SPEC CPU®2017 Integer Rate Result

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Cisco Systems

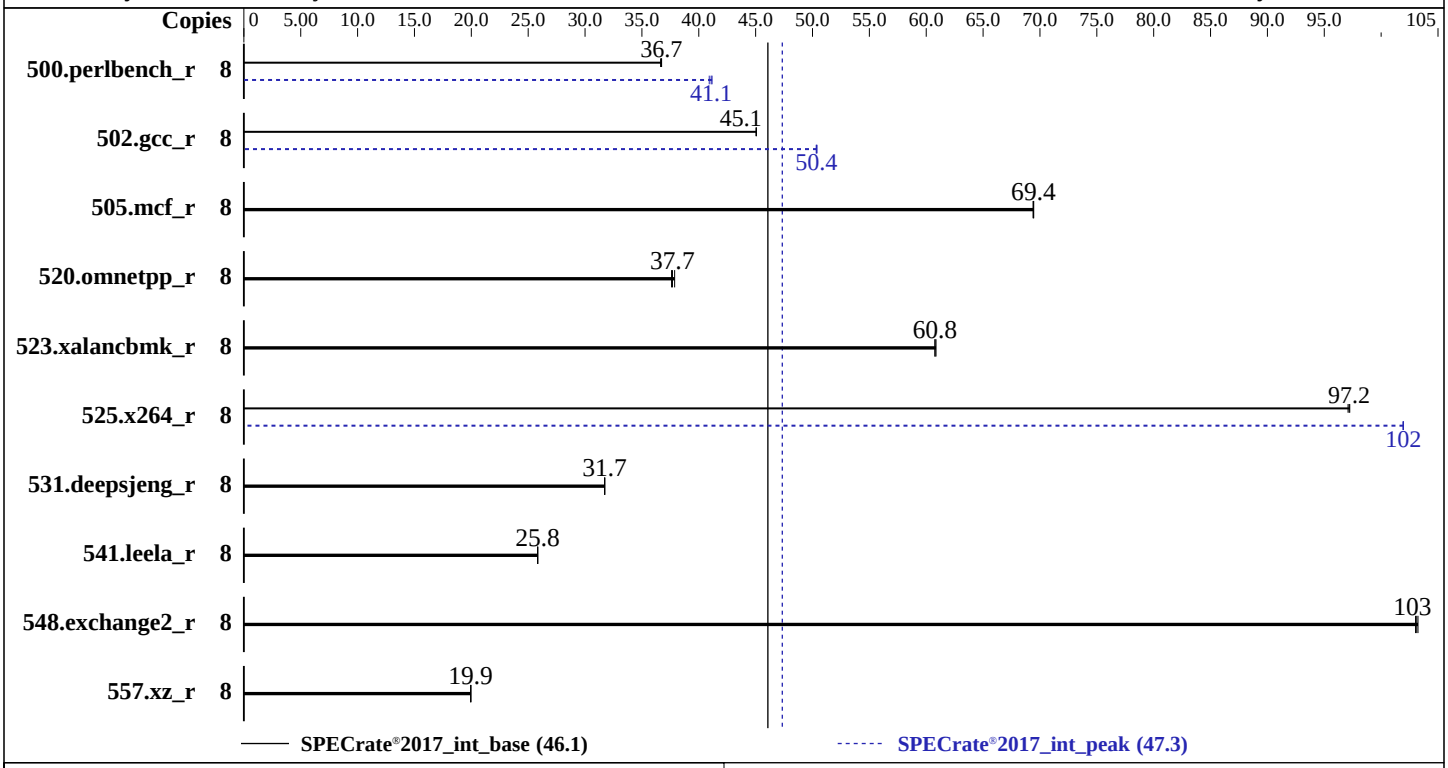
Cisco UCS C240 M7 (Intel Xeon Bronze 3508U, 2.10GHz)

SPECrate®2017_int_base = 46.1

SPECrate®2017_int_peak = 47.3

CPU2017 License: 9019
Test Sponsor: Cisco Systems
Tested by: Cisco Systems

Test Date: Apr-2024
Hardware Availability: Feb-2024
Software Availability: Dec-2023



Hardware

CPU Name:	Intel Xeon Bronze 3508U
Max MHz:	2200
Nominal:	2100
Enabled:	8 cores, 1 chip
Orderable:	1 Chips
Cache L1:	32 KB I + 48 KB D on chip per core
L2:	2 MB I+D on chip per core
L3:	22.5 MB I+D on chip per chip
Other:	None
Memory:	512 GB (8 x 64 GB 2Rx4 PC5-5600B-R, running at 4400)
Storage:	1 x 960 GB M.2 SSD SATA
Other:	CPU Cooling: Air

Software

OS:	SUSE Linux Enterprise Server 15 SP5 5.14.21-150500.53-default
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 4.3.3a released Jan-2024
File System:	btrfs
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 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	8	348	36.6	**347**	**36.7**	347	36.7	8	**310**	**41.1**	311	40.9	309	41.2
502.gcc_r	8	251	45.1	251	45.0	**251**	**45.1**	8	**225**	**50.4**	225	50.4	225	50.3
505.mcf_r	8	186	69.4	**186**	**69.4**	186	69.4	8	186	69.4	**186**	**69.4**	186	69.4
520.omnetpp_r	8	279	37.6	**279**	**37.7**	277	37.9	8	279	37.6	**279**	**37.7**	277	37.9
523.xalancbmk_r	8	**139**	**60.8**	139	60.9	139	60.8	8	**139**	**60.8**	139	60.9	139	60.8
525.x264_r	8	144	97.2	**144**	**97.2**	144	97.1	8	**137**	**102**	137	102	137	102
531.deepsjeng_r	8	**289**	**31.7**	289	31.7	289	31.7	8	**289**	**31.7**	289	31.7	289	31.7
541.leela_r	8	513	25.8	513	25.8	**513**	**25.8**	8	513	25.8	513	25.8	**513**	**25.8**
548.exchange2_r	8	203	103	203	103	**203**	**103**	8	203	103	203	103	**203**	**103**
557.xz_r	8	**433**	**19.9**	433	19.9	433	20.0	8	**433**	**19.9**	433	19.9	433	20.0

SPECrate®2017_int_base = 46.1

SPECrate®2017_int_peak = 47.3

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/cpu2017/lib/intel64:/home/cpu2017/lib/ia32:/home/cpu2017/je5.0.1-32"
MALLOC_CONF = "retain:true"
```

General Notes

```
 Binaries compiled on a system with 2x Intel Xeon Platinum 8280M CPU + 384GB RAM
 memory using Red Hat Enterprise Linux 8.4
 Transparent Huge Pages enabled by default
 Prior to runcpu invocation
 Filesystem page cache synced and cleared with:
 sync; echo 3>       /proc/sys/vm/drop_caches
 runcpu command invoked through numactl i.e.:
 numactl --interleave=all runcpu <etc>
NA: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown)
is mitigated in the system as tested and documented.
Yes: The test sponsor attests, as of date of publication, that CVE-2017-5753 (Spectre variant 1)
is mitigated in the system as tested and documented.
Yes: The test sponsor attests, as of date of publication, that CVE-2017-5715 (Spectre variant 2)
is mitigated in the system as tested and documented.
 jemalloc, a general purpose malloc implementation
```

(Continued on next page)

General Notes (Continued)

```
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

```
BIOS Settings:
Sub NUMA Clustering set to Enable SNC2(2-clusters)
ADDDC Sparing set to Disabled
DCU Streamer Prefetch set to Disabled
Enhanced CPU performance set to Auto
LLC Dead Line set to Disabled
Processor C6 Report set to Enabled


 Sysinfo program /home/cpu2017/bin/sysinfo
 Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
 running on localhost Wed Apr 10 18:40:15 2024

 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 (249.16+suse.171.gdad0071f15)
 12. Failed units, from systemctl list-units --state=failed
 13. Services, from systemctl list-unit-files
 14. Linux kernel boot-time arguments, from /proc/cmdline
 15. cpupower frequency-info
 16. 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
 ------------------------------------------------------------

 ------------------------------------------------------------
 1. uname -a
   Linux localhost 5.14.21-150500.53-default #1 SMP PREEMPT_DYNAMIC Wed May 10 07:56:26 UTC 2023 (b630043)
   x86_64 x86_64 x86_64 GNU/Linux

 ------------------------------------------------------------
 2. w
    18:40:15 up 6 min,  1 user,  load average: 0.00, 0.03, 0.02
   USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU WHAT
   root     tty1     -                18:38    7.00s  1.57s  0.09s -bash
```

(Continued on next page)

Platform Notes (Continued)

```
------------------------------------------------------------
3. Username
  From environment variable $USER:  root

------------------------------------------------------------
4. ulimit -a
  core file size          (blocks, -c) unlimited
  data seg size           (kbytes, -d) unlimited
  scheduling priority             (-e) 0
  file size               (blocks, -f) unlimited
  pending signals                 (-i) 2062684
  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) 2062684
  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=8 -c
   ic2023.2.3-lin-sapphirerapids-rate-20231121.cfg --reportable --iterations 3 --define smt-on --define
   cores=4 --define physicalfirst --define invoke_with_interleave --define drop_caches --tune all -o all
   intrate
 runcpu --nobuild --action validate --define default-platform-flags --define numcopies=8 --configfile
   ic2023.2.3-lin-sapphirerapids-rate-20231121.cfg --reportable --iterations 3 --define smt-on --define
   cores=4 --define physicalfirst --define invoke_with_interleave --define drop_caches --tune all
   --output_format all --nopower --runmode rate --tune base:peak --size refrate intrate --nopreenv
   --note-preenv --logfile $SPEC/tmp/CPU2017.076/templogs/preenv.intrate.076.0.log --lognum 076.0
   --from_runcpu 2
 specperl $SPEC/bin/sysinfo
$SPEC = /home/cpu2017

------------------------------------------------------------
6. /proc/cpuinfo
    model name      : INTEL(R) XEON(R) BRONZE 3508U
    vendor_id       : GenuineIntel
    cpu family      : 6
    model           : 143
    stepping        : 8
    microcode       : 0x2b000571
    bugs            : spectre_v1 spectre_v2 spec_store_bypass swapgs eibrs_pbrsb
    cpu cores       : 8
    siblings        : 8
    1 physical ids (chips)
    8 processors (hardware threads)
    physical id 0: core ids 0-7
    physical id 0: apicids 0,2,4,6,8,10,12,14
  Caution: /proc/cpuinfo data regarding chips, cores, and threads is not necessarily reliable, especially for
  virtualized systems.  Use the above data carefully.
```

(Continued on next page)

Platform Notes (Continued)

```
------------------------------------------------------------
7. lscpu

From lscpu from util-linux 2.37.4:
  Architecture:                    x86_64
  CPU op-mode(s):                  32-bit, 64-bit
  Address sizes:                   46 bits physical, 57 bits virtual
  Byte Order:                      Little Endian
  CPU(s):                          8
  On-line CPU(s) list:             0-7
  Vendor ID:                       GenuineIntel
  Model name:                      INTEL(R) XEON(R) BRONZE 3508U
  CPU family:                      6
  Model:                           143
  Thread(s) per core:              1
  Core(s) per socket:              8
  Socket(s):                       1
  Stepping:                        8
  CPU max MHz:                     2200.0000
  CPU min MHz:                     800.0000
  BogoMIPS:                        4200.00
  Flags:                           fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36
                                   clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp
                                   lm constant_tsc art arch_perfmon pebs bts rep_good nopl xtopology
                                   nonstop_tsc cpuid aperfmperf tsc_known_freq pni pclmulqdq dtes64 monitor
                                   ds_cpl 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 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 flush_l1d arch_capabilities
  L1d cache:                       384 KiB (8 instances)
  L1i cache:                       256 KiB (8 instances)
  L2 cache:                        16 MiB (8 instances)
  L3 cache:                        22.5 MiB (1 instance)
  NUMA node(s):                    2
  NUMA node0 CPU(s):               0-3
  NUMA node1 CPU(s):               4-7
  Vulnerability Itlb multihit:     Not affected
  Vulnerability L1tf:              Not affected
  Vulnerability Mds:               Not affected
  Vulnerability Meltdown:          Not affected
  Vulnerability Mmio stale data:   Not affected
  Vulnerability Retbleed:          Not affected
  Vulnerability Spec store bypass: Mitigation; Speculative Store Bypass disabled via prctl and seccomp
  Vulnerability Spectre v1:        Mitigation; usercopy/swapgs barriers and __user pointer sanitization
  Vulnerability Spectre v2:        Mitigation; Enhanced IBRS, IBPB conditional, RSB filling, PBRSB-eIBRS SW
                                   sequence
  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
```

(Continued on next page)

Platform Notes (Continued)

```
     L1d       48K     384K   12 Data            1    64        1             64
     L1i       32K     256K    8 Instruction     1    64        1             64
     L2         2M      16M   16 Unified         2  2048        1             64
     L3      22.5M    22.5M   15 Unified         3 24576        1             64

------------------------------------------------------------
8. numactl --hardware
NOTE: a numactl 'node' might or might not correspond to a physical chip.
  available: 2 nodes (0-1)
  node 0 cpus: 0-3
  node 0 size: 257694 MB
  node 0 free: 257040 MB
  node 1 cpus: 4-7
  node 1 size: 258007 MB
  node 1 free: 256687 MB
  node distances:
  node   0   1
    0:  10  12
    1:  12  10

------------------------------------------------------------
9. /proc/meminfo
   MemTotal:       528078696 kB

------------------------------------------------------------
10. who -r
  run-level 3 Apr 10 18:33

------------------------------------------------------------
11. Systemd service manager version: systemd 249 (249.16+suse.171.gdad0071f15)
  Default Target  Status
  multi-user      degraded

------------------------------------------------------------
12. Failed units, from systemctl list-units --state=failed
    UNIT           LOAD   ACTIVE SUB    DESCRIPTION
  * smartd.service loaded failed failed Self Monitoring and Reporting Technology (SMART) Daemon

------------------------------------------------------------
13. Services, from systemctl list-unit-files
  STATE            UNIT FILES
  enabled          YaST2-Firstboot YaST2-Second-Stage apparmor auditd cron display-manager getty@ irqbalance
                   issue-generator kbdsettings klog lvm2-monitor nscd postfix purge-kernels rollback rsyslog
                   smartd sshd systemd-pstore 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 haveged-switch-root ipmi ipmievd issue-add-ssh-keys
                   kexec-load lunmask man-db-create multipathd nfs nfs-blkmap rpcbind rpmconfigcheck rsyncd
                   serial-getty@ smartd_generate_opts snmpd snmptrapd systemd-boot-check-no-failures
                   systemd-network-generator systemd-sysext systemd-time-wait-sync systemd-timesyncd udisks2
                   vncserver@
  indirect         wickedd

------------------------------------------------------------
14. Linux kernel boot-time arguments, from /proc/cmdline
  BOOT_IMAGE=/boot/vmlinuz-5.14.21-150500.53-default
  root=UUID=a52509ae-6843-4da4-9108-8987d04eb252
  splash=silent
  mitigations=auto
```

(Continued on next page)

Platform Notes (Continued)

```
  quiet
  security=apparmor

------------------------------------------------------------
15. cpupower frequency-info
  analyzing CPU 0:
    current policy: frequency should be within 800 MHz and 2.20 GHz.
                    The governor "performance" 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                       1
  vm.watermark_boost_factor       15000
  vm.watermark_scale_factor          10
  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 SP5

------------------------------------------------------------
20. Disk information
SPEC is set to: /home/cpu2017
```

(Continued on next page)

Platform Notes (Continued)

```
  Filesystem     Type   Size  Used Avail Use% Mounted on
  /dev/sda2      btrfs  222G   20G  198G  10% /home

------------------------------------------------------------
21. /sys/devices/virtual/dmi/id
    Vendor:         Cisco Systems Inc
    Product:        UCSC-C240-M7SX
    Serial:         WZP27100DJ5

------------------------------------------------------------
22. dmidecode
  Additional information from dmidecode 3.4 follows.  WARNING: Use caution when you interpret this section.
  The 'dmidecode' program reads system data which is "intended to allow hardware to be accurately
  determined", but the intent may not be met, as there are frequent changes to hardware, firmware, and the
  "DMTF SMBIOS" standard.
  Memory:
    8x 0xCE00 M321R8GA0PB0-CWMCH 64 GB 2 rank 5600, configured at 4400


------------------------------------------------------------
23. BIOS
(This section combines info from /sys/devices and dmidecode.)
   BIOS Vendor:       Cisco Systems, Inc.
   BIOS Version:      C240M7.4.3.3a.0.0118241337
   BIOS Date:         01/18/2024
   BIOS Revision:     5.32
```

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)
--------------------------------------------------------------------------------------------------------------
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.
--------------------------------------------------------------------------------------------------------------
```

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Compiler Version Notes (Continued)

```
==============================================================================================================
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

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

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Base Optimization Flags (Continued)

C benchmarks (continued):
-L/home/specdev/new_compilers/ic2023.2.3/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/home/specdev/new_compilers/ic2023.2.3/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/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
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 -xsapphirerapids -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`

Fortran benchmarks:

548.exchange2_r: `basepeak = yes`

The flags files that were used to format this result can be browsed at

http://www.spec.org/cpu2017/flags/Intel-ic2024-official-linux64.html
http://www.spec.org/cpu2017/flags/Cisco-Platform-Settings-V1.0-EMR-revD.html

You can also download the XML flags sources by saving the following links:

http://www.spec.org/cpu2017/flags/Intel-ic2024-official-linux64.xml
http://www.spec.org/cpu2017/flags/Cisco-Platform-Settings-V1.0-EMR-revD.xml

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

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