



SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Oracle Corporation

Sun Blade X6275 M2 Server Module (Intel Xeon X5670 2.93 GHz)

SPECint®_rate2006 = 679

SPECint_rate_base2006 = 651

CPU2006 license: 6

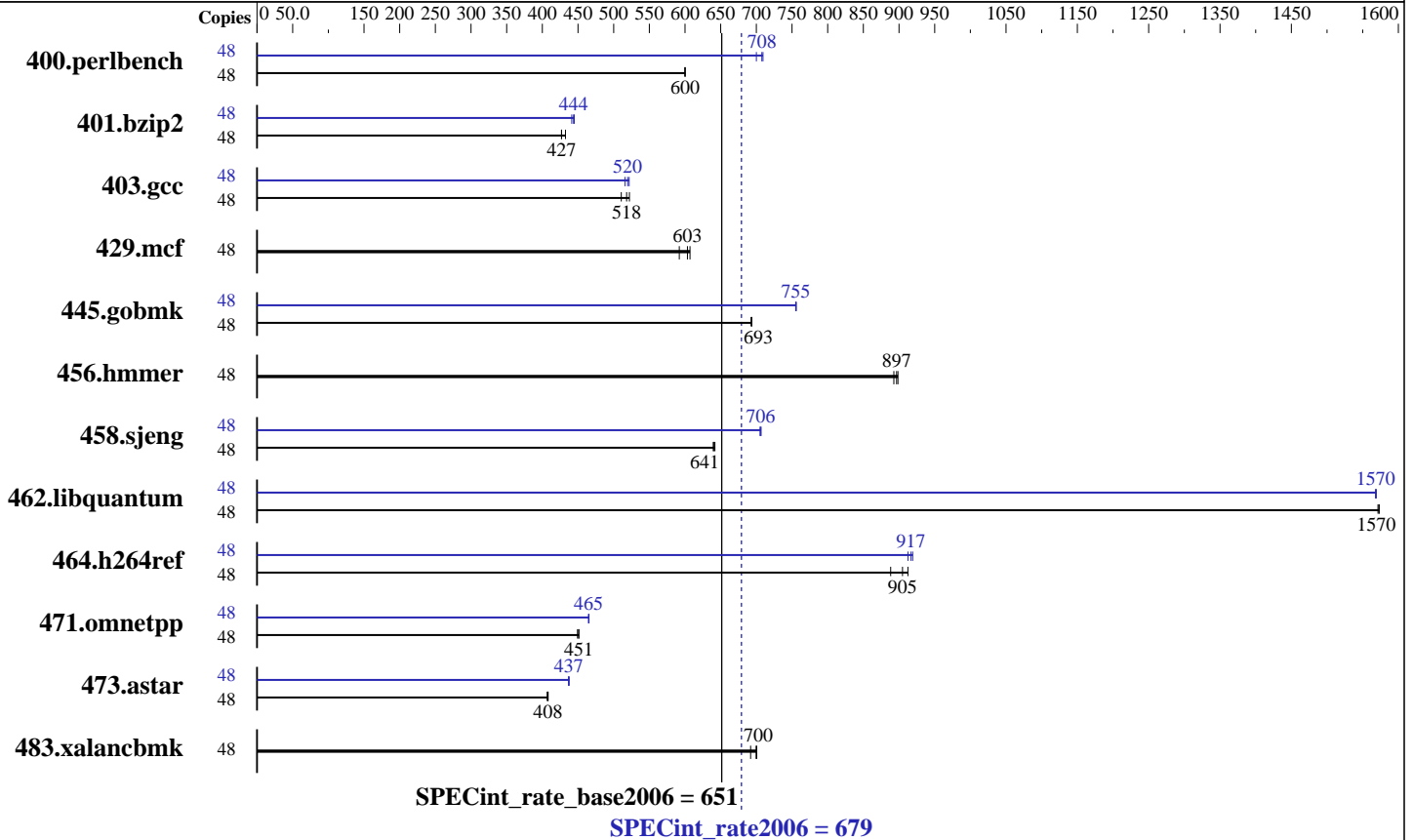
Test sponsor: Oracle Corporation

Tested by: Oracle Corporation

Test date: Nov-2010

Hardware Availability: Dec-2010

Software Availability: Apr-2010



Hardware

CPU Name: Intel Xeon X5670
 CPU Characteristics: Intel Turbo Boost Technology up to 3.33 GHz
 CPU MHz: 2933
 FPU: Integrated
 CPU(s) enabled: 24 cores, 4 chips, 6 cores/chip, 2 threads/core
 CPU(s) orderable: 1 or 2 chips per Sun Blade X6275 M2 node
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 256 KB I+D on chip per core
 L3 Cache: 12 MB I+D on chip per chip
 Other Cache: None
 Memory: 96 GB (12 x 8 GB 2Rx4 PC3-10600R-9, ECC, per node)
 Disk Subsystem: Sun Storage 7410 System via NFS
 (See additional details below)
 Other Hardware: 10 GbE interface

Software

Operating System: Oracle Enterprise Linux Server release 5.5 kernel 2.6.18-194.el5
 Compiler: Intel C++ Professional Compiler for IA32 and Intel 64, Version 11.1 Build 20091130 Package ID: l_cproc_p_11.1.064
 Auto Parallel: No
 File System: NFSv4
 System State: Run level 3 (multi-user)
 Base Pointers: 32-bit
 Peak Pointers: 32/64-bit
 Other Software: Microquill SmartHeap V8.1



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Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	48	<u>781</u>	<u>600</u>	781	600	782	600	48	670	700	<u>663</u>	<u>708</u>	661	709
401.bzip2	48	1085	427	1071	432	<u>1085</u>	<u>427</u>	48	1050	441	<u>1044</u>	<u>444</u>	1042	445
403.gcc	48	<u>746</u>	<u>518</u>	757	511	740	522	48	749	516	<u>744</u>	<u>520</u>	741	522
429.mcf	48	739	592	<u>726</u>	<u>603</u>	721	607	48	739	592	<u>726</u>	<u>603</u>	721	607
445.gobmk	48	726	694	<u>726</u>	<u>693</u>	727	693	48	<u>667</u>	<u>755</u>	666	756	667	755
456.hammer	48	502	893	<u>499</u>	<u>897</u>	498	898	48	502	893	<u>499</u>	<u>897</u>	498	898
458.sjeng	48	905	642	<u>907</u>	<u>641</u>	908	640	48	824	705	822	707	<u>823</u>	<u>706</u>
462.libquantum	48	<u>632</u>	<u>1570</u>	633	1570	632	1570	48	634	1570	634	1570	<u>634</u>	<u>1570</u>
464.h264ref	48	1164	913	1196	888	<u>1174</u>	<u>905</u>	48	1156	919	<u>1159</u>	<u>917</u>	1164	913
471.omnetpp	48	668	449	665	451	<u>665</u>	<u>451</u>	48	645	465	645	465	<u>645</u>	<u>465</u>
473.astar	48	<u>826</u>	<u>408</u>	829	407	826	408	48	770	438	<u>771</u>	<u>437</u>	771	437
483.xalancbmk	48	479	692	<u>473</u>	<u>700</u>	473	701	48	479	692	<u>473</u>	<u>700</u>	473	701

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Submit Notes

The config file option 'submit' was used, along with submit.pl to distribute jobs to two nodes of the Sun Blade X6275 M2 server module. It also uses numactl to bind copies to the cores.

Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run

Platform Notes

Load Default BIOS Settings and then change the following
Data Reuse Optimization Disabled
Hardware Prefetch Enabled
Adjacent Cache Line Prefetch Enabled
L1 Data Prefetch Enabled

Storage Configuration for Disk Subsystem:
Sun Storage 7410 has 2 x J4400 disk shelves. There are 22 x 750 GB 7200 RPM SATA Disks per J4400 disk shelf under RAID-1 configuration mounted over 10GBE network interface with these options
"rw,noacl,hard,intr,rsize=65536,wsiz=65536" in the /etc/fstab.



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General Notes

Binaries were compiled on SLES 10 with Binutils 2.18.50.0.7.20080502

Base Compiler Invocation

C benchmarks:

icc -m32

C++ benchmarks:

icpc -m32

Base Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch

C++ benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs
-L(path to library) -lsmartheap

Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m32

401.bzip2: icc -m64

458.sjeng: icc -m64

462.libquantum: icc -m64

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Peak Compiler Invocation (Continued)

C++ benchmarks (except as noted below):

icpc -m32

473.astar: icpc -m64

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32

401.bzip2: -DSPEC_CPU_LP64

458.sjeng: -DSPEC_CPU_LP64

462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX

473.astar: -DSPEC_CPU_LP64

483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

400.perlbench: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
-prof-use(pass 2) -ansi-alias

401.bzip2: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
-prof-use(pass 2) -opt-prefetch -ansi-alias -auto-ilp32

403.gcc: -xSSE4.2 -ipo -O3 -no-prec-div -static

429.mcf: basepeak = yes

445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2) -O2
-ipo -no-prec-div -ansi-alias

456.hmmer: basepeak = yes

458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
-prof-use(pass 2) -unroll4 -auto-ilp32

462.libquantum: -xSSE4.2 -ipo -O3 -no-prec-div -static -auto-ilp32
-opt-prefetch

464.h264ref: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
-prof-use(pass 2) -unroll2 -ansi-alias

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Peak Optimization Flags (Continued)

C++ benchmarks:

471.omnetpp: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs
-L(path to library) -lsmartheap

473.astar: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-ansi-alias -opt-ra-region-strategy=routine -Wl,-z,muldefs
-L(path to library) -lsmartheap64

483.xalancbmk: basepeak = yes

Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revE-pathfix-smartheap.20101027.html>
http://www.spec.org/cpu2006/flags/Oracle-platform-x86_64.20101027.html
<http://www.spec.org/cpu2006/flags/Sun-Blade-6275M2.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revE-pathfix-smartheap.20101027.xml>
http://www.spec.org/cpu2006/flags/Oracle-platform-x86_64.20101027.xml
<http://www.spec.org/cpu2006/flags/Sun-Blade-6275M2.xml>

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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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