



# SPEC CPU®2017 Integer Rate Result

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## Tyrone Systems

(Test Sponsor: Netweb Technologies India Ltd)  
Tyrone Camarero SDI200A3N-212  
(2.50 GHz, Intel Xeon Gold 6548Y+)

SPECrate®2017\_int\_base = 649

SPECrate®2017\_int\_peak = 672

CPU2017 License: 006802

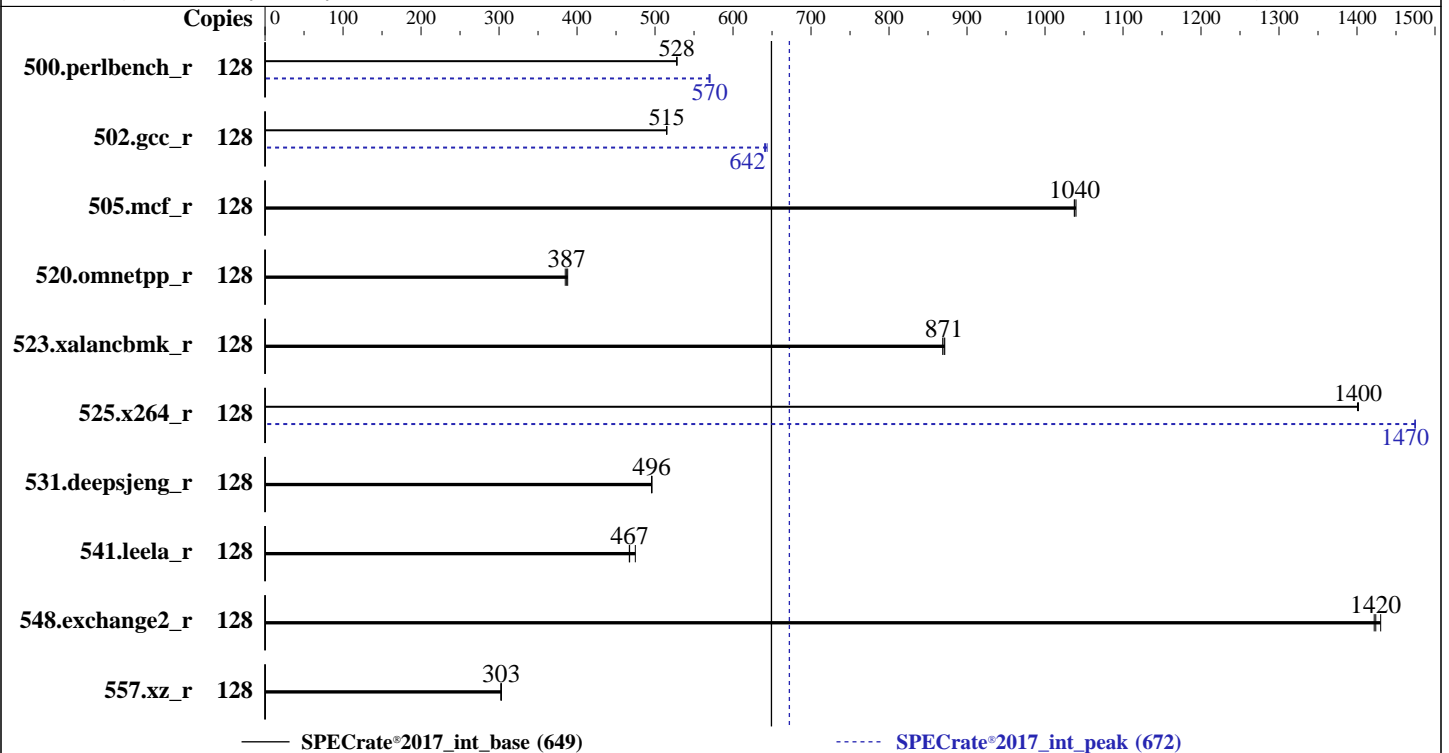
Test Sponsor: Netweb Technologies India Ltd

Tested by: Tyrone Systems

Test Date: Aug-2024

Hardware Availability: Jan-2023

Software Availability: Dec-2023



### Hardware

CPU Name: Intel Xeon Gold 6548Y+  
 Max MHz: 4100  
 Nominal: 2500  
 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: 1 TB (16 x 64 GB 2Rx4 PC5-4800B-R)  
 Storage: 1 x 960 GB NVMe  
 Other: CPU Cooling: Air

### Software

OS: Red Hat Enterprise Linux 9.3 (Plow)  
 5.14.0-362.13.1.el9\_3.x86\_64  
 Compiler: C/C++: Version 2023.2.3 of Intel oneAPI DPC++/C++  
 Compiler for Linux;  
 Fortran: Version 2023.2.3 of Intel Fortran  
 Compiler for Linux;  
 Parallel: No  
 Firmware: Version 2.1a released Mar-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 cost  
 of additional power.



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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	386	528	<b>386</b>	<b>528</b>	386	528	128	357	570	358	569	<b>357</b>	<b>570</b>
502.gcc_r	128	352	515	<b>352</b>	<b>515</b>	352	515	128	283	641	282	644	<b>283</b>	<b>642</b>
505.mcf_r	128	199	1040	<b>199</b>	<b>1040</b>	199	1040	128	199	1040	<b>199</b>	<b>1040</b>	199	1040
520.omnetpp_r	128	436	385	<b>434</b>	<b>387</b>	433	388	128	436	385	<b>434</b>	<b>387</b>	433	388
523.xalancbmk_r	128	<b>155</b>	<b>871</b>	156	869	155	871	128	<b>155</b>	<b>871</b>	156	869	155	871
525.x264_r	128	<b>160</b>	<b>1400</b>	160	1400	160	1400	128	<b>152</b>	<b>1470</b>	152	1470	152	1470
531.deepsjeng_r	128	296	496	<b>296</b>	<b>496</b>	296	496	128	296	496	<b>296</b>	<b>496</b>	296	496
541.leela_r	128	454	467	447	475	<b>453</b>	<b>467</b>	128	454	467	447	475	<b>453</b>	<b>467</b>
548.exchange2_r	128	<b>235</b>	<b>1420</b>	234	1430	236	1420	128	<b>235</b>	<b>1420</b>	234	1430	236	1420
557.xz_r	128	<b>456</b>	<b>303</b>	456	303	457	302	128	<b>456</b>	<b>303</b>	456	303	457	302

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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"  
We are using specific Kernel Version

## 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>

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

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## General Notes (Continued)

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

Sysinfo program /home/cpu2017/bin/sysinfo

Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197

running on localhost.localdomain Thu Aug 29 16:36:30 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 252 (252-18.e19)
  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 5.14.0-362.13.1.el9\_3.x86\_64 #1 SMP PREEMPT\_DYNAMIC Fri Nov 24 01:57:57 EST 2023 x86\_64 x86\_64 x86\_64 GNU/Linux

-----

2. w  
16:36:30 up 1 min, 1 user, load average: 0.16, 0.07, 0.02

USER	TTY	LOGIN@	IDLE	JCPU	PCPU	WHAT
root	ttyl	16:35	14.00s	1.06s	0.04s	-bash

-----

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## Platform Notes (Continued)

### 3. Username

From environment variable \$USER: root

### 4. ulimit -a

```

real-time non-blocking time (microseconds, -R) unlimited
core file size (blocks, -c) 0
data seg size (kbytes, -d) unlimited
scheduling priority (-e) 0
file size (blocks, -f) unlimited
pending signals (-i) 4126693
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) 4126693
virtual memory (kbytes, -v) unlimited
file locks (-x) unlimited

```

### 5. sysinfo process ancestry

```

/usr/lib/systemd/systemd rhgb --switched-root --system --deserialize 31
login -- root
-bash
-bash
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=128 -c
ic2023.2.3-lin-sapphirerapids-rate-20231121.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
ic2023.2.3-lin-sapphirerapids-rate-20231121.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/CPU2017.001/templogs/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) GOLD 6548Y+
vendor_id      : GenuineIntel
cpu family     : 6
model          : 207
stepping       : 2
microcode      : 0x21000200
bugs           : spectre_v1 spectre_v2 spec_store_bypass swapgs eibrs_pbrsb
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.

```

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## Platform Notes (Continued)

### 7. lscpu

From lscpu from util-linux 2.37.4:

```

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):                       128
On-line CPU(s) list:         0-127
Vendor ID:                    GenuineIntel
BIOS Vendor ID:              Intel(R) Corporation
Model name:                   INTEL(R) XEON(R) GOLD 6548Y+
BIOS Model name:             INTEL(R) XEON(R) GOLD 6548Y+
CPU family:                   6
Model:                        207
Thread(s) per core:          2
Core(s) per socket:          32
Socket(s):                    2
Stepping:                     2
BogoMIPS:                     5000.00
Flags:                        fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36
                                clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb
                                rdtscp lm constant_tsc art arch_perfmon pebs bts rep_good nopl
                                xtopology nonstop_tsc cpuid aperfperf tsc_known_freq pni pclmulqdq
                                dtes64 monitor ds_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm
                                pcid dca sse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_timer aes xsave
                                avx f16c rdrand lahf_lm abm 3dnowprefetch cpuid_fault epb cat_l3 cat_l2
                                cdp_l3 invpcid_single 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 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 hfi vnni 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 ibt amx_bf16
                                avx512_fp16 amx_tile amx_int8 flush_lld arch_capabilities

Virtualization:              VT-x
L1d cache:                   3 MiB (64 instances)
L1i cache:                   2 MiB (64 instances)
L2 cache:                     128 MiB (64 instances)
L3 cache:                     120 MiB (2 instances)
NUMA node(s):                2
NUMA node0 CPU(s):           0-31,64-95
NUMA node1 CPU(s):           32-63,96-127
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 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/swappgs barriers and __user pointer sanitization
Vulnerability Spectre v2:     Mitigation; Enhanced / Automatic IBRS, IBPB conditional, RSB filling,
                                PBRBS-eIBRS SW sequence
Vulnerability Srbds:         Not affected

```

(Continued on next page)



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## Platform Notes (Continued)

Vulnerability Tsx async abort: Not affected

From lscpu --cache:

NAME	ONE-SIZE	ALL-SIZE	WAYS	TYPE	LEVEL	SETS	PHY-LINE	COHERENCY-SIZE
L1d	48K	3M	12	Data	1	64	1	64
L1i	32K	2M	8	Instruction	1	64	1	64
L2	2M	128M	16	Unified	2	2048	1	64
L3	60M	120M	15	Unified	3	65536	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: 0-31,64-95
node 0 size: 515664 MB
node 0 free: 514270 MB
node 1 cpus: 32-63,96-127
node 1 size: 516074 MB
node 1 free: 514739 MB
node distances:
node  0  1
 0:  10  21
 1:  21  10

```

9. /proc/meminfo

MemTotal: 1056500928 kB

10. who -r

run-level 3 Aug 29 16:34

11. Systemd service manager version: systemd 252 (252-18.e19)

```

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 avahi-daemon bluetooth chronyd crond cups dbus-broker firewalld
gdm getty@ insights-client-boot irqbalance iscsi iscsi-onboot kdump libstoragemgmt
lm_sensors low-memory-monitor lvm2-monitor mcelog mdmonitor microcode multipathd
nis-domainname nvme-fc-boot-connections ostree-remount pcmd pmie pmlgger
power-profiles-daemon qemu-guest-agent rhsmcertd rpcbind rsyslog rtkit-daemon
selinux-autorelabel-mark smartd sshd sssd switcheroo-control sysstat systemd-boot-update
systemd-network-generator tuned udisks2 upower vgauthd virtqemud vmtoolsd
enabled-runtime systemd-remount-fs
disabled       arp-ethers autofs 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 dovecot fancontrol fcoe grafana-server
gssproxy httpd httpd@ ibacm iprdump iprint iprupdate ipsec iscsid iscsiuiio kpatch
kvm_stat ledmon libvirt-guests libvirt d lldpad man-db-restart-cache-update named
named-chroot netavark-dhcp-proxy nfs-blkmap nfs-server nftables nmb numad nvmmf-autoconnect
ostree-readonly-sysroot-migration pesign pmfind pmie_farm pmlgger_farm pmproxy podman
podman-auto-update podman-clean-transient podman-kube@ podman-restart postfix powertop
psacct ras-mc-ctl rasdaemon rdisc rhcd rhsm rhsm-facts rpmdm-rebuild rrdcached saslauthd
selinux-check-proper-disable serial-getty@ smb snmpd snmptrapd spamassassin
speech-dispatcherd srp_daemon srp_daemon_port@ sshd-keygen@ systemd-boot-check-no-failures

```

(Continued on next page)



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## Platform Notes (Continued)

```

indirect
systemd-nspawn@ systemd-pstore systemd-sysexct target targetclid tog-pegasus trace-cmd
virtinterfaced virtnetworkd virtnodedevd virtnwfilterd virtproxyd virtsecretd virtstoraged
vsftpd wpa_supplicant
pcscd spice-vdagentd sssd-autofs sssd-kcm sssd-nss sssd-pac sssd-pam sssd-ssh sssd-sudo
systemd-sysupdate systemd-sysupdate-reboot virtlockd virtlogd vsftpd@

```

```

-----
13. Linux kernel boot-time arguments, from /proc/cmdline
BOOT_IMAGE=(hd0,gpt2)/vmlinuz-5.14.0-362.13.1.el9_3.x86_64
root=/dev/mapper/rhel-root
ro
resume=/dev/mapper/rhel-swap
rd.lvm.lv=rhel/root
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    20
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

```

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```

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 9.3 (Plow)
redhat-release Red Hat Enterprise Linux release 9.3 (Plow)
system-release Red Hat Enterprise Linux release 9.3 (Plow)

```

### 20. Disk information

```

SPEC is set to: /home/cpu2017
Filesystem Type Size Used Avail Use% Mounted on
/dev/mapper/rhel-home xfs 856G 728G 128G 86% /home

```

### 21. /sys/devices/virtual/dmi/id

```

Vendor: Tyrone Systems
Product: Tyrone Camarero SDI200A3N-212
Product Family: Family
Serial: A495115X4412722

```

### 22. dmidecode

Additional information from dmidecode 3.5 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-CQKZJ 64 GB 2 rank 4800

```

### 23. BIOS

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

```

BIOS Vendor: American Megatrends International, LLC.
BIOS Version: 2.1a
BIOS Date: 03/20/2024
BIOS Revision: 5.32

```

## Compiler Version Notes

```

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

```

```

Intel(R) oneAPI DPC++/C++ Compiler for applications running on IA-32, Version 2023.2.3 Build x
Copyright (C) 1985-2023 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 2023.2.3 Build x  
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.

C | 502.gcc\_r(peak)

Intel(R) oneAPI DPC++/C++ Compiler for applications running on IA-32, Version 2023.2.3 Build x  
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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 2023.2.3 Build x  
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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 2023.2.3 Build x  
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Fortran | 548.exchange2\_r(base, peak)

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2023.2.3 Build x  
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## 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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# SPEC CPU®2017 Integer Rate Result

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## Tyrone Systems

(Test Sponsor: Netweb Technologies India Ltd)

Tyrone Camarero SDI200A3N-212  
(2.50 GHz, Intel Xeon Gold 6548Y+)

SPECrate®2017\_int\_base = 649

SPECrate®2017\_int\_peak = 672

CPU2017 License: 006802

Test Sponsor: Netweb Technologies India Ltd

Tested by: Tyrone Systems

Test Date: Aug-2024

Hardware Availability: Jan-2023

Software Availability: Dec-2023

## 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 -xsapphirerapids -O3 -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-L/home/specdev/new_compilers/ic2023.2.3/compiler/lib/intel64_lin
-lqkmalloc
```

### C++ benchmarks:

```
-w -std=c++14 -m64 -Wl,-z,muldefs -xsapphirerapids -O3 -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-L/home/specdev/new_compilers/ic2023.2.3/compiler/lib/intel64_lin
-lqkmalloc
```

### Fortran benchmarks:

```
-w -m64 -Wl,-z,muldefs -xsapphirerapids -O3 -ffast-math -flto
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-nostandard-realloc-lhs -align array32byte -auto
-L/home/specdev/new_compilers/ic2023.2.3/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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**CPU2017 License:** 006802

**Test Sponsor:** Netweb Technologies India Ltd

**Tested by:** Tyrone Systems

**Test Date:** Aug-2024

**Hardware Availability:** Jan-2023

**Software Availability:** Dec-2023

## 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-AVX2(pass 1)
-flto -Ofast -xCORE-AVX512 -ffast-math -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4
-fno-strict-overflow
-L/home/specdev/new_compilers/ic2023.2.3/compiler/lib/intel64_lin
-lqkmalloc

502.gcc_r: -m32
-L/home/specdev/new_compilers/ic2023.2.3/compiler/lib/ia32_lin
-std=gnu89 -Wl,-z,muldefs -fprofile-generate(pass 1)
-fprofile-use=default.profddata(pass 2) -xCORE-AVX2(pass 1)
-flto -Ofast -xCORE-AVX512 -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 -xsapphirerapids -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fno-alias
-L/home/specdev/new_compilers/ic2023.2.3/compiler/lib/intel64_lin
-lqkmalloc

557.xz_r: basepeak = yes
```

C++ benchmarks:

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

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**SPECrate®2017\_int\_base = 649**

**SPECrate®2017\_int\_peak = 672**

**CPU2017 License:** 006802  
**Test Sponsor:** Netweb Technologies India Ltd  
**Tested by:** Tyrone Systems

**Test Date:** Aug-2024  
**Hardware Availability:** Jan-2023  
**Software Availability:** Dec-2023

## 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-ic2023p2-official-linux64.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-ic2023p2-official-linux64.xml>

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

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