



# SPEC CPU®2017 Integer Speed Result

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## Nettrix

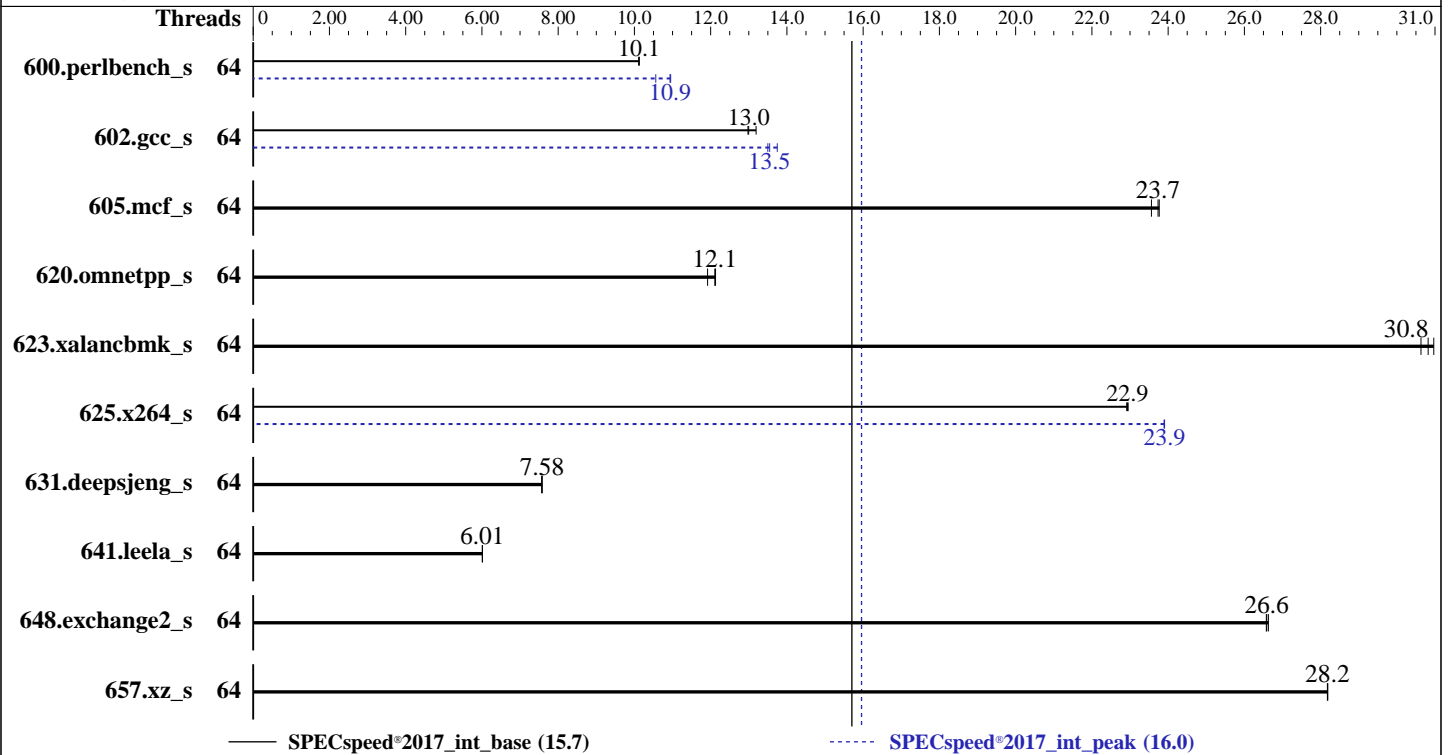
SPECspeed®2017\_int\_base = 15.7

R620 G50 (Intel Xeon Gold 6458Q, 3.10 GHz)

SPECspeed®2017\_int\_peak = 16.0

CPU2017 License: 6138  
Test Sponsor: Nettrix  
Tested by: Nettrix

Test Date: Mar-2023  
Hardware Availability: Jan-2023  
Software Availability: Dec-2022



### Hardware

CPU Name: Intel Xeon Gold 6458Q  
 Max MHz: 4000  
 Nominal: 3100  
 Enabled: 64 cores, 2 chips  
 Orderable: 1,2 chips  
 Cache L1: 32 KB I + 48 KB D on chip per core  
 L2: 2 MB I+D on chip per core  
 L3: 60 MB I+D on chip per chip  
 Other: None  
 Memory: 1 TB (16 x 64 GB 2Rx4 PC5-4800B-R)  
 Storage: 1 x 960 GB NVME SSD  
 Other: None

### Software

OS: SUSE Linux Enterprise Server 15 SP4  
 5.14.21-150400.22-default  
 Compiler: C/C++: Version 2023.0 of Intel oneAPI DPC++/C++  
 Compiler for Linux;  
 Fortran: Version 2023.0 of Intel Fortran Compiler  
 Classic for Linux;  
 C/C++: Version 2023.0 of Intel C/C++ Compiler  
 Classic for Linux  
 Parallel: Yes  
 Firmware: Nettrix BIOS Version NNH1041018-U00-1 released  
 Nov-2022  
 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 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	175	10.1	176	10.1	<b><u>175</u></b>	<b><u>10.1</u></b>	64	168	10.6	<b><u>162</u></b>	<b><u>10.9</u></b>	162	11.0
602.gcc_s	64	302	13.2	307	13.0	<b><u>306</u></b>	<b><u>13.0</u></b>	64	290	13.7	<b><u>294</u></b>	<b><u>13.5</u></b>	295	13.5
605.mcf_s	64	199	23.8	<b><u>199</u></b>	<b><u>23.7</u></b>	200	23.6	64	199	23.8	<b><u>199</u></b>	<b><u>23.7</u></b>	200	23.6
620.omnetpp_s	64	<b><u>135</u></b>	<b><u>12.1</u></b>	137	11.9	134	12.1	64	<b><u>135</u></b>	<b><u>12.1</u></b>	137	11.9	134	12.1
623.xalancbmk_s	64	45.8	31.0	<b><u>46.0</u></b>	<b><u>30.8</u></b>	46.3	30.6	64	45.8	31.0	<b><u>46.0</u></b>	<b><u>30.8</u></b>	46.3	30.6
625.x264_s	64	76.9	23.0	77.0	22.9	<b><u>76.9</u></b>	<b><u>22.9</u></b>	64	73.8	23.9	<b><u>73.8</u></b>	<b><u>23.9</u></b>	73.8	23.9
631.deepsjeng_s	64	<b><u>189</u></b>	<b><u>7.58</u></b>	189	7.57	189	7.58	64	<b><u>189</u></b>	<b><u>7.58</u></b>	189	7.57	189	7.58
641.leela_s	64	<b><u>284</u></b>	<b><u>6.01</u></b>	284	6.01	284	6.01	64	<b><u>284</u></b>	<b><u>6.01</u></b>	284	6.01	284	6.01
648.exchange2_s	64	110	26.6	111	26.6	<b><u>111</u></b>	<b><u>26.6</u></b>	64	110	26.6	111	26.6	<b><u>111</u></b>	<b><u>26.6</u></b>
657.xz_s	64	219	28.2	219	28.2	<b><u>219</u></b>	<b><u>28.2</u></b>	64	219	28.2	219	28.2	<b><u>219</u></b>	<b><u>28.2</u></b>

SPECspeed®2017\_int\_base = **15.7**

SPECspeed®2017\_int\_peak = **16.0**

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

## Compiler Notes

SPEC has ruled that the compiler used for this result was performing a compilation that specifically improves the performance of the 523.xalancbmk\_r / 623.xalancbmk\_s benchmarks using a priori knowledge of the SPEC code and dataset to perform a transformation that has narrow applicability.

In order to encourage optimizations that have wide applicability (see rule 1.4 [https://www.spec.org/cpu2017/Docs/runrules.html#rule\\_1.4](https://www.spec.org/cpu2017/Docs/runrules.html#rule_1.4)), SPEC will no longer publish results using this optimization.

This result is left in the SPEC results database for historical reference.

## 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/lijq/lib/intel64:/home/lijq/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.

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### General Notes (Continued)

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.  
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>

### Platform Notes

BIOS Configuration:  
Enable LP [Global] set to Single LP  
LLC Prefetch set to Enabled  
SNC (Sub NUMA) set to Disabled  
Patrol Scrub set to Disabled  
LLC dead line alloc set to Disabled  
XPT Prefetch set to Enabled  
KTI Prefetch set to Auto  
SR-IOV Support set to Disabled  
Energy Efficient Turbo set to Disabled  
  
Sysinfo program /home/lijq/bin/sysinfo  
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197  
running on localhost Fri Mar 10 11:37:24 2023  
  
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 (249.11+suse.124.g2bc0b2c447)
  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
- 

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### Platform Notes (Continued)

```

-----
1. uname -a
Linux localhost 5.14.21-150400.22-default #1 SMP PREEMPT_DYNAMIC Wed May 11 06:57:18 UTC 2022 (49db222)
x86_64 x86_64 x86_64 GNU/Linux

-----
2. w
11:37:24 up 2:11, 2 users, load average: 0.00, 0.00, 0.06
USER      TTY      FROM          LOGIN@   IDLE   JCPU   PCPU   WHAT
root      tty1     -             11:36   44.00s 0.85s  0.01s  -bash
root      pts/0   10.2.48.216   09:29   9:56   0.16s  0.16s  -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
pending signals         (-i) 4125241
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) 4125241
virtual memory           (kbytes, -v) unlimited
file locks              (-x) unlimited

-----
5. sysinfo process ancestry
/usr/lib/systemd/systemd --switched-root --system --deserialize 29
login -- root
-bash
-bash
runcpu --nobuild --reportable --iterations 3 --define default-platform-flags -c
ic2023.0-lin-sapphirerapids-speed-20221201.cfg --define cores=64 --tune base,peak -o all --define
intspeedaffinity --define drop_caches intspeed
runcpu --nobuild --reportable --iterations 3 --define default-platform-flags --configfile
ic2023.0-lin-sapphirerapids-speed-20221201.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/CPU2017.051/templogs/preenv.intspeed.051.0.log
--lognum 051.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/lijq

-----
6. /proc/cpuinfo
model name      : Intel(R) Xeon(R) Gold 6458Q
vendor_id      : GenuineIntel
cpu family     : 6
model          : 143
stepping      : 8
microcode     : 0x2b000111

```

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### Platform Notes (Continued)

```
bugs           : spectre_v1 spectre_v2 spec_store_bypass swappg
cpu cores      : 32
siblings       : 32
2 physical ids (chips)
64 processors (hardware threads)
physical id 0: core ids 0-31
physical id 1: core ids 0-31
physical id 0: apicids
0,2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46,48,50,52,54,56,58,60,62
physical id 1: apicids
128,130,132,134,136,138,140,142,144,146,148,150,152,154,156,158,160,162,164,166,168,170,172,174,176,178,1
80,182,184,186,188,190
```

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 2.37.2:

```
Architecture:          x86_64
CPU op-mode(s):        32-bit, 64-bit
Address sizes:          52 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) Gold 6458Q
CPU family:             6
Model:                  143
Thread(s) per core:    1
Core(s) per socket:    32
Socket(s):              2
Stepping:               8
Frequency boost:        enabled
CPU max MHz:            3101.0000
CPU min MHz:            800.0000
BogoMIPS:               6200.00
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 intel_ppin cdp_l2 ssbd mba ibrs ibpb stibp ibrs_enhanced
                        tpr_shadow vnmi 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 avx_vnni avx512_bf16 wbnoinvd dtherm ida
                        arat pln pts 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_l1d arch_capabilities
Virtualization:         VT-x
L1d cache:              3 MiB (64 instances)
L1i cache:              2 MiB (64 instances)
L2 cache:               128 MiB (64 instances)
L3 cache:               120 MiB (2 instances)
NUMA node(s):          2
```

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### Platform Notes (Continued)

```

NUMA node0 CPU(s):          0-31
NUMA node1 CPU(s):          32-63
Vulnerability Itlb multihit: Not affected
Vulnerability Lltf:         Not affected
Vulnerability Mds:          Not affected
Vulnerability Meltdown:     Not affected
Vulnerability Spec store bypass: Mitigation; Speculative Store Bypass disabled via prctl and seccomp
Vulnerability Spectre v1:    Mitigation; usercopy/swaps barriers and __user pointer sanitization
Vulnerability Spectre v2:    Mitigation; Enhanced IBRS, IBPB conditional, RSB filling
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	3M	12	Data	1	64	1	64
L1i	32K	2M	8	Instruction	1	64	1	64
L2	2M	128M	16	Unified	2	2048	1	64
L3	60M	120M	15	Unified	3	65536	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
node 0 size: 515573 MB
node 0 free: 510556 MB
node 1 cpus: 32-63
node 1 size: 515758 MB
node 1 free: 515311 MB
node distances:
node  0  1
 0:  10  21
 1:  21  10

```

9. /proc/meminfo

MemTotal: 1056084264 kB

10. who -r

run-level 3 Mar 10 09:26

11. Systemd service manager version: systemd 249 (249.11+suse.124.g2bc0b2c447)

```

Default Target  Status
multi-user      running

```

12. Services, from systemctl list-unit-files

```

STATE          UNIT FILES
enabled        apparmor auditd cron getty@ haveged irqbalance issue-generator kbdsettings kdump
                kdump-early nvme-fc-boot-connections postfix purge-kernels rollback sshd 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
                exchange-bmc-os-info grub2-once haveged-switch-root ipmievd issue-add-ssh-keys kexec-load
                nfs nfs-blkmap nvme-f-autoconnect rpcbind rpmconfigcheck serial-getty@
                systemd-boot-check-no-failures systemd-network-generator systemd-sysext
                systemd-time-wait-sync systemd-timesyncd tuned
indirect        wickedd

```

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### Platform Notes (Continued)

```
-----
13. Linux kernel boot-time arguments, from /proc/cmdline
BOOT_IMAGE=/boot/vmlinuz-5.14.21-150400.22-default
root=UUID=9e7d079b-be10-4779-89e1-79f870e2ca09
splash=silent
mitigations=auto
quiet
security=apparmor
crashkernel=300M,high
crashkernel=72M,low
-----
```

```
-----
14. cpupower frequency-info
analyzing CPU 0:
  current policy: frequency should be within 800 MHz and 3.10 GHz.
                  The governor "ondemand" may decide which speed to use
                  within this range.

  boost state support:
    Supported: yes
    Active: yes
-----
```

```
-----
15. tuned-adm active
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+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
-----
```

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### Platform Notes (Continued)

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 SP4  
 -----

-----  
 20. Disk information  
 SPEC is set to: /home/lijq  

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/nvme0n1p3	btrfs	854G	305G	550G	36%	/home

 -----

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

Vendor:	Nettrix
Product:	R620 G50
Product Family:	Rack
Serial:	6101810603447822

 -----

-----  
 22. dmidecode  
 Additional information from dmidecode 3.2 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 Samsung M321R8GA0BB0-CQKVG 64 GB 2 rank 4800  
 -----

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

BIOS Vendor:	American Megatrends International, LLC.
BIOS Version:	NNH1041018-U00-1
BIOS Date:	11/01/2022
BIOS Revision:	5.29

 -----

### 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 2023.0.0 Build 20221201  
 Copyright (C) 1985-2022 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 2023.0.0 Build 20221201  
 Copyright (C) 1985-2022 Intel Corporation. All rights reserved.  
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## Compiler Version Notes (Continued)

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

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2023.0.0 Build 20221201  
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=====

## Base Compiler Invocation

C benchmarks:

icx

C++ benchmarks:

icpx

Fortran benchmarks:

ifx

## 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:

-m64 -std=c11 -Wl,-z,muldefs -xsaphirerapids -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:

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

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# SPEC CPU®2017 Integer Speed Result

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Nettrix

SPECspeed®2017\_int\_base = 15.7

R620 G50 (Intel Xeon Gold 6458Q, 3.10 GHz)

SPECspeed®2017\_int\_peak = 16.0

CPU2017 License: 6138  
Test Sponsor: Nettrix  
Tested by: Nettrix

Test Date: Mar-2023  
Hardware Availability: Jan-2023  
Software Availability: Dec-2022

## Base Optimization Flags (Continued)

Fortran benchmarks:

```
-m64 -Wl,-z,muldefs -xsaphirerapids -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

## Peak Portability Flags

Same as Base Portability Flags

## Peak Optimization Flags

C benchmarks:

```
600.perlbench_s: -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: -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
```

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# SPEC CPU®2017 Integer Speed Result

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Nettrix

SPECspeed®2017\_int\_base = 15.7

R620 G50 (Intel Xeon Gold 6458Q, 3.10 GHz)

SPECspeed®2017\_int\_peak = 16.0

CPU2017 License: 6138

Test Sponsor: Nettrix

Tested by: Nettrix

Test Date: Mar-2023

Hardware Availability: Jan-2023

Software Availability: Dec-2022

## Peak Optimization Flags (Continued)

605.mcf\_s: basepeak = yes

```
625.x264_s: -m64 -std=c11 -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:

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-ic2023-official-linux64.html>

<http://www.spec.org/cpu2017/flags/Nettrix-Platform-Settings-V1.3-SPR-revA.html>

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

<http://www.spec.org/cpu2017/flags/Intel-ic2023-official-linux64.xml>

<http://www.spec.org/cpu2017/flags/Nettrix-Platform-Settings-V1.3-SPR-revA.xml>

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