SPEC CPU®2017 Integer Speed Result

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xFusion

FusionServer G8600 V7 (Intel Xeon Platinum 8480+)

$SPECspeed®2017\_int\_base = 13.9$

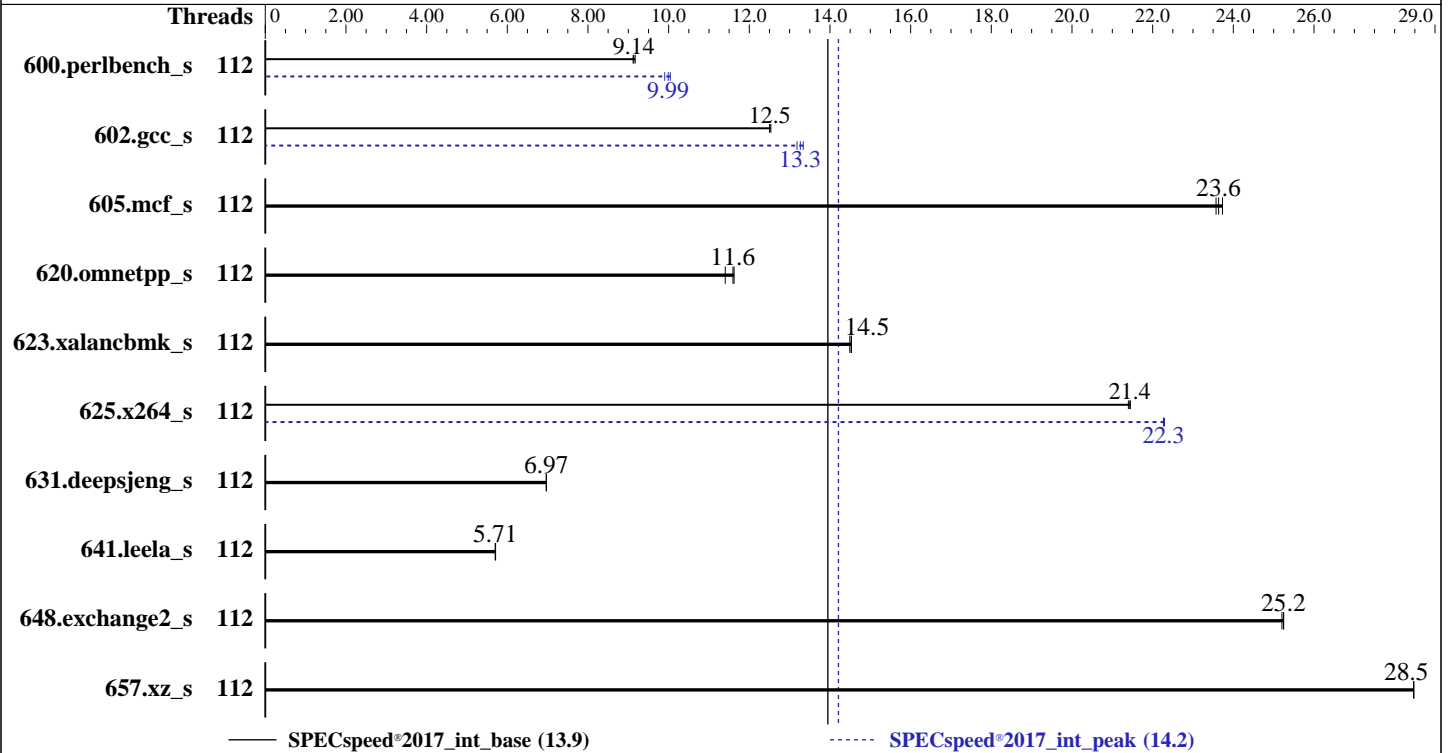$SPECspeed®2017\_int\_peak = 14.2$

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

Test Date: Jun-2024
Hardware Availability: May-2023
Software Availability: Dec-2023

Threads		
600.perlbench_s	112	9.14 / 9.99
602.gcc_s	112	12.5 / 13.3
605.mcf_s	112	23.6
620.omnetpp_s	112	11.6
623.xalancbmk_s	112	14.5
625.x264_s	112	21.4 / 22.3
631.deepsjeng_s	112	6.97
641.leela_s	112	5.71
648.exchange2_s	112	25.2
657.xz_s	112	28.5

SPECspeed®2017_int_base (13.9) — SPECspeed®2017_int_peak (14.2)

Hardware

CPU Name: Intel Xeon Platinum 8480+
 Max MHz: 3800
 Nominal: 2000
Enabled: 112 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 480 GB SATA SSD
Other: CPU Cooling: Air

Software

OS: Red Hat Enterprise Linux 9.2 (Plow)
 5.14.0-284.11.1.el9_2.x86_64
Compiler: C/C++: Version 2024.0.2 of Intel oneAPI DPC++/C++
 Compiler for Linux;
 Fortran: Version 2024.0.2 of Intel Fortran
 Compiler for Linux;
Parallel: Yes
Firmware: Version 01.02.02.09 Released Mar-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: 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
600.perlbench_s	112	194	9.17	**194**	**9.14**	195	9.12	112	**178**	**9.99**	177	10.0	179	9.90
602.gcc_s	112	318	12.5	318	12.5	**318**	**12.5**	112	299	13.3	302	13.2	**300**	**13.3**
605.mcf_s	112	**200**	**23.6**	200	23.6	199	23.7	112	**200**	**23.6**	200	23.6	199	23.7
620.omnetpp_s	112	**141**	**11.6**	143	11.4	140	11.6	112	**141**	**11.6**	143	11.4	140	11.6
623.xalancbmk_s	112	**97.5**	**14.5**	97.5	14.5	97.8	14.5	112	**97.5**	**14.5**	97.5	14.5	97.8	14.5
625.x264_s	112	82.4	21.4	**82.3**	**21.4**	82.3	21.4	112	79.1	22.3	**79.2**	**22.3**	79.2	22.3
631.deepsjeng_s	112	206	6.97	206	6.97	**206**	**6.97**	112	206	6.97	206	6.97	**206**	**6.97**
641.leela_s	112	**299**	**5.71**	299	5.70	299	5.71	112	**299**	**5.71**	299	5.70	299	5.71
648.exchange2_s	112	117	25.2	116	25.2	**116**	**25.2**	112	117	25.2	116	25.2	**116**	**25.2**
657.xz_s	112	**217**	**28.5**	217	28.5	217	28.5	112	**217**	**28.5**	217	28.5	217	28.5
SPECspeed®2017_int_base =		**13.9**												
SPECspeed®2017_int_peak =		**14.2**												

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,scatter"
LD_LIBRARY_PATH = "/home/speccpu2017/lib/intel64:/home/speccpu2017/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
```

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Test Date: Jun-2024
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Platform Notes

```
Performance Profile Set to Load Balance
SNC Set to Disable
Enable LP [Global] Set to Single LP

 Sysinfo program /home/speccpu2017/bin/sysinfo
 Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
 running on localhost.localdomain Mon Jun 17 15:14:39 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 252 (252-13.el9_2)
 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 5.14.0-284.11.1.el9_2.x86_64 #1 SMP PREEMPT_DYNAMIC Wed Apr 12 10:45:03 EDT
   2023 x86_64 x86_64 x86_64 GNU/Linux


 ------------------------------------------------------------
 2. w
    15:14:39 up 4 min,  2 users,  load average: 0.01, 0.06, 0.03
   USER      TTY          LOGIN@   IDLE   JCPU   PCPU WHAT
   root      tty1         15:14    7.00s  0.91s  0.00s -bash
   root      pts/0        15:13    1:11   0.05s  0.05s -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
```

xFusion

FusionServer G8600 V7 (Intel Xeon Platinum 8480+)

SPECspeed®2017_int_base = 13.9

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CPU2017 License: 6488　　　　　　　　　　　　　　　　**Test Date:** Jun-2024
Test Sponsor: xFusion　　　　　　　　　　　　　　　**Hardware Availability:** May-2023
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Platform Notes (Continued)

```
  scheduling priority             (-e) 0
  file size               (blocks, -f) unlimited
  pending signals                 (-i) 2060872
  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) 2060872
  virtual memory          (kbytes, -v) unlimited
  file locks                      (-x) unlimited


  ------------------------------------------------------------
  5. sysinfo process ancestry
  /usr/lib/systemd/systemd --switched-root --system --deserialize 31
  login -- root
  -bash
  -bash
  runcpu --define default-platform-flags -c ic2024.0.2-lin-sapphirerapids-speed-20231213.cfg --define
    cores=112 --tune base,peak -o all --define intspeedaffinity --define drop_caches intspeed
  runcpu --define default-platform-flags --configfile ic2024.0.2-lin-sapphirerapids-speed-20231213.cfg
    --define cores=112 --tune base,peak --output_format all --define intspeedaffinity --define drop_caches
    --nopower --runmode speed --tune base:peak --size refspeed intspeed --nopreenv --note-preenv --logfile
    $SPEC/tmp/CPU2017.028/templogs/preenv.intspeed.028.0.log --lognum 028.0 --from_runcpu 2
  specperl $SPEC/bin/sysinfo
  $SPEC = /home/speccpu2017


  ------------------------------------------------------------
  6. /proc/cpuinfo
    model name      : Intel(R) Xeon(R) Platinum 8480+
    vendor_id       : GenuineIntel
    cpu family      : 6
    model           : 143
    stepping        : 8
    microcode       : 0x2b0004d0
    bugs            : spectre_v1 spectre_v2 spec_store_bypass swapgs eibrs_pbrsb
    cpu cores       : 56
    siblings        : 56
    2 physical ids (chips)
    112 processors (hardware threads)
    physical id 0: core ids 0-55
    physical id 1: core ids 0-55
    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
    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
  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
```

(Continued on next page)

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Platform Notes (Continued)

```
    CPU op-mode(s):                   32-bit, 64-bit
    Address sizes:                    46 bits physical, 57 bits virtual
    Byte Order:                       Little Endian
    CPU(s):                           112
    On-line CPU(s) list:              0-111
    Vendor ID:                        GenuineIntel
    BIOS Vendor ID:                   Intel(R) Corporation
    Model name:                       Intel(R) Xeon(R) Platinum 8480+
    BIOS Model name:                  Intel(R) Xeon(R) Platinum 8480+
    CPU family:                       6
    Model:                            143
    Thread(s) per core:               1
    Core(s) per socket:               56
    Socket(s):                        2
    Stepping:                         8
    CPU max MHz:                      3800.0000
    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 intel_ppin cdp_l2 ssbd mba ibrs ibpb stibp ibrs_enhanced
                                      tpr_shadow vnmi flexpriority ept vpid ept_ad 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 ibt amx_bf16 avx512_fp16 amx_tile amx_int8
                                      flush_l1d arch_capabilities
    Virtualization:                   VT-x
    L1d cache:                        5.3 MiB (112 instances)
    L1i cache:                        3.5 MiB (112 instances)
    L2 cache:                         224 MiB (112 instances)
    L3 cache:                         210 MiB (2 instances)
    NUMA node(s):                     2
    NUMA node0 CPU(s):                0-55
    NUMA node1 CPU(s):                56-111
    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
    Vulnerability Spectre v1:         Mitigation; usercopy/swapgs barriers and __user pointer sanitization
    Vulnerability Spectre v2:         Mitigation; Enhanced IBRS, IBPB conditional, RSB filling, PBRSB-eIBRS SW
                                      sequence
    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     5.3M   12 Data            1     64        1             64
```

(Continued on next page)

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CPU2017 License: 6488   **Test Date:** Jun-2024
Test Sponsor: xFusion   **Hardware Availability:** May-2023
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Platform Notes (Continued)

```
   L1i        32K    3.5M    8 Instruction    1    64       1           64
   L2          2M    224M   16 Unified        2  2048       1           64
   L3        105M    210M   15 Unified        3 114688      1           64


--------------------------------------------------------------
8. numactl --hardware
NOTE: a numactl 'node' might or might not correspond to a physical chip.
  available: 2 nodes (0-1)
  node 0 cpus: 0-55
  node 0 size: 257268 MB
  node 0 free: 256196 MB
  node 1 cpus: 56-111
  node 1 size: 257991 MB
  node 1 free: 257029 MB
  node distances:
  node   0   1
    0:  10  21
    1:  21  10


--------------------------------------------------------------
9. /proc/meminfo
   MemTotal:       527625988 kB


--------------------------------------------------------------
10. who -r
  run-level 3 Jun 17 15:10


--------------------------------------------------------------
11. Systemd service manager version: systemd 252 (252-13.el9_2)
  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 crond
                   dbus-broker firewalld getty@ insights-client-boot irqbalance kdump low-memory-monitor
                   lvm2-monitor mdmonitor microcode nis-domainname nvmefc-boot-connections rhsmcertd rsyslog
                   rtkit-daemon selinux-autorelabel-mark sep5 sshd sssd sysstat systemd-boot-update
                   systemd-network-generator tuned udisks2 upower
  enabled-runtime  systemd-remount-fs
  disabled         blk-availability canberra-system-bootup canberra-system-shutdown
                   canberra-system-shutdown-reboot chrony-wait chronyd console-getty cpupower debug-shell
                   dnf-system-upgrade kvm_stat man-db-restart-cache-update nftables nvmet nvmf-autoconnect
                   pesign rdisc rhcd rhsm rhsm-facts rpmdb-rebuild selinux-check-proper-disable 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 systemd-sysupdate
                   systemd-sysupdate-reboot


--------------------------------------------------------------
14. Linux kernel boot-time arguments, from /proc/cmdline
   BOOT_IMAGE=(hd0,gpt2)/vmlinuz-5.14.0-284.11.1.el9_2.x86_64
   root=/dev/mapper/rhel-root
   ro
   crashkernel=1G-4G:192M,4G-64G:256M,64G-:512M
```

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Platform Notes (Continued)

```
  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 3.80 GHz and 3.80 GHz.
                    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+madvise [madvise] never
  enabled         [always] madvise 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
```

(Continued on next page)

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Platform Notes (Continued)

```
   os-release    Red Hat Enterprise Linux 9.2 (Plow)
   redhat-release Red Hat Enterprise Linux release 9.2 (Plow)
   system-release Red Hat Enterprise Linux release 9.2 (Plow)


   --------------------------------------------------------------
   21. Disk information
   SPEC is set to: /home/speccpu2017
     Filesystem           Type  Size  Used Avail Use% Mounted on
     /dev/mapper/rhel-home xfs   372G  206G  166G  56% /home


   --------------------------------------------------------------
   22. /sys/devices/virtual/dmi/id
       Vendor:        XFUSION
       Product:       G8600 V7
       Product Family: EagleStream


   --------------------------------------------------------------
   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:       01.02.02.09
       BIOS Date:          03/04/2024
```

Compiler Version Notes

```
==============================================================================================
C       | 600.perlbench_s(base, peak) 602.gcc_s(base, peak) 605.mcf_s(base, peak) 625.x264_s(base, peak)
        | 657.xz_s(base, peak)
----------------------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.
----------------------------------------------------------------------------------------------


==============================================================================================
C++     | 620.omnetpp_s(base, peak) 623.xalancbmk_s(base, peak) 631.deepsjeng_s(base, peak)
        | 641.leela_s(base, peak)
----------------------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.
----------------------------------------------------------------------------------------------


==============================================================================================
Fortran | 648.exchange2_s(base, peak)
----------------------------------------------------------------------------------------------
Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213
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----------------------------------------------------------------------------------------------
```

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Base Compiler Invocation

C benchmarks:
`icx`

C++ benchmarks:
`icpx`

Fortran benchmarks:
`ifx`

Base Portability Flags

600.perlbench_s: `-DSPEC_LP64 -DSPEC_LINUX_X64`
602.gcc_s: `-DSPEC_LP64`
605.mcf_s: `-DSPEC_LP64`
620.omnetpp_s: `-DSPEC_LP64`
623.xalancbmk_s: `-DSPEC_LP64 -DSPEC_LINUX`
625.x264_s: `-DSPEC_LP64`
631.deepsjeng_s: `-DSPEC_LP64`
641.leela_s: `-DSPEC_LP64`
648.exchange2_s: `-DSPEC_LP64`
657.xz_s: `-DSPEC_LP64`

Base Optimization Flags

C benchmarks:
`-w -std=c11 -m64 -Wl,-z,muldefs -xsapphirerapids -O3 -ffast-math`
`-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -fiopenmp`
`-DSPEC_OPENMP -L/usr/local/jemalloc64-5.0.1/lib -ljemalloc`

C++ benchmarks:
`-w -std=c++14 -m64 -Wl,-z,muldefs -xsapphirerapids -O3 -ffast-math`
`-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4`
`-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc`

Fortran benchmarks:
`-w -m64 -Wl,-z,muldefs -xsapphirerapids -O3 -ffast-math -flto`
`-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4`
`-nostandard-realloc-lhs -align array32byte`
`-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc`

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

SPEC CPU®2017 Integer Speed Result

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xFusion

FusionServer G8600 V7 (Intel Xeon Platinum 8480+)

SPECspeed®2017_int_base = 13.9

SPECspeed®2017_int_peak = 14.2

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

Test Date: Jun-2024
Hardware Availability: May-2023
Software Availability: Dec-2023

Peak Compiler Invocation

C benchmarks:
`icx`

C++ benchmarks:
`icpx`

Fortran benchmarks:
`ifx`

Peak Portability Flags

```
Same as Base Portability Flags
```

Peak Optimization Flags

C benchmarks:

600.perlbench_s: `-w -m64 -std=c11 -Wl,-z,muldefs`
`-fprofile-generate`(pass 1)
`-fprofile-use=default.profdata`(pass 2) `-xCORE-AVX2`(pass 1)
`-flto -Ofast`(pass 1) `-xCORE-AVX512 -O3 -ffast-math`
`-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4`
`-fiopenmp -DSPEC_OPENMP -fno-strict-overflow`
`-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc`

602.gcc_s: `-w -m64 -std=c11 -Wl,-z,muldefs`
`-fprofile-generate`(pass 1)
`-fprofile-use=default.profdata`(pass 2) `-xCORE-AVX2`(pass 1)
`-flto -Ofast`(pass 1) `-xCORE-AVX512 -O3 -ffast-math`
`-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4`
`-fiopenmp -DSPEC_OPENMP -L/usr/local/jemalloc64-5.0.1/lib`
`-ljemalloc`

605.mcf_s: basepeak = yes

625.x264_s: `-w -std=c11 -m64 -Wl,-z,muldefs -xsapphirerapids -O3`
`-ffast-math -flto -mfpmath=sse -funroll-loops`
`-qopt-mem-layout-trans=4 -fiopenmp -DSPEC_OPENMP`
`-fno-alias -L/usr/local/jemalloc64-5.0.1/lib -ljemalloc`

657.xz_s: basepeak = yes

(Continued on next page)

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SPECspeed®2017_int_base = 13.9

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CPU2017 License: 6488
Test Sponsor: xFusion
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Test Date: Jun-2024
Hardware Availability: May-2023
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Peak Optimization Flags (Continued)

C++ benchmarks:

620.omnetpp_s: `basepeak = yes`

623.xalancbmk_s: `basepeak = yes`

631.deepsjeng_s: `basepeak = yes`

641.leela_s: `basepeak = yes`

Fortran benchmarks:

648.exchange2_s: `basepeak = yes`

The flags files that were used to format this result can be browsed at
`http://www.spec.org/cpu2017/flags/xFusion-Platform-Settings-EMR-V1.1.html`
`http://www.spec.org/cpu2017/flags/Intel-ic2024-official-linux64.html`

You can also download the XML flags sources by saving the following links:
`http://www.spec.org/cpu2017/flags/xFusion-Platform-Settings-EMR-V1.1.xml`
`http://www.spec.org/cpu2017/flags/Intel-ic2024-official-linux64.xml`

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 2024-06-17 03:14:38-0400.
Report generated on 2024-07-03 09:24:25 by CPU2017 PDF formatter v6716.
Originally published on 2024-07-02.