



SPEC® CINT2006 Result

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Fujitsu

SPECint®_rate2006 = 1170

PRIMERGY RX2560 M1, Intel Xeon E5-2695 v3, 2.3 GHz

SPECint_rate_base2006 = 1130

CPU2006 license: 19

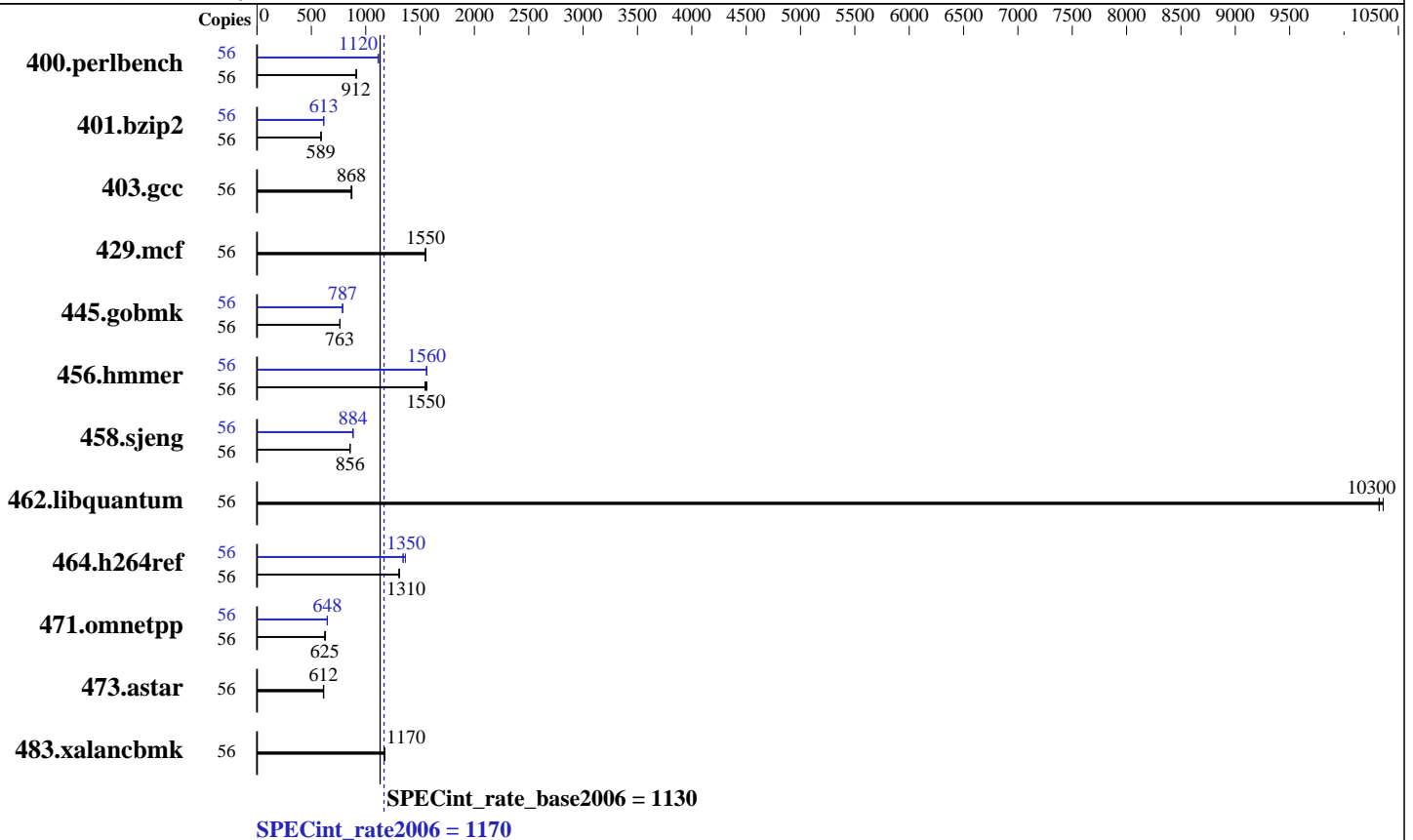
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: May-2015

Hardware Availability: Apr-2015

Software Availability: Nov-2013



Hardware

CPU Name: Intel Xeon E5-2695 v3
 CPU Characteristics: Intel Turbo Boost Technology up to 3.30 GHz
 CPU MHz: 2300
 FPU: Integrated
 CPU(s) enabled: 28 cores, 2 chips, 14 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: 35 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 6.6 (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 | 56 | 597 | 916 | 601 | 911 | 600 | 912 | 56 | 490 | 1120 | 489 | 1120 | 491 | 1110 |
| 401.bzip2 | 56 | 918 | 589 | 918 | 589 | 917 | 589 | 56 | 881 | 613 | 881 | 614 | 881 | 613 |
| 403.gcc | 56 | 520 | 867 | 519 | 868 | 516 | 873 | 56 | 520 | 867 | 519 | 868 | 516 | 873 |
| 429.mcf | 56 | 329 | 1550 | 329 | 1550 | 330 | 1550 | 56 | 329 | 1550 | 329 | 1550 | 330 | 1550 |
| 445.gobmk | 56 | 771 | 762 | 770 | 763 | 770 | 763 | 56 | 745 | 789 | 748 | 786 | 747 | 787 |
| 456.hammer | 56 | 336 | 1550 | 338 | 1550 | 334 | 1560 | 56 | 335 | 1560 | 334 | 1560 | 335 | 1560 |
| 458.sjeng | 56 | 791 | 857 | 792 | 856 | 793 | 855 | 56 | 767 | 884 | 768 | 882 | 767 | 884 |
| 462.libquantum | 56 | 112 | 10400 | 112 | 10300 | 112 | 10300 | 56 | 112 | 10400 | 112 | 10300 | 112 | 10300 |
| 464.h264ref | 56 | 949 | 1310 | 946 | 1310 | 947 | 1310 | 56 | 908 | 1370 | 921 | 1350 | 923 | 1340 |
| 471.omnetpp | 56 | 556 | 630 | 560 | 625 | 561 | 623 | 56 | 543 | 645 | 540 | 648 | 540 | 648 |
| 473.astar | 56 | 641 | 614 | 644 | 611 | 642 | 612 | 56 | 641 | 614 | 644 | 611 | 642 | 612 |
| 483.xalancbmk | 56 | 330 | 1170 | 329 | 1170 | 329 | 1170 | 56 | 330 | 1170 | 329 | 1170 | 329 | 1170 |

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 RX2560 M1. The PRIMERGY RX2560 M1 and the PRIMERGY TX2560 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-revB.html>

<http://www.spec.org/cpu2006/flags/Fujitsu-Platform-Settings-V1.2-HSW-RevA.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-revB.xml>

<http://www.spec.org/cpu2006/flags/Fujitsu-Platform-Settings-V1.2-HSW-RevA.xml>

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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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