DevOps in Service chains and 5G network slices.

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Two trends for operators.

1. **Generic Infra** pooled in DCs – SW Defined NW

2. **IT** becomes increasing part of delivery to Customers
When Networks go SW.

- **Virtualize** – turn network boxes into SW. Open up new vendor eco-systems
- **Consolidate** – centralize to DC and cut Capex/Opex. Enable scalability
- **Soft control** of connectivity & capacity in Network
Towards Cloud Native

- **Consolidate** infra into DC
- **NW & IT Applications on COTS infra**
- **Centralize** NW & IT operations

- Address **new business**
- **New delivery** models
- **Service agility** through DevOps & Eco-system

- Cloud-scale **economics**
- **SW oriented**
- Operational efficiency through **massive automation**
The problem of Agility.

We want change!

Automation

We want less change!

Dev

SW

Ops
Test in DevOps Context.

- Automate **turn-up testing** of Services as part of **delivery** process
- Automate **continuous testing** during the life-time of the Service
- **Automation** needs to be considered at development-time
PoC participants.

Service Provider: telenor

Open Source: MANO

Vendors: Intel, netrounds, RIFT.io

System Integration: ARCTOS LABS

ARCTOS LABS

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PoC Setup

- Model driven orchestration
- Model driven KPI test
Outlining PoC Scenarios

- Different slices have different E2E KPI
- Different slices are deployed differently
- Need for a programmable test solution that can be dynamically deployed in the network
Automation Flow.

1. Design NSD, Test KPI model
   Onboard VNF & KPI Model

2. Instantiate NS

3. Deploy & Start VNFs/VTAs
   Stitch chain

4. VTA call home

5. Run activation test
   Return KPI

6. Start Active Monitoring
7. Read Network Service
   SLA Status

NSD Primitives

JSON RPC
(NETCONF/YANG)
Conclusion.

Orchestration & Automation

Automation SW
Orchestrate
New Services
Enable Service Innovation
Reduce time-to-market
Cut Cost

Network SW
Integrate
Establish DevOps capabilities

Cloud Platform
DevOps

Orchestrated architecture
Thank you!

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