SPEC® CINT2006 Result

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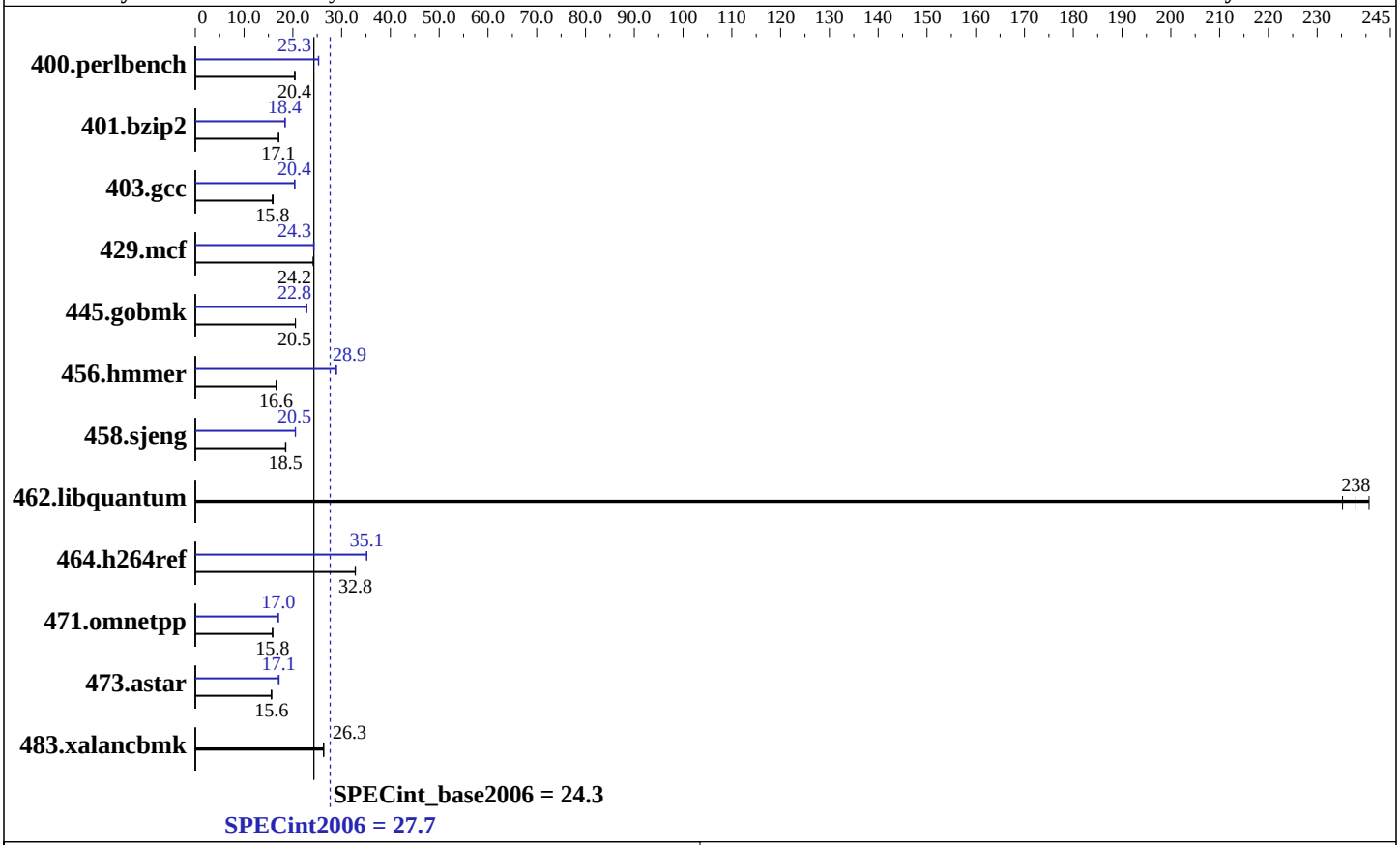
Sun Microsystems
Sun Fire X4150

SPECint®2006 = 27.7

SPECint_base2006 = 24.3

CPU2006 license: 6
Test sponsor: Sun Microsystems
Tested by: Sun Microsystems

Test date: Jan-2008
Hardware Availability: Feb-2008
Software Availability: Nov-2007



Hardware

CPU Name:	Intel Xeon X5460
CPU Characteristics:	3.16 GHz, 2x6 MB L2 shared, 1333 MHz system bus
CPU MHz:	3166
FPU:	Integrated
CPU(s) enabled:	8 cores, 2 chips, 4 cores/chip
CPU(s) orderable:	1,2 (order by number of chips)
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	12 MB I+D on chip per chip, 6 MB shared / 2 cores
L3 Cache:	None
Other Cache:	None
Memory:	16 GB (8x2GB DDR2 PC2-5300F 2rank CAS 5-5-5 with ECC)
Disk Subsystem:	SAS, 72 GB, 10K RPM
Other Hardware:	None

Software

Operating System:	SUSE LINUX Enterprise Server 10 SP1 for x86_64
Compiler:	Intel C++ and Fortran Compiler for Linux32 and Linux64 version 10.1 Build 20070824
Auto Parallel:	Yes
File System:	ReiserFS
System State:	Multi-user, run level 3
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	SmartHeap library V8.1 Binutils 2.17.50.0.15

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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	**479**	**20.4**	479	20.4	478	20.4	**386**	**25.3**	387	25.2	386	25.3
401.bzip2	**566**	**17.1**	563	17.1	566	17.0	524	18.4	**524**	**18.4**	524	18.4
403.gcc	**508**	**15.8**	504	16.0	509	15.8	**395**	**20.4**	396	20.3	395	20.4
429.mcf	**377**	**24.2**	377	24.2	376	24.3	376	24.2	**375**	**24.3**	375	24.3
445.gobmk	511	20.5	511	20.5	**511**	**20.5**	459	22.9	**459**	**22.8**	459	22.8
456.hmmer	563	16.6	563	16.6	**563**	**16.6**	**323**	**28.9**	323	28.9	323	28.9
458.sjeng	**654**	**18.5**	654	18.5	651	18.6	**590**	**20.5**	591	20.5	589	20.6
462.libquantum	86.1	241	**87.1**	**238**	88.1	235	86.1	241	**87.1**	**238**	88.1	235
464.h264ref	**674**	**32.8**	674	32.8	675	32.8	630	35.1	629	35.2	**630**	**35.1**
471.omnetpp	395	15.8	394	15.9	**394**	**15.8**	**367**	**17.0**	367	17.0	368	17.0
473.astar	448	15.7	**449**	**15.6**	451	15.6	**410**	**17.1**	409	17.2	412	17.0
483.xalancbmk	263	26.3	**262**	**26.3**	262	26.3	263	26.3	**262**	**26.3**	262	26.3

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

Operating System Notes

```
'ulimit -s unlimited' was used to set the stacksize to unlimited
OMP_NUM_THREADS set to 8
KMP_AFFINITY set to physical,0
```

Platform Notes

```
Default BIOS configurations were used.
```

General Notes

```
All benchmarks were compiled in 32-bit mode except 401.bzip2
and 456.hmmer for peak were compiled in 64-bit mode
```

Base Compiler Invocation

C benchmarks:
```
icc
```

C++ benchmarks:
```
icpc
```

Base Portability Flags

400.perlbench: `-DSPEC_CPU_LINUX_IA32`
462.libquantum: `-DSPEC_CPU_LINUX`
483.xalancbmk: `-DSPEC_CPU_LINUX`

Base Optimization Flags

C benchmarks:
`-fast -vec-guard-write -parallel -par-runtime-control`

C++ benchmarks:
`-xT -ipo -O3 -no-prec-div -Wl,-z,muldefs`
`-L/home/cmplr/usr3/alrahate/cpu2006.1.0/lib -lsmartheap`

Base Other Flags

C benchmarks:

403.gcc: `-Dalloca=_alloca`

Peak Compiler Invocation

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

401.bzip2: `/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux64/bin/icc`

456.hmmer: `/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux64/bin/icc`

C++ benchmarks:
`icpc`

Peak Portability Flags

400.perlbench: `-DSPEC_CPU_LINUX_IA32`
401.bzip2: `-DSPEC_CPU_LP64`
456.hmmer: `-DSPEC_CPU_LP64`
462.libquantum: `-DSPEC_CPU_LINUX`
483.xalancbmk: `-DSPEC_CPU_LINUX`

Peak Optimization Flags

C benchmarks:

400.perlbench: -prof-gen(pass 1) -prof-use(pass 2) -fast -ansi-alias -prefetch

401.bzip2: -L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux64/lib -I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux64/include -prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch -auto-ilp32

403.gcc: -fast -inline-calloc -opt-malloc-options=3

429.mcf: -fast -prefetch

445.gobmk: -prof-gen(pass 1) -prof-use(pass 2) -xT -O2 -ipo -no-prec-div -ansi-alias

456.hmmer: -L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux64/lib -I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux64/include -fast -unroll2 -ansi-alias -opt-multi-version-aggressive -auto-ilp32

458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4

462.libquantum: basepeak = yes

464.h264ref: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -ansi-alias

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo -no-prec-div -ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs -L/home/cmplr/usr3/alrahate/cpu2006.1.0/lib -lsmartheap

473.astar: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo -no-prec-div -ansi-alias -opt-ra-region-strategy=routine -Wl,-z,muldefs -L/home/cmplr/usr3/alrahate/cpu2006.1.0/lib -lsmartheap

483.xalancbmk: basepeak = yes

Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic10-ia32-intel64-linux-flags.20090714.26.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Intel-ic10-ia32-intel64-linux-flags.20090714.26.xml

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Tested with SPEC CPU2006 v1.0.
Report generated on Tue Jul 22 15:37:33 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 7 March 2008.