



SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Oracle Corporation

Sun Blade X6275 M2 Server Module (Intel Xeon X5675 3.06 GHz)

SPECint®_rate2006 = 755

SPECint_rate_base2006 = 717

CPU2006 license: 6

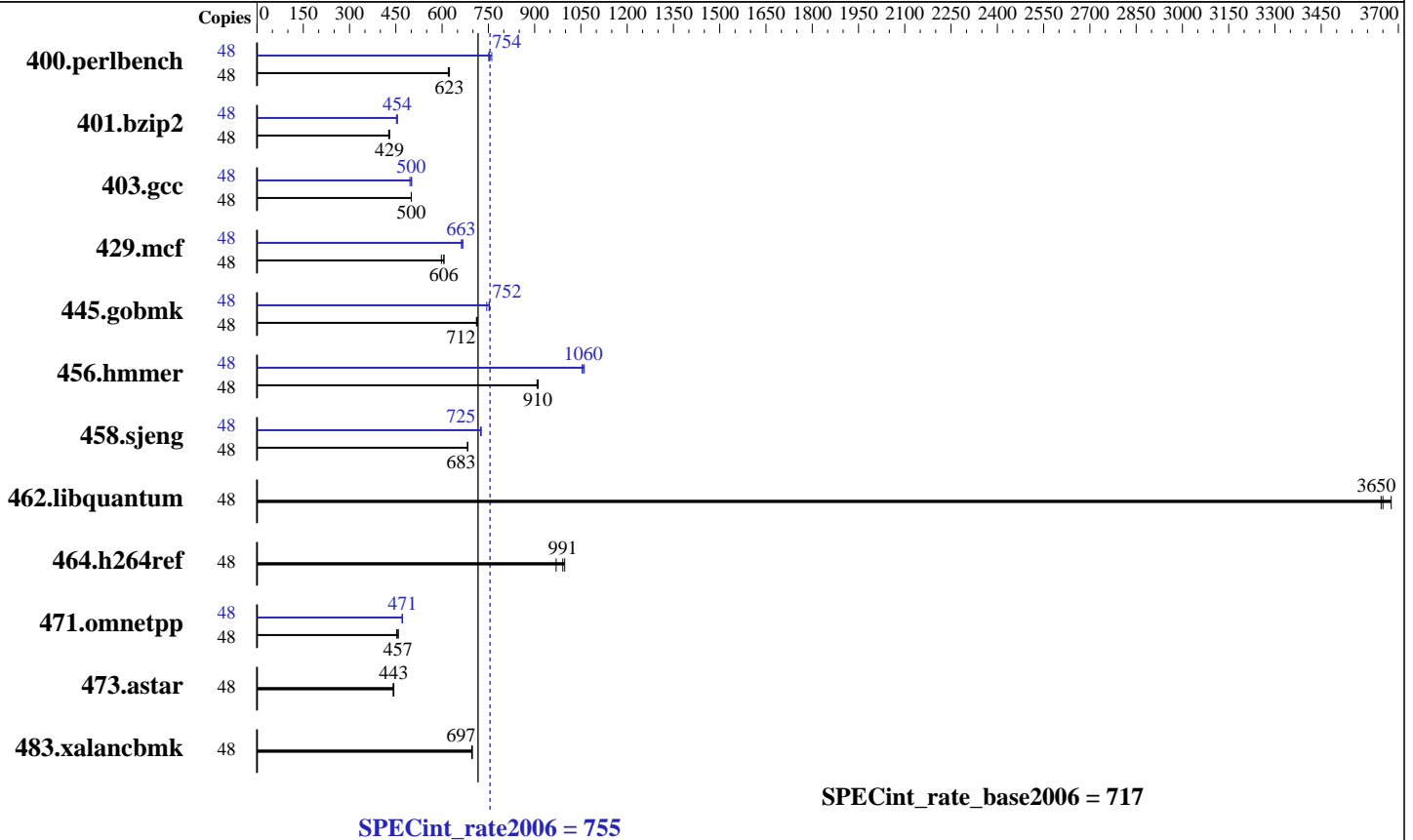
Test sponsor: Oracle Corporation

Tested by: Oracle Corporation

Test date: Jan-2011

Hardware Availability: Mar-2011

Software Availability: Nov-2010



Hardware

CPU Name: Intel Xeon X5675
 CPU Characteristics: Intel Turbo Boost Technology up to 3.46 GHz
 CPU MHz: 3067
 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: None

Software

Operating System: Oracle Linux 5.5
 kernel 2.6.18-194.el5
 Compiler: Intel C++ Compiler XE for applications running on IA-32
 Version 12.0.1.116 Build 20101116
 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 V9.01



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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	752	624	<u>753</u>	<u>623</u>	756	620	48	616	761	624	751	<u>622</u>	<u>754</u>
401.bzip2	48	1085	427	1078	430	<u>1079</u>	<u>429</u>	48	1025	452	1018	455	<u>1020</u>	<u>454</u>
403.gcc	48	773	500	<u>772</u>	<u>500</u>	772	500	48	780	496	770	502	<u>773</u>	<u>500</u>
429.mcf	48	732	598	<u>723</u>	<u>606</u>	722	606	48	656	667	<u>660</u>	<u>663</u>	660	663
445.gobmk	48	708	711	<u>707</u>	<u>712</u>	705	714	48	676	745	<u>670</u>	<u>752</u>	668	754
456.hammer	48	493	908	<u>492</u>	<u>910</u>	491	912	48	<u>423</u>	<u>1060</u>	425	1050	422	1060
458.sjeng	48	851	683	850	683	<u>851</u>	<u>683</u>	48	801	725	799	727	<u>801</u>	<u>725</u>
462.libquantum	48	270	3680	273	3640	<u>272</u>	<u>3650</u>	48	270	3680	273	3640	<u>272</u>	<u>3650</u>
464.h264ref	48	1065	997	<u>1072</u>	<u>991</u>	1096	970	48	1065	997	<u>1072</u>	<u>991</u>	1096	970
471.omnetpp	48	663	453	655	458	<u>657</u>	<u>457</u>	48	<u>637</u>	<u>471</u>	638	470	636	471
473.astar	48	760	444	763	441	<u>761</u>	<u>443</u>	48	760	444	763	441	<u>761</u>	<u>443</u>
483.xalancbmk	48	<u>475</u>	<u>697</u>	475	698	476	696	48	<u>475</u>	<u>697</u>	475	698	476	696

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
Intel Hyperthreading Options 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,wspace=65536" in the /etc/fstab.



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General Notes

Though binaries were linked with hugepages, this result did not use hugepages. Binaries were compiled on RHEL5.5 with Binutils binutils-2.17.50.0.6-14.el5

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 -opt-prefetch
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

C++ benchmarks:
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs
-L/smartheap -lsmartheap
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

Base Other Flags

C benchmarks:
403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):
icc -m32

400.perlbench: icc -m64

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Peak Compiler Invocation (Continued)

401.bzip2: `icc -m64`

456.hmmer: `icc -m64`

458.sjeng: `icc -m64`

C++ benchmarks:

`icpc -m32`

Peak Portability Flags

400.perlbench: `-DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64`
401.bzip2: `-DSPEC_CPU_LP64`
456.hmmer: `-DSPEC_CPU_LP64`
458.sjeng: `-DSPEC_CPU_LP64`
462.libquantum: `-DSPEC_CPU_LINUX`
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) -prof-use(pass 2) -B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT`

401.bzip2: `-xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -opt-prefetch -auto-ilp32 -ansi-alias -B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT`

403.gcc: `-xSSE4.2 -ipo -O3 -no-prec-div -B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT`

429.mcf: `-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 -auto-ilp32`

445.gobmk: `-xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2) -ansi-alias -auto-ilp32`

456.hmmer: `-xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32 -B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT`

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

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Peak Optimization Flags (Continued)

458.sjeng (continued):

`-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT`

462.libquantum: basepeak = yes

464.h264ref: basepeak = yes

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/smartheap -lsmartheap`

473.astar: basepeak = yes

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-ic12.0-linux64-revA.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-ic12.0-linux64-revA.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.
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Tested with SPEC CPU2006 v1.1.
Report generated on Wed Jul 23 16:24:18 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 3 March 2011.