SPEC CPU®2026 Floating Point Rate Result

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Dell Inc.

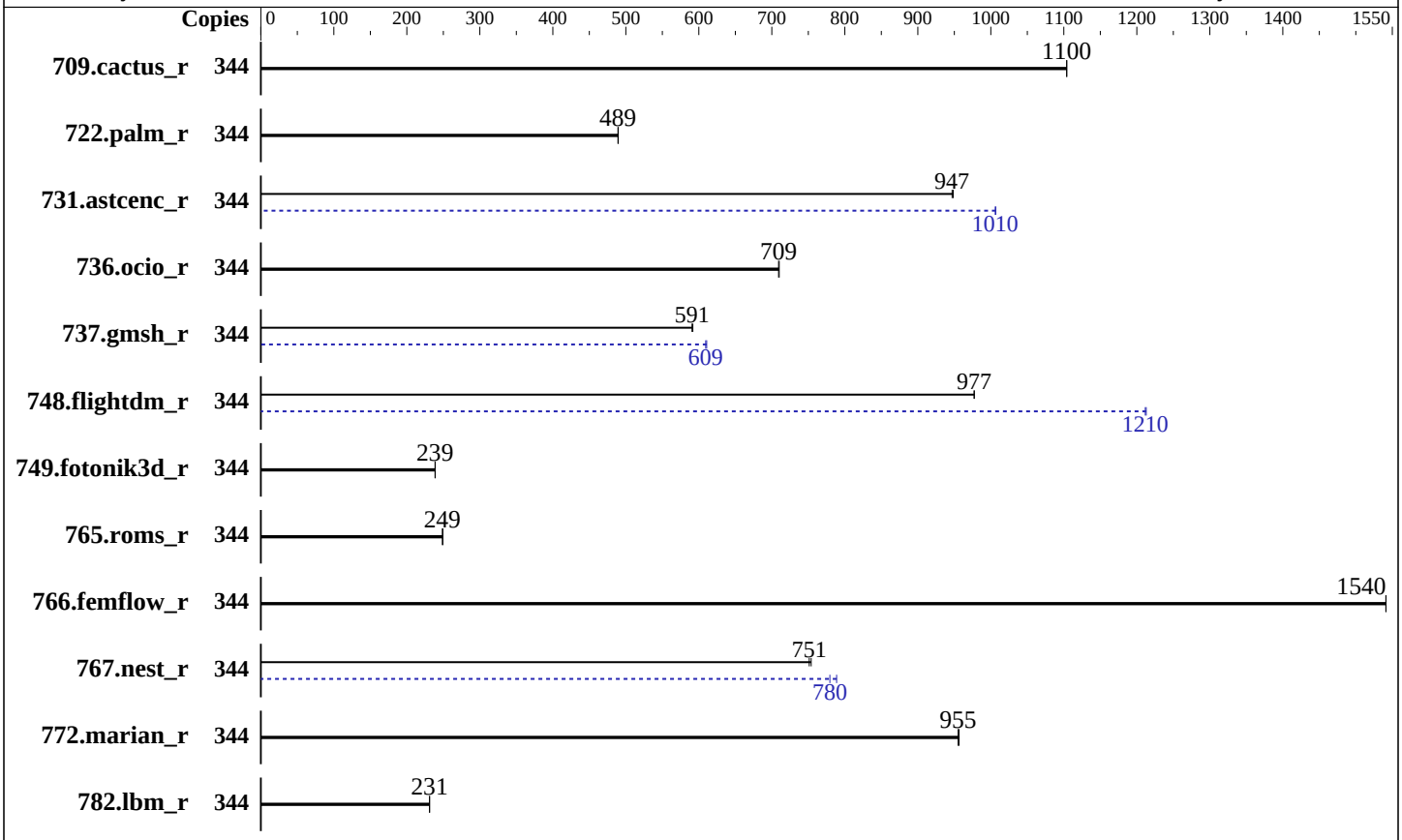
PowerEdge R770 (Intel Xeon 6787P)

SPECrate®2026_fp_base = 619

SPECrate®2026_fp_peak = 637

CPU2026 License: 6573
Test Sponsor: Dell Inc.
Tested by: Dell Inc.

Test Date: Feb-2026
Hardware Availability: Mar-2025
Software Availability: Nov-2025



Hardware

CPU Name:	Intel Xeon 6787P
Max MHz:	3800
Nominal:	2000
Enabled:	172 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:	336 MB I+D on chip per chip
Other:	None
Memory:	1 TB (16 x 64 GB 2Rx4 PC5-6400B-R)
Storage:	190 GB on tmpfs
Cooling:	Air
Other:	None

Software

OS:	SUSE Linux Enterprise Server 15 SP6 6.4.0-150600.21-default
Compiler:	C/C++: Version 2025.3 of Intel oneAPI DPC++/C++ Compiler for Linux; Fortran: Version 2025.3 of Intel Fortran Compiler for Linux
Compiler Category:	Vendor
Firmware:	Version 1.6.4 released Nov-2025
File System:	tmpfs
System State:	Run level 3 (multi-user)
Base Pointers:	64-bit
Peak Pointers:	64-bit
Other:	jemalloc memory allocator v5.3
Power Management:	BIOS set to prefer performance at the cost of additional power usage.

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Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
709.cactus_r	344	267	1100	**267**	**1100**			344	267	1100	**267**	**1100**		
722.palm_r	344	**928**	**489**	927	490			344	**928**	**489**	927	490		
731.astcenc_r	344	**305**	**947**	305	949			344	**287**	**1010**	287	1010		
736.ocio_r	344	424	710	**424**	**709**			344	424	710	**424**	**709**		
737.gmsh_r	344	267	592	**267**	**591**			344	**259**	**609**	259	611		
748.flightdm_r	344	252	977	**252**	**977**			344	203	1210	**203**	**1210**		
749.fotonik3d_r	344	1664	239	**1666**	**239**			344	1664	239	**1666**	**239**		
765.roms_r	344	2173	249	**2179**	**249**			344	2173	249	**2179**	**249**		
766.femflow_r	344	**327**	**1540**	327	1540			344	**327**	**1540**	327	1540		
767.nest_r	344	**363**	**751**	362	754			344	**350**	**780**	346	789		
772.marian_r	344	**569**	**955**	568	957			344	**569**	**955**	568	957		
782.lbm_r	344	853	231	**853**	**231**			344	853	231	**853**	**231**		

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SPECrate®2026_fp_peak = 637

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/cpu2026-RC2/lib"
MALLOC_CONF = "retain:true"
```

General Notes

```
Binaries compiled on a system with 2x Intel Xeon Platinum 8280M CPU + 384GB RAM
memory using CentOS Stream 9.
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
```

(Continued on next page)

General Notes (Continued)

```
runcpu command invoked through numactl i.e.:
numactl --interleave=all runcpu <etc>
jemalloc, a general purpose malloc implementation
built with the CentOS Stream 9, and the system compiler gcc 11.5.0
sources available from jemalloc.net or https://github.com/jemalloc/jemalloc/releases
Benchmark run from a 190 GB ramdisk created with the cmd: "mount -t tmpfs -o size=190G tmpfs /mnt/ramdisk"
```

Platform Notes

```
BIOS Settings:
        Sub NUMA Cluster : Enabled

          System Profile : Custom
    CPU Power Management : Maximum Performance
                C-States : Autonomous
  Latency Optimized Mode : Enabled
 Energy Efficient Policy : Performance

Sysinfo program /mnt/ramdisk/cpu2026-RC2/bin/sysinfo
Rev: 069f95da7e7f5d81b2ce48a82150e54f
running on W409208-R770 Wed Feb  4 23:37:38 2026

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

------------------------------------------------------------
Table of contents
------------------------------------------------------------
 1. uname -srvm
 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
```

(Continued on next page)

Platform Notes (Continued)

```
19. /sys/devices/virtual/dmi/id
20. dmidecode
21. BIOS
------------------------------------------------------------

------------------------------------------------------------
1. uname -srvm
  Linux 6.4.0-150600.21-default #1 SMP PREEMPT_DYNAMIC Thu May 16 11:09:22 UTC 2024 (36c1e09) x86_64

------------------------------------------------------------
2. w
   23:37:38 up  5:04,  1 user,  load average: 162.64, 292.46, 317.02
  USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU WHAT
  root     tty1     -                18:33    5:02m  1.31s  0.01s /bin/bash
  /home/DellFiles/bin/Intel/dell-run-speccpu.sh rate --define DL-VERS=7.0_T01 --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) 4124429
  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) 4124429
  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
```

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Platform Notes (Continued)

```
 /bin/bash /home/DellFiles/bin/Intel/dell-run-speccpu.sh rate --define DL-VERS=7.0_T01 --output_format
    html,pdf,txt
 /bin/bash /home/DellFiles/bin/Intel/dell-run-speccpu.sh rate --define DL-VERS=7.0_T01 --output_format
    html,pdf,txt
 runcpu --nobuild --reportable --action validate --define default-platform-flags --copies 344 -c
   ic2025.3-graniterapids-cpu2026-0.902-rate-20260121.cfg --define smt-on --define cores=172 --define
   physicalfirst --define invoke_with_interleave --define drop_caches --tune base,peak -o all --iterations 2
    --define DL-VERS=7.0_T01 --output_format html,pdf,txt fprate
 runcpu --nobuild --reportable --action validate --define default-platform-flags --copies 344 --configfile
   ic2025.3-graniterapids-cpu2026-0.902-rate-20260121.cfg --define smt-on --define cores=172 --define
   physicalfirst --define invoke_with_interleave --define drop_caches --tune base,peak --output_format all
   --iterations 2 --define DL-VERS=7.0_T01 --output_format html,pdf,txt --nopower --runmode rate --tune
    base:peak --size refrate fprate --nopreenv --note-preenv --logfile
    $SPEC/tmp/CPU2026.002/templogs/preenv.fprate.002.0.log --lognum 002.0 --from_runcpu 2
 specperl $SPEC/bin/sysinfo
$SPEC = /mnt/ramdisk/cpu2026-RC2

------------------------------------------------------------
6. /proc/cpuinfo
    model name      : Intel(R) Xeon(R) 6787P
    vendor_id       : GenuineIntel
    cpu family      : 6
    model           : 173
    stepping        : 1
    microcode       : 0x10003f3
    bugs            : spectre_v1 spectre_v2 spec_store_bypass swapgs bhi
    cpu cores       : 86
    siblings        : 172
    2 physical ids (chips)
    344 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 0-85,128-213
    physical id 1: apicids 256-341,384-469
 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):                               344
  On-line CPU(s) list:                  0-343
```

(Continued on next page)

Platform Notes (Continued)

```
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:                   2
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
                                      pdpe1gb rdtscp lm constant_tsc art arch_perfmon pebs bts rep_good
                                      nopl xtopology nonstop_tsc cpuid aperfmperf tsc_known_freq pni
                                      pclmulqdq dtes64 monitor ds_cpl vmx smx est tm2 ssse3 sdbg fma cx16
                                      xtpr pdcm pcid dca sse4_1 sse4_2 x2apic movbe popcnt
                                      tsc_deadline_timer aes xsave avx f16c rdrand lahf_lm abm
                                      3dnowprefetch cpuid_fault epb cat_l3 cat_l2 cdp_l3 intel_ppin cdp_l2
                                      ssbd mba ibrs ibpb stibp ibrs_enhanced tpr_shadow flexpriority ept
                                      vpid ept_ad fsgsbase tsc_adjust 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 vnmi 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
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):                    0,2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46,48
                                      ,50,52,54,56,58,60,62,64,66,68,70,72,74,76,78,80,82,84,172,174,176,17
                                      8,180,182,184,186,188,190,192,194,196,198,200,202,204,206,208,210,212
                                      ,214,216,218,220,222,224,226,228,230,232,234,236,238,240,242,244,246,
                                      248,250,252,254,256
NUMA node1 CPU(s):                    86,88,90,92,94,96,98,100,102,104,106,108,110,112,114,116,118,120,122,
                                      124,126,128,130,132,134,136,138,140,142,144,146,148,150,152,154,156,1
                                      58,160,162,164,166,168,170,258,260,262,264,266,268,270,272,274,276,27
                                      8,280,282,284,286,288,290,292,294,296,298,300,302,304,306,308,310,312
                                      ,314,316,318,320,322,324,326,328,330,332,334,336,338,340,342
```

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Platform Notes (Continued)

```
  NUMA node2 CPU(s):                1,3,5,7,9,11,13,15,17,19,21,23,25,27,29,31,33,35,37,39,41,43,45,47,49
                                    ,51,53,55,57,59,61,63,65,67,69,71,73,75,77,79,81,83,85,173,175,177,17
                                    9,181,183,185,187,189,191,193,195,197,199,201,203,205,207,209,211,213
                                    ,215,217,219,221,223,225,227,229,231,233,235,237,239,241,243,245,247,
                                    249,251,253,255,257
  NUMA node3 CPU(s):                87,89,91,93,95,97,99,101,103,105,107,109,111,113,115,117,119,121,123,
                                    125,127,129,131,133,135,137,139,141,143,145,147,149,151,153,155,157,1
                                    59,161,163,165,167,169,171,259,261,263,265,267,269,271,273,275,277,27
                                    9,281,283,285,287,289,291,293,295,297,299,301,303,305,307,309,311,313
                                    ,315,317,319,321,323,325,327,329,331,333,335,337,339,341,343
  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;
                                        PBRSB-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:
  0,2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46,48,50,52,54,56,58,60,62,64,66,68,70,72,7
  4,76,78,80,82,84,172,174,176,178,180,182,184,186,188,190,192,194,196,198,200,202,204,206,208,210,212,214,21
  6,218,220,222,224,226,228,230,232,234,236,238,240,242,244,246,248,250,252,254,256
  node 0 size: 257495 MB
  node 0 free: 229160 MB
  node 1 cpus:
  86,88,90,92,94,96,98,100,102,104,106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,14
  2,144,146,148,150,152,154,156,158,160,162,164,166,168,170,258,260,262,264,266,268,270,272,274,276,278,280,2
  82,284,286,288,290,292,294,296,298,300,302,304,306,308,310,312,314,316,318,320,322,324,326,328,330,332,334,
```

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Platform Notes (Continued)

```
  336,338,340,342
  node 1 size: 258025 MB
  node 1 free: 256894 MB
  node 2 cpus:
1,3,5,7,9,11,13,15,17,19,21,23,25,27,29,31,33,35,37,39,41,43,45,47,49,51,53,55,57,59,61,63,65,67,69,71,73,7
5,77,79,81,83,85,173,175,177,179,181,183,185,187,189,191,193,195,197,199,201,203,205,207,209,211,213,215,21
 7,219,221,223,225,227,229,231,233,235,237,239,241,243,245,247,249,251,253,255,257
  node 2 size: 257986 MB
  node 2 free: 256981 MB
  node 3 cpus:
87,89,91,93,95,97,99,101,103,105,107,109,111,113,115,117,119,121,123,125,127,129,131,133,135,137,139,141,14
3,145,147,149,151,153,155,157,159,161,163,165,167,169,171,259,261,263,265,267,269,271,273,275,277,279,281,2
83,285,287,289,291,293,295,297,299,301,303,305,307,309,311,313,315,317,319,321,323,325,327,329,331,333,335,
 337,339,341,343
  node 3 size: 257624 MB
  node 3 free: 256421 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:       1055879972 kB

------------------------------------------------------------
10. who -r
  run-level 3 Feb 4 18:33

------------------------------------------------------------
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         apparmor auditd cron firewalld getty@ irqbalance issue-generator kbdsettings kdump
                  kdump-early kdump-notify nvmefc-boot-connections nvmf-autoconnect postfix purge-kernels
                    rollback sshd systemd-pstore wicked wickedd-auto4 wickedd-dhcp4 wickedd-dhcp6
                      wickedd-nanny
  enabled-runtime  systemd-remount-fs
  disabled        boot-sysctl ca-certificates chrony-wait chronyd console-getty debug-shell ebtables fsidd
                    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
```


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Platform Notes (Continued)

```
                systemd-network-generator systemd-sysext systemd-time-wait-sync systemd-timesyncd
  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=9f371995-0f0f-4242-a0da-7946c498436b
  splash=silent
  resume=/dev/disk/by-uuid/6f9986a8-df9a-4d59-9d87-5688414dc3e7
  mitigations=auto
  quiet
  security=apparmor
  crashkernel=323M,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+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
```

(Continued on next page)

Platform Notes (Continued)

```
  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 15 SP6

------------------------------------------------------------
18. Disk information
SPEC is set to: /mnt/ramdisk/cpu2026-RC2
  Filesystem     Type   Size  Used Avail Use% Mounted on
  tmpfs          tmpfs  190G   13G  178G   7% /mnt/ramdisk

------------------------------------------------------------
19. /sys/devices/virtual/dmi/id
    Vendor:          Dell Inc.
    Product:         PowerEdge R770
    Product Family:  PowerEdge
    Serial:          W409208

------------------------------------------------------------
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:
    14x 002C069D002C MTC40F2046S1RC64BD1 USFF 64 GB 2 rank 6400
    2x 002C069D002C MTC40F2046S1RC64BD2 QSFF 64 GB 2 rank 6400


------------------------------------------------------------
21. BIOS
(This section combines info from /sys/devices and dmidecode.)
   BIOS Vendor:       Dell Inc.
   BIOS Version:      1.6.4
   BIOS Date:         11/02/2025
   BIOS Revision:     1.6
```

Compiler Version Notes

```
==============================================================================
C       | 782.lbm_r(base, peak)
------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
  Version 2025.3.0 Build 20251010
Copyright (C) 1985-2025 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------

==============================================================================
C++     | 731.astcenc_r(base, peak) 736.ocio_r(base, peak)
        | 748.flightdm_r(base, peak) 766.femflow_r(base, peak)
        | 767.nest_r(base, peak) 772.marian_r(base, peak)
------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
  Version 2025.3.0 Build 20251010
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------------------------------------------------------------------------------

==============================================================================
C++, C  | 709.cactus_r(base, peak) 737.gmsh_r(base, peak)
------------------------------------------------------------------------------
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------------------------------------------------------------------------------

==============================================================================
Fortran | 722.palm_r(base, peak) 749.fotonik3d_r(base, peak) 765.roms_r(base,
        | peak)
------------------------------------------------------------------------------
Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version
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```

Base Compiler Invocation

C benchmarks:
icx

C++ benchmarks:
icpx

Fortran benchmarks:
ifx

(Continued on next page)

Base Compiler Invocation (Continued)

Benchmarks using both C and C++:
icpx icx

Base Portability Flags

709.cactus_r: -DSPEC_LP64
722.palm_r: -DSPEC_LP64
731.astcenc_r: -DSPEC_LP64
736.ocio_r: -DSPEC_LP64
737.gmsh_r: -DSPEC_LP64 -fno-associative-math
748.flightdm_r: -DSPEC_LP64
749.fotonik3d_r: -DSPEC_LP64
765.roms_r: -DSPEC_LP64
766.femflow_r: -DSPEC_LP64
767.nest_r: -DSPEC_LP64
772.marian_r: -DSPEC_LP64
782.lbm_r: -DSPEC_LP64

Base Optimization Flags

C benchmarks:
-m64 -std=c18 -Wl,-z,muldefs -xgraniterapids
-mprefer-vector-width=512 -O3 -ffp-model=fast -flto -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4 -L/usr/local/jemalloc-5.3.0/lib
-ljemalloc

C++ benchmarks:
-m64 -std=c++17 -Wl,-z,muldefs -xgraniterapids
-mprefer-vector-width=512 -O3 -ffp-model=fast -flto -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4 -L/usr/local/jemalloc-5.3.0/lib
-ljemalloc

Fortran benchmarks:
-m64 -stand f18 -Wl,-z,muldefs -xgraniterapids
-mprefer-vector-width=512 -O3 -ffp-model=fast -flto -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4 -nostandard-realloc-lhs
-align array32byte -auto -L/usr/local/jemalloc-5.3.0/lib -ljemalloc

Benchmarks using both C and C++:
-m64 -std=c++17 -std=c18 -Wl,-z,muldefs -xgraniterapids
-mprefer-vector-width=512 -O3 -ffp-model=fast -flto -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4 -L/usr/local/jemalloc-5.3.0/lib

(Continued on next page)

Base Optimization Flags (Continued)

Benchmarks using both C and C++ (continued):
`-ljemalloc`

Peak Compiler Invocation

C benchmarks:
`icx`

C++ benchmarks:
`icpx`

Fortran benchmarks:
`ifx`

Benchmarks using both C and C++:
`icpx icx`

Peak Portability Flags

`Same as Base Portability Flags`

Peak Optimization Flags

C benchmarks:

782.lbm_r: `basepeak = yes`

C++ benchmarks:

731.astcenc_r: `-m64 -std=c++17 -Wl,-z,muldefs -fprofile-generate`(pass 1)
`-fprofile-use=default.profdata`(pass 2) `-xHost`(pass 1)
`-ffp-model=fast -xgraniterapids`(pass 2) `-flto`
`-mprefer-vector-width=512 -qopt-mem-layout-trans=4 -O3`
`-mfpmath=sse -funroll-loops`
`-L/usr/local/jemalloc-5.3.0/lib -ljemalloc`

736.ocio_r: `basepeak = yes`

748.flightdm_r: `Same as 731.astcenc_r`

(Continued on next page)

Peak Optimization Flags (Continued)

766.femflow_r: `basepeak = yes`

767.nest_r: `Same as 731.astcenc_r`

772.marian_r: `basepeak = yes`

Fortran benchmarks:

722.palm_r: `basepeak = yes`

749.fotonik3d_r: `basepeak = yes`

765.roms_r: `basepeak = yes`

Benchmarks using both C and C++:

709.cactus_r: `basepeak = yes`

737.gmsh_r: `-m64 -std=c++17 -std=c18 -Wl,-z,muldefs`
`-fprofile-generate`(pass 1)
`-fprofile-use=default.profdata`(pass 2) `-xHost`(pass 1)
`-ffp-model=fast -xgraniterapids`(pass 2) `-flto`
`-mprefer-vector-width=512 -qopt-mem-layout-trans=4 -O3`
`-mfpmath=sse -funroll-loops`
`-L/usr/local/jemalloc-5.3.0/lib -ljemalloc`

The flags files that were used to format this result can be browsed at
`http://www.spec.org/cpu2026/results/flags/Intel-ic2025-official-linux64-cpu2026-0.902.html`
`http://www.spec.org/cpu2026/results/flags/Dell-Platform-Flags-PowerEdge-Intel-Xeon-v1.19.html`

You can also download the XML flags sources by saving the following links:
`http://www.spec.org/cpu2026/results/flags/Intel-ic2025-official-linux64-cpu2026-0.902.xml`
`http://www.spec.org/cpu2026/results/flags/Dell-Platform-Flags-PowerEdge-Intel-Xeon-v1.19.xml`

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