



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017_int_base = 169

PowerEdge XR8610t (Intel Xeon Gold 5423N)

SPECrate®2017_int_peak = 175

CPU2017 License: 6573

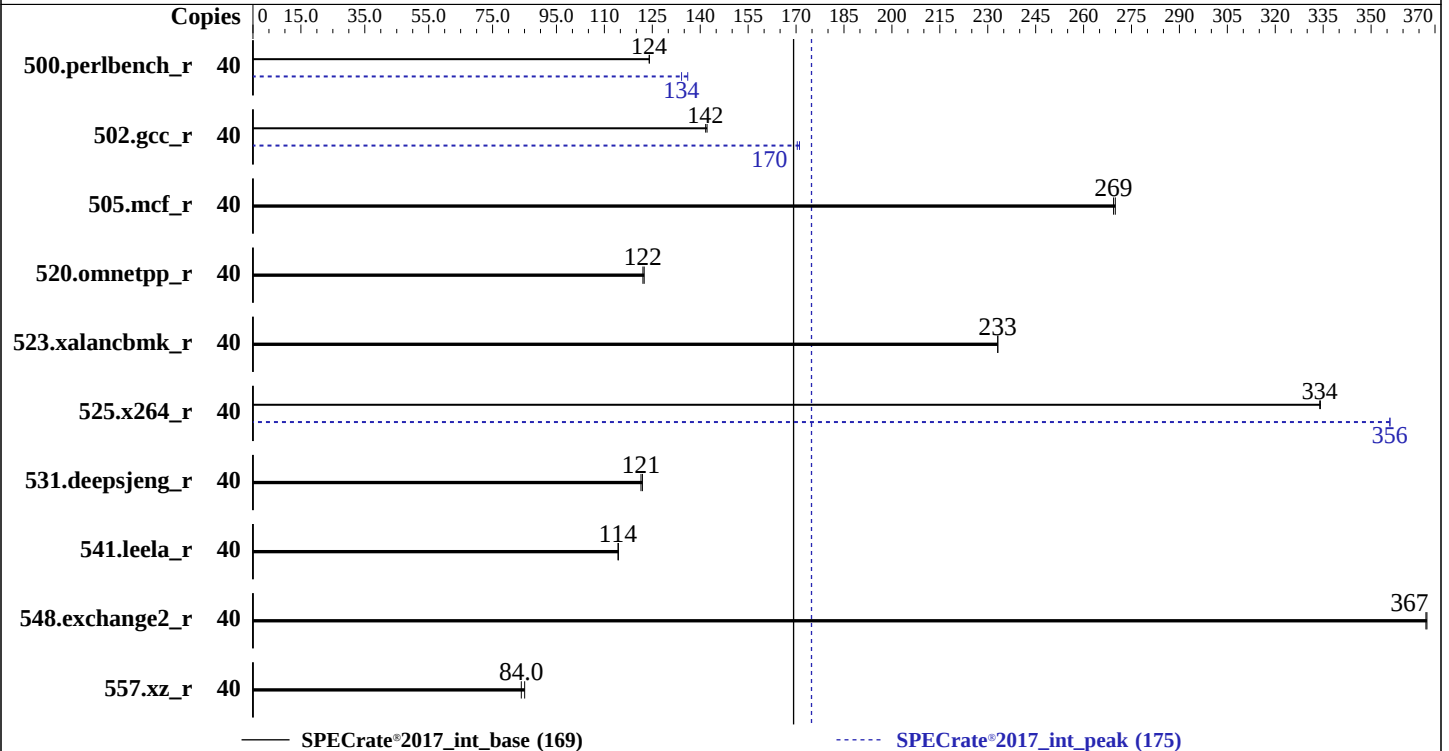
Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Apr-2025

Hardware Availability: Apr-2024

Software Availability: Jun-2024



Hardware

CPU Name: Intel Xeon Gold 5423N
Max MHz: 4000
Nominal: 2100
Enabled: 20 cores, 1 chip, 2 threads/core
Orderable: 1 chip
Cache L1: 32 KB I + 48 KB D on chip per core
L2: 2 MB I+D on chip per core
L3: 37.5 MB I+D on chip per chip
Other: None
Memory: 512 GB (8 x 64 GB 2Rx4 PC5-4800B-R, running at 4000)
Storage: 50 GB on tmpfs
Other: CPU Cooling: Air

Software

OS: SUSE Linux Enterprise Server 15 SP6
6.4.0-150600.21-default
Compiler: C/C++: Version 2024.1 of Intel oneAPI DPC++/C++ Compiler for Linux;
Fortran: Version 2024.1 of Intel Fortran Compiler for Linux;
Parallel: No
Firmware: Version 2.5.4 released Jan-2025
File System: tmpfs
System State: Run level 3 (multi-user)
Base Pointers: 64-bit
Peak Pointers: 32/64-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 Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017_int_base = 169

PowerEdge XR8610t (Intel Xeon Gold 5423N)

SPECrate®2017_int_peak = 175

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Apr-2025

Hardware Availability: Apr-2024

Software Availability: Jun-2024

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
500.perlbench_r	40	<u>513</u>	<u>124</u>	513	124			40	468	136	<u>475</u>	<u>134</u>		
502.gcc_r	40	398	142	<u>400</u>	<u>142</u>			40	<u>332</u>	<u>170</u>	331	171		
505.mcf_r	40	239	270	<u>240</u>	<u>269</u>			40	239	270	<u>240</u>	<u>269</u>		
520.omnetpp_r	40	429	122	<u>430</u>	<u>122</u>			40	429	122	<u>430</u>	<u>122</u>		
523.xalancbmk_r	40	<u>181</u>	<u>233</u>	181	233			40	<u>181</u>	<u>233</u>	181	233		
525.x264_r	40	<u>210</u>	<u>334</u>	210	334			40	197	356	<u>197</u>	<u>356</u>		
531.deepsjeng_r	40	376	122	<u>377</u>	<u>121</u>			40	376	122	<u>377</u>	<u>121</u>		
541.leela_r	40	579	114	<u>580</u>	<u>114</u>			40	579	114	<u>580</u>	<u>114</u>		
548.exchange2_r	40	285	367	<u>285</u>	<u>367</u>			40	285	367	<u>285</u>	<u>367</u>		
557.xz_r	40	508	85.0	<u>514</u>	<u>84.0</u>			40	508	85.0	<u>514</u>	<u>84.0</u>		

SPECrate®2017_int_base = 169

SPECrate®2017_int_peak = 175

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Submit Notes

The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl commands to bind each copy to a specific processor. For details, please see the config file.

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:

LD_LIBRARY_PATH =

"/mnt/ramdisk/cpu2017-1.1.9-ic2024.1/lib/intel64:/mnt/ramdisk/cpu2017-1.1.9-ic2024.1/lib/ia32:/mnt/ramdisk/cpu2017-1.1.9-ic2024.1/je5.0.1-32"

MALLOC_CONF = "retain:true"

General Notes

Binaries compiled on a system with 2x Intel Xeon Platinum 8280M CPU + 384GB RAM memory using Red Hat Enterprise Linux 8.4

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

runcpu command invoked through numactl i.e.:

numactl --interleave=all runcpu <etc>

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)

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017_int_base = 169

PowerEdge XR8610t (Intel Xeon Gold 5423N)

SPECrate®2017_int_peak = 175

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Apr-2025

Hardware Availability: Apr-2024

Software Availability: Jun-2024

General Notes (Continued)

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 50 GB ramdisk created with the cmd: "mount -t tmpfs -o size=50G tmpfs /mnt/ramdisk"

Platform Notes

BIOS Settings:

Virtualization Technology : Disabled
Sub NUMA Cluster : 2-Way Clustering
UMA Based Clustering Status : Disable
LLC Prefetch : Enabled
x2APIC Mode : Disabled

System Profile : Custom
CPU Power Management : Maximum Performance
Energy Efficient Turbo : Disabled
C1E : Disabled
C-States : Autonomous
Memory Patrol Scrub : Disabled
Energy Efficient Policy : Performance
ADDDC Setting : 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 SLX8620-XR8610t Fri Apr 4 10:35:59 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. sysctl
15. /sys/kernel/mm/transparent_hugepage
16. /sys/kernel/mm/transparent_hugepage/khugepaged
17. OS release
18. Disk information
19. /sys/devices/virtual/dmi/id
20. dmidecode
21. BIOS

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017_int_base = 169

PowerEdge XR8610t (Intel Xeon Gold 5423N)

SPECrate®2017_int_peak = 175

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Apr-2025

Hardware Availability: Apr-2024

Software Availability: Jun-2024

Platform Notes (Continued)

```
-----
1. uname -a
Linux SLX8620-XR8610t 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
10:35:59 up 6 min, 1 user, load average: 0.25, 0.06, 0.02
USER      TTY      FROM            LOGIN@   IDLE   JCPU   PCPU   WHAT
root      tty1      -              10:34   37.00s  0.87s  0.00s  /bin/bash
/home/DellFiles/bin/Intel/dell-run-speccpu.sh rate --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) 2060076
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) 2060076
virtual memory          (kbytes, -v) unlimited
file locks              (-x) unlimited

-----
5. sysinfo process ancestry
/usr/lib/systemd/systemd --switched-root --system --deserialize=31
login -- root
-bash
/bin/bash /home/DellFiles/bin/DELL_rate.sh
/bin/bash /home/DellFiles/bin/dell-run-main.sh rate
/bin/bash /home/DellFiles/bin/dell-run-main.sh rate
/bin/bash /home/DellFiles/bin/Intel/dell-run-speccpu.sh rate --define DL-VERS=6.1a --output_format
html,pdf,txt
/bin/bash /home/DellFiles/bin/Intel/dell-run-speccpu.sh rate --define DL-VERS=6.1a --output_format
html,pdf,txt
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=40 -c
ic2024.1-lin-sapphirerapids-rate-20240308.cfg --define smt-on --define cores=20 --define physicalfirst
--define invoke_with_interleave --define drop_caches --tune base,peak -o all --iterations 2 --define
DL-VERS=6.1a --output_format html,pdf,txt intrate
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=40 --configfile
ic2024.1-lin-sapphirerapids-rate-20240308.cfg --define smt-on --define cores=20 --define physicalfirst
--define invoke_with_interleave --define drop_caches --tune base,peak --output_format all --iterations 2
--define DL-VERS=6.1a --output_format html,pdf,txt --nopower --runmode rate --tune base:peak --size
refrate intrate --nopreenv --logfile $SPEC/tmp/CPU2017.001/templogs/preenv.intrate.001.0.log
--lognum 001.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
```

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017_int_base = 169

PowerEdge XR8610t (Intel Xeon Gold 5423N)

SPECrate®2017_int_peak = 175

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Apr-2025

Hardware Availability: Apr-2024

Software Availability: Jun-2024

Platform Notes (Continued)

\$SPEC = /mnt/ramdisk/cpu2017-1.1.9-ic2024.1

6. /proc/cpuinfo

```
model name      : Intel(R) Xeon? Gold 5423N
vendor_id       : GenuineIntel
cpu family      : 6
model           : 143
stepping        : 8
microcode       : 0x2b000622
bugs            : spectre_v1 spectre_v2 spec_store_bypass swapgs eibrs_pbrsb bhi
cpu cores       : 20
siblings        : 40
1 physical ids (chips)
40 processors (hardware threads)
physical id 0: core ids 0-19
physical id 0: apicids 0-39
```

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:      46 bits physical, 57 bits virtual
Byte Order:        Little Endian
CPU(s):            40
On-line CPU(s) list: 0-39
Vendor ID:         GenuineIntel
BIOS Vendor ID:    Intel
Model name:        Intel(R) Xeon? Gold 5423N
BIOS Model name:   Intel(R) Xeon? Gold 5423N  CPU @ 2.1GHz
BIOS CPU family:   179
CPU family:        6
Model:            143
Thread(s) per core: 2
Core(s) per socket: 20
Socket(s):         1
Stepping:          8
CPU(s) scaling MHz: 33%
CPU max MHz:       4000.0000
CPU min MHz:       800.0000
BogoMIPS:          4200.00
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 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 cdp_l2 ssbd mba ibrs ibpb stibp ibrs_enhanced
                  fsgsbase tsc_adjust bmi1 hle avx2 smep bmi2 erms invpcid rtm cqm
                  rdt_a avx512f avx512dq rdseed adx smap avx512ifma clflushopt clwb
                  intel_pt avx512cd sha_ni avx512bw avx512vl xsaveopt xsavec xgetbv1
                  xsaves cqm_llc cqm_occup_llc cqm_mbm_total cqm_mbm_local
                  split_lock_detect user_shstk avx_vnni avx512_bf16 wbnoinvd dtherm ida
                  arat pln pts hfi avx512vbmi umip pku ospke waitpkg avx512_vbmi2 gfni
                  vaes vpclmulqdq avx512_vnni avx512_bitalg tme avx512_vpopcntdq la57
```

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017_int_base = 169

PowerEdge XR8610t (Intel Xeon Gold 5423N)

SPECrate®2017_int_peak = 175

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Apr-2025

Hardware Availability: Apr-2024

Software Availability: Jun-2024

Platform Notes (Continued)

rdpid bus_lock_detect cldemote movdiri movdir64b enqcmd fsrm md_clear
serialize tsxldtrk pconfig arch_lbr ibt avx512_fp16 flush_l1d
arch_capabilities
L1d cache: 960 KiB (20 instances)
L1i cache: 640 KiB (20 instances)
L2 cache: 40 MiB (20 instances)
L3 cache: 37.5 MiB (1 instance)
NUMA node(s): 2
NUMA node0 CPU(s): 0,2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38
NUMA node1 CPU(s): 1,3,5,7,9,11,13,15,17,19,21,23,25,27,29,31,33,35,37,39
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 SW sequence; 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	960K	12	Data	1	64	1	64
L1i	32K	640K	8	Instruction	1	64	1	64
L2	2M	40M	16	Unified	2	2048	1	64
L3	37.5M	37.5M	15	Unified	3	40960	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: 0,2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38

node 0 size: 257384 MB

node 0 free: 246473 MB

node 1 cpus: 1,3,5,7,9,11,13,15,17,19,21,23,25,27,29,31,33,35,37,39

node 1 size: 257660 MB

node 1 free: 256603 MB

node distances:

node 0 1

0: 10 12

1: 12 10

9. /proc/meminfo

MemTotal: 527406372 kB

10. who -r

run-level 3 Apr 4 10:29

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

Default Target Status

multi-user running

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017_int_base = 169

PowerEdge XR8610t (Intel Xeon Gold 5423N)

SPECrate®2017_int_peak = 175

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Apr-2025

Hardware Availability: Apr-2024

Software Availability: Jun-2024

Platform Notes (Continued)

```
-----
12. Services, from systemctl list-unit-files
STATE UNIT FILES
enabled apparmor auditd cron firewalld getty@ irqbalance issue-generator kbdsettings kdump
kdump-early kdump-notify lvm2-monitor nvme-fc-boot-connections nvme-fc-autoconnect postfix
purge-kernels rollback sshd systemd-pstore wicked wickedd-auto4 wickedd-dhcp4
wickedd-dhcp6 wickedd-nanny
enabled-runtime systemd-remount-fs
disabled blk-availability boot-sysctl ca-certificates chrony-wait chronyd console-getty debug-shell
ebtables fsid grub2-once haveged issue-add-ssh-keys kexec-load lunmask nfs nfs-blkmap
rpcbind rpmconfigcheck rsyncd serial-getty@ systemd-boot-check-no-failures systemd-confext
systemd-network-generator systemd-sysext systemd-time-wait-sync systemd-timesyncd udisks2
indirect systemd-userdbd wickedd
-----
```

```
-----
13. Linux kernel boot-time arguments, from /proc/cmdline
BOOT_IMAGE=/boot/vmlinuz-6.4.0-150600.21-default
root=UUID=1420f0de-cf2a-452f-9c6a-d3257d093ae8
splash=silent
resume=/dev/disk/by-uuid/322e7a60-cd58-41d2-8e97-7a815c571f90
mitigations=auto
quiet
security=apparmor
crashkernel=370M,high
crashkernel=72M,low
-----
```

```
-----
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 defer+madvice [madvice] never
enabled [always] madvice 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
-----
```

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017_int_base = 169

PowerEdge XR8610t (Intel Xeon Gold 5423N)

SPECrate®2017_int_peak = 175

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Apr-2025

Hardware Availability: Apr-2024

Software Availability: Jun-2024

Platform Notes (Continued)

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 15 SP6

18. Disk information
SPEC is set to: /mnt/ramdisk/cpu2017-1.1.9-ic2024.1
Filesystem Type Size Used Avail Use% Mounted on
tmpfs tmpfs 50G 5.0G 46G 10% /mnt/ramdisk

19. /sys/devices/virtual/dmi/id
Vendor: Dell Inc.
Product: PowerEdge XR8610t
Product Family: PowerEdge
Serial: SLX8620

20. 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:
7x 002C00B3002C MTC40F2046S1RC48BA1 64 GB 2 rank 4800, configured at 4000
1x 002C0632002C MTC40F2046S1RC48BA1 64 GB 2 rank 4800, configured at 4000

21. BIOS
(This section combines info from /sys/devices and dmidecode.)
BIOS Vendor: Dell Inc.
BIOS Version: 2.5.4
BIOS Date: 01/16/2025
BIOS Revision: 2.5

Compiler Version Notes

=====

C	502.gcc_r(peak)
---	-----------------

Intel(R) oneAPI DPC++/C++ Compiler for applications running on IA-32, Version 2024.1.0 Build 20240308
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.

=====

C	500.perlbench_r(base, peak) 502.gcc_r(base) 505.mcf_r(base, peak) 525.x264_r(base, peak)
	557.xz_r(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.

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017_int_base = 169

PowerEdge XR8610t (Intel Xeon Gold 5423N)

SPECrate®2017_int_peak = 175

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Apr-2025

Hardware Availability: Apr-2024

Software Availability: Jun-2024

Compiler Version Notes (Continued)

C | 502.gcc_r(peak)

Intel(R) oneAPI DPC++/C++ Compiler for applications running on IA-32, Version 2024.1.0 Build 20240308
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.

C | 500.perlbench_r(base, peak) 502.gcc_r(base) 505.mcf_r(base, peak) 525.x264_r(base, peak)
| 557.xz_r(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++ | 520.omnetpp_r(base, peak) 523.xalancbmk_r(base, peak) 531.deepsjeng_r(base, peak)
| 541.leela_r(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 | 548.exchange2_r(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

500.perlbench_r: -DSPEC_LP64 -DSPEC_LINUX_X64
502.gcc_r: -DSPEC_LP64
505.mcf_r: -DSPEC_LP64
520.omnetpp_r: -DSPEC_LP64
523.xalancbmk_r: -DSPEC_LP64 -DSPEC_LINUX

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017_int_base = 169

PowerEdge XR8610t (Intel Xeon Gold 5423N)

SPECrate®2017_int_peak = 175

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Apr-2025

Hardware Availability: Apr-2024

Software Availability: Jun-2024

Base Portability Flags (Continued)

525.x264_r: -DSPEC_LP64
531.deepsjeng_r: -DSPEC_LP64
541.leela_r: -DSPEC_LP64
548.exchange2_r: -DSPEC_LP64
557.xz_r: -DSPEC_LP64

Base Optimization Flags

C benchmarks:

-w -std=c11 -m64 -Wl,-z,muldefs -xsapphirerapids -O3 -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-L/opt/intel/oneapi/compiler/2024.1/lib -lqkmallo

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/opt/intel/oneapi/compiler/2024.1/lib -lqkmallo

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 -auto
-L/opt/intel/oneapi/compiler/2024.1/lib -lqkmallo

Peak Compiler Invocation

C benchmarks:

icx

C++ benchmarks:

icpx

Fortran benchmarks:

ifx

Peak Portability Flags

500.perlbench_r: -DSPEC_LP64 -DSPEC_LINUX_X64
502.gcc_r: -D_FILE_OFFSET_BITS=64

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017_int_base = 169

PowerEdge XR8610t (Intel Xeon Gold 5423N)

SPECrate®2017_int_peak = 175

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Apr-2025

Hardware Availability: Apr-2024

Software Availability: Jun-2024

Peak Portability Flags (Continued)

505.mcf_r: -DSPEC_LP64
520.omnetpp_r: -DSPEC_LP64
523.xalancbmk_r: -DSPEC_LP64 -DSPEC_LINUX
525.x264_r: -DSPEC_LP64
531.deepsjeng_r: -DSPEC_LP64
541.leela_r: -DSPEC_LP64
548.exchange2_r: -DSPEC_LP64
557.xz_r: -DSPEC_LP64

Peak Optimization Flags

C benchmarks:

500.perlbench_r: -w -std=c11 -m64 -Wl,-z,muldefs
-fprofile-generate(pass 1)
-fprofile-use=default.profdata(pass 2) -xCORE-AVX2(pass 1)
-flto -Ofast -xCORE-AVX512 -ffast-math -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4
-fno-strict-overflow
-L/opt/intel/oneapi/compiler/2024.1/lib -lqkmalloc

502.gcc_r: -m32 -L/opt/intel/oneapi/compiler/2024.1/lib32 -std=gnu89
-Wl,-z,muldefs -fprofile-generate(pass 1)
-fprofile-use=default.profdata(pass 2) -xCORE-AVX2(pass 1)
-flto -Ofast -xCORE-AVX512 -ffast-math -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4
-L/usr/local/jemalloc32-5.0.1/lib -ljemalloc

505.mcf_r: basepeak = yes

525.x264_r: -w -std=c11 -m64 -Wl,-z,muldefs -xsapphirerapids -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fno-alias
-L/opt/intel/oneapi/compiler/2024.1/lib -lqkmalloc

557.xz_r: basepeak = yes

C++ benchmarks:

520.omnetpp_r: basepeak = yes

523.xalancbmk_r: basepeak = yes

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017_int_base = 169

PowerEdge XR8610t (Intel Xeon Gold 5423N)

SPECrate®2017_int_peak = 175

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Apr-2025

Hardware Availability: Apr-2024

Software Availability: Jun-2024

Peak Optimization Flags (Continued)

531.deepsjeng_r: basepeak = yes

541.leela_r: basepeak = yes

Fortran benchmarks:

548.exchange2_r: 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 and SPECrate 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.

Tested with SPEC CPU®2017 v1.1.9 on 2025-04-04 10:35:58-0400.

Report generated on 2025-05-08 09:59:11 by CPU2017 PDF formatter v6716.

Originally published on 2025-05-06.