



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

H3C UniServer R4900 G6 (Intel Xeon Gold 6530)

SPECrate®2017\_int\_base = 554

SPECrate®2017\_int\_peak = Not Run

CPU2017 License: 9066

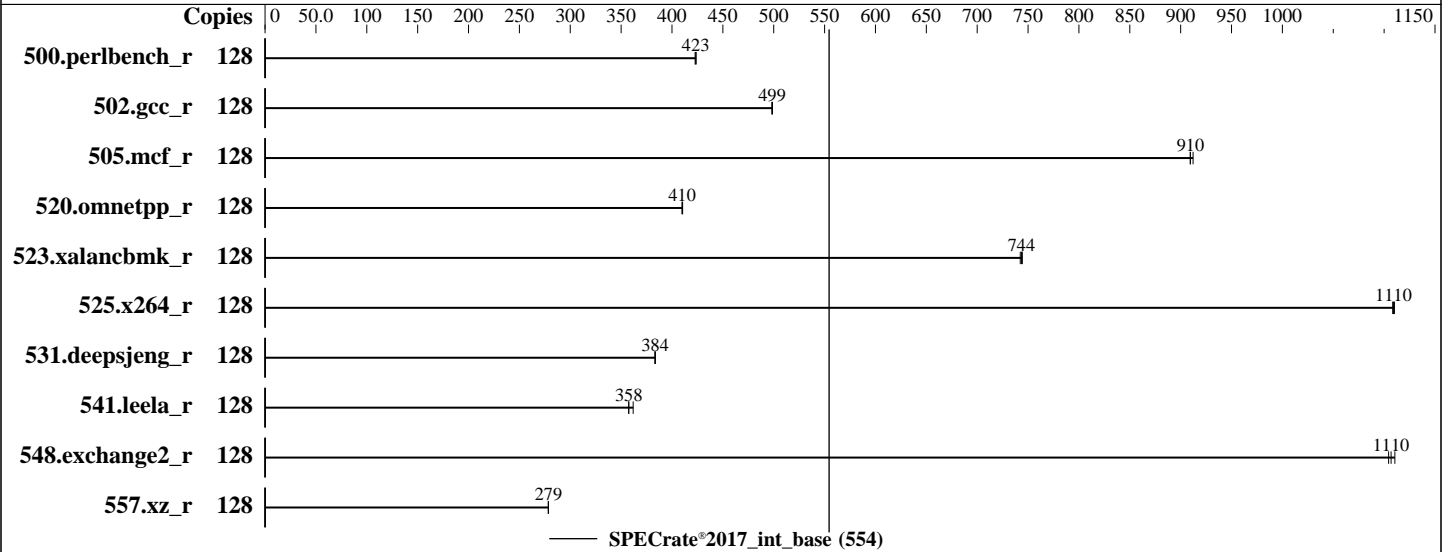
Test Sponsor: New H3C Technologies Co., Ltd.

Tested by: New H3C Technologies Co., Ltd.

Test Date: Mar-2025

Hardware Availability: Oct-2023

Software Availability: Apr-2024



## Hardware

CPU Name: Intel Xeon Gold 6530  
 Max MHz: 4000  
 Nominal: 2100  
 Enabled: 64 cores, 2 chips, 2 threads/core  
 Orderable: 1,2 chips  
 Cache L1: 32 KB I + 48 KB D on chip per core  
 L2: 2 MB I+D on chip per core  
 L3: 160 MB I+D on chip per chip  
 Other: None  
 Memory: 1 TB (16 x 64 GB 2Rx4 PC5-5600B-R, running at 4800)  
 Storage: 1 x 960 GB SATA SSD  
 Other: CPU Cooling: Air

## Software

OS: Red Hat Enterprise Linux 9.4 (Plow)  
 5.14.0-427.13.1.el9\_4.x86\_64  
 Compiler: C/C++: Version 2024.1 of Intel oneAPI DPC++/C++ Compiler for Linux;  
 Fortran: Version 2024.1 of Intel Fortran Compiler for Linux;  
 Parallel: No  
 Firmware: Version 6.10.50 released Feb-2025 BIOS  
 File System: xfs  
 System State: Run level 3 (multi-user)  
 Base Pointers: 64-bit  
 Peak Pointers: Not Applicable  
 Other: None  
 Power Management: BIOS and OS set to prefer performance at the cost of additional power usage.



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.  
H3C UniServer R4900 G6 (Intel Xeon Gold 6530)

SPECrate®2017\_int\_base = 554

SPECrate®2017\_int\_peak = Not Run

CPU2017 License: 9066  
Test Sponsor: New H3C Technologies Co., Ltd.  
Tested by: New H3C Technologies Co., Ltd.

Test Date: Mar-2025  
Hardware Availability: Oct-2023  
Software Availability: Apr-2024

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
500.perlbench_r	128	481	424	482	423	<b>481</b>	<b>423</b>							
502.gcc_r	128	364	498	<b>364</b>	<b>499</b>	363	499							
505.mcf_r	128	<b>227</b>	<b>910</b>	227	912	227	909							
520.omnetpp_r	128	410	410	409	410	<b>410</b>	<b>410</b>							
523.xalancbmk_r	128	182	744	182	742	<b>182</b>	<b>744</b>							
525.x264_r	128	<b>202</b>	<b>1110</b>	202	1110	202	1110							
531.deepsjeng_r	128	<b>382</b>	<b>384</b>	383	383	382	384							
541.leela_r	128	593	357	586	362	<b>593</b>	<b>358</b>							
548.exchange2_r	128	302	1110	<b>303</b>	<b>1110</b>	304	1100							
557.xz_r	128	<b>496</b>	<b>279</b>	496	279	497	278							

SPECrate®2017\_int\_base = 554

SPECrate®2017\_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"

## 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 2x Intel Xeon Platinum 8280M CPU + 384GB RAM memory using Red Hat Enterprise Linux 8.4  
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>  
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.



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECrate®2017\_int\_base = 554

H3C UniServer R4900 G6 (Intel Xeon Gold 6530)

SPECrate®2017\_int\_peak = Not Run

CPU2017 License: 9066

Test Date: Mar-2025

Test Sponsor: New H3C Technologies Co., Ltd.

Hardware Availability: Oct-2023

Tested by: New H3C Technologies Co., Ltd.

Software Availability: Apr-2024

## Platform Notes

### BIOS Settings:

SNC = Enable SNC2 (2-clusters)  
Package C State = C6(Retention) state

### BMC Settings:

Fan mode = powerful mode

Sysinfo program /home/speccpu/bin/sysinfo  
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197  
running on localhost.localdomain Tue Mar 19 01:36:06 2024

SUT (System Under Test) info as seen by some common utilities.

### Table of contents

1. uname -a
2. w
3. Username
4. ulimit -a
5. sysinfo process ancestry
6. /proc/cpuinfo
7. lscpu
8. numactl --hardware
9. /proc/meminfo
10. who -r
11. Systemd service manager version: systemd 252 (252-32.el9\_4)
12. Failed units, from systemctl list-units --state=failed
13. Services, from systemctl list-unit-files
14. Linux kernel boot-time arguments, from /proc/cmdline
15. cpupower frequency-info
16. tuned-adm active
17. sysctl
18. /sys/kernel/mm/transparent\_hugepage
19. /sys/kernel/mm/transparent\_hugepage/khugepaged
20. OS release
21. Disk information
22. /sys/devices/virtual/dmi/id
23. dmidecode
24. BIOS

```
1. uname -a
Linux localhost.localdomain 5.14.0-427.13.1.el9_4.x86_64 #1 SMP PREEMPT_DYNAMIC Wed Apr 10 10:29:16 EDT
2024 x86_64 x86_64 x86_64 GNU/Linux
```

```
2. w
01:36:06 up 2 min, 1 user, load average: 0.11, 0.12, 0.05
USER      TTY      LOGIN@  IDLE   JCPU   PCPU   WHAT
root     tty1      12:31   38.00s  6.36s  0.14s  sh intrate.sh
```

```
3. Username
From environment variable $USER: root
```

```
4. ulimit -a
real-time non-blocking time (microseconds, -R) unlimited
core file size (blocks, -c) 0
```

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECrate®2017\_int\_base = 554

H3C UniServer R4900 G6 (Intel Xeon Gold 6530)

SPECrate®2017\_int\_peak = Not Run

CPU2017 License: 9066

Test Date: Mar-2025

Test Sponsor: New H3C Technologies Co., Ltd.

Hardware Availability: Oct-2023

Tested by: New H3C Technologies Co., Ltd.

Software Availability: Apr-2024

## Platform Notes (Continued)

```

data seg size      (kbytes, -d) unlimited
scheduling priority (-e) 0
file size         (blocks, -f) unlimited
pending signals   (-i) 4124757
max locked memory (kbytes, -l) 64
max memory size   (kbytes, -m) unlimited
open files        (-n) 1024
pipe size         (512 bytes, -p) 8
POSIX message queues (bytes, -q) 819200
real-time priority (-r) 0
stack size        (kbytes, -s) unlimited
cpu time          (seconds, -t) unlimited
max user processes (-u) 4124757
virtual memory    (kbytes, -v) unlimited
file locks        (-x) unlimited

```

```

-----
5. sysinfo process ancestry
/usr/lib/systemd/systemd rhgb --switched-root --system --deserialize 31
login -- root
-bash
sh intrate.sh
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=128 -c
  ic2024.1-lin-sapphirerapids-rate-20240308.cfg --define smt-on --define cores=64 --define physicalfirst
  --define invoke_with_interleave --define drop_caches --tune base -o all intrate
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=128 --configfile
  ic2024.1-lin-sapphirerapids-rate-20240308.cfg --define smt-on --define cores=64 --define physicalfirst
  --define invoke_with_interleave --define drop_caches --tune base --output_format all --nopower --runmode
  rate --tune base --size refrate intrate --nopreenv --note-preenv --logfile
  $SPEC/tmp/CPU2017.016/templogs/preenv.intrate.016.0.log --lognum 016.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/speccpu

```

```

-----
6. /proc/cpuinfo
model name      : INTEL(R) XEON(R) GOLD 6530
vendor_id      : GenuineIntel
cpu family     : 6
model          : 207
stepping       : 2
microcode      : 0x21000291
bugs           : spectre_v1 spectre_v2 spec_store_bypass swapgs eibrs_pbrsb
cpu cores      : 32
siblings       : 64
2 physical ids (chips)
128 processors (hardware threads)
physical id 0: core ids 0-31
physical id 1: core ids 0-31
physical id 0: apicids 0-63
physical id 1: apicids 128-191
Caution: /proc/cpuinfo data regarding chips, cores, and threads is not necessarily reliable, especially for
virtualized systems. Use the above data carefully.

```

```

-----
7. lscpu

From lscpu from util-linux 2.37.4:
Architecture:      x86_64
CPU op-mode(s):    32-bit, 64-bit
Address sizes:      52 bits physical, 57 bits virtual

```

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECrate®2017\_int\_base = 554

H3C UniServer R4900 G6 (Intel Xeon Gold 6530)

SPECrate®2017\_int\_peak = Not Run

CPU2017 License: 9066

Test Date: Mar-2025

Test Sponsor: New H3C Technologies Co., Ltd.

Hardware Availability: Oct-2023

Tested by: New H3C Technologies Co., Ltd.

Software Availability: Apr-2024

## Platform Notes (Continued)

```

Byte Order: Little Endian
CPU(s): 128
On-line CPU(s) list: 0-127
Vendor ID: GenuineIntel
BIOS Vendor ID: Intel(R) Corporation
Model name: INTEL(R) XEON(R) GOLD 6530
BIOS Model name: INTEL(R) XEON(R) GOLD 6530
CPU family: 6
Model: 207
Thread(s) per core: 2
Core(s) per socket: 32
Socket(s): 2
Stepping: 2
CPU(s) scaling MHz: 100%
CPU max MHz: 4000.0000
CPU min MHz: 800.0000
BogoMIPS: 4200.00
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 tsc_known_freq pni pclmulqdq
dtes64 monitor ds_cpl 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 cat_l2
cdp_l3 intel_ppin cdp_l2 ssbd mba ibrs ibpb stibp ibrs_enhanced
fsgsbase tsc_adjust bml avx2 smep bmi2 erms invpcid 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 split_lock_detect avx_vnni
avx512_bf16 wbnoinvd dtherm ida arat pln pts hwp hwp_act_window hwp_epp
hwp_pkg_req avx512vbmi umip pku ospke waitpkg avx512_vbmi2 gfni vaes
vpclmulqdq avx512_vnni avx512_bitalg tme avx512_vpoperntdq la57 rdpid
bus_lock_detect cldemote movdiri movdir64b enqcmd fsrm md_clear
serialize tsxldtrk pconfig arch_lbr ibt amx_bf16 avx512_fp16 amx_tile
amx_int8 flush_l1d arch_capabilities
L1d cache: 3 MiB (64 instances)
L1i cache: 2 MiB (64 instances)
L2 cache: 128 MiB (64 instances)
L3 cache: 320 MiB (2 instances)
NUMA node(s): 4
NUMA node0 CPU(s): 0-15,64-79
NUMA node1 CPU(s): 16-31,80-95
NUMA node2 CPU(s): 32-47,96-111
NUMA node3 CPU(s): 48-63,112-127
Vulnerability Gather data sampling: Not affected
Vulnerability Itlb multihit: Not affected
Vulnerability L1tf: Not affected
Vulnerability Mds: Not affected
Vulnerability Meltdown: Not affected
Vulnerability Mmio stale data: Not affected
Vulnerability Retbleed: Not affected
Vulnerability Spec rstack overflow: Not affected
Vulnerability Spec store bypass: Mitigation; Speculative Store Bypass disabled via prctl
Vulnerability Spectre v1: Mitigation; usercopy/swapgs barriers and __user pointer sanitization
Vulnerability Spectre v2: Mitigation; Enhanced / Automatic IBRS, IBPB conditional, RSB filling,
PBRSE-eIBRS SW sequence
Vulnerability Srbds: Not affected
Vulnerability Tsx async abort: Not affected

```

From lscpu --cache:

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECrate®2017\_int\_base = 554

H3C UniServer R4900 G6 (Intel Xeon Gold 6530)

SPECrate®2017\_int\_peak = Not Run

CPU2017 License: 9066

Test Date: Mar-2025

Test Sponsor: New H3C Technologies Co., Ltd.

Hardware Availability: Oct-2023

Tested by: New H3C Technologies Co., Ltd.

Software Availability: Apr-2024

## Platform Notes (Continued)

NAME	ONE-SIZE	ALL-SIZE	WAYS	TYPE	LEVEL	SETS	PHY-LINE	COHERENCY-SIZE
L1d	48K	3M	12	Data	1	64	1	64
L1i	32K	2M	8	Instruction	1	64	1	64
L2	2M	128M	16	Unified	2	2048	1	64
L3	160M	320M	20	Unified	3	131072	1	64

8. numactl --hardware

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

```

available: 4 nodes (0-3)
node 0 cpus: 0-15,64-79
node 0 size: 257160 MB
node 0 free: 256235 MB
node 1 cpus: 16-31,80-95
node 1 size: 257998 MB
node 1 free: 257431 MB
node 2 cpus: 32-47,96-111
node 2 size: 258039 MB
node 2 free: 257294 MB
node 3 cpus: 48-63,112-127
node 3 size: 258033 MB
node 3 free: 257469 MB
node distances:
node    0    1    2    3
 0:   10   12   21   21
 1:   12   10   21   21
 2:   21   21   10   12
 3:   21   21   12   10

```

9. /proc/meminfo

MemTotal: 1055981780 kB

10. who -r

run-level 3 Mar 18 12:30

11. Systemd service manager version: systemd 252 (252-32.el9\_4)

```

Default Target Status
multi-user      degraded

```

12. Failed units, from systemctl list-units --state=failed

```

UNIT          LOAD    ACTIVE SUB    DESCRIPTION
* logrotate.service loaded failed failed Rotate log files

```

13. Services, from systemctl list-unit-files

```

STATE          UNIT FILES
enabled        NetworkManager NetworkManager-dispatcher NetworkManager-wait-online atd auditd bluetooth
                chronyd crond dbus-broker firewalld getty@ insights-client-boot irqbalance iscsi-onboot
                iscsi-starter kdump libstoragemgmt lm_sensors low-memory-monitor lvm2-monitor mcelog
                mdmonitor microcode multipathd nis-domainname nvme-fc-boot-connections rshmcertd rsyslog
                rtkit-daemon selinux-autorelabel-mark smartd sshd sssd systemd-boot-update
                systemd-network-generator tuned udisks2 upower
enabled-runtime systemd-remount-fs
disabled       arp-ethers blk-availability canberra-system-bootup canberra-system-shutdown
                canberra-system-shutdown-reboot chrony-wait chronyd-restricted cni-dhcp console-getty
                cpupower debug-shell dnf-system-upgrade fancontrol iprdump iprinit iprupdate ipsec

```

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECrate®2017\_int\_base = 554

H3C UniServer R4900 G6 (Intel Xeon Gold 6530)

SPECrate®2017\_int\_peak = Not Run

CPU2017 License: 9066

Test Date: Mar-2025

Test Sponsor: New H3C Technologies Co., Ltd.

Hardware Availability: Oct-2023

Tested by: New H3C Technologies Co., Ltd.

Software Availability: Apr-2024

## Platform Notes (Continued)

```

indirect
iscsi-init iscsid iscsiui kpatch kvm_stat ledmon man-db-restart-cache-update
netavark-dhcp-proxy netavark-firewalld-reload nftables nvmm-autoconnect pesign podman
podman-auto-update podman-clean-transient podman-kube@ podman-restart psacct rdisc rhcd
rhsm rhsm-facts rpmdb-rebuild selinux-check-proper-disable serial-getty@ sshd-keygen@
systemd-boot-check-no-failures systemd-pstore systemd-sysext
iscsi sssd-autofs sssd-kcm sssd-nss sssd-pac sssd-pam sssd-ssh sssd-sudo systemd-sysupdate
systemd-sysupdate-reboot

```

```

-----
14. Linux kernel boot-time arguments, from /proc/cmdline
BOOT_IMAGE=(hd0,gpt2)/vmlinuz-5.14.0-427.13.1.el9_4.x86_64
root=/dev/mapper/rhel-root
ro
crashkernel=1G-4G:192M,4G-64G:256M,64G-:512M
resume=/dev/mapper/rhel-swap
rd.lvm.lv=rhel/root
rd.lvm.lv=rhel/swap
rhgb
quiet

```

```

-----
15. cpupower frequency-info
analyzing CPU 7:
current policy: frequency should be within 800 MHz and 4.00 GHz.
                The governor "performance" may decide which speed to use
                within this range.

boost state support:
Supported: yes
Active: yes

```

```

-----
16. tuned-adm active
Current active profile: throughput-performance

```

```

-----
17. sysctl
kernel.numa_balancing          1
kernel.randomize_va_space      2
vm.compaction_proactiveness    20
vm.dirty_background_bytes      0
vm.dirty_background_ratio      10
vm.dirty_bytes                 0
vm.dirty_expire_centisecs      3000
vm.dirty_ratio                 40
vm.dirty_writeback_centisecs   500
vm.dirtytime_expire_seconds    43200
vm.extfrag_threshold           500
vm.min_unmapped_ratio          1
vm.nr_hugepages                0
vm.nr_hugepages_mempolicy      0
vm.nr_overcommit_hugepages     0
vm.swappiness                   10
vm.watermark_boost_factor      15000
vm.watermark_scale_factor      10
vm.zone_reclaim_mode           0

```

```

-----
18. /sys/kernel/mm/transparent_hugepage
defrag          always defer defer+madvice [madvice] never
enabled         [always] madvice never

```

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.  
H3C UniServer R4900 G6 (Intel Xeon Gold 6530)

SPECrate®2017\_int\_base = 554  
SPECrate®2017\_int\_peak = Not Run

**CPU2017 License:** 9066  
**Test Sponsor:** New H3C Technologies Co., Ltd.  
**Tested by:** New H3C Technologies Co., Ltd.

**Test Date:** Mar-2025  
**Hardware Availability:** Oct-2023  
**Software Availability:** Apr-2024

## Platform Notes (Continued)

hpage\_pmd\_size 2097152  
shmem\_enabled always within\_size advise [never] deny force

-----  
19. /sys/kernel/mm/transparent\_hugepage/khugepaged  
alloc\_sleep\_millisecs 60000  
defrag 1  
max\_ptes\_none 511  
max\_ptes\_shared 256  
max\_ptes\_swap 64  
pages\_to\_scan 4096  
scan\_sleep\_millisecs 10000  
-----

20. OS release  
From /etc/\*-release /etc/\*-version  
os-release Red Hat Enterprise Linux 9.4 (Plow)  
redhat-release Red Hat Enterprise Linux release 9.4 (Plow)  
system-release Red Hat Enterprise Linux release 9.4 (Plow)  
-----

21. Disk information  
SPEC is set to: /home/speccpu  
Filesystem Type Size Used Avail Use% Mounted on  
/dev/mapper/rhel-home xfs 819G 101G 718G 13% /home  
-----

22. /sys/devices/virtual/dmi/id  
Vendor: New H3C Technologies Co., Ltd.  
Product: H3C UniServer R4900 G6  
Product Family: Rack  
Serial: 210235A4HEH242000028  
-----

23. dmidecode  
Additional information from dmidecode 3.5 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 Hynix HMC94AGBRA181N 64 GB 2 rank 5600, configured at 4800  
-----

24. BIOS  
(This section combines info from /sys/devices and dmidecode.)  
BIOS Vendor: American Megatrends International, LLC.  
BIOS Version: 6.10.50  
BIOS Date: 02/28/2025  
BIOS Revision: 5.32  
-----

## Compiler Version Notes

=====  
C | 500.perlbench\_r(base) 502.gcc\_r(base) 505.mcf\_r(base) 525.x264\_r(base) 557.xz\_r(base)  
-----  
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308  
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.  
-----

(Continued on next page)





# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

H3C UniServer R4900 G6 (Intel Xeon Gold 6530)

SPECrate®2017\_int\_base = 554

SPECrate®2017\_int\_peak = Not Run

CPU2017 License: 9066

Test Sponsor: New H3C Technologies Co., Ltd.

Tested by: New H3C Technologies Co., Ltd.

Test Date: Mar-2025

Hardware Availability: Oct-2023

Software Availability: Apr-2024

## Compiler Version Notes (Continued)

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

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308  
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.  
=====

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

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308  
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.  
=====

## Base Compiler Invocation

C benchmarks:

icx

C++ benchmarks:

icpx

Fortran benchmarks:

ifx

## 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 -xsapphirerapids -O3 -ffast-math  
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

H3C UniServer R4900 G6 (Intel Xeon Gold 6530)

SPECrate®2017\_int\_base = 554

SPECrate®2017\_int\_peak = Not Run

CPU2017 License: 9066

Test Sponsor: New H3C Technologies Co., Ltd.

Tested by: New H3C Technologies Co., Ltd.

Test Date: Mar-2025

Hardware Availability: Oct-2023

Software Availability: Apr-2024

## Base Optimization Flags (Continued)

C benchmarks (continued):

```
-L/opt/intel/oneapi/compiler/2024.1/lib -lqkmalloc
```

C++ benchmarks:

```
-w -std=c++14 -m64 -Wl,-z,muldefs -xsaphirerapids -O3 -ffast-math
```

```
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
```

```
-L/opt/intel/oneapi/compiler/2024.1/lib -lqkmalloc
```

Fortran benchmarks:

```
-w -m64 -Wl,-z,muldefs -xsaphirerapids -O3 -ffast-math -flto
```

```
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
```

```
-nostandard-realloc-lhs -align array32byte -auto
```

```
-L/opt/intel/oneapi/compiler/2024.1/lib -lqkmalloc
```

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

<http://www.spec.org/cpu2017/flags/Intel-ic2024-official-linux64.html>

[http://www.spec.org/cpu2017/flags/New\\_H3C-Platform-Settings-intel-RevB.html](http://www.spec.org/cpu2017/flags/New_H3C-Platform-Settings-intel-RevB.html)

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

<http://www.spec.org/cpu2017/flags/Intel-ic2024-official-linux64.xml>

[http://www.spec.org/cpu2017/flags/New\\_H3C-Platform-Settings-intel-RevB.xml](http://www.spec.org/cpu2017/flags/New_H3C-Platform-Settings-intel-RevB.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 v1.1.9 on 2024-03-19 01:36:05-0400.

Report generated on 2025-04-09 15:01:51 by CPU2017 PDF formatter v6716.

Originally published on 2025-04-09.