# SPEC CPU®2017 Floating Point Rate Result

## Inspur Corporation

**Inspur NF5466M6 (Intel Xeon Platinum 8380)**

<table>
<thead>
<tr>
<th>SPECrate®2017_fp_base</th>
<th>464</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECrate®2017_fp_peak</td>
<td>496</td>
</tr>
</tbody>
</table>

### CPU2017 License:
3358

### Test Sponsor:
Inspur Corporation

### Tested by:
Inspur Corporation

### Test Date:
Aug-2021

### Software Availability:
Dec-2020

### Hardware

<table>
<thead>
<tr>
<th>Software</th>
<th>CPU Name: Intel Xeon Platinum 8380</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Max MHz: 3400</td>
</tr>
<tr>
<td></td>
<td>Nominal: 2300</td>
</tr>
<tr>
<td></td>
<td>Enabled: 80 cores, 2 chips, 2 threads/core</td>
</tr>
<tr>
<td></td>
<td>Orderable: 1,2 chips</td>
</tr>
<tr>
<td></td>
<td>Cache L1: 32 KB I + 48 KB D on chip per core</td>
</tr>
<tr>
<td></td>
<td>L2: 1.25 MB I+D on chip per core</td>
</tr>
<tr>
<td></td>
<td>L3: 60 MB I+D on chip per core</td>
</tr>
<tr>
<td></td>
<td>Other: None</td>
</tr>
<tr>
<td></td>
<td>Memory: 1 TB (32 x 32 GB 2Rx4 PC4-3200AA-R)</td>
</tr>
<tr>
<td></td>
<td>Storage: 1 x 4 TB NVME SSD</td>
</tr>
<tr>
<td></td>
<td>Other: None</td>
</tr>
</tbody>
</table>

### Other:
jemalloc memory allocator V5.0.1

### Power Management:
BIOS and OS set to prefer performance at the cost of additional power usage.

### OS:
Red Hat Enterprise Linux release 8.2 (Ootpa) 4.18.0-193.el8.x86_64

### Compiler:
C/C++: Version 2021.1 of Intel oneAPI DPC++/C++ Compiler Build 20201113 for Linux; C/C++: Version 2021.1 of Intel C/C++ Compiler Classic Build 20201112 for Linux; Fortran: Version 2021.1 of Intel Fortran Compiler Classic Build 20201112 for Linux

### Parallel:
No

### Firmware:
Version 05.01.01 released Jul-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
SPEC CPU®2017 Floating Point Rate Result

**Inspur Corporation**

**Inspur NF5466M6 (Intel Xeon Platinum 8380)**

**CPU2017 License:** 3358  
**Test Sponsor:** Inspur Corporation  
**Tested by:** Inspur Corporation

**SPECrate®2017_fp_base = 464**  
**SPECrate®2017_fp_peak = 496**

<table>
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<td>2245</td>
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<td>1.0</td>
<td>80</td>
<td>1109</td>
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<td>1110</td>
<td>1.0</td>
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<tr>
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<td>2027</td>
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<td>555</td>
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<td>195</td>
<td>1.0</td>
<td>651</td>
<td>1.0</td>
</tr>
</tbody>
</table>

**Results 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"
SCALING_GOVERNOR set to Performance

**Environment Variables Notes**

Environment variables set by runcpu before the start of the run:
LD_LIBRARY_PATH = "/home/CPU2017/lib/intel64:/home/CPU2017/je5.0.1-64"
MALLOC_CONF = "retain:true"

**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

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

Filesystem page cache synced and cleared with:
```
sync; echo 3> /proc/sys/vm/drop_caches
```
numactl command invoked through numactl i.e.:
```
numactl --interleave=all runcpu <etc>
```

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.


## Platform Notes

BIOS configuration:
ENERGY_PERF_BIAS_CFG mode set to Performance
Hardware Prefetch set to Disable
VT Support set to Disable
C1E Support set to Disable
Sub NUMA Cluster (SNC) set to Enable

Sysinfo program /home/CPU2017/bin/sysinfo
Rev: r6622 of 2021-04-07 982a61ec0915b55891ef0e16aca6c64d running on localhost.localdomain Sat Aug 14 00:12:09 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
```
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
```

(Continued on next page)
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### Inspur Corporation

**Insur NF5466M6 (Intel Xeon Platinum 8380)**

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<td>Insur Corporation</td>
</tr>
<tr>
<td>SPECrate®2017_fp_base</td>
<td>464</td>
</tr>
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<td>SPECrate®2017_fp_peak</td>
<td>496</td>
</tr>
<tr>
<td>Test Date:</td>
<td>Aug-2021</td>
</tr>
<tr>
<td>Hardware Availability:</td>
<td>May-2021</td>
</tr>
<tr>
<td>Software Availability:</td>
<td>Dec-2020</td>
</tr>
</tbody>
</table>

### Platform Notes (Continued)

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:** 3000.000
- **CPU max MHz:** 3400.0000
- **CPU min MHz:** 800.0000
- **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 art arch_perfmon pebs bts rep_good nopl xtopology nonstop_tsc cpuid aperfmperf pni pclmulqdq dtes64 bs_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm pcid dca sse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_timer aes xsave avx f16c rdrand lahf_lm abm 3dnowprefetch cpuid_fault epb cat_l3 invpcid_single ssbd mba ibrs ibpb stibp ibrs_enhanced tpr_shadow vmi flexpriority ept vpid fsgsb base tsc_adjust bmi1 hle avx2 smep bmi2 ertm invpcid rtm cqm rdt_a avx512f avx512dq rdseed adx smap avx512ifma clflushopt clwb intel_pt avx512cd sha_ni avx512bw avx512vl xsaveopt xsavec xsaveopt xsaves cqm_llc cqm_occup_llc cqm_mbm_total cqm_mbm_local wbnoinvd dtherm ida arat pln pts avx512vmbi umip kpu ospke avx512vpqcntdq la57 rdrid md_clear pconfig flush_l1d arch_capabilities

```
/proc/cpuinfo cache data
    cache size : 61440 KB
```
SPEC CPU®2017 Floating Point Rate Result

Inspur Corporation
Inspur NF5466M6 (Intel Xeon Platinum 8380)

SPECrate®2017_fp_base = 464
SPECrate®2017_fp_peak = 496

CPU2017 License: 3358
Test Sponsor: Inspur Corporation
Tested by: Inspur Corporation

Test Date: Aug-2021
Hardware Availability: May-2021
Software Availability: Dec-2020

Platform Notes (Continued)

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: 257610 MB
node 0 free: 237780 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: 258039 MB
node 1 free: 242666 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: 258039 MB
node 2 free: 242780 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: 258034 MB
node 3 free: 242748 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: 1056484572 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

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

/sys/devices/system/cpu/cpu*/cpufreq/scaling_governor has performance

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

os-release:
NAME="Red Hat Enterprise Linux"
VERSION="8.2 (Ootpa)"
ID="rhel"
ID_LIKE="fedora"
VERSION_ID="8.2"
PLATFORM_ID="platform:el8"
PRETTY_NAME="Red Hat Enterprise Linux 8.2 (Ootpa)"
ANSI_COLOR="0;31"

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

- `redhat-release`: Red Hat Enterprise Linux release 8.2 (Ootpa)
- `system-release`: Red Hat Enterprise Linux release 8.2 (Ootpa)
- `system-release-cpe`: cpe:/o:redhat:enterprise_linux:8.2:ga

```
uname -a:
    Linux localhost.localdomain 4.18.0-193.el8.x86_64 #1 SMP Fri Mar 27 14:35:58 UTC 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):** 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):** No status reported
- **CVE-2019-11135 (TSX Asynchronous Abort):** Not affected

```
run-level 3 Aug 13 16:11
```

**SPEC is set to:** `/home/CPU2017`

<table>
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<th>Size</th>
<th>Used</th>
<th>Avail</th>
<th>Use%</th>
<th>Mounted on</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>/dev/mapper/rhel-home</code></td>
<td>xfs</td>
<td>3.6T</td>
<td>95G</td>
<td>3.5T</td>
<td>3%</td>
<td><code>/home</code></td>
</tr>
</tbody>
</table>

From `/sys/devices/virtual/dmi/id`

- **Vendor:** Inspur
- **Product:** NF5466M6
- **Product Family:** Family
- **Serial:** 380983478

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 36ASF4G72PZ-3G2R1 32 GB 2 rank 3200

- **BIOS:**
  - **BIOS Vendor:** American Megatrends Inc.
  - **BIOS Version:** 05.01.01
**Inspur Corporation**

**Inspur NF5466M6 (Intel Xeon Platinum 8380)**

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**CPU2017 License:** 3358  
**Test Sponsor:** Inspur Corporation  
**Test Date:** Aug-2021  
**Tested by:** Inspur Corporation  
**Hardware Availability:** May-2021  
**Software Availability:** Dec-2020

**Platform Notes (Continued)**

BIOS Date: 07/09/2021  
BIOS Revision: 5.22

(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) 64, Version 2021.1 Build 20201112_000000
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.
```

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

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)
    64, Version 2021.1 Build 20201112_000000
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
---------------------------------------------------------------------

C++, C          | 511.povray_r(base) 526.blender_r(base, peak)
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Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
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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
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
---------------------------------------------------------------------

C++, C, Fortran | 507.cactuBSSN_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,
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Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
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         | 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)
(Continued on next page)
Compiler Version Notes (Continued)

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

Base Compiler Invocation

C benchmarks:
icx

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

Inspur Corporation

Inspur NF5466M6 (Intel Xeon Platinum 8380)

**SPECrate®2017_fp_base = 464**

**SPECrate®2017_fp_peak = 496**

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**Base Compiler Invocation (Continued)**

C++ benchmarks:

```c
icpx
```

Fortran benchmarks:

```fortran
ifort
```

Benchmarks using both Fortran and C:

```fortran
icx
```

Benchmarks using both C and C++:

```c
icpx icx
```

Benchmarks using Fortran, C, and C++:

```c
icpx icx ifort
```

**Base Portability Flags**

- `bwaves_r`: `-DSPEC_LP64`
- `cactuBSSN_r`: `-DSPEC_LP64`
- `namd_r`: `-DSPEC_LP64`
- `parest_r`: `-DSPEC_LP64`
- `povray_r`: `-DSPEC_LP64`
- `lbm_r`: `-DSPEC_LP64`
- `wrf_r`: `-DSPEC_LP64 -DSPEC_CASE_FLAG -convert big_endian`
- `blender_r`: `-DSPEC_LP64 -DSPEC_LINUX -funsigned-char`
- `cam4_r`: `-DSPEC_LP64 -DSPEC_CASE_FLAG`
- `imagick_r`: `-DSPEC_LP64`
- `nab_r`: `-DSPEC_LP64`
- `fotonik3d_r`: `-DSPEC_LP64`
- `roms_r`: `-DSPEC_LP64`

**Base Optimization Flags**

C benchmarks:

```c
-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-boundsaries -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib
```

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### Base Optimization Flags (Continued)

#### 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`

### Peak Compiler Invocation

#### C benchmarks:
- `icx`

#### C++ benchmarks:
- `icpx`

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Peak Compiler Invocation (Continued)

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

  544.nab_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_r: basepeak = yes
  510.parest_r: -w -m64 -Wl,-z,muldefs -xCORE-AVX512 -Ofast -ffast-math
  -flto -mfpmath=sse -funroll-loops

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Peak Optimization Flags (Continued)

510.parest_r (continued):
-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 -Wl,-z,muldefs -xCORE-AVX512 -03 -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

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 -03
-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 -03
-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
## SPEC CPU®2017 Floating Point Rate Result

### Inspur Corporation

**Inspur NF5466M6 (Intel Xeon Platinum 8380)**

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You can also download the XML flags sources by saving the following links:

- [Intel-ic2021-official-linux64_revA.xml](http://www.spec.org/cpu2017/flags/Intel-ic2021-official-linux64_revA.xml)
- [Inspur-Platform-Settings-V2.1.xml](http://www.spec.org/cpu2017/flags/Inspur-Platform-Settings-V2.1.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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