



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

Supermicro

SuperServer SYS-241E-TNRTTP
(X13QEH+ , Intel Xeon Gold 6416H)

SPECrate®2017_int_base = 665

SPECrate®2017_int_peak = Not Run

CPU2017 License: 6573

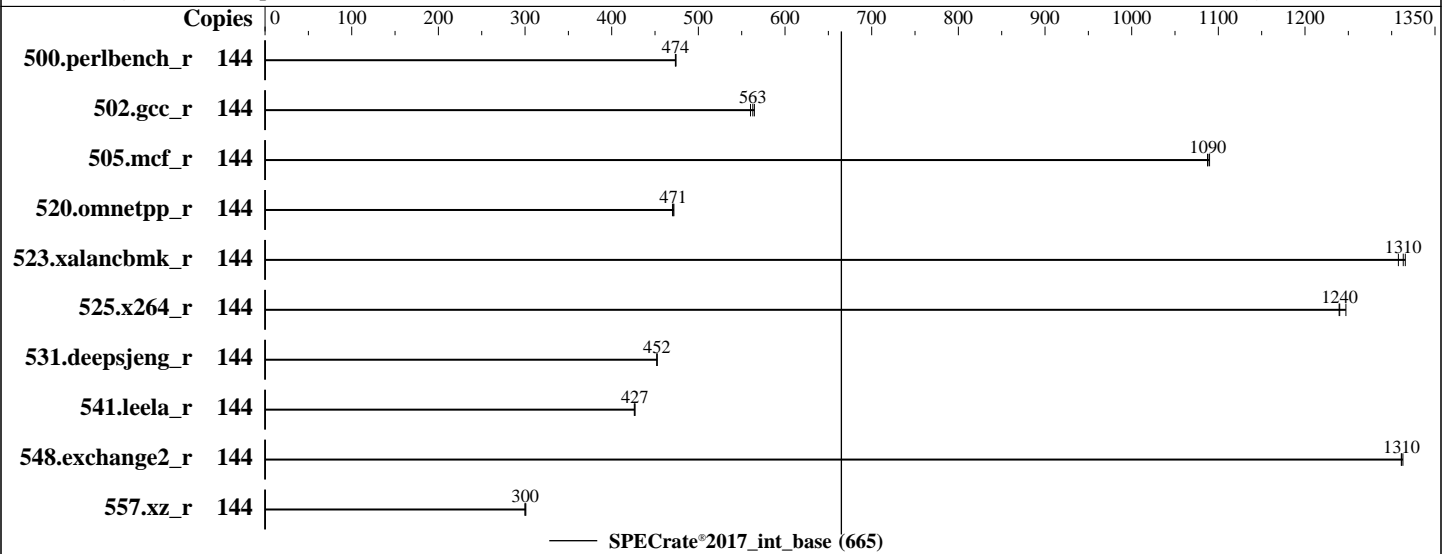
Test Sponsor: Supermicro

Tested by: Supermicro

Test Date: Sep-2023

Hardware Availability: Mar-2023

Software Availability: Dec-2022



Hardware

CPU Name: Intel Xeon Gold 6416H
 Max MHz: 4200
 Nominal: 2200
 Enabled: 72 cores, 4 chips, 2 threads/core
 Orderable: 2,4 chips
 Cache L1: 32 KB I + 48 KB D on chip per core
 L2: 2 MB I+D on chip per core
 L3: 45 MB I+D on chip per chip
 Other: None
 Memory: 2 TB (32 x 64 GB 2Rx4 PC5-4800B-R)
 Storage: 1 x 2 TB SATA HDD, 7200RPM
 Other: None

Software

OS: SUSE Linux Enterprise Server 15 SP4
 5.14.21-150400.22-default
 Compiler: C/C++: Version 2023.0 of Intel oneAPI DPC++/C++
 Compiler for Linux;
 Fortran: Version 2023.0 of Intel Fortran Compiler
 for Linux;
 Parallel: No
 Firmware: Version 1.2 released Mar-2023
 File System: xfs
 System State: Run level 3 (multi-user)
 Base Pointers: 64-bit
 Peak Pointers: Not Applicable
 Other: None
 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

Supermicro

SuperServer SYS-241E-TNRTP
(X13QEH+ , Intel Xeon Gold 6416H)

SPECrate®2017_int_base = 665

SPECrate®2017_int_peak = Not Run

CPU2017 License: 6573
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: Sep-2023
Hardware Availability: Mar-2023
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	144	484	474	484	474	484	473							
502.gcc_r	144	362	563	361	565	364	560							
505.mcf_r	144	214	1090	214	1090	214	1090							
520.omnetpp_r	144	402	470	400	472	401	471							
523.xalancbmk_r	144	116	1310	116	1310	116	1320							
525.x264_r	144	203	1240	203	1240	202	1250							
531.deepsjeng_r	144	365	452	365	452	365	452							
541.leela_r	144	559	427	560	426	559	427							
548.exchange2_r	144	287	1310	288	1310	288	1310							
557.xz_r	144	518	300	519	300	517	301							

SPECrate®2017_int_base = 665

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 = "/home/cpu2017/lib/intel64:/home/cpu2017/lib/ia32:/home/cpu2017/je5.0.1-32"
MALLOC_CONF = "retain:true"



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

Supermicro

SuperServer SYS-241E-TNRTTP
(X13QEH+ , Intel Xeon Gold 6416H)

SPECrate®2017_int_base = 665

SPECrate®2017_int_peak = Not Run

CPU2017 License: 6573
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: Sep-2023
Hardware Availability: Mar-2023
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 Settings:

Power Performance Tuning = BIOS Controls EPB
ENERGY_PERF_BIAS_CFG mode = Extreme Performance
DCU Streamer Prefetcher = Disable
KTI Prefetch = Enable
SNC = Enable SNC2 (2-clusters)
LLC Dead Line Alloc = Disable

Sysinfo program /home/cpu2017/bin/sysinfo
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
running on localhost Thu Sep 21 18:21:29 2023

SUT (System Under Test) info as seen by some common utilities.

Table of contents

1. uname -a
2. w
3. Username
4. ulimit -a
5. sysinfo process ancestry
6. /proc/cpuinfo
7. lscpu
8. numactl --hardware
9. /proc/meminfo
10. who -r
11. Systemd service manager version: systemd 249 (249.11+suse.124.g2bc0b2c447)
12. Services, from systemctl list-unit-files
13. Linux kernel boot-time arguments, from /proc/cmdline
14. cpupower frequency-info
15. sysctl
16. /sys/kernel/mm/transparent_hugepage
17. /sys/kernel/mm/transparent_hugepage/khugepaged
18. OS release
19. Disk information
20. /sys/devices/virtual/dmi/id
21. dmidecode
22. BIOS

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

Supermicro

SuperServer SYS-241E-TNRTTP
(X13QEH+ , Intel Xeon Gold 6416H)

SPECrate®2017_int_base = 665

SPECrate®2017_int_peak = Not Run

CPU2017 License: 6573
Test Sponsor: Supermicro
Tested by: Supermicro

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

Platform Notes (Continued)

```

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

-----
2. w
18:21:29 up 2 min, 3 users, load average: 0.25, 0.24, 0.10
USER      TTY      FROM          LOGIN@      IDLE        JCPU        PCPU        WHAT
root      tty1     -             18:20      8.00s      1.01s      0.05s      -bash

-----
3. Username
From environment variable $USER:  root

-----
4. ulimit -a
core file size          (blocks, -c) unlimited
data seg size           (kbytes, -d) unlimited
scheduling priority     (-e) 0
file size               (blocks, -f) unlimited
pending signals         (-i) 8253959
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) 8253959
virtual memory           (kbytes, -v) unlimited
file locks              (-x) unlimited

-----
5. sysinfo process ancestry
/usr/lib/systemd/systemd --switched-root --system --deserialize 30
login -- root
-bash
-bash
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=144 -c
ic2023.0-lin-sapphirerapids-rate-20221201.cfg --define smt-on --define cores=72 --define physicalfirst
--define invoke_with_interleave --define drop_caches --tune base -o all intrate
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=144 --configfile
ic2023.0-lin-sapphirerapids-rate-20221201.cfg --define smt-on --define cores=72 --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/CPU2017.005/templogs/preenv.intrate.005.0.log --lognum 005.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/cpu2017

-----
6. /proc/cpuinfo
model name      : Intel(R) Xeon(R) Gold 6416H
vendor_id      : GenuineIntel
cpu family     : 6
model          : 143
stepping       : 7
microcode      : 0x2b0001b0
bugs           : spectre_v1 spectre_v2 spec_store_bypass swapgs

```

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

Supermicro

SuperServer SYS-241E-TNRTTP
(X13QEH+ , Intel Xeon Gold 6416H)

SPECrate®2017_int_base = 665

SPECrate®2017_int_peak = Not Run

CPU2017 License: 6573
Test Sponsor: Supermicro
Tested by: Supermicro

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

Platform Notes (Continued)

```
cpu cores      : 18
siblings       : 36
4 physical ids (chips)
144 processors (hardware threads)
physical id 0: core ids 0-17
physical id 1: core ids 0-17
physical id 2: core ids 0-17
physical id 3: core ids 0-17
physical id 0: apicids 0-35
physical id 1: apicids 128-163
physical id 2: apicids 256-291
physical id 3: apicids 384-419
```

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:         46 bits physical, 57 bits virtual
Byte Order:            Little Endian
CPU(s):                144
On-line CPU(s) list:   0-143
Vendor ID:             GenuineIntel
Model name:            Intel(R) Xeon(R) Gold 6416H
CPU family:            6
Model:                 143
Thread(s) per core:    2
Core(s) per socket:    18
Socket(s):             4
Stepping:              7
Frequency boost:       enabled
CPU max MHz:           2201.0000
CPU min MHz:           800.0000
BogoMIPS:              4400.00
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 aperfperf tsc_known_freq pni pclmulqdq dtes64 monitor
                        ds_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm pcid dca sse4_1
                        sse4_2 x2apic movbe popcnt tsc_deadline_timer aes xsave avx f16c rdrand
                        lahf_lm abm 3dnowprefetch cpuid_fault epb cat_l3 cat_l2 cdp_l3
                        invpcid_single cdp_l2 ssbd mba ibrs ibpb stibp ibrs_enhanced tpr_shadow
                        vnmi flexpriority ept vpid ept_ad fsgsbase tsc_adjust bmi1 hle avx2 smep
                        bmi2 erms invpcid rtm cqm rdt_a avx512f avx512dq rdseed adx smap
                        avx512ifma clflushopt clwb intel_pt avx512cd sha_ni avx512bw avx512vl
                        xsaveopt xsavec xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbm_total
                        cqm_mbm_local split_lock_detect avx_vnni avx512_bf16 wbnoinvd dtherm ida
                        arat pln pts avx512vbmi umip pku ospke waitpkg avx512_vbmi2 gfni vaes
                        vpclmulqdq avx512_vnni avx512_bitalg tme avx512_vpopcntdq la57 rdpid
                        bus_lock_detect cldemote movdiri movdir64b enqcmd fsrm md_clear serialize
                        tsxldtrk pconfig arch_lbr avx512_fp16 amx_tile flush_l1d arch_capabilities
Virtualization:        VT-x
L1d cache:             3.4 MiB (72 instances)
L1i cache:             2.3 MiB (72 instances)
L2 cache:              144 MiB (72 instances)
L3 cache:              180 MiB (4 instances)
NUMA node(s):         8
```

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

Supermicro

SuperServer SYS-241E-TNRTTP
(X13QEH+ , Intel Xeon Gold 6416H)

SPECrate®2017_int_base = 665

SPECrate®2017_int_peak = Not Run

CPU2017 License: 6573
Test Sponsor: Supermicro
Tested by: Supermicro

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

Platform Notes (Continued)

```

NUMA node0 CPU(s):      0-8,72-80
NUMA node1 CPU(s):      9-17,81-89
NUMA node2 CPU(s):      18-26,90-98
NUMA node3 CPU(s):      27-35,99-107
NUMA node4 CPU(s):      36-44,108-116
NUMA node5 CPU(s):      45-53,117-125
NUMA node6 CPU(s):      54-62,126-134
NUMA node7 CPU(s):      63-71,135-143
Vulnerability Itlb multihit: Not affected
Vulnerability L1tf:      Not affected
Vulnerability Mds:       Not affected
Vulnerability Meltdown:  Not affected
Vulnerability Spec store bypass: Mitigation; Speculative Store Bypass disabled via prctl and seccomp
Vulnerability Spectre v1: Mitigation; usercopy/swapgs barriers and __user pointer sanitization
Vulnerability Spectre v2: Mitigation; Enhanced IBRS, IBPB conditional, RSB filling
Vulnerability Srbds:     Not affected
Vulnerability Tsx async abort: Not affected

```

From lscpu --cache:

NAME	ONE-SIZE	ALL-SIZE	WAYS	TYPE	LEVEL	SETS	PHY-LINE	COHERENCY-SIZE
L1d	48K	3.4M	12	Data	1	64	1	64
L1i	32K	2.3M	8	Instruction	1	64	1	64
L2	2M	144M	16	Unified	2	2048	1	64
L3	45M	180M	15	Unified	3	49152	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: 0-8,72-80
node 0 size: 257613 MB
node 0 free: 255908 MB
node 1 cpus: 9-17,81-89
node 1 size: 258043 MB
node 1 free: 256429 MB
node 2 cpus: 18-26,90-98
node 2 size: 258043 MB
node 2 free: 257766 MB
node 3 cpus: 27-35,99-107
node 3 size: 258008 MB
node 3 free: 257794 MB
node 4 cpus: 36-44,108-116
node 4 size: 258043 MB
node 4 free: 257788 MB
node 5 cpus: 45-53,117-125
node 5 size: 258043 MB
node 5 free: 257785 MB
node 6 cpus: 54-62,126-134
node 6 size: 258043 MB
node 6 free: 257801 MB
node 7 cpus: 63-71,135-143
node 7 size: 257675 MB
node 7 free: 257411 MB
node distances:
node  0  1  2  3  4  5  6  7
0:  10 12 21 21 21 21 21 21
1:  12 10 21 21 21 21 21 21
2:  21 21 10 12 21 21 21 21
3:  21 21 12 10 21 21 21 21
4:  21 21 21 21 10 12 21 21

```

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

Supermicro

SuperServer SYS-241E-TNRTTP
(X13QEH+ , Intel Xeon Gold 6416H)

SPECrate®2017_int_base = 665

SPECrate®2017_int_peak = Not Run

CPU2017 License: 6573
Test Sponsor: Supermicro
Tested by: Supermicro

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

Platform Notes (Continued)

```
5: 21 21 21 21 12 10 21 21
6: 21 21 21 21 21 21 10 12
7: 21 21 21 21 21 21 12 10
```

9. /proc/meminfo
MemTotal: 2113038464 kB

10. who -r
run-level 3 Sep 21 18:20 last=5

11. Systemd service manager version: systemd 249 (249.11+suse.124.g2bc0b2c447)
Default Target Status
graphical running

12. Services, from systemctl list-unit-files

STATE	UNIT FILES
enabled	YaST2-Firstboot YaST2-Second-Stage apparmor auditd bluetooth cron display-manager firewalld getty@ haveged irqbalance iscsi issue-generator kbdsettings kdump kdump-early klog lvm2-monitor nscd postfix purge-kernels rollback rsyslog smartd sshd wicked wickedd-auto4 wickedd-dhcp4 wickedd-dhcp6 wickedd-nanny
enabled-runtime	systemd-remount-fs
disabled	accounts-daemon appstream-sync-cache 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 gpm grub2-once haveged-switch-root ipmi ipmievd iscsi-init iscsid iscsiui issue-add-ssh-keys kexec-load lunmask man-db-create multipathd nfs nfs-blkmap nmb ostree-remount rdisc rpcbind rpmconfigcheck rsyncd rtkit-daemon serial-getty@ smartd_generate_opts smb snmpd snmptrapd speech-dispatcherd systemd-boot-check-no-failures systemd-network-generator systemd-sysext systemd-time-wait-sync systemd-timesyncd udisks2 upower
indirect	wickedd

13. Linux kernel boot-time arguments, from /proc/cmdline
BOOT_IMAGE=/boot/vmlinuz-5.14.21-150400.22-default
root=UUID=ebf0634e-4c48-4c5b-86b6-a36f33a307a7
splash=silent
resume=/dev/disk/by-uuid/cf02ba25-9f51-46af-b067-8adca89c27bb
mitigations=auto
quiet
security=apparmor
crashkernel=321M,high
crashkernel=72M,low

14. cpupower frequency-info
analyzing CPU 0:
current policy: frequency should be within 800 MHz and 2.20 GHz.
The governor "ondemand" may decide which speed to use within this range.
boost state support:
Supported: yes
Active: yes

15. sysctl
kernel.numa_balancing 1

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

Supermicro

SuperServer SYS-241E-TNRTTP
(X13QEH+ , Intel Xeon Gold 6416H)

SPECrate®2017_int_base = 665

SPECrate®2017_int_peak = Not Run

CPU2017 License: 6573
Test Sponsor: Supermicro
Tested by: Supermicro

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

Platform Notes (Continued)

```

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

```

```

-----
16. /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

```

```

-----
17. /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

```

```

-----
18. OS release
From /etc/*-release /etc/*-version
os-release SUSE Linux Enterprise Server 15 SP4

```

```

-----
19. Disk information
SPEC is set to: /home/cpu2017
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sda3       xfs   815G  99G  717G  13% /home

```

```

-----
20. /sys/devices/virtual/dmi/id
Vendor:          Supermicro
Product:         Super Server
Product Family: Family
Serial:          0123456789

```

```

-----
21. 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.

```

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

Supermicro

SuperServer SYS-241E-TNRTTP
(X13QEH+ , Intel Xeon Gold 6416H)

SPECrate®2017_int_base = 665

SPECrate®2017_int_peak = Not Run

CPU2017 License: 6573
Test Sponsor: Supermicro
Tested by: Supermicro

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

Platform Notes (Continued)

Memory:
32x SK Hynix HMC94MEBRA109N 64 GB 2 rank 4800

22. BIOS
(This section combines info from /sys/devices and dmidecode.)
BIOS Vendor: American Megatrends International, LLC.
BIOS Version: 1.2
BIOS Date: 03/17/2023
BIOS Revision: 5.29

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.

Base Compiler Invocation

C benchmarks:
icx

C++ benchmarks:
icpx

Fortran benchmarks:
ifx

Base Portability Flags

500.perlbench_r: -DSPEC_LP64 -DSPEC_LINUX_X64

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

Supermicro

SuperServer SYS-241E-TNRTTP
(X13QEH+ , Intel Xeon Gold 6416H)

SPECrate®2017_int_base = 665

SPECrate®2017_int_peak = Not Run

CPU2017 License: 6573
Test Sponsor: Supermicro
Tested by: Supermicro

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

Base Portability Flags (Continued)

```
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/usr/local/intel/compiler/2023.0.0/linux/compiler/lib/intel64_lin
-lqkmalloc
```

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

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/usr/local/intel/compiler/2023.0.0/linux/compiler/lib/intel64_lin
-lqkmalloc
```

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/Supermicro-Platform-Settings-V1.2-SPR-revF.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/Supermicro-Platform-Settings-V1.2-SPR-revF.xml>



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

Supermicro

SuperServer SYS-241E-TNRTTP
(X13QEH+ , Intel Xeon Gold 6416H)

SPECrate®2017_int_base = 665

SPECrate®2017_int_peak = Not Run

CPU2017 License: 6573

Test Sponsor: Supermicro

Tested by: Supermicro

Test Date: Sep-2023

Hardware Availability: Mar-2023

Software Availability: Dec-2022

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 2023-09-21 21:21:29-0400.

Report generated on 2024-01-29 18:11:12 by CPU2017 PDF formatter v6716.

Originally published on 2023-10-10.