Cisco Systems
Cisco UCS B200 M3 (Intel Xeon E5-2640 v2 @ 2.00 GHz)

| SPECint_rate2006 = 546 |
| SPECint_rate_base2006 = 524 |

CPU2006 license: 9019  
Test sponsor: Cisco Systems  
Tested by: Cisco Systems  
CPU Name: Intel Xeon E5-2640 v2  
Hardware  
CPU Characteristics: Intel Turbo Boost Technology up to 2.50 GHz  
Primary Cache: 32 KB I + 32 KB D on chip per core  
Memory: 128 GB (16 x 8 GB 2Rx4 PC3-14900R-11, ECC)  
Disk Subsystem: 1 X 600 GB 10000 RPM SAS  

Software  
Operating System: Red Hat Enterprise Linux Server release 6.4 (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 = 546
Cisco Systems
Cisco UCS B200 M3 (Intel Xeon E5-2640 v2 @ 2.00 GHz)

CPU2006 license: 9019
Test sponsor: Cisco Systems
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Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
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<th>Seconds</th>
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<th>Seconds</th>
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<td>584</td>
<td>377</td>
<td>585</td>
<td>378</td>
<td>584</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 Settings:
CPU performance set to HPC
Processor C State set to Disabled
Processor C1E set to Disabled
Processor C6 report set to Disabled
Energy Performance Policy set to Performance
Memory RAS configuration Set to Max-Performance
LV DDR Mode set to Performance-mode
DRAM Refresh Rate Set to 1x
Intel HT Technology = Enable
Sysinfo program /opt/cpu2006-1.2/config/sysinfo.rev6818
$Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
running on localhost.localdomain Thu Oct 10 22:31:09 2013

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
Continued on next page
Cisco Systems
Cisco UCS B200 M3 (Intel Xeon E5-2640 v2 @ 2.00 GHz)

<table>
<thead>
<tr>
<th>SPECint_rate2006</th>
<th>546</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECint_rate_base2006</td>
<td>524</td>
</tr>
</tbody>
</table>

CPU2006 license: 9019
Test sponsor: Cisco Systems
Test date: Oct-2013
Hardware Availability: Sep-2013
Tested by: Cisco Systems
Software Availability: Sep-2013

## Platform Notes (Continued)

From /proc/cpuinfo

- model name : Intel(R) Xeon(R) CPU E5-2640 v2 @ 2.00GHz
- 2 "physical id"s (chips)
- 32 "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 : 8
- siblings : 16
- physical 0: cores 0 1 2 3 4 5 6 7
- physical 1: cores 0 1 2 3 4 5 6 7
- cache size : 20480 KB

From /proc/meminfo

- MemTotal: 132087400 kB
- HugePages_Total: 0
- Hugepagesize: 2048 kB

/usr/bin/lsb_release -d
- Red Hat Enterprise Linux Server release 6.4 (Santiago)

From /etc/*release* /etc/*version*
- redhat-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)
- system-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)

uname -a:
- Linux localhost.localdomain 2.6.32-358.el6.x86_64 #1 SMP Tue Jan 29 11:47:41 EST 2013 x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Oct 10 22:28

SPEC is set to: /opt/cpu2006-1.2

<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>550G</td>
<td>37G</td>
<td>486G</td>
<td>7%</td>
<td>/</td>
</tr>
</tbody>
</table>

Additional information from dmidecode:
- BIOS Cisco Systems, Inc. B200M3.2.1.3a.0.082320131800 08/23/2013
- Memory:
  - 16x 0xAD00 HMT31GR7EFR4C-RD 8 GB 1600 MHz 2 rank
  - 8x NO DIMM NO DIMM

(End of data from sysinfo program)

## General Notes

Environment variables set by runspec before the start of the run:
- LD_LIBRARY_PATH = "/opt/cpu2006-1.2/libs/32:/opt/cpu2006-1.2/libs/64:/opt/cpu2006-1.2/sh"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB
Cisco Systems
Cisco UCS B200 M3 (Intel Xeon E5-2640 v2 @ 2.00 GHz)

SPECint_rate2006 = 546
SPECint_rate_base2006 = 524

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

General Notes (Continued)

memory using RedHat EL 6.4
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

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/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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Cisco Systems
Cisco UCS B200 M3 (Intel Xeon E5-2640 v2 @ 2.00 GHz)

spec

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Cisco Systems
Cisco UCS B200 M3 (Intel Xeon E5-2640 v2 @ 2.00 GHz)

SPEC CINT2006 Result

Cisco Systems
Cisco UCS B200 M3 (Intel Xeon E5-2640 v2 @ 2.00 GHz)

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

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

SPECint_rate2006 = 546
SPECint_rate_base2006 = 524

Test date: Oct-2013
Hardware Availability: Sep-2013
Software Availability: Sep-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: -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

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Cisco Systems
Cisco UCS B200 M3 (Intel Xeon E5-2640 v2 @ 2.00 GHz)

SPEC CINT2006 Result

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CPU2006 license: 9019
Test sponsor: Cisco Systems
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Test date: Oct-2013
Hardware Availability: Sep-2013
Software Availability: Sep-2013

Peak Optimization Flags (Continued)

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/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/Cisco-Platform-Settings-V1.2.20130717.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/Cisco-Platform-Settings-V1.2.20130717.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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