SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

ZTE

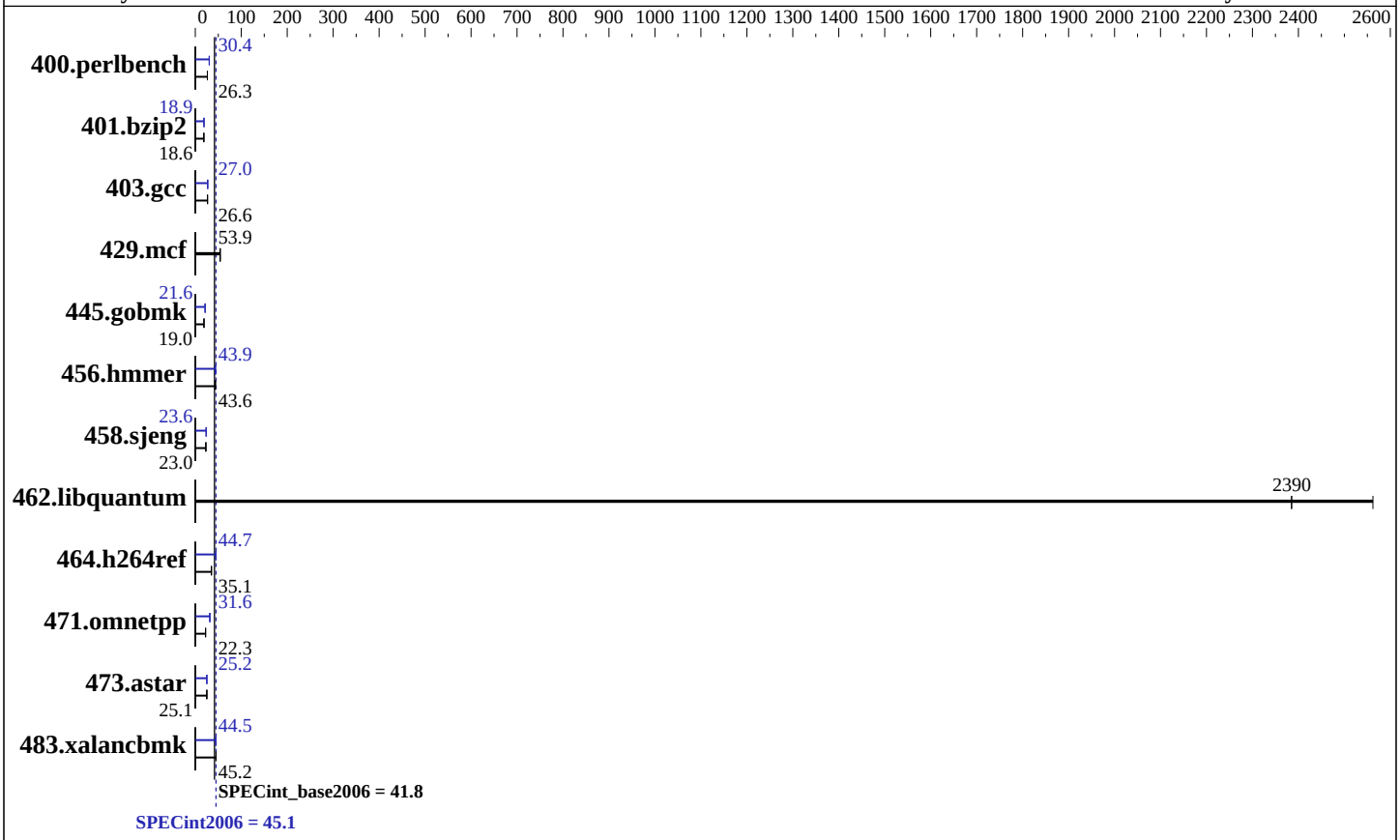
I8300 G2 (Intel Xeon E5-2650, 2.00 GHz)

SPECint®2006 = 45.1

SPECint_base2006 = 41.8

CPU2006 license: 3834
Test sponsor: ZTE
Tested by: ZTE

Test date: Dec-2013
Hardware Availability: Jun-2013
Software Availability: Oct-2013



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 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:	20 MB I+D on chip per chip
Other Cache:	None
Memory:	128 GB (8 x 16 GB 2Rx4 PC3L-12800R-11, ECC)
Disk Subsystem:	2 x 300 GB, 10000 RPM SAS,RAID1
Other Hardware:	None

Software

Operating System:	Red Hat Enterprise Linux Server release 6.2 (Santiago) Kernel 2.6.32-220.el6.x86_64
Compiler:	C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux
Auto Parallel:	Yes
File System:	ext4
System State:	Run level 3 (multi-user)
Base Pointers:	32/64-bit
Peak Pointers:	32/64-bit
Other Software:	Microquill SmartHeap V10.0

SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

ZTE

I8300 G2 (Intel Xeon E5-2650, 2.00 GHz)

SPECint2006 = 45.1

SPECint_base2006 = 41.8

CPU2006 license: 3834
Test sponsor: ZTE
Tested by: ZTE

Test date: Dec-2013
Hardware Availability: Jun-2013
Software Availability: Oct-2013

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	372	26.3	**372**	**26.3**	372	26.2	**322**	**30.4**	323	30.3	322	30.4
401.bzip2	**519**	**18.6**	520	18.6	518	18.6	511	18.9	511	18.9	**511**	**18.9**
403.gcc	303	26.6	**303**	**26.6**	304	26.5	298	27.0	**299**	**27.0**	299	27.0
429.mcf	170	53.8	167	54.6	**169**	**53.9**	170	53.8	167	54.6	**169**	**53.9**
445.gobmk	552	19.0	**553**	**19.0**	562	18.7	487	21.6	**487**	**21.6**	498	21.1
456.hmmer	211	44.1	216	43.3	**214**	**43.6**	211	44.2	**212**	**43.9**	215	43.4
458.sjeng	**527**	**23.0**	527	23.0	526	23.0	513	23.6	512	23.7	**512**	**23.6**
462.libquantum	**8.69**	**2390**	8.69	2380	8.09	2560	**8.69**	**2390**	8.69	2380	8.09	2560
464.h264ref	632	35.0	**631**	**35.1**	629	35.2	496	44.6	**495**	**44.7**	495	44.8
471.omnetpp	279	22.4	281	22.2	**280**	**22.3**	198	31.6	**198**	**31.6**	198	31.6
473.astar	281	24.9	279	25.1	**279**	**25.1**	279	25.2	281	25.0	**279**	**25.2**
483.xalancbmk	**153**	**45.2**	153	45.2	153	45.1	155	44.5	155	44.6	**155**	**44.5**

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Submit Notes

```
The config file option 'submit' was used.
```

Operating System Notes

```
Stack size set to unlimited using "ulimit -s unlimited"
```

Platform Notes

```
HT Enabled,C6 Enabled,Performance Mode,DCU
Disabled
 Sysinfo program /home/cpu2006-14.0/config/sysinfo.rev6818
 $Rev: 6818 $ $Date:: 2012-07-17 #$ 7195f14be9f4254ad3e2727f78b45679
 running on SPECCPU Fri Dec 13 17:14:05 2013

 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
```

Continued on next page

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:       132135332 kB
     HugePages_Total:    2048
     Hugepagesize:       2048 kB

  /usr/bin/lsb_release -d
     Red Hat Enterprise Linux Server release 6.2 (Santiago)

  From /etc/*release* /etc/*version*
     redhat-release: Red Hat Enterprise Linux Server release 6.2 (Santiago)
     system-release: Red Hat Enterprise Linux Server release 6.2 (Santiago)
     system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

  uname -a:
     Linux SPECCPU 2.6.32-220.el6.x86_64 #1 SMP Wed Nov 9 08:03:13 EST 2011 x86_64
     x86_64 x86_64 GNU/Linux

  run-level 3 Dec 12 22:49

  SPEC is set to: /home/cpu2006-14.0
     Filesystem     Type    Size  Used Avail Use% Mounted on
     /dev/sda3      ext4    273G   46G  213G  18% /

  Additional information from dmidecode:
    Memory:
     8x   16 GB
     2x Dimm1_Manufacturer Dimm1_PartNum
     2x Dimm3_Manufacturer Dimm3_PartNum
     2x Dimm5_Manufacturer Dimm5_PartNum
     2x Dimm7_Manufacturer Dimm7_PartNum
     8x Micron 36KSF2G72PZ-1 16 GB 1600 MHz 1 rank

  (End of data from sysinfo program)
```

General Notes

```
 Environment variables set by runspec before the start of the run:
 KMP_AFFINITY = "granularity=fine,scatter"
 LD_LIBRARY_PATH = "/home/cpu2006-14.0/libs/32:/home/cpu2006-14.0/libs/64:/home/cpu2006-14.0/sh"
 OMP_NUM_THREADS = "16"

  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
  runspec command invoked through numactl i.e.:
  numactl --interleave=all runspec <etc>
```

Base Compiler Invocation

C benchmarks:
```
icc  -m64
```

C++ benchmarks:
```
icpc -m64
```

Base Portability Flags

400.perlbench: `-DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64`
401.bzip2: `-DSPEC_CPU_LP64`
403.gcc: `-DSPEC_CPU_LP64`
429.mcf: `-DSPEC_CPU_LP64`
445.gobmk: `-DSPEC_CPU_LP64`
456.hmmer: `-DSPEC_CPU_LP64`
458.sjeng: `-DSPEC_CPU_LP64`
462.libquantum: `-DSPEC_CPU_LP64 -DSPEC_CPU_LINUX`
464.h264ref: `-DSPEC_CPU_LP64`
471.omnetpp: `-DSPEC_CPU_LP64`
473.astar: `-DSPEC_CPU_LP64`
483.xalancbmk: `-DSPEC_CPU_LP64 -DSPEC_CPU_LINUX`

Base Optimization Flags

C benchmarks:
```
-xAVX -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32
```

C++ benchmarks:
```
-xAVX -ipo -O3 -no-prec-div -opt-prefetch -auto-p32 -Wl,-z,muldefs
-L/sh -lsmartheap64
```

Base Other Flags

C benchmarks:

403.gcc: `-Dalloca=_alloca`

Peak Compiler Invocation

C benchmarks (except as noted below):
```
icc  -m64
```

Continued on next page

Peak Compiler Invocation (Continued)

400.perlbench: icc -m32

445.gobmk: icc -m32

464.h264ref: icc -m32

C++ benchmarks (except as noted below):
icpc -m32

473.astar: icpc -m64

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

400.perlbench: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -opt-prefetch
-ansi-alias

401.bzip2: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div -prof-use(pass 2) -auto-ilp32 -opt-prefetch
-ansi-alias

403.gcc: -xAVX -ipo -O3 -no-prec-div -inline-calloc
-opt-malloc-options=3 -auto-ilp32

429.mcf: basepeak = yes

445.gobmk: -xAVX(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
-ansi-alias

456.hmmer: -xAVX -ipo -O3 -no-prec-div -unroll2 -auto-ilp32
-ansi-alias

Continued on next page

Peak Optimization Flags (Continued)

458.sjeng: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -unroll4

462.libquantum: basepeak = yes

464.h264ref: -xAVX(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: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -opt-ra-region-strategy=block -ansi-alias -Wl,-z,muldefs -L/sh -lsmartheap

473.astar: -xAVX -ipo -O3 -no-prec-div -opt-prefetch -auto-p32 -Wl,-z,muldefs -L/sh -lsmartheap64

483.xalancbmk: -xAVX -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias -Wl,-z,muldefs -L/sh -lsmartheap

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-linux64.20140128.html
http://www.spec.org/cpu2006/flags/ZTE-I8300-Settings-V1.2-revA.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.xml
http://www.spec.org/cpu2006/flags/ZTE-I8300-Settings-V1.2-revA.xml

SPEC and SPECint are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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 Fri Jul 25 00:01:44 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 9 May 2014.