### SPEC CPU®2017 Integer Rate Result

#### Dell Inc.

**PowerEdge FC640 (Intel Xeon Bronze 3206R, 1.90 GHz)**

<table>
<thead>
<tr>
<th>Test Sponsor:</th>
<th>Dell Inc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tested by:</td>
<td>Dell Inc.</td>
</tr>
<tr>
<td>Test Date:</td>
<td>Nov-2021</td>
</tr>
<tr>
<td>Hardware Avail.:</td>
<td>Apr-2019</td>
</tr>
<tr>
<td>Software Avail.:</td>
<td>May-2021</td>
</tr>
</tbody>
</table>

---

#### Speciation

**SPECrate®2017_int_base = 59.9**

**SPECrate®2017_int_peak = 61.4**

---

#### Hardware

<table>
<thead>
<tr>
<th>Speciation</th>
<th>SPECrate®2017_int_base (59.9)</th>
<th>SPECrate®2017_int_peak (61.4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Name:</td>
<td>Dell Inc.</td>
<td>Dell Inc.</td>
</tr>
<tr>
<td>Max MHz:</td>
<td>Intel Xeon Bronze 3206R</td>
<td>Intel Xeon Bronze 3206R</td>
</tr>
<tr>
<td>Nominal:</td>
<td>1900</td>
<td>1900</td>
</tr>
<tr>
<td>Enabled:</td>
<td>16 cores, 2 chips</td>
<td>16 cores, 2 chips</td>
</tr>
<tr>
<td>Orderable:</td>
<td>1.2 chips</td>
<td>1.2 chips</td>
</tr>
<tr>
<td>Cache L1:</td>
<td>32 KB I + 32 KB D on chip per core</td>
<td>32 KB I + 32 KB D on chip per core</td>
</tr>
<tr>
<td>L2:</td>
<td>1 MB I+D on chip per core</td>
<td>1 MB I+D on chip per core</td>
</tr>
<tr>
<td>L3:</td>
<td>11 MB I+D on chip per chip</td>
<td>11 MB I+D on chip per chip</td>
</tr>
<tr>
<td>Other:</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Memory:</td>
<td>384 GB (12 x 32 GB 2Rx4 PC4-2933Y-R, running at 2133)</td>
<td>384 GB (12 x 32 GB 2Rx4 PC4-2933Y-R, running at 2133)</td>
</tr>
<tr>
<td>Storage:</td>
<td>125 GB on tmpfs</td>
<td>125 GB on tmpfs</td>
</tr>
<tr>
<td>Other:</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

---

#### Software

<table>
<thead>
<tr>
<th>SPECiation</th>
<th>SPECrate®2017_int_base (59.9)</th>
<th>SPECrate®2017_int_peak (61.4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OS:</td>
<td>Red Hat Enterprise Linux 8.4 (Ootpa)</td>
<td>Red Hat Enterprise Linux 8.4 (Ootpa)</td>
</tr>
<tr>
<td>Parallel:</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>File System:</td>
<td>tmpfs</td>
<td>tmpfs</td>
</tr>
<tr>
<td>System State:</td>
<td>Run level 3 (multi-user)</td>
<td>Run level 3 (multi-user)</td>
</tr>
<tr>
<td>Base Pointers:</td>
<td>64-bit</td>
<td>64-bit</td>
</tr>
<tr>
<td>Peak Pointers:</td>
<td>32/64-bit</td>
<td>32/64-bit</td>
</tr>
<tr>
<td>Other:</td>
<td>jemalloc memory allocator V5.0.1</td>
<td>jemalloc memory allocator V5.0.1</td>
</tr>
<tr>
<td>Power Management:</td>
<td>BIOS and OS set to prefer performance at the cost of additional power usage.</td>
<td>BIOS and OS set to prefer performance at the cost of additional power usage.</td>
</tr>
</tbody>
</table>

---

**Copyright 2017-2022 Standard Performance Evaluation Corporation**
Dell Inc.
PowerEdge FC640 (Intel Xeon Bronze 3206R, 1.90 GHz)

SPECrate®2017_int_base = 59.9
SPECrate®2017_int_peak = 61.4

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>
<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>500.perlbench_r</td>
<td>16</td>
<td>586</td>
<td>43.5</td>
<td>586</td>
<td>43.5</td>
<td>16</td>
<td>512</td>
<td>49.8</td>
<td>513</td>
<td>49.7</td>
<td>16</td>
<td>512</td>
<td>49.8</td>
<td>513</td>
</tr>
<tr>
<td>502.gcc_r</td>
<td>16</td>
<td>415</td>
<td>54.5</td>
<td>414</td>
<td>54.8</td>
<td>16</td>
<td>392</td>
<td>57.8</td>
<td>393</td>
<td>57.6</td>
<td>16</td>
<td>392</td>
<td>57.8</td>
<td>393</td>
</tr>
<tr>
<td>505.mcf_r</td>
<td>16</td>
<td>262</td>
<td>98.8</td>
<td>263</td>
<td>98.5</td>
<td>16</td>
<td>262</td>
<td>98.8</td>
<td>263</td>
<td>98.5</td>
<td>16</td>
<td>262</td>
<td>98.8</td>
<td>263</td>
</tr>
<tr>
<td>520.omnetpp_r</td>
<td>16</td>
<td>466</td>
<td>45.1</td>
<td>466</td>
<td>45.0</td>
<td>16</td>
<td>466</td>
<td>45.1</td>
<td>466</td>
<td>45.0</td>
<td>16</td>
<td>466</td>
<td>45.1</td>
<td>466</td>
</tr>
<tr>
<td>523.xalanbmk_r</td>
<td>16</td>
<td>221</td>
<td>76.4</td>
<td>221</td>
<td>76.4</td>
<td>16</td>
<td>221</td>
<td>76.4</td>
<td>221</td>
<td>76.4</td>
<td>16</td>
<td>221</td>
<td>76.4</td>
<td>221</td>
</tr>
<tr>
<td>525.x264_r</td>
<td>16</td>
<td>223</td>
<td>125</td>
<td>223</td>
<td>125</td>
<td>16</td>
<td>215</td>
<td>130</td>
<td>215</td>
<td>130</td>
<td>16</td>
<td>215</td>
<td>130</td>
<td>215</td>
</tr>
<tr>
<td>531.deepsjeng_r</td>
<td>16</td>
<td>406</td>
<td>45.1</td>
<td>407</td>
<td>45.1</td>
<td>16</td>
<td>406</td>
<td>45.1</td>
<td>407</td>
<td>45.1</td>
<td>16</td>
<td>406</td>
<td>45.1</td>
<td>407</td>
</tr>
<tr>
<td>541.leela_r</td>
<td>16</td>
<td>736</td>
<td>36.0</td>
<td>736</td>
<td>36.0</td>
<td>16</td>
<td>736</td>
<td>36.0</td>
<td>736</td>
<td>36.0</td>
<td>16</td>
<td>736</td>
<td>36.0</td>
<td>736</td>
</tr>
<tr>
<td>548.exchange2_r</td>
<td>16</td>
<td>360</td>
<td>116</td>
<td>360</td>
<td>116</td>
<td>16</td>
<td>360</td>
<td>116</td>
<td>360</td>
<td>116</td>
<td>16</td>
<td>360</td>
<td>116</td>
<td>360</td>
</tr>
<tr>
<td>557.xz_r</td>
<td>16</td>
<td>556</td>
<td>31.1</td>
<td>555</td>
<td>31.2</td>
<td>16</td>
<td>543</td>
<td>31.8</td>
<td>544</td>
<td>31.8</td>
<td>16</td>
<td>543</td>
<td>31.8</td>
<td>544</td>
</tr>
</tbody>
</table>

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

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/cpu2017-1.1.8-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"
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
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.:
Dell Inc.
PowerEdge FC640 (Intel Xeon Bronze 3206R, 1.90 GHz)

General Notes (Continued)

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

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 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
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 Tue Nov 23 02:02:42 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) Bronze 3206R CPU @ 1.90GHz
  2 "physical id"s (chips)
  16 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The following excerpts from /proc/cpuinfo might not be reliable. Use with caution.)

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

Dell Inc.
PowerEdge FC640 (Intel Xeon Bronze 3206R, 1.90 GHz)

SPECrate®2017_int_base = 59.9
SPECrate®2017_int_peak = 61.4

CPU2017 License: 55
Test Sponsor: Dell Inc.
Tested by: Dell Inc.
Test Date: Nov-2021
Hardware Availability: Apr-2019
Software Availability: May-2021

Platform Notes (Continued)

cpu cores : 8
siblings : 8
physical 0: cores 0 1 2 3 4 5 6 7
physical 1: cores 0 1 2 3 4 5 6 7

From lscpu from util-linux 2.32.1:
Architecture: x86_64
CPU op-mode(s): 32-bit, 64-bit
Byte Order: Little Endian
CPU(s): 16
On-line CPU(s) list: 0-15
Thread(s) per core: 1
Core(s) per socket: 8
Socket(s): 2
NUMA node(s): 2
Vendor ID: GenuineIntel
BIOS Vendor ID: Intel
CPU family: 6
Model: 85
Model name: Intel(R) Xeon(R) Bronze 3206R CPU @ 1.90GHz
BIOS Model name: Intel(R) Xeon(R) Bronze 3206R CPU @ 1.90GHz
Stepping: 7
CPU MHz: 1900.000
CPU max MHz: 1900.0000
CPU min MHz: 1000.0000
BogoMIPS: 3800.00
Virtualization: VT-x
L1d cache: 32K
L1i cache: 32K
L2 cache: 1024K
L3 cache: 11264K
NUMA node0 CPU(s): 0,2,4,6,8,10,12,14
NUMA node1 CPU(s): 1,3,5,7,9,11,13,15
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 pd_UNIQUE rgdsc tsc x2apic msr pae mce cx8 apic sep mtrr pge mca cmov le constant_tsc art 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 pclid dca sse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_timer aes xsave avx f16c rdrand lahf_lm absm 3dnowprefetch cpuid_fault epb cat_l3 cdp_l3 invpcid_single intel_pflush ssbd mba ibrs ibpb stibp ibrs_enhanced fsgsbase tsc_adjust bmi1 hle avx2 smep bmi2  erms invpcid cmov mxp rdt_a avx512f avx512dq rdseed adx smap clflushopt clwb intel_pt avx512cd avx512bw avx512vl xsaveopt xsaexc xgetbv1 xsaves cmqm_llc cmqm_occaccess llvm cmqm_mbb Total cmqm_mbb_local  dtherm arat pln pts pkp ospke avx512_vnni md_clear flush_l1d arch_capabilities

/proc/cpuinfo cache data
cache size : 11264 KB

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

Dell Inc.
PowerEdge FC640 (Intel Xeon Bronze 3206R, 1.90 GHz)  

<table>
<thead>
<tr>
<th>SPECrate®2017_int_base = 59.9</th>
<th>Test Date: Nov-2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECrate®2017_int_peak = 61.4</td>
<td>Hardware Availability: Apr-2019</td>
</tr>
</tbody>
</table>

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

Platform Notes (Continued)

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
node 0 size: 192075 MB
node 0 free: 175675 MB
node 1 cpus: 1 3 5 7 9 11 13 15
node 1 size: 193496 MB
node 1 free: 187533 MB
node distances:
node 0 1
  0: 10 21
  1: 21 10

From /proc/meminfo
MemTotal: 394825944 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*
platform:el8
os-release:
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): KVM: Mitigation: Split huge pages

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

**Dell Inc.**  
PowerEdge FC640 (Intel Xeon Bronze 3206R, 1.90 GHz)  

<table>
<thead>
<tr>
<th>CPU2017 License</th>
<th>Test Date</th>
<th>Hardware Availability</th>
<th>Software Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>55</td>
<td>Nov-2021</td>
<td>Apr-2019</td>
<td>May-2021</td>
</tr>
<tr>
<td>Test Sponsor</td>
<td>Dell Inc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tested by</td>
<td>Dell Inc.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SPECrate®2017_int_base = 59.9**  
**SPECrate®2017_int_peak = 61.4**  

### Platform Notes (Continued)

- **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):** Mitigation: TSX disabled

run-level 3 Nov 22 10:46

SPEC is set to: /mnt/ramdisk/cpu2017-1.1.8-ic2021.1

```
Filesystem   Type     Size  Used Avail Use% Mounted on  
tmpfs         tmpfs    125G   17G  109G  14% /mnt/ramdisk
```

From /sys/devices/virtual/dmi/id

<table>
<thead>
<tr>
<th>Vendor:</th>
<th>Dell Inc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product:</td>
<td>PowerEdge FC640</td>
</tr>
<tr>
<td>Product Family</td>
<td>PowerEdge</td>
</tr>
<tr>
<td>Serial:</td>
<td>1234567</td>
</tr>
</tbody>
</table>

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:**

- 3x 00AD00B300AD HMA84GR7CJR4N-WM 32 GB 2 rank 2933, configured at 2133
- 6x 00AD063200AD HMA84GR7CJR4N-WM 32 GB 2 rank 2933, configured at 2133
- 3x 00AD069D00AD HMA84GR7CJR4N-WM 32 GB 2 rank 2933, configured at 2133

**BIOS:**

<table>
<thead>
<tr>
<th>BIOS Vendor:</th>
<th>Dell Inc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOS Version:</td>
<td>2.12.2</td>
</tr>
<tr>
<td>BIOS Date:</td>
<td>07/12/2021</td>
</tr>
<tr>
<td>BIOS Revision</td>
<td>2.12</td>
</tr>
</tbody>
</table>

(End of data from sysinfo program)
Dell Inc.
PowerEdge FC640 (Intel Xeon Bronze 3206R, 1.90 GHz)

SPECrate®2017_int_base = 59.9
SPECrate®2017_int_peak = 61.4

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

Test Date: Nov-2021
Hardware Availability: Apr-2019
Software Availability: May-2021

Compiler Version Notes

==============================================================================
| C       | 500.perlbench_r(peak) 557.xz_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) |
------------
| 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) 557.xz_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) |
------------
| 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. |

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

### Dell Inc.
PowerEdge FC640 (Intel Xeon Bronze 3206R, 1.90 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® Results

<table>
<thead>
<tr>
<th>SPECrate®2017_int_base</th>
<th>59.9</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECrate®2017_int_peak</td>
<td>61.4</td>
</tr>
</tbody>
</table>

### Compiler Version Notes (Continued)

Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

---

<table>
<thead>
<tr>
<th>C</th>
<th>500.perlbench_r(peak) 557.xz_r(peak)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel(R) C</td>
<td>Intel(R) 64 Compiler Classic for applications running on Intel(R) 64, Version 2021.1 Build 20201112_000000</td>
</tr>
<tr>
<td></td>
<td>Copyright (C) 1985-2020 Intel Corporation. All rights reserved.</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>C</th>
<th>502.gcc_r(peak)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel(R)</td>
<td>oneAPI DPC++/C++ Compiler for applications running on IA-32, Version 2021.1 Build 20201113</td>
</tr>
<tr>
<td></td>
<td>Copyright (C) 1985-2020 Intel Corporation. All rights reserved.</td>
</tr>
</tbody>
</table>

---

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

---

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

---

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

---
Dell Inc.
PowerEdge FC640 (Intel Xeon Bronze 3206R, 1.90 GHz)

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

SPECrates

SPECrates\textsuperscript{2017\_int\_base} = 59.9
SPECrates\textsuperscript{2017\_int\_peak} = 61.4

Test Date: Nov-2021
Hardware Availability: Apr-2019
Software Availability: May-2021

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-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
-lqkmalloc

C++ benchmarks:
-w -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
-lqkmalloc

Fortran benchmarks:
-w -m64 -Wl,-z,muldefs -xCORE-AVX2 -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 FC640 (Intel Xeon Bronze 3206R, 1.90 GHz)

SPEC®2017 Integer Rate Result
Copyright 2017-2022 Standard Performance Evaluation Corporation

SPECrate®2017_int_base = 59.9
SPECrate®2017_int_peak = 61.4

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

Test Date: Nov-2021
Hardware Availability: Apr-2019
Software Availability: May-2021

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
557.xz_r: icc

C++ benchmarks:
icpx

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-AVX2 -ipo -O3 -no-prec-div
-qopt-mem-layout-trans=4 -fno-strict-overflow
-mbranches-within-32B-boundaries

(Continued on next page)
Peak Optimization Flags (Continued)

500.perlbench_r (continued):
-L/opt/intel/oneapi/compiler/2021.1.1/linux/compiler/lib/intel64_lin
-lqkmalloc

502.gcc_r: -m32
-L/opt/intel/oneapi/compiler/2021.1.1/linux/compiler/lib/ia32_lin
-std=gnu89 -Wl,-z,muldefs -fprofile-generate(pass1)
-fprofile-use=default.profdata(pass 2) -xCORE-AVX2 -flto
-Ofast(pass 1) -O3 -ffast-math -gopt-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-AVX2 -flto -O3
-ffast-math -gopt-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: -Wl,-z,muldefs -xCORE-AVX2 -ipo -O3 -no-prec-div
-gopt-mem-layout-trans=4 -mbranches-within-32B-boundaries
-L/opt/intel/oneapi/compiler/2021.1.1/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-ic2021-official-linux64_revA.xml
http://www.spec.org/cpu2017/flags/Dell-Platform-Flags-PowerEdge-Intel-ICX-rev1.5.xml
## Dell Inc.

**PowerEdge FC640 (Intel Xeon Bronze 3206R, 1.90 GHz)**

<table>
<thead>
<tr>
<th>SPECrate®2017_int_base</th>
<th>SPECrate®2017_int_peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>59.9</td>
<td>61.4</td>
</tr>
</tbody>
</table>

**CPU2017 License:** 55  
**Test Sponsor:** Dell Inc.  
**Tested by:** Dell Inc.  
**Test Date:** Nov-2021  
**Hardware Availability:** Apr-2019  
**Software Availability:** May-2021

---

**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 2021-11-23 03:02:40-0500.  
Report generated on 2022-02-15 16:26:08 by CPU2017 PDF formatter v6442.  
Originally published on 2022-02-15.