: none"> lib/aix/oci817_8/libweblogicoci39.so lib/aix/oci817_8/libweblogicoxa39.so
	Oracle 9.2.0	<ul style="list-style-type: none"> lib/aix/oci920_8/libweblogicoci39.so lib/aix/oci920_8/libweblogicoxa39.so

Known Issues

This section provides workarounds for the following problems:

- [IBM JVM Updates For DST](#)
- [IIOP Thin Client Not Supported](#)
- [Insufficient Buffer Size for UDP_SENDSIZE](#)
- [JVM Debug Mode Impact](#)
- [JAXP Incompatibility Causes Portability Issues with WebLogic Server 8.1 SP3](#)

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™](#).

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_SENDSPEACE

The default buffer size for `UDP_SENDSPEACE` is 9216 (9 KB), but WebLogic Server sends fragments, up to 32 KB in size, to `UDP_SENDSPEACE`. 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 [“How to Enable JVM Debug Mode” on page 4-6](#) 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 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.processor.TransformerFactoryImpl  
-Djavax.xml.parsers.SAXParserFactory=weblogic.apache.xerces.jaxp.SAXParserFactoryImpl  
-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.processor.TransformerFactoryImpl`
 - `javax.xml.parsers.SAXParserFactory=weblogic.apache.xerces.jaxp.SAXParserFactoryImpl`
 - `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. The following entries must be added:
 - 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>

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 5.3 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 5.3 configuration:

1. Go to the BEA download site:

<http://commerce.bea.com>

2. Download the WebLogic Platform package installer for IBM AIX 5.3.

3. Install WebLogic Platform 8.1 SP3 for IBM AIX 5.3 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 5.3 on pSeries with 8.1 SP3