

case study



leading media
& communications
service provider
achieves rapid
time to market for
SD-WAN services

Working with Amdocs, this leading North American media and communications service provider successfully brought commercial **SD-WAN services into production in under seven months**, enabling both greater scale and increased cost efficiencies. They are now able to offer multi-site mid-market and enterprise customers a powerful and scalable, yet cost-effective alternative to MPLS. Future-looking systems and processes are now in place to enable this operator to expand beyond SD-WAN to network-as-a-service (NaaS) offerings that combine network on demand with value-added services (VAS), providing consumer-like immediacy, choice and control to business customers.

Business drivers

One of the company's key business objectives is to achieve **B2B market leadership** by acquiring the ability to rapidly deploy dynamic, secure and lower-cost business services. A critical pillar of this strategy is software-defined wide area network (SD-WAN) – an automated, programmable and integrated service comprising a layer 3 virtual private network (VPN) integrated with internet access as well as security, quality of service and traffic steering services.

This operator has four major commercial goals for their SD-WAN services:

- Compete against operators delivering business services on dedicated yet expensive IP/MPLS VPNs
- Benefit from the inherent advantages of SD-WAN: time to market, scalability, guaranteed quality of service and reduced costs
- Deliver a business services customer experience that surpasses customer expectations
- Use the SD-WAN infrastructure to deliver a range of value-added services such as security

Enterprise SD-WAN services

The enterprise SD-WAN offering combines dynamic, secure IP-VPN, application-aware routing and a stateful network firewall. The software-defined service provides the option to load balance and as appropriate to route a service over the public internet via a carrier-class IP-backbone instead of IP/MPLS, leveraging existing broadband and fiber-based connectivity solutions.

The SD-WAN platform enables business customers to augment or replace their existing network with an alternative that provides increased bandwidth, reliability and flexibility for better cost per mbps economics. With secure direct Internet access at the branch, connectivity and performance to the cloud and SaaS applications are improved. Enterprise-class SD-WAN accelerates performance across the entire enterprise WAN and minimizes the need and cost of backhauling traffic through centralized points of access such as corporate data centers.

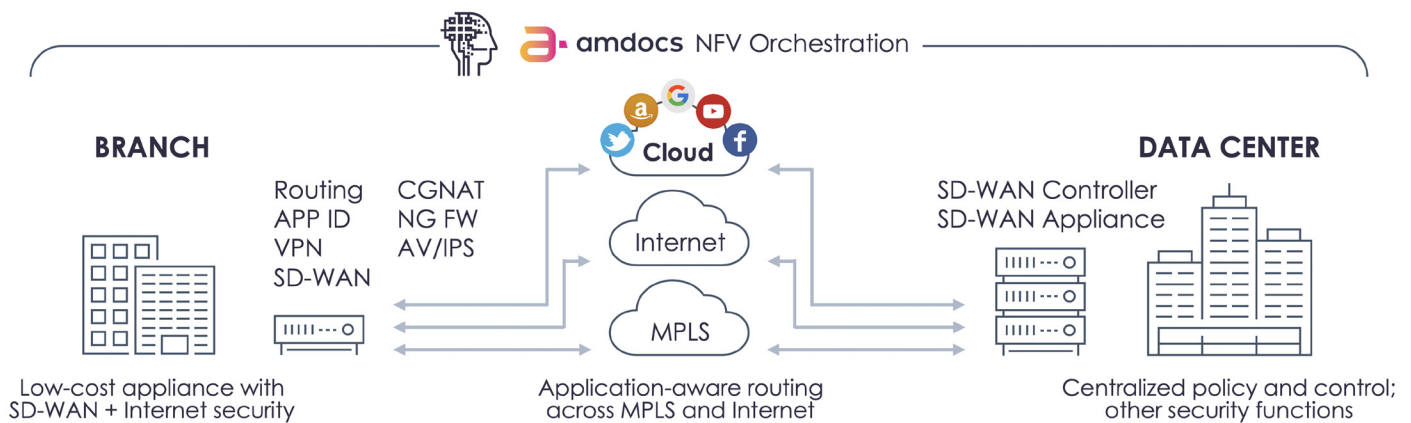


Fig. 1 – SD-WAN solution bundled with virtual Firewall and other add-on services such as unified threat management, WAN optimization and virtual routing functions, orchestrated by Amdocs NFV orchestration and fully integrated with BSS/OSS from sales to cash

The challenges

Legacy IP/MPLS WAN technology is expensive and outstripped by demand for bandwidth. Competing in the rapidly evolving and highly-competitive business market, it was critical for this operator to gain the ability to introduce the new service within a very tight timeframe.

To deliver the experience that enterprise customers expect, the company also needed full service visibility and control as well as simplified management of services and resources, so they could capture all the Opex benefits of SD-WAN, such as avoiding truck rolls, without sacrificing security.

In addition, service providers are looking for ways to increase customer's stickiness and to elevate themselves higher in their enterprise customers' value chain by adding / bundling value-added services (VAS) on top of connectivity.

The solution

Leveraging our extensive experience and knowhow, Amdocs is the chosen partner to support this operator's NFV journey, starting with Amdocs' pre-integrated NFV SD-WAN package. This package scales and expands into Amdocs' modular and programmable NaaS solution with the addition of an integrated self-service portal and VNF marketplace, enabling the operator to rapidly design, deploy and monetize its NaaS offerings. Our leading NFV portfolio brings agility and efficiency through orchestration, fulfillment and automation capabilities. The portfolio integrates existing business and operations support systems, as well as a wide array of virtualized service functions from a vibrant partner ecosystem.

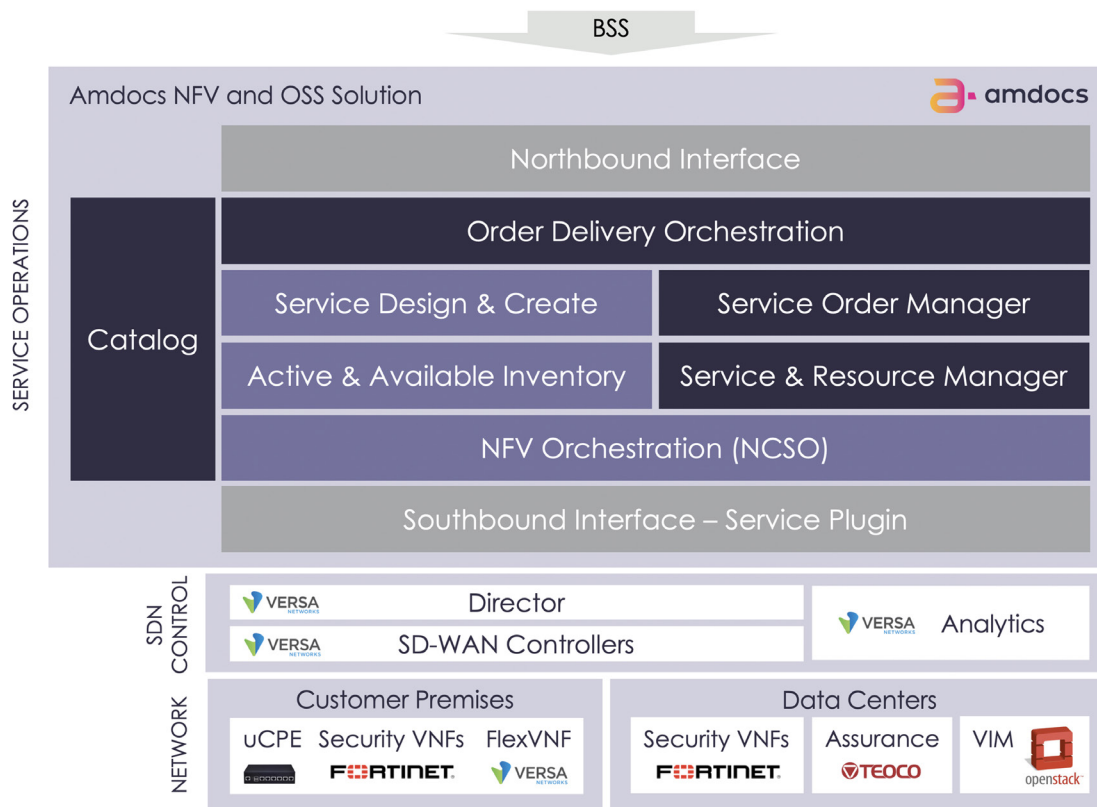


Fig. 2 – SD-WAN solution architecture

Highlights of the pre-integrated solution, which incorporates components from Amdocs' NFV ecosystem partners, include:

- End-to-end orchestration to support next generation network services
- Automated VNF onboarding and service design for rapid innovation
- Catalog-based, model-driven processes to minimize time to market
- NFV Orchestration for instantiation, activation and verification
- Automated fulfillment of underlay connectivity with new overlay services
- Active and Available Inventory for unified, real-time network data and views, including SD-WAN service instances and the supporting virtual, logical, and physical network underlays
- End-to-end service assurance provided by TEOCO, verifying that customer SLAs are met and providing visibility of the real-time operational status of services to the end-customer
- Integration with Versa's secure SD-WAN, Fortinet's security VNFs including NextGen FortiGate Firewall, and TEOCO's active service monitoring for service assurance functions
- Integration with the existing OSS stack

Implementation of Amdocs' NFV portfolio represents the first step in the journey towards offering a combination of network on-demand and virtual services to any tier of business customers, including enterprise, mid-market and SMB. Primary use cases for the model-driven, IP-VPN-based overlay service include service fulfillment, service bandwidth modification and service termination.

Amdocs NFV orchestration supports current and future virtual network functions and services, such as managed routers and security services, as well as network-as-a-service offerings. It also forms a key part of joint development of a network automation platform which is designed to rapidly deploy, orchestrate and automate business services.

Lack of standardization in the industry, especially around VNFs, creates some challenges which the Amdocs solution addresses. One of the key architecture items in both Amdocs NFV solution and in ONAP is the provision of a toolset to begin standardization around VNF definitions, including how they operate, to enable a truly

vendor agnostic platform and accelerate time to market with ease of on-boarding and faster delivery.

Business benefits

- **Scalability:** Amdocs' automation and simplification of the delivery process supports growth in volume and complexity of business orders. The volume of orders continues to rise to **more than 3,000 per month** without the need for a corresponding increase in human resources.
- **Efficiency:** Automation has delivered a **65% reduction** in the end-to-end process, reducing both costs and time to market.
- **Agility:** The agile and dynamic development process with Amdocs resulted in a seven-month time to market from design/inception to production, enabling the operator to bring the new SD-WAN service to market very quickly – on time and within budget.
- **Vendor-agnostic:** Amdocs' multi-domain, multi-vendor orchestration platform is open to any VNF from any vendor, avoiding vendor lock-in for both themselves and their customers. VNFs can be deployed at the customer premises, the data center or on the public cloud, as required by the customer.
- **Future readiness:** Amdocs' solution will support the operator's ongoing virtualization and modernization plans. As their NFV journey vision unfolds, Amdocs NFV orchestration provides a platform that can support new virtual services to any tier of business (services like virtual firewalls, UTM and many more) without the need for manual effort to integrate with the BSS layer or with previous NFV use cases.

This media & communications service provider now has a next generation network services platform in place that accelerates service fulfillment today, thereby enhancing their competitiveness in the business market, as well as ensuring they are ready to rapidly deliver the new virtual services of the future.

Order volume continues to rise to 3k/month, without an increase in human resources

65% reduction in e2e process through automation

About Fortinet

Fortinet (NASDAQ: FTNT) secures the largest enterprise, service provider, and government organizations around the world. Fortinet empowers its customers with intelligent, seamless protection across the expanding attack surface and the power to take on ever-increasing performance requirements of the borderless network – today and into the future. Only the Fortinet Security Fabric architecture can deliver security without compromise to address the most critical security challenges, whether in networked, application, cloud or mobile environments. Fortinet ranks #1 in the most security appliances shipped worldwide and more than 360,000 customers trust Fortinet to protect their businesses. Learn more at www.fortinet.com, the Fortinet Blog, or FortiGuard Labs.

About TEOCO

TEOCO is a leading provider of analytics, assurance and optimization solutions to over 300 communication service providers (CSPs) and OEMs worldwide. Our solutions enable the digital transformation of CSPs while enhancing their network QoS, improving their customer experience and reducing their operational costs. Through advanced analytics, TEOCO solutions provide actionable and measureable insights into network and customer behavior. For more information visit www.teoco.com

About Versa Network

Versa Networks is the innovator of Secure Cloud IP architecture, a next-generation software platform that delivers integrated cloud, networking and security services. Versa's solution, with an unrivaled depth of features and capabilities, enables enterprises to transition off of legacy WANs to achieve business agility, branch modernization and TCO advantages. The company has transacted over 150,000 software licenses through service providers, partners and enterprises globally. Versa Networks is privately held and funded by Sequoia Capital, Mayfield, Artis Ventures and Verizon Ventures. For more information, visit www.versa-networks.com or follow Versa Networks on Twitter @versanetworks.

about amdocs

Amdocs is a leading software and services provider to communications and media companies of all sizes, accelerating the industry's dynamic and continuous digital transformation. With a rich set of innovative solutions, long-term business relationships with 350 communications and media providers, and technology and distribution ties to 600 content creators, Amdocs delivers business improvements to drive growth.

Amdocs and its 25,000 employees serve customers in over 85 countries. Listed on the NASDAQ Global Select Market, Amdocs had revenue of \$4.0 billion in fiscal 2018.

For more information, visit Amdocs at www.amdocs.com

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