ISG Provider Lens™

Network - Software Defined Solutions and Services

Managed Wan Services

U.S. 2019

Quadrant Report

A research report comparing provider strengths, challenges and competitive differentiators

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Sprint Business

June 2019

About this Report

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The research and analysis presented in this report includes research from the ISG Provider Lens™ program, ongoing ISG Research programs, interviews with ISG advisors, briefings with services providers and analysis of publicly available market information from multiple sources. The data collected for this report represents information that was current as of April, 2019. ISG recognizes that many mergers and acquisitions have taken place since that time but those changes are not reflected in this report.

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ISG Provider Lens™

ISG Provider Lens™

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EXECUTIVE SUMMARY

Existing managed LAN and WAN services, multiprotocol label switching (MPLS) and related technologies form the backbone of the enterprise customer installed base of telcos and other communication services providers and account for most of the revenues they generate worldwide. This trend, however, has been rapidly changing. The software-defined network (SDN), which is closely related to network function virtualization (NFV) and software-defined WAN (SD-WAN) technologies and services are evolving and rapidly penetrating the market. A similar trend exists with several related network services such as performance assurance (management), managed networks and devices (MND) and 4G and 5G mobility (4G/5G) with associated additional (non-core) mobile services based on those faster mobile data stream standards, along with their triggers and influences. The main factors that driver this process of rapid change for enterprises are:

Growing flexibility and agility: Enterprises have become more focused on improving the integration, automation, orchestration and management of network resources and processes. This has evolved to encompass NFV and has led to software-defined networking in a wider sense. This trend is being driven by enterprises' desire to seamlessly add applications and network resources in order to meet business and user goals more efficiently and securely without creating silos or depending on vendors. This is often expressed by the business itself as "increasing flexibility and agility."

Increasing customer satisfaction while increasing sales: The ability to respond quickly and seamlessly to customer enquiries and quickly provide (often automatically) new services via SDN helps to elevate client experience and boost sales.

Reduce costs and improve usage efficiency: Enterprises can improve the utilization efficiency while reducing network usage costs even beyond the savings achieved by adopting an NFV strategy. This is particularly relevant with the explosion of data usage in mobile devices, often in areas that are not business critical, and while using social media applications or other related services. Traffic can be routed over lower cost connections and at reduced reliability and quality levels automatically via software-defined pathways with little or no human interaction involved.

The aforementioned factors, together with cloud networks, have been driving significant changes to networks and their operations over the past 30 years. Some telecommunication service providers, such as AT&T, have announced plans to make at least 75 percent of their networks SDN-compliant and functional by 2022. Others have introduced SD-WAN implementations to reap the benefits in a shorter term.

Many service providers that are reviewed in this study are involved in pilot projects and are often converting them into production-level deployments. Some have already concluded these activities or have demonstrated many such instances on behalf of their clients. This progression, coupled with the relative newness of SDN as a whole, leads ISG to expect that many of the companies which are currently categorized as either Product Challengers or Market Challengers in this study will be able to improve their positioning over the course of the year to enter leadership positions in their respective segments.

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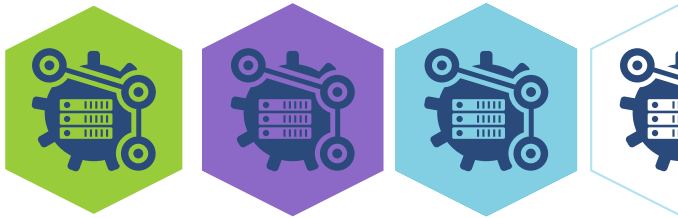
It must be noted that significant volatility exists in the constellation of market providers, partly due to the multitude of mergers and acquisitions that occurred during the last 18 months. This is set to continue and may even increase during the remainder of 2019 as SDN becomes mainstream.



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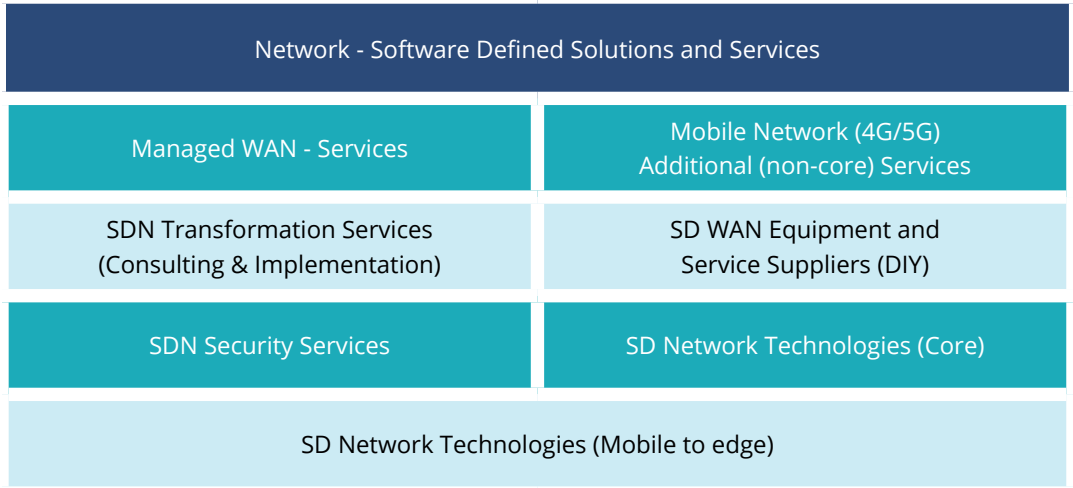
Introduction

Simplified illustration



Source: ISG 2019

Definition

This ISG Provider Lens™ examines the different kinds of network offerings related to software-defined networking, (SDN, SD-WAN and associated security, core-branch and mobility service offerings related to those segments) in the U.S. It also assesses the more traditional managed WAN market offerings. For users, both markets are extremely important. This study accounts for changing market requirements and provides a consistent market overview of the segments. It also gives concrete decision-making support to help user organizations to evaluate and assess the offerings and performance of providers.

The areas described within the following section are associated with SDN and more traditional managed WAN provisioning:

Definition (cont.)

Scope Of The Report

Managed WAN Services

Managed WAN services cover the features and functionality that carriers offer in their WAN and at the customer point of demarcation. They are a collection of value-added services that offer monitoring, reporting, security and outsourced customer-premises equipment (CPE) functions. Many enterprises see managed WAN services as a means to outsource IT functions and purchase them along with consulting and professional services to assess, design and implement their enterprise networks. At the basic level, the managed WAN services offered by carriers provide monitoring and alerts for critical problems such as network outages. Higher tiers of service can add configuration management, proactive troubleshooting and trouble resolution, service-level agreement (SLA) management, more sophisticated and granular monitoring and reporting, on-the ground CPE installation and hardware support to ensure that the CPE software is up to date and configured correctly, and the overall lifecycle management. This section should cover all the major suppliers of managed WAN services for enterprises. It covers all the major suppliers of managed WAN services for enterprises.

Mobile Network (4G/5G) Additional (non-core) Services

Fifth generation (5G) mobile networks and wireless systems are the next telecommunication standards after the current long-term-evolution (LTE) or 4G technology, operating in the millimeter wave bands (28, 38, and 60 GHz). 5G is aimed at a higher capacity than the current 4G, which would allow for an increased density of mobile broadband users and support more device-to-device, reliable and massive machine communications. It is also aimed at lowering latency and battery consumption compared to 4G equipment and is targeted at the internet of things (IoT). This segment covers specific mobility-targeted services or solutions, applications, management systems and methods, end-device control and management and related services. These services are either offered by service providers or suppliers as discrete solutions or as modules that will integrate with or rely on SDN or SD-WAN.

This section should cover all the suppliers of these additional services that make use of software-defined systems via LTE/4G or 5G delivery. **It does not cover the core licensed mobile telephony/data services themselves.**

Definition (cont.)

SDN Transformation Services (Consulting & Implementation)

SDN and SD-WAN provides the benefits of SDN technology to traditional hardware-based networking and is considered complementary to NFV. It is an overlay architecture with a networking foundation that is much easier to manage than legacy WANs. It essentially moves the control layer to the cloud and in the process, centralizes and simplifies network management. This overlay design abstracts software from hardware, enabling network virtualization and making the network more elastic. SD-WAN architecture reduces recurring network costs, offers network-wide control and visibility, and simplifies the technology with zero-touch deployment and centralized management. The key aspect of the SD-WAN architecture is its ability to communicate with all network endpoints without the need for external mechanisms or additional protocols. Suppliers have been increasingly active as advisors/consultants as well as implementation enactors of managed services provision and to supply complete solutions to enterprises. Consulting companies, large vendors and managed network services providers have all been actively involved in offering SD-WAN as managed service packages in this space (independently or as part of partnership/consortium deals).

This quadrant should cover all the advisory/consulting, hardware and software, management/reporting tools, applications and services associated with delivering SD-WAN to enterprises, starting from consulting to managed services delivery.

SD-WAN Equipment and Service Suppliers (DIY)

SD-WAN provides the benefits of SDN technology to traditional hardware-based networking. It has an overlay architecture with a networking foundation that is much easier to manage than legacy WANs. It essentially moves the control layer to the cloud and then centralizes and simplifies network management. This overlay design abstracts software from hardware, enabling network virtualization and making it more elastic. SD-WAN architecture reduces recurring network costs, offers network-wide control and visibility, and simplifies the technology with zero-touch deployment and centralized management. The key aspect of the SD-WAN architecture is its ability to communicate with all network endpoints without the need for external mechanisms or additional protocols. Suppliers have been active in selling directly SD-WAN solutions to enterprises for their “DIY“ (enterprise owned and non-managed) implementations. They are also partnering more with licensed telco/service providers to offer delivery packages in this space.

This section should cover all hardware and software, management/reporting tools, applications and services associated with delivering SD-WAN for enterprise-owned operations.

Definition (cont.)

SDN Security Services

An SD-WAN is a logical overlay network that encompasses any WAN transport — public, private, even LTE/4G or 5G, and is independent of any single carrier or service provider. The overlay occurs between any two SD-WAN nodes, called edges, that can be deployed at the branches and/or data centers. A cloud- delivered variation extends the overlay to any cloud point-of-presence (PoP) or data center. A key value in security services for the network is that SD-WAN unifies secure connectivity over all transports while supporting transport independence. There is no need to use/provide a different security mechanism for different transport types or to depend on the transport provider for their secure network. The network overlay can support a wide range of security capabilities and can enhance its inherent security capabilities by adding advanced security systems in the form of discrete overlays, services or applications. It can be managed both automatically and centrally as well as at local levels.

This section should cover all suppliers of software and/or hardware associated with additional and discrete security services based on SDN or SD-WAN systems.

Network Technologies Suppliers (Core)

SDN technology is a networking approach that eliminates the complex and static nature of legacy distributed network architectures by using a standards-based software abstraction layer between the network control plane and underlying data forwarding plane in both physical and virtual devices. It is related to NFV but is fundamentally different in terms of end results and ability, although both approaches are mutually supportive. A network virtualization program eliminates the conventional shortcomings and provisioning tasks related to legacy network segmentation technologies, such as switched VLANs, routed subnets, and firewall access lists (ACLs). An SDN-based network virtualization application supports arbitrary assignment of IP/MAC addressing schemes, automates network configuration tasks and enforces the expected network segmentation. Data plane abstraction provides a standards-based approach to dynamically provide the network fabric from a centralized (or distributed) software-based controller or multiple controllers.

Definition (cont.)

SDN technologies enable improvements in network agility and automation, while substantially reducing the cost of network operations compared to traditional network deployments. The implementation of an industry-standard data plane abstraction protocol (such as OpenFlow) allows the use of any type and brand of data plane devices as all the underlying network hardware is addressable through a common abstraction protocol. It allows the dynamic and automatic provisioning of virtual network segments and virtual routing services on both physical and virtual networking devices. Security policies can be automatically provisioned via a cloud orchestration platform, such as OpenStack, or through workloads assigned according to attributes, such as MAC, subnet, VLAN and IP protocol, in an automated manner.

The companies covered in this segment of this study will be vendors of SDN and NFV equipment and core services that are purchased either directly by enterprises or by service providers for specific enterprise projects.

Network Technologies Suppliers (Mobile to Edge)

SDN technologies enable improvements in network agility and automation, while substantially reducing the cost of network operations when compared to traditional network deployments. The implementation of an industry-standard data plane abstraction protocol, such as OpenFlow, allows the use of any type and brand of data plane devices as all the underlying network hardware is addressable through a common abstraction protocol. It also allows for the dynamic and automatic provisioning of virtual network segments and virtual routing services on both physical and virtual networking devices. Additionally, all edge components can be managed in the same manner as core and SD-WAN components. With software-defined access out to branch/edge, including all CPE (referenced as virtual CPE or vCPE in SDN terms) and associated Wi-Fi networks, access points (APs), software-defined mobile networks (SDMN), SD-LAN (includes both wireless [SD-WLAN] or mobile [SD-WMLAN], the management protocol can be further improved.

This segment assesses all the main vendors and service providers (such as telcos) in the SD-LAN space, including vCPE, SDMN and SD-LAN specific vendors.

In this independent study, following the format of our internationally successful Provider Lens™ series, ISG sets out to deliver a comprehensive but defensible research program based on an extensive evaluation of criteria that cover all major telcos and service providers of relevance in the U.S.

Provider Classifications

The ISG Provider Lens™ quadrants were created using an evaluation matrix containing four segments, where the providers are positioned accordingly.

Leader

The "leaders" among the vendors/providers have a highly attractive product and service offering and a very strong market and competitive position; they fulfill all requirements for successful market cultivation. They can be regarded as opinion leaders, providing strategic impulses to the market. They also ensure innovative strength and stability.

Product Challenger

The "product challengers" offer a product and service portfolio that provides an above-average coverage of corporate requirements, but are not able to provide the same resources and strengths as the leaders regarding the individual market cultivation categories. Often, this is due to the respective vendor's size or their weak footprint within the respective target segment.

Market Challenger

"Market challengers" are also very competitive, but there is still significant portfolio potential and they clearly lag behind the "leaders." Often, the market challengers are established vendors that are somewhat slow to address new trends, due to their size and company structure, and have therefore still some potential to optimize their portfolio and increase their attractiveness.

Contender

"Contenders" are still lacking mature products and services or sufficient depth and breadth of their offering, while also showing some strengths and improvement potentials in their market cultivation efforts. These vendors are often generalists or niche players.

Provider Classifications (cont.)

Each ISG Provider Lens™ quadrant may include a service provider(s) who ISG believes has a strong potential to move into the leader's quadrant.

Rising Star

Rising stars are mostly product challengers with high future potential. When receiving the "rising stars" award, such companies have a promising portfolio, including the required roadmap and an adequate focus on key market trends and customer requirements. Also, the "rising stars" has an excellent management and understanding of the local market. This award is only given to vendors or service providers that have made extreme progress towards their goals within the last 12 months and are on a good way to reach the leader quadrant within the next 12-24 months, due to their above-average impact and innovative strength.

Not In

This service provider or vendor was not included in this quadrant as ISG could not obtain enough information to position them. This omission does not imply that the service provider or vendor does not provide this service.

Network - Software Defined Solutions and Services - Quadrant Provider Listing 1 of 4

	Managed WAN Services	Mobile Network (4G/5G) Additional (non-core) Services	SDN Transformation Services (Consulting & Implementation	SD-WAN Equipment and Services (DIY)	SDN Security Services	SD Network Technologies (Core)	SD Network Technologies (Mobile to Edge)
Aerohive	Not In	Product Challenger	Not in	Not in	Not in	Product Challenger	Not In
America Movil	Not In	Product Challenger	Not In	Not In	Not in	Not In	Not In
Apcela	Not In	Rising Star	Leader	Rising Star	Not in	Leader	Rising Star
Arista	Not In	Not In	Not In	Contender	Not in	Product Challenger	Not In
Aryaka	Not in	Not In	Market Challenger	Market Challenger	Not in	Not In	Not In
AT&T	Leader	Leader	Leader	Not in	Product Challenger	Leader	Leader
Belkin	Not In	Not in	Not In	Not in	Not in	Not In	Contender
Cato Networks	Not in	Product Challenger	Product Challenger	Product Challenger	Not in	Leader	Product Challenger
Centrify	Not in	Product Challenger	Not In	Not in	Product Challenger	Contender	Not in
CenturyLink	Leader	Not In	Leader	Not In	Product Challenger	Product Challenger	Leader
Cisco	Product Challenger	Not In	Product Challenger	Leader	Product Challenger	Leader	Leader
Citrix	Not In	Not in	Not In	Not In	Product Challenger	Not In	Not In
Cloudgenix	Not In	Not In	Not In	Not In	Not in	Product Challenger	Not In
Computacenter	Not In	Not In	Product Challenger	Not In	Not In	Not In	Not In

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Network - Software Defined Solutions and Services - Quadrant Provider Listing 2 of 4

	Managed WAN Services	Mobile Network (4G/5G) Additional (non-core) Services	SDN Transformation Services (Consulting & Implementation	SD-WAN Equipment and Services (DIY)	SDN Security Services	SD Network Technologies (Core)	SD Network Technologies (Mobile to Edge)
Dell EMC	Not in	Not in	Market Challenger	Leader	Not in	Leader	Market Challenger
D-Link	Not in	Not in	Not in	Not in	Not in	Not in	Contender
DXC	Not in	Not in	Not in	Not in	Product Challenger	Not in	Not in
Ericsson	Not in	Not in	Not in	Not in	Not in	Not in	Product Challenger
Extreme Networks	Not in	Leader	Product Challenger	Product Challenger	Leader	Product Challenger	Product Challenger
Fatpipe	Not in	Contender	Not in	Not in	Contender	Product Challenger	Not in
Fortinet	Not in	Not in	Not in	Not in	Product Challenger	Not in	Not in
Fujitsu	Contender	Not in	Not in	Not in	Not in	Not in	Not in
GTT	Product Challenger	Not in	Product Challenger	Not in	Not in	Not in	Product Challenger
Harman	Not in	Product Challenger	Not in	Product Challenger	Not in	Not in	Product Challenger
HCL	Product Challenger	Not in	Product Challenger	Product Challenger	Rising Star	Product Challenger	Not in
HPE	Not in	Not in	Contender	Contender	Not in	Not in	Product Challenger
Huawei	Not in	Not in	Not in	Contender	Not in	Not in	Not in
IBM	Leader	Product Challenger	Leader	Leader	Leader	Leader	Leader

Network - Software Defined Solutions and Services - Quadrant Provider Listing 3 of 4

	Managed WAN Services	Mobile Network (4G/5G) Additional (non-core) Services	SDN Transformation Services (Consulting & Implementation	SD-WAN Equipment and Services (DIY)	SDN Security Services	SD Network Technologies (Core)	SD Network Technologies (Mobile to Edge)
Infosys	Product Challenger	Not in	Product Challenger	Product Challenger	Product Challenger	Not in	Product Challenger
Juniper	Product Challenger	Not in	Leader	Leader	Not in	Leader	Not in
Logicalis	Rising Star	Not in	Contender	Not in	Not in	Not in	Not in
Masergy	Market Challenger	Market Challenger	Not in	Market Challenger	Leader	Market Challenger	Not in
Microsoft	Not in	Product Challenger	Not in	Not in	Product Challenger	Not in	Not in
Netgear	Not in	Not in	Not in	Not in	Not in	Not in	Product Challenger
NTT	Product Challenger	Product Challenger	Product Challenger	Product Challenger	Market Challenger	Not in	Product Challenger
Nuage Networks (Nokia)	Not in	Product Challenger	Product Challenger	Product Challenger	Not in	Contender	Not in
Orange Business Services	Product Challenger	Market Challenger	Leader	Leader	Not in	Not in	Product Challenger
PCCW	Market Challenger	Leader	Not in	Not in	Not in	Market Challenger	Not in
Pica8	Not in	Contender	Not in	Not in	Not in	Contender	Not in
Prodapt	Product Challenger	Not in	Product Challenger	Not in	Not in	Not in	Not in
Riverbed	Not in	Not in	Not in	Product Challenger	Contender	Not in	Not in
Silver Peak	Not	Product Challenger	Product Challenger	Product Challenger	Contender	Not in	Not in

Network - Software Defined Solutions and Services - Quadrant Provider Listing 4 of 4

	Managed WAN Services	Mobile Network (4G/5G) Additional (non-core) Services	SDN Transformation Services (Consulting & Implementation	SD-WAN Equipment and Services (DIY)	SDN Security Services	SD Network Technologies (Core)	SD Network Technologies (Mobile to Edge)
Sprint	Leader	Leader	Not in	Not in	Not in	Product Challenger	Not in
Symantec	Not in	Not in	Not in	Not in	Leader	Not in	Not in
Talari Networks	Not in	Not in	Not in	Product Challenger	Not in	Rising Star	Not in
TCS	Product Challenger	Product Challenger	Contender	Product Challenger	Product Challenger	Not in	Product Challenger
Tech Mahindra	Product Challenger	Product Challenger	Product Challenger	Not in	Not in	Not in	Product Challenger
Telstra	Product Challenger	Not in	Product Challenger	Not in	Not in	Not in	Not in
Telus	Product Challenger	Not in	Not in	Not in	Not in	Not in	Not in
TP-Link	Not in	Not in	Not in	Not in	Not in	Not in	Contender
Trend Micro	Not in	Not in	Not in	Not in	Product Challenger	Not in	Not in
Verizon	Leader	Leader	Leader	Not in	Market Challenger	Leader	Leader
Versa	Not in	Not in	Not in	Not in	Not in	Product Challenger	Not in
Vmware	Not in	Not in	Not in	Leader	Leader	Not in	Not in
Wipro	Product Challenger	Product Challenger	Rising Star	Not in	Product Challenger	Not in	Product Challenger
ZTE	Not in	Not in	Not in	Not in	Not in	Not in	Contender

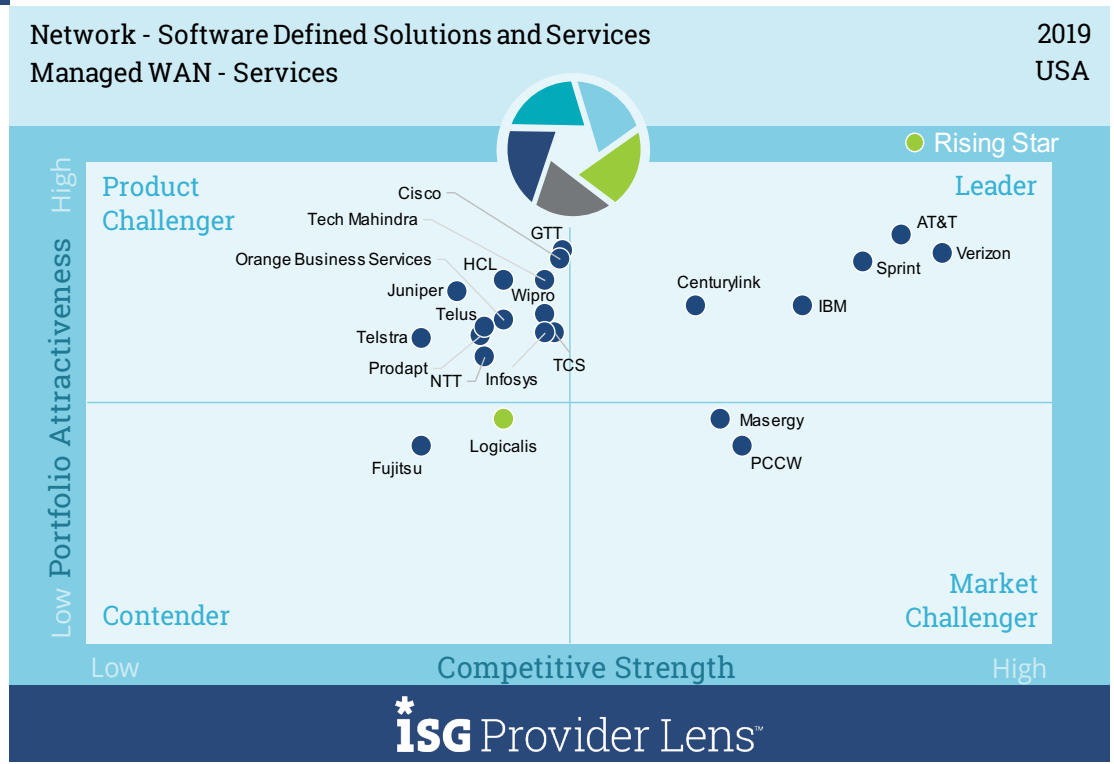
Network - Software Defined Solutions and Services Quadrants

MANAGED WAN SERVICES

Definition

Managed WAN services are increasingly described as traditional in light of the SD-WAN offensive globally. A managed WAN covers the features and functionality that carriers offer in their network and at the customer point of demarcation. They are a collection of value-added services that include monitoring and reporting, security and outsourced customer premise equipment (CPE) functions. Many enterprises choose managed WAN services to outsource IT functions and purchase them along with consulting and professional services to assess, design and implement their enterprise networks.

At the basic level, managed WAN services offer monitoring and alerts during critical problems such as network outages. They also include configuration management, proactive troubleshooting and trouble resolution, service-level agreement (SLA) management, on-the-ground equipment installation, hardware support and the overall lifecycle management.



Source: ISG Research 2019

MANAGED WAN SERVICES

Definition (cont.)

Managed WAN services cover the scope of services and functionalities of various network solutions, including core solutions such as the MPLS protocol for IP-VPN services and multiple access technology. They allow end customers to access resources for network operation centers (NOCs), disaster recovery, active fault clearance and customer portals.

Traditional managed WAN services, often based on MPLS, have come under pressure due to the growing prominence and prospects of SD-WAN which would continue over the next two years. MPLS is the most widely used WAN technology in companies with distributed locations and is being developed continuously. Today, it is possible to prioritize types of applications depending on their respective jitter, packet loss and deceleration to allow a performance boost in individual applications based on customer requirements or policies. While MPLS VPNs provide certain advantages in connecting locations, they are an expensive medium when it comes to connecting mobile devices, especially with the growth of traffic that is not business critical. Mobile usage is also exploding due to the internet of things (IoT), the growing mobile workforce and the addition of decentralized locations within enterprises. Furthermore, enterprises are demanding networks to provide more flexibility and business-oriented SLA metrics such as performance per application and quality of experience. Such demands are causing a strain and affecting the smooth functioning of traditional WAN services and managed services. These newer flexibility and metric requirements call for a more flexible infrastructure compared to what MPLS networks provide, making SDN increasingly relevant.

ISG does not expect MPLS networks to be replaced by alternate software-driven networks any time soon. Instead, these networks would be increasingly complemented by SD-WAN technologies during 2019–2021.

MANAGED WAN SERVICES

Eligibility Criteria

- Product/service portfolio coverage, completeness and scope
- Ability to deliver and manage all hardware and software aspects
- Management capability for the orchestration and control of the overall architecture
- Stability and roadmap planning
- Reference customer/site volume in deployment
- Competitiveness of offerings and commercial terms

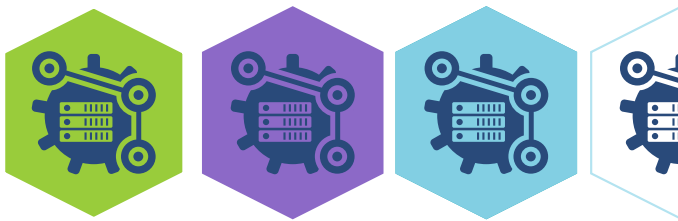
Observations

- **AT&T** has a vast array of business and technology streams in the networking space and has a large client base in managed WAN services. The company is also a leading proponent of SDN/SD-WAN and is well positioned in migration programs.
- **CenturyLink** has capabilities to extend management into IT infrastructure and application management in three services tiers in a complimentary manner for network management. It has been ranked consistently as one of the best-performing managed WAN companies in the U.S.
- **IBM** has a strong portfolio of its own network, service and security solutions. It has also built a world-class partner ecosystem of major players in the managed network, SDN, SD-WAN, multi-cloud network and multi-network integration space. These assets, together with IBM's consulting and project management abilities, allow it to deliver a comprehensive, provider-agnostic solution for enterprises.
- **Sprint** offers three tiers of service coverage within managed network services (MNS). These include MNS Complete, MNS Collaborative and MNS Monitor and Notify (M&N). All MNS levels utilize the Sprint Compass web portal, an interactive network management and reporting tool with self-management functions.

MANAGED WAN SERVICES

Observations (cont.)

- **Verizon** is a widely recognized brand in the U.S. for managed network services and has more than 25 years of delivery experience. The company offers three tiers of MNS service, namely M&N, physical management and full management. It also deploys managed WAN optimization services to two or more customer locations to improve performance in critical applications.
- Rising Star **Logicalis** has an extensive portfolio of managed and hosted managed services that encompass the end-to-end management of multi-vendor, multi-technology ICT environments. It enables customers to take a flexible approach to IT operations and major transformation projects that are available on a global basis.



SPRINT

Overview

Sprint has high visibility and competence within the managed networks space in the U.S. The firm adopts an access-agnostic approach, enabling it to design, deploy and manage the best-suited network solution for customer locations. Ethernet access customers enjoy high-quality and CoS access with over 99 percent coverage in the country. For its MPLS/DIA (dedicated internet access) hybrid ethernet customers, the company has reported a reduction of 30–40 percent in customer network costs compared to previous, non-hybrid implementations. Sprint is highly consulting led in its approach and design/implementation process and employs industry experts in this area. It offers three tiers of service coverage within Managed Network Services, namely MNS Complete, MNS Collaborate and MNS M&N (Monitor & Notify). All MNS levels include customer access to the Sprint Compass web portal, a best-in-class interactive network management and reporting tool with self-management functions.

Strengths

Mature but innovative: Sprint has a long history with U.S. enterprises across the managed network services spectrum. It has an impressive portfolio of functionality with reference accounts and has been investing in coverage, quality and management support for this portfolio.

Access agnostic: Ethernet access customers enjoy high quality and CoS access with over 99 percent coverage in the U.S.

Nurturing existing clients: Sprint has maintained its strategic contracts by providing competitive pricing and improved services. It has also embraced the adoption of SDN products and advanced managed services. This has enabled the company to gain a leading edge over many of its competitors.

Caution

Sprint should sustain its progress and has an advanced position in the overall market. A growing number of market entrants and other competitors with a good pedigree will intensify the competition within a mature product line.

2019 ISG Provider Lens™ Leader

Sprint is a highly competitive company with a strong portfolio of advanced services coupled with excellent coverage in the U.S.

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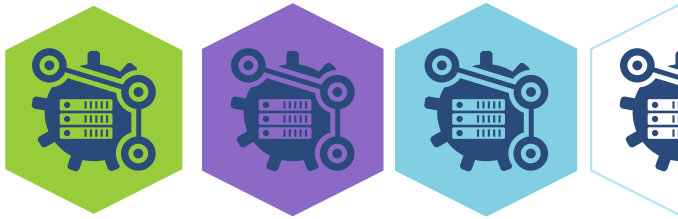
Methodology

METHODOLOGY



The ISG Provider Lens™ 2019 – "Network - Software Defined Solutions and Services" research study analyses the relevant software vendors and service providers in the U.S. market, based on a multi-phased research and analysis process, and positions these providers based on the ISG Research methodology.

The study was divided into the following steps:

1. Definition of Network - Software Defined Solutions and Services market
2. Use of questionnaire-based surveys of service providers/vendor across all trend topics
3. Interactive discussions with service providers/vendors on capabilities & use cases
4. Leverage ISG's internal databases & advisor knowledge & experience (wherever applicable)
5. Detailed analysis & evaluation of services & service documentation based on the facts & figures received from providers & other sources.
6. Use of the following key evaluation criteria:
   - Strategy & vision
   - Innovation
   - Brand awareness and presence in the market
   - Sales and partner landscape
   - Breadth and depth of portfolio of services offered
   - Technology advancements

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