



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

xFusion

SPECrate®2017_int_base = 444

xFusion 2288H V6 (Intel Xeon Gold 6338)

SPECrate®2017_int_peak = Not Run

CPU2017 License: 6488

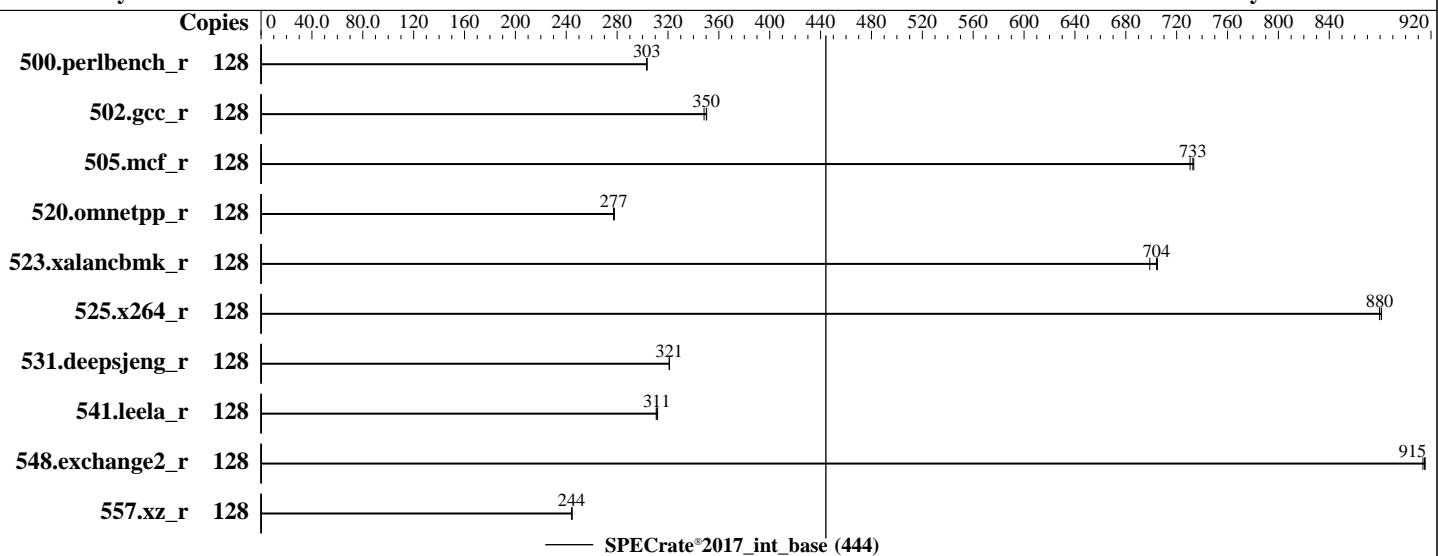
Test Sponsor: xFusion

Tested by: xFusion

Test Date: Jun-2023

Hardware Availability: Apr-2021

Software Availability: Dec-2022



Hardware

CPU Name: Intel Xeon Gold 6338
Max MHz: 3200
Nominal: 2000
Enabled: 64 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: 48 MB I+D on chip per chip
Other: None
Memory: 512 GB (16 x 32 GB 2Rx4 PC4-3200AA-R)
Storage: 1 x 960 GB SATA SSD
Other: None

OS:

Red Hat Enterprise Linux 8.4 (Ootpa)

4.18.0-305.el8.x86_64

C/C++: Version 2023.0 of Intel oneAPI DPC++/C++ Compiler for Linux;

Fortran: Version 2023.0 of Intel Fortran Compiler for Linux;

No

Version 1.55 Released May-2023

xfs

System State:

Run level 3 (multi-user)

64-bit

Base Pointers: Not Applicable

Peak Pointers: None

Other: None

Parallel:

Power Management: BIOS set to prefer performance at the cost of additional power usage



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

xFusion

SPECrate®2017_int_base = 444

xFusion 2288H V6 (Intel Xeon Gold 6338)

SPECrate®2017_int_peak = Not Run

CPU2017 License: 6488

Test Date: Jun-2023

Test Sponsor: xFusion

Hardware Availability: Apr-2021

Tested by: xFusion

Software Availability: Dec-2022

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
500.perlbench_r	128	672	303	672	303	672	303							
502.gcc_r	128	520	348	518	350	517	350							
505.mcf_r	128	282	733	282	733	283	731							
520.omnetpp_r	128	606	277	604	278	606	277							
523.xalancbmk_r	128	192	704	193	699	192	705							
525.x264_r	128	255	880	254	881	255	880							
531.deepsjeng_r	128	457	321	457	321	457	321							
541.leela_r	128	680	312	682	311	681	311							
548.exchange2_r	128	367	914	366	915	367	915							
557.xz_r	128	565	245	566	244	566	244							

SPECrate®2017_int_base = 444

SPECrate®2017_int_peak = Not Run

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), SPEC will no longer publish results using this optimization.

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

Submit Notes

The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl commands to bind each copy to a specific processor. For details, please see the config file.

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:

```
LD_LIBRARY_PATH =
    "/spec2017-icc2023.0/lib/intel64:/spec2017-icc2023.0/lib/ia32:/spec2017-icc2023.0/jet5.0.1-32"
MALLOC_CONF = "retain:true"
```



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

xFusion

xFusion 2288H V6 (Intel Xeon Gold 6338)

SPECrate®2017_int_base = 444

SPECrate®2017_int_peak = Not Run

CPU2017 License: 6488

Test Date: Jun-2023

Test Sponsor: xFusion

Hardware Availability: Apr-2021

Tested by: xFusion

Software Availability: Dec-2022

General Notes

Binaries compiled on a system with 2x Intel Xeon Platinum 8280M CPU + 384GB RAM memory using Red Hat Enterprise Linux 8.4

Transparent Huge Pages enabled by default

Prior to runcpu invocation

Filesystem page cache synced and cleared with:

sync; echo 3 > /proc/sys/vm/drop_caches

runcpu command invoked through numactl i.e.:

numactl --interleave=all runcpu <etc>

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.

Platform Notes

BIOS configuration:

Performance Profile Set to Performance

SNC Set to Enabled SNC2 (2-clusters)

Sysinfo program /spec2017-icc2023.0/bin/sysinfo

Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197 running on localhost.localdomain Thu Jun 15 11:58:53 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 239 (239-45.el8)
 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. Kernel self-reported vulnerability status, from /sys/devices/system/cpu/vulnerabilities
 21. Disk information
 22. /sys/devices/virtual/dmi/id
 23. dmidecode
 24. BIOS
-

1. uname -a
Linux localhost.localdomain 4.18.0-305.el8.x86_64 #1 SMP Thu Apr 29 08:54:30 EDT 2021 x86_64 x86_64 x86_64

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

xFusion

SPECrate®2017_int_base = 444

xFusion 2288H V6 (Intel Xeon Gold 6338)

SPECrate®2017_int_peak = Not Run

CPU2017 License: 6488

Test Date: Jun-2023

Test Sponsor: xFusion

Hardware Availability: Apr-2021

Tested by: xFusion

Software Availability: Dec-2022

Platform Notes (Continued)

GNU/Linux

2. w
11:58:53 up 27 min, 1 user, load average: 0.00, 0.01, 0.12
USER TTY FROM LOGIN@ IDLE JCPU PCPU WHAT
root tty1 - 11:48 7.00s 1.64s 0.09s -bash

3. Username
From environment variable \$USER: root

4. ulimit -a
core file size (blocks, -c) 0
data seg size (kbytes, -d) unlimited
scheduling priority (-e) 0
file size (blocks, -f) unlimited
pending signals (-i) 2060515
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) 2060515
virtual memory (kbytes, -v) unlimited
file locks (-x) unlimited

5. sysinfo process ancestry
/usr/lib/systemd/systemd --switched-root --system --deserialize 17
login -- root
-bash
-bash
runcpu --define default-platform-flags --copies 128 -c ic2023.0-lin-core-avx512-rate-20221201.cfg --define
smt-on --define cores=64 --define physicalfirst --define invoke_with_interleave --define drop_caches
--tune base -o all intrate
runcpu --define default-platform-flags --copies 128 --configfile ic2023.0-lin-core-avx512-rate-20221201.cfg
--define smt-on --define cores=64 --define physicalfirst --define invoke_with_interleave --define
drop_caches --tune base --output_format all --nopower --runmode rate --tune base --size refrate intrate
--nopreenv --note-preenv --logfile \$SPEC/tmp/CPU2017.009/templogs/preenv.intrate.009.0.log --lognum 009.0
--from_runcpu 2
specperl \$SPEC/bin/sysinfo
\$SPEC = /spec2017-icc2023.0

6. /proc/cpuinfo
model name : Intel(R) Xeon(R) Gold 6338 CPU @ 2.00GHz
vendor_id : GenuineIntel
cpu family : 6
model : 106
stepping : 6
microcode : 0xd000363
bugs : spectre_v1 spectre_v2 spec_store_bypass swapgs
cpu cores : 32
siblings : 64
2 physical ids (chips)

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

xFusion

SPECrate®2017_int_base = 444

xFusion 2288H V6 (Intel Xeon Gold 6338)

SPECrate®2017_int_peak = Not Run

CPU2017 License: 6488

Test Date: Jun-2023

Test Sponsor: xFusion

Hardware Availability: Apr-2021

Tested by: xFusion

Software Availability: Dec-2022

Platform Notes (Continued)

```
128 processors (hardware threads)
physical id 0: core ids 0-31
physical id 1: core ids 0-31
physical id 0: apicids 0-63
physical id 1: apicids 128-191
```

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 2.32.1:

```
Architecture:          x86_64
CPU op-mode(s):       32-bit, 64-bit
Byte Order:           Little Endian
CPU(s):               128
On-line CPU(s) list: 0-127
Thread(s) per core:  2
Core(s) per socket:  32
Socket(s):            2
NUMA node(s):         4
Vendor ID:            GenuineIntel
BIOS Vendor ID:      Intel(R) Corporation
CPU family:           6
Model:                106
Model name:           Intel(R) Xeon(R) Gold 6338 CPU @ 2.00GHz
BIOS Model name:     Intel(R) Xeon(R) Gold 6338 CPU @ 2.00GHz
Stepping:              6
CPU MHz:              2600.597
BogoMIPS:             4000.00
Virtualization:       VT-x
L1d cache:            48K
L1i cache:            32K
L2 cache:             1280K
L3 cache:             49152K
NUMA node0 CPU(s):    0-15,64-79
NUMA node1 CPU(s):    16-31,80-95
NUMA node2 CPU(s):    32-47,96-111
NUMA node3 CPU(s):    48-63,112-127
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 aperfmpfperf pn
                      pcimulqdq dtes64 ds_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtrp 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 invpcid_single ssbd mba ibrs ibpb stibp
                      ibrs_enhanced tpr_shadow vnmi flexpriority ept vpid ept_ad fsgsbase tsc_adjust bmil
                      hle avx2 smep bmi2 erms invpcid cqmq rdt_a avx512f avx512dq rdseed adx smap avx512ifma
                      clflushopt clwb intel_pt avx512cd sha_ni avx512bw avx512vl xsaveopt xsavec xgetbv1
                      xsaves cqmq_llc cqmq_occup_llc cqmq_mbm_total cqmq_mbm_local split_lock_detect wbnoinvd
                      dtherm ida arat pln pts hwp_epp avx512vbmi umip pkru ospke avx512_vbmi2 gfni vaes
                      vpclmulqdq avx512_vnni avx512_bitalg tme avx512_vpopcntdq la57 rdpid fsrm md_clear
                      pconfig flush_lld arch_capabilities
```

8. numactl --hardware

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

```
available: 4 nodes (0-3)
node 0 cpus: 0-15,64-95
node 0 size: 128154 MB
node 0 free: 127202 MB
```

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

xFusion

SPECrate®2017_int_base = 444

xFusion 2288H V6 (Intel Xeon Gold 6338)

SPECrate®2017_int_peak = Not Run

CPU2017 License: 6488

Test Date: Jun-2023

Test Sponsor: xFusion

Hardware Availability: Apr-2021

Tested by: xFusion

Software Availability: Dec-2022

Platform Notes (Continued)

```
node 1 cpus: 16-31,80-95
node 1 size: 129017 MB
node 1 free: 128507 MB
node 2 cpus: 32-47,96-111
node 2 size: 128979 MB
node 2 free: 128492 MB
node 3 cpus: 48-63,112-127
node 3 size: 129014 MB
node 3 free: 128506 MB
node distances:
node 0 1 2 3
 0: 10 11 20 20
 1: 11 10 20 20
 2: 20 20 10 11
 3: 20 20 11 10
```

```
9. /proc/meminfo
MemTotal:      527529464 kB
```

```
10. who -r
run-level 3 Jun 15 11:32
```

```
11. Systemd service manager version: systemd 239 (239-45.el8)
Default Target      Status
multi-user          running
```

```
12. Services, from systemctl list-unit-files
STATE      UNIT FILES
enabled    NetworkManager NetworkManager-dispatcher NetworkManager-wait-online atd auditd autovt@ chrony@ crond firewalld getty@ import-state irqbalance iscsi iscsi-onboot kdump libstoragemgmt loadmodules lvm2-monitor mcelog mdmonitor microcode multipathd nis-domainname nvmefc-boot-connections rhsmcertd rsyslog selinux-autorelabel-mark smartd sshd sssd syslog sysstat timedatectl tuned udisks2 vdo
disabled   arp-ethers blk-availability chrony-wait console-getty cpupower debug-shell ebttables iprdump iprinit iprupdate ipsec iscsid iscsiuio kpatch kvm_stat ledmon nftables nvme-autoconnect oddjobd psacct rdisc rhcd rhsm rhsm-facts serial-getty@ sshd-keygen@ systemd-resolved tcscd
generated  SystemTap compile-server gcc-toolset-10-stap-server gcc-toolset-10-systemtap gcc-toolset-9-stap-server gcc-toolset-9-systemtap scripts startup
indirect   sssd-autofs sssd-kcm sssd-nss sssd-pac sssd-pam sssd-ssh sssd-sudo
masked    systemd-timedated
```

```
13. Linux kernel boot-time arguments, from /proc/cmdline
BOOT_IMAGE=(hd0,gpt3)/boot/vmlinuz-4.18.0-305.el8.x86_64
root=UUID=711de346-1631-4b60-a626-37488271d525
ro
crashkernel=auto
resume=UUID=d6a3ac10-1ea1-4e42-a80b-54c427bcad19
rhgb
quiet
```

```
14. cpupower frequency-info
analyzing CPU 0:
  Unable to determine current policy
  boost state support:
```

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

xFusion

xFusion 2288H V6 (Intel Xeon Gold 6338)

SPECrate®2017_int_base = 444

SPECrate®2017_int_peak = Not Run

CPU2017 License: 6488

Test Date: Jun-2023

Test Sponsor: xFusion

Hardware Availability: Apr-2021

Tested by: xFusion

Software Availability: Dec-2022

Platform Notes (Continued)

Supported: yes

Active: yes

15. tuned-adm active

No current active profile.

16. sysctl

kernel.numa_balancing	1
kernel.randomize_va_space	2
vm.compaction_proactiveness	0
vm.dirty_background_bytes	0
vm.dirty_background_ratio	10
vm.dirty_bytes	0
vm.dirty_expire_centisecs	3000
vm.dirty_ratio	20
vm.dirty_writeback_centisecs	500
vm.dirtytime_expire_seconds	43200
vm.extfrag_threshold	500
vm.min_unmapped_ratio	1
vm.nr_hugepages	0
vm.nr_hugepages_mempolicy	0
vm.nr_overcommit_hugepages	0
vm.swappiness	60
vm.watermark_boost_factor	15000
vm.watermark_scale_factor	10
vm.zone_reclaim_mode	0

17. /sys/kernel/mm/transparent_hugepage

defrag	always defer defer+madvise [madvise] never
enabled	[always] madvise never
hpage_pmd_size	2097152
shmem_enabled	always within_size advise [never] deny force

18. /sys/kernel/mm/transparent_hugepage/khugepaged

alloc_sleep_millisecs	60000
defrag	1
max_ptes_none	511
max_ptes_swap	64
pages_to_scan	4096
scan_sleep_millisecs	10000

19. OS release

From /etc/*-release /etc/*-version	
os-release	Red Hat Enterprise Linux 8.4 (Ootpa)
redhat-release	Red Hat Enterprise Linux release 8.4 (Ootpa)
system-release	Red Hat Enterprise Linux release 8.4 (Ootpa)

20. Kernel self-reported vulnerability status, from /sys/devices/system/cpu/vulnerabilities

itlb_multihit	Not affected
l1tf	Not affected
mds	Not affected
meltdown	Not affected
spec_store_bypass	Mitigation: Speculative Store Bypass disabled via prctl and seccomp
specre_v1	Mitigation: usercopy/swapgs barriers and __user pointer sanitization

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

xFusion

SPECrate®2017_int_base = 444

xFusion 2288H V6 (Intel Xeon Gold 6338)

SPECrate®2017_int_peak = Not Run

CPU2017 License: 6488

Test Date: Jun-2023

Test Sponsor: xFusion

Hardware Availability: Apr-2021

Tested by: xFusion

Software Availability: Dec-2022

Platform Notes (Continued)

spectre_v2 Mitigation: Enhanced IBRS, IBPB: conditional, RSB filling
srbds Not affected
tsx_async_abort Not affected
For more information, see the Linux documentation on hardware vulnerabilities, for example
<https://www.kernel.org/doc/html/latest/admin-guide/hw-vuln/index.html>

21. Disk information
SPEC is set to: /spec2017-icc2023.0
Filesystem Type Size Used Avail Use% Mounted on
/dev/sda3 xfs 420G 81G 340G 20% /

22. /sys/devices/virtual/dmi/id
Vendor: XFUSION
Product: 2288H V6
Product Family: Whitley
Serial: Serial

23. 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 M393A4K40DB3-CWE 32 GB 2 rank 3200

24. BIOS
(This section combines info from /sys/devices and dmidecode.)
BIOS Vendor: XFUSION
BIOS Version: 1.55
BIOS Date: 05/09/2023
BIOS Revision: 1.55

Compiler Version Notes

=====

C | 500.perlbench_r(base) 502.gcc_r(base) 505.mcf_r(base) 525.x264_r(base) 557.xz_r(base)

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++ | 520.omnetpp_r(base) 523.xalancbmk_r(base) 531.deepsjeng_r(base) 541.leela_r(base)

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.

=====

Fortran | 548.exchange2_r(base)

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2023.0.0 Build 20221201
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

xFusion

SPECrate®2017_int_base = 444

xFusion 2288H V6 (Intel Xeon Gold 6338)

SPECrate®2017_int_peak = Not Run

CPU2017 License: 6488

Test Date: Jun-2023

Test Sponsor: xFusion

Hardware Availability: Apr-2021

Tested by: xFusion

Software Availability: Dec-2022

Base Compiler Invocation

C benchmarks:

icx

C++ benchmarks:

icpx

Fortran benchmarks:

ifx

Base Portability Flags

500.perlbench_r: -DSPEC_LP64 -DSPEC_LINUX_X64
502.gcc_r: -DSPEC_LP64
505.mcf_r: -DSPEC_LP64
520.omnetpp_r: -DSPEC_LP64
523.xalancbmk_r: -DSPEC_LP64 -DSPEC_LINUX
525.x264_r: -DSPEC_LP64
531.deepsjeng_r: -DSPEC_LP64
541.leela_r: -DSPEC_LP64
548.exchange2_r: -DSPEC_LP64
557.xz_r: -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
-L/usr/local/intel/compiler/2023.0.0/linux/compiler/lib/intel64_lin
-lqkmalloc

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/intel/compiler/2023.0.0/linux/compiler/lib/intel64_lin
-lqkmalloc

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 -auto
-L/usr/local/intel/compiler/2023.0.0/linux/compiler/lib/intel64_lin
-lqkmalloc



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

xFusion

SPECrate®2017_int_base = 444

xFusion 2288H V6 (Intel Xeon Gold 6338)

SPECrate®2017_int_peak = Not Run

CPU2017 License: 6488

Test Date: Jun-2023

Test Sponsor: xFusion

Hardware Availability: Apr-2021

Tested by: xFusion

Software Availability: Dec-2022

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/xFusion-Platform-Settings-ICX-V1.2.2023-07-05.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/xFusion-Platform-Settings-ICX-V1.2.2023-07-05.xml>

SPEC CPU and SPECrate 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 2023-06-15 11:58:53-0400.

Report generated on 2024-01-29 17:54:33 by CPU2017 PDF formatter v6716.

Originally published on 2023-07-04.