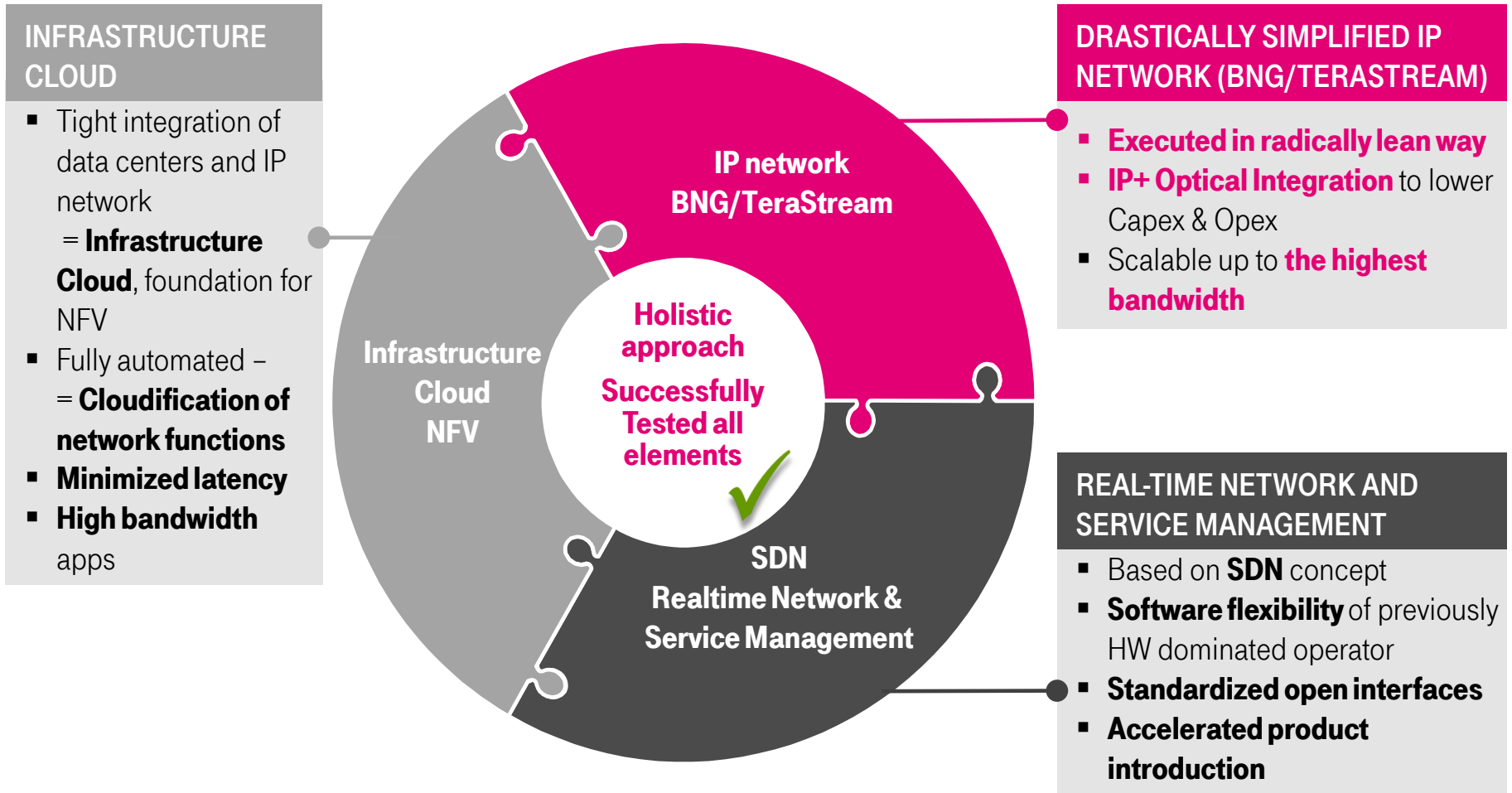


# THE WAY TO BECOME A SOFTWARE DEFINED OPERATOR

DTAG – Alexander Sobania

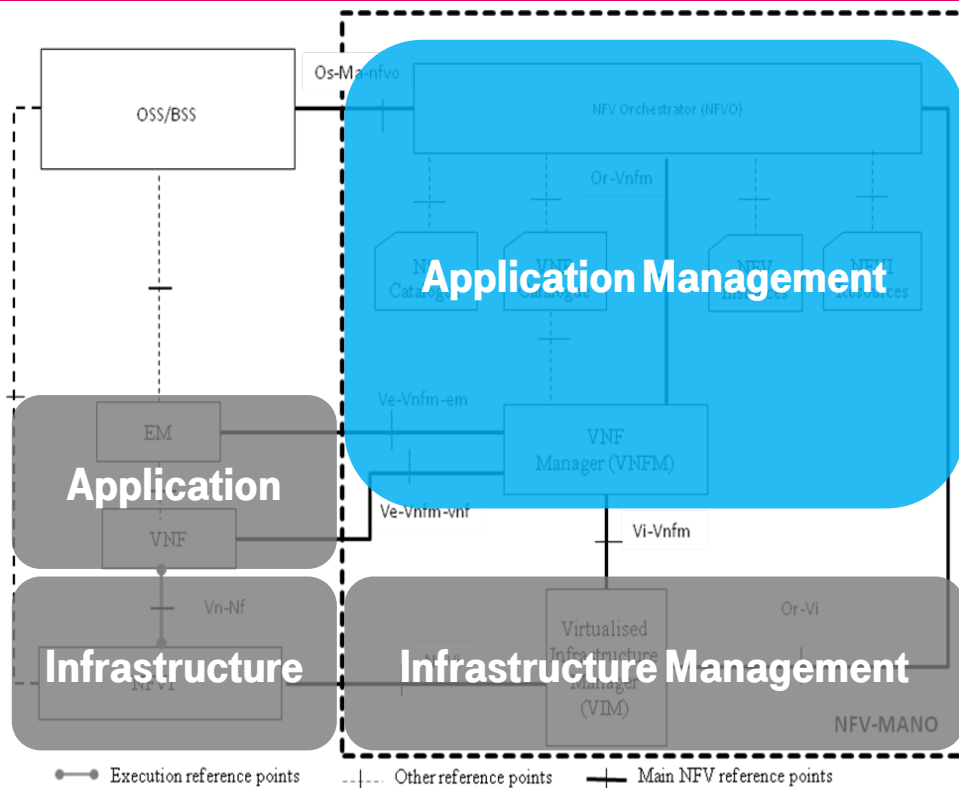


# HOLISTIC AND RADICALLY LEAN APPROACH AT DT



# DT MAPPING TO ETSI NFV

## Architecture Mapping



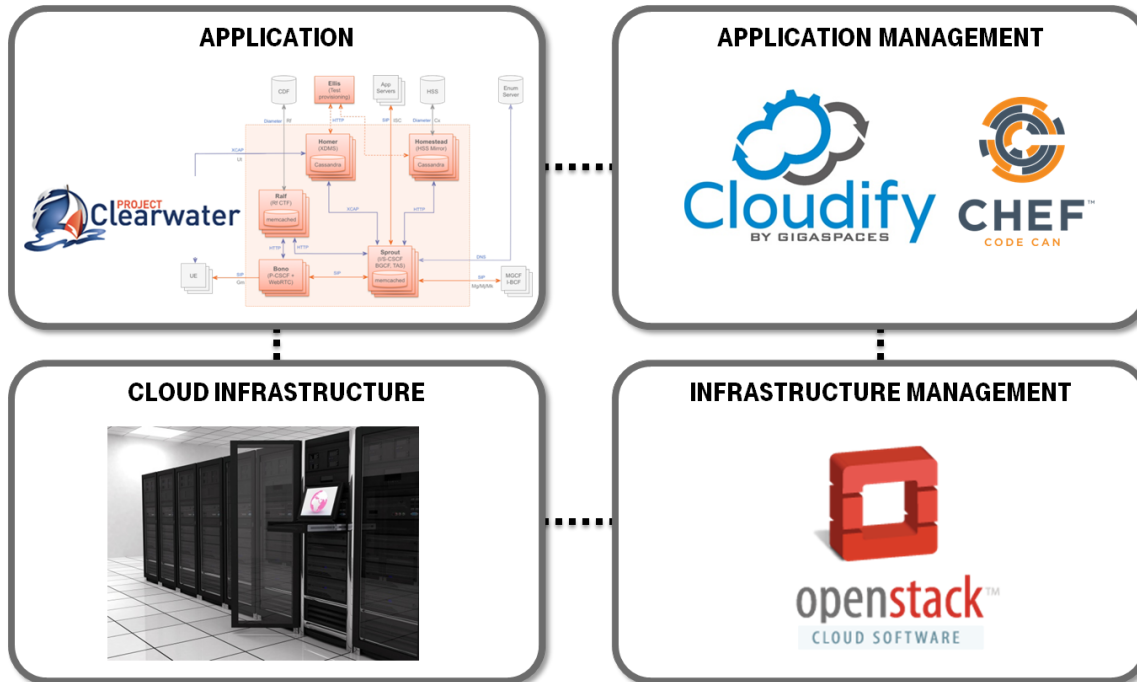
## Simplification

- Reduce interfaces and merge the Orchestrator and the VNFM
- Ensure generic Management of all VNFs and try to reuse as much as possible for other Applications
- Avoid vendor specific management tools like EM
- New Network and Service Management concept

→ Verified architecture within PoCs and more

# HOW WE GOT STARTED

## NFV Open Source First Steps



## Target

- Automatic deploy, scale and heal a VNF on different Openstack infrastructures
  - Use only existing open source products
  - Use generic management tools for orchestration and configuration – without an EMS and a specific VNFM
  - Evaluate TOSCA maturity
- Successfully accomplished proof of concept

# POC TRANSFORMATION

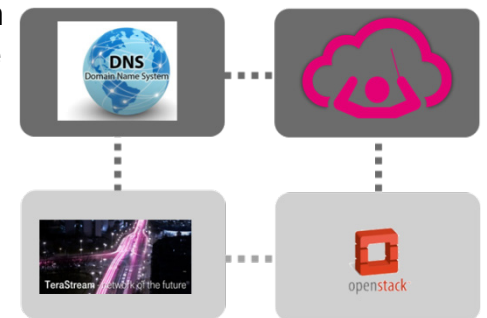
## Grow with the concept

- First B2B product introduced at the same time in three countries
- Next generation DATA Virtual Private Network (VPN) for secure national and international communication



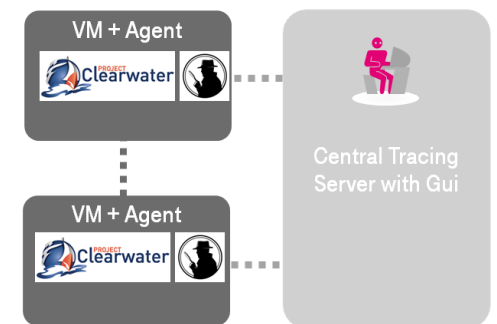
## Application and Infrastructure

- Focus on orchestration of DNS software in use
- Make use of the existing TeraStream pilot infrastructure



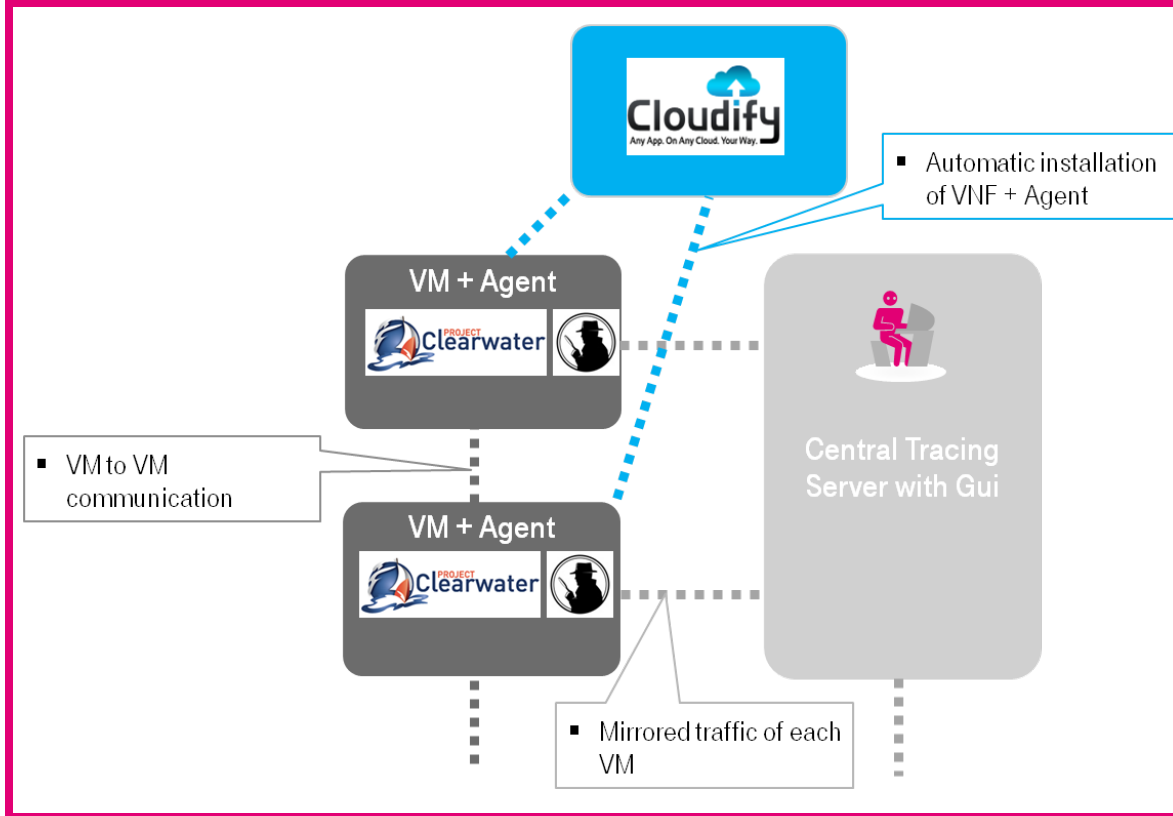
## Tracing

- Extend the vIMS automation PoC with additional tracing capabilities
- Use simple open source modules



# DT TRACING APPROACH TRIAL

## Automatically deployed tracing

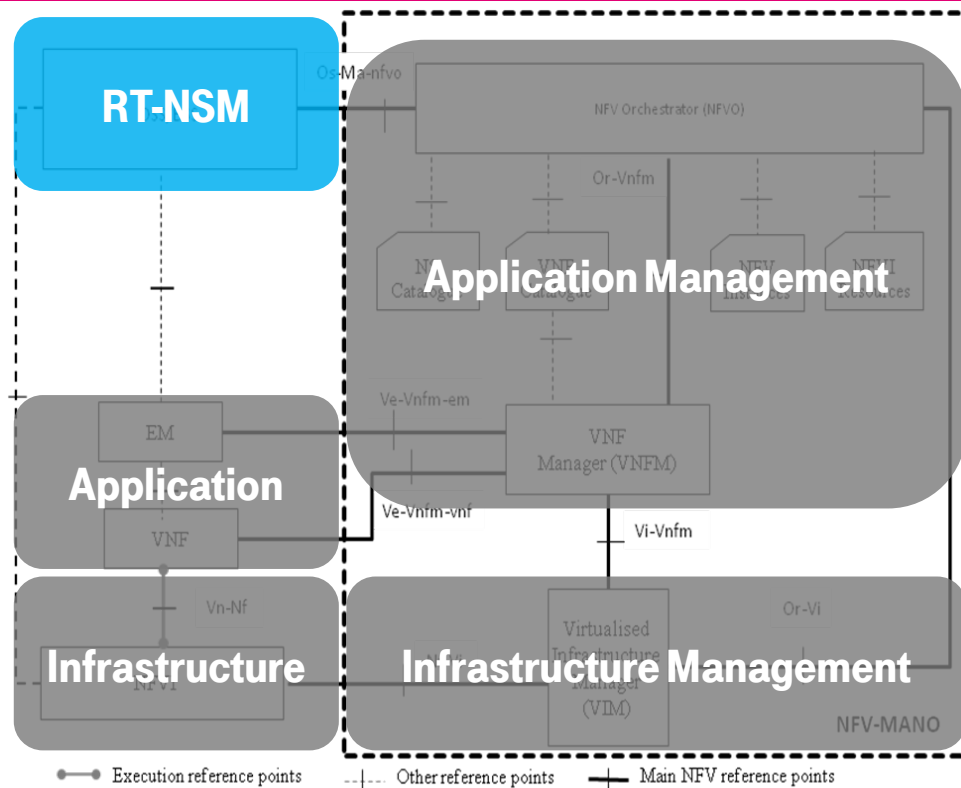


## Target

- Verify a concept where traffic can be captured independent from the infrastructure and without access to the HW and the vSwitch
  - Ensure easy automation of capturing solution for an dynamic environment
  - Focus on capturing functionality per tenant
  - Use open source modules
- Successfully accomplished proof of concept – automation ongoing

# OUTLOOK

## Realtime Network & Service Management



## Further Activities

- To automate further operational activities it is important to look beyond the virtualized applications
- RT-NSM is a new concept to achieve zero touch provisioning and real time assurance
- New analytics approach should provide better prediction and trend estimations
- Consistent use of YANG (RFC 6020) for data models

# THANK YOU



ERLEBEN, WAS VERBINDET.