



SPEC® CINT2006 Result

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ACTION S.A.

ACTINA SOLAR 222 S5 (Intel Xeon E5-2609 v2, 2.50 GHz)

SPECint®_rate2006 = 252

SPECint_rate_base2006 = 244

CPU2006 license: 9008

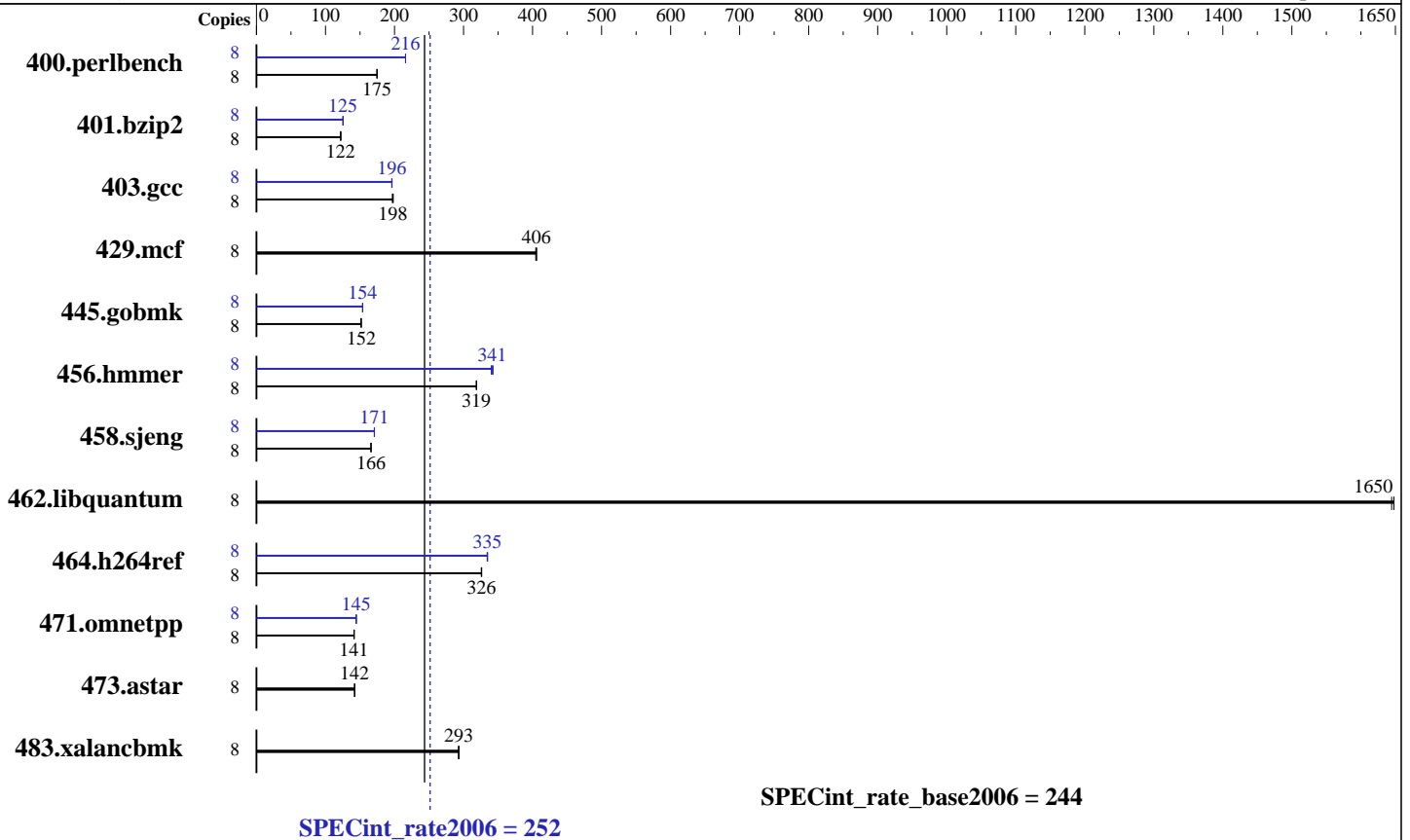
Test sponsor: ACTION S.A.

Tested by: ACTION S.A.

Test date: Feb-2014

Hardware Availability: Oct-2013

Software Availability: Sep-2013



Hardware

CPU Name: Intel Xeon E5-2609 v2
 CPU Characteristics:
 CPU MHz: 2500
 FPU: Integrated
 CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip
 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: 10 MB I+D on chip per chip
 Other Cache: None
 Memory: 128 GB (16 x 8 GB 2Rx4 PC3-14900R-13, ECC, running at 1333 MHz and CL9)
 Disk Subsystem: 1 x 240 GB SATA II SSD
 Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 6.4 (Santiago)
 2.6.32-358.11.1.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



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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	8	447	175	447	175	448	175	8	362	216	362	216	362	216
401.bzip2	8	632	122	633	122	633	122	8	617	125	616	125	614	126
403.gcc	8	325	198	326	198	327	197	8	328	196	328	196	328	196
429.mcf	8	180	406	180	405	180	406	8	180	406	180	405	180	406
445.gobmk	8	553	152	553	152	554	151	8	546	154	545	154	546	154
456.hammer	8	234	319	234	319	234	319	8	219	341	219	340	218	343
458.sjeng	8	583	166	584	166	583	166	8	566	171	567	171	567	171
462.libquantum	8	101	1640	101	1650	101	1650	8	101	1640	101	1650	101	1650
464.h264ref	8	543	326	544	326	543	326	8	530	334	529	335	529	335
471.omnetpp	8	353	141	354	141	353	142	8	346	145	347	144	346	145
473.astar	8	395	142	395	142	395	142	8	395	142	395	142	395	142
483.xalancbmk	8	188	293	189	293	188	293	8	188	293	189	293	188	293

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 /cpu2006.1.2/config/sysinfo.rev6818
\$Rev: 6818 \$ \$Date:: 2012-07-17 #\$ e86d102572650a6e4d596a3cee98f191
running on windows-dedevhl.action.pl Tue Feb 4 08:31:46 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 E5-2609 v2 @ 2.50GHz
2 "physical id"s (chips)
8 "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 : 4
siblings : 4

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Platform Notes (Continued)

```
physical 0: cores 0 1 2 3
physical 1: cores 0 1 2 3
cache size : 10240 KB
```

```
From /proc/meminfo
MemTotal:      132128568 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 windows-dedevh1.action.pl 2.6.32-358.11.1.el6.x86_64 #1 SMP Tue Nov 19
17:43:04 CET 2013 x86_64 x86_64 x86_64 GNU/Linux
```

```
run-level 3 Feb 4 08:25
```

```
SPEC is set to: /cpu2006.1.2
Filesystem      Type      Size  Used Avail Use% Mounted on
/dev/sdal        ext4      193G   65G  119G  36% /
```

```
Additional information from dmidecode:
BIOS American Megatrends Inc. 3.0a 07/31/2013
Memory:
16x 8 GB
16x Hynix Semiconducto HMT31GR7EFR4C 8 GB 1333 MHz 1 rank
```

(End of data from sysinfo program)
dmidecode does not properly detect memory modules
16 modules of 8 GB were used to run the test (128 GB total)

General Notes

Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/cpu2006.1.2/libs/32:/cpu2006.1.2/libs/64:/cpu2006.1.2/sh"

```
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>
Binaries compiled on a system with 2x Xeon E5-2650 v2 chips
+ 256 GB memory using RedHat EL 6.4
```



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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/cpu2006.1.2/sh -lsmarheap`

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/cpu2006.1.2/sh -lsmartheap

473.astar: basepeak = yes

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Peak Optimization Flags (Continued)

483.xalanbmk: basepeak = yes

Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.xml>

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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 20:08:34 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 25 February 2014.