

# 2022-01-13 - ONAP: Orchestration of xNF Based 5G Service

## Topic Leader(s)

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## Topic Description

50 min of demo + 10 min for questions, partially live with an interactive demonstration of particular steps of the demonstration. Topic leader [Lukasz Rajewski](#)

The session will demonstrate the orchestration of 5G service on thxNF based Free5GC solution, which will utilize the latest additions for CNF ORchestration in ONAP and PNF Plug&Play capabilities of ONAP, with PNF reconfiguration support. Onboarding of 5G Core CNF, its instantiation, configuration, status verification, and scaling will be shown, jointly with registration and reconfiguration of the 5G RAN PNF - all in one continuous process managed by ONAP.

## Topic Overview

In the last releases, ONAP was equipped with seamless orchestration of Cloud-native Network Functions (CNFs) in the end-to-end service context, and now ONAP provides seamless joint orchestration and management of heterogeneous network services composed of CNFs, VNFs, and PNFs. This session will demonstrate the practical use of ONAP for the orchestration of such 5G service based on open-source Free5GC implementation prepared for Kubernetes deployments, Towards5Gs. First, the session will cover design and creation with ONAP of heterogenous service composed of CNF (Free5GC Helm Charts) and PNF being a 5G RAN simulator. After that, complete management (Day 0/1/2) of Free5GC CNF life cycle management will be shown, including enrichment of Helm packages, deployment and verification of the Free5GC core on Kubernetes cluster, and configuration after deployment. Afterward, onboarding and registration of PNF in ONAP will be shown with the reconfiguration of the PNF, based on the previously instantiated 5G Core CNF configuration. Finally, the scaling of the NRF component will be shown.

## Slides & Recording



### YouTube

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- Live Interactive Session

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## Links

Towards5GS: <https://github.com/Orange-OpenSource/towards5gs-helm>

Artifact + Scripts: <https://gerrit.onap.org/r/c/demo/+/125983> (artifact so far can be downloaded from the gerrit patch)

## Agenda

Awesome presentation

- Brief summary of the ONAP evolution over the next releases
- Summary of the xNF ORchestration capabilities of ONAP
- Introduction of the Towards5GS solution (K8s ready Helm based Free5GC + UERAN sim for demonstration)
- Introduction of the demo scenario
- 5G Service Onboarding
- 5G Core CNF deployment
- 5G RAN PNF Registration
- Connectivity Test - Failed
- Subscription of UE
- Configuration of 5G RAN PNF
- Connectivity Test - Successful
- NRF Scaling
- Further Plans & Demo enhancements

## Minutes

## Action Items

