Cisco Systems
Cisco UCS B260 M4 (Intel Xeon E7-4830 v2, 2.20 GHz)

SPECfp® 2006 = NC
SPECfp_base2006 = NC

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

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.

410.bwaves
416.gamess
433.milc
434.zeusmp
435.gromacs
436.cactusADM
437.leslie3d
444.namd
447.dealII
450.soplex
453.povray
454.calculix
459.GemsFDTD
465.tonto
470.lbm
481.wrf
482.sphinx3

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**Results Table**

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Base Seconds</th>
<th>Base Ratio</th>
<th>Peak Seconds</th>
<th>Peak Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>410.bwaves</td>
<td>NC</td>
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</tr>
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<td>482.sphinx3</td>
<td>NC</td>
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<td>NC</td>
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</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

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Platform Notes (Continued)

SPEC is set to: /opt/cpu2006-1.4
Filesystem Type Size Used Avail Use% Mounted on
/dev/sda1 ext4 275G 50G 212G 19% /

Additional information from dmidecode:
BIOS Cisco Systems, Inc. EXM4_1.2.1.15.0 2020012013 02/20/2014
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 = "40"

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/redhat_transparent_hugepage/enabled
runspec command invoked through numactl i.e.:
umactl --interleave=all runspec <etc>

Base Compiler Invocation

C benchmarks:
   icc -m64

C++ benchmarks:
   icpc -m64

Fortran benchmarks:
   ifort -m64
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Base Compiler Invocation (Continued)
Benchmarks using both Fortran and C:
icc   -m64 ifort -m64

Base Portability Flags
410.bwaves: -DSPEC_CPU_LP64
416.gamess: -DSPEC_CPU_LP64
433.milc: -DSPEC_CPU_LP64
434.zeusmp: -DSPEC_CPU_LP64
435.gromacs: -DSPEC_CPU_LP64 -nofor_main
436.cactusADM: -DSPEC_CPU_LP64 -nofor_main
437.leslie3d: -DSPEC_CPU_LP64
444.namd: -DSPEC_CPU_LP64
447.dealII: -DSPEC_CPU_LP64
450.soplex: -DSPEC_CPU_LP64
453.povray: -DSPEC_CPU_LP64
454.calculix: -DSPEC_CPU_LP64 -nofor_main
459.GemsFDTD: -DSPEC_CPU_LP64
465.tonto: -DSPEC_CPU_LP64
470.lbm: -DSPEC_CPU_LP64
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
482.sphinx3: -DSPEC_CPU_LP64

Base Optimization Flags
C benchmarks:
-xAVX -ipo -03 -no-prec-div -parallel -opt-prefetch -ansi-alias

C++ benchmarks:
-xAVX -ipo -03 -no-prec-div -opt-prefetch -ansi-alias

Fortran benchmarks:
-xAVX -ipo -03 -no-prec-div -parallel -opt-prefetch

Benchmarks using both Fortran and C:
-xAVX -ipo -03 -no-prec-div -parallel -opt-prefetch -ansi-alias
**Cisco Systems**

Cisco UCS B260 M4 (Intel Xeon E7-4830 v2, 2.20 GHz)

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**Peak Compiler Invocation**

- C benchmarks:
  - `icc -m64`
- C++ benchmarks:
  - `icpc -m64`
- Fortran benchmarks:
  - `ifort -m64`
- Benchmarks using both Fortran and C:
  - `icc -m64 ifort -m64`

**Peak Portability Flags**

Same as Base Portability Flags

**Peak Optimization Flags**

- C benchmarks:
  - `433.milc: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -03(pass 2) -prof-div(pass 2) -prof-use(pass 2) -auto-ilp32 -ansi-alias`
  - `470.nmn: basepeak = yes`
  - `472.sphinx3: -xAVX -ipo -03 -no-prec-div -unroll2 -ansi-alias -parallel`

- C++ benchmarks:
  - `444.namd: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -03(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -fno-alias -auto-ilp32`
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Peak Optimization Flags (Continued)

447.dealII: basepeak = yes
450.soplex: basepeak = yes
453.povray: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -ansi-alias

Fortran benchmarks:

410.bwaves: basepeak = yes
416.gamess: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -unroll2
-inline-level=0 -opt-prefetch -parallel

434.zeusmp: basepeak = yes
437.leslie3d: basepeak = yes

459.GemsFDTD: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -unroll2
-inline-level=0 -opt-prefetch -parallel

465.tonto: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -inline-calloc
-alloc-options=3 -auto -unroll4

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes
436.cactusADM: basepeak = yes

454.calculix: -xAVX -ipo -O3 -no-prec-div -auto-ilp32 -ansi-alias
481.wrf: basepeak = yes
---

**SPEC CFP2006 Result**

**Cisco Systems**  
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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/Cisco-Platform-Settings-V1.2.20140311.xml

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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 6 May 2014.

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Non-Compliant