SPEC CPU®2017 Floating Point Rate Result

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xFusion

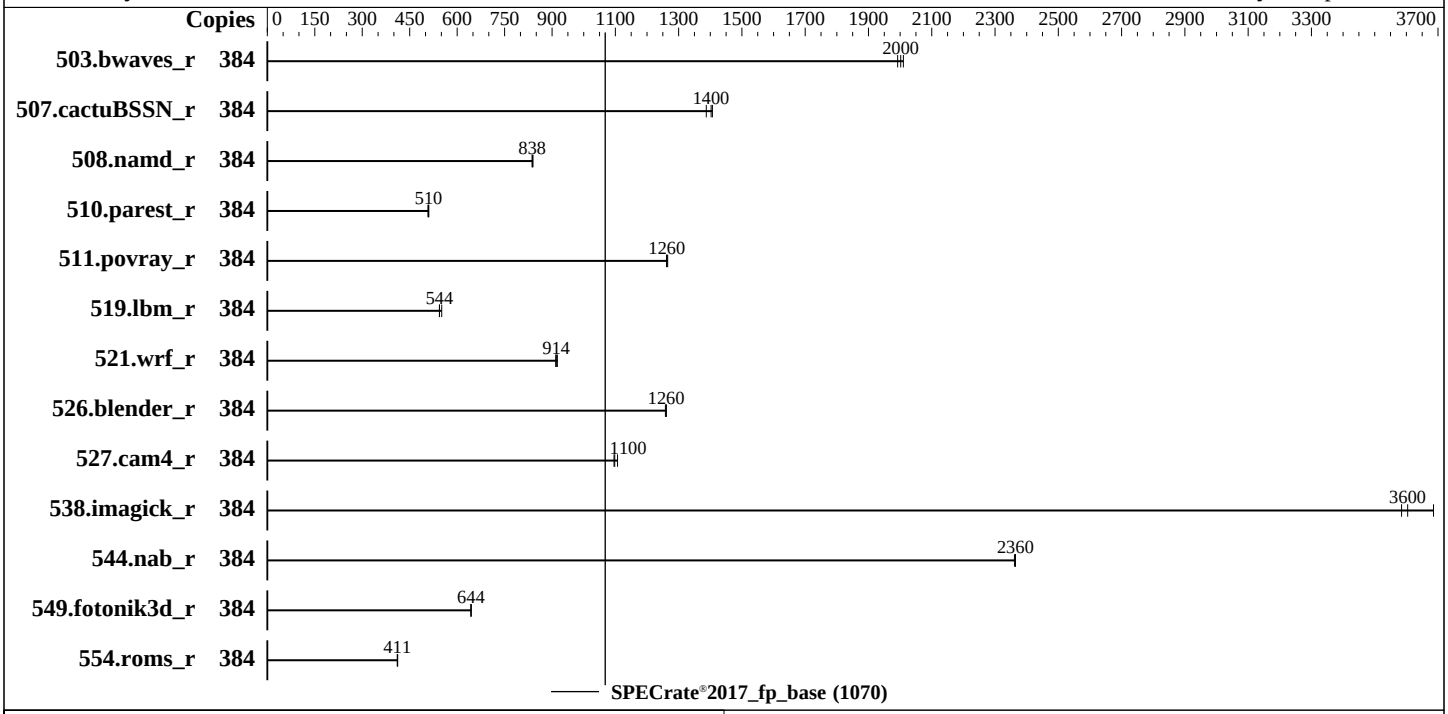
xFusion 9008 V5 (Intel Xeon Platinum 8260)

SPECrate®2017_fp_base = 1070

SPECrate®2017_fp_peak = Not Run

CPU2017 License: 6488
Test Sponsor: xFusion
Tested by: xFusion

Test Date: May-2022
Hardware Availability: Apr-2019
Software Availability: Sep-2021



Hardware

CPU Name:	Intel Xeon Platinum 8260
Max MHz:	3900
Nominal:	2400
Enabled:	192 cores, 8 chips, 2 threads/core
Orderable:	4,8 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
Other:	None
Memory:	3 TB (96 x 32 GB 2Rx4 PC4-2933Y-R)
Storage:	1 x 2400 GB SAS, 10000 RPM
Other:	None

Software

OS:	Red Hat Enterprise Linux release 8.3 (Ootpa) 4.18.0-240.el8.x86_64
Compiler:	C/C++: Version 2021.4.0 of Intel oneAPI DPC++/C++ Compiler Build 20210924 for Linux; Fortran: Version 2021.4.0 of Intel Fortran Compiler Classic Build 20210910 for Linux
Parallel:	No
Firmware:	Version 8.18 Released Sep-2021
File System:	ext4
System State:	Run level 3 (multi-user)
Base Pointers:	64-bit
Peak Pointers:	Not Applicable
Other:	jemalloc memory allocator V5.0.1
Power Management:	BIOS and OS set to prefer performance at the cost of additional power usage

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
503.bwaves_r	384	1916	2010	**1924**	**2000**	1933	1990							
507.cactuBSSN_r	384	346	1410	350	1390	**347**	**1400**							
508.namd_r	384	**436**	**838**	436	837	434	840							
510.parest_r	384	1970	510	1979	508	**1970**	**510**							
511.povray_r	384	709	1270	711	1260	**710**	**1260**							
519.lbm_r	384	734	551	**744**	**544**	744	544							
521.wrf_r	384	944	911	**942**	**914**	938	917							
526.blender_r	384	465	1260	464	1260	**464**	**1260**							
527.cam4_r	384	607	1110	613	1100	**612**	**1100**							
538.imagick_r	384	**265**	**3600**	259	3690	266	3580							
544.nab_r	384	273	2360	274	2360	**273**	**2360**							
549.fotonik3d_r	384	2324	644	2325	644	**2324**	**644**							
554.roms_r	384	1485	411	**1484**	**411**	1481	412							

SPECrate®2017_fp_base = 1070

SPECrate®2017_fp_peak = Not Run

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"
```

Environment Variables Notes

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

General Notes

```
Binaries compiled on a system with 2x Intel Xeon Platinum 8280M CPU + 384GB RAM
memory using Red Hat Enterprise Linux 8.4
Transparent Huge Pages enabled by default
Prior to runcpu invocation
Filesystem page cache synced and cleared with:
```

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General Notes (Continued)

```
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 https://github.com/jemalloc/jemalloc/releases
```

Platform Notes

```
BIOS configuration:
Power Policy Set to Performance
SNC Set to Enabled
IMC Interleaving set to 1-way interleave
XPT Prefetch set to Enabled

Sysinfo program /home/spec/bin/sysinfo
Rev: r6622 of 2021-04-07 982a61ec0915b55891ef0e16acafc64d
running on localhost.localdomain Sat May  7 00:08:54 2022

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 8260 CPU @ 2.40GHz
      8  "physical id"s (chips)
      384 "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 : 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 9 10 11 12 13 16 17 18 19 20 21 24 25 26 27 28 29
      physical 2: 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 3: 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 4: 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 5: 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 6: 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 7: cores 0 1 2 3 4 5 6 9 10 11 12 13 16 17 18 19 20 21 24 25 26 27 28 29
```

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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):              384
     On-line CPU(s) list: 0-383
     Thread(s) per core:  2
     Core(s) per socket:  24
     Socket(s):           8
     NUMA node(s):        16
     Vendor ID:           GenuineIntel
     CPU family:          6
     Model:               85
     Model name:          Intel(R) Xeon(R) Platinum 8260 CPU @ 2.40GHz
     Stepping:            7
     CPU MHz:             3100.004
     CPU max MHz:         3900.0000
     CPU min MHz:         1000.0000
     BogoMIPS:            4800.00
     Virtualization:      VT-x
     L1d cache:           32K
     L1i cache:           32K
     L2 cache:            1024K
     L3 cache:            36608K
     NUMA node0 CPU(s):   0-3,7-9,13-15,19,20,192-195,199-201,205-207,211,212
     NUMA node1 CPU(s):   4-6,10-12,16-18,21-23,196-198,202-204,208-210,213-215
     NUMA node2 CPU(s):   24-27,31,32,36-38,42-44,216-219,223,224,228-230,234-236
     NUMA node3 CPU(s):   28-30,33-35,39-41,45-47,220-222,225-227,231-233,237-239
     NUMA node4 CPU(s):   48-51,55-57,61-63,67,68,240-243,247-249,253-255,259,260
     NUMA node5 CPU(s):   52-54,58-60,64-66,69-71,244-246,250-252,256-258,261-263
     NUMA node6 CPU(s):   72-75,79-81,85-87,91,92,264-267,271-273,277-279,283,284
     NUMA node7 CPU(s):   76-78,82-84,88-90,93-95,268-270,274-276,280-282,285-287
     NUMA node8 CPU(s):   96-99,103-105,109-111,115,116,288-291,295-297,301-303,307,308
     NUMA node9 CPU(s):   100-102,106-108,112-114,117-119,292-294,298-300,304-306,309-311
     NUMA node10 CPU(s):  120-123,127-129,133-135,139,140,312-315,319-321,325-327,331,332
     NUMA node11 CPU(s):  124-126,130-132,136-138,141-143,316-318,322-324,328-330,333-335
     NUMA node12 CPU(s):  144-147,151-153,157-159,163,164,336-339,343-345,349-351,355,356
     NUMA node13 CPU(s):  148-150,154-156,160-162,165-167,340-342,346-348,352-354,357-359
     NUMA node14 CPU(s):  168-171,175,176,180-182,186-188,360-363,367,368,372-374,378-380
     NUMA node15 CPU(s):  172-174,177-179,183-185,189-191,364-366,369-371,375-377,381-383
     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 ds_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 cdp_l3 invpcid_single ssbd
     mba ibrs ibpb stibp ibrs_enhanced tpr_shadow vnmi flexpriority ept vpid ept_ad
```

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Platform Notes (Continued)

```
      fsgsbase tsc_adjust bmi1 hle avx2 smep bmi2 erms invpcid cqm mpx rdt_a avx512f
      avx512dq rdseed adx smap clflushopt clwb intel_pt avx512cd avx512bw avx512vl
      xsaveopt xsavec xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbm_total cqm_mbm_local
      dtherm ida arat pln pts pku ospke avx512_vnni md_clear flush_l1d arch_capabilities

 /proc/cpuinfo cache data
    cache size : 36608 KB

 From numactl --hardware
 WARNING: a numactl 'node' might or might not correspond to a physical chip.
   available: 16 nodes (0-15)
   node 0 cpus: 0 1 2 3 7 8 9 13 14 15 19 20 192 193 194 195 199 200 201 205 206 207 211
   212
   node 0 size: 191325 MB
   node 0 free: 184024 MB
   node 1 cpus: 4 5 6 10 11 12 16 17 18 21 22 23 196 197 198 202 203 204 208 209 210 213
   214 215
   node 1 size: 193320 MB
   node 1 free: 188575 MB
   node 2 cpus: 24 25 26 27 31 32 36 37 38 42 43 44 216 217 218 219 223 224 228 229 230
   234 235 236
   node 2 size: 193524 MB
   node 2 free: 188725 MB
   node 3 cpus: 28 29 30 33 34 35 39 40 41 45 46 47 220 221 222 225 226 227 231 232 233
   237 238 239
   node 3 size: 193530 MB
   node 3 free: 188729 MB
   node 4 cpus: 48 49 50 51 55 56 57 61 62 63 67 68 240 241 242 243 247 248 249 253 254
   255 259 260
   node 4 size: 193530 MB
   node 4 free: 188671 MB
   node 5 cpus: 52 53 54 58 59 60 64 65 66 69 70 71 244 245 246 250 251 252 256 257 258
   261 262 263
   node 5 size: 193530 MB
   node 5 free: 188636 MB
   node 6 cpus: 72 73 74 75 79 80 81 85 86 87 91 92 264 265 266 267 271 272 273 277 278
   279 283 284
   node 6 size: 193528 MB
   node 6 free: 188381 MB
   node 7 cpus: 76 77 78 82 83 84 88 89 90 93 94 95 268 269 270 274 275 276 280 281 282
   285 286 287
   node 7 size: 193530 MB
   node 7 free: 188682 MB
   node 8 cpus: 96 97 98 99 103 104 105 109 110 111 115 116 288 289 290 291 295 296 297
   301 302 303 307 308
   node 8 size: 193528 MB
   node 8 free: 188674 MB
```

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Platform Notes (Continued)

```
node 9 cpus: 100 101 102 106 107 108 112 113 114 117 118 119 292 293 294 298 299 300
304 305 306 309 310 311
node 9 size: 193528 MB
node 9 free: 188730 MB
node 10 cpus: 120 121 122 123 127 128 129 133 134 135 139 140 312 313 314 315 319 320
321 325 326 327 331 332
node 10 size: 193530 MB
node 10 free: 188730 MB
node 11 cpus: 124 125 126 130 131 132 136 137 138 141 142 143 316 317 318 322 323 324
328 329 330 333 334 335
node 11 size: 193528 MB
node 11 free: 188727 MB
node 12 cpus: 144 145 146 147 151 152 153 157 158 159 163 164 336 337 338 339 343 344
345 349 350 351 355 356
node 12 size: 193478 MB
node 12 free: 188684 MB
node 13 cpus: 148 149 150 154 155 156 160 161 162 165 166 167 340 341 342 346 347 348
352 353 354 357 358 359
node 13 size: 193528 MB
node 13 free: 188719 MB
node 14 cpus: 168 169 170 171 175 176 180 181 182 186 187 188 360 361 362 363 367 368
372 373 374 378 379 380
node 14 size: 193528 MB
node 14 free: 188721 MB
node 15 cpus: 172 173 174 177 178 179 183 184 185 189 190 191 364 365 366 369 370 371
375 376 377 381 382 383
node 15 size: 193012 MB
node 15 free: 188174 MB
node distances:
node   0   1   2   3   4   5   6   7   8   9  10  11  12  13  14  15
  0:  10  11  31  31  21  21  21  21  21  21  31  31  31  31  31  31
  1:  11  10  31  31  21  21  21  21  21  21  31  31  31  31  31  31
  2:  31  31  10  11  21  21  21  21  31  31  21  21  31  31  31  31
  3:  31  31  11  10  21  21  21  21  31  31  21  21  31  31  31  31
  4:  21  21  21  21  10  11  31  31  31  31  31  31  21  21  31  31
  5:  21  21  21  21  11  10  31  31  31  31  31  31  21  21  31  31
  6:  21  21  21  21  31  31  10  11  31  31  31  31  31  31  21  21
  7:  21  21  21  21  31  31  11  10  31  31  31  31  31  31  21  21
  8:  21  21  31  31  31  31  31  31  10  11  21  21  31  31  21  21
  9:  21  21  31  31  31  31  31  31  11  10  21  21  31  31  21  21
 10:  31  31  21  21  31  31  31  31  21  21  10  11  21  21  31  31
 11:  31  31  21  21  31  31  31  31  21  21  11  10  21  21  31  31
 12:  31  31  31  31  21  21  31  31  31  31  21  21  10  11  21  21
 13:  31  31  31  31  21  21  31  31  31  31  21  21  11  10  21  21
 14:  31  31  31  31  31  31  21  21  21  21  31  31  21  21  10  11
 15:  31  31  31  31  31  31  21  21  21  21  31  31  21  21  11  10
```

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Platform Notes (Continued)

```
From /proc/meminfo
   MemTotal:       3168365696 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="8.3 (Ootpa)"
      ID="rhel"
      ID_LIKE="fedora"
      VERSION_ID="8.3"
      PLATFORM_ID="platform:el8"
      PRETTY_NAME="Red Hat Enterprise Linux 8.3 (Ootpa)"
      ANSI_COLOR="0;31"
   redhat-release: Red Hat Enterprise Linux release 8.3 (Ootpa)
   system-release: Red Hat Enterprise Linux release 8.3 (Ootpa)
   system-release-cpe: cpe:/o:redhat:enterprise_linux:8.3:ga

uname -a:
   Linux localhost.localdomain 4.18.0-240.el8.x86_64 #1 SMP Wed Sep 23 05:13:10 EDT 2020
   x86_64 x86_64 x86_64 GNU/Linux

Kernel self-reported vulnerability status:

CVE-2018-12207 (iTLB Multihit):                         KVM: Mitigation: Split huge pages
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): Not affected
CVE-2019-11135 (TSX Asynchronous Abort):                  Mitigation: TSX disabled

run-level 3 May 6 18:30
```

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Platform Notes (Continued)

```
 SPEC is set to: /home/spec
    Filesystem     Type  Size  Used Avail Use% Mounted on
    /dev/sdb1      ext4  2.0T   89G  1.8T   5% /home/spec

 From /sys/devices/virtual/dmi/id
     Vendor:         xFusion
     Product:        9008 V5
     Product Family: Purley
     Serial:         123456

 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:
     38x Hynix HMA84GR7CJR4N-WM 32 GB 2 rank 2933
     9x Hynix HMA84GR7JJR4N-WM 32 GB 2 rank 2933
     49x Samsung M393A4K40CB2-CVF 32 GB 2 rank 2933

 BIOS:
    BIOS Vendor:       INSYDE Corp.
    BIOS Version:      8.18
    BIOS Date:         09/06/2021
    BIOS Revision:     8.18

 (End of data from sysinfo program)
```

Compiler Version Notes

```
==============================================================================
C               | 519.lbm_r(base) 538.imagick_r(base) 544.nab_r(base)
------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
  Version 2021.4.0 Build 20210924
Copyright (C) 1985-2021 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------

==============================================================================
C++             | 508.namd_r(base) 510.parest_r(base)
------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
  Version 2021.4.0 Build 20210924
Copyright (C) 1985-2021 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------
```

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Compiler Version Notes (Continued)

```
==============================================================================
C++, C          | 511.povray_r(base) 526.blender_r(base)
------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
  Version 2021.4.0 Build 20210924
Copyright (C) 1985-2021 Intel Corporation. All rights reserved.
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
  Version 2021.4.0 Build 20210924
Copyright (C) 1985-2021 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------

==============================================================================
C++, C, Fortran | 507.cactuBSSN_r(base)
------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
  Version 2021.4.0 Build 20210924
Copyright (C) 1985-2021 Intel Corporation. All rights reserved.
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
  Version 2021.4.0 Build 20210924
Copyright (C) 1985-2021 Intel Corporation. All rights reserved.
Intel(R) Fortran Intel(R) 64 Compiler Classic for applications running on
  Intel(R) 64, Version 2021.4.0 Build 20210910_000000
Copyright (C) 1985-2021 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------------

==============================================================================
Fortran         | 503.bwaves_r(base) 549.fotonik3d_r(base) 554.roms_r(base)
------------------------------------------------------------------------------
Intel(R) Fortran Intel(R) 64 Compiler Classic for applications running on
  Intel(R) 64, Version 2021.4.0 Build 20210910_000000
Copyright (C) 1985-2021 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------------

==============================================================================
Fortran, C      | 521.wrf_r(base) 527.cam4_r(base)
------------------------------------------------------------------------------
Intel(R) Fortran Intel(R) 64 Compiler Classic for applications running on
  Intel(R) 64, Version 2021.4.0 Build 20210910_000000
Copyright (C) 1985-2021 Intel Corporation.  All rights reserved.
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
  Version 2021.4.0 Build 20210924
Copyright (C) 1985-2021 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------
```

Base Compiler Invocation

C benchmarks:
icx

C++ benchmarks:
icpx

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
ifort icx

Benchmarks using both C and C++:
icpx icx

Benchmarks using Fortran, C, and C++:
icpx icx ifort

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_LINUX -funsigned-char
527.cam4_r: -DSPEC_LP64 -DSPEC_CASE_FLAG
538.imagick_r: -DSPEC_LP64
544.nab_r: -DSPEC_LP64
549.fotonik3d_r: -DSPEC_LP64
554.roms_r: -DSPEC_LP64

Base Optimization Flags

C benchmarks:
-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-boundaries -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

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2017/flags/Intel-ic2021-official-linux64_revA.html
http://www.spec.org/cpu2017/flags/xFusion-Platform-Settings-CSL-V1.1.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2017/flags/Intel-ic2021-official-linux64_revA.xml
http://www.spec.org/cpu2017/flags/xFusion-Platform-Settings-CSL-V1.1.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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