



# SPEC CPU®2017 Floating Point Speed Result

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## Hewlett Packard Enterprise

(Test Sponsor: HPE)

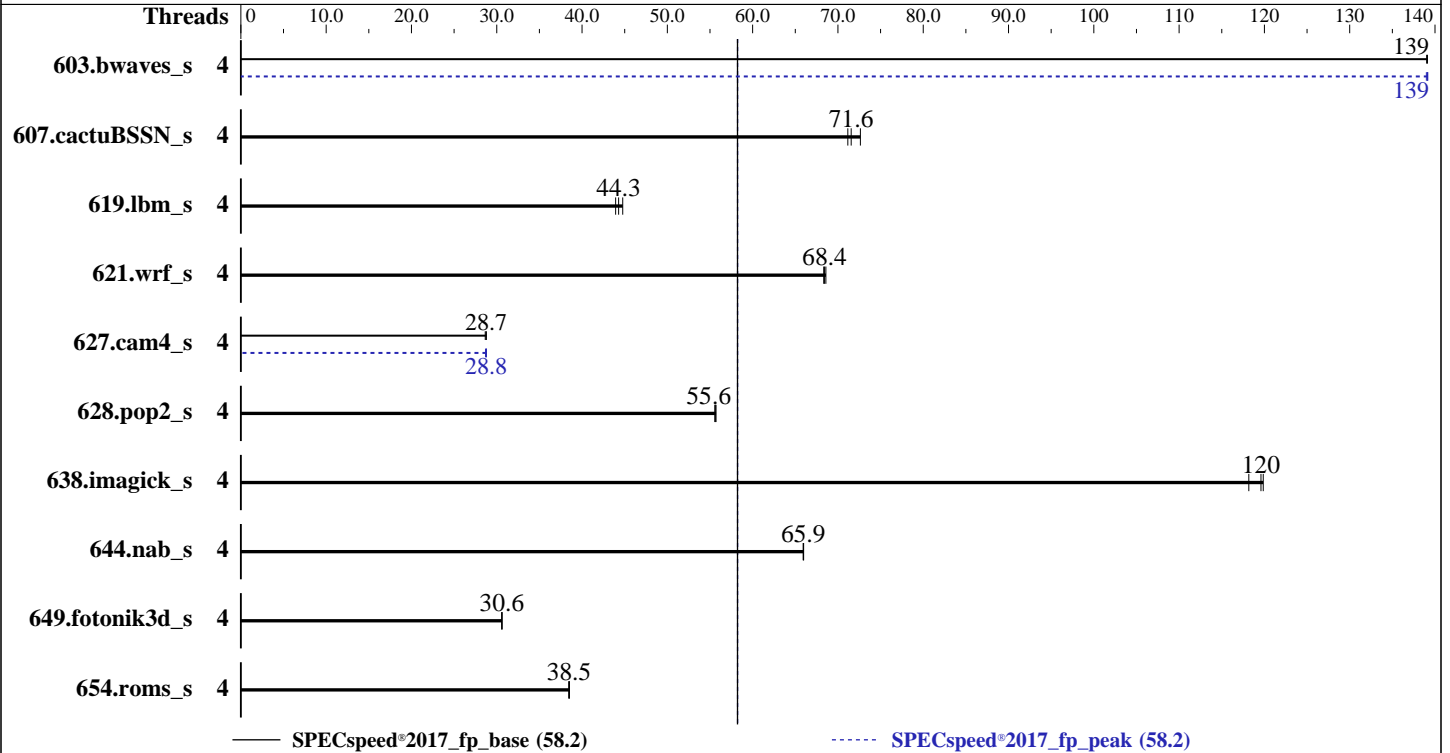
ProLiant MicroServer Gen11  
(2.80 GHz, Intel Xeon 6315P)

SPECspeed®2017\_fp\_base = 58.2

SPECspeed®2017\_fp\_peak = 58.2

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

Test Date: Jan-2025  
Hardware Availability: Mar-2025  
Software Availability: Apr-2024



### Hardware

CPU Name: Intel Xeon 6315P  
 Max MHz: 4700  
 Nominal: 2800  
 Enabled: 4 cores, 1 chip  
 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: 12 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 1 TB 7.2 K SATA HDD  
 Other: CPU Cooling: Air

### Software

OS: Red Hat Enterprise Linux 9.4 (Plow)  
 Kernel 5.14.0-427.13.1.el9\_4.x86\_64  
 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: Yes  
 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 and OS 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	4	<b>424</b>	<b>139</b>	424	139	424	139	4	424	139	424	139	<b>424</b>	<b>139</b>
607.cactuBSSN_s	4	<b>233</b>	<b>71.6</b>	234	71.2	230	72.6	4	<b>233</b>	<b>71.6</b>	234	71.2	230	72.6
619.lbm_s	4	117	44.8	119	43.9	<b>118</b>	<b>44.3</b>	4	117	44.8	119	43.9	<b>118</b>	<b>44.3</b>
621.wrf_s	4	194	68.3	193	68.6	<b>193</b>	<b>68.4</b>	4	194	68.3	193	68.6	<b>193</b>	<b>68.4</b>
627.cam4_s	4	308	28.8	309	28.7	<b>308</b>	<b>28.7</b>	4	<b>308</b>	<b>28.8</b>	308	28.8	309	28.7
628.pop2_s	4	213	55.7	214	55.6	<b>213</b>	<b>55.6</b>	4	213	55.7	214	55.6	<b>213</b>	<b>55.6</b>
638.imagick_s	4	120	120	<b>121</b>	<b>120</b>	122	118	4	120	120	<b>121</b>	<b>120</b>	122	118
644.nab_s	4	265	66.0	<b>265</b>	<b>65.9</b>	265	65.9	4	265	66.0	<b>265</b>	<b>65.9</b>	265	65.9
649.fotonik3d_s	4	298	30.6	<b>298</b>	<b>30.6</b>	298	30.6	4	298	30.6	<b>298</b>	<b>30.6</b>	298	30.6
654.roms_s	4	410	38.4	<b>409</b>	<b>38.5</b>	409	38.5	4	410	38.4	<b>409</b>	<b>38.5</b>	409	38.5

SPECspeed®2017\_fp\_base = **58.2**

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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"  
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>

## Platform Notes

BIOS Configuration:  
Workload Profile set to General Peak Frequency Compute  
Thermal Configuration set to Maximum Cooling  
Enhanced Processor Performance Profile set to Enabled

(Continued on next page)



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## Platform Notes (Continued)

sysinfo program /home/cpu2017/bin/sysinfo  
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197  
running on localhost.localdomain Tue Jan 28 03:26:01 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 252 (252-32.e19\_4)
- 12. Failed units, from systemctl list-units --state=failed
- 13. Services, from systemctl list-unit-files
- 14. Linux kernel boot-time arguments, from /proc/cmdline
- 15. cpupower frequency-info
- 16. tuned-adm active
- 17. sysctl
- 18. /sys/kernel/mm/transparent\_hugepage
- 19. /sys/kernel/mm/transparent\_hugepage/khugepaged
- 20. OS release
- 21. Disk information
- 22. /sys/devices/virtual/dmi/id
- 23. dmidecode
- 24. BIOS

```
1. uname -a
Linux localhost.localdomain 5.14.0-427.13.1.e19_4.x86_64 #1 SMP PREEMPT_DYNAMIC Wed Apr 10 10:29:16 EDT
2024 x86_64 x86_64 x86_64 GNU/Linux
```

```
2. w
03:26:01 up 3 min, 1 user, load average: 0.01, 0.04, 0.01
USER      TTY      LOGIN@  IDLE   JCPU   PCPU WHAT
root      pts/0    03:25   9.00s  0.66s  0.00s -bash
```

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

```
4. ulimit -a
real-time non-blocking time (microseconds, -R) unlimited
core file size (blocks, -c) 0
data seg size (kbytes, -d) unlimited
scheduling priority (-e) 0
file size (blocks, -f) unlimited
pending signals (-i) 256651
max locked memory (kbytes, -l) 8192
```

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## Platform Notes (Continued)

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) 256651
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@pts/0
-bash
-bash
runcpu --nobuild --action validate --define default-platform-flags -c
ic2024.1-lin-core-avx2-speed-20240308.cfg --define cores=4 --tune base,peak -o all --define drop_caches
fpspeed
runcpu --nobuild --action validate --define default-platform-flags --configfile
ic2024.1-lin-core-avx2-speed-20240308.cfg --define cores=4 --tune base,peak --output_format all --define
drop_caches --nopower --runmode speed --tune base:peak --size refspeed fpspeed --nopreenv --note-preenv
--logfile $SPEC/tmp/CPU2017.008/templogs/preenv.fpspeed.008.0.log --lognum 008.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/cpu2017

```

```

6. /proc/cpuinfo
model name      : Intel(R) Xeon(R) 6315P
vendor_id       : GenuineIntel
cpu family      : 6
model           : 183
stepping        : 1
microcode       : 0x12c
bugs            : spectre_v1 spectre_v2 spec_store_bypass swapgs eibrs_pbrsb
cpu cores       : 4
siblings        : 4
1 physical ids (chips)
4 processors (hardware threads)
physical id 0: core ids 0-3
physical id 0: apicids 0,2,4,6
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 2.37.4:
Architecture:          x86_64
CPU op-mode(s):        32-bit, 64-bit
Address sizes:          46 bits physical, 48 bits virtual
Byte Order:             Little Endian
CPU(s):                 4
On-line CPU(s) list:   0-3
Vendor ID:              GenuineIntel
BIOS Vendor ID:        Intel(R) Corporation
Model name:             Intel(R) Xeon(R) 6315P

```

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## Platform Notes (Continued)

```

BIOS Model name: Intel(R) Xeon(R) 6315P
CPU family: 6
Model: 183
Thread(s) per core: 1
Core(s) per socket: 4
Socket(s): 1
Stepping: 1
BogoMIPS: 5606.40
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
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
avx_vnni dtherm ida arat pln pts hfi vnmi umip pku ospke waitpkg gfni
vaes vpclmulqdq tme rdpid movdiri movdir64b fsrm md_clear serialize
pconfig arch_lbr ibt flush_lld arch_capabilities

Virtualization: VT-x
L1d cache: 192 KiB (4 instances)
L1i cache: 128 KiB (4 instances)
L2 cache: 8 MiB (4 instances)
L3 cache: 12 MiB (1 instance)
NUMA node(s): 1
NUMA node0 CPU(s): 0-3
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 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 sanitization
Vulnerability Spectre v2: Mitigation; Enhanced / Automatic IBRS, IBPB conditional, RSB filling,
PBRSE-eIBRS SW sequence

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	192K	12	Data	1	64	1	64
L1i	32K	128K	8	Instruction	1	64	1	64
L2	2M	8M	16	Unified	2	2048	1	64
L3	12M	12M	6	Unified	3	32768	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: 0-3
node 0 size: 64204 MB
node 0 free: 63607 MB
node distances:
node 0
0: 10

```

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## Platform Notes (Continued)

9. /proc/meminfo  
MemTotal: 65745764 kB

10. who -r  
run-level 3 Jan 28 03:23

11. Systemd service manager version: systemd 252 (252-32.el9\_4)  
Default Target Status  
multi-user degraded

12. Failed units, from systemctl list-units --state=failed  
UNIT LOAD ACTIVE SUB DESCRIPTION  
\* NetworkManager-wait-online.service loaded failed failed Network Manager Wait Online

13. Services, from systemctl list-unit-files  
STATE UNIT FILES  
enabled NetworkManager NetworkManager-dispatcher NetworkManager-wait-online auditd crond  
dbus-broker firewalld getty@ insights-client-boot irqbalance kdump lvm2-monitor mdmonitor  
microcode nis-domainname rhsmcertd rsyslog selinux-autorelabel-mark sshd sssd  
systemd-boot-update systemd-network-generator tuned udisks2  
enabled-runtime systemd-remount-fs  
disabled blk-availability console-getty cpupower debug-shell dnf-system-upgrade hwloc-dump-hwdata  
kvm\_stat man-db-restart-cache-update nftables powertop rdisc rhcd rhsm rhsm-facts  
rpmdb-rebuild selinux-check-proper-disable serial-getty@ sshd-keygen@  
systemd-boot-check-no-failures systemd-pstore systemd-sysex  
indirect sssd-autofs sssd-kcm sssd-nss sssd-pac sssd-pam sssd-ssh sssd-sudo systemd-sysupdate  
systemd-sysupdate-reboot

14. Linux kernel boot-time arguments, from /proc/cmdline  
BOOT\_IMAGE=(hd0,gpt2)/vmlinuz-5.14.0-427.13.1.el9\_4.x86\_64  
root=/dev/mapper/rhel00-root  
ro  
resume=/dev/mapper/rhel00-swap  
rd.lvm.lv=rhel00/root  
rd.lvm.lv=rhel00/swap

15. cpupower frequency-info  
analyzing CPU 0:  
Unable to determine current policy  
boost state support:  
Supported: yes  
Active: yes

16. tuned-adm active  
Current active profile: throughput-performance

17. sysctl  
kernel.numa\_balancing 0  
kernel.randomize\_va\_space 2  
vm.compaction\_proactiveness 20

(Continued on next page)



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## Platform Notes (Continued)

```

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

```

```

-----
18. /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

```

```

-----
19. /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

```

```

-----
20. OS release
From /etc/*-release /etc/*-version
os-release      Red Hat Enterprise Linux 9.4 (Plow)
redhat-release Red Hat Enterprise Linux release 9.4 (Plow)
system-release Red Hat Enterprise Linux release 9.4 (Plow)

```

```

-----
21. Disk information
SPEC is set to: /home/cpu2017
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/mapper/rhel00-home xfs  829G  55G  774G   7% /home

```

```

-----
22. /sys/devices/virtual/dmi/id
Vendor:          HPE
Product:         ProLiant MicroServer Gen11
Product Family: ProLiant
Serial:          91ZV86L0HM

```

```

-----
23. dmidecode
Additional information from dmidecode 3.5 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.

```

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## Platform Notes (Continued)

Memory:  
2x Hynix HMC88AGBEA084N 32 GB 2 rank 5600, configured at 4400

-----  
24. 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: 1.67

## 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 2024.1.0 Build 20240308  
Copyright (C) 1985-2024 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 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  
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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 | 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 2024.1.0 Build 20240308  
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.

-----  
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 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.

## Base Compiler Invocation

C benchmarks:  
icx

(Continued on next page)





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## Base Compiler Invocation (Continued)

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 -xCORE-AVX2 -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -fiopenmp
-DSPEC_OPENMP -Wno-implicit-int -L/usr/local/jemalloc64-5.0.1/lib
-ljemalloc
```

Fortran benchmarks:

```
-w -m64 -Wl,-z,muldefs -DSPEC_OPENMP -xCORE-AVX2 -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 -xCORE-AVX2 -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -fiopenmp
-DSPEC_OPENMP -Wno-implicit-int -nostandard-realloc-lhs
-align array32byte -auto -L/usr/local/jemalloc64-5.0.1/lib -ljemalloc
```

(Continued on next page)



# SPEC CPU®2017 Floating Point Speed Result

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**Hewlett Packard Enterprise**

(Test Sponsor: HPE)

**ProLiant MicroServer Gen11**  
(2.80 GHz, Intel Xeon 6315P)

SPECspeed®2017\_fp\_base = 58.2

SPECspeed®2017\_fp\_peak = 58.2

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

**Test Date:** Jan-2025  
**Hardware Availability:** Mar-2025  
**Software Availability:** Apr-2024

## Base Optimization Flags (Continued)

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
-gopt-mem-layout-trans=4 -fiopenmp -DSPEC_OPENMP -Wno-implicit-int
-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

## Peak Optimization Flags

C benchmarks:

619.lbm\_s: basepeak = yes

638.imagick\_s: basepeak = yes

644.nab\_s: basepeak = yes

Fortran benchmarks:

(Continued on next page)



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## Peak Optimization Flags (Continued)

```
603.bwaves_s: -w -m64 -Wl,-z,muldefs -DSPEC_OPENMP -xCORE-AVX2 -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: -w -m64 -std=c11 -Wl,-z,muldefs -xCORE-AVX2 -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fiopenmp -DSPEC_OPENMP
-Wno-implicit-int -nostandard-realloc-lhs
-align array32byte -auto -L/usr/local/jemalloc64-5.0.1/lib
-ljemalloc
```

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-rev1.1.html>

<http://www.spec.org/cpu2017/flags/Intel-ic2024-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-rev1.1.xml>

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

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For questions about this result, please contact the tester. For other inquiries, please contact [info@spec.org](mailto:info@spec.org).

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