SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY RX1440 M2,
AMD EPYC 9255, 3.20 GHz

SPECrate®2017_int_base =   346

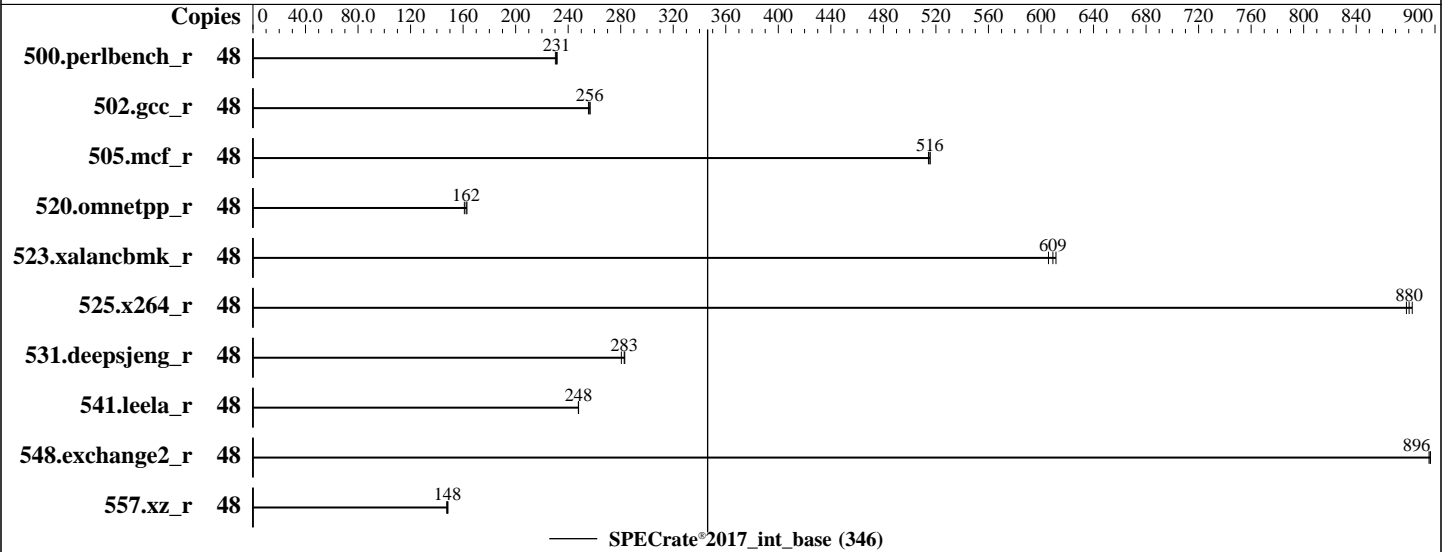SPECrate®2017_int_peak = Not Run

CPU2017 License: 19

Test Sponsor: Fujitsu

Tested by: Fujitsu

Test Date: Jan-2025

Hardware Availability: Apr-2025

Software Availability: Sep-2024

Benchmark	Copies	Result
500.perlbench_r	48	231
502.gcc_r	48	256
505.mcf_r	48	516
520.omnetpp_r	48	162
523.xalancbmk_r	48	609
525.x264_r	48	880
531.deepsjeng_r	48	283
541.leela_r	48	248
548.exchange2_r	48	896
557.xz_r	48	148

SPECrate®2017_int_base (346)

Hardware

CPU Name: AMD EPYC 9255
  Max MHz: 4300
  Nominal: 3200
Enabled: 24 cores, 1 chip, 2 threads/core
Orderable: 1 chip
Cache L1: 32 KB I + 48 KB D on chip per core
  L2:   1 MB I+D on chip per core
  L3:   128 MB I+D on chip per chip, 32 MB shared / 6 cores
Other: None
Memory: 384 GB (12 x 32 GB 2Rx8 PC5-5600B-R, running at 4800)
Storage: 1 x SATA SSD, 960 GB
Other: CPU Cooling: Air

Software

OS: SUSE Linux Enterprise Server 15 SP6 kernel version 6.4.0-150600.21-default
Compiler: C/C++/Fortran: Version 5.0.0 of AOCC
Parallel: No
Firmware: Fujitsu BIOS Version V5.0.0.35 R2.4.0 for D4130-A1x. Released Feb-2025 tested as V5.0.0.35 R2.3.0_PI-1003 for D4130-A1x Dec-2024
File System: xfs
System State: Run level 3 (multi-user)
Base Pointers: 64-bit
Peak Pointers: Not Applicable
Other: None
Power Management: BIOS set to prefer performance at the cost of aditional power usage

SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY RX1440 M2,
AMD EPYC 9255, 3.20 GHz

SPECrate®2017_int_base =   346

SPECrate®2017_int_peak = Not Run

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

Test Date: Jan-2025
Hardware Availability: Apr-2025
Software Availability: Sep-2024

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
500.perlbench_r	48	**331**	**231**	332	230	330	232							
502.gcc_r	48	**265**	**256**	266	255	265	257							
505.mcf_r	48	150	516	151	514	**150**	**516**							
520.omnetpp_r	48	391	161	386	163	**388**	**162**							
523.xalancbmk_r	48	83.7	606	**83.2**	**609**	82.9	611							
525.x264_r	48	95.2	883	**95.5**	**880**	95.7	878							
531.deepsjeng_r	48	**195**	**283**	196	280	194	283							
541.leela_r	48	321	248	**321**	**248**	321	248							
548.exchange2_r	48	**140**	**896**	140	897	140	895							
557.xz_r	48	351	147	349	148	**350**	**148**							
SPECrate®2017_int_base =		**346**												
SPECrate®2017_int_peak =		**Not Run**												

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

Compiler Notes

```
The AMD64 AOCC Compiler Suite is available at
http://developer.amd.com/amd-aocc/
```

Submit Notes

```
The config file option 'submit' was used.
'numactl' was used to bind copies to the cores.
See the configuration file for details.
```

Operating System Notes

```
'ulimit -s unlimited' was used to set environment stack size limit
'ulimit -l 2097152' was used to set environment locked pages in memory limit

runcpu command invoked through numactl i.e.:
numactl --interleave=all runcpu <etc>

To limit dirty cache to 8% of memory, 'sysctl -w vm.dirty_ratio=8' run as root.
To limit swap usage to minimum necessary, 'sysctl -w vm.swappiness=1' run as root.
To free node-local memory and avoid remote memory usage,
'sysctl -w vm.zone_reclaim_mode=1' run as root.
To clear filesystem caches, 'sync; sysctl -w vm.drop_caches=3' run as root.
To disable address space layout randomization (ASLR) to reduce run-to-run
variability, 'sysctl -w kernel.randomize_va_space=0' run as root.

To enable Transparent Hugepages (THP) for all allocations,
'echo always > /sys/kernel/mm/transparent_hugepage/enabled' and
'echo always > /sys/kernel/mm/transparent_hugepage/defrag' run as root.
```

Standard Performance Evaluation Corporation (info@spec.org)   https://www.spec.org/

SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY RX1440 M2,
AMD EPYC 9255, 3.20 GHz

SPECrate®2017_int_base =   346

SPECrate®2017_int_peak = Not Run

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

Test Date: Jan-2025
Hardware Availability: Apr-2025
Software Availability: Sep-2024

Environment Variables Notes

```
Environment variables set by runcpu before the start of the run:
LD_LIBRARY_PATH =
    "/home/Benchmark/speccpu2017r-Turin/amd_rate_aocc500_znver5_A_lib/lib:/home/Benchmark/speccpu2017r-Tur
    in/amd_rate_aocc500_znver5_A_lib/lib32:"
MALLOC_CONF = "retain:true"
```

General Notes

```
Binaries were compiled on a system with 2x AMD EPYC 9174F CPU + 1.5TiB Memory using RHEL 8.6

NA: 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:
Determinism Slider = Power
TDP Control = Manual
TDP Limit = 240
Package Power Limit Control = Manual
Package Power Limit = 240
Power Profile Selection = High Performance
NUMA nodes per socket = NPS4
Probe Filter Organization = Shared
Interleaving Region Size = 2K Region Size
FAN Control = Full


 Sysinfo program /home/Benchmark/speccpu2017r-Turin/bin/sysinfo
 Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
 running on localhost Mon Apr 22 21:02:26 2024

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

 ------------------------------------------------------------
 Table of contents
 ------------------------------------------------------------
  1. uname -a
  2. w
  3. Username
  4. ulimit -a
  5. sysinfo process ancestry
  6. /proc/cpuinfo
  7. lscpu
  8. numactl --hardware
  9. /proc/meminfo
 10. who -r
 11. Systemd service manager version: systemd 254 (254.10+suse.84.ge8d77af424)
 12. Services, from systemctl list-unit-files
 13. Linux kernel boot-time arguments, from /proc/cmdline
 14. cpupower frequency-info
 15. sysctl
```

(Continued on next page)

Fujitsu

PRIMERGY RX1440 M2,
AMD EPYC 9255, 3.20 GHz

SPECrate®2017_int_base =   346

SPECrate®2017_int_peak = Not Run

CPU2017 License: 19

Test Sponsor: Fujitsu

Tested by: Fujitsu

Test Date: Jan-2025

Hardware Availability: Apr-2025

Software Availability: Sep-2024

Platform Notes (Continued)

```
 16. /sys/kernel/mm/transparent_hugepage
 17. /sys/kernel/mm/transparent_hugepage/khugepaged
 18. OS release
 19. Disk information
 20. /sys/devices/virtual/dmi/id
 21. dmidecode
 22. BIOS
    ------------------------------------------------------------


    ------------------------------------------------------------
 1. uname -a
   Linux localhost 6.4.0-150600.21-default #1 SMP PREEMPT_DYNAMIC Thu May 16 11:09:22 UTC 2024 (36c1e09)
   x86_64 x86_64 x86_64 GNU/Linux


    ------------------------------------------------------------
 2. w
    21:02:26 up 2 min,  1 user,  load average: 0.34, 0.35, 0.15
   USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU WHAT
   root     tty1     -                21:00    9.00s  0.87s  0.04s /bin/bash ./amd_rate_aocc500_znver5_A1.sh


    ------------------------------------------------------------
 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) 1542956
   max locked memory       (kbytes, -l) 2097152
   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) 1542956
   virtual memory          (kbytes, -v) unlimited
   file locks                      (-x) unlimited


    ------------------------------------------------------------
 5. sysinfo process ancestry
  /usr/lib/systemd/systemd --switched-root --system --deserialize=42
  login -- root
  -bash
  python3 ./run_amd_intrate_aocc500_znver5_A1_3l.py
  /bin/bash ./amd_rate_aocc500_znver5_A1.sh
  runcpu --config amd_rate_aocc500_znver5_A1.cfg --tune base --reportable --iterations 3 intrate
  runcpu --configfile amd_rate_aocc500_znver5_A1.cfg --tune base --reportable --iterations 3 --nopower
    --runmode rate --tune base --size test:train:refrate intrate --nopreenv --note-preenv --logfile
    $SPEC/tmp/CPU2017.001/templogs/preenv.intrate.001.0.log --lognum 001.0 --from_runcpu 2
  specperl $SPEC/bin/sysinfo
  $SPEC = /home/Benchmark/speccpu2017r-Turin


    ------------------------------------------------------------
 6. /proc/cpuinfo
     model name      : AMD EPYC 9255 24-Core Processor
```

(Continued on next page)

Fujitsu

PRIMERGY RX1440 M2,
AMD EPYC 9255, 3.20 GHz

SPECrate®2017_int_base =   346

SPECrate®2017_int_peak = Not Run

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

Test Date: Jan-2025
Hardware Availability: Apr-2025
Software Availability: Sep-2024

Platform Notes (Continued)

```
      vendor_id        : AuthenticAMD
      cpu family       : 26
      model            : 2
      stepping         : 1
      microcode        : 0xb00211e
      bugs             : sysret_ss_attrs spectre_v1 spectre_v2 spec_store_bypass
      TLB size         : 192 4K pages
      cpu cores        : 24
      siblings         : 48
      1 physical ids (chips)
      48 processors (hardware threads)
      physical id 0: core ids 0-5,8-13,16-21,24-29
      physical id 0: apicids 0-11,16-27,32-43,48-59
   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 2.39.3:
     Architecture:             x86_64
     CPU op-mode(s):           32-bit, 64-bit
     Address sizes:            52 bits physical, 57 bits virtual
     Byte Order:               Little Endian
     CPU(s):                   48
     On-line CPU(s) list:      0-47
     Vendor ID:                AuthenticAMD
     BIOS Vendor ID:           Advanced Micro Devices, Inc.
     Model name:               AMD EPYC 9255 24-Core Processor
     BIOS Model name:          AMD EPYC 9255 24-Core Processor                 Unknown CPU @ 3.2GHz
     BIOS CPU family:          107
     CPU family:               26
     Model:                    2
     Thread(s) per core:       2
     Core(s) per socket:       24
     Socket(s):                1
     Stepping:                 1
     Frequency boost:          enabled
     CPU(s) scaling MHz:       39%
     CPU max MHz:              4315.6250
     CPU min MHz:              1500.0000
     BogoMIPS:                 6390.16
     Flags:                    fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat
                               pse36 clflush mmx fxsr sse sse2 ht syscall nx mmxext fxsr_opt pdpe1gb
                               rdtscp lm constant_tsc rep_good amd_lbr_v2 nopl nonstop_tsc cpuid
                               extd_apicid aperfmperf rapl pni pclmulqdq monitor ssse3 fma cx16 pcid
                               sse4_1 sse4_2 x2apic movbe popcnt aes xsave avx f16c rdrand lahf_lm
                               cmp_legacy svm extapic cr8_legacy abm sse4a misalignsse 3dnowprefetch
                               osvw ibs skinit wdt tce topoext perfctr_core perfctr_nb bpext
                               perfctr_llc mwaitx cpb cat_l3 cdp_l3 hw_pstate ssbd mba perfmon_v2
                               ibrs ibpb stibp ibrs_enhanced vmmcall fsgsbase tsc_adjust bmi1 avx2
                               smep bmi2 erms invpcid cqm rdt_a avx512f avx512dq rdseed adx smap
                               avx512ifma clflushopt clwb avx512cd sha_ni avx512bw avx512vl xsaveopt
                               xsavec xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbm_total
                               cqm_mbm_local user_shstk avx_vnni avx512_bf16 clzero irperf
                               xsaveerptr rdpru wbnoinvd amd_ppin cppc arat npt lbrv svm_lock
                               nrip_save tsc_scale vmcb_clean flushbyasid decodeassists pausefilter
                               pfthreshold avic v_vmsave_vmload vgif x2avic v_spec_ctrl vnmi
                               avx512vbmi umip pku ospke avx512_vbmi2 gfni vaes vpclmulqdq
                               avx512_vnni avx512_bitalg avx512_vpopcntdq la57 rdpid bus_lock_detect
```

(Continued on next page)

Fujitsu

PRIMERGY RX1440 M2,
AMD EPYC 9255, 3.20 GHz

SPECrate®2017_int_base =   346

SPECrate®2017_int_peak = Not Run

CPU2017 License: 19

Test Sponsor: Fujitsu

Tested by: Fujitsu

Test Date: Jan-2025

Hardware Availability: Apr-2025

Software Availability: Sep-2024

Platform Notes (Continued)

```
                            movdiri movdir64b overflow_recov succor smca fsrm avx512_vp2intersect
                            flush_l1d debug_swap
  Virtualization:           AMD-V
  L1d cache:                1.1 MiB (24 instances)
  L1i cache:                768 KiB (24 instances)
  L2 cache:                 24 MiB (24 instances)
  L3 cache:                 128 MiB (4 instances)
  NUMA node(s):             4
  NUMA node0 CPU(s):        0-5,24-29
  NUMA node1 CPU(s):        6-11,30-35
  NUMA node2 CPU(s):        12-17,36-41
  NUMA node3 CPU(s):        18-23,42-47
  Vulnerability Gather data sampling:  Not affected
  Vulnerability Itlb multihit:         Not affected
  Vulnerability L1tf:                  Not affected
  Vulnerability Mds:                   Not affected
  Vulnerability Meltdown:              Not affected
  Vulnerability Mmio stale data:       Not affected
  Vulnerability Reg file data sampling: Not affected
  Vulnerability Retbleed:              Not affected
  Vulnerability Spec rstack overflow:  Not affected
  Vulnerability Spec store bypass:     Mitigation; Speculative Store Bypass disabled via prctl
  Vulnerability Spectre v1:            Mitigation; usercopy/swapgs barriers and __user pointer sanitization
  Vulnerability Spectre v2:            Mitigation; Enhanced / Automatic IBRS; IBPB conditional; STIBP
                                       always-on; RSB filling; PBRSB-eIBRS Not affected; BHI Not affected
  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     1.1M   12 Data          1    64       1             64
    L1i      32K     768K    8 Instruction   1    64       1             64
    L2        1M      24M   16 Unified       2  1024       1             64
    L3       32M     128M   16 Unified       3 32768       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: 0-5,24-29
  node 0 size: 95937 MB
  node 0 free: 95193 MB
  node 1 cpus: 6-11,30-35
  node 1 size: 96764 MB
  node 1 free: 96306 MB
  node 2 cpus: 12-17,36-41
  node 2 size: 96726 MB
  node 2 free: 96299 MB
  node 3 cpus: 18-23,42-47
  node 3 size: 96337 MB
  node 3 free: 95903 MB
  node distances:
  node   0   1   2   3
    0:  10  12  12  12
    1:  12  10  12  12
    2:  12  12  10  12
    3:  12  12  12  10

    ------------------------------------------------------------
9. /proc/meminfo
```

(Continued on next page)

Fujitsu

SPECrate®2017_int_base = 346

PRIMERGY RX1440 M2,
AMD EPYC 9255, 3.20 GHz

SPECrate®2017_int_peak = Not Run

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

Test Date: Jan-2025
Hardware Availability: Apr-2025
Software Availability: Sep-2024

Platform Notes (Continued)

```
    MemTotal:       395023592 kB


    ----------------------------------------------------------
    10. who -r
      run-level 3 Apr 22 21:00


    ----------------------------------------------------------
    11. Systemd service manager version: systemd 254 (254.10+suse.84.ge8d77af424)
      Default Target  Status
      multi-user      running


    ----------------------------------------------------------
    12. Services, from systemctl list-unit-files
      STATE             UNIT FILES
      enabled           YaST2-Firstboot YaST2-Second-Stage apparmor auditd cron display-manager getty@ irqbalance
                        iscsi issue-generator kbdsettings kdump kdump-early kdump-notify klog lvm2-monitor nscd
                        postfix purge-kernels rollback rsyslog smartd sshd systemd-pstore virtqemud wicked
                        wickedd-auto4 wickedd-dhcp4 wickedd-dhcp6 wickedd-nanny
      enabled-runtime   systemd-remount-fs
      disabled          autofs autoyast-initscripts blk-availability boot-sysctl ca-certificates chrony-wait
                        chronyd console-getty cups cups-browsed debug-shell dnsmasq ebtables exchange-bmc-os-info
                        firewalld fsidd gpm grub2-once haveged hwloc-dump-hwdata ipmi ipmievd iscsi-init iscsid
                        issue-add-ssh-keys kexec-load ksm kvm_stat libvirt-guests lunmask man-db-create multipathd
                        nfs nfs-blkmap nfs-server nfsserver rpcbind rpmconfigcheck rsyncd serial-getty@
                        smartd_generate_opts snmpd snmptrapd strongswan strongswan-starter svnserve
                        systemd-boot-check-no-failures systemd-confext systemd-network-generator systemd-nspawn@
                        systemd-sysext systemd-time-wait-sync systemd-timesyncd tcsd udisks2 virtinterfaced
                        virtlockd virtlogd virtnetworkd virtnodedevd virtnwfilterd virtsecretd virtstoraged
                        vncserver@
      indirect          pcscd systemd-userdbd tftp wickedd


    ----------------------------------------------------------
    13. Linux kernel boot-time arguments, from /proc/cmdline
      BOOT_IMAGE=/boot/vmlinuz-6.4.0-150600.21-default
      root=UUID=803d1916-887f-4e1e-bc36-a1ab2542d352
      splash=silent
      resume=/dev/disk/by-uuid/ff08e126-00b4-4583-943a-09584dbe7c67
      mitigations=auto
      quiet
      security=apparmor
      crashkernel=369M,high
      crashkernel=72M,low


    ----------------------------------------------------------
    14. cpupower frequency-info
      analyzing CPU 16:
        current policy: frequency should be within 1.50 GHz and 3.20 GHz.
                        The governor "ondemand" may decide which speed to use
                        within this range.
        boost state support:
          Supported: yes
          Active: yes


    ----------------------------------------------------------
    15. sysctl
      kernel.numa_balancing            1
      kernel.randomize_va_space        0
      vm.compaction_proactiveness      20
      vm.dirty_background_bytes        0
      vm.dirty_background_ratio        10
```

(Continued on next page)

Fujitsu

PRIMERGY RX1440 M2,
AMD EPYC 9255, 3.20 GHz

SPECrate®2017_int_base =   346

SPECrate®2017_int_peak = Not Run

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

Test Date: Jan-2025
Hardware Availability: Apr-2025
Software Availability: Sep-2024

Platform Notes (Continued)

```
   vm.dirty_bytes                      0
   vm.dirty_expire_centisecs        3000
   vm.dirty_ratio                      8
   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                       1
   vm.watermark_boost_factor       15000
   vm.watermark_scale_factor          10
   vm.zone_reclaim_mode                1


   ----------------------------------------------------------
16. /sys/kernel/mm/transparent_hugepage
   defrag          [always] defer defer+madvise madvise never
   enabled         [always] madvise never
   hpage_pmd_size  2097152
   shmem_enabled   always within_size advise [never] deny force


   ----------------------------------------------------------
17. /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


   ----------------------------------------------------------
18. OS release
   From /etc/*-release /etc/*-version
   os-release SUSE Linux Enterprise Server 15 SP6


   ----------------------------------------------------------
19. Disk information
SPEC is set to: /home/Benchmark/speccpu2017r-Turin
   Filesystem      Type  Size  Used Avail Use% Mounted on
   /dev/sda3       xfs   476G   33G  444G   7% /home


   ----------------------------------------------------------
20. /sys/devices/virtual/dmi/id
     Vendor:         FUJITSU
     Product:        PRIMERGY RX1440 M2
     Product Family: SERVER
     Serial:         XXXXXXXXXX


   ----------------------------------------------------------
21. 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:
     12x Samsung M321R4GA3PB0-CWMKH 32 GB 2 rank 5600, configured at 4800
```

(Continued on next page)

SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY RX1440 M2,
AMD EPYC 9255, 3.20 GHz

SPECrate®2017_int_base =   346

SPECrate®2017_int_peak = Not Run

Platform Notes (Continued)

```
------------------------------------------------------------
22. BIOS
(This section combines info from /sys/devices and dmidecode.)
   BIOS Vendor:       FUJITSU // American Megatrends Inc.
   BIOS Version:      V5.0.0.35 R2.3.0_PI-1003 for D4130-A1x
   BIOS Date:         12/24/2024
   BIOS Revision:     2.3
   Firmware Revision: 2.47
```

Compiler Version Notes

```
==============================================================================
C       | 500.perlbench_r(base) 502.gcc_r(base) 505.mcf_r(base) 525.x264_r(base) 557.xz_r(base)
------------------------------------------------------------------------------
AMD clang version 17.0.6 (CLANG: AOCC_5.0.0-Build#1316 2024_09_09)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-5.0.0-4925-1316/bin
------------------------------------------------------------------------------


==============================================================================
C++     | 520.omnetpp_r(base) 523.xalancbmk_r(base) 531.deepsjeng_r(base) 541.leela_r(base)
------------------------------------------------------------------------------
AMD clang version 17.0.6 (CLANG: AOCC_5.0.0-Build#1316 2024_09_09)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-5.0.0-4925-1316/bin
------------------------------------------------------------------------------


==============================================================================
Fortran | 548.exchange2_r(base)
------------------------------------------------------------------------------
AMD clang version 17.0.6 (CLANG: AOCC_5.0.0-Build#1316 2024_09_09)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-5.0.0-4925-1316/bin
------------------------------------------------------------------------------
```

Base Compiler Invocation

C benchmarks:
```
clang
```

C++ benchmarks:
```
clang++
```

Fortran benchmarks:
```
flang
```

SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY RX1440 M2,
AMD EPYC 9255, 3.20 GHz

SPECrate®2017_int_base =   346

SPECrate®2017_int_peak = Not Run

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

Test Date: Jan-2025
Hardware Availability: Apr-2025
Software Availability: Sep-2024

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 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3
-Wl,-mllvm -Wl,-ldist-scalar-expand -fenable-aggressive-gather
-Wl,-mllvm -Wl,-extra-inliner -z muldefs -O3 -march=znver5
-fveclib=AMDLIBM -ffast-math -fno-PIE -no-pie -flto
-fstruct-layout=7 -mllvm -unroll-threshold=50
-mllvm -inline-threshold=1000 -fremap-arrays -fstrip-mining
-mllvm -reduce-array-computations=3 -zopt -lamdlibm -lflang
-lamdalloc-ext -ldl
```

C++ benchmarks:
```
-m64 -std=c++14 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3
-Wl,-mllvm -Wl,-do-block-reorder=advanced -z muldefs -O3 -march=znver5
-fveclib=AMDLIBM -ffast-math -flto -mllvm -unroll-threshold=100
-mllvm -loop-unswitch-threshold=200000
-mllvm -reduce-array-computations=3 -zopt -fno-PIE -no-pie
-fvirtual-function-elimination -fvisibility=hidden
-mllvm -do-block-reorder=advanced -lamdlibm -lflang -lamdalloc-ext
-ldl
```

Fortran benchmarks:
```
-m64 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3
-Wl,-mllvm -Wl,-inline-recursion=4 -Wl,-mllvm -Wl,-lsr-in-nested-loop
-Wl,-mllvm -Wl,-enable-iv-split -z muldefs -O3 -march=znver5
-fveclib=AMDLIBM -ffast-math -flto
-fepilog-vectorization-of-inductions -mllvm -optimize-strided-mem-cost
-floop-transform -mllvm -unroll-aggressive -mllvm -unroll-threshold=500
-lamdlibm -lflang -lamdalloc -ldl
```

Fujitsu

PRIMERGY RX1440 M2,
AMD EPYC 9255, 3.20 GHz

SPECrate®2017_int_base = 346

SPECrate®2017_int_peak = Not Run

CPU2017 License:	19	**Test Date:**	Jan-2025
Test Sponsor:	Fujitsu	**Hardware Availability:**	Apr-2025
Tested by:	Fujitsu	**Software Availability:**	Sep-2024

Base Other Flags

C benchmarks:

`-Wno-unused-command-line-argument`

C++ benchmarks:

`-Wno-unused-command-line-argument`

Fortran benchmarks:

`-Wno-unused-command-line-argument`

The flags files that were used to format this result can be browsed at
`http://www.spec.org/cpu2017/flags/aocc500-flags.2024-10-10.00.html`
`http://www.spec.org/cpu2017/flags/Fujitsu-Platform-Settings-V1.0-Turin-RevB.html`

You can also download the XML flags sources by saving the following links:
`http://www.spec.org/cpu2017/flags/aocc500-flags.2024-10-10.00.xml`
`http://www.spec.org/cpu2017/flags/Fujitsu-Platform-Settings-V1.0-Turin-RevB.xml`

SPEC CPU and SPECrate are registered trademarks 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 CPU®2017 v1.1.9 on 2024-04-22 08:02:25-0400.
Report generated on 2025-04-09 14:58:42 by CPU2017 PDF formatter v6716.
Originally published on 2025-04-09.