



SPEC[®] CINT2006 Result

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SGI

SPECint[®]_rate2006 = Not Run

SGI UV 2000 (Intel Xeon E5-4650, 2.7 GHz)

SPECint_rate_base2006 = 31100

CPU2006 license: 4

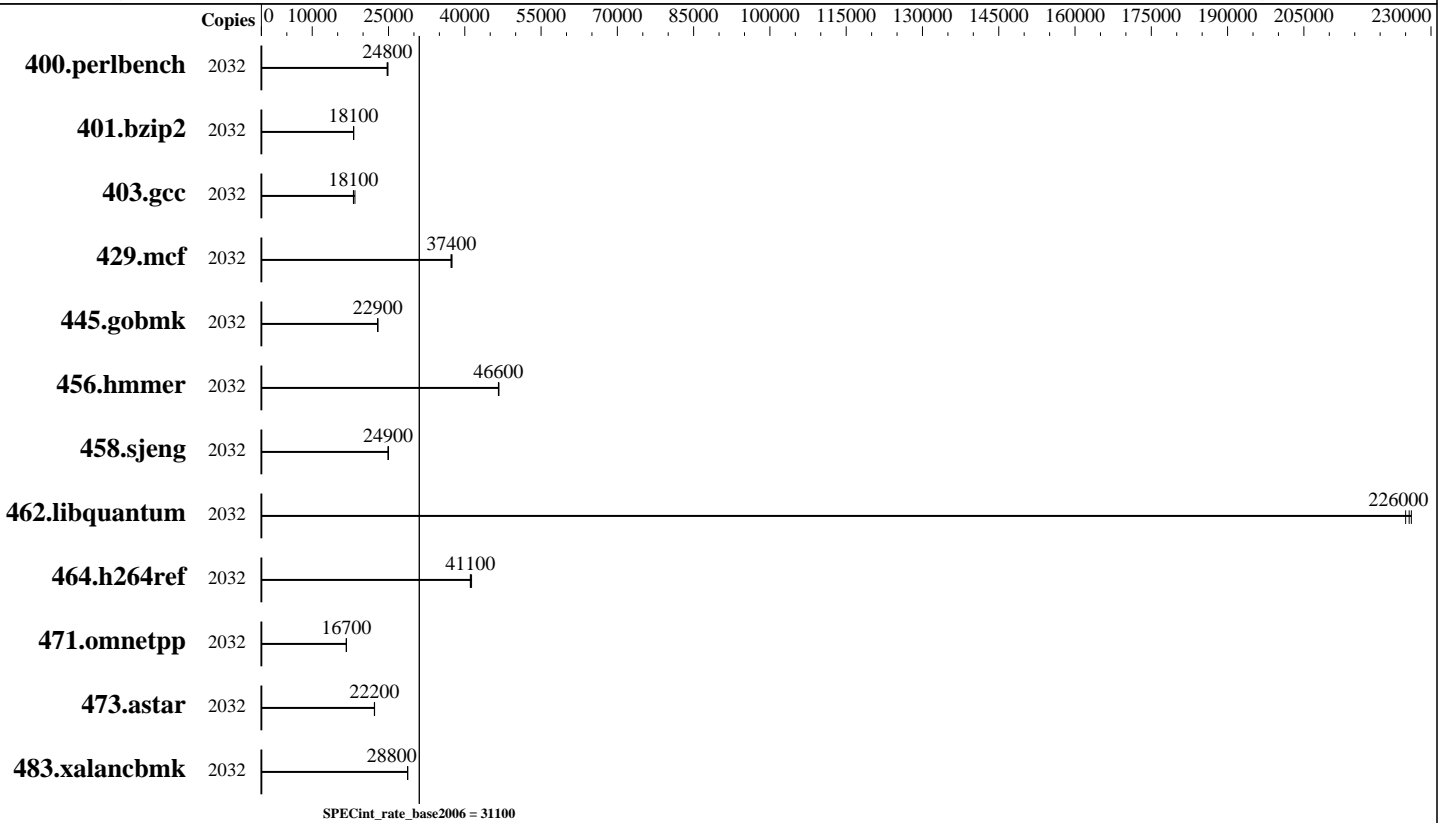
Test sponsor: SGI

Tested by: SGI

Test date: Sep-2012

Hardware Availability: Jun-2012

Software Availability: Jul-2012



Hardware

CPU Name: Intel Xeon E5-4650
 CPU Characteristics: Intel Turbo Boost Technology disabled
 CPU MHz: 2700
 FPU: Integrated
 CPU(s) enabled: 1024 cores, 128 chips, 8 cores/chip, 2 threads/core
 CPU(s) orderable: 4-256 chips
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 256 KB I+D on chip per core
 L3 Cache: 20 MB I+D on chip per chip
 Other Cache: None
 Memory: 8 TB (1024 x 8 GB 2Rx4 PC3-12800R-11, ECC)
 Disk Subsystem: 8 TB tmpfs
 Other Hardware: NUMALink6 routers

Software

Operating System: SUSE Linux Enterprise Server 11 (x86_64) SP2, Kernel 3.0.38-0.5-default
 Compiler: C/C++; Version 12.1.3.293 of Intel C++ Studio XE for Linux
 Auto Parallel: No
 File System: tmpfs
 System State: Run Level 3 (multi-user)
 Base Pointers: 32/64-bit
 Peak Pointers: Not Applicable
 Other Software: Microquill SmartHeap V8, SGI Accelerate 1.4, Patch 10920, SGI Foundation Software 2.6, Patch 10931



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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	2032	797	24900	<u>802</u>	<u>24800</u>	802	24800							
401.bzip2	2032	<u>1081</u>	<u>18100</u>	1080	18200	1082	18100							
403.gcc	2032	889	18400	904	18100	<u>903</u>	<u>18100</u>							
429.mcf	2032	494	37500	<u>496</u>	<u>37400</u>	497	37300							
445.gobmk	2032	932	22900	931	22900	<u>932</u>	<u>22900</u>							
456.hammer	2032	406	46700	<u>407</u>	<u>46600</u>	407	46600							
458.sjeng	2032	984	25000	987	24900	<u>986</u>	<u>24900</u>							
462.libquantum	2032	<u>187</u>	<u>226000</u>	187	225000	186	226000							
464.h264ref	2032	1088	41300	1094	41100	<u>1093</u>	<u>41100</u>							
471.omnetpp	2032	<u>760</u>	<u>16700</u>	760	16700	759	16700							
473.astar	2032	641	22300	642	22200	<u>641</u>	<u>22200</u>							
483.xalancbmk	2032	487	28800	<u>488</u>	<u>28800</u>	488	28700							

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

Submit Notes

The dplace mechanism was used to bind copies to processors. The config file option 'submit' was used to generate dplace commands to bind each copy to a specific processor. Benchmark copies were launched in a staggered fashion to minimize kernel contention associated with synchronized launches. For details, please see the config file.

Operating System Notes

Tmpfs filesystem set up with:
mount -t tmpfs -o size=8192g,rw tmpfs /mnt/shm/
Stack size set to unlimited using "ulimit -s unlimited"
sysctl vm.stat_interval=10

Platform Notes

SGI BIOS version 3.0.7

General Notes

Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/mnt/shm/cpu2006-1.2/libs/32:/mnt/shm/cpu2006-1.2/libs/64"

Binaries compiled on a system with 2x Xeon E5540 CPU + 32GB memory using SLES11 SP1

Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/transparent_hugepage/enabled

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General Notes (Continued)

Filesystem page cache cleared with:
echo 1 > /proc/sys/vm/drop_caches

Base Compiler Invocation

C benchmarks:

icc -m64

C++ benchmarks:

icpc -m64

Base Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
445.gobmk: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
464.h264ref: -DSPEC_CPU_LP64
471.omnetpp: -DSPEC_CPU_LP64
473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:

-xAVX -ipo -O3 -no-prec-div -auto-p32 -opt-prefetch
-opt-mem-layout-trans=3

C++ benchmarks:

-xAVX -ipo -O3 -no-prec-div -auto-p32 -opt-prefetch
-opt-mem-layout-trans=3 -Wl,-z,muldefs
-L/store/jbaron/cpu2006-1.2/SmartHeap_8/lib -lsmarheapC64
-lsmarheap64

Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca



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

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20120912.html>

<http://www.spec.org/cpu2006/flags/SGI-platform.20121009.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20120912.xml>

<http://www.spec.org/cpu2006/flags/SGI-platform.20121009.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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