



SPEC® CINT2006 Result

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Fujitsu

PRIMERGY CX2550 M1, Intel Xeon E5-2650L v3, 1.8 GHz

SPECint®_rate2006 = 810

SPECint_rate_base2006 = 777

CPU2006 license: 19

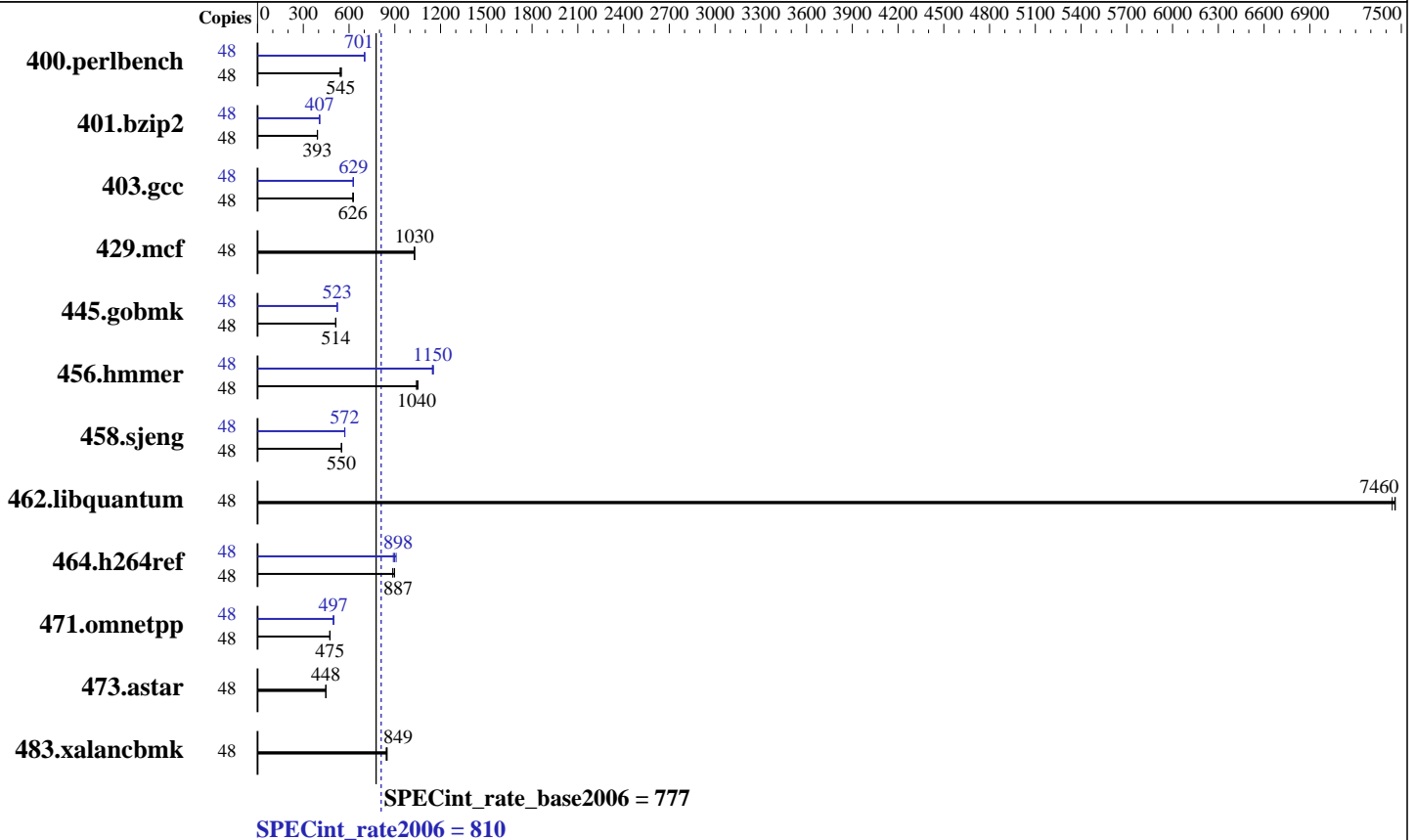
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Nov-2014

Hardware Availability: Sep-2014

Software Availability: Sep-2014



Hardware

CPU Name: Intel Xeon E5-2650L v3
 CPU Characteristics: Intel Turbo Boost Technology up to 2.50 GHz
 CPU MHz: 1800
 FPU: Integrated
 CPU(s) enabled: 24 cores, 2 chips, 12 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: 30 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 7.0 (Maipo)
 Kernel 3.10.0-123.8.1.el7.x86_64
 Compiler: C/C++: Version 15.0.0.090 of Intel C++ Studio XE for Linux
 Auto Parallel: No
 File System: xfs
 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 | 48 | <u>861</u> | <u>545</u> | 866 | 541 | 853 | 550 | 48 | 669 | 701 | <u>669</u> | <u>701</u> | 667 | 703 |
| 401.bzip2 | 48 | <u>1180</u> | <u>393</u> | 1183 | 392 | 1179 | 393 | 48 | 1137 | 407 | 1140 | 406 | <u>1139</u> | <u>407</u> |
| 403.gcc | 48 | <u>618</u> | <u>626</u> | 615 | 629 | 618 | 625 | 48 | <u>615</u> | <u>629</u> | 615 | 629 | 617 | 626 |
| 429.mcf | 48 | <u>425</u> | <u>1030</u> | 426 | 1030 | 425 | 1030 | 48 | <u>425</u> | <u>1030</u> | 426 | 1030 | 425 | 1030 |
| 445.gobmk | 48 | 980 | 514 | 985 | 511 | <u>980</u> | <u>514</u> | 48 | 964 | 522 | 963 | 523 | <u>964</u> | <u>523</u> |
| 456.hammer | 48 | <u>429</u> | <u>1040</u> | 426 | 1050 | 430 | 1040 | 48 | 388 | 1150 | <u>390</u> | <u>1150</u> | 391 | 1150 |
| 458.sjeng | 48 | <u>1055</u> | <u>550</u> | 1055 | 550 | 1054 | 551 | 48 | 1015 | 572 | <u>1015</u> | <u>572</u> | 1016 | 572 |
| 462.libquantum | 48 | 134 | 7440 | 133 | 7460 | <u>133</u> | <u>7460</u> | 48 | 134 | 7440 | 133 | 7460 | <u>133</u> | <u>7460</u> |
| 464.h264ref | 48 | 1182 | 899 | <u>1197</u> | <u>887</u> | 1197 | 887 | 48 | <u>1183</u> | <u>898</u> | 1193 | 890 | 1169 | 909 |
| 471.omnetpp | 48 | 635 | 473 | <u>631</u> | <u>475</u> | 631 | 476 | 48 | <u>603</u> | <u>497</u> | 604 | 497 | 600 | 500 |
| 473.astar | 48 | <u>752</u> | <u>448</u> | 753 | 448 | 751 | 449 | 48 | <u>752</u> | <u>448</u> | 753 | 448 | 751 | 449 |
| 483.xalancbmk | 48 | 393 | 843 | <u>390</u> | <u>849</u> | 390 | 849 | 48 | 393 | 843 | <u>390</u> | <u>849</u> | 390 | 849 |

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 i5-4670K CPU + 16GB memory using RedHat EL 7.0

Filesystem page cache cleared with:
echo 1> /proc/sys/vm/drop_caches

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General Notes (Continued)

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 -L/opt/intel/composer_xe_2015/lib/ia32
```

C++ benchmarks:

```
icpc -m32 -L/opt/intel/composer_xe_2015/lib/ia32
```

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
```

C++ benchmarks:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -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 -L/opt/intel/composer_xe_2015/lib/ia32
```

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Peak Compiler Invocation (Continued)

400.perlbench: `icc -m64`

401.bzip2: `icc -m64`

456.hmmer: `icc -m64`

458.sjeng: `icc -m64`

C++ benchmarks:

`icpc -m32 -L/opt/intel/composer_xe_2015/lib/ia32`

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: `-xCORE-AVX2 -ipo -O3 -no-prec-div`

429.mcf: `basepeak = yes`

445.gobmk: `-xCORE-AVX2(pass 2) -prof-gen(pass 1) -prof-use(pass 2) -ansi-alias`

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-ic15.0-official-linux64.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-ic15.0-official-linux64.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.

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