Huawei
Huawei Kunlun 9008 V5 (Intel Xeon Platinum 8280, 2.7 GHz)

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Base Threads Run</th>
<th>Peak Threads</th>
</tr>
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<tbody>
<tr>
<td>350.md</td>
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<tr>
<td>351.bwaves</td>
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<tr>
<td>352.nab</td>
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<td>360.ilbdc</td>
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<td>372.smithwa</td>
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<tr>
<td>376.kdtree</td>
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</table>

**SPECompG_base2012 = 40.5**

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**Hardware**

- **CPU Name:** Intel Xeon Platinum 8280
- **CPU Characteristics:** Intel Turbo Boost Technology up to 4.00 GHz
- **CPU MHz:** 2700
- **CPU MHz Maximum:** 4000
- **CPU(s) enabled:** Integrated
- **CPU(s) orderable:** 2,4,6,8 Chips
- **Primary Cache:** 32 KB I + 32 KB D on chip per core
- **Secondary Cache:** 1 MB I+D on chip per core
- **L3 Cache:** 38.5 MB I+D on chip per chip
- **Memory:** 1152 GB (36 x 32 GB 2Rx4 PC4-2933Y-R)
- **Disk Subsystem:** 2x900 GB 10 K RPM SAS HDD,RAID 0
- **Base Threads Run:** 336
- **Minimum Peak Threads:** ---

---

**Software**

- **Operating System:** SUSE Linux Enterprise Server 12 SP4 4.12.14-94.41-default
- **Compiler:** C/C++: Version 19.0.1.144 of Intel C++ Studio XE for Linux; Fortran: Version 19.0.1.144 of Intel Fortran
- **Auto Parallel:** No
- **File System:** btrfs
- **System State:** Default
- **Base Pointers:** 64-bit
- **Peak Pointers:** Not Applicable
- **Other Software:** None
**Huawei Kunlun 9008 V5 (Intel Xeon Platinum 8280, 2.7 GHz)**

**SPEC OMPG2012 Result**

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<tr>
<th>Benchmark</th>
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</table>

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

**Platform Notes**

Sysinfo program /home/omp/Docs/sysinfo

$Rev: 395 $ $Date:: 2012-07-25 #$ 8f8c0fe9e19c658963a1e67685e50647
running on linux-2yo1 Tue Mar 12 09:01:40 2019

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/omp2012/Docs/config.html#sysinfo

From /proc/cpuinfo

- model name : Intel Xeon Platinum 8280 CPU @ 2.70GHz
- 6 "physical id"s (chips)
- 336 "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 : 28
  - siblings : 56
  - physical 0: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14 16 17 18 19 20 21 22 24
  - 25 26 27 28 29 30
  - physical 1: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14 16 17 18 19 20 21 22 24
  - 25 26 27 28 29 30
  - physical 2: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14 16 17 18 19 20 21 22 24
  - 25 26 27 28 29 30

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Huawei Kunlun 9008 V5 (Intel Xeon Platinum 8280, 2.7 GHz)

SPECompG_peak2012 = Not Run
SPECompG_base2012 = 40.5

OMP2012 license: 27
Test sponsor: Huawei
Tested by: Huawei

Platform Notes (Continued)

physical 3: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14 16 17 18 19 20 21 22 24
25 26 27 28 29 30
physical 4: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14 16 17 18 19 20 21 22 24
25 26 27 28 29 30
physical 5: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14 16 17 18 19 20 21 22 24
25 26 27 28 29 30
cache size: 39424 KB

From /proc/meminfo
MemTotal: 1186999604 kB
HugePages_Total: 24576
Hugepagesize: 2048 kB

/usr/bin/lsb_release -d
SUSE Linux Enterprise Server 12 SP4

From /etc/*release*/etc/*version*
SuSE-release:
SUSE Linux Enterprise Server 12 (x86_64)
VERSION = 12
PATCHLEVEL = 4
# This file is deprecated and will be removed in a future service pack or
# please check /etc/os-release for details about this release.
os-release:
NAME="SLES"
VERSION="12-SP4"
VERSION_ID="12.4"
PRETTY_NAME="SUSE Linux Enterprise Server 12 SP4"
ID="sles"
ANSI_COLOR="0;32"
CPE_NAME="cpe:/o:suse:sles:12:sp4"

uname -a:
(3090901) x86_64 x86_64 x86_64 GNU/Linux

run-level 5 Mar 12 08:56

SPEC is set to: /home/omp
Filesystem Type Size Used Avail Use% Mounted on
/dev/sda4 xfs 1.6T 53G 1.5T 4% /home

Additional information from dmidecode:
BIOS INSYDE Corp. 9.25 02/15/2019
Memory:
60x NO DIMM NO DIMM
36x Samsung M393A4K40CB2-CVF 32 GB 2933 MHz 2 rank

(End of data from sysinfo program)
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OMP2012 license: 27
Test sponsor: Huawei
Tested by: Huawei

General Notes

========================================================================
Power profile set with:
cpupower -c all frequency-set -g performance
System settings notes:
Intel Turbo Boost Technology (Turbo) : Enabled
Memory RAS Configuration set to Maximum Performance

========================================================================
General Notes and Environment variables
ENV_KMP_BLOCKTIME=infinite
ENV_KMP_DETERMINISTIC_REDUCTION=1
ENV_OMP_DYNAMIC=FALSE
ENV_KMP_LIBRARY=turnaround
ENV_KMP_SCHEDULE=static,balanced
ENV_KMP_STACKSIZE=256M
ENV_OMP_NESTED=FALSE
ENV_OMP_NUM_THREADS=336

========================================================================
General base OMP Library Settings

BIOS settings:
XPT Prefetch Set to Enabled
Yes: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown) is mitigated in the system as tested and documented.
Yes: The test sponsor attests, as of date of publication, that CVE-2017-5753 (Spectre variant 1) is mitigated in the system as tested and documented.
Yes: The test sponsor attests, as of date of publication, that CVE-2017-5715 (Spectre variant 2) is mitigated in the system as tested and documented.

Base Compiler Invocation

C benchmarks:
icc
C++ benchmarks:
icpc
Fortran benchmarks:	ifort

Base Portability Flags

350.md: -FR
357.bt331: --mmodel=medium

Continued on next page
Huawei

Huawei Kunlun 9008 V5 (Intel Xeon Platinum 8280, 2.7 GHz)  

SPECompG_peak2012 = Not Run  
SPECompG_base2012 = 40.5

<table>
<thead>
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<td>Hardware Availability: Jun-2019</td>
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<tr>
<td>Tested by: Huawei</td>
<td>Software Availability: Feb-2019</td>
<td></td>
</tr>
</tbody>
</table>

Base Portability Flags (Continued)

363.swim: -mcmodel=medium  
367.imagick: -std=c99

Base Optimization Flags

C benchmarks:
-03 -gopenmp -ipo -xCORE-AVX512 -fp-model fast=2 -no-prec-div  
  -no-prec-sqrt -ansi-alias

C++ benchmarks:
-03 -gopenmp -ipo -xCORE-AVX512 -fp-model fast=2 -no-prec-div  
  -no-prec-sqrt -ansi-alias

Fortran benchmarks:
-03 -gopenmp -ipo -xCORE-AVX512 -fp-model fast=2 -no-prec-div  
  -no-prec-sqrt -align all

The flags files that were used to format this result can be browsed at
http://www.spec.org/omp2012/flags/Huawei_Intel-ic17.0-linux64.html
http://www.spec.org/omp2012/flags/Huawei-Platform-Settings-SKL-V1.7.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/omp2012/flags/Huawei_Intel-ic17.0-linux64.xml
http://www.spec.org/omp2012/flags/Huawei-Platform-Settings-SKL-V1.7.xml

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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

Tested with SPEC OMP2012 v1.0.
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