



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

KTNF

(Test Sponsor: Telecommunications Technology Association)

KTNF KR580S3

(1.90 GHz, Intel Xeon Platinum 8490H)

SPECrate®2017_int_base = 931

SPECrate®2017_int_peak = 945

CPU2017 License: A83

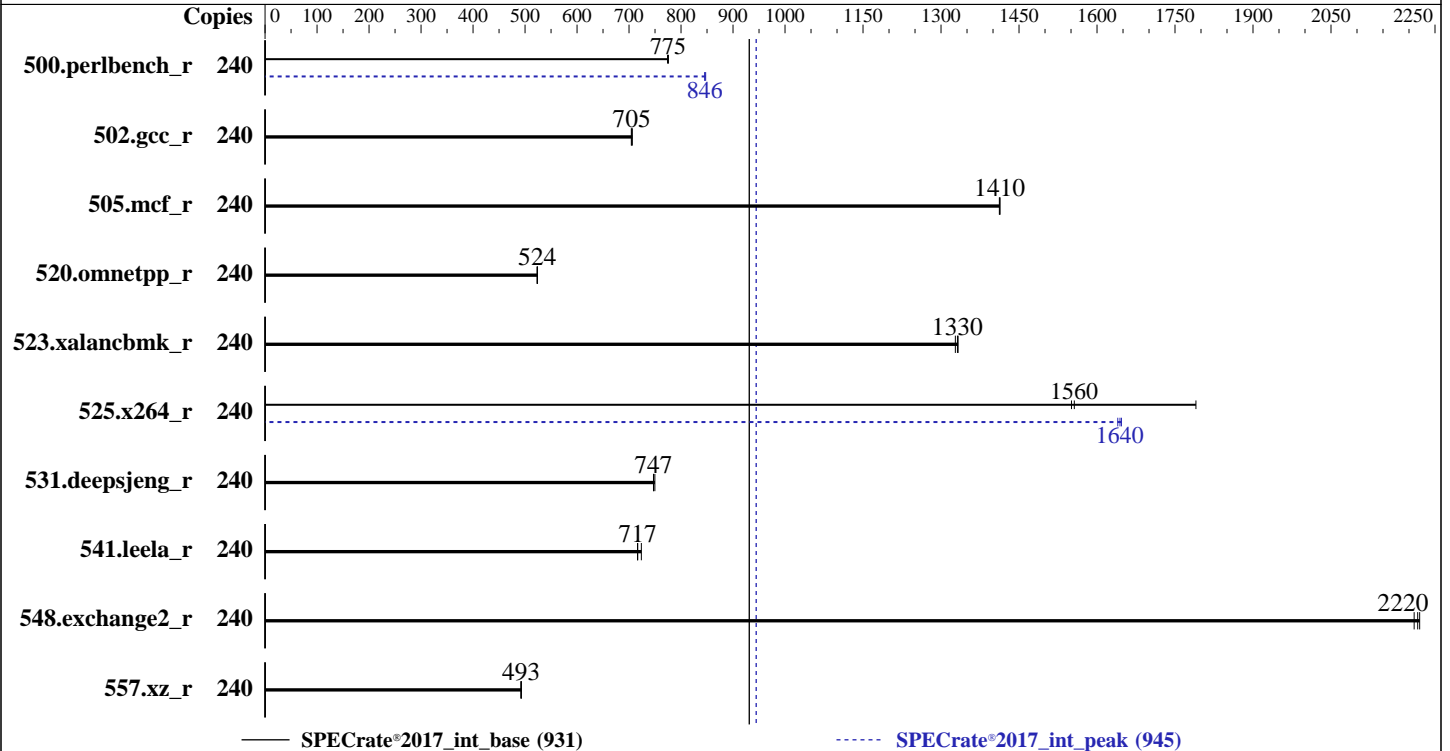
Test Sponsor: Telecommunications Technology Association

Tested by: Telecommunications Technology Association

Test Date: Nov-2024

Hardware Availability: Jun-2024

Software Availability: Jul-2024



Hardware

CPU Name: Intel Xeon Platinum 8490H
 Max MHz: 3500
 Nominal: 1900
 Enabled: 120 cores, 2 chips, 2 threads/core
 Orderable: 1,2 chips
 Cache L1: 32 KB I + 48 KB D on chip per core
 L2: 2 MB I+D on chip per core
 L3: 112.5 MB I+D on chip per chip
 Other: None
 Memory: 1 TB (16 x 64 GB 2Rx4 PC5-4800B-R)
 Storage: 1 x 500 GB SATA HDD, 7200RPM
 Other: CPU Cooling: Air

Software

OS: Red Hat Enterprise Linux 9.0 (Plow)
 5.14.0-70.13.1.el9_0.x86_64
 Compiler: C/C++: Version 2024.2.1 of Intel oneAPI DPC++/C++
 Compiler for Linux;
 Fortran: Version 2024.2.1 of Intel Fortran
 Compiler for Linux;
 Parallel: No
 Firmware: Version 5.32 released Jun-2024
 File System: xfs
 System State: Run level 5 (multi-user)
 Base Pointers: 64-bit
 Peak Pointers: 64-bit
 Other: Not Applicable
 Power Management: BIOS and OS set to prefer performance
 at the cost of additional power usage.



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

KTNF

(Test Sponsor: Telecommunications Technology Association)

KTNF KR580S3

(1.90 GHz, Intel Xeon Platinum 8490H)

SPECrate®2017_int_base = 931

SPECrate®2017_int_peak = 945

CPU2017 License: A83

Test Sponsor: Telecommunications Technology Association

Tested by: Telecommunications Technology Association

Test Date: Nov-2024

Hardware Availability: Jun-2024

Software Availability: Jul-2024

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
500.perlbench_r	240	493	775	494	774	493	776	240	452	846	451	847	452	846
502.gcc_r	240	481	706	482	705	482	704	240	481	706	482	705	482	704
505.mcf_r	240	274	1410	274	1410	275	1410	240	274	1410	274	1410	275	1410
520.omnetpp_r	240	602	523	601	524	601	524	240	602	523	601	524	601	524
523.xalancbmk_r	240	190	1330	190	1330	191	1330	240	190	1330	190	1330	191	1330
525.x264_r	240	235	1790	270	1560	271	1550	240	256	1640	255	1650	256	1640
531.deepsjeng_r	240	368	747	368	747	367	750	240	368	747	368	747	367	750
541.leela_r	240	549	724	555	717	555	716	240	549	724	555	717	555	716
548.exchange2_r	240	283	2220	285	2210	284	2220	240	283	2220	285	2210	284	2220
557.xz_r	240	526	493	527	492	526	493	240	526	493	527	492	526	493

SPECrate®2017_int_base = **931**

SPECrate®2017_int_peak = **945**

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

Submit Notes

The config file option 'submit' was used.

Environment Variables Notes

Environment variables set by runcpu before the start of the run:

LD_LIBRARY_PATH =

"/home/spec/SPECcpu2017-1.1.9/lib/intel64:/home/spec/SPECcpu2017-1.1.9/lib/ia32:/home/spec/SPECcpu2017-1.1.9/je5.0.1-32"

MALLOC_CONF = "retain:true"

General Notes

Binaries were compiled on a system with 2x Intel Xeon Platinum 8490H CPU + 1TiB Memory using RHEL 9.0

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.

Submitted: Tue Nov 19 20:31:03 EST 2024

Submission: cpu2017-20241119-45580.sub

Platform Notes

BIOS Configuration:

VT-d = Disabled

Patrol Scrub = Disabled

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

KTNF

(Test Sponsor: Telecommunications Technology Association)

KTNF KR580S3

(1.90 GHz, Intel Xeon Platinum 8490H)

SPECrate®2017_int_base = 931

SPECrate®2017_int_peak = 945

CPU2017 License: A83

Test Sponsor: Telecommunications Technology Association

Tested by: Telecommunications Technology Association

Test Date: Nov-2024

Hardware Availability: Jun-2024

Software Availability: Jul-2024

Platform Notes (Continued)

SNC = Enable SNC2 (2-clusters)

Engine Boost = Aggressive

SR-IOV Support = Disabled

BMC Configuration:

Fan mode = Full speed mode

Sysinfo program /home/spec/SPECcpu2017-1.1.9/bin/sysinfo
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
running on localhost.localdomain Tue Nov 19 17:06:06 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. Systemd service manager version: systemd 250 (250-6.el9_0)
11. Failed units, from systemctl list-units --state=failed
12. Services, from systemctl list-unit-files
13. Linux kernel boot-time arguments, from /proc/cmdline
14. cpupower frequency-info
15. tuned-adm active
16. sysctl
17. /sys/kernel/mm/transparent_hugepage
18. /sys/kernel/mm/transparent_hugepage/khugepaged
19. OS release
20. Disk information
21. /sys/devices/virtual/dmi/id
22. dmidecode
23. BIOS

1. uname -a
Linux localhost.localdomain 5.14.0-70.13.1.el9_0.x86_64 #1 SMP PREEMPT Thu Apr 14 12:42:38 EDT 2022 x86_64
x86_64 x86_64 GNU/Linux

2. w
17:06:06 up 6 min, 1 user, load average: 0.09, 0.28, 0.20
USER TTY LOGIN@ IDLE JCPU PCPU WHAT
tta pts/0 17:05 6.00s 0.91s 0.00s sshd: tta [priv]

3. Username
From environment variable \$USER: spec
From the command 'logname': tta

4. ulimit -a
real-time non-blocking time (microseconds, -R) unlimited
core file size (blocks, -c) 0

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

KTNF

(Test Sponsor: Telecommunications Technology Association)

KTNF KR580S3

(1.90 GHz, Intel Xeon Platinum 8490H)

SPECrate®2017_int_base = 931

SPECrate®2017_int_peak = 945

CPU2017 License: A83

Test Sponsor: Telecommunications Technology Association

Tested by: Telecommunications Technology Association

Test Date: Nov-2024

Hardware Availability: Jun-2024

Software Availability: Jul-2024

Platform Notes (Continued)

```

data seg size          (kbytes, -d) unlimited
scheduling priority    (-e) 0
file size              (blocks, -f) unlimited
pending signals        (-i) 4124493
max locked memory      (kbytes, -l) 800000000
max memory size        (kbytes, -m) unlimited
open files             (-n) 800000000
pipe size              (512 bytes, -p) 8
POSIX message queues   (bytes, -q) 819200
real-time priority     (-r) 0
stack size             (kbytes, -s) 8192
cpu time               (seconds, -t) unlimited
max user processes     (-u) unlimited
virtual memory         (kbytes, -v) unlimited
file locks             (-x) unlimited

```

5. sysinfo process ancestry

```

/usr/lib/systemd/systemd rhgb --switched-root --system --deserialize 31
sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups
sshd: tta [priv]
sshd: tta@pts/0
-bash
su - spec
-bash
runccpu --action validate --define default-platform-flags --define numcopies=240 -c tta_new_peak --define
smt-on --define cores=120 --define physicalfirst --define invoke_with_interleave --define drop_caches
--tune base:peak -o all intrate
runccpu --action validate --define default-platform-flags --define numcopies=240 --configfile tta_new_peak
--define smt-on --define cores=120 --define physicalfirst --define invoke_with_interleave --define
drop_caches --tune base:peak --output_format all --nopower --runmode rate --tune base:peak --size refrate
intrate --nopreenv --note-preenv --logfile $SPEC/tmp/CPU2017.119/templogs/preenv.intrate.119.0.log
--lognum 119.0 --from_runccpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/spec/SPECcpu2017-1.1.9

```

6. /proc/cpuinfo

```

model name      : Intel(R) Xeon(R) Platinum 8490H
vendor_id      : GenuineIntel
cpu family     : 6
model          : 143
stepping       : 8
microcode      : 0x2b000571
bugs           : spectre_v1 spectre_v2 spec_store_bypass swapsg
cpu cores      : 60
siblings       : 120
2 physical ids (chips)
240 processors (hardware threads)
physical id 0: core ids 0-59
physical id 1: core ids 0-59
physical id 0: apicids 0-119
physical id 1: apicids 128-247

```

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 2.37.4:

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

KTNF

(Test Sponsor: Telecommunications Technology Association)

KTNF KR580S3

(1.90 GHz, Intel Xeon Platinum 8490H)

SPECrate®2017_int_base = 931

SPECrate®2017_int_peak = 945

CPU2017 License: A83

Test Sponsor: Telecommunications Technology Association

Tested by: Telecommunications Technology Association

Test Date: Nov-2024

Hardware Availability: Jun-2024

Software Availability: Jul-2024

Platform Notes (Continued)

```

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):                       240
On-line CPU(s) list:         0-239
Vendor ID:                    GenuineIntel
Model name:                   Intel(R) Xeon(R) Platinum 8490H
CPU family:                   6
Model:                        143
Thread(s) per core:          2
Core(s) per socket:          60
Socket(s):                    2
Stepping:                     8
CPU max MHz:                  3500.0000
CPU min MHz:                  800.0000
BogoMIPS:                     3800.00
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 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 intel_ppin cdp_l2 ssbd mba ibrs ibpb stibp ibrs_enhanced
                                tpr_shadow vnmi flexpriority ept vpid ept_ad fsgsbase tsc_adjust bmil avx2
                                smep bmi2 erms invpcid cqm rdt_a avx512f avx512dq rdseed adx smap
                                avx512ifma clflushopt clwb intel_pt avx512cd sha_ni avx512bw avx512v1
                                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 hwp hwp_act_window hwp_epp hwp_pkg_req 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_lld arch_capabilities
Virtualization:              VT-x
L1d cache:                   5.6 MiB (120 instances)
L1i cache:                   3.8 MiB (120 instances)
L2 cache:                     240 MiB (120 instances)
L3 cache:                     225 MiB (2 instances)
NUMA node(s):                8
NUMA node0 CPU(s):           0-14,120-134
NUMA node1 CPU(s):           15-29,135-149
NUMA node2 CPU(s):           30-44,150-164
NUMA node3 CPU(s):           45-59,165-179
NUMA node4 CPU(s):           60-74,180-194
NUMA node5 CPU(s):           75-89,195-209
NUMA node6 CPU(s):           90-104,210-224
NUMA node7 CPU(s):           105-119,225-239
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
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:

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

KTNF

(Test Sponsor: Telecommunications Technology Association)

KTNF KR580S3

(1.90 GHz, Intel Xeon Platinum 8490H)

SPECrate®2017_int_base = 931

SPECrate®2017_int_peak = 945

CPU2017 License: A83

Test Sponsor: Telecommunications Technology Association

Tested by: Telecommunications Technology Association

Test Date: Nov-2024

Hardware Availability: Jun-2024

Software Availability: Jul-2024

Platform Notes (Continued)

NAME	ONE-SIZE	ALL-SIZE	WAYS	TYPE	LEVEL	SETS	PHY-LINE	COHERENCY-SIZE
L1d	48K	5.6M	12	Data	1	64	1	64
L1i	32K	3.8M	8	Instruction	1	64	1	64
L2	2M	240M	16	Unified	2	2048	1	64
L3	112.5M	225M	15	Unified	3	122880	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: 0-14,120-134
node 0 size: 128079 MB
node 0 free: 127672 MB
node 1 cpus: 15-29,135-149
node 1 size: 129017 MB
node 1 free: 128651 MB
node 2 cpus: 30-44,150-164
node 2 size: 129017 MB
node 2 free: 128079 MB
node 3 cpus: 45-59,165-179
node 3 size: 129017 MB
node 3 free: 128638 MB
node 4 cpus: 60-74,180-194
node 4 size: 129017 MB
node 4 free: 128678 MB
node 5 cpus: 75-89,195-209
node 5 size: 129017 MB
node 5 free: 128670 MB
node 6 cpus: 90-104,210-224
node 6 size: 129017 MB
node 6 free: 128644 MB
node 7 cpus: 105-119,225-239
node 7 size: 128997 MB
node 7 free: 127224 MB
node distances:
node  0  1  2  3  4  5  6  7
0:  10 12 12 12 21 21 21 21
1:  12 10 12 12 21 21 21 21
2:  12 12 10 12 21 21 21 21
3:  12 12 12 10 21 21 21 21
4:  21 21 21 21 10 12 12 12
5:  21 21 21 21 12 10 12 12
6:  21 21 21 21 12 12 10 12
7:  21 21 21 21 12 12 12 10

```

9. /proc/meminfo

MemTotal: 1055930716 kB

'who -r' did not return a run level

10. Systemd service manager version: systemd 250 (250-6.el9_0)

```

Default Target Status
graphical      starting

```

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

```

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

```

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

KTNF

(Test Sponsor: Telecommunications Technology Association)

KTNF KR580S3

(1.90 GHz, Intel Xeon Platinum 8490H)

SPECrate®2017_int_base = 931

SPECrate®2017_int_peak = 945

CPU2017 License: A83

Test Sponsor: Telecommunications Technology Association

Tested by: Telecommunications Technology Association

Test Date: Nov-2024

Hardware Availability: Jun-2024

Software Availability: Jul-2024

Platform Notes (Continued)

12. Services, from `systemctl list-unit-files`

STATE	UNIT FILES
enabled	ModemManager NetworkManager NetworkManager-dispatcher NetworkManager-wait-online accounts-daemon atd auditd avahi-daemon bluetooth chronyd crond cups dbus-broker firewalld gdm getty@ insights-client-boot irqbalance iscsi iscsi-onboot kdump libstoragemgmt low-memory-monitor lvm2-monitor mcelog mdmonitor microcode multipathd nis-domainname nvme-fc-boot-connections ostree-remount power-profiles-daemon qemu-guest-agent rhsmcertd rsyslog rtkit-daemon selinux-autorelabel-mark sep5 smartd sshd sssd switcheroo-control systemd-network-generator tuned udisks2 upower vgauthd vmtoolsd
enabled-runtime	systemd-remount-fs
disabled	arp-ethers blk-availability brltty canberra-system-bootup canberra-system-shutdown canberra-system-shutdown-reboot chrony-wait cni-dhcp console-getty cpupower cups-browsed dbus-daemon debug-shell dnf-system-upgrade dnsmasq iprdump iprinit iprupdate iscsid iscsiuio kpatch kvm_stat ledmon man-db-restart-cache-update nftables nvme-autoconnect podman podman-auto-update podman-restart psacct ras-mc-ctl rasdaemon rdisc rhcd rhsm rhsm-facts rpmdb-rebuild serial-getty@ speech-dispatcherd sshd-keygen@ systemd-boot-check-no-failures systemd-pstore systemd-sysext wpa_supplicant
indirect	spice-vdagentd sssd-autofs sssd-kcm sssd-nss sssd-pac sssd-pam sssd-ssh sssd-sudo

13. Linux kernel boot-time arguments, from `/proc/cmdline`

```

BOOT_IMAGE=(hd0,gpt2)/vmlinuz-5.14.0-70.13.1.el9_0.x86_64
root=/dev/mapper/rhel-root
ro
crashkernel=1G-4G:192M,4G-64G:256M,64G-:512M
resume=/dev/mapper/rhel-swap
rd.lvm.lv=rhel/root
rd.lvm.lv=rhel/swap
rhgb
quiet

```

14. `cpupower frequency-info`

```

analyzing CPU 0:
  current policy: frequency should be within 800 MHz and 3.50 GHz.
                  The governor "performance" may decide which speed to use
                  within this range.

  boost state support:
    Supported: yes
    Active: yes

```

15. `tuned-adm active`

```

It seems that tuned daemon is not running, preset profile is not activated.
Preset profile: throughput-performance

```

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

```

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

KTNF

(Test Sponsor: Telecommunications Technology Association)

KTNF KR580S3

(1.90 GHz, Intel Xeon Platinum 8490H)

SPECrate®2017_int_base = 931

SPECrate®2017_int_peak = 945

CPU2017 License: A83

Test Sponsor: Telecommunications Technology Association

Tested by: Telecommunications Technology Association

Test Date: Nov-2024

Hardware Availability: Jun-2024

Software Availability: Jul-2024

Platform Notes (Continued)

```

vm.extfrag_threshold          500
vm.min_unmapped_ratio        1
vm.nr_hugepages               0
vm.nr_hugepages_mempolicy    0
vm.nr_overcommit_hugepages   0
vm.swappiness                 60
vm.watermark_boost_factor    15000
vm.watermark_scale_factor    10
vm.zone_reclaim_mode         0

```

```

-----
17. /sys/kernel/mm/transparent_hugepage
defrag          always defer defer+madvice [madvice] never
enabled         [always] madvice 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      Red Hat Enterprise Linux 9.0 (Plow)
redhat-release  Red Hat Enterprise Linux release 9.0 (Plow)
system-release  Red Hat Enterprise Linux release 9.0 (Plow)

```

```

-----
20. Disk information
SPEC is set to: /home/spec/SPECcpu2017-1.1.9
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/mapper/rhel-home xfs   390G 173G 218G 45% /home

```

```

-----
21. /sys/devices/virtual/dmi/id
Vendor:          KTNF Co.,Ltd.
Product:         KM-P680
Product Family:  Family

```

```

-----
22. dmidecode
Additional information from dmidecode 3.3 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 M321R8GA0BB0-CQKDS 64 GB 2 rank 4800

```

```

-----
23. BIOS
(This section combines info from /sys/devices and dmidecode.)
BIOS Vendor:      American Megatrends International, LLC.

```

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

KTNF

(Test Sponsor: Telecommunications Technology Association)

KTNF KR580S3

(1.90 GHz, Intel Xeon Platinum 8490H)

SPECrate®2017_int_base = 931

SPECrate®2017_int_peak = 945

CPU2017 License: A83

Test Sponsor: Telecommunications Technology Association

Tested by: Telecommunications Technology Association

Test Date: Nov-2024

Hardware Availability: Jun-2024

Software Availability: Jul-2024

Platform Notes (Continued)

BIOS Version: P680KTFPS.29
BIOS Date: 06/04/2024
BIOS Revision: 5.32

Compiler Version Notes

=====
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 2024.2.1 Build 20240711
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 2024.2.1 Build 20240711
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 2024.2.1 Build 20240711
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 2017-2024 Standard Performance Evaluation Corporation

KTNF

(Test Sponsor: Telecommunications Technology Association)

KTNF KR580S3

(1.90 GHz, Intel Xeon Platinum 8490H)

SPECrate®2017_int_base = 931

SPECrate®2017_int_peak = 945

CPU2017 License: A83

Test Sponsor: Telecommunications Technology Association

Tested by: Telecommunications Technology Association

Test Date: Nov-2024

Hardware Availability: Jun-2024

Software Availability: Jul-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 -xsapphirerapids -O3 -ffast-math  
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4  
-L/home/spec/SPECcpu2017-1.1.9/lib/intel64 -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/home/spec/SPECcpu2017-1.1.9/lib/intel64 -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/home/spec/SPECcpu2017-1.1.9/lib/intel64 -lqkmalloc
```

Peak Compiler Invocation

C benchmarks:

icx

C++ benchmarks:

icpx

Fortran benchmarks:

ifx

Peak Portability Flags

Same as Base Portability Flags



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

KTNF

(Test Sponsor: Telecommunications Technology Association)

KTNF KR580S3

(1.90 GHz, Intel Xeon Platinum 8490H)

SPECrate®2017_int_base = 931

SPECrate®2017_int_peak = 945

CPU2017 License: A83

Test Sponsor: Telecommunications Technology Association

Tested by: Telecommunications Technology Association

Test Date: Nov-2024

Hardware Availability: Jun-2024

Software Availability: Jul-2024

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/home/spec/SPECcpu2017-1.1.9/lib/intel64 -lqkmalloc
```

502.gcc_r: basepeak = yes

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/home/spec/SPECcpu2017-1.1.9/lib/intel64 -lqkmalloc
```

557.xz_r: basepeak = yes

C++ benchmarks:

520.omnetpp_r: basepeak = yes

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/KTNF-Platform-Flags-Version-KM-P680-10B1-SA2.html>

<http://www.spec.org/cpu2017/flags/Intel-ic2024-official-linux64.2024-12-02.html>

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

<http://www.spec.org/cpu2017/flags/KTNF-Platform-Flags-Version-KM-P680-10B1-SA2.xml>

<http://www.spec.org/cpu2017/flags/Intel-ic2024-official-linux64.2024-12-02.xml>



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

KTNF

(Test Sponsor: Telecommunications Technology Association)

KTNF KR580S3

(1.90 GHz, Intel Xeon Platinum 8490H)

SPECrate®2017_int_base = 931

SPECrate®2017_int_peak = 945

CPU2017 License: A83

Test Sponsor: Telecommunications Technology Association

Tested by: Telecommunications Technology Association

Test Date: Nov-2024

Hardware Availability: Jun-2024

Software Availability: Jul-2024

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 2024-11-19 03:06:05-0500.

Report generated on 2024-12-18 18:19:30 by CPU2017 PDF formatter v6716.

Originally published on 2024-12-17.