



SPEC® CPU2017 Integer Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

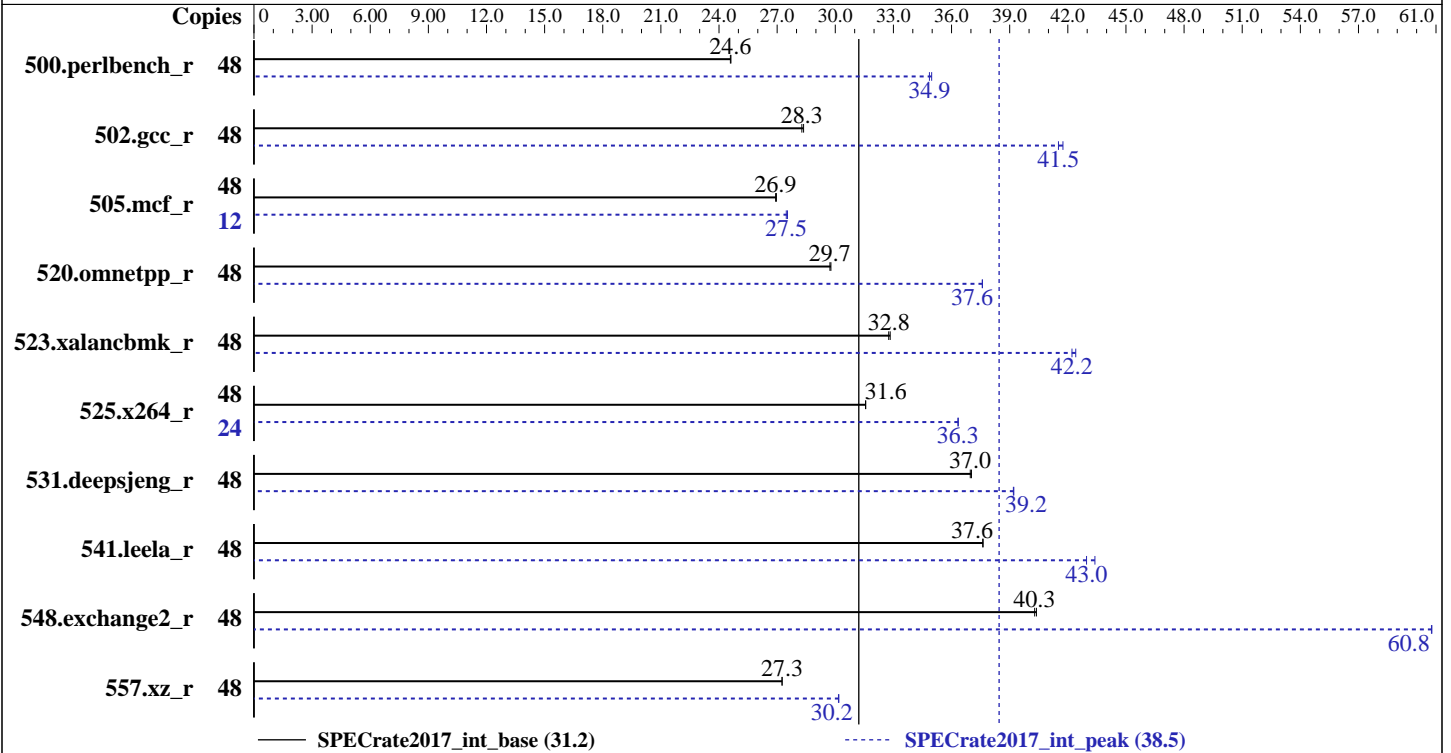
Fujitsu Fujitsu SPARC M12-1

SPECrate2017_int_base = 31.2

SPECrate2017_int_peak = 38.5

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

Test Date: Dec-2017
Hardware Availability: Apr-2017
Software Availability: Jul-2017



Hardware

CPU Name: SPARC64 XII
 Max MHz.: 3200
 Nominal: 3200
 Enabled: 6 cores, 1 chip, 8 threads/core
 Orderable: 1 CPU chip; 2, 3, 4, .. 6 cores
 Cache L1: 64 KB I + 64 KB D on chip per core
 L2: 512 KB I+D on chip per core
 L3: 16 MB I+D on chip per chip
 Other: None
 Memory: 512 GB (16 x 32 GB 2Rx4 PC4-2400T-R)
 Storage: 1 x 600 GB 10K RPM SAS (for system disk)
 Other: None

Software

OS: Oracle Solaris 11.3 SRU 24.4
 Compiler: C/C++/Fortran: Version 12.6 of Oracle Developer Studio
 Parallel: No
 Firmware: Fujitsu HCP Version 3040 released Oct-2017
 File System: tmpfs
 System State: Default
 Base Pointers: 32-bit
 Peak Pointers: 32-bit
 Other: None



SPEC CPU2017 Integer Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Fujitsu
Fujitsu SPARC M12-1

SPECrate2017_int_base = 31.2

SPECrate2017_int_peak = 38.5

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

Test Date: Dec-2017
Hardware Availability: Apr-2017
Software Availability: Jul-2017

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
500.perlbench_r	48	<u>3108</u>	<u>24.6</u>	3104	24.6			48	2185	35.0	<u>2192</u>	<u>34.9</u>		
502.gcc_r	48	<u>2404</u>	<u>28.3</u>	2396	28.4			48	1628	41.7	<u>1637</u>	<u>41.5</u>		
505.mcf_r	48	<u>2881</u>	<u>26.9</u>	2877	27.0			12	<u>706</u>	<u>27.5</u>	704	27.5		
520.omnetpp_r	48	2115	29.8	<u>2119</u>	<u>29.7</u>			48	<u>1676</u>	<u>37.6</u>	1675	37.6		
523.xalancbmk_r	48	1544	32.8	<u>1547</u>	<u>32.8</u>			48	1195	42.4	<u>1201</u>	<u>42.2</u>		
525.x264_r	48	2662	31.6	<u>2663</u>	<u>31.6</u>			24	<u>1157</u>	<u>36.3</u>	1156	36.3		
531.deepsjeng_r	48	<u>1488</u>	<u>37.0</u>	1486	37.0			48	<u>1404</u>	<u>39.2</u>	1403	39.2		
541.leela_r	48	<u>2114</u>	<u>37.6</u>	2112	37.6			48	1832	43.4	<u>1850</u>	<u>43.0</u>		
548.exchange2_r	48	3114	40.4	<u>3122</u>	<u>40.3</u>			48	<u>2070</u>	<u>60.8</u>	2069	60.8		
557.xz_r	48	1902	27.3	<u>1902</u>	<u>27.3</u>			48	<u>1719</u>	<u>30.2</u>	1717	30.2		

SPECrate2017_int_base = 31.2

SPECrate2017_int_peak = 38.5

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

Submit Notes

Processes were assigned to specific processors using 'pbind' commands. The config file option 'submit' was used, along with a list of processors in the 'BIND' variable, to generate the pbind commands. (For details, please see the config file.)

Operating System Notes

Shell Environments:

ulimit -s 131072 was used to limit the space consumed by the stack (and therefore make more space available to the heap).

The "Logical Domains Manager" service was turned off using the command "svcadm disable ldmd".

System Tunables:

(/etc/system parameters)

autoup = 86400

Causes pages older than the listed number of seconds to be written by fsflush.
doiflush = 0

Controls whether file system metadata syncs will be executed during fsflush invocations.
dopageflush = 0

Controls whether memory is examined for modified pages during fsflush invocations.
zfs:zfs_arc_max=1073741824

Determines the maximum size of the ZFS Adaptive Replacement Cache (ARC).



SPEC CPU2017 Integer Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Fujitsu
Fujitsu SPARC M12-1

SPECrate2017_int_base = 31.2

SPECrate2017_int_peak = 38.5

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

Test Date: Dec-2017
Hardware Availability: Apr-2017
Software Availability: Jul-2017

General Notes

File System:
tmpfs: output_root was used to put run directories in /tmp/cpu2017
zfs: operating system

Platform Notes

Sysinfo program /export/cpu2017/bin/sysinfo
Rev: r5797 of 2017-06-14 96c45e4568ad54c135fd618bcc091c0f
running on H1S-202-D0 Fri Dec 8 21:32:41 2017

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 /usr/sbin/psrinfo
SPARC64-XII (chipid 0, clock 3200 MHz)
1 chips
48 threads
3200 MHz

From kstat: 6 cores

From prtconf: 521728 Megabytes

/etc/release:
Oracle Solaris 11.3 SPARC
uname -a:
SunOS H1S-202-D0 5.11 11.3 sun4v sparcsun4v

disk: df -h /export/cpu2017
Filesystem Size Used Available Capacity Mounted on
rpool/export 547G 61G 287G 18% /export

(End of data from sysinfo program)

Compiler Version Notes

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

CC: Studio 12.6 Sun C++ 5.15 SunOS_sparc 2017/05/30

(Continued on next page)



SPEC CPU2017 Integer Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Fujitsu
Fujitsu SPARC M12-1

SPECrate2017_int_base = 31.2

SPECrate2017_int_peak = 38.5

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

Test Date: Dec-2017
Hardware Availability: Apr-2017
Software Availability: Jul-2017

Compiler Version Notes (Continued)

CXXC 520.omnetpp_r(peak) 531.deepsjeng_r(peak) 541.leela_r(peak)

CC: Studio 12.6 Sun C++ 5.15 SunOS_sparc 2017/05/30

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

cc: Studio 12.6 Sun C 5.15 SunOS_sparc 2017/05/30

=====
CC 500.perlbench_r(peak) 502.gcc_r(peak) 505.mcf_r(peak) 525.x264_r(peak)
557.xz_r(peak)

cc: Studio 12.6 Sun C 5.15 SunOS_sparc 2017/05/30

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

f90: Studio 12.6 Fortran 95 8.8 SunOS_sparc 2017/05/30

=====
FC 548.exchange2_r(peak)

f90: Studio 12.6 Fortran 95 8.8 SunOS_sparc 2017/05/30

Base Compiler Invocation

C benchmarks:
cc

C++ benchmarks:
CC

Fortran benchmarks:
f90



SPEC CPU2017 Integer Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Fujitsu
Fujitsu SPARC M12-1

SPECrate2017_int_base = 31.2

SPECrate2017_int_peak = 38.5

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

Test Date: Dec-2017
Hardware Availability: Apr-2017
Software Availability: Jul-2017

Base Portability Flags

```
500.perlbench_r: -DSPEC_SOLARIS_SPARC
502.gcc_r: -D_FILE_OFFSET_BITS=64
505.mcf_r: -D_FILE_OFFSET_BITS=64
520.omnetpp_r: -D_FILE_OFFSET_BITS=64
523.xalancbmk_r: -DSPEC_SOLARIS -D_FILE_OFFSET_BITS=64
525.x264_r: -D_FILE_OFFSET_BITS=64
531.deepsjeng_r: -D_FILE_OFFSET_BITS=64
541.leela_r: -D_FILE_OFFSET_BITS=64
548.exchange2_r: -D_FILE_OFFSET_BITS=64
557.xz_r: -D_FILE_OFFSET_BITS=64
```

Base Optimization Flags

```
C benchmarks:
-m32 -fast -xtarget=sparc64xii -xipo=2 -xpagesize=4M
-xsegment_align=4M -xthroughput

C++ benchmarks:
-m32 -fast -xtarget=sparc64xii -xipo=2 -xpagesize=4M
-xsegment_align=4M -xthroughput -library=stdcxx4 -template=extdef
-lfast

Fortran benchmarks:
-m32 -fast -xtarget=sparc64xii -xipo=2 -xpagesize=4M
-xsegment_align=4M -xthroughput
```

Base Other Flags

```
C benchmarks:
-xjobs=8

C++ benchmarks:
-xjobs=8

Fortran benchmarks:
-xjobs=8
```



SPEC CPU2017 Integer Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Fujitsu
Fujitsu SPARC M12-1

SPECrate2017_int_base = 31.2

SPECrate2017_int_peak = 38.5

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

Test Date: Dec-2017
Hardware Availability: Apr-2017
Software Availability: Jul-2017

Peak Compiler Invocation

C benchmarks:

cc

C++ benchmarks:

CC

Fortran benchmarks:

f90

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

```
500.perlbench_r: -xprofile=collect:./feedback -xprofile=use:./feedback -m32  
-fast -xtarget=sparc64xii -xipo=2 -xpagesize=256M  
-xsegment_align=256M -xthroughput -x04  
-xalias_level=layout -xinline_param=level:3 -lfast
```

```
502 gcc_r: -xprofile=collect:./feedback -xprofile=use:./feedback -m32  
-fast -xtarget=sparc64xii -xipo=2 -xpagesize=256M  
-xsegment_align=256M -xthroughput -xtarget=sparc64xplus  
-xipo=1 -xinline_param=level:3 -xprefetch=no%auto  
-xthroughput=no -lfast
```

```
505.mcf_r: -xprofile=collect:./feedback -xprofile=use:./feedback -m32  
-fast -xtarget=sparc64xii -xipo=2 -xpagesize=256M  
-xsegment_align=256M -xthroughput -xalias_level=strong  
-xprefetch=no%auto -xthroughput=no
```

```
525.x264_r: -xprofile=collect:./feedback -xprofile=use:./feedback -m32  
-fast -xtarget=sparc64xii -xipo=2 -xpagesize=256M  
-xsegment_align=256M -xthroughput -xunroll=3  
-xprefetch=no%auto -W2,-Afully_unroll:always=on
```

```
557.xz_r: -xprofile=collect:./feedback -xprofile=use:./feedback -m32  
-fast -xtarget=sparc64xii -xipo=2 -xpagesize=256M  
-xsegment_align=256M -xthroughput -xalias_level=std  
-xprefetch=latx:0.4 -lbsdmalloc
```

(Continued on next page)



SPEC CPU2017 Integer Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Fujitsu

Fujitsu SPARC M12-1

SPECrate2017_int_base = 31.2

SPECrate2017_int_peak = 38.5

CPU2017 License: 19

Test Sponsor: Fujitsu

Tested by: Fujitsu

Test Date: Dec-2017

Hardware Availability: Apr-2017

Software Availability: Jul-2017

Peak Optimization Flags (Continued)

C++ benchmarks:

```
520.omnetpp_r: -xprofile=collect:./feedback -xprofile=use:./feedback -m32
-fast -xtarget=sparc64xii -xipo=2 -xpagesize=256M
-xsegment_align=256M -xthroughput -xalias_level=compatible
-xprefetch=latx:0.4 -library=stdcxx4 -template=extdef
-lfast
```

```
523.xalancbmk_r: -m32 -fast -xtarget=sparc64xii -xipo=2 -xpagesize=256M
-xsegment_align=256M -xthroughput -library=stlport4
-xprefetch=no%auto -xunroll=2 -lfast
```

```
531.deepsjeng_r: -xprofile=collect:./feedback -xprofile=use:./feedback -m32
-fast -xtarget=sparc64xii -xipo=2 -xpagesize=256M
-xsegment_align=256M -xthroughput -xalias_level=compatible
-xinline_param=level:1 -xunroll=2 -xprefetch=no%auto
-library=stlport4
```

```
541.leela_r: -xprofile=collect:./feedback -xprofile=use:./feedback -m32
-fast -xtarget=sparc64xii -xipo=2 -xpagesize=256M
-xsegment_align=256M -xthroughput
-xinline_param=max_growth:500 -xprefetch=no%auto
-std=c++03 -library=no%stlport4 -xthroughput=no
-Wc,-Qiselect-funcalign=4
-Qoption iropt -Afully_unroll:always=on
-xinline_param=level:3
```

Fortran benchmarks:

```
-xprofile=collect:./feedback -xprofile=use:./feedback -m32 -fast
-xtarget=sparc64xii -xipo=2 -xpagesize=256M -xsegment_align=256M
-xthroughput -xtarget=sparc64xplus -xprefetch=no%auto
-Qoption iropt -Afully_unroll:always=on
```

Peak Other Flags

C benchmarks:

```
-xjobs=8
```

C++ benchmarks:

```
-xjobs=8
```

(Continued on next page)



SPEC CPU2017 Integer Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Fujitsu
Fujitsu SPARC M12-1

SPECrate2017_int_base = 31.2

SPECrate2017_int_peak = 38.5

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

Test Date: Dec-2017
Hardware Availability: Apr-2017
Software Availability: Jul-2017

Peak Other Flags (Continued)

Fortran benchmarks:
-xjobs=8

The flags files that were used to format this result can be browsed at
<http://www.spec.org/cpu2017/flags/Oracle-Developer-Studio12.6.html>
<http://www.spec.org/cpu2017/flags/Fujitsu-M12-1.html>

You can also download the XML flags sources by saving the following links:
<http://www.spec.org/cpu2017/flags/Oracle-Developer-Studio12.6.xml>
<http://www.spec.org/cpu2017/flags/Fujitsu-M12-1.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 2017-12-08 16:32:39-0500.
Report generated on 2018-10-31 13:16:31 by CPU2017 PDF formatter v6067.
Originally published on 2017-12-26.