# SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

**Inspur Electronic Information Industry Co., Ltd.**

**NF8260M7 (Intel Xeon Gold 6448H)**

$SPECspeed^{®}2017\_fp\_base = 388$

$SPECspeed^{®}2017\_fp\_peak = 388$
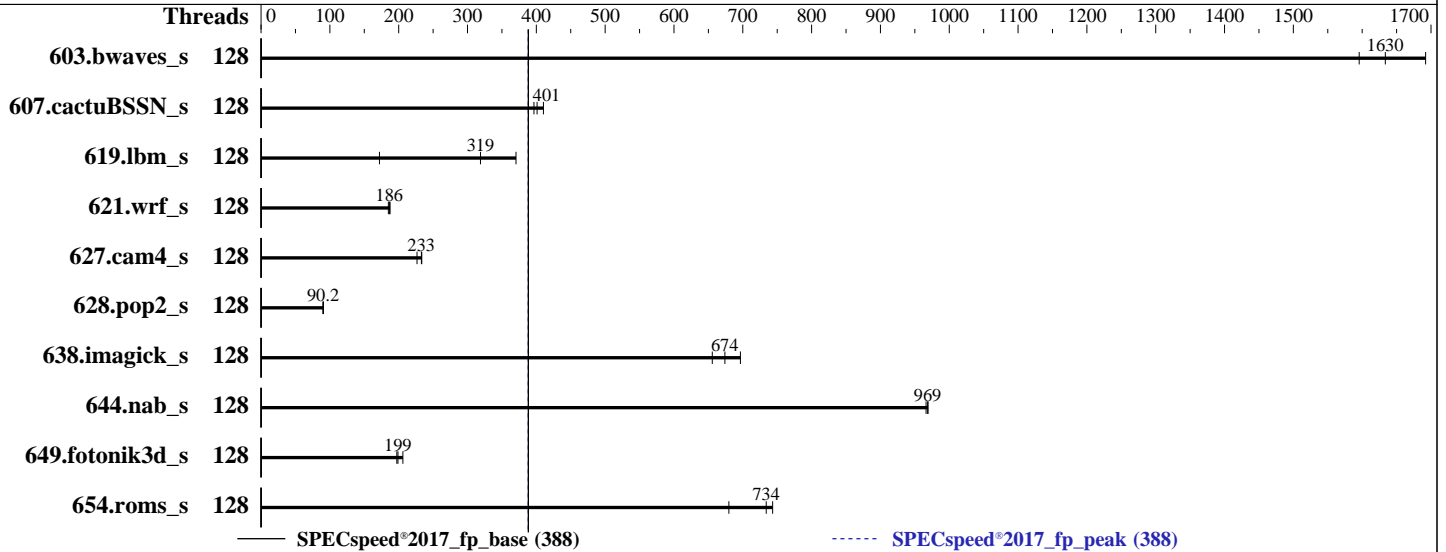
**CPU2017 License:** 3358
**Test Sponsor:** Inspur Electronic Information Industry Co., Ltd.
**Tested by:** Inspur Electronic Information Industry Co., Ltd.

**Test Date:** Aug-2023
**Hardware Availability:** Apr-2023
**Software Availability:** Dec-2022

**Threads** — scale 0 to 1700

| Benchmark | Threads | Result |
|---|---|---|
| 603.bwaves_s | 128 | 1630 |
| 607.cactuBSSN_s | 128 | 401 |
| 619.lbm_s | 128 | 319 |
| 621.wrf_s | 128 | 186 |
| 627.cam4_s | 128 | 233 |
| 628.pop2_s | 128 | 90.2 |
| 638.imagick_s | 128 | 674 |
| 644.nab_s | 128 | 969 |
| 649.fotonik3d_s | 128 | 199 |
| 654.roms_s | 128 | 734 |

SPECspeed®2017_fp_base (388)          SPECspeed®2017_fp_peak (388)

## Hardware

CPU Name: Intel Xeon Gold 6448H
 Max MHz: 4100
 Nominal: 2400
Enabled: 128 cores, 4 chips
Orderable: 2,4 chips
Cache L1: 32 KB I + 48 KB D on chip per core
 L2: 2 MB I+D on chip per core
 L3: 60 MB I+D on chip per chip
 Other: None
Memory: 1 TB (32 x 32 GB 2Rx4 PC5-4800B-R)
Storage: 1 x 1 TB NVME SSD
Other: None

## Software

OS: Red Hat Enterprise Linux 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 03.00.00 released Dec-2022
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.

# SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

Inspur Electronic Information Industry Co., Ltd.

NF8260M7 (Intel Xeon Gold 6448H)

**SPECspeed®2017_fp_base = 388**

**SPECspeed®2017_fp_peak = 388**

| | |
|---|---|
| **CPU2017 License:** 3358 | **Test Date:** Aug-2023 |
| **Test Sponsor:** Inspur Electronic Information Industry Co., Ltd. | **Hardware Availability:** Apr-2023 |
| **Tested by:** Inspur Electronic Information Industry Co., Ltd. | **Software Availability:** Dec-2022 |

## Results Table

| Benchmark | Base | | | | | | | Peak | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Threads | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Threads | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio |
| 603.bwaves_s | 128 | **36.1** | **1630** | 37.0 | 1600 | 34.9 | 1690 | 128 | **36.1** | **1630** | 37.0 | 1600 | 34.9 | 1690 |
| 607.cactuBSSN_s | 128 | 42.0 | 397 | 40.6 | 410 | **41.6** | **401** | 128 | 42.0 | 397 | 40.6 | 410 | **41.6** | **401** |
| 619.lbm_s | 128 | 30.4 | 172 | **16.4** | **319** | 14.1 | 370 | 128 | 30.4 | 172 | **16.4** | **319** | 14.1 | 370 |
| 621.wrf_s | 128 | 70.6 | 187 | 71.5 | 185 | **70.9** | **186** | 128 | 70.6 | 187 | 71.5 | 185 | **70.9** | **186** |
| 627.cam4_s | 128 | **38.0** | **233** | 38.0 | 234 | 39.1 | 227 | 128 | **38.0** | **233** | 38.0 | 234 | 39.1 | 227 |
| 628.pop2_s | 128 | 132 | 90.1 | **132** | **90.2** | 131 | 90.6 | 128 | 132 | 90.1 | **132** | **90.2** | 131 | 90.6 |
| 638.imagick_s | 128 | 20.7 | 697 | 22.0 | 656 | **21.4** | **674** | 128 | 20.7 | 697 | 22.0 | 656 | **21.4** | **674** |
| 644.nab_s | 128 | 18.1 | 966 | **18.0** | **969** | 18.0 | 969 | 128 | 18.1 | 966 | **18.0** | **969** | 18.0 | 969 |
| 649.fotonik3d_s | 128 | 44.2 | 206 | 46.2 | 197 | **45.8** | **199** | 128 | 44.2 | 206 | 46.2 | 197 | **45.8** | **199** |
| 654.roms_s | 128 | **21.4** | **734** | 21.2 | 743 | 23.2 | 680 | 128 | **21.4** | **734** | 21.2 | 743 | 23.2 | 680 |
| **SPECspeed®2017_fp_base =** | | **388** | | | | | | | | | | | | |
| **SPECspeed®2017_fp_peak =** | | **388** | | | | | | | | | | | | |

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/cpu2017/lib/intel64:/home/cpu2017/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 Redhat Enterprise Linux 8.0
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
```

# SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

**Inspur Electronic Information Industry Co., Ltd.**

**NF8260M7 (Intel Xeon Gold 6448H)**

SPECspeed®2017_fp_base = 388

SPECspeed®2017_fp_peak = 388

**CPU2017 License:** 3358

**Test Sponsor:** Inspur Electronic Information Industry Co., Ltd.

**Tested by:** Inspur Electronic Information Industry Co., Ltd.

**Test Date:** Aug-2023

**Hardware Availability:** Apr-2023

**Software Availability:** Dec-2022

## Platform Notes

```
BIOS configuration:
ENERGY_PERF_BIAS_CFG mode set to Performance
Hardware Prefetch set to Disable
VT Support set to Disable
Sub NUMA Cluster (SNC) set to disable
Hyper Threading set to disable

Sysinfo program /home/cpu2017/bin/sysinfo
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
running on localhost.localdomain Thu Aug 17 13:05:55 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. Services, from systemctl list-unit-files
13. Linux kernel boot-time arguments, from /proc/cmdline
14. cpupower frequency-info
15. sysctl
16. /sys/kernel/mm/transparent_hugepage
17. /sys/kernel/mm/transparent_hugepage/khugepaged
18. OS release
19. Disk information
20. /sys/devices/virtual/dmi/id
21. dmidecode
22. 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
   13:05:55 up 0 min,  1 user,  load average: 0.60, 0.18, 0.06
  USER     TTY        LOGIN@   IDLE   JCPU   PCPU WHAT
  root     tty1       13:05   11.00s  0.92s  0.00s sh
  reportable-ic2023.0-lin-sapphirerapids-speed-smt-off-20221201.sh

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


------------------------------------------------------------
4. ulimit -a
  real-time non-blocking time  (microseconds, -R) unlimited
  core file size              (blocks, -c) 0
```

**(Continued on next page)**

# SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

Inspur Electronic Information Industry Co., Ltd.

NF8260M7 (Intel Xeon Gold 6448H)

SPECspeed®2017_fp_base = 388

SPECspeed®2017_fp_peak = 388

**CPU2017 License:** 3358      **Test Date:** Aug-2023

**Test Sponsor:** Inspur Electronic Information Industry Co., Ltd.      **Hardware Availability:** Apr-2023

**Tested by:** Inspur Electronic Information Industry Co., Ltd.      **Software Availability:** Dec-2022

## Platform Notes (Continued)

```
    data seg size              (kbytes, -d) unlimited
    scheduling priority              (-e) 0
    file size                  (blocks, -f) unlimited
    pending signals                  (-i) 4126583
    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) 4126583
    virtual memory             (kbytes, -v) unlimited
    file locks                       (-x) unlimited


    ------------------------------------------------------------
5. sysinfo process ancestry
 /usr/lib/systemd/systemd --switched-root --system --deserialize 28
 login -- root
 -bash
 sh reportable-ic2023.0-lin-sapphirerapids-speed-smt-off-20221201.sh
 runcpu --nobuild --action validate --define default-platform-flags -c
   ic2023.0-lin-sapphirerapids-speed-20221201.cfg --define cores=128 --tune base,peak -o all --define
   drop_caches fpspeed
 runcpu --nobuild --action validate --define default-platform-flags --configfile
   ic2023.0-lin-sapphirerapids-speed-20221201.cfg --define cores=128 --tune base,peak --output_format all
   --define drop_caches --nopower --runmode speed --tune base:peak --size refspeed fpspeed --nopreenv
   --note-preenv --logfile $SPEC/tmp/CPU2017.004/templogs/preenv.fpspeed.004.0.log --lognum 004.0
   --from_runcpu 2
 specperl $SPEC/bin/sysinfo
$SPEC = /home/cpu2017


    ------------------------------------------------------------
6. /proc/cpuinfo
    model name        : Intel(R) Xeon(R) Gold 6448H
    vendor_id         : GenuineIntel
    cpu family        : 6
    model             : 143
    stepping          : 8
    microcode         : 0x2b000130
    bugs              : spectre_v1 spectre_v2 spec_store_bypass swapgs
    cpu cores         : 32
    siblings          : 32
    4 physical ids (chips)
    128 processors (hardware threads)
    physical id 0: core ids 0-31
    physical id 1: core ids 0-31
    physical id 2: core ids 0-31
    physical id 3: core ids 0-31
    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
    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
    physical id 2: apicids
    256,258,260,262,264,266,268,270,272,274,276,278,280,282,284,286,288,290,292,294,296,298,300,302,304,306,3
    08,310,312,314,316,318
    physical id 3: apicids
    384,386,388,390,392,394,396,398,400,402,404,406,408,410,412,414,416,418,420,422,424,426,428,430,432,434,4
```

*(Continued on next page)*

# SPEC CPU®2017 Floating Point Speed Result
Copyright 2017-2023 Standard Performance Evaluation Corporation

Inspur Electronic Information Industry Co., Ltd.

NF8260M7 (Intel Xeon Gold 6448H)

SPECspeed®2017_fp_base = 388

SPECspeed®2017_fp_peak = 388

**CPU2017 License:** 3358
**Test Sponsor:** Inspur Electronic Information Industry Co., Ltd.
**Tested by:** Inspur Electronic Information Industry Co., Ltd.

**Test Date:** Aug-2023
**Hardware Availability:** Apr-2023
**Software Availability:** Dec-2022

## Platform Notes (Continued)

```
   36,438,440,442,444,446
 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:             52 bits physical, 57 bits virtual
  Byte Order:                Little Endian
  CPU(s):                    128
  On-line CPU(s) list:       0-127
  Vendor ID:                 GenuineIntel
  BIOS Vendor ID:            Intel(R) Corporation
  Model name:                Intel(R) Xeon(R) Gold 6448H
  BIOS Model name:           Intel(R) Xeon(R) Gold 6448H
  CPU family:                6
  Model:                     143
  Thread(s) per core:        1
  Core(s) per socket:        32
  Socket(s):                 4
  Stepping:                  8
  Frequency boost:           enabled
  CPU max MHz:               2401.0000
  CPU min MHz:               800.0000
  BogoMIPS:                  4800.00
  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 ds_cpl
                             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 fsgsbase
                             tsc_adjust bmi1 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_vpopcntdq la57 rdpid bus_lock_detect cldemote movdiri movdir64b
                             enqcmd fsrm md_clear serialize tsxldtrk pconfig arch_lbr avx512_fp16
                             amx_tile flush_l1d arch_capabilities
  L1d cache:                 6 MiB (128 instances)
  L1i cache:                 4 MiB (128 instances)
  L2 cache:                  256 MiB (128 instances)
  L3 cache:                  240 MiB (4 instances)
  NUMA node(s):              4
  NUMA node0 CPU(s):         0-31
  NUMA node1 CPU(s):         32-63
  NUMA node2 CPU(s):         64-95
  NUMA node3 CPU(s):         96-127
  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/swapgs barriers and __user pointer sanitization
```

**(Continued on next page)**

# SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

Inspur Electronic Information Industry Co., Ltd.

NF8260M7 (Intel Xeon Gold 6448H)

$SPECspeed®2017\_fp\_base = 388$

$SPECspeed®2017\_fp\_peak = 388$

**CPU2017 License:** 3358
**Test Sponsor:** Inspur Electronic Information Industry Co., Ltd.
**Tested by:** Inspur Electronic Information Industry Co., Ltd.

**Test Date:** Aug-2023
**Hardware Availability:** Apr-2023
**Software Availability:** Dec-2022

## Platform Notes (Continued)

```
  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       6M  12 Data            1    64       1              64
    L1i       32K       4M   8 Instruction     1    64       1              64
    L2         2M     256M  16 Unified         2  2048       1              64
    L3        60M     240M  15 Unified         3 65536       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: 0-31
  node 0 size: 257573 MB
  node 0 free: 255032 MB
  node 1 cpus: 32-63
  node 1 size: 258041 MB
  node 1 free: 257470 MB
  node 2 cpus: 64-95
  node 2 size: 258041 MB
  node 2 free: 257682 MB
  node 3 cpus: 96-127
  node 3 size: 258030 MB
  node 3 free: 257498 MB
  node distances:
  node   0   1   2   3
    0:  10  21  21  21
    1:  21  10  21  21
    2:  21  21  10  21
    3:  21  21  21  10

----------------------------------------------------------------
9. /proc/meminfo
   MemTotal:       1056446460 kB

----------------------------------------------------------------
10. who -r
   run-level 3 Aug 17 13:05

----------------------------------------------------------------
11. Systemd service manager version: systemd 250 (250-6.el9_0)
   Default Target  Status
   multi-user      starting

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

*(Continued on next page)*

# SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

Inspur Electronic Information Industry Co., Ltd.

NF8260M7 (Intel Xeon Gold 6448H)

**SPECspeed®2017_fp_base = 388**

**SPECspeed®2017_fp_peak = 388**

**CPU2017 License:** 3358
**Test Sponsor:** Inspur Electronic Information Industry Co., Ltd.
**Tested by:** Inspur Electronic Information Industry Co., Ltd.

**Test Date:** Aug-2023
**Hardware Availability:** Apr-2023
**Software Availability:** Dec-2022

## Platform Notes (Continued)

```
   ----------------------------------------------------------
13. Linux kernel boot-time arguments, from /proc/cmdline
   BOOT_IMAGE=(hd0,msdos1)/vmlinuz-5.14.0-70.13.1.el9_0.x86_64
   root=/dev/mapper/rhel-root
   ro
   resume=/dev/mapper/rhel-swap
   rd.lvm.lv=rhel/root
   rd.lvm.lv=rhel/swap


   ----------------------------------------------------------
14. cpupower frequency-info
   analyzing CPU 0:
     current policy: frequency should be within 800 MHz and 2.40 GHz.
                     The governor "performance" may decide which speed to use
                     within this range.
     boost state support:
       Supported: yes
       Active: yes


   ----------------------------------------------------------
15. 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                    20
   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                     60
   vm.watermark_boost_factor      15000
   vm.watermark_scale_factor         10
   vm.zone_reclaim_mode               0


   ----------------------------------------------------------
16. /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


   ----------------------------------------------------------
17. /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


   ----------------------------------------------------------
18. OS release
```

(Continued on next page)

Inspur Electronic Information Industry Co., Ltd.

NF8260M7 (Intel Xeon Gold 6448H)

SPECspeed®2017_fp_base = 388

SPECspeed®2017_fp_peak = 388

**CPU2017 License:** 3358
**Test Sponsor:** Inspur Electronic Information Industry Co., Ltd.
**Tested by:** Inspur Electronic Information Industry Co., Ltd.

**Test Date:** Aug-2023
**Hardware Availability:** Apr-2023
**Software Availability:** Dec-2022

## Platform Notes (Continued)

```
   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)

  ----------------------------------------------------------------
  19. Disk information
  SPEC is set to: /home/cpu2017
    Filesystem              Type  Size  Used Avail Use% Mounted on
    /dev/mapper/rhel-home xfs   819G  150G  670G  19% /home

  ----------------------------------------------------------------
  20. /sys/devices/virtual/dmi/id
      Vendor:         Inspur
      Product:        NF8260-M7-A0-R0-00
      Product Family: Not specified
      Serial:         21B545466

  ----------------------------------------------------------------
  21. 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:
      32x Micron MTC20F2085S1RC48BA1 32 GB 2 rank 4800


  ----------------------------------------------------------------
  22. BIOS
  (This section combines info from /sys/devices and dmidecode.)
    BIOS Vendor:      American Megatrends International, LLC.
    BIOS Version:     03.00.00
    BIOS Date:        12/16/2022
```

## 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
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.
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.
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
```

**(Continued on next page)**

Inspur Electronic Information Industry Co., Ltd.

NF8260M7 (Intel Xeon Gold 6448H)

SPECspeed®2017_fp_base = 388

SPECspeed®2017_fp_peak = 388

**CPU2017 License:** 3358
**Test Sponsor:** Inspur Electronic Information Industry Co., Ltd.
**Tested by:** Inspur Electronic Information Industry Co., Ltd.

**Test Date:** Aug-2023
**Hardware Availability:** Apr-2023
**Software Availability:** Dec-2022

## Compiler Version Notes (Continued)

```
Copyright (C) 1985-2022 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 2023.0.0 Build 20221201
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.
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.
------------------------------------------------------------------------------
```

## 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`

**(Continued on next page)**

Inspur Electronic Information Industry Co., Ltd.

NF8260M7 (Intel Xeon Gold 6448H)

SPECspeed®2017_fp_base = 388

SPECspeed®2017_fp_peak = 388

**CPU2017 License:** 3358
**Test Sponsor:** Inspur Electronic Information Industry Co., Ltd.
**Tested by:** Inspur Electronic Information Industry Co., Ltd.

**Test Date:** Aug-2023
**Hardware Availability:** Apr-2023
**Software Availability:** Dec-2022

# Base Optimization Flags (Continued)

C benchmarks (continued):
```
-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
-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
```

# SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

Inspur Electronic Information Industry Co., Ltd.

NF8260M7 (Intel Xeon Gold 6448H)

**SPECspeed®2017_fp_base = 388**

SPECspeed®2017_fp_peak = 388

**CPU2017 License:** 3358
**Test Sponsor:** Inspur Electronic Information Industry Co., Ltd.
**Tested by:** Inspur Electronic Information Industry Co., Ltd.

**Test Date:** Aug-2023
**Hardware Availability:** Apr-2023
**Software Availability:** Dec-2022

## 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: basepeak = yes

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/Inspur-Platform-Settings-intel-V3.3.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/Inspur-Platform-Settings-intel-V3.3.xml

# SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

Inspur Electronic Information Industry Co., Ltd.

NF8260M7 (Intel Xeon Gold 6448H)

$SPECspeed®2017\_fp\_base = 388$

$SPECspeed®2017\_fp\_peak = 388$

**CPU2017 License:** 3358

**Test Sponsor:** Inspur Electronic Information Industry Co., Ltd.

**Tested by:** Inspur Electronic Information Industry Co., Ltd.

**Test Date:** Aug-2023

**Hardware Availability:** Apr-2023

**Software Availability:** Dec-2022

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

Tested with SPEC CPU®2017 v1.1.9 on 2023-08-17 13:05:54-0400.
Report generated on 2023-09-13 14:49:50 by CPU2017 PDF formatter v6716.
Originally published on 2023-09-13.