kernelci.org
(The upstream Linux kernel validation project)
by Milo Casagrande
Who is This Guy?

- Milo Casagrande
- Software Developer @ Linaro (Automation & CI)
- Developer of kernelci.org
What Are We Doing Today?

- Background
- Overview of the system
- Demos
- Q&A
Not so Long Ago...

- Things were broken
- Tiny little scripts
- Doing the same thing
- Everyone on their own

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"I spend a lot of time on this task. I should write a program automating it!"

**Theory:**

- **Writing Code:**
- **Work on Original Task:**
- **Automation Takes Over:**
- **Free Time:**

**Reality:**

- **Writing Code:**
- **Debugging:**
- **Ongoing Development:**
- **Rethinking:**
- **No Time for Original Task Anymore:**
Our Goals

Build every configuration for each architecture
Boot the results
Run tests on them
Repeat for each kernel change
Report the results in a sensible way
Profit
#exactsteps

https://www.flickr.com/photos/ag_gilmore/8170021483/
Why?

There is something out there, but...
Why?

To provide a platform reference for the community.

https://www.flickr.com/photos/tripu/267155109/
Why?

To ensure the hard work done upstream is gross regression free.

https://www.flickr.com/photos/kalexanderson/6208067381/
Before Moving Forward...

- **Job**
  - Base unit
  - Tree + Kernel

- **Build**
  - Job + Defconfig
  - Artifacts

- **Boot**
  - Special case of test
What is kernelci.org

1 server
8 builders
9 distributed & automated hardware labs
160 unique boards
500k builds
1M boot results
What is kernelci.org
Demo Time!
The Road Ahead

- Diff for builds & boots
- Tests visualization
- Improved docs
- Better and new analytics
- Full text search
- Move to the cloud
Wanna Help?

- More hardware
- Use kernelci.org
- Confirm issues, report bugs, send patches...

https://www.flickr.com/photos/johnath/91950886/
Any Questions?

https://www.flickr.com/photos/clement127/13661779374/
Get Involved!
#kernelci / FreeNode

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https://api.kernelci.org/
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