



SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Cisco Systems

SPECint®2006 = 49.9

Cisco UCS C22 M3 (Intel Xeon E5-2470, 2.30 GHz)

SPECint_base2006 = 46.5

CPU2006 license: 9019

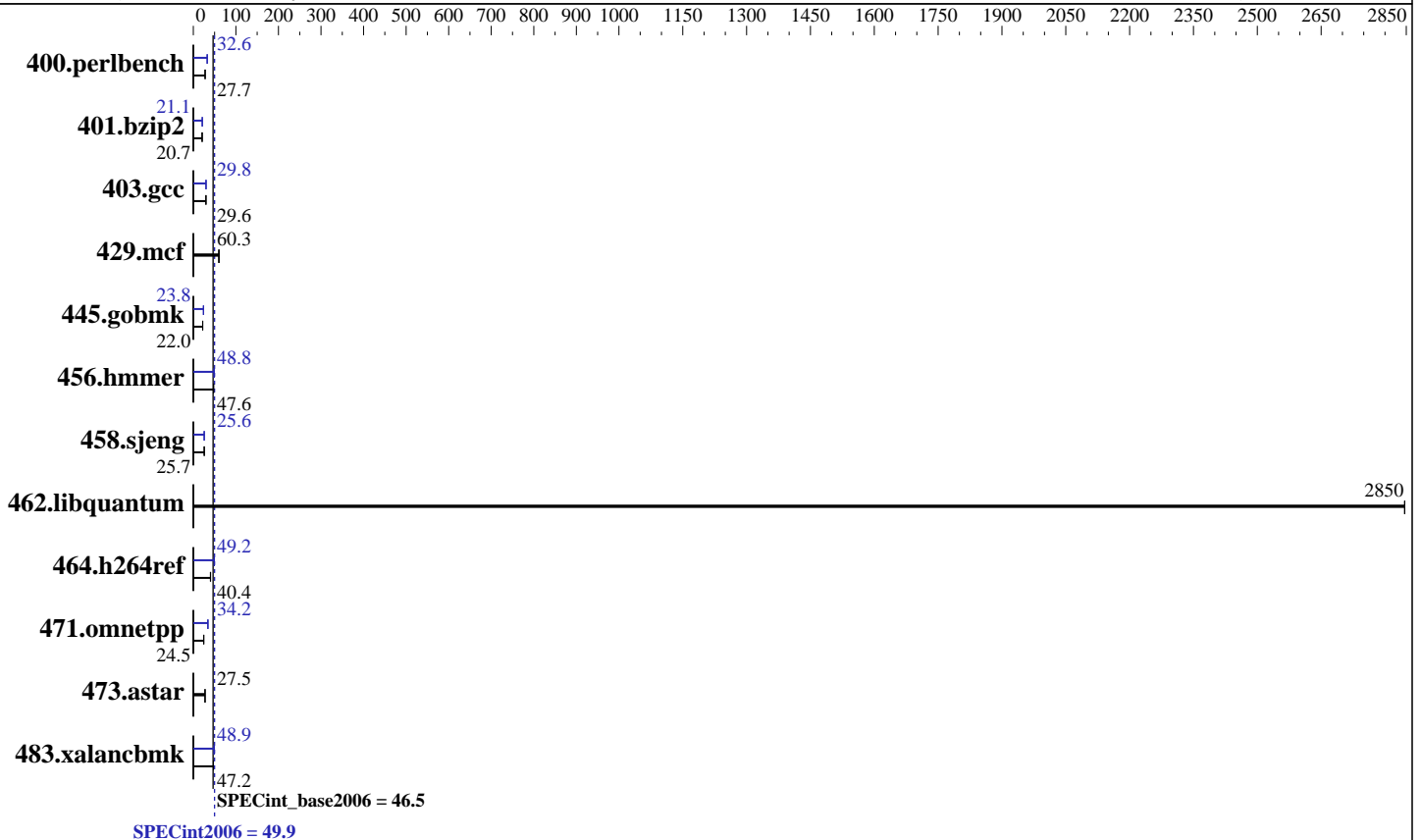
Test date: May-2012

Test sponsor: Cisco Systems

Hardware Availability: Aug-2012

Tested by: Cisco Systems

Software Availability: Dec-2011



Hardware

CPU Name: Intel Xeon E5-2470
 CPU Characteristics: Intel Turbo Boost Technology up to 3.10 GHz
 CPU MHz: 2300
 FPU: Integrated
 CPU(s) enabled: 16 cores, 2 chips, 8 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: 20 MB I+D on chip per chip
 Other Cache: None
 Memory: 96 GB (12 x 8 GB 2Rx4 PC3-12800R-11, ECC)
 Disk Subsystem: 1 X 146 GB 15000 RPM SAS
 Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 6.2 (Santiago)
 2.6.32-220.el6.x86_64
 Compiler: C/C++: Version 12.1.3.293 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 V9.01



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Cisco Systems

SPECint2006 = 49.9

Cisco UCS C22 M3 (Intel Xeon E5-2470, 2.30 GHz)

SPECint_base2006 = 46.5

CPU2006 license: 9019

Test date: May-2012

Test sponsor: Cisco Systems

Hardware Availability: Aug-2012

Tested by: Cisco Systems

Software Availability: Dec-2011

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	353	27.7	<u>352</u>	<u>27.7</u>	352	27.7	300	32.6	<u>299</u>	<u>32.6</u>	299	32.7
401.bzip2	467	20.7	<u>466</u>	<u>20.7</u>	466	20.7	458	21.1	<u>458</u>	<u>21.1</u>	459	21.0
403.gcc	272	29.6	272	29.6	<u>272</u>	<u>29.6</u>	270	29.8	<u>270</u>	<u>29.8</u>	270	29.8
429.mcf	151	60.6	153	59.5	<u>151</u>	<u>60.3</u>	151	60.6	153	59.5	<u>151</u>	<u>60.3</u>
445.gobmk	476	22.0	<u>476</u>	<u>22.0</u>	476	22.0	440	23.8	440	23.8	<u>440</u>	<u>23.8</u>
456.hammer	196	47.6	<u>196</u>	<u>47.6</u>	196	47.6	<u>191</u>	<u>48.8</u>	191	48.8	191	48.8
458.sjeng	471	25.7	471	25.7	<u>471</u>	<u>25.7</u>	472	25.6	473	25.6	<u>473</u>	<u>25.6</u>
462.libquantum	7.28	2850	7.28	2850	<u>7.28</u>	<u>2850</u>	7.28	2850	7.28	2850	<u>7.28</u>	<u>2850</u>
464.h264ref	552	40.1	546	40.6	<u>547</u>	<u>40.4</u>	<u>450</u>	<u>49.2</u>	449	49.3	450	49.1
471.omnetpp	<u>255</u>	<u>24.5</u>	255	24.5	256	24.4	183	34.2	<u>183</u>	<u>34.2</u>	182	34.3
473.astar	<u>255</u>	<u>27.5</u>	255	27.6	256	27.5	<u>255</u>	<u>27.5</u>	255	27.6	256	27.5
483.xalancbmk	<u>146</u>	<u>47.2</u>	146	47.2	146	47.2	141	48.8	141	48.9	<u>141</u>	<u>48.9</u>

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

```
Sysinfo program /opt/cpu2006-1.2/config/sysinfo.rev6800
$Rev: 6800 $ $Date:: 2011-10-11 #$ 6f2ebdff5032aaa42e583f96b07f99d3
running on localhost.localdomain Mon May 28 17:26:14 2012
```

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 E5-2470 0 @ 2.30GHz
 2 "physical id"s (chips)
 16 "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 : 8
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: 99041972 kB
```

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Cisco Systems

SPECint2006 = 49.9

Cisco UCS C22 M3 (Intel Xeon E5-2470, 2.30 GHz)

SPECint_base2006 = 46.5

CPU2006 license: 9019

Test date: May-2012

Test sponsor: Cisco Systems

Hardware Availability: Aug-2012

Tested by: Cisco Systems

Software Availability: Dec-2011

Platform Notes (Continued)

HugePages_Total: 0
Hugepagesize: 2048 kB

```
/usr/bin/lsb_release -d
Red Hat Enterprise Linux Server release 6.2 (Santiago)
```

```
From /etc/*release* /etc/*version*
redhat-release: Red Hat Enterprise Linux Server release 6.2 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.2 (Santiago)
system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server
```

```
uname -a:
Linux localhost.localdomain 2.6.32-220.el6.x86_64 #1 SMP Wed Nov 9 08:03:13
EST 2011 x86_64 x86_64 x86_64 GNU/Linux
```

```
run-level 3 May 28 17:03
```

```
SPEC is set to: /opt/cpu2006-1.2
Filesystem      Type      Size  Used Avail Use% Mounted on
/dev/sda1       ext4      134G  9.9G  118G   8% /
```

Additional information from dmidecode:

```
Memory:
12x 0xCE00 M393B1K70DH0-YK0 8 GB 1600 MHz 2 rank
```

(End of data from sysinfo program)

General Notes

Environment variables set by runspec before the start of the run:

```
KMP_AFFINITY = "granularity=fine,scatter"
LD_LIBRARY_PATH = "/opt/cpu2006-1.2/libs/32:/opt/cpu2006-1.2/libs/64"
OMP_NUM_THREADS = "16"
```

Intel HT Technology = disable

Binaries compiled on a system with 2 X Intel Xeon E5-2690 CPU + 128 GB memory using RHEL 6.2

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
```

Base Compiler Invocation

C benchmarks:

```
icc -m64
```

C++ benchmarks:

```
icpc -m64
```



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Cisco Systems

SPECint2006 = 49.9

Cisco UCS C22 M3 (Intel Xeon E5-2470, 2.30 GHz)

SPECint_base2006 = 46.5

CPU2006 license: 9019

Test date: May-2012

Test sponsor: Cisco Systems

Hardware Availability: Aug-2012

Tested by: Cisco Systems

Software Availability: Dec-2011

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.hmmmer: -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/smartheap -lsmartheap64

Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m64

400.perlbench: icc -m32

445.gobmk: icc -m32

464.h264ref: icc -m32

C++ benchmarks (except as noted below):

icpc -m32

473.astar: icpc -m64



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Cisco Systems

SPECint2006 = 49.9

Cisco UCS C22 M3 (Intel Xeon E5-2470, 2.30 GHz)

SPECint_base2006 = 46.5

CPU2006 license: 9019

Test date: May-2012

Test sponsor: Cisco Systems

Hardware Availability: Aug-2012

Tested by: Cisco Systems

Software Availability: Dec-2011

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.hmmr: -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.hmmr: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32
           -ansi-alias

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/smartheap -lsmartheap

```

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Cisco Systems

SPECint2006 = 49.9

Cisco UCS C22 M3 (Intel Xeon E5-2470, 2.30 GHz)

SPECint_base2006 = 46.5

CPU2006 license: 9019

Test date: May-2012

Test sponsor: Cisco Systems

Hardware Availability: Aug-2012

Tested by: Cisco Systems

Software Availability: Dec-2011

Peak Optimization Flags (Continued)

473.astar: basepeak = yes

483.xalancbmk: -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias
-Wl,-z,muldefs -L/smartheap -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-ic12.1-official-linux64.20120425.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-linux64.20120425.xml>
<http://www.spec.org/cpu2006/flags/Cisco-Platform-Settings-V1.2.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 08:48:19 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 22 June 2012.