



BEA WebLogic Platform™

8.1 Supported Configurations: HP Integrity NonStop™ Server on Itanium

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Contents

1. HP Integrity NonStop Server on Itanium with WebLogic Server 8.1 SP3

Configuration Requirements	1-2
Known Issues	1-3
Download and Installation Instructions	1-6
Step 1: Download BEA WebLogic Server 8.1 SP3 and the Supplemental JAR File.	1-7
Step 2: Download the HP NonStop Server Toolkit	1-7
Step 3: Check Environment for Required Files	1-7
Step 4: Install BEA WebLogic Server 8.1 SP3	1-8
SQL/MX Database Configuration	1-9
Supported Drivers.	1-10
Configuration Requirement for Global Transactions Managed by WebLogic Server	1-10
Related Information	1-10

HP Integrity NonStop Server on Itanium with WebLogic Server 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](#)
- [SQL/MX Database Configuration](#)

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 details about using WebLogic Server 8.1 on HP Integrity NonStop Server, visit the following HP Web site about WebLogic Server:
<http://www.hp.com/go/nonstop/WLS81>.

Configuration Requirements

Table 1-1 Requirements for WebLogic Server 8.1 SP3 on HP Integrity NonStop Server on Itanium

Operating System Version and Patches	HP Integrity NonStop™ Server H06.03 SUT	NonStop SQL/MX Release 2.0, T1050H01
		NonStop Server for JDBC/MX, T1275H10
		NonStop TCP/IPv6, T1265H01, running in INET mode
Chip Architecture and Minimum Processor Speed	Itanium (1.6 GHz)	Hardware Family: Any HP Integrity NonStop™ NS-series servers
SDK	HP NonStop™ Server for Java™ 4.0, T2766H10, based on the Java 2 Platform, Standard Edition (J2SE), SDK 1.4.2 Java version 1.4.2_04 Java 2 Runtime Environment, Standard Edition (build 1.4.2_04-b05) Java HotSpot Server VM.	
Design and Development Tools	The WebLogic Workshop IDE is not supported on HP Integrity NonStop Server systems. HP Integrity NonStop Server 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 HP Integrity NonStop Server, should be accomplished to the extent possible on the Workshop development system; use of JVM debug mode with the NonStop Server for Java significantly degrades application performance and debugging effectiveness. HP Integrity NonStop Server is also supported for the development and production deployment of WebLogic Server applications developed with other tools.	
RAM	4 GB per processor required	QIO must be configured to use KSEG2.
Performance Pack	Included	libmuxer.a
Node Manager	Included	Java
BEA jDrivers for Oracle	Not supported	

Known Issues

Issue	Workaround
<p>1. Database Cascade Deletes Are Not Supported</p> <p>NonStop SQL/MX 2.0 does not support cascade deletions on a table. As a result, any Container Managed Persistence (CMP) EJB that relies on the database cascade delete feature to delete the data from the SQL/MX database fails.</p>	<p>The deployment descriptor of an EJB should not contain <code>db-cascade-delete</code> in its <code>weblogic-cmp-jar.xml</code>. This enables WebLogic Server to delete rows using explicit SQL delete statements.</p>
<p>2. Automatic Table Creation for EJB Container Managed Persistence (CMP) May Fail</p> <p>Automatic table creation for a CMP EJB using the deployment descriptor tag <code>create-default-dbms-table</code> may fail in two situations:</p> <p>(a) If the table contains column names that are keywords in NonStop SQL/MX.</p> <p>(b) If the table includes a primary key column. NonStop SQL/MX 2.0 expects the primary key column to be qualified as <code>NOT NULL NOT DROPPABLE</code>. However, automatic table creation does not generate the <code>NOT NULL NOT DROPPABLE</code> clause.</p>	<p>(a) Make sure the CMP deployment descriptor does not use SQL/MX keywords as table column names.</p> <p>(b) Make sure the table is created before the EJB is deployed so that the table schema exists when WebLogic Server checks for table information for the EJB.</p>

<p>3. Sequence Entities Are Not Supported</p> <p>Sequences/Identity columns are not supported in NonStop SQL/MX. Hence, automatic key generation for an EJB in WebLogic Server using sequences is not supported.</p>	<p>The automatic key can be generated using <code>NamedSequenceTable</code> as the value of the <code>generator-type</code> specified in the <code>automatic-key-generation</code> section of the <code>weblogic-cmp-jar.xml</code> file. The schema for the table name specified in the <code>generator-name</code> should have one column sequence of type <code>Integer</code>.</p> <p>The following code shows a sample entry:</p> <pre><automatic-key-generation> <generator-type>NamedSequenceTable </generator-type> <generator-name>sequencetable</gen erator-name> <key-cache-size>10</key-cache-size > </automatic-key-generation></pre> <p>Table schema:</p> <pre>CREATE TABLE SEQUENCETABLE (SEQUENCE INTEGER);</pre>
<p>4. Deployment Error During Use of WebLogic 5.1-Style Deployment Descriptor</p> <p>When an EJB has a WebLogic Server 5.1-style deployment descriptor, the EJB fails to deploy on WebLogic Server. The doctype for a 5.1-style descriptor is as follows:</p> <pre><!DOCTYPE weblogic-rdbms-bean PUBLIC '--//BEA Systems, Inc.//DTD WebLogic 5.1.0 EJB RDBMS Persistence//EN' http://www.bea.com/servers/wls510/dtd/we blogic-rdbms-persistence.dtd'></pre>	<p>Convert the 5.1-style deployment descriptor to a WebLogic Server 7.0 (or later) style deployment descriptor. Some of the changes required are conversion of the <code>pool-name</code> tag to <code>data-source-name</code> and conversion of the <code>attribute-map</code> to a <code>field-map</code>. WebLogic Server provides a <code>DDConverter</code> utility to convert the beans from earlier versions of WebLogic Server. For further documentation about how to use the <code>DDConverter</code> utility, see the documentation at the following URL:</p> <p>http://e-docs.bea.com/wls/docs81/ejb/implementing.html#DDConverter</p>

5. Certain CMP-Generated Code That Assumes Implicit Type Cast Conversion Fails	None
---	------

Certain instances of CMP-generated code based on the assumption of implicit type cast conversion fail. If the CMP-generated code assumes implicit type cast conversion (for example, conversion from string to integer), the SQL execution at run time fails. Implicit type casting of data types is not supported in NonStop SQL/MX 2.0.

6. EJB-QL That Uses the SQL SUBSTRING Function Fails	None
---	------

Any EJB-QL that uses the SQL SUBSTRING function fails to execute because the parameters of the SQL/MX SUBSTRING function are different from the parameters used by other databases supported by WebLogic Server.

7. Container Managed Relationship Caching Cannot Be Specified	None
--	------

Container Managed Relationship (CMR) caching cannot be specified when using NonStop SQL/MX 2.0.

8. Only the "default database type" Is Supported for CMP	None
---	------

For CMP, no database types other than the default type are supported.

9. SQL/MX 2.0 Triggers Have Restrictions	None
---	------

The use of SQL/MX 2.0 triggers is affected by several restrictions:

- The trigger action must comprise just one statement.
 - The trigger action statement cannot be a call to a Java Stored Procedure.
 - "BEFORE"-type triggers can be used only to inspect or modify data, or to return `SQLState` or vendor error code information.
-

10. Large Objects (BLOBs and CLOBs) Require Use of Special Tables SQL/MX 2.0 MX Tables supports large objects (BLOBs and CLOBs) only with the use of special additional tables.	When a table contains a BLOB or CLOB column: These special tables must be pre-created for both production and development mode by users of WebLogic Server. The <code>JdbcMxLobAdmin</code> utility is the recommended facility for pre-creating tables that contain BLOB or CLOB columns, as well as for creating the special tables used to store the LOB data. The names of these tables must be specified to the JDBC/MX driver as properties in the Java options.
11. Restrictions on Use of Native SQL/MX Utilities SQL/MX 2.0 utilities, including <code>mxci</code> , cannot be used to insert, delete, or update data in tables that contain LOB columns.	Use the JDBC/MX V32 driver to perform these operations.

For more information about known issues, see the *WebLogic Server 8.1 Release Notes*:

<http://e-docs.bea.com/wls/docs81/notes/index.html>

Download and Installation Instructions

Note: To successfully install BEA WebLogic Server 8.1 SP3 on Integrity NonStop Server, you must download and install the NonStop Server Toolkit, as instructed in “[Step 2: Download the HP NonStop Server Toolkit](#).”

The following sections provide instructions for these tasks:

- [Step 1: Download BEA WebLogic Server 8.1 SP3 and the Supplemental JAR File](#)
- [Step 2: Download the HP NonStop Server Toolkit](#)
- [Step 3: Check Environment for Required Files](#)
- [Step 4: Install BEA WebLogic Server 8.1 SP3](#)

Before you begin, review all instructions.

Step 1: Download BEA WebLogic Server 8.1 SP3 and the Supplemental JAR File

1. Go to the BEA Downloads site:

<http://commerce.bea.com/showallversions.jsp?family=WLS>

2. Download the WebLogic Server 8.1 SP3 package installer for HP Integrity NonStop™ Server (Itanium): `pj_server813_generic.jar`.
3. Download the BEA supplemental file for HP Integrity NonStop™ Server: `weblogic81sp3_hpns_h13_supp.jar`. This JAR file contains HP Integrity NonStop™ Server-specific modifications to the standard BEA files that are provided with WebLogic Server 8.1 SP3 and the NonStop Server for Java 4.0.
4. Verify that you have write permission for the root directory on the Integrity NonStop Server to which you plan to copy this software.
5. Use `ftp` to copy BEA WebLogic Server 8.1 SP3 (`pj_server813_generic.jar`) and the supplemental JAR file (`weblogic81sp3_hpns_h13_supp.jar`) to an empty directory on the Integrity NonStop Server. If such a directory does not already exist, create one now:

```
$ mkdir -p /usr/tandem/wlhpns/download81sp3
```

Make a note of the directory in which the server and supplemental JAR files have been copied. This directory will be used in subsequent steps.

Step 2: Download the HP NonStop Server Toolkit

1. Download the NonStop Server Toolkit (`weblogic81sp3_hpns_h13.zip`) from the “Resources” section of the following HP download site:
<http://www.hp.com/go/nonstop/WLS81>
2. Use `ftp` to copy the downloaded file to the directory on the Integrity NonStop Server that contains the supplemental JAR file (`weblogic81sp3_hpns_h13_supp.jar`).

Step 3: Check Environment for Required Files

Before you proceed with the installation, verify that the following files are present on the Integrity NonStop Server:

- WebLogic Server 8.1 SP3 package installer (`pj_server813_generic.jar`)

- Supplemental JAR file for WebLogic Server 8.1 SP3
(weblogic81sp3_hpns_h13_supp.jar)
- HP NonStop Server Toolkit (weblogic81sp3_hpns_h13.zip)

Step 4: Install BEA WebLogic Server 8.1 SP3

1. Before starting the installation process, verify the following:
 - You are using the same user ID that was used to install NonStop Server for Java 4.0.
 - You have write permission for all directories and subdirectories for NonStop Server for Java 4.0, and the root directory in which you plan to install 8.1 SP3 and the NonStop Server Toolkit.
2. Set and export the environment variables required for use with NonStop Server for Java 4.0 and NonStop TCP/IPv6. Save the commands used for setting these variables in a file, such as your .profile.

- a. Set and export the environment variables listed in the following example settings:

```
$ export JAVA_HOME=/usr/tandem/java
$ export PATH=$JAVA_HOME/bin:$PATH
$ export WL_HOME=/usr/BEA/weblogic81
$ export JDBCMX_DIR=/usr/tandem/jdbcMx
$ add_define =PTCPIP^FILTER^KEY class=map file=mykey
```

Note: The environment variables `JAVA_HOME`, `PATH`, and `WL_HOME` do not have default values. Set these variables to actual or intended locations before executing the `check-wl-hpns.sh` and `install-wl-hpns.sh` scripts.

- b. If your NonStop TCP/IPv6 process is not named `$ZTC0`, create a `define` to indicate the process name. For example, in the following `add_define` statement, the name of the TCP/IP process is `$ZSM1`. You must include an escape character before the `$` that precedes `ZSM1`:

```
$ add_define =TCPIP^PROCESS^NAME class=map file=\$ZSM1
```

3. Prepare to install WebLogic Server 8.1 SP3 on Integrity NonStop Server:

- a. Go to the directory in which you downloaded the NonStop Server Toolkit file (weblogic81sp3_hpns_h13.zip):

```
$ cd /usr/tandem/wlhpns/download81sp3
```

- b. Extract the contents of the ZIP file:

```
$ jar -xvf weblogic81sp3_hpns_h13.zip
```

- c. Set execute permission on the newly extracted shell scripts:

```
$ chmod 755 *sh
```

- d. Verify that all necessary software is installed on Integrity NonStop Server:

```
$ ./check-wl-hpns.sh
```

Note: Use the `-h` option to see a complete list of options for this script. Resolve any errors produced by the `check-wl-hpns.sh` script before proceeding.

4. Install WebLogic Server 8.1 SP3 by completing the console-mode installation procedure for `.jar` files available in *Installing BEA WebLogic Platform* at <http://e-docs.bea.com/platform/docs81/install/console.html>.

Note: Installation of WebLogic Server on an Integrity NonStop Server system takes approximately 45 minutes. The supplemental JAR file (`weblogic81sp3_hpns_h13_supp.jar`) is installed with the NonStop Server Toolkit.

5. Install the NonStop Server Toolkit and supplemental JAR file by running the following script:

```
$ ./install-wl-hpns.sh
```

Note: Use the `-h` option to see a complete list of options for this script.

6. Review the documentation, from the NonStop Technical library, for running WebLogic Server 8.1 SP3 on HP Integrity NonStop Server. See *HP NonStop Server Guide for BEA WebLogic Server 8.1* at the following URL:

<http://h30163.www3.hp.com/NTL/view/?id=090015ea80183e49&p=e40-e7f/090015ea80183e49/TPCONTNT.pdf&toc=y>

SQL/MX Database Configuration

On Integrity NonStop Server configurations, WebLogic Server supports only one database: SQL/MX 2.0. This section provides important information about configuring the SQL/MX database for use with WebLogic Server on HP Integrity NonStop Server.

For more information, see “BEA WebLogic Server 8.1 SP3 Software on HP Integrity NonStop Servers” at:

<http://www.hp.com/go/nonstop/wls81>

Supported Drivers

Only the following SQL/MX JDBC type 2 drivers are supported:

- `com.tandem.sqlmx.SQLMXDriver` (non-XA)
- `com.hp.nsk.xares.WLSTxSQLMXDataSource` (XA)

The URL for both drivers is `jdbc:sqlmx:.`

A JDBC Connection Pool that uses a SQL/MX JDBC driver requires the following attributes:

- `RollbackLocalTxUponConnClose="true"`
- `KeepXAConnTillTxComplete="true"`

Configuration Requirement for Global Transactions Managed by WebLogic Server

The NonStop Transaction Management Facility (TMF) must be configured as a *static XA resource* to make it a Resource Manager (subordinate) in global transactions managed by WebLogic Server.

Related Information

For more information about configuring WebLogic Server 8.1 SP3 on HP Integrity NonStop Server, see the following:

- WebLogic Server 8.1 SP3 Configuration Reference (`config.xml`):
http://e-docs.bea.com/wls/docs81/config_xml/index.html
- WebLogic Server 8.1 `weblogic-cmp-jar.xml` Deployment Descriptor Reference:
<http://e-docs.bea.com/wls/docs81/ejb/DDreference-cmp-jar.html>
- *HP NonStop Server Guide for BEA WebLogic Server 8.1*:
<http://h30163.www3.hp.com/NTL/view/?id=090015ea80183e49&p=e40-e7f/090015ea80183e49/TPCONTNT.pdf&toc=y>