



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant Compute DL340e Gen12

(2.10 GHz, Intel Xeon 6740P)

SPECrate®2017_fp_base = 630

SPECrate®2017_fp_peak = 647

CPU2017 License: 3

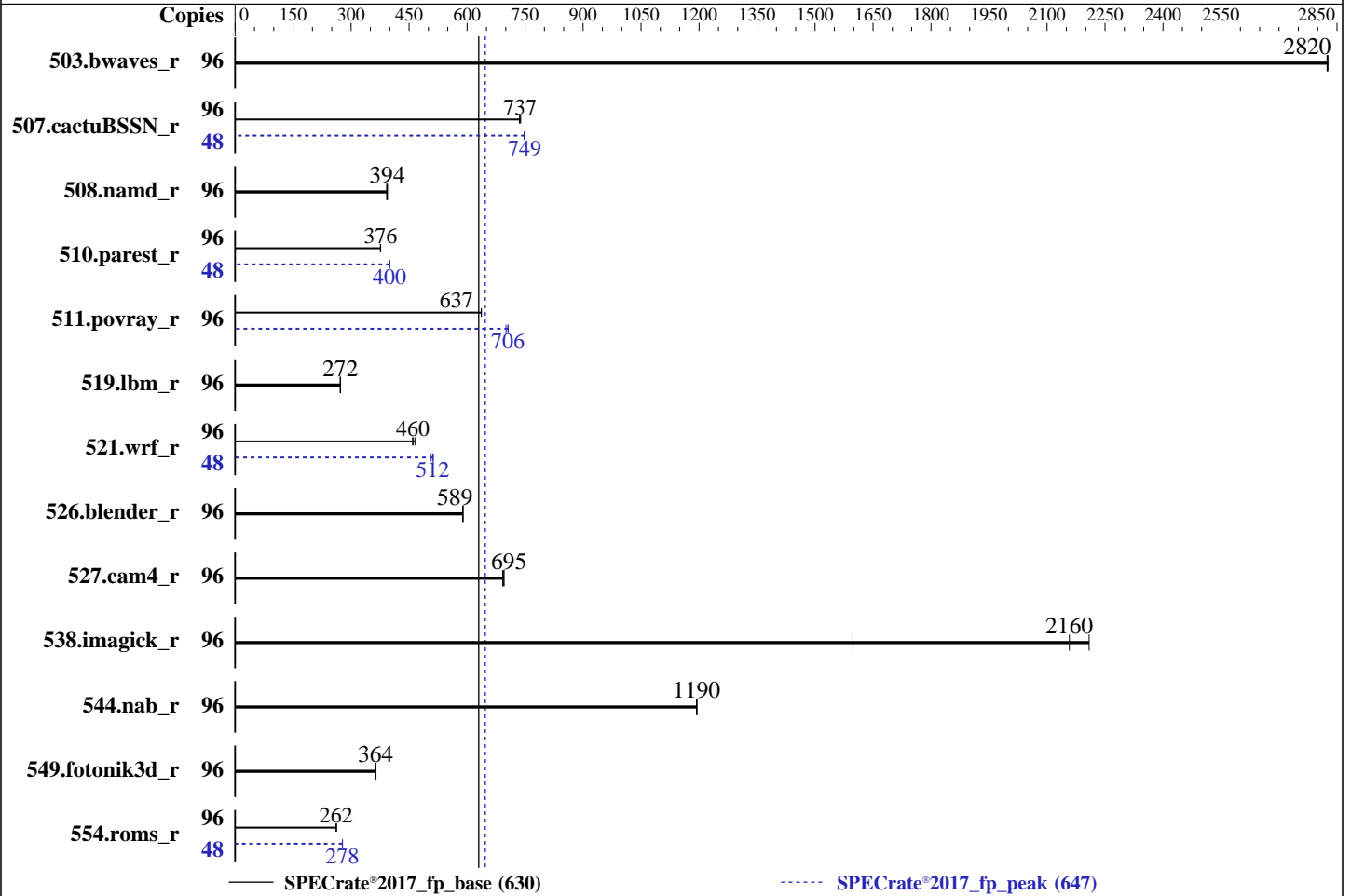
Test Sponsor: HPE

Tested by: HPE

Test Date: Jun-2026

Hardware Availability: May-2026

Software Availability: Jul-2025



Hardware

CPU Name: Intel Xeon 6740P
 Max MHz: 3800
 Nominal: 2100
 Enabled: 48 cores, 1 chip, 2 threads/core
 Orderable: 1 Chip
 Cache L1: 64 KB I + 48 KB D on chip per core
 L2: 2 MB I+D on chip per core
 L3: 288 MB I+D on chip per chip
 Other: None
 Memory: 256 GB (8 x 32 GB 2Rx8 PC5-6400B-R)
 Storage: 1 x 6.4 TB NVMe SSD
 Other: CPU Cooling: Air

Software

OS: SUSE Linux Enterprise Server 15 SP7
 Kernel 6.4.0-150700.53.6-default
 Compiler: C/C++: Version 2025.2 of Intel oneAPI DPC++/C++ Compiler for Linux;
 Fortran: Version 2025.2 of Intel Fortran Compiler for Linux;
 Parallel: No
 Firmware: HPE BIOS Version v1.62 02/06/2026 released Feb-2026
 File System: btrfs
 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 and OS is set to prefer performance at the cost of additional power usage



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant Compute DL340e Gen12

(2.10 GHz, Intel Xeon 6740P)

SPECrate®2017_fp_base = 630

SPECrate®2017_fp_peak = 647

CPU2017 License: 3
Test Sponsor: HPE
Tested by: HPE

Test Date: Jun-2026
Hardware Availability: May-2026
Software Availability: Jul-2025

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
503.bwaves_r	96	341	2820	341	2830	<u>341</u>	<u>2820</u>	96	341	2820	341	2830	<u>341</u>	<u>2820</u>
507.cactuBSSN_r	96	165	735	<u>165</u>	<u>737</u>	165	739	48	81.3	748	<u>81.1</u>	<u>749</u>	81.1	749
508.namd_r	96	<u>232</u>	<u>394</u>	233	392	232	394	96	<u>232</u>	<u>394</u>	233	392	232	394
510.parest_r	96	668	376	667	377	<u>667</u>	<u>376</u>	48	314	400	314	400	<u>314</u>	<u>400</u>
511.povray_r	96	352	637	352	637	<u>352</u>	<u>637</u>	96	<u>318</u>	<u>706</u>	320	701	317	706
519.lbm_r	96	371	272	<u>372</u>	<u>272</u>	372	272	96	371	272	<u>372</u>	<u>272</u>	372	272
521.wrf_r	96	<u>467</u>	<u>460</u>	468	459	462	465	48	210	513	212	507	<u>210</u>	<u>512</u>
526.blender_r	96	248	589	<u>248</u>	<u>589</u>	248	589	96	248	589	<u>248</u>	<u>589</u>	248	589
527.cam4_r	96	241	695	<u>242</u>	<u>695</u>	243	692	96	241	695	<u>242</u>	<u>695</u>	243	692
538.imagick_r	96	108	2210	149	1600	<u>111</u>	<u>2160</u>	96	108	2210	149	1600	<u>111</u>	<u>2160</u>
544.nab_r	96	<u>135</u>	<u>1190</u>	135	1190	135	1190	96	<u>135</u>	<u>1190</u>	135	1190	135	1190
549.fotonik3d_r	96	<u>1029</u>	<u>364</u>	1027	364	1029	364	96	<u>1029</u>	<u>364</u>	1027	364	1029	364
554.roms_r	96	<u>583</u>	<u>262</u>	582	262	583	262	48	<u>275</u>	<u>278</u>	275	278	275	278

SPECrate®2017_fp_base = **630**

SPECrate®2017_fp_peak = **647**

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"
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>
tuned-adm profile was set to virtual-host using 'tuned-adm profile virtual-host'
```

Environment Variables Notes

Environment variables set by runcpu before the start of the run:
LD_LIBRARY_PATH = "/home/cpu2017/lib/intel64:/home/cpu2017/je5.0.1-64"
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
NA: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown)

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant Compute DL340e Gen12

(2.10 GHz, Intel Xeon 6740P)

SPECrate®2017_fp_base = 630

SPECrate®2017_fp_peak = 647

CPU2017 License: 3

Test Sponsor: HPE

Tested by: HPE

Test Date: Jun-2026

Hardware Availability: May-2026

Software Availability: Jul-2025

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.

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>

Platform Notes

BIOS Configuration: Parameters are selected in the order shown below

Workload Profile set to General Throughput Compute

Enhanced Processor Performance Profile set to Aggressive

Thermal Configuration set to Maximum Cooling

Memory Patrol Scrubbing set to Disabled

Sysinfo program /home/cpu2017/bin/sysinfo

Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197

running on localhost Tue Jun 2 13:12:23 2026

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 (254.27+suse.167.g130293e510)
12. Services, from systemctl list-unit-files
13. Linux kernel boot-time arguments, from /proc/cmdline
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. Disk information
21. /sys/devices/virtual/dmi/id
22. dmidecode
23. BIOS

1. uname -a
Linux localhost 6.4.0-150700.53.6-default #1 SMP PREEMPT_DYNAMIC Tue Jul 1 14:54:47 UTC 2025 (8ab7501)
x86_64 x86_64 x86_64 GNU/Linux

2. w
13:12:23 up 10 min, 4 users, load average: 0.09, 0.05, 0.01

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant Compute DL340e Gen12

(2.10 GHz, Intel Xeon 6740P)

SPECrate®2017_fp_base = 630

SPECrate®2017_fp_peak = 647

CPU2017 License: 3
Test Sponsor: HPE
Tested by: HPE

Test Date: Jun-2026
Hardware Availability: May-2026
Software Availability: Jul-2025

Platform Notes (Continued)

USER TTY FROM LOGIN@ IDLE JCPU PCPU WHAT

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) 1030567
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) 1030567
virtual memory         (kbytes, -v) unlimited
file locks             (-x) unlimited
-----
```

5. sysinfo process ancestry

```
/usr/lib/systemd/systemd --switched-root --system --deserialize=42
sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups
sshd: root [priv]
sshd: root@notty
bash -c cd $SPEC/ && $SPEC/reportable-ic2025.2-lin-graniterapids-rate-smt-on-20250605.sh
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=96 -c
  ic2025.2-lin-graniterapids-rate-20250605.cfg --define smt-on --define cores=48 --define physicalfirst
  --define invoke_with_interleave --define drop_caches --tune base,peak --reportable -o all fprate
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=96 --configfile
  ic2025.2-lin-graniterapids-rate-20250605.cfg --define smt-on --define cores=48 --define physicalfirst
  --define invoke_with_interleave --define drop_caches --tune base,peak --reportable --output_format all
  --nopower --runmode rate --tune base:peak --size refrate fprate --nopreenv --note-preenv --logfile
  $SPEC/tmp/CPU2017.001/templots/preenv.fprate.001.0.log --lognum 001.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/cpu2017
-----
```

6. /proc/cpuinfo

```
model name      : Intel(R) Xeon(R) 6740P
vendor_id       : GenuineIntel
cpu family      : 6
model           : 173
stepping        : 1
microcode       : 0x1000411
bugs            : spectre_v1 spectre_v2 spec_store_bypass swaps bhi
cpu cores       : 48
siblings        : 96
1 physical ids (chips)
96 processors (hardware threads)
physical id 0: core ids 0-23,64-87
physical id 0: apicids 0-47,128-175
Caution: /proc/cpuinfo data regarding chips, cores, and threads is not necessarily reliable, especially for
virtualized systems. Use the above data carefully.
```

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant Compute DL340e Gen12

(2.10 GHz, Intel Xeon 6740P)

SPECrate®2017_fp_base = 630

SPECrate®2017_fp_peak = 647

CPU2017 License: 3
Test Sponsor: HPE
Tested by: HPE

Test Date: Jun-2026
Hardware Availability: May-2026
Software Availability: Jul-2025

Platform Notes (Continued)

7. lscpu

From lscpu from util-linux 2.40.4:

```

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):                 96
On-line CPU(s) list:   0-95
Vendor ID:              GenuineIntel
Model name:             Intel(R) Xeon(R) 6740P
CPU family:             6
Model:                  173
Thread(s) per core:    2
Core(s) per socket:    48
Socket(s):              1
Stepping:               1
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 xtology 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 avx2 smep
                        bmi2 erms invpcid cqm rdt_a avx512f avx512dq rdseed adx smap
                        avx512ifma clflushopt clwb intel_pt avx512cd sha_ni avx512bw
                        avx512vl xsaveopt xsavec xgetbv1 xsaves cqm_llc cqm_occup_llc
                        cqm_mbm_total cqm_mbm_local split_lock_detect user_shstk avx_vnni
                        avx512_bf16 wbnoinvd dtherm ida arat pln pts 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_lld arch_capabilities

Virtualization:        VT-x
L1d cache:             2.3 MiB (48 instances)
L1i cache:             3 MiB (48 instances)
L2 cache:              96 MiB (48 instances)
L3 cache:              288 MiB (1 instance)
NUMA node(s):         2
NUMA node0 CPU(s):    0-23,48-71
NUMA node1 CPU(s):    24-47,72-95
Vulnerability Gather data sampling: Not affected
Vulnerability Indirect target selection: Not affected
Vulnerability Itlb multihit: Not affected
Vulnerability Lltf: 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/swaps barriers and __user pointer

```

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant Compute DL340e Gen12

(2.10 GHz, Intel Xeon 6740P)

SPECrate®2017_fp_base = 630

SPECrate®2017_fp_peak = 647

CPU2017 License: 3
Test Sponsor: HPE
Tested by: HPE

Test Date: Jun-2026
Hardware Availability: May-2026
Software Availability: Jul-2025

Platform Notes (Continued)

Vulnerability Spectre v2:	sanitization Mitigation; Enhanced / Automatic IBRS; IBPB conditional; 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	2.3M	12	Data	1	64	1	64
L1i	64K	3M	16	Instruction	1	64	1	64
L2	2M	96M	16	Unified	2	2048	1	64
L3	288M	288M	16	Unified	3	294912	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: 0-23,48-71
node 0 size: 128724 MB
node 0 free: 128079 MB
node 1 cpus: 24-47,72-95
node 1 size: 128950 MB
node 1 free: 127629 MB
node distances:
node  0  1
  0: 10 12
  1: 12 10
```

9. /proc/meminfo

MemTotal: 263858996 kB

10. who -r

run-level 3 Jun 2 13:02

11. Systemd service manager version: systemd 254 (254.27+suse.167.g130293e510)

```
Default Target Status
multi-user      running
```

12. Services, from systemctl list-unit-files

STATE	UNIT FILES
enabled	ModemManager YaST2-Firstboot YaST2-Second-Stage apparmor appstream-sync-cache auditd bluetooth cron display-manager getty@ irqbalance issue-generator kbdsettings klog lvm2-monitor nscd postfix purge-kernels rollback rsyslog smartd sshd systemd-pstore tuned wicked wickedd-auto4 wickedd-dhcp4 wickedd-dhcp6 wickedd-nanny wpa_supplicant
enabled-runtime	systemd-remount-fs
disabled	NetworkManager NetworkManager-dispatcher NetworkManager-wait-online accounts-daemon autofs autoyast-initscripts blk-availability bluetooth-mesh boot-sysctl ca-certificates chrony-wait chronyd console-getty cups cups-browsed debug-shell dnsmasq ebttables exchange-bmc-os-info firewalld fsidd gnome-remote-desktop gpm grub2-once haveged hwloc-dump-hwdata ipmi ipmievd issue-add-ssh-keys kexec-load lunmask man-db-create multipathd nfs nfs-blkmap nmb openvpn@ ostree-remount ostree-state-overlay@ rpcbind rpmconfigcheck rsyncd rtkit-daemon samba-bqgd serial-getty@ smartd_generate_opts smb snmpd snmptrapd speech-dispatcherd systemd-boot-check-no-failures systemd-confext systemd-network-generator systemd-sysextd systemd-time-wait-sync systemd-timesyncd udisks2 update-system-flatpaks upower vncserver@ wpa_supplicant@
indirect	pcscd saned@ systemd-userdbd wickedd

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant Compute DL340e Gen12

(2.10 GHz, Intel Xeon 6740P)

SPECrate®2017_fp_base = 630

SPECrate®2017_fp_peak = 647

CPU2017 License: 3

Test Sponsor: HPE

Tested by: HPE

Test Date: Jun-2026

Hardware Availability: May-2026

Software Availability: Jul-2025

Platform Notes (Continued)

```

-----
13. Linux kernel boot-time arguments, from /proc/cmdline
BOOT_IMAGE=/boot/vmlinuz-6.4.0-150700.53.6-default
root=UUID=282b0587-97e1-413a-84ab-5f19f75f0318
splash=silent
mitigations=auto
quiet
security=apparmor

```

```

-----
14. cpupower frequency-info
analyzing CPU 30:
Unable to determine current policy
boost state support:
Supported: yes
Active: yes

```

```

-----
15. tuned-adm active
Current active profile: virtual-host

```

```

-----
16. sysctl
kernel.numa_balancing          1
kernel.randomize_va_space     2
vm.compaction_proactiveness   20
vm.dirty_background_bytes     0
vm.dirty_background_ratio     5
vm.dirty_bytes                 0
vm.dirty_expire_centisecs    3000
vm.dirty_ratio                 40
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                  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+madvice [madvice] never
enabled         [always] madvice 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_shared        256
max_ptes_swap          64
pages_to_scan          4096
scan_sleep_millisecs   10000

```

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant Compute DL340e Gen12

(2.10 GHz, Intel Xeon 6740P)

SPECrate®2017_fp_base = 630

SPECrate®2017_fp_peak = 647

CPU2017 License: 3

Test Sponsor: HPE

Tested by: HPE

Test Date: Jun-2026

Hardware Availability: May-2026

Software Availability: Jul-2025

Platform Notes (Continued)

19. OS release

From /etc/*-release /etc/*-version
os-release SUSE Linux Enterprise Server 15 SP7

20. Disk information

SPEC is set to: /home/cpu2017
Filesystem Type Size Used Avail Use% Mounted on
/dev/sda2 btrfs 5.9T 149G 5.7T 3% /home

21. /sys/devices/virtual/dmi/id

Vendor: HPE
Product: HPE ProLiant Compute DL340e Gen12
Product Family: ProLiant
Serial: VPR069-P02-04U-H

22. dmidecode

Additional information from dmidecode 3.6 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 Hynix HMC88AHBRA471N 32 GB 2 rank 6400
1x Micron MTC20F2085S1RC64BD2 QSFF 32 GB 2 rank 6400

23. BIOS

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

BIOS Vendor: HPE
BIOS Version: 1.62
BIOS Date: 02/06/2026
BIOS Revision: 1.62
Firmware Revision: 1.22

Compiler Version Notes

=====
C | 519.lbm_r(base, peak) 538.imagick_r(base, peak) 544.nab_r(base, peak)

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

=====
C++ | 508.namd_r(base, peak) 510.parest_r(base, peak)

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

=====
C++, C | 511.povray_r(base, peak) 526.blender_r(base, peak)

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2025.2.0 Build 20250605

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant Compute DL340e Gen12

(2.10 GHz, Intel Xeon 6740P)

SPECrate®2017_fp_base = 630

SPECrate®2017_fp_peak = 647

CPU2017 License: 3

Test Sponsor: HPE

Tested by: HPE

Test Date: Jun-2026

Hardware Availability: May-2026

Software Availability: Jul-2025

Compiler Version Notes (Continued)

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

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2025.2.0 Build 20250605

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

=====
C++, C, Fortran | 507.cactuBSSN_r(base, peak)
=====

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2025.2.0 Build 20250605

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

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2025.2.0 Build 20250605

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

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2025.2.0 Build 20250605

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

=====
Fortran | 503.bwaves_r(base, peak) 549.fotonik3d_r(base, peak) 554.roms_r(base, peak)
=====

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2025.2.0 Build 20250605

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

=====
Fortran, C | 521.wrf_r(base, peak) 527.cam4_r(base, peak)
=====

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2025.2.0 Build 20250605

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

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2025.2.0 Build 20250605

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

Base Compiler Invocation

C benchmarks:

icx

C++ benchmarks:

icpx

Fortran benchmarks:

ifx

Benchmarks using both Fortran and C:

ifx icx

Benchmarks using both C and C++:

icpx icx

Benchmarks using Fortran, C, and C++:

icpx icx ifx



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant Compute DL340e Gen12

(2.10 GHz, Intel Xeon 6740P)

SPECrate®2017_fp_base = 630

SPECrate®2017_fp_peak = 647

CPU2017 License: 3
Test Sponsor: HPE
Tested by: HPE

Test Date: Jun-2026
Hardware Availability: May-2026
Software Availability: Jul-2025

Base Portability Flags

```
503.bwaves_r: -DSPEC_LP64
507.cactuBSSN_r: -DSPEC_LP64
508.namd_r: -DSPEC_LP64
510.parest_r: -DSPEC_LP64
511.povray_r: -DSPEC_LP64
519.lbm_r: -DSPEC_LP64
521.wrf_r: -DSPEC_LP64 -DSPEC_CASE_FLAG -convert big_endian
526.blender_r: -DSPEC_LP64 -DSPEC_LINUX -funsigned-char
527.cam4_r: -DSPEC_LP64 -DSPEC_CASE_FLAG
538.imagick_r: -DSPEC_LP64
544.nab_r: -DSPEC_LP64
549.fotonik3d_r: -DSPEC_LP64
554.roms_r: -DSPEC_LP64
```

Base Optimization Flags

C benchmarks:

```
-w -std=c11 -m64 -Wl,-z,muldefs -xgraniterapids -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-Wno-implicit-int -mprefer-vector-width=512 -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib
```

C++ benchmarks:

```
-w -std=c++14 -m64 -Wl,-z,muldefs -xgraniterapids -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -mprefer-vector-width=512 -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib
```

Fortran benchmarks:

```
-w -m64 -Wl,-z,muldefs -xgraniterapids -Ofast -ffast-math -flto
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-nostandard-realloc-lhs -align array32byte -auto -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib
```

Benchmarks using both Fortran and C:

```
-w -m64 -std=c11 -Wl,-z,muldefs -xgraniterapids -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-Wno-implicit-int -mprefer-vector-width=512 -nostandard-realloc-lhs
-align array32byte -auto -ljemalloc -L/usr/local/jemalloc64-5.0.1/lib
```

Benchmarks using both C and C++:

```
-w -std=c++14 -m64 -std=c11 -Wl,-z,muldefs -xgraniterapids -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -Wno-implicit-int -mprefer-vector-width=512
```

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant Compute DL340e Gen12

(2.10 GHz, Intel Xeon 6740P)

SPECrate®2017_fp_base = 630

SPECrate®2017_fp_peak = 647

CPU2017 License: 3

Test Sponsor: HPE

Tested by: HPE

Test Date: Jun-2026

Hardware Availability: May-2026

Software Availability: Jul-2025

Base Optimization Flags (Continued)

Benchmarks using both C and C++ (continued):

`-ljemalloc -L/usr/local/jemalloc64-5.0.1/lib`

Benchmarks using Fortran, C, and C++:

`-w -m64 -std=c++14 -std=c11 -Wl,-z,muldefs -xgraniterapids -Ofast`

`-ffast-math -flto -mfpmath=sse -funroll-loops`

`-qopt-mem-layout-trans=4 -Wno-implicit-int -mprefer-vector-width=512`

`-nostandard-realloc-lhs -align array32byte -auto -ljemalloc`

`-L/usr/local/jemalloc64-5.0.1/lib`

Peak Compiler Invocation

C benchmarks:

`icx`

C++ benchmarks:

`icpx`

Fortran benchmarks:

`ifx`

Benchmarks using both Fortran and C:

`ifx icx`

Benchmarks using both C and C++:

`icpx icx`

Benchmarks using Fortran, C, and C++:

`icpx icx ifx`

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

`519.lbm_r: basepeak = yes`

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant Compute DL340e Gen12

(2.10 GHz, Intel Xeon 6740P)

SPECrate®2017_fp_base = 630

SPECrate®2017_fp_peak = 647

CPU2017 License: 3
Test Sponsor: HPE
Tested by: HPE

Test Date: Jun-2026
Hardware Availability: May-2026
Software Availability: Jul-2025

Peak Optimization Flags (Continued)

538.imagick_r: basepeak = yes

544.nab_r: basepeak = yes

C++ benchmarks:

508.namd_r: basepeak = yes

510.parest_r: -w -std=c++14 -m64 -Wl,-z,muldefs -xgraniterapids
-Ofast -ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -mprefer-vector-width=512
-ljemalloc -L/usr/local/jemalloc64-5.0.1/lib

Fortran benchmarks:

503.bwaves_r: basepeak = yes

549.fotonik3d_r: basepeak = yes

554.roms_r: -w -m64 -Wl,-z,muldefs -xgraniterapids -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -nostandard-realloc-lhs
-align array32byte -auto -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib

Benchmarks using both Fortran and C:

521.wrf_r: -w -m64 -std=c11 -Wl,-z,muldefs -xgraniterapids -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -Wno-implicit-int
-mprefer-vector-width=512 -nostandard-realloc-lhs
-align array32byte -auto -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib

527.cam4_r: basepeak = yes

Benchmarks using both C and C++:

511.povray_r: -w -std=c++14 -m64 -std=c11 -Wl,-z,muldefs
-fprofile-generate(pass 1)
-fprofile-use=default.profddata(pass 2) -xCORE-AVX2(pass 1)
-flto -Ofast -xCORE-AVX512 -ffast-math -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4 -Wno-implicit-int
-mprefer-vector-width=512 -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant Compute DL340e Gen12

(2.10 GHz, Intel Xeon 6740P)

SPECrate®2017_fp_base = 630

SPECrate®2017_fp_peak = 647

CPU2017 License: 3

Test Sponsor: HPE

Tested by: HPE

Test Date: Jun-2026

Hardware Availability: May-2026

Software Availability: Jul-2025

Peak Optimization Flags (Continued)

526.blender_r: basepeak = yes

Benchmarks using Fortran, C, and C++:

```
-w -m64 -std=c++14 -std=c11 -Wl,-z,muldefs -xgraniterapids -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -Wno-implicit-int -mprefer-vector-width=512
-nostandard-realloc-lhs -align array32byte -auto -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib
```

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

<http://www.spec.org/cpu2017/flags/HPE-Platform-Flags-Intel-GNR-rev1.7.html>

<http://www.spec.org/cpu2017/flags/Intel-ic2025-official-linux64.html>

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

<http://www.spec.org/cpu2017/flags/HPE-Platform-Flags-Intel-GNR-rev1.7.xml>

<http://www.spec.org/cpu2017/flags/Intel-ic2025-official-linux64.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 2026-06-02 03:42:23-0400.

Report generated on 2026-06-30 17:09:16 by CPU2017 PDF formatter v6716.

Originally published on 2026-06-30.