SPEC CPU®2017 Integer Rate Result

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Supermicro

Microcloud SuperServer SYS-530MT-H8TNR
(X12STD-F , Intel Xeon E-2388G)

$SPECrate®2017\_int\_base = 70.2$

$SPECrate®2017\_int\_peak = 73.4$
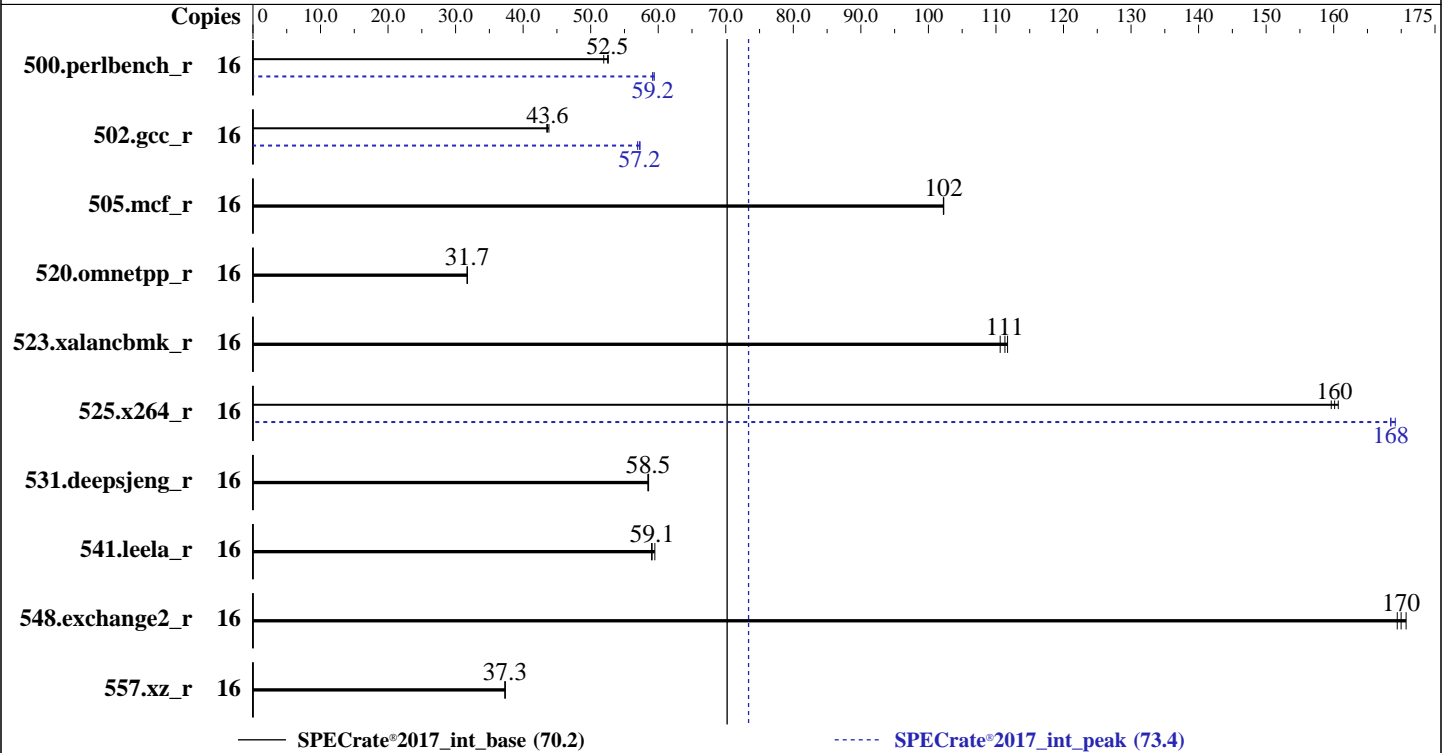
CPU2017 License: 001176　　　　　　**Test Date:** Aug-2023
Test Sponsor: Supermicro　　　　　　**Hardware Availability:** Sep-2021
Tested by: Supermicro　　　　　　**Software Availability:** Dec-2022

Benchmark	Copies	base	peak
500.perlbench_r	16	52.5	59.2
502.gcc_r	16	43.6	57.2
505.mcf_r	16	102	
520.omnetpp_r	16	31.7	
523.xalancbmk_r	16	111	
525.x264_r	16	160	168
531.deepsjeng_r	16	58.5	
541.leela_r	16	59.1	
548.exchange2_r	16	170	
557.xz_r	16	37.3	

SPECrate®2017_int_base (70.2)　　　SPECrate®2017_int_peak (73.4)

Hardware

CPU Name: Intel Xeon E-2388G
 Max MHz: 5100
 Nominal: 3200
Enabled: 8 cores, 1 chip, 2 threads/core
Orderable: 1 chip
Cache L1: 32 KB I + 48 KB D on chip per core
 L2: 512 KB I+D on chip per core
 L3: 16 MB I+D on chip per chip
 Other: None
Memory: 128 GB (4 x 32 GB 2Rx8 PC4-3200AA-E)
Storage: 1 x 128 GB M.2 NVMe SSD
Other: None

Software

OS: SUSE Linux Enterprise Server 15 SP4
Kernel 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: Version 1.4 released Feb-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: Default

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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	16	484	52.6	**485**	**52.5**	491	51.9	16	430	59.2	429	59.4	**430**	**59.2**
502.gcc_r	16	517	43.8	**520**	**43.6**	521	43.5	16	398	56.9	**396**	**57.2**	395	57.3
505.mcf_r	16	**253**	**102**	253	102	253	102	16	**253**	**102**	253	102	253	102
520.omnetpp_r	16	661	31.7	**662**	**31.7**	662	31.7	16	661	31.7	**662**	**31.7**	662	31.7
523.xalancbmk_r	16	151	112	**152**	**111**	153	111	16	151	112	**152**	**111**	153	111
525.x264_r	16	175	160	**175**	**160**	174	161	16	166	168	166	169	**166**	**168**
531.deepsjeng_r	16	313	58.6	314	58.5	**313**	**58.5**	16	313	58.6	314	58.5	**313**	**58.5**
541.leela_r	16	**448**	**59.1**	445	59.5	449	59.0	16	**448**	**59.1**	445	59.5	449	59.0
548.exchange2_r	16	246	171	**247**	**170**	247	169	16	246	171	**247**	**170**	247	169
557.xz_r	16	463	37.3	**463**	**37.3**	463	37.3	16	463	37.3	**463**	**37.3**	463	37.3
SPECrate®2017_int_base =		**70.2**											
SPECrate®2017_int_peak =		**73.4**											

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 taskset mechanism was used to bind copies to processors. The config file option 'submit'
was used to generate taskset 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/cpu2017/lib/intel64:/home/cpu2017/lib/ia32:/home/cpu2017/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

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.
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
```

Platform Notes

```
Sysinfo program /home/cpu2017/bin/sysinfo
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
running on 135-179-102 Tue Aug  1 08:40:56 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. Services, from systemctl list-unit-files
13. Linux kernel boot-time arguments, from /proc/cmdline
14. cpupower frequency-info
15. sysctl
16. /sys/kernel/mm/transparent_hugepage
17. /sys/kernel/mm/transparent_hugepage/khugepaged
18. OS release
19. Disk information
20. /sys/devices/virtual/dmi/id
21. dmidecode
22. BIOS
-----------------------------------------------------------


-----------------------------------------------------------
1. uname -a
  Linux 135-179-102 5.14.21-150400.22-default #1 SMP PREEMPT_DYNAMIC Wed May 11 06:57:18 UTC 2022 (49db222)
  x86_64 x86_64 x86_64 GNU/Linux

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

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Platform Notes (Continued)

```
  2. w
    08:40:56 up 51 min,  2 users,  load average: 0.12, 0.05, 0.01
    USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU WHAT
    root     tty1     -                07:52    2.00s  1.06s  0.04s -bash
    root     tty2     -                08:03   16.00s  0.04s  0.04s -bash


  ------------------------------------------------------------
  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) 514708
    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) 514708
    virtual memory          (kbytes, -v) unlimited
    file locks                      (-x) unlimited


  ------------------------------------------------------------
  5. sysinfo process ancestry
   /usr/lib/systemd/systemd --switched-root --system --deserialize 30
   login -- root
    -bash
    -bash
   runcpu --nobuild --action validate --define default-platform-flags --define numcopies=16 -c
     ic2023.0-lin-core-avx512-rate-20221201.cfg --define smt-on --define cores=8 --define physicalfirst
     --define no-numa --tune base,peak -o all --define drop_caches intrate
   runcpu --nobuild --action validate --define default-platform-flags --define numcopies=16 --configfile
     ic2023.0-lin-core-avx512-rate-20221201.cfg --define smt-on --define cores=8 --define physicalfirst
     --define no-numa --tune base,peak --output_format all --define drop_caches --nopower --runmode rate --tune
     base:peak --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/cpu2017


  ------------------------------------------------------------
  6. /proc/cpuinfo
    model name      : Intel(R) Xeon(R) E-2388G CPU @ 3.20GHz
    vendor_id       : GenuineIntel
    cpu family      : 6
    model           : 167
    stepping        : 1
    microcode       : 0x57
    bugs            : spectre_v1 spectre_v2 spec_store_bypass swapgs
    cpu cores       : 8
    siblings        : 16
    1 physical ids (chips)
    16 processors (hardware threads)
    physical id 0: core ids 0-7
```

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Platform Notes (Continued)

```
      physical id 0: apicids 0-15
   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:             39 bits physical, 48 bits virtual
   Byte Order:                Little Endian
   CPU(s):                    16
   On-line CPU(s) list:       0-15
   Vendor ID:                 GenuineIntel
   Model name:                Intel(R) Xeon(R) E-2388G CPU @ 3.20GHz
   CPU family:                6
   Model:                     167
   Thread(s) per core:        2
   Core(s) per socket:        8
   Socket(s):                 1
   Stepping:                  1
   Frequency boost:           enabled
   CPU max MHz:               3201.0000
   CPU min MHz:               800.0000
   BogoMIPS:                  6384.00
   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 sse4_1 sse4_2
                              x2apic movbe popcnt tsc_deadline_timer aes xsave avx f16c rdrand lahf_lm
                              abm 3dnowprefetch cpuid_fault epb invpcid_single ssbd ibrs ibpb stibp
                              ibrs_enhanced tpr_shadow vnmi flexpriority ept vpid ept_ad fsgsbase
                              tsc_adjust bmi1 avx2 smep bmi2 erms invpcid mpx avx512f avx512dq rdseed
                              adx smap avx512ifma clflushopt intel_pt avx512cd sha_ni avx512bw avx512vl
                              xsaveopt xsavec xgetbv1 xsaves dtherm ida arat pln pts avx512vbmi umip pku
                              ospke avx512_vbmi2 gfni vaes vpclmulqdq avx512_vnni avx512_bitalg
                              avx512_vpopcntdq rdpid fsrm md_clear flush_l1d arch_capabilities
   Virtualization:            VT-x
   L1d cache:                 384 KiB (8 instances)
   L1i cache:                 256 KiB (8 instances)
   L2 cache:                  4 MiB (8 instances)
   L3 cache:                  16 MiB (1 instance)
   NUMA node(s):              1
   NUMA node0 CPU(s):         0-15
   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      384K   12 Data          1    64        1            64
      L1i      32K      256K    8 Instruction   1    64        1            64
```

(Continued on next page)

Standard Performance Evaluation Corporation (info@spec.org)
https://www.spec.org/

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Platform Notes (Continued)

```
      L2       512K     4M    8 Unified     2 1024    1           64
      L3        16M    16M   16 Unified     3 16384   1           64


  ---------------------------------------------------------------
8. numactl --hardware
NOTE: a numactl 'node' might or might not correspond to a physical chip.
  available: 1 nodes (0)
  node 0 cpus: 0-15
  node 0 size: 128701 MB
  node 0 free: 128098 MB
  node distances:
  node   0
    0:  10


  ---------------------------------------------------------------
9. /proc/meminfo
   MemTotal:       131789964 kB


  ---------------------------------------------------------------
10. who -r
   run-level 3 Aug 1 07:50


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


  ---------------------------------------------------------------
12. Services, from systemctl list-unit-files
   STATE             UNIT FILES
   enabled           YaST2-Firstboot YaST2-Second-Stage apparmor auditd cron display-manager getty@ haveged
                     irqbalance issue-generator kbdsettings klog lvm2-monitor nscd nvmefc-boot-connections
                     postfix purge-kernels rollback rsyslog smartd sshd wicked wickedd-auto4 wickedd-dhcp4
                     wickedd-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 ebtables exchange-bmc-os-info
                     firewalld gpm grub2-once haveged-switch-root ipmi ipmievd issue-add-ssh-keys kexec-load
                     lunmask man-db-create multipathd nfs nfs-blkmap nvmf-autoconnect rdisc rpcbind
                     rpmconfigcheck rsyncd serial-getty@ smartd_generate_opts snmpd snmptrapd
                     systemd-boot-check-no-failures systemd-network-generator systemd-sysext systemd-sysctl
                     systemd-time-wait-sync systemd-timesyncd tcsd udisks2
   indirect          wickedd


  ---------------------------------------------------------------
13. Linux kernel boot-time arguments, from /proc/cmdline
   BOOT_IMAGE=/boot/vmlinuz-5.14.21-150400.22-default
   root=UUID=4f2b8917-d4b6-4b8d-ac40-54e299d9c7ea
   splash=silent
   mitigations=auto
   quiet
   security=apparmor


  ---------------------------------------------------------------
14. cpupower frequency-info
   analyzing CPU 0:
     current policy: frequency should be within 800 MHz and 3.20 GHz.
                     The governor "ondemand" may decide which speed to use
                     within this range.
     boost state support:
```

<div align="center">(Continued on next page)</div>

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Platform Notes (Continued)

```
        Supported: yes
        Active: yes


      ------------------------------------------------------------
      15. sysctl
        kernel.numa_balancing            0
        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
        vm.zone_reclaim_mode              0


      ------------------------------------------------------------
      16. /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


      ------------------------------------------------------------
      17. /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


      ------------------------------------------------------------
      18. OS release
        From /etc/*-release /etc/*-version
        os-release SUSE Linux Enterprise Server 15 SP4


      ------------------------------------------------------------
      19. Disk information
      SPEC is set to: /home/cpu2017
        Filesystem     Type  Size  Used Avail Use% Mounted on
        /dev/nvme0n1p2 xfs   117G   23G   95G  20% /


      ------------------------------------------------------------
      20. /sys/devices/virtual/dmi/id
          Vendor:        Supermicro
          Product:       Super Server
          Serial:        0123456789


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

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Platform Notes (Continued)

```
  21. 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:
      4x Micron Technology 18ADF4G72AZ-3G2B3 32 GB 2 rank 3200


    ------------------------------------------------------------
  22. BIOS
  (This section combines info from /sys/devices and dmidecode.)
    BIOS Vendor:      American Megatrends International, LLC.
    BIOS Version:     1.4
    BIOS Date:        02/13/2023
    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 2023.0.0 Build 20221201
Copyright (C) 1985-2022 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 2023.0.0 Build 20221201
Copyright (C) 1985-2022 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)
       | 557.xz_r(base, peak)
----------------------------------------------------------------------------------------------
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, 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 2023.0.0 Build 20221201
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.
----------------------------------------------------------------------------------------------


==============================================================================================
Fortran | 548.exchange2_r(base, peak)
```

(Continued on next page)

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

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

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Standard Performance Evaluation Corporation (info@spec.org)   https://www.spec.org/

Supermicro

Microcloud SuperServer SYS-530MT-H8TNR
(X12STD-F , Intel Xeon E-2388G)

SPECrate®2017_int_base = 70.2

SPECrate®2017_int_peak = 73.4

Base Optimization Flags (Continued)

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/usr/local/intel/compiler/2023.0.0/linux/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`
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)

(Continued on next page)

Supermicro

Microcloud SuperServer SYS-530MT-H8TNR
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SPECrate®2017_int_base = 70.2

SPECrate®2017_int_peak = 73.4

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: Aug-2023
Hardware Availability: Sep-2021
Software Availability: Dec-2022

Peak Optimization Flags (Continued)

500.perlbench_r (continued):
`-flto -Ofast -xCORE-AVX512 -ffast-math -mfpmath=sse`
`-funroll-loops -qopt-mem-layout-trans=4`
`-fno-strict-overflow`
`-L/usr/local/intel/compiler/2023.0.0/linux/compiler/lib/intel64_lin`
`-lqkmalloc`

502.gcc_r: `-m32`
`-L/usr/local/intel/compiler/2023.0.0/linux/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/usr/local/intel/compiler/2023.0.0/linux/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`

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-ic2023-official-linux64_revB.html
http://www.spec.org/cpu2017/flags/Supermicro-Platform-Settings-V1.2-RKL-revB.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2017/flags/Intel-ic2023-official-linux64_revB.xml
http://www.spec.org/cpu2017/flags/Supermicro-Platform-Settings-V1.2-RKL-revB.xml

SPEC CPU®2017 Integer Rate Result

Supermicro

Microcloud SuperServer SYS-530MT-H8TNR
(X12STD-F , Intel Xeon E-2388G)

SPECrate®2017_int_base = 70.2

SPECrate®2017_int_peak = 73.4

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: Aug-2023
Hardware Availability: Sep-2021
Software Availability: Dec-2022

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

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