# SPEC CPU®2017 Floating Point Rate Result

## Dell Inc.

**PowerEdge R740xd (Intel Xeon Gold 6226R, 2.90 GHz)**

<table>
<thead>
<tr>
<th>SPECrate®2017_fp_base</th>
<th>SPECrate®2017_fp_peak</th>
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<tbody>
<tr>
<td>213</td>
<td>224</td>
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### CPU2017 License: 55
Test Sponsor: Dell Inc.
Tested by: Dell Inc.

Test Date: Jun-2020
Hardware Availability: Jul-2020
Software Availability: Apr-2020

### Hardware

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>SPECrate®2017_fp_base</th>
<th>SPECrate®2017_fp_peak</th>
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<tbody>
<tr>
<td>503.bwaves_r</td>
<td>64</td>
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<tr>
<td>507.cactuBSSN_r</td>
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<tr>
<td>508.namd_r</td>
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<tr>
<td>510.parest_r</td>
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<td>511.povray_r</td>
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<td>519.lbm_r</td>
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<td>521.wrf_r</td>
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<tr>
<td>526.blender_r</td>
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<td>527.cam4_r</td>
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<td>538.imagick_r</td>
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<td>544.nab_r</td>
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<td>549.fotonik3d_r</td>
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<td>554.roms_r</td>
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### Software

<table>
<thead>
<tr>
<th>OS</th>
<th>Compiler</th>
<th>Parallel</th>
<th>Firmware</th>
<th>System State</th>
<th>Base Pointers</th>
<th>Peak Pointers</th>
<th>Other</th>
<th>Power Management</th>
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<tbody>
<tr>
<td>Red Hat Enterprise Linux 8.1</td>
<td>C/C++: Version 19.1.1.217 of Intel C/C++ Compiler for Linux</td>
<td>No</td>
<td>Version 2.7.7 released May-2020</td>
<td>Run level 3 (multi-user)</td>
<td>64-bit</td>
<td>64-bit</td>
<td>jemalloc memory allocator V5.0.1</td>
<td>BIOS set to prefer performance at the cost of additional power usage</td>
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</table>

### Software Configuration

- **OS:** Red Hat Enterprise Linux 8.1
- **Kernel:** 4.18.0-147.el8.x86_64
- **Compiler:** C/C++: Version 19.1.1.217 of Intel C/C++ Compiler for Linux
- **Firmware:** Version 2.7.7 released May-2020
- **System State:** Run level 3 (multi-user)
- **Base Pointers:** 64-bit
- **Peak Pointers:** 64-bit
- **Other:** jemalloc memory allocator V5.0.1
- **Power Management:** BIOS set to prefer performance at the cost of additional power usage

### Hardware Configuration

- **CPU Name:** Intel Xeon Gold 6226R
- **Max MHz:** 3900
- **Nominal:** 2900
- **Enabled:** 32 cores, 2 chips, 2 threads/core
- **Orderable:** 1,2 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 core
- **Other:** None
- **Memory:** 768 GB (24 x 32 GB 2Rx4 PC4-2933V-R, running at 2933)
- **Storage:** 1 x 1.92 TB SATA SSD
- **Other:** None
Dell Inc. PowerEdge R740xd (Intel Xeon Gold 6226R, 2.90 GHz)

SPECrate\textsuperscript{\textregistered}2017_fp_base = 213
SPECrate\textsuperscript{\textregistered}2017_fp_peak = 224

Results Table

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</table>

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

Compiler Notes

The inconsistent Compiler version information under Compiler Version section is due to a discrepancy in Intel Compiler. The correct version of C/C++ compiler is: Version 19.1.1.217 Build 20200306 Compiler for Linux
The correct version of Fortran compiler is: Version 19.1.1.217 Build 20200306 Compiler for Linux

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 = 
"/mnt/ramdisk/cpu2017-ic19.1u1/lib/intel64:/mnt/ramdisk/cpu2017-ic19.1u1
/je5.0.1-64"

MALLOCS_ERR = "retain:true"
Dell Inc.

PowerEdge R740xd (Intel Xeon Gold 6226R, 2.90 GHz)

SPEC CPU®2017 Floating Point Rate Result

SPECrate®2017_fp_base = 213
SPECrate®2017_fp_peak = 224

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

Test Date: Jun-2020
Hardware Availability: Jul-2020
Software Availability: Apr-2020

General Notes

Binaries compiled on a system with 1x Intel Core i9-7980XE CPU + 64GB RAM
memory using Redhat Enterprise Linux 8.0
NA: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown)
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)
implemented in the system as tested and documented.
Yes: The test sponsor attests, as of date of publication, that CVE-2017-5715 (Spectre variant 2)
implemented in the system as tested and documented.
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>
Benchmark run from a 225 GB ramdisk created with the cmd; "mount -t tmpfs -o size=225G tmpfs /mnt/ramdisk"
jemalloc, a general purpose malloc implementation
built with the RedHat Enterprise 7.5, and the system compiler gcc 4.8.5

Platform Notes

BIOS settings:
Sub NUMA Cluster enabled
Virtualization Technology 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 set to standard
Logical Processor enabled
CPU Interconnect Bus Link Power Management disabled
PCI ASPM L1 Link Power Management disabled
UPI Prefetch enabled
LLC Prefetch disabled
Dead Line LLC Alloc enabled
Directory AtoS disabled

Sysinfo program /mnt/ramdisk/cpu2017-ic19.1u1/bin/sysinfo
Rev: r6365 of 2019-08-21 295195f888a3d7ed6b16e646a485a0011
running on user-pc.spa.lab Mon Jun 29 16:01:54 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

(Continued on next page)
Dell Inc.  
PowerEdge R740xd (Intel Xeon Gold 6226R, 2.90 GHz)  

**SPEC CPU®2017 Floating Point Rate Result**  
Copyright 2017-2020 Standard Performance Evaluation Corporation

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**Dell Inc.**

**PowerEdge R740xd (Intel Xeon Gold 6226R, 2.90 GHz)**

**CPU2017 License:** 55  
**Test Sponsor:** Dell Inc.  
**Tested by:** Dell Inc.  
**Test Date:** Jun-2020  
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**SPECrater®2017_fp_base = 213**

**SPECrater®2017_fp_peak = 224**

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**Platform Notes (Continued)**

From /proc/cpuinfo

```
model name : Intel(R) Xeon(R) Gold 6226R CPU @ 2.90GHz
  2 "physical id"s (chips)
  64 "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
```

From lscpu:

```
Architecture:        x86_64
CPU op-mode(s):      32-bit, 64-bit
Byte Order:          Little Endian
CPU(s):              64
On-line CPU(s) list: 0-63
Thread(s) per core:  2
Core(s) per socket:  16
Socket(s):           2
NUMA node(s):        4
Vendor ID:           GenuineIntel
CPU family:          6
Model:               85
Model name:          Intel(R) Xeon(R) Gold 6226R CPU @ 2.90GHz
Stepping:            7
CPU MHz:             3476.220
CPU max MHz:         3900.0000
CPU min MHz:         1200.0000
BogoMIPS:            5800.00
Virtualization:      VT-x
L1d cache:           32K
L1i cache:           32K
L2 cache:            1024K
L3 cache:            22528K
NUMA node0 CPU(s):   0,4,8,12,16,20,24,28,32,36,40,44,48,52,56,60
NUMA node1 CPU(s):   1,5,9,13,17,21,25,29,33,37,41,45,49,53,57,61
NUMA node2 CPU(s):   2,6,10,14,18,22,26,30,34,38,42,46,50,54,58,62
NUMA node3 CPU(s):   3,7,11,15,19,23,27,31,35,39,43,47,51,55,59,63
```

(Continued on next page)
Dell Inc. PowerEdge R740xd (Intel Xeon Gold 6226R, 2.90 GHz)

<table>
<thead>
<tr>
<th>CPU2017 License: 55</th>
<th>Test Date:</th>
<th>Jun-2020</th>
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**SPECrate®2017_fp_base = 213**

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**Platform Notes (Continued)**

```
flexpriority ept vpid fsgsbase tsc_adjust bmi1 hle avx2 smep bmi2 erms invpcid rtm
cqm mpx rdt_a avx512f avx512dq rseed adx smap clflushopt clwb intel_pt avx512cd
avx512bw avx512vl xsaveopt xsavec xsave vmm�avx bmi1 bmi2 erms invpcid rtm

cqm_mbb_local dtherm ida pln pts pku ospke avx512_vnni md_clear flush_l1d
arch_capabilities
```

```
/cache/data
```

```
cache size : 22528 KB
```

From `numactl --hardware` WARNING: a numactl 'node' might or might not correspond to a physical chip.

available: 4 nodes (0-3)

- node 0 cpus: 0 4 8 12 16 20 24 28 32 36 40 44 48 52 56 60
- node 0 size: 192074 MB
- node 0 free: 191416 MB
- node 1 cpus: 1 5 9 13 17 21 25 29 33 37 41 45 49 53 57 61
- node 1 size: 193507 MB
- node 1 free: 192739 MB
- node 2 cpus: 2 6 10 14 18 22 26 30 34 38 42 46 50 54 58 62
- node 2 size: 193532 MB
- node 2 free: 193109 MB
- node 3 cpus: 3 7 11 15 19 23 27 31 35 39 43 47 51 55 59 63
- node 3 size: 193532 MB
- node 3 free: 184288 MB

From `/proc/meminfo`

```
MemTotal:       791189588 kB
HugePages_Total:       0
Hugepagesize:       2048 kB
```

From `/etc/*release*/etc/*version*/

```
os-release:
  NAME="Red Hat Enterprise Linux"
  VERSION="8.1 (Ootpa)"
  ID="rhel"
  ID_LIKE="fedora"
  VERSION_ID="8.1"
  PLATFORM_ID="platform:el8"
  PRETTY_NAME="Red Hat Enterprise Linux 8.1 (Ootpa)"
  ANSI_COLOR="0;31"
redhat-release: Red Hat Enterprise Linux release 8.1 (Ootpa)
```

(Continued on next page)
Dell Inc. PowerEdge R740xd (Intel Xeon Gold 6226R, 2.90 GHz) SPECrate®2017_fp_base = 213
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Platform Notes (Continued)

system-release: Red Hat Enterprise Linux release 8.1 (Ootpa)
system-release-cpe: cpe:/o:redhat:enterprise_linux:8.1:ga

uname -a:
   Linux user-pc.spa.lab 4.18.0-147.el8.x86_64 #1 SMP Thu Sep 26 15:52:44 UTC 2019 x86_64
   x86_64 x86_64 GNU/Linux

Kernel self-reported vulnerability status:
CVE-2018-3620 (L1 Terminal Fault): Not affected
Microarchitectural Data Sampling: Not affected
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: usercopy/swapgs barriers and __user
   pointer sanitization
CVE-2017-5715 (Spectre variant 2): Mitigation: Enhanced IBRS, IBPB: conditional,
   RSB filling
run-level 3 Jun 29 10:50 last=5

SPEC is set to: /mnt/ramdisk/cpu2017-ic19.1u1
   Filesystem Type Size Used Avail Use% Mounted on
tmpfs tmpfs 225G 4.3G 221G 2% /mnt/ramdisk

From /sys/devices/virtual/dmi/id
   BIOS: Dell Inc. 2.7.7 05/04/2020
   Vendor: Dell Inc.
   Product: PowerEdge R740xd
   Product Family: PowerEdge
   Serial: F5BMCS2

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:
   19x 00AD00B300AD HMA84GR7CJR4N-WM 32 GB 2 rank 2933
   1x 00AD063200AD HMA84GR7CJR4N-WM 32 GB 2 rank 2933
   4x 00AD069D00AD HMA84GR7CJR4N-WM 32 GB 2 rank 2933

(End of data from sysinfo program)
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Compiler Version Notes

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<tr>
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<td>Copyright (C) 1985-2020 Intel Corporation. All rights reserved.</td>
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</table>
|==============================================================================

(Continued on next page)
Compiler Version Notes (Continued)

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------------------------------------------------------------------
C++, C  | 511.povray_r(peak)
------------------------------------------------------------------
Intel(R) C++ Intel(R) 64 Compiler for applications running on Intel(R) 64,
Version 19.1.1.217 Build 20200306
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,
Version 19.1.1.217 Build 20200306
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
------------------------------------------------------------------
C++, C, Fortran | 507.cactuBSSN_r(base, peak)
------------------------------------------------------------------
Intel(R) C++ Compiler for applications running on Intel(R) 64, Version 2021.1
NextGen Build 20200304
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
Intel(R) C Compiler for applications running on Intel(R) 64, Version 2021.1
NextGen Build 20200304
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R)
64, Version 19.1.1.217 Build 20200306
Copyright (C) 1985-2020 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 19.1.1.217 Build 20200306
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
------------------------------------------------------------------
Fortran, C  | 521.wrf_r(base) 527.cam4_r(base, peak)
------------------------------------------------------------------
Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R)
64, Version 19.1.1.217 Build 20200306
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
Intel(R) C Compiler for applications running on Intel(R) 64, Version 2021.1
NextGen Build 20200304
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(Continued on next page)
Dell Inc.

PowerEdge R740xd (Intel Xeon Gold 6226R, 2.90 GHz)

SPEC CPU®2017 Floating Point Rate Result

SPECrate®2017_fp_base = 213
SPECrate®2017_fp_peak = 224

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

Test Date: Jun-2020
Hardware Availability: Jul-2020
Software Availability: Apr-2020

Compiler Version Notes (Continued)

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Fortran, C       | 521.wrf_r(peak)
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Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,
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Intel(R) C Compiler for applications running on Intel(R) 64, Version 2021.1
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Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,
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------------------------------------------------------------------------------
Base Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

Fortran benchmarks:
ifort

(Continued on next page)
Base Compiler Invocation (Continued)

Benchmarks using both Fortran and C:
ifort icc

Benchmarks using both C and C++:
icpc icc

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

Base Portability Flags

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Flags</th>
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<tbody>
<tr>
<td>503.bwaves_r</td>
<td>-DSPEC_LP64</td>
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<tr>
<td>507.cactuBSSN_r</td>
<td>-DSPEC_LP64</td>
</tr>
<tr>
<td>508.namd_r</td>
<td>-DSPEC_LP64</td>
</tr>
<tr>
<td>510.parest_r</td>
<td>-DSPEC_LP64</td>
</tr>
<tr>
<td>511.povray_r</td>
<td>-DSPEC_LP64</td>
</tr>
<tr>
<td>519.lbm_r</td>
<td>-DSPEC_LP64</td>
</tr>
<tr>
<td>521.wrf_r</td>
<td>-DSPEC_LP64 -DSPEC_CASE_FLAG -convert big_endian</td>
</tr>
<tr>
<td>526.blender_r</td>
<td>-DSPEC_LP64 -DSPEC_LINUX -funsigned-char</td>
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<td>527.cam4_r</td>
<td>-DSPEC_LP64 -DSPEC_CASE_FLAG</td>
</tr>
<tr>
<td>538.imagick_r</td>
<td>-DSPEC_LP64</td>
</tr>
<tr>
<td>544.nab_r</td>
<td>-DSPEC_LP64</td>
</tr>
<tr>
<td>549.fotonik3d_r</td>
<td>-DSPEC_LP64</td>
</tr>
<tr>
<td>554.roms_r</td>
<td>-DSPEC_LP64</td>
</tr>
</tbody>
</table>

Base Optimization Flags

C benchmarks:
-m64 -gnxnextgen -std=c11
-Wl,-plugin-opt=-x86-branches-within-32B-boundaries -Wl,-z,muldefs
-fuse-ld.gold -xCORE-AVX512 -Ofast -ffast-math -flto -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

C++ benchmarks:
-m64 -gnxnextgen -Wl,-plugin-opt=-x86-branches-within-32B-boundaries
-Wl,-z,muldefs -fuse-ld.gold -xCORE-AVX512 -Ofast -ffast-math -flto
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

Fortran benchmarks:
-m64 -Wl,-plugin-opt=-x86-branches-within-32B-boundaries -Wl,-z,muldefs

(Continued on next page)
Base Optimization Flags (Continued)

Fortran benchmarks (continued):
- fuse-ld=gold -xCORE-AVX512 -O3 -ipo -no-prec-div -qopt-prefetch
- -ffinite-math-only -qopt-multiple-gather-scatter-by-shuffles
- -qopt-mem-layout-trans=4 -nostandard-realloc-lhs -align array32byte
- auto -mbranches-within-32B-boundaries
- -L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

Benchmarks using both Fortran and C:
- -m64 -gnextgen -std=c11
- -Wl,-plugin-opt=-x86-branches-within-32B-boundaries -Wl,-z,muldefs
- fuse-ld=gold -xCORE-AVX512 -Ofast -ffast-math -flto -mfpmath=sse
- -funroll-loops -qopt-mem-layout-trans=4 -O3 -ipo -no-prec-div
- -qopt-prefetch -ffinite-math-only
- -qopt-multiple-gather-scatter-by-shuffles -nostandard-realloc-lhs
- -align array32byte -auto -mbranches-within-32B-boundaries
- -L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

Benchmarks using both C and C++:
- -m64 -gnextgen -std=c11
- -Wl,-plugin-opt=-x86-branches-within-32B-boundaries -Wl,-z,muldefs
- fuse-ld=gold -xCORE-AVX512 -Ofast -ffast-math -flto -mfpmath=sse
- -funroll-loops -qopt-mem-layout-trans=4
- -L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

Benchmarks using Fortran, C, and C++:
- -m64 -gnextgen -std=c11
- -Wl,-plugin-opt=-x86-branches-within-32B-boundaries -Wl,-z,muldefs
- fuse-ld=gold -xCORE-AVX512 -Ofast -ffast-math -flto -mfpmath=sse
- -funroll-loops -qopt-mem-layout-trans=4 -O3 -ipo -no-prec-div
- -qopt-prefetch -ffinite-math-only
- -qopt-multiple-gather-scatter-by-shuffles -nostandard-realloc-lhs
- -align array32byte -auto -mbranches-within-32B-boundaries
- -L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

Peak Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

Fortran benchmarks:
ifort

(Continued on next page)
Dell Inc.
PowerEdge R740xd (Intel Xeon Gold 6226R, 2.90 GHz)

**SPECrate®2017_fp_base = 213**

**SPECrate®2017_fp_peak = 224**

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<th>CPU2017 License: 55</th>
<th>Test Date:</th>
<th>Jun-2020</th>
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<td>Hardware Availability:</td>
<td>Jul-2020</td>
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<tr>
<td>Tested by: Dell Inc.</td>
<td>Software Availability:</td>
<td>Apr-2020</td>
</tr>
</tbody>
</table>

**Peak Compiler Invocation (Continued)**

Benchmarks using both Fortran and C:
ifort icc

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: basepeak = yes
538.imagick_r: basepeak = yes
544.nab_r: basepeak = yes

C++ benchmarks:
508.namd_r: basepeak = yes
510.parest_r: -m64 -qnextgen
-W1,-plugin-opt=-x86-branches-within-32B-boundaries
-W1,-z,muldefs -fuse-ld=gold -xCORE-AVX512 -Ofast
-ffast-math -fto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -L/usr/local/jemalloc64-5.0.1/lib
-ljemalloc

Fortran benchmarks:
503.bwaves_r: -m64 -W1,-plugin-opt=-x86-branches-within-32B-boundaries
-W1,-z,muldefs -fuse-ld=gold -xCORE-AVX512 -O3 -ipo
-no-prec-div -qopt-prefetch -ffinite-math-only
-qopt-multiple-gather-scatter-by-shuffles

(Continued on next page)
Dell Inc.

PowerEdge R740xd (Intel Xeon Gold 6226R, 2.90 GHz)

SPECRate®2017_fp_base = 213
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CPU2017 License: 55
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Peak Optimization Flags (Continued)

503.bwaves_r (continued):
-qopt-mem-layout-trans=4 -nostandard-realloc-lhs
-align array32byte -auto -mbranches-within-32B-boundaries
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

549.fotonik3d_r: basepeak = yes

554.roms_r: Same as 503.bwaves_r

Benchmarks using both Fortran and C:

521.wrf_r: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX512 -O3
-ipo -no-prec-div -qopt-prefetch -ffinite-math-only
-qopt-multiple-gather-scatter-by-shuffles
-qopt-mem-layout-trans=4 -mbranches-within-32B-boundaries
-nostandard-realloc-lhs -align array32byte -auto
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

527.cam4_r: basepeak = yes

Benchmarks using both C and C++:

511.povray_r: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX512 -O3
-ipo -no-prec-div -qopt-prefetch -ffinite-math-only
-qopt-multiple-gather-scatter-by-shuffles
-qopt-mem-layout-trans=4 -mbranches-within-32B-boundaries
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

526.blender_r: basepeak = yes

Benchmarks using Fortran, C, and C++:

507.cactuBSSN_r: basepeak = yes

The flags files that were used to format this result can be browsed at

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2017/flags/Intel-ic19.1u1-official-linux64_revA.xml
**SPEC CPU®2017 Floating Point Rate Result**

Dell Inc.  
PowerEdge R740xd (Intel Xeon Gold 6226R, 2.90 GHz)  

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Test Date: Jun-2020  
Hardware Availability: Jul-2020  
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For questions about this result, please contact the tester. For other inquiries, please contact info@spec.org.

Tested with SPEC CPU®2017 v1.1.0 on 2020-06-29 17:01:54-0400.
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