



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

## Kaytus Systems Pte. Ltd. KR1280V3 (Intel Xeon 6780E)

SPECrate®2017\_int\_base = 1410

SPECrate®2017\_int\_peak = 1460

CPU2017 License: 3358

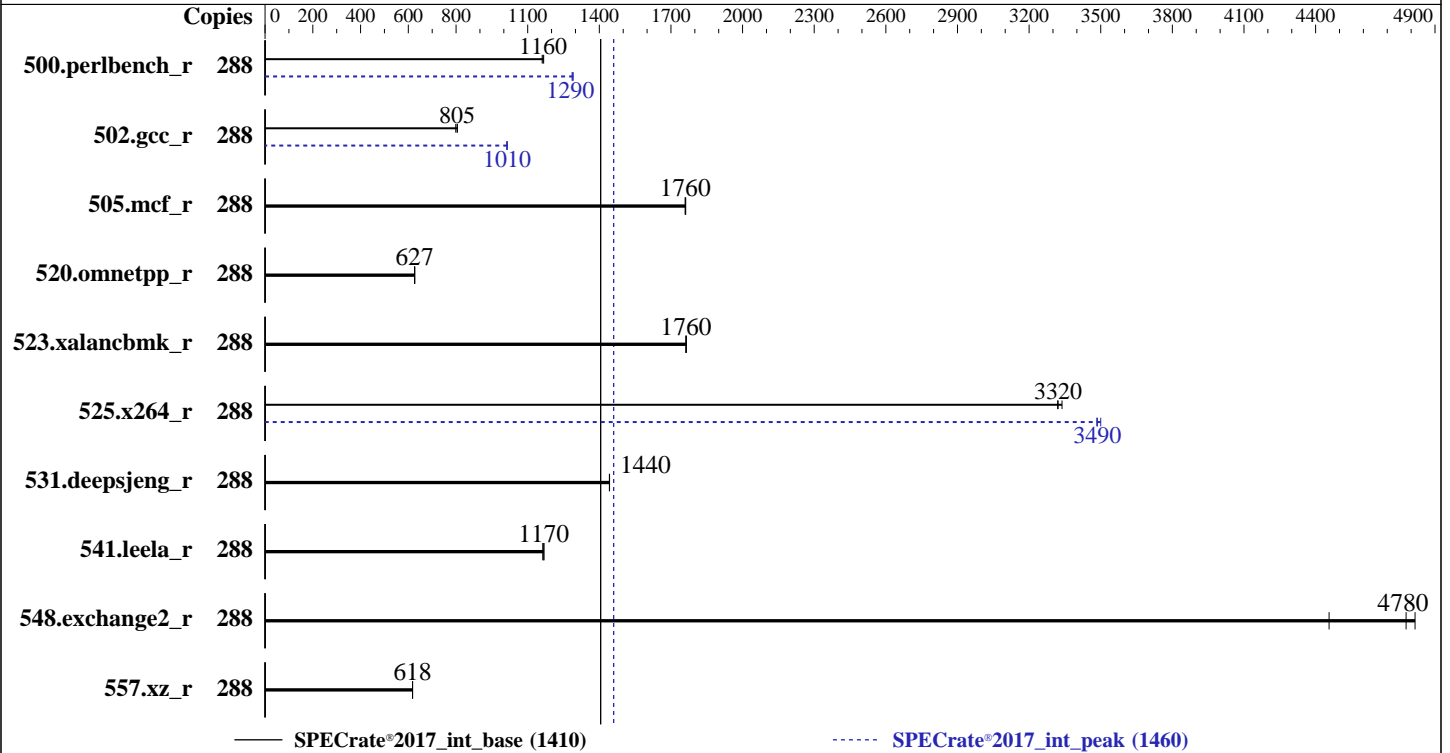
Test Sponsor: Kaytus Systems Pte. Ltd.

Tested by: Kaytus Systems Pte. Ltd.

Test Date: Sep-2024

Hardware Availability: Oct-2024

Software Availability: Jun-2024



### Hardware

CPU Name: Intel Xeon 6780E  
 Max MHz: 3000  
 Nominal: 2200  
 Enabled: 288 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: 108 MB I+D on chip per chip  
 Other: None  
 Memory: 1 TB (16 x 64 GB 2Rx4 PC5-6400B-R)  
 Storage: 1 x 1.92 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 00.14.02 released Jul-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 set to prefer performance at the cost  
 of additional power usage.



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

## Kaytus Systems Pte. Ltd.

SPECrate®2017\_int\_base = 1410

## KR1280V3 (Intel Xeon 6780E)

SPECrate®2017\_int\_peak = 1460

CPU2017 License: 3358

Test Sponsor: Kaytus Systems Pte. Ltd.

Tested by: Kaytus Systems Pte. Ltd.

Test Date: Sep-2024

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	288	395	1160	<b>394</b>	<b>1160</b>	393	1170	288	357	1290	355	1290	<b>356</b>	<b>1290</b>
502.gcc_r	288	<b>507</b>	<b>805</b>	507	805	511	799	288	403	1010	<b>402</b>	<b>1010</b>	402	1010
505.mcf_r	288	<b>264</b>	<b>1760</b>	264	1760	264	1760	288	<b>264</b>	<b>1760</b>	264	1760	264	1760
520.omnetpp_r	288	<b>603</b>	<b>627</b>	603	626	603	627	288	<b>603</b>	<b>627</b>	603	626	603	627
523.xalancbmk_r	288	173	1760	172	1760	<b>172</b>	<b>1760</b>	288	173	1760	172	1760	<b>172</b>	<b>1760</b>
525.x264_r	288	<b>152</b>	<b>3320</b>	151	3340	152	3320	288	144	3500	<b>145</b>	<b>3490</b>	145	3480
531.deepsjeng_r	288	229	1440	229	1440	<b>229</b>	<b>1440</b>	288	229	1440	229	1440	<b>229</b>	<b>1440</b>
541.leela_r	288	408	1170	410	1160	<b>408</b>	<b>1170</b>	288	408	1170	410	1160	<b>408</b>	<b>1170</b>
548.exchange2_r	288	169	4460	157	4820	<b>158</b>	<b>4780</b>	288	169	4460	157	4820	<b>158</b>	<b>4780</b>
557.xz_r	288	503	618	504	618	<b>504</b>	<b>618</b>	288	503	618	504	618	<b>504</b>	<b>618</b>

SPECrate®2017\_int\_base = **1410**

SPECrate®2017\_int\_peak = **1460**

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 2017-2024 Standard Performance Evaluation Corporation

## Kaytus Systems Pte. Ltd.

SPECrate®2017\_int\_base = 1410

## KR1280V3 (Intel Xeon 6780E)

SPECrate®2017\_int\_peak = 1460

**CPU2017 License:** 3358

**Test Sponsor:** Kaytus Systems Pte. Ltd.

**Tested by:** Kaytus Systems Pte. Ltd.

**Test Date:** Sep-2024

**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 Sat Jun 15 07:13:38 2024

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  
07:13:38 up 1 min, 1 user, load average: 1.22, 0.76, 0.30  
USER TTY FROM LOGIN@ IDLE JCPU PCPU WHAT  
root tty1 - 07:12 8.00s 2.19s 0.06s sh  
reportable-ic2024.1-lin-sierraforest-rate-20240308.sh  
-----

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

## Kaytus Systems Pte. Ltd.

SPECrate®2017\_int\_base = 1410

## KR1280V3 (Intel Xeon 6780E)

SPECrate®2017\_int\_peak = 1460

CPU2017 License: 3358

Test Sponsor: Kaytus Systems Pte. Ltd.

Tested by: Kaytus Systems Pte. Ltd.

Test Date: Sep-2024

Hardware Availability: Oct-2024

Software Availability: Jun-2024

### Platform Notes (Continued)

#### 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) 4124133
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) 4124133
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
sh reportable-ic2024.1-lin-sierraforest-rate-20240308.sh
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=288 -c
ic2024.1-lin-sierraforest-rate-20231213.cfg --define smt-on --define cores=288 --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=288 --configfile
ic2024.1-lin-sierraforest-rate-20231213.cfg --define smt-on --define cores=288 --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/CPU2017.001/temlogs/preenv.intrate.001.0.log --lognum 001.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/CPU2017

```

#### 6. /proc/cpuinfo

```

model name      : Intel(R) Xeon(R) 6780E
vendor_id      : GenuineIntel
cpu family     : 6
model          : 175
stepping       : 3
microcode      : 0x130001a0
bugs           : spectre_v1 spectre_v2 spec_store_bypass swapgs bhi
cpu cores      : 144
siblings       : 144
2 physical ids (chips)
288 processors (hardware threads)
physical id 0: core ids 0-143
physical id 1: core ids 0-143
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
,238,240,242,244,246,248,250,252,254,256,258,260,262,264,266,268,270,272,274,276,278,280,282,284,286

```

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

## Kaytus Systems Pte. Ltd. KR1280V3 (Intel Xeon 6780E)

SPECrate®2017\_int\_base = 1410

SPECrate®2017\_int\_peak = 1460

**CPU2017 License:** 3358  
**Test Sponsor:** Kaytus Systems Pte. Ltd.  
**Tested by:** Kaytus Systems Pte. Ltd.

**Test Date:** Sep-2024  
**Hardware Availability:** Oct-2024  
**Software Availability:** Jun-2024

### Platform Notes (Continued)

physical id 1: apicids  
512,514,516,518,520,522,524,526,528,530,532,534,536,538,540,542,544,546,548,550,552,554,556,558,560,562,564,566,568,570,572,574,576,578,580,582,584,586,588,590,592,594,596,598,600,602,604,606,608,610,612,614,616,618,620,622,624,626,628,630,632,634,636,638,640,642,644,646,648,650,652,654,656,658,660,662,664,666,668,670,672,674,676,678,680,682,684,686,688,690,692,694,696,698,700,702,704,706,708,710,712,714,716,718,720,722,724,726,728,730,732,734,736,738,740,742,744,746,748,750,752,754,756,758,760,762,764,766,768,770,772,774,776,778,780,782,784,786,788,790,792,794,796,798

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):               288
On-line CPU(s) list: 0-287
Vendor ID:            GenuineIntel
BIOS Vendor ID:       Intel(R) Corporation
Model name:           Intel(R) Xeon(R) 6780E
BIOS Model name:     Intel(R) Xeon(R) 6780E  CPU @ 2.2GHz
BIOS CPU family:     179
CPU family:          6
Model:               175
Thread(s) per core:  1
Core(s) per socket:  144
Socket(s):           2
Stepping:            3
CPU(s) scaling MHz:  27%
CPU max MHz:         3000.0000
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 aperfmperf tsc_known_freq pni
                    pclmulqdq dtes64 ds_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm
                    pcid dca sse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_timer aes
                    xsave avx f16c rdrand lahf_lm abm 3dnowprefetch cpuid_fault epb
                    cat_l3 cat_l2 cdp_l3 intel_ppin cdp_l2 ssbd mba ibrs ibpb stibp
                    ibrs_enhanced tpr_shadow flexpriority ept vpid ept_ad fsgsbase
                    tsc_adjust bmi1 avx2 smep bmi2 erms invpcid cqm rdt_a 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 hwp
                    hwp_act_window hwp_epp hwp_pkg_req vnmi 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_l1d
                    arch_capabilities
Virtualization:       VT-x
L1d cache:           9 MiB (288 instances)
L1i cache:           18 MiB (288 instances)
L2 cache:            288 MiB (72 instances)
L3 cache:            216 MiB (2 instances)
NUMA node(s):        2
NUMA node0 CPU(s):  0-143
NUMA node1 CPU(s):  144-287

```

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

## Kaytus Systems Pte. Ltd.

SPECrate®2017\_int\_base = 1410

## KR1280V3 (Intel Xeon 6780E)

SPECrate®2017\_int\_peak = 1460

CPU2017 License: 3358

Test Date: Sep-2024

Test Sponsor: Kaytus Systems Pte. Ltd.

Hardware Availability: Oct-2024

Tested by: Kaytus Systems Pte. Ltd.

Software Availability: Jun-2024

### Platform Notes (Continued)

Vulnerability Gather data sampling: Not affected  
 Vulnerability Itlb multihit: Not affected  
 Vulnerability L1tf: Not affected  
 Vulnerability Mds: Not affected  
 Vulnerability Meltdown: Not affected  
 Vulnerability Mmio stale data: Not affected  
 Vulnerability Reg file data sampling: Not affected  
 Vulnerability Retbleed: Not affected  
 Vulnerability Spec rstack overflow: Not affected  
 Vulnerability Spec store bypass: Mitigation; Speculative Store Bypass disabled via prctl  
 Vulnerability Spectre v1: Mitigation; usercopy/swaps barriers and \_\_user pointer sanitization  
 Vulnerability Spectre v2: Mitigation; Enhanced / Automatic IBRS; IBPB conditional; RSB filling; PBRSE-eIBRS 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	9M	8	Data	1	64	1	64
L1i	64K	18M	8	Instruction	1	128	1	64
L2	4M	288M	16	Unified	2	4096	1	64
L3	108M	216M	12	Unified	3	147456	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: 0-143
node 0 size: 515489 MB
node 0 free: 514001 MB
node 1 cpus: 144-287
node 1 size: 515570 MB
node 1 free: 514111 MB
node distances:
node  0  1
  0: 10 21
  1: 21 10
```

9. /proc/meminfo

MemTotal: 1055805176 kB

10. who -r

run-level 3 Jun 15 07:12

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 YaST2-Firstboot YaST2-Second-Stage apparmor auditd cron display-manager firewalld getty@
irgbalance issue-generator kbdsettings kdump kdump-early kdump-notify klog lvm2-monitor
nscd nvme-fc-boot-connections nvme-autoconnect postfix purge-kernels rollback rsyslog
smartd sshd systemd-pstore wicked wickedd-auto4 wickedd-dhcp4 wickedd-dhcp6 wickedd-nanny
enabled-runtime systemd-remount-fs
disabled autofs autoyast-initscripts blk-availability boot-sysctl ca-certificates chrony-wait
```

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

**Kaytus Systems Pte. Ltd.**  
**KR1280V3 (Intel Xeon 6780E)**

SPECrate®2017\_int\_base = 1410

SPECrate®2017\_int\_peak = 1460

**CPU2017 License:** 3358  
**Test Sponsor:** Kaytus Systems Pte. Ltd.  
**Tested by:** Kaytus Systems Pte. Ltd.

**Test Date:** Sep-2024  
**Hardware Availability:** Oct-2024  
**Software Availability:** Jun-2024

## Platform Notes (Continued)

indirect  
chronydc console-getty cups cups-browsed debug-shell ebttables exchange-bmc-os-info fsidd  
gpm grub2-once haveged ipmi ipmievd issue-add-ssh-keys kexec-load lunmask man-db-create  
multipathd nfs nfs-blkmap rpcbind rpmconfigcheck rsyncd serial-getty@ smartd\_generate\_opts  
snmpd snmptrapd systemd-boot-check-no-failures systemd-confext systemd-network-generator  
systemd-sysext systemd-time-wait-sync systemd-timesyncd udisks2 vncserver@  
systemd-userdbd wickedd

-----  
13. Linux kernel boot-time arguments, from /proc/cmdline  
BOOT\_IMAGE=/boot/vmlinuz-6.4.0-150600.21-default  
root=UUID=18377317-737e-4218-af3f-1dfefc7flbec  
splash=silent  
mitigations=auto  
quiet  
security=apparmor  
crashkernel=371M,high  
crashkernel=72M,low

-----  
14. cpupower frequency-info  
analyzing CPU 235:  
current policy: frequency should be within 800 MHz and 3.00 GHz.  
The governor "powersave" 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+madvise [madvise] never  
enabled [always] madvise 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

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

## Kaytus Systems Pte. Ltd.

SPECrate®2017\_int\_base = 1410

## KR1280V3 (Intel Xeon 6780E)

SPECrate®2017\_int\_peak = 1460

**CPU2017 License:** 3358

**Test Sponsor:** Kaytus Systems Pte. Ltd.

**Tested by:** Kaytus Systems Pte. Ltd.

**Test Date:** Sep-2024

**Hardware Availability:** Oct-2024

**Software Availability:** Jun-2024

### Platform Notes (Continued)

```

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 SP6

```

```

-----
19. Disk information
SPEC is set to: /home/CPU2017
Filesystem  Type  Size  Used Avail Use% Mounted on
/dev/nvme0n1p2 xfs   892G  180G  712G  21% /

```

```

-----
20. /sys/devices/virtual/dmi/id
Vendor:      KAYTUS
Product:     KR1280-X3-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:
  16x Samsung M321R8GA0PB2-CCPEC 64 GB 2 rank 6400

```

```

-----
22. BIOS
(This section combines info from /sys/devices and dmidecode.)
BIOS Vendor:      American Megatrends International, LLC.
BIOS Version:     00.14.02
BIOS Date:        07/18/2024
BIOS Revision:    5.35

```

### 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 2017-2024 Standard Performance Evaluation Corporation

Kaytus Systems Pte. Ltd.

SPECrate®2017\_int\_base = 1410

KR1280V3 (Intel Xeon 6780E)

SPECrate®2017\_int\_peak = 1460

CPU2017 License: 3358

Test Date: Sep-2024

Test Sponsor: Kaytus Systems Pte. Ltd.

Hardware Availability: Oct-2024

Tested by: Kaytus Systems Pte. Ltd.

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, peak) 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

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

Kaytus Systems Pte. Ltd.

SPECrate®2017\_int\_base = 1410

KR1280V3 (Intel Xeon 6780E)

SPECrate®2017\_int\_peak = 1460

CPU2017 License: 3358

Test Date: Sep-2024

Test Sponsor: Kaytus Systems Pte. Ltd.

Hardware Availability: Oct-2024

Tested by: Kaytus Systems Pte. Ltd.

Software Availability: Jun-2024

## Base Portability Flags (Continued)

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 -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

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

Kaytus Systems Pte. Ltd.

SPECrate®2017\_int\_base = 1410

KR1280V3 (Intel Xeon 6780E)

SPECrate®2017\_int\_peak = 1460

CPU2017 License: 3358

Test Date: Sep-2024

Test Sponsor: Kaytus Systems Pte. Ltd.

Hardware Availability: Oct-2024

Tested by: Kaytus Systems Pte. Ltd.

Software Availability: Jun-2024

## Peak Portability Flags (Continued)

```

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.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 2017-2024 Standard Performance Evaluation Corporation

**Kaytus Systems Pte. Ltd.**  
**KR1280V3 (Intel Xeon 6780E)**

SPECrate®2017\_int\_base = 1410

SPECrate®2017\_int\_peak = 1460

**CPU2017 License:** 3358

**Test Sponsor:** Kaytus Systems Pte. Ltd.

**Tested by:** Kaytus Systems Pte. Ltd.

**Test Date:** Sep-2024

**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/Kaytus-Platform-Settings-intel-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/Kaytus-Platform-Settings-intel-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](mailto:info@spec.org).

Tested with SPEC CPU®2017 v1.1.9 on 2024-06-15 07:13:37-0400.

Report generated on 2024-10-09 14:02:57 by CPU2017 PDF formatter v6716.

Originally published on 2024-10-09.