



# SPEC CPU®2017 Floating Point Speed Result

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## Dell Inc.

SPECspeed®2017\_fp\_base = 294

### PowerEdge XR8720t (Intel Xeon 6766P-B)

SPECspeed®2017\_fp\_peak = 294

CPU2017 License: 6573

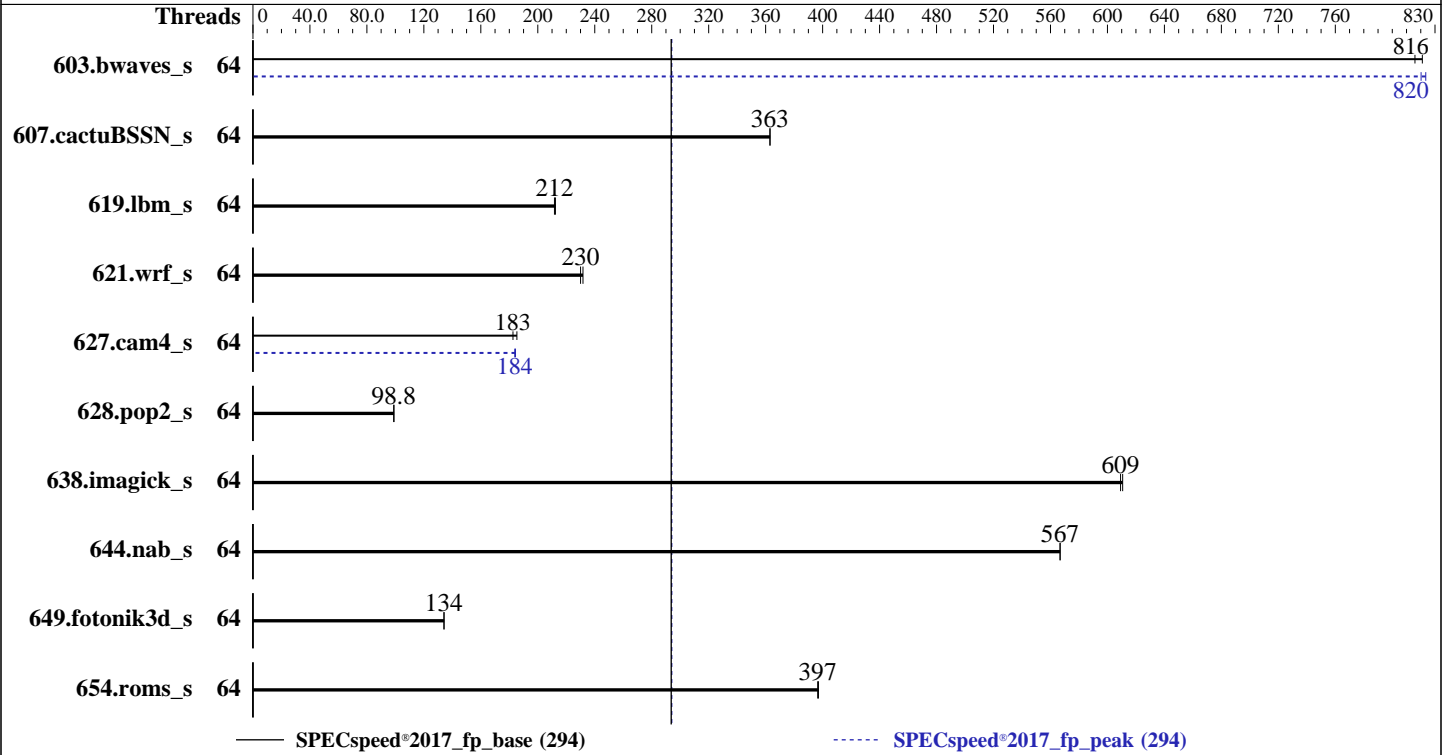
Test Date: Mar-2026

Test Sponsor: Dell Inc.

Hardware Availability: Mar-2026

Tested by: Dell Inc.

Software Availability: Jun-2025



### Hardware

CPU Name: Intel Xeon 6766P-B  
 Max MHz: 3500  
 Nominal: 2300  
 Enabled: 64 cores, 1 chip  
 Orderable: 1 chip  
 Cache L1: 64 KB I + 48 KB D on chip per core  
 L2: 2 MB I+D on chip per core  
 L3: 256 MB I+D on chip per chip  
 Other: None  
 Memory: 512 GB (8 x 64 GB 2Rx4 PC5-6400B-R)  
 Storage: 60 GB on tmpfs  
 Other: CPU Cooling: Air

### Software

OS: Red Hat Enterprise Linux 10.0 (Coughlan)  
 6.12.0-55.9.1.el10\_0.x86\_64  
 Compiler: C/C++: Version 2025.2 of Intel oneAPI DPC++/C++  
 Compiler for Linux;  
 Fortran: Version 2025.2 of Intel Fortran Compiler  
 for Linux;  
 Parallel: Yes  
 Firmware: Version 1.1.3 released Feb-2026  
 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 and OS 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
603.bwaves_s	64	<b><u>72.3</u></b>	<b><u>816</u></b>	71.9	821			64	71.6	824	<b><u>71.9</u></b>	<b><u>820</u></b>		
607.cactuBSSN_s	64	<b><u>45.9</u></b>	<b><u>363</u></b>	45.9	363			64	<b><u>45.9</u></b>	<b><u>363</u></b>	45.9	363		
619.lbm_s	64	24.7	212	<b><u>24.7</u></b>	<b><u>212</u></b>			64	24.7	212	<b><u>24.7</u></b>	<b><u>212</u></b>		
621.wrf_s	64	57.1	232	<b><u>57.5</u></b>	<b><u>230</u></b>			64	57.1	232	<b><u>57.5</u></b>	<b><u>230</u></b>		
627.cam4_s	64	47.8	185	<b><u>48.5</u></b>	<b><u>183</u></b>			64	<b><u>48.2</u></b>	<b><u>184</u></b>	48.1	184		
628.pop2_s	64	120	99.1	<b><u>120</u></b>	<b><u>98.8</u></b>			64	120	99.1	<b><u>120</u></b>	<b><u>98.8</u></b>		
638.imagick_s	64	23.6	611	<b><u>23.7</u></b>	<b><u>609</u></b>			64	23.6	611	<b><u>23.7</u></b>	<b><u>609</u></b>		
644.nab_s	64	30.8	567	<b><u>30.8</u></b>	<b><u>567</u></b>			64	30.8	567	<b><u>30.8</u></b>	<b><u>567</u></b>		
649.fotonik3d_s	64	67.9	134	<b><u>68.0</u></b>	<b><u>134</u></b>			64	67.9	134	<b><u>68.0</u></b>	<b><u>134</u></b>		
654.roms_s	64	39.7	397	<b><u>39.7</u></b>	<b><u>397</u></b>			64	39.7	397	<b><u>39.7</u></b>	<b><u>397</u></b>		

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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,compact"  
LD\_LIBRARY\_PATH =  
"/mnt/ramdisk/cpu2017-1.1.9-ic2025.2/lib/intel64:/mnt/ramdisk/cpu2017-1.1.9-ic2025.2/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>  
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  
Sub NUMA Cluster : Enabled  
LLC Prefetch : Enabled

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## Platform Notes (Continued)

System Profile : Custom  
CPU Power Management : Maximum Performance  
Memory Patrol Scrub : Disabled  
Latency Optimized Mode : Enabled

Sysinfo program /mnt/ramdisk/cpu2017-1.1.9-ic2025.2/bin/sysinfo  
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197  
running on SLXR872-XR8720t Tue Mar 3 00:55:18 2026

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 257 (257-9.el10\_0.1-g8cd5633)
12. Services, from systemctl list-unit-files
13. Linux kernel boot-time arguments, from /proc/cmdline
14. cpupower frequency-info
15. tuned-adm active
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 SLXR872-XR8720t 6.12.0-55.9.1.el10\_0.x86\_64 #1 SMP PREEMPT\_DYNAMIC Tue Mar 25 09:14:09 EDT 2025  
x86\_64 GNU/Linux  
-----

2. w  
00:55:18 up 2:27, 0 user, load average: 6.18, 5.73, 3.35  
USER TTY LOGIN@ IDLE JCPU PCPU WHAT  
-----

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

4. ulimit -a  
real-time non-blocking time (microseconds, -R) unlimited  
core file size (blocks, -c) unlimited  
data seg size (kbytes, -d) unlimited  
scheduling priority (-e) 0  
-----

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## Platform Notes (Continued)

```

file size                (blocks, -f) unlimited
pending signals          (-i) 2059717
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) 2059717
virtual memory            (kbytes, -v) unlimited
file locks                (-x) unlimited

```

```

-----
5. sysinfo process ancestry
/usr/lib/systemd/systemd --switched-root --system --deserialize=47 rhgb
/usr/sbin/crond -n
/usr/sbin/CROND -n
/bin/bash /home/DellFiles/bin/dell-crontab-run.sh dell-batch.sh
/bin/bash /home/DellFiles/bin/dell-crontab-run.sh dell-batch.sh
/bin/bash /home/DellFiles/bin/dell-batch.sh
/bin/bash /home/DellFiles/bin/dell-batch.sh
/bin/bash /home/DellFiles/bin/CPU_speed.sh
/bin/bash /home/DellFiles/bin/cpu-run-main.sh speed
/bin/bash /home/DellFiles/bin/cpu-run-main.sh speed
/bin/bash /home/DellFiles/bin/Intel/cpu-run-speccpu.sh speed_all --define DL-VERS=7.0_T06 --output_format
html,pdf,txt
/bin/bash /home/DellFiles/bin/Intel/cpu-run-speccpu.sh speed_all --define DL-VERS=7.0_T06 --output_format
html,pdf,txt
runcpu --nobuild --action validate --define default-platform-flags -c
ic2025.2-linux64-graniterapids-speed-20250605.cfg --define cores=64 --tune base,peak -o all --define
drop_caches --iterations 2 --define DL-VERS=7.0_T06 --output_format html,pdf,txt fpspeed
runcpu --nobuild --action validate --define default-platform-flags --configfile
ic2025.2-linux64-graniterapids-speed-20250605.cfg --define cores=64 --tune base,peak --output_format all
--define drop_caches --iterations 2 --define DL-VERS=7.0_T06 --output_format html,pdf,txt --nopower
--runmode speed --tune base:peak --size refspeed fpspeed --nopreenv --note-preenv --logfile
$SPEC/tmp/CPU2017.002/templogs/preenv.fpspeed.002.0.log --lognum 002.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /mnt/ramdisk/cpu2017-1.1.9-ic2025.2

```

```

-----
6. /proc/cpuinfo
model name      : INTEL(R) XEON(R) 6766P-B
vendor_id      : GenuineIntel
cpu family     : 6
model          : 174
stepping       : 1
microcode      : 0x1000303
bugs           : spectre_v1 spectre_v2 spec_store_bypass swapgs bhi
cpu cores      : 64
siblings       : 64
1 physical ids (chips)
64 processors (hardware threads)
physical id 0: core ids 0-31,64-95
physical id 0: apicids
0,2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46,48,50,52,54,56,58,60,62,128,130,132,13
4,136,138,140,142,144,146,148,150,152,154,156,158,160,162,164,166,168,170,172,174,176,178,180,182,184,186
,188,190
Caution: /proc/cpuinfo data regarding chips, cores, and threads is not necessarily reliable, especially for

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## Platform Notes (Continued)

virtualized systems. Use the above data carefully.

### 7. lscpu

From lscpu from util-linux 2.40.2:

```

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) 6766P-B
BIOS Model name:       INTEL(R) XEON(R) 6766P-B  CPU @ 2.3GHz
BIOS CPU family:       179
CPU family:             6
Model:                  174
Thread(s) per core:    1
Core(s) per socket:    64
Socket(s):              1
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 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 bmil avx2 smep bmi2 erms invpcid 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 vnni avx512vbmi umip pku ospke waitpkg avx512_vbmi2
gfni vaes vpclmulqdq avx512_vnni avx512_bitalg 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:              256 MiB (1 instance)
NUMA node(s):         2
NUMA node0 CPU(s):    0-31
NUMA node1 CPU(s):    32-63
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

```

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## Platform Notes (Continued)

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; PBRSE-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	256M	256M	16	Unified	3	262144	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: 257168 MB  
node 0 free: 255604 MB  
node 1 cpus: 32-63  
node 1 size: 257986 MB  
node 1 free: 243294 MB  
node distances:  
node 0 1  
0: 10 12  
1: 12 10

9. /proc/meminfo

MemTotal: 527518412 kB

10. who -r

run-level 3 Mar 2 22:27

11. Systemd service manager version: systemd 257 (257-9.el10\_0.1-g8cd5633)

Default Target Status  
multi-user running

12. Services, from systemctl list-unit-files

STATE	UNIT FILES
enabled	ModemManager NetworkManager NetworkManager-dispatcher NetworkManager-wait-online accounts-daemon atd audit-rules auditd avahi-daemon bluetooth chronyd crond cups dbus-broker fips-crypto-policy-overlay firewalld gdm getty@ insights-client-boot irqbalance iscsi-onboot iscsi-starter kdump libstoragemgmt lvm2-monitor mcelog mdmonitor multipathd nvme-fc-boot-connections qemu-guest-agent rhsmcertd rsyslog rtkit-daemon selinux-autorelabel-mark smartd sshd sssd switcheroo-control systemd-confext systemd-network-generator systemd-pstore systemd-sysext tuned tuned-ppd udisks2 upower vgauthd vmttoolsd
enabled-runtime	systemd-remount-fs
disabled	arp-ethers blk-availability brltty canberra-system-bootup canberra-system-shutdown canberra-system-shutdown-reboot chrony-wait chronyd-restricted console-getty cups-browsed dbus-daemon debug-shell dnf-system-upgrade dnsmasq gnome-remote-desktop gnome-remote-desktop-configuration hypervfcopyd iscsi-init iscsid iscsiuiio kpatch kvm_stat ledmon low-memory-monitor lvm-devices-import man-db-restart-cache-update microcode netavark-dhcp-proxy netavark-firewalld-reload nftables nis-domainname nvme-autoconnect

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## Platform Notes (Continued)

```

indirect
podman podman-auto-update podman-clean-transient podman-kube@ podman-restart psacct
ras-mc-ctl rasdaemon rhsm rhsm-facts rpmdb-migrate rpmdb-rebuild
selinux-check-proper-disable serial-getty@ speech-dispatcherd ssh-host-keys-migration
sshd-keygen@ systemd-boot-check-no-failures systemd-boot-update
systemd-PCRlock-file-system systemd-PCRlock-firmware-code systemd-PCRlock-firmware-config
systemd-PCRlock-machine-id systemd-PCRlock-make-policy
systemd-PCRlock-secureboot-authority systemd-PCRlock-secureboot-policy
systemd-udev-load-credentials wpa_supplicant wsdm yggdrasil yggdrasil@
iscsi pcsd spice-vdagentd sshd@ sssd-autofs sssd-kcm sssd-nss sssd-pac sssd-pam sssd-ssh
sssd-sudo systemd-sysupdate systemd-sysupdate-reboot systemd-userdbd

```

```

-----
13. Linux kernel boot-time arguments, from /proc/cmdline
BOOT_IMAGE=(hd0,gpt2)/vmlinuz-6.12.0-55.9.1.el10_0.x86_64
root=/dev/mapper/rhel-root
ro
crashkernel=2G-64G:256M,64G-:512M
resume=UUID=eefe8659-8b69-47a2-9f71-b55ccafcac00
rd.lvm.lv=rhel/root
rd.lvm.lv=rhel/swap
rhgb
quiet

```

```

-----
14. cpupower frequency-info
analyzing CPU 24:
Unable to determine current policy
boost state support:
Supported: yes
Active: yes

```

```

-----
15. tuned-adm active
Current active profile: balanced

```

```

-----
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                   60
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+madvice [madvice] never

```

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## Platform Notes (Continued)

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 Red Hat Enterprise Linux 10.0 (Coughlan)  
redhat-release Red Hat Enterprise Linux release 10.0 (Coughlan)  
system-release Red Hat Enterprise Linux release 10.0 (Coughlan)

-----  
20. Disk information  
SPEC is set to: /mnt/ramdisk/cpu2017-1.1.9-ic2025.2  
Filesystem Type Size Used Avail Use% Mounted on  
tmpfs tmpfs 60G 5.8G 55G 10% /mnt/ramdisk

-----  
21. /sys/devices/virtual/dmi/id  
Vendor: Dell Inc.  
Product: PowerEdge XR8720t  
Product Family: PowerEdge  
Serial: SLXR872

-----  
22. dmidecode  
Additional information from dmidecode 3.6 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 002C069D002C MTC40F2046S1RC64BD2 USFF 64 GB 2 rank 6400

-----  
23. BIOS  
(This section combines info from /sys/devices and dmidecode.)  
BIOS Vendor: Dell Inc.  
BIOS Version: 1.1.3  
BIOS Date: 02/03/2026  
BIOS Revision: 1.1

## Compiler Version Notes

-----  
C | 619.lbm\_s(base, peak) 638.imagick\_s(base, peak) 644.nab\_s(base, peak)

-----  
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2025.2.0 Build 20250605  
Copyright (C) 1985-2025 Intel Corporation. All rights reserved.

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SPECspeed®2017\_fp\_peak = 294

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

Test Date: Mar-2026  
Hardware Availability: Mar-2026  
Software Availability: Jun-2025

## Compiler Version Notes (Continued)

=====  
C++, C, Fortran | 607.cactuBSSN\_s(base, peak)  
=====

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Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2025.2.0 Build 20250605  
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=====  
Fortran | 603.bwaves\_s(base, peak) 649.fotonik3d\_s(base, peak) 654.roms\_s(base, peak)  
=====

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2025.2.0 Build 20250605  
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=====  
Fortran, C | 621.wrf\_s(base, peak) 627.cam4\_s(base, peak) 628.pop2\_s(base, peak)  
=====

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2025.2.0 Build 20250605  
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## Base Compiler Invocation

C benchmarks:  
icx

Fortran benchmarks:  
ifx

Benchmarks using both Fortran and C:  
ifx icx

Benchmarks using Fortran, C, and C++:  
icpx icx ifx

## Base Portability Flags

603.bwaves\_s: -DSPEC\_LP64  
607.cactuBSSN\_s: -DSPEC\_LP64  
619.lbm\_s: -DSPEC\_LP64  
621.wrf\_s: -DSPEC\_LP64 -DSPEC\_CASE\_FLAG -convert big\_endian

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# SPEC CPU®2017 Floating Point Speed Result

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## Base Portability Flags (Continued)

```
627.cam4_s: -DSPEC_LP64 -DSPEC_CASE_FLAG
628.pop2_s: -DSPEC_LP64 -DSPEC_CASE_FLAG -convert big_endian
-assume byterecl
638.imagick_s: -DSPEC_LP64
644.nab_s: -DSPEC_LP64
649.fotonik3d_s: -DSPEC_LP64
654.roms_s: -DSPEC_LP64
```

## Base Optimization Flags

C benchmarks:

```
-w -std=c11 -m64 -Wl,-z,muldefs -xgraniterapids -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -fiopenmp
-DSPEC_OPENMP -Wno-implicit-int -mprefer-vector-width=512
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc
```

Fortran benchmarks:

```
-w -m64 -Wl,-z,muldefs -DSPEC_OPENMP -xgraniterapids -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fiopenmp -nostandard-realloc-lhs
-align array32byte -auto -L/usr/local/jemalloc64-5.0.1/lib -ljemalloc
```

Benchmarks using both Fortran and C:

```
-w -m64 -std=c11 -Wl,-z,muldefs -xgraniterapids -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -fiopenmp
-DSPEC_OPENMP -Wno-implicit-int -mprefer-vector-width=512
-nostandard-realloc-lhs -align array32byte -auto
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc
```

Benchmarks using Fortran, C, and C++:

```
-w -std=c++14 -m64 -std=c11 -Wl,-z,muldefs -xgraniterapids -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fiopenmp -DSPEC_OPENMP -Wno-implicit-int
-mprefer-vector-width=512 -nostandard-realloc-lhs -align array32byte
-auto -L/usr/local/jemalloc64-5.0.1/lib -ljemalloc
```

## Peak Compiler Invocation

C benchmarks:

```
icx
```

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CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Mar-2026

Hardware Availability: Mar-2026

Software Availability: Jun-2025

## Peak Compiler Invocation (Continued)

Fortran benchmarks:

ifx

Benchmarks using both Fortran and C:

ifx icx

Benchmarks using Fortran, C, and C++:

icpx icx ifx

## Peak Portability Flags

Same as Base Portability Flags

## Peak Optimization Flags

C benchmarks:

619.lbm\_s: basepeak = yes

638.imagick\_s: basepeak = yes

644.nab\_s: basepeak = yes

Fortran benchmarks:

603.bwaves\_s: -w -m64 -Wl,-z,muldefs -DSPEC\_OPENMP -xgraniterapids -Ofast -ffast-math -flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -fiopenmp -nostandard-realloc-lhs -align array32byte -auto -L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

649.fotonik3d\_s: basepeak = yes

654.roms\_s: basepeak = yes

Benchmarks using both Fortran and C:

621.wrf\_s: basepeak = yes

627.cam4\_s: -w -m64 -std=c11 -Wl,-z,muldefs -xgraniterapids -Ofast -ffast-math -flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -fiopenmp -DSPEC\_OPENMP

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## Peak Optimization Flags (Continued)

627.cam4\_s (continued):

```
-Wno-implicit-int -mprefer-vector-width=512
-nostandard-realloc-lhs -align array32byte -auto
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc
```

628.pop2\_s: basepeak = yes

Benchmarks using Fortran, C, and C++:

607.cactuBSSN\_s: basepeak = yes

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

<http://www.spec.org/cpu2017/flags/Intel-ic2025-official-linux64.html>

<http://www.spec.org/cpu2017/flags/Dell-Platform-Flags-PowerEdge-Intel-Xeon-v1.19.html>

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

<http://www.spec.org/cpu2017/flags/Intel-ic2025-official-linux64.xml>

<http://www.spec.org/cpu2017/flags/Dell-Platform-Flags-PowerEdge-Intel-Xeon-v1.19.xml>

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