SPEC® CINT2006 Result

ACTION S.A.

ACTINA SOLAR 202 S6 (Intel Xeon E5-2630 v3, 2.40 GHz)

$SPECint^{®}\_rate2006 =$ 702

$SPECint\_rate\_base2006 =$ 673

CPU2006 license: 9008

Test sponsor: ACTION S.A.

Tested by: ACTION S.A.

Test date: Apr-2015

Hardware Availability: Sep-2014

Software Availability: Sep-2014

SPECint_rate_base2006 = 673

SPECint_rate2006 = 702

Hardware

CPU Name: Intel Xeon E5-2630 v3

CPU Characteristics: Intel Turbo Boost Technology up to 3.20 GHz

CPU MHz: 2400

FPU: Integrated

CPU(s) enabled: 16 cores, 2 chips, 8 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: 20 MB I+D on chip per chip

Other Cache: None

Memory: 256 GB (16 x 16 GB 2Rx4 PC4-2133P-R, running at 1866 MHz)

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

SPEC CINT2006 Result
Copyright 2006-2015 Standard Performance Evaluation Corporation

ACTION S.A.

ACTINA SOLAR 202 S6 (Intel Xeon E5-2630 v3, 2.40 GHz)

SPECint_rate2006 = 702

SPECint_rate_base2006 = 673

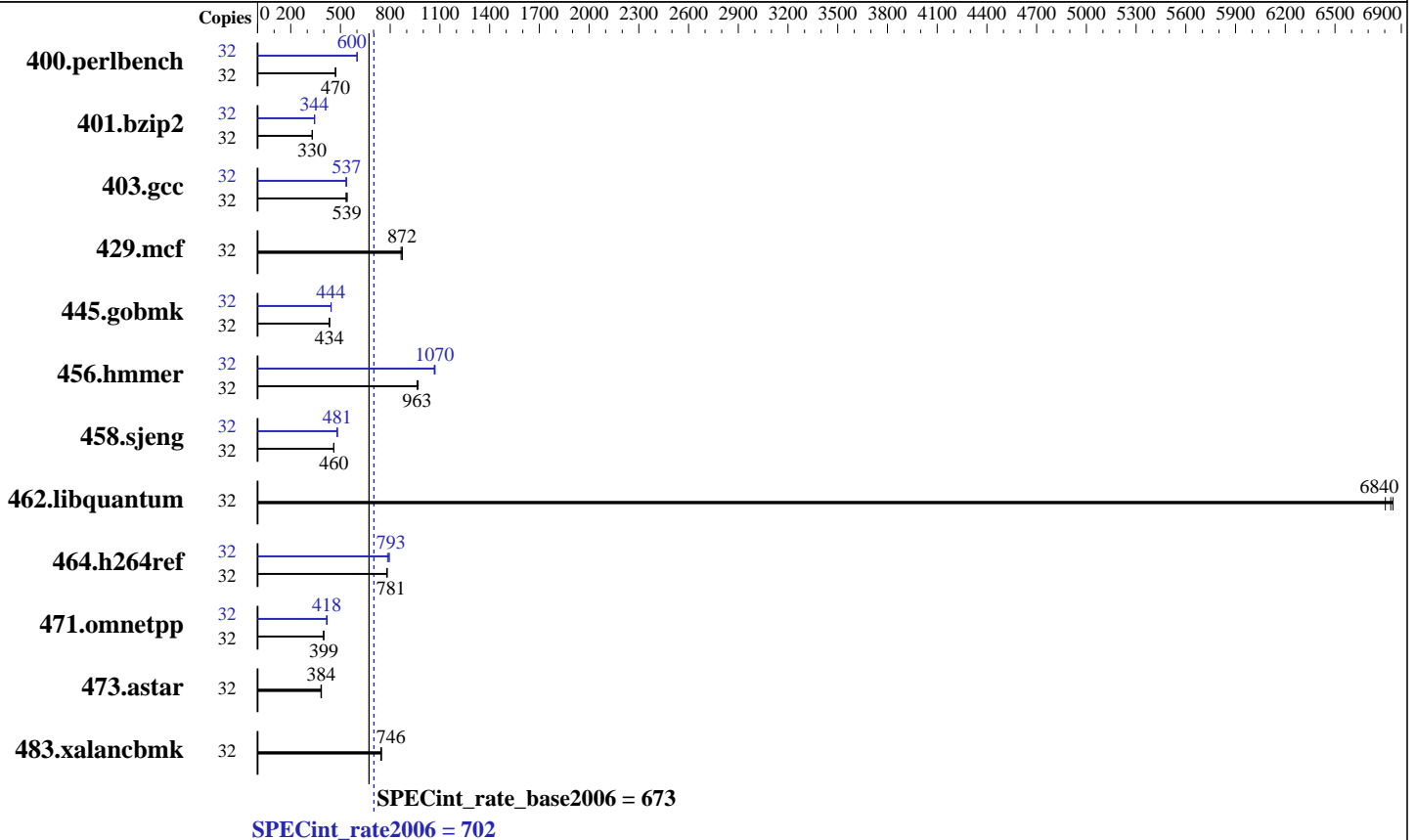**CPU2006 license:** 9008　　　　　　　　　　　　　　　　　**Test date:** Apr-2015
Test sponsor: ACTION S.A.　　　　　　　　　　　　**Hardware Availability:** Sep-2014
Tested by: ACTION S.A.　　　　　　　　　　　　　**Software Availability:** Sep-2014

Results Table

Benchmark	Copies	Base Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Peak Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	32	665	470	664	471	**665**	**470**	32	**521**	**600**	520	602	521	600
401.bzip2	32	**936**	**330**	936	330	935	330	32	897	344	899	343	**898**	**344**
403.gcc	32	483	534	**478**	**539**	477	540	32	**480**	**537**	483	533	480	537
429.mcf	32	337	866	**335**	**872**	334	873	32	337	866	**335**	**872**	334	873
445.gobmk	32	775	433	**774**	**434**	773	434	32	757	443	**757**	**444**	757	444
456.hmmer	32	**310**	**963**	308	969	310	963	32	279	1070	280	1070	**279**	**1070**
458.sjeng	32	841	460	842	460	**842**	**460**	32	806	480	**805**	**481**	805	481
462.libquantum	32	97.5	6800	**97.0**	**6840**	96.8	6850	32	97.5	6800	**97.0**	**6840**	96.8	6850
464.h264ref	32	906	782	**906**	**781**	909	779	32	892	794	**893**	**793**	903	784
471.omnetpp	32	**501**	**399**	502	398	501	399	32	**478**	**418**	480	416	476	420
473.astar	32	**585**	**384**	587	383	583	385	32	**585**	**384**	587	383	583	385
483.xalancbmk	32	**296**	**746**	295	747	297	743	32	**296**	**746**	295	747	297	743

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
    Power Technology = Energy Efficient
    Enforce POR = Disabled

    BMC Setting
    Fan Mode = Full Speed

    Sysinfo program /cpu2006.1.2/config/sysinfo.rev6818
    $Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
    running on SUT Fri Apr 17 09:57:23 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
```

ACTION S.A.

ACTINA SOLAR 202 S6 (Intel Xeon E5-2630 v3, 2.40 GHz)

SPECint_rate2006 =   702

SPECint_rate_base2006 = 673

CPU2006 license: 9008

Test sponsor: ACTION S.A.

Tested by: ACTION S.A.

Test date: Apr-2015

Hardware Availability: Sep-2014

Software Availability: Sep-2014

Platform Notes (Continued)

```
    model name : Intel(R) Xeon(R) CPU E5-2630 v3 @ 2.40GHz
       2 "physical id"s (chips)
       32 "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 : 8
       siblings  : 16
       physical 0: cores 0 1 2 3 4 5 6 7
       physical 1: cores 0 1 2 3 4 5 6 7
    cache size : 20480 KB

  From /proc/meminfo
    MemTotal:       264425916 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 Apr 17 09:53

  SPEC is set to: /cpu2006.1.2
    Filesystem     Type  Size  Used Avail Use% Mounted on
    /dev/sda1      ext4  212G   37G  165G  18% /

  Additional information from dmidecode:
    BIOS American Megatrends Inc. 1.0c 02/12/2015
    Memory:
    16x    16 GB
    2x Samsung(date:14/33) M393A2G40DB0-CPB 16 GB 1866 MHz 2 rank
    14x Samsung(date:14/40) M393A2G40DB0-CPB 16 GB 1866 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"
```

Continued on next page

SPEC CINT2006 Result

ACTION S.A.

ACTINA SOLAR 202 S6 (Intel Xeon E5-2630 v3, 2.40 GHz)

SPECint_rate2006 =   702

SPECint_rate_base2006 = 673

General Notes (Continued)

```
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 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 -lsmartheap
```

Base Other Flags

C benchmarks:

```
    403.gcc: -Dalloca=_alloca
```

SPEC CINT2006 Result
Copyright 2006-2015 Standard Performance Evaluation Corporation

ACTION S.A.

ACTINA SOLAR 202 S6 (Intel Xeon E5-2630 v3, 2.40 GHz)

SPECint_rate2006 =   702

SPECint_rate_base2006 =   673

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

Test date: Apr-2015
Hardware Availability: Sep-2014
Software Availability: Sep-2014

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`

456.hmmer: `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.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: `-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.hmmer: `-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`

Continued on next page

ACTION S.A.

ACTINA SOLAR 202 S6 (Intel Xeon E5-2630 v3, 2.40 GHz)

SPECint_rate2006 = 702

SPECint_rate_base2006 = 673

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

Test date: Apr-2015
Hardware Availability: Sep-2014
Software Availability: Sep-2014

Peak Optimization Flags (Continued)

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

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-RevC-jan-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-RevC-jan-2015-For-Supermicro-Platform.xml

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 Wed Apr 8 11:03:13 2015 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 7 April 2015.