SPEC CPU®2017 Integer Rate Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

Tyrone Systems
(Test Sponsor: Netweb Pte Ltd)

Tyrone Camarero DIT400TR-28RL
(3.0 GHz, Intel Xeon Gold 6248R)

$SPECrate®2017\_int\_base = 316$

$SPECrate®2017\_int\_peak = 326$

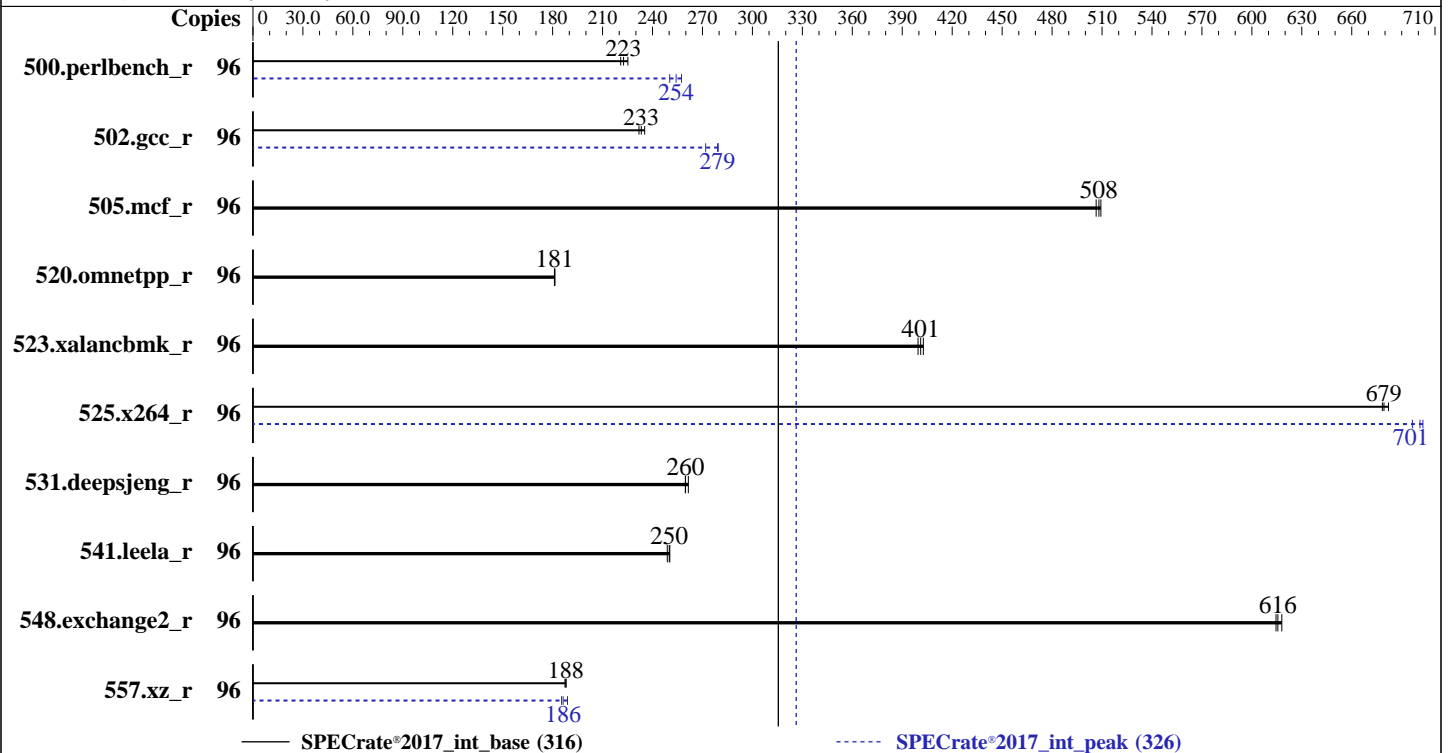|	
CPU2017 License: 006042	**Test Date:** Jul-2021
Test Sponsor: Netweb Pte Ltd	**Hardware Availability:** Feb-2020
Tested by: Tyrone Systems	**Software Availability:** Jun-2021

Copies 0 30.0 60.0 90.0 120 150 180 210 240 270 300 330 360 390 420 450 480 510 540 570 600 630 660 710

- 500.perlbench_r 96 — 223 / 254
- 502.gcc_r 96 — 233 / 279
- 505.mcf_r 96 — 508
- 520.omnetpp_r 96 — 181
- 523.xalancbmk_r 96 — 401
- 525.x264_r 96 — 679 / 701
- 531.deepsjeng_r 96 — 260
- 541.leela_r 96 — 250
- 548.exchange2_r 96 — 616
- 557.xz_r 96 — 188 / 186

SPECrate®2017_int_base (316)   SPECrate®2017_int_peak (326)

Hardware

CPU Name: Intel Xeon Gold 6248R
 Max MHz: 4000
 Nominal: 3000
Enabled: 48 cores, 2 chips, 2 threads/core
Orderable: 1,2 Chips
Cache L1: 32 KB I + 32 KB D on chip per core
 L2: 1 MB I+D on chip per core
 L3: 35.75 MB I+D on chip per chip
 Other: None
Memory: 384 GB (12 x 32 GB 2Rx4 PC4-2933P-R)
Storage: 1 x 480 GB SATA SSD
Other: None

Software

OS: CentOS Linux release 8.4.2105
 Kernel 4.18.0-305.3.1.el8.x86_64
Compiler: C/C++: Version 2021.1 of Intel oneAPI DPC++/C++
 Compiler Build 20201113 for Linux;
 Fortran: Version 2021.1 of Intel Fortran Compiler
 Classic Build 20201112 for Linux;
 C/C++: Version 2021.1 of Intel C/C++ Compiler
 Classic Build 20201112 for Linux
Parallel: No
Firmware: Version V8.102 released Jun-2020
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 2017-2021 Standard Performance Evaluation Corporation

Tyrone Systems
(Test Sponsor: Netweb Pte Ltd)

Tyrone Camarero DIT400TR-28RL
(3.0 GHz, Intel Xeon Gold 6248R)

SPECrate®2017_int_base = 316

SPECrate®2017_int_peak = 326

CPU2017 License: 006042	**Test Date:** Jul-2021
Test Sponsor: Netweb Pte Ltd	**Hardware Availability:** Feb-2020
Tested by: Tyrone Systems	**Software Availability:** Jun-2021

Results Table

Benchmark	Base Copies	Base Seconds	Base Ratio	Base Seconds	Base Ratio	Base Seconds	Base Ratio	Peak Copies	Peak Seconds	Peak Ratio	Peak Seconds	Peak Ratio	Peak Seconds	Peak Ratio
500.perlbench_r	96	679	225	692	221	**687**	**223**	96	594	257	**601**	**254**	610	250
502.gcc_r	96	**583**	**233**	578	235	586	232	96	**487**	**279**	486	279	500	272
505.mcf_r	96	306	506	305	509	**305**	**508**	96	306	506	305	509	**305**	**508**
520.omnetpp_r	96	696	181	**695**	**181**	695	181	96	696	181	**695**	**181**	695	181
523.xalancbmk_r	96	254	399	**253**	**401**	252	403	96	254	399	**253**	**401**	252	403
525.x264_r	96	**247**	**679**	248	678	246	682	96	239	703	**240**	**701**	241	696
531.deepsjeng_r	96	**423**	**260**	424	260	421	262	96	**423**	**260**	424	260	421	262
541.leela_r	96	635	250	639	249	**636**	**250**	96	635	250	639	249	**636**	**250**
548.exchange2_r	96	409	615	407	618	**409**	**616**	96	409	615	407	618	**409**	**616**
557.xz_r	96	**552**	**188**	551	188	553	187	96	549	189	**557**	**186**	559	185

SPECrate®2017_int_base =	**316**
SPECrate®2017_int_peak =	**326**

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 locally by Netweb
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.:

(Continued on next page)

Standard Performance Evaluation Corporation (info@spec.org) https://www.spec.org/

SPEC CPU®2017 Integer Rate Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

Tyrone Systems
(Test Sponsor: Netweb Pte Ltd)

Tyrone Camarero DIT400TR-28RL
(3.0 GHz, Intel Xeon Gold 6248R)

SPECrate®2017_int_base = 316

SPECrate®2017_int_peak = 326

CPU2017 License: 006042
Test Sponsor: Netweb Pte Ltd
Tested by: Tyrone Systems

Test Date: Jul-2021
Hardware Availability: Feb-2020
Software Availability: Jun-2021

General Notes (Continued)

```
  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 set to Custom
Power Performance Tuning set to BIOS Controls EPB
ENERGY_PERF_BIAS_CFG mode set to Performance
LLC Dead Line Alloc set to Disable

 Sysinfo program /home/cpu2017/bin/sysinfo
 Rev: r6622 of 2021-04-07 982a61ec0915b55891ef0e16acafc64d
 running on spec Tue Jul 27 03:44:10 2021

 SUT (System Under Test) info as seen by some common utilities.
 For more information on this section, see
    https://www.spec.org/cpu2017/Docs/config.html#sysinfo

 From /proc/cpuinfo
    model name : Intel(R) Xeon(R) Gold 6248R CPU @ 3.00GHz
       2  "physical id"s (chips)
       96 "processors"
    cores, siblings (Caution: counting these is hw and system dependent. The following
    excerpts from /proc/cpuinfo might not be reliable.  Use with caution.)
       cpu cores : 24
       siblings  : 48
       physical 0: cores 0 1 2 3 4 5 6 9 10 11 12 13 16 17 18 19 20 21 24 25 26 27 28 29
       physical 1: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 16 17 18 19 20 21 25 26 27 28 29

 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):              96
      On-line CPU(s) list: 0-95
      Thread(s) per core:  2
```

(Continued on next page)

Tyrone Systems
(Test Sponsor: Netweb Pte Ltd)

Tyrone Camarero DIT400TR-28RL
(3.0 GHz, Intel Xeon Gold 6248R)

SPECrate®2017_int_base = 316

SPECrate®2017_int_peak = 326

CPU2017 License: 006042

Test Sponsor: Netweb Pte Ltd

Tested by: Tyrone Systems

Test Date: Jul-2021

Hardware Availability: Feb-2020

Software Availability: Jun-2021

Platform Notes (Continued)

```
        Core(s) per socket:   24
        Socket(s):            2
        NUMA node(s):         2
        Vendor ID:            GenuineIntel
        BIOS Vendor ID:       Intel(R) Corporation
        CPU family:           6
        Model:                85
        Model name:           Intel(R) Xeon(R) Gold 6248R CPU @ 3.00GHz
        BIOS Model name:      Intel(R) Xeon(R) Gold 6248R CPU @ 3.00GHz
        Stepping:             7
        CPU MHz:              3513.566
        CPU max MHz:          4000.0000
        CPU min MHz:          1200.0000
        BogoMIPS:             6000.00
        Virtualization:       VT-x
        L1d cache:            32K
        L1i cache:            32K
        L2 cache:             1024K
        L3 cache:             36608K
        NUMA node0 CPU(s):    0-23,48-71
        NUMA node1 CPU(s):    24-47,72-95
        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 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 cdp_l3
    invpcid_single intel_ppin ssbd mba ibrs ibpb stibp ibrs_enhanced tpr_shadow vnmi
    flexpriority ept vpid ept_ad fsgsbase tsc_adjust bmi1 hle avx2 smep bmi2 erms
    invpcid cqm mpx rdt_a avx512f avx512dq rdseed adx smap clflushopt clwb intel_pt
    avx512cd avx512bw avx512vl xsaveopt xsavec xgetbv1 xsaves cqm_llc cqm_occup_llc
    cqm_mbm_total cqm_mbm_local dtherm ida arat pln pts hwp hwp_act_window hwp_epp
    hwp_pkg_req pku ospke avx512_vnni md_clear flush_l1d arch_capabilities


 /proc/cpuinfo cache data
    cache size : 36608 KB


 From numactl --hardware
 WARNING: a numactl 'node' might or might not correspond to a physical chip.
   available: 2 nodes (0-1)
   node 0 cpus: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 48 49 50 51
   52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71
   node 0 size: 192100 MB
   node 0 free: 191241 MB
   node 1 cpus: 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 72
   73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95
   node 1 size: 193487 MB
```

(Continued on next page)

Tyrone Systems
(Test Sponsor: Netweb Pte Ltd)

SPECrate®2017_int_base = 316

Tyrone Camarero DIT400TR-28RL
(3.0 GHz, Intel Xeon Gold 6248R)

SPECrate®2017_int_peak = 326

CPU2017 License: 006042   **Test Date:** Jul-2021
Test Sponsor: Netweb Pte Ltd   **Hardware Availability:** Feb-2020
Tested by: Tyrone Systems   **Software Availability:** Jun-2021

Platform Notes (Continued)

```
   node 1 free: 192986 MB
   node distances:
   node   0   1
     0:  10  21
     1:  21  10

 From /proc/meminfo
    MemTotal:       394842900 kB
    HugePages_Total:        0
    Hugepagesize:        2048 kB

 /sbin/tuned-adm active
     Current active profile: throughput-performance

 /sys/devices/system/cpu/cpu*/cpufreq/scaling_governor has
    performance

 From /etc/*release* /etc/*version*
    centos-release: CentOS Linux release 8.4.2105
    centos-release-upstream: Derived from Red Hat Enterprise Linux 8.4
    os-release:
       NAME="CentOS Linux"
       VERSION="8"
       ID="centos"
       ID_LIKE="rhel fedora"
       VERSION_ID="8"
       PLATFORM_ID="platform:el8"
       PRETTY_NAME="CentOS Linux 8"
       ANSI_COLOR="0;31"
    redhat-release: CentOS Linux release 8.4.2105
    system-release: CentOS Linux release 8.4.2105
    system-release-cpe: cpe:/o:centos:centos:8

 uname -a:
    Linux spec 4.18.0-305.3.1.el8.x86_64 #1 SMP Tue Jun 1 16:14:33 UTC 2021 x86_64 x86_64
    x86_64 GNU/Linux

 Kernel self-reported vulnerability status:

 CVE-2018-12207 (iTLB Multihit):            KVM: Mitigation: Split huge pages
 CVE-2018-3620 (L1 Terminal Fault):           Not affected
 Microarchitectural Data Sampling:            Not affected
 CVE-2017-5754 (Meltdown):                    Not affected
 CVE-2018-3639 (Speculative Store Bypass):    Mitigation: Speculative Store
                                              Bypass disabled via prctl and
                                              seccomp
 CVE-2017-5753 (Spectre variant 1):           Mitigation: usercopy/swapgs
```

(Continued on next page)

Tyrone Systems
(Test Sponsor: Netweb Pte Ltd)

SPECrate®2017_int_base = 316

Tyrone Camarero DIT400TR-28RL
(3.0 GHz, Intel Xeon Gold 6248R)

SPECrate®2017_int_peak = 326

CPU2017 License: 006042		**Test Date:**	Jul-2021
Test Sponsor:	Netweb Pte Ltd	**Hardware Availability:**	Feb-2020
Tested by:	Tyrone Systems	**Software Availability:**	Jun-2021

Platform Notes (Continued)

```
                                                barriers and __user pointer
                                                sanitization
 CVE-2017-5715 (Spectre variant 2):             Mitigation: Enhanced IBRS, IBPB:
                                                conditional, RSB filling
 CVE-2020-0543 (Special Register Buffer Data Sampling): Not affected
 CVE-2019-11135 (TSX Asynchronous Abort):       Mitigation: TSX disabled


 run-level 3 Jul 27 03:19


 SPEC is set to: /home/cpu2017
    Filesystem            Type  Size  Used Avail Use% Mounted on
    /dev/mapper/cl-home xfs   372G  176G  196G  48% /home


 From /sys/devices/virtual/dmi/id
    Vendor:           Tyrone Systems
    Product:          Tyrone Camarero DIT400TR-28R
    Product Family: empty
    Serial:           empty


 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:
       12x Samsung M393A4K40CB2-CVF 32 GB 2 rank 2933


 BIOS:
    BIOS Vendor:        American Megatrends Inc.
    BIOS Version:       V8.102
    BIOS Date:          06/09/2020
    BIOS Revision:      5.14
    Firmware Revision: 7.0


 (End of data from sysinfo program)
```

Compiler Version Notes

```
==============================================================================
C        | 500.perlbench_r(peak) 557.xz_r(peak)
------------------------------------------------------------------------------
Intel(R) C Intel(R) 64 Compiler Classic for applications running on Intel(R)
  64, Version 2021.1 Build 20201112_000000
Copyright (C) 1985-2020 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------------


==============================================================================
```

(Continued on next page)

Tyrone Systems

(Test Sponsor: Netweb Pte Ltd)

Tyrone Camarero DIT400TR-28RL
(3.0 GHz, Intel Xeon Gold 6248R)

SPECrate®2017_int_base = 316

SPECrate®2017_int_peak = 326

CPU2017 License: 006042
Test Sponsor: Netweb Pte Ltd
Tested by: Tyrone Systems

Test Date: Jul-2021
Hardware Availability: Feb-2020
Software Availability: Jun-2021

Compiler Version Notes (Continued)

```
C        | 502.gcc_r(peak)
----------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on IA-32, Version
  2021.1 Build 20201113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
----------------------------------------------------------------------------


==============================================================================
C        | 500.perlbench_r(base) 502.gcc_r(base) 505.mcf_r(base, peak)
         | 525.x264_r(base, peak) 557.xz_r(base)
----------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
  Version 2021.1 Build 20201113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
----------------------------------------------------------------------------


==============================================================================
C        | 500.perlbench_r(peak) 557.xz_r(peak)
----------------------------------------------------------------------------
Intel(R) C Intel(R) 64 Compiler Classic for applications running on Intel(R)
  64, Version 2021.1 Build 20201112_000000
Copyright (C) 1985-2020 Intel Corporation.  All rights reserved.
----------------------------------------------------------------------------


==============================================================================
C        | 502.gcc_r(peak)
----------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on IA-32, Version
  2021.1 Build 20201113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
----------------------------------------------------------------------------


==============================================================================
C        | 500.perlbench_r(base) 502.gcc_r(base) 505.mcf_r(base, peak)
         | 525.x264_r(base, peak) 557.xz_r(base)
----------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
  Version 2021.1 Build 20201113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
----------------------------------------------------------------------------


==============================================================================
C        | 500.perlbench_r(peak) 557.xz_r(peak)
----------------------------------------------------------------------------
Intel(R) C Intel(R) 64 Compiler Classic for applications running on Intel(R)
  64, Version 2021.1 Build 20201112_000000
Copyright (C) 1985-2020 Intel Corporation.  All rights reserved.
```

(Continued on next page)

Tyrone Systems

(Test Sponsor: Netweb Pte Ltd)

Tyrone Camarero DIT400TR-28RL
(3.0 GHz, Intel Xeon Gold 6248R)

SPECrate®2017_int_base = 316

SPECrate®2017_int_peak = 326

CPU2017 License: 006042

Test Sponsor: Netweb Pte Ltd

Tested by: Tyrone Systems

Test Date: Jul-2021

Hardware Availability: Feb-2020

Software Availability: Jun-2021

Compiler Version Notes (Continued)

```
--------------------------------------------------------------------------------


================================================================================
C        | 502.gcc_r(peak)
--------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on IA-32, Version
  2021.1 Build 20201113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
--------------------------------------------------------------------------------


================================================================================
C        | 500.perlbench_r(base) 502.gcc_r(base) 505.mcf_r(base, peak)
         | 525.x264_r(base, peak) 557.xz_r(base)
--------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
  Version 2021.1 Build 20201113
Copyright (C) 1985-2020 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 2021.1 Build 20201113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
--------------------------------------------------------------------------------


================================================================================
Fortran | 548.exchange2_r(base, peak)
--------------------------------------------------------------------------------
Intel(R) Fortran Intel(R) 64 Compiler Classic for applications running on
  Intel(R) 64, Version 2021.1 Build 20201112_000000
Copyright (C) 1985-2020 Intel Corporation.  All rights reserved.
--------------------------------------------------------------------------------
```

Base Compiler Invocation

C benchmarks:
icx

C++ benchmarks:
icpx

Fortran benchmarks:
ifort

Tyrone Systems
(Test Sponsor: Netweb Pte Ltd)

Tyrone Camarero DIT400TR-28RL
(3.0 GHz, Intel Xeon Gold 6248R)

SPECrate®2017_int_base = 316

SPECrate®2017_int_peak = 326

CPU2017 License: 006042
Test Sponsor: Netweb Pte Ltd
Tested by: Tyrone Systems

Test Date: Jul-2021
Hardware Availability: Feb-2020
Software Availability: Jun-2021

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
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
-mbranches-within-32B-boundaries
-L/opt/intel/oneapi/compiler/2021.1.1/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
-mbranches-within-32B-boundaries
-L/opt/intel/oneapi/compiler/2021.1.1/linux/compiler/lib/intel64_lin
-lqkmalloc

Fortran benchmarks:
-w -m64 -Wl,-z,muldefs -xCORE-AVX512 -O3 -ipo -no-prec-div
-qopt-mem-layout-trans=4 -nostandard-realloc-lhs -align array32byte
-auto -mbranches-within-32B-boundaries
-L/opt/intel/oneapi/compiler/2021.1.1/linux/compiler/lib/intel64_lin
-lqkmalloc

Peak Compiler Invocation

C benchmarks (except as noted below):
icx

500.perlbench_r: icc

(Continued on next page)

Tyrone Systems
(Test Sponsor: Netweb Pte Ltd)

SPECrate®2017_int_base = 316

Tyrone Camarero DIT400TR-28RL
(3.0 GHz, Intel Xeon Gold 6248R)

SPECrate®2017_int_peak = 326

CPU2017 License: 006042		**Test Date:**	Jul-2021
Test Sponsor:	Netweb Pte Ltd	**Hardware Availability:**	Feb-2020
Tested by:	Tyrone Systems	**Software Availability:**	Jun-2021

Peak Compiler Invocation (Continued)

557.xz_r: `icc`

C++ benchmarks:
`icpx`

Fortran benchmarks:
`ifort`

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: `-Wl,-z,muldefs` -prof-gen(pass 1) -prof-use(pass 2)
`-xCORE-AVX512 -ipo -O3 -no-prec-div`
`-qopt-mem-layout-trans=4 -fno-strict-overflow`
`-mbranches-within-32B-boundaries`
`-L/opt/intel/oneapi/compiler/2021.1.1/linux/compiler/lib/intel64_lin`
`-lqkmalloc`

502.gcc_r: `-m32`
`-L/opt/intel/oneapi/compiler/2021.1.1/linux/compiler/lib/ia32_lin`
`-std=gnu89 -Wl,-z,muldefs` -fprofile-generate(pass 1)
-fprofile-use=default.profdata(pass 2) `-xCORE-AVX512 -flto`
-Ofast(pass 1) `-O3 -ffast-math -qopt-mem-layout-trans=4`
`-mbranches-within-32B-boundaries`
`-L/usr/local/je5.0.1-32/lib -ljemalloc`

505.mcf_r: basepeak = yes

(Continued on next page)

Tyrone Systems
(Test Sponsor: Netweb Pte Ltd)

Tyrone Camarero DIT400TR-28RL
(3.0 GHz, Intel Xeon Gold 6248R)

SPECrate®2017_int_base = 316

SPECrate®2017_int_peak = 326

CPU2017 License: 006042	**Test Date:** Jul-2021
Test Sponsor: Netweb Pte Ltd	**Hardware Availability:** Feb-2020
Tested by: Tyrone Systems	**Software Availability:** Jun-2021

Peak Optimization Flags (Continued)

525.x264_r: -w -std=c11 -m64 -Wl,-z,muldefs -xCORE-AVX512 -flto
-O3 -ffast-math -qopt-mem-layout-trans=4 -fno-alias
-mbranches-within-32B-boundaries
-L/opt/intel/oneapi/compiler/2021.1.1/linux/compiler/lib/intel64_lin
-lqkmalloc

557.xz_r: -Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div
-qopt-mem-layout-trans=4 -mbranches-within-32B-boundaries
-L/opt/intel/oneapi/compiler/2021.1.1/linux/compiler/lib/intel64_lin
-lqkmalloc

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/Intel-ic2021-official-linux64_revA.html
http://www.spec.org/cpu2017/flags/Tyrone-Platform-Settings-V1.2-CLX-revI.html

---

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2017/flags/Intel-ic2021-official-linux64_revA.xml
http://www.spec.org/cpu2017/flags/Tyrone-Platform-Settings-V1.2-CLX-revI.xml

---

For questions about this result, please contact the tester. For other inquiries, please contact info@spec.org.

Tested with SPEC CPU®2017 v1.1.8 on 2021-07-27 03:44:09-0400.
Report generated on 2021-09-21 16:16:12 by CPU2017 PDF formatter v6442.
Originally published on 2021-09-21.