# SPEC® CPU2017 Integer Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

## Dell Inc.

PowerEdge R840 (Intel Xeon Gold 6148, 2.40 GHz)

SPECrate2017_int_base = 392

SPECrate2017_int_peak = 414

**CPU2017 License:** 55　　　　　　　　　　　　　　　　**Test Date:** Apr-2018
**Test Sponsor:** Dell Inc.　　　　　　　　　　　　　　**Hardware Availability:** May-2018
**Tested by:** Dell Inc.　　　　　　　　　　　　　　　**Software Availability:** Sep-2017

**Copies** scale: 0 40.0 80.0 120 160 200 240 280 320 360 400 440 480 520 560 600 640 680 720 760 800 870

| Benchmark | Copies | base | peak |
|---|---|---|---|
| 500.perlbench_r | 160 | 307 | 371 |
| 502.gcc_r | 160 | 330 | 402 |
| 505.mcf_r | 160 | 470 | 466 |
| 520.omnetpp_r | 160 | 248 | 229 |
| 523.xalancbmk_r | 160 | 366 | 451 |
| 525.x264_r | 160 | 819 | 867 |
| 531.deepsjeng_r | 160 | 350 | 342 |
| 541.leela_r | 160 | 330 | 337 |
| 548.exchange2_r | 160 | 772 | 774 |
| 557.xz_r | 160 | 269 | 265 |

SPECrate2017_int_base (392)　　　　SPECrate2017_int_peak (414)

## Hardware

CPU Name: Intel Xeon Gold 6148
 Max MHz.: 3700
 Nominal: 2400
Enabled: 80 cores, 4 chips, 2 threads/core
Orderable: 2,4 chips
Cache L1: 32 KB I + 32 KB D on chip per core
 L2: 1 MB I+D on chip per core
 L3: 27.5 MB I+D on chip per chip
 Other: None
Memory: 768 GB (48 x 16 GB 2Rx8 PC4-2666V-R)
Storage: 1 x 480 GB SATA SSD
Other: None

## Software

OS: SUSE Linux Enterprise Server 12 SP3
 4.4.114-94.11-default
Compiler: C/C++: Version 18.0.0.128 of Intel C/C++
 Compiler for Linux;
 Fortran: Version 18.0.0.128 of Intel Fortran
 Compiler for Linux
Parallel: No
Firmware: Version 1.0.0 released Mar-2018
File System: xfs
System State: Run level 3 (multi-user)
Base Pointers: 64-bit
Peak Pointers: 32/64-bit
Other: jemalloc memory allocator library, version 5.0.1

# SPEC CPU2017 Integer Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

## Dell Inc.

PowerEdge R840 (Intel Xeon Gold 6148, 2.40 GHz)

SPECrate2017_int_base =   392

SPECrate2017_int_peak =   414
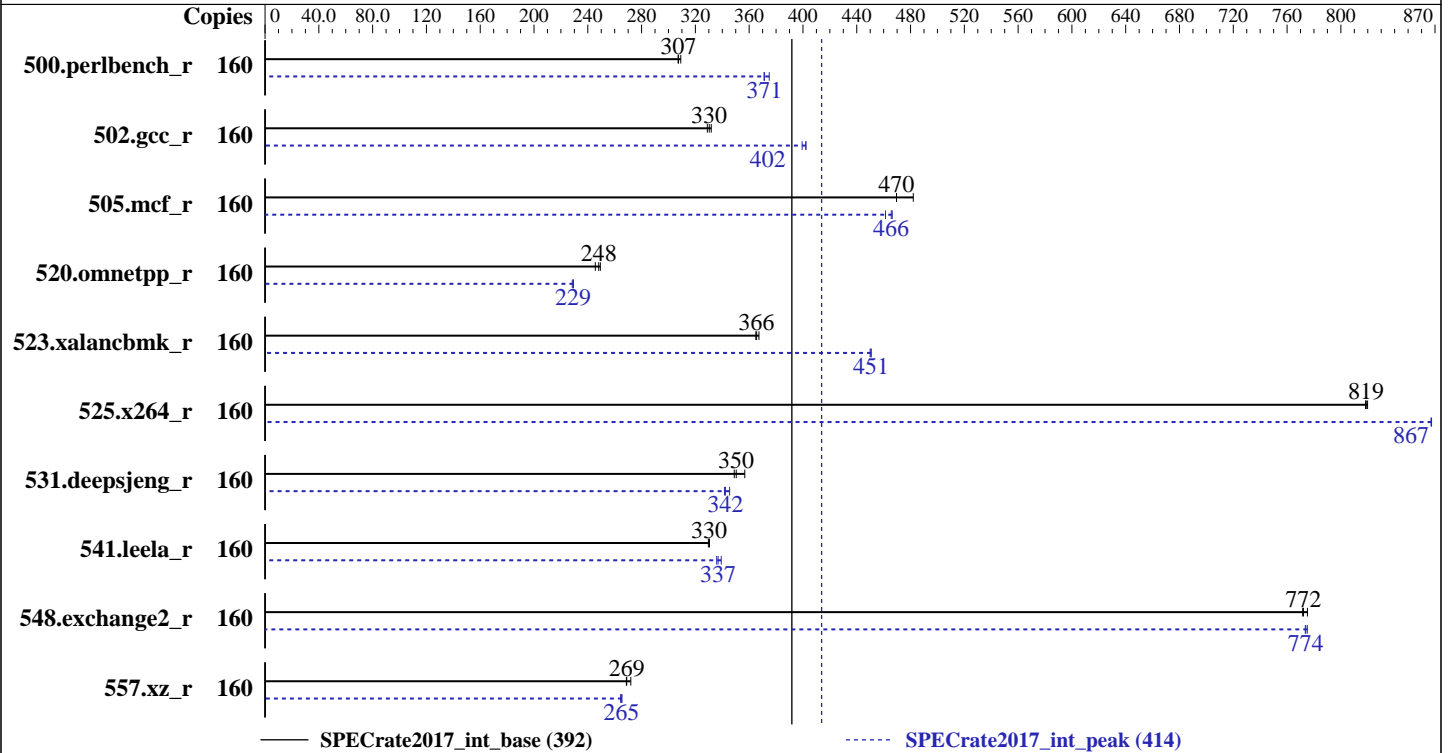
**CPU2017 License:** 55
**Test Sponsor:** Dell Inc.
**Tested by:** Dell Inc.

**Test Date:**   Apr-2018
**Hardware Availability:** May-2018
**Software Availability:**   Sep-2017

## Results Table

| Benchmark | Base | | | | | | Peak | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio |
| 500.perlbench_r | 160 | 829 | 307 | 824 | 309 | **828** | **307** | 160 | 679 | 375 | **686** | **371** | 687 | 371 |
| 502.gcc_r | 160 | **686** | **330** | 683 | 332 | 689 | 329 | 160 | 567 | 399 | 563 | 402 | **563** | **402** |
| 505.mcf_r | 160 | 536 | 482 | **551** | **470** | 551 | 470 | 160 | **555** | **466** | 554 | 466 | 560 | 461 |
| 520.omnetpp_r | 160 | 842 | 249 | **846** | **248** | 855 | 246 | 160 | 915 | 229 | 919 | 228 | **916** | **229** |
| 523.xalancbmk_r | 160 | 460 | 367 | 463 | 365 | **462** | **366** | 160 | 375 | 451 | 375 | 450 | **375** | **451** |
| 525.x264_r | 160 | 342 | 818 | **342** | **819** | 342 | 820 | 160 | **323** | **867** | 323 | 867 | 323 | 867 |
| 531.deepsjeng_r | 160 | 514 | 357 | 526 | 349 | **523** | **350** | 160 | 537 | 342 | **536** | **342** | 531 | 345 |
| 541.leela_r | 160 | 802 | 330 | **802** | **330** | 804 | 330 | 160 | 789 | 336 | 781 | 339 | **786** | **337** |
| 548.exchange2_r | 160 | **543** | **772** | 541 | 775 | 543 | 772 | 160 | **542** | **774** | 542 | 774 | 541 | 775 |
| 557.xz_r | 160 | 635 | 272 | **642** | **269** | 643 | 269 | 160 | 654 | 264 | 651 | 265 | **652** | **265** |
| SPECrate2017_int_base = | | **392** | | | | | | | | | | | | |
| SPECrate2017_int_peak = | | **414** | | | | | | | | | | | | |

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"

## General Notes

Environment variables set by runcpu before the start of the run:

LD_LIBRARY_PATH = "/root/cpu2017/lib/ia32:/root/cpu2017/lib/intel64:/root/cpu2017/je5.0.1-32:/root/cpu2017/je5.0.1-64"

 Binaries compiled on a system with 1x Intel Core i7-4790 CPU + 32GB RAM
 memory using Redhat Enterprise Linux 7.4
 Yes: 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.
 jemalloc: configured and built at default for 32bit (i686) and 64bit (x86_64) targets;
 jemalloc: built with the RedHat Enterprise 7.4, and the system compiler gcc 4.8.5;
 jemalloc: sources available via jemalloc.net
 Transparent Huge Pages enabled by default
 Prior to runcpu invocation

**(Continued on next page)**

Standard Performance Evaluation Corporation (info@spec.org) https://www.spec.org/

## Dell Inc.

PowerEdge R840 (Intel Xeon Gold 6148, 2.40 GHz)

**SPECrate2017_int_base =** 392

**SPECrate2017_int_peak =** 414

| | | | |
|---|---|---|---|
| **CPU2017 License:** | 55 | **Test Date:** | Apr-2018 |
| **Test Sponsor:** | Dell Inc. | **Hardware Availability:** | May-2018 |
| **Tested by:** | Dell Inc. | **Software Availability:** | Sep-2017 |

## General Notes (Continued)

```
Filesystem page cache synced and cleared with:
sync; echo 3>        /proc/sys/vm/drop_caches
runcpu command invoked through numactl i.e.:
numactl --interleave=all runcpu <etc>
```

## Platform Notes

```
BIOS settings:
Sub NUMA Cluster enabled
Virtualization Technology disabled
System Profile set to Custom
CPU Performance set to Maximum Performance
C States set to Autonomous
C1E disabled
Uncore Frequency set to Dynamic
Energy Efficiency Policy set to Performance
Memory Patrol Scrub disabled
Logical Processor enabled
CPU Interconnect Bus Link Power Management disabled
PCI ASPM L1 Link Power Management disabled
Sysinfo program /root/cpu2017/bin/sysinfo
Rev: r5797 of 2017-06-14 96c45e4568ad54c135fd618bcc091c0f
running on linux-jfwh Mon Apr 23 13:09:32 2018

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 6148 CPU @ 2.40GHz
      4  "physical id"s (chips)
      160 "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 : 20
      siblings  : 40
      physical 0: cores 0 1 2 3 4 8 9 10 11 12 16 17 18 19 20 24 25 26 27 28
      physical 1: cores 0 1 2 3 4 8 9 10 11 12 16 17 18 19 20 24 25 26 27 28
      physical 2: cores 0 1 2 3 4 8 9 10 11 12 16 17 18 19 20 24 25 26 27 28
      physical 3: cores 0 1 2 3 4 8 9 10 11 12 16 17 18 19 20 24 25 26 27 28

From lscpu:
   Architecture:          x86_64
   CPU op-mode(s):        32-bit, 64-bit
   Byte Order:            Little Endian
   CPU(s):                160
```

**(Continued on next page)**

## Dell Inc.

PowerEdge R840 (Intel Xeon Gold 6148, 2.40 GHz)

SPECrate2017_int_base =  392

SPECrate2017_int_peak =  414

**CPU2017 License:** 55

**Test Sponsor:** Dell Inc.

**Tested by:** Dell Inc.

**Test Date:** Apr-2018

**Hardware Availability:** May-2018

**Software Availability:** Sep-2017

## Platform Notes (Continued)

```
      On-line CPU(s) list:    0-159
      Thread(s) per core:     2
      Core(s) per socket:     20
      Socket(s):              4
      NUMA node(s):           8
      Vendor ID:              GenuineIntel
      CPU family:             6
      Model:                  85
      Model name:             Intel(R) Xeon(R) Gold 6148 CPU @ 2.40GHz
      Stepping:               4
      CPU MHz:                2394.381
      BogoMIPS:               4788.76
      Virtualization:         VT-x
      L1d cache:              32K
      L1i cache:              32K
      L2 cache:               1024K
      L3 cache:               28160K
      NUMA node0 CPU(s):
      0,8,16,24,32,40,48,56,64,72,80,88,96,104,112,120,128,136,144,152
      NUMA node1 CPU(s):
      1,9,17,25,33,41,49,57,65,73,81,89,97,105,113,121,129,137,145,153
      NUMA node2 CPU(s):
      2,10,18,26,34,42,50,58,66,74,82,90,98,106,114,122,130,138,146,154
      NUMA node3 CPU(s):
      3,11,19,27,35,43,51,59,67,75,83,91,99,107,115,123,131,139,147,155
      NUMA node4 CPU(s):
      4,12,20,28,36,44,52,60,68,76,84,92,100,108,116,124,132,140,148,156
      NUMA node5 CPU(s):
      5,13,21,29,37,45,53,61,69,77,85,93,101,109,117,125,133,141,149,157
      NUMA node6 CPU(s):
      6,14,22,30,38,46,54,62,70,78,86,94,102,110,118,126,134,142,150,158
      NUMA node7 CPU(s):
      7,15,23,31,39,47,55,63,71,79,87,95,103,111,119,127,135,143,151,159
      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 art arch_perfmon pebs bts rep_good nopl xtopology nonstop_tsc
      aperfmperf eagerfpu 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 ida arat epb invpcid_single pln pts
      dtherm intel_pt rsb_ctxsw spec_ctrl retpoline kaiser tpr_shadow vnmi flexpriority
      ept vpid fsgsbase tsc_adjust bmi1 hle avx2 smep bmi2 erms invpcid rtm cqm mpx
      avx512f avx512dq rdseed adx smap clflushopt clwb avx512cd avx512bw avx512vl xsaveopt
      xsavec xgetbv1 cqm_llc cqm_occup_llc pku ospke

 /proc/cpuinfo cache data
    cache size : 28160 KB
```

## Dell Inc.

PowerEdge R840 (Intel Xeon Gold 6148, 2.40 GHz)

SPECrate2017_int_base =  392

SPECrate2017_int_peak =  414

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

**Test Date:** Apr-2018
**Hardware Availability:** May-2018
**Software Availability:** Sep-2017

## Platform Notes (Continued)

```
  From numactl --hardware  WARNING: a numactl 'node' might or might not correspond to a
  physical chip.
    available: 8 nodes (0-7)
    node 0 cpus: 0 8 16 24 32 40 48 56 64 72 80 88 96 104 112 120 128 136 144 152
    node 0 size: 95360 MB
    node 0 free: 95148 MB
    node 1 cpus: 1 9 17 25 33 41 49 57 65 73 81 89 97 105 113 121 129 137 145 153
    node 1 size: 96761 MB
    node 1 free: 96611 MB
    node 2 cpus: 2 10 18 26 34 42 50 58 66 74 82 90 98 106 114 122 130 138 146 154
    node 2 size: 96761 MB
    node 2 free: 96612 MB
    node 3 cpus: 3 11 19 27 35 43 51 59 67 75 83 91 99 107 115 123 131 139 147 155
    node 3 size: 96761 MB
    node 3 free: 96602 MB
    node 4 cpus: 4 12 20 28 36 44 52 60 68 76 84 92 100 108 116 124 132 140 148 156
    node 4 size: 96761 MB
    node 4 free: 96615 MB
    node 5 cpus: 5 13 21 29 37 45 53 61 69 77 85 93 101 109 117 125 133 141 149 157
    node 5 size: 96761 MB
    node 5 free: 96619 MB
    node 6 cpus: 6 14 22 30 38 46 54 62 70 78 86 94 102 110 118 126 134 142 150 158
    node 6 size: 96761 MB
    node 6 free: 96603 MB
    node 7 cpus: 7 15 23 31 39 47 55 63 71 79 87 95 103 111 119 127 135 143 151 159
    node 7 size: 96759 MB
    node 7 free: 96620 MB
    node distances:
    node   0   1   2   3   4   5   6   7
      0:  10  21  21  21  11  21  21  21
      1:  21  10  21  21  21  11  21  21
      2:  21  21  10  21  21  21  11  21
      3:  21  21  21  10  21  21  21  11
      4:  11  21  21  21  10  21  21  21
      5:  21  11  21  21  21  10  21  21
      6:  21  21  11  21  21  21  10  21
      7:  21  21  21  11  21  21  21  10

  From /proc/meminfo
     MemTotal:       791233596 kB
     HugePages_Total:        0
     Hugepagesize:        2048 kB

  /usr/bin/lsb_release -d
     SUSE Linux Enterprise Server 12 SP3

  From /etc/*release* /etc/*version*
```

**(Continued on next page)**

## Dell Inc.

PowerEdge R840 (Intel Xeon Gold 6148, 2.40 GHz)

**SPECrate2017_int_base =  392**

**SPECrate2017_int_peak =  414**

| | |
|---|---|
| **CPU2017 License:** 55 | **Test Date:** Apr-2018 |
| **Test Sponsor:** Dell Inc. | **Hardware Availability:** May-2018 |
| **Tested by:** Dell Inc. | **Software Availability:** Sep-2017 |

## Platform Notes (Continued)

```
    SuSE-release:
       SUSE Linux Enterprise Server 12 (x86_64)
       VERSION = 12
       PATCHLEVEL = 3
       # This file is deprecated and will be removed in a future service pack or release.
       # Please check /etc/os-release for details about this release.
    os-release:
       NAME="SLES"
       VERSION="12-SP3"
       VERSION_ID="12.3"
       PRETTY_NAME="SUSE Linux Enterprise Server 12 SP3"
       ID="sles"
       ANSI_COLOR="0;32"
       CPE_NAME="cpe:/o:suse:sles:12:sp3"

 uname -a:
    Linux linux-jfwh 4.4.114-94.11-default #1 SMP Thu Feb 1 19:28:26 UTC 2018 (4309ff9)
    x86_64 x86_64 x86_64 GNU/Linux

 run-level 3 Apr 23 11:29

 SPEC is set to: /root/cpu2017
    Filesystem      Type  Size  Used Avail Use% Mounted on
    /dev/sda3       xfs   415G   37G  378G   9% /

 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.
    BIOS Dell Inc. 1.0.0 03/20/2018
    Memory:
     13x 002C00B3002C 18ASF2G72PDZ-2G6D1 16 GB 2 rank 2666
      5x 00AD00B300AD HMA82GR7AFR8N-VK 16 GB 2 rank 2666
      7x 00AD063200AD HMA82GR7AFR8N-VK 16 GB 2 rank 2666
     23x 00CE063200CE M393A2K43BB1-CTD 16 GB 2 rank 2666

 (End of data from sysinfo program)
```

## Compiler Version Notes

```
==============================================================================
  CC  500.perlbench_r(base) 502.gcc_r(base) 505.mcf_r(base, peak)
      525.x264_r(base, peak) 557.xz_r(base, peak)
------------------------------------------------------------------------------
 icc (ICC) 18.0.0 20170811
 Copyright (C) 1985-2017 Intel Corporation.  All rights reserved.
```

**(Continued on next page)**

# SPEC CPU2017 Integer Rate Result

## Dell Inc.

PowerEdge R840 (Intel Xeon Gold 6148, 2.40 GHz)

SPECrate2017_int_base = 392

SPECrate2017_int_peak = 414

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

**Test Date:** Apr-2018
**Hardware Availability:** May-2018
**Software Availability:** Sep-2017

## Compiler Version Notes (Continued)

```
--------------------------------------------------------------------------

==========================================================================
CC   500.perlbench_r(peak) 502.gcc_r(peak)
--------------------------------------------------------------------------
icc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation.  All rights reserved.
--------------------------------------------------------------------------

==========================================================================
 CXXC 520.omnetpp_r(base) 523.xalancbmk_r(base) 531.deepsjeng_r(base)
      541.leela_r(base)
--------------------------------------------------------------------------
icpc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation.  All rights reserved.
--------------------------------------------------------------------------

==========================================================================
CXXC 520.omnetpp_r(peak) 523.xalancbmk_r(peak) 531.deepsjeng_r(peak)
      541.leela_r(peak)
--------------------------------------------------------------------------
icpc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation.  All rights reserved.
--------------------------------------------------------------------------

==========================================================================
 FC  548.exchange2_r(base, peak)
--------------------------------------------------------------------------
ifort (IFORT) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation.  All rights reserved.
--------------------------------------------------------------------------
```

## Base Compiler Invocation

C benchmarks:
```
icc
```

C++ benchmarks:
```
icpc
```

Fortran benchmarks:
```
ifort
```

Standard Performance Evaluation Corporation (info@spec.org)
https://www.spec.org/

# SPEC CPU2017 Integer Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

## Dell Inc.

PowerEdge R840 (Intel Xeon Gold 6148, 2.40 GHz)

SPECrate2017_int_base = 392

SPECrate2017_int_peak = 414

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

**Test Date:** Apr-2018
**Hardware Availability:** May-2018
**Software Availability:** Sep-2017

## 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:
`-Wl,-z,muldefs -xCORE-AVX2 -ipo -O3 -no-prec-div`
`-qopt-mem-layout-trans=3 -L/usr/local/je5.0.1-64/lib -ljemalloc`

C++ benchmarks:
`-Wl,-z,muldefs -xCORE-AVX2 -ipo -O3 -no-prec-div`
`-qopt-mem-layout-trans=3 -L/usr/local/je5.0.1-64/lib -ljemalloc`

Fortran benchmarks:
`-Wl,-z,muldefs -xCORE-AVX2 -ipo -O3 -no-prec-div`
`-qopt-mem-layout-trans=3 -nostandard-realloc-lhs -align array32byte`
`-L/usr/local/je5.0.1-64/lib -ljemalloc`

## Base Other Flags

C benchmarks:
`-m64 -std=c11`

C++ benchmarks:
`-m64`

Fortran benchmarks:
`-m64`

Standard Performance Evaluation Corporation (info@spec.org)
https://www.spec.org/

## Dell Inc.

PowerEdge R840 (Intel Xeon Gold 6148, 2.40 GHz)

SPECrate2017_int_base = 392

SPECrate2017_int_peak = 414

| | | | |
|---|---|---|---|
| **CPU2017 License:** 55 | | **Test Date:** | Apr-2018 |
| **Test Sponsor:** Dell Inc. | | **Hardware Availability:** | May-2018 |
| **Tested by:** Dell Inc. | | **Software Availability:** | Sep-2017 |

# Peak Compiler Invocation

C benchmarks:
`icc`

C++ benchmarks:
`icpc`

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: `-D_FILE_OFFSET_BITS=64 -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) `-ipo`
`-xCORE-AVX2 -O3 -no-prec-div -qopt-mem-layout-trans=3`
`-fno-strict-overflow -L/usr/local/je5.0.1-64/lib`
`-ljemalloc`

502.gcc_r: `-L/opt/intel/compilers_and_libraries_2018/linux/lib/ia32`
`-Wl,-z,muldefs -prof-gen`(pass 1) `-prof-use`(pass 2) `-ipo`
`-xCORE-AVX2 -O3 -no-prec-div -qopt-mem-layout-trans=3`
`-L/usr/local/je5.0.1-32/lib -ljemalloc`

505.mcf_r: `-Wl,-z,muldefs -xCORE-AVX2 -ipo -O3 -no-prec-div`
`-qopt-mem-layout-trans=3 -L/usr/local/je5.0.1-64/lib`
`-ljemalloc`

525.x264_r: `-Wl,-z,muldefs -xCORE-AVX2 -ipo -O3 -no-prec-div`
`-qopt-mem-layout-trans=3 -fno-alias`

**(Continued on next page)**

## Dell Inc.

PowerEdge R840 (Intel Xeon Gold 6148, 2.40 GHz)

SPECrate2017_int_base = 392

SPECrate2017_int_peak = 414

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

**Test Date:** Apr-2018
**Hardware Availability:** May-2018
**Software Availability:** Sep-2017

# Peak Optimization Flags (Continued)

525.x264_r (continued):
`-L/usr/local/je5.0.1-64/lib -ljemalloc`

557.xz_r: `Same as 505.mcf_r`

C++ benchmarks:

520.omnetpp_r: `-Wl,-z,muldefs -prof-gen(pass 1) -prof-use(pass 2) -ipo`
`-xCORE-AVX2 -O3 -no-prec-div -qopt-mem-layout-trans=3`
`-L/usr/local/je5.0.1-64/lib -ljemalloc`

523.xalancbmk_r: `-L/opt/intel/compilers_and_libraries_2018/linux/lib/ia32`
`-Wl,-z,muldefs -prof-gen(pass 1) -prof-use(pass 2) -ipo`
`-xCORE-AVX2 -O3 -no-prec-div -qopt-mem-layout-trans=3`
`-L/usr/local/je5.0.1-32/lib -ljemalloc`

531.deepsjeng_r: `Same as 520.omnetpp_r`

541.leela_r: `Same as 520.omnetpp_r`

Fortran benchmarks:
`-Wl,-z,muldefs -xCORE-AVX2 -ipo -O3 -no-prec-div`
`-qopt-mem-layout-trans=3 -nostandard-realloc-lhs -align array32byte`
`-L/usr/local/je5.0.1-64/lib -ljemalloc`

# Peak Other Flags

C benchmarks (except as noted below):
`-m64 -std=c11`

502.gcc_r: `-m32 -std=c11`

C++ benchmarks (except as noted below):
`-m64`

523.xalancbmk_r: `-m32`

Fortran benchmarks:
`-m64`

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2017/flags/Intel-ic18.0-official-linux64.2017-10-19.html
http://www.spec.org/cpu2017/flags/Dell-Platform-Flags-PowerEdge14G-revC.html

# SPEC CPU2017 Integer Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

## Dell Inc.

PowerEdge R840 (Intel Xeon Gold 6148, 2.40 GHz)

SPECrate2017_int_base = 392

SPECrate2017_int_peak = 414

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

**Test Date:** Apr-2018
**Hardware Availability:** May-2018
**Software Availability:** Sep-2017

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2017/flags/Intel-ic18.0-official-linux64.2017-10-19.xml
http://www.spec.org/cpu2017/flags/Dell-Platform-Flags-PowerEdge14G-revC.xml

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

Tested with SPEC CPU2017 v1.0.2 on 2018-04-23 01:09:31-0400.
Report generated on 2018-10-31 17:19:48 by CPU2017 PDF formatter v6067.
Originally published on 2018-05-29.