



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

Fujitsu

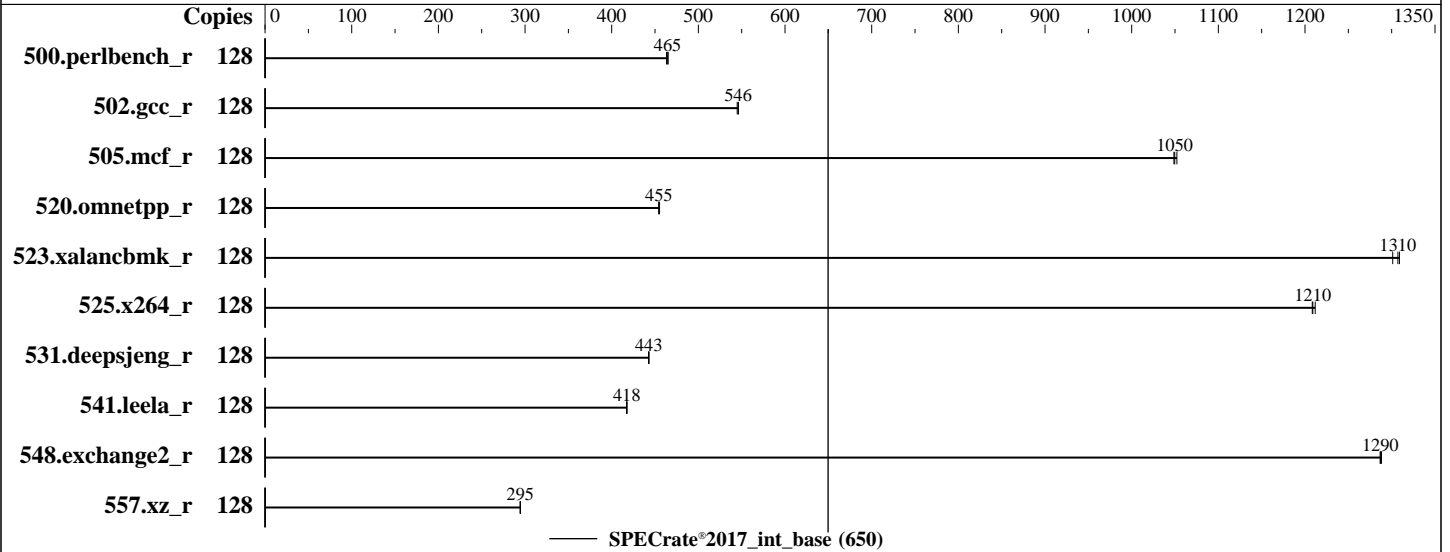
PRIMEQUEST 4400E, Intel Xeon Platinum 8444H, 2.90GHz

SPECrate®2017_int_base = 650

SPECrate®2017_int_peak = Not Run

CPU2017 License: 19
Test Sponsor: Fujitsu
Tested by: Fujitsu

Test Date: Apr-2023
Hardware Availability: Jun-2023
Software Availability: Dec-2022



Hardware

CPU Name: Intel Xeon Platinum 8444H
 Max MHz: 4000
 Nominal: 2900
 Enabled: 64 cores, 4 chips, 2 threads/core
 Orderable: 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: 2 TB (32 x 64 GB 2Rx4 PC5-4800B-R)
 Storage: 1 x 1.92 TB SATA SSD
 Other: None

Software

OS: SUSE Linux Enterprise Server 15 SP4 5.14.21-150400.22-default
 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: Fujitsu BIOS Version V1.0.0.0 R1.10.0 for D3984-A1x. Released Jun-2023 tested as V1.0.0.0 R0.20.0 for D3984-A1x Apr-2023
 File System: xfs
 System State: Run level 3 (multi-user)
 Base Pointers: 64-bit
 Peak Pointers: Not Applicable
 Other: None
 Power Management: BIOS set to prefer performance at the cost of additional power usage



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

Fujitsu

PRIMEQUEST 4400E, Intel Xeon Platinum 8444H, 2.90GHz

SPECrate®2017_int_base = 650

SPECrate®2017_int_peak = Not Run

CPU2017 License: 19
Test Sponsor: Fujitsu
Tested by: Fujitsu

Test Date: Apr-2023
Hardware Availability: Jun-2023
Software Availability: Dec-2022

Results Table

Benchmark	Base								Peak							
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio		
500.perlbench_r	128	440	463	438	465	439	465									
502.gcc_r	128	332	546	332	546	333	545									
505.mcf_r	128	197	1050	197	1050	197	1050									
520.omnetpp_r	128	369	455	369	455	370	454									
523.xalancbmk_r	128	103	1310	104	1300	103	1310									
525.x264_r	128	185	1210	185	1210	185	1210									
531.deepsjeng_r	128	331	443	331	443	331	443									
541.leela_r	128	508	418	508	418	508	417									
548.exchange2_r	128	260	1290	261	1290	261	1290									
557.xz_r	128	469	294	469	295	469	295									

SPECrate®2017_int_base = 650

SPECrate®2017_int_peak = Not Run

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/Benchmark/speccpu/lib/intel64:/home/Benchmark/speccpu/lib/ia32:/home/Benchmark/speccpu/je5.0.1-32"
MALLOC_CONF = "retain:true"
```



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

Fujitsu

PRIMEQUEST 4400E, Intel Xeon Platinum 8444H, 2.90GHz

SPECrate®2017_int_base = 650

SPECrate®2017_int_peak = Not Run

CPU2017 License: 19

Test Sponsor: Fujitsu

Tested by: Fujitsu

Test Date: Apr-2023

Hardware Availability: Jun-2023

Software Availability: Dec-2022

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.

Platform Notes

BIOS configuration:
 DCU Streamer Prefetcher = Disabled
 Package C State limit = C0
 LLC Dead Line Alloc = Disabled
 CPU Performance Boost = Aggressive
 SNC (Sub NUMA) = Enable SNC4
 FAN Control = Full
 System date was wrongly set. The actual date is Apr-2023

Sysinfo program /home/Benchmark/speccpu/bin/sysinfo
 Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
 running on localhost Fri Apr 29 21:16:06 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+suse.124.g2bc0b2c447)
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. cpupower frequency-info
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

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

Fujitsu

PRIMEQUEST 4400E, Intel Xeon Platinum 8444H,
2.90GHz

SPECrate®2017_int_base = 650

SPECrate®2017_int_peak = Not Run

CPU2017 License: 19
Test Sponsor: Fujitsu
Tested by: Fujitsu

Test Date: Apr-2023
Hardware Availability: Jun-2023
Software Availability: Dec-2022

Platform Notes (Continued)

```

-----
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
 21:16:06 up 16 min,  1 user,  load average: 0.08, 0.15, 0.41
USER      TTY      FROM          LOGIN@   IDLE   JCPU   PCPU WHAT
root      tty1    -            21:15   14.00s  2.72s  0.15s /home/Benchmark/PTU/ptat -mon -i 5000000
-filter 0x3f -ts -y

-----
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) 8253996
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) 8253996
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=128 -c
ic2023.0-lin-sapphirerapids-rate-20221201.cfg --define smt-on --define cores=64 --define physicalfirst
--define invoke_with_interleave --define drop_caches --tune base -o all intrate
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=128 --configfile
ic2023.0-lin-sapphirerapids-rate-20221201.cfg --define smt-on --define cores=64 --define physicalfirst
--define invoke_with_interleave --define drop_caches --tune base --output_format all --nopower --runmode
rate --tune base --size refrate intrate --nopreenv --note-preenv --logfile
$SPEC/tmp/CPU2017.001/templogs/preenv.intrate.001.0.log --lognum 001.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/Benchmark/speccpu

-----
6. /proc/cpuinfo
model name      : Intel(R) Xeon(R) Platinum 8444H
vendor_id      : GenuineIntel
cpu family     : 6
model          : 143
stepping      : 8

```

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

Fujitsu

PRIMEQUEST 4400E, Intel Xeon Platinum 8444H, 2.90GHz

SPECrate®2017_int_base = 650

SPECrate®2017_int_peak = Not Run

CPU2017 License: 19
Test Sponsor: Fujitsu
Tested by: Fujitsu

Test Date: Apr-2023
Hardware Availability: Jun-2023
Software Availability: Dec-2022

Platform Notes (Continued)

```
microcode      : 0x2b0001b0
bugs           : spectre_v1 spectre_v2 spec_store_bypass swapgs
cpu cores      : 16
siblings       : 32
4 physical ids (chips)
128 processors (hardware threads)
physical id 0: core ids 0-15
physical id 1: core ids 0-15
physical id 2: core ids 0-15
physical id 3: core ids 0-15
physical id 0: apicids 0-31
physical id 1: apicids 128-159
physical id 2: apicids 256-287
physical id 3: apicids 384-415
```

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) Platinum 8444H
CPU family:             6
Model:                  143
Thread(s) per core:    2
Core(s) per socket:    16
Socket(s):              4
Stepping:               8
CPU max MHz:            4000.0000
CPU min MHz:            800.0000
BogoMIPS:               5800.00
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 sse3 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 MiB (64 instances)
L1i cache:              2 MiB (64 instances)
L2 cache:               128 MiB (64 instances)
```

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

Fujitsu

PRIMEQUEST 4400E, Intel Xeon Platinum 8444H, 2.90GHz

SPECrate®2017_int_base = 650

SPECrate®2017_int_peak = Not Run

CPU2017 License: 19
Test Sponsor: Fujitsu
Tested by: Fujitsu

Test Date: Apr-2023
Hardware Availability: Jun-2023
Software Availability: Dec-2022

Platform Notes (Continued)

```

L3 cache: 180 MiB (4 instances)
NUMA node(s): 16
NUMA node0 CPU(s): 0-3,64-67
NUMA node1 CPU(s): 4-7,68-71
NUMA node2 CPU(s): 8-11,72-75
NUMA node3 CPU(s): 12-15,76-79
NUMA node4 CPU(s): 16-19,80-83
NUMA node5 CPU(s): 20-23,84-87
NUMA node6 CPU(s): 24-27,88-91
NUMA node7 CPU(s): 28-31,92-95
NUMA node8 CPU(s): 32-35,96-99
NUMA node9 CPU(s): 36-39,100-103
NUMA node10 CPU(s): 40-43,104-107
NUMA node11 CPU(s): 44-47,108-111
NUMA node12 CPU(s): 48-51,112-115
NUMA node13 CPU(s): 52-55,116-119
NUMA node14 CPU(s): 56-59,120-123
NUMA node15 CPU(s): 60-63,124-127
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/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	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	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: 16 nodes (0-15)
node 0 cpus: 0-3,64-67
node 0 size: 128601 MB
node 0 free: 127643 MB
node 1 cpus: 4-7,68-71
node 1 size: 129021 MB
node 1 free: 128508 MB
node 2 cpus: 8-11,72-75
node 2 size: 128987 MB
node 2 free: 128591 MB
node 3 cpus: 12-15,76-79
node 3 size: 129021 MB
node 3 free: 128739 MB
node 4 cpus: 16-19,80-83
node 4 size: 129021 MB
node 4 free: 128728 MB
node 5 cpus: 20-23,84-87
node 5 size: 129021 MB
node 5 free: 128732 MB
node 6 cpus: 24-27,88-91
node 6 size: 129021 MB
node 6 free: 128729 MB

```

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

Fujitsu

PRIMEQUEST 4400E, Intel Xeon Platinum 8444H, 2.90GHz

SPECrate®2017_int_base = 650

SPECrate®2017_int_peak = Not Run

CPU2017 License: 19
Test Sponsor: Fujitsu
Tested by: Fujitsu

Test Date: Apr-2023
Hardware Availability: Jun-2023
Software Availability: Dec-2022

Platform Notes (Continued)

```

node 7 cpus: 28-31,92-95
node 7 size: 129021 MB
node 7 free: 128757 MB
node 8 cpus: 32-35,96-99
node 8 size: 129021 MB
node 8 free: 128750 MB
node 9 cpus: 36-39,100-103
node 9 size: 129021 MB
node 9 free: 128738 MB
node 10 cpus: 40-43,104-107
node 10 size: 129021 MB
node 10 free: 128717 MB
node 11 cpus: 44-47,108-111
node 11 size: 129021 MB
node 11 free: 128706 MB
node 12 cpus: 48-51,112-115
node 12 size: 129021 MB
node 12 free: 128775 MB
node 13 cpus: 52-55,116-119
node 13 size: 129021 MB
node 13 free: 128773 MB
node 14 cpus: 56-59,120-123
node 14 size: 129021 MB
node 14 free: 128770 MB
node 15 cpus: 60-63,124-127
node 15 size: 128650 MB
node 15 free: 128417 MB
node distances:
node  0  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15
0:  10 12 12 12 21 21 21 21 21 21 21 21 31 31 31 31
1:  12 10 12 12 21 21 21 21 21 21 21 21 31 31 31 31
2:  12 12 10 12 21 21 21 21 21 21 21 21 31 31 31 31
3:  12 12 12 10 21 21 21 21 21 21 21 21 31 31 31 31
4:  21 21 21 21 10 12 12 12 31 31 31 31 21 21 21 21
5:  21 21 21 21 12 10 12 12 31 31 31 31 21 21 21 21
6:  21 21 21 21 12 12 10 12 31 31 31 31 21 21 21 21
7:  21 21 21 21 12 12 12 10 31 31 31 31 21 21 21 21
8:  21 21 21 21 31 31 31 31 10 12 12 12 21 21 21 21
9:  21 21 21 21 31 31 31 31 12 10 12 12 21 21 21 21
10: 21 21 21 21 31 31 31 31 12 12 10 12 21 21 21 21
11: 21 21 21 21 31 31 31 31 12 12 12 10 21 21 21 21
12: 31 31 31 31 21 21 21 21 21 21 21 21 10 12 12 12
13: 31 31 31 31 21 21 21 21 21 21 21 21 12 10 12 12
14: 31 31 31 31 21 21 21 21 21 21 21 21 12 12 10 12
15: 31 31 31 31 21 21 21 21 21 21 21 21 12 12 12 10

```

```

-----
9. /proc/meminfo
   MemTotal:      2113047980 kB

```

```

-----
10. who -r
    run-level 3 Apr 29 21:00

```

```

-----
11. Systemd service manager version: systemd 249 (249.11+suse.124.g2bc0b2c447)
    Default Target Status
    multi-user      degraded

```

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

Fujitsu

PRIMEQUEST 4400E, Intel Xeon Platinum 8444H, 2.90GHz

SPECrate®2017_int_base = 650

SPECrate®2017_int_peak = Not Run

CPU2017 License: 19

Test Sponsor: Fujitsu

Tested by: Fujitsu

Test Date: Apr-2023

Hardware Availability: Jun-2023

Software Availability: Dec-2022

Platform Notes (Continued)

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	YaST2-Firstboot	YaST2-Second-Stage apparmor auditd bluetooth cron display-manager getty@
	haveged irqbalance	iscsi issue-generator kbdsettings kdump kdump-early klog lvm2-monitor
	nscd postfix	purge-kernels rollback rsyslog sep5 smartd sshd wicked wickedd-auto4
	wickedd-dhcp4	wickedd-dhcp6 wickedd-nanny
enabled-runtime	systemd-remount-fs	
disabled	accounts-daemon	appstream-sync-cache autofs autoyast-initscripts blk-availability
	bluetooth-mesh	boot-sysctl ca-certificates chrony-wait chronyd console-getty cups
	cups-browsed	debug-shell ebttables exchange-bmc-os-info firewallld gpm grub2-once
	haveged-switch-root	ipmi ipmievd iscsi-init iscsid iscsiui issue-add-ssh-keys kexec-load
	lunmask	man-db-create multipathd nfs nfs-blkmap nmb numad ostree-remount rdisc rpcbind
	rpmconfigcheck	rsyncd rtkit-daemon serial-getty@ smartd_generate_opts smb snmpd snmptrapd
	speech-dispatcherd	systemd-boot-check-no-failures systemd-network-generator systemd-sysext
	systemd-time-wait-sync	systemd-timesyncd udisks2 upower
indirect	wickedd	

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

```
BOOT_IMAGE=/boot/vmlinuz-5.14.21-150400.22-default
root=UUID=8b4cfla0-f943-46c1-a409-c2bca0c1173e
splash=silent
mitigations=auto
quiet
security=apparmor
crashkernel=324M,high
crashkernel=72M,low
```

15. cpupower frequency-info

```
analyzing CPU 0:
  current policy: frequency should be within 800 MHz and 4.00 GHz.
                  The governor "powersave" may decide which speed to use
                  within this range.

boost state support:
  Supported: yes
  Active: yes
```

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

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

Fujitsu

PRIMEQUEST 4400E, Intel Xeon Platinum 8444H, 2.90GHz

SPECrate®2017_int_base = 650

SPECrate®2017_int_peak = Not Run

CPU2017 License: 19

Test Sponsor: Fujitsu

Tested by: Fujitsu

Test Date: Apr-2023

Hardware Availability: Jun-2023

Software Availability: Dec-2022

Platform Notes (Continued)

```

vm.swappiness          60
vm.watermark_boost_factor 15000
vm.watermark_scale_factor 10
vm.zone_reclaim_mode  0

```

```

-----
17. /sys/kernel/mm/transparent_hugepage
defrag          always defer defer+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 SUSE Linux Enterprise Server 15 SP4

```

```

-----
20. Disk information
SPEC is set to: /home/Benchmark/speccpu
Filesystem  Type  Size  Used Avail Use% Mounted on
/dev/sda2   xfs   1.8T  55G  1.7T   4% /

```

```

-----
21. /sys/devices/virtual/dmi/id
Vendor:      FUJITSU LIMITED

```

```

-----
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:
  9x Samsung M321R8GA0BB0-CQKDG 64 GB 2 rank 4800
  4x Samsung M321R8GA0BB0-CQKEG 64 GB 2 rank 4800
  1x Samsung M321R8GA0BB0-CQKMG 64 GB 2 rank 4800
 18x Samsung M321R8GA0BB0-CQKVG 64 GB 2 rank 4800

```

```

-----
23. BIOS
(This section combines info from /sys/devices and dmidecode.)
BIOS Vendor:      FUJITSU
BIOS Version:     V1.0.0.0 R0.20.0 for D3986-A1
BIOS Date:       04/28/2023
BIOS Revision:   0.20
Firmware Revision: 1.0

```



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

Fujitsu

PRIMEQUEST 4400E, Intel Xeon Platinum 8444H, 2.90GHz

SPECrate®2017_int_base = 650

SPECrate®2017_int_peak = Not Run

CPU2017 License: 19

Test Sponsor: Fujitsu

Tested by: Fujitsu

Test Date: Apr-2023

Hardware Availability: Jun-2023

Software Availability: Dec-2022

Compiler Version Notes

C | 500.perlbench_r(base) 502.gcc_r(base) 505.mcf_r(base) 525.x264_r(base) 557.xz_r(base)

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) 523.xalancbmk_r(base) 531.deepsjeng_r(base) 541.leela_r(base)

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)

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.

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



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

Fujitsu

PRIMEQUEST 4400E, Intel Xeon Platinum 8444H, 2.90GHz

SPECrate®2017_int_base = 650

SPECrate®2017_int_peak = Not Run

CPU2017 License: 19

Test Sponsor: Fujitsu

Tested by: Fujitsu

Test Date: Apr-2023

Hardware Availability: Jun-2023

Software Availability: Dec-2022

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
```

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/Fujitsu-Platform-Settings-V1.0-SPR-RevB.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/Fujitsu-Platform-Settings-V1.0-SPR-RevB.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 2022-04-29 08:16:05-0400.

Report generated on 2024-01-29 17:58:19 by CPU2017 PDF formatter v6716.

Originally published on 2023-07-19.