SPEC® CINT2006 Result

SGI

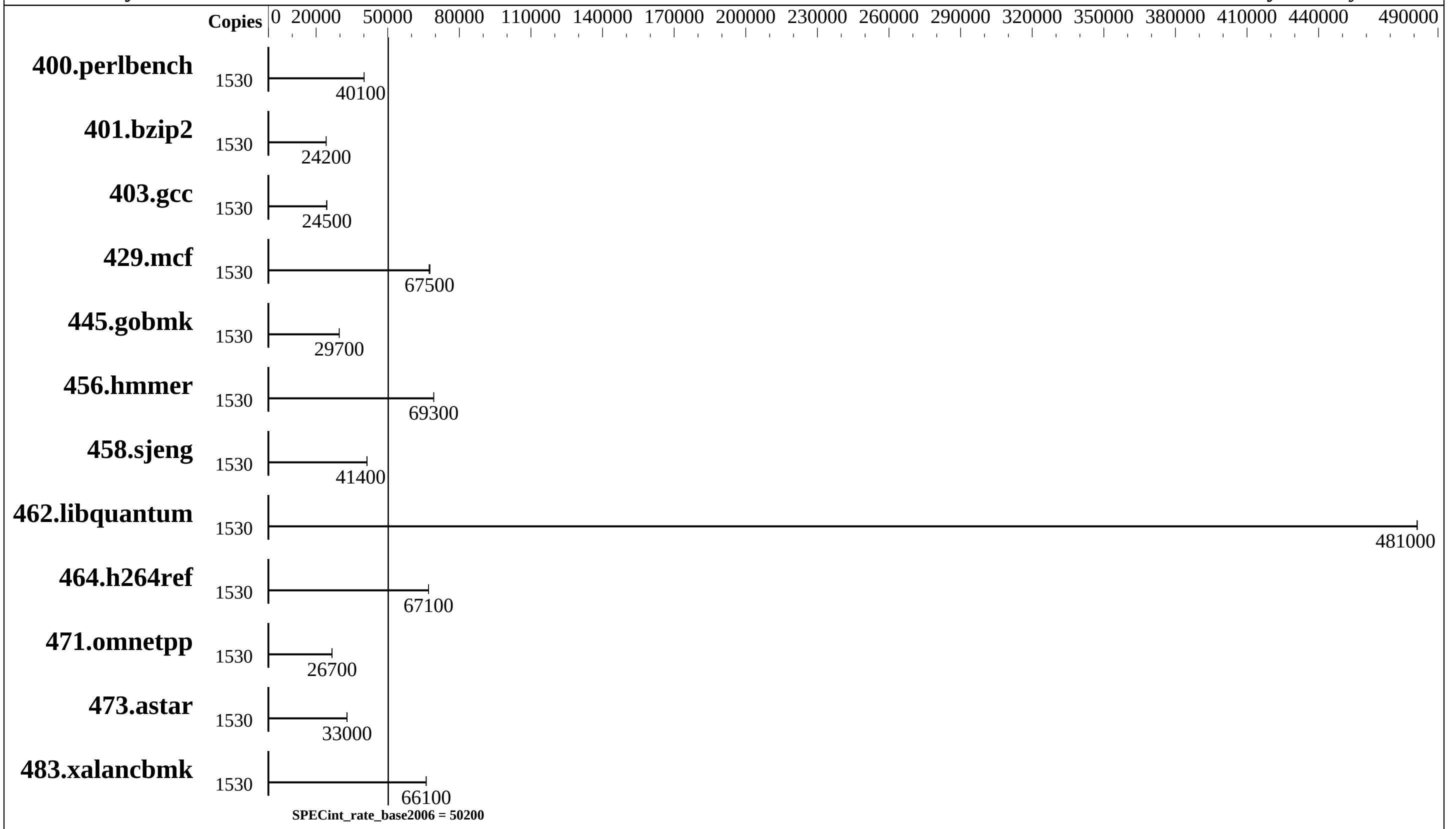
(Test Sponsor: Japan Advanced Institute of Science and Technology)

SGI UV 3000 (Intel Xeon E5-4655 v3, 2.90 GHz)

SPECint®_rate2006 = Not Run

SPECint_rate_base2006 = 50200

CPU2006 license: 4		**Test date:**	Aug-2016
Test sponsor:	Japan Advanced Institute of Science and Technology	**Hardware Availability:**	Sep-2015
Tested by:	SGI	**Software Availability:**	May-2016



Hardware

CPU Name:	Intel Xeon E5-4655 v3
CPU Characteristics:	Intel Turbo Boost Technology up to 3.20 GHz
CPU MHz:	2900
FPU:	Integrated
CPU(s) enabled:	1536 cores, 256 chips, 6 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:	30 MB I+D on chip per chip
Other Cache:	None
Memory:	32 TB (2048 x 16 GB 2Rx4 PC4-2133P-R)
Disk Subsystem:	32640 GB tmpfs
Other Hardware:	NUMAlink6 routers

Software

Operating System:	SUSE Linux Enterprise Server 12 (x86_64) SP1, Kernel 3.12.48-52.27-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

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Results Table

	Base							Peak						
Benchmark	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	1530	372	40200	**372**	**40100**	373	40100							
401.bzip2	1530	**609**	**24200**	610	24200	609	24200							
403.gcc	1530	503	24500	**503**	**24500**	506	24300							
429.mcf	1530	207	67300	206	67700	**207**	**67500**							
445.gobmk	1530	540	29700	541	29700	**541**	**29700**							
456.hmmer	1530	**206**	**69300**	206	69300	206	69300							
458.sjeng	1530	447	41400	**447**	**41400**	449	41300							
462.libquantum	1530	**65.9**	**481000**	65.9	481000	65.9	481000							
464.h264ref	1530	**504**	**67100**	504	67100	504	67200							
471.omnetpp	1530	358	26700	**359**	**26700**	359	26700							
473.astar	1530	**326**	**33000**	326	32900	325	33000							
483.xalancbmk	1530	160	66100	159	66200	**160**	**66100**							

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 rw,size=32640g,mpol=bind:1-255 tmpfs /mnt/shm/cpu2006-sgi-ic16
```

Platform Notes

```
Intel Hyperthreading set to Disabled
The dmidecode output is in error - There were 2048 memory DIMMs 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
```

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:
`-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.20160906.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.20160906.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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