SPEC® CINT2006 Result

SGI

SGI Rackable C2005-TY3 (Intel Xeon X5687, 3.60 GHz)

$SPECint®\_rate2006 =$ 337

$SPECint\_rate\_base2006 =$ 319

CPU2006 license:	4	**Test date:**	Aug-2011
Test sponsor:	SGI	**Hardware Availability:**	Feb-2011
Tested by:	SGI	**Software Availability:**	Sep-2011

Copies: 0 100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500 1600 1700 1800 2000

- 400.perlbench 16 / 295, 16 / 249
- 401.bzip2 16 / 197, 16 / 186
- 403.gcc 16 / 223, 16 / 223
- 429.mcf 16 / 394
- 445.gobmk 16 / 293, 16 / 278
- 456.hmmer 16 / 513, 16 / 397
- 458.sjeng 16 / 286, 16 / 268
- 462.libquantum 16 / 1980
- 464.h264ref 16 / 378, 16 / 377
- 471.omnetpp 16 / 209, 16 / 196
- 473.astar 16 / 188
- 483.xalancbmk 16 / 334

SPECint_rate_base2006 = 319

SPECint_rate2006 = 337

Hardware

CPU Name:	Intel Xeon X5687
CPU Characteristics:	Intel Turbo Boost Technology up to 3.86 GHz
CPU MHz:	3600
FPU:	Integrated
CPU(s) enabled:	8 cores, 2 chips, 4 cores/chip, 2 threads/core
CPU(s) orderable:	1,2 chip
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:	48 GB (6 x 8 GB 2Rx4 PC3-10600R-9, ECC)
Disk Subsystem:	876 GB RAID 5
	6 x 146 GB SAS, 15000 RPM
Other Hardware:	None

Software

Operating System:	SUSE Linux Enterprise Server 11 (x86_64) SP1, kernel 2.6.32.36-0.5-default
Compiler:	Intel C++ Compiler XE for applications running on IA-32 and Intel 64 12.1.0.225 Build 20110803
Auto Parallel:	No
File System:	xfs
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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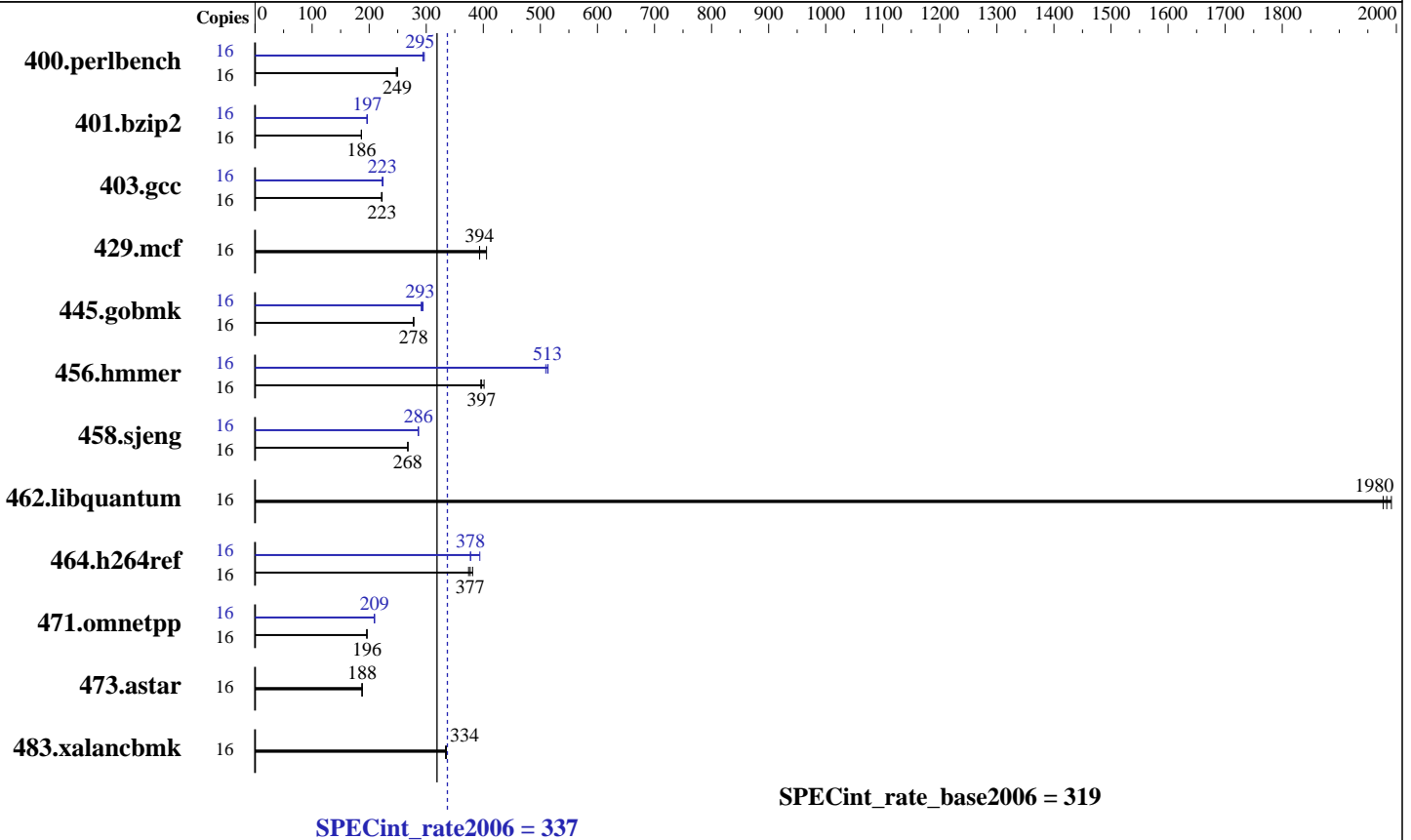|	
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Results Table

Benchmark	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
			Base								**Peak**			
400.perlbench	16	626	250	**627**	**249**	632	248	16	531	294	**530**	**295**	527	297
401.bzip2	16	829	186	**828**	**186**	828	186	16	788	196	**785**	**197**	785	197
403.gcc	16	582	221	**579**	**223**	578	223	16	574	224	577	223	**577**	**223**
429.mcf	16	371	393	360	406	**371**	**394**	16	371	393	360	406	**371**	**394**
445.gobmk	16	603	278	**604**	**278**	605	277	16	**574**	**293**	576	291	570	294
456.hmmer	16	377	396	372	401	**376**	**397**	16	291	513	293	509	**291**	**513**
458.sjeng	16	**723**	**268**	723	268	723	268	16	676	286	677	286	**676**	**286**
462.libquantum	16	**167**	**1980**	166	1990	168	1980	16	**167**	**1980**	166	1990	168	1980
464.h264ref	16	946	374	929	381	**939**	**377**	16	**938**	**378**	938	378	899	394
471.omnetpp	16	**510**	**196**	510	196	511	196	16	**478**	**209**	478	209	478	209
473.astar	16	600	187	598	188	**599**	**188**	16	600	187	598	188	**599**	**188**
483.xalancbmk	16	**330**	**334**	329	335	331	334	16	**330**	**334**	329	335	331	334

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.
    numactl was used to bind copies to the cores
```

General Notes

```
   Environment variables set by runspec before the start of the run:
   LD_LIBRARY_PATH = "/scratch/cma/cpu2006-1.1/smartheap:/scratch/cma/cpu2006-1.1/ic12.1-libs/ia32/:/scratch/cma/cpu2006-1.1/ic12.1-libs/intel64"

    Binaries compiled on a system with 1x Core i7-860 CPU + 8GB
    memory using RHEL5.5 with binutils-2.17.50.0.6-14.el5
    Stack size set to unlimited using "ulimit -s unlimited"
    runspec command invoked through numactl i.e.:
    numactl --interleave=all runspec <etc>
```

Base Compiler Invocation

C benchmarks:
```
     icc -m32
```

C++ benchmarks:
```
     icpc -m32
```

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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 -opt-mem-layout-trans=3
```

C++ benchmarks:

```
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3
-Wl,-z,muldefs -L/smartheap -lsmartheap
```

Base Other Flags

C benchmarks:

```
403.gcc: -Dalloca=_alloca
```

Peak Compiler Invocation

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

```
400.perlbench: icc -m64
```

```
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
```

Continued on next page

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Peak Portability Flags (Continued)

       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)`
                      `-auto-ilp32`

          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`

           403.gcc: `-xSSE4.2 -ipo -O3 -no-prec-div`

          429.mcf: basepeak = yes

         445.gobmk: `-xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)`
                    `-ansi-alias -opt-mem-layout-trans=3`

        456.hmmer: `-xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32`

         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`

    462.libquantum: basepeak = yes

        464.h264ref: `-xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)`
                     `-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)`
                     `-unroll2 -ansi-alias`

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

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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-ic12.1-linux64.html
http://www.spec.org/cpu2006/flags/platform.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic12.1-linux64.xml
http://www.spec.org/cpu2006/flags/platform.xml

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For other inquiries, please contact webmaster@spec.org.

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