SPEC CPU®2017 Integer Rate Result

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Fujitsu

PRIMERGY RX2540 M7, Intel Xeon Silver 4416+, 2.00GHz

$SPECrate^{®}2017\_int\_base =$ 363
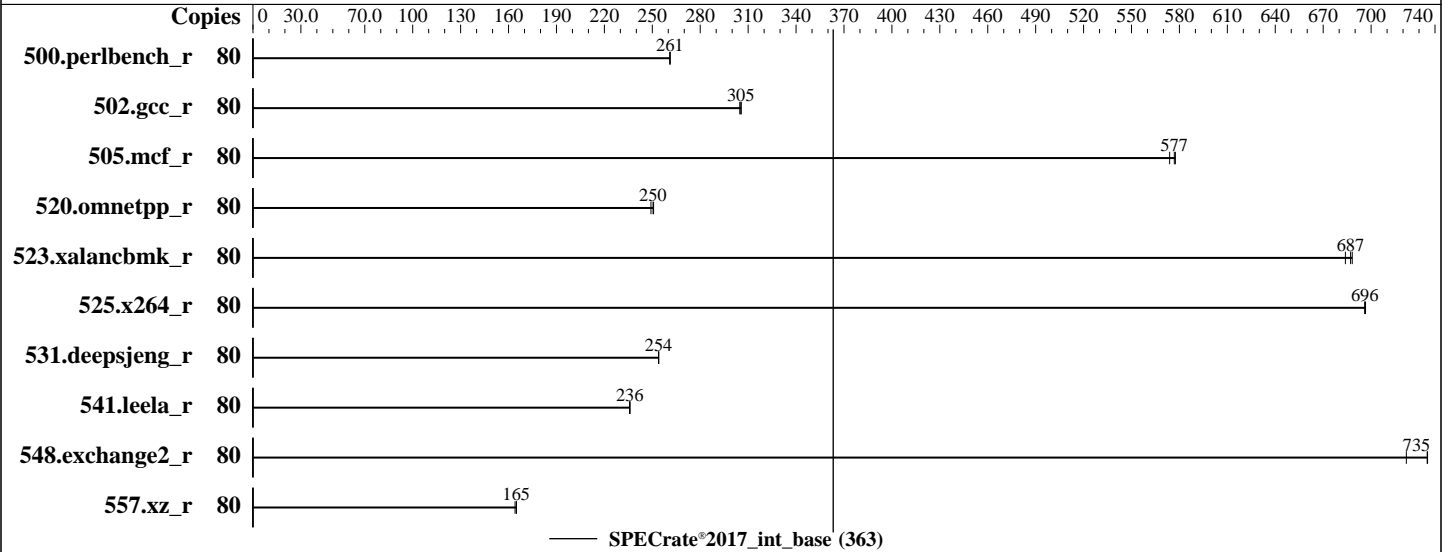
$SPECrate^{®}2017\_int\_peak =$ Not Run

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

Copies scale: 0 30.0 70.0 100 130 160 190 220 250 280 310 340 370 400 430 460 490 520 550 580 610 640 670 700 740

Benchmark	Copies	Result
500.perlbench_r	80	261
502.gcc_r	80	305
505.mcf_r	80	577
520.omnetpp_r	80	250
523.xalancbmk_r	80	687
525.x264_r	80	696
531.deepsjeng_r	80	254
541.leela_r	80	236
548.exchange2_r	80	735
557.xz_r	80	165

—— SPECrate®2017_int_base (363)

Hardware

CPU Name: Intel Xeon Silver 4416+
  Max MHz: 3900
  Nominal: 2000
Enabled: 40 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: 37.5 MB I+D on chip per chip
  Other: None
Memory: 1 TB (16 x 64 GB 2Rx4 PC5-4800B-R, running at 4000)
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: None
Power Management: BIOS set to prefer performance at the cost of additional power usage

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Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
500.perlbench_r	80	488	261	488	261	**488**	**261**							
502.gcc_r	80	372	305	**371**	**305**	371	306							
505.mcf_r	80	225	574	**224**	**577**	224	577							
520.omnetpp_r	80	**419**	**250**	418	251	421	249							
523.xalancbmk_r	80	124	684	**123**	**687**	123	688							
525.x264_r	80	**201**	**696**	201	696	201	697							
531.deepsjeng_r	80	**361**	**254**	361	254	361	254							
541.leela_r	80	**562**	**236**	562	236	561	236							
548.exchange2_r	80	285	735	**285**	**735**	290	722							
557.xz_r	80	**524**	**165**	524	165	527	164							
SPECrate®2017_int_base =	**363**													
SPECrate®2017_int_peak =	**Not Run**													

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

Compiler Notes

```
SPEC has ruled that the compiler used for this result was performing a compilation
that specifically improves the performance of the 523.xalancbmk_r / 623.xalancbmk_s
benchmarks using a priori knowledge of the SPEC code and dataset to perform a
transformation that has narrow applicability.

In order to encourage optimizations that have wide applicability (see rule 1.4
https://www.spec.org/cpu2017/Docs/runrules.html#rule_1.4), SPEC will no longer
publish results using this optimization.

This result is left in the SPEC results database for historical reference.
```

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/lib/ia32:/home/benchmark/spec
    cpu-1.1.9/je5.0.1-32"
MALLOC_CONF = "retain:true"
```

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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.
```

Platform Notes

```
BIOS configuration:
DCU Streamer Prefetcher = Disabled
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 Sat Apr 29 17:29:35 2023

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 (249.11+suse.124.g2bc0b2c447)
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/khugepaged
19. OS release
20. Disk information
21. /sys/devices/virtual/dmi/id
22. dmidecode
23. BIOS
-----------------------------------------------------------

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

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Platform Notes (Continued)

```
 1. uname -a
   Linux localhost 5.14.21-150400.22-default #1 SMP PREEMPT_DYNAMIC Wed May 11 06:57:18 UTC 2022 (49db222/lp)
   x86_64 x86_64 x86_64 GNU/Linux

  ------------------------------------------------------------
 2. w
   17:29:35 up  9:41,  2 users,  load average: 0.35, 26.85, 55.80
   USER     TTY       FROM             LOGIN@   IDLE   JCPU   PCPU WHAT
   root     tty1      -                07:49    9:39m  0.08s  0.08s -bash
   root     pts/0     192.168.1.111    07:49    9:35m  2.37s  0.06s
   /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) 4125367
   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) 4125367
   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=80 -c
     ic2023.0-lin-sapphirerapids-rate-20221201.cfg --define smt-on --define cores=40 --define physicalfirst
     --define invoke_with_interleave --define drop_caches --tune base -o all intrate
   runcpu --nobuild --action validate --define default-platform-flags --define numcopies=80 --configfile
     ic2023.0-lin-sapphirerapids-rate-20221201.cfg --define smt-on --define cores=40 --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/benchmark/speccpu-1.1.9

  ------------------------------------------------------------
 6. /proc/cpuinfo
   model name      : Intel(R) Xeon(R) Silver 4416+
   vendor_id       : GenuineIntel
   cpu family      : 6
   model           : 143
```

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Platform Notes (Continued)

```
      stepping        : 7
      microcode       : 0x2b000130
      bugs            : spectre_v1 spectre_v2 spec_store_bypass swapgs
      cpu cores       : 20
      siblings        : 40
      2 physical ids (chips)
      80 processors (hardware threads)
      physical id 0: core ids 0-19
      physical id 1: core ids 0-19
      physical id 0: apicids 0-39
      physical id 1: apicids 128-167
  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):                 80
  On-line CPU(s) list:    0-79
  Vendor ID:              GenuineIntel
  Model name:             Intel(R) Xeon(R) Silver 4416+
  CPU family:             6
  Model:                  143
  Thread(s) per core:     2
  Core(s) per socket:     20
  Socket(s):              2
  Stepping:               7
  CPU max MHz:            3900.0000
  CPU min MHz:            800.0000
  BogoMIPS:               4000.00
  Flags:                  fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36
                          clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp
                          lm constant_tsc art arch_perfmon pebs bts rep_good nopl xtopology
                          nonstop_tsc cpuid aperfmperf tsc_known_freq pni pclmulqdq dtes64 monitor
                          ds_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm pcid dca sse4_1
                          sse4_2 x2apic movbe popcnt tsc_deadline_timer aes xsave avx f16c rdrand
                          lahf_lm abm 3dnowprefetch cpuid_fault epb cat_l3 cat_l2 cdp_l3
                          invpcid_single intel_ppin cdp_l2 ssbd mba ibrs ibpb stibp ibrs_enhanced
                          tpr_shadow vnmi flexpriority ept vpid ept_ad fsgsbase tsc_adjust bmi1 hle
                          avx2 smep bmi2 erms invpcid rtm cqm rdt_a avx512f avx512dq rdseed adx smap
                          avx512ifma clflushopt clwb intel_pt avx512cd sha_ni avx512bw avx512vl
                          xsaveopt xsavec xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbm_total
                          cqm_mbm_local split_lock_detect avx_vnni avx512_bf16 wbnoinvd dtherm ida
                          arat pln pts hwp hwp_act_window hwp_epp hwp_pkg_req 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:              1.9 MiB (40 instances)
  L1i cache:              1.3 MiB (40 instances)
  L2 cache:               80 MiB (40 instances)
  L3 cache:               75 MiB (2 instances)
  NUMA node(s):           4
  NUMA node0 CPU(s):      0-9,40-49
```

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Platform Notes (Continued)

```
  NUMA node1 CPU(s):           10-19,50-59
  NUMA node2 CPU(s):           20-29,60-69
  NUMA node3 CPU(s):           30-39,70-79
  Vulnerability Itlb multihit:    Not affected
  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:
     NAME ONE-SIZE ALL-SIZE WAYS TYPE         LEVEL  SETS PHY-LINE COHERENCY-SIZE
     L1d      48K     1.9M   12 Data           1    64       1          64
     L1i      32K     1.3M    8 Instruction    1    64       1          64
     L2        2M      80M   16 Unified        2  2048       1          64
     L3     37.5M      75M   15 Unified        3 40960       1          64


-----------------------------------------------------------
8. numactl --hardware
NOTE: a numactl 'node' might or might not correspond to a physical chip.
  available: 4 nodes (0-3)
  node 0 cpus: 0-9,40-49
  node 0 size: 257588 MB
  node 0 free: 256416 MB
  node 1 cpus: 10-19,50-59
  node 1 size: 258042 MB
  node 1 free: 257386 MB
  node 2 cpus: 20-29,60-69
  node 2 size: 258042 MB
  node 2 free: 257378 MB
  node 3 cpus: 30-39,70-79
  node 3 size: 257691 MB
  node 3 free: 256992 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:       1056119020 kB


-----------------------------------------------------------
10. who -r
   run-level 3 Apr 29 07:49


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

(Continued on next page)

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Platform Notes (Continued)

```
        ----------------------------------------------------------
        13. Services, from systemctl list-unit-files
          STATE           UNIT FILES
          enabled         YaST2-Firstboot YaST2-Second-Stage apparmor auditd bluetooth cron display-manager getty@
                          haveged irqbalance iscsi issue-generator kbdsettings kdump kdump-early klog lvm2-monitor
                          nscd postfix purge-kernels rollback rsyslog sep5 smartd sshd wicked wickedd-auto4
                          wickedd-dhcp4 wickedd-dhcp6 wickedd-nanny
          enabled-runtime systemd-remount-fs
          disabled        accounts-daemon appstream-sync-cache autofs autoyast-initscripts blk-availability
                          bluetooth-mesh boot-sysctl ca-certificates chrony-wait chronyd console-getty cups
                          cups-browsed debug-shell ebtables exchange-bmc-os-info firewalld gpm grub2-once
                          haveged-switch-root ipmi ipmievd iscsi-init iscsid iscsiuio issue-add-ssh-keys kexec-load
                          lunmask man-db-create multipathd nfs nfs-blkmap nmb ostree-remount rdisc rpcbind
                          rpmconfigcheck rsyncd rtkit-daemon serial-getty@ smartd_generate_opts smb snmpd snmptrapd
                          speech-dispatcherd systemd-boot-check-no-failures systemd-network-generator systemd-sysext
                          systemd-time-wait-sync systemd-timesyncd udisks2 upower
          indirect        wickedd

        ----------------------------------------------------------
        14. Linux kernel boot-time arguments, from /proc/cmdline
          BOOT_IMAGE=/boot/vmlinuz-5.14.21-150400.22-default
          root=UUID=0e5beafe-73ba-4cb4-b738-5343b4292867
          splash=silent
          mitigations=auto
          quiet
          security=apparmor
          crashkernel=322M,high
          crashkernel=72M,low

        ----------------------------------------------------------
        15. cpupower frequency-info
          analyzing CPU 0:
            current policy: frequency should be within 800 MHz and 3.90 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.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                   60
          vm.watermark_boost_factor       15000
          vm.watermark_scale_factor       10
```

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Platform Notes (Continued)

```
    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 SP4


  ----------------------------------------------------------------
  20. Disk information
  SPEC is set to: /home/benchmark/speccpu-1.1.9
    Filesystem      Type  Size  Used Avail Use% Mounted on
    /dev/sdb2       xfs   1.8T  117G  1.7T   7% /


  ----------------------------------------------------------------
  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:
      2x Samsung M321R8GA0BB0-CQKDG 64 GB 2 rank 4800, configured at 4000
      8x Samsung M321R8GA0BB0-CQKEG 64 GB 2 rank 4800, configured at 4000
      6x Samsung M321R8GA0BB0-CQKVG 64 GB 2 rank 4800, configured at 4000


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

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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 2023.0.0 Build 20221201
Copyright (C) 1985-2022 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 2023.0.0 Build 20221201
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------


==============================================================================
Fortran | 548.exchange2_r(base)
------------------------------------------------------------------------------
Intel(R) Fortran 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`

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`

Fujitsu

PRIMERGY RX2540 M7, Intel Xeon Silver 4416+, 2.00GHz

SPECrate®2017_int_base =   363

SPECrate®2017_int_peak = Not Run

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

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

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/usr/local/intel/compiler/2023.0.0/linux/compiler/lib/intel64_lin
-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/usr/local/intel/compiler/2023.0.0/linux/compiler/lib/intel64_lin
-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/usr/local/intel/compiler/2023.0.0/linux/compiler/lib/intel64_lin
-lqkmalloc
```

The flags files that were used to format this result can be browsed at
```
http://www.spec.org/cpu2017/flags/Fujitsu-Platform-Settings-V1.0-SPR-RevB.html
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
```

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

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