# SPEC CPU®2017 Integer Rate Result

## Dell Inc.

**PowerEdge R740xd (Intel Xeon Silver 4210R, 2.40 GHz)**

### SPECrate®2017_int_base = 128

### SPECrate®2017_int_peak = 132

<table>
<thead>
<tr>
<th>Copies</th>
<th>SPECrate®2017_int_base (128)</th>
<th>SPECrate®2017_int_peak (132)</th>
</tr>
</thead>
<tbody>
<tr>
<td>500.perlbench_r</td>
<td>40</td>
<td>101</td>
</tr>
<tr>
<td>502.gcc_r</td>
<td>40</td>
<td>114</td>
</tr>
<tr>
<td>505.mcf_r</td>
<td>40</td>
<td>87.2</td>
</tr>
<tr>
<td>520.omnetpp_r</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>523.xalancbmk_r</td>
<td>40</td>
<td>172</td>
</tr>
<tr>
<td>525.x264_r</td>
<td>40</td>
<td>224</td>
</tr>
<tr>
<td>531.deepsjeng_r</td>
<td>40</td>
<td>255</td>
</tr>
<tr>
<td>541.leela_r</td>
<td>40</td>
<td>260</td>
</tr>
<tr>
<td>548.exchange2_r</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>557.xz_r</td>
<td>40</td>
<td>237</td>
</tr>
</tbody>
</table>

### Hardware

**CPU Name:** Intel Xeon Silver 4210R  
**Max MHz:** 3200  
**Nominal:** 2400  
**Enabled:** 20 cores, 2 chips, 2 threads/core  
**Orderable:** 1.2 chips  
**Cache L1:** 32 KB I + 32 KB D on chip per core  
**L2:** 1 MB I+D on chip per core  
**L3:** 13.75 MB I+D on chip per chip  
**Other:** None  
**Memory:** 768 GB (24 x 32 GB 2Rx4 PC4-2933Y-R, running at 2400)  
**Storage:** 1 x 1.92 TB SATA SSD  
**Other:** None

### Software

**OS:** Red Hat Enterprise Linux 8.1  
**Kernel:** 4.18.0-147.el8.x86_64  
**Compiler:** C/C++: Version 19.1.1.217 of Intel C/C++ Compiler for Linux; Fortran: Version 19.1.1.217 of Intel Fortran Compiler for Linux  
**Parallel:** No  
**Firmware:** Version 2.7.7 released May-2020  
**File System:** tmpfs  
**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 prefer performance at the cost of additional power usage
Dell Inc.

PowerEdge R740xd (Intel Xeon Silver 4210R, 2.40 GHz)

CPU2017 License: 55
Test Sponsor: Dell Inc.
Tested by: Dell Inc.

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>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECrate®2017_int_base = 128</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPECrate®2017_int_peak = 132</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

Compiler Notes

The inconsistent Compiler version information under Compiler Version section is due to a discrepancy in Intel Compiler. The correct version of C/C++ compiler is: Version 19.1.1.217 Build 20200306 Compiler for Linux

The correct version of Fortran compiler is: Version 19.1.1.217 Build 20200306 Compiler for Linux

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 = 
"/mnt/ramdisk/cpu2017-ic19.1u1/lib/intel64:/mnt/ramdisk/cpu2017-ic19.1u1/lib/ia32:/mnt/ramdisk/cpu2017-ic19.1u1/je5.0.1-32"

MALLOC_CONF = "retain:true"
Dell Inc.
PowerEdge R740xd (Intel Xeon Silver 4210R, 2.40 GHz)

SPEC CPU®2017 Integer Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

SPECrate®2017_int_base = 128
SPECrate®2017_int_peak = 132

CPU2017 License: 55
Test Sponsor: Dell Inc.
Tested by: Dell Inc.
Test Date: Jul-2020
Hardware Availability: Jul-2020
Software Availability: Apr-2020

General Notes

Binaries compiled on a system with 1x Intel Core i9-7980XE CPU + 64GB RAM
memory using Redhat Enterprise Linux 8.0
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
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>
Benchmark run from a 225 GB ramdisk created with the cmd; "mount -t tmpfs -o size=225G tmpfs /mnt/ramdisk"
jemalloc, a general purpose malloc implementation
built with the RedHat Enterprise 7.5, and the system compiler gcc 4.8.5

Platform Notes

BIOS settings:
Virtualization Technology disabled
System Profile set to Custom
CPU Performance set to Maximum Performance
C States set to Autonomous
C1E disabled
Uncore Frequency set to Dynamic
Energy Efficiency Policy set to Performance
Memory Patrol Scrub set to standard
Logical Processor enabled
CPU Interconnect Bus Link Power Management disabled
PCI ASPM L1 Link Power Management disabled
UPI Prefetch enabled
LLC Prefetch disabled
Dead Line LLC Alloc enabled
Directory AtoS disabled

Sysinfo program /mnt/ramdisk/cpu2017-ic19.1u1/bin/sysinfo
Rev: r6365 of 2019-08-21 295195f888a3d7edbbe6e46a485a0011
running on user-pc.spa.lab Sun Jul 19 04:54:49 2020

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

(Continued on next page)
### Dell Inc. PowerEdge R740xd (Intel Xeon Silver 4210R, 2.40 GHz)

**SPEC CPU®2017 Integer Rate Result**  
*Copyright 2017-2020 Standard Performance Evaluation Corporation*

<table>
<thead>
<tr>
<th>CPU2017 License: 55</th>
<th>Test Date: Jul-2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Sponsor: Dell Inc.</td>
<td>Hardware Availability: Jul-2020</td>
</tr>
<tr>
<td>Tested by: Dell Inc.</td>
<td>Software Availability: Apr-2020</td>
</tr>
</tbody>
</table>

**SPECrate®2017_int_base = 128**  
**SPECrate®2017_int_peak = 132**

**Platform Notes (Continued)**

From `/proc/cpuinfo`
- **model name**: Intel(R) Xeon(R) Silver 4210R CPU @ 2.40GHz
- 2 "physical id"s (chips)
- 40 "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**: 10
  - **siblings**: 20
  - **physical 0**: cores 0 1 2 3 4 8 9 10 11 12
  - **physical 1**: cores 0 1 2 3 4 8 9 10 11 12

From `lscpu`:
- **Architecture**: x86_64
- **CPU op-mode(s)**: 32-bit, 64-bit
- **Byte Order**: Little Endian
- **CPU(s)**: 40
- **On-line CPU(s) list**: 0-39
- **Thread(s) per core**: 2
- **Core(s) per socket**: 10
- **Socket(s)**: 2
- **NUMA node(s)**: 2
- **Vendor ID**: GenuineIntel
- **CPU family**: 6
- **Model**: 85
- **Model name**: Intel(R) Xeon(R) Silver 4210R CPU @ 2.40GHz
- **Stepping**: 7
- **CPU MHz**: 1424.399
- **CPU max MHz**: 3200.0000
- **CPU min MHz**: 1000.0000
- **BogoMIPS**: 4800.00
- **Virtualization**: VT-x
- **L1d cache**: 32K
- **L1i cache**: 32K
- **L2 cache**: 1024K
- **L3 cache**: 14080K
- **NUMA node0 CPU(s)**: 0,2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38
- **NUMA node1 CPU(s)**: 1,3,5,7,9,11,13,15,17,19,21,23,25,27,29,31,33,35,37,39
- **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 arch_perfmon pebs bts rep_good nopl xtopology nonstop_tsc cpuid aperfmperf 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_c3 cdp_c0 l3下面小编的插件可能会带来一些问题，所以，请在使用之前先阅读插件的使用说明。
Dell Inc.
PowerEdge R740xd (Intel Xeon Silver 4210R, 2.40 GHz)

SPEC CPU®2017 Integer Rate Result
Copyright 2017-2020 Standard Performance Evaluation Corporation

SPECrate®2017_int_base = 128
SPECrate®2017_int_peak = 132

CPU2017 License: 55
Test Sponsor: Dell Inc.
Tested by: Dell Inc.

Test Date: Jul-2020
Hardware Availability: Jul-2020
Software Availability: Apr-2020

Platform Notes (Continued)

cqm_mbm_local  dtherm  ida  arat  pln  pts  pku  ospke  avx512_vnni  md_clear  flush_l1d
arch_capabilities

/proc/cpuinfo cache data

cache size : 14080 KB

From numactl --hardware  WARNING: a numactl 'node' might or might not correspond to a
physical chip.
available: 2 nodes (0-1)
node 0 cpus: 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38
node 0 size: 385609 MB
node 0 free: 384521 MB
node 1 cpus: 1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39
node 1 size: 387041 MB
node 1 free: 377620 MB
node distances:
node 0 1
0:  10  21
1:  21  10

From /proc/meminfo
MemTotal:       791194780 kB
HugePages_Total:       0
Hugepagesize:       2048 kB

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

os-release:
   NAME="Red Hat Enterprise Linux"
   VERSION="8.1 (Ootpa)"
   ID="rhel"
   ID_LIKE="fedora"
   VERSION_ID="8.1"
   PLATFORM_ID="platform:el8"
   PRETTY_NAME="Red Hat Enterprise Linux 8.1 (Ootpa)"
   ANSI_COLOR="0;31"
redhat-release: Red Hat Enterprise Linux release 8.1 (Ootpa)
system-release: Red Hat Enterprise Linux release 8.1 (Ootpa)
system-release-cpe: cpe:/o:redhat:enterprise_linux:8.1:ga

uname -a:
Linux user-pc.spa.lab 4.18.0-147.el8.x86_64 #1 SMP Thu Sep 26 15:52:44 UTC 2019 x86_64
x86_64 x86_64 GNU/Linux

Kernel self-reported vulnerability status:

CVE-2018-3620 (L1 Terminal Fault):    Not affected
Microarchitectural Data Sampling:      Not affected

(Continued on next page)
Dell Inc.  
PowerEdge R740xd (Intel Xeon Silver 4210R, 2.40 GHz)  

SPEC CPU®2017 Integer Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

SPECrate®2017_int_base = 128  
SPECrate®2017_int_peak = 132

CPU2017 License: 55  
Test Sponsor: Dell Inc.  
Tested by: Dell Inc.  
Test Date: Jul-2020  
Hardware Availability: Jul-2020  
Software Availability: Apr-2020

Platform Notes (Continued)

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: userscopy/swapgs barriers and __user pointer sanitation  
CVE-2017-5715 (Spectre variant 2): Mitigation: Enhanced IBRS, IBPB: conditional, RSB filling

run-level 3 Jul 19 04:49 last=5

SPEC is set to: /mnt/ramdisk/cpu2017-ic19.1u1  
Filesystem Type Size Used Avail Use% Mounted on  
tmpfs tmpfs 225G 4.3G 221G 2% /mnt/ramdisk

From /sys/devices/virtual/dmi/id  
BIOS: Dell Inc. 2.7.7 05/04/2020  
Vendor: Dell Inc.  
Product: PowerEdge R740xd  
Product Family: PowerEdge  
Serial: F5BMC52  

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:  
19x 00AD00B300AD HMA84GR7CJR4N-WM 32 GB 2 rank 2933  
1x 00AD063200AD HMA84GR7CJR4N-WM 32 GB 2 rank 2933  
4x 00AD069D00AD HMA84GR7CJR4N-WM 32 GB 2 rank 2933

(End of data from sysinfo program)

Compiler Version Notes

================================================================================
C | 502.gcc_r(peak)  
================================================================================
Intel(R) C Compiler for applications running on IA-32, Version 2021.1 NextGen  
Build 20200304  
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)

(Continued on next page)
Compiler Version Notes (Continued)

Intel(R) C Compiler for applications running on Intel(R) 64, Version 2021.1 NextGen Build 20200304
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

----------------------------------------------------------------------------------
C       | 500.perlbench_r(peak) 557.xz_r(peak)

----------------------------------------------------------------------------------
Intel(R) C Compiler for applications running on Intel(R) 64, Version 19.1.1.217 Build 20200306
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

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

----------------------------------------------------------------------------------
Intel(R) C Compiler for applications running on IA-32, Version 2021.1 NextGen Build 20200304
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) C Compiler for applications running on Intel(R) 64, Version 2021.1 NextGen Build 20200304
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

----------------------------------------------------------------------------------
C       | 500.perlbench_r(peak) 557.xz_r(peak)

----------------------------------------------------------------------------------
Intel(R) C Compiler for applications running on Intel(R) 64, Version 19.1.1.217 Build 20200306
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

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

----------------------------------------------------------------------------------
Intel(R) C Compiler for applications running on IA-32, Version 2021.1 NextGen Build 20200304
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

(Continued on next page)
Dell Inc.  
PowerEdge R740xd (Intel Xeon Silver 4210R, 2.40 GHz)

<table>
<thead>
<tr>
<th>CPU2017 License: 55</th>
<th>Test Date: Jul-2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Sponsor: Dell Inc.</td>
<td>Hardware Availability: Jul-2020</td>
</tr>
<tr>
<td>Tested by: Dell Inc.</td>
<td>Software Availability: Apr-2020</td>
</tr>
</tbody>
</table>

**Compiler Version Notes (Continued)**

<table>
<thead>
<tr>
<th>Language</th>
<th>Benchmark (base)</th>
<th>Benchmark (peak)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>500.perlbench</td>
<td>500.perlbench</td>
</tr>
<tr>
<td></td>
<td>502.gcc</td>
<td>502.gcc</td>
</tr>
<tr>
<td></td>
<td>505.mcf</td>
<td>505.mcf</td>
</tr>
<tr>
<td></td>
<td>525.x264</td>
<td>525.x264</td>
</tr>
<tr>
<td></td>
<td>557.xz</td>
<td>557.xz</td>
</tr>
</tbody>
</table>

Intel(R) C Compiler for applications running on Intel(R) 64, Version 2021.1
NextGen Build 20200304
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

<table>
<thead>
<tr>
<th>Language</th>
<th>Benchmark (base)</th>
<th>Benchmark (peak)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>500.perlbench</td>
<td>500.perlbench</td>
</tr>
<tr>
<td></td>
<td></td>
<td>557.xz</td>
</tr>
</tbody>
</table>

Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,
Version 19.1.1.217 Build 20200306
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

<table>
<thead>
<tr>
<th>Language</th>
<th>Benchmark (base)</th>
<th>Benchmark (peak)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C++</td>
<td>520.omnetpp</td>
<td>520.omnetpp</td>
</tr>
<tr>
<td></td>
<td>531.deepsjeng</td>
<td>531.deepsjeng</td>
</tr>
<tr>
<td></td>
<td>541.leela</td>
<td>541.leela</td>
</tr>
</tbody>
</table>

Intel(R) C++ Compiler for applications running on Intel(R) 64, Version 2021.1
NextGen Build 20200304
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

<table>
<thead>
<tr>
<th>Language</th>
<th>Benchmark (base)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fortran</td>
<td>548.exchange2</td>
</tr>
</tbody>
</table>

Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R)
64, Version 19.1.1.217 Build 20200306
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

---

**Base Compiler Invocation**

C benchmarks:
icc

C++ benchmarks:
icpc

Fortran benchmarks:
ifort
SPEC CPU®2017 Integer Rate Result

Dell Inc.
PowerEdge R740xd (Intel Xeon Silver 4210R, 2.40 GHz)

<table>
<thead>
<tr>
<th>SPECrate®2017_int_base = 128</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECrate®2017_int_peak = 132</td>
</tr>
</tbody>
</table>

CPU2017 License: 55
Test Sponsor: Dell Inc.
Tested by: Dell Inc.

Test Date: Jul-2020
Hardware Availability: Jul-2020
Software Availability: Apr-2020

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:
-m64 -gnextgen -std=c11
-Wl,-plugin-opt=-x86-branches-within-32B-boundaries -Wl,-z,muldefs
-xCORE-AVX512 -O3 -ffast-math -fpmath=sse -funroll-loops
-fuse-ld=gold -qopt-mem-layout-trans=4
-L/usr/local/IntelCompiler19/compilers_and_libraries_2020.1.217/linux/compiler/lib/intel64_lin
-lqkmalloc

C++ benchmarks:
-m64 -gnextgen -Wl,-plugin-opt=-x86-branches-within-32B-boundaries
-Wl,-z,muldefs -xCORE-AVX512 -O3 -ffast-math -fpmath=sse
-funroll-loops -fuse-ld=gold -qopt-mem-layout-trans=4
-L/usr/local/IntelCompiler19/compilers_and_libraries_2020.1.217/linux/compiler/lib/intel64_lin
-lqkmalloc

Fortran benchmarks:
-m64 -Wl,-plugin-opt=-x86-branches-within-32B-boundaries -Wl,-z,muldefs
-xCORE-AVX512 -O3 -ipo -no-prec-div -qopt-mem-layout-trans=4
-nostandard-realloc-lhs -align array32byte -auto
-nbranches-within-32B-boundaries
-L/usr/local/IntelCompiler19/compilers_and_libraries_2020.1.217/linux/compiler/lib/intel64_lin
-lqkmalloc

Peak Compiler Invocation

C benchmarks:
icc

(Continued on next page)
Peak Compiler Invocation (Continued)

C++ benchmarks:
icpc

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/usr/local/IntelCompiler19/compilers_and_libraries_2020.1.217/linux/compiler/lib/intel64_lin
-lqkmalloc

502.gcc_r: -m32
-L/usr/local/IntelCompiler19/compilers_and_libraries_2020.1.217/linux/compiler/lib/ia32_lin
-std=gnu89
-Wl,-plugin-opt=-x86-branches-within-32B-boundaries
-Wl,-z,muldefs -fprofile-generate(pass 1)
-fprofile-use=default.profdatal -xCORE-AVX512 -flto
-Ofast(pass l) -O3 -ffast-math -qnextgen -fuse-ld=gold
-qopt-mem-layout-trans=4 -L/usr/local/jemalloc32-5.0.1/lib
-ljemalloc

505.mcf_r: basepeak = yes
# SPEC CPU®2017 Integer Rate Result

## Dell Inc.

PowerEdge R740xd (Intel Xeon Silver 4210R, 2.40 GHz)

<table>
<thead>
<tr>
<th>SPECrate®2017_int_base</th>
<th>Dell Inc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>128</td>
<td>Test Sponsor: Dell Inc.</td>
</tr>
<tr>
<td>SPECrate®2017_int_peak</td>
<td>Dell Inc.</td>
</tr>
<tr>
<td>132</td>
<td>Tested by: Dell Inc.</td>
</tr>
</tbody>
</table>

### Peak Optimization Flags (Continued)

525.x264_r: -m64 -qnextgen -std=c11
- W1, -plugin-opt=-x86-branches-within-32B-boundaries
- W1, -z, muldefs -xCORE-AVX512 -flto -O3 -ffast-math
- fuse-ld=gold -qopt-mem-layout-trans=4 -fno-alias
- L/usr/local/IntelCompiler19/compilers_and_libraries_2020.1.217/linux/compiler/lib/intel64_lin
- lqkmalloc

557.xz_r: -W1, -z, muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div
- qopt-mem-layout-trans=4 -mbbranches-within-32B-boundaries
- L/usr/local/IntelCompiler19/compilers_and_libraries_2020.1.217/linux/compiler/lib/intel64_lin
- lqkmalloc

### 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


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

http://www.spec.org/cpu2017/flags/Intel-ic19.1u1-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.

Tested with SPEC CPU®2017 v1.1.0 on 2020-07-19 05:54:49-0400.
Report generated on 2020-08-04 14:36:14 by CPU2017 PDF formatter v6255.
Originally published on 2020-08-04.