



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

## Hewlett Packard Enterprise

(Test Sponsor: HPE)

### ProLiant Compute DL340e Gen12

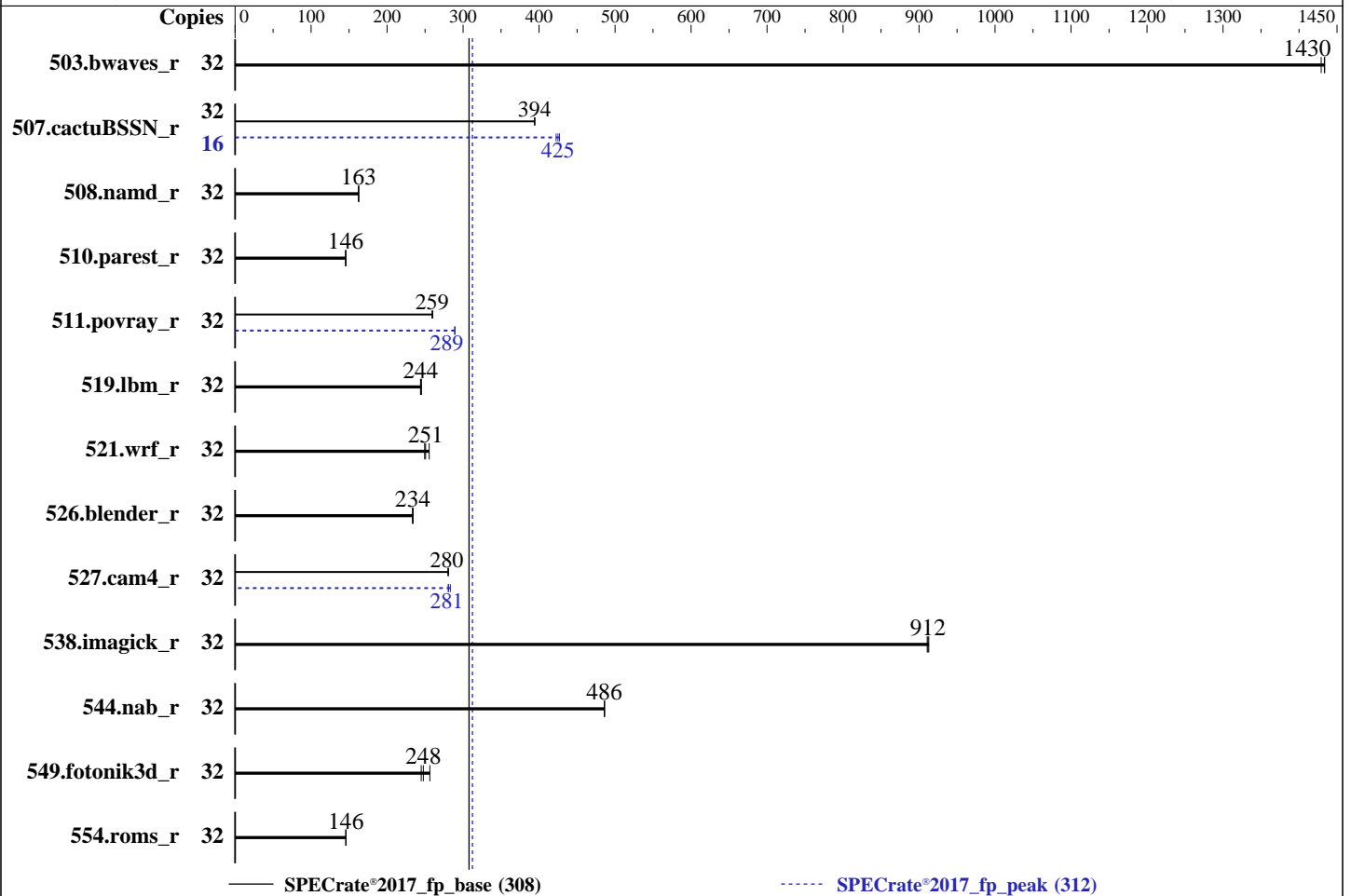
(2.30 GHz, Intel Xeon 6511P)

## SPECrate®2017\_fp\_base = 308

## SPECrate®2017\_fp\_peak = 312

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

**Test Date:** Apr-2026  
**Hardware Availability:** May-2026  
**Software Availability:** Dec-2025



### Hardware

CPU Name: Intel Xeon 6511P  
 Max MHz: 4200  
 Nominal: 2300  
 Enabled: 16 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: 72 MB I+D on chip per chip  
 Other: None  
 Memory: 256 GB (8 x 32 GB 2Rx8 PC5-6400B-R)  
 Storage: 1 x 480 GB 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

(2.30 GHz, Intel Xeon 6511P)

SPECrate®2017\_fp\_base = 308

SPECrate®2017\_fp\_peak = 312

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

Test Date: Apr-2026  
Hardware Availability: May-2026  
Software Availability: Dec-2025

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
503.bwaves_r	32	224	1430	<b>224</b>	<b>1430</b>	225	1430	32	224	1430	<b>224</b>	<b>1430</b>	225	1430
507.cactuBSSN_r	32	<b>103</b>	<b>394</b>	103	394	103	394	16	47.9	422	47.5	427	<b>47.7</b>	<b>425</b>
508.namd_r	32	187	162	<b>187</b>	<b>163</b>	187	163	32	187	162	<b>187</b>	<b>163</b>	187	163
510.parest_r	32	<b>575</b>	<b>146</b>	575	146	575	145	32	<b>575</b>	<b>146</b>	575	146	575	145
511.povray_r	32	287	260	<b>288</b>	<b>259</b>	288	259	32	<b>258</b>	<b>289</b>	258	289	258	289
519.lbm_r	32	138	244	<b>138</b>	<b>244</b>	138	245	32	138	244	<b>138</b>	<b>244</b>	138	245
521.wrf_r	32	287	249	<b>286</b>	<b>251</b>	281	255	32	287	249	<b>286</b>	<b>251</b>	281	255
526.blender_r	32	<b>208</b>	<b>234</b>	209	234	208	234	32	<b>208</b>	<b>234</b>	209	234	208	234
527.cam4_r	32	199	281	<b>200</b>	<b>280</b>	200	280	32	200	280	198	283	<b>199</b>	<b>281</b>
538.imagick_r	32	87.2	913	<b>87.3</b>	<b>912</b>	87.4	911	32	87.2	913	<b>87.3</b>	<b>912</b>	87.4	911
544.nab_r	32	111	486	111	486	<b>111</b>	<b>486</b>	32	111	486	111	486	<b>111</b>	<b>486</b>
549.fotonik3d_r	32	<b>503</b>	<b>248</b>	487	256	509	245	32	<b>503</b>	<b>248</b>	487	256	509	245
554.roms_r	32	348	146	349	146	<b>348</b>	<b>146</b>	32	348	146	349	146	<b>348</b>	<b>146</b>

SPECrate®2017\_fp\_base = **308**

SPECrate®2017\_fp\_peak = **312**

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
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) 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)

(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**

(2.30 GHz, Intel Xeon 6511P)

**SPECrate®2017\_fp\_base = 308**

**SPECrate®2017\_fp\_peak = 312**

**CPU2017 License:** 3

**Test Sponsor:** HPE

**Tested by:** HPE

**Test Date:** Apr-2026

**Hardware Availability:** May-2026

**Software Availability:** Dec-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-2017-5715 (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

Last Level Cache (LLC) Prefetch set to Enabled

XPT Prefetch set to Disabled

Workload Profile set to Custom

DCU Stream Prefetcher set to Disabled

Adjacent Sector Prefetch set to Disabled

Sysinfo program /home/cpu2017/bin/sysinfo

Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197

running on localhost Sat Apr 11 09:53:34 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

(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**

(2.30 GHz, Intel Xeon 6511P)

**SPECrate®2017\_fp\_base = 308**

**SPECrate®2017\_fp\_peak = 312**

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

**Test Date:** Apr-2026  
**Hardware Availability:** May-2026  
**Software Availability:** Dec-2025

## Platform Notes (Continued)

-----  
2. w  
09:53:34 up 1 min, 3 users, load average: 0.24, 0.11, 0.04  
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) 1029901  
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) 1029901  
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-sapphirerapids-rate-smt-on-20250605.sh  
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=32 -c  
ic2025.2-lin-sapphirerapids-rate-20250605.cfg --define smt-on --define cores=16 --define physicalfirst  
--define no-numa --tune base,peak -o all --define drop\_caches fprate  
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=32 --configfile  
ic2025.2-lin-sapphirerapids-rate-20250605.cfg --define smt-on --define cores=16 --define physicalfirst  
--define no-numa --tune base,peak --output\_format all --define drop\_caches --nopower --runmode rate --tune  
base:peak --size refrate fprate --nopreenv --note-preenv --logfile  
\$SPEC/tmp/CPU2017.001/tempslogs/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) 6511P  
vendor\_id : GenuineIntel  
cpu family : 6  
model : 173  
stepping : 1  
microcode : 0xa000133  
bugs : spectre\_v1 spectre\_v2 spec\_store\_bypass swapgs bhi  
cpu cores : 16  
siblings : 32  
1 physical ids (chips)  
32 processors (hardware threads)  
physical id 0: core ids 0-15  
-----

(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**  
(2.30 GHz, Intel Xeon 6511P)

**SPECrate®2017\_fp\_base = 308**

**SPECrate®2017\_fp\_peak = 312**

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

**Test Date:** Apr-2026  
**Hardware Availability:** May-2026  
**Software Availability:** Dec-2025

## Platform Notes (Continued)

physical id 0: apicids 0-31

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 2.40.4:

```

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):                       32
On-line CPU(s) list:         0-31
Vendor ID:                   GenuineIntel
Model name:                  Intel(R) Xeon(R) 6511P
CPU family:                   6
Model:                       173
Thread(s) per core:          2
Core(s) per socket:          16
Socket(s):                    1
Stepping:                     1
BogoMIPS:                    4600.00
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 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 hfi 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:                   768 KiB (16 instances)
L1i cache:                   1 MiB (16 instances)
L2 cache:                     32 MiB (16 instances)
L3 cache:                     72 MiB (1 instance)
NUMA node(s):                1
NUMA node0 CPU(s):           0-31
Vulnerability Gather data sampling: Not affected
Vulnerability Indirect target selection: 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

```

(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**

(2.30 GHz, Intel Xeon 6511P)

**SPECrate®2017\_fp\_base = 308**

**SPECrate®2017\_fp\_peak = 312**

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

**Test Date:** Apr-2026  
**Hardware Availability:** May-2026  
**Software Availability:** Dec-2025

## Platform Notes (Continued)

Vulnerability Spec store bypass: Mitigation; Speculative Store Bypass disabled via prctl  
Vulnerability Spectre v1: Mitigation; usercopy/swaps barriers and \_\_user pointer sanitization  
Vulnerability Spectre v2: 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	768K	12	Data	1	64	1	64
L1i	64K	1M	16	Instruction	1	64	1	64
L2	2M	32M	16	Unified	2	2048	1	64
L3	72M	72M	16	Unified	3	73728	1	64

8. numactl --hardware

NOTE: a numactl 'node' might or might not correspond to a physical chip.

available: 1 nodes (0)  
node 0 cpus: 0-31  
node 0 size: 257508 MB  
node 0 free: 256590 MB  
node distances:  
node 0  
0: 10

9. /proc/meminfo

MemTotal: 263688704 kB

10. who -r

run-level 3 Apr 11 09:52

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 nvme-fc-boot-connections nvme-autoconnect 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 autofsd 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-bgqd 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**

(2.30 GHz, Intel Xeon 6511P)

**SPECrate®2017\_fp\_base = 308**

**SPECrate®2017\_fp\_peak = 312**

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

**Test Date:** Apr-2026  
**Hardware Availability:** May-2026  
**Software Availability:** Dec-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=b10d0bb3-3119-4a77-aedb-83e9e3b9582d  
splash=silent  
mitigations=auto  
quiet  
security=apparmor  
-----

-----  
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: virtual-host  
-----

-----  
16. sysctl  
kernel.numa\_balancing 0  
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**

(2.30 GHz, Intel Xeon 6511P)

**SPECrate®2017\_fp\_base = 308**

**SPECrate®2017\_fp\_peak = 312**

**CPU2017 License:** 3

**Test Sponsor:** HPE

**Tested by:** HPE

**Test Date:** Apr-2026

**Hardware Availability:** May-2026

**Software Availability:** Dec-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/nvme0n1p2 btrfs 445G 329G 116G 75% /home

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

Vendor: HPE  
Product: HPE ProLiant Compute DL340e Gen12  
Product Family: ProLiant  
Serial: SANJACSCM

-----  
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:  
8x Hynix HMC88AHBRA472N 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: 1.19

## 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  
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

(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**

(2.30 GHz, Intel Xeon 6511P)

**SPECrate®2017\_fp\_base = 308**

**SPECrate®2017\_fp\_peak = 312**

**CPU2017 License:** 3

**Test Sponsor:** HPE

**Tested by:** HPE

**Test Date:** Apr-2026

**Hardware Availability:** May-2026

**Software Availability:** Dec-2025

## Compiler Version Notes (Continued)

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**

(2.30 GHz, Intel Xeon 6511P)

**SPECrate®2017\_fp\_base = 308**

**SPECrate®2017\_fp\_peak = 312**

**CPU2017 License:** 3

**Test Sponsor:** HPE

**Tested by:** HPE

**Test Date:** Apr-2026

**Hardware Availability:** May-2026

**Software Availability:** Dec-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 -xsapphirerapids -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 -xsapphirerapids -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 -xsapphirerapids -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 -xsapphirerapids -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 -xsapphirerapids -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**

(2.30 GHz, Intel Xeon 6511P)

**SPECrate®2017\_fp\_base = 308**

**SPECrate®2017\_fp\_peak = 312**

**CPU2017 License:** 3

**Test Sponsor:** HPE

**Tested by:** HPE

**Test Date:** Apr-2026

**Hardware Availability:** May-2026

**Software Availability:** Dec-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 -xsaphirerapids -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**

(2.30 GHz, Intel Xeon 6511P)

**SPECrate®2017\_fp\_base = 308**

**SPECrate®2017\_fp\_peak = 312**

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

**Test Date:** Apr-2026  
**Hardware Availability:** May-2026  
**Software Availability:** Dec-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: basepeak = yes

Fortran benchmarks:

503.bwaves\_r: basepeak = yes

549.fotonik3d\_r: basepeak = yes

554.roms\_r: basepeak = yes

Benchmarks using both Fortran and C:

521.wrf\_r: basepeak = yes

```
527.cam4_r: -w -m64 -std=c11 -Wl,-z,muldefs -xsapphirerapids -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++:

```
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
```

526.blender\_r: basepeak = yes

Benchmarks using Fortran, C, and C++:

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

(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**

(2.30 GHz, Intel Xeon 6511P)

**SPECrate®2017\_fp\_base = 308**

**SPECrate®2017\_fp\_peak = 312**

**CPU2017 License:** 3

**Test Sponsor:** HPE

**Tested by:** HPE

**Test Date:** Apr-2026

**Hardware Availability:** May-2026

**Software Availability:** Dec-2025

## Peak Optimization Flags (Continued)

Benchmarks using Fortran, C, and C++ (continued):

-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-rev1.6.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-rev1.6.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](mailto:info@spec.org).

Tested with SPEC CPU®2017 v1.1.9 on 2026-04-11 00:23:34-0400.

Report generated on 2026-05-06 09:59:22 by CPU2017 PDF formatter v6716.

Originally published on 2026-05-05.