



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

Supermicro

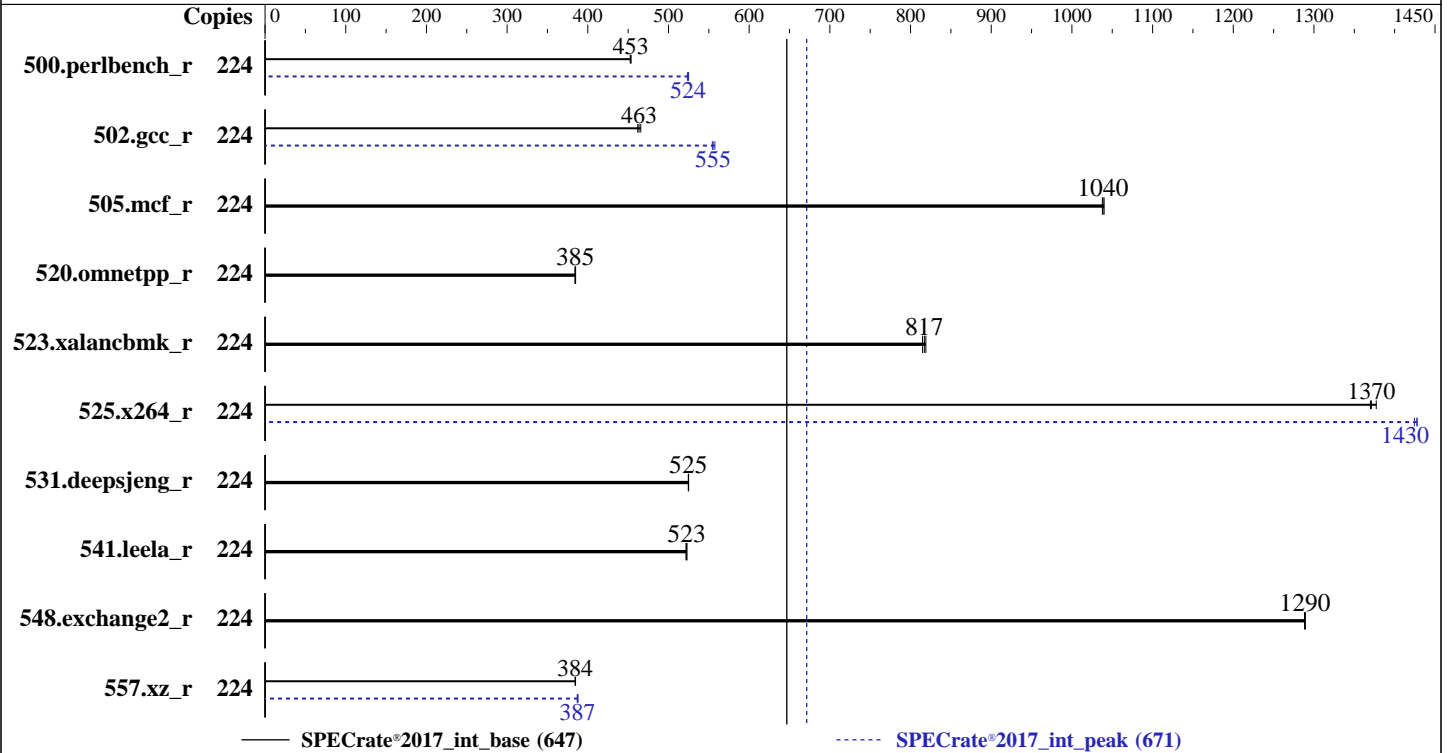
SuperServer SYS-2049U-TR4
(X11QPH+, Intel Xeon Platinum 8276L)

SPECrate®2017_int_base = 647

SPECrate®2017_int_peak = 671

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: Jul-2021
Hardware Availability: Feb-2020
Software Availability: Dec-2020



Hardware

CPU Name: Intel Xeon Platinum 8276L
Max MHz: 4000
Nominal: 2200
Enabled: 112 cores, 4 chips, 2 threads/core
Orderable: 1,2,4 chips
Cache L1: 32 KB I + 32 KB D on chip per core
L2: 1 MB I+D on chip per core
L3: 38.5 MB I+D on chip per chip
Other: None
Memory: 3 TB (48 x 64 GB 2Rx4 PC4-2933Y-R)
Storage: 1.9 TB SATA SSD
Other: None

Software

OS: Red Hat Enterprise Linux release 8.3 (Ootpa)
4.18.0-240.el8.x86_64
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: version 3.5 released Jul-2021
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 set to Super performance at the cost of
additionnal power usage.



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

Supermicro

SuperServer SYS-2049U-TR4
(X11QPH+, Intel Xeon Platinum 8276L)

SPECrate®2017_int_base = 647

SPECrate®2017_int_peak = 671

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: Jul-2021
Hardware Availability: Feb-2020
Software Availability: Dec-2020

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
500.perlbench_r	224	787	453	786	453	788	453	224	679	525	680	524	681	523
502.gcc_r	224	687	462	684	463	681	466	224	571	555	572	554	569	558
505.mcf_r	224	348	1040	349	1040	349	1040	224	348	1040	349	1040	349	1040
520.omnetpp_r	224	764	385	765	384	764	385	224	764	385	765	384	764	385
523.xalancbmk_r	224	289	817	290	815	289	819	224	289	817	290	815	289	819
525.x264_r	224	285	1380	286	1370	286	1370	224	275	1430	275	1430	275	1420
531.deepsjeng_r	224	489	525	489	525	489	525	224	489	525	489	525	489	525
541.leela_r	224	711	522	710	523	710	523	224	711	522	710	523	710	523
548.exchange2_r	224	455	1290	455	1290	456	1290	224	455	1290	455	1290	456	1290
557.xz_r	224	629	384	629	384	629	385	224	625	387	624	387	624	388

SPECrate®2017_int_base = 647

SPECrate®2017_int_peak = 671

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/lib/intel64:/home/lib/ia32:/home/je5.0.1-32"
MALLOC_CONF = "retain:true"

General Notes

Binaries compiled on a system with 1x Intel Core i9-7980XE CPU + 64GB RAM memory using Red Hat Enterprise Linux 8.3
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.
Transparent Huge Pages enabled by default

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

Supermicro

SuperServer SYS-2049U-TR4
(X11QPH+, Intel Xeon Platinum 8276L)

SPECrate®2017_int_base = 647

SPECrate®2017_int_peak = 671

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: Jul-2021
Hardware Availability: Feb-2020
Software Availability: Dec-2020

General Notes (Continued)

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>
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 Settings:
Intel Virtualization Technology = Disable
Power Technology = Custom
Power Performance Tuning = BIOS Controls EPB
ENERGY_PERF_BIAS_CFG mode = Maximum Performance
Super Performance Mode = Enable
SNC = Enable
Stale Atos = Disable
IMC Interleaving = 1-way Interleave
Patrol Scrub = Disable

Sysinfo program /home/bin/sysinfo
Rev: r6538 of 2020-09-24 e8664e66d2d7080afeaa89d4b38e2f1c
running on 122-71.pnet Wed Jul 14 19:46:36 2021

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) Platinum 8276L CPU @ 2.20GHz
4 "physical id"s (chips)
224 "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 : 28
siblings : 56
physical 0: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14 16 17 18 19 20 21 22 24 25 26 27
28 29 30
physical 1: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14 16 17 18 19 20 21 22 24 25 26 27
28 29 30
physical 2: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14 16 17 18 19 20 21 22 24 25 26 27
28 29 30
physical 3: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14 16 17 18 19 20 21 22 24 25 26 27
28 29 30

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

Supermicro

SuperServer SYS-2049U-TR4
(X11QPH+, Intel Xeon Platinum 8276L)

SPECrate®2017_int_base = 647

SPECrate®2017_int_peak = 671

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: Jul-2021
Hardware Availability: Feb-2020
Software Availability: Dec-2020

Platform Notes (Continued)

From lscpu:

```

Architecture:          x86_64
CPU op-mode(s):        32-bit, 64-bit
Byte Order:            Little Endian
CPU(s):                224
On-line CPU(s) list:   0-223
Thread(s) per core:    2
Core(s) per socket:    28
Socket(s):              4
NUMA node(s):          8
Vendor ID:              GenuineIntel
CPU family:             6
Model:                 85
Model name:             Intel(R) Xeon(R) Platinum 8276L CPU @ 2.20GHz
Stepping:               6
CPU MHz:                1385.987
CPU max MHz:           4000.0000
CPU min MHz:           1000.0000
BogoMIPS:              4400.00
Virtualization:        VT-x
L1d cache:              32K
L1i cache:              32K
L2 cache:               1024K
L3 cache:               39424K
NUMA node0 CPU(s):     0-3,7-9,14-17,21-23,112-115,119-121,126-129,133-135
NUMA node1 CPU(s):     4-6,10-13,18-20,24-27,116-118,122-125,130-132,136-139
NUMA node2 CPU(s):     28-31,35-37,42-45,49-51,140-143,147-149,154-157,161-163
NUMA node3 CPU(s):     32-34,38-41,46-48,52-55,144-146,150-153,158-160,164-167
NUMA node4 CPU(s):     56-59,63-65,70-73,77-79,168-171,175-177,182-185,189-191
NUMA node5 CPU(s):     60-62,66-69,74-76,80-83,172-174,178-181,186-188,192-195
NUMA node6 CPU(s):     84-87,91-93,98-101,105-107,196-199,203-205,210-213,217-219
NUMA node7 CPU(s):     88-90,94-97,102-104,108-111,200-202,206-209,214-216,220-223
Flags:                  fpu vme pf 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
aperfmpperf pni pclmulqdq dtes64 monitor ds_cpl vmx smx est tm2 ssse3 sdbg fma cx16
xtpr pdcm pcid dca sse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_timer aes xsave
avx f16c rdrand lahf_lm abm 3dnowprefetch cpuid_fault epb cat_l3 cdp_l3
invpcid_single intel_ppin ssbd mba ibrs ibpb stibp ibrs_enhanced tpr_shadow vnmi
flexpriority ept vpid ept_ad fsgsbase tsc_adjust bmi1 hle avx2 smep bmi2 erms
invpcid cqm mpx rdt_a avx512f avx512dq rdseed adx smap clflushopt clwb intel_pt
avx512cd avx512bw avx512vl xsaveopt xsavec xgetbv1 xsaves cqm_llc cqm_occup_llc
cqm_mbm_total cqm_mbm_local dtherm ida arat pln pts pku ospke avx512_vnni md_clear
flush_lld arch_capabilities

```

/proc/cpuinfo cache data

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

Supermicro

SuperServer SYS-2049U-TR4
(X11QPH+, Intel Xeon Platinum 8276L)

SPECrate®2017_int_base = 647

SPECrate®2017_int_peak = 671

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: Jul-2021
Hardware Availability: Feb-2020
Software Availability: Dec-2020

Platform Notes (Continued)

cache size : 39424 KB

From numactl --hardware WARNING: a numactl 'node' might or might not correspond to a physical chip.

available: 8 nodes (0-7)

node 0 cpus: 0 1 2 3 7 8 9 14 15 16 17 21 22 23 112 113 114 115 119 120 121 126 127 128 129 133 134 135

node 0 size: 373088 MB

node 0 free: 384647 MB

node 1 cpus: 4 5 6 10 11 12 13 18 19 20 24 25 26 27 116 117 118 122 123 124 125 130 131 132 136 137 138 139

node 1 size: 375527 MB

node 1 free: 386725 MB

node 2 cpus: 28 29 30 31 35 36 37 42 43 44 45 49 50 51 140 141 142 143 147 148 149 154 155 156 157 161 162 163

node 2 size: 375359 MB

node 2 free: 386745 MB

node 3 cpus: 32 33 34 38 39 40 41 46 47 48 52 53 54 55 144 145 146 150 151 152 153 158 159 160 164 165 166 167

node 3 size: 375639 MB

node 3 free: 386803 MB

node 4 cpus: 56 57 58 59 63 64 65 70 71 72 73 77 78 79 168 169 170 171 175 176 177 182 183 184 185 189 190 191

node 4 size: 375639 MB

node 4 free: 386654 MB

node 5 cpus: 60 61 62 66 67 68 69 74 75 76 80 81 82 83 172 173 174 178 179 180 181 186 187 188 192 193 194 195

node 5 size: 376533 MB

node 5 free: 386778 MB

node 6 cpus: 84 85 86 87 91 92 93 98 99 100 101 105 106 107 196 197 198 199 203 204 205 210 211 212 213 217 218 219

node 6 size: 376477 MB

node 6 free: 386645 MB

node 7 cpus: 88 89 90 94 95 96 97 102 103 104 108 109 110 111 200 201 202 206 207 208 209 214 215 216 220 221 222 223

node 7 size: 376498 MB

node 7 free: 386774 MB

node distances:

node	0	1	2	3	4	5	6	7
0:	10	11	21	21	21	21	21	21
1:	11	10	21	21	21	21	21	21
2:	21	21	10	11	21	21	21	21
3:	21	21	11	10	21	21	21	21
4:	21	21	21	21	10	11	21	21
5:	21	21	21	21	11	10	21	21
6:	21	21	21	21	21	21	10	11
7:	21	21	21	21	21	21	11	10

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

Supermicro

SuperServer SYS-2049U-TR4
(X11QPH+, Intel Xeon Platinum 8276L)

SPECrate®2017_int_base = 647

SPECrate®2017_int_peak = 671

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: Jul-2021
Hardware Availability: Feb-2020
Software Availability: Dec-2020

Platform Notes (Continued)

From /proc/meminfo

MemTotal: 3168829312 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

/sbin/tuned-adm active
Current active profile: throughput-performance

/sys/devices/system/cpu/cpu*/cpufreq/scaling_governor has
performance

From /etc/*release* /etc/*version*

os-release:
NAME="Red Hat Enterprise Linux"
VERSION="8.3 (Ootpa)"
ID="rhel"
ID_LIKE="fedora"
VERSION_ID="8.3"
PLATFORM_ID="platform:el8"
PRETTY_NAME="Red Hat Enterprise Linux 8.3 (Ootpa)"
ANSI_COLOR="0;31"

redhat-release: Red Hat Enterprise Linux release 8.3 (Ootpa)
system-release: Red Hat Enterprise Linux release 8.3 (Ootpa)
system-release-cpe: cpe:/o:redhat:enterprise_linux:8.3:ga

uname -a:

Linux 122-71.pnet 4.18.0-240.el8.x86_64 #1 SMP Wed Sep 23 05:13:10 EDT 2020 x86_64
x86_64 x86_64 GNU/Linux

Kernel self-reported vulnerability status:

CVE-2018-12207 (iTLB Multihit):	KVM: Mitigation: Split huge pages
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):	Mitigation: TSX disabled

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

Supermicro

SuperServer SYS-2049U-TR4
(X11QPH+, Intel Xeon Platinum 8276L)

SPECrate®2017_int_base = 647

SPECrate®2017_int_peak = 671

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: Jul-2021
Hardware Availability: Feb-2020
Software Availability: Dec-2020

Platform Notes (Continued)

run-level 3 Jul 14 18:40

SPEC is set to: /home

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/mapper/rhel-home	xf	1.7T	99G	1.6T	6%	/home

From /sys/devices/virtual/dmi/id

Vendor: Supermicro
Product: X11QPH+
Product Family: SMC X11
Serial: 123456789

Additional information from dmidecode 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:

48x Hynix HMAA8GR7AJR4N-WM 64 GB 2 rank 2933, configured at 2934

BIOS:

BIOS Vendor: American Megatrends Inc.
BIOS Version: 3.5
BIOS Date: 06/18/2021
BIOS Revision: 5.14

(End of data from sysinfo program)

Compiler Version Notes

=====
C | 500.perlbench_r(peak) 557.xz_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 2017-2021 Standard Performance Evaluation Corporation

Supermicro

SuperServer SYS-2049U-TR4
(X11QPH+, Intel Xeon Platinum 8276L)

SPECrate®2017_int_base = 647

SPECrate®2017_int_peak = 671

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: Jul-2021
Hardware Availability: Feb-2020
Software Availability: Dec-2020

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)

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) 557.xz_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)

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) 557.xz_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 2017-2021 Standard Performance Evaluation Corporation

Supermicro

SuperServer SYS-2049U-TR4
(X11QPH+, Intel Xeon Platinum 8276L)

SPECrate®2017_int_base = 647

SPECrate®2017_int_peak = 671

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: Jul-2021
Hardware Availability: Feb-2020
Software Availability: Dec-2020

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)
=====

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.xalancbmk_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

Base Portability Flags

500.perlbench_r: -DSPEC_LP64 -DSPEC_LINUX_X64
502.gcc_r: -DSPEC_LP64

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

Supermicro

SuperServer SYS-2049U-TR4
(X11QPH+, Intel Xeon Platinum 8276L)

SPECrate®2017_int_base = 647

SPECrate®2017_int_peak = 671

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: Jul-2021
Hardware Availability: Feb-2020
Software Availability: Dec-2020

Base Portability Flags (Continued)

```
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

557.xz_r: icc

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

Supermicro

SuperServer SYS-2049U-TR4
(X11QPH+, Intel Xeon Platinum 8276L)

SPECrate®2017_int_base = 647

SPECrate®2017_int_peak = 671

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: Jul-2021
Hardware Availability: Feb-2020
Software Availability: Dec-2020

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 2017-2021 Standard Performance Evaluation Corporation

Supermicro

SuperServer SYS-2049U-TR4
(X11QPH+, Intel Xeon Platinum 8276L)

SPECrate®2017_int_base = 647

SPECrate®2017_int_peak = 671

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: Jul-2021
Hardware Availability: Feb-2020
Software Availability: Dec-2020

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  
-lqkmallo
```

```
557.xz_r: -w1, -z, muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div  
-qopt-mem-layout-trans=4 -mbranches-within-32B-boundaries  
-L/opt/intel/oneapi/compiler/2021.1.1/linux/compiler/lib/intel64_lin  
-lqkmallo
```

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/Intel-ic2021-official-linux64_revA.html

<http://www.spec.org/cpu2017/flags/Supermicro-Platform-Settings-V1.2-CLX-revH.html>

You can also download the XML flags sources by saving the following links:

http://www.spec.org/cpu2017/flags/Intel-ic2021-official-linux64_revA.xml

<http://www.spec.org/cpu2017/flags/Supermicro-Platform-Settings-V1.2-CLX-revH.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.

Tested with SPEC CPU®2017 v1.1.5 on 2021-07-14 19:46:35-0400.

Report generated on 2021-08-04 18:44:41 by CPU2017 PDF formatter v6442.

Originally published on 2021-08-03.