



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2022 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECrate®2017\_int\_base = 139

H3C UniServer R4900 G5 (Intel Xeon Gold 5315Y)

SPECrate®2017\_int\_peak = 143

CPU2017 License: 9066

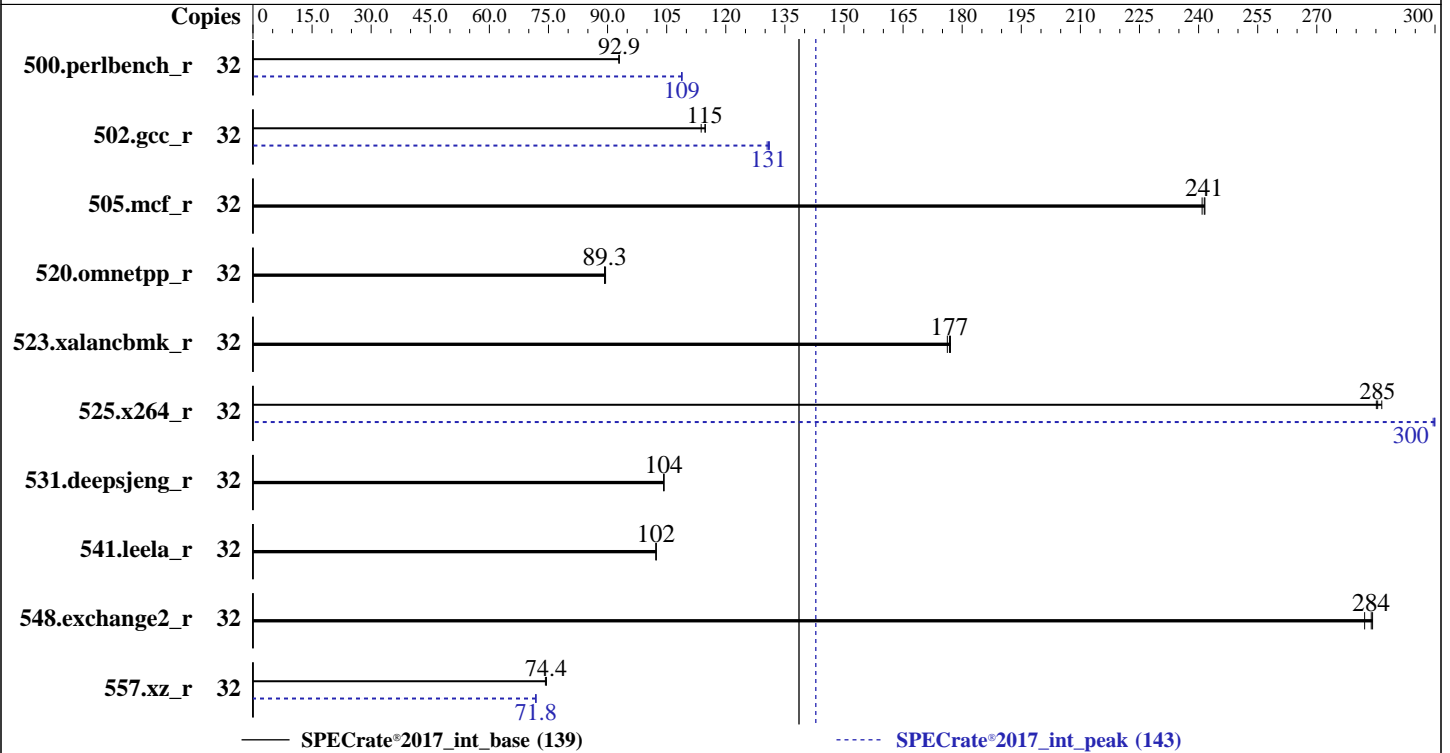
Test Date: Dec-2021

Test Sponsor: New H3C Technologies Co., Ltd.

Hardware Availability: Jun-2021

Tested by: New H3C Technologies Co., Ltd.

Software Availability: Dec-2020



## Hardware

CPU Name: Intel Xeon Gold 5315Y  
 Max MHz: 3600  
 Nominal: 3200  
 Enabled: 16 cores, 2 chips, 2 threads/core  
 Orderable: 1,2 chips  
 Cache L1: 32 KB I + 48 KB D on chip per core  
 L2: 1.25 MB I+D on chip per core  
 L3: 12 MB I+D on chip per chip  
 Other: None  
 Memory: 512 GB (16 x 32 GB 2Rx4 PC4-3200AA-R, running at 2933)  
 Storage: 1 x 480GB 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 2021.1 of Intel oneAPI DPC++/C++ Compiler Build 20201113 for Linux;  
 Fortran: Version 2021.1 of Intel Fortran Compiler Classic Build 20201112 for Linux;  
 C/C++: Version 2021.1 of Intel C/C++ Compiler Classic Build 20201112 for Linux  
 Parallel: No  
 Firmware: Version 5.39 released Nov-2021 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 and OS set to prefer performance at the cost of additional power usage.



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2022 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECrate®2017\_int\_base = 139

H3C UniServer R4900 G5 (Intel Xeon Gold 5315Y)

SPECrate®2017\_int\_peak = 143

CPU2017 License: 9066

Test Sponsor: New H3C Technologies Co., Ltd.

Tested by: New H3C Technologies Co., Ltd.

Test Date: Dec-2021

Hardware Availability: Jun-2021

Software Availability: Dec-2020

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
500.perlbench_r	32	548	93.0	<b><u>548</u></b>	<b><u>92.9</u></b>	548	92.9	32	468	109	468	109	<b><u>468</u></b>	<b><u>109</u></b>
502.gcc_r	32	395	115	398	114	<b><u>395</u></b>	<b><u>115</u></b>	32	<b><u>346</u></b>	<b><u>131</u></b>	347	130	346	131
505.mcf_r	32	214	242	<b><u>214</u></b>	<b><u>241</u></b>	215	241	32	214	242	<b><u>214</u></b>	<b><u>241</u></b>	215	241
520.omnetpp_r	32	470	89.3	469	89.5	<b><u>470</u></b>	<b><u>89.3</u></b>	32	470	89.3	469	89.5	<b><u>470</u></b>	<b><u>89.3</u></b>
523.xalancbmk_r	32	192	176	<b><u>191</u></b>	<b><u>177</u></b>	191	177	32	192	176	<b><u>191</u></b>	<b><u>177</u></b>	191	177
525.x264_r	32	196	286	<b><u>196</u></b>	<b><u>285</u></b>	197	285	32	<b><u>187</u></b>	<b><u>300</u></b>	187	300	187	300
531.deepsjeng_r	32	<b><u>352</u></b>	<b><u>104</u></b>	352	104	352	104	32	<b><u>352</u></b>	<b><u>104</u></b>	352	104	352	104
541.leela_r	32	518	102	<b><u>518</u></b>	<b><u>102</u></b>	518	102	32	518	102	<b><u>518</u></b>	<b><u>102</u></b>	518	102
548.exchange2_r	32	297	282	<b><u>295</u></b>	<b><u>284</u></b>	295	284	32	297	282	<b><u>295</u></b>	<b><u>284</u></b>	295	284
557.xz_r	32	466	74.2	464	74.5	<b><u>464</u></b>	<b><u>74.4</u></b>	32	<b><u>481</u></b>	<b><u>71.8</u></b>	482	71.8	481	71.8

SPECrate®2017\_int\_base = 139

SPECrate®2017\_int\_peak = 143

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"

## 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"

## General Notes

Binaries compiled on a system with 1x Intel Core i9-7980XE CPU + 64GB RAM memory using Red Hat Enterprise Linux 8.1

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)

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2022 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECrate®2017\_int\_base = 139

H3C UniServer R4900 G5 (Intel Xeon Gold 5315Y)

SPECrate®2017\_int\_peak = 143

**CPU2017 License:** 9066

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

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

**Test Date:** Dec-2021

**Hardware Availability:** Jun-2021

**Software Availability:** Dec-2020

## General Notes (Continued)

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 (Sub NUMA) to Enabled  
 Set Power Performance Tuning to BIOS Controls EPB  
 Set Energy Performance BIAS to Performance  
 Set XPT Prefetch to Enabled

sysinfo program /home/speccpu/bin/sysinfo  
 Rev: r6622 of 2021-04-07 982a61ec0915b55891ef0e16acafc64d  
 running on localhost.localdomain Fri Dec 17 15:47:10 2021

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 5315Y CPU @ 3.20GHz
 2 "physical id"s (chips)
 32 "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 1 2 3 4 5 6 7
physical 1: cores 0 1 2 3 4 5 6 7
```

From lscpu from util-linux 2.32.1:

```
Architecture: x86_64
CPU op-mode(s): 32-bit, 64-bit
Byte Order: Little Endian
CPU(s): 32
On-line CPU(s) list: 0-31
Thread(s) per core: 2
Core(s) per socket: 8
```

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2022 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECrate®2017\_int\_base = 139

H3C UniServer R4900 G5 (Intel Xeon Gold 5315Y)

SPECrate®2017\_int\_peak = 143

CPU2017 License: 9066

Test Date: Dec-2021

Test Sponsor: New H3C Technologies Co., Ltd.

Hardware Availability: Jun-2021

Tested by: New H3C Technologies Co., Ltd.

Software Availability: Dec-2020

## Platform Notes (Continued)

```

Socket(s): 2
NUMA node(s): 2
Vendor ID: GenuineIntel
CPU family: 6
Model: 106
Model name: Intel(R) Xeon(R) Gold 5315Y CPU @ 3.20GHz
Stepping: 6
CPU MHz: 3500.000
CPU max MHz: 3600.0000
CPU min MHz: 800.0000
BogoMIPS: 6400.00
Virtualization: VT-x
L1d cache: 48K
L1i cache: 32K
L2 cache: 1280K
L3 cache: 12288K
NUMA node0 CPU(s): 0-7,16-23
NUMA node1 CPU(s): 8-15,24-31

```

```

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 rep_good nopl xtopology nonstop_tsc cpuid
aperfperf 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_l3 invpcid_single 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 rdt_a avx512f avx512dq
rdseed adx smap avx512ifma clflushopt clwb intel_pt avx512cd sha_ni avx512bw
avx512vl xsaveopt xsavec xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbm_total
cqm_mbm_local wbnoinvd dtherm ida arat pln pts hwp hwp_act_window hwp_epp
hwp_pkg_req avx512vbmi umip pku ospke avx512_vbmi2 gfni vaes vpclmulqdq avx512_vnni
avx512_bitalg tme avx512_vpopcntdq la57 rdpid md_clear pconfig flush_l1d
arch_capabilities

```

```

/proc/cpuinfo cache data
cache size : 12288 KB

```

From numactl --hardware

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

```

available: 2 nodes (0-1)
node 0 cpus: 0 1 2 3 4 5 6 7 16 17 18 19 20 21 22 23
node 0 size: 257378 MB
node 0 free: 256445 MB
node 1 cpus: 8 9 10 11 12 13 14 15 24 25 26 27 28 29 30 31
node 1 size: 258014 MB
node 1 free: 257628 MB
node distances:
node 0 1

```

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2022 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECrate®2017\_int\_base = 139

H3C UniServer R4900 G5 (Intel Xeon Gold 5315Y)

SPECrate®2017\_int\_peak = 143

CPU2017 License: 9066

Test Sponsor: New H3C Technologies Co., Ltd.

Tested by: New H3C Technologies Co., Ltd.

Test Date: Dec-2021

Hardware Availability: Jun-2021

Software Availability: Dec-2020

## Platform Notes (Continued)

```
0: 10 20
1: 20 10
```

From /proc/meminfo

```
MemTotal:      527762644 kB
HugePages_Total:      0
Hugepagesize:    2048 kB
```

/sbin/tuned-adm active

Current active profile: throughput-performance

/sys/devices/system/cpu/cpu\*/cpufreq/scaling\_governor has performance

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:

```
CVE-2018-12207 (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
CVE-2020-0543 (Special Register Buffer Data Sampling): No status reported
```

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2022 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECrate®2017\_int\_base = 139

H3C UniServer R4900 G5 (Intel Xeon Gold 5315Y)

SPECrate®2017\_int\_peak = 143

CPU2017 License: 9066

Test Date: Dec-2021

Test Sponsor: New H3C Technologies Co., Ltd.

Hardware Availability: Jun-2021

Tested by: New H3C Technologies Co., Ltd.

Software Availability: Dec-2020

## Platform Notes (Continued)

CVE-2019-11135 (TSX Asynchronous Abort): Not affected

run-level 3 Dec 17 15:43

SPEC is set to: /home/speccpu

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/mapper/rhel-home	xfs	392G	119G	273G	31%	/home

From /sys/devices/virtual/dmi/id

Vendor: H3C  
 Product: RS33M2C9S  
 Product Family: Rack

Additional information from dmidecode 3.2 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:

16x Micron 36ASF4G72PZ-3G2E7 32 GB 2 rank 3200, configured at 2933  
 16x NO DIMM NO DIMM

BIOS:

BIOS Vendor: American Megatrends International, LLC.  
 BIOS Version: 5.39  
 BIOS Date: 11/17/2021  
 BIOS Revision: 5.22

(End of data from sysinfo program)

## Compiler Version Notes

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

```
Intel(R) C Intel(R) 64 Compiler Classic for applications running on Intel(R)
64, Version 2021.1 Build 20201112_000000
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
-----
```

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

```
Intel(R) oneAPI DPC++/C++ Compiler for applications running on IA-32, Version
2021.1 Build 20201113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
-----
```

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2022 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECrate®2017\_int\_base = 139

H3C UniServer R4900 G5 (Intel Xeon Gold 5315Y)

SPECrate®2017\_int\_peak = 143

CPU2017 License: 9066

Test Sponsor: New H3C Technologies Co., Ltd.

Tested by: New H3C Technologies Co., Ltd.

Test Date: Dec-2021

Hardware Availability: Jun-2021

Software Availability: Dec-2020

## Compiler Version Notes (Continued)

```
=====
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) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
Version 2021.1 Build 20201113
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 Classic for applications running on Intel(R)
64, Version 2021.1 Build 20201112_000000
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
=====
```

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

```
Intel(R) oneAPI DPC++/C++ Compiler for applications running on IA-32, Version
2021.1 Build 20201113
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) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
Version 2021.1 Build 20201113
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 Classic for applications running on Intel(R)
64, Version 2021.1 Build 20201112_000000
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
=====
```

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

```
Intel(R) oneAPI DPC++/C++ Compiler for applications running on IA-32, Version
```

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2022 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECrate®2017\_int\_base = 139

H3C UniServer R4900 G5 (Intel Xeon Gold 5315Y)

SPECrate®2017\_int\_peak = 143

CPU2017 License: 9066

Test Sponsor: New H3C Technologies Co., Ltd.

Tested by: New H3C Technologies Co., Ltd.

Test Date: Dec-2021

Hardware Availability: Jun-2021

Software Availability: Dec-2020

## Compiler Version Notes (Continued)

2021.1 Build 20201113  
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) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,  
Version 2021.1 Build 20201113  
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

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

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,  
Version 2021.1 Build 20201113  
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

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

Intel(R) Fortran Intel(R) 64 Compiler Classic for applications running on  
Intel(R) 64, Version 2021.1 Build 20201112\_000000  
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

## Base Compiler Invocation

C benchmarks:

icx

C++ benchmarks:

icpx

Fortran benchmarks:

ifort





# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2022 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECrate®2017\_int\_base = 139

H3C UniServer R4900 G5 (Intel Xeon Gold 5315Y)

SPECrate®2017\_int\_peak = 143

CPU2017 License: 9066

Test Sponsor: New H3C Technologies Co., Ltd.

Tested by: New H3C Technologies Co., Ltd.

Test Date: Dec-2021

Hardware Availability: Jun-2021

Software Availability: Dec-2020

## 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:

```
-w -std=c11 -m64 -Wl,-z,muldefs -xCORE-AVX512 -O3 -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-mbranches-within-32B-boundaries
-L/opt/intel/oneapi/compiler/2021.1.1/linux/compiler/lib/intel64_lin
-lqkmalloc
```

C++ benchmarks:

```
-w -m64 -Wl,-z,muldefs -xCORE-AVX512 -O3 -ffast-math -flto
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-mbranches-within-32B-boundaries
-L/opt/intel/oneapi/compiler/2021.1.1/linux/compiler/lib/intel64_lin
-lqkmalloc
```

Fortran benchmarks:

```
-w -m64 -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/opt/intel/oneapi/compiler/2021.1.1/linux/compiler/lib/intel64_lin
-lqkmalloc
```

## Peak Compiler Invocation

C benchmarks (except as noted below):

icx

500.perlbench\_r: icc

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2022 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECrate®2017\_int\_base = 139

H3C UniServer R4900 G5 (Intel Xeon Gold 5315Y)

SPECrate®2017\_int\_peak = 143

CPU2017 License: 9066

Test Sponsor: New H3C Technologies Co., Ltd.

Tested by: New H3C Technologies Co., Ltd.

Test Date: Dec-2021

Hardware Availability: Jun-2021

Software Availability: Dec-2020

## Peak Compiler Invocation (Continued)

557.xz\_r: icc

C++ benchmarks:

icpx

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

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/opt/intel/oneapi/compiler/2021.1.1/linux/compiler/lib/intel64\_lin

-lqkmalloc

502.gcc\_r: -m32

-L/opt/intel/oneapi/compiler/2021.1.1/linux/compiler/lib/ia32\_lin

-std=gnu89 -Wl,-z,muldefs -fprofile-generate(pass 1)

-fprofile-use=default.profddata(pass 2) -xCORE-AVX512 -flto

-Ofast(pass 1) -O3 -ffast-math -qopt-mem-layout-trans=4

-mbranches-within-32B-boundaries

-L/usr/local/jemalloc32-5.0.1/lib -ljemalloc

505.mcf\_r: basepeak = yes

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2022 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECrate®2017\_int\_base = 139

H3C UniServer R4900 G5 (Intel Xeon Gold 5315Y)

SPECrate®2017\_int\_peak = 143

CPU2017 License: 9066

Test Sponsor: New H3C Technologies Co., Ltd.

Tested by: New H3C Technologies Co., Ltd.

Test Date: Dec-2021

Hardware Availability: Jun-2021

Software Availability: Dec-2020

## Peak Optimization Flags (Continued)

```
525.x264_r: -w -std=c11 -m64 -Wl,-z,muldefs -xCORE-AVX512 -flto
-O3 -ffast-math -qopt-mem-layout-trans=4 -fno-alias
-mbranches-within-32B-boundaries
-L/opt/intel/oneapi/compiler/2021.1.1/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/opt/intel/oneapi/compiler/2021.1.1/linux/compiler/lib/intel64_lin
-lqkmalloc
```

C++ benchmarks:

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-ic2021-official-linux64\\_revA.html](http://www.spec.org/cpu2017/flags/Intel-ic2021-official-linux64_revA.html)

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

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

[http://www.spec.org/cpu2017/flags/Intel-ic2021-official-linux64\\_revA.xml](http://www.spec.org/cpu2017/flags/Intel-ic2021-official-linux64_revA.xml)

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

SPEC CPU and SPECrate are registered trademarks 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 CPU®2017 v1.1.8 on 2021-12-17 02:47:10-0500.

Report generated on 2022-01-10 11:03:04 by CPU2017 PDF formatter v6442.

Originally published on 2022-01-07.