



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

## Cisco Systems

Cisco UCS C240 M7 (Intel Xeon Gold 6526Y,  
2.80GHz)

**SPECrate®2017\_int\_base = 341**

**SPECrate®2017\_int\_peak = 351**

CPU2017 License: 9019

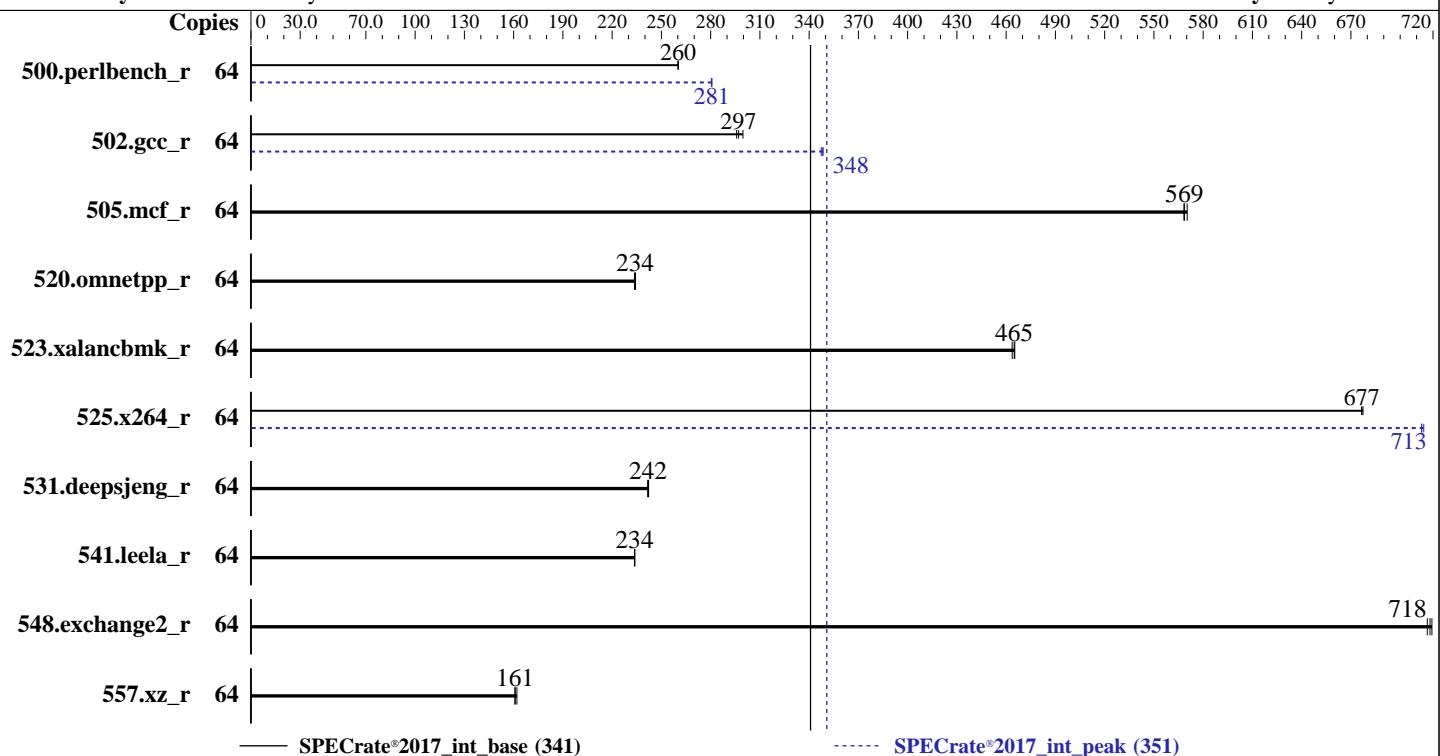
Test Sponsor: Cisco Systems

Tested by: Cisco Systems

**Test Date:** Feb-2024

**Hardware Availability:** Feb-2024

**Software Availability:** May-2023



### Hardware

CPU Name: Intel Xeon Gold 6526Y  
 Max MHz: 3900  
 Nominal: 2800  
 Enabled: 32 cores, 2 chips, 2 threads/core  
 Orderable: 1,2 Chips  
 Cache L1: 32 KB I + 48 KB D on chip per core  
 L2: 2 MB I+D on chip per core  
 L3: 37.5 MB I+D on chip per chip  
 Other: None  
 Memory: 1 TB (16 x 64 GB 2Rx4 PC5-5600B-R,  
 running at 5200)  
 Storage: 1 x 960 GB M.2 SSD SATA  
 Other: None

### OS:

SUSE Linux Enterprise Server 15 SP4  
 5.14.21-150400.22-default

Compiler:  
 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;

### 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



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## Results Table

Benchmark	Base								Peak							
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
500.perlbench_r	64	392	260	<b>392</b>	<b>260</b>	392	260	64	363	281	363	280	<b>363</b>	<b>281</b>		
502.gcc_r	64	<b>305</b>	<b>297</b>	306	296	302	300	64	261	347	260	349	<b>260</b>	<b>348</b>		
505.mcf_r	64	<b>182</b>	<b>569</b>	182	568	181	570	64	<b>182</b>	<b>569</b>	182	568	181	570		
520.omnetpp_r	64	<b>359</b>	<b>234</b>	358	234	359	234	64	<b>359</b>	<b>234</b>	358	234	359	234		
523.xalancbmk_r	64	<b>145</b>	<b>465</b>	145	465	146	464	64	<b>145</b>	<b>465</b>	145	465	146	464		
525.x264_r	64	<b>166</b>	<b>677</b>	165	677	166	676	64	<b>157</b>	<b>713</b>	157	713	157	714		
531.deepsjeng_r	64	304	242	<b>303</b>	<b>242</b>	303	242	64	304	242	<b>303</b>	<b>242</b>	303	242		
541.leela_r	64	453	234	454	234	<b>453</b>	<b>234</b>	64	453	234	454	234	<b>453</b>	<b>234</b>		
548.exchange2_r	64	<b>233</b>	<b>718</b>	233	719	234	717	64	<b>233</b>	<b>718</b>	233	719	234	717		
557.xz_r	64	<b>429</b>	<b>161</b>	427	162	430	161	64	<b>429</b>	<b>161</b>	427	162	430	161		

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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:  
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:

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.

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## General Notes (Continued)

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 Settings:  
Adjacent Cache Line Prefetcher set to Enabled  
DCU streamer Prefetch set to Enabled  
Enhanced CPU Performance set to Auto  
LLC Dead Line set to Disabled  
ADDDC Sparing set to Disabled  
Processor C6 Report set to Enabled

Sysinfo program /home/cpu2017/bin/sysinfo  
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197  
running on specsrv Thu Feb 15 23:09:44 2024

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+suse.124.g2bc0b2c447)  
12. Services, from systemctl list-unit-files  
13. Linux kernel boot-time arguments, from /proc/cmdline  
14. cpupower 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 specsrv 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  
23:09:44 up 6 min, 1 user, load average: 0.00, 0.05, 0.02  
USER TTY FROM LOGIN@ IDLE JCPU PCPU WHAT  
root ttty1 - 23:09 8.00s 1.26s 0.14s -bash

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## 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) 4126948
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) 4126948
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
-bash
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=64 -c
  ic2023.2.3-lin-sapphirerapids-rate-20231121.cfg --reportable --iterations 3 --define smt-on --define
  cores=32 --define physicalfirst --define invoke_with_interleave --define drop_caches --tune all -o all
  intrate
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=64 --configfile
  ic2023.2.3-lin-sapphirerapids-rate-20231121.cfg --reportable --iterations 3 --define smt-on --define
  cores=32 --define physicalfirst --define invoke_with_interleave --define drop_caches --tune all
  --output_format all --nopower --runmode rate --tune base:peak --size rerate intrate --nopreenv
  --note-preenv --logfile $SPEC/tmp/CPU2017.319/templogs/preenv.intrate.319.0.log --lognum 319.0
  --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/cpu2017
```

6. /proc/cpuinfo

model name	: INTEL(R) XEON(R) GOLD 6526Y
vendor_id	: GenuineIntel
cpu family	: 6
model	: 207
stepping	: 2
microcode	: 0x21000200
bugs	: spectre_v1 spectre_v2 spec_store_bypass swapgs
cpu cores	: 16
siblings	: 32
2 physical ids (chips)	
64 processors (hardware threads)	
physical id 0: core ids 0-15	
physical id 1: core ids 0-15	
physical id 0: apicids 0-31	
physical id 1: apicids 128-159	

Caution: /proc/cpuinfo data regarding chips, cores, and threads is not necessarily reliable, especially for

(Continued on next page)



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## Platform Notes (Continued)

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): 64  
On-line CPU(s) list: 0-63  
Vendor ID: GenuineIntel  
Model name: INTEL(R) XEON(R) GOLD 6526Y  
CPU family: 6  
Model: 207  
Thread(s) per core: 2  
Core(s) per socket: 16  
Socket(s): 2  
Stepping: 2  
CPU max MHz: 3900.0000  
CPU min MHz: 800.0000  
BogoMIPS: 5600.00  
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 noopl xtopology nonstop\_tsc cpuid aperfmpfper tsc\_known\_freq pni pclmulqdq dtes64 monitor ds\_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtrp 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\_13 cat\_12 cdp\_13 invpcid\_single cdp\_12 ssbd mba ibrs ibpb stibp ibrs\_enhanced tpr\_shadow vnmi flexpriority ept vpid ept\_ad fsgsbase tsc\_adjust bmi1 hle avx2 smep bmi2 ertms invpcid rtm 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 avx\_vnni avx512\_bf16 wbnoinvd dtherm ida arat pln pts hwp hwp\_act\_window hwp\_epp hwp\_pkg\_req avx512vbm1 umip pku ospke waitpkg avx512\_vbm1 gfni vaes vpclmulqdq avx512\_vnni avx512\_bitalg tme avx512\_vpopcntdq la57 rdpid bus\_lock\_detect cldemote movdiri movdir64b enqcmd fsrm md\_clear serialize tsxlptrk pconfig arch\_lbr avx512\_fp16 amx\_tile flush\_l1d arch\_capabilities  
Virtualization: VT-x  
L1d cache: 1.5 MiB (32 instances)  
L1i cache: 1 MiB (32 instances)  
L2 cache: 64 MiB (32 instances)  
L3 cache: 75 MiB (2 instances)  
NUMA node(s): 4  
NUMA node0 CPU(s): 0-7,32-39  
NUMA node1 CPU(s): 8-15,40-47  
NUMA node2 CPU(s): 16-23,48-55  
NUMA node3 CPU(s): 24-31,56-63  
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 and seccomp  
Vulnerability Spectre v1: Mitigation; usercopy/swapgs 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

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## Platform Notes (Continued)

From lscpu --cache:

NAME	ONE-SIZE	ALL-SIZE	WAYS	TYPE	LEVEL	SETS	PHY-LINE	COHERENCY-SIZE
L1d	48K	1.5M	12	Data	1	64	1	64
L1i	32K	1M	8	Instruction	1	64	1	64
L2	2M	64M	16	Unified	2	2048	1	64
L3	37.5M	75M	15	Unified	3	40960	1	64

-----  
8. numactl --hardware

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

available: 4 nodes (0-3)

node 0 cpus: 0-7,32-39

node 0 size: 257658 MB

node 0 free: 256634 MB

node 1 cpus: 8-15,40-47

node 1 size: 258043 MB

node 1 free: 257584 MB

node 2 cpus: 16-23,48-55

node 2 size: 258043 MB

node 2 free: 257633 MB

node 3 cpus: 24-31,56-63

node 3 size: 258014 MB

node 3 free: 257629 MB

node distances:

node 0 1 2 3

0: 10 12 21 21

1: 12 10 21 21

2: 21 21 10 12

3: 21 21 12 10

-----  
9. /proc/meminfo

MemTotal: 1056523496 kB

-----  
10. who -r

run-level 3 Feb 15 23:03

-----  
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 apparmor auditd cron getty@ haveged irqbalance issue-generator kbdsettings klog lvm2-monitor nsqd postfix purge-kernels rollback rsyslog smartd sshd wicked wickedd-auto4 wickedd-dhcp4 wickedd-dhcp6 wickedd-nanny

enabled-runtime systemd-remount-fs

disabled autofs autoyast-initscripts blk-availability boot-sysctl ca-certificates chrony-wait chronyd console-getty cups cups-browsed debug-shell ebttables exchange-bmc-os-info firewalld gpm grub2-once haveged-switch-root ipmi ipmievfd issue-add-ssh-keys kexec-load lunmask man-db-create multipathd nfs nfs-blkmap rdisc rpcbind rpmconfigcheck rsyncd serial-getty@ smartd\_generate\_opts snmpd snmptrapd svnserv systemd-boot-check-no-failures systemd-network-generator systemd-sysext systemd-time-wait-sync systemd-timesyncd udisks2 indirect wickedd

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## Platform Notes (Continued)

13. Linux kernel boot-time arguments, from /proc/cmdline

```
BOOT_IMAGE=/boot/vmlinuz-5.14.21-150400.22-default
root=UUID=7a984919-bd0d-4451-8476-5139e3d5b29b
splash=silent
mitigations=auto
quiet
security=apparmor
```

14. cpupower frequency-info

```
analyzing CPU 0:
    current policy: frequency should be within 800 MHz and 3.90 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	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.extfrag_threshold	500
vm.min_unmapped_ratio	1
vm.nr_hugepages	0
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
hugepage_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
```

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## Platform Notes (Continued)

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/sdb3	xfs	220G	18G	203G	8%	/

-----  
20. /sys/devices/virtual/dmi/id

Vendor:	Cisco Systems Inc
Product:	UCSC-C240-M7SX
Serial:	WZP26330JLV

-----  
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:

16x 0xCE00 M321R8GA0PB0-CWMCH 64 GB 2 rank 5600, configured at 5200

-----  
22. BIOS

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

BIOS Vendor:	Cisco Systems, Inc.
BIOS Version:	C240M7.4.3.3a.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 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  
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)

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## Compiler Version Notes (Continued)

-----  
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++ | 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 2023.2.3 Build x  
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.  
=====

=====  
Fortran | 548.exchange2\_r(base, peak)  
=====

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2023.2.3 Build x  
Copyright (C) 1985-2023 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



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## 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
```

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

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## Cisco Systems

Cisco UCS C240 M7 (Intel Xeon Gold 6526Y,  
2.80GHz)

SPECrate®2017\_int\_base = 341

SPECrate®2017\_int\_peak = 351

CPU2017 License: 9019

Test Date: Feb-2024

Test Sponsor: Cisco Systems

Hardware Availability: Feb-2024

Tested by: Cisco Systems

Software Availability: May-2023

## 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.xalancbmk\_r: basepeak = yes

531.deepsjeng\_r: basepeak = yes

541.leela\_r: basepeak = yes

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

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CPU2017 License: 9019

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Hardware Availability: Feb-2024

Tested by: Cisco Systems

Software Availability: May-2023

## 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/Intel-ic2023p2-official-linux64.html>

<http://www.spec.org/cpu2017/flags/Cisco-Platform-Settings-V1.0-EMR-revA.html>

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

<http://www.spec.org/cpu2017/flags/Intel-ic2023p2-official-linux64.xml>

<http://www.spec.org/cpu2017/flags/Cisco-Platform-Settings-V1.0-EMR-revA.xml>

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