



# SPEC CPU®2017 Floating Point Speed Result

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## Hewlett Packard Enterprise

(Test Sponsor: HPE)

### ProLiant Compute DL320 Gen12

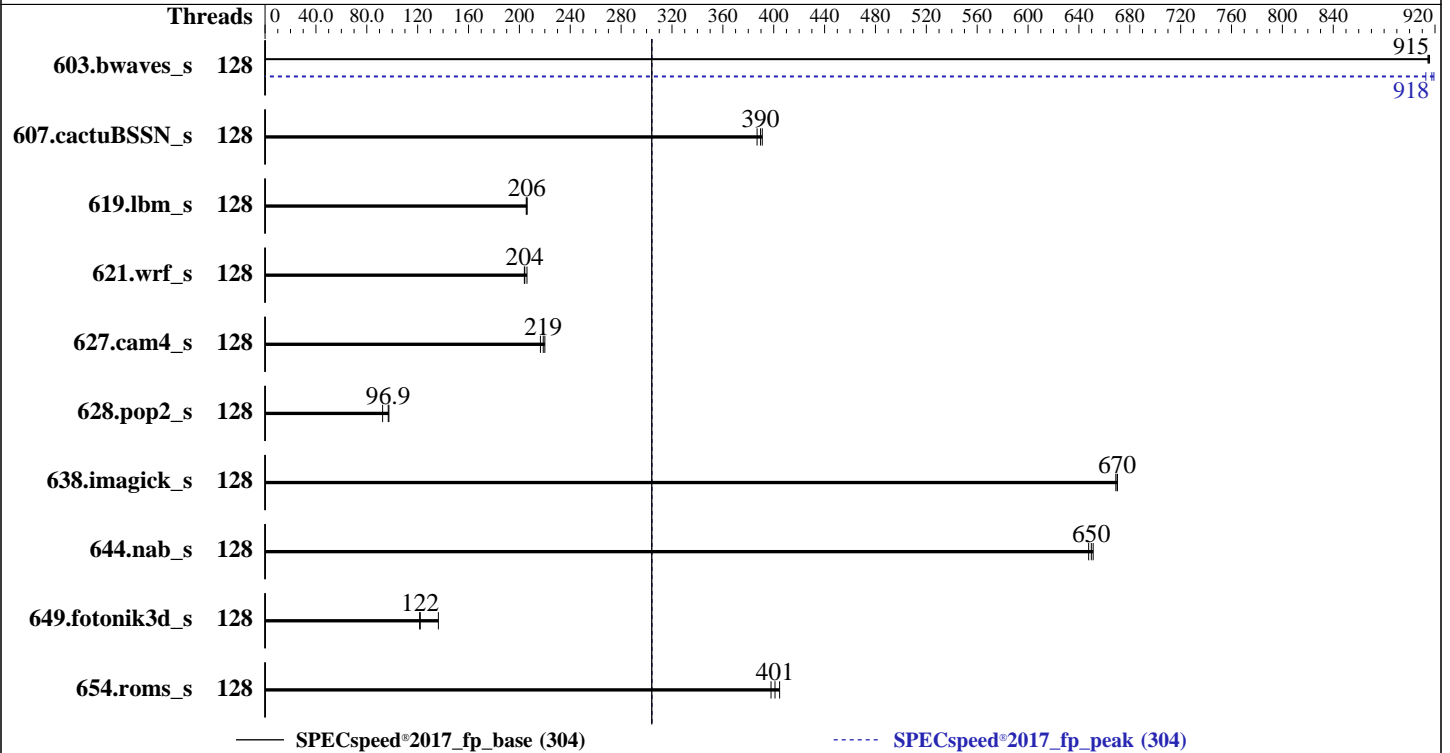
(2.50 GHz, Intel Xeon 6774P)

SPECspeed®2017\_fp\_base = 304

SPECspeed®2017\_fp\_peak = 304

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 6774P  
Max MHz: 3900  
Nominal: 2500  
Enabled: 64 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: 336 MB I+D on chip per chip  
Other: None  
Memory: 256 GB (8 x 32 GB 2Rx8 PC5-6400B-R)  
Storage: 1 x 1.5 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: Yes  
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



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## Results Table

Benchmark	Base							Peak						
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
603.bwaves_s	128	64.4	916	64.5	915	<b>64.5</b>	<b>915</b>	128	<b>64.3</b>	<b>918</b>	64.2	919	64.6	913
607.cactuBSSN_s	128	<b>42.8</b>	<b>390</b>	42.6	391	43.1	387	128	<b>42.8</b>	<b>390</b>	42.6	391	43.1	387
619.lbm_s	128	25.5	205	<b>25.4</b>	<b>206</b>	25.4	206	128	25.5	205	<b>25.4</b>	<b>206</b>	25.4	206
621.wrf_s	128	64.2	206	64.9	204	<b>64.8</b>	<b>204</b>	128	64.2	206	64.9	204	<b>64.8</b>	<b>204</b>
627.cam4_s	128	<b>40.5</b>	<b>219</b>	40.3	220	40.9	217	128	<b>40.5</b>	<b>219</b>	40.3	220	40.9	217
628.pop2_s	128	122	97.4	128	92.5	<b>123</b>	<b>96.9</b>	128	122	97.4	128	92.5	<b>123</b>	<b>96.9</b>
638.imagick_s	128	21.6	669	<b>21.5</b>	<b>670</b>	21.5	670	128	21.6	669	<b>21.5</b>	<b>670</b>	21.5	670
644.nab_s	128	27.0	648	26.8	651	<b>26.9</b>	<b>650</b>	128	27.0	648	26.8	651	<b>26.9</b>	<b>650</b>
649.fotonik3d_s	128	75.0	122	<b>74.7</b>	<b>122</b>	66.9	136	128	75.0	122	<b>74.7</b>	<b>122</b>	66.9	136
654.roms_s	128	<b>39.3</b>	<b>401</b>	38.9	405	39.6	398	128	<b>39.3</b>	<b>401</b>	38.9	405	39.6	398

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

## 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 throughput-performance using 'tuned-adm profile throughput-performance'
```

## Environment Variables Notes

```
Environment variables set by runcpu before the start of the run:
KMP_AFFINITY = "granularity=fine,compact"
LD_LIBRARY_PATH = "/home/cpu2017/lib/intel64:/home/cpu2017/je5.0.1-64"
MALLOC_CONF = "retain:true"
OMP_STACKSIZE = "192M"
```

## General Notes

```
Binaries compiled on a system with 2x Intel Xeon Platinum 8280M CPU + 384GB RAM
memory using Redhat Enterprise Linux 8.0
NA: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown)
is mitigated in the system as tested and documented.
Yes: The test sponsor attests, as of date of publication, that CVE-2017-5753 (Spectre variant 1)
is mitigated in the system as tested and documented.
Yes: The test sponsor attests, as of date of publication, that CVE-2017-5715 (Spectre variant 2)
is mitigated in the system as tested and documented.
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
```



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## Platform Notes

BIOS Configuration: Parameters are selected in the order shown below  
 Workload Profile set to General Peak Frequency Compute  
 Memory Patrol Scrubbing set to Disabled  
 Thermal Configuration set to Maximum Cooling  
 Enhanced Processor Performance Profile set to Aggressive  
 Sub-NUMA Clustering (SNC) set to Enabled  
 Minimum Processor Idle Power Core C-State set to C6 as ACPI C3 State  
 Last Level Cache (LLC) Prefetch set to Enabled  
 Workload Profile set to Custom  
 Minimum Processor Idle Power Package C-State set to No Package State

Sysinfo program /home/cpu2017/bin/sysinfo  
 Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197  
 running on hqmorphpub1 Fri Apr 17 05:51:19 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 hqmorphpub1 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
05:51:19 up 4:40, 3 users, load average: 0.08, 0.98, 2.13
USER      TTY      FROM          LOGIN@      IDLE        JCPU      PCPU      WHAT
```

```
3. Username
From environment variable $USER: root
```

(Continued on next page)



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## 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) 1030461
   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) 1030461
   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/speed-baseline.sh
   runcpu --nobuild --action validate --define default-platform-flags -c
     ic2025.2-lin-sapphirerapids-speed-20250605.cfg --reportable --define cores=128 --tune base,peak -o all
     --define drop_caches fpspeed
   runcpu --nobuild --action validate --define default-platform-flags --configfile
     ic2025.2-lin-sapphirerapids-speed-20250605.cfg --reportable --define cores=128 --tune base,peak
     --output_format all --define drop_caches --nopower --runmode speed --tune base:peak --size refspeed
     fpspeed --nopreenv --note-preenv --logfile $SPEC/tmp/CPU2017.002/templogs/preenv.fpspeed.002.0.log
     --lognum 002.0 --from_runcpu 2
   specperl $SPEC/bin/sysinfo
   $SPEC = /home/cpu2017

```

```

-----
6. /proc/cpuinfo
   model name      : Intel(R) Xeon(R) 6774P
   vendor_id      : GenuineIntel
   cpu family     : 6
   model          : 173
   stepping       : 1
   microcode      : 0xa000133
   bugs           : spectre_v1 spectre_v2 spec_store_bypass swaps bhi
   cpu cores      : 64
   siblings       : 128
   1 physical ids (chips)
   128 processors (hardware threads)
   physical id 0: core ids 0-31,64-95
   physical id 0: apicids 0-63,128-191
   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

```

(Continued on next page)



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## Platform Notes (Continued)

```

Address sizes:                46 bits physical, 57 bits virtual
Byte Order:                   Little Endian
CPU(s):                        128
On-line CPU(s) list:          0-127
Vendor ID:                     GenuineIntel
Model name:                   Intel(R) Xeon(R) 6774P
CPU family:                   6
Model:                         173
Thread(s) per core:           2
Core(s) per socket:           64
Socket(s):                     1
Stepping:                     1
BogoMIPS:                     5000.00
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:                    3 MiB (64 instances)
L1i cache:                    4 MiB (64 instances)
L2 cache:                     128 MiB (64 instances)
L3 cache:                     336 MiB (1 instance)
NUMA node(s):                 2
NUMA node0 CPU(s):            0-31,64-95
NUMA node1 CPU(s):            32-63,96-127
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/swapgs 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:

(Continued on next page)



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## Platform Notes (Continued)

NAME	ONE-SIZE	ALL-SIZE	WAYS	TYPE	LEVEL	SETS	PHY-LINE	COHERENCY-SIZE
L1d	48K	3M	12	Data	1	64	1	64
L1i	64K	4M	16	Instruction	1	64	1	64
L2	2M	128M	16	Unified	2	2048	1	64
L3	336M	336M	16	Unified	3	344064	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: 0-31,64-95
node 0 size: 128681 MB
node 0 free: 121539 MB
node 1 cpus: 32-63,96-127
node 1 size: 128966 MB
node 1 free: 127025 MB
node distances:
node  0  1
  0: 10 12
  1: 12 10

```

9. /proc/meminfo

MemTotal: 263831944 kB

10. who -r

run-level 3 Apr 17 01:11

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
                autovast-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 ipmievad 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-bgqg 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       pcsd saned@ systemd-userdbd wickedd

```

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

```

BOOT_IMAGE=/boot/vmlinuz-6.4.0-150700.53.6-default
root=UUID=9c4fd0fb-bb42-489c-bd93-1c9f83bb28af
splash=silent

```

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## Platform Notes (Continued)

```
mitigations=auto
quiet
security=apparmor
```

```
-----
14. cpupower frequency-info
   analyzing CPU 49:
     Unable to determine current policy
     boost state support:
       Supported: yes
       Active: yes
```

```
-----
15. tuned-adm active
   Current active profile: throughput-performance
```

```
-----
16. sysctl
kernel.numa_balancing          1
kernel.randomize_va_space     2
vm.compaction_proactiveness   20
vm.dirty_background_bytes     0
vm.dirty_background_ratio     10
vm.dirty_bytes                 0
vm.dirty_expire_centisecs     3000
vm.dirty_ratio                40
vm.dirty_writeback_centisecs  500
vm.dirtytime_expire_seconds   43200
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
```

```
-----
19. OS release
From /etc/*-release /etc/*-version
os-release SUSE Linux Enterprise Server 15 SP7
```

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## Platform Notes (Continued)

### 20. Disk information

SPEC is set to: /home/cpu2017

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/nvme0nlp2	btrfs	1.5T	158G	1.3T	11%	/home

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

```
Vendor:      HPE
Product:    HPE ProLiant Compute DL320 Gen12
Product Family: ProLiant
Serial:     S84PQDRU0T
```

### 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 HMC88AHBRA471N 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 | 619.lbm\_s(base, peak) 638.imagick\_s(base, peak) 644.nab\_s(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, Fortran | 607.cactuBSSN\_s(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 | 603.bwaves\_s(base, peak) 649.fotonik3d\_s(base, peak) 654.roms\_s(base, peak)  
=====

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

-----  
Fortran, C | 621.wrf\_s(base, peak) 627.cam4\_s(base, peak) 628.pop2\_s(base, peak)  
-----

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

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

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-----

## Base Compiler Invocation

C benchmarks:

icx

Fortran benchmarks:

ifx

Benchmarks using both Fortran and C:

ifx icx

Benchmarks using Fortran, C, and C++:

icpx icx ifx

## Base Portability Flags

603.bwaves\_s: -DSPEC\_LP64

607.cactuBSSN\_s: -DSPEC\_LP64

619.lbm\_s: -DSPEC\_LP64

621.wrf\_s: -DSPEC\_LP64 -DSPEC\_CASE\_FLAG -convert big\_endian

627.cam4\_s: -DSPEC\_LP64 -DSPEC\_CASE\_FLAG

628.pop2\_s: -DSPEC\_LP64 -DSPEC\_CASE\_FLAG -convert big\_endian

-assume byterecl

638.imagick\_s: -DSPEC\_LP64

644.nab\_s: -DSPEC\_LP64

649.fotonik3d\_s: -DSPEC\_LP64

654.roms\_s: -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 -fiopenmp

-DSPEC\_OPENMP -Wno-implicit-int -mprefer-vector-width=512

(Continued on next page)



# SPEC CPU®2017 Floating Point Speed Result

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**Hewlett Packard Enterprise**

(Test Sponsor: HPE)

**ProLiant Compute DL320 Gen12**

(2.50 GHz, Intel Xeon 6774P)

**SPECspeed®2017\_fp\_base = 304**

**SPECspeed®2017\_fp\_peak = 304**

**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)

C benchmarks (continued):

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

Fortran benchmarks:

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

Benchmarks using both Fortran and C:

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

Benchmarks using Fortran, C, and C++:

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

## Peak Compiler Invocation

C benchmarks:

```
icx
```

Fortran benchmarks:

```
ifx
```

Benchmarks using both Fortran and C:

```
ifx icx
```

Benchmarks using Fortran, C, and C++:

```
icpx icx ifx
```

## Peak Portability Flags

Same as Base Portability Flags



# SPEC CPU®2017 Floating Point Speed Result

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**SPECspeed®2017\_fp\_base = 304**

**SPECspeed®2017\_fp\_peak = 304**

**CPU2017 License:** 3

**Test Sponsor:** HPE

**Tested by:** HPE

**Test Date:** Apr-2026

**Hardware Availability:** May-2026

**Software Availability:** Dec-2025

## Peak Optimization Flags

C benchmarks:

619.lbm\_s: basepeak = yes

638.imagick\_s: basepeak = yes

644.nab\_s: basepeak = yes

Fortran benchmarks:

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

649.fotonik3d\_s: basepeak = yes

654.roms\_s: basepeak = yes

Benchmarks using both Fortran and C:

621.wrf\_s: basepeak = yes

627.cam4\_s: basepeak = yes

628.pop2\_s: basepeak = yes

Benchmarks using Fortran, C, and C++:

607.cactuBSSN\_s: basepeak = yes

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>



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**Test Date:** Apr-2026

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