

SPECjbb2013

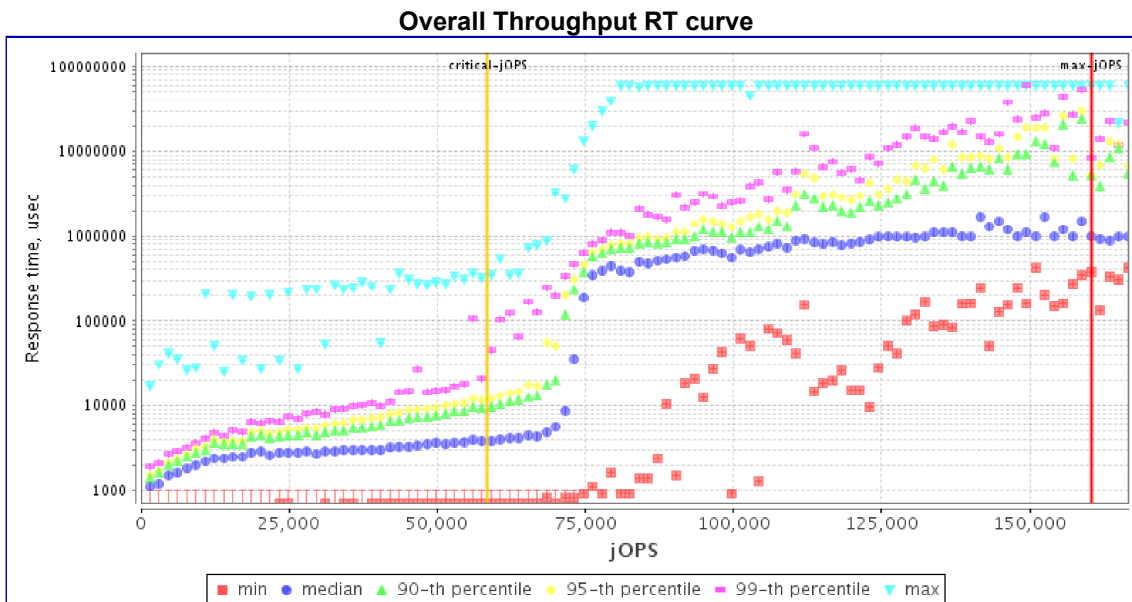
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Cisco Systems Cisco UCS C220 M4	160283 SPECjbb2013-MultiJVM max-jOPS 58478 SPECjbb2013-MultiJVM critical-jOPS		
Tested by: Cisco Systems ()	Test Sponsor: Cisco Systems	Test location: San Jose, CA	Test date: August 21, 2014
SPEC license #: 9019	Hardware Availability: Dec -2014	Software Availability: Aug -2014	Publication: MMM DD, YYYY

Benchmark Results Summary

SPECjbb2013
-MultiJVM:
Multiple
JVMs/Single
Host
(# of groups:
2)

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Overall SUT (System Under Test) Description

Vendor	Cisco Systems
Vendor URL	http://www.cisco.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	2
Total Cores	36
Total Threads	72
Total Memory Amount (GB)	1024
Total OS Images	1
SW Environment	Non-virtual

SUT Description

Hardware hw_1	
Vendor	Cisco Systems
Vendor URL	http://www.cisco.com/
Available	Dec-2014
Model	Cisco UCS C220 M4
Form Factor	1RU
CPU Name	Intel Xeon E5-2699 v3
CPU Characteristics	18-Core, 2.30GHz (Turbo Boost Technology up to 3.60 GHz)
Number of Systems	1
Nodes Per System	1
Chips Per System	2
Cores Per System	36
Cores Per Chip	18
Threads Per System	72
Threads Per Core	2
Version	None
CPU Frequency (MHz)	2300
Primary Cache	32 KB(L)+32 KB(D)on chip per core
Secondary Cache	256 KB (I+D) per core
Tertiary Cache	45MB (I+D) on chip per chip
Other Cache	None
Disk	1x 300GB 15K SAS
File System	ext4
Memory Amount (GB)	1024GB
# and size of DIMM(s)	16 x 64GB
Memory Details	64GB 2S 4Rx4 PC4-2133P-RA0-10-DC0-ES
# and type of Network Interface Cards (NICs)	2 X 1 Gbit NIC
Power Supply Quantity and Rating (W)	2 x 770W
Other Hardware	None
Cabinet/Housing/Enclosure	None
Shared Description	None
Shared Comment	None
Tuning	None
Notes	None
Other Hardware network_1	
Vendor	None
Vendor URL	None
Version	None
Available	None
Bitness	None
Notes	None

Operating System os_1	
Vendor	Red Hat
Vendor URL	http://www.redhat.com/
Version	Red Hat Enterprise Linux Server release 6.5 (Santiago)
Available	Nov-2013
Bitness	64
Notes	None
Java Virtual Machine jvm_1	
Vendor	Oracle Corporation
Vendor URL	http://www.oracle.com
Version	Java Hotspot 64-bit Server VM, version 1.8.0_20
Available	Aug-2014
Bitness	64
Notes	None
Other Software other_1	
Vendor	None
Vendor URL	None
Version	None
Available	None
Bitness	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	158727	160283	161840	163396	164952

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

Response time percentile is 99-th

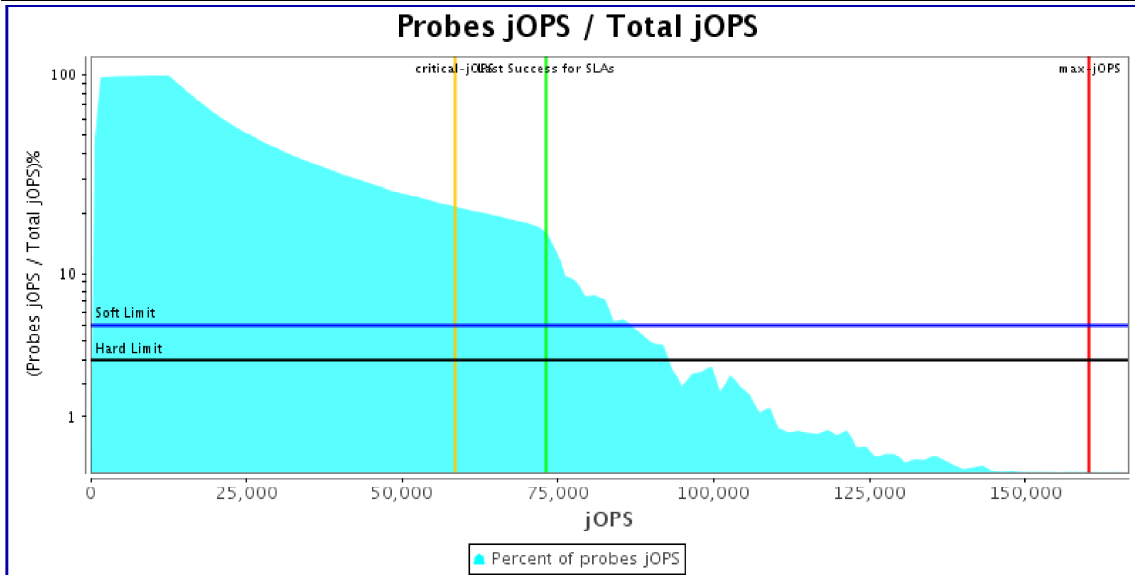
SLA (us)	10000	50000	100000	200000	500000	Geomean
jOPS	38385	58096	59911	69249	73917	58478

Last Success jOPS/First Failure jOPS for SLA points

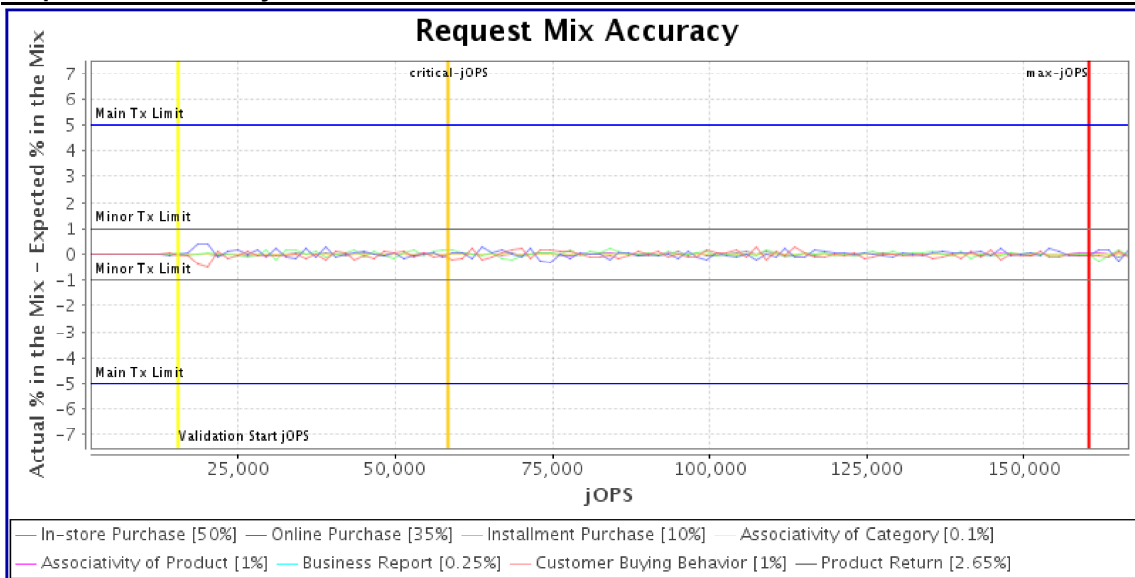
	Percentile					
	10-th	50-th	90-th	95-th	99-th	100-th
500us	- / 1556	- / 1556	- / 1556	- / 1556	- / 1556	- / 1556
1000us	4668 / 6225	- / 1556	- / 1556	- / 1556	- / 1556	- / 1556
5000us	73139 / 74695	68471 / 70027	34235 / 35791	23342 / 24898	17118 / 18674	- / 1556
10000us	73139 / 74695	71583 / 73139	59134 / 60690	51353 / 52909	40460 / 37348	- / 1556
20000us	73139 / 74695	71583 / 73139	70027 / 71583	66914 / 68471	54465 / 46684	1556 / 3112
50000us	74695 / 76251	73139 / 74695	70027 / 71583	70027 / 68471	59134 / 56021	26455 / 10893
100000us						

	74695 /	73139 /	70027 /	70027 /	63802 /	40460 /
	76251	74695	71583	71583	56021	10893
200000us	82476 /	74695 /	71583 /	70027 /	70027 /	40460 /
	79364	76251	73139	71583	68471	10893
500000us	121380 /	85588 /	74695 /	74695 /	73139 /	63802 /
	112043	87144	76251	76251	74695	60690
1000000us	160283 / -	160283 /	99594 /	88701 /	82476 /	68471 /
		133829	94925	90257	79364	70027

Number of probes



Request Mix Accuracy



Note

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

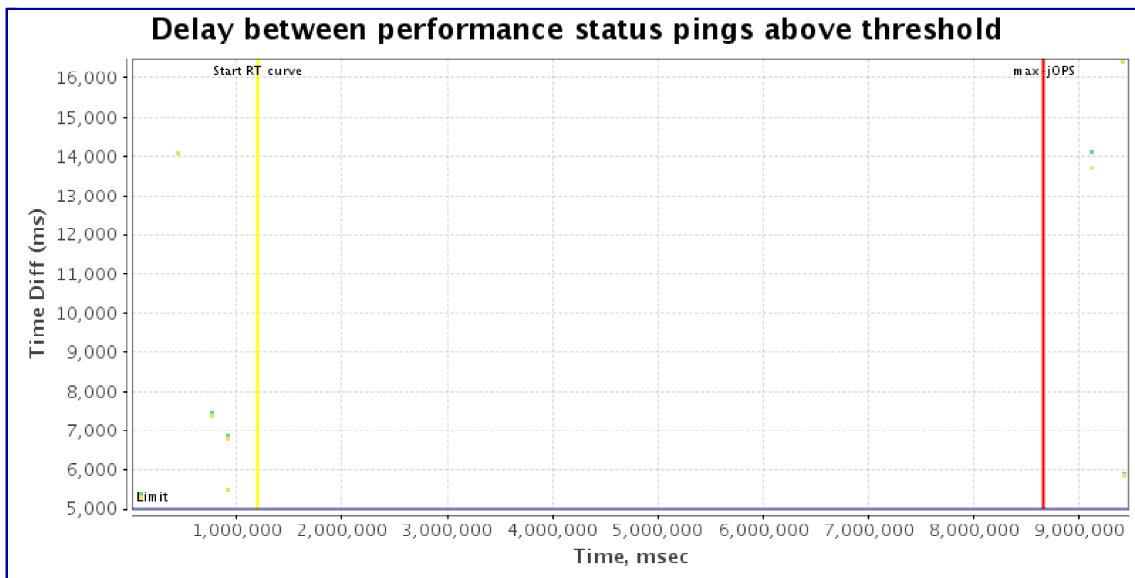
'Main Tx' limit of +/-5.0% for the requests whose expected % in the mix is >= 10.0%

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

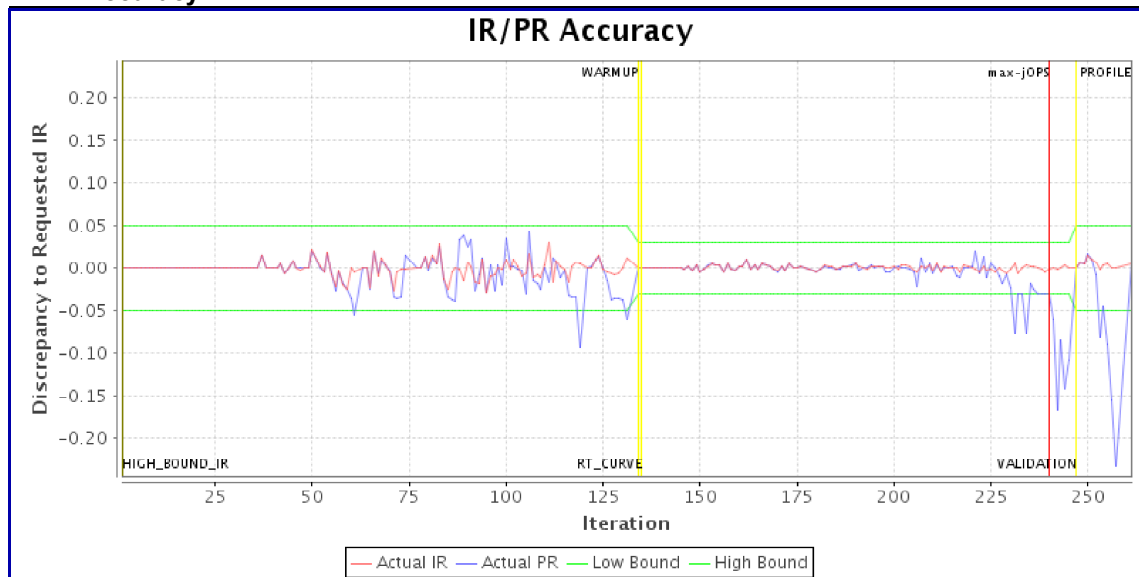
Rate of Non-Critical Failures

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

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



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_Txlnjector_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(2) , jvm_Txlnjector_1(2)
Hardware Description	hw_1	OS Image Description	os_1
Number of Systems	1	Tuning	<ul style="list-style-type: none"> tuned-adm profile throughput-performance
SW Environment	non-virtual	Notes	None
Tuning	BIOS Tuning <ul style="list-style-type: none"> Energy Performance was set to Performance Mode CPU Performance set to Enterprise Memory RAS Configuration set to Maximum Performance 	JVM Instance jvm_Ctr_1	
		Parts of Benchmark	Controller
			jvm_1

	• Processor C6 state set to enabled
Notes	None

JVM Instance Description	
Command Line	-Xmn1536m -Xms2g -Xmx2g
Tuning	None
Notes	None

JVM Instance jvm_Backend_1

Parts of Benchmark	Backend
JVM Instance Description	jvm_1
Command Line	-showversion -server -XX:LargePageSizeInBytes=2m -XX:+AggressiveOpts -XX:-UseAdaptiveSizePolicy -XX:+AlwaysPreTouch -XX:-UseBiasedLocking -XX:+UseLargePages -XX:+UseParallelOldGC -Xms400g -Xmx400g -Xmn340g -XX:SurvivorRatio=26 -XX:TargetSurvivorRatio=90 -XX:ParallelGCThreads=32 -XX:+UseTransparentHugePages -XX:+PrintGCDetails -XX:+PrintGCTimeStamps
Tuning	Affinity Masks <ul style="list-style-type: none"> numactl --cpunodebind=0 --localalloc numactl --cpunodebind=1 --localalloc
Notes	None

JVM Instance jvm_TxInjector_1

Parts of Benchmark	TxInjector
JVM Instance Description	jvm_1
Command Line	-showversion -Xmn1536m -Xms2g -Xmx2g -XX:ParallelGCThreads=9
Tuning	None
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.comm.connect.timeouts.connect	60000	600000
specjbb.comm.connect.timeouts.read	60000	600000
specjbb.comm.connect.timeouts.write	60000	600000
specjbb.forkjoin.workers	72	90
specjbb.group.count	1	2
specjbb.txi.pergroup.count	1	1

[View table in csv format](#)

Validation Details

Validation Reports

Level: COMPLIANCE

Check	Agent	Result
Check properties on compliance	All	PASSED

Level: CORRECTNESS

Check	Agent	Result
Compare SM and HQ Inventory	All	PASSED

Other Checks

High-bound (max attempted) is 155615 IR

High-bound (settled) is 146120 IR