



# SPEC CPU®2017 Floating Point Speed Result

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## xFusion

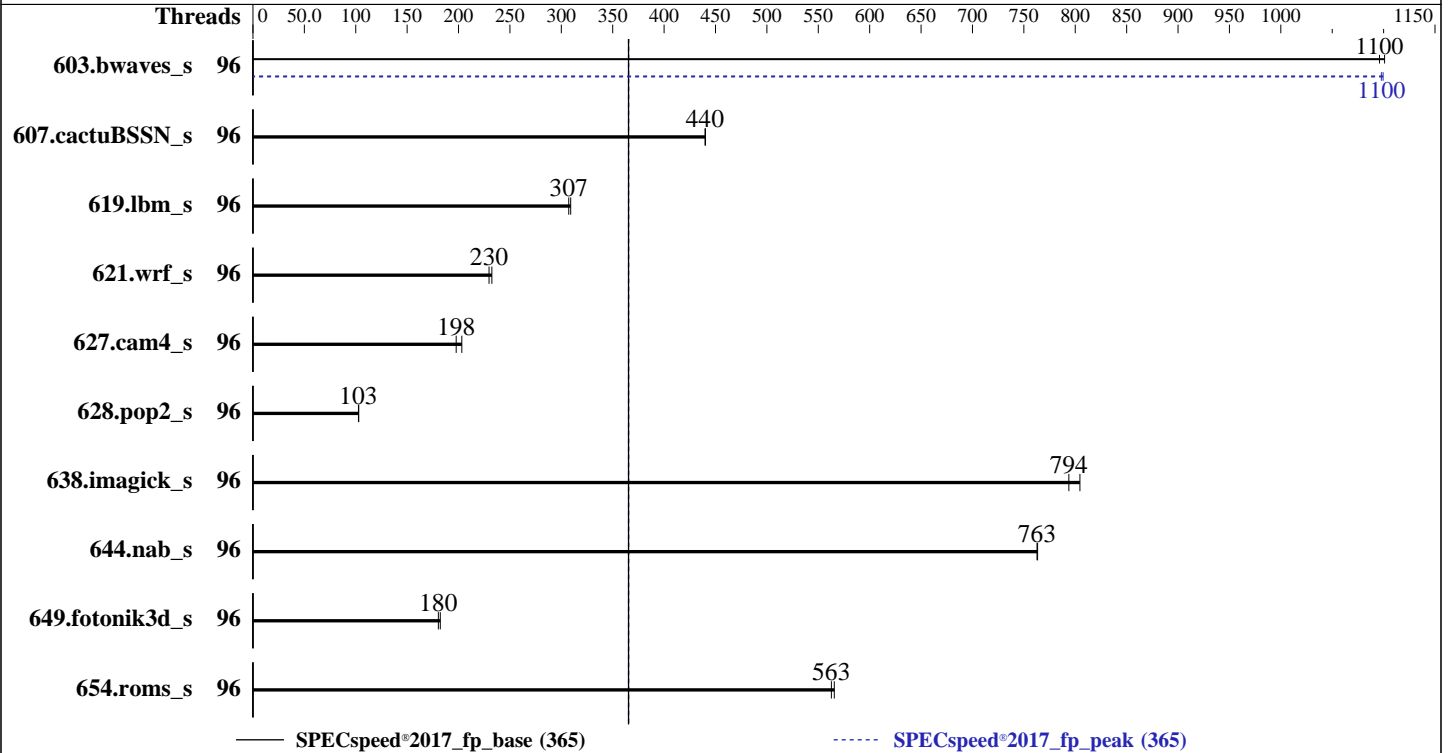
SPECspeed®2017\_fp\_base = 365

FusionServer 5288 V7 (Intel Xeon Platinum 8468)

SPECspeed®2017\_fp\_peak = 365

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

Test Date: Jun-2023  
Hardware Availability: Jan-2023  
Software Availability: Dec-2022



### Hardware

CPU Name: Intel Xeon Platinum 8468  
Max MHz: 3800  
Nominal: 2100  
Enabled: 96 cores, 2 chips  
Orderable: 1,2 chips  
Cache L1: 32 KB I + 48 KB D on chip per core  
L2: 2 MB I+D on chip per core  
L3: 105 MB I+D on chip per chip  
Other: None  
Memory: 512 GB (16 x 32 GB 2Rx8 PC5-4800B-R)  
Storage: 1 x 1920 GB SATA SSD  
Other: None

### Software

OS: Red Hat Enterprise Linux release 9.0 (Plow)  
5.14.0-70.13.1.el9\_0.x86\_64  
Compiler: C/C++: Version 2023.0 of Intel oneAPI DPC++/C++  
Compiler for Linux;  
Fortran: Version 2023.0 of Intel Fortran Compiler  
for Linux;  
Parallel: Yes  
Firmware: Version 2.00.55 Released Mar-2023  
File System: xfs  
System State: Run level 3 (multi-user)  
Base Pointers: 64-bit  
Peak Pointers: 64-bit  
Other: jemalloc memory allocator V5.0.1  
Power Management: OS set to prefer performance at the cost of  
additional power usage



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## Results Table

Benchmark	Base						Peak							
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
603.bwaves_s	96	53.6	1100	<b><u>53.8</u></b>	<b><u>1100</u></b>			96	<b><u>53.7</u></b>	<b><u>1100</u></b>	53.7	1100		
607.cactuBSSN_s	96	37.9	440	<b><u>37.9</u></b>	<b><u>440</u></b>			96	37.9	440	<b><u>37.9</u></b>	<b><u>440</u></b>		
619.lbm_s	96	<b><u>17.0</u></b>	<b><u>307</u></b>	16.9	309			96	<b><u>17.0</u></b>	<b><u>307</u></b>	16.9	309		
621.wrf_s	96	<b><u>57.6</u></b>	<b><u>230</u></b>	56.9	232			96	<b><u>57.6</u></b>	<b><u>230</u></b>	56.9	232		
627.cam4_s	96	<b><u>44.8</u></b>	<b><u>198</u></b>	43.6	203			96	<b><u>44.8</u></b>	<b><u>198</u></b>	43.6	203		
628.pop2_s	96	115	103	<b><u>116</u></b>	<b><u>103</u></b>			96	115	103	<b><u>116</u></b>	<b><u>103</u></b>		
638.imagick_s	96	<b><u>18.2</u></b>	<b><u>794</u></b>	17.9	805			96	<b><u>18.2</u></b>	<b><u>794</u></b>	17.9	805		
644.nab_s	96	<b><u>22.9</u></b>	<b><u>763</u></b>	22.9	763			96	<b><u>22.9</u></b>	<b><u>763</u></b>	22.9	763		
649.fotonik3d_s	96	50.0	182	<b><u>50.5</u></b>	<b><u>180</u></b>			96	50.0	182	<b><u>50.5</u></b>	<b><u>180</u></b>		
654.roms_s	96	<b><u>28.0</u></b>	<b><u>563</u></b>	27.8	566			96	<b><u>28.0</u></b>	<b><u>563</u></b>	27.8	566		

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

## 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:  
KMP\_AFFINITY = "granularity=fine,compact"  
LD\_LIBRARY\_PATH = "/home/spec2017-1.1.9-ic2023/lib/intel64:/home/spec2017-1.1.9-ic2023/je5.0.1-64"  
MALLOC\_CONF = "retain:true"  
OMP\_STACKSIZE = "192M"

## 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:  
sync; echo 3> /proc/sys/vm/drop\_caches  
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>



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## Platform Notes

BIOS configuration:  
Performance Profile Set to Load Balance  
Enable LP [Global] Set to Single LP

Sysinfo program /home/spec2017-1.1.9-ic2023/bin/sysinfo  
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197  
running on localhost.localdomain Wed Jun 28 10:02:44 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 250 (250-6.el9\_0)
12. Failed units, from systemctl list-units --state=failed
13. Services, from systemctl list-unit-files
14. Linux kernel boot-time arguments, from /proc/cmdline
15. cpupower frequency-info
16. tuned-adm active
17. sysctl
18. /sys/kernel/mm/transparent\_hugepage
19. /sys/kernel/mm/transparent\_hugepage/khugepaged
20. OS release
21. Disk information
22. /sys/devices/virtual/dmi/id
23. dmidecode
24. BIOS

```
1. uname -a
Linux localhost.localdomain 5.14.0-70.13.1.el9_0.x86_64 #1 SMP PREEMPT Thu Apr 14 12:42:38 EDT 2022 x86_64
x86_64 x86_64 GNU/Linux
```

```
2. w
10:02:44 up 6 min, 1 user, load average: 0.00, 0.02, 0.00
USER      TTY      LOGIN@  IDLE   JCPU   PCPU WHAT
root     tty1      10:01   1:08   0.98s  0.00s -bash
```

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

```
4. ulimit -a
real-time non-blocking time (microseconds, -R) unlimited
core file size (blocks, -c) 0
data seg size (kbytes, -d) unlimited
scheduling priority (-e) 0
```

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### Platform Notes (Continued)

```

file size                (blocks, -f) unlimited
pending signals          (-i) 2060198
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) 2060198
virtual memory          (kbytes, -v) unlimited
file locks              (-x) unlimited

```

```

-----
5. sysinfo process ancestry
/usr/lib/systemd/systemd --switched-root --system --deserialize 30
login -- root
-bash
-runcpu --define default-platform-flags -c ic2023.0-lin-sapphirerapids-speed-20221201.cfg --define cores=96
  --tune base,peak --iterations 2 -o all --define drop_caches fpspeed
runcpu --define default-platform-flags --configfile ic2023.0-lin-sapphirerapids-speed-20221201.cfg --define
cores=96 --tune base,peak --iterations 2 --output_format all --define drop_caches --nopower --runmode
speed --tune base:peak --size refspeed fpspeed --note-preenv --logfile
  $SPEC/tmp/CPU2017.101/templogs/preenv.fpspeed.101.0.log --lognum 101.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/spec2017-1.1.9-ic2023

```

```

-----
6. /proc/cpuinfo
model name      : Intel(R) Xeon(R) Platinum 8468
vendor_id      : GenuineIntel
cpu family     : 6
model          : 143
stepping       : 8
microcode      : 0x2b000111
bugs           : spectre_v1 spectre_v2 spec_store_bypass swapgs
cpu cores      : 48
siblings       : 48
2 physical ids (chips)
96 processors (hardware threads)
physical id 0: core ids 0-47
physical id 1: core ids 0-47
physical id 0: apicids
0,2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46,48,50,52,54,56,58,60,62,64,66,68,70,72
,74,76,78,80,82,84,86,88,90,92,94
physical id 1: apicids
128,130,132,134,136,138,140,142,144,146,148,150,152,154,156,158,160,162,164,166,168,170,172,174,176,178,1
80,182,184,186,188,190,192,194,196,198,200,202,204,206,208,210,212,214,216,218,220,222
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 2.37.4:
Architecture:      x86_64
CPU op-mode(s):    32-bit, 64-bit
Address sizes:     46 bits physical, 57 bits virtual

```

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### Platform Notes (Continued)

```

Byte Order:                Little Endian
CPU(s):                    96
On-line CPU(s) list:      0-95
Vendor ID:                 GenuineIntel
BIOS Vendor ID:          Intel(R) Corporation
Model name:                Intel(R) Xeon(R) Platinum 8468
BIOS Model name:         Intel(R) Xeon(R) Platinum 8468
CPU family:                6
Model:                    143
Thread(s) per core:       1
Core(s) per socket:       48
Socket(s):                 2
Stepping:                  8
Frequency boost:          enabled
CPU max MHz:               2101.0000
CPU min MHz:               800.0000
BogoMIPS:                  4200.00
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 tsc_known_freq pni pclmulqdq dtes64 monitor
                           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 cat_l2 cdp_l3
                           invpcid_single intel_ppin cdp_l2 ssbd mba ibrs ibpb stibp ibrs_enhanced
                           tpr_shadow vnmi flexpriority ept vpid ept_ad fsgsbase tsc_adjust bmil 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 avx_vnni avx512_bf16 wbnoinvd dtherm ida
                           arat pln pts avx512vbmi umip pku ospke waitpkg avx512_vbmi2 gfni vaes
                           vpclmulqdq avx512_vnni avx512_bitalg tme avx512_vpocntdq la57 rdpid
                           bus_lock_detect cldemote movdiri movdir64b enqcmd fsrm md_clear serialize
                           tsxldtrk pconfig arch_lbr avx512_fp16 amx_tile flush_lld arch_capabilities
Virtualization:           VT-x
L1d cache:                4.5 MiB (96 instances)
L1i cache:                3 MiB (96 instances)
L2 cache:                 192 MiB (96 instances)
L3 cache:                 210 MiB (2 instances)
NUMA node(s):             2
NUMA node0 CPU(s):        0-47
NUMA node1 CPU(s):        48-95
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
Vulnerability Spectre v1:  Mitigation; usercopy/swaps barriers and __user pointer sanitization
Vulnerability Spectre v2:  Mitigation; Enhanced IBRS, IBPB conditional, RSB filling
Vulnerability Srbds:       Not affected
Vulnerability Tsx async abort: Not affected

```

```

From lscpu --cache:
NAME ONE-SIZE ALL-SIZE WAYS TYPE          LEVEL   SETS PHY-LINE COHERENCY-SIZE
L1d   48K      4.5M    12 Data          1       64      1           64
L1i   32K       3M      8 Instruction    1       64      1           64
L2    2M      192M    16 Unified       2    2048      1           64
L3   105M     210M    15 Unified       3 114688      1           64

```

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### Platform Notes (Continued)

8. numactl --hardware

NOTE: a numactl 'node' might or might not correspond to a physical chip.

```
available: 2 nodes (0-1)
node 0 cpus: 0-47
node 0 size: 257099 MB
node 0 free: 254266 MB
node 1 cpus: 48-95
node 1 size: 257990 MB
node 1 free: 254287 MB
node distances:
node  0  1
  0:  10  21
  1:  21  10
```

9. /proc/meminfo

```
MemTotal:          527451920 kB
```

10. who -r

```
run-level 3 Jun 28 09:56
```

11. Systemd service manager version: systemd 250 (250-6.el9\_0)

```
Default Target Status
multi-user      degraded
```

12. Failed units, from systemctl list-units --state=failed

```
UNIT          LOAD ACTIVE SUB    DESCRIPTION
* sep5.service loaded failed failed systemd script to load sep5 driver at boot time
```

13. Services, from systemctl list-unit-files

```
STATE          UNIT FILES
enabled        NetworkManager NetworkManager-dispatcher NetworkManager-wait-online auditd chronyd crond
                dbus-broker getty@ irqbalance kdump lvm2-monitor mdmonitor microcode nis-domainname
                rhsmcertd rsyslog selinux-autorelabel-mark sep5 sshd sssd sysstat
                systemd-network-generator tuned udisks2 upower
enabled-runtime systemd-remount-fs
disabled       arp-ethers blk-availability canberra-system-bootup canberra-system-shutdown
                canberra-system-shutdown-reboot chrony-wait console-getty cpupower debug-shell firewalld
                kvm_stat man-db-restart-cache-update nftables powertop rdisc rhsm rhsm-facts rpmdb-rebuild
                serial-getty@ sshd-keygen@ systemd-boot-check-no-failures systemd-pstore systemd-sysex
                sssd-autofs sssd-kcm sssd-nss sssd-pac sssd-pam sssd-ssh sssd-sudo
indirect
```

14. Linux kernel boot-time arguments, from /proc/cmdline

```
BOOT_IMAGE=(hd0,gpt2)/vmlinuz-5.14.0-70.13.1.el9_0.x86_64
root=/dev/mapper/rhel-root
ro
crashkernel=1G-4G:192M,4G-64G:256M,64G-:512M
resume=/dev/mapper/rhel-swap
rd.lvm.lv=rhel/root
rd.lvm.lv=rhel/swap
```

15. cpupower frequency-info

```
analyzing CPU 0:
current policy: frequency should be within 800 MHz and 2.10 GHz.
```

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### Platform Notes (Continued)

The governor "performance" may decide which speed to use within this range.

boost state support:  
Supported: yes  
Active: yes

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

-----  
17. sysctl  
kernel.numa\_balancing 1  
kernel.randomize\_va\_space 2  
vm.compaction\_proactiveness 20  
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

-----  
18. /sys/kernel/mm/transparent\_hugepage  
defrag always defer defer+madvice [madvice] never  
enabled [always] madvice never  
hpage\_pmd\_size 2097152  
shmem\_enabled always within\_size advise [never] deny force

-----  
19. /sys/kernel/mm/transparent\_hugepage/khugepaged  
alloc\_sleep\_millisecs 60000  
defrag 1  
max\_ptes\_none 511  
max\_ptes\_shared 256  
max\_ptes\_swap 64  
pages\_to\_scan 4096  
scan\_sleep\_millisecs 10000

-----  
20. OS release  
From /etc/\*-release /etc/\*-version  
os-release Red Hat Enterprise Linux 9.0 (Plow)  
redhat-release Red Hat Enterprise Linux release 9.0 (Plow)  
system-release Red Hat Enterprise Linux release 9.0 (Plow)

-----  
21. Disk information  
SPEC is set to: /home/spec2017-1.1.9-ic2023  
Filesystem Type Size Used Avail Use% Mounted on

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### Platform Notes (Continued)

/dev/mapper/rhel-home xfs 1.7T 61G 1.7T 4% /home

-----  
22. /sys/devices/virtual/dmi/id  
Vendor: XFUSION  
Product: 5288 V7  
Product Family: Eagle Stream  
Serial: serial  
-----

23. dmidecode  
Additional information from dmidecode 3.3 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:  
16x Samsung M321R4GA3BB6-CQKDG 32 GB 2 rank 4800  
-----

24. BIOS  
(This section combines info from /sys/devices and dmidecode.)  
BIOS Vendor: XFUSION  
BIOS Version: 2.00.55  
BIOS Date: 03/07/2023  
BIOS Revision: 0.55  
-----

### Compiler Version Notes

=====  
C | 619.lbm\_s(base, peak) 638.imagick\_s(base, peak) 644.nab\_s(base, peak)  
-----

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2023.0.0 Build 20221201  
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.  
-----

=====  
C++, C, Fortran | 607.cactuBSSN\_s(base, peak)  
-----

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2023.0.0 Build 20221201  
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Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2023.0.0 Build 20221201  
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.  
-----

=====  
Fortran | 603.bwaves\_s(base, peak) 649.fotonik3d\_s(base, peak) 654.roms\_s(base, peak)  
-----

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2023.0.0 Build 20221201  
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-----

=====  
Fortran, C | 621.wrf\_s(base, peak) 627.cam4\_s(base, peak) 628.pop2\_s(base, peak)  
-----

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## Base Compiler Invocation

C benchmarks:

icx

Fortran benchmarks:

ifx

Benchmarks using both Fortran and C:

ifx icx

Benchmarks using Fortran, C, and C++:

icpx icx ifx

## Base Portability Flags

```
603.bwaves_s: -DSPEC_LP64
607.cactuBSSN_s: -DSPEC_LP64
619.lbm_s: -DSPEC_LP64
621.wrf_s: -DSPEC_LP64 -DSPEC_CASE_FLAG -convert big_endian
627.cam4_s: -DSPEC_LP64 -DSPEC_CASE_FLAG
628.pop2_s: -DSPEC_LP64 -DSPEC_CASE_FLAG -convert big_endian
-assume byterecl
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:

```
-m64 -std=c11 -Wl,-z,muldefs -xsapphirerapids -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -fiopenmp
-DSPEC_OPENMP -Wno-implicit-int -mprefer-vector-width=512
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc
```

Fortran benchmarks:

```
-m64 -Wl,-z,muldefs -DSPEC_OPENMP -xsapphirerapids -Ofast
```

(Continued on next page)



# SPEC CPU®2017 Floating Point Speed Result

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## xFusion

SPECspeed®2017\_fp\_base = 365

FusionServer 5288 V7 (Intel Xeon Platinum 8468)

SPECspeed®2017\_fp\_peak = 365

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

**Test Date:** Jun-2023  
**Hardware Availability:** Jan-2023  
**Software Availability:** Dec-2022

## Base Optimization Flags (Continued)

Fortran benchmarks (continued):

```
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fiopenmp -nostandard-realloc-lhs
-align array32byte -auto -L/usr/local/jemalloc64-5.0.1/lib -ljemalloc
```

Benchmarks using both Fortran and C:

```
-m64 -std=c11 -Wl,-z,muldefs -xsapphirerapids -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -fiopenmp
-DSPEC_OPENMP -Wno-implicit-int -mprefer-vector-width=512
-nostandard-realloc-lhs -align array32byte -auto
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc
```

Benchmarks using Fortran, C, and C++:

```
-m64 -std=c++14 -std=c11 -Wl,-z,muldefs -xsapphirerapids -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fiopenmp -DSPEC_OPENMP -Wno-implicit-int
-mprefer-vector-width=512 -nostandard-realloc-lhs -align array32byte
-auto -L/usr/local/jemalloc64-5.0.1/lib -ljemalloc
```

## Peak Compiler Invocation

C benchmarks:

icx

Fortran benchmarks:

ifx

Benchmarks using both Fortran and C:

ifx icx

Benchmarks using Fortran, C, and C++:

icpx icx ifx

## Peak Portability Flags

Same as Base Portability Flags



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**Test Date:** Jun-2023  
**Hardware Availability:** Jan-2023  
**Software Availability:** Dec-2022

## Peak Optimization Flags

C benchmarks:

619.lbm\_s: basepeak = yes

638.imagick\_s: basepeak = yes

644.nab\_s: basepeak = yes

Fortran benchmarks:

```
603.bwaves_s: -m64 -Wl,-z,muldefs -DSPEC_OPENMP -xsaphirerapids
-Ofast -ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fiopenmp -nostandard-realloc-lhs
-align array32byte -auto -L/usr/local/jemalloc64-5.0.1/lib
-ljemalloc
```

649.fotonik3d\_s: basepeak = yes

654.roms\_s: basepeak = yes

Benchmarks using both Fortran and C:

621.wrf\_s: basepeak = yes

627.cam4\_s: basepeak = yes

628.pop2\_s: basepeak = yes

Benchmarks using Fortran, C, and C++:

607.cactuBSSN\_s: basepeak = yes

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2017/flags/Intel-ic2023-official-linux64.html>

<http://www.spec.org/cpu2017/flags/xFusion-Platform-Settings-SPR-V1.1-revC.html>

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

<http://www.spec.org/cpu2017/flags/Intel-ic2023-official-linux64.xml>

<http://www.spec.org/cpu2017/flags/xFusion-Platform-Settings-SPR-V1.1-revC.xml>



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For questions about this result, please contact the tester. For other inquiries, please contact [info@spec.org](mailto:info@spec.org).

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