SPEC CPU®2017 Integer Rate Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

Dell Inc.

PowerEdge R750xa (Intel Xeon Platinum 8362, 2.80 GHz)

$SPECrate®2017\_int\_base = 474$
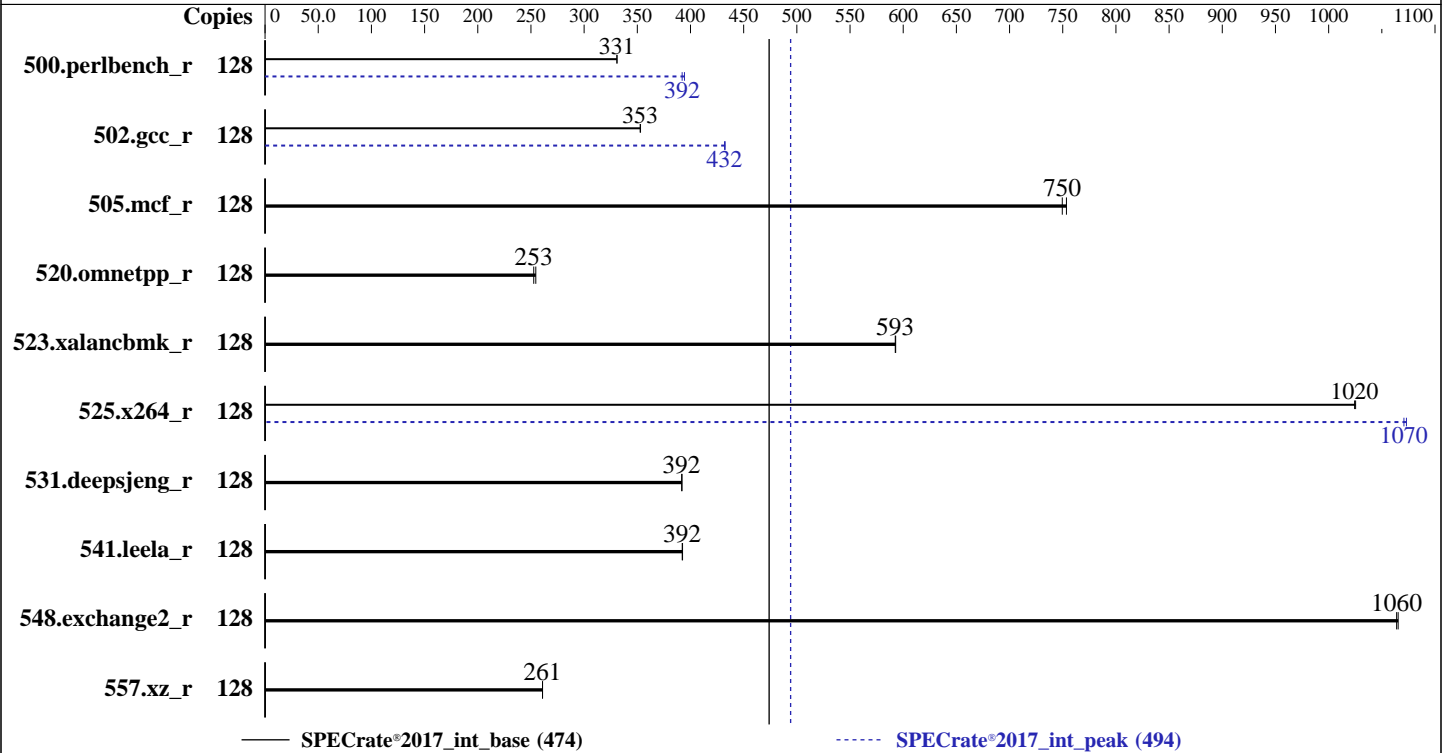
$SPECrate®2017\_int\_peak = 494$

CPU2017 License: 55

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Sep-2021

Hardware Availability: Sep-2021

Software Availability: Feb-2021

Benchmark	Copies	Result
500.perlbench_r	128	331 (base) / 392 (peak)
502.gcc_r	128	353 (base) / 432 (peak)
505.mcf_r	128	750
520.omnetpp_r	128	253
523.xalancbmk_r	128	593
525.x264_r	128	1020 (base) / 1070 (peak)
531.deepsjeng_r	128	392
541.leela_r	128	392
548.exchange2_r	128	1060
557.xz_r	128	261

SPECrate®2017_int_base (474)   SPECrate®2017_int_peak (494)

Hardware

CPU Name: Intel Xeon Platinum 8362

Max MHz: 3600

Nominal: 2800

Enabled: 64 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: 48 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 1.3.8 released Aug-2021

File System: tmpfs

System State: Run level 5 (graphical multi-user)

Base Pointers: 64-bit

Peak Pointers: 32/64-bit

Other: jemalloc memory allocator V5.0.1

Power Management: BIOS and OS set to prefer performance at the cost of additional power usage.

SPEC CPU®2017 Integer Rate Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

Dell Inc.

PowerEdge R750xa (Intel Xeon Platinum 8362, 2.80 GHz)

SPECrate®2017_int_base = 474

SPECrate®2017_int_peak = 494

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

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
500.perlbench_r	128	**616**	**331**	616	331			128	**520**	**392**	517	394		
502.gcc_r	128	513	353	**514**	**353**			128	419	433	**420**	**432**		
505.mcf_r	128	**276**	**750**	275	753			128	**276**	**750**	275	753		
520.omnetpp_r	128	**665**	**253**	660	255			128	**665**	**253**	660	255		
523.xalancbmk_r	128	228	593	**228**	**593**			128	228	593	**228**	**593**		
525.x264_r	128	**219**	**1020**	219	1030			128	**209**	**1070**	209	1070		
531.deepsjeng_r	128	374	392	**375**	**392**			128	374	392	**375**	**392**		
541.leela_r	128	**540**	**392**	540	393			128	**540**	**392**	540	393		
548.exchange2_r	128	315	1070	**315**	**1060**			128	315	1070	**315**	**1060**		
557.xz_r	128	530	261	**530**	**261**			128	530	261	**530**	**261**		
SPECrate®2017_int_base =		**474**												
SPECrate®2017_int_peak =		**494**												

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)

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

SPEC CPU®2017 Integer Rate Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

Dell Inc.

PowerEdge R750xa (Intel Xeon Platinum 8362, 2.80 GHz)

SPECrate®2017_int_base = 474

SPECrate®2017_int_peak = 494

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

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

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
 sources available from jemalloc.net or https://github.com/jemalloc/jemalloc/releases

NA: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown)
is mitigated in the system as tested and documented.
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
        PCI ASPM L1 Link
            Power Management : Disabled

 Sysinfo program /mnt/ramdisk/cpu2017-1.1.5-ic2021.1/bin/sysinfo
 Rev: r6538 of 2020-09-24 e8664e66d2d7080afeaa89d4b38e2f1c
 running on localhost.localdomain Wed Sep 22 14:47:33 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 8362 CPU @ 2.80GHz
       2  "physical id"s (chips)
       128 "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 R750xa (Intel Xeon Platinum 8362, 2.80 GHz)

SPECrate®2017_int_base = 474

SPECrate®2017_int_peak = 494

CPU2017 License: 55

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Sep-2021

Hardware Availability: Sep-2021

Software Availability: Feb-2021

Platform Notes (Continued)

```
    cpu cores : 32
    siblings  : 64
    physical 0: cores 0 1 2 3 4 5 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27
    28 29 30 31
    physical 1: cores 0 1 2 3 4 5 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27
    28 29 30 31

 From lscpu:
    Architecture:          x86_64
    CPU op-mode(s):        32-bit, 64-bit
    Byte Order:            Little Endian
    CPU(s):                128
    On-line CPU(s) list:   0-127
    Thread(s) per core:    2
    Core(s) per socket:    32
    Socket(s):             2
    NUMA node(s):          4
    Vendor ID:             GenuineIntel
    CPU family:            6
    Model:                 106
    Model name:            Intel(R) Xeon(R) Platinum 8362 CPU @ 2.80GHz
    Stepping:              6
    CPU MHz:               2541.257
    BogoMIPS:              5600.00
    Virtualization:        VT-x
    L1d cache:             48K
    L1i cache:             32K
    L2 cache:              1280K
    L3 cache:              49152K
    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
    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
    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
    NUMA node3 CPU(s):
    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
    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 cpuid
    aperfmperf pni pclmulqdq dtes64 monitor ds_cpl vmx smx est tm2 ssse3 sdbg fma cx16
    xtpr pdcm pcid dca sse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_timer aes xsave
    avx f16c rdrand lahf_lm abm 3dnowprefetch cpuid_fault epb cat_l3 invpcid_single
```

(Continued on next page)

Dell Inc.

PowerEdge R750xa (Intel Xeon Platinum 8362, 2.80 GHz)

SPECrate®2017_int_base = 474

SPECrate®2017_int_peak = 494

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

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

Platform Notes (Continued)

```
    intel_ppin ssbd mba ibrs ibpb stibp ibrs_enhanced fsgsbase tsc_adjust bmi1 hle avx2
    smep bmi2 erms invpcid cqm rdt_a avx512f avx512dq rdseed adx smap avx512ifma
    clflushopt clwb intel_pt avx512cd sha_ni avx512bw avx512vl xsaveopt xsavec xgetbv1
    xsaves cqm_llc cqm_occup_llc cqm_mbm_total cqm_mbm_local split_lock_detect wbnoinvd
    dtherm ida arat pln pts avx512vbmi umip pku ospke avx512_vbmi2 gfni vaes vpclmulqdq
    avx512_vnni avx512_bitalg tme avx512_vpopcntdq la57 rdpid md_clear pconfig flush_l1d
    arch_capabilities

 /proc/cpuinfo cache data
    cache size : 49152 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
    node 0 size: 125001 MB
    node 0 free: 122002 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
    node 1 size: 125587 MB
    node 1 free: 128114 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
    node 2 size: 126454 MB
    node 2 free: 104444 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
    node 3 size: 125924 MB
    node 3 free: 128625 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:       527793960 kB
    HugePages_Total:        0
    Hugepagesize:        2048 kB

 /sbin/tuned-adm active
    Current active profile: throughput-performance

 From /etc/*release* /etc/*version*
    os-release:
```

(Continued on next page)

Dell Inc.

PowerEdge R750xa (Intel Xeon Platinum 8362, 2.80 GHz)

SPECrate®2017_int_base = 474

SPECrate®2017_int_peak = 494

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

Platform Notes (Continued)

```
      NAME="Red Hat Enterprise Linux"
      VERSION="8.3 (Ootpa)"
      ID="rhel"
      ID_LIKE="fedora"
      VERSION_ID="8.3"
      PLATFORM_ID="platform:el8"
      PRETTY_NAME="Red Hat Enterprise Linux 8.3 (Ootpa)"
      ANSI_COLOR="0;31"
   redhat-release: Red Hat Enterprise Linux release 8.3 (Ootpa)
   system-release: Red Hat Enterprise Linux release 8.3 (Ootpa)
   system-release-cpe: cpe:/o:redhat:enterprise_linux:8.3:ga

 uname -a:
   Linux localhost.localdomain 4.18.0-240.15.1.el8_3.x86_64 #1 SMP Wed Feb 3 03:12:15 EST
   2021 x86_64 x86_64 x86_64 GNU/Linux

 Kernel self-reported vulnerability status:

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

 run-level 5 Sep 22 14:45

 SPEC is set to: /mnt/ramdisk/cpu2017-1.1.5-ic2021.1
    Filesystem      Type   Size  Used Avail Use% Mounted on
    tmpfs           tmpfs  225G   13G  213G   6% /mnt/ramdisk

 From /sys/devices/virtual/dmi/id
     Vendor:         Dell Inc.
     Product:        PowerEdge R750xa
     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
```

(Continued on next page)

Dell Inc.

PowerEdge R750xa (Intel Xeon Platinum 8362, 2.80 GHz)

SPECrate®2017_int_base = 474

SPECrate®2017_int_peak = 494

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

Platform Notes (Continued)

```
 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:
      16x 002C069D002C 18ASF4G72PDZ-3G2E1 32 GB 2 rank 3200
      16x Not Specified Not Specified

  BIOS:
    BIOS Vendor:        Dell Inc.
    BIOS Version:       1.3.8
    BIOS Date:          08/31/2021
    BIOS Revision:      1.3

  (End of data from sysinfo program)
```

Compiler Version Notes

```
==============================================================================
C         | 500.perlbench_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, peak)
------------------------------------------------------------------------------
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)
------------------------------------------------------------------------------
Intel(R) C Intel(R) 64 Compiler Classic for applications running on Intel(R)
  64, Version 2021.1 Build 20201112_000000
```

(Continued on next page)

Dell Inc.

PowerEdge R750xa (Intel Xeon Platinum 8362, 2.80 GHz)

SPECrate®2017_int_base = 474

SPECrate®2017_int_peak = 494

Compiler Version Notes (Continued)

```
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, peak)
--------------------------------------------------------------------------------
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)
--------------------------------------------------------------------------------
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, peak)
--------------------------------------------------------------------------------
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)
```

(Continued on next page)

Dell Inc.

PowerEdge R750xa (Intel Xeon Platinum 8362, 2.80 GHz)

SPECrate®2017_int_base = 474

SPECrate®2017_int_peak = 494

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

Compiler Version Notes (Continued)

```
      | 531.deepsjeng_r(base, peak) 541.leela_r(base, peak)
------------------------------------------------------------------------
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`

Copyright 2017-2021 Standard Performance Evaluation Corporation

Dell Inc.

PowerEdge R750xa (Intel Xeon Platinum 8362, 2.80 GHz)

$SPECrate^{®}2017\_int\_base = 474$

$SPECrate^{®}2017\_int\_peak = 494$

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

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

Base Optimization Flags

C benchmarks:
```
-w -std=c11 -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
```

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`

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`

(Continued on next page)

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

Dell Inc.

PowerEdge R750xa (Intel Xeon Platinum 8362, 2.80 GHz)

SPECrate®2017_int_base = 474

SPECrate®2017_int_peak = 494

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

Peak Portability Flags (Continued)

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: basepeak = yes

C++ benchmarks:

520.omnetpp_r: basepeak = yes

523.xalancbmk_r: basepeak = yes

531.deepsjeng_r: basepeak = yes

(Continued on next page)

Dell Inc.

PowerEdge R750xa (Intel Xeon Platinum 8362, 2.80 GHz)

SPECrate®2017_int_base = 474

SPECrate®2017_int_peak = 494

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

Peak Optimization Flags (Continued)

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
`http://www.spec.org/cpu2017/flags/Intel-ic2021-official-linux64_revA.html`
`http://www.spec.org/cpu2017/flags/Dell-Platform-Flags-PowerEdge-Intel-ICX-rev1.4.html`

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-rev1.4.xml`

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

Tested with SPEC CPU®2017 v1.1.5 on 2021-09-22 02:47:33-0400.
Report generated on 2021-11-10 10:07:22 by CPU2017 PDF formatter v6442.
Originally published on 2021-11-09.