

ETSI NFV Conference

Evolving NFV towards the Next Decade Celebrating the 10th Anniversary of ETSI NFV

NFV 10 Years on: a Progress Report

Caroline Chappell



06/03/2023





Telecoms operators and telco cloud: level of adoption



NFV MANO versus cloud-native automation: operator trends



Future challenges for telco cloud



The market is still struggling with automating NFV clouds but needs to make another disruptive leap into cloud-native automation for 5G SA



The full benefits of NFV/SDN will only be realised in Phase 3 with full cloud-native transformation



100% 90% Percentage of the total addressable Network 80% mobile network cloud market vRAN and cloud network 70% accounts **Cloud-native** First-mover CNFs begin edge for 42% of to scale up, operators 60% mainstream TAM technologies Network led by 5G are driving begins cloud 5G SA core, 50% core are pervading accounts vRAN and for only 40% the 5G network – edge 15% of TAM 30% from core to 20% RAN/network edge 10% 0% 2020 2021 2022 2023 2024 2025 2026 Virtual network functions (VNFs) Cloud-native functions (CNFs) Physical network functions (PNFs)

> analysys mason

No CSP is truly cloud-native at scale yet; CSPs from North America and developed Asia-Pacific are leading the way in defining the vision



Distinct cloud-native network adoption patterns are emerging among the CSPs



Most CSPs are rethinking their orchestration stacks for cloudnative networks and want to move away from vendor-specific solutions to the K8s ecosystem



How is your cloud native network function managed and orchestrated today? How do you expect it will change in 3 years' time?

Cloud Transformation Benchmark survey 2021

analysys

CSP cloud-native automation efforts are fragmented and vendordependent

Q. Please rank the following tools/standards/solutions in terms of how well they fit your cloud-native automation strategy



Yet CSPs say they want to future-proof their networks with Kubernetes and Nephio



Google Cloud

Source: Analysys Mason Cloud-native Automation and Nephio Survey December 2022

CSPs identify the need for a common automation approach across cloud infrastructure and CNFs

Q. What are the top technology related pain points you are experiencing/ expect to experience in your cloud-native automation journey?



Google Cloud

CSPs would benefit from more senior-level organisational support for the adoption of cloud-native automation

Q. What are the top business related pain points you are experiencing/expect to experience in your cloud-native automation journey?



Cloud-native networks are driving the development of new platform models with more diverse vendor ecosystems



analysys mason

Operators are gradually moving away from vertically integrated network clouds to disaggregated models



And senior executives are impressed by the TCO savings potential of public cloud stacks deployed in a hybrid model



The viability of Open RAN depends on highly optimised cloud platforms and strong, pre-validated ecosystems



Recommendations



ETSI is operating in a changed world. It should prepare itself for the impact of hyperscaler cloud automation on NFV outcomes. ETSI can become the 'translator' of CNCF IT automation technologies for telco cloud and the arbiter of a telco PaaS. ETSI should own the reference architectures for the implementation of telco cloud on hyperscaler and other industry platforms.





Q&A

Contact details

Caroline Chappell

Partner

Caroline.Chappell@analysysmason.com



Caroline Chappell

Bonn

Tel: +49 176 1154 2109 bonn@analysysmason.com

Kolkata

Tel: +91 33 4084 5700 kolkata@analysysmason.com

Milan

Tel: +39 02 76 31 88 34 milan@analysysmason.com

Singapore

Tel: +65 6493 6038 singapore@analysysmason.com Cambridge Tel: +44 (0)1223 460600 cambridge@analysysmason.com

London Tel: +44 (0)20 7395 9000 london@analysysmason.com

New Delhi Tel: +91 124 4501860 newdelhi@analysysmason.com

Stockholm Tel: +46 8 587 120 00 stockholm@analysysmason.com

У @AnalysysMason

Tel: +971 (0)4 446 7473 dubai@analysysmason.com

Dubai

Lund Tel: +46 8 587 120 00 lund@analysysmason.com

New York Tel: +212 944 5100 newyork@analysysmason.com Dublin Tel: +353 (0)1 602 4755 dublin@analysysmason.com

Madrid Tel: +34 91 399 5016 madrid@analysysmason.com

Oslo Tel: +47 920 49 000 oslo@analysysmason.com Hong Kong hongkong@analysysmason.com

Manchester

Tel: +44 (0)161 877 7808 manchester@analysysmason.com

Paris Tel: +33 (0)1 72 71 96 96 paris@analysysmason.com

in linkedin.com/company/analysys-mason 🛛 🛗 youtube.com/AnalysysMason

• • • analysys • mason

Global leaders in TMT management consulting



analysysmason.com/what-we-do

Analysys Mason is the world's leading management consultancy focused on TMT, a critical enabler of economic, environmental and social transformation.

We bring together unparalleled commercial and technical understanding to deliver bespoke consultancy on strategy, transaction support, transformation, regulation and policy, further strengthened by globally respected research.

Our clients value our advice which combines deep domain knowledge with global reach and local insight into markets to help them achieve meaningful business results.

We are committed to our clients, employees and communities – contributing to a world where technology delivers for all.



Our research services



Consumer Services

Fixed Broadband Services Mobile Services Fixed-Mobile Convergence Smart Devices Future Comms Video, Gaming and Entertainment Digital Services



Networks

Next-Generation Wireless Networks Wireless Infrastructure Strategies Fibre Infrastructure Strategies Operator Investment Strategies Telecoms Strategy and Forecast Transport Network Strategies



Applications

Network Automation and Orchestration Customer Engagement Monetisation Platforms Digital Experience Automated Assurance Service Design and Orchestration Telecoms Software Market Shares



Satellite and Space

Satellite Communications Space Applications and Infrastructure



analysysmason.com/what-we-do/practices/research



Operator Business Services and IoT

Enterprise Services SME Services IoT Services Private Networks

SMB IT Channels and Forecasts



SMB Technology Forecaster



Global Telecoms Data and Financial KPIs Americas Asia-Pacific Middle East and Africa European Core Forecasts

European Telecoms Market Matrix European Country Reports



Cloud

Cloud Infrastructure Strategies Data, AI and Development Platforms Edge and Media Platforms Multi-Cloud Networking



~2800 forecast and 280+ historical metrics Regional results and worldwide totals Operator historical data



Our areas of expertise



Strategy Corporate growth strategy Business unit strategy

Infrastructure strategy

151
17111

Regulation and policy Network and platform Public sector broadband

intervention

Accelerating digital transformation of society

Price controls and cost modelling

Regulatory accounting

Regulatory benchmarking and analysis

Spectrum management and policy

Expert witness and litigation support

Postal regulation and policy



analysysmason.com/what-we-do/practices

Transaction support Commercial due diligence and market review Technical due diligence Post-merger integration Periodical business monitoring and loan technical advisory Opportunity scouting and pre-deal support



Transformation Business transformation Digitalisation Operational excellence Data, BI, steering and insights Change and programme management Sustainability

