SPEC® CINT2006 Result

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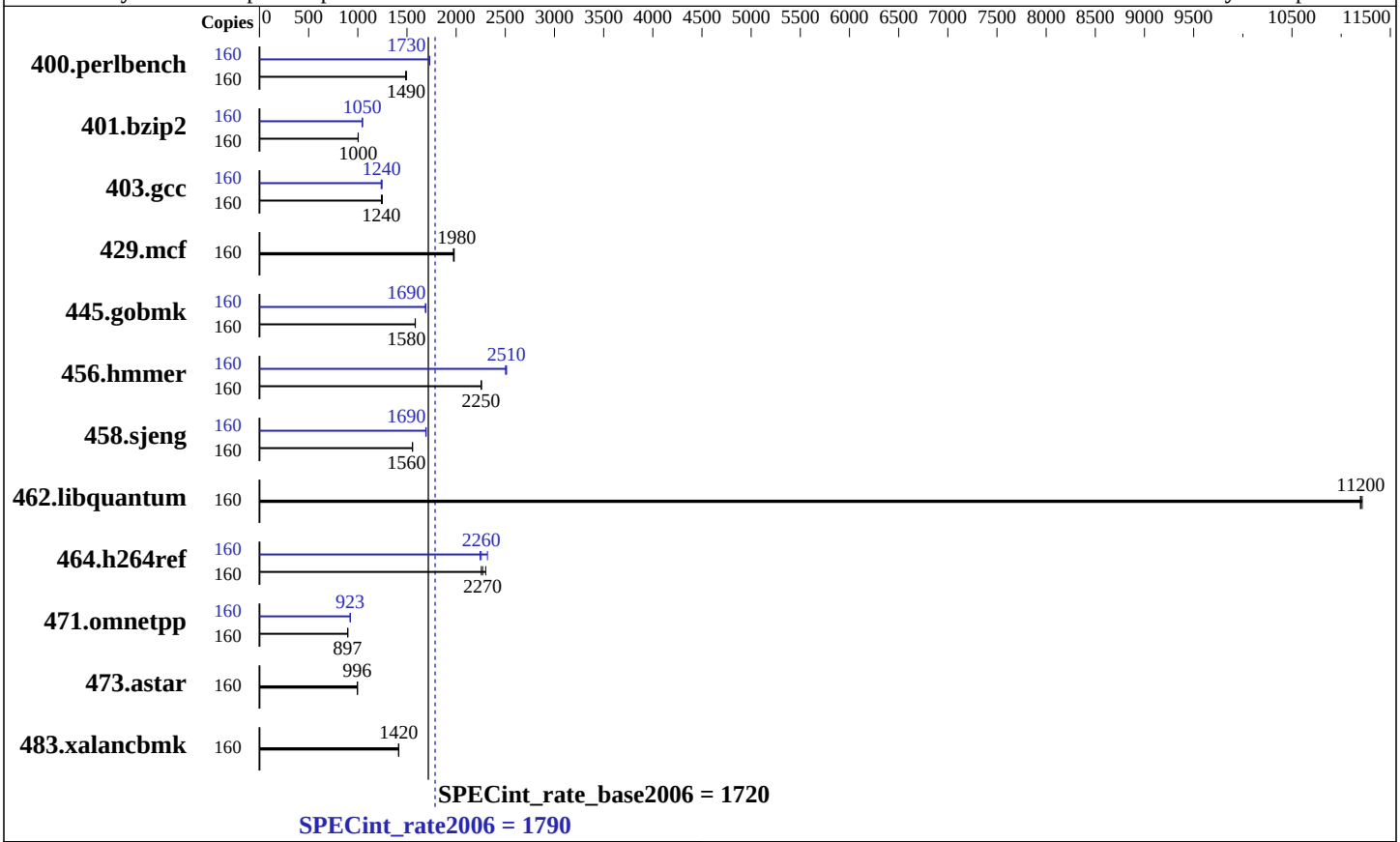
Inspur Corporation
K1 800

SPECint®_rate2006 = 1790

SPECint_rate_base2006 = 1720

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

Test date: Dec-2013
Hardware Availability: May-2012
Software Availability: Sep-2013



Hardware

CPU Name:	Intel Xeon E7-8850
CPU Characteristics:	Intel Turbo Boost Technology up to 2.40 GHz
CPU MHz:	2000
FPU:	Integrated
CPU(s) enabled:	80 cores, 8 chips, 10 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 (64 x 8 GB 2Rx4 PC3L-10600R-9, ECC, running at 1066 MHz)
Disk Subsystem:	960GB (3 x 480GB SSD,2.5" SATA,RAID5)
Other Hardware:	None

Software

Operating System:	Inspur K-UX Server release 2.2 (Inspur) 2.6.32-358.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

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	160	1052	1490	1047	1490	**1048**	**1490**	160	905	1730	**903**	**1730**	903	1730
401.bzip2	160	1539	1000	1537	1000	**1539**	**1000**	160	**1475**	**1050**	1477	1050	1475	1050
403.gcc	160	**1038**	**1240**	1038	1240	1031	1250	160	1041	1240	1033	1250	**1037**	**1240**
429.mcf	160	**738**	**1980**	740	1970	737	1980	160	**738**	**1980**	740	1970	737	1980
445.gobmk	160	**1060**	**1580**	1060	1580	1059	1590	160	992	1690	995	1690	**993**	**1690**
456.hmmer	160	**662**	**2250**	663	2250	661	2260	160	594	2510	597	2500	**595**	**2510**
458.sjeng	160	1245	1560	**1244**	**1560**	1244	1560	160	1145	1690	1142	1690	**1143**	**1690**
462.libquantum	160	**296**	**11200**	296	11200	296	11200	160	**296**	**11200**	296	11200	296	11200
464.h264ref	160	**1560**	**2270**	1539	2300	1570	2260	160	1527	2320	**1570**	**2260**	1578	2240
471.omnetpp	160	1113	898	1115	897	**1115**	**897**	160	**1083**	**923**	1082	924	1084	922
473.astar	160	1128	996	**1128**	**996**	1128	996	160	1128	996	**1128**	**996**	1128	996
483.xalancbmk	160	**780**	**1420**	781	1410	779	1420	160	**780**	**1420**	781	1410	779	1420

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 k1 Mon Jan 13 15:44:47 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 @ 2.00GHz
      8 "physical id"s (chips)
      160 "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 : 10
      siblings  : 20
```

Continued on next page

Platform Notes (Continued)

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

  From /proc/meminfo
     MemTotal:       529219776 kB
     HugePages_Total:       0
     Hugepagesize:       2048 kB

  From /etc/*release* /etc/*version*
     inspur-release: Inspur K-UX Server release 2.2 (Inspur)
     system-release: Inspur K-UX Server release 2.2 (Inspur)
     system-release-cpe: cpe:/o:inspur:k-ux:2.2:ga:server

  uname -a:
     Linux k1 2.6.32-358.el6.x86_64 #1 SMP Tue Jan 29 11:47:41 EST 2013 x86_64
     x86_64 x86_64 GNU/Linux

  run-level 3 Jan 13 15:02

  SPEC is set to: /spec
     Filesystem     Type    Size  Used Avail Use% Mounted on
     /dev/sda3      ext4    736G  3.8G  695G   1% /spec

  (End of data from sysinfo program)
```

General Notes

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

  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

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

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

Continued on next page

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-ic14.0-official-linux64.20140128.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.xml`

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