



# SPEC CPU®2017 Integer Speed Result

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## Hewlett Packard Enterprise

(Test Sponsor: HPE)

### ProLiant DL380 Gen11

(2.00 Ghz, Intel Xeon Silver 4514Y)

SPECspeed®2017\_int\_base = 12.4

SPECspeed®2017\_int\_peak = 12.6

CPU2017 License: 3

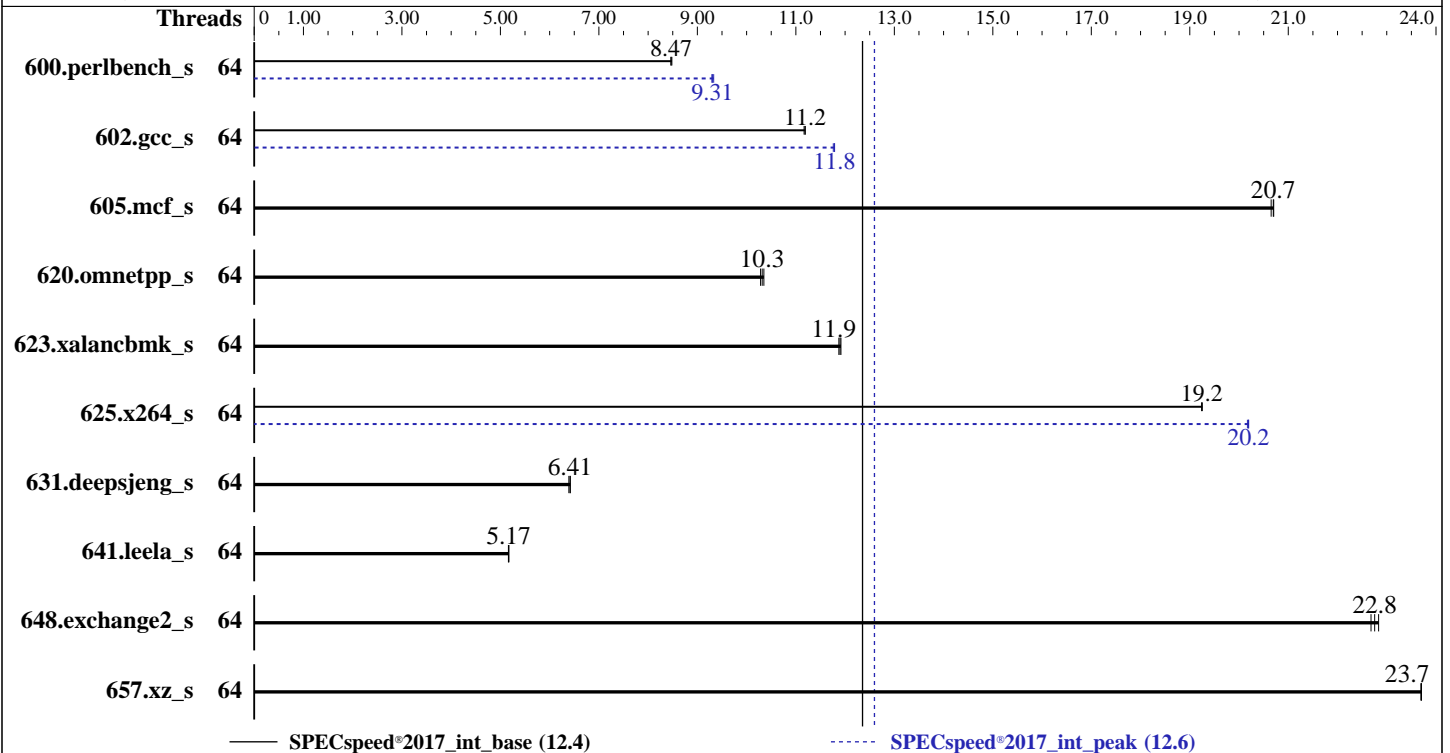
Test Sponsor: HPE

Tested by: HPE

Test Date: Mar-2024

Hardware Availability: Feb-2024

Software Availability: Dec-2023



### Hardware

CPU Name: Intel Xeon Silver 4514Y  
 Max MHz: 3400  
 Nominal: 2000  
 Enabled: 32 cores, 2 chips, 2 threads/core  
 Orderable: 1, 2 chip(s)  
 Cache L1: 32 KB I + 48 KB D on chip per core  
 L2: 2 MB I+D on chip per core  
 L3: 30 MB I+D on chip per chip  
 Other: None  
 Memory: 512 GB (16 x 32 GB 2Rx8 PC5-5600B-R, running at 4400)  
 Storage: 1 x 3.2 TB NVMe SSD  
 Other: CPU Cooling: Air

### Software

OS: SUSE Linux Enterprise Server 15 SP5  
 Kernel 5.14.21-150500.53-default  
 Compiler: C/C++: Version 2023.2.3 of Intel oneAPI DPC++/C++ Compiler for Linux;  
 Fortran: Version 2023.2.3 of Intel Fortran Compiler for Linux;  
 Parallel: Yes  
 Firmware: HPE BIOS Version v2.12 12/13/2023 released Dec-2023  
 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
600.perlbench_s	64	209	8.48	<b><u>210</u></b>	<b><u>8.47</u></b>	210	8.46	64	190	9.33	<b><u>191</u></b>	<b><u>9.31</u></b>	191	9.30
602.gcc_s	64	<b><u>356</u></b>	<b><u>11.2</u></b>	356	11.2	357	11.2	64	338	11.8	339	11.8	<b><u>338</u></b>	<b><u>11.8</u></b>
605.mcf_s	64	229	20.7	<b><u>228</u></b>	<b><u>20.7</u></b>	228	20.7	64	229	20.7	<b><u>228</u></b>	<b><u>20.7</u></b>	228	20.7
620.omnetpp_s	64	<b><u>158</u></b>	<b><u>10.3</u></b>	159	10.3	158	10.4	64	<b><u>158</u></b>	<b><u>10.3</u></b>	159	10.3	158	10.4
623.xalancbmk_s	64	<b><u>119</u></b>	<b><u>11.9</u></b>	119	11.9	119	11.9	64	<b><u>119</u></b>	<b><u>11.9</u></b>	119	11.9	119	11.9
625.x264_s	64	<b><u>91.7</u></b>	<b><u>19.2</u></b>	91.6	19.3	91.7	19.2	64	87.5	20.2	<b><u>87.4</u></b>	<b><u>20.2</u></b>	87.3	20.2
631.deepsjeng_s	64	<b><u>223</u></b>	<b><u>6.41</u></b>	224	6.39	223	6.42	64	<b><u>223</u></b>	<b><u>6.41</u></b>	224	6.39	223	6.42
641.leela_s	64	330	5.17	330	5.16	<b><u>330</u></b>	<b><u>5.17</u></b>	64	330	5.17	330	5.16	<b><u>330</u></b>	<b><u>5.17</u></b>
648.exchange2_s	64	129	22.8	<b><u>129</u></b>	<b><u>22.8</u></b>	130	22.7	64	129	22.8	<b><u>129</u></b>	<b><u>22.8</u></b>	130	22.7
657.xz_s	64	<b><u>261</u></b>	<b><u>23.7</u></b>	261	23.7	261	23.7	64	<b><u>261</u></b>	<b><u>23.7</u></b>	261	23.7	261	23.7

SPECspeed®2017\_int\_base = 12.4

SPECspeed®2017\_int\_peak = 12.6

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
runcpu command invoked through numactl i.e.:
numactl --interleave=all runcpu <etc>
tuned service was stopped using "systemctl stop tuned"
```

## 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/lib/ia32:/home/cpu2017/je5.0.1-64"
MALLOCONF = "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:

Workload Profile set to General Peak Frequency Compute  
 Thermal Configuration set to Maximum Cooling  
 Memory Patrol Scrubbing set to Disabled  
 Last Level Cache (LLC) Prefetch set to Enabled  
 Last Level Cache (LLC) Dead Line Allocation set to Disabled  
 Enhanced Processor Performance Profile set to Aggressive  
 Workload Profile set to Custom  
 Adjacent Sector Prefetch set to Disabled  
 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 Mon Mar 18 07:32:50 2024

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 249 (249.16+suse.171.gdad0071f15)
12. Services, from systemctl list-unit-files
13. Linux kernel boot-time arguments, from /proc/cmdline
14. cpupower frequency-info
15. tuned-adm active
16. sysctl
17. /sys/kernel/mm/transparent\_hugepage
18. /sys/kernel/mm/transparent\_hugepage/khugepaged
19. OS release
20. Disk information
21. /sys/devices/virtual/dmi/id
22. dmidecode
23. BIOS

```
1. uname -a
Linux localhost 5.14.21-150500.53-default #1 SMP PREEMPT_DYNAMIC Wed May 10 07:56:26 UTC 2023 (b630043)
x86_64 x86_64 x86_64 GNU/Linux
```

```
2. w
07:32:50 up 1 min, 0 users, load average: 0.17, 0.06, 0.02
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) 2062777
   max locked memory      (kbytes, -l) 64
   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) 2062777
   virtual memory         (kbytes, -v) unlimited
   file locks             (-x) unlimited

```

```

5. sysinfo process ancestry
   /usr/lib/systemd/systemd --switched-root --system --deserialize 29
   sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups
   sshd: root@notty
   bash -c cd $SPEC/ && $SPEC/intspeed.sh
   runcpu --nobuild --action validate --define default-platform-flags -c
     ic2023.2.3-lin-sapphirerapids-speed-20231121.cfg --define cores=64 --tune base,peak -o all --define
     intspeedaffinity --define drop_caches intspeed
   runcpu --nobuild --action validate --define default-platform-flags --configfile
     ic2023.2.3-lin-sapphirerapids-speed-20231121.cfg --define cores=64 --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/CPU2017.001/templogs/preenv.intspeed.001.0.log
     --lognum 001.0 --from_runcpu 2
   specperl $SPEC/bin/sysinfo
   $SPEC = /home/cpu2017

```

```

6. /proc/cpuinfo
   model name      : INTEL(R) XEON(R) SILVER 4514Y
   vendor_id      : GenuineIntel
   cpu family     : 6
   model          : 207
   stepping       : 2
   microcode      : 0x21000200
   bugs           : spectre_v1 spectre_v2 spec_store_bypass swapgs eibrs_pbrsb
   cpu cores      : 16
   siblings       : 32
   2 physical ids (chips)
   64 processors (hardware threads)
   physical id 0: core ids 0-15
   physical id 1: core ids 0-15
   physical id 0: apicids 0-31
   physical id 1: apicids 128-159
   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

```

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## Platform Notes (Continued)

```

CPU op-mode(s):          32-bit, 64-bit
Address sizes:          46 bits physical, 57 bits virtual
Byte Order:             Little Endian
CPU(s):                 64
On-line CPU(s) list:   0-63
Vendor ID:              GenuineIntel
Model name:             INTEL(R) XEON(R) SILVER 4514Y
CPU family:             6
Model:                  207
Thread(s) per core:    2
Core(s) per socket:    16
Socket(s):              2
Stepping:               2
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 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
                        invpcid_single cdp_l2 ssbd mba ibrs ibpb stibp ibrs_enhanced tpr_shadow
                        vmni flexpriority ept vpid ept_ad fsgsbase tsc_adjust bmi1 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 avx_vnni avx512_bf16 wbnoinvd dtherm ida arat pln pts hfi
                        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 avx512_fp16 amx_tile flush_lld arch_capabilities
Virtualization:         VT-x
L1d cache:              1.5 MiB (32 instances)
L1i cache:              1 MiB (32 instances)
L2 cache:               64 MiB (32 instances)
L3 cache:               60 MiB (2 instances)
NUMA node(s):          2
NUMA node0 CPU(s):     0-15,32-47
NUMA node1 CPU(s):     16-31,48-63
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 store bypass: Mitigation; Speculative Store Bypass disabled via prctl and seccomp
Vulnerability Spectre v1: Mitigation; usercopy/swapgs barriers and __user pointer sanitization
Vulnerability Spectre v2: Mitigation; Enhanced IBRS, IBPB conditional, RSB filling, PBRBSB-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	1.5M	12	Data	1	64	1	64
L1i	32K	1M	8	Instruction	1	64	1	64
L2	2M	64M	16	Unified	2	2048	1	64
L3	30M	60M	15	Unified	3	32768	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: 0-15,32-47
node 0 size: 257732 MB
node 0 free: 256242 MB
node 1 cpus: 16-31,48-63
node 1 size: 257984 MB
node 1 free: 257131 MB
node distances:
node  0  1
  0:  10  20
  1:  20  10
```

9. /proc/meminfo

```
MemTotal:          528094696 kB
```

10. who -r

```
run-level 3 Mar 18 07:32
```

11. Systemd service manager version: systemd 249 (249.16+suse.171.gdad0071f15)

```
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
                postfix purge-kernels rollback sshd systemd-pstore wickd wickedd-auto4 wickedd-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 haveged-switch-root issue-add-ssh-keys kexec-load nvmmf-autoconnect rpmconfigcheck
                serial-getty@ systemd-boot-check-no-failures systemd-network-generator systemd-sysext
                systemd-time-wait-sync systemd-timesyncd tuned
indirect        wickedd
```

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

```
BOOT_IMAGE=/boot/vmlinuz-5.14.21-150500.53-default
root=UUID=a806a23c-58ee-4027-a60d-04b4dal323d6
splash=silent
resume=/dev/disk/by-uuid/ebbabfc7-d0cb-4aac-aeed-3d2c035d5d16
mitigations=auto
quiet
security=apparmor
```

14. cpupower frequency-info

```
analyzing CPU 0:
Unable to determine current policy
boost state support:
Supported: yes
Active: yes
```

15. tuned-adm active

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## Platform Notes (Continued)

It seems that tuned daemon is not running, preset profile is not activated.  
Preset 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                  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

```

```

17. /sys/kernel/mm/transparent_hugepage
defrag          always defer defer+madvise [madvise] never
enabled         [always] madvise 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 SP5

```

```

20. Disk information
SPEC is set to: /home/cpu2017
Filesystem  Type  Size  Used Avail Use% Mounted on
/dev/nvme0n1p3 xfs   2.5T  130G  2.3T   6% /home

```

```

21. /sys/devices/virtual/dmi/id
Vendor:      HPE
Product:     ProLiant DL380 Gen11
Product Family: ProLiant
Serial:      CNX21000G3

```

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## Platform Notes (Continued)

### 22. 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:

16x Hynix HMC88AGBRA193N 32 GB 2 rank 5600, configured at 4400

### 23. BIOS

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

BIOS Vendor: HPE  
BIOS Version: 2.12  
BIOS Date: 12/13/2023  
BIOS Revision: 2.12  
Firmware Revision: 1.52

## 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 2023.2.3 Build x  
Copyright (C) 1985-2023 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 2023.2.3 Build x  
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.

Fortran | 648.exchange2\_s(base, peak)

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2023.2.3 Build x  
Copyright (C) 1985-2023 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 DL380 Gen11**

(2.00 Ghz, Intel Xeon Silver 4514Y)

SPECspeed®2017\_int\_base = 12.4

SPECspeed®2017\_int\_peak = 12.6

**CPU2017 License:** 3

**Test Sponsor:** HPE

**Tested by:** HPE

**Test Date:** Mar-2024

**Hardware Availability:** Feb-2024

**Software Availability:** Dec-2023

## 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 -xsapphirerapids -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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**Test Date:** Mar-2024

**Hardware Availability:** Feb-2024

**Software Availability:** Dec-2023

## 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/Intel-ic2023p2-official-linux64.html>

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

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

<http://www.spec.org/cpu2017/flags/Intel-ic2023p2-official-linux64.xml>

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

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