



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

xFusion

SPECrate®2017_int_base = 2040

SPECrate®2017_int_peak = 2110

CPU2017 License: 6488

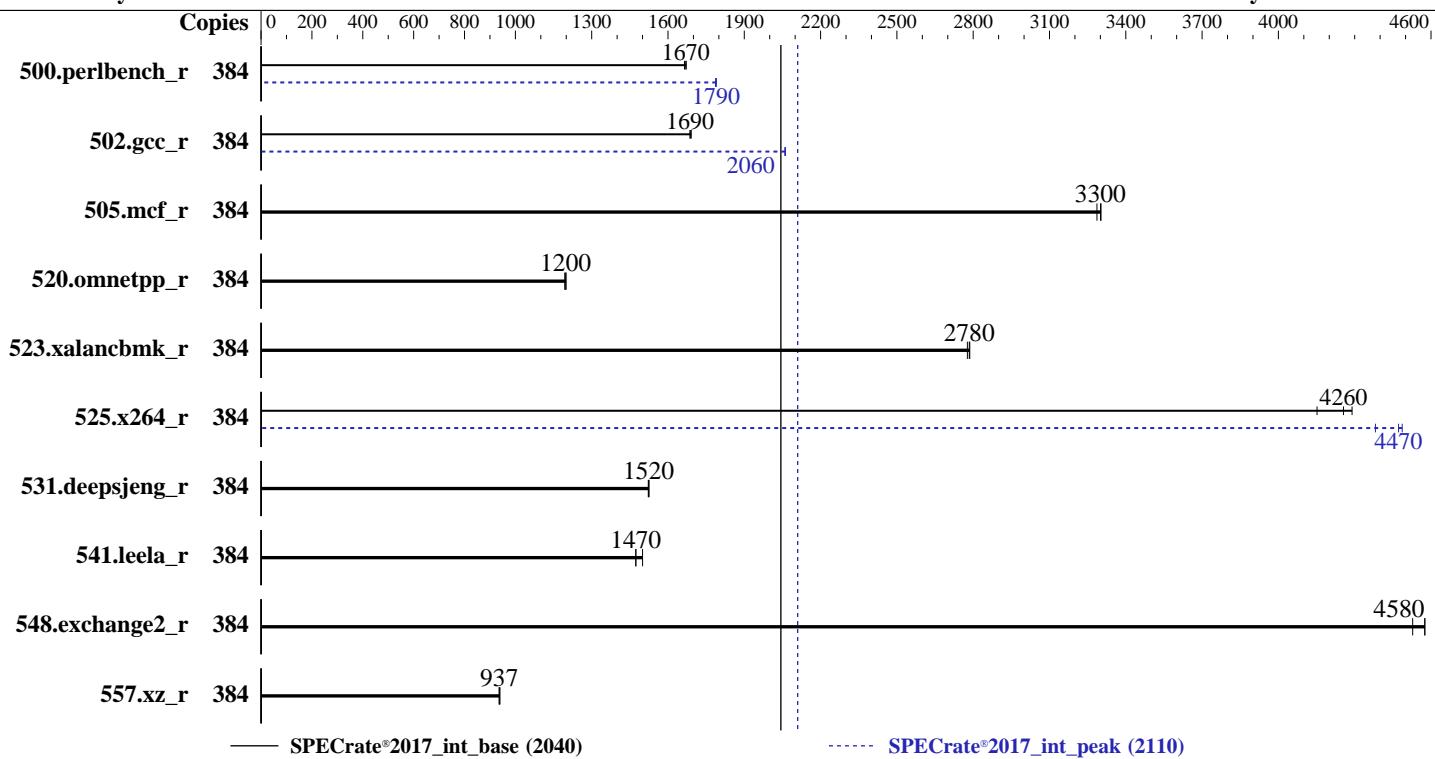
Test Date: Apr-2025

Test Sponsor: xFusion

Hardware Availability: Apr-2025

Tested by: xFusion

Software Availability: Jun-2024



Hardware

CPU Name: Intel Xeon 6972P
 Max MHz: 3900
 Nominal: 2400
 Enabled: 192 cores, 2 chips, 2 threads/core
 Orderable: 2 chips
 Cache L1: 64 KB I + 48 KB D on chip per core
 L2: 2 MB I+D on chip per core
 L3: 480 MB I+D on chip per chip
 Other: None
 Memory: 768 GB (24 x 32 GB 2Rx8 PC5-88/44B-M)
 Storage: 1 x 7.68 TB NVMe SSD
 Other: CPU Cooling: Air

Software

OS: SUSE Linux Enterprise Server 15 SP6 6.4.0-150600.21-default
 Compiler: C/C++: Version 2024.1 of Intel oneAPI DPC++/C++ Compiler for Linux;
 Fortran: Version 2024.1 of Intel Fortran Compiler for Linux;
 Parallel: No
 Firmware: Version 01.01.06.05 Released Feb-2025
 File System: btrfs
 System State: Run level 3 (multi-user)
 Base Pointers: 64-bit
 Peak Pointers: 32/64-bit
 Other: jemalloc memory allocator V5.0.1
 Power Management: BIOS set to prefer performance at the cost of additional power usage.



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

xFusion

SPECrate®2017_int_base = 2040

FusionServer 2288H V8 (Intel Xeon 6972P)

SPECrate®2017_int_peak = 2110

CPU2017 License: 6488

Test Date: Apr-2025

Test Sponsor: xFusion

Hardware Availability: Apr-2025

Tested by: xFusion

Software Availability: Jun-2024

Results Table

Benchmark	Base								Peak							
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
500.perlbench_r	384	367	1660	366	1670	366	1670	384	342	1790	342	1790	342	1790	342	1790
502.gcc_r	384	321	1690	322	1690	322	1690	384	264	2060	264	2060	264	2060	264	2060
505.mcf_r	384	189	3290	188	3300	188	3300	384	189	3290	188	3300	188	3300	188	3300
520.omnetpp_r	384	422	1190	421	1200	420	1200	384	422	1190	421	1200	420	1200	420	1200
523.xalancbmk_r	384	146	2790	146	2780	146	2780	384	146	2790	146	2780	146	2780	146	2780
525.x264_r	384	157	4290	162	4150	158	4260	384	153	4380	150	4490	150	4470		
531.deepsjeng_r	384	289	1520	289	1530	289	1520	384	289	1520	289	1530	289	1520		
541.leela_r	384	432	1470	432	1470	424	1500	384	432	1470	432	1470	424	1500		
548.exchange2_r	384	220	4580	222	4530	220	4580	384	220	4580	222	4530	220	4580		
557.xz_r	384	443	936	441	939	443	937	384	443	936	441	939	443	937		

SPECrate®2017_int_base = 2040

SPECrate®2017_int_peak = 2110

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

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"
Kernel Boot Parameter set with : nohz_full=1-191

Environment Variables Notes

Environment variables set by runcpu before the start of the run:
LD_LIBRARY_PATH = "/root/speccpu/lib/intel64:/root/speccpu/lib/ia32:/root/speccpu/je5.0.1-32"
MALLOC_CONF = "retain:true"

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)

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

xFusion

SPECrate®2017_int_base = 2040

FusionServer 2288H V8 (Intel Xeon 6972P)

SPECrate®2017_int_peak = 2110

CPU2017 License: 6488

Test Date: Apr-2025

Test Sponsor: xFusion

Hardware Availability: Apr-2025

Tested by: xFusion

Software Availability: Jun-2024

General Notes (Continued)

is mitigated in the system as tested and documented.

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:

Performance Profile Set to Performance

SNC Set to Enabled

```
Sysinfo program /root/speccpu/bin/sysinfo
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
running on localhost Thu Apr 10 18:00:24 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. 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 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
18:00:24 up 5:45, 1 user, load average: 62.14, 264.56, 336.50
USER TTY FROM LOGIN@ IDLE JCPU PCPU WHAT
root tty2 - 12:28 5:16m 1.13s 0.02s -bash

3. Username
From environment variable \$USER: root

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

xFusion

SPECrate®2017_int_base = 2040

FusionServer 2288H V8 (Intel Xeon 6972P)

SPECrate®2017_int_peak = 2110

CPU2017 License: 6488

Test Date: Apr-2025

Test Sponsor: xFusion

Hardware Availability: Apr-2025

Tested by: xFusion

Software Availability: Jun-2024

Platform Notes (Continued)

```
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) 3091830
max locked memory        (kbytes, -l) 8192
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) 3091830
virtual memory             (kbytes, -v) unlimited
file locks               (-x) unlimited
```

```
5. sysinfo process ancestry
/usr/lib/systemd/systemd --switched-root --system --deserialize=42
login -- root
-bash
-bash
-bash
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=384 -c
  ic2024.1-lin-sapphirerapids-rate-20240308.cfg --define smt-on --define cores=192 --define physicalfirst
  --define invoke_with_interleave --define drop_caches --tune base,peak -o all intrate
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=384 --configfile
  ic2024.1-lin-sapphirerapids-rate-20240308.cfg --define smt-on --define cores=192 --define physicalfirst
  --define invoke_with_interleave --define drop_caches --tune base,peak --output_format all --nopower
  --runmode rate --tune base:peak --size reframe intrate --nopreenv --note-preenv --logfile
  $SPEC/tmp/CPU2017.002/templogs/preenv.intrate.002.0.log --lognum 002.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /root/speccpu
```

```
6. /proc/cpuinfo
model name      : Intel(R) Xeon(R) 6972P
vendor_id       : GenuineIntel
cpu family      : 6
model          : 173
stepping        : 1
microcode       : 0x1000380
bugs           : spectre_v1 spectre_v2 spec_store_bypass swapgs bhi
cpu cores       : 96
siblings        : 192
2 physical ids (chips)
384 processors (hardware threads)
physical id 0: core ids 0-31,64-95,128-159
physical id 1: core ids 0-31,64-95,128-159
physical id 0: apicids 0-63,128-191,256-319
physical id 1: apicids 512-575,640-703,768-831
Caution: /proc/cpuinfo data regarding chips, cores, and threads is not necessarily reliable, especially for
virtualized systems. Use the above data carefully.
```

```
7. lscpu
```

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

xFusion

SPECrate®2017_int_base = 2040

FusionServer 2288H V8 (Intel Xeon 6972P)

SPECrate®2017_int_peak = 2110

CPU2017 License: 6488

Test Date: Apr-2025

Test Sponsor: xFusion

Hardware Availability: Apr-2025

Tested by: xFusion

Software Availability: Jun-2024

Platform Notes (Continued)

From lscpu from util-linux 2.39.3:

```
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): 384
On-line CPU(s) list: 0-383
Vendor ID: GenuineIntel
BIOS Vendor ID: Intel(R) Corporation
Model name: Intel(R) Xeon(R) 6972P
BIOS Model name: Intel(R) Xeon(R) 6972P CPU @ 2.4GHz
BIOS CPU family: 179
CPU family: 6
Model: 173
Thread(s) per core: 2
Core(s) per socket: 96
Socket(s): 2
Stepping: 1
BogoMIPS: 4800.00
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
nop1 xtopology nonstop_tsc cpuid aperfmpfperf tsc_known_freq pn1
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_13 cat_12 cdp_13 intel_ppin cdp_12 ssbd mba ibrs ibpb stibp
ibrs_enhanced tpr_shadow flexpriority ept vpid ept_ad fsqfsbase
tsc_adjust bmil hle avx2 smep bmi2 erms invpcid rtm cqmq rdt_a avx512f
avx512dq rdseed adx smap avx512ifma clflushopt clwb intel_pt avx512cd
sha_ni avx512bw avx512vl xsaveopt xgetbv1 xsaves cqmq_llc
cqmq_occup_llc cqmq_mbm_total cqmq_mbm_local split_lock_detect
user_shstk avx_vnni avx512_bf16 wbnoinvd dtherm ida arat pln pts hfi
vnmi avx512vbmi umip pkv ospke waitpkg avx512_vbmi2 gfni vaes
vpclmulqdq avx512_vnni avx512_bitalg tme avx512_vpocndq 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_lll arch_capabilities
Virtualization: VT-x
L1d cache: 9 MiB (192 instances)
L1i cache: 12 MiB (192 instances)
L2 cache: 384 MiB (192 instances)
L3 cache: 960 MiB (2 instances)
NUMA node(s): 6
NUMA node0 CPU(s): 0-31,192-223
NUMA node1 CPU(s): 32-63,224-255
NUMA node2 CPU(s): 64-95,256-287
NUMA node3 CPU(s): 96-127,288-319
NUMA node4 CPU(s): 128-159,320-351
NUMA node5 CPU(s): 160-191,352-383
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
```

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

xFusion

SPECrate®2017_int_base = 2040

FusionServer 2288H V8 (Intel Xeon 6972P)

SPECrate®2017_int_peak = 2110

CPU2017 License: 6488

Test Date: Apr-2025

Test Sponsor: xFusion

Hardware Availability: Apr-2025

Tested by: xFusion

Software Availability: Jun-2024

Platform Notes (Continued)

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; PBRSB-eIBRS Not affected; 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	9M	12	Data	1	64	1	64
L1i	64K	12M	16	Instruction	1	64	1	64
L2	2M	384M	16	Unified	2	2048	1	64
L3	480M	960M	16	Unified	3	491520	1	64

8. numactl --hardware

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

available: 6 nodes (0-5)

node 0 cpus: 0-31,192-223

node 0 size: 128432 MB

node 0 free: 127330 MB

node 1 cpus: 32-63,224-255

node 1 size: 129007 MB

node 1 free: 126726 MB

node 2 cpus: 64-95,256-287

node 2 size: 128968 MB

node 2 free: 127838 MB

node 3 cpus: 96-127,288-319

node 3 size: 129007 MB

node 3 free: 127729 MB

node 4 cpus: 128-159,320-351

node 4 size: 129007 MB

node 4 free: 127722 MB

node 5 cpus: 160-191,352-383

node 5 size: 128563 MB

node 5 free: 127541 MB

node distances:

node	0	1	2	3	4	5
------	---	---	---	---	---	---

0:	10	12	12	21	21	21
----	----	----	----	----	----	----

1:	12	10	12	21	21	21
----	----	----	----	----	----	----

2:	12	12	10	21	21	21
----	----	----	----	----	----	----

3:	21	21	21	10	12	12
----	----	----	----	----	----	----

4:	21	21	21	12	10	12
----	----	----	----	----	----	----

5:	21	21	21	12	12	10
----	----	----	----	----	----	----

9. /proc/meminfo

MemTotal: 791538508 kB

10. who -r

run-level 3 Apr 10 12:27 last=5

11. Systemd service manager version: systemd 254 (254.10+suse.84.ge8d77af424)

Default Target Status

graphical degraded

12. Failed units, from systemctl list-units --state=failed

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

xFusion

SPECrate®2017_int_base = 2040

FusionServer 2288H V8 (Intel Xeon 6972P)

SPECrate®2017_int_peak = 2110

CPU2017 License: 6488

Test Date: Apr-2025

Test Sponsor: xFusion

Hardware Availability: Apr-2025

Tested by: xFusion

Software Availability: Jun-2024

Platform Notes (Continued)

```
UNIT          LOAD ACTIVE SUB DESCRIPTION
* sep5.service    loaded failed failed systemd script to load sep5 driver at boot time
* udisks2.service loaded failed failed Disk Manager

-----
13. Services, from systemctl list-unit-files
STATE          UNIT FILES
enabled        YaST2-Firstboot YaST2-Second-Stage apparmor appstream-sync-cache auditd bluetooth cron
                display-manager getty@ issue-generator kbdsettings kdump kdump-early kdump-notify klog
                lvm2-monitor nscd nvmefc-boot-connections nvmf-autoconnect postfix purge-kernels rollback
                rsyslog sep5 smartd sshd systemd-pstore wicked wicd wicd-dhcp4 wicd-dhcp6
                wickedd-nanny
enabled-runtime systemd-remount-fs
disabled       accounts-daemon autofs autoyast-initscripts blk-availability bluetooth-mesh boot-sysctl
                ca-certificates chrony-wait chronyd console-getty cups cups-browsed debug-shell ebttables
                exchange-bmc-os-info firewalld fsidd gpm grub2-once haveged ipmi ipmievfd irqbalance
                issue-add-ssh-keys kexec-load lummask man-db-create multipathd nfs nfs-blkmap nmb
                ostree-remount rpcbind rpmconfigcheck rsyncd rtkit-daemon serial-getty@
                smartd_generate_opts smb snmpd snmptrapd speech-dispatcherd systemd-boot-check-no-failures
                systemd-confext systemd-network-generator systemd-sysext systemd-time-wait-sync
                systemd-timesyncd udisks2 update-system-flatpaks upower vncserver@
indirect        systemd-userdbd wickedd

-----
14. Linux kernel boot-time arguments, from /proc/cmdline
BOOT_IMAGE=/boot/vmlinuz-6.4.0-150600.21-default
root=UUID=6e3dc6a0-eb5c-4adf-9eb8-8aef9c14cf2c
nohz_full=1-191
splash=silent
mitigations=auto
quiet
security=apparmor
crashkernel=365M,high
crashkernel=72M,low

-----
15. cpupower frequency-info
analyzing CPU 229:
  Unable to determine current policy
  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
```

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

xFusion

SPECrate®2017_int_base = 2040

FusionServer 2288H V8 (Intel Xeon 6972P)

SPECrate®2017_int_peak = 2110

CPU2017 License: 6488

Test Date: Apr-2025

Test Sponsor: xFusion

Hardware Availability: Apr-2025

Tested by: xFusion

Software Availability: Jun-2024

Platform Notes (Continued)

```
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_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 SP6

-----
20. Disk information
SPEC is set to: /root/speccpu
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/nvme0nlp3  btrfs  1.5T  333G  1.2T  23% /root

-----
21. /sys/devices/virtual/dmi/id
    Product:        2288H V8
    Product Family: Birch Stream

-----
22. dmidecode
Additional information from dmidecode 3.4 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:
    24x Micron MTC20F2085S1HC88XD1 WCCCC 32 GB 2 rank 8800

-----
23. BIOS
(This section combines info from /sys/devices and dmidecode.)
    BIOS Vendor:      INSYDE Corp.
    BIOS Version:     01.01.06.05
    BIOS Date:        02/26/2025
    BIOS Revision:    6.5
```



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

xFusion

SPECrate®2017_int_base = 2040

FusionServer 2288H V8 (Intel Xeon 6972P)

SPECrate®2017_int_peak = 2110

CPU2017 License: 6488

Test Date: Apr-2025

Test Sponsor: xFusion

Hardware Availability: Apr-2025

Tested by: xFusion

Software Availability: Jun-2024

Compiler Version Notes

=====

C | 502.gcc_r(peak)

=====

Intel(R) oneAPI DPC++/C++ Compiler for applications running on IA-32, Version 2024.1.0 Build 20240308
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.

=====

=====

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

=====

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.

=====

=====

C | 502.gcc_r(peak)

=====

Intel(R) oneAPI DPC++/C++ Compiler for applications running on IA-32, Version 2024.1.0 Build 20240308
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.

=====

=====

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

=====

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.

=====

=====

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

=====

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.

=====

=====

Fortran | 548.exchange2_r(base, peak)

=====

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.

=====

Base Compiler Invocation

C benchmarks:

icx

C++ benchmarks:

icpx

Fortran benchmarks:

ifx



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

xFusion

SPECrate®2017_int_base = 2040

FusionServer 2288H V8 (Intel Xeon 6972P)

SPECrate®2017_int_peak = 2110

CPU2017 License: 6488

Test Date: Apr-2025

Test Sponsor: xFusion

Hardware Availability: Apr-2025

Tested by: xFusion

Software Availability: Jun-2024

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 -xsapphirerapids -O3 -ffast-math  
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4  
-L/opt/intel/oneapi/compiler/2024.1/lib -lgkmalloc
```

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/opt/intel/oneapi/compiler/2024.1/lib -lgkmalloc
```

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 -auto  
-L/opt/intel/oneapi/compiler/2024.1/lib -lgkmalloc
```

Peak Compiler Invocation

C benchmarks:

icx

C++ benchmarks:

icpx

Fortran benchmarks:

ifx



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

xFusion

SPECrate®2017_int_base = 2040

FusionServer 2288H V8 (Intel Xeon 6972P)

SPECrate®2017_int_peak = 2110

CPU2017 License: 6488

Test Date: Apr-2025

Test Sponsor: xFusion

Hardware Availability: Apr-2025

Tested by: xFusion

Software Availability: Jun-2024

Peak Portability Flags

500.perlbench_r: -DSPEC_LP64 -DSPEC_LINUX_X64
502.gcc_r: -D_FILE_OFFSET_BITS=64
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

Peak Optimization Flags

C benchmarks:

500.perlbench_r: -w -std=c11 -m64 -Wl,-z,muldefs
-fprofile-generate(pass 1)
-fprofile-use=default.profdata(pass 2) -xCORE-AVX2(pass 1)
-flto -Ofast -xCORE-AVX512 -ffast-math -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4
-fno-strict-overflow
-L/opt/intel/oneapi/compiler/2024.1/lib -lgkmalloc

502.gcc_r: -m32 -L/opt/intel/oneapi/compiler/2024.1/lib32 -std=gnu89
-Wl,-z,muldefs -fprofile-generate(pass 1)
-fprofile-use=default.profdata(pass 2) -xCORE-AVX2(pass 1)
-flto -Ofast -xCORE-AVX512 -ffast-math -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4
-L/usr/local/jemalloc32-5.0.1/lib -ljemalloc

505.mcf_r: basepeak = yes

525.x264_r: -w -std=c11 -m64 -Wl,-z,muldefs -xsapphirerapids -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fno-alias
-L/opt/intel/oneapi/compiler/2024.1/lib -lgkmalloc

557.xz_r: basepeak = yes

C++ benchmarks:

520.omnetpp_r: basepeak = yes

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

xFusion

SPECrate®2017_int_base = 2040

FusionServer 2288H V8 (Intel Xeon 6972P)

SPECrate®2017_int_peak = 2110

CPU2017 License: 6488

Test Date: Apr-2025

Test Sponsor: xFusion

Hardware Availability: Apr-2025

Tested by: xFusion

Software Availability: Jun-2024

Peak Optimization Flags (Continued)

523.xalancbmk_r: basepeak = yes

531.deepsjeng_r: basepeak = yes

541.leela_r: basepeak = yes

Fortran benchmarks:

548.exchange2_r: basepeak = yes

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2017/flags/Intel-ic2024-official-linux64.html>

<http://www.spec.org/cpu2017/flags/xFusion-Platform-Settings-GNR-V1.0.html>

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

<http://www.spec.org/cpu2017/flags/Intel-ic2024-official-linux64.xml>

<http://www.spec.org/cpu2017/flags/xFusion-Platform-Settings-GNR-V1.0.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 2025-04-10 06:00:23-0400.

Report generated on 2025-07-16 11:07:05 by CPU2017 PDF formatter v6716.

Originally published on 2025-07-15.