SPEC CPU®2017 Integer Rate Result

Tyrone Systems
(Test Sponsor: Netweb)
Tyrone Camarero QS400TU-224R4
(2.30 GHz, Intel Xeon Gold 6140)

SPECrater®2017_int_base = 395
SPECrater®2017_int_peak = 413

CPU2017 License: 6011
Test Sponsor: Netweb
Tested by: Netweb

Copies  SPECrate®2017_int_base (395)  SPECrate®2017_int_peak (413)
500.perlbench_r  144
502.gcc_r  144
505.mcf_r  144
520.omnetpp_r  144
523.xalancbmk_r  144
525.x264_r  144
531.deepsjeng_r  144
541.leela_r  144
548.exchange2_r  144
557.xz_r  144

Hardware

CPU Name: Intel Xeon Gold 6140
Max MHz: 3700
Nominal: 2300
Enabled: 72 cores, 4 chips, 2 threads/core
Orderable: 2, 4 chips
Cache L1: 32 KB I + 32 KB D on chip per core
L2: 1 MB I+D on chip per core
L3: 24.75 MB I+D on chip per chip
Other: None
Memory: 768 GB (24 x 32 GB 2Rx8 PC4-2666P-R)
Storage: 3 x 480GB SSD
Other: None

Software

OS: CentOS Linux Release 7.6.1810 (Core)
Kernel: 3.10.0-957.21.2.el7.x86_64
Compiler: C/C++: Version 19.0.1.144 of Intel C/C++
Fortran: Version 19.0.1.144 of Intel Fortran
Compiler Build 20181018 for Linux
Firmware: Version 2.1 released Jul-2018
File System: xfs
System State: Run level 3 (multi-user)
Power Management: --
## SPEC CPU®2017 Integer Rate Result

### Tyrone Systems
(Test Sponsor: Netweb)
Tyron Camarero QS400TU-224R4
(2.30 GHz, Intel Xeon Gold 6140)

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>500.perlbench_r</td>
<td>144</td>
<td>728</td>
<td>315</td>
<td>737</td>
<td>311</td>
<td>731</td>
<td>314</td>
</tr>
<tr>
<td>502.gcc_r</td>
<td>144</td>
<td>679</td>
<td>300</td>
<td>677</td>
<td>301</td>
<td>675</td>
<td>302</td>
</tr>
<tr>
<td>505.mcf_r</td>
<td>144</td>
<td>448</td>
<td>519</td>
<td>448</td>
<td>519</td>
<td>448</td>
<td>519</td>
</tr>
<tr>
<td>520.omnetpp_r</td>
<td>144</td>
<td>743</td>
<td>254</td>
<td>747</td>
<td>253</td>
<td>741</td>
<td>255</td>
</tr>
<tr>
<td>523.xalancbmk_r</td>
<td>144</td>
<td>352</td>
<td>432</td>
<td>351</td>
<td>433</td>
<td>350</td>
<td>434</td>
</tr>
<tr>
<td>525.x264_r</td>
<td>144</td>
<td>307</td>
<td>822</td>
<td>304</td>
<td>831</td>
<td>303</td>
<td>831</td>
</tr>
<tr>
<td>531.deepsjeng_r</td>
<td>144</td>
<td>484</td>
<td>341</td>
<td>485</td>
<td>340</td>
<td>485</td>
<td>340</td>
</tr>
<tr>
<td>541.leela_r</td>
<td>144</td>
<td>736</td>
<td>324</td>
<td>751</td>
<td>318</td>
<td>757</td>
<td>315</td>
</tr>
<tr>
<td>548.exchange2_r</td>
<td>144</td>
<td>519</td>
<td>727</td>
<td>518</td>
<td>729</td>
<td>519</td>
<td>727</td>
</tr>
<tr>
<td>557.xz_r</td>
<td>144</td>
<td>587</td>
<td>265</td>
<td>586</td>
<td>265</td>
<td>587</td>
<td>265</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>500.perlbench_r</td>
<td>144</td>
<td>624</td>
<td>367</td>
<td>622</td>
<td>368</td>
<td>623</td>
<td>368</td>
</tr>
<tr>
<td>502.gcc_r</td>
<td>144</td>
<td>575</td>
<td>355</td>
<td>576</td>
<td>354</td>
<td>575</td>
<td>354</td>
</tr>
<tr>
<td>505.mcf_r</td>
<td>144</td>
<td>451</td>
<td>516</td>
<td>448</td>
<td>520</td>
<td>450</td>
<td>517</td>
</tr>
<tr>
<td>520.omnetpp_r</td>
<td>144</td>
<td>741</td>
<td>255</td>
<td>742</td>
<td>255</td>
<td>741</td>
<td>255</td>
</tr>
<tr>
<td>523.xalancbmk_r</td>
<td>144</td>
<td>323</td>
<td>471</td>
<td>323</td>
<td>471</td>
<td>323</td>
<td>471</td>
</tr>
<tr>
<td>525.x264_r</td>
<td>144</td>
<td>291</td>
<td>865</td>
<td>291</td>
<td>865</td>
<td>292</td>
<td>864</td>
</tr>
<tr>
<td>531.deepsjeng_r</td>
<td>144</td>
<td>486</td>
<td>339</td>
<td>484</td>
<td>341</td>
<td>484</td>
<td>341</td>
</tr>
<tr>
<td>541.leela_r</td>
<td>144</td>
<td>758</td>
<td>315</td>
<td>750</td>
<td>318</td>
<td>758</td>
<td>314</td>
</tr>
<tr>
<td>548.exchange2_r</td>
<td>144</td>
<td>526</td>
<td>718</td>
<td>520</td>
<td>726</td>
<td>518</td>
<td>728</td>
</tr>
<tr>
<td>557.xz_r</td>
<td>144</td>
<td>586</td>
<td>265</td>
<td>588</td>
<td>264</td>
<td>588</td>
<td>264</td>
</tr>
</tbody>
</table>

**SPECrate®2017_int_base = 395**

**SPECrate®2017_int_peak = 413**

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

## Compiler Notes

SPEC has learned that this result, which used an evaluation compiler, was submitted contrary to the compiler license terms.

Intel has granted a one-time waiver for this result.

## 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"

## General Notes

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

LD_LIBRARY_PATH = "/home/user/cpu2017/lib/ia32:/home/user/cpu2017/lib/intel64"
LD_LIBRARY_PATH="$LD_LIBRARY_PATH:/home/user/cpu2017/je5.0.1-32:/home/user/cpu2017/je5.0.1-64"

Binaries compiled on a system with 1x Intel Core i9-7900X CPU + 32GB RAM

Memory using Redhat Enterprise Linux 7.5

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
```
SPEC CPU®2017 Integer Rate Result

Tyrone Systems
(Test Sponsor: Netweb)
Tyrone Camarero QS400TU-224R4
(2.30 GHz, Intel Xeon Gold 6140)

SPECr2017_int_base = 395
SPECr2017_int_peak = 413

General Notes (Continued)
Yes: 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.

Platform Notes
Sysinfo program /home/user/cpu2017/bin/sysinfo
Rev: r5974 of 2018-05-19 9bcde8f2999c33d61f649b5e458e9ea9
running on demo Fri Jun 14 12:31:22 2019

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 6140 CPU @ 2.30GHz
  4 "physical id"s (chips)
  144 "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 : 18
  siblings : 36
  physical 0: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
  physical 1: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
  physical 2: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
  physical 3: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27

From lscpu:
Architecture: x86_64
CPU op-mode(s): 32-bit, 64-bit
Byte Order: Little Endian
CPU(s): 144
On-line CPU(s) list: 0-143
Thread(s) per core: 2
Core(s) per socket: 18
Socket(s): 4
NUMA node(s): 4
Vendor ID: GenuineIntel
CPU family: 6
Model: 85

(Continued on next page)
Tyrone Systems
(Test Sponsor: Netweb)
Tyrone Camarero QS400TU-224R4
(2.30 GHz, Intel Xeon Gold 6140)

CPU2017 License: 6011
Test Sponsor: Netweb
Tested by: Netweb

SPEC CPU®2017 Integer Rate Result
Copyright 2017-2020 Standard Performance Evaluation Corporation

SPECrate®2017_int_base = 395
SPECrate®2017_int_peak = 413

Test Date: Jun-2019
Hardware Availability: Nov-2018
Software Availability: Jun-2019

Platform Notes (Continued)

Model name: Intel(R) Xeon(R) Gold 6140 CPU @ 2.30GHz
Stepping: 4
CPU MHz: 1000.000
CPU max MHz: 2301.0000
CPU min MHz: 1000.0000
BogoMIPS: 4600.00
Virtualization: VT-x
L1d cache: 32K
L1i cache: 32K
L2 cache: 1024K
L3 cache: 25344K
NUMA node0 CPU(s): 0-17,72-89
NUMA node1 CPU(s): 18-35,90-107
NUMA node2 CPU(s): 36-53,108-125
NUMA node3 CPU(s): 54-71,126-143
Flags: fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov
pat pse36 clflush dts acpid mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtsscp
lm constant_tsc art arch_perfmon pebs bts rep_good nopl good_cp15 nonstop_tsc
aperfmpref perf_kube eagerfpu pni pclmulqdq dtes64 monitor ds_cpl vmx smx est tm2 ssse3 sdbg
fma cx16 xptr pdcm pcid dca sse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_timer aes
xsave avx f16c rdrand lahf_lm abm 3nowprefetch ebpx cat _13 cd p13 intel_ppi
inte _pt ssbd mba ibrs ibpb stibp tpr_shadow vnumi flexpriority ept vpid fsgsbase
tsc_adjust bl i1 hle avx2 smep bmi2 erms invpcid rt m cmp mx rdt_a avx512f avx512dq
drseed adx smap clflushopt clwb avx512cd avx512bw avx512vl xsaveopt xsaves xgetbv1
cqm _llc cq m_occup_llc cq m_mb m_total cq m _mb m _loc al dtherm ida ar at pln pts pk u ospek
md _clear spec _ctrl intel _stibp flush _lid

/proc/cpuinfo cache data
  cache size : 25344 KB

From numactl --hardware WARNING: a numactl 'node' might or might not correspond to a
physical chip.
  available: 4 nodes (0-3)
  node 0 cpus: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 72 73 74 75 76 77 78 79 80 81
    82 83 84 85 86 87 88 89
  node 0 size: 195241 MB
  node 0 free: 190380 MB
  node 1 cpus: 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 90 91 92 93 94 95 96
    97 98 99 100 101 102 103 104 105 106 107
  node 1 size: 196608 MB
  node 1 free: 191779 MB
  node 2 cpus: 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 108 109 110 111 112
    113 114 115 116 117 118 119 120 121 122 123 124 125
  node 2 size: 196608 MB
  node 2 free: 192016 MB
  node 3 cpus: 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 126 127 128 129 130
    131 132 133 134 135 136 137 138 139 140 141 142 143

(Continued on next page)
Platform Notes (Continued)

node 3 size: 196608 MB
node 3 free: 191990 MB
node distances:
node  0  1  2  3
  0:  10 21 21 21
  1:  21 10 21 21
  2:  21 21 10 21
  3:  21 21 21 10

From /proc/meminfo
MemTotal:       791193052 kB
HugePages_Total:       0
Hugepagesize:       2048 kB

From /etc/*release*/etc/*version*
centos-release: CentOS Linux release 7.6.1810 (Core)
centos-release-upstream: Derived from Red Hat Enterprise Linux 7.6 (Source)
os-release:
  NAME="CentOS Linux"
  VERSION="7 (Core)"
  ID="centos"
  ID_LIKE="rhel fedora"
  VERSION_ID="7"
  PRETTY_NAME="CentOS Linux 7 (Core)"
  ANSI_COLOR="0;31"
  CPE_NAME=cpe:/o:centos:centos:7
redhat-release: CentOS Linux release 7.6.1810 (Core)
system-release: CentOS Linux release 7.6.1810 (Core)
system-release-cpe: cpe:/o:centos:centos:7

uname -a:
Linux demo 3.10.0-957.21.2.el7.x86_64 #1 SMP Wed Jun 5 14:26:44 UTC 2019 x86_64 x86_64 GNU/Linux

Kernel self-reported vulnerability status:
CVE-2017-5754 (Meltdown): Mitigation: PTI
CVE-2017-5753 (Spectre variant 1): Mitigation: Load fences, __user pointer sanitization
CVE-2017-5715 (Spectre variant 2): Mitigation: IBRS (kernel), IBPB

run-level 3 Jun 14 12:28

SPEC is set to: /home/user/cpu2017

Filesystem Type Size Used Avail Use% Mounted on
/dev/mapper/centos-home xfs  838G  89G  750G 11% /home

Additional information from dmidecode follows. WARNING: Use caution when you interpret
 SPEC CPU®2017 Integer Rate Result

Tyrone Systems
(Test Sponsor: Netweb)
Tyrone Camarero QS400TU-224R4
(2.30 GHz, Intel Xeon Gold 6140)

| SPECrate®2017_int_base = 395 |
| SPECrate®2017_int_peak = 413 |

CPU2017 License: 6011
Test Sponsor: Netweb
Tested by: Netweb

Platform Notes (Continued)

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.

BIOS American Megatrends Inc. 2.1 07/23/2018
Memory:
24x NO DIMM NO DIMM
24x Samsung M393A4K40CB2-CTD 32 GB 2 rank 2666

(End of data from sysinfo program)

Compiler Version Notes

==============================================================================
<table>
<thead>
<tr>
<th>C</th>
<th>502.gcc_r(peak)</th>
</tr>
</thead>
</table>
| Intel(R) C Intel(R) 64 Compiler for applications running on IA-32, Version 19.0.1.144 Build 20181018
| Copyright (C) 1985-2018 Intel Corporation. All rights reserved.
| icc: NOTE: The evaluation period for this product ends on 28-jun-2019 UTC. |
|-------|----------------|
| Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64, Version 19.0.1.144 Build 20181018
| Copyright (C) 1985-2018 Intel Corporation. All rights reserved.
| icc: NOTE: The evaluation period for this product ends on 28-jun-2019 UTC. |
|-------|----------------|
| Intel(R) C Intel(R) 64 Compiler for applications running on IA-32, Version 19.0.1.144 Build 20181018
| Copyright (C) 1985-2018 Intel Corporation. All rights reserved.
| icc: NOTE: The evaluation period for this product ends on 28-jun-2019 UTC. |
|-------|----------------|
| Intel(R) C Intel(R) 64 Compiler for applications running on IA-32, Version 19.0.1.144 Build 20181018
| Copyright (C) 1985-2018 Intel Corporation. All rights reserved.
| icc: NOTE: The evaluation period for this product ends on 28-jun-2019 UTC. |
|-------|----------------|
| Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64, Version 19.0.1.144 Build 20181018
| Copyright (C) 1985-2018 Intel Corporation. All rights reserved.
| icc: NOTE: The evaluation period for this product ends on 28-jun-2019 UTC. |
==============================================================================

(Continued on next page)
SPEC CPU®2017 Integer Rate Result

Tyrone Systems
(Test Sponsor: Netweb)
Tyrone Camarero QS400TU-224R4
(2.30 GHz, Intel Xeon Gold 6140)

SPECrate®2017_int_base = 395
SPECrate®2017_int_peak = 413

CPU2017 License: 6011
Test Sponsor: Netweb
Tested by: Netweb

Compiler Version Notes (Continued)

Copyright (C) 1985-2018 Intel Corporation. All rights reserved.
icc: NOTE: The evaluation period for this product ends on 28-jun-2019 UTC.

==============================================================================
C++ | 523.xalancbmk_r(peak)
Intel(R) C++ Intel(R) 64 Compiler for applications running on IA-32, Version
19.0.1.144 Build 20181018
Copyright (C) 1985-2018 Intel Corporation. All rights reserved.
icpc: NOTE: The evaluation period for this product ends on 28-jun-2019 UTC.

==============================================================================
C++ | 520.omnetpp_r(base, peak) 523.xalancbmk_r(base)
 | 531.deepsjeng_r(base, peak) 541.leela_r(base, peak)
Intel(R) C++ Intel(R) 64 Compiler for applications running on Intel(R) 64,
Version 19.0.1.144 Build 20181018
Copyright (C) 1985-2018 Intel Corporation. All rights reserved.
icpc: NOTE: The evaluation period for this product ends on 28-jun-2019 UTC.

==============================================================================
C++ | 523.xalancbmk_r(peak)
Intel(R) C++ Intel(R) 64 Compiler for applications running on IA-32, Version
19.0.1.144 Build 20181018
Copyright (C) 1985-2018 Intel Corporation. All rights reserved.
icpc: NOTE: The evaluation period for this product ends on 28-jun-2019 UTC.

==============================================================================
C++ | 520.omnetpp_r(base, peak) 523.xalancbmk_r(base)
 | 531.deepsjeng_r(base, peak) 541.leela_r(base, peak)
Intel(R) C++ Intel(R) 64 Compiler for applications running on Intel(R) 64,
Version 19.0.1.144 Build 20181018
Copyright (C) 1985-2018 Intel Corporation. All rights reserved.
icpc: NOTE: The evaluation period for this product ends on 28-jun-2019 UTC.

==============================================================================
Fortran | 548.exchange2_r(base, peak)
Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R)
64, Version 19.0.1.144 Build 20181018

(Continued on next page)
SPEC CPU®2017 Integer Rate Result

Tyrone Systems
(Test Sponsor: Netweb)
Tyrone Camarero QS400TU-224R4
(2.30 GHz, Intel Xeon Gold 6140)

SPECrate®2017_int_base = 395
SPECrate®2017_int_peak = 413

CPU2017 License: 6011
Test Sponsor: Netweb
Tested by: Netweb

Copyright 2017-2020 Standard Performance Evaluation Corporation

Compiler Version Notes (Continued)

Copyright (C) 1985-2018 Intel Corporation. All rights reserved.
ifort: NOTE: The evaluation period for this product ends on 28-jun-2019 UTC.

Base Compiler Invocation

C benchmarks:
icc -m64 -std=c11

C++ benchmarks:
icpc -m64

Fortran benchmarks:
ifort -m64

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:
-W1,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div
-qopt-mem-layout-trans=4
-L/usr/local/IntelCompiler19/compilers_and_libraries_2019.1.144/linux/compiler/lib/intel64
-lqkmalloc

C++ benchmarks:
-W1,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div
-qopt-mem-layout-trans=4
-L/usr/local/IntelCompiler19/compilers_and_libraries_2019.1.144/linux/compiler/lib/intel64
-lqkmalloc

(Continued on next page)
SPEC CPU®2017 Integer Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

Tyrone Systems
(Test Sponsor: Netweb)
Tyrone Camarero QS400TU-224R4
(2.30 GHz, Intel Xeon Gold 6140)

SPECrater®2017_int_base = 395
SPECrater®2017_int_peak = 413

CPU2017 License: 6011
Test Sponsor: Netweb
Tested by: Netweb

Base Optimization Flags (Continued)

Fortran benchmarks:
-Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div
-qopt-mem-layout-trans=4 -nostandard-realloc-lhs -align array32byte
-L/usr/local/IntelCompiler19/compilers_and_libraries_2019.1.144/linux/compiler/lib/intel64
-lqkmalloc

Peak Compiler Invocation

C benchmarks (except as noted below):
icc -m64 -std=c11


C++ benchmarks (except as noted below):
icpc -m64

523.xalancbmk_r: icpc -m32 -L/usr/local/IntelCompiler19/compilers_and_libraries_2019.1.144/linux/compiler/lib/ia32_lin

Fortran benchmarks:
ifort -m64

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: -D_FILE_OFFSET_BITS=64 -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:

(Continued on next page)
SPEC CPU®2017 Integer Rate Result

Tyrone Systems
(Test Sponsor: Netweb)
Tyrone Camarero QS400TU-224R4
(2.30 GHz, Intel Xeon Gold 6140)

SPECrate®2017_int_base = 395
SPECrate®2017_int_peak = 413

CPU2017 License: 6011
Test Sponsor: Netweb
Tested by: Netweb

Test Date: Jun-2019
Hardware Availability: Nov-2018
Software Availability: Jun-2019

Peak Optimization Flags (Continued)

500.perlbench_r: -Wl,-z,muldefs -prof-gen(pass 1) -prof-use(pass 2) -ipo
-xCORE-AVX512 -O3 -no-prec-div -qopt-mem-layout-trans=4
-fno-strict-overflow
-L/usr/local/IntelCompiler19/compilers_and_libraries_2019.1.144/linux/compiler/lib/intel64
-lqkmalloc

502.gcc_r: -Wl,-z,muldefs -prof-gen(pass 1) -prof-use(pass 2) -ipo
-xCORE-AVX512 -O3 -no-prec-div -qopt-mem-layout-trans=4
-L/usr/local/je5.0.1-32/lib -ljemalloc

505.mcf_r: -Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div
-qopt-mem-layout-trans=4
-L/usr/local/IntelCompiler19/compilers_and_libraries_2019.1.144/linux/compiler/lib/intel64
-lqkmalloc

525.x264_r: -Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div
-qopt-mem-layout-trans=4 -fno-alias
-L/usr/local/IntelCompiler19/compilers_and_libraries_2019.1.144/linux/compiler/lib/intel64
-lqkmalloc

557.xz_r: Same as 505.mcf_r

C++ benchmarks:

520.omnetpp_r: -Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div
-qopt-mem-layout-trans=4
-L/usr/local/IntelCompiler19/compilers_and_libraries_2019.1.144/linux/compiler/lib/intel64
-lqkmalloc

523.xalancbmk_r: -Wl,-z,muldefs -prof-gen(pass 1) -prof-use(pass 2) -ipo
-xCORE-AVX512 -O3 -no-prec-div -qopt-mem-layout-trans=4
-L/usr/local/je5.0.1-32/lib -ljemalloc

531.deepsjeng_r: Same as 520.omnetpp_r

541.leela_r: Same as 520.omnetpp_r

Fortran benchmarks:
-Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div
-qopt-mem-layout-trans=4 -nostandard-realloc-lhs -align array32byte
-L/usr/local/IntelCompiler19/compilers_and_libraries_2019.1.144/linux/compiler/lib/intel64
-lqkmalloc
**SPEC CPU®2017 Integer Rate Result**

**Tyrone Systems**  
(Test Sponsor: Netweb)  
Tyrone Camarero QS400TU-224R4  
(2.30 GHz, Intel Xeon Gold 6140)  

<table>
<thead>
<tr>
<th>SPECrate®2017_int_base = 395</th>
<th>SPECrate®2017_int_peak = 413</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CPU2017 License:</strong> 6011</td>
<td><strong>Test Date:</strong> Jun-2019</td>
</tr>
<tr>
<td><strong>Test Sponsor:</strong> Netweb</td>
<td><strong>Hardware Availability:</strong> Nov-2018</td>
</tr>
<tr>
<td><strong>Tested by:</strong> Netweb</td>
<td><strong>Software Availability:</strong> Jun-2019</td>
</tr>
</tbody>
</table>

The flags files that were used to format this result can be browsed at  

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

---

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 v1.0.5 on 2019-06-14 03:01:21-0400.  
Report generated on 2020-10-06 17:34:21 by CPU2017 PDF formatter v6255.  
Originally published on 2019-07-12.