SPEC® CPU2017 Floating Point Rate Result

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Huawei

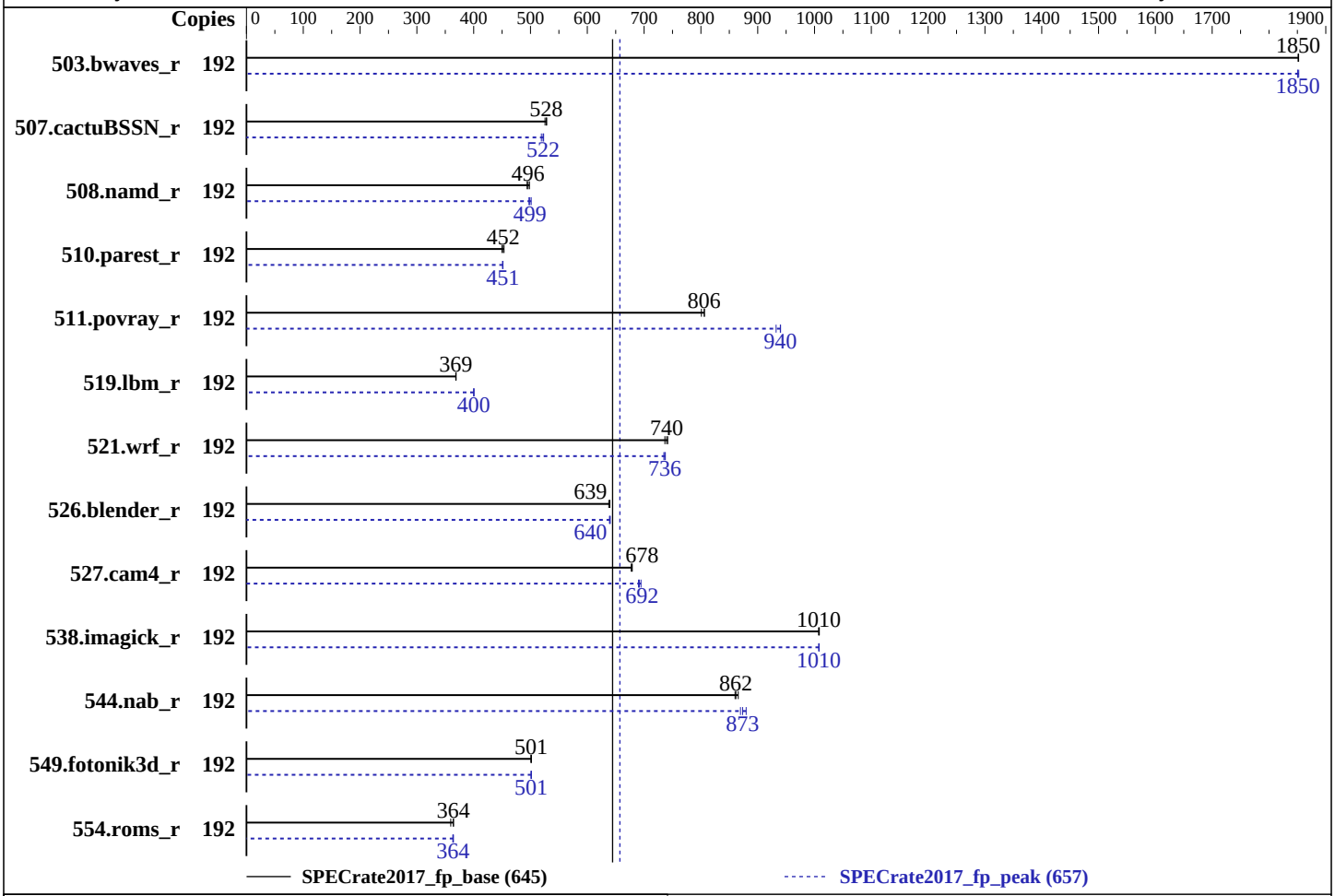
Huawei 9008 V5 (Intel Xeon Platinum 8158)

SPECrate2017_fp_base = 645

SPECrate2017_fp_peak = 657

CPU2017 License: 3175
Test Sponsor: Huawei
Tested by: Huawei

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



Hardware

CPU Name:	Intel Xeon Platinum 8158
Max MHz.:	3700
Nominal:	3000
Enabled:	96 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:	24.75 MB I+D on chip per chip
Other:	None
Memory:	1536 GB (48 x 32 GB 2Rx4 PC4-2666V-R)
Storage:	2 x 900 GB SAS HDD 10K RPM, RAID 0
Other:	None

Software

OS:	SUSE Linux Enterprise Server for SAP Applications 12 SP2 4.4.120-92.70-default
Compiler:	C/C++: Version 18.0.0.128 of Intel C/C++ Compiler for Linux; Fortran: Version 18.0.0.128 of Intel Fortran Compiler for Linux
Parallel:	No
Firmware:	Version 8.92 released May-2018
File System:	btrfs
System State:	Run level 5 (multi-user)
Base Pointers:	64-bit
Peak Pointers:	64-bit
Other:	None

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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	192	**1040**	**1850**	1039	1850	1040	1850	192	1041	1850	1039	1850	**1040**	**1850**
507.cactuBSSN_r	192	460	528	463	526	**460**	**528**	192	**466**	**522**	465	523	468	519
508.namd_r	192	369	494	**368**	**496**	366	498	192	367	497	364	501	**366**	**499**
510.parest_r	192	**1111**	**452**	1108	453	1117	450	192	1112	452	**1113**	**451**	1114	451
511.povray_r	192	**556**	**806**	556	806	560	801	192	**477**	**940**	477	940	481	932
519.lbm_r	192	**549**	**369**	548	369	549	369	192	506	400	**506**	**400**	506	400
521.wrf_r	192	580	742	584	736	**581**	**740**	192	**584**	**736**	583	737	585	735
526.blender_r	192	457	640	**457**	**639**	458	638	192	**457**	**640**	458	639	457	640
527.cam4_r	192	494	679	**495**	**678**	496	677	192	487	690	484	694	**486**	**692**
538.imagick_r	192	473	1010	**474**	**1010**	474	1010	192	**474**	**1010**	474	1010	474	1010
544.nab_r	192	373	866	**375**	**862**	376	860	192	367	880	372	870	**370**	**873**
549.fotonik3d_r	192	**1492**	**501**	1494	501	1492	501	192	1493	501	1492	502	**1493**	**501**
554.roms_r	192	**838**	**364**	848	360	837	364	192	840	363	837	364	**839**	**364**

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SPECrate2017_fp_peak = 657

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"
Numa balancing was disabled using "echo 0 > /proc/sys/kernel/numa_balancing"
```

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 i7-4790 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>
```

(Continued on next page)

General Notes (Continued)

```
Yes: 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 configuration:
 Sub NUMA Cluster (SNC) set to enabled
 IMC (Integrated memory controller) Interleaving set to 1 way interleave
 Xtended Prediction Table (XPT) Prefetch set to Enable
 Memory Patrol Scrub set to Disable
 Last Level Cache (LLC) Prefetch set to Disable
 Sysinfo program /home/cpu2017/bin/sysinfo
 Rev: r5797 of 2017-06-14 96c45e4568ad54c135fd618bcc091c0f
 running on linux-0mnb Sun Jul 29 07:06:56 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) Platinum 8158 CPU @ 3.00GHz
       8  "physical id"s (chips)
       192 "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 9 10 16 18 19 25 26
       physical 1: cores 0 1 2 3 4 9 10 16 18 19 25 26
       physical 2: cores 0 1 2 3 4 8 9 11 17 18 19 20
       physical 3: cores 0 1 2 3 4 9 10 16 18 19 25 26
       physical 4: cores 0 1 2 3 4 9 10 16 18 19 25 26
       physical 5: cores 0 3 4 5 6 7 16 18 19 20 21 22
       physical 6: cores 0 1 2 3 4 9 10 16 18 19 25 26
       physical 7: cores 0 1 2 3 4 9 10 16 18 19 25 26

 From lscpu:
      Architecture:          x86_64
      CPU op-mode(s):        32-bit, 64-bit
      Byte Order:            Little Endian
      CPU(s):                192
      On-line CPU(s) list:   0-191
```

(Continued on next page)

Platform Notes (Continued)

```
      Thread(s) per core:    2
      Core(s) per socket:    12
      Socket(s):             8
      NUMA node(s):          16
      Vendor ID:             GenuineIntel
      CPU family:            6
      Model:                 85
      Model name:            Intel(R) Xeon(R) Platinum 8158 CPU @ 3.00GHz
      Stepping:              4
      CPU MHz:               1700.000
      CPU max MHz:           3001.0000
      CPU min MHz:           1200.0000
      BogoMIPS:              5999.93
      Virtualization:        VT-x
      L1d cache:             32K
      L1i cache:             32K
      L2 cache:              1024K
      L3 cache:              25344K
      NUMA node0 CPU(s):     0-2,5,7,10,96-98,101,103,106
      NUMA node1 CPU(s):     3,4,6,8,9,11,99,100,102,104,105,107
      NUMA node2 CPU(s):     12-14,17,19,22,108-110,113,115,118
      NUMA node3 CPU(s):     15,16,18,20,21,23,111,112,114,116,117,119
      NUMA node4 CPU(s):     24-26,29,30,32,120-122,125,126,128
      NUMA node5 CPU(s):     27,28,31,33-35,123,124,127,129-131
      NUMA node6 CPU(s):     36-38,41,43,46,132-134,137,139,142
      NUMA node7 CPU(s):     39,40,42,44,45,47,135,136,138,140,141,143
      NUMA node8 CPU(s):     48-50,53,55,58,144-146,149,151,154
      NUMA node9 CPU(s):     51,52,54,56,57,59,147,148,150,152,153,155
      NUMA node10 CPU(s):    60-62,66-68,156-158,162-164
      NUMA node11 CPU(s):    63-65,69-71,159-161,165-167
      NUMA node12 CPU(s):    72-74,77,79,82,168-170,173,175,178
      NUMA node13 CPU(s):    75,76,78,80,81,83,171,172,174,176,177,179
      NUMA node14 CPU(s):    84-86,89,91,94,180-182,185,187,190
      NUMA node15 CPU(s):    87,88,90,92,93,95,183,184,186,188,189,191
      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 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

  /proc/cpuinfo cache data
     cache size : 25344 KB
```

(Continued on next page)

Platform Notes (Continued)

```
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 5 7 10 96 97 98 101 103 106
  node 0 size: 95025 MB
  node 0 free: 94169 MB
  node 1 cpus: 3 4 6 8 9 11 99 100 102 104 105 107
  node 1 size: 96762 MB
  node 1 free: 96332 MB
  node 2 cpus: 12 13 14 17 19 22 108 109 110 113 115 118
  node 2 size: 96762 MB
  node 2 free: 96268 MB
  node 3 cpus: 15 16 18 20 21 23 111 112 114 116 117 119
  node 3 size: 96762 MB
  node 3 free: 96459 MB
  node 4 cpus: 24 25 26 29 30 32 120 121 122 125 126 128
  node 4 size: 96762 MB
  node 4 free: 96439 MB
  node 5 cpus: 27 28 31 33 34 35 123 124 127 129 130 131
  node 5 size: 96762 MB
  node 5 free: 96465 MB
  node 6 cpus: 36 37 38 41 43 46 132 133 134 137 139 142
  node 6 size: 96762 MB
  node 6 free: 96252 MB
  node 7 cpus: 39 40 42 44 45 47 135 136 138 140 141 143
  node 7 size: 96762 MB
  node 7 free: 96480 MB
  node 8 cpus: 48 49 50 53 55 58 144 145 146 149 151 154
  node 8 size: 96762 MB
  node 8 free: 96428 MB
  node 9 cpus: 51 52 54 56 57 59 147 148 150 152 153 155
  node 9 size: 96762 MB
  node 9 free: 96343 MB
  node 10 cpus: 60 61 62 66 67 68 156 157 158 162 163 164
  node 10 size: 96762 MB
  node 10 free: 96470 MB
  node 11 cpus: 63 64 65 69 70 71 159 160 161 165 166 167
  node 11 size: 96762 MB
  node 11 free: 96460 MB
  node 12 cpus: 72 73 74 77 79 82 168 169 170 173 175 178
  node 12 size: 96762 MB
  node 12 free: 96445 MB
  node 13 cpus: 75 76 78 80 81 83 171 172 174 176 177 179
  node 13 size: 96762 MB
  node 13 free: 96419 MB
  node 14 cpus: 84 85 86 89 91 94 180 181 182 185 187 190
```

(Continued on next page)

Platform Notes (Continued)

```
   node 14 size: 96762 MB
   node 14 free: 96475 MB
   node 15 cpus: 87 88 90 92 93 95 183 184 186 188 189 191
   node 15 size: 96605 MB
   node 15 free: 96296 MB
   node distances:
   node   0   1   2   3   4   5   6   7   8   9  10  11  12  13  14  15
     0:  10  20  20  20  20  20  20  20  20  20  20  20  20  20  20  20
     1:  20  10  20  20  20  20  20  20  20  20  20  20  20  20  20  20
     2:  20  20  10  20  20  20  20  20  20  20  20  20  20  20  20  20
     3:  20  20  20  10  20  20  20  20  20  20  20  20  20  20  20  20
     4:  20  20  20  20  10  20  20  20  20  20  20  20  20  20  20  20
     5:  20  20  20  20  20  10  20  20  20  20  20  20  20  20  20  20
     6:  20  20  20  20  20  20  10  20  20  20  20  20  20  20  20  20
     7:  20  20  20  20  20  20  20  10  20  20  20  20  20  20  20  20
     8:  20  20  20  20  20  20  20  20  10  20  20  20  20  20  20  20
     9:  20  20  20  20  20  20  20  20  20  10  20  20  20  20  20  20
    10:  20  20  20  20  20  20  20  20  20  20  10  20  20  20  20  20
    11:  20  20  20  20  20  20  20  20  20  20  20  10  20  20  20  20
    12:  20  20  20  20  20  20  20  20  20  20  20  20  10  20  20  20
    13:  20  20  20  20  20  20  20  20  20  20  20  20  20  10  20  20
    14:  20  20  20  20  20  20  20  20  20  20  20  20  20  20  10  20
    15:  20  20  20  20  20  20  20  20  20  20  20  20  20  20  20  10

From /proc/meminfo
   MemTotal:       1583410940 kB
   HugePages_Total:       0
   Hugepagesize:       2048 kB

/usr/bin/lsb_release -d
   SUSE Linux Enterprise Server 12 SP2

From /etc/*release* /etc/*version*
   SuSE-release:
      SUSE Linux Enterprise Server 12 (x86_64)
      VERSION = 12
      PATCHLEVEL = 2
      # 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-SP2"
      VERSION_ID="12.2"
      PRETTY_NAME="SUSE Linux Enterprise Server 12 SP2"
      ID="sles"
      ANSI_COLOR="0;32"
      CPE_NAME="cpe:/o:suse:sles:12:sp2"
```

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Platform Notes (Continued)

```
 uname -a:
    Linux linux-0mnb 4.4.120-92.70-default #1 SMP Wed Mar 14 15:59:43 UTC 2018 (52a83de)
    x86_64 x86_64 x86_64 GNU/Linux

 run-level 5 Jul 28 22:51

 SPEC is set to: /home/cpu2017
    Filesystem     Type   Size  Used Avail Use% Mounted on
    /dev/sda4      btrfs  1.5T   23G  1.5T   2% /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 INSYDE Corp. 8.92 05/02/2018
   Memory:
    48x NO DIMM NO DIMM
    48x Samsung M393A4K40BB2-CTD 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)
------------------------------------------------------------------------------
icc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------------

==============================================================================
CC   519.lbm_r(peak) 544.nab_r(peak)
------------------------------------------------------------------------------
icc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------------

==============================================================================
 CXXC 508.namd_r(base) 510.parest_r(base)
------------------------------------------------------------------------------
icpc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------------

==============================================================================
```

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Compiler Version Notes (Continued)

```
CXXC 508.namd_r(peak) 510.parest_r(peak)
------------------------------------------------------------------------------
icpc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------------

==============================================================================
 CC  511.povray_r(base) 526.blender_r(base)
------------------------------------------------------------------------------
icpc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation.  All rights reserved.
icc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------------

==============================================================================
CC   511.povray_r(peak) 526.blender_r(peak)
------------------------------------------------------------------------------
icpc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation.  All rights reserved.
icc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------------

==============================================================================
 FC  507.cactuBSSN_r(base)
------------------------------------------------------------------------------
icpc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation.  All rights reserved.
icc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation.  All rights reserved.
ifort (IFORT) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------------

==============================================================================
FC   507.cactuBSSN_r(peak)
------------------------------------------------------------------------------
icpc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation.  All rights reserved.
icc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation.  All rights reserved.
ifort (IFORT) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------------

==============================================================================
```

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Compiler Version Notes (Continued)

```
 FC  503.bwaves_r(base, peak) 549.fotonik3d_r(base, peak) 554.roms_r(base)
------------------------------------------------------------------------------
ifort (IFORT) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------------

==============================================================================
FC   554.roms_r(peak)
------------------------------------------------------------------------------
ifort (IFORT) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------------

==============================================================================
 CC  521.wrf_r(base) 527.cam4_r(base)
------------------------------------------------------------------------------
ifort (IFORT) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation.  All rights reserved.
icc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------------

==============================================================================
CC   521.wrf_r(peak) 527.cam4_r(peak)
------------------------------------------------------------------------------
ifort (IFORT) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation.  All rights reserved.
icc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------------
```

Base Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
ifort icc

(Continued on next page)

Base Compiler Invocation (Continued)

Benchmarks using both C and C++:
icpc icc

Benchmarks using Fortran, C, and C++:
icpc icc ifort

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=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

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Base Optimization Flags (Continued)

Benchmarks using both C and C++ (continued):
`-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`

Base Other Flags

C benchmarks:
`-m64 -std=c11`

C++ benchmarks:
`-m64`

Fortran benchmarks:
`-m64`

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

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

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

Peak Compiler Invocation

C benchmarks:
`icc`

C++ benchmarks:
`icpc`

Fortran benchmarks:
`ifort`

Benchmarks using both Fortran and C:
`ifort icc`

(Continued on next page)

Peak Compiler Invocation (Continued)

Benchmarks using both C and C++:
icpc icc

Benchmarks using Fortran, C, and C++:
icpc icc ifort

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 519.lbm_r

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

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

(Continued on next page)

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=3 -nostandard-realloc-lhs -align array32byte

Benchmarks using both 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

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

Peak Other Flags

C benchmarks:
-m64 -std=c11

C++ benchmarks:
-m64

Fortran benchmarks:
-m64

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

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

Benchmarks using Fortran, C, and C++:
-m64 -std=c11

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.html
http://www.spec.org/cpu2017/flags/Huawei-Platform-Settings-SKL-V1.7.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.xml
http://www.spec.org/cpu2017/flags/Huawei-Platform-Settings-SKL-V1.7.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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