



Assuring the Promise of SD-WAN

Introduction

The drive to automation is rapidly progressing as operators and enterprises adopt software-defined networking (SDN), network functions virtualization (NFV), and cloud services. SD-WAN is a logical outgrowth of virtualization, for it allows enterprises to tailor the wide area network (WAN) around business-critical applications.

Without standards, the SD-WAN market has been hindered by a lack of multi-vendor interoperability. SD-WAN managed service providers (MSPs) are spending millions of dollars on integration and normalization to support the many SD-WAN products, and the myriad of virtualized network functions (VNFs) that provide value-added capabilities.

Deployment of virtualized SD-WAN VNFs are further complicated because of the wide variations of NFV Infrastructure (NFVi), ranging from public cloud “as a service” to universal CPE. On top of that, traditional hardware-centric testing tools and platforms are inadequate to address NFVi variability. Confusion and complexity have reigned.

Assuring the Promise of SD-WAN

SD-WAN Standardization is emerging

A lack of common definition and standards has complicated multi-vendor deployment of SD-WAN and fostered market fragmentation. MEF recently introduced the industry's first SD-WAN service standard (MEF 70) that will bring a measure of order to the chaotic environment of SD-WAN.

Operators and vendors alike are incentivized to deploy the new standard to address diametric challenges.

The adoption of emerging MEF standards may be accelerated by certification. By proactively validating compliance with the vendors may focus on high-value-added and differentiated features.

A new methodology is needed to assure SD-WAN integrity

In the midst of the highly fragmented SD-WAN market, a comprehensive SD-WAN testing and validation approach is required to ensure the integrity and the delivery of SD-WAN, especially in the virtualized environment.

Existing test, validation, and assurance tools are oriented towards testing the underlying infrastructure, including local area network (LAN), WAN, and wireless technologies. Introduction of virtualization poses a new set of challenges to assess the behavior of dynamic VNFs, service chains, and services. As NFVi is increasingly deployed, enhanced test methods and tools are required to address the wide variation of NFVi.

Ever-changing threats require continuous validation to ensure that security and protections solutions function as expected. At the same time, CSP/MSP customers (in other words, enterprise end users) are reducing costs by leveraging public resources such as the internet and public cloud services further increasing security threats. New methodologies are needed to assess security counter-measures and application ID policies, and to rapidly validate the security posture and ensure application policy rules are enforced.

Consequently, it's absolutely critical that a trusted, neutral third party authority validate application and network performance, along with vendor claims in a normalized manner—and, ideally, certify conformance with MEF standards.

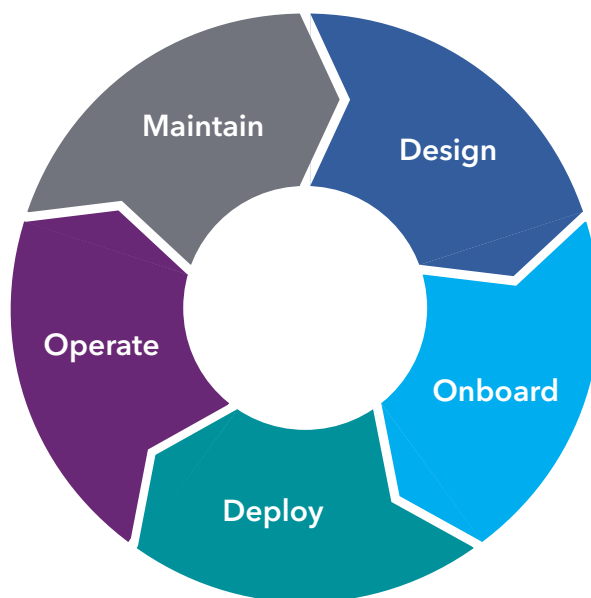
Delivering value in the SD-WAN environment

The lack of standards and the dynamic nature of the virtualized environment presents vendors with their own set of challenges. The advent of the cloud has altered customer expectations for software-defined products, by accelerating design, deployment, and maintenance cycles for all dynamic services beginning with SD-WAN.

At the same time, the rapid growth of the SD-WAN market has resulted in a proliferation of products with a broad range of functional and performance claims. Comprehensive SD-WAN testing and validation allow vendors to highlight their value proposition to stand out in an increasingly crowded field. In addition, the impact of "SD-WAN Washing," where vendors simply re-brand their existing products as SD-WAN, is minimized. Operator confidence will subsequently rise through sound, independent validation.

In order to accelerate development and deployment, vendors must be able to rapidly test their SD-WAN against a wide range of applications, networking technologies, and policies, to deliver value to their customers. Highly agile testing enables the vendor to perform "What If" evaluations and to efficiently optimize the operational environment for specific applications.

Spanning the Lifecycle



Comprehensive testing and validation for SD-WAN

Spirent has introduced a unique approach to testing, validation, and assurance for the increasingly complex, virtualized, and automated SD-WAN environment. Our methodology allows comprehensive testing and validation across two key dimensions, the lifecycle and the stack.

Spirent’s unified approach carries our award-winning testing and validation technology from the lab into the operational environment with both physical devices and virtual test agents to quickly and easily automate end-to-end assurance across the entire service lifecycle. In the design and development phases, Spirent affords a comprehensive testing platform to characterize SD-WAN capabilities, facilitate more efficient onboarding of VNFs, and provide endpoint testing. In addition, Spirent’s industry-leading platform supports a broad range of WAN and LAN underlays.

At the same time, our extensive test suite traverses the stack to validate the behavior of the infrastructure layer, characterize the performance of applications and service chains in the virtualization layer, and provide service-layer visibility for policies and SD-WAN functions, as well as the applications being supported. Spirent, moreover, continuously assesses and validates that security applications are behaving as expected.

Partner with the experts

As the global leader in innovative testing and validation in the virtualized network, Spirent collaborates with MEF Certification Committee and contributes to the MEF SD-WAN industry standards.

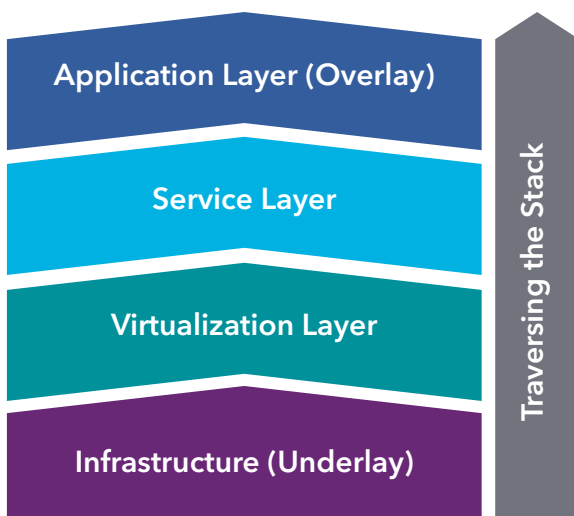
This has enabled Spirent to earn the credibility to become the neutral testing authority assisting service providers and vendors along their SD-WAN journey.

For SD-WAN managed service providers, we enable comprehensive testing, validation, and assurance to facilitate the journey towards multi-vendor SD-WAN. Vendors may demonstrate SD-WAN compliance and highlight their high-value-added features. Both operators and vendors will also be able to exploit Spirent’s industry-leading WAN (and LAN) testing and assurance across domains.

What’s more, by combining passive monitoring with active testing, Spirent enhances service assurance by giving end-to-end visibility from the end-user’s perspective. Armed with increased confidence that SD-WAN will operate in the virtualized environment, service providers will streamline qualification and deployment of SD-WAN and achieve faster time-to-market.

For MSPs, System Integrators (SIs), and other vendors who seek credible validation of standards compliance of their product claims, receiving certification from a trusted neutral test authority can be a powerful differentiator. With our SD-WAN Test Suite automated with industry-leading Spirent TestCenter (STC) and VisionWorks™ platforms, improved agility and reduced costs add yet another degree of competitive advantage to a vendor’s portfolio.

Traversing the Stack



Assuring the Promise of SD-WAN

About Spirent Communications

Spirent Communications (LSE: SPT) is a global leader with deep expertise and decades of experience in testing, assurance, analytics, and security, serving developers, service providers, and enterprise networks.

We help bring clarity to increasingly complex technological and business challenges.

Spirent's customers have made a promise to their customers to deliver superior performance. Spirent assures that those promises are fulfilled.

For more information, visit:
www.spirent.com

You promise a rapid, trustworthy evolution to SD-WAN

Let Spirent assure you fulfill your promise

As an active partner in developing many industry standards and testing protocols, Spirent is uniquely qualified and emerging as trusted advisors helping leaders in nearly every technical field expedite innovation, accelerate time-to-market of new products and services, tap into new revenues and savings, improve customer experiences, and ultimately, fulfill their promises to their customers of assured performance. Contact us to learn how we can help you assure your SD-WAN journey.

Spirent SD-WAN Testing and Validation Benefits

- Neutral, testing authority—earning the trust of SD-WAN managed service providers and vendors by strategically applying test and validation to achieve multi-vendor SD-WAN
- Comprehensive methodology and Test/Validation/Assurance portfolio spanning the entire lifecycle, from the lab to operational network
- Validate and assure both the underlay WAN services, SD-WAN overlay, and end-to-end application behavior for both physical and virtualized environments
- Exclusive MEF SD-WAN Partner authorized to certify compliance with the industry first SD-WAN standard (MEF70)
- Readily allow 'What If' testing to optimize SD-WAN configuration and policies, as well as deployment options
- Characterize the configuration and deployment for protection and security solutions, to ensure they behave as expected in the face of ever-changing threats
- Highly automated, virtualized portfolio enables rapid deployment, configuration, and updates in the dynamic virtualization environment, offering agility, scalability, and reduced TCO



Contact Us

For more information, call your Spirent sales representative or visit us on the web at www.spirent.com/ContactSpirent.

www.spirent.com

Americas 1-800-SPIRENT
+1-800-774-7368 | sales@spirent.com

Europe and the Middle East
+44 (0) 1293 767979 | emeainfo@spirent.com

Asia and the Pacific
+86-10-8518-2539 | salesasia@spirent.com