Huawei

Huawei 2488H V5 (Intel Xeon Platinum 8280, 2.7 GHz)

SPECompG_peak2012 = Not Run
SPECompG_base2012 = 45.9

OMPG2012 license: 27
Test sponsor: Huawei
Tested by: Huawei

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
FPU: Integrated
CPU(s) enabled: 112 cores, 4 chips, 28 cores/chip, 2 threads/core
CPU(s) orderable: 2 to 4 Chips
Primary Cache: 32 KB L1 + 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
Other Cache: None
Memory: 1536 GB (48 x 32 GB 2Rx4 PC4-2933Y-R)
Disk Subsystem: 1x900 GB 10 K RPM SAS HDD,RAID 0
Other Hardware: None
Base Threads Run: 224
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

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Huawei
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Test sponsor: Huawei
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Maximum Peak Threads: --

Results Table

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</tbody>
</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-7ven Wed Feb 27 16:47:16 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
  4 "physical id"s (chips)
  224 "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

Huawei 2488H V5 (Intel Xeon Platinum 8280, 2.7 GHz)

<table>
<thead>
<tr>
<th>SPEC OMPG2012 Result</th>
<th>Huawei 2488H V5 (Intel Xeon Platinum 8280, 2.7 GHz)</th>
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OMP2012 license:27
Test sponsor: Huawei
Tested by: Huawei

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<tr>
<th>Test date</th>
<th>Hardware Availability</th>
<th>Software Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feb-2019</td>
<td>Apr-2019</td>
<td>Feb-2019</td>
</tr>
</tbody>
</table>

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
cache size : 39424 KB

From /proc/meminfo
MemTotal: 1583460908 kB
HugePages_Total: 262144
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 release.
# 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:
Linux linux-7ven 4.12.14-94.41-default #1 SMP Wed Oct 31 12:25:04 UTC 2018
(3090901) x86_64 x86_64 x86_64 GNU/Linux

run-level 5 Feb 27 16:04

SPEC is set to: /home/omp

Filesystem Type Size Used Avail Use% Mounted on
/dev/sda4 btrfs 696G 27G 668G 4% /home

Additional information from dmidecode:
BIOS INSYDE Corp. 6.36 02/15/2019
Memory:
48x Samsung M393A4K40CB2-CVF 32 GB 2933 MHz 2 rank

(End of data from sysinfo program)

General Notes

========================================================================
Power profile set with:
cpupower -c all frequency-set -g performance
========================================================================
Continued on next page
Huawei

Huawei 2488H V5 (Intel Xeon Platinum 8280, 2.7 GHz)

SPECompG_peak2012 = Not Run
SPECompG_base2012 = 45.9

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

General Notes (Continued)

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=224

General Base OMP Library Settings
- ENV_KMP_AFFINITY=granularity=fine,proclist=[0-27,112-139,28-55,140-167,56-83,168-195,84-111,196-223],explicit

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: -mcmode=medium
- 363.swim: -mcmode=medium
- 367.imagick: -std=c99
Huawei 2488H V5 (Intel Xeon Platinum 8280, 2.7 GHz)

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SPECompG_base2012 = 45.9

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

Test date: Feb-2019
Hardware Availability: Apr-2019
Software Availability: Feb-2019

Base Optimization Flags

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

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

Fortran benchmarks:
-03 -qopenmp -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