### SPEC CPU®2017 Floating Point Speed Result

**Hewlett Packard Enterprise**  
(Test Sponsor: HPE)  
ProLiant DL325 Gen10 Plus  
(2.80 GHz, AMD EPYC 7282)

| SPECspeed®2017_fp_base = 62.8 |
| SPECspeed®2017_fp_peak = Not Run |

**CPU2017 License:** 3  
**Test Sponsor:** HPE  
**Tested by:** HPE  
**Test Date:** Apr-2020  
**Hardware Availability:** Mar-2020  
**Software Availability:** Aug-2019

#### Threads

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Threads</th>
</tr>
</thead>
<tbody>
<tr>
<td>603.bwaves_s</td>
<td>16</td>
</tr>
<tr>
<td>607.cactuBSSN_s</td>
<td>16</td>
</tr>
<tr>
<td>619.lbm_s</td>
<td>16</td>
</tr>
<tr>
<td>621.wrf_s</td>
<td>16</td>
</tr>
<tr>
<td>627.cam4_s</td>
<td>16</td>
</tr>
<tr>
<td>628.pop2_s</td>
<td>16</td>
</tr>
<tr>
<td>638.imagick_s</td>
<td>16</td>
</tr>
<tr>
<td>644.nab_s</td>
<td>16</td>
</tr>
<tr>
<td>649.fotonik3d_s</td>
<td>16</td>
</tr>
<tr>
<td>654.roms_s</td>
<td>16</td>
</tr>
</tbody>
</table>

#### SPECspeed®2017_fp_base (62.8)

#### Hardware

- **CPU Name:** AMD EPYC 7282  
- **Max MHz:** 3200  
- **Nominal:** 2800  
- **Enabled:** 16 cores, 1 chip  
- **Orderable:** 1 chip  
- **Cache L1:** 32 KB I + 32 KB D on chip per core  
- **L2:** 512 KB I+D on chip per core  
- **L3:** 64 MB I+D on chip per chip, 16 MB shared / 4 cores  
- **Other:** None  
- **Memory:** 512 GB (8 x 64 GB 2Rx4 PC4-3200AA-R)  
- **Storage:** 1 x 800 GB SAS SSD, RAID 0  
- **Other:** None

#### Software

- **OS:** SUSE Linux Enterprise Server 15 (x86_64) SP1  
  Kernel 4.12.14-195-default  
- **Compiler:** C/++/Fortran: Version 2.0.0 of AOCC  
  Yes  
- **Firmware:** HPE BIOS Version A43 03/19/2020 released Mar-2020  
  xfs  
- **File System:** xfs  
  Run level 3 (multi-user)  
- **Base Pointers:** 64-bit  
  Not Applicable  
- **Peak Pointers:**  
  jemalloc: jemalloc memory allocator library v5.1.0  
  BIOS set to prefer performance at the cost of additional power usage
**SPEC CPU®2017 Floating Point Speed Result**

**Hewlett Packard Enterprise**
(Test Sponsor: HPE)
ProLiant DL325 Gen10 Plus
(2.80 GHz, AMD EPYC 7282)

SPECspeed®2017_fp_base = 62.8
SPECspeed®2017_fp_peak = Not Run

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

Test Date: Apr-2020
Hardware Availability: Mar-2020
Software Availability: Aug-2019

---

### Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Threads</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>603.bwaves_s</td>
<td>16</td>
<td>351</td>
<td>168</td>
<td>350</td>
<td>169</td>
<td>350</td>
<td>169</td>
</tr>
<tr>
<td>607.cactuBSSN_s</td>
<td>16</td>
<td>154</td>
<td>108</td>
<td>156</td>
<td>107</td>
<td>153</td>
<td>109</td>
</tr>
<tr>
<td>619.lbm_s</td>
<td>16</td>
<td>288</td>
<td>18.2</td>
<td>288</td>
<td>18.2</td>
<td>288</td>
<td>18.2</td>
</tr>
<tr>
<td>621.wrf_s</td>
<td>16</td>
<td>176</td>
<td>75.3</td>
<td>176</td>
<td>75.3</td>
<td>175</td>
<td>75.4</td>
</tr>
<tr>
<td>627.cam4_s</td>
<td>16</td>
<td>217</td>
<td>40.9</td>
<td>216</td>
<td>41.0</td>
<td>216</td>
<td>41.0</td>
</tr>
<tr>
<td>628.pop2_s</td>
<td>16</td>
<td>223</td>
<td>53.1</td>
<td>225</td>
<td>52.7</td>
<td>225</td>
<td>52.7</td>
</tr>
<tr>
<td>638.imagick_s</td>
<td>16</td>
<td>190</td>
<td>76.1</td>
<td>190</td>
<td>76.1</td>
<td>189</td>
<td>76.2</td>
</tr>
<tr>
<td>644.nab_s</td>
<td>16</td>
<td>170</td>
<td>103</td>
<td>170</td>
<td>103</td>
<td>170</td>
<td>103</td>
</tr>
<tr>
<td>649.fotonik3d_s</td>
<td>16</td>
<td>233</td>
<td>39.1</td>
<td>232</td>
<td>39.3</td>
<td>232</td>
<td>39.3</td>
</tr>
<tr>
<td>654.roms_s</td>
<td>16</td>
<td>273</td>
<td>57.8</td>
<td>272</td>
<td>57.8</td>
<td>275</td>
<td>57.2</td>
</tr>
</tbody>
</table>

**SPECspeed®2017_fp_base = 62.8**
**SPECspeed®2017_fp_peak = Not Run**

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

### Compiler Notes

The AMD64 AOCC Compiler Suite is available at http://developer.amd.com/amd-aocc/

### Submit Notes

The config file option 'submit' was used. 'numactl' was used to bind copies to the cores. See the configuration file for details.

### Operating System Notes

'ulimit -s unlimited' was used to set environment stack size
'ulimit -l 2097152' was used to set environment locked pages in memory limit

runcpu command invoked through numactl i.e.:
numactl --interleave=all runcpu <etc>

Set dirty_ratio=8 to limit dirty cache to 8% of memory
Set swappiness=1 to swap only if necessary
Set zone_reclaim_mode=1 to free local node memory and avoid remote memory
sync then drop_caches=3 to reset caches before invoking runcpu

dirty_ratio, swappiness, zone_reclaim_mode and drop_caches were all set using privileged echo (e.g. echo 1 > /proc/sys/vm/swappiness).

Transparent huge pages set to 'always' for this run (OS default)
Environment Variables Notes

Environment variables set by runcpu before the start of the run:
- `GOMP_CPU_AFFINITY = "0-15"
- `LD_LIBRARY_PATH = "/home/cpu2017/amd_speed_aocc200_rome_C_lib/64;/home/cpu2017/amd_speed_aocc200_rome_C_lib/32:"`
- `MALLOC_CONF = "retain:true"
- `OMP_DYNAMIC = "false"
- `OMP_SCHEDULE = "static"
- `OMP_STACKSIZE = "128M"
- `OMP_THREAD_LIMIT = "16"

General Notes

Binaries were compiled on a system with 2x AMD EPYC 7601 CPU + 512GB Memory using Fedora 26

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: configured and built with GCC v9.1.0 in Ubuntu 19.04 with -O3 -znver2 -flto
jemalloc 5.1.0 is available here:
https://github.com/jemalloc/jemalloc/releases/download/5.1.0/jemalloc-5.1.0.tar.bz2

Platform Notes

BIOS Configuration
- Thermal Configuration set to Maximum Cooling
- SMT Mode set to Disabled
- Determinism Control set to Manual
- Performance Determinism set to Power Deterministic
- Minimum Processor Idle Power Core C-State set to C6 State
- Memory Patrol Scrubbing set to Disabled
- Workload Profile set to General Peak Frequency Compute
- NUMA memory domains per socket set to One memory domain per socket
- Power Regulator Set to OS Control Mode

Sysinfo program `/home/cpu2017/bin/sysinfo`
Rev: r6365 of 2019-08-21 295195f888a3d7edble6e46a485a0011
running on linux-3xau Thu Feb 14 09:23:12 2019

SUT (System Under Test) info as seen by some common utilities.
**SPEC CPU®2017 Floating Point Speed Result**

**Hewlett Packard Enterprise**
(Test Sponsor: HPE)
ProLiant DL325 Gen10 Plus
(2.80 GHz, AMD EPYC 7282)

<table>
<thead>
<tr>
<th>SPECspeed®2017_fp_base =</th>
<th>62.8</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECspeed®2017_fp_peak =</td>
<td>Not Run</td>
</tr>
</tbody>
</table>

**CPU2017 License:** 3  
**Test Sponsor:** HPE
**Test Date:** Apr-2020
**Hardware Availability:** Mar-2020
**Tested by:** HPE
**Software Availability:** Aug-2019

Platform Notes (Continued)

For more information on this section, see  
https://www.spec.org/cpu2017/Docs/config.html#sysinfo

From `/proc/cpuinfo`

```
    model name : AMD EPYC 7282 16-Core Processor
                 1 "physical id"s (chips)
                16 "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 : 16
                   siblings : 16
                   physical 0: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
```

From `lscpu`:
```
    Architecture:        x86_64
    CPU op-mode(s):      32-bit, 64-bit
    Byte Order:          Little Endian
    Address sizes:       48 bits physical, 48 bits virtual
    CPU(s):              16
    On-line CPU(s) list: 0-15
    Thread(s) per core:  1
    Core(s) per socket:  16
    Socket(s):           1
    NUMA node(s):        1
    Vendor ID:           AuthenticAMD
    CPU family:          23
    Model:               49
    Model name:          AMD EPYC 7282 16-Core Processor
    Stepping:            0
    CPU MHz:             2000.000
    CPU max MHz:         2800.0000
    CPU min MHz:         1500.0000
    BogoMIPS:            5589.34
    Virtualization:      AMD-V
    L1d cache:           32K
    L1i cache:           32K
    L2 cache:            512K
    L3 cache:            16384K
    NUMA node0 CPU(s):   0-15
    Flags:               fpu vme de pse tsc msr pae mce cmov
                        pat pse36 clflush mmx fxsr sse sse2 ht syscall nx mmxext fxsr_opt pdpe1gb rdtscp lm
                        constant_tsc rep_good nopl xtopology nonstop_tsc cpuid extd_apicid aperfmperf pni
                        pclmulqdq monitor ssse3 fma cx16 sse4_1 sse4_2 movbe popcnt aes xsave avx f16c
                        rdrand lahf_lm cmp_legacy svm extapic cr8_legacy abm sse4a misalignsse 3dnowprefetch
                        osvw ibs skinit wdt tce topoext perfctr_core perfctr_nb bpxt perfctr_l2 mwaitx cpb
                        cat_l3 cdp_l3 hw_pstate ssbd ibrs ibpb stibp vmmcall fs_base bmi1 avx2 smep bmi2
                        cqm rdt_a rdseed adx smap clflushopt clwb sha ni xsaveopt xsaves xsavec xgetbv1 xsaveas
```

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

Copyright 2017-2020 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant DL325 Gen10 Plus
(2.80 GHz, AMD EPYC 7282)

SPECspeed®2017_fp_base = 62.8
SPECspeed®2017_fp_peak = Not Run

CPU2017 License: 3
Test Sponsor: HPE
Tested by: HPE
Test Sponsor: HPE
Hardware Availability: Mar-2020
Software Availability: Aug-2019
Test Date: Apr-2020

Platform Notes (Continued)

cqm_llc cqm_occuipp_llc cqm_mbm_total cqm_mbm_local clzero irperf xsaverptr arat npt
lbrv svm_lock nrk_save tsc_scale vmcb_clean flushbyasid decodeassists pausefilter
pfthreshold avic v_vmsave_vmload vgif umip rdpid overflow_recov succor smca

/proc/cpuinfo cache data
cache size : 512 KB

From numactl --hardware WARNING: a numactl 'node' might or might not correspond to a
physical chip.
available: 1 nodes (0)
node 0 cpus: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
node 0 size: 515739 MB
node 0 free: 515019 MB
node distances:
node 0
0: 10

From /proc/meminfo
MemTotal: 528117520 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

From /etc/*release*/etc/*version*
os-release:
NAME="SLES"
VERSION="15-SP1"
VERSION_ID="15.1"
PRETTY_NAME="SUSE Linux Enterprise Server 15 SP1"
ID="sles"
ID_LIKE="suse"
ANSI_COLOR="0;32"
CPE_NAME="cpe:/o:suse:sles:15:sp1"

uname -a:
Linux linux-3xau 4.12.14-195-default #1 SMP Tue May 7 10:55:11 UTC 2019 (8fba516)
x86_64 x86_64 x86_64 GNU/Linux

Kernel self-reported vulnerability status:

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: __user pointer sanitization
CVE-2017-5715 (Spectre variant 2): Mitigation: Full AMD retpoline, IBPB:
conditional, IBRS_FW, STIBP: disabled, RSB

(Continued on next page)
Spec CPU®2017 Floating Point Speed Result
Copyright 2017-2020 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant DL325 Gen10 Plus
(2.80 GHz, AMD EPYC 7282)

SPECspeed®2017_fp_base = 62.8
SPECspeed®2017_fp_peak = Not Run

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

Test Date: Apr-2020
Hardware Availability: Mar-2020
Software Availability: Aug-2019

Platform Notes (Continued)

filling

run-level 3 Feb 14 09:21

SPEC is set to: /home/cpu2017
  Filesystem Type  Size  Used  Avail Use% Mounted on
  /dev/sda5    xfs   161G   29G  133G  18% /home

From /sys/devices/virtual/dmi/id
  BIOS: HPE A43 03/19/2020
  Vendor: HPE
  Product: ProLiant DL325 Gen10 Plus
  Product Family: ProLiant
  Serial: CN79290FKQ

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:
  8x Hynix HMAA8GR7AJR4N-XN 64 GB 2 rank 3200
  8x UNKNOWN NOT AVAILABLE

(End of data from sysinfo program)

Compiler Version Notes

==============================================================================
| C | 619.lbm_s(base) 638.imagick_s(base) 644.nab_s(base) |
==============================================================================
AOCC.LLVM.2.0.0.B191.2019_07_19 clang version 8.0.0 (CLANG: Jenkins
  AOCC_2_0_0-Build#191) (based on LLVM AOCC.LLVM.2.0.0.B191.2019_07_19)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /sppo/dev/compilers/aocc-compiler-2.0.0/bin

==============================================================================
| C++, C, Fortran | 607.cactuBSSN_s(base) |
==============================================================================
AOCC.LLVM.2.0.0.B191.2019_07_19 clang version 8.0.0 (CLANG: Jenkins
  AOCC_2_0_0-Build#191) (based on LLVM AOCC.LLVM.2.0.0.B191.2019_07_19)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /sppo/dev/compilers/aocc-compiler-2.0.0/bin
AOCC.LLVM.2.0.0.B191.2019_07_19 clang version 8.0.0 (CLANG: Jenkins

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

AOCC_2.0.0-Build#191) (based on LLVM AOCC.LLVM.2.0.0.B191.2019_07_19)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /sppo/dev/compilers/aocc-compiler-2.0.0/bin
AOCC.LLVM.2.0.0.B191.2019_07_19 clang version 8.0.0 (CLANG: Jenkins
AOCC_2.0.0-Build#191) (based on LLVM AOCC.LLVM.2.0.0.B191.2019_07_19)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /sppo/dev/compilers/aocc-compiler-2.0.0/bin

Base Compiler Invocation

C benchmarks:
clang

Fortran benchmarks:
flang

Benchmarks using both Fortran and C:
flang clang

(Continued on next page)
### Base Compiler Invocation (Continued)

Benchmarks using Fortran, C, and C++:

```bash
clang++ clang flang
```

### Base Portability Flags

- `603.bwaves_s`: `-DSPEC_LP64`
- `607.cactusBSSN_s`: `-DSPEC_LP64`
- `619.lbm_s`: `-DSPEC_LP64`
- `621.wrf_s`: `-DSPEC_CASE_FLAG -Mbyteswapio -DSPEC_LP64`
- `627.cam4_s`: `-DSPEC_CASE_FLAG -DSPEC_LP64`
- `628.pop2_s`: `-DSPEC_CASE_FLAG -Mbyteswapio -DSPEC_LP64`
- `638.imagick_s`: `-DSPEC_LP64`
- `644.nab_s`: `-DSPEC_LP64`
- `649.fotonik3d_s`: `-DSPEC_LP64`
- `654.roms_s`: `-DSPEC_LP64`

### Base Optimization Flags

#### C benchmarks:

- `-flto -Wl,-mluvm -Wl,-function-specialize`
- `-Wl,-mluvm -Wl,-region-vectorize -Wl,-mluvm -Wl,-vector-library=LIBMVEC`
- `-Wl,-mluvm -Wl,-reduce-array-computations=3 -O3 -ffast-math`
- `-march=znver2 -fstruct-layout=1 -mluvm -unroll-threshold=50`
- `-fremap-arrays -mluvm -function-specialize -mluvm -enable-gvn-hoist`
- `-mluvm -reduce-array-computations=3 -mluvm -global-vectorize-slp`
- `-mluvm -vector-library=LIBMVEC -mluvm -inline-threshold=1000`
- `-flv-function-specialization -z muldefs -DSPEC_OPENMP -fopenmp`
- `-DUSE_OPENMP -fopenmp=libomp -lomp -lpthread -ldl -lmvec -lamdlibm`
- `-ljemalloc -lflang`

#### Fortran benchmarks:

- `-flto -Wl,-mluvm -Wl,-function-specialize`
- `-Wl,-mluvm -Wl,-region-vectorize -Wl,-mluvm -Wl,-vector-library=LIBMVEC`
- `-Wl,-mluvm -Wl,-reduce-array-computations=3 -O3 -march=znver2`
- `-funroll-loops -Mrecursive -mluvm -vector-library=LIBMVEC -z muldefs`
- `-Kieee -fno-finite-math-only -DSPEC_OPENMP -fopenmp -DUSE_OPENMP`
- `-fopenmp=libomp -lomp -lpthread -ldl -lmvec -lamdlibm -ljemalloc -lflang`

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

**Hewlett Packard Enterprise**
(Test Sponsor: HPE)
ProLiant DL325 Gen10 Plus
(2.80 GHz, AMD EPYC 7282)

<table>
<thead>
<tr>
<th>SPECspeed®2017_fp_base =</th>
<th>62.8</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECspeed®2017_fp_peak =</td>
<td>Not Run</td>
</tr>
</tbody>
</table>

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

---

**Base Optimization Flags (Continued)**

Benchmarks using both Fortran and C:
- `-flto -Wl,-mllvm -Wl,-function-specialize`
- `-Wl,-mllvm -Wl,-region-vectorize -Wl,-mllvm -Wl,-vector-library=LIBMVEC`
- `-Wl,-mllvm -Wl,-reduce-array-computations=3 -O3 -ffast-math`
- `-march=znver2 -fstruct-layout=3 -mllvm -unroll-threshold=50`
- `-fremap-arrays -mllvm -function-specialize -mllvm -enable-gvn-hoist`
- `-mllvm -reduce-array-computations=3 -mllvm -global-vectorize-slp`
- `-mllvm -vector-library=LIBMVEC -mllvm -inline-threshold=1000`
- `-flv-function-specialization -funroll-loops -Mrecursive -z muldefs`
- `-Kieee -fno-finite-math-only -DSPEC_OPENMP -fopenmp -DUSE_OPENMP`
- `-fopenmp=libomp -lomp -lpthread -ldl -lmvec -lamdlibm -ljemalloc -liflang`

Benchmarks using Fortran, C, and C++:
- `-std=c++98 -flto -Wl,-mllvm -Wl,-function-specialize`
- `-Wl,-mllvm -Wl,-region-vectorize -Wl,-mllvm -Wl,-vector-library=LIBMVEC`
- `-Wl,-mllvm -Wl,-reduce-array-computations=3`
- `-Wl,-mllvm -Wl,-suppress-fmas -O3 -ffast-math -march=znver2`
- `-fstruct-layout=3 -mllvm -unroll-threshold=50 -fremap-arrays`
- `-mllvm -function-specialize -mllvm -enable-gvn-hoist`
- `-mllvm -reduce-array-computations=3 -mllvm -global-vectorize-slp`
- `-mllvm -vector-library=LIBMVEC -mllvm -inline-threshold=1000`
- `-flv-function-specialization -mllvm -loop-unswitch-threshold=200000`
- `-mllvm -unroll-threshold=100 -mllvm -enable-partial-unswitch`
- `-funroll-loops -Mrecursive -z muldefs -Kieee -fno-finite-math-only`
- `-DSPEC_OPENMP -fopenmp -DUSE_OPENMP -fopenmp=libomp -lomp -lpthread -ldl -lmvec -lamdlibm -ljemalloc -liflang`

---

**Base Other Flags**

**C benchmarks:**
- `-Wno-return-type`

**Fortran benchmarks:**
- `-Wno-return-type`

**Benchmarks using both Fortran and C:**
- `-Wno-return-type`

**Benchmarks using Fortran, C, and C++:**
- `-Wno-return-type`
Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant DL325 Gen10 Plus
(2.80 GHz, AMD EPYC 7282)

SPECspeed®2017_fp_base = 62.8
SPECspeed®2017_fp_peak = Not Run

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

Test Date: Apr-2020
Hardware Availability: Mar-2020
Software Availability: Aug-2019

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/aocc200-flags-C1-HPE.xml

SPEC CPU and SPECspeed are registered trademarks 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 CPU®2017 v1.1.0 on 2019-02-14 09:23:11-0500.
Originally published on 2020-05-12.