# SPEC® CFP2006 Result

## Cisco Systems

Cisco UCS C220 M3 (Intel Xeon E5-2690, 2.90 GHz)

<table>
<thead>
<tr>
<th>SPECfp®2006</th>
<th>Not Run</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECfp_base2006</td>
<td>89.9</td>
</tr>
</tbody>
</table>

### Hardware

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Name</td>
<td>Intel Xeon E5-2690</td>
</tr>
<tr>
<td>CPU Characteristics</td>
<td>Intel Turbo Boost Technology up to 3.80 GHz</td>
</tr>
<tr>
<td>CPU MHz</td>
<td>2900</td>
</tr>
<tr>
<td>FPU</td>
<td>Integrated</td>
</tr>
<tr>
<td>CPU(s) enabled</td>
<td>16 cores, 2 chips, 8 cores/chip</td>
</tr>
<tr>
<td>CPU(s) orderable</td>
<td>1,2 chips</td>
</tr>
<tr>
<td>Primary Cache</td>
<td>32 KB I + 32 KB D on chip per core</td>
</tr>
<tr>
<td>Secondary Cache</td>
<td>256 KB I+D on chip per core</td>
</tr>
</tbody>
</table>

### Software

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating System</td>
<td>Red Hat Enterprise Linux Server release 6.2 (Santiago)</td>
</tr>
<tr>
<td>Compiler</td>
<td>C/C++: Version 12.1.3.293 of Intel C++ Studio XE for Linux; Fortran: Version 12.1.3.293 of Intel Fortran Studio XE for Linux</td>
</tr>
<tr>
<td>Auto Parallel</td>
<td>Yes</td>
</tr>
<tr>
<td>File System</td>
<td>ext4</td>
</tr>
</tbody>
</table>

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 teste
Cisco Systems

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**SPECfp2006 = Not Run**

**SPECfp_base2006 = 89.9**

**CPU2006 license:** 9019  
**Test date:** Mar-2012  
**Test sponsor:** Cisco Systems  
**Hardware Availability:** Apr-2012  
**Tested by:** Cisco Systems  
**Software Availability:** Dec-2011  
**System State:** Run level 3 (multi-user)  
**Base Pointers:** 64-bit  
**Peak Pointers:** Not Applicable  
**Other Software:** None

<table>
<thead>
<tr>
<th>L3 Cache:</th>
<th>Other Cache:</th>
<th>Memory:</th>
<th>Disk Subsystem:</th>
<th>Other Hardware:</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 MB I+D on chip per chip</td>
<td>None</td>
<td>128 GB (16 x 8 GB 2Rx4 PC3-12800R-11, ECC)</td>
<td>100 GB SSD, SATA Gen2, 3Gb/s</td>
<td>None</td>
</tr>
</tbody>
</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>
</tr>
</thead>
<tbody>
<tr>
<td>bwaves</td>
<td>38.9</td>
<td>349</td>
<td>39.7</td>
<td>342</td>
<td>39.8</td>
<td>341</td>
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<tr>
<td>gamess</td>
<td>583</td>
<td>33.6</td>
<td>583</td>
<td>33.6</td>
<td>582</td>
<td>33.7</td>
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<tr>
<td>milc</td>
<td>129</td>
<td>70.9</td>
<td>129</td>
<td>71.0</td>
<td>130</td>
<td>70.7</td>
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<tr>
<td>zeusmp</td>
<td>55.8</td>
<td>163</td>
<td>55.6</td>
<td>164</td>
<td>56.4</td>
<td>161</td>
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<tr>
<td>gromacs</td>
<td>173</td>
<td>41.3</td>
<td>173</td>
<td>41.3</td>
<td>173</td>
<td>41.3</td>
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<tr>
<td>cactusADM</td>
<td>23.4</td>
<td>510</td>
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<td>510</td>
<td>23.8</td>
<td>501</td>
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<tr>
<td>leslie3d</td>
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<td>219</td>
<td>43.7</td>
<td>215</td>
<td>41.9</td>
<td>224</td>
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<tr>
<td>namd</td>
<td>310</td>
<td>25.9</td>
<td>310</td>
<td>25.9</td>
<td>310</td>
<td>25.9</td>
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<tr>
<td>dealII</td>
<td>182</td>
<td>62.8</td>
<td>183</td>
<td>62.6</td>
<td>183</td>
<td>62.6</td>
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<tr>
<td>soplex</td>
<td>175</td>
<td>47.7</td>
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<td>47.8</td>
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<tr>
<td>povray</td>
<td>110</td>
<td>48.3</td>
<td>109</td>
<td>48.6</td>
<td>111</td>
<td>48.1</td>
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<td>calculix</td>
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<td>42.4</td>
<td>193</td>
<td>42.6</td>
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<td>42.5</td>
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<tr>
<td>GemsFDTD</td>
<td>70.3</td>
<td>151</td>
<td>71.7</td>
<td>148</td>
<td>70.7</td>
<td>150</td>
</tr>
<tr>
<td>tonto</td>
<td>240</td>
<td>41.0</td>
<td>240</td>
<td>41.1</td>
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<td>41.1</td>
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<tr>
<td>lbm</td>
<td>30.3</td>
<td>454</td>
<td>33.0</td>
<td>417</td>
<td>32.2</td>
<td>427</td>
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<tr>
<td>wrf</td>
<td>138</td>
<td>81.0</td>
<td>138</td>
<td>80.7</td>
<td>141</td>
<td>79.4</td>
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<tr>
<td>sphinx3</td>
<td>249</td>
<td>78.3</td>
<td>250</td>
<td>77.9</td>
<td>248</td>
<td>78.6</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 Configuration:
- Intel(R) Hyper-Threading Technology set to Disabled
- Processor Power State C6 set to Disabled
- Processor Power State C1 Enhanced set to Disabled
- Power Technology set to Custom
- Energy Performance set to Performance
- DRAM Clock Throttling set to Performance

Sysinfo program /opt/cpu2006-1.2/config/sysinfo.rev6800
$Rev: 6800 $ $Date:: 2011-10-11 #$ 6f2ebdff5032aaa42e583f96b07f99d3
running on localhost.localdomain Fri Mar 2 13:02:45 2012

Continued on next page
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CPU2006 license: 9019
Test sponsor: Cisco Systems
Test date: Mar-2012
Tested by: Cisco Systems
Hardware Availability: Apr-2012
Software Availability: Dec-2011

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) CPU E5-2690 0 @ 2.90GHz
  2 "physical id"s (chips)
  16 "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 : 8
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:       132135396 kB
HugePages_Total:       0
Hugepagesize:       2048 kB

/usr/bin/lsb_release -d
Red Hat Enterprise Linux Server release 6.2 (Santiago)

From /etc/*release* /etc/*version*
redhat-release: Red Hat Enterprise Linux Server release 6.2 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.2 (Santiago)

uname -a:
Linux localhost.localdomain 2.6.32-220.el6.x86_64 #1 SMP Wed Nov 9 08:03:13 EST 2011 x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Mar 2 10:58

SPEC is set to: /opt/cpu2006-1.2
Filesystem    Type    Size  Used Avail Use% Mounted on
/dev/sda2      ext4     91G  7.5G  79G   9% /

Additional information from dmidecode:
Memory:
  16x 0xCE00 M393B1K70DH0-YK0 8 GB 1600 MHz 1 rank

(End of data from sysinfo program)
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General Notes

Environment variables set by runspec before the start of the run:
KMP_AFFINITY = "granularity=fine,scatter"
LD_LIBRARY_PATH = "/opt/cpu2006-1.2/libs/32:/opt/cpu2006-1.2/libs/64"
OMP_NUM_THREADS = "16"

Binaries compiled on a system with 2 x Xeon X5650 CPU + 16GB memory
running RHEL 6.2
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

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.reusmp: -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 -nofor_main
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
## SPEC CFP2006 Result

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**Base Optimization Flags**

C benchmarks:
- `xAVX`  
- `ipo`  
- `-O3`  
- `-no-prec-div`  
- `-static`  
- `-parallel`  
- `-opt-prefetch`  
- `-ansi-alias`

C++ benchmarks:
- `xAVX`  
- `ipo`  
- `-O3`  
- `-no-prec-div`  
- `-static`  
- `-opt-prefetch`  
- `-ansi-alias`

Fortran benchmarks:
- `xAVX`  
- `ipo`  
- `-O3`  
- `-no-prec-div`  
- `-static`  
- `-parallel`  
- `-opt-prefetch`

Benchmarks using both Fortran and C:
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- `-O3`  
- `-no-prec-div`  
- `-static`  
- `-parallel`  
- `-opt-prefetch`  
- `-ansi-alias`

The flags files that were used to format this result can be browsed at:

- [http://www.spec.org/cpu2006/flags/Cisco-Platform-Settings-V1.2.20130607.html](http://www.spec.org/cpu2006/flags/Cisco-Platform-Settings-V1.2.20130607.html)

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

- [http://www.spec.org/cpu2006/flags/Cisco-Platform-Settings-V1.2.20130607.xml](http://www.spec.org/cpu2006/flags/Cisco-Platform-Settings-V1.2.20130607.xml)