## SPEC® CPU2017 Floating Point Rate Result

**Epsylon Sp. z o.o. Sp. Komandytowa**

*Eptorio 210 RA1 (Intel Xeon Gold 6134, 3.20 GHz)*

<table>
<thead>
<tr>
<th>SPECrate2017_fp_base</th>
<th>SPECrate2017_fp_peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>123</td>
<td>125</td>
</tr>
</tbody>
</table>

**CPU2017 License**: 9081  
**Test Sponsor**: Epsylon Sp. z o.o. Sp. Komandytowa  
**Tested by**: Epsylon Sp. z o.o. Sp. Komandytowa  
**Test Date**: Feb-2018  
**Hardware Availability**: Sep-2017  
**Software Availability**: Sep-2017

<table>
<thead>
<tr>
<th>Copies</th>
<th>SPECrate2017_fp_base</th>
<th>SPECrate2017_fp_peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>503.bwaves_r</td>
<td></td>
<td></td>
</tr>
<tr>
<td>507.cactuBSSN_r</td>
<td></td>
<td></td>
</tr>
<tr>
<td>508.namd_r</td>
<td></td>
<td></td>
</tr>
<tr>
<td>510.parest_r</td>
<td></td>
<td></td>
</tr>
<tr>
<td>511.povray_r</td>
<td></td>
<td></td>
</tr>
<tr>
<td>519.lbm_r</td>
<td></td>
<td></td>
</tr>
<tr>
<td>521.wrf_r</td>
<td></td>
<td></td>
</tr>
<tr>
<td>526.blender_r</td>
<td></td>
<td></td>
</tr>
<tr>
<td>527.cam4_r</td>
<td></td>
<td></td>
</tr>
<tr>
<td>538.imagick_r</td>
<td></td>
<td></td>
</tr>
<tr>
<td>544.nab_r</td>
<td></td>
<td></td>
</tr>
<tr>
<td>549.fotonik3d_r</td>
<td></td>
<td></td>
</tr>
<tr>
<td>554.roms_r</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Hardware

- **CPU Name**: Intel Xeon Gold 6134  
- **Max MHz.**: 3700  
- **Nominal**: 3200  
- **Enabled**: 16 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**: 24.75 MB I+D on chip per chip  
- **Other**: None  
- **Memory**: 384 GB (24 x 16 GB 2Rx4 PC4-2666V-R)  
- **Storage**: 1 x 960 GB SSD SATA III  
- **Other**: None

### Software

- **OS**: Red Hat Enterprise Linux Server release 7.4  
- **Compiler**: C/C++: Version 18.0.0.128 of Intel C/C++ Compiler for Linux; Fortran: Version 18.0.0.128 of Intel Fortran Compiler for Linux  
- **Parallel**: No  
- **Firmware**: Version BIOSR0009 released Oct-2017  
- **File System**: ext4  
- **System State**: Run level 3 (multi-user)  
- **Base Pointers**: 64-bit  
- **Peak Pointers**: 64-bit  
- **Other**: None
Epsylon Sp. z o.o. Sp. Komandytowa

### Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>503.bwaves_r</td>
<td>32</td>
<td>772</td>
<td>416</td>
<td>779</td>
<td>412</td>
<td>775</td>
<td>414</td>
<td>32</td>
<td>772</td>
<td>416</td>
<td>773</td>
<td>415</td>
<td>774</td>
<td>415</td>
<td></td>
<td></td>
</tr>
<tr>
<td>507.cactuBSSN_r</td>
<td>32</td>
<td>473</td>
<td>85.6</td>
<td>475</td>
<td>85.2</td>
<td>475</td>
<td>85.4</td>
<td>32</td>
<td>476</td>
<td>85.0</td>
<td>475</td>
<td>85.4</td>
<td>476</td>
<td>85.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>508.namd_r</td>
<td>32</td>
<td>364</td>
<td>83.6</td>
<td>364</td>
<td>83.5</td>
<td>364</td>
<td>83.6</td>
<td>32</td>
<td>362</td>
<td>84.0</td>
<td>363</td>
<td>83.8</td>
<td>363</td>
<td>83.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>510.parest_r</td>
<td>32</td>
<td>899</td>
<td>93.1</td>
<td>899</td>
<td>93.1</td>
<td>901</td>
<td>92.9</td>
<td>32</td>
<td>890</td>
<td>94.0</td>
<td>897</td>
<td>93.4</td>
<td>894</td>
<td>93.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>511.povray_r</td>
<td>32</td>
<td>589</td>
<td>127</td>
<td>586</td>
<td>127</td>
<td>584</td>
<td>128</td>
<td>32</td>
<td>494</td>
<td>151</td>
<td>493</td>
<td>152</td>
<td>493</td>
<td>152</td>
<td></td>
<td></td>
</tr>
<tr>
<td>519.lbm_r</td>
<td>32</td>
<td>400</td>
<td>84.4</td>
<td>400</td>
<td>84.4</td>
<td>400</td>
<td>84.4</td>
<td>32</td>
<td>400</td>
<td>84.3</td>
<td>400</td>
<td>84.4</td>
<td>400</td>
<td>84.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>521.wrf_r</td>
<td>32</td>
<td>463</td>
<td>155</td>
<td>464</td>
<td>154</td>
<td>456</td>
<td>157</td>
<td>32</td>
<td>449</td>
<td>160</td>
<td>451</td>
<td>159</td>
<td>448</td>
<td>160</td>
<td></td>
<td></td>
</tr>
<tr>
<td>527.cam4_r</td>
<td>32</td>
<td>461</td>
<td>121</td>
<td>460</td>
<td>122</td>
<td>461</td>
<td>122</td>
<td>32</td>
<td>457</td>
<td>122</td>
<td>457</td>
<td>122</td>
<td>457</td>
<td>122</td>
<td></td>
<td></td>
</tr>
<tr>
<td>538.imagick_r</td>
<td>32</td>
<td>466</td>
<td>171</td>
<td>466</td>
<td>171</td>
<td>465</td>
<td>171</td>
<td>32</td>
<td>466</td>
<td>171</td>
<td>466</td>
<td>171</td>
<td>466</td>
<td>171</td>
<td></td>
<td></td>
</tr>
<tr>
<td>544.nab_r</td>
<td>32</td>
<td>368</td>
<td>146</td>
<td>367</td>
<td>147</td>
<td>368</td>
<td>146</td>
<td>32</td>
<td>364</td>
<td>148</td>
<td>366</td>
<td>147</td>
<td>368</td>
<td>146</td>
<td></td>
<td></td>
</tr>
<tr>
<td>549.fotonik3d_r</td>
<td>32</td>
<td>1084</td>
<td>115</td>
<td>1081</td>
<td>115</td>
<td>1085</td>
<td>115</td>
<td>32</td>
<td>1084</td>
<td>115</td>
<td>1081</td>
<td>115</td>
<td>1085</td>
<td>115</td>
<td></td>
<td></td>
</tr>
<tr>
<td>554.roms_r</td>
<td>32</td>
<td>588</td>
<td>86.4</td>
<td>588</td>
<td>86.5</td>
<td>587</td>
<td>86.6</td>
<td>32</td>
<td>587</td>
<td>86.7</td>
<td>586</td>
<td>86.7</td>
<td>586</td>
<td>86.7</td>
<td></td>
<td></td>
</tr>
</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"

General Notes

Environment variables set by runcpu before the start of the run:

```
LD_LIBRARY_PATH="/cpu2017.1.0.2/lib/ia32:/cpu2017.1.0.2/lib/intel64:/cpu2017.1.0.2/je5.0.1-32:/cpu2017.1.0.2/je5.0.1-64"
```

Binaries compiled on a system with 1x Intel Core i7-4790 CPU + 32 GB RAM memory using Redhat Enterprise Linux 7.4

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.:

```
umactl --interleave=all runcpu <etc>
```

No: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown) is mitigated in the system as tested and documented.

(Continued on next page)
SPEC CPU2017 Floating Point Rate Result

Epsylon Sp. z o.o. Sp. Komandytowa
eterio 210 RA1 (Intel Xeon Gold 6134, 3.20 GHz)

SPECrate2017_fp_base = 123
SPECrate2017_fp_peak = 125

CPU2017 License: 9081
Test Sponsor: Epsylon Sp. z o.o. Sp. Komandytowa
Tested by: Epsylon Sp. z o.o. Sp. Komandytowa

Test Date: Feb-2018
Hardware Availability: Sep-2017
Software Availability: Sep-2017

General Notes (Continued)
No: 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.
No: 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 Settings:
Intel(R) Hyper-Threading Tech = Enabled
CPU Power and Performance Policy = Performance
Intel(R) Turbo Boost Technology = Enabled
C1E = Disabled
Processor C6 = Disabled
IMC Interleaving = Auto
Sub_NUMA Cluster = Disabled
Set FAN Profile = Performance
Patrol Scrub = Disabled

Sysinfo program /cpu2017.1.0.2/bin/sysinfo
Rev: r5797 of 2017-06-14 96c45e4568ad54c135fd618b09c0f
running on SUT Tue Feb 6 22:17:42 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 6134 CPU @ 3.20GHz
  2 "physical id"s (chips)
  32 "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 : 8
siblings : 16
physical 0: cores 0 2 3 9 16 19 26 27
physical 1: cores 0 2 3 9 16 19 26 27

From lscpu:
Architecture: x86_64
CPU op-mode(s): 32-bit, 64-bit
Byte Order: Little Endian
CPU(s): 32
On-line CPU(s) list: 0-31
Thread(s) per core: 2
Core(s) per socket: 8

(Continued on next page)
Epsylon Sp. z o.o. Sp. Komandytowa

terio 210 RA1 (Intel Xeon Gold 6134, 3.20 GHz)

SPECrate2017_fp_base = 123
SPECrate2017_fp_peak = 125

CPU2017 License: 9081
Test Sponsor: Epsylon Sp. z o.o. Sp. Komandytowa
Test Date: Feb-2018
Tested by: Epsylon Sp. z o.o. Sp. Komandytowa
Hardware Availability: Sep-2017
Software Availability: Sep-2017

Platform Notes (Continued)

Socket(s): 2
NUMA node(s): 2
Vendor ID: GenuineIntel
CPU family: 6
Model: 85
Model name: Intel(R) Xeon(R) Gold 6134 CPU @ 3.20GHz
Stepping: 4
CPU MHz: 1200.000
CPU max MHz: 3700.000
CPU min MHz: 1200.000
BogoMIPS: 6400.00
Virtualization: VT-x
L1d cache: 32K
L1i cache: 32K
L2 cache: 1024K
L3 cache: 25344K
NUMA node0 CPU(s): 0-7,16-23
NUMA node1 CPU(s): 8-15,24-31
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 rdscp
lm constant_tsc arch_perfmon pebs bts rep_good nopl xtopology nonstop_tsc
aperfmperf eagerfpu pni pclmulqdq dtes64 monitor ds_cpl vmx smx est tm2 ssse3 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 cp 013 cdp 01_3 intel_p t
pr_shadow vmx flexpriority ept vpid fsgsbase tsc_adjust bmi1 hle avx2 smep bmi2
erm sinvcpuid rdt_a avx512f avx512dq rdseed adx smap clflushopt clwb
avx512cd avx512bw avx512vl xsavesopt xsaveopt xgetbv1 cqm_llc cqm_occup_llc
cqm_mbm_total cqm_mbm_local dtherm ida arat pln pts hwp hwp_act_window hwp_epp
hwp_pkg_req

/proc/cpuinfo cache data
  cache size : 25344 KB

From numactl --hardware WARNING: a numactl 'node' might or might not correspond to a
physical chip.
  available: 2 nodes (0-1)
    node 0 cpus: 0 1 2 3 4 5 6 7 16 17 18 19 20 21 22 23
    node 0 size: 195276 MB
    node 0 free: 190437 MB
    node 1 cpus: 8 9 10 11 12 13 14 15 24 25 26 27 28 29 30 31
    node 1 size: 196608 MB
    node 1 free: 191871 MB
    node distances:
      node 0 1
        0: 10 21
        1: 21 10

(Continued on next page)
SPEC CPU2017 Floating Point Rate Result

Epsylon Sp. z o.o. Sp. Komandytowa
eterio 210 RA1 (Intel Xeon Gold 6134, 3.20 GHz)

SPECrate2017_fp_base = 123
SPECrate2017_fp_peak = 125

CPU2017 License: 9081
Test Sponsor: Epsylon Sp. z o.o. Sp. Komandytowa
Tested by: Epsylon Sp. z o.o. Sp. Komandytowa

Platform Notes (Continued)

From /proc/meminfo
MemTotal: 394690080 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

From /etc/*release* /etc/*version*
NAME="Red Hat Enterprise Linux Server"
VERSION="7.4 (Maipo)"
ID="rhel"
ID_LIKE="fedora"
VARIANT="Server"
VARIANT_ID="server"
VERSION_ID="7.4"
PRETTY_NAME="Red Hat Enterprise Linux"
redhat-release: Red Hat Enterprise Linux Server release 7.4 (Maipo)
system-release: Red Hat Enterprise Linux Server release 7.4 (Maipo)
system-release-cpe: cpe:/o:redhat:enterprise_linux:7.4:ga:server

uname -a:
Linux SUT 3.10.0-693.el7.x86_64 #1 SMP Thu Jul 6 19:56:57 EDT 2017 x86_64 x86_64 GNU/Linux
run-level 3 Feb 6 14:45

SPEC is set to: /cpu2017.1.0.2

Filesystem Type Size Used Avail Use% Mounted on
/dev/sda1 ext4 825G 84G 700G 11% /

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.
BIOS Intel Corporation SE5C620.86B.00.01.0009.101920170212 10/19/2017
Memory:
24x Samsung M393A2G40EB2-CTD 16 GB 2 rank 2666

(End of data from sysinfo program)

Compiler Version Notes

==============================================================================
CC  519.lbm_r(base) 538.imagick_r(base, peak) 544.nab_r(base)
==============================================================================
icc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

(Continued on next page)
Epsylon Sp. z o.o. Sp. Komandytowa

 WHETHER CONTENT OF THIS SPECIFICATION IS ACCURATE, COMPLETE, OR CORRECT, STANDARD PERFORMANCE EVALUATION CORPORATION DISCLAIMS ANY WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

CPU2017 License: 9081
Test Sponsor: Epsylon Sp. z o.o. Sp. Komandytowa
Tested by: Epsylon Sp. z o.o. Sp. Komandytowa

Compiler Version Notes (Continued)

==============================================================================
CC  519.lbm_r(peak) 544.nab_r(peak)
icc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.
==============================================================================

CXXC 508.namd_r(base) 510.parest_r(base)
icpc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.
==============================================================================

CXXC 508.namd_r(peak) 510.parest_r(peak)
icpc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.
==============================================================================

CC  511.povray_r(base) 526.blender_r(base)
icpc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.
icc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

==============================================================================
CC  511.povray_r(peak) 526.blender_r(peak)
icpc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.
icc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

==============================================================================
FC  507.cactuBSSN_r(base)
icpc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.
icc (ICC) 18.0.0 20170811

(Continued on next page)
## SPEC CPU2017 Floating Point Rate Result

**Epsylon Sp. z o.o. Sp. Komandytowa**

**Compiler Version Notes (Continued)**

<table>
<thead>
<tr>
<th>Compiler</th>
<th>Version</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>ifort</td>
<td>18.0.0</td>
<td>20170811</td>
</tr>
<tr>
<td>icc</td>
<td>18.0.0</td>
<td>20170811</td>
</tr>
<tr>
<td>ifort</td>
<td>18.0.0</td>
<td>20170811</td>
</tr>
<tr>
<td>Copyright (C) 1985-2017 Intel Corporation. All rights reserved.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

### FC 507.cactuBSSN_r (peak)

```plaintext
icpc (ICC) 18.0.0 20170811
icc (ICC) 18.0.0 20170811
ifort (IFORT) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.
```

---

### FC 503.bwaves_r (base, peak)

```plaintext
ifort (IFORT) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.
```

---

### FC 554.roms_r (peak)

```plaintext
ifort (IFORT) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.
```

---

### CC 521.wrf_r (base)

```plaintext
ifort (IFORT) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.
```

---

### CC 521.wrf_r (peak)

```plaintext
ifort (IFORT) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.
```

---

### CC 527.cam4_r (base)

```plaintext
ifort (IFORT) 18.0.0 20170811
icc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.
```

---

### CC 527.cam4_r (peak)

```plaintext
ifort (IFORT) 18.0.0 20170811
icc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.
```
### 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

### Base Portability Flags

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

### Base Optimization Flags

C benchmarks:
- -xCORE-AVX512 -ipo -03 -no-prec-div -qopt-prefetch
- -ffinite-math-only -qopt-mem-layout-trans=3

C++ benchmarks:
- -xCORE-AVX512 -ipo -03 -no-prec-div -qopt-prefetch

(Continued on next page)
Epsylon Sp. z o.o. Sp. Komandytowa

eterio 210 RA1 (Intel Xeon Gold 6134, 3.20 GHz)

SPECraten2017_fp_base = 123
SPECraten2017_fp_peak = 125

CPU2017 License: 9081
Test Sponsor: Epsylon Sp. z o.o. Sp. Komandytowa
Test Date: Feb-2018
Hardware Availability: Sep-2017
Tested by: Epsylon Sp. z o.o. Sp. Komandytowa
Software Availability: Sep-2017

Base Optimization Flags (Continued)

C++ benchmarks (continued):
-ffinite-math-only -qopt-mem-layout-trans=3
Fortran benchmarks:
-xCORE-AVX512 -ipo -O3 -no-prec-div -qopt-prefetch
-ffinite-math-only -qopt-mem-layout-trans=3 -nostandard-realloc-lhs
-align array32byte

Benchmarks using both Fortran and C:
-xCORE-AVX512 -ipo -O3 -no-prec-div -qopt-prefetch
-ffinite-math-only -qopt-mem-layout-trans=3 -nostandard-realloc-lhs
-align array32byte

Benchmarks using both C and C++:
-xCORE-AVX512 -ipo -O3 -no-prec-div -qopt-prefetch
-ffinite-math-only -qopt-mem-layout-trans=3

Benchmarks using Fortran, C, and C++:
-xCORE-AVX512 -ipo -O3 -no-prec-div -qopt-prefetch
-ffinite-math-only -qopt-mem-layout-trans=3 -nostandard-realloc-lhs
-align array32byte

Base Other Flags

C benchmarks:
-m64 -std=c11
C++ benchmarks:
-m64
Fortran benchmarks:
-m64

Benchmarks using both Fortran and C:
-m64 -std=c11

Benchmarks using both C and C++:
-m64 -std=c11

Benchmarks using Fortran, C, and C++:
-m64 -std=c11
SPEC CPU2017 Floating Point Rate Result

Epsylon Sp. z o.o. Sp. Komandytowa
eterio 210 RA1 (Intel Xeon Gold 6134, 3.20 GHz)

SPECrate2017_fp_base = 123
SPECrate2017_fp_peak = 125

CPU2017 License: 9081
Test Sponsor: Epsylon Sp. z o.o. Sp. Komandytowa
Tested by: Epsylon Sp. z o.o. Sp. Komandytowa

Test Date: Feb-2018
Hardware Availability: Sep-2017

Software Availability: Sep-2017

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

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:
519.lbmr_r: -prof-gen(pass 1) -prof-use(pass 2) -ipo -xCORE-AVX512 -O3 -no-prec-div -qopt-prefetch -ffinite-math-only -qopt-mem-layout-trans=3

538.imagick_r: -xCORE-AVX512 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only -qopt-mem-layout-trans=3

544.nab_r: Same as 519.lbmr_r

C++ benchmarks:
-prof-gen(pass 1) -prof-use(pass 2) -ipo -xCORE-AVX512 -O3 -no-prec-div -qopt-prefetch -ffinite-math-only -qopt-mem-layout-trans=3

Fortran benchmarks:

(Continued on next page)
Epsylon Sp. z o.o. Sp. Komandytowa
eterio 210 RA1 (Intel Xeon Gold 6134, 3.20 GHz)

SPECrate2017_fp_base = 123
SPECrate2017_fp_peak = 125

CPU2017 License: 9081
Test Sponsor: Epsylon Sp. z o.o. Sp. Komandytowa
Test Date: Feb-2018
Tested by: Epsylon Sp. z o.o. Sp. Komandytowa
Hardware Availability: Sep-2017
Software Availability: Sep-2017

Peak Optimization Flags (Continued)

503.bwaves_r: -xCORE-AVX512 -ipo -O3 -no-prec-div -qopt-prefetch
                -ffinite-math-only -qopt-mem-layout-trans=3
                -nostandard-realloc-lhs -align array32byte

549.fotonik3d_r: Same as 503.bwaves_r

554.roms_r: -prof-gen(pass 1) -prof-use(pass 2) -ipo -xCORE-AVX512
                -O3 -no-prec-div -qopt-prefetch -ffinite-math-only
                -qopt-mem-layout-trans=3 -nostandard-realloc-lhs
                -align array32byte

Benchmarks using both Fortran and C:
-prof-gen(pass 1) -prof-use(pass 2) -ipo -xCORE-AVX512 -O3
-prec-div -qopt-prefetch -ffinite-math-only
-qopt-mem-layout-trans=3 -nostandard-realloc-lhs -align array32byte

Benchmarks using both C and C++:
-prec-gen(pass 1) -prof-use(pass 2) -ipo -xCORE-AVX512 -O3
-prec-div -qopt-prefetch -ffinite-math-only
-qopt-mem-layout-trans=3

Benchmarks using Fortran, C, and C++:
-prec-gen(pass 1) -prof-use(pass 2) -ipo -xCORE-AVX512 -O3
-prec-div -qopt-prefetch -ffinite-math-only
-qopt-mem-layout-trans=3 -nostandard-realloc-lhs -align array32byte

Peak Other Flags

C benchmarks:
-m64 -std=c11

C++ benchmarks:
-m64

Fortran benchmarks:
-m64

Benchmarks using both Fortran and C:
-m64 -std=c11

Benchmarks using both C and C++:
-m64 -std=c11

(Continued on next page)
<table>
<thead>
<tr>
<th>SPEC CPU2017 Floating Point Rate Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epsylon Sp. z o.o. Sp. Komandytowa</td>
</tr>
<tr>
<td>etio 210 RA1 (Intel Xeon Gold 6134, 3.20 GHz)</td>
</tr>
<tr>
<td>SPECrate2017_fp_base = 123</td>
</tr>
<tr>
<td>SPECrate2017_fp_peak = 125</td>
</tr>
</tbody>
</table>

**CPU2017 License:** 9081

- **Test Sponsor:** Epsylon Sp. z o.o. Sp. Komandytowa
- **Tested by:** Epsylon Sp. z o.o. Sp. Komandytowa
- **Test Date:** Feb-2018
- **Hardware Availability:** Sep-2017
- **Software Availability:** Sep-2017

**Peak Other Flags (Continued)**

Benchmarks using Fortran, C, and C++:

- `-m64` 
- `-std=c11`

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:


SPEC is a registered trademark of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

For questions about this result, please contact the tester. For other inquiries, please contact info@spec.org.

Tested with SPEC CPU2017 v1.0.2 on 2018-02-06 16:17:42-0500.
Report generated on 2018-10-31 17:12:42 by CPU2017 PDF formatter v6067.
Originally published on 2018-03-29.