



SPEC® CPU2017 Integer Rate Result

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ASUSTeK Computer Inc.

(Test Sponsor: Intel Corporation)

SPECrate2017_int_base = 23.5

ASUS Z170M-PLUS Motherboard (Intel Core i7-6700K)

SPECrate2017_int_peak = Not Run

CPU2017 License: 13

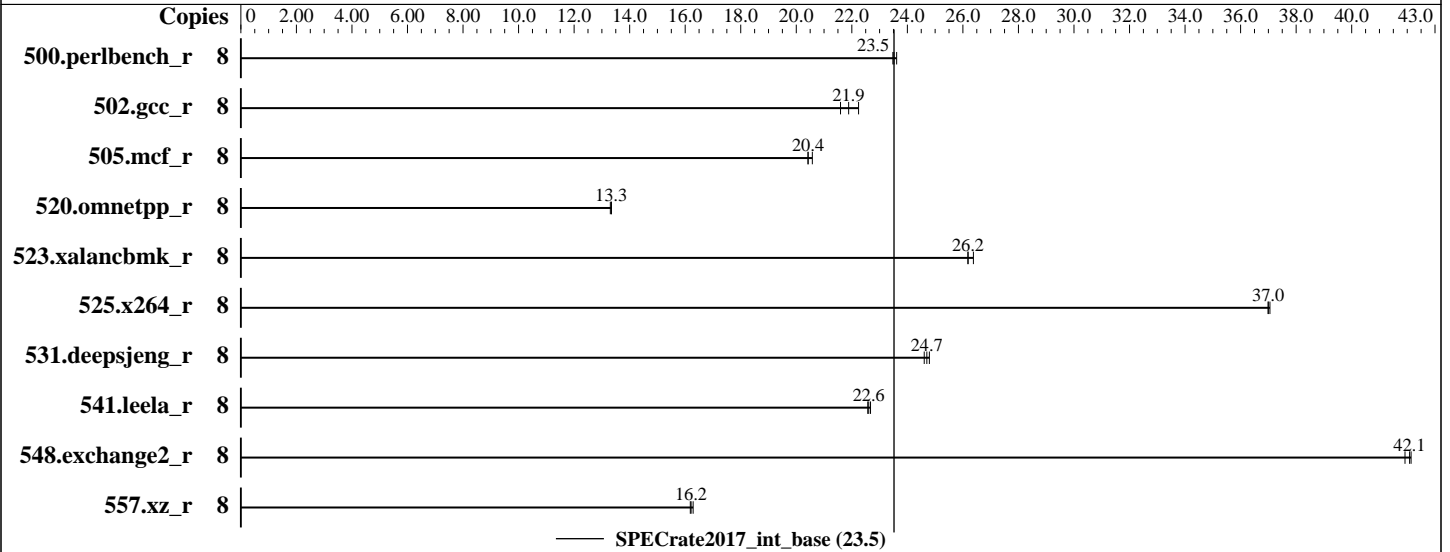
Test Sponsor: Intel Corporation

Tested by: Intel Corporation

Test Date: Dec-2016

Hardware Availability: Jan-2016

Software Availability: Sep-2016



Hardware

CPU Name: Intel Core i7-6700K
 Max MHz.: 4200
 Nominal: 4000
 Enabled: 4 cores, 1 chip, 2 threads/core
 Orderable: 1 chip
 Cache L1: 32 KB I + 32 KB D on chip per core
 L2: 256 KB I+D on chip per core
 L3: 8 MB I+D on chip per chip
 Other: None
 Memory: 32 GB (2 x 16 GB 2Rx8 PC4-3000N-U, running at 2133, G.SKILL Ripjaws F4-3000C14D-32GVK)
 Storage: 1.5 TB SATA HDD, 7200RPM
 Other: None

Software

OS: Red Hat Enterprise Linux Server release 7.2 (Maipo)
 3.10.0-327.el7.x86_64
 Compiler: C/C++: Version 17.0.0.098 of Intel C/C++ Compiler for Linux;
 Fortran: Version 17.0.0.098 of Intel Fortran Compiler for Linux
 Parallel: No
 Firmware: American Megatrends Inc. v0701 01/13/2016
 File System: xfs
 System State: Run level 5 (Multiuser Networking with GUI)
 Base Pointers: 64-bit
 Peak Pointers: Not Applicable
 Other: Microquill SmartHeap V10.2



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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	8	542	23.5	539	23.6	542	23.5							
502.gcc_r	8	518	21.9	509	22.2	525	21.6							
505.mcf_r	8	633	20.4	628	20.6	633	20.4							
520.omnetpp_r	8	787	13.3	787	13.3	789	13.3							
523.xalancbmk_r	8	323	26.2	323	26.2	320	26.4							
525.x264_r	8	378	37.1	379	37.0	379	37.0							
531.deepsjeng_r	8	371	24.7	370	24.8	373	24.6							
541.leela_r	8	587	22.6	586	22.6	584	22.7							
548.exchange2_r	8	498	42.1	497	42.1	500	41.9							
557.xz_r	8	533	16.2	534	16.2	531	16.3							

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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 = */home/specdev/workspace/cpu2017-rc4/lib/ia32:/home/specdev/workspace/cpu2017-rc4/lib/intel64:/home/specdev/workspace/cpu2017-rc4/sh10.2*
```

Binaries compiled on a system with 1x Intel Core i7-4790 CPU + 32GB RAM
memory using Redhat Enterprise Linux 7.2
Transparent Huge Pages enabled by default

Platform Notes

Sysinfo program /home/specdev/workspace/cpu2017-rc4/Docs/sysinfo
Rev: r5007 of 2016-11-15 fc8dc82f217779bedfed4d694d580ba9
running on mrcarrol-desky Tue Dec 13 06:43:56 2016

This section contains SUT (System Under Test) info as seen by some common utilities.

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Platform Notes (Continued)

For more information on this section, see
<http://www.spec.org/cpu2017/Docs/config.html#sysinfo>

From /proc/cpuinfo

```
model name : Intel(R) Core(TM) i7-6700K CPU @ 4.00GHz
```

```
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
```

```
cache size : 8192 KB
```

The view from numactl --hardware follows. WARNING: a numactl 'node' might or might not correspond to a physical chip.

```
available: 1 nodes (0)
```

```
node 0 cpus: 0 1 2 3 4 5 6 7
```

```
node 0 size: 32655 MB
```

```
node 0 free: 7195 MB
```

```
node distances:
```

```
node 0
```

```
0: 10
```

From /proc/meminfo

```
MemTotal: 32667216 kB
```

```
HugePages_Total: 0
```

```
Hugepagesize: 2048 kB
```

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

```
os-release:
```

```
NAME="Red Hat Enterprise Linux Server"
```

```
VERSION="7.2 (Maipo)"
```

```
ID="rhel"
```

```
ID_LIKE="fedora"
```

```
VERSION_ID="7.2"
```

```
PRETTY_NAME=Storage
```

```
ANSI_COLOR="0;31"
```

```
CPE_NAME="cpe:/o:redhat:enterprise_linux:7.2:GA:server"
```

```
redhat-release: Red Hat Enterprise Linux Server release 7.2 (Maipo)
```

```
system-release: Red Hat Enterprise Linux Server release 7.2 (Maipo)
```

```
system-release-cpe: cpe:/o:redhat:enterprise_linux:7.2:ga:server
```

uname -a:

```
Linux mrcarro1-desky 3.10.0-327.el7.x86_64 #1 SMP Thu Oct 29 17:29:29 EDT
```

```
2015 x86_64 x86_64 x86_64 GNU/Linux
```

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Platform Notes (Continued)

run-level 5 Dec 7 09:08

SPEC is set to: /home/specdev/workspace/cpu2017-rc4

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/mapper/rhel-home	xfs	1.5T	89G	1.5T	6%	/home

Cannot run dmidecode; consider saying 'chmod +s /usr/sbin/dmidecode'

(End of data from sysinfo program)

Compiler Version Notes

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

```
icc (ICC) 17.0.0 20160721
Copyright (C) 1985-2016 Intel Corporation. All rights reserved.
-----
```

```
=====
CXXC 520.omnetpp_r(base) 523.xalancbmk_r(base) 531.deepsjeng_r(base)
      541.leela_r(base)
-----
```

```
icpc (ICC) 17.0.0 20160721
Copyright (C) 1985-2016 Intel Corporation. All rights reserved.
-----
```

```
=====
FC 548.exchange2_r(base)
-----
```

```
ifort (IFORT) 17.0.0 20160721
Copyright (C) 1985-2016 Intel Corporation. All rights reserved.
-----
```

Base Compiler Invocation

C benchmarks:

icc -m64 -std=c11

C++ benchmarks:

icpc -m64

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Base Compiler Invocation (Continued)

Fortran benchmarks:

```
ifort -m64
```

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:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -auto-p32 -qopt-prefetch
-qopt-mem-layout-trans=3
```

C++ benchmarks:

```
-Wl,-z,muldefs -xCORE-AVX2 -ipo -O3 -no-prec-div -auto-p32
-qopt-prefetch -qopt-mem-layout-trans=3 -L/sh10.2 -lsmartheap64
```

Fortran benchmarks:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch
-qopt-mem-layout-trans=3 -nostandard-realloc-lhs
```

The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2017/flags/Intel-ic17.0-official-linux64-revE.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2017/flags/Intel-ic17.0-official-linux64-revE.xml>



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

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