## SPEC CPU®2017 Integer Rate Result

**Hewlett Packard Enterprise**  
(Test Sponsor: HPE)  
ProLiant DL360 Gen11  
(2.00 GHz, Intel Xeon Platinum 8592V)  

| SPECrate®2017_int_base = 1060 | SPECrate®2017_int_peak = 1090 |

**CPU2017 License:** 3  
**Test Sponsor:** HPE  
**Tested by:** HPE  
**Test Date:** Mar-2024  
**Hardware Availability:** Feb-2024  
**Software Availability:** Dec-2023

### Copies

<table>
<thead>
<tr>
<th>Spec bench</th>
<th>Copies</th>
</tr>
</thead>
<tbody>
<tr>
<td>500.perlbench_r</td>
<td>256</td>
</tr>
<tr>
<td>502.gcc_r</td>
<td>256</td>
</tr>
<tr>
<td>505.mcf_r</td>
<td>256</td>
</tr>
<tr>
<td>520.omnetpp_r</td>
<td>256</td>
</tr>
<tr>
<td>523.xalancbmk_r</td>
<td>256</td>
</tr>
<tr>
<td>525.x264_r</td>
<td>256</td>
</tr>
<tr>
<td>531.deepsjeng_r</td>
<td>256</td>
</tr>
<tr>
<td>541.leela_r</td>
<td>256</td>
</tr>
<tr>
<td>548.exchange2_r</td>
<td>256</td>
</tr>
<tr>
<td>557.xz_r</td>
<td>256</td>
</tr>
</tbody>
</table>

### SPECrate®2017_int_base (1060)  
### SPECrate®2017_int_peak (1090)

**Hardware**

<table>
<thead>
<tr>
<th>Spec Name</th>
<th>Spec Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Name</td>
<td>Intel Xeon Platinum 8592V</td>
</tr>
<tr>
<td>Max MHz</td>
<td>3900</td>
</tr>
<tr>
<td>Nominal</td>
<td>2000</td>
</tr>
<tr>
<td>Enabled</td>
<td>128 cores, 2 chips, 2 threads/core</td>
</tr>
<tr>
<td>Orderable</td>
<td>1, 2 chip(s)</td>
</tr>
<tr>
<td>Cache L1</td>
<td>32 KB I + 48 KB D on chip per core</td>
</tr>
<tr>
<td>L2</td>
<td>2 MB I+D on chip per core</td>
</tr>
<tr>
<td>L3</td>
<td>320 MB I+D on chip per chip</td>
</tr>
<tr>
<td>Other</td>
<td>None</td>
</tr>
<tr>
<td>Memory</td>
<td>512 GB (16 x 32 GB 2Rx8 PC5-5600B-R, running at 4800)</td>
</tr>
<tr>
<td>Storage</td>
<td>1 x 480 GB SATA SSD</td>
</tr>
<tr>
<td>Other</td>
<td>CPU Cooling: CLC</td>
</tr>
</tbody>
</table>

**Software**

<table>
<thead>
<tr>
<th>Spec Name</th>
<th>Spec Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>OS</td>
<td>SUSE Linux Enterprise Server 15 SP5</td>
</tr>
<tr>
<td>Compiler</td>
<td>C/C++: Version 2023.2.3 of Intel oneAPI DPC++/C++ Compiler for Linux; Fortran: Version 2023.2.3 of Intel Fortran Compiler for Linux</td>
</tr>
<tr>
<td>Parallel</td>
<td>No</td>
</tr>
<tr>
<td>Firmware</td>
<td>HPE BIOS Version v2.12 12/13/2023 released Dec-2023</td>
</tr>
<tr>
<td>File System</td>
<td>btrfs</td>
</tr>
<tr>
<td>System State</td>
<td>Run level 3 (multi-user)</td>
</tr>
<tr>
<td>Base Pointers</td>
<td>64-bit</td>
</tr>
<tr>
<td>Peak Pointers</td>
<td>32/64-bit</td>
</tr>
<tr>
<td>Other</td>
<td>jemalloc memory allocator V5.0.1</td>
</tr>
<tr>
<td>Power Management</td>
<td>BIOS and OS set to prefer performance at the cost of additional power usage</td>
</tr>
</tbody>
</table>
Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant DL360 Gen11
(2.00 GHz, Intel Xeon Platinum 8592V)

CPU2017 License: 3
Test Sponsor: HPE
Tested by: HPE

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>
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<tbody>
<tr>
<td>500.perlbench_r</td>
<td>256</td>
<td>479</td>
<td>850</td>
<td>476</td>
<td>856</td>
<td>478</td>
<td>854</td>
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<tr>
<td>502.gcc_r</td>
<td>256</td>
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<td>442</td>
<td>821</td>
<td>441</td>
<td>823</td>
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<tr>
<td>503.mcf_r</td>
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<td>275</td>
<td>1500</td>
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<tr>
<td>520.omnetpp_r</td>
<td>256</td>
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<td>523.xalancbmk_r</td>
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<td>1490</td>
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<tr>
<td>525.x264_r</td>
<td>256</td>
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<td>2260</td>
<td>198</td>
<td>2260</td>
</tr>
<tr>
<td>531.deepsjeng_r</td>
<td>256</td>
<td>360</td>
<td>814</td>
<td>360</td>
<td>815</td>
<td>360</td>
<td>815</td>
</tr>
<tr>
<td>541.leela_r</td>
<td>256</td>
<td>545</td>
<td>777</td>
<td>545</td>
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</tr>
<tr>
<td>548.exchange2_r</td>
<td>256</td>
<td>284</td>
<td>2360</td>
<td>286</td>
<td>2350</td>
<td>285</td>
<td>2360</td>
</tr>
<tr>
<td>557.xz_r</td>
<td>256</td>
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<td>549</td>
<td>504</td>
<td>549</td>
<td>504</td>
<td>549</td>
</tr>
</tbody>
</table>

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"
Transparent Huge Pages enabled by default
Prior to runcpu invocation
Filesystem page cache synced and cleared with:
sync; echo 3> /proc/sys/vm/drop_caches
runcpu command invoked through numactl i.e.:
numactl --interleave=all runcpu <etc>
tuned service was stopped using 'systemctl stop tuned'

Environment Variables Notes

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

(Continued on next page)
General Notes (Continued)

is mitigated in the system as tested and documented.
jemalloc, a general purpose malloc implementation
built with the RedHat Enterprise 7.5, and the system compiler gcc 4.8.5

Platform Notes

BIOS Configuration:
Workload Profile set to General Throughput Compute
Memory Patrol Scrubbing set to Disabled
Last Level Cache (LLC) Dead Line Allocation set to Disabled
Intel UPI Link Enablement set to Single Link
Enhanced Processor Performance Profile set to Aggressive
Thermal Configuration set to Maximum Cooling
Workload Profile set to Custom
DCU Stream Prefetcher set to Disabled
Adjacent Sector Prefetch set to Disabled
Intel UPI Link Power Management set to Enabled
Sysinfo program /home/cpu2017/bin/sysinfo
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
running on localhost Wed Mar 20 03:22:23 2024

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

---

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3. Username
4. ulimit -a
5. sysinfo process ancestry
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7. lscpu
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10. who -r
11. Systemd service manager version: systemd 249 (249.16+suse.171.gdad0071f15)
12. Services, from systemctl list-unit-files
13. Linux kernel boot-time arguments, from /proc/cmdline
14. cpupower frequency-info
15. tuned-adm active
16. sysctl
17. /sys/kernel/mm/transparent_hugepage
18. /sys/kernel/mm/transparent_hugepage/khugepaged
19. OS release
20. Disk information
21. /sys/devices/virtual/dmi/id
22. dmidecode
23. BIOS
---

1. uname -a
Linux localhost 5.14.21-150500.53-default #1 SMP PREEMPT_DYNAMIC Wed May 10 07:56:26 UTC 2023 (b630043)
x86_64 x86_64 x86_64 GNU/Linux

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(Continued on next page)
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Platform Notes (Continued)

2. w
03:22:23 up 1 min, 0 users, load average: 0.40, 0.13, 0.04
USER TTY FROM LOGIN@ IDLE JCPU PCPU WHAT

------------------------------------------------------------

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 (--l) 2062369
  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) 2062369
  virtual memory (kbytes, -v) unlimited
  file locks (--x) unlimited

------------------------------------------------------------

5. sysinfo process ancestry
/usr/lib/systemd/systemd --switched-root --system --deserialize 29
sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups
sshd: root@notty
bash -c cd $SPEC/ && $SPEC/intrate_new.sh
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=256 --c
ic2023.2.3-sapphirerapids-rate-20231121.cfg --define smt-on --define drop_caches --tune base,peak -o all intrate
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=256 --configfile
ic2023.2.3-sapphirerapids-rate-20231121.cfg --define smt-on --define cores=128 --define physicalfirst
--define invoke_with_interleave --define drop_caches --tune base,peak -o all intrate
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=256 --configfile
ic2023.2.3-sapphirerapids-rate-20231121.cfg --define smt-on --define cores=128 --define physicalfirst
--define invoke_with_interleave --define drop_caches --tune base,peak -o all intrate
--output_format all --nopower --runmode rate --tune base:peak --size refrate intrate --nopreenv --note-preenv --logfile
$SPEC/tmp/CPU2017.001/templogs/preenv.intrate.001.0.log --lognum 001.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/cpu2017

------------------------------------------------------------

6. /proc/cpuinfo
  model name: INTEL(R) XEON(R) PLATINUM 8592V
  vendor_id: GenuineIntel
  cpu family: 6
  model: 207
  stepping: 2
  microcode: 0x21000200
  bugs: spectre_v1 spectre_v2 spec_store_bypass swapgs ibrs_pbrsb
  cpu cores: 64
  siblings: 128
  2 physical ids (chips)
  256 processors (hardware threads)
  physical id 0: core ids 0-63
  physical id 1: core ids 0-63
  physical id 0: apicids 0-127

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Platform Notes (Continued)

physical id 1: apicids 128-255
Caution: /proc/cpuinfo data regarding chips, cores, and threads is not necessarily reliable, especially for virtualized systems. Use the above data carefully.

7. lscpu

From lscpu from util-linux 2.37.4:
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): 256
On-line CPU(s) list: 0-255
Vendor ID: GenuineIntel
Model name: INTEL(R) XEON(R) PLATINUM 8592V
CPU family: 6
Model: 207
Thread(s) per core: 2
Core(s) per socket: 64
Socket(s): 2
Stepping: 2
BogoMIPS: 4000.00

Flags:
fpu vme de pse mce cx8 apic sep mtrr pge mca cmov pat pse36
clflush dts acpi mmx fxsr sse sse2 ss movsx mmxset nx pdpe1gb rdtscp
lm constant tsarch arch_perfmon pebs bts rep_good nopl xtopology
ownstop ts arch_perfmon pebs bts rep_good nopl xtopology
nonstop ts arch_perfmon pebs bts rep_good nopl xtopology
os_cache ride discovery tsc_deadline_timer aes xsave avx f16c rdrand
lahf_lm abm 3dnowprefetch cpuid_fault epb cat_l3 cat_l2 cdp_l3

From lscpu from util-linux 2.37.4:
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): 256
On-line CPU(s) list: 0-255
Vendor ID: GenuineIntel
Model name: INTEL(R) XEON(R) PLATINUM 8592V
CPU family: 6
Model: 207
Thread(s) per core: 2
Core(s) per socket: 64
Socket(s): 2
Stepping: 2
BogoMIPS: 4000.00

Flags:
fpu vme de pse mce cx8 apic sep mtrr pge mca cmov pat
pse36 clflush dts acpi mmx fxsr sse sse2 ss movsx mmxset
nx pdpe1gb rdtscp lm constant_tsarch arch_perfmon pebs bts rep_good
nopl xtopology nonstop tsarch arch_perfmon pebs bts rep_good
nopl xtopology os_cache ride discovery tsc_deadline_timer
aes xsave avx f16c rdrand lahf_lm abm 3dnowprefetch

Virtualization: VT-x
L1d cache: 6 MiB (128 instances)
L1i cache: 4 MiB (128 instances)
L2 cache: 256 MiB (128 instances)
L3 cache: 640 MiB (2 instances)
NUMA node0 CPU(s): 0-31, 128-159
NUMA node1 CPU(s): 32-63, 160-191
NUMA node2 CPU(s): 64-95, 192-223
NUMA node3 CPU(s): 96-127, 224-255

Vulnerability Itlb multihit: Not affected
Vulnerability Lti: Not affected
Vulnerability Mds: Not affected
Vulnerability Med: 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 swapping barriers and __user pointer sanitization
Vulnerability Spectre v2: Mitigation; Enhanced IBRS, IBPB conditional, RSB filling, PBRSB-eIBRS SW sequence

(Continued on next page)
Platform Notes (Continued)

Vulnerability Srbds: Not affected
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>48K</td>
<td>6M</td>
<td>12</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>4M</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>2M</td>
<td>256M</td>
<td>16</td>
<td>Unified</td>
<td>2</td>
<td>2048</td>
<td>1</td>
<td>64</td>
</tr>
<tr>
<td>L3</td>
<td>320M</td>
<td>640M</td>
<td>20</td>
<td>Unified</td>
<td>3</td>
<td>262144</td>
<td>1</td>
<td>64</td>
</tr>
</tbody>
</table>

8. numactl --hardware
NOTE: a numactl 'node' might or might not correspond to a physical chip.
available: 4 nodes (0-3)
node 0 cpus: 0-31,128-159
node 0 size: 128701 MB
node 0 free: 128018 MB
node 1 cpus: 32-63,160-191
node 1 size: 129008 MB
node 1 free: 128498 MB
node 2 cpus: 64-95,192-223
node 2 size: 129008 MB
node 2 free: 128515 MB
node 3 cpus: 96-127,224-255
node 3 size: 128898 MB
node 3 free: 128312 MB
node distances:
node 0 1 2 3
0: 10 20 30 30
1: 20 10 30 30
2: 30 30 10 20
3: 30 30 20 10

9. /proc/meminfo
MemTotal: 527991284 kB

10. who -r
run-level 3 Mar 20 03:21

11. Systemd service manager version: systemd 249 (249.16+suse.171.gdad0071f15)
Default Target: running
multi-user: running

12. Services, from systemctl list-unit-files
STATE    UNIT FILES
enabled   apparmor audid cron getty@ irqbalance issue-generator kbdsettings lvm2-monitor postfix purge-kernels rollback sshd systemd-pstore wicked wickedd-auto4 wickedd-dhcp4 wickedd-dhcp6 wickedd-nanny
enabled-runtime systemd-remount-fs

(Continued on next page)
Platform Notes (Continued)

13. Linux kernel boot-time arguments, from /proc/cmdline
   BOOT_IMAGE=/boot/vmlinuz-5.14.21-150500.53-default
   root=UUID=cc6cc077-0be5-45b2-9254-52358283bcfe
   splash=silent
   mitigations=auto
   quiet
   security=apparmor

14. cpupower frequency-info
   analyzing CPU 0:
   Unable to determine current policy
   boost state support:
   Supported: yes
   Active: yes

15. tuned-adm active
   It seems that tuned daemon is not running, preset profile is not activated.
   Preset profile: throughput-performance

16. sysctl
   kernel.numa_balancing               1
   kernel.randomize_va_space           2
   vm.compaction_proactiveness         20
   vm.dirty_background_bytes           0
   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                    0
   vm.nr_hugepages_mempolicy          0
   vm.nr_overcommit_hugepages         0
   vm.swappiness                      60
   vm.watermark_boost_factor          15000
   vm.watermark_scale_factor          10
   vm.zone_reclaim_mode               0

17. /sys/kernel/mm/transparent_hugepage
   defrag always defer defer+madvisew [madvisew] never
   enabled [always] madvisew never
   hpage_pmd_size 2097152
   shmem_enabled always within_size advise [never] deny force

18. /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

(Continued on next page)
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Platform Notes (Continued)

19. OS release
   From /etc/*-release /etc/*-version
   os-release SUSE Linux Enterprise Server 15 SP5

20. Disk information
   SPEC is set to: /home/cpu2017
   Filesystem Type Size Used Avail Use% Mounted on
   /dev/sda2 btrfs 371G 187G 183G 51% /home

21. /sys/devices/virtual/dmi/id
   Vendor: HPE
   Product: ProLiant DL360 Gen11
   Product Family: ProLiant
   Serial: CNX2070DC4

22. dmidecode
   Additional information from dmidecode 3.4 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:
   16x Hynix HMCG88AGBRA193N 32 GB 2 rank 5600, configured at 4800

23. BIOS
   (This section combines info from /sys/devices and dmidecode.)
   BIOS Vendor: HPE
   BIOS Version: 2.12
   BIOS Date: 12/13/2023
   BIOS Revision: 2.12
   Firmware Revision: 1.55

Compiler Version Notes

C       | 502.gcc_r(peak)
Intel(R) oneAPI DPC++/C++ Compiler for applications running on IA-32, Version 2023.2.3 Build x
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 2023.2.3 Build x
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 2023.2.3 Build x
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**SPEC CPU®2017 Integer Rate Result**

Hewlett Packard Enterprise  
(Test Sponsor: HPE)  
ProLiant DL360 Gen11  
(2.00 GHz, Intel Xeon Platinum 8592V)

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**Compiler Version Notes (Continued)**

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**Base Compiler Invocation**

**C benchmarks:**

- icx

**C++ benchmarks:**

- icpx

**Fortran benchmarks:**

- ifx

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**Base Portability Flags**

```bash
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
```
SPEC CPU®2017 Integer Rate Result
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(2.00 GHz, Intel Xeon Platinum 8592V)

SPECrate®2017_int_base = 1060
SPECrate®2017_int_peak = 1090

CPU2017 License: 3
Test Sponsor: HPE
Tested by: HPE

Base Optimization Flags

C benchmarks:
- -w -std=c11 -m64 -Wl,-z,muldefs -xsapphirerapids -O3 -ffast-math
- -flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
- -L/home/specdev/new_compilers/ic2023.2.3/compiler/lib/intel64_lin
- -lqkmalloc

C++ benchmarks:
- -w -std=c++14 -m64 -Wl,-z,muldefs -xsapphirerapids -O3 -ffast-math
- -flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
- -L/home/specdev/new_compilers/ic2023.2.3/compiler/lib/intel64_lin
- -lqkmalloc

Fortran benchmarks:
- -w -m64 -Wl,-z,muldefs -xsapphirerapids -O3 -ffast-math -flto
- -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
- -nostandard-realloc-lhs -align array32byte -auto
- -L/home/specdev/new_compilers/ic2023.2.3/compiler/lib/intel64_lin
- -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

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Peak Portability Flags (Continued)

557.xz_r: -DSPEC_LP64

Peak Optimization Flags

C benchmarks:

500.perlbench_r: -w -std=c11 -m64 -Wl,-z,muldefs
   -fprofile-generate(pass 1)
   -fprofile-use=default.profdata(pass 2) -xCORE-AVX2(pass 1)
   -flto -Ofast -xCORE-AVX512 -ffast-math -mfpmath=sse
   -funroll-loops -qopt-mem-layout-trans=4
   -fno-strict-overflow
   -L/home/specdev/new_compilers/ic2023.2.3/compiler/lib/intel64_lin
      -lqkmalloc

502.gcc_r: -m32
   -L/home/specdev/new_compilers/ic2023.2.3/compiler/lib/ia32_lin
   -std=gnu89 -Wl,-z,muldefs -fprofile-generate(pass 1)
   -fprofile-use=default.profdata(pass 2) -xCORE-AVX2(pass 1)
   -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/home/specdev/new_compilers/ic2023.2.3/compiler/lib/intel64_lin
   -lqkmalloc

557.xz_r: basepeak = yes

C++ benchmarks:

520.omnetpp_r: basepeak = yes

523.xalancbnk_r: basepeak = yes

531.deepsjeng_r: basepeak = yes

541.leela_r: basepeak = yes
Peak Optimization Flags (Continued)

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/HPE-Platform-Flags-Intel-EMR-rev1.0.html
http://www.spec.org/cpu2017/flags/Intel-ic2023p2-official-linux64.html

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

http://www.spec.org/cpu2017/flags/HPE-Platform-Flags-Intel-EMR-rev1.0.xml
http://www.spec.org/cpu2017/flags/Intel-ic2023p2-official-linux64.xml

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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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