SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

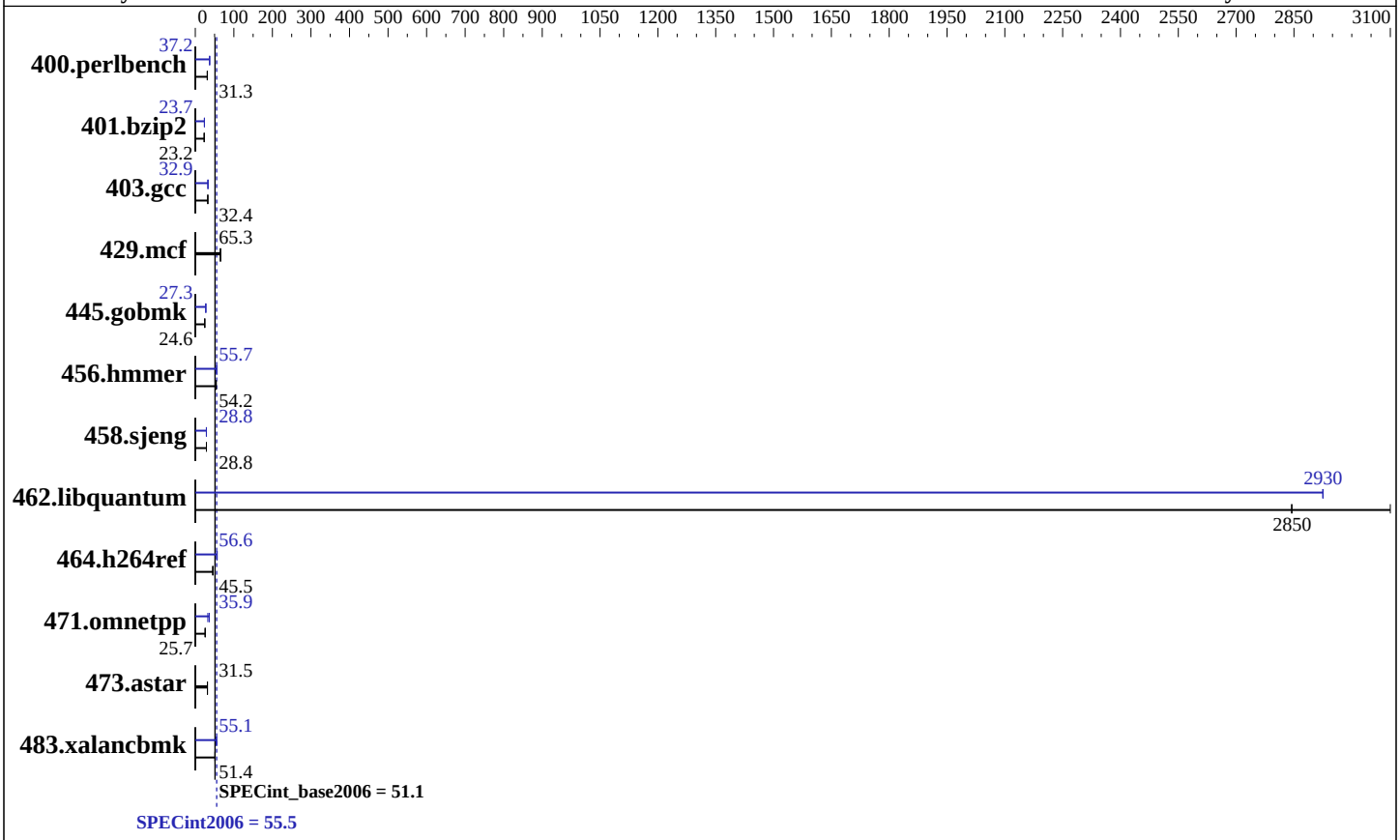
Huawei RH1288 V2 (Intel Xeon E5-2680)

SPECint®2006 = 55.5

SPECint_base2006 = 51.1

CPU2006 license: 3175
Test sponsor: Huawei
Tested by: Huawei

Test date: Apr-2013
Hardware Availability: May-2012
Software Availability: Dec-2011



Hardware

CPU Name:	Intel Xeon E5-2680
CPU Characteristics:	Intel Turbo Boost Technology up to 3.50 GHz
CPU MHz:	2700
FPU:	Integrated
CPU(s) enabled:	16 cores, 2 chips, 8 cores/chip
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 (16 x 8 GB 2Rx4 PC3-12800R-11, ECC)
Disk Subsystem:	1 x 500 GB SATA, 7200 RPM
Other Hardware:	None

Software

Operating System:	Red Hat Enterprise Linux Server release 6.3 (Santiago) 2.6.32-279.el6.x86_64
Compiler:	C/C++: Version 12.1.0.225 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 V9.01

SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

Huawei RH1288 V2 (Intel Xeon E5-2680)

SPECint2006 = 55.5

SPECint_base2006 = 51.1

CPU2006 license: 3175
Test sponsor: Huawei
Tested by: Huawei

Test date: Apr-2013
Hardware Availability: May-2012
Software Availability: Dec-2011

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	316	30.9	**312**	**31.3**	312	31.3	264	37.0	263	37.2	**263**	**37.2**
401.bzip2	419	23.0	**416**	**23.2**	416	23.2	**408**	**23.7**	408	23.7	408	23.7
403.gcc	248	32.4	249	32.4	**248**	**32.4**	245	32.9	**245**	**32.9**	245	32.8
429.mcf	**140**	**65.3**	139	65.5	140	65.3	**140**	**65.3**	139	65.5	140	65.3
445.gobmk	427	24.6	427	24.6	**427**	**24.6**	**385**	**27.3**	385	27.2	385	27.3
456.hmmer	**172**	**54.2**	172	54.2	172	54.1	169	55.2	**168**	**55.7**	167	55.8
458.sjeng	419	28.8	**420**	**28.8**	420	28.8	**420**	**28.8**	420	28.8	421	28.8
462.libquantum	6.68	3100	7.29	2840	**7.28**	**2850**	7.08	2920	**7.08**	**2930**	7.08	2930
464.h264ref	**487**	**45.5**	488	45.4	486	45.5	390	56.8	400	55.4	**391**	**56.6**
471.omnetpp	244	25.6	243	25.7	**243**	**25.7**	193	32.4	**174**	**35.9**	172	36.3
473.astar	224	31.4	222	31.6	**223**	**31.5**	224	31.4	222	31.6	**223**	**31.5**
483.xalancbmk	134	51.5	135	51.0	**134**	**51.4**	126	54.7	125	55.4	**125**	**55.1**

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

Operating System Notes

```
Stack size set to unlimited using "ulimit -s unlimited"
Transparent Huge Pages enabled with:
Select only test related files when installing the operating system
```

Platform Notes

```
BIOS configuration:
Set Power Efficiency Mode to Performance
Baseboard Management Controller used to adjust the fan speed to 100%
Sysinfo program /spec/config/sysinfo.rev6800
$Rev: 6800 $ $Date:: 2011-10-11 #$ 6f2ebdff5032aaa42e583f96b07f99d3
running on z-spectest Sun Apr 21 01:26:16 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 E5-2680 0 @ 2.70GHz
      2 "physical id"s (chips)
      16 "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  : 8
      physical 0: cores 0 1 2 3 4 5 6 7
```

Continued on next page

Platform Notes (Continued)

```
        physical 1: cores 0 1 2 3 4 5 6 7
     cache size : 20480 KB

  From /proc/meminfo
     MemTotal:       132118004 kB
     HugePages_Total:       0
     Hugepagesize:       2048 kB

  /usr/bin/lsb_release -d
     Red Hat Enterprise Linux Server release 6.3 (Santiago)

  From /etc/*release* /etc/*version*
     redhat-release: Red Hat Enterprise Linux Server release 6.3 (Santiago)
     system-release: Red Hat Enterprise Linux Server release 6.3 (Santiago)
     system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

  uname -a:
     Linux z-spectest 2.6.32-279.el6.x86_64 #1 SMP Wed Jun 13 18:24:36 EDT 2012
     x86_64 x86_64 x86_64 GNU/Linux

  run-level 3 Apr 21 01:19

  SPEC is set to: /spec
     Filesystem     Type    Size  Used Avail Use% Mounted on
     /dev/sda2      ext4    289G  4.6G  270G   2% /

  Additional information from dmidecode:

  (End of data from sysinfo program)
```

General Notes

```
Environment variables set by runspec before the start of the run:
KMP_AFFINITY = "granularity=fine,compact,0,1"
LD_LIBRARY_PATH = "/spec/libs/32:/spec/libs/64"
OMP_NUM_THREADS = "16"

 Binaries compiled on a system with 2 x Xeon X5645 CPU + 16GB memory
 using RHEL 6.1
 Transparent Huge Pages enabled with:
 echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
```

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:
`-xSSE4.2 -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32`

C++ benchmarks:
`-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32`
`-Wl,-z,muldefs -L/smartheap -lsmartheap64`

Base Other Flags

C benchmarks:

403.gcc: `-Dalloca=_alloca`

Peak Compiler Invocation

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

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: -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 -ansi-alias

401.bzip2: -xSSE4.2(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: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2) -ansi-alias

456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32 -ansi-alias

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

462.libquantum: -xAVX -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32

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) -opt-ra-region-strategy=block -ansi-alias

Continued on next page

Peak Optimization Flags (Continued)

471.omnetpp (continued):
`-Wl,-z,muldefs -L/smartheap -lsmartheap`

473.astar: `basepeak = yes`

483.xalancbmk: `-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias -Wl,-z,muldefs -L/smartheap -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-ic12.1-official-linux64.20120425.html`
`http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-revE.20121120.html`

You can also download the XML flags sources by saving the following links:
`http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20120425.xml`
`http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-revE.20121120.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 Thu Jul 24 15:25:19 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 4 June 2013.