



SPEC® CPU2017 Integer Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Huawei

SPECrate2017_int_base = 217

Huawei 2488H V5 (Intel Xeon Gold 6134)

SPECrate2017_int_peak = Not Run

CPU2017 License: 3175

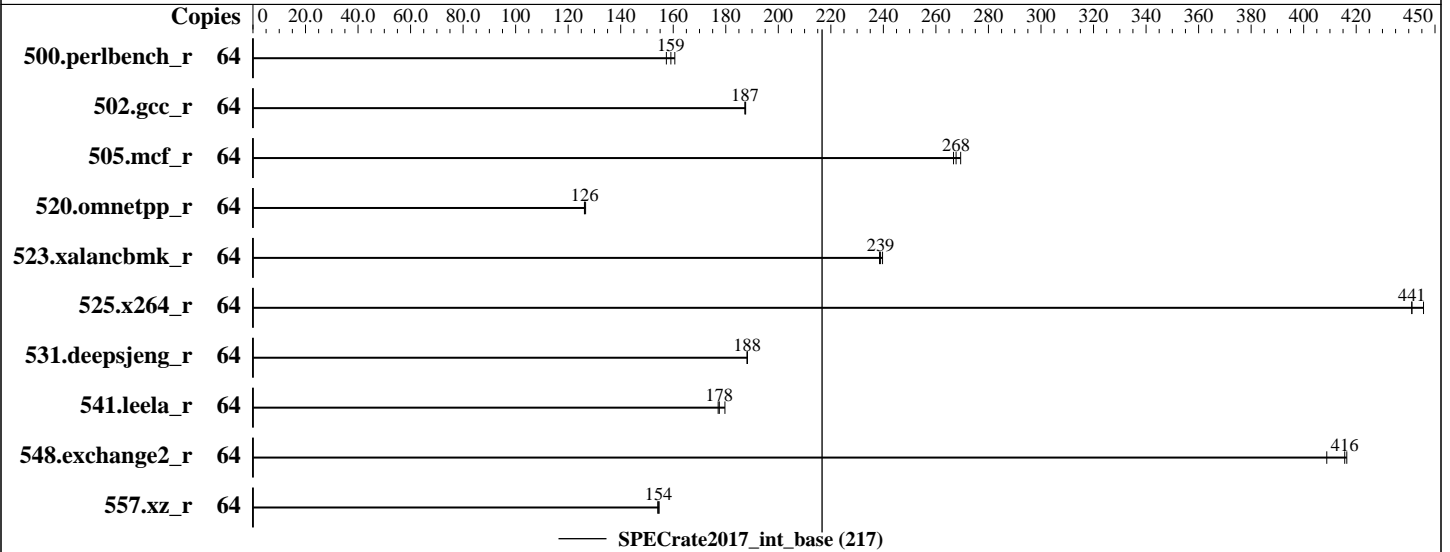
Test Sponsor: Huawei

Tested by: Huawei

Test Date: Jun-2018

Hardware Availability: May-2018

Software Availability: Mar-2018



Hardware

CPU Name: Intel Xeon Gold 6134
 Max MHz.: 3700
 Nominal: 3200
 Enabled: 32 cores, 4 chips, 2 threads/core
 Orderable: 2,4 chips
 Cache L1: 32 KB I + 32 KB D on chip per core
 L2: 1 MB I+D on chip per core
 L3: 24.75 MB I+D on chip per chip
 Other: None
 Memory: 1536 GB (48 x 32 GB 2Rx4 PC4-2666V-R)
 Storage: 1 x 900 GB SAS HDD 10K RPM, RAID 0
 Other: None

Software

OS: SUSE Linux Enterprise Server 12 SP2
 4.4.120-92.70-default
 Compiler: C/C++: Version 18.0.0.128 of Intel C/C++
 Compiler for Linux;
 Fortran: Version 18.0.0.128 of Intel Fortran
 Compiler for Linux
 Parallel: No
 Firmware: Version 0.84 released Mar-2018
 File System: ext4
 System State: Run level 5 (multi-user)
 Base Pointers: 64-bit
 Peak Pointers: Not Applicable
 Other: jemalloc: jemalloc memory allocator library
 V5.0.1;



SPEC CPU2017 Integer Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Huawei

SPECrate2017_int_base = 217

Huawei 2488H V5 (Intel Xeon Gold 6134)

SPECrate2017_int_peak = Not Run

CPU2017 License: 3175
Test Sponsor: Huawei
Tested by: Huawei

Test Date: Jun-2018
Hardware Availability: May-2018
Software Availability: Mar-2018

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
500.perlbench_r	64	647	157	640	159	634	161							
502.gcc_r	64	483	188	484	187	484	187							
505.mcf_r	64	386	268	388	267	384	269							
520.omnetpp_r	64	665	126	665	126	663	127							
523.xalancbmk_r	64	282	240	283	239	283	239							
525.x264_r	64	251	446	254	441	254	441							
531.deepsjeng_r	64	390	188	390	188	390	188							
541.leela_r	64	597	178	590	180	598	177							
548.exchange2_r	64	403	416	403	416	410	409							
557.xz_r	64	449	154	447	155	448	154							

SPECrate2017_int_base = 217

SPECrate2017_int_peak = Not Run

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"
Numa balancing was disabled using "echo 0 > /proc/sys/kernel/numa_balancing"

General Notes

Environment variables set by runcpu before the start of the run:

LD_LIBRARY_PATH = "/home/cpu2017/lib/ia32:/home/cpu2017/lib/intel64:/home/cpu2017/je5.0.1-32:/home/cpu2017/je5.0.1-64"

Binaries compiled on a system with 1x Intel Core i7-4790 CPU + 32GB RAM
memory using Redhat Enterprise Linux 7.4

Transparent Huge Pages enabled by default

Prior to runcpu invocation

Filesystem page cache synced and cleared with:

sync; echo 3> /proc/sys/vm/drop_caches

runcpu command invoked through numactl i.e.:

numactl --interleave=all runcpu <etc>

jemalloc: configured and built at default for

32bit (i686) and 64bit (x86_64) targets;

jemalloc: built with the RedHat Enterprise 7.4,

(Continued on next page)



SPEC CPU2017 Integer Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Huawei

SPECrate2017_int_base = 217

Huawei 2488H V5 (Intel Xeon Gold 6134)

SPECrate2017_int_peak = Not Run

CPU2017 License: 3175
Test Sponsor: Huawei
Tested by: Huawei

Test Date: Jun-2018
Hardware Availability: May-2018
Software Availability: Mar-2018

General Notes (Continued)

and the system compiler gcc 4.8.5;
jemalloc: sources available from jemalloc.net or
<https://github.com/jemalloc/jemalloc/releases>;
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.

Platform Notes

BIOS configuration:
Sub NUMA Cluster (SNC) set to enabled
IMC (Integrated memory controller) Interleaving set to 1 way interleave
Xtended Prediction Table (XPT) Prefetch set to Enable
Memory Patrol Scrub set to Disable
Last Level Cache (LLC) Prefetch set to Disable
Sysinfo program /home/cpu2017/bin/sysinfo
Rev: r5797 of 2017-06-14 96c45e4568ad54c135fd618bcc091c0f
running on linux-scjg Thu Jun 7 14:26:28 2018

SUT (System Under Test) info as seen by some common utilities.
For more information on this section, see
<https://www.spec.org/cpu2017/Docs/config.html#sysinfo>

From /proc/cpuinfo
model name : Intel(R) Xeon(R) Gold 6134 CPU @ 3.20GHz
4 "physical id"s (chips)
64 "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 : 8
siblings : 16
physical 0: cores 0 2 3 9 16 19 26 27
physical 1: cores 0 2 3 4 16 19 25 26
physical 2: cores 0 2 3 9 16 19 26 27
physical 3: cores 0 2 3 9 16 19 26 27

From lscpu:
Architecture: x86_64
CPU op-mode(s): 32-bit, 64-bit
Byte Order: Little Endian
CPU(s): 64
On-line CPU(s) list: 0-63
Thread(s) per core: 2

(Continued on next page)



SPEC CPU2017 Integer Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Huawei

SPECrate2017_int_base = 217

Huawei 2488H V5 (Intel Xeon Gold 6134)

SPECrate2017_int_peak = Not Run

CPU2017 License: 3175
Test Sponsor: Huawei
Tested by: Huawei

Test Date: Jun-2018
Hardware Availability: May-2018
Software Availability: Mar-2018

Platform Notes (Continued)

```

Core(s) per socket:      8
Socket(s):               4
NUMA node(s):           8
Vendor ID:               GenuineIntel
CPU family:              6
Model:                   85
Model name:              Intel(R) Xeon(R) Gold 6134 CPU @ 3.20GHz
Stepping:                4
CPU MHz:                 3201.000
CPU max MHz:             3201.0000
CPU min MHz:             1200.0000
BogoMIPS:                6400.04
Virtualization:         VT-x
L1d cache:               32K
L1i cache:               32K
L2 cache:                1024K
L3 cache:                25344K
NUMA node0 CPU(s):      0,1,3,4,32,33,35,36
NUMA node1 CPU(s):      2,5-7,34,37-39
NUMA node2 CPU(s):      8,9,12,14,40,41,44,46
NUMA node3 CPU(s):      10,11,13,15,42,43,45,47
NUMA node4 CPU(s):      16,17,19,20,48,49,51,52
NUMA node5 CPU(s):      18,21-23,50,53-55
NUMA node6 CPU(s):      24,25,27,28,56,57,59,60
NUMA node7 CPU(s):      26,29-31,58,61-63
Flags:                   fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov
pat pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp
lm constant_tsc art arch_perfmon pebs bts rep_good nopl xtopology nonstop_tsc
aperfmpperf eagerfpu pni pclmulqdq dtes64 ds_cpl vmx smx est tm2 ssse3 sdbg fma cx16
xtpr pdcm pcid dca sse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_timer aes xsave
avx f16c rdrand lahf_lm abm 3dnowprefetch ida arat epb invpcid_single pln pts dtherm
intel_pt rsb_ctxsw spec_ctrl stibp retpoline kaiser tpr_shadow vnmi flexpriority ept
vpid fsgsbase tsc_adjust bml hle avx2 smep bmi2 erms invpcid rtm cqm mpx avx512f
avx512dq rdseed adx smap clflushopt clwb avx512cd avx512bw avx512vl xsaveopt xsavec
xgetbv1 cqm_llc cqm_occup_llc

```

```
/proc/cpuinfo cache data
cache size : 25344 KB
```

```

From numactl --hardware WARNING: a numactl 'node' might or might not correspond to a
physical chip.
available: 8 nodes (0-7)
node 0 cpus: 0 1 3 4 32 33 35 36
node 0 size: 191756 MB
node 0 free: 191484 MB
node 1 cpus: 2 5 6 7 34 37 38 39
node 1 size: 193524 MB

```

(Continued on next page)



SPEC CPU2017 Integer Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Huawei

SPECrate2017_int_base = 217

Huawei 2488H V5 (Intel Xeon Gold 6134)

SPECrate2017_int_peak = Not Run

CPU2017 License: 3175

Test Sponsor: Huawei

Tested by: Huawei

Test Date: Jun-2018

Hardware Availability: May-2018

Software Availability: Mar-2018

Platform Notes (Continued)

```

node 1 free: 193304 MB
node 2 cpus: 8 9 12 14 40 41 44 46
node 2 size: 193524 MB
node 2 free: 193231 MB
node 3 cpus: 10 11 13 15 42 43 45 47
node 3 size: 193524 MB
node 3 free: 193327 MB
node 4 cpus: 16 17 19 20 48 49 51 52
node 4 size: 193524 MB
node 4 free: 193359 MB
node 5 cpus: 18 21 22 23 50 53 54 55
node 5 size: 193524 MB
node 5 free: 193203 MB
node 6 cpus: 24 25 27 28 56 57 59 60
node 6 size: 193524 MB
node 6 free: 193339 MB
node 7 cpus: 26 29 30 31 58 61 62 63
node 7 size: 193365 MB
node 7 free: 193180 MB
node distances:
node  0  1  2  3  4  5  6  7
 0:  10  20  20  20  20  20  20  20
 1:  20  10  20  20  20  20  20  20
 2:  20  20  10  20  20  20  20  20
 3:  20  20  20  10  20  20  20  20
 4:  20  20  20  20  10  20  20  20
 5:  20  20  20  20  20  10  20  20
 6:  20  20  20  20  20  20  10  20
 7:  20  20  20  20  20  20  20  10

```

From /proc/meminfo

MemTotal: 1583378416 kB

HugePages_Total: 0

Hugepagesize: 2048 kB

/usr/bin/lsb_release -d

SUSE Linux Enterprise Server 12 SP2

From /etc/*release* /etc/*version*

SuSE-release:

SUSE Linux Enterprise Server 12 (x86_64)

VERSION = 12

PATCHLEVEL = 2

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"

(Continued on next page)



SPEC CPU2017 Integer Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Huawei

SPECrate2017_int_base = 217

Huawei 2488H V5 (Intel Xeon Gold 6134)

SPECrate2017_int_peak = Not Run

CPU2017 License: 3175
Test Sponsor: Huawei
Tested by: Huawei

Test Date: Jun-2018
Hardware Availability: May-2018
Software Availability: Mar-2018

Platform Notes (Continued)

```
VERSION="12-SP2"
VERSION_ID="12.2"
PRETTY_NAME="SUSE Linux Enterprise Server 12 SP2"
ID="sles"
ANSI_COLOR="0;32"
CPE_NAME="cpe:/o:suse:sles:12:sp2"
```

```
uname -a:
Linux linux-scjg 4.4.120-92.70-default #1 SMP Wed Mar 14 15:59:43 UTC 2018 (52a83de)
x86_64 x86_64 x86_64 GNU/Linux
```

```
run-level 5 Jun 7 14:22
```

```
SPEC is set to: /home/cpu2017
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sda4        btrfs 717G   23G  693G   4% /home
```

Additional information from dmidecode follows. 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 INSYDE Corp. 0.84 03/26/2018
Memory:
48x Hynix HMA84GR7AFR4N-VK 32 GB 2 rank 2666
```

(End of data from sysinfo program)

Compiler Version Notes

```
=====
CC 500.perlbench_r(base) 502.gcc_r(base) 505.mcf_r(base) 525.x264_r(base)
557.xz_r(base)
-----

icc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.
-----

=====
CXXC 520.omnetpp_r(base) 523.xalanbmk_r(base) 531.deepsjeng_r(base)
541.leela_r(base)
-----

icpc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.
-----
=====
```

(Continued on next page)



SPEC CPU2017 Integer Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Huawei

SPECrate2017_int_base = 217

Huawei 2488H V5 (Intel Xeon Gold 6134)

SPECrate2017_int_peak = Not Run

CPU2017 License: 3175
Test Sponsor: Huawei
Tested by: Huawei

Test Date: Jun-2018
Hardware Availability: May-2018
Software Availability: Mar-2018

Compiler Version Notes (Continued)

FC 548.exchange2_r(base)

ifort (IFORT) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

Base Compiler Invocation

C benchmarks:

icc

C++ benchmarks:

icpc

Fortran benchmarks:

ifort

Base Portability Flags

500.perlbench_r: -DSPEC_LP64 -DSPEC_LINUX_X64
502.gcc_r: -DSPEC_LP64
505.mcf_r: -DSPEC_LP64
520.omnetpp_r: -DSPEC_LP64
523.xalancbmk_r: -DSPEC_LP64 -DSPEC_LINUX
525.x264_r: -DSPEC_LP64
531.deepsjeng_r: -DSPEC_LP64
541.leela_r: -DSPEC_LP64
548.exchange2_r: -DSPEC_LP64
557.xz_r: -DSPEC_LP64

Base Optimization Flags

C benchmarks:

-Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div
-qopt-mem-layout-trans=3 -L/usr/local/je5.0.1-64/lib -ljemalloc

C++ benchmarks:

-Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div
-qopt-mem-layout-trans=3 -L/usr/local/je5.0.1-64/lib -ljemalloc

(Continued on next page)



SPEC CPU2017 Integer Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Huawei

SPECrate2017_int_base = 217

Huawei 2488H V5 (Intel Xeon Gold 6134)

SPECrate2017_int_peak = Not Run

CPU2017 License: 3175

Test Sponsor: Huawei

Tested by: Huawei

Test Date: Jun-2018

Hardware Availability: May-2018

Software Availability: Mar-2018

Base Optimization Flags (Continued)

Fortran benchmarks:

```
-Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div
-qopt-mem-layout-trans=3 -nostandard-realloc-lhs -align array32byte
-L/usr/local/je5.0.1-64/lib -ljemalloc
```

Base Other Flags

C benchmarks:

```
-m64 -std=c11
```

C++ benchmarks:

```
-m64
```

Fortran benchmarks:

```
-m64
```

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2017/flags/Intel-ic18.0-official-linux64.html>

<http://www.spec.org/cpu2017/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/cpu2017/flags/Intel-ic18.0-official-linux64.xml>

<http://www.spec.org/cpu2017/flags/Huawei-Platform-Settings-SKL-V1.7.xml>

SPEC is a registered trademark of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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

Tested with SPEC CPU2017 v1.0.2 on 2018-06-07 02:26:27-0400.

Report generated on 2018-10-31 17:37:24 by CPU2017 PDF formatter v6067.

Originally published on 2018-06-26.