



SPEC CPU®2017 Floating Point Speed Result

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Nettrix

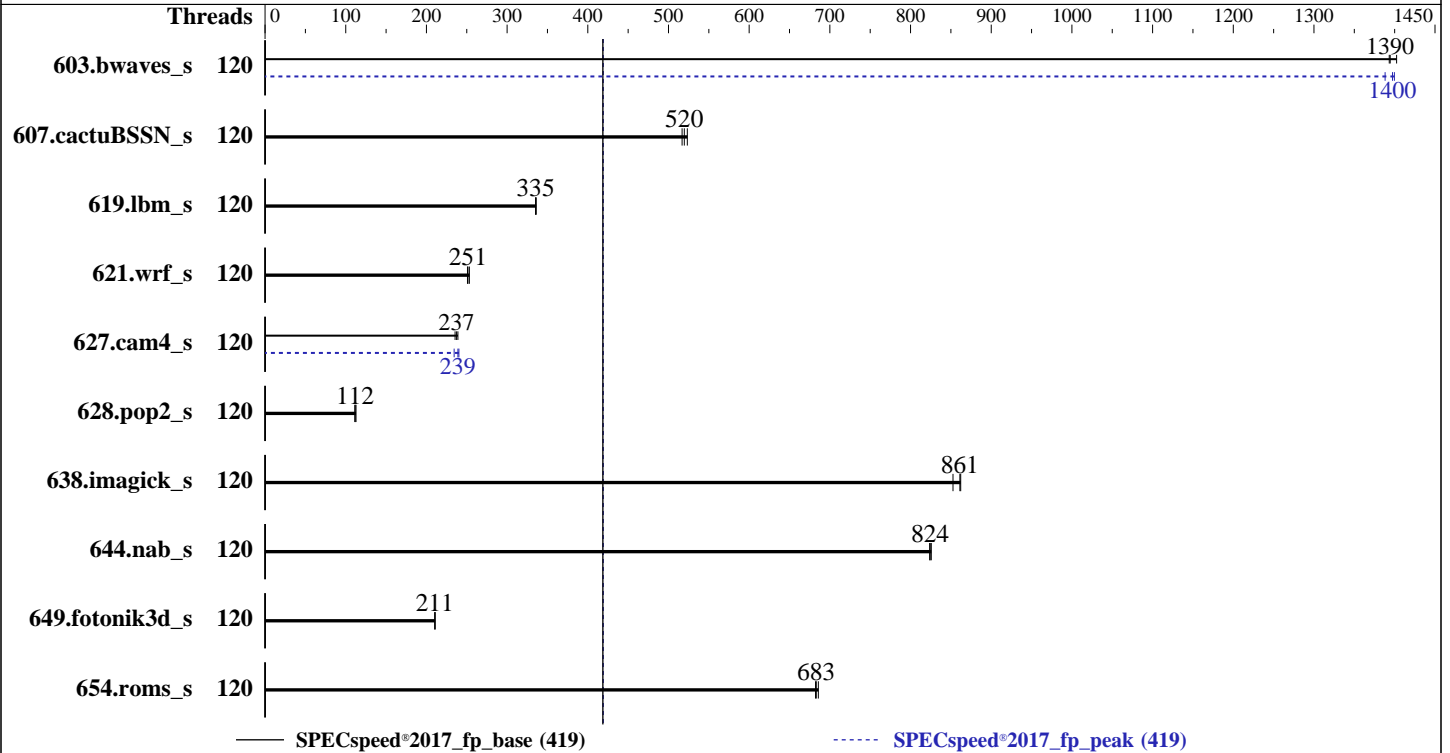
SPECspeed®2017_fp_base = 419

R620 G50 (Intel Xeon Platinum 8580, 2 GHz)

SPECspeed®2017_fp_peak = 419

CPU2017 License: 6138
Test Sponsor: Nettrix
Tested by: Nettrix

Test Date: May-2024
Hardware Availability: Jan-2024
Software Availability: Jan-2024



Hardware

CPU Name: Intel Xeon Platinum 8580
Max MHz: 4000
Nominal: 2000
Enabled: 120 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: 300 MB I+D on chip per chip
Other: None
Memory: 1 TB (16 x 64 GB 2Rx4 PC5-5600B-R)
Storage: 1 x 14 TB SATA HDD (7200 rpm)
Other: CPU Cooling: Air

Software

OS: SUSE Linux Enterprise Server 15 SP5
5.14.21-150500.53-default
Compiler: C/C++: Version 2023.2.3 of Intel oneAPI DPC++/C++
Compiler for Linux;
Fortran: Version 2023.2.3 of Intel Fortran
Compiler for Linux;
Parallel: Yes
Firmware: Nettrix BIOS Version NNH1041268 released Jan-2024
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: BIOS and 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	120	<u>42.3</u>	<u>1390</u>	42.1	1400	42.3	1390	120	<u>42.2</u>	<u>1400</u>	42.2	1400	42.5	1390
607.cactuBSSN_s	120	32.3	517	<u>32.1</u>	<u>520</u>	31.9	523	120	32.3	517	<u>32.1</u>	<u>520</u>	31.9	523
619.lbm_s	120	15.6	336	<u>15.6</u>	<u>335</u>	15.6	335	120	15.6	336	<u>15.6</u>	<u>335</u>	15.6	335
621.wrf_s	120	52.7	251	<u>52.6</u>	<u>251</u>	52.2	253	120	52.7	251	<u>52.6</u>	<u>251</u>	52.2	253
627.cam4_s	120	<u>37.3</u>	<u>237</u>	37.6	236	37.1	239	120	36.9	240	37.8	234	<u>37.1</u>	<u>239</u>
628.pop2_s	120	107	111	<u>106</u>	<u>112</u>	105	113	120	107	111	<u>106</u>	<u>112</u>	105	113
638.imagick_s	120	16.9	853	<u>16.8</u>	<u>861</u>	16.7	862	120	16.9	853	<u>16.8</u>	<u>861</u>	16.7	862
644.nab_s	120	<u>21.2</u>	<u>824</u>	21.2	824	21.2	826	120	<u>21.2</u>	<u>824</u>	21.2	824	21.2	826
649.fotonik3d_s	120	<u>43.3</u>	<u>211</u>	43.3	211	43.3	210	120	<u>43.3</u>	<u>211</u>	43.3	211	43.3	210
654.roms_s	120	23.0	686	<u>23.0</u>	<u>683</u>	23.1	682	120	23.0	686	<u>23.0</u>	<u>683</u>	23.1	682

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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"
OS set to performance mode via cpupower frequency-set -g performance

Environment Variables Notes

Environment variables set by runcpu before the start of the run:
KMP_AFFINITY = "granularity=fine,compact"
LD_LIBRARY_PATH = "/home/tzk/SPECcpu/lib/intel64:/home/tzk/SPECcpu/je5.0.1-64"
MALLOCONF = "retain:true"
OMP_STACKSIZE = "192M"

General Notes

Binaries compiled on a system with 2x Intel Xeon Platinum 8280M CPU + 384GB RAM
memory using Redhat Enterprise Linux 8.0
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.
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
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:

SNC (Sub NUMA) set to Enable SNC2 (2-clusters)
Patrol Scrub set to Disabled
LLC dead line alloc set to Enabled
DCU Streamer Prefetcher set to Enabled
Hardware P-States set to Disabled
Enable LP [Global] set to Single LP

Sysinfo program /home/tzk/SPECcpu/bin/sysinfo
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
running on localhost Wed May 22 19:28:56 2024

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 249 (249.16+suse.171.gdad0071f15)
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 5.14.21-150500.53-default #1 SMP PREEMPT_DYNAMIC Wed May 10 07:56:26 UTC 2023 (b630043)
x86_64 x86_64 x86_64 GNU/Linux
```

```
2. w
19:28:56 up 28 min, 1 user, load average: 5.64, 43.86, 31.16
USER      TTY      FROM          LOGIN@      IDLE        JCPU       PCPU       WHAT
root      tty1    -             19:01       6.00s      1.13s     0.01s     python3 SetPrefetch.py -t fpspeed -f
/home/tzk/SPECcpu/result/CPU2017.460.log
```

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

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Platform Notes (Continued)

```

4. ulimit -a
   core file size          (blocks, -c) unlimited
   data seg size          (kbytes, -d) unlimited
   scheduling priority     (-e) 0
   file size              (blocks, -f) unlimited
   pending signals        (-i) 4125116
   max locked memory      (kbytes, -l) 64
   max memory size        (kbytes, -m) unlimited
   open files             (-n) 1024
   pipe size              (-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) 4125116
   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
   -bash
   runcpu --nobuild --action validate --define default-platform-flags -c
     ic2023.2.3-lin-core-avx512-speed-20231121.cfg --define cores=120 --tune base,peak -o all --define
     drop_caches fpspeed
   runcpu --nobuild --action validate --define default-platform-flags --configfile
     ic2023.2.3-lin-core-avx512-speed-20231121.cfg --define cores=120 --tune base,peak --output_format all
     --define drop_caches --nopower --runmode speed --tune base:peak --size refspeed fpspeed --nopreenv
     --note-preenv --logfile $SPEC/tmp/CPU2017.460/templogs/preenv.fpspeed.460.0.log --lognum 460.0
     --from_runcpu 2
   specperl $SPEC/bin/sysinfo
   $SPEC = /home/tzk/SPECcpu

```

```

-----
6. /proc/cpuinfo
   model name      : INTEL(R) XEON(R) PLATINUM 8580
   vendor_id      : GenuineIntel
   cpu family     : 6
   model          : 207
   stepping       : 2
   microcode      : 0x21000200
   bugs           : spectre_v1 spectre_v2 spec_store_bypass swapgs eibrs_pbrsb
   cpu cores      : 60
   siblings       : 60
   2 physical ids (chips)
   120 processors (hardware threads)
   physical id 0: core ids 0-59
   physical id 1: core ids 0-59
   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
   ,74,76,78,80,82,84,86,88,90,92,94,96,98,100,102,104,106,108,110,112,114,116,118
   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
   80,182,184,186,188,190,192,194,196,198,200,202,204,206,208,210,212,214,216,218,220,222,224,226,228,230,23
   2,234,236,238,240,242,244,246
   Caution: /proc/cpuinfo data regarding chips, cores, and threads is not necessarily reliable, especially for
   virtualized systems. Use the above data carefully.

```

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Platform Notes (Continued)

7. lscpu

From lscpu from util-linux 2.37.4:

```

Architecture:          x86_64
CPU op-mode(s):        32-bit, 64-bit
Address sizes:          52 bits physical, 57 bits virtual
Byte Order:             Little Endian
CPU(s):                 120
On-line CPU(s) list:   0-119
Vendor ID:              GenuineIntel
Model name:             INTEL(R) XEON(R) PLATINUM 8580
CPU family:             6
Model:                  207
Thread(s) per core:    1
Core(s) per socket:    60
Socket(s):              2
Stepping:               2
Frequency boost:        enabled
CPU max MHz:            2001.0000
CPU min MHz:            800.0000
BogoMIPS:               4000.00
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 cdp_l2 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 rtm 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 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_vpopcntdq 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:             5.6 MiB (120 instances)
L1i cache:             3.8 MiB (120 instances)
L2 cache:              240 MiB (120 instances)
L3 cache:              600 MiB (2 instances)
NUMA node(s):          4
NUMA node0 CPU(s):    0-29
NUMA node1 CPU(s):    30-59
NUMA node2 CPU(s):    60-89
NUMA node3 CPU(s):    90-119
Vulnerability Itlb multihit: Not affected
Vulnerability L1tf:    Not affected
Vulnerability Mds:     Not affected
Vulnerability Meltdown: Not affected
Vulnerability Mmio stale data: Not affected
Vulnerability Retbleed: Not affected
Vulnerability Spec store bypass: Mitigation; Speculative Store Bypass disabled via prctl and seccomp
Vulnerability Spectre v1: Mitigation; usercopy/swaps barriers and __user pointer sanitization
Vulnerability Spectre v2: Mitigation; Enhanced IBRS, IBPB conditional, RSB filling, PBRSE-eIBRS SW
                        sequence
Vulnerability Srbds:   Not affected

```

(Continued on next page)



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Platform Notes (Continued)

Vulnerability Tsx async abort: Not affected

From lscpu --cache:

NAME	ONE-SIZE	ALL-SIZE	WAYS	TYPE	LEVEL	SETS	PHY-LINE	COHERENCY-SIZE
L1d	48K	5.6M	12	Data	1	64	1	64
L1i	32K	3.8M	8	Instruction	1	64	1	64
L2	2M	240M	16	Unified	2	2048	1	64
L3	300M	600M	20	Unified	3	245760	1	64

8. numactl --hardware

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

```

available: 4 nodes (0-3)
node 0 cpus: 0-29
node 0 size: 258004 MB
node 0 free: 255950 MB
node 1 cpus: 30-59
node 1 size: 257562 MB
node 1 free: 256762 MB
node 2 cpus: 60-89
node 2 size: 258040 MB
node 2 free: 257147 MB
node 3 cpus: 90-119
node 3 size: 257702 MB
node 3 free: 254587 MB
node distances:
node  0  1  2  3
0:  10  20  20  20
1:  20  10  20  20
2:  20  20  10  20
3:  20  20  20  10

```

9. /proc/meminfo

MemTotal: 1056061620 kB

10. who -r

run-level 3 May 22 19:01

11. Systemd service manager version: systemd 249 (249.16+suse.171.gdad0071f15)

```

Default Target Status
multi-user     degraded

```

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

```

UNIT          LOAD  ACTIVE SUB    DESCRIPTION
* postfix.service loaded failed failed Postfix Mail Transport Agent

```

13. Services, from systemctl list-unit-files

```

STATE      UNIT FILES
enabled    YaST2-Firstboot YaST2-Second-Stage apparmor auditd chronyd cron cups firewalld getty@
            haveged irqbalance issue-generator kbdsettings kdump kdump-early klog lm_sensors
            lvm2-monitor nscd postfix purge-kernels rollback rsyslog smartd sshd systemd-pstore wicked
            wickedd-auto4 wickedd-dhcp4 wickedd-dhcp6 wickedd-nanny
enabled-runtime systemd-remount-fs
disabled   apcupsd autofs autoyast-initscripts blk-availability boot-sysctl ca-certificates
            chrony-wait console-getty corosync corosync-notifyd crm_mon ctdb cups-browsed debug-shell

```

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Platform Notes (Continued)

```

dlm dmraid-activation drbd drbd-lvchange@ drbd-wait-promotable@ ebttables
exchange-bmc-os-info fancontrol gpm grub2-once haveged-switch-root hawk ipmi ipmiev
ipvsadm issue-add-ssh-keys kexec-load ldirectord logd lunmask lvmlockd lvmlocks
man-db-create multipathd nfs nfs-blkmap pacemaker rpcbind rpmconfigcheck rsyncd sanlock
sbd sbd_remote serial-getty@ smartd_generate_opts snmpd snmptrapd svnservice
systemd-boot-check-no-failures systemd-network-generator systemd-sysext
systemd-time-wait-sync systemd-timesyncd tuned udisks2 wdmd
indirect wickedd

```

```

-----
14. Linux kernel boot-time arguments, from /proc/cmdline
BOOT_IMAGE=/boot/vmlinuz-5.14.21-150500.53-default
root=UUID=aec0cd35-b79c-432e-8a92-68e81aa94bbb
splash=silent
resume=/dev/disk/by-uuid/d53caa22-ee5c-46fa-a8f2-44d678cc6069
mitigations=auto
quiet
security=apparmor
crashkernel=317M,high
crashkernel=72M,low
default_hugepagesz=1G

```

```

-----
15. cpupower frequency-info
analyzing CPU 0:
  current policy: frequency should be within 800 MHz and 2.00 GHz.
                  The governor "performance" may decide which speed to use
                  within this range.
  boost state support:
    Supported: yes
    Active: yes

```

```

-----
16. tuned-adm active
  It seems that tuned daemon is not running, preset profile is not activated.
  Preset 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   900
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

```

(Continued on next page)



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Platform Notes (Continued)

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 openSUSE Leap 15.5

21. Disk information
SPEC is set to: /home/tzk/SPECcpu
Filesystem Type Size Used Avail Use% Mounted on
/dev/sda3 xfs 12T 220G 12T 2% /home

22. /sys/devices/virtual/dmi/id
Vendor: Nettrix
Product: R620 G50
Product Family: Rack
Serial: 6101810603447812

23. dmidecode
Additional information from dmidecode 3.4 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 Hynix HMCG94AGBRA179N 64 GB 2 rank 5600

24. BIOS
(This section combines info from /sys/devices and dmidecode.)
BIOS Vendor: American Megatrends International, LLC.
BIOS Version: NNH1041268
BIOS Date: 01/26/2024
BIOS Revision: 5.32

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 2023.2.3 Build x
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.

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Compiler Version Notes (Continued)

=====
C++, C, Fortran | 607.cactuBSSN_s(base, peak)
=====

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2023.2.3 Build x
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2023.2.3 Build x
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Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2023.2.3 Build x
Copyright (C) 1985-2023 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 2023.2.3 Build x
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.

=====
Fortran, C | 621.wrf_s(base, peak) 627.cam4_s(base, peak) 628.pop2_s(base, peak)
=====

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2023.2.3 Build x
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Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2023.2.3 Build x
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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

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SPEC CPU®2017 Floating Point Speed Result

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Nettrix

SPECspeed®2017_fp_base = 419

R620 G50 (Intel Xeon Platinum 8580, 2 GHz)

SPECspeed®2017_fp_peak = 419

CPU2017 License: 6138
Test Sponsor: Nettrix
Tested by: Nettrix

Test Date: May-2024
Hardware Availability: Jan-2024
Software Availability: Jan-2024

Base Portability Flags (Continued)

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:

-w -std=c11 -m64 -Wl,-z,muldefs -xCORE-AVX512 -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -fiopenmp
-DSPEC_OPENMP -Wno-implicit-int -L/usr/local/jemalloc64-5.0.1/lib
-ljemalloc

Fortran benchmarks:

-w -m64 -Wl,-z,muldefs -DSPEC_OPENMP -xCORE-AVX512 -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

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 -fiopenmp
-DSPEC_OPENMP -Wno-implicit-int -nostandard-realloc-lhs
-align array32byte -auto -L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

Benchmarks using Fortran, C, and C++:

-w -std=c++14 -m64 -std=c11 -Wl,-z,muldefs -xCORE-AVX512 -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fiopenmp -DSPEC_OPENMP -Wno-implicit-int
-nostandard-realloc-lhs -align array32byte -auto
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

Peak Compiler Invocation

C benchmarks:

icx

Fortran benchmarks:

ifx

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Peak Compiler Invocation (Continued)

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

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: -w -m64 -Wl,-z,muldefs -DSPEC_OPENMP -xCORE-AVX512 -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: -w -m64 -std=c11 -Wl,-z,muldefs -xCORE-AVX512 -Ofast -ffast-math -flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -fiopenmp -DSPEC_OPENMP -Wno-implicit-int -nostandard-realloc-lhs

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Peak Optimization Flags (Continued)

627.cam4_s (continued):

```
-align array32byte -auto -L/usr/local/jemalloc64-5.0.1/lib
-ljemalloc
```

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-ic2023p2-official-linux64.html>

<http://www.spec.org/cpu2017/flags/Netrix-Platform-Settings-V1.3-SPR-revA.html>

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

<http://www.spec.org/cpu2017/flags/Intel-ic2023p2-official-linux64.xml>

<http://www.spec.org/cpu2017/flags/Netrix-Platform-Settings-V1.3-SPR-revA.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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