SPEC CPU®2017 Integer Speed Result

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Dell Inc.

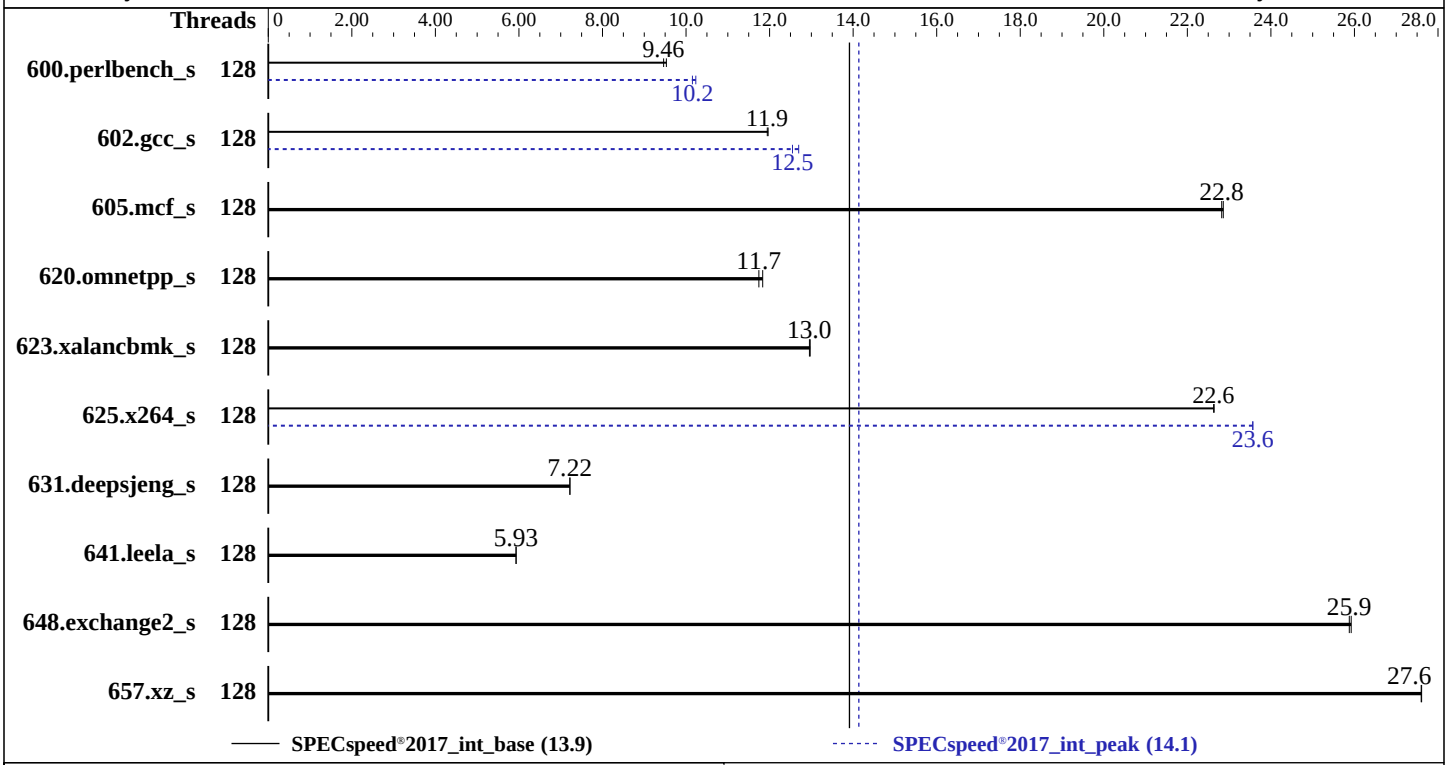
PowerEdge R770 (Intel Xeon 6730P)

SPECspeed®2017_int_base = 13.9

SPECspeed®2017_int_peak = 14.1

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

Test Date: Mar-2025
Hardware Availability: Mar-2025
Software Availability: Jun-2024



Hardware

CPU Name:	Intel Xeon 6730P
Max MHz:	3800
Nominal:	2500
Enabled:	64 cores, 2 chips, 2 threads/core
Orderable:	1,2 chips
Cache L1:	64 KB I + 48 KB D on chip per core
L2:	2 MB I+D on chip per core
L3:	288 MB I+D on chip per chip
Other:	None
Memory:	1 TB (16 x 64 GB 2Rx4 PC5-6400B-R)
Storage:	80 GB on tmpfs
Other:	CPU Cooling: Air

Software

OS:	SUSE Linux Enterprise Server 15 SP6 6.4.0-150600.21-default
Compiler:	C/C++: Version 2024.1 of Intel oneAPI DPC++/C++ Compiler for Linux; Fortran: Version 2024.1 of Intel Fortran Compiler for Linux;
Parallel:	Yes
Firmware:	Version 1.2.6 released Feb-2025
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.

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Results Table

Benchmark	Base							Peak						
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
600.perlbench_s	128	186	9.53	**188**	**9.46**			128	173	10.2	**175**	**10.2**		
602.gcc_s	128	**333**	**11.9**	333	12.0			128	**317**	**12.5**	314	12.7		
605.mcf_s	128	207	22.9	**207**	**22.8**			128	207	22.9	**207**	**22.8**		
620.omnetpp_s	128	138	11.8	**139**	**11.7**			128	138	11.8	**139**	**11.7**		
623.xalancbmk_s	128	109	13.0	**109**	**13.0**			128	109	13.0	**109**	**13.0**		
625.x264_s	128	77.9	22.6	**78.0**	**22.6**			128	74.8	23.6	**74.9**	**23.6**		
631.deepsjeng_s	128	198	7.22	**198**	**7.22**			128	198	7.22	**198**	**7.22**		
641.leela_s	128	**288**	**5.93**	288	5.93			128	**288**	**5.93**	288	5.93		
648.exchange2_s	128	113	25.9	**114**	**25.9**			128	113	25.9	**114**	**25.9**		
657.xz_s	128	224	27.6	**224**	**27.6**			128	224	27.6	**224**	**27.6**		

SPECspeed®2017_int_base = 13.9

SPECspeed®2017_int_peak = 14.1

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-ic2024.1/lib/intel64:/mnt/ramdisk/cpu2017-1.1.9-ic2024.1/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 80 GB ramdisk created with the cmd: "mount -t tmpfs -o size=80G tmpfs /mnt/ramdisk"
```

Platform Notes

```
BIOS Settings:
                  Sub NUMA Cluster : Enabled
             MADT Core Enumeration : Linear
                     LLC Prefetch : Enabled
                    Optimizer Mode : Enabled

                    System Profile : Custom
               CPU Power Management : Maximum Performance
            Energy Efficient Turbo : Disabled
                              C1E : Disabled
                         C-States : Autonomous
            Latency Optimized Mode : Enabled
           Energy Efficient Policy : Performance
            CPU Interconnect Bus -
             Link Power Management : Disabled
 PCI ASPM L1 Link Power Management : Disabled
              DIMM Self Healing -
     on Uncorrectable Memory Error : Disabled

Sysinfo program /mnt/ramdisk/cpu2017-1.1.9-ic2024.1/bin/sysinfo
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
running on W402143-R770 Sun Mar  9 08:31:40 2025

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

------------------------------------------------------------
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------------------------------------------------------------
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 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 254 (254.10+suse.84.ge8d77af424)
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 W402143-R770 6.4.0-150600.21-default #1 SMP PREEMPT_DYNAMIC Thu May 16 11:09:22 UTC 2024 (36c1e09)
  x86_64 x86_64 x86_64 GNU/Linux

------------------------------------------------------------
2. w
```

(Continued on next page)

Platform Notes (Continued)

```
   08:31:40 up 8 min,  1 user,  load average: 0.21, 0.55, 0.47
  USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU WHAT
  root     tty1     -                17Jun24 20.00s  0.90s  0.00s /bin/bash
  /home/DellFiles/bin/Intel/dell-run-speccpu.sh speed --define DL-VERS=6.1a --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) 4125021
  max locked memory       (kbytes, -l) 8192
  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) 4125021
  virtual memory          (kbytes, -v) unlimited
  file locks                      (-x) unlimited

------------------------------------------------------------
5. sysinfo process ancestry
 /usr/lib/systemd/systemd --switched-root --system --deserialize=42
 login -- root
 -bash
 /bin/bash /home/DellFiles/bin/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-VERS=6.1a --output_format
   html,pdf,txt
 /bin/bash /home/DellFiles/bin/Intel/dell-run-speccpu.sh speed --define DL-VERS=6.1a --output_format
   html,pdf,txt
 runcpu --nobuild --action validate --define default-platform-flags -c
   ic2024.1-lin-sapphirerapids-speed-20240308.cfg --define cores=64 --tune base,peak -o all --define
   intspeedaffinity --define smt-on --define drop_caches --iterations 2 --define DL-VERS=6.1a --output_format
   html,pdf,txt intspeed
 runcpu --nobuild --action validate --define default-platform-flags --configfile
   ic2024.1-lin-sapphirerapids-speed-20240308.cfg --define cores=64 --tune base,peak --output_format all
   --define intspeedaffinity --define smt-on --define drop_caches --iterations 2 --define DL-VERS=6.1a
   --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-ic2024.1

------------------------------------------------------------
6. /proc/cpuinfo
    model name      : Intel(R) Xeon(R) 6730P
    vendor_id       : GenuineIntel
    cpu family      : 6
    model           : 173
    stepping        : 1
```

(Continued on next page)

Platform Notes (Continued)

```
     microcode       : 0x1000380
     bugs            : spectre_v1 spectre_v2 spec_store_bypass swapgs bhi
     cpu cores       : 32
     siblings        : 64
     2 physical ids (chips)
     128 processors (hardware threads)
     physical id 0: core ids 0-15,64-79
     physical id 1: core ids 0-15,64-79
     physical id 0: apicids 0-31,128-159
     physical id 1: apicids 256-287,384-415
   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 2.39.3:
   Architecture:                         x86_64
   CPU op-mode(s):                       32-bit, 64-bit
   Address sizes:                        52 bits physical, 57 bits virtual
   Byte Order:                           Little Endian
   CPU(s):                               128
   On-line CPU(s) list:                  0-127
   Vendor ID:                            GenuineIntel
   BIOS Vendor ID:                       Intel
   Model name:                           Intel(R) Xeon(R) 6730P
   BIOS Model name:                      Intel(R) Xeon(R) 6730P  CPU @ 2.5GHz
   BIOS CPU family:                      179
   CPU family:                           6
   Model:                                173
   Thread(s) per core:                   2
   Core(s) per socket:                   32
   Socket(s):                            2
   Stepping:                             1
   BogoMIPS:                             5000.00
   Flags:                                fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat
                                         pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx
                                         pdpe1gb rdtscp lm constant_tsc art arch_perfmon pebs bts rep_good
                                         nopl xtopology nonstop_tsc cpuid aperfmperf tsc_known_freq pni
                                         pclmulqdq dtes64 monitor ds_cpl vmx smx est tm2 ssse3 sdbg fma cx16
                                         xtpr pdcm pcid dca sse4_1 sse4_2 x2apic movbe popcnt
                                         tsc_deadline_timer aes xsave avx f16c rdrand lahf_lm abm
                                         3dnowprefetch cpuid_fault epb cat_l3 cat_l2 cdp_l3 intel_ppin cdp_l2
                                         ssbd mba ibrs ibpb stibp ibrs_enhanced tpr_shadow flexpriority ept
                                         vpid ept_ad fsgsbase tsc_adjust bmi1 hle avx2 smep bmi2 erms invpcid
                                         rtm cqm rdt_a avx512f avx512dq rdseed adx smap avx512ifma clflushopt
                                         clwb intel_pt avx512cd sha_ni avx512bw avx512vl xsaveopt xsavec
                                         xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbm_total cqm_mbm_local
                                         split_lock_detect user_shstk avx_vnni avx512_bf16 wbnoinvd dtherm ida
                                         arat pln pts hfi vnmi 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 ibt amx_bf16 avx512_fp16
                                         amx_tile amx_int8 flush_l1d arch_capabilities
   Virtualization:                       VT-x
   L1d cache:                            3 MiB (64 instances)
   L1i cache:                            4 MiB (64 instances)
   L2 cache:                             128 MiB (64 instances)
   L3 cache:                             576 MiB (2 instances)
   NUMA node(s):                         4
```

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Platform Notes (Continued)

```
  NUMA node0 CPU(s):                    0-15,64-79
  NUMA node1 CPU(s):                    16-31,80-95
  NUMA node2 CPU(s):                    32-47,96-111
  NUMA node3 CPU(s):                    48-63,112-127
  Vulnerability Gather data sampling:   Not affected
  Vulnerability Itlb multihit:          Not affected
  Vulnerability L1tf:                   Not affected
  Vulnerability Mds:                    Not affected
  Vulnerability Meltdown:               Not affected
  Vulnerability Mmio stale data:        Not affected
  Vulnerability Reg file data sampling: Not affected
  Vulnerability Retbleed:               Not affected
  Vulnerability Spec rstack overflow:   Not affected
  Vulnerability Spec store bypass:      Mitigation; Speculative Store Bypass disabled via prctl
  Vulnerability Spectre v1:             Mitigation; usercopy/swapgs barriers and __user pointer sanitization
  Vulnerability Spectre v2:             Mitigation; Enhanced / Automatic IBRS; IBPB conditional; RSB filling;
                                        PBRSB-eIBRS Not affected; BHI BHI_DIS_S
  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       3M   12 Data            1     64        1             64
     L1i       64K       4M   16 Instruction     1     64        1             64
     L2         2M     128M   16 Unified         2   2048        1             64
     L3       288M     576M   16 Unified         3 294912        1             64

------------------------------------------------------------
8. numactl --hardware
NOTE: a numactl 'node' might or might not correspond to a physical chip.
  available: 4 nodes (0-3)
  node 0 cpus: 0-15,64-79
  node 0 size: 257531 MB
  node 0 free: 255431 MB
  node 1 cpus: 16-31,80-95
  node 1 size: 258039 MB
  node 1 free: 257160 MB
  node 2 cpus: 32-47,96-111
  node 2 size: 258039 MB
  node 2 free: 257211 MB
  node 3 cpus: 48-63,112-127
  node 3 size: 257671 MB
  node 3 free: 246729 MB
  node distances:
  node   0   1   2   3
    0:  10  12  21  21
    1:  12  10  21  21
    2:  21  21  10  12
    3:  21  21  12  10

------------------------------------------------------------
9. /proc/meminfo
   MemTotal:       1056032320 kB

------------------------------------------------------------
10. who -r
  run-level 3 Jun 17 18:50

------------------------------------------------------------
11. Systemd service manager version: systemd 254 (254.10+suse.84.ge8d77af424)
```

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Platform Notes (Continued)

```
  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@ irqbalance
                   issue-generator kbdsettings kdump kdump-early kdump-notify klog lvm2-monitor nscd
                   nvmefc-boot-connections nvmf-autoconnect 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 fsidd gpm grub2-once haveged 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-confext
                   systemd-network-generator systemd-sysext systemd-time-wait-sync systemd-timesyncd udisks2
                   vncserver@
  indirect         systemd-userdbd wickedd

------------------------------------------------------------
13. Linux kernel boot-time arguments, from /proc/cmdline
  BOOT_IMAGE=/boot/vmlinuz-6.4.0-150600.21-default
  root=UUID=548d6002-e7bf-482f-bb7e-f840f545abd7
  splash=silent
  resume=/dev/disk/by-uuid/ad31361e-b87e-4e7f-8ce6-12503dcd6544
  mitigations=auto
  quiet
  security=apparmor
  crashkernel=328M,high
  crashkernel=72M,low

------------------------------------------------------------
14. cpupower frequency-info
  analyzing CPU 33:
    Unable to determine current policy
    boost state support:
      Supported: yes
      Active: yes

------------------------------------------------------------
15. sysctl
  kernel.numa_balancing               1
  kernel.randomize_va_space           2
  vm.compaction_proactiveness        20
  vm.dirty_background_bytes           0
  vm.dirty_background_ratio          10
  vm.dirty_bytes                      0
  vm.dirty_expire_centisecs        3000
  vm.dirty_ratio                     20
  vm.dirty_writeback_centisecs      500
  vm.dirtytime_expire_seconds     43200
  vm.extfrag_threshold              500
  vm.min_unmapped_ratio               1
  vm.nr_hugepages                     0
  vm.nr_hugepages_mempolicy           0
  vm.nr_overcommit_hugepages          0
  vm.swappiness                      60
  vm.watermark_boost_factor       15000
  vm.watermark_scale_factor          10
```

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Platform Notes (Continued)

```
  vm.zone_reclaim_mode              0

------------------------------------------------------------
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 SP6

------------------------------------------------------------
19. Disk information
SPEC is set to: /mnt/ramdisk/cpu2017-1.1.9-ic2024.1
  Filesystem     Type   Size  Used Avail Use% Mounted on
  tmpfs          tmpfs   80G  5.0G   76G   7% /mnt/ramdisk

------------------------------------------------------------
20. /sys/devices/virtual/dmi/id
    Vendor:         Dell Inc.
    Product:        PowerEdge R770
    Product Family: PowerEdge
    Serial:         W402143

------------------------------------------------------------
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:
    3x 002C0632002C MTC40F2046S1RC64BD2 MWFF 64 GB 2 rank 6400
    13x 002C069D002C MTC40F2046S1RC64BD2 QSFF 64 GB 2 rank 6400


------------------------------------------------------------
22. BIOS
(This section combines info from /sys/devices and dmidecode.)
   BIOS Vendor:       Dell Inc.
   BIOS Version:      1.2.6
   BIOS Date:         02/26/2025
   BIOS Revision:     1.2
```

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 2024.1.0 Build 20240308
Copyright (C) 1985-2024 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 2024.1.0 Build 20240308
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.
--------------------------------------------------------------------------------------------------------------

==============================================================================================================
Fortran | 648.exchange2_s(base, peak)
--------------------------------------------------------------------------------------------------------------
Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.
--------------------------------------------------------------------------------------------------------------
```

Base Compiler Invocation

C benchmarks:
icx

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`

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Peak Optimization Flags (Continued)

600.perlbench_s (continued):
-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

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-v1.13.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-v1.13.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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