Huawei
Kunlun 9008 (Intel Xeon E7-4809 v4)

**SPECint\_rate2006 = Not Run**

**SPECint\_rate_base2006 = 2110**

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

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### Hardware

- **CPU Name:** Intel Xeon E7-4809 v4
- **CPU Characteristics:**
  - **CPU MHz:** 2100
  - **FPU:** Integrated
  - **CPU(s) enabled:** 64 cores, 8 chips, 8 cores/chip, 2 threads/core
  - **CPU(s) orderable:** 4.8 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:** 20 MB I+D on chip per chip
  - **Other Cache:** None
  - **Memory:** 1 TB (64 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 3.12.49-11-default
- **Compiler:** C/C++: Version 17.0.0.098 of Intel C/C++ Compiler 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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SPEC® CINT2006 Result

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SPEC CINT2006 Result

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**SPEClnt_rate_base2006 = 2110**

CPU2006 license: 3175
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Specint_result2006 = Not Run
Specint_result_base2006 = 2110

Results Table

<table>
<thead>
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<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
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</thead>
<tbody>
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<td>799</td>
<td>1570</td>
<td>801</td>
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<td>802</td>
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<td>401.bzip2</td>
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<tr>
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<td>2640</td>
<td>335</td>
<td>2630</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:
cupower -c all frequency-set -g performance

Platform Notes

Sysinfo program /home/spec/config/sysinfo.rev6993
Revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f98696cbe290c1)
running on linux-v9m3 Thu Jun 15 20:22:01 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 E7-4809 v4 @ 2.10GHz
    8 "physical id"s (chips)
    128 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The following excerpts from /proc/cpuinfo might not be reliable. Use with caution.)

Continued on next page
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Platform Notes (Continued)

cpu cores : 8
siblings : 16
physical 0: cores 0 1 2 3 4 5 6 7
physical 1: cores 0 1 2 3 4 5 6 7
physical 2: cores 0 1 2 3 4 5 6 7
physical 3: cores 0 1 2 3 4 5 6 7
physical 4: cores 0 1 2 3 4 5 6 7
physical 5: cores 0 1 2 3 4 5 6 7
physical 6: cores 0 1 2 3 4 5 6 7
physical 7: cores 0 1 2 3 4 5 6 7
cache size : 20480 KB

From /proc/meminfo
MemTotal: 1058282856 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"
    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
(8d714a0) x86_64 x86_64 x86_64 GNU/Linux

run-level 5 Jun 15 17:00

SPEC is set to: /home/spec
Filesystem   Type   Size  Used Avail Use% Mounted on
/dev/sda4    xfs  1.1T  779G  295G  73% /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

Continued on next page
Huawei Kunlun 9008 (Intel Xeon E7-4809 v4)  

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### Platform Notes (Continued)

"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:  
  - 64x Micron 36ASF2G72PZ-2GLA2 16 GB 2 rank 2133 MHz, configured at 1333 MHz  
  - 128x 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/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.:
  - numactl --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  
- 445.gobmk: -D_FILE_OFFSET_BITS=64  
- 456.hmmer: -D_FILE_OFFSET_BITS=64  
- 458.sjeng: -D_FILE_OFFSET_BITS=64  
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- 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 -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](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/Intel-ic17.0-official-linux64.xml)  

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For other inquiries, please contact webmaster@spec.org.

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