Dell Inc.
PowerEdge R750 (Intel Xeon Platinum 8352V, 2.10 GHz)

<table>
<thead>
<tr>
<th>Hardware</th>
<th>Software</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Name: Intel Xeon Platinum 8352V</td>
<td>OS: Red Hat Enterprise Linux 8.3 (Ootpa)</td>
</tr>
<tr>
<td>Max MHz: 3500</td>
<td>4.18.0-240.15.1.el8_3.x86_64</td>
</tr>
<tr>
<td>Nominal: 2100</td>
<td>Compiler: C/C++: Version 2021.1 of Intel oneAPI DPC++/C++</td>
</tr>
<tr>
<td>Enabled: 72 cores, 2 chips, 2 threads/core</td>
<td>Compiler Build 20201113 for Linux; Fortran: Version 2021.1 of Intel Fortran Compiler</td>
</tr>
<tr>
<td>Orderable: 1.2 chips</td>
<td>Classic Build 20201112 for Linux;</td>
</tr>
<tr>
<td>Cache L1: 32 KB I + 48 KB D on chip per core</td>
<td>C/C++: Version 2021.1 of Intel C/C++ Compiler</td>
</tr>
<tr>
<td>L2: 1.25 MB I+D on chip per core</td>
<td>Classic Build 20201112 for Linux</td>
</tr>
<tr>
<td>L3: 54 MB I+D on chip per chip</td>
<td>Parallel: No</td>
</tr>
<tr>
<td>Other: None</td>
<td>Firmware: Version 1.1.2 released Apr-2021</td>
</tr>
<tr>
<td>Memory: 512 GB (16 x 32 GB 2Rx8 PC4-3200AA-R, running at 2933)</td>
<td>File System: tmpfs</td>
</tr>
<tr>
<td>Storage: 225 GB on tmpfs</td>
<td>System State: Run level 5 (graphical multi-user)</td>
</tr>
<tr>
<td>Other: None</td>
<td>Base Pointers: 64-bit</td>
</tr>
</tbody>
</table>

SPECCPU®2017_floating_point_rate_result

| SPECrate®2017 fp_base = 388 |
| SPECrate®2017 fp_peak = 412 |

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

Test Date: Apr-2021
Hardware Availability: May-2021
Software Availability: Feb-2021

<table>
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<tr>
<th>Copies</th>
<th>SPECrate®2017 fp_base (388)</th>
<th>SPECrate®2017 fp_peak (412)</th>
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<tbody>
<tr>
<td>503.bwaves_r</td>
<td>144</td>
<td>665</td>
</tr>
<tr>
<td>507.cactusBSSN_r</td>
<td>144</td>
<td>72</td>
</tr>
<tr>
<td>508.namd_r</td>
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<td>330</td>
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<tr>
<td>510.parest_r</td>
<td>144</td>
<td>193</td>
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<tr>
<td>511.povray_r</td>
<td>144</td>
<td>252</td>
</tr>
<tr>
<td>519.lbm_r</td>
<td>144</td>
<td>478</td>
</tr>
<tr>
<td>521.wrf_r</td>
<td>144</td>
<td>249</td>
</tr>
<tr>
<td>526.blender_r</td>
<td>144</td>
<td>316</td>
</tr>
<tr>
<td>527.cam4_r</td>
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<tr>
<td>538.imagick_r</td>
<td>144</td>
<td>461</td>
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<tr>
<td>544.nab_r</td>
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<tr>
<td>549.fotonik3d_r</td>
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<tr>
<td>554.roms_r</td>
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jemalloc memory allocator V5.0.1

(Continued on next page)
## Results Table

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<th>Seconds</th>
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<tr>
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<td>631</td>
<td>181</td>
<td>632</td>
<td>181</td>
<td></td>
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</tbody>
</table>

### 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/ramdisk2/cpu2017-1.1.5-ic2021.1/lib/intel64:/mnt/ramdisk2/cpu2017-1.1.5-ic2021.1/je5.0.1-64"
MALLOCP_CONF = "retain:true"
```

---

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**General Notes**

Binaries compiled on a system with 1x Intel Core i9-7980XE CPU + 64GB RAM memory using Red Hat Enterprise Linux 8.1

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>
```

jemalloc, a general purpose malloc implementation

Built with the RedHat Enterprise 7.5, and the system compiler gcc 4.8.5

Sources available from jemalloc.net or https://github.com/jemalloc/jemalloc/releases

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.

Benchmark run from a 225 GB ramdisk created with the cmd: "mount –t tmpfs –o size=225G tmpfs /mnt/ramdisk"

**Platform Notes**

**BIOS Settings:**

- Sub NUMA Cluster: 2-Way Clustering
- Virtualization Technology: Disabled

**System Profile:** Custom

- CPU Power Management: Maximum Performance
- C1E: Disabled
- C States: Autonomous
- Memory Patrol Scrub: Disabled
- Energy Efficiency Policy: Performance
- CPU Interconnect Bus Link
- Power Management: Disabled

Sysinfo program /mnt/ramdisk2/cpu2017-1.1.5-ic2021.1/bin/sysinfo
Rev: r6538 of 2020-09-24 e8664e66d2d7080afeaa89d4b38e2f1c
running on localhost.localdomain Wed Apr 28 02:34:24 2021

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

(Continued on next page)
SPEC CPU®2017 Floating Point Rate Result

Dell Inc.
PowerEdge R750 (Intel Xeon Platinum 8352V, 2.10 GHz)

SPECrate®2017_fp_base = 388
SPECrate®2017_fp_peak = 412

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

Test Date: Apr-2021
Hardware Availability: May-2021
Software Availability: Feb-2021

Platform Notes (Continued)

model name : Intel(R) Xeon(R) Platinum 8352V CPU @ 2.10GHz
2 "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 : 36
siblings : 72
physical 0: cores 0 1 2 3 4 5 6 7 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
26 27 28 29 30 31 32 33 34 35
physical 1: cores 0 1 2 3 4 5 6 7 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
26 27 28 29 30 31 32 33 34 35

From lscpu:
Architecture: x86_64
CPU op-mode(s): 32-bit, 64-bit
Byte Order: Little Endian
CPU(s): 144
On-line CPU(s) list: 0-143
Thread(s) per core: 2
Core(s) per socket: 36
Socket(s): 2
NUMA node(s): 4
Vendor ID: GenuineIntel
CPU family: 6
Model: 106
Model name: Intel(R) Xeon(R) Platinum 8352V CPU @ 2.10GHz
Stepping: 6
CPU MHz: 2500.000
BogoMIPS: 4200.00
Virtualization: VT-x
L1d cache: 48K
L1i cache: 32K
L2 cache: 1280K
L3 cache: 55296K

NUMA node0 CPU(s):
0,4,8,12,16,20,24,28,32,36,40,44,48,52,56,60,64,68,72,76,80,84,88,92,96,100,104,108,
112,116,120,124,128,132,136,140

NUMA node1 CPU(s):
2,6,10,14,18,22,26,30,34,38,42,46,50,54,58,62,66,70,74,78,82,86,90,94,98,102,106,110,
114,118,122,126,130,134,138,142

NUMA node2 CPU(s):
1,5,9,13,17,21,25,29,33,37,41,45,49,53,57,61,65,69,73,77,81,85,89,93,97,101,105,109,
113,117,121,125,129,133,137,141

NUMA node3 CPU(s):
115,119,123,127,131,135,139,143

Flags: fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov

(Continued on next page)
<table>
<thead>
<tr>
<th>SPEC CPU®2017 Floating Point Rate Result</th>
</tr>
</thead>
<tbody>
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<td>Dell Inc. PowerEdge R750 (Intel Xeon Platinum 8352V, 2.10 GHz)</td>
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<tr>
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**CPU2017 License:** 55  
**Test Sponsor:** Dell Inc.  
**Tested by:** Dell Inc.  
**Test Date:** Apr-2021  
**Hardware Availability:** May-2021  
**Software Availability:** Feb-2021

<table>
<thead>
<tr>
<th>Platform Notes (Continued)</th>
</tr>
</thead>
</table>

pat pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm phe syscall nx pdpe1gb rdtpsckl
lm constant_tsc 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
xtrp 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 invpcid_single
intel_pinn ssbd mba ibrs ibpb stibp ibrsenhanced fsgrbase tsc_adjust bmi1 hle avx2
smep bmi2 erms invpcid qcm rdt_a avx512f avx512dq rdseed adx smap avx512ifma
clfshopt clwb intel_pt avx512cd sha_hi avx512bw avx512vl xsaveopt xsavec xgetbv1
xsaves qcm llc qcm_occup llc qcm mbm_total qcm mbm_local split_lock_detect wbnoinvd
dtherm ida arat pln pts avx512vbmi umip pku ospke avx512_vbmi2 gfni vaes vpcmulqdq
avx512_vnni avx512_bitalg tme avx512_vpopcntdq la57 rdpid md_clear pconfig flush_l1d
arch_capabilities

/proc/cpuinfo cache data  
cache size: 55296 KB

From /proc/cpuinfo: 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 64 68 72 76 80 84 88 92 96
100 104 108 112 116 120 124 128 132 136 140
node 0 size: 124972 MB  
node 0 free: 112973 MB  
node 1 cpus: 2 6 10 14 18 22 26 30 34 38 42 46 50 54 58 62 66 70 74 78 82 86 90 94 98
102 106 110 114 118 122 126 130 134 138 142
node 1 size: 125909 MB  
node 1 free: 127533 MB  
node 2 cpus: 1 5 9 13 17 21 25 29 33 37 41 45 49 53 57 61 65 69 73 77 81 85 89 93 97
101 105 109 113 117 121 125 129 133 137 141
node 2 size: 125880 MB  
node 2 free: 128035 MB  
node 3 cpus: 3 7 11 15 19 23 27 31 35 39 43 47 51 55 59 63 67 71 75 79 83 87 91 95 99
103 107 111 115 119 123 127 131 135 139 143
node 3 size: 125747 MB  
node 3 free: 128280 MB  
node distances:
node 0 1 2 3
0: 10 11 20 20
1: 11 10 20 20
2: 20 20 10 11
3: 20 20 11 10

From /proc/meminfo  
MemTotal: 527788616 KB  
HugePages_Total: 0  
Hugepagesize: 2048 KB

(Continued on next page)
Platform Notes (Continued)

/sbin/tuned-adm active
   Current active profile: throughput-performance

From /etc/*release* /etc/*version*
   os-release:
      NAME="Red Hat Enterprise Linux"
      VERSION="8.3 (Ootpa)"
      ID="rhel"
      ID_LIKE="fedora"
      VERSION_ID="8.3"
      PLATFORM_ID="platform:el8"
      PRETTY_NAME="Red Hat Enterprise Linux 8.3 (Ootpa)"
      ANSI_COLOR="0;31"
   redhat-release: Red Hat Enterprise Linux release 8.3 (Ootpa)
   system-release: Red Hat Enterprise Linux release 8.3 (Ootpa)
   system-release-cpe: cpe:/o:redhat:enterprise_linux:8.3:ga

uname -a:
   Linux localhost.localdomain 4.18.0-240.15.1.el8_3.x86_64 #1 SMP Wed Feb 3 03:12:15 EST 2021 x86_64 x86_64 x86_64 GNU/Linux

Kernel self-reported vulnerability status:

CVE-2018-12207 (iTLB Multihit):          Not affected
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
CVE-2020-0543 (Special Register Buffer Data Sampling): Not affected
CVE-2019-11135 (TSX Asynchronous Abort):  Not affected

run-level 5 Apr 27 20:31

SPEC is set to: /mnt/ramdisk2/cpu2017-1.1.5-ic2021.1
   Filesystem  Type  Size  Used Avail Use% Mounted on
   tmpfs       tmpfs  225G  6.9G  219G   4% /mnt/ramdisk2

From /sys/devices/virtual/dmi/id
   Vendor: Dell Inc.
   Product: PowerEdge R750

(Continued on next page)
Dell Inc.
PowerEdge R750 (Intel Xeon Platinum 8352V, 2.10 GHz)

SPECrater®2017_fp_base = 388
SPECrater®2017_fp_peak = 412

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

Test Date: Apr-2021
Hardware Availability: May-2021
Software Availability: Feb-2021

Platform Notes (Continued)

Product Family: PowerEdge
Serial: 1234567

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:
12x 002C069D002C 18ASF4G72PDZ-3G2E1 32 GB 2 rank 3200, configured at 2933
4x 00AD063200AD HMAA4GR7AJR8N-XN 32 GB 2 rank 3200, configured at 2933
16x Not Specified Not Specified

BIOS:
BIOS Vendor: Dell Inc.
BIOS Version: 1.1.2
BIOS Date: 04/09/2021
BIOS Revision: 1.1

(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) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2021.1 Build 20201113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

-----------------------------------------------------------------------------

| C++             | 508.namd_r(base, peak) 510.parest_r(base, peak) |
-----------------------------------------------------------------------------

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2021.1 Build 20201113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

-----------------------------------------------------------------------------

| C++, C          | 511.povray_r(peak) |
-----------------------------------------------------------------------------

Intel(R) C++ Intel(R) 64 Compiler Classic for applications running on
Intel(R) 64, Version 2021.1 Build 20201112_000000
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

Intel(R) C Intel(R) 64 Compiler Classic for applications running on Intel(R)

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

Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

-------------------------------------------------------------------------------
C++, C          | 511.povray_r(base) 526.blender_r(base, peak)
-------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
   Version 2021.1 Build 20201113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
   Version 2021.1 Build 20201113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
-------------------------------------------------------------------------------
C++, C          | 511.povray_r(peak)
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Intel(R) C++ Intel(R) 64 Compiler Classic for applications running on
   Intel(R) 64, Version 2021.1 Build 20201112_000000
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
Intel(R) C Intel(R) 64 Compiler Classic for applications running on Intel(R)
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   Version 2021.1 Build 20201113
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-------------------------------------------------------------------------------
C++, C, Fortran | 507.cactuBSSN_r(base, peak)
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   Version 2021.1 Build 20201113
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   Version 2021.1 Build 20201113
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Intel(R) Fortran Intel(R) 64 Compiler Classic for applications running on
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Compiler Version Notes (Continued)

Intel (R) 64, Version 2021.1 Build 20201112_000000
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 Classic for applications running on
Intel (R) 64, Version 2021.1 Build 20201112_000000
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

==============================================================================
Fortran, C       | 521.wrf_r(peak)
==============================================================================
Intel (R) Fortran Intel (R) 64 Compiler Classic for applications running on
Intel (R) 64, Version 2021.1 Build 20201112_000000
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
Intel (R) C Intel (R) 64 Compiler Classic for applications running on Intel (R)
64, Version 2021.1 Build 20201112_000000
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==============================================================================
Fortran, C       | 521.wrf_r(base) 527.cam4_r(base, peak)
==============================================================================
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Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
Intel (R) oneAPI DPC++/C++ Compiler for applications running on Intel (R) 64,
Version 2021.1 Build 20201113
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==============================================================================
Fortran, C       | 521.wrf_r(peak)
==============================================================================
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==============================================================================
(Continued on next page)
Dell Inc.
PowerEdge R750 (Intel Xeon Platinum 8352V, 2.10 GHz)

SPECrater®2017_fp_base = 388
SPECrater®2017_fp_peak = 412

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

Test Date: Apr-2021
Hardware Availability: May-2021
Software Availability: Feb-2021

Compiler Version Notes (Continued)

Fortran, C | 521.wrf_r(base) 527.cam4_r(base, peak)
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-----------------------------------------------------------------------------------------------

Base Compiler Invocation

C benchmarks:
icx

C++ benchmarks:
icpx

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
ifort icx

Benchmarks using both C and C++:
icpx icx

Benchmarks using Fortran, C, and C++:
icpx icx 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.ibm_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

(Continued on next page)
Dell Inc.
PowerEdge R750 (Intel Xeon Platinum 8352V, 2.10 GHz)

SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

Test Date: Apr-2021
Hardware Availability: May-2021
Software Availability: Feb-2021

SPECrate®2017_fp_base = 388
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Base Portability Flags (Continued)

549.fotonik3d_r: -DSPEC_LP64
554.roms_r: -DSPEC_LP64

Base Optimization Flags

C benchmarks:
-w -std=c11 -m64 -Wl,-z,muldefs -xCORE-AVX512 -Ofast -ffast-math
-fflto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-mbranches-within-32B-boundaries -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib

C++ benchmarks:
-w -m64 -Wl,-z,muldefs -xCORE-AVX512 -Ofast -ffast-math -flto
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-mbranches-within-32B-boundaries -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib

Fortran benchmarks:
-w -m64 -Wl,-z,muldefs -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 -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib

Benchmarks using both Fortran and C:
-w -m64 -std=c11 -Wl,-z,muldefs -xCORE-AVX512 -Ofast -ffast-math
-fflto -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
-mbranches-within-32B-boundaries -nostandard-realloc-lhs
-align array32byte -auto -ljemalloc -L/usr/local/jemalloc64-5.0.1/lib

Benchmarks using both C and C++:
-w -m64 -std=c11 -Wl,-z,muldefs -xCORE-AVX512 -Ofast -ffast-math
-fflto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-mbranches-within-32B-boundaries -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib

Benchmarks using Fortran, C, and C++:
-w -m64 -std=c11 -Wl,-z,muldefs -xCORE-AVX512 -Ofast -ffast-math
-fflto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -O3
-no-prec-div -qopt-prefetch -ffinite-math-only
-qopt-multiple-gather-scatter-by-shuffles

(Continued on next page)
Dell Inc.
PowerEdge R750 (Intel Xeon Platinum 8352V, 2.10 GHz)  

SPEC CPU®2017 Floating Point Rate Result
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Hardware Availability: May-2021
Software Availability: Feb-2021

Base Optimization Flags (Continued)

Benchmarks using Fortran, C, and C++ (continued):
-mbranches-within-32B-boundaries -nostandard-realloc-lhs
-align array32byte -auto -ljemalloc -L/usr/local/jemalloc64-5.0.1/lib

Peak Compiler Invocation

C benchmarks:
icx

C++ benchmarks:
icpx

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
521.wrf_r: ifort icc
527.cam4_r: ifort icx

Benchmarks using both C and C++:
511.povray_r: icpc icc
526.blender_r: icpx icx

Benchmarks using Fortran, C, and C++:
icpx icx ifort

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:
519.lbm_r: basepeak = yes

(Continued on next page)
### Dell Inc.

**PowerEdge R750 (Intel Xeon Platinum 8352V, 2.10 GHz)**

<table>
<thead>
<tr>
<th>CPU2017 License: 55</th>
<th>Test Date: Apr-2021</th>
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<tbody>
<tr>
<td>Test Sponsor: Dell Inc.</td>
<td>Hardware Availability: May-2021</td>
</tr>
<tr>
<td>Tested by: Dell Inc.</td>
<td>Software Availability: Feb-2021</td>
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#### SPEC CPU 2017 Floating Point Rate Result

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>SPECrate\textsuperscript{2017}\textsubscript{fp_base}</th>
<th>SPECrate\textsuperscript{2017}\textsubscript{fp_peak}</th>
</tr>
</thead>
<tbody>
<tr>
<td>PowerEdge R750 Intel Xeon Platinum 8352V, 2.10 GHz</td>
<td>388</td>
<td>412</td>
</tr>
</tbody>
</table>

**Peak Optimization Flags (Continued)**

538.imagick\textsubscript{r}.basepeak = yes

544.nab\textsubscript{r}. -w -std=c11 -m64 -Wl,-z,muldefs -xCORE-AVX512 -flto -Ofast -qopt-mem-layout-trans=4 -fimf-accuracy-bits=14:sqrt -mbranches-within-32B-boundaries -ljemalloc -L/usr/local/jemalloc64-5.0.1/lib

C++ benchmarks:

508.namd\textsubscript{r}.basepeak = yes

510.parest\textsubscript{r}. -w -m64 -Wl,-z,muldefs -xCORE-AVX512 -Ofast -ffast-math -flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -mbranches-within-32B-boundaries -ljemalloc -L/usr/local/jemalloc64-5.0.1/lib

Fortran benchmarks:


549.fotonik3d\textsubscript{r}.basepeak = yes

554.roms\textsubscript{r}. Same as 503.bwaves\textsubscript{r}

Benchmarks using both Fortran and C:


527.cam4\textsubscript{r}.basepeak = yes

Benchmarks using both C and C++:

511.povray\textsubscript{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

(Continued on next page)
SPEC CPU®2017 Floating Point Rate Result

Dell Inc.
PowerEdge R750 (Intel Xeon Platinum 8352V, 2.10 GHz)

SPECraten2017_fp_base = 388
SPECraten2017_fp_peak = 412

CPU2017 License: 55
Test Sponsor: Dell Inc.
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Peak Optimization Flags (Continued)

511.povray_r (continued):
-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-ic2021-official-linux64_revA.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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