



# SPEC® CINT2006 Result

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## Huawei

### SPECint®\_rate2006 = Not Run

### Huawei RH5885H V3 (Intel Xeon E7-8894 v4)

### SPECint\_rate\_base2006 = 3800

CPU2006 license: 3175

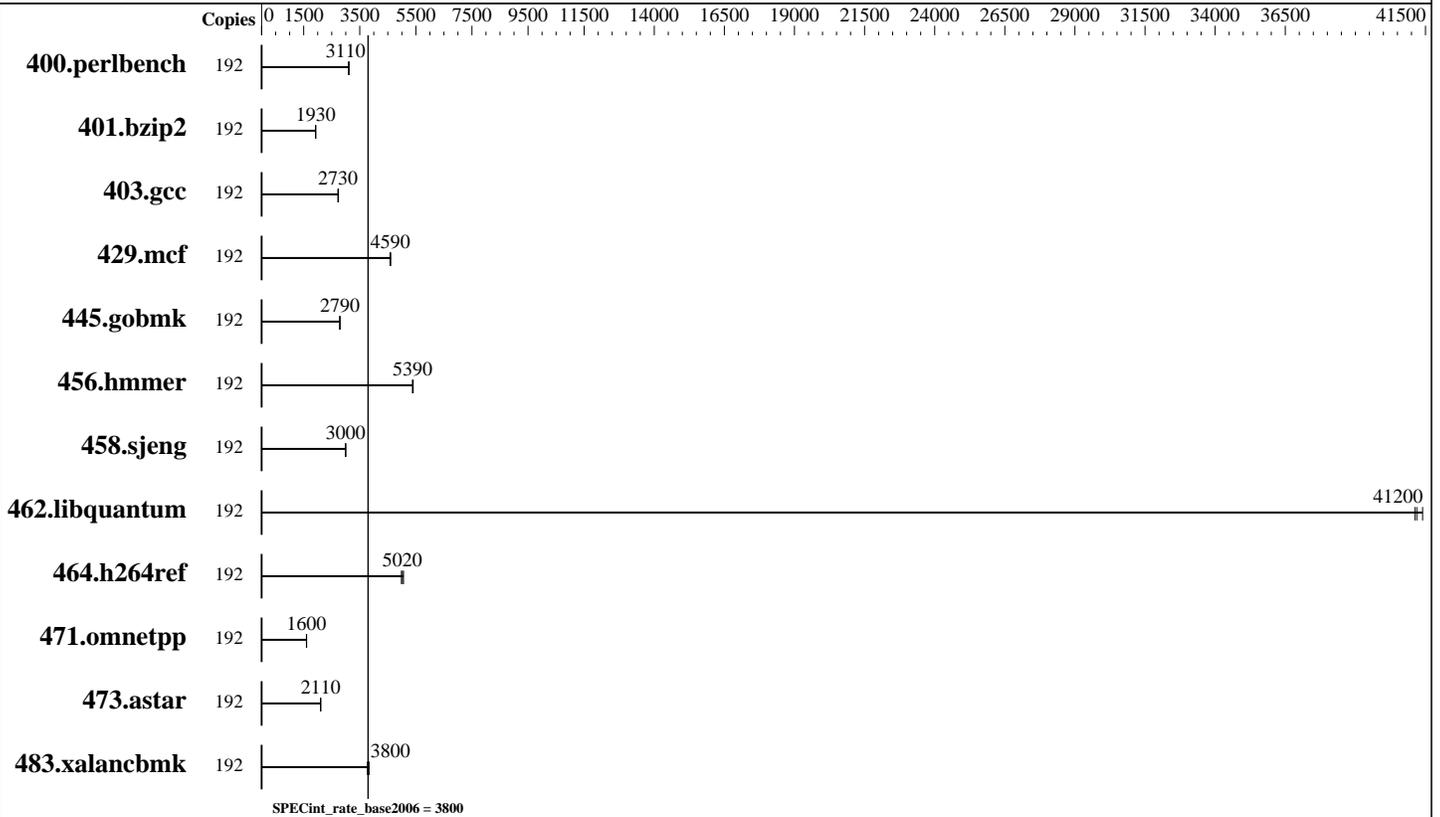
Test sponsor: Huawei

Tested by: Huawei

Test date: Jan-2017

Hardware Availability: Feb-2017

Software Availability: Dec-2015



### Hardware

CPU Name: Intel Xeon E7-8894 v4  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.40 GHz  
 CPU MHz: 2400  
 FPU: Integrated  
 CPU(s) enabled: 96 cores, 4 chips, 24 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: 60 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 512 GB (32 x 16 GB 2Rx8 PC4-2400T-R, running at 1600 MHz)  
 Disk Subsystem: 2 x 600 GB SAS, 10K RPM  
 Other Hardware: None

### Software

Operating System: SUSE Linux Enterprise Server 12 (x86\_64) SP1  
 Kernel 3.12.49-11-default  
 Compiler: C/C++; Version 16.0.0.101 of Intel C++ Studio XE for Linux  
 Auto Parallel: No  
 File System: xfs  
 System State: Run level 5 (multi-user)  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: Microquill SmartHeap V10.2



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## Results Table

Benchmark	Base								Peak							
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio		
400.perlbench	192	603	3110	<b>603</b>	<b>3110</b>	604	3110									
401.bzip2	192	<b>962</b>	<b>1930</b>	963	1920	961	1930									
403.gcc	192	564	2740	<b>566</b>	<b>2730</b>	567	2730									
429.mcf	192	380	4600	382	4580	<b>382</b>	<b>4590</b>									
445.gobmk	192	721	2790	<b>722</b>	<b>2790</b>	722	2790									
456.hammer	192	333	5380	331	5400	<b>332</b>	<b>5390</b>									
458.sjeng	192	<b>775</b>	<b>3000</b>	776	2990	775	3000									
462.libquantum	192	<b>96.6</b>	<b>41200</b>	96.7	41100	96.1	41400									
464.h264ref	192	852	4980	840	5060	<b>846</b>	<b>5020</b>									
471.omnetpp	192	751	1600	<b>750</b>	<b>1600</b>	747	1610									
473.astar	192	639	2110	642	2100	<b>640</b>	<b>2110</b>									
483.xalancbmk	192	351	3770	346	3830	<b>348</b>	<b>3800</b>									

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"  
Turbo mode set with:  
cpupower -c all frequency-set -g performance

## 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 C-State to C0/C1  
Sysinfo program /home/spec/config/sysinfo.rev6914  
\$Rev: 6914 \$ \$Date:: 2014-06-25 #\$ e3fbb8667b5a285932ceab81e28219e1  
running on RH5885Hv3 Mon Jan 23 20:30:31 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) CPU E7-8894 v4 @ 2.40GHz  
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### Platform Notes (Continued)

```

4 "physical id"s (chips)
192 "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 : 24
siblings : 48
physical 0: cores 0 1 2 3 4 5 8 9 10 11 12 13 16 17 18 19 20 21 24 25 26
27 28 29
physical 1: cores 0 1 2 3 4 5 8 9 10 11 12 13 16 17 18 19 20 21 24 25 26
27 28 29
physical 2: cores 0 1 2 3 4 5 8 9 10 11 12 13 16 17 18 19 20 21 24 25 26
27 28 29
physical 3: cores 0 1 2 3 4 5 8 9 10 11 12 13 16 17 18 19 20 21 24 25 26
27 28 29
cache size : 30720 KB

From /proc/meminfo
MemTotal:          529086232 kB
HugePages_Total:   0
Hugepagesize:      2048 kB

/usr/bin/lsb_release -d
SUSE Linux Enterprise Server 12 SP1

From /etc/*release* /etc/*version*
SuSE-release:
SUSE Linux Enterprise Server 12 (x86_64)
VERSION = 12
PATCHLEVEL = 1
# 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-SP1"
VERSION_ID="12.1"
PRETTY_NAME="SUSE Linux Enterprise Server 12 SP1"
ID="sles"
ANSI_COLOR="0;32"
CPE_NAME="cpe:/o:suse:sles:12:sp1"

uname -a:
Linux RH5885Hv3 3.12.49-11-default #1 SMP Wed Nov 11 20:52:43 UTC 2015
(8d714a0) x86_64 x86_64 x86_64 GNU/Linux

run-level 5 Jan 23 18:02

SPEC is set to: /home/spec
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sdal       xfs   750G  32G  719G  5% /home
Additional information from dmidecode:

```

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## Platform Notes (Continued)

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. BLISY102 11/07/2016

Memory:

64x NO DIMM NO DIMM

32x Samsung M393A2K43BB1-CRC 16 GB 2 rank 2400 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/libs/32:/home/spec/libs/64:/home/spec/sh"

Binaries compiled on a system with 1x Intel Core i5-4670K CPU + 32GB memory using RedHat EL 7.1

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/compilers\_and\_libraries\_2016/linux/compiler/lib/ia32\_lin

C++ benchmarks:

icpc -m32 -L/opt/intel/compilers\_and\_libraries\_2016/linux/compiler/lib/ia32\_lin

## Base Portability Flags

400.perlbench: -D\_FILE\_OFFSET\_BITS=64 -DSPEC\_CPU\_LINUX\_IA32  
401.bzip2: -D\_FILE\_OFFSET\_BITS=64  
403.gcc: -D\_FILE\_OFFSET\_BITS=64  
429.mcf: -D\_FILE\_OFFSET\_BITS=64  
445.gobmk: -D\_FILE\_OFFSET\_BITS=64  
456.hmmer: -D\_FILE\_OFFSET\_BITS=64  
458.sjeng: -D\_FILE\_OFFSET\_BITS=64  
462.libquantum: -D\_FILE\_OFFSET\_BITS=64 -DSPEC\_CPU\_LINUX  
464.h264ref: -D\_FILE\_OFFSET\_BITS=64

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## Base Portability Flags (Continued)

471.omnetpp: -D\_FILE\_OFFSET\_BITS=64  
473.astar: -D\_FILE\_OFFSET\_BITS=64  
483.xalancbmk: -D\_FILE\_OFFSET\_BITS=64 -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 -lsmarheap

## Base 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-ic16.0-official-linux64.html>

<http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-V1.2-BDW-RevG.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic16.0-official-linux64.xml>

<http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-V1.2-BDW-RevG.xml>

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For questions about this result, please contact the tester.  
For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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