Cisco Systems
Cisco UCS B200 M5 (Intel Xeon Gold 6138, 2.00GHz)

SPECfp®2006 = Not Run
SPECfp_base2006 = 139

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

Hardware

<table>
<thead>
<tr>
<th>Test</th>
<th>Name</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>410.bwaves</td>
<td>48.2</td>
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<tr>
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<td>416.gamess</td>
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<td></td>
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<td></td>
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<tr>
<td></td>
<td>436.cactusADM</td>
<td>1350</td>
</tr>
<tr>
<td></td>
<td>437.leslie3d</td>
<td>445</td>
</tr>
<tr>
<td></td>
<td>444.namd</td>
<td>35.7</td>
</tr>
<tr>
<td></td>
<td>447.dealII</td>
<td>73.0</td>
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<tr>
<td></td>
<td>450.soplex</td>
<td>53.2</td>
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<tr>
<td></td>
<td>453.povray</td>
<td>69.5</td>
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<td></td>
<td>454.calculix</td>
<td>71.5</td>
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<tr>
<td></td>
<td>459.GemsFDTD</td>
<td>275</td>
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<tr>
<td></td>
<td>465.tonto</td>
<td>44.9</td>
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<tr>
<td></td>
<td>470.lbm</td>
<td>134</td>
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<tr>
<td></td>
<td>481.wrf</td>
<td>62.3</td>
</tr>
<tr>
<td></td>
<td>482.sphinx3</td>
<td></td>
</tr>
</tbody>
</table>

Software

<table>
<thead>
<tr>
<th>Operating System:</th>
<th>SUSE Linux Enterprise Server 12 SP2 (x86_64) 4.4.21-69-default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compiler:</td>
<td>C/C++: Version 17.0.3.191 of Intel C/C++ Compiler for Linux; Fortran: Version 17.0.3.191 of Intel Fortran Compiler for Linux</td>
</tr>
<tr>
<td>Auto Parallel:</td>
<td>Yes</td>
</tr>
<tr>
<td>File System:</td>
<td>xfs</td>
</tr>
<tr>
<td>System State:</td>
<td>Run level 3 (multi-user)</td>
</tr>
</tbody>
</table>

- Continued on next page
## SPEC CFP2006 Result

### Cisco Systems

Cisco UCS B200 M5 (Intel Xeon Gold 6138, 2.00GHz)

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<th>CPU2006 license: 9019</th>
<th>SPECfp2006 =</th>
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<tr>
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<td></td>
</tr>
<tr>
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<td>Software Availability: Apr-2017</td>
<td></td>
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<td>Tested by: Cisco Systems</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

L3 Cache: 27.5 MB I+D on chip per chip
Other Cache: None
Memory: 384 GB (24 x 16 GB 2Rx4 PC4-2666V-R)
Disk Subsystem: 1 x 800 GB SAS HDD, 10K RPM
Other Hardware: None
Base Pointers: 64-bit
Peak Pointers: Not Applicable
Other Software: None

### Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Base</th>
<th>Peak</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Seconds</td>
<td>Ratio</td>
</tr>
<tr>
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<td>1350</td>
</tr>
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<td>437.leslie3d</td>
<td>21.1</td>
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<td>224</td>
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<td>115</td>
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<td>278</td>
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<td>465.tonto</td>
<td>217</td>
<td>45.3</td>
</tr>
<tr>
<td>470.lbm</td>
<td>8.94</td>
<td>1540</td>
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<tr>
<td>481.wrf</td>
<td>83.0</td>
<td>135</td>
</tr>
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<td>482.sphinx3</td>
<td>313</td>
<td>62.3</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

BIOS Settings:
- Intel HyperThreading Technology set to Disabled
- CPU performance set to Enterprise
- Power Performance Tuning set to OS
- SNC set to Disabled
- IMC Interleaving set to Auto
- Patrol Scrub set to Disabled

Sysinfo program /home/cpu2006-1.2/config/sysinfo.rev6993
Revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f98696cbe290c1)
running on linux-uezu Sun Jan 3 04:53:57 2010

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Cisco Systems
Cisco UCS B200 M5 (Intel Xeon Gold 6138, 2.00GHz)

SPECfp2006 = Not Run
SPECfp_base2006 = 139

CPU2006 license: 9019
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Platform Notes (Continued)

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) Gold 6138 CPU @ 2.00GHz
  2 "physical id"s (chips)
  40 "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 : 20
siblings : 20
physical 0: cores 0 1 2 3 4 8 9 10 11 12 16 17 18 19 20 24 25 26 27 28
physical 1: cores 0 1 2 3 4 8 9 10 11 12 16 17 18 19 20 24 25 26 27 28
cache size : 28160 KB

From /proc/meminfo
MemTotal:       394832584 kB
HugePages_Total:       0
Hugepagesize:       2048 kB

From /etc/*release* /etc/*version*
SuSE-release:
  SUSE Linux Enterprise Server 12 (x86_64)
  VERSION = 12
  PATCHLEVEL = 2
  # This file is deprecated and will be removed in a future service pack or release.
  # Please check /etc/os-release for details about this release.
  os-release:
    NAME="SLES"
    VERSION="12-SP2"
    VERSION_ID="12.2"
    PRETTY_NAME="SUSE Linux Enterprise Server 12 SP2"
    ID="sles"
    ANSI_COLOR="0;32"
    CPE_NAME="cpe:/o:suse:sles:12:sp2"

uname -a:
(9464f67) x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Jan 3 04:51

SPEC is set to: /home/cpu2006-1.2
Filesystem Type Size Used Avail Use% Mounted on
/dev/sda1 xfs 894G 38G 857G 5% /
Additional information from dmidecode:

Warning: Use caution when you interpret this section. The 'dmidecode' program...
## SPEC CFP2006 Result

**Cisco Systems**

Cisco UCS B200 M5 (Intel Xeon Gold 6138, 2.00GHz)  

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### Platform Notes (Continued)

reads system data which is "intended to allow hardware to be accurately determined", but the intent may not be met, as there are frequent changes to hardware, firmware, and the "DMTF SMI BIOS" standard.

**BIOS** Cisco Systems, Inc. B200M5.3.2.1d.5.0727171353 07/27/2017  
Memory:  
24x 0xCE00 M393A2G40EB2-CTD 16 GB 2 rank 2666 MHz  
(End of data from sysinfo program)

### General Notes

Environment variables set by runspec before the start of the run:  
- **KMP_AFFINITY** = "granularity=fine,compact"  
- **LD_LIBRARY_PATH** = "/home/cpu2006-1.2/lib/ia32:/home/cpu2006-1.2/lib/intel64:/home/cpu2006-1.2/sh10.2"  
- **OMP_NUM_THREADS** = "40"

Binaries compiled on a system with 1x Intel Core i7-4790 CPU + 32GB RAM memory using Redhat Enterprise Linux 7.2  
Transparent Huge Pages enabled with:  
echo always > /sys/kernel/mm/transparent_hugepage/enabled

### Base Compiler Invocation

**C benchmarks:**  
- icc -m64

**C++ benchmarks:**  
- icpc -m64

**Fortran benchmarks:**  
- ifort -m64

**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 -nofor_main
- 435.gromacs: --DSPEC_CPU_LP64 -nofor_main
- 436.cactusADM: --DSPEC_CPU_LP64 -nofor_main
- 437.leslie3d: --DSPEC_CPU_LP64
- 444.namd: --DSPEC_CPU_LP64

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Cisco Systems
Cisco UCS B200 M5 (Intel Xeon Gold 6138, 2.00GHz)

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CPU2006 license: 9019
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Test date: Jan-2010
Hardware Availability: Aug-2017
Software Availability: Apr-2017

### Base Portability Flags (Continued)

- 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:**
-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -qopt-prefetch

**C++ benchmarks:**
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch

**Fortran benchmarks:**
-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -qopt-prefetch

**Benchmarks using both Fortran and C:**
-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -qopt-prefetch

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic17.0-official-linux64-revF.html
http://www.spec.org/cpu2006/flags/Cisco-Platform-Settings-V1.2-revH.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic17.0-official-linux64-revF.xml
http://www.spec.org/cpu2006/flags/Cisco-Platform-Settings-V1.2-revH.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.
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