

SPECjbb2013

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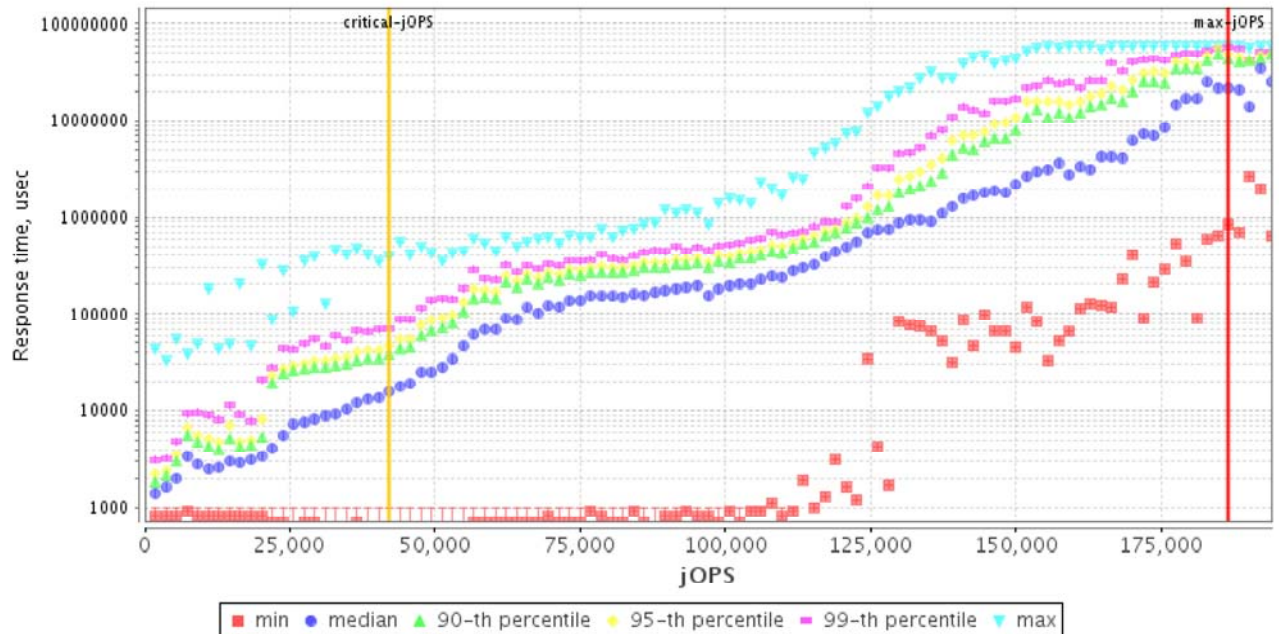
Dell Inc. PowerEdge R920	186577 SPECjbb2013-MultiJVM max-jOPS 42034 SPECjbb2013-MultiJVM critical-jOPS		
Tested by: Dell Inc.	Test Sponsor: Dell Inc.	Test location: Round Rock, TX	Test date: Feb 23, 2014
SPEC license #: 55	Hardware Availability: Mar-2014	Software Availability: Mar-2014	Publication: MMM DD, YYYY

Benchmark Results Summary

SPECjbb2013-MultiJVM:
Multiple JVMs/Single Host
(# of groups: 4)

[Overall SUT Description](#)
[SUT Description](#)
[max-jOPS and critical-jOPS Details](#)
[Number of probes](#)
[Request Mix](#)
[Accuracy](#)
[Rate Of Non-Critical Failures](#)
[Delay between performance status pings](#)
[IR/PR](#)
[Accuracy](#)
[Topology](#)
[SUT Configuration](#)
[Properties](#)
[Validation](#)
[Details](#)

Overall Throughput RT curve



Overall SUT (System Under Test) Description

Vendor	Dell Inc.
Vendor URL	http://www.dell.com/
System Source	Single Supplier
System Designation	Server Rack
Total Systems	1
All SUT Systems Identical	YES
Total Nodes	1
All Nodes Identical	YES
Nodes Per System	1
Total Chips	4
Total Cores	60
Total Threads	120
Total Memory Amount (GB)	1024
Total OS Images	1

SW Environment

Non-virtual

SUT Description

Hardware hw_1		Operating System os_1	
Vendor	Dell Inc.	Vendor	SUSE
Vendor URL	http://www.dell.com/	Vendor URL	http://www.suse.com/
Available	Mar-2014	Version	SLES 11 SP3
Model	PowerEdge R920	Available	Feb-2013
Form Factor	4U Rack.	Bitness	64
CPU Name	Intel Xeon E7-4890 v2	Notes	None
CPU Characteristics	15 core, 2.80GHz, 37.5MB L3 Cache (Turbo Boost Technology up to 3.40 GHz)	Java Virtual Machine jvm_1	
Number of Systems	1	Vendor	Oracle
Nodes Per System	1	Vendor URL	http://www.oracle.com
Chips Per System	4	Version	Java HotSpot 64-bit Server VM, version 1.8.0
Cores Per System	60	Available	Mar-2014
Cores Per Chip	2	Bitness	64
Threads Per System	120	Notes	None
Threads Per Core	2		
Version	None		
CPU Frequency (MHz)	2800		
Primary Cache	32 KB I + 32 KB D on chip per core		
Secondary Cache	256 KB I+D on chip per core		
Tertiary Cache	37.5 MB I+D on chip per chip		
Other Cache	None		
Disk	1 x 200 GB SAS SSD		
File System	ext2		
Memory Amount (GB)	1024		
# and size of DIMM(s)	64 x 16384 MB		
Memory Details	2Rx4 PC3L-12800R-11 ECC; slots 1-8 of risers A-H populated		
# and type of Network Interface Cards (NICs)	4 x 1 Gbit NICs		
Power Supply Quantity and Rating (W)	2 x 1100		
Other Hardware	None		
Cabinet/Housing/Enclosure	None		
Shared Description	None		
Shared Comment	None		
Tuning	None		
Notes	None		

max-jOPS and critical-jOPS Details

max-jOPS = jOPS passed before the First Failure

Pass/Fail	Pass	Pass	Fail	Fail	Fail
jOPS	184748	186577	188407	190236	192065

critical-jOPS = Geomean (jOPS @ 10000; 50000; 100000; 200000; 500000; SLAs)

Response time percentile is 99-th

SLA (us)	10000	50000	100000	200000	500000	Geomean
jOPS	17072	30181	46644	55790	97861	42034

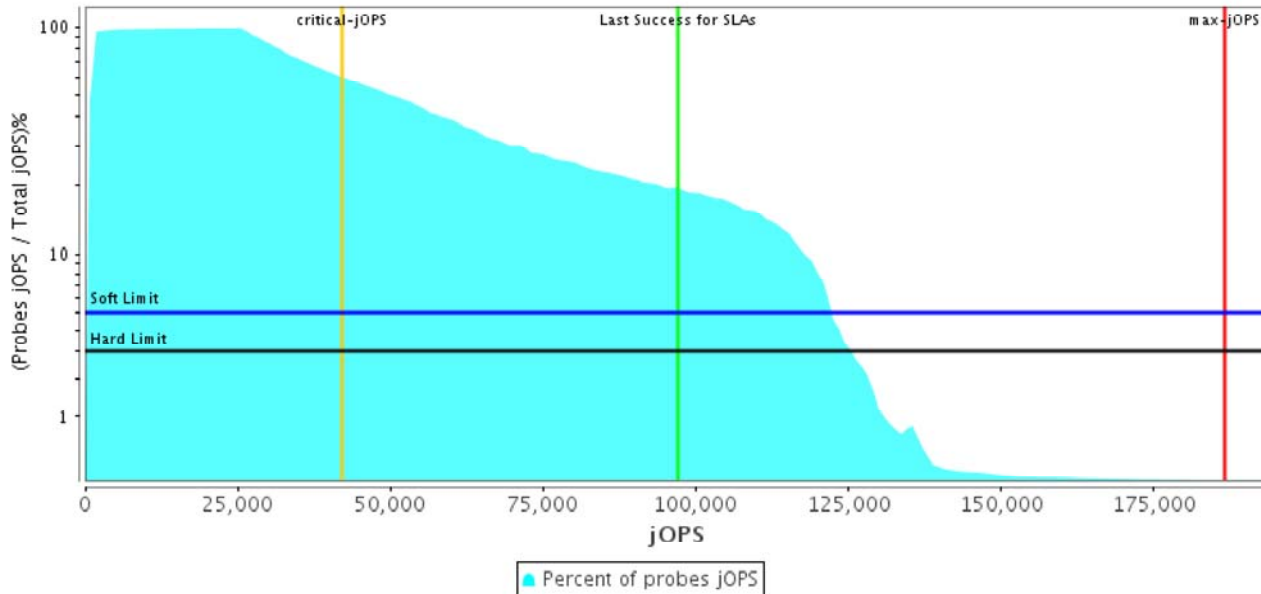
Last Success jOPS/First Failure jOPS for SLA points

	Percentile					
	10-th	50-th	90-th	95-th	99-th	100-th
500us	- / 1829	- / 1829	- / 1829	- / 1829	- / 1829	- / 1829
1000us	- / 1829	- / 1829	- / 1829	- / 1829	- / 1829	- / 1829
5000us	49388 / 51217	21950 / 23779	18292 / 7317	18292 / 7317	5488 / 7317	- / 1829
10000us	53047 / 54876	32925 / 34755	20121 / 21950	20121 / 21950	18292 / 14634	- / 1829
20000us	60363 / 62192	45730 / 47559	21950 / 23779	20121 / 21950	18292 / 20121	- / 1829
50000us	74997 / 73168	54876 / 56705	45730 / 47559	42071 / 43901	31096 / 29267	18292 / 5488
100000us	106093 / 107922	64022 / 65851	53047 / 54876	53047 / 54876	45730 / 47559	21950 / 10975
200000us	117068 / 118897	100605 / 102435	64022 / 62192	60363 / 62192	54876 / 56705	31096 / 16463
500000us						

128043 /	120727 /	111581 /	109751 /	96947 /	64022 /
129872	122556	113410	107922	98776	43901
173773 /	135360 /	124385 /	122556 /	118897 /	96947 /
155481	137189	126214	124385	120727	89630

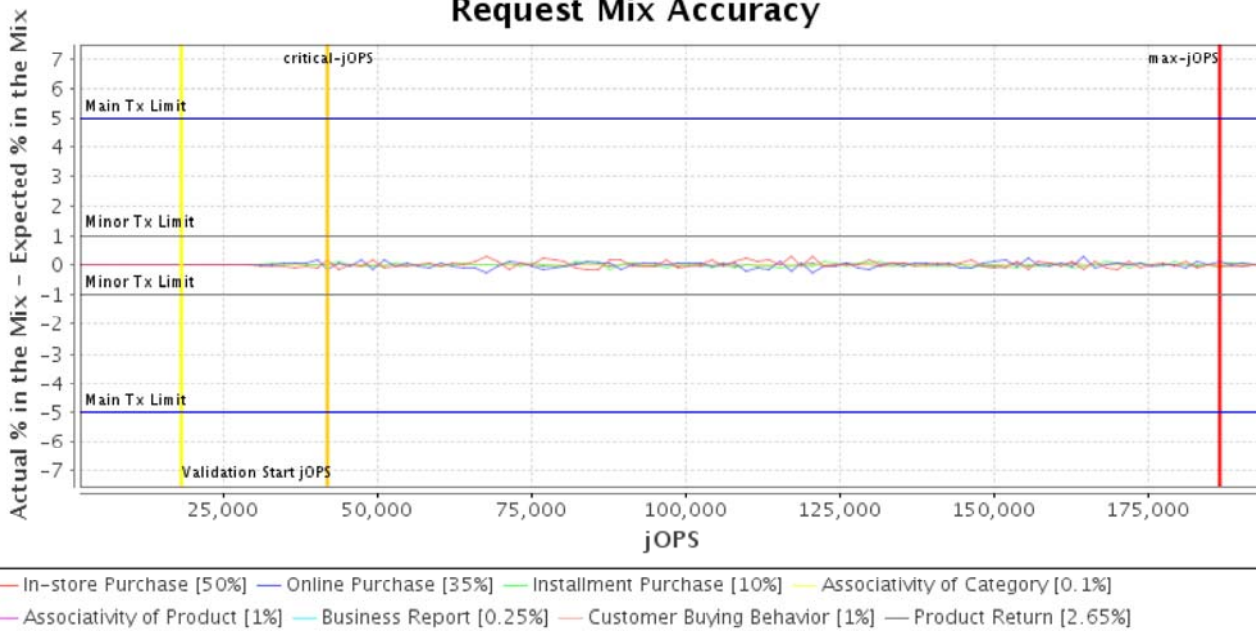
Number of probes

Probes jOPS / Total jOPS



Request Mix Accuracy

Request Mix Accuracy



Note

(Actual % in the Mix - Expected % in the Mix) must be within:

'Main Tx' limit of +/-5.0% for the requests whose expected % in the mix is >= 10.0%

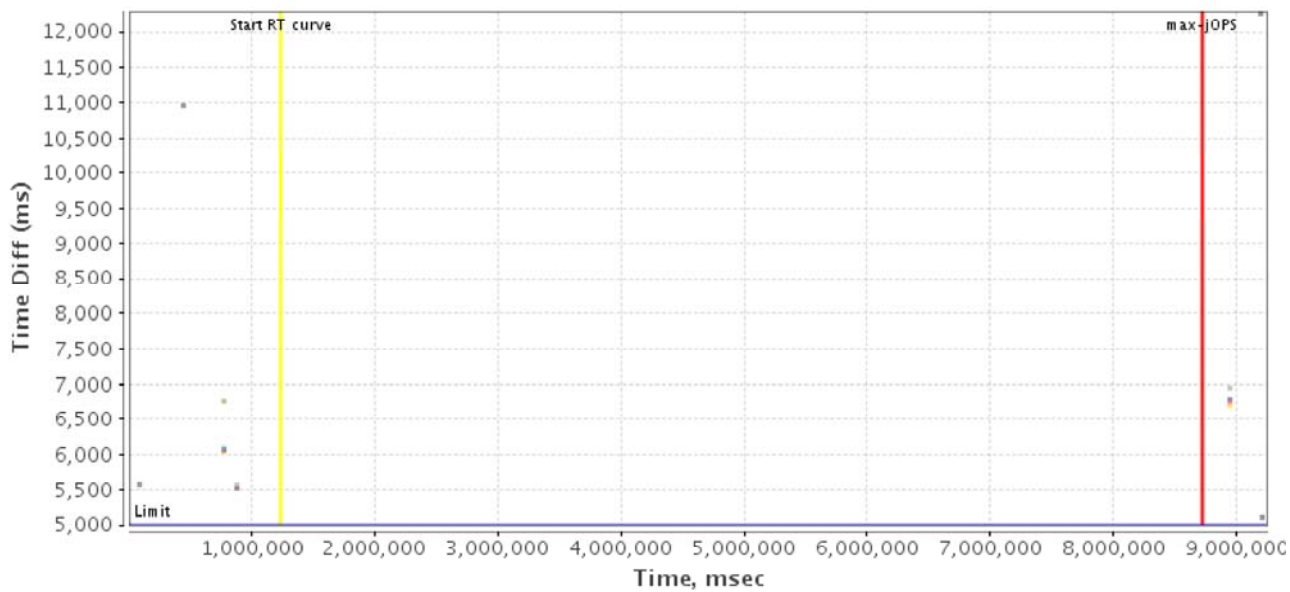
'Minor Tx' limit of +/-1.0% for the requests whose expected % in the mix is < 10.0%

Rate of Non-Critical Failures

There were no non-critical failures in Response Time curve building

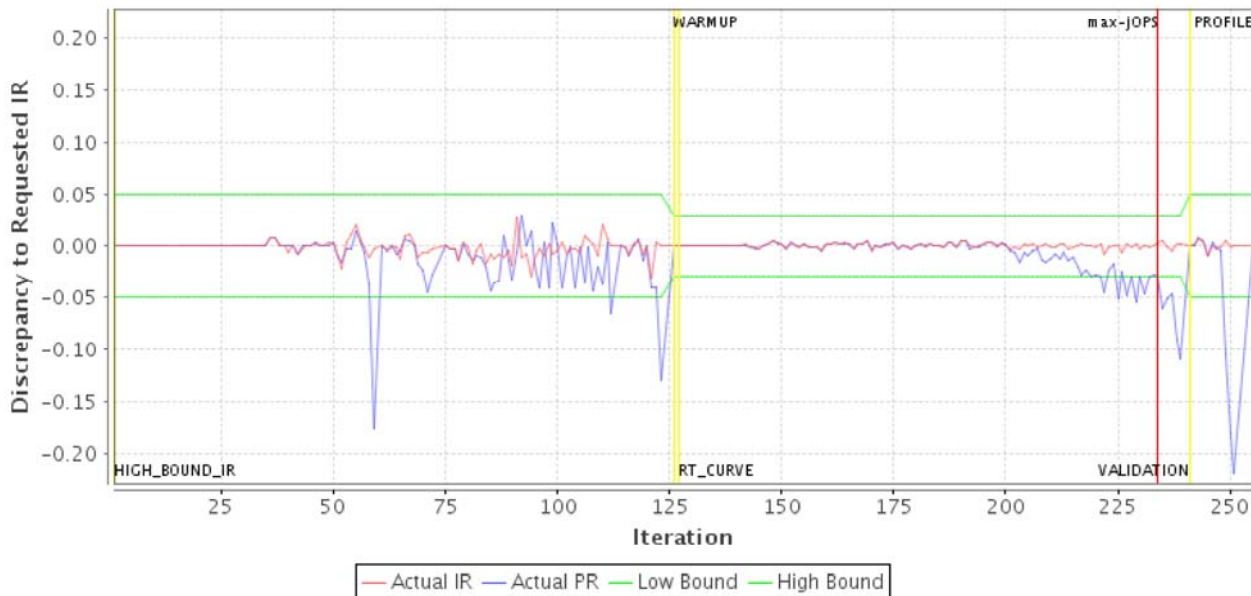
Delay between performance status pings during RT Curve (Response-Throughput Curve)

Delay between performance status pings above threshold



IR/PR Accuracy

IR/PR Accuracy



Topology

SUT

Hardware [config_1](#)

OS Image [os_Image_1](#)

JVM [jvm_Ctr_1](#) : Controller

JVM [jvm_Backend_1](#) : Backend

JVM [jvm_TxInjector_1](#) : TxInjector

SUT config_1 Configuration

Hardware		OS Image os_Image_1	
OS Images	os_Image_1(1)	JVM Instances	jvm_Ctr_1(1) , jvm_Backend_1(4) , jvm_TxInjector_1(4)
Hardware Description	hw_1	OS Image Description	os_1
Number of Systems	1	Tuning	None
SW Environment	non-virtual	Notes	None
Tuning	System Profile set to Performance	JVM Instance jvm_Ctr_1	
Notes	None	Parts of Benchmark	Controller
			jvm_1

JVM Instance Description	
Command Line	-jar specjbb2013.jar -m MULTICONTROLLER
Tuning	None
Notes	None
JVM Instance jvm_Backend_1	
Parts of Benchmark	Backend
JVM Instance Description	jvm_1
Command Line	-server -Xmx240g -Xms240g -Xmn220g -XX:+UseParallelOldGC -XX:+UseLargePages -XX:ParallelGCThreads=30 -XX:-UseBiasedLocking -XX:-UseAdaptiveSizePolicy -XX:+AlwaysPreTouch -jar specjbb2013.jar -m BACKEND -G \$GROUPID -J \$JVMID
Tuning	affinity note 1 • numactl --cpunodebind=\$node --localalloc
Notes	None
JVM Instance jvm_TxInjector_1	
Parts of Benchmark	TxInjector
JVM Instance Description	jvm_1
Command Line	-Xmx6g -Xms6g -Xmn5g -XX:+UseParallelOldGC -jar specjbb2013.jar -m TXINJECTOR -G \$GROUPID -J \$JVMID
Tuning	numactl --cpunodebind=\$node --localalloc
Notes	None

Run Properties

This section lists properties only set by user; use -defaultProps reporter option to list all properties

Property Name	Default Controller	
specjbb.forkjoin.workers	120	60
specjbb.group.count	1	4
specjbb.txi.pergroup.count	1	1

[View table in csv format](#)

Validation Details

Validation Reports

Level: COMPLIANCE

Check	Agent	Result
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Check properties on compliance	All	PASSED
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Level: CORRECTNESS

Check	Agent	Result
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Compare SM and HQ Inventory	All	PASSED
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Other Checks

High-bound (max attempted) is 182919 IR

High-bound (settled) is 175288 IR