Cisco Systems
Cisco UCS C460 M2 (Intel Xeon E7-4807, 1.87 GHz)

**SPECint**\(^{*}\)\_rate\_2006 = 536

**SPECint\_rate\_base\_2006 = 507**

**CPU2006 license:** 9019

**Test sponsor:** Cisco Systems

**Tested by:** Cisco Systems

**Hardware**

- **CPU Name:** Intel Xeon E7-4807
- **CPU Characteristics:**
  - CPU MHz: 1867
  - FPU: Integrated
- **CPU(s) enabled:** 24 cores, 4 chips, 6 cores/chip, 2 threads/core
- **CPU(s) orderable:** 1,2,3,4 chips
- **Primary Cache:** 32 KB I + 32 KB D on chip per core
- **Secondary Cache:** 256 KB I+D on chip per core
- **L3 Cache:** 18 MB I+D on chip per chip
- **Other Cache:** None
- **Memory:** 1 TB (64 x 16 GB 4Rx4 PC3-8500R-9, ECC, running at 800 MHz)
- **Disk Subsystem:** 600 GB SAS 10K RPM
- **Other Hardware:** None

**Software**

- **Operating System:** Red Hat Enterprise Linux Server release 6.1 (Santiago)
  - 2.6.32-131.0.15.el6.x86_64
- **Compiler:** C/C++: Version 12.1.0.225 of Intel C++ Studio XE for Linux
- **Auto Parallel:** No
- **File System:** ext4
- **System State:** Run level 3 (multi-user)
- **Base Pointers:** 32-bit
- **Peak Pointers:** 32/64-bit
- **Other Software:** Microquill SmartHeap V9.01

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**About SPECint:** SPECint\_rate\_base\_2006 is the revised SPECint base rate for the year 2006, measured in integer instructions per second (IIPS). The SPECint\_rate\_2006 is the measured SPECint rate in 2006, normalized to a base rate. The SPECint\_rate\_2006 is a measure of the performance of a system in executing a set of integer benchmarks.

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**Cisco Systems**

**Test date:** Jan-2012

**Hardware Availability:** May-2011

**Test sponsor:** Cisco Systems

**Software Availability:** Oct-2011

**Tested by:** Cisco Systems
# SPEC CINT2006 Result

## Cisco Systems

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<table>
<thead>
<tr>
<th>SPECint_rate2006</th>
<th>536</th>
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</thead>
<tbody>
<tr>
<td>SPECint_rate_base2006</td>
<td>507</td>
</tr>
</tbody>
</table>

### CPU2006 license: 9019

Test sponsor: Cisco Systems  
Tested by: Cisco Systems  
Hardware Availability: May-2011  
Software Availability: Oct-2011

#### Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
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<th>Seconds</th>
<th>Ratio</th>
<th>Base Seconds</th>
<th>Ratio</th>
<th>Results</th>
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<th>Peak</th>
<th>Seconds</th>
<th>Ratio</th>
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<tbody>
<tr>
<td>400.perlbench</td>
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<td>483.xalancbmk</td>
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<td>603</td>
<td>549</td>
<td>604</td>
<td>548</td>
</tr>
</tbody>
</table>

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

## Submit Notes

The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl commands to bind each copy to a specific processor. For details, please see the config file.

## Operating System Notes

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

## Platform Notes

Sysinfo program /opt/cpu2006/config/sysinfo.revl6800  
$Rev: 6800 $ $Date:: 2011-10-11 #$ 6fb2bdf5f5032aaa42e583f96b7f99d3  
running on localhost.localdomain Sun Dec 23 21:17:41 2012

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- 4807 @ 1.87GHz  
4 "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 : 6  
siblings : 12

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Platform Notes (Continued)

physical 0: cores 0 8 9 16 17 25
physical 1: cores 0 1 2 18 24 25
physical 2: cores 0 1 2 18 24 25
physical 3: cores 0 1 2 18 24 25
cache size : 18432 KB

From /proc/meminfo
MemTotal: 1058713416 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

/usr/bin/lsb_release -d
Red Hat Enterprise Linux Server release 6.1 (Santiago)

From /etc/*release* /etc/*version*
redhat-release: Red Hat Enterprise Linux Server release 6.1 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.1 (Santiago)

uname -a:
Linux localhost.localdomain 2.6.32-131.0.15.el6.x86_64 #1 SMP Tue May 10 15:42:40 EDT 2011 x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Dec 23 21:14

SPEC is set to: /opt/cpu2006

Filesystem Type Size Used Avail Use% Mounted on
/dev/sda1 ext4 550G 60G 462G 12% /

Additional information from dmidecode:

(End of data from sysinfo program)

General Notes

Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/opt/cpu2006/libs/32:/opt/cpu2006/libs/64"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RHEL5.5
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
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>
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**Base Compiler Invocation**

C benchmarks:
- icc -m32

C++ benchmarks:
- icpc -m32

**Base Portability Flags**

- 400.perlbench: -DSPEC_CPU_LINUX_IA32
- 462.libquantum: -DSPEC_CPU_LINUX
- 483.xalancbmk: -DSPEC_CPU_LINUX

**Base Optimization Flags**

C benchmarks:
- -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3

C++ benchmarks:
- -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3
- -Wl,-z,muldefs -L/smartheap -lsmartheap

**Base Other Flags**

C benchmarks:
- 403.gcc: -Dalloca=_alloca

**Peak Compiler Invocation**

C benchmarks (except as noted below):
- icc -m32

400.perlbench: icc -m64

401.bzip2: icc -m64

456.hmmer: icc -m64

458.sjeng: icc -m64

C++ benchmarks:
- icpc -m32
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Peak Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
401.bzip2: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

400.perlbench: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
        -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
        -auto-ilp32

401.bzip2: -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 -auto-ilp32 -ansi-alias

403.gcc: -xSSE4.2 -ipo -O3 -no-prec-div

429.mcf: basepeak = yes

445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
        -ansi-alias -opt-mem-layout-trans=3

456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32

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 -auto-ilp32

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)
        -unroll2 -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)
        -ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs
        -L/smartheap -lsmartheap

473.astar: basepeak = yes

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Peak Optimization Flags (Continued)

483.xalancbmk: basepeak = yes

Peak 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-ic12.1-official-linux64.20111122.html
http://www.spec.org/cpu2006/flags/Cisco-Platform-Settings-V1.2.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.xml
http://www.spec.org/cpu2006/flags/Cisco-Platform-Settings-V1.2.xml

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