5G will be a killer app for cloud native, as recent deals signify

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Publication date: Monday, October 4 2021

Introduction

The interconnected world is happening, and will be advanced by the combination of 5G connectivity (and subsequent iterations), and upstream capabilities like edge computing and advanced analytics. Nearly every vertical industry in the world is exploring how these platforms will be applied to their environment and advance their digital transformation agendas.

The global 5G investment cycle is hitting its stride, including 5GSA (5G stand-alone) core deployments and distributed multi-access edge computing buildouts. However, a radical shift in network service delivery architecture and approach – to cloud native and DevOps – is necessary to fully take advantage of 5G capabilities today and in the future. A couple of recent announcements highlight these trends.

The Take

Recent deals sharpen our belief that the telecom industry promises to be the outstanding buildout market opportunity – a 'killer app' – for cloud native, in its transition to 5G. That's the technology change. But significant challenges remain, principally around the change of mindset required on the part of telcos to move away from the kind of monolithic application infrastructure and operational models that have meant they are less nimble in pursuit of emerging opportunities.

Context

Telcos are now looking to the cloud, 5G and edge to manage costs, enter new value chain positions and restore their image (and therefore shareholder value) on Wall Street, in a climate where the network has been regarded by the investment sector as essentially dumb pipes, with owners that are unable to monetize the data moving over them (having lost out to the OTT operators in 3G and especially 4G/LTE).

The open question is whether telcos, even when fully furnished with cloud-native networks and distributed computing facilities and with the skills and partners to run them, can also become service

providers, and whether they can capture new consumer, and especially enterprise, revenue pools that have long been elusive in the segment. On the latter, several of the world's large cloud and IT infrastructure giants see billions of dollars in bidirectional opportunities surfacing in the next decade, and are pursuing a mix of engagement strategies and business models to get positioned.

Cloud native is the network

Telefonica Spain recently announced it will use IBM's Cloud Pak for Network Automation, Red Hat OpenShift, and Juniper Networks Apstra and QFX technology as the basis of a cloud-native, 5G core network platform that will be deployed into its UNICA Next datacenters starting next month. IBM and Telefonica Spain will provide integrated releases using CI/CD methodology to deliver lifecycle upgrades to the existing UNICA Next platform. UNICA Next is Telefonica's reference architecture for network virtualization (SDN/NFV), based on ETSI NFV concepts.

Telefonica already has a number of companies supplying VNFs in the program, including Nokia and Ericsson, as it focuses UNICA initially on virtualizing its core network functions (the radio access network will come later). Over time, VNFs will be handling all of Telefonica's traffic.

Also recently, Oracle announced that BT will be using its Oracle Communication cloud-native converged policy management to optimize its network resources and bring new 5G offerings such as live streaming and zero-rated 5G content to market on its EE network faster by reducing current testing and implementation time from months to minutes. BT says the Oracle cloud-native policy management software will also enable it to optimize network and subscriber resources to launch 5G-enabled IoT service offerings to consumer and enterprise customers.

It's a question of mindset

While there's ample hype around cloud native in telecom circles, it is generally held that cloud-native design and deployment principles will bring an optimal mix of application portability, reusability, time-to-market speed, automation and scale for the next generation of network operations and monetization. When cloud-native infrastructure is combined with CI/CD and DevOps application development and testing processes, it serves to makes telcos more cloud-like, while also enabling the next generation of digital services, platform business models and cost controls.

We believe that as 5G and the cloud intersect to bring the interconnected world vision to life, serving the telecom industry will be the outstanding buildout market opportunity – a killer app – for cloud native.

Cloud-native forms and functions will be critical to the ultimate success of 5G for telcos on both top and bottom lines, and will become table stakes for suppliers. Moreover, global telecom operators will offer the most complex workload and orchestration challenges and richest rewards to the cloud-native ecosystem. But it's not all plain sailing, and the 5G cloud-native story may not be as important as the change in mindset required to deliver success here.

At least as important is the issue that telcos have to overcome the cultural inertia built up around the monolithic infrastructure and operational models developed to support them and their vertically integrated approaches. These approaches would dramatically reduce their chances to really capture the new enterprise 5G edge services. Many are well along on this journey, but it's still just the beginning. For every CEO who talks about the promise of cloudification, there are dozens of network engineers that still prefer to deploy boxes, not software.

For telcos then, 5G is a complete cloud-native transformation story where the challenge remains the cultural and organizational change required to achieve the desired outcome. Enterprise customers will be scrutinizing this aspect as much as the technology change to assess their preparedness for

delivering the agility and automation required. If you can't change the mindset you won't get the outcome, whether it's security, telco or cloud native. It's about thinking differently – but there is no SKU or blueprint for it.

Additionally, some telcos are embracing hyperscalers for this transition to the cloud-native world. This is another way to try to ride the cloud wave, but it does not really solve the issue. On one side, they cannot claim readiness for cloud, because they are hand-held or totally driven by hyperscalers. On the other side, hyperscalers are going to address the edge cloud opportunity by themselves. It's like letting the fox look after the hen house.