SPEC® CINT2006 Result

Fujitsu

PRIMERGY CX250 S2, Intel Xeon E5-2620 v2, 2.10 GHz

$SPECint^®\_rate2006 = 429$

$SPECint\_rate\_base2006 = 413$

CPU2006 license: 19	**Test date:** Sep-2013
Test sponsor: Fujitsu	**Hardware Availability:** Sep-2013
Tested by: Fujitsu	**Software Availability:** Sep-2013

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400.perlbench	24 / 24	357 / 297
401.bzip2	24 / 24	224 / 219
403.gcc	24	337
429.mcf	24	674
445.gobmk	24 / 24	297 / 289
456.hmmer	24 / 24	606 / 544
458.sjeng	24 / 24	300 / 290
462.libquantum	24	2660
464.h264ref	24 / 24	498 / 491
471.omnetpp	24 / 24	261 / 245
473.astar	24	245
483.xalancbmk	24	468

Hardware

CPU Name:	Intel Xeon E5-2620 v2
CPU Characteristics:	Intel Turbo Boost Technology up to 2.60 GHz
CPU MHz:	2100
FPU:	Integrated
CPU(s) enabled:	12 cores, 2 chips, 6 cores/chip, 2 threads/core
CPU(s) orderable:	1,2 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:	15 MB I+D on chip per chip
Other Cache:	None
Memory:	128 GB (16 x 8 GB 2Rx8 PC3-14900R-13, ECC, running at 1600 MHz and CL11)
Disk Subsystem:	1 x SATA, 500 GB, 7200 RPM
Other Hardware:	None

Software

Operating System:	Red Hat Enterprise Linux Server release 6.4 (Santiago) 2.6.32-358.11.1.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 5 (multi-user)
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	Microquill SmartHeap V10.0

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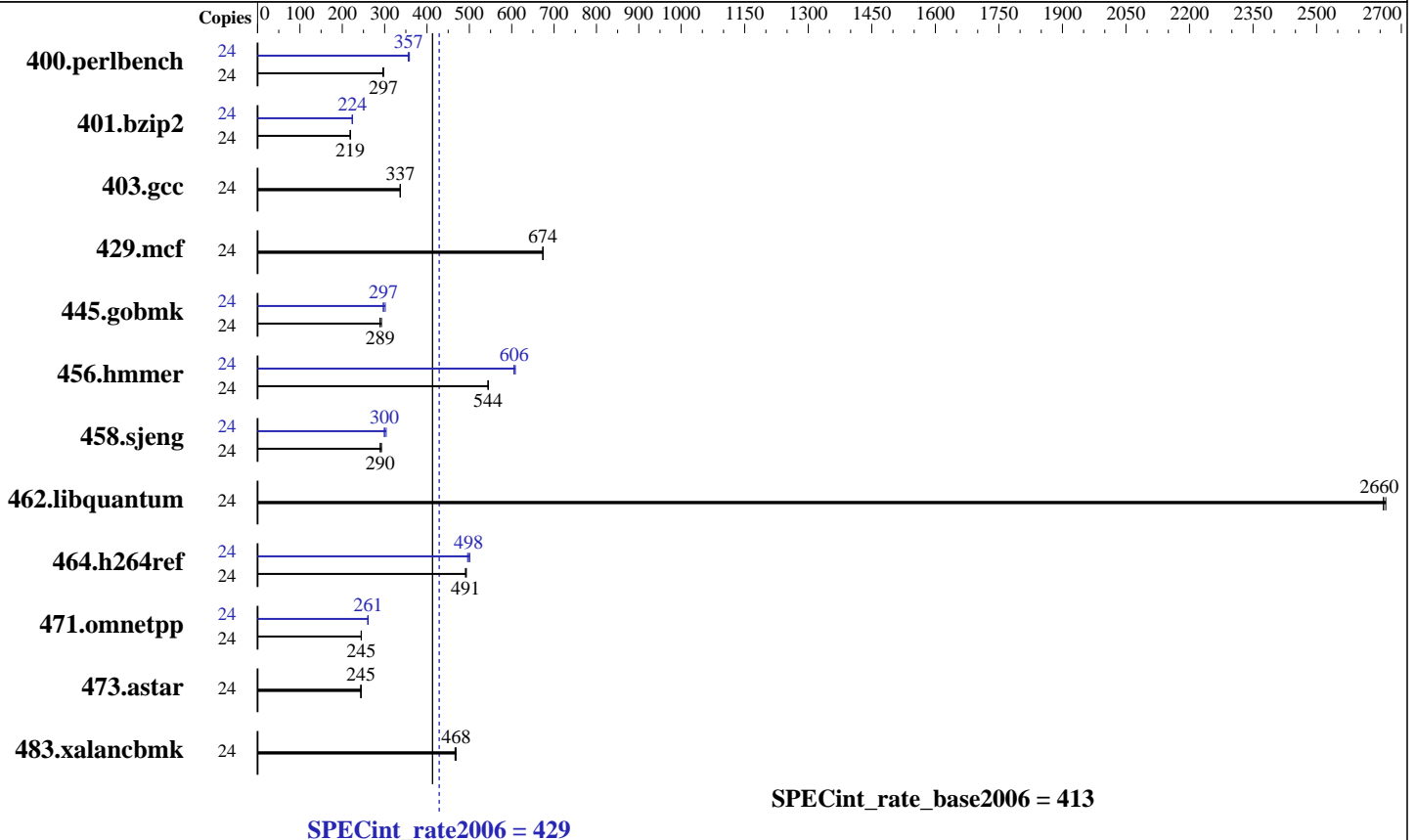
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Results Table

Benchmark	Copies	Base Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Peak Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	24	**789**	**297**	793	296	789	297	24	654	358	**657**	**357**	659	356
401.bzip2	24	**1058**	**219**	1060	218	1055	220	24	1036	224	1035	224	**1035**	**224**
403.gcc	24	573	337	**573**	**337**	574	337	24	573	337	**573**	**337**	574	337
429.mcf	24	**325**	**674**	325	674	325	673	24	**325**	**674**	325	674	325	673
445.gobmk	24	**870**	**289**	871	289	860	293	24	**847**	**297**	848	297	835	302
456.hmmer	24	**411**	**544**	412	544	411	545	24	370	606	368	609	**370**	**606**
458.sjeng	24	**1002**	**290**	1002	290	992	293	24	956	304	970	299	**969**	**300**
462.libquantum	24	187	2660	**187**	**2660**	187	2660	24	187	2660	**187**	**2660**	187	2660
464.h264ref	24	1082	491	1077	493	**1081**	**491**	24	1060	501	1071	496	**1066**	**498**
471.omnetpp	24	**613**	**245**	613	245	612	245	24	576	260	**575**	**261**	575	261
473.astar	24	692	243	689	245	**689**	**245**	24	692	243	689	245	**689**	**245**
483.xalancbmk	24	353	468	355	466	**354**	**468**	24	353	468	355	466	**354**	**468**

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 = "/SPECcpu2006/libs/32:/SPECcpu2006/libs/64:/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:
    -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/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.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: `-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: `basepeak = yes`

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`

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Peak Optimization Flags (Continued)

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/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/Intel-ic14.0-official-linux64.20140128.html
http://www.spec.org/cpu2006/flags/Fujitsu-Platform.20131009.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.xml
http://www.spec.org/cpu2006/flags/Fujitsu-Platform.20131009.xml

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

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