Linux Plumbers Conference 2025



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AOSP on taped-out RISC-V SoC without RVA22/23, I came back to finish what I started.

Running Android on RISC-V platforms has been a long-standing goal, filled with technical hurdles and real world economical evaluation.

Initially I proposed the idea at Andes Technology, it didn't pan out, leading me to pursue its realization at SiFive. However, due to org restructuring, I was eventually laid off from SiFive. (Hi Samuel \boxtimes)

Ultimately, I returned to Andes to finish what I started: porting and booting Android on a real silicon-hardened RISC-V test chip platform, Qilai. And we, Andes, showcased it in various RISC-V conventions.

However, Qilai came in this world way before the ratification of RVA22 and RVA23 profiles which Google are relentlessly pushing forward to latest standards with their Cuttlefish.

In this talk, I will run through the things we need to do nowadays to squeeze AOSP to a platform on which its upstream shuns away.

Additionally, I will explore the question: Do we really need all those fancy extensions for running AOSP?

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