



SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Fusionstor
(Test Sponsor: Meganet)

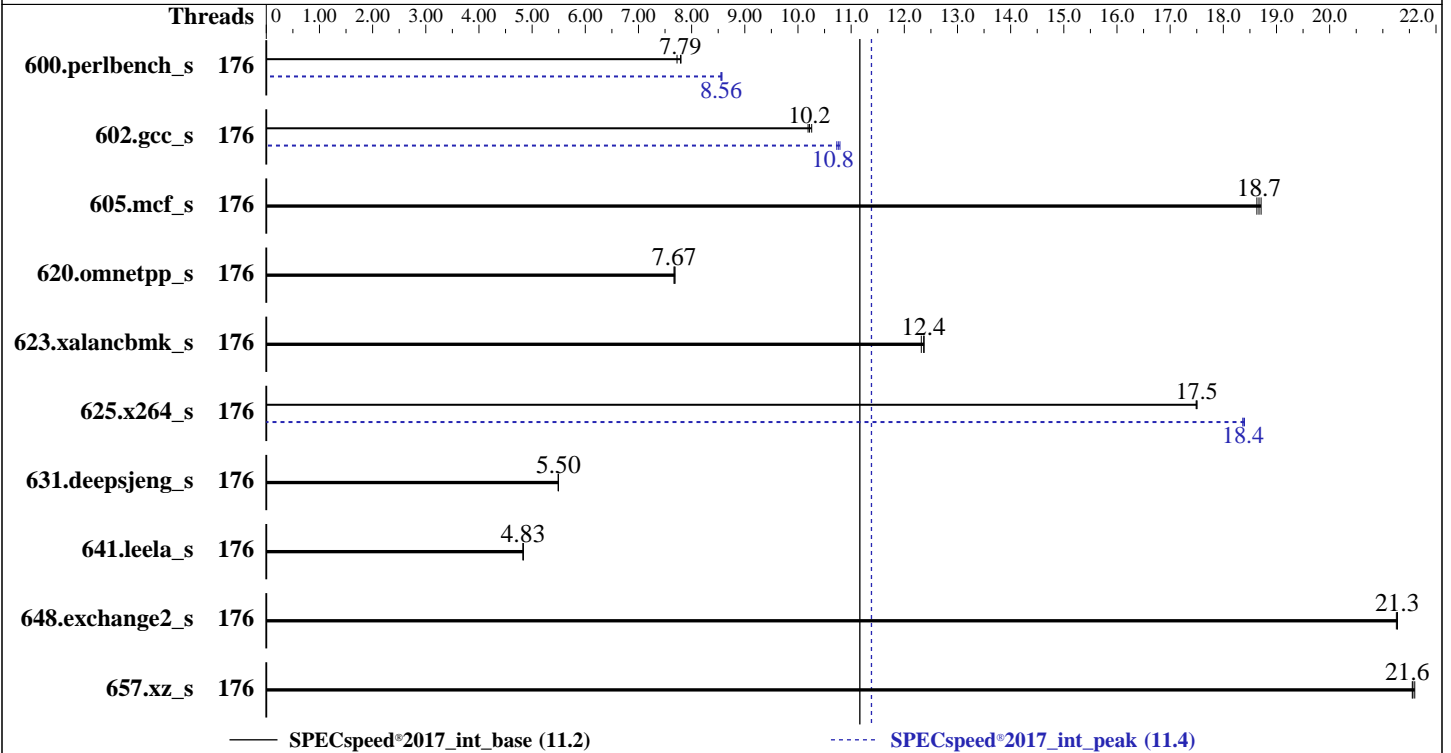
SPECspeed®2017_int_base = 11.2

Invento i6000 (Intel Xeon Platinum 8458P)

SPECspeed®2017_int_peak = 11.4

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 Platinum 8458P
Max MHz: 3800
Nominal: 2700
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: 82.5 MB I+D on chip per chip
Other: None
Memory: 1 TB (16 x 64 GB 2Rx4 PC5-4800B-R)
Storage: 960 GB SATA SSD
Other: CPU Cooling: Air

Software

OS: Ubuntu 22.04.4 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 and OS set to prefer performance at the cost of additional power usage



SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Fusionstor
(Test Sponsor: Meganet)

SPECspeed®2017_int_base = 11.2

Invento i6000 (Intel Xeon Platinum 8458P)

SPECspeed®2017_int_peak = 11.4

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

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

Results Table

Benchmark	Base						Peak							
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
600.perlbench_s	176	228	7.80	230	7.73	228	7.79	176	207	8.56	208	8.55	207	8.57
602.gcc_s	176	390	10.2	388	10.3	391	10.2	176	370	10.8	371	10.7	369	10.8
605.mcf_s	176	253	18.7	252	18.7	253	18.6	176	253	18.7	252	18.7	253	18.6
620.omnetpp_s	176	213	7.67	212	7.69	213	7.67	176	213	7.67	212	7.69	213	7.67
623.xalancbmk_s	176	115	12.4	115	12.3	115	12.4	176	115	12.4	115	12.3	115	12.4
625.x264_s	176	101	17.5	101	17.5	101	17.5	176	96.0	18.4	95.9	18.4	96.0	18.4
631.deepsjeng_s	176	261	5.50	261	5.49	261	5.50	176	261	5.50	261	5.49	261	5.50
641.leela_s	176	353	4.83	353	4.83	353	4.83	176	353	4.83	353	4.83	353	4.83
648.exchange2_s	176	138	21.3	138	21.3	138	21.3	176	138	21.3	138	21.3	138	21.3
657.xz_s	176	287	21.6	286	21.6	287	21.6	176	287	21.6	286	21.6	287	21.6

SPECspeed®2017_int_base = **11.2**

SPECspeed®2017_int_peak = **11.4**

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 SNC4 (4-Clusters)

Sysinfo program /home/speccpu/cpu2017/bin/sysinfo
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
running on intel Fri Oct 18 12:30:16 2024

(Continued on next page)



SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Fusionstor
(Test Sponsor: Meganet)

SPECspeed®2017_int_base = 11.2

Invento i6000 (Intel Xeon Platinum 8458P)

SPECspeed®2017_int_peak = 11.4

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

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

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
12:30:16 up 19:02, 2 users, load average: 0.11, 0.06, 0.01
USER      TTY      FROM            LOGIN@   IDLE   JCPU   PCPU WHAT
intel    :1       :1              Thu18   ?xdm?  30:03  0.00s /usr/libexec/gdm-x-session --run-script env
GNOME_SHELL_SESSION_MODE=ubuntu /usr/bin/gnome-session --session=ubuntu
intel    pts/1   -               12:30   3.00s  0.99s  0.00s 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) 132055920
process            4126443
```

(Continued on next page)



SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Fusionstor
(Test Sponsor: Meganet)

SPECspeed®2017_int_base = 11.2

Invento i6000 (Intel Xeon Platinum 8458P)

SPECspeed®2017_int_peak = 11.4

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

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

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=88 --tune base,peak -o all --define
intspeedaffinity --define smt-on --define drop_caches intspeerd
runcpu --nobuild --action validate --define default-platform-flags --configfile
ic2023.2.3-lin-sapphirerapids-speed-20231121.cfg --define cores=88 --tune base,peak --output_format all
--define intspeerdaffinity --define smt-on --define drop_caches --nopower --runmode speed --tune base:peak
--size refspeerd intspeerd --nopreenv --note-preenv --logfile
$SPEC/tmp/CPU2017.012/templots/preenv.intspeerd.012.0.log --lognum 012.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/speccpu/cpu2017
-----
```

```
6. /proc/cpuinfo
model name      : Intel(R) Xeon(R) Platinum 8458P
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     : 44
siblings      : 88
2 physical ids (chips)
176 processors (hardware threads)
physical id 0: core ids 0-43
physical id 1: core ids 0-43
physical id 0: apicids 0-87
physical id 1: apicids 128-215
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):                176
On-line CPU(s) list:   0-175
Vendor ID:             GenuineIntel
Model name:            Intel(R) Xeon(R) Platinum 8458P
CPU family:            6
Model:                 143
Thread(s) per core:    2
```

(Continued on next page)



SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Fusionstor
(Test Sponsor: Meganet)

SPECspeed®2017_int_base = 11.2

Invento i6000 (Intel Xeon Platinum 8458P)

SPECspeed®2017_int_peak = 11.4

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

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

Platform Notes (Continued)

```

Core(s) per socket:          44
Socket(s):                  2
Stepping:                   8
CPU max MHz:                3800.0000
CPU min MHz:                800.0000
BogoMIPS:                   5400.00
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:                  4.1 MiB (88 instances)
L1i cache:                  2.8 MiB (88 instances)
L2 cache:                   176 MiB (88 instances)
L3 cache:                   165 MiB (2 instances)
NUMA node(s):              8
NUMA node0 CPU(s):         0-10,88-98
NUMA node1 CPU(s):         11-21,99-109
NUMA node2 CPU(s):         22-32,110-120
NUMA node3 CPU(s):         33-43,121-131
NUMA node4 CPU(s):         44-54,132-142
NUMA node5 CPU(s):         55-65,143-153
NUMA node6 CPU(s):         66-76,154-164
NUMA node7 CPU(s):         77-87,165-175
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	4.1M	12	Data	1	64	1	64
L1i	32K	2.8M	8	Instruction	1	64	1	64
L2	2M	176M	16	Unified	2	2048	1	64

(Continued on next page)



SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Fusionstor
(Test Sponsor: Meganet)

SPECspeed®2017_int_base = 11.2

Invento i6000 (Intel Xeon Platinum 8458P)

SPECspeed®2017_int_peak = 11.4

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

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

Platform Notes (Continued)

L3 82.5M 165M 15 Unified 3 90112 1 64

8. numactl --hardware

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

```

available: 8 nodes (0-7)
node 0 cpus: 0-10,88-98
node 0 size: 128622 MB
node 0 free: 127021 MB
node 1 cpus: 11-21,99-109
node 1 size: 129016 MB
node 1 free: 128330 MB
node 2 cpus: 22-32,110-120
node 2 size: 129016 MB
node 2 free: 128026 MB
node 3 cpus: 33-43,121-131
node 3 size: 129016 MB
node 3 free: 128402 MB
node 4 cpus: 44-54,132-142
node 4 size: 129016 MB
node 4 free: 128480 MB
node 5 cpus: 55-65,143-153
node 5 size: 129016 MB
node 5 free: 128465 MB
node 6 cpus: 66-76,154-164
node 6 size: 128973 MB
node 6 free: 128520 MB
node 7 cpus: 77-87,165-175
node 7 size: 129008 MB
node 7 free: 128514 MB
node distances:
node  0  1  2  3  4  5  6  7
0:  10  12  12  12  21  21  21  21
1:  12  10  12  12  21  21  21  21
2:  12  12  10  12  21  21  21  21
3:  12  12  12  10  21  21  21  21
4:  21  21  21  21  10  12  12  12
5:  21  21  21  21  12  10  12  12
6:  21  21  21  21  12  12  10  12
7:  21  21  21  21  12  12  12  10

```

9. /proc/meminfo

MemTotal: 1056447388 kB

10. who -r

run-level 5 Oct 17 17:28

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

(Continued on next page)



SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Fusionstor
(Test Sponsor: Meganet)

SPECspeed®2017_int_base = 11.2

Invento i6000 (Intel Xeon Platinum 8458P)

SPECspeed®2017_int_peak = 11.4

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

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

Platform Notes (Continued)

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-oom 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

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 52:
  current policy: frequency should be within 800 MHz and 3.80 GHz.
                  The governor "performance" 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

(Continued on next page)



SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Fusionstor
(Test Sponsor: Meganet)

SPECspeed®2017_int_base = 11.2

Invento i6000 (Intel Xeon Platinum 8458P)

SPECspeed®2017_int_peak = 11.4

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

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

Platform Notes (Continued)

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
From /etc/*-release /etc/*-version
os-release Ubuntu 22.04.4 LTS

20. Disk information
SPEC is set to: /home/speccpu/cpu2017
Filesystem Type Size Used Avail Use% Mounted on
/dev/sda2 ext4 879G 678G 157G 82% /

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

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)
=====

(Continued on next page)



SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Fusionstor
(Test Sponsor: Meganet)

SPECspeed®2017_int_base = 11.2

Invento i6000 (Intel Xeon Platinum 8458P)

SPECspeed®2017_int_peak = 11.4

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

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

Compiler Version Notes (Continued)

| 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

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



SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Fusionstor
(Test Sponsor: Meganet)

SPECspeed®2017_int_base = 11.2

Invento i6000 (Intel Xeon Platinum 8458P)

SPECspeed®2017_int_peak = 11.4

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

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

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

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
```

(Continued on next page)



SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Fusionstor
(Test Sponsor: Meganet)

SPECspeed®2017_int_base = 11.2

Invento i6000 (Intel Xeon Platinum 8458P)

SPECspeed®2017_int_peak = 11.4

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

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

Peak Optimization Flags (Continued)

600.perlbench_s (continued):

```
-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:

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>



SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Fusionstor
(Test Sponsor: Meganet)

SPECspeed®2017_int_base = 11.2

Invento i6000 (Intel Xeon Platinum 8458P)

SPECspeed®2017_int_peak = 11.4

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

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

SPEC CPU and SPECspeed are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

For questions about this result, please contact the tester. For other inquiries, please contact info@spec.org.

Tested with SPEC CPU®2017 v1.1.9 on 2024-10-18 03:00:15-0400.
Report generated on 2025-01-07 11:51:06 by CPU2017 PDF formatter v6716.
Originally published on 2025-01-07.