SPEC CPU®2017 Integer Rate Result

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New H3C Technologies Co., Ltd.

$SPECrate^{®}2017\_int\_base =$ 1160

H3C UniServer R4900 G7 (Intel Xeon 6756E)
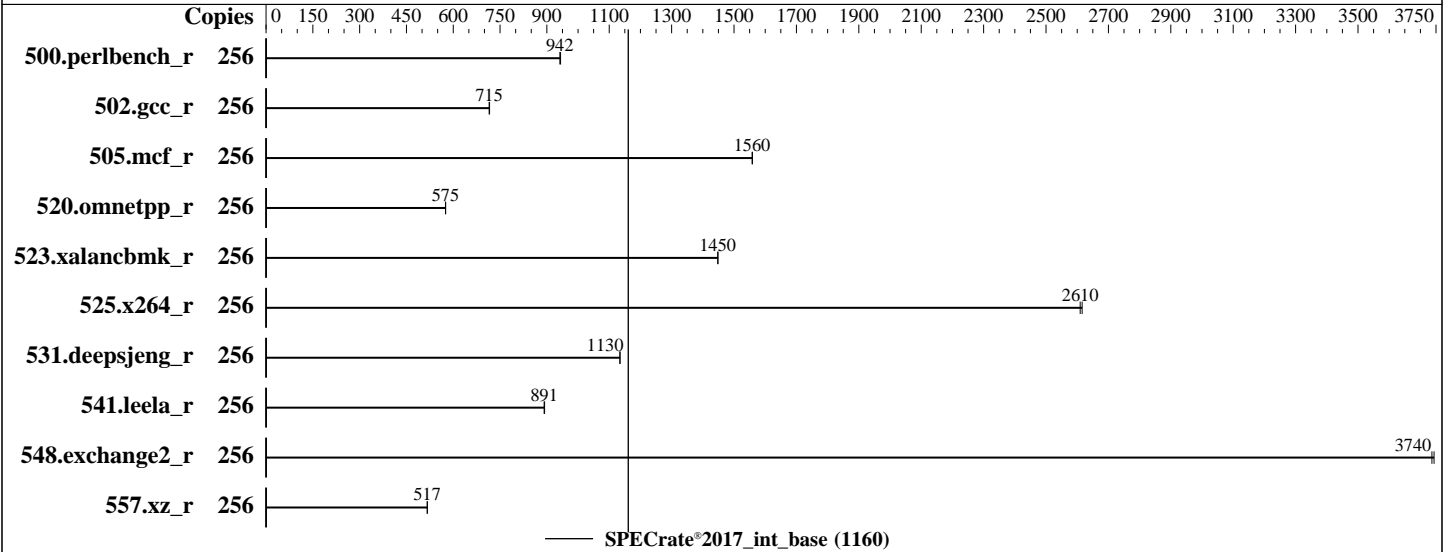
$SPECrate^{®}2017\_int\_peak =$ Not Run

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

Test Date: Oct-2024
Hardware Availability: Jun-2024
Software Availability: Apr-2024

Copies	
500.perlbench_r	256 — 942
502.gcc_r	256 — 715
505.mcf_r	256 — 1560
520.omnetpp_r	256 — 575
523.xalancbmk_r	256 — 1450
525.x264_r	256 — 2610
531.deepsjeng_r	256 — 1130
541.leela_r	256 — 891
548.exchange2_r	256 — 3740
557.xz_r	256 — 517

(Scale: 0 150 300 450 600 750 900 1100 1300 1500 1700 1900 2100 2300 2500 2700 2900 3100 3300 3500 3750)

—— SPECrate®2017_int_base (1160)

Hardware

CPU Name: Intel Xeon 6756E
 Max MHz: 2600
 Nominal: 1800
Enabled: 256 cores, 2 chips
Orderable: 1,2 chips
Cache L1: 64 KB I + 32 KB D on chip per core
 L2: 4 MB I+D on chip per core
 L3: 96 MB I+D on chip per chip
 Other: None
Memory: 512 GB (16 x 32 GB 2Rx8 PC5-6400B-R)
Storage: 1 x 1.92 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 7.00.02 released Sep-2024 BIOS
File System: xfs
System State: Run level 3 (multi-user)
Base Pointers: 64-bit
Peak Pointers: Not Applicable
Other: None
Power Management: BIOS and OS set to prefer performance at the cost of
 additional power usage.

Standard Performance Evaluation Corporation (info@spec.org)
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Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
500.perlbench_r	256	**433**	**942**	432	944									
502.gcc_r	256	506	716	**507**	**715**									
505.mcf_r	256	265	1560	**266**	**1560**									
520.omnetpp_r	256	583	576	**584**	**575**									
523.xalancbmk_r	256	187	1450	**187**	**1450**									
525.x264_r	256	**172**	**2610**	171	2620									
531.deepsjeng_r	256	259	1130	**259**	**1130**									
541.leela_r	256	**476**	**891**	475	893									
548.exchange2_r	256	**179**	**3740**	179	3740									
557.xz_r	256	535	517	**535**	**517**									

SPECrate®2017_int_base = **1160**

SPECrate®2017_int_peak = **Not Run**

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Submit Notes

```
The numactl mechanism was used to bind copies to processors. The config file option 'submit'
was used to generate numactl commands to bind each copy to a specific processor.
For details, please see the config file.
```

Operating System Notes

```
Stack size set to unlimited using "ulimit -s unlimited"
```

Environment Variables Notes

```
Environment variables set by runcpu before the start of the run:
LD_LIBRARY_PATH = "/home/speccpu/lib/intel64:/home/speccpu/lib/ia32:/home/speccpu/je5.0.1-32"
MALLOC_CONF = "retain:true"
```

General Notes

```
Binaries compiled on a system with 2x Intel Xeon Platinum 8280M CPU + 384GB RAM
memory using Red Hat Enterprise Linux 8.4
Transparent Huge Pages enabled by default
Prior to runcpu invocation
Filesystem page cache synced and cleared with:
sync; echo 3>        /proc/sys/vm/drop_caches
runcpu command invoked through numactl i.e.:
numactl --interleave=all runcpu <etc>
NA: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown)
is mitigated in the system as tested and documented.
Yes: The test sponsor attests, as of date of publication, that CVE-2017-5753 (Spectre variant 1)
is mitigated in the system as tested and documented.
Yes: The test sponsor attests, as of date of publication, that CVE-2017-5715 (Spectre variant 2)
is mitigated in the system as tested and documented.
```

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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 Fri Oct 11 01:30:22 2024

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

  ------------------------------------------------------------
  Table of contents
  ------------------------------------------------------------
   1. uname -a
   2. w
   3. Username
   4. ulimit -a
   5. sysinfo process ancestry
   6. /proc/cpuinfo
   7. lscpu
   8. numactl --hardware
   9. /proc/meminfo
  10. who -r
  11. Systemd service manager version: systemd 252 (252-32.el9_4)
  12. 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
     01:30:22 up 15:51,  2 users,  load average: 0.14, 0.15, 21.47
    USER     TTY          LOGIN@   IDLE   JCPU   PCPU WHAT
    root     tty1         01:29   14.00s  1.70s  0.03s sh intrate.sh
    root     pts/0        21:22   37:30   0.04s  0.04s -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
```

New H3C Technologies Co., Ltd.

SPECrate®2017_int_base =   1160

H3C UniServer R4900 G7 (Intel Xeon 6756E)   SPECrate®2017_int_peak = Not Run

CPU2017 License: 9066   **Test Date:**   Oct-2024
Test Sponsor: New H3C Technologies Co., Ltd.   **Hardware Availability:** Jun-2024
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Platform Notes (Continued)

```
  scheduling priority             (-e) 0
  file size              (blocks, -f) unlimited
  pending signals                 (-i) 2059593
  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) 2059593
  virtual memory         (kbytes, -v) unlimited
  file locks                      (-x) unlimited


    ----------------------------------------------------------
5. sysinfo process ancestry
 /usr/lib/systemd/systemd rhgb --switched-root --system --deserialize 31
 login -- root
 -bash
 sh intrate.sh
 runcpu --nobuild --action validate --define default-platform-flags --define numcopies=256 -c
   ic2024.1-lin-sierraforest-rate-20240308.cfg --define smt-on --define cores=256 --define physicalfirst
   --define invoke_with_interleave --define drop_caches --reportable --tune base -o all intrate -n 2
 runcpu --nobuild --action validate --define default-platform-flags --define numcopies=256 --configfile
   ic2024.1-lin-sierraforest-rate-20240308.cfg --define smt-on --define cores=256 --define physicalfirst
   --define invoke_with_interleave --define drop_caches --reportable --tune base --output_format all
   --iterations 2 --nopower --runmode rate --tune base --size refrate intrate --nopreenv --note-preenv
   --logfile $SPEC/tmp/CPU2017.021/templogs/preenv.intrate.021.0.log --lognum 021.0 --from_runcpu 2
 specperl $SPEC/bin/sysinfo
 $SPEC = /home/speccpu


    ----------------------------------------------------------
6. /proc/cpuinfo
    model name      : Intel(R) Xeon(R) 6756E
    vendor_id       : GenuineIntel
    cpu family      : 6
    model           : 175
    stepping        : 3
    microcode       : 0x13000211
    bugs            : spectre_v1 spectre_v2 spec_store_bypass swapgs
    cpu cores       : 128
    siblings        : 128
    2 physical ids (chips)
    256 processors (hardware threads)
    physical id 0: core ids 0-127
    physical id 1: core ids 0-127
    physical id 0: apicids
    0,2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46,48,50,52,54,56,58,60,62,64,66,68,70,72
    ,74,76,78,80,82,84,86,88,90,92,94,96,98,100,102,104,106,108,110,112,114,116,118,120,122,124,126,128,130,1
    32,134,136,138,140,142,144,146,148,150,152,154,156,158,160,162,164,166,168,170,172,174,176,178,180,182,18
    4,186,188,190,192,194,196,198,200,202,204,206,208,210,212,214,216,218,220,222,224,226,228,230,232,234,236
    ,238,240,242,244,246,248,250,252,254
    physical id 1: apicids
    512,514,516,518,520,522,524,526,528,530,532,534,536,538,540,542,544,546,548,550,552,554,556,558,560,562,5
    64,566,568,570,572,574,576,578,580,582,584,586,588,590,592,594,596,598,600,602,604,606,608,610,612,614,61
    6,618,620,622,624,626,628,630,632,634,636,638,640,642,644,646,648,650,652,654,656,658,660,662,664,666,668
    ,670,672,674,676,678,680,682,684,686,688,690,692,694,696,698,700,702,704,706,708,710,712,714,716,718,720,
    722,724,726,728,730,732,734,736,738,740,742,744,746,748,750,752,754,756,758,760,762,764,766
    Caution: /proc/cpuinfo data regarding chips, cores, and threads is not necessarily reliable, especially for
```

(Continued on next page)

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Platform Notes (Continued)

```
    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, 48 bits virtual
      Byte Order:                  Little Endian
      CPU(s):                      256
      On-line CPU(s) list:         0-255
      Vendor ID:                   GenuineIntel
      BIOS Vendor ID:              Intel(R) Corporation
      Model name:                  Intel(R) Xeon(R) 6756E
      BIOS Model name:             Intel(R) Xeon(R) 6756E
      CPU family:                  6
      Model:                       175
      Thread(s) per core:          1
      Core(s) per socket:          128
      Socket(s):                   2
      Stepping:                    3
      CPU(s) scaling MHz:          100%
      CPU max MHz:                 2600.0000
      CPU min MHz:                 800.0000
      BogoMIPS:                    3600.00
      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 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 rdseed adx smap clflushopt clwb intel_pt sha_ni
                                   xsaveopt xsavec xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbm_total
                                   cqm_mbm_local split_lock_detect avx_vnni lam wbnoinvd dtherm ida arat
                                   pln pts hwp hwp_act_window hwp_epp hwp_pkg_req vnmi umip pku ospke
                                   waitpkg gfni vaes vpclmulqdq tme rdpid bus_lock_detect cldemote movdiri
                                   movdir64b enqcmd fsrm md_clear serialize pconfig arch_lbr ibt flush_l1d
                                   arch_capabilities
      Virtualization:              VT-x
      L1d cache:                   8 MiB (256 instances)
      L1i cache:                   16 MiB (256 instances)
      L2 cache:                    256 MiB (64 instances)
      L3 cache:                    192 MiB (2 instances)
      NUMA node(s):                2
      NUMA node0 CPU(s):           0-127
      NUMA node1 CPU(s):           128-255
      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
```

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Platform Notes (Continued)

```
  Vulnerability Spectre v2:         Mitigation; Enhanced / Automatic IBRS, IBPB conditional, RSB filling,
                                    PBRSB-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       32K       8M   8 Data               1     64        1             64
      L1i       64K      16M   8 Instruction        1    128        1             64
      L2         4M     256M  16 Unified            2   4096        1             64
      L3        96M     192M  12 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: 0-127
    node 0 size: 257001 MB
    node 0 free: 221184 MB
    node 1 cpus: 128-255
    node 1 size: 257960 MB
    node 1 free: 223505 MB
    node distances:
    node   0   1
      0:  10  21
      1:  21  10


  -------------------------------------------------------------
  9. /proc/meminfo
    MemTotal:       527321048 kB


  -------------------------------------------------------------
  10. who -r
    run-level 3 Oct 10 09:39


  -------------------------------------------------------------
  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 nvmefc-boot-connections ostree-remount pmcd pmie pmlogger
                    power-profiles-daemon qemu-guest-agent rhsmcertd rpcbind rsyslog rtkit-daemon
                    selinux-autorelabel-mark smartd sshd sssd switcheroo-control sysstat systemd-boot-update
                    systemd-network-generator tuned udisks2 upower vgauthd virtqemud vmtoolsd
    enabled-runtime systemd-remount-fs
    disabled        arp-ethers autofs blk-availability brltty canberra-system-bootup canberra-system-shutdown
                    canberra-system-shutdown-reboot chrony-wait chronyd-restricted cni-dhcp console-getty
                    cpupower cups-browsed dbus-daemon debug-shell dnf-system-upgrade dnsmasq dovecot
                    fancontrol fcoe grafana-server gssproxy httpd httpd@ ibacm iprdump iprinit iprupdate ipsec
                    iscsi-init iscsid iscsiuio kpatch kvm_stat ledmon libvirt-guests libvirtd lldpad
                    man-db-restart-cache-update named named-chroot netavark-dhcp-proxy
                    netavark-firewalld-reload nfs-blkmap nfs-server nftables nmb numad nvmf-autoconnect
                    ostree-readonly-sysroot-migration ostree-state-overlay@ pesign pmfind pmie_farm
```

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Platform Notes (Continued)

```
               pmlogger_farm pmproxy podman podman-auto-update podman-clean-transient podman-kube@
               podman-restart postfix powertop psacct ras-mc-ctl rasdaemon rdisc rhcd rhsm rhsm-facts
               rpmdb-rebuild rrdcached saslauthd selinux-check-proper-disable serial-getty@ smb snmpd
               snmptrapd spamassassin speech-dispatcherd srp_daemon srp_daemon_port@ sshd-keygen@
               systemd-boot-check-no-failures systemd-nspawn@ systemd-pstore systemd-sysext target
               targetclid tog-pegasus trace-cmd virtinterfaced virtlockd virtlogd virtnetworkd
               virtnodedevd virtnwfilterd virtproxyd virtsecretd virtstoraged vsftpd wpa_supplicant
  indirect     iscsi pcscd spice-vdagentd sssd-autofs sssd-kcm sssd-nss sssd-pac sssd-pam sssd-ssh
               sssd-sudo systemd-sysupdate systemd-sysupdate-reboot vsftpd@

     ----------------------------------------------------------
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 83:
      current policy: frequency should be within 800 MHz and 2.60 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
```

(Continued on next page)

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Platform Notes (Continued)

```
  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     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   1.8T  256G  1.5T  15% /home

  ---------------------------------------------------------------
21. /sys/devices/virtual/dmi/id
    Vendor:         New H3C Technologies Co., Ltd.
    Product:        H3C UniServer R4900 G7
    Serial:         210235A51GH249000025

  ---------------------------------------------------------------
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 HMCG88AHBRA290N 32 GB 2 rank 6400



  ---------------------------------------------------------------
23. BIOS
(This section combines info from /sys/devices and dmidecode.)
    BIOS Vendor:      American Megatrends International, LLC.
    BIOS Version:     7.00.02
    BIOS Date:        09/14/2024
    BIOS Revision:    5.35
    Firmware Revision: 1.16
```

Compiler Version Notes

```
==================================================================================================
C       | 500.perlbench_r(base) 502.gcc_r(base) 505.mcf_r(base) 525.x264_r(base) 557.xz_r(base)
--------------------------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308
```

(Continued on next page)

SPEC CPU®2017 Integer Rate Result

New H3C Technologies Co., Ltd.

SPECrate®2017_int_base =   1160

H3C UniServer R4900 G7 (Intel Xeon 6756E)

SPECrate®2017_int_peak = Not Run

CPU2017 License: 9066   **Test Date:**   Oct-2024
Test Sponsor: New H3C Technologies Co., Ltd.   **Hardware Availability:** Jun-2024
Tested by: New H3C Technologies Co., Ltd.   **Software Availability:** Apr-2024

Compiler Version Notes (Continued)

```
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-----------------------------------------------------------------------------


==============================================================================
C++     | 520.omnetpp_r(base) 523.xalancbmk_r(base) 531.deepsjeng_r(base) 541.leela_r(base)
------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------


==============================================================================
Fortran | 548.exchange2_r(base)
------------------------------------------------------------------------------
Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------
```

Base Compiler Invocation

C benchmarks:
`icx`

C++ benchmarks:
`icpx`

Fortran benchmarks:
`ifx`

Base Portability Flags

500.perlbench_r: `-DSPEC_LP64 -DSPEC_LINUX_X64`
502.gcc_r: `-DSPEC_LP64`
505.mcf_r: `-DSPEC_LP64`
520.omnetpp_r: `-DSPEC_LP64`
523.xalancbmk_r: `-DSPEC_LP64 -DSPEC_LINUX`
525.x264_r: `-DSPEC_LP64`
531.deepsjeng_r: `-DSPEC_LP64`
541.leela_r: `-DSPEC_LP64`
548.exchange2_r: `-DSPEC_LP64`
557.xz_r: `-DSPEC_LP64`

Base Optimization Flags

C benchmarks:
`-w -std=c11 -m64 -Wl,-z,muldefs -xsierraforest -O3 -ffast-math`

(Continued on next page)

New H3C Technologies Co., Ltd.

H3C UniServer R4900 G7 (Intel Xeon 6756E)

SPECrate®2017_int_base = 1160

SPECrate®2017_int_peak = Not Run

CPU2017 License: 9066		**Test Date:**	Oct-2024
Test Sponsor:	New H3C Technologies Co., Ltd.	**Hardware Availability:**	Jun-2024
Tested by:	New H3C Technologies Co., Ltd.	**Software Availability:**	Apr-2024

Base Optimization Flags (Continued)

C benchmarks (continued):
```
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-L/opt/intel/oneapi/compiler/2024.1/lib -lqkmalloc
```

C++ benchmarks:
```
-w -std=c++14 -m64 -Wl,-z,muldefs -xsierraforest -O3 -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-L/opt/intel/oneapi/compiler/2024.1/lib -lqkmalloc
```

Fortran benchmarks:
```
-w -m64 -Wl,-z,muldefs -xsierraforest -O3 -ffast-math -flto
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-nostandard-realloc-lhs -align array32byte -auto
-L/opt/intel/oneapi/compiler/2024.1/lib -lqkmalloc
```

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2017/flags/Intel-ic2024-official-linux64.html
http://www.spec.org/cpu2017/flags/New_H3C-Platform-Settings-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

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

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