Cisco Systems
Cisco UCS C24 M3 (Intel Xeon E5-2450, 2.10 GHz)

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CPU2006 license: 9019
Test date: May-2013

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Hardware
- CPU Name: Intel Xeon E5-2450
- CPU Characteristics: Intel Turbo Boost Technology up to 2.90 GHz
- CPU MHZ: 2100
- FPU: Integrated
- CPU(s) enabled: 16 cores, 2 chips, 8 cores/chip, 2 threads/core
- CPU(s) orderable: 1.2 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: 20 MB I+D on chip per chip
- Other Cache: None
- Memory: 48 GB (6 x 8 GB 2Rx4 PC3-12800R-11, ECC)
- Disk Subsystem: 1 X 300GB SAS, 15K RPM
- Other Hardware: None

Software
- Operating System: Red Hat Enterprise Linux Server release 6.4 (Santiago)
- Compiler: C/C++: Version 13.0.0.133 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 V10.0
Cisco Systems

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**SPEC CINT2006 Result**

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

**SPECint_rate2006 = Not Run**  
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Results Table

<table>
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<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
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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**

BIOS Settings:
- Power Technology set to Custom
- Processor Power State C6 set to Enabled
- Processor Power State C1 Enhanced set to Disabled
- Energy Performance Set to Performance
- DRAM Clock Throttling Set to Performance

Sysinfo program /opt/cpu2006-1.2/config/sysinfo.rev6818
$Rev: 6818 $ $Date:: 2012-07-17 $ e86d102572650a6e4d596a3cee98f191
running on SPEC-RHEL6.4 Fri May 24 15:57:14 2013

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 E5-2450 0 @ 2.10GHz
Continued on next page
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**Platform Notes (Continued)**

- 2 "physical id"s (chips)
- 32 "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 : 16
  - 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: 49399180 kB
- HugePages_Total: 0
- Hugepagesize: 2048 kB

/usr/bin/lsb_release -d
- Red Hat Enterprise Linux Server release 6.4 (Santiago)

From /etc/*release* /etc/*version*
- redhat-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)
- system-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)

uname -a:
- Linux SPEC-RHEL6.4 2.6.32-358.el6.x86_64 #1 SMP Tue Jan 29 11:47:41 EST 2013
- x86_64 x86_64 x86_64 GNU/Linux

run-level 3 May 24 15:49

SPEC is set to: /opt/cpu2006-1.2
- Filesystem Type Size Used Avail Use% Mounted on
- /dev/sda2 ext4 274G 25G 236G 10% /

Additional information from dmidecode:
- BIOS Cisco Systems, Inc. C22M3.1.4.5c.0.052020122333 05/20/2012
- Memory:
  - 6x 0xCE00 M393B1K70DH0-YK0 8 GB 1600 MHz 2 rank
  - 6x NO DIMM NO DIMM

(End of data from sysinfo program)

**General Notes**

Environment variables set by runspec before the start of the run:
- LD_LIBRARY_PATH = "'/opt/cpu2006-1.2/libs/32:/opt/cpu2006-1.2/libs/64:/opt/cpu2006-1.2/sh"

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

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General Notes (Continued)

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 -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/sh -lsmartheap

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-ic12.1-official-linux64.20120425.html
http://www.spec.org/cpu2006/flags/Cisco-Platform-Settings-V1.2.20130717.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20120425.xml
http://www.spec.org/cpu2006/flags/Cisco-Platform-Settings-V1.2.20130717.xml
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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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