SPEC® CINT2006 Result

ACTION S.A.

ACTINA SOLAR 222 S6 (Intel Xeon E5-2603 v3, 1.60 GHz)

$SPECint®\_rate2006 =$ 277

$SPECint\_rate\_base2006 =$ 269

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

SPECint_rate_base2006 = 269

SPECint_rate2006 = 277

Hardware

CPU Name:	Intel Xeon E5-2603 v3
CPU Characteristics:	
CPU MHz:	1600
FPU:	Integrated
CPU(s) enabled:	12 cores, 2 chips, 6 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:	15 MB I+D on chip per chip
Other Cache:	None
Memory:	128 GB (16 x 8 GB 1Rx4 PC4-2133P-R, running at 1600 MHz)
Disk Subsystem:	1 x 240 GB SATA II SSD
Other Hardware:	None

Software

Operating System:	Red Hat Enterprise Linux Server release 7.0 (Maipo) 3.10.0-123.20.1.el7.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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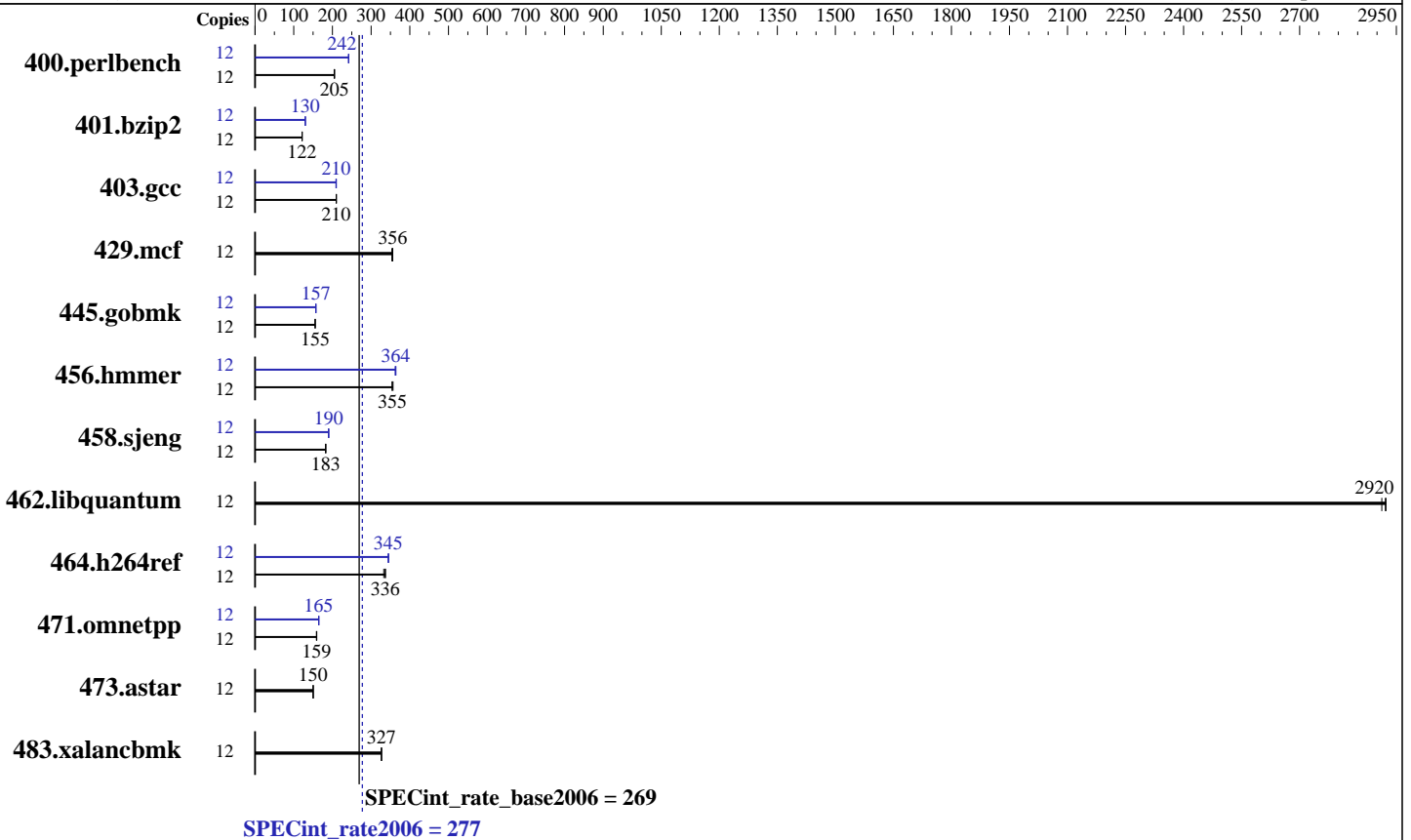
SPECint_rate_base2006 = 269

CPU2006 license: 9008
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Test date: Mar-2015
Hardware Availability: Sep-2014
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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	12	571	205	**571**	**205**	573	204	12	**484**	**242**	484	242	486	241
401.bzip2	12	**951**	**122**	951	122	953	122	12	891	130	892	130	**892**	**130**
403.gcc	12	460	210	460	210	**460**	**210**	12	460	210	**461**	**210**	462	209
429.mcf	12	309	354	307	356	**308**	**356**	12	309	354	307	356	**308**	**356**
445.gobmk	12	810	155	**810**	**155**	810	155	12	801	157	801	157	**801**	**157**
456.hmmer	12	**316**	**355**	316	354	314	357	12	309	362	**308**	**364**	308	364
458.sjeng	12	**795**	**183**	795	183	795	183	12	761	191	**764**	**190**	765	190
462.libquantum	12	**85.1**	**2920**	85.1	2920	85.4	2910	12	**85.1**	**2920**	85.1	2920	85.4	2910
464.h264ref	12	798	333	787	337	**790**	**336**	12	**771**	**345**	769	345	771	344
471.omnetpp	12	473	159	**472**	**159**	470	160	12	454	165	456	164	**456**	**165**
473.astar	12	561	150	**561**	**150**	561	150	12	561	150	**561**	**150**	561	150
483.xalancbmk	12	254	327	**253**	**327**	253	327	12	254	327	**253**	**327**	253	327

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 localhost.localdomain Thu Mar  5 10:07:57 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
```

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CPU2006 license: 9008   **Test date:**   Mar-2015
Test sponsor: ACTION S.A.   **Hardware Availability:** Sep-2014
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Platform Notes (Continued)

```
    model name : Intel(R) Xeon(R) CPU E5-2603 v3 @ 1.60GHz
       2 "physical id"s (chips)
       12 "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  : 6
       physical 0: cores 0 1 2 3 4 5
       physical 1: cores 0 1 2 3 4 5
    cache size : 15360 KB

 From /proc/meminfo
    MemTotal:       131761400 kB
    HugePages_Total:        0
    Hugepagesize:        2048 kB

 /usr/bin/lsb_release -d
    Red Hat Enterprise Linux Server release 7.0 (Maipo)

 From /etc/*release* /etc/*version*
    os-release:
       NAME="Red Hat Enterprise Linux Server"
       VERSION="7.0 (Maipo)"
       ID="rhel"
       ID_LIKE="fedora"
       VERSION_ID="7.0"
       PRETTY_NAME="Red Hat Enterprise Linux"
       ANSI_COLOR="0;31"
       CPE_NAME="cpe:/o:redhat:enterprise_linux:7.0:GA:server"
    redhat-release: Red Hat Enterprise Linux Server release 7.0 (Maipo)
    system-release: Red Hat Enterprise Linux Server release 7.0 (Maipo)
    system-release-cpe: cpe:/o:redhat:enterprise_linux:7.0:ga:server

 uname -a:
    Linux localhost.localdomain 3.10.0-123.20.1.el7.x86_64 #3 SMP Wed Feb 4
    14:55:18 CET 2015 x86_64 x86_64 x86_64 GNU/Linux

 run-level 3 Mar 5 10:02

 SPEC is set to: /cpu2006.1.2
    Filesystem     Type  Size  Used Avail Use% Mounted on
    /dev/sda1      ext4  212G   26G  176G  13% /

 Additional information from dmidecode:
   BIOS American Megatrends Inc. 1.0a 11/05/2014
   Memory:
    16x    8 GB
    1x Micron(data:14/25) 18ASF1G72PZ-2G1A2 8 GB 1600 MHz 1 rank
    2x Micron(data:14/30) 18ASF1G72PZ-2G1A2 8 GB 1600 MHz 1 rank
    10x Micron(data:14/32) 18ASF1G72PZ-2G1A2 8 GB 1600 MHz 1 rank
    1x Micron(data:14/34) 18ASF1G72PZ-2G1A2 8 GB 1600 MHz 1 rank
```

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Hardware Availability: Sep-2014

Software Availability: Sep-2014

Platform Notes (Continued)

```
     2x Micron(data:14/35) 18ASF1G72PZ-2G1A2 8 GB 1600 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 v3 chips + 256 GB memory
  using RedHat EL 7.0
```

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
```

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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

      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

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Peak Optimization Flags (Continued)

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

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

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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 Tue Mar 24 17:18:21 2015 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 24 March 2015.