



SPEC® CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Huawei

SPECint®_rate2006 = 2310

Huawei RH5885 V3 (Intel Xeon E7-8890 v3)

SPECint_rate_base2006 = 2240

CPU2006 license: 3175

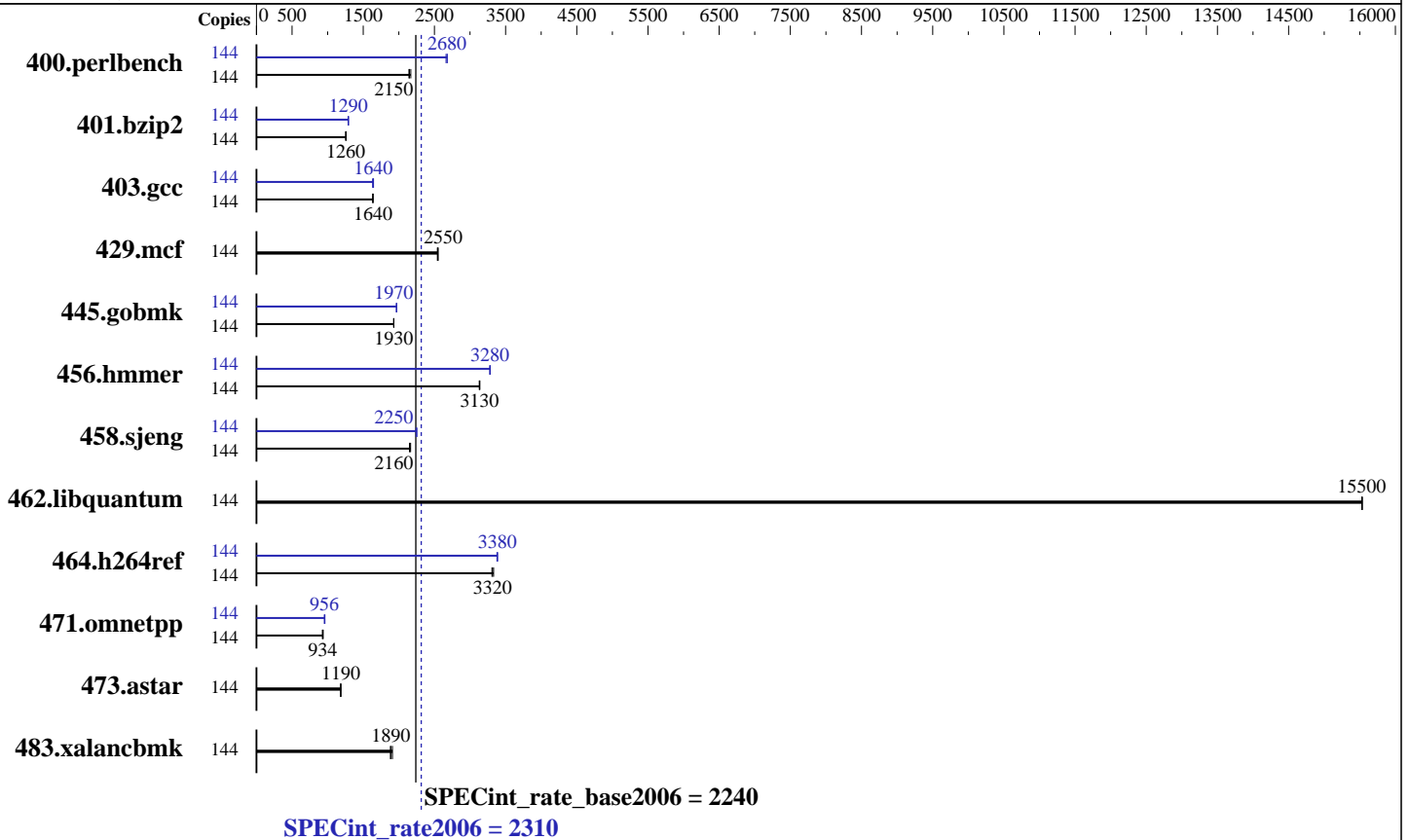
Test date: Oct-2015

Test sponsor: Huawei

Hardware Availability: May-2015

Tested by: Huawei

Software Availability: Oct-2014



Hardware

CPU Name: Intel Xeon E7-8890 v3
 CPU Characteristics: Intel Turbo Boost Technology up to 3.30 GHz
 CPU MHz: 2500
 FPU: Integrated
 CPU(s) enabled: 72 cores, 4 chips, 18 cores/chip, 2 threads/core
 CPU(s) orderable: 2,4 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: 45 MB I+D on chip per chip
 Other Cache: None
 Memory: 512 GB (32 x 16 GB 2Rx4 PC4-2133P-R, running at 1600 MHz)
 Disk Subsystem: 2 x 300 GB SAS, 10K RPM
 Other Hardware: None

Software

Operating System: SUSE Linux Enterprise Server 12 (x86_64) 3.12.28-4-default
 Compiler: C/C++: Version 15.0.0.090 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

Huawei

SPECint_rate2006 = 2310

Huawei RH5885 V3 (Intel Xeon E7-8890 v3)

SPECint_rate_base2006 = 2240

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

Test date: Oct-2015
Hardware Availability: May-2015
Software Availability: Oct-2014

Results Table

Benchmark	Base						Peak							
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	144	649	2170	657	2140	<u>655</u>	<u>2150</u>	144	525	2680	528	2660	<u>525</u>	<u>2680</u>
401.bzip2	144	1110	1250	<u>1105</u>	<u>1260</u>	1102	1260	144	1076	1290	<u>1077</u>	<u>1290</u>	1077	1290
403.gcc	144	707	1640	710	1630	<u>708</u>	<u>1640</u>	144	711	1630	<u>706</u>	<u>1640</u>	705	1640
429.mcf	144	<u>516</u>	<u>2550</u>	514	2550	517	2540	144	<u>516</u>	<u>2550</u>	514	2550	517	2540
445.gobmk	144	<u>783</u>	<u>1930</u>	783	1930	784	1930	144	767	1970	<u>767</u>	<u>1970</u>	768	1970
456.hammer	144	429	3130	428	3140	<u>429</u>	<u>3130</u>	144	<u>410</u>	<u>3280</u>	410	3280	409	3290
458.sjeng	144	805	2170	<u>808</u>	<u>2160</u>	811	2150	144	774	2250	<u>774</u>	<u>2250</u>	777	2240
462.libquantum	144	<u>192</u>	<u>15500</u>	192	15500	192	15500	144	<u>192</u>	<u>15500</u>	192	15500	192	15500
464.h264ref	144	<u>961</u>	<u>3320</u>	957	3330	963	3310	144	<u>942</u>	<u>3380</u>	941	3390	943	3380
471.omnetpp	144	961	936	972	926	<u>964</u>	<u>934</u>	144	943	955	<u>941</u>	<u>956</u>	936	962
473.astar	144	852	1190	<u>853</u>	<u>1190</u>	856	1180	144	852	1190	<u>853</u>	<u>1190</u>	856	1180
483.xalancbmk	144	<u>525</u>	<u>1890</u>	520	1910	528	1880	144	<u>525</u>	<u>1890</u>	520	1910	528	1880

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:
Set Power Efficiency Mode to Performance
Set Lock_step to disabled
Baseboard Management Controller used to adjust the fan speed to 100%
Set Memory Power Saving to disabled
Sysinfo program /zsn/spec1/config/sysinfo.rev6914
\$Rev: 6914 \$ \$Date:: 2014-06-25 #\$ e3fbb8667b5a285932ceab81e28219e1
running on RH5885V3 Thu Oct 22 14:06:51 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 E7-8890 v3 @ 2.50GHz
4 "physical id"s (chips)
144 "processors"

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Huawei

SPECint_rate2006 = 2310

Huawei RH5885 V3 (Intel Xeon E7-8890 v3)

SPECint_rate_base2006 = 2240

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Oct-2015

Hardware Availability: May-2015

Software Availability: Oct-2014

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 : 18
siblings  : 36
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
physical 2: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
physical 3: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
cache size : 46080 KB

```

From /proc/meminfo

```

MemTotal:      529107052 kB
HugePages_Total:      0
Hugepagesize:    2048 kB

```

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

```

SuSE-release:
SUSE Linux Enterprise Server 12 (x86_64)
VERSION = 12
PATCHLEVEL = 0
# This file is deprecated and will be removed in a future service pack or
# release.
# Please check /etc/os-release for details about this release.
os-release:
NAME="SLES"
VERSION="12"
VERSION_ID="12"
PRETTY_NAME="SUSE Linux Enterprise Server 12"
ID="sles"
ANSI_COLOR="0;32"
CPE_NAME="cpe:/o:suse:sles:12"

```

uname -a:

```

Linux RH5885V3 3.12.28-4-default #1 SMP Thu Sep 25 17:02:34 UTC 2014
(9879bd4) x86_64 x86_64 x86_64 GNU/Linux

```

run-level 3 Oct 22 09:08

SPEC is set to: /zsn/spec1

```

Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sdb1       ext4  823G  7.1G  774G   1% /zsn

```

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 American Megatrends Inc. BLISQ954 09/19/2015

Memory:

```

32x Micron 36ASF2G72PZ-2G1A2 16 GB 2 rank 2133 MHz, configured at 1600 MHz
Continued on next page

```



SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Huawei

SPECint_rate2006 = 2310

Huawei RH5885 V3 (Intel Xeon E7-8890 v3)

SPECint_rate_base2006 = 2240

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

Test date: Oct-2015
Hardware Availability: May-2015
Software Availability: Oct-2014

Platform Notes (Continued)

16x NO DIMM NO DIMM

(End of data from sysinfo program)

Regarding the sysinfo display about the memory installed, the correct amount of memory is 512 GB and the dmidecode description should have two lines reading as:

32x Micron 36ASF2G72PZ-2G1A2 16 GB 2 rank 2133 MHz, configured at 1600 MHz

16x NO DIMM NO DIMM

General Notes

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

LD_LIBRARY_PATH = "/zsn/spec1/libs/32:/zsn/spec1/libs/64:/zsn/spec1/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>

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

C++ benchmarks:

-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch

-opt-mem-layout-trans=3 -Wl,-z,muldefs -L/sh -lsmartheap



SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Huawei

SPECint_rate2006 = 2310

Huawei RH5885 V3 (Intel Xeon E7-8890 v3)

SPECint_rate_base2006 = 2240

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

Test date: Oct-2015
Hardware Availability: May-2015
Software Availability: Oct-2014

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:

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: -xCORE-AVX2 -ipo -O3 -no-prec-div

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Huawei

SPECint_rate2006 = 2310

Huawei RH5885 V3 (Intel Xeon E7-8890 v3)

SPECint_rate_base2006 = 2240

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

Test date: Oct-2015
Hardware Availability: May-2015
Software Availability: Oct-2014

Peak Optimization Flags (Continued)

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

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/Huawei-Platform-Settings-V1.2-HSW-RevG.html>

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/Huawei-Platform-Settings-V1.2-HSW-RevG.xml>



SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Huawei

SPECint_rate2006 = 2310

Huawei RH5885 V3 (Intel Xeon E7-8890 v3)

SPECint_rate_base2006 = 2240

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Oct-2015

Hardware Availability: May-2015

Software Availability: Oct-2014

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 Nov 17 19:14:57 2015 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 17 November 2015.