SPEC® CINT2006 Result
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ACTION S.A.

ACTINA SOLAR 225 S5 (Intel Xeon E5-2430)

$SPECint^{®}_rate2006 = $ 409

$SPECint_rate_base2006 = $ 391

CPU2006 license: 9008	**Test date:** May-2012
Test sponsor: ACTION S.A.	**Hardware Availability:** May-2012
Tested by: ACTION S.A.	**Software Availability:** Feb-2012

Copies

400.perlbench 24 345 24 294
401.bzip2 24 224 24 216
403.gcc 24 318 24 318
429.mcf 24 609
445.gobmk 24 302 24 296
456.hmmer 24 586 24 496
458.sjeng 24 309 24 293
462.libquantum 24 2350
464.h264ref 24 515 24 496
471.omnetpp 24 245 24 231
473.astar 24 230
483.xalancbmk 24 392

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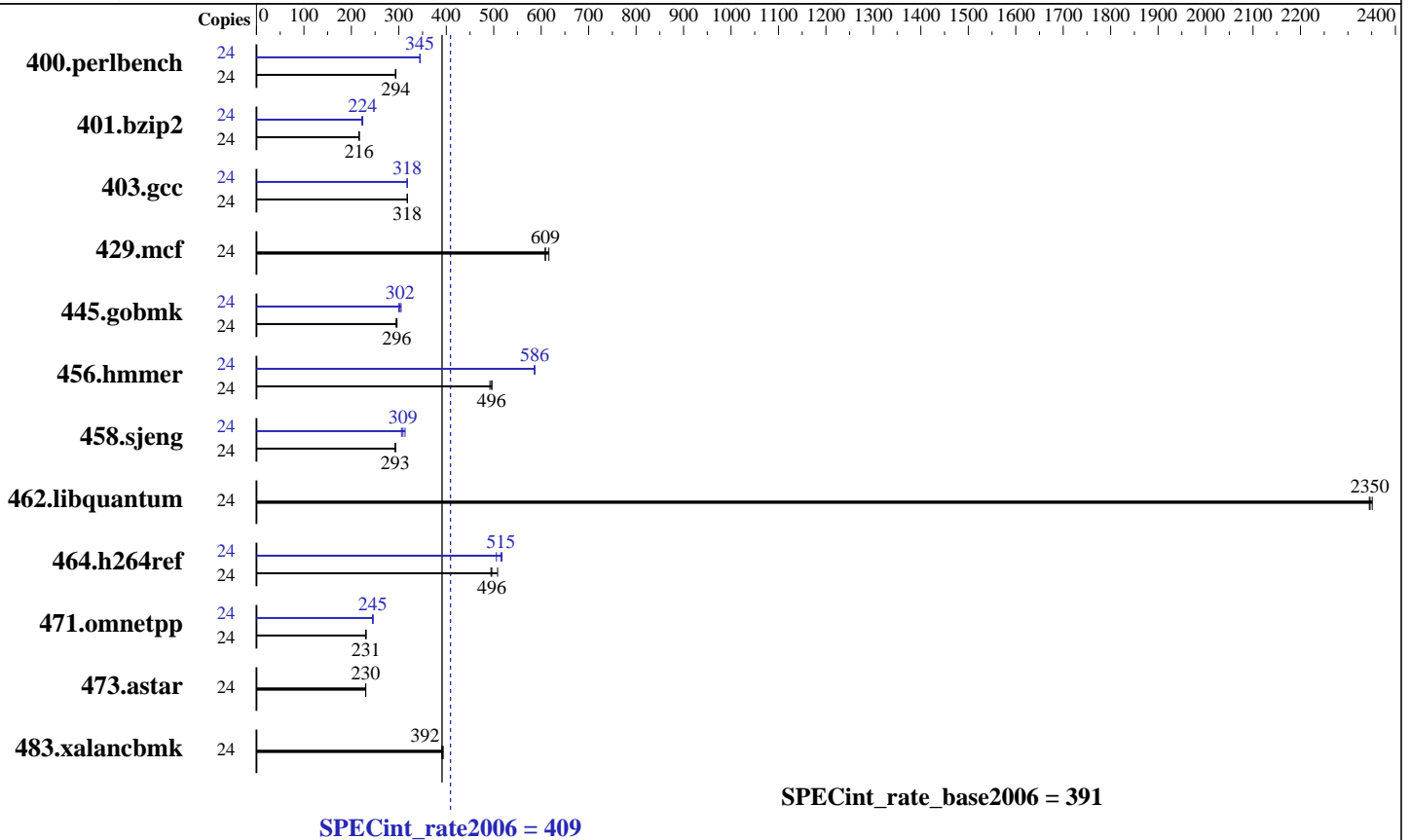
Hardware

CPU Name: Intel Xeon E5-2430
CPU Characteristics: Intel Turbo Boost Technology up to 2.70 GHz
CPU MHz: 2200
FPU: Integrated
CPU(s) enabled: 12 cores, 2 chips, 6 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: 15 MB I+D on chip per chip
Other Cache: None
Memory: 64 GB (8 x 8 GB 2Rx4 PC3-10600R-9, 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 Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Peak Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	24	801	293	798	294	**798**	**294**	24	679	345	**680**	**345**	681	344
401.bzip2	24	1072	216	1070	217	**1070**	**216**	24	1043	222	**1035**	**224**	1034	224
403.gcc	24	**608**	**318**	607	318	608	318	24	**608**	**318**	608	318	608	318
429.mcf	24	355	616	360	608	**359**	**609**	24	355	616	360	608	**359**	**609**
445.gobmk	24	856	294	**851**	**296**	850	296	24	826	305	839	300	**833**	**302**
456.hmmer	24	452	496	**452**	**496**	455	492	24	382	586	382	586	**382**	**586**
458.sjeng	24	**993**	**293**	990	293	994	292	24	927	313	**941**	**309**	950	306
462.libquantum	24	**212**	**2350**	212	2350	212	2350	24	**212**	**2350**	212	2350	212	2350
464.h264ref	24	1075	494	**1071**	**496**	1045	508	24	**1031**	**515**	1050	506	1027	517
471.omnetpp	24	649	231	652	230	**650**	**231**	24	**612**	**245**	610	246	613	245
473.astar	24	732	230	**732**	**230**	732	230	24	732	230	**732**	**230**	732	230
483.xalancbmk	24	421	394	**422**	**392**	424	391	24	421	394	**422**	**392**	424	391

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 Fri May 4 13:41:44 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 E5-2430 0 @ 2.20GHz
          2 "physical id"s (chips)
          24 "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 : 12

Continued on next page

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Platform Notes (Continued)

```
     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:       65925688 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 May 4 13:40 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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