## Dell Inc.

PowerEdge R7625 (AMD EPYC 9454 48-Core Processor)

<table>
<thead>
<tr>
<th>CPU2017 License</th>
<th>Test Sponsor</th>
<th>Tested by</th>
<th>Test Date</th>
<th>Hardware Availability</th>
<th>Software Availability</th>
</tr>
</thead>
</table>

### SPECrate®2017 int_base = 1020

### SPECrate®2017 int_peak = Not Run

### Hardware

- **CPU Name:** AMD EPYC 9454
- **Max MHz:** 3800
- **Nominal:** 2750
- **Enabled:** 96 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 / 6 cores
- **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
- **Compiler:** C/C++/Fortran: Version 4.0.0 of AOCC
- **Parallel:** No
- **Firmware:** Version 1.0.2 released Oct-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.

### Test Results

<table>
<thead>
<tr>
<th>SPECrate®</th>
<th>2017_int_base</th>
<th>2017_int_peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECrate®2017</td>
<td>1020</td>
<td>Not Run</td>
</tr>
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### Performance Results

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>SPECrate®2017 int_base</th>
<th>SPECrate®2017 int_peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>500.perlbench_r</td>
<td>192</td>
<td>731</td>
<td></td>
</tr>
<tr>
<td>502.gcc_r</td>
<td>192</td>
<td>836</td>
<td></td>
</tr>
<tr>
<td>505.mcf_r</td>
<td>192</td>
<td>1480</td>
<td></td>
</tr>
<tr>
<td>520.omnetpp_r</td>
<td>192</td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>523.xalancbmk_r</td>
<td>192</td>
<td>1110</td>
<td></td>
</tr>
<tr>
<td>525.x264_r</td>
<td>192</td>
<td>2500</td>
<td></td>
</tr>
<tr>
<td>531.deepsjeng_r</td>
<td>192</td>
<td>863</td>
<td></td>
</tr>
<tr>
<td>541.leela_r</td>
<td>192</td>
<td>833</td>
<td></td>
</tr>
<tr>
<td>548.exchange2_r</td>
<td>192</td>
<td>2390</td>
<td></td>
</tr>
<tr>
<td>557.xz_r</td>
<td>192</td>
<td>512</td>
<td></td>
</tr>
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**Note:** All benchmarks were run with the default settings and configurations provided by the SPEC. The results were obtained using the SPEC CPU®2017 benchmark suite. For more detailed information, please refer to the SPEC website: [https://www.spec.org/](https://www.spec.org/)
## Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
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<th>Ratio</th>
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<td>513</td>
<td>405</td>
<td>512</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Compiler Notes


### 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)
**SPEC CPU®2017 Integer Rate Result**

Dell Inc.  
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- **CPU2017 License:** 6573  
- **Test Date:** Nov-2022  
- **Test Sponsor:** Dell Inc.  
- **Hardware Availability:** Feb-2023  
- **Tested by:** Dell Inc.  
- **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)
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 982a61e0915b55891ef0e16acacfc64d
running on amd-sut Tue Nov 15 00:37:18 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

cpu core : 48
sibling : 96
physical 0: cores 0 1 2 3 4 5 8 9 10 11 12 13 16 17 18 19 20 21 24 25 26 27 28 29
 32 33 34 35 36 37 40 41 42 43 44 45 48 49 50 51 52 53 56 57 58 59 60 61
physical 1: cores 0 1 2 3 4 5 8 9 10 11 12 13 16 17 18 19 20 21 24 25 26 27 28 29
 32 33 34 35 36 37 40 41 42 43 44 45 48 49 50 51 52 53 56 57 58 59 60 61

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): 192
On-line CPU(s) list: 0-191
Vendor ID: AuthenticAMD
Model name: AMD EPYC 9454 48-Core Processor
CPU family: 25
Model: 17
Thread(s) per core: 2
Core(s) per socket: 48
Stepping: 1
Frequency boost: enabled
CPU max MHz: 3812.0000
CPU min MHz: 400.0000
BogoMIPS: 5501.74
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)
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#### Platform Notes (Continued)

aperfmperp 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 3nowprefetch osvw ibs skinit wdt tce topoext perfctr_core perfctr_nb bpext perfctr_llc mwaitx cpb cat_l3 cdpl3 invpcid_single hw_pstate ssbd mba ibrs ibpb stibp vmccall fsqsbse bml1 avx2 smep bmi2 erms invpcid cqm rdt_a avx512f avx512dq rdseed adv smap avx512ifma clflushopt clwb avx512cd sha ni avx512bw avx512vl xsxavopt xsavec xgetbv1 xsave cqm_llc cqm_occup_llc cqm_mbb_total cqm_mbb_local avx512_bf16 clzero irperf xsaveerptr rdprr wbnoinv md_ppin cppc arat npt lbrv svm_lock nrip_save tsc_scale vmcb_clean flushbyasid decodeassists pausefilter pfthreshold avic v_vmsave_vmload vgif v_spec_ctl avx512vlbi umip pku ospke avx512_vbm2 gfin vaes vpc1mulqdq avx512_vnni avx512_bitalg avx512_vpopcntdq la57 rdpid overflow_recov succor smca fsrm flush_l1d

**Virtualization:** AMD-V  
**L1d cache:** 3 MiB (96 instances)  
**L1i cache:** 3 MiB (96 instances)  
**L2 cache:** 96 MiB (96 instances)  
**L3 cache:** 512 MiB (16 instances)  
**NUMA node(s):** 16  
**NUMA node0 CPU(s):** 0–5, 96–101  
**NUMA node1 CPU(s):** 24–29, 120–125  
**NUMA node2 CPU(s):** 12–17, 108–113  
**NUMA node3 CPU(s):** 36–41, 132–137  
**NUMA node4 CPU(s):** 18–23, 114–119  
**NUMA node5 CPU(s):** 42–47, 138–143  
**NUMA node6 CPU(s):** 6–11, 102–107  
**NUMA node7 CPU(s):** 30–35, 126–131  
**NUMA node8 CPU(s):** 48–53, 144–149  
**NUMA node9 CPU(s):** 72–77, 168–173  
**NUMA node10 CPU(s):** 60–65, 156–161  
**NUMA node11 CPU(s):** 84–89, 180–185  
**NUMA node12 CPU(s):** 66–71, 162–167  
**NUMA node13 CPU(s):** 90–95, 186–191  
**NUMA node14 CPU(s):** 54–59, 150–155  
**NUMA node15 CPU(s):** 78–83, 174–179  
**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, STIBP always-on, RSB filling  
**Vulnerability Srbd:** Not affected

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

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SPECrater®2017_int_base = 1020

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Platform Notes (Continued)

Vulnerability Tsx async abort: Not affected

From lscpu --cache:

<table>
<thead>
<tr>
<th>NAME</th>
<th>ONE-SIZE</th>
<th>ALL-SIZE</th>
<th>WAYS</th>
<th>TYPE</th>
<th>LEVEL</th>
<th>SETS</th>
<th>PHY-LINE</th>
<th>COHERENCY-SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1d</td>
<td>32K</td>
<td>3M</td>
<td>8</td>
<td>Data</td>
<td>1</td>
<td>64</td>
<td>1</td>
<td>64</td>
</tr>
<tr>
<td>L1i</td>
<td>32K</td>
<td>3M</td>
<td>8</td>
<td>Instruction</td>
<td>1</td>
<td>64</td>
<td>1</td>
<td>64</td>
</tr>
<tr>
<td>L2</td>
<td>1M</td>
<td>96M</td>
<td>8</td>
<td>Unified</td>
<td>2</td>
<td>2048</td>
<td>1</td>
<td>64</td>
</tr>
<tr>
<td>L3</td>
<td>32M</td>
<td>512M</td>
<td>16</td>
<td>Unified</td>
<td>3</td>
<td>32768</td>
<td>1</td>
<td>64</td>
</tr>
</tbody>
</table>

/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 4 5 96 97 98 99 100 101
node 0 size: 96311 MB
node 0 free: 95798 MB
node 1 cpus: 24 25 26 27 28 29 120 121 122 123 124 125
node 1 size: 96763 MB
node 1 free: 92691 MB
node 2 cpus: 12 13 14 15 16 17 108 109 110 111 112 113
node 2 size: 96764 MB
node 2 free: 96194 MB
node 3 cpus: 36 37 38 39 40 41 132 133 134 135 136 137
node 3 size: 96763 MB
node 3 free: 96276 MB
node 4 cpus: 18 19 20 21 22 23 114 115 116 117 118 119
node 4 size: 96764 MB
node 4 free: 96324 MB
node 5 cpus: 42 43 44 45 46 47 138 139 140 141 142 143
node 5 size: 96763 MB
node 5 free: 96305 MB
node 6 cpus: 6 7 8 9 10 11 102 103 104 105 106 107
node 6 size: 96729 MB
node 6 free: 96264 MB
node 7 cpus: 30 31 32 33 34 35 126 127 128 129 130 131
node 7 size: 96747 MB
node 7 free: 96279 MB
node 8 cpus: 48 49 50 51 52 53 144 145 146 147 148 149
node 8 size: 96764 MB
node 8 free: 96292 MB
node 9 cpus: 72 73 74 75 76 77 168 169 170 171 172 173
node 9 size: 96763 MB
node 9 free: 96318 MB
node 10 cpus: 60 61 62 63 64 65 156 157 158 159 160 161
node 10 size: 96764 MB

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

| node 10 free: 96322 MB |
| node 11 cpus: 84 85 86 87 88 89 180 181 182 183 184 185 |
| node 11 size: 96763 MB |
| node 11 free: 96320 MB |
| node 12 cpus: 66 67 68 69 70 71 162 163 164 165 166 167 |
| node 12 size: 96764 MB |
| node 12 free: 96327 MB |
| node 13 cpus: 90 91 92 93 94 95 186 187 188 189 190 191 |
| node 13 size: 96763 MB |
| node 13 free: 96319 MB |
| node 14 cpus: 54 55 56 57 58 59 150 151 152 153 154 155 |
| node 14 size: 96764 MB |
| node 14 free: 96286 MB |
| node 15 cpus: 78 79 80 81 82 83 174 175 176 177 178 179 |
| node 15 size: 96738 MB |
| node 15 free: 96254 MB |

**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 10 11 12 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 10 11 12 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 11
15: 32 32 32 32 32 32 32 32 12 12 12 12 12 12 11 10
```

From `/proc/meminfo`

- MemTotal: 1584845628 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

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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:

CVE-2018-12207 (iTLB MultiHit): Not affected
CVE-2018-3620 (L1 Terminal Fault): Not affected
Microarchitectural Data Sampling: Not affected
CVE-2017-5754 (Meltdown):
  Not affected
  mmio_stale_data:
  Not affected
  retbleed:
CVE-2018-3639 (Speculative Store Bypass):
  Mitigation: Speculative Store
  Bypass disabled via prctl and seccomp
CVE-2017-5753 (Spectre variant 1):
  Mitigation: usercopy/swaps
guards and __user pointer
  sanitation
CVE-2017-5715 (Spectre variant 2):
  Mitigation: Retpolines, IBPB:
  conditional, IBRS_FW, STIBP:
  always-on, RSB filling
CVE-2020-0543 (Special Register Buffer Data Sampling): Not affected
CVE-2019-11135 (TSX Asynchronous Abort): Not affected

run-level 3 Nov 10 22:28

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 R7625

(Continued on next page)
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Platform Notes (Continued)

Product Family: PowerEdge
Serial: BRZ5015

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:
1x 802C0000802C MTC40F2046S1RC48BA1 64 GB 2 rank 4800
23x 80AD000080AD HMCG94MEBRA109N 64 GB 2 rank 4800

BIOS:
BIOS Vendor: Dell Inc.
BIOS Version: 1.0.2
BIOS Date: 10/17/2022
BIOS Revision: 1.0

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.leela_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)

(Continued on next page)
Compiler Version Notes (Continued)

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

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,-ml1vm -Wl,-align-all-nofallthru-blocks=6
-Wl,-ml1vm -Wl,-reduce-array-computations=3
-Wl,-ml1vm -Wl,-ldist-scalar-expand -fenable-aggressive-gather
-z muldefs -O3 -march=znver4 -fveclib=AMDLIBM -ffast-math
-fstruct-layout=7 -ml1vm -unroll-threshold=50
-ml1vm -inline-threshold=1000 -fremap-arrays -fstrip-mining
-ml1vm -reduce-array-computations=3 -zopt -lamdlibm -lflang

(Continued on next page)
Dell Inc.  
PowerEdge R7625 (AMD EPYC 9454 48-Core Processor)  

SPECratre®2017_int_base = 1020
SPECratre®2017_int_peak = Not Run

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

Base Optimization Flags (Continued)

C benchmarks (continued):
- lamdalloc

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

Fortran benchmarks:
- m64 -flto -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=znver4
  -fveclib=AMDLIBM -ffast-math -fepilog-vectorization-of-inductions
  -mllvm -optimize-strided-mem-cost -floop-transform
  -mllvm -unroll-aggressive -mllvm -unroll-threshold=500 -lamdlibm
  -lflang -lamdalloc-ext

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
<table>
<thead>
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<th>Dell Inc.</th>
<th>Dell Inc.</th>
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<td>PowerEdge R7625 (AMD EPYC 9454 48-Core Processor)</td>
<td>SPECrate®2017_int_base = 1020</td>
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<td>SPECrate®2017_int_peak = Not Run</td>
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</tr>
</tbody>
</table>

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

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