**Fujitsu**

PRIMERGY CX2550 M1, Intel Xeon E5-2623 v3, 3.0 GHz

<table>
<thead>
<tr>
<th>Software</th>
<th>CPU2006 license:</th>
<th>Test sponsor:</th>
<th>Tested by:</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>Fujitsu</td>
<td>Fujitsu</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hardware</th>
<th>Operating System:</th>
<th>Compiler:</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Name: Intel Xeon E5-2623 v3</td>
<td>Red Hat Enterprise Linux Server release 6.5 (Santiago)</td>
<td></td>
</tr>
<tr>
<td>CPU Characteristics: Intel Turbo Boost Technology up to 3.50 GHz</td>
<td>2.6.32-431.23.3.el6.x86_64</td>
<td></td>
</tr>
<tr>
<td>CPU MHZ: 3000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FPU: Integrated</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip, 2 threads/core</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CPU(s) orderable: 1.2 chip</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary Cache: 32 KB I + 32 KB D on chip per core</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary Cache: 256 KB I+D on chip per core</td>
<td></td>
<td></td>
</tr>
<tr>
<td>L3 Cache: 10 MB I+D on chip per chip</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Cache: None</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Memory: 256 GB (16 x 16 GB 2Rx4 PC4-2133P-R, running at 1866 MHz)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disk Subsystem: 1 x SATA, 500 GB, 7200 RPM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Hardware: None</td>
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</tr>
</tbody>
</table>

| SPECint®_rate2006 = 425 |

| SPECint_rate_base2006 = 411 |

<table>
<thead>
<tr>
<th>CPU2006 license:</th>
<th>Test date:</th>
<th>Hardware Availability:</th>
<th>Software Availability:</th>
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<tbody>
<tr>
<td>19</td>
<td>Dec-2014</td>
<td>Sep-2014</td>
<td>Nov-2013</td>
</tr>
</tbody>
</table>

| SPECint®_rate2006 = 425 |

| SPECint_rate_base2006 = 411 |

**Software**

Operating System: Red Hat Enterprise Linux Server release 6.5 (Santiago)

Compiler: CIC++: 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
Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
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<th>Ratio</th>
<th>Seconds</th>
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<th>Seconds</th>
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<tbody>
<tr>
<td>400.perlbench</td>
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<td>507</td>
<td>308</td>
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<td>306</td>
<td>418</td>
<td>374</td>
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<td>417</td>
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<tr>
<td>401.bzip2</td>
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<td>794</td>
<td>194</td>
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<td>195</td>
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<td>195</td>
<td>761</td>
<td>203</td>
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<td>762</td>
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<td>403.gcc</td>
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<td>419</td>
<td>307</td>
<td>420</td>
<td>306</td>
<td>423</td>
<td>304</td>
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<td>307</td>
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<td>429.mcf</td>
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<td>266</td>
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<td>456.hmmer</td>
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<td>458.sjeng</td>
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<td>672</td>
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<td>462.libquantum</td>
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<tr>
<td>464.h264ref</td>
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<td>726</td>
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<td>722</td>
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<td>471.omnetpp</td>
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<td>226</td>
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<td>473.astar</td>
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<td>481</td>
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<td>483</td>
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<td>483.xalancbmk</td>
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<td>236</td>
<td>469</td>
<td>236</td>
<td>467</td>
</tr>
</tbody>
</table>

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 Red Hat EL 6.4
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled

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| SPECint_rate2006 | 425 |
| SPECint_rate_base2006 | 411 |

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

### General Notes (Continued)

Filesystem page cache cleared with:
```bash
echo 1>/proc/sys/vm/drop_caches
```
runcspec command invoked through numactl i.e.:
```bash
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:**  
```bash
icc  -m32
```

**C++ benchmarks:**  
```bash
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:**  
```bash
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch  
-opt-mem-layout-trans=3
```

**C++ benchmarks:**  
```bash
-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:**  
```bash
403.gcc: -Dalloca=_alloca
```
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CPU2006 license: 19
Test sponsor: Fujitsu
Tested by: Fujitsu

SPECint_rate2006 = 425
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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

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

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

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