



BEA Products

**Supported
Configurations: HP
Integrity NonStop
Operating System**

Contents

1. BEA WebLogic Server 9.2 on HP NonStop Operating System H06.10 SUT

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BEA WebLogic Server 9.2 on HP NonStop Operating System H06.10 SUT

This section provides the following information:

- [Related Information](#)
- [Configuration Requirements](#)
- [Supported Database Configuration](#)
- [Known Issues](#)
- [Download and Installation Instructions](#)

Related Information

For more information about configuring WebLogic Server 9.2 on HP Integrity NonStop Operating System, see the following:

- [BEA WebLogic Server 9.2 Domain Configuration Schema Reference at `http://e-docs.bea.com/wls/docs92/schemaref/config/`](http://e-docs.bea.com/wls/docs92/schemaref/config/)
- [WebLogic Server 9.2 Domain Configuration files \(config.xml\) at `http://edocs.bea.com/wls/docs92/domain_config/config_files.html`](http://edocs.bea.com/wls/docs92/domain_config/config_files.html)
- [WebLogic Server 9.2 `weblogic-cmp-jar.xml` Deployment Descriptor Reference `http://e-docs.bea.com/wls/docs92/ejb/DDreference-ejb-jar.html`](http://e-docs.bea.com/wls/docs92/ejb/DDreference-ejb-jar.html)
- [HP NonStop Server Guide for BEA WebLogic Server 9.2 `http://docs.hp.com/en/NSHSeries.html`.](http://docs.hp.com/en/NSHSeries.html)

Configuration Requirements

Table 1-1 Requirements for HP Integrity NonStop™ Server

Operating System Version and Patches	HP Integrity NonStop™ Server H06.10 SUT or higher	<p>NonStop SQL/MX Release 2.2, T1050H22 or higher</p> <p>vproc Details : T1050H22_10APR2006_ACO_221_0410</p> <hr/> <p>NonStop Server for JDBC/MX, T1275H50</p> <p>vproc Details : T1275H50_23DEC2005_JDBCMX_1220</p> <hr/> <p>NonStop TCP/IPv6, T1265H01, running in INET mode</p> <p>vproc Details : T1265H01_10APR2006_H01_SAM_AAX_0</p> <hr/> <p>NonStop XARM License File, T2921H13</p> <p>vproc Details: T2921H13 1DEC2007 AAA</p>
Chip Architecture and Minimum Processor Speed	Intel Itanium (1.6 GHz)	Hardware Family: Any HP Integrity NonStop™ NS-series servers
SDK	<p>HP NonStop™ Server for Java™ 5.0, T2766H50, based on the Java 2 Platform, Standard Edition (J2SE), SDK 1.5.0 Java version (build 1.5.0_02-b09 Java 2 Runtime Environment, Standard Edition (build 1.5.0_02 05.04.07-18:23 IA64, mixed mode) Java HotSpot Server VM.</p> <p>vproc Details :</p> <p>Binder timestamp: 04MAY2007 18:39:06</p> <p>Version procedure: T2766H50_06JUN2007_jdk150_AAS_04May2007</p> <p>Version procedure: T8432H01_05MAY2006_CCPLMAIN</p> <p>TNS/E Native Mode: runnable file</p>	

Table 1-1 Requirements for HP Integrity NonStop™ Server

RAM	4 GB per processor required	QIO must be configured to use KSEG2.
Performance Pack	Included	libmuxer.a
BEA Product Support	<ul style="list-style-type: none"> • WebLogic Server 9.2 • WebLogic Workshop 9.2 (runtime) 	
Design and Development Tools	<p>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.</p>	

Supported Database Configuration

On Integrity NonStop Operating System configurations, WebLogic Server supports only one database: SQL/MX. 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 9.2 Software on HP Integrity NonStop Servers* at <http://www.hp.com/go/nonstop/wls92>.

Supported Drivers

The following sections provide information on driver support:

- 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.

Known Issues

The following sections provide information on known issues for this configuration:

Issue	Workaround
Database Cascade Deletes Are Not Supported. NonStop SQL/MX 2.2 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.	The deployment descriptor of an EJB should not contain db-cascade-delete in its weblogic-cmp-jar.xml. This enables WebLogic Server to delete rows using explicit SQL delete statements.
Automatic Table Creation for EJB Container Managed Persistence (CMP) May Fail. Automatic table creation for a CMP EJB using the deployment descriptor tag create-default-dbms-table may fail in two situations:	<ol style="list-style-type: none">1. Make sure the CMP deployment descriptor does not use SQL/MX keywords as table column names.2. 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.
<ol style="list-style-type: none">1. If the table contains column names that are keywords in NonStop SQL/MX.2. If the table includes a primary key column. NonStop SQL/MX 2.2 expects the primary key column to be qualified as NOT NULL NOT DROPPABLE. However, automatic table creation does not generate the NOT NULL NOT DROPPABLE clause.	

Issue	Workaround
<p data-bbox="162 340 686 374">Sequence Entities Are Not Supported</p> <p data-bbox="162 392 686 526">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 data-bbox="686 340 1249 583">The automatic key can be generated using NamedSequenceTable as the value of the generator-type specified in the automatic-key-generation section of the weblogic-cmp-jar.xml file. The schema for the table name specified in the generator-name should have one column sequence of type Integer.</p> <p data-bbox="686 600 1249 635">The following code shows a sample entry:</p> <pre data-bbox="727 644 1249 861"> <automatic-key-generation> <generator-type>NamedSequenceTable</generator-type> <generator-name>sequencetable</generator-name> <key-cache-size>10</key-cache-size> </automatic-key-generation> </pre> <p data-bbox="686 878 1249 913">Table schema:</p> <pre data-bbox="727 921 1249 965"> CREATE TABLE SEQUENCETABLE (SEQUENCE INTEGER); </pre>
<p data-bbox="162 982 686 1052">Deployment Error During Use of WebLogic 5.1-Style Deployment Descriptor</p> <p data-bbox="162 1069 686 1203">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 data-bbox="202 1216 686 1407"> <!DOCTYPE weblogic-rdbms-bean PUBLIC "-//BEA Systems, Inc.//DTD WebLogic 5.1.0 EJB RDBMS Persistence//EN" http://www.bea.com/servers/wls510/ dtd/weblogic-rdbms-persistence.dtd '> </pre>	<p data-bbox="686 982 1249 1364">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 pool-name tag to data-source-name and conversion of the attribute-map to a field-map. WebLogic Server provides a DDConverter utility to convert the beans from earlier versions of WebLogic Server. For further documentation about how to use the DDConverter utility, see the documentation at the following URL:</p> <p data-bbox="686 1381 1249 1433">http://edocs.bea.com/wls/docs92/ejb/implementing.html#DDConverter</p>

Issue	Workaround
<p>Certain CMP-Generated Code That Assumes Implicit Type Cast Conversion Fails</p> <p>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 2.2.</p>	<p>None</p>
<p>EJB-QL That Uses the SQL SUBSTRING Function Fails</p> <p>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.</p>	<p>None</p>
<p>Container Managed Relationship Caching Cannot Be Specified</p> <p>Container Managed Relationship (CMR) caching cannot be specified when using NonStop SQL/MX 2.2.</p>	<p>None</p>
<p>Only the "default database type" Is Supported for CMP</p> <p>For CMP, no database types other than the default type are supported.</p>	<p>None</p>

Issue	Workaround
SQL/MX 2.2 Triggers Have Restrictions	None
<p>The use of SQL/MX 2.2 triggers is affected by several restrictions:</p> <ul style="list-style-type: none"> <li data-bbox="168 473 606 526">• The trigger action must comprise just one statement. <li data-bbox="168 539 673 591">• The trigger action statement cannot be a call to a Java Stored Procedure. <li data-bbox="168 605 669 687">• "BEFORE"-type triggers can be used only to inspect or modify data, or to return SQLState or vendor error code information. 	
<p>Large Objects (BLOBs and CLOBs) Require Use of Special Tables</p> <p>SQL/MX 2.2 MX Tables supports large objects (BLOBs and CLOBs) only with the use of special additional tables.</p>	<p>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 JdbcMxLobAdmin 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.</p>
<p>Restrictions on Use of Native SQL/MX Utilities</p> <p>SQL/MX 2.2 utilities, including mxci, cannot be used to insert, delete, or update data in tables that contain LOB columns.</p>	<p>Use the JDBC/MX V32 driver to perform these operations.</p>
SQL/MX 2.2 does not support ROWNUM	None
SetAutoCommit Property cannot be changed when a transaction is active in JDBC/MX.	None
SQL/MX 2.2 does not support save points on a table.	None

Issue	Workaround
Commit method does not throw the 'HeuristicRollbackException' in the following scenario mentioned below:	Instead, In NSK it throws the 'HeristicMixedException'.
<ul style="list-style-type: none"> <code>xa1.setException(xid, XA_COMMIT_OP, XAException.XA_HEURRB, "HeurRollback");</code> <code>xa2.setException(xid, XA_COMMIT_OP, XAException.XA_HEURRB, "HeurRollback");</code> <code>xa1.enlist();</code> <code>xa2.enlist();</code> <code>tm.commit();</code> 	
Nodemanager ssh and rsh features are not available on NonStop	None
Nodemanager command nmKill() is not supported on NonStop.	Identify the process using the ps command and issue an OS Kill command to kill the process.

Known Issues for Other BEA Products

For information about known issues with BEA products supported on this configuration, including available workarounds, see the appropriate *Release Notes* document.

Issues related to...	Are described in...
WebLogic Server	<i>BEA WebLogic Server Known and Resolved Issues:</i> http://e-docs.bea.com/wls/docs92/issues/known_resolved.html
Installation and Configuration	<i>BEA Products Installation and Configuration Release Notes:</i> http://e-docs.bea.com/common/docs92/relnotes/relnotes.html

Download and Installation Instructions

To successfully install BEA WebLogic Server 9.2 on Integrity NonStop Server, you must complete the following steps:

1. [Download BEA WebLogic Server 9.2 and the Supplemental JAR File](#)

2. [Download the HP NonStop Server Toolkit](#)
3. [Check Environment for Required Files](#)
4. [Install BEA WebLogic Server 9.2](#)

Note: Before you begin, review all instructions.

Download BEA WebLogic Server 9.2 and the Supplemental JAR File

1. Go to the BEA Downloads site at <http://commerce.bea.com/showallversions.jsp?family=WLS>
2. Download the WebLogic Server 9.2 package installer for HP Integrity NonStop™ Server (Itanium): `server920_generic.jar`.
3. Download the BEA supplemental file for HP NonStop™ Server: `weblogic92_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 9.2 and the NonStop Server for Java 5.0.
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 the BEA WebLogic Server 9.2 `server920_generic.jar` and the supplemental JAR file (`weblogic92_hpns_h13_supp.jar`) to an empty directory on the Integrity NonStop Server. If such a directory does not already exist, create one now using:

```
$ mkdir -p /usr/tandem/wlhpns/download92
```

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

Download the HP NonStop Server Toolkit

1. Download the NonStop Server Toolkit (`weblogic92_hpns_h13.zip`) from the "Resources" section of the following HP download site: <http://www.hp.com/go/nonstop/WLS92>
2. Use ftp to copy the downloaded file to the directory on the Integrity NonStop Server that contains the supplemental JAR file (`weblogic92_hpns_h13_supp.jar`).

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 9.2 package installer (`server920_generic.jar`)
- Supplemental JAR file for WebLogic Server 9.2 (`weblogic92_hpns_h13_supp.jar`)
- HP NonStop Server Toolkit (`weblogic92_hpns_h13.zip`)

Install BEA WebLogic Server 9.2

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 5.0.
 - You have write permission for all directories and subdirectories for NonStop Server for Java 5.0, and the root directory in which you plan to install 9.2 and the NonStop Server Toolkit.
2. Set and export the environment variables required for use with NonStop Server for Java 5.0 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/weblogic92
$ export JDBCXM_DIR=/usr/tandem/jdbcMx
$ export JREHOME=$JAVA_HOME/jre
$ export _RLD_LIB_PATH=$JDBCXM_DIR/T1275H50/lib:$JREHOME/lib/oss/se
rver:$JREHOME/lib/oss:$WL_HOME/server/lib/hpns:$WL_HOME/server/lib:/
usr/lib
$ 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 9.2 on Integrity NonStop Server:

- a. Go to the directory in which you downloaded the NonStop Server Toolkit file (weblogic92_hpns_h13.zip):

```
$ cd /usr/tandem/wlhpns/download92
```

- b. Extract the contents of the ZIP file:

```
$ jar -xvf weblogic92_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 9.2 by completing the console-mode installation procedure for .jar files available in Installing BEA WebLogic Platform at <http://e-docs.bea.com/common/docs92/install/console.html>. You can also use the following to install WebLogic 9.2 from the command line:

```
java -Dspace.detection=false -jar server920_generic.jar
```

Note: Installation of WebLogic Server on an Integrity NonStop Server system takes approximately 45 minutes. The supplemental JAR file (weblogic92_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. Change directories to \$WL_HOME/server/lib. For example, if your WL_HOME is /usr/bea/weblogic92, then change directories to /usr/bea/weblogic92/server/lib and execute the following command:

```
pax -rvf T0791LIC
```

7. Review the documentation, from the NonStop Technical library, for running WebLogic Server 9.2 on HP Integrity NonStop Server. See HP NonStop Server Guide for BEA WebLogic Server 9.2 at <http://docs.hp.com/en/NSHSeries.html>