### Hardware

- **CPU Name:** Intel Xeon Gold 6454S  
  - **Max MHz:** 3400  
  - **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 PC5-4800B-R)  
- **Storage:** 1 x SATA SSD, 1.92TB  
- **Other:** None

### Software

- **OS:** SUSE Linux Enterprise Server 15 SP4  
  - 5.14.21-150400.22-default  
- **Compiler:**
  - C/C++: Version 2023.0 of Intel oneAPI DPC++/C++ Compiler for Linux  
  - Fortran: Version 2023.0 of Intel Fortran Compiler for Linux  
- **Parallel:** No  
- **Firmware:** Fujitsu BIOS Version V1.0.0.0 R1.10.0 for D3983-A1x, Released Mar-2023  
  - tested as V1.0.0.0 R0.24.1 for D3983-A1x Jan-2023  
- **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 set to prefer performance at the cost of additional power usage

### SPECrate®2017 fp_base = 668

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## Fujitsu

PRIMERGY RX2540 M7, Intel Xeon Gold 6454S, 2.20GHz

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### 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/benchmark/speccpu-1.1.9/lib/intel64:/home/benchmark/speccpu-1.1.9/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.
Fujitsu
PRIMERGY RX2540 M7, Intel Xeon Gold 6454S,
2.20GHz

CPU2017 License: 19
Test Sponsor: Fujitsu
Tested by: Fujitsu

SPECraté®2017_fp_base = 668
SPECraté®2017_fp_peak = Not Run

Test Date: Mar-2023
Hardware Availability: Mar-2023
Software Availability: Dec-2022

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

Platform Notes

BIOS configuration:
Package C State limit = C0
CPU Performance Boost = Aggressive
SNC (Sub NUMA) = Enable SNC4
FAN Control = Full

Sysinfo program /home/benchmark/speccpu-1.1.9/bin/sysinfo
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
running on localhost Tue Mar 28 22:52:56 2023

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

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8. numacl --hardware
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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. sysctl
17. /sys/kernel/mm/transparent_hugepage
18. /sys/kernel/mm/transparent_hugepage/klhugepaged
19. OS release
20. Disk information
21. /sys/devices/virtual/dmi/id
22. dmidecode
23. BIOS

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Platform Notes (Continued)

root tty1 - 17:37 5:15m 0.08s 0.08s -bash
root pts/0 10.118.163.62 17:37 5:13m 2.33s 0.09s
/home/benchmark/ptu_v4.0/UNIFIED_SERVER_PTAT_V4.0.0_20230110/ptat -mon -i 5000000 -filter 0x3f -y -ts -csv
-log

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) 4125247
   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) 4125247
   virtual memory  (kbytes, -v) unlimited
   file locks       (-x) unlimited

5. sysinfo process ancestry
   /usr/lib/systemd/systemd --switched-root --system --deserialize 30
   sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups
   sshd: root@pts/0
   -bash
   -bash
   runcpu --nobuild --action validate --define default-platform-flags --define numcopies=128 -c
   ic2023.0-lin-sapphirerapids-rate-20221201.cfg --define smt-on --define cores=64 --define physicalfirst
   --define invoke_with_interleave --define drop_caches --tune base --output_format all --nopower --runmode
   rate --size refrate --nopreenv --note-preenv --logfile
   $SPEC/tmp/CPU2017.001/templogs/preenv.fprate.001.0.log --lognum 001.0 --from_runcpu 2
   specperl $SPEC/bin/sysinfo
   $SPEC = /home/benchmark/speccpu-1.1.9

6. /proc/cpuinfo
   model name : Intel(R) Xeon(R) Gold 6454S
   vendor_id : GenuineIntel
   cpu family : 6
   model : 143
   stepping : 8
   microcode : 0x2b000130
   bug : spectre_v1 spectre_v2 spec_store_bypass swaps
   cpu cores : 32
   siblings : 64
   2 physical ids (chips)
   128 processors (hardware threads)
   physical id 0: core ids 0-31

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

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 2.37.2:
Architecture:                           x86_64
CPU op-mode(s):                         32-bit, 64-bit
Address sizes:                         46 bits physical, 57 bits virtual
Byte Order:                            Little Endian
CPU(s):                                128
On-line CPU(s) list:                   0-127
Vendor ID:                             GenuineIntel
Model name:                            Intel(R) Xeon(R) Gold 6454S
CPU family:                            6
Model:                                 143
Thread(s) per core:                    2
Core(s) per socket:                    32
Socket(s):                             2
Stepping:                              8
CPU max MHz:                            3400.0000
CPU min MHz:                            800.0000
BogoMIPS:                              4400.00
Flags:                                 fpu vme de pse tsc msr pae mca cmov pat pse36
                                      clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdscas
                                      lm constant_tsc 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_dq cat_pq cat_dq_pq
                                      cat_l2 cat_pq_l2 cat_pq_l2_dq
CPU max MHz:                            3400.0000
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 rdscas
                                      lm constant_tsc 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_dq cat_pq cat_dq_pq
                                      cat_l2 cat_pq_l2 cat_pq_l2_dq
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):                           8
NUMA node0 CPU(s):                      0-7,64-71
NUMA node1 CPU(s):                      8-15,72-79
NUMA node2 CPU(s):                      16-23,80-87
NUMA node3 CPU(s):                      24-31,88-95
NUMA node4 CPU(s):                      32-39,96-103
NUMA node5 CPU(s):                      40-47,104-111
NUMA node6 CPU(s):                      48-55,112-119
NUMA node7 CPU(s):                      56-63,120-127
Vulnerability Itlb multihit: Not affected
```
Fujitsu
PRIMERGY RX2540 M7, Intel Xeon Gold 6454S, 2.20GHz

SPECrate®2017_fp_base = 668
SPECrate®2017_fp_peak = Not Run

CPU2017 License: 19
Test Sponsor: Fujitsu
Tested by: Fujitsu

Platform Notes (Continued)

Vulnerability L1tf: Not affected
Vulnerability Mds: Not affected
Vulnerability Meltdown: 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
Vulnerability Srbds: Not affected
Vulnerability Tsx async abort: Not affected

From lscpu --cache:

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<th>ALL-SIZE</th>
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8. numactl --hardware
NOTE: a numactl 'node' might or might not correspond to a physical chip.

available: 8 nodes (0-7)
node 0 cpus: 0-7,64-71
node 0 size: 128600 MB
node 0 free: 127502 MB
node 1 cpus: 8-15,72-79
node 1 size: 129019 MB
node 1 free: 127641 MB
node 2 cpus: 16-23,80-87
node 2 size: 129019 MB
node 2 free: 128459 MB
node 3 cpus: 24-31,88-95
node 3 size: 129019 MB
node 3 free: 128452 MB
node 4 cpus: 32-39,96-103
node 4 size: 129019 MB
node 4 free: 128445 MB
node 5 cpus: 40-47,104-111
node 5 size: 128985 MB
node 5 free: 128416 MB
node 6 cpus: 48-55,112-119
node 6 size: 129019 MB
node 6 free: 128458 MB
node 7 cpus: 56-63,120-127
node 7 size: 128650 MB
node 7 free: 128112 MB
node distances:
node 0 1 2 3 4 5 6 7
0: 10 12 12 12 21 21 21
1: 12 10 12 12 21 21 21
2: 12 12 10 12 21 21 21
3: 12 12 12 10 21 21 21
4: 21 21 21 21 10 12 12
5: 21 21 21 21 12 10 12
6: 21 21 21 21 12 12 10
7: 21 21 21 21 12 12 10

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

9. /proc/meminfo
MemTotal: 1056087804 kB

(Continued on next page)
Fujitsu
PRIMERGY RX2540 M7, Intel Xeon Gold 6454S, 2.20GHz

SPECrate®2017_fp_base = 668
SPECrate®2017_fp_peak = Not Run

CPU2017 License: 19
Test Sponsor: Fujitsu
Tested by: Fujitsu

Platform Notes (Continued)

10. who -r
   run-level 3 Mar 28 17:36

11. Systemd service manager version: systemd 249 (249.11+suse.124.g2bc0b2c447)
    Default Target Status
    multi-user degraded

12. Failed units, from systemctl list-units --state=failed
    UNIT LOAD ACTIVE SUB DESCRIPTION
    * sep5.service loaded failed failed systemd script to load sep5 driver at boot time

13. Services, from systemctl list-unit-files
    STATE UNIT FILES
    enabled YaST2-Firstboot YaST2-Second-Stage apparmor auditd cron display-manager getty@ haveged
    irqbalance iscsi issue-generator kbdsettings kdump kdump--early klog libvirt-d lm2-monitor
    nscd postfix purge-kernels rollback rsyslog sep5 smartd sshd wicked wicked-dhcp4 wicked-dhcp6 wickedd-nanny
    enabled-runtime systemd-remount-fs
    disabled autofs autoyast-initscripts blk-availability boot-sysctl ca-certificates chrony-wait
    chronyd console-getty cups cups-browsed debug-shell dnsmasq ebtables exchange-bmc-os-info
    firewalld gpm grub2-once haveged-switch-root ipmi ipmi-tlv iscsi-init iscsid
    issue-add-ssh-keys kexec-load ksm kvm_stat libvirt-guests lunmask man-db-create multipathd
    nfs nfs-blkmap nfs-server nsserver rdisc rsyslog rsyslogd smartd Generate_opts snmpd snmptrapd strongswan strongswan-starter svnservice
    systemd-boot-check-no-failures systemd-network-generator systemd-nspawn@ systemd-sysvext
    systemd-time-wait-sync systemd-timesyncd tsconf udisks2 virtinterfaced virtnetworkd
    virtiodiskd virtio-virtfs virtproxyd virtsecretd virtstoraged
    indirect psccd virtlockd virtlogd wicked

14. Linux kernel boot-time arguments, from /proc/cmdline
    BOOT_IMAGE=/boot/vmlinuz-5.14.21-150400.22-default
    root=UUID=0fc48b86-32e9-4597-b40a-5581420df75f
    splash=silent
    resume=/dev/disk/by-uuid/82af1018-ea10-4182-81e8-fe09e4c70bd4
    mitigations=auto
    quiet
    security=apparmor
    crashkernel=32M,high
    crashkernel=7M,low

15. cpupower frequency-info
    analyzing CPU 0:
    current policy: frequency should be within 800 MHz and 3.40 GHz.
    The governor "powersave" may decide which speed to use
    within this range.
    boost state support:
    Supported: yes
    Active: yes

16. sysctl
    kernel numa_balancing 1
    kernel.randomize_va_space 2
    vm.compage_proactive 20
    vm.dirty_background_bytes 0

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

Fujitsu
PRIMERGY RX2540 M7, Intel Xeon Gold 6454S, 2.20GHz

SPECrate®2017_fp_base = 668
SPECrate®2017_fp_peak = Not Run

CPU2017 License: 19
Test Sponsor: Fujitsu
Tested by: Fujitsu

Test Date: Mar-2023
Hardware Availability: Mar-2023
Software Availability: Dec-2022

Platform Notes (Continued)

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<td>vm.dirty_writeback_centisecs</td>
<td>500</td>
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<tr>
<td>vm.dirtytime_expire_seconds</td>
<td>43200</td>
</tr>
<tr>
<td>vm.extravg_threshold</td>
<td>500</td>
</tr>
<tr>
<td>vm.min_unmapped_ratio</td>
<td>1</td>
</tr>
<tr>
<td>vm.nr_hugepages</td>
<td>0</td>
</tr>
<tr>
<td>vm.nr_hugepages_mempolicy</td>
<td>0</td>
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<tr>
<td>vm.nr_overcommit_hugepages</td>
<td>0</td>
</tr>
<tr>
<td>vm.swappiness</td>
<td>60</td>
</tr>
<tr>
<td>vm.watermark_boost_factor</td>
<td>15000</td>
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<tr>
<td>vm.watermark_scale_factor</td>
<td>10</td>
</tr>
<tr>
<td>vm.zone_reclaim_mode</td>
<td>0</td>
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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 SP4

20. Disk information
   SPEC is set to: /home/benchmark/speccpu-1.1.9
   /dev/sda3      xfs   741G   38G  703G   6% /home

21. /sys/devices/virtual/dmi/id
   Vendor:         FUJITSU
   Product:        PRIMERGY RX2540 M7
   Product Family: SERVER
   Serial:         EWCEXXXXXX

22. dmidecode
   Additional information from dmidecode 3.2 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:
   3x Samsung M321R8GA0BB0-CQKDG 64 GB 2 rank 4800
   4x Samsung M321R8GA0BB0-CQKMG 64 GB 2 rank 4800

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

9x Samsung M321R8GA0BB0–CQKVG 64 GB 2 rank 4800

23. BIOS

(This section combines info from /sys/devices and dmidecode.)

BIOS Vendor: FUJITSU
BIOS Version: V1.0.0.0 R0.24.1 for D3983-A1x
BIOS Date: 01/06/2023
BIOS Revision: 0.24
Firmware Revision: 2.0

---

**Compiler Version Notes**

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<tr>
<th>C</th>
<th>519.libm_r(base) 538.imagick_r(base) 544.nab_r(base)</th>
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Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2023.0.0 Build 20221201
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<th>C++</th>
<th>508.namd_r(base) 510.parest_r(base)</th>
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<th>C++, C, Fortran</th>
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Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2023.0.0 Build 20221201
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<th>Fortran, C</th>
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Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2023.0.0 Build 20221201

(Continued on next page)
Fujitsu
PRIMERGY RX2540 M7, Intel Xeon Gold 6454S, 2.20GHz

SPECrate®2017_fp_base = 668
SPECrate®2017_fp_peak = Not Run

CPU2017 License: 19
Test Sponsor: Fujitsu
Test Date: Mar-2023
Tested by: Fujitsu
Hardware Availability: Mar-2023
Software Availability: Dec-2022

Compiler Version Notes (Continued)

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Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2023.0.0 Build 20221201
Copyright (C) 1985-2022 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
Fujitsu
PRIMERGY RX2540 M7, Intel Xeon Gold 6454S, 2.20GHz

SPEC CPU®2017 Floating Point Rate Result

SPECrate®2017_fp_base = 668
SPECrate®2017_fp_peak = Not Run

CPU2017 License: 19
Test Sponsor: Fujitsu
Tested by: Fujitsu
Test Date: Mar-2023
Hardware Availability: Mar-2023
Software Availability: Dec-2022

Base Optimization Flags

C benchmarks:
-w -std=c11 -m64 -Wl,-z,muldefs -xsapphirerapids -Ofast -ffast-math -fno-rtti -fno- excepthandlers -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 -fno-rtti -fno-excepthandlers -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 -fno-rtti -fno-excepthandlers
-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 -fno-rtti -fno-excepthandlers
-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 -fno-rtti -fno-excepthandlers
-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 -fno-rtti -fno-excepthandlers
-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-ic2023-official-linux64.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2017/flags/Fujitsu-Platform-Settings-V1.0-SPR-RevB.xml
http://www.spec.org/cpu2017/flags/Intel-ic2023-official-linux64.xml
Fujitsu
PRIMERGY RX2540 M7, Intel Xeon Gold 6454S, 2.20GHz

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CPU2017 License: 19
Test Sponsor: Fujitsu
Tested by: Fujitsu

Test Date: Mar-2023
Hardware Availability: Mar-2023
Software Availability: Dec-2022

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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 2023-03-28 09:52:55-0400.
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