



# SPEC CPU®2017 Integer Speed Result

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## Hewlett Packard Enterprise

(Test Sponsor: HPE)

### ProLiant DL320 Gen12

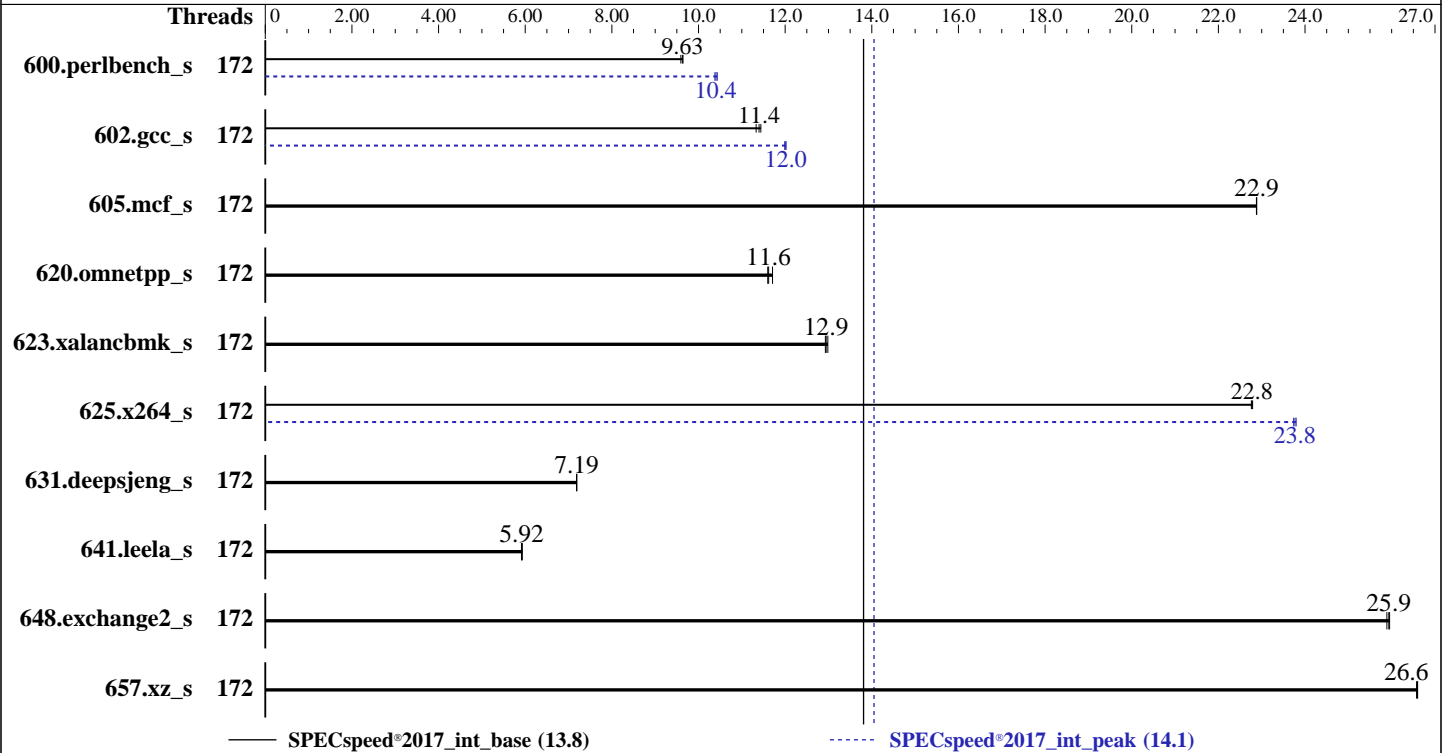
(2.00 GHz, Intel Xeon 6787P)

SPECspeed®2017\_int\_base = 13.8

SPECspeed®2017\_int\_peak = 14.1

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 6787P  
 Max MHz: 3800  
 Nominal: 2000  
 Enabled: 86 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 1.2 TB NVMe SSD  
 Other: CPU Cooling: CLC

### 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: Yes  
 Firmware: HPE BIOS Version v1.22 02/07/2025 released Feb-2025  
 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



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## Results Table

| Benchmark       | Base    |            |             |            |             |             | Peak        |         |            |             |             |             |            |             |
|-----------------|---------|------------|-------------|------------|-------------|-------------|-------------|---------|------------|-------------|-------------|-------------|------------|-------------|
|                 | Threads | Seconds    | Ratio       | Seconds    | Ratio       | Seconds     | Ratio       | Threads | Seconds    | Ratio       | Seconds     | Ratio       | Seconds    | Ratio       |
| 600.perlbench_s | 172     | 184        | 9.64        | 185        | 9.59        | <b>184</b>  | <b>9.63</b> | 172     | 171        | 10.4        | <b>171</b>  | <b>10.4</b> | 170        | 10.4        |
| 602.gcc_s       | 172     | 348        | 11.4        | 351        | 11.3        | <b>349</b>  | <b>11.4</b> | 172     | <b>331</b> | <b>12.0</b> | 331         | 12.0        | 332        | 12.0        |
| 605.mcf_s       | 172     | 206        | 22.9        | 206        | 22.9        | <b>206</b>  | <b>22.9</b> | 172     | 206        | 22.9        | 206         | 22.9        | <b>206</b> | <b>22.9</b> |
| 620.omnetpp_s   | 172     | <b>140</b> | <b>11.6</b> | 139        | 11.7        | 141         | 11.6        | 172     | <b>140</b> | <b>11.6</b> | 139         | 11.7        | 141        | 11.6        |
| 623.xalancbmk_s | 172     | <b>109</b> | <b>12.9</b> | 110        | 12.9        | 109         | 13.0        | 172     | <b>109</b> | <b>12.9</b> | 110         | 12.9        | 109        | 13.0        |
| 625.x264_s      | 172     | 77.5       | 22.8        | 77.4       | 22.8        | <b>77.5</b> | <b>22.8</b> | 172     | 74.1       | 23.8        | <b>74.2</b> | <b>23.8</b> | 74.3       | 23.7        |
| 631.deepsjeng_s | 172     | 199        | 7.19        | 199        | 7.19        | <b>199</b>  | <b>7.19</b> | 172     | 199        | 7.19        | 199         | 7.19        | <b>199</b> | <b>7.19</b> |
| 641.leela_s     | 172     | <b>288</b> | <b>5.92</b> | 288        | 5.91        | 288         | 5.93        | 172     | <b>288</b> | <b>5.92</b> | 288         | 5.91        | 288        | 5.93        |
| 648.exchange2_s | 172     | 113        | 26.0        | 114        | 25.9        | <b>113</b>  | <b>25.9</b> | 172     | 113        | 26.0        | 114         | 25.9        | <b>113</b> | <b>25.9</b> |
| 657.xz_s        | 172     | 232        | 26.6        | <b>232</b> | <b>26.6</b> | 233         | 26.6        | 172     | 232        | 26.6        | <b>232</b>  | <b>26.6</b> | 233        | 26.6        |

SPECspeed®2017\_int\_base = **13.8**

SPECspeed®2017\_int\_peak = **14.1**

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"

## Environment Variables Notes

Environment variables set by runcpu before the start of the run:  
KMP\_AFFINITY = "granularity=fine,scatter"  
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  
Enhanced Processor Performance Profile set to Aggressive  
Thermal Configuration set to Maximum Cooling  
Memory Patrol Scrubbing set to Disabled

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## Platform Notes (Continued)

Last Level Cache (LLC) Prefetch set to Enabled  
Sub-NUMA Clustering (SNC) set to Enabled  
Minimum Processor Idle Power Core C-State set to ACPI C3 state  
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 localhost Fri Feb 7 05:55:58 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  
05:55:58 up 1:21, 6 users, load average: 0.00, 0.36, 13.59  
USER TTY FROM LOGIN@ IDLE JCPU PCPU WHAT  
root pts/0 172.17.1.114 04:35 4:54 0.02s 0.02s -bash  
-----

-----  
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  
-----

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## Platform Notes (Continued)

```

pending signals                (-i) 1030507
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) 1030507
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/intspeedsproff.sh
runcpu --nobuild --action validate --define default-platform-flags -c
  ic2024.1-lin-sapphirerapids-speed-20240308.cfg --define cores=172 --tune base,peak -o all --define
  intspeedaffinity --define drop_caches intspeed
runcpu --nobuild --action validate --define default-platform-flags --configfile
  ic2024.1-lin-sapphirerapids-speed-20240308.cfg --define cores=172 --tune base,peak --output_format all
  --define intspeedaffinity --define drop_caches --nopower --runmode speed --tune base:peak --size refspeed
  intspeed --nopreenv --note-preenv --logfile $SPEC/tmp/CPU2017.002/templogs/preenv.intspeed.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) 6787P
vendor_id      : GenuineIntel
cpu family     : 6
model          : 173
stepping      : 1
microcode     : 0x1000380
bugs          : spectre_v1 spectre_v2 spec_store_bypass swapgs bhi
cpu cores     : 86
siblings      : 172
1 physical ids (chips)
172 processors (hardware threads)
physical id 0: core ids 0-42,64-106
physical id 0: apicids 0-85,128-213

```

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
CPU op-mode(s):        32-bit, 64-bit
Address sizes:         46 bits physical, 57 bits virtual
Byte Order:            Little Endian
CPU(s):                172
On-line CPU(s) list:   0-171
Vendor ID:             GenuineIntel

```

(Continued on next page)



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## Platform Notes (Continued)

```

BIOS Vendor ID: Intel(R) Corporation
Model name: Intel(R) Xeon(R) 6787P
BIOS Model name: Intel(R) Xeon(R) 6787P CPU @ 2.0GHz
BIOS CPU family: 179
CPU family: 6
Model: 173
Thread(s) per core: 2
Core(s) per socket: 86
Socket(s): 1
Stepping: 1
BogoMIPS: 4000.00
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 sse3 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 bmil hle avx2 smep bmi2 erms invpcid
rtm 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 vnmi 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: 4 MiB (86 instances)
L1i cache: 5.4 MiB (86 instances)
L2 cache: 172 MiB (86 instances)
L3 cache: 336 MiB (1 instance)
NUMA node(s): 2
NUMA node0 CPU(s): 0-42,86-128
NUMA node1 CPU(s): 43-85,129-171
Vulnerability Gather data sampling: 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; RSB filling;
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      | 4M       | 12   | Data        | 1     | 64     | 1        | 64             |
| L1i  | 64K      | 5.4M     | 16   | Instruction | 1     | 64     | 1        | 64             |
| L2   | 2M       | 172M     | 16   | Unified     | 2     | 2048   | 1        | 64             |
| L3   | 336M     | 336M     | 16   | Unified     | 3     | 344064 | 1        | 64             |

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## Platform Notes (Continued)

8. numactl --hardware

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

```

available: 2 nodes (0-1)
node 0 cpus: 0-42,86-128
node 0 size: 128690 MB
node 0 free: 120399 MB
node 1 cpus: 43-85,129-171
node 1 size: 128961 MB
node 1 free: 128168 MB
node distances:
node 0 1
0: 10 12
1: 12 10

```

9. /proc/meminfo

MemTotal: 263835284 kB

10. who -r

run-level 3 Feb 7 04:34

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 nvme-fc-boot-connections
nvme-fc-autoconnect postfix purge-kernels rollback sshd systemd-pstore wicked wickedd-auto4
wicked-dhcp4 wickedd-dhcp6 wickedd-nanny
enabled-runtime systemd-remount-fs
disabled boot-sysctl ca-certificates chrony-wait chronyd console-getty debug-shell grub2-once
haveged hwloc-dump-hwdata issue-add-ssh-keys kexec-load 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=6815926d-0e31-407c-9bfc-7d4c1d8acd7f
splash=silent
resume=/dev/disk/by-uuid/3ddd6c4a-76f7-4f45-b79b-814fe2bce522
mitigations=auto
quiet
security=apparmor

```

14. cpupower frequency-info

```

analyzing CPU 45:
Unable to determine current policy
boost state support:
Supported: yes
Active: yes

```

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## Platform Notes (Continued)

```

-----
15. 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                 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+madvice [madvice] never
enabled         [always] madvice 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/nvme0n1p4 xfs   1.2T  250G  949G  21% /home
-----
20. /sys/devices/virtual/dmi/id
Vendor:      HPE
Product:     HPE ProLiant Compute DL320 Gen12
Product Family: ProLiant
Serial:      FLLKN48DYT
-----
21. dmidecode
Additional information from dmidecode 3.4 follows.  WARNING: Use caution when you interpret this section.

```

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## Platform Notes (Continued)

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 Micron MTC20F2085S1RC64BD2 QSFF 32 GB 2 rank 6400

-----  
22. BIOS

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

BIOS Vendor: HPE  
BIOS Version: 1.22  
BIOS Date: 02/07/2025  
BIOS Revision: 1.22  
Firmware Revision: 1.10

## Compiler Version Notes

-----  
C | 600.perlbench\_s(base, peak) 602.gcc\_s(base, peak) 605.mcf\_s(base, peak) 625.x264\_s(base, peak)  
| 657.xz\_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++ | 620.omnetpp\_s(base, peak) 623.xalancbmk\_s(base, peak) 631.deepsjeng\_s(base, peak)  
| 641.leela\_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.  
-----

-----  
Fortran | 648.exchange2\_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.  
-----

## Base Compiler Invocation

C benchmarks:

icx

C++ benchmarks:

icpx

Fortran benchmarks:

ifx





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## Base Portability Flags

```
600.perlbench_s: -DSPEC_LP64 -DSPEC_LINUX_X64
602.gcc_s: -DSPEC_LP64
605.mcf_s: -DSPEC_LP64
620.omnetpp_s: -DSPEC_LP64
623.xalancbmk_s: -DSPEC_LP64 -DSPEC_LINUX
625.x264_s: -DSPEC_LP64
631.deepsjeng_s: -DSPEC_LP64
641.leela_s: -DSPEC_LP64
648.exchange2_s: -DSPEC_LP64
657.xz_s: -DSPEC_LP64
```

## Base Optimization Flags

C benchmarks:

```
-w -std=c11 -m64 -Wl,-z,muldefs -xsapphirerapids -O3 -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -fiopenmp
-DSPEC_OPENMP -L/usr/local/jemalloc64-5.0.1/lib -ljemalloc
```

C++ benchmarks:

```
-w -std=c++14 -m64 -Wl,-z,muldefs -xsapphirerapids -O3 -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc
```

Fortran benchmarks:

```
-w -m64 -Wl,-z,muldefs -xsapphirerapids -O3 -ffast-math -flto
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-nostandard-realloc-lhs -align array32byte
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc
```

## Peak Compiler Invocation

C benchmarks:

icx

C++ benchmarks:

icpx

Fortran benchmarks:

ifx



# SPEC CPU®2017 Integer Speed Result

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**Hewlett Packard Enterprise**

(Test Sponsor: HPE)

ProLiant DL320 Gen12

(2.00 GHz, Intel Xeon 6787P)

SPECspeed®2017\_int\_base = 13.8

SPECspeed®2017\_int\_peak = 14.1

**CPU2017 License:** 3

**Test Sponsor:** HPE

**Tested by:** HPE

**Test Date:** Feb-2025

**Hardware Availability:** Mar-2025

**Software Availability:** Jun-2024

## Peak Portability Flags

Same as Base Portability Flags

## Peak Optimization Flags

C benchmarks:

```
600.perlbench_s: -w -m64 -std=c11 -Wl,-z,muldefs
-fprofile-generate(pass 1)
-fprofile-use=default.profdata(pass 2) -xCORE-AVX2(pass 1)
-flto -Ofast(pass 1) -xCORE-AVX512 -O3 -ffast-math
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-fiopenmp -DSPEC_OPENMP -fno-strict-overflow
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc
```

```
602.gcc_s: -w -m64 -std=c11 -Wl,-z,muldefs
-fprofile-generate(pass 1)
-fprofile-use=default.profdata(pass 2) -xCORE-AVX2(pass 1)
-flto -Ofast(pass 1) -xCORE-AVX512 -O3 -ffast-math
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-fiopenmp -DSPEC_OPENMP -L/usr/local/jemalloc64-5.0.1/lib
-ljemalloc
```

605.mcf\_s: basepeak = yes

```
625.x264_s: -w -std=c11 -m64 -Wl,-z,muldefs -xsaphirerapids -O3
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fiopenmp -DSPEC_OPENMP
-fno-alias -L/usr/local/jemalloc64-5.0.1/lib -ljemalloc
```

657.xz\_s: basepeak = yes

C++ benchmarks:

620.omnetpp\_s: basepeak = yes

623.xalancbmk\_s: basepeak = yes

631.deepsjeng\_s: basepeak = yes

641.leela\_s: basepeak = yes

Fortran benchmarks:

(Continued on next page)



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SPECspeed®2017\_int\_base = 13.8

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**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)

648.exchange2\_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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