Hacking Project EVE for fun and profit

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Governance process

• Linux Foundation’s charter
  • https://wiki.lfedge.org/display/EVE/Community

• We answer to the LF Edge board of directors

• Down on the ground, “The Apache Way” principles apply
  • Technical Steering Committee (TSC) does day-to-day governance
  • Code gets merged by maintainers
  • https://github.com/lf-edge/eve/blob/master/CONTRIBUTING.md

• Community dashboards
  • https://insights.lfx.linuxfoundation.org/projects/Lfedge%2Fproject-eve/dashboard
Where are the bits?

• Development/collaboration is on GitHub under LF Edge: github.com/lf-edge
  • Project EVE – main codebase is at https://github.com/lf-edge/eve
  • Adam – reference implementation of a controller https://github.com/lf-edge/adam
  • Eden – developer tooling, tests https://github.com/lf-edge/eden

• Binary artifacts (including user-facing) are on DockerHub under LF Edge
  • The final user-facing container image at https://hub.docker.com/r/lfedge/eve

• Collaboration
  • https://projecteve.dev
  • Mailing lists, slack channels, LF Edge wiki
Development process

• Remember LF Edge wiki at https://wiki.lfedge.org/display/EVE/EVE?
  • Significant architecture proposals. E.g. https://wiki.lfedge.org/display/EVE/Next+generation+storage+architecture
  • EVE hardware compatibility list https://wiki.lfedge.org/display/EVE/EVE+in+the+Market

• Mailing list
  • eve-tsc@lists.lfedge.org

• Slack channels (channel names start with #eve-)
  • https://lfedge.slack.com/

• GitHub PRs
  • https://github.com/lf-edge/eve/pulls
CI/CD pipeline

• Almost exclusively built around GitHub Actions
  • https://github.com/lf-edge/eve/actions

• Every PR has a number of “checks” run against it (on both ARM and x86)
  • This is where Eden tests kick-in

• Test infrastructure
  • GitHub Actions VMs
  • Google Compute Platform (GCP) VMs with support for nested virtualization
  • 22 hardware configurations on Packet.net (nowadays Equinix Metal)
    • Dell, HP, Supermicro
    • Huawei, Foxcon
  • ZEDEDA’s own hardware lab
Major upstream dependencies

- Alpine Linux
  - currently 3.13.2, bespoke Linux distribution bits
- linuxkit
  - basis for Linux distro assembly, init system
- Linux kernel
- Xen
- Qemu
Project Structure

- api/ - EVE <-> controller API specs (proto) and implementations (Go, python)
- build-tools/ - linuxkit &co
- docs/ - pretty extensive documentation
- images/ - linuxkit-based, .yml image definitions
- conf/ - initial configuration that is baked into an installer image
- pkg/ - where all the code lives
- boards/ - BSP bits (mostly for ARM)
- .folders/ - mostly for CI/CD systems
  - .github,.circleci,.yetus