



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

## Dell Inc.

SPECspeed®2017\_int\_base = 13.9

## PowerEdge R770 (Intel Xeon 6787P)

SPECspeed®2017\_int\_peak = 14.2

CPU2017 License: 6573

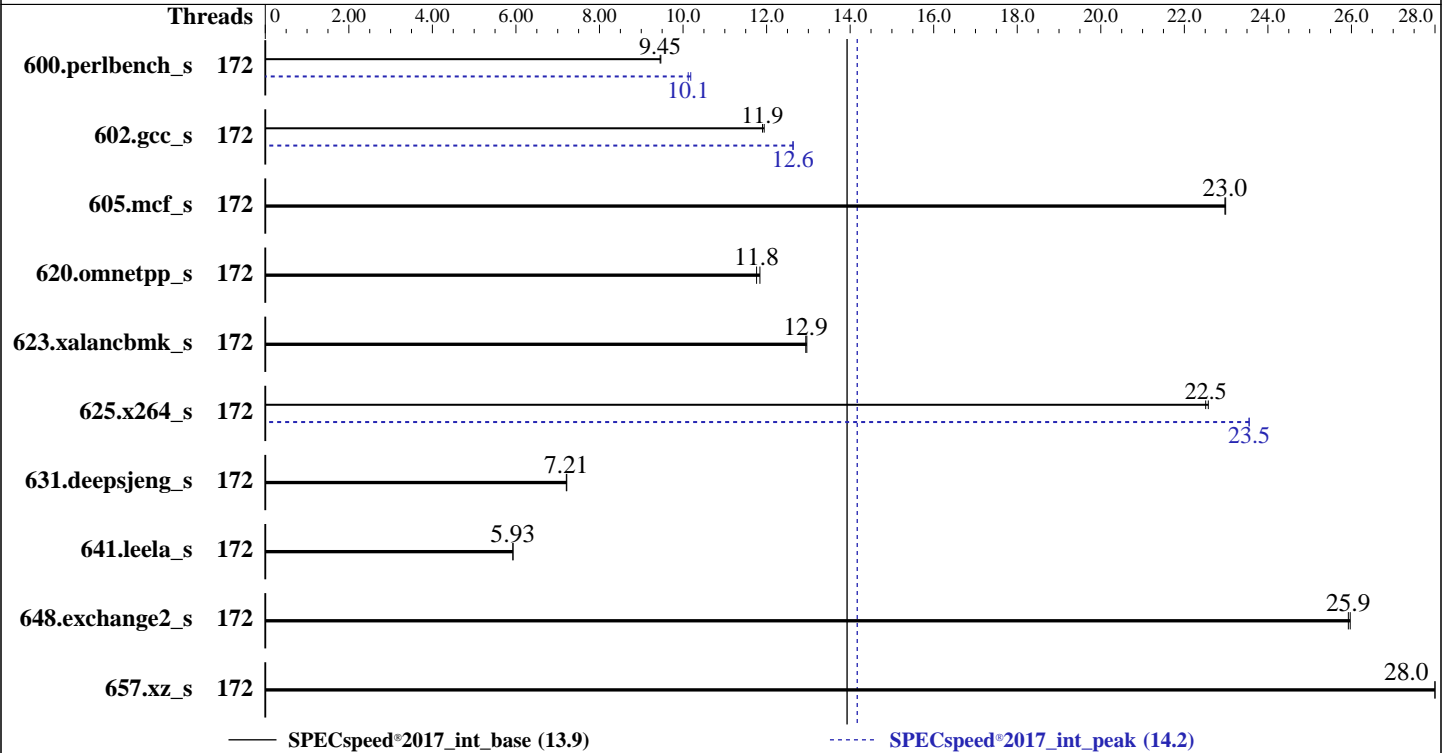
Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Mar-2025

Hardware Availability: Mar-2025

Software Availability: Jun-2024



### Hardware

CPU Name: Intel Xeon 6787P  
 Max MHz: 3800  
 Nominal: 2000  
 Enabled: 172 cores, 2 chips  
 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: 336 MB I+D on chip per chip  
 Other: None  
 Memory: 1 TB (16 x 64 GB 2Rx4 PC5-6400B-R)  
 Storage: 100 GB on tmpfs  
 Other: CPU Cooling: DLC

### 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.



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECspeed®2017\_int\_base = 13.9

PowerEdge R770 (Intel Xeon 6787P)

SPECspeed®2017\_int\_peak = 14.2

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

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

## Results Table

Benchmark	Base						Peak							
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
600.perlbench_s	172	<b>188</b>	<b>9.45</b>	187	9.47			172	<b>175</b>	<b>10.1</b>	174	10.2		
602.gcc_s	172	333	11.9	<b>335</b>	<b>11.9</b>			172	<b>315</b>	<b>12.6</b>	315	12.6		
605.mcf_s	172	205	23.0	<b>206</b>	<b>23.0</b>			172	205	23.0	<b>206</b>	<b>23.0</b>		
620.omnetpp_s	172	138	11.8	<b>139</b>	<b>11.8</b>			172	138	11.8	<b>139</b>	<b>11.8</b>		
623.xalancbmk_s	172	109	13.0	<b>110</b>	<b>12.9</b>			172	109	13.0	<b>110</b>	<b>12.9</b>		
625.x264_s	172	78.1	22.6	<b>78.4</b>	<b>22.5</b>			172	<b>74.9</b>	<b>23.5</b>	74.9	23.6		
631.deepsjeng_s	172	199	7.22	<b>199</b>	<b>7.21</b>			172	199	7.22	<b>199</b>	<b>7.21</b>		
641.leela_s	172	288	5.93	<b>288</b>	<b>5.93</b>			172	288	5.93	<b>288</b>	<b>5.93</b>		
648.exchange2_s	172	<b>113</b>	<b>25.9</b>	113	26.0			172	<b>113</b>	<b>25.9</b>	113	26.0		
657.xz_s	172	221	28.0	<b>221</b>	<b>28.0</b>			172	221	28.0	<b>221</b>	<b>28.0</b>		

SPECspeed®2017\_int\_base = **13.9**

SPECspeed®2017\_int\_peak = **14.2**

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 100 GB ramdisk created with the cmd: "mount -t tmpfs -o size=100G tmpfs /mnt/ramdisk"



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECspeed®2017\_int\_base = 13.9

PowerEdge R770 (Intel Xeon 6787P)

SPECspeed®2017\_int\_peak = 14.2

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Mar-2025

Hardware Availability: Mar-2025

Software Availability: Jun-2024

## Platform Notes

### BIOS Settings:

```

Logical Processor : Disabled
Sub NUMA Cluster : Enabled
MADT Core Enumeration : Linear
LLC Prefetch : Enabled
Optimizer Mode : Enabled

System Profile : Custom
CPU Power Management : Maximum Performance
CIE : 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 CPCD664-R770 Sat Mar 8 14:38:28 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 CPCD664-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)



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECspeed®2017\_int\_base = 13.9

PowerEdge R770 (Intel Xeon 6787P)

SPECspeed®2017\_int\_peak = 14.2

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

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

## Platform Notes (Continued)

```
14:38:28 up 4 min, 1 user, load average: 0.44, 1.48, 0.82
USER      TTY      FROM          LOGIN@   IDLE   JCPU   PCPU   WHAT
root      tty1     -             14:36   28.00s 0.81s  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) 4126564  
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) 4126564  
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=172 --tune base,peak -o all --define  
intspeedaffinity --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=172 --tune base,peak --output\_format all  
--define intsppedaffinity --define drop\_caches --iterations 2 --define DL-VERS=6.1a --output\_format  
html,pdf,txt --nopower --runmode speed --tune base:peak --size refspped intspped --nopreenv --note-preenv  
--logfile \$SPEC/tmp/CPU2017.001/temlogs/preenv.intspped.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) 6787P  
vendor\_id : GenuineIntel  
cpu family : 6  
model : 173  
stepping : 1  
microcode : 0x1000380

(Continued on next page)



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECSpeed®2017\_int\_base = 13.9

PowerEdge R770 (Intel Xeon 6787P)

SPECSpeed®2017\_int\_peak = 14.2

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

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

## Platform Notes (Continued)

```
bugs          : spectre_v1 spectre_v2 spec_store_bypass swappgs bhi
cpu cores     : 86
siblings      : 86
2 physical ids (chips)
172 processors (hardware threads)
physical id 0: core ids 0-42,64-106
physical id 1: core ids 0-42,64-106
physical id 0: apicids
0,2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46,48,50,52,54,56,58,60,62,64,66,68,70,72
,74,76,78,80,82,84,128,130,132,134,136,138,140,142,144,146,148,150,152,154,156,158,160,162,164,166,168,17
0,172,174,176,178,180,182,184,186,188,190,192,194,196,198,200,202,204,206,208,210,212
physical id 1: apicids
256,258,260,262,264,266,268,270,272,274,276,278,280,282,284,286,288,290,292,294,296,298,300,302,304,306,3
08,310,312,314,316,318,320,322,324,326,328,330,332,334,336,338,340,384,386,388,390,392,394,396,398,400,40
2,404,406,408,410,412,414,416,418,420,422,424,426,428,430,432,434,436,438,440,442,444,446,448,450,452,454
,456,458,460,462,464,466,468
```

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):                172
On-line CPU(s) list:  0-171
Vendor ID:             GenuineIntel
BIOS Vendor ID:       Intel
Model name:            Intel(R) Xeon(R) 6787P
BIOS Model name:       Intel(R) Xeon(R) 6787P  CPU @ 2.0GHz
BIOS CPU family:       179
CPU family:            6
Model:                 173
Thread(s) per core:   1
Core(s) per socket:   86
Socket(s):             2
Stepping:              1
BogoMIPS:              4000.00
Flags:                 fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat
pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx
pdpelgb 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 bml 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 vnni 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
```

(Continued on next page)



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECspeed®2017\_int\_base = 13.9

PowerEdge R770 (Intel Xeon 6787P)

SPECspeed®2017\_int\_peak = 14.2

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

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

## Platform Notes (Continued)

```

Virtualization: VT-x
L1d cache: 8.1 MiB (172 instances)
L1i cache: 10.8 MiB (172 instances)
L2 cache: 344 MiB (172 instances)
L3 cache: 672 MiB (2 instances)
NUMA node(s): 4
NUMA node0 CPU(s): 0-42
NUMA node1 CPU(s): 43-85
NUMA node2 CPU(s): 86-128
NUMA node3 CPU(s): 129-171
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;
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 8.1M 12 Data 1 64 1 64
L1i 64K 10.8M 16 Instruction 1 64 1 64
L2 2M 344M 16 Unified 2 2048 1 64
L3 336M 672M 16 Unified 3 344064 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: 0-42
node 0 size: 257636 MB
node 0 free: 256767 MB
node 1 cpus: 43-85
node 1 size: 258036 MB
node 1 free: 257195 MB
node 2 cpus: 86-128
node 2 size: 258036 MB
node 2 free: 246875 MB
node 3 cpus: 129-171
node 3 size: 257957 MB
node 3 free: 257190 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: 1056427720 kB

```

(Continued on next page)



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECspeed®2017\_int\_base = 13.9

PowerEdge R770 (Intel Xeon 6787P)

SPECspeed®2017\_int\_peak = 14.2

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Mar-2025

Hardware Availability: Mar-2025

Software Availability: Jun-2024

## Platform Notes (Continued)

10. who -r  
run-level 3 Mar 8 14:34

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 YaST2-Firstboot YaST2-Second-Stage apparmor auditd cron display-manager firewalld getty@  
irqbalance issue-generator kbdsettings klog lvm2-monitor nscd nvme-fc-boot-connections  
nvmmf-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 autofsd autoyast-initscripts blk-availability boot-sysctl ca-certificates chrony-wait  
chronyd console-getty cups cups-browsed debug-shell ebttables exchange-bmc-os-info 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  
masked synce4l

13. Linux kernel boot-time arguments, from /proc/cmdline  
BOOT\_IMAGE=/boot/vmlinuz-6.4.0-150600.21-default  
root=UUID=76a05062-7f00-4ac9-8774-60874d089739  
splash=silent  
mitigations=auto  
quiet  
security=apparmor

14. cpupower frequency-info  
analyzing CPU 92:  
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

(Continued on next page)



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECspeed®2017\_int\_base = 13.9

PowerEdge R770 (Intel Xeon 6787P)

SPECspeed®2017\_int\_peak = 14.2

CPU2017 License: 6573

Test Date: Mar-2025

Test Sponsor: Dell Inc.

Hardware Availability: Mar-2025

Tested by: Dell Inc.

Software Availability: Jun-2024

## Platform Notes (Continued)

```

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+madvice [madvice] never
enabled        [always] madvice 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 100G  5.0G  96G   5% /mnt/ramdisk

```

```

-----
20. /sys/devices/virtual/dmi/id
Vendor:      Dell Inc.
Product:     PowerEdge R770
Product Family: PowerEdge
Serial:      CPCD664

```

```

-----
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:
16x 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

```





# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECspeed®2017\_int\_base = 13.9

PowerEdge R770 (Intel Xeon 6787P)

SPECspeed®2017\_int\_peak = 14.2

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Mar-2025

Hardware Availability: Mar-2025

Software Availability: Jun-2024

## 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

```



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECspeed®2017\_int\_base = 13.9

PowerEdge R770 (Intel Xeon 6787P)

SPECspeed®2017\_int\_peak = 14.2

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Mar-2025

Hardware Availability: Mar-2025

Software Availability: Jun-2024

## 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.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
```

(Continued on next page)



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECspeed®2017\_int\_base = 13.9

PowerEdge R770 (Intel Xeon 6787P)

SPECspeed®2017\_int\_peak = 14.2

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Mar-2025

Hardware Availability: Mar-2025

Software Availability: Jun-2024

## 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>



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECspeed®2017\_int\_base = 13.9

PowerEdge R770 (Intel Xeon 6787P)

SPECspeed®2017\_int\_peak = 14.2

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Mar-2025

Hardware Availability: Mar-2025

Software Availability: Jun-2024

SPEC CPU and SPECspeed are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

For questions about this result, please contact the tester. For other inquiries, please contact [info@spec.org](mailto:info@spec.org).

Tested with SPEC CPU®2017 v1.1.9 on 2025-03-08 14:38:27-0500.  
Report generated on 2025-03-28 09:23:02 by CPU2017 PDF formatter v6716.  
Originally published on 2025-03-27.