



Where do network APIs fit within private networks?

As the private networks adoption increases, technology and service providers look for ways to streamline deployments and address the customisation challenges. Earlier in 2023, network APIs re-emerged as an important tool that can help telcos and vendors monetise network investments and drive innovation. But what value can APIs bring to private networks specifically and how they can be utilised to accelerate their adoption?

Ahmed Ali, Senior Analyst

The state of the private networks market

The private networks market has grown slightly slower than what many people might have predicted but there are certain areas where there is significant traction. These are mainly sectors with industrial use cases, including manufacturing (e.g., automotive and chemical manufacturing), transport and logistics (e.g., ports and airports) and remote locations such as mining and oil and gas sites. Many of these deployments primarily aim to address distinct connectivity challenges that emerge from the location and the structure of these sites as well as the complexity of the use cases they need to be implemented. Mostly, the existing or legacy connectivity options in these sites fail to meet such requirements.

Major private network deployments are focused on large and established enterprises which have the capacity to manage the associated costs and the ability to invest the required time and effort. The industry is actively working toward developing scalable solutions, and we do see lots of vendors trying to simplify the deployment and management of private networks and drive the cost down. However, customisation remains a crucial aspect of private network deployments which can still be a barrier to adoption for small and medium enterprises (SMEs). Network slicing holds promise for SMEs but its rollout by telcos is in the early stages, and it will require time for both the technology and the corresponding business case to mature.

APIs can play an important role in private networks

There has been growing hype about network APIs (Application Programming Interfaces) in 2023, since the announcement of GSMA's Open Gateway initiative at the beginning of the year. However, APIs have not been discussed a lot in the context of private networks. Network APIs as described in our report, 'Network APIs: Driving new revenue streams for telcos,' are interfaces that enable third parties to retrieve information about the network or to program and customise the network service based on application needs.

While most current private network deployments are isolated islands, there are many scenarios that a private network would need to interact with other external and internal systems including other private networks, public networks, and network slices. APIs can play a significant role in enabling that as well as improving different aspects of private networks lifecycle including system management, use case development, and monetisation. Here are a few examples of how APIs can positively impact private networks adoption.

- **Simplifying deployment, configuration and management:** Minimising the complexity of private network solutions is crucial for both customers and suppliers. On the demand side, this improves the business case and makes private networks a viable option for more enterprise customers. For suppliers, they can make changes dynamically and scale their solutions and services faster and more cost-effectively to match the growing and changing demands.
- **Enhancing application development:** APIs allow private networks to seamlessly integrate with other internal and external systems, services, and devices. This integration allows enterprises and operators to develop applications either internally or by onboarding developers through application platforms. This openness leverages different external and external data to enhance the network efficiency and streamline operations.
- **Creating monetisation opportunities:** In many cases, private networks are created for individual businesses to solve specific problems, generating and consuming data in isolation. However, there are opportunities to monetise some of this generated data by allowing the network to interact with other external systems and networks. For example, we can think of a smart city private network scenario where APIs would be the way for the operator to monetise the network's data and help application development.
- **Facilitating collaboration across the ecosystem:** For enterprises that are focused on innovation and creating new use cases, APIs represent a standardised means of interconnecting and building

Where do network APIs fit within private networks?

partnerships with third parties. APIs then become valuable assets that facilitate collaboration and innovation across the private networks ecosystem.

- **Enabling network slicing:** As operators move towards implementing network slicing, APIs play an even more critical role. They serve as one of the main enablers that underpin the creation and management of slices. APIs can allow a more granular and efficient allocation of network resources based on specific application requirements.

Unleashing the potential of application development

Many players from different backgrounds are anticipating the large-scale adoption of private networks and have either invested or eagerly planning to invest in the market. Technology providers continue to improve their solutions to accelerate and automate the delivery of private networks. Nevertheless, the technology ultimately serves as an enabler, with the real value residing in the applications it supports. For the market to truly take off, we need to be able to streamline various aspects of the private network lifecycle in order to create solutions that can easily be scaled. APIs as a tool for both the network operator and enterprise customer could be part of this evolution.

Furthermore, API adoption could further open up the private networks opportunity to a wider range of players and introduce new ways to partner. Although the market is already diverse and has attracted new types of players in addition to traditional telcos and equipment providers, this could be an opportunity for all these players to take bigger roles in application development. Similarly, it can be more inviting for software and application providers to engage directly with the market, unleash innovation and accelerate the value realisation for themselves and other stakeholders.

Ahmed Ali is a Senior Analyst at STL Partners, specialising in private networks.

Get in touch with the author to learn more

ahmed.ali@stlpartners.com

Or visit STL Partners' Private networks Hub

www.stlpartners.com/private-cellular-networks