



SPEC[®] CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

HITACHI

SPECint[®]2006 = 51.0

Compute Blade 2000 (Intel Xeon E5-2643)

SPECint_base2006 = 48.4

CPU2006 license: 35

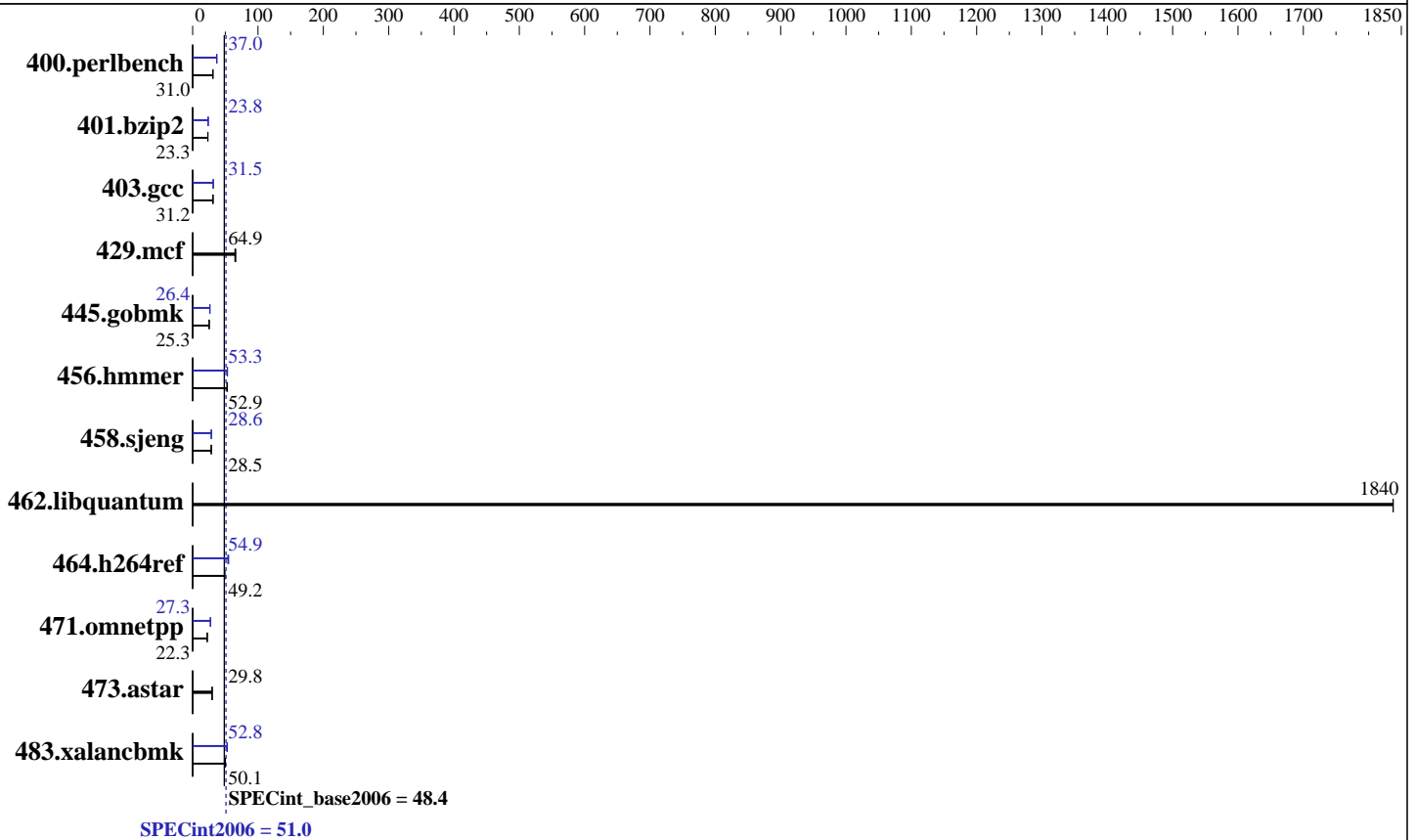
Test sponsor: HITACHI

Tested by: HITACHI

Test date: May-2012

Hardware Availability: Apr-2012

Software Availability: Feb-2012



Hardware

CPU Name: Intel Xeon E5-2643
 CPU Characteristics: Intel Turbo Boost Technology up to 3.50 GHz
 CPU MHz: 3300
 FPU: Integrated
 CPU(s) enabled: 8 cores, 2 chips, 4 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: 10 MB I+D on chip per chip
 Other Cache: None
 Memory: 128 GB (16 x 8 GB 2Rx4 PC3L-10600R-9, ECC)
 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 = **51.0**

Compute Blade 2000 (Intel Xeon E5-2643)

SPECint_base2006 = **48.4**

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

Test date: May-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	315	31.0	315	31.0	<u>315</u>	<u>31.0</u>	<u>264</u>	<u>37.0</u>	265	36.9	264	37.0
401.bzip2	414	23.3	<u>414</u>	<u>23.3</u>	414	23.3	<u>406</u>	<u>23.8</u>	406	23.8	407	23.7
403.gcc	258	31.2	258	31.1	<u>258</u>	<u>31.2</u>	256	31.5	256	31.5	<u>256</u>	<u>31.5</u>
429.mcf	138	66.1	<u>140</u>	<u>64.9</u>	141	64.9	138	66.1	<u>140</u>	<u>64.9</u>	141	64.9
445.gobmk	414	25.3	415	25.2	<u>415</u>	<u>25.3</u>	<u>398</u>	<u>26.4</u>	397	26.4	398	26.4
456.hmmr	176	52.9	177	52.6	<u>177</u>	<u>52.9</u>	175	53.3	175	53.2	<u>175</u>	<u>53.3</u>
458.sjeng	425	28.5	425	28.5	<u>425</u>	<u>28.5</u>	423	28.6	<u>423</u>	<u>28.6</u>	423	28.6
462.libquantum	<u>11.3</u>	<u>1840</u>	11.3	1840	11.3	1840	<u>11.3</u>	<u>1840</u>	11.3	1840	11.3	1840
464.h264ref	450	49.2	<u>450</u>	<u>49.2</u>	454	48.7	<u>403</u>	<u>54.9</u>	403	55.0	411	53.8
471.omnetpp	<u>280</u>	<u>22.3</u>	280	22.3	280	22.3	230	27.2	<u>229</u>	<u>27.3</u>	229	27.4
473.astar	236	29.8	235	29.9	<u>236</u>	<u>29.8</u>	236	29.8	235	29.9	<u>236</u>	<u>29.8</u>
483.xalancbmk	139	49.7	138	50.1	<u>138</u>	<u>50.1</u>	131	52.8	130	52.9	<u>131</u>	<u>52.8</u>

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 Fri May 11 18:13:45 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 E5-2643 0 @ 3.30GHz
 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 : 4
siblings  : 8
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 = 51.0

Compute Blade 2000 (Intel Xeon E5-2643)

SPECint_base2006 = 48.4

CPU2006 license: 35

Test sponsor: HITACHI

Tested by: HITACHI

Test date: May-2012

Hardware Availability: Apr-2012

Software Availability: Feb-2012

Platform Notes (Continued)

From /proc/meminfo

MemTotal: 132149304 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 May 11 18:03

(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 = 51.0

Compute Blade 2000 (Intel Xeon E5-2643)

SPECint_base2006 = 48.4

CPU2006 license: 35

Test sponsor: HITACHI

Tested by: HITACHI

Test date: May-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/smarterheap -lsmarterheap64
```

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 = 51.0

Compute Blade 2000 (Intel Xeon E5-2643)

SPECint_base2006 = 48.4

CPU2006 license: 35

Test sponsor: HITACHI

Tested by: HITACHI

Test date: May-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 = 51.0

Compute Blade 2000 (Intel Xeon E5-2643)

SPECint_base2006 = 48.4

CPU2006 license: 35

Test sponsor: HITACHI

Tested by: HITACHI

Test date: May-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 05:58:57 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 5 June 2012.