



# SPEC® CPU2017 Integer Speed Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

## Hewlett Packard Enterprise

(Test Sponsor: HPE)

### ProLiant DL380 Gen10

(3.20 GHz, Intel Xeon Gold 6134M)

SPECspeed2017\_int\_base = 8.66

SPECspeed2017\_int\_peak = Not Run

CPU2017 License: 3

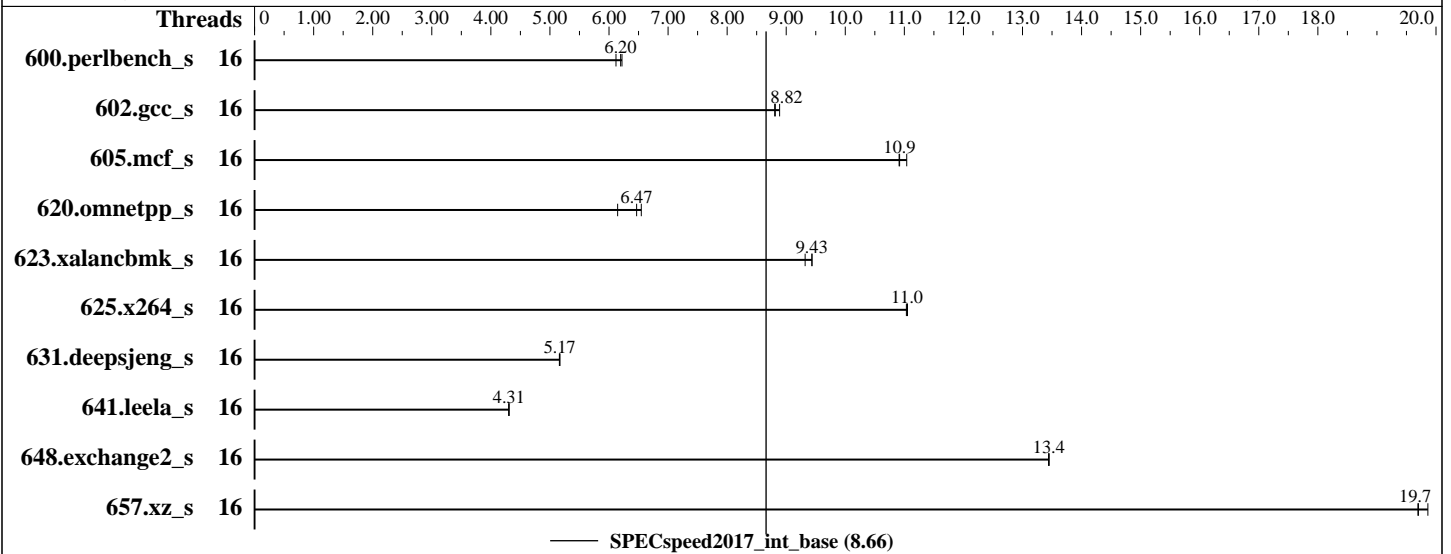
Test Sponsor: HPE

Tested by: HPE

Test Date: Nov-2018

Hardware Availability: Oct-2018

Software Availability: Mar-2018



### Hardware

CPU Name: Intel Xeon Gold 6134M  
 Max MHz.: 3700  
 Nominal: 3200  
 Enabled: 16 cores, 2 chips  
 Orderable: 1, 2 chip(s)  
 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: 768 GB (24 x 32 GB 2Rx4 PC4-2666V-R)  
 Storage: 1 x 480 GB SATA SSD, RAID 0  
 Other: None

### Software

OS: Red Hat Enterprise Linux Server release 7.4 (Maipo)  
 Kernel 3.10.0-693.20.1.el7.x86\_64  
 Compiler: C/C++: Version 18.0.2.199 of Intel C/C++ Compiler for Linux;  
 Fortran: Version 18.0.2.199 of Intel Fortran Compiler for Linux  
 Parallel: Yes  
 Firmware: HPE BIOS Version U30 10/15/2018 released Oct-2018  
 File System: xfs  
 System State: Run level 3 (multi-user)  
 Base Pointers: 64-bit  
 Peak Pointers: Not Applicable  
 Other: jemalloc memory allocator V5.0.1



# SPEC CPU2017 Integer Speed Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

**Hewlett Packard Enterprise**

(Test Sponsor: HPE)

ProLiant DL380 Gen10

(3.20 GHz, Intel Xeon Gold 6134M)

SPECspeed2017\_int\_base = 8.66

SPECspeed2017\_int\_peak = Not Run

CPU2017 License: 3  
Test Sponsor: HPE  
Tested by: HPE

Test Date: Nov-2018  
Hardware Availability: Oct-2018  
Software Availability: Mar-2018

## Results Table

Benchmark	Base							Peak						
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
600.perlbench_s	16	290	6.12	<b><u>286</u></b>	<b><u>6.20</u></b>	285	6.22							
602.gcc_s	16	448	8.89	<b><u>452</u></b>	<b><u>8.82</u></b>	452	8.80							
605.mcf_s	16	<b><u>432</u></b>	<b><u>10.9</u></b>	428	11.0	433	10.9							
620.omnetpp_s	16	249	6.55	265	6.15	<b><u>252</u></b>	<b><u>6.47</u></b>							
623.xalancbmk_s	16	150	9.44	152	9.32	<b><u>150</u></b>	<b><u>9.43</u></b>							
625.x264_s	16	<b><u>160</u></b>	<b><u>11.0</u></b>	160	11.1	160	11.0							
631.deepsjeng_s	16	278	5.16	<b><u>277</u></b>	<b><u>5.17</u></b>	277	5.17							
641.leela_s	16	396	4.30	396	4.31	<b><u>396</u></b>	<b><u>4.31</u></b>							
648.exchange2_s	16	219	13.4	<b><u>219</u></b>	<b><u>13.4</u></b>	219	13.4							
657.xz_s	16	<b><u>314</u></b>	<b><u>19.7</u></b>	311	19.9	314	19.7							

SPECspeed2017\_int\_base = 8.66

SPECspeed2017\_int\_peak = Not Run

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

## Operating System Notes

```
Stack size set to unlimited using "ulimit -s unlimited"
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>
IRQ balance service was stopped using "systemctl stop irqbalance.service"
Tuned-adm profile was set to Throughput-Performance using "tuned-adm profile throughput-performance"
```

## General Notes

```
Environment variables set by runcpu before the start of the run:
KMP_AFFINITY = "granularity=fine,compact"
LD_LIBRARY_PATH = "/home/cpu2017/lib/ia32:/home/cpu2017/lib/intel64:/home/cpu2017/je5.0.1-32:/home/cpu2017/je5.0.1-64"
OMP_STACKSIZE = "192M"
```

Binaries compiled on a system with 1x Intel Core i7-6700K CPU + 32GB RAM memory using Redhat Enterprise Linux 7.5

```
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.
jemalloc, a general purpose malloc implementation
```

(Continued on next page)



# SPEC CPU2017 Integer Speed Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

**Hewlett Packard Enterprise**

(Test Sponsor: HPE)

**ProLiant DL380 Gen10**

(3.20 GHz, Intel Xeon Gold 6134M)

SPECspeed2017\_int\_base = 8.66

SPECspeed2017\_int\_peak = Not Run

**CPU2017 License:** 3

**Test Sponsor:** HPE

**Tested by:** HPE

**Test Date:** Nov-2018

**Hardware Availability:** Oct-2018

**Software Availability:** Mar-2018

## General Notes (Continued)

built with the RedHat Enterprise 7.5, and the system compiler gcc 4.8.5  
sources available from jemalloc.net or <https://github.com/jemalloc/jemalloc/releases>

## Platform Notes

BIOS Configuration:

Hyper-Threading set to Disabled  
Thermal Configuration set to Maximum Cooling  
LLC Prefetch set to Enabled  
LLC Dead Line Allocation set to Disabled  
Stale A to S set to Disabled  
XPT Prefetch set to Disabled  
Memory Patrol Scrubbing set to Disabled  
Workload Profile set to General Peak Frequency Compute  
Energy/Performance Bias set to Maximum Performance  
Workload Profile set to Custom  
Numa Group Size Optimization set to Flat  
Uncore Frequency Scaling set to Auto  
Sysinfo program /home/cpu2017/bin/sysinfo  
Rev: r5974 of 2018-05-19 9bcde8f2999c33d61f64985e45859ea9  
running on localhost.localdomain Tue Nov 27 05:26:35 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 6134M CPU @ 3.20GHz
 2 "physical id"s (chips)
 16 "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 : 8
physical 0: cores 0 2 3 9 16 19 26 27
physical 1: 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):                 16
On-line CPU(s) list:   0-15
Thread(s) per core:    1
Core(s) per socket:    8
Socket(s):              2
```

(Continued on next page)



# SPEC CPU2017 Integer Speed Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

**Hewlett Packard Enterprise**

(Test Sponsor: HPE)

**ProLiant DL380 Gen10**

(3.20 GHz, Intel Xeon Gold 6134M)

SPECspeed2017\_int\_base = 8.66

SPECspeed2017\_int\_peak = Not Run

**CPU2017 License:** 3  
**Test Sponsor:** HPE  
**Tested by:** HPE

**Test Date:** Nov-2018  
**Hardware Availability:** Oct-2018  
**Software Availability:** Mar-2018

## Platform Notes (Continued)

```

NUMA node(s):          2
Vendor ID:             GenuineIntel
CPU family:            6
Model:                 85
Model name:            Intel(R) Xeon(R) Gold 6134M CPU @ 3.20GHz
Stepping:              4
CPU MHz:               3200.000
BogoMIPS:              6400.00
Virtualization:        VT-x
L1d cache:             32K
L1i cache:             32K
L2 cache:              1024K
L3 cache:              25344K
NUMA node0 CPU(s):    0-7
NUMA node1 CPU(s):    8-15
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 monitor ds_cpl vmx smx est tm2 ssse3 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 epb cat_l3 cdp_l3 invpcid_single
intel_pt spec_ctrl ibpb_support tpr_shadow vnmi flexpriority ept vpid fsgsbase
tsc_adjust bmi1 hle avx2 smep bmi2 erms invpcid rtm cqm mpx rdt_a avx512f avx512dq
rdseed adx smap clflushopt clwb avx512cd avx512bw avx512vl xsaveopt xsavec xgetbv1
cqm_llc cqm_occup_llc cqm_mbm_total cqm_mbm_local dtherm ida arat pln pts

```

```

/proc/cpuinfo cache data
cache size : 25344 KB

```

From numactl --hardware WARNING: a numactl 'node' might or might not correspond to a physical chip.

```

From /proc/meminfo
MemTotal:      792271444 kB
HugePages_Total:      0
Hugepagesize:    2048 kB

```

```

From /etc/*release* /etc/*version*
os-release:
NAME="Red Hat Enterprise Linux Server"
VERSION="7.4 (Maipo)"
ID="rhel"
ID_LIKE="fedora"
VARIANT="Server"
VARIANT_ID="server"
VERSION_ID="7.4"
PRETTY_NAME="Red Hat Enterprise Linux Server 7.4 (Maipo)"

```

(Continued on next page)



# SPEC CPU2017 Integer Speed Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

**Hewlett Packard Enterprise**

(Test Sponsor: HPE)

**ProLiant DL380 Gen10**

(3.20 GHz, Intel Xeon Gold 6134M)

SPECspeed2017\_int\_base = 8.66

SPECspeed2017\_int\_peak = Not Run

**CPU2017 License:** 3  
**Test Sponsor:** HPE  
**Tested by:** HPE

**Test Date:** Nov-2018  
**Hardware Availability:** Oct-2018  
**Software Availability:** Mar-2018

## Platform Notes (Continued)

```
redhat-release: Red Hat Enterprise Linux Server release 7.4 (Maipo)
system-release: Red Hat Enterprise Linux Server release 7.4 (Maipo)
system-release-cpe: cpe:/o:redhat:enterprise_linux:7.4:ga:server
```

uname -a:

```
Linux localhost.localdomain 3.10.0-693.20.1.el7.x86_64 #1 SMP Wed Feb 7 16:53:38 EST
2018 x86_64 x86_64 x86_64 GNU/Linux
```

Kernel self-reported vulnerability status:

```
CVE-2017-5754 (Meltdown): Mitigation: PTI
CVE-2017-5753 (Spectre variant 1): Mitigation: Load fences
CVE-2017-5715 (Spectre variant 2): Mitigation: IBRS (kernel)
```

run-level 3 Nov 27 05:25

SPEC is set to: /home/cpu2017

```
Filesystem Type Size Used Avail Use% Mounted on
/dev/mapper/rhel00-home xfs 318G 17G 301G 6% /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 HPE U30 10/15/2018

Memory:

24x UNKNOWN NOT AVAILABLE 32 GB 2 rank 2666

(End of data from sysinfo program)

## Compiler Version Notes

```
=====  
CC 600.perlbench_s(base) 602.gcc_s(base) 605.mcf_s(base) 625.x264_s(base)  
657.xz_s(base)
```

-----  
icc (ICC) 18.0.2 20180210

Copyright (C) 1985-2018 Intel Corporation. All rights reserved.

```
=====  
CXXC 620.omnetpp_s(base) 623.xalanbmk_s(base) 631.deepsjeng_s(base)  
641.leela_s(base)
```

-----  
icpc (ICC) 18.0.2 20180210

Copyright (C) 1985-2018 Intel Corporation. All rights reserved.

(Continued on next page)



# SPEC CPU2017 Integer Speed Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

**Hewlett Packard Enterprise**

(Test Sponsor: HPE)

ProLiant DL380 Gen10

(3.20 GHz, Intel Xeon Gold 6134M)

SPECspeed2017\_int\_base = 8.66

SPECspeed2017\_int\_peak = Not Run

CPU2017 License: 3

Test Sponsor: HPE

Tested by: HPE

Test Date: Nov-2018

Hardware Availability: Oct-2018

Software Availability: Mar-2018

## Compiler Version Notes (Continued)

FC 648.exchange2\_s(base)

ifort (IFORT) 18.0.2 20180210

Copyright (C) 1985-2018 Intel Corporation. All rights reserved.

## Base Compiler Invocation

C benchmarks:

icc -m64 -std=c11

C++ benchmarks:

icpc -m64

Fortran benchmarks:

ifort -m64

## Base Portability Flags

600.perlbench\_s: -DSPEC\_LP64 -DSPEC\_LINUX\_X64

602.gcc\_s: -DSPEC\_LP64

605.mcf\_s: -DSPEC\_LP64

620.omnetpp\_s: -DSPEC\_LP64

623.xalancbmk\_s: -DSPEC\_LP64 -DSPEC\_LINUX

625.x264\_s: -DSPEC\_LP64

631.deepsjeng\_s: -DSPEC\_LP64

641.leela\_s: -DSPEC\_LP64

648.exchange2\_s: -DSPEC\_LP64

657.xz\_s: -DSPEC\_LP64

## Base Optimization Flags

C benchmarks:

-Wl,-z,muldefs -xCORE-AVX2 -ipo -O3 -no-prec-div

-qopt-mem-layout-trans=3 -qopenmp -DSPEC\_OPENMP

-L/usr/local/je5.0.1-64/lib -ljemalloc

(Continued on next page)



# SPEC CPU2017 Integer Speed Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

**Hewlett Packard Enterprise**

(Test Sponsor: HPE)

ProLiant DL380 Gen10

(3.20 GHz, Intel Xeon Gold 6134M)

SPECspeed2017\_int\_base = 8.66

SPECspeed2017\_int\_peak = Not Run

**CPU2017 License:** 3

**Test Sponsor:** HPE

**Tested by:** HPE

**Test Date:** Nov-2018

**Hardware Availability:** Oct-2018

**Software Availability:** Mar-2018

## Base Optimization Flags (Continued)

C++ benchmarks:

```
-Wl,-z,muldefs -xCORE-AVX2 -ipo -O3 -no-prec-div  
-qopt-mem-layout-trans=3 -L/usr/local/je5.0.1-64/lib -ljemalloc
```

Fortran benchmarks:

```
-Wl,-z,muldefs -xCORE-AVX2 -ipo -O3 -no-prec-div  
-qopt-mem-layout-trans=3 -nostandard-realloc-lhs  
-L/usr/local/je5.0.1-64/lib -ljemalloc
```

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

<http://www.spec.org/cpu2017/flags/Intel-ic18.0-official-linux64.2017-12-21.html>

<http://www.spec.org/cpu2017/flags/HPE-Platform-Flags-Intel-V1.2-SKX-revH.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2017/flags/Intel-ic18.0-official-linux64.2017-12-21.xml>

<http://www.spec.org/cpu2017/flags/HPE-Platform-Flags-Intel-V1.2-SKX-revH.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](mailto:info@spec.org).

Tested with SPEC CPU2017 v1.0.5 on 2018-11-27 05:26:34-0500.

Report generated on 2019-02-05 13:13:47 by CPU2017 PDF formatter v6067.

Originally published on 2019-02-05.