SPEC CPU®2017 Integer Speed Result

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Dell Inc.

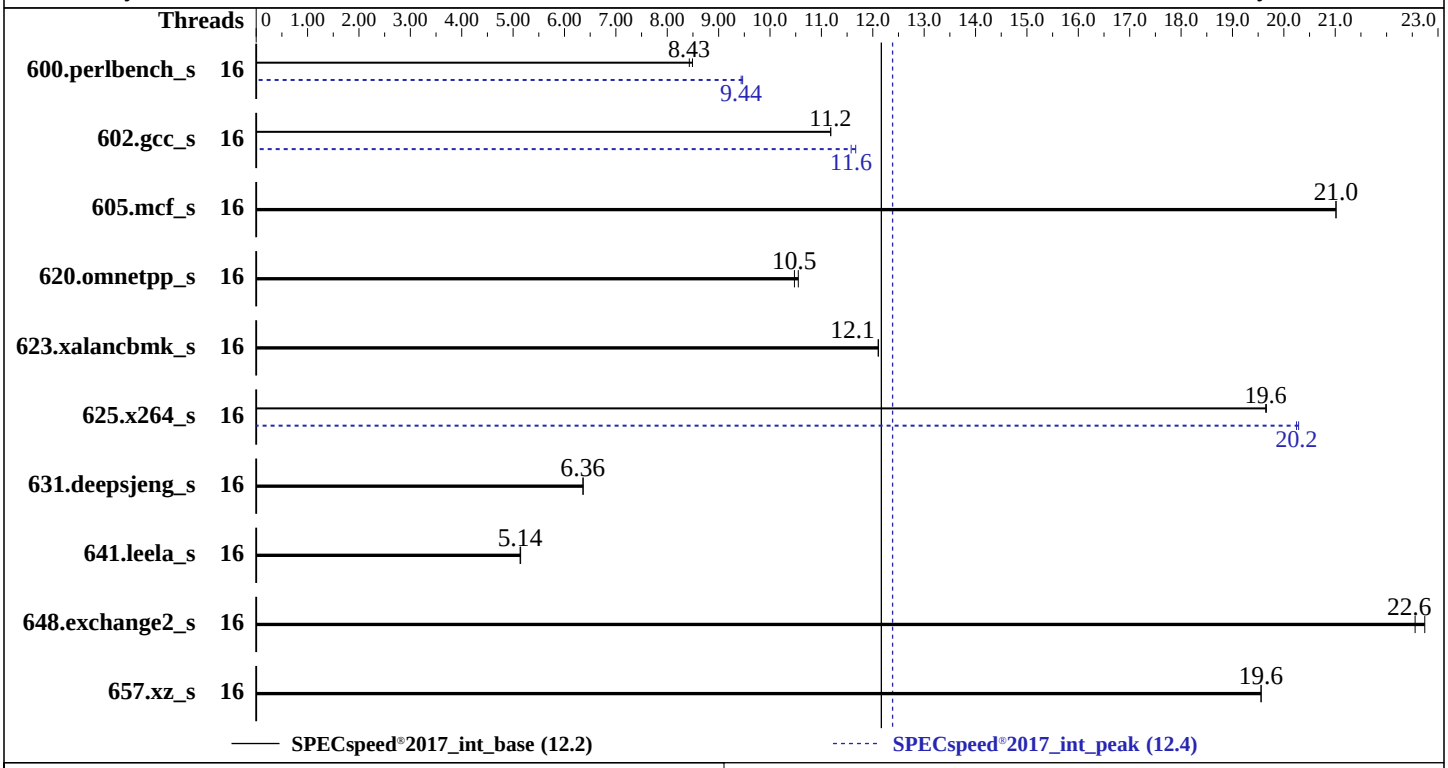
PowerEdge XR8620t (Intel Xeon Silver 4514Y)

SPECspeed®2017_int_base = 12.2

SPECspeed®2017_int_peak = 12.4

CPU2017 License: 6573
Test Sponsor: Dell Inc.
Tested by: Dell Inc.

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



Hardware

CPU Name:	Intel Xeon Silver 4514Y
Max MHz:	3400
Nominal:	2000
Enabled:	16 cores, 1 chip
Orderable:	1 chip
Cache L1:	32 KB I + 48 KB D on chip per core
L2:	2 MB I+D on chip per core
L3:	30 MB I+D on chip per chip
Other:	None
Memory:	512 GB (8 x 64 GB 2Rx4 PC5-5600B-R, running at 4400)
Storage:	40 GB on tmpfs
Other:	CPU Cooling: Air

Software

OS:	SUSE Linux Enterprise Server 15 SP5 5.14.21-150500.53-default
Compiler:	C/C++: Version 2024.0.2 of Intel oneAPI DPC++/C++ Compiler for Linux; Fortran: Version 2024.0.2 of Intel Fortran Compiler for Linux;
Parallel:	Yes
Firmware:	Version 1.9.3 released Mar-2024
File System:	tmpfs
System State:	Run level 3 (multi-user)
Base Pointers:	64-bit
Peak Pointers:	64-bit
Other:	jemalloc memory allocator V5.0.1
Power Management:	BIOS set to prefer performance at the cost of additional power usage.

Results Table

Benchmark	Base							Peak						
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
600.perlbench_s	16	**211**	**8.43**	209	8.49			16	187	9.47	**188**	**9.44**		
602.gcc_s	16	**356**	**11.2**	356	11.2			16	341	11.7	**344**	**11.6**		
605.mcf_s	16	**225**	**21.0**	225	21.0			16	**225**	**21.0**	225	21.0		
620.omnetpp_s	16	**156**	**10.5**	155	10.6			16	**156**	**10.5**	155	10.6		
623.xalancbmk_s	16	**117**	**12.1**	117	12.1			16	**117**	**12.1**	117	12.1		
625.x264_s	16	**89.8**	**19.6**	89.7	19.7			16	87.0	20.3	**87.1**	**20.2**		
631.deepsjeng_s	16	**225**	**6.36**	225	6.36			16	**225**	**6.36**	225	6.36		
641.leela_s	16	332	5.15	**332**	**5.14**			16	332	5.15	**332**	**5.14**		
648.exchange2_s	16	129	22.7	**130**	**22.6**			16	129	22.7	**130**	**22.6**		
657.xz_s	16	316	19.6	**316**	**19.6**			16	316	19.6	**316**	**19.6**		

SPECspeed®2017_int_base = 12.2

SPECspeed®2017_int_peak = 12.4

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

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:
KMP_AFFINITY = "granularity=fine,scatter"
LD_LIBRARY_PATH =
     "/mnt/ramdisk/cpu2017-1.1.9-ic2024.0.2/lib/intel64:/mnt/ramdisk/cpu2017-1.1.9-ic2024.0.2/je5.0.1-64"
MALLOC_CONF = "retain:true"
OMP_STACKSIZE = "192M"
```

General Notes

```
Binaries compiled on a system with 2x Intel Xeon Platinum 8280M CPU + 384GB RAM
memory using Redhat Enterprise Linux 8.0
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
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)
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.

Benchmark run from a 40 GB ramdisk created with the cmd: "mount -t tmpfs -o size=40G tmpfs /mnt/ramdisk"
```

Platform Notes

```
BIOS settings:
                  ADDDC Setting : Disabled
        DIMM Self Healing on
    Uncorrectable Memory Error : Disabled

             Logical Processor : Disabled
     Virtualization Technology : Disabled
       DCU Streamer Prefetcher : Disabled

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

Sysinfo program /mnt/ramdisk/cpu2017-1.1.9-ic2024.0.2/bin/sysinfo
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
running on localhost Sat Apr  6 13:07:39 2024

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

------------------------------------------------------------
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10. who -r
11. Systemd service manager version: systemd 249 (249.16+suse.171.gdad0071f15)
12. Services, from systemctl list-unit-files
13. Linux kernel boot-time arguments, from /proc/cmdline
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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 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
   13:07:39 up 2 min,  3 users,  load average: 0.68, 0.29, 0.11
```

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Platform Notes (Continued)

```
  USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU WHAT
  root     tty1     -                13:06   41.00s  0.98s  0.00s /bin/bash
  /home/DellFiles/bin/Intel/dell-run-speccpu.sh speed --define DL-BIOSinc=Dell-BIOS_Xeon-5.inc --define
  DL-BIOS-adddcD=1 --define DL-VERS=5.2 --output_format html,pdf,txt

------------------------------------------------------------
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) 2061118
  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) 2061118
  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
 /bin/bash ./DELL_speed.sh
 /bin/bash /home/DellFiles/bin/dell-run-main.sh speed
 /bin/bash /home/DellFiles/bin/dell-run-main.sh speed
 /bin/bash /home/DellFiles/bin/Intel/dell-run-speccpu.sh speed --define DL-BIOSinc=Dell-BIOS_Xeon-5.inc
   --define DL-BIOS-adddcD=1 --define DL-VERS=5.2 --output_format html,pdf,txt
 /bin/bash /home/DellFiles/bin/Intel/dell-run-speccpu.sh speed --define DL-BIOSinc=Dell-BIOS_Xeon-5.inc
   --define DL-BIOS-adddcD=1 --define DL-VERS=5.2 --output_format html,pdf,txt
 runcpu --nobuild --action validate --define default-platform-flags -c
   ic2024.0.2-lin-sapphirerapids-speed-20231213.cfg --define cores=16 --tune base,peak -o all --define
   intspeedaffinity --define drop_caches --iterations 2 --define DL-BIOSinc=Dell-BIOS_Xeon-5.inc --define
   DL-BIOS-adddcD=1 --define DL-VERS=5.2 --output_format html,pdf,txt intspeed
 runcpu --nobuild --action validate --define default-platform-flags --configfile
   ic2024.0.2-lin-sapphirerapids-speed-20231213.cfg --define cores=16 --tune base,peak --output_format all
   --define intspeedaffinity --define drop_caches --iterations 2 --define DL-BIOSinc=Dell-BIOS_Xeon-5.inc
   --define DL-BIOS-adddcD=1 --define DL-VERS=5.2 --output_format html,pdf,txt --nopower --runmode speed
   --tune base:peak --size refspeed intspeed --nopreenv --note-preenv --logfile
   $SPEC/tmp/CPU2017.001/templogs/preenv.intspeed.001.0.log --lognum 001.0 --from_runcpu 2
 specperl $SPEC/bin/sysinfo
$SPEC = /mnt/ramdisk/cpu2017-1.1.9-ic2024.0.2

------------------------------------------------------------
6. /proc/cpuinfo
    model name      : INTEL(R) XEON(R) SILVER 4514Y
    vendor_id       : GenuineIntel
    cpu family      : 6
    model           : 207
    stepping        : 2
```

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Platform Notes (Continued)

```
     microcode       : 0x21000230
     bugs            : spectre_v1 spectre_v2 spec_store_bypass swapgs eibrs_pbrsb
     cpu cores       : 16
     siblings        : 16
     1 physical ids (chips)
     16 processors (hardware threads)
     physical id 0: core ids 0-15
     physical id 0: apicids 0,2,4,6,8,10,12,14,16,18,20,22,24,26,28,30
   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 2.37.4:
   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):                          16
   On-line CPU(s) list:             0-15
   Vendor ID:                       GenuineIntel
   Model name:                      INTEL(R) XEON(R) SILVER 4514Y
   CPU family:                      6
   Model:                           207
   Thread(s) per core:              1
   Core(s) per socket:              16
   Socket(s):                       1
   Stepping:                        2
   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 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
                                    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 avx_vnni avx512_bf16 wbnoinvd dtherm ida arat pln pts hfi
                                    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
   L1d cache:                       768 KiB (16 instances)
   L1i cache:                       512 KiB (16 instances)
   L2 cache:                        32 MiB (16 instances)
   L3 cache:                        30 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 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
```

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Platform Notes (Continued)

```
  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
     L1d       48K     768K   12 Data            1    64        1             64
     L1i       32K     512K    8 Instruction     1    64        1             64
     L2         2M      32M   16 Unified         2  2048        1             64
     L3        30M      30M   15 Unified         3 32768        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: 515310 MB
  node 0 free: 502579 MB
  node distances:
  node   0
    0:  10

------------------------------------------------------------
9. /proc/meminfo
   MemTotal:       527678264 kB

------------------------------------------------------------
10. who -r
  run-level 3 Apr 6 13:06 last=5

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

------------------------------------------------------------
12. Services, from systemctl list-unit-files
  STATE           UNIT FILES
  enabled         YaST2-Firstboot YaST2-Second-Stage apparmor appstream-sync-cache auditd bluetooth cron
                  display-manager firewalld getty@ irqbalance issue-generator kbdsettings klog lvm2-monitor
                  nscd nvmefc-boot-connections postfix purge-kernels rollback rsyslog smartd sshd
                  systemd-pstore wicked wickedd-auto4 wickedd-dhcp4 wickedd-dhcp6 wickedd-nanny
  enabled-runtime systemd-remount-fs
  disabled        accounts-daemon 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 gpm grub2-once haveged haveged-switch-root ipmi ipmievd
                  issue-add-ssh-keys kexec-load lunmask man-db-create multipathd nfs nfs-blkmap nmb
                  nvmf-autoconnect ostree-remount 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
                  update-system-flatpaks upower vncserver@
  indirect        wickedd

------------------------------------------------------------
13. Linux kernel boot-time arguments, from /proc/cmdline
  BOOT_IMAGE=/boot/vmlinuz-5.14.21-150500.53-default
  root=UUID=9e20eb74-d7e2-4c8f-a983-577420e73ea7
  splash=silent
  mitigations=auto
```

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Platform Notes (Continued)

```
  quiet
  security=apparmor

------------------------------------------------------------
14. cpupower frequency-info
  analyzing CPU 0:
    Unable to determine current policy
    boost state support:
      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 SP5

------------------------------------------------------------
19. Disk information
SPEC is set to: /mnt/ramdisk/cpu2017-1.1.9-ic2024.0.2
  Filesystem     Type   Size  Used Avail Use% Mounted on
  tmpfs          tmpfs   40G  5.7G   35G  15% /mnt/ramdisk
```

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Platform Notes (Continued)

```
 ------------------------------------------------------------
 20. /sys/devices/virtual/dmi/id
     Vendor:         Dell Inc.
     Product:        PowerEdge XR8620t
     Product Family: PowerEdge
     Serial:         SLX8621

 ------------------------------------------------------------
 21. 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 00AD063200AD HMCG94AGBRA181N 64 GB 2 rank 5600, configured at 4400


 ------------------------------------------------------------
 22. BIOS
 (This section combines info from /sys/devices and dmidecode.)
    BIOS Vendor:       Dell Inc.
    BIOS Version:      1.9.3
    BIOS Date:         03/20/2024
    BIOS Revision:     1.9
```

Compiler Version Notes

```
==============================================================================================================
C       | 600.perlbench_s(base, peak) 602.gcc_s(base, peak) 605.mcf_s(base, peak) 625.x264_s(base, peak)
        | 657.xz_s(base, peak)
--------------------------------------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.
--------------------------------------------------------------------------------------------------------------

==============================================================================================================
C++     | 620.omnetpp_s(base, peak) 623.xalancbmk_s(base, peak) 631.deepsjeng_s(base, peak)
        | 641.leela_s(base, peak)
--------------------------------------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.
--------------------------------------------------------------------------------------------------------------

==============================================================================================================
Fortran | 648.exchange2_s(base, peak)
--------------------------------------------------------------------------------------------------------------
Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.
--------------------------------------------------------------------------------------------------------------
```

Base Compiler Invocation

C benchmarks:
icx

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Base Compiler Invocation (Continued)

C++ benchmarks:
icpx

Fortran benchmarks:
ifx

Base Portability Flags

600.perlbench_s: -DSPEC_LP64 -DSPEC_LINUX_X64
602.gcc_s: -DSPEC_LP64
605.mcf_s: -DSPEC_LP64
620.omnetpp_s: -DSPEC_LP64
623.xalancbmk_s: -DSPEC_LP64 -DSPEC_LINUX
625.x264_s: -DSPEC_LP64
631.deepsjeng_s: -DSPEC_LP64
641.leela_s: -DSPEC_LP64
648.exchange2_s: -DSPEC_LP64
657.xz_s: -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 -fiopenmp
-DSPEC_OPENMP -L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

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/jemalloc64-5.0.1/lib -ljemalloc

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
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

Peak Compiler Invocation

C benchmarks:
icx

C++ benchmarks:
icpx

Fortran benchmarks:
ifx

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

600.perlbench_s: -w -m64 -std=c11 -Wl,-z,muldefs
-fprofile-generate(pass 1)
-fprofile-use=default.profdata(pass 2) -xCORE-AVX2(pass 1)
-flto -Ofast(pass 1) -xCORE-AVX512 -O3 -ffast-math
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-fiopenmp -DSPEC_OPENMP -fno-strict-overflow
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

602.gcc_s: -w -m64 -std=c11 -Wl,-z,muldefs
-fprofile-generate(pass 1)
-fprofile-use=default.profdata(pass 2) -xCORE-AVX2(pass 1)
-flto -Ofast(pass 1) -xCORE-AVX512 -O3 -ffast-math
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-fiopenmp -DSPEC_OPENMP -L/usr/local/jemalloc64-5.0.1/lib
-ljemalloc

605.mcf_s: basepeak = yes

625.x264_s: -w -std=c11 -m64 -Wl,-z,muldefs -xsapphirerapids -O3
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fiopenmp -DSPEC_OPENMP
-fno-alias -L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

657.xz_s: basepeak = yes

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Peak Optimization Flags (Continued)

C++ benchmarks:

620.omnetpp_s: `basepeak = yes`

623.xalancbmk_s: `basepeak = yes`

631.deepsjeng_s: `basepeak = yes`

641.leela_s: `basepeak = yes`

Fortran benchmarks:

648.exchange2_s: `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/Dell-Platform-Flags-PowerEdge-Intel-Xeon-v1.6.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/Dell-Platform-Flags-PowerEdge-Intel-Xeon-v1.6.xml`

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Tested with SPEC CPU®2017 v1.1.9 on 2024-04-06 13:07:39-0400.
Report generated on 2024-07-01 10:34:54 by CPU2017 PS formatter v6716.
Originally published on 2024-06-29.