



# SPEC CPU®2017 Integer Rate Result

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## New H3C Technologies Co., Ltd.

H3C UniServer R6900 G5 (Intel Xeon Platinum 8380HL)

**SPECrate®2017\_int\_base = 745**

**SPECrate®2017\_int\_peak = 774**

CPU2017 License: 9066

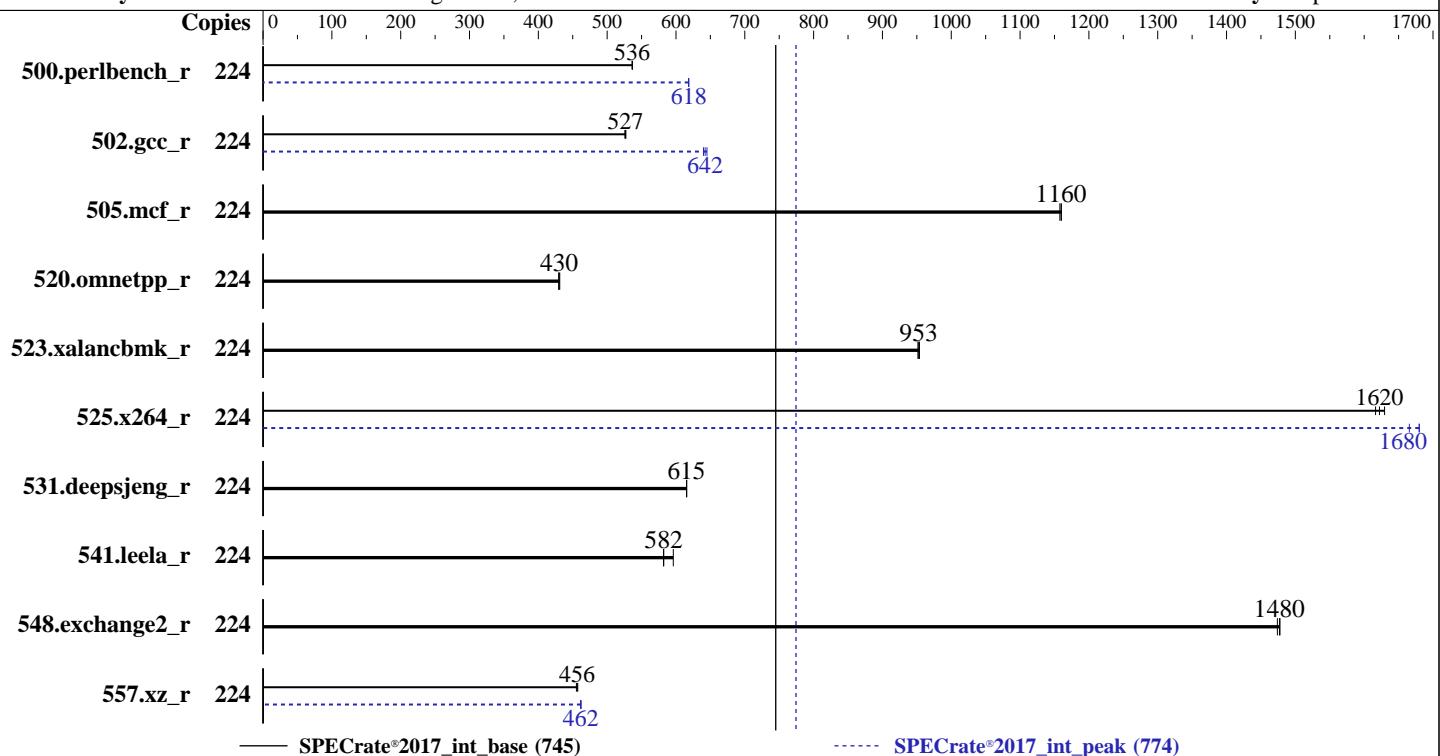
**Test Date:** Aug-2020

**Test Sponsor:** New H3C Technologies Co., Ltd.

**Hardware Availability:** Sep-2020

**Tested by:** New H3C Technologies Co., Ltd.

**Software Availability:** Apr-2020



### Hardware

CPU Name: Intel Xeon Platinum 8380HL  
 Max MHz: 4300  
 Nominal: 2900  
 Enabled: 112 cores, 4 chips, 2 threads/core  
 Orderable: 1,2,3,4 chips  
 Cache L1: 32 KB I + 32 KB D on chip per core  
 L2: 1 MB I+D on chip per core  
 L3: 38.5 MB I+D on chip per chip  
 Other: None  
 Memory: 768 GB (48 x 16 GB 2Rx8 PC4-3200V-R, running at 2933)  
 Storage: 1 x 960 GB SATA SSD  
 Other: None

### Software

OS: Red Hat Enterprise Linux release 8.2 (Ootpa) 4.18.0-193.el8.x86\_64  
 Compiler: C/C++: Version 19.1.1.217 of Intel C/C++ Compiler Build 20200306 for Linux;  
 Fortran: Version 19.1.1.217 of Intel Fortran Compiler Build 20200306 for Linux  
 Parallel: No  
 Firmware: Version 5.19 released Jul-2020 BIOS  
 File System: xfs  
 System State: Run level 3 (multi-user)  
 Base Pointers: 64-bit  
 Peak Pointers: 32/64-bit  
 Other: jemalloc memory allocator V5.0.1  
 Power Management: BIOS set to prefer performance at the cost of additional power usage.



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## Results Table

Benchmark	Base								Peak							
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
500.perlbench_r	224	664	537	<b>665</b>	<b>536</b>	665	536	224	<b>577</b>	<b>618</b>	577	618	577	619	577	619
502.gcc_r	224	603	526	602	527	<b>602</b>	<b>527</b>	224	492	645	<b>494</b>	<b>642</b>	496	640	496	640
505.mcf_r	224	313	1160	<b>312</b>	<b>1160</b>	312	1160	224	313	1160	<b>312</b>	<b>1160</b>	312	1160	312	1160
520.omnetpp_r	224	682	431	684	429	<b>683</b>	<b>430</b>	224	682	431	684	429	<b>683</b>	<b>430</b>	683	430
523.xalancbmk_r	224	<b>248</b>	<b>953</b>	248	954	249	952	224	<b>248</b>	<b>953</b>	248	954	249	952	249	952
525.x264_r	224	241	1630	243	1620	<b>242</b>	<b>1620</b>	224	235	1670	<b>233</b>	<b>1680</b>	233	1680	233	1680
531.deepsjeng_r	224	417	615	417	615	<b>417</b>	<b>615</b>	224	417	615	417	615	<b>417</b>	<b>615</b>	<b>417</b>	<b>615</b>
541.leela_r	224	<b>637</b>	<b>582</b>	622	596	638	582	224	<b>637</b>	<b>582</b>	622	596	638	582	638	582
548.exchange2_r	224	397	1480	398	1470	<b>397</b>	<b>1480</b>	224	397	1480	398	1470	<b>397</b>	<b>1480</b>	<b>397</b>	<b>1480</b>
557.xz_r	224	531	455	<b>530</b>	<b>456</b>	529	457	224	524	461	<b>524</b>	<b>462</b>	524	462	524	462

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

## Compiler Notes

The inconsistent Compiler version information under Compiler Version section is due to a discrepancy in Intel Compiler.  
The correct version of C/C++ compiler is: Version 19.1.1.217 Build 20200306 Compiler for Linux  
The correct version of Fortran compiler is: Version 19.1.1.217 Build 20200306 Compiler for Linux

## 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"

## Environment Variables Notes

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

```
LD_LIBRARY_PATH =
    "/home/speccpu/lib/intel64:/home/speccpu/lib/ia32:/home/speccpu/je5.0.1-
    32"
MALLOC_CONF = "retain:true"
```



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## General Notes

Binaries compiled on a system with 1x Intel Core i9-7980XE CPU + 64GB RAM memory using Redhat Enterprise Linux 8.0

NA: 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.

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, a general purpose malloc implementation

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 Settings:

Set SNC to Enabled

Set Power Performance Tuning to BIOS Controls EPB

Set Energy Performance BIAS to Performance

Set XPT Prefetch to Enabled

Set Patrol Scrub to Disabled

Sysinfo program /home/speccpu/bin/sysinfo

Rev: r6365 of 2019-08-21 295195f888a3d7edb1e6e46a485a0011

running on localhost.localdomain Sat Aug 15 15:16:45 2020

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) Platinum 8380HL CPU @ 2.90GHz

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

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## Platform Notes (Continued)

```
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
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
```

From lscpu:

```
Architecture:           x86_64
CPU op-mode(s):        32-bit, 64-bit
Byte Order:            Little Endian
CPU(s):                224
On-line CPU(s) list:  0-223
Thread(s) per core:   2
Core(s) per socket:   28
Socket(s):             4
NUMA node(s):          8
Vendor ID:             GenuineIntel
CPU family:            6
Model:                 85
Model name:            Intel(R) Xeon(R) Platinum 8380HL CPU @ 2.90GHz
Stepping:               11
CPU MHz:               1766.460
CPU max MHz:           4300.0000
CPU min MHz:           1000.0000
BogoMIPS:              5800.00
Virtualization:        VT-x
L1d cache:              32K
L1i cache:              32K
L2 cache:               1024K
L3 cache:               39424K
NUMA node0 CPU(s):     0-3,7-9,14-17,21-23,112-115,119-121,126-129,133-135
NUMA node1 CPU(s):     4-6,10-13,18-20,24-27,116-118,122-125,130-132,136-139
NUMA node2 CPU(s):     28-31,35-37,42-45,49-51,140-143,147-149,154-157,161-163
NUMA node3 CPU(s):     32-34,38-41,46-48,52-55,144-146,150-153,158-160,164-167
NUMA node4 CPU(s):     56-59,63-65,70-73,77-79,168-171,175-177,182-185,189-191
NUMA node5 CPU(s):     60-62,66-69,74-76,80-83,172-174,178-181,186-188,192-195
NUMA node6 CPU(s):     84-87,91-93,98-101,105-107,196-199,203-205,210-213,217-219
NUMA node7 CPU(s):     88-90,94-97,102-104,108-111,200-202,206-209,214-216,220-223
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 cpuid
aperfmperf pni pclmulqdq dtes64 monitor 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 cpuid_fault epb cat_13 cdp_13
invpcid_single intel_ppin ssbd mba ibrs ibpb stibp ibrs_enhanced 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 intel_pt avx512cd
```

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## Platform Notes (Continued)

```
avx512bw avx512vl xsavemt xsavemt xgetbv1 xsaves cqmm_llc cqmm_occup_llc cqmm_mbm_total  
cqmm_mbm_local avx512_bf16 dtherm ida arat pln pts hwp hwp_act_window hwp_epp  
hwp_pkg_req pku ospke avx512_vnni md_clear flush_lld arch_capabilities
```

```
/proc/cpuinfo cache data  
cache size : 39424 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 2 3 7 8 9 14 15 16 17 21 22 23 112 113 114 115 119 120 121 126 127 128  
129 133 134 135  
node 0 size: 95083 MB  
node 0 free: 93970 MB  
node 1 cpus: 4 5 6 10 11 12 13 18 19 20 24 25 26 27 116 117 118 122 123 124 125 130 131  
132 136 137 138 139  
node 1 size: 96761 MB  
node 1 free: 96056 MB  
node 2 cpus: 28 29 30 31 35 36 37 42 43 44 45 49 50 51 140 141 142 143 147 148 149 154  
155 156 157 161 162 163  
node 2 size: 96761 MB  
node 2 free: 95648 MB  
node 3 cpus: 32 33 34 38 39 40 41 46 47 48 52 53 54 55 144 145 146 150 151 152 153 158  
159 160 164 165 166 167  
node 3 size: 96761 MB  
node 3 free: 95895 MB  
node 4 cpus: 56 57 58 59 63 64 65 70 71 72 73 77 78 79 168 169 170 171 175 176 177 182  
183 184 185 189 190 191  
node 4 size: 96734 MB  
node 4 free: 95982 MB  
node 5 cpus: 60 61 62 66 67 68 69 74 75 76 80 81 82 83 172 173 174 178 179 180 181 186  
187 188 192 193 194 195  
node 5 size: 96761 MB  
node 5 free: 96269 MB  
node 6 cpus: 84 85 86 87 91 92 93 98 99 100 101 105 106 107 196 197 198 199 203 204 205  
210 211 212 213 217 218 219  
node 6 size: 96761 MB  
node 6 free: 96302 MB  
node 7 cpus: 88 89 90 94 95 96 97 102 103 104 108 109 110 111 200 201 202 206 207 208  
209 214 215 216 220 221 222 223  
node 7 size: 96759 MB  
node 7 free: 96272 MB  
node distances:  
node 0 1 2 3 4 5 6 7  
0: 10 11 20 20 20 20 20 20  
1: 11 10 20 20 20 20 20 20  
2: 20 20 10 11 20 20 20 20
```

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## Platform Notes (Continued)

```
3: 20 20 11 10 20 20 20 20  
4: 20 20 20 20 10 11 20 20  
5: 20 20 20 20 11 10 20 20  
6: 20 20 20 20 20 20 10 11  
7: 20 20 20 20 20 20 11 10
```

From /proc/meminfo

```
MemTotal: 790923124 kB  
HugePages_Total: 0  
Hugepagesize: 2048 kB
```

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

```
os-release:  
NAME="Red Hat Enterprise Linux"  
VERSION="8.2 (Ootpa)"  
ID="rhel"  
ID_LIKE="fedora"  
VERSION_ID="8.2"  
PLATFORM_ID="platform:el8"  
PRETTY_NAME="Red Hat Enterprise Linux 8.2 (Ootpa)"  
ANSI_COLOR="0;31"  
redhat-release: Red Hat Enterprise Linux release 8.2 (Ootpa)  
system-release: Red Hat Enterprise Linux release 8.2 (Ootpa)  
system-release-cpe: cpe:/o:redhat:enterprise_linux:8.2:ga
```

uname -a:

```
Linux localhost.localdomain 4.18.0-193.el8.x86_64 #1 SMP Fri Mar 27 14:35:58 UTC 2020  
x86_64 x86_64 x86_64 GNU/Linux
```

Kernel self-reported vulnerability status:

```
itlb_multihit: Not affected  
CVE-2018-3620 (L1 Terminal Fault): Not affected  
Microarchitectural Data Sampling: Not affected  
CVE-2017-5754 (Meltdown): Not affected  
CVE-2018-3639 (Speculative Store Bypass): Mitigation: Speculative Store Bypass disabled via prctl and seccomp  
CVE-2017-5753 (Spectre variant 1): Mitigation: usercopy/swapgs barriers and __user pointer sanitization  
CVE-2017-5715 (Spectre variant 2): Mitigation: Enhanced IBRS, IBPB: conditional, RSB filling  
tsx_async_abort: Not affected
```

run-level 3 Aug 14 14:28

SPEC is set to: /home/speccpu

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
------------	------	------	------	-------	------	------------

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## Platform Notes (Continued)

```
/dev/mapper/rhel-home xfs 839G 21G 818G 3% /home
```

```
From /sys/devices/virtual/dmi/id
```

```
    BIOS: American Megatrends International, LLC. 5.19 07/23/2020
```

```
    Product Family: SYSTEM_FAMILY
```

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.

```
Memory:
```

```
    45x Hynix HMA82GR7DJR8N-XN 16 GB 2 rank 3200
    3x Micron 18ASF2G72PDZ-3G2E1 16 GB 2 rank 3200
```

(End of data from sysinfo program)

## Compiler Version Notes

```
=====
| C | 502.gcc_r(peak)
=====
```

```
-----
Intel(R) C Compiler for applications running on IA-32, Version 2021.1 NextGen
Build 20200304
```

```
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
```

```
=====
| C | 500.perlbench_r(base) 502.gcc_r(base) 505.mcf_r(base, peak)
| 525.x264_r(base, peak) 557.xz_r(base)
=====
```

```
-----
Intel(R) C Compiler for applications running on Intel(R) 64, Version 2021.1
NextGen Build 20200304
```

```
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
```

```
=====
| C | 500.perlbench_r(peak) 557.xz_r(peak)
=====
```

```
-----
Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,
Version 19.1.1.217 Build 20200306
```

```
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
```

```
=====
| C | 502.gcc_r(peak)
=====
```

(Continued on next page)



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Intel(R) C Compiler for applications running on IA-32, Version 2021.1 NextGen Build 20200304

Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

=====

C | 500.perlbench\_r(base) 502.gcc\_r(base) 505.mcf\_r(base, peak)  
| 525.x264\_r(base, peak) 557.xz\_r(base)

=====

Intel(R) C Compiler for applications running on Intel(R) 64, Version 2021.1  
NextGen Build 20200304

Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

=====

C | 500.perlbench\_r(peak) 557.xz\_r(peak)

=====

Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,  
Version 19.1.1.217 Build 20200306

Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

=====

C | 502.gcc\_r(peak)

=====

Intel(R) C Compiler for applications running on IA-32, Version 2021.1 NextGen Build 20200304

Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

=====

C | 500.perlbench\_r(base) 502.gcc\_r(base) 505.mcf\_r(base, peak)  
| 525.x264\_r(base, peak) 557.xz\_r(base)

=====

Intel(R) C Compiler for applications running on Intel(R) 64, Version 2021.1  
NextGen Build 20200304

Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

=====

C | 500.perlbench\_r(peak) 557.xz\_r(peak)

=====

Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,  
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## Compiler Version Notes (Continued)

=====

C++ | 520.omnetpp\_r(base, peak) 523.xalancbmk\_r(base, peak)  
| 531.deepsjeng\_r(base, peak) 541.leela\_r(base, peak)

=====

Intel(R) C++ Compiler for applications running on Intel(R) 64, Version 2021.1  
NextGen Build 20200304  
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

=====

=====

Fortran | 548.exchange2\_r(base, peak)

=====

Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R)  
64, Version 19.1.1.217 Build 20200306  
Copyright (C) 1985-2020 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



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## Base Optimization Flags

C benchmarks:

```
-m64 -qnextgen -std=c11
-Wl,-plugin-opt=-x86-branches-within-32B-boundaries -Wl,-z,muldefs
-xCORE-AVX512 -O3 -ffast-math -flto -mfpmath=sse -funroll-loops
-fuse-ld=gold -qopt-mem-layout-trans=4
-L/usr/local/IntelCompiler19/compilers_and_libraries_2020.1.217/linux/compiler/lib/intel64_lin
-lqkmalloc
```

C++ benchmarks:

```
-m64 -qnextgen -Wl,-plugin-opt=-x86-branches-within-32B-boundaries
-Wl,-z,muldefs -xCORE-AVX512 -O3 -ffast-math -flto -mfpmath=sse
-funroll-loops -fuse-ld=gold -qopt-mem-layout-trans=4
-L/usr/local/IntelCompiler19/compilers_and_libraries_2020.1.217/linux/compiler/lib/intel64_lin
-lqkmalloc
```

Fortran benchmarks:

```
-m64 -Wl,-plugin-opt=-x86-branches-within-32B-boundaries -Wl,-z,muldefs
-xCORE-AVX512 -O3 -ipo -no-prec-div -qopt-mem-layout-trans=4
-nostandard-realloc-lhs -align array32byte -auto
-mbranches-within-32B-boundaries
-L/usr/local/IntelCompiler19/compilers_and_libraries_2020.1.217/linux/compiler/lib/intel64_lin
-lqkmalloc
```

## Peak Compiler Invocation

C benchmarks:

icc

C++ benchmarks:

icpc

Fortran benchmarks:

ifort

## Peak Portability Flags

500.perlbench\_r: -DSPEC\_LP64 -DSPEC\_LINUX\_X64  
502.gcc\_r: -D\_FILE\_OFFSET\_BITS=64  
505.mcf\_r: -DSPEC\_LP64  
520.omnetpp\_r: -DSPEC\_LP64  
523.xalancbmk\_r: -DSPEC\_LP64 -DSPEC\_LINUX

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# SPEC CPU®2017 Integer Rate Result

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## New H3C Technologies Co., Ltd.

H3C UniServer R6900 G5 (Intel Xeon Platinum 8380HL)

SPECrate®2017\_int\_base = 745

SPECrate®2017\_int\_peak = 774

CPU2017 License: 9066

Test Date: Aug-2020

Test Sponsor: New H3C Technologies Co., Ltd.

Hardware Availability: Sep-2020

Tested by: New H3C Technologies Co., Ltd.

Software Availability: Apr-2020

## Peak Portability Flags (Continued)

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

## Peak Optimization Flags

C benchmarks:

500.perlbench\_r: -Wl,-z,muldefs -prof-gen(pass 1) -prof-use(pass 2)  
-xCORE-AVX512 -ipo -O3 -no-prec-div  
-qopt-mem-layout-trans=4 -fno-strict-overflow  
-mbranches-within-32B-boundaries  
-L/usr/local/IntelCompiler19/compilers\_and\_libraries\_2020.1.217/linux/compiler/lib/intel64\_lin  
-lqkmalloc  
  
502.gcc\_r: -m32  
-L/usr/local/IntelCompiler19/compilers\_and\_libraries\_2020.1.217/linux/compiler/lib/ia32\_lin  
-std=gnu89  
-Wl,-plugin-opt=-x86-branches-within-32B-boundaries  
-Wl,-z,muldefs -fprofile-generate(pass 1)  
-fprofile-use=default.profdata(pass 2) -xCORE-AVX512 -flto  
-Ofast(pass 1) -O3 -ffast-math -qnextgen -fuse-ld=gold  
-qopt-mem-layout-trans=4 -L/usr/local/jemalloc32-5.0.1/lib  
-ljemalloc  
  
505.mcf\_r: basepeak = yes

525.x264\_r: -m64 -qnextgen -std=c11  
-Wl,-plugin-opt=-x86-branches-within-32B-boundaries  
-Wl,-z,muldefs -xCORE-AVX512 -flto -O3 -ffast-math  
-fuse-ld=gold -qopt-mem-layout-trans=4 -fno-alias  
-L/usr/local/IntelCompiler19/compilers\_and\_libraries\_2020.1.217/linux/compiler/lib/intel64\_lin  
-lqkmalloc

557.xz\_r: -Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div  
-qopt-mem-layout-trans=4 -mbranches-within-32B-boundaries  
-L/usr/local/IntelCompiler19/compilers\_and\_libraries\_2020.1.217/linux/compiler/lib/intel64\_lin  
-lqkmalloc

C++ benchmarks:

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Software Availability: Apr-2020

## Peak Optimization Flags (Continued)

520.omnetpp\_r: basepeak = yes

523.xalancbmk\_r: basepeak = yes

531.deepsjeng\_r: basepeak = yes

541.leela\_r: basepeak = yes

Fortran benchmarks:

548.exchange2\_r: basepeak = yes

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

[http://www.spec.org/cpu2017/flags/Intel-ic19.l1l-official-linux64\\_revA.html](http://www.spec.org/cpu2017/flags/Intel-ic19.l1l-official-linux64_revA.html)

[http://www.spec.org/cpu2017/flags/New\\_H3C-Platform-Settings-V1.0-CPX-RevA.html](http://www.spec.org/cpu2017/flags/New_H3C-Platform-Settings-V1.0-CPX-RevA.html)

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

[http://www.spec.org/cpu2017/flags/Intel-ic19.l1l-official-linux64\\_revA.xml](http://www.spec.org/cpu2017/flags/Intel-ic19.l1l-official-linux64_revA.xml)

[http://www.spec.org/cpu2017/flags/New\\_H3C-Platform-Settings-V1.0-CPX-RevA.xml](http://www.spec.org/cpu2017/flags/New_H3C-Platform-Settings-V1.0-CPX-RevA.xml)

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For questions about this result, please contact the tester. For other inquiries, please contact [info@spec.org](mailto:info@spec.org).

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