

case study



SES implements
Amdocs NFV SD-WAN
package solution on
Azure for intelligent
enterprise connectivity



Overview

SES, one of the world's leading satellite operators, is currently undergoing a digital transformation process to modernize and automate its network platforms and implement a single unified, open, standards-based network automation and service orchestration platform to manage its virtual network services over multiple clouds and network resources. The operator's tailored, industry-focused network solutions are powered by a global network comprising a fleet of 70 satellites and extensive terrestrial infrastructure.

By implementing Amdocs' pre-integrated NFV SD-WAN solution powered by ONAP (Open Network Automation Platform) on Microsoft Azure's cloud, SES will benefit from:

- Fast time to market
- Avoidance of massive upfront investment
- A highly scalable, resilient and proven technology solution
- Dynamic and agile service and network management approach

Business challenges

SES seeks to modernize and transform its current network infrastructure into an efficient, scalable virtualized platform, enabling it to offer "intelligent connectivity" and value-added services in a rapid and efficient manner. Until recently, the company's focus for telco and business services was mainly based on providing traditional managed connectivity services. To reflect evolving needs however, these objectives have been updated with the aim of enriching their offerings with innovative Network as a Service (NaaS) offerings such as SD-WAN, WAN optimization, security, Unified Threat Management (UTM) and other highly flexible and scalable cloud-based network services.

SES is the first operator to deliver a differentiated and scalable portfolio of multi-orbit network solutions worldwide. They currently have over 50 satellites in Geostationary Earth Orbit (GEO) and 20 in Medium Earth Orbit (MEO). This enables SES to offer intelligent, resilient, and secure SD-WAN solutions with load balancing across multiple MEO, GEO and other access technologies, in order to deliver cloud-scale, highly available network services.

However, to efficiently deliver and monetize such services, SES understood that both time to market and the cost of service operation and innovation must be cut by simplifying and automating their current lengthy manual service lifecycle management processes.

Business drivers

- **Enhance services portfolio** beyond connectivity with rich set of Network as a Service offerings
- **Reduce time to market** of both service innovation and delivery with more efficient and timely processes
- **End-to-end orchestration** across different network domains for optimized dynamic allocation of resources based on actual needs
- **Create new revenue streams** and increase customer stickiness while reducing costs
- **Increase overall network availability** with intent-based traffic management across all available connections
- **Maximize productivity** by quickly and securely connecting users to applications

The solution

SES implemented Amdocs' pre-integrated NFV SD-WAN package solution to orchestrate and manage SD-WAN, security and other virtual network services. The solution provides an open and extensible platform that reduces the complexity and cost associated with integrating and deploying services across multiple vendor, technology and network domains.

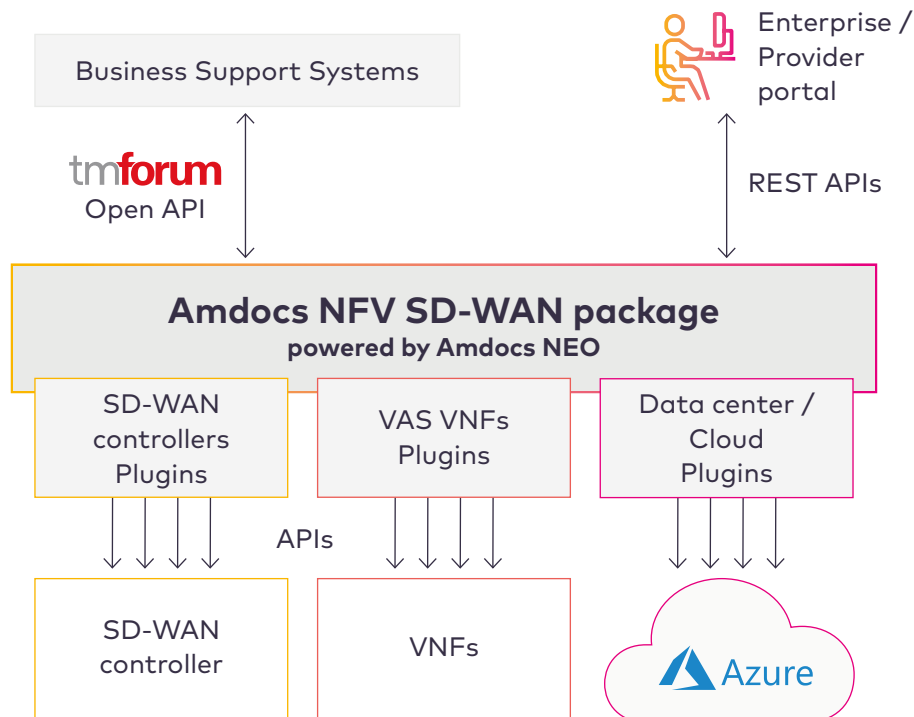
Amdocs' pre-integrated NFV SD-WAN package is based on the cloud-native, open and modular Amdocs Service & Network Automation platform (NEO). This platform provides end-to-end service lifecycle management of hybrid networks and cloud services, from design and creation to orchestration, continuous monitoring and operation. Amdocs NEO is a unified yet modular platform that encompasses traditional service activation and fulfillment functionality, along with cloud and NFV orchestration and advanced network automation capabilities. Leveraging ONAP components and service modeling practices, as well as TMF open APIs, Amdocs NEO empowers service providers to rapidly define, launch, fulfill, operate and assure new offerings that combine organic capabilities (e.g. connectivity) with ecosystem elements while simplifying their operations complexities.

Amdocs' NFV SD-WAN package solution enables service providers to deliver managed SD-WAN and value-added

virtual network services with the benefits of NFV/SDN, public cloud scalability and service automation. Furthermore, as a multi-vendor and multi-domain pre-integrated service orchestration solution, it reduces barriers, accelerates and simplifies the service provider's network transformation journey, while empowering them to offer and monetize managed SD-WAN and other virtual network services with lower investment and risk. It also enables automation of the managed SD-WAN service lifecycle, including service fulfillment, performance control and closed-loop assurance.

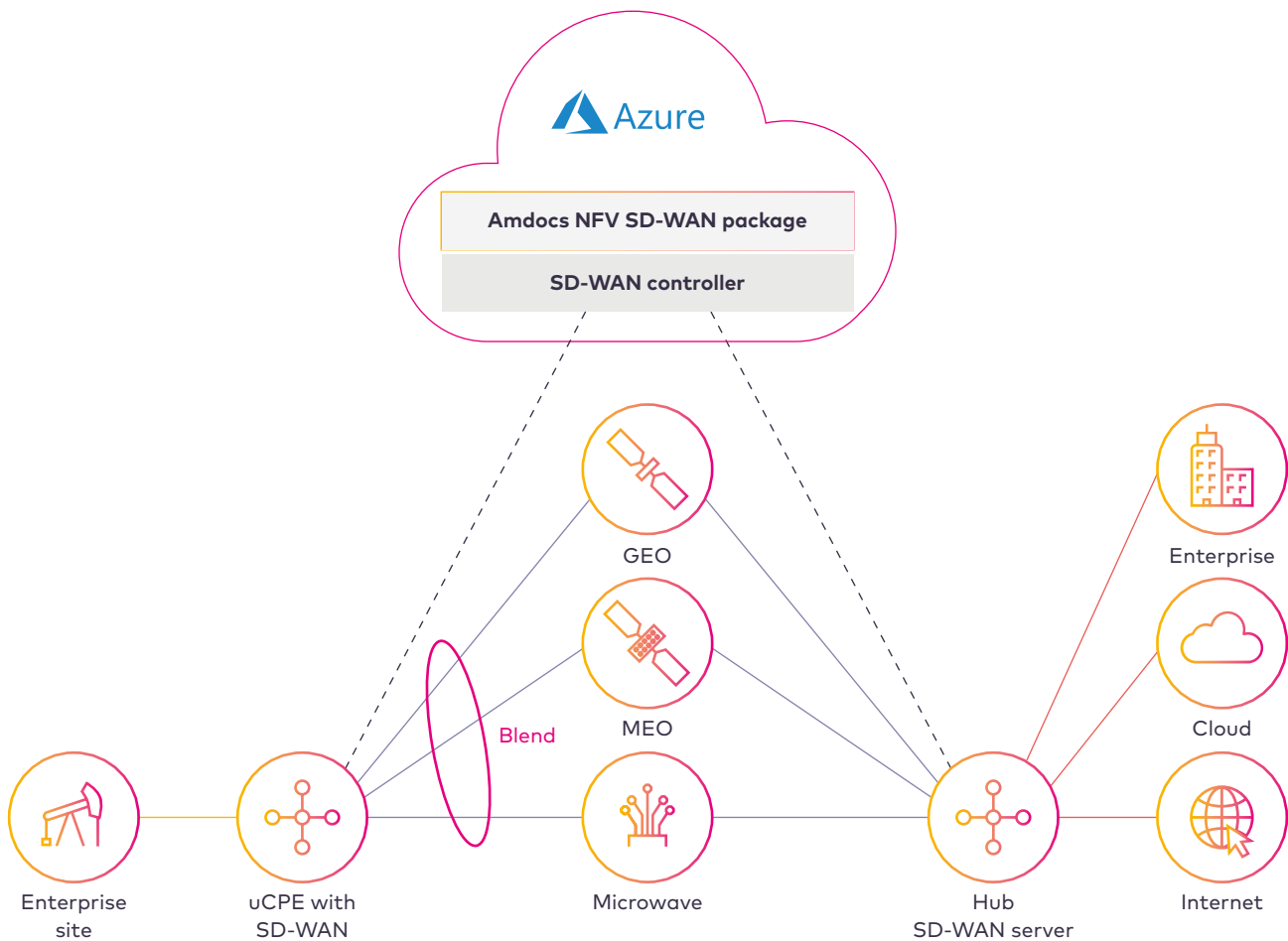
By deploying the Amdocs Service and Network Automation solution, SD-WAN solution and other virtual network functions on Microsoft Azure public cloud, SES leverages the benefits of a highly agile and scalable infrastructure, enabling them to accelerate time to market for managed virtual network services. It also enabled SES to save costs by avoiding the investments normally required to set up and run a solution in their own data center, as well as the associated operational expenses.

Since Microsoft Azure public cloud computing, storage and networking resources can be provisioned in minutes, SES also gained the ability to rapidly scale and continue expanding their offering, capacity and capabilities without compromising innovative service and customer experience enhancement efforts.



As the first satellite network solutions provider to adopt an ONAP-based solution, SES is continuing its leadership in driving open networking initiatives into the satellite industry, advancing its vision to make satellite networks a seamless extension of the global communications ecosystem.

In addition, Amdocs Service and Network Automation solution will enable SES to introduce new innovative managed SD-WAN and other virtual network services over a combination of MEO and GEO satellites, as well as other terrestrial connectivity options. It will also enable unmatched flexibility for traffic policy management, while dramatically increasing customer satisfaction from applications performances.



Key solution capabilities to help SES attain its business goals and deliver these new services include:

- **Hybrid cloud and network platform** for creating, deploying and managing SD-WAN, security and value-added virtual network services
- **End-to-end NFV orchestration** of virtual network services across SES' core network, telco cloud, Azure cloud and customer sites
- **Vendor-agnostic, standards-based service model** for composing SD-WAN service connections, VNF service chaining and all cloud and network resources required to roll out and operate the service
- **Application intent-based traffic steering**, with dynamic load balancing across various WAN connectivity combinations
- **Automated continuous service fulfilment and assurance** through real-time enforcement of VNFs, network and cloud resources, as well as end-to-end service-related policies
- **Single NFV management platform**, enabling management of business customers' network services, as well as of SES's own virtualized network

Business benefits

Amdocs' solution and services enables SES to offer its broadcast, telecom, corporate and government customers extended services such as SD-WAN, WAN optimization, high security, unified threat management (UTM), as well as other flexible and scalable cloud-based virtual network services – all of which can be easily configured, customized and verified over the highly scalable Microsoft Azure public cloud infrastructure. Other key business benefits include:

Automate operations and reduce OPEX

- Allow rapid deployment of new capabilities and services by leveraging network functions virtualization
- Automate network services lifecycle management – increasing productivity and reducing operational costs
- Closed-loop service assurance

Increase revenues

- Enhance service portfolio beyond connectivity with rich set of Network as a Service (NaaS) offerings
- Increase network connectivity with intent-based intelligent traffic management across diverse satellite and other WAN connections options
- Enhance customer stickiness and reduce churn through enhanced customer experience

Slash time to market and accelerate innovation

- Dramatically shorten service introduction cycle by deploying Amdocs pre-integrated NFV SD-WAN package on Azure
- Azure computing, storage and networking resources can be provisioned in minutes, saving costs by avoiding investments for setting up and running the solution in SES's data center and optimizing operational costs
- Introduce new and innovative network and value-added services across both the networks and public cloud through access to Amdocs' rich partner ecosystem of VNFs and onboarding services

Future readiness

Key reasons for SES to implement Amdocs Service and Network Automation solution include its embracement of open-source components, industry standards, open TMF APIs, as well as its agility and scalability. This will enable SES to continuously transform its networks and services operations, while expanding into new applications beyond traditional connectivity.

In addition, the combination of Amdocs's solution's microservices-based architecture together with a DevOps approach enables CSPs to rapidly update their systems to support new SD-WAN, security and VNFs plugins in order to enhance their service offering. As a result, services can be released in short cycles, with development and test taking several days as opposed to months, thereby accelerating time to market and providing complete transparency to existing customers without impacting the service.

Amdocs' solution is aligned with the MEF (Metro Ethernet Forum) SD-WAN service attributes and service definitions technical specification, with the purpose of simplifying integration of multiple SD-WAN solutions into complex multi-technology domain environments using standardized SD-WAN lifecycle service orchestration and open APIs.

about SES



SES is the world's leading satellite operator with over 70 satellites in two different orbits, Geostationary Orbit (GEO) and Medium Earth Orbit (MEO). It provides a diverse range of customers with global video distribution and data connectivity services through two business units: SES Video and SES Networks.

SES Video reaches over 351 million TV homes, through Direct-to-Home (DTH) platforms and cable, terrestrial, and IPTV networks globally. The SES Video portfolio includes MX1, a leading media service provider offering a full suite of innovative services for both linear and digital distribution, and the ASTRA satellite system, which has the largest DTH television reach in Europe. SES Networks provides global managed data services, connecting people in a variety of sectors including telecommunications, maritime, aeronautical, and energy, as well as governments and institutions across the world. The SES Networks portfolio includes GovSat, a 50/50 public-private partnership between SES and the Luxembourg government, and O3b, the only non-geostationary system delivering fibre-like broadband services today.

Further information is available at: www.ses.com

about amdocs

Amdocs' purpose is to enrich lives and progress society, using creativity and technology to build a better connected world. Amdocs and its 25,000 employees partner with the leading players in the communications and media industry, enabling next-generation experiences in 85 countries. Our cloud-native, open and dynamic portfolio of digital solutions, platforms and services brings greater choice, faster time to market and flexibility, to better meet the evolving needs of our customers as they drive growth, transform and take their business to the cloud. Listed on the NASDAQ Global Select Market, Amdocs had revenue of \$4.1 billion in fiscal 2019. For more information, visit Amdocs at www.amdocs.com.

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