SPEC CPU®2017 Floating Point Rate Result
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New H3C Technologies Co., Ltd.

H3C UniServer R6900 G6 (Intel Xeon Gold 6448H)

$SPECrate®2017\_fp\_base = \quad 1070$

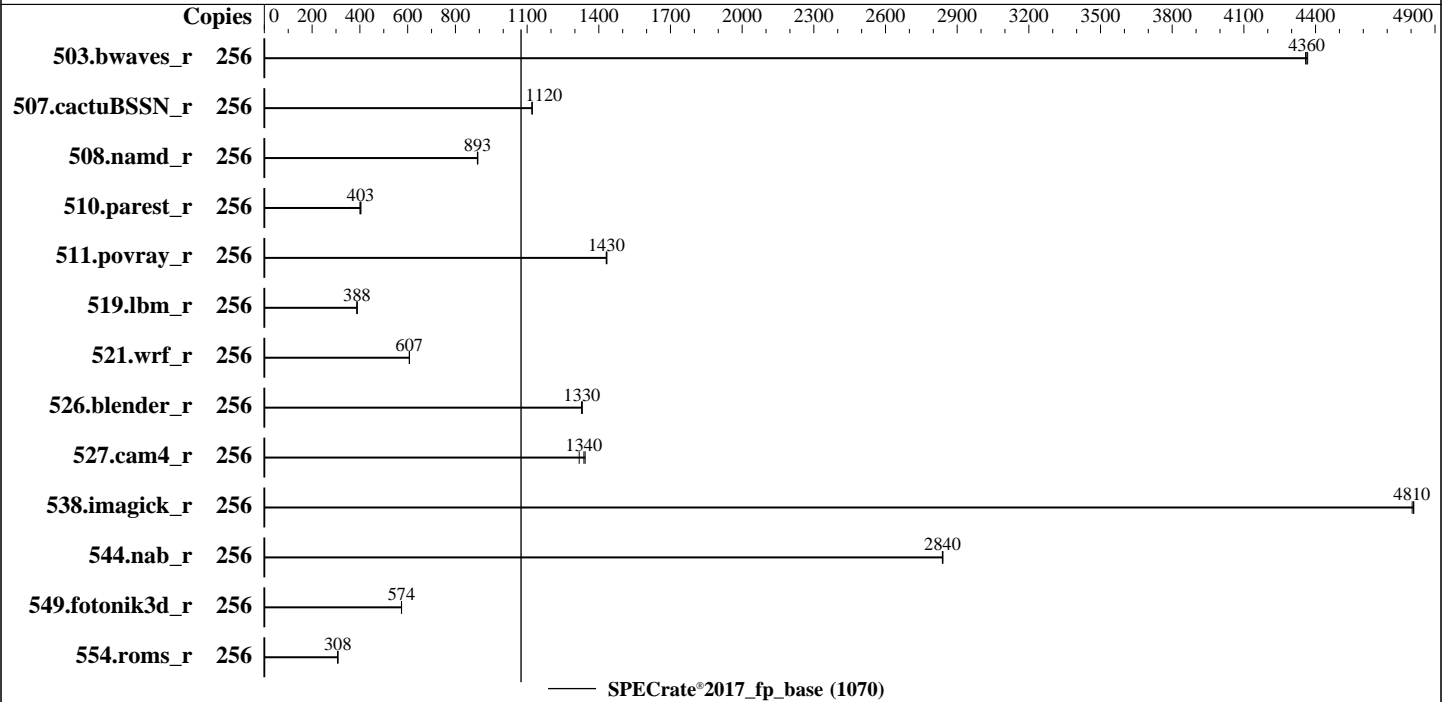$SPECrate®2017\_fp\_peak = Not\ Run$

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:** Mar-2024

Benchmark	Copies	Result
503.bwaves_r	256	4360
507.cactuBSSN_r	256	1120
508.namd_r	256	893
510.parest_r	256	403
511.povray_r	256	1430
519.lbm_r	256	388
521.wrf_r	256	607
526.blender_r	256	1330
527.cam4_r	256	1340
538.imagick_r	256	4810
544.nab_r	256	2840
549.fotonik3d_r	256	574
554.roms_r	256	308

SPECrate®2017_fp_base (1070)

Hardware
CPU Name: Intel Xeon Gold 6448H
 Max MHz: 4100
 Nominal: 2400
Enabled: 128 cores, 4 chips, 2 threads/core
Orderable: 1,2,4 chips
Cache L1: 32 KB I + 48 KB D on chip per core
 L2: 2 MB I+D on chip per core
 L3: 60 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 1.92 TB PCIE 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: No
Firmware: Version 6.10.43P65 released Jan-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.

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Results Table

Benchmark	Base						Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
503.bwaves_r	256	588	4370	**588**	**4360**	589	4360							
507.cactuBSSN_r	256	289	1120	**289**	**1120**	289	1120							
508.namd_r	256	273	892	**272**	**893**	272	894							
510.parest_r	256	1657	404	**1662**	**403**	1673	400							
511.povray_r	256	418	1430	**417**	**1430**	417	1430							
519.lbm_r	256	695	388	696	388	**695**	**388**							
521.wrf_r	256	**944**	**607**	944	607	944	607							
526.blender_r	256	**293**	**1330**	293	1330	294	1330							
527.cam4_r	256	**335**	**1340**	333	1340	340	1320							
538.imagick_r	256	**132**	**4810**	132	4810	133	4800							
544.nab_r	256	152	2840	**152**	**2840**	152	2840							
549.fotonik3d_r	256	**1738**	**574**	1738	574	1737	574							
554.roms_r	256	**1322**	**308**	1325	307	1322	308							

SPECrate®2017_fp_base =   **1070**

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)

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CPU2017 License: 9066
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Test Date: Mar-2025
Hardware Availability: Oct-2023
Software Availability: Mar-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

 Submitted_by: Zhoushinan <zhou.shinan@h3c.com>
 Submitted: Tue Mar 25 00:08:47 EDT 2025
 Submission: cpu2017-20250325-47246.sub
```

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 Thu Mar 20 00:15:03 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. 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 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
```

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Platform Notes (Continued)

```
    ----------------------------------------------------------
    2. w
       00:15:03 up 5 min,  1 user,  load average: 0.01, 0.13, 0.08
       USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU WHAT
       root     tty1     -                00:11    7.00s  2.73s  0.18s sh intrate.sh

    ----------------------------------------------------------
    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) 4126064
      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) 4126064
      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
     sh intrate.sh
     runcpu --nobuild --action validate --define default-platform-flags --define numcopies=256 -c
       ic2024.1-lin-sapphirerapids-rate-20240308.cfg --define smt-on --define cores=128 --define physicalfirst
       --define invoke_with_interleave --define drop_caches --tune base -o all fprate
     runcpu --nobuild --action validate --define default-platform-flags --define numcopies=256 --configfile
       ic2024.1-lin-sapphirerapids-rate-20240308.cfg --define smt-on --define cores=128 --define physicalfirst
       --define invoke_with_interleave --define drop_caches --tune base --output_format all --nopower --runmode
       rate --tune base --size refrate fprate --nopreenv --note-preenv --logfile
       $SPEC/tmp/CPU2017.013/templogs/preenv.fprate.013.0.log --lognum 013.0 --from_runcpu 2
     specperl $SPEC/bin/sysinfo
     $SPEC = /home/speccpu

    ----------------------------------------------------------
    6. /proc/cpuinfo
       model name      : Intel(R) Xeon(R) Gold 6448H
       vendor_id       : GenuineIntel
       cpu family      : 6
       model           : 143
       stepping        : 8
       microcode       : 0x2b000571
       bugs            : spectre_v1 spectre_v2 spec_store_bypass swapgs eibrs_pbrsb
       cpu cores       : 32
       siblings        : 64
       4 physical ids (chips)
       256 processors (hardware threads)
       physical id 0: core ids 0-31
```

(Continued on next page)

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Platform Notes (Continued)

```
      physical id 1: core ids 0-31
      physical id 2: core ids 0-31
      physical id 3: core ids 0-31
      physical id 0: apicids 0-63
      physical id 1: apicids 128-191
      physical id 2: apicids 256-319
      physical id 3: apicids 384-447
   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):                    256
     On-line CPU(s) list:       0-255
     Vendor ID:                 GenuineIntel
     Model name:                Intel(R) Xeon(R) Gold 6448H
     CPU family:                6
     Model:                     143
     Thread(s) per core:        2
     Core(s) per socket:        32
     Socket(s):                 4
     Stepping:                  8
     CPU max MHz:               4100.0000
     CPU min MHz:               800.0000
     BogoMIPS:                  4800.00
     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 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
                                invpcid_single intel_ppin cdp_l2 ssbd mba ibrs ibpb stibp ibrs_enhanced
                                tpr_shadow vnmi flexpriority ept vpid ept_ad fsgsbase tsc_adjust bmi1 hle
                                avx2 smep bmi2 erms invpcid rtm cqm rdt_a avx512f avx512dq rdseed adx smap
                                avx512ifma clflushopt clwb intel_pt avx512cd sha_ni avx512bw avx512vl
                                xsaveopt xsavec xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbm_total
                                cqm_mbm_local split_lock_detect avx_vnni avx512_bf16 wbnoinvd dtherm ida
                                arat pln pts hwp hwp_act_window hwp_epp hwp_pkg_req hfi 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
                                avx512_fp16 amx_tile flush_l1d arch_capabilities
     Virtualization:            VT-x
     L1d cache:                 6 MiB (128 instances)
     L1i cache:                 4 MiB (128 instances)
     L2 cache:                  256 MiB (128 instances)
     L3 cache:                  240 MiB (4 instances)
     NUMA node(s):              8
     NUMA node0 CPU(s):         0-15,128-143
     NUMA node1 CPU(s):         16-31,144-159
     NUMA node2 CPU(s):         32-47,160-175
     NUMA node3 CPU(s):         48-63,176-191
     NUMA node4 CPU(s):         64-79,192-207
```

(Continued on next page)

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Platform Notes (Continued)

```
  NUMA node5 CPU(s):            80-95,208-223
  NUMA node6 CPU(s):            96-111,224-239
  NUMA node7 CPU(s):            112-127,240-255
  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 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       6M  12 Data             1    64       1              64
      L1i      32K       4M   8 Instruction      1    64       1              64
      L2        2M     256M  16 Unified          2  2048       1              64
      L3       60M     240M  15 Unified          3 65536       1              64

  -----------------------------------------------------------
8. numactl --hardware
NOTE: a numactl 'node' might or might not correspond to a physical chip.
  available: 8 nodes (0-7)
  node 0 cpus: 0-15,128-143
  node 0 size: 128546 MB
  node 0 free: 121373 MB
  node 1 cpus: 16-31,144-159
  node 1 size: 129015 MB
  node 1 free: 128439 MB
  node 2 cpus: 32-47,160-175
  node 2 size: 128981 MB
  node 2 free: 128528 MB
  node 3 cpus: 48-63,176-191
  node 3 size: 129015 MB
  node 3 free: 128495 MB
  node 4 cpus: 64-79,192-207
  node 4 size: 129015 MB
  node 4 free: 121893 MB
  node 5 cpus: 80-95,208-223
  node 5 size: 129015 MB
  node 5 free: 127947 MB
  node 6 cpus: 96-111,224-239
  node 6 size: 129015 MB
  node 6 free: 128315 MB
  node 7 cpus: 112-127,240-255
  node 7 size: 128940 MB
  node 7 free: 128302 MB
  node distances:
  node   0   1   2   3   4   5   6   7
    0:  10  12  21  21  21  21  21  21
    1:  12  10  21  21  21  21  21  21
    2:  21  21  10  12  21  21  21  21
    3:  21  21  12  10  21  21  21  21
    4:  21  21  21  21  10  12  21  21
    5:  21  21  21  21  12  10  21  21
    6:  21  21  21  21  21  21  10  12
```

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Platform Notes (Continued)

```
      7:  21  21  21  21  21  21  12  10


   ----------------------------------------------------------
9. /proc/meminfo
   MemTotal:       1056305884 kB


   ----------------------------------------------------------
10. who -r
   run-level 3 Mar 20 00:10


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


   ----------------------------------------------------------
12. 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
                   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
                   autoyast-initscripts blk-availability bluetooth-mesh boot-sysctl ca-certificates
                   chrony-wait chronyd console-getty cups cups-browsed debug-shell dmraid-activation dnsmasq
                   ebtables exchange-bmc-os-info gpm grub2-once haveged haveged-switch-root ipmi ipmievd
                   irqbindall issue-add-ssh-keys kexec-load ksm kvm_stat lunmask man-db-create multipathd nfs
                   nfs-blkmap nmb nvmf-autoconnect openvpn@ ostree-remount rpcbind rpmconfigcheck rsyncd
                   rtkit-daemon serial-getty@ set_kthread_prio smartd_generate_opts smb snmpd snmptrapd
                   speech-dispatcherd 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

   ----------------------------------------------------------
13. Linux kernel boot-time arguments, from /proc/cmdline
   BOOT_IMAGE=/boot/vmlinuz-5.14.21-150500.53-default
   root=UUID=42cd3eb0-1919-4e14-8cb7-34aa5e9c9cc6
   splash=silent
   resume=/dev/disk/by-uuid/d347197e-8adf-471d-98f3-0e36bb931f65
   mitigations=auto
   quiet
   security=apparmor

   ----------------------------------------------------------
14. cpupower frequency-info
   analyzing CPU 0:
     current policy: frequency should be within 800 MHz and 4.10 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
```

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Platform Notes (Continued)

```
-------------------------------------------------------------
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                    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+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
  Filesystem      Type  Size  Used Avail Use% Mounted on
  /dev/nvme0n1p3 xfs   1.3T  102G  1.2T   9% /home


-------------------------------------------------------------
21. /sys/devices/virtual/dmi/id
    Vendor:        New H3C Technologies Co., Ltd.
    Product:       H3C UniServer R6900 G6
    Product Family: Rack
    Serial:        210235A4J7H24A000016


-------------------------------------------------------------
22. dmidecode
  Additional information from dmidecode 3.4 follows.  WARNING: Use caution when you interpret this section.
```

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Platform Notes (Continued)

```
  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 HMCG94AGBRA179N 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:      6.10.43P65
    BIOS Date:         01/02/2025
    BIOS Revision:     5.32
```

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
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--------------------------------------------------------------------------------------------------


==================================================================================================
C++          | 508.namd_r(base) 510.parest_r(base)
--------------------------------------------------------------------------------------------------
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--------------------------------------------------------------------------------------------------


==================================================================================================
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
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--------------------------------------------------------------------------------------------------


==================================================================================================
C++, C, Fortran | 507.cactuBSSN_r(base)
--------------------------------------------------------------------------------------------------
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Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308
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--------------------------------------------------------------------------------------------------


==================================================================================================
Fortran      | 503.bwaves_r(base) 549.fotonik3d_r(base) 554.roms_r(base)
--------------------------------------------------------------------------------------------------
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--------------------------------------------------------------------------------------------------


==================================================================================================
```

New H3C Technologies Co., Ltd.

H3C UniServer R6900 G6 (Intel Xeon Gold 6448H)

SPECrate®2017_fp_base =   1070

SPECrate®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:**	Mar-2024

Compiler Version Notes (Continued)

```
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`

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`

SPEC CPU®2017 Floating Point Rate Result

New H3C Technologies Co., Ltd.

H3C UniServer R6900 G6 (Intel Xeon Gold 6448H)

SPECrate®2017_fp_base = 1070

SPECrate®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:**	Mar-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
-Wno-implicit-int -mprefer-vector-width=512 -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib
```

C++ benchmarks:
```
-w -std=c++14 -m64 -Wl,-z,muldefs -xsapphirerapids -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -mprefer-vector-width=512 -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib
```

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

Benchmarks using Fortran, C, and C++:
```
-w -m64 -std=c++14 -std=c11 -Wl,-z,muldefs -xsapphirerapids -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -Wno-implicit-int -mprefer-vector-width=512
-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-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
```

Standard Performance Evaluation Corporation (info@spec.org)   https://www.spec.org/

New H3C Technologies Co., Ltd.

H3C UniServer R6900 G6 (Intel Xeon Gold 6448H)

SPECrate®2017_fp_base =	1070

SPECrate®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:**	Mar-2024

For questions about this result, please contact the tester. For other inquiries, please contact info@spec.org.

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