

SPEC® CINT2006 Result

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Fujitsu

SPECint®_rate2006 = 5630

PRIMEQUEST 2800E2, Intel Xeon E7-8890 v3, 2.50 GHz

SPECint_rate_base2006 = 5470

CPU2006 license: 19

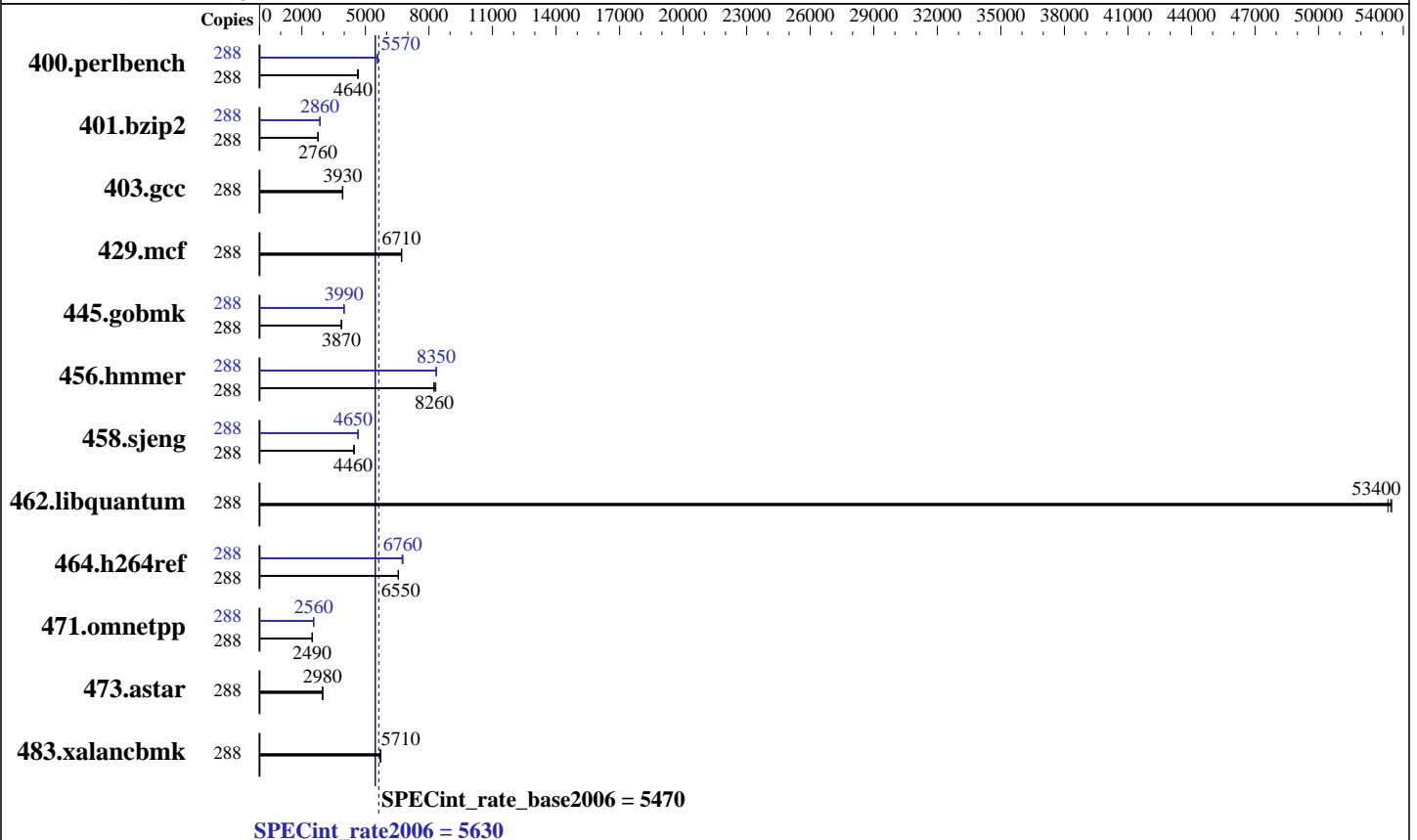
Test date: Apr-2015

Test sponsor: Fujitsu

Hardware Availability: May-2015

Tested by: Fujitsu

Software Availability: Oct-2014



Hardware

CPU Name: Intel Xeon E7-8890 v3
CPU Characteristics: Intel Turbo Boost Technology up to 3.60 GHz
CPU MHz: 2500
FPU: Integrated
CPU(s) enabled: 144 cores, 8 chips, 18 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	288	608	4630	606	4640	603	4670	288	505	5570	505	5580	505	5570
401.bzip2	288	1009	2750	1005	2770	1005	2760	288	976	2850	971	2860	973	2860
403.gcc	288	589	3940	590	3930	593	3910	288	589	3940	590	3930	593	3910
429.mcf	288	392	6710	392	6700	391	6710	288	392	6710	392	6700	391	6710
445.gobmk	288	783	3860	781	3870	781	3870	288	756	3990	757	3990	757	3990
456.hammer	288	327	8230	323	8330	325	8260	288	323	8330	322	8350	322	8350
458.sjeng	288	781	4460	781	4460	781	4460	288	749	4650	749	4650	750	4650
462.libquantum	288	112	53400	112	53300	112	53500	288	112	53400	112	53300	112	53500
464.h264ref	288	972	6560	973	6550	972	6550	288	947	6730	942	6770	943	6760
471.omnetpp	288	725	2480	722	2490	724	2490	288	703	2560	703	2560	707	2550
473.astar	288	679	2980	679	2980	678	2980	288	679	2980	679	2980	678	2980
483.xalancbmk	288	348	5710	348	5710	348	5720	288	348	5710	348	5710	348	5720

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-RH66-ICC14/libs/32:/home/SPECcpu2006-RH66-ICC14/libs/64:/home/SPECcpu2006-RH66-ICC14/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`

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Peak Compiler Invocation (Continued)

456.hmmmer: 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.hmmmer: -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.hmmmer: -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
```

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

Tested with SPEC CPU2006 v1.2.
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