

# HP Operations Smart Plug-in for JBoss Application Server

for HP Operations Manager for Solaris

Software Version: 7.02

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## Reference Guide

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This guide contains JBoss SPI information for HP Operations Manager for UNIX version 9.00, HP Operations Manager for Linux version 9.01 and HP Operations Manager for Solaris version 9.02.

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# 1 JBoss AS SPI Policies

This guide contains JBoss SPI information for HP Operations Manager for UNIX version 9.00, HP Operations Manager for Linux version 9.01 and HP Operations Manager for Solaris version 9.02.

This chapter provides detailed and summary listings of the HP Operations Smart Plug-in for JBoss Application Server (JBoss AS SPI) metrics and the logfile policies, which monitors the information logged in JBoss Application Server log file. The metric descriptions help you to interpret the incoming JBoss AS SPI data. You can use this information to customize metric policies.

The chapter contains the following sections:

- [JBoss AS SPI Metrics](#)
  - [Metric Summary](#)
  - [Metric Specification Description](#)
  - [Metric Details](#)
- [JBoss AS SPI LogFile Policies](#)

# JBoss AS SPI Metrics

## Metric Summary

JBoss AS SPI metric policies have pre-defined settings, which simplify setup tasks for the JBoss AS SPI. However, you can customize these settings depending on your environment. The sections, [Metric Specification Description](#) and [Metric Details](#) provide basic information required to customize the metric policies.

## Metric Specification Description

JBoss AS SPI metrics can be identified as JBSSPI\_XXXX, where XXXX represents the number assigned to the metric. The letter “S” preceding the metric name designates the metric as a JBoss AS SPI metric. JBoss AS SPI metric numbers (XXXX) range from 0000 to 0999.

**Table 1 Metric Attribute Definitions**

<b>Metric ID</b>	Begins always with ‘JBSSPI,’ followed by the metric ID. Within the monitor policy, you can change the settings. For example, you can change the settings for threshold value or severity.
<b>Metric Name</b>	The name assigned to the metric. It follows the format SXXX_Metric Name. XXX is the last three numbers of the metric id.
<b>Metric Type</b>	Shows how the metric is used, such as: <ul style="list-style-type: none"><li>• Alarming (using policy settings)</li><li>• Graphing (within a graph of the HP Performance Manager that you have purchased separately)</li></ul>
<b>Policy Description</b>	What the metric represents.
<b>Severity</b>	The severity of the exceeded threshold condition. (Critical, Major, Minor, Warning, Normal). If multiple conditions—for example, graduated thresholds—are defined within the metric, severity levels are identified according to the specific condition.
<b>Message Group</b>	The HPOM message group to which the metric belongs.
<b>Message</b>	The message displayed for each condition.
<b>Instructions</b>	Problem-solving information (Probable causes, Potential impact, and Suggested actions).

## Metric Details

This section describes the JBoss AS SPI metrics in details.



## JBSSPI\_0001

<b>Metric ID</b>	JBSSPI_0001
<b>Metric Name</b>	S001_ServerStatus
<b>Metric Type</b>	Alarming and Reporting
<b>Policy Description</b>	Status of a server, monitors whether running or not
<b>Severity</b>	JBSSPI-8001.1: Critical, threshold, 0.5 JBSSPI-8001.2: Normal
<b>Message Group</b>	JBoss
<b>Message</b>	JBSSPI-8001.1: JBoss Server is not running. JBSSPI-8001.2: JBoss Server is now running.
<b>Instruction Text</b>	<p><b>Probable cause:</b> For each server, this metric will report if the status 'InShutdown' is true. If the server is either shutting down or not in a running state, the following events may have occurred:</p> <ul style="list-style-type: none"> <li>• The Administrator has shut the server down.</li> <li>• The server may have gone down for other reasons.</li> </ul> <p><b>Potential Impact:</b> If the server is Shutdown or in the process of shutting down, the server will no longer be available.</p> <p><b>Suggested action:</b> The Administrator has to bring the server up.</p>

## JBSSPI\_0002

<b>Metric ID</b>	JBSSPI_0002
<b>Metric Name</b>	S002_TransRollbackRt
<b>Metric Type</b>	Alarming and Graphing
<b>Policy Description</b>	Number of transactions rolled back per second
<b>Severity</b>	JBSSPI-8002.11: Critical, threshold, 8.0 JBSSPI-8002.21: Normal JBSSPI-8002.12: Major, threshold, 5.0 JBSSPI-8002.22: Normal JBSSPI-8002.13: Warning, threshold, 2.0 JBSSPI-8002.23: Normal
<b>Message Group</b>	JBoss
<b>Message</b>	JBSSPI-8002.11: JBoss transaction roll back rate critical threshold overshoot condition has occurred. JBSSPI-8002.21: JBoss transaction roll back rate critical threshold overshoot condition is gone. JBSSPI-8002.12: JBoss transaction roll back rate major threshold overshoot condition has occurred. JBSSPI-8002.22: JBoss transaction roll back rate major threshold overshoot condition is gone. JBSSPI-8002.13: JBoss transaction roll back rate warning threshold overshoot condition has occurred. JBSSPI-8002.23: JBoss transaction roll back rate warning threshold overshoot condition is gone.
<b>Instruction Text</b>	<p><b>Probable cause:</b></p> <ol style="list-style-type: none"> <li>1 One or few transactions are lacking ACID properties.</li> <li>2 The transaction manager and recoverable resources are not able to communicate.</li> </ol> <p><b>Potential Impact:</b></p> <p>Rolled back transaction may cause all dependent transactions to fail.</p> <p><b>Suggested action:</b></p> <ol style="list-style-type: none"> <li>1 Analyze the heuristic exceptions thrown by the JTA component.</li> <li>2 Look for ApplicationDeadlockException thrown.</li> </ol>

JBSSPI\_0003

<b>Metric ID</b>	JBSSPI_0003
<b>Metric Name</b>	S003_SysThdPolPctUtl
<b>Metric Type</b>	Alarming and Graphing
<b>Policy Description</b>	Percentage utilization of current JBoss System Thread Pool
<b>Severity</b>	JBSSPI-8003.11: Critical, threshold, 90.0 JBSSPI-8003.21: Normal JBSSPI-8003.12: Major, threshold, 85.0 JBSSPI-8003.22: Normal JBSSPI-8003.13: Warning, threshold, 75.0 JBSSPI-8003.23: Normal
<b>Message Group</b>	JBoss
<b>Message</b>	JBSSPI-8003.11: JBoss system thread pool percentage utilization critical threshold overshoot condition has occurred. JBSSPI-8003.21: JBoss system thread pool percentage utilization critical threshold overshoot condition is gone. JBSSPI-8003.12: JBoss system thread pool percentage utilization major threshold overshoot condition has occurred. JBSSPI-8003.22: JBoss system thread pool percentage utilization major threshold overshoot condition is gone. JBSSPI-8003.13: JBoss system thread pool percentage utilization warning threshold overshoot condition has occurred. JBSSPI-8003.23: JBoss system thread pool percentage utilization warning threshold overshoot condition is gone.
<b>Instruction Text</b>	<p><b>Probable cause:</b> Small Thread pool size is chosen.</p> <p><b>Potential Impact:</b></p> <ol style="list-style-type: none"> <li>1 Thread pool saturation condition may occur.</li> <li>2 CPU utilization may consistently keep shooting up.</li> </ol> <p><b>Suggested action:</b></p> <ol style="list-style-type: none"> <li>1 To fix a saturated thread pool, keep changing the thread pool size in steps until CPU utilization reaches between 75 and 85 percent.</li> <li>2 Tune the application using a code profiling tool.</li> </ol>

<b>Metric ID</b>	JBSSPI_0004
<b>Metric Name</b>	S004_JCATHdPolPctUtl
<b>Metric Type</b>	Alarming and Graphing
<b>Policy Description</b>	Percentage utilization of current JCA WorkManager Thread Pool
<b>Severity</b>	JBSSPI-8004.11: Critical, threshold, 90.0 JBSSPI-8004.21: Normal JBSSPI-8004.12: Major, threshold, 85.0 JBSSPI-8004.22: Normal JBSSPI-8004.13: Warning, threshold, 75.0 JBSSPI-8004.23: Normal
<b>Message Group</b>	JBoss
<b>Message</b>	JBSSPI-8004.11: JBoss WorkManager thread pool percentage utilization critical threshold overshoot condition has occurred. JBSSPI-8004.21: JBoss WorkManager thread pool percentage utilization critical threshold overshoot condition is gone. JBSSPI-8004.12: JBoss WorkManager thread pool percentage utilization major threshold overshoot condition has occurred. JBSSPI-8004.22: JBoss WorkManager thread pool percentage utilization major threshold overshoot condition is gone. JBSSPI-8004.13: JBoss WorkManager thread pool percentage utilization warning threshold overshoot condition has occurred. JBSSPI-8004.23: JBoss WorkManager thread pool percentage utilization warning threshold overshoot condition is gone.
<b>Instruction Text</b>	<p><b>Probable cause:</b> Small thread pool size is chosen for WorkManager Thread Pool.</p> <p><b>Potential Impact:</b></p> <ol style="list-style-type: none"> <li>1 Thread pool saturation condition may occur.</li> <li>2 CPU utilization may consistently keep shooting up.</li> </ol> <p><b>Suggested action:</b></p> <ol style="list-style-type: none"> <li>1 To fix a saturated thread pool, keep changing the thread pool size in steps until CPU utilization reaches between 75 and 85 percent.</li> <li>2 Tune the application using a code profiling tool.</li> </ol>

JBSSPI\_0005

<b>Metric ID</b>	JBSSPI_0005
<b>Metric Name</b>	S005_JVMHeapMmPctUtl
<b>Metric Type</b>	Alarming and Graphing
<b>Policy Description</b>	Percentage utilization of JVM Heap
<b>Severity</b>	JBSSPI-8005.11: Critical, threshold, 90.0 JBSSPI-8005.21: Normal JBSSPI-8005.12: Major, threshold, 80.0 JBSSPI-8005.22: Normal JBSSPI-8005.13: Warning, threshold, 70.0 JBSSPI-8005.23: Normal
<b>Message Group</b>	JBoss
<b>Message</b>	JBSSPI-8005.11: JVM Heap percentage utilization critical threshold overshoot condition has occurred. JBSSPI-8005.21: JVM Heap percentage utilization critical threshold overshoot condition is gone. JBSSPI-8005.12: JVM Heap percentage utilization major threshold overshoot condition has occurred. JBSSPI-8005.22: JVM Heap percentage utilization major threshold overshoot condition is gone. JBSSPI-8005.13: JVM Heap percentage utilization warning threshold overshoot condition has occurred. JBSSPI-8005.23: JVM Heap percentage utilization warning threshold overshoot condition is gone.
<b>Instruction Text</b>	<p><b>Probable cause:</b></p> <ol style="list-style-type: none"> <li>1 JVM garbage collection is not running at regular intervals.</li> <li>2 Connection pool size is set to small value leading to creation of heavy connection objects.</li> </ol> <p><b>Potential Impact:</b> Applications response time may increase drastically.</p> <p><b>Suggested action:</b></p> <ol style="list-style-type: none"> <li>1 Verify thread pool size set.</li> <li>2 Verify connection pool size set.</li> <li>3 Verify JVM heap size set.</li> </ol>

JBSSPI\_0006

<b>Metric ID</b>	JBSSPI_0006
<b>Metric Name</b>	S006_AllSrvAvgExTime
<b>Metric Type</b>	Alarming and Graphing
<b>Policy Description</b>	Average response time of a servlet (in secs)
<b>Severity</b>	JBSSPI-8006.11: Critical, threshold, 4.0 JBSSPI-8006.21: Normal JBSSPI-8006.12: Major, threshold, 3.0 JBSSPI-8006.22: Normal JBSSPI-8006.13: Warning, threshold, 2.0 JBSSPI-8006.23: Normal
<b>Message Group</b>	JBoss
<b>Message</b>	JBSSPI-8006.11: Average servlet execution time critical threshold overshoot condition has occurred. JBSSPI-8006.21: Average servlet execution time critical threshold overshoot condition is gone. JBSSPI-8006.12: Average servlet execution time major threshold overshoot condition has occurred. JBSSPI-8006.22: Average servlet execution time major threshold overshoot condition is gone. JBSSPI-8006.13: Average servlet execution time warning threshold overshoot condition has occurred. JBSSPI-8006.23: Average servlet execution time warning threshold overshoot condition is gone.
<b>Instruction Text</b>	<b>Probable cause:</b> <ol style="list-style-type: none"> <li>1 JVM garbage collection is running frequently slowing the applications.</li> <li>2 Thread pool size is set to small value.</li> <li>3 Connection pool size is set to small value.</li> </ol> <b>Potential Impact:</b> Applications response time may increase drastically. <b>Suggested action:</b> <ol style="list-style-type: none"> <li>1 Verify thread pool size set.</li> <li>2 Verify connection pool size set.</li> <li>3 Verify JVM heap size set.</li> </ol>

JBSSPI\_0007

<b>Metric ID</b>	JBSSPI_0007
<b>Metric Name</b>	S007_JCAConPolPctUtl
<b>Metric Type</b>	Alarming and Graphing
<b>Policy Description</b>	Percentage utilization of JCA connection pool
<b>Severity</b>	JBSSPI-8007.11: Critical, threshold, 90.0 JBSSPI-8007.21: Normal JBSSPI-8007.12: Major, threshold, 85.0 JBSSPI-8007.22: Normal JBSSPI-8007.13: Warning, threshold, 75.0 JBSSPI-8007.23: Normal
<b>Message Group</b>	JBoss
<b>Message</b>	JBSSPI-8007.11: JBoss JCA connection pool percentage utilization critical threshold overshoot condition has occurred. JBSSPI-8007.21: JBoss JCA connection pool percentage utilization critical threshold overshoot condition is gone. JBSSPI-8007.12: JBoss JCA connection pool percentage utilization major threshold overshoot condition has occurred. JBSSPI-8007.22: JBoss JCA connection pool percentage utilization major threshold overshoot condition is gone. JBSSPI-8007.13: JBoss JCA connection pool percentage utilization warning threshold overshoot condition has occurred. JBSSPI-8007.23: JBoss JCA connection pool percentage utilization warning threshold overshoot condition is gone.
<b>Instruction Text</b>	<b>Probable cause:</b> Small pool size is chosen for JCA connection pool. <b>Potential Impact:</b> 1 Connection pool saturation condition may occur. 2 Applications may block on connection objects. <b>Suggested action:</b> To fix a saturated connection pool, keep changing the pool size in steps until number of blocked applications is significantly reduced.

JBSSPI\_0008

<b>Metric ID</b>	JBSSPI_0008
<b>Metric Name</b>	S008_JCAConPoolWtCnt
<b>Metric Type</b>	Alarming and Graphing
<b>Policy Description</b>	Number of threads waiting for a connection from JCA pool
<b>Severity</b>	JBSSPI-8008.11: Critical, threshold, 15.0 JBSSPI-8008.21: Normal JBSSPI-8008.12: Major, threshold, 10.0 JBSSPI-8008.22: Normal JBSSPI-8008.13: Warning, threshold, 5.0 JBSSPI-8008.23: Normal
<b>Message Group</b>	JBoss
<b>Message</b>	JBSSPI-8008.11: Thread count awaiting a connection in JCA pool critical threshold overshoot condition has occurred. JBSSPI-8008.21: Thread count awaiting a connection in JCA pool critical threshold overshoot condition is gone. JBSSPI-8008.12: Thread count awaiting a connection in JCA pool major threshold overshoot condition has occurred. JBSSPI-8008.22: Thread count awaiting a connection in JCA pool major threshold overshoot condition is gone. JBSSPI-8008.13: Thread count awaiting a connection in JCA pool warning threshold overshoot condition has occurred. JBSSPI-8008.23: Thread count awaiting a connection in JCA pool warning threshold overshoot condition is gone.
<b>Instruction Text</b>	<b>Probable cause:</b> Small JCA connection pool cache size is chosen. <b>Potential Impact:</b> 1 Applications may respond slow. 2 Applications may block on connection objects. 3 Application deadlock situation may arise. <b>Suggested action:</b> Increase JCA connection pool cache size.



## JBSSPI\_0009

<b>Metric ID</b>	JBSSPI_0009
<b>Metric Name</b>	S009_JCAConCrtRate
<b>Metric Type</b>	Alarming and Graphing
<b>Policy Description</b>	Number of new connections created in JCA pool per second
<b>Severity</b>	JBSSPI-8009.11: Critical, threshold, 15.0 JBSSPI-8009.21: Normal JBSSPI-8009.12: Major, threshold, 10.0 JBSSPI-8009.22: Normal JBSSPI-8009.13: Warning, threshold, 5.0 JBSSPI-8009.23: Normal
<b>Message Group</b>	JBoss
<b>Message</b>	JBSSPI-8009.11: Connection creation rate (per sec) in JCA pool critical threshold overshoot condition has occurred. JBSSPI-8009.21: Connection creation rate (per sec) in JCA pool critical threshold overshoot condition is gone. JBSSPI-8009.12: Connection creation rate (per sec) in JCA pool major threshold overshoot condition has occurred. JBSSPI-8009.22: Connection creation rate (per sec) in JCA pool major threshold overshoot condition is gone. JBSSPI-8009.13: Connection creation rate (per sec) in JCA pool warning threshold overshoot condition has occurred. JBSSPI-8009.23: Connection creation rate (per sec) in JCA pool warning threshold overshoot condition is gone.
<b>Instruction Text</b>	<b>Probable cause:</b> 1 Pooled connections are not getting reused. 2 Count of free connections is low. <b>Potential Impact:</b> Applications may respond slowly. <b>Suggested action:</b> 1 Reconfigure JCA connection pool cache size. 2 Recycle Connection Pool.

JBSSPI\_0010

<b>Metric ID</b>	JBSSPI_0010
<b>Metric Name</b>	S010_JCAConClsRate
<b>Metric Type</b>	Alarming and Graphing
<b>Policy Description</b>	Number of connections closed in JCA pool per second
<b>Severity</b>	JBSSPI-8010.11: Critical, threshold, 15.0 JBSSPI-8010.21: Normal JBSSPI-8010.12: Major, threshold, 10.0 JBSSPI-8010.22: Normal JBSSPI-8010.13: Warning, threshold, 5.0 JBSSPI-8010.23: Normal
<b>Message Group</b>	JBoss
<b>Message</b>	JBSSPI-8010.11: Connection closing rate (per sec) in JCA pool critical threshold overshoot condition has occurred. JBSSPI-8010.21: Connection closing rate (per sec) in JCA pool critical threshold overshoot condition is gone. JBSSPI-8010.12: Connection closing rate (per sec) in JCA pool major threshold overshoot condition has occurred. JBSSPI-8010.22: Connection closing rate (per sec) in JCA pool major threshold overshoot condition is gone. JBSSPI-8010.13: Connection closing rate (per sec) in JCA pool warning threshold overshoot condition has occurred. JBSSPI-8010.23: Connection closing rate (per sec) in JCA pool warning threshold overshoot condition is gone.
<b>Instruction Text</b>	<p><b>Probable cause:</b></p> <ol style="list-style-type: none"> <li>1 Applications are closing connections instead of returning those back to pool.</li> <li>2 Connection pool recycling is taking place often.</li> </ol> <p><b>Potential Impact:</b> Applications may respond slowly.</p> <p><b>Suggested action:</b></p> <ol style="list-style-type: none"> <li>1 Verify application logic to return connection object back to pool.</li> <li>2 Reconfigure connection pool recycling interval.</li> </ol>

## JBSSPI\_0011

<b>Metric ID</b>	JBSSPI_0011
<b>Metric Name</b>	S011_JCAConnLeak
<b>Metric Type</b>	Alarming and Graphing
<b>Policy Description</b>	Number of leaked connections in JCA pool
<b>Severity</b>	JBSSPI-8011.11: Critical, threshold, 2.0 JBSSPI-8011.21: Normal JBSSPI-8011.12: Major, threshold, 1.0 JBSSPI-8011.22: Normal
<b>Message Group</b>	JBoss
<b>Message</b>	JBSSPI-8011.11: JCA connection leak critical threshold overshoot condition has occurred. JBSSPI-8011.21: JCA connection leak critical threshold overshoot condition is gone. JBSSPI-8011.12: JCA connection leak major threshold overshoot condition has occurred. JBSSPI-8011.22: JCA connection leak major threshold overshoot condition is gone.
<b>Instruction Text</b>	<p><b>Probable cause:</b> Application is neither closing connection nor returning back to pool after use.</p> <p><b>Potential Impact:</b></p> <ol style="list-style-type: none"> <li>1 Pool utilization may come down gradually with further leaks.</li> <li>2 Valid connection objects may fail to get created.</li> <li>3 Applications may respond slowly.</li> </ol> <p><b>Suggested action:</b> Verify application logic to return connection object back to pool.</p>

## JBSSPI\_0012

<b>Metric ID</b>	JBSSPI_0012
<b>Metric Name</b>	S012_JCAConAvgWtTime
<b>Metric Type</b>	Alarming and Graphing
<b>Policy Description</b>	Average time spent waiting for a connection in JCA pool
<b>Severity</b>	JBSSPI-8012.11: Critical, threshold, 4.0 JBSSPI-8012.21: Normal JBSSPI-8012.12: Major, threshold, 3.0 JBSSPI-8012.22: Normal JBSSPI-8012.13: Warning, threshold, 2.0 JBSSPI-8012.23: Normal
<b>Message Group</b>	JBoss
<b>Message</b>	JBSSPI-8012.11: Avg wait time for JCA connection critical threshold overshoot condition has occurred. JBSSPI-8012.21: Avg wait time for JCA connection critical threshold overshoot condition is gone. JBSSPI-8012.12: Avg wait time for JCA connection major threshold overshoot condition has occurred. JBSSPI-8012.22: Avg wait time for JCA connection major threshold overshoot condition is gone. JBSSPI-8012.13: Avg wait time for JCA connection warning threshold overshoot condition has occurred. JBSSPI-8012.23: Avg wait time for JCA connection warning threshold overshoot condition is gone.
<b>Instruction Text</b>	<b>Probable cause:</b> Small JCA connection pool cache size is chosen. <b>Potential Impact:</b> 1 Applications may respond slowly. 2 Applications may block on connection objects. 3 Application deadlock situation may arise. <b>Suggested action:</b> Increase JCA connection pool cache size.

## JBSSPI\_0015

<b>Metric ID</b>	JBSSPI_0015
<b>Metric Name</b>	S015_EntityBnCrRate
<b>Metric Type</b>	Alarming and Graphing
<b>Policy Description</b>	Number of Entity Beans created per second
<b>Severity</b>	JBSSPI-8015.11: Critical, threshold, 15.0 JBSSPI-8015.21: Normal JBSSPI-8015.12: Major, threshold, 10.0 JBSSPI-8015.22: Normal JBSSPI-8015.13: Warning, threshold, 5.0 JBSSPI-8015.23: Normal
<b>Message Group</b>	JBoss
<b>Message</b>	JBSSPI-8015.11: Entity Bean creation rate critical threshold overshoot condition has occurred. JBSSPI-8015.21: Entity Bean creation rate critical threshold overshoot condition is gone. JBSSPI-8015.12: Entity Bean creation rate major threshold overshoot condition has occurred. JBSSPI-8015.22: Entity Bean creation rate major threshold overshoot condition is gone. JBSSPI-8015.13: Entity Bean creation rate warning threshold overshoot condition has occurred. JBSSPI-8015.23: Entity Bean creation rate warning threshold overshoot condition is gone.
<b>Instruction Text</b>	<b>Probable cause:</b> 1 Not sufficient Entity Beans in pooled state. 2 Entity Bean pool size is set to small value. <b>Potential Impact:</b> 1 JVM Heap space may reduce rapidly. 2 Frequent JVM garbage collection calls. <b>Suggested action:</b> Verify Entity Bean pool size set.

## JBSSPI\_0016

<b>Metric ID</b>	JBSSPI_0016
<b>Metric Name</b>	S016_EntityBnRmRate
<b>Metric Type</b>	Alarming and Graphing
<b>Policy Description</b>	Number of Entity Beans removed per second
<b>Severity</b>	<p>JBSSPI-8016.11: Critical, threshold, 15.0            JBSSPI-8016.21: Normal</p> <p>JBSSPI-8016.12: Major, threshold, 10.0            JBSSPI-8016.22: Normal</p> <p>JBSSPI-8016.13: Warning, threshold, 5.0            JBSSPI-8016.23: Normal</p>
<b>Message Group</b>	JBoss
<b>Message</b>	<p>JBSSPI-8016.11: Entity Bean removal rate critical threshold overshoot condition has occurred.</p> <p>JBSSPI-8016.21: Entity Bean removal rate critical threshold overshoot condition is gone.</p> <p>JBSSPI-8016.12: Entity Bean removal rate major threshold overshoot condition has occurred.</p> <p>JBSSPI-8016.22: Entity Bean removal rate major threshold overshoot condition is gone.</p> <p>JBSSPI-8016.13: Entity Bean removal rate warning threshold overshoot condition has occurred.</p> <p>JBSSPI-8016.23: Entity Bean removal rate warning threshold overshoot condition is gone.</p>
<b>Instruction Text</b>	<p><b>Probable cause:</b>            Entity Beans in ready state do not represent valid rowset.</p> <p><b>Potential Impact:</b>            Sudden spike in Entity Bean creation rate may occur.</p> <p><b>Suggested action:</b>            Verify application business logic.</p>

## JBSSPI\_0017

<b>Metric ID</b>	JBSSPI_0017
<b>Metric Name</b>	S017_EntityBnPolCnt
<b>Metric Type</b>	Alarming and Graphing
<b>Policy Description</b>	Number of Entity Beans available in pool
<b>Severity</b>	JBSSPI-8017.11: Critical, threshold, 5.0 JBSSPI-8017.21: Normal JBSSPI-8017.12: Major, threshold, 10.0 JBSSPI-8017.22: Normal JBSSPI-8017.13: Warning, threshold, 15.0 JBSSPI-8017.23: Normal
<b>Message Group</b>	JBoss
<b>Message</b>	JBSSPI-8017.11: Pooled Entity Bean count critical threshold overshoot condition has occurred. JBSSPI-8017.21: Pooled Entity Bean count critical threshold overshoot condition is gone. JBSSPI-8017.12: Pooled Entity Bean count major threshold overshoot condition has occurred. JBSSPI-8017.22: Pooled Entity Bean count major threshold overshoot condition is gone. JBSSPI-8017.13: Pooled Entity Bean count warning threshold overshoot condition has occurred. JBSSPI-8017.23: Pooled Entity Bean count warning threshold overshoot condition is gone.
<b>Instruction Text</b>	<b>Probable cause:</b> 1 Not sufficient Entity Beans in pooled state. 2 Entity Beans getting destroyed frequently. <b>Potential Impact:</b> Application response time may increase. <b>Suggested action:</b> Verify Entity Bean removal rate.

## JBSSPI\_0018

<b>Metric ID</b>	JBSSPI_0018
<b>Metric Name</b>	S018_EntityBnReadySt
<b>Metric Type</b>	Alarming and Graphing
<b>Policy Description</b>	Number of Entity Beans in ready state
<b>Severity</b>	<p>JBSSPI-8018.11: Critical, threshold, 30.0            JBSSPI-8018.21: Normal</p> <p>JBSSPI-8018.12: Major, threshold, 40.0            JBSSPI-8018.22: Normal</p> <p>JBSSPI-8018.13: Warning, threshold, 55.0            JBSSPI-8018.23: Normal</p>
<b>Message Group</b>	JBoss
<b>Message</b>	<p>JBSSPI-8018.11: Ready Entity Bean count critical threshold overshoot condition has occurred.</p> <p>JBSSPI-8018.21: Ready Entity Bean count critical threshold overshoot condition is gone.</p> <p>JBSSPI-8018.12: Ready Entity Bean count major threshold overshoot condition has occurred.</p> <p>JBSSPI-8018.22: Ready Entity Bean count major threshold overshoot condition is gone.</p> <p>JBSSPI-8018.13: Ready Entity Bean count warning threshold overshoot condition has occurred.</p> <p>JBSSPI-8018.23: Ready Entity Bean count warning threshold overshoot condition is gone.</p>
<b>Instruction Text</b>	<p><b>Probable cause:</b>            Entity Beans in ready state do not represent valid rowset.</p> <p><b>Potential Impact:</b>            Sudden spike in Entity Bean pooling rate may occur.</p> <p><b>Suggested action:</b>            Verify application business logic.</p>



## JBSSPI\_0019

<b>Metric ID</b>	JBSSPI_0019
<b>Metric Name</b>	S019_MsgDrvBnCrtrRate
<b>Metric Type</b>	Alarming and Graphing
<b>Policy Description</b>	Number of Message Driven Beans created per second
<b>Severity</b>	JBSSPI-8019.11: Critical, threshold, 15.0 JBSSPI-8019.21: Normal JBSSPI-8019.12: Major, threshold, 10.0 JBSSPI-8019.22: Normal JBSSPI-8019.13: Warning, threshold, 5.0 JBSSPI-8019.23: Normal
<b>Message Group</b>	JBoss
<b>Message</b>	JBSSPI-8019.11: Message Driven Bean creation rate critical threshold overshoot condition has occurred. JBSSPI-8019.21: Message Driven Bean creation rate critical threshold overshoot condition is gone. JBSSPI-8019.12: Message Driven Bean creation rate major threshold overshoot condition has occurred. JBSSPI-8019.22: Message Driven Bean creation rate major threshold overshoot condition is gone. JBSSPI-8019.13: Message Driven Bean creation rate warning threshold overshoot condition has occurred. JBSSPI-8019.23: Message Driven Bean creation rate warning threshold overshoot condition is gone.
<b>Instruction Text</b>	<b>Probable cause:</b> 1 Not sufficient Message Driven Beans in pooled state. 2 Message Driven Bean pool size is set to small value. <b>Potential Impact:</b> 1 JVM Heap space may reduce rapidly. 2 Frequent JVM garbage collection calls. <b>Suggested action:</b> Verify Message Driven Bean pool size set.

JBSSPI\_0020

<b>Metric ID</b>	JBSSPI_0020
<b>Metric Name</b>	S020_MsgDrvBnRmRate
<b>Metric Type</b>	Alarming and Graphing
<b>Policy Description</b>	Number of Message Driven Beans removed per second
<b>Severity</b>	JBSSPI-8020.11: Critical, threshold, 15.0 JBSSPI-8020.21: Normal JBSSPI-8020.12: Major, threshold, 10.0 JBSSPI-8020.22: Normal JBSSPI-8020.13: Warning, threshold, 5.0 JBSSPI-8020.23: Normal
<b>Message Group</b>	JBoss
<b>Message</b>	JBSSPI-8020.11: Message Driven Bean removal rate critical threshold overshoot condition has occurred. JBSSPI-8020.21: Message Driven Bean removal rate critical threshold overshoot condition is gone. JBSSPI-8020.12: Message Driven Bean removal rate major threshold overshoot condition has occurred. JBSSPI-8020.22: Message Driven Bean removal rate major threshold overshoot condition is gone. JBSSPI-8020.13: Message Driven Bean removal rate warning threshold overshoot condition has occurred. JBSSPI-8020.23: Message Driven Bean removal rate warning threshold overshoot condition is gone.
<b>Instruction Text</b>	<b>Probable cause:</b> Message Driven Beans in ready state do not represent valid rowset. <b>Potential Impact:</b> Sudden spike in Message Driven Bean creation rate may occur. <b>Suggested action:</b> Verify application business logic.

JBSSPI\_0021

<b>Metric ID</b>	JBSSPI_0021
<b>Metric Name</b>	S021_MsgDrvBnMsgRcRt
<b>Metric Type</b>	Alarming and Graphing
<b>Policy Description</b>	Number of messages received by a Message Driven Bean per second
<b>Severity</b>	JBSSPI-8021.11: Critical, threshold, 15.0 JBSSPI-8021.21: Normal JBSSPI-8021.12: Major, threshold, 10.0 JBSSPI-8021.22: Normal JBSSPI-8021.13: Warning, threshold, 5.0 JBSSPI-8021.23: Normal
<b>Message Group</b>	JBoss
<b>Message</b>	JBSSPI-8021.11: Message Driven Bean message arrival rate critical threshold overshoot condition has occurred. JBSSPI-8021.21: Message Driven Bean message arrival rate critical threshold overshoot condition is gone. JBSSPI-8021.12: Message Driven Bean message arrival rate major threshold overshoot condition has occurred. JBSSPI-8021.22: Message Driven Bean message arrival rate major threshold overshoot condition is gone. JBSSPI-8021.13: Message Driven Bean message arrival rate warning threshold overshoot condition has occurred. JBSSPI-8021.23: Message Driven Bean message arrival rate warning threshold overshoot condition is gone.
<b>Instruction Text</b>	<b>Probable cause:</b> Lesser instances of Message Driven Beans in ready state. <b>Potential Impact:</b> 1 Application response time may increase. 2 JMS queue may get saturated. 3 Messages may get timed out. <b>Suggested action:</b> 1 Increase JMS queue size. 2 Application should create additional Message Driven Beans to handle load.

## JBSSPI\_0022

<b>Metric ID</b>	JBSSPI_0022
<b>Metric Name</b>	S022_StfulSesBnCrRt
<b>Metric Type</b>	Alarming and Graphing
<b>Policy Description</b>	Number of Stateful Session Beans created per second
<b>Severity</b>	JBSSPI-8022.11: Critical, threshold, 15.0 JBSSPI-8022.21: Normal JBSSPI-8022.12: Major, threshold, 10.0 JBSSPI-8022.22: Normal JBSSPI-8022.13: Warning, threshold, 5.0 JBSSPI-8022.23: Normal
<b>Message Group</b>	JBoss
<b>Message</b>	JBSSPI-8022.11: Stateful Session Bean creation rate critical threshold overshoot condition has occurred. JBSSPI-8022.21: Stateful Session Bean creation rate critical threshold overshoot condition is gone. JBSSPI-8022.12: Stateful Session Bean creation rate major threshold overshoot condition has occurred. JBSSPI-8022.22: Stateful Session Bean creation rate major threshold overshoot condition is gone. JBSSPI-8022.13: Stateful Session Bean creation rate warning threshold overshoot condition has occurred. JBSSPI-8022.23: Stateful Session Bean creation rate warning threshold overshoot condition is gone.
<b>Instruction Text</b>	<b>Probable cause:</b> Sudden increase in client transactions. <b>Potential Impact:</b> 1 JVM Heap space may reduce rapidly. 2 Frequent JVM garbage collection calls. <b>Suggested action:</b> Verify number of client connections created.

## JBSSPI\_0023

<b>Metric ID</b>	JBSSPI_0023
<b>Metric Name</b>	S023_StfulSesBnPasRt
<b>Metric Type</b>	Alarming and Graphing
<b>Policy Description</b>	Number of Stateful Session Beans passivated per second
<b>Severity</b>	JBSSPI-8023.11: Critical, threshold, 15.0 JBSSPI-8023.21: Normal JBSSPI-8023.12: Major, threshold, 10.0 JBSSPI-8023.22: Normal JBSSPI-8023.13: Warning, threshold, 5.0 JBSSPI-8023.23: Normal
<b>Message Group</b>	JBoss
<b>Message</b>	JBSSPI-8023.11: Stateful Session Bean passivation rate critical threshold overshoot condition has occurred. JBSSPI-8023.21: Stateful Session Bean passivation rate critical threshold overshoot condition is gone. JBSSPI-8023.12: Stateful Session Bean passivation rate major threshold overshoot condition has occurred. JBSSPI-8023.22: Stateful Session Bean passivation rate major threshold overshoot condition is gone. JBSSPI-8023.13: Stateful Session Bean passivation rate warning threshold overshoot condition has occurred. JBSSPI-8023.23: Stateful Session Bean passivation rate warning threshold overshoot condition is gone.
<b>Instruction Text</b>	<b>Probable cause:</b> Ongoing client transactions have become dormant. <b>Potential Impact:</b> Application response time may increase. <b>Suggested action:</b> Verify Session beans passivation interval configured.

## JBSSPI\_0024

<b>Metric ID</b>	JBSSPI_0024
<b>Metric Name</b>	S024_StlesSesBnCrRt
<b>Metric Type</b>	Alarming and Graphing
<b>Policy Description</b>	Number of Stateless Session Beans created per second
<b>Severity</b>	JBSSPI-8024.11: Critical, threshold, 15.0 JBSSPI-8024.21: Normal JBSSPI-8024.12: Major, threshold, 10.0 JBSSPI-8024.22: Normal JBSSPI-8024.13: Warning, threshold, 5.0 JBSSPI-8024.23: Normal
<b>Message Group</b>	JBoss
<b>Message</b>	JBSSPI-8024.11: Stateful Session Bean creation rate critical threshold overshoot condition has occurred. JBSSPI-8024.21: Stateful Session Bean creation rate critical threshold overshoot condition is gone. JBSSPI-8024.12: Stateful Session Bean creation rate major threshold overshoot condition has occurred. JBSSPI-8024.22: Stateful Session Bean creation rate major threshold overshoot condition is gone. JBSSPI-8024.13: Stateful Session Bean creation rate warning threshold overshoot condition has occurred. JBSSPI-8024.23: Stateful Session Bean creation rate warning threshold overshoot condition is gone.
<b>Instruction Text</b>	<b>Probable cause:</b> Sudden increase in client transactions. <b>Potential Impact:</b> 1 JVM Heap space may reduce rapidly. 2 Frequent JVM garbage collection calls. <b>Suggested action:</b> Verify number of client connections created.

JBSSPI\_0025

<b>Metric ID</b>	JBSSPI_0025
<b>Metric Name</b>	S025_JMSTotlPndgMsgs
<b>Metric Type</b>	Alarming and Graphing
<b>Policy Description</b>	Number of pending JMS messages in a session
<b>Severity</b>	<p>JBSSPI-8025.11: Critical, threshold, 15.0            JBSSPI-8025.21: Normal</p> <p>JBSSPI-8025.12: Major, threshold, 10.0            JBSSPI-8025.22: Normal</p> <p>JBSSPI-8025.13: Warning, threshold, 5.0            JBSSPI-8025.23: Normal</p>
<b>Message Group</b>	JBoss
<b>Message</b>	<p>JBSSPI-8025.11: JMS session pending messages critical threshold overshoot condition has occurred.</p> <p>JBSSPI-8025.21: JMS session pending messages critical threshold overshoot condition is gone.</p> <p>JBSSPI-8025.12: JMS session pending messages major threshold overshoot condition has occurred.</p> <p>JBSSPI-8025.22: JMS session pending messages major threshold overshoot condition is gone.</p> <p>JBSSPI-8025.13: JMS session pending messages warning threshold overshoot condition has occurred.</p> <p>JBSSPI-8025.23: JMS session pending messages warning threshold overshoot condition is gone.</p>
<b>Instruction Text</b>	<p><b>Probable cause:</b></p> <ul style="list-style-type: none"> <li>• Messages are not being consumed at regular intervals.</li> <li>• Rate of message creation is more than that of consumption.</li> </ul> <p><b>Potential Impact:</b></p> <ul style="list-style-type: none"> <li>• Further messages may get rejected.</li> <li>• JVM Heap space may reduce rapidly.</li> <li>• Frequent JVM garbage collection calls.</li> <li>• Possibility of out-of-memory error.</li> </ul> <p><b>Suggested action:</b></p> <ol style="list-style-type: none"> <li>1 Tune JMS consumers to remove messages fast.</li> <li>2 Increase message queue or topic size.</li> </ol>

<b>Metric ID</b>	JBSSPI_0026
<b>Metric Name</b>	S026_JMSNewPndgMsgs
<b>Metric Type</b>	Alarming and Graphing
<b>Policy Description</b>	New pending JMS messages in a session over collection interval
<b>Severity</b>	JBSSPI-8026.11: Critical, threshold, 15.0 JBSSPI-8026.21: Normal JBSSPI-8026.12: Major, threshold, 10.0 JBSSPI-8026.22: Normal JBSSPI-8026.13: Warning, threshold, 5.0 JBSSPI-8026.23: Normal
<b>Message Group</b>	JBoss
<b>Message</b>	JBSSPI-8026.11: JMS session new pending messages in a collection interval critical threshold overshoot condition has occurred. JBSSPI-8026.21: JMS session new pending messages in a collection interval critical threshold overshoot condition is gone. JBSSPI-8026.12: JMS session new pending messages in a collection interval major threshold overshoot condition has occurred. JBSSPI-8026.22: JMS session new pending messages in a collection interval major threshold overshoot condition is gone. JBSSPI-8026.13: JMS session new pending messages in a collection interval warning threshold overshoot condition has occurred. JBSSPI-8026.23: JMS session new pending messages in a collection interval warning threshold overshoot condition is gone.
<b>Instruction Text</b>	<p><b>Probable cause:</b></p> <ul style="list-style-type: none"> <li>• Messages are not being consumed at regular intervals.</li> <li>• Rate of message creation is more than that of consumption.</li> </ul> <p><b>Potential Impact:</b></p> <ul style="list-style-type: none"> <li>• Further messages may get rejected.</li> <li>• JVM Heap space may reduce rapidly.</li> <li>• Frequent JVM garbage collection calls.</li> <li>• Possibility of out-of-memory error.</li> </ul> <p><b>Suggested action:</b></p> <ol style="list-style-type: none"> <li>1 Tune JMS consumers to remove messages fast.</li> <li>2 Increase message queue or topic size.</li> </ol>



JBSSPI\_0027

<b>Metric ID</b>	JBSSPI_0027
<b>Metric Name</b>	S027_JMSTotlExprMsgs
<b>Metric Type</b>	Alarming and Graphing
<b>Policy Description</b>	Number of expired JMS messages in a session
<b>Severity</b>	<p>JBSSPI-8027.11: Critical, threshold, 15.0          JBSSPI-8027.21: Normal</p> <p>JBSSPI-8027.12: Major, threshold, 10.0          JBSSPI-8027.22: Normal</p> <p>JBSSPI-8027.13: Warning, threshold, 5.0          JBSSPI-8027.23: Normal</p>
<b>Message Group</b>	JBoss
<b>Message</b>	<p>JBSSPI-8027.11: JMS session expired messages critical threshold overshoot condition has occurred.</p> <p>JBSSPI-8027.21: JMS session expired messages critical threshold overshoot condition is gone.</p> <p>JBSSPI-8027.12: JMS session expired messages major threshold overshoot condition has occurred.</p> <p>JBSSPI-8027.22: JMS session expired messages major threshold overshoot condition is gone.</p> <p>JBSSPI-8027.13: JMS session expired messages warning threshold overshoot condition has occurred.</p> <p>JBSSPI-8027.23: JMS session expired messages warning threshold overshoot condition is gone.</p>
<b>Instruction Text</b>	<p><b>Probable cause:</b></p> <ul style="list-style-type: none"> <li>• Messages are not being consumed at regular intervals.</li> <li>• Rate of message creation is more than that of consumption.</li> </ul> <p><b>Potential Impact:</b></p> <ul style="list-style-type: none"> <li>• Expiry of transaction message leads to high transaction roll back rate.</li> <li>• Application failure due to communication failure.</li> </ul> <p><b>Suggested action:</b></p> <ol style="list-style-type: none"> <li>1 Tune JMS consumers to remove messages fast.</li> <li>2 Check if subscribers can be made durable.</li> <li>3 Increase message time-out value.</li> </ol>

<b>Metric ID</b>	JBSSPI_0028
<b>Metric Name</b>	S028_JMSNewExprMsgs
<b>Metric Type</b>	Alarming and Graphing
<b>Policy Description</b>	New expired JMS messages in a session over collection interval
<b>Severity</b>	JBSSPI-8028.11: Critical, threshold, 15.0 JBSSPI-8028.21: Normal JBSSPI-8028.12: Major, threshold, 10.0 JBSSPI-8028.22: Normal JBSSPI-8028.13: Warning, threshold, 5.0 JBSSPI-8028.23: Normal
<b>Message Group</b>	JBoss
<b>Message</b>	JBSSPI-8028.11: JMS session new expired messages in a collection interval critical threshold overshoot condition has occurred. JBSSPI-8028.21: JMS session new expired messages in a collection interval critical threshold overshoot condition is gone. JBSSPI-8028.12: JMS session new expired messages in a collection interval major threshold overshoot condition has occurred. JBSSPI-8028.22: JMS session new expired messages in a collection interval major threshold overshoot condition is gone. JBSSPI-8028.13: JMS session new expired messages in a collection interval warning threshold overshoot condition has occurred. JBSSPI-8028.23: JMS session new expired messages in a collection interval warning threshold overshoot condition is gone.
<b>Instruction Text</b>	<p><b>Probable cause:</b></p> <ul style="list-style-type: none"> <li>• Messages are not being consumed at regular intervals.</li> <li>• Rate of message creation is more than that of consumption.</li> </ul> <p><b>Potential Impact:</b></p> <ul style="list-style-type: none"> <li>• Expiry of transaction message leads to high transaction roll back rate.</li> <li>• Application failure due to communication failure.</li> </ul> <p><b>Suggested action:</b></p> <ol style="list-style-type: none"> <li>1 Tune JMS consumers to remove messages fast.</li> <li>2 Check if subscribers can be made durable.</li> <li>3 Increase message time-out value.</li> </ol>

## JBSSPI\_0029

<b>Metric ID</b>	JBSSPI_0029
<b>Metric Name</b>	S029_JMSMsgExchCnt
<b>Metric Type</b>	Alarming and Graphing
<b>Policy Description</b>	Number of JMS messages exchanged in a session
<b>Severity</b>	JBSSPI-8029.11: Critical, threshold, 5.0 JBSSPI-8029.21: Normal JBSSPI-8029.12: Major, threshold, 10.0 JBSSPI-8029.22: Normal JBSSPI-8029.13: Warning, threshold, 15.0 JBSSPI-8029.23: Normal
<b>Message Group</b>	JBoss
<b>Message</b>	JBSSPI-8029.11: JMS session exchanged messages critical threshold overshoot condition has occurred. JBSSPI-8029.21: JMS session exchanged messages critical threshold overshoot condition is gone. JBSSPI-8029.12: JMS session exchanged messages major threshold overshoot condition has occurred. JBSSPI-8029.22: JMS session exchanged messages major threshold overshoot condition is gone. JBSSPI-8029.13: JMS session exchanged messages warning threshold overshoot condition has occurred. JBSSPI-8029.23: JMS session exchanged messages warning threshold overshoot condition is gone.
<b>Instruction Text</b>	<b>Probable cause:</b> Message consumption rate has come down. <b>Potential Impact:</b> <ul style="list-style-type: none"> <li>• Message expiry rate may overshoot.</li> <li>• Further messages may get rejected.</li> </ul> <b>Suggested action:</b> Tune JMS consumers to remove messages fast and acknowledge.

JBSSPI\_0030

<b>Metric ID</b>	JBSSPI_0030
<b>Metric Name</b>	S030_JMSMsgAvgWtTime
<b>Metric Type</b>	Alarming and Graphing
<b>Policy Description</b>	Average time spent by a JMS message in a session before being delivered
<b>Severity</b>	JBSSPI-8030.11: Critical, threshold, 15.0 JBSSPI-8030.21: Normal JBSSPI-8030.12: Major, threshold, 10.0 JBSSPI-8030.22: Normal JBSSPI-8030.13: Warning, threshold, 5.0 JBSSPI-8030.23: Normal
<b>Message Group</b>	JBoss
<b>Message</b>	JBSSPI-8030.11: JMS session message average wait time critical threshold overshoot condition has occurred. JBSSPI-8030.21: JMS session message average wait time critical threshold overshoot condition is gone. JBSSPI-8030.12: JMS session message average wait time major threshold overshoot condition has occurred. JBSSPI-8030.22: JMS session message average wait time major threshold overshoot condition is gone. JBSSPI-8030.13: JMS session message average wait time warning threshold overshoot condition has occurred. JBSSPI-8030.23: JMS session message average wait time warning threshold overshoot condition is gone.
<b>Instruction Text</b>	<b>Probable cause:</b> Message consumption rate has come down. <b>Potential Impact:</b> <ul style="list-style-type: none"> <li>• Message queue may grow.</li> <li>• Message expiry rate may overshoot.</li> </ul> <b>Suggested action:</b> Tune JMS consumers to remove messages fast and acknowledge.

JBSSPI\_0031

<b>Metric ID</b>	JBSSPI_0031
<b>Metric Name</b>	S031_JMSPTtlPndgMsgs
<b>Metric Type</b>	Alarming and Graphing
<b>Policy Description</b>	Number of pending JMS messages for a producer
<b>Severity</b>	<p>JBSSPI-8031.11: Critical, threshold, 15.0            JBSSPI-8031.21: Normal</p> <p>JBSSPI-8031.12: Major, threshold, 10.0            JBSSPI-8031.22: Normal</p> <p>JBSSPI-8031.13: Warning, threshold, 5.0            JBSSPI-8031.23: Normal</p>
<b>Message Group</b>	JBoss
<b>Message</b>	<p>JBSSPI-8031.11: JMS producer pending messages critical threshold overshoot condition has occurred.</p> <p>JBSSPI-8031.21: JMS producer pending messages critical threshold overshoot condition is gone.</p> <p>JBSSPI-8031.12: JMS producer pending messages major threshold overshoot condition has occurred.</p> <p>JBSSPI-8031.22: JMS producer pending messages major threshold overshoot condition is gone.</p> <p>JBSSPI-8031.13: JMS producer pending messages warning threshold overshoot condition has occurred.</p> <p>JBSSPI-8031.23: JMS producer pending messages warning threshold overshoot condition is gone.</p>
<b>Instruction Text</b>	<p><b>Probable cause:</b></p> <ul style="list-style-type: none"> <li>• Messages are not being consumed at regular intervals.</li> <li>• Rate of message creation is more than that of consumption.</li> </ul> <p><b>Potential Impact:</b></p> <ul style="list-style-type: none"> <li>• Further messages may get rejected.</li> <li>• JVM Heap space may reduce rapidly.</li> <li>• Frequent JVM garbage collection calls.</li> <li>• Possibility of out-of-memory error.</li> </ul> <p><b>Suggested action:</b></p> <ol style="list-style-type: none"> <li>1 Tune JMS consumers to remove messages fast.</li> <li>2 Increase message queue or topic size.</li> </ol>

<b>Metric ID</b>	JBSSPI_0032
<b>Metric Name</b>	S032_JMSPNewPndgMsgs
<b>Metric Type</b>	Alarming and Graphing
<b>Policy Description</b>	New pending JMS messages for a producer over collection interval
<b>Severity</b>	JBSSPI-8032.11: Critical, threshold, 15.0 JBSSPI-8032.21: Normal JBSSPI-8032.12: Major, threshold, 10.0 JBSSPI-8032.22: Normal JBSSPI-8032.13: Warning, threshold, 5.0 JBSSPI-8032.23: Normal
<b>Message Group</b>	JBoss
<b>Message</b>	JBSSPI-8032.11: JMS producer new pending messages in a collection interval critical threshold overshoot condition has occurred. JBSSPI-8032.21: JMS producer new pending messages in a collection interval critical threshold overshoot condition is gone. JBSSPI-8032.12: JMS producer new pending messages in a collection interval major threshold overshoot condition has occurred. JBSSPI-8032.22: JMS producer new pending messages in a collection interval major threshold overshoot condition is gone. JBSSPI-8032.13: JMS producer new pending messages in a collection interval warning threshold overshoot condition has occurred. JBSSPI-8032.23: JMS producer new pending messages in a collection interval warning threshold overshoot condition is gone.
<b>Instruction Text</b>	<p><b>Probable cause:</b></p> <ul style="list-style-type: none"> <li>• Messages are not being consumed at regular intervals.</li> <li>• Rate of message creation is more than that of consumption.</li> </ul> <p><b>Potential Impact:</b></p> <ul style="list-style-type: none"> <li>• Further messages may get rejected.</li> <li>• JVM Heap space may reduce rapidly.</li> <li>• Frequent JVM garbage collection calls.</li> <li>• Possibility of out-of-memory error.</li> </ul> <p><b>Suggested action:</b></p> <ol style="list-style-type: none"> <li>1 Tune JMS consumers to remove messages fast.</li> <li>2 Increase message queue or topic size.</li> </ol>

JBSSPI\_0033

<b>Metric ID</b>	JBSSPI_0033
<b>Metric Name</b>	S033_JMSPTtlExprMsgs
<b>Metric Type</b>	Alarming and Graphing
<b>Policy Description</b>	Number of expired JMS messages for a producer
<b>Severity</b>	<p>JBSSPI-8033.11: Critical, threshold, 15.0            JBSSPI-8033.21: Normal</p> <p>JBSSPI-8033.12: Major, threshold, 10.0            JBSSPI-8033.22: Normal</p> <p>JBSSPI-8033.13: Warning, threshold, 5.0            JBSSPI-8033.23: Normal</p>
<b>Message Group</b>	JBoss
<b>Message</b>	<p>JBSSPI-8033.11: JMS producer expired messages critical threshold overshoot condition has occurred.</p> <p>JBSSPI-8033.21: JMS producer expired messages critical threshold overshoot condition is gone.</p> <p>JBSSPI-8033.12: JMS producer expired messages major threshold overshoot condition has occurred.</p> <p>JBSSPI-8033.22: JMS producer expired messages major threshold overshoot condition is gone.</p> <p>JBSSPI-8033.13: JMS producer expired messages warning threshold overshoot condition has occurred.</p> <p>JBSSPI-8033.23: JMS producer expired messages warning threshold overshoot condition is gone.</p>
<b>Instruction Text</b>	<p><b>Probable cause:</b></p> <ul style="list-style-type: none"> <li>• Messages are not being consumed at regular intervals.</li> <li>• Rate of message creation is more than that of consumption.</li> </ul> <p><b>Potential Impact:</b></p> <ul style="list-style-type: none"> <li>• Expiry of transaction message leads to high transaction roll back rate.</li> <li>• Application failure due to communication failure.</li> </ul> <p><b>Suggested action:</b></p> <ol style="list-style-type: none"> <li>1 Tune JMS consumers to remove messages fast.</li> <li>2 Check if subscribers can be made durable.</li> <li>3 Increase message time-out value.</li> </ol>

<b>Metric ID</b>	JBSSPI_0034
<b>Metric Name</b>	S034_JMSPNewExprMsgs
<b>Metric Type</b>	Alarming and Graphing
<b>Policy Description</b>	New expired JMS messages for a producer over collection interval
<b>Severity</b>	JBSSPI-8034.11: Critical, threshold, 15.0 JBSSPI-8034.21: Normal JBSSPI-8034.12: Major, threshold, 10.0 JBSSPI-8034.22: Normal JBSSPI-8034.13: Warning, threshold, 5.0 JBSSPI-8034.23: Normal
<b>Message Group</b>	JBoss
<b>Message</b>	JBSSPI-8034.11: JMS producer new expired messages in a collection interval critical threshold overshoot condition has occurred. JBSSPI-8034.21: JMS producer new expired messages in a collection interval critical threshold overshoot condition is gone. JBSSPI-8034.12: JMS producer new expired messages in a collection interval major threshold overshoot condition has occurred. JBSSPI-8034.22: JMS producer new expired messages in a collection interval major threshold overshoot condition is gone. JBSSPI-8034.13: JMS producer new expired messages in a collection interval warning threshold overshoot condition has occurred. JBSSPI-8034.23: JMS producer new expired messages in a collection interval warning threshold overshoot condition is gone.
<b>Instruction Text</b>	<p><b>Probable cause:</b></p> <ul style="list-style-type: none"> <li>• Messages are not being consumed at regular intervals.</li> <li>• Rate of message creation is more than that of consumption.</li> </ul> <p><b>Potential Impact:</b></p> <ul style="list-style-type: none"> <li>• Expiry of transaction message leads to high transaction roll back rate.</li> <li>• Application failure due to communication failure.</li> </ul> <p><b>Suggested action:</b></p> <ol style="list-style-type: none"> <li>1 Tune JMS consumers to remove messages fast.</li> <li>2 Check if subscribers can be made durable.</li> <li>3 Increase message time-out value.</li> </ol>



## JBSSPI\_0035

<b>Metric ID</b>	JBSSPI_0035
<b>Metric Name</b>	S035_JMSPMsgSentCnt
<b>Metric Type</b>	Alarming and Graphing
<b>Policy Description</b>	Number of JMS messages sent by a producer
<b>Severity</b>	JBSSPI-8035.11: Critical, threshold, 5.0 JBSSPI-8035.21: Normal JBSSPI-8035.12: Major, threshold, 10.0 JBSSPI-8035.22: Normal JBSSPI-8035.13: Warning, threshold, 15.0 JBSSPI-8035.23: Normal
<b>Message Group</b>	JBoss
<b>Message</b>	JBSSPI-8035.11: JMS producer sent messages critical threshold overshoot condition has occurred. JBSSPI-8035.21: JMS producer sent messages critical threshold overshoot condition is gone. JBSSPI-8035.12: JMS producer sent messages major threshold overshoot condition has occurred. JBSSPI-8035.22: JMS producer sent messages major threshold overshoot condition is gone. JBSSPI-8035.13: JMS producer sent messages warning threshold overshoot condition has occurred. JBSSPI-8035.23: JMS producer sent messages warning threshold overshoot condition is gone.
<b>Instruction Text</b>	<p><b>Probable cause:</b></p> <ul style="list-style-type: none"> <li>• Message consumption rate has come down.</li> <li>• Message are getting rejected.</li> </ul> <p><b>Potential Impact:</b></p> <ul style="list-style-type: none"> <li>• Message queue may grow.</li> <li>• Message expiry rate may overshoot.</li> </ul> <p><b>Suggested action:</b></p> <p>Tune JMS consumers to remove messages fast and acknowledge.</p>

JBSSPI\_0036

<b>Metric ID</b>	JBSSPI_0036
<b>Metric Name</b>	S036_JMSPMsgAvgWtTime
<b>Metric Type</b>	Alarming and Graphing
<b>Policy Description</b>	Average time spent by a JMS message before being delivered to the producer
<b>Severity</b>	JBSSPI-8036.11: Critical, threshold, 15.0 JBSSPI-8036.21: Normal JBSSPI-8036.12: Major, threshold, 10.0 JBSSPI-8036.22: Normal JBSSPI-8036.13: Warning, threshold, 5.0 JBSSPI-8036.23: Normal
<b>Message Group</b>	JBoss
<b>Message</b>	JBSSPI-8036.11: JMS producer message average wait time critical threshold overshoot condition has occurred. JBSSPI-8036.21: JMS producer message average wait time critical threshold overshoot condition is gone. JBSSPI-8036.12: JMS producer message average wait time major threshold overshoot condition has occurred. JBSSPI-8036.22: JMS producer message average wait time major threshold overshoot condition is gone. JBSSPI-8036.13: JMS producer message average wait time warning threshold overshoot condition has occurred. JBSSPI-8036.23: JMS producer message average wait time warning threshold overshoot condition is gone.
<b>Instruction Text</b>	<b>Probable cause:</b> Message consumption rate has come down. <b>Potential Impact:</b> <ul style="list-style-type: none"> <li>• Message queue may grow.</li> <li>• Message expiry rate may overshoot.</li> </ul> <b>Suggested action:</b> Tune JMS consumers to remove messages fast and acknowledge.

JBSSPI\_0037

<b>Metric ID</b>	JBSSPI_0037
<b>Metric Name</b>	S037_JMSCTtlPndgMsgs
<b>Metric Type</b>	Alarming and Graphing
<b>Policy Description</b>	Number of pending JMS messages for a consumer
<b>Severity</b>	<p>JBSSPI-8037.11: Critical, threshold, 15.0</p> <p>JBSSPI-8037.21: Normal</p> <p>JBSSPI-8037.12: Major, threshold, 10.0</p> <p>JBSSPI-8037.22: Normal</p> <p>JBSSPI-8037.13: Warning, threshold, 5.0</p> <p>JBSSPI-8037.23: Normal</p>
<b>Message Group</b>	JBoss
<b>Message</b>	<p>JBSSPI-8037.11: JMS consumer pending messages critical threshold overshoot condition has occurred.</p> <p>JBSSPI-8037.21: JMS consumer pending messages critical threshold overshoot condition is gone.</p> <p>JBSSPI-8037.12: JMS consumer pending messages major threshold overshoot condition has occurred.</p> <p>JBSSPI-8037.22: JMS consumer pending messages major threshold overshoot condition is gone.</p> <p>JBSSPI-8037.13: JMS consumer pending messages warning threshold overshoot condition has occurred.</p> <p>JBSSPI-8037.23: JMS consumer pending messages warning threshold overshoot condition is gone.</p>
<b>Instruction Text</b>	<p><b>Probable cause:</b></p> <ul style="list-style-type: none"> <li>• Messages are not being consumed at regular intervals.</li> <li>• Rate of message creation is more than that of consumption.</li> </ul> <p><b>Potential Impact:</b></p> <ul style="list-style-type: none"> <li>• Further messages may get rejected.</li> <li>• JVM Heap space may reduce rapidly.</li> <li>• Frequent JVM garbage collection calls.</li> <li>• Possibility of out-of-memory error.</li> </ul> <p><b>Suggested action:</b></p> <ol style="list-style-type: none"> <li>1 Tune JMS consumers to remove messages fast.</li> <li>2 Increase message queue or topic size.</li> </ol>

<b>Metric ID</b>	JBSSPI_0038
<b>Metric Name</b>	S038_JMSCNewPndgMsgs
<b>Metric Type</b>	Alarming and Graphing
<b>Policy Description</b>	New pending JMS messages for a consumer over collection interval
<b>Severity</b>	JBSSPI-8038.11: Critical, threshold, 15.0 JBSSPI-8038.21: Normal JBSSPI-8038.12: Major, threshold, 10.0 JBSSPI-8038.22: Normal JBSSPI-8038.13: Warning, threshold, 5.0 JBSSPI-8038.23: Normal
<b>Message Group</b>	JBoss
<b>Message</b>	JBSSPI-8038.11: JMS consumer new pending messages in a collection interval critical threshold overshoot condition has occurred. JBSSPI-8038.21: JMS consumer new pending messages in a collection interval critical threshold overshoot condition is gone. JBSSPI-8038.12: JMS consumer new pending messages in a collection interval major threshold overshoot condition has occurred. JBSSPI-8038.22: JMS consumer new pending messages in a collection interval major threshold overshoot condition is gone. JBSSPI-8038.13: JMS consumer new pending messages in a collection interval warning threshold overshoot condition has occurred. JBSSPI-8038.23: JMS consumer new pending messages in a collection interval warning threshold overshoot condition is gone.
<b>Instruction Text</b>	<p><b>Probable cause:</b></p> <ul style="list-style-type: none"> <li>• Messages are not being consumed at regular intervals.</li> <li>• Rate of message creation is more than that of consumption.</li> </ul> <p><b>Potential Impact:</b></p> <ul style="list-style-type: none"> <li>• Further messages may get rejected.</li> <li>• JVM Heap space may reduce rapidly.</li> <li>• Frequent JVM garbage collection calls.</li> <li>• Possibility of out-of-memory error.</li> </ul> <p><b>Suggested action:</b></p> <ol style="list-style-type: none"> <li>1 Tune JMS consumers to remove messages fast.</li> <li>2 Increase message queue or topic size.</li> </ol>

## JBSSPI\_0039

<b>Metric ID</b>	JBSSPI_0039
<b>Metric Name</b>	S039_JMSCTtlExprMsgs
<b>Metric Type</b>	Alarming and Graphing
<b>Policy Description</b>	Number of expired JMS messages for a consumer
<b>Severity</b>	JBSSPI-8039.11: Critical, threshold, 15.0 JBSSPI-8039.21: Normal JBSSPI-8039.12: Major, threshold, 10.0 JBSSPI-8039.22: Normal JBSSPI-8039.13: Warning, threshold, 5.0 JBSSPI-8039.23: Normal
<b>Message Group</b>	JBoss
<b>Message</b>	JBSSPI-8039.11: JMS consumer expired messages critical threshold overshoot condition has occurred. JBSSPI-8039.21: JMS consumer expired messages critical threshold overshoot condition is gone. JBSSPI-8039.12: JMS consumer expired messages major threshold overshoot condition has occurred. JBSSPI-8039.22: JMS consumer expired messages major threshold overshoot condition is gone. JBSSPI-8039.13: JMS consumer expired messages warning threshold overshoot condition has occurred. JBSSPI-8039.23: JMS consumer expired messages warning threshold overshoot condition is gone.
<b>Instruction Text</b>	<p><b>Probable cause:</b></p> <ul style="list-style-type: none"> <li>• Messages are not being consumed at regular intervals.</li> <li>• Rate of message creation is more than that of consumption.</li> </ul> <p><b>Potential Impact:</b></p> <ul style="list-style-type: none"> <li>• Expiry of transaction message leads to high transaction roll back rate.</li> <li>• Application failure due to communication failure.</li> </ul> <p><b>Suggested action:</b></p> <ol style="list-style-type: none"> <li>1 Tune JMS consumers to remove messages fast.</li> <li>2 Check if subscribers can be made durable.</li> <li>3 Increase message time-out value.</li> </ol>

## JBSSPI\_0040

<b>Metric ID</b>	JBSSPI_0040
<b>Metric Name</b>	S040_JMSCNewExprMsgs
<b>Metric Type</b>	Alarming and Graphing
<b>Policy Description</b>	New expired JMS messages for a consumer over collection interval
<b>Severity</b>	JBSSPI-8040.11: Critical, threshold, 15.0 JBSSPI-8040.21: Normal JBSSPI-8040.12: Major, threshold, 10.0 JBSSPI-8040.22: Normal JBSSPI-8040.13: Warning, threshold, 5.0 JBSSPI-8040.23: Normal
<b>Message Group</b>	JBoss
<b>Message</b>	JBSSPI-8040.11: JMS consumer new expired messages in a collection interval critical threshold overshoot condition has occurred. JBSSPI-8040.21: JMS consumer new expired messages in a collection interval critical threshold overshoot condition is gone. JBSSPI-8040.12: JMS consumer new expired messages in a collection interval major threshold overshoot condition has occurred. JBSSPI-8040.22: JMS consumer new expired messages in a collection interval major threshold overshoot condition is gone. JBSSPI-8040.13: JMS consumer new expired messages in a collection interval warning threshold overshoot condition has occurred. JBSSPI-8040.23: JMS consumer new expired messages in a collection interval warning threshold overshoot condition is gone.
<b>Instruction Text</b>	<p><b>Probable cause:</b></p> <ul style="list-style-type: none"> <li>• Messages are not being consumed at regular intervals.</li> <li>• Rate of message creation is more than that of consumption.</li> </ul> <p><b>Potential Impact:</b></p> <ul style="list-style-type: none"> <li>• Expiry of transaction message leads to high transaction roll back rate.</li> <li>• Application failure due to communication failure.</li> </ul> <p><b>Suggested action:</b></p> <ol style="list-style-type: none"> <li>1 Tune JMS consumers to remove messages fast.</li> <li>2 Check if subscribers can be made durable.</li> <li>3 Increase message time-out value.</li> </ol>

## JBSSPI\_0041

<b>Metric ID</b>	JBSSPI_0041
<b>Metric Name</b>	S041_JMSCMsgRecvdCnt
<b>Metric Type</b>	Alarming and Graphing
<b>Policy Description</b>	Number of JMS messages received by a consumer
<b>Severity</b>	JBSSPI-8041.11: Critical, threshold, 5.0 JBSSPI-8041.21: Normal JBSSPI-8041.12: Major, threshold, 10.0 JBSSPI-8041.22: Normal JBSSPI-8041.13: Warning, threshold, 15.0 JBSSPI-8041.23: Normal
<b>Message Group</b>	JBoss
<b>Message</b>	JBSSPI-8041.11: JMS consumer received messages critical threshold overshoot condition has occurred. JBSSPI-8041.21: JMS consumer received messages critical threshold overshoot condition is gone. JBSSPI-8041.12: JMS consumer received messages major threshold overshoot condition has occurred. JBSSPI-8041.22: JMS consumer received messages major threshold overshoot condition is gone. JBSSPI-8041.13: JMS consumer received messages warning threshold overshoot condition has occurred. JBSSPI-8041.23: JMS consumer received messages warning threshold overshoot condition is gone.
<b>Instruction Text</b>	<p><b>Probable cause:</b></p> <ul style="list-style-type: none"> <li>• The consumer is failing to remove messages fast.</li> <li>• Message time-out value set by producer is less.</li> </ul> <p><b>Potential Impact:</b> Topic or Queue size may grow.</p> <p><b>Suggested action:</b></p> <ol style="list-style-type: none"> <li>1 If applicable make this a durable subscriber.</li> <li>2 Tune producer to increase message time-out value.</li> </ol>

JBSSPI\_0042

<b>Metric ID</b>	JBSSPI_0042
<b>Metric Name</b>	S042_JMSCMsgAvgWtTime
<b>Metric Type</b>	Alarming and Graphing
<b>Policy Description</b>	Average time spent by a JMS message before being received by the consumer
<b>Severity</b>	JBSSPI-8042.11: Critical, threshold, 15.0 JBSSPI-8042.21: Normal JBSSPI-8042.12: Major, threshold, 10.0 JBSSPI-8042.22: Normal JBSSPI-8042.13: Warning, threshold, 5.0 JBSSPI-8042.23: Normal
<b>Message Group</b>	JBoss
<b>Message</b>	JBSSPI-8042.11: JMS consumer message average wait time critical threshold overshoot condition has occurred. JBSSPI-8042.21: JMS consumer message average wait time critical threshold overshoot condition is gone. JBSSPI-8042.12: JMS consumer message average wait time major threshold overshoot condition has occurred. JBSSPI-8042.22: JMS consumer message average wait time major threshold overshoot condition is gone. JBSSPI-8042.13: JMS consumer message average wait time warning threshold overshoot condition has occurred. JBSSPI-8042.23: JMS consumer message average wait time warning threshold overshoot condition is gone.
<b>Instruction Text</b>	<b>Probable cause:</b> The consumer is failing to remove messages fast. <b>Potential Impact:</b> Topic or Queue size may grow. <b>Suggested action:</b> Tune consumer to remove messages fast.



## JBoss AS SPI LogFile Policies

JBoss AS SPI contains the following logfile policies to monitor the information logged in JBoss Application Server log files.

### JBoss Server Log Monitor

This logfile policy monitors the JBoss server log file located at `JBOSS_HOME/server/production/log/server.log`.

<b>Description</b>	Monitors the JBoss server log file and catches FATAL, ERROR and WARN level messages, which it sends to the message browser.
<b>Severity</b>	Critical Warning
<b>Category</b>	JBoss
<b>Type</b>	Logfile Entry
<b>Message Group</b>	JBSSPI
<b>Help Text</b>	<b>Probable Cause:</b> There is one of FATAL, ERROR or WARN level message in the server.log file. <b>Potential Impact:</b> The application server may exhibit unexpected behavior if necessary action(s) are not taken. <b>Suggested Action:</b> Read the message text for possible action(s) to be taken.

### JBSSPI Error Log

This logfile policy monitors the JBoss AS SPI log file located at `wasspi_perl -S wasspi_jbs_files wasspi_perl.log`.

<b>Description</b>	Monitors the JBoss AS SPI log file and sends the error messages to the message browser.
<b>Severity</b>	Normal Major Critical Warning
<b>Category</b>	JBoss
<b>Type</b>	Logfile Entry
<b>Message Group</b>	JBSSPI
<b>Help Text</b>	Available for each error as detected: WASSPI-1 through WASSPI-254. For detailed help text for all error messages, see the specific error message listed in <i>HP Operations Smart Plug-in for JBoss Application Server Installation and Configuration Guide</i> for information about the error message.

## JBSSPI Java Discovery Error Log

This logfile policy monitors the JBoss AS SPI discovery error log file located at `wasspi_perl -S wasspi_jbs_files Discovery.log`.

<b>Description</b>	Monitors the JBoss AS SPI Java Discovery Error Log.
<b>Severity</b>	Normal Major Critical Warning
<b>Category</b>	JBoss
<b>Type</b>	Logfile Entry
<b>Message Group</b>	JBSSPI
<b>Help Text</b>	Available for each error as detected: WASSPI-1 through WASSPI-254. For detailed help text for all error messages, see the specific error message listed in <i>HP Operations Smart Plug-in for JBoss Application Server Installation and Configuration Guide</i> for information about the error message.

## JBSSPI Java Collector Error Log

This logfile policy monitors the JBoss AS SPI collector error log file located at `wasspi_perl -S wasspi_jbs_files Collector.log`.

<b>Description</b>	Monitors the JBoss AS SPI Java Collector Error Log.
<b>Severity</b>	Normal Major Critical Warning
<b>Category</b>	JBoss
<b>Type</b>	Logfile Entry
<b>Message Group</b>	JBSSPI
<b>Help Text</b>	Available for each error as detected: WASSPI-1 through WASSPI-254. For detailed help text for all error messages, see the specific error message listed in <i>HP Operations Smart Plug-in for JBoss Application Server Installation and Configuration Guide</i> for information about the error message.



## 2 JBoss AS SPI Tools and Graphs

This chapter provides specific information on JBoss AS SPI Tools and Graphs. For generic information on these topics, see the *HP Operations Smart Plug-in for JBoss Application Server Installation and Configuration Guide for Linux/Solaris*.

### Tools

The JBoss AS SPI offers centralized tools, which help you to monitor and manage systems using JBoss Application Server (AS). The JBoss AS SPI tools enable you to configure the management server's connection to selected server instances on specific managed nodes. The JBoss AS SPI tools include the tools for administrating and operating the SPI for JBoss Application Server. To access the JBoss AS SPI tools, open the Tool Bank window and click SPI for JBoss Application Server (JBSSPI:Tools). The JBoss AS SPI tools contains two tool groups named SPI Admin and JBoss Server Admin. The SPI Admin tool group consists of tools that allow you to perform the tasks related to SPI for JBoss Application Server. The JBoss Server Admin tool group consists of tools that allow you to perform the tasks related to JBoss Application Server.

### Graphs

The following tables show the graphs available for mapping collected metric values. Use HP Performance Manager to view any one of the metrics included in any of these tables.

**Table 2 JVM**

Metric Name	Metric Description
S005_JVMHeapMmPctUtl	Percentage utilization of JVM Heap

**Table 3 Thread Pools**

Metric Name	Metric Description
S003_SysThdPolPctUtl	Current JBoss System Thread Pool Percentage Utilization
S004_JCATHdPolPctUtl	Current JCA WorkManager Thread Pool Percentage Utilization

**Table 4 Transactions (JTA)**

<b>Metric Name</b>	<b>Metric Description</b>
S002_TransRollbackRt	Number of transactions rolled back per second.

**Table 5 Servlets**

<b>Metric Name</b>	<b>Metric Description</b>
S006_AllSrvAvgExTime	Average response time of a servlet (in seconds) over the collection interval.

**Table 6 JCA Connections**

<b>Metric Name</b>	<b>Metric Description</b>
S007_JCAConPolPctUtl	JCA connection pool percentage utilization
S008_JCAConPoolWtCnt	The number of threads waiting for a connection from JCA pool
S009_JCAConCrtRate	Number of new connections created in JCA pool per second
S010_JCAConClsRate	Number of connections closed in JCA pool per second
S011_JCAConnLeak	Number of leaked connections in JCA pool
S012_JCAConAvgWtTime	Average time spent waiting for a connection in JCA pool

**Table 7 Entity Bean**

<b>Metric Name</b>	<b>Metric Description</b>
S015_EntityBnCrtRate	Number of Entity Beans created per second
S016_EntityBnRmRate	Number of Entity Beans removed per second
S017_EntityBnPolCnt	Number of Entity Beans available in pool
S018_EntityBnReadySt	Number of Entity Beans in ready state

**Table 8 Message Driven Bean**

<b>Metric Name</b>	<b>Metric Description</b>
S019_MsgDrvBnCrtRate	Number of Message Driven Beans created per second
S020_MsgDrvBnRmRate	Number of Message Driven Beans removed per second
S021_MsgDrvBnMsgRcRt	Number of messages received by a Message Driven Bean per second

**Table 9 Stateful Session Bean**

<b>Metric Name</b>	<b>Metric Description</b>
S022_StfulSesBnCrtRt	Number of Stateful Session Beans created per second
S023_StfulSesBnPasRt	Number of Stateful Session Beans passivated per second

**Table 10 Stateless Session Bean**

<b>Metric Name</b>	<b>Metric Description</b>
S024_StlesSesBnCrtRt	Number of Stateless Session Beans created per second

**Table 11 JMS**

<b>Metric Name</b>	<b>Metric Description</b>
S025_JMSTotlPndgMsgs	Number of pending messages in a session
S026_JMSNewPndgMsgs	New pending JMS messages in a session over collection interval
S027_JMSTotlExprMsgs	Number of expired messages in a session
S028_JMSNewExprMsgs	New expired JMS messages in a session over collection interval
S029_JMSMsgExchCnt	Number of messages exchanged in a session
S030_JMSMsgAvgWtTime	Average time spent by a message in a session before being delivered
S031_JMSPTtlPndgMsgs	Number of pending messages for a producer
S032_JMSPNewPndgMsgs	New pending JMS messages for a producer over collection interval
S033_JMSPTtlExprMsgs	Number of expired messages for a producer
S034_JMSPNewExprMsgs	New expired JMS messages for a producer over collection interval
S035_JMSPMsgSentCnt	Number of messages sent by a producer
S036_JMSPMsgAvgWtTime	Average time spent by a message before being delivered
S037_JMSCTtlPndgMsgs	Number of pending messages for a consumer
S038_JMSCNewPndgMsgs	New pending JMS messages for a consumer over collection interval
S039_JMSCTtlExprMsgs	Number of expired messages for a consumer
S040_JMSCNewExprMsgs	New expired JMS messages for a consumer over collection interval
S041_JMSCMsgRecvdCnt	Number of messages received by a consumer
S042_JMSCMsgAvgWtTime	Average time spent by a message before receiving





# A JBoss AS SPI Golden Metrics

Golden metrics are a set of metrics which monitor the basic functionality of your JBoss Application Server. The golden metrics cover the critical areas (such as server status) for which you would like to receive messages as a critical or major event happens on the JBoss Application Server. Implementing golden metrics and taking action against the events generated by these metrics ensure the smooth functioning of the JBoss Application Server.

**Table 12 Golden Metrics**

<b>Metric Type</b>	<b>Metric ID</b>	<b>Metric Name</b>
Availability	JBSSPI_0001	S001_ServerStatus
Transactions	JBSSPI_0002	S002_TransRollbackRt
ThreadPool	JBSSPI_0003	S003_SysThdPolPctUtl
JCA	JBSSPI_0004	S004_JCATHdPolPctUtl
	JBSSPI_0007	S007_JCAConPolPctUtl
JVM	JBSSPI_0005	S005_JVMHeapMmPctUtl
JMS	JBSSPI_0025	S025_JMSTotlPndgMsgs
	JBSSPI_0031	S031_JMSPTtlPndgMsgs
	JBSSPI_0037	S037_JMSCTtlPndgMsgs



## B Data Store Table for JBoss Application Server

The JBoss AS SPI creates the following data tables for JBoss AS SPI metrics in the data store on the node to facilitate the data-collection procedure.

**Table 13 Data Store Metrics of JBoss AS SPI**

Table Name	Area	Metric Description	Column Name
JBSSPI_METRICS	Transactions	Number of transactions rolled back per second	S002_TransRollbackRt
JBSSPI_METRICS	ThreadPool	Percentage utilization of current JBoss System Thread Pool	S003_SysThdPolPctUtl
JBSSPI_METRICS	JCA	Percentage utilization of current JCA WorkManager Thread Pool	S004_JCAThdPolPctUtl
JBSSPI_METRICS	JVM	Percentage utilization of JVM Heap	S005_JVMHeapMmPctUtl
JBSSPI_METRICS	Servlets	Average response time of a servlet (in secs)	S006_AllSrvAvgExTime
JBSSPI_METRICS	JCA	Percentage utilization of JCA connection pool	S007_JCAConPolPctUtl
JBSSPI_METRICS	JCA	Number of threads waiting for a connection from JCA pool	S008_JCAConPoolWtCnt
JBSSPI_METRICS	JCA	Number of new connections created in JCA pool per second	S009_JCAConCrtRate
JBSSPI_METRICS	JCA	Number of connections closed in JCA pool per second	S010_JCAConClsRate
JBSSPI_METRICS	JCA	Number of leaked connections in JCA pool	S011_JCAConnLeak
JBSSPI_METRICS	JCA	Average time spent waiting for a connection in JCA pool	S012_JCAConAvgWtTime

**Table 13 Data Store Metrics of JBoss AS SPI**

<b>Table Name</b>	<b>Area</b>	<b>Metric Description</b>	<b>Column Name</b>
JBSSPI_METRICS	EntityBean	Number of Entity Beans created per second	S015_EntityBnCrtRate
JBSSPI_METRICS	EntityBean	Number of Entity Beans removed per second	S016_EntityBnRmRate
JBSSPI_METRICS	EntityBean	Number of Entity Beans available in pool	S017_EntityBnPolCnt
JBSSPI_METRICS	EntityBean	Number of Entity Beans in ready state	S018_EntityBnReadySt
JBSSPI_METRICS	JVM	Number of Message Driven Beans created per second	S019_MsgDrvBnCrtRate
JBSSPI_METRICS	JVM	Number of Message Driven Beans removed per second	S020_MsgDrvBnRmRate
JBSSPI_METRICS	JMS	Number of messages received by a Message Driven Bean per second	S021_MsgDrvBnMsgRcRt
JBSSPI_METRICS	JVM	Number of Stateful Session Beans created per second	S022_StfulSesBnCrtRt
JBSSPI_METRICS	JVM	Number of Stateful Session Beans passivated per second	S023_StfulSesBnPasRt
JBSSPI_METRICS	JVM	Number of Stateless Session Beans created per second	S024_StlesSesBnCrtRt
JBSSPI_METRICS	JMS	Number of pending JMS messages in a session	S025_JMSTotlPndgMsgs
JBSSPI_METRICS	JMS	New pending JMS messages in a session over collection interval	S026_JMSNewPndgMsgs
JBSSPI_METRICS	JMS	Number of expired JMS messages in a session	S027_JMSTotlExprMsgs
JBSSPI_METRICS	JMS	New expired JMS messages in a session over collection interval	S028_JMSNewExprMsgs

**Table 13 Data Store Metrics of JBoss AS SPI**

<b>Table Name</b>	<b>Area</b>	<b>Metric Description</b>	<b>Column Name</b>
JBSSPI_METRICS	JMS	Number of JMS messages exchanged in a session	S029_JMSMsgExchCnt
JBSSPI_METRICS	JMS	Average time spent by a JMS message in a session before being delivered	S030_JMSMsgAvgWtTime
JBSSPI_METRICS	JMS	Number of pending JMS messages for a producer	S031_JMSPTtlPndgMsgs
JBSSPI_METRICS	JMS	New pending JMS messages for a producer over collection interval	S032_JMSPNewPndgMsgs
JBSSPI_METRICS	JMS	Number of expired JMS messages for a producer	S033_JMSPTtlExprMsgs
JBSSPI_METRICS	JMS	New expired JMS messages for a producer over collection interval	S034_JMSPNewExprMsgs
JBSSPI_METRICS	JMS	Number of JMS messages sent by a producer	S035_JMSPMsgSentCnt
JBSSPI_METRICS	JMS	Average time spent by a JMS message before being delivered to the producer	S036_JMSPMsgAvgWtTm
JBSSPI_METRICS	JMS	Number of pending JMS messages for a consumer	S037_JMSCTtlPndgMsgs
JBSSPI_METRICS	JMS	New pending JMS messages for a consumer over collection interval	S038_JMSCNewPndgMsgs
JBSSPI_METRICS	JMS	Number of expired JMS messages for a consumer	S039_JMSCTtlExprMsgs

**Table 13 Data Store Metrics of JBoss AS SPI**

<b>Table Name</b>	<b>Area</b>	<b>Metric Description</b>	<b>Column Name</b>
JBSSPI_METRICS	JMS	New expired JMS messages for a consumer over collection interval	S040_JMSCNewExprMsgs
JBSSPI_METRICS	JMS	Number of JMS messages received by a consumer	S041_JMSCMsgRecvdCnt
JBSSPI_METRICS	JMS	Average time spent by a JMS message before being received by the consumer	S042_JMSCMsgAvgWtTm

## C Data Store Details for Graphs

The JBoss AS SPI creates the following data store details for graphs for JBoss Application Server.

**Table 14 Data Store for Graphs**

Graph Name	Policy Logging Data	Spec File	Data StoreData Class
Transaction Rollback Percent	JBSSPI_0002 JBSSPI-05min	wasspi_jbs_graph.sp	wasspi_jbs_graph
	JBSSPI_0003 JBSSPI-05min	wasspi_jbs_graph.sp	wasspi_jbs_graph
JCA Performance	JBSSPI_0004 JBSSPI-05min	wasspi_jbs_graph.sp	wasspi_jbs_graph
JVM Utilization	JBSSPI_0005	wasspi_jbs_graph.sp	wasspi_jbs_graph
Servlet Session Activity	JBSSPI_0006 JBSSPI-05min	wasspi_jbs_graph.sp	wasspi_jbs_graph
JCA Performance	JBSSPI_0007 JBSSPI-05min	wasspi_jbs_graph.sp	wasspi_jbs_graph
	JBSSPI_0008 JBSSPI-05min	wasspi_jbs_graph.sp	wasspi_jbs_graph
	JBSSPI_0009 JBSSPI-05min	wasspi_jbs_graph.sp	wasspi_jbs_graph
	JBSSPI_0010	wasspi_jbs_graph.sp	wasspi_jbs_graph
	JBSSPI_0011	wasspi_jbs_graph.sp	wasspi_jbs_graph
	JBSSPI_0012	wasspi_jbs_graph.sp	wasspi_jbs_graph
EJB Performance	JBSSPI_0015	wasspi_jbs_graph.sp	wasspi_jbs_graph
	JBSSPI_0016	wasspi_jbs_graph.sp	wasspi_jbs_graph
	JBSSPI_0017	wasspi_jbs_graph.sp	wasspi_jbs_graph
	JBSSPI_0018	wasspi_jbs_graph.sp	wasspi_jbs_graph
EJB MessageDrivenBean Activity	JBSSPI_0019	wasspi_jbs_graph.sp	wasspi_jbs_graph
	JBSSPI_0020	wasspi_jbs_graph.sp	wasspi_jbs_graph
	JBSSPI_0021	wasspi_jbs_graph.sp	wasspi_jbs_graph

**Table 14 Data Store for Graphs**

<b>Graph Name</b>	<b>Policy Logging Data</b>	<b>Spec File</b>	<b>Data StoreData Class</b>
EJB StatefulSessionBean Activity	JBSSPI_0022	wasspi_jbs_graph.sp	wasspi_jbs_graph
	JBSSPI_0023	wasspi_jbs_graph.sp	wasspi_jbs_graph
EJB StatelessSessionBean Activity	JBSSPI_0024	wasspi_jbs_graph.sp	wasspi_jbs_graph
JMS Session Activity	JBSSPI_0025	wasspi_jbs_graph.sp	wasspi_jbs_graph
	JBSSPI_0026	wasspi_jbs_graph.sp	wasspi_jbs_graph
	JBSSPI_0027	wasspi_jbs_graph.sp	wasspi_jbs_graph
	JBSSPI_0028	wasspi_jbs_graph.sp	wasspi_jbs_graph
	JBSSPI_0029	wasspi_jbs_graph.sp	wasspi_jbs_graph
	JBSSPI_0030	wasspi_jbs_graph.sp	wasspi_jbs_graph
JMS Producer Performance	JBSSPI_0031	wasspi_jbs_graph.sp	wasspi_jbs_graph
	JBSSPI_0032	wasspi_jbs_graph.sp	wasspi_jbs_graph
	JBSSPI_0033	wasspi_jbs_graph.sp	wasspi_jbs_graph
	JBSSPI_0034	wasspi_jbs_graph.sp	wasspi_jbs_graph
	JBSSPI_0035	wasspi_jbs_graph.sp	wasspi_jbs_graph
	JBSSPI_0036	wasspi_jbs_graph.sp	wasspi_jbs_graph
JMS Consumer Performance	JBSSPI_0037	wasspi_jbs_graph.sp	wasspi_jbs_graph
	JBSSPI_0038	wasspi_jbs_graph.sp	wasspi_jbs_graph
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