## SPEC CPU®2017 Integer Speed Result

**Dell Inc.**

PowerEdge R7515 (AMD EPYC 7443P 24-Core Processor)

**SPECspeed®2017_int_base = 13.2**

**SPECspeed®2017_int_peak = 13.3**

<table>
<thead>
<tr>
<th>Threads</th>
<th>SPECspeed®2017_int_base (13.2)</th>
<th>SPECspeed®2017_int_peak (13.3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>SPECspeed®2017_int_base</td>
<td>SPECspeed®2017_int_peak</td>
</tr>
<tr>
<td>600.perlbench_s</td>
<td>7.89</td>
<td>14.2</td>
</tr>
<tr>
<td>602.gcc_s</td>
<td>7.95</td>
<td>14.3</td>
</tr>
<tr>
<td>605.mcf_s</td>
<td>8.65</td>
<td>22.1</td>
</tr>
<tr>
<td>620.omnetpp_s</td>
<td>8.66</td>
<td>22.2</td>
</tr>
<tr>
<td>623.xalancbmk_s</td>
<td>15.0</td>
<td>18.6</td>
</tr>
<tr>
<td>625.x264_s</td>
<td>6.77</td>
<td>18.8</td>
</tr>
<tr>
<td>631.deepsjeng_s</td>
<td>6.31</td>
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<tr>
<td>641.leela_s</td>
<td>6.36</td>
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</tr>
<tr>
<td>648.exchange2_s</td>
<td>25.6</td>
<td></td>
</tr>
<tr>
<td>657.xz_s</td>
<td>24.7</td>
<td></td>
</tr>
</tbody>
</table>

### Hardware

- **CPU Name:** AMD EPYC 7443P
- **Max MHz:** 4000
- **Nominal:** 2850
- **Enabled:** 24 cores, 1 chip
- **Orderable:** 1 chip
- **Cache L1:** 32 KB I + 32 KB D on chip per core
- **Cache L2:** 512 KB I+D on chip per core
- **Cache L3:** 128 MB I+D on chip per core, 32 MB shared / 6 cores
- **Other:** None
- **Memory:** 1 TB (8 x 128 GB 4Rx4 PC4-3200AA-L)
- **Storage:** 125 GB on tmpfs
- **Other:** None

### Software

- **OS:** Red Hat Enterprise Linux 8.3 (Ootpa) 4.18.0-240.el8.x86_64
- **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>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
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<td>24</td>
<td>225</td>
<td>7.89</td>
<td>223</td>
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<td>7.95</td>
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<td>223</td>
<td>7.95</td>
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<tr>
<td>602.gcc_s</td>
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<td>15.5</td>
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<td>15.1</td>
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<tr>
<td>625.x264_s</td>
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<td>648.exchange2_s</td>
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<td>24</td>
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<td>249</td>
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<td></td>
</tr>
</tbody>
</table>

**SPECspeed®2017_int_base = 13.2**  
**SPECspeed®2017_int_peak = 13.3**

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.

(Continued on next page)
Dell Inc. PowerEdge R7515 (AMD EPYC 7443P 24-Core Processor)

SPECspeed®2017_int_base = 13.2
SPECspeed®2017_int_peak = 13.3

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/cpu2017-1.1.7-aocc300/amd_speed_aocc300_milan_B_lib/64;/mnt/ramdisk/cpu2017-1.1.7-aocc300/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 641.leela_s peak run:
GOMP_CPU_AFFINITY = "0"

General Notes

Binaries were compiled on a system with 2x AMD EPYC 7742 CPU + 1TiB Memory using openSUSE 15.2

(Continued on next page)
General Notes (Continued)

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

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:
- Logical 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/cpu2017-1.1.7-aocc300/bin/sysinfo
Rev: r6538 of 2020-09-24 e8664e66d2d7080afeaa89d4b38e2f1c
running on rhel-8-3-amd Thu Apr  8 19:53:32 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 7443P 24-Core Processor
  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

(Continued on next page)
Dell Inc.  
PowerEdge R7515 (AMD EPYC 7443P 24-Core Processor)

SPECspeed®2017_int_base = 13.2
SPECspeed®2017_int_peak = 13.3

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

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

Platform Notes (Continued)

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 7443P 24-Core Processor
Stepping: 1
CPU MHz: 3774.297
BogoMIPS: 5688.79
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 xsave avx f16c
   rdrand lahf_lm cmp_legacy svm extapic cr8_legacy abm sse4a misalignsse 3dnowprefetch
   osvw ibs kinit wdt tce topoext perfctr_core perfctr_nb bpext perfctr_llc mwaitx cpx
   cat_l3 cdp_l3 invpcid_single hw_pstate sse2 mmse ibr sibp stibp vmmcall
   fsgsbse bmi1 avx2 smep bmi2 invpcid cmq rdt-a rdseed adx smap clflushopt clwb
   sha ni xsaveopt xsavefc xgetbv1 xsaves cqm_llc cqm_occupp llc cqm_mbm_total
   cqm_mbm_local clzero irperf xsaveerptr wbknoinvd amd_ppm arat npt lbrv svm_lock
   nrip_save tsc_scale vmcb_clean flushbyasid decodeassist pausefilter pfthreshold
   v_msave_vmload vgif umip pkru ospke vaes vpclmulqdq rdrpid overflow_recover succor smca

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: 257477 MB

(Continued on next page)
Dell Inc.

PowerEdge R7515 (AMD EPYC 7443P 24-Core Processor)

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

SPECspeed®2017_int_base = 13.2
SPECspeed®2017_int_peak = 13.3

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

Platform Notes (Continued)

node 0 free: 257219 MB
node 1 cpus: 6 7 8 9 10 11
node 1 size: 258038 MB
node 1 free: 257815 MB
node 2 cpus: 12 13 14 15 16 17
node 2 size: 257984 MB
node 2 free: 257727 MB
node 3 cpus: 18 19 20 21 22 23
node 3 size: 245928 MB
node 3 free: 241729 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: 1043940320 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

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

(Continued on next page)
Dell Inc.  

PowerEdge R7515 (AMD EPYC 7443P 24-Core Processor)  

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**Dell Inc.**  

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

---

**Platform Notes (Continued)**

- **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/swaps barriers and __user pointer sanitation
- **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 Nov 26 09:11**

---

**SPEC is set to:** /mnt/ramdisk/cpu2017-1.1.7-aocc300

**Filesystem**

<table>
<thead>
<tr>
<th>Type</th>
<th>Size</th>
<th>Used</th>
<th>Avail</th>
<th>Use%</th>
<th>Mounted on</th>
</tr>
</thead>
<tbody>
<tr>
<td>tmpfs</td>
<td>125G</td>
<td>3.7G</td>
<td>122G</td>
<td>3</td>
<td>/mnt/ramdisk</td>
</tr>
</tbody>
</table>

---

**From /sys/devices/virtual/dmi/id**

- **Vendor:** Dell Inc.
- **Product:** PowerEdge R7515
- **Product Family:** PowerEdge
- **Serial:** 5MGPH13

---

**Additional information from dmidecode 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:**

- 8x 80CE80B380CE M386AA40AM3-CWE 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

---

**Compiler Version Notes**

```
C   | 600.perlbench_s(base, peak) 602.gcc_s(base, peak) 605.mcf_s(base, peak) 606.mcf_s(peak, peak)
```

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(Continued on next page)
Dell Inc. PowerEdge R7515 (AMD EPYC 7443P 24-Core Processor) SPECspeed®2017_int_base = 13.2
SPECspeed®2017_int_peak = 13.3

CPU2017 License: 55 Test Date: Apr-2021
Test Sponsor: Dell Inc. Hardware Availability: Apr-2021
Tested by: Dell Inc. Software Availability: Mar-2021

Compiler Version Notes (Continued)

| peak) 625.x264_s(base, peak) 657.xz_s(base, peak)
| 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

C++ benchmarks:
clang
C++ benchmarks:
clang++
Fortran benchmarks:
flang

Base Compiler Invocation
Dell Inc.
PowerEdge R7515 (AMD EPYC 7443P 24-Core Processor)

SPEC CPU®2017 Integer Speed Result
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CPU2017 License: 55
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Test Date: Apr-2021
Hardware Availability: Apr-2021
Software Availability: Mar-2021

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 -Wl,-allow-multiple-definition
-Wl,-mllvm -Wl,-enable-licm-vrp -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 -fflt -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
-Wl,-mllvm -Wl,-do-block-reorder=aggressive
-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 -fflt -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
-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

(Continued on next page)
**Base Optimization Flags (Continued)**

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`

**Peak Portability Flags**

Same as Base Portability Flags
## Dell Inc.

**PowerEdge R7515 (AMD EPYC 7443P 24-Core Processor)**

<table>
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<tr>
<th>SPECspeak®2017_int_base</th>
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<tr>
<td>SPECspeak®2017_int_peak</td>
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**CPU2017 License:** 55  
**Test Sponsor:** Dell Inc.  
**Tested by:** Dell Inc.  
**Test Date:** Apr-2021  
**Hardware Availability:** Apr-2021  
**Software Availability:** Mar-2021

### Peak Optimization Flags

**C benchmarks:**

- `600.perlbench_s`:
  - `-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 -ffast-math -flto`
  - `-fstruct-layout=5 -mlvm -unroll-threshold=50`
  - `-fremap-arrays -floop-function-specialization`
  - `-mllvm -inlining-threshold=1000 -mllvm -unroll-moves=always -mllvm -function-specialize -mllvm -reduce-array-computations=3 -DSPEC_OPENMP -fopenmp`
  - `-fopenmp=libomp -lomp -llamdlibm -ljemalloc -lflang`

- `602.gcc_s`:
  - Same as `600.perlbench_s`

- `605.mcf_s`:
  - Same as `600.perlbench_s`

- `625.x264_s`:
  - Same as `600.perlbench_s`

- `657.xz_s`:
  - `basepeak = yes`

**C++ benchmarks:**

- `620.omnetpp_s`:
  - `-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 -ffast-math -flto`
  - `-finline-aggressive -mllvm -unroll-threshold=100`
  - `-fllvm-function-elimination -mllvm -function-specialize -mllvm -reduce-array-computations=3 -DSPEC_OPENMP -fopenmp`
  - `-fopenmp=libomp -lomp -llamdlibm -ljemalloc -lflang`

- `623.xalancbmk_s`:
  - Same as `620.omnetpp_s`

- `631.deepsjeng_s`:
  - `basepeak = yes`

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

Dell Inc.

PowerEdge R7515 (AMD EPYC 7443P 24-Core Processor)

<table>
<thead>
<tr>
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### Peak Optimization Flags (Continued)

641.leela_s: Same as 620.omnetpp_s

Fortran benchmarks:

648.exchange2_s: basepeak = yes

### 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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Tested with SPEC CPU®2017 v1.1.7 on 2021-04-08 20:53:31-0400.


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