



SPEC® CINT2006 Result

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ACTION S.A.

SPECint®_rate2006 = 222

ACTINA SOLAR 110 S6 (Intel Xeon E3-1241 v3, 3.50 GHz)

SPECint_rate_base2006 = 213

CPU2006 license: 9008

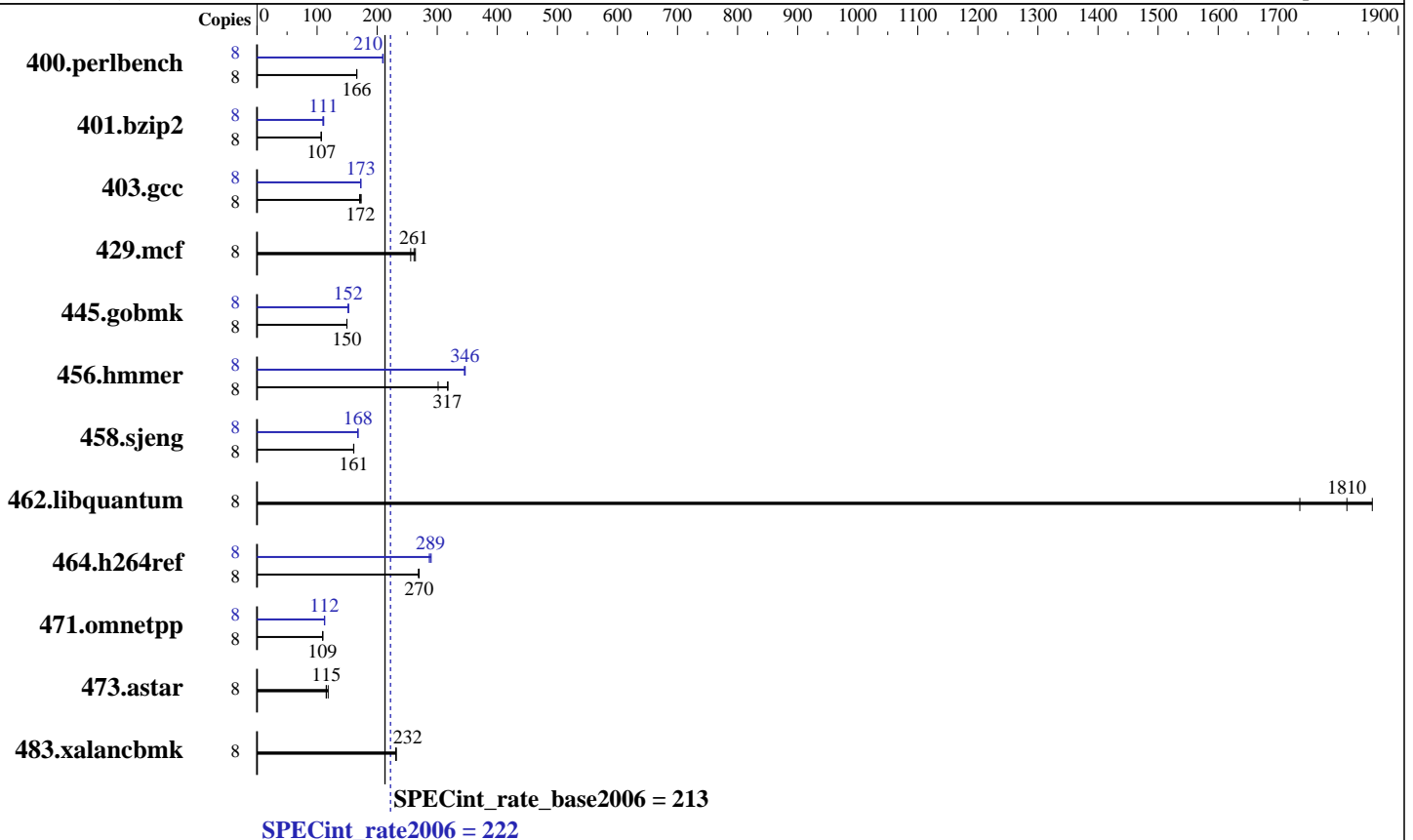
Test date: Jul-2015

Test sponsor: ACTION S.A.

Hardware Availability: Sep-2014

Tested by: ACTION S.A.

Software Availability: Sep-2014



Hardware

CPU Name: Intel Xeon E3-1241 v3
 CPU Characteristics: Intel Turbo Boost Technology up to 3.90 GHz
 CPU MHz: 3500
 FPU: Integrated
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip, 2 threads/core
 CPU(s) orderable: 1 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: 8 MB I+D on chip per chip
 Other Cache: None
 Memory: 32 GB (4 x 8 GB 2Rx8 PC3-12800U-13)
 Disk Subsystem: 1 x 240 GB SATA II SSD
 Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 6.6 (Santiago)
 2.6.32-504.8.1.el6.x86_64
 Compiler: C/C++: Version 15.0.0.090 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	471	166	471	166	<u>471</u>	<u>166</u>	8	<u>373</u>	<u>210</u>	374	209	372	210
401.bzip2	8	720	107	<u>721</u>	<u>107</u>	723	107	8	704	110	<u>697</u>	<u>111</u>	695	111
403.gcc	8	<u>374</u>	<u>172</u>	377	171	371	173	8	<u>373</u>	<u>173</u>	373	172	372	173
429.mcf	8	285	256	<u>279</u>	<u>261</u>	277	264	8	285	256	<u>279</u>	<u>261</u>	277	264
445.gobmk	8	561	150	560	150	<u>561</u>	<u>150</u>	8	<u>553</u>	<u>152</u>	554	152	550	153
456.hammer	8	248	302	235	318	<u>235</u>	<u>317</u>	8	<u>216</u>	<u>346</u>	216	345	215	347
458.sjeng	8	<u>602</u>	<u>161</u>	600	161	602	161	8	576	168	576	168	<u>576</u>	<u>168</u>
462.libquantum	8	<u>91.4</u>	<u>1810</u>	89.3	1860	95.5	1740	8	<u>91.4</u>	<u>1810</u>	89.3	1860	95.5	1740
464.h264ref	8	659	269	<u>656</u>	<u>270</u>	656	270	8	617	287	<u>614</u>	<u>289</u>	611	290
471.omnetpp	8	<u>457</u>	<u>109</u>	456	110	458	109	8	444	113	446	112	<u>444</u>	<u>112</u>
473.astar	8	487	115	<u>487</u>	<u>115</u>	474	118	8	487	115	<u>487</u>	<u>115</u>	474	118
483.xalancbmk	8	<u>238</u>	<u>232</u>	238	232	239	231	8	<u>238</u>	<u>232</u>	238	232	239	231

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Submit Notes

The taskset mechanism was used to bind copies to processors. The config file option 'submit' was used to generate taskset 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

BMC Setting: Default
Fan Mode = Full Speed

Sysinfo program /cpu2006.1.2/config/sysinfo.rev6818
\$Rev: 6818 \$ \$Date:: 2012-07-17 #\$ e86d102572650a6e4d596a3cee98f191
running on SUT Fri Jul 24 12:08:43 2015

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 E3-1241 v3 @ 3.50GHz
1 "physical id"s (chips)
8 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The
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Platform Notes (Continued)

following excerpts from /proc/cpuinfo might not be reliable. Use with caution.)

```
cpu cores : 4
siblings  : 8
physical 0: cores 0 1 2 3
cache size : 8192 KB
```

From /proc/meminfo

```
MemTotal: 32836660 kB
HugePages_Total: 0
Hugepagesize: 2048 kB
```

/usr/bin/lsb_release -d

Red Hat Enterprise Linux Server release 6.6 (Santiago)

From /etc/*release* /etc/*version*

```
redhat-release: Red Hat Enterprise Linux Server release 6.6 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.6 (Santiago)
system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server
```

uname -a:

```
Linux SUT 2.6.32-504.8.1.el6.x86_64 #1 SMP Wed Mar 11 12:12:13 CET 2015
x86_64 x86_64 x86_64 GNU/Linux
```

run-level 3 Jul 24 12:08

SPEC is set to: /cpu2006.1.2

```
Filesystem Type Size Used Avail Use% Mounted on
/dev/sdal ext4 212G 47G 154G 24% /
```

Additional information from dmidecode:

BIOS American Megatrends Inc. 2.0 03/28/2014

Memory:

```
4x 8 GB
4x 0793 W-MEM1600E38G 8 GB 1600 MHz 2 rank
```

(End of data from sysinfo program)

dmidecode does not properly detect memory modules

4 modules of 8 GB were used to run the test (32 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>
```

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General Notes (Continued)

Binaries compiled on a system with 2x Xeon E5-2650 v3 chips + 256 GB memory using RedHat EL 6.6

Base Compiler Invocation

C benchmarks:

```
icc -m32 -L/opt/intel/composer_xe_2015/lib/ia32
```

C++ benchmarks:

```
icpc -m32 -L/opt/intel/composer_xe_2015/lib/ia32
```

Base Portability Flags

```
400.perlbench: -DSPEC_CPU_LINUX_IA32  
462.libquantum: -DSPEC_CPU_LINUX  
483.xalancbmk: -DSPEC_CPU_LINUX
```

Base Optimization Flags

C benchmarks:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch  
-opt-mem-layout-trans=3
```

C++ benchmarks:

```
-xCORE-AVX2 -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 -L/opt/intel/composer_xe_2015/lib/ia32
```

```
400.perlbench: icc -m64
```

```
401.bzip2: icc -m64
```

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Peak Compiler Invocation (Continued)

456.hmmr: `icc -m64`

458.sjeng: `icc -m64`

C++ benchmarks:

`icpc -m32 -L/opt/intel/composer_xe_2015/lib/ia32`

Peak Portability Flags

400.perlbench: `-DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64`

401.bzip2: `-DSPEC_CPU_LP64`

456.hmmr: `-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: `-xCORE-AVX2(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: `-xCORE-AVX2(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: `-xCORE-AVX2 -ipo -O3 -no-prec-div`

429.mcf: `basepeak = yes`

445.gobmk: `-xCORE-AVX2(pass 2) -prof-gen(pass 1) -prof-use(pass 2) -ansi-alias -opt-mem-layout-trans=3`

456.hmmr: `-xCORE-AVX2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32`

458.sjeng: `-xCORE-AVX2(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: `-xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -unroll2 -ansi-alias`

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Peak Optimization Flags (Continued)

C++ benchmarks:

471.omnetpp: -xCORE-AVX2(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

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-ic15.0-official-linux64.html>

<http://www.spec.org/cpu2006/flags/ACTION.SA-Platform-Flags-RevD-aug-2015-For-Supermicro-Platform.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.xml>

<http://www.spec.org/cpu2006/flags/ACTION.SA-Platform-Flags-RevD-aug-2015-For-Supermicro-Platform.xml>

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For other inquiries, please contact webmaster@spec.org.

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