## SPEC CPU®2017 Floating Point Rate Result

**Hewlett Packard Enterprise**  
(Test Sponsor: HPE)  
ProLiant DL380 Gen10 Plus  
(2.30 GHz, Intel Xeon Platinum 8380)

**SPECrates**
- SPECrates®2017_fp_base = 469  
- SPECrates®2017_fp_peak = 498

<table>
<thead>
<tr>
<th>Test Date:</th>
<th>May-2021</th>
<th>Hardware Availability:</th>
<th>Jun-2021</th>
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<tbody>
<tr>
<td>Test Sponsor:</td>
<td>HPE</td>
<td>Software Availability:</td>
<td>Jun-2021</td>
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<tr>
<td>Tested by:</td>
<td>HPE</td>
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### Hardware

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<tr>
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<td>508.namd_r</td>
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<td>519.lbm_r</td>
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<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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<tr>
<td>80</td>
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</table>

### Software

**CPU Name:** Intel Xeon Platinum 8380  
**Max MHz:** 3400  
**Nominal:** 2300  
**Enabled:** 80 cores, 2 chips, 2 threads/core  
**Orderable:** 1, 2 chip(s)  
**Cache L1:** 32 KB I + 48 KB D on chip per core  
**L2:** 1.25 MB I+D on chip per core  
**L3:** 60 MB I+D on chip per core  
**Memory:** 2 TB (32 x 64 GB 2Rx4 PC4-3200AA-R)  
**Storage:** 1 x 400 GB SAS SSD, RAID 0  
**OS:** Red Hat Enterprise Linux 8.3 (Ootpa)  
**Compiler:** C/C++: Version 2021.1 of Intel oneAPI DPC++/C++ Compiler Build 20201113 for Linux; Fortran: Version 2021.1 of Intel Fortran Compiler Classic Build 20201112 for Linux;  
**Parallel:** No  
**Firmware:** HPE BIOS Version U46 v1.42 05/16/2021 released Jun-2021  
**File System:** xfs  
**System State:** Run level 3 (multi-user)  
**Base Pointers:** 64-bit  
**Peak Pointers:** 64-bit  
**Other:**jemalloc memory allocator V5.0.1

(Continued on next page)
Hewlett Packard Enterprise
ProLiant DL380 Gen10 Plus
(2.30 GHz, Intel Xeon Platinum 8380)

CPU2017 License: 3
Test Sponsor: HPE
Tested by: HPE

SPECrate®2017_fp_base = 469
SPECrate®2017_fp_peak = 498

RESULTS TABLE

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Base</th>
<th>Peak</th>
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<tbody>
<tr>
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<td>Seconds</td>
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<td>503.bwaves_r</td>
<td>160</td>
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<tr>
<td>507.cactuBSSN_r</td>
<td>160</td>
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<td>508.namd_r</td>
<td>160</td>
<td>345</td>
</tr>
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<td>510.parest_r</td>
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<td>1959</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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<td>488</td>
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<td>160</td>
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<td>549.fotonik3d_r</td>
<td>160</td>
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</tr>
<tr>
<td>554.roms_r</td>
<td>160</td>
<td>1579</td>
</tr>
</tbody>
</table>

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"
Transparent Huge Pages enabled by default
Prior to runcpu invocation
Filesystme 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>

Environment Variables Notes

Environment variables set by runcpu before the start of the run:
LD_LIBRARY_PATH = "/home/cpu2017_1.1.7/lib/intel64:/home/cpu2017_1.1.7/je5.0.1-64"
SPEC CPU®2017 Floating Point Rate Result
Copyright 2017-2021 Standard Performance Evaluation Corporation

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CPU2017 License: 3
Test Sponsor: HPE
Tested by: HPE

Test Date: May-2021
Hardware Availability: Jun-2021
Software Availability: Jun-2021

Environment Variables Notes (Continued)

<table>
<thead>
<tr>
<th>Environment Variable</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>MALLOC_CONF</td>
<td>&quot;retain:true&quot;</td>
</tr>
</tbody>
</table>

General Notes

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

Submitted by: "Bhatnagar, Prateek" <prateek.bhatnagar@hpe.com>
Submitted: Mon May 24 12:41:14 EDT 2021
Submission: cpu2017-20210524-26435.sub

Submitted by: "Bhatnagar, Prateek" <prateek.bhatnagar@hpe.com>
Submitted: Tue Jun 1 10:16:53 EDT 2021
Submission: cpu2017-20210524-26435.sub

Platform Notes

The system ROM used for this result contains Intel microcode version 0xd0002a0 for the Intel Xeon Platinum 8380 processor

- BIOS Configuration:
  - Workload Profile set to General Throughput Compute
  - Memory Patrol Scrubbing set to Disabled
  - Advanced Memory Protection set to Advanced ECC
  - Last Level Cache (LLC) Prefetch set to Enabled
  - Last Level Cache (LLC) Dead Line Allocation set to Disabled
  - Enhanced Processor Performance set to Enabled
  - Enhanced Processor Performance Profile set to Aggressive
  - Thermal Configuration set to Maximum Cooling
  - Workload Profile set to Custom
    - DCU Stream Prefetcher set to Disabled
    - XPT Remote Prefetcher set to Enabled
    - Energy/Performance Bias set to Balanced Performance

Sysinfo program /home/cpu2017_1.1.7/bin/sysinfo
Rev: r6622 of 2021-04-07 982a61ec0915b55891ef0e16aca64d
running on localhost.localdomain Thu May 20 09:48:55 2021

(Continued on next page)
**Platform Notes (Continued)**

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

```plaintext
model name : Intel(R) Xeon(R) Platinum 8380 CPU @ 2.30GHz
  2 "physical id"s (chips)
  160 "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 : 40
siblings : 80
physical 0: cores 0 1 2 3 4 5 6 7 8 9 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 36 37 38 39
physical 1: cores 0 1 2 3 4 5 6 7 8 9 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 36 37 38 39
```

From lscpu from util-linux 2.32.1:

- **Architecture:** x86_64
- **CPU op-mode(s):** 32-bit, 64-bit
- **Byte Order:** Little Endian
- **CPU(s):** 160
- **On-line CPU(s) list:** 0-159
- **Thread(s) per core:** 2
- **Core(s) per socket:** 40
- **Socket(s):** 2
- **NUMA node(s):** 4
- **Vendor ID:** GenuineIntel
- **CPU family:** 6
- **Model:** 106
- **Model name:** Intel(R) Xeon(R) Platinum 8380 CPU @ 2.30GHz
- **Stepping:** 6
- **CPU MHz:** 2316.464
- **BogoMIPS:** 4600.00
- **Virtualization:** VT-x
- **L1d cache:** 48K
- **L1i cache:** 32K
- **L2 cache:** 1280K
- **L3 cache:** 61440K
- **NUMA node0 CPU(s):** 0-19,80-99
- **NUMA node1 CPU(s):** 20-39,100-119
- **NUMA node2 CPU(s):** 40-59,120-139
- **NUMA node3 CPU(s):** 60-79,140-159
- **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 arch_perfmon pebs bts rep_good nopl xtopology nonstop_tsc cpuid
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Test Sponsor: HPE
Tested by: HPE

Test Date: May-2021
Hardware Availability: Jun-2021
Software Availability: Jun-2021

Platform Notes (Continued)

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_13 invpcid_single ssbd
mba ibrs ibpb stibp ibrs_enhanced tpr_shadow vnumi flexpriority ept vpid ept_ad
fsqsb tsc_adjust bmi1 hle avx2 smep bmi2 erms invpcid cqm rdt_a avx512f avx512dq
rdseed adx smap avx512ifma clflushopt clwb intel_pt avx512cd sha ni avx512bw
avx512vl xsaveopt xsaves xsavec xgetbv1 xsaves cqm llc cqm_occup llc cqm mbm total
cqm mbm local split lock_detect wboinvd dtherm ida arat pin pts avx512vbmi umip pk
ospke avx512_vbmi2 gfni vaes vpcmullqdq avx512_vnni avx512_bitalg tme
avx512_vppcntdq la57 rdpid md_clear pconfig flush lld arch capabilities

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 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 80 81 82 83 84 85 86 87
  88 89 90 91 92 93 94 95 96 97 98 99
  node 0 size: 500787 MB
  node 0 free: 515093 MB
  node 1 cpus: 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 100 101 102
  103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119
  node 1 size: 501741 MB
  node 1 free: 515559 MB
  node 2 cpus: 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 120 121 122
  123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139
  node 2 size: 501832 MB
  node 2 free: 515785 MB
  node 3 cpus: 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 140 141 142
  143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159
  node 3 size: 501868 MB
  node 3 free: 515726 MB
  node distances:
  node 0 1 2 3
  0: 10 20 30 30
  1: 20 10 30 30
  2: 30 30 10 20
  3: 30 30 20 10

From /proc/meminfo
  MemTotal: 2113465328 kB
  HugePages_Total: 0
  Hugepagesize: 2048 kB

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

(Continued on next page)
### Platform Notes (Continued)

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

```plaintext
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
```

```plaintext
uname -a:
    Linux localhost.localdomain 4.18.0-240.el8.x86_64 #1 SMP Wed Sep 23 05:13:10 EDT 2020
    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):** Bypass disabled via prctl and seccomp
  - Mitigation: Speculative Store
- **CVE-2017-5753 (Spectre variant 1):** usercopy/swapgs barriers and __user pointer sanitation
  - Mitigation: Enhanced IBRS, IBPB: conditional, RSB filling
- **CVE-2017-5715 (Spectre variant 2):** Not affected
- **CVE-2020-0543 (Special Register Buffer Data Sampling):** Not affected
- **CVE-2019-11135 (TSX Asynchronous Abort):** Not affected

```
run-level 3 May 20 09:46
```

```
SPEC is set to: /home/cpu2017_1.1.7
```

<table>
<thead>
<tr>
<th>Filesystem</th>
<th>Type</th>
<th>Size</th>
<th>Used</th>
<th>Avail</th>
<th>Use%</th>
<th>Mounted on</th>
</tr>
</thead>
<tbody>
<tr>
<td>/dev/mapper/rhel-home</td>
<td>xfs</td>
<td>372G</td>
<td>280G</td>
<td>92G</td>
<td>76%</td>
<td>/home</td>
</tr>
</tbody>
</table>

From /sys/devices/virtual/dmi/id

- **Vendor:** HPE
- **Product:** ProLiant DL380 Gen10 Plus
- **Product Family:** ProLiant
- **Serial:** CN70490X83

(Continued on next page)
Platform Notes (Continued)

Additional information from dmidecode 3.2 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:
32x Micron 36ASF8G72PZ-3G2B2 64 GB 2 rank 3200

BIOS:
BIOS Vendor: HPE
BIOS Version: U46
BIOS Date: 05/16/2021
BIOS Revision: 1.42
Firmware Revision: 2.40

(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)
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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.
---|---|---

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

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<th>Language</th>
<th>Benchmark</th>
<th>Compiler</th>
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<td>C++, C</td>
<td>511.povray_r(base) 526.blender_r(base, peak)</td>
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<tr>
<td>C++, C, Fortran</td>
<td>507.cactuBSSN_r(base, peak)</td>
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Compiler Version Notes (Continued)

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.

Fortran, C        | 521.wrf_r(base) 527.cam4_r(base, peak)
Intel (R) Fortran 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(peak)
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Intel(R) 64, Version 2021.1 Build 20201112_000000
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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.

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.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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Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant DL380 Gen10 Plus
(2.30 GHz, Intel Xeon Platinum 8380)

SPECrate®2017_fp_base = 469
SPECrate®2017_fp_peak = 498

CPU2017 License: 3
Test Sponsor: HPE
Tested by: HPE

Base Optimization Flags

C benchmarks:
- `-w` `-std=c11` `-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`

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`
- `-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`
- `-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`
- `-flto` `-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`
- `-flto` `-mfpmath=sse` `-funroll-loops` `-qopt-mem-layout-trans=4` `-O3`
- `-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`
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Test Date: May-2021
Hardware Availability: Jun-2021
Software Availability: Jun-2021

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
538.imagick_r:basepeak = yes

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**Peak Optimization Flags (Continued)**

**C++ benchmarks:**

508.namd_r: basepeak = yes

510.parest_r: -w -m64 -W1,-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:**

503.bwaves_r: -w -m64 -W1,-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 -mbranches-within-32B-boundaries
   -ljemalloc -L/usr/local/jemalloc64-5.0.1/lib

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++:**
SPEC CPU®2017 Floating Point Rate Result

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Peak Optimization Flags (Continued)

507.cactuBSSN_r: basepeak = yes

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2017/flags/HPE-Platform-Flags-Intel-V1.0-ICX-revC.html

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
http://www.spec.org/cpu2017/flags/HPE-Platform-Flags-Intel-V1.0-ICX-revC.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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