## SPEC CPU®2017 Integer Rate Result

**Dell Inc.**

PowerEdge R6625 (AMD EPYC 9374F 32-Core Processor)

<table>
<thead>
<tr>
<th>SPECrate®2017_int_base = 814</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECrate®2017_int_peak = Not Run</td>
</tr>
</tbody>
</table>

### CPU2017 License: 6573

- **Test Sponsor:** Dell Inc.
- **Tested by:** Dell Inc.

### Test Date: Dec-2022

- **Hardware Availability:** Feb-2023
- **Software Availability:** Nov-2022

### Hardware

- **CPU Name:** AMD EPYC 9374F
- **Max MHz:** 4300
- **Nominal:** 3850
- **Enabled:** 64 cores, 2 chips, 2 threads/core
- **Orderable:** 1.2 chips
- **Cache L1:** 32 KB I + 32 KB D on chip per core
- **L2:** 1 MB I+D on chip per core
- **L3:** 256 MB I+D on chip per chip, 32 MB shared / 4 cores
- **Other:** None
- **Memory:** 1536 GB (24 x 64 GB 2Rx4 PC5-4800B-R)
- **Storage:** 125 GB on tmpfs
- **Other:** None

### Software

- **OS:** Ubuntu 22.04.1 LTS
- **Version:** 5.15.0-46-generic
- **Compiler:** C/C++/Fortran: Version 4.0.0 of AOCC
- **Parallel:** No
- **Firmware:** Version 1.1.0 released Nov-2022
- **File System:** tmpfs
- **System State:** Run level 3 (multi-user)
- **Base Pointers:** 64-bit
- **Peak Pointers:** Not Applicable
- **Other:** None
- **Power Management:** BIOS and OS set to prefer performance at the cost of additional power usage.

### SPECrate®2017 Results

<table>
<thead>
<tr>
<th>Program</th>
<th>Copies</th>
<th>SPECrate®2017_int_base (814)</th>
</tr>
</thead>
<tbody>
<tr>
<td>500.perlbench_r</td>
<td>128</td>
<td>575</td>
</tr>
<tr>
<td>502.gcc_r</td>
<td>128</td>
<td>690</td>
</tr>
<tr>
<td>505.mcf_r</td>
<td>128</td>
<td>1180</td>
</tr>
<tr>
<td>520.omnetpp_r</td>
<td>128</td>
<td>401</td>
</tr>
<tr>
<td>523.xalancbmk_r</td>
<td>128</td>
<td>1080</td>
</tr>
<tr>
<td>525.x264_r</td>
<td>128</td>
<td>1980</td>
</tr>
<tr>
<td>531.deepsjeng_r</td>
<td>128</td>
<td>661</td>
</tr>
<tr>
<td>541.leela_r</td>
<td>128</td>
<td>648</td>
</tr>
<tr>
<td>548.exchange2_r</td>
<td>128</td>
<td>1880</td>
</tr>
<tr>
<td>557.xz_r</td>
<td>128</td>
<td>395</td>
</tr>
</tbody>
</table>
Dell Inc.

PowerEdge R6625 (AMD EPYC 9374F 32-Core Processor)

**SPECrate®2017_int_base = 814**

**SPECrate®2017_int_peak = Not Run**

---

### Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>500.perlbench_r</td>
<td>128</td>
<td>354</td>
<td>575</td>
<td>354</td>
<td>576</td>
<td></td>
<td></td>
</tr>
<tr>
<td>502.gcc_r</td>
<td>128</td>
<td>262</td>
<td>693</td>
<td>263</td>
<td>690</td>
<td></td>
<td></td>
</tr>
<tr>
<td>505.mcf_r</td>
<td>128</td>
<td>175</td>
<td>1180</td>
<td>175</td>
<td>1180</td>
<td></td>
<td></td>
</tr>
<tr>
<td>520.omnetpp_r</td>
<td>128</td>
<td>415</td>
<td>405</td>
<td>419</td>
<td>401</td>
<td></td>
<td></td>
</tr>
<tr>
<td>523.xalancbmk_r</td>
<td>128</td>
<td>125</td>
<td>1080</td>
<td>124</td>
<td>1090</td>
<td></td>
<td></td>
</tr>
<tr>
<td>525.x264_r</td>
<td>128</td>
<td>113</td>
<td>1980</td>
<td>113</td>
<td>1980</td>
<td></td>
<td></td>
</tr>
<tr>
<td>531.deepsjeng_r</td>
<td>128</td>
<td>220</td>
<td>667</td>
<td>222</td>
<td>661</td>
<td></td>
<td></td>
</tr>
<tr>
<td>541.leela_r</td>
<td>128</td>
<td>326</td>
<td>650</td>
<td>327</td>
<td>648</td>
<td></td>
<td></td>
</tr>
<tr>
<td>548.exchange2_r</td>
<td>128</td>
<td>178</td>
<td>1880</td>
<td>179</td>
<td>1880</td>
<td></td>
<td></td>
</tr>
<tr>
<td>557.xz_r</td>
<td>128</td>
<td>349</td>
<td>396</td>
<td>350</td>
<td>395</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

### 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.

(Continued on next page)
Dell Inc. | SPECrate®2017_int_base = 814
---|---
PowerEdge R6625 (AMD EPYC 9374F 32-Core Processor) | SPECrate®2017_int_peak = Not Run

**CPU2017 License:** 6573  
**Test Sponsor:** Dell Inc.  
**Tested by:** Dell Inc.  
**Test Date:** Dec-2022  
**Hardware Availability:** Feb-2023  
**Software Availability:** Nov-2022

---

**Operating System Notes (Continued)**

To enable Transparent Hugepages (THP) only on request for base runs, 
'echo madvise > /sys/kernel/mm/transparent_hugepage/enabled' run as root.  
To enable THP for all allocations for peak runs, 
'echo always > /sys/kernel/mm/transparent_hugepage/enabled' and 
'echo always > /sys/kernel/mm/transparent_hugepage/defrag' run as root.

---

**Environment Variables Notes**

Environment variables set by runcpu before the start of the run:
LD_LIBRARY_PATH =  
"/mnt/ramdisk/cpu2017-1.1.8-aocc400-B1b/amd_rate_aocc400_genoa_B_lib/lib :/mnt/ramdisk/cpu2017-1.1.8-aocc400-B1b/amd_rate_aocc400_genoa_B_lib/lib 32:"  
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.

Benchmark run from a 125 GB ramdisk created with the cmd: "mount -t tmpfs -o size=125G tmpfs /mnt/ramdisk"

---

**Platform Notes**

BIOS settings:
  DRAM Refresh Delay : Performance  
  DIMM Self Healing on  
  Uncorrectable Memory Error : Disabled  
  Virtualization Technology : Disabled  
  NUMA Nodes per Socket : 4  
  L3 Cache as NUMA Domain : Enabled

  System Profile : Custom  
  Memory Patrol Scrub : Disabled

(Continued on next page)
**SPEC CPU® 2017 Integer Rate Result**

Dell Inc.  
PowerEdge R6625 (AMD EPYC 9374F 32-Core Processor)

<table>
<thead>
<tr>
<th>Spec CPU® 2017 int_base</th>
<th>814</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spec CPU® 2017 int_peak</td>
<td>Not Run</td>
</tr>
</tbody>
</table>

**CPU2017 License:** 6573  
**Test Sponsor:** Dell Inc.  
**Tested by:** Dell Inc.

**Test Date:** Dec-2022  
**Hardware Availability:** Feb-2023  
**Software Availability:** Nov-2022

Platform Notes (Continued)

PCI ASPM L1 Link  
Power Management : Disabled  
Determinism Slider : Power Determinism

Sysinfo program /mnt/ramdisk/cpu2017-1.1.8-aoccc400-B1b/bin/sysinfo  
Rev: r6622 of 2021-04-07 982a61ec0915b5f5b5891ef0e16a3cf64d  
running on amd-sut Mon Dec 12 19:42:04 2022

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 : AMD EPYC 9374F 32-Core Processor
    2 "physical id"s (chips)
    128 "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 : 32
    siblings : 64
    physical 0: cores 0 1 2 3 8 9 10 11 16 17 18 19 24 25 26 27 32 33 34 35 40 41 42 43
                  48 49 50 51 56 57 58 59
    physical 1: cores 0 1 2 3 8 9 10 11 16 17 18 19 24 25 26 27 32 33 34 35 40 41 42 43
                  48 49 50 51 56 57 58 59
```

From lscpu from util-linux 2.37.2:

```
    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):                          128
    On-line CPU(s) list:             0-127
    Vendor ID:                       AuthenticAMD
    Model name:                      AMD EPYC 9374F 32-Core Processor
    CPU family:                      25
    Model:                           17
    Thread(s) per core:              2
    Core(s) per socket:              32
    Socket(s):                       2
    Stepping:                        1
    Frequency boost:                 enabled
    CPU max MHz:                     4306.0000
    CPU min MHz:                     400.0000
    BogoMIPS:                        7702.25
    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 nopl nonstop_tsc cpuid extd_apicid
```

(Continued on next page)
### SPEC CPU®2017 Integer Rate Result

**Dell Inc.**

**PowerEdge R6625 (AMD EPYC 9374F 32-Core Processor)**

<table>
<thead>
<tr>
<th>CPU2017 License:</th>
<th>Dell Inc.</th>
<th>Test Sponsor:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tested by:</td>
<td>Dell Inc.</td>
<td>Hardware Availability:</td>
</tr>
</tbody>
</table>

**SPECrate®2017_int_base = 814**

**SPECrate®2017_int_peak = Not Run**

**CPU2017 License:** 6573  
**Test Date:** Dec-2022

**Test Sponsor:** Dell Inc.  
**Hardware Availability:** Feb-2023

**Tested by:** Dell Inc.  
**Software Availability:** Nov-2022

---

**Platform Notes (Continued)**

aperfmerf rapl pni pclmulqdq monitor ssse3 fma cx16 pcid sse4_1 sse4_2 x2apic movbe  
popcnt aes xsave avx v16c rdrand lahf_lm cmp_legacy svm extapic cr8_legacy abm sse4a  
msaligndle 3dnowprefetch osvw ibr skinit wdt tce topoext perfctr_core perfctr_nb  
bpxt perfctr_llc mwaitx cpb cat_l3 cd_p single hw_pstate ssbd mba ibrs  
ibpb stibp vmmcall fsgsbase bmi1 avx2 smp bni erms invpcid cqm rdt_a avx512f  
avx512dq rseed adx smap avx512ifma clflushopt clwb avx512cd sha ni avx512bw  
avx512vl xsaveopt xsavec xboxcbv1 xsaves cqm llc cqm_occup llc cqm mbm_total  
cqm mbm_local avx512 bf16 clzero irperf xsaverptr rdpri wbnoindv amd ppin cppc arat  
npt lbv svm lock nrip save tsc scale vmcb clean flushbyasid decodeassists  
pausefilter pfthreshold avic v_vmmsave_vmload vgic v spec ctrl avx512vbmi umip pku  
ospke avx512 vmibi gfn vaes vpcm ulm dq avx512 vnni avx512 bitalg avx512 vpopt dq  
las7 rdpid overlap recov succor smca fsrm flush l1d

**Virtualization:** AMD-V

L1d cache: 2 MiB (64 instances)  
L1i cache: 2 MiB (64 instances)

L2 cache: 64 MiB (64 instances)  
L3 cache: 512 MiB (16 instances)

NUMA node(s): 16

NUMA node0 CPU(s): 0-3,64-67  
NUMA node1 CPU(s): 16-19,80-83

NUMA node2 CPU(s): 8-11,72-75  
NUMA node3 CPU(s): 24-27,88-91

NUMA node4 CPU(s): 12-15,76-79  
NUMA node5 CPU(s): 28-31,92-95

NUMA node6 CPU(s): 4-7,68-71  
NUMA node7 CPU(s): 20-23,84-87

NUMA node8 CPU(s): 32-35,96-99  
NUMA node9 CPU(s): 48-51,112-115

NUMA node10 CPU(s): 40-43,104-107  
NUMA node11 CPU(s): 56-59,120-123

NUMA node12 CPU(s): 44-47,108-111  
NUMA node13 CPU(s): 60-63,124-127

NUMA node14 CPU(s): 36-39,100-103  
NUMA node15 CPU(s): 52-55,116-119

**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; Retpolines, IBPB conditional, IBRS_FW, STIBF always-on, RSB filling

**Vulnerability Srbd:** Not affected

(Continued on next page)
**Platform Notes (Continued)**

Vulnerability Tsx async abort: Not affected

From lscpu --cache:
```
NAME    ONE-SIZE  ALL-SIZE  WAYS  TYPE  LEVEL  SETS  PHY-LINE  COHERENCY-SIZE
L1d     32K       2M      8  Data   1   64   1       64
L1i     32K       2M      8  Instruction 1   64   1       64
L2      1M        64M     8  Unified 2  2048 1       64
L3      32M       512M    16  Unified 3 32768 1       64
```

/proc/cpuinfo cache data
```
cache size: 1024 KB
```

From numactl --hardware
```
WARNING: a numactl 'node' might or might not correspond to a physical chip.
available: 16 nodes (0-15)
node 0 cpus: 0 1 2 3 64 65 66 67
node 0 size: 96312 MB
node 0 free: 96077 MB
node 1 cpus: 16 17 18 19 80 81 82 83
node 1 size: 96764 MB
node 1 free: 96561 MB
node 2 cpus: 8 9 10 11 72 73 74 75
node 2 size: 96765 MB
node 2 free: 96561 MB
node 3 cpus: 24 25 26 27 88 89 90 91
node 3 size: 96764 MB
node 3 free: 96561 MB
node 4 cpus: 12 13 14 15 76 77 78 79
node 4 size: 96765 MB
node 4 free: 96561 MB
node 5 cpus: 28 29 30 31 92 93 94 95
node 5 size: 96764 MB
node 5 free: 96561 MB
node 6 cpus: 4 5 6 7 68 69 70 71
node 6 size: 96765 MB
node 6 free: 96613 MB
node 7 cpus: 20 21 22 23 84 85 86 87
node 7 size: 96748 MB
node 7 free: 96578 MB
node 8 cpus: 32 33 34 35 96 97 98 99
node 8 size: 96765 MB
node 8 free: 96602 MB
node 9 cpus: 48 49 50 51 112 113 114 115
node 9 size: 96764 MB
node 9 free: 96594 MB
node 10 cpus: 40 41 42 43 104 105 106 107
node 10 size: 96765 MB
```

(Continued on next page)
SPEC CPU®2017 Integer Rate Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

Dell Inc.

PowerEdge R6625 (AMD EPYC 9374F 32-Core Processor)

Dell Inc.

SPECrate®2017_int_base = 814

SPECrate®2017_int_peak = Not Run

CPU2017 License: 6573
Test Sponsor: Dell Inc.
Test Date: Dec-2022

Tested by: Dell Inc.
Hardware Availability: Feb-2023
Software Availability: Nov-2022

Platform Notes (Continued)

node 10 free: 96603 MB
node 11 cpus: 56 57 58 59 120 121 122 123
node 11 size: 96764 MB
node 11 free: 93061 MB
node 12 cpus: 44 45 46 47 108 109 110 111
node 12 size: 96765 MB
node 12 free: 96591 MB
node 13 cpus: 60 61 62 63 124 125 126 127
node 13 size: 96729 MB
node 13 free: 96580 MB
node 14 cpus: 36 37 38 39 100 101 102 103
node 14 size: 96765 MB
node 14 free: 96618 MB
node 15 cpus: 52 53 54 55 116 117 118 119
node 15 size: 96739 MB
node 15 free: 96592 MB
node distances:

node distances:
node 0   1   2   3   4   5   6   7   8  9  10  11  12  13  14  15
0:  10  11  12  12  12  12  12  12  32  32  32  32  32  32  32  32
1:  11  10  12  12  12  12  12  12  32  32  32  32  32  32  32  32
2:  12  12  10  11  12  12  12  12  32  32  32  32  32  32  32  32
3:  12  12  11  10  12  12  12  12  32  32  32  32  32  32  32  32
4:  12  12  12  12  10  11  12  12  32  32  32  32  32  32  32  32
5:  12  12  12  12  11  10  12  12  32  32  32  32  32  32  32  32
6:  12  12  12  12  12  10  11  12  32  32  32  32  32  32  32  32
7:  12  12  12  12  12  12  11  10  32  32  32  32  32  32  32  32
8:  32  32  32  32  32  32  32  32  10  11  12  12  12  12  12  12
9:  32  32  32  32  32  32  32  32  11  10  12  12  12  12  12  12
10: 32  32  32  32  32  32  32  32  12  12  10  11  12  12  12  12
11: 32  32  32  32  32  32  32  32  12  12  11  10  12  12  12  12
12: 32  32  32  32  32  32  32  32  12  12  12  12  10  11  12  12
13: 32  32  32  32  32  32  32  32  12  12  12  12  10  11  12  12
14: 32  32  32  32  32  32  32  32  12  12  12  12  12  10  11  12
15: 32  32  32  32  32  32  32  32  12  12  12  12  12  12  11  10

From /proc/meminfo
MemTotal: 1584861016 kB
HugePages_Total: 0
Hugepagesize: 2048 kB
/sbin/tuned-adm active
  Current active profile: latency-performance
/sys/devices/system/cpu/cpu*/cpufreq/scaling_governor has performance
/usr/bin/lsb_release -d

(Continued on next page)
## Platform Notes (Continued)

Ubuntu 22.04.1 LTS

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

debian_version: bookworm/sid

os-release:
- PRETTY_NAME="Ubuntu 22.04.1 LTS"
- NAME="Ubuntu"
- VERSION_ID="22.04"
- VERSION="22.04.1 LTS (Jammy Jellyfish)"
- VERSION_CODENAME=jammy
- ID=ubuntu
- ID_LIKE=debian
- HOME_URL="https://www.ubuntu.com/"

uname -a:
Linux amd-sut 5.15.0-46-generic #49-Ubuntu SMP Thu Aug 4 18:03:25 UTC 2022 x86_64
x86_64 x86_64 GNU/Linux

Kernel self-reported vulnerability status:

<table>
<thead>
<tr>
<th>CVE</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>CVE-2018-12207 (iTLB Multihit)</td>
<td>Not affected</td>
</tr>
<tr>
<td>CVE-2018-3620 (L1 Terminal Fault)</td>
<td>Not affected</td>
</tr>
<tr>
<td>Microarchitectural Data Sampling:</td>
<td>Not affected</td>
</tr>
<tr>
<td>CVE-2017-5754 (Meltdown):</td>
<td>Not affected</td>
</tr>
<tr>
<td>mmio_stale_data:</td>
<td>Not affected</td>
</tr>
<tr>
<td>retbleed:</td>
<td>Not affected</td>
</tr>
<tr>
<td>CVE-2018-3639 (Speculative Store Bypass):</td>
<td>Mitigation: Speculative Store Bypass disabled via prctl and seccomp</td>
</tr>
<tr>
<td>CVE-2017-5753 (Spectre variant 1):</td>
<td>Mitigation: usercopy/swapgs barriers and __user pointer sanitization</td>
</tr>
<tr>
<td>CVE-2017-5715 (Spectre variant 2):</td>
<td>Mitigation: Retpolines, IBPB: conditional, IBRS_FW, STIBP: always-on, RSB filling</td>
</tr>
<tr>
<td>CVE-2020-0543 (Special Register Buffer Data Sampling):</td>
<td>Not affected</td>
</tr>
<tr>
<td>CVE-2019-11135 (TSX Asynchronous Abort):</td>
<td>Not affected</td>
</tr>
</tbody>
</table>

run-level 3 Dec 12 19:41

SPEC is set to: /mnt/ramdisk/cpu2017-1.1.8-aocc400-B1b

Filesystem Type Size Used Avail Use% Mounted on
tmpfs tmpfs 125G 3.4G 122G 3% /mnt/ramdisk

From /sys/devices/virtual/dmi/id

Vendor: Dell Inc.
Product: PowerEdge R6625

(Continued on next page)
SPEC CPU®2017 Integer Rate Result

Dell Inc.

PowerEdge R6625 (AMD EPYC 9374F 32-Core Processor)

SPECrate®2017_int_base = 814
SPECrate®2017_int_peak = Not Run

CPU2017 License: 6573
Test Sponsor: Dell Inc.
Test Date: Dec-2022
Tested by: Dell Inc.
Hardware Availability: Feb-2023
Software Availability: Nov-2022

Platform Notes (Continued)

Product Family: PowerEdge
Serial: BGP4023

Additional information from dmidecode 3.3 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:
24x 80CE000080CE M321R8GA0BB0-CQKDG 64 GB 2 rank 4800

BIOS:
BIOS Vendor: Dell Inc.
BIOS Version: 1.1.0
BIOS Date: 11/25/2022
BIOS Revision: 1.1

(End of data from sysinfo program)

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 14.0.6 (CLANG: AOCC_4.0.0-Build#389 2022_10_07) (based on LLVM Mirror.Version.14.0.6)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-4.0-3206-389/bin

==============================================================================
C++ | 520.omnetpp_r(base) 523.xalancbmk_r(base) 531.deepsjeng_r(base) 541.lmbench_r(base)
==============================================================================
AMD clang version 14.0.6 (CLANG: AOCC_4.0.0-Build#389 2022_10_07) (based on LLVM Mirror.Version.14.0.6)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-4.0-3206-389/bin

==============================================================================
Fortran | 548.exchange2_r(base)
AMD clang version 14.0.6 (CLANG: AOCC_4.0.0-Build#389 2022_10_07) (based on LLVM Mirror.Version.14.0.6)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-4.0-3206-389/bin

(Continued on next page)
### Dell Inc.
PowerEdge R6625 (AMD EPYC 9374F 32-Core Processor)

-----

**CPU2017 License:** 6573  
**Test Sponsor:** Dell Inc.  
**Tested by:** Dell Inc.  

### SPEC CPU®2017 Integer Rate Result

<table>
<thead>
<tr>
<th>SPECrate®2017_int_base</th>
<th>814</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECrate®2017_int_peak</td>
<td>Not Run</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Test Date</th>
<th>Dec-2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardware Availability</td>
<td>Feb-2023</td>
</tr>
<tr>
<td>Software Availability</td>
<td>Nov-2022</td>
</tr>
</tbody>
</table>

### Compiler Version Notes (Continued)

**LLVM Mirror.Version.14.0.6**  
Target: x86_64-unknown-linux-gnu  
Thread model: posix  
InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-4.0-3206-389/bin  

---

### Base Compiler Invocation

- **C benchmarks:** clang
- **C++ benchmarks:** clang++
- **Fortran benchmarks:** flang

### 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 -flto -Wl,-mltvms -Wl,-align-all-nofallthru-blocks=6  
  -Wl,-mltvms -Wl,-reduce-array-computations=3  
  -Wl,-mltvms -Wl,-ldist-scalar-expand -fenable-aggressive-gather  
  -z muldefs -o3 -fcontrolznver4 -fveclib=AMDLIBM -ffast-math  
  -fstruct-layout=7 -mllvm -unroll-threshold=50  
  -mllvm -inline-threshold=1000 -fremap-arrays -fstrip-mining  
  -mllvm -reduce-array-computations=3 -zopt -lamlilibm -llflang  
  -lamlalloc

(Continued on next page)
SPEC CPU®2017 Integer Rate Result
Copyright 2017-2023 Standard Performance Evaluation Corporation

Dell Inc. PowerEdge R6625 (AMD EPYC 9374F 32-Core Processor)

SPECrate®2017_int_base = 814
SPECrate®2017_int_peak = Not Run

CPU2017 License: 6573
Test Sponsor: Dell Inc.
Test Date: Dec-2022
Tested by: Dell Inc.
Hardware Availability: Feb-2023
Software Availability: Nov-2022

Base Optimization Flags (Continued)

C++ benchmarks:
-m64 -flto -Wl,-ml1vm -Wl,-align-all-nofallthru-blocks=6
-Wl,-ml1vm -Wl,-reduce-array-computations=3 -z muldefs -O3
-march=znver4 -fveclib=AMDLIBM -ffast-math
-ml1vm -unroll-threshold=100 -finline-aggressive
-ml1vm -loop-unswitch-threshold=200000
-ml1vm -reduce-array-computations=3 -zopt
-fvirtual-function-elimination -fvisibility=hidden -lamdlibm -lflang
-lamdalloc-ext

Fortran benchmarks:
-m64 -flto -Wl,-ml1vm -Wl,-align-all-nofallthru-blocks=6
-Wl,-ml1vm -Wl,-reduce-array-computations=3
-Wl,-ml1vm -Wl,-inline-recursion=4 -Wl,-ml1vm -Wl,-lsr-in-nested-loop
-Wl,-ml1vm -Wl,-enable-iv-split -z muldefs -O3 -march=znver4
-fveclib=AMDLIBM -ffast-math -fepilog-vectorization-of-inductions
-ml1vm -optimize-strided-mem-cost -floop-transform
-ml1vm -unroll-aggressive -ml1vm -unroll-threshold=500 -lamdlibm
-lflang -lamdalloc

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/aocc400-flags.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2017/flags/aocc400-flags.xml
http://www.spec.org/cpu2017/flags/Dell-Platform-Flags-PowerEdge-AMD-EPYC-v1.0.xml
## SPEC CPU®2017 Integer Rate Result

**Dell Inc.**

PowerEdge R6625 (AMD EPYC 9374F 32-Core Processor)

<table>
<thead>
<tr>
<th>SPECrate®2017_int_base</th>
<th>814</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECrate®2017_int_peak</td>
<td>Not Run</td>
</tr>
</tbody>
</table>

| CPU2017 License:   | 6573 |
| Test Sponsor:      | Dell Inc. |
| Tested by:         | Dell Inc. |
| Test Date:         | Dec-2022 |
| Hardware Availability: | Feb-2023 |
| Software Availability: | Nov-2022 |

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 v1.1.8 on 2022-12-12 14:42:03-0500.
Report generated on 2023-02-01 18:17:39 by CPU2017 PDF formatter v6442.
Originally published on 2023-02-01.