SPEC CPU®2017 Integer Speed Result

Dell Inc.

PowerEdge XR11 (Intel Xeon Gold 5318N, 2.10 GHz)

SPECspeed®2017_int_base = 11.4
SPECspeed®2017_int_peak = 11.7

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

Threads

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Threads</th>
<th>SPECspeed®2017_int_base (11.4)</th>
<th>SPECspeed®2017_int_peak (11.7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>600.perlbench_s</td>
<td>24</td>
<td>7.01</td>
<td>8.08</td>
</tr>
<tr>
<td>602.gcc_s</td>
<td>24</td>
<td>11.0</td>
<td>19.8</td>
</tr>
<tr>
<td>605.mcf_s</td>
<td>24</td>
<td>11.2</td>
<td>13.2</td>
</tr>
<tr>
<td>620.omnetpp_s</td>
<td>24</td>
<td>4.71</td>
<td>5.78</td>
</tr>
<tr>
<td>623.xalancbmk_s</td>
<td>24</td>
<td>11.2</td>
<td>16.7</td>
</tr>
<tr>
<td>625.x264_s</td>
<td>24</td>
<td>5.78</td>
<td>11.2</td>
</tr>
<tr>
<td>631.deepsjeng_s</td>
<td>24</td>
<td>13.2</td>
<td>16.7</td>
</tr>
<tr>
<td>641.leela_s</td>
<td>24</td>
<td>4.71</td>
<td>11.2</td>
</tr>
<tr>
<td>648.exchange2_s</td>
<td>24</td>
<td>11.2</td>
<td>11.2</td>
</tr>
<tr>
<td>657.xz_s</td>
<td>24</td>
<td>20.2</td>
<td>20.2</td>
</tr>
</tbody>
</table>

Hardware

CPU Name: Intel Xeon Gold 5318N
Max MHz: 3400
Nominal: 2100
Enabled: 24 cores, 1 chip
Orderable: 1 chip
Cache L1: 32 KB I + 48 KB D on chip per core
L2: 1.25 MB I+D on chip per core
L3: 36 MB I+D on chip per chip
Other: None
Memory: 512 GB (8 x 64 GB 2Rx4 PC4-3200AA-R, running at 2666)
Storage: 225 GB on tmpfs
Other: None

Software

OS: Red Hat Enterprise Linux 8.3 (Ootpa)
    4.18.0-240.15.1.el8_3.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: Yes
Firmware: Version 0.6.3 released May-2021
File System: tmpfs
System State: Run level 5 (graphical 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.
# SPEC CPU®2017 Integer Speed Result

## Dell Inc.

PowerEdge XR11 (Intel Xeon Gold 5318N, 2.10 GHz)

<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>Threads</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>24</td>
<td>253</td>
<td>7.02</td>
<td>255</td>
<td>6.97</td>
<td>253</td>
<td>7.01</td>
<td>24</td>
<td>220</td>
<td>8.08</td>
<td>219</td>
<td>8.09</td>
<td>220</td>
<td>8.08</td>
</tr>
<tr>
<td>602.gcc_s</td>
<td>24</td>
<td>372</td>
<td>10.7</td>
<td>375</td>
<td>10.6</td>
<td>374</td>
<td>10.6</td>
<td>24</td>
<td>361</td>
<td>11.0</td>
<td>361</td>
<td>11.0</td>
<td>358</td>
<td>11.1</td>
</tr>
<tr>
<td>605.mcf_s</td>
<td>24</td>
<td>236</td>
<td>20.0</td>
<td>239</td>
<td>19.8</td>
<td>239</td>
<td>19.7</td>
<td>24</td>
<td>236</td>
<td>20.0</td>
<td>239</td>
<td>19.8</td>
<td>239</td>
<td>19.7</td>
</tr>
<tr>
<td>620.omnetpp_s</td>
<td>24</td>
<td>145</td>
<td>11.2</td>
<td>149</td>
<td>10.9</td>
<td>144</td>
<td>11.4</td>
<td>24</td>
<td>145</td>
<td>11.2</td>
<td>149</td>
<td>10.9</td>
<td>144</td>
<td>11.4</td>
</tr>
<tr>
<td>623.xalanchmk_s</td>
<td>24</td>
<td>107</td>
<td>13.2</td>
<td>107</td>
<td>13.2</td>
<td>107</td>
<td>13.2</td>
<td>24</td>
<td>107</td>
<td>13.2</td>
<td>107</td>
<td>13.2</td>
<td>107</td>
<td>13.2</td>
</tr>
<tr>
<td>625.x264_s</td>
<td>24</td>
<td>106</td>
<td>16.7</td>
<td>106</td>
<td>16.7</td>
<td>106</td>
<td>16.7</td>
<td>24</td>
<td>101</td>
<td>17.4</td>
<td>101</td>
<td>17.4</td>
<td>101</td>
<td>17.4</td>
</tr>
<tr>
<td>631.deepsjeng_s</td>
<td>24</td>
<td>248</td>
<td>5.78</td>
<td>248</td>
<td>5.78</td>
<td>248</td>
<td>5.78</td>
<td>24</td>
<td>248</td>
<td>5.78</td>
<td>248</td>
<td>5.78</td>
<td>248</td>
<td>5.78</td>
</tr>
<tr>
<td>648.exchange2_s</td>
<td>24</td>
<td>156</td>
<td>18.8</td>
<td>156</td>
<td>18.8</td>
<td>157</td>
<td>18.7</td>
<td>24*</td>
<td>156</td>
<td>18.8</td>
<td>156</td>
<td>18.8</td>
<td>157</td>
<td>18.7</td>
</tr>
</tbody>
</table>

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/cpu2017-1.1.5-ic2021.1/lib/intel64:/mnt/ramdisk/cpu2017-1.1.5-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
- 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

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)
Dell Inc.

PowerEdge XR11 (Intel Xeon Gold 5318N, 2.10 GHz)

SPEC CPU®2017 Integer Speed Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

Dell Inc.

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

Test Date: May-2021
Hardware Availability: Jul-2021
Software Availability: Feb-2021

SPECspeed®2017_int_base = 11.4
SPECspeed®2017_int_peak = 11.7

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 225 GB ramdisk created with the cmd: "mount -t tmpfs -o size=225G 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

Sysinfo program /mnt/ramdisk/cpu2017-1.1.5-ic2021.1/bin/sysinfo
Rev: r6538 of 2020-09-24 e8664e66d2d7080afeaa89d4b38e2f1c
running on localhost.localdomain Wed May 12 05:38:04 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 5318N CPU @ 2.10GHz
5 "physical id"s (chips)
24 "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 : 24
siblings : 24
physical 0: cores 0 1 10 11 12 13 14 15 16 17 18 19 20 21 22 23

From lscpu:
   Architecture: x86_64
   CPU op-mode(s): 32-bit, 64-bit
   Byte Order: Little Endian
   CPU(s): 24

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

**Dell Inc.**

**PowerEdge XR11 (Intel Xeon Gold 5318N, 2.10 GHz)**

<table>
<thead>
<tr>
<th>SPECspeed®2017_int_base = 11.4</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECspeed®2017_int_peak = 11.7</td>
</tr>
</tbody>
</table>

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

**Test Date:** May-2021  
**Hardware Availability:** Jul-2021  
**Software Availability:** Feb-2021  

---

### Platform Notes (Continued)

- **On-line CPU(s) list:** 0-23  
- **Thread(s) per core:** 1  
- **Core(s) per socket:** 24  
- **Socket(s):** 1  
- **NUMA node(s):** 1  
- **Vendor ID:** GenuineIntel  
- **CPU family:** 6  
- **Model:** 106  
- **Model name:** Intel(R) Xeon(R) Gold 5318N CPU @ 2.10GHz  
- **Stepping:** 6  
- **CPU MHz:** 2860.921  
- **BogoMIPS:** 4200.00  
- **Virtualization:** VT-x  
- **L1d cache:** 48K  
- **L1i cache:** 32K  
- **L2 cache:** 1280K  
- **L3 cache:** 36864K  
- **NUMA node0 CPU(s):** 0-23  
- **Flags:** fpu vme de pse tsc msr pae mca cmov pat pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpte1gb 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 invpcid_single intel_ppn vmbd mbr mbr_stibp ibrs enhanced fsgsbase tsc_adjust bmi1 hle avx2 smep bmi2 erms invpcid cqm rdt_a avx512f avx512dq rdseed adx smad xsaveopt xsavec xgetbv1 xsaves cmqm llc cmqm_occup llc cmqm_mbb_total cmqm_mbb_local split_lock_detect wbnoinvd dtherm ida arat pln pts avx512vbm1 umip pku ospe avx512_vbmi2 gfnv vaes vpcmvdq avx512_vnni avx512_bitalg tme avx512_vpopcntdq la57 rdpid md_clear pconfig flush_lld arch_capabilities

```bash
/proc/cpuinfo cache data
 cache size : 36864 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 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23  
- **node 0 size:** 492206 MB  
- **node 0 free:** 498527 MB  
- **node distances:**  
- **node 0:** 10  

From /proc/meminfo    
MemTotal: 527817248 KB

(Continued on next page)
Dell Inc.

PowerEdge XR11 (Intel Xeon Gold 5318N, 2.10 GHz)

SPEC CPU®2017 Integer Speed Results

Copyright 2017-2021 Standard Performance Evaluation Corporation

SPECspeed®2017_int_base = 11.4
SPECspeed®2017_int_peak = 11.7

CPU2017 License: 55
Test Sponsor: Dell Inc.
Test Date: May-2021
CPU2017 License: 55
Test Sponsor: Dell Inc.
Test Date: May-2021

Tested by: Dell Inc.
Hardware Availability: Jul-2021
Tested by: Dell Inc.
Hardware Availability: Jul-2021

Software Availability: Feb-2021
Software Availability: Feb-2021

Platform Notes (Continued)

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 4.18.0-240.15.1.el8_3.x86_64 #1 SMP Wed Feb 3 03:12:15 EST 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/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 5 May 12 05:02

SPEC is set to: /mnt/ramdisk/cpu2017-1.1.5-ic2021.1
Filesystem  Type  Size  Used  Avail  Use% Mounted on
  tmpfs     tmpfs   225G   6.9G  219G    4% /mnt/ramdisk

(Continued on next page)
Dell Inc.

PowerEdge XR11 (Intel Xeon Gold 5318N, 2.10 GHz)

**SPECspeed\textsuperscript{\textregistered}2017\textsubscript{\textregistered} int\textsubscript{\textregistered} peak = 11.7**

**SPECspeed\textsuperscript{\textregistered}2017\textsubscript{\textregistered} int\textsubscript{\textregistered} base = 11.4**

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

**Platform Notes (Continued)**

From /sys/devices/virtual/dmi/id
Vendor:         Dell Inc.
Product:        PowerEdge XR11
Product Family: PowerEdge
Serial:         09A000N

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:
- 2x 002C0632002C 36ASF8G72PZ-3G2B2 64 GB 2 rank 3200, configured at 2666
- 3x 002C069D002C 36ASF8G72PZ-3G2B2 64 GB 2 rank 3200, configured at 2666
- 1x 00AD063200AD HMAA8GR7AJR4N-XN 64 GB 2 rank 3200, configured at 2666
- 2x 00CE063200CE M393A8G40AB2-CWE 64 GB 2 rank 3200, configured at 2666

BIOS:
- BIOS Vendor:       Dell Inc.
- BIOS Version:      0.6.3
- BIOS Date:         05/04/2020
- BIOS Revision:     0.6

(BIOS Note: Version 0.6.3 was built with an incorrect date stamp which is reflected in the sysinfo section. The correct release date is reflected in the "Firmware" field of the disclosure.

(Continued on next page)
## Dell Inc.

### PowerEdge XR11 (Intel Xeon Gold 5318N, 2.10 GHz)

<table>
<thead>
<tr>
<th>SPECspeed®2017_int_base</th>
<th>SPECspeed®2017_int_peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.4</td>
<td>11.7</td>
</tr>
</tbody>
</table>

### Compiler Version Notes (Continued)

<table>
<thead>
<tr>
<th>Compiler</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>600.perlbench_s(peak)</td>
</tr>
</tbody>
</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>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>C++</td>
<td>620.omnetpp_s(base, peak) 623.xalancbmk_s(base, peak)</td>
</tr>
</tbody>
</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>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fortran</td>
<td>648.exchange2_s(base, peak)</td>
</tr>
</tbody>
</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

- **C++ benchmarks:**
  - icpx

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

**PowerEdge XR11 (Intel Xeon Gold 5318N, 2.10 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>
<tr>
<td>Test Date:</td>
<td>May-2021</td>
</tr>
<tr>
<td>Hardware Availability:</td>
<td>Jul-2021</td>
</tr>
<tr>
<td>Software Availability:</td>
<td>Feb-2021</td>
</tr>
</tbody>
</table>

#### SPEC CPU®2017 Integer Speed Result

<table>
<thead>
<tr>
<th>SPECspeed®2017_int_base</th>
<th>11.4</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECspeed®2017_int_peak</td>
<td>11.7</td>
</tr>
</tbody>
</table>

#### 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 -ftnopenmp -Wl,-z,uldefs -xCORE-AVX512
-03 -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,uldefs -xCORE-AVX512 -03 -ffast-math
-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/
-1qkmalloc

**Fortran benchmarks:**
-m64 -xCORE-AVX512 -03 -ipo -no-prec-div -qopt-mem-layout-trans=4
-nostandard-realloc-lhs -align array32byte -auto
-mbranches-within-32B-boundaries

#### Peak Compiler Invocation

**C benchmarks (except as noted below):**
icx
600.perlbench_s: icc

**C++ benchmarks:**
icpx

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

<table>
<thead>
<tr>
<th>Dell Inc.</th>
<th>SPECspeed®2017_int_base = 11.4</th>
</tr>
</thead>
<tbody>
<tr>
<td>PowerEdge XR11 (Intel Xeon Gold 5318N, 2.10 GHz)</td>
<td>SPECspeed®2017_int_peak = 11.7</td>
</tr>
</tbody>
</table>

<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: Jul-2021</td>
</tr>
<tr>
<td>Tested by: Dell Inc.</td>
<td>Software Availability: Feb-2021</td>
</tr>
</tbody>
</table>

## Peak Compiler Invocation (Continued)

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-AVX512 -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-AVX512 -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-AVX512 -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

### C++ benchmarks:
- 620.omnetpp_s: basepeak = yes

- 623.xalancbmk_s: basepeak = yes

- 631.deepsjeng_s: basepeak = yes

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

**Dell Inc.**

PowerEdge XR11 (Intel Xeon Gold 5318N, 2.10 GHz)

<table>
<thead>
<tr>
<th>SPECspeed®2017_int_base</th>
<th>11.4</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECspeed®2017_int_peak</td>
<td>11.7</td>
</tr>
</tbody>
</table>

<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>

<table>
<thead>
<tr>
<th>Test Date:</th>
<th>May-2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardware Availability:</td>
<td>Jul-2021</td>
</tr>
<tr>
<td>Software Availability:</td>
<td>Feb-2021</td>
</tr>
</tbody>
</table>

#### Peak Optimization Flags (Continued)

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:


---

SPEC CPU and SPECspeed 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 2021-05-12 06:38:04-0400.
Originally published on 2021-07-06.