**Cisco Systems**  
Cisco UCS C240 M4 (Intel Xeon E5-2680 v3 @ 2.50GHz)

<table>
<thead>
<tr>
<th>SPECint®2006</th>
<th>Not Run</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECint_base2006</td>
<td>60.3</td>
</tr>
</tbody>
</table>

**CPU2006 license:** 9019  
**Test date:** Dec-2014

**Test sponsor:** Cisco Systems  
**Hardware Availability:** Sep-2014

**Tested by:** Cisco Systems  
**Software Availability:** Jul-2014

**CPU Name:** Intel Xeon E5-2680 v3  
**Operating System:** Red Hat Enterprise Linux Server release 7.0 (Maipo) 3.10.0-123.el7.x86_64

**CPU Characteristics:** Intel Turbo Boost Technology up to 3.30 GHz  
**Compiler:** C/C++: Version 15.0.0.090 of Intel C++ Studio XE for Linux

**CPU MHz:** 2500  
**Auto Parallel:** Yes

**FPU:** Integrated  
**File System:** xfs

**CPU(s) enabled:** 24 cores, 2 chips, 12 cores/chip  
**System State:** Run level 3 (multi-user)

**CPU(s) orderable:** 1.2 chips  
**Base Pointers:** 32/64-bit

**Primary Cache:** 32 KB I + 32 KB D on chip per core  
**Peak Pointers:** 32/64-bit

**Secondary Cache:** 256 KB I+D on chip per core  
**Other Software:** Microquill SmartHeap V10.0

**L3 Cache:** 30 MB I+D on chip per chip

**Other Cache:** None  

<table>
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<tr>
<th>Software</th>
<th>Hardware</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel Turbo Boost Technology up to 3.30 GHz</td>
<td>CPU Name: Intel Xeon E5-2680 v3</td>
</tr>
<tr>
<td>Run level 3 (multi-user)</td>
<td>Operating System: Red Hat Enterprise Linux Server release 7.0 (Maipo) 3.10.0-123.el7.x86_64</td>
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<tr>
<td>C/C++: Version 15.0.0.090 of Intel C++ Studio XE for Linux</td>
<td>Compiler: C/C++: Version 15.0.0.090 of Intel C++ Studio XE for Linux</td>
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<tr>
<td>Yes</td>
<td>Auto Parallel: Yes</td>
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<td>xfs</td>
<td>File System: xfs</td>
</tr>
<tr>
<td>32/64-bit</td>
<td>System State: Run level 3 (multi-user)</td>
</tr>
</tbody>
</table>

| 32/64-bit | Base Pointers: 32/64-bit |
| 32/64-bit | Peak Pointers: 32/64-bit |
| Microquill SmartHeap V10.0 | Other Software: Microquill SmartHeap V10.0 |

**Memory:** 256 GB (16 x 16 GB 2Rx4 PC4-2133P-R)  
**Disk Subsystem:** 1 x 300GB SAS, 15K RPM

**Other Hardware:** None
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SPECint_base2006 = 60.3

CPU2006 license: 9019
Test sponsor: Cisco Systems
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Results Table

<table>
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<tr>
<th>Benchmark</th>
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<td>62.3</td>
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</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"
System Tuning Profile set to throughput-performance using tuned-adm with:
tuned-adm profile throughput-performance

Platform Notes

CPU performance set to HPC
Power Technology set to Custom
Processor Power State C6 set to Disabled
Energy Performance BIAS setting set to Performance
Memory RAS configuration set to Maximum Performance
Snoop Mode set to Early Snoop
Intel Hyper-Threading Technology option set to Disabled
Sysinfo program /opt/cpu2006-1.2/config/sysinfo.rev6914
$Rev: 6914 $ $Date:: 2014-06-25 #$ e3fbb8667b5a285932ceab81e28219e1

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 E5-2680 v3 @ 2.50GHz
  2 "physical id"s (chips)
  24 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The following excerpts from /proc/cpuinfo might not be reliable. Use with

Continued on next page
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CPU2006 license: 9019
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Platform Notes (Continued)

cautions.)

    cpu cores : 12
    siblings : 12
    physical 0: cores 0 1 2 3 4 5 8 9 10 11 12 13
    physical 1: cores 0 1 2 3 4 5 8 9 10 11 12 13
    cache size : 30720 KB

From /proc/meminfo
    MemTotal:       263706176 kB
    HugePages_Total:       0
    Hugepagesize:       2048 kB

From /etc/*release* /etc/*version*
    os-release:
        NAME="Red Hat Enterprise Linux Server"
        VERSION="7.0 (Maipo)"
        ID="rhel"
        ID_LIKE="fedora"
        VERSION_ID="7.0"
        PRETTY_NAME="Red Hat Enterprise Linux Server 7.0 (Maipo)"
        ANSI_COLOR="0;31"
        CPE_NAME="cpe:/o:redhat:enterprise_linux:7.0:GA:server"
    redhat-release: Red Hat Enterprise Linux Server release 7.0 (Maipo)
    system-release: Red Hat Enterprise Linux Server release 7.0 (Maipo)
    system-release-cpe: cpe:/o:redhat:enterprise_linux:7.0:ga:server

uname -a:
    Linux localhost.localdomain 3.10.0-123.el7.x86_64 #1 SMP Mon May 5 11:16:57 EDT 2014 x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Dec 20 19:56

SPEC is set to:/opt/cpu2006-1.2

Filesystem Type Size Used Avail Use% Mounted on
/dev/sda1 xfs 350G 23G 328G 7% /

Additional information from dmidecode:

Warning: Use caution when you interpret this section. The 'dmidecode' program 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 SMIOS" standard.

BIOS Cisco Systems, Inc. C240M4.2.0.3c.0.091920142008 09/19/2014
Memory:
    16x 0xCE00 M393A2G40DB0-CPB 16 GB 2 rank 2133 MHz
    8x NO DIMM NO DIMM

(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,compact,1,0"
LD_LIBRARY_PATH = "/opt/cpu2006-1.2/libs/32:/opt/cpu2006-1.2/libs/64:/opt/cpu2006-1.2/sh"
OMP_NUM_THREADS = "24"

Binaries compiled on a system with 1x Core i5-4670K CPU + 16GB memory using RedHat EL 7.0
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/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 -m64

C++ benchmarks:
  icpc -m64

Base Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
  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:
  -xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32

C++ benchmarks:
  -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
  -Wl,-z,muldefs -L/sh -lsmartheap64
## Cisco Systems

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**SPECint2006** = Not Run

**SPECint_base2006** = 60.3

### Base 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-ic15.0-official-linux64.html](http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.html)

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

- [http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.xml](http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.xml)

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