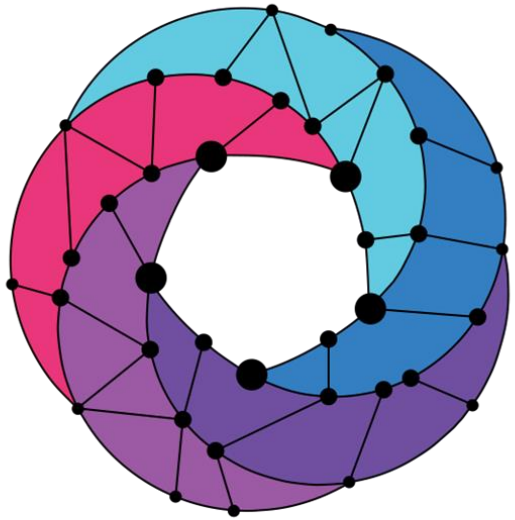


Open Source
MANO

OSM PoC#4

Charmed Open5GCore Deployment with OSM Rel 5

Piotr Zuraniewski, Niels van Adrichem, Toni Dimitrovski (TNO)
Adam Israel, Arno van Huyssteen, Marcin Bednarz (Canonical)

ETSI

PoC Participants

- Dutch national research institute
- ~3500 people, 9 Units
- Connects business, academia and government for research and innovations

CANONICAL

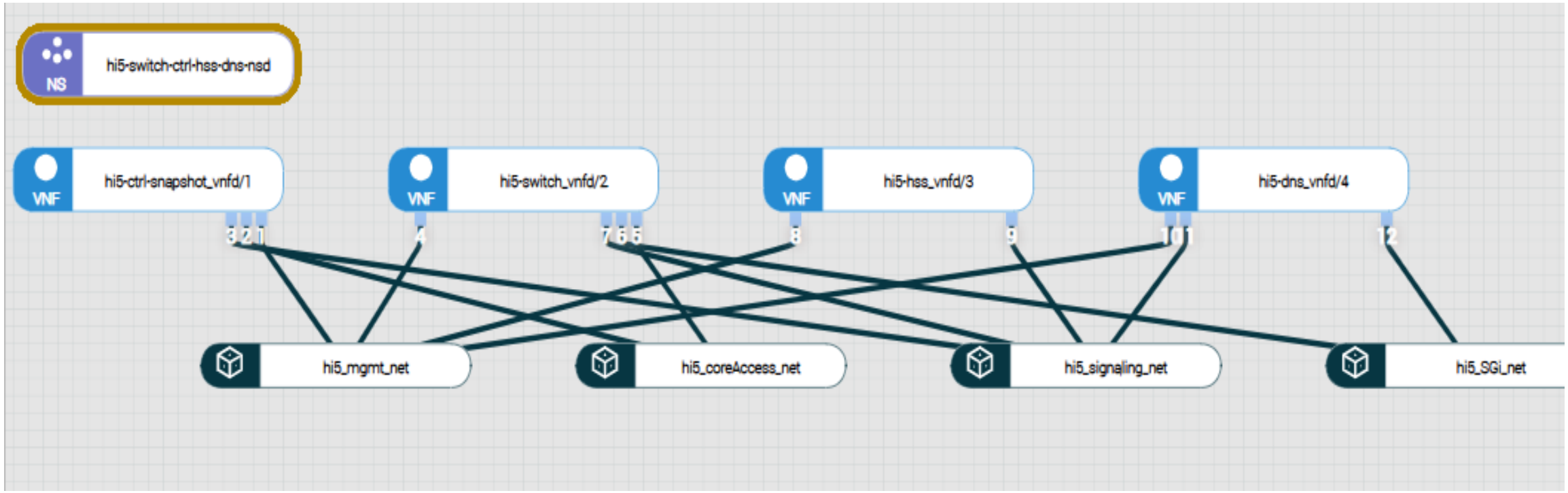
- Company behind Ubuntu
- Actively contributing to OpenSource MANO
- We design and build NFV clouds for world's biggest telecommunications providers

Starting point: 5Groningen initiative

- 5Groningen: initiative of Economic Board Groningen (NL province)
- 11 partners: TNO, KPN, E///, VMware ,...
- Goal: create ultimate **field** lab for the latest generation of mobile internet
- Test 5G apps related to healthcare, energy, agriculture, living environment,...

First TNO demo: “5G core in 5 minutes”

- Instantiation of Open5GCore in TNO Research Cloud using OSM3
- Phone connects to our eNodeB
- …and can ping 8.8.8.8 😊



Towards more charming demo…

- First demo served its purpose
  - Gain experience, move from standalone VMs to NS
  - Promote OSM & 5Groningen (KPN, VodafoneZiggo, Agentschap NL…)
- …at the same time, it was rather static & difficult to reconfigure

- Canonical and TNO joined forces to create dynamic, reconfigurable 5G network service

Open Source MANO

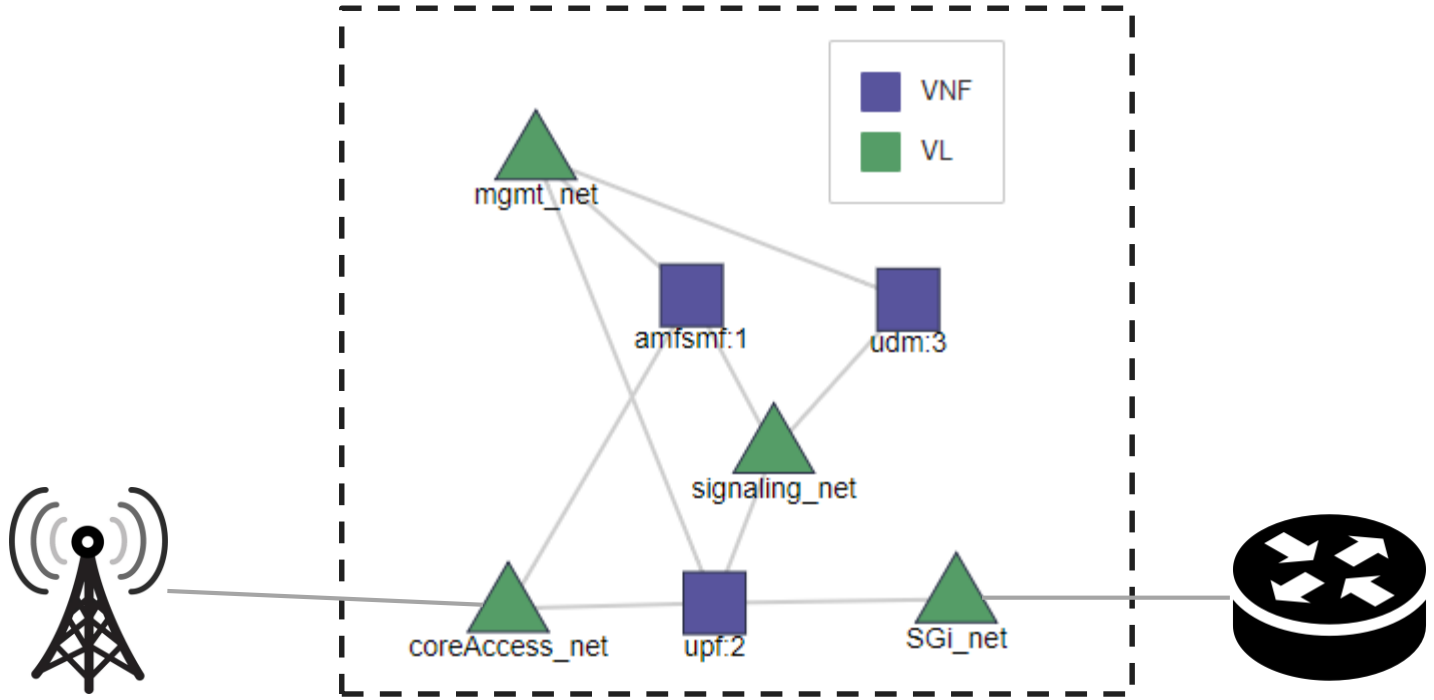
PoC Objectives

- Deployment of complex network service (Open5GCore by Fraunhofer Fokus*) using OSM5
- Advanced VNF configuration using full (native) charms
- Enabling further Open5GCore use cases (AR/VR)
- Community contribution (code, experience)

*For more info visit: https://www.open5gcore.org/

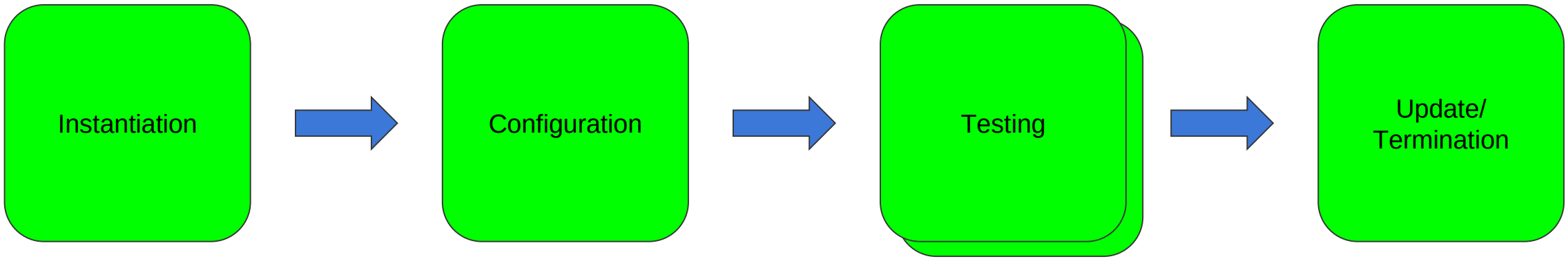
OSM Usage

- PoC will use the latest OSM Release 5 with emphasis on VCA with full charm to deploy complex network service.
- Multiple full charms, with relations to be used



VNF onboarding in practice

- Requirements for Network Service and VNF descriptors
- Configuration and lifecycle management operations
- End-to-end Network Service testing
- Repeatable, automated onboarding process

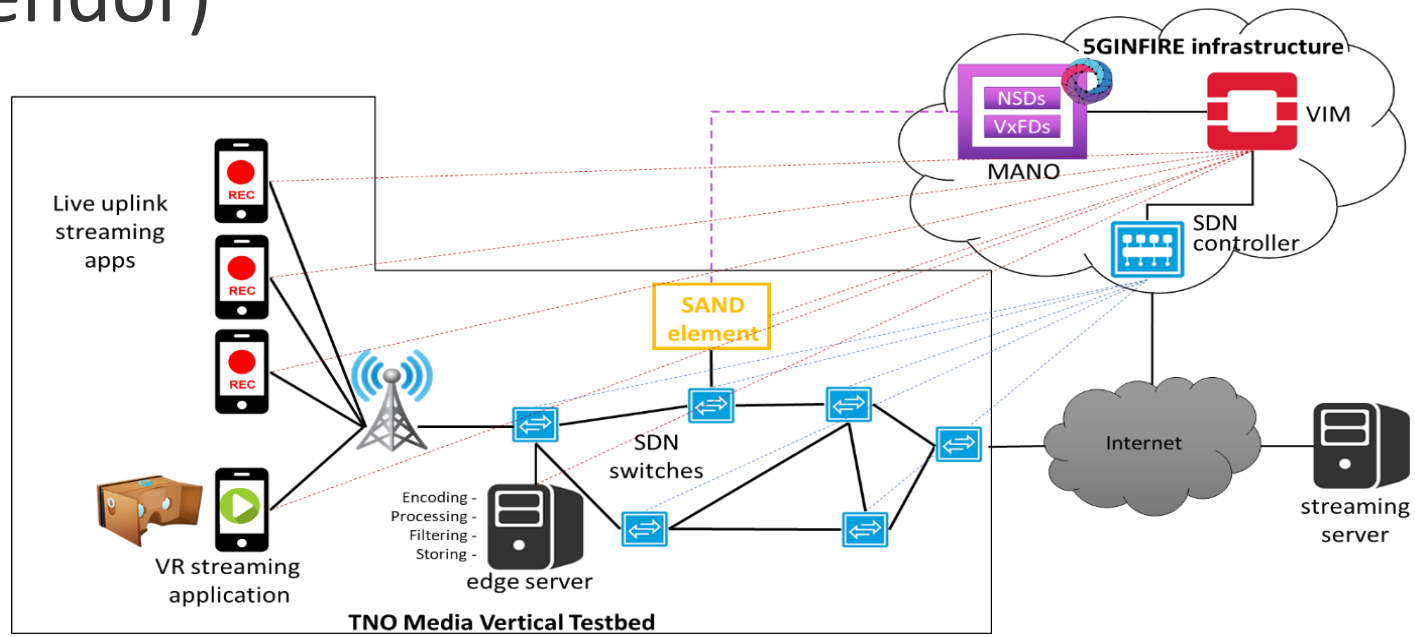


Envisioned Demo Scenario

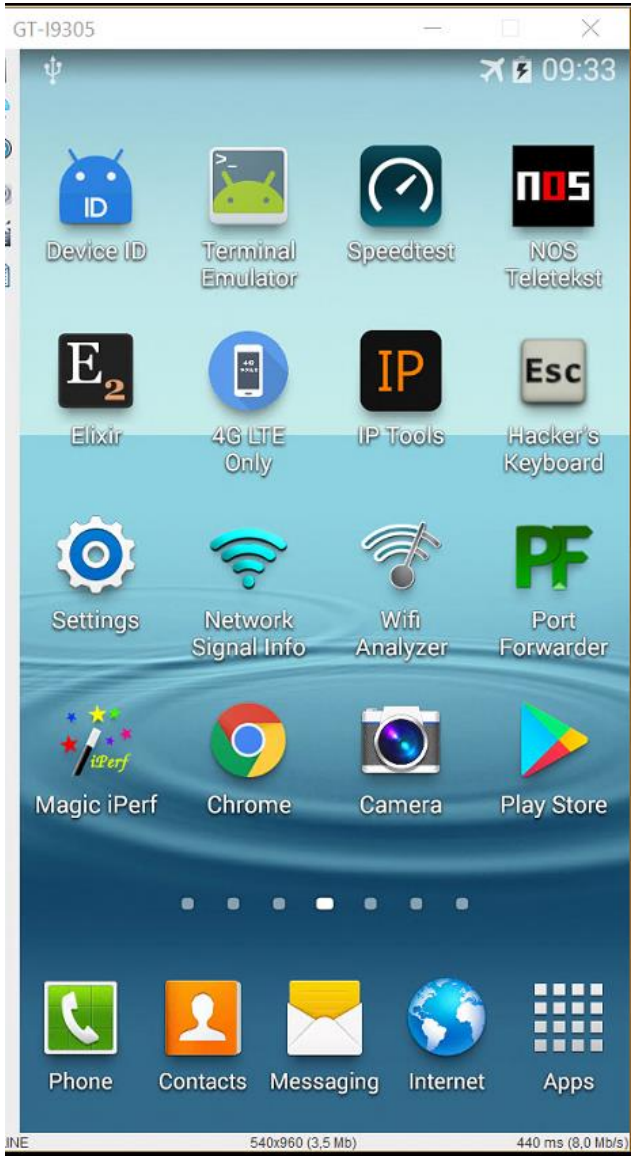
1. Onboarding of Open5GCore VNFs to OSM
2. Deployment of Network Service
3. Validation of E2E services
4. Test 5G call using indoor spectrum
5. Simulation of Open5GCore component failure and auto-healing
6. Validation of service operations

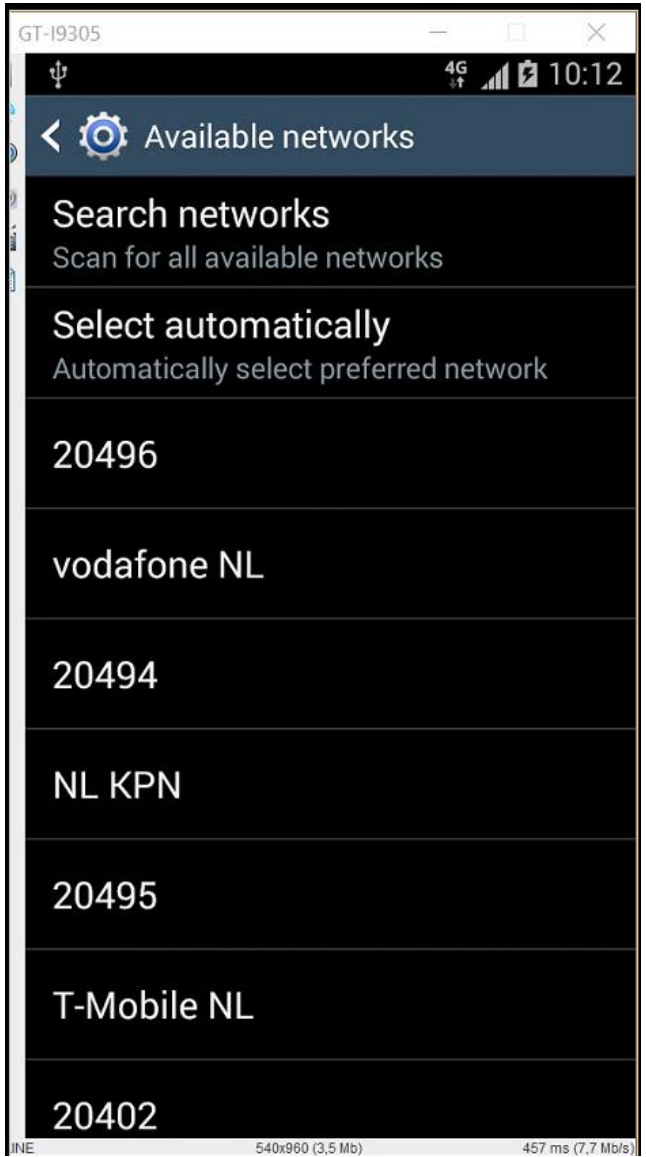
PoC: Next Ideas

- Extending the demo to cover Multi-Site/Multi-VIM deployments
  - Configure additional 3GPP parameters like slice identifiers, device IP ranges, etc.
- Adding extra VNFs (multi-vendor)
  - TNO extends 5GINFIRE testbed with Media Vertical
- Automating end-to-end network service testing



Back to Demo

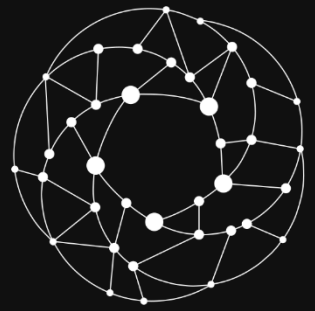




Open Source
MANO

Questions ?

ETSI



Open Source
MANO

Thank you!

ETSI