SPEC® CINT2006 Result
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ACTION S.A.

ACTINA SOLAR 820 X5 (Intel Xeon E5-2650)

SPECint®_rate2006 = 540

SPECint_rate_base2006 = 517
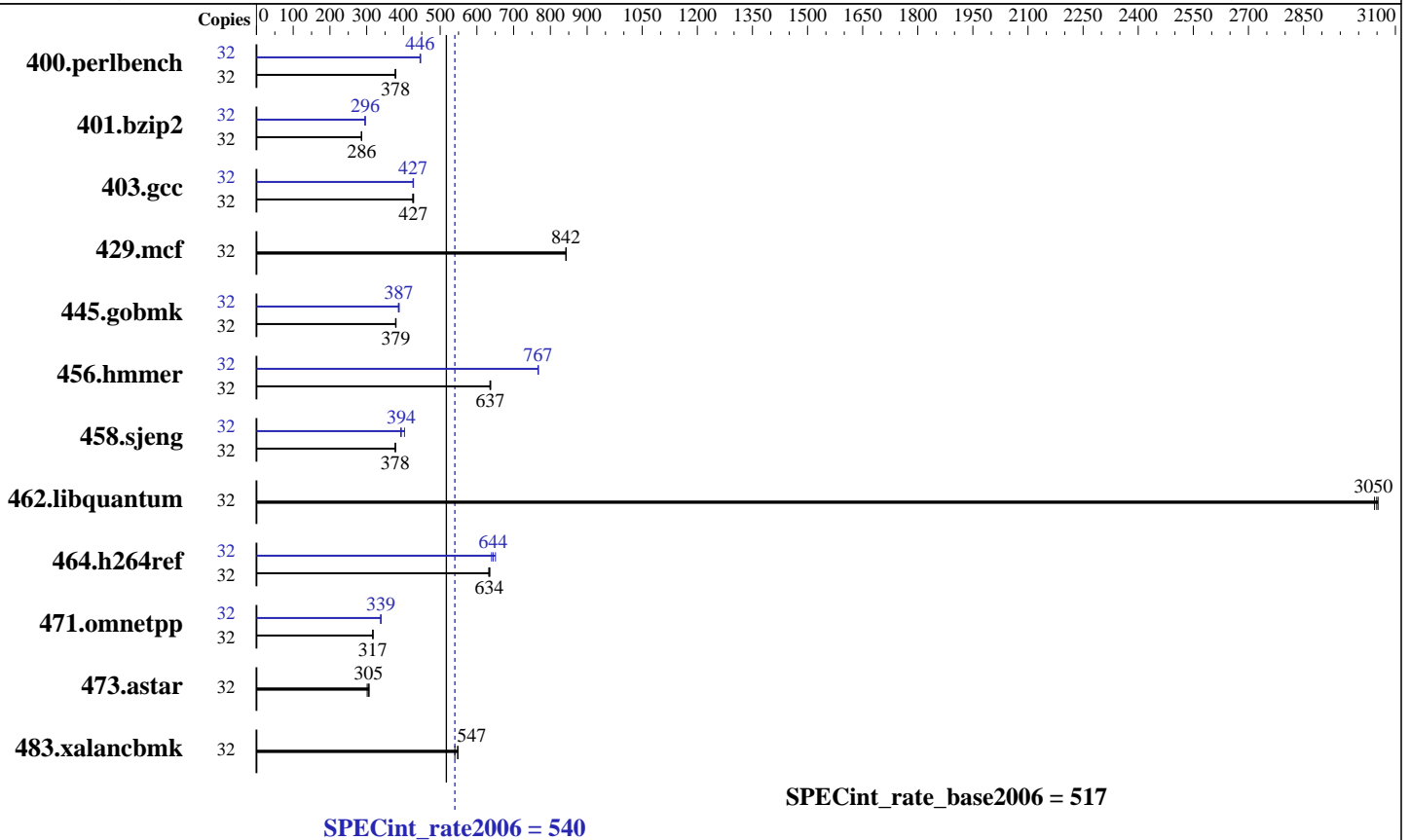
CPU2006 license: 9008
Test sponsor: ACTION S.A.
Tested by: ACTION S.A.

Test date: Jun-2012
Hardware Availability: Mar-2012
Software Availability: Feb-2012

SPECint_rate2006 = 540

SPECint_rate_base2006 = 517

Hardware

CPU Name: Intel Xeon E5-2650
CPU Characteristics: Intel Turbo Boost Technology up to 2.80 GHz
CPU MHz: 2000
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: 128 GB (16 x 8 GB 2Rx4 PC3-12800R-11, ECC)
Disk Subsystem: 1 x 2 TB SATA 7200 RPM
Other Hardware: None

Software

Operating System: SUSE Linux Enterprise Server 11 SP2 (x86_64) 3.0.13-0.27-default
Compiler: C/C++: Version 12.1.0.225 of Intel C++ Studio XE for Linux
Auto Parallel: No
File System: ext3
System State: Run level 3 (multi-user)
Base Pointers: 32-bit
Peak Pointers: 32/64-bit
Other Software: Microquill SmartHeap V9.01

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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	32	828	378	**827**	**378**	824	379	32	699	447	702	445	**701**	**446**
401.bzip2	32	1079	286	**1079**	**286**	1082	286	32	1043	296	**1043**	**296**	1046	295
403.gcc	32	602	428	**603**	**427**	606	425	32	**604**	**427**	603	427	604	426
429.mcf	32	346	842	346	843	**346**	**842**	32	346	842	346	843	**346**	**842**
445.gobmk	32	883	380	887	379	**885**	**379**	32	869	386	864	389	**867**	**387**
456.hmmer	32	470	636	**469**	**637**	468	638	32	**389**	**767**	389	767	390	766
458.sjeng	32	**1024**	**378**	1025	378	1024	378	32	**982**	**394**	961	403	986	393
462.libquantum	32	**217**	**3050**	217	3050	218	3040	32	**217**	**3050**	217	3050	218	3040
464.h264ref	32	1120	632	1115	635	**1117**	**634**	32	1089	651	**1100**	**644**	1106	640
471.omnetpp	32	631	317	631	317	**631**	**317**	32	**591**	**339**	591	338	591	339
473.astar	32	**737**	**305**	732	307	745	301	32	**737**	**305**	732	307	745	301
483.xalancbmk	32	403	548	409	540	**403**	**547**	32	403	548	409	540	**403**	**547**

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.rev6800
    $Rev: 6800 $ $Date:: 2011-10-11 #$ 6f2ebdff5032aaa42e583f96b07f99d3
    running on linux-zwpf Tue Jun 12 20:02:44 2012

    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 E5-2650 0 @ 2.00GHz
          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

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Platform Notes (Continued)

```
     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:        132140168 kB
    HugePages_Total:         0
    Hugepagesize:         2048 kB

 /usr/bin/lsb_release -d
    SUSE Linux Enterprise Server 11 (x86_64)

 From /etc/*release* /etc/*version*
    SuSE-release:
       SUSE Linux Enterprise Server 11 (x86_64)
       VERSION = 11
       PATCHLEVEL = 2

 uname -a:
    Linux linux-zwpf 3.0.13-0.27-default #1 SMP Wed Feb 15 13:33:49 UTC 2012
    (d73692b) x86_64 x86_64 x86_64 GNU/Linux

 run-level 3 Jun 12 20:00 last=S

 SPEC is set to: /cpu2006.1.2
    Filesystem      Type  Size  Used Avail Use% Mounted on
    /dev/sda2       ext3  1.8T   51G  1.8T   3% /

 Additional information from dmidecode:

 (End of data from sysinfo program)
```

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"

 Binaries compiled on a system with 1x Core i7-860 CPU + 8GB
 memory using RHEL5.5
 Transparent Huge Pages enabled with:
 echo always > /sys/kernel/mm/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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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/smartheap -lsmartheap
```

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/smartheap -lsmartheap

        473.astar: basepeak = yes
```

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Peak Optimization Flags (Continued)

483.xalancbmk: 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-ic12.1-official-linux64.20111122.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.xml

For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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