



SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

HITACHI

SPECint®2006 = 27.7

BladeSymphony BS2000 (Intel Xeon E5-2603)

SPECint_base2006 = 26.5

CPU2006 license: 35

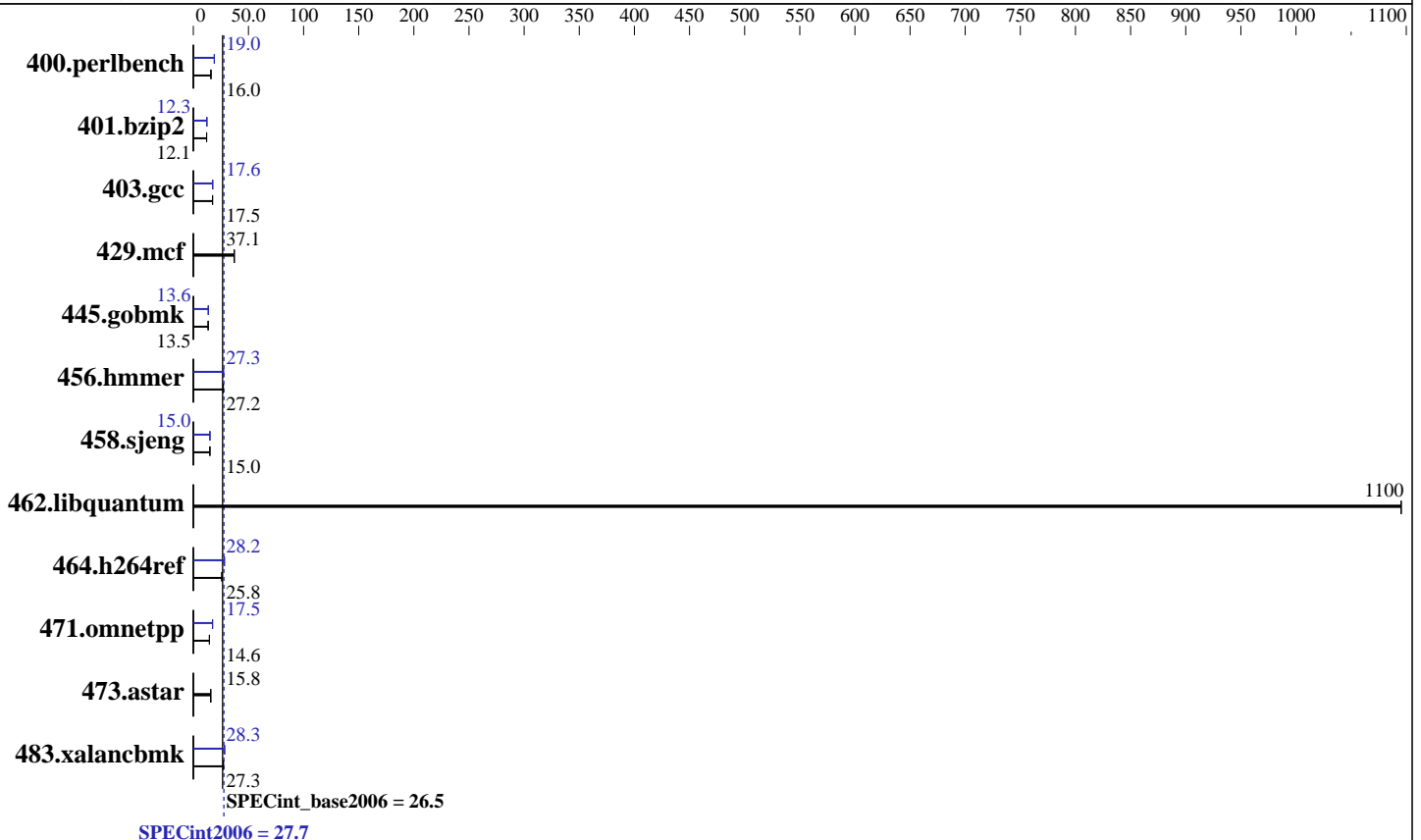
Test sponsor: HITACHI

Tested by: HITACHI

Test date: Apr-2012

Hardware Availability: Apr-2012

Software Availability: Feb-2012



Hardware

CPU Name: Intel Xeon E5-2603
 CPU Characteristics:
 CPU MHz: 1800
 FPU: Integrated
 CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip
 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: 10 MB I+D on chip per chip
 Other Cache: None
 Memory: 128 GB (16 x 8 GB 2Rx4 PC3L-10600R-9, ECC, running at 1066 MHz)
 Disk Subsystem: 2 x 300 GB SAS, 10000 RPM RAID1 configuration
 Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 6.2, Kernel 2.6.32-220.4.2.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

HITACHI

SPECint2006 = **27.7**

BladeSymphony BS2000 (Intel Xeon E5-2603)

SPECint_base2006 = **26.5**

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

Test date: Apr-2012
Hardware Availability: Apr-2012
Software Availability: Feb-2012

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	611	16.0	610	16.0	611	16.0	513	19.0	513	19.0	513	19.0
401.bzip2	800	12.1	801	12.1	799	12.1	787	12.3	787	12.3	787	12.3
403.gcc	461	17.5	462	17.4	461	17.5	458	17.6	459	17.6	459	17.5
429.mcf	246	37.1	246	37.1	246	37.1	246	37.1	246	37.1	246	37.1
445.gobmk	779	13.5	779	13.5	779	13.5	772	13.6	772	13.6	772	13.6
456.hammer	343	27.2	343	27.2	343	27.2	341	27.3	342	27.3	341	27.3
458.sjeng	806	15.0	806	15.0	806	15.0	805	15.0	805	15.0	806	15.0
462.libquantum	18.9	1100	18.9	1100	18.9	1100	18.9	1100	18.9	1100	18.9	1100
464.h264ref	849	26.1	858	25.8	856	25.8	785	28.2	785	28.2	784	28.2
471.omnetpp	427	14.6	428	14.6	429	14.6	359	17.4	357	17.5	358	17.5
473.astar	446	15.7	444	15.8	444	15.8	446	15.7	444	15.8	444	15.8
483.xalancbmk	252	27.3	253	27.2	253	27.3	244	28.3	244	28.3	244	28.3

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"

Platform Notes

BIOS Settings:

Adjacent Cache Line Prefetch = Enabled

Sysinfo program /home/cpu2006/config/sysinfo.rev6800

\$Rev: 6800 \$ \$Date:: 2011-10-11 #\$ 6f2ebdff5032aaa42e583f96b07f99d3
running on localhost.localdomain Thu Apr 12 20:28:16 2012

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 E5-2603 0 @ 1.80GHz
 2 "physical id"s (chips)
 8 "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 : 4
siblings : 4
physical 0: cores 0 1 2 3
physical 1: cores 0 1 2 3
cache size : 10240 KB
```

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

HITACHI

SPECint2006 = 27.7

BladeSymphony BS2000 (Intel Xeon E5-2603)

SPECint_base2006 = 26.5

CPU2006 license: 35

Test sponsor: HITACHI

Tested by: HITACHI

Test date: Apr-2012

Hardware Availability: Apr-2012

Software Availability: Feb-2012

Platform Notes (Continued)

```

From /proc/meminfo
MemTotal:      132150296 kB
HugePages_Total:      0
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 localhost.localdomain 2.6.32-220.4.2.el6.x86_64 #1 SMP Mon Feb 6
16:39:28 EST 2012 x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Apr 12 20:24

(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/libs/32:/home/cpu2006/libs/64"
OMP_NUM_THREADS = "8"

```

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RHEL5.5
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled

HITACHI BladeSymphony BS2000 and HITACHI Compute Blade 2000 are electronically equivalent. The results have been measured on a HITACHI BladeSymphony BS2000.

Base Compiler Invocation

C benchmarks:
icc -m64

C++ benchmarks:
icpc -m64



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

HITACHI

SPECint2006 = 27.7

BladeSymphony BS2000 (Intel Xeon E5-2603)

SPECint_base2006 = 26.5

CPU2006 license: 35

Test sponsor: HITACHI

Tested by: HITACHI

Test date: Apr-2012

Hardware Availability: Apr-2012

Software Availability: Feb-2012

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/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`



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

HITACHI

SPECint2006 = 27.7

BladeSymphony BS2000 (Intel Xeon E5-2603)

SPECint_base2006 = 26.5

CPU2006 license: 35

Test sponsor: HITACHI

Tested by: HITACHI

Test date: Apr-2012

Hardware Availability: Apr-2012

Software Availability: Feb-2012

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

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/smartheap -lsmartheap

```

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

HITACHI

SPECint2006 = 27.7

BladeSymphony BS2000 (Intel Xeon E5-2603)

SPECint_base2006 = 26.5

CPU2006 license: 35

Test sponsor: HITACHI

Tested by: HITACHI

Test date: Apr-2012

Hardware Availability: Apr-2012

Software Availability: Feb-2012

Peak Optimization Flags (Continued)

473.astar: basepeak = yes

483.xalancbmk: -xAVX -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-linux64.20111122.html>

<http://www.spec.org/cpu2006/flags/PlatformHitachi-V1.2.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.xml>

<http://www.spec.org/cpu2006/flags/PlatformHitachi-V1.2.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 09:00:27 2014 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 22 May 2012.