# SPEC CPU®2017 Integer Speed Result

## Lenovo Global Technology

**ThinkSystem SR950 V3**  
(1.90 GHz, Intel Xeon Platinum 8490H)

**CPU2017 License:** 9017  
**Test Sponsor:** Lenovo Global Technology  
**Tested by:** Lenovo Global Technology  
**Test Date:** Nov-2023  
**Hardware Availability:** Oct-2023  
**Software Availability:** Dec-2023

### SPECspeed®2017 results

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>SPECspeed®2017_int_base</th>
<th>SPECspeed®2017_int_peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>600.perlbench_s</td>
<td>602.gcc_s</td>
<td>605.mcf_s</td>
</tr>
<tr>
<td>620.omnetpp_s</td>
<td>623.xalancbmk_s</td>
<td>625.x264_s</td>
</tr>
<tr>
<td>631.deepsjeng_s</td>
<td>641.leela_s</td>
<td>648.exchange2_s</td>
</tr>
<tr>
<td>657.xz_s</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Hardware

**CPU Name:** Intel Xeon Platinum 8490H  
**Max MHz:** 3500  
**Nominal:** 1900  
**Enabled:** 480 cores, 8 chips, 2 threads/core  
**Orderable:** 8 chips  
**Cache L1:** 32 KB I+D on chip per core  
**L2:** 2 MB I+D on chip per core  
**L3:** 112.5 MB I+D on chip per chip  
**Other:** None  
**Memory:** 4 TB (64 x 64 GB 2Rx4 PC5-4800B-R)  
**Storage:** 1 x 480 GB SATA SSD  
**Other:** None

### Software

**OS:** Red Hat Enterprise Linux 9.2 (Plow)  
**Kernel:** 5.14.0-284.11.1.el9_2.x86_64  
**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:** Lenovo BIOS Version EBE103M 1.10 released Oct-2023  
**File System:** xfs  
**System State:** Run level 3 (multi-user)  
**Base Pointers:** 64-bit  
**Peak Pointers:** Not Applicable  
**Other:** jemalloc memory allocator V5.0.1  
**Power Management:** BIOS and OS set to prefer performance at the cost of additional power usage
SPEC CPU®2017 Integer Speed Result

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SPECspeed®2017_int_base = 13.0
SPECspeed®2017_int_peak = Not Run

Test Date: Nov-2023
Hardware Availability: Oct-2023
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Results Table

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<tr>
<th>Benchmark</th>
<th>Threads</th>
<th>Base Seconds</th>
<th>Base Ratio</th>
<th>Base Seconds</th>
<th>Base Ratio</th>
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<th>Peak Seconds</th>
<th>Peak Ratio</th>
<th>Peak Seconds</th>
<th>Peak Ratio</th>
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<tr>
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<td>641.leela_s</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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/cpu2017-1.1.9-ic2023.2.3/lib/intel64:/home/cpu2017-1.1.9-ic2023.2.3/lib/ia32:/home/cpu2017-1.1.9-ic2023.2.3/jemalloc-5.0.1-64"
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
Platform Notes

BIOS configuration:
Choose Operating Mode set to Maximum Performance and then set it to Custom Mode
C-States set to Legacy
SNC set to SNC2

Sysinfo program /home/cpu2017-1.1.9-ic2023.2.3/bin/sysinfo
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
running on localhost.localdomain Sat Nov 25 22:52:57 2023

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

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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
22:52:57 up 3:38, 1 user, load average: 6.15, 7.64, 4.29
USER TTY LOGIN@ IDLE JCPU PCPU WHAT
root tty1 19:15 3:35m 0.96s 0.00s /bin/bash ./speccpu_rock.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
data seg size (kbytes, -d) unlimited
 scheduling priority (-e) 0
 file size (blocks, -f) unlimited

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Platform Notes (Continued)

5. sysinfo process ancestry
/usr/lib/systemd/systemd --switched-root --system --deserialize 31
login -- root
-bash
/bin/bash ./speccpu_rock.sh
/runcpu --nobuild --action validate --define default-platform-flags -c
ic2023.2.3-lin-sapphirerapids-speed-20231121.cfg --define cores=480 --tune base -o all --define
intspeedaffinity --define smt-on --define drop_caches intspeed
runcpu --nobuild --action validate --define default-platform-flags --configfile
ic2023.2.3-lin-sapphirerapids-speed-20231121.cfg --define cores=480 --tune base --output_format all
--define intsspeedaffinity --define smt-on --define drop_caches --nopower --runmode speed --tune base
--size refspeed intspeed --nopreenv --note-preenv --logfile
$SPEC/tmp/CPU2017.009/templogs/preenv.intspeed.009.0.log --lognum 009.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/cpu2017-1.1.9-ic2023.2.3

6. /proc/cpuinfo
model name : Intel(R) Xeon(R) Platinum 8490H
vendor_id : GenuineIntel
cpu family : 6
model : 143
stepping : 8
microcode : 0x2b0004b1
bugs : spectre_v1 spectre_v2 spec_store_bypass swapgs eibrs_pbrsb
cpu cores : 60
siblings : 120
8 physical ids (chips)
960 processors (hardware threads)
physical id 0: core ids 0-59
physical id 1: core ids 0-59
physical id 2: core ids 0-59
physical id 3: core ids 0-59
physical id 4: core ids 0-59
physical id 5: core ids 0-59
physical id 6: core ids 0-59
physical id 7: core ids 0-59
physical id 0: apicids 0-119
physical id 1: apicids 128-247
physical id 2: apicids 256-375
physical id 3: apicids 384-503
physical id 4: apicids 512-631
physical id 5: apicids 640-759
physical id 6: apicids 768-887
physical id 7: apicids 896-1015

(Continued on next page)
Platform Notes (Continued)

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
Byte Order:                    Little Endian
CPU(s):                        960
On-line CPU(s) list:           0-959
Vendor ID:                     GenuineIntel
BIOS Vendor ID:                 Intel(R) Corporation
Model name:                    Intel(R) Xeon(R) Platinum 8490H
BIOS Model name:               Intel(R) Xeon(R) Platinum 8490H
CPU family:                    6
Model:                         143
Thread(s) per core:            2
Core(s) per socket:            60
Socket(s):                     8
Stepping:                      8
CPU max MHz:                   3500.0000
CPU min MHz:                   800.0000
BogoMIPS:                      3800.00
Flags:                         fpu vme de pse mce pse36 apic sep mtrr pge mca cmovpat pse36
                             clflush dts acpi mmx fxsr sse sse2 as ht tm pbe syscall nx pdpe1gb rdtrunc
                             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 sse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_timer aes xsave avx f16c rcrand
                             lahf_lm abm 3dnowprefetch cpuid_fault epb cat_l3 cat_l2 cdp cdp_13
                             invpcid_single intel_ppps cdp_c12 ssbd mba ibrs ibpb ibrs_enhanced
                             tpr_shadow vnmi flexpriority ept vpd ept_ad fsgsbase tsc_adjust bmi1 avx2
                             smep bmi2 erness invpcid cqm cqm_occup_llc cqm_mbm_total
cqcm_mbm_local_split_lock_detect avx_vnni avx512_VF16 wmbnoindent dtherm ida
                             arat pln pts avx512vbuvmi umpk ospe waitpkg avx512vbmi2 gfnl vaes
                             vpclmulqdq avx512_vnni avx512_bitavg tme avx512_vpopcntdq la57 rdpid
                             bus_lock_detect cldemote mvdidi movdir64b enqcmd farm md_clear serialize
txslxdrk pconfig arch_bbr ibt amx_bf16 avx512_fp16 amx_tile amx_int8
                             flush_l1d arch_capabilities

Virtualization:                VT-x
L1d cache:                     22.5 MiB (480 instances)
L1i cache:                     15 MiB (480 instances)
L2 cache:                      960 MiB (480 instances)
L3 cache:                      900 MiB (8 instances)
NUMA node(s):                  16
NUMA node0 CPU(s):            0-29,480-509
NUMA node1 CPU(s):            30-59,510-539
NUMA node2 CPU(s):            60-89,540-569
NUMA node3 CPU(s):            90-119,570-599
NUMA node4 CPU(s):            120-149,600-629
NUMA node5 CPU(s):            150-179,630-659
NUMA node6 CPU(s):            180-209,660-689
NUMA node7 CPU(s):            210-239,690-719
NUMA node8 CPU(s):            240-269,720-749
NUMA node9 CPU(s):            270-299,750-779

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SPECspeed\textsuperscript{2017_int_base} = 13.0

SPECspeed\textsuperscript{2017_int_peak} = Not Run

Test Date: Nov-2023
Hardware Availability: Oct-2023
Software Availability: Dec-2023

Platform Notes (Continued)

NUMA node10 CPU(s): 300–329,780–809
NUMA node11 CPU(s): 330–359,810–839
NUMA node12 CPU(s): 360–389,840–869
NUMA node13 CPU(s): 390–419,870–899
NUMA node14 CPU(s): 420–449,900–929
NUMA node15 CPU(s): 450–479,930–959
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
Vulnerability Tax async abort: Not affected

From lscpu --cache:

\begin{verbatim}
NAME ONE-SIZE ALL-SIZE WAYS TYPE        LEVEL   SETS PHY-LINE COHERENCY-SIZE
L1d  48K    22.5M   12 Data            1     64        1             64
L1i  32K      15M    8 Instruction     1     64        1             64
L2    2M     960M   16 Unified         2   2048        1             64
L3  112.5M     900M   15 Unified         3 122880        1             64
\end{verbatim}

8. numactl --hardware
NOTE: a numactl 'node' might or might not correspond to a physical chip.
available: 16 nodes (0–15)
node 0 cpus: 0–29,480–509
node 0 size: 257371 MB
node 0 free: 256577 MB
node 1 cpus: 30–59,510–539
node 1 size: 258034 MB
node 1 free: 257412 MB
node 2 cpus: 60–89,540–569
node 2 size: 258034 MB
node 2 free: 256551 MB
node 3 cpus: 90–119,570–599
node 3 size: 258034 MB
node 3 free: 257591 MB
node 4 cpus: 120–149,600–629
node 4 size: 258034 MB
node 4 free: 257525 MB
node 5 cpus: 150–179,630–659
node 5 size: 258034 MB
node 5 free: 257565 MB
node 6 cpus: 180–209,660–689
node 6 size: 258034 MB
node 6 free: 256748 MB
node 7 cpus: 210–239,690–719
node 7 size: 257995 MB
node 7 free: 257550 MB
node 8 cpus: 240–269,720–749
node 8 size: 258034 MB
node 8 free: 257613 MB
node 9 cpus: 270–299,750–779
node 9 size: 258034 MB
node 9 free: 257628 MB
\end{verbatim}

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**Platform Notes (Continued)**

<table>
<thead>
<tr>
<th>node</th>
<th>cpus:</th>
<th>size:</th>
<th>free:</th>
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</thead>
<tbody>
<tr>
<td>10</td>
<td>300-329,780-809</td>
<td>258034 MB</td>
<td>257504 MB</td>
</tr>
<tr>
<td>11</td>
<td>330-359,810-839</td>
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<td>257533 MB</td>
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<tr>
<td>12</td>
<td>360-389,840-869</td>
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<td>13</td>
<td>390-419,870-899</td>
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<td>14</td>
<td>420-449,900-929</td>
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<tr>
<td>15</td>
<td>450-479,930-959</td>
<td>257991 MB</td>
<td>257603 MB</td>
</tr>
</tbody>
</table>

| distances: |
| node 0 | 10 | 12 | 21 | 21 | 21 | 31 | 31 | 31 | 31 | 21 | 21 | 21 | 21 | 31 | 31 |
| node 1 | 12 | 10 | 21 | 21 | 21 | 31 | 31 | 31 | 31 | 21 | 21 | 21 | 21 | 31 | 31 |
| node 2 | 21 | 21 | 10 | 12 | 31 | 31 | 21 | 21 | 21 | 21 | 31 | 31 | 31 | 31 | 21 | 21 |
| node 3 | 21 | 21 | 12 | 10 | 31 | 31 | 21 | 21 | 21 | 21 | 31 | 31 | 31 | 31 | 21 | 21 |
| node 4 | 21 | 21 | 31 | 10 | 12 | 21 | 21 | 21 | 21 | 31 | 31 | 31 | 31 | 31 | 31 | 21 |
| node 5 | 21 | 21 | 31 | 31 | 12 | 10 | 21 | 21 | 21 | 21 | 31 | 31 | 31 | 31 | 31 | 21 |
| node 6 | 31 | 31 | 21 | 21 | 21 | 31 | 31 | 21 | 21 | 21 | 21 | 31 | 31 | 31 | 31 | 21 |
| node 7 | 31 | 31 | 21 | 21 | 21 | 31 | 31 | 21 | 21 | 21 | 21 | 31 | 31 | 31 | 31 | 21 |
| node 8 | 31 | 31 | 21 | 21 | 21 | 31 | 31 | 21 | 21 | 21 | 21 | 31 | 31 | 31 | 31 | 21 |
| node 9 | 31 | 31 | 21 | 21 | 21 | 31 | 31 | 21 | 21 | 21 | 21 | 31 | 31 | 31 | 31 | 21 |
| node 10 | 31 | 31 | 21 | 21 | 21 | 31 | 31 | 21 | 21 | 21 | 21 | 31 | 31 | 31 | 31 | 21 |
| node 11 | 31 | 31 | 21 | 21 | 21 | 31 | 31 | 21 | 21 | 21 | 21 | 31 | 31 | 31 | 31 | 21 |
| node 12 | 31 | 31 | 21 | 21 | 21 | 31 | 31 | 21 | 21 | 21 | 21 | 31 | 31 | 31 | 31 | 21 |
| node 13 | 31 | 31 | 21 | 21 | 21 | 31 | 31 | 21 | 21 | 21 | 21 | 31 | 31 | 31 | 31 | 21 |
| node 14 | 31 | 31 | 21 | 21 | 21 | 31 | 31 | 21 | 21 | 21 | 21 | 31 | 31 | 31 | 31 | 21 |
| node 15 | 31 | 31 | 21 | 21 | 21 | 31 | 31 | 21 | 21 | 21 | 21 | 31 | 31 | 31 | 31 | 21 |

---

9. /proc/meminfo
   MemTotal: 4226878208 kB

---

10. who -r
    run-level 3 Nov 25 19:15

---

11. Systemd service manager version: systemd 252 (252-13.el9_2)
    Default Target    Status
    multi-user         running

---

12. Services, from systemctl list-unit-files
    STATE   UNIT FILES
    enabled NetworkManager NetworkManager-dispatcher NetworkManager-wait-online auditd chronyd crond
dbus-broker firewalld getty@8 insights-client-boot irqbalance kdump low-memory-monitor
mdmonitor microcode nis-domainname rhsmcertd rsyslog rtkit-daemon selinux-autorelabel-mark
sshd sssd systemd-boot-update systemd-network-generator udisks2 upower
    enabled-runtime  systemd-remount-fs
    disabled       canberra-system-bootup canberra-system-shutdown canberra-system-shutdown-reboot
chrony-wait console-getty cpupower debug-shell dnf-system-upgrade kvm_stat

(Continued on next page)
13. Linux kernel boot-time arguments, from /proc/cmdline
   BOOT_IMAGE=(hd1,gpt2)/boot/vmlinuz-5.14.0-284.11.1.el9_2.x86_64
   root=UUID=116409c2-57ac-4857-ace6-bb315b1769ff
   ro
   resume=UUID=075e4fda-52f2-4584-8323-c813820fb1bd

14. cpupower frequency-info
   analyzing CPU 0:
   current policy: frequency should be within 800 MHz and 3.50 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.extrfag_threshold        500
   vm.min_unmapped_ratio        1
   vm.nr_hugepages             2097152
   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

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(1.90 GHz, Intel Xeon Platinum 8490H)

CPU2017 License: 9017
Test Sponsor: Lenovo Global Technology
Tested by: Lenovo Global Technology

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Platform Notes (Continued)

18. OS release
   From /etc/*-release /etc/*-version
   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)

19. Disk information
   SPEC is set to: /home/cpu2017-1.1.9-ic2023.2.3
   Filesystem Type Size Used Avail Use% Mounted on
   /dev/sdc4 xfs 371G 235G 137G 64% /home

20. /sys/devices/virtual/dmi/id
   Vendor: Lenovo
   Product: ThinkSystem SR950 V3
   Product Family: ThinkSystem
   Serial: BLRSDV044

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:
   41x SK Hynix HMCG94AEBRA102N 64 GB 2 rank 4800
   14x SK Hynix HMCG94AEBRA109N 64 GB 2 rank 4800
   9x SK Hynix HMCG94AEBRA123N 64 GB 2 rank 4800

22. BIOS
   (This section combines info from /sys/devices and dmidecode.)
   BIOS Vendor: Lenovo
   BIOS Version: EBE103M-1.10
   BIOS Date: 10/10/2023
   BIOS Revision: 1.10
   Firmware Revision: 1.10

Compiler Version Notes

---------------------------------------------------------------------------------------------------------------------
| C       | 600.perlbench_s(base) 602.gcc_s(base) 605.mcf_s(base) 625.x264_s(base) 657.xz_s(base) |
---------------------------------------------------------------------------------------------------------------------
| Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2023.2.3 Build x |
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| C++     | 620.omnetpp_s(base) 623.xalancbmk_s(base) 631.deepsjeng_s(base) 641.leela_s(base) |
---------------------------------------------------------------------------------------------------------------------
| Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2023.2.3 Build x |
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### Compiler Version Notes (Continued)

Fortran | 648.exchange2_s(base)
---|---------------------------------------------
Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2023.2.3 Build x
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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

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Lenovo Global Technology
ThinkSystem SR950 V3
(1.90 GHz, Intel Xeon Platinum 8490H)

SPECspeed®2017_int_base = 13.0
SPECs speed®2017_int_peak = Not Run

Test Sponsor: Lenovo Global Technology
Tested by: Lenovo Global Technology

CPU2017 License: 9017
Test Date: Nov-2023
Hardware Availability: Oct-2023
Software Availability: Dec-2023

Test Date: Nov-2023
Hardware Availability: Oct-2023
Software Availability: Dec-2023

Base Optimization Flags (Continued)
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

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2017/flags/Lenovo-Platform-SPECcpu2017-Flags-V1.2-Eaglestream-AA.html
http://www.spec.org/cpu2017/flags/Intel-ic2023p2-official-linux64.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2017/flags/Lenovo-Platform-SPECcpu2017-Flags-V1.2-Eaglestream-AA.xml
http://www.spec.org/cpu2017/flags/Intel-ic2023p2-official-linux64.xml

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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 2023-11-25 09:52:56-0500.
Report generated on 2023-12-11 09:56:51 by CPU2017 PDF formatter v6716.
Originally published on 2023-12-11.