



SPEC® CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Huawei

SPECint®2006 = 80.0

Huawei 2288H V5 (Intel Xeon Gold 6154)

SPECint_base2006 = 76.9

CPU2006 license: 3175

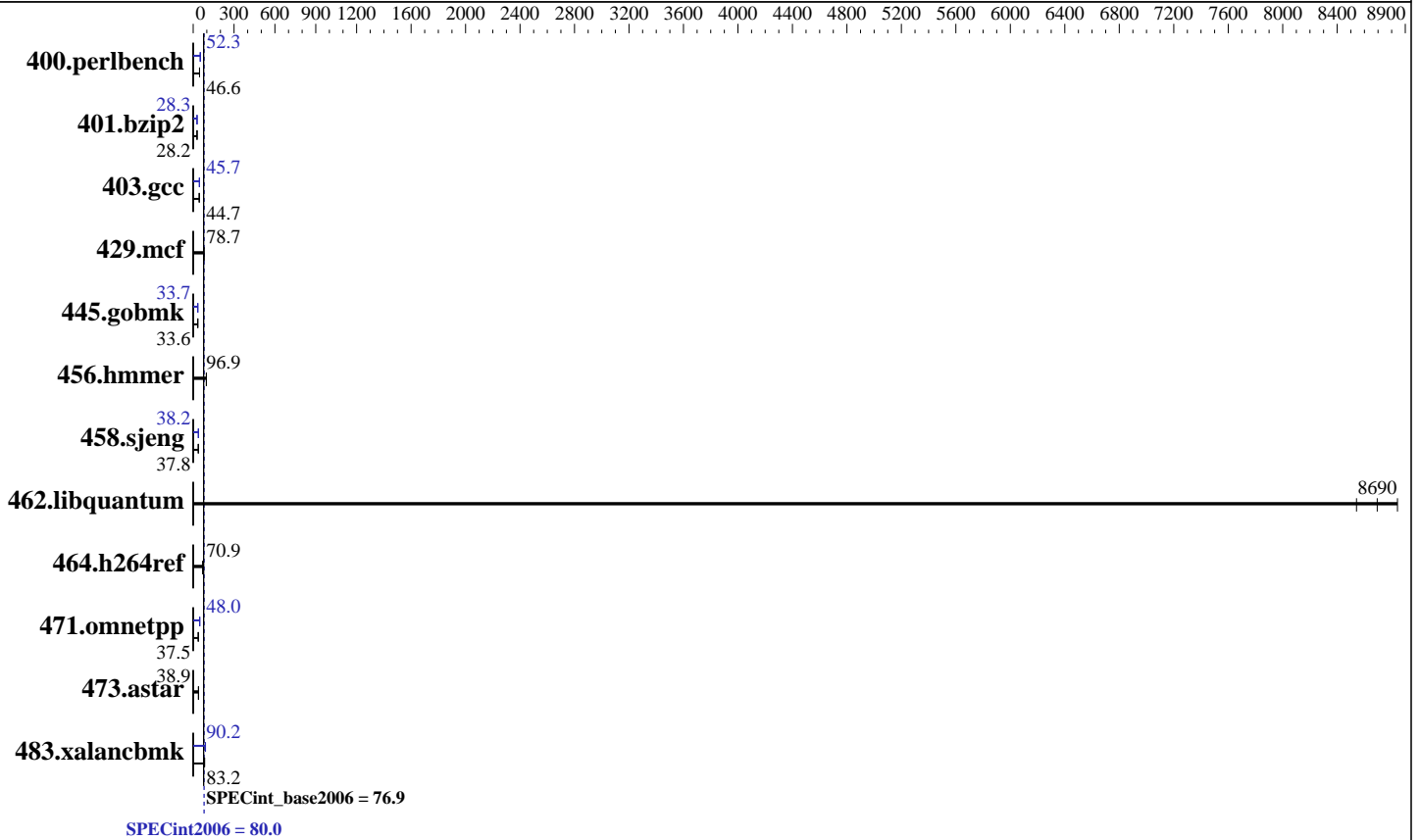
Test sponsor: Huawei

Tested by: Huawei

Test date: May-2017

Hardware Availability: Aug-2017

Software Availability: Nov-2016



Hardware

CPU Name: Intel Xeon Gold 6154
 CPU Characteristics: Intel Turbo Boost Technology up to 3.70 GHz
 CPU MHz: 3000
 FPU: Integrated
 CPU(s) enabled: 36 cores, 2 chips, 18 cores/chip
 CPU(s) orderable: 1,2 chip
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 1 MB I+D on chip per core
 L3 Cache: 24.75 MB I+D on chip per chip
 Other Cache: None
 Memory: 384 GB (24 x 16 GB 2Rx8 PC4-2666V-R)
 Disk Subsystem: 1 x 1200 GB SAS, 10000 RPM
 Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 7.3 (Maipo)
 Compiler: 3.10.0-514.el7.x86_64 C/C++: Version 17.0.0.098 of Intel C/C++ Compiler for Linux
 Auto Parallel: Yes
 File System: xfs
 System State: Run level 3 (multi-user)
 Base Pointers: 32/64-bit
 Peak Pointers: 32/64-bit
 Other Software: Microquill SmartHeap V10.2



SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Huawei

SPECint2006 = 80.0

Huawei 2288H V5 (Intel Xeon Gold 6154)

SPECint_base2006 = 76.9

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

Test date: May-2017
Hardware Availability: Aug-2017
Software Availability: Nov-2016

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	209	46.7	210	46.6	<u>210</u>	<u>46.6</u>	<u>187</u>	<u>52.3</u>	187	52.2	187	52.3
401.bzip2	342	28.2	342	28.2	<u>342</u>	<u>28.2</u>	<u>341</u>	<u>28.3</u>	341	28.3	341	28.3
403.gcc	180	44.7	<u>180</u>	<u>44.7</u>	180	44.6	<u>176</u>	<u>45.7</u>	176	45.9	176	45.7
429.mcf	117	78.2	<u>116</u>	<u>78.7</u>	115	79.2	117	78.2	<u>116</u>	<u>78.7</u>	115	79.2
445.gobmk	<u>312</u>	<u>33.6</u>	311	33.7	312	33.6	311	33.7	311	33.7	<u>311</u>	<u>33.7</u>
456.hammer	96.2	97.0	96.6	96.6	<u>96.3</u>	<u>96.9</u>	96.2	97.0	96.6	96.6	<u>96.3</u>	<u>96.9</u>
458.sjeng	320	37.8	321	37.8	<u>320</u>	<u>37.8</u>	316	38.2	316	38.2	<u>316</u>	<u>38.2</u>
462.libquantum	2.43	8540	2.34	8840	<u>2.38</u>	<u>8690</u>	2.43	8540	2.34	8840	<u>2.38</u>	<u>8690</u>
464.h264ref	315	70.3	<u>312</u>	<u>70.9</u>	312	71.0	315	70.3	<u>312</u>	<u>70.9</u>	312	71.0
471.omnetpp	167	37.3	166	37.6	<u>167</u>	<u>37.5</u>	130	48.1	131	47.8	<u>130</u>	<u>48.0</u>
473.astar	<u>180</u>	<u>38.9</u>	180	38.9	180	39.1	<u>180</u>	<u>38.9</u>	180	38.9	180	39.1
483.xalancbmk	82.5	83.7	<u>83.0</u>	<u>83.2</u>	83.0	83.1	<u>76.5</u>	<u>90.2</u>	76.5	90.2	76.5	90.2

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

Submit Notes

The config file option 'submit' was used.

Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

Platform Notes

BIOS configuration:

Set Power Efficiency Mode to Custom

Set Hyper-Threading to Disable

Sysinfo program /spec17/config/sysinfo.rev6993

Revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f98696cbe290c1)

running on localhost.localdomain Wed May 24 23:18:24 2017

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) Gold 6154 CPU @ 3.00GHz

2 "physical id"s (chips)

36 "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 : 18

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Huawei

SPECint2006 = 80.0

Huawei 2288H V5 (Intel Xeon Gold 6154)

SPECint_base2006 = 76.9

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: May-2017

Hardware Availability: Aug-2017

Software Availability: Nov-2016

Platform Notes (Continued)

```

siblings      : 18
physical 0: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
physical 1: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
cache size   : 25344 KB

```

From /proc/meminfo

```

MemTotal:      394145204 kB
HugePages_Total: 0
Hugepagesize:  2048 kB

```

From /etc/*release* /etc/*version*

```

os-release:
NAME="Red Hat Enterprise Linux Server"
VERSION="7.3 (Maipo)"
ID="rhel"
ID_LIKE="fedora"
VERSION_ID="7.3"
PRETTY_NAME="Red Hat Enterprise Linux Server 7.3 (Maipo)"
ANSI_COLOR="0;31"
CPE_NAME="cpe:/o:redhat:enterprise_linux:7.3:GA:server"
redhat-release: Red Hat Enterprise Linux Server release 7.3 (Maipo)
system-release: Red Hat Enterprise Linux Server release 7.3 (Maipo)
system-release-cpe: cpe:/o:redhat:enterprise_linux:7.3:ga:server

```

uname -a:

```

Linux localhost.localdomain 3.10.0-514.el7.x86_64 #1 SMP Wed Oct 19 11:24:13
EDT 2016 x86_64 x86_64 x86_64 GNU/Linux

```

run-level 3 May 24 14:36

SPEC is set to: /spec17

```

Filesystem      Type      Size  Used Avail Use% Mounted on
/dev/sda2        xfs       262G   88G  175G  34% /

```

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

BIOS INSYDE Corp. 0.10 02/14/2017

Memory:

24x Samsung M393A2K43BB1-CTD 16 GB 2 rank 2666 MHz

(End of data from sysinfo program)

General Notes

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

KMP_AFFINITY = "granularity=fine,compact"

LD_LIBRARY_PATH = "/spec17/libs/32:/spec17/libs/64:/spec17/sh10.2"

Continued on next page

Standard Performance Evaluation Corporation

info@spec.org

http://www.spec.org/

Page 3



SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Huawei	SPECint2006 =	80.0
Huawei 2288H V5 (Intel Xeon Gold 6154)	SPECint_base2006 =	76.9

CPU2006 license: 3175	Test date: May-2017
Test sponsor: Huawei	Hardware Availability: Aug-2017
Tested by: Huawei	Software Availability: Nov-2016

General Notes (Continued)

OMP_NUM_THREADS = "36"

Binaries compiled on a system with 1x Intel Core i7-4790 CPU + 32GB RAM memory using Redhat Enterprise Linux 7.2
 Transparent Huge Pages enabled with:
 echo always > /sys/kernel/mm/transparent_hugepage/enabled
 runspec command invoked through numactl i.e.:
 numactl --interleave=all runspec <etc>

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:
 -xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -qopt-prefetch
 -auto-p32

C++ benchmarks:
 -xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -auto-p32
 -Wl,-z,muldefs -L/sh10.2 -lsmartheap64



SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Huawei

SPECint2006 = 80.0

Huawei 2288H V5 (Intel Xeon Gold 6154)

SPECint_base2006 = 76.9

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

Test date: May-2017
Hardware Availability: Aug-2017
Software Availability: Nov-2016

Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m64

400.perlbench: icc -m32 -L/opt/intel/compilers_and_libraries_2017/linux/lib/ia32

445.gobmk: icc -m32 -L/opt/intel/compilers_and_libraries_2017/linux/lib/ia32

C++ benchmarks (except as noted below):

icc -m32 -L/opt/intel/compilers_and_libraries_2017/linux/lib/ia32

473.astar: icpc -m64

Peak Portability Flags

400.perlbench: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX_IA32

401.bzip2: -DSPEC_CPU_LP64

403.gcc: -DSPEC_CPU_LP64

429.mcf: -DSPEC_CPU_LP64

445.gobmk: -D_FILE_OFFSET_BITS=64

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: -D_FILE_OFFSET_BITS=64

473.astar: -DSPEC_CPU_LP64

483.xalancbmk: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

400.perlbench: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX2(pass 2)
-par-num-threads=1(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -qopt-prefetch

401.bzip2: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX2(pass 2)
-par-num-threads=1(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div -auto-ilp32 -qopt-prefetch

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Huawei

SPECint2006 = 80.0

Huawei 2288H V5 (Intel Xeon Gold 6154)

SPECint_base2006 = 76.9

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: May-2017

Hardware Availability: Aug-2017

Software Availability: Nov-2016

Peak Optimization Flags (Continued)

403.gcc: -xCORE-AVX2 -ipo -O3 -no-prec-div -inline-calloc
-qopt-malloc-options=3 -auto-ilp32

429.mcf: basepeak = yes

445.gobmk: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX2(pass 2)
-par-num-threads=1(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2)

456.hmmmer: basepeak = yes

458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX2(pass 2)
-par-num-threads=1(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -unroll4

462.libquantum: basepeak = yes

464.h264ref: basepeak = yes

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX2(pass 2)
-par-num-threads=1(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -qopt-ra-region-strategy=block
-Wl,-z,muldefs -L/sh10.2 -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: -xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch
-Wl,-z,muldefs -L/sh10.2 -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-ic17.0-official-linux64.html>

<http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-SKL-V1.6.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic17.0-official-linux64.xml>

<http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-SKL-V1.6.xml>



SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Huawei

SPECint2006 = 80.0

Huawei 2288H V5 (Intel Xeon Gold 6154)

SPECint_base2006 = 76.9

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: May-2017

Hardware Availability: Aug-2017

Software Availability: Nov-2016

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 Jul 25 15:51:38 2017 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 25 July 2017.