



SPEC CPU®2017 Integer Speed Result

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Dell Inc.

SPECspeed®2017_int_base = 14.2

PowerEdge R770AP (Intel Xeon 6960P)

SPECspeed®2017_int_peak = 14.4

CPU2017 License: 6573

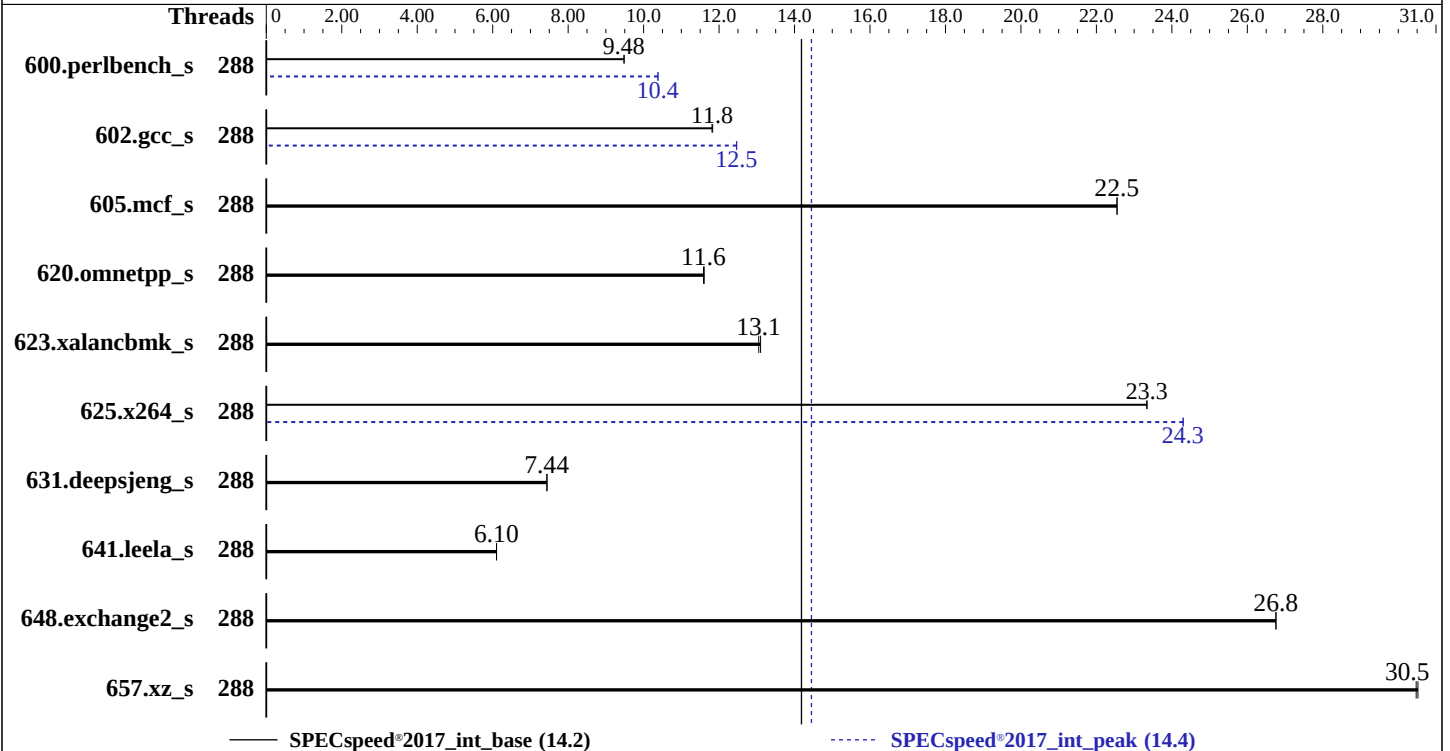
Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Nov-2025

Hardware Availability: Oct-2025

Software Availability: Sep-2025



Hardware

CPU Name: Intel Xeon 6960P
Max MHz: 3900
Nominal: 2700
Enabled: 144 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: 432 MB I+D on chip per chip
Other: None
Memory: 768 GB (24 x 32 GB 2Rx8 PC5-6400B-R)
Storage: 150 GB on tmpfs
Other: CPU Cooling: Air

Software

OS: SUSE Linux Enterprise Server 16.0
6.12.0-160000.4-default
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 1.1.5 released Oct-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	288	<u>187</u>	<u>9.48</u>	187	9.48			288	171	10.4	<u>171</u>	<u>10.4</u>		
602.gcc_s	288	337	11.8	<u>337</u>	<u>11.8</u>			288	319	12.5	<u>320</u>	<u>12.5</u>		
605.mcf_s	288	209	22.5	<u>209</u>	<u>22.5</u>			288	209	22.5	<u>209</u>	<u>22.5</u>		
620.omnetpp_s	288	<u>141</u>	<u>11.6</u>	141	11.6			288	<u>141</u>	<u>11.6</u>	141	11.6		
623.xalancbmk_s	288	<u>109</u>	<u>13.1</u>	108	13.1			288	<u>109</u>	<u>13.1</u>	108	13.1		
625.x264_s	288	75.6	23.3	<u>75.6</u>	<u>23.3</u>			288	<u>72.6</u>	<u>24.3</u>	72.6	24.3		
631.deepsjeng_s	288	193	7.44	<u>193</u>	<u>7.44</u>			288	193	7.44	<u>193</u>	<u>7.44</u>		
641.leela_s	288	<u>280</u>	<u>6.10</u>	280	6.10			288	<u>280</u>	<u>6.10</u>	280	6.10		
648.exchange2_s	288	110	26.8	<u>110</u>	<u>26.8</u>			288	110	26.8	<u>110</u>	<u>26.8</u>		
657.xz_s	288	<u>203</u>	<u>30.5</u>	203	30.5			288	<u>203</u>	<u>30.5</u>	203	30.5		

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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,scatter"

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 150 GB ramdisk created with the cmd: "mount -t tmpfs -o size=150G tmpfs /mnt/ramdisk"

Platform Notes

BIOS Settings:

Sub NUMA Cluster : Enabled

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Platform Notes (Continued)

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

Sysinfo program /mnt/ramdisk/cpu2017-1.1.9-ic2025.2/bin/sysinfo
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
running on S123456-R770AP Thu Nov 6 15:41:53 2025

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

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1. uname -a
Linux S123456-R770AP 6.12.0-160000.4-default #1 SMP PREEMPT_DYNAMIC Wed Aug 20 16:45:35 UTC 2025 (1147121)
x86_64 x86_64 x86_64 GNU/Linux

2. w
15:41:53 up 49 min, 1 user, load average: 0.38, 0.93, 9.92
USER TTY FROM LOGIN@ IDLE JCPU PCPU WHAT
root tty1 - 14:52 25.00s 0.92s ? /bin/bash
/home/DellFiles/bin/Intel/dell-run-speccpu.sh speed --define DL-VERS=6.4_T17 --output_format html,pdf,txt

3. Username
From environment variable \$USER: root

4. ulimit -a
real-time non-blocking time (microseconds, -R) unlimited

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Platform Notes (Continued)

core file size	(blocks, -c) unlimited
data seg size	(kbytes, -d) unlimited
scheduling priority	(-e) 0
file size	(blocks, -f) unlimited
pending signals	(-i) 3093045
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) 3093045
virtual memory	(kbytes, -v) unlimited
file locks	(-x) unlimited

5. sysinfo process ancestry

```
/usr/lib/systemd/systemd --switched-root --system --deserialize=47
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=6.4_T17 --output_format
html, pdf, txt
/bin/bash /home/DellFiles/bin/Intel/dell-run-speccpu.sh speed --define DL-VERS=6.4_T17 --output_format
html, pdf, txt
runcpu --nobuild --action validate --define default-platform-flags -c
ic2025.2-linux64-graniterapids-speed-20250605.cfg --define cores=144 --tune base,peak -o all --define
intspeedaffinity --define smt-on --define drop_caches --iterations 2 --define DL-VERS=6.4_T17
--output_format html, pdf, txt intspeed
runcpu --nobuild --action validate --define default-platform-flags --configfile
ic2025.2-linux64-graniterapids-speed-20250605.cfg --define cores=144 --tune base,peak --output_format all
--define intspeedaffinity --define smt-on --define drop_caches --iterations 2 --define DL-VERS=6.4_T17
--output_format html, pdf, txt --nopower --runmode speed --tune base:peak --size refspeed intspeed
--nopreenv --note-preenv --logfile $SPEC/tmp/CPU2017.001/temlogs/preenv.intspeed.001.0.log --lognum 001.0
--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) 6960P
vendor_id      : GenuineIntel
cpu family     : 6
model          : 173
stepping       : 1
microcode      : 0x10003f3
bugs           : spectre_v1 spectre_v2 spec_store_bypass swapgs bhi spectre_v2_user
cpu cores      : 72
siblings       : 144
2 physical ids (chips)
288 processors (hardware threads)
physical id 0: core ids 0-23,64-87,128-151
physical id 1: core ids 0-23,64-87,128-151
physical id 0: apicids 0-47,128-175,256-303
physical id 1: apicids 512-559,640-687,768-815
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 2.41.1:

```
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):                      288
On-line CPU(s) list:         0-287
Vendor ID:                   GenuineIntel
Model name:                  Intel(R) Xeon(R) 6960P
CPU family:                  6
Model:                       173
Thread(s) per core:          2
Core(s) per socket:          72
Socket(s):                   2
Stepping:                    1
BogoMIPS:                    5400.00
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 aperfperf 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 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 vnmi 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_l1d arch_capabilities
Virtualization:              VT-x
L1d cache:                   6.8 MiB (144 instances)
L1i cache:                   9 MiB (144 instances)
L2 cache:                    288 MiB (144 instances)
L3 cache:                    864 MiB (2 instances)
NUMA node(s):                6
NUMA node0 CPU(s):           0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46,
                             144, 146, 148, 150, 152, 154, 156, 158, 160, 162, 164, 166, 168, 170, 172, 174, 1,
                             76, 178, 180, 182, 184, 186, 188, 190
NUMA node1 CPU(s):           48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88, 90,
                             92, 94, 192, 194, 196, 198, 200, 202, 204, 206, 208, 210, 212, 214, 216, 218, 220,
                             222, 224, 226, 228, 230, 232, 234, 236, 238
NUMA node2 CPU(s):           96, 98, 100, 102, 104, 106, 108, 110, 112, 114, 116, 118, 120, 122, 124, 126, 128,
                             130, 132, 134, 136, 138, 140, 142, 240, 242, 244, 246, 248, 250, 252, 254, 256, 25
                             8, 260, 262, 264, 266, 268, 270, 272, 274, 276, 278, 280, 282, 284, 286
NUMA node3 CPU(s):           1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45, 47,
                             145, 147, 149, 151, 153, 155, 157, 159, 161, 163, 165, 167, 169, 171, 173, 175, 1,
                             77, 179, 181, 183, 185, 187, 189, 191
NUMA node4 CPU(s):           49, 51, 53, 55, 57, 59, 61, 63, 65, 67, 69, 71, 73, 75, 77, 79, 81, 83, 85, 87, 89, 91,
```

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Platform Notes (Continued)

93, 95, 193, 195, 197, 199, 201, 203, 205, 207, 209, 211, 213, 215, 217, 219, 221, 223, 225, 227, 229, 231, 233, 235, 237, 239
97, 99, 101, 103, 105, 107, 109, 111, 113, 115, 117, 119, 121, 123, 125, 127, 129, 131, 133, 135, 137, 139, 141, 143, 241, 243, 245, 247, 249, 251, 253, 255, 257, 259, 261, 263, 265, 267, 269, 271, 273, 275, 277, 279, 281, 283, 285, 287

NUMA node5 CPU(s):

Vulnerability Gather data sampling: Not affected
Vulnerability Indirect target selection: 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; PBRSE-eIBRS Not affected; BHI BHI_DIS_S
Vulnerability Srbds: Not affected
Vulnerability Tsa: 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	6.8M	12	Data	1	64	1	64
L1i	64K	9M	16	Instruction	1	64	1	64
L2	2M	288M	16	Unified	2	2048	1	64
L3	432M	864M	16	Unified	3	442368	1	64

8. numactl --hardware

NOTE: a numactl 'node' might or might not correspond to a physical chip.

available: 6 nodes (0-5)

node 0 cpus:

0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 144, 146, 148, 150, 152, 154, 156, 158, 160, 162, 164, 166, 168, 170, 172, 174, 176, 178, 180, 182, 184, 186, 188, 190

node 0 size: 128575 MB

node 0 free: 115595 MB

node 1 cpus:

48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 192, 194, 196, 198, 200, 202, 204, 206, 208, 210, 212, 214, 216, 218, 220, 222, 224, 226, 228, 230, 232, 234, 236, 238

node 1 size: 129006 MB

node 1 free: 128599 MB

node 2 cpus:

96, 98, 100, 102, 104, 106, 108, 110, 112, 114, 116, 118, 120, 122, 124, 126, 128, 130, 132, 134, 136, 138, 140, 142, 240, 242, 244, 246, 248, 250, 252, 254, 256, 258, 260, 262, 264, 266, 268, 270, 272, 274, 276, 278, 280, 282, 284, 286

node 2 size: 129006 MB

node 2 free: 128607 MB

node 3 cpus:

1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45, 47, 145, 147, 149, 151, 153, 155, 157, 159, 161, 163, 165, 167, 169, 171, 173, 175, 177, 179, 181, 183, 185, 187, 189, 191

node 3 size: 128964 MB

node 3 free: 128586 MB

node 4 cpus:

49, 51, 53, 55, 57, 59, 61, 63, 65, 67, 69, 71, 73, 75, 77, 79, 81, 83, 85, 87, 89, 91, 93, 95, 193, 195, 197, 199, 201, 203, 205, 207, 209, 211, 213, 215, 217, 219, 221, 223, 225, 227, 229, 231, 233, 235, 237, 239

node 4 size: 129006 MB

node 4 free: 128620 MB

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Platform Notes (Continued)

node 5 cpus:

97, 99, 101, 103, 105, 107, 109, 111, 113, 115, 117, 119, 121, 123, 125, 127, 129, 131, 133, 135, 137, 139, 141, 143, 241, 243, 245, 247, 249, 251, 253, 255, 257, 259, 261, 263, 265, 267, 269, 271, 273, 275, 277, 279, 281, 283, 285, 287

node 5 size: 128928 MB

node 5 free: 128556 MB

node distances:

node	0	1	2	3	4	5
0:	10	15	17	21	28	26
1:	15	10	15	23	26	23
2:	17	15	10	26	23	21
3:	21	28	26	10	15	17
4:	23	26	23	15	10	15
5:	26	23	21	17	15	10

9. /proc/meminfo

MemTotal: 792051648 kB

'who -r' did not return a run level

10. Systemd service manager version: systemd 257 (257.7+suse.19.ga0dfd5de4c)

Default Target	Status
multi-user	running

11. Services, from systemctl list-unit-files

STATE	UNIT FILES
enabled	NetworkManager NetworkManager-dispatcher NetworkManager-wait-online audit-rules auditd chronyd dbus-broker getty@ irqbalance issue-generator kbdsettings klog lvm2-monitor nvme-fc-boot-connections nvme-fc-autoconnect rollback rsyslog smartd soft-reboot-cleanup sshd systemd-pstore wpa_supplicant wtmpdb-update-boot
enabled-runtime	systemd-remount-fs
disabled	blk-availability boot-sysctl ca-certificates ca-certificates-setup chrony-wait console-getty debug-shell dnsmasq firewalld gpm grub2-once hwloc-dump-hwdata issue-add-ssh-keys kernel-sysctl kexec-load lastlog2-import lunmask lvm-devices-import man-db-create multipathd nftables nis-domainname rpmconfigcheck rsyncd serial-getty@ setup-systemd-proxy-env smartd-generate_opts snmpd snmptrapd systemd-boot-check-no-failures systemd-confext systemd-network-generator systemd-sysext systemd-time-wait-sync systemd-timesyncd systemd-udev-load-credentials udisks2 wpa_supplicant@
indirect	systemd-userdbd

12. Linux kernel boot-time arguments, from /proc/cmdline

BOOT_IMAGE=/boot/vmlinuz-6.12.0-160000.4-default
root=UUID=e4f947ce-14ce-42f7-b3ba-64120f83c4e6
mitigations=auto
quiet
security=selinux
selinux=1

13. cpupower frequency-info

analyzing CPU 0:
Unable to determine current policy
boost state support:
Supported: yes
Active: yes

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Platform Notes (Continued)

14. 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

15. /sys/kernel/mm/transparent_hugepage

defrag	always defer+madvise [madvise] never
enabled	[always] madvise never
hpage_pmd_size	2097152
shmem_enabled	always within_size advise [never] deny force

16. /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

17. OS release

From /etc/*-release /etc/*-version
os-release SUSE Linux Enterprise Server 16.0

18. Disk information

SPEC is set to: /mnt/ramdisk/cpu2017-1.1.9-ic2025.2

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
tmpfs	tmpfs	150G	5.8G	145G	4%	/mnt/ramdisk

19. /sys/devices/virtual/dmi/id

Vendor:	Dell Inc.
Product:	PowerEdge R770AP
Product Family:	PowerEdge
Serial:	S123456

20. dmidecode

Additional information from dmidecode 3.6 follows. WARNING: Use caution when you interpret this section.

(Continued on next page)



SPEC CPU®2017 Integer Speed Result

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Dell Inc.

SPECspeed®2017_int_base = 14.2

PowerEdge R770AP (Intel Xeon 6960P)

SPECspeed®2017_int_peak = 14.4

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Nov-2025

Hardware Availability: Oct-2025

Software Availability: Sep-2025

Platform Notes (Continued)

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:

24x 002C069D002C MTC20F2085S1RC64BD2 USFF 32 GB 2 rank 6400

21. BIOS

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

BIOS Vendor: Dell Inc.

BIOS Version: 1.1.5

BIOS Date: 10/22/2025

BIOS Revision: 1.1

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 2025.2.0 Build 20250605
Copyright (C) 1985-2025 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 2025.2.0 Build 20250605
Copyright (C) 1985-2025 Intel Corporation. All rights reserved.

```
=====  
Fortran | 648.exchange2_s(base, peak)  
=====
```

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

Base Compiler Invocation

C benchmarks:

icx

C++ benchmarks:

icpx

Fortran benchmarks:

ifx



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SPECspeed®2017_int_peak = 14.4

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Nov-2025

Hardware Availability: Oct-2025

Software Availability: Sep-2025

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 -xgraniterapids -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 -xgraniterapids -O3 -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-fdelayed-template-parsing -L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

Fortran benchmarks:

-w -m64 -Wl,-z,muldefs -xgraniterapids -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



SPEC CPU®2017 Integer Speed Result

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PowerEdge R770AP (Intel Xeon 6960P)

SPECspeed®2017_int_peak = 14.4

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Nov-2025

Hardware Availability: Oct-2025

Software Availability: Sep-2025

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.profddata(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
-fno-strict-aliasing -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.profddata(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 -xgraniterapids -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:

(Continued on next page)



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CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Nov-2025

Hardware Availability: Oct-2025

Software Availability: Sep-2025

Peak Optimization Flags (Continued)

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-ic2025-official-linux64.html>

<http://www.spec.org/cpu2017/flags/Dell-Platform-Flags-PowerEdge-Intel-Xeon-v1.18.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-v1.18.xml>

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