Upstream Kernel CI

LPC 2019 – *Birds of a Feather session*
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Landscape: projects

kernelci.org

C K I

Red Hat’s Continuous Kernel Integration

0-Day - Linux Kernel Performance

syzkaller
Landscape: Tests

• Linux kernel test tools:
  – Kselftest, coccinelle, KASAN, UBSAN, KUnit...

• Comprehensive test suites:
  – Linux Test Project

• Subsystem test suites
  – v4l2-compliance, i-g-t, xfstests...
Commonalities

- Monitor git branches or patches
- Build kernels
- Run tests
- Process the results
- Send emails
- Report on a dashboard
So many wheels

• Each project has some good tools and features
• Combining them could lead to more possibilities
• Different purposes:
  – CPU architecture (Intel…)
  – Boards (96Boards…)
  – Distribution (Fedora…)
  – Kernel frameworks (Kunit…)

Open First
Ideas

- Common test results database
- Common set of tools to orchestrate CI
- Test coverage “map”
- Shared hardware pools
- Public APIs to let components talk to each other
  - See also: “Open Testing Philosophy”
Let’s talk!
Photo credits

• 3. test equipment: https://www.flickr.com/photos/129143611@N03/16348438725/

• 4. grinder: https://www.flickr.com/photos/16041363@N00/2338931226/

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