

SPEC® CPU2017 Floating Point Speed Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

(Test Sponsor: Red Hat, Inc.)

SPECspeed2017_fp_base = 20.0

SPECspeed2017_fp_peak = 24.3

CPU2017 License: 0002991

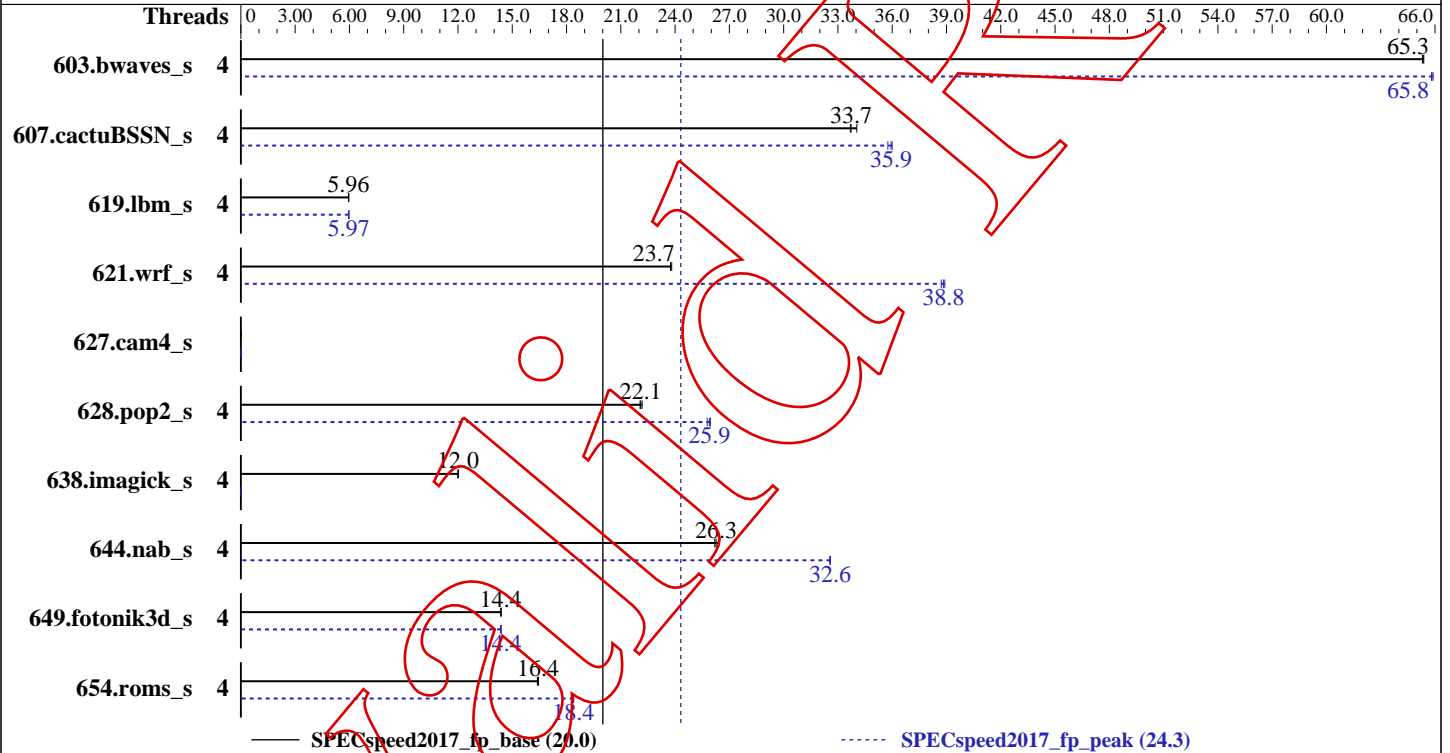
Test Sponsor: Red Hat, Inc.

Tested by: Vladimir Makarov

Test Date: Apr-2024

Hardware Availability: Now

Software Availability:



Hardware

CPU Name: AMD Ryzen 7 3800X 8-Core Processor
Max MHz.:
Nominal: 1896.572
Enabled: 16 cores, 1 chip, threads/core
Orderable:
Cache L1:
L2: 512 KB
L3:
Other:
Memory: 32889052 KB
'N GB (M x N GB nRxn PCn-nnnnnR-n, ECC)'
Storage: 69 GB add more disk info here
Other:

Software

OS: Linux 5.5.11-200.fc31.x86_64
5.5.11-200.fc31.x86_64
Compiler: gcc version 14.0.1 20240404 (experimental) (GCC)
Parallel: Yes
Firmware:
File System: ext4
System State: multiuser
Base Pointers: 64-bit
Peak Pointers: 64-bit
Other:

Errors

'reportable' flag not set during run
627.cam4_s (base) did not have enough runs!
627.cam4_s (base) had invalid runs!
638.imagick_s (peak) did not have enough runs!
627.cam4_s (peak) did not have enough runs!

(Continued on next page)

SPEC CPU2017 Floating Point Speed Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

(Test Sponsor: Red Hat, Inc.)

SPECspeed2017_fp_base = 20.0

SPECspeed2017_fp_peak = 24.3

CPU2017 License: 0002991
Test Sponsor: Red Hat, Inc.
Tested by: Vladimir Makarov

Test Date: Apr-2024
Hardware Availability: Now
Software Availability:

Errors (Continued)

638.imagick_s (peak) had invalid runs!
627.cam4_s (peak) had invalid runs!
Run of 627.cam4_s (base) was not valid; status is CE
Run of 627.cam4_s (peak) was not valid; status is CE
Run of 638.imagick_s (peak) was not valid; status is CE
Unknown flags were used! See
<https://www.spec.org/cpu2017/Docs/runcpu.html#flagsurl>
for information about how to get rid of this error.

Results Table

Benchmark	Base							Peak						
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
603.bwaves_s	4	903	65.3	902	65.4	903	65.3	4	895	65.9	896	65.8	896	65.8
607.cactuBSSN_s	4	495	33.7	490	34.0	494	33.7	4	466	35.8	463	36.0	464	35.9
619.lbm_s	4	879	5.96	879	5.96	879	5.96	4	878	5.97	878	5.97	878	5.97
621.wrf_s	4	555	23.8	557	23.7	557	23.7	4	340	38.9	341	38.8	342	38.7
627.cam4_s	1	0.00	0.00					1	0.00	0.00				
628.pop2_s	4	538	22.1	537	22.1	535	22.2	4	457	26.0	458	25.9	461	25.8
638.imagick_s	4	1203	12.0	1200	12.0	1200	12.0	1	0.00	0.00				
644.nab_s	4	665	26.3	662	26.4	667	26.2	4	537	32.6	536	32.6	536	32.6
649.fotonik3d_s	4	635	14.4	634	14.4	634	14.4	4	634	14.4	634	14.4	634	14.4
654.roms_s	4	961	16.4	957	16.5	959	16.4	4	856	18.4	856	18.4	856	18.4

SPECspeed2017_fp_base = 20.0

SPECspeed2017_fp_peak = 24.3

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

General Notes

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

```
LD_LIBRARY_PATH = */notnfs/vmakarov/perf/sbox/gcc/local.spec2017.x86_64/inst.to-ryzen/lib64:/notnfs/vmakarov/perf/sbox/gcc/local.spec2017.x86_64/inst.to-ryzen/lib:/usr/lib64:/usr/lib:/lib64*  
OMP_STACKSIZE = "120M"
```

Platform Notes

Sysinfo program /notnfs/vmakarov/spec2017/bin/sysinfo
Rev: r5797 of 2017-06-14 96c45e4568ad54c135fd618bcc091c0f
running on to-ryzen.usersys.redhat.com Thu Apr 4 22:25:32 2024

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>

(Continued on next page)

SPEC CPU2017 Floating Point Speed Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

(Test Sponsor: Red Hat, Inc.)

SPECspeed2017_fp_base = 20.0

SPECspeed2017_fp_peak = 24.3

CPU2017 License: 0002991

Test Sponsor: Red Hat, Inc.

Tested by: Vladimir Makarov

Test Date: Apr-2024

Hardware Availability: Now

Software Availability:

Platform Notes (Continued)

From /proc/cpuinfo

model name : AMD Ryzen 7 3800X 8-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 : 8

siblings : 16

physical 0: cores 0 1 2 3 4 5 6 7

From lscpu:

Architecture: x86_64

CPU op-mode(s): 32-bit, 64-bit

Byte Order: Little Endian

Address sizes: 43 bits physical, 48 bits virtual

CPU(s): 16

On-line CPU(s) list: 0-15

Thread(s) per core: 2

Core(s) per socket: 8

Socket(s): 1

NUMA node(s): 1

Vendor ID: AuthenticAMD

CPU family: 23

Model: 113

Model name: AMD Ryzen 7 3800X 8-Core Processor

Stepping: 0

Frequency boost: enabled

CPU MHz: 2615.740

CPU max MHz: 3900.0000

CPU min MHz: 2200.0000

BogoMIPS: 7785.73

Virtualization: AMD-V

L1d cache: 256 KiB

L1i cache: 256 KiB

L2 cache: 4 MiB

L3 cache: 32 MiB

NUMA node0 CPU(s): 0-15

Vulnerability Itlb multihit: Not affected

Vulnerability L1tf: Not affected

Vulnerability Mds: Not affected

Vulnerability Meltdown: Not affected

Vulnerability Spec store bypass: Mitigation; Speculative Store Bypass disabled via prctl and seccomp

Vulnerability Spectre v1: Mitigation; usercopy/swapgs barriers and __user pointer sanitization

Vulnerability Spectre v2: Mitigation; Full AMD retpoline, IBPB conditional,

(Continued on next page)

SPEC CPU2017 Floating Point Speed Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

(Test Sponsor: Red Hat, Inc.)

SPECspeed2017_fp_base = 20.0

SPECspeed2017_fp_peak = 24.3

CPU2017 License: 0002991

Test Sponsor: Red Hat, Inc.

Tested by: Vladimir Makarov

Test Date: Apr-2024

Hardware Availability: Now

Software Availability:

Platform Notes (Continued)

STIBP always-on, RSB filling
Vulnerability Tsx async abort: Not affected
Flags: fpu vme de pse tsc msr pae mce cx8 apic sep mtrr
pge mca cmov pat pse36 clflush mmx fxsr sse sse2 ht syscall nx mmxext fxsr_opt
pdpe1gb rdtscp lm constant_tsc rep_good nopl nonstop_tsc cpuid extd_apicid
aperfmpperf 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 bpext
perfctr_llc mwaitx cpb cat_l3 cdp_l3 hw_pstate sme ssbd mba sev ibpb stibp vmmcall
fsgsbase bmi1 avx2 smep bmi2 cqm rdt_a rdseed adx smap clflushopt clwb sha_ni
xsaveopt xsavec xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbm_total cqm_mbm_local
clzero irperf xsaveerptr rdpru wbnoinvd arat npt lbrv svm_lock nrip_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.

```
From /proc/meminfo
MemTotal: 32889052 kB
HugePages_Total: 0
Hugepagesize: 2048 kB
```

```
From /etc/*release* /etc/*version*
fedora-release: Fedora release 31 (Thirty One)
os-release:
NAME= Fedora
VERSION="31 (Workstation Edition)"
ID= fedora
VERSION_ID=31
VERSION_CODENAME=""
PLATFORM_ID="platform:f31"
PRETTY_NAME="Fedora 31 (Workstation Edition)"
ANSI_COLOR="0;34"
redhat-release: Fedora release 31 (Thirty One)
system-release: Fedora release 31 (Thirty One)
system-release-cpe: cpe:/o:fedoraproject:fedora:31
```

```
uname -a:
Linux to-ryzen.usersys.redhat.com 5.5.11-200.fc31.x86_64 #1 SMP Mon Mar 23 17:32:43
UTC 2020 x86_64 x86_64 x86_64 GNU/Linux
```

```
run-level 3 2024-02-27 12:34
```

(Continued on next page)

SPEC CPU2017 Floating Point Speed Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

(Test Sponsor: Red Hat, Inc.)

SPECspeed2017_fp_base = 20.0

SPECspeed2017_fp_peak = 24.3

CPU2017 License: 0002991

Test Sponsor: Red Hat, Inc.

Tested by: Vladimir Makarov

Test Date: Apr-2024

Hardware Availability: Now

Software Availability:

Platform Notes (Continued)

SPEC is set to: /notnfs/vmakarov/spec2017

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/mapper/fedora_localhost--live-root	ext4	69G	63G	2.9G	96%	/

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.

(End of data from sysinfo program)

Compiler Version Notes

=====
FC 607.cactuBSSN_s(base, peak)
=====

Using built-in specs.

COLLECT_GCC=/notnfs/vmakarov/perf/sbox/gcc/local.spec2017.x86_64/inst.to-ryzen/bin/g++

COLLECT_LTO_WRAPPER=/notnfs/vmakarov/perf/sbox/gcc/local.spec2017.x86_64/inst.to-ryzen/libexec/gcc/x86_64-pc-linux-gnu/14.0.1/lto-wrapper

Target: x86_64-pc-linux-gnu

Configured with:

```
/notnfs/vmakarov/perf/sbox/gcc/local.spec2017.x86_64/src/configure
--prefix=/notnfs/vmakarov/perf/sbox/gcc/local.spec2017.x86_64/inst.to-ryzen
--srcdir=/notnfs/vmakarov/perf/sbox/gcc/local.spec2017.x86_64/src
--disable-bootstrap --disable-libcilkrts --enable-checking=release
--enable-languages=c,c++,fortran
```

Thread model: posix

Supported LTO compression algorithms: zlib

gcc version 14.0.1 20240404 (experimental) (GCC)

Using built-in specs.

COLLECT_GCC=/notnfs/vmakarov/perf/sbox/gcc/local.spec2017.x86_64/inst.to-ryzen/bin/gcc

COLLECT_LTO_WRAPPER=/notnfs/vmakarov/perf/sbox/gcc/local.spec2017.x86_64/inst.to-ryzen/libexec/gcc/x86_64-pc-linux-gnu/14.0.1/lto-wrapper

Target: x86_64-pc-linux-gnu

Configured with:

```
/notnfs/vmakarov/perf/sbox/gcc/local.spec2017.x86_64/src/configure
--prefix=/notnfs/vmakarov/perf/sbox/gcc/local.spec2017.x86_64/inst.to-ryzen
--srcdir=/notnfs/vmakarov/perf/sbox/gcc/local.spec2017.x86_64/src
--disable-bootstrap --disable-libcilkrts --enable-checking=release
--enable-languages=c,c++,fortran
```

Thread model: posix

Supported LTO compression algorithms: zlib

gcc version 14.0.1 20240404 (experimental) (GCC)

Using built-in specs.

COLLECT_GCC=/notnfs/vmakarov/perf/sbox/gcc/local.spec2017.x86_64/inst.to-ryzen/bin/gfortran

COLLECT_LTO_WRAPPER=/notnfs/vmakarov/perf/sbox/gcc/local.spec2017.x86_64/inst.to-ryzen/libexec/gcc/x86_64-pc-linux-gnu/14.0.1/lto-wrapper

Target: x86_64-pc-linux-gnu

(Continued on next page)

SPEC CPU2017 Floating Point Speed Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

(Test Sponsor: Red Hat, Inc.)

SPECspeed2017_fp_base = 20.0

SPECspeed2017_fp_peak = 24.3

CPU2017 License: 0002991
Test Sponsor: Red Hat, Inc.
Tested by: Vladimir Makarov

Test Date: Apr-2024
Hardware Availability: Now
Software Availability:

Compiler Version Notes (Continued)

Configured with:

```
/notnfs/vmakarov/perf/sbox/gcc/local.spec2017.x86_64/src/configure  
--prefix=/notnfs/vmakarov/perf/sbox/gcc/local.spec2017.x86_64/inst.to-ryzen  
--srcdir=/notnfs/vmakarov/perf/sbox/gcc/local.spec2017.x86_64/src  
--disable-bootstrap --disable-libcilkrts --enable-checking=release  
--enable-languages=c,c++,fortran
```

Thread model: posix

Supported LTO compression algorithms: zlib
gcc version 14.0.1 20240404 (experimental) (GCC)

=====
CC 619.lbm_s(base, peak) 638.imagick_s(base) 644.nab_s(base, peak)
=====

Using built-in specs.

```
COLLECT_GCC=/notnfs/vmakarov/perf/sbox/gcc/local.spec2017.x86_64/inst.to-ryzen/bin/gcc  
COLLECT_LTO_WRAPPER=/notnfs/vmakarov/perf/sbox/gcc/local.spec2017.x86_64/inst.to-ryzen/libexec/gcc/x86_64-pc-linux-gnu/14.0.1/lto-wrapper  
Target: x86_64-pc-linux-gnu
```

Configured with:

```
/notnfs/vmakarov/perf/sbox/gcc/local.spec2017.x86_64/src/configure  
--prefix=/notnfs/vmakarov/perf/sbox/gcc/local.spec2017.x86_64/inst.to-ryzen  
--srcdir=/notnfs/vmakarov/perf/sbox/gcc/local.spec2017.x86_64/src  
--disable-bootstrap --disable-libcilkrts --enable-checking=release  
--enable-languages=c,c++,fortran
```

Thread model: posix

Supported LTO compression algorithms: zlib
gcc version 14.0.1 20240404 (experimental) (GCC)

=====
FC 603.lwaves_s(base, peak) 649.fotonik3d_s(base, peak) 654.roms_s(base,
peak)
=====

Using built-in specs.

```
COLLECT_GCC=/notnfs/vmakarov/perf/sbox/gcc/local.spec2017.x86_64/inst.to-ryzen/bin/gfortran  
COLLECT_LTO_WRAPPER=/notnfs/vmakarov/perf/sbox/gcc/local.spec2017.x86_64/inst.to-ryzen/libexec/gcc/x86_64-pc-linux-gnu/14.0.1/lto-wrapper  
Target: x86_64-pc-linux-gnu
```

Configured with:

```
/notnfs/vmakarov/perf/sbox/gcc/local.spec2017.x86_64/src/configure  
--prefix=/notnfs/vmakarov/perf/sbox/gcc/local.spec2017.x86_64/inst.to-ryzen  
--srcdir=/notnfs/vmakarov/perf/sbox/gcc/local.spec2017.x86_64/src  
--disable-bootstrap --disable-libcilkrts --enable-checking=release  
--enable-languages=c,c++,fortran
```

Thread model: posix

Supported LTO compression algorithms: zlib
gcc version 14.0.1 20240404 (experimental) (GCC)

(Continued on next page)

SPEC CPU2017 Floating Point Speed Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

(Test Sponsor: Red Hat, Inc.)

SPECspeed2017_fp_base = 20.0

SPECspeed2017_fp_peak = 24.3

CPU2017 License: 0002991

Test Sponsor: Red Hat, Inc.

Tested by: Vladimir Makarov

Test Date: Apr-2024

Hardware Availability: Now

Software Availability:

Compiler Version Notes (Continued)

=====
CC 621.wrf_s(base, peak) 628.pop2_s(base, peak)
=====

Using built-in specs.

COLLECT_GCC=/notnfs/vmakarov/perf/sbox/gcc/local.spec2017.x86_64/inst.to-ryzen/bin/gfortran

COLLECT_LTO_WRAPPER=/notnfs/vmakarov/perf/sbox/gcc/local.spec2017.x86_64/inst.to-ryzen/libexec/gcc/x86_64-pc-linux-gnu/14.0.1/lto-wrapper

Target: x86_64-pc-linux-gnu

Configured with:

```
/notnfs/vmakarov/perf/sbox/gcc/local.spec2017.x86_64/src/configure
--prefix=/notnfs/vmakarov/perf/sbox/gcc/local.spec2017.x86_64/inst.to-ryzen
--srcdir=/notnfs/vmakarov/perf/sbox/gcc/local.spec2017.x86_64/src
--disable-bootstrap --disable-libcilkrts --enable-checking=release
--enable-languages=c,c++,fortran
```

Thread model: posix

Supported LTO compression algorithms: zlib

gcc version 14.0.1 20240404 (experimental) (GCC)

Using built-in specs.

COLLECT_GCC=/notnfs/vmakarov/perf/sbox/gcc/local.spec2017.x86_64/inst.to-ryzen/bin/gcc

COLLECT_LTO_WRAPPER=/notnfs/vmakarov/perf/sbox/gcc/local.spec2017.x86_64/inst.to-ryzen/libexec/gcc/x86_64-pc-linux-gnu/14.0.1/lto-wrapper

Target: x86_64-pc-linux-gnu

Configured with:

```
/notnfs/vmakarov/perf/sbox/gcc/local.spec2017.x86_64/src/configure
--prefix=/notnfs/vmakarov/perf/sbox/gcc/local.spec2017.x86_64/inst.to-ryzen
--srcdir=/notnfs/vmakarov/perf/sbox/gcc/local.spec2017.x86_64/src
--disable-bootstrap --disable-libcilkrts --enable-checking=release
--enable-languages=c,c++,fortran
```

Thread model: posix

Supported LTO compression algorithms: zlib

gcc version 14.0.1 20240404 (experimental) (GCC)

Base Unknown Flags

603.bwaves_s: "-fallow-argument-mismatchARRAY(0xa321630)

"-fallow-argument-mismatchARRAY(0xa31d6e0)

607.cactuBSSN_s: "-fcommon -std=c++14ARRAY(0xa308578)

"-fcommonARRAY(0xa2ffe18)

"-fallow-argument-mismatchARRAY(0xa354a30)

"-fcommon -std=c++14ARRAY(0xa35d5d8)

619.lbm_s: "-fcommonARRAY(0xa2f7ec8) "-fcommonARRAY(0xa3057c8)

621.wrf_s: "-fallow-argument-mismatchARRAY(0xa2f7f88)

"-fcommonARRAY(0xa354f28)

(Continued on next page)

SPEC CPU2017 Floating Point Speed Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

(Test Sponsor: Red Hat, Inc.)

SPECspeed2017_fp_base = 20.0

SPECspeed2017_fp_peak = 24.3

CPU2017 License: 0002991

Test Sponsor: Red Hat, Inc.

Tested by: Vladimir Makarov

Test Date: Apr-2024

Hardware Availability: Now

Software Availability:

Base Unknown Flags (Continued)

621.wrf_s (continued):

"-fallow-argument-mismatchARRAY(0xa483940)

628.pop2_s: "-fallow-argument-mismatchARRAY(0xa3075a8)

"-fcommonARRAY(0xa36b7a8)

"-fallow-argument-mismatchARRAY(0xa484240)

638.imagick_s: "-fcommonARRAY(0xa3551f8) "-fcommonARRAY(0xa484468)

644.nab_s: "-fcommonARRAY(0xa35d590) "-fcommonARRAY(0xa484c40)

649.fotonik3d_s: "-fallow-argument-mismatchARRAY(0xa3551e0)

"-fallow-argument-mismatchARRAY(0xa4851b0)

654.roms_s: "-fallow-argument-mismatchARRAY(0xa372208)

"-fallow-argument-mismatchARRAY(0xa408f58)

Peak Unknown Flags

603.bwaves_s: "-fallow-argument-mismatchARRAY(0xa321630)

"-fallow-argument-mismatchARRAY(0xa31d6e0)

607.cactuBSSN_s: "-fcommon -std=c++14ARRAY(0xa308578)

"-fcommonARRAY(0xa2ffe18)

"-fallow-argument-mismatchARRAY(0xa354a30)

"-fcommon -std=c++14ARRAY(0xa35d5d8)

619.lbm_s: "-fcommonARRAY(0xa2f7ec8) "-fcommonARRAY(0xa3057c8)

621.wrf_s: "-fallow-argument-mismatchARRAY(0xa2f7f88)

"-fcommonARRAY(0xa354f28)

"-fallow-argument-mismatchARRAY(0xa483940)

628.pop2_s: "-fallow-argument-mismatchARRAY(0xa3075a8)

"-fcommonARRAY(0xa36b7a8)

"-fallow-argument-mismatchARRAY(0xa484240)

638.imagick_s: "-fcommonARRAY(0xa3551f8) "-fcommonARRAY(0xa484468)

644.nab_s: "-fcommonARRAY(0xa35d590) "-fcommonARRAY(0xa484c40)

649.fotonik3d_s: "-fallow-argument-mismatchARRAY(0xa3551e0)

"-fallow-argument-mismatchARRAY(0xa4851b0)

(Continued on next page)

SPEC CPU2017 Floating Point Speed Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

(Test Sponsor: Red Hat, Inc.)

SPECspeed2017_fp_base = 20.0

SPECspeed2017_fp_peak = 24.3

CPU2017 License: 0002991

Test Sponsor: Red Hat, Inc.

Tested by: Vladimir Makarov

Test Date: Apr-2024

Hardware Availability: Now

Software Availability:

Peak Unknown Flags (Continued)

654.roms_s: "-fallow-argument-mismatchARRAY(0xa372208)
"-fallow-argument-mismatchARRAY(0xa408f58)

603.bwaves_s: "-fallow-argument-mismatchARRAY(0xa481cb8)
"-fallow-argument-mismatchARRAY(0xa409300)
"-fltoARRAY(0xa4e0f48)

607.cactuBSSN_s: "-fcommon -std=c++14ARRAY(0xa409520)
"-fcommonARRAY(0xa4f5f18)
"-fallow-argument-mismatchARRAY(0xa499a48)
"-fcommon -std=c++14ARRAY(0xa4f76f8)
"-fltoARRAY(0xa4c9a40)

619.lbm_s: "-fcommonARRAY(0xa4dbf38) "-fcommonARRAY(0xa4f6470)
"-fltoARRAY(0xa4f7770)

621.wrf_s: "-fallow-argument-mismatchARRAY(0xa4fc1d8)
"-fcommonARRAY(0xa4f3310)
"-fallow-argument-mismatchARRAY(0xa4f32f8)
"-fltoARRAY(0xa4e1918)

628.pop2_s: "-fallow-argument-mismatchARRAY(0xa4f6698)
"-fcommonARRAY(0xa481ec8)
"-fallow-argument-mismatchARRAY(0xa4e2740)
"-fltoARRAY(0xa4fcd48)

644.nab_s: "-fcommonARRAY(0xa4fc640) "-fcommonARRAY(0xa4f77d0)
"-fltoARRAY(0xa4fa4a0)

649.fotonik3d_s: "-fallow-argument-mismatchARRAY(0xa484030)
"-fallow-argument-mismatchARRAY(0xa4e0be8)
"-fltoARRAY(0xa4ffa48)

654.roms_s: "-fallow-argument-mismatchARRAY(0xa4dbe78)
"-fallow-argument-mismatchARRAY(0xa4e1f48)
"-fltoARRAY(0xa5005f8)

Base Compiler Invocation

C benchmarks:

gcc

Fortran benchmarks:

gfortran

(Continued on next page)

SPEC CPU2017 Floating Point Speed Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

(Test Sponsor: Red Hat, Inc.)

SPECspeed2017_fp_base = 20.0

SPECspeed2017_fp_peak = 24.3

CPU2017 License: 0002991

Test Sponsor: Red Hat, Inc.

Tested by: Vladimir Makarov

Test Date: Apr-2024

Hardware Availability: Now

Software Availability:

Base Compiler Invocation (Continued)

Benchmarks using both Fortran and C (except as noted below):

gfortran gcc

Benchmarks using Fortran, C, and C++:

g++ gcc gfortran

Base Portability Flags

603.bwaves_s: -DSPEC_LP64

607.cactuBSSN_s: -DSPEC_LP64

619.lbm_s: -DSPEC_LP64

621.wrf_s: -DSPEC_CASE_FLAG -fconvert=big-endian -DSPEC_LP64

628.pop2_s: -DSPEC_CASE_FLAG -fconvert=big-endian -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:

-O2 -mtune=generic -fopenmp -DSPEC_OPENMP

Fortran benchmarks:

-O2 -mtune=generic -DSPEC_OPENMP -fopenmp

Benchmarks using both Fortran and C:

621.wrf_s: -O2 -mtune=generic -DSPEC_OPENMP -fopenmp

628.pop2_s: Same as 621.wrf_s

Benchmarks using Fortran, C, and C++:

-O2 -mtune=generic -fopenmp -DSPEC_OPENMP

SPEC CPU2017 Floating Point Speed Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

(Test Sponsor: Red Hat, Inc.)

SPECspeed2017_fp_base = 20.0

SPECspeed2017_fp_peak = 24.3

CPU2017 License: 0002991

Test Sponsor: Red Hat, Inc.

Tested by: Vladimir Makarov

Test Date: Apr-2024

Hardware Availability: Now

Software Availability:

Peak Compiler Invocation

C benchmarks (except as noted below):

gcc

Fortran benchmarks:

gfortran

Benchmarks using both Fortran and C (except as noted below):

gfortran gcc

Benchmarks using Fortran, C, and C++:

g++ gcc gfortran

Peak Portability Flags

603.bwaves_s: -DSPEC_LP64

607.cactuBSSN_s: -DSPEC_LP64

619.lbm_s: -DSPEC_LP64

621.wrf_s: -DSPEC_CASE_FLAG -fconvert=big-endian -DSPEC_LP64

628.pop2_s: -DSPEC_CASE_FLAG -fconvert=big-endian -DSPEC_LP64

644.nab_s: -DSPEC_LP64

649.fotonik3d_s: -DSPEC_LP64

654.roms_s: -DSPEC_LP64

Peak Optimization Flags

C benchmarks:

619.lbm_s: -Ofast -mtune=corei7 -march=core-avx2 -fopenmp
-DSPEC_OPENMP

644.nab_s: Same as 619.lbm_s

Fortran benchmarks:

603.bwaves_s: -Ofast -mtune=corei7 -march=core-avx2 -DSPEC_OPENMP
-fopenmp -fno-stack-arrays

649.fotonik3d_s: -Ofast -mtune=corei7 -march=core-avx2 -DSPEC_OPENMP
-fopenmp

654.roms_s: Same as 649.fotonik3d_s

(Continued on next page)

SPEC CPU2017 Floating Point Speed Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

(Test Sponsor: Red Hat, Inc.)

SPECspeed2017_fp_base = 20.0

SPECspeed2017_fp_peak = 24.3

CPU2017 License: 0002991

Test Sponsor: Red Hat, Inc.

Tested by: Vladimir Makarov

Test Date: Apr-2024

Hardware Availability: Now

Software Availability:

Peak Optimization Flags (Continued)

Benchmarks using both Fortran and C:

```
621.wrf_s: -Ofast -mtune=corei7 -march=core-avx2 -DSPEC_OPENMP  
-fopenmp
```

```
628.pop2_s: Same as 621.wrf_s
```

Benchmarks using Fortran, C, and C++:

```
-Ofast -mtune=corei7 -march=core-avx2 -fopenmp -DSPEC_OPENMP
```

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 v1.0.1 on 2024-04-04 22:25:32-0400.

Report generated on 2024-04-05 08:24:33 by CPU2017 PDF formatter v5748.