



The distributed cloud makes DevOps adoption more compelling for CSPs

A Nokia guest blog by Monica Paolini, Senza Fili

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5G is coming. CSPs have started to transition to a cloud-native network architecture that breaks the mold of today's centralized, monolithic networks and introduces an end-to-end distributed cloud.

It's much more than a simple tech transition. It's a lot more involved than, say, deploying new equipment for better performance, or to support new use cases.

To unlock the benefits of 5G and of cloud-native, distributed architectures, CSPs need to learn how to run networks that are more flexible and powerful, but also inherently more complex and dynamic. To succeed, they need to fundamentally change their approach to deploy and run their networks. This will require both operational and cultural change.

Why move to a distributed cloud?

Most CSPs understand the benefits of a distributed cloud, which enables them to position network functionality where it's most needed and most cost-effective, while maximizing network and service performance.

In a distributed architecture, the cloud is everywhere. CSPs continue to have a centralized cloud, but they also have regional and edge clouds. They continue to use private clouds, but they expand their use of public clouds.

A distributed cloud makes it possible for CSPs to cost-effectively support many of the new 5G use cases. It enables CSPs to keep the latency low, to manage services and traffic more efficiently, to increase reliability and security, and to roll out services more quickly. More specifically, the edge cloud gives CSPs a powerful tool to deploy IoT, IIoT and other enterprise location-based services affected by latency, mission criticality, data storage, or similar distance-sensitive factors.

The flexibility and power of the distributed cloud comes at a cost

The more distributed the cloud is, the more complex it is to deploy, operate, monitor, update and optimize. There are more elements and more interactions among them to manage. There is greater scope for optimization, but also more choices to be made and more parameters to set.

Furthermore, the distributed cloud is embedded in a more dynamic 5G network, which has to coexist with legacy networks and has to support a wider set of use cases -- some with stronger latency, reliability, and security requirements. 5G networks require real-time optimization and monitoring, frequent upgrades and quick new service rollouts. All this must propagate to all the cloud locations, not just the few that operators need today.

CSPs cannot escape the increased complexity if they want to move to the distributed cloud as part of their 5G strategy. But they can successfully manage this complexity and benefit from it.

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About Monica Paolini

Monica Paolini, PhD, is the founder and principal of Senza Fili. She is an expert in wireless technologies and has helped clients worldwide to understand new technologies and customer requirements, create and assess financial models, evaluate business plan opportunities, market their services and products, and estimate the market size and revenue opportunity of new and established wireless technologies. She frequently gives presentations at conferences, and writes reports, blog entries and articles on wireless technologies and services, covering end-to-end mobile networks, the operator, enterprise and IoT markets.

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