



SPEC CPU®2017 Floating Point Rate Result

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Fujitsu

PRIMERGY RX2540 M7, Intel Xeon Platinum 8580, 2.00GHz

SPECrate®2017_fp_base = 1160

SPECrate®2017_fp_peak = Not Run

CPU2017 License: 19

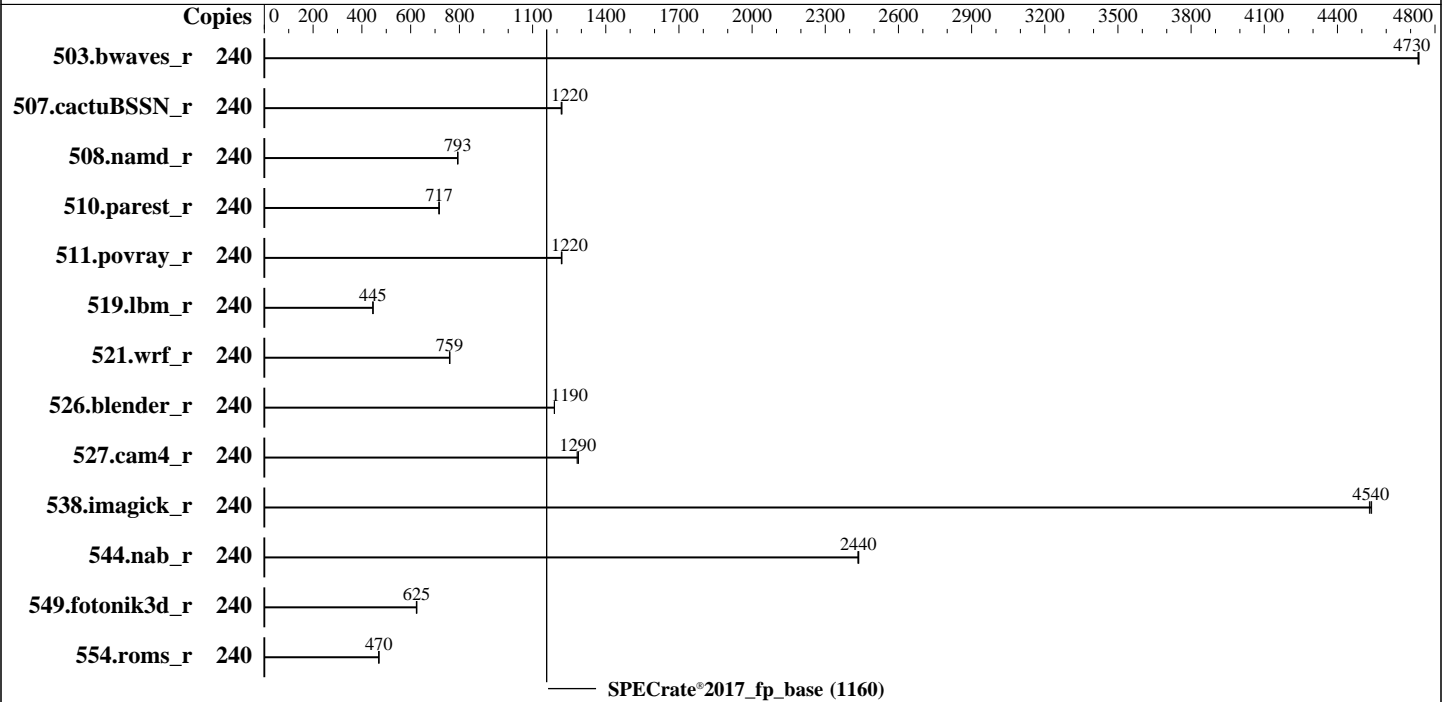
Test Sponsor: Fujitsu

Tested by: Fujitsu

Test Date: Apr-2024

Hardware Availability: Apr-2024

Software Availability: Dec-2023



Hardware

CPU Name: Intel Xeon Platinum 8580
 Max MHz: 4000
 Nominal: 2000
 Enabled: 120 cores, 2 chips, 2 threads/core
 Orderable: 1,2 chips
 Cache L1: 32 KB I + 48 KB D on chip per core
 L2: 2 MB I+D on chip per core
 L3: 300 MB I+D on chip per chip
 Other: None
 Memory: 1 TB (16 x 64 GB 2Rx4 PC5-5600B-R)
 Storage: 1 x SATA M.2, 960GB
 Other: CPU Cooling: Air

Software

OS: SUSE Linux Enterprise Server 15 SP5 5.14.21-150500.53-default
 Compiler: C/C++: Version 2024.0.2 of Intel oneAPI DPC++/C++ Compiler for Linux;
 Fortran: Version 2024.0.2 of Intel Fortran Compiler for Linux;
 Parallel: No
 Firmware: Fujitsu BIOS Version V1.0.0.0 R2.4.0 for D3983-A1x. Released Apr-2024
 tested as V1.0.0.0 R2.1.2 for D3983-A1x Dec-2023
 File System: btrfs
 System State: Run level 3 (multi-user)
 Base Pointers: 64-bit
 Peak Pointers: Not Applicable
 Other: jemalloc memory allocator V5.0.1
 Power Management: BIOS set to prefer performance at the cost of additional power usage



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Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
503.bwaves_r	240	509	4730	<u>509</u>	<u>4730</u>	508	4730							
507.cactuBSSN_r	240	<u>249</u>	<u>1220</u>	249	1220	250	1220							
508.namd_r	240	287	794	288	792	<u>287</u>	<u>793</u>							
510.parest_r	240	876	717	877	716	<u>876</u>	<u>717</u>							
511.povray_r	240	459	1220	460	1220	<u>460</u>	<u>1220</u>							
519.lbm_r	240	568	445	<u>568</u>	<u>445</u>	568	446							
521.wrf_r	240	<u>708</u>	<u>759</u>	708	759	706	761							
526.blender_r	240	307	1190	307	1190	<u>307</u>	<u>1190</u>							
527.cam4_r	240	<u>326</u>	<u>1290</u>	327	1280	326	1290							
538.imagick_r	240	<u>132</u>	<u>4540</u>	131	4540	132	4530							
544.nab_r	240	166	2430	166	2440	<u>166</u>	<u>2440</u>							
549.fotonik3d_r	240	<u>1497</u>	<u>625</u>	1496	625	1500	623							
554.roms_r	240	812	469	<u>812</u>	<u>470</u>	812	470							

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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"

Environment Variables Notes

Environment variables set by runcpu before the start of the run:
LD_LIBRARY_PATH = "/home/benchmark/speccpu-24.0/lib/intel64:/home/benchmark/speccpu-24.0/je5.0.1-64"
MALLOC_CONF = "retain:true"

General Notes

Binaries compiled on a system with 2x Intel Xeon Platinum 8280M CPU + 384GB RAM memory using Red Hat Enterprise Linux 8.4
Transparent Huge Pages enabled by default
Prior to runcpu invocation
Filesystem page cache synced and cleared with:
sync; echo 3> /proc/sys/vm/drop_caches
runcpu command invoked through numactl i.e.:
numactl --interleave=all runcpu <etc>
NA: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown) is mitigated in the system as tested and documented.

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General Notes (Continued)

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.

jemalloc, a general purpose malloc implementation

built with the RedHat Enterprise 7.5, and the system compiler gcc 4.8.5

sources available from jemalloc.net or <https://github.com/jemalloc/jemalloc/releases>

Platform Notes

BIOS configuration:

Intel Virtualization Technology = Disabled

Utilization Profile = Unbalanced

CPU Performance Boost = Aggressive

SNC (Sub NUMA) = Enable SNC2

Fan Control = Full

Sysinfo program /home/benchmark/speccpu-24.0/bin/sysinfo

Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197

running on localhost Thu Apr 4 23:47:59 2024

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

Table of contents

1. uname -a
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 10. who -r
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 13. Services, from systemctl list-unit-files
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 18. /sys/kernel/mm/transparent_hugepage/khugepaged
 19. OS release
 20. Disk information
 21. /sys/devices/virtual/dmi/id
 22. dmidecode
 23. BIOS
-
1. uname -a
Linux localhost 5.14.21-150500.53-default #1 SMP PREEMPT_DYNAMIC Wed May 10 07:56:26 UTC 2023 (b630043)
x86_64 x86_64 x86_64 GNU/Linux
-

2. w
23:47:59 up 6:00, 1 user, load average: 0.93, 78.35, 166.02

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Platform Notes (Continued)

USER	TTY	FROM	LOGIN@	IDLE	JCPU	PCPU	WHAT
root	tty1	-	17:48	5:58m	3.07s	0.48s	-bash

3. Username

From environment variable \$USER: root

4. ulimit -a

```

core file size          (blocks, -c) unlimited
data seg size          (kbytes, -d) unlimited
scheduling priority    (-e) 0
file size              (blocks, -f) unlimited
pending signals        (-i) 4124825
max locked memory      (kbytes, -l) 64
max memory size        (kbytes, -m) unlimited
open files             (-n) 1024
pipe size              (512 bytes, -p) 8
POSIX message queues   (bytes, -q) 819200
real-time priority     (-r) 0
stack size             (kbytes, -s) unlimited
cpu time               (seconds, -t) unlimited
max user processes     (-u) 4124825
virtual memory         (kbytes, -v) unlimited
file locks             (-x) unlimited

```

5. sysinfo process ancestry

```

/usr/lib/systemd/systemd --switched-root --system --deserialize 30
login -- root
-bash
-bash
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=240 -c
  ic2024.0.2-lin-sapphirerapids-rate-20231213.cfg --define smt-on --define cores=120 --define physicalfirst
  --define invoke_with_interleave --define drop_caches --tune base -o all fprate
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=240 --configfile
  ic2024.0.2-lin-sapphirerapids-rate-20231213.cfg --define smt-on --define cores=120 --define physicalfirst
  --define invoke_with_interleave --define drop_caches --tune base --output_format all --nopower --runmode
  rate --tune base --size refrate fprate --nopreenv --note-preenv --logfile
  $SPEC/tmp/CPU2017.001/templots/preenv.fprate.001.0.log --lognum 001.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/benchmark/speccpu-24.0

```

6. /proc/cpuinfo

```

model name      : INTEL(R) XEON(R) PLATINUM 8580
vendor_id      : GenuineIntel
cpu family     : 6
model          : 207
stepping       : 2
microcode      : 0x210001a0
bugs           : spectre_v1 spectre_v2 spec_store_bypass swapgs eibrs_pbrsb
cpu cores      : 60
siblings       : 120
2 physical ids (chips)
240 processors (hardware threads)
physical id 0: core ids 0-59
physical id 1: core ids 0-59
physical id 0: apicids 0-119
physical id 1: apicids 128-247

```

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Platform Notes (Continued)

Caution: /proc/cpuinfo data regarding chips, cores, and threads is not necessarily reliable, especially for virtualized systems. Use the above data carefully.

7. lscpu

From lscpu from util-linux 2.37.4:

```

Architecture:          x86_64
CPU op-mode(s):        32-bit, 64-bit
Address sizes:         46 bits physical, 57 bits virtual
Byte Order:            Little Endian
CPU(s):                240
On-line CPU(s) list:  0-239
Vendor ID:             GenuineIntel
Model name:            INTEL(R) XEON(R) PLATINUM 8580
CPU family:            6
Model:                 207
Thread(s) per core:   2
Core(s) per socket:   60
Socket(s):             2
Stepping:              2
CPU max MHz:           4000.0000
CPU min MHz:           800.0000
BogoMIPS:              4000.00
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 tsc_known_freq pni pclmulqdq dtes64 monitor
                        ds_cpl 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 cpuid_fault epb cat_l3 cat_l2 cdp_l3 invpcid_single
                        cdp_l2 ssbd mba ibrs ibpb stibp ibrs_enhanced fsgsbase tsc_adjust bmi1 hle
                        avx2 smep bmi2 erms invpcid rtm cqm rdt_a avx512f avx512dq rdseed adx smap
                        avx512ifma clflushopt clwb intel_pt avx512cd sha_ni avx512bw avx512vl
                        xsaveopt xsavec xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbm_total
                        cqm_mbm_local avx_vnni avx512_bf16 wbnoinvd dtherm ida arat pln pts hwp
                        hwp_act_window hwp_epp hwp_pkg_req avx512vbmi umip pku ospke waitpkg
                        avx512_vbmi2 gfni vaes vpclmulqdq avx512_vnni avx512_bitalg tme
                        avx512_vpopcntdq la57 rdpid bus_lock_detect cldemote movdiri movdir64b
                        enqcmd fsrm md_clear serialize tsxldtrk pconfig arch_lbr avx512_fp16
                        amx_tile flush_lld arch_capabilities

L1d cache:             5.6 MiB (120 instances)
L1i cache:             3.8 MiB (120 instances)
L2 cache:              240 MiB (120 instances)
L3 cache:              600 MiB (2 instances)
NUMA node(s):         4
NUMA node0 CPU(s):    0-29,120-149
NUMA node1 CPU(s):    30-59,150-179
NUMA node2 CPU(s):    60-89,180-209
NUMA node3 CPU(s):    90-119,210-239
Vulnerability Itlb multihit: Not affected
Vulnerability L1tf:    Not affected
Vulnerability Mds:     Not affected
Vulnerability Meltdown: Not affected
Vulnerability Mmio stale data: Not affected
Vulnerability Retbleed: Not affected
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; Enhanced IBRS, IBPB conditional, RSB filling, PBRBS-eIBRS SW
                        sequence

```

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Platform Notes (Continued)

Vulnerability Srbds: Not affected
Vulnerability Tsx async abort: Not affected

From lscpu --cache:

NAME	ONE-SIZE	ALL-SIZE	WAYS	TYPE	LEVEL	SETS	PHY-LINE	COHERENCY-SIZE
L1d	48K	5.6M	12	Data	1	64	1	64
L1i	32K	3.8M	8	Instruction	1	64	1	64
L2	2M	240M	16	Unified	2	2048	1	64
L3	300M	600M	20	Unified	3	245760	1	64

8. numactl --hardware

NOTE: a numactl 'node' might or might not correspond to a physical chip.

```

available: 4 nodes (0-3)
node 0 cpus: 0-29,120-149
node 0 size: 257577 MB
node 0 free: 256290 MB
node 1 cpus: 30-59,150-179
node 1 size: 258032 MB
node 1 free: 256915 MB
node 2 cpus: 60-89,180-209
node 2 size: 258032 MB
node 2 free: 256876 MB
node 3 cpus: 90-119,210-239
node 3 size: 257593 MB
node 3 free: 256333 MB
node distances:
node  0  1  2  3
0:  10  12  21  21
1:  12  10  21  21
2:  21  21  10  12
3:  21  21  12  10

```

9. /proc/meminfo

MemTotal: 1055986124 kB

10. who -r

run-level 3 Apr 4 17:47

11. Systemd service manager version: systemd 249 (249.16+suse.171.gdad0071f15)

Default Target	Status
multi-user	degraded

12. Failed units, from systemctl list-units --state=failed

UNIT	LOAD	ACTIVE	SUB	DESCRIPTION
* sep5.service	loaded	failed	failed	systemd script to load sep5 driver at boot time

13. Services, from systemctl list-unit-files

STATE	UNIT FILES
enabled	YaST2-Firstboot YaST2-Second-Stage apparmor appstream-sync-cache auditd bluetooth cron display-manager getty@ irqbalance issue-generator kbdsettings kdump kdump-early klog lvm2-monitor nscd postfix purge-kernels rollback rsyslog sep5 smartd sshd systemd-pstore wicked wickedd-auto4 wickedd-dhcp4 wickedd-dhcp6 wickedd-nanny
enabled-runtime	systemd-remount-fs
disabled	accounts-daemon autofsd autoyast-initscripts blk-availability bluetooth-mesh boot-sysctl

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Platform Notes (Continued)

```

ca-certificates chrony-wait chronyd console-getty cups cups-browsed debug-shell ebttables
exchange-bmc-os-info firewalld gpm grub2-once haveged haveged-switch-root ipmi ipmievdev
issue-add-ssh-keys kexec-load lunmask man-db-create multipathd nfs nfs-blkmap nmb
ostree-remount rpcbind rpmconfigcheck rsyncd rtkit-daemon serial-getty@
smartd_generate_opts smb snmpd snmptrapd speech-dispatcherd systemd-boot-check-no-failures
systemd-network-generator systemd-sysexit systemd-time-wait-sync systemd-timesyncd udisks2
update-system-flatpaks upower vncserver@
wickedd

```

indirect

14. Linux kernel boot-time arguments, from /proc/cmdline

```

BOOT_IMAGE=/boot/vmlinuz-5.14.21-150500.53-default
root=UUID=d177d129-775e-44ff-bf2a-8f0e7a7a7b1b
splash=silent
quiet
security=apparmor
crashkernel=401M,high
crashkernel=72M,low
mitigations=auto

```

15. cpupower frequency-info

```

analyzing CPU 0:
  current policy: frequency should be within 800 MHz and 4.00 GHz.
                  The governor "powersave" may decide which speed to use
                  within this range.

  boost state support:
    Supported: yes
    Active: yes

```

16. sysctl

```

kernel.numa_balancing          1
kernel.randomize_va_space      2
vm.compaction_proactiveness    20
vm.dirty_background_bytes      0
vm.dirty_background_ratio      10
vm.dirty_bytes                 0
vm.dirty_expire_centisecs     3000
vm.dirty_ratio                 20
vm.dirty_writeback_centisecs   500
vm.dirtytime_expire_seconds    43200
vm.extfrag_threshold           500
vm.min_unmapped_ratio         1
vm.nr_hugepages                0
vm.nr_hugepages_mempolicy      0
vm.nr_overcommit_hugepages     0
vm.swappiness                  60
vm.watermark_boost_factor      15000
vm.watermark_scale_factor      10
vm.zone_reclaim_mode           0

```

17. /sys/kernel/mm/transparent_hugepage

```

defrag          always defer defer+madvice [madvice] never
enabled         [always] madvice never
hpage_pmd_size  2097152
shmem_enabled   always within_size advise [never] deny force

```

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Platform Notes (Continued)

```
18. /sys/kernel/mm/transparent_hugepage/khugepaged
alloc_sleep_millisecs 60000
defrag 1
max_ptes_none 511
max_ptes_shared 256
max_ptes_swap 64
pages_to_scan 4096
scan_sleep_millisecs 10000
```

```
19. OS release
From /etc/*-release /etc/*-version
os-release SUSE Linux Enterprise Server 15 SP5
```

```
20. Disk information
SPEC is set to: /home/benchmark/speccpu-24.0
Filesystem Type Size Used Avail Use% Mounted on
/dev/sda2 btrfs 892G 67G 824G 8% /home
```

```
21. /sys/devices/virtual/dmi/id
Vendor: FUJITSU
Product: PRIMERGY RX2540 M7
Product Family: SERVER
Serial: EWCEXXXXXX
```

```
22. dmidecode
Additional information from dmidecode 3.4 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.
Memory:
16x Hynix HMCG94AGBRA181N 64 GB 2 rank 5600
```

```
23. BIOS
(This section combines info from /sys/devices and dmidecode.)
BIOS Vendor: FUJITSU
BIOS Version: V1.0.0.0 R2.1.2 for D3983-A1x
BIOS Date: 12/21/2023
BIOS Revision: 2.1
Firmware Revision: 2.36
```

Compiler Version Notes

```
=====  
C | 519.lbm_r(base) 538.imagick_r(base) 544.nab_r(base)  
=====
```

```
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213  
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.  
=====
```

```
=====  
C++ | 508.namd_r(base) 510.parest_r(base)  
=====
```

```
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213  
=====
```

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Compiler Version Notes (Continued)

Copyright (C) 1985-2023 Intel Corporation. All rights reserved.

=====
C++, C | 511.povray_r(base) 526.blender_r(base)
=====

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.

=====
C++, C, Fortran | 507.cactuBSSN_r(base)
=====

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213
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Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.
Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.

=====
Fortran | 503.bwaves_r(base) 549.fotonik3d_r(base) 554.roms_r(base)
=====

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.

=====
Fortran, C | 521.wrf_r(base) 527.cam4_r(base)
=====

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.

Base Compiler Invocation

C benchmarks:
icx

C++ benchmarks:
icpx

Fortran benchmarks:
ifx

Benchmarks using both Fortran and C:
ifx icx

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Base Compiler Invocation (Continued)

Benchmarks using both C and C++:

icpx icx

Benchmarks using Fortran, C, and C++:

icpx icx ifx

Base Portability Flags

```

503.bwaves_r: -DSPEC_LP64
507.cactuBSSN_r: -DSPEC_LP64
508.namd_r: -DSPEC_LP64
510.parest_r: -DSPEC_LP64
511.povray_r: -DSPEC_LP64
519.lbm_r: -DSPEC_LP64
521.wrf_r: -DSPEC_LP64 -DSPEC_CASE_FLAG -convert big_endian
526.blender_r: -DSPEC_LP64 -DSPEC_LINUX -funsigned-char
527.cam4_r: -DSPEC_LP64 -DSPEC_CASE_FLAG
538.imagick_r: -DSPEC_LP64
544.nab_r: -DSPEC_LP64
549.fotonik3d_r: -DSPEC_LP64
554.roms_r: -DSPEC_LP64

```

Base Optimization Flags

C benchmarks:

```

-w -std=c11 -m64 -Wl,-z,muldefs -xsapphirerapids -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-Wno-implicit-int -mprefer-vector-width=512 -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib

```

C++ benchmarks:

```

-w -std=c++14 -m64 -Wl,-z,muldefs -xsapphirerapids -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -mprefer-vector-width=512 -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib

```

Fortran benchmarks:

```

-w -m64 -Wl,-z,muldefs -xsapphirerapids -Ofast -ffast-math -flto
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-nostandard-realloc-lhs -align array32byte -auto -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib

```

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

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Fujitsu

PRIMERGY RX2540 M7, Intel Xeon Platinum 8580, 2.00GHz

SPECrate®2017_fp_base = 1160

SPECrate®2017_fp_peak = Not Run

CPU2017 License: 19

Test Sponsor: Fujitsu

Tested by: Fujitsu

Test Date: Apr-2024

Hardware Availability: Apr-2024

Software Availability: Dec-2023

Base Optimization Flags (Continued)

Benchmarks using both Fortran and C:

```
-w -m64 -std=c11 -Wl,-z,muldefs -xsapphirerapids -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-Wno-implicit-int -mprefer-vector-width=512 -nostandard-realloc-lhs
-align array32byte -auto -ljemalloc -L/usr/local/jemalloc64-5.0.1/lib
```

Benchmarks using both C and C++:

```
-w -std=c++14 -m64 -std=c11 -Wl,-z,muldefs -xsapphirerapids -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -Wno-implicit-int -mprefer-vector-width=512
-ljemalloc -L/usr/local/jemalloc64-5.0.1/lib
```

Benchmarks using Fortran, C, and C++:

```
-w -m64 -std=c++14 -std=c11 -Wl,-z,muldefs -xsapphirerapids -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -Wno-implicit-int -mprefer-vector-width=512
-nostandard-realloc-lhs -align array32byte -auto -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib
```

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

<http://www.spec.org/cpu2017/flags/Fujitsu-Platform-Settings-V1.0-EMR-RevD.html>

<http://www.spec.org/cpu2017/flags/Intel-ic2024-official-linux64.html>

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

<http://www.spec.org/cpu2017/flags/Fujitsu-Platform-Settings-V1.0-EMR-RevD.xml>

<http://www.spec.org/cpu2017/flags/Intel-ic2024-official-linux64.xml>

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

Tested with SPEC CPU®2017 v1.1.9 on 2024-04-04 10:47:58-0400.

Report generated on 2024-05-21 19:30:27 by CPU2017 PDF formatter v6716.

Originally published on 2024-05-21.