New H3C Technologies Co., Ltd.  SPECrate®2017_int_base = 861
H3C UniServer R4900 G6 (Intel Xeon Platinum 8558)  SPECrate®2017_int_peak = 890

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

Hardware

CPU Name: Intel Xeon Platinum 8558
Max MHz: 4000
Nominal: 2100
Enabled: 96 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: 260 MB I+D on chip per chip
Other: None
Memory: 512 GB (16 x 32 GB 2Rx8 PC5-5600B-R, running at 5200)
Storage: 1 x 1.92 TB SSD
Other: CPU Cooling: Air

Software

OS: SUSE Linux Enterprise Server 15 SP5
5.14.21-150500.53-default
Compiler: C/C++; Version 2024.0.2 of Intel oneAPI DPC++/C++) Compiler for Linux;
Fortran: Version 2024.0.2 of Intel Fortran Compiler for Linux;
Parallel: No
Firmware: Version 6.10.38 released Mar-2024 BIOS
File System: xfs
System State: Run level 3 (multi-user)
Base Pointers: 64-bit
Peak Pointers: 32/64-bit
Other: jemalloc memory allocator V5.0.1
Power Management: BIOS and OS set to prefer performance at the cost of additional power usage.
New H3C Technologies Co., Ltd.

H3C UniServer R4900 G6 (Intel Xeon Platinum 8558)

Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
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<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
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<td>481</td>
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<td>481</td>
<td>431</td>
<td>481</td>
<td>431</td>
<td>481</td>
<td>431</td>
</tr>
</tbody>
</table>

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.

(Continued on next page)
SPEC CPU®2017 Integer Rate Result

New H3C Technologies Co., Ltd.

H3C UniServer R4900 G6 (Intel Xeon Platinum 8558)

SPEC CPU®2017 License: 9066
Test Sponsor: New H3C Technologies Co., Ltd.
Tested by: New H3C Technologies Co., Ltd.

SPECrate®2017_int_base = 861
SPECrate®2017_int_peak = 890

Test Date: May-2024
Hardware Availability: Oct-2023
Software Availability: Dec-2023

General Notes (Continued)

jemalloc, a general purpose malloc implementation
built with the RedHat Enterprise 7.5, and the system compiler gcc 4.8.5

Platform Notes

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

Sysinfo program /home/speccpu/bin/sysinfo
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
running on localhost.localdomain Wed May 15 17:41:18 2024

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

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1. uname -a
2. w
3. Username
4. ulimit -a
5. sysinfo process ancestry
6. /proc/cpuint
7. lscpu
8. numacl --hardware
9. /proc/meminfo
10. who -r
11. Systemd service manager version: systemd 249 (249.16+suse.171.gdad0071f15)
12. Failed units, from systemctl list-units --state=failed
13. Services, from systemctl list-unit-files
14. Linux kernel boot-time arguments, from /proc/cmdline
15. cpupower frequency-info
16. tuned-adm active
17. sysctl
18. /sys/kernel/mm/transparent_hugepage
19. /sys/kernel/mm/transparent_hugepage/klhugepaged
20. OS release
21. Disk information
22. /sys/devices/virtual/dmi/id
23. dmidecode
24. BIOS

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

1. uname -a
Linux localhost.localdomain 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
17:41:18 up 5 min, 2 users, load average: 0.05, 0.27, 0.16
USER TTY FROM LOGIN@ IDLE JCPU PCPU WHAT
root tty1 17:36 5:00 0.04s 0.04s -bash
root pts/0 172.16.53.190 17:36 11.00s 0.87s 0.01s /bin/sh
./reportable-ic2024.0.2-lin-sapphirerapids-rate-smt-on-20231213.sh

(Continued on next page)


New H3C Technologies Co., Ltd.
H3C UniServer R4900 G6 (Intel Xeon Platinum 8558)

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Test Date: May-2024
Hardware Availability: Oct-2023
Software Availability: Dec-2023

Platform Notes (Continued)

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) 2060327
   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) 2060327
   virtual memory (kbytes, -v) unlimited
   file locks (-x) unlimited

5. sysinfo process ancestry
   /usr/lib/systemd/systemd --switched-root --system --deserialize 29
   sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups
   sshd: root@pts/0
   -bash
   /bin/sh ./reportable-ic2024.0.2-lin-sapphirerapids-rate-smt-on-20231213.sh
   runcpu --nobuild --action validate --define default-platform-flags --define numcopies=192 --c
   ic2024.0.2-lin-sapphirerapids-rate-20231213.cfg --define smt-on --define cores=96 --define physicalfirst
   --define invoke_with_interleave --define drop_caches --tune base,peak -o all intrate
   runcpu --nobuild --action validate --define default-platform-flags --define numcopies=192 --configfile
   ic2024.0.2-lin-sapphirerapids-rate-20231213.cfg --define smt-on --define cores=96 --define physicalfirst
   --define invoke_with_interleave --define drop_caches --tune base,peak --output_format all --nopower
   --runmode rate --tune base:peak --size refrate intrate --nopreenv --note-preenv --logfile
   $SPEC/tmp/CPU2017.075/templogs/preenv.intrate.075.0.log --lognum 075.0 --from_runcpu 2
   specperl $SPEC/bin/sysinfo
   $SPEC = /home/speccpu

6. /proc/cpuinfo
   model name : INTEL(R) XEON(R) PLATINUM 8558
   vendor_id : GenuineIntel
cpu family : 6
   model : 207
   stepping : 2
   microcode : 0x21000200
   bugs : spectre_v1 spectre_v2 spec_store_bypass swapgs ebibs_pbrsb
   cpu cores : 48
   siblings : 96
   2 physical ids (chips)
   192 processors (hardware threads)
   physical id 0: core ids 0-47
   physical id 1: core ids 0-47
   physical id 0: apicids 0-95
   physical id 1: apicids 128-223

Caution: /proc/cpuinfo data regarding chips, cores, and threads is not necessarily reliable, especially for virtualized systems. Use the above data carefully.

(Continued on next page)
New H3C Technologies Co., Ltd. | SPEC CPU®2017 Integer Rate Result

H3C UniServer R4900 G6 (Intel Xeon Platinum 8558)

SPECrate®2017_int_base = 861

SPECrate®2017_int_peak = 890

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

Platform Notes (Continued)

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): 192
On-line CPU(s) list: 0-191
Vendor ID: GenuineIntel
Model name: INTEL(R) XEON(R) PLATINUM 8558
CPU family: 6
Model: 207
Thread(s) per core: 2
Core(s) per socket: 48
Socket(s): 2
Stepping: 2
CPU max MHz: 4000.000
CPU min MHz: 800.000
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 arch_perfmon pebs bts rep_good nopl xtopology
nonstop_tsc cpuid aperf perf tsc_known_freq pni pclmulqdq dtes64 monitor
core_set_size lm clflush size clflush_line infiniband cpuid

Virtualization: VT-x
L1d cache: 4.5 MiB (96 instances)
L1i cache: 3 MiB (96 instances)
L2 cache: 192 MiB (96 instances)
L3 cache: 520 MiB (2 instances)
NUMA node(s): 4
NUMA node0 CPU(s): 0-23, 96-119
NUMA node1 CPU(s): 24-47, 120-143
NUMA node2 CPU(s): 48-71, 144-167
NUMA node3 CPU(s): 72-95, 168-191
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; speculative store bypass disabled via prctl and seccomp
Vulnerability Spectre v2: Mitigation; Enhanced IBRS, IBPB conditional, RSB filling, PBRSB-eIBRS SW sequence

(Continued on next page)
### SPEC CPU®2017 Integer Rate Result

New H3C Technologies Co., Ltd.

**H3C UniServer R4900 G6 (Intel Xeon Platinum 8558)**

<table>
<thead>
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<th>9066</th>
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<td>New H3C Technologies Co., Ltd.</td>
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<td>New H3C Technologies Co., Ltd.</td>
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<td>Test Date:</td>
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<tr>
<td>Software Availability:</td>
<td>Dec-2023</td>
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</table>

**SPECrate**

- SPECrate\textsuperscript{2017\_int\_base} = 861
- SPECrate\textsuperscript{2017\_int\_peak} = 890

**Platform Notes (Continued)**

- **Vulnerability Srbds:** Not affected
- **Vulnerability Tax async abort:** Not affected

**From lscpu --cache:**

<table>
<thead>
<tr>
<th>NAME</th>
<th>ONE-SIZE</th>
<th>ALL-SIZE</th>
<th>WAYS</th>
<th>TYPE</th>
<th>LEVEL</th>
<th>SETS</th>
<th>PHY-LINE</th>
<th>COHERENCY-SIZE</th>
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<td>4.5M</td>
<td>12</td>
<td>Data</td>
<td>1</td>
<td>64</td>
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<td>64</td>
</tr>
<tr>
<td>L1i</td>
<td>32K</td>
<td>3M</td>
<td>8</td>
<td>Instruction</td>
<td>1</td>
<td>64</td>
<td>1</td>
<td>64</td>
</tr>
<tr>
<td>L2</td>
<td>2M</td>
<td>192M</td>
<td>16</td>
<td>Unified</td>
<td>2</td>
<td>2048</td>
<td>1</td>
<td>64</td>
</tr>
<tr>
<td>L3</td>
<td>260M</td>
<td>520M</td>
<td>20</td>
<td>Unified</td>
<td>3</td>
<td>212992</td>
<td>1</td>
<td>64</td>
</tr>
</tbody>
</table>

8. numactl --hardware

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

```
available: 4 nodes (0-3)
node 0 cpus: 0-23,96-119
node 0 size: 128515 MB
node 0 free: 127834 MB
node 1 cpus: 24-47,120-143
node 1 size: 128977 MB
node 1 free: 128304 MB
node 2 cpus: 48-71,144-167
node 2 size: 129011 MB
node 2 free: 128583 MB
node 3 cpus: 72-95,168-191
node 3 size: 128600 MB
node 3 free: 127951 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: 527468064 kB
```

10. `who -r`

```
run-level 3 May 15 17:36
```

11. Systemd service manager version: systemd 249 (249.16+suse.171.gdad0071f15)

```
Default Target Status
multi-user degraded
```

12. Failed units, from systemctl list-units --state=failed

```
* NetworkManager-wait-online.service loaded failed failed Network Manager Wait Online
```

13. Services, from systemctl list-unit-files

```
<table>
<thead>
<tr>
<th>STATE</th>
<th>UNIT FILES</th>
</tr>
</thead>
<tbody>
<tr>
<td>enabled</td>
<td>NetworkManager NetworkManager-dispatcher NetworkManager-wait-online apparmor auditd cron firewalld getty@ irqbalance issue-generator kbdsettings kdump kdump-early postfix purge-kernels rollback sshd systemd-pstore wicked wickedd-auto4 wickedd-dhcp4 wickedd-dhcp6 wickedd-nanny wpa_supplicant</td>
</tr>
<tr>
<td>enabled-runtime</td>
<td>systemd-remount-fs</td>
</tr>
<tr>
<td>disabled</td>
<td>boot-sysctl ca-certificates chrony-wait chronyd console-getty debug-shell dnsmasq ebtables</td>
</tr>
</tbody>
</table>

(Continued on next page)
**Platform Notes (Continued)**

grub2-once haveged haveged-switch-root issue-add-ssh-keys kexec-load lunmask nfs nfs-blkmap rpmbind rpmconfigcheck serial-getty@ systemd-boot-check-no-failures systemd-network-generator systemd-sysext systemd-time-wait-sync systemd-timesyncd tuned wpa_supplicant@

indirect wickedd

14. Linux kernel boot-time arguments, from /proc/cmdline

```
BOOT_IMAGE=/boot/vmlinuz-5.14.21-150500.53-default
root=UUID=8941a345-b7dd-4a3e-98f3-0af9eb97f32e
splash=silent
resume=/dev/disk/by-uuid/06a94d0a-0f9e-4e93-848f-045322d8f16d
mitigations=auto
quiet
security=apparmor
crashkernel=373M,high
crashkernel=72M,low
tuned
```

15. cpupower frequency-info

```
analyzing CPU 0:
current policy: frequency should be within 800 MHz and 4.00 GHz.
The governor "performance" may decide which speed to use
within this range.
boost state support:
   Supported: yes
   Active: yes
```

16. tuned-adm active

```
Current active profile: throughput-performance
```

17. 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                      1
vm.dirty_writeback_centisecs        500
vm.dirtytime_expire_seconds         43200
vm.extrfrag_threshold              500
vm.min_unmapped_ratio               3
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
```

18. /sys/kernel/mm/transparent_hugepage

```
defrag always defer defer+madvise [madvise] never
enabled [always] madvise never
hpage_pmd_size 2097152
```

(Continued on next page)
New H3C Technologies Co., Ltd.  
H3C UniServer R4900 G6 (Intel Xeon Platinum 8558)

**Platform Notes (Continued)**

```plaintext
shmem_enabled always within_size advise [never] deny force
```

```
19. /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
```

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

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

```
Filesystem     Type  Size  Used Avail Use% Mounted on
/dev/sda3      xfs   1.5T   63G  1.4T   5% /home
```

```
22. /sys/devices/virtual/dmi/id
Vendor:         H3C
Product:        H3C UniServer R4900 G6
Product Family: Rack
Serial:         N/A
```

```
23. 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:
5x Samsung M321R4GA3PB0-CWMJH 32 GB 2 rank 5600, configured at 5200
7x Samsung M321R4GA3PB0-CWMKH 32 GB 2 rank 5600, configured at 5200
4x Samsung M321R4GA3PB0-CWMXH 32 GB 2 rank 5600, configured at 5200
```

```
24. BIOS
(This section combines info from /sys/devices and dmidecode.)
BIOS Vendor: American Megatrends International, LLC.
BIOS Version: 6.10.38
BIOS Date: 03/23/2024
BIOS Revision: 5.32
```

---

**Compiler Version Notes**

```plaintext
C       | 502.gcc_r(peak)
```

Intel(R) oneAPI DPC++/C++ Compiler for applications running on IA-32, Version 2024.0.2 Build 20231213
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.

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(Continued on next page)
# SPEC CPU®2017 Integer Rate Result

**New H3C Technologies Co., Ltd.**

H3C UniServer R4900 G6 (Intel Xeon Platinum 8558)

**SPECrater®2017_int_base = 861**

**SPECrater®2017_int_peak = 890**

<table>
<thead>
<tr>
<th>CPU2017 License:</th>
<th>9066</th>
</tr>
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<tbody>
<tr>
<td>Test Sponsor:</td>
<td>New H3C Technologies Co., Ltd.</td>
</tr>
<tr>
<td>Tested by:</td>
<td>New H3C Technologies Co., Ltd.</td>
</tr>
<tr>
<td>Test Date:</td>
<td>May-2024</td>
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<tr>
<td>Hardware Availability:</td>
<td>Oct-2023</td>
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<td>Software Availability:</td>
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## Compiler Version Notes (Continued)

<table>
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<tr>
<th>C</th>
<th>500.perlbench_r(base, peak) 502.gcc_r(base) 505.mcf_r(base, peak) 525.x264_r(base, peak) 557.xz_r(base, peak)</th>
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<td>Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213</td>
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<th>C++</th>
<th>520.omnetpp_r(base, peak) 523.xalancbmk_r(base, peak) 531.deepjeng_r(base, peak) 541.leela_r(base, peak)</th>
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<th>Fortran</th>
<th>548.exchange2_r(base, peak)</th>
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## Base Compiler Invocation

C benchmarks:
- icx

C++ benchmarks:
- icpx

Fortran benchmarks:
- ifx
## SPEC CPU®2017 Integer Rate Result

**New H3C Technologies Co., Ltd.**

H3C UniServer R4900 G6 (Intel Xeon Platinum 8558)

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<th>SPECrate®2017_int_base = 861</th>
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**CPU2017 License:** 9066  
**Test Sponsor:** New H3C Technologies Co., Ltd.  
**Tested by:** New H3C Technologies Co., Ltd.

**Test Date:** May-2024  
**Hardware Availability:** Oct-2023  
**Software Availability:** Dec-2023

### Base Portability Flags

500.perlbench_r: -DSPEC_LP64 -DSPEC_LINUX_X64  
502gcc_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/2024.0/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/2024.0/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/2024.0/lib -lqkmalloc

### Peak Compiler Invocation

**C benchmarks:**

icx

**C++ benchmarks:**

icpx

**Fortran benchmarks:**

ifx
SPEC CPU®2017 Integer Rate Result

New H3C Technologies Co., Ltd.
H3C UniServer R4900 G6 (Intel Xeon Platinum 8558)

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

SPECratio2017_int_base = 861
SPECratio2017_int_peak = 890

Peak Portability Flags

500.perlbench_r: -DSPEC_LP64 -DSPEC_LINUX_X64
502.gcc_r: -D_FILE_OFFSET_BITS=64
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

Peak Optimization Flags

C benchmarks:

500.perlbench_r: -w -std=c11 -m64 -Wl,-z,muldefs
  -fprofile=generate(pass 1)
  -fprofile=use=default.profdata(pass 2) -xCORE-AVX2(pass 1)
  -flto -Ofast -xCORE-AVX512 -ffast-math -mfpmath=sse
  -funroll-loops -qopt-mem-layout-trans=4
  -fno-strict-overflow
  -L/opt/intel/oneapi/compiler/2024.0/lib -lqkmalloc

502.gcc_r: -m32 -L/opt/intel/oneapi/compiler/2024.0/lib32 -std=gnu89
  -Wl,-z,muldefs -fprofile=generate(pass 1)
  -fprofile=use=default.profdata(pass 2) -xCORE-AVX2(pass 1)
  -flto -Ofast -xCORE-AVX512 -ffast-math -mfpmath=sse
  -funroll-loops -qopt-mem-layout-trans=4
  -L/usr/local/jemalloc32-5.0.1/lib -ljemalloc

505.mcf_r: basepeak = yes

525.x264_r: -w -std=c11 -m64 -Wl,-z,muldefs -xsapphirerapids -Ofast
  -ffast-math -flto -mfpmath=sse -funroll-loops
  -qopt-mem-layout-trans=4 -fno-alias
  -L/opt/intel/oneapi/compiler/2024.0/lib -lqkmalloc

557.xz_r: basepeak = yes

C++ benchmarks:

520.omnetpp_r: basepeak = yes

(Continued on next page)
New H3C Technologies Co., Ltd.  
H3C UniServer R4900 G6 (Intel Xeon Platinum 8558)

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

**Peak Optimization Flags (Continued)**

523.xalancbmk_r: basepeak = yes
531.deepsjeng_r: basepeak = yes
541.leela_r: basepeak = yes

Fortran benchmarks:
548.exchange2_r: basepeak = yes

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

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-RevD.xml

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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 2024-05-15 05:41:18-0400.
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