SPEC® CPU2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

Dell Inc.

PowerEdge MX840c (Intel Xeon Gold 6240M, 2.60GHz)

SPECrate2017_fp_base =   409

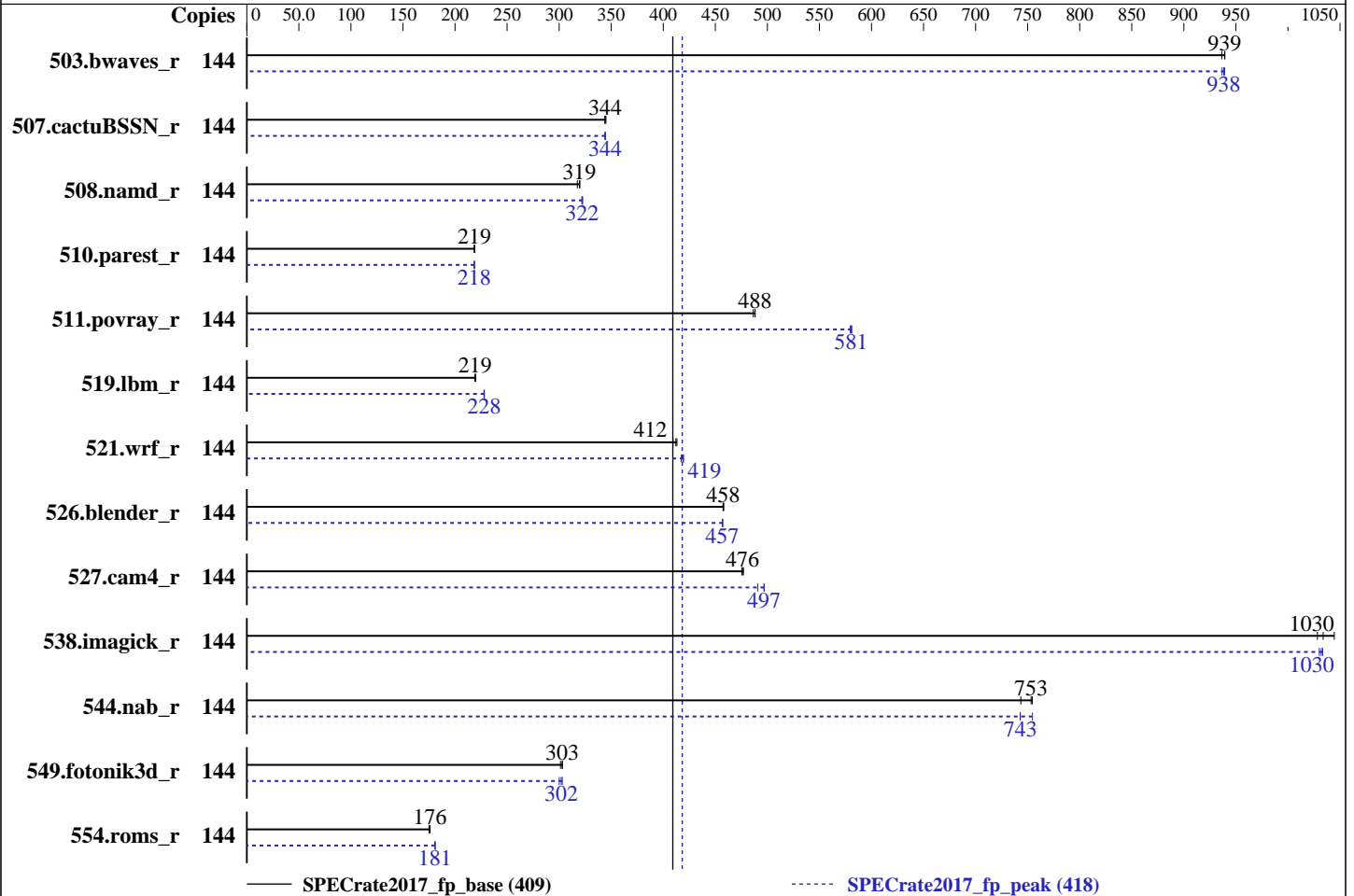SPECrate2017_fp_peak =   418

CPU2017 License: 55
Test Sponsor: Dell Inc.
Tested by: Dell Inc.

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

Copies

Benchmark	Copies	base	peak
503.bwaves_r	144	939	938
507.cactuBSSN_r	144	344	344
508.namd_r	144	319	322
510.parest_r	144	219	218
511.povray_r	144	488	581
519.lbm_r	144	219	228
521.wrf_r	144	412	419
526.blender_r	144	458	457
527.cam4_r	144	476	497
538.imagick_r	144	1030	1030
544.nab_r	144	753	743
549.fotonik3d_r	144	303	302
554.roms_r	144	176	181

—— SPECrate2017_fp_base (409)

····· SPECrate2017_fp_peak (418)

Hardware

CPU Name: Intel Xeon Gold 6240M
 Max MHz.:   3900
 Nominal: 2600
Enabled: 72 cores, 4 chips, 2 threads/core
Orderable: 2,4 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: 768 GB (48 x 16 GB 2Rx4 PC4-2933Y-R)
Storage: 1 x 480 GB SATA SSD
Other: None

Software

OS: Ubuntu 18.04.2 LTS
   kernel 4.15.0-45-generic
Compiler: C/C++: Version 19.0.1.144 of Intel C/C++
   Compiler Build 20181018 for Linux;
   Fortran: Version 19.0.1.144 of Intel Fortran
   Compiler Build 20181018 for Linux
Parallel: No
Firmware: Version 2.2.1 released Feb-2019
File System: ext4
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/

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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	144	1537	939	1542	936	**1538**	**939**	144	1542	937	**1539**	**938**	1537	939
507.cactuBSSN_r	144	530	344	**530**	**344**	528	345	144	529	344	530	344	**530**	**344**
508.namd_r	144	428	320	431	317	**428**	**319**	144	**425**	**322**	424	323	425	322
510.parest_r	144	1725	218	**1722**	**219**	1721	219	144	1723	219	1724	218	**1724**	**218**
511.povray_r	144	691	486	689	488	**689**	**488**	144	579	581	580	580	**579**	**581**
519.lbm_r	144	691	220	692	219	**692**	**219**	144	**666**	**228**	666	228	665	228
521.wrf_r	144	781	413	**783**	**412**	788	409	144	773	417	**770**	**419**	769	420
526.blender_r	144	479	457	**479**	**458**	479	458	144	**480**	**457**	480	457	480	457
527.cam4_r	144	528	477	**529**	**476**	530	476	144	507	497	513	491	**507**	**497**
538.imagick_r	144	343	1040	**346**	**1030**	348	1030	144	**347**	**1030**	347	1030	348	1030
544.nab_r	144	**322**	**753**	326	743	321	754	144	326	743	321	755	**326**	**743**
549.fotonik3d_r	144	1851	303	**1853**	**303**	1863	301	144	**1858**	**302**	1852	303	1870	300
554.roms_r	144	**1301**	**176**	1300	176	1308	175	144	1266	181	**1266**	**181**	1265	181

SPECrate2017_fp_base =   **409**

SPECrate2017_fp_peak =   **418**

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Submit Notes

The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl commands to bind each copy to a specific processor. For details, please see the config file.

Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

General Notes

Environment variables set by runcpu before the start of the run:
LD_LIBRARY_PATH = "/home/cpu2017/lib/ia32:/home/cpu2017/lib/intel64"

Binaries compiled on a system with 1x Intel Core i9-7900X CPU + 32GB RAM memory using Redhat Enterprise Linux 7.5
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.
Transparent Huge Pages enabled by default

(Continued on next page)

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

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CPU2017 License: 55		**Test Date:**	May-2019
Test Sponsor:	Dell Inc.	**Hardware Availability:**	Apr-2019
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General Notes (Continued)

```
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>
```

Platform Notes

```
BIOS settings:
ADDDC setting disabled
Sub NUMA Cluster enabled
Virtualization Technology disabled
DCU Streamer Prefetcher disabled
System Profile set to Custom
CPU Performance set to Maximum Performance
C States set to Autonomous
C1E disabled
Uncore Frequency set to Dynamic
Energy Efficiency Policy set to Performance
Memory Patrol Scrub disabled
Logical Processor enabled
CPU Interconnect Bus Link Power Management disabled
PCI ASPM L1 Link Power Management disabled
Sysinfo program /home/cpu2017/bin/sysinfo
Rev: r5974 of 2018-05-19 9bcde8f2999c33d61f64985e45859ea9
running on intel-sut Wed May 15 05:41:44 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) Gold 6240M CPU @ 2.60GHz
      4  "physical id"s (chips)
      144 "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 : 18
      siblings  : 36
      physical 0: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
      physical 1: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
      physical 2: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
      physical 3: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27

From lscpu:
   Architecture:        x86_64
   CPU op-mode(s):      32-bit, 64-bit
```

(Continued on next page)

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Platform Notes (Continued)

```
        Byte Order:            Little Endian
        CPU(s):                144
        On-line CPU(s) list:   0-143
        Thread(s) per core:    2
        Core(s) per socket:    18
        Socket(s):             4
        NUMA node(s):          8
        Vendor ID:             GenuineIntel
        CPU family:            6
        Model:                 85
        Model name:            Intel(R) Xeon(R) Gold 6240M CPU @ 2.60GHz
        Stepping:              7
        CPU MHz:               2061.479
        BogoMIPS:              5200.00
        Virtualization:        VT-x
        L1d cache:             32K
        L1i cache:             32K
        L2 cache:              1024K
        L3 cache:              25344K
        NUMA node0 CPU(s):     0,8,16,24,32,40,48,56,64,72,80,88,96,104,112,120,128,136
        NUMA node1 CPU(s):     1,9,17,25,33,41,49,57,65,73,81,89,97,105,113,121,129,137
        NUMA node2 CPU(s):     2,10,18,26,34,42,50,58,66,74,82,90,98,106,114,122,130,138
        NUMA node3 CPU(s):     3,11,19,27,35,43,51,59,67,75,83,91,99,107,115,123,131,139
        NUMA node4 CPU(s):     4,12,20,28,36,44,52,60,68,76,84,92,100,108,116,124,132,140
        NUMA node5 CPU(s):     5,13,21,29,37,45,53,61,69,77,85,93,101,109,117,125,133,141
        NUMA node6 CPU(s):     6,14,22,30,38,46,54,62,70,78,86,94,102,110,118,126,134,142
        NUMA node7 CPU(s):     7,15,23,31,39,47,55,63,71,79,87,95,103,111,119,127,135,143
        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 aes xsave avx f16c rdrand
    lahf_lm abm 3dnowprefetch cpuid_fault epb cat_l3 cdp_l3 invpcid_single ssbd mba ibrs
    ibpb stibp ibrs_enhanced 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 pku
    ospke avx512_vnni flush_l1d arch_capabilities

 /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: 8 nodes (0-7)
    node 0 cpus: 0 8 16 24 32 40 48 56 64 72 80 88 96 104 112 120 128 136
    node 0 size: 95167 MB
```

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Platform Notes (Continued)

```
   node 0 free: 94733 MB
   node 1 cpus: 1 9 17 25 33 41 49 57 65 73 81 89 97 105 113 121 129 137
   node 1 size: 96764 MB
   node 1 free: 96320 MB
   node 2 cpus: 2 10 18 26 34 42 50 58 66 74 82 90 98 106 114 122 130 138
   node 2 size: 96764 MB
   node 2 free: 96349 MB
   node 3 cpus: 3 11 19 27 35 43 51 59 67 75 83 91 99 107 115 123 131 139
   node 3 size: 96764 MB
   node 3 free: 96317 MB
   node 4 cpus: 4 12 20 28 36 44 52 60 68 76 84 92 100 108 116 124 132 140
   node 4 size: 96743 MB
   node 4 free: 96043 MB
   node 5 cpus: 5 13 21 29 37 45 53 61 69 77 85 93 101 109 117 125 133 141
   node 5 size: 96764 MB
   node 5 free: 96365 MB
   node 6 cpus: 6 14 22 30 38 46 54 62 70 78 86 94 102 110 118 126 134 142
   node 6 size: 96764 MB
   node 6 free: 96350 MB
   node 7 cpus: 7 15 23 31 39 47 55 63 71 79 87 95 103 111 119 127 135 143
   node 7 size: 96763 MB
   node 7 free: 96376 MB
   node distances:
   node   0   1   2   3   4   5   6   7
     0:  10  21  21  21  11  21  21  21
     1:  21  10  21  21  21  11  21  21
     2:  21  21  10  21  21  21  11  21
     3:  21  21  21  10  21  21  21  11
     4:  11  21  21  21  10  21  21  21
     5:  21  11  21  21  21  10  21  21
     6:  21  21  11  21  21  21  10  21
     7:  21  21  21  11  21  21  21  10

 From /proc/meminfo
    MemTotal:       791036484 kB
    HugePages_Total:        0
    Hugepagesize:        2048 kB

 /usr/bin/lsb_release -d
    Ubuntu 18.04.2 LTS

 From /etc/*release* /etc/*version*
    debian_version: buster/sid
    os-release:
       NAME="Ubuntu"
       VERSION="18.04.2 LTS (Bionic Beaver)"
       ID=ubuntu
```

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Platform Notes (Continued)

```
        ID_LIKE=debian
        PRETTY_NAME="Ubuntu 18.04.2 LTS"
        VERSION_ID="18.04"
        HOME_URL="https://www.ubuntu.com/"
        SUPPORT_URL="https://help.ubuntu.com/"

    uname -a:
        Linux intel-sut 4.15.0-45-generic #48-Ubuntu SMP Tue Jan 29 16:28:13 UTC 2019 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: Enhanced IBRS, IBPB

    run-level 3 May 14 21:19

    SPEC is set to: /home/cpu2017
        Filesystem      Type  Size  Used Avail Use% Mounted on
        /dev/sda2       ext4  439G   19G  398G   5% /

    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 Dell Inc. 2.2.1 02/19/2019
      Memory:
        26x 002C00B3002C 18ASF2G72PDZ-2G6D1 16 GB 2 rank 2666
        2x 00AD00B300AD HMA82GR7AFR8N-VK 16 GB 2 rank 2666
        1x 00AD063200AD HMA82GR7AFR8N-VK 16 GB 2 rank 2666
        19x 00CE063200CE M393A2K43BB1-CTD 16 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)
------------------------------------------------------------------------------
Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,
  Version 19.0.1.144 Build 20181018
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------------


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

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Compiler Version Notes (Continued)

```
CC   519.lbm_r(peak)
-------------------------------------------------------------------------------
Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,
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Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
-------------------------------------------------------------------------------


===============================================================================
 CXXC 508.namd_r(base) 510.parest_r(base, peak)
-------------------------------------------------------------------------------
Intel(R) C++ Intel(R) 64 Compiler for applications running on Intel(R) 64,
  Version 19.0.1.144 Build 20181018
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
-------------------------------------------------------------------------------


===============================================================================
CXXC 508.namd_r(peak)
-------------------------------------------------------------------------------
Intel(R) C++ Intel(R) 64 Compiler for applications running on Intel(R) 64,
  Version 19.0.1.144 Build 20181018
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
-------------------------------------------------------------------------------


===============================================================================
 CC  511.povray_r(base) 526.blender_r(base, peak)
-------------------------------------------------------------------------------
Intel(R) C++ Intel(R) 64 Compiler for applications running on Intel(R) 64,
  Version 19.0.1.144 Build 20181018
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,
  Version 19.0.1.144 Build 20181018
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
-------------------------------------------------------------------------------


===============================================================================
CC   511.povray_r(peak)
-------------------------------------------------------------------------------
Intel(R) C++ Intel(R) 64 Compiler for applications running on Intel(R) 64,
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Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,
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Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
-------------------------------------------------------------------------------


===============================================================================
 FC  507.cactuBSSN_r(base, peak)
```

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Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,
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Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R)
  64, Version 19.0.1.144 Build 20181018
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
--------------------------------------------------------------------------


==========================================================================
  FC  503.bwaves_r(base, peak) 549.fotonik3d_r(base, peak) 554.roms_r(base)
--------------------------------------------------------------------------
Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R)
  64, Version 19.0.1.144 Build 20181018
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
--------------------------------------------------------------------------


==========================================================================
FC   554.roms_r(peak)
--------------------------------------------------------------------------
Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R)
  64, Version 19.0.1.144 Build 20181018
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
--------------------------------------------------------------------------


==========================================================================
  CC  521.wrf_r(base) 527.cam4_r(base)
--------------------------------------------------------------------------
Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R)
  64, Version 19.0.1.144 Build 20181018
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,
  Version 19.0.1.144 Build 20181018
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
--------------------------------------------------------------------------


==========================================================================
CC   521.wrf_r(peak) 527.cam4_r(peak)
--------------------------------------------------------------------------
Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R)
  64, Version 19.0.1.144 Build 20181018
Copyright (C) 1985-2018 Intel Corporation.  All rights reserved.
Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,
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```

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Compiler Version Notes (Continued)

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

Base Compiler Invocation

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

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

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

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

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

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

Base Portability Flags

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

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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
```

(Continued on next page)

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SPEC CPU2017 Floating Point Rate Result

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Dell Inc.

PowerEdge MX840c (Intel Xeon Gold 6240M, 2.60GHz)

SPECrate2017_fp_base = 409

SPECrate2017_fp_peak = 418

CPU2017 License: 55	**Test Date:** May-2019
Test Sponsor: Dell Inc.	**Hardware Availability:** Apr-2019
Tested by: Dell Inc.	**Software Availability:** Feb-2019

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-ic18.0-official-linux64.2019-04-02.html
http://www.spec.org/cpu2017/flags/Dell-Platform-Flags-PowerEdge14G-revE2.html

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You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2017/flags/Intel-ic18.0-official-linux64.2019-04-02.xml
http://www.spec.org/cpu2017/flags/Dell-Platform-Flags-PowerEdge14G-revE2.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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