Dell Inc.
PowerEdge R750 xa (Intel Xeon Platinum 8360Y, 2.40 GHz)  

SPECrate®2017_int_base = 485  
SPECrate®2017_int_peak = 504

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

Copies 0 50.0 100 150 200 250 300 350 400 450 500 550 600 650 700 750 800 850 900 950 1000 1100

500.perlbench_r 144
502.gcc_r 144
505.mcf_r 144
520.omnetpp_r 144
523.xalancbmk_r 144
525.x264_r 144
531.deepsjeng_r 144
541.leela_r 144
548.exchange2_r 144
557.xz_r 144

SPECrate®2017_int_base (485)  
SPECrate®2017_int_peak (504)

Hardware
CPU Name: Intel Xeon Platinum 8360Y  
Max MHz: 3500  
Nominal: 2400  
Enabled: 72 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: 54 MB I+D on chip per chip  
Other: None  
Memory: 512 GB (16 x 32 GB 2Rx8 PC4-3200AA-R)  
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: No  
Firmware: Version 1.1.2 released Apr-2021  
File System: tmpfs  
System State: Run level 5 (graphical multi-user)  
Base Pointers: 64-bit  
Peak Pointers: 32/64-bit  
Other: None  
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 Rate Result

Dell Inc.

PowerEdge R750 xa (Intel Xeon Platinum 8360Y, 2.40 GHz)

SPECrate®2017_int_base = 485
SPECrate®2017_int_peak = 504

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

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>
<th>Seconds</th>
<th>Ratio</th>
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<tbody>
<tr>
<td>500.perlbench_r</td>
<td>144</td>
<td>669</td>
<td>343</td>
<td>666</td>
<td>344</td>
<td>144</td>
<td>567</td>
<td>404</td>
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<td>567</td>
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<td>502.gcc_r</td>
<td>144</td>
<td>563</td>
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<td>457</td>
<td>446</td>
<td>444</td>
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<td>457</td>
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<tr>
<td>505.mcf_r</td>
<td>144</td>
<td>303</td>
<td>767</td>
<td>305</td>
<td>763</td>
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<td>767</td>
<td>305</td>
<td>763</td>
<td></td>
</tr>
<tr>
<td>520.omnetpp_r</td>
<td>144</td>
<td>717</td>
<td>264</td>
<td>716</td>
<td>264</td>
<td>144</td>
<td>717</td>
<td>264</td>
<td>716</td>
<td>264</td>
<td></td>
</tr>
<tr>
<td>523.xalancbmk_r</td>
<td>144</td>
<td>254</td>
<td>598</td>
<td>253</td>
<td>601</td>
<td>144</td>
<td>254</td>
<td>598</td>
<td>253</td>
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<tr>
<td>525.x264_r</td>
<td>144</td>
<td>243</td>
<td>1040</td>
<td>243</td>
<td>1040</td>
<td>144</td>
<td>232</td>
<td>1090</td>
<td>233</td>
<td>1080</td>
<td></td>
</tr>
<tr>
<td>531.deepsjeng_r</td>
<td>144</td>
<td>417</td>
<td>396</td>
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<td>396</td>
<td>417</td>
<td>396</td>
<td></td>
</tr>
<tr>
<td>541.leela_r</td>
<td>144</td>
<td>607</td>
<td>393</td>
<td>601</td>
<td>397</td>
<td>144</td>
<td>607</td>
<td>393</td>
<td>601</td>
<td>397</td>
<td></td>
</tr>
<tr>
<td>548.exchange2_r</td>
<td>144</td>
<td>349</td>
<td>1080</td>
<td>349</td>
<td>1080</td>
<td>144</td>
<td>349</td>
<td>1080</td>
<td>349</td>
<td>1080</td>
<td></td>
</tr>
<tr>
<td>557.xz_r</td>
<td>144</td>
<td>566</td>
<td>275</td>
<td>565</td>
<td>275</td>
<td>144</td>
<td>577</td>
<td>270</td>
<td>577</td>
<td>269</td>
<td></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/cpu2017-1.1.5-ic2021.1/lib/intel64:/mnt/ramdisk/cpu2017-1.1.5-ic2021.1/lib/ia32:/mnt/ramdisk/cpu2017-1.1.5-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.:

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

**Dell Inc.**

PowerEdge R750 xa (Intel Xeon Platinum 8360Y, 2.40 GHz)

<table>
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<tr>
<th>SPECrate®2017_int_base</th>
<th>SPECrate®2017_int_peak</th>
</tr>
</thead>
<tbody>
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<td>485</td>
<td>504</td>
</tr>
</tbody>
</table>

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

**General Notes (Continued)**

```bash
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 225 GB ramdisk created with the cmd: "mount -t tmpfs -o size=225G 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/cpu2017-1.1.5-ic2021.1/bin/sysinfo
Rev: r6538 of 2020-09-24 e8664e66d2d7080afea89d4b38e2f1c
running on localhost.localdomain Fri Apr 23 14:19:16 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 8360Y CPU @ 2.40GHz
  2 "physical id"s (chips)
  144 "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 : 36
  siblings : 72

(Continued on next page)
Dell Inc.
PowerEdge R750 xa (Intel Xeon Platinum 8360Y, 2.40 GHz)

SPEC CPU®2017 Integer Rate Result

SPECrate®2017_int_base = 485
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CPU2017 License: 55
Test Sponsor: Dell Inc.
Tested by: Dell Inc.

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

Platform Notes (Continued)

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

From lscpu:
Architecture: x86_64
CPU op-mode(s): 32-bit, 64-bit
Byte Order: Little Endian
CPU(s): 144
On-line CPU(s) list: 0-143
Thread(s) per core: 2
Core(s) per socket: 36
Socket(s): 2
NUMA node(s): 4
Vendor ID: GenuineIntel
CPU family: 6
Model: 106
Model name: Intel(R) Xeon(R) Platinum 8360Y CPU @ 2.40GHz
Stepping: 6
CPU MHz: 1659.752
BogoMIPS: 4800.00
Virtualization: VT-x
L1d cache: 48K
L1i cache: 32K
L2 cache: 1280K
L3 cache: 55296K
NUMA node0 CPU(s):
0,4,8,12,16,20,24,28,32,36,40,44,48,52,56,60,64,68,72,76,80,84,88,92,96,100,104,108,
112,116,120,124,128,132,136,140
NUMA node1 CPU(s):
2,6,10,14,18,22,26,30,34,38,42,46,50,54,58,62,66,70,74,78,82,86,90,94,98,102,106,110,
114,118,122,126,130,134,138,142
NUMA node2 CPU(s):
1,5,9,13,17,21,25,29,33,37,41,45,49,53,57,61,65,69,73,77,81,85,89,93,97,101,105,109,
113,117,121,125,129,133,137,141
NUMA node3 CPU(s):
115,119,123,127,131,135,139,143

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 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_pni ssbd mba ibrs ibpb stibp ibrs_enabled fsgsbase tsc_adjust bmi1 hle avx2 smep bmi2 erms invpcid cqm rdt_a avx512f avx512dq rdseed adx smap avx512ifma

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

Dell Inc.
PowerEdge R750 xa (Intel Xeon Platinum 8360Y, 2.40 GHz)  

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

**SPECrate®2017_int_base = 485**

**SPECrate®2017_int_peak = 504**

**Platform Notes (Continued)**

clflushopt clwb intel_pt avx512cd sha_ni avx512bw avx512vl xsaveopt xsavec xgetbv1 
xsave cqm_llc cqm_occur_llc cqm_mbm_total cqm_mbm_local split_lock_detect wbnoinvd 
dtherm ida arat pln pts avx512vbmi umip pkp ospke avx512_vbmi2 gfni vaes vpclmulqdq 
avx512_vnni avx512_bitalg tme avx512_vpdpctndq la57 rdpid md_clear pconfig flush_l1d 
arch_capabilities

/prorcpupinfo cache data
  cache size : 55296 KB

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 32 36 40 44 48 52 56 60 64 68 72 76 80 84 88 92 96 
100 104 108 112 116 120 124 128 132 136 140
  node 0 size: 124930 MB
  node 0 free: 127533 MB
  node 1 cpus: 2 6 10 14 18 22 26 30 34 38 42 46 50 54 58 62 66 70 74 78 82 86 90 94 98 
102 106 110 114 118 122 126 130 134 138 142
  node 1 size: 125523 MB
  node 1 free: 127881 MB
  node 2 cpus: 1 5 9 13 17 21 25 29 33 37 41 45 49 53 57 61 65 69 73 77 81 85 89 93 97 
101 105 109 113 117 121 125 129 133 137 141
  node 2 size: 125504 MB
  node 2 free: 114000 MB
  node 3 cpus: 3 7 11 15 19 23 27 31 35 39 43 47 51 55 59 63 67 71 75 79 83 87 91 95 99 
103 107 111 115 119 123 127 131 135 139 143
  node 3 size: 125595 MB
  node 3 free: 128241 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: 527788460 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)"

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

```
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:

<table>
<thead>
<tr>
<th>CVE</th>
<th>Description</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>CVE-2018-12207</td>
<td>(iTLB Multihit):</td>
<td>Not affected</td>
</tr>
<tr>
<td>CVE-2018-3620</td>
<td>(L1 Terminal Fault):</td>
<td>Not affected</td>
</tr>
<tr>
<td>Microarchitectural Data Sampling:</td>
<td></td>
<td>Not affected</td>
</tr>
<tr>
<td>CVE-2017-5754</td>
<td>(Meltdown):</td>
<td>Mitigation: Speculative Store Bypass disabled via prctl and seccomp</td>
</tr>
<tr>
<td>CVE-2018-3639</td>
<td>(Speculative Store Bypass):</td>
<td>Mitigation: usercopy/swapgs barriers and __user pointer sanitization</td>
</tr>
<tr>
<td>CVE-2017-5753</td>
<td>(Spectre variant 1):</td>
<td>Mitigation: Enhanced IBRS, IBPB: conditional, RSB filling</td>
</tr>
<tr>
<td>CVE-2017-5715</td>
<td>(Spectre variant 2):</td>
<td>Not affected</td>
</tr>
<tr>
<td>CVE-2020-0543</td>
<td>(Special Register Buffer Data Sampling):</td>
<td>Not affected</td>
</tr>
<tr>
<td>CVE-2019-11135</td>
<td>(TSX Asynchronous Abort):</td>
<td>Not affected</td>
</tr>
</tbody>
</table>

run-level 5 Apr 23 14:17

SPEC is set to: /mnt/ramdisk/cpu2017-1.1.5-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>225G</td>
<td>6.9G</td>
<td>219G</td>
<td>4%</td>
<td>/mnt/ramdisk</td>
</tr>
</tbody>
</table>

From /sys/devices/virtual/dmi/id
```
Vendor: Dell Inc.
Product: PowerEdge R750 xa
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.

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

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CPU2017 License: 55
Test Sponsor: Dell Inc.
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Hardware Availability: May-2021
Software Availability: Feb-2021

Platform Notes (Continued)

Memory:
16x 002C069D002C 18ASF4G72PD2-3G2E1 32 GB 2 rank 3200
16x Not Specified Not Specified

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)

Compiler Version Notes

==============================================================================
C       | 500.perlbend_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.perlbend_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
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==============================================================================
C       | 500.perlbend_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.
==============================================================================

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

==============================================================================
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.
------------------------------------------------------------------------------

==============================================================================
C++     | 520.omnetpp_r(base, peak) 523.xalancbmk_r(base, peak)
| 531.deepsjeng_r(base, peak) 541.leela_r(base, peak)
------------------------------------------------------------------------------
(Continued on next page)
Dell Inc.
PowerEdge R750 xa (Intel Xeon Platinum 8360Y, 2.40 GHz)

SPEC CPU®2017 Integer Rate Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

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Compiler Version Notes (Continued)

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.
------------------------------------------------------------------------

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

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

C benchmarks (continued):
-fflat -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
-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

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

Dell Inc.
PowerEdge R750 xa (Intel Xeon Platinum 8360Y, 2.40 GHz)

**SPECrate®2017_int_base = 485**

**SPECrate®2017_int_peak = 504**

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

### Peak Portability Flags (Continued)

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

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: -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

(Continued on next page)
Dell Inc.
PowerEdge R750 xa (Intel Xeon Platinum 8360Y, 2.40 GHz)

SPECrate®2017_int_base = 485
SPECrate®2017_int_peak = 504

CPU2017 License: 55
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Test Date: Apr-2021
Hardware Availability: May-2021
Software Availability: Feb-2021

Peak Optimization Flags (Continued)

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

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For questions about this result, please contact the tester. For other inquiries, please contact info@spec.org.

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