



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECrate®2017_fp_base = 1250

H3C UniServer R3900 G7 (Intel Xeon 6979P)

SPECrate®2017_fp_peak = Not Run

CPU2017 License: 9066

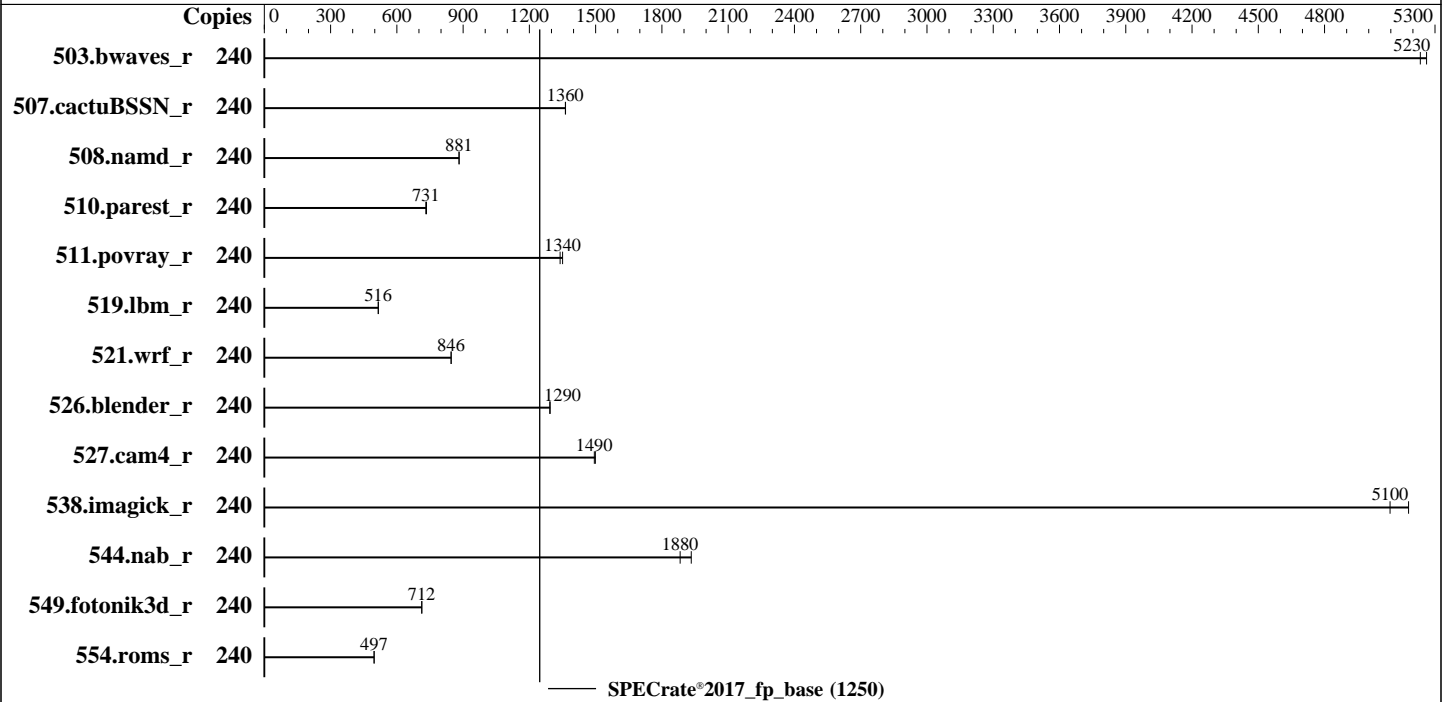
Test Date: Oct-2024

Test Sponsor: New H3C Technologies Co., Ltd.

Hardware Availability: Oct-2024

Tested by: New H3C Technologies Co., Ltd.

Software Availability: Apr-2024



Hardware

CPU Name: Intel Xeon 6979P
 Max MHz: 3900
 Nominal: 2100
 Enabled: 120 cores, 1 chip, 2 threads/core
 Orderable: 1 chip
 Cache L1: 64 KB I + 48 KB D on chip per core
 L2: 2 MB I+D on chip per core
 L3: 504 MB I+D on chip per chip
 Other: None
 Memory: 768 GB (12 x 64 GB 2Rx4 PC5-11200B-R, running at 8800)
 Storage: 1 x 3.84 TB NVME 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 7.10.01P91 released Sep-2024 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 Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECrate®2017_fp_base = 1250

H3C UniServer R3900 G7 (Intel Xeon 6979P)

SPECrate®2017_fp_peak = Not Run

CPU2017 License: 9066

Test Sponsor: New H3C Technologies Co., Ltd.

Tested by: New H3C Technologies Co., Ltd.

Test Date: Oct-2024

Hardware Availability: Oct-2024

Software Availability: Apr-2024

Results Table

Benchmark	Base						Peak							
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
503.bwaves_r	240	457	5260	460	5230									
507.cactuBSSN_r	240	223	1360	223	1360									
508.namd_r	240	259	881	259	882									
510.parest_r	240	855	734	859	731									
511.povray_r	240	418	1340	415	1350									
519.lbm_r	240	491	516	490	516									
521.wrf_r	240	636	846	636	846									
526.blender_r	240	283	1290	282	1290									
527.cam4_r	240	281	1490	280	1500									
538.imagick_r	240	115	5180	117	5100									
544.nab_r	240	215	1880	209	1930									
549.fotonik3d_r	240	1311	713	1313	712									
554.roms_r	240	767	497	767	497									

SPECrate®2017_fp_base = 1250

SPECrate®2017_fp_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/je5.0.1-64"
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.

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECrate®2017_fp_base = 1250

H3C UniServer R3900 G7 (Intel Xeon 6979P)

SPECrate®2017_fp_peak = Not Run

CPU2017 License: 9066

Test Date: Oct-2024

Test Sponsor: New H3C Technologies Co., Ltd.

Hardware Availability: Oct-2024

Tested by: New H3C Technologies Co., Ltd.

Software Availability: Apr-2024

General Notes (Continued)

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:

LLC dead line alloc = Disabled

Power Performance Tuning = BIOS Controls EPB

ENERGY_PERF_BIAS_CFG mode = Performance

Sysinfo program /home/speccpu/bin/sysinfo

Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197

running on localhost.localdomain Mon Oct 7 17:14:32 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.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
17:14:32 up 2:15, 3 users, load average: 0.10, 49.99, 143.55
USER TTY LOGIN@ IDLE JCPU PCPU WHAT
root tty1 15:00 2:14m 0.00s 0.00s -bash

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECrate®2017_fp_base = 1250

H3C UniServer R3900 G7 (Intel Xeon 6979P)

SPECrate®2017_fp_peak = Not Run

CPU2017 License: 9066

Test Sponsor: New H3C Technologies Co., Ltd.

Tested by: New H3C Technologies Co., Ltd.

Test Date: Oct-2024

Hardware Availability: Oct-2024

Software Availability: Apr-2024

Platform Notes (Continued)

```

root pts/0 15:00 22.00s 0.97s 0.00s sh intrate.sh
root pts/1 15:38 41:34 0.05s 0.05s -bash

```

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
scheduling priority (-e) 0
file size (blocks, -f) unlimited
pending signals (-i) 3092092
max locked memory (kbytes, -l) 8192
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) 3092092
virtual memory (kbytes, -v) unlimited
file locks (-x) unlimited

```

5. sysinfo process ancestry

```

/usr/lib/systemd/systemd rhgb --switched-root --system --deserialize 31
sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups
sshd: root [priv]
sshd: root@pts/0
-bash
sh intrate.sh
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=240 -c
ic2024.1-lin-sierraforest-rate-20240308.cfg --define smt-on --define peakfpcopies=120 --define
physicalfirst --define invoke_with_interleave --define drop_caches --reportable --tune base -o all fprate
-n 2
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=240 --configfile
ic2024.1-lin-sierraforest-rate-20240308.cfg --define smt-on --define peakfpcopies=120 --define
physicalfirst --define invoke_with_interleave --define drop_caches --reportable --tune base
--output_format all --iterations 2 --nopower --runmode rate --tune base --size refrate fprate --nopreenv
--note-preenv --logfile $SPEC/tmp/CPU2017.027/templogs/preenv.fprate.027.0.log --lognum 027.0
--from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/speccpu

```

6. /proc/cpuinfo

```

model name      : Intel(R) Xeon(R) 6979P
vendor_id      : GenuineIntel
cpu family     : 6
model          : 173
stepping       : 1
microcode      : 0x810002e0
bugs           : spectre_v1 spectre_v2 spec_store_bypass swapgs
cpu cores      : 120
siblings       : 240
1 physical ids (chips)

```

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECrate®2017_fp_base = 1250

H3C UniServer R3900 G7 (Intel Xeon 6979P)

SPECrate®2017_fp_peak = Not Run

CPU2017 License: 9066

Test Date: Oct-2024

Test Sponsor: New H3C Technologies Co., Ltd.

Hardware Availability: Oct-2024

Tested by: New H3C Technologies Co., Ltd.

Software Availability: Apr-2024

Platform Notes (Continued)

240 processors (hardware threads)
 physical id 0: core ids 0-39,64-103,128-167
 physical id 0: apicids 0-79,128-207,256-335
 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:         46 bits physical, 57 bits virtual
Byte Order:            Little Endian
CPU(s):                240
On-line CPU(s) list:  0-239
Vendor ID:             GenuineIntel
BIOS Vendor ID:       Intel(R) Corporation
Model name:            Intel(R) Xeon(R) 6979P
BIOS Model name:      Intel(R) Xeon(R) 6979P
CPU family:           6
Model:                 173
Thread(s) per core:   2
Core(s) per socket:   120
Socket(s):             1
Stepping:              1
CPU(s) scaling MHz:   82%
CPU max MHz:           3900.0000
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 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 cat_l2
                      cdp_l3 cdp_l2 ssbd mba ibrs ibpb stibp ibrs_enhanced tpr_shadow
                      flexpriority ept vpid ept_ad 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
                      xsaves 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 vnni 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

Virtualization:        VT-x
L1d cache:             5.6 MiB (120 instances)
L1i cache:             7.5 MiB (120 instances)
L2 cache:              240 MiB (120 instances)
L3 cache:              504 MiB (1 instance)
NUMA node(s):         3
NUMA node0 CPU(s):    0-39,120-159
NUMA node1 CPU(s):    40-79,160-199
NUMA node2 CPU(s):    80-119,200-239
Vulnerability Gather data sampling: Not affected
Vulnerability Itlb multihit:      Not affected
Vulnerability L1tf:              Not affected

```

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECrate®2017_fp_base = 1250

H3C UniServer R3900 G7 (Intel Xeon 6979P)

SPECrate®2017_fp_peak = Not Run

CPU2017 License: 9066

Test Date: Oct-2024

Test Sponsor: New H3C Technologies Co., Ltd.

Hardware Availability: Oct-2024

Tested by: New H3C Technologies Co., Ltd.

Software Availability: Apr-2024

Platform Notes (Continued)

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/swaps barriers and __user pointer sanitization
Vulnerability Spectre v2:	Mitigation; Enhanced / Automatic IBRS, IBPB conditional, RSB filling, PBRSE-eIBRS Not affected
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	5.6M	12	Data	1	64	1	64
L1i	64K	7.5M	16	Instruction	1	64	1	64
L2	2M	240M	16	Unified	2	2048	1	64
L3	504M	504M	16	Unified	3	516096	1	64

8. numactl --hardware

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

```

available: 3 nodes (0-2)
node 0 cpus: 0-39,120-159
node 0 size: 257087 MB
node 0 free: 238526 MB
node 1 cpus: 40-79,160-199
node 1 size: 257986 MB
node 1 free: 241956 MB
node 2 cpus: 80-119,200-239
node 2 size: 258012 MB
node 2 free: 241223 MB
node distances:
node  0  1  2
 0:  10  12  12
 1:  12  10  12
 2:  12  12  10

```

9. /proc/meminfo

MemTotal: 791640580 kB

10. who -r

run-level 3 Oct 7 14:59

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 ModemManager NetworkManager NetworkManager-dispatcher NetworkManager-wait-online
accounts-daemon atd auditd avahi-daemon bluetooth chronyd crond cups dbus-broker firewalld
gdm 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 ostree-remount power-profiles-daemon
gemu-guest-agent rhsmcertd rpcbind rsyslog rtkit-daemon selinux-autorelabel-mark smartd

```

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECrate®2017_fp_base = 1250

H3C UniServer R3900 G7 (Intel Xeon 6979P)

SPECrate®2017_fp_peak = Not Run

CPU2017 License: 9066

Test Date: Oct-2024

Test Sponsor: New H3C Technologies Co., Ltd.

Hardware Availability: Oct-2024

Tested by: New H3C Technologies Co., Ltd.

Software Availability: Apr-2024

Platform Notes (Continued)

```

enabled-runtime  sshd sssd switcheroo-control sysstat systemd-boot-update systemd-network-generator tuned
disabled         udisks2 upower vgauthd vmtoolsd
                 systemd-remount-fs
                 arp-ethers blk-availability brltty canberra-system-bootup canberra-system-shutdown
                 canberra-system-shutdown-reboot chrony-wait chronyd-restricted console-getty cpupower
                 cups-browsed dbus-daemon debug-shell dnf-system-upgrade dnsmasq fancontrol gssproxy
                 iprdump iprinit iprupdate ipsec iscsi-init iscsid iscsiui kpatch kvm_stat ledmon
                 man-db-restart-cache-update netavark-dhcp-proxy netavark-firewalld-reload nfs-blkmap
                 nfs-server nftables nvme-autoconnect ostree-readonly-sysroot-migration
                 ostree-state-overlay@ 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@ speech-dispatcherd sshd-keygen@
                 systemd-boot-check-no-failures systemd-pstore systemd-sysexth thermald wpa_supplicant
indirect         iscsi spice-vdagentd 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
resume=/dev/mapper/rhel-swap
rd.lvm.lv=rhel/root
rd.lvm.lv=rhel/swap
rhgb
quiet

```

```

-----
14. cpupower frequency-info
analyzing CPU 8:
  current policy: frequency should be within 800 MHz and 3.90 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

```

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECrate®2017_fp_base = 1250

H3C UniServer R3900 G7 (Intel Xeon 6979P)

SPECrate®2017_fp_peak = Not Run

CPU2017 License: 9066

Test Sponsor: New H3C Technologies Co., Ltd.

Tested by: New H3C Technologies Co., Ltd.

Test Date: Oct-2024

Hardware Availability: Oct-2024

Software Availability: Apr-2024

Platform Notes (Continued)

```

vm.watermark_boost_factor      15000
vm.watermark_scale_factor      10
vm.zone_reclaim_mode           0

```

```

-----
17. /sys/kernel/mm/transparent_hugepage
defrag          always 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      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      3.5T      141G  3.3T   5% /home

```

```

-----
21. /sys/devices/virtual/dmi/id
Vendor:          New H3C Technologies Co., Ltd.
Product:         H3C UniServer R3900 G7
Serial:          210235A526H249000006

```

```

-----
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:
  10x Samsung M327R8GA0PB0-CLVEM 64 GB 2 rank 11200, configured at 8800
  2x Samsung M327R8GA0PB0-CLVFM 64 GB 2 rank 11200, configured at 8800

```

```

-----
23. BIOS
(This section combines info from /sys/devices and dmidecode.)
BIOS Vendor:      American Megatrends International, LLC.
BIOS Version:     7.10.01P91
BIOS Date:        09/25/2024
BIOS Revision:    5.35
Firmware Revision: 1.16

```




SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECrate®2017_fp_base = 1250

H3C UniServer R3900 G7 (Intel Xeon 6979P)

SPECrate®2017_fp_peak = Not Run

CPU2017 License: 9066

Test Sponsor: New H3C Technologies Co., Ltd.

Tested by: New H3C Technologies Co., Ltd.

Test Date: Oct-2024

Hardware Availability: Oct-2024

Software Availability: Apr-2024

Compiler Version Notes

=====
C | 519.lbm_r(base) 538.imagick_r(base) 544.nab_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.
=====

=====
C++ | 508.namd_r(base) 510.parest_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.
=====

=====
C++, C | 511.povray_r(base) 526.blender_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.
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 | 507.cactuBSSN_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.
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 | 503.bwaves_r(base) 549.fotonik3d_r(base) 554.roms_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.
=====

=====
Fortran, C | 521.wrf_r(base) 527.cam4_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.
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

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECrate®2017_fp_base = 1250

H3C UniServer R3900 G7 (Intel Xeon 6979P)

SPECrate®2017_fp_peak = Not Run

CPU2017 License: 9066

Test Date: Oct-2024

Test Sponsor: New H3C Technologies Co., Ltd.

Hardware Availability: Oct-2024

Tested by: New H3C Technologies Co., Ltd.

Software Availability: Apr-2024

Base Compiler Invocation (Continued)

C++ benchmarks:

icpx

Fortran benchmarks:

ifx

Benchmarks using both Fortran and C:

ifx icx

Benchmarks using both C and C++:

icpx icx

Benchmarks using Fortran, C, and C++:

icpx icx ifx

Base Portability Flags

503.bwaves_r: -DSPEC_LP64
 507.cactuBSSN_r: -DSPEC_LP64
 508.namd_r: -DSPEC_LP64
 510.parest_r: -DSPEC_LP64
 511.povray_r: -DSPEC_LP64
 519.lbm_r: -DSPEC_LP64
 521.wrf_r: -DSPEC_LP64 -DSPEC_CASE_FLAG -convert big_endian
 526.blender_r: -DSPEC_LP64 -DSPEC_LINUX -funsigned-char
 527.cam4_r: -DSPEC_LP64 -DSPEC_CASE_FLAG
 538.imagick_r: -DSPEC_LP64
 544.nab_r: -DSPEC_LP64
 549.fotonik3d_r: -DSPEC_LP64
 554.roms_r: -DSPEC_LP64

Base Optimization Flags

C benchmarks:

-w -std=c11 -m64 -Wl,-z,muldefs -xsierraforest -Ofast -ffast-math
 -flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
 -Wno-implicit-int -ljemalloc -L/usr/local/jemalloc64-5.0.1/lib

C++ benchmarks:

-w -std=c++14 -m64 -Wl,-z,muldefs -xsierraforest -Ofast -ffast-math
 -flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -ljemalloc
 -L/usr/local/jemalloc64-5.0.1/lib

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

SPECrate®2017_fp_base = 1250

H3C UniServer R3900 G7 (Intel Xeon 6979P)

SPECrate®2017_fp_peak = Not Run

CPU2017 License: 9066

Test Sponsor: New H3C Technologies Co., Ltd.

Tested by: New H3C Technologies Co., Ltd.

Test Date: Oct-2024

Hardware Availability: Oct-2024

Software Availability: Apr-2024

Base Optimization Flags (Continued)

Fortran benchmarks:

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

Benchmarks using both Fortran and C:

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

Benchmarks using both C and C++:

```
-w -std=c++14 -m64 -std=c11 -Wl,-z,muldefs -xsierraforest -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -Wno-implicit-int -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib
```

Benchmarks using Fortran, C, and C++:

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

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-V1.0-SPR-RevE.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-V1.0-SPR-RevE.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.

Tested with SPEC CPU®2017 v1.1.9 on 2024-10-07 05:14:32-0400.

Report generated on 2024-10-23 13:33:26 by CPU2017 PDF formatter v6716.

Originally published on 2024-10-23.