



CSPs look to open systems to accelerate digital-to-network automation

It is almost ironic that the network services used by consumers and enterprises to support their own digital lifestyles and business transformation are themselves sold, ordered, processed and assured in a high-touch, mostly manual, manner. While service providers have mainly focused on digitalising the front-end customer sales and care experience, in order to better meet the new demands of our connected society, service providers must also fully automate and digitalise their end-to-end service operations and assurance processes.

In this interview, Ilan Sade, the general manager of Amdocs Open Network, tells VanillaPlus managing editor George Malim why digital-to-network automation is so critical for service provider digital transformation success and how it will enable the continuous delivery of uninterrupted experiences to consumers and enterprises

George Malim: How would you describe the state of play in terms of digitalisation and automation in the telecoms industry?

Ilan Sade: Over the past few years, there has been an acceleration into digital-first and everyone wants to be connected fast. Consumers and businesses are moving into a connectivity-centric ecosystem which has been even further accelerated by Covid-19. The pandemic has brought in a greater sense of urgency and service providers need to respond to this.

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Although service providers have been making steady progress in certain areas of their digital transformation journeys, the focus has been on customers' and businesses' experiences across the different channels and on ensuring net promoter score (NPS) improvements. However, it's more clear now than ever before that we can't afford gaps and broken areas within service operations and network infrastructure that are still being addressed with 'human glue' or dealt with as checkmarks on a maintenance roadmap. The number one issue is that processes aren't automated end-to-end.

The human glue is needed because there are too many manual steps. Much work remains to be done to automate service and network operations to remove dependencies on time-consuming manual steps and long lead-time break-fix activities. Several urgent steps need to be taken to reduce and eventually eliminate the risk of disjointed experiences, widespread outages and missed growth opportunities.

In addition, the manual steps have huge impacts on efficiency and service providers' abilities to operate with the right cost structure. This is also preventing service providers from fully enabling their revenue potential because the scalability is not in place.

GM: Why is there this lag when it comes to automation of service and network operations relative to other areas for service providers?

IS: There has never been a single answer to address digital transformation and each service provider will have to plot its own journey based on business priorities. It depends on what the CSP has and what the CSP plans to do. That informs the direction taken and what the journey will look like.

There is no magic answer. You have got to pick a journey that starts from the use case and the ►



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resources you have. Your access to technical people is a major factor and you have to make sure you are able to move in the direction you have chosen. There will be multiple directions chosen by different CSPs.

Having said that, it is no secret that CSPs have historically trailed on basic customer relationship metrics relative to other industries, and therefore there is a generalised focus on improving customer engagement capabilities, including digital support channels, as well as in analytics and artificial intelligence (AI), to make the channels more intelligent with chatbot capabilities, for example.

The number one challenge is a CSP's legacy. They may have many siloed pieces to consider but they may also have legacy in terms of their people. Transformation brings a set of complexities that need to be addressed holistically in a top-down management approach. However, service providers recognise that as communications technology dependency deepens and demand for new experiences grows, they will need to more fully automate and digitalise their service delivery processes, including service ordering, fulfilment, orchestration, activation and assurance.

The advent of 5G and the telco cloud is also now motivating many service providers to transform their

operations support systems (OSS) and related processes in order to handle the size and complexity of new networks and technology. Finding a specific use case and making sure that's pragmatic and then choosing the right technology to enable you to fully automate is the key and 5G and telco cloud are triggers for this.

GM: What are some of the specific OSS challenges that need be addressed to better automate service management processes?

IS: The prevalence of siloed IT systems for each network and/or service domain is a major issue. Services are increasingly being supported by chaining capabilities across a hybrid network that span multiple technologies and capabilities, for example, a mix of

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physical, virtual and cloud functions. So, the current systems environment of 'islands' makes it extremely hard to control and run operational processes efficiently.

CSPs are therefore looking at these islands holistically and seeing if their processes can flow from end-to-end. Often they don't. With network functions ►



virtualisation (NFV), for example, it's still one piece of the overall network but it's highly siloed. There is a need for an end-to-end system to look across all of these different islands.

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Secondly, due to the prevalence of closed and monolithic legacy systems, we continue to have fragmented fulfilment and orchestration processes, comprising a multitude of unintegrated touch points with manual steps along the way. This leads to many service delivery inaccuracies and significant order fallout.

In addition, there is a lack of real-time contextual integration and connection between orchestration and assurance systems, which limits the ability to implement proactive, assurance and operations, thereby leading to dependence on reactive problem-solving approaches only.

If you look at future services, it's clear CSPs have to go further than ever before and systems need to be kept open in order to enable the services. If you have a key performance indicator (KPI) on latency for a high demand service like a connected factory, it's not enough to provision the service, you have to keep measuring and assuring. Today it's different CSP organisations that perform these functions but they need to come together to support the service proposition.

You don't need to boil the ocean in one day to achieve this, you can do it step-by-step, but it does need to happen.

GM: How does Amdocs help service providers address these challenges and what is your approach for modernising and transforming the OSS?

IS: We are doing a number of things to help service providers consolidate, modernise and transform their operations support systems, which will all help accelerate the digital-to-network automation journey for service providers.

Amdocs has evolved its proven OSS capabilities into Amdocs NEO, a unified service and network automation platform designed to manage and orchestrate hybrid networks, combining traditional service management ►



functionality with cloud and NFV orchestration and automation capabilities. NEO is a cloud-native, microservices offering which embraces a modular, open, standards-based approach in providing service and network automation capabilities. And, we have incorporated policy and AI and machine learning driven operations capabilities into the platform to support the move towards more autonomous operations.

Putting all these worlds into one fully cloud-based, microservices platform is not obvious and there aren't many independent providers in this ecosystem. Network equipment providers, for example, find it's in their own interest to combine this capability in their own siloed systems but this doesn't help CSPs have open systems.

We're totally open and it doesn't matter if you're operating a hybrid network of multiple vendors, we'll enable your business with end-to-end capabilities.

GM: How should service providers navigate the digital-to-network automation journey?

IS: It's important to first recognise that such a transformation cannot happen in one shot overnight, and indeed it's a journey. To start with, service providers need to adopt an OSS platform that can support automation in an incremental manner, be it by specific business process or service type. Explore how new capabilities can start getting incorporated in either 'side-by-side' and 'over-the-top' implementations through federation and loosely coupled integration. Advanced and flexible technology underpinnings using industry-standard APIs, microservices architecture, embedded AI, CI/CD tools and testing automation help take this approach.

The service provider should clearly identify and prioritise the key processes to automate, taking into consideration their desired future state. The objective may be to have a unified order handling process and single catalogue across the BSS and OSS layers; or on-demand, adaptive, contextual orchestration with real-time notification to billing and charging for efficient monetisation. Other objectives include closed-loop operations with contextual notifications and alerts through inventory as well as back to the order and service orchestrators and real-time active and federated inventory for full visibility of hybrid network services and resources.

Finally, it's important to factor in the impact of new network technologies and service architectures, even


if the adoption is still in progress or further out. This includes things like 5G network slicing and edge services, the transition to cloud-based services and applications, the acceleration of IoT, ecosystem-powered innovation and more.

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GM: Please can you give some examples of service providers that are successfully digitalising and automating service and network operations?

IS: We have many examples but I can highlight one of our recent deployments in Europe where a customer took a strategic decision to grow its revenue and expand its broadband offering with fibre to the home (FTTH). In order to enter the market quickly and do so with lower capex, the service provider is taking advantage of unbundled local fibre access. To execute its strategy on that kind of infrastructure, the customer knew it needed an advanced OSS solution that would enable automation of the service activation process over a complex mix of third party and organic network infrastructure. This includes seamless interaction with systems of the third-party fibre infrastructure providers for accurate feasibility checks, reservation of partner fibre infrastructure, automatic service activation and closed-loop service assurance.

To achieve this, the customer selected our Service and Network Automation platform, Amdocs NEO, which is deployed on the cloud and operated by us as a managed service which enabled it to accelerate the project timeline and minimise its investment. Our platform is responsible for automatic end-to-end service lifecycle management which includes inventory management, order fulfilment, configuration and activation of the customer premises equipment (CPE), as well as automatic fault detection and resolution. In short: full-stack OSS on the cloud.

The bottom line is that this is a good example of a service provider that expanded its business quickly by utilising our service and network automation solutions to accomplish digital-to-network automation of their services management processes. 

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