SPEC CPU®2017 Integer Rate Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant DL380 Gen10 Plus
(2.40 GHz, Intel Xeon Gold 6336Y)

$SPECrate®2017\_int\_base = 357$

$SPECrate®2017\_int\_peak = 370$
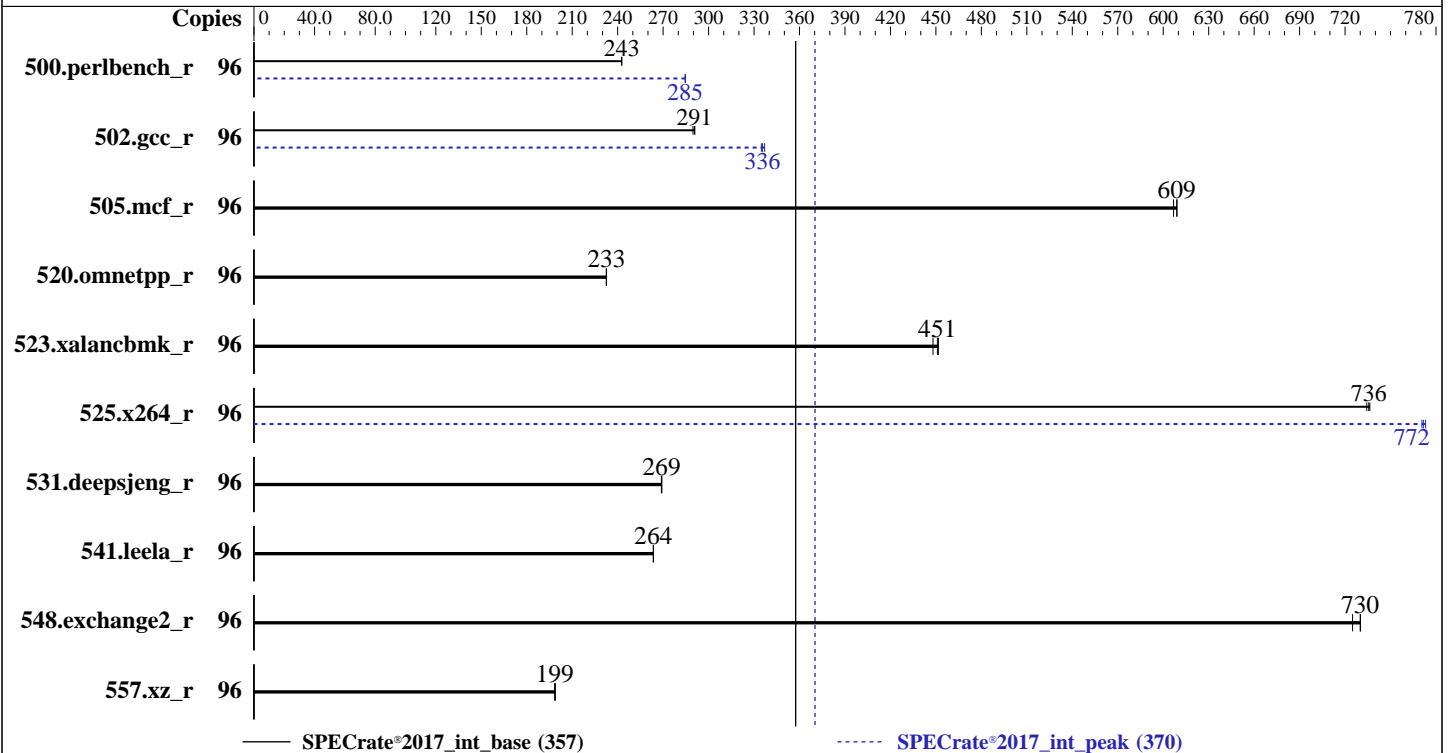
CPU2017 License: 3   **Test Date:** Aug-2021

Test Sponsor: HPE   **Hardware Availability:** Jun-2021

Tested by: HPE   **Software Availability:** Dec-2020

Copies scale: 0, 40.0, 80.0, 120, 150, 180, 210, 240, 270, 300, 330, 360, 390, 420, 450, 480, 510, 540, 570, 600, 630, 660, 690, 720, 780

Benchmark	Copies	Base	Peak
500.perlbench_r	96	243	285
502.gcc_r	96	291	336
505.mcf_r	96	609	
520.omnetpp_r	96	233	
523.xalancbmk_r	96	451	
525.x264_r	96	736	772
531.deepsjeng_r	96	269	
541.leela_r	96	264	
548.exchange2_r	96	730	
557.xz_r	96	199	

— SPECrate®2017_int_base (357)   ----- SPECrate®2017_int_peak (370)

Hardware

CPU Name: Intel Xeon Gold 6336Y
Max MHz: 3600
Nominal: 2400
Enabled: 48 cores, 2 chips, 2 threads/core
Orderable: 1, 2 chip(s)
Cache L1: 32 KB I + 48 KB D on chip per core
L2: 1.25 MB I+D on chip per core
L3: 36 MB I+D on chip per chip
Other: None
Memory: 2 TB (32 x 64 GB 2Rx4 PC4-3200AA-R)
Storage: 1 x 400 GB SAS SSD, RAID 0
Other: None

Software

OS: Red Hat Enterprise Linux 8.3 (Ootpa)
Kernel 4.18.0-240.el8.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: HPE BIOS Version U46 v1.50 05/27/2021 released
May-2021
File System: xfs
System State: Run level 3 (multi-user)
Base Pointers: 64-bit
Peak Pointers: 32/64-bit
Other: jemalloc memory allocator V5.0.1
Power Management: BIOS set to prefer performance at the cost of
additional power usage

SPEC CPU®2017 Integer Rate Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise
(Test Sponsor: HPE)

ProLiant DL380 Gen10 Plus
(2.40 GHz, Intel Xeon Gold 6336Y)

SPECrate®2017_int_base = 357

SPECrate®2017_int_peak = 370

CPU2017 License: 3	**Test Date:** Aug-2021
Test Sponsor: HPE	**Hardware Availability:** Jun-2021
Tested by: HPE	**Software Availability:** Dec-2020

Results Table

Benchmark	Base						Peak					
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
500.perlbench_r	96	**630**	**243**	630	243	630	243	96	537	285	**537**	**285**	537	285
502.gcc_r	96	469	290	467	291	**468**	**291**	96	403	337	406	335	**405**	**336**
505.mcf_r	96	**255**	**609**	256	607	255	609	96	**255**	**609**	256	607	255	609
520.omnetpp_r	96	**541**	**233**	541	233	542	232	96	**541**	**233**	541	233	542	232
523.xalancbmk_r	96	224	452	226	448	**225**	**451**	96	224	452	226	448	**225**	**451**
525.x264_r	96	228	736	229	734	**229**	**736**	96	**218**	**772**	217	773	218	771
531.deepsjeng_r	96	409	269	**409**	**269**	409	269	96	409	269	**409**	**269**	409	269
541.leela_r	96	**603**	**264**	603	264	603	264	96	**603**	**264**	603	264	603	264
548.exchange2_r	96	344	730	347	725	**345**	**730**	96	344	730	347	725	**345**	**730**
557.xz_r	96	521	199	522	199	**522**	**199**	96	521	199	522	199	**522**	**199**
SPECrate®2017_int_base =	**357**											
SPECrate®2017_int_peak =	**370**											

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"
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

Environment Variables Notes

Environment variables set by runcpu before the start of the run:
LD_LIBRARY_PATH =
    "/home/cpu2017/lib/intel64:/home/cpu2017/lib/ia32:/home/cpu2017/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

(Continued on next page)

SPEC CPU®2017 Integer Rate Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant DL380 Gen10 Plus
(2.40 GHz, Intel Xeon Gold 6336Y)

$SPECrate^{®}2017\_int\_base = 357$

$SPECrate^{®}2017\_int\_peak = 370$

CPU2017 License: 3
Test Sponsor: HPE
Tested by: HPE

Test Date: Aug-2021
Hardware Availability: Jun-2021
Software Availability: Dec-2020

General Notes (Continued)

```
 runcpu command invoked through numactl i.e.:
 numactl --interleave=all runcpu <etc>
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.
 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
```

Platform Notes

```
The system ROM used for this result contains Intel microcode version 0xd0002a0 for
the Intel Xeon Gold 6336Y processor.
  BIOS Configuration:
  Workload Profile set to General Throughput Compute
  Memory Patrol Scrubbing set to Disabled
  Advanced Memory Protection set to Advanced ECC
  XPT Remote Prefetcher set to Enabled
  Last Level Cache (LLC) Dead Line Allocation set to Disabled
  Enhanced Processor Performance set to Enabled
  Enhanced Processor Performance Profile set to Aggressive
  Thermal Configuration set to Maximum Cooling
  Intel UPI Link Frequency set to Minimum
  Intel UPI Link Enablement set to Single Link
  D2K set to Disabled
  Workload Profile set to Custom
    DCU Stream Prefetcher set to Disabled
    Energy Efficient Turbo set to Enabled
    Adjacent Sector Prefetch set to Disabled
    Intel UPI Link Power Management set to Enabled

 Sysinfo program /home/cpu2017/bin/sysinfo
 Rev: r6622 of 2021-04-07 982a61ec0915b55891ef0e16acafc64d
 running on localhost.localdomain Sat Aug 28 03:56:26 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) Gold 6336Y CPU @ 2.40GHz
       2  "physical id"s (chips)
      96 "processors"
```

(Continued on next page)

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

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant DL380 Gen10 Plus
(2.40 GHz, Intel Xeon Gold 6336Y)

SPECrate®2017_int_base = 357

SPECrate®2017_int_peak = 370

CPU2017 License:	3	**Test Date:**	Aug-2021
Test Sponsor:	HPE	**Hardware Availability:**	Jun-2021
Tested by:	HPE	**Software Availability:**	Dec-2020

Platform Notes (Continued)

```
    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 : 24
       siblings  : 48
       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
       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

  From lscpu from util-linux 2.32.1:
       Architecture:        x86_64
       CPU op-mode(s):      32-bit, 64-bit
       Byte Order:          Little Endian
       CPU(s):              96
       On-line CPU(s) list: 0-95
       Thread(s) per core:  2
       Core(s) per socket:  24
       Socket(s):           2
       NUMA node(s):        4
       Vendor ID:           GenuineIntel
       CPU family:          6
       Model:               106
       Model name:          Intel(R) Xeon(R) Gold 6336Y CPU @ 2.40GHz
       Stepping:            6
       CPU MHz:             1354.199
       BogoMIPS:            4800.00
       Virtualization:      VT-x
       L1d cache:           48K
       L1i cache:           32K
       L2 cache:            1280K
       L3 cache:            36864K
       NUMA node0 CPU(s):   0-11,48-59
       NUMA node1 CPU(s):   12-23,60-71
       NUMA node2 CPU(s):   24-35,72-83
       NUMA node3 CPU(s):   36-47,84-95
       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 ssbd
    mba ibrs ibpb stibp ibrs_enhanced tpr_shadow vnmi flexpriority ept vpid ept_ad
    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
```

(Continued on next page)

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant DL380 Gen10 Plus
(2.40 GHz, Intel Xeon Gold 6336Y)

SPECrate®2017_int_base = 357

SPECrate®2017_int_peak = 370

CPU2017 License: 3
Test Sponsor: HPE
Tested by: HPE

Test Date: Aug-2021
Hardware Availability: Jun-2021
Software Availability: Dec-2020

Platform Notes (Continued)

```
 /proc/cpuinfo cache data
    cache size : 36864 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 1 2 3 4 5 6 7 8 9 10 11 48 49 50 51 52 53 54 55 56 57 58 59
   node 0 size: 503722 MB
   node 0 free: 515417 MB
   node 1 cpus: 12 13 14 15 16 17 18 19 20 21 22 23 60 61 62 63 64 65 66 67 68 69 70 71
   node 1 size: 504196 MB
   node 1 free: 515802 MB
   node 2 cpus: 24 25 26 27 28 29 30 31 32 33 34 35 72 73 74 75 76 77 78 79 80 81 82 83
   node 2 size: 504454 MB
   node 2 free: 515607 MB
   node 3 cpus: 36 37 38 39 40 41 42 43 44 45 46 47 84 85 86 87 88 89 90 91 92 93 94 95
   node 3 size: 504335 MB
   node 3 free: 515621 MB
   node distances:
   node   0   1   2   3
     0:  10  20  30  30
     1:  20  10  30  30
     2:  30  30  10  20
     3:  30  30  20  10

 From /proc/meminfo
    MemTotal:       2113481272 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)"
      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
```

(Continued on next page)

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant DL380 Gen10 Plus
(2.40 GHz, Intel Xeon Gold 6336Y)

$SPECrate®2017\_int\_base = 357$

$SPECrate®2017\_int\_peak = 370$

CPU2017 License: 3
Test Sponsor: HPE
Tested by: HPE

Test Date: Aug-2021
Hardware Availability: Jun-2021
Software Availability: Dec-2020

Platform Notes (Continued)

```
uname -a:
   Linux localhost.localdomain 4.18.0-240.el8.x86_64 #1 SMP Wed Sep 23 05:13:10 EDT 2020
   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 3 Aug 28 03:55

SPEC is set to: /home/cpu2017
   Filesystem              Type  Size  Used Avail Use% Mounted on
   /dev/mapper/rhel-home xfs   297G  104G  193G  36% /home

From /sys/devices/virtual/dmi/id
   Vendor:         HPE
   Product:        ProLiant DL380 Gen10 Plus
   Product Family: ProLiant
   Serial:         CN70110BZV

Additional information from dmidecode 3.2 follows.  WARNING: Use caution when you
interpret this section. The 'dmidecode' program reads system data which is "intended to
allow hardware to be accurately determined", but the intent may not be met, as there are
frequent changes to hardware, firmware, and the "DMTF SMBIOS" standard.
  Memory:
    32x Micron 36ASF8G72PZ-3G2B2 64 GB 2 rank 3200

BIOS:
   BIOS Vendor:      HPE
   BIOS Version:     U46
   BIOS Date:        05/27/2021
   BIOS Revision:    1.50
   Firmware Revision: 2.50
```

(Continued on next page)

SPEC CPU®2017 Integer Rate Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant DL380 Gen10 Plus
(2.40 GHz, Intel Xeon Gold 6336Y)

SPECrate®2017_int_base = 357

SPECrate®2017_int_peak = 370

CPU2017 License: 3
Test Sponsor: HPE
Tested by: HPE

Test Date: Aug-2021
Hardware Availability: Jun-2021
Software Availability: Dec-2020

Platform Notes (Continued)

```
  (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
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.
------------------------------------------------------------------------------


==============================================================================
```

(Continued on next page)

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant DL380 Gen10 Plus
(2.40 GHz, Intel Xeon Gold 6336Y)

SPECrate®2017_int_base = 357

SPECrate®2017_int_peak = 370

CPU2017 License: 3
Test Sponsor: HPE
Tested by: HPE

Test Date: Aug-2021
Hardware Availability: Jun-2021
Software Availability: Dec-2020

Compiler Version Notes (Continued)

```
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)
         | 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
```

(Continued on next page)

SPEC CPU®2017 Integer Rate Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise
(Test Sponsor: HPE)

ProLiant DL380 Gen10 Plus
(2.40 GHz, Intel Xeon Gold 6336Y)

SPECrate®2017_int_base = 357

SPECrate®2017_int_peak = 370

CPU2017 License: 3		**Test Date:**	Aug-2021
Test Sponsor:	HPE	**Hardware Availability:**	Jun-2021
Tested by:	HPE	**Software Availability:**	Dec-2020

Compiler Version Notes (Continued)

```
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
-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
```

(Continued on next page)

Hewlett Packard Enterprise
(Test Sponsor: HPE)

ProLiant DL380 Gen10 Plus
(2.40 GHz, Intel Xeon Gold 6336Y)

SPECrate®2017_int_base = 357

SPECrate®2017_int_peak = 370

CPU2017 License:	3	**Test Date:**	Aug-2021
Test Sponsor:	HPE	**Hardware Availability:**	Jun-2021
Tested by:	HPE	**Software Availability:**	Dec-2020

Base Optimization Flags (Continued)

C++ benchmarks (continued):
```
-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`
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:

(Continued on next page)

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant DL380 Gen10 Plus
(2.40 GHz, Intel Xeon Gold 6336Y)

SPECrate®2017_int_base = 357

SPECrate®2017_int_peak = 370

CPU2017 License: 3	**Test Date:** Aug-2021
Test Sponsor: HPE	**Hardware Availability:** Jun-2021
Tested by: HPE	**Software Availability:** Dec-2020

Peak Optimization Flags (Continued)

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

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/HPE-Platform-Flags-Intel-V1.0-ICX-revE.html
http://www.spec.org/cpu2017/flags/Intel-ic2021-official-linux64_revA.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2017/flags/HPE-Platform-Flags-Intel-V1.0-ICX-revE.xml
http://www.spec.org/cpu2017/flags/Intel-ic2021-official-linux64_revA.xml

SPEC CPU®2017 Integer Rate Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant DL380 Gen10 Plus
(2.40 GHz, Intel Xeon Gold 6336Y)

SPECrate®2017_int_base = 357

SPECrate®2017_int_peak = 370

CPU2017 License: 3
Test Sponsor: HPE
Tested by: HPE

Test Date: Aug-2021
Hardware Availability: Jun-2021
Software Availability: Dec-2020

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

Tested with SPEC CPU®2017 v1.1.8 on 2021-08-27 18:26:26-0400.
Report generated on 2021-09-14 19:17:56 by CPU2017 PDF formatter v6442.
Originally published on 2021-09-14.