



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant DL380 Gen11

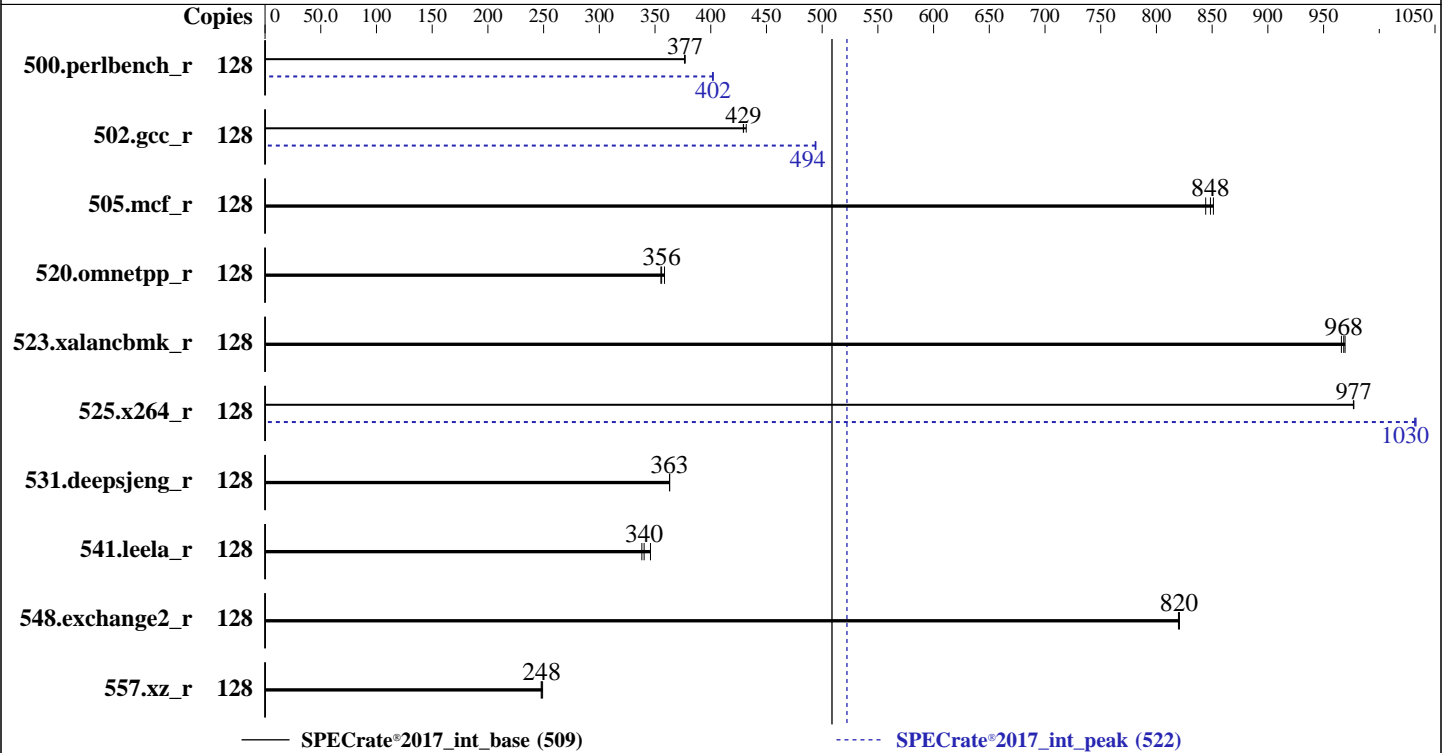
(2.10 GHz, Intel Xeon Gold 6430)

SPECrate®2017_int_base = 509

SPECrate®2017_int_peak = 522

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

Test Date: Feb-2023
Hardware Availability: Jan-2023
Software Availability: Jan-2023



Hardware

CPU Name: Intel Xeon Gold 6430
 Max MHz: 3400
 Nominal: 2100
 Enabled: 64 cores, 2 chips, 2 threads/core
 Orderable: 1, 2 chip(s)
 Cache L1: 32 KB I + 48 KB D on chip per core
 L2: 2 MB I+D on chip per core
 L3: 60 MB I+D on chip per chip
 Other: None
 Memory: 1 TB (16 x 64 GB 2Rx4 PC5-4800B-R, running at 4400)
 Storage: 1 x 900 GB SATA SSD
 Other: None

Software

OS: Ubuntu 22.04.1 LTS
 Kernel 5.15.0-58-generic
 Compiler: C/C++: Version 2022.1 of Intel oneAPI DPC++/C++ Compiler for Linux;
 Fortran: Version 2022.1 of Intel Fortran Compiler
 Parallel: No
 Firmware: HPE BIOS Version v1.22 01/18/2023 released Jan-2023
 File System: ext4
 System State: Run level 5 (multi-user)
 Base Pointers: 64-bit
 Peak Pointers: 32/64-bit
 Other: jemalloc memory allocator V5.0.1
 Power Management: BIOS and OS set to prefer performance at the cost of additional power usage



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant DL380 Gen11

(2.10 GHz, Intel Xeon Gold 6430)

SPECrate®2017_int_base = 509

SPECrate®2017_int_peak = 522

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

Test Date: Feb-2023
Hardware Availability: Jan-2023
Software Availability: Jan-2023

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
500.perlbench_r	128	541	377	541	376	541	377	128	507	402	507	402	507	402
502.gcc_r	128	422	429	422	429	420	432	128	367	494	367	494	367	494
505.mcf_r	128	244	848	243	851	245	844	128	244	848	243	851	245	844
520.omnetpp_r	128	473	355	472	356	468	359	128	473	355	472	356	468	359
523.xalancbmk_r	128	140	966	140	968	139	969	128	140	966	140	968	139	969
525.x264_r	128	229	977	229	977	229	977	128	217	1030	217	1030	217	1030
531.deepsjeng_r	128	404	363	404	363	404	363	128	404	363	404	363	404	363
541.leela_r	128	613	346	623	340	627	338	128	613	346	623	340	627	338
548.exchange2_r	128	409	820	409	820	409	821	128	409	820	409	820	409	821
557.xz_r	128	555	249	557	248	558	248	128	555	249	557	248	558	248

SPECrate®2017_int_base = **509**

SPECrate®2017_int_peak = **522**

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

Compiler Notes

SPEC has ruled that the compiler used for this result was performing a compilation that specifically improves the performance of the 523.xalancbmk_r / 623.xalancbmk_s benchmarks using a priori knowledge of the SPEC code and dataset to perform a transformation that has narrow applicability.

In order to encourage optimizations that have wide applicability (see rule 1.4 https://www.spec.org/cpu2017/Docs/runrules.html#rule_1.4), SPEC will no longer publish results using this optimization.

This result is left in the SPEC results database for historical reference.

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>
IRQ balance service was stopped using "systemctl stop irqbalance.service"
tuned-adm profile was set to Accelerator-Performance using "tuned-adm profile accelerator-performance"



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant DL380 Gen11

(2.10 GHz, Intel Xeon Gold 6430)

SPECrate®2017_int_base = 509

SPECrate®2017_int_peak = 522

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

Test Date: Feb-2023
Hardware Availability: Jan-2023
Software Availability: Jan-2023

Environment Variables Notes

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

LD_LIBRARY_PATH = "/home/cpu2017_19/lib/intel64:/home/cpu2017_19/lib/ia32:/home/cpu2017_19/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) 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

sources available from jemalloc.net or <https://github.com/jemalloc/jemalloc/releases>

Platform Notes

The system ROM used for this result contains Intel microcode version 0x2b000161 for the Intel Xeon Gold 6430 processor.

The reported date by sysinfo is incorrect due to computer clock being not set correctly.

The correct test date is: Feb-2023.

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

Adjacent Sector Prefetch set to Disabled

DCU Stream Prefetcher set to Disabled

Intel UPI Link Power Management set to Enabled

Minimum Processor Idle Power Package C-State set to Package C6 (non-retention) State

Sysinfo program /home/cpu2017_19/bin/sysinfo

Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197

running on admin1 Mon Jun 27 19:26:35 2022

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

Table of contents

1. uname -a
2. w
3. Username
4. ulimit -a
5. sysinfo process ancestry
6. /proc/cpuinfo
7. lscpu
8. numactl --hardware
9. /proc/meminfo
10. who -r
11. Systemd service manager version: systemd 249 (249.11-0ubuntu3.4)

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant DL380 Gen11

(2.10 GHz, Intel Xeon Gold 6430)

SPECrate®2017_int_base = 509

SPECrate®2017_int_peak = 522

CPU2017 License: 3

Test Sponsor: HPE

Tested by: HPE

Test Date: Feb-2023

Hardware Availability: Jan-2023

Software Availability: Jan-2023

Platform Notes (Continued)

- 12. Failed units, from `systemctl list-units --state=failed`
- 13. Services, from `systemctl list-unit-files`
- 14. Linux kernel boot-time arguments, from `/proc/cmdline`
- 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 admin1 5.15.0-58-generic #64-Ubuntu SMP Thu Jan 5 11:43:13 UTC 2023 x86_64 x86_64 x86_64 GNU/Linux
```

```
2. w
19:26:35 up 58 min, 3 users, load average: 0.00, 0.00, 0.00
USER      TTY      FROM          LOGIN@      IDLE        JCPU   PCPU   WHAT
admin1    tty1    -              19:21       4:51       0.04s   0.01s -bash
admin1    pts/0   172.16.0.100  19:22       4:03       0.02s   0.01s sshd: admin1 [priv]
admin1    pts/1   172.16.0.100  19:22      11.00s    0.97s   0.01s sudo -i
```

```
3. Username
From environment variable $USER:  root
From the command 'logname':      admin1
```

```
4. ulimit -a
time(seconds)      unlimited
file(blocks)       unlimited
data(kbytes)       unlimited
stack(kbytes)      unlimited
coredump(blocks)   0
memory(kbytes)     unlimited
locked memory(kbytes) 132074412
process            4126881
nofiles            1024
vmemory(kbytes)    unlimited
locks              unlimited
rtprio             0
```

```
5. sysinfo process ancestry
/sbin/init
sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups
sshd: admin1 [priv]
sshd: admin1@pts/0
-bash
sudo -i
sudo -i
-bash
-bash
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=128 -c
ic2022.1-lin-core-avx512-rate-20220316.cfg --define smt-on --define cores=64 --define physicalfirst
--define invoke_with_interleave --define drop_caches --tune base,peak -o all intrate
```

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant DL380 Gen11

(2.10 GHz, Intel Xeon Gold 6430)

SPECrate®2017_int_base = 509

SPECrate®2017_int_peak = 522

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

Test Date: Feb-2023
Hardware Availability: Jan-2023
Software Availability: Jan-2023

Platform Notes (Continued)

```
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=128 --configfile
ic2022.1-lin-core-avx512-rate-20220316.cfg --define smt-on --define cores=64 --define physicalfirst
--define invoke_with_interleave --define drop_caches --tune base,peak --output_format all --nopower
--runmode rate --tune base:peak --size refrate intrate --nopreenv --note-preenv --logfile
$SPEC/tmp/CPU2017.004/templogs/preenv.intrate.004.0.log --lognum 004.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/cpu2017_19
```

```
-----
6. /proc/cpuinfo
model name      : Intel(R) Xeon(R) Gold 6430
vendor_id      : GenuineIntel
cpu family     : 6
model          : 143
stepping       : 6
microcode      : 0x2b000161
bugs           : spectre_v1 spectre_v2 spec_store_bypass swapgs eibrs_pbrsb
cpu cores      : 32
siblings       : 64
2 physical ids (chips)
128 processors (hardware threads)
physical id 0: core ids 0-31
physical id 1: core ids 0-31
physical id 0: apicids 0-63
physical id 1: apicids 128-191
```

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 2.37.2:

```
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): 128
On-line CPU(s) list: 0-127
Vendor ID: GenuineIntel
Model name: Intel(R) Xeon(R) Gold 6430
CPU family: 6
Model: 143
Thread(s) per core: 2
Core(s) per socket: 32
Socket(s): 2
Stepping: 6
BogoMIPS: 3800.00
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
ds_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 avx f16c rdrand
lahf_lm abm 3dnowprefetch cpuid_fault epb cat_l3 cat_l2 cdp_l3
invpcid_single cdp_l2 ssbd mba ibrs ibpb stibp ibrs_enhanced tpr_shadow
vmi flexpriority ept vpid ept_ad fsgsbase tsc_adjust bmi1 avx2 smep bmi2
erms invpcid cqm rdt_a avx512f avx512dq rdseed adx smap avx512ifma
clflushopt clwb intel_pt avx512cd sha_ni avx512bw avx512vl xsaveopt xsavec
xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbm_total cqm_mbm_local
split_lock_detect avx_vnni avx512_bf16 wbnoinvd dtherm ida arat pln pts
```

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant DL380 Gen11

(2.10 GHz, Intel Xeon Gold 6430)

SPECrate®2017_int_base = 509

SPECrate®2017_int_peak = 522

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

Test Date: Feb-2023
Hardware Availability: Jan-2023
Software Availability: Jan-2023

Platform Notes (Continued)

```
avx512vbmi umip pku ospke waitpkg avx512_vbmi2 gfni vaes vpclmulqdq
avx512_vnni avx512_bitalg tme avx512_vpopcntdq la57 rdpid bus_lock_detect
cldemote movdiri movdir64b enqcmd fsrm md_clear serialize tsxldtrk pconfig
arch_lbr amx_bf16 avx512_fp16 amx_tile amx_int8 flush_llid
arch_capabilities
```

```

Virtualization: VT-x
L1d cache: 3 MiB (64 instances)
L1i cache: 2 MiB (64 instances)
L2 cache: 128 MiB (64 instances)
L3 cache: 120 MiB (2 instances)
NUMA node(s): 8
NUMA node0 CPU(s): 0-7,64-71
NUMA node1 CPU(s): 8-15,72-79
NUMA node2 CPU(s): 16-23,80-87
NUMA node3 CPU(s): 24-31,88-95
NUMA node4 CPU(s): 32-39,96-103
NUMA node5 CPU(s): 40-47,104-111
NUMA node6 CPU(s): 48-55,112-119
NUMA node7 CPU(s): 56-63,120-127
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/swaps barriers and __user pointer sanitization
Vulnerability Spectre v2: Mitigation; Enhanced IBRS, IBPB conditional, RSB filling, PBR SB-eIBRS SW
sequence
Vulnerability Srbds: Not affected
Vulnerability Tsx async abort: Not affected

```

From lscpu --cache:

NAME	ONE-SIZE	ALL-SIZE	WAYS	TYPE	LEVEL	SETS	PHY-LINE	COHERENCY-SIZE
L1d	48K	3M	12	Data	1	64	1	64
L1i	32K	2M	8	Instruction	1	64	1	64
L2	2M	128M	16	Unified	2	2048	1	64
L3	60M	120M	15	Unified	3	65536	1	64

8. numactl --hardware

NOTE: a numactl 'node' might or might not correspond to a physical chip.

```

available: 8 nodes (0-7)
node 0 cpus: 0-7,64-71
node 0 size: 128732 MB
node 0 free: 128269 MB
node 1 cpus: 8-15,72-79
node 1 size: 128984 MB
node 1 free: 128513 MB
node 2 cpus: 16-23,80-87
node 2 size: 129020 MB
node 2 free: 128787 MB
node 3 cpus: 24-31,88-95
node 3 size: 129020 MB
node 3 free: 128765 MB
node 4 cpus: 32-39,96-103
node 4 size: 129020 MB
node 4 free: 128772 MB
node 5 cpus: 40-47,104-111
node 5 size: 129020 MB

```

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant DL380 Gen11

(2.10 GHz, Intel Xeon Gold 6430)

SPECrate®2017_int_base = 509

SPECrate®2017_int_peak = 522

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

Test Date: Feb-2023
Hardware Availability: Jan-2023
Software Availability: Jan-2023

Platform Notes (Continued)

```

node 5 free: 128734 MB
node 6 cpus: 48-55,112-119
node 6 size: 129020 MB
node 6 free: 128651 MB
node 7 cpus: 56-63,120-127
node 7 size: 129013 MB
node 7 free: 128772 MB
node distances:
node  0  1  2  3  4  5  6  7
0:  10  20  30  30  30  30  30  30
1:  20  10  30  30  30  30  30  30
2:  30  30  10  20  30  30  30  30
3:  30  30  20  10  30  30  30  30
4:  30  30  30  30  10  20  30  30
5:  30  30  30  30  20  10  30  30
6:  30  30  30  30  30  30  10  20
7:  30  30  30  30  30  30  20  10

```

```

-----
9. /proc/meminfo
   MemTotal:      1056595300 kB

```

```

-----
10. who -r
   run-level 5 Jun 27 18:30

```

```

-----
11. Systemd service manager version: systemd 249 (249.11-0ubuntu3.4)
   Default Target  Status
   graphical       degraded

```

```

-----
12. Failed units, from systemctl list-units --state=failed
   UNIT                                LOAD  ACTIVE SUB    DESCRIPTION
* systemd-networkd-wait-online.service loaded failed failed Wait for Network to be Configured

```

```

-----
13. Services, from systemctl list-unit-files
   STATE     UNIT FILES
enabled     ModemManager apparmor blk-availability cloud-config cloud-final cloud-init
cloud-init-local console-setup cron dmesg e2scrub_reap finalrd getty@ gpu-manager
grub-common grub-initrd-fallback irqbalance keyboard-setup lvm2-monitor lxd-agent
multipathd networkd-dispatcher open-iscsi open-vm-tools pollinate rsyslog secureboot-db
setvtrgb snapd ssh systemd-networkd systemd-networkd-wait-online systemd-pstore
systemd-resolved systemd-timesyncd thermald tuned ua-reboot-cmds ubuntu-advantage udisks2
ufw unattended-upgrades vgauth
enabled-runtime netplan-ovs-cleanup systemd-fsck-root systemd-remount-fs
disabled     console-getty debug-shell iscsid nftables powertop rsync serial-getty@
systemd-boot-check-no-failures systemd-network-generator systemd-sysext
systemd-time-wait-sync upower
generated    apport
indirect     uuid
masked       cryptdisks cryptdisks-early hwclock lvm2 multipath-tools-boot rc rcS screen-cleanup sudo
x11-common

```

```

-----
14. Linux kernel boot-time arguments, from /proc/cmdline
   BOOT_IMAGE=/vmlinuz-5.15.0-58-generic
   root=/dev/mapper/ubuntu--vg-ubuntu--lv
   ro

```

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant DL380 Gen11

(2.10 GHz, Intel Xeon Gold 6430)

SPECrate®2017_int_base = 509

SPECrate®2017_int_peak = 522

CPU2017 License: 3

Test Sponsor: HPE

Tested by: HPE

Test Date: Feb-2023

Hardware Availability: Jan-2023

Software Availability: Jan-2023

Platform Notes (Continued)

15. tuned-adm active
Current active profile: accelerator-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 40
vm.dirty_writeback_centisecs 500
vm.dirtytime_expire_seconds 43200
vm.extfrag_threshold 500
vm.min_unmapped_ratio 1
vm.nr_hugepages 0
vm.nr_hugepages_mempolicy 0
vm.nr_overcommit_hugepages 0
vm.swappiness 10
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+madvice [madvice] never
enabled always [madvice] 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

19. OS release
From /etc/*-release /etc/*-version
os-release Ubuntu 22.04.1 LTS

20. Disk information
SPEC is set to: /home/cpu2017_19
Filesystem Type Size Used Avail Use% Mounted on
/dev/mapper/ubuntu--vg-ubuntu--lv ext4 877G 54G 787G 7% /

21. /sys/devices/virtual/dmi/id
Vendor: HPE
Product: ProLiant DL380 Gen11
Product Family: ProLiant

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant DL380 Gen11

(2.10 GHz, Intel Xeon Gold 6430)

SPECrate®2017_int_base = 509

SPECrate®2017_int_peak = 522

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

Test Date: Feb-2023
Hardware Availability: Jan-2023
Software Availability: Jan-2023

Platform Notes (Continued)

Serial: CNX21000G7

22. dmidecode

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:

16x Samsung M321R8GA0BB0-CQKDG 64 GB 2 rank 4800, configured at 4400
16x UNKNOWN NOT AVAILABLE

23. BIOS

(This section combines info from /sys/devices and dmidecode.)

BIOS Vendor: HPE
BIOS Version: 1.22
BIOS Date: 01/18/2023
BIOS Revision: 1.22
Firmware Revision: 1.30

Compiler Version Notes

C | 502.gcc_r(peak)

Intel(R) oneAPI DPC++/C++ Compiler for applications running on IA-32, Version 2022.1.0 Build 20220316
Copyright (C) 1985-2022 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 2022.1.0 Build 20220316
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.

C | 502.gcc_r(peak)

Intel(R) oneAPI DPC++/C++ Compiler for applications running on IA-32, Version 2022.1.0 Build 20220316
Copyright (C) 1985-2022 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 2022.1.0 Build 20220316
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.

C++ | 520.omnetpp_r(base, peak) 523.xalancbnk_r(base, peak) 531.deepsjeng_r(base, peak)
| 541.leela_r(base, peak)

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2022.1.0 Build 20220316

(Continued on next page)



SPEC CPU[®]2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant DL380 Gen11

(2.10 GHz, Intel Xeon Gold 6430)

SPECrate[®]2017_int_base = 509

SPECrate[®]2017_int_peak = 522

CPU2017 License: 3

Test Sponsor: HPE

Tested by: HPE

Test Date: Feb-2023

Hardware Availability: Jan-2023

Software Availability: Jan-2023

Compiler Version Notes (Continued)

Copyright (C) 1985-2022 Intel Corporation. All rights reserved.

Fortran | 548.exchange2_r(base, peak)

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2022.1.0 Build 20220316
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.

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 -xCORE-AVX512 -O3 -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-L/usr/local/intel/compiler/2022.1.0/linux/compiler/lib/intel64_lin
-lqkmalloc

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant DL380 Gen11

(2.10 GHz, Intel Xeon Gold 6430)

SPECrate®2017_int_base = 509

SPECrate®2017_int_peak = 522

CPU2017 License: 3

Test Sponsor: HPE

Tested by: HPE

Test Date: Feb-2023

Hardware Availability: Jan-2023

Software Availability: Jan-2023

Base Optimization Flags (Continued)

C++ benchmarks:

```
-w -m64 -Wl,-z,muldefs -xCORE-AVX512 -O3 -ffast-math -flto
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-L/usr/local/intel/compiler/2022.1.0/linux/compiler/lib/intel64_lin
-lqkmalloc
```

Fortran benchmarks:

```
-w -m64 -Wl,-z,muldefs -xCORE-AVX512 -O3 -ffast-math -flto
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-nostandard-realloc-lhs -align array32byte -auto
-L/usr/local/intel/compiler/2022.1.0/linux/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
557.xz_r: -DSPEC_LP64
```



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant DL380 Gen11

(2.10 GHz, Intel Xeon Gold 6430)

SPECrate®2017_int_base = 509

SPECrate®2017_int_peak = 522

CPU2017 License: 3

Test Sponsor: HPE

Tested by: HPE

Test Date: Feb-2023

Hardware Availability: Jan-2023

Software Availability: Jan-2023

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-AVX512
-Ofast -ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fno-strict-overflow
-L/usr/local/intel/compiler/2022.1.0/linux/compiler/lib/intel64_lin
-lqkmallocc
```

```
502.gcc_r: -m32
-L/usr/local/intel/compiler/2022.1.0/linux/compiler/lib/ia32_lin
-std=gnu89 -Wl,-z,muldefs -fprofile-generate(pass 1)
-fprofile-use=default.profdata(pass 2) -xCORE-AVX512
-Ofast -ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -L/usr/local/jemalloc32-5.0.1/lib
-ljemallocc
```

505.mcf_r: basepeak = yes

```
525.x264_r: -w -std=c11 -m64 -Wl,-z,muldefs -xCORE-AVX512 -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fno-alias
-L/usr/local/intel/compiler/2022.1.0/linux/compiler/lib/intel64_lin
-lqkmallocc
```

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/HPE-Platform-Flags-Intel-SPR-rev1.1.html>

http://www.spec.org/cpu2017/flags/Intel-ic2022-official-linux64_revA.html



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant DL380 Gen11

(2.10 GHz, Intel Xeon Gold 6430)

SPECrate®2017_int_base = 509

SPECrate®2017_int_peak = 522

CPU2017 License: 3

Test Sponsor: HPE

Tested by: HPE

Test Date: Feb-2023

Hardware Availability: Jan-2023

Software Availability: Jan-2023

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

<http://www.spec.org/cpu2017/flags/HPE-Platform-Flags-Intel-SPR-rev1.1.xml>

http://www.spec.org/cpu2017/flags/Intel-ic2022-official-linux64_revA.xml

SPEC CPU and SPECrate are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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

Tested with SPEC CPU®2017 v1.1.9 on 2022-06-27 15:26:35-0400.

Report generated on 2024-01-29 17:29:22 by CPU2017 PDF formatter v6716.

Originally published on 2023-03-29.