

94º Tech Day – NFV: Normalização e atividades na Altice Labs

Software para NFV: Desenvolvimento e Validação

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sonata



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SYNELIXIS

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SUNING THE FUTURE

July 2015

July 2016

July 2017

December 2017



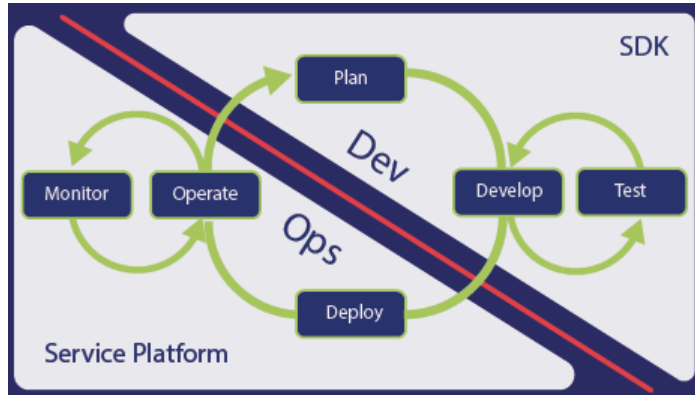
Core Objectives

- **Reduce time-to-market of networked services:** SONATA offers a valuable NFV-enabled SDK for service developers to easily create and deploy networked services on top of telecom operators' resources. It also promotes a DevOps model to integrate service development and management operations of virtual network functions.
- **Optimize resources utilization and reduce costs of service deployment and operation:** SONATA Service Platform orchestrates and maps complex services to connectivity, computing and storage resources and automatically re-configures running services. Network service management is done via programmable FSM/SSM plug-ins to flexibly change the behavior of network services.
- **Accelerate industry adoption of software networks:** SONATA supports the full lifecycle of a service and allows NFV integration and interoperability with already existing network management systems.

Key Contributions

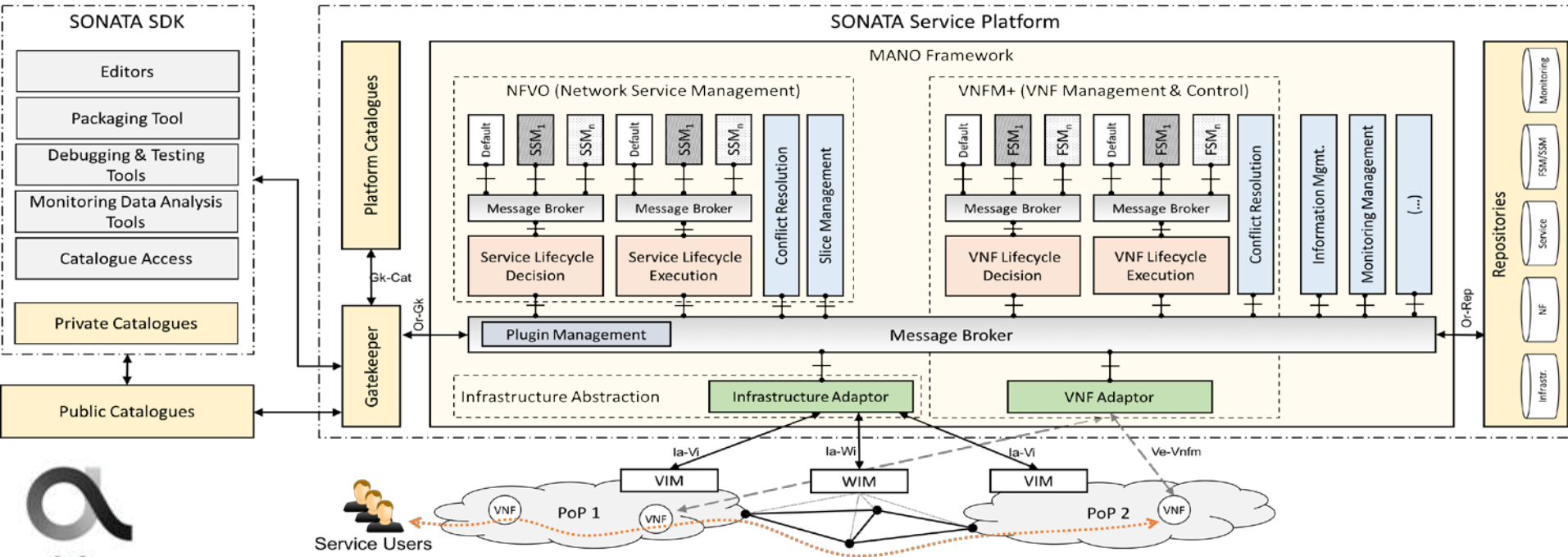
SONATA offers an integrated NFV Service platform that includes both :

- A novel **Network Service Development Kit (SDK)** that provides a valuable set of tools that assists developers in the development and testing of complex NFV services.
- A highly modular and customizable **Service Platform** with a MANO orchestrator for deployment and management of complex network services over multiple PoPs.

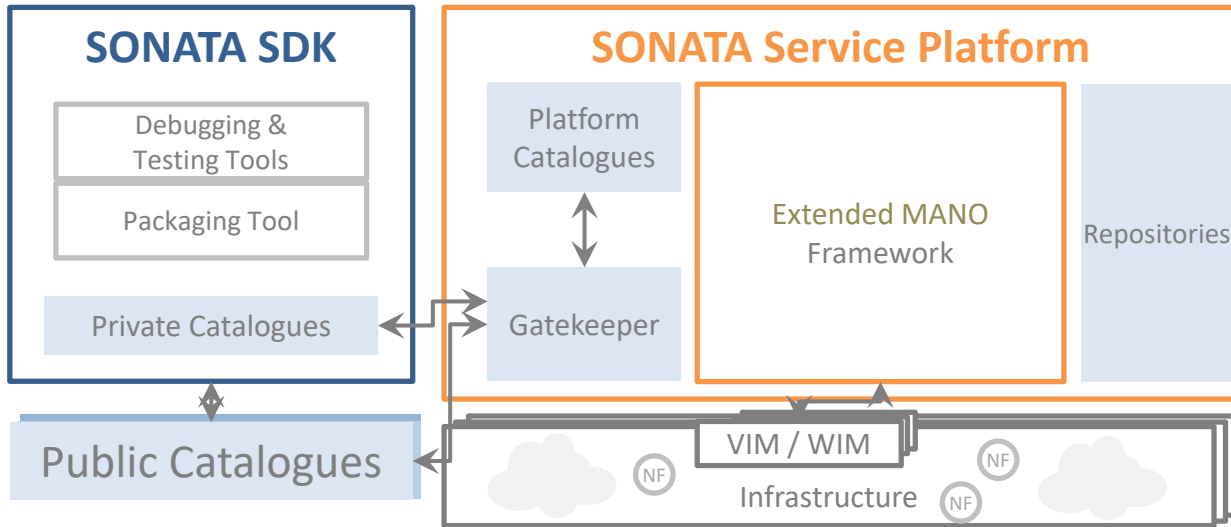


SONATA also implements an extended **DevOps model** with a multi-organisational design that increases efficiency and collaboration, facilitates the launch of new services and accelerates the adoption of NFV technologies.

SONATA Architecture: a high-level look



SONATA Architecture: a high-level look



Innovations

- **Modular plug-in architecture:** third-party logic support for operator and service developers (FSM/SSM)
- **Interoperable and Vendor agnostic:** support for multiple VIMs, VNFs, underlying ETSI-based architecture
- Built for **NFV DevOps** between operator and service developers of network services
- **“Recursion” support:** allowing stacked tenant and wholesale deployments in software networks models (e.g. MVNO)

SONATA 3.1 – *March 2018*

- **Upgraded release** which includes all the software components developed, integrated, tested and qualified within the time horizon of the project.
- Main improvements:
 - ✓ **New features (e.g. multi-PoP support)** that makes SONATA more attractive with a product-like code that can be easily adopted.
 - ✓ Additional interfaces for ensuring **interoperability with OSS and SLA management systems** and other building blocks and components such as **self-monitoring facilities** allowing critical operational information to be shared with the platform owner.
 - ✓ **Lower usage entry-barrier**, thanks to its easy and automated installation process, compelling and complete documentation tutorial videos provided.
 - ✓ **Higher reliability and stability**, due to the final stage of validation and qualification included in the SONATA development pipeline.
 - ✓ Many SDK tools extended to **interoperate with other platforms** beyond SONATA scope, for example OSM.

Learn more about SONATA

- **Project website:** <http://www.sonata-nfv.eu/>
- **Twitter:** <https://twitter.com/sonataNFV>
- **LinkedIn:** www.linkedin.com/in/sonata-nfv
- **YouTube:** https://www.youtube.com/channel/UC_vQQq7mjbvHt4JzEkp4kppQ
- **ResearchGate:** <https://www.researchgate.net/project/H2020-SONATA>
- You can also subscribe to our **newsletter** here: <http://www.sonata-nfv.eu/newsletter/30>

5Gtango



June 2017

June 2018

June 2019

November 2019s



5GTANGO Objectives



Reduce the time-to-market for networked services by shortening the service development cycle and by qualifying those network services to be adopted.



Reduce the entry barrier to 3rd party developers and support the creation and composition of Virtual Network Functions (VNFs) and application elements as "Network Services".



Enable new business opportunities with the customisation and adaptation of the network to vertical application's requirements.

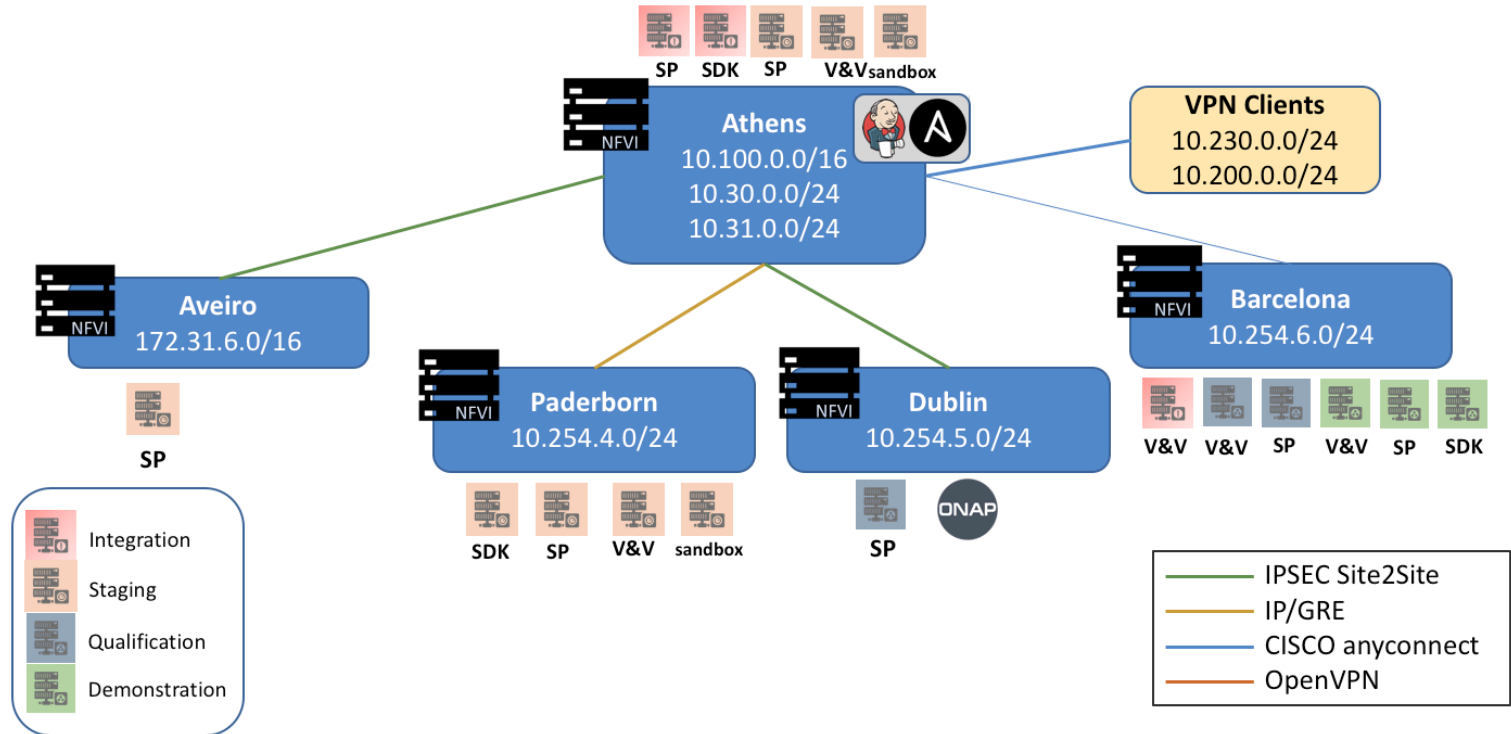


Accelerate the NFV uptake in industry via an 'extended' DevOps model and the validation at scale of Network Service capabilities of the 5GTANGO platform in vertical show cases.

5GTANGO: value for stakeholders

Service Platform with Orchestrator	5GTANGO's SDK	Validation & Verification Store	DevOps Tools / Methodology
network operators	service providers, equipment vendors, SME developers	network operators, service providers, equipment vendors, SME developers	telecom sector
<ul style="list-style-type: none">• efficiency on network infrastructure• higher service levels• dynamic network scalability• simplify network management• lower OpEx, CapEx• vendor lock-in alleviation	<ul style="list-style-type: none">• lower the barrier to entry the Telecom sector• differentiation in changing market	<ul style="list-style-type: none">• open environment for innovation• increase of service lifecycle automation• guarantee of carrier grade requirements• lower the barrier to entry the Telecom sector• new business opportunities	<ul style="list-style-type: none">• time-to-market reduction, increased productivity• create ecosystem leading to differentiation and increased revenue• lower barrier to entry, new business models, closer B2B collaboration

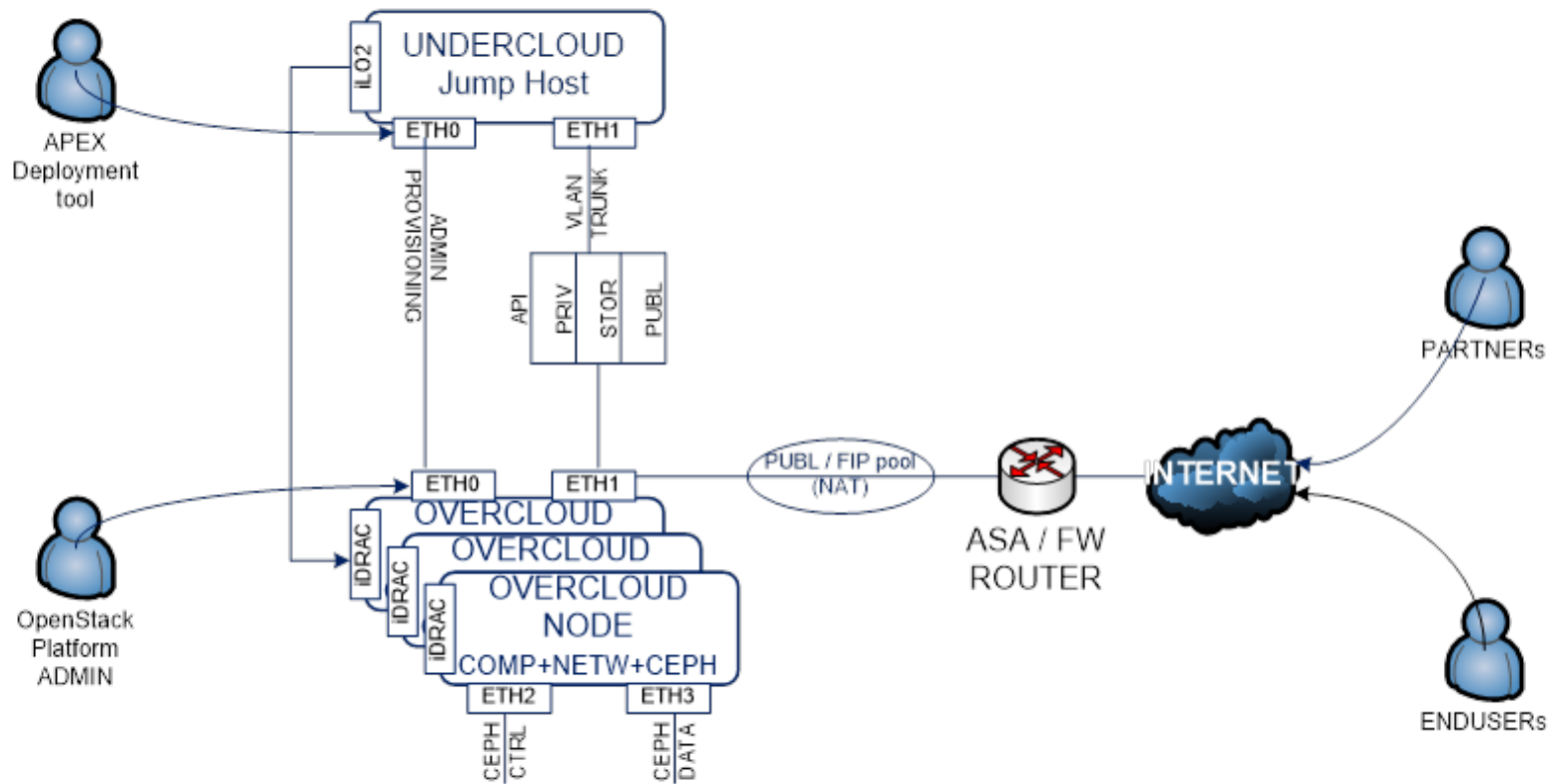
5GTANGO Testbeds



5GTANGO Aveiro Testbed

- 3 Dell RX730 bare metal servers and one Pica8 P-3297 SDN switch:
 - Dell RX730 servers:
 - CPU: Intel(R) Xeon(R) CPU E5-2640 v4 @ 2.40GHz
 - RAM: 4*32 GB DDR4 (total memory: 128 GB)
 - DSK: 3,75 TB of Available RAID Disk Space
 - NET: Intel(R) 10G 2P X520 Adapter + Intel(R) 2P X540/2P I350 rNDC
- 3 nodes with dual socket of 10 cores per node + conservative over provisioning ratio of 10:
 - able to instantiate near 600 'm1.small' flavor VM's while there is enough memory;
 - considering the limit of 384 GB of RAM, we can host up to 192 VMs simultaneously;

5GTANGO Aveiro testbed topology



Obrigado!

Perguntas?

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