SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

H3C UniServer R4900 G6 Ultra (Intel Xeon Gold 6538Y+)

SPECrate®2017_int_base = 636

SPECrate®2017_int_peak = Not Run
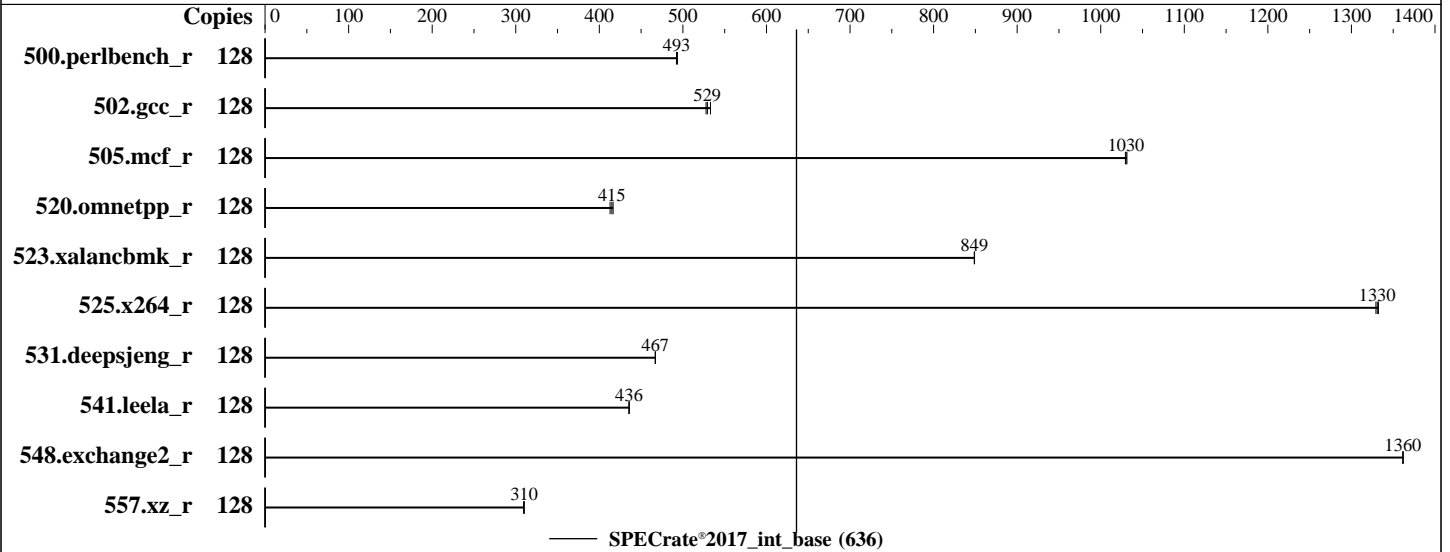
CPU2017 License: 9066
Test Sponsor: New H3C Technologies Co., Ltd.
Tested by: New H3C Technologies Co., Ltd.

Test Date: Sep-2024
Hardware Availability: Oct-2023
Software Availability: Mar-2024

Copies	Result
500.perlbench_r 128	493
502.gcc_r 128	529
505.mcf_r 128	1030
520.omnetpp_r 128	415
523.xalancbmk_r 128	849
525.x264_r 128	1330
531.deepsjeng_r 128	467
541.leela_r 128	436
548.exchange2_r 128	1360
557.xz_r 128	310

SPECrate®2017_int_base (636)

Hardware

CPU Name: Intel Xeon Gold 6538Y+
 Max MHz: 4000
 Nominal: 2200
Enabled: 64 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: 60 MB I+D on chip per chip
 Other: None
Memory: 1 TB (16 x 64 GB 2Rx4 PC5-5600B-R, running at 5200)
Storage: 1 x 3.2 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: No
Firmware: Version 6.10.43 released Jul-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)
https://www.spec.org/

SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

H3C UniServer R4900 G6 Ultra (Intel Xeon Gold 6538Y+)

SPECrate®2017_int_base =   636

SPECrate®2017_int_peak = Not Run

CPU2017 License: 9066	**Test Date:** Sep-2024
Test Sponsor: New H3C Technologies Co., Ltd.	**Hardware Availability:** Oct-2023
Tested by: New H3C Technologies Co., Ltd.	**Software Availability:** Mar-2024

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
500.perlbench_r	128	413	493	**414**	**493**	414	492							
502.gcc_r	128	343	528	340	533	**342**	**529**							
505.mcf_r	128	201	1030	**201**	**1030**	201	1030							
520.omnetpp_r	128	407	413	403	416	**405**	**415**							
523.xalancbmk_r	128	159	849	159	849	**159**	**849**							
525.x264_r	128	**168**	**1330**	169	1330	168	1330							
531.deepsjeng_r	128	314	467	314	467	**314**	**467**							
541.leela_r	128	487	436	487	436	**487**	**436**							
548.exchange2_r	128	246	1360	246	1360	**246**	**1360**							
557.xz_r	128	**446**	**310**	447	309	446	310							
SPECrate®2017_int_base =		**636**												
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/speccpunew/lib/intel64:/home/speccpunew/lib/ia32:/home/speccpunew/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.

SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

H3C UniServer R4900 G6 Ultra (Intel Xeon Gold 6538Y+)

SPECrate®2017_int_base =   636

SPECrate®2017_int_peak = Not Run

Platform Notes

```
BIOS Settings:
SNC = Enable SNC2 (2-clusters)
Power Performance Tuning = BIOS Controls EPB
ENERGY_PERF_BIAS_CFG mode = Performance

Sysinfo program /home/speccpunew/bin/sysinfo
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
running on localhost Wed Sep  4 23:11:30 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 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)
  x86_64 x86_64 x86_64 GNU/Linux


------------------------------------------------------------
2. w
  23:11:30 up 5 min,  1 user,  load average: 0.12, 0.19, 0.10
  USER     TTY       FROM             LOGIN@  IDLE  JCPU   PCPU WHAT
  root     tty1      -                23:09   18.00s  1.24s  0.00s 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
```

New H3C Technologies Co., Ltd.

H3C UniServer R4900 G6 Ultra (Intel Xeon Gold 6538Y+)

SPECrate®2017_int_base = 636

SPECrate®2017_int_peak = Not Run

CPU2017 License: 9066   **Test Date:** Sep-2024
Test Sponsor: New H3C Technologies Co., Ltd.   **Hardware Availability:** Oct-2023
Tested by: New H3C Technologies Co., Ltd.   **Software Availability:** Mar-2024

Platform Notes (Continued)

```
   pending signals              (-i) 4126528
   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) 4126528
   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=128 -c
   ic2024.1-lin-sapphirerapids-rate-20231213.cfg --define smt-on --define cores=64 --define physicalfirst
   --define invoke_with_interleave --define drop_caches --tune base -o all intrate
 runcpu --nobuild --action validate --define default-platform-flags --define numcopies=128 --configfile
   ic2024.1-lin-sapphirerapids-rate-20231213.cfg --define smt-on --define cores=64 --define physicalfirst
   --define invoke_with_interleave --define drop_caches --tune base --output_format all --nopower --runmode
   rate --tune base --size refrate intrate --nopreenv --note-preenv --logfile
   $SPEC/tmp/CPU2017.001/templogs/preenv.intrate.001.0.log --lognum 001.0 --from_runcpu 2
 specperl $SPEC/bin/sysinfo
$SPEC = /home/speccpunew

   ----------------------------------------------------------
6. /proc/cpuinfo
   model name     : INTEL(R) XEON(R) GOLD 6538Y+
   vendor_id      : GenuineIntel
   cpu family     : 6
   model          : 207
   stepping       : 2
   microcode      : 0x21000200
   bugs           : spectre_v1 spectre_v2 spec_store_bypass swapgs eibrs_pbrsb
   cpu cores      : 32
   siblings       : 64
   2 physical ids (chips)
   128 processors (hardware threads)
   physical id 0: core ids 0-31
   physical id 1: core ids 0-31
   physical id 0: apicids 0-63
   physical id 1: apicids 128-191
 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):                      128
   On-line CPU(s) list:         0-127
```

(Continued on next page)

New H3C Technologies Co., Ltd.

H3C UniServer R4900 G6 Ultra (Intel Xeon Gold 6538Y+)

SPECrate®2017_int_base = 636

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: Sep-2024
Hardware Availability: Oct-2023
Software Availability: Mar-2024

Platform Notes (Continued)

```
Vendor ID:                      GenuineIntel
Model name:                     INTEL(R) XEON(R) GOLD 6538Y+
CPU family:                     6
Model:                          207
Thread(s) per core:             2
Core(s) per socket:             32
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 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 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 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:                      3 MiB (64 instances)
L1i cache:                      2 MiB (64 instances)
L2 cache:                       128 MiB (64 instances)
L3 cache:                       120 MiB (2 instances)
NUMA node(s):                   4
NUMA node0 CPU(s):              0-15,64-79
NUMA node1 CPU(s):              16-31,80-95
NUMA node2 CPU(s):              32-47,96-111
NUMA node3 CPU(s):              48-63,112-127
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       3M   12 Data            1    64        1              64
    L1i      32K       2M    8 Instruction     1    64        1              64
    L2        2M     128M   16 Unified         2  2048        1              64
    L3       60M     120M   15 Unified         3 65536        1              64

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

(Continued on next page)

New H3C Technologies Co., Ltd.

H3C UniServer R4900 G6 Ultra (Intel Xeon Gold 6538Y+)

SPECrate®2017_int_base =   636

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: Sep-2024

Hardware Availability: Oct-2023

Software Availability: Mar-2024

Platform Notes (Continued)

```
  8. numactl --hardware
NOTE: a numactl 'node' might or might not correspond to a physical chip.
  available: 4 nodes (0-3)
  node 0 cpus: 0-15,64-79
  node 0 size: 257581 MB
  node 0 free: 256908 MB
  node 1 cpus: 16-31,80-95
  node 1 size: 258039 MB
  node 1 free: 257340 MB
  node 2 cpus: 32-47,96-111
  node 2 size: 258039 MB
  node 2 free: 257344 MB
  node 3 cpus: 48-63,112-127
  node 3 size: 258000 MB
  node 3 free: 256941 MB
  node distances:
  node   0   1   2   3
    0:  10  12  21  21
    1:  12  10  21  21
    2:  21  21  10  12
    3:  21  21  12  10


  ------------------------------------------------------------
  9. /proc/meminfo
    MemTotal:       1056421856 kB


  ------------------------------------------------------------
  10. who -r
   run-level 3 Sep 4 23:06


  ------------------------------------------------------------
  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          YaST2-Firstboot YaST2-Second-Stage apparmor cron display-manager getty@ issue-generator
                     kbdsettings klog lvm2-monitor nscd nvmefc-boot-connections purge-kernels rollback rsyslog
                     smartd sshd systemd-pstore wicked wickedd-auto4 wickedd-dhcp4 wickedd-dhcp6 wickedd-nanny
    enabled-runtime  systemd-remount-fs
    disabled         auditd autofs autoyast-initscripts blk-availability boot-sysctl ca-certificates
                     chrony-wait chronyd console-getty cups cups-browsed debug-shell ebtables
                     exchange-bmc-os-info fancontrol firewalld gpm grub2-once haveged haveged-switch-root ipmi
                     ipmievd irqbalance issue-add-ssh-keys kdump kdump-early kexec-load lm_sensors lunmask
                     man-db-create multipathd ndctl-monitor nfs nfs-blkmap nmb nvmf-autoconnect postfix rpcbind
                     rpmconfigcheck rsyncd serial-getty@ smartd_generate_opts smb snmpd snmptrapd sysstat
                     systemd-boot-check-no-failures systemd-network-generator systemd-sysext
                     systemd-time-wait-sync systemd-timesyncd tuned vncserver@
    indirect         pcscd wickedd


  ------------------------------------------------------------
  13. Linux kernel boot-time arguments, from /proc/cmdline
    BOOT_IMAGE=/boot/vmlinuz-5.14.21-150500.53-default
    root=UUID=befab1a9-6492-412a-9d0b-079466ad03eb
    splash=silent
    resume=/dev/disk/by-uuid/64b85326-8619-4fcb-8127-1e8683bd7471
    mitigations=auto
    quiet
```

(Continued on next page)

New H3C Technologies Co., Ltd.

H3C UniServer R4900 G6 Ultra (Intel Xeon Gold 6538Y+)

SPECrate®2017_int_base = 636

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: Sep-2024

Hardware Availability: Oct-2023

Software Availability: Mar-2024

Platform Notes (Continued)

```
     splash=silent
   mitigations=auto


   ------------------------------------------------------------
14. 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


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

(Continued on next page)

New H3C Technologies Co., Ltd.

H3C UniServer R4900 G6 Ultra (Intel Xeon Gold 6538Y+)

SPECrate®2017_int_base =   636

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: Sep-2024

Hardware Availability: Oct-2023

Software Availability: Mar-2024

Platform Notes (Continued)

```
         ----------------------------------------------------------
         20. Disk information
         SPEC is set to: /home/speccpunew
           Filesystem     Type  Size  Used Avail Use% Mounted on
           /dev/nvme0n1p5 xfs   522G  513G  9.5G  99% /home


         ----------------------------------------------------------
         21. /sys/devices/virtual/dmi/id
             Vendor:          New H3C Technologies Co., Ltd.
             Product:         H3C UniServer R4900 G6 Ultra
             Product Family: Rack
             Serial:          210235A4CHH244000019


         ----------------------------------------------------------
         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 5200


         ----------------------------------------------------------
         23. BIOS
         (This section combines info from /sys/devices and dmidecode.)
           BIOS Vendor:      American Megatrends International, LLC.
           BIOS Version:     6.10.43
           BIOS Date:        07/27/2024
           BIOS Revision:    5.32
```

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
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.
--------------------------------------------------------------------------------------------------------------


==============================================================================================================
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.
--------------------------------------------------------------------------------------------------------------
```

SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

New H3C Technologies Co., Ltd.

H3C UniServer R4900 G6 Ultra (Intel Xeon Gold 6538Y+)

SPECrate®2017_int_base =   636

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: Sep-2024
Hardware Availability: Oct-2023
Software Availability: Mar-2024

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 -xsapphirerapids -O3 -ffast-math`
`-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 -xsapphirerapids -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 -xsapphirerapids -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`

SPEC CPU®2017 Integer Rate Result

New H3C Technologies Co., Ltd.

H3C UniServer R4900 G6 Ultra (Intel Xeon Gold 6538Y+)

SPECrate®2017_int_base =   636

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: Sep-2024
Hardware Availability: Oct-2023
Software Availability: Mar-2024

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.

Tested with SPEC CPU®2017 v1.1.9 on 2024-09-04 11:11:29-0400.
Report generated on 2024-10-09 14:04:16 by CPU2017 PDF formatter v6716.
Originally published on 2024-10-09.