



SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECSpeed®2017_int_base = 14.7

PowerEdge R670 (Intel Xeon 6530P)

SPECSpeed®2017_int_peak = 15.0

CPU2017 License: 6573

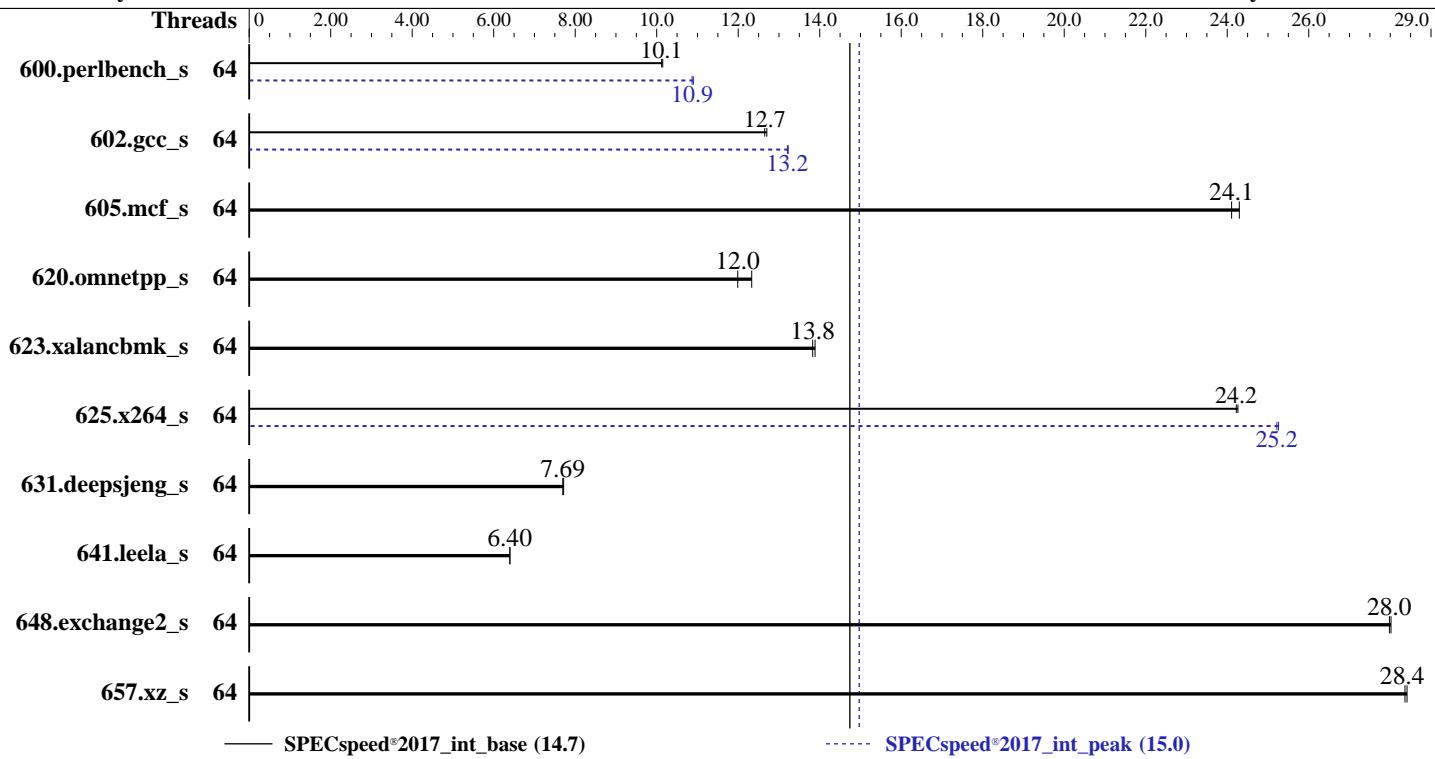
Test Date: Jun-2025

Test Sponsor: Dell Inc.

Hardware Availability: Apr-2025

Tested by: Dell Inc.

Software Availability: Jun-2024



| Hardware | | Software | |
|------------|--------------------------------------|-------------------|---|
| CPU Name: | Intel Xeon 6530P | OS: | SUSE Linux Enterprise Server 15 SP6 |
| Max MHz: | 4100 | Compiler: | 6.4.0-150600.21-default |
| Nominal: | 2300 | Parallel: | C/C++: Version 2024.1 of Intel oneAPI DPC++/C++ Compiler for Linux; |
| Enabled: | 64 cores, 2 chips | Firmware: | Fortran: Version 2024.1 of Intel Fortran Compiler for Linux; |
| Orderable: | 1,2 chips | File System: | Yes |
| Cache L1: | 64 KB I + 48 KB D on chip per core | System State: | Version 1.3.2 released May-2025 |
| L2: | 2 MB I+D on chip per core | Base Pointers: | tmpfs |
| L3: | 144 MB I+D on chip per chip | Peak Pointers: | Run level 3 (multi-user) |
| Other: | None | Other: | 64-bit |
| Memory: | 960 GB (15 x 64 GB 2Rx4 PC5-6400B-R) | Power Management: | 64-bit |
| Storage: | 60 GB on tmpfs | | jemalloc memory allocator V5.0.1 |
| Other: | CPU Cooling: DLC | | 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 | 64 | 175 | 10.1 | 175 | 10.1 | | | 64 | 163 | 10.9 | 163 | 10.9 | | |
| 602.gcc_s | 64 | 313 | 12.7 | 315 | 12.7 | | | 64 | 301 | 13.2 | 302 | 13.2 | | |
| 605.mcf_s | 64 | 196 | 24.1 | 194 | 24.3 | | | 64 | 196 | 24.1 | 194 | 24.3 | | |
| 620.omnetpp_s | 64 | 136 | 12.0 | 132 | 12.3 | | | 64 | 136 | 12.0 | 132 | 12.3 | | |
| 623.xalancbmk_s | 64 | 102 | 13.8 | 102 | 13.9 | | | 64 | 102 | 13.8 | 102 | 13.9 | | |
| 625.x264_s | 64 | 72.7 | 24.3 | 72.8 | 24.2 | | | 64 | 69.9 | 25.2 | 69.8 | 25.3 | | |
| 631.deepsjeng_s | 64 | 186 | 7.72 | 186 | 7.69 | | | 64 | 186 | 7.72 | 186 | 7.69 | | |
| 641.leela_s | 64 | 267 | 6.40 | 267 | 6.40 | | | 64 | 267 | 6.40 | 267 | 6.40 | | |
| 648.exchange2_s | 64 | 105 | 28.0 | 105 | 28.0 | | | 64 | 105 | 28.0 | 105 | 28.0 | | |
| 657.xz_s | 64 | 218 | 28.4 | 218 | 28.4 | | | 64 | 218 | 28.4 | 218 | 28.4 | | |
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| SPECspeed®2017_int_peak = 15.0 | | | | | | | | | | | | | | |

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>

Benchmark run from a 60 GB ramdisk created with the cmd: "mount -t tmpfs -o size=60G tmpfs /mnt/ramdisk"

Platform Notes

BIOS Settings:

```
Logical Processor : Disabled
MADT Core Enumeration : Linear
```

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Platform Notes (Continued)

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 1234567-R670 Mon Jun 16 03:26:23 2025

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 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 1234567-R670 6.4.0-150600.21-default #1 SMP PREEMPT_DYNAMIC Thu May 16 11:09:22 UTC 2024 (36c1e09/lp)
x86_64 x86_64 x86_64 GNU/Linux

2. w
03:26:23 up 4 min, 1 user, load average: 0.26, 0.20, 0.10
USER TTY FROM LOGIN@ IDLE JCPU PCPU WHAT
root ttym1 - 03:23 31.00s 0.79s 0.00s /bin/bash
/home/DellFiles/bin/Intel/dell-run-speccpu.sh speed --define DL-VERS=6.3 --output_format html,pdf,txt

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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) 3094436
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) 3094436
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=6.3 --output_format
html,pdf,txt
/bin/bash /home/DellFiles/bin/Intel/dell-run-speccpu.sh speed --define DL-VERS=6.3 --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 drop_caches --iterations 2 --define DL-VERS=6.3 --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 drop_caches --iterations 2 --define DL-VERS=6.3 --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) 6530P
vendor_id       : GenuineIntel
cpu family      : 6
model           : 173
stepping         : 1
microcode       : 0x10003c2
bugs             : spectre_v1 spectre_v2 spec_store_bypass swapgs bhi
cpu cores       : 32
siblings         : 32
2 physical ids (chips)
```

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Platform Notes (Continued)

```
64 processors (hardware threads)
physical id 0: core ids 0-31
physical id 1: core ids 0-31
physical id 0: apicids
0,2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46,48,50,52,54,56,58,60,62
physical id 1: apicids
128,130,132,134,136,138,140,142,144,146,148,150,152,154,156,158,160,162,164,166,168,170,172,174,176,178,1
80,182,184,186,188,190
```

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): 64
On-line CPU(s) list: 0-63
Vendor ID: GenuineIntel
BIOS Vendor ID: Intel
Model name: Intel(R) Xeon(R) 6530P
BIOS Model name: Intel(R) Xeon(R) 6530P CPU @ 2.3GHz
BIOS CPU family: 179
CPU family: 6
Model: 173
Thread(s) per core: 1
Core(s) per socket: 32
Socket(s): 2
Stepping: 1
BogoMIPS: 4600.00
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 aperf mperf tsc_known_freq pn
pclmulqdq dtes64 monitor ds_cpl vmx smx est tm2 ssse3 sdbe 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_13 cat_12 cdp_13 intel_ppin cdp_12
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 xsavenc
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_lld 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: 288 MiB (2 instances)
NUMA node(s): 2
NUMA node0 CPU(s): 0-31
NUMA node1 CPU(s): 32-63
```

(Continued on next page)



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Platform Notes (Continued)

| | |
|---------------------------------------|---|
| Vulnerability Gather data sampling: | Not affected |
| Vulnerability Itlb multihit: | Not affected |
| Vulnerability Llftf: | 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/swaps 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 | 144M | 288M | 16 | Unified | 3 | 147456 | 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: 0-31
node 0 size: 515699 MB
node 0 free: 503743 MB
node 1 cpus: 32-63
node 1 size: 257979 MB
node 1 free: 256796 MB
node distances:
node 0 1
0: 10 21
1: 21 10

9. /proc/meminfo

MemTotal: 792247516 kB

10. who -r
run-level 3 Jun 16 03:22

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

Default Target Status
multi-user running

12. Services, from systemctl list-unit-files

| STATE | UNIT FILES |
|-----------------|---|
| enabled | ModemManager YaST2-Firstboot YaST2-Second-Stage apparmor appstream-sync-cache auditd cron display-manager firewalld getty@ irqbalance issue-generator kbdsettings klog lvm2-monitor nscd nvmefc-boot-connections nvmf-autoconnect postfix purge-kernels rollback rsyslog smartd sshd systemd-pstore wicked wickedd-wicked4 wickedd-dhcp4 wickedd-dhcp6 wickedd-nanny wpa_supplicant |
| enabled-runtime | systemd-remount-fs |

(Continued on next page)



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Platform Notes (Continued)

disabled NetworkManager NetworkManager-dispatcher NetworkManager-wait-online accounts-daemon autofs
autoyast-initscripts blk-availability boot-sysctl ca-certificates chrony-wait chronyd
console-getty cups cups-browsed debug-shell dmraid-activation dnsmasq ebttables
exchange-bmc-os-info fsidd gpm grub2-once haveged hwloc-dump-hwdata ipmi ipmiev
issue-add-ssh-keys kexec-load ksm kvm kvm_stat lunmask man-db-create multipathd nfs nfs-blkmap
nmb openvpn@ ostree-remount rpcbind rpmconfigcheck rsyncd rtkit-daemon serial-getty@
smartd_generate_opts smb snmpd snmptrapd speech-dispatcherd systemd-boot-check-no-failures
systemd-confext systemd-network-generator systemd-sysext systemd-time-wait-sync
systemd-timesyncd udisks2 update-system-flatpaks upower vncserver@ wpa_supplicant@
indirect pcscd saned@ systemd-userdbd wickedd

13. Linux kernel boot-time arguments, from /proc/cmdline
BOOT_IMAGE=/boot/vmlinuz-6.4.0-150600.21-default
root=UUID=f6b7b82f-7376-4741-aad6-a16a8014b2fb
splash=silent
resume=/dev/disk/by-uuid/3bfae0e2-56ee-4845-bdbe-561ecf485c49
mitigations=auto
quiet
security=apparmor

14. cpupower frequency-info
analyzing CPU 6:
 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
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

(Continued on next page)



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Platform Notes (Continued)

```
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 | 60G | 5.0G | 56G | 9% | /mnt/ramdisk |

20. /sys/devices/virtual/dmi/id

```
Vendor:        Dell Inc.
Product:       PowerEdge R670
Product Family: PowerEdge
Serial:        1234567
```

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:

```
2x 00AD063200AD HMCG94AHBRA283N 64 GB 2 rank 6400
12x 00CE042300CE M321R8GA0PB2-CCPEC 64 GB 2 rank 6400
1x 00CE063200CE M321R8GA0PB1-CCPQC 64 GB 2 rank 6400
```

22. BIOS

(This section combines info from /sys/devices and dmidecode.)

```
BIOS Vendor:        Dell Inc.
BIOS Version:       1.3.2
BIOS Date:          05/15/2025
BIOS Revision:      1.3
```

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)
```

(Continued on next page)



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Compiler Version Notes (Continued)

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
-fipa -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -fopenmp
-DSPEC_OPENMP -L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

(Continued on next page)



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SPECspeed®2017_int_base = 14.7

PowerEdge R670 (Intel Xeon 6530P)

SPECspeed®2017_int_peak = 15.0

CPU2017 License: 6573

Test Date: Jun-2025

Test Sponsor: Dell Inc.

Hardware Availability: Apr-2025

Tested by: Dell Inc.

Software Availability: Jun-2024

Base Optimization Flags (Continued)

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  
-fopenmp -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)
```

(Continued on next page)



SPEC CPU®2017 Integer Speed Result

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Peak Optimization Flags (Continued)

602.gcc_s (continued):

```
-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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