## SPEC CPU®2017 Floating Point Rate Result

### Inspur Corporation

**Inspur NF5180M5 (Intel Xeon Gold 6248R)**

<table>
<thead>
<tr>
<th>SPECrate®2017_fp_base</th>
<th>SPECrate®2017_fp_peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>271</td>
<td>287</td>
</tr>
</tbody>
</table>

**CPU2017 License:** 3358  
**Test Date:** Jul-2020  
**Test Sponsor:** Inspur Corporation  
**Tested by:** Inspur Corporation  
**Hardware Availability:** Feb-2020  
**Software Availability:** Apr-2020

### Hardware

- **CPU Name:** Intel Xeon Gold 6248R  
  - **Max MHz:** 4000  
  - **Nominal:** 3000  
  - **Enabled:** 48 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:** 35.75 MB I+D on chip per chip  
  - **Memory:** 768 GB (24 x 32 GB 2Rx4 PC4-2933Y-R)  
  - **Storage:** 1 x 2 TB NVME SSD  
  - **Other:** None

### Software

- **OS:** Red Hat Enterprise Linux release 8.0 (Ootpa)  
  - 4.18.0-80.el8.x86_64  
- **Compiler:** C/C++: Version 19.1.1.217 of Intel C/C++ Compiler Build 20200306 for Linux; Fortran: Version 19.1.1.217 of Intel Fortran Compiler Build 20200306 for Linux  
- **Firmware:** Version 4.1.5 released May-2019  
- **File System:** xfs  
- **System State:** Run level 5 (multi-user)  
- **Base Pointers:** 64-bit  
- **Peak Pointers:** 64-bit  
- **Other:** jemalloc memory allocator V5.0.1  
- **Power Management:** BIOS and OS set to prefer performance at the cost of additional power usage
# SPEC CPU®2017 Floating Point Rate Result

## Inspur Corporation

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**CPU2017 License:** 3358  
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### Results Table

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<thead>
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---

**SPECrate®2017_fp_base = 271**  
**SPECrate®2017_fp_peak = 287**

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"  
SCALING_GOVERNOR set to Performance

### Environment Variables Notes

Environment variables set by runcpu before the start of the run:  
LD_LIBRARY_PATH = "/home/CPUS2017/lib/intel64:/home/CPUS2017/je5.0.1-64"  
MALLOC_CONF = "retain:true"
Inspru Corporation

Inspur NF5180M5 (Intel Xeon Gold 6248R)  SPECrate®2017_fp_base = 271
SPECrate®2017_fp_peak = 287

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<thead>
<tr>
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</tbody>
</table>

**General Notes**

Binaries compiled on a system with 1x Intel Core i9-7980XE CPU + 64GB RAM
memory using Redhat Enterprise Linux 8.0
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>`

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.

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

**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
IMC (Integrated memory controller) Interleaving set to 1-way
SuN NUMA Cluster (SNC) set to Enable

Sysinfo program /home/cpu2017/bin/sysinfo
Rev: r6365 of 2019-08-21 295195f888a3d7edb1e646a485a0011
running on localhost.localdomain Fri Jun 22 07:24:13 2018

SUT (System Under Test) info as seen by some common utilities.
For more information on this section, see
https://www.spec.org/cpu2017/Docs/config.html#sysinfo

From /proc/cpuinfo
`model name : Intel(R) Xeon(R) Gold 6248R CPU @ 3.00GHz`
`2 "physical id"s (chips)`
`96 "processors"`
cores, siblings (Caution: counting these is hw and system dependent. The following excerpts from /proc/cpuinfo might not be reliable. Use with caution.)

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

cpu cores : 24
siblings : 48

physical 0: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 16 17 18 19 20 21 25 26 27 28 29
physical 1: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 16 17 18 19 20 21 25 26 27 28 29

From `lscpu`:
- Architecture: x86_64
- CPU op-mode(s): 32-bit, 64-bit
- Byte Order: Little Endian
- CPU(s): 96
- On-line CPU(s) list: 0-95
- Thread(s) per core: 2
- Core(s) per socket: 24
- Socket(s): 2
- NUMA node(s): 4
- Vendor ID: GenuineIntel
- CPU family: 6
- Model: 85
- Model name: Intel(R) Xeon(R) Gold 6248R CPU @ 3.00GHz
- Stepping: 7
- CPU MHz: 3599.993
- CPU max MHz: 4000.0000
- CPU min MHz: 1200.0000
- BogoMIPS: 6000.00
- Virtualization: VT-x
- L1d cache: 32K
- L1i cache: 32K
- L2 cache: 1024K
- L3 cache: 36608K
- NUMA node0 CPU(s): 0-3,7-9,13-15,19,20,48-51,55-57,61-63,67,68
- NUMA node1 CPU(s): 4-6,10-12,16-18,21-23,52-54,58-60,64-66,69-71
- NUMA node2 CPU(s): 24-27,31-33,37-39,43,44,72-75,79-81,85-87,91,92
- NUMA node3 CPU(s): 28-30,34-36,40-42,45-47,76-78,82-84,88-90,93-95
- 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
  - pdelgb
  - rdtsscp
  - lm
  - constant_tsc
  - arch_perfmon
  - pebs
  - bts
  - rep_good
  - nopl
  - xtopology
  - nonstop_tsc
  - cpuid
  - aperfmperf
  - pni
  - pclmulqdq
  - dtc
  - ds
  - cpcl
  - vmx
  - smx
  - est
  - tm
  - sse3
  - sdbg
  - fma
  - cx16
  - xtpr
  - pdcm
  - pcid
  - dca
  - sse4_1
  - sse4_2
  - x2apic
  - movbe
  - popcnt
  - tsc_deadline_timer
  - aes
  - avx
  - f16c
  - rdrand
  - lahf
  - lm
  - abm
  - 3nowprefetch
  - cpuid_fault
  - epb
  - cat
  - l1d
  - lahf
  - lbm
  - hle
  - avx2
  - smep
  - bmi2
  - emms
  - invpcid_single
  - intel_pmpi
  - sbbd
  - mba
  - ibrs
  - stibp
  - ibrs_enhanced
  - tpr_shadow
  - vmni
  - flexpriority
  - ept
  - fsgsbase
  - tsc_adjust
  - bmi1
  - hle
  - avx2
  - amep
  - bmi2
  - erms
  - invpcid
  - rtm
  - cqm
  - mpx
  - rdt_a
  - avx512f
  - avx512dq
  - rdseed
  - adx
  - smap
  - clflushopt
  - clwb
  - intel_pt
  - avx512cd
  - avx512bw
  - avx512vl
  - xsaveopt
  - xsaves
  - cqm
  - cqm_occup
  - cqm_mbb
  - cqm_mbb_total
  - cqm_mbb_local
  - dtherm
  - ida
  - arat
  - pln
  - pts
  - pkup
  - ospke
  - avx512_vnni
  - flush_l1d
  - arch_capabilities

/proc/cpuinfo cache data
แนวทาง cache size : 36608 KB

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

## Inspur Corporation

**Inspur NF5180M5 (Intel Xeon Gold 6248R)**

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<th>SPECrate 2017_fp_peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>= 271</td>
<td>= 287</td>
</tr>
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</table>

**CPU2017 License:** 3358  
**Test Sponsor:** Inspur Corporation  
**Test Date:** Jul-2020  
**Hardware Availability:** Feb-2020  
**Tested by:** Inspur Corporation  
**Software Availability:** Apr-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 7 8 9 13 14 15 19 20 48 49 50 51 55 56 57 61 62 63 67 68
node 0 size: 191846 MB
node 0 free: 191528 MB
node 1 cpus: 4 5 6 10 11 12 16 17 18 21 22 23 52 53 54 58 59 60 64 65 66 69 70 71
node 1 size: 193506 MB
node 1 free: 193161 MB
node 2 cpus: 24 25 26 27 31 32 33 37 38 39 43 44 72 73 74 75 79 80 81 85 86 87 91 92
node 2 size: 193531 MB
node 2 free: 193226 MB
node 3 cpus: 28 29 30 34 35 36 40 41 42 45 46 47 76 77 78 82 83 84 88 89 90 93 94 95
node 3 size: 193530 MB
node 3 free: 193247 MB
```

node distances:

```
node   0   1   2   3
0:  10  11  11  11
1:  11  10  11  11
2:  11  10  11  11
3:  11  11  11  11
```

From `/proc/meminfo`

```
MemTotal:       790952744 kB
HugePages_Total:       0
Hugepagesize:       2048 kB
```

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

```
NAME="Red Hat Enterprise Linux"
VERSION="8.0 (Ootpa)"
ID="rhel"
ID_LIKE="fedora"
VERSION_ID="8.0"
PLATFORM_ID="platform:el8"
PRETTY_NAME="Red Hat Enterprise Linux 8.0 (Ootpa)"
ANSI_COLOR="0;31"
redhat-release: Red Hat Enterprise Linux release 8.0 (Ootpa)
system-release: Red Hat Enterprise Linux release 8.0 (Ootpa)
system-release-cpe: cpe:/o:redhat:enterprise_linux:8.0:ga
```

```
uname -a:
Linux localhost.localdomain 4.18.0-80.el8.x86_64 #1 SMP Wed Mar 13 12:02:46 UTC 2019
x86_64 x86_64 x86_64 GNU/Linux
```

Kernel self-reported vulnerability status:

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

**Inspur Corporation**

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**SPECRate®2017_fp_base = 271**

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**Platform Notes (Continued)**

- **CVE-2018-3620 (L1 Terminal Fault):** Not affected
- **Microarchitectural Data Sampling:** No status reported
- **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: __user pointer sanitization
- **CVE-2017-5715 (Spectre variant 2):** Mitigation: Enhanced IBRS, IBPB: conditional, RSB filling

run-level 5 Jun 22 07:11

SPEC is set to: /home/CPU2017

```
Filesystem Type Size Used Avail Use% Mounted on
/dev/mapper/rhel-home xfs 1.8T 21G 1.8T 2% /home
```

From /sys/devices/virtual/dmi/id

- BIOS: American Megatrends Inc. 4.1.5 05/21/2019
- Vendor: Inspur
- Product: NF5180M5
- Serial: 219243921

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:
- 24x Samsung M393A4G43AB3-CVF 32 GB 2 rank 2933

(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) C Compiler for applications running on Intel(R) 64, Version 2021.1
NextGen Build 20200304
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
```

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

Intel(R) C++ Compiler for applications running on Intel(R) 64, Version 2021.1
```

(Continued on next page)
Inspur Corporation
Inspur NF5180M5 (Intel Xeon Gold 6248R)

SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

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CPU2017 License: 3358
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Compiler Version Notes (Continued)

NextGen Build 20200304

C++, C | 511.povray_r(base) 526.blender_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.

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 | 511.povray_r(base) 526.blender_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.

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

==============================================================================
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
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 Intel(R) C Compiler for applications running on Intel(R) 64, Version 2021.1
     NextGen Build 20200304
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 Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R)
       64, Version 19.1.1.217 Build 20200306
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==============================================================================
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
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 Intel(R) C Compiler for applications running on Intel(R) 64, Version 2021.1
     NextGen Build 20200304
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==============================================================================
Fortran, C      | 521.wrf_r(peak)
==============================================================================
 Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R)
       64, Version 19.1.1.217 Build 20200306
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 Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,
     Version 19.1.1.217 Build 20200306
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==============================================================================

(Continued on next page)
Inspur Corporation

Inspur NF5180M5 (Intel Xeon Gold 6248R)

<table>
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<tr>
<th>SPECrate®2017_fp_base</th>
<th>271</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECrate®2017_fp_peak</td>
<td>287</td>
</tr>
</tbody>
</table>

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

Compiler Version Notes (Continued)

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
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Intel(R) C Compiler for applications running on Intel(R) 64, Version 2021.1
NextGen Build 20200304
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---------------------------------------------------------------------

Base Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

Fortran benchmarks:
ifort

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
Insapur Corporation

Insapur NF5180M5 (Intel Xeon Gold 6248R)

**SPECrate\textsuperscript{\textregistered}2017\textsubscript{fp}\_peak = 287**  
**SPECrate\textsuperscript{\textregistered}2017\textsubscript{fp}\_base = 271**

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**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\_LP64 -DSPEC\_LINUX -funsigned\_char  
527. cam4\_r: -DSPEC\_LP64 -DSPEC\_CASE\_FLAG  
538. imagick\_r: -DSPEC\_LP64  
544. nab\_r: -DSPEC\_LP64  
549. fotoni3d\_r: -DSPEC\_LP64  
554. roms\_r: -DSPEC\_LP64  

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**Base Optimization Flags**

**C benchmarks:**

- m64 -qnextgen -std=c11  
- Wl, -plugin-opt=-x86\_branches\_within\_32B\_boundaries -Wl, -z, muldefs  
- fuse=ld\_gold -xCORE-AVX2 -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 -qnextgen -Wl, -plugin-opt=-x86\_branches\_within\_32B\_boundaries  
- Wl, -z, muldefs -fuse=ld\_gold -xCORE-AVX2 -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  
- fuse=ld\_gold -xCORE-AVX2 -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  
- L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

**Benchmarks using both Fortran and C:**

- m64 -qnextgen -std=c11  
- Wl, -plugin-opt=-x86\_branches\_within\_32B\_boundaries -Wl, -z, muldefs  
- fuse=ld\_gold -xCORE-AVX2 -Ofast -ffast\_math -flto -mfpmath=sse  
- funroll\_loops -qopt\_mem\_layout\_trans=4 -03 -ipo -no-prec\_div  
- qopt\_prefetch -ffinite\_math\_only  
- qopt\_multiple\_gather\_scatter\_by\_shuffles -nostandard\_realloc\_lhs

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Inspur Corporation

Inspur NF5180M5 (Intel Xeon Gold 6248R)  

SPECrate®2017_fp_base = 271  
SPECrate®2017_fp_peak = 287

CPU2017 License: 3358  
Test Sponsor: Inspur Corporation  
Test Date: Jul-2020

Tested by: Inspur Corporation  
Hardware Availability: Feb-2020

Software Availability: Apr-2020

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Base Optimization Flags (Continued)

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

Benchmarks using both C and C++:
-m64 -qnextgen -std=c11
-WL,-plugin-opt=-x86-branches-within-32B-boundaries -Wl,-z,muldefs
-fuse-ld=gold -xCORE-AVX2 -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 -qnextgen -std=c11
-WL,-plugin-opt=-x86-branches-within-32B-boundaries -Wl,-z,muldefs
-fuse-ld=gold -xCORE-AVX2 -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

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
SPEC CPU®2017 Floating Point Rate Result

Inspur Corporation
Inspur NF5180M5 (Intel Xeon Gold 6248R)

SPECrate®2017_fp_base = 271
SPECrate®2017_fp_peak = 287

CPU2017 License: 3358
Test Sponsor: Inspur Corporation
Test Date: Jul-2020
Hardware Availability: Feb-2020
Tested by: Inspur Corporation
Software Availability: Apr-2020

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
-Wl,-plugin-opt=-x86-branches-within-32B-boundaries
-Wl,-z,muldefs -fuse-ld=gold -xCORE-AVX2 -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -L/usr/local/jemalloc64-5.0.1/lib
-ljemalloc

Fortran benchmarks:
503.bwaves_r: -m64 -Wl,-plugin-opt=-x86-branches-within-32B-boundaries
-Wl,-z,muldefs -fuse-ld=gold -xCORE-AVX2 -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

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-AVX2 -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

(Continued on next page)
Inspur Corporation
Inspur NF5180M5 (Intel Xeon Gold 6248R)

CPU2017 License: 3358
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SPEC CPU®2017 Floating Point Rate Result
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SPECrate®2017_fp_base = 271
SPECrate®2017_fp_peak = 287

CPU2017 License: 3358
Test Date: Jul-2020
Test Sponsor: Inspur Corporation
Hardware Availability: Feb-2020
Tested by: Inspur Corporation
Software Availability: Apr-2020

Peak Optimization Flags (Continued)

521.wrf_r (continued):
-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-AVX2 -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
http://www.spec.org/cpu2017/flags/Inspur-Platform-Settings-V1.9.xml

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