Cisco Systems
Cisco UCS X210 M7 (Intel Xeon Gold 5512U, 2.10GHz)

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>SPECrate®2017_int_base</th>
<th>SPECrate®2017_int_peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>perlbench_r</td>
<td>56</td>
<td>(262)</td>
</tr>
<tr>
<td>gcc_r</td>
<td>56</td>
<td>(253)</td>
</tr>
<tr>
<td>mcf_r</td>
<td>56</td>
<td></td>
</tr>
<tr>
<td>omnetpp_r</td>
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<td></td>
</tr>
<tr>
<td>xalancbmk_r</td>
<td>56</td>
<td></td>
</tr>
<tr>
<td>x264_r</td>
<td>56</td>
<td></td>
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<tr>
<td>deepsjeng_r</td>
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<tr>
<td>leela_r</td>
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<td></td>
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<tr>
<td>exchange2_r</td>
<td>56</td>
<td></td>
</tr>
<tr>
<td>xz_r</td>
<td>56</td>
<td></td>
</tr>
</tbody>
</table>

**Hardware**
- **CPU Name:** Intel Xeon Gold 5512U
- **Max MHz:** 3700
- **Nominal:** 2100
- **Enabled:** 28 cores, 1 chip, 2 threads/core
- **Orderable:** 1 Chips
- **Cache L1:** 32 KB I + 48 KB D on chip per core
- **L2:** 2 MB I+D on chip per core
- **L3:** 52.5 MB I+D on chip per chip
- **Other:** None
- **Memory:** 512 GB (8 x 64 GB 2Rx4 PC5-4800B-R)
- **Storage:** 1 x 960 GB M.2 SSD SATA
- **Other:** CPU Cooling: Air

**Software**
- **OS:** SUSE Linux Enterprise Server 15 SP4
  5.14.21-150400.22-default
- **Compiler:** C/C++: Version 2024.0.2 of Intel oneAPI DPC++/C++ Compiler for Linux;
  Fortran: Version 2024.0.2 of Intel Fortran Compiler for Linux;
- **Parallel:** No
- **Firmware:** Version 4.3.3a released Jan-2024
- **File System:** xfs
- **System State:** Run level 3 (multi-user)
- **Base Pointers:** 64-bit
- **Peak Pointers:** 32/64-bit
- **Other:** jemalloc memory allocator V5.0.1
- **Power Management:** BIOS set to prefer performance at the cost of additional power usage
### Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
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</tr>
</tbody>
</table>

**SPECrate®2017_int_base = 253**

**SPECrate®2017_int_peak = 262**

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

### Submit Notes

The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl commands to bind each copy to a specific processor. For details, please see the config file.

### Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

### Environment Variables Notes

Environment variables set by runcpu before the start of the run:

```bash
LD_LIBRARY_PATH = "/home/cpu2017/lib/intel64:/home/cpu2017/lib/ia32:/home/cpu2017/je5.0.1-32"
MALLOC_CONF = "retain:true"
```

### General Notes

Binaries compiled on a system with 2x Intel Xeon Platinum 8280M CPU + 384GB RAM memory using Red Hat Enterprise Linux 8.4

Transparent Huge Pages enabled by default

Prior to runcpu invocation

Filesystem page cache synced and cleared with:

```bash
sync; echo 3 > /proc/sys/vm/drop_caches
```

runcpu command invoked through numactl i.e.:

```
numactl --interleave=all runcpu <etc>
```

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.

(Continued on next page)
General Notes (Continued)

jemalloc, a general purpose malloc implementation
built with the RedHat Enterprise 7.5, and the system compiler gcc 4.8.5

Platform Notes

BIOS Settings:
Sub NUMA Clustering set to Enable SNC2(2-clusters)
ADDCDC Sparing set to Disabled
DCU Streamer Prefetch set to Disabled
Enhanced CPU performance set to Auto
LLC Dead Line set to Disabled
Processor C6 Report set to Enabled

Sysinfo program /home/cpu2017/bin/sysinfo
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
running on emr-x210-spec Fri Apr 19 11:33:29 2024

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

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1. uname -a
2. w
3. Username
4. ulimit -a
5. sysinfo process ancestry
6. /proc/cpuint
7. lsacpu
8. numacl --hardware
9. /proc/meminfo
10. who -r
11. Systemd service manager version: systemd 249 (249.11+suse.124.g2bc0b2c447)
12. Services, from systemctl list-unit-files
13. Linux kernel boot-time arguments, from /proc/cmdline
14. cpupow frequency-info
15. sysctl
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 emr-x210-spec 5.14.21-150400.22-default #1 SMP PREEMPT_DYNAMIC Wed May 11 06:57:18 UTC 2022 (49db222)
   x86_64 x86_64 x86_64 GNU/Linux

2. w
   11:33:29 up 1 min, 1 user, load average: 0.13, 0.05, 0.01
   USER     TTY     FRQ    LOGIN@     IDLE     CPU     PCPU    WHAT
   root     tty1     -      11:32     8.00s     1.07s   0.16s   -bash

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

Cisco Systems
Cisco UCS X210 M7 (Intel Xeon Gold 5512U, 2.10GHz)  

CPU2017 License: 9019
Test Sponsor: Cisco Systems
Tested by: Cisco Systems
Test Date: Apr-2024
Hardware Availability: Feb-2024
Software Availability: Dec-2023

SPECrate®2017_int_base = 253
SPECrate®2017_int_peak = 262

Platform Notes (Continued)

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) 2062556
   max locked memory (kbytes, -l) 64
   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) 2062556
   virtual memory (kbytes, -v) unlimited
   file locks      (-x) unlimited

5. sysinfo process ancestry
   /usr/lib/systemd/systemd --switched-root --system --deserialize 30
   login -- root
   -bash
   sh runrate.ic2024.sh
   runcpu --nobuild --action validate --define default-platform-flags --define numcopies=56 -c ic2024.0.2-lin-sapphirerapids-rate-20231213.cfg --reportable --iterations 3 --define smt-on --define cores=28 --define physicalfirst --define invoke_with_interleave --define drop_caches --tune all -o all intrate
   runcpu --nobuild --action validate --define default-platform-flags --define numcopies=56 --configfile ic2024.0.2-lin-sapphirerapids-rate-20231213.cfg --reportable --iterations 3 --define smt-on --define cores=28 --define physicalfirst --define invoke_with_interleave --define drop_caches --tune all --output_format all --nopower --runmode rate --tune base:peak --size refrate intrate --nopreenv --note-preenv --logfile $SPEC/tmp/CPU2017.032/templogs/preenv.intrate.032.0.log --lognum 032.0 --from_runcpu 2
   specperl $SPEC/bin/sysinfo
   $SPEC = /home/cpu2017

6. /proc/cpuinfo
   model name      : INTEL(R) XEON(R) GOLD 5512U
   vendor_id       : GenuineIntel
   cpu family      : 6
   model           : 207
   stepping        : 2
   microcode       : 0x21000200
   bugs            : spectre_v1 spectre_v2 spec_store_bypass swags
   cpu cores       : 28
   siblings        : 56
   1 physical ids (chips)
   56 processors (hardware threads)
   physical id 0: core ids 0-27
   physical id 0: apicids 0-55
   Caution: /proc/cpuinfo data regarding chips, cores, and threads is not necessarily reliable, especially for virtualized systems. Use the above data carefully.

(Continued on next page)
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Cisco UCS X210 M7 (Intel Xeon Gold 5512U, 2.10GHz)

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CPU2017 License: 9019
Test Sponsor: Cisco Systems
Tested by: Cisco Systems

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**Platform Notes (Continued)**

7. lscpu

From lscpu from util-linux 2.37.2:

```
Architecture:                    x86_64
CPU op-mode(s):                  32-bit, 64-bit
Address sizes:                   46 bits physical, 57 bits virtual
Byte Order:                      Little Endian
CPU(s):                          56
On-line CPU(s) list:             0-55
Vendor ID:                       GenuineIntel
Model name:                      INTEL(R) XEON(R) GOLD 5512U
CPU family:                      6
Model:                           207
Thread(s) per core:              2
Core(s) per socket:              28
Socket(s):                       1
Stepping:                        2
CPU max MHz:                     3700.0000
CPU min MHz:                     800.0000
BogoMIPS:                        4200.00
Flags:                           fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36
clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp
lm constant_tsc art arch_perfmon pebs bts rep_good nopl xtopology
nonstop_tsc cpuid aperfmperf tsc_known_freq pni pclmulqdq dtes64 monitor
des_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm pcid dca sse4_1
sse4_2 x2apic movbe popcnt tsc_deadline_timer aes xsave avxf16c rdrand
lahf_lm abm 3nowprefetch cpuid_fault epb cat_13 cat_12 cd p13
invpcid_single cd p12 sbbd mba ibrs ibbp ibrs_enhanced tpr_shadow
vmx flexpriority ept vpid ept_ad fsgsbase tsc_adjust bmon hle avx2 smep
bm12 erms invpcid rtm cmq rdt_a avx512f avx512dq rdseed adx smap
avx512ifma cms liw intel_pt avx512cd sha ni avx512bw avx512vl
xsaveopt xsavecf xetbvl xsaves cqm ltc cmq_occup llc cmq_mmb total
cmq_mbb_local avx_vnni avx512_bf16 vmvondvd dtherm ida arat pni pts hwp
act_window hwp epp hwp ep rerq avx512_v bmi gfi vae vpclmulqdq avx512_vnni avx512_vlambda tme
avx512_vpovcnteq 1a57 rdpid bus_lock_detect cldemote movdird movdir64b
enqcmd fsrm md_clear serialize tsxtdtrk pconf arch lbr avx512_fp16
amx_tile flush_l1d arch_capabilities
```

Virtualization:                  VT-x
L1d cache:                       1.3 MiB (28 instances)
L1i cache:                       896 KiB (28 instances)
L2 cache:                        56 MiB (28 instances)
L3 cache:                        52.5 MiB (1 instance)
NUMA node(s):                    2
NUMA node0 CPU(s):               0-13,28-41
NUMA node1 CPU(s):               14-27,42-55
Vulnerability Itlb multihit:     Not affected
Vulnerability Lttf:              Not affected
Vulnerability Mds:               Not affected
Vulnerability Meltdown:          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; Enhanced IBRS, IBPB conditional, RSB filling
Vulnerability Srbsd:             Not affected
Vulnerability Taa async abort:   Not affected

From lscpu --cache:

```
NAME ONE-SIZE ALL-SIZE WAYS TYPE LEVEL SETS PHY-LINE COHERENCY-SIZE
L1d  48K  1.3M  12 Data  1  64  1  64
```

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Cisco Systems
Cisco UCS X210 M7 (Intel Xeon Gold 5512U, 2.10GHz)

CPU2017 License: 9019
Test Sponsor: Cisco Systems
Tested by: Cisco Systems

SpecCrade®2017_int_base = 253
SpecCrade®2017_int_peak = 262

Test Date: Apr-2024
Hardware Availability: Feb-2024
Software Availability: Dec-2023

Platform Notes (Continued)

L1i  32K  896K  8 Instruction  1  64  1  64
L2  2M  56M  16 Unified  2 2048  1  64
L3 52.5M  52.5M  15 Unified  3  57344  1  64

8. numactl --hardware
NOTE: a numactl 'node' might or might not correspond to a physical chip.
available: 2 nodes (0-1)
node 0 cpus: 0-13,28-41
node 0 size: 257676 MB
node 0 free: 256801 MB
node 1 cpus: 14-27,42-55
node 1 size: 257986 MB
node 1 free: 257466 MB
node distances:
node   0   1
0:  10  12
1:  12  10

9. /proc/meminfo
MemTotal: 5280838912 kB

10. who -r
run-level 3 Apr 19 11:32

11. Systemd service manager version: systemd 249 (249.11+suse.124.g2bc0b2c447)
Default Target Status
multi-user running

12. Services, from systemctl list-unit-files
STATE UNIT FILES
enabled YaST2-Firstboot YaST2-Second-Stage auditd cron getty@ havedeg irqbalance issue-generator
      kbdsettings lvm2-monitor nscd nvme-fc-boot-connections postfix purge-kernels rollback
      rsyslog smartd ssd wicked wicked-d-auto4 wicked-d-dhcpd wicked-d-dhcp5 wicked-d-nanny
enabled-runtime systemd-remount-fs
disabled autofs autostart-initscripts blk-availability boot-sysctl ca-certificates chrony-wait
      chronyd console-getty cups cups-browsed debug-shell ebtables exchange-bmc-os-info
      firewallD grub2-getty once havedeg-switch-root ipmi ipmielvd issue-add-ssh-keys kexec-load
      lufmask man-db-create multipathd nfs nfs-blkmap nvme-autoconnect rdisk rpcbind
      rpnconfigcheck rsyncd serial-getty@ smartd_contro-opt sno mpd snmptrapd svnsave
      systemd-boot-check-no-failures systemd-network-generator systemd-sysext
      systemd-time-wait-sync systemd-timesyncd udisks2
indirect wicked

13. Linux kernel boot-time arguments, from /proc/cmdline
BOOT_IMAGE=boot/vmlinuz-5.14.21-150400.22-default
root=UUID=72858f1f-355b-4421-909c-1facea01bdc
splash=silent
mitigations=auto
quiet
security=

14. cpupower frequency-info
analyzing CPU 0:

(Continued on next page)
Cisco Systems
Cisco UCS X210 M7 (Intel Xeon Gold 5512U, 2.10GHz)

SPEC CPU®2017 Integer Rate Result
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SPECrate®2017_int_base = 253
SPECrate®2017_int_peak = 262

CPU2017 License: 9019
Test Sponsor: Cisco Systems
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Tested by: Cisco Systems
Hardware Availability: Feb-2024
Software Availability: Dec-2023

Platform Notes (Continued)

current policy: frequency should be within 800 MHz and 3.70 GHz.
The governor "performance" 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           2
vm.compaction_proactiveness         20
vm.dirty_background_bytes          10
vm.dirty_background_ratio          10
vm.dirty_bytes                      0
vm.dirty_expire_centisecs          3000
vm.dirty_ratio                     20
vm.dirty_writeback_centisecs       500
vm.dirtytime_expire_seconds        43200
vm.extrfrag_threshold              500
vm.min_unmapped_ratio               1
vm.nr_hugepages                    2097152
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               0

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 SP4

19. Disk information
   SPEC is set to: /home/cpu2017
   Filesystem Type Size Used Avail Use% Mounted on
   /dev/sdb2 xfs 893G 20G 874G 3% /

20. /sys/devices/virtual/dmi/id
    Vendor: Cisco Systems Inc

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Cisco Systems
Cisco UCS X210 M7 (Intel Xeon Gold 5512U, 2.10GHz)

<table>
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<th>CPU2017 License:</th>
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<td>Dec-2023</td>
</tr>
</tbody>
</table>

## Platform Notes (Continued)

21. dmidecode
Additional information from dmidecode 3.2 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:
- 7x 0xCE00 M321R8GA0B0-CQKDG 64 GB 2 rank 4800
- 1x 0xCE00 M321R8GA0B0-CQKMG 64 GB 2 rank 4800

22. BIOS
(This section combines info from /sys/devices and dmidecode.)
- BIOS Vendor: Cisco Systems, Inc.
- BIOS Version: X210M7.4.3.3a.0.0118241337
- BIOS Date: 01/18/2024
- BIOS Revision: 5.32

## Compiler Version Notes

### C
| 502.gcc_r(peak) |
---
Intel(R) oneAPI DPC++/C++ Compiler for applications running on IA-32, Version 2024.0.2 Build 20231213
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.

### C
| 500.perlbench_r(base, peak) 502.gcc_r(base) 505.mcf_r(base, peak) 525.x264_r(base, peak) 557.xz_r(base, peak) |
---
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.

### C
| 502.gcc_r(peak) |
---
Intel(R) oneAPI DPC++/C++ Compiler for applications running on IA-32, Version 2024.0.2 Build 20231213
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.

### C
| 500.perlbench_r(base, peak) 502.gcc_r(base) 505.mcf_r(base, peak) 525.x264_r(base, peak) 557.xz_r(base, peak) |
---
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213
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### C
| 500.perlbench_r(base, peak) 502.gcc_r(base) 505.mcf_r(base, peak) 525.x264_r(base, peak) 557.xz_r(base, peak) |
---
Intel(R) oneAPI DPC++/C++ Compiler for applications running on IA-32, Version 2024.0.2 Build 20231213
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### C++
| 520.omnetpp_r(base, peak) 523.xalancbmk_r(base, peak) 531.deepsjeng_r(base, peak) |
---
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213

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# SPEC CPU®2017 Integer Rate Result

## Cisco Systems

Cisco UCS X210 M7 (Intel Xeon Gold 5512U, 2.10GHz)  

<table>
<thead>
<tr>
<th>SPECrate®2017_int_base = 253</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECrate®2017_int_peak = 262</td>
</tr>
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</table>

CPU2017 License: 9019  
Test Sponsor: Cisco Systems  
Tested by: Cisco Systems  

<table>
<thead>
<tr>
<th>Test Date: Apr-2024</th>
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### Compiler Version Notes (Continued)

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**Fortran | 548.exchange2_r(base, peak)**

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213  
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### Base Compiler Invocation

C benchmarks:  
- icx

C++ benchmarks:  
- icpx

Fortran benchmarks:  
- ifx

---

### Base Portability Flags

- `500.perlbench_r`: `-DSPEC_LP64 -DSPEC_LINUX_X64`
- `502.gcc_r`: `-DSPEC_LP64`
- `505.mcf_r`: `-DSPEC_LP64`
- `520.omnetpp_r`: `-DSPEC_LP64`
- `523.xalancbmk_r`: `-DSPEC_LP64 -DSPEC_LINUX`
- `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:  
- `-w -std=c11 -m64 -Wl,-z,muldefs -xsapphirerapids -O3 -ffast-math`
- `-L/opt/intel/oneapi/compiler/2024.0/lib -lkmalloc`

C++ benchmarks:  
- `-w -std=c++14 -m64 -Wl,-z,muldefs -xsapphirerapids -O3 -ffast-math`

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Base Optimization Flags (Continued)

C++ benchmarks (continued):
-flt -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-L/opt/intel/oneapi/compiler/2024.0/lib -lqkmalloc

Fortran benchmarks:
-w -m64 -Wl,-z,muldefs -xsapphirerapids -O3 -ffast-math -flt
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-nostandard-realloc-lhs -align array32byte -auto
-L/opt/intel/oneapi/compiler/2024.0/lib -lqkmalloc

Peak Compiler Invocation

C benchmarks:
icx

C++ benchmarks:
icpx

Fortran benchmarks:
ifx

Peak Portability Flags

500.perlbench_r: -DSPEC_LP64 -DSPEC_LINUX_X64
502.gcc_r: -D_FILE_OFFSET_BITS=64
505.mcf_r: -DSPEC_LP64
520.omnetpp_r: -DSPEC_LP64
523.xalancbmk_r: -DSPEC_LP64 -DSPEC_LINUX
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

Peak Optimization Flags

C benchmarks:
500.perlbench_r: -w -std=c11 -m64 -Wl,-z,muldefs
-fprofile-generate(pass 1)

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Peak Optimization Flags (Continued)

500.perlbench_r (continued):
-ffast-math -flto -Ofast -xCORE-AVX512 -ffast-math -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4
-fno-strict-overflow
-L/opt/intel/oneapi/compiler/2024.0/lib -lqkmalloc

502.gcc_r: -m32 -L/opt/intel/oneapi/compiler/2024.0/lib32 -std=gnu89
-Wl,-z,muldefs -fprofile-generate(pass 1)
-ffast-math -flto -Ofast -xCORE-AVX512 -ffast-math -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4
-L/usr/local/jemalloc32-5.0.1/lib -ljemalloc

505.mcf_r: basepeak = yes

525.x264_r: -w -std=c11 -m64 -Wl,-z,muldefs -xsapphirerapids -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fno-alias
-L/opt/intel/oneapi/compiler/2024.0/lib -lqkmalloc

557.xz_r: basepeak = yes

C++ benchmarks:

520.omnetpp_r: basepeak = yes

523.xalancbmk_r: basepeak = yes

531.deepsjeng_r: basepeak = yes

541.leela_r: basepeak = yes

Fortran benchmarks:

548.exchange2_r: basepeak = yes

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2017/flags/Intel-ic2024-official-linux64.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2017/flags/Intel-ic2024-official-linux64.xml
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