# Deutsche Telekom Deploys ONAP in O-RAN TOWN

"ONAP supports Deutsche Telekom's transformation to become a software defined operator by automating disaggregated / cloud native network functions. By being part of the ONAP open source community, we benefit from shared efforts defining open APIs and pre-integrated automation components. The beauty of ONAP is that it can be used as a platform in multiple network domains. It is the de-facto standard of vendor independent management platforms by implementing various industry standards."
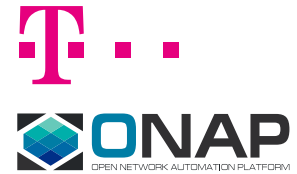
– MARC FIEDLER, OPERATION SUPPORT SYSTEMS (OSS) ARCHITECT FOR REAL-TIME NETWORK SERVICE MANAGEMENT, *DEUTSCHE TELEKOM*

COMPANY

Deutsche Telekom is one of the world's leading integrated telecommunications companies. Headquartered in Bonn, Germany, Deutsche Telekom is a strong, highly active advocate of Open RAN, a founding member of the O-RAN ALLIANCE. Deutsche Telekom is actively engaging, contributing, or leading community driven approaches including ONF, TIP as well as ONAP.

CHALLENGE

Deutsche Telekom's operations support system (OSS) had continually grown over the years, and the access-disaggregation of 5G would soon bring even more requirements. Seeing increasing network complexity on the horizon, the carrier examined both proprietary and open-source solutions for optimizing and automating its OSS landscape. They wanted to be able to handle the complexity of technologies like cloud-native functions, act in real time for greater efficiency and accommodate equipment from multiple vendors. Taking the path of open source, they joined the ONAP community, knowing that the need to collaborate and contribute would require a cultural change and shift in their traditional mindset.

SOLUTION

Deutsche Telekom is on their way of bringing ONAP from the labs into pilot production. Having more use cases in mind, DT started with applying ONAP to the RAN domain. The concept of O-RAN matches perfectly to philosophy of opening the network management ecosystem. They contributed actively on several projects and established two project team leads (PTLs) for documentation and integration on the OM project.

In their O-RAN Town project, the carrier deployed in the city of Neubrandenburg a multi-vendor Open RAN trial network for 4G and 5G services with massive MIMO integrated into the live network — the first in Europe. To automate services on all network domains, Deutsche Telekom introduced a vendor-independent Service Management and Orchestration (SMO) component based on ONAP open source. The SMO is to be at the heart of complete lifecycle management of all O-RAN components in this deployment.

BENEFITS

ONAP supports the lifecycle management of disaggregated network functions in the radio access network (RAN). That allowed Deutsche Telekom the expanded choice of vendors and solutions that enabled the O-RAN Town project in New Brandenburg.

The carrier relies on ONAP support for the O1 interface for configuring O-RAN and integrating FCAPS — fault, configuration, accounting, performance and security — spanning their most common operations functions.

The Controller Design Studio (CDS) framework inside of the Common Control SDK offers blueprint definitions and archives for config management processes. The specific blueprints as part of the service model helped during the integration of their processes in the RAN domain, such as handling disaggregated 4G or 5G workloads.

Deutsche Telekom values the flexibility of ONAP to span and automate the entire lifecycle of a network function, from design-time to runtime, and offer control at every point. With the automation gains, they look forward to reducing their effort on operations and increasing the quality of their network services.