



SPEC CPU®2017 Integer Speed Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

Dell Inc.

SPECspeed®2017_int_base = 12.2

PowerEdge C6620 (Intel Xeon Platinum 8452Y)

SPECspeed®2017_int_peak = 12.4

CPU2017 License: 6573

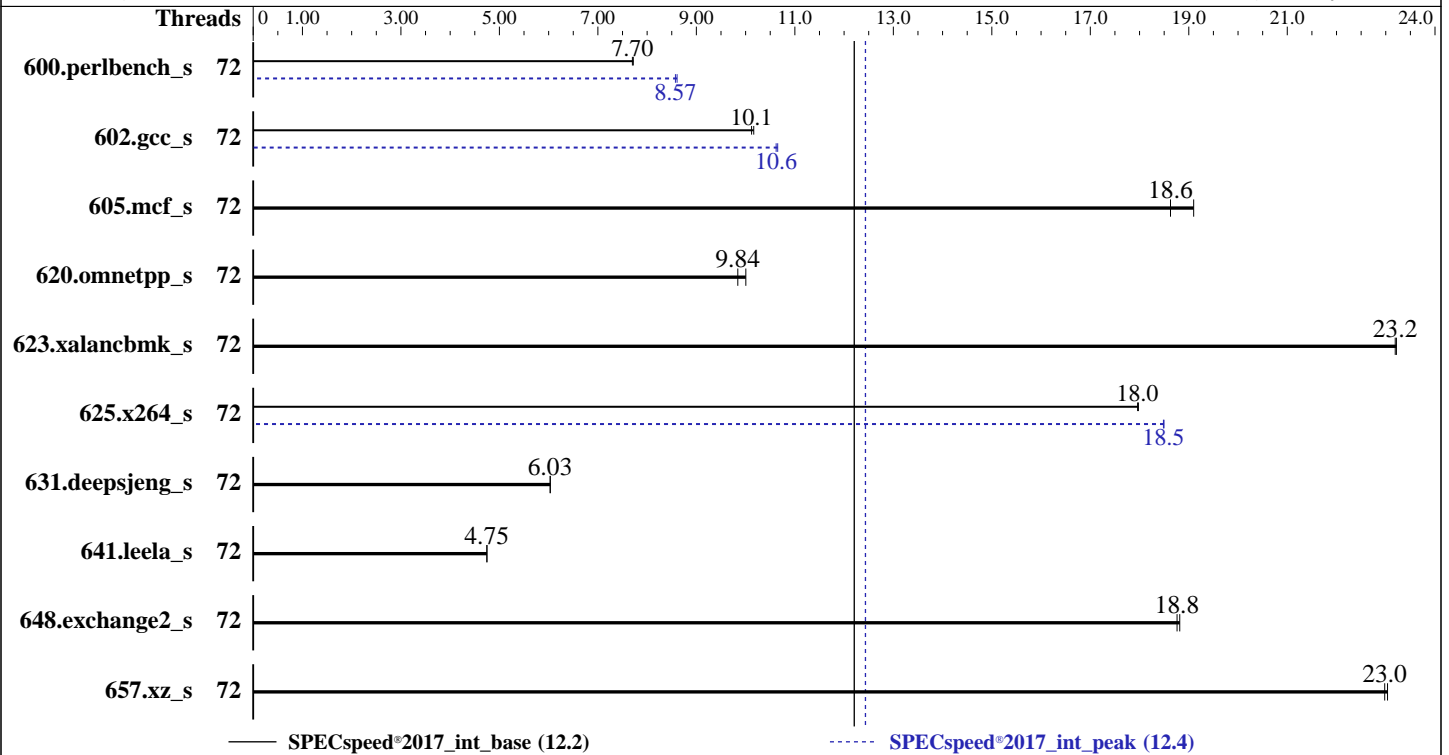
Test Date: Jan-2023

Test Sponsor: Dell Inc.

Hardware Availability: Feb-2023

Tested by: Dell Inc.

Software Availability: May-2022



Hardware

CPU Name: Intel Xeon Platinum 8452Y
 Max MHz: 3200
 Nominal: 2000
 Enabled: 72 cores, 2 chips
 Orderable: 1,2 chips
 Cache L1: 32 KB I + 48 KB D on chip per core
 L2: 2 MB I+D on chip per core
 L3: 67.5 MB I+D on chip per chip
 Other: None
 Memory: 1 TB (16 x 64 GB 2Rx4 PC5-4800B-R)
 Storage: 125 GB on tmpfs
 Other: None

Software

OS: Red Hat Enterprise Linux 8.6 (Ootpa)
 4.18.0-372.9.1.el8.x86_64
 Compiler: C/C++: Version 2022.1 of Intel oneAPI DPC++/C++
 Compiler for Linux;
 Fortran: Version 2022.1 of Intel Fortran Compiler
 for Linux;
 Parallel: Yes
 Firmware: Version 0.3.1 released Nov-2022
 File System: tmpfs
 System State: Run level 5 (graphical 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
600.perlbench_s	72	<u>231</u>	<u>7.70</u>	230	7.72			72	206	8.61	<u>207</u>	<u>8.57</u>		
602.gcc_s	72	392	10.2	<u>393</u>	<u>10.1</u>			72	<u>375</u>	<u>10.6</u>	374	10.7		
605.mcf_s	72	247	19.1	<u>253</u>	<u>18.6</u>			72	247	19.1	<u>253</u>	<u>18.6</u>		
620.omnetpp_s	72	<u>166</u>	<u>9.84</u>	163	10.0			72	<u>166</u>	<u>9.84</u>	163	10.0		
623.xalancbmk_s	72	61.0	23.2	<u>61.1</u>	<u>23.2</u>			72	61.0	23.2	<u>61.1</u>	<u>23.2</u>		
625.x264_s	72	<u>98.2</u>	<u>18.0</u>	98.1	18.0			72	<u>95.4</u>	<u>18.5</u>	95.4	18.5		
631.deepsjeng_s	72	<u>238</u>	<u>6.03</u>	238	6.03			72	<u>238</u>	<u>6.03</u>	238	6.03		
641.leela_s	72	<u>360</u>	<u>4.75</u>	359	4.75			72	<u>360</u>	<u>4.75</u>	359	4.75		
648.exchange2_s	72	156	18.8	<u>157</u>	<u>18.8</u>			72	156	18.8	<u>157</u>	<u>18.8</u>		
657.xz_s	72	268	23.0	<u>269</u>	<u>23.0</u>			72	268	23.0	<u>269</u>	<u>23.0</u>		

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

Compiler Notes

SPEC has ruled that the compiler used for this result was performing a compilation that specifically improves the performance of the 523.xalancbmk_r / 623.xalancbmk_s benchmarks using a priori knowledge of the SPEC code and dataset to perform a transformation that has narrow applicability.

In order to encourage optimizations that have wide applicability (see rule 1.4 https://www.spec.org/cpu2017/Docs/runrules.html#rule_1.4), SPEC will no longer publish results using this optimization.

This result is left in the SPEC results database for historical reference.

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-ic2022.1/lib/intel64:/mnt/ramdisk/cpu2017-1.1.9-ic2022.1/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

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General Notes (Continued)

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 125 GB ramdisk created with the cmd: "mount -t tmpfs -o size=125G tmpfs /mnt/ramdisk"

Platform Notes

BIOS settings:

```

      ADDDC Setting : Disabled
      DIMM Self Healing on
Uncorrectable Memory Error : Disabled
Virtualization Technology : Disabled
      Logical Processor : Disabled
      Sub NUMA Cluster : 2-way Clustering
      Optimizer Mode : Enabled

      System Profile : Custom
      CPU Power Management : Maximum Performance
      C1E : Disabled
      C States : Autonomous
      Memory Patrol Scrub : Disabled
      Energy Efficiency Policy : Performance
      PCI ASPM L1 Link
      Power Management : Disabled

```

Sysinfo program /mnt/ramdisk/cpu2017-1.1.9-ic2022.1/bin/sysinfo
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
running on 1 Mon Jan 23 22:15:14 2023

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 239 (239-58.el8)
12. Services, from systemctl list-unit-files
13. Linux kernel boot-time arguments, from /proc/cmdline

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Platform Notes (Continued)

```

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. Kernel self-reported vulnerability status, from /sys/devices/system/cpu/vulnerabilities
21. Disk information
22. /sys/devices/virtual/dmi/id
23. dmidecode
24. BIOS
-----

1. uname -a
Linux 1 4.18.0-372.9.1.el8.x86_64 #1 SMP Fri Apr 15 22:12:19 EDT 2022 x86_64 x86_64 x86_64 GNU/Linux
-----

2. w
22:15:15 up 3 min, 1 user, load average: 0.83, 0.57, 0.24
USER      TTY      FROM          LOGIN@   IDLE   JCPU   PCPU WHAT
donald    :l        :l            22:13   ?xdm?  16.60s 0.00s /usr/libexec/gdm-x-session
--register-session --run-script gnome-session
-----

3. Username
From environment variable $USER:  root
From the command 'logname':      donald
-----

4. ulimit -a
core file size          (blocks, -c) 0
data seg size           (kbytes, -d) unlimited
scheduling priority     (-e) 0
file size               (blocks, -f) unlimited
pending signals         (-i) 4125070
max locked memory       (kbytes, -l) 64
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) 4125070
virtual memory          (kbytes, -v) unlimited
file locks              (-x) unlimited
-----

5. sysinfo process ancestry
/usr/lib/systemd/systemd --switched-root --system --deserialize 17
/usr/lib/systemd/systemd --user
/usr/libexec/gnome-terminal-server
bash
sudo su
su
bash
/bin/bash ./DELL_speed.sh
/bin/bash ./dell-norun-main.sh speed
/bin/bash ./dell-norun-main.sh speed

```

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Platform Notes (Continued)

```

/bin/bash ./dell-norun-specspeed.sh --iterations 2 --output_format csv,html,pdf,txt --define
Dell-BIOS-inc=Dell-BIOS_Xeon-4.inc
/bin/bash ./dell-norun-specspeed.sh --iterations 2 --output_format csv,html,pdf,txt --define
Dell-BIOS-inc=Dell-BIOS_Xeon-4.inc
runcpu --nobuild --action validate --define default-platform-flags -c
ic2022.1-lin-core-avx512-speed-20220316.cfg --define cores=72 --tune base,peak -o all --define
intspeedaffinity --define drop_caches --iterations 2 --output_format csv,html,pdf,txt --define
Dell-BIOS-inc=Dell-BIOS_Xeon-4.inc intspeer
runcpu --nobuild --action validate --define default-platform-flags --configfile
ic2022.1-lin-core-avx512-speed-20220316.cfg --define cores=72 --tune base,peak --output_format all
--define intspeer --define drop_caches --iterations 2 --output_format csv,html,pdf,txt --define
Dell-BIOS-inc=Dell-BIOS_Xeon-4.inc --nopower --runmode speed --tune base:peak --size refspeer intspeer
--nopreenv --note-preenv --logfile $SPEC/tmp/CPU2017.001/templogs/preenv.intspeer.001.0.log --lognum 001.0
--from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /mnt/ramdisk/cpu2017-1.1.9-ic2022.1

```

```

-----
6. /proc/cpuinfo
model name      : Intel(R) Xeon(R) Platinum 8452Y
vendor_id      : GenuineIntel
cpu family     : 6
model          : 143
stepping       : 8
microcode      : 0x2b000111
bugs           : spectre_v1 spectre_v2 spec_store_bypass swapgs
cpu cores      : 36
siblings       : 36
2 physical ids (chips)
72 processors (hardware threads)
physical id 0: core ids 0-35
physical id 1: core ids 0-35
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
physical id 1: apicids
128,130,132,134,136,138,140,142,144,146,148,150,152,154,156,158,160,162,164,166,168,170,172,174,176,178,1
80,182,184,186,188,190,192,194,196,198
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 2.32.1:
Architecture:    x86_64
CPU op-mode(s): 32-bit, 64-bit
Byte Order:      Little Endian
CPU(s):          72
On-line CPU(s) list: 0-71
Thread(s) per core: 1
Core(s) per socket: 36
Socket(s):       2
NUMA node(s):   4
Vendor ID:       GenuineIntel
BIOS Vendor ID: Intel
CPU family:      6
Model:           143
Model name:      Intel(R) Xeon(R) Platinum 8452Y
BIOS Model name: Intel(R) Xeon(R) Platinum 8452Y
Stepping:        8

```

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Platform Notes (Continued)

```

CPU MHz:                2000.000
BogoMIPS:               4000.00
L1d cache:              48K
L1i cache:              32K
L2 cache:               2048K
L3 cache:               69120K
NUMA node0 CPU(s):     0,4,8,12,16,20,24,28,32,36,40,44,48,52,56,60,64,68
NUMA node1 CPU(s):     2,6,10,14,18,22,26,30,34,38,42,46,50,54,58,62,66,70
NUMA node2 CPU(s):     1,5,9,13,17,21,25,29,33,37,41,45,49,53,57,61,65,69
NUMA node3 CPU(s):     3,7,11,15,19,23,27,31,35,39,43,47,51,55,59,63,67,71
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
                        invpcid_single cdp_l2 ssbd mba ibrs ibpb stibp ibrs_enhanced 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 avx_vnni
                        avx512_bf16 wbnoinvd dtherm ida arat pln pts 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 avx512_fp16 amx_tile flush_lld arch_capabilities

```

```

-----
8. numactl --hardware
NOTE: a numactl 'node' might or might not correspond to a physical chip.
available: 4 nodes (0-3)
node 0 cpus: 0,4,8,12,16,20,24,28,32,36,40,44,48,52,56,60,64,68
node 0 size: 257198 MB
node 0 free: 255164 MB
node 1 cpus: 2,6,10,14,18,22,26,30,34,38,42,46,50,54,58,62,66,70
node 1 size: 258043 MB
node 1 free: 256488 MB
node 2 cpus: 1,5,9,13,17,21,25,29,33,37,41,45,49,53,57,61,65,69
node 2 size: 258043 MB
node 2 free: 254090 MB
node 3 cpus: 3,7,11,15,19,23,27,31,35,39,43,47,51,55,59,63,67,71
node 3 size: 258041 MB
node 3 free: 255322 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:      1056078780 kB

```

```

-----
10. who -r
run-level 5 Jan 23 22:13

```

```

-----
11. Systemd service manager version: systemd 239 (239-58.e18)
Default Target Status
graphical        running

```

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Platform Notes (Continued)

12. Services, from systemctl list-unit-files

```

STATE      UNIT FILES
enabled    ModemManager NetworkManager NetworkManager-dispatcher NetworkManager-wait-online accounts-daemon
atd auditd autovt@ avahi-daemon bluetooth chronyd crond cups display-manager firewalld gdm getty@
import-state insights-client-boot irqbalance iscsi iscsi-onboot kdump ksm ksmtuned libstoragemgmt
libvirtd loadmodules lvm2-monitor mcelog mdmonitor microcode multipathd nis-domainname
nvme-fc-boot-connections ostree-remount qemu-guest-agent rhsmcertd rpcbind rsyslog rtkit-daemon
selinux-autorelabel-mark smartd sshd sssd syslog timedatex tuned udisks2 vdo vgauthd vmtoolsd
disabled   arp-ethers blk-availability brlty canberra-system-bootup canberra-system-shutdown
canberra-system-shutdown-reboot chrony-wait cni-dhcp console-getty cpupower cups-browsed
debug-shell dnsmasq ebttables gssproxy hwloc-dump-hwdata initial-setup
initial-setup-reconfiguration iprdump iprinit iprupdate iscsid iscsiui kpatch kvm_stat ledmon
libvirt-guests man-db-restart-cache-update ndctl-monitor netcf-transaction nfs-blkmap nfs-convert
nfs-server nftables numad nvme-f-autoconnect oddjobd podman podman-auto-update podman-restart
psacct ras-mc-ctl rasdaemon rdisc rhcd rhsm rhsm-facts saslauthd serial-getty@ speech-dispatcherd
sshd-keygen@ switcheroo-control systemd-nspawn@ systemd-resolved tcsd upower virtinterfaced
virtnetworkd virtnodeudev virtnwfilterd virtproxyd virtqemud virtsecret virtstorage
wpa_supplicant
indirect   spice-vdagentd sssd-autofs sssd-kcm sssd-nss sssd-pac sssd-pam sssd-ssh sssd-sudo virtlockd
virtlogd
masked     systemd-timedated

```

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

```

BOOT_IMAGE=(hd0,gpt2)/vmlinuz-4.18.0-372.9.1.el8.x86_64
root=/dev/mapper/rhel-root
ro
crashkernel=auto
resume=/dev/mapper/rhel-swap
rd.lvm.lv=rhel/root
rd.lvm.lv=rhel/swap
rhgb
quiet

```

14. cpupower frequency-info

```

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

```

15. tuned-adm active

Current active profile: throughput-performance

16. sysctl

```

kernel.numa_balancing          1
kernel.randomize_va_space      2
vm.compaction_proactiveness    0
vm.dirty_background_bytes      0
vm.dirty_background_ratio      10
vm.dirty_bytes                  0
vm.dirty_expire_centisecs      3000
vm.dirty_ratio                  40
vm.dirty_writeback_centisecs   500
vm.dirtytime_expire_seconds    43200

```

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Platform Notes (Continued)

```

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             10
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+madvise [madvise] never
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_swap         64
pages_to_scan         4096
scan_sleep_millisecs 10000

```

```

-----
19. OS release
From /etc/*-release /etc/*-version
os-release      Red Hat Enterprise Linux 8.6 (Ootpa)
redhat-release  Red Hat Enterprise Linux release 8.6 (Ootpa)
system-release  Red Hat Enterprise Linux release 8.6 (Ootpa)

```

```

-----
20. Kernel self-reported vulnerability status, from /sys/devices/system/cpu/vulnerabilities
itlb_multihit      Not affected
lltf                Not affected
mds                 Not affected
meltdown           Not affected
spec_store_bypass  Mitigation: Speculative Store Bypass disabled via prctl and seccomp
spectre_v1          Mitigation: usercopy/swaps barriers and __user pointer sanitization
spectre_v2          Mitigation: Enhanced IBRS, IBPB: conditional, RSB filling
srbds               Not affected
tsx_async_abort     Not affected
For more information, see the Linux documentation on hardware vulnerabilities, for example
https://www.kernel.org/doc/html/latest/admin-guide/hw-vuln/index.html

```

```

-----
21. Disk information
SPEC is set to: /mnt/ramdisk/cpu2017-1.1.9-ic2022.1
Filesystem  Type  Size  Used Avail Use% Mounted on
tmpfs       tmpfs 125G  3.7G 122G   3% /mnt/ramdisk

```

```

-----
22. /sys/devices/virtual/dmi/id
Vendor:      Dell Inc.
Product:     PowerEdge C6620
Product Family: PowerEdge
Serial:      SL6C201

```

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Platform Notes (Continued)

23. dmidecode

Additional information from dmidecode 3.3 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:

15x 002C00B3002C MTC40F2046S1RC48BA1 64 GB 2 rank 4800
1x 002C0632002C MTC40F2046S1RC48BA1 64 GB 2 rank 4800

24. BIOS

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

BIOS Vendor: Dell Inc.
BIOS Version: 0.3.1
BIOS Date: 11/24/2022
BIOS Revision: 0.3

Compiler Version Notes

C | 600.perlbench_s(base, peak) 602.gcc_s(base, peak) 605.mcf_s(base, peak) 625.x264_s(base, peak)
| 657.xz_s(base, peak)

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2022.1.0 Build 20220316
Copyright (C) 1985-2022 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 2022.1.0 Build 20220316
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Fortran | 648.exchange2_s(base, peak)

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2022.1.0 Build 20220316
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Base Compiler Invocation

C benchmarks:

icx

C++ benchmarks:

icpx

Fortran benchmarks:

ifx



SPEC CPU®2017 Integer Speed Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

Dell Inc.

SPECSpeed®2017_int_base = 12.2

PowerEdge C6620 (Intel Xeon Platinum 8452Y)

SPECSpeed®2017_int_peak = 12.4

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

Test Date: Jan-2023
Hardware Availability: Feb-2023
Software Availability: May-2022

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:

-m64 -std=c11 -Wl,-z,muldefs -xCORE-AVX512 -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:

-m64 -Wl,-z,muldefs -xCORE-AVX512 -O3 -ffast-math -flto
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

Fortran benchmarks:

-m64 -Wl,-z,muldefs -xCORE-AVX512 -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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Dell Inc.

SPECspeed®2017_int_base = 12.2

PowerEdge C6620 (Intel Xeon Platinum 8452Y)

SPECspeed®2017_int_peak = 12.4

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Jan-2023

Hardware Availability: Feb-2023

Software Availability: May-2022

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

```
600.perlbench_s: -m64 -std=c11 -Wl,-z,muldefs -fprofile-generate(pass 1)
-fprofile-use=default.profdata(pass 2) -xCORE-AVX512 -O3
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fiopenmp -DSPEC_OPENMP
-fno-strict-overflow -L/usr/local/jemalloc64-5.0.1/lib
-ljemalloc
```

```
602.gcc_s: -m64 -std=c11 -Wl,-z,muldefs -fprofile-generate(pass 1)
-fprofile-use=default.profdata(pass 2) -xCORE-AVX512 -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
```

605.mcf_s: basepeak = yes

```
625.x264_s: -m64 -std=c11 -Wl,-z,muldefs -xCORE-AVX512 -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



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Test Date: Jan-2023

Hardware Availability: Feb-2023

Software Availability: May-2022

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

<http://www.spec.org/cpu2017/flags/Intel-ic2022-official-linux64-revB.html>

<http://www.spec.org/cpu2017/flags/Dell-Platform-Flags-PowerEdge-Intel-Xeon-v1.3.html>

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

<http://www.spec.org/cpu2017/flags/Intel-ic2022-official-linux64-revB.xml>

<http://www.spec.org/cpu2017/flags/Dell-Platform-Flags-PowerEdge-Intel-Xeon-v1.3.xml>

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