Captive Portals Hackathon

IETF 100

The Problem

- How can the API server identify a captive device?

Planning

- Some rough discussions over slack on Saturday
- Decided to build on the work from the IETF 98 hackathon

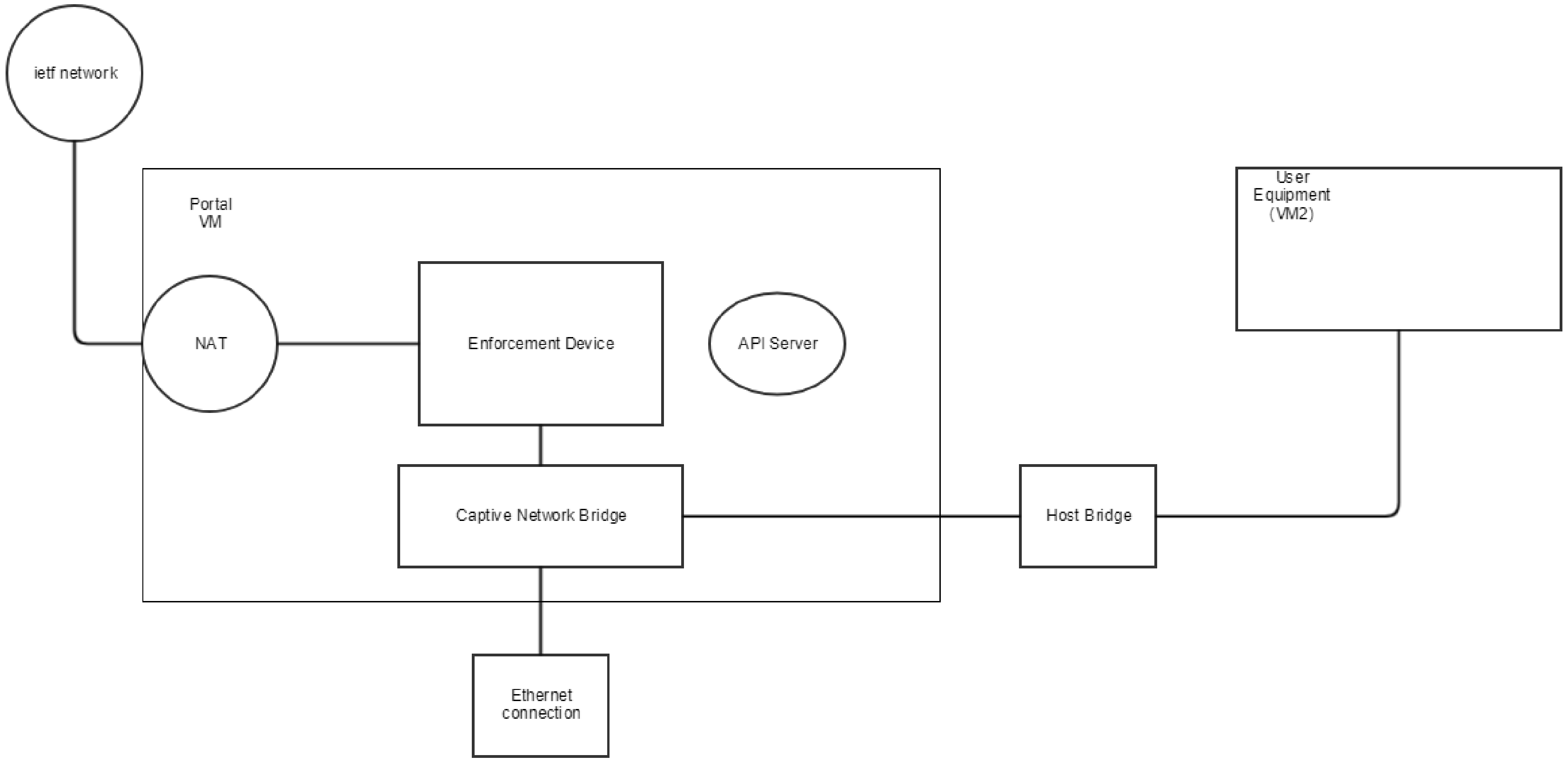
Technology and Code

- Lots of virtual machines
- https://datatracker.ietf.org/doc/draft-ietf-capport-architecture/
- https://datatracker.ietf.org/doc/draft-donnelly-capport-detection/
- https://datatracker.ietf.org/doc/draft-wkumari-capport-icmp-unreach/
- https://github.com/coova/coova-chilli (Enforcement device)
- https://github.com/darshakthakore/capport-detection (API server using Flask)
- https://github.com/klarose/capport_98 (Client side code)

Achievements

- Proof via working code of the feasibility of different deployment models
- Feedback for discussion at the capport meeting on Tuesday.

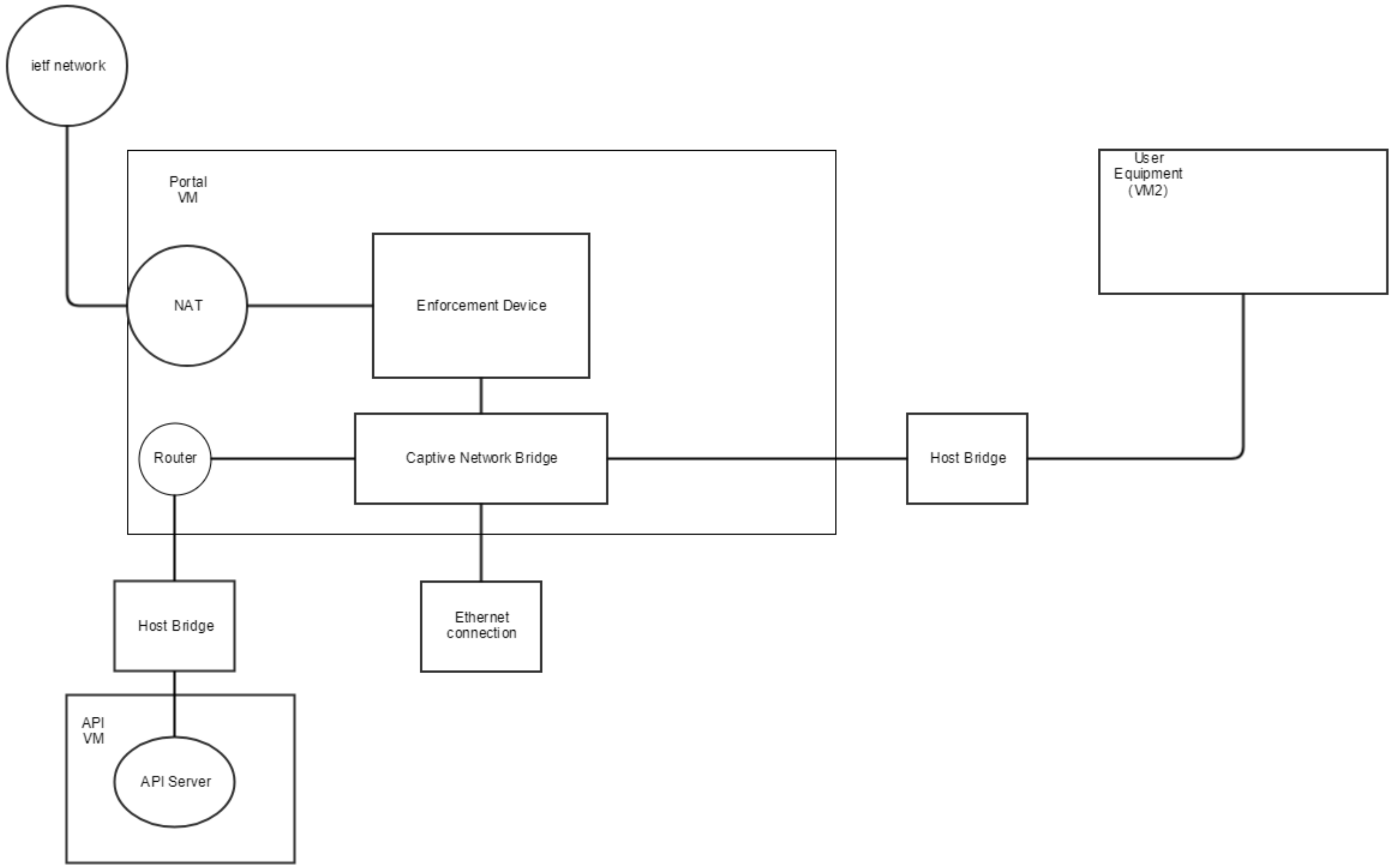
Adjacent Device



Adjacent Device

- Tested Explicit L2 Login to API
- Tested Explicit L3 Login to API

Remote Device



Remote Device

- Tested Explicit L2 Login to API
- Tested Explicit L3 Login to API
- Tested inferred L3 login to API

Findings

- API server co-located with enforcement device was easier than a remote one
- Inferring the identity made for a simpler, less stateful API.
- Inferring the MAC didn’t seem easy – didn’t try. Would probably try to use the arp table.
- For inferring the identity, the API server needs to be on the same route as the portal

Participants

- Kyle Larose (Sandvine)
- Tommy Pauly (Apple)
- Alexander Roscoe (Comcast)
- Donald Eastlake (Huawei)