SPEC® CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

HITACHI

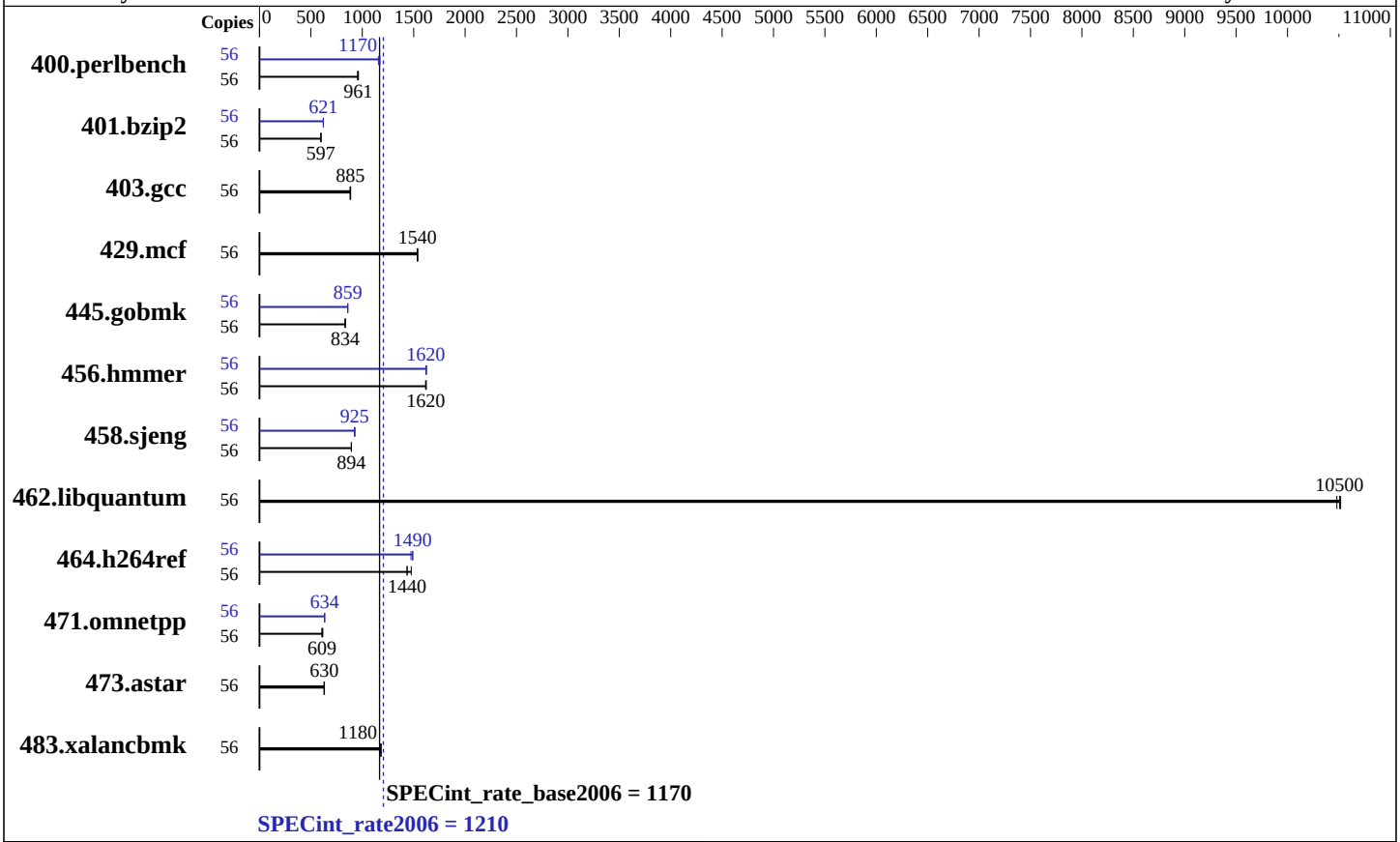
BladeSymphony BS2500 (Intel Xeon E5-2697 v3)

SPECint®_rate2006 = 1210

SPECint_rate_base2006 = 1170

CPU2006 license: 35
Test sponsor: HITACHI
Tested by: HITACHI

Test date: Jan-2015
Hardware Availability: Dec-2014
Software Availability: Nov-2013



Hardware

CPU Name:	Intel Xeon E5-2697 v3
CPU Characteristics:	Intel Turbo Boost Technology up to 3.60 GHz
CPU MHz:	2600
FPU:	Integrated
CPU(s) enabled:	28 cores, 2 chips, 14 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:	35 MB I+D on chip per chip
Other Cache:	None
Memory:	256 GB (16 x 16 GB 2Rx4 PC4-2133P-R)
Disk Subsystem:	2 x 600 GB SAS, 10000 RPM, RAID1
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

SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

HITACHI

BladeSymphony BS2500 (Intel Xeon E5-2697 v3)

SPECint_rate2006 = 1210

SPECint_rate_base2006 = 1170

CPU2006 license: 35
Test sponsor: HITACHI
Tested by: HITACHI

Test date: Jan-2015
Hardware Availability: Dec-2014
Software Availability: Nov-2013

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	56	569	962	574	954	**569**	**961**	56	473	1160	467	1170	**468**	**1170**
401.bzip2	56	**905**	**597**	905	597	903	598	56	**870**	**621**	871	621	869	622
403.gcc	56	508	887	**509**	**885**	512	881	56	508	887	**509**	**885**	512	881
429.mcf	56	**332**	**1540**	333	1540	332	1540	56	**332**	**1540**	333	1540	332	1540
445.gobmk	56	**704**	**834**	704	834	705	834	56	685	857	**684**	**859**	684	859
456.hmmer	56	322	1620	323	1620	**323**	**1620**	56	321	1630	323	1620	**323**	**1620**
458.sjeng	56	**758**	**894**	759	892	757	895	56	733	924	**732**	**925**	729	929
462.libquantum	56	**110**	**10500**	110	10500	111	10500	56	**110**	**10500**	110	10500	111	10500
464.h264ref	56	864	1440	**863**	**1440**	840	1480	56	831	1490	**832**	**1490**	841	1470
471.omnetpp	56	568	616	**575**	**609**	575	608	56	553	633	552	634	**552**	**634**
473.astar	56	**624**	**630**	622	632	626	628	56	**624**	**630**	622	632	626	628
483.xalancbmk	56	328	1180	327	1180	**327**	**1180**	56	328	1180	327	1180	**327**	**1180**

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

```
BIOS configuration:
 Patrol Scrub = Disable
 Per Core P-state = Disable
 COD Preferenc = Enable

 Sysinfo program /home/speccpu2006/cpu2006/config/sysinfo.rev6818
 $Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
 running on 520Hx36564 Sun Jan 18 10:17:09 2015

 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 E5-2697 v3 @ 2.60GHz
       2 "physical id"s (chips)
       56 "processors"
```

Continued on next page

Platform Notes (Continued)

```
      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 : 14
         siblings  : 28
         physical 0: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14
         physical 1: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14
      cache size : 17920 KB

   From /proc/meminfo
      MemTotal:       263987312 kB
      HugePages_Total:       0
      Hugepagesize:       2048 kB

   /usr/bin/lsb_release -d
      Red Hat Enterprise Linux Server release 6.5 (Santiago)

   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 520Hx36564 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 16 19:12

   SPEC is set to: /home/speccpu2006/cpu2006
      Filesystem                     Type  Size  Used Avail Use% Mounted on
      /dev/mapper/vg_520hx36564-lv_home ext4  485G   56G  405G  13% /home

   Additional information from dmidecode:
     BIOS HITACHI 08-20 01/06/2015
     Memory:
      8x NO DIMM Unknown
      16x Samsung M393A2G40DB0-CPB 16 GB 2133 MHz 2 rank

   (End of data from sysinfo program)
```

General Notes

```
 Environment variables set by runspec before the start of the run:
 LD_LIBRARY_PATH = "/home/speccpu2006/cpu2006/libs/32:/home/speccpu2006/cpu2006/libs/64:/home/speccpu2006/cpu2006/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
```

Continued on next page

General Notes (Continued)

```
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>
BladeSymphony BS520H, Hitachi Compute Blade 520H and BladeSymphony BS2500 HC0A1 are electronically equivalent.
The results have been measured on a Hitachi Compute Blade 520H.
```

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:
```
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
-opt-mem-layout-trans=3
```

C++ benchmarks:
```
-xCORE-AVX2 -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`

Continued on next page

Peak Compiler Invocation (Continued)

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: -xCORE-AVX2(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: -xCORE-AVX2(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: basepeak = yes

429.mcf: basepeak = yes

445.gobmk: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
-ansi-alias -opt-mem-layout-trans=3

456.hmmer: -xCORE-AVX2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32

458.sjeng: -xCORE-AVX2(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

Continued on next page

Peak Optimization Flags (Continued)

464.h264ref: `-xCORE-AVX2`(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: `-xCORE-AVX2`(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/PlatformHitachi-V1.2.20150127.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/PlatformHitachi-V1.2.20150127.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 Wed Feb 25 11:31:34 2015 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 24 February 2015.