SPEC® CPU2017 Integer Rate Result

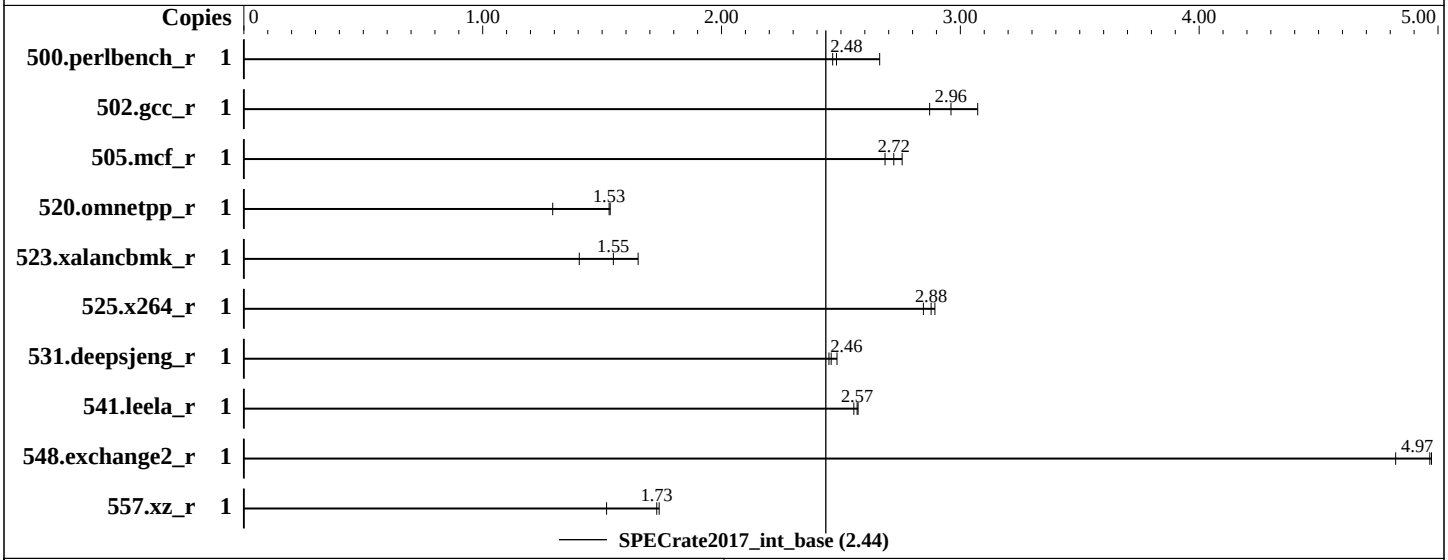
My Corporation

SPECrate2017_int_base = 2.44

SPECrate2017_int_peak = Not Run

CPU2017 License: nnn (Your SPEC license number)
Test Sponsor: My Corporation
Tested by: My Corporation

Test Date: Jan-2023
Hardware Availability:
Software Availability:



Hardware

CPU Name: Intel Xeon E5-2630 0
Max MHz.:
Nominal:
Enabled: cores, 8 chips, threads/core
Orderable:
Cache L1:
L2:
L3:
Other:
Memory: 15.626 GB fixme: If using DDR4, the format is: 'N GB (N x N GB nRxn PC4-nnnnX-X)'
Storage: 491 GB add more disk info here
Other:

Software

OS: Ubuntu 22.04.1 LTS 5.15.0-56-generic
Compiler: C/C++/Fortran: Version 7.2.1 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:

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Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
500.perlbench_r	1	598	2.66	**642**	**2.48**	646	2.47							
502.gcc_r	1	493	2.87	461	3.07	**478**	**2.96**							
505.mcf_r	1	602	2.68	**594**	**2.72**	586	2.76							
520.omnetpp_r	1	**858**	**1.53**	1015	1.29	855	1.53							
523.xalancbmk_r	1	752	1.40	**683**	**1.55**	640	1.65							
525.x264_r	1	**608**	**2.88**	615	2.85	605	2.89							
531.deepsjeng_r	1	468	2.45	**466**	**2.46**	461	2.48							
541.leela_r	1	**645**	**2.57**	648	2.55	644	2.57							
548.exchange2_r	1	543	4.82	527	4.97	**528**	**4.97**							
557.xz_r	1	621	1.74	**625**	**1.73**	711	1.52							

SPECrate2017_int_base = 2.44

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 /home/iiitb/Desktop/SPEC/bin/sysinfo
 Rev: r5974 of 2018-05-19 9bcde8f2999c33d61f64985e45859ea9
 running on iiitb-vm Sat Jan  7 11:57:11 2023

 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) CPU E5-2630 0 @ 2.30GHz
       8  "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 : 1
       siblings  : 1
       physical 0: cores 0
       physical 2: cores 0
       physical 4: cores 0
       physical 6: cores 0
       physical 8: cores 0
```

(Continued on next page)

Platform Notes (Continued)

```
       physical 10: cores 0
       physical 12: cores 0
       physical 14: cores 0

 From lscpu:
      Architecture:                    x86_64
      CPU op-mode(s):                  32-bit, 64-bit
      Address sizes:                   40 bits physical, 48 bits virtual
      Byte Order:                      Little Endian
      CPU(s):                          8
      On-line CPU(s) list:             0-7
      Vendor ID:                       GenuineIntel
      Model name:                      Intel(R) Xeon(R) CPU E5-2630 0 @ 2.30GHz
      CPU family:                      6
      Model:                           45
      Thread(s) per core:              1
      Core(s) per socket:              1
      Socket(s):                       8
      Stepping:                        7
      BogoMIPS:                        4600.00
      Flags:                           fpu vme de pse tsc msr pae mce cx8 apic sep mtrr
      pge mca cmov pat pse36 clflush dts mmx fxsr sse sse2 ss syscall nx rdtscp lm
      constant_tsc arch_perfmon pebs bts nopl xtopology tsc_reliable nonstop_tsc cpuid
      aperfmperf tsc_known_freq pni pclmulqdq ssse3 cx16 sse4_1 sse4_2 popcnt aes xsave
      avx hypervisor lahf_lm pti dtherm ida arat pln pts
      Hypervisor vendor:               VMware
      Virtualization type:             full
      L1d cache:                       256 KiB (8 instances)
      L1i cache:                       256 KiB (8 instances)
      L2 cache:                        2 MiB (8 instances)
      L3 cache:                        120 MiB (8 instances)
      NUMA node(s):                    1
      NUMA node0 CPU(s):               0-7
      Vulnerability Itlb multihit:     KVM: Mitigation: VMX unsupported
      Vulnerability L1tf:              Mitigation; PTE Inversion
      Vulnerability Mds:               Vulnerable: Clear CPU buffers attempted, no
      microcode; SMT Host state unknown
      Vulnerability Meltdown:          Mitigation; PTI
      Vulnerability Mmio stale data:   Unknown: No mitigations
      Vulnerability Retbleed:          Not affected
      Vulnerability Spec store bypass: Vulnerable
      Vulnerability Spectre v1:        Mitigation; usercopy/swapgs barriers and __user
      pointer sanitization
      Vulnerability Spectre v2:        Mitigation; Retpolines, STIBP disabled, RSB
      filling, PBRSB-eIBRS Not affected
      Vulnerability Srbds:             Not affected
      Vulnerability Tsx async abort:   Not affected
```

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Platform Notes (Continued)

```
/proc/cpuinfo cache data
   cache size : 15360 KB

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

From /proc/meminfo
   MemTotal:       16384604 kB
   HugePages_Total:       0
   Hugepagesize:       2048 kB

/usr/bin/lsb_release -d
   Ubuntu 22.04.1 LTS

From /etc/*release* /etc/*version*
   debian_version: bookworm/sid
   os-release:
      PRETTY_NAME="Ubuntu 22.04.1 LTS"
      NAME="Ubuntu"
      VERSION_ID="22.04"
      VERSION="22.04.1 LTS (Jammy Jellyfish)"
      VERSION_CODENAME=jammy
      ID=ubuntu
      ID_LIKE=debian
      HOME_URL="https://www.ubuntu.com/"

uname -a:
   Linux iiitb-vm 5.15.0-56-generic #62-Ubuntu SMP Tue Nov 22 19:54:14 UTC 2022 x86_64
   x86_64 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: Retpolines, STIBP: disabled, RSB filling,
PBRSB-eIBRS: Not affected

run-level 5 Jan 5 12:58

SPEC is set to: /home/iiitb/Desktop/SPEC
   Filesystem     Type  Size  Used Avail Use% Mounted on
   /dev/sda3      ext4  491G  334G  133G  72% /

Additional information from dmidecode follows.  WARNING: Use caution when you interpret
this section. The 'dmidecode' program reads system data which is "intended to allow
```

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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.

 (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/11/lto-wrapper
OFFLOAD_TARGET_NAMES=nvptx-none:amdgcn-amdhsa
OFFLOAD_TARGET_DEFAULT=1
Target: x86_64-linux-gnu
Configured with: ../src/configure -v --with-pkgversion='Ubuntu
  11.3.0-1ubuntu1~22.04'
  --with-bugurl=file:///usr/share/doc/gcc-11/README.Bugs
  --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,m2
  --prefix=/usr --with-gcc-major-version-only --program-suffix=-11
  --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 --enable-libphobos-checking=release
  --with-target-system-zlib=auto --enable-objc-gc=auto --enable-multiarch
  --disable-werror --enable-cet --with-arch-32=i686 --with-abi=m64
  --with-multilib-list=m32,m64,mx32 --enable-multilib --with-tune=generic
  --enable-offload-targets=nvptx-none=/build/gcc-11-xKiWfi/gcc-11-11.3.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-11-xKiWfi/gcc-11-11.3.0/debian/tmp-gcn/usr
  --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-serialization=2
Thread model: posix
Supported LTO compression algorithms: zlib zstd
gcc version 11.3.0 (Ubuntu 11.3.0-1ubuntu1~22.04)
------------------------------------------------------------------------------

==============================================================================
 CC  500.perlbench_r(base) 502.gcc_r(base) 505.mcf_r(base) 525.x264_r(base)
      557.xz_r(base)
------------------------------------------------------------------------------
Using built-in specs.
```

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Compiler Version Notes (Continued)

```
COLLECT_GCC=/usr/bin/gcc
COLLECT_LTO_WRAPPER=/usr/lib/gcc/x86_64-linux-gnu/11/lto-wrapper
OFFLOAD_TARGET_NAMES=nvptx-none:amdgcn-amdhsa
OFFLOAD_TARGET_DEFAULT=1
Target: x86_64-linux-gnu
Configured with: ../src/configure -v --with-pkgversion='Ubuntu
  11.3.0-1ubuntu1~22.04'
  --with-bugurl=file:///usr/share/doc/gcc-11/README.Bugs
  --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,m2
  --prefix=/usr --with-gcc-major-version-only --program-suffix=-11
  --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 --enable-libphobos-checking=release
  --with-target-system-zlib=auto --enable-objc-gc=auto --enable-multiarch
  --disable-werror --enable-cet --with-arch-32=i686 --with-abi=m64
  --with-multilib-list=m32,m64,mx32 --enable-multilib --with-tune=generic
  --enable-offload-targets=nvptx-none=/build/gcc-11-xKiWfi/gcc-11-11.3.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-11-xKiWfi/gcc-11-11.3.0/debian/tmp-gcn/usr
  --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-serialization=2
Thread model: posix
Supported LTO compression algorithms: zlib zstd
gcc version 11.3.0 (Ubuntu 11.3.0-1ubuntu1~22.04)
------------------------------------------------------------------------------

==============================================================================
 FC  548.exchange2_r(base)
------------------------------------------------------------------------------
Using built-in specs.
COLLECT_GCC=/usr/bin/gfortran
COLLECT_LTO_WRAPPER=/usr/lib/gcc/x86_64-linux-gnu/11/lto-wrapper
OFFLOAD_TARGET_NAMES=nvptx-none:amdgcn-amdhsa
OFFLOAD_TARGET_DEFAULT=1
Target: x86_64-linux-gnu
Configured with: ../src/configure -v --with-pkgversion='Ubuntu
  11.3.0-1ubuntu1~22.04'
  --with-bugurl=file:///usr/share/doc/gcc-11/README.Bugs
  --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,m2
  --prefix=/usr --with-gcc-major-version-only --program-suffix=-11
  --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
```

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Compiler Version Notes (Continued)

```
  --with-default-libstdcxx-abi=new --enable-gnu-unique-object
  --disable-vtable-verify --enable-plugin --enable-default-pie
  --with-system-zlib --enable-libphobos-checking=release
  --with-target-system-zlib=auto --enable-objc-gc=auto --enable-multiarch
  --disable-werror --enable-cet --with-arch-32=i686 --with-abi=m64
  --with-multilib-list=m32,m64,mx32 --enable-multilib --with-tune=generic
  --enable-offload-targets=nvptx-none=/build/gcc-11-xKiWfi/gcc-11-11.3.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-11-xKiWfi/gcc-11-11.3.0/debian/tmp-gcn/usr
  --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-serialization=2
Thread model: posix
Supported LTO compression algorithms: zlib zstd
gcc version 11.3.0 (Ubuntu 11.3.0-1ubuntu1~22.04)
------------------------------------------------------------------------------
```

Base Compiler Invocation

C benchmarks:
gcc

C++ benchmarks:
g++

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 -no-pie -march=native -fcommon
-fno-unsafe-math-optimizations -fno-tree-loop-vectorize
-fno-strict-aliasing -fgnu89-inline
```

C++ benchmarks:
```
-m64 -std=c++03 -g -O3 -no-pie -march=native -fcommon
-fno-unsafe-math-optimizations -fno-tree-loop-vectorize
```

Fortran benchmarks:
```
-m64 -g -O3 -no-pie -march=native -fcommon
-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 2023-01-07 11:57:08+0530.
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