



SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Cisco Systems

SPECint®_rate2006 = 438

Cisco UCS C22 M3 (Intel Xeon E5-2440, 2.40 GHz)

SPECint_rate_base2006 = 422

CPU2006 license: 9019

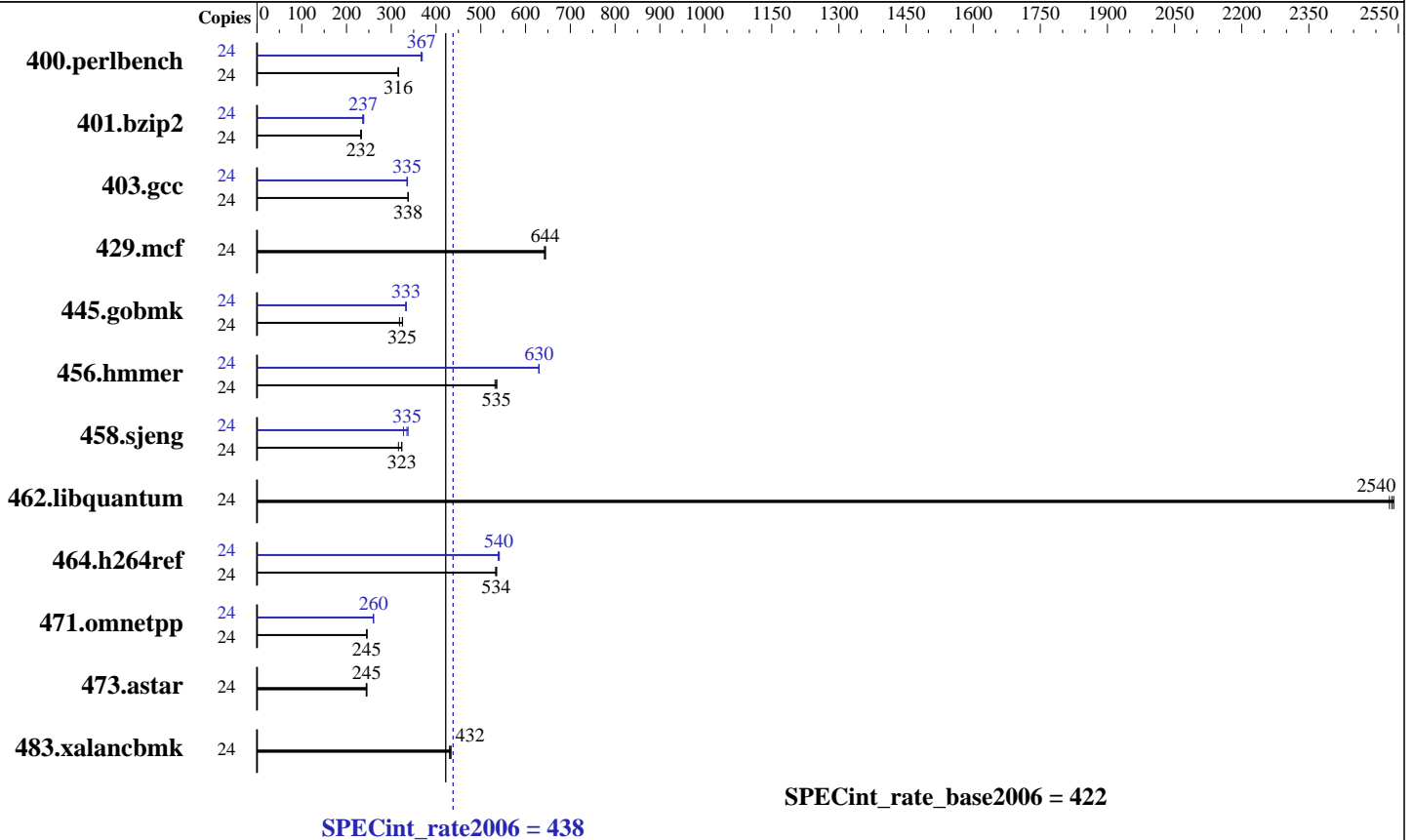
Test date: Jun-2012

Test sponsor: Cisco Systems

Hardware Availability: Aug-2012

Tested by: Cisco Systems

Software Availability: Feb-2012



Hardware

CPU Name: Intel Xeon E5-2440
 CPU Characteristics: Intel Turbo Boost Technology up to 2.90 GHz
 CPU MHz: 2400
 FPU: Integrated
 CPU(s) enabled: 12 cores, 2 chips, 6 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: 15 MB I+D on chip per chip
 Other Cache: None
 Memory: 128 GB (16 x 8 GB 2Rx4 PC3-12800R-11, ECC, running at 1333 MHz and CL9)
 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: No
 File System: ext4
 System State: Run level 3 (multi-user)
 Base Pointers: 32-bit
 Peak Pointers: 32/64-bit
 Other Software: Microquill SmartHeap V9.01



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Cisco Systems

SPECint_rate2006 = 438

Cisco UCS C22 M3 (Intel Xeon E5-2440, 2.40 GHz)

SPECint_rate_base2006 = 422

CPU2006 license: 9019

Test date: Jun-2012

Test sponsor: Cisco Systems

Hardware Availability: Aug-2012

Tested by: Cisco Systems

Software Availability: Feb-2012

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	24	741	316	<u>743</u>	<u>316</u>	744	315	24	635	369	640	367	<u>639</u>	<u>367</u>
401.bzip2	24	993	233	<u>997</u>	<u>232</u>	1000	232	24	980	236	971	239	<u>976</u>	<u>237</u>
403.gcc	24	<u>572</u>	<u>338</u>	573	337	572	338	24	<u>576</u>	<u>335</u>	576	335	575	336
429.mcf	24	341	642	340	644	<u>340</u>	<u>644</u>	24	341	642	340	644	<u>340</u>	<u>644</u>
445.gobmk	24	791	318	<u>775</u>	<u>325</u>	774	325	24	755	333	757	332	<u>756</u>	<u>333</u>
456.hammer	24	418	536	421	532	<u>419</u>	<u>535</u>	24	356	629	355	630	<u>355</u>	<u>630</u>
458.sjeng	24	919	316	<u>898</u>	<u>323</u>	898	323	24	887	327	860	338	<u>867</u>	<u>335</u>
462.libquantum	24	196	2540	197	2530	<u>196</u>	<u>2540</u>	24	196	2540	197	2530	<u>196</u>	<u>2540</u>
464.h264ref	24	996	533	<u>994</u>	<u>534</u>	992	536	24	<u>983</u>	<u>540</u>	986	539	981	541
471.omnetpp	24	611	246	<u>611</u>	<u>245</u>	612	245	24	<u>576</u>	<u>260</u>	577	260	576	260
473.astar	24	<u>687</u>	<u>245</u>	687	245	691	244	24	<u>687</u>	<u>245</u>	687	245	691	244
483.xalancbmk	24	<u>383</u>	<u>432</u>	382	433	385	430	24	<u>383</u>	<u>432</u>	382	433	385	430

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

Sysinfo program /opt/cpu2006-1.2/config/sysinfo.rev6800
\$Rev: 6800 \$ \$Date:: 2011-10-11 #\$ 6f2ebdff5032aaa42e583f96b07f99d3
running on localhost.localdomain Fri Jun 29 15:14:07 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 E5-2440 0 @ 2.40GHz
 2 "physical id"s (chips)
 24 "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 : 6
siblings  : 12
```

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Cisco Systems

SPECint_rate2006 = 438

Cisco UCS C22 M3 (Intel Xeon E5-2440, 2.40 GHz)

SPECint_rate_base2006 = 422

CPU2006 license: 9019

Test sponsor: Cisco Systems

Tested by: Cisco Systems

Test date: Jun-2012

Hardware Availability: Aug-2012

Software Availability: Feb-2012

Platform Notes (Continued)

```
physical 0: cores 0 1 2 3 4 5
physical 1: cores 0 1 2 3 4 5
cache size : 15360 KB
```

```
From /proc/meminfo
MemTotal:      99040980 kB
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 Jun 29 07:54
```

```
SPEC is set to: /opt/cpu2006-1.2
Filesystem      Type      Size  Used Avail Use% Mounted on
/dev/sdal        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:

```
LD_LIBRARY_PATH = "/opt/cpu2006-1.2/libs/32:/opt/cpu2006-1.2/libs/64"
```

Intel HT Technology = enable

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 -m32
```

Continued on next page

Standard Performance Evaluation Corporation

info@spec.org

http://www.spec.org/

Page 3



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Cisco Systems

SPECint_rate2006 = 438

Cisco UCS C22 M3 (Intel Xeon E5-2440, 2.40 GHz)

SPECint_rate_base2006 = 422

CPU2006 license: 9019

Test date: Jun-2012

Test sponsor: Cisco Systems

Hardware Availability: Aug-2012

Tested by: Cisco Systems

Software Availability: Feb-2012

Base Compiler Invocation (Continued)

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/smartheap -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

456.hmmer: icc -m64

458.sjeng: icc -m64

C++ benchmarks:
icpc -m32



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Cisco Systems

SPECint_rate2006 = 438

Cisco UCS C22 M3 (Intel Xeon E5-2440, 2.40 GHz)

SPECint_rate_base2006 = 422

CPU2006 license: 9019

Test sponsor: Cisco Systems

Tested by: Cisco Systems

Test date: Jun-2012

Hardware Availability: Aug-2012

Software Availability: Feb-2012

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

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/smartheap -lsmartheap

473.astar: basepeak = yes

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Cisco Systems

SPECint_rate2006 = 438

Cisco UCS C22 M3 (Intel Xeon E5-2440, 2.40 GHz)

SPECint_rate_base2006 = 422

CPU2006 license: 9019

Test date: Jun-2012

Test sponsor: Cisco Systems

Hardware Availability: Aug-2012

Tested by: Cisco Systems

Software Availability: Feb-2012

Peak Optimization Flags (Continued)

483.xalanbmk: 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-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 11:47:35 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 31 July 2012.