



SPEC® CINT2006 Result

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Huawei

SPECint®_rate2006 = Not Run

Kunlun 9008 (Intel Xeon E7-4850 v3)

SPECint_rate_base2006 = 7650

CPU2006 license: 3175

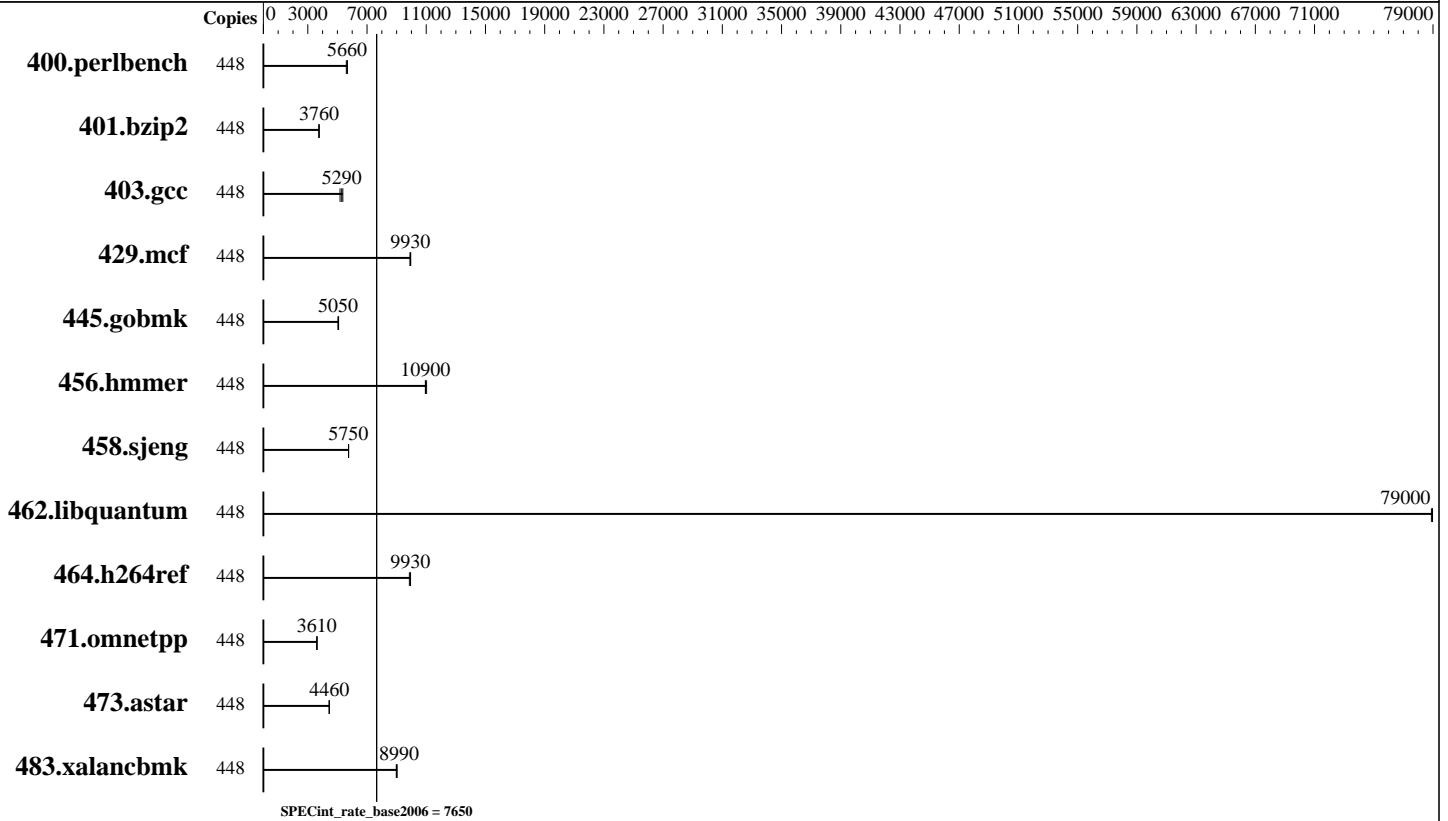
Test sponsor: Huawei

Tested by: Huawei

Test date: Apr-2017

Hardware Availability: Jan-2016

Software Availability: Dec-2015



Hardware

CPU Name: Intel Xeon E7-4850 v3
 CPU Characteristics: Intel Turbo Boost Technology up to 2.80 GHz
 CPU MHz: 2200
 FPU: Integrated
 CPU(s) enabled: 224 cores, 16 chips, 14 cores/chip, 2 threads/core
 CPU(s) orderable: 4,8,16 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: 35 MB I+D on chip per chip
 Other Cache: None
 Memory: 2 TB (128 x 16 GB 2Rx4 PC4-2133P-R, running at 1333 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	448	781	5600	<u>773</u>	<u>5660</u>	772	5670							
401.bzip2	448	1149	3760	<u>1150</u>	<u>3760</u>	1152	3750							
403.gcc	448	<u>682</u>	<u>5290</u>	697	5180	672	5370							
429.mcf	448	413	9900	<u>411</u>	<u>9930</u>	411	9950							
445.gobmk	448	932	5040	<u>930</u>	<u>5050</u>	925	5080							
456.hmmer	448	382	10900	379	11000	<u>382</u>	<u>10900</u>							
458.sjeng	448	<u>943</u>	<u>5750</u>	943	5750	941	5760							
462.libquantum	448	118	78900	<u>118</u>	<u>79000</u>	118	79000							
464.h264ref	448	<u>998</u>	<u>9930</u>	1006	9860	997	9940							
471.omnetpp	448	776	3610	<u>775</u>	<u>3610</u>	773	3620							
473.astar	448	708	4440	706	4460	<u>706</u>	<u>4460</u>							
483.xalancbmk	448	<u>344</u>	<u>8990</u>	344	8980	342	9040							

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
Baseboard Management Controller used to adjust the fan speed to 100%
Sysinfo program /home/spec/config/sysinfo.rev6914
\$Rev: 6914 \$ \$Date:: 2014-06-25 #\$ e3fbb8667b5a285932ceab81e28219e1
running on linux-v9m3 Thu Apr 20 09:26:50 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 E7-4850 v3 @ 2.20GHz
16 "physical id"s (chips)
448 "processors"

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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 : 14
siblings  : 28
physical 0: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14
physical 1: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14
physical 2: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14
physical 3: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14
physical 4: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14
physical 5: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14
physical 6: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14
physical 7: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14
physical 8: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14
physical 9: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14
physical 10: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14
physical 11: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14
physical 12: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14
physical 13: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14
physical 14: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14
physical 15: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14
cache size : 35840 KB

```

From /proc/meminfo

```

MemTotal:      2117340076 kB
HugePages_Total:      0
Hugepagesize:    2048 kB

```

/usr/bin/lsc_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"

```

```

sgi-accelerate-release: SGI Accelerate 1.12, Build
714r18.sles12sp1-1604041900

```

uname -a:

Linux linux-v9m3 3.12.49-11-default #1 SMP Wed Nov 11 20:52:43 UTC 2015

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Platform Notes (Continued)

(8d714a0) x86_64 x86_64 x86_64 GNU/Linux

run-level 5 Apr 20 09:15

SPEC is set to: /home/spec

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/sda4	xfs	1.1T	351G	723G	33%	/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.

BIOS American Megatrends Inc. 5.11 02/21/2017

Memory:

128x Micron 36ASF2G72PZ-2G1A2 16 GB 2 rank 2133 MHz, configured at 1333 MHz
256x 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

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Base Portability Flags (Continued)

```

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

```

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.20170404.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.20170404.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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