



SPEC® CPU2017 Integer Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Fujitsu

SPECrate2017_int_base = 32.3

PRIMERGY CX1430 M1, Intel Xeon D-1541, 2.10GHz

SPECrate2017_int_peak = Not Run

CPU2017 License: 19

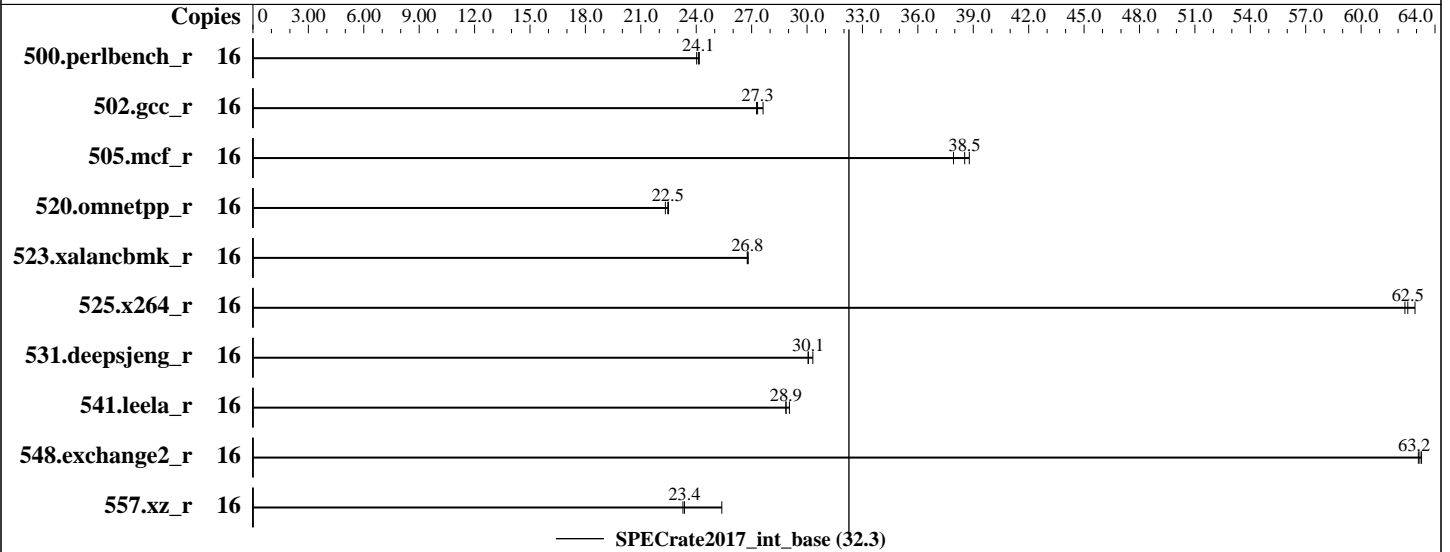
Test Sponsor: Fujitsu

Tested by: Fujitsu

Test Date: Jun-2018

Hardware Availability: May-2018

Software Availability: Apr-2018



Hardware

CPU Name: Intel Xeon D-1541
 Max MHz.: 2700
 Nominal: 2100
 Enabled: 8 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: 12 MB I+D on chip per chip
 Other: None
 Memory: 128 GB (4 x 32 GB 2Rx4 PC4-2400T-R)
 Storage: 1 x SAS HDD, 1 TB, 7200 RPM
 Other: None

Software

OS: SUSE Linux Enterprise Server 12 SP2
 4.4.114-92.64-default
 Compiler: C/C++: Version 18.0.1.163 of Intel C/C++
 Compiler for Linux;
 Fortran: Version 18.0.1.163 of Intel Fortran
 Compiler for Linux
 Parallel: No
 Firmware: American Megatrends BIOS Version C419A020. Released Apr-2018
 File System: xfs
 System State: Run level 3 (multi-user)
 Base Pointers: 64-bit
 Peak Pointers: Not Applicable
 Other: jemalloc: jemalloc memory allocator library V5.0.1



SPEC CPU2017 Integer Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Fujitsu

SPECrate2017_int_base = 32.3

PRIMERGY CX1430 M1, Intel Xeon D-1541, 2.10GHz

SPECrate2017_int_peak = Not Run

CPU2017 License: 19
Test Sponsor: Fujitsu
Tested by: Fujitsu

Test Date: Jun-2018
Hardware Availability: May-2018
Software Availability: Apr-2018

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
500.perlbench_r	16	1060	24.0	1054	24.2	<u>1056</u>	<u>24.1</u>							
502.gcc_r	16	831	27.3	<u>829</u>	<u>27.3</u>	820	27.6							
505.mcf_r	16	667	38.8	<u>671</u>	<u>38.5</u>	682	37.9							
520.omnetpp_r	16	<u>935</u>	<u>22.5</u>	933	22.5	940	22.3							
523.xalancbmk_r	16	631	26.8	630	26.8	<u>631</u>	<u>26.8</u>							
525.x264_r	16	445	62.9	<u>448</u>	<u>62.5</u>	449	62.4							
531.deepsjeng_r	16	605	30.3	610	30.1	<u>610</u>	<u>30.1</u>							
541.leela_r	16	912	29.0	918	28.9	<u>918</u>	<u>28.9</u>							
548.exchange2_r	16	664	63.1	<u>663</u>	<u>63.2</u>	663	63.3							
557.xz_r	16	681	25.4	742	23.3	<u>739</u>	<u>23.4</u>							

SPECrate2017_int_base = 32.3

SPECrate2017_int_peak = Not Run

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"
Set CPU frequency governor to maximum performance with:
cpupower -c all frequency-set -g performance
cpu idle state set with:
cpupower idle-set -d 1
```

General Notes

```
Environment variables set by runcpu before the start of the run:
LD_LIBRARY_PATH = "/home/SPECcpu/speccpu2017-ic18.1-20171215-1/icc18.1-lib/intel64"
LD_LIBRARY_PATH = "${LD_LIBRARY_PATH}:/home/SPECcpu/speccpu2017-ic18.1-20171215-1/je5.0.1-32"
LD_LIBRARY_PATH = "${LD_LIBRARY_PATH}:/home/SPECcpu/speccpu2017-ic18.1-20171215-1/je5.0.1-64"
Binaries compiled on a system with 1x Intel Xeon D-1541 CPU + 128GB RAM
memory using SUSE Linux Enterprise Server 12 SP2
Transparent Huge Pages enabled by default
Prior to runcpu invocation
Filesystem page cache synced and cleared with:
sync; echo 1 > /proc/sys/vm/drop_caches
runcpu command invoked through numactl i.e.:
numactl --interleave=all runcpu <etc>
```

(Continued on next page)



SPEC CPU2017 Integer Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Fujitsu

SPECrate2017_int_base = 32.3

PRIMERGY CX1430 M1, Intel Xeon D-1541, 2.10GHz

SPECrate2017_int_peak = Not Run

CPU2017 License: 19

Test Sponsor: Fujitsu

Tested by: Fujitsu

Test Date: Jun-2018

Hardware Availability: May-2018

Software Availability: Apr-2018

General Notes (Continued)

jemalloc: configured and built at default for 32bit (i686) and 64bit (x86_64) targets;
 jemalloc: built with the RedHat Enterprise 7.4, and the system compiler gcc 4.8.5;
 jemalloc: jemalloc: sources available via jemalloc.net;
 Yes: 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.

Platform Notes

BIOS configuration:

Intel Virtualization Technology = Disabled

HWP Support = Disabled

Sysinfo program /home/SPECcpu/speccpu2017-ic18.1-20171215-1/bin/sysinfo

Rev: r5797 of 2017-06-14 96c45e4568ad54c135fd618bcc091c0f

running on linux-as6c Mon Jun 25 11:01:55 2018

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 D-1541 @ 2.10GHz

1 "physical id"s (chips)

16 "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 : 8

siblings : 16

physical 0: cores 0 1 2 3 4 5 6 7

From lscpu:

Architecture: x86_64

CPU op-mode(s): 32-bit, 64-bit

Byte Order: Little Endian

CPU(s): 16

On-line CPU(s) list: 0-15

Thread(s) per core: 2

Core(s) per socket: 8

Socket(s): 1

NUMA node(s): 1

Vendor ID: GenuineIntel

CPU family: 6

Model: 86

(Continued on next page)



SPEC CPU2017 Integer Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Fujitsu

SPECrate2017_int_base = 32.3

PRIMERGY CX1430 M1, Intel Xeon D-1541, 2.10GHz

SPECrate2017_int_peak = Not Run

CPU2017 License: 19
Test Sponsor: Fujitsu
Tested by: Fujitsu

Test Date: Jun-2018
Hardware Availability: May-2018
Software Availability: Apr-2018

Platform Notes (Continued)

```

Model name: Intel(R) Xeon(R) CPU D-1541 @ 2.10GHz
Stepping: 3
CPU MHz: 1597.150
CPU max MHz: 2700.0000
CPU min MHz: 800.0000
BogoMIPS: 4200.45
Virtualization: VT-x
L1d cache: 32K
L1i cache: 32K
L2 cache: 256K
L3 cache: 12288K
NUMA node0 CPU(s): 0-15
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 arch_perfmon pebs bts rep_good nopl xtopology nonstop_tsc aperfmperf
eagerfpu 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 ida arat epb invpcid_single pln pts dtherm
intel_pt spec_ctrl retpoline kaiser tpr_shadow vnmi flexpriority ept vpid fsgsbase
tsc_adjust bmi1 hle avx2 smep bmi2 erms invpcid rtm cqm rdseed adx smap xsaveopt
cqm_llc cqm_occup_llc

```

```

/proc/cpuinfo cache data
cache size : 12288 KB

```

```

From numactl --hardware 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 8 9 10 11 12 13 14 15
node 0 size: 128657 MB
node 0 free: 128082 MB
node distances:
node 0
0: 10

```

```

From /proc/meminfo
MemTotal: 131745784 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

```

```

/usr/bin/lsb_release -d
SUSE Linux Enterprise Server 12 SP2

```

```

From /etc/*release* /etc/*version*
SuSE-release:
SUSE Linux Enterprise Server 12 (x86_64)
VERSION = 12

```

(Continued on next page)



SPEC CPU2017 Integer Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Fujitsu

SPECrate2017_int_base = 32.3

PRIMERGY CX1430 M1, Intel Xeon D-1541, 2.10GHz

SPECrate2017_int_peak = Not Run

CPU2017 License: 19

Test Sponsor: Fujitsu

Tested by: Fujitsu

Test Date: Jun-2018

Hardware Availability: May-2018

Software Availability: Apr-2018

Platform Notes (Continued)

PATCHLEVEL = 2

This file is deprecated and will be removed in a future service pack or release.

Please check /etc/os-release for details about this release.

os-release:

NAME="SLES"

VERSION="12-SP2"

VERSION_ID="12.2"

PRETTY_NAME="SUSE Linux Enterprise Server 12 SP2"

ID="sles"

ANSI_COLOR="0;32"

CPE_NAME="cpe:/o:suse:sles:12:sp2"

uname -a:

Linux linux-as6c 4.4.114-92.64-default #1 SMP Thu Feb 1 19:18:19 UTC 2018 (c6ce5db)
x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Jun 25 01:15

SPEC is set to: /home/SPECcpu/speccpu2017-ic18.1-20171215-1

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/sda7	xf	570G	21G	550G	4%	/home

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.

BIOS American Megatrends Inc. C419A020 04/03/2018

Memory:

4x Hynix Semiconductor HMA84GR7AFR4N-UH 32 GB 2 rank 2400

(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) 18.0.1 20171018

Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

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

(Continued on next page)



SPEC CPU2017 Integer Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Fujitsu

SPECrate2017_int_base = 32.3

PRIMERGY CX1430 M1, Intel Xeon D-1541, 2.10GHz

SPECrate2017_int_peak = Not Run

CPU2017 License: 19
Test Sponsor: Fujitsu
Tested by: Fujitsu

Test Date: Jun-2018
Hardware Availability: May-2018
Software Availability: Apr-2018

Compiler Version Notes (Continued)

icpc (ICC) 18.0.1 20171018
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

FC 548.exchange2_r(base)

ifort (IFORT) 18.0.1 20171018
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

Base Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

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:
-Wl,-z,muldefs -xCORE-AVX2 -ipo -O3 -no-prec-div
-qopt-mem-layout-trans=3 -L/usr/local/je5.0.1-64/lib -ljemalloc

(Continued on next page)



SPEC CPU2017 Integer Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Fujitsu

SPECrate2017_int_base = 32.3

PRIMERGY CX1430 M1, Intel Xeon D-1541, 2.10GHz

SPECrate2017_int_peak = Not Run

CPU2017 License: 19

Test Sponsor: Fujitsu

Tested by: Fujitsu

Test Date: Jun-2018

Hardware Availability: May-2018

Software Availability: Apr-2018

Base Optimization Flags (Continued)

C++ benchmarks:

-Wl,-z,muldefs -xCORE-AVX2 -ipo -O3 -no-prec-div
-qopt-mem-layout-trans=3 -L/usr/local/je5.0.1-64/lib -ljemalloc

Fortran benchmarks:

-Wl,-z,muldefs -xCORE-AVX2 -ipo -O3 -no-prec-div
-qopt-mem-layout-trans=3 -nostandard-realloc-lhs -align array32byte
-L/usr/local/je5.0.1-64/lib -ljemalloc

Base Other Flags

C benchmarks:

-m64 -std=c11

C++ benchmarks:

-m64

Fortran benchmarks:

-m64

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2017/flags/Intel-ic18.0-official-linux64.2017-10-19.html>

<http://www.spec.org/cpu2017/flags/Fujitsu-Platform-Settings-V1.2-SKL-RevD.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2017/flags/Intel-ic18.0-official-linux64.2017-10-19.xml>

<http://www.spec.org/cpu2017/flags/Fujitsu-Platform-Settings-V1.2-SKL-RevD.xml>

SPEC is a registered trademark of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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

Tested with SPEC CPU2017 v1.0.2 on 2018-06-24 22:01:54-0400.

Report generated on 2018-10-31 18:56:35 by CPU2017 PDF formatter v6067.

Originally published on 2018-07-10.