



SPEC CPU®2017 Integer Rate Result

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xFusion

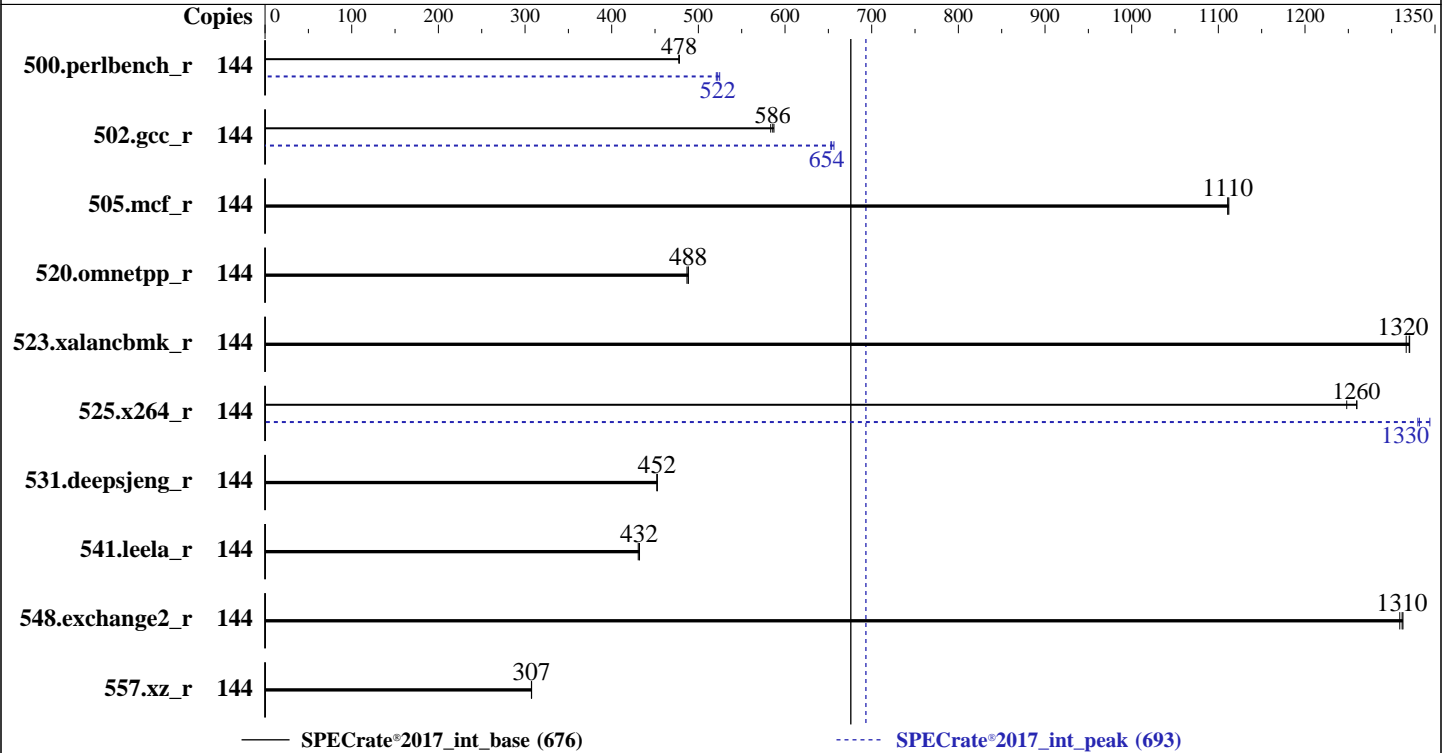
SPECrate®2017_int_base = 676

FusionServer 2488H V7 (Intel Xeon Gold 6416H)

SPECrate®2017_int_peak = 693

CPU2017 License: 6488
Test Sponsor: xFusion
Tested by: xFusion

Test Date: Aug-2023
Hardware Availability: Jul-2023
Software Availability: Dec-2022



Hardware

CPU Name: Intel Xeon Gold 6416H
Max MHz: 4200
Nominal: 2200
Enabled: 72 cores, 4 chips, 2 threads/core
Orderable: 1,2,4 chips
Cache L1: 32 KB I + 48 KB D on chip per core
L2: 2 MB I+D on chip per core
L3: 45 MB I+D on chip per chip
Other: None
Memory: 1 TB (32 x 32 GB 2Rx8 PC5-4800B-R)
Storage: 1 x 960 GB SATA SSD
Other: None

Software

OS: Red Hat Enterprise Linux release 9.0 (Plow)
5.14.0-70.13.1.el9_0.x86_64
Compiler: C/C++: Version 2023.0 of Intel oneAPI DPC++/C++ Compiler for Linux;
Fortran: Version 2023.0 of Intel Fortran Compiler for Linux;
Parallel: No
Firmware: Version 01.02.00.05 Released Jul-2023
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 and OS set to prefer performance at the cost of additional power usage



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Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
500.perlbench_r	144	480	478	480	478	480	478	144	437	525	440	521	439	522
502.gcc_r	144	349	583	348	586	347	587	144	312	654	312	653	311	656
505.mcf_r	144	209	1110	209	1110	209	1110	144	209	1110	209	1110	209	1110
520.omnetpp_r	144	387	488	387	488	388	487	144	387	488	387	488	388	487
523.xalancbmk_r	144	115	1320	115	1320	115	1320	144	115	1320	115	1320	115	1320
525.x264_r	144	200	1260	200	1260	202	1250	144	188	1340	190	1330	189	1330
531.deepsjeng_r	144	365	452	365	452	365	452	144	365	452	365	452	365	452
541.leela_r	144	552	432	552	432	554	431	144	552	432	552	432	554	431
548.exchange2_r	144	288	1310	288	1310	287	1310	144	288	1310	288	1310	287	1310
557.xz_r	144	506	307	506	308	506	307	144	506	307	506	308	506	307

SPECrate®2017_int_base = **676**

SPECrate®2017_int_peak = **693**

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"

Environment Variables Notes

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

LD_LIBRARY_PATH =

"/home/Uniautos/cpu2017/lib/intel64:/home/Uniautos/cpu2017/lib/ia32:/home/Uniautos/cpu2017/je5.0.1-32"

MALLOC_CONF = "retain:true"



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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:
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.
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

BIOS configuration:
Performance Profile Set to Performance
SNC Set to Enable SNC2 (2-clusters)

Sysinfo program /home/Uniautos/cpu2017/bin/sysinfo
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
running on localhost.localdomain Wed Aug 2 13:50:41 2023

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

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 10. who -r
 11. Systemd service manager version: systemd 250 (250-6.el9_0)
 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
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Platform Notes (Continued)

1. `uname -a`
Linux localhost.localdomain 5.14.0-70.13.1.el9_0.x86_64 #1 SMP PREEMPT Thu Apr 14 12:42:38 EDT 2022 x86_64
x86_64 x86_64 GNU/Linux

2. `w`
13:50:41 up 2:24, 1 user, load average: 0.25, 0.06, 0.02
USER TTY LOGIN@ IDLE JCPU PCPU WHAT
root pts/0 11:28 9.00s 1.11s 0.05s -bash

3. Username
From environment variable \$USER: root

4. `ulimit -a`
real-time non-blocking time (microseconds, -R) unlimited
core file size (blocks, -c) 0
data seg size (kbytes, -d) unlimited
scheduling priority (-e) 0
file size (blocks, -f) unlimited
pending signals (-i) 4125196
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) 4125196
virtual memory (kbytes, -v) unlimited
file locks (-x) unlimited

5. `sysinfo process ancestry`
/usr/lib/systemd/systemd --switched-root --system --deserialize 30
sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups
sshd: root [priv]
sshd: root@pts/0
-bash
/bin/sh ./run_rate.sh
runcpu --define default-platform-flags --copies 144 -c ic2023.0-lin-sapphirerapids-rate-20221201.cfg
--define smt-on --define cores=72 --define physicalfirst --define invoke_with_interleave --define
drop_caches --tune base,peak -o all intrate
runcpu --define default-platform-flags --copies 144 --configfile
ic2023.0-lin-sapphirerapids-rate-20221201.cfg --define smt-on --define cores=72 --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/CPU2017.061/templs/preenv.intrate.061.0.log --lognum 061.0 --from_runcpu 2
specperl \$SPEC/bin/sysinfo
\$SPEC = /home/Uniautos/cpu2017

6. `/proc/cpuinfo`
model name : Intel(R) Xeon(R) Gold 6416H
vendor_id : GenuineIntel
cpu family : 6
model : 143

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Platform Notes (Continued)

```
stepping      : 7
microcode     : 0x2b0001b0
bugs          : spectre_v1 spectre_v2 spec_store_bypass swapsg
cpu cores     : 18
siblings      : 36
4 physical ids (chips)
144 processors (hardware threads)
physical id 0: core ids 0-17
physical id 1: core ids 0-17
physical id 2: core ids 0-17
physical id 3: core ids 0-17
physical id 0: apicids 0-35
physical id 1: apicids 128-163
physical id 2: apicids 256-291
physical id 3: apicids 384-419
```

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):                 144
On-line CPU(s) list:   0-143
Vendor ID:              GenuineIntel
BIOS Vendor ID:        Intel(R) Corporation
Model name:             Intel(R) Xeon(R) Gold 6416H
BIOS Model name:       Intel(R) Xeon(R) Gold 6416H
CPU family:             6
Model:                  143
Thread(s) per core:    2
Core(s) per socket:    18
Socket(s):              4
Stepping:               7
BogoMIPS:               4400.00
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 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
                        intel_ppin cdp_l2 ssbd mba ibrs ibpb stibp ibrs_enhanced tpr_shadow vnmi
                        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 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 avx512_fp16
                        amx_tile flush_lld arch_capabilities
Virtualization:        VT-x
L1d cache:             3.4 MiB (72 instances)
L1i cache:             2.3 MiB (72 instances)
L2 cache:              144 MiB (72 instances)
```

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Platform Notes (Continued)

```

L3 cache: 180 MiB (4 instances)
NUMA node(s): 8
NUMA node0 CPU(s): 0-8,72-80
NUMA node1 CPU(s): 9-17,81-89
NUMA node2 CPU(s): 18-26,90-98
NUMA node3 CPU(s): 27-35,99-107
NUMA node4 CPU(s): 36-44,108-116
NUMA node5 CPU(s): 45-53,117-125
NUMA node6 CPU(s): 54-62,126-134
NUMA node7 CPU(s): 63-71,135-143
Vulnerability Itlb multihit: Not affected
Vulnerability Lltf: Not affected
Vulnerability Mds: Not affected
Vulnerability Meltdown: Not affected
Vulnerability Spec store bypass: Mitigation; Speculative Store Bypass disabled via prctl
Vulnerability Spectre v1: Mitigation; usercopy/swaps barriers and __user pointer sanitization
Vulnerability Spectre v2: Mitigation; Enhanced IBRS, IBPB conditional, RSB filling
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	3.4M	12	Data	1	64	1	64
L1i	32K	2.3M	8	Instruction	1	64	1	64
L2	2M	144M	16	Unified	2	2048	1	64
L3	45M	180M	15	Unified	3	49152	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: 0-8,72-80
node 0 size: 128216 MB
node 0 free: 126998 MB
node 1 cpus: 9-17,81-89
node 1 size: 129020 MB
node 1 free: 128167 MB
node 2 cpus: 18-26,90-98
node 2 size: 129020 MB
node 2 free: 128626 MB
node 3 cpus: 27-35,99-107
node 3 size: 129020 MB
node 3 free: 128706 MB
node 4 cpus: 36-44,108-116
node 4 size: 129020 MB
node 4 free: 128696 MB
node 5 cpus: 45-53,117-125
node 5 size: 129020 MB
node 5 free: 128705 MB
node 6 cpus: 54-62,126-134
node 6 size: 129020 MB
node 6 free: 128691 MB
node 7 cpus: 63-71,135-143
node 7 size: 129000 MB
node 7 free: 128678 MB
node distances:
node  0  1  2  3  4  5  6  7
0:  10  12  21  21  21  21  21  21
1:  12  10  21  21  21  21  21  21
2:  21  21  10  12  21  21  21  21

```

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Platform Notes (Continued)

3:	21	21	12	10	21	21	21	21
4:	21	21	21	21	10	12	21	21
5:	21	21	21	21	12	10	21	21
6:	21	21	21	21	21	21	10	12
7:	21	21	21	21	21	21	12	10

9. /proc/meminfo
MemTotal: 1056088428 kB

10. who -r
run-level 3 Aug 2 11:26

11. Systemd service manager version: systemd 250 (250-6.el9_0)
Default Target Status
multi-user degraded

12. Failed units, from systemctl list-units --state=failed
UNIT LOAD ACTIVE SUB DESCRIPTION
* sep5.service loaded failed failed systemd script to load sep5 driver at boot time

13. Services, from systemctl list-unit-files
STATE UNIT FILES
enabled NetworkManager NetworkManager-dispatcher NetworkManager-wait-online auditd chronyd crond
dbus-broker firewalld getty@ irqbalance kdump mdmonitor microcode nis-domainname rhsmcertd
rsyslog selinux-autorelabel-mark sep5 sshd sssd systemd-network-generator tuned udisks2
enabled-runtime systemd-remount-fs
disabled chrony-wait console-getty cpupower debug-shell kvm_stat man-db-restart-cache-update
nftables rdisc rhsm rhsm-facts rpmbd-rebuild serial-getty@ sshd-keygen@
systemd-boot-check-no-failures systemd-pstore systemd-sysext
indirect sssd-autofs sssd-kcm sssd-nss sssd-pac sssd-pam sssd-ssh sssd-sudo

14. Linux kernel boot-time arguments, from /proc/cmdline
BOOT_IMAGE=(hd0,gpt2)/vmlinuz-5.14.0-70.13.1.el9_0.x86_64
root=UUID=058bfd1-c62b-4fad-8d41-5c40aa179007
ro
crashkernel=1G-4G:192M,4G-64G:256M,64G-:512M
resume=UUID=b47f1685-a5fa-4d39-b2d7-e3f6e95ad499
nohz_full=1-72

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

16. tuned-adm active
Current active profile: throughput-performance

17. sysctl
kernel.numa_balancing 1

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Platform Notes (Continued)

```

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

```

```

-----
18. /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

```

```

-----
19. /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

```

```

-----
20. OS release
From /etc/*-release /etc/*-version
os-release      Red Hat Enterprise Linux 9.0 (Plow)
redhat-release  Red Hat Enterprise Linux release 9.0 (Plow)
system-release  Red Hat Enterprise Linux release 9.0 (Plow)

```

```

-----
21. Disk information
SPEC is set to: /home/Uniautos/cpu2017
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sda5       xfs   820G  48G  773G   6% /home

```

```

-----
22. /sys/devices/virtual/dmi/id
Vendor:          XFUSION
Product:         2488H V7
Product Family:  EagleStream

```

```

-----
23. 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

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Platform Notes (Continued)

"DMTF SMBIOS" standard.

Memory:

32x Samsung M321R4GA3BB6-CQKDG 32 GB 2 rank 4800

24. BIOS

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

BIOS Vendor: XFUSION
BIOS Version: 01.02.00.05
BIOS Date: 07/13/2023

Compiler Version Notes

=====
C | 502.gcc_r(peak)

Intel(R) oneAPI DPC++/C++ Compiler for applications running on IA-32, Version 2023.0.0 Build 20221201
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 2023.0.0 Build 20221201
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 2023.0.0 Build 20221201
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 2023.0.0 Build 20221201
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.

=====
C++ | 520.omnetpp_r(base, peak) 523.xalancbmk_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 2023.0.0 Build 20221201
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 2023.0.0 Build 20221201
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.



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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
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-L/usr/local/intel/compiler/2023.0.0/linux/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/usr/local/intel/compiler/2023.0.0/linux/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/usr/local/intel/compiler/2023.0.0/linux/compiler/lib/intel64_lin
-lqkmalloc
```



SPEC CPU®2017 Integer Rate Result

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xFusion

SPECrate®2017_int_base = 676

FusionServer 2488H V7 (Intel Xeon Gold 6416H)

SPECrate®2017_int_peak = 693

CPU2017 License: 6488
Test Sponsor: xFusion
Tested by: xFusion

Test Date: Aug-2023
Hardware Availability: Jul-2023
Software Availability: Dec-2022

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)
-fprofile-use=default.profddata(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/usr/local/intel/compiler/2023.0.0/linux/compiler/lib/intel64_lin
-lqkmalloc

502.gcc_r: -m32
-L/usr/local/intel/compiler/2023.0.0/linux/compiler/lib/ia32_lin
-std=gnu89 -Wl,-z,muldefs -fprofile-generate(pass 1)
-fprofile-use=default.profddata(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
```

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

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xFusion

SPECrate®2017_int_base = 676

FusionServer 2488H V7 (Intel Xeon Gold 6416H)

SPECrate®2017_int_peak = 693

CPU2017 License: 6488
Test Sponsor: xFusion
Tested by: xFusion

Test Date: Aug-2023
Hardware Availability: Jul-2023
Software Availability: Dec-2022

Peak Optimization Flags (Continued)

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/usr/local/intel/compiler/2023.0.0/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/Intel-ic2023-official-linux64.html>

<http://www.spec.org/cpu2017/flags/xFusion-Platform-Settings-SPR-V1.1-revC.html>

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

<http://www.spec.org/cpu2017/flags/Intel-ic2023-official-linux64.xml>

<http://www.spec.org/cpu2017/flags/xFusion-Platform-Settings-SPR-V1.1-revC.xml>

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