



Amdocs partners with CSPs to address 5G ecosystem complexity

Without a doubt, the next generation of networks will be about 5G services. Operating across multiple domains and technologies, they will traverse multiple accesses to the edge and core, and across hybrid public and private clouds. Yet, delivering them amidst 5G ecosystem complexity presents an immense challenge. To ensure each service seamlessly reaches its end-customer, Amdocs has designed an innovative suite to mask 5G network complexity. In short, it simplifies and abstracts the underlying complexity of diverse domain variations, thereby guaranteeing high performance and SLA-compliant delivery with seamless management via a single pane of glass

In response to a rapidly developing market need, **Amdocs** sought to demonstrate the plausibility and advantages of creating a software-defined architecture that could be deployed with any radio or infrastructure at any location, as well as the ability to create edge application services that could solve business-critical use cases. Its fulfilment came through participation in several commercial implementations and proofs of concepts (PoCs), where the company showcased new operations and monetisation models for 5G era networks (including slicing) based on end-to-end service and network orchestration and monetisation solutions.

A solution for end-to-end 5G service and network orchestration

Amdocs Intelligent Networking Suite comprises a set of solutions and products that can be delivered out of the box and integrated with hybrid third-party solutions. Its standards-based architecture, interfaces and information models support extremely modular and flexible solutions. These include:

- Amdocs E2E Service and Network Orchestration
- Amdocs Service Fulfillment and Activation
- Amdocs Network Inventory
- Intent-driven, AI backed, closed-loop operations based on multiple data sources

The suite's 5G network slicing capabilities are anchored in Amdocs E2E Service and Network Orchestration solution. By delivering network slice lifecycle management, the solution enables the delivery of a diverse range of 5G services over a shared network infrastructure. With it, CSPs can deliver service manageability as an integral part of the BSS and OSS, including automating, orchestrating, productising and commercialising slicing-based services from one place. The solution is also key to generating new revenue and monetisation possibilities, serving as a charging triggerfunction that passes information about a service's activation, utilisation and performance to the charging function.

Longstanding partnerships pay dividends

As CSPs increasingly embark on their 5G standalone and network-slicing business journeys, the role of Amdocs E2E Service and Network Orchestration takes on even greater importance. Indeed, a recent **Heavy Reading** survey¹ of organisations' network slicing business journeys found that while the majority of respondents were still in the early phases offering commercial services, there was also a leadership cohort that was already moving toward commercialisation. This is precisely where Amdocs is heavily engaged, working closely with CSPs and other service providers who are on an advanced path to commercialisation (34%), as well as those who are conducting trials and gaining experience (33%).

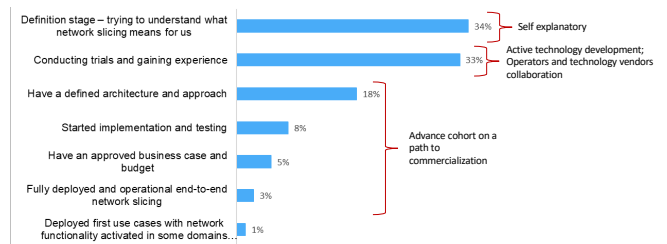


Figure 1 Heavy Reading 5G Network Slicing Operator Survey, 2022

Leading from the front

The following case studies demonstrate Amdocs' industry leadership and experience, supporting CSPs in their 5G journeys – whether they're already on an advanced path to commercialisation or still conducting trials and gaining experience.

Tier-1 North American operator: commercial service orchestration platform

One of North America's largest wireless carriers entrusted Amdocs with assuming end-to-end ownership for delivery of their production-ready 5G service orchestration platform. As part of its deployment, Amdocs met all original business goals, while delivering on the customer's four main challenges relating to slice automation and hybrid service deployment:

- Manage end-to-end lifecycle service management
- Align with open network automation platform (ONAP) as reference architecture
- Use ONAP/ETSI-defined interface
- Utilise information models for inter-component interactions

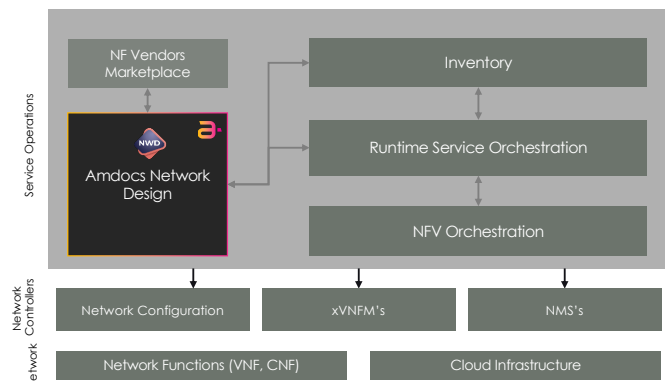


Figure 2 Service Orchestration Platform in full commercial operation

SPONSORED CASE STUDY



Amdocs Network Design, a component of Amdocs E2E Service and Network Orchestration, sits at the heart of the customer's orchestration platform, serving as the centralised service designer and catalogue tool for all network services. Its modularity and standards-based application programming interface (API) architecture enables rapid integration of third-party components, while it also has strong capabilities to facilitate further operational process automation.

A1 Telekom Austria: live, end-to-end 5G network orchestration

Amdocs recently completed a PoC² at **A1 Telekom Austria**, which included design and delivery of an environment demonstrating the deployment, management and monetisation of 5G services, as part of a 5G standalone-based mobile private network. The PoC's 5G edge architecture was infrastructure-independent and cloud-native, and included 5G SA core software. Project partners included an augmented reality (AR) application vendor, a European cloud hosting solution vendor and Amazon Web Services. Amdocs E2E Service and Network Orchestration was used for design and delivery of end-to-end 5G services.

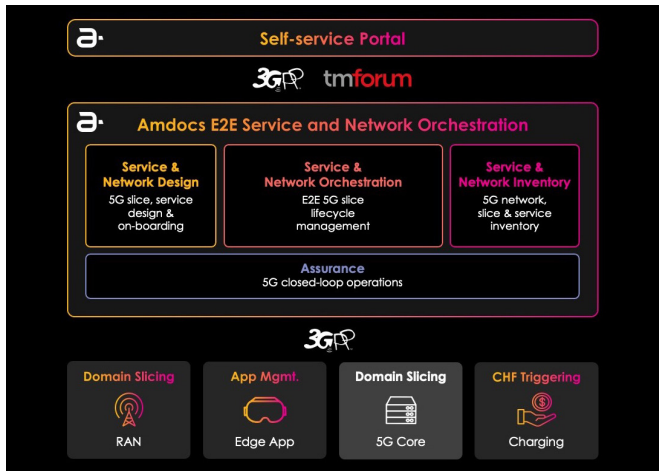


Figure 3 Scope of Proof of Concept

Orange: Amdocs co-develops monetisation engine for 5G Experimental Network of the Future³

Selected for its 5G acumen, Amdocs participated in the design of a co-development model, comprising an end-to-end 5G network, OSS and BSS integrated suite. The model sought to prove that a 100% cloud-native 5G telco platform can deliver business value and support creation of new business models.

Drawing on our expertise in cloud-native 5G telco platforms for customer experience management (BSS) and end-to-end service and network orchestration (OSS), the model showcased how new business models can be delivered cost-effectively. This included the ability for **Orange** and third-party, such as MVNO, sales organisations to sell B2C or B2B products, with the service hosted on a 5G slice. From a BSS perspective, the project also explored supported use cases, including third-party management, product management, ordering, retail resource management and charging.

Tier-1 North American operator: 5G Slice E2E lifecycle management

In this multi-phase PoC project, the CSP and Amdocs showcased the E2E lifecycle management of network slice-based services. To support the multilayer, multi-vendor nature of both the RAN and core network, Amdocs Intelligent Networking Suite's E2E Service and Network Orchestration solution enabled

the multi-layer orchestration function, network slice management function (NSMF) and network slice subnet management (NSSMF) function. Meanwhile, APIs and other **TM Forum** and 3GPP-based interfaces enabled the management functions that handle 5G ecosystem complexities. This represented an industry first for 3GPP 5G slice lifecycle management across Nokia and Ericsson equipment.

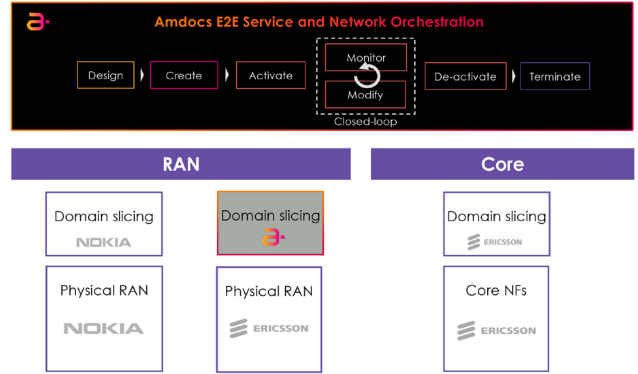


Figure 4 Tier-1 NA Operator 5G Slice Manager PoC

One of Europe's largest cable operators: end-to-end service orchestration for enterprise network services

As part of an overall objective to offer the network of the future to enterprise customers, this CSP sought to introduce new and innovative revenue-generating services, while moving to a single virtual capability in their cloud data centres to reduce on-premises hardware costs. Using Amdocs Intelligent Networking Suite, the customer and Amdocs worked together to deliver an end-to-end service and network orchestration for enterprise services, covering all aspects of service lifecycle management over multiple data centres, networks and vendor technologies. Benefits included zero-touch capabilities from order to bill, rapid introduction of innovative, revenue-generating services, reduced total cost of ownership, improved operational efficiencies, and reduced human error supported by service order fulfillment process automation.

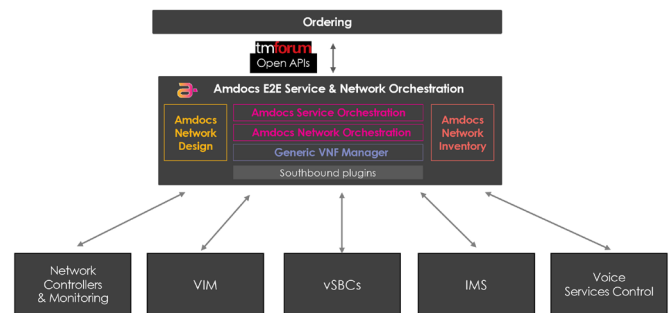


Figure 5 End-to-End service orchestration for enterprise network services

Partnership is key to success

Whether CSPs are on an advanced path to commercialisation or in the earlier stages of conducting trials and gaining experience, Amdocs' expertise in 5G, together with our close collaboration with organisations worldwide, positions us to ensure their success across every stage of the 5G journey. To learn more, including details of Amdocs Intelligent Networking Suite's Key capabilities, view our website. ■

www.amdocs.com

1. G. Brown, "When to launch 5G network slicing", Light Reading, 8th December 2022.
 2. Case study: A1 Telekom Austria Group showcases live end-to-end 5G network slicing orchestration, October 2022, Amdocs. <https://www.amdocs.com/insights/case-study/a1-telekom-austria-group-showcases-live-end-end-5g-network-slicing>
 3. Orange Selects Amdocs as the Monetization Engine for their 5G Experimental Network of the Future. Please follow the link for further info. <https://www.amdocs.com/news-press/orange-selects-amdocs-monetization-engine-their-5g-experimental-network-future>