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A Single-Source Solution Provider for All Your SD-WAN Service Needs

Software Defined WAN or SD-WAN is becoming the mainstream choice for many organizations. Does using Internet facing circuits instead of private circuits sound intimidating? It doesn't have to. BlueprintIQ partners with the world's leading SD-WAN providers, and can address concerns about security, redundancy, quality of experience, and more.

Your business requires a robust communications and data network for its mission-critical applications and services. Traditionally, that has been accomplished by connecting private sites with MPLS or other private circuits. SD-WAN provides solutions that not only meet or exceed those offered by traditional WAN technologies, but can provide additional capabilities, such as redundancy, application acceleration, dynamic bandwidth to large cloud providers, and more. Map and scale to your business objectives faster and more effectively, with SD-WAN.

WHY CHOOSE SD-WAN?

- ✓ Best overall value and functionality
- ✓ Agility and speed when adding locations
- ✓ Redundancy, scalability and fault tolerance
- ✓ Quality of experience for critical applications
- ✓ Simplifcation of operations
- ✓ Connectivity to other cloud-based solutions
- ✓ Dynamic bandwidth
- ✓ Cost effective upgrades
- ✓ Support whenever you need it
- ✓ Application acceleration and optimization

WHY WORK WITH US?

- ✓ Is independent & can deliver multiple options
- ✓ Will learn your business structure and goals
- ✓ Will understand your IT infrastructure
- ✓ Will determine the optimal UCaaS solution
- ✓ Will research to source the optimal supplier
- ✓ Will implement and support the selected solution
- ✓ Post-implementation support, including customer service and escalations
- ✓ Be integrated as part of your organization's ecosystem

Expand Connectivity & Improve Security

Secure Networking Is Getting Harder

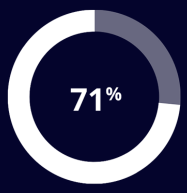
Expanding workforces make it more important than ever to have flexible and secure connectivity. But it's expensive and time consuming to expand your infrastructure to extend your network to remote workers. Traditional WAN (Wide Area Network) solutions just can't keep up with the evolving workplace.

SD-WAN: Modern Connectivity Without the Infrastructure

SD-WAN (Software-Defined Wide Area Network) is tailored to today's hybrid workforce. This cloud-based IT environment supports fast, reliable, secure networks to users anywhere.

With the right SD-WAN solution, you can:

- **Work independently of company-owned infrastructure**
- **Integrate with existing MPLS solutions**
- **Offer a reliable user experience anywhere and load share across connections**
- **Control cost**
- **Improve bandwidth and speed with application prioritization and provision network traffic**



"71% of organizations are actively researching or have already implemented SD-WAN."

DG, 2020 State of the Network

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WHITE PAPER

SD-WAN & SASE

Modern Networking Solutions

In 2020, digital transformation accelerated as businesses adopted new technologies to enable global remote workforces.Today, more than 90 percent of organizations use cloud solutions, according to IDG's 2020 Cloud Computing Study. (1) Statista reports that 73 percent of organizations use three or more data center locations. (2) Worldwide spending on edge computing is predicted to reach $250 billion by 2024. (3)

In 2020, many people started working remotely, and a large portion may not return to traditional offices. An outstanding 96 percent of workers say they want to remain remote either full time (65 percent) or part time (31 percent), according to Flexjobs. (4)

New networking solutions are needed to keep up with these changes and provide consistent access, latency and security. SD-WAN (software defined wide area network) has emerged as today's leading solution, but Secure Access Service Edge (SASE, pronounced "sassy") is a promising newcomer on the horizon.

What is SD-WAN

SD-WAN is a virtual network overlay not directly tied to any specific hardware or infrastructure. This makes it well suited to the "as a service" and cloud-based IT footprints of today's organizations.

Previous WAN solutions created a secure, dedicated connection from branch locations to a specific server. These solutions weren't able to scale well to keep up with workforce changes, resulting in poor performance and questionable security.

SD-WAN uses virtualized architecture, separating the control plane from the data plane. This allows organizations to control the network (including access, connectivity and security) via software from a centralized location. It's a solution designed to push fast, reliable, secure networks to users anywhere.

Benefits of SD-WAN

SD-WAN has emerged as the poster child for modern networking because of its agility, flexibility and fit for how today's companies and employees work. Many of the benefits center around improved accessibility, better management and increased connectivity, along with a significant financial benefit.

Easy to Manage

SD-WAN offers a centralized, cloud-based control plane, allowing IT teams to easily manage the network from anywhere and quickly make changes as needed. SD-WAN solutions often offer simple interfaces that make it fast and easy to provision connections to branches anywhere (without being on location).

Improved Bandwidth (at a Lower Cost)

The control offered by SD-WAN also allows organizations to improve bandwidth by provisioning network traffic for optimal speed, throttling lower priority applications and traffic and load sharing across WAN connections via dynamic path selection.

This improved control over bandwidth often results in cost savings for organizations utilizing SD-WAN. In fact,.58 percent of respondents in a State of the Network 2020 study stated that their primary motivation for employing SD-WAN was cost.(5)

"58 percent of respondents in a State of the Network 2020 study stated that their primary motivation for employing SD-WAN was cost."
Viavi Solutions, State of the Network 2020

Connection Flexibility

As the way employees work and where they work changes, more network connectivity options have emerged. A “rip and replace” approach isn’t sensible or feasible for many organizations, but with SD-WAN, many existing connections can be used within the new solution. SD-WAN is compatible with MPLS, internet connections, LTE and other connectivity solutions.

Supports Third Party Services

Another component of how the working world has changed is organizations’ increasing use of remote workforces, third party vendors, contractors, “as a Service” solutions and other outside elements. Allowing access to your network when transmitting sensitive data has caused worry in the past, but SD-WAN makes it easier to set up permission-based security policies to allow access to certain applications and data on the network.

Improved Security

SD-WAN has the same end-to-end application traffic isolation benefits as previous WAN solutions, but it takes security a step further — particularly when it comes to internet connections. According to IDG, “SD-WAN can also protect application traffic from threats within the enterprise and from outside by leveraging a full stack of security solutions included in SD-WAN such as next-gen Firewalls, IPS, URL filtering, malware protection, and cloud security.”(6)

What is SASE?

Even newer networking and security models like Secure Access Service Edge (SASE) allow organizations to apply secure access wherever users, applications or devices are located. SASE is a cloud-delivered networking solution hyper-focused on security for dispersed teams. This emerging technology combines existing solutions such as VPN, SD-WAN, Zero Trust and several other security functions into a single solution.

SASE relies on policies and permissions (set by a central manager) that are pushed to all users regardless of their location, end device or network. It promises to be a dynamic solution that provides low latency and high-level security.

SASE is still a new solution but it’s poised to grow quickly. By 2024, at least 40 percent of enterprise organizations will have a SASE adoption strategy, according to Gartner.(7)

Benefits of SASE

SASE’s primary benefits are simplification and better security intentionally designed for a dispersed workforce — something that will be increasingly important in coming years. SASE has many of the same benefits as SD-WAN, but in an enhanced capacity.

Streamlined Security & Cost

Because SASE essentially combines several existing network security functions (e.g. VPN, Zero Trust), it functions as a more centralized solution for modern network security needs. These security features will be provided by a single vendor, which reduces complexity and potentially reduces IT spend.

Increased Secure Access

The trend of working with contractors, agencies, consultants and other third party providers isn't likely to wane. As with SD-WAN, SASE makes it easier and more secure to give these outside entities access to your network and data, regardless of their location and end-user device. SASE takes a permissions- and policies-based approach, making it extremely simple to limit access based on role and need.

Increased Reach

SASE is still an emerging solution, but analysts predict it will have a large global footprint that includes many points of presence. This will benefit organizations as employees and other workers continue to be dispersed. The ability to provide employees with secure, reliable network access regardless of their location will also give companies the option to increase their hiring pool.

As SASE continues to evolve and more vendors enter the market, we'll likely see additional benefits emerge. Companies that want to be on the forefront of security and supporting remote access should begin the discussions around SASE now.

SD-WAN & SASE Best Practices

As with any technology solution, understanding what you need and expect from the service is key to successful deployment. When exploring SD-WAN and SASE specifically, it's also important to ensure any solution you choose will work with your desired connectivity methods. Working with an experienced IT advisor can help you define your criteria and identify the best solution and provider. As these solutions continue to evolve, smart companies will monitor the features available to take advantage of full solutions and reduce redundancy where possible.

It's important to remember that SASE and SDWAN solutions centralize network security — not necessarily outsource the tasks completely. With this in mind, it's best to have an in-house point person or team to oversee solution implementation and management. This person or team is an integral part of vendor selection, as they likely best understand your existing technology, challenges and needs.

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(1) IDG, "2020 Cloud Computing Study," June 8, 2020. https://www.idg.com/tools-for-marketers/2020-cloud-computing-study/

(2) Statista, "Number of owned or collocated data centers operated by companies worldwide as of 2019," March 12, 2021. https://www.statista.com/statistics/1106068/owned-or-collocated-data-centers-eneterprise-operate/#statisticContainer

(3) IDC, "Worldwide Spending on Edge Computing Will Reach $250 Billion in 2024, According to a New IDC Spending Guide," September 23, 2020. https://www.idc.com/getdoc.jsp?containerId=prUS46878020

(4) Rachel Pelta, Flexjobs, "FlexJobs Survey: Productivity, Work-Life Balance Improves During Pandemic," September 21, 2020. https://www.flexjobs.com/blog/post/survey-productivity-balance-improveduring-pandemic-remote-work/

(5) Viavi Solutions, "State of The Network 2020" July 2020 https://www.stateofthenetwork.com/assets/pdf/2020-infographic.pdf

(6) IDC, "SD-WAN: Security, Application Experience and Operational Simplicity Drive Market Growth," April 2019. https://www.cisco.com/c/dam/en/us/solutions/collateral/enterprise-networks/intelligent-wan/idc-tangible-benefits.pdf

(7) Susan Moore, Gartner, "Top Actions From Gartner Hype Cycle for Cloud Security, 2020," August 27, 2020. https://www.gartner.com/smarterwithgartner/top-actions-from-gartner-hype-cycle-for-cloud-security-2020/

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BANDWIDTH AGGREGATION

SD-WAN allows companies to utilize multiple Internet circuits, balance the load across them, and deliver a solid quality of experience. Aggregating the Internet circuits allows for large amounts of bandwidth, while securely connecting to additional private locations. Additional sites can be added in very short order once Internet access is acquired.

REDUNDANCY

SD-WAN solutions can combine your MPLS and Internet connections so they don't sit idle. By dynamically and intelligently routing traffic over multiple circuits to improve efficiency, and providing seamless packet-by-packet routing to keep you up and running if there's a circuit failure, you and your employees can be more efficient and productive throughout the day.

SECURITY

Businesses appreciate the cost associated with Internet circuits but worry about security if transmitting sensitive data. SD-WAN provides secure connections between sites and reduced complexities - a benefit of as-a-Service solutions!

DYNAMIC BANDWIDTH

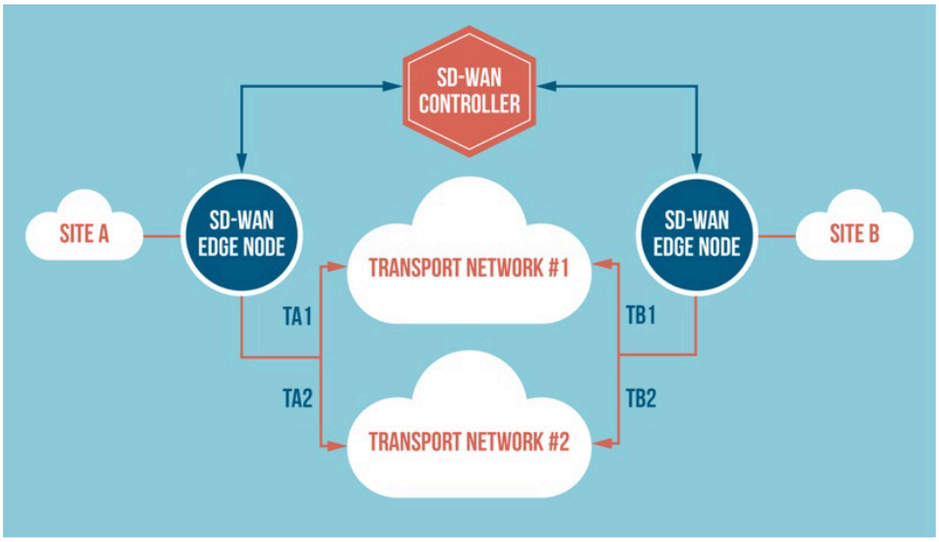
Do you utilize or plan to utilize other cloud services, such as AWS, Azure or Google? Many SD-WAN providers connect directly to many of these cloud providers. Additionally, there are options that allow bandwidth to grow dynamically as your cloud needs change.

QUALITY OF EXPERIENCE

SD-WAN solutions can provide prioritization to the mission critical applications your business demands.Typically, providers choose the best circuit based on real-time statistics in order to optimize the traffic, reduce overall latency, jitter and response times, and accelerate the applications themselves.

NETWORK FUNCTION VIRTUALIZATION

We can also provide partnerships with companies that can virtualize out many network functions, such as firewalls, VPNs, load balancing, application acceleration, etc.



ABOUT US

BlueprintIQ designs and delivers IT & communications solutions and services that help organizations execute on their strategic goals.

Our focus? Every business is unique, so we start with listening to the needs of our clients, and then exceed those needs in every way.

Contact us today to learn more about what SD-WAN services are right for your business.

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