SPEC CPU®2017 Floating Point Rate Result

Inspur Corporation

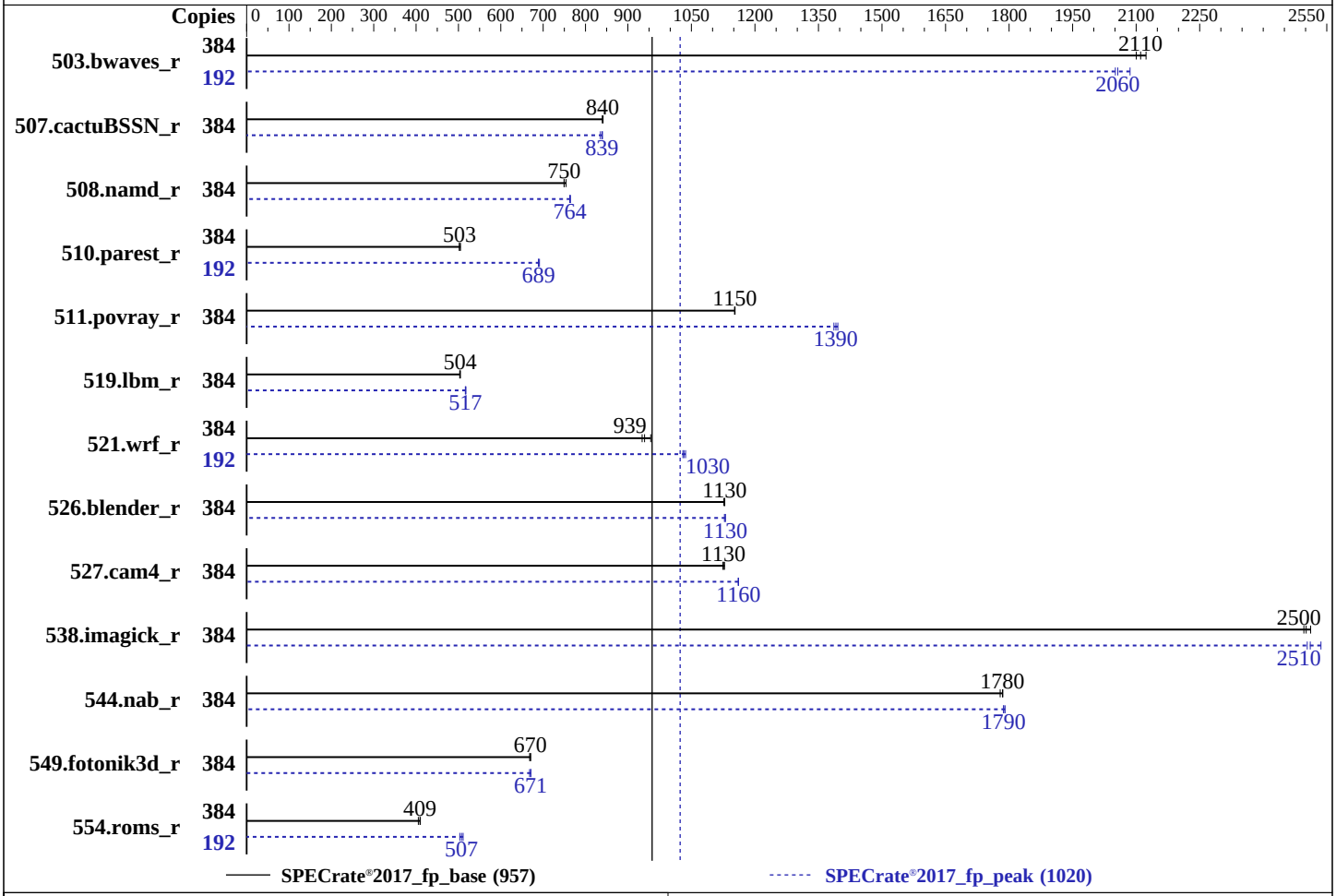
Inspur TS860M5 (Intel Xeon Platinum 8260)

SPECrate®2017_fp_base = 957

SPECrate®2017_fp_peak = 1020

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

Test Date: Mar-2020
Hardware Availability: Apr-2019
Software Availability: May-2019



Hardware

CPU Name:	Intel Xeon Platinum 8260
Max MHz:	3900
Nominal:	2400
Enabled:	192 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:	35.75 MB I+D on chip per chip
Other:	None
Memory:	1536 GB (96 x 16 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:	BIOS and OS set to prefer performance at the cost of additional power usage.

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
503.bwaves_r	384	1814	2120	**1824**	**2110**	1833	2100	192	923	2090	939	2050	**936**	**2060**
507.cactuBSSN_r	384	579	840	578	842	**579**	**840**	384	582	835	**579**	**839**	579	840
508.namd_r	384	**487**	**750**	487	749	484	754	384	477	764	478	763	**478**	**764**
510.parest_r	384	**1999**	**503**	1990	505	2001	502	192	**729**	**689**	729	689	727	691
511.povray_r	384	778	1150	**778**	**1150**	778	1150	384	647	1390	**645**	**1390**	642	1400
519.lbm_r	384	**803**	**504**	805	503	802	504	384	782	518	784	516	**783**	**517**
521.wrf_r	384	**916**	**939**	921	934	902	954	192	415	1040	418	1030	**417**	**1030**
526.blender_r	384	**518**	**1130**	519	1130	518	1130	384	**518**	**1130**	517	1130	518	1130
527.cam4_r	384	597	1120	595	1130	**597**	**1130**	384	578	1160	**578**	**1160**	579	1160
538.imagick_r	384	**382**	**2500**	383	2500	380	2510	384	377	2540	381	2500	**380**	**2510**
544.nab_r	384	**362**	**1780**	362	1790	363	1780	384	**362**	**1790**	362	1790	361	1790
549.fotonik3d_r	384	**2234**	**670**	2240	668	2232	670	384	**2231**	**671**	2231	671	2240	668
554.roms_r	384	**1491**	**409**	1505	405	1488	410	192	**601**	**507**	597	511	606	503

SPECrate®2017_fp_base = 957

SPECrate®2017_fp_peak = 1020

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"
```

Environment Variables Notes

```
Environment variables set by runcpu before the start of the run:
LD_LIBRARY_PATH = "/home/CPU2017/lib/intel64"
```

General Notes

```
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
```

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General Notes (Continued)

```
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)
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: r6365 of 2019-08-21 295195f888a3d7edb1e6e46a485a0011
running on linux-dty6 Fri Mar 20 16:17:31 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) Platinum 8260 CPU @ 2.40GHz
      8  "physical id"s (chips)
      384 "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 : 24
      siblings  : 48
      physical 0: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 16 17 18 19 20 21 25 26 27 28 29
      physical 1: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 16 17 18 19 20 21 25 26 27 28 29
      physical 2: cores 0 1 2 3 4 5 6 9 10 11 12 13 16 17 18 19 20 21 24 25 26 27 28 29
      physical 3: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 16 17 18 19 20 21 25 26 27 28 29
      physical 4: cores 0 1 2 3 4 5 6 9 10 11 12 13 16 17 18 19 20 21 24 25 26 27 28 29
      physical 5: cores 0 1 2 3 4 5 6 9 10 11 12 13 16 17 18 19 20 21 24 25 26 27 28 29
      physical 6: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 16 17 18 19 20 21 25 26 27 28 29
      physical 7: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 16 17 18 19 20 21 25 26 27 28 29
```

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Platform Notes (Continued)

```
From lscpu:
      Architecture:          x86_64
      CPU op-mode(s):        32-bit, 64-bit
      Byte Order:            Little Endian
      CPU(s):                384
      On-line CPU(s) list:   0-383
      Thread(s) per core:    2
      Core(s) per socket:    24
      Socket(s):             8
      NUMA node(s):          16
      Vendor ID:             GenuineIntel
      CPU family:            6
      Model:                 85
      Model name:            Intel(R) Xeon(R) Platinum 8260 CPU @ 2.40GHz
      Stepping:              7
      CPU MHz:               2400.000
      CPU max MHz:           3900.0000
      CPU min MHz:           1000.0000
      BogoMIPS:              4800.00
      Virtualization:        VT-x
      L1d cache:             32K
      L1i cache:             32K
      L2 cache:              1024K
      L3 cache:              36608K
      NUMA node0 CPU(s):     0-3,7-9,13-15,19,20,192-195,199-201,205-207,211,212
      NUMA node1 CPU(s):     4-6,10-12,16-18,21-23,196-198,202-204,208-210,213-215
      NUMA node2 CPU(s):     24-27,31-33,37-39,43,44,216-219,223-225,229-231,235,236
      NUMA node3 CPU(s):     28-30,34-36,40-42,45-47,220-222,226-228,232-234,237-239
      NUMA node4 CPU(s):     48-51,55,56,60-62,66-68,240-243,247,248,252-254,258-260
      NUMA node5 CPU(s):     52-54,57-59,63-65,69-71,244-246,249-251,255-257,261-263
      NUMA node6 CPU(s):     72-75,79-81,85-87,91,92,264-267,271-273,277-279,283,284
      NUMA node7 CPU(s):     76-78,82-84,88-90,93-95,268-270,274-276,280-282,285-287
     NUMA node8 CPU(s):     96-99,103,104,108-110,114-116,288-291,295,296,300-302,306-308
      NUMA node9 CPU(s):
      100-102,105-107,111-113,117-119,292-294,297-299,303-305,309-311
      NUMA node10 CPU(s):
      120-123,127,128,132-134,138-140,312-315,319,320,324-326,330-332
      NUMA node11 CPU(s):
      124-126,129-131,135-137,141-143,316-318,321-323,327-329,333-335
      NUMA node12 CPU(s):
      144-147,151-153,157-159,163,164,336-339,343-345,349-351,355,356
      NUMA node13 CPU(s):
      148-150,154-156,160-162,165-167,340-342,346-348,352-354,357-359
      NUMA node14 CPU(s):
      168-171,175-177,181-183,187,188,360-363,367-369,373-375,379,380
      NUMA node15 CPU(s):
      172-174,178-180,184-186,189-191,364-366,370-372,376-378,381-383
```


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Platform Notes (Continued)

```
      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

  /proc/cpuinfo cache data
     cache size : 36608 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 7 8 9 13 14 15 19 20 192 193 194 195 199 200 201 205 206 207 211
    212
    node 0 size: 95297 MB
    node 0 free: 81039 MB
    node 1 cpus: 4 5 6 10 11 12 16 17 18 21 22 23 196 197 198 202 203 204 208 209 210 213
    214 215
    node 1 size: 96760 MB
    node 1 free: 86847 MB
    node 2 cpus: 24 25 26 27 31 32 33 37 38 39 43 44 216 217 218 219 223 224 225 229 230
    231 235 236
    node 2 size: 96760 MB
    node 2 free: 87092 MB
    node 3 cpus: 28 29 30 34 35 36 40 41 42 45 46 47 220 221 222 226 227 228 232 233 234
    237 238 239
    node 3 size: 96760 MB
    node 3 free: 87125 MB
    node 4 cpus: 48 49 50 51 55 56 60 61 62 66 67 68 240 241 242 243 247 248 252 253 254
    258 259 260
    node 4 size: 96760 MB
    node 4 free: 87123 MB
    node 5 cpus: 52 53 54 57 58 59 63 64 65 69 70 71 244 245 246 249 250 251 255 256 257
    261 262 263
    node 5 size: 96760 MB
    node 5 free: 87131 MB
    node 6 cpus: 72 73 74 75 79 80 81 85 86 87 91 92 264 265 266 267 271 272 273 277 278
    279 283 284
    node 6 size: 96760 MB
    node 6 free: 87082 MB
```

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Platform Notes (Continued)

```
node 7 cpus: 76 77 78 82 83 84 88 89 90 93 94 95 268 269 270 274 275 276 280 281 282
285 286 287
node 7 size: 96760 MB
node 7 free: 87121 MB
node 8 cpus: 96 97 98 99 103 104 108 109 110 114 115 116 288 289 290 291 295 296 300
301 302 306 307 308
node 8 size: 96760 MB
node 8 free: 87115 MB
node 9 cpus: 100 101 102 105 106 107 111 112 113 117 118 119 292 293 294 297 298 299
303 304 305 309 310 311
node 9 size: 96760 MB
node 9 free: 87124 MB
node 10 cpus: 120 121 122 123 127 128 132 133 134 138 139 140 312 313 314 315 319 320
324 325 326 330 331 332
node 10 size: 96760 MB
node 10 free: 87109 MB
node 11 cpus: 124 125 126 129 130 131 135 136 137 141 142 143 316 317 318 321 322 323
327 328 329 333 334 335
node 11 size: 96760 MB
node 11 free: 87114 MB
node 12 cpus: 144 145 146 147 151 152 153 157 158 159 163 164 336 337 338 339 343 344
345 349 350 351 355 356
node 12 size: 96760 MB
node 12 free: 87120 MB
node 13 cpus: 148 149 150 154 155 156 160 161 162 165 166 167 340 341 342 346 347 348
352 353 354 357 358 359
node 13 size: 96760 MB
node 13 free: 87111 MB
node 14 cpus: 168 169 170 171 175 176 177 181 182 183 187 188 360 361 362 363 367 368
369 373 374 375 379 380
node 14 size: 96760 MB
node 14 free: 87121 MB
node 15 cpus: 172 173 174 178 179 180 184 185 186 189 190 191 364 365 366 370 371 372
376 377 378 381 382 383
node 15 size: 96501 MB
node 15 free: 86874 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
```

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Platform Notes (Continued)

```
     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:       1583560592 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"
      ID="sles"
      ANSI_COLOR="0;32"
      CPE_NAME="cpe:/o:suse:sles:12:sp4"

uname -a:
   Linux linux-dty6 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-2018-3620 (L1 Terminal Fault):        Not affected
Microarchitectural Data Sampling:         No status reported
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: __user pointer sanitization
CVE-2017-5715 (Spectre variant 2):        Mitigation: Indirect Branch Restricted
                                          Speculation, IBPB, IBRS_FW
```

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Platform Notes (Continued)

```
 run-level 3 Mar 20 06:53 last=5

 SPEC is set to: /home/CPU2017
    Filesystem     Type  Size  Used Avail Use% Mounted on
    /dev/sdb4      xfs   1.8T  148G  1.7T   9% /home

 From /sys/devices/virtual/dmi/id
     BIOS:    Inspur 4.1.09 06/20/2019
     Vendor:  Inspur
     Product: TS860M5
     Product Family: Type1Family
     Serial:  219179468

 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:
     96x Hynix HMA82GR7DJR8N-WM 16 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,
  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
```

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Compiler Version Notes (Continued)

```
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.
------------------------------------------------------------------------------
```

Base Compiler Invocation

C benchmarks:

```
icc -m64 -std=c11
```

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Base Compiler Invocation (Continued)

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

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Base Optimization Flags (Continued)

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

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

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

(Continued on next page)

Peak Optimization Flags (Continued)

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-V1.6.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-V1.6.xml

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

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