



SPEC® CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

HITACHI

SPECint®_rate2006 = 1780

BladeSymphony BS520X (Intel Xeon E7-8893 v3)

SPECint_rate_base2006 = 1700

CPU2006 license: 35

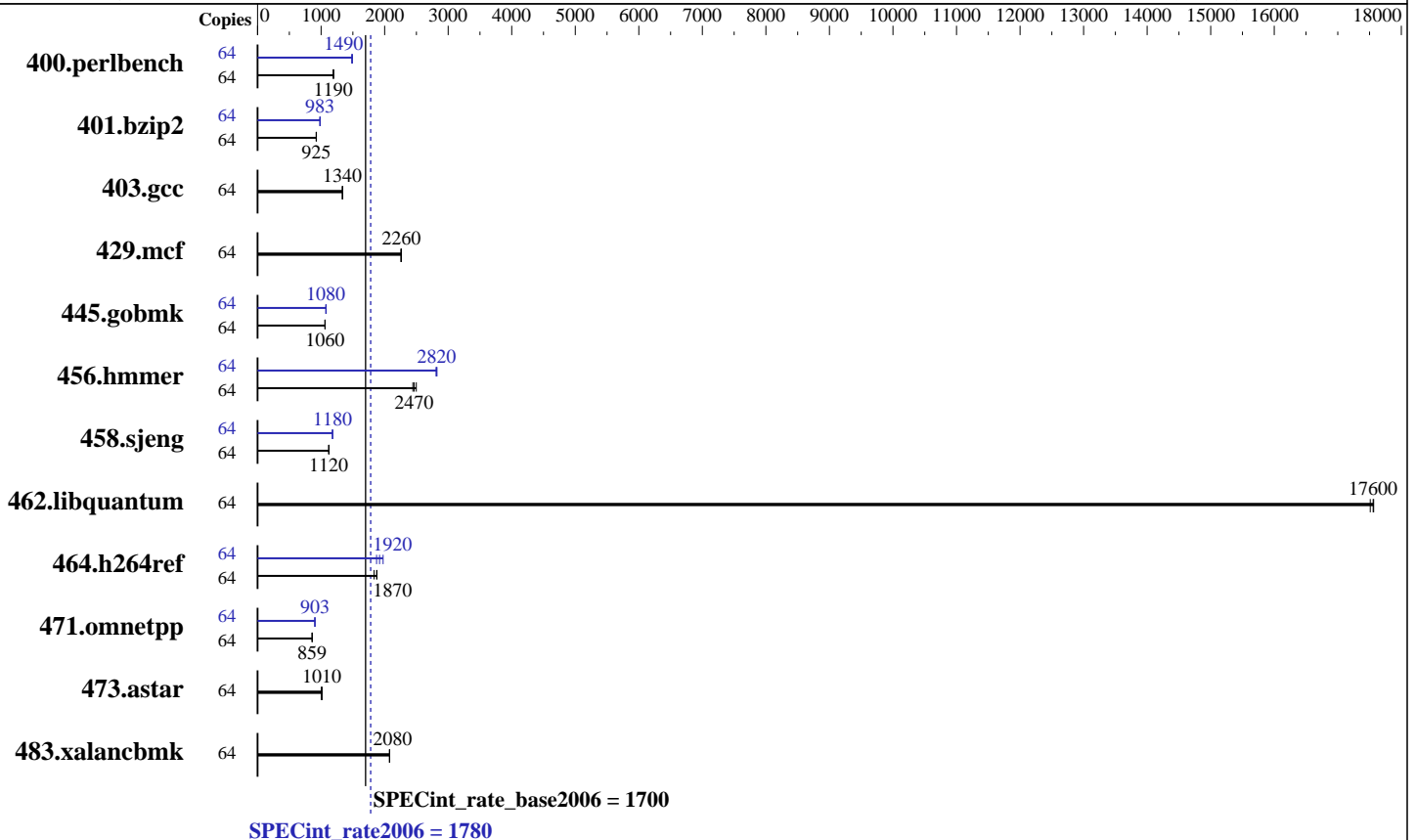
Test date: Aug-2015

Test sponsor: HITACHI

Hardware Availability: Jun-2015

Tested by: HITACHI

Software Availability: Mar-2015



Hardware

CPU Name: Intel Xeon E7-8893 v3
 CPU Characteristics: Intel Turbo Boost Technology up to 3.50 GHz
 CPU MHz: 3200
 FPU: Integrated
 CPU(s) enabled: 32 cores, 8 chips, 4 cores/chip, 2 threads/core
 CPU(s) orderable: 2,4,8 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: 45 MB I+D on chip per chip
 Other Cache: None
 Memory: 2 TB (128 x 16 GB 2Rx4 PC4-2133P-R, running at 1600 MHz)
 Disk Subsystem: 2 x 450 GB SAS, 10000 RPM, RAID1
 Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 7.1 (Maipo)
 3.10.0-229.el7.x86_64
 Compiler: C/C++: Version 15.0.0.090 of Intel C++ Studio XE for Linux
 Auto Parallel: No
 File System: xfs
 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

SPECint_rate2006 = 1780

BladeSymphony BS520X (Intel Xeon E7-8893 v3)

SPECint_rate_base2006 = 1700

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

Test date: Aug-2015
Hardware Availability: Jun-2015
Software Availability: Mar-2015

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	64	524	1190	522	1200	525	1190	64	422	1480	420	1490	419	1490
401.bzip2	64	670	922	667	926	668	925	64	628	983	628	984	629	982
403.gcc	64	385	1340	387	1330	385	1340	64	385	1340	387	1330	385	1340
429.mcf	64	258	2260	259	2260	258	2260	64	258	2260	259	2260	258	2260
445.gobmk	64	632	1060	632	1060	633	1060	64	622	1080	624	1080	624	1080
456.hammer	64	239	2500	242	2470	244	2440	64	211	2820	213	2810	212	2820
458.sjeng	64	690	1120	690	1120	690	1120	64	656	1180	657	1180	656	1180
462.libquantum	64	75.5	17600	75.7	17500	75.5	17600	64	75.5	17600	75.7	17500	75.5	17600
464.h264ref	64	773	1830	756	1870	754	1880	64	717	1980	756	1870	738	1920
471.omnetpp	64	465	860	466	859	465	859	64	443	904	444	902	443	903
473.astar	64	443	1010	448	1000	444	1010	64	443	1010	448	1000	444	1010
483.xalancbmk	64	213	2080	212	2080	213	2080	64	213	2080	212	2080	213	2080

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:

C-State = Disable
C1 Enhanced Mode = Disable
EnergyEfficientTurbo = Disable
ProcessorPerformanceStates = Disable
UncoreFrequencyScaling = Disable
Platform Controlled Type = Maximum Performance
Memory Power Management = Disable
Patrol Scrub = Disable

Sysinfo program /home/spec/speccpu2006/cpu2006/config/sysinfo.rev6914
\$Rev: 6914 \$ \$Date:: 2014-06-25 #\$ e3fbb8667b5a285932ceab81e28219e1
running on localhost.localdomain Thu Aug 20 09:31:23 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>

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

HITACHI

SPECint_rate2006 = 1780

BladeSymphony BS520X (Intel Xeon E7-8893 v3)

SPECint_rate_base2006 = 1700

CPU2006 license: 35

Test sponsor: HITACHI

Tested by: HITACHI

Test date: Aug-2015

Hardware Availability: Jun-2015

Software Availability: Mar-2015

Platform Notes (Continued)

```

From /proc/cpuinfo
model name : Intel(R) Xeon(R) CPU E7-8893 v3 @ 3.20GHz
 8 "physical id"s (chips)
64 "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 1 5 16 20
  physical 1: cores 1 5 16 20
  physical 2: cores 1 5 16 20
  physical 3: cores 1 5 16 20
  physical 4: cores 1 5 16 20
  physical 5: cores 1 5 16 20
  physical 6: cores 1 5 16 20
  physical 7: cores 1 5 16 20
cache size : 46080 KB

```

```

From /proc/meminfo
MemTotal:      2112900508 kB
HugePages_Total:    0
Hugepagesize:    2048 kB

```

```

From /etc/*release* /etc/*version*
os-release:
NAME="Red Hat Enterprise Linux Server"
VERSION="7.1 (Maipo)"
ID="rhel"
ID_LIKE="fedora"
VERSION_ID="7.1"
PRETTY_NAME="Red Hat Enterprise Linux Server 7.1 (Maipo)"
ANSI_COLOR="0;31"
CPE_NAME="cpe:/o:redhat:enterprise_linux:7.1:GA:server"
redhat-release: Red Hat Enterprise Linux Server release 7.1 (Maipo)
system-release: Red Hat Enterprise Linux Server release 7.1 (Maipo)
system-release-cpe: cpe:/o:redhat:enterprise_linux:7.1:ga:server

```

```

uname -a:
Linux localhost.localdomain 3.10.0-229.el7.x86_64 #1 SMP Thu Jan 29 18:37:38
EST 2015 x86_64 x86_64 x86_64 GNU/Linux

```

run-level 3 Aug 17 23:52

```

SPEC is set to: /home/spec/speccpu2006/cpu2006
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/mapper/rhel-home xfs   364G  13G  352G   4% /home

```

Additional information from dmidecode:

Warning: Use caution when you interpret this section. The 'dmidecode' program reads system data which is "intended to allow hardware to be accurately

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

HITACHI

SPECint_rate2006 = 1780

BladeSymphony BS520X (Intel Xeon E7-8893 v3)

SPECint_rate_base2006 = 1700

CPU2006 license: 35

Test sponsor: HITACHI

Tested by: HITACHI

Test date: Aug-2015

Hardware Availability: Jun-2015

Software Availability: Mar-2015

Platform Notes (Continued)

determined", but the intent may not be met, as there are frequent changes to hardware, firmware, and the "DMTF SMBIOS" standard.

BIOS HITACHI 09-14 07/09/2015

Memory:

64x NO DIMM Unknown

1x Samsung M39.A2G40DB0-CPB 16 GB 2 rank 2133 MHz, configured at 1600 MHz

127x Samsung M393A2G40DB0-CPB 16 GB 2 rank 2133 MHz, configured at 1600 MHz

(End of data from sysinfo program)

General Notes

Environment variables set by runspec before the start of the run:

LD_LIBRARY_PATH = "/home/spec/speccpu2006/cpu2006/libs/32:/home/spec/speccpu2006/cpu2006/libs/64:/home/spec/speccpu2006/cpu2006/sh"

Binaries compiled on a system with 1x Core i5-4670K CPU + 16GB memory using RedHat EL 7.0

Transparent Huge Pages enabled with:

echo always > /sys/kernel/mm/transparent_hugepage/enabled

Filesystem page cache cleared with:

echo 1> /proc/sys/vm/drop_caches

runspec command invoked through numactl i.e.:

numactl --interleave=all runspec <etc>

BladeSymphony BS520X, BladeSymphony BS2500 and Hitachi Compute Blade 520X are electronically equivalent.

The results have been measured on a Hitachi Compute Blade 520X.

Base Compiler Invocation

C benchmarks:

icc -m32 -L/opt/intel/composer_xe_2015/lib/ia32

C++ benchmarks:

icpc -m32 -L/opt/intel/composer_xe_2015/lib/ia32

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

Continued on next page

Standard Performance Evaluation Corporation

info@spec.org

http://www.spec.org/



SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

HITACHI

SPECint_rate2006 = 1780

BladeSymphony BS520X (Intel Xeon E7-8893 v3)

SPECint_rate_base2006 = 1700

CPU2006 license: 35

Test sponsor: HITACHI

Tested by: HITACHI

Test date: Aug-2015

Hardware Availability: Jun-2015

Software Availability: Mar-2015

Base Optimization Flags (Continued)

C++ benchmarks:

-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
-opt-mem-layout-trans=3 -Wl,-z,muldefs -L/sh -lsmarthearp

Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m32 -L/opt/intel/composer_xe_2015/lib/ia32

400.perlbench: icc -m64

401.bzip2: icc -m64

456.hmmer: icc -m64

458.sjeng: icc -m64

C++ benchmarks:

icpc -m32 -L/opt/intel/composer_xe_2015/lib/ia32

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:

Continued on next page

Standard Performance Evaluation Corporation

info@spec.org

http://www.spec.org/



SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

HITACHI

SPECint_rate2006 = 1780

BladeSymphony BS520X (Intel Xeon E7-8893 v3)

SPECint_rate_base2006 = 1700

CPU2006 license: 35

Test sponsor: HITACHI

Tested by: HITACHI

Test date: Aug-2015

Hardware Availability: Jun-2015

Software Availability: Mar-2015

Peak Optimization Flags (Continued)

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.hmmr: -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

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-ic15.0-official-linux64.html>

<http://www.spec.org/cpu2006/flags/PlatformHitachi-V1.2.20150729.html>



SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

HITACHI

SPECint_rate2006 = 1780

BladeSymphony BS520X (Intel Xeon E7-8893 v3)

SPECint_rate_base2006 = 1700

CPU2006 license: 35

Test sponsor: HITACHI

Tested by: HITACHI

Test date: Aug-2015

Hardware Availability: Jun-2015

Software Availability: Mar-2015

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

<http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.xml>
<http://www.spec.org/cpu2006/flags/PlatformHitachi-V1.2.20150729.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 Tue Sep 8 22:41:20 2015 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 8 September 2015.