Dell Inc.

PowerEdge R6515 (AMD EPYC 7413 24-Core Processor)

SPEC CPU®2017 Integer Speed Result

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Dell Inc.

SPECspeed®2017_int_base = 12.0

SPECspeed®2017_int_peak = 12.1

CPU2017 License: 55
Test Sponsor: Dell Inc.
Tested by: Dell Inc.

Test Date: Mar-2021
Hardware Availability: Mar-2021
Software Availability: Mar-2021

Threads

<table>
<thead>
<tr>
<th>Threads</th>
<th>SPECspeed®2017_int_base (12.0)</th>
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<tbody>
<tr>
<td>1</td>
<td>7.18</td>
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<tr>
<td>24</td>
<td>7.17</td>
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<tr>
<td>24</td>
<td>12.9</td>
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<tr>
<td>24</td>
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<tr>
<td>24</td>
<td>20.2</td>
</tr>
<tr>
<td>24</td>
<td>20.3</td>
</tr>
<tr>
<td>24</td>
<td>13.7</td>
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<td>24</td>
<td>13.6</td>
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<td>16.8</td>
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<tr>
<td>24</td>
<td>23.1</td>
</tr>
<tr>
<td>24</td>
<td>23.1</td>
</tr>
</tbody>
</table>

Hardware

CPU Name: AMD EPYC 7413
Max MHz: 3600
Nominal: 2650
Enabled: 24 cores, 1 chip
Orderable: 1 chip
Cache L1: 32 KB I + 32 KB D on chip per core
L2: 512 KB I+D on chip per core
L3: 128 MB I+D on chip per chip, 32 MB shared / 6 cores
Other: None
Memory: 1 TB (8 x 128 GB 4Rx4 PC4-3200AA-R)
Storage: 48 GB on tmpfs
Other: None

Software

OS: Red Hat Enterprise Linux 8.3 (Ootpa)
Compiler: C/C++/Fortran: Version 3.0.0 of AOCC
Parallel: Yes
Firmware: Version 2.0.3 released Jan-2021
File System: tmpfs
System State: Run level 3 (multi-user)
Base Pointers: 64-bit
Peak Pointers: 64-bit
Other: jemalloc: jemalloc memory allocator library v5.1.0
Power Management: BIOS and OS set to prefer performance at the cost of additional power usage.
Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Threads</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Base Threads</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Peak Threads</th>
<th>Seconds</th>
<th>Ratio</th>
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<td>602.gcc_s</td>
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<td>605.mcf_s</td>
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<td>620.omnetpp_s</td>
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<td>623.xalancbmk_s</td>
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<td>625.x264_s</td>
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<tr>
<td>631.deepsjeng_s</td>
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<tr>
<td>641.leela_s</td>
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<td>5.73</td>
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<td>648.exchange2_s</td>
<td>24</td>
<td>128</td>
<td>23.0</td>
<td>1</td>
<td>127</td>
<td>23.1</td>
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<tr>
<td>657.xz_s</td>
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<td>24</td>
<td>268</td>
<td>23.1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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>

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

**PowerEdge R6515 (AMD EPYC 7413 24-Core Processor)**

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**CPU2017 License:** 55

**Test Sponsor:** Dell Inc.

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**Software Availability:** Mar-2021

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### Operating System Notes (Continued)

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.

---

### Environment Variables Notes

**Environment variables set by runcpu before the start of the run:**
- `GOMP_CPU_AFFINITY = "0-23"`
- `LD_LIBRARY_PATH = "/mnt/ramdisk/cpu2017-1.1.5/amd_speed_aocc300_milan_B_lib/64;/mnt/ramdisk/cpu2017-1.1.5/amd_speed_aocc300_milan_B_lib/32:"`
- `MALLOC_CONF = "retain:true"`
- `OMP_DYNAMIC = "false"`
- `OMP_SCHEDULE = "static"`
- `OMP_STACKSIZE = "128M"`
- `OMP_THREAD_LIMIT = "24"`

**Environment variables set by runcpu during the 600.perlbench_s peak run:**
- `GOMP_CPU_AFFINITY = "0"`

**Environment variables set by runcpu during the 602.gcc_s peak run:**
- `GOMP_CPU_AFFINITY = "0"`

**Environment variables set by runcpu during the 605.mcf_s peak run:**
- `GOMP_CPU_AFFINITY = "0"`

**Environment variables set by runcpu during the 620.omnetpp_s peak run:**
- `GOMP_CPU_AFFINITY = "0"`

**Environment variables set by runcpu during the 623.xalancbmk_s peak run:**
- `GOMP_CPU_AFFINITY = "0"`

**Environment variables set by runcpu during the 625.x264_s peak run:**
- `GOMP_CPU_AFFINITY = "0"`

**Environment variables set by runcpu during the 631.deepsjeng_s peak run:**
- `GOMP_CPU_AFFINITY = "0"`

**Environment variables set by runcpu during the 641.leela_s peak run:**
- `GOMP_CPU_AFFINITY = "0"`

**Environment variables set by runcpu during the 648.exchange2_s peak run:**
- `GOMP_CPU_AFFINITY = "0"`

**Environment variables set by runcpu during the 657.xz_s peak run:**

(Continued on next page)
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PowerEdge R6515 (AMD EPYC 7413 24-Core Processor)

SPECspeed®2017_int_base = 12.0

SPECspeed®2017_int_peak = 12.1

Environment Variables Notes (Continued)

GOMP_CPU_AFFINITY = "0–23"

General Notes

Binaries were compiled on a system with 2x AMD EPYC 7713 CPU + 512GiB Memory using RHEL 8.2

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 48 GB ramdisk created with the cmd: "mount -t tmpfs -o size=48G tmpfs /mnt/ramdisk"

jemalloc: configured and built with GCC v4.8.2 in RHEL 7.4 (No options specified)
jemalloc 5.1.0 is available here:
https://github.com/jemalloc/jemalloc/releases/download/5.1.0/jemalloc-5.1.0.tar.bz2

Platform Notes

BIOS settings:
Logic processor : Disabled
L3 Cache as NUMA Domain : Enabled
Virtualization Technology : Disabled
DRAM Refresh Delay : Performance
System Profile : Custom
CPU Power Management : Maximum Performance
Memory Patrol Scrub : Disabled
PCI ASPM L1 Link
Power Management : Disabled

Sysinfo program /mnt/ramdisk/cpu2017-1.1.5/bin/sysinfo
Rev: r6538 of 2020-09-24 e8664e66d2d7080a8eaa89d4b38e2f1c
running on rhel-8-3-amd Fri Mar 26 22:00:29 2021

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 7413 24-Core Processor
Dell Inc. PowerEdge R6515 (AMD EPYC 7413 24-Core Processor)

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Platform Notes (Continued)

1  "physical id"s (chips)
24 "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 : 24
siblings : 24
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

From lscpu:
Architecture: x86_64
CPU op-mode(s): 32-bit, 64-bit
Byte Order: Little Endian
CPU(s): 24
On-line CPU(s) list: 0-23
Thread(s) per core: 1
Core(s) per socket: 24
Socket(s): 1
NUMA node(s): 4
Vendor ID: AuthenticAMD
CPU family: 25
Model: 1
Model name: AMD EPYC 7413 24-Core Processor
Stepping: 1
CPU MHz: 3258.263
BogoMIPS: 5290.01
Virtualization: AMD-V
L1d cache: 32K
L1i cache: 32K
L2 cache: 512K
L3 cache: 32768K
NUMA node0 CPU(s): 0-5
NUMA node1 CPU(s): 6-11
NUMA node2 CPU(s): 12-17
NUMA node3 CPU(s): 18-23
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 aperfmperf pni pclmulqdq
monitor ssse3 fma cx16 pcid sse4_1 sse4_2 x2apic movbe popcnt aes avx f16c
rdxrd lahf_lm cmp_legacy svm extapic cr8_legacy abm sse4a misalignsse 3dnowprefetch
osvw ibs skinit wdt tce topoext perfctr-core perfctr_nb bext perfctr_l1l bpgb cpb
cto cto etc legacy svm extapic cr8_legacy abm sse4a misalignsse 3dnowprefetch
osvw ibs skinit wdt tce topoext perfctr-core perfctr_nb bext perfctr_l1l bpgb cpb
cat_l3 cdp_l3 invpcid_single hw_pstate sme ssbd mba sev ibrs ibp pb stibp vmmcall
fsgsbase bmi1 avx2 smep bmi2 invpcid cqm rdt_a rdseed adx smap clflushopt clwb
sha ni xsaveopt xsaves xgetbv1 xsaves cqm_llc cqm_mbb_total cqm_mbb_local clzero
irperf xsaveerpdr wbnoinvd amd_pni arat npt lbv svm_lock
nrip_save tsc_scale vmcb_clean flushbyassist decodeassist pausefilter ptf threshold
v_vmsave_vmload vgif umip pkf ospe va pcp clmul dq rdpid overflow_recover succor smca

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Platform Notes (Continued)

/proc/cpuinfo cache data
  cache size : 512 KB

From `numactl --hardware` WARNING: a numactl 'node' might or might not correspond to a physical chip.
available: 4 nodes (0-3)
node 0 cpus: 0 1 2 3 4 5
node 0 size: 257589 MB
node 0 free: 252029 MB
node 1 cpus: 6 7 8 9 10 11
node 1 size: 257982 MB
node 1 free: 257609 MB
node 2 cpus: 12 13 14 15 16 17
node 2 size: 258026 MB
node 2 free: 257820 MB
node 3 cpus: 18 19 20 21 22 23
node 3 size: 245912 MB
node 3 free: 245558 MB
node distances:
  node 0 1 2 3
  0: 10 11 11 11
  1: 11 10 11 11
  2: 11 11 10 11
  3: 11 11 11 10

From `/proc/meminfo`
MemTotal: 1044071428 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

/sbin/tuned-adm active
  Current active profile: throughput-performance

From `/etc/*release* /etc/*version*`
  os-release:
    NAME="Red Hat Enterprise Linux"
    VERSION="8.3 (Ootpa)"
    ID="rhel"
    ID_LIKE="fedora"
    VERSION_ID="8.3"
    PLATFORM_ID="platform:el8"
    PRETTY_NAME="Red Hat Enterprise Linux 8.3 (Ootpa)"
    ANSI_COLOR="0;31"
  redhat-release: Red Hat Enterprise Linux release 8.3 (Ootpa)
  system-release: Red Hat Enterprise Linux release 8.3 (Ootpa)
  system-release-cpe: cpe:/o:redhat:enterprise_linux:8.3:ga

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Platform Notes (Continued)

uname -a:
   Linux rhel-8-3-amd 4.18.0-240.el8.x86_64 #1 SMP Wed Sep 23 05:13:10 EDT 2020 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
CVE-2018-3639 (Speculative Store Bypass):
   Mitigation: Speculative Store Bypass disabled via prctl and seccomp
CVE-2017-5753 (Spectre variant 1):
   Mitigation: usercopy/swapgs barriers and __user pointer sanitization
CVE-2017-5715 (Spectre variant 2):
   Mitigation: Full AMD retpoline, IBPB: conditional, IBRS_FW, STIBP: disabled, RSB filling
CVE-2020-0543 (Special Register Buffer Data Sampling): Not affected
CVE-2019-11135 (TSX Asynchronous Abort): Not affected

run-level 3 Mar 26 21:13

SPEC is set to: /mnt/ramdisk/cpu2017-1.1.5
From /sys/devices/virtual/dmi/id
   Vendor: Dell Inc.
   Product: PowerEdge R6515
   Product Family: PowerEdge

Memory:
   8x 802C8632802C 72ASS16G72LZ-3G2B3 128 GB 4 rank 3200
   8x Not Specified Not Specified

BIOS:
   BIOS Vendor: Dell Inc.
   BIOS Version: 2.0.3
   BIOS Date: 01/15/2021
   BIOS Revision: 2.0

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Dell Inc. PowerEdge R6515 (AMD EPYC 7413 24-Core Processor)  

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Platform Notes (Continued)

(End of data from sysinfo program)

Compiler Version Notes

<table>
<thead>
<tr>
<th>Language</th>
<th>benchmarks</th>
</tr>
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<tbody>
<tr>
<td>C</td>
<td>600.perlbench_s(base, peak) 602.gcc_s(base, peak) 605.mcf_s(base, peak) 625.x264_s(base, peak) 657.xz_s(base, peak)</td>
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<tr>
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<td>AMD clang version 12.0.0 (CLANG: AOCC_3.0.0-Build#78 2020_12_10) (based on LLVM Mirror.Version.12.0.0)</td>
</tr>
<tr>
<td></td>
<td>Target: x86_64-unknown-linux-gnu</td>
</tr>
<tr>
<td></td>
<td>Thread model: posix</td>
</tr>
<tr>
<td></td>
<td>InstalledDir: /opt/AMD/aocc-compiler-3.0.0/bin</td>
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| C++      | 620.omnetpp_s(base, peak) 623.xalancbmk_s(base, peak) 631.deepsjeng_s(base, peak) 641.leela_s(base, peak) |
|          |           |
|          | AMD clang version 12.0.0 (CLANG: AOCC_3.0.0-Build#78 2020_12_10) (based on LLVM Mirror.Version.12.0.0) |
|          | Target: x86_64-unknown-linux-gnu |
|          | Thread model: posix |
|          | InstalledDir: /opt/AMD/aocc-compiler-3.0.0/bin |

| Fortran  | 648.exchange2_s(base, peak) |
|          |           |
|          | AMD clang version 12.0.0 (CLANG: AOCC_3.0.0-Build#78 2020_12_10) (based on LLVM Mirror.Version.12.0.0) |
|          | Target: x86_64-unknown-linux-gnu |
|          | Thread model: posix |
|          | InstalledDir: /opt/AMD/aocc-compiler-3.0.0/bin |

Base Compiler Invocation

C benchmarks:
clang

C++ benchmarks:
clang++

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**Base Compiler Invocation (Continued)**

**Fortran benchmarks:**
flang

**Base Portability Flags**

- 600.perlbench_s: -DSPEC_LINUX_X64 -DSPEC_LP64
- 602.gcc_s: -DSPEC_LP64
- 605.mcf_s: -DSPEC_LP64
- 620.omnetpp_s: -DSPEC_LP64
- 623.xalancbmk_s: -DSPEC_LINUX -DSPEC_LP64
- 625.x264_s: -DSPEC_LP64
- 631.deepsjeng_s: -DSPEC_LP64
- 641.leela_s: -DSPEC_LP64
- 648.exchange2_s: -DSPEC_LP64
- 657.xz_s: -DSPEC_LP64

**Base Optimization Flags**

**C benchmarks:**
- -m64 -mno-adx -mno-sse4a -W1, -allow-multiple-definition
- -W1, -mllvm -W1, -enable-licm-vrp -W1, -mllvm -W1, -region-vectorize
- -W1, -mllvm -W1, -function-specialize
- -W1, -mllvm -W1, -align-all-nofallback-throws=6
- -W1, -mllvm -W1, -reduce-array-computations=3 -O3 -march=znver3
- -fveclib=AMDLIBM -ffast-math -flto -fstruct-layout=5
- -mllvm -unroll-threshold=50 -mllvm -inline-threshold=1000
- -fremap-arrays -mllvm -function-specialize -flv-function-specialization
- -mllvm -enable-gvn-hoist -mllvm -global-vectorize-slp=true
- -mllvm -enable-licm-vrp -mllvm -reduce-array-computations=3 -z muldefs
- -DSPEC_OPENMP -fopenmp -fopenmp=libomp -lomp -lamdlibm -ljemalloc
- -lflang -lflangrti

**C++ benchmarks:**
- -m64 -std=c++98 -mno-adx -mno-sse4a
- -W1, -mllvm -W1, -do-block-reorder=aggressive
- -W1, -mllvm -W1, -region-vectorize -W1, -mllvm -W1, -function-specialize
- -W1, -mllvm -W1, -align-all-nofallback-throws=6
- -W1, -mllvm -W1, -reduce-array-computations=3 -O3 -march=znver3
- -fveclib=AMDLIBM -ffast-math -flto -mllvm -enable-partial-unswitch
- -mllvm -unroll-threshold=100 -finline-aggressive
- -flv-function-specialization -mllvm -loop-unswitch-threshold=200000
- -mllvm -reroll-loops -mllvm -aggressive-loop-unswitch

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<td>SPECspeed®2017_int_peak = 12.1</td>
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**CPU2017 License:** 55

**Test Sponsor:** Dell Inc.

**Tested by:** Dell Inc.

**Test Date:** Mar-2021

**Hardware Availability:** Mar-2021

**Software Availability:** Mar-2021

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**Base Optimization Flags (Continued)**

C++ benchmarks (continued):

-`-mllvm -extra-vectorizer-passes -mllvm -reduce-array-computations=3`
-`-mllvm -global-vectorize-slp=true -mllvm -convert-pow-exp-to-int=false`
-`-z muldefs -mllvm -do-block-reorder=aggressive`
-`-fvirtual-function-elimination -fvisibility=hidden -DSPEC_OPENMP`
-`-fopenmp -fopenmp=libomp -lomp -lamdlibm -ljemalloc -lflang`
-`-lflangrti`

Fortran benchmarks:

-`-m64 -mno-adx -mno-sse4a -Wl,-mllvm -Wl,-inline-recursion=4`
-`-Wl,-mllvm -Wl,-lsr-in-nested-loop -Wl,-mllvm -Wl,-enable-iv-split`
-`-Wl,-mllvm -Wl,-region-vectorize -Wl,-mllvm -Wl,-function-specialize`
-`-Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6`
-`-Wl,-mllvm -Wl,-reduce-array-computations=3 -O3 -march=znver3`
-`-fveclib=AMDLIBM -ffast-math -flto -z muldefs`
-`-mllvm -unroll-aggressive -mllvm -unroll-threshold=150 -DSPEC_OPENMP`
-`-fopenmp -fopenmp=libomp -lomp -lamdlibm -ljemalloc -lflang`
-`-lflangrti`

---

**Base Other Flags**

C benchmarks:

-`-Wno-unused-command-line-argument -Wno-return-type`

C++ benchmarks:

-`-Wno-unused-command-line-argument -Wno-return-type`

Fortran benchmarks:

-`-Wno-return-type`

---

**Peak Compiler Invocation**

C benchmarks:

`clang`

C++ benchmarks:

`clang++`

Fortran benchmarks:

`flang`
### SPEC CPU®2017 Integer Speed Result

#### Dell Inc.

**PowerEdge R6515 (AMD EPYC 7413 24-Core Processor)**

<table>
<thead>
<tr>
<th>SPECspeed®2017_int_base</th>
<th>SPECspeed®2017_int_peak</th>
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<td>12.0</td>
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**CPU2017 License**: 55<br>
**Test Date**: Mar-2021<br>
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**Software Availability**: Mar-2021

### Peak Portability Flags

Same as Base Portability Flags

### Peak Optimization Flags

**C benchmarks:**

- `-m64 -mno-adx -mno-sse4a -Wl,-allow-multiple-definition`
- `-Wl,-mllvm -Wl,-enable-licm-vrp -Wl,-mllvm -Wl,-function-specialize`
- `-Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6`
- `-Wl,-mllvm -Wl,-reduce-array-computations=3 -Ofast -march=znver3`
- `-fveclib=AMDLIBM -ffast-math -flto -fstruct-layout=5`
- `-mllvm -unroll-threshold=50 -fremap-arrays -flv-function-specialization`
- `-mllvm -inline-threshold=1000 -mllvm -enable-gvn-hoist`
- `-mllvm -global-vectorize-slp=true -mllvm -function-specialize`
- `-mllvm -enable-licm-vrp -mllvm -reduce-array-computations=3`
- `-DSPEC_OPENMP -fopenmp -fopenmp=libomp -lomp -lamdlibm -ljemalloc -lflang`

**C++ benchmarks:**

- `-m64 -std=c++98 -mno-adx -mno-sse4a`
- `-Wl,-mllvm -Wl,-do-block-reorder-aggressive`
- `-Wl,-mllvm -Wl,-function-specialize`
- `-Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6`
- `-Wl,-mllvm -Wl,-reduce-array-computations=3 -Ofast -march=znver3`
- `-fveclib=AMDLIBM -ffast-math -flto -finline-aggressive`
- `-mllvm -unroll-threshold=100 -flv-function-specialization`
- `-mllvm -enable-licm-vrp -mllvm -reroll-loops`
- `-mllvm -aggressive-loop-unswitch -mllvm -reduce-array-computations=3`
- `-mllvm -global-vectorize-slp=true -mllvm -do-block-reorder=aggressive`
- `-fvirtual-function-elimination -fvisibility=hidden -DSPEC_OPENMP`
- `-fopenmp -fopenmp=libomp -lomp -lamdlibm -ljemalloc -lflang`

**Fortran benchmarks:**

- `-m64 -mno-adx -mno-sse4a -Wl,-mllvm -Wl,-inline-recursion=4`
- `-Wl,-mllvm -Wl,-lsr-in-nested-loop -Wl,-mllvm -Wl,-enable-iv-split`
- `-Wl,-mllvm -Wl,-function-specialize`
- `-Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6`
- `-Wl,-mllvm -Wl,-reduce-array-computations=3 -O3 -march=znver3`
- `-fveclib=AMDLIBM -ffast-math -flto -mllvm -unroll-aggressive`
- `-mllvm -unroll-threshold=150 -DSPEC_OPENMP -fopenmp -fopenmp=libomp`
- `-lomp -lamdlibm -ljemalloc -lflang`
SPEC CPU®2017 Integer Speed Result

Dell Inc.

PowerEdge R6515 (AMD EPYC 7413 24-Core Processor)

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Peak Other Flags

C benchmarks:
-Wno-unused-command-line-argument -Wno-return-type

C++ benchmarks:
-Wno-unused-command-line-argument -Wno-return-type

Fortran benchmarks:
-Wno-return-type

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

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

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