



SPEC® CINT2006 Result

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Cisco Systems

SPECint®_rate2006 = 254

Cisco UCS B230 M2 (Intel Xeon E7-2803, 1.73 GHz)

SPECint_rate_base2006 = 239

CPU2006 license: 9019

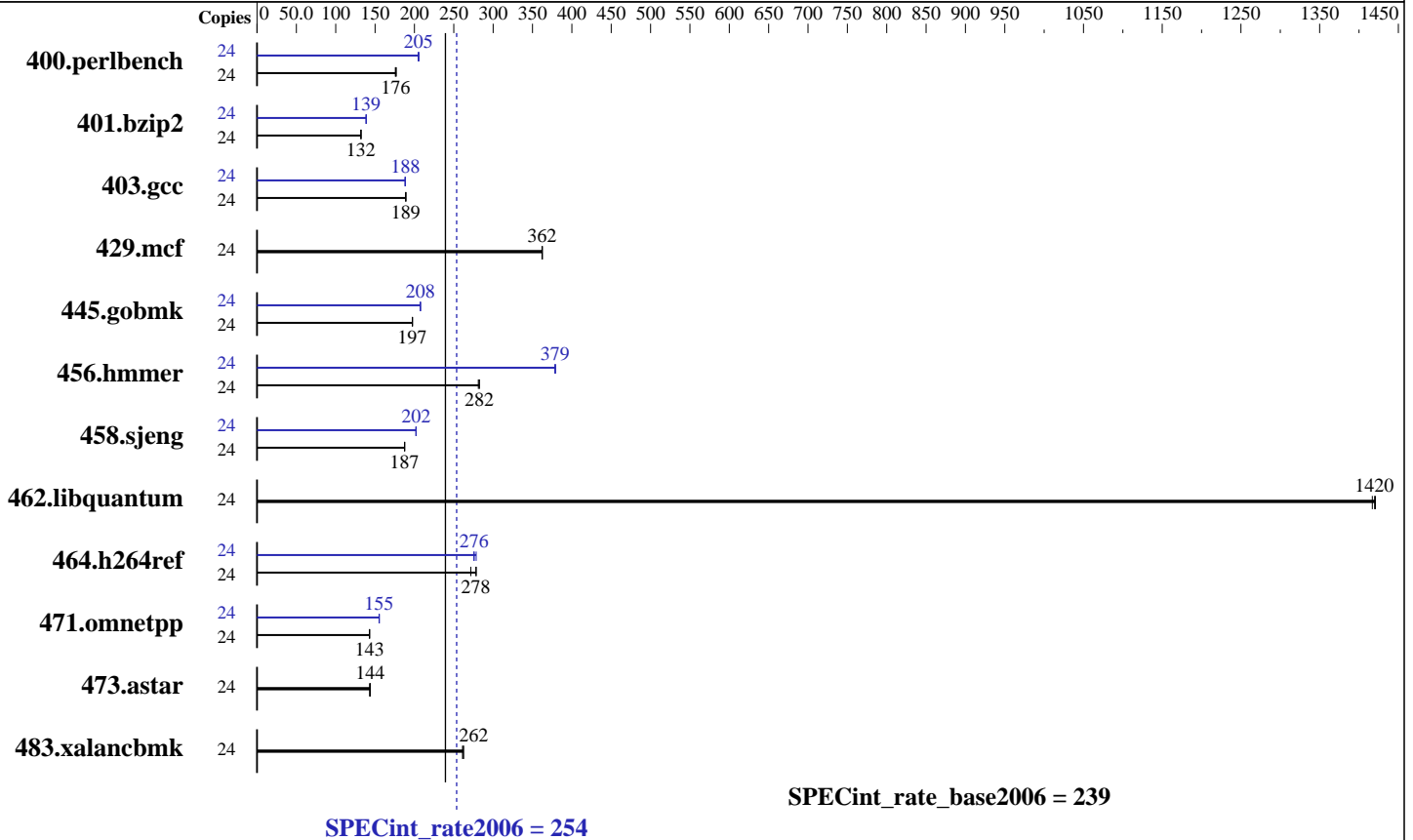
Test date: Jan-2012

Test sponsor: Cisco Systems

Hardware Availability: May-2011

Tested by: Cisco Systems

Software Availability: Oct-2011



Hardware

CPU Name: Intel Xeon E7-2803
 CPU Characteristics:
 CPU MHz: 1733
 FPU: Integrated
 CPU(s) enabled: 12 cores, 2 chips, 6 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: 18 MB I+D on chip per chip
 Other Cache: None
 Memory: 256 GB (32 x 8 GB 2Rx4 PC3L-10600R-9, ECC)
 Disk Subsystem: 2 x 64 GB SSD, SATA Gen2, 3Gb/s
 Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 6.1 (Santiago)
 2.6.32-131.0.15.el6.x86_64
 Compiler: C/C++: Version 12.1.0.225 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



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Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	24	1325	177	1332	176	1334	176	24	1145	205	1140	206	1143	205
401.bzip2	24	1756	132	1754	132	1752	132	24	1671	139	1670	139	1669	139
403.gcc	24	1021	189	1024	189	1022	189	24	1028	188	1025	188	1024	189
429.mcf	24	605	362	604	363	604	362	24	605	362	604	363	604	362
445.gobmk	24	1276	197	1276	197	1274	198	24	1212	208	1213	208	1214	207
456.hammer	24	793	283	796	281	793	282	24	591	379	592	378	590	379
458.sjeng	24	1550	187	1547	188	1549	187	24	1437	202	1437	202	1438	202
462.libquantum	24	350	1420	350	1420	351	1420	24	350	1420	350	1420	351	1420
464.h264ref	24	1955	272	1911	278	1906	279	24	1907	278	1925	276	1928	276
471.omnetpp	24	1049	143	1050	143	1049	143	24	966	155	967	155	965	155
473.astar	24	1171	144	1178	143	1171	144	24	1171	144	1178	143	1171	144
483.xalancbmk	24	634	261	631	262	631	262	24	634	261	631	262	631	262

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/config/sysinfo.rev6800
\$Rev: 6800 \$ \$Date:: 2011-10-11 #\$ 6f2ebdff5032aaa42e583f96b07f99d3
running on localhost.localdomain Mon Feb 6 15:38:46 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 E7- 2803 @ 1.73GHz
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

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Platform Notes (Continued)

```
physical 0: cores 0 1 2 18 24 25
physical 1: cores 0 1 2 18 24 25
cache size : 18432 KB
```

```
From /proc/meminfo
MemTotal:      264434372 kB
HugePages_Total: 0
Hugepagesize:  2048 kB
```

```
/usr/bin/lsb_release -d
Red Hat Enterprise Linux Server release 6.1 (Santiago)
```

```
From /etc/*release* /etc/*version*
redhat-release: Red Hat Enterprise Linux Server release 6.1 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.1 (Santiago)
system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server
```

```
uname -a:
Linux localhost.localdomain 2.6.32-131.0.15.el6.x86_64 #1 SMP Tue May 10
15:42:40 EDT 2011 x86_64 x86_64 x86_64 GNU/Linux
```

```
run-level 3 Feb 6 15:21
```

```
SPEC is set to: /opt/cpu2006
Filesystem      Type      Size  Used Avail Use% Mounted on
/dev/sdal       ext4      58G   5.5G   50G  10% /
```

Additional information from dmidecode:

(End of data from sysinfo program)

General Notes

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

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

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RHEL5.5

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.:

```
numactl --interleave=all runspec <etc>
```

Base Compiler Invocation

C benchmarks:

```
icc -m32
```

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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



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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



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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-linux64.20111122.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-linux64.20111122.xml>

<http://www.spec.org/cpu2006/flags/Cisco-Platform-Settings-V1.2.xml>

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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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