# SPEC CPU®2017 Integer Rate Result

## Dell Inc.
PowerEdge MX750c (Intel Xeon Platinum 8368, 2.40 GHz)

### SPECrate®2017_int_base = 493
SPECrate®2017_int_peak = 511

| Copies | 0 | 50.0 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 |
|--------|---|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 500.perlbench_r | 152 |       |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 502.gcc_r | 152 |       |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 505.mcf_r | 152 |       |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 520.omnetpp_r | 152 |       |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 523.xalancbmk_r | 152 |       |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 525.x264_r | 152 |       |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 531.deepsjeng_r | 152 |       |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 541.leela_r | 152 |       |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 548.exchange2_r | 152 |       |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 557.xz_r | 152 |       |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |

**SPECrate®2017_int_base (493)**

**SPECrate®2017_int_peak (511)**

## Hardware

<table>
<thead>
<tr>
<th>Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Name</td>
<td>Intel Xeon Platinum 8368</td>
</tr>
<tr>
<td>Max MHz</td>
<td>3400</td>
</tr>
<tr>
<td>Nominal</td>
<td>2400</td>
</tr>
<tr>
<td>Enabled</td>
<td>76 cores, 2 chips, 2 threads/core</td>
</tr>
<tr>
<td>Orderable</td>
<td>1.2 chips</td>
</tr>
<tr>
<td>Cache L1</td>
<td>32 KB I + 48 KB D on chip per core</td>
</tr>
<tr>
<td>L2</td>
<td>1.25 MB I+D on chip per core</td>
</tr>
<tr>
<td>L3</td>
<td>57 MB I+D on chip per chip</td>
</tr>
<tr>
<td>Other</td>
<td>None</td>
</tr>
<tr>
<td>Memory</td>
<td>1 TB (32 x 32 GB 2Rx8 PC4-3200AA-R)</td>
</tr>
<tr>
<td>Storage</td>
<td>125 GB on tmpfs</td>
</tr>
<tr>
<td>Other</td>
<td>None</td>
</tr>
</tbody>
</table>

## Software

<table>
<thead>
<tr>
<th>Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>OS</td>
<td>Red Hat Enterprise Linux 8.2 (Ootpa)</td>
</tr>
<tr>
<td></td>
<td>4.18.0-193.el8.x86_64</td>
</tr>
<tr>
<td>Compiler</td>
<td>C/C++: Version 2021.1 of Intel oneAPI DPC++/C++ Compiler Build 20201113 for Linux;</td>
</tr>
<tr>
<td></td>
<td>Fortran: Version 2021.1 of Intel Fortran Compiler</td>
</tr>
<tr>
<td></td>
<td>Classic Build 20201112 for Linux;</td>
</tr>
<tr>
<td></td>
<td>C/C++: Version 2021.1 of Intel C/C++ Compiler</td>
</tr>
<tr>
<td></td>
<td>Classic Build 20201112 for Linux;</td>
</tr>
<tr>
<td>Parallel</td>
<td>No</td>
</tr>
<tr>
<td>Firmware</td>
<td>Version 1.1.2 released Apr-2021</td>
</tr>
<tr>
<td>File System</td>
<td>tmpfs</td>
</tr>
<tr>
<td>System State</td>
<td>Run level 3 (multi-user)</td>
</tr>
<tr>
<td>Base Pointers</td>
<td>64-bit</td>
</tr>
<tr>
<td>Peak Pointers</td>
<td>32/64-bit</td>
</tr>
<tr>
<td>Other</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>
</tr>
</tbody>
</table>
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Dell Inc.
PowerEdge MX750c (Intel Xeon Platinum 8368, 2.40 GHz)

SPECrate®2017_int_base = 493
SPECrate®2017_int_peak = 511

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>
</tr>
</thead>
<tbody>
<tr>
<td>500.perlbench_r</td>
<td>152</td>
<td>692</td>
<td>350</td>
<td>697</td>
<td>347</td>
<td></td>
<td></td>
</tr>
<tr>
<td>502.gcc_r</td>
<td>152</td>
<td>571</td>
<td>377</td>
<td>573</td>
<td>375</td>
<td></td>
<td></td>
</tr>
<tr>
<td>505.mcf_r</td>
<td>152</td>
<td>309</td>
<td>794</td>
<td>310</td>
<td>791</td>
<td></td>
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</tr>
<tr>
<td>520.omnetpp_r</td>
<td>152</td>
<td>719</td>
<td>277</td>
<td>721</td>
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<tr>
<td>523.xalancbmk_r</td>
<td>152</td>
<td>263</td>
<td>611</td>
<td>262</td>
<td>613</td>
<td></td>
<td></td>
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<tr>
<td>525.x264_r</td>
<td>152</td>
<td>254</td>
<td>1050</td>
<td>253</td>
<td>1050</td>
<td></td>
<td></td>
</tr>
<tr>
<td>531.deepsjeng_r</td>
<td>152</td>
<td>443</td>
<td>393</td>
<td>440</td>
<td>396</td>
<td></td>
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</tr>
<tr>
<td>541.leela_r</td>
<td>152</td>
<td>626</td>
<td>402</td>
<td>626</td>
<td>402</td>
<td></td>
<td></td>
</tr>
<tr>
<td>548.exchange2_r</td>
<td>152</td>
<td>366</td>
<td>1090</td>
<td>364</td>
<td>1090</td>
<td></td>
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</tr>
<tr>
<td>557.xz_r</td>
<td>152</td>
<td>609</td>
<td>270</td>
<td>609</td>
<td>270</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)
### 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 numaclt 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 Wed Apr 14 17:43:25 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) Platinum 8368 CPU @ 2.40GHz
  2 "physical id"s (chips)
  152 "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)
Dell Inc.
PowerEdge MX750c (Intel Xeon Platinum 8368, 2.40 GHz)

SPECrate®2017_int_base = 493
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CPU2017 License: 55
Test Sponsor: Dell Inc.
Tested by: Dell Inc.
Test Date: Apr-2021
Hardware Availability: Apr-2021
Software Availability: Feb-2021

Platform Notes (Continued)

cpu cores : 38
siblings : 76
physical 0: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37
physical 1: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37

From lscpu:
Architecture: x86_64
CPU op-mode(s): 32-bit, 64-bit
Byte Order: Little Endian
CPU(s): 152
On-line CPU(s) list: 0-151
Thread(s) per core: 2
Core(s) per socket: 38
Socket(s): 2
NUMA node(s): 2
Vendor ID: GenuineIntel
CPU family: 6
Model: 106
Model name: Intel(R) Xeon(R) Platinum 8368 CPU @ 2.40GHz
Stepping: 6
CPU MHz: 3199.853
BogoMIPS: 4800.00
Virtualization: VT-x
L1d cache: 48K
L1i cache: 32K
L2 cache: 1280K
L3 cache: 58368K
NUMA node0 CPU(s): 0-37,76-113
NUMA node1 CPU(s): 38-75,114-151
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 xtrunc 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 ssbd mba ibrs ibpb stibp ibrs_enhanced tpr_shadow vnmi flexpriority ept vpid fsgsbase tsc_adjust bmi1 hle avx2 smep bmi2 erms invpcid rtm cqm rdt_a avx512f avx512dq rdseed adx smap avx512ifma clflushopt clwb intel_pt avx512cd sha扩展 avx512bw avx512vl xsaveopt xsavec xsaveopt xsaves cmov cguest lllc cmov_occup llc cmov_mb_local wbinvd dtherm ida arat plc pts avx512vmbmi umip pku ospke avx512_vmbi2 gfn vaes vpclmulqdq avx512_vnni avx512_bitalg tme avx512_vpopcntdq la57 rdrid md_clear pconf stuff flush_l1d arch_capabilities

/proc/cpuinfo cache data
    cache size : 58368 KB

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

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Tested by: Dell Inc.

Test Date: Apr-2021  
Hardware Availability: Apr-2021  
Software Availability: Feb-2021

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**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 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152

node 0 size: 515474 MB  
node 0 free: 514976 MB

node 1 cpus: 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152

node 1 size: 516047 MB  
node 1 free: 506029 MB

node distances:  
node 0 1

0:  10  20
1:  20  10

From /proc/meminfo  
MemTotal: 1056278988 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="8.2 (Ootpa)"

ID="rhel"  
ID_LIKE="fedora"  
VERSION_ID="8.2"

PLATFORM_ID="platform:el8"  
PRETTY_NAME="Red Hat Enterprise Linux 8.2 (Ootpa)"

ANSI_COLOR="0;31"

redhat-release: Red Hat Enterprise Linux release 8.2 (Ootpa)  
system-release: Red Hat Enterprise Linux release 8.2 (Ootpa)  
system-release-cpe: cpe:/o:redhat:enterprise_linux:8.2:ga

uname -a:  
Linux localhost.localdomain 4.18.0-193.el8.x86_64 #1 SMP Fri Mar 27 14:35:58 UTC 2020  
x86_64 x86_64 x86_64 GNU/Linux

Kernel self-reported vulnerability status:

(Continued on next page)
### Platform Notes (Continued)

- **CVE-2018-12207** (iTLB Multihit): Not affected
- **CVE-2018-3620** (LI Terminal Fault): Not affected
- **Microarchitectural Data Sampling:** Not affected
- **CVE-2017-5754** (Meltdown): Mitigation: Speculative Store Bypass disabled via prctl and seccomp
- **CVE-2018-3639** (Speculative Store Bypass): Mitigation: usercopy/swapgs barriers and __user pointer sanitization
- **CVE-2017-5753** (Spectre variant 1): Mitigation: Enhanced IBRS, IBPB: conditional, RSB filling
- **CVE-2017-5715** (Spectre variant 2): Mitigation: Enhanced IBRS, IBPB: conditional, RSB filling
- **CVE-2020-0543** (Special Register Buffer Data Sampling): No status reported
- **CVE-2019-11135** (TSX Asynchronous Abort): Not affected

```
run-level 3 Apr 14 17:41
```

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

```
From /sys/devices/virtual/dmi/id
Vendor: Dell Inc.
Product: PowerEdge MX750c
Product Family: PowerEdge
Serial: 1234567
```

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:
15x 00AD063200AD HMA84GR7CJR4N-XN 32 GB 2 rank 3200
17x 00AD063200AD HMAA4GR7AJR8N-XN 32 GB 2 rank 3200
```

```
BIOS:
  BIOS Vendor: Dell Inc.
  BIOS Version: 1.1.2
  BIOS Date: 04/09/2021
  BIOS Revision: 1.1
```

(End of data from sysinfo program)
Dell Inc.
PowerEdge MX750c (Intel Xeon Platinum 8368, 2.40 GHz)

SPEC CPU®2017 Integer Rate Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

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

Test Date: Apr-2021
Hardware Availability: Apr-2021
Software Availability: Feb-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)
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Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
Version 2021.1 Build 20201113
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C  | 500.perlbench_r(peak) 557.xz_r(peak)
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------------------------------------------------------------------------------

==============================================================================
C  | 500.perlbench_r(base) 502.gcc_r(base) 505.mcf_r(base, peak)
     | 525.x264_r(base, peak) 557.xz_r(base)
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Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
Version 2021.1 Build 20201113

(Continued on next page)
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Compiler Version Notes (Continued)

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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)
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==============================================================================
C       | 500.perlbench_r(base) 502.gcc_r(base) 505.mcf_r(base, peak)
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==============================================================================
C++     | 520.omnetpp_r(base, peak) 523.xalancbmk_r(base, peak)
       | 531.deepsjeng_r(base, peak) 541.leela_r(base, peak)
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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
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Dell Inc.
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Dell Inc.

TEST DATE: Apr-2021
HARDWARE AVAILABILITY: Apr-2021
SOFTWARE AVAILABILITY: Feb-2021

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

Base Compiler Invocation

C benchmarks:
ix

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
-fflto -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 -fflto
-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)
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PowerEdge MX750c (Intel Xeon Platinum 8368, 2.40 GHz)

SPECrate®2017_int_base = 493
SPECrate®2017_int_peak = 511

CPU2017 License: 55
Test Sponsor: Dell Inc.
Tested by: Dell Inc.
Test Date: Apr-2021
Hardware Availability: Apr-2021
Software Availability: Feb-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-AVX512 -ipo -O3 -no-prec-div
-qopt-mem-layout-trans=4 -fno-strict-overflow
-mbranches-within-32B-boundaries

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

**Dell Inc.**  
PowerEdge MX750c (Intel Xeon Platinum 8368, 2.40 GHz)

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**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.profdatal`  
- `-fLTO`  
- `-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:  
- `-Wl,-z,muldefs`  
- `-xCORE-AVX512`  
- `-ipo`  
- `-O3`  
- `-no-prec-div`  
- `-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:

- 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:

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