## Dell Inc.
PowerEdge C6420 (Intel Xeon Silver 4210R, 2.40 GHz)

<table>
<thead>
<tr>
<th>SPECspeed®2017_int_base = 8.73</th>
<th>SPECspeed®2017_int_peak = 8.95</th>
</tr>
</thead>
<tbody>
<tr>
<td>TESTED BY: Dell Inc.</td>
<td>Dell Inc.</td>
</tr>
<tr>
<td>HARDWARE AVAILABILITY: Feb-2020</td>
<td>Software Availability: Dec-2020</td>
</tr>
</tbody>
</table>

### 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**: Yes
- **Firmware**: Version 2.13.1 released Nov-2021
- **File System**: tmpfs
- **System State**: Run level 3 (multi-user)
- **Base Pointers**: 64-bit
- **Peak Pointers**: 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.

### Hardware
- **CPU Name**: Intel Xeon Silver 4210R
- **Max MHz**: 3200
- **Nominal**: 2400
- **Enabled**: 20 cores, 2 chips
- **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**: 384 GB (12 x 32 GB 2Rx4 PC4-2933Y-R, running at 2400)
- **Storage**: 125 GB on tmpfs
- **Other**: None

### Performance

<table>
<thead>
<tr>
<th>Batch</th>
<th>SPECspeed 2017 int_base</th>
<th>SPECspeed 2017 int_peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>perlbench_20</td>
<td>8.73</td>
<td>8.95</td>
</tr>
<tr>
<td>gcc_20</td>
<td>5.22</td>
<td>6.25</td>
</tr>
<tr>
<td>mcf_20</td>
<td>8.46</td>
<td>8.13</td>
</tr>
<tr>
<td>omnetpp_20</td>
<td>5.76</td>
<td>15.9</td>
</tr>
<tr>
<td>xalancbmk_20</td>
<td>11.1</td>
<td>12.9</td>
</tr>
<tr>
<td>x264_20</td>
<td>4.81</td>
<td>13.4</td>
</tr>
<tr>
<td>deepsjeng_20</td>
<td>3.91</td>
<td>13.9</td>
</tr>
<tr>
<td>leela_20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>exchange2_20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>xz_20</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Threads

<table>
<thead>
<tr>
<th>Batch</th>
<th>Threads</th>
<th>SPECspeed 2017 int_base</th>
<th>SPECspeed 2017 int_peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>perlbench_20</td>
<td>20</td>
<td>5.22</td>
<td>6.25</td>
</tr>
<tr>
<td>gcc_20</td>
<td>20</td>
<td>8.13</td>
<td>6.25</td>
</tr>
<tr>
<td>mcf_20</td>
<td>20</td>
<td>8.46</td>
<td>6.25</td>
</tr>
<tr>
<td>omnetpp_20</td>
<td>20</td>
<td>5.76</td>
<td>15.9</td>
</tr>
<tr>
<td>xalancbmk_20</td>
<td>20</td>
<td>11.1</td>
<td>12.9</td>
</tr>
<tr>
<td>x264_20</td>
<td>20</td>
<td>4.81</td>
<td>13.4</td>
</tr>
<tr>
<td>deepsjeng_20</td>
<td>20</td>
<td>3.91</td>
<td>13.9</td>
</tr>
<tr>
<td>leela_20</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>exchange2_20</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>xz_20</td>
<td>20</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Threads</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>600.perlbench_s</td>
<td>20</td>
<td>340</td>
<td>5.22</td>
<td>340</td>
<td>5.23</td>
<td>20</td>
<td>284</td>
<td>6.25</td>
<td>284</td>
<td>6.25</td>
<td></td>
</tr>
<tr>
<td>602.gcc_s</td>
<td>20</td>
<td>490</td>
<td>8.13</td>
<td>481</td>
<td>8.28</td>
<td>20</td>
<td>458</td>
<td>8.70</td>
<td>471</td>
<td>8.46</td>
<td></td>
</tr>
<tr>
<td>605.mcf_s</td>
<td>20</td>
<td>298</td>
<td>15.9</td>
<td>290</td>
<td>16.3</td>
<td>20</td>
<td>298</td>
<td>15.9</td>
<td>290</td>
<td>16.3</td>
<td></td>
</tr>
<tr>
<td>620.omnetpp_s</td>
<td>20</td>
<td>283</td>
<td>5.76</td>
<td>280</td>
<td>5.83</td>
<td>20</td>
<td>283</td>
<td>5.76</td>
<td>280</td>
<td>5.83</td>
<td></td>
</tr>
<tr>
<td>623.xalancbmk_s</td>
<td>20</td>
<td>127</td>
<td>11.1</td>
<td>127</td>
<td>11.2</td>
<td>20</td>
<td>127</td>
<td>11.1</td>
<td>127</td>
<td>11.2</td>
<td></td>
</tr>
<tr>
<td>625.x264_s</td>
<td>20</td>
<td>137</td>
<td>12.9</td>
<td>137</td>
<td>12.9</td>
<td>20</td>
<td>131</td>
<td>13.5</td>
<td>132</td>
<td>13.4</td>
<td></td>
</tr>
<tr>
<td>631.deepsjeng_s</td>
<td>20</td>
<td>298</td>
<td>4.81</td>
<td>298</td>
<td>4.81</td>
<td>20</td>
<td>298</td>
<td>4.81</td>
<td>298</td>
<td>4.81</td>
<td></td>
</tr>
<tr>
<td>641.leeula_s</td>
<td>20</td>
<td>436</td>
<td>3.91</td>
<td>436</td>
<td>3.91</td>
<td>20</td>
<td>436</td>
<td>3.91</td>
<td>436</td>
<td>3.91</td>
<td></td>
</tr>
<tr>
<td>648.exchange2_s</td>
<td>20</td>
<td>211</td>
<td>13.9</td>
<td>212</td>
<td>13.9</td>
<td>20</td>
<td>211</td>
<td>13.9</td>
<td>212</td>
<td>13.9</td>
<td></td>
</tr>
<tr>
<td>657.xz_s</td>
<td>20</td>
<td>351</td>
<td>17.6</td>
<td>351</td>
<td>17.6</td>
<td>20</td>
<td>351</td>
<td>17.6</td>
<td>351</td>
<td>17.6</td>
<td></td>
</tr>
</tbody>
</table>

**SPECspeed®2017_int_base** = 8.73
**SPECspeed®2017_int_peak** = 8.95

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

## 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:

- KMP_AFFINITY = "granularity=fine,scatter"
- LD_LIBRARY_PATH = "/mnt/ramdisk/cpu2017-1.1.8-ic2021.1/lib/intel64:/mnt/ramdisk/cpu2017-1.1.8-ic2021.1/je5.0.1-64"
- MALLOC_CONF = "retain:true"
- OMP_STACKSIZE = "192M"

## General Notes

Binaries compiled on a system with 1x Intel Core i9-7980XE CPU + 64GB RAM memory using Redhat Enterprise Linux 8.0

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

NA: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown) is mitigated in the system as tested and documented.

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

Dell Inc.
PowerEdge C6420 (Intel Xeon Silver 4210R, 2.40 GHz)

SPECspeed®2017_int_base = 8.73
SPECspeed®2017_int_peak = 8.95

General Notes (Continued)

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

Platform Notes

BIOS settings:
Logical Processor : Disabled
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
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 982a61ec0915b55891ef0e16aca64d
running on localhost.localdomain Thu Dec 9 11:29:39 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) Silver 4210R CPU @ 2.40GHz
  2 "physical id"'s (chips)
20 "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 : 10
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 from util-linux 2.32.1:
Architecture:       x86_64

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

Dell Inc.
PowerEdge C6420 (Intel Xeon Silver 4210R, 2.40 GHz)  

SPECspeed®2017_int_base = 8.73
SPECspeed®2017_int_peak = 8.95

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

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

Platform Notes (Continued)

CPU op-mode(s): 32-bit, 64-bit
Byte Order: Little Endian
CPU(s): 20
On-line CPU(s) list: 0-19
Thread(s) per core: 1
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: 1166.242
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
NUMA node1 CPU(s): 1,3,5,7,9,11,13,15,17,19
Flags: fpu vme de pse tsc msr pae mce 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 abtm 3dnowprefetch cpuid_fault epb cat_l3 cdp lpht

Flags: fpu vme de pse tsc msr pae mce 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 abtm 3dnowprefetch cpuid_fault epb cat_l3 cdp lpht

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
node 0 size: 187294 MB
node 0 free: 183746 MB
node 1 cpus: 1 3 5 7 9 11 13 15 17 19
node 1 size: 188409 MB

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

Dell Inc.
PowerEdge C6420 (Intel Xeon Silver 4210R, 2.40 GHz)

SPECspeed®2017_int_base = 8.73
SPECspeed®2017_int_peak = 8.95

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

Platform Notes (Continued)

node 1 free: 192518 MB
node distances:
node 0 1
 0: 10 21
 1: 21 10

From /proc/meminfo
  MemTotal: 394823540 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 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

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
CVE-2017-5753 (Spectre variant 1): Bypass disabled via prctl and
CVE-2017-5753 (Spectre variant 1): seccomp
CVE-2017-5753 (Spectre variant 1): Mitigation: usercopy/swaps
CVE-2017-5753 (Spectre variant 1): barriers and __user pointer
CVE-2017-5753 (Spectre variant 1): sanitization

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

Dell Inc.
PowerEdge C6420 (Intel Xeon Silver 4210R, 2.40 GHz)

SPECspeed®2017_int_base = 8.73
SPECspeed®2017_int_peak = 8.95

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

Platform Notes (Continued)

CVE-2017-5715 (Spectre variant 2): Mitigation: Enhanced IBRS, IBPB: conditional, RSB filling
CVE-2020-0543 (Special Register Buffer Data Sampling): Not affected

run-level 3 Dec 9 11:26

SPEC is set to: /mnt/ramdisk/cpu2017-1.1.8-ic2021.1
Filesysten Type Size Used Avail Use% Mounted on
tmpfs tmpfs 125G 4.1G 121G 4% /mnt/ramdisk

From /sys/devices/virtual/dmi/id
Vendor: Dell Inc.
Product: PowerEdge C6420
Product Family: PowerEdge

Memory:
7x 00AD00B300AD HMA84GR7CJKR4N-WM 32 GB 2 rank 2933, configured at 2400
2x 00AD063200AD HMA84GR7CJKR4N-WM 32 GB 2 rank 2933, configured at 2400
3x 00AD069D00AD HMA84GR7CJKR4N-WM 32 GB 2 rank 2933, configured at 2400
4x Not Specified Not Specified

BIOS:
BIOS Vendor: Dell Inc.
BIOS Version: 2.13.1
BIOS Date: 11/03/2021
BIOS Revision: 2.13

(End of data from sysinfo program)

Compiler Version Notes

==============================================================================
C       | 600.perlbench_s(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       | 600.perlbench_s(base) 602.gcc_s(base, peak) 605.mcf_s(base, peak)

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

**Dell Inc.**  
PowerEdge C6420 (Intel Xeon Silver 4210R, 2.40 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>

![SPEClogo](https://www.spec.org/)

### SPECspeed®2017_int_base = 8.73

### SPECspeed®2017_int_peak = 8.95

**Compiler Version Notes (Continued)**

<table>
<thead>
<tr>
<th>625.x264_s(base, peak)</th>
<th>657.xz_s(base, peak)</th>
</tr>
</thead>
</table>

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2021.1 Build 20201133  
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

<table>
<thead>
<tr>
<th>C</th>
<th>600.perlbench_s(peak)</th>
</tr>
</thead>
</table>

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.

<table>
<thead>
<tr>
<th>C</th>
<th>602.gcc_s(base, peak)</th>
<th>605.mcf_s(base, peak)</th>
<th>625.x264_s(base, peak)</th>
<th>657.xz_s(base, peak)</th>
</tr>
</thead>
</table>

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.

<table>
<thead>
<tr>
<th>C++</th>
<th>620.omnetpp_s(base, peak)</th>
<th>623.xalancbmk_s(base, peak)</th>
<th>631.deepsjeng_s(base, peak)</th>
<th>641.leela_s(base, peak)</th>
</tr>
</thead>
</table>

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.

<table>
<thead>
<tr>
<th>Fortran</th>
<th>648.exchange2_s(base, peak)</th>
</tr>
</thead>
</table>

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

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

Dell Inc.
PowerEdge C6420 (Intel Xeon Silver 4210R, 2.40 GHz)

SPECspeed®2017_int_base = 8.73
SPECspeed®2017_int_peak = 8.95

C++ benchmarks:
icpx

Fortran benchmarks:
ifort

Base Compiler Invocation (Continued)

Base Portability Flags

600.perlbench_s: -DSPEC_LP64 -DSPEC_LINUX_X64
602.gcc_s: -DSPEC_LP64
605.mcf_s: -DSPEC_LP64
620.omnetpp_s: -DSPEC_LP64
623.xalancbmk_s: -DSPEC_LP64 -DSPEC_LINUX
625.x264_s: -DSPEC_LP64
631.deepsjeng_s: -DSPEC_LP64
641.leela_s: -DSPEC_LP64
648.exchange2_s: -DSPEC_LP64
657.xz_s: -DSPEC_LP64

Base Optimization Flags

C benchmarks:
-DSPEC_OPENMP -std=c11 -m64 -fioopenmp -Wl,-z,muldefs -xCORE-AVX2
-O3 -ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -mbranches-within-32B-boundaries
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

C++ benchmarks:
-DSPEC_OPENMP -m64 -Wl,-z,muldefs -xCORE-AVX2 -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/
-llqkmalloc

Fortran benchmarks:
-m64 -xCORE-AVX2 -O3 -ipo -no-prec-div -qopt-mem-layout-trans=4
-nostandard-realloc-lhs -align array32byte -auto
-mbranches-within-32B-boundaries
Dell Inc.
PowerEdge C6420 (Intel Xeon Silver 4210R, 2.40 GHz)

SPEC®2017_int_base = 8.73
SPEC®2017_int_peak = 8.95

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

Peak Compiler Invocation

C benchmarks (except as noted below):
icc

600.perlbench_s: icc

C++ benchmarks:
icpx

Fortran benchmarks:
ifort

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

600.perlbench_s: -Wl,-z,muldefs -prof-gen(pass 1) -prof-use(pass 2)
-xCORE-AVX2 -ipo -O3 -no-prec-div
-qopt-mem-layout-trans=4 -fno-strict-overflow
-mbranches-within-32B-boundaries
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

602.gcc_s: -m64 -std=c11 -Wl,-z,muldefs -fprofile-generate(pass 1)
-fprofile-use=default.profdata(pass 2) -xCORE-AVX2 -flto
-Ofast(pass 1) -O3 -ffast-math -qopt-mem-layout-trans=4
-mbranches-within-32B-boundaries
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

605.mcf_s: basepeak = yes

625.x264_s: -DSPEC_OPENMP -fiopenmp -std=c11 -m64 -Wl,-z,muldefs
-xCORE-AVX2 -flto -O3 -ffast-math
-qopt-mem-layout-trans=4 -fno-alias
-mbranches-within-32B-boundaries
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

657.xz_s: basepeak = yes

(Continued on next page)
Dell Inc.  
PowerEdge C6420 (Intel Xeon Silver 4210R, 2.40 GHz)  

<table>
<thead>
<tr>
<th>SPECspeed®2017_int_peak = 8.95</th>
<th>SPECspeed®2017_int_base = 8.73</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU2017 License: 55</td>
<td>Test Date: Dec-2021</td>
</tr>
<tr>
<td>Test Sponsor: Dell Inc.</td>
<td>Hardware Availability: Feb-2020</td>
</tr>
<tr>
<td>Tested by: Dell Inc.</td>
<td>Software Availability: Dec-2020</td>
</tr>
</tbody>
</table>

### Peak Optimization Flags (Continued)

C++ benchmarks:

- 620.omnetpp_s: basepeak = yes
- 623.xalancbmk_s: basepeak = yes
- 631.deepsjeng_s: basepeak = yes
- 641.leela_s: basepeak = yes

Fortran benchmarks:

- 648.exchange2_s: 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: