



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

## Hewlett Packard Enterprise

(Test Sponsor: HPE)

### ProLiant ML30 Gen11

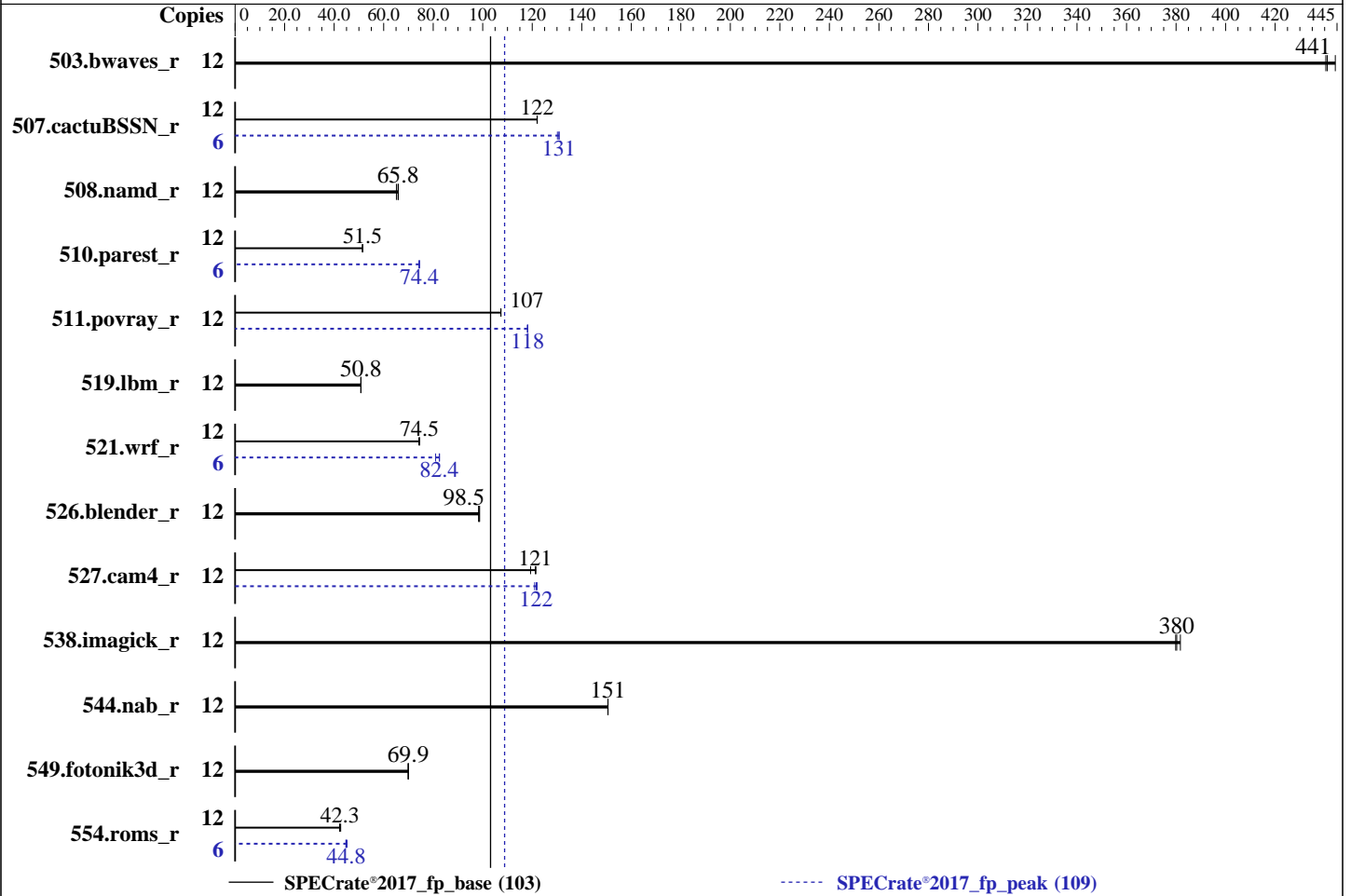
(3.60 GHz, Intel Xeon 6349P)

## SPECrate®2017\_fp\_base = 103

## SPECrate®2017\_fp\_peak = 109

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

**Test Date:** Feb-2025  
**Hardware Availability:** Mar-2025  
**Software Availability:** Jun-2024



### Hardware

CPU Name: Intel Xeon 6349P  
 Max MHz: 5700  
 Nominal: 3600  
 Enabled: 6 cores, 1 chip, 2 threads/core  
 Orderable: 1 chip  
 Cache L1: 32 KB I + 48 KB D on chip per core  
 L2: 2 MB I+D on chip per core  
 L3: 18 MB I+D on chip per chip  
 Other: None  
 Memory: 64 GB (2 x 32 GB 2Rx8 PC5-5600B-E, running at 4400 , orderable using HPE part# P64339-B21)  
 Storage: 1 x 480 GB SATA SSD  
 Other: CPU Cooling: Air

### Software

OS: SUSE Linux Enterprise Server 15 SP6  
 Kernel 6.4.0-150600.21-default  
 Compiler: C/C++: Version 2024.1 of Intel oneAPI DPC++/C++ Compiler for Linux;  
 Fortran: Version 2024.1 of Intel Fortran Compiler for Linux;  
 Parallel: No  
 Firmware: HPE BIOS Version v2.10 12/06/2024 released Dec-2024  
 File System: xfs  
 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 set to prefer performance at the cost of additional power usage



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant ML30 Gen11

(3.60 GHz, Intel Xeon 6349P)

SPECrate®2017\_fp\_base = 103

SPECrate®2017\_fp\_peak = 109

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

Test Date: Feb-2025  
Hardware Availability: Mar-2025  
Software Availability: Jun-2024

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
503.bwaves_r	12	271	444	<u>273</u>	<u>441</u>	273	440	12	271	444	<u>273</u>	<u>441</u>	273	440
507.cactuBSSN_r	12	<u>125</u>	<u>122</u>	125	122	125	122	6	58.0	131	<u>58.1</u>	<u>131</u>	58.4	130
508.namd_r	12	175	65.1	<u>173</u>	<u>65.8</u>	173	65.9	12	175	65.1	<u>173</u>	<u>65.8</u>	173	65.9
510.parest_r	12	<u>610</u>	<u>51.5</u>	609	51.6	611	51.4	6	<u>211</u>	<u>74.4</u>	211	74.5	211	74.2
511.povray_r	12	261	107	261	107	<u>261</u>	<u>107</u>	12	<u>237</u>	<u>118</u>	237	118	237	118
519.lbm_r	12	249	50.8	249	50.8	<u>249</u>	<u>50.8</u>	12	249	50.8	249	50.8	<u>249</u>	<u>50.8</u>
521.wrf_r	12	362	74.2	361	74.5	<u>361</u>	<u>74.5</u>	6	166	81.0	<u>163</u>	<u>82.4</u>	163	82.6
526.blender_r	12	185	98.8	<u>185</u>	<u>98.5</u>	186	98.3	12	185	98.8	<u>185</u>	<u>98.5</u>	186	98.3
527.cam4_r	12	176	119	173	121	<u>173</u>	<u>121</u>	12	172	122	173	121	<u>173</u>	<u>122</u>
538.imagick_r	12	78.2	382	<u>78.5</u>	<u>380</u>	78.6	380	12	78.2	382	<u>78.5</u>	<u>380</u>	78.6	380
544.nab_r	12	<u>134</u>	<u>151</u>	134	151	134	151	12	<u>134</u>	<u>151</u>	134	151	134	151
549.fotonik3d_r	12	<u>669</u>	<u>69.9</u>	669	69.9	669	69.9	12	<u>669</u>	<u>69.9</u>	669	69.9	669	69.9
554.roms_r	12	447	42.6	452	42.2	<u>451</u>	<u>42.3</u>	6	213	44.8	<u>213</u>	<u>44.8</u>	211	45.2

SPECrate®2017\_fp\_base = 103

SPECrate®2017\_fp\_peak = 109

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

## 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) 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)

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

**Hewlett Packard Enterprise**

(Test Sponsor: HPE)

**ProLiant ML30 Gen11**

(3.60 GHz, Intel Xeon 6349P)

**SPECrate®2017\_fp\_base = 103**

**SPECrate®2017\_fp\_peak = 109**

**CPU2017 License:** 3

**Test Sponsor:** HPE

**Tested by:** HPE

**Test Date:** Feb-2025

**Hardware Availability:** Mar-2025

**Software Availability:** Jun-2024

## General Notes (Continued)

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:

Workload Profile set to General Throughput Compute  
Thermal Configuration set to Maximum Cooling  
Enhanced Processor Performance Profile set to Enabled

Sysinfo program /home/cpu2017/bin/sysinfo  
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197  
running on localhost Sat Feb 22 00:39:14 2025

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

-----  
Table of contents  
-----

1. uname -a
2. w
3. Username
4. ulimit -a
5. sysinfo process ancestry
6. /proc/cpuinfo
7. lscpu
8. numactl --hardware
9. /proc/meminfo
10. who -r
11. Systemd service manager version: systemd 254 (254.10+suse.84.ge8d77af424)
12. Services, from systemctl list-unit-files
13. Linux kernel boot-time arguments, from /proc/cmdline
14. cpupower frequency-info
15. sysctl
16. /sys/kernel/mm/transparent\_hugepage
17. /sys/kernel/mm/transparent\_hugepage/khugepaged
18. OS release
19. Disk information
20. /sys/devices/virtual/dmi/id
21. dmidecode
22. BIOS

-----  
1. uname -a  
Linux localhost 6.4.0-150600.21-default #1 SMP PREEMPT\_DYNAMIC Thu May 16 11:09:22 UTC 2024 (36c1e09)  
x86\_64 x86\_64 x86\_64 GNU/Linux

-----  
2. w  
00:39:14 up 3:52, 6 users, load average: 8.33, 11.15, 11.72  
USER TTY FROM LOGIN@ IDLE JCPU PCPU WHAT

-----  
3. Username  
From environment variable \$USER: root

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

**Hewlett Packard Enterprise**

(Test Sponsor: HPE)

ProLiant ML30 Gen11

(3.60 GHz, Intel Xeon 6349P)

SPECrate®2017\_fp\_base = 103

SPECrate®2017\_fp\_peak = 109

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

**Test Date:** Feb-2025  
**Hardware Availability:** Mar-2025  
**Software Availability:** Jun-2024

## Platform Notes (Continued)

```

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) 256713
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) 256713
virtual memory         (kbytes, -v) unlimited
file locks             (-x) unlimited

```

```

5. sysinfo process ancestry
/usr/lib/systemd/systemd --switched-root --system --deserialize=31
sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups
sshd: root [priv]
sshd: root@notty
bash -c cd $SPEC/ && $SPEC/fprate.sh
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=12 -c
  ic2024.1-lin-core-avx2-rate-20240308.cfg --define smt-on --define cores=6 --define physicalfirst --define
  no-numa --tune base,peak -o all --define drop_caches fprate
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=12 --configfile
  ic2024.1-lin-core-avx2-rate-20240308.cfg --define smt-on --define cores=6 --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/CPU2017.004/templogs/preenv.fprate.004.0.log --lognum 004.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/cpu2017

```

```

6. /proc/cpuinfo
model name      : Intel(R) Xeon(R) 6349P
vendor_id      : GenuineIntel
cpu family     : 6
model          : 183
stepping      : 1
microcode     : 0x12c
bugs           : spectre_v1 spectre_v2 spec_store_bypass swapgs eibrs_pbrsb bhi
cpu cores     : 6
siblings      : 12
1 physical ids (chips)
12 processors (hardware threads)
physical id 0: core ids 0-5
physical id 0: apicids 0-11
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

```

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

## Hewlett Packard Enterprise

(Test Sponsor: HPE)

### ProLiant ML30 Gen11

(3.60 GHz, Intel Xeon 6349P)

## SPECrate®2017\_fp\_base = 103

## SPECrate®2017\_fp\_peak = 109

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

**Test Date:** Feb-2025  
**Hardware Availability:** Mar-2025  
**Software Availability:** Jun-2024

## Platform Notes (Continued)

```

CPU op-mode(s):          32-bit, 64-bit
Address sizes:          46 bits physical, 48 bits virtual
Byte Order:             Little Endian
CPU(s):                 12
On-line CPU(s) list:   0-11
Vendor ID:              GenuineIntel
BIOS Vendor ID:        Intel(R) Corporation
Model name:             Intel(R) Xeon(R) 6349P
BIOS Model name:       Intel(R) Xeon(R) 6349P To Be Filled By O.E.M. CPU @ 3.6GHz
BIOS CPU family:       179
CPU family:             6
Model:                  183
Thread(s) per core:    2
Core(s) per socket:    6
Socket(s):              1
Stepping:               1
BogoMIPS:               7219.20
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 sse3 sdbg fma cx16
                        xtpr pdcm sse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_timer aes
                        xsave avx f16c rdrand lahf_lm abm 3dnowprefetch cpuid_fault epb ssbd
                        ibrs ibpb stibp ibrs_enhanced tpr_shadow flexpriority ept vpid ept_ad
                        fsgsbase tsc_adjust bmi1 avx2 smep bmi2 erms invpcid rdseed adx smap
                        clflushopt clwb intel_pt sha_ni xsaveopt xsavec xgetbv1 xsaves
                        split_lock_detect user_shstk avx_vnni dtherm ida arat pln pts hfi
                        vmmi umip pku ospke waitpkg gfni vaes vpclmulqdq tme rdpid movdiri
                        movdir64b fsrm md_clear serialize pconfig arch_lbr ibt flush_l1d
                        arch_capabilities
Virtualization:         VT-x
L1d cache:              288 KiB (6 instances)
L1i cache:              192 KiB (6 instances)
L2 cache:               12 MiB (6 instances)
L3 cache:               18 MiB (1 instance)
NUMA node(s):          1
NUMA node0 CPU(s):    0-11
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 SW sequence; BHI BHI_DIS_S
Vulnerability Srbds:                 Not affected
Vulnerability Tsx async abort:       Not affected

```

From lscpu --cache:

NAME	ONE-SIZE	ALL-SIZE	WAYS	TYPE	LEVEL	SETS	PHY-LINE	COHERENCY-SIZE
L1d	48K	288K	12	Data	1	64	1	64
L1i	32K	192K	8	Instruction	1	64	1	64
L2	2M	12M	16	Unified	2	2048	1	64
L3	18M	18M	9	Unified	3	32768	1	64

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

**Hewlett Packard Enterprise**

(Test Sponsor: HPE)

**ProLiant ML30 Gen11**

(3.60 GHz, Intel Xeon 6349P)

**SPECrate®2017\_fp\_base = 103**

**SPECrate®2017\_fp\_peak = 109**

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

**Test Date:** Feb-2025  
**Hardware Availability:** Mar-2025  
**Software Availability:** Jun-2024

## Platform Notes (Continued)

8. numactl --hardware

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

```
available: 1 nodes (0)
node 0 cpus: 0-11
node 0 size: 64203 MB
node 0 free: 51521 MB
node distances:
node 0
0: 10
```

9. /proc/meminfo

```
MemTotal: 65744240 kB
```

10. who -r

```
run-level 3 Feb 21 20:46
```

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 getty@ irqbalance issue-generator kbdsettings lvm2-monitor postfix
purge-kernels rollback sshd systemd-pstore wicked wickedd-auto4 wickedd-dhcp4
wickedd-dhcp6 wickedd-nanny
enabled-runtime systemd-remount-fs
disabled blk-availability boot-sysctl ca-certificates chrony-wait chronyd console-getty debug-shell
grub2-once haveged hwloc-dump-hwdata issue-add-ssh-keys kexec-load lunmask rpmconfigcheck
serial-getty@ systemd-boot-check-no-failures systemd-confext 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=1601d4e3-aed0-470e-8bd5-82680fe83224
splash=silent
resume=/dev/disk/by-uuid/e928ac5a-0714-4827-a56e-3fd30f6224d5
mitigations=auto
quiet
security=apparmor
```

14. cpupower frequency-info

```
analyzing CPU 10:
Unable to determine current policy
boost state support:
Supported: yes
Active: yes
```

15. sysctl

```
kernel.numa_balancing 0
kernel.randomize_va_space 2
```

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

**Hewlett Packard Enterprise**

(Test Sponsor: HPE)

ProLiant ML30 Gen11

(3.60 GHz, Intel Xeon 6349P)

SPECrate®2017\_fp\_base = 103

SPECrate®2017\_fp\_peak = 109

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

**Test Date:** Feb-2025  
**Hardware Availability:** Mar-2025  
**Software Availability:** Jun-2024

## Platform Notes (Continued)

```

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

```

```

-----
16. /sys/kernel/mm/transparent_hugepage
defrag          always defer+madvise [madvise] never
enabled         [always] madvise never
hpage_pmd_size 2097152
shmem_enabled   always within_size advise [never] deny force

```

```

-----
17. /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

```

```

-----
18. OS release
From /etc/*-release /etc/*-version
os-release SUSE Linux Enterprise Server 15 SP6

```

```

-----
19. Disk information
SPEC is set to: /home/cpu2017
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sdb4       xfs   342G  68G  274G  20% /home

```

```

-----
20. /sys/devices/virtual/dmi/id
Vendor:         HPE
Product:        ProLiant ML30 Gen11
Product Family: ProLiant
Serial:         LXVBT01BVHZ03N

```

```

-----
21. 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:

```

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

**Hewlett Packard Enterprise**

(Test Sponsor: HPE)

**ProLiant ML30 Gen11**

(3.60 GHz, Intel Xeon 6349P)

**SPECrate®2017\_fp\_base = 103**

**SPECrate®2017\_fp\_peak = 109**

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

**Test Date:** Feb-2025  
**Hardware Availability:** Mar-2025  
**Software Availability:** Jun-2024

## Platform Notes (Continued)

2x Hynix HMG88AGBEA084N 32 GB 2 rank 5600, configured at 4400

-----  
22. BIOS  
(This section combines info from /sys/devices and dmidecode.)  
BIOS Vendor: HPE  
BIOS Version: 2.10  
BIOS Date: 12/06/2024  
BIOS Revision: 2.10  
Firmware Revision: 1.62

## 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 2024.1.0 Build 20240308  
Copyright (C) 1985-2024 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 2024.1.0 Build 20240308  
Copyright (C) 1985-2024 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 2024.1.0 Build 20240308  
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.  
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308  
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.

-----  
C++, C, Fortran | 507.cactuBSSN\_r(base, peak)

-----  
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308  
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.  
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308  
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.  
Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308  
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.

-----  
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 2024.1.0 Build 20240308  
Copyright (C) 1985-2024 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 2024.1.0 Build 20240308

(Continued on next page)





# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

**Hewlett Packard Enterprise**

(Test Sponsor: HPE)

**ProLiant ML30 Gen11**

(3.60 GHz, Intel Xeon 6349P)

**SPECrate®2017\_fp\_base = 103**

**SPECrate®2017\_fp\_peak = 109**

**CPU2017 License:** 3

**Test Sponsor:** HPE

**Tested by:** HPE

**Test Date:** Feb-2025

**Hardware Availability:** Mar-2025

**Software Availability:** Jun-2024

## Compiler Version Notes (Continued)

Copyright (C) 1985-2024 Intel Corporation. All rights reserved.

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308

Copyright (C) 1985-2024 Intel Corporation. All rights reserved.

## 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

## 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



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

**Hewlett Packard Enterprise**

(Test Sponsor: HPE)

**ProLiant ML30 Gen11**

(3.60 GHz, Intel Xeon 6349P)

**SPECrate®2017\_fp\_base = 103**

**SPECrate®2017\_fp\_peak = 109**

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

**Test Date:** Feb-2025  
**Hardware Availability:** Mar-2025  
**Software Availability:** Jun-2024

## Base Optimization Flags

C benchmarks:

```
-w -std=c11 -m64 -Wl,-z,muldefs -xCORE-AVX2 -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-Wno-implicit-int -ljemalloc -L/usr/local/jemalloc64-5.0.1/lib
```

C++ benchmarks:

```
-w -std=c++14 -m64 -Wl,-z,muldefs -xCORE-AVX2 -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib
```

Fortran benchmarks:

```
-w -m64 -Wl,-z,muldefs -xCORE-AVX2 -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 -xCORE-AVX2 -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-Wno-implicit-int -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 -xCORE-AVX2 -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -Wno-implicit-int -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib
```

Benchmarks using Fortran, C, and C++:

```
-w -std=c++14 -m64 -std=c11 -Wl,-z,muldefs -xCORE-AVX2 -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -Wno-implicit-int -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

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

**Hewlett Packard Enterprise**

(Test Sponsor: HPE)

ProLiant ML30 Gen11

(3.60 GHz, Intel Xeon 6349P)

SPECrate®2017\_fp\_base = 103

SPECrate®2017\_fp\_peak = 109

CPU2017 License: 3

Test Sponsor: HPE

Tested by: HPE

Test Date: Feb-2025

Hardware Availability: Mar-2025

Software Availability: Jun-2024

## Peak Compiler Invocation (Continued)

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

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 -xCORE-AVX2 -Ofast  
-ffast-math -flto -mfpmath=sse -funroll-loops  
-qopt-mem-layout-trans=4 -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 -xCORE-AVX2 -Ofast -ffast-math  
-flto -mfpmath=sse -funroll-loops

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

**Hewlett Packard Enterprise**

(Test Sponsor: HPE)

ProLiant ML30 Gen11

(3.60 GHz, Intel Xeon 6349P)

SPECrate®2017\_fp\_base = 103

SPECrate®2017\_fp\_peak = 109

**CPU2017 License:** 3

**Test Sponsor:** HPE

**Tested by:** HPE

**Test Date:** Feb-2025

**Hardware Availability:** Mar-2025

**Software Availability:** Jun-2024

## Peak Optimization Flags (Continued)

554.roms\_r (continued):

```
-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 -xCORE-AVX2 -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-Wno-implicit-int -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.profdata(pass 2) -xCORE-AVX2 -flto
-Ofast -ffast-math -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -Wno-implicit-int -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib
```

526.blender\_r: basepeak = yes

Benchmarks using Fortran, C, and C++:

```
-w -std=c++14 -m64 -std=c11 -Wl,-z,muldefs -xCORE-AVX2 -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -Wno-implicit-int -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/Intel-ic2024-official-linux64.html>

<http://www.spec.org/cpu2017/flags/HPE-Platform-Flags-Intel-CatlowRefresh-rev1.0.html>

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

<http://www.spec.org/cpu2017/flags/Intel-ic2024-official-linux64.xml>

<http://www.spec.org/cpu2017/flags/HPE-Platform-Flags-Intel-CatlowRefresh-rev1.0.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 2025-02-22 00:39:14-0500.

Report generated on 2025-03-12 10:26:21 by CPU2017 PDF formatter v6716.

Originally published on 2025-03-11.