



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2022 Standard Performance Evaluation Corporation

## Lenovo Global Technology

ThinkSystem ST250 V2  
(3.40 GHz, Intel Xeon E-2334)

SPECrate®2017\_int\_base = 38.8

SPECrate®2017\_int\_peak = 40.2

CPU2017 License: 9017

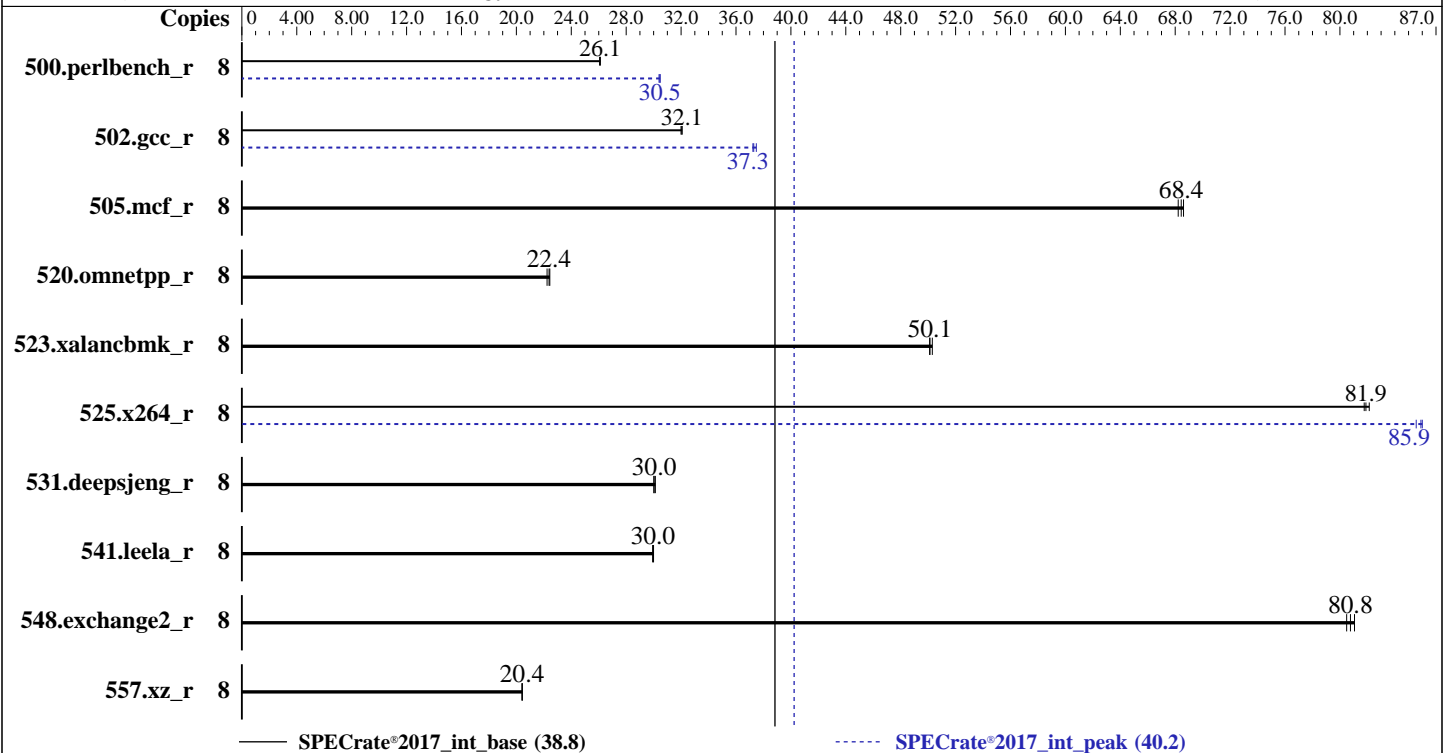
Test Sponsor: Lenovo Global Technology

Tested by: Lenovo Global Technology

Test Date: Jun-2022

Hardware Availability: Apr-2022

Software Availability: Jun-2021



### Hardware

CPU Name: Intel Xeon E-2334  
 Max MHz: 4800  
 Nominal: 3400  
 Enabled: 4 cores, 1 chip, 2 threads/core  
 Orderable: 1 chip  
 Cache L1: 32 KB I + 48 KB D on chip per core  
 L2: 512 KB I+D on chip per core  
 L3: 8 MB I+D on chip per chip  
 Other: None  
 Memory: 64 GB (2 x 32 GB 2Rx8 PC4-3200AA-E)  
 Storage: 1 x 960 GB SATA SSD  
 Other: None

### Software

OS: SUSE Linux Enterprise Server 15 SP3 (x86\_64)  
 Kernel 5.3.18-57-default  
 Compiler: C/C++: Version 2021.1 of Intel oneAPI DPC++/C++  
 Compiler Build 20201113 for Linux;  
 Fortran: Version 2021.1 of Intel Fortran Compiler  
 Classic Build 20201112 for Linux;  
 C/C++: Version 2021.1 of Intel C/C++ Compiler  
 Classic Build 20201112 for Linux  
 Parallel: No  
 Firmware: Lenovo BIOS Version TQE104H 1.01 released Jun-2022  
 tested as TQE103G 1.01 Apr-2022  
 File System: xfs  
 System State: Run level 3 (multi-user)  
 Base Pointers: 64-bit  
 Peak Pointers: 32/64-bit  
 Other: jemalloc memory allocator V5.0.1  
 Power Management: BIOS and OS set to prefer performance at the cost  
 of additional power usage



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2022 Standard Performance Evaluation Corporation

## Lenovo Global Technology

ThinkSystem ST250 V2  
(3.40 GHz, Intel Xeon E-2334)

SPECrate®2017\_int\_base = 38.8

SPECrate®2017\_int\_peak = 40.2

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

**Test Date:** Jun-2022  
**Hardware Availability:** Apr-2022  
**Software Availability:** Jun-2021

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
500.perlbench_r	8	488	26.1	489	26.1	<b>488</b>	<b>26.1</b>	8	418	30.5	419	30.4	<b>418</b>	<b>30.5</b>
502.gcc_r	8	353	32.1	354	32.0	<b>353</b>	<b>32.1</b>	8	302	37.5	<b>304</b>	<b>37.3</b>	304	37.2
505.mcf_r	8	188	68.6	<b>189</b>	<b>68.4</b>	190	68.2	8	188	68.6	<b>189</b>	<b>68.4</b>	190	68.2
520.omnetpp_r	8	<b>469</b>	<b>22.4</b>	468	22.4	472	22.2	8	<b>469</b>	<b>22.4</b>	468	22.4	472	22.2
523.xalancbmk_r	8	<b>169</b>	<b>50.1</b>	168	50.3	169	50.1	8	<b>169</b>	<b>50.1</b>	168	50.3	169	50.1
525.x264_r	8	171	81.8	171	82.1	<b>171</b>	<b>81.9</b>	8	164	85.6	163	86.0	<b>163</b>	<b>85.9</b>
531.deepsjeng_r	8	<b>305</b>	<b>30.0</b>	304	30.1	305	30.0	8	<b>305</b>	<b>30.0</b>	304	30.1	305	30.0
541.leela_r	8	<b>442</b>	<b>30.0</b>	442	30.0	443	29.9	8	<b>442</b>	<b>30.0</b>	442	30.0	443	29.9
548.exchange2_r	8	260	80.5	259	81.1	<b>260</b>	<b>80.8</b>	8	260	80.5	259	81.1	<b>260</b>	<b>80.8</b>
557.xz_r	8	423	20.4	<b>423</b>	<b>20.4</b>	423	20.4	8	423	20.4	<b>423</b>	<b>20.4</b>	423	20.4

SPECrate®2017\_int\_base = **38.8**

SPECrate®2017\_int\_peak = **40.2**

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/cpu2017-1.1.8-ic2021.1-revA-update1/lib/intel64:/home/cpu2017-1.1.8-ic2021.1-revA-update1/lib/ia32:/home/cpu2017-1.1.8-ic2021.1-revA-update1/je5.0.1-32"  
MALLOC\_CONF = "retain:true"

## General Notes

Binaries compiled on a system with 1x Intel Core i9-7940X CPU + 64GB RAM memory using openSUSE Leap 15.2  
Transparent Huge Pages enabled by default  
Prior to runcpu invocation  
Filesystem page cache synced and cleared with:

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2022 Standard Performance Evaluation Corporation

## Lenovo Global Technology

SPECrate®2017\_int\_base = 38.8

ThinkSystem ST250 V2  
(3.40 GHz, Intel Xeon E-2334)

SPECrate®2017\_int\_peak = 40.2

**CPU2017 License:** 9017

**Test Date:** Jun-2022

**Test Sponsor:** Lenovo Global Technology

**Hardware Availability:** Apr-2022

**Tested by:** Lenovo Global Technology

**Software Availability:** Jun-2021

### General Notes (Continued)

```
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>

### Platform Notes

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

```
Sysinfo program /home/cpu2017-1.1.8-ic2021.1-revA-update1/bin/sysinfo
Rev: r6622 of 2021-04-07 982a61ec0915b55891ef0e16acafc64d
running on node1 Thu Jun  2 16:26:36 2022
```

SUT (System Under Test) info as seen by some common utilities.  
For more information on this section, see  
<https://www.spec.org/cpu2017/Docs/config.html#sysinfo>

```
From /proc/cpuinfo
model name : Intel(R) Xeon(R) E-2334 CPU @ 3.40GHz
 1 "physical id"s (chips)
 8 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The following
excerpts from /proc/cpuinfo might not be reliable. Use with caution.)
cpu cores : 4
siblings : 8
physical 0: cores 0 1 2 3
```

```
From lscpu from util-linux 2.36.2:
Architecture: x86_64
CPU op-mode(s): 32-bit, 64-bit
Byte Order: Little Endian
Address sizes: 39 bits physical, 48 bits virtual
CPU(s): 8
On-line CPU(s) list: 0-7
Thread(s) per core: 2
Core(s) per socket: 4
Socket(s): 1
NUMA node(s): 1
```

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2022 Standard Performance Evaluation Corporation

## Lenovo Global Technology

SPECrate®2017\_int\_base = 38.8

ThinkSystem ST250 V2  
(3.40 GHz, Intel Xeon E-2334)

SPECrate®2017\_int\_peak = 40.2

CPU2017 License: 9017

Test Date: Jun-2022

Test Sponsor: Lenovo Global Technology

Hardware Availability: Apr-2022

Tested by: Lenovo Global Technology

Software Availability: Jun-2021

### Platform Notes (Continued)

```

Vendor ID: GenuineIntel
CPU family: 6
Model: 167
Model name: Intel(R) Xeon(R) E-2334 CPU @ 3.40GHz
Stepping: 1
CPU MHz: 4596.977
BogoMIPS: 6816.00
Virtualization: VT-x
L1d cache: 192 KiB
L1i cache: 128 KiB
L2 cache: 2 MiB
L3 cache: 8 MiB
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, IBPB conditional, RSB filling
Vulnerability Srbds: Not affected
Vulnerability Tsx async abort: Not affected
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 aperfperf tsc_known_freq pni pclmulqdq dtes64 monitor ds_cpl vmx
smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm pcid sse4_1 sse4_2 x2apic movbe popcnt
tsc_deadline_timer aes xsave avx f16c rdrand lahf_lm abm 3dnowprefetch cpuid_fault
epb invpcid_single ssbd ibrs_ibpb stibp ibrs_enhanced tpr_shadow vnmi flexpriority
ept vpid ept_ad fsgsbase tsc_adjust bmi1 avx2 smep bmi2 erms invpcid mpx avx512f
avx512dq rdseed adx smap avx512ifma clflushopt intel_pt avx512cd sha_ni avx512bw
avx512vl xsaveopt xsavec xgetbv1 xsaves dtherm ida arat pln pts avx512vbmi umip pku
ospke avx512_vbmi2 gfni vaes vpclmulqdq avx512_vnni avx512_bitalg avx512_vpopcntdq
rdpid fsrm md_clear flush_lld arch_capabilities

```

From lscpu --cache:

NAME	ONE-SIZE	ALL-SIZE	WAYS	TYPE	LEVEL	SETS	PHY-LINE	COHERENCY-SIZE
L1d	48K	192K	12	Data	1	64	1	64
L1i	32K	128K	8	Instruction	1	64	1	64
L2	512K	2M	8	Unified	2	1024	1	64
L3	8M	8M	16	Unified	3	8192	1	64

/proc/cpuinfo cache data  
cache size : 8192 KB

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2022 Standard Performance Evaluation Corporation

## Lenovo Global Technology

SPECrate®2017\_int\_base = 38.8

ThinkSystem ST250 V2  
(3.40 GHz, Intel Xeon E-2334)

SPECrate®2017\_int\_peak = 40.2

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

**Test Date:** Jun-2022  
**Hardware Availability:** Apr-2022  
**Software Availability:** Jun-2021

### Platform Notes (Continued)

```

From numactl --hardware
WARNING: a numactl 'node' might or might not correspond to a physical chip.
  available: 1 nodes (0)
  node 0 cpus: 0 1 2 3 4 5 6 7
  node 0 size: 64233 MB
  node 0 free: 63765 MB
  node distances:
  node   0
    0: 10

From /proc/meminfo
MemTotal:        65775116 kB
HugePages_Total:    0
Hugepagesize:     2048 kB

From /etc/*release* /etc/*version*
os-release:
NAME="SLES"
VERSION="15-SP3"
VERSION_ID="15.3"
PRETTY_NAME="SUSE Linux Enterprise Server 15 SP3"
ID="sles"
ID_LIKE="suse"
ANSI_COLOR="0;32"
CPE_NAME="cpe:/o:suse:sles:15:sp3"

uname -a:
Linux node1 5.3.18-57-default #1 SMP Wed Apr 28 10:54:41 UTC 2021 (ba3c2e9) x86_64
x86_64 x86_64 GNU/Linux

Kernel self-reported vulnerability status:

CVE-2018-12207 (iTLB Multihit):                Not affected
CVE-2018-3620 (L1 Terminal Fault):             Not affected
Microarchitectural Data Sampling:             Not affected
CVE-2017-5754 (Meltdown):                     Not affected
CVE-2018-3639 (Speculative Store Bypass):     Mitigation: Speculative Store
Bypass disabled via prctl and
seccomp
CVE-2017-5753 (Spectre variant 1):             Mitigation: usercopy/swapgs
barriers and __user pointer
sanitization
CVE-2017-5715 (Spectre variant 2):             Mitigation: Enhanced IBRS, IBPB:
conditional, RSB filling
CVE-2020-0543 (Special Register Buffer Data Sampling): Not affected
CVE-2019-11135 (TSX Asynchronous Abort):      Not affected

```

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2022 Standard Performance Evaluation Corporation

## Lenovo Global Technology

ThinkSystem ST250 V2  
(3.40 GHz, Intel Xeon E-2334)

SPECrate®2017\_int\_base = 38.8

SPECrate®2017\_int\_peak = 40.2

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

**Test Date:** Jun-2022  
**Hardware Availability:** Apr-2022  
**Software Availability:** Jun-2021

### Platform Notes (Continued)

run-level 3 Jun 2 16:23

SPEC is set to: /home/cpu2017-1.1.8-ic2021.1-revA-update1  
Filesystem      Type   Size   Used   Avail   Use%   Mounted on  
/dev/sda2       xfs    894G   118G   777G   14%   /

From /sys/devices/virtual/dmi/id  
Vendor:            Lenovo  
Product:           ThinkSystem ST250 V2  
Product Family:   ThinkSystem  
Serial:            1234567890

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:  
  2x Micron Technology 18ASF4G72AZ-3G2B1 32 GB 2 rank 3200

BIOS:  
  BIOS Vendor:        Lenovo  
  BIOS Version:      TQE103G-1.01  
  BIOS Date:         04/19/2022  
  BIOS Revision:     1.1  
  Firmware Revision: 1.96

(End of data from sysinfo program)

### Compiler Version Notes

=====  
C           | 500.perlbench\_r(peak)  
-----

Intel(R) C Intel(R) 64 Compiler Classic for applications running on Intel(R) 64, Version 2021.1 Build 20201112\_000000  
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.  
-----

=====  
C           | 502.gcc\_r(peak)  
-----

Intel(R) oneAPI DPC++/C++ Compiler for applications running on IA-32, Version 2021.1 Build 20201113  
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.  
-----

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2022 Standard Performance Evaluation Corporation

## Lenovo Global Technology

SPECrate®2017\_int\_base = 38.8

ThinkSystem ST250 V2  
(3.40 GHz, Intel Xeon E-2334)

SPECrate®2017\_int\_peak = 40.2

**CPU2017 License:** 9017

**Test Sponsor:** Lenovo Global Technology

**Tested by:** Lenovo Global Technology

**Test Date:** Jun-2022

**Hardware Availability:** Apr-2022

**Software Availability:** Jun-2021

### Compiler Version Notes (Continued)

```
=====
C          | 500.perlbench_r(base) 502.gcc_r(base) 505.mcf_r(base, peak)
          | 525.x264_r(base, peak) 557.xz_r(base, peak)
-----
```

```
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
Version 2021.1 Build 20201113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
-----
```

```
=====
C          | 500.perlbench_r(peak)
-----
```

```
Intel(R) C Intel(R) 64 Compiler Classic for applications running on Intel(R)
64, Version 2021.1 Build 20201112_000000
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
-----
```

```
=====
C          | 502.gcc_r(peak)
-----
```

```
Intel(R) oneAPI DPC++/C++ Compiler for applications running on IA-32, Version
2021.1 Build 20201113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
-----
```

```
=====
C          | 500.perlbench_r(base) 502.gcc_r(base) 505.mcf_r(base, peak)
          | 525.x264_r(base, peak) 557.xz_r(base, peak)
-----
```

```
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
Version 2021.1 Build 20201113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
-----
```

```
=====
C          | 500.perlbench_r(peak)
-----
```

```
Intel(R) C Intel(R) 64 Compiler Classic for applications running on Intel(R)
64, Version 2021.1 Build 20201112_000000
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
-----
```

```
=====
C          | 502.gcc_r(peak)
-----
```

```
Intel(R) oneAPI DPC++/C++ Compiler for applications running on IA-32, Version
```

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2022 Standard Performance Evaluation Corporation

## Lenovo Global Technology

ThinkSystem ST250 V2  
(3.40 GHz, Intel Xeon E-2334)

SPECrate®2017\_int\_base = 38.8

SPECrate®2017\_int\_peak = 40.2

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

**Test Date:** Jun-2022  
**Hardware Availability:** Apr-2022  
**Software Availability:** Jun-2021

### Compiler Version Notes (Continued)

2021.1 Build 20201113  
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

=====  
C | 500.perlbench\_r(base) 502.gcc\_r(base) 505.mcf\_r(base, peak)  
| 525.x264\_r(base, peak) 557.xz\_r(base, peak)  
=====

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,  
Version 2021.1 Build 20201113  
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

=====  
C++ | 520.omnetpp\_r(base, peak) 523.xalanbmk\_r(base, peak)  
| 531.deepsjeng\_r(base, peak) 541.leela\_r(base, peak)  
=====

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,  
Version 2021.1 Build 20201113  
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

=====  
Fortran | 548.exchange2\_r(base, peak)  
=====

Intel(R) Fortran Intel(R) 64 Compiler Classic for applications running on  
Intel(R) 64, Version 2021.1 Build 20201112\_000000  
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

### Base Compiler Invocation

C benchmarks:

icx

C++ benchmarks:

icpx

Fortran benchmarks:

ifort





# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2022 Standard Performance Evaluation Corporation

Lenovo Global Technology

SPECrate®2017\_int\_base = 38.8

ThinkSystem ST250 V2  
(3.40 GHz, Intel Xeon E-2334)

SPECrate®2017\_int\_peak = 40.2

CPU2017 License: 9017

Test Sponsor: Lenovo Global Technology

Tested by: Lenovo Global Technology

Test Date: Jun-2022

Hardware Availability: Apr-2022

Software Availability: Jun-2021

## Base Portability Flags

```
500.perlbench_r: -DSPEC_LP64 -DSPEC_LINUX_X64
502.gcc_r: -DSPEC_LP64
505.mcf_r: -DSPEC_LP64
520.omnetpp_r: -DSPEC_LP64
523.xalancbmk_r: -DSPEC_LP64 -DSPEC_LINUX
525.x264_r: -DSPEC_LP64
531.deepsjeng_r: -DSPEC_LP64
541.leela_r: -DSPEC_LP64
548.exchange2_r: -DSPEC_LP64
557.xz_r: -DSPEC_LP64
```

## Base Optimization Flags

C benchmarks:

```
-w -std=c11 -m64 -Wl,-z,muldefs -xCORE-AVX512 -O3 -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-mbranches-within-32B-boundaries
-L/opt/intel/oneapi/compiler/2021.1.1/linux/compiler/lib/intel64_lin
-lqkmalloc
```

C++ benchmarks:

```
-w -m64 -Wl,-z,muldefs -xCORE-AVX512 -O3 -ffast-math -flto
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-mbranches-within-32B-boundaries
-L/opt/intel/oneapi/compiler/2021.1.1/linux/compiler/lib/intel64_lin
-lqkmalloc
```

Fortran benchmarks:

```
-w -m64 -Wl,-z,muldefs -xCORE-AVX512 -O3 -ipo -no-prec-div
-qopt-mem-layout-trans=4 -nostandard-realloc-lhs -align array32byte
-auto -mbranches-within-32B-boundaries
-L/opt/intel/oneapi/compiler/2021.1.1/linux/compiler/lib/intel64_lin
-lqkmalloc
```

## Peak Compiler Invocation

C benchmarks (except as noted below):

icx

500.perlbench\_r: icc

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2022 Standard Performance Evaluation Corporation

Lenovo Global Technology

SPECrate®2017\_int\_base = 38.8

ThinkSystem ST250 V2  
(3.40 GHz, Intel Xeon E-2334)

SPECrate®2017\_int\_peak = 40.2

CPU2017 License: 9017

Test Date: Jun-2022

Test Sponsor: Lenovo Global Technology

Hardware Availability: Apr-2022

Tested by: Lenovo Global Technology

Software Availability: Jun-2021

## Peak Compiler Invocation (Continued)

C++ benchmarks:

icpx

Fortran benchmarks:

ifort

## Peak Portability Flags

```
500.perlbench_r: -DSPEC_LP64 -DSPEC_LINUX_X64
502.gcc_r: -D_FILE_OFFSET_BITS=64
505.mcf_r: -DSPEC_LP64
520.omnetpp_r: -DSPEC_LP64
523.xalancbmk_r: -DSPEC_LP64 -DSPEC_LINUX
525.x264_r: -DSPEC_LP64
531.deepsjeng_r: -DSPEC_LP64
541.leela_r: -DSPEC_LP64
548.exchange2_r: -DSPEC_LP64
557.xz_r: -DSPEC_LP64
```

## Peak Optimization Flags

C benchmarks:

```
500.perlbench_r: -Wl,-z,muldefs -prof-gen(pass 1) -prof-use(pass 2)
-xCORE-AVX512 -ipo -O3 -no-prec-div
-qopt-mem-layout-trans=4 -fno-strict-overflow
-mbranches-within-32B-boundaries
-L/opt/intel/oneapi/compiler/2021.1.1/linux/compiler/lib/intel64_lin
-lqkmalloc

502.gcc_r: -m32
-L/opt/intel/oneapi/compiler/2021.1.1/linux/compiler/lib/ia32_lin
-std=gnu89 -Wl,-z,muldefs -fprofile-generate(pass 1)
-fprofile-use=default.profddata(pass 2) -xCORE-AVX512 -flto
-Ofast(pass 1) -O3 -ffast-math -qopt-mem-layout-trans=4
-mbranches-within-32B-boundaries
-L/usr/local/jemalloc32-5.0.1/lib -ljemalloc

505.mcf_r: basepeak = yes

525.x264_r: -w -std=c11 -m64 -Wl,-z,muldefs -xCORE-AVX512 -flto
-O3 -ffast-math -qopt-mem-layout-trans=4 -fno-alias
```

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2022 Standard Performance Evaluation Corporation

**Lenovo Global Technology**

ThinkSystem ST250 V2  
(3.40 GHz, Intel Xeon E-2334)

SPECrate®2017\_int\_base = 38.8

SPECrate®2017\_int\_peak = 40.2

**CPU2017 License:** 9017

**Test Sponsor:** Lenovo Global Technology

**Tested by:** Lenovo Global Technology

**Test Date:** Jun-2022

**Hardware Availability:** Apr-2022

**Software Availability:** Jun-2021

## Peak Optimization Flags (Continued)

525.x264\_r (continued):

```
-mbranches-within-32B-boundaries  
-L/opt/intel/oneapi/compiler/2021.1.1/linux/compiler/lib/intel64_lin  
-lqkmalloc
```

557.xz\_r: basepeak = yes

C++ benchmarks:

520.omnetpp\_r: basepeak = yes

523.xalancbmk\_r: basepeak = yes

531.deepsjeng\_r: basepeak = yes

541.leela\_r: basepeak = yes

Fortran benchmarks:

548.exchange2\_r: basepeak = yes

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-RocketB-A.html>

[http://www.spec.org/cpu2017/flags/Intel-ic2021-official-linux64\\_revA.html](http://www.spec.org/cpu2017/flags/Intel-ic2021-official-linux64_revA.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-RocketB-A.xml>

[http://www.spec.org/cpu2017/flags/Intel-ic2021-official-linux64\\_revA.xml](http://www.spec.org/cpu2017/flags/Intel-ic2021-official-linux64_revA.xml)

SPEC CPU and SPECrate are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

For questions about this result, please contact the tester. For other inquiries, please contact [info@spec.org](mailto:info@spec.org).

Tested with SPEC CPU®2017 v1.1.8 on 2022-06-02 04:26:36-0400.

Report generated on 2022-06-21 17:29:45 by CPU2017 PDF formatter v6442.

Originally published on 2022-06-21.