



# SPEC CPU®2017 Integer Speed Result

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**Fusionstor**  
(Test Sponsor: Meganet)

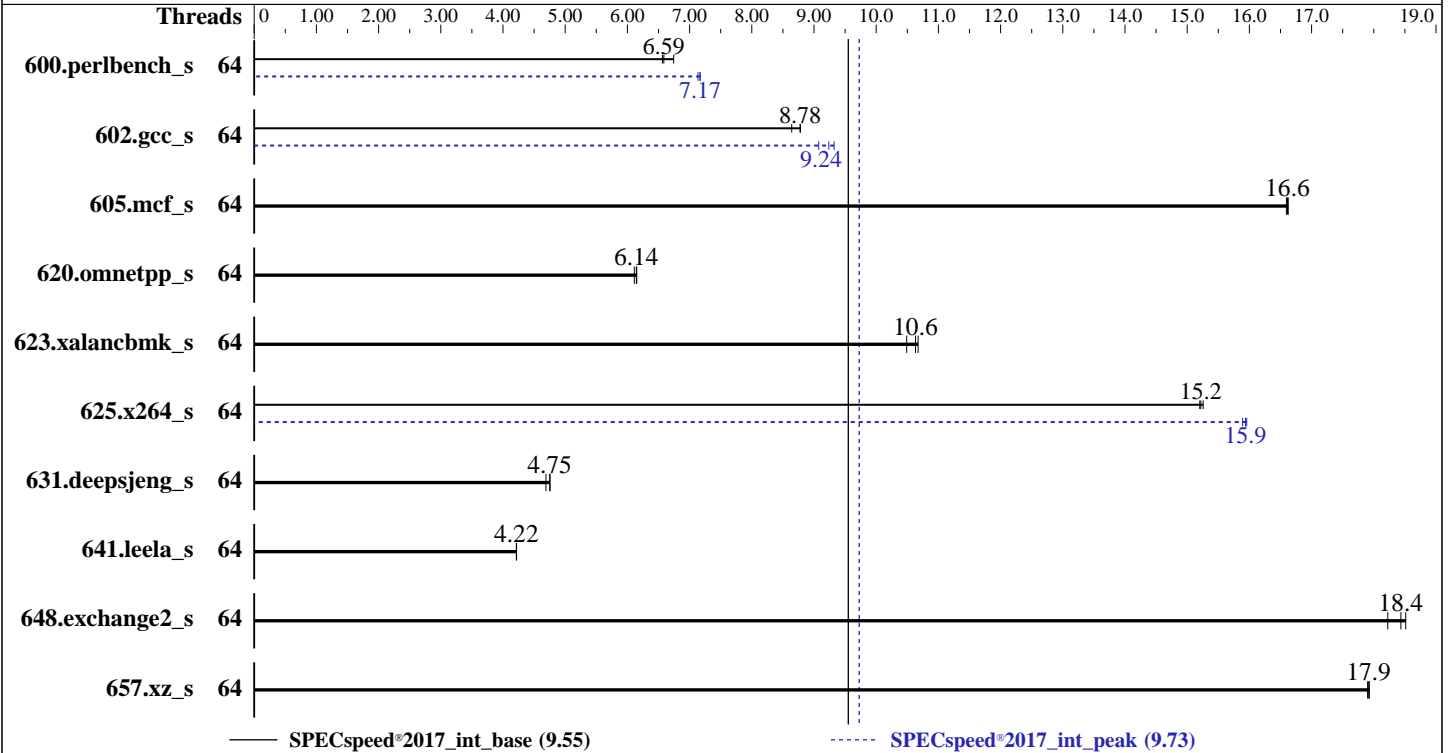
SPECspeed®2017\_int\_base = 9.55

**Invento i6000 (Intel Xeon Gold 5416S)**

SPECspeed®2017\_int\_peak = 9.73

**CPU2017 License:** 6221  
**Test Sponsor:** Meganet  
**Tested by:** Fusionstor system

**Test Date:** Oct-2024  
**Hardware Availability:** Feb-2023  
**Software Availability:** Oct-2024



## Hardware

CPU Name: Intel Xeon Gold 5416S  
 Max MHz: 4000  
 Nominal: 2000  
 Enabled: 88 cores, 2 chips, 2 threads/core  
 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: 30 MB I+D on chip per chip  
 Other: None  
 Memory: 1 TB (16 x 64 GB 2Rx4 PC5-4800B-R, running at 4400)  
 Storage: 960 GB SATA SSD  
 Other: CPU Cooling: Air

## Software

OS: Ubuntu 22.04.5 LTS  
 6.8.0-47-generic  
 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 EG0.10.01 released Mar-2024  
 File System: ext4  
 System State: Run level 5 (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	64	<b>270</b>	<b>6.59</b>	263	6.74	270	6.56	64	249	7.14	248	7.17	<b>248</b>	<b>7.17</b>
602.gcc_s	64	461	8.64	453	8.78	<b>454</b>	<b>8.78</b>	64	427	9.32	439	9.08	<b>431</b>	<b>9.24</b>
605.mcf_s	64	<b>284</b>	<b>16.6</b>	284	16.6	284	16.6	64	<b>284</b>	<b>16.6</b>	284	16.6	284	16.6
620.omnetpp_s	64	265	6.15	267	6.11	<b>265</b>	<b>6.14</b>	64	265	6.15	267	6.11	<b>265</b>	<b>6.14</b>
623.xalancbmk_s	64	135	10.5	<b>133</b>	<b>10.6</b>	133	10.7	64	135	10.5	<b>133</b>	<b>10.6</b>	133	10.7
625.x264_s	64	116	15.2	116	15.3	<b>116</b>	<b>15.2</b>	64	111	15.9	<b>111</b>	<b>15.9</b>	111	16.0
631.deepsjeng_s	64	301	4.76	305	4.69	<b>302</b>	<b>4.75</b>	64	301	4.76	305	4.69	<b>302</b>	<b>4.75</b>
641.leela_s	64	404	4.22	<b>405</b>	<b>4.22</b>	405	4.21	64	404	4.22	<b>405</b>	<b>4.22</b>	405	4.21
648.exchange2_s	64	159	18.5	<b>159</b>	<b>18.4</b>	161	18.2	64	159	18.5	<b>159</b>	<b>18.4</b>	161	18.2
657.xz_s	64	<b>345</b>	<b>17.9</b>	345	17.9	345	17.9	64	<b>345</b>	<b>17.9</b>	345	17.9	345	17.9

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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 =  
"/home/speccpu/cpu2017/lib/intel64:/home/speccpu/cpu2017/lib/ia32:/home/speccpu/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  
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  
SNC (Sub NUMA) set to Enable SNC2 (2-Clusters)  
  
Sysinfo program /home/speccpu/cpu2017/bin/sysinfo  
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197  
running on intel Wed Oct 23 18:43:29 2024

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## Platform Notes (Continued)

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 (249.11-0ubuntu3.12)
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. 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 intel 6.8.0-47-generic #47~22.04.1-Ubuntu SMP PREEMPT_DYNAMIC Wed Oct  2 16:16:55 UTC 2 x86_64 x86_64
x86_64 GNU/Linux

```

```

2. w
18:43:29 up 1:05,  2 users,  load average: 0.75, 0.26, 0.09
USER      TTY      FROM            LOGIN@   IDLE   JCPU   PCPU WHAT
intel     :1       :1              18:40   ?xdm?  6:25   0.00s /usr/libexec/gdm-x-session --run-script env
GNOME_SHELL_SESSION_MODE=ubuntu /usr/bin/gnome-session --session=ubuntu
intel     pts/4   -               18:43   4.00s  1.60s  0.05s sudo
./reportable-ic2023.2.3-lin-sapphirerapids-speed-smt-on-20231121.sh

```

```

3. Username
From environment variable $USER:  root
From the command 'logname':      intel

```

```

4. ulimit -a
time(seconds)      unlimited
file(blocks)       unlimited
data(kbytes)       unlimited
stack(kbytes)      unlimited
coredump(blocks)   0
memory(kbytes)     unlimited
locked memory(kbytes) 132061220
process            4126609

```

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## Platform Notes (Continued)

```
nfiles          1024
vmemory(kbytes) unlimited
locks           unlimited
rtprio          0
```

```
-----
5. sysinfo process ancestry
/sbin/init splash
/lib/systemd/systemd --user
/usr/libexec/gnome-terminal-server
bash
sudo ./reportable-ic2023.2.3-lin-sapphirerapids-speed-smt-on-20231121.sh
sudo ./reportable-ic2023.2.3-lin-sapphirerapids-speed-smt-on-20231121.sh
sh ./reportable-ic2023.2.3-lin-sapphirerapids-speed-smt-on-20231121.sh
runcpu --nobuild --action validate --define default-platform-flags -c
  ic2023.2.3-lin-sapphirerapids-speed-20231121.cfg --define cores=32 --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-sapphirerapids-speed-20231121.cfg --define cores=32 --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/CPU2017.018/templots/preenv.intspeed.018.0.log --lognum 018.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/speccpu/cpu2017
-----
```

```
6. /proc/cpuinfo
model name      : Intel(R) Xeon(R) Gold 5416S
vendor_id      : GenuineIntel
cpu family     : 6
model          : 143
stepping       : 8
microcode      : 0x2b0005c0
bugs           : spectre_v1 spectre_v2 spec_store_bypass swapgs eibrs_pbrsb bhi
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 2.37.2:
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 5416S
CPU family:            6
Model:                 143
Thread(s) per core:    2
-----
```

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## Platform Notes (Continued)

```

Core(s) per socket:      16
Socket(s):              2
Stepping:              8
CPU max MHz:           4000.0000
CPU min MHz:           800.0000
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 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 intel_ppin cdp_l2 ssbd mba ibrs ibpb stibp
                        ibrs_enhanced tpr_shadow flexpriority ept vpid ept_ad fsgsbase
                        tsc_adjust bmi1 avx2 smep bmi2 erms invpcid 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 hfi
                        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:            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):        4
NUMA node0 CPU(s):   0-7,32-39
NUMA node1 CPU(s):   8-15,40-47
NUMA node2 CPU(s):   16-23,48-55
NUMA node3 CPU(s):   24-31,56-63
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 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/swaps barriers and __user pointer sanitization
Vulnerability Spectre v2:          Mitigation; Enhanced / Automatic IBRS; IBPB conditional; RSB filling;
                                    PBRSE-eIBRS SW sequence; 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	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

8. numactl --hardware

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## Platform Notes (Continued)

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

```
available: 4 nodes (0-3)
node 0 cpus: 0-7,32-39
node 0 size: 257605 MB
node 0 free: 255890 MB
node 1 cpus: 8-15,40-47
node 1 size: 258042 MB
node 1 free: 256723 MB
node 2 cpus: 16-23,48-55
node 2 size: 258042 MB
node 2 free: 257089 MB
node 3 cpus: 24-31,56-63
node 3 size: 258037 MB
node 3 free: 256980 MB
node distances:
node  0  1  2  3
  0:  10  12  21  21
  1:  12  10  21  21
  2:  21  21  10  12
  3:  21  21  12  10
```

9. /proc/meminfo  
MemTotal: 1056489784 kB

10. who -r  
run-level 5 Oct 23 17:39

11. Systemd service manager version: systemd 249 (249.11-0ubuntu3.12)  
Default Target Status  
graphical 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 ModemManager NetworkManager NetworkManager-dispatcher NetworkManager-wait-online  
accounts-daemon anacron anydesk apparmor avahi-daemon bluetooth console-setup cron cups  
cups-browsed dmesg e2scrub\_reap getty@ gpu-manager grub-common grub-initrd-fallback  
irqbalance kerneloops keyboard-setup networkd-dispatcher openvpn power-profiles-daemon  
rsyslog secureboot-db setvtrgb snapd ssh switcheroo-control systemd-oond systemd-pstore  
systemd-resolved systemd-timesyncd teamviewerd thermald ua-reboot-cmds ubuntu-advantage  
udisks2 ufw unattended-upgrades wpa\_supplicant  
enabled-runtime netplan-ovs-cleanup systemd-fsck-root systemd-remount-fs  
disabled acpid brltty console-getty debug-shell nftables openvpn-client@ openvpn-server@ openvpn@  
rsync rtkit-daemon serial-getty@ speech-dispatcherd systemd-boot-check-no-failures  
systemd-network-generator systemd-networkd systemd-networkd-wait-online systemd-sysext  
systemd-time-wait-sync tlp upower wpa\_supplicant-nl80211@ wpa\_supplicant-wired@  
wpa\_supplicant@  
generated apport cpufrequtils loadcpufreq speech-dispatcher  
indirect saned@ spice-vdagentd uidd  
masked alsa-utils cryptdisks cryptdisks-early hwclock pulseaudio-enable-autospawn rc rcS saned  
screen-cleanup sudo systemd-rfkill x11-common

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## Platform Notes (Continued)

-----  
14. Linux kernel boot-time arguments, from /proc/cmdline  
BOOT\_IMAGE=/boot/vmlinuz-6.8.0-47-generic  
root=UUID=073562bb-1438-42b9-adfa-6a6f7f3d3559  
ro  
quiet  
splash  
vt.handoff=7  
-----

-----  
15. cpupower frequency-info  
analyzing CPU 48:  
current policy: frequency should be within 800 MHz and 4.00 GHz.  
The governor "ondemand" may decide which speed to use  
within this range.  
boost state support:  
Supported: yes  
Active: yes  
-----

-----  
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  
max\_ptes\_none 511  
max\_ptes\_shared 256  
max\_ptes\_swap 64  
pages\_to\_scan 4096  
scan\_sleep\_millisecs 10000  
-----

-----  
19. OS release  
-----

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## Platform Notes (Continued)

From /etc/\*-release /etc/\*-version  
os-release Ubuntu 22.04.5 LTS

-----  
20. Disk information  
SPEC is set to: /home/speccpu/cpu2017  
Filesystem Type Size Used Avail Use% Mounted on  
/dev/sda2 ext4 879G 684G 150G 83% /  
-----

21. /sys/devices/virtual/dmi/id  
Vendor: Fusionstor  
Product: Invento\_i6000  
Product Family: SG\_Intel\_EagleStream  
Serial: HQ3110001BDA03CD0002  
-----

22. dmidecode  
Additional information from dmidecode 3.3 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 NO DIMM NO DIMM  
16x Samsung M321R8GA0BB0-CQKZJ 64 GB 2 rank 4800, configured at 4400  
-----

23. BIOS  
(This section combines info from /sys/devices and dmidecode.)  
BIOS Vendor: American Megatrends International, LLC.  
BIOS Version: EG0.10.01  
BIOS Date: 03/22/2024  
BIOS Revision: 5.32  
-----

## 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.  
-----





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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:

```
-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
```



# SPEC CPU®2017 Integer Speed Result

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**Fusionstor**  
(Test Sponsor: Meganet)

SPECspeed®2017\_int\_base = 9.55

**Invento i6000 (Intel Xeon Gold 5416S)**

SPECspeed®2017\_int\_peak = 9.73

**CPU2017 License:** 6221  
**Test Sponsor:** Meganet  
**Tested by:** Fusionstor system

**Test Date:** Oct-2024  
**Hardware Availability:** Feb-2023  
**Software Availability:** Oct-2024

## 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: -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

```

(Continued on next page)



# SPEC CPU®2017 Integer Speed Result

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**Test Date:** Oct-2024  
**Hardware Availability:** Feb-2023  
**Software Availability:** Oct-2024

## Peak Optimization Flags (Continued)

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-ic2023p2-official-linux64.html>

<http://www.spec.org/cpu2017/flags/Fusionstor-Platform-Flags-Intel-ICX-rev6.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/Fusionstor-Platform-Flags-Intel-ICX-rev6.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 2024-10-23 09:13:28-0400.  
Report generated on 2025-01-07 11:51:07 by CPU2017 PDF formatter v6716.  
Originally published on 2025-01-07.