



# SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Cisco Systems

Cisco UCS C240 M4 (Intel Xeon E5-2695 v3 @ 2.30GHz)

**SPECint®\_rate2006 = 1180**

**SPECint\_rate\_base2006 = 1140**

CPU2006 license: 9019

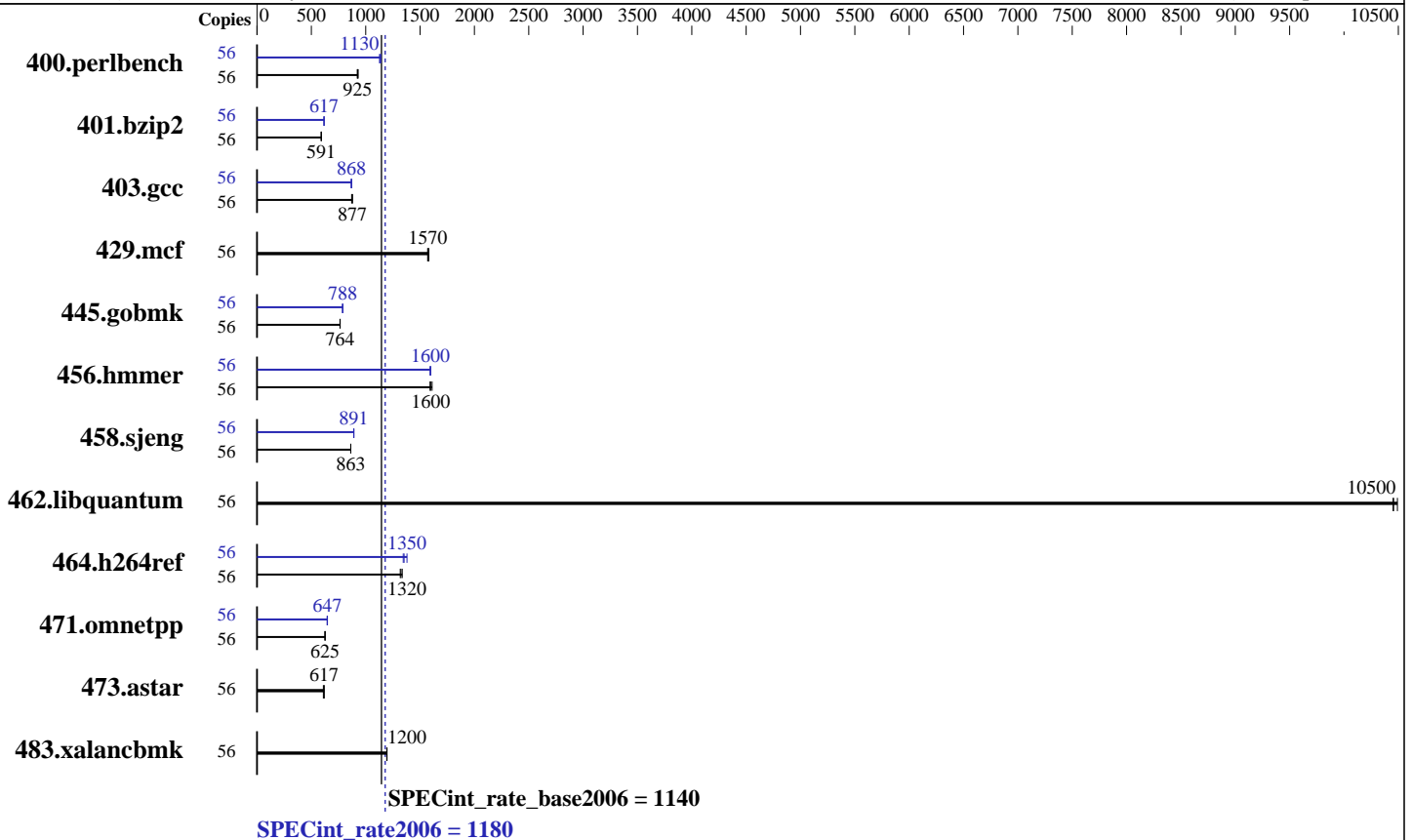
Test sponsor: Cisco Systems

Tested by: Cisco Systems

Test date: Nov-2014

Hardware Availability: Sep-2014

Software Availability: Sep-2013



### Hardware

CPU Name: Intel Xeon E5-2695 v3  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.30 GHz  
 CPU MHz: 2300  
 FPU: Integrated  
 CPU(s) enabled: 28 cores, 2 chips, 14 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: 35 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: Red Hat Enterprise Linux Server release 6.5 (Santiago)  
 2.6.32-431.el6.x86\_64  
 Compiler: C/C++: Version 14.0.0.080 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



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Cisco Systems

Cisco UCS C240 M4 (Intel Xeon E5-2695 v3 @ 2.30GHz)

SPECint\_rate2006 = 1180

SPECint\_rate\_base2006 = 1140

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

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

## Results Table

Benchmark	Base								Peak							
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio		
400.perlbench	56	588	931	<u>591</u>	<u>925</u>	593	923	56	481	1140	486	1130	<u>482</u>	<u>1130</u>		
401.bzip2	56	914	591	<u>914</u>	<u>591</u>	914	591	56	875	617	<u>875</u>	<u>617</u>	877	616		
403.gcc	56	518	871	513	878	<u>514</u>	<u>877</u>	56	520	867	<u>519</u>	<u>868</u>	518	871		
429.mcf	56	<u>325</u>	<u>1570</u>	325	1570	323	1580	56	<u>325</u>	<u>1570</u>	325	1570	323	1580		
445.gobmk	56	769	763	<u>769</u>	<u>764</u>	768	765	56	<u>746</u>	<u>788</u>	746	787	745	789		
456.hammer	56	<u>327</u>	<u>1600</u>	328	1590	324	1610	56	328	1590	327	1600	<u>328</u>	<u>1600</u>		
458.sjeng	56	786	862	785	863	<u>786</u>	<u>863</u>	56	760	891	<u>761</u>	<u>891</u>	761	890		
462.libquantum	56	111	10500	111	10500	<u>111</u>	<u>10500</u>	56	111	10500	111	10500	<u>111</u>	<u>10500</u>		
464.h264ref	56	<u>935</u>	<u>1320</u>	927	1340	940	1320	56	<u>916</u>	<u>1350</u>	921	1350	898	1380		
471.omnetpp	56	560	625	558	628	<u>560</u>	<u>625</u>	56	<u>541</u>	<u>647</u>	543	645	540	648		
473.astar	56	636	618	<u>637</u>	<u>617</u>	644	610	56	636	618	<u>637</u>	<u>617</u>	644	610		
483.xalancbmk	56	324	1190	323	1200	<u>323</u>	<u>1200</u>	56	324	1190	323	1200	<u>323</u>	<u>1200</u>		

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  
Sysinfo program /opt/cpu2006-1.2/config/sysinfo.rev6818  
\$Rev: 6818 \$ \$Date:: 2012-07-17 #\$ e86d102572650a6e4d596a3cee98f191  
running on rhel65 Fri Nov 7 11:17:05 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 E5-2695 v3 @ 2.30GHz  
2 "physical id"s (chips)  
56 "processors"

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Cisco Systems

Cisco UCS C240 M4 (Intel Xeon E5-2695 v3 @ 2.30GHz)

**SPECint\_rate2006 = 1180**

**SPECint\_rate\_base2006 = 1140**

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

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

### Platform Notes (Continued)

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 : 14
siblings  : 28
physical 0: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14
physical 1: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14
cache size : 17920 KB
```

```
From /proc/meminfo
MemTotal:      264255336 kB
HugePages_Total:      0
Hugepagesize:    2048 kB
```

```
/usr/bin/lsb_release -d
Red Hat Enterprise Linux Server release 6.5 (Santiago)
```

```
From /etc/*release* /etc/*version*
redhat-release: Red Hat Enterprise Linux Server release 6.5 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.5 (Santiago)
system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server
```

```
uname -a:
Linux rhel65 2.6.32-431.el6.x86_64 #1 SMP Sun Nov 10 22:19:54 EST 2013 x86_64
x86_64 x86_64 GNU/Linux
```

```
run-level 3 Nov 7 11:15
```

```
SPEC is set to: /opt/cpu2006-1.2
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sdb1       ext4  245G   19G  215G   8% /
```

```
Additional information from dmidecode:
BIOS Cisco Systems, Inc. C240M4.2.0.3c.0.091920142008 09/19/2014
Memory:
16x 0xCE00 M393A2G40DB0-CPB 16 GB 2133 MHz 2 rank
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
```

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Cisco Systems

Cisco UCS C240 M4 (Intel Xeon E5-2695 v3 @ 2.30GHz)

SPECint\_rate2006 = 1180

SPECint\_rate\_base2006 = 1140

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

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

### General Notes (Continued)

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:  
-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 2006-2014 Standard Performance Evaluation Corporation

Cisco Systems

Cisco UCS C240 M4 (Intel Xeon E5-2695 v3 @ 2.30GHz)

SPECint\_rate2006 = 1180

SPECint\_rate\_base2006 = 1140

CPU2006 license: 9019

Test sponsor: Cisco Systems

Tested by: Cisco Systems

Test date: Nov-2014

Hardware Availability: Sep-2014

Software Availability: Sep-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 2006-2014 Standard Performance Evaluation Corporation

## Cisco Systems

Cisco UCS C240 M4 (Intel Xeon E5-2695 v3 @ 2.30GHz)

**SPECint\_rate2006 = 1180**

**SPECint\_rate\_base2006 = 1140**

**CPU2006 license:** 9019

**Test sponsor:** Cisco Systems

**Tested by:** Cisco Systems

**Test date:** Nov-2014

**Hardware Availability:** Sep-2014

**Software Availability:** Sep-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 Dec 3 10:34:01 2014 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 2 December 2014.