



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

## ASUSTeK Computer Inc.

ASUS ESC4000-E11  
(2.20 GHz, Intel Xeon Platinum 8460H)

SPECspeed®2017\_int\_base = 14.2

SPECspeed®2017\_int\_peak = 14.5

CPU2017 License: 9016

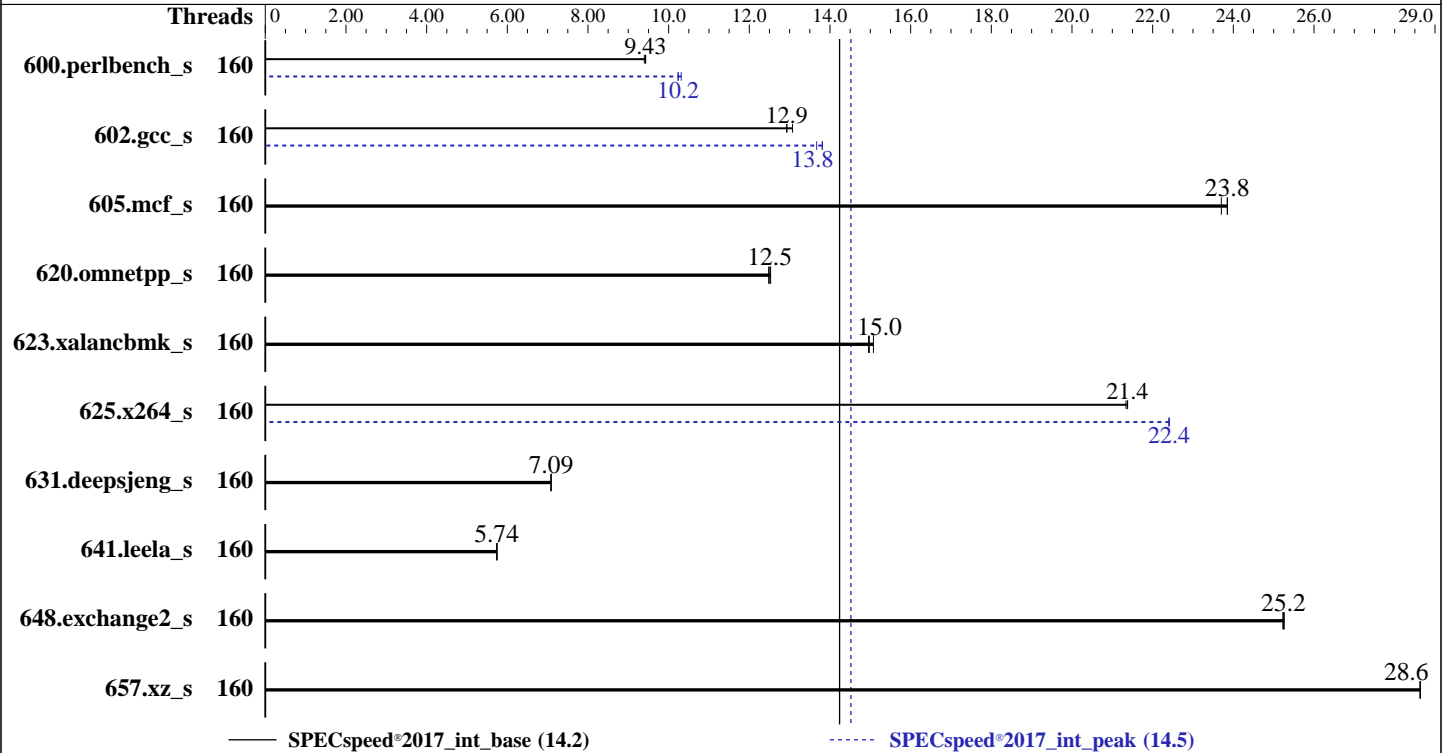
Test Sponsor: ASUSTeK Computer Inc.

Tested by: ASUSTeK Computer Inc.

Test Date: Mar-2024

Hardware Availability: Jul-2023

Software Availability: Dec-2023



### Hardware

CPU Name: Intel Xeon Platinum 8460H  
 Max MHz: 3800  
 Nominal: 2200  
 Enabled: 80 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: 105 MB I+D on chip per chip  
 Other: None  
 Memory: 1 TB (16 x 64 GB 2Rx4 PC5-4800B-R)  
 Storage: 1 x 1.6 TB PCIe NVMe SSD  
 Other: Cooling: DLC

### Software

OS: SUSE Linux Enterprise Server 15 SP4 (x86\_64)  
 Kernel 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: Yes  
 Firmware: Version 2101 released Dec-2023  
 File System: xfs  
 System State: Run level 3 (multi-user)  
 Base Pointers: 64-bit  
 Peak Pointers: 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 Speed Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

## ASUSTeK Computer Inc.

ASUS ESC4000-E11  
(2.20 GHz, Intel Xeon Platinum 8460H)

SPECspeed®2017\_int\_base = 14.2

SPECspeed®2017\_int\_peak = 14.5

CPU2017 License: 9016  
Test Sponsor: ASUSTeK Computer Inc.  
Tested by: ASUSTeK Computer Inc.

Test Date: Mar-2024  
Hardware Availability: Jul-2023  
Software Availability: Dec-2023

### Results Table

Benchmark	Base							Peak						
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
600.perlbench_s	160	189	9.40	<b>188</b>	<b>9.43</b>	188	9.43	160	172	10.3	173	10.2	<b>173</b>	<b>10.2</b>
602.gcc_s	160	305	13.1	<b>308</b>	<b>12.9</b>	308	12.9	160	291	13.7	288	13.8	<b>288</b>	<b>13.8</b>
605.mcf_s	160	199	23.7	198	23.9	<b>198</b>	<b>23.8</b>	160	199	23.7	198	23.9	<b>198</b>	<b>23.8</b>
620.omnetpp_s	160	130	12.5	131	12.5	<b>130</b>	<b>12.5</b>	160	130	12.5	131	12.5	<b>130</b>	<b>12.5</b>
623.xalancbmk_s	160	<b>94.6</b>	<b>15.0</b>	94.7	15.0	94.0	15.1	160	<b>94.6</b>	<b>15.0</b>	94.7	15.0	94.0	15.1
625.x264_s	160	82.7	21.3	82.5	21.4	<b>82.5</b>	<b>21.4</b>	160	<b>78.7</b>	<b>22.4</b>	78.7	22.4	78.7	22.4
631.deepsjeng_s	160	<b>202</b>	<b>7.09</b>	202	7.08	202	7.09	160	<b>202</b>	<b>7.09</b>	202	7.08	202	7.09
641.leela_s	160	<b>297</b>	<b>5.74</b>	297	5.74	297	5.74	160	<b>297</b>	<b>5.74</b>	297	5.74	297	5.74
648.exchange2_s	160	117	25.2	<b>116</b>	<b>25.2</b>	116	25.3	160	117	25.2	<b>116</b>	<b>25.2</b>	116	25.3
657.xz_s	160	216	28.6	216	28.6	<b>216</b>	<b>28.6</b>	160	216	28.6	216	28.6	<b>216</b>	<b>28.6</b>

SPECspeed®2017\_int\_base = **14.2**

SPECspeed®2017\_int\_peak = **14.5**

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

### Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"  
OS set to performance mode via cpupower frequency-set -g performance

### Environment Variables Notes

Environment variables set by runcpu before the start of the run:  
KMP\_AFFINITY = "granularity=fine,scatter"  
LD\_LIBRARY\_PATH = "/ic23u2/lib/intel64:/ic23u2/lib/ia32:/ic23u2/je5.0.1-64"  
MALLOC\_CONF = "retain:true"  
OMP\_STACKSIZE = "192M"

### General Notes

Binaries compiled on a system with 2x Intel Xeon Platinum 8280M CPU + 384GB RAM  
memory using Red Hat Enterprise Linux 8.0  
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  
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



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

## ASUSTeK Computer Inc.

ASUS ESC4000-E11  
(2.20 GHz, Intel Xeon Platinum 8460H)

SPECspeed®2017\_int\_base = 14.2

SPECspeed®2017\_int\_peak = 14.5

**CPU2017 License:** 9016

**Test Sponsor:** ASUSTeK Computer Inc.

**Tested by:** ASUSTeK Computer Inc.

**Test Date:** Mar-2024

**Hardware Availability:** Jul-2023

**Software Availability:** Dec-2023

## Platform Notes

BIOS Configuration:  
VT-d = Disabled  
Patrol Scrub = Disabled  
SNC = Enable SNC2 (2-clusters)  
LLC dead line allc = Disabled  
Engine Boost = Aggressive  
SR-IOV Support = Disabled  
BMC Configuration:  
Fan mode = Full speed mode

Sysinfo program /ic23u2/bin/sysinfo  
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197  
running on localhost Tue Mar 5 21:07:50 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. 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 5.14.21-150400.22-default #1 SMP PREEMPT\_DYNAMIC Wed May 11 06:57:18 UTC 2022 (49db222)  
x86\_64 x86\_64 x86\_64 GNU/Linux  
-----

-----  
2. w  
21:07:50 up 3:15, 1 user, load average: 5.51, 5.16, 3.21  
USER TTY FROM LOGIN@ IDLE JCPU PCPU WHAT  
root tty1 - 17:53 3:14m 0.84s 0.00s /bin/bash ./speed.sh  
-----

-----  
3. Username  
From environment variable \$USER: root  
-----

(Continued on next page)



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

## ASUSTeK Computer Inc.

ASUS ESC4000-E11  
(2.20 GHz, Intel Xeon Platinum 8460H)

SPECspeed®2017\_int\_base = 14.2

SPECspeed®2017\_int\_peak = 14.5

**CPU2017 License:** 9016

**Test Sponsor:** ASUSTeK Computer Inc.

**Tested by:** ASUSTeK Computer Inc.

**Test Date:** Mar-2024

**Hardware Availability:** Jul-2023

**Software Availability:** Dec-2023

### Platform Notes (Continued)

```

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) 4126735
   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) 4126735
   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
   /bin/bash ./speed.sh
   /bin/bash ./speed.sh
   runcpu --nobuild --action validate --define default-platform-flags -c
     ic2023.2.3-lin-sapphirerapids-speed-20231121.cfg --define cores=160 --tune base,peak -o all --define
     intspeedaffinity --define drop_caches intspeed
   runcpu --nobuild --action validate --define default-platform-flags --configfile
     ic2023.2.3-lin-sapphirerapids-speed-20231121.cfg --define cores=160 --tune base,peak --output_format all
     --define intspeedaffinity --define drop_caches --nopower --runmode speed --tune base:peak --size refspped
     intspeed --nopreenv --note-preenv --logfile $SPEC/tmp/CPU2017.483/templogs/preenv.intspeed.483.0.log
     --lognum 483.0 --from_runcpu 2
   specperl $SPEC/bin/sysinfo
   $SPEC = /ic23u2

```

```

-----
6. /proc/cpuinfo
   model name      : Intel(R) Xeon(R) Platinum 8460H
   vendor_id      : GenuineIntel
   cpu family     : 6
   model          : 143
   stepping       : 8
   microcode      : 0x2b000461
   bugs           : spectre_v1 spectre_v2 spec_store_bypass swapgs
   cpu cores      : 40
   siblings       : 80
   2 physical ids (chips)
   160 processors (hardware threads)
   physical id 0: core ids 0-39
   physical id 1: core ids 0-39
   physical id 0: apicids 0-79
   physical id 1: apicids 128-207
   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:

```

(Continued on next page)



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

## ASUSTeK Computer Inc.

SPECspeed®2017\_int\_base = 14.2

ASUS ESC4000-E11  
(2.20 GHz, Intel Xeon Platinum 8460H)

SPECspeed®2017\_int\_peak = 14.5

CPU2017 License: 9016

Test Date: Mar-2024

Test Sponsor: ASUSTeK Computer Inc.

Hardware Availability: Jul-2023

Tested by: ASUSTeK Computer Inc.

Software Availability: Dec-2023

### Platform Notes (Continued)

```

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):                       160
On-line CPU(s) list:         0-159
Vendor ID:                    GenuineIntel
Model name:                   Intel(R) Xeon(R) Platinum 8460H
CPU family:                   6
Model:                        143
Thread(s) per core:          2
Core(s) per socket:          40
Socket(s):                    2
Stepping:                     8
CPU max MHz:                  3800.0000
CPU min MHz:                  800.0000
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 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 intel_ppin cdp_l2 ssbd mba ibrs ibpb stibp ibrs_enhanced
                                tpr_shadow vnmi flexpriority ept vpid ept_ad fsgsbase tsc_adjust bmi1 hle
                                avx2 smep bmi2 erms 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 split_lock_detect avx_vnni avx512_bf16 wbnoinvd dtherm ida
                                arat pln pts hwp hwp_act_window hwp_epp hwp_pkg_req 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:                   3.8 MiB (80 instances)
L1i cache:                   2.5 MiB (80 instances)
L2 cache:                    160 MiB (80 instances)
L3 cache:                    210 MiB (2 instances)
NUMA node(s):                4
NUMA node0 CPU(s):          0-19,80-99
NUMA node1 CPU(s):          20-39,100-119
NUMA node2 CPU(s):          40-59,120-139
NUMA node3 CPU(s):          60-79,140-159
Vulnerability Itlb multihit: Not affected
Vulnerability L1tf:          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

```

From lscpu --cache:

NAME	ONE-SIZE	ALL-SIZE	WAYS	TYPE	LEVEL	SETS	PHY-LINE	COHERENCY-SIZE
L1d	48K	3.8M	12	Data	1	64	1	64
L1i	32K	2.5M	8	Instruction	1	64	1	64
L2	2M	160M	16	Unified	2	2048	1	64

(Continued on next page)



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

## ASUSTeK Computer Inc.

ASUS ESC4000-E11  
(2.20 GHz, Intel Xeon Platinum 8460H)

SPECspeed®2017\_int\_base = 14.2

SPECspeed®2017\_int\_peak = 14.5

**CPU2017 License:** 9016  
**Test Sponsor:** ASUSTeK Computer Inc.  
**Tested by:** ASUSTeK Computer Inc.

**Test Date:** Mar-2024  
**Hardware Availability:** Jul-2023  
**Software Availability:** Dec-2023

### Platform Notes (Continued)

L3 105M 210M 15 Unified 3 114688 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: 0-19,80-99
node 0 size: 257676 MB
node 0 free: 255604 MB
node 1 cpus: 20-39,100-119
node 1 size: 258037 MB
node 1 free: 257554 MB
node 2 cpus: 40-59,120-139
node 2 size: 258037 MB
node 2 free: 257748 MB
node 3 cpus: 60-79,140-159
node 3 size: 257956 MB
node 3 free: 257688 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: 1056469656 kB

10. who -r

run-level 3 Mar 5 17:53

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 display-manager getty@ haveged
irqbalance issue-generator kbdsettings klog lvm2-monitor nscd nvme-fc-boot-connections
postfix purge-kernels rollback rsyslog smartd sshd wickd 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 hwloc-dump-hwdata ipmi ipmievd
issue-add-ssh-keys kexec-load lunmask man-db-create multipathd nfs nfs-blkmap
nvme-f-autoconnect rdisc rpcbind rpmconfigcheck rsyncd serial-getty@ smartd_generate_opts
snmpd snmptrapd svnservice systemd-boot-check-no-failures systemd-network-generator
systemd-sysext systemd-time-wait-sync systemd-timesyncd tuned udisks2
indirect wickedd
```

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

```
BOOT_IMAGE=/boot/vmlinuz-5.14.21-150400.22-default
root=UUID=9bcf0374-b29f-4a4c-932e-9c0e90fb0803
splash=silent
```

(Continued on next page)



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

## ASUSTeK Computer Inc.

ASUS ESC4000-E11  
(2.20 GHz, Intel Xeon Platinum 8460H)

SPECspeed®2017\_int\_base = 14.2

SPECspeed®2017\_int\_peak = 14.5

**CPU2017 License:** 9016

**Test Sponsor:** ASUSTeK Computer Inc.

**Tested by:** ASUSTeK Computer Inc.

**Test Date:** Mar-2024

**Hardware Availability:** Jul-2023

**Software Availability:** Dec-2023

### Platform Notes (Continued)

```
mitigations=auto
quiet
```

```
-----
14. cpupower frequency-info
analyzing CPU 0:
  current policy: frequency should be within 800 MHz and 3.80 GHz.
                  The governor "performance" may decide which speed to use
                  within this range.
  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.extfrag_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+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
```

(Continued on next page)



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

## ASUSTeK Computer Inc.

ASUS ESC4000-E11  
(2.20 GHz, Intel Xeon Platinum 8460H)

SPECspeed®2017\_int\_base = 14.2

SPECspeed®2017\_int\_peak = 14.5

**CPU2017 License:** 9016  
**Test Sponsor:** ASUSTeK Computer Inc.  
**Tested by:** ASUSTeK Computer Inc.

**Test Date:** Mar-2024  
**Hardware Availability:** Jul-2023  
**Software Availability:** Dec-2023

### Platform Notes (Continued)

os-release SUSE Linux Enterprise Server 15 SP4

-----  
20. Disk information

SPEC is set to: /ic23u2

```
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/nvme0n1p8  xfs   500G  296G  205G  60% /
```

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

```
Vendor:          ASUSTeK COMPUTER INC.
Product:         ESC4000-E11
Product Family: Server
Serial:          /psn/
```

-----  
22. 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 Samsung M321R8GA0BB0-CQKVG 64 GB 2 rank 4800

-----  
23. BIOS

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

```
BIOS Vendor:     American Megatrends Inc.
BIOS Version:    2101
BIOS Date:       12/12/2023
BIOS Revision:   21.1
```

### Compiler Version Notes

=====  
C | 600.perlbench\_s(base, peak) 602.gcc\_s(base, peak) 605.mcf\_s(base, peak) 625.x264\_s(base, peak)  
657.xz\_s(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++ | 620.omnetpp\_s(base, peak) 623.xalancbmk\_s(base, peak) 631.deepsjeng\_s(base, peak)  
641.leela\_s(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 | 648.exchange2\_s(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.  
-----





# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

**ASUSTeK Computer Inc.**

ASUS ESC4000-E11  
(2.20 GHz, Intel Xeon Platinum 8460H)

SPECspeed®2017\_int\_base = 14.2

SPECspeed®2017\_int\_peak = 14.5

**CPU2017 License:** 9016

**Test Sponsor:** ASUSTeK Computer Inc.

**Tested by:** ASUSTeK Computer Inc.

**Test Date:** Mar-2024

**Hardware Availability:** Jul-2023

**Software Availability:** Dec-2023

## Base Compiler Invocation

C benchmarks:

icx

C++ benchmarks:

icpx

Fortran benchmarks:

ifx

## Base Portability Flags

```
600.perlbench_s: -DSPEC_LP64 -DSPEC_LINUX_X64
602.gcc_s: -DSPEC_LP64
605.mcf_s: -DSPEC_LP64
620.omnetpp_s: -DSPEC_LP64
623.xalancbmk_s: -DSPEC_LP64 -DSPEC_LINUX
625.x264_s: -DSPEC_LP64
631.deepsjeng_s: -DSPEC_LP64
641.leela_s: -DSPEC_LP64
648.exchange2_s: -DSPEC_LP64
657.xz_s: -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 -fiopenmp
-DSPEC_OPENMP -L/usr/local/jemalloc64-5.0.1/lib -ljemalloc
```

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/jemalloc64-5.0.1/lib -ljemalloc
```

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
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc
```



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

## ASUSTeK Computer Inc.

ASUS ESC4000-E11  
(2.20 GHz, Intel Xeon Platinum 8460H)

SPECspeed®2017\_int\_base = 14.2

SPECspeed®2017\_int\_peak = 14.5

CPU2017 License: 9016

Test Sponsor: ASUSTeK Computer Inc.

Tested by: ASUSTeK Computer Inc.

Test Date: Mar-2024

Hardware Availability: Jul-2023

Software Availability: Dec-2023

## Peak Compiler Invocation

C benchmarks:

icx

C++ benchmarks:

icpx

Fortran benchmarks:

ifx

## Peak Portability Flags

Same as Base Portability Flags

## Peak Optimization Flags

C benchmarks:

```

600.perlbench_s: -w -m64 -std=c11 -Wl,-z,muldefs
-fprofile-generate(pass 1)
-fprofile-use=default.profdata(pass 2) -xCORE-AVX2(pass 1)
-flto -Ofast(pass 1) -xCORE-AVX512 -O3 -ffast-math
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-fiopenmp -DSPEC_OPENMP -fno-strict-overflow
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

602.gcc_s: -w -m64 -std=c11 -Wl,-z,muldefs
-fprofile-generate(pass 1)
-fprofile-use=default.profdata(pass 2) -xCORE-AVX2(pass 1)
-flto -Ofast(pass 1) -xCORE-AVX512 -O3 -ffast-math
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-fiopenmp -DSPEC_OPENMP -L/usr/local/jemalloc64-5.0.1/lib
-ljemalloc

605.mcf_s: basepeak = yes

625.x264_s: -w -std=c11 -m64 -Wl,-z,muldefs -xsapphirerapids -O3
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fiopenmp -DSPEC_OPENMP
-fno-alias -L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

657.xz_s: basepeak = yes

```

(Continued on next page)



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

**ASUSTeK Computer Inc.**

ASUS ESC4000-E11  
(2.20 GHz, Intel Xeon Platinum 8460H)

SPECspeed®2017\_int\_base = 14.2

SPECspeed®2017\_int\_peak = 14.5

**CPU2017 License:** 9016

**Test Sponsor:** ASUSTeK Computer Inc.

**Tested by:** ASUSTeK Computer Inc.

**Test Date:** Mar-2024

**Hardware Availability:** Jul-2023

**Software Availability:** Dec-2023

## Peak Optimization Flags (Continued)

C++ benchmarks:

620.omnetpp\_s: basepeak = yes

623.xalancbmk\_s: basepeak = yes

631.deepsjeng\_s: basepeak = yes

641.leela\_s: basepeak = yes

Fortran benchmarks:

648.exchange2\_s: basepeak = yes

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2017/flags/ASUSTekPlatform-Settings-z13-V1.3.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/ASUSTekPlatform-Settings-z13-V1.3.xml>

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

SPEC CPU and SPECspeed 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](mailto:info@spec.org).

Tested with SPEC CPU®2017 v1.1.9 on 2024-03-05 08:07:49-0500.

Report generated on 2024-03-27 20:19:38 by CPU2017 PDF formatter v6716.

Originally published on 2024-03-26.