SPEC® CINT2006 Result

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Supermicro

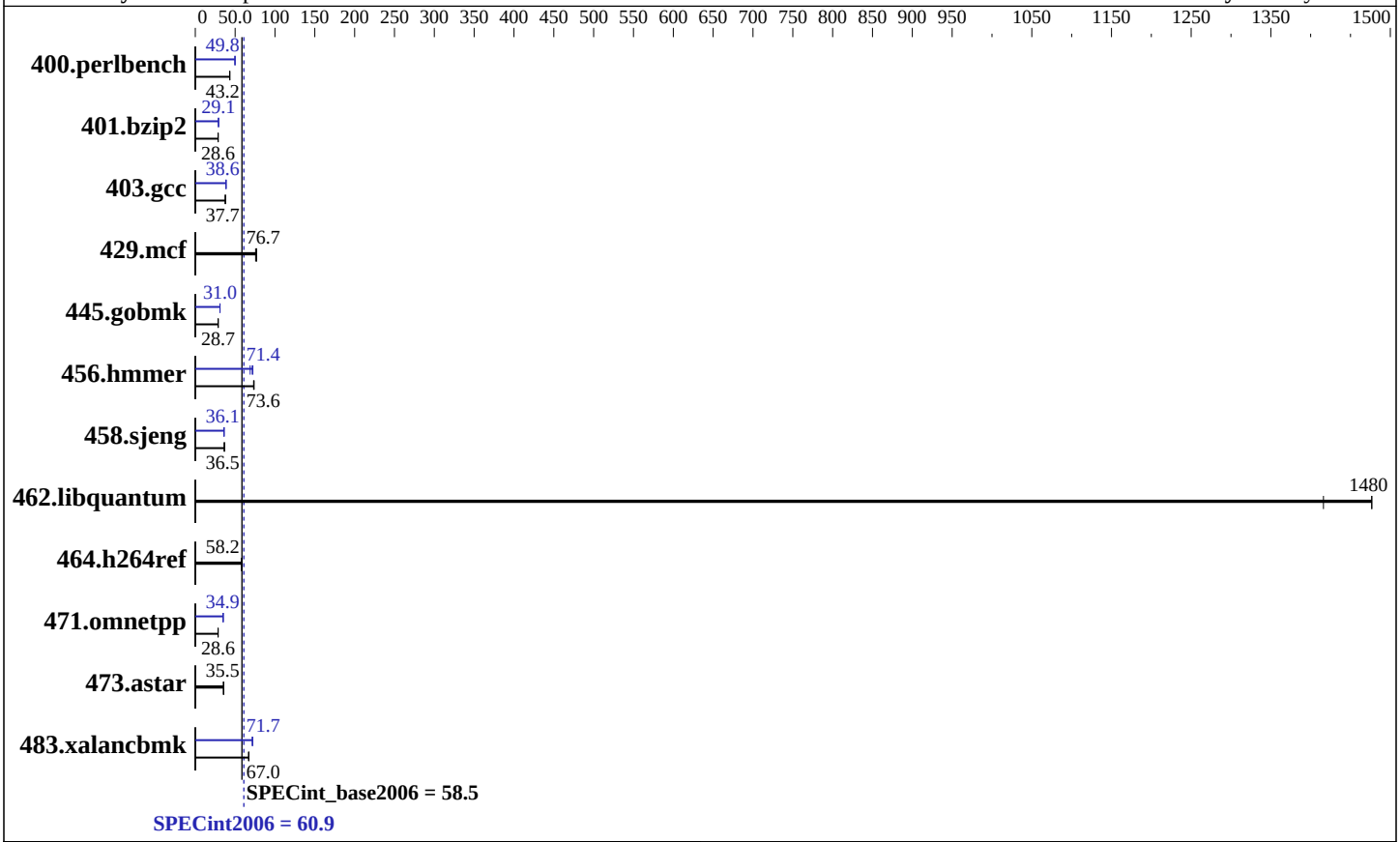
SuperServer 5018D-MTF (X10SLM-F, Intel Xeon E3-1240 v3, 3.40 GHz)

SPECint®2006 = 60.9

SPECint_base2006 = 58.5

CPU2006 license: 001176
Test sponsor: Supermicro
Tested by: Supermicro

Test date: Jun-2013
Hardware Availability: Jun-2013
Software Availability: May-2013



Hardware

CPU Name:	Intel Xeon E3-1240 v3
CPU Characteristics:	Intel Turbo Boost Technology up to 3.80 GHz
CPU MHz:	3400
FPU:	Integrated
CPU(s) enabled:	4 cores, 1 chip, 4 cores/chip, 2 threads/core
CPU(s) orderable:	1 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:	8 MB I+D on chip per chip
Other Cache:	None
Memory:	32 GB (4 x 8 GB 2Rx4 PC3-12800E-11, ECC)
Disk Subsystem:	1 x 500 GB SATA II, 7200 RPM
Other Hardware:	None

Software

Operating System:	Red Hat Enterprise Linux Server release 6.4, Kernel 2.6.32-358.el6.x86_64
Compiler:	C/C++: Version 13.1.1.163 of Intel C++ Studio XE for Linux
Auto Parallel:	Yes
File System:	ext4
System State:	Run level 3 (multi-user)
Base Pointers:	32/64-bit
Peak Pointers:	32/64-bit
Other Software:	Microquill SmartHeap V10.0

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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	226	43.2	**226**	**43.2**	226	43.3	**196**	**49.8**	196	49.9	196	49.8
401.bzip2	**337**	**28.6**	336	28.7	337	28.6	331	29.1	331	29.1	**331**	**29.1**
403.gcc	213	37.8	**214**	**37.7**	214	37.7	209	38.5	**209**	**38.6**	208	38.6
429.mcf	**119**	**76.7**	118	77.0	121	75.7	**119**	**76.7**	118	77.0	121	75.7
445.gobmk	365	28.8	366	28.6	**366**	**28.7**	338	31.0	**338**	**31.0**	339	31.0
456.hmmer	127	73.7	128	73.2	**127**	**73.6**	136	68.8	**131**	**71.4**	129	72.3
458.sjeng	**332**	**36.5**	332	36.5	332	36.4	**335**	**36.1**	335	36.1	336	36.0
462.libquantum	**14.0**	**1480**	14.6	1420	14.0	1480	**14.0**	**1480**	14.6	1420	14.0	1480
464.h264ref	382	58.0	**380**	**58.2**	380	58.3	382	58.0	**380**	**58.2**	380	58.3
471.omnetpp	**218**	**28.6**	218	28.7	219	28.5	178	35.0	**179**	**34.9**	179	34.9
473.astar	**197**	**35.5**	197	35.6	199	35.3	**197**	**35.5**	197	35.6	199	35.3
483.xalancbmk	103	67.2	103	67.0	**103**	**67.0**	**96.2**	**71.7**	95.8	72.0	96.4	71.5

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

Operating System Notes

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

General Notes

```
Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/usr/cpu2006/libs/32:/usr/cpu2006/libs/64:/usr/cpu2006/sh"
OMP_NUM_THREADS = "4"

 Binaries compiled on a system with 1x Core i7-860 CPU + 8GB
 memory using RHEL5.5
 Transparent Huge Pages enabled with:
 echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
 runspec command invoked through numactl i.e.:
 numactl --interleave=all runspec <etc>
```

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 -parallel -opt-prefetch -auto-p32

C++ benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
-Wl,-z,muldefs -L/sh -lsmartheap64

Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):
icc -m64

400.perlbench: icc -m32

445.gobmk: icc -m32

C++ benchmarks (except as noted below):
icpc -m32

473.astar: icpc -m64

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64
429.mcf: -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
473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

400.perlbench: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -opt-prefetch -ansi-alias

401.bzip2: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div -prof-use(pass 2) -auto-ilp32 -opt-prefetch -ansi-alias

403.gcc: -xCORE-AVX2 -ipo -O3 -no-prec-div -inline-calloc -opt-malloc-options=3 -auto-ilp32

429.mcf: basepeak = yes

445.gobmk: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -prof-use(pass 2) -ansi-alias

456.hmmer: -xCORE-AVX2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32 -ansi-alias

458.sjeng: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -unroll4

462.libquantum: basepeak = yes

464.h264ref: basepeak = yes

C++ benchmarks:

471.omnetpp: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -opt-ra-region-strategy=block -ansi-alias -Wl,-z,muldefs -L/sh -lsmartheap

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Peak Optimization Flags (Continued)

473.astar: `basepeak = yes`

483.xalancbmk: `-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias -Wl,-z,muldefs -L/sh -lsmartheap`

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/Supermicro-Platform-Settings-V1.2-revB.20130719.html
http://www.spec.org/cpu2006/flags/Intel-ic13-official-linux64.20130702.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Supermicro-Platform-Settings-V1.2-revB.20130719.xml
http://www.spec.org/cpu2006/flags/Intel-ic13-official-linux64.20130702.xml

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

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