SPEC CPU®2017 Floating Point Rate Result

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Inspur Corporation

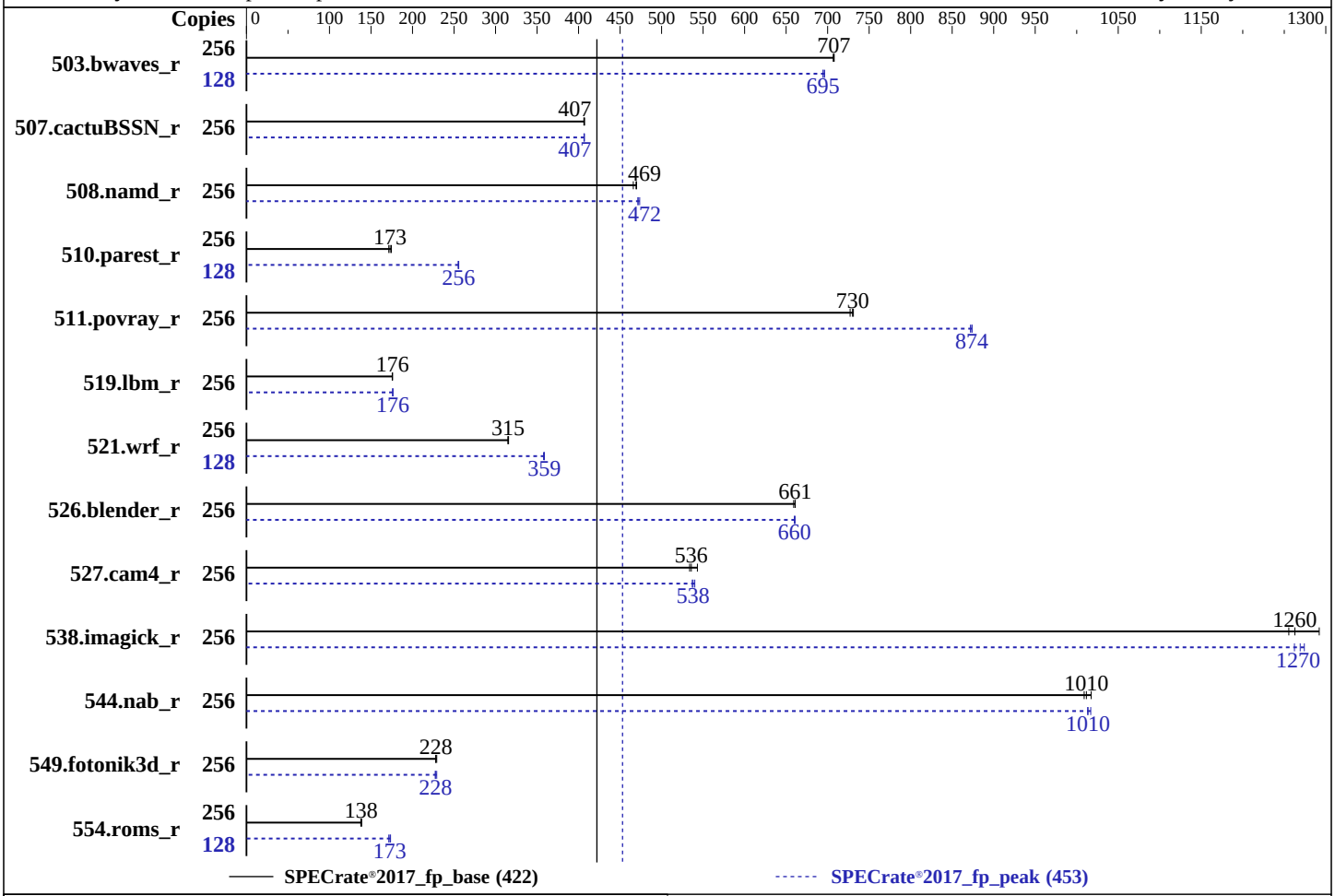
Inspur TS860M5 (Intel Xeon Platinum 8253)

SPECrate®2017_fp_base = 422

SPECrate®2017_fp_peak = 453

CPU2017 License: 3358
Test Sponsor: Inspur Corporation
Tested by: Inspur Corporation

Test Date: Oct-2019
Hardware Availability: Apr-2019
Software Availability: May-2019



Hardware

CPU Name:	Intel Xeon Platinum 8253
Max MHz:	3000
Nominal:	2200
Enabled:	128 cores, 8 chips, 2 threads/core
Orderable:	2,4,6,8 chips
Cache L1:	32 KB I + 32 KB D on chip per core
L2:	1 MB I+D on chip per core
L3:	22 MB I+D on chip per chip
Other:	None
Memory:	3 TB (96 x 32 GB 2Rx4 PC4-2933Y-R)
Storage:	1 x 2 TB SATA SSD
Other:	None

Software

OS:	SUSE Linux Enterprise Server 12 SP4 4.12.14-94.41-default
Compiler:	C/C++: Version 19.0.4.227 of Intel C/C++ Compiler Build 20190416 for Linux; Fortran: Version 19.0.4.227 of Intel Fortran Compiler Build 20190416 for Linux
Parallel:	No
Firmware:	Version 4.1.09 released Jun-2019
File System:	xfs
System State:	Run level 3 (multi-user)
Base Pointers:	64-bit
Peak Pointers:	64-bit
Other:	None
Power Management:	--

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Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
503.bwaves_r	256	**3629**	**707**	3633	707	3626	708	128	**1848**	**695**	1848	695	1843	696
507.cactuBSSN_r	256	797	406	796	407	**797**	**407**	256	796	407	**797**	**407**	797	407
508.namd_r	256	**518**	**469**	518	470	522	466	256	**516**	**472**	516	472	513	474
510.parest_r	256	3836	175	**3871**	**173**	3906	171	128	**1310**	**256**	1314	255	1310	256
511.povray_r	256	822	727	818	731	**819**	**730**	256	684	874	**684**	**874**	686	872
519.lbm_r	256	**1534**	**176**	1537	176	1534	176	256	1531	176	**1531**	**176**	1532	176
521.wrf_r	256	1821	315	**1819**	**315**	1816	316	128	801	358	**799**	**359**	799	359
526.blender_r	256	590	661	592	659	**590**	**661**	256	**591**	**660**	591	660	590	661
527.cam4_r	256	824	543	839	534	**836**	**536**	256	**832**	**538**	829	540	834	537
538.imagick_r	256	493	1290	507	1260	**504**	**1260**	256	504	1260	500	1270	**502**	**1270**
544.nab_r	256	423	1020	427	1010	**426**	**1010**	256	424	1020	**425**	**1010**	425	1010
549.fotonik3d_r	256	4379	228	4353	229	**4371**	**228**	256	4386	227	4353	229	**4382**	**228**
554.roms_r	256	2954	138	**2941**	**138**	2932	139	128	1187	171	**1177**	**173**	1172	174

SPECrate®2017_fp_base = 422

SPECrate®2017_fp_peak = 453

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/intel64"

 Binaries compiled on a system with 1x Intel Core i9-799X 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>

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

(Continued on next page)

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 and OS configuration:
SCALING_GOVERNOR set to Performance
Hardware Prefetch set to Disable
VT Support set to Disable
C1E Support set to Disable
IMC (Integrated memory controller) Interleaving set to 1-way
Sub NUMA Cluster (SNC) set to Enable
Sysinfo program /home/CPU2017/bin/sysinfo
Rev: r5974 of 2018-05-19 9bcde8f2999c33d61f64985e45859ea9
running on linux-atnv Sat Oct 12 18:24:30 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) Platinum 8253 CPU @ 2.20GHz
      8  "physical id"s (chips)
      256 "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 : 16
      siblings  : 32
      physical 0: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
      physical 1: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
      physical 2: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
      physical 3: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
      physical 4: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
      physical 5: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
      physical 6: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
      physical 7: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

From lscpu:
     Architecture:          x86_64
     CPU op-mode(s):        32-bit, 64-bit
     Byte Order:            Little Endian
     CPU(s):                256
```

(Continued on next page)

Platform Notes (Continued)

```
On-line CPU(s) list:   0-255
Thread(s) per core:    2
Core(s) per socket:    16
Socket(s):             8
NUMA node(s):          16
Vendor ID:             GenuineIntel
CPU family:            6
Model:                 85
Model name:            Intel(R) Xeon(R) Platinum 8253 CPU @ 2.20GHz
Stepping:              6
CPU MHz:               2200.000
CPU max MHz:           3000.0000
CPU min MHz:           1000.0000
BogoMIPS:              4400.00
Virtualization:        VT-x
L1d cache:             32K
L1i cache:             32K
L2 cache:              1024K
L3 cache:              22528K
NUMA node0 CPU(s):     0-3,8-11,128-131,136-139
NUMA node1 CPU(s):     4-7,12-15,132-135,140-143
NUMA node2 CPU(s):     16-19,24-27,144-147,152-155
NUMA node3 CPU(s):     20-23,28-31,148-151,156-159
NUMA node4 CPU(s):     32-35,40-43,160-163,168-171
NUMA node5 CPU(s):     36-39,44-47,164-167,172-175
NUMA node6 CPU(s):     48-51,56-59,176-179,184-187
NUMA node7 CPU(s):     52-55,60-63,180-183,188-191
NUMA node8 CPU(s):     64-67,72-75,192-195,200-203
NUMA node9 CPU(s):     68-71,76-79,196-199,204-207
NUMA node10 CPU(s):    80-83,88-91,208-211,216-219
NUMA node11 CPU(s):    84-87,92-95,212-215,220-223
NUMA node12 CPU(s):    96-99,104-107,224-227,232-235
NUMA node13 CPU(s):    100-103,108-111,228-231,236-239
NUMA node14 CPU(s):    112-115,120-123,240-243,248-251
NUMA node15 CPU(s):    116-119,124-127,244-247,252-255
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 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 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
flush_l1d arch_capabilities
```


(Continued on next page)

Platform Notes (Continued)

```
 /proc/cpuinfo cache data
    cache size : 22528 KB

 From numactl --hardware  WARNING: a numactl 'node' might or might not correspond to a
 physical chip.
   available: 16 nodes (0-15)
   node 0 cpus: 0 1 2 3 8 9 10 11 128 129 130 131 136 137 138 139
   node 0 size: 193073 MB
   node 0 free: 183729 MB
   node 1 cpus: 4 5 6 7 12 13 14 15 132 133 134 135 140 141 142 143
   node 1 size: 193527 MB
   node 1 free: 186908 MB
   node 2 cpus: 16 17 18 19 24 25 26 27 144 145 146 147 152 153 154 155
   node 2 size: 193527 MB
   node 2 free: 186907 MB
   node 3 cpus: 20 21 22 23 28 29 30 31 148 149 150 151 156 157 158 159
   node 3 size: 193527 MB
   node 3 free: 186928 MB
   node 4 cpus: 32 33 34 35 40 41 42 43 160 161 162 163 168 169 170 171
   node 4 size: 193527 MB
   node 4 free: 186925 MB
   node 5 cpus: 36 37 38 39 44 45 46 47 164 165 166 167 172 173 174 175
   node 5 size: 193527 MB
   node 5 free: 186929 MB
   node 6 cpus: 48 49 50 51 56 57 58 59 176 177 178 179 184 185 186 187
   node 6 size: 193527 MB
   node 6 free: 186924 MB
   node 7 cpus: 52 53 54 55 60 61 62 63 180 181 182 183 188 189 190 191
   node 7 size: 193527 MB
   node 7 free: 186918 MB
   node 8 cpus: 64 65 66 67 72 73 74 75 192 193 194 195 200 201 202 203
   node 8 size: 193527 MB
   node 8 free: 186927 MB
   node 9 cpus: 68 69 70 71 76 77 78 79 196 197 198 199 204 205 206 207
   node 9 size: 193498 MB
   node 9 free: 186906 MB
   node 10 cpus: 80 81 82 83 88 89 90 91 208 209 210 211 216 217 218 219
   node 10 size: 193527 MB
   node 10 free: 186914 MB
   node 11 cpus: 84 85 86 87 92 93 94 95 212 213 214 215 220 221 222 223
   node 11 size: 193527 MB
   node 11 free: 186913 MB
   node 12 cpus: 96 97 98 99 104 105 106 107 224 225 226 227 232 233 234 235
   node 12 size: 193527 MB
   node 12 free: 186917 MB
   node 13 cpus: 100 101 102 103 108 109 110 111 228 229 230 231 236 237 238 239
```

(Continued on next page)

Platform Notes (Continued)

```
   node 13 size: 193527 MB
   node 13 free: 186933 MB
   node 14 cpus: 112 113 114 115 120 121 122 123 240 241 242 243 248 249 250 251
   node 14 size: 193527 MB
   node 14 free: 186928 MB
   node 15 cpus: 116 117 118 119 124 125 126 127 244 245 246 247 252 253 254 255
   node 15 size: 193305 MB
   node 15 free: 186703 MB
   node distances:
   node   0   1   2   3   4   5   6   7   8   9  10  11  12  13  14  15
     0:  10  11  21  21  31  31  21  21  31  31  21  21  31  31  31  31
     1:  11  10  21  21  31  31  21  21  31  31  21  21  31  31  31  31
     2:  21  21  10  11  21  21  31  31  21  21  31  31  31  31  31  31
     3:  21  21  11  10  21  21  31  31  21  21  31  31  31  31  31  31
     4:  31  31  21  21  10  11  21  21  31  31  31  31  21  21  31  31
     5:  31  31  21  21  11  10  21  21  31  31  31  31  21  21  31  31
     6:  21  21  31  31  21  21  10  11  31  31  31  31  31  31  21  21
     7:  21  21  31  31  21  21  11  10  31  31  31  31  31  31  21  21
     8:  31  31  21  21  31  31  31  31  10  11  21  21  31  31  21  21
     9:  31  31  21  21  31  31  31  31  11  10  21  21  31  31  21  21
    10:  21  21  31  31  31  31  31  31  21  21  10  11  21  21  31  31
    11:  21  21  31  31  31  31  31  31  21  21  11  10  21  21  31  31
    12:  31  31  31  31  21  21  31  31  31  31  21  21  10  11  21  21
    13:  31  31  31  31  21  21  31  31  31  31  21  21  11  10  21  21
    14:  31  31  31  31  31  31  21  21  21  21  31  31  21  21  10  11
    15:  31  31  31  31  31  31  21  21  21  21  31  31  21  21  11  10

From /proc/meminfo
   MemTotal:       3170034112 kB
   HugePages_Total:       0
   Hugepagesize:       2048 kB

/usr/bin/lsb_release -d
   SUSE Linux Enterprise Server 12 SP4

From /etc/*release* /etc/*version*
   SuSE-release:
      SUSE Linux Enterprise Server 12 (x86_64)
      VERSION = 12
      PATCHLEVEL = 4
      # 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-SP4"
      VERSION_ID="12.4"
      PRETTY_NAME="SUSE Linux Enterprise Server 12 SP4"
```

(Continued on next page)

Platform Notes (Continued)

```
       ID="sles"
       ANSI_COLOR="0;32"
       CPE_NAME="cpe:/o:suse:sles:12:sp4"

 uname -a:
    Linux linux-atnv 4.12.14-94.41-default #1 SMP Wed Oct 31 12:25:04 UTC 2018 (3090901)
    x86_64 x86_64 x86_64 GNU/Linux

 Kernel self-reported vulnerability status:

 CVE-2017-5754 (Meltdown):          Not affected
 CVE-2017-5753 (Spectre variant 1): Mitigation: __user pointer sanitization
 CVE-2017-5715 (Spectre variant 2): Mitigation: Indirect Branch Restricted Speculation,
 IBPB, IBRS_FW

 run-level 3 Oct 12 06:33 last=5

 SPEC is set to: /home/CPU2017
    Filesystem     Type  Size  Used Avail Use% Mounted on
    /dev/sdb4      xfs   1.8T  103G  1.7T   6% /home

 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 Inspur 4.1.09 06/20/2019
   Memory:
    96x Hynix HMAA4GR7AJR8N-WM 32 GB 2 rank 2933

 (End of data from sysinfo program)
```

Compiler Version Notes

```
==============================================================================
C               | 519.lbm_r(base, peak) 538.imagick_r(base, peak)
                | 544.nab_r(base, peak)
------------------------------------------------------------------------------
Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,
  Version 19.0.4.227 Build 20190416
Copyright (C) 1985-2019 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------------

==============================================================================
C++             | 508.namd_r(base, peak) 510.parest_r(base, peak)
------------------------------------------------------------------------------
Intel(R) C++ Intel(R) 64 Compiler for applications running on Intel(R) 64,
```

(Continued on next page)

Compiler Version Notes (Continued)

```
  Version 19.0.4.227 Build 20190416
Copyright (C) 1985-2019 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------------

==============================================================================
C++, C          | 511.povray_r(base, peak) 526.blender_r(base, peak)
------------------------------------------------------------------------------
Intel(R) C++ Intel(R) 64 Compiler for applications running on Intel(R) 64,
  Version 19.0.4.227 Build 20190416
Copyright (C) 1985-2019 Intel Corporation.  All rights reserved.
Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,
  Version 19.0.4.227 Build 20190416
Copyright (C) 1985-2019 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------------

==============================================================================
C++, C, Fortran | 507.cactuBSSN_r(base, peak)
------------------------------------------------------------------------------
Intel(R) C++ Intel(R) 64 Compiler for applications running on Intel(R) 64,
  Version 19.0.4.227 Build 20190416
Copyright (C) 1985-2019 Intel Corporation.  All rights reserved.
Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,
  Version 19.0.4.227 Build 20190416
Copyright (C) 1985-2019 Intel Corporation.  All rights reserved.
Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R)
  64, Version 19.0.4.227 Build 20190416
Copyright (C) 1985-2019 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------------

==============================================================================
Fortran         | 503.bwaves_r(base, peak) 549.fotonik3d_r(base, peak)
                | 554.roms_r(base, peak)
------------------------------------------------------------------------------
Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R)
  64, Version 19.0.4.227 Build 20190416
Copyright (C) 1985-2019 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------------

==============================================================================
Fortran, C      | 521.wrf_r(base, peak) 527.cam4_r(base, peak)
------------------------------------------------------------------------------
Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R)
  64, Version 19.0.4.227 Build 20190416
Copyright (C) 1985-2019 Intel Corporation.  All rights reserved.
Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,
  Version 19.0.4.227 Build 20190416
Copyright (C) 1985-2019 Intel Corporation.  All rights reserved.
```

(Continued on next page)

Compiler Version Notes (Continued)

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

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
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=4

C++ benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only
-qopt-mem-layout-trans=4

Fortran benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only
-qopt-mem-layout-trans=4 -auto -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=4 -auto -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=4

Benchmarks using Fortran, C, and C++:
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only
-qopt-mem-layout-trans=4 -auto -nostandard-realloc-lhs
-align array32byte

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

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

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Peak Compiler Invocation (Continued)

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=4

538.imagick_r: -xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only -qopt-mem-layout-trans=4

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=4

510.parest_r: -xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only -qopt-mem-layout-trans=4

Fortran benchmarks:

503.bwaves_r: -xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only -qopt-mem-layout-trans=4 -auto -nostandard-realloc-lhs -align array32byte

549.fotonik3d_r: Same as 503.bwaves_r

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=4 -auto -nostandard-realloc-lhs -align array32byte

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Peak Optimization Flags (Continued)

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=4 -auto -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=4`

526.blender_r: `-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch`
`-ffinite-math-only -qopt-mem-layout-trans=4`

Benchmarks using Fortran, C, and C++:
`-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only`
`-qopt-mem-layout-trans=4 -auto -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/Intel-ic19.0u1-official-linux64.2019-07-09.html
http://www.spec.org/cpu2017/flags/Inspur-Platform-Settings-V1.4-CAS.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2017/flags/Intel-ic19.0u1-official-linux64.2019-07-09.xml
http://www.spec.org/cpu2017/flags/Inspur-Platform-Settings-V1.4-CAS.xml

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

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