SPEC CPU®2017 Floating Point Rate Result

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xFusion
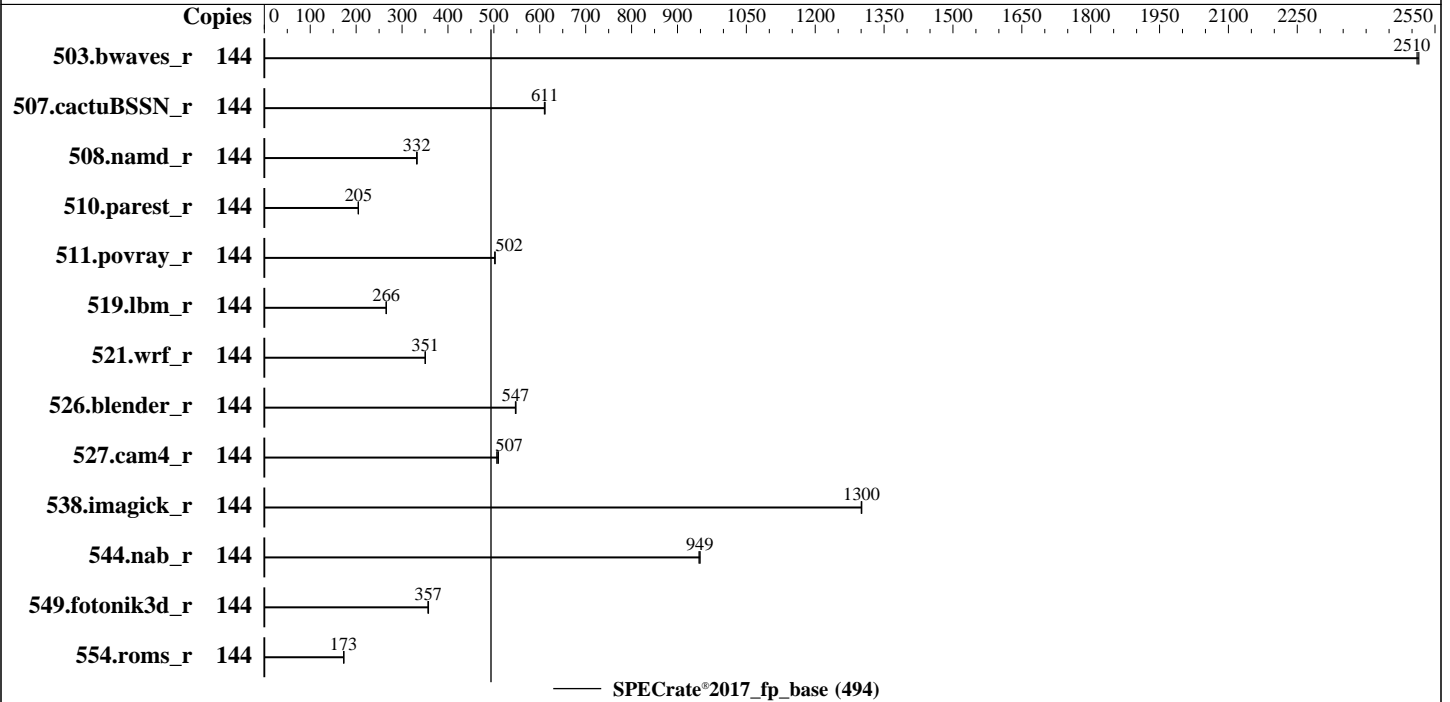
xFusion 1288H V6 (Intel Xeon Platinum 8352V)

$SPECrate®2017\_fp\_base =$ 494

$SPECrate®2017\_fp\_peak =$ Not Run

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

Test Date: Mar-2023
Hardware Availability: Apr-2021
Software Availability: May-2022

Copies

- **503.bwaves_r 144** — 2510
- **507.cactuBSSN_r 144** — 611
- **508.namd_r 144** — 332
- **510.parest_r 144** — 205
- **511.povray_r 144** — 502
- **519.lbm_r 144** — 266
- **521.wrf_r 144** — 351
- **526.blender_r 144** — 547
- **527.cam4_r 144** — 507
- **538.imagick_r 144** — 1300
- **544.nab_r 144** — 949
- **549.fotonik3d_r 144** — 357
- **554.roms_r 144** — 173

SPECrate®2017_fp_base (494)

Hardware

CPU Name: Intel Xeon Platinum 8352V
 Max MHz: 3500
 Nominal: 2100
Enabled: 72 cores, 2 chips, 2 threads/core
Orderable: 1,2 chips
Cache L1: 32 KB I + 48 KB D on chip per core
 L2: 1.25 MB I+D on chip per core
 L3: 54 MB I+D on chip per chip
 Other: None
Memory: 512 GB (16 x 32 GB 2Rx4 PC4-3200AA-R, running at 2933)
Storage: 1 x 960 GB SATA SSD
Other: None

Software

OS: Red Hat Enterprise Linux 8.4 (Ootpa)
 4.18.0-305.el8.x86_64
Compiler: C/C++: Version 2022.1 of Intel oneAPI DPC++/C++ Compiler for Linux;
 Fortran: Version 2022.1 of Intel Fortran Compiler for Linux;
Parallel: No
Firmware: Version 1.35 Released Feb-2023
File System: xfs
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

Standard Performance Evaluation Corporation (info@spec.org)

https://www.spec.org/

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Results Table

Benchmark	Base Copies	Base Seconds	Base Ratio	Base Seconds	Base Ratio	Base Seconds	Base Ratio	Peak Copies	Peak Seconds	Peak Ratio	Peak Seconds	Peak Ratio	Peak Seconds	Peak Ratio
503.bwaves_r	144	**575**	**2510**	575	2510	574	2510							
507.cactuBSSN_r	144	299	610	**298**	**611**	298	611							
508.namd_r	144	411	333	412	332	**412**	**332**							
510.parest_r	144	1837	205	1844	204	**1837**	**205**							
511.povray_r	144	670	502	669	503	**669**	**502**							
519.lbm_r	144	572	265	571	266	**571**	**266**							
521.wrf_r	144	**920**	**351**	921	350	919	351							
526.blender_r	144	**401**	**547**	400	548	401	547							
527.cam4_r	144	494	510	497	506	**496**	**507**							
538.imagick_r	144	**275**	**1300**	275	1300	275	1300							
544.nab_r	144	256	947	255	949	**255**	**949**							
549.fotonik3d_r	144	1569	358	**1571**	**357**	1575	356							
554.roms_r	144	1320	173	**1324**	**173**	1324	173							

SPECrate®2017_fp_base = **494**

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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 = "/spec2017_1.19/lib/intel64:/spec2017_1.19/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:

(Continued on next page)

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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:
Performance Profile Set to Performance
SNC Set to Enabled SNC2 (2-clusters)

Sysinfo program /spec2017_1.19/bin/sysinfo
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
running on localhost.localdomain Tue Mar  7 12:00:52 2023

SUT (System Under Test) info as seen by some common utilities.

-------------------------------------------------------------
Table of contents
-------------------------------------------------------------
 1. uname -a
 2. w
 3. Username
 4. ulimit -a
 5. sysinfo process ancestry
 6. /proc/cpuinfo
 7. lscpu
 8. numactl --hardware
 9. /proc/meminfo
10. who -r
11. Systemd service manager version: systemd 239 (239-45.el8)
12. Services, from systemctl list-unit-files
13. Linux kernel boot-time arguments, from /proc/cmdline
14. cpupower frequency-info
15. tuned-adm active
16. sysctl
17. /sys/kernel/mm/transparent_hugepage
18. /sys/kernel/mm/transparent_hugepage/khugepaged
```

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Platform Notes (Continued)

```
 19. OS release
 20. Kernel self-reported vulnerability status, from /sys/devices/system/cpu/vulnerabilities
 21. Disk information
 22. /sys/devices/virtual/dmi/id
 23. dmidecode
 24. BIOS
 -----------------------------------------------------------


 -----------------------------------------------------------
 1. uname -a
   Linux localhost.localdomain 4.18.0-305.el8.x86_64 #1 SMP Thu Apr 29 08:54:30 EDT 2021 x86_64 x86_64 x86_64
   GNU/Linux


 -----------------------------------------------------------
 2. w
    12:00:52 up 21:12,  2 users,  load average: 92.88, 130.94, 138.05
   USER      TTY       FROM              LOGIN@    IDLE   JCPU    PCPU WHAT
   root      tty1      -                 07:46    4:14m  1.90s  0.01s -bash
   root      pts/0     70.167.0.2        07:45    4:14m  0.02s  0.02s -bash


 -----------------------------------------------------------
 3. Username
   From environment variable $USER:  root


 -----------------------------------------------------------
 4. ulimit -a
   core file size          (blocks, -c) 0
   data seg size           (kbytes, -d) unlimited
   scheduling priority             (-e) 0
   file size               (blocks, -f) unlimited
   pending signals                 (-i) 2059989
   max locked memory       (kbytes, -l) 64
   max memory size         (kbytes, -m) unlimited
   open files                      (-n) 1024
   pipe size            (512 bytes, -p) 8
   POSIX message queues     (bytes, -q) 819200
   real-time priority              (-r) 0
   stack size              (kbytes, -s) unlimited
   cpu time               (seconds, -t) unlimited
   max user processes              (-u) 2059989
   virtual memory          (kbytes, -v) unlimited
   file locks                      (-x) unlimited


 -----------------------------------------------------------
 5. sysinfo process ancestry
  /usr/lib/systemd/systemd --switched-root --system --deserialize 18
  login -- root
```

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Platform Notes (Continued)

```
 -bash
 -bash
 runcpu --define default-platform-flags --copies 144 -c ic2022.1-lin-core-avx512-rate-20220316.cfg --define
   smt-on --define cores=72 --define physicalfirst --define invoke_with_interleave --define drop_caches
    --tune base -o all fprate
 runcpu --define default-platform-flags --copies 144 --configfile ic2022.1-lin-core-avx512-rate-20220316.cfg
   --define smt-on --define cores=72 --define physicalfirst --define invoke_with_interleave --define
   drop_caches --tune base --output_format all --nopower --runmode rate --tune base --size refrate fprate
   --nopreenv --note-preenv --logfile $SPEC/tmp/CPU2017.015/templogs/preenv.fprate.015.0.log --lognum 015.0
    --from_runcpu 2
 specperl $SPEC/bin/sysinfo
 $SPEC = /spec2017_1.19


 ----------------------------------------------------------
 6. /proc/cpuinfo
    model name        : Intel(R) Xeon(R) Platinum 8352V CPU @ 2.10GHz
    vendor_id         : GenuineIntel
    cpu family        : 6
    model             : 106
    stepping          : 6
    microcode         : 0xd000363
    bugs              : spectre_v1 spectre_v2 spec_store_bypass swapgs
    cpu cores         : 36
    siblings          : 72
    2 physical ids (chips)
    144 processors (hardware threads)
    physical id 0: core ids 0-35
    physical id 1: core ids 0-35
    physical id 0: apicids 0-71
    physical id 1: apicids 128-199
  Caution: /proc/cpuinfo data regarding chips, cores, and threads is not necessarily reliable, especially for
   virtualized systems.  Use the above data carefully.


 ----------------------------------------------------------
 7. lscpu

 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):              144
   On-line CPU(s) list: 0-143
   Thread(s) per core:  2
   Core(s) per socket:  36
   Socket(s):           2
   NUMA node(s):        4
   Vendor ID:           GenuineIntel
```

(Continued on next page)

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Platform Notes (Continued)

```
   BIOS Vendor ID:        Intel(R) Corporation
   CPU family:            6
   Model:                 106
   Model name:            Intel(R) Xeon(R) Platinum 8352V CPU @ 2.10GHz
   BIOS Model name:       Intel(R) Xeon(R) Platinum 8352V CPU @ 2.10GHz
   Stepping:              6
   CPU MHz:               2500.000
   BogoMIPS:              4200.00
   Virtualization:        VT-x
   L1d cache:             48K
   L1i cache:             32K
   L2 cache:              1280K
   L3 cache:              55296K
   NUMA node0 CPU(s):     0-17,72-89
   NUMA node1 CPU(s):     18-35,90-107
   NUMA node2 CPU(s):     36-53,108-125
   NUMA node3 CPU(s):     54-71,126-143
   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 invpcid_single ssbd mba ibrs ibpb stibp
                          ibrs_enhanced tpr_shadow vnmi flexpriority ept vpid ept_ad fsgsbase tsc_adjust bmi1
                          hle avx2 smep bmi2 erms invpcid cqm rdt_a avx512f avx512dq rdseed adx smap avx512ifma
                          clflushopt clwb intel_pt avx512cd sha_ni avx512bw avx512vl xsaveopt xsavec xgetbv1
                          xsaves cqm_llc cqm_occup_llc cqm_mbm_total cqm_mbm_local split_lock_detect wbnoinvd
                          dtherm ida arat pln pts hwp_epp avx512vbmi umip pku ospke avx512_vbmi2 gfni vaes
                          vpclmulqdq avx512_vnni avx512_bitalg tme avx512_vpopcntdq la57 rdpid fsrm md_clear
                          pconfig flush_l1d arch_capabilities

   -----------------------------------------------------------
8. numactl --hardware
NOTE: a numactl 'node' might or might not correspond to a physical chip.
   available: 4 nodes (0-3)
   node 0 cpus: 0-17,72-89
   node 0 size: 128027 MB
   node 0 free: 118978 MB
   node 1 cpus: 18-35,90-107
   node 1 size: 129016 MB
   node 1 free: 121730 MB
   node 2 cpus: 36-53,108-125
   node 2 size: 129016 MB
   node 2 free: 121703 MB
   node 3 cpus: 54-71,126-143
   node 3 size: 128974 MB
   node 3 free: 120755 MB
```

(Continued on next page)

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Platform Notes (Continued)

```
   node distances:
   node    0    1    2    3
     0:   10   11   20   20
     1:   11   10   20   20
     2:   20   20   10   11
     3:   20   20   11   10


  ----------------------------------------------------------
9. /proc/meminfo
   MemTotal:       527394876 kB


  ----------------------------------------------------------
10. who -r
   run-level 3 Mar 6 14:48


  ----------------------------------------------------------
11. Systemd service manager version: systemd 239 (239-45.el8)
   Default Target  Status
   multi-user      running


  ----------------------------------------------------------
12. Services, from systemctl list-unit-files
   STATE        UNIT FILES
   enabled     NetworkManager NetworkManager-dispatcher NetworkManager-wait-online atd auditd autovt@ chronyd
                crond firewalld getty@ import-state irqbalance iscsi iscsi-onboot kdump libstoragemgmt
                   loadmodules lvm2-monitor mcelog mdmonitor microcode multipathd nis-domainname
                nvmefc-boot-connections rhsmcertd rsyslog selinux-autorelabel-mark smartd sshd sssd syslog
                        sysstat timedatex tuned udisks2 vdo
   disabled    arp-ethers blk-availability chrony-wait console-getty cpupower debug-shell ebtables httpd httpd@
                iprdump iprinit iprupdate ipsec iscsid iscsiuio kpatch kvm_stat ledmon nftables nvmf-autoconnect
                oddjobd phoromatic-client phoromatic-server phoronix-result-server php-fpm pmcd pmfind pmie
                pmie_check pmlogger pmlogger_check pmproxy psacct rdisc rhcd rhsm rhsm-facts serial-getty@ snmpd
                        snmptrapd sshd-keygen@ systemd-resolved tcsd
   generated   SystemTap compile-server gcc-toolset-10-stap-server gcc-toolset-10-systemtap
                gcc-toolset-9-stap-server gcc-toolset-9-systemtap mst scripts startup
   indirect    sssd-autofs sssd-kcm sssd-nss sssd-pac sssd-pam sssd-ssh sssd-sudo
   masked      systemd-timedated


  ----------------------------------------------------------
13. Linux kernel boot-time arguments, from /proc/cmdline
   BOOT_IMAGE=(hd0,gpt3)/boot/vmlinuz-4.18.0-305.el8.x86_64
   root=UUID=9304e5cd-2e1d-48f6-9359-484ddf980c8a
   ro
   crashkernel=auto
   resume=UUID=aff4e6f4-0757-4e74-b0fd-4e11814d5ccb
   rhgb
   quiet
```

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Platform Notes (Continued)

```
   idle=poll
   intel_idle.max_cstate=0


  ----------------------------------------------------------------
 14. cpupower frequency-info
  analyzing CPU 0:
    Unable to determine current policy
    boost state support:
      Supported: yes
      Active: yes


  ----------------------------------------------------------------
 15. tuned-adm active
   Current active profile: throughput-performance


  ----------------------------------------------------------------
 16. sysctl
  kernel.numa_balancing              1
  kernel.randomize_va_space          2
  vm.compaction_proactiveness        0
  vm.dirty_background_bytes          0
  vm.dirty_background_ratio         10
  vm.dirty_bytes                     0
  vm.dirty_expire_centisecs       3000
  vm.dirty_ratio                    40
  vm.dirty_writeback_centisecs     500
  vm.dirtytime_expire_seconds    43200
  vm.extfrag_threshold             500
  vm.min_unmapped_ratio              1
  vm.nr_hugepages                    0
  vm.nr_hugepages_mempolicy          0
  vm.nr_overcommit_hugepages         0
  vm.swappiness                     10
  vm.watermark_boost_factor      15000
  vm.watermark_scale_factor         10
  vm.zone_reclaim_mode               0

  ----------------------------------------------------------------
 17. /sys/kernel/mm/transparent_hugepage
  defrag         always defer defer+madvise [madvise] never
  enabled        [always] madvise never
  hpage_pmd_size  2097152
  shmem_enabled   always within_size advise [never] deny force


  ----------------------------------------------------------------
 18. /sys/kernel/mm/transparent_hugepage/khugepaged
  alloc_sleep_millisecs   60000
```

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Platform Notes (Continued)

```
  defrag                    1
  max_ptes_none           511
  max_ptes_swap            64
  pages_to_scan          4096
  scan_sleep_millisecs  10000


  ----------------------------------------------------------
19. OS release
  From /etc/*-release /etc/*-version
  os-release     Red Hat Enterprise Linux 8.4 (Ootpa)
  redhat-release Red Hat Enterprise Linux release 8.4 (Ootpa)
  system-release Red Hat Enterprise Linux release 8.4 (Ootpa)


  ----------------------------------------------------------
20. Kernel self-reported vulnerability status, from /sys/devices/system/cpu/vulnerabilities
  itlb_multihit       Not affected
  l1tf                Not affected
  mds                 Not affected
  meltdown            Not affected
  spec_store_bypass   Mitigation: Speculative Store Bypass disabled via prctl and seccomp
  spectre_v1          Mitigation: usercopy/swapgs barriers and __user pointer sanitization
  spectre_v2          Mitigation: Enhanced IBRS, IBPB: conditional, RSB filling
  srbds               Not affected
  tsx_async_abort     Not affected
For more information, see the Linux documentation on hardware vulnerabilities, for example
     https://www.kernel.org/doc/html/latest/admin-guide/hw-vuln/index.html


  ----------------------------------------------------------
21. Disk information
SPEC is set to: /spec2017_1.19
  Filesystem      Type  Size  Used Avail Use% Mounted on
  /dev/sda3       xfs   859G  144G  716G  17% /


  ----------------------------------------------------------
22. /sys/devices/virtual/dmi/id
    Vendor:         XFUSION
    Product:        1288H V6
    Product Family: Whitley
    Serial:         Serial


  ----------------------------------------------------------
23. dmidecode
  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:
```

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Platform Notes (Continued)

```
    16x Samsung M393A4K40DB3-CWE 32 GB 2 rank 3200, configured at 2933


  ----------------------------------------------------------
  24. BIOS
  (This section combines info from /sys/devices and dmidecode.)
    BIOS Vendor:      XFUSION
    BIOS Version:     1.35
    BIOS Date:        02/14/2023
    BIOS Revision:    1.35
```

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 2022.1.0 Build 20220316
Copyright (C) 1985-2022 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 2022.1.0 Build 20220316
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------


==============================================================================
C++, C            | 511.povray_r(base) 526.blender_r(base)
------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
  Version 2022.1.0 Build 20220316
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
  Version 2022.1.0 Build 20220316
Copyright (C) 1985-2022 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 2022.1.0 Build 20220316
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.
```

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  Version 2022.1.0 Build 20220316
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.
Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version
  2022.1.0 Build 20220316
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------


==============================================================================
Fortran       | 503.bwaves_r(base) 549.fotonik3d_r(base) 554.roms_r(base)
------------------------------------------------------------------------------
Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version
  2022.1.0 Build 20220316
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------


==============================================================================
Fortran, C    | 521.wrf_r(base) 527.cam4_r(base)
------------------------------------------------------------------------------
Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version
  2022.1.0 Build 20220316
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
  Version 2022.1.0 Build 20220316
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------
```

Base Compiler Invocation

C benchmarks:
```
icx
```

C++ benchmarks:
```
icpx
```

Fortran benchmarks:
```
ifx
```

Benchmarks using both Fortran and C:
```
ifx icx
```

Benchmarks using both C and C++:
```
icpx icx
```

Benchmarks using Fortran, C, and C++:
```
icpx icx ifx
```

Standard Performance Evaluation Corporation (info@spec.org)   https://www.spec.org/

SPEC CPU®2017 Floating Point Rate Result

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xFusion

SPECrate®2017_fp_base = 494

xFusion 1288H V6 (Intel Xeon Platinum 8352V)

SPECrate®2017_fp_peak = Not Run

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

Test Date: Mar-2023
Hardware Availability: Apr-2021
Software Availability: May-2022

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 -ljemalloc`
`-L/usr/local/jemalloc64-5.0.1/lib`

C++ benchmarks:
`-w -m64 -Wl,-z,muldefs -xCORE-AVX512 -Ofast -ffast-math -flto`
`-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -ljemalloc`
`-L/usr/local/jemalloc64-5.0.1/lib`

Fortran benchmarks:
`-w -m64 -Wl,-z,muldefs -xCORE-AVX512 -Ofast -ffast-math -flto`
`-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4`
`-nostandard-realloc-lhs -align array32byte -auto -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`
`-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 -ljemalloc`
`-L/usr/local/jemalloc64-5.0.1/lib`

(Continued on next page)

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xFusion

xFusion 1288H V6 (Intel Xeon Platinum 8352V)

SPECrate®2017_fp_base = 494

SPECrate®2017_fp_peak = Not Run

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

Test Date: Mar-2023
Hardware Availability: Apr-2021
Software Availability: May-2022

Base Optimization Flags (Continued)

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
-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-ic2022-official-linux64_revA.html
http://www.spec.org/cpu2017/flags/xFusion-Platform-Settings-ICX-V1.2.html

You can also download the XML flags sources by saving the following links:

http://www.spec.org/cpu2017/flags/Intel-ic2022-official-linux64_revA.xml
http://www.spec.org/cpu2017/flags/xFusion-Platform-Settings-ICX-V1.2.xml

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

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