Cisco Systems
Cisco UCS B260 M4 (Intel Xeon E7-4850 v2, 2.30 GHz)

SPEC® CINT2006 Result

SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the submitter has notified SPEC that the system was run with a BIOS which included a version of the Intel MRC (Memory Reference Code) that is not supported by Cisco or Intel.

Non-Compliant
**SPEC CINT2006 Result**

**Cisco Systems**

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<table>
<thead>
<tr>
<th>CPU2006 license:</th>
<th>9019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test sponsor:</td>
<td>Cisco Systems</td>
</tr>
<tr>
<td>Tested by:</td>
<td>Cisco Systems</td>
</tr>
</tbody>
</table>

**SPECint2006 = NC**  
**SPECint_base2006 = NC**

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**Results Table**

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
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<tbody>
<tr>
<td>400.perlbench</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
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<tr>
<td>401.bzip2</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
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<tr>
<td>403.gcc</td>
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<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
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<tr>
<td>429.mcf</td>
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<td>NC</td>
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<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
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<tr>
<td>445.gobmk</td>
<td>NC</td>
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<td>NC</td>
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<td>NC</td>
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<tr>
<td>456.hmmer</td>
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<td>NC</td>
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<tr>
<td>462.libquantum</td>
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<td>NC</td>
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<td>NC</td>
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<tr>
<td>464.h264ref</td>
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<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
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<tr>
<td>471.omnetpp</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
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<tr>
<td>473.astar</td>
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<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
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<tr>
<td>483.xalancbmk</td>
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<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
</tr>
</tbody>
</table>

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

**Operating System Notes**

Stack size set to unlimited using "ulimit -s unlimited"

**Platform Notes**

Intel HT technology = Enabled  
CPU performance set to HPC  
Power Technology set to Custom  
CPU Power State C6 set to Disabled  
CPU Power State C1 Enhanced set to Disabled  
Memory RAS configuration set to Maximum Performance  
DRAM Clock Throttling Set to Performance  

Sysinfo program /opt/cpu2006-1.4/config/sysinfo.rev6818  
$Rev: 6818 $ Date:: 2012-07-17 $  
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Platform Notes (Continued)

running on specompccpu Sun Apr 20 11:16:24 2014

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 E7-4850 v2 @ 2.30GHz
  2 "physical id"s (chips)
  48 "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 : 12
    siblings : 24
    physical 0: cores 0 1 2 3 4 5 8 9 10 11 12 13
    physical 1: cores 0 2 3 4 5 8 9 10 11 12 13
    cache size : 24576 KB

From /proc/meminfo
  MemTotal: 264103304 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 specompcpu 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 Apr 20 11:12

SPEC is set to: /opt/cpu2006-1.4

Filesystem    Type       Size  Used  Avail  Use% Mounted on
/dev/sda1     ext4       275G   72G  193G  28%  /

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CPU2006 license: 9019
Test sponsor: Cisco Systems
Tested by: Cisco Systems
Test date: Apr-2014
Hardware Availability: May-2014
Software Availability: Sep-2013

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Platform Notes (Continued)

Additional information from dmidecode:
BIOS Cisco Systems, Inc. EXM4-1.2.2.1.1.1.EP9201-2034 01/29/2014
Memory:
32x 8 GB
32x 0xCE00 M393B1K70QB0-YK0 8 GB 1333 MHz 2 rank
16x NO DIMM NO DIMM

(End of data from sysinfo program)

General Notes

Environment variables set by runspec before the start of the run:
KMP_AFFINITY = "granularity=fine,compact,1,0"
LD_LIBRARY_PATH = "/opt/cpu2006-1.4/libs/32:/opt/cpu2006-1.4/libs/64:/opt/cpu2006-1.4/sh"
OMP_NUM_THREADS = "48"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RedHat EL 6.
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
runspec command --poke through numactl i.e.:
numactl --interleave=all runspec <etc>

Base Compiler Invocation

icc -m64
C++ benchmarks:
icp++ -m64

Base Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64

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Base Portability Flags (Continued)

401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
445.gobmk: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
464.h264ref: -DSPEC_CPU_LP64
471.omnetpp: -DSPEC_CPU_LP64
473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:
-xSSE4.2 -ipo -O3 -prec-div -parallel -opt-prefetch -auto-p32

C++ benchmarks:
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
-Wl,-z,muldefs -L/sh -lsmartheap64

Base Other Flags

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):
icc -m64

400.perlbench: icc -m32

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Peak Compiler Invocation (Continued)

445.gobmk: icc -m32
464.h264ref: icc -m32
C++ benchmarks (except as noted below):
icpc -m32
473.astar: icpc -m64

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LINUX-
401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

400.perlbench: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-03(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-opt-prefetch -ansi-alias
401.bzip2: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-03(pass 2) -no-prec-div -prof-use(pass 2) -auto-ilp32
-opt-prefetch -ansi-alias
403.gcc: -xSSE4.2 -ipo -03 -no-prec-div -inline-calloc
-opt-malloc-options=3 -auto-ilp32

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Peak Optimization Flags (Continued)

429.mcf: basepeak = yes
445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2) -ansi-alias
456.hmmer: -xSSE4.2 -ipo -03 -no-prec-div -unroll2 -auto-ilp32 -ansi-alias
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
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) -unroll4 -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) -opt-prefetch -region-strategy=block -ansi-alias
473.astar: basepeak = yes
493.lhs: -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias

Peak Other Flags

C benchmarks:
403.gcc: -Dalloca=_alloca
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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-V1.2.20140311.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-V1.2.20140311.xml

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

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