

# Kernel CI – How Far Can It Go?

Embedded Open Source Summit 2023

Nikolai Kondrashov



## Nikolai Kondrashov

    [spbnick](#)

Sr. Software Engineer, Red Hat, CKI Project  
KCIDB developer & maintainer, KernelCI  
Electronics and embedded enthusiast

Born in Russia, living in Finland



# KernelCI Contents

- **Kernel Testing Systems**
- **What are KernelCI and KCIDB?**
- **What's Continuous Integration?**
- **The Metrics of CI**
- **Where are we with upstream Kernel's CI?**
- **Hard Limits**
- **Challenges**
- **What Can We Do?**

# Kernel testing systems

# KernelCI Kernel testing systems



...



Results from Linares's test farm.  
No regressions on arm64, arm, x86\_64, and i386.

## Summary

```
kernel: 5.7.12-rc3
git repo: https://git.kernel.org/pub/scm/linux/kernel/git/stable/linux-stable-rc.git
git branch: linux-5.7.y
git commit: 48223a8f6c9e980a32747f119a21a9226
git describe: v5.7.12-312-gd3223a8f6d
Test details: https://qa-reports.linaro.org/ikf/linux-stable-rc-5.7-e/Build/v5.7.12-312-gd3223a8f6d/
No regressions (compared to build v5.7.12)
No fixes (compared to build v5.7.12)
```

Run 34339 total tests in the following environments and test suites.

```
Environments
-----
- dragonboard-410c
- hi3798-hikey
- i386
- linux-r2
- jun0-r2-compact
- jun0-r2-kasan
- nvp-ls2088
- qemu_arm
- qemu_arm64
- qemu_i386
- qemu_x86_64
- x15
- x86
- x86-kasan
```

## Test Suites

### KMSAN: kernel-usb-infileok in hif\_usb\_send

[\[Date Prev\]](#) [\[Date Next\]](#) [\[Thread Prev\]](#) [\[Thread Next\]](#) [\[Date Index\]](#) [\[Thread Index\]](#)

- To: glider@xxxxxxxxx, gregh@xxxxxxxxxxxxxxxxxx, Ingrassia@xxxxxxxxxxxxxx, linux-kernel@xxxxxxxxx
- Subject: KMSAN: kernel-usb-infileok in hif\_usb\_send
- From: syzbot+83a1df1ed4f7e8d8ad@xxxxxxxxxxxxxxxxxxxxxxxxxxxxx
- Date: Tue, 11 Aug 2020 10:06:18 -0700

Hello,

syzbot found the following issue on:

```
HEAD commit: c8056d1 wip: changed copy_from_user where instrumented
git tree: https://github.com/google/aman-git-master
console output: https://syzkaller.appspot.com/view_test?id=24453-08000
kernel config: https://syzkaller.appspot.com/view_config?id=3a3f089f79925f1f
download link: https://syzkaller.appspot.com/view_test?id=3a3f089f79925f1f
compiler: clang version 10.0.0 (https://github.com/llvm/llvm-project/commit/c24431558f8245c8f172c1c72b6ea3918e68f)
userspace arch: i386
```

Unfortunately, I don't have any reproducer for this issue yet.

IMPORTANT: if you fix the issue, please add the following tag to the commit:

Reported-by: syzbot+83a1df1ed4f7e8d8ad@xxxxxxxxxxxxxxxxxxxxxxxxxxxxx

usb 4-1: at91k\_hic: Transferred fw: at91k\_hic/htc\_9271-1.4.0-fw, size: 51008

```
-----
BUG: KMSAN: kernel-usb-infileok in kasan_handle_urb=>20/bx40 mem/aman/kasan_books.c:207
CPU: 1 PID: 1392 Comm: kworker/1:8 Not tainted 5.8.0-rc5-syzkaller #0
Hardware name: Google Google Compute Engine/Google Compute Engine, BIOS Google 01/01/2011
Memory: events request, firmware_work_func
Call Trace:
```

### stable-rc/linux-4.9.y build: 197 builds: 1 failed, 196 passed, 4 warnings (v4.9.232)

kernel.org bot [hot at kernel.org](#)

Sat Aug 1 08:24:58 UTC 2020

- Previous message: [\[PATCH stable\] MIPS: Loongson: Introduce and use loongson\\_llsc\\_mb\(\)](#)
- Next message: [stable-rc/linux-4.9.y build: 197 builds: 1 failed, 196 passed, 4 warnings \(v4.9.232\)](#)
- Messages sorted by: [\[date\]](#) [\[thread\]](#) [\[subject\]](#) [\[author\]](#)

stable-rc/linux-4.9.y build: 197 builds: 1 failed, 196 passed, 4 warnings (v4.9.232)

Full Build summary: <https://kernelci.org/build/stable-rc/branch/linux-4.9.y/kernel/v4.9.232/>

```
Tree: stable-rc
Branch: linux-4.9.y
Git describe: v4.9.232
Git commit: 80564120e59293b2a7b80e1c58d91abe13b
Git URL: https://git.kernel.org/pub/scm/linux/kernel/git/stable/linux-stable-rc.git
Build: 6 unique architectures
```

Build Failure Detected:

mips: 32r2el defconfig: (gcc-8) FAIL

Warnings Detected:

arm:

### ✓ PASS: Test report for kernel 5.7.12-3ff3d4f.cki (stable-queue)

CKI Project [cki-project at redhat.com](#)

Tue Aug 4 12:35:15 UTC 2020

- Previous message: [fixing 4.14-stable's broken DM cache writethrough support \[was: Re: \(resend\) PATCH v3: \(linux-4.14.y\) dm cache: submit writethrough writes in parallel to origin and cache\]](#)
- Next message: [stable-rc/linux-4.4.y build: 190 builds: 1 failed, 189 passed, 2 errors, 13 warnings \(v4.4.232-30-g52247eb98be\)](#)
- Messages sorted by: [\[date\]](#) [\[thread\]](#) [\[subject\]](#) [\[author\]](#)

Hello,

We ran automated tests on a recent commit from this kernel tree:

Kernel repo: <https://git.kernel.org/pub/scm/linux/kernel/git/stable/linux-stable-rc.git>  
Commit: 3ff3d4f3856 - x86/IBT59: Use prints\_deferred() to prevent deadlock

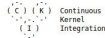
The results of these automated tests are provided below.

```
Overall result: PASSED
Merge: OK
Compile: OK
Tests: OK
```

All kernel binaries, config files, and logs are available for download here:

<https://cki-artifacts.s3.us-east-2.amazonaws.com/index.html?ref=ci-datawarehouse/2020/08/03/61139>

Please reply to this email if you have any questions about the tests that we ran or if you have any suggestions on how to make future tests more effective.



### Re: [PATCH V4] hwmon: add fan/pwm driver for corsair

[\[Date Prev\]](#) [\[Date Next\]](#) [\[Thread Prev\]](#) [\[Thread Next\]](#) [\[Date Index\]](#) [\[Thread Index\]](#)

- To: Jaap aarts <[jaap.aarts1@xxxxxxxxx](mailto:jaap.aarts1@xxxxxxxxx)>, Jean Delvare <[delvare@xxxxxxxxx](mailto:delvare@xxxxxxxxx)>, Guenter Roeck <[linux@xxxxxxxxx](mailto:linux@xxxxxxxxx)>, Barnabás Pócze <[pobrn@xxxxxxxxxxxxxx](mailto:pobrn@xxxxxxxxxxxxxx)>
- Subject: Re: [PATCH V4] hwmon: add fan/pwm driver for corsair h100i platinum
- From: Kernel test robot <[clk@xxxxxxxxx](mailto:clk@xxxxxxxxx)>
- Date: Sun, 16 Aug 2020 17:34:40 +0800
- Cc: [kbuild-all@xxxxxxxxxxxxx](mailto:kbuild-all@xxxxxxxxxxxxx), [jaap.aarts1@xxxxxxxxx](mailto:jaap.aarts1@xxxxxxxxx), [jaap.aarts@gmail.com](mailto:jaap.aarts@gmail.com)
- In-reply-to: <[20200815211617.86565-1-jaap.aarts1@gmail.com](mailto:20200815211617.86565-1-jaap.aarts1@gmail.com)>
- References: <[20200815211617.86565-1-jaap.aarts1@gmail.com](mailto:20200815211617.86565-1-jaap.aarts1@gmail.com)>
- User-agent: Mutt/1.10.1 (2018-07-13)

Hi Jaap,

Thank you for the patch! Perhaps something to improve:

```
[auto build test WARNING on hmon/hmon-next]
[auto build test WARNING on v5.8 next-20200814]
[if your patch is applied to the wrong git tree, kindly drop us a note.
And when submitting patch, we suggest to use "--base" as documented in
https://git-scm.com/docs/git-format-patch]
```

```
url: https://github.com/8day-cy/linux/commit/jaap.aarts/hmon-add-fan-pwm-driver-for-corsair-h100i-platLinux/20200816-88529
base: https://git.kernel.org/pub/scm/linux/kernel/git/groeck/linux-staging.git hmon-next
config: nios2-randconfig-c009-20200816 (attached as .config)
compiler: nios2-linux-gcc (GCC) 9.3.0
```



# KernelCI Kernel testing systems

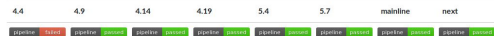
**LKFT** About LKFT 101 Boards Branches Tests Logs

## Test Results

linux-stable-rc-4.4-oe	142 hours ago	17799 passed	879 failed	3052 skipped	<a href="#">View Builds</a>
linux-stable-rc-4.9-oe	142 hours ago	31410 passed	927 failed	3239 skipped	<a href="#">View Builds</a>
linux-stable-rc-4.14-oe	123 hours ago	32787 passed	934 failed	3239 skipped	<a href="#">View Builds</a>
linux-stable-rc-4.19-oe	123 hours ago	42289 passed	924 failed	4239 skipped	<a href="#">View Builds</a>
linux-stable-rc-5.4-oe	135 hours ago	41554 passed	933 failed	4248 skipped	<a href="#">View Builds</a>
linux-stable-rc-5.7-oe	139 hours ago	33009 passed	1352 failed	4137 skipped	<a href="#">View Builds</a>
linux-mainline-oe	13 hours ago	13193 passed	941 failed	3441 skipped	<a href="#">View Builds</a>
linux-next-oe	7 hours ago	14015 passed	928 failed	3222 skipped	<a href="#">View Builds</a>

## LKFT 2.0 Build Status

Our second generation build and continuous integration uses GitLab pipelines and TuxBot.



## LKFT Build Status

The LKFT build uses OpenEmbedded to build a userspace image, along with the kernel, for each board and branch combination under test.



## syzbot

Linux 4.14 [sign-in](#) | [mailing list](#) | [source](#) | [docs](#)

Open [308] Fixed [100] Invalid [215]

Name	Active	Uptime	Corpus	Coverage	Crashes	Execs	Instances:		Kernel build		syzkaller build	
							Commit	Freshness	Status	Commit	Freshness	Status
ci2-linux-4.14	now	2621h	53390	1099200	237	1354254	14858326	104	5681352	3081h	fail10s	

open (508):

Title	Repro	Bisected	Count	Last	Reported
<a href="#">WARNING in rtl_dellink</a>	C		1	4153h	4152h
<a href="#">possible deadlock in proc_pid_personality</a>			1	21155h	21154h
<a href="#">syzkaller: make target failed: failed to run ["make" "tar..."]</a>			3	1491h	2489h
<a href="#">INFO: task hung in _input_unregister_device</a>			1	3481h	2482h
<a href="#">unregister_netdevice: waiting for DPU to become free (2)</a>			1	3422h	2422h
<a href="#">INFO: task hung in do_task_dead</a>			1	5415h	2415h
<a href="#">INFO: trying to register non-static key in done (2)</a>			1	5422h	2422h
<a href="#">INFO: trying to register non-static key in shhd_char_rel...</a>	C		1	6622h	2422h
<a href="#">possible deadlock in proc_pid_syscall</a>			3	1452h	2422h
<a href="#">possible deadlock in proc_pid_stack</a>	C		3	5415h	2415h
<a href="#">INFO: trying to register non-static key in l2cap_chan_cl...</a>	592		1	7420h	2420h
<a href="#">BUG: corrupted list in bt_accept_unlink</a>			1	8481h	2480h
<a href="#">KASAN: use-after-free Read in hci_get_auth_info</a>	592		1	8494h	2480h
<a href="#">inconsistent lock state in sock_timeout</a>			1	8412h	2412h
<a href="#">INFO: rcu detected stall in tv_timer_handler</a>			1	9410h	2410h
<a href="#">general protection fault in memsw work</a>	592		1	9410h	2410h

Home Jobs Builds Tests SoCs Boots KCIDB Info

## Available Test Results

The results shown here cover the last 14 days of available data starting from **Mon, 17 Aug 2020** (time is UTC based).

25 Tests per page

Tree	Branch	Kernel	Test Plan	Test Results
mainline	master	v5.8-13502-gb07175d041ba	usb	54 34 4 16
rt-stable	v4.14-rt	v4.14.193-r192	baseline-rfcs	1,589 1,502 22 59
mainline	master	v5.8-13651-g84835b118ed	baseline	1,097 774 20 303
rt-stable	v4.14-rt	v4.14.193-r192	baseline	1,609 1,499 24 80
mainline	master	v5.8-13502-gb07175d041ba	baseline	1,588 1,482 26 73
mainline	master	v5.8-13502-gb07175d041ba	sleep	34 12 2 20
mainline	master	v5.8-13414-g7175e9d2759b	baseline	4,674 4,526 94 77

Go to pipeline #

Build

All / Revision / Build

Build status: **Passed**

TEST STATUS: **Passed**

Build ID: reohat956956

Valid: Yes

Origin: reohat

Start Time: Aug 17, 2020, 2:26 a.m.

Architecture: ppc64le

Command: make -j30 INSTALL\_MOD\_STRIP=1 largz-pkg

Config Name: fedora

Config URL: https://3.us-east-2.amazonaws.com/ci-artifacts/datawarehouse/2020/08/17/612139/build\_ppc64le\_reohat956956/config

Log URL: https://3.us-east-2.amazonaws.com/ci-artifacts/datawarehouse/2020/08/17/612139/build\_ppc64le\_reohat956956/build.log

Output Files

MD1.01.0rg

## LKP

Linux Kernel Performance

Start a new thread

Manage subscription

ACTIVITY SUMMARY

Replies in 24 Jul 2020

2020

Aug 17

Jul

June

May

April

March

February

January

## MOST ACTIVE POSTERS

- #1 [kernel test robot](#) 61 posts
- #2 [kernel test robot](#) 24 posts
- #3 [Rong Chen](#) 4 posts
- #4 [King Zhangjun](#) 4 posts
- #5 [Thomas Gleixner](#) 4 posts

Anonymous

## RECENTLY ACTIVE DISCUSSIONS

- #1 [LKS] #62119007: kmsg-usb-4-lmaul\_spl\_maxpacket Mon Aug 17, 1:04 p.m.
- #2 [perf parse] #6306065: perf-sanity-tests.Parse\_event\_definition\_attrpa... Mon Aug 17, 12:52 p.m.
- #3 [mm] #6306064: WARNING:at\_mm\_mremcontrol.c:mm\_mcgoup\_alloc Sat Aug 15, 12:45 a.m.
- #4 [fs] #646046a3: canonical\_address[#4] Sat Aug 15, 11:08 a.m.
- #5 [x86-entry] #646046a3: hp\_ptracoe8.fail Sat Aug 15, 4:42 a.m.

## MOST POPULAR DISCUSSIONS

No vote has been cast this month yet.

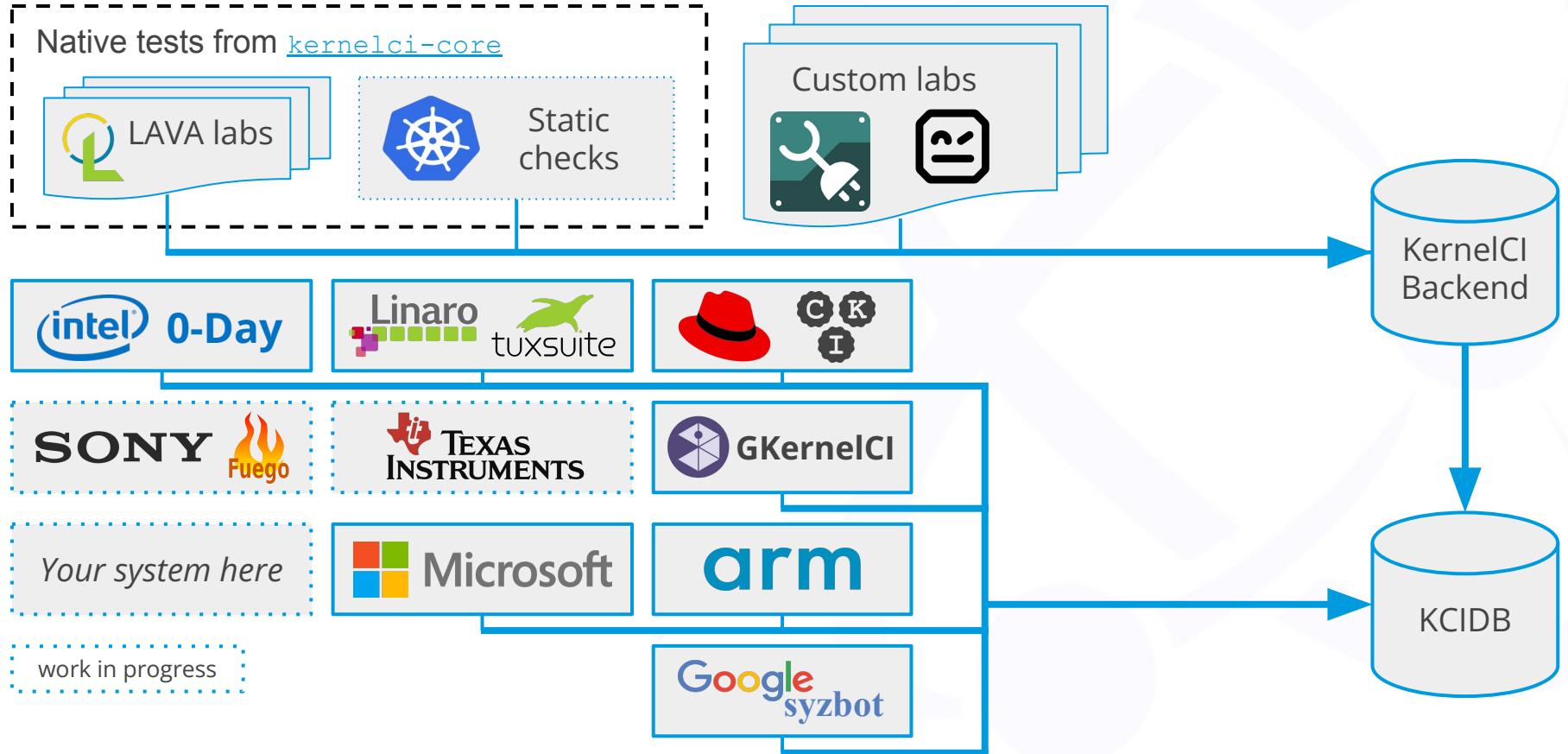
## MOST ACTIVE DISCUSSIONS

- #1 [x86-entry] #26c60827: hp\_ptracoe8.fail Sat Aug 15, 4:42 a.m.
- #2 [x86] #56d19c0346: vm-scalability:median -15.9% regression Thu Jul 23, 7:14 p.m.
- #3 [lk] #616c027e: hp\_fx\_68.fail Fri Aug 7, 2:52 p.m.
- #4 [x86] #616c027e: sh77 jobs-per-min -31.4% regression Wed Jul 22, 6:27 p.m.
- #5 [x86] #616c027e: sh77 jobs-per-min -43.3% regression Fri Aug 7, 7:16 p.m.

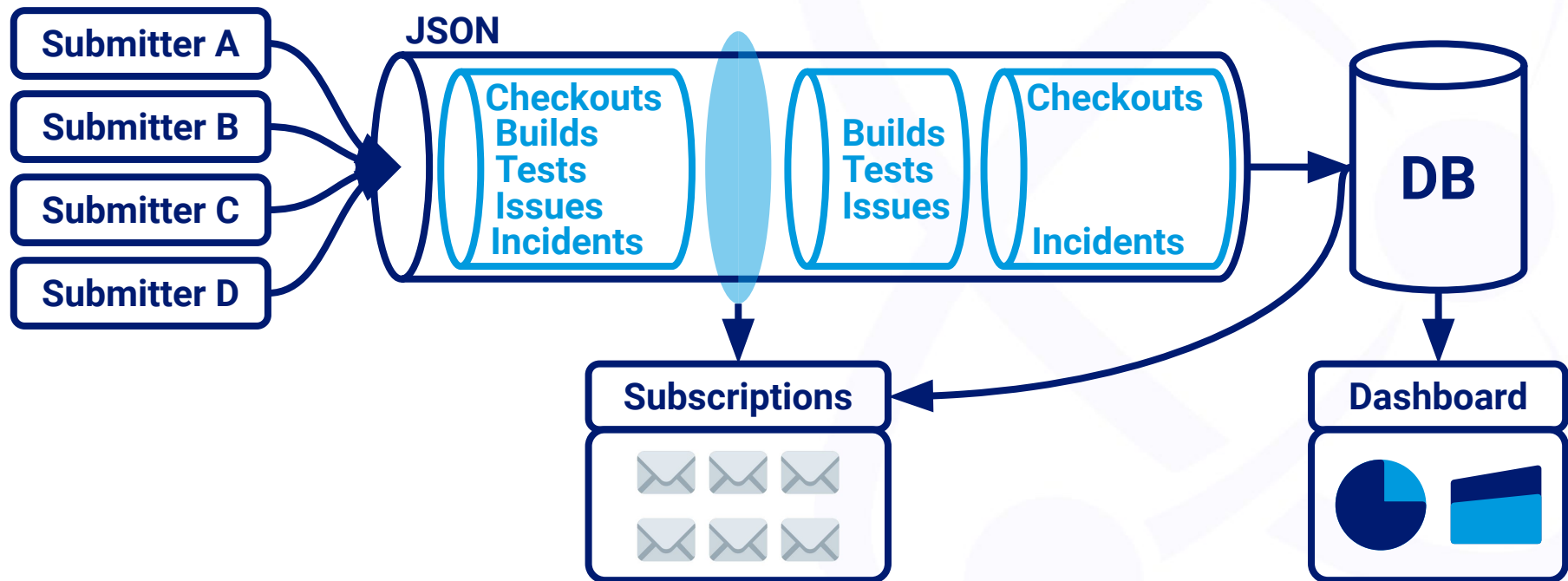
# What are KernelCI and KCIDB



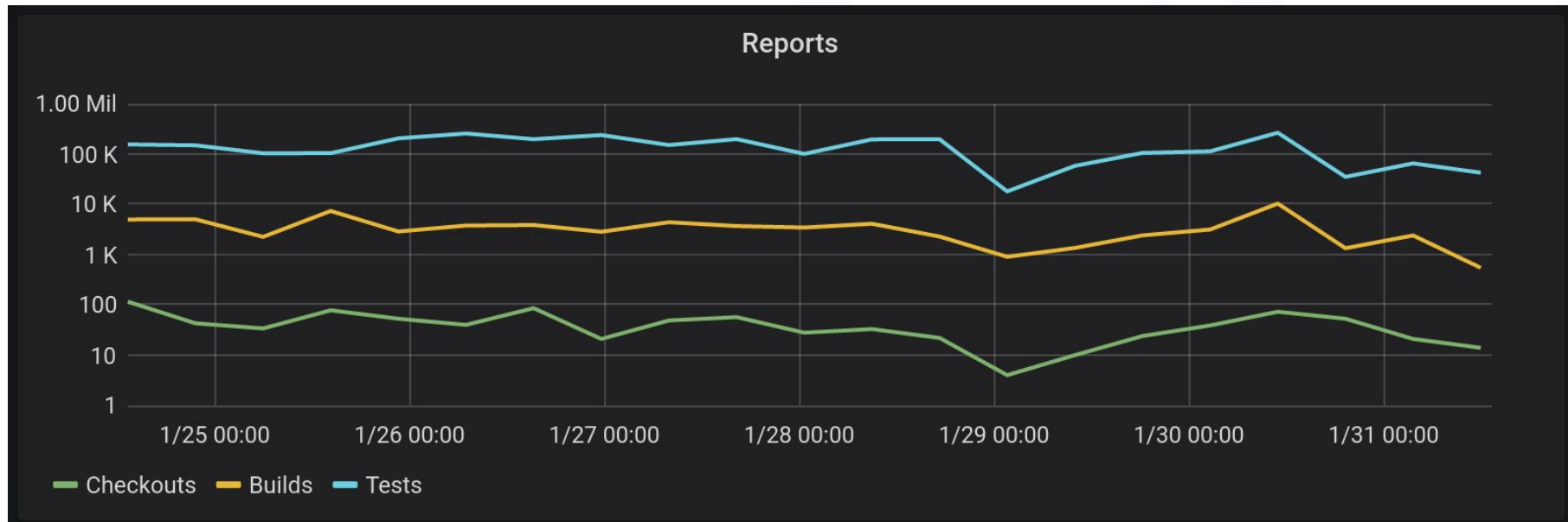
# KernelCI What are KernelCI and KCIDB



# KernelCI What are KernelCI and KCIDB



# KernelCI What are KernelCI and KCIDB



# KernelCI What are KernelCI and KCIDB

Home -

Origin All Build architecture All Build configuration All

Welcome to Linux Kernel CI report database (KCIDB) dashboard. Here you can find testing reports aggregated from multiple CI systems ("origins"). This is a work in progress, and we welcome contributions and participation. See the source code for the [collection system](#), and for the [dashboard](#). Write to [kernelci@proton.fr](mailto:kernelci@proton.fr) if you want to start submitting results from your CI system, or if you want to receive automatic notifications of arriving results.

Repositories

URL	Branches	Revisions
https://gitlab.com/Linaro/ltfs/mimosa/stable/linux-stable-rc-queue		539
https://git.kernel.org/pub/scm/linux/kernel/git/stable/linux-stable-rc.git	queue/5.4, queue/5.14, queue/5.10 (v10)	479
https://git.kernel.org/pub/scm/linux/kernel/git/davem/net-next.git	master	347
https://git.kernel.org/pub/scm/linux/kernel/git/torvalds/linux.git	master	448
https://android.googlesource.com/kernel/common	android/13.0, android/12.5.4-lts, android/12.5.4 (v16)	154
https://gitlab.com/Linaro/ltfs/mimosa/stable/linux-stable-rc		140

1 2 3 4 5 6 7 8 9

Revisions

Origin	Repository	Branch	Name	Hash	Discovery time	Status	Builds	Tests
kernelci	https://git.kernel.org/pub/scm/linux/kernel/git/stable/linux-stable-rc.git	linux-5.10-y	v5.10.67-1775-gb66c21644809	b66c216444809	2021-09-21 09:11:43.151+00	✓	✓	FAIL
.....	https://git.kernel.org/pub/scm/linux/kernel/git/stable/linux-stable-rc.git	queue/5.10	v5.10.67-124-g409ba09baec2	4409ba09baec2	2021-09-21 07:17:03+00	✓	✓	FAIL
fasuite	https://gitlab.com/Linaro/ltfs/mimosa/stable/linux-stable-rc-queue	-	v4.9.282-175-g41cfaebbd653	41cfaebbd653	2021-09-21 07:16:56+00	✓	✓	✓
fasuite	https://gitlab.com/Linaro/ltfs/mimosa/stable/linux-stable-rc-queue	-	v5.4.147-269-g17452f118854	17452f118854	2021-09-21 07:15:49+00	✓	✓	✓
fasuite	https://gitlab.com/Linaro/ltfs/mimosa/stable/linux-stable-rc-queue	-	v4.4.283-133-ga6ff9e9006	a6ff9e9006	2021-09-21 07:15:38+00	✓	✓	✓
fasuite	https://gitlab.com/Linaro/ltfs/mimosa/stable/linux-stable-rc-queue	-	v5.19.206-293-gc70c39e8ed9f	c70c39e8ed9f	2021-09-21 07:15:35+00	✓	✓	✓
fasuite	https://gitlab.com/Linaro/ltfs/mimosa/stable/linux-stable-rc-queue	-	v4.14.244-217-ga6ff9e9006	a6ff9e9006	2021-09-21 07:15:33+00	✓	✓	✓
fasuite	https://gitlab.com/Linaro/ltfs/mimosa/stable/linux-stable-rc-queue	-	v5.14.6-170-g6aec71c1020a	6aec71c1020a	2021-09-21 07:14:33+00	✓	✓	✓
fasuite	https://gitlab.com/Linaro/ltfs/mimosa/stable/linux-next	-	next-20210921	83fa38574812	2021-09-21 06:12:25+00	✓	✓	✓

1 2 3 4 5 6 7 8 9

Build status

Test status

Reports

Builds per architecture

Repository -

URL: https://git.kernel.org/pub/scm/linux/kernel/git/stable/linux-stable-rc.git

Origin All Build architecture All Build configuration All

Home

kernelci, redhat

Build status

Test status

Revisions

Origin	Branch	Name	Hash	Discovery time	Status	Builds	Tests
kernelci	queue/6.14	v4.14.246-217-ga6ff9e9006	a6ff9e9006	2021-09-21 10:28:35.278+00	✓	✓	FAIL
kernelci	queue/5.10	v5.10.67-124-g409ba09baec2	4409ba09baec2	2021-09-21 10:03:57.482+00	✓	✓	FAIL
kernelci	linux-5.13-y	v5.13.19	7f68f06c0e0b	2021-09-21 09:47:49.489+00	✓	✓	FAIL
kernelci	linux-5.10-y	v5.10.67-125-gb66c21644809	b66c216444809	2021-09-21 09:11:43.151+00	✓	✓	FAIL
kernelci	linux-4.19-y	v5.19.206-294-ga70776605f	9a70776605f	2021-09-21 08:53:19.501+00	✓	✓	FAIL
kernelci	linux-5.4-y	v5.4.147-261-g9f54072b6a3	9f54072b6a3	2021-09-21 08:36:16.638+00	✓	✓	FAIL
kernelci	linux-4.14-y	v4.14.246-218-g7c39e8ed9f	7c39e8ed9f	2021-09-21 08:31:30.890+00	✓	✓	FAIL
kernelci	linux-4.9-y	v4.9.282-176-g5020b6ff9f	f5020b6ff9f	2021-09-21 08:09:46.564+00	✓	✓	FAIL
kernelci	linux-4.4-y	v4.4.283-134-ga6ff9e9006	6a6ff9e9006	2021-09-21 07:52:38.934+00	✓	✓	FAIL

1 2 3 4 5 6 7 8 9

Reports

Builds per architecture



Branch -

Repository URL: <https://git.kernel.org/pub/scm/linux/kernel/git/torvalds/linux.git> Name: master Origin: All Build architecture: All Build configuration: All

Home Repository

Origins	Repository URL	Name
arm, kernelci, redhat, syzbot, tuxsuite	<a href="https://git.kernel.org/pub/scm/linux/kernel/git/torvalds/linux.git">https://git.kernel.org/pub/scm/linux/kernel/git/torvalds/linux.git</a>	master

Revisions

Origin	Name	Hash	Discovery time	Status	Builds	Tests
tuxsuite	v5.15-rc2-35-g05050856a77	e9b6578414c0	2021-09-21 01:00:47+00	✓	X	
arm	v5.15-rc2-2-g8f7189236e	e8f7189236e	2021-09-20 21:46:17+00	✓	✓	FAIL
tuxsuite	v5.15-rc2-2-g8f7189236e	e8f7189236e	2021-09-20 18:20:57+00	✓	X	
...	v5.15-rc2	e4e737bb5c17	2021-09-20 00:41:11:722+00	✓	X	FAIL
redhat	2062142f27a0	2062142f27a0	2021-09-19 20:41:12:717+00	✓	X	PASS
redhat	bc1abb9e55ce	bc1abb9e55ce	2021-09-19 19:51:28:073+00	✓	X	PASS
...	v5.15-rc1-239-g45016caa4b8	048016caa4b8	2021-09-18 22:06:14:758+00	✓	X	FAIL
redhat	938f913bd91	938f913bd91	2021-09-18 19:56:12:056+00	✓	X	FAIL
arm	v5.15-rc1-221-g43570536611	43570536611	2021-09-18 13:49:13+00	✓	✓	FAIL

Build status, Test status, Reports, Builds per architecture

Revision -

Origin: All Build architecture: All Build configuration: All

Home

Repo: <https://gitlab.com/leandro/mirrors/torvalds/linux-mainline> Branch: master Commit name: v5.15-rc2

Log Status: ✓ Builds: X Tests: FAIL

Hash: e4e737bb5c170df6135a127739a9e6148ee3da82

Description: 2021-09-20 00:41:17.381+00

Build status, Top 10 architecture build failures, Test status, Top 5 configuration build failures, Top 5 compiler build failures

Origin	Architecture	Compiler	Configuration	Start time	Duration	Description	Status	Tests
redhat	aarch64	clang version 13.0.0 (Fedora 13.0.0-rc1.1.fc35)	fedora	2021-09-20 00:54:01.94896+00	00:35:23.000		✓	
redhat	s390x	s390x-linux-gnu-gcc (GCC) 11.2.1 20210728 (Red Hat 11.2.1-1)	fedora	2021-09-20 00:54:03.116458+00	00:10:08.000		✓	
redhat	s390x	clang version 13.0.0 (Fedora 13.0.0-rc1.1.fc35)	fedora	2021-09-20 00:54:04.279798+00	00:12:45.000		✓	
redhat	x86_64	gcc (GCC) 11.2.1 20210728 (Red Hat 11.2.1-1)	fedora	2021-09-20 00:54:08.688925+00	00:23:37.000		✓	FAIL
redhat	ppc64le	powerpc64le-linux-gnu-gcc (GCC) 11.2.1 20210728	fedora	2021-09-20 00:54:12.072400+00	00:24:02.000		✓	
redhat	aarch64	aarch64-linux-gnu-gcc (GCC) 11.2.1 20210728 (Red Hat 11.2.1-1)	fedora	2021-09-20 00:54:13.558512+00	00:30:15.000		✓	SKIP
redhat	x86_64	clang version 13.0.0 (Fedora 13.0.0-rc1.1.fc35)	fedora	2021-09-20 00:54:16.220894+00	00:24:02.000		X	
redhat	ppc64le	clang version 13.0.0 (Fedora 13.0.0-rc1.1.fc35)	fedora	2021-09-20 00:54:19.067626+00	00:28:42.000		✓	

Patches



Below is the summary of results Kernel CI database has recorded for this revision so far. See complete and up-to-date report at:

[https://kcidb.kernelci.org/d/revision/revision?orgId=1&var-git\\_commit\\_hash=8088293888188c3923f5bd8a69370dae25ed14e5&var-patchset\\_hash=](https://kcidb.kernelci.org/d/revision/revision?orgId=1&var-git_commit_hash=8088293888188c3923f5bd8a69370dae25ed14e5&var-patchset_hash=)

## OVERVIEW

Builds: ✗ FAIL  
Tests: ✗ FAIL

## REVISION

Status ✔ PASS  
Commit  
name: v5.16-rc7-108-g808829388818  
hash: 8088293888188c3923f5bd8a69370dae25ed14e5  
Checked out from  
<https://git.kernel.org/pub/scm/linux/kernel/git/torvalds/linux.git> master  
<https://gitlab.com/Linaro/lkft/mirrors/torvalds/linux-mainline>  
By  
kernelci, redhat, syzbot, tuxsuite

## BUILDS

Status ✗ 56 ✔ 738  
Architectures  
arm ✗ 26 ✔ 347  
riscv ✗ 8 ✔ 21  
mips ✗ 7 ✔ 86  
powerpc ✗ 5 ✔ 47  
x86\_64 ✗ 3 ✔ 55  
arm64 ✗ 3 ✔ 48  
i386 ✗ 2 ✔ 42  
s390 ✗ 1 ✔ 17  
ppc64le ✗ 1 ✔ 1  
sh — ✔ 24  
arc — ✔ 22  
parisc — ✔ 12  
sparc — ✔ 12  
aarch64 — ✔ 2  
s390x — ✔ 2  
Failures  
✗ 4 riscv allnoconfig  
✗ 2 arm allmodconfig "v5.16-rc7-108-g808829388818"  
✗ 2 x86\_64 allmodconfig "v5.16-rc7-108-g808829388818"  
✗ 2 i386 allmodconfig "v5.16-rc7-108-g808829388818"  
✗ 2 powerpc maple\_defconfig  
...  
By  
kernelci, redhat, syzbot, tuxsuite

## TESTS

Status  
✗ 23 ✔ 53 ✗ 5 🔄 6 📌 1  
Failures  
✗ baseline-qemu-docker  
✗ baseline  
✗ baseline-nfs  
✗ ltp-mm  
✗ cros-ec  
...  
By  
kernelci, redhat, syzbot

See complete and up-to-date report at:

[https://kcidb.kernelci.org/d/revision/revision?orgId=1&var-git\\_commit\\_hash=8088293888188c3923f5bd8a69370dae25ed14e5&var-patchset\\_hash=](https://kcidb.kernelci.org/d/revision/revision?orgId=1&var-git_commit_hash=8088293888188c3923f5bd8a69370dae25ed14e5&var-patchset_hash=)

## LEGEND

- ✗ ERROR - Aborted. Test, tested code, or both might be faulty.
- ✗ FAIL - Failed. Tested code is likely faulty.
- ✔ PASS - Passed. Tested code is likely correct.
- 📌 DONE - Finished. Status of tested code is unknown.
- 🔄 SKIP - Skipped. Planned, but didn't execute.
- ? UNKNOWN - In progress, or status unknown.
- 🚫 WAIVED - Waived result. Test is too new or shows known failures.
- BLANK - No data, zero.

# What's Continuous Integration?

# 1. Test every change



- 1. Test every change**
- 2. Give feedback**

# The Metrics of CI

## Coverage

How much functionality is tested



# KernelCI The metrics of CI

## Coverage

How much functionality is tested

## Latency

How fast feedback is produced

 **KernelCI** The metrics of CI**Coverage**

How much functionality is tested

**Latency**

How fast feedback is produced

**Reliability**

How reliable feedback is

## **Coverage**

How much functionality is tested

## **Latency**

How fast feedback is produced

## **Reliability**

How reliable feedback is

## **Accessibility**

How easy it is to understand feedback



# KernelCI The ✨ideal✨ CI

## Coverage

Everything is tested

## Latency

Instant feedback

## Reliability

Always spot on

## Accessibility

Just says what's broken

# KernelCI The worst CI

## **Coverage**

Useless

## **Latency**

Takes forever

## **Reliability**

Cannot be trusted

## **Accessibility**

Incomprehensible



# KernelCI The worst CI

Coverage

Useless

Latency



# Worse than NO CI



Cannot be trusted

Accessibility

Incomprehensible

# Where are we with upstream Kernel's CI?



# KernelCI Where are we?

- **Coverage**
  - Nobody seems to know



## LCOV - code coverage report

Current view: [top level](#)

Test: Coverage of kernel tests

Date: 2023-06-07 00:04:15

Legend: Rating: low: < 25 % medium: >= 25 % high: >= 50 %

	Hit	Total	Coverage
Lines:	425403	3375966	12.6 %
Functions:	37119	220966	16.8 %
Branches:	197204	2094174	9.4 %

Directory	Line Coverage ↕	Functions ↕	Branches ↕
<a href="#">arch/arm64/crypto</a>	67.8 % 1075 / 1585	76.1 % 102 / 134	50.1 % 404 / 806
<a href="#">arch/arm64/hyperv</a>	8.6 % 7 / 81	12.5 % 1 / 8	9.1 % 2 / 22
<a href="#">arch/arm64/include/asm</a>	64.3 % 1379 / 2143	68.4 % 143 / 209	40.6 % 2837 / 6994
<a href="#">arch/arm64/include/asm/stacktrace</a>	86.5 % 32 / 37	100.0 % 3 / 3	55.0 % 22 / 40
<a href="#">arch/arm64/include/asm/vdso</a>	100.0 % 8 / 8	- 0 / 0	- 0 / 0
<a href="#">arch/arm64/kernel</a>	44.5 % 3611 / 8106	51.1 % 435 / 852	27.5 % 1356 / 4923
<a href="#">arch/arm64/kernel/probes</a>	5.2 % 20 / 383	6.0 % 3 / 50	2.0 % 5 / 247
<a href="#">arch/arm64/kvm</a>	50.9 % 3097 / 6086	48.8 % 352 / 721	28.4 % 1155 / 4060
<a href="#">arch/arm64/kvm/hyp</a>	33.0 % 462 / 1398	39.1 % 45 / 115	24.1 % 185 / 768
<a href="#">arch/arm64/kvm/hyp/include/hyp</a>	64.5 % 247 / 383	81.2 % 26 / 32	23.8 % 76 / 320
<a href="#">arch/arm64/kvm/hyp/vhe</a>	77.0 % 147 / 191	80.0 % 20 / 25	53.1 % 17 / 32
<a href="#">arch/arm64/kvm/vgic</a>	42.2 % 1888 / 4471	52.1 % 189 / 363	25.7 % 615 / 2395
<a href="#">arch/arm64/lib</a>	45.6 % 393 / 861	54.1 % 33 / 61	37.8 % 118 / 312
<a href="#">arch/arm64/mm</a>	51.3 % 1079 / 2105	60.0 % 117 / 195	36.1 % 472 / 1306
<a href="#">arch/arm64/net</a>	43.6 % 424 / 973	56.2 % 18 / 32	32.9 % 337 / 1025
<a href="#">block</a>	63.7 % 11377 / 17858	66.8 % 1112 / 1664	47.2 % 5656 / 11975
<a href="#">block/partitions</a>	57.1 % 463 / 811	70.8 % 34 / 48	37.7 % 203 / 539
<a href="#">certs</a>	57.7 % 75 / 130	60.0 % 9 / 15	29.7 % 19 / 64

 **KernelCI** Where are we?**Coverage**

Nobody seems to know

 **KernelCI** Where are we?**Coverage**

Nobody seems to know

**Latency**

Several hours to weeks, pre-merge rare

 **KernelCI** Where are we?**Coverage**

Nobody seems to know

**Latency**

Several hours to weeks, pre-merge rare

**Reliability**

Manual review required in many cases

 **KernelCI** Where are we?**Coverage**

Nobody seems to know

**Latency**

Several hours to weeks, pre-merge rare

**Reliability**

Manual review required in many cases

**Accessibility**

Area-specific, disparate



# Hard Limits

## Coverage

Hardware availability





# KernelCI Hard Limits

## Coverage

Hardware availability

## Latency

Hardware availability

**Coverage**

Hardware availability

**Latency**

Hardware availability

**Reliability**

Hardware and kernel reliability

**Coverage**

Hardware availability

**Latency**

Hardware availability

**Reliability**

Hardware and kernel reliability

**Accessibility**

Hardware availability, kernel complexity

# Challenges



# KernelCI Challenges

## Coverage

Held back by other metrics



# KernelCI Challenges

## Coverage

Held back by other metrics

## Latency

Unsafe pre-merge CI, slow human reviews





# KernelCI Challenges

## Coverage

Held back by other metrics

## Latency

Unsafe pre-merge CI, slow human reviews

## Reliability

Kernel/tests desync



# KernelCI Challenges

## Coverage

Held back by other metrics

## Latency

Unsafe pre-merge CI, slow human reviews

## Reliability

Kernel/tests desync

## Accessibility

Disparate reports/dashboards



# KernelCI Challenges Compounded

## Low **Reliability** and **Accessibility**

- Low developer trust towards results
  - No *gating*, constricted test/code feedback
    - Improvement process starved

# KernelCI Challenges Compounded

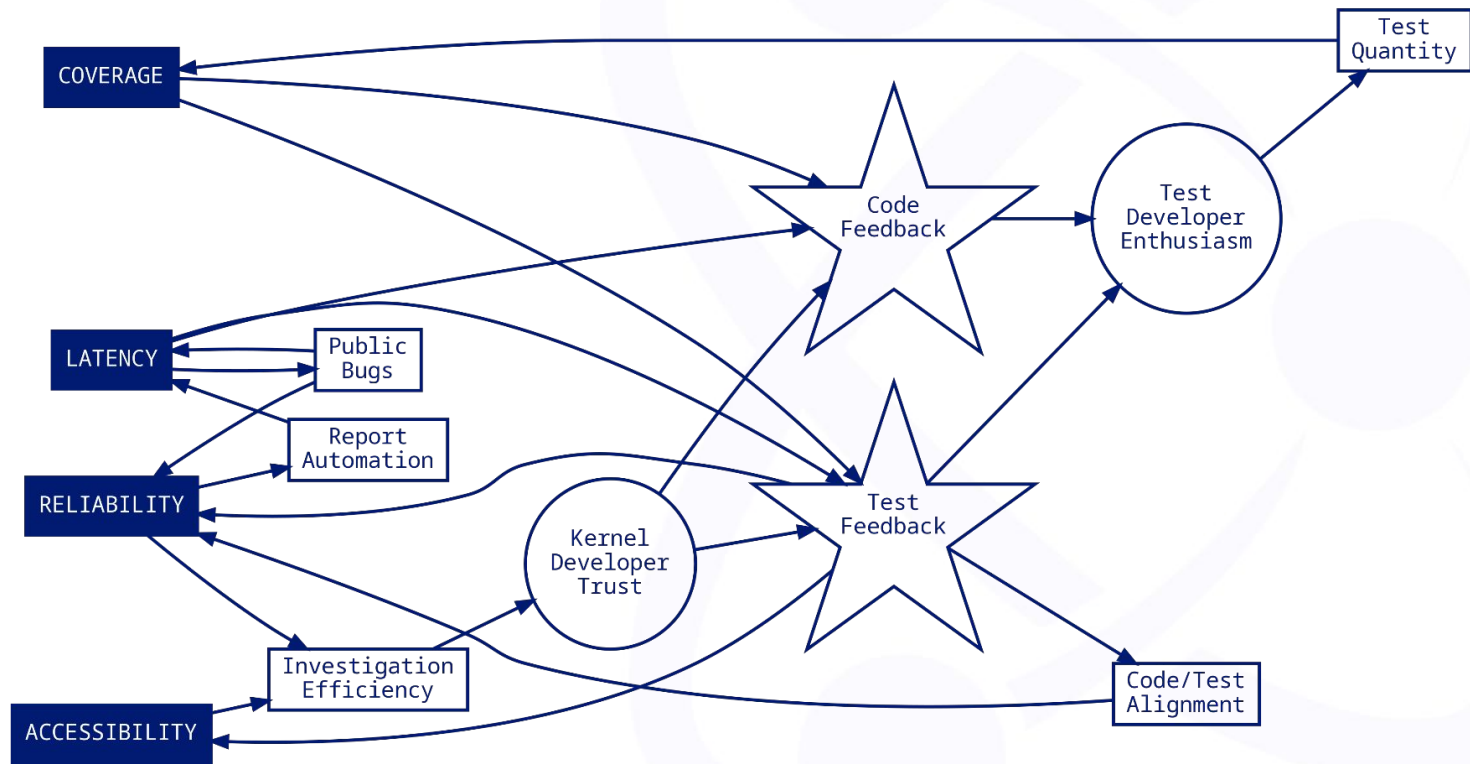
## Low **Reliability** and **Accessibility**

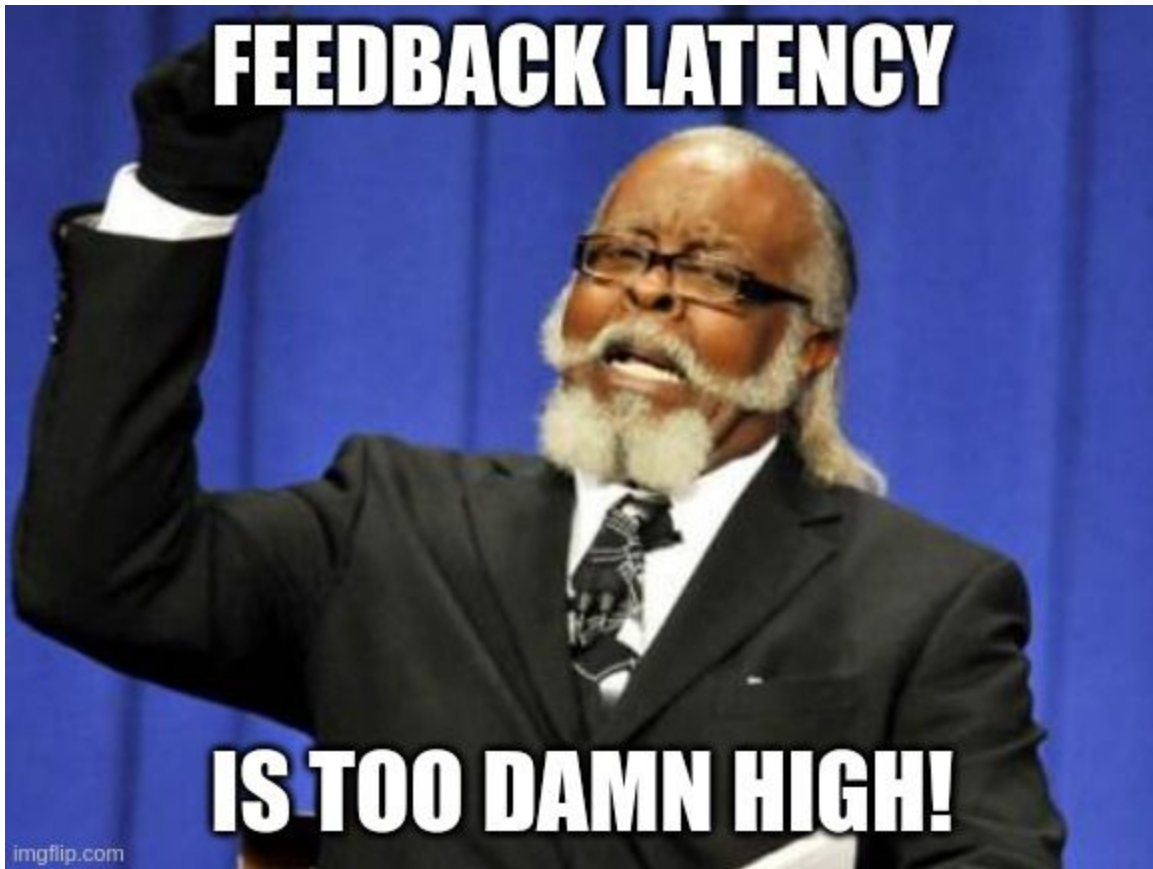
- Low developer trust towards results
  - No *gating*, constricted test/code feedback
    - Improvement process starved

## High **Latency**

- No *gating*
- Bugs stay in public code longer
  - More time wasted by *everyone*
    - Less time for improvement
    - More **Latency**

# KernelCI All together now









# What can we do?



~~What can we do?~~  
What we *can't* do?

# KernelCI What we *can't* do?

- Kernel community is not a single team
- Not a single company
- You **cannot force** people to look at test results
- "Enable gating then fix the tests" doesn't work
- We have to fix them first, gain ✨**developer trust**✨



# Developer Trust



**So *what can we do?***

## Attract more companies into testing — more hardware, more tests, more coverage

- If you have your own CI system
  - KernelCI KCIDB [interface](#) is easy to use
  - Help improve KCIDB reporting
- If you'd like to contribute hardware
  - Set up a LAVA lab and [connect](#) to KernelCI
- Write to [kernelci@lists.linux.dev](mailto:kernelci@lists.linux.dev)

## More pre-merge testing — less bugs in public code, less time spent triaging, faster feedback!

- Use Patchwork for picking patches
  - Test safely what you can
- About 50 repos are already on GitHub/GitLab
  - Offer integration with your CI system
  - KernelCI is planning to offer its own
  - "The authenticated user gets the hardware"
- Encourage maintainers to use "git forges" for patches
  - CI integration and PR testing as selling points

## One test at a time

- Talk to maintainers
- Offer to test a staging branch
- Pick and choose a few most trusted tests to start
- KCIDB subscriptions can help with that
  - Want just that one test for your branch?
  - Particular compiler, architecture?
  - From all testers, or just some?
  - We're here for you - sign up!
    - Write to [kernelci@lists.linux.dev](mailto:kernelci@lists.linux.dev)

## Automated triaging — more reliability, faster

- Results still need reviews, let's make them easier
- KCIDB is building a triaging system for aggregated results, we need your help!
- References: GFX CI, CKI, syzbot



# KernelCI Latency

Edit filter

Short description CFL: igt@kms\_flip@2x-flip-vs-expired-vblank\* - fail - Failed assertion: timercmp(&reply.ts, &o->flip\_state.last\_ts, ==), Last errno: 25

Select the tags

Ignored	Selected
Empty list	Showing all 1
<input type="text" value="Filter"/>	<input type="text" value="Filter"/>
>> >	< <<
	DRM-TIP
Leave empty to select all tags	

Select the machines

Ignored	Selected
Showing all 186	Showing all 1
<input type="text" value="Filter"/>	<input type="text" value="Filter"/>
>> >	< <<
Tag: APL Tag: BDW Tag: BLB Tag: BSW Tag: BWR Tag: BXT Tag: BYT Tag: CHAMELI Tag: CNL Tag: CTG	Tag: CFL
Leave empty to select all machines	

Select the tests

Ignored	Selected
Showing all 2963	Showing all 1
<input type="text" value="Filter"/>	<input type="text" value="Filter"/>
>> >	< <<
IGT: igt@kms_frontbuffer_tracking@fbc-2p-primscrn-pri-indfb-draw IGT: igt@kms_chamelium@hdmi-hpd IGT: igt@kms_flip@dprms-off-confusion IGT: igt@gem_persistent_relocs@forked-faulting-reloc IGT: igt@kms_chv_cursor_fail@pipe-b-256x256-top-edge IGT: igt@kms_cursor_legacy@basic-flip-before-cursor-legacy IGT: igt@kms_atomic_transition@5x-modeset-transitions-fencing IGT: igt@gem_persistent_relocs@forked-thrashing IGT: igt@kms_draw_crc@draw-method-xrgb8888-render-xtiled IGT: igt@kms_pipe_crc_basic@hang-read-crc-pipe-b	IGT: igt@kms_flip@2x-flip-vs-expired-vblank
Leave empty to select all tests	

Select the statuses

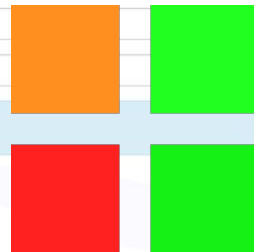
Ignored	Selected
Showing all 14	Showing all 1
<input type="text" value="Filter"/>	<input type="text" value="Filter"/>
>> >	< <<
IGT: pass IGT: warn IGT: dmesg-wa IGT: dmesg-fail IGT: incomplete IGT: notrun IGT: timeout Piglit: warn IGT: crash Piglit: crash	IGT: fail
Leave empty to select all statuses	

Stdout regex Regular expression that needs to be matched on the test's standard output. Leave empty to ignore.

Stderr regex Failed assertion: timercmp(&reply.ts, &o->flip\_state.last\_ts, ==)in.\*Last errno: 25, Inappropriate ioctl for device

Dmesg regex Regular expression that needs to be matched on the kernel logs. Leave empty to ignore.

Matches 0/564 unknown failures: 0 tag(s), 0 machine(s), 0 machine tag(s), 0 test(s), and 0 status(es) -



**Kernel Bug** Storage block - storage fio numa: Performance comparison: min:40535 \* 1.15 < max:81259 stable Created by:

**Kind:** Kernel bug **Resolved:** No **Policy:** public (read: None, write: None)

**Ticket URL:** [https://bugzilla.redhat.com/show\\_bug.cgi?id=2032094](https://bugzilla.redhat.com/show_bug.cgi?id=2032094)

**Origin Tree:** stable

### Regexes

Text	File Name	Test Name
<code>\[s+FAIL\s+\] :: Performance comparison: min:\d+ \* 1\.\d+ &lt; max:\d+</code>	taskout\.log	Storage block - storage fio

### Affected hosts

### Affected Checkouts

ID	Tree	Branch	Start Time
redhat:449002104	mainline.kernel	master	Jan. 16, 2022, 8:26 a.m.
redhat:448605532	kernel-rt-rhel9		Jan. 15, 2022, 12:54 a.m.
redhat:448600281	rhel9		Jan. 15, 2022, 12:33 a.m.



**syzbot**

Linux v

[sign-in](#) | [mailing list](#) | [source](#) | [docs](#)

 Open [1059]

 Fixed [3590]

 Invalid [7252]

## KMSAN: uninit-value in sctp\_inq\_pop (2)

Status: [upstream: reported C repro on 2022/01/08 08:00](#)

Reported-by: [syzbot+70a42f45e76bede082be@syzkaller.appspotmail.com](mailto:syzbot+70a42f45e76bede082be@syzkaller.appspotmail.com)

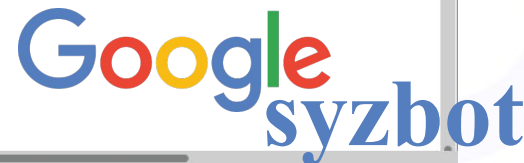
First crash: 58d, last: 1d21h

### similar bugs (1):

<a href="#">Kernel</a>	<a href="#">Title</a>	<a href="#">Repro</a>	<a href="#">Cause bisect</a>	<a href="#">Fix bisect</a>	<a href="#">Count</a>	<a href="#">Last</a>	<a href="#">Reported</a>	<a href="#">Patched</a>	<a href="#">Status</a>
upstream	<a href="#">KMSAN: uninit-value in sctp_inq_pop</a>				3	204d	<a href="#">244d</a>	0/22	<a href="#">auto-closed as invalid on 2021/10/</a>

### Sample crash report:

```
sctp_side_effects net/sctp/sm_sideeffect.c:1195 [inline]
sctp_do_sm+0x946f/0x9b50 net/sctp/sm_sideeffect.c:1166
sctp_assoc_bh_rcv+0xa15/0xdd0 net/sctp/associola.c:1054
sctp_inq_push+0x31c/0x440 net/sctp/inqueue.c:80
sctp_backlog_rcv+0x30f/0x10b0 net/sctp/input.c:344
sk_backlog_rcv include/net/sock.h:1030 [inline]
__release_sock+0x256/0x640 net/core/sock.c:2768
release_sock+0x98/0x2e0 net/core/sock.c:3300
sctp_wait_for_connect+0x52a/0x9e0 net/sctp/socket.c:9306
sctp_sendmsg_to_asoc+0x1c47/0x1f90 net/sctp/socket.c:1881
sctp_sendmsg+0x3eaa/0x5460 net/sctp/socket.c:2027
inet_sendmsg+0x15b/0x1d0 net/ipv4/af_inet.c:819
sock_sendmsg_nosec net/socket.c:704 [inline]
sock_sendmsg net/socket.c:724 [inline]
__sys_sendto+0x9ef/0xc70 net/socket.c:2036
__do_sys_sendto net/socket.c:2048 [inline]
__se_sys_sendto net/socket.c:2044 [inline]
__x64_sys_sendto+0x19c/0x210 net/socket.c:2044
do_syscall_x64 arch/x86/entry/common.c:51 [inline]
```



```
sctp_sendmsg_to_asoc+0x1c47/0x1f90 net/sctp/socket.c:1881
sctp_sendmsg+0x3eaa/0x5460 net/sctp/socket.c:2027
inet_sendmsg+0x15b/0x1d0 net/ipv4/af_inet.c:819
sock_sendmsg_nosec net/socket.c:704 [inline]
sock_sendmsg net/socket.c:724 [inline]
__sys_sendto+0x9ef/0xc70 net/socket.c:2036
__do_sys_sendto net/socket.c:2048 [inline]
__se_sys_sendto net/socket.c:2044 [inline]
__x64_sys_sendto+0x19c/0x210 net/socket.c:2044
do_syscall_x64 arch/x86/entry/common.c:51 [inline]
do_syscall_64+0x54/0xd0 arch/x86/entry/common.c:82
entry_SYSCALL_64_after_hwframe+0x44/0xae
```

```
CPU: 0 PID: 3479 Comm: syz-executor678 Not tainted 5.16.0-rc5-syzkaller #0
Hardware name: Google Google Compute Engine/Google Compute Engine, BIOS Google 01/01/2011
=====
```

### Crashes (12):

<a href="#">Manager</a>	<a href="#">Time</a>	<a href="#">Kernel</a>	<a href="#">Commit</a>	<a href="#">Syzkaller</a>	<a href="#">Config</a>	<a href="#">Log</a>	<a href="#">Report</a>	<a href="#">Syz repro</a>	<a href="#">C repro</a>	<a href="#">VM info</a>	
ci-upstream-kmsan-gce	2022/01/04 02:03	https://gith...	<a href="#">81c325bbf94e</a>	<a href="#">4a3f34f2</a>	<a href="#">.config</a>	<a href="#">log</a>	<a href="#">report</a>	<a href="#">syz</a>	<a href="#">C</a>	<a href="#">info</a>	KMSAN: unin
ci-upstream-kmsan-gce	2022/01/09 14:48	https://gith...	<a href="#">81c325bbf94e</a>	<a href="#">2ca0d385</a>	<a href="#">.config</a>	<a href="#">log</a>	<a href="#">report</a>			<a href="#">info</a>	KMSAN: unin
ci-upstream-kmsan-gce	2022/01/09 03:03	https://gith...	<a href="#">81c325bbf94e</a>	<a href="#">2ca0d385</a>	<a href="#">.config</a>	<a href="#">log</a>	<a href="#">report</a>			<a href="#">info</a>	KMSAN: unin
ci-upstream-kmsan-gce	2022/01/08 23:49	https://gith...	<a href="#">81c325bbf94e</a>	<a href="#">2ca0d385</a>	<a href="#">.config</a>	<a href="#">log</a>	<a href="#">report</a>			<a href="#">info</a>	KMSAN: unin
ci-upstream-kmsan-gce	2022/01/08 08:29	https://gith...	<a href="#">81c325bbf94e</a>	<a href="#">2ca0d385</a>	<a href="#">.config</a>	<a href="#">log</a>	<a href="#">report</a>			<a href="#">info</a>	KMSAN: unin
ci-upstream-kmsan-gce	2022/01/07 15:49	https://gith...	<a href="#">81c325bbf94e</a>	<a href="#">2ca0d385</a>	<a href="#">.config</a>	<a href="#">log</a>	<a href="#">report</a>			<a href="#">info</a>	KMSAN: unin
ci-upstream-kmsan-gce	2022/01/07 07:08	https://gith...	<a href="#">81c325bbf94e</a>	<a href="#">6acc789a</a>	<a href="#">.config</a>	<a href="#">log</a>	<a href="#">report</a>			<a href="#">info</a>	KMSAN: unin
ci-upstream-kmsan-gce	2022/01/03 22:19	https://gith...	<a href="#">81c325bbf94e</a>	<a href="#">4a3f34f2</a>	<a href="#">.config</a>	<a href="#">log</a>	<a href="#">report</a>			<a href="#">info</a>	KMSAN: unin
ci-upstream-kmsan-gce-386	2022/01/14 20:25	https://gith...	<a href="#">fa3879a274df</a>	<a href="#">53e00b45</a>	<a href="#">.config</a>	<a href="#">log</a>	<a href="#">report</a>			<a href="#">info</a>	KMSAN: unin
ci-upstream-kmsan-gce-386	2021/12/03 12:30	https://gith...	<a href="#">093998eacea3</a>	<a href="#">c7c20675</a>	<a href="#">.config</a>	<a href="#">log</a>	<a href="#">report</a>			<a href="#">info</a>	KMSAN: unin
ci-upstream-kmsan-gce-386	2021/11/26 04:17	https://gith...	<a href="#">a535b0caaa2f</a>	<a href="#">63eac02</a>	<a href="#">.config</a>	<a href="#">log</a>	<a href="#">report</a>			<a href="#">info</a>	KMSAN: unin
ci-upstream-kmsan-gce-386	2021/11/19 07:31	https://gith...	<a href="#">412af9cd936d</a>	<a href="#">31a30fc0</a>	<a href="#">.config</a>	<a href="#">log</a>	<a href="#">report</a>			<a href="#">info</a>	KMSAN: unin



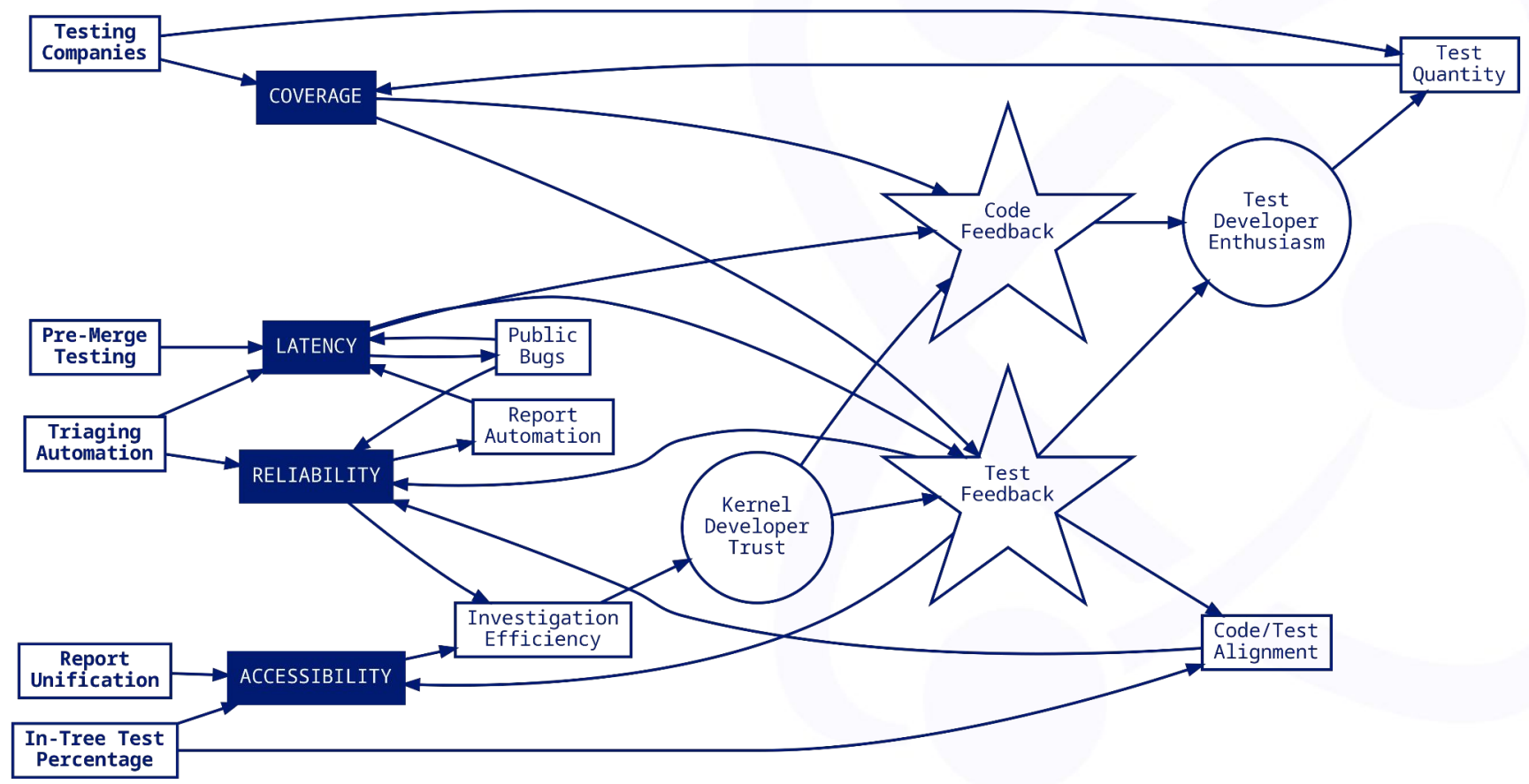
## **Move tests in-tree — no desync with code, "official" tests attract contributions**

- Start with most popular and well-developed ones
  - LTP?
- Integrate into kernel documentation
- Help backport to older branches
  - Stable?
- Prioritize execution of in-tree tests in CI
  - Shorten the loop

## Uniform reports/dashboards — time saved

- We're here for you - sign up!
  - Write to [kernelci@lists.linux.dev](mailto:kernelci@lists.linux.dev)
- Give us your requirements and use cases!
- Contribute your reporting templates!
- Help [development](#)!

# KernelCI All together now



**Thank you!**





**Join Us!**

# KernelCI Main repos on GitHub

The screenshot shows the GitHub profile for KernelCI, an Upstream Linux Kernel Validation Project. The profile includes a logo, a description, and contact information. Below the profile, there are navigation tabs for Repositories (41), Packages, People (22), Teams (2), and Projects (1). A search bar contains the query 'kcidb', and filters for 'Type: All' and 'Language: All' are visible. A 'New' button is also present. The search results show 3 repositories matching 'kcidb'. The first result is 'kcidb', described as 'kernelci.org common database tools', with 7 forks, 5 stars, 38 issues, and 1 pull request, updated 6 days ago. The second result is 'kcidb-io', described as 'kernelci.org common reporting - I/O data library', with 2 forks, 1 star, 7 issues, and 2 pull requests, updated 8 days ago. The third result is 'kcidb-grafana', described as 'KCIDB Grafana docs and files', with 1 fork, 2 stars, 5 issues, and 0 pull requests, updated on Jan 13. On the right side, there are two sidebars: 'Top languages' showing Python, Shell, HTML, Makefile, and SaltStack; and 'People' showing 22 contributors with their profile pictures.

**KernelCI**  
Upstream Linux Kernel Validation Project  
https://kernelci.org | kernelci@groups.io

Repositories 41 | Packages | People 22 | Teams 2 | Projects 1

Search: kcidb | Type: All | Language: All | New

3 results for repositories matching **kcidb** | Clear filter

- kcidb**  
kernelci.org common database tools  
Python | GPL-2.0 | 7 forks | 5 stars | 38 issues | 1 pull request | Updated 6 days ago
- kcidb-io**  
kernelci.org common reporting - I/O data library  
Python | 2 forks | 1 star | 7 issues | 2 pull requests | Updated 8 days ago
- kcidb-grafana**  
KCIDB Grafana docs and files  
1 fork | 2 stars | 5 issues | 0 pull requests | Updated on Jan 13

Top languages: Python, Shell, HTML, Makefile, SaltStack

People: 22



is:issue is:open label:"good first issu" 7 Pull requests Issues Marketplace Explore

Repositories	2
Code	0
Commits	0
Issues	8
Discussions <span>Beta</span>	0
Packages	107K
Marketplace	0
Topics	815K
Wikis	0
Users	0

<b>States</b>	
Open	8

<b>Languages</b>	
Python	8

[Advanced search](#) [Cheat sheet](#)

## 8 issues or view all results on GitHub

- [kernelci/kcidb #157](#)  
**bigquery: Add and use a single function for queries**  
To reduce code duplication implement a single querying function to be called by dump()/query()/oo\_query()/etc. in the BigQuery database code. Add DEBUG-level logging of queries and their parameters.  
good first issue  
spbnick
- [kernelci/kcidb-io #9](#)  
**Mark all symbols not supposed to be exposed as private**  
Figure out the correct way for, and mark all symbols not explicitly supposed to be exposed as private to avoid unintended use and unnecessary coupling.  
good first issue  
spbnick
- [kernelci/kcidb #111](#)  
**Upgrade google-cloud-secret-manager dependency**  
The latest release of the google-cloud-secret-manager package breaks the existing KCIDB code, and was pinned to versions <2.0.0dev. Fix the incompatibilities and unpin the package. Or perhaps re-pin ...  
good first issue  
spbnick
- [kernelci/kcidb #110](#)  
**Upgrade google-cloud-pubsub dependency**  
The latest release of the google-cloud-pubsub package breaks the existing KCIDB code, and was pinned to versions <2.0.0dev. Fix the incompatibilities and unpin the package. Or perhaps re-pin to <3.0.0dev. ...  
good first issue

## #kernelci at libera.chat

#kernelci The upstream kernel validation project: <http://kernelci.org> | Mailing list: <https://lists.linaro.org/mailman...> 71

Tuesday, February 16th, 2021 about 21 hours ago

**A** **alicef** none  
spbnick: sending it 21:31  
→ FFY00 nipped out 22:41

Wednesday, February 17th, 2021

→ sestebanz and kverz\_broke joined ← alexandra, shuah and kveremitz quit → selvak1631189 popped in → csd nipped out 01:10

**S** **spbnick** Nikolai Kondrashov  
alicef: Yep, I see it now, awesome :D 10:52  
→ mwasilew joined ← veremitz quit → selvak1631189, gaulishcoin9 and gaulishcoin3 popped in • kverz\_broke → kveremitz 10:57

**S** **spbnick** Nikolai Kondrashov  
Everyone who's around, say hi for a channel screenshot for my talk on Friday 🙌! 12:19

**G** **gtucker** Guillaume Tucker  
o/ KernelCI rules :) 12:33  
→ vkabatova joined (~vkabatova@176-74-128-122.netdatacomm.cz) 12:40

**M** **montjoie**  
hello 12:49  
→ monstr joined 15:50

**S** **spbnick** | 18:26