

Demo: 5G RAN management through an SMO/non-RT RIC via the O1 interface

Robert Schmidt (OpenAirInterface)
Alfons Mittermaier (highstreet technologies)

October 19, 2023



highstreet
technologies
Network solutions

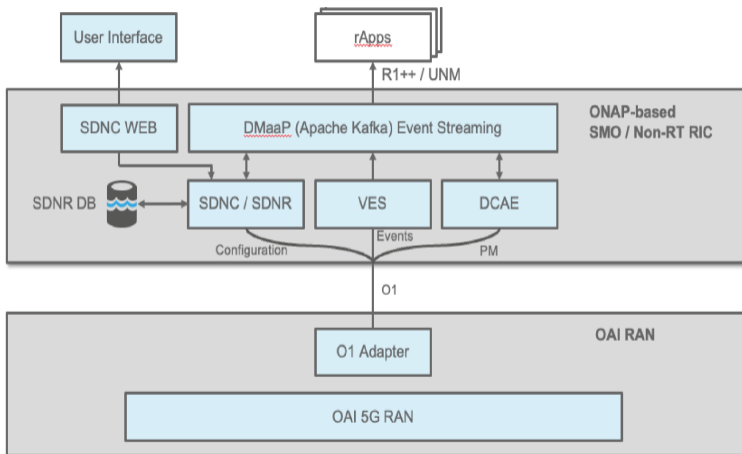


Demo description

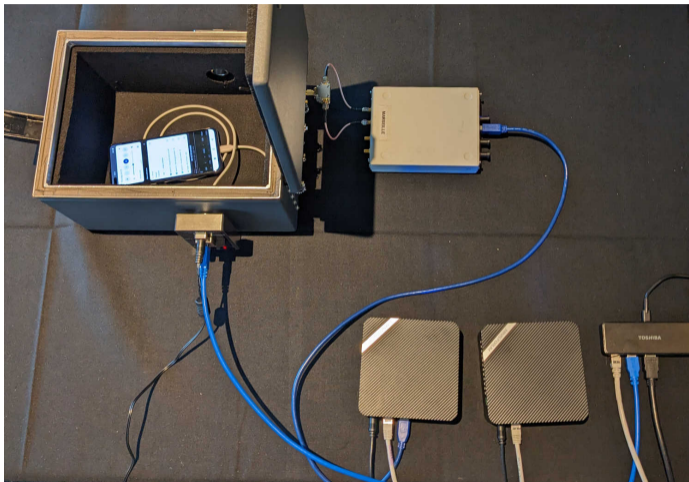
- ▶ First prototype of O-RAN O1 interface in OpenAirInterface (OAI)
- ▶ Deployment of OAI 5G O-DU and CU with O1 adapter
- ▶ Configuration of RAN through Service Management & Orchestration (SMO)



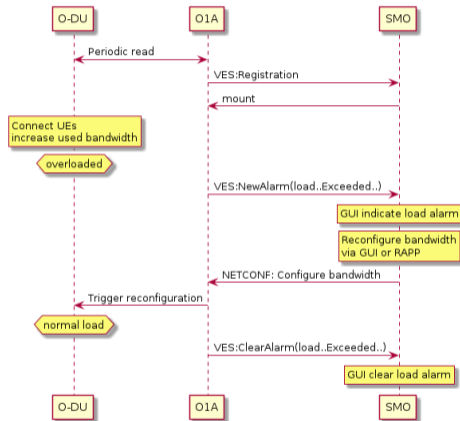
Architecture



Setup



- ▶ O1 exposed through O1-Adapter (O1A)
- ▶ SMO monitors O-DU through SDNC
- ▶ On high O-DU load: alarm notified through VES
- ▶ O-DU bandwidth can be reconfigured on-the-fly through SDNC and NETCONF (up or down)
- ▶ On low O-DU load: alarm cleared through VES
- ▶ If O-DU offline: alarm notified through VES



Demo Video



Conclusion and Outlook

Summary

- ▶ Integration of O1 interface in OAI
- ▶ Integration of OAI with ONAP-based SMO/non-RT RIC
- ▶ O1 alarms through VES messages, O-DU reconfiguration through NETCONF

Next Step

- ▶ Performance metrics collection through ONAP's Data Collection, Analytics and Events (DCAE) engine

