SPEC® CINT2006 Result

SGI

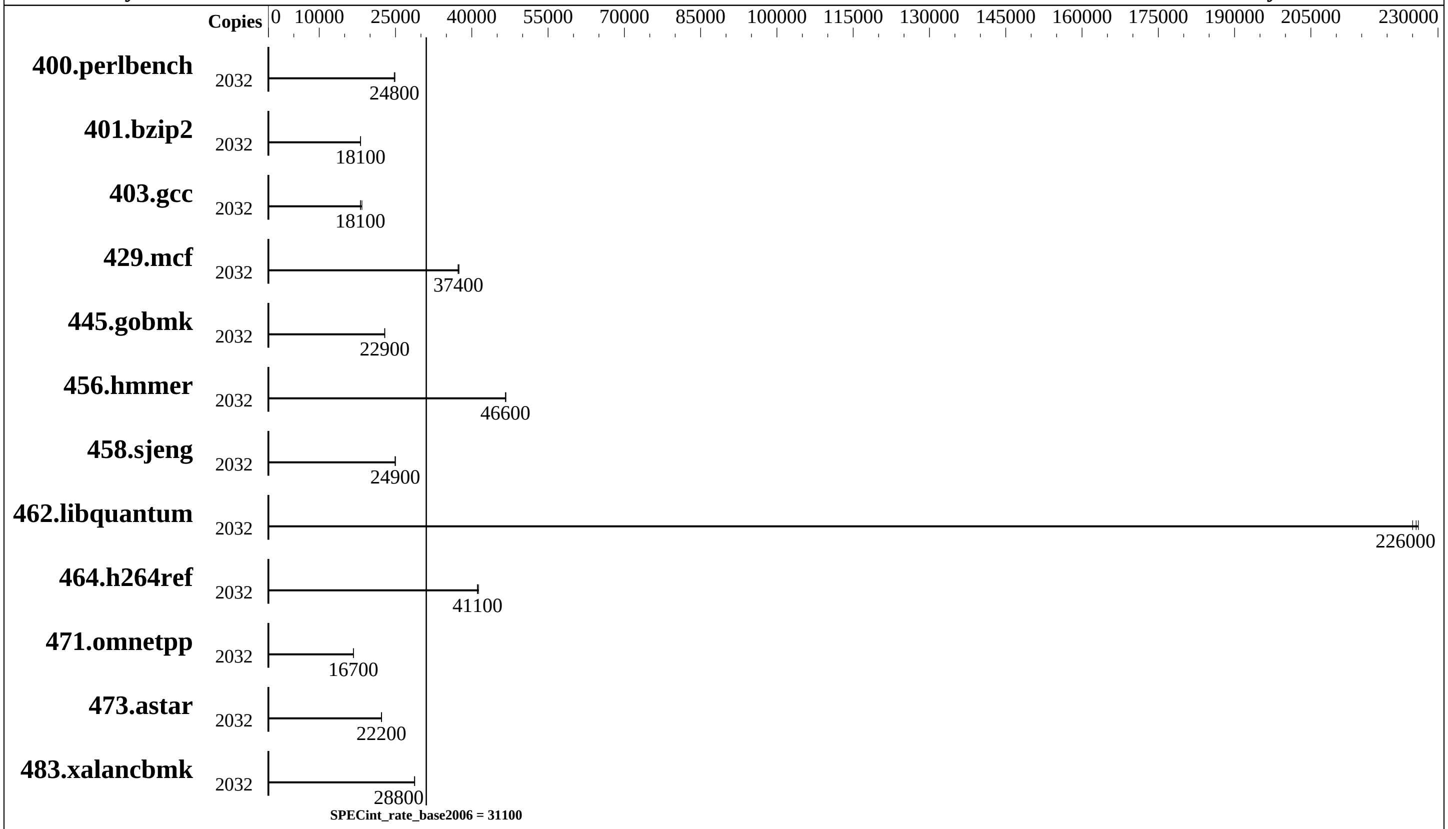
SGI UV 2000 (Intel Xeon E5-4650, 2.7 GHz)

SPECint®_rate2006 = Not Run

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

Results Table

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

Continued on next page

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 -lsmartheapC64
-lsmartheap64
```

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

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

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