SPEC® CINT2006 Result

SGI

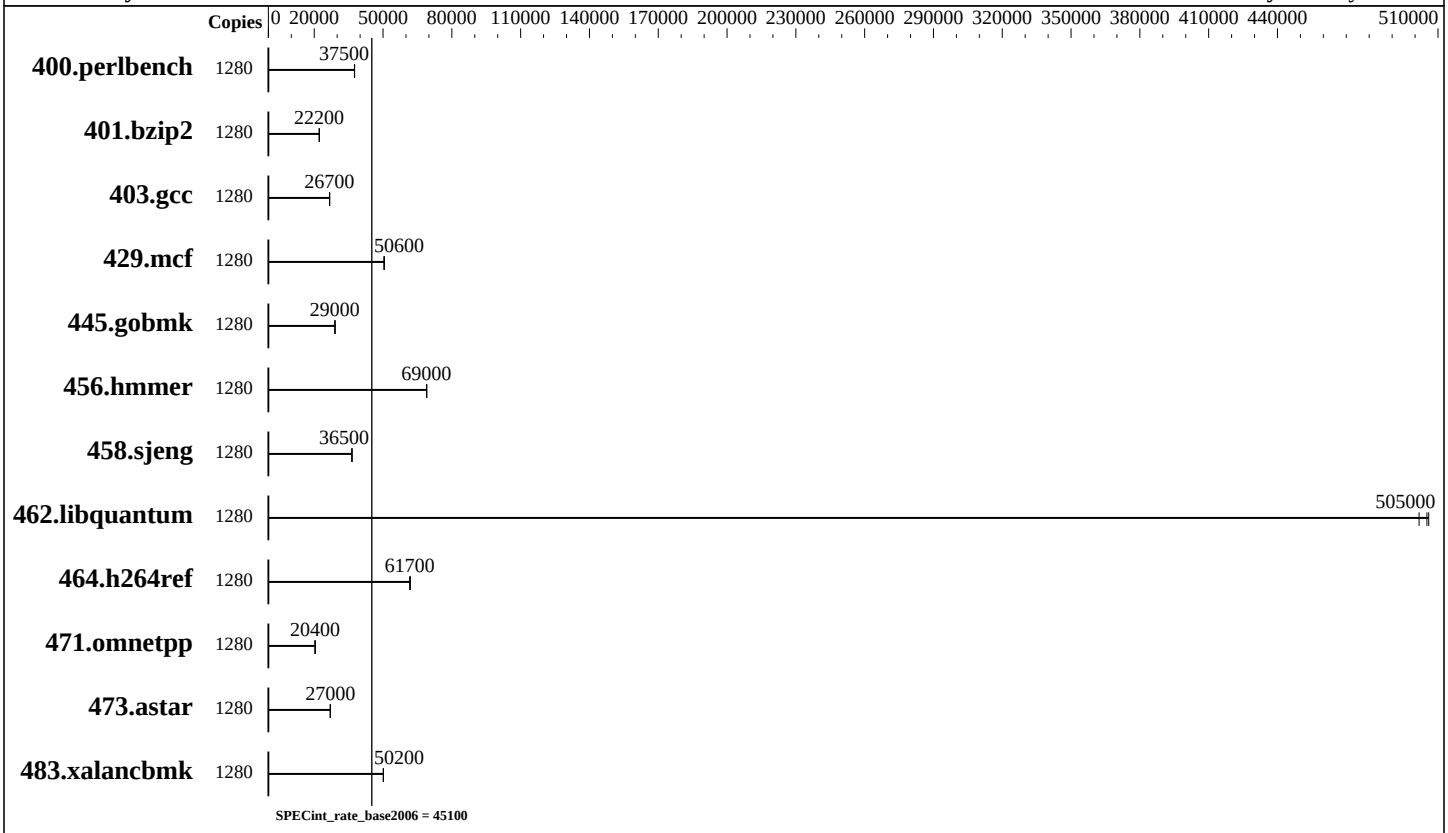
SGI UV 3000 (Intel Xeon E5-4627 v3, 2.60 GHz)

SPECint®_rate2006 = Not Run

SPECint_rate_base2006 = 45100

CPU2006 license: 4
Test sponsor: SGI
Tested by: SGI

Test date: Mar-2016
Hardware Availability: Aug-2015
Software Availability: May-2016



Hardware

CPU Name:	Intel Xeon E5-4627 v3
CPU Characteristics:	Intel Turbo Boost Technology up to 3.20 GHz
CPU MHz:	2600
FPU:	Integrated
CPU(s) enabled:	1280 cores, 128 chips, 10 cores/chip
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:	25 MB I+D on chip per chip
Other Cache:	None
Memory:	16 TB (1024 x 16 GB 2Rx4 PC4-2133P-R)
Disk Subsystem:	16 TB tmpfs
Other Hardware:	NUMAlink6 routers

Software

Operating System:	SUSE Linux Enterprise Server 12 (x86_64) SP1, Kernel 3.12.53-60.30-default
Compiler:	C/C++: Version 16.0.2.181 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 V10.2 SGI Foundation Software 2.14, Build 714a122.sles12sp1-1602291900 SGI Accelerate 1.12, Build 714a122.sles12sp1-1602291900

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	1280	332	37600	333	37500	**333**	**37500**							
401.bzip2	1280	**556**	**22200**	556	22200	556	22200							
403.gcc	1280	387	26700	**386**	**26700**	385	26700							
429.mcf	1280	**231**	**50600**	231	50600	232	50400							
445.gobmk	1280	462	29100	**462**	**29000**	463	29000							
456.hmmer	1280	**173**	**69000**	173	69000	173	69000							
458.sjeng	1280	426	36400	**425**	**36500**	425	36500							
462.libquantum	1280	**52.5**	**505000**	52.4	506000	52.9	502000							
464.h264ref	1280	460	61600	458	61900	**459**	**61700**							
471.omnetpp	1280	**393**	**20400**	392	20400	393	20400							
473.astar	1280	**333**	**27000**	333	27000	332	27000							
483.xalancbmk	1280	176	50100	**176**	**50200**	176	50200							

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

```
Stack size set to unlimited using "ulimit -s unlimited"

The tmpfs filesystem was set up with:
  mkdir -p /mnt/shm/cpu2006-sgi-ic16
  mount -t tmpfs -o size=16384g,rw tmpfs /mnt/shm/cpu2006-sgi-ic16
```

Platform Notes

```
The dmidecode output is in error - the memory was running at 2133.
```

General Notes

```
Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/mnt/shm/cpu2006-sgi-ic16/libs/32:/mnt/shm/cpu2006-sgi-ic16/libs/64:/mnt/shm/cpu2006-sgi-ic16/sh"

 Transparent Huge Pages enabled with:
 echo always > /sys/kernel/mm/transparent_hugepage/enabled
 Filesystem page cache cleared with:
```

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General Notes (Continued)

```
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:
```
-xCORE-AVX2 -ipo -O3 -no-prec-div -auto-p32 -opt-prefetch
-opt-mem-layout-trans=3
```

C++ benchmarks:
```
-xCORE-AVX2 -ipo -O3 -no-prec-div -auto-p32 -opt-prefetch
-opt-mem-layout-trans=3 -Wl,-z,muldefs
-L/root/draddatz/cpu2006-sgi-ic16/sh -lsmartheap64
```

Base 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/SGI-UV3000-Platform-Flags.html
http://www.spec.org/cpu2006/flags/Intel-ic16.0-official-linux64.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/SGI-UV3000-Platform-Flags.xml
http://www.spec.org/cpu2006/flags/Intel-ic16.0-official-linux64.xml

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

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