SPEC® CPU2017 Integer Rate Result

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ASUS corp.

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SPECrate2017_int_base = 4.69

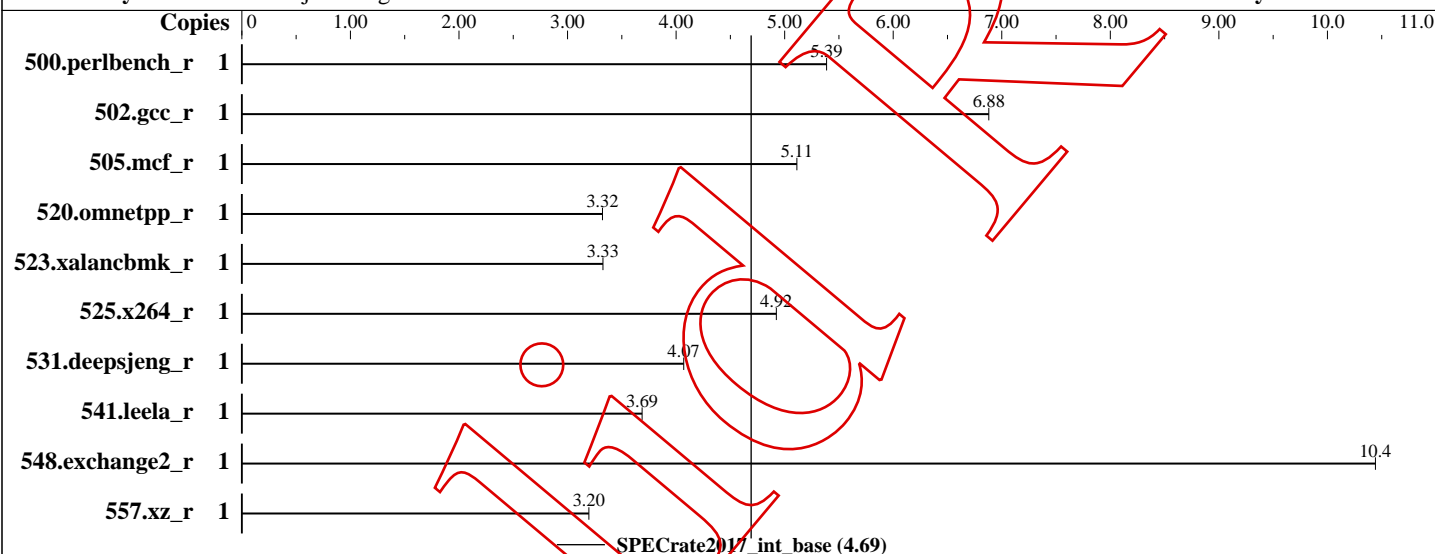SPECrate2017_int_peak = Not Run

CPU2017 License: --	**Test Date:** Feb-2020
Test Sponsor: ASUS corp.	**Hardware Availability:**
Tested by: Manavjeet Singh	**Software Availability:**

Copies	
500.perlbench_r 1	5.39
502.gcc_r 1	6.88
505.mcf_r 1	5.11
520.omnetpp_r 1	3.32
523.xalancbmk_r 1	3.33
525.x264_r 1	4.92
531.deepsjeng_r 1	4.07
541.leela_r 1	3.69
548.exchange2_r 1	10.4
557.xz_r 1	3.20

SPECrate2017_int_base (4.69)

Hardware

CPU Name: Intel i5-8300H
 Max MHz.: 4000
 Nominal: 2300
Enabled: 4 cores, 1 chip, 2 threads/core
Orderable: --
Cache L1:
 L2:
 L3:
 Other:
Memory: 7.701 GB fixme: If using DDR4, the format is: 'N GB (N x N GB nRxn PC4-nnnnX-X)'
Storage: 137 GB add more disk info here
Other: --

Software

OS: Parrot GNU/Linux 4.8
 5.4.0-3parrot1-amd64
Compiler: C/C++/Fortran: Version 9.2.1 20200123 of GCC, the GNU Compiler Collection
Parallel: No
Firmware:
File System: ext4
System State: Run level 5 (add definition here)
Base Pointers: 64-bit
Peak Pointers: Not Applicable
Other:

Errors

'reportable' flag not set during run
548.exchange2_r (base) did not have enough runs!
531.deepsjeng_r (base) did not have enough runs!
523.xalancbmk_r (base) did not have enough runs!
505.mcf_r (base) did not have enough runs!
557.xz_r (base) did not have enough runs!
525.x264_r (base) did not have enough runs!
541.leela_r (base) did not have enough runs!
500.perlbench_r (base) did not have enough runs!
520.omnetpp_r (base) did not have enough runs!
502.gcc_r (base) did not have enough runs!

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Results Table

Benchmark	Copies	Base Seconds	Base Ratio	Base Seconds	Base Ratio	Base Seconds	Base Ratio	Peak Copies	Peak Seconds	Peak Ratio	Peak Seconds	Peak Ratio	Peak Seconds	Peak Ratio
500.perlbench_r	1	**296**	**5.39**											
502.gcc_r	1	**206**	**6.88**											
505.mcf_r	1	**316**	**5.11**											
520.omnetpp_r	1	**395**	**3.32**											
523.xalancbmk_r	1	**317**	**3.33**											
525.x264_r	1	**356**	**4.92**											
531.deepsjeng_r	1	**282**	**4.07**											
541.leela_r	1	**449**	**3.69**											
548.exchange2_r	1	**251**	**10.4**											
557.xz_r	1	**338**	**3.20**											
SPECrate2017_int_base =		**4.69**												
SPECrate2017_int_peak =		**Not Run**												

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

General Notes

```
Environment variables set by runcpu before the start of the run:
LD_LIBRARY_PATH = "/usr/lib64/:/usr/lib/:/lib64"
```

Platform Notes

```
 Sysinfo program
 /media/pheonix/d630b300-6092-41db-bf6a-dd1bd0f42bca/home/manavjeet/git/OS/Spec_OS/bin/sys
 info
 Rev: r5974 of 2018-05-19 9bcde8f2999c33d61f64985e45859ea9
 running on parrot Thu Feb 27 12:24:56 2020

 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) Core(TM) i5-8300H CPU @ 2.30GHz
       1  "physical id"s (chips)
       8 "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 : 4
       siblings  : 8
       physical 0: cores 0 1 2 3

 From lscpu:
```

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CPU2017 License:	--	**Test Date:**	Feb-2020
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Tested by:	Manavjeet Singh	**Software Availability:**	

Platform Notes (Continued)

```
          Architecture:              x86_64
          CPU op-mode(s):            32-bit, 64-bit
          Byte Order:                Little Endian
          Address sizes:             39 bits physical, 48 bits virtual
          CPU(s):                    8
          On-line CPU(s) list:       0-7
          Thread(s) per core:        2
          Core(s) per socket:        4
          Socket(s):                 1
          NUMA node(s):              1
          Vendor ID:                 GenuineIntel
          CPU family:                6
          Model:                     158
          Model name:                Intel(R) Core(TM) i5-8300H CPU @ 2.30GHz
          Stepping:                  10
          CPU MHz:                   807.815
          CPU max MHz:               4000.0000
          CPU min MHz:               800.0000
          BogoMIPS:                  4599.93
          Virtualization:            VT-x
          L1d cache:                 128 KiB
          L1i cache:                 128 KiB
          L2 cache:                  1 MiB
          L3 cache:                  8 MiB
          NUMA node0 CPU(s):         0-7
          Vulnerability Itlb multihit: KVM: Mitigation: Split huge pages
          Vulnerability L1tf:        Mitigation; PTE Inversion; VMX conditional cache
          flushes, SMT vulnerable
          Vulnerability Mds:         Mitigation; Clear CPU buffers; SMT vulnerable
          Vulnerability Meltdown:    Mitigation; PTI
          Vulnerability Spec store bypass: Mitigation; Speculative Store Bypass disabled via
          prctl and seccomp
          Vulnerability Spectre v1:  Mitigation; usercopy/swapgs barriers and __user
          pointer sanitization
          Vulnerability Spectre v2:  Mitigation; Full generic retpoline, IBPB
          conditional, IBRS_FW, STIBP conditional, RSB filling
          Vulnerability Tsx async abort: Not affected
          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 est tm2 ssse3
          sdbg fma cx16 xtpr pdcm pcid sse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_timer
          aes xsave avx f16c rdrand lahf_lm abm 3dnowprefetch cpuid_fault epb invpcid_single
          pti ssbd ibrs ibpb stibp tpr_shadow vnmi flexpriority ept vpid ept_ad fsgsbase
          tsc_adjust bmi1 avx2 smep bmi2 erms invpcid mpx rdseed adx smap clflushopt intel_pt
          xsaveopt xsavec xgetbv1 xsaves dtherm ida arat pln pts hwp hwp_notify hwp_act_window
          hwp_epp md_clear flush_l1d
```

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SPECrate2017_int_peak = Not Run

CPU2017 License: --
Test Sponsor: ASUS corp.
Tested by: Manavjeet Singh

Test Date: Feb-2020
Hardware Availability:
Software Availability:

Platform Notes (Continued)

```
/proc/cpuinfo cache data
   cache size : 8192 KB

From numactl --hardware  WARNING: a numactl 'node' might or might not correspond to a
physical chip.

From /proc/meminfo
   MemTotal:        8074588 kB
   HugePages_Total:       0
   Hugepagesize:       2048 kB

/usr/bin/lsb_release -d
   Parrot GNU/Linux 4.8

From /etc/*release* /etc/*version*
   debian_version: parrot
   os-release:
       PRETTY_NAME="Parrot GNU/Linux 4.8"
       NAME="Parrot GNU/Linux"
       ID=parrot
       ID_LIKE=debian
       VERSION="4.8"
       VERSION_ID="4.8"
       HOME_URL="https://www.parrotlinux.org/"
       SUPPORT_URL="https://community.parrotlinux.org/"

uname -a:
   Linux parrot 5.4.0-3parrot1-amd64 #1 SMP Parrot 5.4.13-3parrot2 (2020-02-01) x86_64
   GNU/Linux

Kernel self-reported vulnerability status:

CVE-2017-5754 (Meltdown):          Mitigation: PTI
CVE-2017-5753 (Spectre variant 1): Mitigation: usercopy/swapgs barriers and __user
pointer sanitization
CVE-2017-5715 (Spectre variant 2): Mitigation: Full generic retpoline, IBPB: conditional,
IBRS_FW, STIBP: conditional, RSB filling

run-level 5 Feb 25 15:47

SPEC is set to:
/media/pheonix/d630b300-6092-41db-bf6a-dd1bd0f42bca/home/manavjeet/git/OS/Spec_OS
   Filesystem      Type  Size  Used Avail Use% Mounted on
   /dev/sda4       ext4  137G   97G   34G  75%
   /media/pheonix/d630b300-6092-41db-bf6a-dd1bd0f42bca
```

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Tested by:	Manavjeet Singh	**Software Availability:**	

Platform Notes (Continued)

```
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.

(End of data from sysinfo program)
```

Compiler Version Notes

```
==============================================================================
  CXXC 520.omnetpp_r(base) 523.xalancbmk_r(base) 531.deepsjeng_r(base)
       541.leela_r(base)
------------------------------------------------------------------------------
Using built-in specs.
COLLECT_GCC=/usr/bin/g++
COLLECT_LTO_WRAPPER=/usr/lib/gcc/x86_64-linux-gnu/9/lto-wrapper
OFFLOAD_TARGET_NAMES=nvptx-none:hsa
OFFLOAD_TARGET_DEFAULT=1
Target: x86_64-linux-gnu
Configured with: ../src/configure -v --with-pkgversion='Debian 9.2.1-28'
  --with-bugurl=file:///usr/share/doc/gcc-9/README.Bugs
  --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2
  --prefix=/usr --with-gcc-major-version-only --program-suffix=-9
  --program-prefix=x86_64-linux-gnu- --enable-shared --enable-linker-build-id
  --libexecdir=/usr/lib --without-included-gettext --enable-threads=posix
  --libdir=/usr/lib --enable-nls --enable-bootstrap --enable-clocale=gnu
  --enable-libstdcxx-debug --enable-libstdcxx-time=yes
  --with-default-libstdcxx-abi=new --enable-gnu-unique-object
  --disable-vtable-verify --enable-plugin --enable-default-pie
  --with-system-zlib --with-target-system-zlib=auto --enable-objc-gc=auto
  --enable-multiarch --disable-werror --with-arch-32=i686 --with-abi=m64
  --with-multilib-list=m32,m64,mx32 --enable-multilib --with-tune=generic
  --enable-offload-targets=nvptx-none,hsa --without-cuda-driver
  --enable-checking=release --build=x86_64-linux-gnu --host=x86_64-linux-gnu
  --target=x86_64-linux-gnu --with-build-config=bootstrap-lto-lean
  --enable-link-mutex
Thread model: posix
gcc version 9.2.1 20200203 (Debian 9.2.1-28)
------------------------------------------------------------------------------


==============================================================================
  CC  500.perlbench_r(base)
------------------------------------------------------------------------------
Using built-in specs.
COLLECT_GCC=/usr/bin/gcc
COLLECT_LTO_WRAPPER=/usr/lib/gcc/x86_64-linux-gnu/9/lto-wrapper
```

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Tested by: Manavjeet Singh		**Software Availability:**	

Compiler Version Notes (Continued)

```
OFFLOAD_TARGET_NAMES=nvptx-none:hsa
OFFLOAD_TARGET_DEFAULT=1
Target: x86_64-linux-gnu
Configured with: ../src/configure -v --with-pkgversion='Debian 9.2.1-25'
  --with-bugurl=file:///usr/share/doc/gcc-9/README.Bugs
  --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2
  --prefix=/usr --with-gcc-major-version-only --program-suffix=-9
  --program-prefix=x86_64-linux-gnu- --enable-shared --enable-linker-build-id
  --libexecdir=/usr/lib --without-included-gettext --enable-threads=posix
  --libdir=/usr/lib --enable-nls --enable-bootstrap --enable-clocale=gnu
  --enable-libstdcxx-debug --enable-libstdcxx-time=yes
  --with-default-libstdcxx-abi=new --enable-gnu-unique-object
  --disable-vtable-verify --enable-plugin --enable-default-pie
  --with-system-zlib --with-target-system-zlib=auto --enable-objc-gc=auto
  --enable-multiarch --disable-werror --with-arch-32=i686 --with-abi=m64
  --with-multilib-list=m32,m64,mx32 --enable-multilib --with-tune=generic
  --enable-offload-targets=nvptx-none,hsa --without-cuda-driver
  --enable-checking=release --build=x86_64-linux-gnu --host=x86_64-linux-gnu
  --target=x86_64-linux-gnu --with-build-config=bootstrap-lto-lean
  --enable-link-mutex
Thread model: posix
gcc version 9.2.1 20200123 (Debian 9.2.1-25)
-----------------------------------------------------------------------------

=============================================================================
  CC  502.gcc_r(base) 505.mcf_r(base) 525.x264_r(base) 557.xz_r(base)
-----------------------------------------------------------------------------
Using built-in specs.
COLLECT_GCC=/usr/bin/gcc
COLLECT_LTO_WRAPPER=/usr/lib/gcc/x86_64-linux-gnu/9/lto-wrapper
OFFLOAD_TARGET_NAMES=nvptx-none:hsa
OFFLOAD_TARGET_DEFAULT=1
Target: x86_64-linux-gnu
Configured with: ../src/configure -v --with-pkgversion='Debian 9.2.1-28'
  --with-bugurl=file:///usr/share/doc/gcc-9/README.Bugs
  --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2
  --prefix=/usr --with-gcc-major-version-only --program-suffix=-9
  --program-prefix=x86_64-linux-gnu- --enable-shared --enable-linker-build-id
  --libexecdir=/usr/lib --without-included-gettext --enable-threads=posix
  --libdir=/usr/lib --enable-nls --enable-bootstrap --enable-clocale=gnu
  --enable-libstdcxx-debug --enable-libstdcxx-time=yes
  --with-default-libstdcxx-abi=new --enable-gnu-unique-object
  --disable-vtable-verify --enable-plugin --enable-default-pie
  --with-system-zlib --with-target-system-zlib=auto --enable-objc-gc=auto
  --enable-multiarch --disable-werror --with-arch-32=i686 --with-abi=m64
  --with-multilib-list=m32,m64,mx32 --enable-multilib --with-tune=generic
  --enable-offload-targets=nvptx-none,hsa --without-cuda-driver
```

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Test Sponsor:	ASUS corp.	**Hardware Availability:**	
Tested by:	Manavjeet Singh	**Software Availability:**	

Compiler Version Notes (Continued)

```
  --enable-checking=release --build=x86_64-linux-gnu --host=x86_64-linux-gnu
  --target=x86_64-linux-gnu --with-build-config=bootstrap-lto-lean
  --enable-link-mutex
Thread model: posix
gcc version 9.2.1 20200203 (Debian 9.2.1-28)
------------------------------------------------------------------------------

==============================================================================
 FC  548.exchange2_r(base)
------------------------------------------------------------------------------
Using built-in specs.
COLLECT_GCC=/usr/bin/gfortran
COLLECT_LTO_WRAPPER=/usr/lib/gcc/x86_64-linux-gnu/9/lto-wrapper
OFFLOAD_TARGET_NAMES=nvptx-none:hsa
OFFLOAD_TARGET_DEFAULT=1
Target: x86_64-linux-gnu
Configured with: ../src/configure -v --with-pkgversion='Debian 9.2.1-28'
  --with-bugurl=file:///usr/share/doc/gcc-9/README.Bugs
  --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2
  --prefix=/usr --with-gcc-major-version-only --program-suffix=-9
  --program-prefix=x86_64-linux-gnu- --enable-shared --enable-linker-build-id
  --libexecdir=/usr/lib --without-included-gettext --enable-threads=posix
  --libdir=/usr/lib --enable-nls --enable-bootstrap --enable-clocale=gnu
  --enable-libstdcxx-debug --enable-libstdcxx-time=yes
  --with-default-libstdcxx-abi=new --enable-gnu-unique-object
  --disable-vtable-verify --enable-plugin --enable-default-pie
  --with-system-zlib --with-target-system-zlib=auto --enable-objc-gc=auto
  --enable-multiarch --disable-werror --with-arch-32=i686 --with-abi=m64
  --with-multilib-list=m32,m64,mx32 --enable-multilib --with-tune=generic
  --enable-offload-targets=nvptx-none,hsa --without-cuda-driver
  --enable-checking=release --build=x86_64-linux-gnu --host=x86_64-linux-gnu
  --target=x86_64-linux-gnu --with-build-config=bootstrap-lto-lean
  --enable-link-mutex
Thread model: posix
gcc version 9.2.1 20200203 (Debian 9.2.1-28)
------------------------------------------------------------------------------
```

Base Compiler Invocation

C benchmarks:
```
gcc
```

C++ benchmarks:
```
g++
```

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--	SPECrate2017_int_peak = Not Run

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Tested by:	Manavjeet Singh		**Software Availability:**	

Base Compiler Invocation (Continued)

Fortran benchmarks:
`gfortran`

Base Portability Flags

500.perlbench_r: `-DSPEC_LINUX_X64 -DSPEC_LP64`
502.gcc_r: `-DSPEC_LP64`
505.mcf_r: `-DSPEC_LP64`
520.omnetpp_r: `-DSPEC_LP64`
523.xalancbmk_r: `-DSPEC_LINUX -DSPEC_LP64`
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:
`-m64 -std=c99 -g -O3 -march=native -fno-unsafe-math-optimizations`
`-fno-tree-loop-vectorize -fno-strict-aliasing -fgnu89-inline`

C++ benchmarks:
`-m64 -std=c++03 -g -O3 -march=native -fno-unsafe-math-optimizations`
`-fno-tree-loop-vectorize`

Fortran benchmarks:
`-m64 -g -O3 -march=native -fno-unsafe-math-optimizations`
`-fno-tree-loop-vectorize`

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

Tested with SPEC CPU2017 v1.0.5 on 2020-02-27 12:24:55+0530.
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