**SPEC CPU®2017 Integer Rate Result**

**Lenovo Global Technology**

ThinkSystem SD530 V3  
(2.20 GHz, Intel Xeon Silver 4516Y+)

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**Software**

**OS:** Red Hat Enterprise Linux 9.3 (Plow)  
**Kernel:** 5.14.0-362.8.1.el9_3.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:** No  
**Firmware:** Lenovo BIOS Version FNE113F 2.20 released Jan-2024  
**File System:** xfs  
**System State:** Run level 3 (multi-user)  
**Base Pointers:** 64-bit  
**Peak Pointers:** Not Applicable  
**Other:** None  
**Power Management:** BIOS set to prefer performance at the cost of additional power usage

---

**Hardware**

**CPU Name:** Intel Xeon Silver 4516Y+  
**Max MHz:** 3700  
**Nominal:** 2200  
**Enabled:** 48 cores, 2 chips, 2 threads/core  
**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:** 45 MB I+D on chip per chip  
**Other:** None  
**Memory:** 1 TB (16 x 64 GB 2Rx4 PC5-5600B-R, running at 4400)  
**Storage:** 1 x 480 GB M.2 SATA SSD  
**Other:** Cooling: Air

---

**Lenovo Global Technology**

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

---

**Test Date:** Feb-2024  
**Hardware Availability:** Mar-2024  
**Software Availability:** Dec-2023

---

| SPECrate®2017_int_base = | 428 |
|--------------------------|
| SPECrate®2017_int_peak = | Not Run |

---

<table>
<thead>
<tr>
<th>Tests</th>
<th>Copies</th>
</tr>
</thead>
<tbody>
<tr>
<td>500. perbench_r</td>
<td>96</td>
</tr>
<tr>
<td>502. gcc_r</td>
<td>96</td>
</tr>
<tr>
<td>505. mcf_r</td>
<td>96</td>
</tr>
<tr>
<td>520. omnetpp_r</td>
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</tr>
<tr>
<td>523. xalancbmk_r</td>
<td>96</td>
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<td>525. x264_r</td>
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<td>531. deepsjeng_r</td>
<td>96</td>
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<tr>
<td>541. leela_r</td>
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<tr>
<td>548. exchange2_r</td>
<td>96</td>
</tr>
<tr>
<td>557. xz_r</td>
<td>96</td>
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</tbody>
</table>

---

<table>
<thead>
<tr>
<th>Hardware</th>
<th>Software</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Name: Intel Xeon Silver 4516Y+</td>
<td>OS: Red Hat Enterprise Linux 9.3 (Plow)</td>
</tr>
<tr>
<td>Max MHz: 3700</td>
<td>Kernel 5.14.0-362.8.1.el9_3.x86_64</td>
</tr>
<tr>
<td>Nominal: 2200</td>
<td>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;</td>
</tr>
<tr>
<td>Enabled: 48 cores, 2 chips, 2 threads/core</td>
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</tr>
<tr>
<td>L2: 2 MB I+D on chip per core</td>
<td>System State: Run level 3 (multi-user)</td>
</tr>
<tr>
<td>L3: 45 MB I+D on chip per chip</td>
<td>Base Pointers: 64-bit</td>
</tr>
<tr>
<td>Other: None</td>
<td>Peak Pointers: Not Applicable</td>
</tr>
<tr>
<td>Memory: 1 TB (16 x 64 GB 2Rx4 PC5-5600B-R, running at 4400)</td>
<td>Other: None</td>
</tr>
<tr>
<td>Storage: 1 x 480 GB M.2 SATA SSD</td>
<td>Power Management: BIOS set to prefer performance at the cost of additional power usage</td>
</tr>
<tr>
<td>Other: Cooling: Air</td>
<td></td>
</tr>
</tbody>
</table>
Lenovo Global Technology
ThinkSystem SD530 V3
(2.20 GHz, Intel Xeon Silver 4516Y+)

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

Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
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<th>Ratio</th>
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<td>328</td>
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<td>365</td>
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<tr>
<td>505.mcf_r</td>
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<td>710</td>
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<td>709</td>
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<td>520.omnetpp_r</td>
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<td>531.deepsjeng_r</td>
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<tr>
<td>548.exchange2_r</td>
<td>96</td>
<td>283</td>
<td>888</td>
<td>285</td>
<td>882</td>
<td>283</td>
<td>887</td>
</tr>
<tr>
<td>557.xz_r</td>
<td>96</td>
<td>498</td>
<td>208</td>
<td>501</td>
<td>207</td>
<td>504</td>
<td>206</td>
</tr>
</tbody>
</table>

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

Submit Notes

The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl commands to bind each copy to a specific processor. For details, please see the config file.

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:
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/lib/je5.0.1-32"
MALLOC_CONF = "retain:true"

General Notes

Binaries compiled on a system with 2x Intel Xeon Platinum 8280M CPU + 384GB RAM memory using Red Hat Enterprise Linux 8.4
Transparent Huge Pages enabled by default
Prior to runcpu invocation
Filesystem page cache synced and cleared with:
sync; echo 3 > /proc/sys/vm/drop_caches
runcpu command invoked through numactl i.e.:
numactl --interleave=all runcpu <etc>
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.

(Continued on next page)
General Notes (Continued)

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.

Platform Notes

BIOS configuration:
Choose Operating Mode set to Maximum Performance
SNC set to SNC2
LLC Prefetch set to Disabled

Sysinfo program /home/cpu2017-1.1.9-ic2023.2.3/bin/sysinfo
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
running on localhost.localdomain Mon Feb 26 03:40:14 2024

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

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4. ulimit -a
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7. lscpu
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10. who 
11. Systemd service manager version: systemd 252 (252-18.el9)
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/klhugepaged
18. OS release
19. Disk information
20. /sys/devices/virtual/dmi/id
21. dmidecode
22. BIOS

1. uname -a
Linux localhost.localdomain 5.14.0-362.8.1.el9_3.x86_64 #1 SMP PREEMPT_DYNAMIC Tue Oct 3 11:12:36 EDT 2023
x86_64 x86_64 x86_64 GNU/Linux

2. w
03:40:14 up 1 min,  1 user,  load average: 0.10, 0.04, 0.01
USER     TTY        LOGIN@   IDLE   JCPU   PCPU WHAT
root     tty1      03:38   11.00s  1.19s  0.01s /bin/bash ./rate_int.sh

3. Username
From environment variable $USER: root

(Continued on next page)
Platform Notes (Continued)

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
   pending signals   (-i) 4126937
   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) 4126937
   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
   /bin/bash ./rate_int.sh
   /bin/bash ./rate_int.sh
   runcpu --nobuild --action validate --define default-platform-flags --define numcopies=96 -c
   ic2023.2.3-lin-sapphirerapids-rate-20231121.cfg --define smt-on --define cores=48 --define physicalfirst
   --define invoke_with_interleave --define drop_caches --tune base -o all intrate
   runcpu --nobuild --action validate --define default-platform-flags --define numcopies=96 --configfile
   ic2023.2.3-lin-sapphirerapids-rate-20231121.cfg --define smt-on --define cores=48 --define physicalfirst
   --define invoke_with_interleave --define drop_caches --tune base --output_format all --nopower --runmode
   rate --tune base --size refrate intrate --nopreenv --note-preenv --logfile
   $SPEC/tmp/CFU2017.407/templogs/preenv.intrate.407.0.log --lognum 407.0 --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) SILVER 4516Y+
   vendor_id       : GenuineIntel
   cpu family      : 6
   model           : 207
   stepping        : 2
   microcode       : 0x21000200
   bugs            : spectre_v1 spectre_v2 spec_store_bypass swapgs eibr_swap
   cpu cores       : 24
   siblings        : 48
   2 physical ids (chips)
   96 processors (hardware threads)
   physical id 0: core ids 0-23
   physical id 1: core ids 0-23
   physical id 0: apic ids 0-47
   physical id 1: apic ids 128-175
   Caution: /proc/cpuinfo data regarding chips, cores, and threads is not necessarily reliable, especially for
   virtualized systems. Use the above data carefully.

------------------------------------------------------------

7. lscpu

(Continued on next page)
**Platform Notes (Continued)**

From `lscpu` from `util-linux` 2.37.4:

<table>
<thead>
<tr>
<th>Feature</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architecture:</td>
<td>x86_64</td>
</tr>
<tr>
<td>CPU op-mode(s):</td>
<td>32-bit, 64-bit</td>
</tr>
<tr>
<td>Address sizes:</td>
<td>46 bits physical, 57 bits virtual</td>
</tr>
<tr>
<td>Byte Order:</td>
<td>Little Endian</td>
</tr>
<tr>
<td>CPU(s):</td>
<td>96</td>
</tr>
<tr>
<td>On-line CPU(s) list:</td>
<td>0-95</td>
</tr>
<tr>
<td>Vendor ID:</td>
<td>GenuineIntel</td>
</tr>
<tr>
<td>BIOS Vendor ID:</td>
<td>Intel(R) Corporation</td>
</tr>
<tr>
<td>Model name:</td>
<td>INTEL(R) XEON(R) SILVER 4516Y+</td>
</tr>
<tr>
<td>BIOS Model name:</td>
<td>INTEL(R) XEON(R) SILVER 4516Y+</td>
</tr>
<tr>
<td>CPU family:</td>
<td>6</td>
</tr>
<tr>
<td>Model:</td>
<td>207</td>
</tr>
<tr>
<td>Thread(s) per core:</td>
<td>2</td>
</tr>
<tr>
<td>Core(s) per socket:</td>
<td>24</td>
</tr>
<tr>
<td>Socket(s):</td>
<td>2</td>
</tr>
<tr>
<td>Stepping:</td>
<td>2</td>
</tr>
<tr>
<td>BogoMIPS:</td>
<td>4400.00</td>
</tr>
</tbody>
</table>

**Virtualization:**

- VT-x

**Cache:**

- L1d cache: 2.3 MiB (48 instances)
- Li1 cache: 1.5 MiB (48 instances)
- L2 cache: 96 MiB (48 instances)
- L3 cache: 90 MiB (2 instances)

**NUMA node(s):**

- NUMA node0 CPU(s): 0-11, 48-59
- NUMA node1 CPU(s): 12-23, 60-71
- NUMA node2 CPU(s): 24-35, 72-83
- NUMA node3 CPU(s): 36-47, 84-95

**Vulnerability Gather data sampling:** Not affected

**Vulnerability Il1b 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 / Automatic IBRS, IBPB conditional, RSB filling, PBRBS-eIBRS SW sequence

**Vulnerability Srbds:** Not affected

**Vulnerability Txr async abort:** Not affected

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Lenovo Global Technology

ThinkSystem SD530 V3
(2.20 GHz, Intel Xeon Silver 4516Y+)

SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

Lenovo Global Technology

SPECrate®2017_int_base = 428

SPECrate®2017_int_peak = Not Run

CPU2017 License: 9017
Test Sponsor: Lenovo Global Technology
Test Date: Feb-2024

Tested by: Lenovo Global Technology
Hardware Availability: Mar-2024
Software Availability: Dec-2023

Platform Notes (Continued)

From lscpu --cache:

<table>
<thead>
<tr>
<th>NAME</th>
<th>ONE-SIZE</th>
<th>ALL-SIZE</th>
<th>WAYS</th>
<th>TYPE</th>
<th>LEVEL</th>
<th>SETS</th>
<th>PHY-LINE</th>
<th>COHERENCY-SIZE</th>
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</thead>
<tbody>
<tr>
<td>L1d</td>
<td>48K</td>
<td>2.3M</td>
<td>12</td>
<td>Data</td>
<td>1</td>
<td>64</td>
<td>1</td>
<td>64</td>
</tr>
<tr>
<td>L1i</td>
<td>32K</td>
<td>1.5M</td>
<td>8</td>
<td>Instruction</td>
<td>1</td>
<td>64</td>
<td>1</td>
<td>64</td>
</tr>
<tr>
<td>L2</td>
<td>2M</td>
<td>96M</td>
<td>16</td>
<td>Unified</td>
<td>2</td>
<td>2048</td>
<td>1</td>
<td>64</td>
</tr>
<tr>
<td>L3</td>
<td>45M</td>
<td>90M</td>
<td>15</td>
<td>Unified</td>
<td>3</td>
<td>49152</td>
<td>1</td>
<td>64</td>
</tr>
</tbody>
</table>

FROM numactl --hardware

available: 4 nodes (0-3)
node 0 cpus: 0-11,48-59
node 0 size: 257653 MB
node 0 free: 256786 MB
node 1 cpus: 12-23,60-71
node 1 size: 258041 MB
node 1 free: 257348 MB
node 2 cpus: 24-35,72-83
node 2 size: 258041 MB
node 2 free: 257435 MB
node 3 cpus: 36-47,84-95
node 3 size: 258036 MB
node 3 free: 257451 MB
node distances:
node   0   1   2   3
0:  10  12  21  21
1:  12  10  21  21
2:  21  21  10  12
3:  21  21  12  10

9. /proc/meminfo
MemTotal: 1056536124 kB

10. who -r
run-level 3 Feb 26 03:38

11. Systemd service manager version: systemd 252 (252-18.el9)
Default Target Status
multi-user running

12. 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
mdmonitor microcode nis-domainname rshmcertd 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-reboot
canberra-system-bootup canberra-system-shutdown-reboot
canberra-system-bootup canberra-system-shutdown-reboot
console-getty cputpower debug-shell dnf-system-upgrade kvm_stat man-db-restart-cache-update
ntables petign rdisc rhcd rhsm rhsm-facts rpmdb-rebuild selinux-check-proper-disable
serial-getty sshd-keugen@ systemd-boot-check-no-failures systemd-psstore systemd-sysxext
indirect sshd-autofs sssd-km sssd-ns sssd-pac sssd-pam sssd-ssh sssd-sudo systemd-sysupdate
systemd-sysupdate-reboot

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

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Lenovo Global Technology  
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**CPU2017 License:** 9017  
**Test Sponsor:** Lenovo Global Technology  
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**Platform Notes (Continued)**

```plaintext
BOOT_IMAGE=(hd0,gpt3)/boot/vmlinuz-5.14.0-362.8.1.el9_x86_64
root=UUID=be3ee7bd-6db4-4efc-8d0a-4f4f123b4865
ro
resume=UUID=8de8c2d1-84ee-4c60-9038-a9e1ae2929c4

14. cpupower frequency-info
   analyzing CPU 0:
   Unable to determine current policy
   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.extrfrag_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/klhugepaged
   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
   From /etc/*-release /etc/*-version
   os-release Red Hat Enterprise Linux 9.3 (Plow)
   redhat-release Red Hat Enterprise Linux release 9.3 (Plow)
   system-release Red Hat Enterprise Linux release 9.3 (Plow)
```

---

(Continued on next page)
## Platform Notes (Continued)

19. Disk information

```
Filesystem     Type Size  Used Avail Use% Mounted on  
/dev/sda4      xfs   372G   25G  347G   7% /home
```

20. /sys/devices/virtual/dmi/id

```
Vendor:         Lenovo
Product:        ThinkSystem SD530 V3
Product Family: ThinkSystem
Serial:         PASDVMK006
```

21. dmidecode

Additional information from dmidecode 3.5 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:        
15x Samsung M321R8GA0PB0-CWMKH 64 GB 2 rank 5600, configured at 4400
1x Samsung M321R8GA0PB0-CWMXH 64 GB 2 rank 5600, configured at 4400
```

22. BIOS

```
BIOS Vendor:       Lenovo
BIOS Version:      FNE113F-2.20
BIOS Date:         01/02/2024
BIOS Revision:     2.20
Firmware Revision: 1.10
```

## Compiler Version Notes

```
C        | 500.perltbench_r(base) 502.gcc_r(base) 505.mcf_r(base) 525.x264_r(base) 557.xz_r(base)
```

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.

```
C++      | 520.omnetpp_r(base) 523.xalancbmk_r(base) 531.deepsjeng_r(base) 541.leela_r(base)
```

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.

```
Fortran  | 548.exchange2_r(base)
```

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2023.2.3 Build x
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**SPEC CPU®2017 Integer Rate Result**

**Lenovo Global Technology**
ThinkSystem SD530 V3  
(2.20 GHz, Intel Xeon Silver 4516Y+)

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
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<tbody>
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<td>SPECrate®2017_int_base</td>
<td>428</td>
</tr>
<tr>
<td>SPECrate®2017_int_peak</td>
<td>Not Run</td>
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**CPU2017 License:** 9017  
**Test Date:** Feb-2024  
**Test Sponsor:** Lenovo Global Technology  
**Hardware Availability:** Mar-2024  
**Tested by:** Lenovo Global Technology  
**Software Availability:** Dec-2023  

### Base Compiler Invocation

- **C benchmarks:** icx  
- **C++ benchmarks:** icpx  
- **Fortran benchmarks:** ifx

### Base Portability Flags

<table>
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<tr>
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<th>Value</th>
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<td>perlbench_r</td>
<td>-DSPEC_LP64 -DSPEC_LINUX_X64</td>
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<td>gcc_r</td>
<td>-DSPEC_LP64</td>
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<tr>
<td>mcf_r</td>
<td>-DSPEC_LP64</td>
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<td>omnetpp_r</td>
<td>-DSPEC_LP64</td>
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<tr>
<td>xalancbmk_r</td>
<td>-DSPEC_LP64 -DSPEC_LINUX</td>
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<tr>
<td>x264_r</td>
<td>-DSPEC_LP64</td>
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<tr>
<td>deepsjeng_r</td>
<td>-DSPEC_LP64</td>
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<tr>
<td>leela_r</td>
<td>-DSPEC_LP64</td>
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<tr>
<td>exchange2_r</td>
<td>-DSPEC_LP64</td>
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<tr>
<td>xz_r</td>
<td>-DSPEC_LP64</td>
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</table>

### 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  
  -L/home/specdev/new_compilers/ic2023.2.3/compiler/lib/intel64_lin  
  -lqkmalloc  

- **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/home/specdev/new_compilers/ic2023.2.3/compiler/lib/intel64_lin  
  -lqkmalloc

- **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 -auto  
  -L/home/specdev/new_compilers/ic2023.2.3/compiler/lib/intel64_lin  
  -lqkmalloc
### Lenovo Global Technology

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**SPECrate**

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**Test Date:** Feb-2024

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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 2024-02-25 14:40:13-0500.


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