



# SPEC® CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

## Cisco Systems

Cisco UCS C220 M4 (Intel Xeon E5-2667 v3 @ 3.20GHz)

**SPECint®\_rate2006 = 843**

**SPECint\_rate\_base2006 = 816**

CPU2006 license: 9019

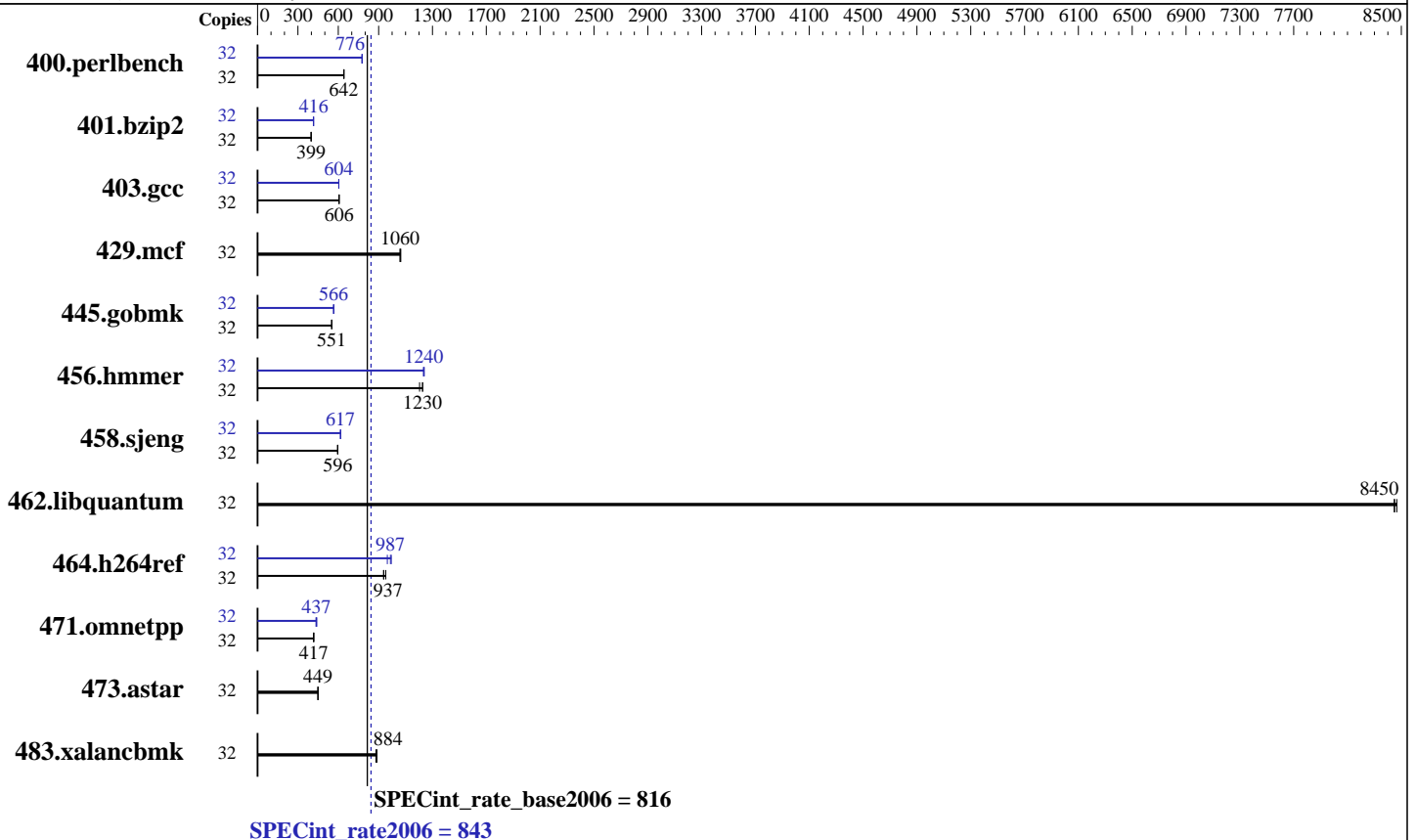
Test sponsor: Cisco Systems

Tested by: Cisco Systems

Test date: Dec-2014

Hardware Availability: Sep-2014

Software Availability: Nov-2013



### Hardware

CPU Name: Intel Xeon E5-2667 v3  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.60 GHz  
 CPU MHz: 3200  
 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: 256 GB (16 x 16 GB 2Rx4 PC4-2133P-R)  
 Disk Subsystem: 1 x 300GB SAS, 15K RPM  
 Other Hardware: None

### Software

Operating System: SUSE Linux Enterprise Server 11 (x86\_64) 3.0.76-0.11-default  
 Compiler: C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux  
 Auto Parallel: No  
 File System: ext3  
 System State: Run level 3 (multi-user)  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: Microquill SmartHeap V10.0



# SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

## Cisco Systems

Cisco UCS C220 M4 (Intel Xeon E5-2667 v3 @ 3.20GHz)

SPECint\_rate2006 = 843

SPECint\_rate\_base2006 = 816

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

Test date: Dec-2014  
Hardware Availability: Sep-2014  
Software Availability: Nov-2013

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	32	487	642	<b>487</b>	<b>642</b>	488	641	32	402	778	<b>403</b>	<b>776</b>	403	776
401.bzip2	32	774	399	777	398	<b>774</b>	<b>399</b>	32	<b>742</b>	<b>416</b>	744	415	741	417
403.gcc	32	<b>425</b>	<b>606</b>	426	605	425	606	32	<b>426</b>	<b>604</b>	427	603	426	604
429.mcf	32	274	1060	275	1060	<b>275</b>	<b>1060</b>	32	274	1060	275	1060	<b>275</b>	<b>1060</b>
445.gobmk	32	609	551	<b>609</b>	<b>551</b>	609	552	32	<b>593</b>	<b>566</b>	594	565	593	566
456.hammer	32	<b>244</b>	<b>1230</b>	243	1230	248	1200	32	241	1240	242	1230	<b>241</b>	<b>1240</b>
458.sjeng	32	650	596	650	595	<b>650</b>	<b>596</b>	32	<b>628</b>	<b>617</b>	628	617	628	617
462.libquantum	32	<b>78.5</b>	<b>8450</b>	78.5	8450	78.3	8470	32	<b>78.5</b>	<b>8450</b>	78.5	8450	78.3	8470
464.h264ref	32	743	953	<b>755</b>	<b>937</b>	756	937	32	<b>717</b>	<b>987</b>	712	994	734	964
471.omnetpp	32	478	419	<b>480</b>	<b>417</b>	481	416	32	<b>458</b>	<b>437</b>	460	434	454	440
473.astar	32	501	448	<b>500</b>	<b>449</b>	499	450	32	501	448	<b>500</b>	<b>449</b>	499	450
483.xalancbmk	32	251	879	249	887	<b>250</b>	<b>884</b>	32	251	879	249	887	<b>250</b>	<b>884</b>

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

CPU performance set to HPC  
Power Technology set to Custom  
Processor Power State C6 set to Disabled  
Energy Performance BIAS setting set to Performance  
Memory RAS configuration set to Maximum Performance  
Snoop Mode set to Early Snoop  
Sysinfo program /opt/cpu2006-1.2/config/sysinfo.rev6818  
\$Rev: 6818 \$ \$Date:: 2012-07-17 #\$ e86d102572650a6e4d596a3cee98f191  
running on slessp3 Fri Dec 19 13:45:41 2014

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 E5-2667 v3 @ 3.20GHz  
2 "physical id"s (chips)

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

## Cisco Systems

Cisco UCS C220 M4 (Intel Xeon E5-2667 v3 @ 3.20GHz)

**SPECint\_rate2006 = 843**

**SPECint\_rate\_base2006 = 816**

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

**Test date:** Dec-2014  
**Hardware Availability:** Sep-2014  
**Software Availability:** Nov-2013

### Platform Notes (Continued)

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:      264440888 kB
HugePages_Total: 0
Hugepagesize:  2048 kB
```

```
From /etc/*release* /etc/*version*
SuSE-release:
SUSE Linux Enterprise Server 11 (x86_64)
VERSION = 11
PATCHLEVEL = 3
```

```
uname -a:
Linux slessp3 3.0.76-0.11-default #1 SMP Fri Jun 14 08:21:43 UTC 2013
(ccab990) x86_64 x86_64 x86_64 GNU/Linux
```

```
run-level 3 Dec 19 13:42 last=S
```

```
SPEC is set to: /opt/cpu2006-1.2
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sdd2        ext3  273G   64G  208G  24% /
```

```
Additional information from dmidecode:
BIOS Cisco Systems, Inc. C220M4.2.0.3.0.080720142114 08/07/2014
Memory:
16x 0xCE00 M393A2G40DB0-CPB 16 GB 2133 MHz
8x 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 RedHat EL 6.4
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.:
```

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Cisco Systems

SPECint\_rate2006 = 843

Cisco UCS C220 M4 (Intel Xeon E5-2667 v3 @ 3.20GHz)

SPECint\_rate\_base2006 = 816

CPU2006 license: 9019

Test date: Dec-2014

Test sponsor: Cisco Systems

Hardware Availability: Sep-2014

Tested by: Cisco Systems

Software Availability: Nov-2013

## General Notes (Continued)

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:

-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch  
-opt-mem-layout-trans=3

C++ benchmarks:

-xCORE-AVX2 -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

## Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m32

400.perlbench: icc -m64

401.bzip2: icc -m64

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Cisco Systems

Cisco UCS C220 M4 (Intel Xeon E5-2667 v3 @ 3.20GHz)

SPECint\_rate2006 = 843

SPECint\_rate\_base2006 = 816

CPU2006 license: 9019

Test sponsor: Cisco Systems

Tested by: Cisco Systems

Test date: Dec-2014

Hardware Availability: Sep-2014

Software Availability: Nov-2013

## Peak Compiler Invocation (Continued)

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

462.libquantum: -DSPEC\_CPU\_LINUX

483.xalancbmk: -DSPEC\_CPU\_LINUX

## Peak Optimization Flags

C benchmarks:

400.perlbench: -xCORE-AVX2(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: -xCORE-AVX2(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: -xCORE-AVX2 -ipo -O3 -no-prec-div

429.mcf: basepeak = yes

445.gobmk: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)  
-ansi-alias -opt-mem-layout-trans=3

456.hmmer: -xCORE-AVX2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32

458.sjeng: -xCORE-AVX2(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: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
-unroll2 -ansi-alias

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Cisco Systems

Cisco UCS C220 M4 (Intel Xeon E5-2667 v3 @ 3.20GHz)

SPECint\_rate2006 = 843

SPECint\_rate\_base2006 = 816

CPU2006 license: 9019

Test sponsor: Cisco Systems

Tested by: Cisco Systems

Test date: Dec-2014

Hardware Availability: Sep-2014

Software Availability: Nov-2013

## Peak Optimization Flags (Continued)

C++ benchmarks:

471.omnetpp: -xCORE-AVX2(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/sh -lsmartheap

473.astar: basepeak = yes

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-ic14.0-official-linux64.20140128.html>

<http://www.spec.org/cpu2006/flags/Cisco-Platform-Settings-V1.2-revC.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-revC.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 Wed Jan 14 10:28:55 2015 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 13 January 2015.