SPEC® CINT2006 Result

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Fujitsu

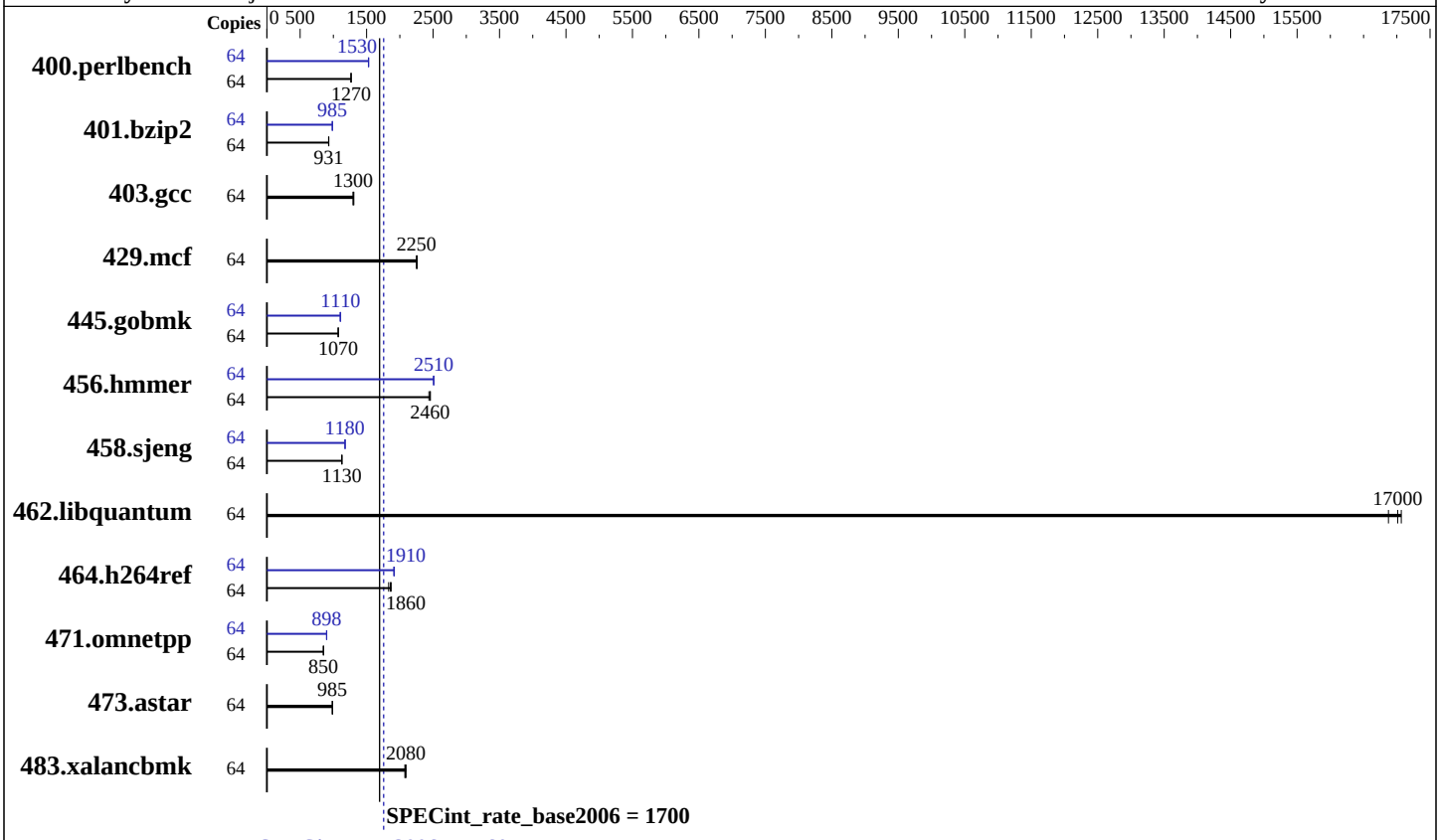
PRIMEQUEST 2800E2, Intel Xeon E7-8893 v3, 3.20 GHz

SPECint®_rate2006 = 1760

SPECint_rate_base2006 = 1700

CPU2006 license: 19
Test sponsor: Fujitsu
Tested by: Fujitsu

Test date: Apr-2015
Hardware Availability: May-2015
Software Availability: Oct-2014



Hardware

CPU Name:	Intel Xeon E7-8893 v3
CPU Characteristics:	Intel Turbo Boost Technology up to 3.50 GHz
CPU MHz:	3200
FPU:	Integrated
CPU(s) enabled:	32 cores, 8 chips, 4 cores/chip, 2 threads/core
CPU(s) orderable:	1,2,4,6,8 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:	45 MB I+D on chip per chip
Other Cache:	None
Memory:	2 TB (128 x 16 GB 2Rx4 PC4-2133P-R, running at 1600 MHz)
Disk Subsystem:	2 x SATA, 600 GB, 10000 RPM
Other Hardware:	None

Software

Operating System:	Red Hat Enterprise Linux Server release 6.6 (Santiago) 2.6.32-504.el6.x86_64
Compiler:	C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux
Auto Parallel:	No
File System:	ext4
System State:	Run level 3 (multi-user)
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	Microquill SmartHeap V10.0

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Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	64	**494**	**1270**	495	1260	493	1270	64	409	1530	**409**	**1530**	408	1530
401.bzip2	64	**664**	**931**	663	931	666	928	64	628	984	**627**	**985**	626	986
403.gcc	64	394	1310	397	1300	**397**	**1300**	64	394	1310	397	1300	**397**	**1300**
429.mcf	64	259	2250	258	2260	**259**	**2250**	64	259	2250	258	2260	**259**	**2250**
445.gobmk	64	626	1070	**626**	**1070**	625	1070	64	**605**	**1110**	605	1110	610	1100
456.hmmer	64	**243**	**2460**	245	2440	243	2460	64	238	2510	**238**	**2510**	238	2510
458.sjeng	64	687	1130	**687**	**1130**	686	1130	64	**658**	**1180**	658	1180	658	1180
462.libquantum	64	**77.9**	**17000**	78.6	16900	77.7	17100	64	**77.9**	**17000**	78.6	16900	77.7	17100
464.h264ref	64	773	1830	757	1870	**762**	**1860**	64	**740**	**1910**	742	1910	738	1920
471.omnetpp	64	**470**	**850**	469	852	471	849	64	444	900	446	898	**446**	**898**
473.astar	64	457	983	**456**	**985**	454	989	64	457	983	**456**	**985**	454	989
483.xalancbmk	64	211	2090	**212**	**2080**	213	2080	64	211	2090	**212**	**2080**	213	2080

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

Submit Notes

```
The numactl mechanism was used to bind copies to processors. The config file option 'submit'
was used to generate numactl commands to bind each copy to a specific processor.
For details, please see the config file.
```

Operating System Notes

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

Platform Notes

```
BIOS configuration:
Energy Performance = Performance
```

General Notes

```
Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/home/SPECcpu2006/libs/32:/home/SPECcpu2006/libs/64:/home/SPECcpu2006/sh"

 Binaries compiled on a system with 1x Core i7-860 CPU + 8GB
 memory using RedHat EL 6.4
 Transparent Huge Pages enabled with:
 echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
 Filesystem page cache cleared with:
 echo 1>       /proc/sys/vm/drop_caches
 runspec command invoked through numactl i.e.:
 numactl --interleave=all runspec <etc>
```

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General Notes (Continued)

For information about Fujitsu please visit: http://www.fujitsu.com

Base Compiler Invocation

C benchmarks:
icc -m32

C++ benchmarks:
icpc -m32

Base Portability Flags

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

Base Optimization Flags

C benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
-opt-mem-layout-trans=3

C++ benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
-opt-mem-layout-trans=3 -Wl,-z,muldefs -L/sh -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

Continued on next page

Peak Compiler Invocation (Continued)

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
462.libquantum: -DSPEC_CPU_LINUX
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)
-auto-ilp32

401.bzip2: -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 -auto-ilp32 -ansi-alias

403.gcc: basepeak = yes

429.mcf: basepeak = yes

445.gobmk: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
-ansi-alias -opt-mem-layout-trans=3

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

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 -auto-ilp32

462.libquantum: basepeak = yes

464.h264ref: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-unroll2 -ansi-alias

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Peak Optimization Flags (Continued)

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) `-ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs -L/sh -lsmartheap`

473.astar: `basepeak = yes`

483.xalancbmk: `basepeak = yes`

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/Fujitsu-Platform-Settings-V1.2-HSW-RevA.html
http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64-revB.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Fujitsu-Platform-Settings-V1.2-HSW-RevA.xml
http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64-revB.xml

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

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