
More YAML
With
Talos Linux
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- Kubernetes Person™ at La Sentinelle

- Python & Rust “dev”
- Linux and FOSS enthusiast
  (maybe too enthusiastic)

- Most interesting thing about me?
  > My homelab

A Wild ALEX Appeared!

Let’s Talk Linux

- Linux is a kernel
- Linux comes in many flavours
- We have Linux for desktop, for servers, for SBCs, for phones etc…
- But Linux exists in 2 “main” types

“Full” Linux

- The complete package – includes everything expected of an Operating System.
- Includes: CLI, printer drivers, SSH server, audio drivers, firewall, sometimes a GUI etc etc…
- Found in desktops and many servers.
  ex: OpenSUSE Leap, Ubuntu 24.04, Arch Linux

“Micro” OS

- Lightweight, slimmed-down Linux distros
- **Not** built for normal day-to-day use
- Usually features:
  - reduced number of packages
  - immutable root fs
  - container runtimes preinstalled
- Built for container workloads
- Includes OpenSUSE Micro, Fedora CoreOS

Why “Micro” Linux

- Lightweight, can run on the edge
- Built for containers first
- Less packages = less vulnerabilities
- Immutable
- Etc etc

Experiencing OpenSUSE Micro

- I created a worklab on old servers
- OpenSUSE Micro was the base OS
- Installed k3s on top
- Who needs a heavy host OS when everything is in a self-contained container?

Introducing Talos

- Introducing Talos Linux
- The Linux distro built for Kubernetes **only**
- Does not do normal Linux things
- Doesn’t even have a terminal or ssh!
- 12 unique binaries in Talos 1.7. 0

Which Backdoor?

- ❌ no ssh
- ❌ no systemd
- ❌ no glibc (uses musl libc)
- ❌ no rpm/deb packages

How You Administer Talos

How You Administer Talos

YAML

Talos Administration

- Talos nodes have an API, same how Kubernetes has the KubeAPI
- talosctl is the CLI client to the API (hint: kubectl)
- Talos nodes are configured through yaml and applied through talosctl
- And tadaa, you have Kubernetes without a normal OS

Why Talos

- Everything is extremely replicable
- Scaling clusters is a breeze
- Easy Talos OS upgrades and rollbacks
  (no apt update && apt upgrade)
- More security, more better ;)
- Easy to create a HA cluster
- Lightweight (nearly as good as K3S!)

Maybe some kinda demo, idk

Thank You!

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