SPEC® CPU2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

ASUS RS720Q-E9(Z11PH-D12) Server System
(3.20 GHz, Intel Xeon Gold 6134)

SPECrate2017_fp_base =   141
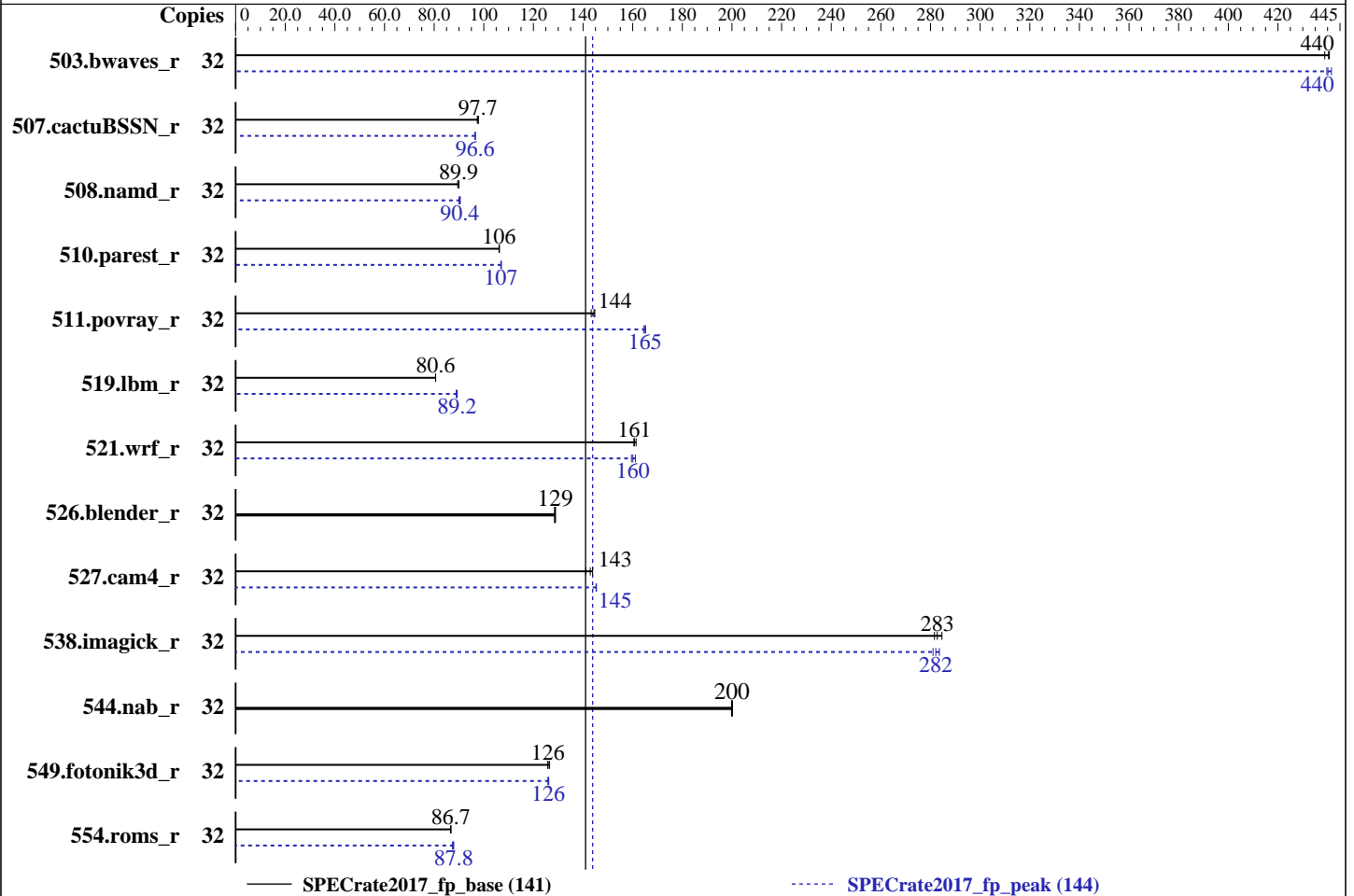
SPECrate2017_fp_peak =   144

CPU2017 License: 9016
Test Sponsor: ASUSTeK Computer Inc.
Tested by: ASUSTeK Computer Inc.

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

Copies	
503.bwaves_r	32
507.cactuBSSN_r	32
508.namd_r	32
510.parest_r	32
511.povray_r	32
519.lbm_r	32
521.wrf_r	32
526.blender_r	32
527.cam4_r	32
538.imagick_r	32
544.nab_r	32
549.fotonik3d_r	32
554.roms_r	32

Base values: 503.bwaves_r 440; 507.cactuBSSN_r 97.7; 508.namd_r 89.9; 510.parest_r 106; 511.povray_r 144; 519.lbm_r 80.6; 521.wrf_r 161; 526.blender_r 129; 527.cam4_r 143; 538.imagick_r 283; 544.nab_r 200; 549.fotonik3d_r 126; 554.roms_r 86.7

Peak values: 503.bwaves_r 440; 507.cactuBSSN_r 96.6; 508.namd_r 90.4; 510.parest_r 107; 511.povray_r 165; 519.lbm_r 89.2; 521.wrf_r 160; 527.cam4_r 145; 538.imagick_r 282; 549.fotonik3d_r 126; 554.roms_r 87.8

—— **SPECrate2017_fp_base (141)**   ······ **SPECrate2017_fp_peak (144)**

Hardware

CPU Name: Intel Xeon Gold 6134
 Max MHz.: 3700
 Nominal: 3200
Enabled: 16 cores, 2 chips, 2 threads/core
Orderable: 1, 2 chip(s)
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: 384 GB (12 x 32 GB 2Rx4 PC4-2666V-R)
Storage: 1 x 240 GB SATA SSD
Other: None

Software

OS: SUSE Linux Enterprise Server 12 (x86_64) SP3
 Kernel 4.4.120-94.17-default
Compiler: C/C++: Version 18.0.3.222 of Intel C/C++
 Compiler for Linux;
 Fortran: Version 18.0.3.222 of Intel Fortran
 Compiler for Linux
Parallel: No
Firmware: Version 0905 released Mar-2018
File System: btrfs
System State: Run level 3 (multi-user)
Base Pointers: 64-bit
Peak Pointers: 64-bit
Other: None

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

SPEC CPU2017 Floating Point Rate Result
Copyright 2017-2019 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

ASUS RS720Q-E9(Z11PH-D12) Server System
(3.20 GHz, Intel Xeon Gold 6134)

SPECrate2017_fp_base = 141

SPECrate2017_fp_peak = 144

CPU2017 License: 9016
Test Sponsor: ASUSTeK Computer Inc.
Tested by: ASUSTeK Computer Inc.

Test Date: Jul-2018
Hardware Availability: Mar-2018
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	32	731	439	**729**	**440**	728	441	32	727	442	730	440	**729**	**440**
507.cactuBSSN_r	32	414	97.8	416	97.4	**415**	**97.7**	32	419	96.6	420	96.4	**420**	**96.6**
508.namd_r	32	**338**	**89.9**	340	89.5	338	90.0	32	**336**	**90.4**	336	90.5	338	90.0
510.parest_r	32	789	106	**789**	**106**	787	106	32	782	107	**783**	**107**	783	107
511.povray_r	32	**518**	**144**	521	143	516	145	32	**453**	**165**	452	165	454	164
519.lbm_r	32	419	80.6	418	80.6	**419**	**80.6**	32	379	88.9	378	89.3	**378**	**89.2**
521.wrf_r	32	447	160	444	161	**446**	**161**	32	449	160	445	161	**448**	**160**
526.blender_r	32	**378**	**129**	379	128	378	129	32	**378**	**129**	379	128	378	129
527.cam4_r	32	397	141	389	144	**392**	**143**	32	385	145	385	145	**385**	**145**
538.imagick_r	32	283	282	280	285	**281**	**283**	32	283	281	281	284	**282**	**282**
544.nab_r	32	270	200	**269**	**200**	269	200	32	270	200	**269**	**200**	269	200
549.fotonik3d_r	32	986	127	991	126	**990**	**126**	32	991	126	**990**	**126**	988	126
554.roms_r	32	**587**	**86.7**	586	86.8	587	86.7	32	**579**	**87.8**	579	87.8	582	87.3

SPECrate2017_fp_base = **141**

SPECrate2017_fp_peak = **144**

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 = "/spec2017/lib/ia32:/spec2017/lib/intel64:/spec2017/je5.0.1-32:/spec2017/je5.0.1-64"

    Binaries compiled on a system with 1x Intel Core i7-4790 CPU + 32GB RAM
    memory using Redhat Enterprise Linux 7.4
    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-2017-5754 (Meltdown) is mitigated in the system as tested and documented.

(Continued on next page)

SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

ASUS RS720Q-E9(Z11PH-D12) Server System
(3.20 GHz, Intel Xeon Gold 6134)

SPECrate2017_fp_base =   141

SPECrate2017_fp_peak =   144

CPU2017 License: 9016
Test Sponsor: ASUSTeK Computer Inc.
Tested by: ASUSTeK Computer Inc.

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

General Notes (Continued)

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 Configuration:
SNC = Enabled
IMC interleaving = 1 way
Patrol Scrub = Disabled
VT-d = Disabled
ENERGY_PERF_BIAS_CFG mode = Performance
HyperThreading = Enabled
 Sysinfo program /spec2017/bin/sysinfo
 Rev: r5974 of 2018-05-19 9bcde8f2999c33d61f64985e45859ea9
 running on linux-pmm5 Wed Jul 18 17:05:21 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) Gold 6134 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 1 2 3 4 8 18 24 27
       physical 1: cores 0 2 3 9 16 19 26 27

 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):          4
      Vendor ID:             GenuineIntel
      CPU family:            6
      Model:                 85
```

(Continued on next page)

ASUSTeK Computer Inc.

ASUS RS720Q-E9(Z11PH-D12) Server System
(3.20 GHz, Intel Xeon Gold 6134)

SPECrate2017_fp_base =   141

SPECrate2017_fp_peak =   144

CPU2017 License: 9016

Test Sponsor: ASUSTeK Computer Inc.

Tested by: ASUSTeK Computer Inc.

Test Date: Jul-2018

Hardware Availability: Mar-2018

Software Availability: Mar-2018

Platform Notes (Continued)

```
      Model name:            Intel(R) Xeon(R) Gold 6134 CPU @ 3.20GHz
      Stepping:              4
      CPU MHz:               3201.000
      CPU max MHz:           3201.0000
      CPU min MHz:           1200.0000
      BogoMIPS:              6592.30
      Virtualization:        VT-x
      L1d cache:             32K
      L1i cache:             32K
      L2 cache:              1024K
      L3 cache:              25344K
      NUMA node0 CPU(s):     0,1,4,6,16,17,20,22
      NUMA node1 CPU(s):     2,3,5,7,18,19,21,23
      NUMA node2 CPU(s):     8,9,11,12,24,25,27,28
      NUMA node3 CPU(s):     10,13-15,26,29-31
      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 stibp 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 : 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 4 6 16 17 20 22
    node 0 size: 95307 MB
    node 0 free: 94833 MB
    node 1 cpus: 2 3 5 7 18 19 21 23
    node 1 size: 96759 MB
    node 1 free: 96202 MB
    node 2 cpus: 8 9 11 12 24 25 27 28
    node 2 size: 96759 MB
    node 2 free: 96334 MB
    node 3 cpus: 10 13 14 15 26 29 30 31
    node 3 size: 96757 MB
    node 3 free: 95830 MB
    node distances:
    node   0   1   2   3
      0:  10  11  21  21
```

(Continued on next page)

ASUSTeK Computer Inc.

ASUS RS720Q-E9(Z11PH-D12) Server System
(3.20 GHz, Intel Xeon Gold 6134)

SPECrate2017_fp_base =   141

SPECrate2017_fp_peak =   144

CPU2017 License: 9016

Test Sponsor: ASUSTeK Computer Inc.

Tested by: ASUSTeK Computer Inc.

Test Date: Jul-2018

Hardware Availability: Mar-2018

Software Availability: Mar-2018

Platform Notes (Continued)

```
     1:  11  10  21  21
     2:  21  21  10  11
     3:  21  21  11  10

 From /proc/meminfo
    MemTotal:       394837552 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-pmm5 4.4.120-94.17-default #1 SMP Wed Mar 14 17:23:00 UTC 2018 (cf3a7bb)
    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: __user pointer sanitization
 CVE-2017-5715 (Spectre variant 2): Mitigation: IBRS+IBPB

 run-level 3 Jul 18 09:19

 SPEC is set to: /spec2017
    Filesystem      Type   Size  Used Avail Use% Mounted on
    /dev/sda2       btrfs  203G   93G  109G  47% /

 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. 0905 03/19/2018
    Memory:
```

(Continued on next page)

SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

ASUS RS720Q-E9(Z11PH-D12) Server System
(3.20 GHz, Intel Xeon Gold 6134)

SPECrate2017_fp_base =   141

SPECrate2017_fp_peak =   144

CPU2017 License: 9016
Test Sponsor: ASUSTeK Computer Inc.
Tested by: ASUSTeK Computer Inc.

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

Platform Notes (Continued)

```
     12x Kingston D4-26662R4-32G 32 GB 2 rank 2666

  (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) 18.0.3 20180410
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------------


==============================================================================
  CC   519.lbm_r(peak)
------------------------------------------------------------------------------
icc (ICC) 18.0.3 20180410
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------------


==============================================================================
  CXXC 508.namd_r(base) 510.parest_r(base)
------------------------------------------------------------------------------
icpc (ICC) 18.0.3 20180410
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------------


==============================================================================
 CXXC 508.namd_r(peak) 510.parest_r(peak)
------------------------------------------------------------------------------
icpc (ICC) 18.0.3 20180410
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------------


==============================================================================
  CC  511.povray_r(base) 526.blender_r(base, peak)
------------------------------------------------------------------------------
icpc (ICC) 18.0.3 20180410
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
icc (ICC) 18.0.3 20180410
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------------


==============================================================================
  CC   511.povray_r(peak)
------------------------------------------------------------------------------
```

(Continued on next page)

ASUSTeK Computer Inc.

ASUS RS720Q-E9(Z11PH-D12) Server System
(3.20 GHz, Intel Xeon Gold 6134)

SPECrate2017_fp_base =   141

SPECrate2017_fp_peak =   144

CPU2017 License: 9016
Test Sponsor: ASUSTeK Computer Inc.
Tested by: ASUSTeK Computer Inc.

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

Compiler Version Notes (Continued)

```
icpc (ICC) 18.0.3 20180410
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
icc (ICC) 18.0.3 20180410
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------------


==============================================================================
 FC   507.cactuBSSN_r(base)
------------------------------------------------------------------------------
icpc (ICC) 18.0.3 20180410
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
icc (ICC) 18.0.3 20180410
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
ifort (IFORT) 18.0.3 20180410
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------------


==============================================================================
 FC   507.cactuBSSN_r(peak)
------------------------------------------------------------------------------
icpc (ICC) 18.0.3 20180410
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
icc (ICC) 18.0.3 20180410
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
ifort (IFORT) 18.0.3 20180410
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) 18.0.3 20180410
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------------


==============================================================================
 FC   554.roms_r(peak)
------------------------------------------------------------------------------
ifort (IFORT) 18.0.3 20180410
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------------


==============================================================================
 CC   521.wrf_r(base) 527.cam4_r(base)
------------------------------------------------------------------------------
ifort (IFORT) 18.0.3 20180410
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
```

(Continued on next page)

SPEC CPU2017 Floating Point Rate Result

ASUSTeK Computer Inc.

ASUS RS720Q-E9(Z11PH-D12) Server System
(3.20 GHz, Intel Xeon Gold 6134)

SPECrate2017_fp_base =   141

SPECrate2017_fp_peak =   144

CPU2017 License: 9016
Test Sponsor: ASUSTeK Computer Inc.
Tested by: ASUSTeK Computer Inc.

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

Compiler Version Notes (Continued)

```
icc (ICC) 18.0.3 20180410
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------


==============================================================================
CC   521.wrf_r(peak) 527.cam4_r(peak)
------------------------------------------------------------------------
ifort (IFORT) 18.0.3 20180410
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
icc (ICC) 18.0.3 20180410
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`

(Continued on next page)

ASUSTeK Computer Inc.

ASUS RS720Q-E9(Z11PH-D12) Server System
(3.20 GHz, Intel Xeon Gold 6134)

SPECrate2017_fp_base = 141

SPECrate2017_fp_peak = 144

CPU2017 License: 9016
Test Sponsor: ASUSTeK Computer Inc.
Tested by: ASUSTeK Computer Inc.

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

Base Portability Flags (Continued)

527.cam4_r: -DSPEC_LP64 -DSPEC_CASE_FLAG
538.imagick_r: -DSPEC_LP64
544.nab_r: -DSPEC_LP64
549.fotonik3d_r: -DSPEC_LP64
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 -nostandard-realloc-lhs -align array32byte

Benchmarks using both Fortran and C:
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only
-qopt-mem-layout-trans=3 -nostandard-realloc-lhs -align array32byte

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 -nostandard-realloc-lhs -align array32byte

Peak Compiler Invocation

C benchmarks:
icc -m64 -std=c11

C++ benchmarks:
icpc -m64

Fortran benchmarks:
ifort -m64

(Continued on next page)

ASUSTeK Computer Inc.

ASUS RS720Q-E9(Z11PH-D12) Server System
(3.20 GHz, Intel Xeon Gold 6134)

SPECrate2017_fp_base = 141

SPECrate2017_fp_peak = 144

CPU2017 License: 9016
Test Sponsor: ASUSTeK Computer Inc.
Tested by: ASUSTeK Computer Inc.

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

Peak Compiler Invocation (Continued)

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`

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: `basepeak = yes`

C++ benchmarks:
`-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`

Fortran benchmarks:

503.bwaves_r: `-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch`
`-ffinite-math-only -qopt-mem-layout-trans=3`
`-nostandard-realloc-lhs -align array32byte`

549.fotonik3d_r: `Same as 503.bwaves_r`

(Continued on next page)

SPEC CPU2017 Floating Point Rate Result
Copyright 2017-2019 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

ASUS RS720Q-E9(Z11PH-D12) Server System
(3.20 GHz, Intel Xeon Gold 6134)

SPECrate2017_fp_base = 141

SPECrate2017_fp_peak = 144

CPU2017 License: 9016
Test Sponsor: ASUSTeK Computer Inc.
Tested by: ASUSTeK Computer Inc.

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

Peak Optimization Flags (Continued)

554.roms_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 -nostandard-realloc-lhs
-align array32byte

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 -nostandard-realloc-lhs -align array32byte

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: basepeak = yes

Benchmarks using Fortran, C, 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 -nostandard-realloc-lhs -align array32byte

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2017/flags/ASUSTekPlatform-Settings-z11-V2.0-revD.html
http://www.spec.org/cpu2017/flags/Intel-ic18.0-official-linux64.2017-12-21.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2017/flags/ASUSTekPlatform-Settings-z11-V2.0-revD.xml
http://www.spec.org/cpu2017/flags/Intel-ic18.0-official-linux64.2017-12-21.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 2018-07-18 05:05:21-0400.
Report generated on 2019-03-08 20:41:17 by CPU2017 PDF formatter v6067.
Originally published on 2018-08-21.