



# SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Cisco Systems

Cisco UCS C220 M3 (Intel Xeon E5-2643 v2, 3.50 GHz)

**SPECint®2006 = 61.2**

**SPECint\_base2006 = 57.4**

**CPU2006 license:** 9019

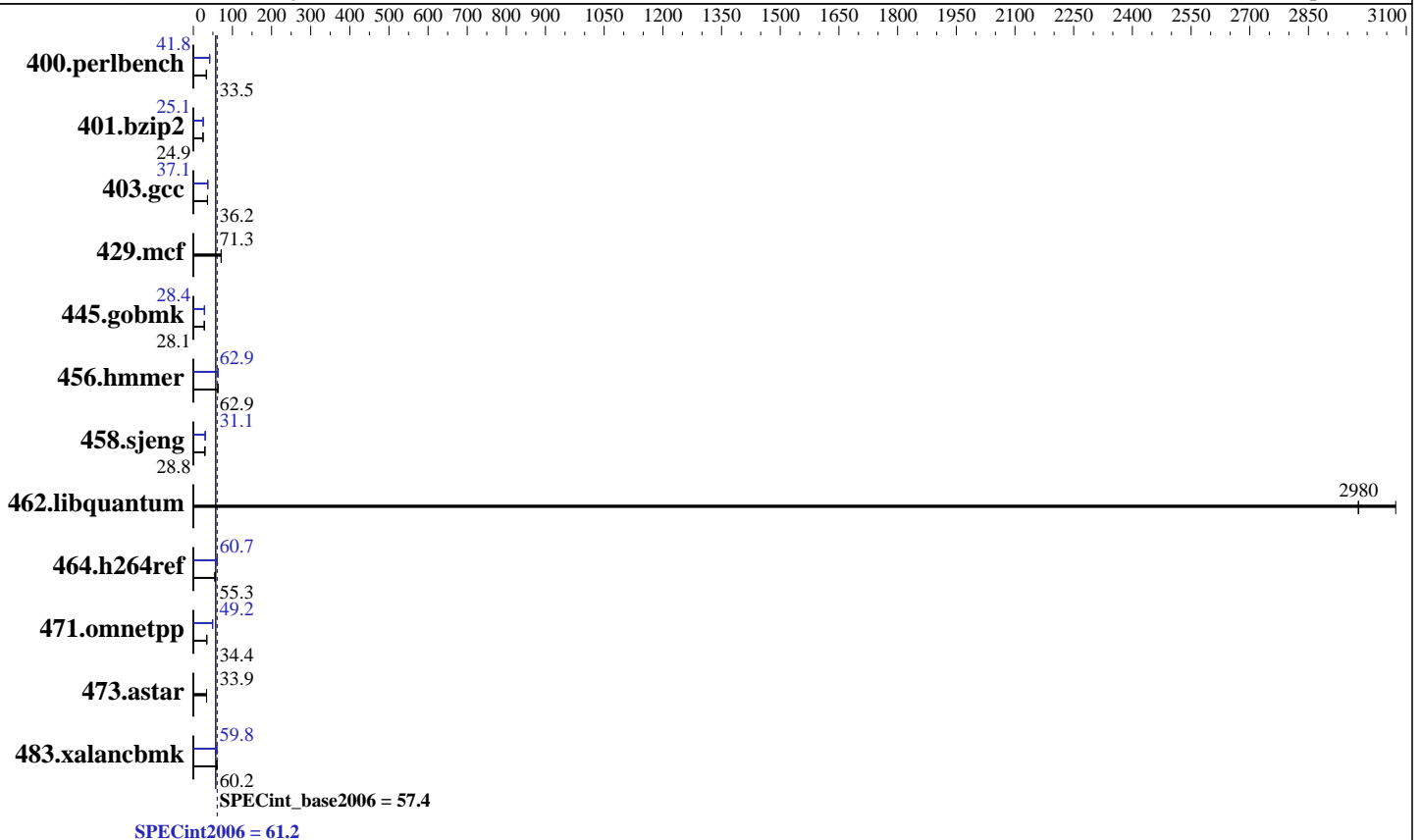
**Test sponsor:** Cisco Systems

**Tested by:** Cisco Systems

**Test date:** Nov-2013

**Hardware Availability:** Sep-2013

**Software Availability:** Sep-2013



### Hardware

**CPU Name:** Intel Xeon E5-2643 v2  
**CPU Characteristics:** Intel Turbo Boost Technology up to 3.80 GHz  
**CPU MHz:** 3500  
**FPU:** Integrated  
**CPU(s) enabled:** 12 cores, 2 chips, 6 cores/chip  
**CPU(s) orderable:** 1,2 chip  
**Primary Cache:** 32 KB I + 32 KB D on chip per core  
**Secondary Cache:** 256 KB I+D on chip per core  
**L3 Cache:** 25 MB I+D on chip per chip  
**Other Cache:** None  
**Memory:** 128 GB (16 x 8 GB 2Rx4 PC3-14900R-13, ECC)  
**Disk Subsystem:** 1 x 300 GB 15000 RPM SAS  
**Other Hardware:** None

### Software

**Operating System:** Red Hat Enterprise Linux Server release 6.4 (Santiago)  
 2.6.32-358.el6.x86\_64  
**Compiler:** C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux  
**Auto Parallel:** Yes  
**File System:** ext4  
**System State:** Run level 3 (multi-user)  
**Base Pointers:** 32/64-bit  
**Peak Pointers:** 32/64-bit  
**Other Software:** Microquill SmartHeap V10.0



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Cisco Systems

Cisco UCS C220 M3 (Intel Xeon E5-2643 v2, 3.50 GHz)

SPECint2006 = **61.2**

SPECint\_base2006 = **57.4**

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

Test date: Nov-2013  
Hardware Availability: Sep-2013  
Software Availability: Sep-2013

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	292	33.4	292	33.5	<u>292</u>	<u>33.5</u>	234	41.8	<u>234</u>	<u>41.8</u>	234	41.7
401.bzip2	388	24.8	388	24.9	<u>388</u>	<u>24.9</u>	384	25.1	384	25.1	<u>384</u>	<u>25.1</u>
403.gcc	<u>222</u>	<u>36.2</u>	222	36.3	222	36.2	217	37.1	<u>217</u>	<u>37.1</u>	219	36.8
429.mcf	127	71.7	129	71.0	<u>128</u>	<u>71.3</u>	127	71.7	129	71.0	<u>128</u>	<u>71.3</u>
445.gobmk	<u>373</u>	<u>28.1</u>	373	28.2	373	28.1	369	28.4	<u>369</u>	<u>28.4</u>	369	28.4
456.hammer	148	63.1	149	62.5	<u>148</u>	<u>62.9</u>	148	63.0	<u>148</u>	<u>62.9</u>	148	62.9
458.sjeng	397	30.5	421	28.7	<u>420</u>	<u>28.8</u>	<u>390</u>	<u>31.1</u>	409	29.6	389	31.1
462.libquantum	6.74	3070	6.96	2980	<u>6.96</u>	<u>2980</u>	6.74	3070	6.96	2980	<u>6.96</u>	<u>2980</u>
464.h264ref	400	55.3	401	55.2	<u>400</u>	<u>55.3</u>	365	60.6	<u>365</u>	<u>60.7</u>	364	60.8
471.omnetpp	182	34.3	181	34.5	<u>182</u>	<u>34.4</u>	128	48.8	<u>127</u>	<u>49.2</u>	126	49.6
473.astar	<u>207</u>	<u>33.9</u>	208	33.8	207	33.9	<u>207</u>	<u>33.9</u>	208	33.8	207	33.9
483.xalancbmk	114	60.4	<u>115</u>	<u>60.2</u>	115	60.0	115	60.0	<u>115</u>	<u>59.8</u>	115	59.8

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"

## Platform Notes

```

Intel HT Technology = Disabled
CPU performance set to HPC
Power Technology set to Custom
CPU Power State C6 set to Enabled
CPU Power State C1 Enhanced set to Disabled
Energy Performance policy set to Performance
Memory RAS configuration set to Maximum Performance
DRAM Clock Throttling Set to Performance
LV DDR Mode set to Performance-mode
DRAM Refresh Rate Set to 1x
Sysinfo program /opt/cpu2006-1.2/config/sysinfo.rev6818
$Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
running on SL1-IVB Thu Nov 21 06:38:22 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 E5-2643 v2 @ 3.50GHz
    2 "physical id"s (chips)
    12 "processors"
    cores, siblings (Caution: counting these is hw and system dependent. The

```

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Cisco Systems

Cisco UCS C220 M3 (Intel Xeon E5-2643 v2, 3.50 GHz)

**SPECint2006 = 61.2**

**SPECint\_base2006 = 57.4**

**CPU2006 license:** 9019

**Test sponsor:** Cisco Systems

**Tested by:** Cisco Systems

**Test date:** Nov-2013

**Hardware Availability:** Sep-2013

**Software Availability:** Sep-2013

### Platform Notes (Continued)

following excerpts from /proc/cpuinfo might not be reliable. Use with caution.)

```
cpu cores : 6
siblings  : 6
physical 0: cores 2 3 4 8 9 10
physical 1: cores 2 3 4 8 9 10
cache size : 25600 KB
```

From /proc/meminfo

```
MemTotal:      132126884 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)
system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server
```

uname -a:

```
Linux SL1-IVB 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 Nov 21 01:39

SPEC is set to: /opt/cpu2006-1.2

```
Filesystem      Type      Size  Used Avail Use% Mounted on
/dev/sdb1        ext4      275G  270G   0 100% /
```

Additional information from dmidecode:

```
BIOS Cisco Systems, Inc. C220M3.1.5.2.27.071120132232 07/11/2013
```

Memory:

```
16x 0xAD00 HMT31GR7EFR4C-RD 8 GB 1866 MHz 2 rank
```

(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"
OMP_NUM_THREADS = "12"
```

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RedHat EL 6.4

Transparent Huge Pages enabled with:

```
echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
```

runspec command invoked through numactl i.e.:

```
numactl --interleave=all runspec <etc>
```



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Cisco Systems

Cisco UCS C220 M3 (Intel Xeon E5-2643 v2, 3.50 GHz)

SPECint2006 = 61.2

SPECint\_base2006 = 57.4

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

Test date: Nov-2013  
Hardware Availability: Sep-2013  
Software Availability: Sep-2013

## 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:  
-xSSE4.2 -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32

C++ benchmarks:  
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32  
-Wl,-z,muldefs -L/sh -lsmartheap64

## Base Other Flags

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

## Peak Compiler Invocation

C benchmarks (except as noted below):  
icc -m64

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Cisco Systems

Cisco UCS C220 M3 (Intel Xeon E5-2643 v2, 3.50 GHz)

**SPECint2006 = 61.2**

**SPECint\_base2006 = 57.4**

**CPU2006 license:** 9019

**Test sponsor:** Cisco Systems

**Tested by:** Cisco Systems

**Test date:** Nov-2013

**Hardware Availability:** Sep-2013

**Software Availability:** Sep-2013

## Peak Compiler Invocation (Continued)

400.perlbench: `icc -m32`

445.gobmk: `icc -m32`

464.h264ref: `icc -m32`

C++ benchmarks (except as noted below):

`icpc -m32`

473.astar: `icpc -m64`

## Peak Portability Flags

400.perlbench: `-DSPEC_CPU_LINUX_IA32`

401.bzip2: `-DSPEC_CPU_LP64`

403.gcc: `-DSPEC_CPU_LP64`

429.mcf: `-DSPEC_CPU_LP64`

456.hmmer: `-DSPEC_CPU_LP64`

458.sjeng: `-DSPEC_CPU_LP64`

462.libquantum: `-DSPEC_CPU_LP64 -DSPEC_CPU_LINUX`

473.astar: `-DSPEC_CPU_LP64`

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) -opt-prefetch -ansi-alias`

401.bzip2: `-xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div -prof-use(pass 2) -auto-ilp32 -opt-prefetch -ansi-alias`

403.gcc: `-xSSE4.2 -ipo -O3 -no-prec-div -inline-calloc -opt-malloc-options=3 -auto-ilp32`

429.mcf: `basepeak = yes`

445.gobmk: `-xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2) -ansi-alias`

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

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Cisco Systems

Cisco UCS C220 M3 (Intel Xeon E5-2643 v2, 3.50 GHz)

**SPECint2006 = 61.2**

**SPECint\_base2006 = 57.4**

**CPU2006 license:** 9019

**Test sponsor:** Cisco Systems

**Tested by:** Cisco Systems

**Test date:** Nov-2013

**Hardware Availability:** Sep-2013

**Software Availability:** Sep-2013

## Peak Optimization Flags (Continued)

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

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

473.astar: basepeak = yes

483.xalancbmk: -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias  
-Wl,-z,muldefs -L/sh -lsmartheap

## 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-ic14.0-official-linux64.20140128.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-ic14.0-official-linux64.20140128.xml>

<http://www.spec.org/cpu2006/flags/Cisco-Platform-Settings-V1.2.20130717.xml>

SPEC and SPECint are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

For questions about this result, please contact the tester.  
For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.2.  
Report generated on Thu Jul 24 19:44:41 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 17 December 2013.