Dell Inc.
PowerEdge C6520 (Intel Xeon Gold 6334, 3.60 GHz)

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

**SPECrater®2017_int_base = 146**
**SPECrater®2017_int_peak = 151**

<table>
<thead>
<tr>
<th>Spec Benchmark</th>
<th>Copies</th>
<th>SPECrate®2017_int_base</th>
<th>SPECrate®2017_int_peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>500.perlbench_r</td>
<td>32</td>
<td>96.8</td>
<td>113</td>
</tr>
<tr>
<td>502.gcc_r</td>
<td>32</td>
<td>128</td>
<td>143</td>
</tr>
<tr>
<td>505.mcf_r</td>
<td>32</td>
<td>99.0</td>
<td></td>
</tr>
<tr>
<td>520.omnetpp_r</td>
<td>32</td>
<td></td>
<td>256</td>
</tr>
<tr>
<td>523.xalancbmk_r</td>
<td>32</td>
<td></td>
<td>188</td>
</tr>
<tr>
<td>525.x264_r</td>
<td>32</td>
<td></td>
<td>295</td>
</tr>
<tr>
<td>531.deepsjeng_r</td>
<td>32</td>
<td>108</td>
<td>309</td>
</tr>
<tr>
<td>541.leela_r</td>
<td>32</td>
<td>105</td>
<td></td>
</tr>
<tr>
<td>548.exchange2_r</td>
<td>32</td>
<td></td>
<td>289</td>
</tr>
<tr>
<td>557.xz_r</td>
<td>32</td>
<td>79.1</td>
<td></td>
</tr>
</tbody>
</table>

**Hardware**

- **CPU Name:** Intel Xeon Gold 6334
- **Max MHz:** 3700
- **Nominal:** 3600
- **Enabled:** 16 cores, 2 chips, 2 threads/core
- **Orderable:** 1.2 chips
- **Cache L1:** 32 KB I + 48 KB D on chip per core
- **L2:** 1.25 MB I+D on chip per core
- **L3:** 18 MB I+D on chip per chip
- **Other:** None
- **Memory:** 512 GB (16 x 32 GB 2Rx8 PC4-3200AA-R)
- **Storage:** 125 GB on tmpfs
- **Other:** None

**Software**

- **OS:** Red Hat Enterprise Linux 8.3 (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 1.1.3 released Apr-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.
## Dell Inc.

PowerEdge C6520 (Intel Xeon Gold 6334, 3.60 GHz)

### SPECrate®2017_int_base = 146

### SPECrate®2017_int_peak = 151

### 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>
</tr>
</thead>
<tbody>
<tr>
<td>Base</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>500.perlbench_r</td>
<td>32</td>
<td>526</td>
<td>96.8</td>
<td>526</td>
<td>96.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>502.gcc_r</td>
<td>32</td>
<td>354</td>
<td>128</td>
<td>353</td>
<td>129</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>505.mcf_r</td>
<td>32</td>
<td>202</td>
<td>256</td>
<td>202</td>
<td>256</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>520.omnetpp_r</td>
<td>32</td>
<td>423</td>
<td>99.3</td>
<td>424</td>
<td>99.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>523.xalancbmk_r</td>
<td>32</td>
<td>178</td>
<td>189</td>
<td>180</td>
<td>188</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>525.x264_r</td>
<td>32</td>
<td>190</td>
<td>295</td>
<td>190</td>
<td>295</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>531.deepsjeng_r</td>
<td>32</td>
<td>340</td>
<td>108</td>
<td>340</td>
<td>108</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>541.leela_r</td>
<td>32</td>
<td>506</td>
<td>105</td>
<td>506</td>
<td>105</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>548.exchange2_r</td>
<td>32</td>
<td>288</td>
<td>292</td>
<td>291</td>
<td>289</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>557.xz_r</td>
<td>32</td>
<td>437</td>
<td>79.1</td>
<td>437</td>
<td>79.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 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/cpu2017-1.1.7-ic2021.1/lib/intel64:/mnt/ramdisk/cpu2017-1.1.7-ic2021.1/lib/ia32:/mnt/ramdisk/cpu2017-1.1.7-ic2021.1/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 8.1

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)
## SPEC CPU®2017 Integer Rate Result

**Dell Inc.**

PowerEdge C6520 (Intel Xeon Gold 6334, 3.60 GHz)

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECrate®2017_int_base</td>
<td>146</td>
</tr>
<tr>
<td>SPECrate®2017_int_peak</td>
<td>151</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Date</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Date:</td>
<td>May-2021</td>
</tr>
<tr>
<td>Hardware Availability:</td>
<td>Apr-2021</td>
</tr>
<tr>
<td>Software Availability:</td>
<td>Dec-2020</td>
</tr>
</tbody>
</table>

**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.

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>
```

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

Benchmark run from a 125 GB ramdisk created with the cmd: "mount -t tmpfs -o size=125G tmpfs /mnt/ramdisk"

**Platform Notes**

**BIOS Settings:**
- Sub NUMA Cluster: 2-Way Clustering  
- Virtualization Technology: Disabled  
- System Profile: Custom  
- CPU Power Management: Maximum Performance  
- C1E: Disabled  
- C States: Autonomous  
- Memory Patrol Scrub: Disabled  
- Energy Efficiency Policy: Performance  
- CPU Interconnect Bus Link  
- Power Management: Disabled

**Sysinfo program** /mnt/ramdisk/cpu2017-1.1.7-ic2021.1/bin/sysinfo  
Rev: r6538 of 2020-09-24 e8664e66d2d7080afeaa89d4b38e2f1c  
running on localhost.localdomain Thu May 13 08:08:36 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) Gold 6334 CPU @ 3.60GHz
- 2 "physical id"s (chips)
- 32 "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: 8

(Continued on next page)
Platform Notes (Continued)

siblings : 16
physical 0: cores 0 1 2 3 4 5 6 7
physical 1: cores 0 1 2 3 4 5 6 7

From lscpu:
Architecture: x86_64
CPU op-mode(s): 32-bit, 64-bit
Byte Order: Little Endian
CPU(s): 32
On-line CPU(s) list: 0-31
Thread(s) per core: 2
Core(s) per socket: 8
Socket(s): 2
NUMA node(s): 4
Vendor ID: GenuineIntel
CPU family: 6
Model: 106
Model name: Intel(R) Xeon(R) Gold 6334 CPU @ 3.60GHz
Stepping: 6
CPU MHz: 3600.000
BogoMIPS: 7200.00
Virtualization: VT-x
L1d cache: 48K
L1i cache: 32K
L2 cache: 1280K
L3 cache: 18432K
NUMA node0 CPU(s): 0,4,8,12,16,20,24,28
NUMA node1 CPU(s): 2,6,10,14,18,22,26,30
NUMA node2 CPU(s): 1,5,9,13,17,21,25,29
NUMA node3 CPU(s): 3,7,11,15,19,23,27,31
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
x86hyper tm2ese tm2e ste 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 invpcid_single
intel_pinn ssbd mba ibrs ibpb stibp ibrs_enhanced fsysbase tsc_adjust bmi1 hle avx2
smep bmi2 ept ms rsb cmp_legacy invvpicid qpc qm rdtscp inclflush optflush dts	
lmsa idapls arat pnp ccmode db ldmicr msr dpc_arch_capabilities dqa smm
drbrown tda rdmsk pdcm iommu pud tsc tsc_adjust fsgsbase nonstop_tsc

/proc/cpuinfo cache data
cache size : 18432 KB

(Continued on next page)
Dell Inc.

PowerEdge C6520 (Intel Xeon Gold 6334, 3.60 GHz)

SPEC®2017 Integer Rate Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

Dell Inc.

PowerEdge C6520 (Intel Xeon Gold 6334, 3.60 GHz)

SPECrate®2017_int_base = 146

SPECrate®2017_int_peak = 151

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

Test Date: May-2021
Hardware Availability: Apr-2021
Software Availability: Dec-2020

Platform Notes (Continued)

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

available: 4 nodes (0-3)
node 0 cpus: 0 4 8 12 16 20 24 28
node 0 size: 127400 MB
node 0 free: 119022 MB
node 1 cpus: 2 6 10 14 18 22 26 30
node 1 size: 128064 MB
node 1 free: 128810 MB
node 2 cpus: 1 5 9 13 17 21 25 29
node 2 size: 128071 MB
node 2 free: 128803 MB
node 3 cpus: 3 7 11 15 19 23 27 31
node 3 size: 127957 MB
node 3 free: 128726 MB
node distances:
node   0   1   2   3
0:  10  11  20  20
1:  11  10  20  20
2:  20  20  10  11
3:  20  20  11  10

From /proc/meminfo
MemTotal:       527812440 kB
HugePages_Total:       0
Hugepagesize:       2048 kB
/sbin/tuned-adm active
  Current active profile: throughput-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 localhost.localdomain 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

(Continued on next page)
Dell Inc. PowerEdge C6520 (Intel Xeon Gold 6334, 3.60 GHz)

**SPECrate®2017_int_base = 146**

**SPECrate®2017_int_peak = 151**

---

**CPU2017 License:** 55  
**Test Sponsor:** Dell Inc.  
**Tested by:** Dell Inc.  
**Test Date:** May-2021  
**Hardware Availability:** Apr-2021  
**Software Availability:** Dec-2020

---

**Platform Notes (Continued)**

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

run-level 3 May 13 08:07

SPEC is set to: /mnt/ramdisk/cpu2017-1.1.7-ic2021.1

<table>
<thead>
<tr>
<th>Filesystem</th>
<th>Type</th>
<th>Size</th>
<th>Used</th>
<th>Avail</th>
<th>Use%</th>
<th>Mounted on</th>
</tr>
</thead>
<tbody>
<tr>
<td>tmpfs</td>
<td>tmpfs</td>
<td>125G</td>
<td>4.4G</td>
<td>121G</td>
<td>4%</td>
<td>/mnt/ramdisk</td>
</tr>
</tbody>
</table>

From /sys/devices/virtual/dmi/id

**Vendor:** Dell Inc.  
**Product:** PowerEdge C6520  
**Product Family:** PowerEdge

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:**

- 6x 002C00B3002C 18ASF4G72PDZ-3G2E1 32 GB 2 rank 3200
- 10x 00AD063200AD HMAA4GR7AJR8N-XN 32 GB 2 rank 3200

**BIOS:**

**BIOS Vendor:** Dell Inc.  
**BIOS Version:** 1.1.3  
**BIOS Date:** 04/27/2021  
**BIOS Revision:** 1.1

(End of data from sysinfo program)
Dell Inc.

PowerEdge C6520 (Intel Xeon Gold 6334, 3.60 GHz)

| SPECrate®2017_int_base = 146 | SPECrate®2017_int_peak = 151 |

CPU2017 License: 55  
Test Sponsor: Dell Inc.  
Tested by: Dell Inc.  
Test Date: May-2021  
Hardware Availability: Apr-2021  
Software Availability: Dec-2020

---

### Compiler Version Notes

<table>
<thead>
<tr>
<th>C</th>
<th>500.perlbench_r(peak)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel(R) C 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>
---

<table>
<thead>
<tr>
<th>C</th>
<th>502.gcc_r(peak)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel(R) oneAPI DPC++/C++ Compiler for applications running on IA-32, 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>
---

| C       | 500.perlbench_r(base) 502.gcc_r(base) 505.mcf_r(base, peak)  
<table>
<thead>
<tr>
<th></th>
<th>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>500.perlbench_r(peak)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel(R) C 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>
---

<table>
<thead>
<tr>
<th>C</th>
<th>502.gcc_r(peak)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel(R) oneAPI DPC++/C++ Compiler for applications running on IA-32, 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>
---

(Continued on next page)
Dell Inc.

PowerEdge C6520 (Intel Xeon Gold 6334, 3.60 GHz)

<table>
<thead>
<tr>
<th>SPEC CPU®2017 Integer Rate Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dell Inc.</td>
</tr>
<tr>
<td>SPECrate®2017_int_base = 146</td>
</tr>
<tr>
<td>SPECrate®2017_int_peak = 151</td>
</tr>
</tbody>
</table>

CPU2017 License: 55
Test Sponsor: Dell Inc.
Hardware Availability: Apr-2021
Test Date: May-2021
Tested by: Dell Inc.
Software Availability: Dec-2020

Compiler Version Notes (Continued)

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++     | 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.
```
Dell Inc.  
PowerEdge C6520 (Intel Xeon Gold 6334, 3.60 GHz)  

**SPEC CPU®2017 Integer Rate Result**  

<table>
<thead>
<tr>
<th>SPECrate®2017_int_base = 146</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECrate®2017_int_peak = 151</td>
</tr>
</tbody>
</table>

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

**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
- 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

(Continued on next page)
Dell Inc.

PowerEdge C6520 (Intel Xeon Gold 6334, 3.60 GHz)

SPECrater®2017_int_base = 146
SPECrater®2017_int_peak = 151

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

Test Date: May-2021
Hardware Availability: Apr-2021
Software Availability: Dec-2020

Base Optimization Flags (Continued)

Fortran benchmarks (continued):
- 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

Peak Portability Flags

500.perlbench_r: -DSPEC_LP64 -DSPEC_LINUX_X64
502.gcc_r: -D_FILE_OFFSET_BITS=64
505.mcfr: -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
(Continued on next page)
SPEC CPU®2017 Integer Rate Result
Copyright 2017-2021 Standard Performance Evaluation Corporation

Dell Inc.
PowerEdge C6520 (Intel Xeon Gold 6334, 3.60 GHz)

SPECrate®2017_int_base = 146
SPECrate®2017_int_peak = 151

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

Test Date: May-2021
Hardware Availability: Apr-2021
Software Availability: Dec-2020

Peak Optimization Flags (Continued)

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.profdata(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
-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

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
# SPEC CPU®2017 Integer Rate Result

**Dell Inc.**

**PowerEdge C6520 (Intel Xeon Gold 6334, 3.60 GHz)**

<table>
<thead>
<tr>
<th>CPU2017 License: 55</th>
<th>Test Date: May-2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Sponsor: Dell Inc.</td>
<td>Hardware Availability: Apr-2021</td>
</tr>
<tr>
<td>Tested by: Dell Inc.</td>
<td>Software Availability: Dec-2020</td>
</tr>
</tbody>
</table>

**SPECrate®2017_int_base = 146**

**SPECrate®2017_int_peak = 151**

---

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 v1.1.7 on 2021-05-13 09:08:35-0400.
Report generated on 2021-07-08 13:30:01 by CPU2017 PDF formatter v6442.
Originally published on 2021-07-06.