



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Esconet Technologies Ltd.

Hexadata HD-RS3000 Ver: ILX-002  
(Intel Xeon Gold 5318N, 2.10 GHz)

SPECspeed®2017\_int\_base = 11.1

SPECspeed®2017\_int\_peak = 11.3

CPU2017 License: 6523

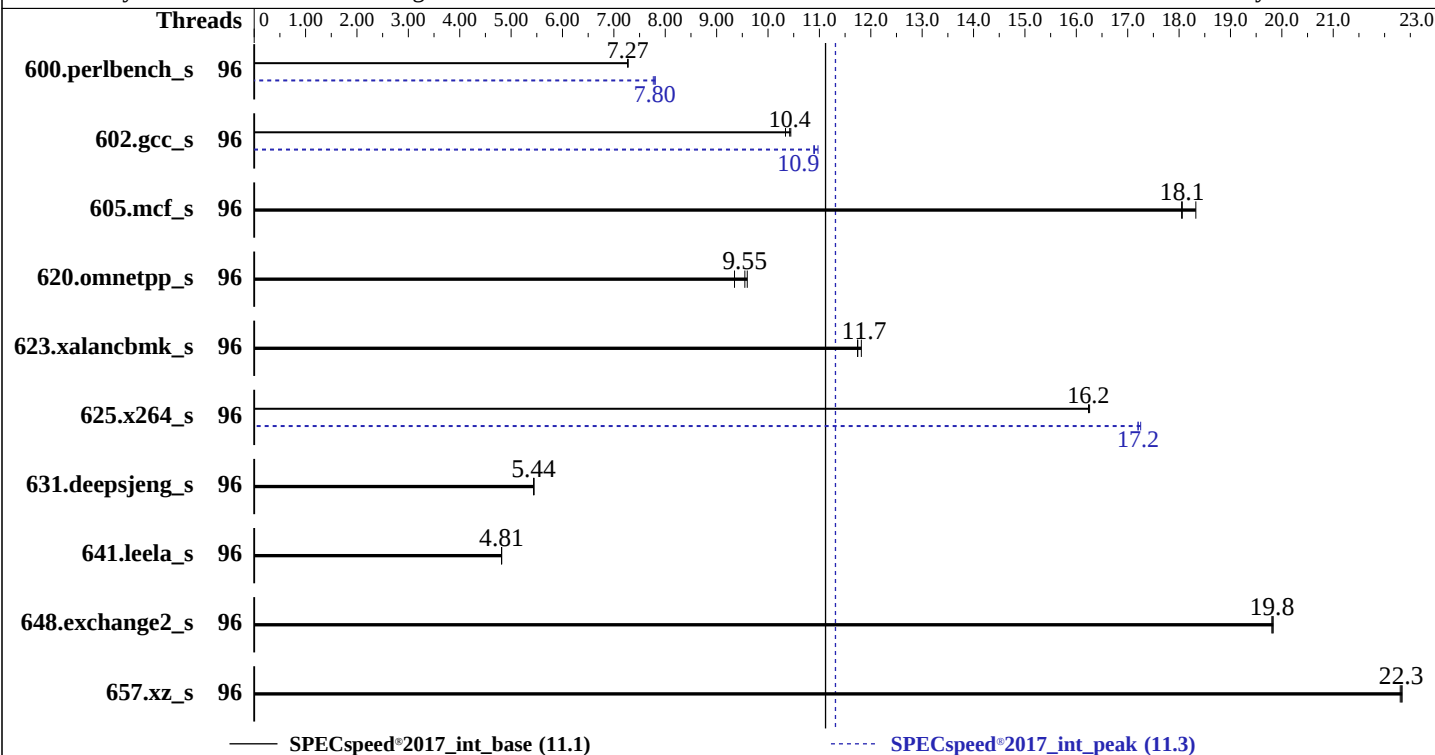
Test Sponsor: Esconet Technologies Ltd.

Tested by: Esconet Technologies Ltd.

Test Date: Mar-2025

Hardware Availability: Apr-2021

Software Availability: Jun-2024



## Hardware

CPU Name: Intel Xeon Gold 5318N  
Max MHz: 3400  
Nominal: 2100  
Enabled: 48 cores, 2 chips, 2 threads/core  
Orderable: 1,2 chips  
Cache L1: 32 KB I + 48 KB D on chip per core  
L2: 1.25 MB I+D on chip per core  
L3: 36 MB I+D on chip per chip  
Other: None  
Memory: 2 TB (16 x 128 GB 4Rx4 PC4-3200AA-R, running at 2666)  
Storage: 125 GB on tmpfs  
Other: CPU Cooling: Air

## Software

OS: SUSE Linux Enterprise Server 15 SP6  
6.4.0-150600.21-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: Version P1.00 released Aug-2022  
File System: tmpfs  
System State: Run level 3 (multi-user)  
Base Pointers: 64-bit  
Peak Pointers: 64-bit  
Other: jemalloc memory allocator V5.0.1  
Power Management: 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 | 96      | 244        | 7.28        | <u>244</u> | <u>7.27</u> | 244        | 7.27        | 96      | <u>228</u> | <u>7.80</u> | 227        | 7.81        | 229        | 7.77        |
| 602.gcc_s       | 96      | 381        | 10.4        | <u>382</u> | <u>10.4</u> | 385        | 10.3        | 96      | 363        | 11.0        | 366        | 10.9        | <u>365</u> | <u>10.9</u> |
| 605.mcf_s       | 96      | 262        | 18.0        | 258        | 18.3        | <u>261</u> | <u>18.1</u> | 96      | 262        | 18.0        | 258        | 18.3        | <u>261</u> | <u>18.1</u> |
| 620.omnetpp_s   | 96      | 170        | 9.60        | 174        | 9.35        | <u>171</u> | <u>9.55</u> | 96      | 170        | 9.60        | 174        | 9.35        | <u>171</u> | <u>9.55</u> |
| 623.xalancbmk_s | 96      | 120        | 11.8        | 121        | 11.7        | <u>121</u> | <u>11.7</u> | 96      | 120        | 11.8        | 121        | 11.7        | <u>121</u> | <u>11.7</u> |
| 625.x264_s      | 96      | <u>109</u> | <u>16.2</u> | 108        | 16.3        | 109        | 16.2        | 96      | <u>103</u> | <u>17.2</u> | 103        | 17.2        | 102        | 17.3        |
| 631.deepsjeng_s | 96      | 263        | 5.45        | 264        | 5.44        | <u>263</u> | <u>5.44</u> | 96      | 263        | 5.45        | 264        | 5.44        | <u>263</u> | <u>5.44</u> |
| 641.leela_s     | 96      | 354        | 4.81        | 354        | 4.82        | <u>354</u> | <u>4.81</u> | 96      | 354        | 4.81        | 354        | 4.82        | <u>354</u> | <u>4.81</u> |
| 648.exchange2_s | 96      | <u>148</u> | <u>19.8</u> | 148        | 19.8        | 148        | 19.8        | 96      | <u>148</u> | <u>19.8</u> | 148        | 19.8        | 148        | 19.8        |
| 657.xz_s        | 96      | 277        | 22.3        | <u>277</u> | <u>22.3</u> | 277        | 22.3        | 96      | 277        | 22.3        | <u>277</u> | <u>22.3</u> | 277        | 22.3        |

SPECspeed®2017\_int\_base = 11.1

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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"

## Environment Variables Notes

Environment variables set by runcpu before the start of the run:

KMP\_AFFINITY = "granularity=fine,scatter"

LD\_LIBRARY\_PATH = "/mnt/ramdisk/cpu17/lib/intel64:/mnt/ramdisk/cpu17/lib/ia32:/mnt/ramdisk/cpu17/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

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

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>

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.

Benchmark run from a 125 GB ramdisk created with the cmd: "mount -t tmpfs -o size=125G tmpfs /mnt/ramdisk"



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## Platform Notes

BIOS settings: Default

Sysinfo program /mnt/ramdisk/cpu17/bin/sysinfo  
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197  
running on localhost Sat Mar 15 11:17:06 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  
11:17:06 up 1 day, 22:12, 1 user, load average: 0.00, 0.00, 0.00  
USER TTY FROM LOGIN@ IDLE JCPU PCPU WHAT  
root tty1 - Thu14 10.00s 1.13s 0.00s sh  
reportable-ic2023.2.3-lin-core-avx512-speed-smt-on-20231121.sh

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  
pending signals (-i) 8253701  
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) 8253701  
virtual memory (kbytes, -v) unlimited  
file locks (-x) unlimited

```
5. sysinfo process ancestry
/usr/lib/systemd/systemd --switched-root --system --deserialize=31
login -- root
-bash
sh reportable-ic2023.2.3-lin-core-avx512-speed-smt-on-20231121.sh
runcpu --nobuild --action validate --define default-platform-flags -c
  ic2023.2.3-lin-core-avx512-speed-20231121.cfg --define cores=48 --tune base,peak -o all --define
  intspeedaffinity --define smt-on --define drop_caches intspeed
runcpu --nobuild --action validate --define default-platform-flags --configfile
  ic2023.2.3-lin-core-avx512-speed-20231121.cfg --define cores=48 --tune base,peak --output_format all
  --define intspeedaffinity --define smt-on --define drop_caches --nopower --runmode speed --tune base:peak
  --size refspeed intspeed --nopreenv --note-preenv --logfile
  $SPEC/tmp/CPU2017.003/temlogs/preenv.intspeed.003.0.log --lognum 003.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /mnt/ramdisk/cpu17
```

```
6. /proc/cpuinfo
model name      : Intel(R) Xeon(R) Gold 5318N CPU @ 2.10GHz
vendor_id       : GenuineIntel
cpu family      : 6
model           : 106
stepping        : 6
microcode       : 0xd0003d1
bugs             : spectre_v1 spectre_v2 spec_store_bypass swapgs mmio_stale_data eibrs_pbrsb gds bhi
cpu cores       : 24
siblings        : 48
2 physical ids (chips)
96 processors (hardware threads)
physical id 0:  core ids 0-23
physical id 1:  core ids 0-23
physical id 0:  apicids 0-47
physical id 1:  apicids 64-111
```

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):              | 96                                |
| On-line CPU(s) list: | 0-95                              |
| Vendor ID:           | GenuineIntel                      |
| BIOS Vendor ID:      | Intel(R) Corporation              |

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### Platform Notes (Continued)

Model name: Intel(R) Xeon(R) Gold 5318N CPU @ 2.10GHz  
BIOS Model name: Intel(R) Xeon(R) Gold 5318N CPU @ 2.10GHz CPU @ 2.1GHz  
BIOS CPU family: 179  
CPU family: 6  
Model: 106  
Thread(s) per core: 2  
Core(s) per socket: 24  
Socket(s): 2  
Stepping: 6  
CPU(s) scaling MHz: 36%  
CPU max MHz: 3400.0000  
CPU min MHz: 800.0000  
BogoMIPS: 4200.00  
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 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 intel\_ppin ssbd mba ibrs ibpb stibp ibrs\_enhanced tpr\_shadow 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 split\_lock\_detect wbnoinvd dtherm ida arat pln pts hwp hwp\_act\_window hwp\_epp hwp\_pkg\_req vnmi avx512vbmi umip pku ospke avx512\_vbmi2 gfni vaes vpclmulqdq avx512\_vnni avx512\_bitalg tme avx512\_vpopcntdq la57 rdpid fsrm md\_clear pconfig flush\_l1d arch\_capabilities  
Virtualization: VT-x  
L1d cache: 2.3 MiB (48 instances)  
L1i cache: 1.5 MiB (48 instances)  
L2 cache: 60 MiB (48 instances)  
L3 cache: 72 MiB (2 instances)  
NUMA node(s): 2  
NUMA node0 CPU(s): 0-23,48-71  
NUMA node1 CPU(s): 24-47,72-95  
Vulnerability Gather data sampling: Mitigation; Microcode  
Vulnerability Itlb multihit: Not affected  
Vulnerability L1tf: Not affected  
Vulnerability Mds: Not affected  
Vulnerability Meltdown: Not affected  
Vulnerability Mmio stale data: Mitigation; Clear CPU buffers; SMT vulnerable  
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 SW sequence; BHI SW loop, KVM SW loop  
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      | 2.3M     | 12   | Data        | 1     | 64    | 1        | 64             |
| L1i  | 32K      | 1.5M     | 8    | Instruction | 1     | 64    | 1        | 64             |
| L2   | 1.3M     | 60M      | 20   | Unified     | 2     | 1024  | 1        | 64             |
| L3   | 36M      | 72M      | 12   | Unified     | 3     | 49152 | 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: 0-23,48-71
node 0 size: 1031697 MB
node 0 free: 991410 MB
node 1 cpus: 24-47,72-95
node 1 size: 1031753 MB
node 1 free: 1004720 MB
node distances:
node    0    1
 0:   10   20
 1:   20   10
```

### 9. /proc/meminfo

MemTotal: 2112973592 kB

### 10. who -r

run-level 3 Mar 13 18:34

### 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 firewalld getty@ irqbalance issue-generator kbdsettings kdump
           kdump-early kdump-notify postfix purge-kernels rollback sshd systemd-pstore wicked
           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 ebttables fsidd
           grub2-once haveged issue-add-ssh-keys kexec-load lunmask nfs nfs-blkmap rpcbind
           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=82a9aeec-5736-4b02-959a-2c2c5709e6ff
splash=silent
mitigations=auto
quiet
security=apparmor
crashkernel=365M,high
crashkernel=72M,low
```

### 14. cpupower frequency-info

```
analyzing CPU 78:
  current policy: frequency should be within 800 MHz and 3.40 GHz.
                  The governor "performance" may decide which speed to use
                  within this range.
  boost state support:
```

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## Platform Notes (Continued)

Supported: yes  
Active: yes

### 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       | 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: /mnt/ramdisk/cpu17

| Filesystem | Type  | Size | Used | Avail | Use% | Mounted on   |
|------------|-------|------|------|-------|------|--------------|
| tmpfs      | tmpfs | 125G | 60G  | 66G   | 48%  | /mnt/ramdisk |

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

Product: HDR-RM2386212I

### 21. dmidecode

Additional information from dmidecode 3.4 follows. WARNING: Use caution when you interpret this section.

(Continued on next page)



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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:

16x Hynix TLR4128G32Q422 128 GB 4 rank 3200, configured at 2666

### 22. BIOS

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

BIOS Vendor: American Megatrends International, LLC.

BIOS Version: P1.00

BIOS Date: 08/23/2022

BIOS Revision: 5.22

## 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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**Hardware Availability:** Apr-2021

**Software Availability:** Jun-2024

## 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 -xCORE-AVX512 -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 -xCORE-AVX512 -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 -xCORE-AVX512 -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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**Esconet Technologies Ltd.**

Hexadata HD-RS3000 Ver: ILX-002  
(Intel Xeon Gold 5318N, 2.10 GHz)

SPECspeed®2017\_int\_base = 11.1

SPECspeed®2017\_int\_peak = 11.3

CPU2017 License: 6523

Test Sponsor: Esconet Technologies Ltd.

Tested by: Esconet Technologies Ltd.

Test Date: Mar-2025

Hardware Availability: Apr-2021

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.profddata(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.profddata(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 -xCORE-AVX512 -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)



# SPEC CPU®2017 Integer Speed Result

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Hexadata HD-RS3000 Ver: ILX-002  
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SPECspeed®2017\_int\_base = 11.1

SPECspeed®2017\_int\_peak = 11.3

**CPU2017 License:** 6523

**Test Sponsor:** Esconet Technologies Ltd.

**Tested by:** Esconet Technologies Ltd.

**Test Date:** Mar-2025

**Hardware Availability:** Apr-2021

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

<http://www.spec.org/cpu2017/flags/Hexadata-Platform-Flags-Intel-ICX.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/Hexadata-Platform-Flags-Intel-ICX.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).

Tested with SPEC CPU®2017 v1.1.9 on 2025-03-15 01:47:05-0400.

Report generated on 2025-05-20 15:58:53 by CPU2017 PDF formatter v6716.

Originally published on 2025-05-20.