Cisco Systems

Cisco UCS C210 M2 (Intel Xeon E5649, 2.53 GHz)

| Test sponsor | Cisco Systems |
| CPU2006 license: | 9019 |
| Tested by: | Cisco Systems |
| Test date: | Jan-2012 |
| Hardware Availability: | Mar-2011 |
| Software Availability: | Dec-2011 |

| SPECint®_rate2006 = 340 |
| SPECint_rate_base2006 = 327 |

### Hardware

| CPU Name | Intel Xeon E5649 |
| CPU Characteristics | Intel Turbo Boost Technology up to 2.93 GHz |
| CPU MHz | 2533 |
| FPU | Integrated |
| CPU(s) enabled | 12 cores, 2 chips, 6 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 | 12 MB I+D on chip per chip |
| Other Cache | None |
| Memory | 96 GB (12 x 8 GB 2Rx4 PCM3L-10600R-9, ECC) |
| Disk Subsystem | 600 GB SAS 10K RPM |
| Other Hardware | None |

### Software

| Operating System | Red Hat Enterprise Linux Server release 6.2 (Santiago) |
| 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 |
## SPEC CINT2006 Result

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```
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```

### Results Table

<table>
<thead>
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<th>Ratio</th>
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<td>494</td>
<td>335</td>
<td>492</td>
<td>336</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

- BIOS Configuration : Data Reuse Optimization = Disabled
- Sysinfo program /opt/cpu2006/config/sysinfo.rev6800
- $Rev: 6800 $ $Date:: 2011-10-11 #$ 6f2ebdff5032aaa42e583f96b07f99d3
- running on localhost.localdomain Fri Jan 27 12:12:22 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 E5649 @ 2.53GHz
- 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 caution.)
- cpu cores : 6

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**Platform Notes (Continued)**

siblings : 12  
physical 0: cores 0 1 2 8 9 10  
physical 1: cores 0 1 2 8 9 10  
cache size : 12288 KB

From /proc/meminfo

```
MemTotal:       98997780 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 Jan 27 12:09
```

```
SPEC is set to: /opt/cpu2006  
Filesystem    Type    Size  Used Avail Use% Mounted on  
/dev/sda1     ext4     67G  5.5G   58G   9% /
```

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
```
```
runcspev 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) -prof-use(pass 2) -auto-ilp32
401.bzip2: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(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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info@spec.org
http://www.spec.org/
## Cisco Systems

**SPEC CINT2006 Result**

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<tr>
<th>SPECint_rate2006</th>
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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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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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