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Enterprise service orchestration

SD-WAN use case

November 2020

The need for enterprise service orchestration

The global enterprise market is worth billions of dollars, and most communications service providers aspire to take advantage of this potential additional revenue¹.

For many, this revenue comprises basic fixed and mobile connectivity, but some are offering advanced enterprise services such as Software-Defined Wide Area Network (SD-WAN) and Wide Area Network (WAN) optimization, and even services beyond communications such as enterprise security.

One of the challenges for service providers is positioning with hyperscalers such as Google Cloud, AWS and Azure, and ICT vendors such as Microsoft, Citrix and Google. For CSPs to flourish they need to adopt the models and approaches of these well-established incumbents by improving agility and service offerings with a much lower operational cost base.

Network virtualization creates a flexible environment to enable this. The ability to dynamically manage and automate enterprise services – enterprise service orchestration – is the key to delivery.

What is SD-WAN orchestration?

SD-WAN orchestration uses network virtualization software to control the software-defined networking controller (SDN-c) automating the provisioning and control of the service. By decoupling the network hardware from its control mechanism, SD-WAN enables enterprises to flexibly replace or augment existing multiprotocol label switching (MPLS) connectivity with internet broadband or wireless (4G/5G) connectivity, simplifying management and operation and significantly reducing costs.

There are three distinct phases in the service lifecycle: design, deploy and operate. The design phase drives the acceleration of new service introduction, the deployment phase enables new products and services to be ordered and deployed efficiently, and the operate phase employs closed-loop service assurance and AI analytics to manage network and service performance.

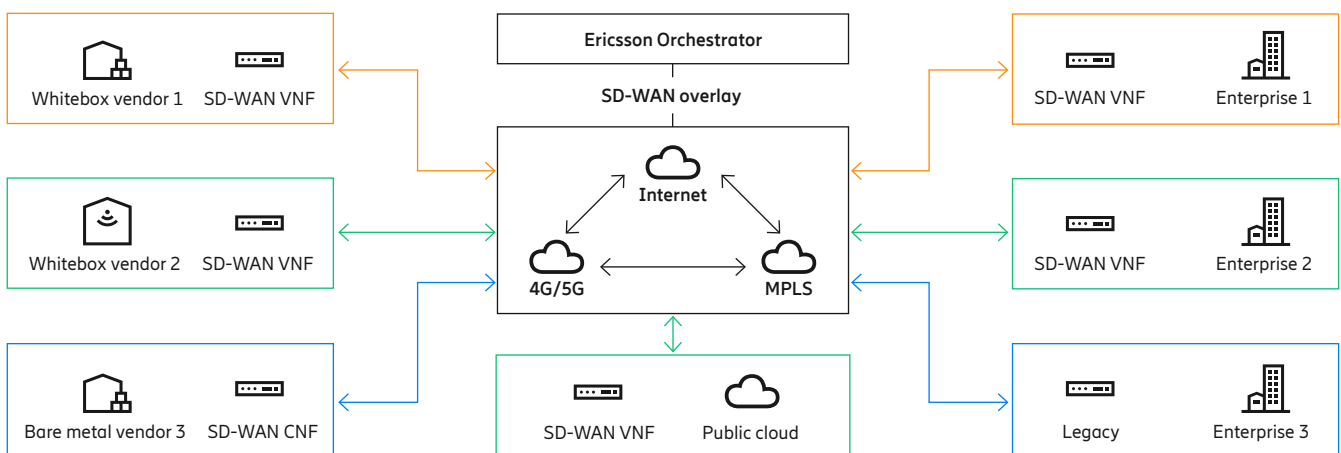
Understanding the business problem

As a result of changes driven in part by the adoption of “always-on” cloud-based services, enterprises expect flexibility in both service delivery and connectivity. They are no longer willing or able to wait for an incumbent operator to deliver connectivity to their own timescale.

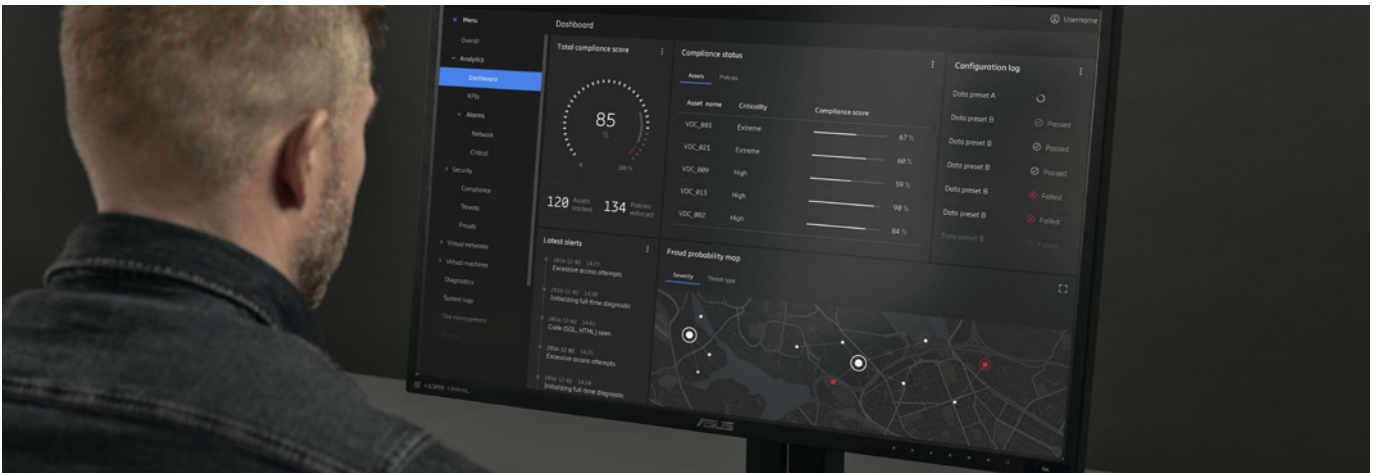
The business-critical nature of connectivity means that enterprises also expect improved service resilience to protect their operations, and have recognized the cost benefits of standardizing services nationally and internationally. Many also want to move away from or augment their dedicated, expensive MPLS links in favor of lower cost, more scalable dedicated internet links or even 5G fixed-wireless access (FWA) connectivity for their businesses.

Finally, the COVID-19 pandemic has driven many enterprises to distribute their organizations with vast numbers of new home-based workers, and they want to be able to provide these employees with the same resilience and security as they could expect from working in the office.

Figure 1. Enterprise SD-WAN



¹The SD-WAN/NFV market is growing at 36 percent CAGR, with a projected value of USD 7.3 billion by 2024. Source: Omdia



SD-WAN orchestration enables new services and creates new revenue opportunities.

Ericsson's solution

Ericsson's SD-WAN orchestration solution comprises of the Ericsson Orchestrator, including the Service Orchestration, Cloud Manager, Policy Framework, Service Configuration Management and WAN Orchestration components to orchestrate third-party SD-WAN solutions.

These SD-WAN orchestration solutions are typically deployed as virtual network functions (VNFs) which can be deployed at customer premises (uCPE), secure access service edge (vCPE) or on public cloud to provide an SD-WAN overlay.

In addition, Ericsson have pre-integrated the Ericsson Orchestrator

with several leading SD-WAN vendors including Viptela, Versa and Velocloud. This pre-integration accelerates the implementation of enterprise SD-WAN services with these vendors.

The impact of SD-WAN orchestration

An effectively orchestrated SD-WAN solution can drive significant cost savings as well as enabling new enterprise services. Analysys Mason published an SDN business case that predicted a 4 percent rise in EBIDTA and an average opex saving of 47 percent.

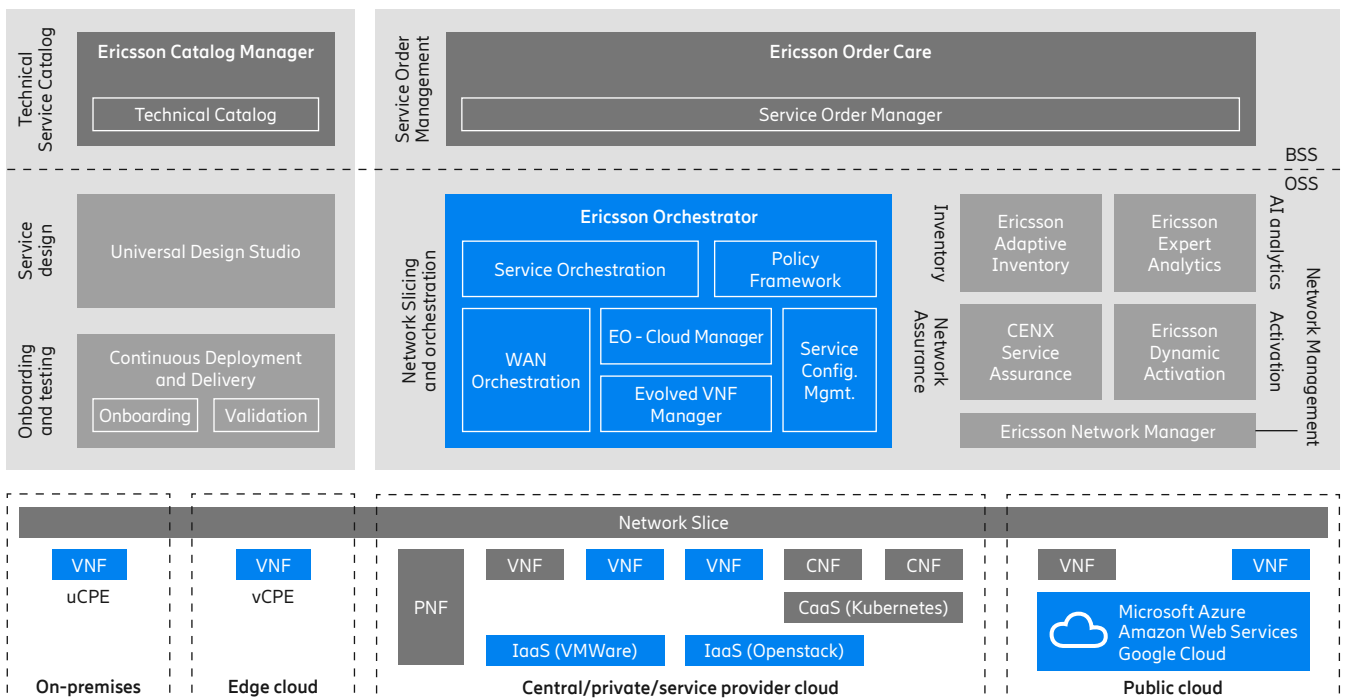
An Ericsson tier-one North American service provider saw a 30 percent reduction in connectivity costs with

SD-WAN and a reduction in order fulfilment time from an average of 21 days to minutes. New service creation was reduced by more than 90 percent, significantly improving TTM for launching new services.

These are significant operational savings that enable service providers to compete effectively in the Small and Medium Enterprise (SME) market.

SD-WAN orchestration also enables agile new services, such as dynamic or short-term bandwidth changes or resilience for critical events, creating new revenue opportunities that weren't possible before implementing an orchestrated SD-WAN overlay.

Figure 2. Ericsson Dynamic Orchestration – Portfolio – SD-WAN Orchestration highlighted



Ericsson enables communications service providers to capture the full value of connectivity. The company's portfolio spans Networks, Digital Services, Managed Services, and Emerging Business and is designed to help our customers go digital, increase efficiency and find new revenue streams. Ericsson's investments in innovation have delivered the benefits of telephony and mobile broadband to billions of people around the world. The Ericsson stock is listed on Nasdaq Stockholm and on Nasdaq New York.

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