



# SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

## New H3C Technologies Co., Ltd.

### H3C UniServer R4900 G6 (Intel Xeon Gold 6530)

SPECspeed®2017\_fp\_base = 315

SPECspeed®2017\_fp\_peak = Not Run

CPU2017 License: 9066

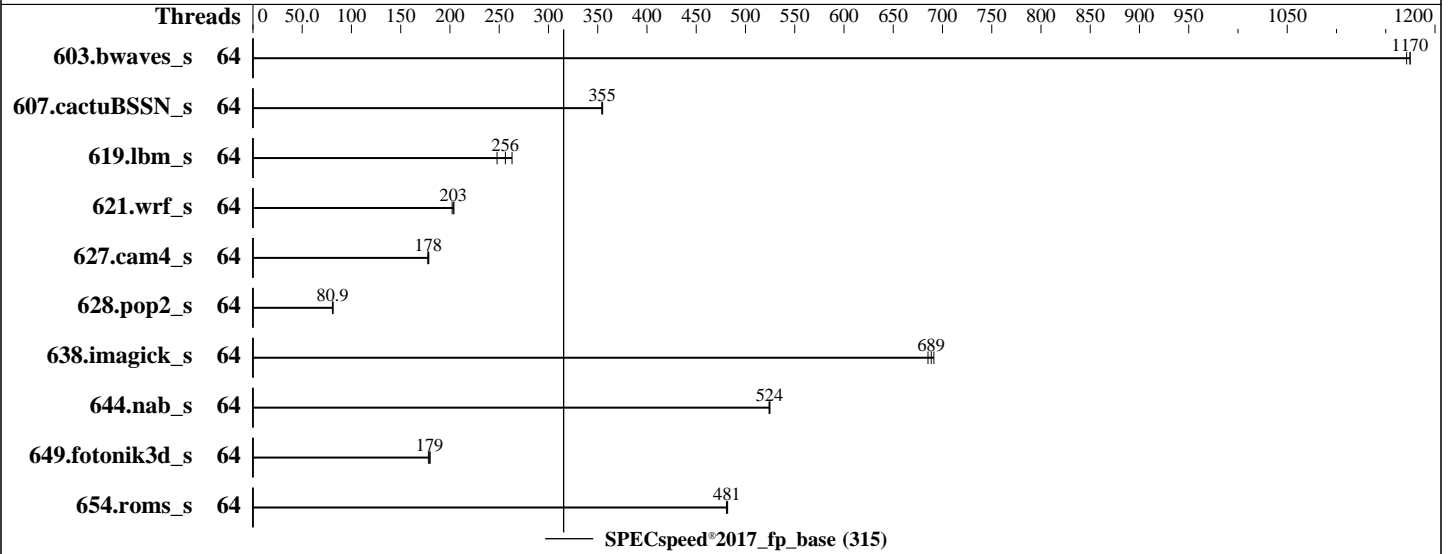
Test Sponsor: New H3C Technologies Co., Ltd.

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  
 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: Yes  
 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: 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 Floating Point Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECspeed®2017\_fp\_base = 315

H3C UniServer R4900 G6 (Intel Xeon Gold 6530)

SPECspeed®2017\_fp\_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

## Results Table

Benchmark	Base							Peak						
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
603.bwaves_s	64	<b><u>50.2</u></b>	<b><u>1170</u></b>	50.2	1170	50.4	1170							
607.cactuBSSN_s	64	<b><u>47.0</u></b>	<b><u>355</u></b>	47.1	354	47.0	355							
619.lbm_s	64	21.1	248	19.9	263	<b><u>20.4</u></b>	<b><u>256</u></b>							
621.wrf_s	64	65.4	202	64.8	204	<b><u>65.0</u></b>	<b><u>203</u></b>							
627.cam4_s	64	49.6	179	49.9	177	<b><u>49.8</u></b>	<b><u>178</u></b>							
628.pop2_s	64	146	81.4	<b><u>147</u></b>	<b><u>80.9</u></b>	147	80.7							
638.imagick_s	64	<b><u>20.9</u></b>	<b><u>689</u></b>	20.9	691	21.1	685							
644.nab_s	64	33.3	525	33.3	524	<b><u>33.3</u></b>	<b><u>524</u></b>							
649.fotonik3d_s	64	51.2	178	<b><u>50.8</u></b>	<b><u>179</u></b>	50.7	180							
654.roms_s	64	32.7	482	<b><u>32.7</u></b>	<b><u>481</u></b>	32.8	481							

SPECspeed®2017\_fp\_base = 315

SPECspeed®2017\_fp\_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"

## Environment Variables Notes

Environment variables set by runcpu before the start of the run:  
 KMP\_AFFINITY = "granularity=fine,compact"  
 LD\_LIBRARY\_PATH = "/home/speccpu/lib/intel64:/home/speccpu/je5.0.1-64"  
 MALLOC\_CONF = "retain:true"  
 OMP\_STACKSIZE = "192M"

## General Notes

Binaries compiled on a system with 2x Intel Xeon Platinum 8280M CPU + 384GB RAM memory using Redhat Enterprise Linux 8.0  
 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  
 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.  
 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:  
Enable LP [Global] = Single LP

(Continued on next page)



# SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

H3C UniServer R4900 G6 (Intel Xeon Gold 6530)

SPECspeed®2017\_fp\_base = 315

SPECspeed®2017\_fp\_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)

SNC = Disabled  
Package C State = C6(Retention) state  
LLC Prefetch = Enabled  
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 18 09:04:37 2025

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.e19\_4)
12. Services, from systemctl list-unit-files
13. Linux kernel boot-time arguments, from /proc/cmdline
14. cpupower frequency-info
15. tuned-adm active
16. sysctl
17. /sys/kernel/mm/transparent\_hugepage
18. /sys/kernel/mm/transparent\_hugepage/khugepaged
19. OS release
20. Disk information
21. /sys/devices/virtual/dmi/id
22. dmidecode
23. 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  
09:04:37 up 2 min, 1 user, load average: 0.04, 0.03, 0.01  
USER TTY LOGIN@ IDLE JCPU PCPU WHAT  
root tty1 09:03 36.00s 3.35s 0.02s sh intspeed.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  
data seg size (kbytes, -d) unlimited

(Continued on next page)



# SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECspeed®2017\_fp\_base = 315

H3C UniServer R4900 G6 (Intel Xeon Gold 6530)

SPECspeed®2017\_fp\_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)

```

scheduling priority      (-e) 0
file size                (blocks, -f) unlimited
pending signals         (-i) 4124824
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) 4124824
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 intspeed.sh
runcpu --nobuild --action validate --define default-platform-flags -c
  ic2024.1-lin-sapphirerapids-speed-20240308.cfg --define cores=64 --tune base -o all --define drop_caches
  fpspeed
runcpu --nobuild --action validate --define default-platform-flags --configfile
  ic2024.1-lin-sapphirerapids-speed-20240308.cfg --define cores=64 --tune base --output_format all --define
  drop_caches --nopower --runmode speed --tune base --size refspeed fpspeed --nopreenv --note-preenv
  --logfile $SPEC/tmp/CPU2017.014/templogs/preenv.fpspeed.014.0.log --lognum 014.0 --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      : 32
2 physical ids (chips)
64 processors (hardware threads)
physical id 0: core ids 0-31
physical id 1: core ids 0-31
physical id 0: apicids
0,2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46,48,50,52,54,56,58,60,62
physical id 1: apicids
128,130,132,134,136,138,140,142,144,146,148,150,152,154,156,158,160,162,164,166,168,170,172,174,176,178,1
80,182,184,186,188,190
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

```

(Continued on next page)



# SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECspeed®2017\_fp\_base = 315

H3C UniServer R4900 G6 (Intel Xeon Gold 6530)

SPECspeed®2017\_fp\_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)

```

Address sizes:                52 bits physical, 57 bits virtual
Byte Order:                   Little Endian
CPU(s):                        64
On-line CPU(s) list:         0-63
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:          1
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 aperfperf 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 bmi1 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_vpopcntdq 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_lld 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):                 2
NUMA node0 CPU(s):           0-31
NUMA node1 CPU(s):           32-63
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:
NAME ONE-SIZE ALL-SIZE WAYS TYPE          LEVEL   SETS PHY-LINE COHERENCY-SIZE

```

(Continued on next page)



# SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECspeed®2017\_fp\_base = 315

H3C UniServer R4900 G6 (Intel Xeon Gold 6530)

SPECspeed®2017\_fp\_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)

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: 2 nodes (0-1)
node 0 cpus: 0-31
node 0 size: 515166 MB
node 0 free: 514184 MB
node 1 cpus: 32-63
node 1 size: 516082 MB
node 1 free: 514852 MB
node distances:
node    0    1
 0:    10   21
 1:    21   10

```

### 9. /proc/meminfo

MemTotal: 1055998776 kB

### 10. who -r

run-level 3 Mar 18 09:02

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

```

Default Target Status
multi-user      running

```

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

```

### 13. 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

```

(Continued on next page)



# SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

H3C UniServer R4900 G6 (Intel Xeon Gold 6530)

SPECspeed®2017\_fp\_base = 315

SPECspeed®2017\_fp\_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)

```
resume=/dev/mapper/rhel-swap
rd.lvm.lv=rhel/root
rd.lvm.lv=rhel/swap
rhgb
quiet
```

### 14. cpupower frequency-info

```
analyzing CPU 39:
  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
```

### 15. tuned-adm active

```
Current active profile: throughput-performance
```

### 16. 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
```

### 17. /sys/kernel/mm/transparent\_hugepage

```
defrag          always defer defer+madvice [madvice] never
enabled         [always] madvice never
hpage_pmd_size  2097152
shmem_enabled   always within_size advise [never] deny force
```

### 18. /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
```

(Continued on next page)



# SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

H3C UniServer R4900 G6 (Intel Xeon Gold 6530)

SPECspeed®2017\_fp\_base = 315

SPECspeed®2017\_fp\_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)

### 19. 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)

### 20. Disk information

SPEC is set to: /home/speccpu  
Filesystem Type Size Used Avail Use% Mounted on  
/dev/mapper/rhel-home xfs 819G 98G 721G 12% /home

### 21. /sys/devices/virtual/dmi/id

Vendor: New H3C Technologies Co., Ltd.  
Product: H3C UniServer R4900 G6  
Product Family: Rack  
Serial: 210235A4HEH242000028

### 22. 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

### 23. 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 | 619.lbm\_s(base) 638.imagick\_s(base) 644.nab\_s(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.  
=====

=====  
C++, C, Fortran | 607.cactuBSSN\_s(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.  
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.  
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.  
=====

=====  
Fortran | 603.bwaves\_s(base) 649.fotonik3d\_s(base) 654.roms\_s(base)  
=====

(Continued on next page)





# SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

H3C UniServer R4900 G6 (Intel Xeon Gold 6530)

SPECspeed®2017\_fp\_base = 315

SPECspeed®2017\_fp\_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)

-----  
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.  
-----

=====  
Fortran, C | 621.wrf\_s(base) 627.cam4\_s(base) 628.pop2\_s(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.

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.  
-----

## Base Compiler Invocation

C benchmarks:

icx

Fortran benchmarks:

ifx

Benchmarks using both Fortran and C:

ifx icx

Benchmarks using Fortran, C, and C++:

icpx icx ifx

## Base Portability Flags

603.bwaves\_s: -DSPEC\_LP64

607.cactuBSSN\_s: -DSPEC\_LP64

619.lbm\_s: -DSPEC\_LP64

621.wrf\_s: -DSPEC\_LP64 -DSPEC\_CASE\_FLAG -convert big\_endian

627.cam4\_s: -DSPEC\_LP64 -DSPEC\_CASE\_FLAG

628.pop2\_s: -DSPEC\_LP64 -DSPEC\_CASE\_FLAG -convert big\_endian

-assume byterecl

638.imagick\_s: -DSPEC\_LP64

644.nab\_s: -DSPEC\_LP64

649.fotonik3d\_s: -DSPEC\_LP64

654.roms\_s: -DSPEC\_LP64



# SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

H3C UniServer R4900 G6 (Intel Xeon Gold 6530)

SPECspeed®2017\_fp\_base = 315

SPECspeed®2017\_fp\_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

C benchmarks:

```
-w -std=c11 -m64 -Wl,-z,muldefs -xsapphirerapids -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -fiopenmp
-DSPEC_OPENMP -Wno-implicit-int -mprefer-vector-width=512
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc
```

Fortran benchmarks:

```
-w -m64 -Wl,-z,muldefs -DSPEC_OPENMP -xsapphirerapids -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fiopenmp -nostandard-realloc-lhs
-align array32byte -auto -L/usr/local/jemalloc64-5.0.1/lib -ljemalloc
```

Benchmarks using both Fortran and C:

```
-w -m64 -std=c11 -Wl,-z,muldefs -xsapphirerapids -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -fiopenmp
-DSPEC_OPENMP -Wno-implicit-int -mprefer-vector-width=512
-nostandard-realloc-lhs -align array32byte -auto
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc
```

Benchmarks using Fortran, C, and C++:

```
-w -std=c++14 -m64 -std=c11 -Wl,-z,muldefs -xsapphirerapids -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fiopenmp -DSPEC_OPENMP -Wno-implicit-int
-mprefer-vector-width=512 -nostandard-realloc-lhs -align array32byte
-auto -L/usr/local/jemalloc64-5.0.1/lib -ljemalloc
```

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 SPECspeed 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 2025-03-18 09:04:37-0400.

Report generated on 2025-04-09 15:01:52 by CPU2017 PDF formatter v6716.

Originally published on 2025-04-09.