## SPECint CINT2006 Result

### Cisco Systems

**Cisco UCS B200 M2 (Intel Xeon X5690, 2.13 GHz)**

<table>
<thead>
<tr>
<th>SPECint_rate2006</th>
<th>SPECint_rate_base2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>432</td>
<td>417</td>
</tr>
</tbody>
</table>

**CPU2006 license:** 9019  
**Test sponsor:** Cisco Systems  
**Tested by:** Cisco Systems  
**Test date:** Jan-2012  
**Hardware Availability:** May-2011  

### Software

**Operating System:** Red Hat Enterprise Linux Server release 6.1 (Santiago)  
**Compiler:** C/C++: Version 12.1.0.225 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 V9.01

### Hardware

**CPU Name:** Intel Xeon X5690  
**CPU Characteristics:** Intel Turbo Boost Technology up to 3.73 GHz  
**CPU MHz:** 3467  
**FPU:** Integrated  
**CPU(s) enabled:** 12 cores, 2 chips, 6 cores/chip, 2 threads/core  
**CPU(s) orderable:** 1.2 chips  
**Primary Cache:** 32 KB I + 32 KB D on chip per core  
**Secondary Cache:** 256 KB I+D on chip per core  
**L3 Cache:** 12 MB I+D on chip per chip  
**Other Cache:** None  
**Memory:** 96 GB (12 x 8 GB 2Rx4 PC3L-10600R-9, ECC)  
**Disk Subsystem:** 300 GB SAS 10K RPM  
**Other Hardware:** None

---

[Standard Performance Evaluation Corporation](http://www.spec.org)
## SPEC CINT2006 Result

**Cisco Systems**

Cisco UCS B200 M2 (Intel Xeon X5690, 2.13 GHz)

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>400.perlbench</td>
<td>24</td>
<td>644</td>
<td>364</td>
<td>644</td>
<td>364</td>
<td>24</td>
<td>549</td>
</tr>
<tr>
<td>401.bzip2</td>
<td>24</td>
<td>965</td>
<td>240</td>
<td>241</td>
<td>241</td>
<td>24</td>
<td>927</td>
</tr>
<tr>
<td>403.mcf</td>
<td>24</td>
<td>487</td>
<td>449</td>
<td>488</td>
<td>449</td>
<td>24</td>
<td>487</td>
</tr>
<tr>
<td>429.gobmk</td>
<td>24</td>
<td>626</td>
<td>402</td>
<td>627</td>
<td>402</td>
<td>24</td>
<td>598</td>
</tr>
<tr>
<td>456.hmmer</td>
<td>24</td>
<td>439</td>
<td>510</td>
<td>438</td>
<td>511</td>
<td>24</td>
<td>411</td>
</tr>
<tr>
<td>458.sjeng</td>
<td>24</td>
<td>735</td>
<td>395</td>
<td>734</td>
<td>396</td>
<td>24</td>
<td>685</td>
</tr>
<tr>
<td>462.libquantum</td>
<td>24</td>
<td>182</td>
<td>2730</td>
<td>181</td>
<td>2750</td>
<td>24</td>
<td>182</td>
</tr>
<tr>
<td>464.h264ref</td>
<td>24</td>
<td>971</td>
<td>547</td>
<td>979</td>
<td>543</td>
<td>24</td>
<td>952</td>
</tr>
<tr>
<td>471.omnetpp</td>
<td>24</td>
<td>639</td>
<td>235</td>
<td>639</td>
<td>235</td>
<td>24</td>
<td>625</td>
</tr>
<tr>
<td>473.astar</td>
<td>24</td>
<td>688</td>
<td>245</td>
<td>691</td>
<td>244</td>
<td>24</td>
<td>688</td>
</tr>
<tr>
<td>483.xalancbmk</td>
<td>24</td>
<td>401</td>
<td>413</td>
<td>400</td>
<td>414</td>
<td>24</td>
<td>401</td>
</tr>
</tbody>
</table>

**Results 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

Sysinfo program /opt/cpu2006/config/sysinfo.rev6800
$Rev: 6800 $ $Date:: 2011-10-11 #$ 6f2ebdff5032aaa42e583f96b07f99d3
running on localhost.localdomain Mon Dec 19 14:28:37 2011

This section contains SUT (System Under Test) info as seen by some common utilities. To remove or add to this section, see: http://www.spec.org/cpu2006/Docs/config.html#sysinfo

From /proc/cpuinfo

- model name: Intel(R) Xeon(R) CPU X5690 @ 3.47GHz
- 2 "physical id"s (chips)
- 24 "processors"
- cores, siblings (Caution: counting these is hw and system dependent. The following excerpts from /proc/cpuinfo might not be reliable. Use with caution.)
- cpu cores: 6
- siblings: 12

Continued on next page
Cisco Systems
Cisco UCS B200 M2 (Intel Xeon X5690, 2.13 GHz)

SPECint_rate2006 = 432
SPECint_rate_base2006 = 417

CPU2006 license: 9019
Test sponsor: Cisco Systems
Test date: Jan-2012
Tested by: Cisco Systems
Hardware Availability: May-2011
Software Availability: Oct-2011

Platform Notes (Continued)

physical 0: cores 0 1 2 8 9 10
physical 1: cores 0 1 2 8 9 10
cache size : 12288 KB

From /proc/meminfo
  MemTotal: 99006892 kB
  MemFree: 59019598 kB
  HugePages_Total: 0
  Hugepagesize: 2048 kB

/usr/bin/lsb_release -d
  Red Hat Enterprise Linux Server release 6.1 (Santiago)

From /etc/*release* /etc/*version*
  redhat-release: Red Hat Enterprise Linux Server release 6.1 (Santiago)
  system-release: Red Hat Enterprise Linux Server release 6.1 (Santiago)

uname -a:
  Linux localhost.localdomain 2.6.32-131.0.15.el6.x86_64 #1 SMP Tue May 10
  15:42:40 EDT 2011 x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Dec 19 12:54

SPEC is set to: /opt/cpu2006

<table>
<thead>
<tr>
<th>Filesystem</th>
<th>Type</th>
<th>Size</th>
<th>Used</th>
<th>Avail</th>
<th>Use%</th>
<th>Mounted on</th>
</tr>
</thead>
<tbody>
<tr>
<td>/dev/sda1</td>
<td>ext4</td>
<td>68G</td>
<td>5.4G</td>
<td>59G</td>
<td>9%</td>
<td>/</td>
</tr>
</tbody>
</table>

Additional information from dmidecode:
(End of data from sysinfo program)

General Notes

Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/opt/cpu2006/libs/32:/opt/cpu2006/libs/64"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB
memory using RHEL5.5
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
Filesystem page cache cleared with:
echo 1 > /proc/sys/vm/drop_caches
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>

Base Compiler Invocation

C benchmarks:
  icc  -m32

Continued on next page
Cisco Systems
Cisco UCS B200 M2 (Intel Xeon X5690, 2.13 GHz)

SPECint_rate2006 = 432
SPECint_rate_base2006 = 417

Test date: Jan-2012
Hardware Availability: May-2011
Test sponsor: Cisco Systems
Software Availability: Oct-2011
Tested by: Cisco Systems
CPU2006 license: 9019

Base Compiler Invocation (Continued)
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:
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3
C++ benchmarks:
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3
-Wl,-z,muldefs -L/smartheap -lsmartheap

Base Other Flags
C benchmarks:
403.gcc: -Dalloca=_alloca

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
Cisco UCS B200 M2 (Intel Xeon X5690, 2.13 GHz)

**SPECint_rate2006 = 432**

**SPECint_rate_base2006 = 417**

**CPU2006 license:** 9019  
**Test sponsor:** Cisco Systems  
**Tested by:** Cisco Systems  
**Test date:** Jan-2012  
**Hardware Availability:** May-2011  
**Software Availability:** Oct-2011

### 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: `-xSSE4.2(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: `-xSSE4.2(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: `-xSSE4.2 -ipo -o3 -no-prec-div`
- 429.mcf: `basepeak = yes`
- 445.gobmk: `-xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2) -ansi-alias -opt-mem-layout-trans=3`
- 456.hmmer: `-xSSE4.2 -ipo -o3 -no-prec-div -unroll2 -auto-ilp32`
- 458.sjeng: `-xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -o3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -auto-ilp32`
- 462.libquantum: `basepeak = yes`
- 464.h264ref: `-xSSE4.2(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: `-xSSE4.2(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/smartheap -lsmartheap`
- 473.astar: `basepeak = yes`

Continued on next page
Cisco UCS B200 M2 (Intel Xeon X5690, 2.13 GHz)

**SPECint_rate2006** = 432
**SPECint_rate_base2006** = 417

CPU2006 license: 9019
Test sponsor: Cisco Systems
Tested by: Cisco Systems

Test date: Jan-2012
Hardware Availability: May-2011
Software Availability: Oct-2011

### Peak Optimization Flags (Continued)

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-ic12.1-official-linux64.20111122.html
http://www.spec.org/cpu2006/flags/Cisco-Platform-Settings-V1.2.html

You can also download the XML flags sources by saving the following links:

http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.xml
http://www.spec.org/cpu2006/flags/Cisco-Platform-Settings-V1.2.xml

SPEC and SPECint are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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

Tested with SPEC CPU2006 v1.2.
Originally published on 8 March 2012.