



# SPEC CPU®2017 Floating Point Speed Result

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## New H3C Technologies Co., Ltd.

H3C UniServer R4900 G6 (Intel Xeon Gold 5520+)

**SPECSpeed®2017\_fp\_base = 319**

**SPECSpeed®2017\_fp\_peak = 319**

CPU2017 License: 9066

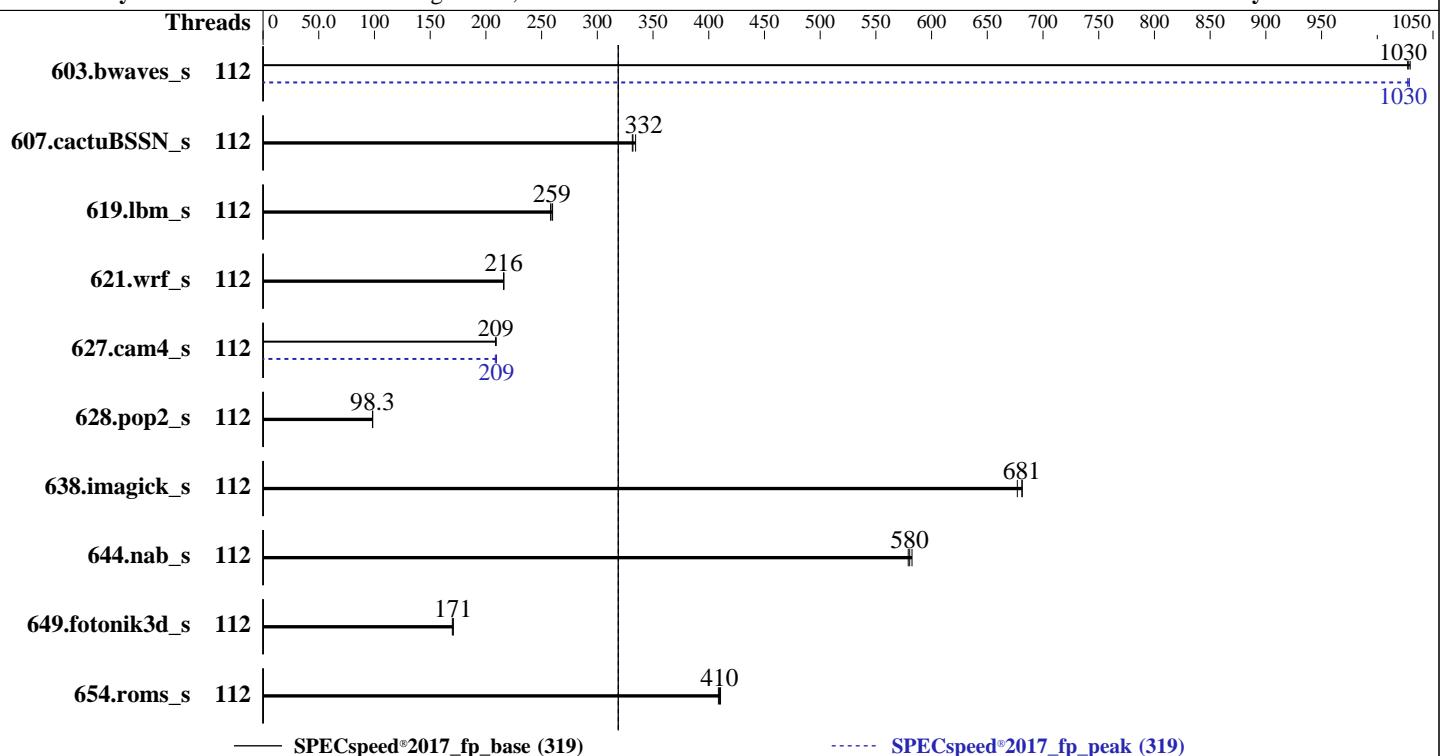
Test Sponsor: New H3C Technologies Co., Ltd.

Tested by: New H3C Technologies Co., Ltd.

**Test Date:** Jun-2025

**Hardware Availability:** Oct-2023

**Software Availability:** Mar-2024



Hardware	
CPU Name:	Intel Xeon Gold 5520+
Max MHz:	4000
Nominal:	2200
Enabled:	56 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:	52.5 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 14 TB NVME SSD
Other:	CPU Cooling: Air

Software	
OS:	SUSE Linux Enterprise Server 15 SP5 5.14.21-150500.53-default
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:	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.



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## Results Table

Benchmark	Base							Peak						
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
603.bwaves_s	112	57.3	1030	57.4	1030	<b>57.4</b>	<b>1030</b>	112	<b>57.4</b>	<b>1030</b>	57.4	1030	57.4	1030
607.cactuBSSN_s	112	50.3	331	<b>50.2</b>	<b>332</b>	49.9	334	112	50.3	331	<b>50.2</b>	<b>332</b>	49.9	334
619.lbm_s	112	20.3	258	20.2	260	<b>20.2</b>	<b>259</b>	112	20.3	258	20.2	260	<b>20.2</b>	<b>259</b>
621.wrf_s	112	61.3	216	61.2	216	<b>61.3</b>	<b>216</b>	112	61.3	216	61.2	216	<b>61.3</b>	<b>216</b>
627.cam4_s	112	42.4	209	42.5	209	<b>42.4</b>	<b>209</b>	112	<b>42.3</b>	<b>209</b>	42.3	209	42.5	208
628.pop2_s	112	121	98.2	121	98.4	<b>121</b>	<b>98.3</b>	112	121	98.2	121	98.4	<b>121</b>	<b>98.3</b>
638.imagick_s	112	<b>21.2</b>	<b>681</b>	21.2	681	21.3	677	112	<b>21.2</b>	<b>681</b>	21.2	681	21.3	677
644.nab_s	112	30.2	579	30.0	582	<b>30.1</b>	<b>580</b>	112	30.2	579	30.0	582	<b>30.1</b>	<b>580</b>
649.fotonik3d_s	112	<b>53.4</b>	<b>171</b>	53.7	170	53.4	171	112	<b>53.4</b>	<b>171</b>	53.7	170	53.4	171
654.roms_s	112	38.5	409	38.3	411	<b>38.4</b>	<b>410</b>	112	38.5	409	38.3	411	<b>38.4</b>	<b>410</b>

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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:

Intel VT for Directed I/O = Disabled

CPU C6 report = Enabled

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## Platform Notes (Continued)

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 Fri Jun 13 01:19:21 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 249 (249.16+suse.171.gdad0071f15)
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. 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 5.14.21-150500.53-default #1 SMP PREEMPT\_DYNAMIC Wed May 10 07:56:26 UTC 2023 (b630043/lp)  
x86\_64 x86\_64 x86\_64 GNU/Linux

-----

2. w  
01:19:21 up 27 min, 1 user, load average: 10.01, 56.27, 53.45  
USER TTY FROM LOGIN@ IDLE JCPU PCPU WHAT  
root ttym1 - 00:54 9.00s 1.17s 0.00s -bash

-----

3. Username  
From environment variable \$USER: root

-----

4. ulimit -a  
core file size (blocks, -c) unlimited  
data seg size (kbytes, -d) unlimited  
scheduling priority (-e) 0  
file size (blocks, -f) unlimited  
pending signals (-i) 4124935

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## Platform Notes (Continued)

```
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) 4124935
virtual memory           (kbytes, -v) unlimited
file locks              (-x) unlimited
```

---

### 5. sysinfo process ancestry

```
/usr/lib/systemd/systemd --switched-root --system --deserialize 30
login -- root
-bash
-bash
runcpu --nobuild --action validate --define default-platform-flags -c
  ic2024.1-lin-sapphirerapids-speed-20240308.cfg --define cores=112 --tune base,peak -o all --define
  drop_caches fpsspeed
runcpu --nobuild --action validate --define default-platform-flags --configfile
  ic2024.1-lin-sapphirerapids-speed-20240308.cfg --define cores=112 --tune base,peak --output_format all
  --define drop_caches --nopower --runmode speed --tune base:peak --size refspeed fpsspeed --nopreenv
  --note-preenv --logfile $SPEC/tmp/CPU2017.075/templogs/preenv.fpsspeed.075.0.log --lognum 075.0
  --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/speccpu
```

---

### 6. /proc/cpuinfo

```
model name      : INTEL(R) XEON(R) GOLD 5520+
vendor_id       : GenuineIntel
cpu family     : 6
model          : 207
stepping        : 2
microcode       : 0x21000291
bugs            : spectre_v1 spectre_v2 spec_store_bypass swapgs eibrp_pbrsb
cpu cores       : 28
siblings        : 56
2 physical ids (chips)
112 processors (hardware threads)
physical id 0: core ids 0-27
physical id 1: core ids 0-27
physical id 0: apicids 0-55
physical id 1: apicids 128-183
```

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
Byte Order:             Little Endian
CPU(s):                 112
On-line CPU(s) list:   0-111
Vendor ID:              GenuineIntel
```

(Continued on next page)



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## Platform Notes (Continued)

Model name:	INTEL(R) XEON(R) GOLD 5520+
CPU family:	6
Model:	207
Thread(s) per core:	2
Core(s) per socket:	28
Socket(s):	2
Stepping:	2
CPU max MHz:	4000.0000
CPU min MHz:	800.0000
BogoMIPS:	4400.00
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 aperf fmpf perf tsc_known_freq pni pclmulqdq dtes64 monitor ds_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtrp pdcm pcid dca sse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_timer aes xsave avx f16c rdrandlahf_lm 3dnowprefetch cpuid_fault epb cat_13 cat_12 cdp_13 invpcid_single cdp_12 ssbd mba ibrs ibpb stibp ibrs_enhanced tpr_shadow vnmi flexpriority ept vpid ept_ad fsgsbase tsc_adjust bmil hle avx2 smep bmi2 erms invpcid rtm cqm rdt_a avx512f avx512dq rdseed adx smap avx512fma clflushopt clwb intel_pt avx512cd sha_ni avx512bw avx512vl xsaveopt xsavec xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbm_total cqm_mbm_local avx_vnni avx512_bf16 wbnoinvd dtherm ida arat pln pts hwp hwp_act_window hwp_epp hwp_pkg_req avx512vbm1 umip pku ospke waitpkg avx512_vbm1 gfni vaes vpclmulqdq avx512_vnni avx512_bitalg tme avx512_vpocntdq la57 rdpid bus_lock_detect cldemote movdiri movdir64b enqcmd fsrm md_clear serialize tsxlptrk pconfig arch_lbr avx512_fp16 amx_tile flush_llid arch_capabilities
Virtualization:	VT-x
L1d cache:	2.6 MiB (56 instances)
L1i cache:	1.8 MiB (56 instances)
L2 cache:	112 MiB (56 instances)
L3 cache:	105 MiB (2 instances)
NUMA node(s):	2
NUMA node0 CPU(s):	0-27,56-83
NUMA node1 CPU(s):	28-55,84-111
Vulnerability Itlb multihit:	Not affected
Vulnerability Llft:	Not affected
Vulnerability Mds:	Not affected
Vulnerability Meltdown:	Not affected
Vulnerability Mmio stale data:	Not affected
Vulnerability Retbleed:	Not affected
Vulnerability Spec store bypass:	Mitigation; Speculative Store Bypass disabled via prctl and seccomp
Vulnerability Spectre v1:	Mitigation; usercopy/swapgs barriers and __user pointer sanitization
Vulnerability Spectre v2:	Mitigation; Enhanced IBRS, IBPB conditional, RSB filling, PBRSB-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
L1d	48K	2.6M	12	Data	1	64	1	64
L1i	32K	1.8M	8	Instruction	1	64	1	64
L2	2M	112M	16	Unified	2	2048	1	64
L3	52.5M	105M	15	Unified	3	57344	1	64

-----  
8. numactl --hardware

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

available: 2 nodes (0-1)

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## Platform Notes (Continued)

```
node 0 cpus: 0-27,56-83
node 0 size: 515609 MB
node 0 free: 511747 MB
node 1 cpus: 28-55,84-111
node 1 size: 515655 MB
node 1 free: 514236 MB
node distances:
node    0   1
 0:   10   21
 1:   21   10
```

```
-----  
9. /proc/meminfo
MemTotal:      1056015660 kB
```

```
-----  
10. who -r
run-level 3 Jun 13 00:53
```

```
-----  
11. Systemd service manager version: systemd 249 (249.16+suse.171.gdad0071f15)
Default Target  Status
multi-user      degraded
```

```
-----  
12. Failed units, from systemctl list-units --state=failed
UNIT          LOAD ACTIVE SUB   DESCRIPTION
* firewalld.service loaded failed firewalld - dynamic firewall daemon
```

```
-----  
13. Services, from systemctl list-unit-files
STATE          UNIT FILES
enabled        ModemManager YaST2-Firstboot YaST2-Second-Stage apparmor appstream-sync-cache auditd
                bluetooth cron display-manager firewalld getty@ irqbalance issue-generator kbdsettings
                kdump kdump-early klog lvm2-monitor nscd nvmefc-boot-connections postfix purge-kernels
                rollback rsyslog smartd sshd systemd-pstore wicked wickedd-auto4 wickedd-dhcp4
                wickedd-dhcp6 wickedd-nanny wpa_supplicant
enabled-runtime  systemd-remount-fs
disabled       NetworkManager NetworkManager-dispatcher NetworkManager-wait-online accounts-daemon autofs
                autostart-initscripts blk-availability bluetooth-mesh boot-sysctl ca-certificates
                chrony-wait chronyd console-getty cups cups-browsed debug-shell dmraid-activation dnsmasq
                ebttables exchange-bmc-os-info fancontrol gpm grub2-once haveged haveged-switch-root ipmi
                ipmievtd irqbindall issue-add-ssh-keys kexec-load ksm kvm_stat lm_sensors lunmask
                man-db-create multipathd nfs nfs-blkmap nmb nvme-fc-autoconnect openvpn@ ostree-remount
                rpcbind rpmconfigcheck rsyncd rtkit-daemon serial-getty@ set_kthread_prio
                smartd_generate_opts smb snmpd snmptrapd speech-dispatcherd svnserve sysstat
                systemd-boot-check-no-failures systemd-network-generator systemd-sysext
                systemd-time-wait-sync systemd-timesyncd tuned udisks2 update-system-flatpaks upower
                vncserver@ wpa_supplicant@
indirect       pcscd saned@ wickedd
```

```
-----  
14. Linux kernel boot-time arguments, from /proc/cmdline
BOOT_IMAGE=/boot/vmlinuz-5.14.21-150500.53-default
root=UUID=daf904c3-fbf5-4de2-becb-d99fd84fd87c
splash=silent
resume=/dev/disk/by-uuid/d9c6f3d0-7f4b-4714-80e1-7b72a8a2b8d9
mitigations=auto
quiet
security=apparmor
```

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## Platform Notes (Continued)

```
crashkernel=405M,high  
crashkernel=72M,low
```

```
-----  
15. cpupower frequency-info  
analyzing CPU 0:  
    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. sysctl  
kernel.numa_balancing          0  
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                 20  
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                  60  
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+madvise [madvise] never  
enabled          [always] madvise 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
```

```
-----  
19. OS release  
From /etc/*-release /etc/*-version  
os-release SUSE Linux Enterprise Server 15 SP5
```

```
-----  
20. Disk information  
SPEC is set to: /home/speccpu
```

(Continued on next page)



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## Platform Notes (Continued)

```
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/nvme0n1p3  xfs   14T   98G  14T   1% /home
```

```
21. /sys/devices/virtual/dmi/id
Vendor:          New H3C Technologies Co., Ltd.
Product:         H3C UniServer R4900 G6
Product Family: Rack
Serial:          210235A4HEH242000015
```

```
22. dmidecode
Additional information from dmidecode 3.4 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 HMCG94AGBRA181N 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

```
=====| 619.lbm_s(base, peak) 638.imagick_s(base, peak) 644.nab_s(base, peak)
```

```
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.
```

```
=====| 607.cactusBSSN_s(base, peak)
```

```
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.
```

```
=====| 603.bwaves_s(base, peak) 649.fotonik3d_s(base, peak) 654.roms_s(base, peak)
```

```
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.
```

```
=====| 621.wrf_s(base, peak) 627.cam4_s(base, peak) 628.pop2_s(base, peak)
```

```
Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308
```

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## Compiler Version Notes (Continued)

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Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308  
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## 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

## Base Optimization Flags

C benchmarks:

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

(Continued on next page)



# SPEC CPU®2017 Floating Point Speed Result

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## New H3C Technologies Co., Ltd.

H3C UniServer R4900 G6 (Intel Xeon Gold 5520+)

SPECSpeed®2017\_fp\_base = 319

SPECSpeed®2017\_fp\_peak = 319

CPU2017 License: 9066

Test Date: Jun-2025

Test Sponsor: New H3C Technologies Co., Ltd.

Hardware Availability: Oct-2023

Tested by: New H3C Technologies Co., Ltd.

Software Availability: Mar-2024

## Base Optimization Flags (Continued)

Fortran benchmarks:

```
-w -m64 -Wl,-z,muldefs -DSPEC_OPENMP -xsapphirerapids -Ofast  
-ffast-math -futo -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  
-futo -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 -futo -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
```

## Peak 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

## Peak Portability Flags

Same as Base Portability Flags



# SPEC CPU®2017 Floating Point Speed Result

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## New H3C Technologies Co., Ltd.

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SPECSpeed®2017\_fp\_peak = 319

CPU2017 License: 9066

Test Date: Jun-2025

Test Sponsor: New H3C Technologies Co., Ltd.

Hardware Availability: Oct-2023

Tested by: New H3C Technologies Co., Ltd.

Software Availability: Mar-2024

## Peak Optimization Flags

C benchmarks:

619.lbm\_s: basepeak = yes

638.imagick\_s: basepeak = yes

644.nab\_s: basepeak = yes

Fortran benchmarks:

```
603.bwaves_s: -w -m64 -Wl,-z,muldefs -DSPEC_OPENMP -xsapphirerapids
-Ofast -ffast-math -fsto -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
```

649.fotonik3d\_s: basepeak = yes

654.roms\_s: basepeak = yes

Benchmarks using both Fortran and C:

621.wrf\_s: basepeak = yes

```
627.cam4_s: -w -m64 -std=c11 -Wl,-z,muldefs -xsapphirerapids -Ofast
-ffast-math -fsto -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
```

628.pop2\_s: basepeak = yes

Benchmarks using Fortran, C, and C++:

607.cactubSSN\_s: basepeak = yes

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)



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