SPEC CPU®2017 Integer Rate Result

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Esconet Technologies Ltd.

Hexadata HDR-RM2386212I
(Intel Xeon Gold 5317,3.00 GHz)

$SPECrate®2017\_int\_base = 203$

$SPECrate®2017\_int\_peak = 211$

CPU2017 License: 6523   **Test Date:** Dec-2023
Test Sponsor: Esconet Technologies Ltd.   **Hardware Availability:** May-2021
Tested by: Esconet Technologies Ltd.   **Software Availability:** Dec-2023

Copies	
500.perlbench_r	48 — 142 / 162
502.gcc_r	48 — 163 / 194
505.mcf_r	48 — 342
520.omnetpp_r	48 — 129
523.xalancbmk_r	48 — 253
525.x264_r	48 — 405 / 432
531.deepsjeng_r	48 — 152
541.leela_r	48 — 151
548.exchange2_r	48 — 448
557.xz_r	48 — 110

—— SPECrate®2017_int_base (203)   ------ SPECrate®2017_int_peak (211)

Hardware

CPU Name: Intel Xeon Gold 5317
 Max MHz: 3600
 Nominal: 3000
Enabled: 24 cores, 2 chips, 2 threads/core
Orderable: 1, 2 chip(s)
Cache L1: 32 KB I + 48 KB D on chip per core
 L2: 1.25 MB I+D on chip per core
 L3: 18 MB I+D on chip per chip
 Other: None
Memory: 1 TB (16 x 64 GB 2Rx4 PC4-3200AA-R, running at 2933)
Storage: 960 GB SSD
Other: None

Software

OS: CentOS Linux 8
 4.18.0-348.7.1.el8_5.x86_64
Compiler: C/C++: Version 2023.2.3 of Intel oneAPI DPC++/C++ Compiler for Linux;
 Fortran: Version 2023.2.3 of Intel Fortran Compiler for Linux;
Parallel: No
Firmware: Version F26 released May-2023
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.

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SPECrate®2017_int_base = 203

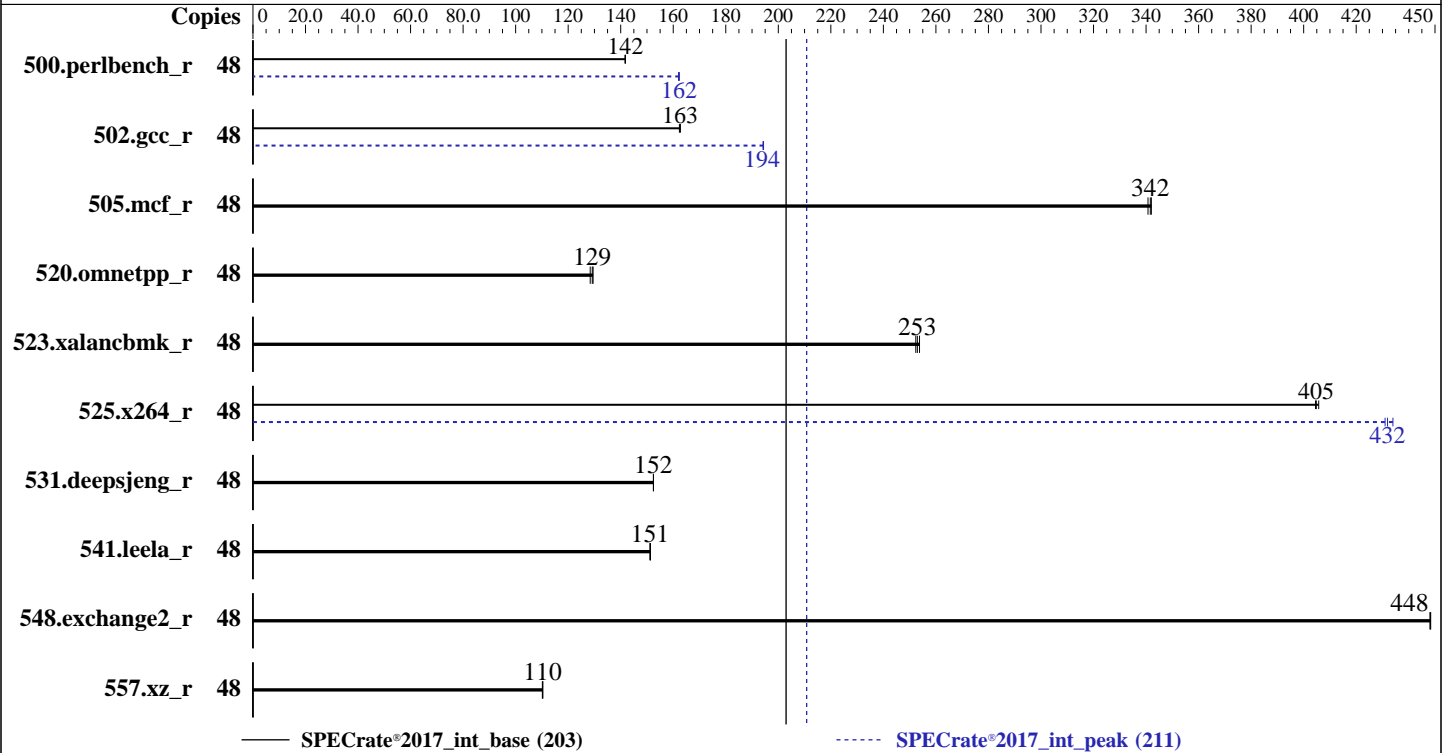SPECrate®2017_int_peak = 211

CPU2017 License: 6523
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Test Date: Dec-2023
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Results Table

Benchmark	Base Copies	Base Seconds	Base Ratio	Base Seconds	Base Ratio	Base Seconds	Base Ratio	Peak Copies	Peak Seconds	Peak Ratio	Peak Seconds	Peak Ratio	Peak Seconds	Peak Ratio
500.perlbench_r	48	539	142	**539**	**142**	539	142	48	472	162	**471**	**162**	471	162
502.gcc_r	48	418	163	419	162	**418**	**163**	48	350	194	350	194	**350**	**194**
505.mcf_r	48	**227**	**342**	228	341	227	342	48	**227**	**342**	228	341	227	342
520.omnetpp_r	48	**488**	**129**	490	128	486	129	48	**488**	**129**	490	128	486	129
523.xalancbmk_r	48	**200**	**253**	200	254	201	252	48	**200**	**253**	200	254	201	252
525.x264_r	48	207	406	208	405	**208**	**405**	48	195	431	**195**	**432**	194	434
531.deepsjeng_r	48	**361**	**152**	361	152	361	152	48	**361**	**152**	361	152	361	152
541.leela_r	48	525	151	**526**	**151**	526	151	48	525	151	**526**	**151**	526	151
548.exchange2_r	48	280	448	281	448	**281**	**448**	48	280	448	281	448	**281**	**448**
557.xz_r	48	**470**	**110**	470	110	471	110	48	**470**	**110**	470	110	471	110
SPECrate®2017_int_base =	**203**													
SPECrate®2017_int_peak =	**211**													

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/ub/cpu17/lib/intel64:/home/ub/cpu17/lib/ia32:/home/ub/cpu17/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>
jemalloc, a general purpose malloc implementation
built with the RedHat Enterprise 7.5, and the system compiler gcc 4.8.5
sources available from jemalloc.net or https://github.com/jemalloc/jemalloc/releases
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)
```

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Test Date: Dec-2023
Hardware Availability: May-2021
Software Availability: Dec-2023

General Notes (Continued)

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 settings:
            Sub NUMA Cluster : 2-Way Clustering
    Virtualization Technology : Disabled

              System Profile : Custom
        CPU Power Management : Maximum Performance
                         C1E : Disabled
                    C States : Autonomous
         Memory Patrol Scrub : Disabled
     Energy Efficiency Policy : Performance
   CPU Interconnect Bus Link
            Power Management : Disabled
          PCI ASPM L1 Link
            Power Management : Disabled

Sysinfo program /home/ub/cpu17/bin/sysinfo
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
running on localhost.localdomain Tue Dec 19 09:21:22 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 239 (239-51.el8_5.2)
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/khugepaged
20. OS release
21. Kernel self-reported vulnerability status, from /sys/devices/system/cpu/vulnerabilities
22. Disk information
23. /sys/devices/virtual/dmi/id
24. dmidecode
25. BIOS
------------------------------------------------------------

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

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Platform Notes (Continued)

```
1. uname -a
   Linux localhost.localdomain 4.18.0-348.7.1.el8_5.x86_64 #1 SMP Wed Dec 22 13:25:12 UTC 2021 x86_64 x86_64
   x86_64 GNU/Linux


   -----------------------------------------------------------
2. w
    09:21:22 up 0 min,  1 user,  load average: 0.20, 0.07, 0.02
   USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU WHAT
   ub       tty1     -                09:20   17.00s  1.08s  0.00s sh
   reportable-ic2023.2.3-lin-core-avx512-rate-smt-on-20231121.sh

   -----------------------------------------------------------
3. Username
   From environment variable $USER:  ub


   -----------------------------------------------------------
4. ulimit -a
   core file size          (blocks, -c) 0
   data seg size           (kbytes, -d) unlimited
   scheduling priority             (-e) 0
   file size               (blocks, -f) unlimited
   pending signals                 (-i) 4125609
   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) 4125609
   virtual memory          (kbytes, -v) unlimited
   file locks                      (-x) unlimited

   -----------------------------------------------------------
5. sysinfo process ancestry
  /usr/lib/systemd/systemd --switched-root --system --deserialize 18
  login -- ub
  -bash
  sh reportable-ic2023.2.3-lin-core-avx512-rate-smt-on-20231121.sh
  runcpu --nobuild --action validate --define default-platform-flags --define numcopies=48 -c
    ic2023.2.3-lin-core-avx512-rate-20231121.cfg --define smt-on --define cores=24 --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=48 --configfile
    ic2023.2.3-lin-core-avx512-rate-20231121.cfg --define smt-on --define cores=24 --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/CPU2017.003/templogs/preenv.intrate.003.0.log --lognum 003.0 --from_runcpu 2
  specperl $SPEC/bin/sysinfo
  $SPEC = /home/ub/cpu17


   -----------------------------------------------------------
6. /proc/cpuinfo
     model name      : Intel(R) Xeon(R) Gold 5317 CPU @ 3.00GHz
     vendor_id       : GenuineIntel
     cpu family      : 6
     model           : 106
     stepping        : 6
     microcode       : 0xd0003a5
     bugs            : spectre_v1 spectre_v2 spec_store_bypass swapgs
```

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Platform Notes (Continued)

```
     cpu cores       : 12
     siblings        : 24
     2 physical ids (chips)
     48 processors (hardware threads)
     physical id 0: core ids 0-11
     physical id 1: core ids 0-11
     physical id 0: apicids 0-23
     physical id 1: apicids 64-87
  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 2.32.1:
     Architecture:        x86_64
     CPU op-mode(s):      32-bit, 64-bit
     Byte Order:          Little Endian
     CPU(s):              48
     On-line CPU(s) list: 0-47
     Thread(s) per core:  2
     Core(s) per socket:  12
     Socket(s):           2
     NUMA node(s):        2
     Vendor ID:           GenuineIntel
     CPU family:          6
     Model:               106
     Model name:          Intel(R) Xeon(R) Gold 5317 CPU @ 3.00GHz
     Stepping:            6
     CPU MHz:             3000.000
     CPU max MHz:         3600.0000
     CPU min MHz:         800.0000
     BogoMIPS:            6000.00
     Virtualization:      VT-x
     L1d cache:           48K
     L1i cache:           32K
     L2 cache:            1280K
     L3 cache:            18432K
     NUMA node0 CPU(s):   0-11,24-35
     NUMA node1 CPU(s):   12-23,36-47
     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 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 invpcid_single intel_ppin ssbd mba ibrs ibpb
                          stibp ibrs_enhanced tpr_shadow vnmi flexpriority ept vpid ept_ad fsgsbase tsc_adjust
                          sgx bmi1 hle avx2 smep bmi2 erms invpcid 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
                          wbnoinvd dtherm ida arat pln pts hwp hwp_act_window hwp_epp hwp_pkg_req avx512vbmi
                          umip pku ospke avx512_vbmi2 gfni vaes vpclmulqdq avx512_vnni avx512_bitalg tme
                          avx512_vpopcntdq la57 rdpid sgx_lc fsrm md_clear pconfig flush_l1d arch_capabilities

    ------------------------------------------------------------
    8. numactl --hardware
  NOTE: a numactl 'node' might or might not correspond to a physical chip.
     available: 2 nodes (0-1)
     node 0 cpus: 0-11,24-35
     node 0 size: 515387 MB
```

(Continued on next page)

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Platform Notes (Continued)

```
  node 0 free: 512821 MB
  node 1 cpus: 12-23,36-47
  node 1 size: 516050 MB
  node 1 free: 513083 MB
  node distances:
  node   0   1
    0:  10  20
    1:  20  10


  -----------------------------------------------------------
9. /proc/meminfo
   MemTotal:       1056193072 kB


  -----------------------------------------------------------
10. who -r
   run-level 3 Dec 19 09:20


  -----------------------------------------------------------
11. Systemd service manager version: systemd 239 (239-51.el8_5.2)
   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    NetworkManager NetworkManager-dispatcher NetworkManager-wait-online auditd autovt@ crond
              firewalld getty@ import-state irqbalance kdump loadmodules lvm2-monitor mdmonitor microcode
              nis-domainname rsyslog selinux-autorelabel-mark sep5 sshd sssd syslog tuned udisks2
   disabled   blk-availability console-getty cpupower debug-shell ebtables iprdump iprinit iprupdate kvm_stat
              man-db-restart-cache-update nftables rdisc serial-getty@ sshd-keygen@ systemd-resolved tcsd
   indirect   sssd-autofs sssd-kcm sssd-nss sssd-pac sssd-pam sssd-ssh sssd-sudo


  -----------------------------------------------------------
14. Linux kernel boot-time arguments, from /proc/cmdline
   BOOT_IMAGE=(hd1,gpt2)/vmlinuz-4.18.0-348.7.1.el8_5.x86_64
   root=/dev/mapper/cl-root
   ro
   crashkernel=auto
   resume=/dev/mapper/cl-swap
   rd.lvm.lv=cl/root
   rd.lvm.lv=cl/swap
   rhgb
   quiet


  -----------------------------------------------------------
15. cpupower frequency-info
   analyzing CPU 0:
     current policy: frequency should be within 800 MHz and 3.60 GHz.
                     The governor "performance" may decide which speed to use
                     within this range.
     boost state support:
       Supported: yes
       Active: yes


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

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Platform Notes (Continued)

```
  16. tuned-adm active
    Current active profile: throughput-performance


    ------------------------------------------------------------
  17. sysctl
    kernel.numa_balancing           1
    kernel.randomize_va_space       2
    vm.compaction_proactiveness     0
    vm.dirty_background_bytes       0
    vm.dirty_background_ratio       10
    vm.dirty_bytes                  0
    vm.dirty_expire_centisecs       3000
    vm.dirty_ratio                  40
    vm.dirty_writeback_centisecs    500
    vm.dirtytime_expire_seconds     43200
    vm.extfrag_threshold            500
    vm.min_unmapped_ratio           1
    vm.nr_hugepages                 2048
    vm.nr_hugepages_mempolicy       2048
    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
    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_swap           64
    pages_to_scan           4096
    scan_sleep_millisecs    10000


    ------------------------------------------------------------
  20. OS release
    From /etc/*-release /etc/*-version
    os-release     CentOS Linux 8
    redhat-release CentOS Linux release 8.5.2111
    system-release CentOS Linux release 8.5.2111


    ------------------------------------------------------------
  21. Kernel self-reported vulnerability status, from /sys/devices/system/cpu/vulnerabilities
    itlb_multihit        Not affected
    l1tf                 Not affected
    mds                  Not affected
    meltdown             Not affected
    spec_store_bypass    Mitigation: Speculative Store Bypass disabled via prctl and seccomp
    spectre_v1           Mitigation: usercopy/swapgs barriers and __user pointer sanitization
    spectre_v2           Mitigation: Enhanced IBRS, IBPB: conditional, RSB filling
    srbds                Not affected
    tsx_async_abort      Not affected
  For more information, see the Linux documentation on hardware vulnerabilities, for example
```

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Platform Notes (Continued)

```
       https://www.kernel.org/doc/html/latest/admin-guide/hw-vuln/index.html

    ----------------------------------------------------------------
    22. Disk information
    SPEC is set to: /home/ub/cpu17
      Filesystem          Type  Size  Used Avail Use% Mounted on
      /dev/mapper/cl-home xfs   819G   84G  735G  11% /home


    ----------------------------------------------------------------
    23. /sys/devices/virtual/dmi/id
       Vendor:          ESCONET TECHNOLOGIES LTD.
       Product:         HEXADATA
       Product Family: Server


    ----------------------------------------------------------------
    24. 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:
        16x Samsung M393A8G40AB2-CWE 64 GB 2 rank 3200, configured at 2933



    ----------------------------------------------------------------
    25. BIOS
    (This section combines info from /sys/devices and dmidecode.)
       BIOS Vendor:      GIGABYTE
       BIOS Version:     F26
       BIOS Date:        05/29/2023
       BIOS Revision:    5.22
```

Compiler Version Notes

```
==========================================================================================
C        | 502.gcc_r(peak)
------------------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on IA-32, Version 2023.2.3 Build x
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------------------


==========================================================================================
C        | 500.perlbench_r(base, peak) 502.gcc_r(base) 505.mcf_r(base, peak) 525.x264_r(base, peak)
         | 557.xz_r(base, peak)
------------------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2023.2.3 Build x
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------------------


==========================================================================================
C        | 502.gcc_r(peak)
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==========================================================================================
C        | 500.perlbench_r(base, peak) 502.gcc_r(base) 505.mcf_r(base, peak) 525.x264_r(base, peak)
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```
-------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2023.2.3 Build x
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.
-------------------------------------------------------------------------------


===============================================================================
C++      | 520.omnetpp_r(base, peak) 523.xalancbmk_r(base, peak) 531.deepsjeng_r(base, peak)
         | 541.leela_r(base, peak)
-------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2023.2.3 Build x
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.
-------------------------------------------------------------------------------


===============================================================================
Fortran | 548.exchange2_r(base, peak)
-------------------------------------------------------------------------------
Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2023.2.3 Build x
Copyright (C) 1985-2023 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`

https://www.spec.org/

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Test Date: Dec-2023

Hardware Availability: May-2021

Software Availability: Dec-2023

Base Optimization Flags

C benchmarks:
```
-w -std=c11 -m64 -Wl,-z,muldefs -xCORE-AVX512 -O3 -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-L/home/specdev/new_compilers/ic2023.2.3/compiler/lib/intel64_lin
-lqkmalloc
```

C++ benchmarks:
```
-w -std=c++14 -m64 -Wl,-z,muldefs -xCORE-AVX512 -O3 -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-L/home/specdev/new_compilers/ic2023.2.3/compiler/lib/intel64_lin
-lqkmalloc
```

Fortran benchmarks:
```
-w -m64 -Wl,-z,muldefs -xCORE-AVX512 -O3 -ffast-math -flto
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-nostandard-realloc-lhs -align array32byte -auto
-L/home/specdev/new_compilers/ic2023.2.3/compiler/lib/intel64_lin
-lqkmalloc
```

Peak Compiler Invocation

C benchmarks:
```
icx
```

C++ benchmarks:
```
icpx
```

Fortran benchmarks:
```
ifx
```

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`

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SPECrate®2017_int_base = 203

Hexadata HDR-RM2386212I
(Intel Xeon Gold 5317,3.00 GHz)

SPECrate®2017_int_peak = 211

CPU2017 License: 6523　　　　　　　　　　　　　　　**Test Date:**　　　　　　　Dec-2023
Test Sponsor:　Esconet Technologies Ltd.　　　　　　**Hardware Availability:** May-2021
Tested by:　　　Esconet Technologies Ltd.　　　　　　**Software Availability:**　Dec-2023

Peak Portability Flags (Continued)

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/home/specdev/new_compilers/ic2023.2.3/compiler/lib/intel64_lin`
`-lqkmalloc`

502.gcc_r: `-m32`
`-L/home/specdev/new_compilers/ic2023.2.3/compiler/lib/ia32_lin`
`-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 -xCORE-AVX512 -Ofast`
`-ffast-math -flto -mfpmath=sse -funroll-loops`
`-qopt-mem-layout-trans=4 -fno-alias`
`-L/home/specdev/new_compilers/ic2023.2.3/compiler/lib/intel64_lin`
`-lqkmalloc`

557.xz_r: basepeak = yes

C++ benchmarks:

520.omnetpp_r: basepeak = yes

523.xalancbmk_r: basepeak = yes

531.deepsjeng_r: basepeak = yes

541.leela_r: basepeak = yes

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Hexadata HDR-RM2386212I
(Intel Xeon Gold 5317,3.00 GHz)

SPECrate®2017_int_base = 203

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Peak Optimization Flags (Continued)

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/Hexadata-ic2023p2-official-linux64.html
http://www.spec.org/cpu2017/flags/Hexadata-Platform-Flags-Intel-ICX-rev1.5.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2017/flags/Hexadata-ic2023p2-official-linux64.xml
http://www.spec.org/cpu2017/flags/Hexadata-Platform-Flags-Intel-ICX-rev1.5.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 2023-12-18 22:51:22-0500.
Report generated on 2024-01-16 17:16:44 by CPU2017 PDF formatter v6716.
Originally published on 2024-01-16.