# OMDIA

# Amdocs leverages its BSS and orchestration expertise to help operators monetize 5G network slicing

# Omdia view

## Summary

Network slicing will be a main component of operators' 5G strategy; it will help drive their value propositions beyond connectivity to support a wide range of digital services for enterprises. Over the next year, operators will continue to invest in SDN/NFV, cloud-native vendor agnostic infrastructures, and network automation to lay the groundwork for network slicing monetization in 5G.

However, the move from a monolithic physical network to one that is service driven and cloud-based introduces significant complexity in service lifecycle management (i.e., design, orchestration, operation). To monetize network slicing and new services in 5G, carriers will need intelligent management and automation solutions. Amdocs understands this need; to address it, the company launched its 5G Slice Manager to help operators manage and monetize 5G network slices—from design to automated operations management.

Network slice automation essential to 5G monetization

A network slice is a logical end-to-end (E2E) network that is defined over virtualized resources on top of a common physical infrastructure. It allocates specific resources to an application, a service, a set of users, or a network; these resources can be dedicated to one network slice only or shared between many different slices.

The proposed benefits of network slicing are large in scope and will be even more important this year as 5G adoption accelerates. It should be noted that COVID-19's impact will slow 5G movement in the near term, but it should rebound over time. With network slicing and 5G, operators will deliver services to their business customers based on their custom requirements, for example, latency and/or speed, and this new level of agility will open new revenue opportunities based on a mix of use cases. However, it will also add more complexity to the management of network resources. Operators will need to assure guaranteed slice performance across the varied customer requirements and they must do so by allocating network resources in the most efficient manner to realize any cost savings and service monetization. Other issues include:

- automating the instantiation, operation, and disbanding of a slice
- managing slices as they scale; currently, it is uncertain how many slices an operator will be able to manage at one time
- simultaneously assuring the service level agreement (SLAs) on each slice across a single network infrastructure.

To help mitigate these challenges, operators need to integrate more automation across the entire networking stack. This is where Amdocs comes in. With its 5G

Slice Manager, Amdocs offers end-to-end lifecycle automation for cross-domain and multivendor network slicing. The aim is to accelerate customers' ability to monetize services in 5G through automated network slice management. In other words, operators will be able to charge based on the usage and performance of a slice or a service—a new business model for 5G networking.

## BSS expertise gives Amdocs an edge in network slice management

In previous network access generations, operations support systems (OSS) for lifecycle management was relatively static, and it took place mainly during service activation. But with network slicing in 5G, the operational complexity in service design increases drastically. This creates a need for customer-centric slice management and orchestration across all networking domains.

**Figure 1: Amdocs 5G Slice Manager**
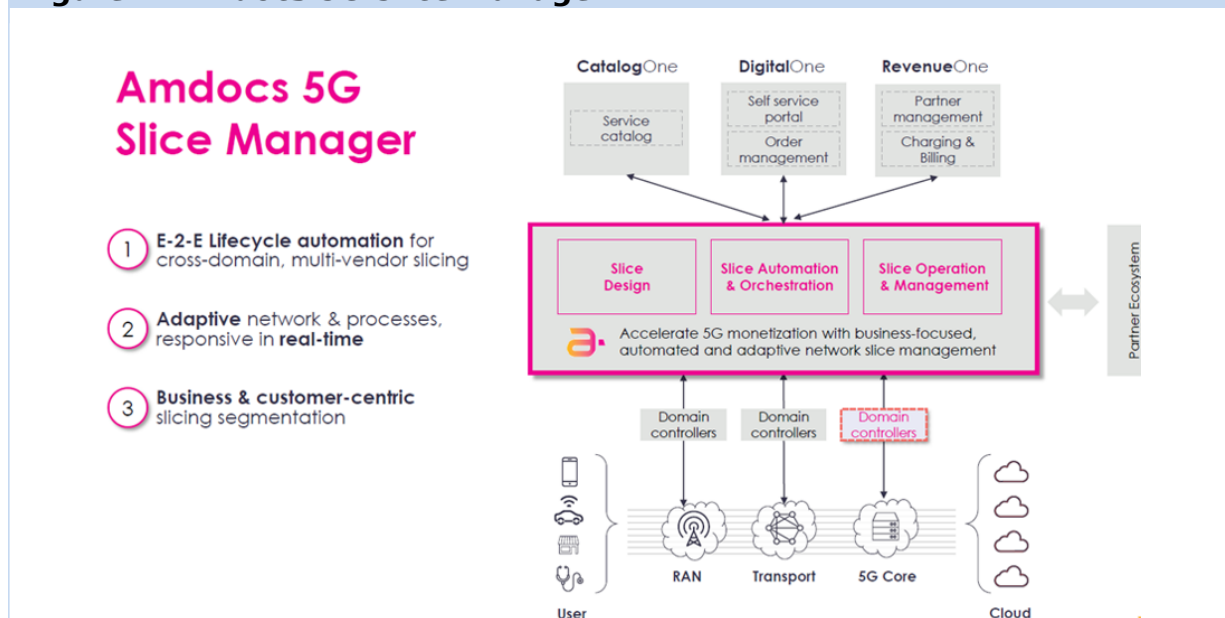


Source: Amdocs

In 5G networks, a network slice will have to cross multiple vendors and domains (e.g., 5G core, RAN, and transport). There has been notable progress in transport and core virtualization, with all major telecoms vendors offering a 5G core solution. Virtualizing the RAN will take more time, but it will eventually catch up to the others and, as this market develops, cross-domain, multivendor slicing will evolve to optimize, tune, and scale network resources in real time to meet quality of service (QoS) parameters. Essentially, the slice is pre-instantiated, but its management needs to be dynamic to meet QoS and SLA requirements of customers.

Again, this is where Amdocs can do its thing. A differentiator the company will bring to customers with its 5G Slice Manager is its expertise in business support

systems (BSS). As a proven BSS vendor, the company understands the importance of integrating the business layer into all OSS upgrades, particularly in mobile networks. Amdocs will enable network slice monetization with information from the business enablement layer, while it integrates with NFV infrastructures —regardless of vendor. The main criterion at this stage is interoperability and Amdocs' 5G Slice Manager is positioned for interoperability across domains, automated slice creation and delivery, and meeting customer SLA requirements.

# 5G will move network slicing from pre-instantiated to dynamic

Over the next year, operators will continue to invest in NFV, cloud-native vendor agnostic infrastructures, and network automation to lay the groundwork for network slicing monetization in 5G. Omdia believes that the network slicing use cases and capabilities align with the 5G use case evolution timeline (i.e., eMBB to URLLC/mMTC).

Similarly, the different types of network slicing use cases will advance from supporting enhanced connectivity-type applications to supporting dynamic, application-driven slices that allocate and optimize network resources in real time, based on specific business and customer needs.



**Figure 2: 5G and network slicing use case alignment**
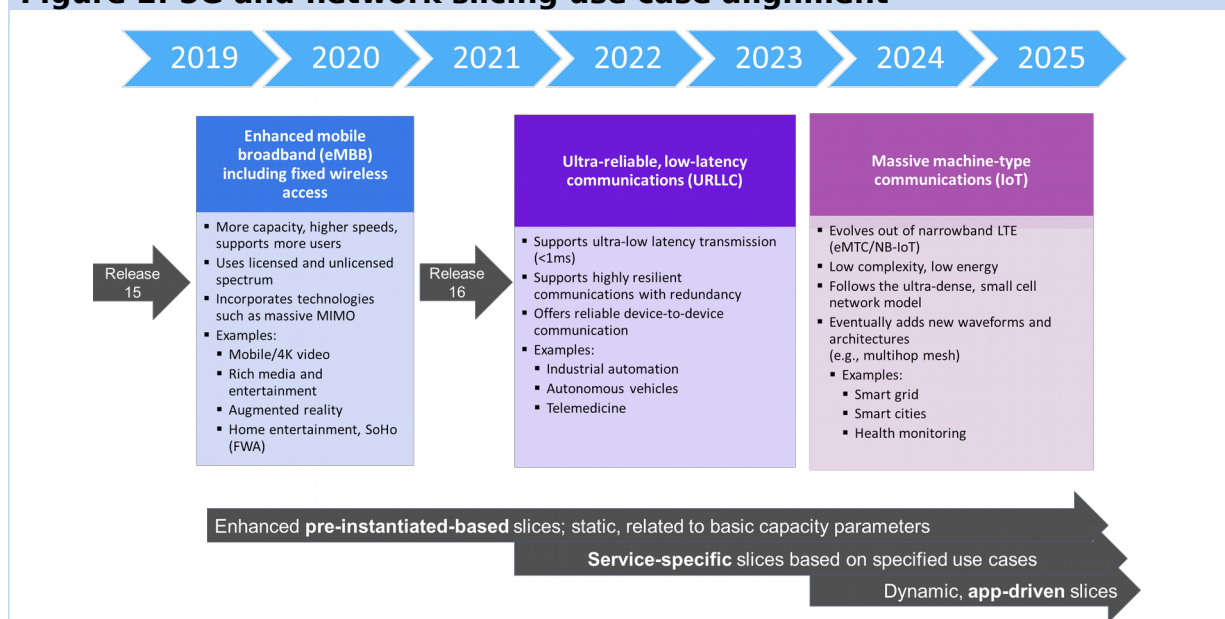
Source: Omdia

Over the next year, select operators will begin trialing and launching a small number of pre-instantiated slices that they can configure based on capacity required for the VNF or service. As today's cloud-native NFVIs mature and the industry standardizes more around network slicing, the concept will evolve to support more slices that are increasingly provisioned on an on-demand basis and that will tune network resources to customer requirements in real time.

## A network slice will be more than just another network management system

As mentioned above, operators need to be further along in the virtualization of key domains (e.g., RAN) before the industry can truly experience the benefits of network slicing. In the meantime, key players in network slice orchestration need to understand that a slice will not be just another network management system (NMS). They need to look beyond the network functions that make up a slice and integrate its creation and orchestration into the service itself.

With its 5G Slice Manager, Amdocs aims to think bigger than just network operations and consider how BSS integration into the network leads to slice monetization. The company understands that the tools required to manage both edge compute and network slicing must be service aware. In the 5G Slice Manager Amdocs supports the service/slice lifecycle management from design tools to slice orchestration to ongoing closed loop operation. This is an interesting point to consider right now since the industry is in the trial stages of network slicing; the network engineers are more involved at this stage and understand the technology specifics of network slicing. However, when vendors and operators move to commercialize network slicing, budgeting discussions occur with IT personnel and enterprises. In this case, promoting the similarity between slice creation and service delivery becomes more important because it helps key decision-makers understand the potential for network slicing monetization.

In the end, E2E network slicing is being positioned as one of the largest revenue opportunities in 5G. This is an attractive opportunity across the entire networking supply chain. By partnering with Amdocs for its 5G Slice Manager, operators can ensure that future network slices can be managed, orchestrated and monetized across their existing infrastructures, which helps protect their current network virtualization investments for 5G.

# Appendix

## Further reading

*Network Slicing in 5G*, SPT002-000310, (March 2019)

## Author

Stephanie Gibbons, Principal Analyst, Service Provider & Comms

askananalyst@omdia.com

## Citation Policy

Request external citation and usage of Omdia research and data via citations@omdia.com.

## Omdia Consulting

We hope that this analysis will help you make informed and imaginative business decisions. If you have further requirements, Omdia's consulting team may be able to help you. For more information about Omdia's consulting capabilities, please contact us directly at consulting@omdia.com.

## Copyright notice and disclaimer