



SPEC® CINT2006 Result

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Fujitsu

PRIMERGY TX2560 M1, Intel Xeon E5-2630L v3, 1.8 GHz

SPECint®_rate2006 = 584

SPECint_rate_base2006 = 562

CPU2006 license: 19

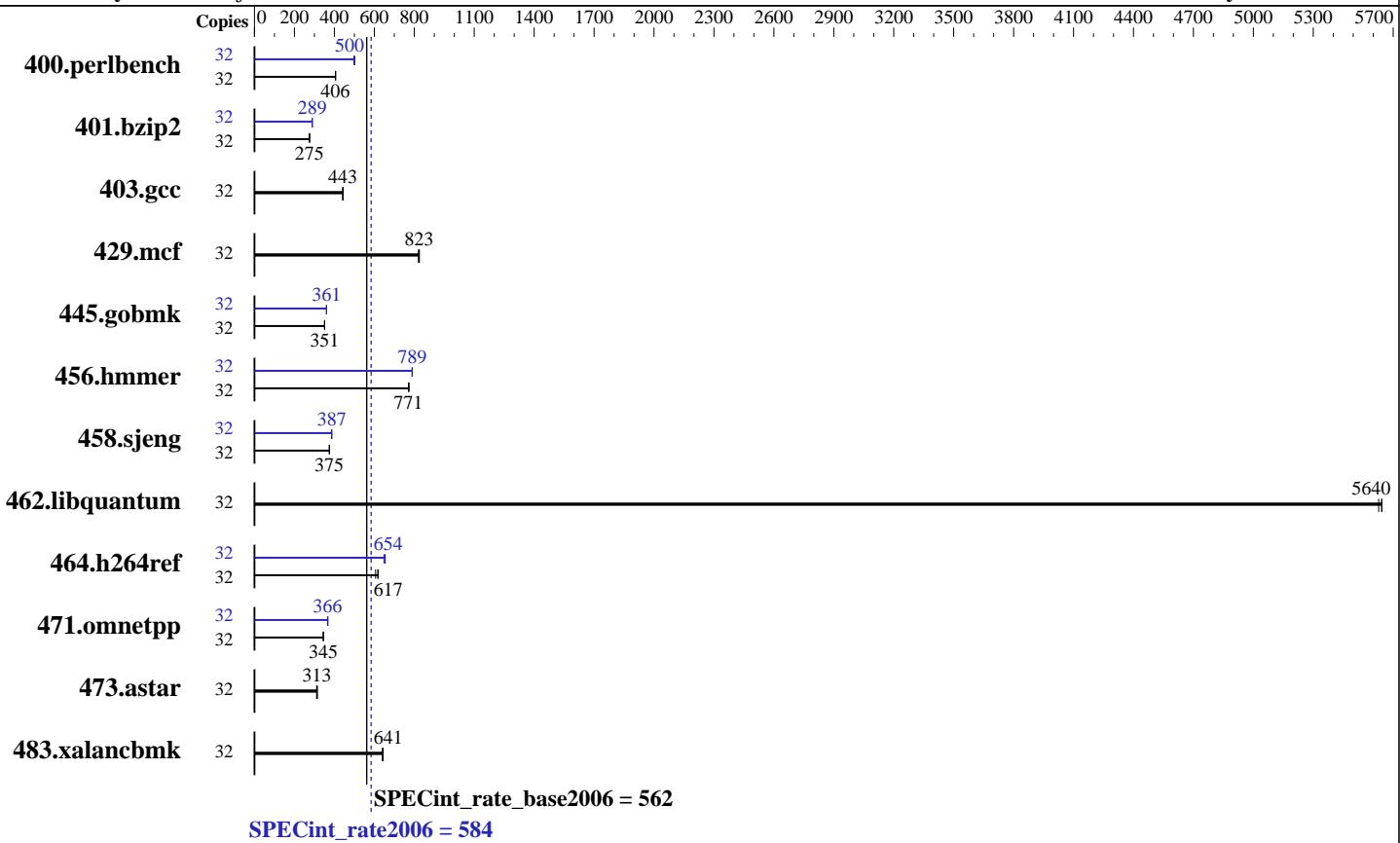
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Apr-2015

Hardware Availability: Apr-2015

Software Availability: Nov-2013



Hardware

| | |
|----------------------|---|
| CPU Name: | Intel Xeon E5-2630L v3 |
| CPU Characteristics: | Intel Turbo Boost Technology up to 2.90 GHz |
| CPU MHz: | 1800 |
| FPU: | Integrated |
| CPU(s) enabled: | 16 cores, 2 chips, 8 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: | 20 MB I+D on chip per chip |
| Other Cache: | None |
| Memory: | 256 GB (16 x 16 GB 2Rx4 PC4-2133P-R, running at 1866 MHz) |
| 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 | 32 | 770 | 406 | 770 | 406 | 771 | 406 | 32 | 626 | 500 | 628 | 498 | 622 | 502 |
| 401.bzip2 | 32 | 1121 | 275 | 1121 | 275 | 1121 | 275 | 32 | 1067 | 290 | 1068 | 289 | 1071 | 288 |
| 403.gcc | 32 | 580 | 444 | 584 | 441 | 582 | 443 | 32 | 580 | 444 | 584 | 441 | 582 | 443 |
| 429.mcf | 32 | 356 | 821 | 354 | 823 | 353 | 826 | 32 | 356 | 821 | 354 | 823 | 353 | 826 |
| 445.gobmk | 32 | 956 | 351 | 956 | 351 | 956 | 351 | 32 | 933 | 360 | 930 | 361 | 930 | 361 |
| 456.hmmer | 32 | 386 | 774 | 387 | 771 | 387 | 771 | 32 | 378 | 789 | 378 | 789 | 378 | 790 |
| 458.sjeng | 32 | 1033 | 375 | 1034 | 374 | 1030 | 376 | 32 | 1001 | 387 | 1002 | 387 | 1002 | 386 |
| 462.libquantum | 32 | 118 | 5630 | 118 | 5640 | 118 | 5640 | 32 | 118 | 5630 | 118 | 5640 | 118 | 5640 |
| 464.h264ref | 32 | 1143 | 620 | 1148 | 617 | 1168 | 606 | 32 | 1082 | 654 | 1093 | 648 | 1083 | 654 |
| 471.omnetpp | 32 | 580 | 345 | 580 | 345 | 580 | 345 | 32 | 544 | 368 | 546 | 366 | 546 | 366 |
| 473.astar | 32 | 719 | 313 | 722 | 311 | 713 | 315 | 32 | 719 | 313 | 722 | 311 | 713 | 315 |
| 483.xalancbmk | 32 | 344 | 641 | 343 | 644 | 345 | 641 | 32 | 344 | 641 | 343 | 644 | 345 | 641 |

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: Early Snoop
 COD Enable = Disabled, Early Snoop = Enabled
 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 -unroll12 -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)
-unroll14 -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 other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.2.

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