

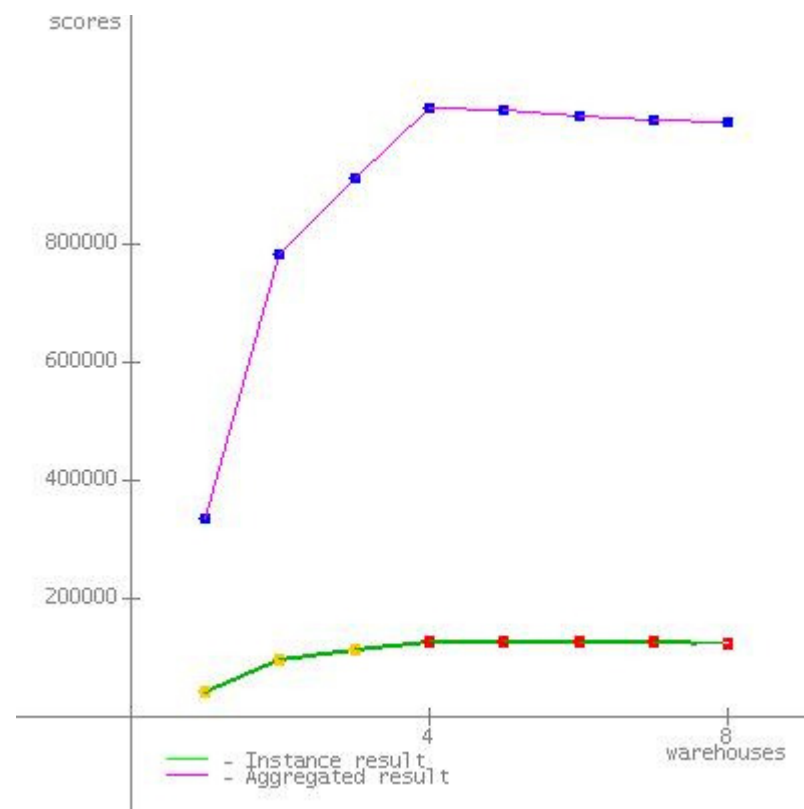
SPECjbb2005

SPECjbb2005 bops = 1017141, SPECjbb2005 bops/JVM = 127143

Cisco Systems Cisco UCS B230 M1

IBM Corporation IBM J9 VM (build 2.4, J2RE 1.6.0 IBM J9 2.4 Windows Server 2008 amd64-64
jvmwa6460sr5-20090519_35743 (JIT enabled, AOT enabled)

JVM run	JVM Scores
1	125319
2	127615
3	127699
4	128201
5	127752
6	125353
7	127851
8	127351
SPECjbb2005 bops = 1017141, SPECjbb2005 bops/JVM = 127143	



Hardware	
Hardware Vendor	Cisco Systems
Vendor URL	http://www.cisco.com
Model	Cisco UCS B230 M1

Software	
Software Vendor	IBM Corporation
Vendor URL	http://www.ibm.com
JVM Version	IBM J9 VM (build 2.4, J2RE 1.6.0 IBM J9 2.4 Windows Server 2008 amd64-64 jvmwa6460sr5-20090519_35743 (JIT enabled, AOT enabled))

Processor	Intel Xeon X7560 (Intel Turbo Boost Technology up to 2.666GHz)
MHz	2266
# of Chips	2
# of Cores	16
# of Cores/Chip	8
HW Threading Enabled?	yes
Procs Avail to Java	32
Memory (MB)	131072
Memory Details	128GB (32 x 4GB 2Rx4 PC3L-10600R, ECC, running 1066MHz)
Primary cache	32KB I + 32KB D on chip per core
Secondary cache	256KB(I+D) on chip per core
Other cache	24MB(I+D) on chip per chip
Filesystem	NTFS
Disks	2 x 64GB 3Gb/s SATA SSD
Other hardware	Cisco UCS 6120XP 20 Port Fabric Interconnect, Cisco UCS 5100 Series Blade Server Chassis, Cisco UCS 2104XP Fabric Extender

JVM Command Line	java /HIGH /AFFINITY [0xF,0xF0,0xF00,0xF000,0xF0000,0xF00000,0xF000000,0xF0000000] -Xaggressive -Xcompressedrefs -Xgcpolicy:gencon -Xmn1400m -Xms1875m -Xmx1875m -XlockReservation -Xnloa -XtlhPrefetch -Xlp spec.jbb.JBBmain -propfile SPECjbb-UCS-B230-M1.props
JVM Initial Heap Memory (MB)	1875
JVM Maximum Heap Memory (MB)	1875
JVM Address bits	64
JVM CLASSPATH	.\jbb.jar; .\check.jar;
JVM BOOTCLASSPATH	C:\Java\IBM_J9_SR5_x8664_Windows\Java\jre\bin\compressedrefs\jclSC160\vm.jar; C:\Java\IBM_J9_SR5_x8664_Windows\Java\jre\lib\annotation.jar; C:\Java\IBM_J9_SR5_x8664_Windows\Java\jre\lib\beans.jar; C:\Java\IBM_J9_SR5_x8664_Windows\Java\jre\lib\java.util.jar; C:\Java\IBM_J9_SR5_x8664_Windows\Java\jre\lib\jndi.jar; C:\Java\IBM_J9_SR5_x8664_Windows\Java\jre\lib\logging.jar; C:\Java\IBM_J9_SR5_x8664_Windows\Java\jre\lib\security.jar; C:\Java\IBM_J9_SR5_x8664_Windows\Java\jre\lib\sql.jar; C:\Java\IBM_J9_SR5_x8664_Windows\Java\jre\lib\ibmorib.jar; C:\Java\IBM_J9_SR5_x8664_Windows\Java\jre\lib\ibmoribapi.jar; C:\Java\IBM_J9_SR5_x8664_Windows\Java\jre\lib\ibmcfw.jar; C:\Java\IBM_J9_SR5_x8664_Windows\Java\jre\lib\rt.jar; C:\Java\IBM_J9_SR5_x8664_Windows\Java\jre\lib\charsets.jar; C:\Java\IBM_J9_SR5_x8664_Windows\Java\jre\lib\resources.jar; C:\Java\IBM_J9_SR5_x8664_Windows\Java\jre\lib\ibmpkcs.jar; C:\Java\IBM_J9_SR5_x8664_Windows\Java\jre\lib\ibmcertpathfw.jar; C:\Java\IBM_J9_SR5_x8664_Windows\Java\jre\lib\ibmjgssf.jar; C:\Java\IBM_J9_SR5_x8664_Windows\Java\jre\lib\ibmjsssfw.jar; C:\Java\IBM_J9_SR5_x8664_Windows\Java\jre\lib\ibmsaslfw.jar; C:\Java\IBM_J9_SR5_x8664_Windows\Java\jre\lib\ibmjcefw.jar; C:\Java\IBM_J9_SR5_x8664_Windows\Java\jre\lib\ibmjgssprovider.jar; C:\Java\IBM_J9_SR5_x8664_Windows\Java\jre

	\lib\ibmjsseprovider2.jar; C:\Java\IBM_J9_SR5_x8664_Windows\Java\jre \lib\ibmcertpathprovider.jar; C:\Java\IBM_J9_SR5_x8664_Windows\Java\jre\lib\ibmxmlcrypto.jar; C:\Java\IBM_J9_SR5_x8664_Windows\Java\jre\lib\management-agent.jar; C:\Java\IBM_J9_SR5_x8664_Windows\Java\jre\lib\xml.jar; C:\Java\IBM_J9_SR5_x8664_Windows\Java\jre\lib\jlm.jar; C:\Java\IBM_J9_SR5_x8664_Windows\Java\jre\lib\javascript.jar
OS Version	Microsoft Windows Server 2008 R2 Enterprise Edition x64
Other software	None

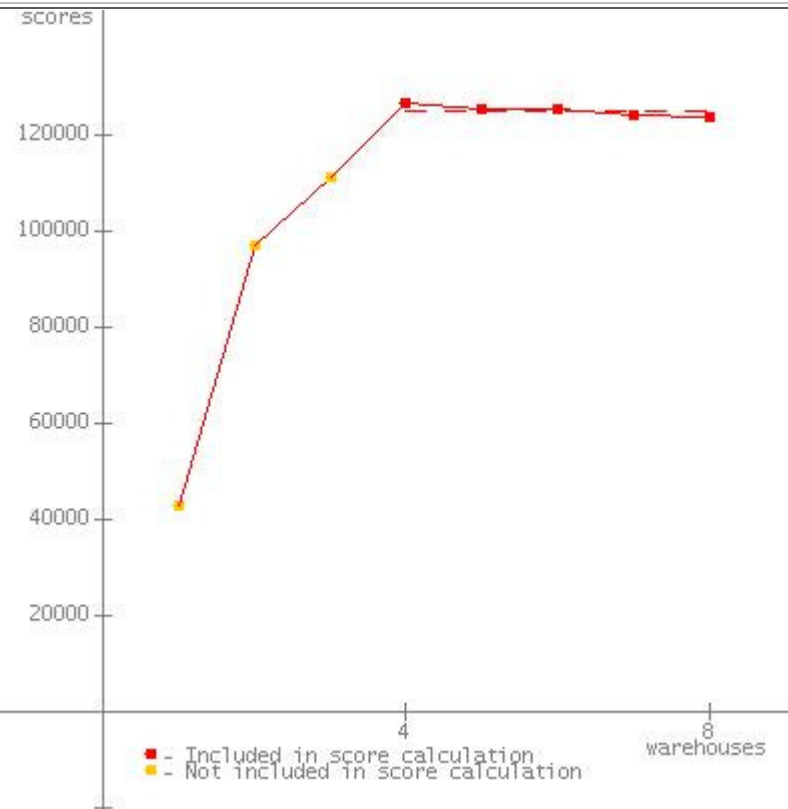
Test Information	
Tested by	Cisco Systems
SPEC license #	9019
Test location	San Jose, CA
Test date	Sep 8, 2010
H/w available	Oct-2010
JVM available	May-2009
OS available	Oct-2009
Other s/w available	N/A

AOT Compilation
Tuning
Operating system tunings <ul style="list-style-type: none"> • Turned off "Hardware Prefetcher" in BIOS. • Turned off "Adjacent Cache Line Prefetch" in BIOS. • "Lock pages in memory" enabled for benchmark user. • Each JVM instance was affinitized to four logical cores of a chip.
Notes
Command line options are described at: http://publib.boulder.ibm.com/infocenter/javasdk/v6r0/index.jsp

[JVM 1 Scores:](#)

Warehouses	SPECjbb2005 bops	Incl. in metric
1	43205	
2	97280	
3	111539	
4	126970	*
5	125531	*
6	125730	*
7	124337	*
8	124027	*
SPECjbb2005	(from 4 to 8)	125319 SPECjbb2005 bops

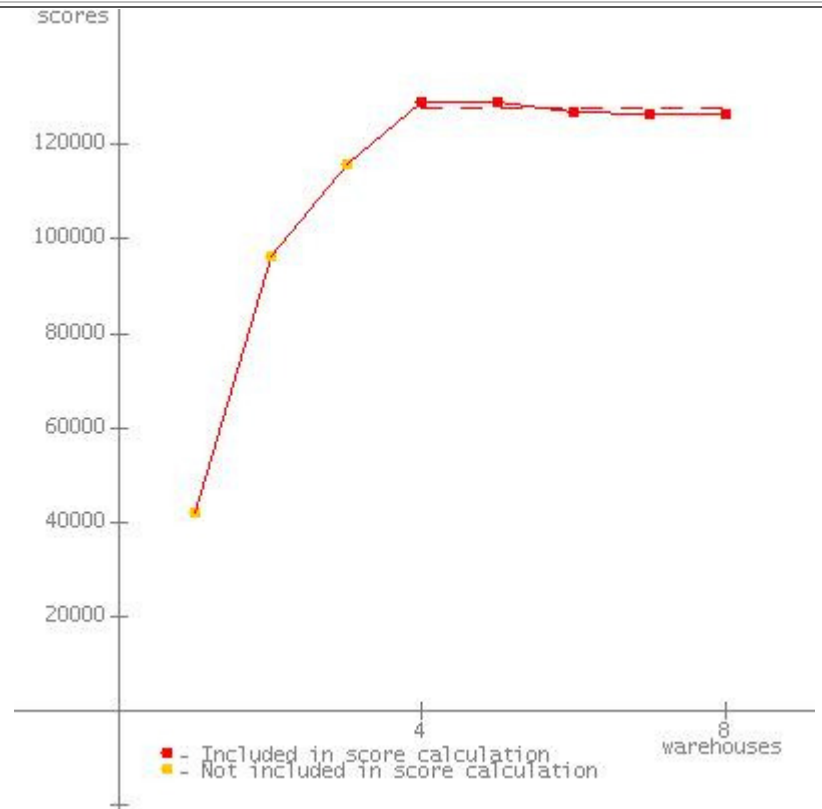
SPEC license # 9019	Tested by: Cisco Systems	Test date: Sep 8, 2010
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JVM 2 Scores:

Warehouses	SPECjbb2005 bops	Incl. in metric
1	42182	
2	96311	
3	116085	
4	129179	*
5	128888	*
6	126956	*
7	126487	*
8	126567	*
SPECjbb2005	(from 4 to 8)	127615 SPECjbb2005 bops

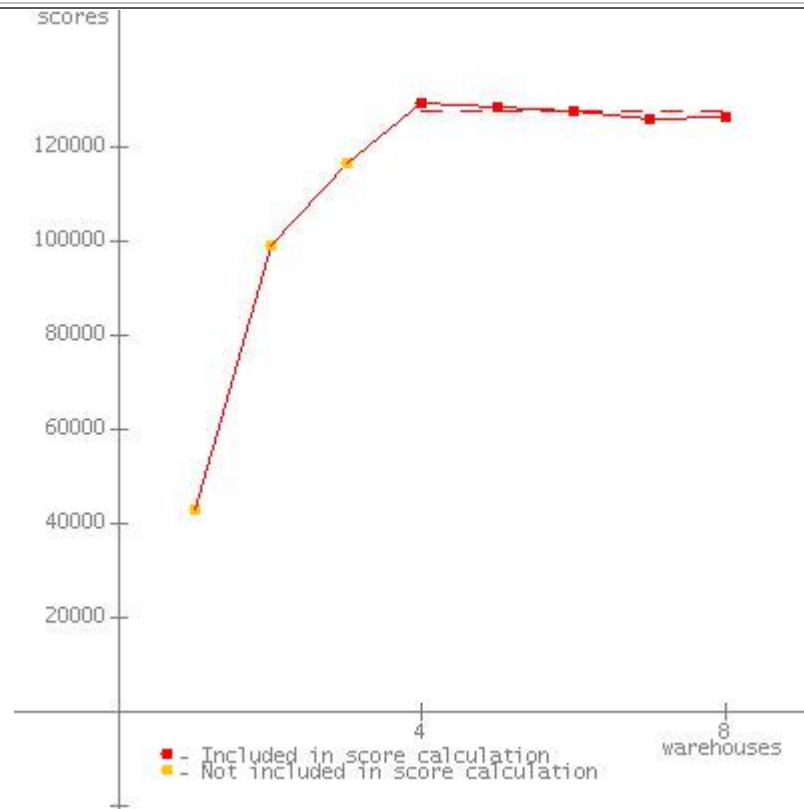
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JVM 3 Scores:

Warehouses	SPECjbb2005 bops	Incl. in metric
1	42849	
2	99112	
3	116701	
4	129657	*
5	128545	*
6	127669	*
7	126194	*
8	126432	*
SPECjbb2005	(from 4 to 8)	127699 SPECjbb2005 bops

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JVM 4 Scores:

Warehouses	SPECjbb2005 bops	Incl. in metric
1	42051	
2	99319	
3	113670	
4	129978	*
5	129112	*
6	127733	*
7	127882	*
8	126298	*
SPECjbb2005	(from 4 to 8)	128201 SPECjbb2005 bops

Legend:
■ - Included in score calculation
■ - Not included in score calculation

SPEC license # 9019

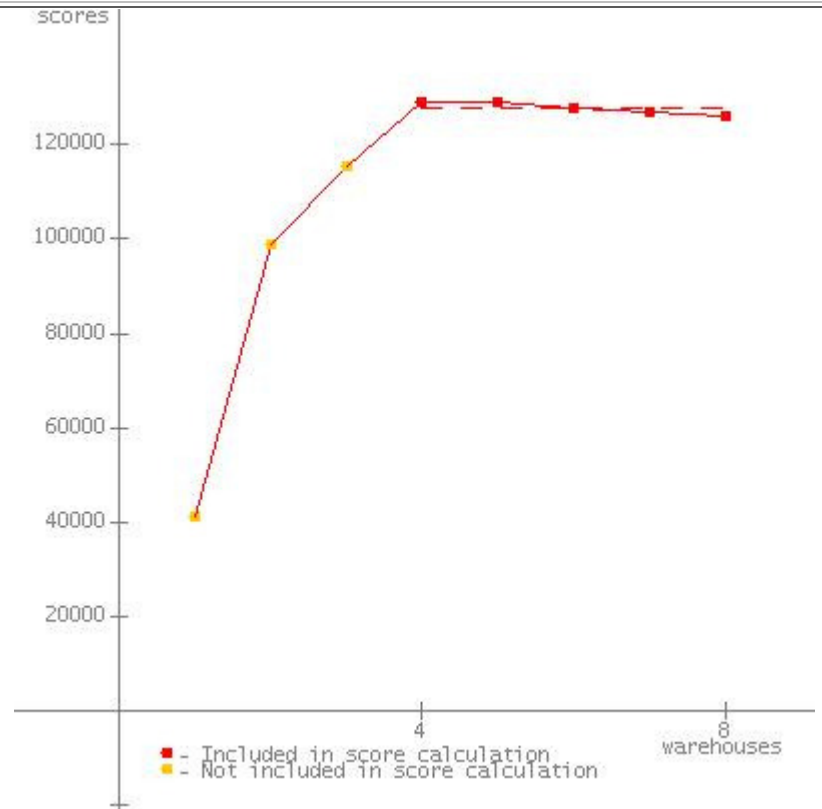
Tested by: Cisco Systems

Test date: Sep 8, 2010

JVM 5 Scores:

Warehouses	SPECjbb2005 bops	Incl. in metric
1	41318	
2	99062	
3	115251	
4	129157	*
5	128825	*
6	127611	*
7	126958	*
8	126208	*
SPECjbb2005	(from 4 to 8)	127752 SPECjbb2005 bops

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JVM 6 Scores:

Warehouses	SPECjbb2005 bops	Incl. in metric
1	40123	
2	95247	
3	111039	
4	127143	*
5	126389	*
6	124885	*
7	124600	*
8	123749	*
SPECjbb2005	(from 4 to 8)	125353 SPECjbb2005 bops

Legend:
■ - Included in score calculation
● - Not included in score calculation

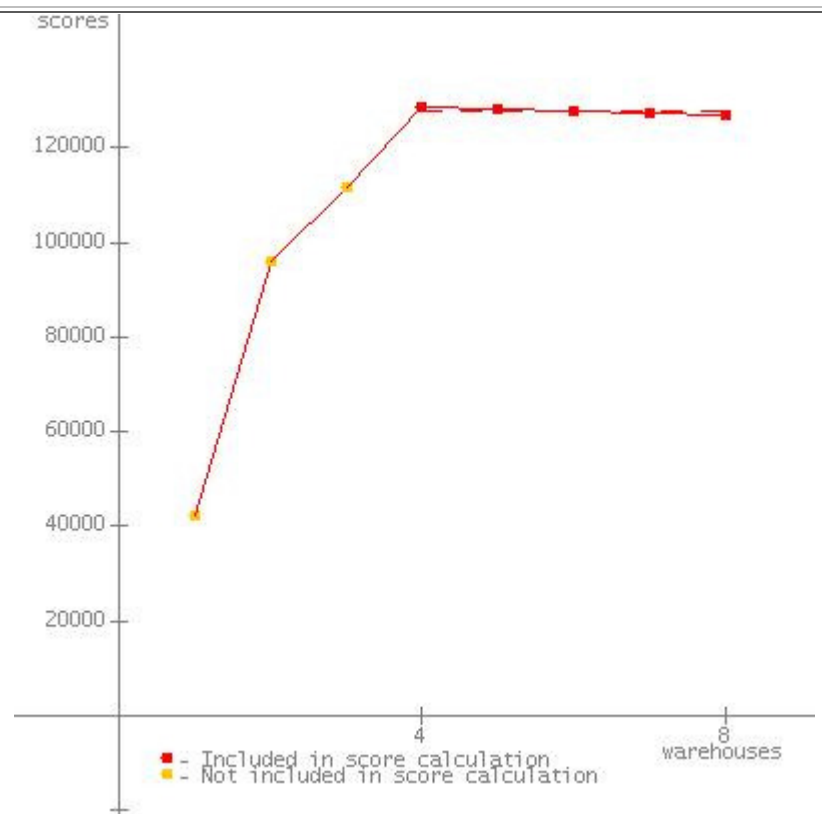
SPEC license # 9019

Tested by: Cisco Systems

Test date: Sep 8, 2010

JVM 7 Scores:

Warehouses	SPECjbb2005 bops	Incl. in metric
1	42416	
2	95843	
3	111739	
4	128707	*
5	128308	*
6	127869	*
7	127285	*
8	127084	*
SPECjbb2005	(from 4 to 8)	127851 SPECjbb2005 bops



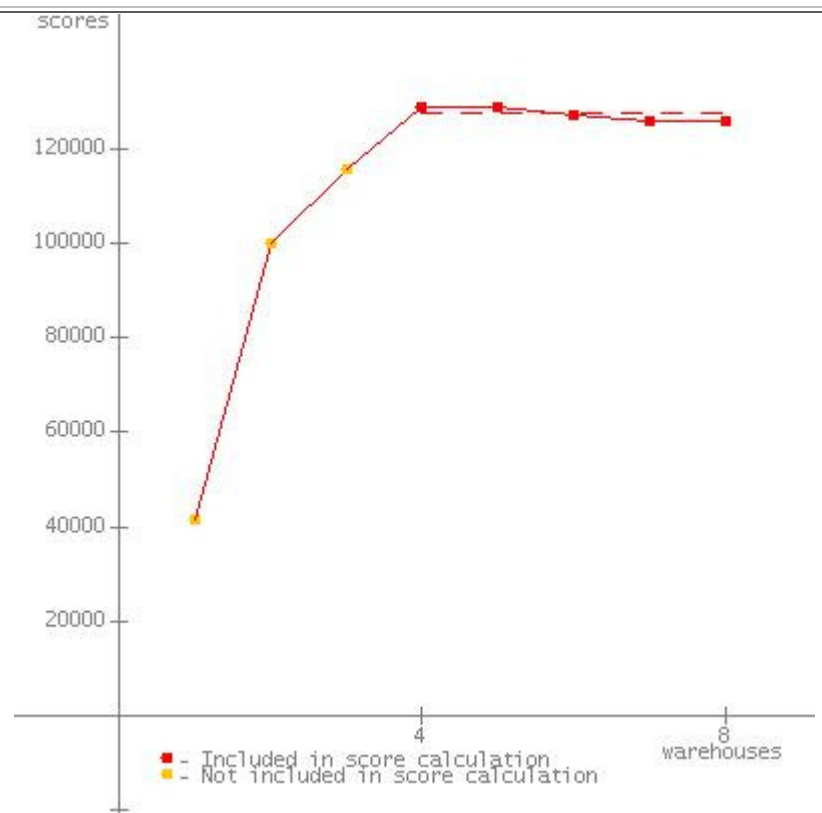
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Tested by: Cisco Systems

Test date: Sep 8, 2010

JVM 8 Scores:

Warehouses	SPECjbb2005 bops	Incl. in metric
1	41633	
2	100063	
3	115788	
4	128965	*
5	128954	*
6	127064	*
7	125943	*
8	125827	*
SPECjbb2005	(from 4 to 8)	127351 SPECjbb2005 bops



SPEC license # 9019

Tested by: Cisco Systems

Test date: Sep 8, 2010

SPECjbb2005 Version: [SPECjbb2005 1.07, March 15, 2006]

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