**Lenovo Global Technology**

**ThinkSystem SR630 V3**  
(1.80 GHz, Intel Xeon Bronze 3408U)

<table>
<thead>
<tr>
<th>SPECrate®2017_fp_base = 75.0</th>
</tr>
</thead>
</table>

**SPECrater®2017_fp_peak = Not Run**

<table>
<thead>
<tr>
<th>CPU2017 License:</th>
<th>9017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Sponsor:</td>
<td>Lenovo Global Technology</td>
</tr>
<tr>
<td>Tested by:</td>
<td>Lenovo Global Technology</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Test Date:</th>
<th>Apr-2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardware Availability:</td>
<td>May-2023</td>
</tr>
<tr>
<td>Software Availability:</td>
<td>Dec-2022</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hardware</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Name:</td>
</tr>
<tr>
<td>Max MHz:</td>
</tr>
<tr>
<td>Nominal:</td>
</tr>
<tr>
<td>Enabled:</td>
</tr>
<tr>
<td>Orderable:</td>
</tr>
<tr>
<td>Cache L1:</td>
</tr>
<tr>
<td>L2:</td>
</tr>
<tr>
<td>L3:</td>
</tr>
<tr>
<td>Other:</td>
</tr>
<tr>
<td>Memory:</td>
</tr>
<tr>
<td>Storage:</td>
</tr>
<tr>
<td>Other:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Software</th>
</tr>
</thead>
<tbody>
<tr>
<td>OS:</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Compiler:</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Parallel:</td>
</tr>
<tr>
<td>Firmware:</td>
</tr>
<tr>
<td>File System:</td>
</tr>
<tr>
<td>System State:</td>
</tr>
<tr>
<td>Base Pointers:</td>
</tr>
<tr>
<td>Peak Pointers:</td>
</tr>
<tr>
<td>Other:</td>
</tr>
<tr>
<td>Power Management:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Copies</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SPECrate®2017_fp_base</th>
<th>(75.0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>15.0</td>
</tr>
<tr>
<td>320</td>
<td>316</td>
</tr>
</tbody>
</table>

| 8 |
| 108 |

**503.bwaves_r**  
**507.cactuBSSN_r**  
**508.namd_r**  
**510.parest_r**  
**511.povray_r**  
**519.lbm_r**  
**521.wrf_r**  
**526.blender_r**  
**527.cam4_r**  
**538.imagick_r**  
**544.nab_r**  
**549.fotonik3d_r**  
**554.roms_r**  

**Copies**

<table>
<thead>
<tr>
<th>Copies</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SPECrate®2017_fp_base (75.0)</th>
</tr>
</thead>
</table>

**Lenovo Global Technology**

**ThinkSystem SR630 V3**  
(1.80 GHz, Intel Xeon Bronze 3408U)

<table>
<thead>
<tr>
<th>SPECrate®2017_fp_base = 75.0</th>
</tr>
</thead>
</table>

**SPECrater®2017_fp_peak = Not Run**

<table>
<thead>
<tr>
<th>CPU2017 License:</th>
<th>9017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Sponsor:</td>
<td>Lenovo Global Technology</td>
</tr>
<tr>
<td>Tested by:</td>
<td>Lenovo Global Technology</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Test Date:</th>
<th>Apr-2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardware Availability:</td>
<td>May-2023</td>
</tr>
<tr>
<td>Software Availability:</td>
<td>Dec-2022</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hardware</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Name:</td>
</tr>
<tr>
<td>Max MHz:</td>
</tr>
<tr>
<td>Nominal:</td>
</tr>
<tr>
<td>Enabled:</td>
</tr>
<tr>
<td>Orderable:</td>
</tr>
<tr>
<td>Cache L1:</td>
</tr>
<tr>
<td>L2:</td>
</tr>
<tr>
<td>L3:</td>
</tr>
<tr>
<td>Other:</td>
</tr>
<tr>
<td>Memory:</td>
</tr>
<tr>
<td>Storage:</td>
</tr>
<tr>
<td>Other:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Software</th>
</tr>
</thead>
<tbody>
<tr>
<td>OS:</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Compiler:</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Parallel:</td>
</tr>
<tr>
<td>Firmware:</td>
</tr>
<tr>
<td>File System:</td>
</tr>
<tr>
<td>System State:</td>
</tr>
<tr>
<td>Base Pointers:</td>
</tr>
<tr>
<td>Peak Pointers:</td>
</tr>
<tr>
<td>Other:</td>
</tr>
<tr>
<td>Power Management:</td>
</tr>
</tbody>
</table>
Lenovo Global Technology

ThinkSystem SR630 V3
(1.80 GHz, Intel Xeon Bronze 3408U)

SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

Lenovo Global Technology

ThinkSystem SR630 V3
(1.80 GHz, Intel Xeon Bronze 3408U)

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

Test Date: Apr-2023
Hardware Availability: May-2023
Software Availability: Dec-2022

Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>503.bwaves_r</td>
<td>8</td>
<td>254</td>
<td>316</td>
<td>263</td>
<td>305</td>
<td>254</td>
<td>316</td>
</tr>
<tr>
<td>507.cactuBSSN_r</td>
<td>8</td>
<td>93.5</td>
<td>108</td>
<td>93.5</td>
<td>108</td>
<td>93.0</td>
<td>109</td>
</tr>
<tr>
<td>508.namd_r</td>
<td>8</td>
<td>227</td>
<td>33.5</td>
<td>227</td>
<td>33.4</td>
<td>227</td>
<td>33.5</td>
</tr>
<tr>
<td>510.parest_r</td>
<td>8</td>
<td>401</td>
<td>52.2</td>
<td>401</td>
<td>52.3</td>
<td>401</td>
<td>52.2</td>
</tr>
<tr>
<td>511.povray_r</td>
<td>8</td>
<td>361</td>
<td>51.8</td>
<td>360</td>
<td>51.8</td>
<td>362</td>
<td>51.6</td>
</tr>
<tr>
<td>519.lbm_r</td>
<td>8</td>
<td>123</td>
<td>68.4</td>
<td>122</td>
<td>69.4</td>
<td>130</td>
<td>64.6</td>
</tr>
<tr>
<td>521.wrf_r</td>
<td>8</td>
<td>243</td>
<td>73.7</td>
<td>241</td>
<td>74.2</td>
<td>243</td>
<td>73.7</td>
</tr>
<tr>
<td>526.blender_r</td>
<td>8</td>
<td>269</td>
<td>45.2</td>
<td>270</td>
<td>45.2</td>
<td>269</td>
<td>45.3</td>
</tr>
<tr>
<td>527.cam4r</td>
<td>8</td>
<td>248</td>
<td>56.4</td>
<td>248</td>
<td>56.3</td>
<td>249</td>
<td>56.3</td>
</tr>
<tr>
<td>538.imagick_r</td>
<td>8</td>
<td>145</td>
<td>137</td>
<td>145</td>
<td>137</td>
<td>145</td>
<td>137</td>
</tr>
<tr>
<td>544.nab_r</td>
<td>8</td>
<td>161</td>
<td>83.8</td>
<td>161</td>
<td>83.5</td>
<td>161</td>
<td>83.5</td>
</tr>
<tr>
<td>549.fotonik3d_r</td>
<td>8</td>
<td>321</td>
<td>97.0</td>
<td>322</td>
<td>96.9</td>
<td>330</td>
<td>94.6</td>
</tr>
<tr>
<td>554.roms_r</td>
<td>8</td>
<td>236</td>
<td>53.8</td>
<td>237</td>
<td>53.6</td>
<td>237</td>
<td>53.6</td>
</tr>
</tbody>
</table>

SPECrate®2017_fp_base = 75.0
SPECrate®2017_fp_peak = Not Run

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

Submit Notes

The taskset mechanism was used to bind copies to processors. The config file option 'submit' was used to generate taskset 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-ic2023.0/lib/intel64:/home/cpu2017-1.1.9-ic2023.0/je5.0.1-64"
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
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.

jemalloc, a general purpose malloc implementation
built with the RedHat Enterprise 7.5, and the system compiler gcc 4.8.5
SPEC CPU®2017 Floating Point Rate Result

Lenovo Global Technology
ThinkSystem SR630 V3
(1.80 GHz, Intel Xeon Bronze 3408U)

SPECrate®2017_fp_base = 75.0
SPECrate®2017_fp_peak = Not Run

CPU2017 License: 9017
Test Sponsor: Lenovo Global Technology
Test Date: Apr-2023
Hardware Availability: May-2023
Tested by: Lenovo Global Technology
Software Availability: Dec-2022

Platform Notes (Continued)

4. ulimit
   core file size (blocks, -c) unlimited
   data seg size (kbytes, -d) unlimited
   scheduling priority (-e) 0
   file size (blocks, -f) unlimited
   pending signals (-i) 1029785
   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) 1029785
   virtual memory (kbytes, -v) unlimited
   file locks (-x) unlimited

5. sysinfo process ancestry
   /usr/lib/systemd/systemd --switched-root --system --deserialize 30
   login -- root
   -bash
   -bash
   runcpu --nobuild --action validate --define default-platform-flags --define numcopies=8 -c
   ic2023.0-lin-sapphirerapids-rate-20221201.cfg --define cores=8 --define physicalfirst --define no-numa
   --tune base --all --define drop_caches fprate
   runcpu --nobuild --action validate --define default-platform-flags --define numcopies=8 --configfile
   ic2023.0-lin-sapphirerapids-rate-20221201.cfg --define cores=8 --define physicalfirst --define no-numa
   --tune base --output_format all --define drop_caches --nopower --rummode rate --tune base --size refrate
   fprate --nopreenv --note-prenv --logfile $SPEC/tmp/CPU2017.331/templogs/prenv.fprate.331.0.log --lognum
   331.0 --from_runcpu 2
   specperl $SPEC/bin/sysinfo
   $SPEC = /home/cpu2017-1.1.9-ic2023.0

6. /proc/cpuinfo
   model name : Intel(R) Xeon(R) Bronze 3408U
   vendor_id : GenuineIntel
   cpu family : 6
   model : 143
   stepping : 8
   microcode : 0x2b000190
   bugs : spectre_v1 spectre_v2 spec_store_bypass swapgs
   cpu cores : 8
   siblings : 8
   1 physical ids (chips)
   8 processors (hardware threads)
   8 physical ids: core ids 0-7
   physical id 0: apicids 0,2,4,6,8,10,12,14
   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 2.37.2:
   Architecture: x86_64

(Continued on next page)
Platform Notes (Continued)

CPU op-mode(s): 32-bit, 64-bit
Address sizes: 46 bits physical, 57 bits virtual
Byte Order: Little Endian
On-line CPU(s) list: 0-7
Vendor ID: GenuineIntel
Model name: Intel(R) Xeon(R) Bronze 3408U
CPU family: 6
Model: 143
Thread(s) per core: 1
Core(s) per socket: 8
Stepping: 8
BogoMIPS: 3600.00
Flags: fpu vme de pmx mt ms pae mce仙 fmarith 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 mca lrcpu tm mce
msr pbe syscall nx pdpe1gb rdtscp
lahf_lm abm 3nowprefetch cpuid_fault epb cat_13 cat_12 cd p13
invpcid_single intel_pinn cd p12 ssbd mba ibrs ibpb ibrs_enhanced
trp_shadow vmmi flexpriority ept vpid ept_ad fsbg base tsc_adjust bm11 hle
avx2 smep bmi2 erms invpcid ram cmq rdr dse adv dse smap
axv512ifma cflush OPT clwb intel_pt avx512cd sha ni avx512bw avx512vl
xsavenopt xsavec xgetenv xsavec lmq_ccq cmq_occup_llc cmq_mmb_total
cmq_mmb_local split_lock_detect avx_vnni avx512_bf16 wboinovd dtherm ida
ar at pnl pts avx512vbi umip pku ospke waitpkg avx512_vbmi qfni vaes
vpcmuludq avx512_vnni avx512_bitalg tme avx512_vpopcntd avx512_5a7
rdpid
bus_lock_detect cidemote movdzip movdir64b enqcmd farm md_clear serialize
tskidtrk pconfail arch_bhr avx512_fp16 flush无效 arch_capabilities
Virtualization: VT-x
L1d cache: 384 KiB (8 instances)
L1i cache: 256 KiB (8 instances)
L2 cache: 16 MiB (8 instances)
L3 cache: 22.5 MiB (1 instance)
NUMA node(s): 1
NUMA node0 CPU(s): 0-7
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 and seccomp
Vulnerability Spectre v1: Mitigation; usercopy/swapgs barriers and __user pointer sanitization
Vulnerability Spectre v2: Mitigation; Enhanced IBRS, IBBP conditional, RSB filling
Vulnerability Srbds: Not affected
Vulnerability Taa abort: Not affected

From lscpu --cache:
NAME ONE-SIZE ALL-SIZE WAYS TYPE LEVEL SETS PHY-LINE COHERENCY-SIZE
L1d 48K 384K 12 Data 1 64 1 64
L1i 32K 256K 8 Instruction 1 64 1 64
L2 2M 16M 16 Unified 2 2048 1 64
L3 22.5M 22.5M 15 Unified 3 24576 1 64

----------------------------------------------------------------------------------------------
8. numactl --hardware
NOTE: a numactl 'node' might or might not correspond to a physical chip.
available: 1 nodes (0)
node 0 cpus: 0-7

(Continued on next page)
Lenovo Global Technology

ThinkSystem SR630 V3
(1.80 GHz, Intel Xeon Bronze 3408U)

SPECraten®2017_fp_base = 75.0
SPECraten®2017_fp_peak = Not Run

Platform Notes (Continued)

node 0 size: 257470 MB
node 0 free: 256799 MB
node distances:
node 0
0: 10

9. /proc/meminfo
MemTotal: 263649352 kB

10. who -r
run-level 3 Apr 25 10:30

11. Systemd service manager version: systemd 249 (249.11+suse.124.g2bc0b2c447)
Default Target Status
multi-user running

12. Services, from systemctl list-unit-files
STATE UNIT FILES
enabled YaST2-Firstboot YaST2-Second-Stage apparmor auditd cron getty@ havedeg irgbalance iscsi
issue-generator kbdsettings klog lvm2-monitor nscd postfix purge-kernels rollback raslog
smartd sshd wicked wickedd-auto4 wickedd-dhcp4 wickedd-dhcp6 wickedd-nanny
enabled-runtime systemd-remount-fs
autofs autoyast-initscripts blk-availability boot-sysctl ca-certificates chrony-wait
chrony console-getty cups cups-browsed debug-shell ebtables exchange-bmc-os-info
firewalld gpm grub2-oncé havedeg-switch-root ipmi ipmiexec iscsl-init lscsid lscsiudio
issue-add-ssh-keys kexec-load lvmmask man-db-create multipathd nfs nfs-blkmap nmb rdisc
rpconfigcheck rsync rsyncd service sshd systemd systemd-boot-check-no-failures systemd-network-generator systemd-sysext
systemd-time-wait-sync systemd-timesyncd
generated ntp_sync
indirect wickedd

13. Linux kernel boot-time arguments, from /proc/cmdline
BOOT_IMAGE=/boot/vmlinuz-5.14.21-150400.22-default
root=UUID=f976c541-a329-4c54-ba84-4be16556ee18
splash=silent
mitigations=auto
quiet
security=apparmor

14. cpupower frequency-info
analyzing CPU 0:
Unable to determine current policy
boost state support:
Supported: yes
Active: yes

15. sysct1
kernel.numa_balancing 0
kernel.randomize_va_space 2
vm.compaction_proactiveness 20
vm.dirty_background_bytes 0
vm.dirty_background_ratio 10

(Continued on next page)
### Lenovo Global Technology

**ThinkSystem SR630 V3**

(1.80 GHz, Intel Xeon Bronze 3408U)

<table>
<thead>
<tr>
<th>SPECrate®2017_fp_base =</th>
<th>75.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECrate®2017_fp_peak =</td>
<td>Not Run</td>
</tr>
</tbody>
</table>

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

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

---

### Platform Notes (Continued)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>vm.dirty_bytes</code></td>
<td>0</td>
</tr>
<tr>
<td><code>vm.dirty_expire_centisecs</code></td>
<td>3000</td>
</tr>
<tr>
<td><code>vm.dirty_ratio</code></td>
<td>20</td>
</tr>
<tr>
<td><code>vm.dirty_writeback_centisecs</code></td>
<td>500</td>
</tr>
<tr>
<td><code>vm.dirtytime_expire_seconds</code></td>
<td>43200</td>
</tr>
<tr>
<td><code>vm.exfrag_threshold</code></td>
<td>500</td>
</tr>
<tr>
<td><code>vm.min_unmapped_ratio</code></td>
<td>1</td>
</tr>
<tr>
<td><code>vm.nr_hugepages</code></td>
<td>0</td>
</tr>
<tr>
<td><code>vm.nr_hugepages_mempolicy</code></td>
<td>0</td>
</tr>
<tr>
<td><code>vm.nr_overcommit_hugepages</code></td>
<td>0</td>
</tr>
<tr>
<td><code>vm.swappiness</code></td>
<td>60</td>
</tr>
<tr>
<td><code>vm.watermark_boost_factor</code></td>
<td>15000</td>
</tr>
<tr>
<td><code>vm.watermark_scale_factor</code></td>
<td>10</td>
</tr>
<tr>
<td><code>vm.zone_reclaim_mode</code></td>
<td>0</td>
</tr>
</tbody>
</table>

---

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  
From /etc/*-release /etc/*-version  
`os-release` SUSE Linux Enterprise Server 15 SP4

---

19. Disk information  
SPEC is set to: /home/cpu2017-1.1.9-ic2023.0  
Filesystem  Type  Size  Used Avail Use% Mounted on  
/dev/sda2  xfs  894G  97G  797G  11% /

---

20. /sys/devices/virtual/dmi/id  
Vendor: Lenovo  
Product: ThinkSystem SR630 V3  
Product Family: ThinkSystem  
Serial: 1234567890

---

21. dmidecode  
Additional information from dmidecode 3.2 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:  
1x Samsung M321R4GA3B80-CQKMG 32 GB 2 rank 4800, configured at 4000  
7x Samsung M321R4GA3B80-CQKVG 32 GB 2 rank 4800, configured at 4000

(Continued on next page)
Lenovo Global Technology
ThinkSystem SR630 V3
(1.80 GHz, Intel Xeon Bronze 3408U)

SPECrates®

CPU2017 License: 9017
Test Sponsor: Lenovo Global Technology
Test Date: Apr-2023
Tested by: Lenovo Global Technology
Hardware Availability: May-2023
Software Availability: Dec-2022

Platform Notes (Continued)

22. BIOS
(This section combines info from /sys/devices and dmidecode.)
BIOS Vendor: Lenovo
BIOS Version: ESE113G-2.10
BIOS Date: 03/16/2023
BIOS Revision: 2.10
Firmware Revision: 2.10

Compiler Version Notes

---
C                     | 519.lbm_r(base) 538.imagick_r(base) 544.nab_r(base)
---
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++                  | 508.namd_r(base) 510.parest_r(base)
---
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            | 511.povray_r(base) 526.blender_r(base)
---
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     | 507.cactuBSSN_r(base)
---
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            | 503.bwaves_r(base) 549.fotonik3d_r(base) 554.roms_r(base)
---
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, C         | 521.wrf_r(base) 527.cam4_r(base)
---
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
(Continued on next page)
**Lenovo Global Technology**

ThinkSystem SR630 V3  
(1.80 GHz, Intel Xeon Bronze 3408U)

<table>
<thead>
<tr>
<th>SPECrate®2017_fp_base = 75.0</th>
<th>SPECrate®2017_fp_peak = Not Run</th>
</tr>
</thead>
</table>

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

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

---

**Compiler Version Notes (Continued)**

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

---

**Base Compiler Invocation**

C benchmarks:  
*icx*

C++ benchmarks:  
*icpx*

Fortran benchmarks:  
*ifx*

Benchmarks using both Fortran and C:  
*ifx icx*

Benchmarks using both C and C++:  
*icpx icx*

Benchmarks using Fortran, C, and C++:  
*icpx icx ifx*

---

**Base Portability Flags**

503.bwaves_r: -DSPEC_LP64  
507.cactuBSSN_r: -DSPEC_LP64  
508.namd_r: -DSPEC_LP64  
510.parest_r: -DSPEC_LP64  
511.povray_r: -DSPEC_LP64  
519.lbm_r: -DSPEC_LP64  
521.wrf_r: -DSPEC_LP64 -DSPEC_CASE_FLAG -convert big_endian  
526.blender_r: -DSPEC_LP64 -DSPEC_LINUX -funsigned-char  
527.cam4_r: -DSPEC_LP64 -DSPEC_CASE_FLAG  
538.imagick_r: -DSPEC_LP64  
544.nab_r: -DSPEC_LP64  
549.fotonik3d_r: -DSPEC_LP64  
554.roms_r: -DSPEC_LP64
Lenovo Global Technology
ThinkSystem SR630 V3
(1.80 GHz, Intel Xeon Bronze 3408U)

SPECrate®2017_fp_base = 75.0
SPECrate®2017_fp_peak = Not Run

CPU2017 License: 9017
Test Sponsor: Lenovo Global Technology
Test Date: Apr-2023
Tested by: Lenovo Global Technology
Hardware Availability: May-2023
Software Availability: Dec-2022

Base Optimization Flags

C benchmarks:
-w -std=c11 -m64 -Wl,-z,muldefs -xsapphirerapids -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-Wno-implicit-int -mprefer-vector-width=512 -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib

C++ benchmarks:
-w -std=c++14 -m64 -Wl,-z,muldefs -xsapphirerapids -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -mprefer-vector-width=512 -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib

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

Benchmarks using both Fortran and C:
-w -m64 -std=c11 -Wl,-z,muldefs -xsapphirerapids -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-Wno-implicit-int -mprefer-vector-width=512 -nostandard-realloc-lhs
-align array32byte -auto -ljemalloc -L/usr/local/jemalloc64-5.0.1/lib

Benchmarks using both C and C++:
-w -std=c++14 -m64 -std=c11 -Wl,-z,muldefs -xsapphirerapids -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -Wno-implicit-int -mprefer-vector-width=512
-ljemalloc -L/usr/local/jemalloc64-5.0.1/lib

Benchmarks using Fortran, C, and C++:
-w -m64 -std=c++14 -std=c11 -Wl,-z,muldefs -xsapphirerapids -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -Wno-implicit-int -mprefer-vector-width=512
-nostandard-realloc-lhs -align array32byte -auto -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib

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-P.html
http://www.spec.org/cpu2017/flags/Intel-ic2023-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-P.xml
http://www.spec.org/cpu2017/flags/Intel-ic2023-official-linux64.xml
<table>
<thead>
<tr>
<th>Lenovo Global Technology</th>
<th>CPU2017 License</th>
<th>Lenovo Global Technology</th>
<th>Test Date</th>
<th>Apr-2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>ThinkSystem SR630 V3</td>
<td>Test Sponsor</td>
<td>Lenovo Global Technology</td>
<td>Hardware Availability</td>
<td>May-2023</td>
</tr>
<tr>
<td>(1.80 GHz, Intel Xeon Bronze 3408U)</td>
<td>Tested by</td>
<td>Lenovo Global Technology</td>
<td>Software Availability</td>
<td>Dec-2022</td>
</tr>
</tbody>
</table>

**SPEC®CPU2017 Floating Point Rate Result**

**Lenovo Global Technology**

ThinkSystem SR630 V3
(1.80 GHz, Intel Xeon Bronze 3408U)

<table>
<thead>
<tr>
<th>Test Date</th>
<th>Apr-2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Sponsor</td>
<td>Lenovo Global Technology</td>
</tr>
<tr>
<td>Tested by</td>
<td>Lenovo Global Technology</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SPECrate®2017_fp_base =</th>
<th>75.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECrate®2017_fp_peak =</td>
<td>Not Run</td>
</tr>
</tbody>
</table>

CPU2017 License: 9017

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 2023-04-24 22:32:18-0400.
Originally published on 2023-05-23.