



SPEC® CINT2006 Result

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Huawei

SPECint®_rate2006 = Not Run

Huawei RH5885 V3 (Intel Xeon E7-8890 v4)

SPECint_rate_base2006 = 2860

CPU2006 license: 3175

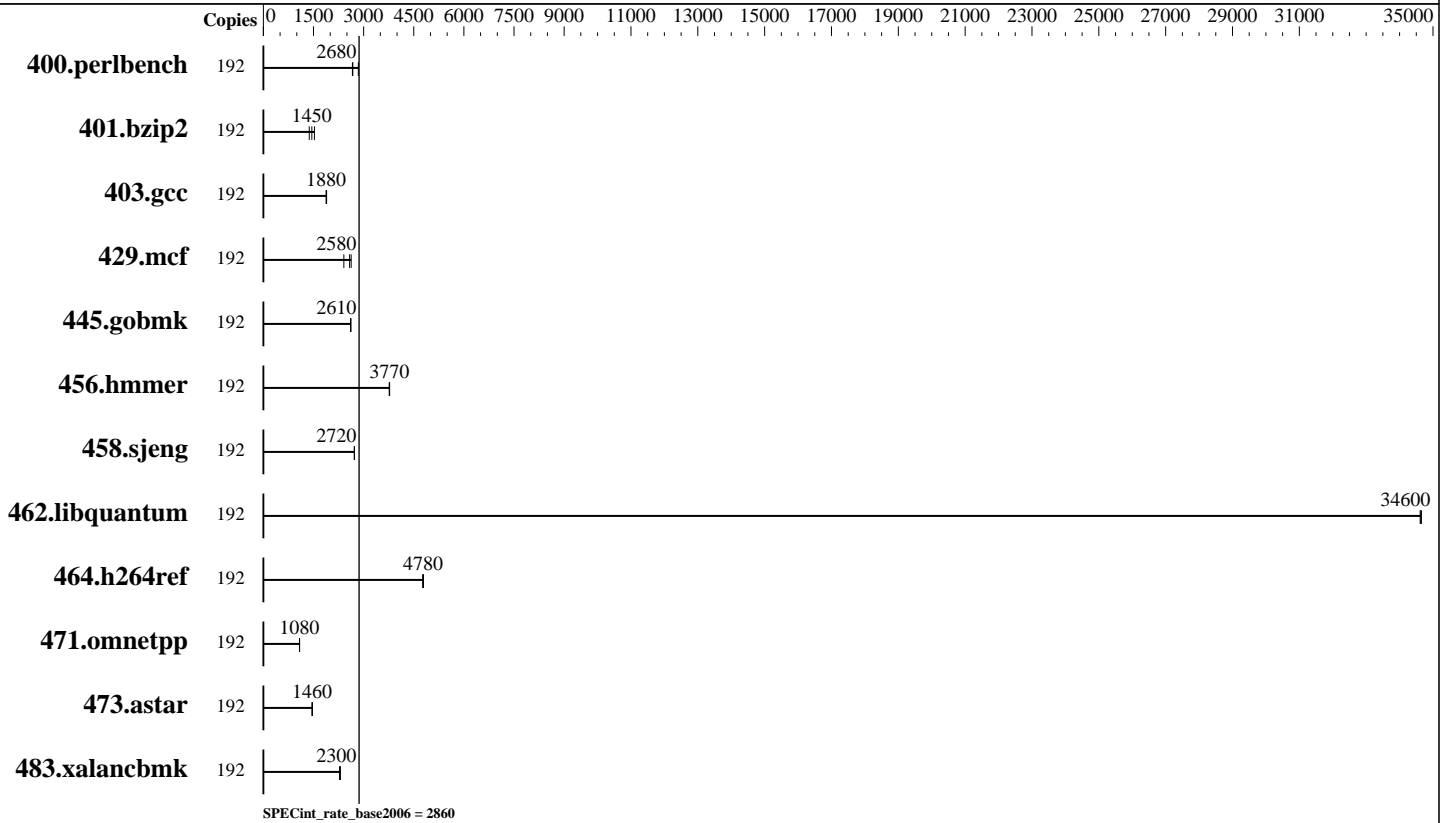
Test sponsor: Huawei

Tested by: Huawei

Test date: Sep-2016

Hardware Availability: Jun-2016

Software Availability: Nov-2015



Hardware

CPU Name: Intel Xeon E7-8890 v4
 CPU Characteristics: Intel Turbo Boost Technology up to 3.40 GHz
 CPU MHz: 2200
 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: 256 GB (16 x 16 GB 2Rx4 PC4-2133P-R, running at 1600 MHz)
 Disk Subsystem: 2 x 600 GB SAS, 10K RPM
 Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 7.2 (Maipo)
 3.10.0-327.el7.x86_64
 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 3 (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	660	2840	<u>701</u>	<u>2680</u>	704	2660							
401.bzip2	192	1213	1530	<u>1278</u>	<u>1450</u>	1350	1370							
403.gcc	192	822	1880	817	1890	<u>821</u>	<u>1880</u>							
429.mcf	192	727	2410	666	2630	<u>679</u>	<u>2580</u>							
445.gobmk	192	<u>770</u>	<u>2610</u>	772	2610	770	2620							
456.hammer	192	476	3770	<u>475</u>	<u>3770</u>	474	3780							
458.sjeng	192	852	2730	854	2720	<u>853</u>	<u>2720</u>							
462.libquantum	192	115	34700	<u>115</u>	<u>34600</u>	115	34600							
464.h264ref	192	887	4790	<u>889</u>	<u>4780</u>	891	4770							
471.omnetpp	192	1108	1080	1110	1080	<u>1109</u>	<u>1080</u>							
473.astar	192	920	1460	924	1460	<u>923</u>	<u>1460</u>							
483.xalancbmk	192	576	2300	<u>576</u>	<u>2300</u>	582	2280							

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 RH5885v3 Wed Sep 21 11:11:26 2016

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 v4 @ 2.20GHz
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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 : 61440 KB

```

```

From /proc/meminfo
MemTotal:      263834464 kB
HugePages_Total:    0
Hugepagesize:   2048 kB

```

```

From /etc/*release* /etc/*version*
os-release:
NAME="Red Hat Enterprise Linux Server"
VERSION="7.2 (Maipo)"
ID="rhel"
ID_LIKE="fedora"
VERSION_ID="7.2"
PRETTY_NAME="Red Hat Enterprise Linux Server 7.2 (Maipo)"
ANSI_COLOR="0;31"
CPE_NAME="cpe:/o:redhat:enterprise_linux:7.2:GA:server"
redhat-release: Red Hat Enterprise Linux Server release 7.2 (Maipo)
system-release: Red Hat Enterprise Linux Server release 7.2 (Maipo)
system-release-cpe: cpe:/o:redhat:enterprise_linux:7.2:ga:server

```

```

uname -a:
Linux RH5885v3 3.10.0-327.el7.x86_64 #1 SMP Thu Oct 29 17:29:29 EDT 2015
x86_64 x86_64 x86_64 GNU/Linux

```

run-level 3 Sep 21 11:03

```

SPEC is set to: /home/spec
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/mapper/rhel-home xfs  485G  8.0G  477G   2% /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 determined", but the intent may not be met, as there are frequent changes to hardware, firmware, and the "DMTF SMBIOS" standard.

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Platform Notes (Continued)

BIOS American Megatrends Inc. BLISV767 07/27/2016

Memory:

16x Hynix HMA42GR7MFR4N-TF 16 GB 2 rank 2133 MHz, configured at 1600 MHz
32x NO DIMM NO DIMM

(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
471.omnetpp: -D_FILE_OFFSET_BITS=64
473.astar: -D_FILE_OFFSET_BITS=64
483.xalancbmk: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX



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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

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.

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