



SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Cisco Systems

Cisco UCS B260 M4 (Intel Xeon E7-4860 v2, 2.60 GHz)

SPECint®_rate2006 = 934

SPECint_rate_base2006 = 904

CPU2006 license: 9019

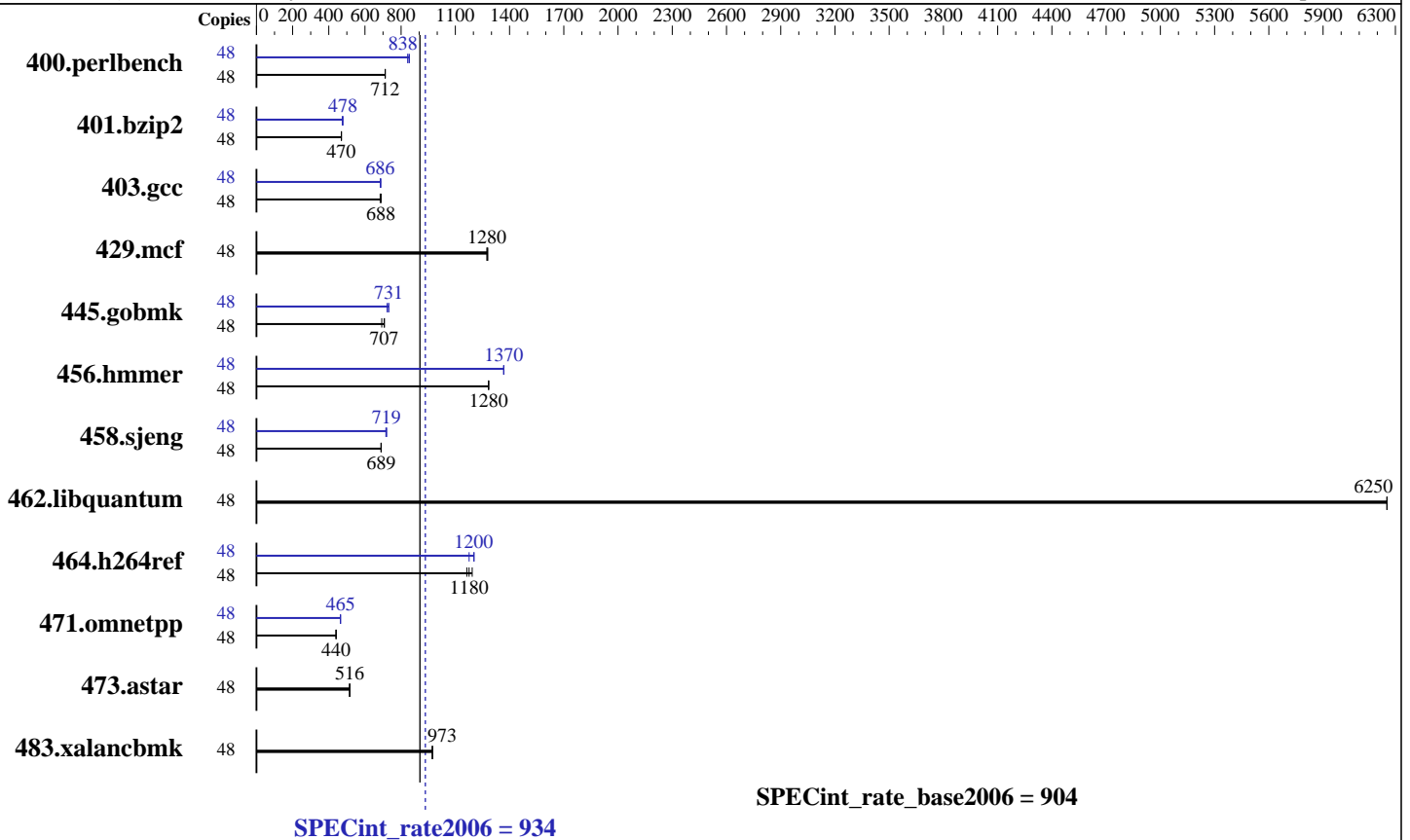
Test sponsor: Cisco Systems

Tested by: Cisco Systems

Test date: Apr-2014

Hardware Availability: May-2014

Software Availability: Sep-2013



Hardware

CPU Name: Intel Xeon E7-4860 v2
 CPU Characteristics: Intel Turbo Boost Technology up to 3.20 GHz
 CPU MHz: 2600
 FPU: Integrated
 CPU(s) enabled: 24 cores, 2 chips, 12 cores/chip, 2 threads/core
 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: 30 MB I+D on chip per chip
 Other Cache: None
 Memory: 256 GB (32 x 8 GB 2Rx4 PC3L-12800R-11, 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: No
 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 B260 M4 (Intel Xeon E7-4860 v2, 2.60 GHz)

SPECint_rate2006 = 934

SPECint_rate_base2006 = 904

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

Test date: Apr-2014
Hardware Availability: May-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	48	<u>659</u>	<u>712</u>	659	712	658	712	48	554	846	<u>560</u>	<u>838</u>	560	837
401.bzip2	48	985	470	987	469	<u>986</u>	<u>470</u>	48	969	478	976	475	<u>969</u>	<u>478</u>
403.gcc	48	561	689	<u>562</u>	<u>688</u>	565	684	48	564	685	<u>564</u>	<u>686</u>	561	688
429.mcf	48	<u>343</u>	<u>1280</u>	343	1280	342	1280	48	<u>343</u>	<u>1280</u>	343	1280	342	1280
445.gobmk	48	712	708	726	693	<u>712</u>	<u>707</u>	48	<u>689</u>	<u>731</u>	697	723	688	731
456.hammer	48	349	1280	349	1280	<u>349</u>	<u>1280</u>	48	<u>327</u>	<u>1370</u>	327	1370	328	1370
458.sjeng	48	<u>843</u>	<u>689</u>	843	689	841	690	48	811	716	807	720	<u>808</u>	<u>719</u>
462.libquantum	48	159	6250	<u>159</u>	<u>6250</u>	159	6250	48	159	6250	<u>159</u>	<u>6250</u>	159	6250
464.h264ref	48	913	1160	890	1190	<u>903</u>	<u>1180</u>	48	<u>883</u>	<u>1200</u>	882	1200	903	1180
471.omnetpp	48	681	441	<u>681</u>	<u>440</u>	681	440	48	646	464	645	465	<u>645</u>	<u>465</u>
473.astar	48	655	515	<u>653</u>	<u>516</u>	653	516	48	655	515	<u>653</u>	<u>516</u>	653	516
483.xalancbmk	48	341	972	<u>340</u>	<u>973</u>	340	974	48	341	972	<u>340</u>	<u>973</u>	340	974

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

Intel HT Technology = Enabled
CPU performance set to HPC
Power Technology set to Custom
CPU Power State C6 set to Disabled
CPU Power State C1 Enhanced set to Disabled
Memory RAS configuration set to Maximum Performance
DRAM Clock Throttling Set to Performance
Sysinfo program /opt/cpu2006-1.4/config/sysinfo.rev6818
\$Rev: 6818 \$ \$Date:: 2012-07-17 #\$ e86d102572650a6e4d596a3cee98f191
running on specompcpu Fri Apr 11 03:37:38 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 E7-4860 v2 @ 2.60GHz
Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Cisco Systems

Cisco UCS B260 M4 (Intel Xeon E7-4860 v2, 2.60 GHz)

SPECint_rate2006 = 934

SPECint_rate_base2006 = 904

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

Test date: Apr-2014
Hardware Availability: May-2014
Software Availability: Sep-2013

Platform Notes (Continued)

```

2 "physical id"s (chips)
48 "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 : 12
siblings  : 24
physical 0: cores 0 1 2 3 4 5 8 9 10 11 12 13
physical 1: cores 0 1 2 3 4 5 8 9 10 11 12 13
cache size : 30720 KB

From /proc/meminfo
MemTotal:      264103304 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 specompcpu 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 Apr 11 03:16

SPEC is set to: /opt/cpu2006-1.4
Filesystem      Type      Size  Used Avail Use% Mounted on
/dev/sdal        ext4      275G  29G  232G  11% /

Additional information from dmidecode:
BIOS Cisco Systems, Inc. EXM4-1.2.2.1.12.012920142034 01/29/2014
Memory:
32x 8 GB
32x 0xCE00 M393B1K70QB0-YK0 8 GB 1333 MHz 2 rank
16x 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/cpu2006-1.4/libs/32:/opt/cpu2006-1.4/libs/64:/opt/cpu2006-1.4/sh"

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

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Cisco Systems

Cisco UCS B260 M4 (Intel Xeon E7-4860 v2, 2.60 GHz)

SPECint_rate2006 = 934

SPECint_rate_base2006 = 904

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

Test date: Apr-2014
Hardware Availability: May-2014
Software Availability: Sep-2013

General Notes (Continued)

```
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.:
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:
-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/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

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Cisco Systems

SPECint_rate2006 = 934

Cisco UCS B260 M4 (Intel Xeon E7-4860 v2, 2.60 GHz)

SPECint_rate_base2006 = 904

CPU2006 license: 9019

Test date: Apr-2014

Test sponsor: Cisco Systems

Hardware Availability: May-2014

Tested by: Cisco Systems

Software Availability: Sep-2013

Peak Compiler Invocation (Continued)

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

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.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

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Cisco Systems

Cisco UCS B260 M4 (Intel Xeon E7-4860 v2, 2.60 GHz)

SPECint_rate2006 = 934

SPECint_rate_base2006 = 904

CPU2006 license: 9019

Test sponsor: Cisco Systems

Tested by: Cisco Systems

Test date: Apr-2014

Hardware Availability: May-2014

Software Availability: Sep-2013

Peak Optimization Flags (Continued)

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/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-V1.2.20140311.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-V1.2.20140311.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.

Tested with SPEC CPU2006 v1.2.
Report generated on Thu Jul 24 22:21:17 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 6 May 2014.