

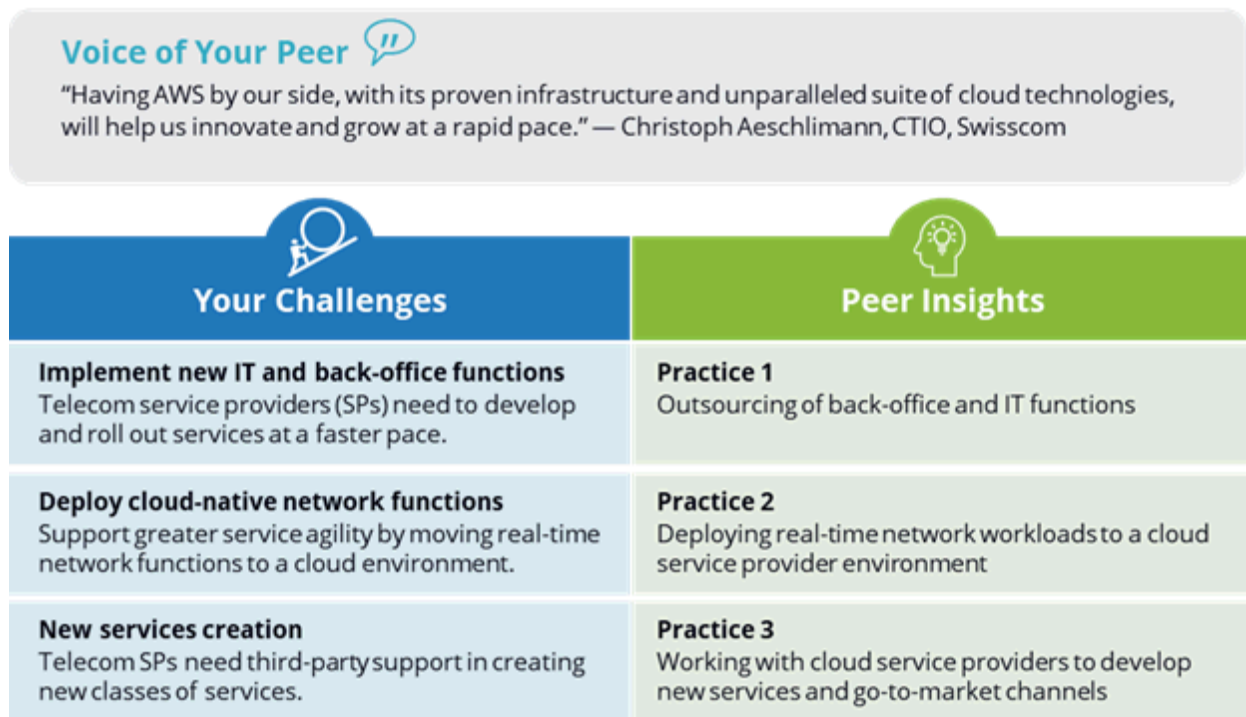
IDC PeerScape: Telecommunication Service Provider Practices to Maximize Cloud Service Provider Partnerships to Enable the Future of Connectivity

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IDC PEERSCAPE FIGURE

FIGURE 1

IDC PeerScape: Telecommunication Service Providers – Practices to Maximize Cloud Service Provider Partnerships



Source: IDC, 2022

EXECUTIVE SUMMARY

Many communication service providers (SPs) are going through a period of transformation to position themselves as digital service providers, with the goal of remaining relevant to their end-user subscribers. This comes as enterprises look toward the future of connectivity as a means of supporting their own digital transformations with the free flow of data across people, things, and applications. For communication service providers to effectively act upon their primary strategic goal of remaining relevant to their customers undergoing their own digital transformations, communication SPs must transform their business and execute on a future-proof strategy that embraces new business models. However, communication SPs cannot achieve all these goals on their own. To achieve these objectives, communication SPs are finding that they need new partnerships to transform themselves and are increasingly turning to cloud service providers for those partnerships.

This IDC PeerScape provides examples of how different communication SPs are partnering with cloud service providers to enable their transformation to digital service providers. For each of the three main areas of transformation, we provide two examples of how communication service providers are working with cloud service providers and some of the results from those partnerships.

"The narrative on the relationship between telecommunication and cloud service providers has changed," says Daryl Scholar, program vice president, IDC's Worldwide Telecommunications Insights. "Telecommunication service providers are moving away from seeing cloud service providers as a competitive threat. Telecom SPs are now starting to recognize cloud service providers as a key ally on their journey to being digital service providers."

PEER INSIGHTS

Practice 1: Outsourcing of Back-Office and IT Functions

Challenge

Telecom service providers need the ability to develop and roll out new dynamically priced services at a faster pace than they have been able to accomplish traditionally. The advent of faster, more flexible networks creates an opportunity to deliver new, unique, and highly competitive service offerings but will become stymied by an inflexible order-to-cash process. The industry has been addressing legacy operational support system/business support system (OSS/BSS) issues for decades, and today, that continued lack of flexibility continues to impede the time to order and provision process and limits the ability to creatively monetize new services. Re-architecting OSS/BSS using a cloud-agnostic or cloud-native approach plus migrating to a cloud environment can change this paradigm, giving communication SPs greater service agility to meet their end users' evolving connectivity needs. Working with a cloud service provider on this transition to a cloud environment can help communication SPs save money by reducing up-front capital costs. Instead of buying compute capacity up front and risk being left with underutilized resources, telcos can pay the cloud service provider on a consumption basis. Furthermore, cloud service providers can fill in cloud and IT skill gaps that many communication service providers have. Communications SPs can also leverage CI/CD/CT principles to accelerate service innovation by removing obstacles for software (SW) development and enhancement and streamlining improvements through the software life cycle.

Example

Swisscom Names AWS as Its Preferred Public Cloud for Its Enterprise IT

In June 2021, Switzerland-based communications service provider Swisscom announced it had selected AWS to be its preferred public cloud provider for hosting its IT applications. Those enterprise applications include operational support systems, business support systems, and analytics, contact center, and communication provisioning workloads. This agreement supports Swisscom's overall cloud-first strategy to improve IT agility, drive operational efficiencies, and accelerate time to market for new features and services. Achieving this goal will help put Swisscom in a better position to meet the future of connectivity requirements of its business users.

As of the end of year 2021, Swisscom reported it had reduced the number of IT apps in use by 6% compared with 2019. This reduction was accomplished through modernization and consolidation of Swisscom's IT platforms, with the phasing out of older technologies and the adoption of modern agile development methods and standards. The company has set a goal of reducing the number of IT apps in use by the end of 2025 by 25% versus 2019. The communications SP also stated in its fiscal year 2021 earnings that its IT expenses had decreased in FY21 by 11.6%. While not all these results can be 100% attributed to AWS, the relationship between the two companies appears to be helping Swisscom achieve its goals.

Microsoft Azure Hosts AT&T's New BSS Solution

AT&T has been at the forefront of virtualizing network and IT functions among telecom service providers. In July 2019, AT&T named Microsoft Azure its preferred public cloud provider with a goal of moving most of AT&T's nonnetwork workloads to Azure by 2024. In November 2021, AT&T, in conjunction with Amdocs, would be hosting its new business support system in the Azure cloud.

The BSS implementation will start with AT&T's consumer business unit including 5G mobility, fixed wireless, broadband, and IoT. The goals of this implementation are to improve customer experience, consolidate datacenter infrastructure, accelerate business growth and agility, reduce costs, and provide technology modernization and simplification. Planned outcomes include enabling cloud-based consumer billing, charging, and mediation of current and future services. Ultimately, AT&T hopes to reduce operational costs associated with its BSS by 20%.

While much of today's discussions around digital transformation is how the telco can better support its business users, in the case of AT&T, it is starting with its consumer users when it comes to leveraging the benefits of modernizing its BSS solutions and moving them to a public cloud. Consumer services still generate over 50% of telecom service revenue. Consumer services may lack the complexity and some of the growth potential of business services, but that does not mean telco SPs' consumer cannot benefit from modernization including leveraging the advantages that come from working with a cloud service provider.

Guidance

IT system rationalization and migration of IT applications to a cloud environment should be done in concurrence. Moving of IT applications should not be a straight porting. Communications SPs should audit their applications and look for areas where they can reduce the number in use. This could not only save costs in terms of software and IT compute licensing fees but also help in streamlining process and reducing customer and billing errors coming from overly complex and data systems.

Practice 2: Deploying Real-Time Network Workloads to a Cloud Service Provider Environment

Challenge

As communications SPs transform their networks and IT to drive greater business and operational agility, migrating many of their real-time network functions to virtualized and cloud-native environments has helped accelerate some of the future connectivity needs of their end users. Separating network hardware from software allows for greater performance customization and more efficient network upgrades. However, not all communication SPs can do this on their own or even want to take on this challenge. Cloud SPs can help telcos in moving real-time network functions to the cloud and even take on parts of ongoing network management process for those telcos. Working with a cloud SP can also benefit the communications SP by helping the telco optimize its capital investments by shifting part of the communications network stack to a service model, only paying for network capacity where and when it is needed.

As part of telecom SPs' move to being more agile service providers to meet the future of connectivity requirements of their end users, telco SPs are migrating many of their real-time network functions to virtualized cloud-native environments. Separating network hardware from software allows for supply chain optimization, helps introduce new network technologies, and improves total cost of ownership (TCO) through minimizing the operational ease of network upgrades. However, in this disaggregated world of cloud-native networks, the real challenge becomes meeting greater performance customization and achieving system-level network assurance for the service-level agreements (SLA) based on end-customer services. Not all communication SPs can do this on their own.

Cloud SPs can help telcos in moving real-time network functions to the cloud by providing the requirements of the platform stack while exposing these closed-loop automation capabilities to the communication SPs to take on parts of ongoing network management process in this disaggregated world. Communication SPs can leverage similar capabilities from their software application providers of real-time network functions and consolidate at the network management layer to be able to provide the network and service-level assurance while benefitting from disaggregation, scalability of cloud-native networks, agility of using microservice-based architecture, and a better TCO.

Example

Swisscom Deploying Its 5G Mobile Core Network on a Hybrid Cloud Platform with AWS

Swisscom's June 2021 AWS announcement was not solely focused on the outsourcing of IT applications; it also included details on Swisscom's plans to enable elements of the company's new cloud-native 5G mobile core network to AWS. AWS will provide cloud infrastructure to support elements of the new mobile core network in AWS' regional cloud infrastructure in Zurich. Overall, Swisscom currently has a hybrid cloud strategy and will continue to maintain some 5G mobile core elements in its own private cloud as well.

Swisscom had previously announced Ericsson as its 5G mobile core supplier, and the agreement with AWS does not change that. Ericsson will supply the actual cloud network functions and Ericsson will be working with Swisscom and AWS on how to build the 5G core network across the different cloud environments. Swisscom says this cloud mobile core deployment will commence after the IT application migration begins.

Swisscom is not the only communication SP working with a cloud service provider to support network workloads, but this approach remains uncommon. Moving real-time network workloads to a cloud service provider comes with greater risk and challenges than moving IT functions to a public cloud. Network workload failure can bring down the entire network and expose the telecom operator to negative press and service-level agreement-driven financial penalties. However, the Swisscom and AWS relationship should enable and accelerate Swisscom's move to a 5G standalone network on a public cloud.

5G standalone is required for a mobile operator to fully monetize its 5G investment with new 5G-based services and applications. 5G non-standalone uses an LTE mobile core, which limits 5G network performance and capabilities. Mobile operators looking to offer new types of connectivity-based services need a standalone 5G network.

Google Cloud Helps Bell Canada Deploy Its New 5G Core Network at the Edge

In July 2021, Google Cloud and Bell Canada announced a multiyear strategic partnership to help Bell Canada with its digital transformation. This agreement covered both Bell Canada's IT infrastructure and communications network. In February 2022, Bell Canada announced as part of that strategic relationship that it would be deploying its 5G mobile core on Google Distributed Cloud Edge. The announcement said this would be the first implementation of this kind.

As part of the deployment, Google Cloud will manage the underlying IT infrastructure. Ericsson, previously announced 5G core supplier to Bell Canada, will continue to provide the core network functions. Ericsson also has its own relationship with Google Cloud dating back to mid-2021 that focuses on helping telecom SPs transition to cloud-native infrastructure.

Mobile core networks traditionally have been centralized, but in a cloud-native environment, mobile operators can use a distributed architecture. This brings the network closer to the end user where the data is created. This will help mobile operators to provide lower latency on their 5G networks. Working in the Google Cloud environment will also support Bell Canada's plans to work with third-party solution providers to create new applications to drive 5G monetization.

Guidance

Communication SPs can take a gradual approach to moving network workloads to a cloud service provider. Telcos do not need to move all of their network functions to a cloud service provider location. They can choose to only migrate select elements. Another approach can be to move just network elements associated with a specific application or user base to a cloud service provider environment while still maintaining network elements that carry the bulk of the network traffic and generate the majority of service revenue within their own cloud centers. A gradual approach allows a telco to build confidence in moving communication network elements to a third-party cloud service provider while helping limit downside risk if something goes wrong.

Practice 3: Working with Cloud Service Providers to Develop New Services and Go-to-Market Channels

Challenge

Businesses' connectivity and communication requirements continue to multiply and become specialized and increasingly complex. Communications SPs cannot meet all these requirements on their own – they need partners. Cloud SPs can be an important ally to telco SPs when it comes to developing and delivering new services. Cloud SPs can function as a new go-to-market channel as

well as providing cloud infrastructure to support new services. Communications SPs can also act as new sales channels for cloud SPs and provide those cloud SPs with the wide area networking needed to connect end users to cloud SP locations. All these different relationship models can be monetized.

Example

Swisscom and AWS Partner on Multiple Cloud Service Offerings

Before IT and network workload outsourcing, Swisscom and AWS were working together on different solutions to sell public cloud services to the Swiss business community. Both act as channels for the other's services. AWS lists Swisscom on its partner site, while Swisscom promotes AWS' cloud services on its site. They collaborate on several AWS partner programs. One of those programs is AWS Well-Architected Partner Program where Swisscom has had success working with a Swiss-based company called DroneAnalytics.

DroneAnalytics' and AWS' commercial relationship dates back to 2015. DroneAnalytics provides hardware and software solutions for drones and other connected objects. DroneAnalytics used AWS for several solutions including infrastructure management, database, and storage. Overtime, as it grew its business, DroneAnalytics' costs with AWS grew as well. To optimize costs, DroneAnalytics contacted Swisscom for an AWS Well-Architected Review. In this relationship, Swisscom provided DroneAnalytics an audit of DroneAnalytics' current spend with AWS and provided guidance on how to lower those costs. Through this consultancy, Swisscom was able to help DroneAnalytics save more than 60% of its spend with AWS.

Swisscom cites its own experience in migrating its IT workloads to AWS as a benefit to other Swiss companies looking to move their own process and applications to AWS. Swisscom can provide those businesses with guidance based on Swisscom's own learnings. Swisscom sees its relationship with AWS as a long-term strategic asset and, as such, announced in May 2022 that it was investing in more personnel training to expand its AWS practice. In this announcement, Swisscom focused on providing offers using a cloud consulting approach supplemented with a broad portfolio of value-added services. These services include migrations (e.g., SAP on AWS), application modernization, cloud analytics, contact center, and IoT solutions. As of June 2022, AWS reports Swisscom has launched over 20 commercial engagements coming out of their partnership.

Google Cloud and Verizon Partner to Bring Network Smarts and New Services to the Edge

Verizon has taken an opportunistic approach to working with all three major U.S. cloud service providers. The last agreement came in December 2021 with Verizon and Google Cloud announcing they had entered a partnership that would combine Verizon's 5G Edge with Google Distributed Cloud Edge. The commercial agreement will initially have a private network focus, but Verizon and Google announced they plan to work on public edge offerings in the future to attract developers and businesses that are not looking for a private network solution.

The first announced collaboration between Verizon and Google Cloud involves a private network pilot deployment at an Ericsson manufacturing facility. Verizon will install cameras on autonomous robots that will use Verizon's Sensor Intelligence solution to scan bar codes and shipping labels. The data will be transmitted over the private 5G network to the Google Cloud at the edge for inventory and logistics management. This arrangement between Verizon and Google allows both to focus on their areas of strength – connectivity for Verizon and cloud computing for Google – in creating a new business-class service offering. This approach between the two companies also shows how telecommunication companies and cloud service providers can benefit from working together instead of treating each other as competitors.

Guidance

To maximize cloud and communication service providers' commercial relationship, both partners need to move beyond seeing the other partner as just another sales channel. The two parties need to work on creating service offerings that tightly integrate both partners' assets and create new types of services. The offering needs to be something different than what a business can get from any telco/cloud service provider partnership. This will help the telco differentiate itself from its in-market peers. It will also help telcos in their digital transformation to be seen as technology leaders.

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