



# SPEC® CINT2006 Result

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## Cisco Systems

Cisco UCS B200 M2 (Intel Xeon E5649, 2.53 GHz)

**SPECint\_rate2006 = 176**

CPU2006 license: 9019

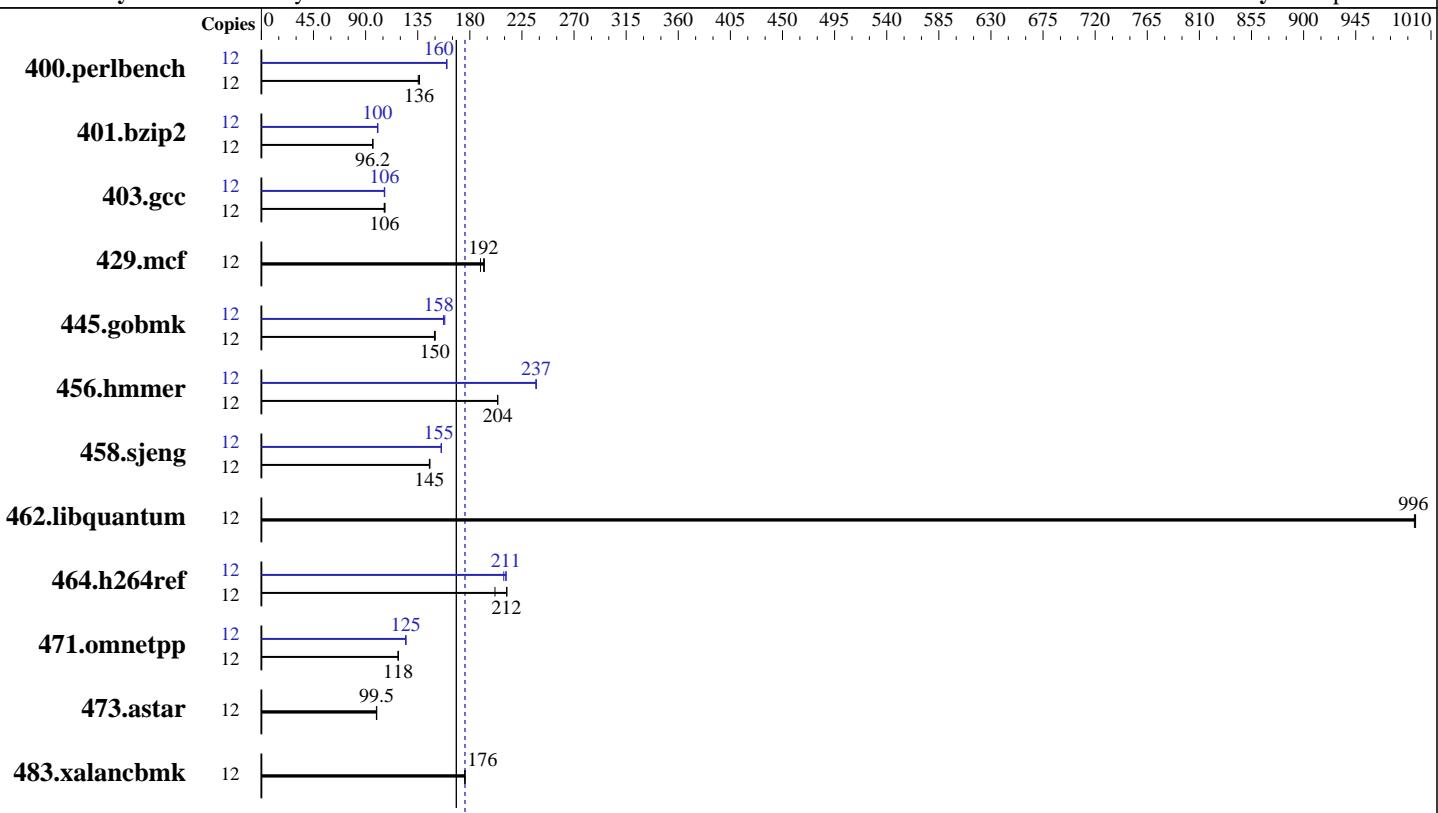
Test date: Nov-2011

Test sponsor: Cisco Systems

Hardware Availability: Mar-2011

Tested by: Cisco Systems

Software Availability: Sep-2011



**SPECint\_rate\_base2006 = 168**

**SPECint\_rate2006 = 176**

### 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: 6 cores, 1 chip, 6 cores/chip, 2 threads/core  
 CPU(s) orderable: 1 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: 48 GB (6 x 8 GB 2Rx4 PC3L-10600R-9, ECC)  
 Disk Subsystem: 135 GB SAS, 10K RPM  
 Other Hardware: None

### Software

Operating System: Red Hat Enterprise Linux Server release 6.1 (Santiago)  
 Compiler: 2.6.32-131.0.15.el6.x86\_64  
 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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## Results Table

| Benchmark      | Base   |             |             |             |             |             |            | Peak   |            |             |            |            |             |            |
|----------------|--------|-------------|-------------|-------------|-------------|-------------|------------|--------|------------|-------------|------------|------------|-------------|------------|
|                | Copies | Seconds     | Ratio       | Seconds     | Ratio       | Seconds     | Ratio      | Copies | Seconds    | Ratio       | Seconds    | Ratio      | Seconds     | Ratio      |
| 400.perlbench  | 12     | <b>861</b>  | <b>136</b>  | 865         | 135         | 859         | 137        | 12     | 732        | 160         | 733        | 160        | <b>732</b>  | <b>160</b> |
| 401.bzip2      | 12     | 1203        | 96.3        | <b>1204</b> | <b>96.2</b> | 1204        | 96.2       | 12     | 1150       | 101         | 1155       | 100        | <b>1155</b> | <b>100</b> |
| 403.gcc        | 12     | 905         | 107         | 911         | 106         | <b>908</b>  | <b>106</b> | 12     | <b>909</b> | <b>106</b>  | 910        | 106        | 907         | 106        |
| 429.mcf        | 12     | 568         | 193         | <b>570</b>  | <b>192</b>  | 578         | 189        | 12     | 568        | 193         | <b>570</b> | <b>192</b> | 578         | 189        |
| 445.gobmk      | 12     | <b>841</b>  | <b>150</b>  | 842         | 149         | 838         | 150        | 12     | 800        | 157         | 795        | 158        | <b>799</b>  | <b>158</b> |
| 456.hmmer      | 12     | 549         | 204         | <b>549</b>  | <b>204</b>  | 549         | 204        | 12     | 472        | 237         | <b>472</b> | <b>237</b> | 472         | 237        |
| 458.sjeng      | 12     | 1001        | 145         | 997         | 146         | <b>1000</b> | <b>145</b> | 12     | 934        | 156         | <b>934</b> | <b>155</b> | 936         | 155        |
| 462.libquantum | 12     | 249         | 997         | <b>250</b>  | <b>996</b>  | 250         | 996        | 12     | 249        | 997         | <b>250</b> | <b>996</b> | 250         | 996        |
| 464.h264ref    | 12     | <b>1254</b> | <b>212</b>  | 1252        | 212         | 1317        | 202        | 12     | 1256       | 211         | 1269       | 209        | <b>1258</b> | <b>211</b> |
| 471.omnetpp    | 12     | 635         | 118         | 634         | 118         | <b>635</b>  | <b>118</b> | 12     | 601        | 125         | 602        | 125        | <b>601</b>  | <b>125</b> |
| 473.astar      | 12     | <b>847</b>  | <b>99.5</b> | 848         | 99.3        | 846         | 99.6       | 12     | <b>847</b> | <b>99.5</b> | 848        | 99.3       | 846         | 99.6       |
| 483.xalancbmk  | 12     | <b>471</b>  | <b>176</b>  | 471         | 176         | 471         | 176        | 12     | <b>471</b> | <b>176</b>  | 471        | 176        | 471         | 176        |

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

## Submit Notes

The taskset mechanism was used to bind copies to processors. The config file option 'submit' was used to generate taskset commands to bind each copy to a specific processor.

## 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 $ $Date::: 2011-10-11 #$
running on localhost.localdomain Thu Nov  3 09:23:32 2011
```

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
  1 "physical id"s (chips)
  12 "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 1 2 8 9 10
cache size : 12288 KB

From /proc/meminfo
MemTotal:        49360316 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)
system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

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 Nov 3 09:21

SPEC is set to: /opt/cpu2006
Filesystem      Type   Size  Used Avail Use% Mounted on
/dev/sdal      ext4   135G   12G  117G  10%  /


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

## Base Compiler Invocation

C benchmarks:  
icc -m32

C++ benchmarks:  
icpc -m32



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## 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/smarterheap -lsmarterheap

## 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

## 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

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## Peak Portability Flags (Continued)

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.hmmr: -xSSE4.2 -ipo -O3 -no-prec-div -unroll12 -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)  
-unroll14 -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)  
-unroll12 -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

483.xalancbmk: basepeak = yes



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## 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 other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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