HP Operations Smart Plug-in for IBM WebSphere Application Server

for HP Operations Manager for UNIX®

Software Version: 7.00

Reference Guide

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Contents

1 WebSphere SPI Policies

This chapter provides detailed and summary listings of the HP Operations Smart Plug-in for WebSphere Application Server (WebSphere SPI) metrics. The metric descriptions will help you interpret the incoming WebSphere SPI data. You can use this information for customizing metric policies.

The chapter contains the following sections:

WebSphere SPI Metrics

Metric Summary

WebSphere SPI metric policies have pre-defined settings that simplify setup tasks for the WebSphere SPI. However, you may want to customize these settings depending on your environment. This and the section that follows provide basic information required for such customizations.

The summary list provides a list of metrics and most basic information for each metric. Following the metric summary table are individual metric details for every WebSphere Server metric and, when available, its monitor policy settings. For metrics used for reporting or graphing only, no monitor settings exist, hence the setting is labeled 'N/A' (not applicable).

For easy reference, the tables on the following pages list all metrics contained in the chapter. Following the metric summary table are individual metric details for every WebSphere SPI metric and, when available, its monitor policy settings. For metrics used for reporting or graphing only, no monitor settings exist, hence the setting is labeled "N/A" (not applicable).

Metric Summary Sheet: Columns Key

The summary list assists you in quickly finding a metric and its most basic information. Following the summary list are individual metric details which include settings for alarming metrics with parallel monitor policies.

The column key for the Metric Summary sheet is listed in Table 1 on page 10.

Table 1   Metric Summary Sheet: Columns Key

ID (Metric Number)	The number assigned to the metric; for example 25 = I025. Numbers in the 200 range are for drill down metrics that collect values on a single instance of WebSphere App Server; for example 225 = I225.
Metric Name	The metric name in non-abbreviated form; for example, EJBTranRbPct = EJB Transaction Rollback Percent.
Description	What the collected metric value represents.
Impact	Shows the generated overhead rating of the metric; possible ratings are: H = High M = Medium L = Low
Type	The purpose for which the metric is collected. A = Alarming R = Reporter reporting G = Reporter graphing
Severity	The severity of the exceeded threshold condition.
Area	The logical area to which the metric belongs.

Table 2   Summary WebSphere SPI Metric Listing

ID	Metric Name	Description	Impact	Type	Severity	Area
1	I001_ServerStatus	Status of a server	L	A	Critical	Availability
2	I002_ServerStatus Rep	Status of a server - reporting	L	R		Availability
5	I005_JVMMemUtil Pct	% of heap space used in the JVM	L	AG	Critical	JVM
6	I006_ClusterStatus	Status of cluster	L	A	Critical	JVM
210	I210_ThreadPool ActThreads	Average # of active threads in a pool during collection interval	H	R		Performance

Table 2   Summary WebSphere SPI Metric Listing

ID	Metric Name	Description	Impact	Type	Severity	Area
211	I211_ThreadPool AveSize	Average # of threads in a pool (active and idle) during collection interval	H	R		Performance
212	I212_ThreadPool UtilPct	% of threads used in a pool collection interval	H	A	Critical Major Minor	Performance
13	I013_ThrdPool PctMax	% of time # of threads in pool reached configured maximum size	H	G		Performance
213	I213_ThreadPool PctMax	% of time # of threads in pool reached configured maximum size (drill down)	H	A	Minor	Performance
14	I014_ThrdPool CrtRt	# of threads created per minute	L	G		Performance
20	I020_EJBPoolUtil	% of active beans in the pool	H	G		EJB
220	I220_EJBPoolUtil	% of active beans in the pool (drill down)	H	RA	Warning	EJB
221	I221_EJBMeth RespTime	Average response time of an EJB in msec	M	RA	Major Warning	EJB
22	I022_EJBMeth CallsRt	# of EJB method calls per minute	L	GR		EJB
222	I222_EJBMethod CallsRt	# of EJB method calls per minute (drill down)	L	RA	Warning	EJB

Table 2   Summary WebSphere SPI Metric Listing

ID	Metric Name	Description	Impact	Type	Severity	Area
223	I223_EJBPoolSize	Average size of the EJB pool	H	R		EJB
24	I024_EJBEntDat LdStRt	# of times an EJB was written to or loaded from the database per minute	L	GR		EJB
224	I224_EJBEntData LdStRt	# of times an EJB was written to or loaded from the database per minute (drill down)	L	RA	Warning	EJB
25	I025_EJBPoolMiss Pct	Average % of time a call to retrieve an EJB from the pool failed	L	G		EJB
225	I225_EJBPoolMiss Pct	Average % of time a call to retrieve an EJB from the pool failed (drill down)	L	R		EJB
26	I026_EJBConcLives	Average # of bean objects in the pool	H	GA	Warning	EJB
40	I040_ServSessAve Life	Average servlet session lifetime in msec	M	GA	Warning	Servlets
41	I041_ServSessAct Sess	# of sessions currently being accessed	H	GRA	Warning	Servlets
42	I042_ServInvSessRt	# of sessions being invalidated per second	L	GA	Warning	Servlets

Table 2   Summary WebSphere SPI Metric Listing

ID	Metric Name	Description	Impact	Type	Severity	Area
45	I045_WebAppServ ReqRt	# of requests for a servlet per second	L	GR		Web Applications
245	I245_WebApp ServletReqRt	# of requests for a servlet per second (drill down)	L	RA	Warning	Web Applications
246	I246_WebApp ServletRespTime	Average response time in milliseconds for a servlet	M	AR	Major Warning	Web Applications
47	I047_WebApp ServErrRt	# of errors in a servlet per second	L	G		Web Applications
247	I247_WebApp ServletErrorRt	# of errors in a servlet per second (drill down)	L	A	Warning	Web Applications
48	I048_WebApp ServLoad	# of servlets currently loaded for a web application	L	GA	Warning	Web Applications
49	I049_WebApp ServRelRt	# of servlets reloaded for a web application per minute	L	G		Web Applications
260	I260_JDBCConn PoolSize	Average # of connections in the connection pool	H	RA	Minor	JDBC
61	I061_JDBCCon PoolWait	Average # of threads waiting for a connection from connection pools	H	G		JDBC

Table 2   Summary WebSphere SPI Metric Listing

ID	Metric Name	Description	Impact	Type	Severity	Area
261	I261_JDBCConn PoolWaiters	Average # of threads waiting for a connection from connection pools (drill down)	H	RA	Major Warning	JDBC
62	I062_JDBConPool WtTim	Average time that a client waited for a connection in msec	M	G		JDBC
62	I062_JDBConPool WtTim (WBS version 5)	Average time that a client waited for a connection in msec	H	G		JDBC
262	I262_JDBCConn PoolWaitTime	Average time that a client waited for a connection in msec (drill down)	M	RA	Major Warning	JDBC
263	I263_JDBCConn PoolUtil	% of connection pool in use	H	RA	Critical Major	JDBC
264	I264_JDBCConn PoolMaxPct	% of time that all connections in a pool are in use	H	A	Critical Major	JDBC
65	I065_JDBConPoolTi mRt	# of times a client timed out waiting for a connection from the pool per minute	L	G		JDBC
265	I265_JDBCConn PoolTimeOutRts	# of times a client timed out waiting for a connection from the pool per minute (drill down)	L	RA	Critical Major	JDBC

Table 2   Summary WebSphere SPI Metric Listing

ID	Metric Name	Description	Impact	Type	Severity	Area
66	I066_JDBConPool Thru	# of connections allocated and returned by applications per second	L	GR		JDBC
266	I266_JDBConnPool Throughput	# of connections allocated and returned by applications	L	RA	Warning	JDBC
70	I070_TranGlobDur	Average duration of global transactions	H	GA	Warning	Transactions
70	I070_TranGlobDur (WBS version 5)	Average duration of global transactions	M	GA	Warning	Transactions
71	I071_TranLocDur	Average duration of local transactions	H	GA	Warning	Transactions
71	I071_TranLocDur (WBS version 5)	Average duration of local transactions	M	GA	Warning	Transactions
72	I072_TranGlob CommDur	Average duration of commits for global transactions	M	GA	Warning	Transactions
73	I073_TranLocComm Dur	Average duration of commits for local transactions	M	GA	Warning	Transactions
74	I074_TranRollback Rt	# of global and local transactions rolled back per second	L	GA	Warning	Transactions

Table 2   Summary WebSphere SPI Metric Listing

ID	Metric Name	Description	Impact	Type	Severity	Area
75	I075_TranTimeoutRt	# of global and local transactions that timed out per second	L	GA	Warning	Transactions
76	I076_TranCommitRt	# of global and local transactions that were committed per second	L	GA	Warning	Transactions
77	I077_TranThruput	# of global and local transactions that were completed per second	L	R		Transactions
78	I078_TranStartRt	# of global and local transactions that were begun per second	L	GA	Warning	Transactions
807	I807_JVMMemFreePct	Percent of JVM Free Memory available	ML	G		JVM
808	I808_JVMCpuUsagePct	The CPU Usage of the Java virtual machine	ML	G		JVM
809	I809_GCIntervalTime	The average garbage collection value in seconds between two garbage collections	HML	G		JVM

Table 2   Summary WebSphere SPI Metric Listing

ID	Metric Name	Description	Impact	Type	Severity	Area
810	I810_MsgBackout Rate	The rate at which the messages failed to be delivered to the bean onMessage method (message driven beans)	ML	ARG	Warning	EJB
811	I811_ReturnDiscrdRt	The rate at which the returning object was discarded because the pool was full (entity and stateless)	HML	ARG	Warning	EJB
812	I812_ThrdPoolHung Rt	The rate at which the threads are declared hung	HML	AG	Warning	ThreadPool
813	I813_CcrtThdPlHng Ct	The number of concurrently hung threads	HML	G		ThreadPool
814	I814_PrdstcchdsrdR t	The rate at which the prepared statements are discarded by the least recently used (LRU) algorithm of the statement cache	HM	ARG	Warning	EJB

WebSphere SPI Metrics and Performance Impact

All data collection affects performance in some way, with impact varying according to metric (counter). The overhead cost associated with each WebSphere SPI metric is represented with a rating of low, medium, or high. A metric with a low rating involves only a minor

performance impact since its calculation requires just a single addition or subtraction. Metrics with medium or high ratings have higher performance impacts because the calculations required for the collected data generally require multiplication, division, or both.

WebSphere SPI Policy Groups (Organized According to Performance Impact)

WebSphere SPI metrics are grouped in three groups according to the impact that their data collection has on system performance:

- Low Impact
- Medium Impact
- High Impact

The Low Impact group has only low impact metrics; while the Medium has both low and medium. High has all metrics, adding those with high impact levels to the low and medium groups.

Table 3   Low Impact Metrics

LOW IMPACT Metric Number	Metric Name	WebSphere Version	PMI Module
WBSSPI_0001	Server Status	6.0, 6.1, 7.0	JMX MBean
WBSSPI_0002	Server Status Report	6.0, 6.1, 7.0	JMX MBean
WBSSPI_0005	JVM Memory Utilization	6.0, 6.1, 7.0	jmvRuntimeModule
WBSSPI_0006	Cluster Status	6.0, 6.1, 7.0	jmvRuntimeModule
WBSSPI_0807	JVM Memory Free Percent	6.0, 6.1, 7.0	jvmRuntimeModule
WBSSPI_0808	JVM CPU Usage Percent	6.0, 6.1, 7.0	jvmRuntimeModule
WBSSPI_0809	GCIntervalTime	6.0, 6.1, 7.0	jvmRuntimeModule
WBSSPI_0014	Thread Pool Created Rate	6.0, 6.1, 7.0	threadPoolModule
WBSSPI_0812	Thread Pool Hung Rate	6.0, 6.1, 7.0	threadPoolModule
WBSSPI_0813	Concurrent Thread Pool Hung Count	6.0, 6.1, 7.0	threadPoolModule
WBSSPI_0022	EJB Method Calls Rate	6.0, 6.1, 7.0	beanModule
WBSSPI_0222	EJB Method Calls Rate; Drill Down	6.0, 6.1, 7.0	beanModule
WBSSPI_0024	EJB Data Loads/Stores Rate	6.0, 6.1, 7.0	beanModule
WBSSPI_0224	EJB Data Loads/Stores Rate; Drill Down	6.0, 6.1, 7.0	beanModule
WBSSPI_0025	Web Application Servlet Request Rate	6.0, 6.1, 7.0	beanModule
WBSSPI_0225	Web Application Servlet Request Rate; Drill Down	6.0, 6.1, 7.0	beanModule
WBSSPI_0810	Message Backout Rate	6.0, 6.1, 7.0	beanModule
WBSSPI_0811	Return Discard Rate	6.0, 6.1, 7.0	beanModule
WBSSPI_0042	Server Invalidated Session Rate	6.0, 6.1, 7.0	servletSessionsModule
WBSSPI_0045	Web Application Servlet Request Rate	6.0, 6.1, 7.0	webAppModule

Table 3   Low Impact Metrics (cont'd)

LOW IMPACT Metric Number	Metric Name	WebSphere Version	PMI Module
WBSSPI_0245	Web Application Servlet Request Rate; Drill Down	6.0, 6.1, 7.0	webAppModule
WBSSPI_0246	Web Application Servlet Response Time	6.0, 6.1, 7.0	webAppModule
WBSSPI_0047	Web Application Servlet Error Rate	6.0, 6.1, 7.0	webAppModule
WBSSPI_0247	Web Application Servlet Error Rate	6.0, 6.1, 7.0	webAppModule
WBSSPI_0048	Web Application Servlet Load Rate	6.0, 6.1, 7.0	webAppModule
WBSSPI_0049	Web Application Servlet Reload Rate	6.0, 6.1, 7.0	webAppModule
WBSSPI_0065	JDBC Connection Pool Timeout Rate	6.0, 6.1, 7.0	connectionPoolModule
WBSSPI_0265	JDBC Connection Pool Timeout Rate; Drill Down	6.0, 6.1, 7.0	connectionPoolModule
WBSSPI_0066	JDBC Connection Pool Throughput	6.0, 6.1, 7.0	connectionPoolModule
WBSSPI_0266	JDBC Connection Pool Throughput; Drill Down	6.0, 6.1, 7.0	connectionPoolModule
WBSSPI_0074	Transaction Rollback Rate	6.0, 6.1, 7.0	transactionModule
WBSSPI_0075	Transaction Timeout Rate	6.0, 6.1, 7.0	transactionModule
WBSSPI_0076	Transaction Commit Rate	6.0, 6.1, 7.0	transactionModule
WBSSPI_0077	Transaction Throughput	6.0, 6.1, 7.0	transactionModule
WBSSPI_0078	Transaction Start Rate	6.0, 6.1, 7.0	transactionModule

Table 4   Medium Impact Metrics

MEDIUM IMPACT Metric Number	Metric Name	WebSphere Version	PMI Module
WBSSPI_0221	EJB Method Response Time	6.0, 6.1, 7.0	beanModule
WBSSPI_0810	Message Backout Rate	6.0, 6.1, 7.0	beanModule
WBSSPI_0811	Return Discard Rate	6.0, 6.1, 7.0	beanModule
WBSSPI_0040	Servlet Session Average Life	6.0, 6.1, 7.0	servletSessionsModule
WBSSPI_0062	JDB Connection Pool Wait Time	6.0, 6.1, 7.0	connectionPoolModule
WBSSPI_0262	JDB Connection Pool Wait Time; Drill Down	6.0, 6.1, 7.0	connectionPoolModule
WBSSPI_0814	PrprdstcachdiscrdRt	6.0, 6.1, 7.0	connectionPoolModule
WBSSPI_0070	Transaction Global Duration	6.0, 6.1, 7.0	transactionModule
WBSSPI_0071	Transaction Local Duration	6.0, 6.1, 7.0	transactionModule
WBSSPI_0072	Transaction Global Commit Duration	6.0, 6.1, 7.0	transactionModule
WBSSPI_0073	Transaction Local Commit Duration	6.0, 6.1, 7.0	transactionModule
WBSSPI_0807	JVM Memory Free Percent	6.0, 6.1, 7.0	jvmRuntimeModule

Table 4   Medium Impact Metrics (cont'd)

MEDIUM IMPACT Metric Number	Metric Name	WebSphere Version	PMI Module
WBSSPI_0808	JVM CPU Usage Percent	6.0, 6.1, 7.0	jvmRuntimeModule
WBSSPI_0809	GCIntervalTime	6.0, 6.1, 7.0	jvmRuntimeModule
WBSSPI_0812	Thread Pool Hung Rate	6.0, 6.1, 7.0	threadPoolModule
WBSSPI_0813	Concurrent Thread Pool Hung Count	6.0, 6.1, 7.0	threadPoolModule

Table 5   High Impact Metrics

HIGH IMPACT Metric Number	Metric Name	WebSphere Version	PMI Module
WBSSPI_0005	JVM Memory Utilization	6.0, 6.1, 7.0	jmvRuntimeModule
WBSSPI_0809	GCIntervalTime	6.0, 6.1, 7.0	jvmRuntimeModule
WBSSPI_0210	Thread Pool Active Threads	6.0, 6.1, 7.0	threadPoolModule
WBSSPI_0211	Thread Pool Average Size	6.0, 6.1, 7.0	threadPoolModule
WBSSPI_0212	Thread Pool Utilization Percentage	6.0, 6.1, 7.0	threadPoolModule
WBSSPI_0013	Thread Pool Percentage Maximum	6.0, 6.1, 7.0	threadPoolModule
WBSSPI_0213	Thread Pool Percentage Maximum; Drill Down	6.0, 6.1, 7.0	threadPoolModule
WBSSPI_0812	Thread Pool Hung Rate	6.0, 6.1, 7.0	threadPoolModule
WBSSPI_0813	Concurrent Thread Pool Hung Count	6.0, 6.1, 7.0	threadPoolModule
WBSSPI_0020	EJB Pool Utilization	6.0, 6.1, 7.0	beanModule
WBSSPI_0220	EJB Pool Utilization; Drill Down	6.0, 6.1, 7.0	beanModule
WBSSPI_0223	EJB Pool Size	6.0, 6.1, 7.0	beanModule
WBSSPI_0026	EJB Concurrent Lives	6.0, 6.1, 7.0	beanModule
WBSSPI_0811	Return Discard Rate	6.0, 6.1, 7.0	beanModule
WBSSPI_0041	Servlet Session Active Sessions	6.0, 6.1, 7.0	servletSessionsModule
WBSSPI_0260	JDBC Connection Pool Size	6.0, 6.1, 7.0	connectionPoolModule
WBSSPI_0061	JDBC Connection Pool Waiters	6.0, 6.1, 7.0	connectionPoolModule
WBSSPI_0261	JDBC Connection Pool Waiters; Drill Down	6.0, 6.1, 7.0	connectionPoolModule
WBSSPI_0062	JDB Connection Pool Wait Time	6.0, 6.1, 7.0	connectionPoolModule
WBSSPI_0262	JDB Connection Pool Wait Time; Drill Down	6.0, 6.1, 7.0	connectionPoolModule
WBSSPI_0263	JDBC Connection Pool Utilization	6.0, 6.1, 7.0	connectionPoolModule

Table 5 High Impact Metrics (cont'd)

HIGH IMPACT Metric Number	Metric Name	WebSphere Version	PMI Module
WBSSPI_0264	JDBC Connection Pool Percentage Maximum	6.0, 6.1, 7.0	connectionPoolModule
WBSSPI_0814	PrprdstcachdiscrdRt	6.0, 6.1, 7.0	connectionPoolModule
WBSSPI_0070	Transaction Global Duration	6.0, 6.1, 7.0	transactionModule

PMI Modules Not Used

The following PMI modules are not used by the SPI (PMI module settings should be set to N, none, for these modules):

- cacheModule
- orbPerfModule
- systemModule
- webServicesModule

Metric Details

In this section WebSphere SPI metrics are explained in detail.

Metric Specification Description

The WebSphere SPI metrics are identified by a metric name/number. These numbers also appear in the monitor policies and Tool Bank (ASCII) reports (if either exists for the parallel metric). The naming/numbering conventions are as follows:

- **metric names/numbers**: WebSphere SPI metrics can be identified as IXXX, where *XXX* represents the number assigned to the metric. The letter 'I' preceding each metric number designates the metric as a WebSphere SPI metric.

- **metric number ranges**: WebSphere SPI numbers range from 0000 to 0999 with ranges covering metrics as follows:

  1 - 4 —Availability
  10-19 —Server Performance
  20-39 —Enterprise Java Beans
  40-44 —Servlets
  45-49 —Web Application
  60-69 —JDBC
  70-79 — transaction

  In addition, the 1000 to 1999 range is reserved for metrics defined by the user (user defined metrics).

- **Tool Bank report names**: If available for a specific WebSphere SPI metric, the report name is the metric number followed by an underscore and the abbreviated metric name; for example, I0005_JVMMemUtilPct.

- **monitor policy names**: If a monitor policy is available for a metric, the monitor policy name omits the 'I' and begins with WBSSPI followed by an underscore and the metric number. Zeros are used as necessary to total a four-digit number; for example, metric number I005 = monitor policy WBSSPI_0005

Table 6   Metric Attribute Definitions

Monitor Policy Name	Always begins with 'WBSSPI', followed by the metric number. Within the monitor policy you can change settings as described in the definition; for example, threshold value, severity, etc.
Metric Name	The name assigned to the metric.
Metric Type	Shows how the metric is used: • Alarming (using monitor policy settings) • Reporting (within a report of HP Reporter) • Graphing (within a graph of the HP Performance Manager).
Description	What the metric represents.
Impact	Performance impact rating: • H (High): Data counters (metrics) with the highest impact on system performance • M (Medium): Data counters with moderate impact on system performance • L (Low): Data counters with nominal impact on system performance
PMI Module	PMI module mapped to the metric.
Severity: Condition	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.
Collection Interval	The time interval at which the metric is collected and analyzed. (5 min, 15 min, 1 hour, or 1 time daily)
HPOM Min/Max Threshold	This setting is same for all WebSphere SPI metrics (maximum threshold).
Default HPOM Threshold	Shows the default HPOM threshold for metrics with parallel monitor policies. (*=Metrics that should have been assigned a threshold value of 0 are set at 0.5 because HPOM alarms must occur at <= or >= values. Since a 0 value would always trigger an alarm, the threshold is set to 0.5)
HPOM Threshold Type	This setting is same for all WebSphere SPI metrics (without reset).
Message Group	The HPOM message group to which the metric belongs: • WBSSPI = conditions occurring in the WebSphere SPI • WebSphere = conditions occurring in the WebSphere application server)
Message Text	The message displayed for each condition.

Table 6   Metric Attribute Definitions

Instruction Text	Problem-solving information (Probable causes, Potential impact, Suggested actions, and Reports)
Tool Bank Report	Indicates whether or not an ASCII report is available and whether or not an Automatic Action is associated with it. **Note**: All automatic action or operator action reports are present in the HPOM Tool Bank. The Performance Agent metrics (no alarms) do not have an HPOM policy for Operator or Auto actions, therefore they are present *only* in the Tool Bank. N/A means that no report is planned.
Area	The logical area to which the metric belongs. (Availability, JVM, Performance, Servlets, EJB, Servlets, Web Applications, J2C, JDBC, Transactions)

Metric I001_ServerStatus

Monitor Policy Name	WBSSPI_0001
Metric Name	I001_ServerStatus
Metric Type	Alarming
Description	Status of a server, monitors whether running or not
Impact	Low
PMI Module	JMX MBean
Severity: Condition with threshold	WBSSPI-0001.1: Critical threshold, 4.5
Collection Interval	5m
Message Group	WebSphere
Message Text	WBSSPI-0001.1: Server status is down
Instruction Text	**Probable Cause**: The server is not started. **Potential Impact**: Performance monitoring for the server is not possible, and all the deployed applications will not work, until the server is started. **Suggested Action**: Start the server using the WebSphere StartServer script.
Tool Bank Report	Not Applicable
Area	Availability

Metric I002_ServerStatusRep

Monitor Policy Name	N/A—Used to generate a report
Metric Name	I002_ServerStatusRep
Metric Type	Reporting
Description	Status of server—reporting
Impact	Low
PMI Module	JMX MBean
Severity: Condition with threshold	N/A
Collection Interval	5m
Message Text	N/A
Instruction Text	NA
Tool Bank Report	N/A
Area	Availability

Metric I005_JVMMemUtilPct

Monitor Policy Name	WBSSPI_0005
Metric Name	I005_JVMMemUtilPct
Metric Type	Alarming and Graphing
Description	Percentage of heap space used in the JVM
Impact	Low (WebSphere version 6.0, 6.1, 7.0)
PMI Module	jvmRuntimeModule
Severity: Condition with threshold	WBSSPI-0005.1: Critical threshold, 98 WBSSPI-0005.2: Major threshold, 95
Collection Interval	15m
Message Group	WebSphere
Message Text	WBSSPI-0005.10:% of heap space used (<$VALUE>%) too high (>=<$THRESHOLD>%) WBSSPI-0005.11:% of heap space used (<$VALUE>%) is within the threshold (<$THRESHOLD>%) WBSSPI-0005.20:% of heap space used (<$VALUE>%) too high (>=<$THRESHOLD>%) WBSSPI-0005.21:% of heap space used (<$VALUE>%) is within the threshold (<$THRESHOLD>%)

Monitor Policy Name	WBSSPI_0005

Instruction Text	**Probable Cause**: The JVM is running out of available heap space.
	
	Potential Impact: The performance of all the J2EE components (Servlets, EJBs, and so on) for the server becomes slow.
	
	Suggested Action: For IBM i and distributed platforms, click **Servers → Server Types → WebSphere Application Servers → <server_name>**. In the Server Infrastructure section, click **Java and process management → Process definition → Java virtual machine**.
	
	Java Virtual Machine (JVM) Heap Size
	
	The Java Virtual Machine (JVM) Heap Size settings influence garbage collection of Java objects. If you increase the heap size, garbage collection occurs less frequently, but takes longer. These settings depend strongly on your application and on the amount of physical memory available. Consider:
	
	• whether the JVM Heap for the selected application server shares physical memory with other application server JVM Heaps on the same machine.
	
	• specifying JVM Heaps to reside in physical memory and prevent swapping to disk.
	
	• setting the starting JVM Heap Size to one quarter of the maximum JVM Heap Size.
	
	• setting the maximum JVM Heap Size to the following, if you have only one application server on the machine:
	
	    128 MB, for small systems with less than 1 GB of memory
	    256 MB, for systems with 2 GB of memory
	    512 MB, for larger systems
	
	Note: A value of 0 or blank indicates that no starting or maximum heap size is passed when initializing the JVM. On OS/400, the JVM Heap Size is quite different and you should never set the maximum heap size.

Tool Bank Report	Yes
Area	JVM

Metric I006_ClusterStatus

Monitor Policy Name	WBSSPI_0006
Metric Name	I006_ClusterStatus
Metric Type	Alarming
Description	Status of the cluster
Impact	Low (WebSphere version 6.0, 6.1, 7.0)
PMI Module	jmvRuntimeModule
Severity: Condition with threshold	WBSSPI-0006.10: Critical threshold, 1.0 WBSSPI-0006.20: Major threshold, 2.0
Collection Interval	15m
Message Group	WebSphere
Message Text	WBSSPI-0006.10:Cluster is stopped [Policy: <$NAME>]. WBSSPI-0006.11:Cluster is started [Policy: <$NAME>]. WBSSPI-0006.20:Cluster is partially stopped [Policy: <$NAME>].
Instruction Text	**Probable Cause**: Cluster is stopped. **Potential Impact**: The cluster and all servers in this cluster is stopped. **Suggested Action**: For IBM i and distributed platforms, click **Servers → Server Types → WebSphere Application Servers → <server_name>**. In the Server Infrastructure section, click **Java and process management → Process definition → Java virtual machine**. To restart the cluster from the admin console, click **Servers → Clusters → WebSphere Application Servers clusters → <cluster_name>** and issue the **start** command.
Tool Bank Report	Yes
Area	JVM

Metric I807_JVMMemFreePct

Monitor Policy Name	WBSSPI_0007
Metric Name	I807_JVMMemFreePct
Metric Type	Graphing
Description	Percent of JVM Free Memory available
Impact	Medium and Low
PMI Module	jmvRuntimeModule
Severity: Condition with threshold	N/A
Collection Interval	15m
Message Group	WebSphere
Message Text	N/A
Instruction Text	N/A
Tool Bank Report	N/A
Area	JVM

Metric I808_JVMCpuUsagePct

Monitor Policy Name	WBSSPI_0008
Metric Name	I808_JVMCpuUsagePct
Metric Type	Graphing
Description	The CPU Usage of the Java virtual machine
Impact	Medium and Low
PMI Module	jmvRuntimeModule
Severity: Condition with threshold	N/A
Collection Interval	15m
Message Group	WebSphere
Message Text	N/A
Instruction Text	N/A
Tool Bank Report	N/A
Area	JVM

Metric I809_GCIntervalTime

Monitor Policy Name	WBSSPI_0009
Metric Name	I809_GCIntervalTime
Metric Type	Graphing
Description	The average garbage collection value in seconds between two garbage collections
Impact	High, Medium, and Low
PMI Module	jmvRuntimeModule
Severity: Condition with threshold	N/A
Collection Interval	1h
Message Group	WebSphere
Message Text	N/A
Instruction Text	N/A
Tool Bank Report	N/A
Area	JVM

Metric I210_ThreadPoolActThreads

Monitor Policy Name	N/A—Used to generate a report
Metric Name	I210_ThreadPoolActThreads
Metric Type	Reporting
Description	Average number of active threads in a pool during collection interval
Impact	High
PMI Module	threadPoolModule
Severity: Condition with threshold	N/A
Collection Interval	15m
Message Group	N/A
Message Text	N/A
Instruction Text	N/A
Tool Bank Report	N/A
Area	Performance

Metric I211_ThreadPoolAveSize

Monitor Policy Name	N/A—Used to generate a report
Metric Name	I211_ThreadPoolAveSize
Metric Type	Reporting
Description	Average number of threads (active and idle) in a pool during collection interval
Impact	High
PMI Module	threadPoolModule
Severity: Condition with threshold	N/A
Collection Interval	15m
Message Group	N/A
Message Text	N/A
Instruction Text	N/A
Tool Bank Report	N/A
Area	Performance

Metric I212_ThreadPoolUtilPct

Monitor Policy Name	WBSSPI_0212
Metric Name	I212_ThreadPoolUtilPct
Metric Type	Alarming
Description	Percentage of threads used in a pool during collection interval
Impact	High
PMI Module	threadPoolModule
Severity: Condition with threshold	WBSSPI-0212.1: Critical threshold, 90 WBSSPI-0212.2: Major threshold, 85 WBSSPI-0212.3: Minor threshold, 80
Collection Interval	15m
Message Group	WebSphere
Message Text	WBSSPI-0212.10: % of threads used (<$VALUE>%) too high (>=<$THRESHOLD>%) WBSSPI-0212.11: % of threads used (<$VALUE>%) is within the threshold (<$THRESHOLD>%) WBSSPI-0212.20: % of threads used (<$VALUE>%) too high (>=<$THRESHOLD>%) WBSSPI-0212.21: % of threads used (<$VALUE>%) is within the threshold (<$THRESHOLD>%) WBSSPI-0212.30: % of threads used (<$VALUE>%) too high (>=<$THRESHOLD>%) WBSSPI-0212.31: % of threads used (<$VALUE>%) is within the threshold (<$THRESHOLD>%)
Instruction Text	**Probable Cause**: The percent of threads in use in a pool has exceeded a threshold value. **Potential Impact**: Small Thread pool size might have been chosen.This choice can have the following impact: • Thread pool saturation condition may occur. • CPU utilization may consistently keep shooting up. **Suggested action**: 1 To fix a saturated thread pool, keep changing the thread pool size in steps until CPU utilization reaches between 75 and 85 percent. 2 Tune the application using a code profiling tool. 3 To check the size of the threadpool, in the Admin Console click **Servers → Server Types → Application servers → <server_name> → Thread pools** or **Servers → Server Types → Application servers → server1 → ORB service → Thread Pool.**
Tool Bank Report	Yes
Area	Performance

If the ThreadPool Size is configured as growable, the value for the metric I212_ThreadPoolUtilPct can exceed 100%. In this case, modify the threshold to a desired value to avoid false or frequent alarms.

Metric I013_ThrdPoolPctMax

Monitor Policy Name	N/A—Used to generate a graph
Metric Name	I013_ThrdPoolPctMax
Metric Type	Graphing
Description	Percentage of time number of threads in pool reached configured maximum size
Impact	High
PMI Module	threadPoolModule
Severity: Condition with threshold	N/A
Collection Interval	15m
Message Group	N/A
Message Text	N/A
Instruction Text	N/A
Tool Bank Report	N/A
Area	Performance

Metric I213_ThreadPoolPctMax

Monitor Policy Name	WBSSPI_0213
Metric Name	I213_ThreadPoolPctMax
Metric Type	Alarming
Description	Percentage of time number of threads in pool reached configured maximum size (drill down)
Impact	High
PMI Module	threadPoolModule
Severity: Condition with threshold	WBSSPI-0213.1: Minor threshold, 10
Collection Interval	15m
Message Group	WebSphere
Message Text	WBSSPI-0213.10: % of time # of threads reached configured maximum (<$VALUE>%) too high (>=<$THRESHOLD>%) WBSSPI-0213.11: % of time # of threads reached configured maximum (<$VALUE>%) is within the threshold (<$THRESHOLD>%)

Monitor Policy Name	WBSSPI_0213
Instruction Text	**Probable Cause**: The percent of threads in use in a pool has exceeded a threshold value
	Potential Impact: Small Thread pool size may have been chosen.This choice can have the following impact:
	• Thread pool saturation condition may occur.
	• CPU utilization may consistently keep shooting up.
	Suggested action:
	1 To fix a saturated thread pool, keep changing the thread pool size in steps until CPU utilization reaches between 75 and 85 percent.
	2 Tune the application using a code profiling tool.
	3 To check the size of the threadpool, in the Admin Console click **Servers → Server Types → Application servers → <server_name> → Thread pools** or **Servers → Server Types → Application servers → server1 → ORB service → Thread Pool.**
Tool Bank Report	Yes
Area	Performance

Metric I014_ThrdPoolCrtRt

Monitor Policy Name	N/A—Used to generate a graph
Metric Name	I014_ThrdPoolCrtRt
Metric Type	Graphing
Description	Number of threads created per minute
Impact	Low
PMI Module	threadPoolModule
Severity: Condition with threshold	N/A
Collection Interval	15m
Message Group	N/A
Message Text	N/A
Instruction Text	N/A
Tool Bank Report	N/A
Area	Performance

Metric I812_ThrdPoolHungRt

Monitor Policy Name	WBSSPI_0812
Metric Name	I812_ThrdPoolHungRt
Metric Type	Alarming and Graphing
Description	The rate at which the threads are declared hung
Impact	High, Medium, and Low
PMI Module	threadPoolModule
Severity: Condition with threshold	WBSSPI-0812.1: Warning threshold, 10
Collection Interval	15m
HPOM Threshold	10
Message Group	WebSphere
Message Text	WBSSPI-0812.10: The rate at which the threads are declared hung (<$VALUE>/min) too high (>=<$THRESHOLD> /min) [Policy: <$NAME>] WBSSPI-0812.11: The rate at which the threads are declared hung (<$VALUE>/min) is within the threshold (<$THRESHOLD>/min) [Policy: <$NAME>]
Instruction Text	**Probable Cause**: The rate at which the threads are declared hung has exceeded a threshold value. **Potential Impact**: A hung thread can result from a simple software defect (such as an infinite loop) or a more complex cause (for example, a resource deadlock). System resources, such as CPU time, might be consumed by this hung transaction when threads run unbounded code paths, such as when the code is running in an infinite loop. Alternately, a system can become unresponsive even though all resources are idle, as in a deadlock scenario. **Suggested action**: Check the code for hung thread scenarios and fix them.
Tool Bank Report	Yes
Area	ThreadPool

Metric I813_CcrtThdPlHngCtt

Monitor Policy Name	WBSSPI_0813
Metric Name	I813_CcrtThdPlHngCt
Metric Type	Graphing
Description	The number of concurrently hung threads
Impact	High, Medium, and Low
PMI Module	threadPoolModule
Severity: Condition with threshold	N/A
Collection Interval	High - 1h, Med - 15m
Message Group	WebSphere
Message Text	N/A
Instruction Text	N/A
Tool Bank Report	No
Area	ThreadPool

Metric I020_EJBPoolUtil

Monitor Policy Name	N/A—Used to generate a graph
Metric Name	I020_EJBPoolUtil
Metric Type	Graphing
Description	Percentage of active beans in the pool
Impact	High
PMI Module	beanModule
Severity: Condition with threshold	N/A
Collection Interval	1h
Message Group	N/A
Message Text	N/A
Instruction Text	N/A
Tool Bank Report	N/A
Area	EJB

Metric I220_EJBPoolUtil

Monitor Policy Name	WBSSPI_0220
Metric Name	I220_EJBPoolUtil
Metric Type	Alarming and Reporting
Description	Percentage of active beans in the pool (drill down)
Impact	High
PMI Module	beanModule
Severity: Condition with threshold	WBSSPI-0220.1: Warning threshold, 90
Message Group	WebSphere
Collection Interval	1h
Message Text	WBSSPI-0220.10: % of EJBs in the pool in use (<$VALUE>%) too high (>=<$THRESHOLD>%) WBSSPI-0220.11: % of EJBs in the pool in use (<$VALUE>%) is within the threshold (<$THRESHOLD>%)

Monitor Policy Name	WBSSPI_0220
Instruction Text	**Probable Cause**: The utilization of the EJB pool has exceeded a threshold value. **Potential Impact**: • Thread pool saturation condition may occur. • CPU utilization may consistently keep shooting up. **Suggested action**: 1 To fix a saturated thread pool, keep changing the thread pool size in steps until CPU utilization reaches between 75 and 85 percent. 2 Tune the application using a code profiling tool. 3 To check the size of the EJB cache, in the Admin Console click **Servers** → **Server Types** → **Application servers** → **<server_name>** → **EJB Container** → **EJB Cache Settings.**
Tool Bank Report	Yes
Area	EJB

The metric WBSSPI_0220 returns a valid value only if Entity Beans are present in the application(s) deployed on the WebSphere Application Server(s).

Metric I221_EJBMethRespTime

Monitor Policy Name	WBSSPI_0221
Metric Name	I221_EJBMethRespTime
Metric Type	Alarming and Reporting
Severity: Condition with threshold	WBSSPI-0221.1: Major threshold, 5000
Description	Average EJB response time in milliseconds
Impact	Medium
PMI Module	beanModule
Message Group	WebSphere
Collection Interval	5m
Message Text	WBSSPI-0221.10: Average EJB response time (<$VALUE>ms) too high (>=<$THRESHOLD>ms) WBSSPI-0221.11: Average EJB response time (<$VALUE>ms) too high (<$THRESHOLD>ms)
Instruction Text	**Probable Cause**: The average response time of an EJB has exceeded a threshold value. **Potential Impact**: • Not sufficient Beans in pooled state. • Beans getting destroyed frequently. • Application response time may increase. **Suggested Action**: To check the size of the EJB cache, in the Admin Console click **Servers → Server Types → Application servers → <server_name> → EJB Container → EJB Cache Settings.**
Tool Bank Report	Yes
Area	EJB

The metric WBSSPI_0221 returns a valid value only if Entity Beans are present in the application(s) deployed on the WebSphere Application Server(s).

Metric I022_EJBMethCallsRt

Monitor Policy Name	N/A—Used to generate a report and graph
Metric Name	I022_EJBMethCallsRt
Metric Type	Graphing and Reporting
Description	Number of EJB method calls per minute
Impact	Low
PMI Module	beanModule
Severity: Condition with threshold	N/A
Collection Interval	5m
Message Group	N/A
Message Text	N/A
Instruction Text	N/A
Tool Bank Report	N/A
Area	EJB

Metric I222_EJBMethodCallsRt

Monitor Policy Name	WBSSPI_0222
Metric Name	I222_EJBMethodCallsRt
Metric Type	Alarming and Reporting
Description	Number of EJB method calls per minute (drill down)
Impact	Low
PMI Module	beanModule
Severity: Condition with threshold	WBSSPI-0222.1: Warning threshold, 10
Collection Interval	5m
Message Group	WebSphere
Message Text	WBSSPI-0222.10: # of EJB method calls per minute (<$VALUE>/min) too high (>=<$THRESHOLD>/min) WBSSPI-0222.11: # of EJB method calls per minute (<$VALUE>/min) is within the threshold (<$THRESHOLD>/min)
Instruction Text	**Probable Cause**: The number of EJB method calls per minute has exceeded a threshold value. **Potential Impact**: • Increase in the CPU utilization • Increase in the EJB pool utilization **Suggested action**: To check the size of the EJB cache, in the Admin Console click **Servers → Server Types → Application servers → <server_name> → EJB Container → EJB Cache Settings.**
Tool Bank Report	Yes
Area	EJB

The metric WBSSPI_0222 returns a valid value only if Entity Beans are present in the application(s) deployed on the WebSphere Application Server(s).

Metric I223_EJBPoolSize

Monitor Policy Name	N/A—Used to generate a report
Metric Name	I223_EJBPoolSize
Metric Type	Reporting
Description	Average size of the EJB pool
Impact	High
PMI Module	beanModule
Severity: Condition with threshold	N/A
Collection Interval	5m
Message Group	N/A
Message Text	N/A
Instruction Text	N/A
Tool Bank Report	N/A
Area	EJB

The metric WBSSPI_0223 returns a valid value only if Entity Beans are present in the application(s) deployed on the WebSphere Application Server(s).

Metric I024_EJBEntDatLdStRt

Monitor Policy Name	N/A—Used to generate a report and graph
Metric Name	I024_EJBEntDatLdStRt
Metric Type	Graphing and Reporting
Description	Number of times an EJB was written to or loaded from the database per minute
Impact	Low
PMI Module	beanModule
Severity: Condition with threshold	N/A
Collection Interval	5m
Message Group	N/A
Message Text	N/A
Instruction Text	N/A
Tool Bank Report	N/A
Area	EJB

Metric I224_EJBEntDataLdStRt

Monitor Policy Name	WBSSPI_0224
Metric Name	I224_EJBEntDataLdStRt
Metric Type	Alarming and Reporting
Description	Number of times an EJB was written to or loaded from the database per minute (drill down)
Impact	Low
PMI Module	beanModule
Severity: Condition with threshold	WBSSPI-0224.1: Warning threshold
Collection Interval	15m
Message Group	WebSphere
Message Text	WBSSPI-0224.10: # of times EJB data was written to or loaded from the database per minute (<$VALUE>/min) too high (>=<$THRESHOLD>/min) WBSSPI-0224.11: # of times EJB data was written to or loaded from the database per minute (<$VALUE>/min) is within the threshold (<$THRESHOLD>/min)

Monitor Policy Name	WBSSPI_0224
Instruction Text	**Probable Cause**: The number of times an EJB was written to or loaded from the database per minute has exceeded a threshold value. **Potential Impact**: • Increase in the CPU usage • May reduce the response time of the applications, if the EJB pool is full since the container has to passivate a bean and provide space for active beans in the pool. **Suggested action**: Make sure the EJB pool utilization is not high so that the Data Loads and Stores can be performed quickly.
Tool Bank Report	Yes
Area	EJB

The metric WBSSPI_0224 returns a valid value only if Entity Beans are present in the application(s) deployed on the WebSphere Application Server(s).

Metric I025_EJBPoolMissPct

Monitor Policy Name	N/A—Used to generate a graph
Metric Name	I025_EJBPoolMissPct
Metric Type	Graphing
Description	Average percentage of time a call to retrieve an EJB from the pool failed
Impact	Low
PMI Module	beanModule
Severity: Condition with threshold	Warning: WBSSPI-0025.1, threshold 10.
Collection Interval	5m
Message Group	N/A
Message Text	N/A
Instruction Text	N/A
Tool Bank Report	N/A
Area	EJB

Metric I225_EJBPoolMissPct

Monitor Policy Name	N/A—Used to generate a report
Metric Name	I225_EJBPoolMissPct
Metric Type	Reporting
Description	Average percentage of time a call to retrieve an EJB from the pool failed (drill down)
Impact	Low
PMI Module	beanModule
Severity: Condition with threshold	N/A
Collection Interval	5m
Default HPOM Threshold	10
Message Group	WebSphere
Message Text	N/A
Instruction Text	N/A
Tool Bank Report	N/A
Area	EJB

The metric WBSSPI_0225 returns a valid value only if Entity Beans are present in the application(s) deployed on the WebSphere Application Server(s).

Metric I810_MsgBackoutRate

Monitor Policy Name	WBSSPI_0810
Metric Name	I810_MsgBackoutRate
Metric Type	Alarming, Reporting, and Graphing
Description	The rate at which the messages failed to be delivered to the bean onMessage method (message driven beans)
Impact	Medium and Low
PMI Module	beanModule
Severity: Condition with threshold	WBSSPI-0810.1: Warning threshold, 5
Collection Interval	15m
Default HPOM Threshold	5
Message Group	WebSphere
Message Text	WBSSPI-0810.10: The rate at which the messages failed to be delivered to the bean onMessage method (message driven beans) (<$VALUE>/min) too high (>=<$THRESHOLD>/min) [Policy: <$NAME>] WBSSPI-0810.11: The rate at which the messages failed to be delivered to the bean onMessage method (message driven beans) (<$VALUE>/min) is within the threshold (<$THRESHOLD>/min) [Policy: <$NAME>]
Instruction Text	**Probable Cause**: The rate at which the messages failed to be delivered to the bean onMessage method (message driven beans) has exceeded a threshold value. **Potential Impact**: The message could be corrupt or just in an unexpected format. These messages could be sent again to the MDB based on the configured retries. If the number of retries are more, the application response slows down. **Suggested action**: Configure the Backout threshold appropriately, to prevent the number of tries for the backed out messages.
Tool Bank Report	Yes
Area	EJB

Metric I811_ReturnDiscrdRt

Monitor Policy Name	WBSSPI_0811
Metric Name	I811_ReturnDiscrdRt
Metric Type	Alarming, Reporting, and Graphing
Description	The rate at which the returning object was discarded because the pool was full (entity and stateless)
Impact	High, Medium, and Low
PMI Module	beanModule
Severity: Condition with threshold	WBSSPI-0811.1: Warning threshold, 10
Collection Interval	15m
Default HPOM Threshold	10
Message Group	WebSphere
Message Text	WBSSPI-0811.10 ReturnsDiscardRate: The rate at which the returning object was discarded because the pool was full (entity and stateless) (<$VALUE>/min) too high (>=<$THRESHOLD>/min) [Policy: <$NAME>] WBSSPI-0811.11 ReturnsDiscardRate: The rate at which the returning object was discarded because the pool was full (entity and stateless) (<$VALUE>/min) is within the threshold (<$THRESHOLD>/min) [Policy: <$NAME>]
Instruction Text	**Probable Cause**: ReturnsDiscardRate: The rate at which the returning object was discarded because the pool was full (entity and stateless) has exceeded a threshold value. **Potential Impact**: The performance of the applications slows down. **Suggested action**: Modify the pool settings accordingly: In the administrative console page, click **Servers → WebSphere Application Servers → <server> → EJB Container Settings → EJB Container.**
Tool Bank Report	Yes
Area	EJB

Metric I026_EJBConcLives

Monitor Policy Name	WBSSPI_0026
Metric Name	I026_EJBConcLives
Metric Type	Alarming and Graphing
Description	Average number of bean objects in the pool
Impact	High
PMI Module	beanModule
Severity: Condition with threshold	WBSSPI-0026.10: Warning threshold, 1000
Collection Interval	5m
Default HPOM Threshold	10
Message Group	WebSphere
Message Text	WBSSPI-0026.10: Average # of bean objects in the pool (<$VALUE>) is too high (>=<$THRESHOLD>) WBSSPI-0026.11: Average # of bean objects in the pool (<$VALUE>) is within the threshold (<$THRESHOLD>)
Instruction Text	**Probable Cause**: The average number of bean objects in the pool has exceeded a threshold value. **Potential Impact**: The pool is coming close to being full. Once the pool is full, it lowers the performance of the applications. **Suggested action**: Modify the thread pool settings accordingly: In the administrative console page, click **Servers → WebSphere Application Servers → <server> → EJB Container Settings → EJB container**.
Tool Bank Report	Yes
Area	EJB

Metric I040_ServSessAveLife

Monitor Policy Name	WBSSPI_0040
Metric Name	I040_ServSessAveLife
Metric Type	Alarming and Graphing
Description	Average servlet session lifetime in milliseconds
Impact	Medium
PMI Module	servletSessionModule
Severity: Condition with threshold	WBSSPI-0040.1: Warning threshold, 1000
Collection Interval	1h
WebSphere	Message Group
Message Text	WBSSPI-0040.10: Average servlet session lifetime (<$VALUE>ms) is too high (>=<$THRESHOLD>ms). WBSSPI-0040.11: Average servlet session lifetime (<$VALUE>ms) is within the threshold (<$THRESHOLD>ms).
Instruction Text	Check/modify the session settings: In the administrative console page, click **Servers** → **Server Types** → **WebSphere Application Servers** → **<server_name>** → **Web container** → **Session management**.
Tool Bank Report	Yes
Area	Servlets

Metric I041_ServSessActSess

Monitor Policy Name	WBSSPI_0041
Metric Name	I041_ServSessActSess
Metric Type	Alarming, Graphing, and Reporting
Description	Number of sessions currently being accessed
Impact	High
PMI Module	servletSessionModule
Severity: Condition	WBSSPI-0041.1: Warning threshold, 10000
Collection Interval	1h
Message Group	WebSphere
Message Text	WBSSPI-0041.10: # of sessions currently being accessed (<$VALUE>) is too high (>=<$THRESHOLD>) WBSSPI-0041.11: # of sessions currently being accessed (<$VALUE>) is within the threshold (<$THRESHOLD>)
Instruction Text	**Probable Cause**: The number of sessions currently being accessed has exceeded a threshold value. **Potential Impact**: If this number equals the "maximum session count", request for new sessions is not created. **Suggested action**: To check or modify the session settings for maximum session counts: In the administrative console page, click **Servers** → **Server Types** → **WebSphere Application Servers** → <server_name> → **Web container** → **Session management**.
Tool Bank Report	Yes
Area	Servlets

Metric I042_ServInvSessRt

Monitor Policy Name	WBSSPI_0042
Metric Name	I042_ServInvSessRt
Metric Type	Alarming and Graphing
Description	Number of sessions being invalidated per second
Impact	Low
PMI Module	servletSessionModule
Severity: Condition	WBSSPI-0042.1: Warning threshold, 10000
Collection Interval	1h
Message Group	WebSphere
Message Text	WBSSPI-0042.10: # of sessions timed out per second (<$VALUE>/sec) too high (>=<$THRESHOLD>/sec) WBSSPI-0042.11: # of sessions timed out per second (<$VALUE>/sec) is within the threshold (<$THRESHOLD>/sec)
Instruction Text	**Probable Cause**: The number of sessions being invalidated per second has exceeded a threshold value. **Potential Impact**: The average response time of the application may increase, if the sessions get invalidated even before the request to them is made by a client. **Suggested action**: To modify or increase the session timeout: In the administrative console page, click **Servers → Server Types → WebSphere Application Servers → <server_name> → Web container → Session management**. Set the Session timeout value accordingly.
Tool Bank Report	Yes
Area	Servlets

Metric I045_WebAppServReqRt

Monitor Policy Name	WBSSPI_0245
Metric Name	I045_WebAppServReqRt
Metric Type	Graphing and Reporting
Description	Number of requests for a servlet per second
Impact	Low
PMI Module	webAppModule
Severity: Condition	N/A
Collection Interval	1h
Message Group	N/A
Message Text	N/A
Instruction Text	N/A
Tool Bank Report	N/A
Area	Web Applications

Metric I245_WebAppServletReqRt

Monitor Policy Name	WBSSPI_0245
Metric Name	I245_WebAppServletReqRt
Metric Type	Alarming and Reporting
Description	Number of requests for a servlet per second (drill down)
Impact	Low
PMI Module	webAppModule
Severity: Condition	WBSSPI-0245.1: Warning threshold, 1000
Collection Interval	1h
Message Group	N/A
Message Text	WBSSPI-0245.10: Average request rate for a web application servlet (<$VALUE>/sec) too high (>=<$THRESHOLD>/sec) WBSSPI-0245.11: Average request rate for a web application servlet (<$VALUE>/sec) is within the threshold (<$THRESHOLD>/sec)
Instruction Text	**Probable Cause**: The number of requests for a servlet per second has exceeded a threshold value. **Potential Action**: As the number of concurrent users for the application increases, the thread pool utilization of the servlet engine also increases and the new requests may not be serviced immediately. This increases the response time of the application. **Suggested action**: Check the application server or servlet engine documentation for information about thread pool and its configurations to handle increased number of concurrent users or requests.
Tool Bank Report	Yes
Area	Web Applications

Metric I246_WebAppServletRespTime

Monitor Policy Name	WBSSPI_0246
Metric Name	I246_WebAppServletRespTime
Metric Type	Alarming and Reporting
Description	Average response time for a web application servlet in milliseconds
Impact	Low
PMI Module	webAppModule
Severity: Condition	WBSSPI-0246.1: Major threshold, 1000 WBSSPI-0246.2: Warning threshold, 2000
Collection Interval	1h
Message Group	N/A
Message Text	WBSSPI-0246.10: Average response time for a web application servlet (<$VALUE>/sec) too high (>=<$THRESHOLD>/sec) WBSSPI-0246.11: Average response time for a web application servlet (<$VALUE>/sec) is within the threshold (<$THRESHOLD>/sec) WBSSPI-0246.20: Average response time for a web application servlet (<$VALUE>/sec) too high (>=<$THRESHOLD>/sec) WBSSPI-0246.21: Average response time for a web application servlet (<$VALUE>/sec) is within the threshold (<$THRESHOLD>/sec)
Instruction Text	**Probable Cause**: The number of requests for a servlet per second has exceeded a threshold value. **Potential Action**: As the number of concurrent users for the application increases, the thread pool utilization of the servlet engine also increases and the new requests may not be serviced immediately. This increases the response time of the application. **Suggested action**: Check the application server or servlet engine documentation for information about thread pool and its configurations to handle increased number of concurrent users or requests.
Tool Bank Report	Yes
Area	Web Applications

Metric I047_WebAppServErrRt

Monitor Policy Name	N/A—Used to generate a graph
Metric Name	I047_WebAppServErrRt
Metric Type	Graphing
Description	Number of errors in a servlet per second
Impact	Low
PMI Module	webAppModule
Severity: Condition	N/A
Collection Interval	1h
Message Group	N/A
Message Text	N/A
Instruction Text	N/A
Tool Bank Report	N/A
Area	Web Applications

Metric I247_WebAppServletErrorRt

Monitor Policy Name	WBSSPI_0247
Metric Name	WI247_WebAppServletErrorRt
Metric Type	Alarming
Description	Number of errors in a servlet per second (drill down)
Impact	Low
PMI Module	webAppModule
Severity: Condition	WBSSPI-0247.1: Warning, 100
Collection Interval	1h
Message Group	WebSphere
Message Text	WBSSPI-0247.10: # of errors for a web application servlet per second (<$VALUE>/sec) too high (>=<$THRESHOLD>/sec)
	WBSSPI-0247.11: # of errors for a web application servlet per second (<$VALUE>/sec) is within the threshold (<$THRESHOLD>/sec)
Instruction Text	**Probable Cause**: The number of errors in a servlet per second has exceeded a threshold value.
	Potential Impact: Applications response time may increase drastically.
	Suggested action:
	• Verify thread pool size set.
	• Verify connection pool size set.
	• Verify JVM heap size set.
Tool Bank Report	Yes
Area	Web Applications

Metric I048_WebAppServLoad

Monitor Policy Name	WBSSPI_0048
Metric Name	I048_WebAppServLoad
Metric Type	Alarming and Graphing
Severity: Condition	WBSSPI-0048.1: Warning threshold, 100
Description	Number of servlets currently loaded for a web application
Impact	Low
PMI Module	webAppModule
Collection Interval	1h
Message Group	N/A
Message Text	WBSSPI-0048.10: # of servlets currently loaded for a web application (<$VALUE>) too high (>=<$THRESHOLD>) WBSSPI-0048.11: # of servlets currently loaded for a web application (<$VALUE>) is within the threshold (<$THRESHOLD>)

Monitor Policy Name	WBSSPI_0048
Instruction Text	**Probable Cause**: The number of servlets currently loaded for a web application has exceeded a threshold value.
	Potential Impact: Loading a large number of servlets may increase the CPU usage and affect the performance
	Suggested action:
	Web Applications
	You can also set parameters specific to each Web application you deploy. The settings can affect performance.
	Servlet Reload Interval and Reloading Enabled Short description: WebSphere application server offers an auto reload capability. The default automatically reloads servlets in the Web application when the class files change.
	The auto reload capability can simplify the testing and management of your Web site's applications by enabling you to quickly modify your site without restarting the WebSphere application server. (Be sure that your Reload Interval is short). However, this ability to reload servlets dynamically and the associated polling affects performance negatively. When the application's resources (such as servlets and enterprise beans) are fully deployed, it is not as necessary to aggressively reload these resources as during development.
	When to try adjusting: When you are in a stable production mode, you need to either set a long Reload Interval or disable Reloading. For a production system, it is common to reload resources only a few times a day.
	How to see or set:
	The Reload Interval and Reloading Enabled can be set for your application by using the Application Assembler from the administrative console. When creating a new Web module, these parameters can be configured by selecting the IBM Extensions and:
	1 Unchecking the Reloading Enabled box.
	2 Updating the Reload Interval field.
	Default value: `Reload Interval = three seconds Reloading Enabled=true`
	How to see or set: The Reload Interval and Reloading Enabled can be set. In the administrative console page, click **Applications** →**Application Types** → **Enterprise Applications** → **<application_name>** → **Class loader** and modify the "Class reloading options".
Tool Bank Report	Yes
Area	Web Applications

Metric I049_WebAppServRelRt

Monitor Policy Name	N/A—Used to generate a graph
Metric Name	I049_WebAppServRelRt
Metric Type	Graphing
Description	Number of servlets reloaded for a web application per minute
Impact	Low
PMI Module	webAppModule
Severity: Condition	N/A
Collection Interval	1h
Message Group	WebSphere
Message Text	N/A
Instruction Text	N/A
Tool Bank Report	N/A
Area	Web Applications

Metric I260_JDBCConnPoolSize

Monitor Policy Name	WBSSPI_0260
Metric Name	I260_JDBCConnPoolSize
Metric Type	Alarming and Reporting
Description	Average number of connections in the connection pool
Impact	High
PMI Module	connectionPoolModule
Severity: Condition	Warning: WBSSPI-0260.1, threshold 10000
Collection Interval	5m
Message Group	WebSphere
Message Text	WBSSPI-0260.10: Average # of connections in the connection pool (<$VALUE>) too high (>=<$THRESHOLD>) WBSSPI-0260.11: Average # of connections in the connection pool (<$VALUE>) is within the threshold (<$THRESHOLD>)
Instruction Text	**Probable Cause**: The average number of connections in the connection pool has exceeded a threshold value. **Potential Impact**: • Connection pool saturation condition may occur. • Applications may block on connection objects. **Suggested action**: • To fix a saturated connection pool, keep changing the pool size in steps until number of blocked applications is significantly reduced. • To modify or view the JDBC settings, in the administration console, click **Resources → JDBC → JDBC providers → <JDBC_provider_name> → Data sources → Default Datasource → Connection pools**.
Tool Bank Report	Yes
Area	JDBC

Metric I061_JDBCConPoolWait

Monitor Policy Name	N/A—Used to generate a graph
Metric Name	I061_JDBCConPoolWait
Metric Type	Graphing
Description	Average number of threads waiting for a connection from connection pools
Impact	High
PMI Module	connectionPoolModule
Severity: Condition	Warning: WBSSPI-0061.1, threshold 100
Collection Interval	5m
Message Group	WebSphere
Message Text	N/A
Instruction Text	N/A
Tool Bank Report	Yes
Area	JDBC

Metric I261_JDBCConnPoolWaiters

Monitor Policy Name	WBSSPI_0261
Metric Name	I261_JDBCConnPoolWaiters
Metric Type	Alarming and Reporting
Description	Average number of threads waiting for a connection from connection pools (drill down)
Impact	High
PMI Module	connectionPoolModule
Severity: Condition with threshold	WBSSPI-0261.1: Major, 10 WBSSPI-0261.2: Warning, 1
Collection Interval	5m
Message Group	WebSphere
Message Text	WBSSPI-0261.10: Average # of threads waiting for a connection from connection pools (<$VALUE>) too high (>=<$THRESHOLD>) WBSSPI-0261.11: Average # of threads waiting for a connection from connection pools (<$VALUE>) is within the threshold (<$THRESHOLD>)
Instruction Text	**Probable Cause**: The average number of threads waiting for a connection from the connection pool has exceeded a threshold value. **Potential Impact**: The application slows down. **Suggested action**: Small pool size is chosen for JDBC connection pool. • To fix a saturated connection pool, keep changing the pool size in steps until number of blocked applications is significantly reduced. • To modify or view the JDBC settings, in the administration console, click **Resources** → **JDBC** → **JDBC providers** → **<JDBC_provider_name>** → **Data sources** → **Default Datasource** → **Connection pools**.
Tool Bank Report	Yes
Area	JDBC

Metric I062_JDBConPoolWtTim

Monitor Policy Name	N/A—Used to generate a graph
Metric Name	I062_JDBConPoolWtTim
Metric Type	Graphing
Description	Average time that a client waited for a connection in milliseconds
Impact	High (WebSphere version 6.0, 6.1, 7.0)
PMI Module	connectionPoolModule
Severity: Condition	N/A
Collection Interval	5m
Message Group	N/A
Message Text	NA
Instruction Text	N/A
Tool Bank Report	N/A
Area	JDBC

Metric I262_JDBCConnPoolWaitTime

Monitor Policy Name	WBSSPI_0262
Metric Name	I262_JDBCConnPoolWaitTime
Metric Type	Alarming and Reporting
Description	Average time that a client waited for a connection in msec (drill down)
Impact	High (WebSphere version 6.0, 6.1, 7.0)
PMI Module	connectionPoolModule
Severity: Condition	WBSSPI-0262.1: Major, 50 WBSSPI-0262.2: Warning
Collection Interval	5m
Message Group	WebSphere
Message Text	WBSSPI-0262.10: Average time a client waited for a connection (<$VALUE>ms) too high (>=<$THRESHOLD>ms) WBSSPI-0262.11: Average time a client waited for a connection (<$VALUE>ms) is within the threshold (<$THRESHOLD>ms)
Instruction Text	**Probable Cause**: The average time that a client waited for a connection in has exceeded a threshold value. **Potential Impact**: • The client requests is not processed if the wait time is less than or equal to connection timeout. • The application response time increases. **Suggested action**: In the WebSphere Administration console, click **Resources** → **JDBC** → **Data sources** → **<datasource_name>** → **Connection pools** and configure the properties appropriately.
Tool Bank Report	Yes
Area	JDBC

Metric I263_JDBCConnPoolUtil

Monitor Policy Name	WBSSPI_0263
Metric Name	I263_JDBCConnPoolUtil
Metric Type	Alarming and Reporting
Description	Percentage of connection pool in use
Impact	High
PMI Module	connectionPoolModule
Severity: Condition	WBSSPI-0263.1: Critical, 98 WBSSPI-0263.2: Major, 95
Collection Interval	5m
Message Group	WebSphere
Message Text	WBSSPI-0263.10: % utilization of a connection pool (<$VALUE>%) too high (>=<$THRESHOLD>%) WBSSPI-0263.11: % utilization of a connection pool (<$VALUE>%) is within the threshold (<$THRESHOLD>%)
Instruction Text	**Probable Cause**: The percent utilization of the connection pool has exceeded a threshold value. **Potential Impact**: • Connection pool saturation condition may soon occur. • JDBC connection timeouts occur on connection pool saturation. • Application response time increases. **Suggested action**: To modify or view the JDBC settings, in the administration console, click **Resources** → **JDBC** → **JDBC providers** → **<JDBC_provider_name>** → **Data sources** → **<datasource_name>** → **Connection pools** and configure the properties appropriately.
Tool Bank Report	Yes
Area	JDBC

Metric I264_JDBCConnPoolMaxPct

Monitor Policy Name	WBSSPI_0264
Metric Name	I264_JDBCConnPoolMaxPct
Metric Type	Alarming
Description	Percentage of time that all connections in a pool are in use
Impact	High
PMI Module	connectionPoolModule
Severity: Condition	WBSSPI-0264.1: Critical, 98 WBSSPI-0264.2: Major, 95
Collection Interval	5m
Message Group	WebSphere
Message Text	WBSSPI-0264.10: % of time all connections in a pool are in use (<$VALUE>%) too high (>=<$THRESHOLD>%) WBSSPI-0264.11: % of time all connections in a pool are in use (<$VALUE>%) is within the threshold (<$THRESHOLD>%)
Instruction Text	**Probable Cause**: The percent of time that all connections in a pool are in use has exceeded a threshold value. **Potential Impact**: Small connection pool size may have been chosen.This choice can have the following impact: • Connection pool saturation condition may occur. • CPU utilization may consistently keep shooting up. **Suggested action**: • To fix a saturated connection pool, keep changing the pool size in steps until CPU utilization reaches between 75 and 85 percent. • To modify or view the JDBC settings, in the administration console, click **Resources** → **JDBC** → **JDBC providers** → **<JDBC_provider_name>** → **Data sources** → **<Datasource_name>** → **Connection pools** and configure the properties appropriately.
Tool Bank Report	Yes
Area	JDBC

Metric I065_JDBConPoolTimRt

Monitor Policy Name	N/A—Used to generate a graph
Metric Name	I065_JDBConPoolTimRt
Metric Type	Graphing
Description	Number of times a client timed out waiting for a connection from the pool per minute
Impact	Low
PMI Module	connectionPoolModule
Severity: Condition with threshold	N/A
Collection Interval	5m
Message Group	N/A
Message Text	N/A
Instruction Text	N/A
Tool Bank Report	Yes
Area	JDBC

Metric I265_JDBCConnPoolTimeOutRts

Monitor Policy Name	WBSSPI_0265
Metric Name	I265_JDBCConnPoolTimeOutRts
Metric Type	Alarming and Reporting
Description	Number of times a client timed out waiting for a connection from the pool (drill down) per minute
Impact	Low
PMI Module	connectionPoolModule
Severity: Condition	WBSSPI-0265.1: Critical, 98 WBSSPI-0265.2: Major, 95
Collection Interval	5m
Message Group	WebSphere
Message Text	WBSSPI-0265.10: # of times a client timed out waiting for a connection per minute (<$VALUE>/min) too high (>=<$THRESHOLD>/min) WBSSPI-0265.11: # of times a client timed out waiting for a connection per minute (<$VALUE>/min) is within the threshold (<$THRESHOLD>/min)

Monitor Policy Name	WBSSPI_0265
Instruction Text	**Probable Cause**: The number of times a client timed out waiting for a connection from the connection pool has exceeded a threshold value.
	Potential Impact: Increased number of timed out requests impacts the performance of the applications.
	Suggested action: To modify or view the JDBC settings, in the administration console, click **Resources → JDBC → JDBC providers** → <JDBC_provider_name> → **Data sources** → <Datasource_name> → **Connection pools** and configure the properties appropriately.
Tool Bank Report	Yes
Area	JDBC

Metric I066_JDBConPoolThru

Monitor Policy Name	N/A—Used to generate a report and graph
Metric Name	I066_JDBConPoolThru
Metric Type	Graphing and Reporting
Description	Number of connections allocated and returned by applications per second
Impact	Low
PMI Module	connectionPoolModule
Severity: Condition	N/A
Collection Interval	5m
Message Group	N/A
Message Text	N/A
Instruction Text	N/A
Tool Bank Report	N/A
Area	JDBC

Metric I266_JDBConnPoolThroughput

Monitor Policy Name	WBSSPI_0266
Metric Name	I266_JDBConnPoolThroughput
Metric Type	Alarming and Reporting
Description	Number of connections allocated and returned by applications per second (drill down)
Impact	Low
PMI Module	connectionPoolModule
Severity: Condition	WBSSPI-0266.1: Warning threshold, 10000
Collection Interval	5m
Message Group	WebSphere
Message Text	WBSSPI-0266.10: # of connections allocated and returned by applications (<$VALUE>/sec) too high (>=<$THRESHOLD>/sec) WBSSPI-0266.11: # of connections allocated and returned by applications (<$VALUE>/sec) is within the threshold (<$THRESHOLD>/sec)
Instruction Text	**Probable Cause**: The number of connections allocated and returned by applications per second has exceeded a threshold value. **Potential Impact**: • This indicates an increased number of JDBC requests. • Results in increase in CPU Usage. **Suggested action**: To modify or view the JDBC settings, in the administration console, click **Resources → JDBC → JDBC providers → <JDBC_provider_name> → Data sources → <Datasource_name> → Connection pools** and configure the properties appropriately.
Tool Bank Report	Yes
Area	JDBC

Metric I814_PrdstcchdsrdRt

Monitor Policy Name	WBSSPI_0814
Metric Name	I814_PrdstcchdsrdRt
Metric Type	Alarming, Reporting, and Graphing
Description	The rate at which the prepared statements are discarded by the least recently used (LRU) algorithm of the statement cache
Impact	High and Medium
PMI Module	connectionPoolModule
Severity: Condition	WBSSPI-0814.1: Warning threshold, 10
Collection Interval	15m
Message Group	WebSphere
Message Text	WBSSPI-0814.10: The rate at which the prepared statements are discarded by the least recently used (LRU) algorithm of the statement cache (<$VALUE>/sec) too high (>=<$THRESHOLD>/sec) [Policy: <$NAME>] WBSSPI-0814.11: The rate at which the prepared statements are discarded by the least recently used (LRU) algorithm of the statement cache (<$VALUE> /min) is within the threshold (<$THRESHOLD>/min) [Policy: <$NAME>]
Instruction Text	**Probable Cause**: ReturnsDiscardRate: The rate at which the returning object was discarded because the pool was full (entity and stateless) has exceeded a threshold value. **Potential Impact**: The performance of the applications slows down. **Suggested action**: Modify the pool settings accordingly: In the administrative console page, click **Servers → WebSphere Application Servers → <server> → EJB Container Settings → EJB Container.**
Tool Bank Report	Yes
Area	JDBC

Metric I070_TranGlobDur

Monitor Policy Name	WBSSPI_0070
Metric Name	I070_TranGlobDur
Metric Type	Alarming and Graphing
Description	Average duration of global transactions
Impact	Medium (WebSphere version 6.0, 6.1, 7.0)
PMI Module	transactionModule
Severity: Condition	WBSSPI-0070.1: Warning threshold, 1000
Collection Interval	5m
Message Group	WebSphere
Message Text	WBSSPI-0070.10: Average duration of a global transaction (<$VALUE>ms) too high (>=<$THRESHOLD>ms) WBSSPI-0070.11: Average duration of a global transaction (<$VALUE>ms) is within the threshold (<$THRESHOLD>ms)
Instruction Text	**Probable Cause**: The average duration of global transactions has exceeded a threshold value. **Potential Impact**: Transaction durations indicate the server load and/or resource contentions. **Suggested action**: Use this metric to monitor the server load over time. Slower transaction durations may indicate increased server load and/or increased resource contention. WebSphere keeps transaction performance data separately for global and local transactions. Local transactions are limited to a single server and its associated resource manager. Global transactions are controlled by an external transaction manager and can span multiple servers.
Tool Bank Report	Yes
Area	Transactions

Metric I071_TranLocDur

Monitor Policy Name	WBSSPI_0071
Metric Name	I071_TranLocDur
Metric Type	Alarming and Graphing
Description	Average duration of local transactions
Impact	Medium (WebSphere version 6.0, 6.1, 7.0)
PMI Module	transactionModule
Severity: Condition	WBSSPI-0071.1: Warning threshold, 1000
Collection Interval	5m
Message Group	WebSphere
Message Text	WBSSPI-0071.10: Average duration of a local transaction (<$VALUE>ms) too high (>=<$THRESHOLD>ms) WBSSPI-0071.11: Average duration of a local transaction (<$VALUE>ms) is within the threshold (<$THRESHOLD>ms)
Instruction Text	**Probable Cause**: The average duration of local transactions has exceeded a threshold value. **Potential Impact**: Transaction durations indicate the server load and/or resource contentions. **Suggested action**: Use this metric to monitor the server load over time. Slower transaction durations may indicate increased server load and/or increased resource contention. WebSphere keeps transaction performance data separately for global and local transactions. Local transactions are limited to a single server and its associated resource manager. Global transactions are controlled by an external transaction manager and can span multiple servers.
Tool Bank Report	Yes
Area	Transactions

Metric I072_TranGlobCommDur

Monitor Policy Name	WBSSPI_0072
Metric Name	I072_TranGlobCommDur
Metric Type	Alarming and Graphing
Description	Average duration of commits for global transactions
Impact	Medium
PMI Module	transactionModule
Severity: Condition	WBSSPI-0072.1: Warning threshold, 1000
Collection Interval	5m
Message Group	WebSphere
Message Text	WBSSPI-0072.10: Average duration of a commit for a global transaction (<$VALUE>ms) too high (>=<$THRESHOLD>ms) WBSSPI-0072.11: Average duration of a commit for a global transaction (<$VALUE>ms) is within the threshold (>=<$THRESHOLD>ms)
Instruction Text	**Probable Cause**: The average duration of commits for global transactions has exceeded a threshold value. **Potential Impact**: Transaction commit durations indicate the server load and/or resource contentions. **Suggested action**: Use this metric to monitor the server load over time. Slower transaction durations may indicate increased server load and/or increased resource contention. WebSphere keeps transaction performance data separately for global and local transactions. Local transactions are limited to a single server and its associated resource manager. Global transactions are controlled by an external transaction manager and can span multiple servers.
Tool Bank Report	Yes
Area	Transactions

Metric I073_TranLocCommDur

Monitor Policy Name	WBSSPI_0073
Metric Name	I073_TranLocCommDur
Metric Type	Alarming and Graphing
Description	Average duration of commits for local transactions
Impact	Medium
PMI Module	transactionModule
Severity: Condition	WBSSPI-0073.1: Warning threshold, 1000
Message Group	WebSphere
Collection Interval	5m
Message Text	WBSSPI-0073.10: Average duration of a commit for a local transaction (<$VALUE>ms) too high (>=<$THRESHOLD>ms) WBSSPI-0073.11: Average duration of a commit for a local transaction (<$VALUE>ms) is within the threshold (>=<$THRESHOLD>ms)
Instruction Text	**Probable Cause**: The average duration of commits for local transactions has exceeded a threshold value. **Potential Impact**: Transaction commit durations indicate the server load and/or resource contentions. **Suggested action**: Use this metric to monitor the server load over time. Slower transaction durations may indicate increased server load and/or increased resource contention. WebSphere keeps transaction performance data separately for global and local transactions. Local transactions are limited to a single server and its associated resource manager. Global transactions are controlled by an external transaction manager and can span multiple servers.
Tool Bank Report	Yes
Area	Transactions

Metric I074_TranRollbackRt

Monitor Policy Name	WBSSPI_0074
Metric Name	I074_TranRollbackRt
Metric Type	Alarming and Graphing
Description	Number of global and local transactions rolled back per second
Impact	Low
PMI Module	transactionModule
Severity: Condition	WBSSPI-0074.1: Warning threshold, 1000
Collection Interval	5m
Message Group	WebSphere
Message Text	WBSSPI-0074.10: # of global and local transactions rolled back (<$VALUE>/sec) too high (>=<$THRESHOLD>/sec)
	WBSSPI-0074.11: # of global and local transactions rolled back (<$VALUE>/sec) is within the threshold (>=<$THRESHOLD>/sec)
Instruction Text	**Probable Cause**: The number of global and local transactions rolled back per second has exceeded a threshold value.
	Potential Impact: This indicates the number of transaction failed, either due to resource contention and deadlock, or due to timeouts. Increased transaction roll backs impacts the application performance.
	Suggested action: This metric includes both global and local transactions. Local transactions are limited to a single server and its associated resource manager. Global transactions are controlled by an external transaction manager and can span multiple servers.
	When a transaction commits, all actions associated with that transaction are written to a log. In the event of system problems, those actions are repeated if necessary when the system's recovery mechanism replays the log.
	When a transaction aborts, any changes made by the transaction are undone. After a transaction is undone (rolled back), the only remaining evidence of the transaction is in the transaction processing system's log.
	Timeouts associated with transactions usually prevent any one transaction from holding resources at a server for too long. For example, if two transactions are competing for the same resource (one holds a lock on a resource and the other is requesting that lock, and the lock modes conflict), timeouts will eventually abort one of the transactions. The idle timeout will abort a transaction that is inactive too long, and the operation timeout will abort an active transaction that is taking too long.
Tool Bank Report	Yes
Area	Transactions

Metric I075_TranTimeoutRt

Monitor Policy Name	WBSSPI_0075
Metric Name	I075_TranTimeoutRte
Metric Type	Alarming and Graphing
Description	Number of global and local transactions that timed out per second
Impact	Low
PMI Module	transactionModule
Severity: Condition	WBSSPI-0075.1: Warning threshold, 1000
Collection Interval	5m
Message Group	WebSphere
Message Text	WBSSPI-0075.10: # of global and local transactions that timed out (<$VALUE>/sec) too high (>=<$THRESHOLD>/sec) [Policy: <$NAME>] [Policy: <$NAME>] WBSSPI-0075.11: # of global and local transactions that timed out (<$VALUE>/sec) is within the threshold (<$THRESHOLD>/sec) [Policy: <$NAME>] [Policy: <$NAME>]

Monitor Policy Name	WBSSPI_0075
Instruction Text	**Probable Cause**: The number of global and local transactions that timed out per second has exceeded a threshold value.
	Potential Impact: Timed out transactions result in the rolling back of transactions. Increased number of timed out transactions impacts the performance of the applications.
	Suggested action: This metric includes both global and local transactions. Local transactions are limited to a single server and its associated resource manager. Global transactions are controlled by an external transaction manager and can span multiple servers.
	When a transaction commits, all actions associated with that transaction are written to a log. In the event of system problems, those actions are repeated if necessary when the system's recovery mechanism replays the log.
	When a transaction aborts, any changes made by the transaction are undone. After a transaction is undone (rolled back), the only remaining evidence of the transaction is in the transaction processing system's log.
	Timeouts associated with transactions usually prevent any one transaction from holding resources at a server for too long. For example, if two transactions are competing for the same resource (one holds a lock on a resource and the other is requesting that lock, and the lock modes conflict), timeouts will eventually abort one of the transactions. The idle timeout will abort a transaction that is inactive too long, and the operation timeout will abort an active transaction that is taking too long.
Tool Bank Report	Yes
Area	Transactions

Metric I076_TranCommitRt

Monitor Policy Name	WBSSPI_0076
Metric Name	I076_TranCommitRt
Metric Type	Alarming and Graphing
Description	Number of global and local transactions that were committed per second
Impact	Low
PMI Module	transactionModule
Severity: Condition	WBSSPI-0076.1: Warning threshold, 1000
Collection Interval	5m
Message Group	WebSphere
Message Text	WBSSPI-0076.10: # of global and local transactions that were committed (<$VALUE>/sec) too high (>=<$THRESHOLD>/sec) WBSSPI-0076.11: # of global and local transactions that were committed (<$VALUE>/sec) is within the threshold (<$THRESHOLD>/sec)
Instruction Text	**Probable Cause**: The number of global and local transactions that were committed per second has exceeded a threshold value. **Potential Impact**: Increased number of committed transactions impacts the performance of the application. **Suggested action**: This metric indicates the rate (number per second) of transactions that are successfully committed on the server. Use this information for capacity planning. This metric includes both global and local transactions. Local transactions are limited to a single server and its associated resource manager. Global transactions are controlled by an external transaction manager and can span multiple servers.
Tool Bank Report	Yes
Area	Transactions

Metric I078_TranStartRt

Monitor Policy Name	WBSSPI_0078
Metric Name	I078_TranStartRt
Metric Type	Alarming and Graphing
Description	Number of global and local transactions that were begun per second

Monitor Policy Name	WBSSPI_0078
Impact	Low
PMI Module	transactionModule
Severity: Condition	WBSSPI-0078.1: Warning threshold
Collection Interval	5m
Message Group	WebSphere
Message Text	WBSSPI-0078.10: # of global and local transactions that were begun (<$VALUE>/sec) too high (>=<$THRESHOLD>/sec) WBSSPI-0078.11: # of global and local transactions that were begun (<$VALUE>/sec) is within the threshold (<$THRESHOLD>/sec)
Instruction text	**Probable Cause**: The number of global and local transactions that were begun per second has exceeded a threshold value. **Potential Impact**: Increased number of transactions impacts the performance of the server. **Suggested action**: This metric indicates the rate (number per second) of transactions that are begun on this server. Use this information for capacity planning.
Tool Bank Report	Yes
Area	Transactions

WebSphere SPI LogFile Policies

This section describes the Smart Plug-in for WebSphere Application Server (WebSphere SPI) policies that monitor the logfiles of WebSphere Application Server and WebSphere SPI. These policies detect error messages internal to WebSphere SPI, as well as changes made to the WebSphere Application Server XML configuration files.

WBSSPI-Error Log

This logfile policy monitors the WBSSPI log file located at `%OvAgentdir%\wasspi\wbs\log\wasspi_perl.log`.

Description	Monitors the WebSphere SPI error log and captures critical errors, which it sends to the Message Browser.
Severity	Critical
Message Group	WBSSPI
Help Text	Available for each error as detected: WASSPI-1 through WASSPI-241. For detailed help text for these error messages see the *HP Operations Smart Plug-in for WebSphere Application Server Installation and Configuration Guide.*

WebSphere Text Logs

Description	Catches critical errors and warnings in the WebSphere log files.
Severity	Critical Warning
Message Group	WebSphere
Help Text	**Probable Cause**: A message with the indicator 'Emergency' or 'Critical' was detected in the WebSphere logfile. OR A message with the indicator 'Notice,' 'Error' or 'Alert' was detected in the WebSphere logfile. **Suggested Action**: Examine the error and use the WebSphere documentation (manuals or online Help) to determine the exact cause and action to take.

WebSphere Activity Log via JMX Notification

Description	Monitors the WebSphere Activity log file.
Severity	Critical Warning
Message Group	WebSphere
Help Text	**Probable Cause**: Critical - A message with the indicator "ERROR" or "FATAL" was detected in the WebSphere activity log. Warning - A message with the indicator "WARNING" or any non-critical message was detected in the WebSphere activity log. **Suggested Action**: Refer to the WebSphere documentation (manuals or online help) for more information about the error.

WBSSPI Java Discovery Error Log

This logfile policy monitors the WBSSPI discovery error log file located at `%OvAgentdir%\wasspi\wbs\log\discovery.log`.

Description	Monitors the WBSSPI Java Discovery error log.
Severity	Normal Major Critical Warning
Message Group	WBSSPI
Help Text	Available for each error as detected: WASSPI-1 through WASSPI-241. For detailed help text for these error messages see the *HP Operations Smart Plug-in for WebSphere Application Server Installation and Configuration Guide*.

WBSSPI Java Collector Error Log

This logfile policy monitors the WBSSPI collector error log file located at
`%OvAgentdir%\wasspi\wbs\log\collector.log`

Description	Monitors the WBSSPI Java Collector error log.
Severity	Normal Major Critical Warning
Message Group	WBSSPI
Help Text	Available for each error as detected: WASSPI-1 through WASSPI-241. For detailed help text for these error messages see the *HP Operations Smart Plug-in for WebSphere Application Server Installation and Configuration Guide.*

2 WebSphere SPI Tools, Reports, and Graphs

This chapter provides specific information on WebSphere SPI Tools, Reports, and Graphs. For generic information on these topics, see the *HP Operations Smart Plug-in for IBM WebSPhere Application Server Installation and Configuration Guide for UNIX*.

Tools

The WebSphere SPI offers centralized tools which help you monitor and manage systems using WebSphere Application Server. The WebSphere SPI tools allow you to configure the management server's connection to selected server instances on specific managed nodes. The WebSphere SPI tools include configuration, troubleshooting, and report-generating utilities. In the Tool Bank window, the SPI for WebSphere tools (WBSSPI:TOOLS) are divided into the following tool groups:

- WebSphere Admin (WBSSPI:ADMIN)

- Metric Reports (WBSSPI:REPORTS)

- SPI Admin (WBSSPI:SPI_ADMIN)

- JMX Metric Builder: This tool group is available *only if* you install the SPIJMB software bundle.

Reports

The reports show consolidated, historical data generated as web pages in management-ready presentation format which helps you analyze the performance of the WebSphere Application Server over a period of time. This section provides the reports generated on integrating WebSphere SPI with HP Reporter or HP Performance Insight.

HP Reporter Reports for the WebSphere SPI

The reports available through the integration of HP Reporter and the WebSphere SPI show consolidated data on server performance and availability on all WebSphere Server systems. In addition, other reports show data for single systems. These reports are available the day following your installation of the WebSphere SPI report package on the HP Reporter Windows system.

The following tables show all pre-defined reports.

Table 7   All/Group Reports

Report Title	Description	Metric
Availability	Shows the percent uptime for all WebSphere Servers by day.	2
Top 20 Servers— Transaction Throughput	Shows the average throughput for the top 20 execute queues of all servers.	77
Top 20 Servers—JDBC Connection Pool Throughput	Shows the average throughput for all connections pools on the server for the top 20 servers.	66
Top 20 Servers—Servlet Request Rate	Shows the total servlet request rate for the top 20 servers.	45
Top 20 Servers— Servlet Sessions	Shows the total servlet sessions being handled by the top 20 servers.	41
Top 20 Servers— Servlet Average Response Time	Shows the average response time for the top 20 requested servlets for all servers for the reporting period.	245
Top 20 Servers— EJB Method Calls Rate	Shows the number of all EJB method calls per minute for the top 20 servers.	22
Top 20 Servers— Entity EJB Load/Stores Rate	Shows the number of all Entity EJB loads and stores to or from the database per minute for the top 20 servers.	24

Table 8   Single System Reports

Report Title	Description	Metric
Server Availability Details	Contains spectrum graphs showing minutes of uptime by day and hour for each WebSphere Server.	2
Admin Server Availability Details	Shows the uptime percent for each WebSphere Admin server by day.	4
EJB Average Response Time	Shows the average response time for the top 20 EJBs for a server for the reporting period.	221
EJB Method Calls Rate	Shows the number of all EJB method calls per minute for the top 20 EJBs for a server.	22
Entity EJB Load/ Stores Rate	Shows the number of all EJB loads and stores to or from the database per minute for the top 20 EJBs on a server.	224
EJB Pool Utilization	Shows the EJB pool utilization as a percent for the top 20 EJBs on a server.	220
EJB Pool Misses Percent	Shows the percent of time that a call to retrieve an EJB from the pool was not successful during the collection interval for the top 20 EJBs.	225

Table 8   Single System Reports

Report Title	Description	Metric
EJB Pool Size	Shows average pool size for the top 20 EJBs for one server for each day.	223
JDBC Connection Pools Throughput vs. Utilization	Charts throughput against utilization for the JDBC connection pools on the selected server, one chart for each connection pool.	263
JDBC Connection Pools - Size vs. Wait Time	Charts connection pool size against the average wait time for a connection for the JDBC connection pools on the selected server, one chart for each connection pool.	260
JDBC Connection Pools - Clients Waiting vs. TimeoutRate	Charts the number of clients waiting for a database connection from the pool against the timeout rate for waiting clients for the DB connection pools on the selected server, one chart for each connection pool.	265
JCA Connections Utilization - Top 20 Resources	Shows the JCA resource connection pool utilization as a percent.	250
Transaction Throughput	Shows the average transaction throughput for the selected server by day.	77
Thread Pool Activity	Charts the average size of the thread pool against the average number of active threads for all thread pools on the selected server, one chart for each thread pool.	211
Servlet Request Rate	Shows the request rate (per second) for the top 20 servlets for one server for each day.	245
Servlet Average Response Time - Top 20 Servlets	Show the average response time for the top 20 requested servlets for one server for the reporting period.	246

HP Performance Insight Reports for the WebSphere SPI

The reports available through the integration of HP Performance Insight and the WebSphere SPI show consolidated data on server performance and availability on WebSphere application server systems.

The following table shows all pre-defined reports.

Report Title	Description	Metric
Server Availability—Throughput	The server availability chart plots the availability status of the application server on an hourly, daily, and monthly basis. The transaction throughput chart displays the number of transactions processed by the application server per second.	2, 77
EJB Pool Utilization	The percentage of EJB pool utilization.	20
JDBC Throughput—Utilization	The percentage of available JDBC connection in the connection pool and the number of clients serviced by the connection pool per second.	66, 263
Near Real Time Server Availability	The server status for the last six hours.	2, 77
Servlet Request Rate—Response Time	The servlet request rate measures the number of requests for a servlet per second. The servlet response time chart shows the average execution time for an individual servlet.	45, 246
EJB Load-Stores Rate	The number of all entity EJB loads and stores to and from the database per minute for the top 20 servers. For the selected server, lists the top 20 EJBs.	24
EJB Method Calls Rate	The number of all EJB method calls per minute for the top 20 servers.	22
EJB Top 20	The percentage of EJB retrievals that were not successful during the collection interval, average pool size, and average response time in milliseconds for the top 20 EJBs.	25, 221, 223
JDBC Connection Pool Details	The average number of connections allocated per day for the top 20 servers. The DB pool is shown along with clients waiting, client timeout rate, average pool size, and average wait time.	61, 65, 260, 266
Servlet Sessions	The total number of servlet sessions being handled by the top 20 servers.	41
Thread Pool Activity	Comparison of the average size of thread pools with the average number of active threads on the selected server.	210, 211
Transaction Throughput	The average number of transactions processed per second by the top 20 servers for the previous day.	77

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 9   JVM

Metric Number/Name	Metric Description
I005_JVMMemUtilPct	Percentage of heap space used in the JVM.
I807_JVMMemFreePct	Percent of JVM Free Memory available
I808_JVMCpuUsagePct	The CPU Usage of the Java virtual machine
I809_GCInterval Time	The average garbage collection value in seconds between two garbage collections

Table 10   Server Performance

Metric Number/Name	Metric Description
I013_ ThrdPoolPctMax	Percentage of time Number of threads in pool reached configured maximum size.
I014_ThrdPoolCrtRt	Number of threads created per minute.

Table 11   Enterprise Java Beans (EJB)

Metric Number/Name	Metric Description
I020_EJBPoolUtil	Percentage of active beans in the pool.
I022_EJBMethCallsRt	Number of EJB method calls per minute.
I024_EJBEntDatLdStRt	Number of times an EJB was written to or loaded from the database per minute.
I025_EJBPoolMissPct	Average Percentage of time a call to retrieve an EJB from the pool failed.
I026_EJBConcLives	Average Number of bean objects in the pool.
I810_MsgBackoutRate	The rate at which the messages failed to be delivered to the bean onMessage method (message driven beans)
I811_ReturnDiscrdRt	The rate at which the returning object was discarded because the pool was full (entity and stateless)
I814_Prdstcchdsrd Rt	The rate at which the prepared statements are discarded by the least recently used (LRU) algorithm of the statement cache

Table 12   Servlets

Metric Number/Name	Metric Description
I040_ServSessAveLife	Average lifetime of a servlet session in milliseconds.
I041_ServSessActSess	Number of sessions currently being accessed.
I042_ServInvSessRt	Number of sessions being invalidated per second.

Table 13   Web Applications

Metric Number/Name	Metric Description
I045_WebAppServReqRt	Number of requests for a servlet per second.
I047_WebAppServErrRt	Number of errors in a servlet per second.
I048_WebAppServLoad	Number of servlets currently loaded for a web application.
I049_WebAppServRelRt	Number of servlets reloaded for a web application per minute.

Table 14   JDBC

Metric Number/Name	Metric Description
I061_JDBCConPoolWait	Average number of threads waiting for a connection from connection pools
I062_JDBConPoolWtTim	Average time that a client waited for a connection in milliseconds.
I065_JDBConPoolTimRt	Number of times a client timed out waiting for a connection from the pool per minute.
I066_JDBCConPoolThru	Number of connections allocated and returned by applications per second.

Table 15   Transactions

Metric Number/Name	Metric Description
I070_TranGlobDur	Average duration of global transactions.
I071_TranLocDur	Average duration of local transactions.
I072_TranGlobCommDur	Average duration of commits for global transactions.
I073_TranLocCommDur	Average duration of commits for local transactions.
I074_TranRollbackRt	Number of global and local transactions rolled back per second.

Table 15   Transactions

Metric Number/Name	Metric Description
I075_TranTimeoutRt	Number of timed out global and local transactions per second.
I076_TranCommitRt	Number of global and local transactions that were committed per second.
I078_TranStartRtt	Number of global and local transactions that were begun per second.

Table 16   ThreadPool

Metric Name	Metric Description
I013_ThrdPoolPctMax	Percentage of time number of threads in pool reached configured maximum size.
I014_ThrdPoolCrtRt	Number of threads created per minute.
I812_ThrdPoolHungRt	The rate at which the threads are declared hung
I813_CcrtThdPlHngCt	The number of concurrently hung threads

A WebSphere SPI Golden Metrics

Golden metrics are a set of metrics which monitor the basic functionality of your WebSphere 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 WebSphere Application server. Implementing golden metrics and taking action against the events generated by these metrics ensure the smooth functioning of the WebSphere Application server.

Table 17   Golden Metrics

Metric Type	Metric Name
Availability	Metric I001_ServerStatus
JVM	Metric I005_JVMMemUtilPct
	Metric I006_ClusterStatus
Servlets	Metric I041_ServSessActSess
Transactions	Metric I074_TranRollbackRt
	Metric I075_TranTimeoutRt
Performance	Metric I212_ThreadPoolUtilPct
EJB	Metric I220_EJBPoolUtil
	Metric I221_EJBMethRespTime
Web Applications	Metric I245_WebAppServletReqRt
	Metric I247_WebAppServletErrorRt
JDBC	Metric I261_JDBCConnPoolWaiters
	Metric I263_JDBCConnPoolUtil
	Metric I266_JDBConnPoolThroughput

B   Data Store Table for WebSphere Application Server

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

Table 18   Data Store Metrics of WebSphere SPI

Table Name	Area	Metric Description	Column Name
WBSSPI_RPT_METRICS	Server	Status of a server-reporting	I002_ServerStatusRep
WBSSPI_METRICS	JVM	Percentage of heap space used in the JVM	I005_JVMMemUtilPct
WBSSPI_METRICS	ThreadPool	Percentage of time Number of threads in pool reached configured maximum size	I013_ThrdPoolPctMax
WBSSPI_METRICS	ThreadPool	Number of threads created per minute	I014_ThrdPoolCrtRt
WBSSPI_METRICS	EJB	Percentage of active beans in the pool	I020_EJBPoolUtil
WBSSPI_METRICS WBSSPI_RPT_METRICS	EJB	Number of EJB method calls per minute	I022_EJBMethCallsRt
WBSSPI_METRICS WBSSPI_RPT_METRICS	EJB	Number of times an EJB was written to or loaded from the database per minute	I024_EJBEntDtLdStRt
WBSSPI_METRICS	EJB	Average percentage of time a call to retrieve an EJB from the pool failed	I025_EJBPoolMissPct
WBSSPI_METRICS	EJB	Average number of bean objects in the pool	I026_EJBConcLives
WBSSPI_METRICS	WebModule	Average servlet session lifetime in milliseconds	I040_ServSessAveLfe
WBSSPI_METRICS WBSSPI_RPT_METRICS	WebModule	Number of sessions currently being accessed	I041_ServSessActSes

Table 18 Data Store Metrics of WebSphere SPI

Table Name	Area	Metric Description	Column Name
WBSSPI_METRICS	WebModule	Number of sessions being invalidated per second	I042_ServInvSessRt
WBSSPI_METRICS WBSSPI_RPT_METRICS	WebModule	Number of requests for a servlet per second	I045_WebApServReqRt
WBSSPI_METRICS	WebModule	Number of errors in a servlet per second	I047_WebAppServErRt
WBSSPI_METRICS	WebModule	Number of servlets currently loaded for a web application	I048_WebAppServLoad
WBSSPI_METRICS	WebModule	Number of servlets reloaded for a web application per minute	I049_WebApServRelRt
WBSSPI_METRICS	JDBC	Average number of threads waiting for a connection from connection pools	I061_JDBCConPoolWt
WBSSPI_METRICS	JDBC	Average time that a client waited for a connection in milliseconds	I062_JDBConPoolWtTm
WBSSPI_METRICS	JDBC	Number of times a client timed out waiting for a connection from the pool per minute	I065_JDBConPlToutRt
WBSSPI_METRICS WBSSPI_RPT_METRICS	JDBC	Number of connections allocated and returned by applications per second	I066_JDBCConPlThru
WBSSPI_METRICS	JDBC	Average duration of global transactions	I070_TranGlobDur
WBSSPI_METRICS	JDBC	Average duration of local transactions	I071_TranLocDur
WBSSPI_METRICS	JDBC	Average duration of commits for global transactions	I072_TrGlbComDurNew
WBSSPI_METRICS	JDBC	Average duration of commits for local transactions	I073_TranLocCommDur

Table 18   Data Store Metrics of WebSphere SPI

Table Name	Area	Metric Description	Column Name
WBSSPI_METRICS	JDBC	Number per second of global and local transactions rolled back	I074_TranRollbackRt
WBSSPI_METRICS	JDBC	Number per second of timed out global and local transactions	I075_TranTimeoutRt
WBSSPI_METRICS	JDBC	Number per second of global and local transactions that were committed	I076_TranCommitRt
WBSSPI_METRICS WBSSPI_RPT_MET RICS	JDBC	Number per second of global and local transactions that were committed	I077_TranThroughput
WBSSPI_METRICS	JDBC	Number per second of global and local transactions that were started	I078_TranStartRt
WBSSPI_RPT_MET RICS	ThreadPool	Average number of active threads in a pool during collection interval	I210_ThreadPoolActThread s
WBSSPI_RPT_MET RICS	ThreadPool	Average number of threads (active and idle) in a pool during collection interval	I211_ThreadPoolAveSize
WBSSPI_RPT_MET RICS	EJB	Percentage of active beans in the pool (drill down)	I220_EJBPoolUtil
WBSSPI_RPT_MET RICS	EJB	Average EJB response time in milliseconds	I221_EJBMethRespTime
WBSSPI_RPT_MET RICS	EJB	Number of EJB method calls per minute (drill down)	I222_EJBMethodCallsRate
WBSSPI_RPT_MET RICS	EJB	Average size of the EJB pool	I223_EJBPoolSize
WBSSPI_RPT_MET RICS	EJB	Number of times an EJB was written to or loaded from the database per minute (drill down)	I224_EJBEntDataLdStRt

Table 18 Data Store Metrics of WebSphere SPI

Table Name	Area	Metric Description	Column Name
WBSSPI_RPT_MET RICS	EJB	Average Percentage of time a call to retrieve an EJB from the pool failed (drill down)	I225_EJBPoolMissPct
WBSSPI_RPT_MET RICS	WebModule	Number of requests for a servlet per second (drill down)	I245_WebAppServletReqRt
WBSSPI_RPT_MET RICS	WebModule	Average response time for a web application servlet in milliseconds	I246_WebAppServletRespT ime
WBSSPI_RPT_MET RICS	JDBC	Average number of connections in the connection pool	I260_JDBCConnPoolSize
WBSSPI_RPT_MET RICS	JDBC	Average # of threads waiting for a connection from connection pools (drill down)	I261_JDBCConnPoolWaiter s
WBSSPI_RPT_MET RICS	JDBC	Average time that a client waited for a connection in msec (drill down)	I262_JDBCConnPoolWaitT ime
WBSSPI_RPT_MET RICS	JDBC	% of connection pool in use	I263_JDBCConnPoolUtil
WBSSPI_RPT_MET RICS	JDBC	# of times a client timed out waiting for a connection from the pool per minute (drill down)	I265_JDBCConnPoolTimou tRts
WBSSPI_RPT_MET RICS	JDBC	# of connections allocated and returned by applications	I266_JDBCConnPoolThrou ghput
WBSSPI_METRICS	JVM	Percent of JVM Free Memory available	I807_JVMMemFreePct
WBSSPI_METRICS	JVM	The CPU Usage of the Java virtual machine	I808_JVMCpuUsagePct
WBSSPI_METRICS	JVM	The average garbage collection value in seconds between two garbage collections	I809_GCIntervalTime

Table 18   Data Store Metrics of WebSphere SPI

Table Name	Area	Metric Description	Column Name
WBSSPI_METRICS WBSSPI_RPT_MET RICS	EJB	The rate at which the messages failed to be delivered to the bean onMessage method (message driven beans)	I810_MsgBackoutRate
WBSSPI_METRICS WBSSPI_RPT_MET RICS	EJB	The rate at which the returning object was discarded because the pool was full (entity and stateless)	I811_ReturnDiscrdRt
WBSSPI_METRICS	ThreadPool	The rate at which the threads are declared hung	I812_ThrdPoolHungRt
WBSSPI_METRICS	ThreadPool	The number of concurrently hung threads	I813_CcrtThdPlHngCt
WBSSPI_METRICS WBSSPI_RPT_MET RICS	JDBC	The rate at which the prepared statements are discarded by the least recently used (LRU) algorithm of the statement cache	I814_PrdstcchdsrdRt

C Data Store Details for Reports

The WebSphere SPI creates the following data store details for reports for WebSphere Application Server.

Table 19   Data Store for Reports

Report Name	Report Table Name	Report Table Attributes	Data Store Class Name	Policy Logging Data
a_wbs_availability.rpt g_wbs_availability.rpt s_wbs_availability_details.rpt	WEBSPHERE	ID	WEBSPHERE	WBSSPI_Med_05min WBSSPI_High_05min WBSSPI_Low_05min
		SYSTEMNAME		
		DATETIME		
		GMT		
		SHIFTNAME		
		METRICID		
		OBJECTNAME		
		SERVERNAME		
		SORTID		
		VALUE		
		VALUEID		
a_wbs_ejb_meth_call_rate_top.rpt g_wbs_ejb_meth_call_rate_top.rpt	WEBSPHERE	ID	WEBSPHERE	WBSSPI_High_05min
		SYSTEMNAME		
		DATETIME		
		GMT		
		SHIFTNAME		
		METRICID		
		OBJECTNAME		
		SERVERNAME		
		SORTID		
		VALUE		
		VALUEID		

Table 19   Data Store for Reports

Report Name	Report Table Name	Report Table Attributes	Data Store Class Name	Policy Logging Data
a_wbs_ejb_ent_load_str_rate_top.rpt g_wbs_ejb_ent_load_str_rate_top.rpt	WEBSPHERE	ID	WEBSPHERE	WBSSPI_Med_05min WBSSPI_High_05min WBSSPI_Low_05min
		SYSTEMNAME		
		DATETIME		
		GMT		
		SHIFTNAME		
		METRICID		
		OBJECTNAME		
		SERVERNAME		
		SORTID		
		VALUE		
		VALUEID		
a_wbs_servlet_sessions_top.rpt g_wbs_servlet_sessions_top.rpt	WEBSPHERE	ID	WEBSPHERE	WBSSPI_0041 WBSSPI_High_1h
		SYSTEMNAME		
		DATETIME		
		GMT		
		SHIFTNAME		
		METRICID		
		OBJECTNAME		
		SERVERNAME		
		SORTID		
		VALUE		
		VALUEID		

Table 19   Data Store for Reports

Report Name	Report Table Name	Report Table Attributes	Data Store Class Name	Policy Logging Data
a_wbs_servlet_request _top.rpt g_wbs_servlet_request _top.rpt	WEBSPHERE	ID	WEBSPHERE	WBSSPI_Low_ 1h WBSSPI_High _1h WBSSPI_Med_ 1h
		SYSTEMNAME		
		DATETIME		
		GMT		
		SHIFTNAME		
		METRICID		
		OBJECTNAME		
		SERVERNAME		
		SORTID		
		VALUE		
		VALUEID		
a_wbs_db_con_pool_tp ut_top.rpt g_wbs_db_con_pool_tp ut_top.rpt	WEBSPHERE	ID	WEBSPHERE	WBSSPI_Med_ 05min WBSSPI_High _05min WBSSPI_Low_ 05min
		SYSTEMNAME		
		DATETIME		
		GMT		
		SHIFTNAME		
		METRICID		
		OBJECTNAME		
		SERVERNAME		
		SORTID		
		VALUE		
		VALUEID		

Table 19   Data Store for Reports

Report Name	Report Table Name	Report Table Attributes	Data Store Class Name	Policy Logging Data
a_wbs_transaction_tput_top.rpt g_wbs_transaction_tput_top.rpt s_wbs_trans_throughput.rpt	WEBSPHERE	ID SYSTEMNAME DATETIME GMT SHIFTNAME METRICID OBJECTNAME SERVERNAME SORTID VALUE VALUEID	WEBSPHERE	WBSSPI_Med_05min WBSSPI_High_05min WBSSPI_Low_05min
s_wbs_thread_pool_activity.rpt	WEBSPHERE	ID SYSTEMNAME DATETIME GMT SHIFTNAME METRICID OBJECTNAME SERVERNAME SORTID VALUE VALUEID	WEBSPHERE	WBSSPI_High_15min

Table 19   Data Store for Reports

Report Name	Report Table Name	Report Table Attributes	Data Store Class Name	Policy Logging Data
s_wbs_ejb_pool_util_top.rpt	WEBSPHERE	ID	WEBSPHERE	WBSSPI_0220 WBSSPI_High_1h
		SYSTEMNAME		
		DATETIME		
		GMT		
		SHIFTNAME		
		METRICID		
		OBJECTNAME		
		SERVERNAME		
		SORTID		
		VALUE		
		VALUEID		
s_wbs_ejb_meth_call_rate_top.rpt s_wbs_ejb_resp_time_top.rpt	WEBSPHERE	ID	WEBSPHERE	WBSSPI_0221 WBSSPI_Med_05min WBSSPI_High_05min WBSSPI_Low_05min
		SYSTEMNAME		
		DATETIME		
		GMT		
		SHIFTNAME		
		METRICID		
		OBJECTNAME		
		SERVERNAME		
		SORTID		
		VALUE		
		VALUEID		

Table 19   Data Store for Reports

Report Name	Report Table Name	Report Table Attributes	Data Store Class Name	Policy Logging Data
s_wbs_ejb_meth_call_r ate_top.rpt s_wbs_ejb_resp_time_t op.rpt	WEBSPHERE	ID	WEBSPHERE	WBSSPI_0222 WBSSPI_High _05min
		SYSTEMNAME		
		DATETIME		
		GMT		
		SHIFTNAME		
		METRICID		
		OBJECTNAME		
		SERVERNAME		
		SORTID		
		VALUE		
		VALUEID		
s_wbs_ejb_pool_size_to p.rpt	WEBSPHERE	ID	WEBSPHERE	WBSSPI_High _05min
		SYSTEMNAME		
		DATETIME		
		GMT		
		SHIFTNAME		
		METRICID		
		OBJECTNAME		
		SERVERNAME		
		SORTID		
		VALUE		
		VALUEID		

Table 19   Data Store for Reports

Report Name	Report Table Name	Report Table Attributes	Data Store Class Name	Policy Logging Data
s_wbs_ejb_ent_load_str_rate_top.rpt	WEBSPHERE	ID	WEBSPHERE	WBSSPI_0224 WBSSPI_Med_05min WBSSPI_High_05min WBSSPI_Low_05min
		SYSTEMNAME		
		DATETIME		
		GMT		
		SHIFTNAME		
		METRICID		
		OBJECTNAME		
		SERVERNAME		
		SORTID		
		VALUE		
		VALUEID		
s_wbs_ejb_pool_miss_top.rpt	WEBSPHERE	ID	WEBSPHERE	WBSSPI_Med_05min WBSSPI_High_05min WBSSPI_Low_05min
		SYSTEMNAME		
		DATETIME		
		GMT		
		SHIFTNAME		
		METRICID		
		OBJECTNAME		
		SERVERNAME		
		SORTID		
		VALUE		
		VALUEID		

Table 19   Data Store for Reports

Report Name	Report Table Name	Report Table Attributes	Data Store Class Name	Policy Logging Data
a_wbs_servlet_resp_time_top.rpt g_wbs_servlet_resp_time_top.rpt s_wbs_servlet_request_rate.rpt s_wbs_servlet_resp_time.rpt	WEBSPHERE	ID SYSTEMNAME DATETIME GMT SHIFTNAME METRICID OBJECTNAME SERVERNAME SORTID VALUE VALUEID	WEBSPHERE	WBSSPI_0245 WBSSPI_Low_1h WBSSPI_High_1h WBSSPI_Med_1h
a_wbs_servlet_resp_time_top.rpt g_wbs_servlet_resp_time_top.rpt s_wbs_servlet_request_rate.rpt s_wbs_servlet_resp_time.rpt	WEBSPHERE	ID SYSTEMNAME DATETIME GMT SHIFTNAME METRICID OBJECTNAME SERVERNAME SORTID VALUE VALUEID	WEBSPHERE	WBSSPI_0246 WBSSPI_High_1h WBSSPI_Med_1h

Table 19   Data Store for Reports

Report Name	Report Table Name	Report Table Attributes	Data Store Class Name	Policy Logging Data
s_wbs_db_conn_pools_ size_wtime.rpt	WEBSPHERE	ID	WEBSPHERE	WBSSPI_0260 WBSSPI_High _05min
		SYSTEMNAME		
		DATETIME		
		GMT		
		SHIFTNAME		
		METRICID		
		OBJECTNAME		
		SERVERNAME		
		SORTID		
		VALUE		
		VALUEID		
s_wbs_db_conn_pools_ clnwt_trate.rpt	WEBSPHERE	ID	WEBSPHERE	WBSSPI_0261 WBSSPI_High _05min
		SYSTEMNAME		
		DATETIME		
		GMT		
		SHIFTNAME		
		METRICID		
		OBJECTNAME		
		SERVERNAME		
		SORTID		
		VALUE		
		VALUEID		

Table 19   Data Store for Reports

Report Name	Report Table Name	Report Table Attributes	Data Store Class Name	Policy Logging Data
s_wbs_db_conn_pools_ size_wtime.rpt	WEBSPHERE	ID	WEBSPHERE	WBSSPI_0262 WBSSPI_High _05min
		SYSTEMNAME		
		DATETIME		
		GMT		
		SHIFTNAME		
		METRICID		
		OBJECTNAME		
		SERVERNAME		
		SORTID		
		VALUE		
		VALUEID		
s_wbs_db_conn_pools_ tput_util.rpt	WEBSPHERE	ID	WEBSPHERE	WBSSPI_0263 WBSSPI_High _05min
		SYSTEMNAME		
		DATETIME		
		GMT		
		SHIFTNAME		
		METRICID		
		OBJECTNAME		
		SERVERNAME		
		SORTID		
		VALUE		
		VALUEID		

Table 19   Data Store for Reports

Report Name	Report Table Name	Report Table Attributes	Data Store Class Name	Policy Logging Data
s_wbs_db_conn_pools_ clnwt_trate.rpt	WEBSPHERE	ID	WEBSPHERE	WBSSPI_0265 WBSSPI_Med_ 05min WBSSPI_High _05min WBSSPI_Low_ 05min
		SYSTEMNAME		
		DATETIME		
		GMT		
		SHIFTNAME		
		METRICID		
		OBJECTNAME		
		SERVERNAME		
		SORTID		
		VALUE		
		VALUEID		
s_wbs_db_conn_pools_ tput_util.rpt	WEBSPHERE	ID	WEBSPHERE	WBSSPI_0266 WBSSPI_Med_ 05min WBSSPI_High _05min WBSSPI_Low_ 05min
		SYSTEMNAME		
		DATETIME		
		GMT		
		SHIFTNAME		
		METRICID		
		OBJECTNAME		
		SERVERNAME		
		SORTID		
		VALUE		
		VALUEID		

D Data Store Details for Graphs

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

Table 20   Data Store for Graphs

Graph Name	Policy Logging Data	Spec File	Data StoreData Class
JVM Utilization	WBSSPI_0005 WBSSPI_High_15min	wasspi_wbs_graph.sp	wasspi_wbs_graph
ThreadPool	WBSSPI_0013 WBSSPI_High_15min	wasspi_wbs_graph.sp	wasspi_wbs_graph
	WBSSPI_0014 WBSSPI_High_15min	wasspi_wbs_graph.sp	wasspi_wbs_graph
EJB Activity	WBSSPI_0024 WBSSPI_High_05min	wasspi_wbs_graph.sp	wasspi_wbs_graph
	WBSSPI_0025 WBSSPI_Med_05min WBSSPI_High_05min WBSSPI_Low_05min	wasspi_wbs_graph.sp	wasspi_wbs_graph
EJB Pool	WBSSPI_0040 WBSSPI_High_1h	wasspi_wbs_graph.sp	wasspi_wbs_graph
EJB Pool Size	WBSSPI_0026 WBSSPI_High_05min	wasspi_wbs_graph.sp	wasspi_wbs_graph
Servlet Session Activity	WBSSPI_0041 WBSSPI_High_1h	wasspi_wbs_graph.sp	wasspi_wbs_graph

Table 20   Data Store for Graphs

Graph Name	Policy Logging Data	Spec File	Data StoreData Class
Servlet Session Invalidations	WBSSPI_0042 WBSSPI_High_1h WBSSPI_Med_1h	wasspi_wbs_graph.sp	wasspi_wbs_graph
	WBSSPI_0045 WBSSPI_Low_1h WBSSPI_High_1h WBSSPI_Med_1h	wasspi_wbs_graph.sp	wasspi_wbs_graph
	WBSSPI_0047 WBSSPI_Low_1h WBSSPI_High_1h WBSSPI_Med_1h	wasspi_wbs_graph.sp	wasspi_wbs_graph
WebApplication	WBSSPI_0048 WBSSPI_Low_1h WBSSPI_High_1h WBSSPI_Med_1h	wasspi_wbs_graph.sp	wasspi_wbs_graph
	WBSSPI_0049 WBSSPI_Low_1h WBSSPI_High_1h WBSSPI_Med_1h	wasspi_wbs_graph.sp	wasspi_wbs_graph
JDBC Pool Waits	WBSSPI_0061 WBSSPI_High_05min	wasspi_wbs_graph.sp	wasspi_wbs_graph
	WBSSPI_0062 WBSSPI_Med_05min WBSSPI_High_05min WBSSPI_Low_05min	wasspi_wbs_graph.sp	wasspi_wbs_graph
JDBC Pool Performance	WBSSPI_0065 WBSSPI_Med_05min WBSSPI_High_05min WBSSPI_Low_05min	wasspi_wbs_graph.sp	wasspi_wbs_graph
	WBSSPI_0066 WBSSPI_Med_05min WBSSPI_High_05min WBSSPI_Low_05min	wasspi_wbs_graph.sp	wasspi_wbs_graph

Table 20   Data Store for Graphs

Graph Name	Policy Logging Data	Spec File	Data StoreData Class
Transaction Duration Times	WBSSPI_0070 WBSSPI_Med_05min WBSSPI_High_05min	wasspi_wbs_graph.sp	wasspi_wbs_graph
	WBSSPI_0071 WBSSPI_Med_05min WBSSPI_High_05min	wasspi_wbs_graph.sp	wasspi_wbs_graph
	WBSSPI_0072 WBSSPI_Med_05min WBSSPI_High_05min	wasspi_wbs_graph.sp	wasspi_wbs_graph
	WBSSPI_0073 WBSSPI_Med_05min WBSSPI_High_05min	wasspi_wbs_graph.sp	wasspi_wbs_graph
Transaction Activity	WBSSPI_0074 WBSSPI_Med_05min WBSSPI_High_05min WBSSPI_Low_05min	wasspi_wbs_graph.sp	wasspi_wbs_graph
	WBSSPI_0075 WBSSPI_Med_05min WBSSPI_High_05min WBSSPI_Low_05min	wasspi_wbs_graph.sp	wasspi_wbs_graph
	WBSSPI_0076 WBSSPI_Med_05min WBSSPI_High_05min WBSSPI_Low_05min	wasspi_wbs_graph.sp	wasspi_wbs_graph
	WBSSPI_0077 WBSSPI_Med_05min WBSSPI_High_05min WBSSPI_Low_05min	wasspi_wbs_graph.sp	wasspi_wbs_graph
	WBSSPI_0078 WBSSPI_Med_05min WBSSPI_High_05min WBSSPI_Low_05min	wasspi_wbs_graph.sp	wasspi_wbs_graph

Table 20   Data Store for Graphs

Graph Name	Policy Logging Data	Spec File	Data StoreData Class
JVM Utilization	WBSSPI_0807 WBSSPI_Low_15min WBSSPI_Med_15min	wasspi_wbs_graph.sp	wasspi_wbs_graph
	WBSSPI_0808 WBSSPI_Low_15min WBSSPI_Med_15min	wasspi_wbs_graph.sp	wasspi_wbs_graph
	WBSSPI_0809 WBSSPI_Low_1h WBSSPI_High_1h WBSSPI_Med_1h	wasspi_wbs_graph.sp	wasspi_wbs_graph
EJB Activity	WBSSPI_0810 WBSSPI_Low_15min WBSSPI_Med_15min	wasspi_wbs_graph.sp	wasspi_wbs_graph
	WBSSPI_0811 WBSSPI_Low_15min WBSSPI_High_15min WBSSPI_Med_15min	wasspi_wbs_graph.sp	wasspi_wbs_graph
ThreadPool	WBSSPI_0812 WBSSPI_Low_15min WBSSPI_High_15min WBSSPI_Med_15min	wasspi_wbs_graph.sp	wasspi_wbs_graph
	WBSSPI_0813 WBSSPI_Low_15min WBSSPI_Med_15min WBSSPI_High_1h	wasspi_wbs_graph.sp	wasspi_wbs_graph
JDBC SQL Statistics	WBSSPI_0814 WBSSPI_High_15min WBSSPI_Med_15min	wasspi_wbs_graph.sp	wasspi_wbs_graph

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