SPEC® CINT2006 Result

Fujitsu

PRIMERGY BX920 S4, Intel Xeon E5-2430 v2, 2.50 GHz

$SPECint®\_rate2006 = 477$

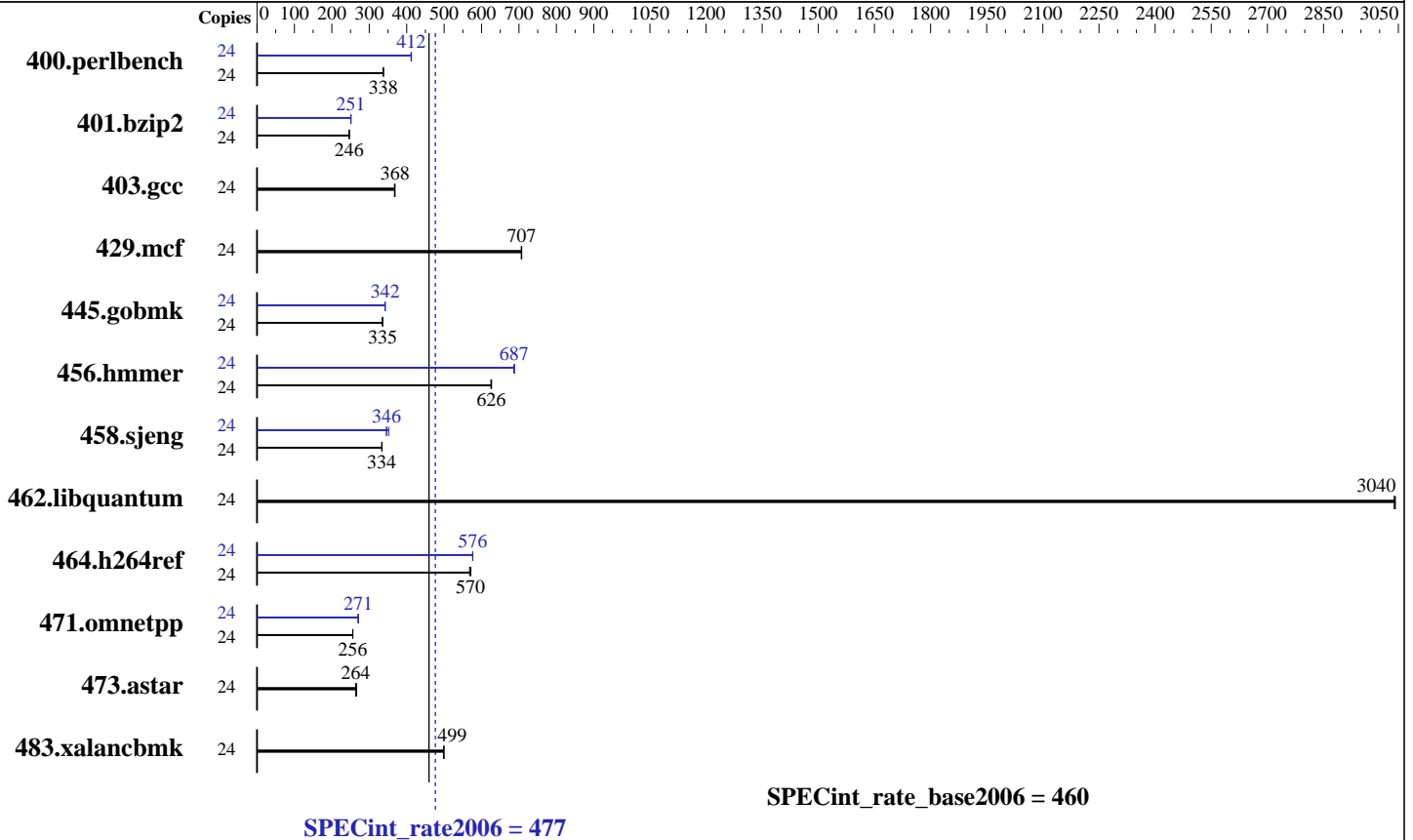$SPECint\_rate\_base2006 = 460$

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

Test date: Dec-2013
Hardware Availability: Jan-2014
Software Availability: Sep-2013

Benchmark	Copies	Base	Peak
400.perlbench	24 / 24	338	412
401.bzip2	24 / 24	246	251
403.gcc	24	368	
429.mcf	24	707	
445.gobmk	24 / 24	335	342
456.hmmer	24 / 24	626	687
458.sjeng	24 / 24	334	346
462.libquantum	24	3040	
464.h264ref	24 / 24	570	576
471.omnetpp	24 / 24	256	271
473.astar	24	264	
483.xalancbmk	24	499	

SPECint_rate_base2006 = 460

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Hardware

CPU Name: Intel Xeon E5-2430 v2
CPU Characteristics: Intel Turbo Boost Technology up to 3.00 GHz
CPU MHz: 2500
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: 192 GB (12 x 16 GB 2Rx4 PC3L-12800R-11, ECC)
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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Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	24	694	338	695	337	**694**	**338**	24	**569**	**412**	570	412	568	413
401.bzip2	24	**940**	**246**	940	246	939	247	24	924	251	921	251	**924**	**251**
403.gcc	24	524	369	**524**	**368**	526	367	24	524	369	**524**	**368**	526	367
429.mcf	24	309	707	**310**	**707**	310	706	24	309	707	**310**	**707**	310	706
445.gobmk	24	751	335	751	335	**751**	**335**	24	736	342	735	343	**735**	**342**
456.hmmer	24	357	627	**357**	**626**	358	625	24	**326**	**687**	325	688	326	686
458.sjeng	24	**870**	**334**	871	334	870	334	24	840	346	825	352	**839**	**346**
462.libquantum	24	164	3040	163	3040	**164**	**3040**	24	164	3040	163	3040	**164**	**3040**
464.h264ref	24	929	572	935	568	**932**	**570**	24	921	577	922	576	**921**	**576**
471.omnetpp	24	**586**	**256**	585	256	587	256	24	**554**	**271**	554	271	555	270
473.astar	24	633	266	638	264	**638**	**264**	24	633	266	638	264	**638**	**264**
483.xalancbmk	24	332	499	331	500	**332**	**499**	24	332	499	331	500	**332**	**499**

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

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

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

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