Fujitsu

PRIMERGY BX2580 M1, Intel Xeon E5-2660 v3, 2.6 GHz

CPU2006 license: 19
Test sponsor: Fujitsu
Tested by: Fujitsu

CPU Name: Intel Xeon E5-2660 v3
CPU Characteristics: Intel Turbo Boost Technology up to 3.30 GHz
CPU MHz: 2600
FPU: Integrated
CPU(s) enabled: 20 cores, 2 chips, 10 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: 25 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

Operating System: Red Hat Enterprise Linux Server release 6.6 (Santiago)
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

SPECint_rate2006 = 917
SPECint_rate_base2006 = 886
### Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>Base</th>
<th>Peak</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Seconds</td>
<td>Ratio</td>
</tr>
<tr>
<td>400.perlbench</td>
<td>40</td>
<td>571</td>
<td>685</td>
</tr>
<tr>
<td>401.bzip2</td>
<td>40</td>
<td>887</td>
<td>435</td>
</tr>
<tr>
<td>403.gcc</td>
<td>40</td>
<td>469</td>
<td>686</td>
</tr>
<tr>
<td>429.mcf</td>
<td>40</td>
<td>304</td>
<td>1200</td>
</tr>
<tr>
<td>445.gobmk</td>
<td>40</td>
<td>700</td>
<td>599</td>
</tr>
<tr>
<td>456.hmmer</td>
<td>40</td>
<td>298</td>
<td>1250</td>
</tr>
<tr>
<td>458.sjeng</td>
<td>40</td>
<td>759</td>
<td>637</td>
</tr>
<tr>
<td>462.libquantum</td>
<td>40</td>
<td>469.7</td>
<td>8550</td>
</tr>
<tr>
<td>464.h264ref</td>
<td>40</td>
<td>855</td>
<td>1040</td>
</tr>
<tr>
<td>471.omnetpp</td>
<td>40</td>
<td>518</td>
<td>485</td>
</tr>
<tr>
<td>473.astar</td>
<td>40</td>
<td>577</td>
<td>487</td>
</tr>
<tr>
<td>483.xalancbmk</td>
<td>40</td>
<td>287</td>
<td>966</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: 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/redhatTransparentHungPage/enabled

Continued on next page
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>

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

Peak Compiler Invocation

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

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SPEC CINT2006 Result

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Test date: Apr-2015
Hardware Availability: Mar-2015
Software Availability: Nov-2013

Peak Compiler Invocation (Continued)

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:


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.

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