SPEC® CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

ACTION S.A.

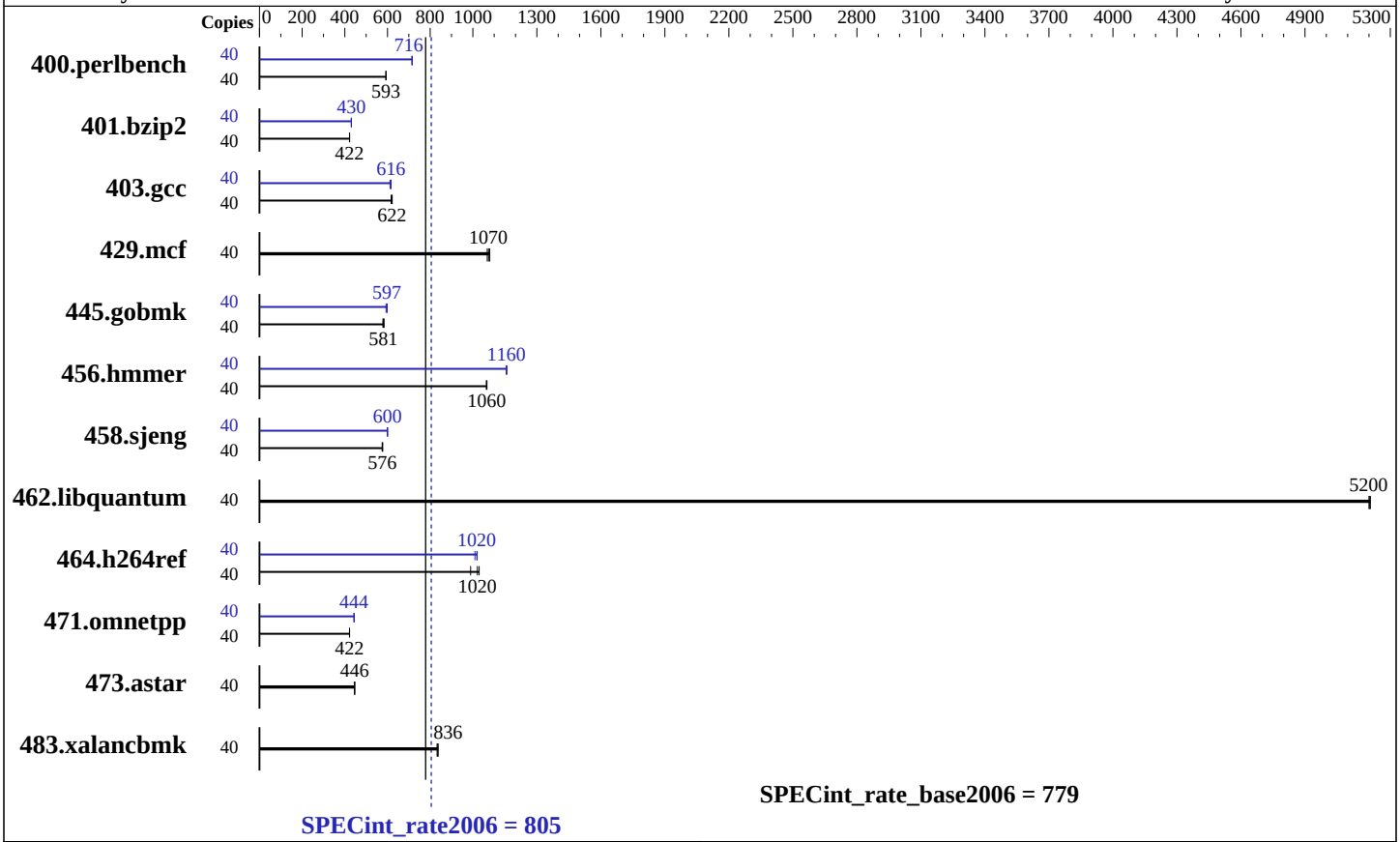
ACTINA SOLAR 820 X5 (Intel Xeon E5-2670 v2, 2.50 GHz)

SPECint®_rate2006 = 805

SPECint_rate_base2006 = 779

CPU2006 license: 9008
Test sponsor: ACTION S.A.
Tested by: ACTION S.A.

Test date: May-2015
Hardware Availability: Oct-2013
Software Availability: Oct-2014



Hardware

CPU Name:	Intel Xeon E5-2670 v2
CPU Characteristics:	Intel Turbo Boost Technology up to 3.30 GHz
CPU MHz:	2500
FPU:	Integrated
CPU(s) enabled:	20 cores, 2 chips, 10 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:	25 MB I+D on chip per chip
Other Cache:	None
Memory:	256 GB (16 x 16 GB 2Rx4 PC3-14900R-13, ECC)
Disk Subsystem:	1 x 240 GB SATA II SSD
Other Hardware:	None

Software

Operating System:	Red Hat Enterprise Linux Server release 6.6 (Santiago) 2.6.32-431.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

SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

ACTION S.A.

ACTINA SOLAR 820 X5 (Intel Xeon E5-2670 v2, 2.50 GHz)

SPECint_rate2006 = 805

SPECint_rate_base2006 = 779

CPU2006 license: 9008
Test sponsor: ACTION S.A.
Tested by: ACTION S.A.

Test date: May-2015
Hardware Availability: Oct-2013
Software Availability: Oct-2014

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	40	659	593	**659**	**593**	659	593	40	**546**	**716**	546	716	547	714
401.bzip2	40	915	422	**914**	**422**	914	422	40	897	430	896	431	**897**	**430**
403.gcc	40	522	617	**518**	**622**	518	622	40	522	617	**522**	**616**	526	612
429.mcf	40	342	1070	338	1080	**340**	**1070**	40	342	1070	338	1080	**340**	**1070**
445.gobmk	40	719	584	725	578	**723**	**581**	40	701	599	707	593	**703**	**597**
456.hmmer	40	**350**	**1060**	351	1060	350	1070	40	322	1160	323	1160	**322**	**1160**
458.sjeng	40	841	575	**841**	**576**	838	578	40	809	599	**807**	**600**	806	601
462.libquantum	40	159	5210	**159**	**5200**	159	5200	40	159	5210	**159**	**5200**	159	5200
464.h264ref	40	**867**	**1020**	895	990	860	1030	40	867	1020	877	1010	**869**	**1020**
471.omnetpp	40	**592**	**422**	593	422	592	422	40	563	444	**564**	**444**	564	443
473.astar	40	**629**	**446**	629	447	632	445	40	**629**	**446**	629	447	632	445
483.xalancbmk	40	330	837	332	832	**330**	**836**	40	330	837	332	832	**330**	**836**

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

```
Bios Settings
System Acoustic and Performance Configuration = Performance
Select Memory RAS Configuration = Maximum Performance
Intel(R) Turbo Boost Technology = Enabled
Processor C3 = Disabled
Processor C6 = Disabled

Sysinfo program /cpu2006.1.2/config/sysinfo.rev6818
$Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
running on SUT Thu May 14 16:03:05 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
```

Continued on next page

Platform Notes (Continued)

```
      model name : Intel(R) Xeon(R) CPU E5-2670 v2 @ 2.50GHz
         2 "physical id"s (chips)
         40 "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 : 10
         siblings  : 20
         physical 0: cores 0 1 2 3 4 8 9 10 11 12
         physical 1: cores 0 1 2 3 4 8 9 10 11 12
      cache size : 25600 KB

   From /proc/meminfo
      MemTotal:       264426684 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 2.6.32-431.el6.x86_64 #1 SMP Sun Nov 10 22:19:54 EST 2013 x86_64
      x86_64 x86_64 GNU/Linux

   run-level 3 May 14 16:01

   SPEC is set to: /cpu2006.1.2
      Filesystem     Type  Size  Used Avail Use% Mounted on
      /dev/sda1      ext4  212G   52G  150G  26% /

   Additional information from dmidecode:
     BIOS Intel Corp. SE5C600.86B.02.04.0003.102320141138 10/23/2014
     Memory:
      16x   16 GB
      16x Samsung M393B2G70QH0-CMA 16 GB 1867 MHz 2 rank

   (End of data from sysinfo program)
   dmidecode does not properly detect memory modules
   16 modules of 16 GB were used to run the test (256 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:
```

Continued on next page

General Notes (Continued)

```
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
```

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 -lsmartheap
```

Base Other Flags

C benchmarks:

403.gcc: `-Dalloca=_alloca`

Peak Compiler Invocation

C benchmarks (except as noted below):
```
icc  -m32
```

Continued on next page

Peak Compiler Invocation (Continued)

400.perlbench: icc -m64

401.bzip2: icc -m64

456.hmmer: icc -m64

458.sjeng: icc -m64

C++ benchmarks:
icpc -m32

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

Continued on next page

Peak Optimization Flags (Continued)

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

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-ic14.0-official-linux64.20140128.html
http://www.spec.org/cpu2006/flags/ACTION.SA-Platform-Flags-RevB-apr-2014-For-Intel-Platform.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.xml
http://www.spec.org/cpu2006/flags/ACTION.SA-Platform-Flags-RevB-apr-2014-For-Intel-Platform.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 Tue Jun 2 13:47:26 2015 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 2 June 2015.