



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

IEIT Systems Co., Ltd.

SPECrate®2017_int_base = 1160

meta brain NF5280G8 (Intel Xeon 6756E)

SPECrate®2017_int_peak = 1200

CPU2017 License: 3358

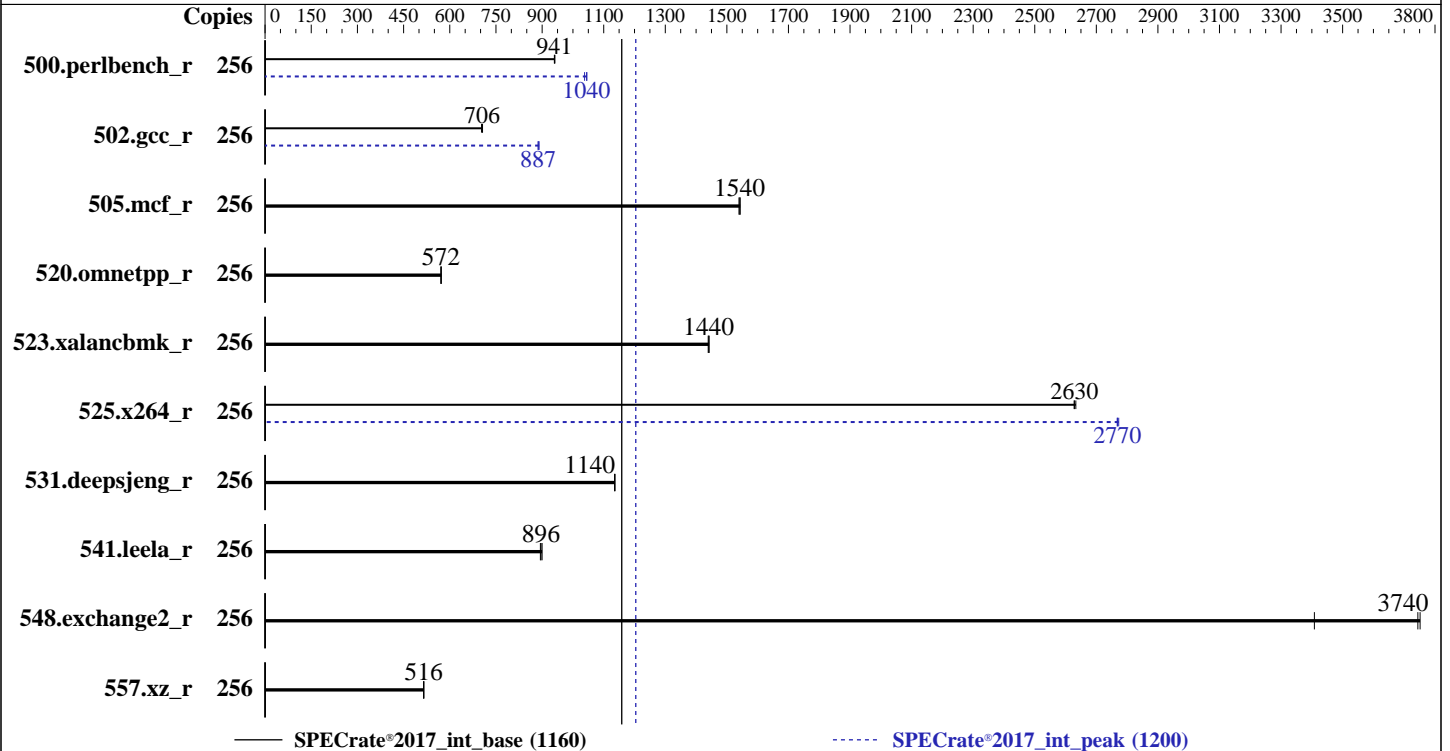
Test Sponsor: IEIT Systems Co., Ltd.

Tested by: IEIT Systems Co., Ltd.

Test Date: Feb-2025

Hardware Availability: Oct-2024

Software Availability: Jun-2024



Hardware

CPU Name: Intel Xeon 6756E
 Max MHz: 2600
 Nominal: 1800
 Enabled: 256 cores, 2 chips
 Orderable: 1,2 chips
 Cache L1: 64 KB I + 32 KB D on chip per core
 L2: 4 MB I+D on chip per core
 L3: 96 MB I+D on chip per chip
 Other: None
 Memory: 1 TB (16 x 64 GB 2Rx4 PC5-6400B-R)
 Storage: 1 x 960 GB 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 00.17.04 released Nov-2024
 File System: xfs
 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 and OS set to prefer performance at the cost
 of additional power usage.



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

IEIT Systems Co., Ltd.

SPECrate®2017_int_base = 1160

meta brain NF5280G8 (Intel Xeon 6756E)

SPECrate®2017_int_peak = 1200

CPU2017 License: 3358

Test Sponsor: IEIT Systems Co., Ltd.

Tested by: IEIT Systems Co., Ltd.

Test Date: Feb-2025

Hardware Availability: Oct-2024

Software Availability: Jun-2024

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
500.perlbench_r	256	434	940	433	941	433	941	256	390	1050	390	1040	393	1040
502.gcc_r	256	513	706	516	703	514	706	256	409	887	407	890	409	887
505.mcf_r	256	268	1540	268	1540	269	1540	256	268	1540	268	1540	269	1540
520.omnetpp_r	256	588	571	587	572	588	572	256	588	571	587	572	588	572
523.xalancbmk_r	256	188	1440	188	1440	187	1440	256	188	1440	188	1440	187	1440
525.x264_r	256	171	2630	170	2630	171	2630	256	162	2770	162	2770	162	2770
531.deepsjeng_r	256	258	1140	258	1140	258	1140	256	258	1140	258	1140	258	1140
541.leela_r	256	473	896	474	894	471	900	256	473	896	474	894	471	900
548.exchange2_r	256	179	3750	179	3740	197	3410	256	179	3750	179	3740	197	3410
557.xz_r	256	536	516	536	516	537	515	256	536	516	536	516	537	515

SPECrate®2017_int_base = 1160

SPECrate®2017_int_peak = 1200

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"

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"

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

IEIT Systems Co., Ltd.

SPECrate®2017_int_base = 1160

meta brain NF5280G8 (Intel Xeon 6756E)

SPECrate®2017_int_peak = 1200

CPU2017 License: 3358

Test Sponsor: IEIT Systems Co., Ltd.

Tested by: IEIT Systems Co., Ltd.

Test Date: Feb-2025

Hardware Availability: Oct-2024

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:
ENERGY_PERF_BIAS_CFG mode set to Performance
Hardware Prefetch set to Disable
VT Support set to Disable

Sysinfo program /home/CPU2017/bin/sysinfo
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
running on localhost Wed Feb 12 18:10:51 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. 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

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
18:10:51 up 6 min, 1 user, load average: 0.08, 0.04, 0.01
USER TTY FROM LOGIN@ IDLE JCPU PCPU WHAT
root tty1 - 18:10 11.00s 1.82s 0.05s -bash

3. Username

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

IEIT Systems Co., Ltd.

SPECrate®2017_int_base = 1160

meta brain NF5280G8 (Intel Xeon 6756E)

SPECrate®2017_int_peak = 1200

CPU2017 License: 3358

Test Sponsor: IEIT Systems Co., Ltd.

Tested by: IEIT Systems Co., Ltd.

Test Date: Feb-2025

Hardware Availability: Oct-2024

Software Availability: Jun-2024

Platform Notes (Continued)

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) 4124396
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) 4124396
virtual memory         (kbytes, -v) unlimited
file locks             (-x) unlimited

```

```

5. sysinfo process ancestry
/usr/lib/systemd/systemd --switched-root --system --deserialize=31
login -- root
-bash
-bash
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=256 -c
  ic2024.1-lin-sierraforest-rate-20240308.cfg --define smt-on --define cores=256 --define physicalfirst
  --define invoke_with_interleave --define drop_caches --reportable --tune base,peak -o all intrate
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=256 --configfile
  ic2024.1-lin-sierraforest-rate-20240308.cfg --define smt-on --define cores=256 --define physicalfirst
  --define invoke_with_interleave --define drop_caches --reportable --tune base,peak --output_format all
  --nopower --runmode rate --tune base:peak --size refrate intrate --nopreenv --note-preenv --logfile
  $SPEC/tmp/CPU2017.003/templogs/preenv.intrate.003.0.log --lognum 003.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/CPU2017

```

```

6. /proc/cpuinfo
model name      : Intel(R) Xeon(R) 6756E
vendor_id      : GenuineIntel
cpu family     : 6
model          : 175
stepping       : 3
microcode      : 0x3000190
bugs           : spectre_v1 spectre_v2 spec_store_bypass swapgs bhi
cpu cores      : 128
siblings       : 128
2 physical ids (chips)
256 processors (hardware threads)
physical id 0: core ids 0-127
physical id 1: core ids 0-127
physical id 0: apicids
0,2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46,48,50,52,54,56,58,60,62,64,66,68,70,72
,74,76,78,80,82,84,86,88,90,92,94,96,98,100,102,104,106,108,110,112,114,116,118,120,122,124,126,128,130,1
32,134,136,138,140,142,144,146,148,150,152,154,156,158,160,162,164,166,168,170,172,174,176,178,180,182,18
4,186,188,190,192,194,196,198,200,202,204,206,208,210,212,214,216,218,220,222,224,226,228,230,232,234,236
,238,240,242,244,246,248,250,252,254
physical id 1: apicids

```

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

IEIT Systems Co., Ltd.

SPECrate®2017_int_base = 1160

meta brain NF5280G8 (Intel Xeon 6756E)

SPECrate®2017_int_peak = 1200

CPU2017 License: 3358

Test Sponsor: IEIT Systems Co., Ltd.

Tested by: IEIT Systems Co., Ltd.

Test Date: Feb-2025

Hardware Availability: Oct-2024

Software Availability: Jun-2024

Platform Notes (Continued)

512, 514, 516, 518, 520, 522, 524, 526, 528, 530, 532, 534, 536, 538, 540, 542, 544, 546, 548, 550, 552, 554, 556, 558, 560, 562, 564, 566, 568, 570, 572, 574, 576, 578, 580, 582, 584, 586, 588, 590, 592, 594, 596, 598, 600, 602, 604, 606, 608, 610, 612, 614, 616, 618, 620, 622, 624, 626, 628, 630, 632, 634, 636, 638, 640, 642, 644, 646, 648, 650, 652, 654, 656, 658, 660, 662, 664, 666, 668, 670, 672, 674, 676, 678, 680, 682, 684, 686, 688, 690, 692, 694, 696, 698, 700, 702, 704, 706, 708, 710, 712, 714, 716, 718, 720, 722, 724, 726, 728, 730, 732, 734, 736, 738, 740, 742, 744, 746, 748, 750, 752, 754, 756, 758, 760, 762, 764, 766

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 2.39.3:

```

Architecture:          x86_64
CPU op-mode(s):        32-bit, 64-bit
Address sizes:         52 bits physical, 48 bits virtual
Byte Order:            Little Endian
CPU(s):                256
On-line CPU(s) list:   0-255
Vendor ID:             GenuineIntel
BIOS Vendor ID:       Intel(R) Corporation
Model name:            Intel(R) Xeon(R) 6756E
BIOS Model name:       Intel(R) Xeon(R) 6756E  CPU @ 1.8GHz
BIOS CPU family:       179
CPU family:            6
Model:                 175
Thread(s) per core:    1
Core(s) per socket:    128
Socket(s):             2
Stepping:              3
Frequency boost:       enabled
CPU(s) scaling MHz:    46%
CPU max MHz:           1801.0000
CPU min MHz:           800.0000
BogoMIPS:              3600.00
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
pdpelgb 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 nba ibrs ibpb stibp
ibrs_enhanced tpr_shadow flexpriority ept vpid ept_ad fsgsbase
tsc_adjust bmil avx2 smep bmi2 erms invpcid cqm rdt_a rdseed adx smap
clflushopt clwb intel_pt sha_ni xsaveopt xsavec xgetbv1 xsaves
cqm_llc cqm_occup_llc cqm_mbm_total cqm_mbm_local split_lock_detect
user_shstk avx_vnni lam wbnoinvd dtherm ida arat pln pts vmi umip
pku ospke waitpkg gfni vaes vpclmulqdq tme rdpid bus_lock_detect
cldemote movdiri movdir64b enqcmd fsrm md_clear serialize pconfig
arch_lbr ibt flush_lld arch_capabilities

Virtualization:        VT-x
L1d cache:             8 MiB (256 instances)
L1i cache:             16 MiB (256 instances)
L2 cache:              256 MiB (64 instances)
L3 cache:              192 MiB (2 instances)
NUMA node(s):         2
NUMA node0 CPU(s):    0-127
NUMA node1 CPU(s):    128-255
Vulnerability Gather data sampling: Not affected
Vulnerability Itlb multihit: Not affected

```

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

IEIT Systems Co., Ltd.

SPECrate®2017_int_base = 1160

meta brain NF5280G8 (Intel Xeon 6756E)

SPECrate®2017_int_peak = 1200

CPU2017 License: 3358

Test Sponsor: IEIT Systems Co., Ltd.

Tested by: IEIT Systems Co., Ltd.

Test Date: Feb-2025

Hardware Availability: Oct-2024

Software Availability: Jun-2024

Platform Notes (Continued)

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 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	32K	8M	8	Data	1	64	1	64
L1i	64K	16M	8	Instruction	1	128	1	64
L2	4M	256M	16	Unified	2	4096	1	64
L3	96M	192M	12	Unified	3	131072	1	64

8. numactl --hardware

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

```
available: 2 nodes (0-1)
node 0 cpus: 0-127
node 0 size: 515548 MB
node 0 free: 514102 MB
node 1 cpus: 128-255
node 1 size: 515576 MB
node 1 free: 513798 MB
node distances:
node 0 1
0: 10 21
1: 21 10
```

9. /proc/meminfo

MemTotal: 1055871716 kB

10. who -r

run-level 3 Feb 12 18:05

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

```
Default Target Status
multi-user      running
```

12. Services, from systemctl list-unit-files

```
STATE UNIT FILES
enabled apparmor auditd cron firewalld getty@ irqbalance issue-generator kbdsettings kdump
kdump-early kdump-notify nvme-fc-boot-connections nvme-autoconnect postfix purge-kernels
rollback sshd systemd-pstore wicked wickedd-auto4 wickedd-dhcp4 wickedd-dhcp6
wickedd-nanny
enabled-runtime systemd-remount-fs
disabled boot-sysctl ca-certificates chrony-wait chronyd console-getty debug-shell ebttables
exchange-bmc-os-info fsidd grub2-once haveged ipmievd issue-add-ssh-keys kexec-load
lunmask nfs nfs-blkmap rpcbind rpmconfigcheck serial-getty@ systemd-boot-check-no-failures
```

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

IEIT Systems Co., Ltd.

SPECrate®2017_int_base = 1160

meta brain NF5280G8 (Intel Xeon 6756E)

SPECrate®2017_int_peak = 1200

CPU2017 License: 3358

Test Date: Feb-2025

Test Sponsor: IEIT Systems Co., Ltd.

Hardware Availability: Oct-2024

Tested by: IEIT Systems Co., Ltd.

Software Availability: Jun-2024

Platform Notes (Continued)

```

systemd-confext systemd-network-generator systemd-sysext systemd-time-wait-sync
systemd-timesyncd
generated jexec
indirect systemd-userdbd wickedd

```

```

-----
13. Linux kernel boot-time arguments, from /proc/cmdline
BOOT_IMAGE=/boot/vmlinuz-6.4.0-150600.21-default
root=UUID=3d2e35de-7a40-49d4-9b7e-5a61505ac35b
splash=silent
resume=/dev/disk/by-uuid/12ee3b15-7778-419b-ab9f-ab402e71e53d
mitigations=auto
quiet
security=apparmor
crashkernel=370M,high
crashkernel=72M,low

```

```

-----
14. cpupower frequency-info
analyzing CPU 122:
current policy: frequency should be within 800 MHz and 1.80 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
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

```

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

IEIT Systems Co., Ltd.

SPECrate®2017_int_base = 1160

meta brain NF5280G8 (Intel Xeon 6756E)

SPECrate®2017_int_peak = 1200

CPU2017 License: 3358

Test Sponsor: IEIT Systems Co., Ltd.

Tested by: IEIT Systems Co., Ltd.

Test Date: Feb-2025

Hardware Availability: Oct-2024

Software Availability: Jun-2024

Platform Notes (Continued)

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 SP6

19. Disk information
 SPEC is set to: /home/CPU2017

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/nvme0n1p3	xf	381G	262G	119G	69%	/home

20. /sys/devices/virtual/dmi/id

Vendor:	IEIT SYSTEMS
Product:	NF5280-M8-A0-R0-00
Product Family:	Not specified
Serial:	000000000

21. 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:

15x Samsung M321R8GA0PB2-CCPEC	64 GB 2 rank 6400
1x Samsung M321R8GA0PB2-CCPWC	64 GB 2 rank 6400

22. BIOS
 (This section combines info from /sys/devices and dmidecode.)

BIOS Vendor:	American Megatrends International, LLC.
BIOS Version:	00.17.04
BIOS Date:	11/29/2024

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.

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

IEIT Systems Co., Ltd.

SPECrate®2017_int_base = 1160

meta brain NF5280G8 (Intel Xeon 6756E)

SPECrate®2017_int_peak = 1200

CPU2017 License: 3358

Test Sponsor: IEIT Systems Co., Ltd.

Tested by: IEIT Systems Co., Ltd.

Test Date: Feb-2025

Hardware Availability: Oct-2024

Software Availability: Jun-2024

Compiler Version Notes (Continued)

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

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

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

IEIT Systems Co., Ltd.

SPECrate®2017_int_base = 1160

meta brain NF5280G8 (Intel Xeon 6756E)

SPECrate®2017_int_peak = 1200

CPU2017 License: 3358

Test Sponsor: IEIT Systems Co., Ltd.

Tested by: IEIT Systems Co., Ltd.

Test Date: Feb-2025

Hardware Availability: Oct-2024

Software Availability: Jun-2024

Base Portability Flags (Continued)

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

C++ benchmarks:

-w -std=c++14 -m64 -Wl,-z,muldefs -xsierraforest -O3 -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-L/opt/intel/oneapi/compiler/2024.1/lib -lqkmalloc

Fortran benchmarks:

-w -m64 -Wl,-z,muldefs -xsierraforest -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 -lqkmalloc

Peak Compiler Invocation

C benchmarks:

icx

C++ benchmarks:

icpx

Fortran benchmarks:

ifx

Peak Portability Flags

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

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

IEIT Systems Co., Ltd.

SPECrate®2017_int_base = 1160

meta brain NF5280G8 (Intel Xeon 6756E)

SPECrate®2017_int_peak = 1200

CPU2017 License: 3358

Test Sponsor: IEIT Systems Co., Ltd.

Tested by: IEIT Systems Co., Ltd.

Test Date: Feb-2025

Hardware Availability: Oct-2024

Software Availability: Jun-2024

Peak Portability Flags (Continued)

```

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.profddata(pass 2) -xCORE-AVX2 -flto
-Ofast -ffast-math -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fno-strict-overflow
-L/opt/intel/oneapi/compiler/2024.1/lib -lqkmalloc

502.gcc_r: -m32 -L/opt/intel/oneapi/compiler/2024.1/lib32 -std=gnu89
-Wl,-z,muldefs -fprofile-generate(pass 1)
-fprofile-use=default.profddata(pass 2) -xCORE-AVX2 -flto
-Ofast -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 -xsierraforest -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fno-alias
-L/opt/intel/oneapi/compiler/2024.1/lib -lqkmalloc

```

557.xz_r: basepeak = yes

C++ benchmarks:

520.omnetpp_r: basepeak = yes

523.xalancbmk_r: basepeak = yes

531.deepsjeng_r: basepeak = yes

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

IEIT Systems Co., Ltd.

SPECrate®2017_int_base = 1160

meta brain NF5280G8 (Intel Xeon 6756E)

SPECrate®2017_int_peak = 1200

CPU2017 License: 3358

Test Sponsor: IEIT Systems Co., Ltd.

Tested by: IEIT Systems Co., Ltd.

Test Date: Feb-2025

Hardware Availability: Oct-2024

Software Availability: Jun-2024

Peak Optimization Flags (Continued)

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/IEIT-Platform-Settings-intel-V1.2.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/IEIT-Platform-Settings-intel-V1.2.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 2025-02-12 18:10:50-0500.

Report generated on 2025-03-12 10:24:26 by CPU2017 PDF formatter v6716.

Originally published on 2025-03-11.