Supermicro
SuperStorage 6029P-E1CR24H
(X11DSC+, Intel Xeon Silver 4215R)

**SPEC CPU®2017 Integer Rate Result**

<table>
<thead>
<tr>
<th>SPECrate®2017</th>
<th>int_base = 117</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECrate®2017</td>
<td>int_peak = 121</td>
</tr>
</tbody>
</table>

**CPU2017 License:** 001176  
**Test Sponsor:** Supermicro  
**Tested by:** Supermicro  
**Test Date:** Sep-2020  
**Hardware Availability:** Feb-2020  
**Software Availability:** Apr-2020

**Copies**

<table>
<thead>
<tr>
<th>Test</th>
<th>Copies</th>
<th>SPECrate®2017_int_base</th>
<th>SPECrate®2017_int_peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>500.perlbench_r</td>
<td>32</td>
<td>81.1</td>
<td>93.7</td>
</tr>
<tr>
<td>502.gcc_r</td>
<td>32</td>
<td>84.0</td>
<td>99.7</td>
</tr>
<tr>
<td>505.mcf_r</td>
<td>32</td>
<td>68.1</td>
<td></td>
</tr>
<tr>
<td>520.omnetpp_r</td>
<td>32</td>
<td></td>
<td>202</td>
</tr>
<tr>
<td>523.xalancbmk_r</td>
<td>32</td>
<td></td>
<td>159</td>
</tr>
<tr>
<td>525.x264_r</td>
<td>32</td>
<td></td>
<td>232</td>
</tr>
<tr>
<td>531.deepsjeng_r</td>
<td>32</td>
<td></td>
<td>226</td>
</tr>
<tr>
<td>541.leela_r</td>
<td>32</td>
<td></td>
<td>236</td>
</tr>
<tr>
<td>548.exchange2_r</td>
<td>32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>557.xz_r</td>
<td>32</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**copies**

<table>
<thead>
<tr>
<th>SPECrate®2017_int_base (117)</th>
<th>SPECrate®2017_int_peak (121)</th>
</tr>
</thead>
</table>

**Hardware**

- **CPU Name:** Intel Xeon Silver 4215R
- **Max MHz:** 4000
- **Nominal:** 3200
- **Enabled:** 16 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:** 11 MB I+D on chip per chip
- **Other:** None
- **Memory:** 384 GB (12 x 32 GB 2Rx4 PC4-2933Y-R)
- **Storage:** 1 x 200 GB SATA III SSD
- **Other:** None

**Software**

- **OS:** Red Hat Enterprise Linux release 8.1
- **Kernel:** 4.18.0-147.el8.x86_64
- **Compiler:** C/C++; Version 19.1.1.217 of Intel C/C++ Compiler for Linux; Fortran: Version 19.1.1.217 of Intel Fortran Compiler for Linux
- **Parallel:** No
- **Firmware:** Version 3.2 released Oct-2019
- **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

**Supermicro**  
SuperStorage 6029P-E1CR24H  
(X11DSC+, Intel Xeon Silver 4215R)

**CPU2017 License**: 001176  
**Test Sponsor**: Supermicro  
**Test Date**: Sep-2020  
**Hardware Availability**: Feb-2020  
**Tested by**: Supermicro  
**Software Availability**: Apr-2020

### Results 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>
<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>32</td>
<td>634</td>
<td>80.4</td>
<td>628</td>
<td>81.1</td>
<td>628</td>
<td>81.1</td>
<td>32</td>
<td>542</td>
<td>93.9</td>
<td>543</td>
<td>93.7</td>
<td>543</td>
</tr>
<tr>
<td>502.gcc_r</td>
<td>32</td>
<td>547</td>
<td>84.0</td>
<td>535</td>
<td>84.7</td>
<td>535</td>
<td>84.7</td>
<td>32</td>
<td>454</td>
<td>99.7</td>
<td>454</td>
<td>99.7</td>
<td>455</td>
</tr>
<tr>
<td>505.mcf_r</td>
<td>32</td>
<td>256</td>
<td>82.9</td>
<td>256</td>
<td>82.9</td>
<td>256</td>
<td>82.9</td>
<td>32</td>
<td>454</td>
<td>99.7</td>
<td>454</td>
<td>99.7</td>
<td>455</td>
</tr>
<tr>
<td>520.omnetpp_r</td>
<td>32</td>
<td>616</td>
<td>68.2</td>
<td>617</td>
<td>68.1</td>
<td>620</td>
<td>67.7</td>
<td>32</td>
<td>616</td>
<td>68.2</td>
<td>617</td>
<td>68.1</td>
<td>620</td>
</tr>
<tr>
<td>523.xalancbmk_r</td>
<td>32</td>
<td>213</td>
<td>159</td>
<td>213</td>
<td>159</td>
<td>213</td>
<td>159</td>
<td>32</td>
<td>213</td>
<td>159</td>
<td>213</td>
<td>159</td>
<td>213</td>
</tr>
<tr>
<td>525.x264_r</td>
<td>32</td>
<td>242</td>
<td>138</td>
<td>235</td>
<td>138</td>
<td>235</td>
<td>138</td>
<td>32</td>
<td>242</td>
<td>138</td>
<td>242</td>
<td>138</td>
<td>242</td>
</tr>
<tr>
<td>531.deepsjeng_r</td>
<td>32</td>
<td>374</td>
<td>98.0</td>
<td>374</td>
<td>98.1</td>
<td>374</td>
<td>98.2</td>
<td>32</td>
<td>374</td>
<td>98.0</td>
<td>374</td>
<td>98.1</td>
<td>374</td>
</tr>
<tr>
<td>541.leela_r</td>
<td>32</td>
<td>580</td>
<td>91.4</td>
<td>580</td>
<td>91.3</td>
<td>580</td>
<td>91.3</td>
<td>32</td>
<td>580</td>
<td>91.4</td>
<td>580</td>
<td>91.3</td>
<td>580</td>
</tr>
<tr>
<td>548.exchange2_r</td>
<td>32</td>
<td>356</td>
<td>235</td>
<td>355</td>
<td>236</td>
<td>355</td>
<td>236</td>
<td>32</td>
<td>356</td>
<td>235</td>
<td>355</td>
<td>236</td>
<td>355</td>
</tr>
<tr>
<td>557.xz_r</td>
<td>32</td>
<td>521</td>
<td>66.3</td>
<td>519</td>
<td>66.6</td>
<td>522</td>
<td>66.3</td>
<td>32</td>
<td>512</td>
<td>67.5</td>
<td>513</td>
<td>67.4</td>
<td>512</td>
</tr>
</tbody>
</table>

**SPECrate®2017_int_base = 117**  
**SPECrate®2017_int_peak = 121**

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

### Compiler Notes

The inconsistent Compiler version information under Compiler Version section is due to a discrepancy in Intel Compiler. The correct version of C/C++ compiler is: Version 19.1.1.217 Build 20200306 Compiler for Linux  
The correct version of Fortran compiler is: Version 19.1.1.217 Build 20200306 Compiler for Linux

### 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"

MALLOCONF = "retain:true"
```
SPEC CPU®2017 Integer Rate Result

Supermicro
SuperStorage 6029P-E1CR24H
(X11DSC+, Intel Xeon Silver 4215R)

SPECrate®2017_int_base = 117
SPECrate®2017_int_peak = 121

<table>
<thead>
<tr>
<th>CPU2017 License:</th>
<th>001176</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Sponsor:</td>
<td>Supermicro</td>
</tr>
<tr>
<td>Tested by:</td>
<td>Supermicro</td>
</tr>
<tr>
<td>Test Date:</td>
<td>Sep-2020</td>
</tr>
<tr>
<td>Hardware Availability:</td>
<td>Feb-2020</td>
</tr>
<tr>
<td>Software Availability:</td>
<td>Apr-2020</td>
</tr>
</tbody>
</table>

General Notes

Binaries compiled on a system with 1x Intel Core i9-7980XE CPU + 64GB RAM memory using Redhat Enterprise Linux 8.0
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.:
umactl --interleave=all runcpu <etc>

NA: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown) is mitigated in the system as tested and documented.
Yes: The test sponsor attests, as of date of publication, that CVE-2017-5753 (Spectre variant 1) is mitigated in the system as tested and documented.
Yes: The test sponsor attests, as of date of publication, that CVE-2017-5715 (Spectre variant 2) is mitigated in the system as tested and documented.

Platform Notes

BIOS Settings:
Power Technology = Custom
Power Performance Tuning = BIOS Controls EPB
ENERGY_PERF_BIAS_CFG mode = Maximum Performance
Stale AtoS = Disable
Patrol Scrub = Disable

Sysinfo program /home/cpu2017/bin/sysinfo
Rev: r6365 of 2019-08-21 295195f888a3d7ed1e6e46a485a0011
running on RHEL81-01 Sat Sep  5 16:58:28 2020

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) Silver 4215R CPU @ 3.20GHz
  2 "physical id"s (chips)
  32 "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 : 8
siblings : 16
physical 0: cores 0 1 2 3 4 5 6 7
physical 1: cores 0 1 2 3 4 5 6 7

(Continued on next page)
Supermicro
SuperStorage 6029P-E1CR24H
(X11DSC+, Intel Xeon Silver 4215R)

SPECrate®2017_int_base = 117
SPECrate®2017_int_peak = 121

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: Sep-2020
Hardware Availability: Feb-2020
Software Availability: Apr-2020

Platform Notes (Continued)

From lscpu:

Architecture: x86_64
CPU op-mode(s): 32-bit, 64-bit
Byte Order: Little Endian
CPU(s): 32
On-line CPU(s) list: 0-31
Thread(s) per core: 2
Core(s) per socket: 8
Socket(s): 2
NUMA node(s): 2
Vendor ID: GenuineIntel
CPU family: 6
Model: 85
Model name: Intel(R) Xeon(R) Silver 4215R CPU @ 3.20GHz
Stepping: 7
CPU MHz: 999.948
BogoMIPS: 6400.00
Virtualization: VT-x
L1d cache: 32K
L1i cache: 32K
L2 cache: 1024K
L3 cache: 11264K
NUMA node0 CPU(s): 0-7,16-23
NUMA node1 CPU(s): 8-15,24-31
Flags: fpu vme de pse tsc mtrr 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 rdtabld
lm constant tsc arch_perfmon pebs bts rep_good nopl xtopology nonstop tsc cpuid
aperfperf pni pclmulqdq dtes64 ds_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtpr pdcms
cpid dca sse4_1 sse4_2 x2apic movbe popcnt tsck_deadline_timer aes xsave avx f16c
rdandr lahf_lm abm 3nowprefetch cpuid_fault epb cat_l3 cdp_l3 invpcid_single
intel_pinned ssbd mba ibrs ibbp stibp ibrs_enhanced tpr_shadow vnmi flexpriority ept
vpid fsgsbase tsc_adjust bmi1 hle avx2 smep bmi2 erms invpcid rtm cqm mpx rdt_a
avx512f avx512dq rdseed adx smap clflushopt clwb intel_pt avx512cd avx512bw avx512vl
xsaveopt xsavec xgetbv1 xsaves cgq _llc cgq _occu _llc cgq _mmb _total cgq _mmb _local
dtherm ida arat pln pts hwp_epp pku ospke avx512_vnni md_clear flush_l1d
arch_capabilities

/proc/cpuinfo cache data

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 16 17 18 19 20 21 22 23
node 0 size: 193062 MB
node 0 free: 188646 MB

(Continued on next page)
## Platform Notes (Continued)

- node 1 cpus: 8 9 10 11 12 13 14 15 24 25 26 27 28 29 30 31
- node 1 size: 193506 MB
- node 1 free: 189274 MB
- node distances:
  - node 0 1
  - 0: 10 21
  - 1: 21 10

From `/proc/meminfo`
- MemTotal: 395847188 kB
- HugePages_Total: 0
- Hugepagesize: 2048 kB

From `/etc/*release* /etc/*version*`
- NAME="Red Hat Enterprise Linux"
- VERSION="8.1 (Ootpa)"
- ID="rhel"
- ID_LIKE="fedora"
- VERSION_ID="8.1"
- PLATFORM_ID="platform:el8"
- PRETTY_NAME="Red Hat Enterprise Linux 8.1 (Ootpa)"
- ANSI_COLOR="0;31"
- redhat-release: Red Hat Enterprise Linux release 8.1 (Ootpa)
- system-release: Red Hat Enterprise Linux release 8.1 (Ootpa)
- system-release-cpe: cpe:/o:redhat:enterprise_linux:8.1:ga

`uname -a`:
- Linux RHEL81-01 4.18.0-147.el8.x86_64 #1 SMP Thu Sep 26 15:52:44 UTC 2019 x86_64
- x86_64 x86_64 GNU/Linux

Kernel self-reported vulnerability status:

- 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 barriers and __user pointer sanitization
- CVE-2017-5715 (Spectre variant 2): Mitigation: Enhanced IBRS, IBPB: conditional, RSB filling

run-level 3 Sep 5 01:05

SPEC is set to: /home/cpu2017

<table>
<thead>
<tr>
<th>Filesystem</th>
<th>Type</th>
<th>Size</th>
<th>Used</th>
<th>Avail</th>
<th>Use%</th>
<th>Mounted on</th>
</tr>
</thead>
</table>

(Continued on next page)
Supermicro
SuperStorage 6029P-E1CR24H
(X11DSC+, Intel Xeon Silver 4215R)

SPECrater®2017_int_base = 117
SPECrater®2017_int_peak = 121

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: Sep-2020
Hardware Availability: Feb-2020
Software Availability: Apr-2020

Platform Notes (Continued)

/dev/sda3 xfs 185G 82G 104G 44% /

From /sys/devices/virtual/dmi/id
BIOS: American Megatrends Inc. 3.2 10/18/2019
Vendor: pm_2019-10-08_18:11:34
Product: ppm_2019-10-08_18:11:37
Serial: ps_2019-10-08_18:11:38

Additional information from dmidecode 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 NO DIMM NO DIMM
12x Samsung M393A4K40CB2-CVF 32 GB 2 rank 2933

(End of data from sysinfo program)

Compiler Version Notes

==============================================================================
C | 502.gcc_r(peak)
==============================================================================
Intel(R) C Compiler for applications running on IA-32, Version 2021.1 NextGen
Build 20200304
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) C Compiler for applications running on Intel(R) 64, Version 2021.1
NextGen Build 20200304
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
==============================================================================

==============================================================================
C | 500.perlbench_r(peak) 557.xz_r(peak)
==============================================================================
Intel(R) C Compiler for Intel(R) 64 Compiler for applications running on Intel(R) 64,
Version 19.1.1.217 Build 20200306
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
==============================================================================

(Continued on next page)
Supermicro
SuperStorage 6029P-E1CR24H
(X11DSC+, Intel Xeon Silver 4215R)

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

SPECrater®2017_int_base = 117
SPECrater®2017_int_peak = 121

Test Date: Sep-2020
Hardware Availability: Feb-2020
Software Availability: Apr-2020

Compiler Version Notes (Continued)

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

Intel(R) C Compiler for applications running on IA-32, Version 2021.1 NextGen Build 20200304
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) C Compiler for applications running on Intel(R) 64, Version 2021.1 NextGen Build 20200304
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 for applications running on Intel(R) 64, Version 19.1.1.217 Build 20200306
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

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

Intel(R) C Compiler for applications running on IA-32, Version 2021.1 NextGen Build 20200304
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) C Compiler for applications running on Intel(R) 64, Version 2021.1 NextGen Build 20200304
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 for applications running on Intel(R) 64, Version 19.1.1.217 Build 20200306
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

(Continued on next page)
### Compiler Version Notes (Continued)

-----

**C++**
- 520.omnetpp_r (base, peak)
- 523.xalancbmk_r (base, peak)
- 531.deepsjeng_r (base, peak)
- 541.leela_r (base, peak)

Intel(R) C++ Compiler for applications running on Intel(R) 64, Version 2021.1
NextGen Build 20200304
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

---------

**Fortran**
- 548.exchange2_r (base, peak)

Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R) 64, Version 19.1.1.217 Build 20200306
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

### Base Compiler Invocation

- **C benchmarks:**
  - icc

- **C++ benchmarks:**
  - icpc

- **Fortran benchmarks:**
  - ifort

### Base Portability Flags

```shell
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:
- `-m64` `-qnextgen` `-std=c11`
- `-Wl,-plugin-opt=-x86-branches-within-32B-boundaries -Wl,-z,muldefs`
- `-xCORE-AVX512` `-O3` `-ffast-math -flto -mfpmath=sse -funroll-loops`
- `-fuse-ld=gold -qopt-mem-layout-trans=4`
- `-L/usr/local/IntelCompiler19/compilers_and_libraries_2020.1.217/linux/compiler/lib/intel64_lin`
- `-lqkmalloc`

### C++ benchmarks:
- `-m64` `-qnextgen` `-Wl,-plugin-opt=-x86-branches-within-32B-boundaries`
- `-Wl,-z,muldefs` `-xCORE-AVX512` `-O3` `-ffast-math -flto -mfpmath=sse`
- `-funroll-loops -fuse-ld=gold -qopt-mem-layout-trans=4`
- `-L/usr/local/IntelCompiler19/compilers_and_libraries_2020.1.217/linux/compiler/lib/intel64_lin`
- `-lqkmalloc`

### Fortran benchmarks:
- `-m64` `-Wl,-plugin-opt=-x86-branches-within-32B-boundaries -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/usr/local/IntelCompiler19/compilers_and_libraries_2020.1.217/linux/compiler/lib/intel64_lin`
- `-lqkmalloc`

## Peak Compiler Invocation

### C benchmarks:
- `icc`

### C++ benchmarks:
- `icpc`

### 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`

(Continued on next page)
Peak Portability Flags (Continued)

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/usr/local/IntelCompiler19/compilers_and_libraries_2020.1.217/linux/compiler/lib/intel64_lin
-lqkmalloc

502.gcc_r: -m32
-L/usr/local/IntelCompiler19/compilers_and_libraries_2020.1.217/linux/compiler/lib/ia32_lin
-std=gnu89
-Wl,-plugin-opt=-x86-branches-within-32B-boundaries
-Wl,-z,muldefs -fprofile-generator(pass 1)
-fprofile-use=default.profd (pass 2) -xCORE-AVX512 -flto
-Ofast(pass 1) -O3 -ffast-math -qnextgen -fuse-ld=gold
-qopt-mem-layout-trans=4 -L/usr/local/jemalloc32-5.0.1/lib
-ljemalloc

505.mcf_r: basepeak = yes

525.x264_r: -m64 -qnextgen -std=c11
-Wl,-plugin-opt=-x86-branches-within-32B-boundaries
-Wl,-z,muldefs -xCORE-AVX512 -flto -O3 -ffast-math
-fuse-ld=gold -qopt-mem-layout-trans=4 -fno-alias
-L/usr/local/IntelCompiler19/compilers_and_libraries_2020.1.217/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/usr/local/IntelCompiler19/compilers_and_libraries_2020.1.217/linux/compiler/lib/intel64_lin
-lqkmalloc

C++ benchmarks:

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

Supermicro

SuperStorage 6029P-E1CR24H
(X11DSC+, Intel Xeon Silver 4215R)

<table>
<thead>
<tr>
<th>SPECrate®2017_int_base = 117</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECrate®2017_int_peak = 121</td>
</tr>
</tbody>
</table>

| CPU2017 License: 001176 |
| Test Date: Sep-2020 |
| Test Sponsor: Supermicro |
| Hardware Availability: Feb-2020 |
| Tested by: Supermicro |
| Software Availability: Apr-2020 |

#### 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:


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 v1.1.0 on 2020-09-05 04:58:27-0400.
Report generated on 2020-09-29 15:26:19 by CPU2017 PDF formatter v6255.
Originally published on 2020-09-29.