

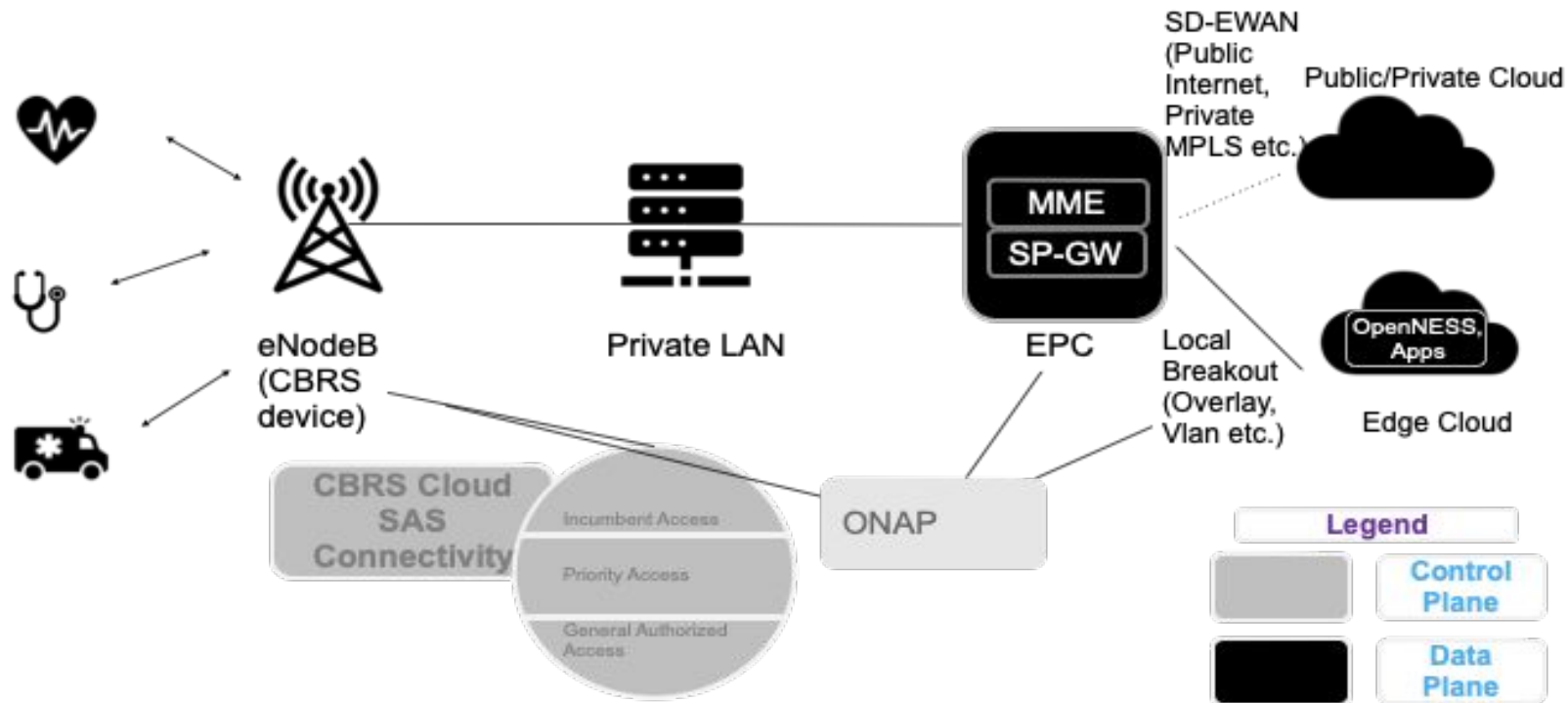
Akraino Private LTE/5G ICN - Release 5

Prem Sankar Gopannan (Cohere Technologies), PTL
Sukhdev Kapur (Juniper Networks)

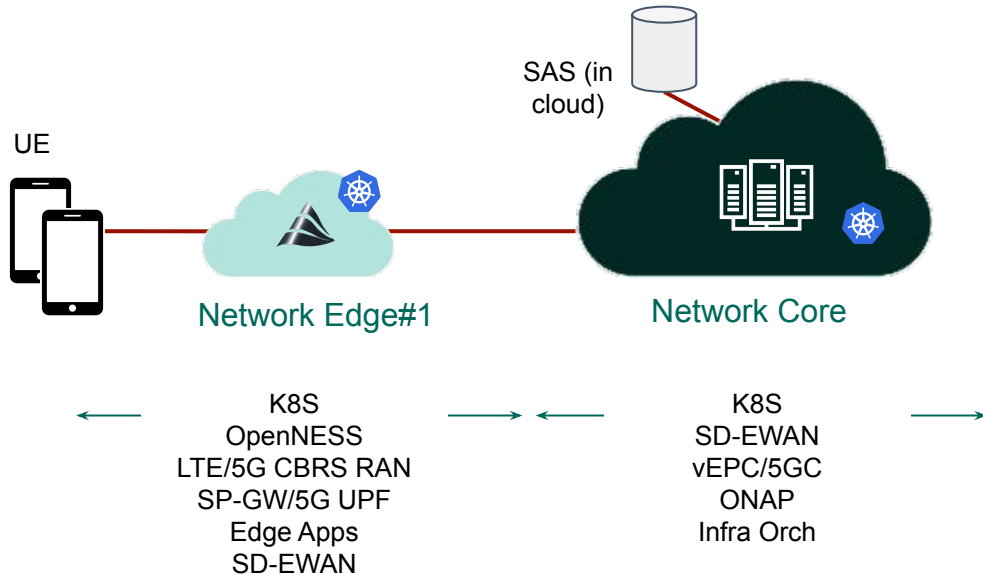
Supported by: Shah Rahman (Facebook Connectivity)



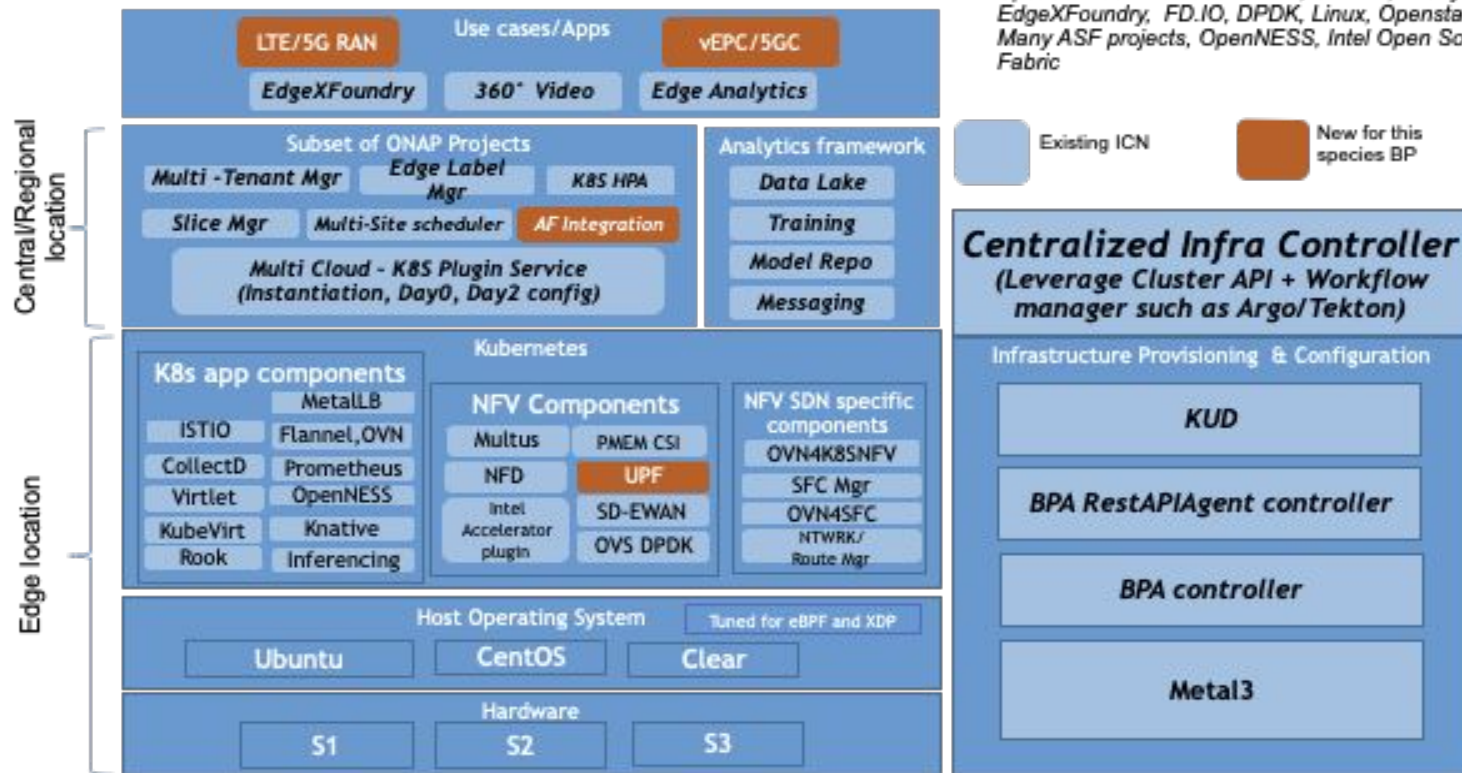
Akraino Private LTE/5G - Overview



High Level Diagram



Private LTE/5G ICN Stack



Upstream communities: ONAP, OPNFV, Many CNCF projects, EdgeXFoundry, FD.IO, DPDK, Linux, Openstack Ironic, OVS, Many ASF projects, OpenNESS, Intel Open Source, Tungsten Fabric

Partners

End Users:

- Airbus
- Globe
- Orange
- Tata Communications
- T-Mobile
- US Navy
- Verizon

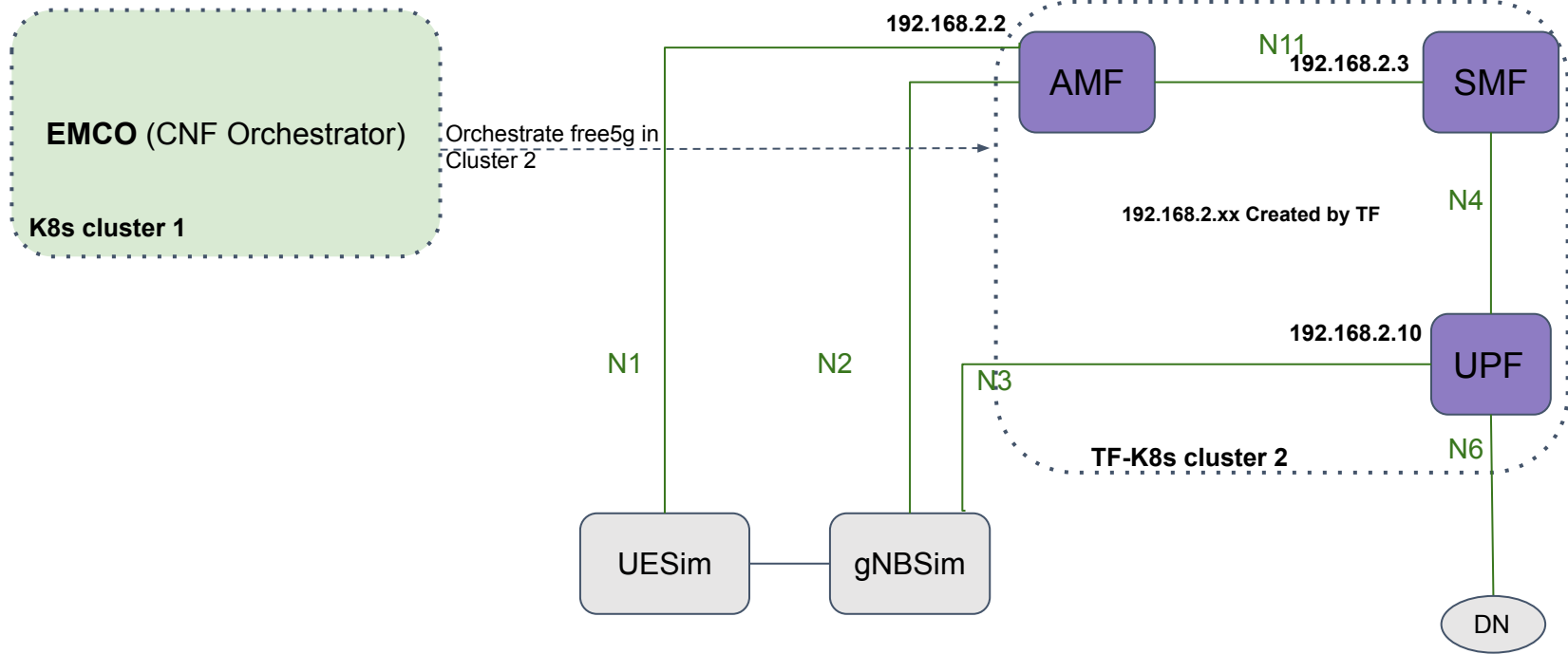
Vendors:

- Aarna Networks
- ATS Systems
- Intel
- NetNumber
- Juniper Networks
- Polaris
- Rebaca Technologies
- Wavelabs
- FreedomFi

Akraino Private LTE/5G - R4

- Goal
 - Package and provide well tested Private LTE/5G stack over ICN BP
- Completed
 - Integrate components needed for Private LTE/5G with Akraino ICN family
 - i. Integrated with Free5GC - Helm chart creation of UPF, SMF and AMF
 - ii. Integration of EMCO Orchestrator for CNF orchestration - In progress (Dev complete)
 - iii. Underlay network for hosting NF needed for UPF, SMF and AMF
 - iv. Helm chart for other 5GC NF
 - v. Tested with gNBSIM and UESIM
 - Show local breakout to edge computing
 - i. Continue to support MICN apps: 360° video, EdgeXFoundry, AI/ML edge analytics
 - ii. Tungsten Fabric for K8s networking needed for UPF and breakout

Enterprise Private 5G Usecase

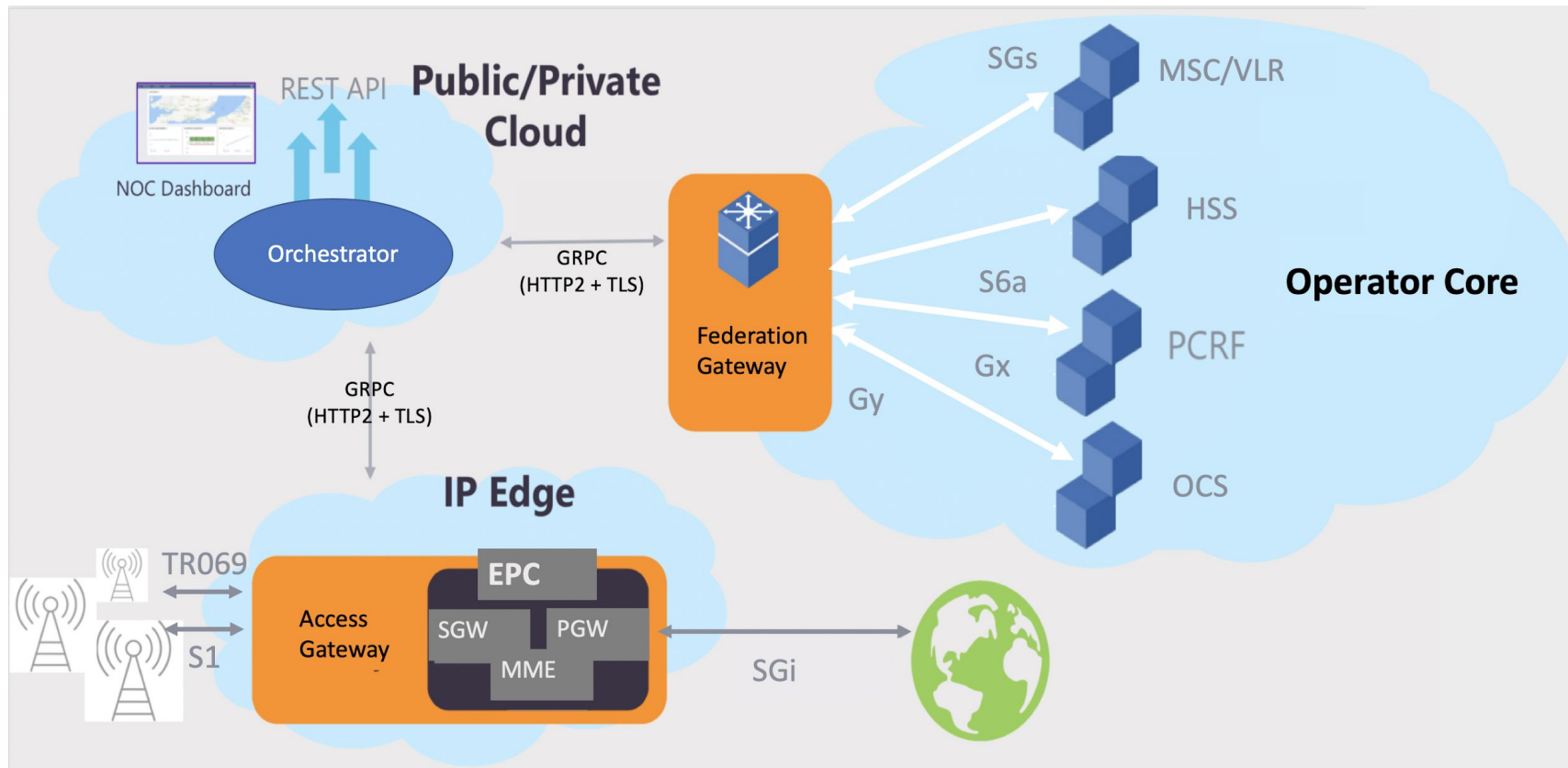


Akraino Private LTE/5G - Planned for R5

Scope for R5 release

- Integrate components needed for Private LTE/5G with Akraino ICN family
 - i. Integration with Facebook Magma
 - ii. Multi-cluster support for free5GC
 - iii. Multi-tenant support
 - iv. Tighter integration with EMCO
 - v. API definition for Private 5G
 - vi. Testing with Radio
 - vii. PCEI Blueprint support
- Show local breakout to edge computing
 - Continue to support MICN apps: 360° video, EdgeXFoundry, AI/ML edge analytics

Magma @ LF by Facebook



Thank you

