SPEC® CINT2006 Result

Fujitsu

PRIMERGY CX2550 M1, Intel Xeon E5-2637 v3, 3.5 GHz

SPECint®_rate2006 = 468

SPECint_rate_base2006 = 451

CPU2006 license:	19		**Test date:**	Dec-2014
Test sponsor:	Fujitsu		**Hardware Availability:**	Sep-2014
Tested by:	Fujitsu		**Software Availability:**	Nov-2013

SPECint_rate_base2006 = 451

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Benchmark	Copies	base	peak
400.perlbench	16	335	408
401.bzip2	16	227	238
403.gcc	16	343	
429.mcf	16	596	
445.gobmk	16	293	300
456.hmmer	16	672	683
458.sjeng	16	312	329
462.libquantum	16	4690	
464.h264ref	16	512	538
471.omnetpp	16	232	246
473.astar	16	254	
483.xalancbmk	16	526	

Hardware

CPU Name:	Intel Xeon E5-2637 v3
CPU Characteristics:	Intel Turbo Boost Technology up to 3.70 GHz
CPU MHz:	3500
FPU:	Integrated
CPU(s) enabled:	8 cores, 2 chips, 4 cores/chip, 2 threads/core
CPU(s) orderable:	1,2 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:	15 MB I+D on chip per chip
Other Cache:	None
Memory:	256 GB (16 x 16 GB 2Rx4 PC4-2133P-R)
Disk Subsystem:	1 x SATA, 500 GB, 7200 RPM
Other Hardware:	None

Software

Operating System:	Red Hat Enterprise Linux Server release 6.5 (Santiago) 2.6.32-431.23.3.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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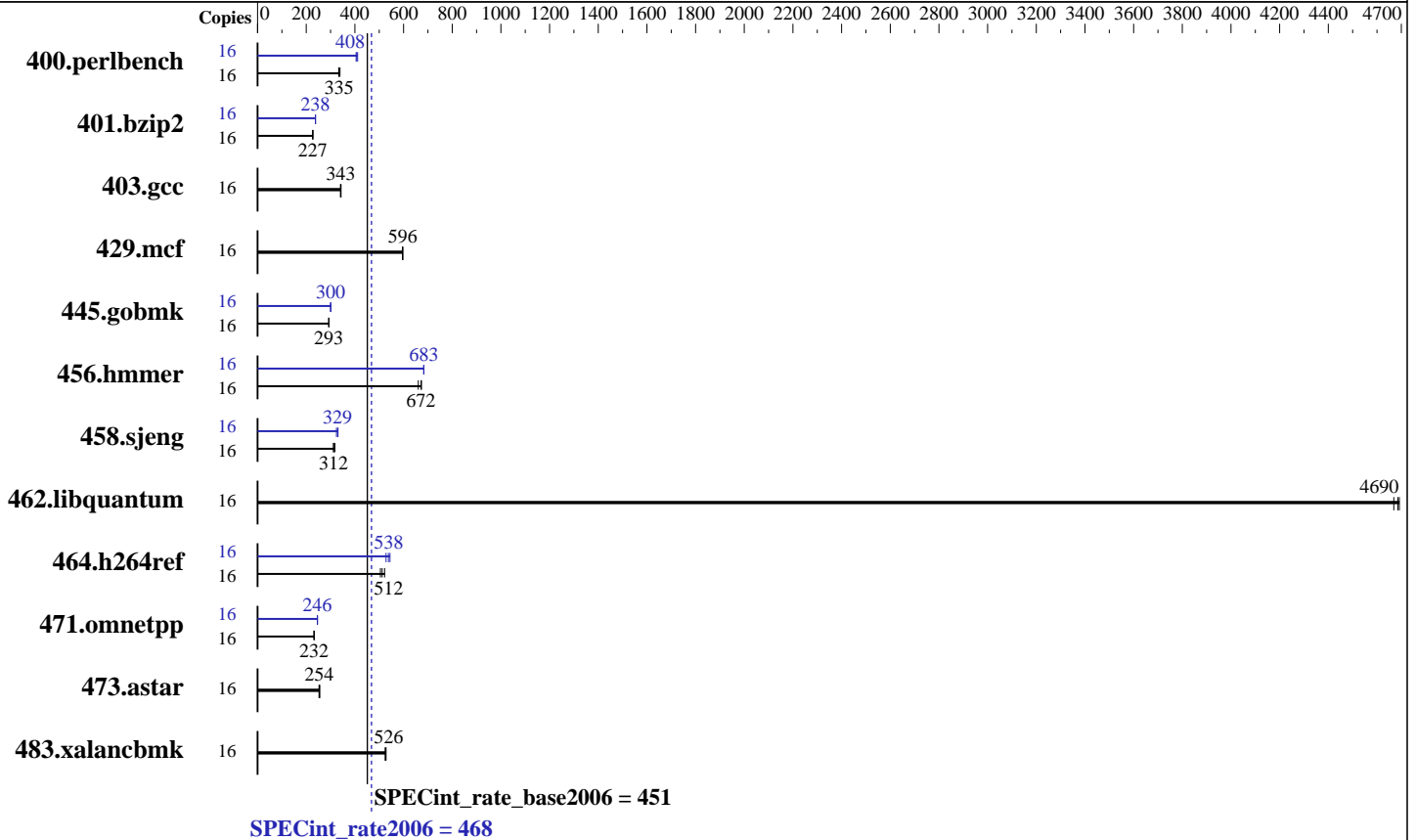
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Results Table

Benchmark		Base							Peak					
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	16	**467**	**335**	462	339	469	333	16	**383**	**408**	386	405	380	411
401.bzip2	16	680	227	680	227	**680**	**227**	16	649	238	**649**	**238**	649	238
403.gcc	16	**376**	**343**	376	343	378	341	16	**376**	**343**	376	343	378	341
429.mcf	16	245	597	245	596	**245**	**596**	16	245	597	245	596	**245**	**596**
445.gobmk	16	573	293	**573**	**293**	573	293	16	**559**	**300**	559	300	558	301
456.hmmer	16	222	673	226	661	**222**	**672**	16	**219**	**683**	219	683	218	684
458.sjeng	16	620	312	609	318	**620**	**312**	16	586	331	**588**	**329**	597	324
462.libquantum	16	**70.7**	**4690**	71.0	4670	70.7	4690	16	**70.7**	**4690**	71.0	4670	70.7	4690
464.h264ref	16	**691**	**512**	701	505	678	522	16	**658**	**538**	651	544	671	528
471.omnetpp	16	**431**	**232**	431	232	429	233	16	407	246	**406**	**246**	406	246
473.astar	16	439	256	445	253	**442**	**254**	16	439	256	445	253	**442**	**254**
483.xalancbmk	16	**210**	**526**	209	528	210	525	16	**210**	**526**	209	528	210	525

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
    Utilization Profile = Unbalanced
    QPI snoop mode: Cluster on Die
        COD Enable = Enabled, Early Snoop = Disabled
    CPU C1E Support = Disabled

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

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General Notes (Continued)

```
Filesystem page cache cleared with:
echo 1>      /proc/sys/vm/drop_caches
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>

This result was measured on the PRIMERGY CX2550 M1. The PRIMERGY CX2550 M1
and the PRIMERGY CX2570 M1 are electronically equivalent.
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

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Peak Compiler Invocation

C benchmarks (except as noted below):
    `icc  -m32`

    400.perlbench: `icc -m64`

       401.bzip2: `icc -m64`

      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`

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Peak Optimization Flags (Continued)

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

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/Intel-ic14.0-official-linux64.20140128.html
http://www.spec.org/cpu2006/flags/Fujitsu-Platform.20141216.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.20141216.xml

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