# SPEC CPU®2017 Integer Rate Result

## Dell Inc.

**PowerEdge R350 (Intel Xeon E-2334, 3.40 GHz)**

<table>
<thead>
<tr>
<th><strong>CPU2017 License:</strong></th>
<th>55</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Test Sponsor:</strong></td>
<td>Dell Inc.</td>
</tr>
<tr>
<td><strong>Tested by:</strong></td>
<td>Dell Inc.</td>
</tr>
</tbody>
</table>

**SPECrates**

- **SPECraté®2017_int_base = 39.8**
- **SPECraté®2017_int_peak = 41.2**

### 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:** 70 GB on tmpfs
- **Other:** None

### Software

- **OS:** Red Hat Enterprise Linux 8.4 (Ootpa)
- **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 1.0.1 released Aug-2021
- **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 and OS set to prefer performance at the cost of additional power usage.

### Test Details

<table>
<thead>
<tr>
<th>Copies</th>
<th>Test Date: Aug-2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>500.perlbench_r</td>
<td>8</td>
</tr>
<tr>
<td>502.gcc_r</td>
<td>8</td>
</tr>
<tr>
<td>505.mcf_r</td>
<td>8</td>
</tr>
<tr>
<td>520.omnetpp_r</td>
<td>8</td>
</tr>
<tr>
<td>523.xalancbmk_r</td>
<td>8</td>
</tr>
<tr>
<td>525.x264_r</td>
<td>8</td>
</tr>
<tr>
<td>531.deepsjeng_r</td>
<td>8</td>
</tr>
<tr>
<td>541.leela_r</td>
<td>8</td>
</tr>
<tr>
<td>548.exchange2_r</td>
<td>8</td>
</tr>
<tr>
<td>557.xz_r</td>
<td>8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SPECrate®2017_int_base (39.8)</th>
<th>SPECrate®2017_int_peak (41.2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>31.0</td>
<td>32.5</td>
</tr>
<tr>
<td>30.6</td>
<td>30.4</td>
</tr>
<tr>
<td>21.1</td>
<td>81.9</td>
</tr>
</tbody>
</table>

---

**Copyright 2017-2021 Standard Performance Evaluation Corporation**

---

[https://www.spec.org/](https://www.spec.org/)
### Dell Inc.

PowerEdge R350 (Intel Xeon E-2334, 3.40 GHz)

---

**SPEC CPU®2017 Integer Rate Result**

**Copyright 2017-2021 Standard Performance Evaluation Corporation**

**SPECrate®2017_int_base = 39.8**

**SPECrate®2017_int_peak = 41.2**

---

**CPU2017 License:** 55

**Test Sponsor:** Dell Inc.

**Tested by:** Dell Inc.

**Test Date:** Aug-2021

**Hardware Availability:** Oct-2021

**Software Availability:** May-2021

---

**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>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>500.perlbench_r</td>
<td>8</td>
<td>477</td>
<td>26.7</td>
<td>477</td>
<td>26.7</td>
<td>477</td>
<td>26.7</td>
<td>8</td>
<td>410</td>
<td>31.0</td>
<td>411</td>
<td>31.0</td>
</tr>
<tr>
<td>502.gcc_r</td>
<td>8</td>
<td>349</td>
<td>32.5</td>
<td>348</td>
<td>32.5</td>
<td>348</td>
<td>32.5</td>
<td>8</td>
<td>297</td>
<td>38.2</td>
<td>297</td>
<td>38.1</td>
</tr>
<tr>
<td>505.mcf_r</td>
<td>8</td>
<td>186</td>
<td>69.5</td>
<td>186</td>
<td>69.4</td>
<td>186</td>
<td>69.4</td>
<td>8</td>
<td>186</td>
<td>69.5</td>
<td>186</td>
<td>69.4</td>
</tr>
<tr>
<td>520.omnetpp_r</td>
<td>8</td>
<td>433</td>
<td>24.2</td>
<td>432</td>
<td>24.3</td>
<td>432</td>
<td>24.3</td>
<td>8</td>
<td>433</td>
<td>24.2</td>
<td>432</td>
<td>24.3</td>
</tr>
<tr>
<td>523.xalancbmk_r</td>
<td>8</td>
<td>165</td>
<td>51.1</td>
<td>165</td>
<td>51.2</td>
<td>165</td>
<td>51.2</td>
<td>8</td>
<td>165</td>
<td>51.1</td>
<td>165</td>
<td>51.2</td>
</tr>
<tr>
<td>525.x264_r</td>
<td>8</td>
<td>168</td>
<td>83.2</td>
<td>168</td>
<td>83.2</td>
<td>168</td>
<td>83.2</td>
<td>8</td>
<td>168</td>
<td>83.2</td>
<td>168</td>
<td>83.2</td>
</tr>
<tr>
<td>531.deepsjeng_r</td>
<td>8</td>
<td>300</td>
<td>30.6</td>
<td>299</td>
<td>30.7</td>
<td>300</td>
<td>30.6</td>
<td>8</td>
<td>300</td>
<td>30.6</td>
<td>299</td>
<td>30.7</td>
</tr>
<tr>
<td>541.leela_r</td>
<td>8</td>
<td>436</td>
<td>30.4</td>
<td>436</td>
<td>30.4</td>
<td>436</td>
<td>30.4</td>
<td>8</td>
<td>436</td>
<td>30.4</td>
<td>436</td>
<td>30.4</td>
</tr>
<tr>
<td>548.exchange2_r</td>
<td>8</td>
<td>256</td>
<td>81.9</td>
<td>255</td>
<td>82.2</td>
<td>256</td>
<td>81.9</td>
<td>8</td>
<td>256</td>
<td>81.9</td>
<td>255</td>
<td>82.2</td>
</tr>
</tbody>
</table>

---

**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 =
"/mnt/ramdisk/cpu2017-1.1.8-ic2021.1/lib/intel64:/mnt/ramdisk/cpu2017-1.1.8-ic2021.1/lib/ia32:/mnt/ramdisk/cpu2017-1.1.8-ic2021.1/je5.0.1-32"
MALLOCONF = "retain:true"
```

---

**General Notes**

Binaries compiled on a system with 1x Intel Core i9-7980XE CPU + 64GB RAM memory using Red Hat Enterprise Linux 8.1

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
```

---

---

(Continued on next page)
General Notes (Continued)

jemalloc, a general purpose malloc implementation
built with the RedHat Enterprise 7.5, and the system compiler gcc 4.8.5

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.

Benchmark run from a 70 GB ramdisk created with the cmd: "mount -t tmpfs -o size=70G tmpfs /mnt/ramdisk"

Platform Notes

BIOS settings:
  Virtualization Technology : Disabled
  System Profile : Custom
  CPU Power Management : Maximum Performance
    C1E : Disabled
    C States : Autonomous
  PCI ASPM L1 Link
  Power Management : Disabled

Sysinfo program /mnt/ramdisk/cpu2017-1.1.8-ic2021.1/bin/sysinfo
Rev: r6622 of 2021-04-07 982a61ec0915b55891ef0e16acaf64d
running on localhost.localdomain Fri Aug 27 11:57:45 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) 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 2.32.1:
  Architecture: x86_64

(Continued on next page)
Dell Inc. PowerEdge R350 (Intel Xeon E-2334, 3.40 GHz) SPECrate®2017_int_base = 39.8
SPECrate®2017_int_peak = 41.2

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

Test Date: Aug-2021
Hardware Availability: Oct-2021
Software Availability: May-2021

Platform Notes (Continued)

CPU op-mode(s): 32-bit, 64-bit
Byte Order: Little Endian
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
Vendor ID: GenuineIntel
BIOS Vendor ID: Intel
CPU family: 6
Model: 167
Model name: Intel(R) Xeon(R) E-2334 CPU @ 3.40GHz
BIOS Model name: Intel(R) Xeon(R) E-2334 CPU @ 3.40GHz
Stepping: 1
CPU MHz: 4600.000
BogoMIPS: 6816.00
Virtualization: VT-x
L1d cache: 48K
L1i cache: 32K
L2 cache: 512K
L3 cache: 8192K
NUMA node0 CPU(s): 0-7
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
aperfmrperf tsc_known_freq pni pclmulqdq dtes64 monitor ds_cpl vmx smx est tm2 ssse3
sdbg fma cx16 xtpr pdcm pcid sse4_1_l sse4_2 x2apic movbe popcnt tsc_deadline_timer
aes xsave avx f16c rdrand lahf_lm abm 3dnowprefetch cpuid_fault invpcid_single ssbd
ibrs ibpb stibp ibrs_enhanced fsgsbase tsc_adjust bmi1 avx2 smep bmi2 erms invpcid
mpx avx512f avx512dq rdseed adx smap avx512ifma clflushopt intel_pt avx512cd sha_ni
avx512bw avx512v1 xsaveopt xsavec xsavec xgetbv1 xsaves dtherm ida arat pln pts avx512vbmi
umip pku ospke avx512_vbmi2 gfnf vaes vpcmcmldq avx512_vnni avx512_bitalg
avx512_vpopcntdq rdpid fsrmd_clean flush_l1d arch_capabilities

/proc/cpuinfo cache data
cache size: 8192 KB

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: 64028 MB
node 0 free: 53992 MB
node distances:
node 0
0: 10

(Continued on next page)
SPEC CPU®2017 Integer Rate Result

Dell Inc.
PowerEdge R350 (Intel Xeon E-2334, 3.40 GHz)

SPECrates

- SPECrates2017_int_base = 39.8
- SPECrates2017_int_peak = 41.2

CPU2017 License: 55
Test Sponsor: Dell Inc.
Test Date: Aug-2021
Tested by: Dell Inc.
Hardware Availability: Oct-2021
Software Availability: May-2021

Platform Notes (Continued)

From /proc/meminfo
MemTotal: 65564844 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

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

From /etc/*release* /etc/*version*
NAME="Red Hat Enterprise Linux"
VERSION="8.4 (Ootpa)"
ID="rhel"
ID_LIKE="fedora"
VERSION_ID="8.4"
PLATFORM_ID="platform:el8"
PRETTY_NAME="Red Hat Enterprise Linux 8.4 (Ootpa)"
ANSI_COLOR="0;31"
redhat-release: Red Hat Enterprise Linux release 8.4 (Ootpa)
system-release: Red Hat Enterprise Linux release 8.4 (Ootpa)
system-release-cpe: cpe:/o:redhat:enterprise_linux:8.4:ga

uname -a:
Linux localhost.localdomain 4.18.0-305.el8.x86_64 #1 SMP Thu Apr 29 08:54:30 EDT 2021
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/swaps 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

run-level 3 Aug 27 11:38
SPEC is set to: /mnt/ramdisk/cpu2017-1.1.8-ic2021.1

(Continued on next page)
spec

SPEC CPU®2017 Integer Rate Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

Dell Inc.

PowerEdge R350 (Intel Xeon E-2334, 3.40 GHz)

| SPECrate®2017_int_base = 39.8 |
| SPECrate®2017_int_peak = 41.2 |

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

Platform Notes (Continued)

Filesystem Type Size Used Avail Use% Mounted on
tmpfs tmpfs 70G 4.4G 66G 7% /mnt/ramdisk

From /sys/devices/virtual/dmi/id
Vendor: Dell Inc.
Product: PowerEdge R350
Product Family: PowerEdge
Serial: 7SWFFFF3

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 002C00000C01 18ASF4G72AZ-3G2B1 32 GB 2 rank 3200

BIOS:
BIOS Vendor: Dell Inc.
BIOS Version: 1.0.1
BIOS Date: 08/18/2021
BIOS Revision: 1.0

(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. |
==============================================================================

==============================================================================
| C       | 500.perlbench_r(base) 502.gcc_r(base) 505.mcf_r(base, peak) 525.x264_r(base, peak) 557.xz_r(base, peak) |
| (Continued on next page) |
Dell Inc.
PowerEdge R350 (Intel Xeon E-2334, 3.40 GHz)

<table>
<thead>
<tr>
<th>SPECrate®2017_int_base = 39.8</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECrate®2017_int_peak = 41.2</td>
</tr>
</tbody>
</table>

**CPU2017 License:** 55  
**Test Sponsor:** Dell Inc.  
**Test Date:** Aug-2021  
**Tested by:** Dell Inc.  
**Hardware Availability:** Oct-2021  
**Software Availability:** May-2021

### Compiler Version Notes (Continued)

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.

```plaintext
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.
Dell Inc.  
PowerEdge R350 (Intel Xeon E-2334, 3.40 GHz)  

**SPECratenew_int_base = 39.8**  
**SPECratenew_int_peak = 41.2**

<table>
<thead>
<tr>
<th>CPU2017 License</th>
<th>Dell Inc.</th>
<th>Aug-2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Sponsor</td>
<td>Dell Inc.</td>
<td>Oct-2021</td>
</tr>
<tr>
<td>Tested by</td>
<td>Dell Inc.</td>
<td>May-2021</td>
</tr>
</tbody>
</table>

**Compiler Version Notes (Continued)**

<table>
<thead>
<tr>
<th>C</th>
<th>500.perlbench_r(base) 502.gcc_r(base) 505.mcf_r(base, peak) 525.x264_r(base, peak) 557.xz_r(base, peak)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2021.1 Build 20201113</td>
<td></td>
</tr>
<tr>
<td>Copyright (C) 1985-2020 Intel Corporation. All rights reserved.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C++</th>
<th>520.omnetpp_r(base, peak) 523.xalancbmk_r(base, peak) 531.deepsjeng_r(base, peak) 541.leela_r(base, peak)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2021.1 Build 20201113</td>
<td></td>
</tr>
<tr>
<td>Copyright (C) 1985-2020 Intel Corporation. All rights reserved.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fortran</th>
<th>548.exchange2_r(base, peak)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel(R) Fortran Intel(R) 64 Compiler Classic for applications running on Intel(R) 64, Version 2021.1 Build 20201112_000000</td>
<td></td>
</tr>
<tr>
<td>Copyright (C) 1985-2020 Intel Corporation. All rights reserved.</td>
<td></td>
</tr>
</tbody>
</table>

**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  
505.mcf_r: -DSPEC_LP64  
520.omnetpp_r: -DSPEC_LP64  
523.xalancbmk_r: -DSPEC_LP64 -DSPEC_LINUX

(Continued on next page)
## Dell Inc.

**PowerEdge R350 (Intel Xeon E-2334, 3.40 GHz)**

<table>
<thead>
<tr>
<th>CPU2017 License:</th>
<th>55</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Sponsor:</td>
<td>Dell Inc.</td>
</tr>
<tr>
<td>Tested by:</td>
<td>Dell Inc.</td>
</tr>
</tbody>
</table>

**SPECrate®2017_int_base = 39.8**

**SPECrate®2017_int_peak = 41.2**

### Base Portability Flags (Continued)

- 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`

#### C++ benchmarks:
- `icpx`

#### Fortran benchmarks:
- `ifort`
### Dell Inc.

**PowerEdge R350 (Intel Xeon E-2334, 3.40 GHz)**

<table>
<thead>
<tr>
<th>CPU2017 License:</th>
<th>55</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Sponsor:</td>
<td>Dell Inc.</td>
</tr>
<tr>
<td>Tested by:</td>
<td>Dell Inc.</td>
</tr>
</tbody>
</table>

**SPECrate®2017_int_base = 39.8**

**SPECrate®2017_int_peak = 41.2**

**Test Date:** Aug-2021  
**Hardware Availability:** Oct-2021  
**Software Availability:** May-2021

### Peak Portability Flags

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Flags</th>
</tr>
</thead>
<tbody>
<tr>
<td>500.perlbench_r</td>
<td>-DSPEC_LP64 -DSPEC_LINUX_X64</td>
</tr>
<tr>
<td>502.gcc_r</td>
<td>-D_FILE_OFFSET_BITS=64</td>
</tr>
<tr>
<td>505.mcf_r</td>
<td>-DSPEC_LP64</td>
</tr>
<tr>
<td>520.omnetpp_r</td>
<td>-DSPEC_LP64</td>
</tr>
<tr>
<td>523.xalancbmk_r</td>
<td>-DSPEC_LP64 -DSPEC_LINUX</td>
</tr>
<tr>
<td>525.x264_r</td>
<td>-DSPEC_LP64</td>
</tr>
<tr>
<td>531.deepsjeng_r</td>
<td>-DSPEC_LP64</td>
</tr>
<tr>
<td>541.leela_r</td>
<td>-DSPEC_LP64</td>
</tr>
<tr>
<td>548.exchange2_r</td>
<td>-DSPEC_LP64</td>
</tr>
<tr>
<td>557.xz_r</td>
<td>-DSPEC_LP64</td>
</tr>
</tbody>
</table>

### Peak Optimization Flags

**C benchmarks:**

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Flags</th>
</tr>
</thead>
<tbody>
<tr>
<td>505.mcf_r</td>
<td>basepeak = yes</td>
</tr>
<tr>
<td>557.xz_r</td>
<td>basepeak = yes</td>
</tr>
</tbody>
</table>

**C++ benchmarks:**

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Flags</th>
</tr>
</thead>
<tbody>
<tr>
<td>520.omnetpp_r</td>
<td>basepeak = yes</td>
</tr>
</tbody>
</table>

*Continued on next page*
Dell Inc.
PowerEdge R350 (Intel Xeon E-2334, 3.40 GHz)

SPEC CPU®2017 Integer Rate Result
Copyright 2017-2021 Standard Performance Evaluation Corporation

SPECrate®2017_int_base = 39.8
SPECrate®2017_int_peak = 41.2

CPU2017 License: 55
Test Sponsor: Dell Inc.
Tested by: Dell Inc.
Test Date: Aug-2021
Hardware Availability: Oct-2021
Software Availability: May-2021

Peak Optimization Flags (Continued)

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-ic2021-official-linux64_revA.xml
http://www.spec.org/cpu2017/flags/Dell-Platform-Flags-PowerEdge-Intel-ICX-rev1.4.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 v1.1.8 on 2021-08-27 12:57:45-0400.
Originally published on 2021-10-06.