SPEC® CINT2006 Result

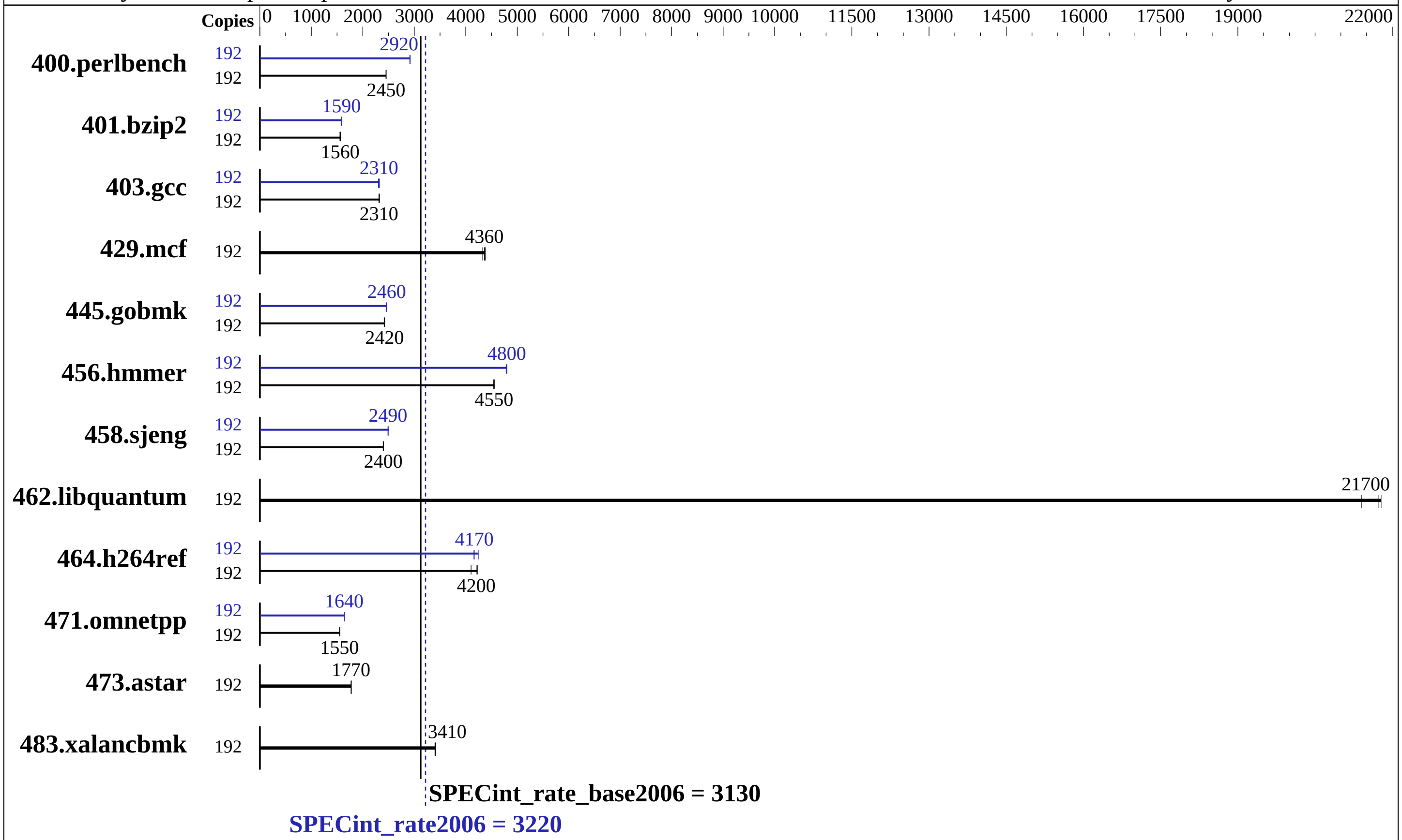
Inspur Corporation
TS860

SPECint®_rate2006 = 3220

SPECint_rate_base2006 = 3130

CPU2006 license: 3358
Test sponsor: Inspur Corporation
Tested by: Inspur Corporation

Test date: Jan-2014
Hardware Availability: May-2014
Software Availability: Nov-2013



Hardware

CPU Name:	Intel Xeon E7-8850 v2
CPU Characteristics:	Intel Turbo Boost Technology up to 2.80 GHz
CPU MHz:	2300
FPU:	Integrated
CPU(s) enabled:	96 cores, 8 chips, 12 cores/chip, 2 threads/core
CPU(s) orderable:	8 chip
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	256 KB I+D on chip per core
L3 Cache:	24 MB I+D on chip per chip
Other Cache:	None
Memory:	2 TB (128 x 16 GB 2Rx4 PC3-12800R-11, ECC, running at 1333 MHz)
Disk Subsystem:	1800GB (4 x 900GB SAS,RAID1,10K RPM)
Other Hardware:	None

Software

Operating System:	Red Hat Enterprise Linux Server release 6.5 (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

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Results Table

	Base							Peak						
Benchmark	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	192	764	2450	**765**	**2450**	765	2450	192	**642**	**2920**	644	2910	642	2920
401.bzip2	192	1191	1560	1183	1570	**1186**	**1560**	192	1167	1590	**1167**	**1590**	1166	1590
403.gcc	192	668	2310	**668**	**2310**	664	2330	192	665	2320	**668**	**2310**	671	2300
429.mcf	192	**402**	**4360**	400	4380	404	4330	192	**402**	**4360**	400	4380	404	4330
445.gobmk	192	**831**	**2420**	834	2410	831	2420	192	**817**	**2460**	816	2470	821	2450
456.hmmer	192	394	4540	393	4560	**394**	**4550**	192	373	4800	374	4780	**373**	**4800**
458.sjeng	192	968	2400	970	2400	**968**	**2400**	192	928	2500	934	2490	**933**	**2490**
462.libquantum	192	183	21800	**183**	**21700**	186	21400	192	183	21800	**183**	**21700**	186	21400
464.h264ref	192	**1011**	**4200**	1006	4230	1036	4100	192	**1020**	**4170**	1022	4160	1001	4240
471.omnetpp	192	772	1560	**774**	**1550**	775	1550	192	**731**	**1640**	732	1640	731	1640
473.astar	192	758	1780	**760**	**1770**	760	1770	192	758	1780	**760**	**1770**	760	1770
483.xalancbmk	192	389	3400	388	3410	**389**	**3410**	192	389	3400	388	3410	**389**	**3410**

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 /spec/config/sysinfo.rev6818
$Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
running on ts860 Thu Jan 30 19:18:49 2014

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 E7-8850 v2 @ 2.30GHz
      8 "physical id"s (chips)
      192 "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 : 12
      siblings  : 24
```

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Platform Notes (Continued)

```
          physical 0: cores 0 1 2 3 4 5 8 9 10 11 12 13
          physical 1: cores 0 1 2 3 4 5 8 9 10 11 12 13
          physical 2: cores 0 1 2 3 4 5 8 9 10 11 12 13
          physical 3: cores 0 1 2 3 4 5 8 9 10 11 12 13
          physical 4: cores 0 1 2 3 4 5 8 9 10 11 12 13
          physical 5: cores 0 1 2 3 4 5 8 9 10 11 12 13
          physical 6: cores 0 1 2 3 4 5 8 9 10 11 12 13
          physical 7: cores 0 1 2 3 4 5 8 9 10 11 12 13
       cache size : 24576 KB

 From /proc/meminfo
    MemTotal:       2117644348 kB
    HugePages_Total:       0
    Hugepagesize:       2048 kB

 From /etc/*release* /etc/*version*
    redhat-release: Red Hat Enterprise Linux Server release 6.5 (Santiago)
    system-release: Red Hat Enterprise Linux Server release 6.5 (Santiago)
    system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

 uname -a:
    Linux ts860 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 Jan 30 19:12

 SPEC is set to: /spec
    Filesystem     Type  Size  Used Avail Use% Mounted on
    /dev/sda2      ext4  673G  4.0G  635G   1% /spec

 Additional information from dmidecode:
   BIOS INSYDE Corp. TS860_1.1.2 06/24/2014
   Memory:
    128x   16 GB
    64x NO DIMM Unknown
    128x Samsung M393B2G70QH0-YK0 16 GB 1333 MHz 2 rank

 (End of data from sysinfo program)
 Regarding the sysinfo display about the memory installed,the correct amount of memory is 2 TB
 and the dmidecode description should have two lines reading as:
     128x Samsung M393B2G70QH0-YK0 16 GB 1333 MHz 2 rank
     64x NO DIMM Unknown
 To lock the memory in 1333MHz, the setting "Force 1333MHz" must be enabled.
 The setting "Force 1333MHz" can be enabled in BIOS version 1.1.2,
 which was an old design with the Intel latest MRC update.
```

General Notes

```
Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/spec/libs/32:/spec/libs/64:/spec/sh"
```

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General Notes (Continued)

```
Binaries compiled on a system with 1x Core i7-860 CPU + 8GB
memory using RedHat EL 6.4
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>
```

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/sh -lsmartheap`

Base Other Flags

C benchmarks:

403.gcc: `-Dalloca=_alloca`

Peak Compiler Invocation

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

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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`

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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/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-revC.html
http://www.spec.org/cpu2006/flags/Inspur-Platform-Settings-V1.3-IVB-RevG.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-revC.xml
http://www.spec.org/cpu2006/flags/Inspur-Platform-Settings-V1.3-IVB-RevG.xml

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

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