SPEC® CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Supermicro
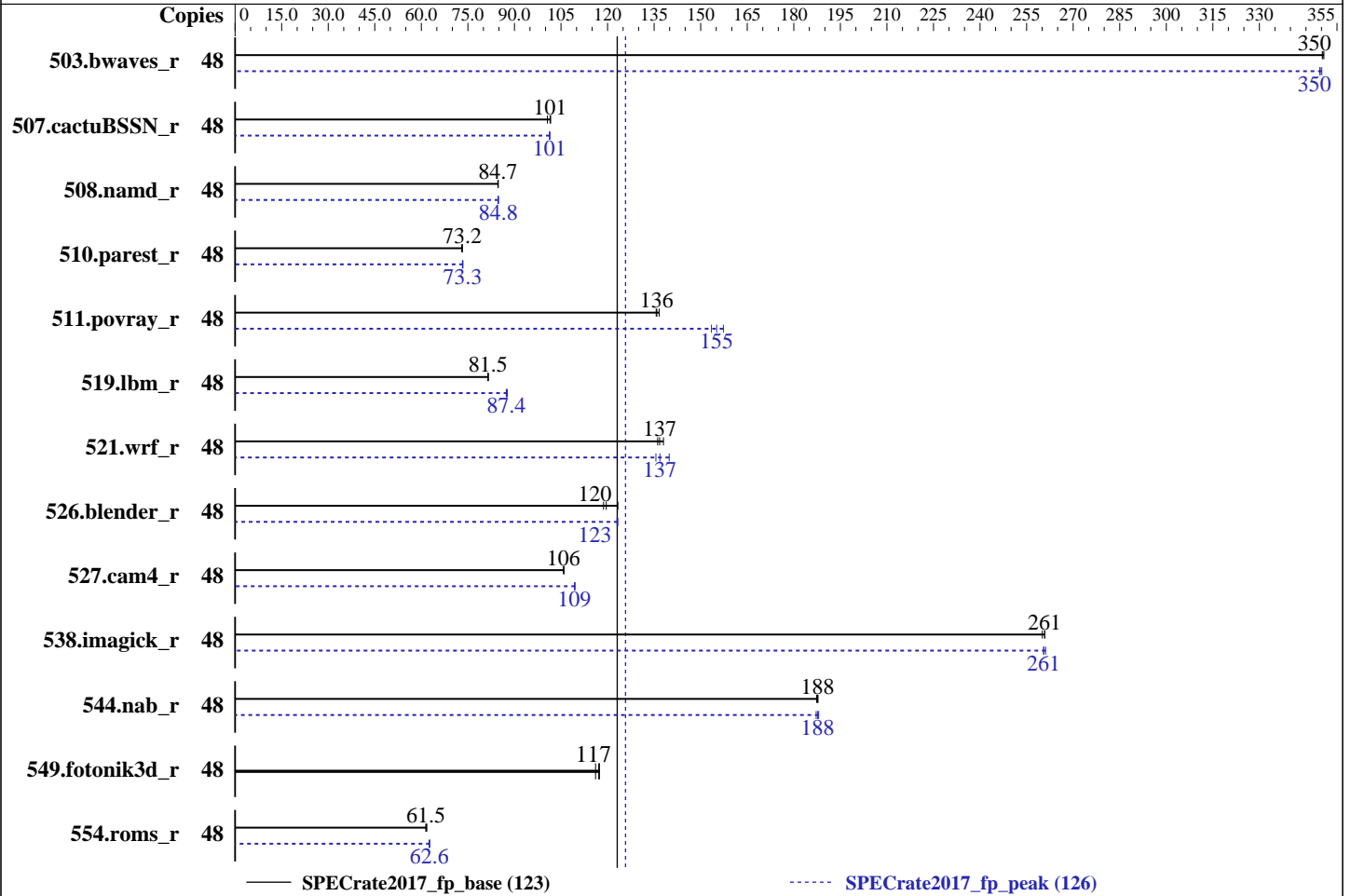
SuperServer 6029U-TR4 (X11DPU , Intel Xeon Silver 4116)

$SPECrate2017\_fp\_base = 123$

$SPECrate2017\_fp\_peak = 126$

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

Test Date: Oct-2018
Hardware Availability: Jul-2017
Software Availability: Mar-2018

Copies	
503.bwaves_r 48	350 / 350
507.cactuBSSN_r 48	101 / 101
508.namd_r 48	84.7 / 84.8
510.parest_r 48	73.2 / 73.3
511.povray_r 48	136 / 155
519.lbm_r 48	81.5 / 87.4
521.wrf_r 48	137 / 137
526.blender_r 48	120 / 123
527.cam4_r 48	106 / 109
538.imagick_r 48	261 / 261
544.nab_r 48	188 / 188
549.fotonik3d_r 48	117
554.roms_r 48	61.5 / 62.6

——— **SPECrate2017_fp_base (123)**   ----- **SPECrate2017_fp_peak (126)**

Hardware

CPU Name: Intel Xeon Silver 4116
 Max MHz.: 3000
 Nominal: 2100
Enabled: 24 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: 16.5 MB I+D on chip per chip
 Other: None
Memory: 384 GB (12 x 32 GB 2Rx4 PC4-2666V-R, running at 2400)
Storage: 1 x 200 GB SATA III SSD
Other: None

Software

OS: SUSE Linux Enterprise Server 12 SP3 (x86_64) Kernel 4.4.114-94.11-default
Compiler: C/C++: Version 18.0.2.199 of Intel C/C++ Compiler for Linux; Fortran: Version 18.0.2.199 of Intel Fortran Compiler for Linux
Parallel: No
Firmware: Supermicro BIOS version 2.1a released Aug-2018
File System: xfs
System State: Run level 3 (multi-user)
Base Pointers: 64-bit
Peak Pointers: 64-bit
Other: None

SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Supermicro

SuperServer 6029U-TR4 (X11DPU , Intel Xeon Silver 4116)

SPECrate2017_fp_base =   123

SPECrate2017_fp_peak =   126

CPU2017 License: 001176	**Test Date:** Oct-2018
Test Sponsor: Supermicro	**Hardware Availability:** Jul-2017
Tested by: Supermicro	**Software Availability:** Mar-2018

Results Table

Benchmark	Base						Peak					
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
503.bwaves_r	48	1372	351	1374	350	**1374**	**350**	48	**1377**	**350**	1375	350	1377	349
507.cactuBSSN_r	48	604	101	598	102	**599**	**101**	48	599	101	**600**	**101**	600	101
508.namd_r	48	538	84.8	**538**	**84.7**	539	84.7	48	538	84.8	538	84.8	**538**	**84.8**
510.parest_r	48	1719	73.0	1715	73.2	**1716**	**73.2**	48	**1713**	**73.3**	1714	73.2	1710	73.4
511.povray_r	48	**825**	**136**	820	137	826	136	48	712	157	**722**	**155**	730	153
519.lbm_r	48	621	81.4	**620**	**81.5**	620	81.6	48	579	87.4	577	87.7	**579**	**87.4**
521.wrf_r	48	790	136	**786**	**137**	779	138	48	793	136	769	140	**786**	**137**
526.blender_r	48	616	119	**611**	**120**	593	123	48	594	123	**593**	**123**	593	123
527.cam4_r	48	792	106	793	106	**793**	**106**	48	768	109	**768**	**109**	767	110
538.imagick_r	48	458	261	459	260	**458**	**261**	48	458	260	457	261	**458**	**261**
544.nab_r	48	**430**	**188**	430	188	431	187	48	**430**	**188**	430	188	432	187
549.fotonik3d_r	48	1593	117	1611	116	**1597**	**117**	48	1593	117	1611	116	**1597**	**117**
554.roms_r	48	**1240**	**61.5**	1235	61.8	1241	61.5	48	1220	62.5	1216	62.7	**1219**	**62.6**
SPECrate2017_fp_base =	**123**											
SPECrate2017_fp_peak =	**126**											

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"

General Notes

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

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

Binaries compiled on a system with 1x Intel Core i7-6700K 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
runcpu command invoked through numactl i.e.:
numactl --interleave=all runcpu <etc>

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

(Continued on next page)

SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Supermicro

SuperServer 6029U-TR4 (X11DPU , Intel Xeon Silver 4116)

SPECrate2017_fp_base = 123

SPECrate2017_fp_peak = 126

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

Test Date: Oct-2018
Hardware Availability: Jul-2017
Software Availability: Mar-2018

General Notes (Continued)

```
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:
LLC prefetch = Enable
Power Technology = Custom
Power Performance Tuning = BIOS Controls EPB
ENERGY_PERF_BIAS_CFG mode = Extreme Performance
Hardware P-state = Out of Band Mode
SNC = Enable
XPT Prefetch = Enable
Stale AtoS = Enable
LLC dead line alloc = Disable
IMC Interleaving = 1-way Interleave
SDDC Plus One = Disable
ADDDC Sparing = Disable
Patrol Scrub = Disable
Sysinfo program /home/cpu2017/bin/sysinfo
Rev: r5974 of 2018-05-19 9bcde8f2999c33d61f64985e45859ea9
running on linux-ima8 Mon Oct 22 22:36:12 2018

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 4116 CPU @ 2.10GHz
      2  "physical id"s (chips)
      48 "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 : 12
      siblings  : 24
      physical 0: cores 0 1 2 3 4 5 8 9 10 11 12 13
      physical 1: cores 0 1 2 3 4 5 8 9 10 11 12 13

From lscpu:
   Architecture:          x86_64
   CPU op-mode(s):        32-bit, 64-bit
   Byte Order:            Little Endian
   CPU(s):                48
```

(Continued on next page)

Supermicro

SuperServer 6029U-TR4 (X11DPU , Intel Xeon Silver 4116)

SPECrate2017_fp_base = 123

SPECrate2017_fp_peak = 126

CPU2017 License: 001176

Test Sponsor: Supermicro

Tested by: Supermicro

Test Date: Oct-2018

Hardware Availability: Jul-2017

Software Availability: Mar-2018

Platform Notes (Continued)

```
      On-line CPU(s) list:    0-47
      Thread(s) per core:     2
      Core(s) per socket:     12
      Socket(s):              2
      NUMA node(s):           4
      Vendor ID:              GenuineIntel
      CPU family:             6
      Model:                  85
      Model name:             Intel(R) Xeon(R) Silver 4116 CPU @ 2.10GHz
      Stepping:               4
      CPU MHz:                2100.008
      BogoMIPS:               4200.01
      Virtualization:         VT-x
      L1d cache:              32K
      L1i cache:              32K
      L2 cache:               1024K
      L3 cache:               16896K
      NUMA node0 CPU(s):      0-2,6-8,24-26,30-32
      NUMA node1 CPU(s):      3-5,9-11,27-29,33-35
      NUMA node2 CPU(s):      12-14,18-20,36-38,42-44
      NUMA node3 CPU(s):      15-17,21-23,39-41,45-47
      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
    aperfmperf eagerfpu 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 ida arat epb invpcid_single pln pts
    dtherm intel_pt rsb_ctxsw spec_ctrl retpoline kaiser tpr_shadow vnmi flexpriority
    ept vpid fsgsbase tsc_adjust bmi1 hle avx2 smep bmi2 erms invpcid rtm cqm mpx
    avx512f avx512dq rdseed adx smap clflushopt clwb avx512cd avx512bw avx512vl xsaveopt
    xsavec xgetbv1 cqm_llc cqm_occup_llc pku ospke

 /proc/cpuinfo cache data
    cache size : 16896 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 6 7 8 24 25 26 30 31 32
   node 0 size: 95332 MB
   node 0 free: 87609 MB
   node 1 cpus: 3 4 5 9 10 11 27 28 29 33 34 35
   node 1 size: 96759 MB
   node 1 free: 90991 MB
   node 2 cpus: 12 13 14 18 19 20 36 37 38 42 43 44
   node 2 size: 96759 MB
   node 2 free: 90991 MB
```

(Continued on next page)

Supermicro

SuperServer 6029U-TR4 (X11DPU , Intel Xeon Silver 4116)

SPECrate2017_fp_base = 123

SPECrate2017_fp_peak = 126

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

Test Date: Oct-2018
Hardware Availability: Jul-2017
Software Availability: Mar-2018

Platform Notes (Continued)

```
   node 3 cpus: 15 16 17 21 22 23 39 40 41 45 46 47
   node 3 size: 96756 MB
   node 3 free: 91016 MB
   node distances:
   node   0   1   2   3
     0:  10  11  21  21
     1:  11  10  21  21
     2:  21  21  10  11
     3:  21  21  11  10

From /proc/meminfo
   MemTotal:       394861332 kB
   HugePages_Total:        0
   Hugepagesize:        2048 kB

From /etc/*release* /etc/*version*
   SuSE-release:
      SUSE Linux Enterprise Server 12 (x86_64)
      VERSION = 12
      PATCHLEVEL = 3
      # This file is deprecated and will be removed in a future service pack or release.
      # Please check /etc/os-release for details about this release.
   os-release:
      NAME="SLES"
      VERSION="12-SP3"
      VERSION_ID="12.3"
      PRETTY_NAME="SUSE Linux Enterprise Server 12 SP3"
      ID="sles"
      ANSI_COLOR="0;32"
      CPE_NAME="cpe:/o:suse:sles:12:sp3"

uname -a:
   Linux linux-ima8 4.4.114-94.11-default #1 SMP Thu Feb 1 19:28:26 UTC 2018 (4309ff9)
   x86_64 x86_64 x86_64 GNU/Linux

Kernel self-reported vulnerability status:

CVE-2017-5754 (Meltdown):           Mitigation: PTI
CVE-2017-5753 (Spectre variant 1): Mitigation: Barriers
CVE-2017-5715 (Spectre variant 2): Mitigation: IBRS+IBPB

run-level 3 Oct 22 10:35

SPEC is set to: /home/cpu2017
   Filesystem      Type  Size  Used Avail Use% Mounted on
   /dev/sda4       xfs   145G   49G   96G  34% /home
```

(Continued on next page)

Supermicro

SuperServer 6029U-TR4 (X11DPU , Intel Xeon Silver 4116)

SPECrate2017_fp_base =   123

SPECrate2017_fp_peak =   126

CPU2017 License: 001176		**Test Date:**	Oct-2018
Test Sponsor:	Supermicro	**Hardware Availability:**	Jul-2017
Tested by:	Supermicro	**Software Availability:**	Mar-2018

Platform Notes (Continued)

```
 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.
   BIOS American Megatrends Inc. 2.1a 08/23/2018
   Memory:
    12x NO DIMM NO DIMM
    12x Samsung M393A4K40BB2-CTD 32 GB 2 rank 2666, configured at 2400

 (End of data from sysinfo program)
```

Compiler Version Notes

```
==============================================================================
 CC  519.lbm_r(base) 538.imagick_r(base, peak) 544.nab_r(base, peak)
------------------------------------------------------------------------------
icc (ICC) 18.0.2 20180210
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------------


==============================================================================
CC   519.lbm_r(peak)
------------------------------------------------------------------------------
icc (ICC) 18.0.2 20180210
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------------


==============================================================================
 CXXC 508.namd_r(base) 510.parest_r(base, peak)
------------------------------------------------------------------------------
icpc (ICC) 18.0.2 20180210
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------------


==============================================================================
CXXC 508.namd_r(peak)
------------------------------------------------------------------------------
icpc (ICC) 18.0.2 20180210
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------------


==============================================================================
 CC  511.povray_r(base) 526.blender_r(base, peak)
------------------------------------------------------------------------------
icpc (ICC) 18.0.2 20180210
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
```

(Continued on next page)

Supermicro

SuperServer 6029U-TR4 (X11DPU , Intel Xeon Silver 4116)

SPECrate2017_fp_base = 123

SPECrate2017_fp_peak = 126

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

Test Date: Oct-2018
Hardware Availability: Jul-2017
Software Availability: Mar-2018

Compiler Version Notes (Continued)

```
icc (ICC) 18.0.2 20180210
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------


==============================================================================
CC   511.povray_r(peak)
------------------------------------------------------------------------
icpc (ICC) 18.0.2 20180210
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
icc (ICC) 18.0.2 20180210
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------


==============================================================================
 FC  507.cactuBSSN_r(base, peak)
------------------------------------------------------------------------
icpc (ICC) 18.0.2 20180210
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
icc (ICC) 18.0.2 20180210
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
ifort (IFORT) 18.0.2 20180210
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------


==============================================================================
 FC  503.bwaves_r(base, peak) 549.fotonik3d_r(base, peak) 554.roms_r(base)
------------------------------------------------------------------------
ifort (IFORT) 18.0.2 20180210
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------


==============================================================================
FC   554.roms_r(peak)
------------------------------------------------------------------------
ifort (IFORT) 18.0.2 20180210
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------


==============================================================================
 CC  521.wrf_r(base) 527.cam4_r(base)
------------------------------------------------------------------------
ifort (IFORT) 18.0.2 20180210
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
icc (ICC) 18.0.2 20180210
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------
```

(Continued on next page)

SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Supermicro

SuperServer 6029U-TR4 (X11DPU , Intel Xeon Silver 4116)

SPECrate2017_fp_base = 123

SPECrate2017_fp_peak = 126

CPU2017 License: 001176　　　　　　　　　　　　　**Test Date:** Oct-2018
Test Sponsor: Supermicro　　　　　　　　　　　**Hardware Availability:** Jul-2017
Tested by: Supermicro　　　　　　　　　　　　**Software Availability:** Mar-2018

Compiler Version Notes (Continued)

```
==============================================================================
CC   521.wrf_r(peak) 527.cam4_r(peak)
------------------------------------------------------------------------------
ifort (IFORT) 18.0.2 20180210
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
icc (ICC) 18.0.2 20180210
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------------
```

Base Compiler Invocation

C benchmarks:
`icc -m64 -std=c11`

C++ benchmarks:
`icpc -m64`

Fortran benchmarks:
`ifort -m64`

Benchmarks using both Fortran and C:
`ifort -m64 icc -m64 -std=c11`

Benchmarks using both C and C++:
`icpc -m64 icc -m64 -std=c11`

Benchmarks using Fortran, C, and C++:
`icpc -m64 icc -m64 -std=c11 ifort -m64`

Base Portability Flags

503.bwaves_r: `-DSPEC_LP64`
507.cactuBSSN_r: `-DSPEC_LP64`
508.namd_r: `-DSPEC_LP64`
510.parest_r: `-DSPEC_LP64`
511.povray_r: `-DSPEC_LP64`
519.lbm_r: `-DSPEC_LP64`
521.wrf_r: `-DSPEC_LP64 -DSPEC_CASE_FLAG -convert big_endian`
526.blender_r: `-DSPEC_LP64 -DSPEC_LINUX -funsigned-char`
527.cam4_r: `-DSPEC_LP64 -DSPEC_CASE_FLAG`
538.imagick_r: `-DSPEC_LP64`
544.nab_r: `-DSPEC_LP64`
549.fotonik3d_r: `-DSPEC_LP64`

(Continued on next page)

Supermicro

SuperServer 6029U-TR4 (X11DPU , Intel Xeon Silver 4116)

SPECrate2017_fp_base = 123

SPECrate2017_fp_peak = 126

CPU2017 License: 001176

Test Sponsor: Supermicro

Tested by: Supermicro

Test Date: Oct-2018

Hardware Availability: Jul-2017

Software Availability: Mar-2018

Base Portability Flags (Continued)

554.roms_r: `-DSPEC_LP64`

Base Optimization Flags

C benchmarks:
```
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only
-qopt-mem-layout-trans=3
```

C++ benchmarks:
```
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only
-qopt-mem-layout-trans=3
```

Fortran benchmarks:
```
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only
-qopt-mem-layout-trans=3 -auto -nostandard-realloc-lhs
```

Benchmarks using both Fortran and C:
```
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only
-qopt-mem-layout-trans=3 -auto -nostandard-realloc-lhs
```

Benchmarks using both C and C++:
```
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only
-qopt-mem-layout-trans=3
```

Benchmarks using Fortran, C, and C++:
```
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only
-qopt-mem-layout-trans=3 -auto -nostandard-realloc-lhs
```

Peak Compiler Invocation

C benchmarks:
```
icc -m64 -std=c11
```

C++ benchmarks:
```
icpc -m64
```

Fortran benchmarks:
```
ifort -m64
```

Benchmarks using both Fortran and C:
```
ifort -m64 icc -m64 -std=c11
```

SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Supermicro

SuperServer 6029U-TR4 (X11DPU , Intel Xeon Silver 4116)

SPECrate2017_fp_base = 123

SPECrate2017_fp_peak = 126

CPU2017 License: 001176

Test Sponsor: Supermicro

Tested by: Supermicro

Test Date: Oct-2018

Hardware Availability: Jul-2017

Software Availability: Mar-2018

Peak Compiler Invocation (Continued)

Benchmarks using both C and C++:
```
icpc -m64 icc -m64 -std=c11
```

Benchmarks using Fortran, C, and C++:
```
icpc -m64 icc -m64 -std=c11 ifort -m64
```

Peak Portability Flags

```
Same as Base Portability Flags
```

Peak Optimization Flags

C benchmarks:

519.lbm_r: -prof-gen(pass 1) -prof-use(pass 2) -ipo -xCORE-AVX2 -O3
-no-prec-div -qopt-prefetch -ffinite-math-only
-qopt-mem-layout-trans=3

538.imagick_r: -xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch
-ffinite-math-only -qopt-mem-layout-trans=3

544.nab_r: Same as 538.imagick_r

C++ benchmarks:

508.namd_r: -prof-gen(pass 1) -prof-use(pass 2) -ipo -xCORE-AVX2 -O3
-no-prec-div -qopt-prefetch -ffinite-math-only
-qopt-mem-layout-trans=3

510.parest_r: -xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch
-ffinite-math-only -qopt-mem-layout-trans=3

Fortran benchmarks:

503.bwaves_r: -xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch
-ffinite-math-only -qopt-mem-layout-trans=3 -auto
-nostandard-realloc-lhs

549.fotonik3d_r: basepeak = yes

554.roms_r: -prof-gen(pass 1) -prof-use(pass 2) -ipo -xCORE-AVX2 -O3
-no-prec-div -qopt-prefetch -ffinite-math-only

(Continued on next page)

Standard Performance Evaluation Corporation (info@spec.org)

https://www.spec.org/

SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Supermicro

SuperServer 6029U-TR4 (X11DPU , Intel Xeon Silver 4116)

SPECrate2017_fp_base = 123

SPECrate2017_fp_peak = 126

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

Test Date: Oct-2018
Hardware Availability: Jul-2017
Software Availability: Mar-2018

Peak Optimization Flags (Continued)

554.roms_r (continued):
`-qopt-mem-layout-trans=3 -auto -nostandard-realloc-lhs`

Benchmarks using both Fortran and C:
`-prof-gen`(pass 1) `-prof-use`(pass 2) `-ipo -xCORE-AVX2 -O3`
`-no-prec-div -qopt-prefetch -ffinite-math-only`
`-qopt-mem-layout-trans=3 -auto -nostandard-realloc-lhs`

Benchmarks using both C and C++:

511.povray_r: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-ipo -xCORE-AVX2 -O3`
`-no-prec-div -qopt-prefetch -ffinite-math-only`
`-qopt-mem-layout-trans=3`

526.blender_r: `-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch`
`-ffinite-math-only -qopt-mem-layout-trans=3`

Benchmarks using Fortran, C, and C++:
`-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only`
`-qopt-mem-layout-trans=3 -auto -nostandard-realloc-lhs`

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2017/flags/Intel-ic18.0-official-linux64.2017-12-21.html
http://www.spec.org/cpu2017/flags/Supermicro-Platform-Settings-V1.2-SKL-revD.html

---

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2017/flags/Intel-ic18.0-official-linux64.2017-12-21.xml
http://www.spec.org/cpu2017/flags/Supermicro-Platform-Settings-V1.2-SKL-revD.xml

---

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

Tested with SPEC CPU2017 v1.0.5 on 2018-10-22 10:36:12-0400.
Report generated on 2018-11-13 15:16:17 by CPU2017 PDF formatter v6067.
Originally published on 2018-11-13.

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