



Tech
Mahindra

NANC

NetOps.ai & AWS powered Network Cloud
for Telcos and MVNOs

Current SDN/NFV Implementation Challenges?

- Almost All Operators have tried NFV in one form or other and are struggling!
- > 90% transformations have been implemented as vertical stacks
- Operators have yet to realize their business objectives of Cost, Speed and Quality
- Efforts to increase velocity introducing compromise in Quality and Costs

Struggle Factors

Non-Cloud Native VNFs

Inefficient Infra Capacity Utilization

Poor Orchestration & Automation

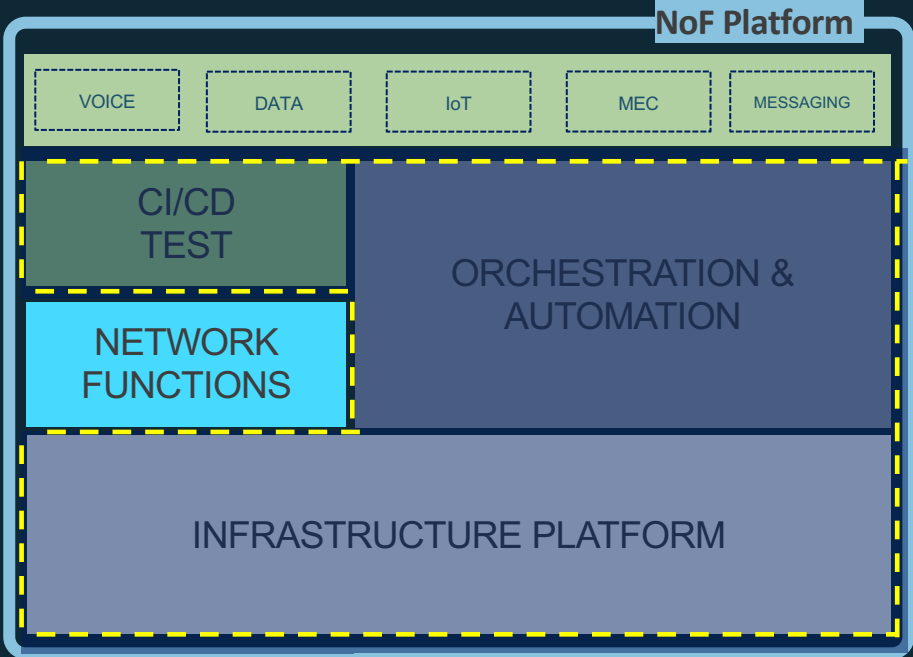
Difficult Staff Upskilling

Old Operating Model

High TCO

Vendor Lock In

Networks Of Future - Design Tenets



✓ **ROBUST & PROVEN**

✓ **FLEXIBLE & OPEN**

✓ **SIMPLE TO OPERATE & DEPLOY**

✓ **VERY RELIABLE**

HIGHLY SCALABLE ✓

HIGHLY DIFFERENTIABLE ✓

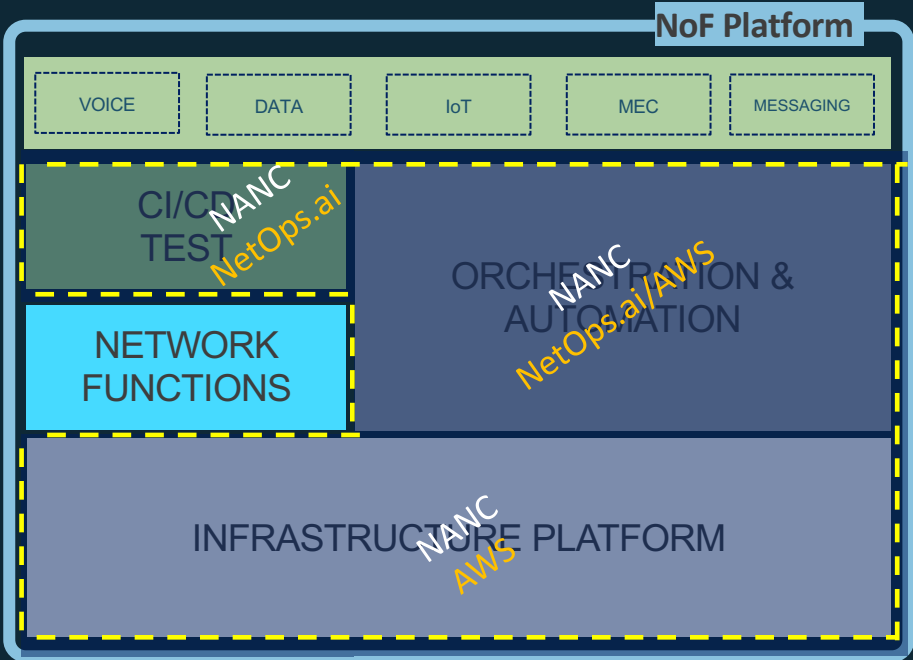
HIGHLY COMPATIBLE ✓

RESILIENT & FUTURE PROOF ✓

EXTREMELY SECURE ✓

A **NEW BREED** of infrastructure platform and automation/orchestration solution that makes the relevance of HW and Infra much less than what it is presently, an XaaS solution that has already achieved most, if not all, design tenets and instills confidence in the overall network transformation.

NANC : Addresses ALL NoF Design Tenets



- ✓ ROBUST & PROVEN
- ✓ FLEXIBLE & OPEN
- ✓ SIMPLE TO OPERATE & DEPLOY
- ✓ VERY RELIABLE

- HIGHLY SCALABLE ✓
- HIGHLY DIFFERENTIABLE ✓
- HIGHLY COMPATIBLE ✓
- RESILIENT & FUTURE PROOF ✓
- EXTREMELY SECURE ✓

What is NANC?

- NANC is the result of a strategic partnership between Amazon Web Services (AWS) and Tech Mahindra (TM)
- It offers a “Fully Integrated” and “Operationally Ready” Public and Private Cloud Platform for Telco Networks of Future
- Primarily Focused on RAPID 5G rollout
- Fully Managed E2E Solution; **Zero CAPEX**, Low OPEX

Customer Value

Lowest TCO

Faster Time to Market

Highly Efficient & Secure

Ultra Reliable

Differentiation

World’s First Public Telco Cloud

Offering

OEM Vendor Agnostic

NANC – Target Market

1. NANC has been designed to suit all types of Operators ranging from Greenfield to Brownfield MNOs. An Operator who has both PNFs and VNFs already deployed in production and is now looking for a unified cloud platform strategy for both their Network and IT workloads and not wanting to go through another set of “trials”!
2. An Operator who is yet to realize their business objectives due to high CAPEX and OPEX costs along with slow speed of change
3. An Operator looking to leapfrog complexities of “seemingly next steps” of k8s on bare-metal!

NANC Components

NANC Platform

DESIGN, CI/CD PIPELINE (HCC)
netOps.ai

CONTINUOUS TEST AUTOMATION (HTA)
netOps.ai

BUILD

NETWORK FUNCTIONS
vKAIN, 5G Core, IMS
Other Vendors

TENANTS

VIRTUAL INFRASTRUCTURE



PHYSICAL INFRASTRUCTURE



INFRA MANAGEMENT



Cloud Native Platform



COMMON INFRA SERVICES



PLATFORM - Engineering Core (HEC)
ESB, AAA, API Gateway



ORCH. & POLICY
FRAMEWORK (HOF)



netOps.ai

ASSET MANAGEMENT
& AUDIT (HMA)



netOps.ai

SELF SERVICE PORTAL (H3V)

netOps.ai

PLATFORM SECURITY
MANAGEMENT (HSM)



INFRA
AUTOMATION
FRAMEWORK
(HIA)



PLATFORM
READINESS (HRD)



netOps.ai

TENANT & SVC
ON BOARDING
(HOB)



netOps.ai

TENANT & SVC
LIFE CYCLE MGT (HLM)



netOps.ai

CENTRAL ASSURANCE & ANALYTICS (HAA)



netOps.ai

NANC Orchestration & Automation

NANC INFRA/PLATFORM

NANC Advantage

LOWEST TCO

**“Unheard of” Short
Time to Market**

**No Need for Expensive
Hardware Re-refresh**

**Hugely Better
Utilization Rates**

**Much More Secure
than Private Clouds**

**Single Pane of
Glass View**

Web Scale Operations
~ working towards
1:8000 VMs Scale

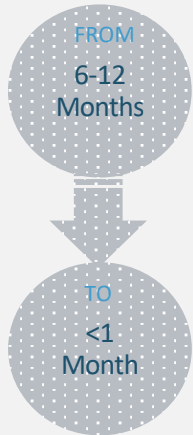
“TechMahindra NetOps.ai implements an **Operations Cockpit** for Networks of Future. It utilizes advanced techniques to handle incidents/problems both automatically (AutoPilot mode) or manually with in-built SOPs/Workflows. NetOps.ai is also a one stop-shop for enabling multi domain and Hybrid (Infra, RAN, Core, PaaS) hyper automation for Network Deployment, Continuous Integration, Continuous Deployment, Continuous Test, Network Assurance and AI based Operations”

netOps.ai : Designed with Customer Business Objectives in mind



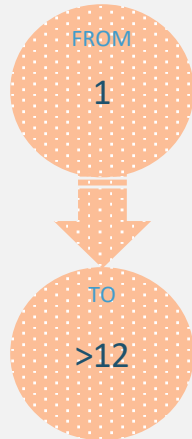
Development Time

Duration from feature requests until RFA



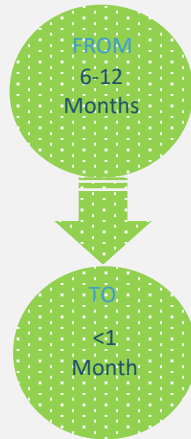
Release Cycle

Combined Network Functions, Infra and tools Release Cycle



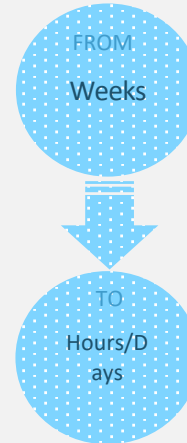
SW Quality

of Change delivery attempts required to reach RFA-> RFP



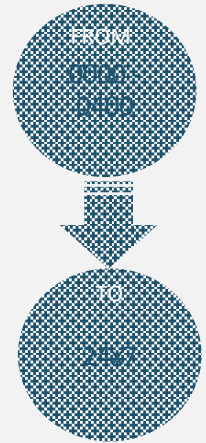
Integration & Validation

Duration of Systems integration and validation in Lab



Usable Working Hours

Requirement of a late-night maintenance window



Tech
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