## SPEC® CINT2006 Result

### Huawei

**Kunlun 9016 (Intel Xeon E7-4850 v4)**

<table>
<thead>
<tr>
<th>SPECint®_rate2006</th>
<th>Not Run</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECint_rate_base2006</td>
<td>8970</td>
</tr>
</tbody>
</table>

**CPU2006 license:** 3175  
**Test sponsor:** Huawei  
**Tested by:** Huawei  
**Test date:** May-2017  
**Hardware Availability:** Jan-2016  
**Software Availability:** Sep-2016

### Hardware

<table>
<thead>
<tr>
<th>Application</th>
<th>Copies</th>
<th>SPECint Rate Base2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>400.perlbench</td>
<td>512</td>
<td>7000</td>
</tr>
<tr>
<td>401.bzip2</td>
<td>512</td>
<td>4320</td>
</tr>
<tr>
<td>403.gcc</td>
<td>512</td>
<td>5790</td>
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<tr>
<td>429.mcf</td>
<td>512</td>
<td>11300</td>
</tr>
<tr>
<td>445.gobmk</td>
<td>512</td>
<td>5830</td>
</tr>
<tr>
<td>456.hmmer</td>
<td>512</td>
<td>13900</td>
</tr>
<tr>
<td>458.sjeng</td>
<td>512</td>
<td>6710</td>
</tr>
<tr>
<td>462.libquantum</td>
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<td>96800</td>
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<tr>
<td>464.h264ref</td>
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<tr>
<td>471.omnetpp</td>
<td>512</td>
<td>3960</td>
</tr>
<tr>
<td>473.astar</td>
<td>512</td>
<td>5200</td>
</tr>
<tr>
<td>483.xalancbmk</td>
<td>512</td>
<td>10400</td>
</tr>
</tbody>
</table>

### Software

<table>
<thead>
<tr>
<th>Operating System</th>
<th>SUSE Linux Enterprise Server 12 (x86_64) SP1 3.12.49-11-default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compiler</td>
<td>C/C++: Version 17.0.0.098 of Intel C/C++ Compiler for Linux</td>
</tr>
<tr>
<td>Auto Parallel</td>
<td>No</td>
</tr>
<tr>
<td>File System</td>
<td>ext4</td>
</tr>
<tr>
<td>System State</td>
<td>Run level 5 (multi-user)</td>
</tr>
<tr>
<td>Base Pointers</td>
<td>32-bit</td>
</tr>
<tr>
<td>Peak Pointers</td>
<td>32/64-bit</td>
</tr>
<tr>
<td>Other Software</td>
<td>Microquill SmartHeap V10.2</td>
</tr>
</tbody>
</table>

**CPU Name:** Intel Xeon E7-4850 v4  
**CPU Characteristics:** Intel Turbo Boost Technology up to 2.80 GHz  
**CPU MHz:** 2100  
**FPU:** Integrated  
**CPU(s) enabled:** 256 cores, 16 chips, 16 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:** 40 MB I+D on chip per chip  
**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
## SPEC CINT2006 Result

### Huawei Kunlun 9016(Intel Xeon E7-4850 v4)

**CPU2006 license:** 3175  
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**SPECint_rate2006 = Not Run**

**SPECint_rate_base2006 = 8970**

### Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
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<tr>
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<td>10400</td>
<td>343</td>
<td>10300</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 /spec/config/sysinfo.rev6993  
Revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f98696cbe290c1)  
running on linux-ew80 Mon May 15 07:47:57 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 v4 @ 2.10GHz  
16 "physical id"s (chips)  
512 "processors"
Huawei

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SPECint_rate_base2006 = 8970

CPU2006 license: 3175
Test sponsor: Huawei
Test date: May-2017
Hardware Availability: Jan-2016
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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 : 16
siblings : 32
physical 0: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
physical 1: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
physical 2: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
physical 3: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
physical 4: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
physical 5: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
physical 6: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
physical 7: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
physical 8: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
physical 9: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
physical 10: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
physical 11: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
physical 12: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
physical 13: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
physical 14: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
physical 15: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
cache size : 40960 KB

From /proc/meminfo
MemTotal: 2117104300 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:
(8d714a0) x86_64 x86_64 x86_64 GNU/Linux

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Huawei
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Tested by: Huawei

Platform Notes (Continued)
run-level 5 May 15 07:44
SPEC is set to: /spec
  Filesystem     Type  Size  Used Avail Use% Mounted on
  /dev/sda3      ext4  1.1T   95G  961G   9% /
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. BLXSV207 04/17/2017
  Memory:
    128x Micron 36ASF2G72PZ-2G1A2 16 GB 2 rank 2133 MHz, configured at 1333 MHz
    256x NO DIMM NO DIMM

General Notes
Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/spec/libs/32:/spec/libs/64:/spec/sh10.2"
Binaries compiled on a system with 1x Intel Core i7-4790K CPU + 32GB RAM memory using Redhat Enterprise Linux 7.2
Transparent Huge Pages enabled by default
Filesystem page cache cleared with:
echo 1 > /proc/sys/vm/drop_caches
runspec command invoked through numactl i.e.:
umactl --interleave=all runspec <etc>

Base Compiler Invocation
C benchmarks:
  icc -m32 -L/opt/intel/compilers_and_libraries_2017/linux/lib/ia32
C++ benchmarks:
  icpc -m32 -L/opt/intel/compilers_and_libraries_2017/linux/lib/ia32

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

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Kunlun 9016(Intel Xeon E7-4850 v4)  

SPECint_rate2006 =  Not Run  
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CPU2006 license: 3175  
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Tested by: Huawei  

Test date: May-2017  
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Base Portability Flags (Continued)

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 -qopt-prefetch  
-qopt-mem-layout-trans=3  

C++ benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch  
-qopt-mem-layout-trans=3 -Wl,-z,muldefs -L/sh10.2 -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-ic17.0-official-linux64.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-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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