



SPEC CPU®2017 Integer Rate Result

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Tyrone Systems

(Test Sponsor: Netweb Pte Ltd)

Tyrone Camarero SDI200C3R-28
(2.40 GHz, Intel Xeon Gold 6448H)

SPECrate®2017_int_base = 518

SPECrate®2017_int_peak = 536

CPU2017 License: 006042

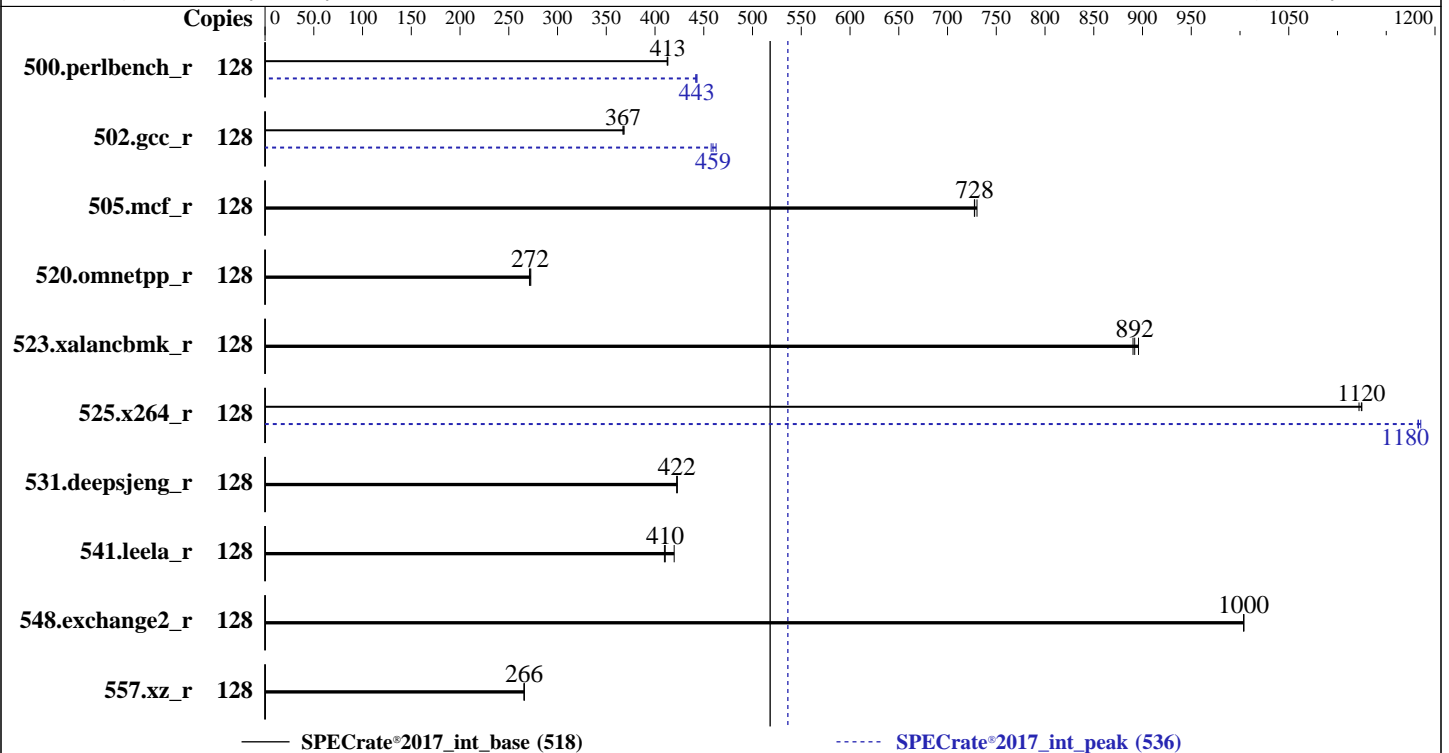
Test Sponsor: Netweb Pte Ltd

Tested by: Tyrone Systems

Test Date: Sep-2023

Hardware Availability: Jan-2023

Software Availability: May-2022



Hardware

CPU Name: Intel Xeon Gold 6448H
 Max MHz: 4100
 Nominal: 2400
 Enabled: 64 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: 60 MB I+D on chip per chip
 Other: None
 Memory: 256 GB (8 x 32 GB 2Rx4 PC4-4800AA-R)
 Storage: 1 x 512 GB NVMe SSD
 Other: None

Software

OS: Red Hat Enterprise Linux release 8.5 (Ootpa)
 Kernel 4.18.0-348.el8.x86_64
 Compiler: C/C++: Version 2022.1 of Intel oneAPI DPC++/C++ Compiler for Linux;
 Fortran: Version 2022.1 of Intel Fortran Compiler for Linux;
 Parallel: No
 Firmware: Version 1.3 released Jun-2023
 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.



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Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
500.perlbench_r	128	493	413	494	412	493	413	128	460	443	460	443	461	442
502.gcc_r	128	493	367	494	367	492	368	128	392	463	394	459	396	458
505.mcf_r	128	283	730	284	728	284	728	128	283	730	284	728	284	728
520.omnetpp_r	128	619	271	616	273	618	272	128	619	271	616	273	618	272
523.xalancbmk_r	128	152	892	152	890	151	896	128	152	892	152	890	151	896
525.x264_r	128	199	1120	200	1120	199	1120	128	190	1180	189	1180	189	1190
531.deepsjeng_r	128	347	422	347	423	347	422	128	347	422	347	423	347	422
541.leela_r	128	516	410	517	410	505	420	128	516	410	517	410	505	420
548.exchange2_r	128	334	1000	334	1000	334	1000	128	334	1000	334	1000	334	1000
557.xz_r	128	520	266	520	266	520	266	128	520	266	520	266	520	266

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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"



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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>
```

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.

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.

NA: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown) 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 Settings:

Power Technology = Custom

ENERGY_PERF_BIAS_CFG mode = Maximum Performance

KTI Prefetch = Enable

LLC Dead Line Alloc = Disable

Hyper-Threading = Enabled

Sysinfo program /home/cpu2017/bin/sysinfo

Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197

running on Tyronespec Sat Sep 16 10:58:48 2023

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

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10. who -r
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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
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18. /sys/kernel/mm/transparent_hugepage/khugepaged
19. OS release
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21. Disk information
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Platform Notes (Continued)

24. BIOS

1. `uname -a`

```
Linux Tyronespec 4.18.0-348.el8.x86_64 #1 SMP Mon Oct 4 12:17:22 EDT 2021 x86_64 x86_64 x86_64 GNU/Linux
```

2. `w`

```
10:58:48 up 1 min, 1 user, load average: 0.18, 0.06, 0.02
USER      TTY      FROM          LOGIN@   IDLE   JCPU   PCPU   WHAT
root      tty1    -             10:58   7.00s  0.98s  0.00s  -bash
```

3. Username

```
From environment variable $USER: root
```

4. `ulimit -a`

```
core file size          (blocks, -c) 0
data seg size           (kbytes, -d) unlimited
scheduling priority     (-e) 0
file size               (blocks, -f) unlimited
pending signals         (-i) 1030244
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) 1030244
virtual memory          (kbytes, -v) unlimited
file locks              (-x) unlimited
```

5. `sysinfo process ancestry`

```
/usr/lib/systemd/systemd --switched-root --system --deserialize 17
login -- root
-bash
-runcpu --nobuild --action validate --define default-platform-flags --define numcopies=128 -c
ic2022.1-lin-core-avx512-rate-20220316.cfg --define smt-on --define cores=64 --define physicalfirst
--define invoke_with_interleave --define drop_caches --tune base,peak -o all intrate
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=128 --configfile
ic2022.1-lin-core-avx512-rate-20220316.cfg --define smt-on --define cores=64 --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/CPU2017.002/templogs/preenv.intrate.002.0.log --lognum 002.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/cpu2017
```

6. `/proc/cpuinfo`

```
model name      : Intel(R) Xeon(R) Gold 6448H
vendor_id      : GenuineIntel
cpu family     : 6
model          : 143
stepping       : 8
```

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Platform Notes (Continued)

```

microcode      : 0x2b000461
bugs           : spectre_v1 spectre_v2 spec_store_bypass swapgs
cpu cores     : 32
siblings      : 64
2 physical ids (chips)
128 processors (hardware threads)
physical id 0: core ids 0-31
physical id 1: core ids 0-31
physical id 0: apicids 0-63
physical id 1: apicids 128-191

```

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 2.32.1:

```

Architecture:          x86_64
CPU op-mode(s):        32-bit, 64-bit
Byte Order:             Little Endian
CPU(s):                 128
On-line CPU(s) list:   0-127
Thread(s) per core:    2
Core(s) per socket:    32
Socket(s):              2
NUMA node(s):          2
Vendor ID:              GenuineIntel
BIOS Vendor ID:        Intel(R) Corporation
CPU family:             6
Model:                  143
Model name:             Intel(R) Xeon(R) Gold 6448H
BIOS Model name:       Intel(R) Xeon(R) Gold 6448H
Stepping:               8
CPU MHz:                3199.999
BogoMIPS:               4800.00
Virtualization:         VT-x
L1d cache:              48K
L1i cache:              32K
L2 cache:               2048K
L3 cache:               61440K
NUMA node0 CPU(s):     0-31,64-95
NUMA node1 CPU(s):     32-63,96-127
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 cdp_l2 ssbd mba ibrs ibpb stibp ibrs_enhanced tpr_shadow vnmi
                        flexpriority ept vpid ept_ad fsgsbase tsc_adjust sgx bml hle avx2 smep bmi2 erms
                        invpcid 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 sgx_lc fsrm md_clear serialize tsxldtrk pconfig arch_lbr
                        avx512_fp16 flush_lld arch_capabilities

```

8. numactl --hardware

(Continued on next page)



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Platform Notes (Continued)

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

```
available: 2 nodes (0-1)
node 0 cpus: 0-31,64-95
node 0 size: 128649 MB
node 0 free: 127342 MB
node 1 cpus: 32-63,96-127
node 1 size: 128970 MB
node 1 free: 128431 MB
node distances:
node  0  1
  0: 10 21
  1: 21 10
```

9. /proc/meminfo
MemTotal: 263802716 kB

10. who -r
run-level 3 Sep 16 10:58

11. Systemd service manager version: systemd 239 (239-51.el8)
Default Target Status
multi-user running

12. Services, from systemctl list-unit-files

STATE	UNIT FILES
enabled	ModemManager NetworkManager NetworkManager-dispatcher NetworkManager-wait-online accounts-daemon atd auditd autovt@ avahi-daemon bluetooth chronyd crond cups display-manager firewalld gdm getty@ import-state insights-client-boot irqbalance iscsi iscsi-onboot kdump ksm ksmtuned libstoragemgmt libvirt loadmodules lvm2-monitor mcelog mdmonitor microcode multipathd nis-domainname nvidia-hibernate nvidia-resume nvidia-suspend nvme-fc-boot-connections ostree-remount qemu-guest-agent rhsmcertd rpcbind rsyslog rtkit-daemon selinux-autorelabel-mark sep5 smartd sshd sssd syslog timedatex tuned udisks2 vdo vgaauthd vmtoolsd
disabled	arp-ethers blk-availability brltty canberra-system-bootup canberra-system-shutdown canberra-system-shutdown-reboot chrony-wait console-getty cpupower cups-browsed debug-shell dnsmasq ebttables gssproxy httpd httpd@ initial-setup initial-setup-reconfiguration iprump iprinit iprupdate iscsid iscsiui kpatch kvm_stat ledmon man-db-restart-cache-update ndctl-monitor netcf-transaction nfs-blkmap nfs-convert nfs-server nftables numad nvidia-powerd nvme-autoconnect oddjobd podman podman-auto-update podman-restart psacct radvd ras-mc-ctl rasdaemon rdisc rhcd rhsm rhsm-facts saslauthd serial-getty@ snmpd snmptrapd speech-dispatcherd sshd-keygen@ switcheroo-control systemd-nspawn@ systemd-resolved tcsd tog-pegasus upower virtinterfaced virtnetworkd virtnodeudev virtnwfilterd virtproxyd virtqemud virtsecretd virtstoraged wpa_supplicant
generated	SystemTap compile-server gcc-toolset-10-stap-server gcc-toolset-10-systemtap gcc-toolset-11-stap-server gcc-toolset-11-systemtap gcc-toolset-9-stap-server gcc-toolset-9-systemtap scripts startup
indirect	spice-vdagentd sssd-autofs sssd-kcm sssd-nss sssd-pac sssd-pam sssd-ssh sssd-sudo virtlockd virtlogd
masked	systemd-timedated

13. Linux kernel boot-time arguments, from /proc/cmdline
BOOT_IMAGE=(hd1,gpt2)/vmlinuz-4.18.0-348.el8.x86_64
root=/dev/mapper/rhel-root
ro
resume=/dev/mapper/rhel-swap
rd.lvm.lv=rhel/root

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Platform Notes (Continued)

```
rd.lvm.lv=rhel/swap
rhgb
quiet
```

```
-----
14. cpupower frequency-info
analyzing CPU 0:
  Unable to determine current policy
  boost state support:
    Supported: yes
    Active: yes
```

```
-----
15. tuned-adm active
  Current active profile: throughput-performance
```

```
-----
16. sysctl
kernel.numa_balancing          1
kernel.randomize_va_space      2
vm.compaction_proactiveness     0
vm.dirty_background_bytes      0
vm.dirty_background_ratio      10
vm.dirty_bytes                  0
vm.dirty_expire_centisecs      3000
vm.dirty_ratio                  40
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                   10
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_swap           64
pages_to_scan           4096
scan_sleep_millisecs   10000
```

```
-----
19. OS release
From /etc/*-release /etc/*-version
os-release      Red Hat Enterprise Linux 8.5 (Ootpa)
redhat-release  Red Hat Enterprise Linux release 8.5 (Ootpa)
system-release  Red Hat Enterprise Linux release 8.5 (Ootpa)
```

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Platform Notes (Continued)

20. Kernel self-reported vulnerability status, from /sys/devices/system/cpu/vulnerabilities

itlb_multihit	Not affected
lltf	Not affected
mds	Not affected
meltdown	Not affected
spec_store_bypass	Mitigation: Speculative Store Bypass disabled via prctl and seccomp
spectre_v1	Mitigation: usercopy/swapgs barriers and __user pointer sanitization
spectre_v2	Mitigation: Enhanced IBRS, IBPB: conditional, RSB filling
srbsds	Not affected
tsx_async_abort	Not affected

For more information, see the Linux documentation on hardware vulnerabilities, for example <https://www.kernel.org/doc/html/latest/admin-guide/hw-vuln/index.html>

21. Disk information

SPEC is set to: /home/cpu2017

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/mapper/rhel-home	xfs	402G	372G	30G	93%	/home

22. /sys/devices/virtual/dmi/id

Vendor:	Tyrone Systems
Product:	Tyrone Camarero SDI200C3R-28
Product Family:	Family
Serial:	A886319X3827516

23. 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.

Memory:
8x Samsung M321R4GA3BB6-CQKET 32 GB 2 rank 4800

24. BIOS

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

BIOS Vendor:	American Megatrends International, LLC.
BIOS Version:	1.3a
BIOS Date:	06/02/2023
BIOS Revision:	5.31

Compiler Version Notes

=====
C | 502.gcc_r(peak)

Intel(R) oneAPI DPC++/C++ Compiler for applications running on IA-32, Version 2022.1.0 Build 20220316
Copyright (C) 1985-2022 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)

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Compiler Version Notes (Continued)

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2022.1.0 Build 20220316
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.

=====
C | 502.gcc_r(peak)
=====

Intel(R) oneAPI DPC++/C++ Compiler for applications running on IA-32, Version 2022.1.0 Build 20220316
Copyright (C) 1985-2022 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 2022.1.0 Build 20220316
Copyright (C) 1985-2022 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 2022.1.0 Build 20220316
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.

=====
Fortran | 548.exchange2_r(base, peak)
=====

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2022.1.0 Build 20220316
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
502.gcc_r: -DSPEC_LP64
505.mcf_r: -DSPEC_LP64

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Base 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
```

Base Optimization Flags

C benchmarks:

```
-w -std=c11 -m64 -Wl,-z,muldefs -xCORE-AVX512 -O3 -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-L/usr/local/intel/compiler/2022.1.0/linux/compiler/lib/intel64_lin
-lqkmalloc
```

C++ benchmarks:

```
-w -m64 -Wl,-z,muldefs -xCORE-AVX512 -O3 -ffast-math -flto
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-L/usr/local/intel/compiler/2022.1.0/linux/compiler/lib/intel64_lin
-lqkmalloc
```

Fortran benchmarks:

```
-w -m64 -Wl,-z,muldefs -xCORE-AVX512 -O3 -ffast-math -flto
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-nostandard-realloc-lhs -align array32byte -auto
-L/usr/local/intel/compiler/2022.1.0/linux/compiler/lib/intel64_lin
-lqkmalloc
```

Peak Compiler Invocation

C benchmarks:

icx

C++ benchmarks:

icpx

Fortran benchmarks:

ifx



SPEC CPU®2017 Integer Rate Result

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Tyrone Systems

(Test Sponsor: Netweb Pte Ltd)

Tyrone Camarero SDI200C3R-28
(2.40 GHz, Intel Xeon Gold 6448H)

SPECrate®2017_int_base = 518

SPECrate®2017_int_peak = 536

CPU2017 License: 006042

Test Sponsor: Netweb Pte Ltd

Tested by: Tyrone Systems

Test Date: Sep-2023

Hardware Availability: Jan-2023

Software Availability: May-2022

Peak Portability Flags

```
500.perlbench_r: -DSPEC_LP64 -DSPEC_LINUX_X64
502.gcc_r: -D_FILE_OFFSET_BITS=64
505.mcf_r: -DSPEC_LP64
520.omnetpp_r: -DSPEC_LP64
523.xalancbmk_r: -DSPEC_LP64 -DSPEC_LINUX
525.x264_r: -DSPEC_LP64
531.deepsjeng_r: -DSPEC_LP64
541.leela_r: -DSPEC_LP64
548.exchange2_r: -DSPEC_LP64
557.xz_r: -DSPEC_LP64
```

Peak Optimization Flags

C benchmarks:

```
500.perlbench_r: -w -std=c11 -m64 -Wl,-z,muldefs
-fprofile-generate(pass 1)
-fprofile-use=default.profddata(pass 2) -xCORE-AVX512
-Ofast -ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fno-strict-overflow
-L/usr/local/intel/compiler/2022.1.0/linux/compiler/lib/intel64_lin
-lqkmallo
```

```
502.gcc_r: -m32
-L/usr/local/intel/compiler/2022.1.0/linux/compiler/lib/ia32_lin
-std=gnu89 -Wl,-z,muldefs -fprofile-generate(pass 1)
-fprofile-use=default.profddata(pass 2) -xCORE-AVX512
-Ofast -ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -L/usr/local/jemalloc32-5.0.1/lib
-ljemallo
```

505.mcf_r: basepeak = yes

```
525.x264_r: -w -std=c11 -m64 -Wl,-z,muldefs -xCORE-AVX512 -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fno-alias
-L/usr/local/intel/compiler/2022.1.0/linux/compiler/lib/intel64_lin
-lqkmallo
```

557.xz_r: basepeak = yes

C++ benchmarks:

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

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Test Date: Sep-2023

Hardware Availability: Jan-2023

Software Availability: May-2022

Peak Optimization Flags (Continued)

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/Intel-ic2022-official-linux64_revA.html

<http://www.spec.org/cpu2017/flags/Tyrone-Platform-Settings-V1.2-SPR-revC.html>

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

http://www.spec.org/cpu2017/flags/Intel-ic2022-official-linux64_revA.xml

<http://www.spec.org/cpu2017/flags/Tyrone-Platform-Settings-V1.2-SPR-revC.xml>

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