



CAPGEMINI – EXPERT OPINION

WITH SD-WAN & SASE, YOUR SECURE NETWORK BECOMES A STRATEGIC ASSET



SD-WAN with SASE includes software defined wide area network services (SD-WAN) combined with software defined security services (SASE based) in one complete solution. SD-WAN & SASE, with its orchestration layer, decouples network management from the underlying carrier transport circuit infrastructures and overcomes the limitations of traditional legacy WAN approaches in terms of improved

security, lower latency, greater agility and quality of service improvements. In doing so, a professional Secure SD-WAN and SASE based network becomes a lasting asset for your company that creates business value every day. As any good solution demands, SD-WAN with SASE must be engineered professionally for optimal performance to benefit your company.



The SD-WAN & SASE enabled network overlay is intended to become an agile, scalable and long-lasting company resource, when designed and deployed well SD-WAN and SASE becomes a differentiating asset for your company. SD-WAN & SASE enabled networks are highly personalized and integrated to deliver high added business value. Secure SD-WAN combined with SASE is the network blueprint of choice for today's enterprise networks."

Today SD-WAN & SASE have become the Wide Area Network Technology solution of choice for most of the larger enterprises in the world. Secure SD-WAN and SASE are now the preferred Onramp to Cloud and Data Centers. SD-WAN with SASE, done well, is secure, scalable and agile and can use any WAN transport circuit type you wish to connect with, wired or wireless.

SD-WAN solutions began life about nine years ago and these solutions are now in the second generation of SD-WAN, which is a combined SD-WAN & SASE solution. SASE stands for Secure Access Service Edge, and SASE compliments SD-WAN solutions that are leading the industry today.

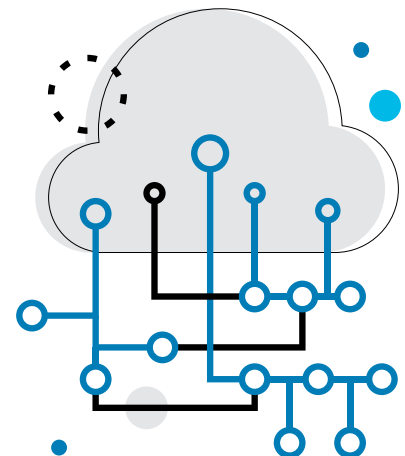
Enterprises and companies around the world are both smart and practical, after a period of observation, proof of concept testing or PoCs, and careful site deployments, many companies are now using SD-WAN & SASE to connect their sites and applications (on premises or in the cloud).

Interest is growing in the area of Secure Cloud connectivity, in particular, among our clients who find themselves in one or more of the following situations:

- They are approaching the end of their legacy carrier or operator circuit contracts
- They are on the eve of a digital transformation of business applications, shifting more to Cloud locations
- Their network teams are currently struggling to meet performance expectations, or their users are dissatisfied with the speed, security or quality of service their applications receive.
- They face remote and mobile connectivity needs that Secure SD-WAN and SASE easily enable.
- With SD-WAN combined with SASE, applications are more secure and run faster.
- Simplify and unify the administration of the WAN via an orchestrator or portal for network management
- Accelerate time to market thanks to automation (like any "software defined" solution) and improve agility using low touch or zero-touch provisioning
- Accelerate the connection to the cloud and promote fast, secure, and efficient access to the internet
- Reduce the telecom circuit bill by a high percentage of spend every year, via a significant (sometimes complete) reduction of the MPLS footprint, shifting more towards the use of low cost and high performance direct internet links.

SD-WAN technology is now clearly showing a high level of maturity and reliability that allows SD-WAN and SASE to be the Wide Area Network (WAN) connectivity solution of choice for many business and technical reasons, which include:

- Simplify and Unify the Network: Unify the connectivity of sites (branches) within a single secure network device consolidating the functionalities of secure network connectivity, link aggregation, routing, and improvement of the user experience and to improve application performance.





The SD-WAN label today covers an abundant and heterogeneous offer and support may be necessary to navigate and select a complete product whose philosophy, architecture, and functionalities will be adapted to the technological environment and business needs of the company, your company's security policies and, above all, its priorities and objectives, quality of service and user experience, agility and usability, as well as cost reduction.



The preferred solution for a complete digital transformation

SD-WAN combined with SASE is also favored to improve wide area network connectivity and security due to the increasingly clear limits of traditional legacy WAN solutions in the face of current and growing cloud first networking demands. These legacy carrier WAN approaches before SD-WAN and SASE tend to hinder and limit sites on the intranet, whereas the uses and hosting of applications in the cloud requires a secure and optimized path as well as more openness on the internet. These current legacy WAN solutions often lack agility, with excessively long deployment or change cycles given the time-to-market requirements of the business lines. Legacy carrier transport solutions such as MPLS can also place the company in a situation of technical and contractual dependence on its telecom operator(s) (the “telco lock-in”).

Finally, legacy transport solutions without SD-WAN are substantially more expensive compared to public internet access enabled and secured using SD-WAN. In addition, the various alternatives considered over the past ten years, such as WAN optimization alone, have failed to deliver the flexible network required by today’s companies. Complex to implement and operate, legacy MPLS carrier networks alone failed to provide the expected savings while making it more difficult to meet the SLAs today’s enterprise require.

In many respects, SD-WAN therefore appears to be the new standard for essential WAN connectivity solutions. Nevertheless, certain precautions are necessary during its implementation to obtain all the benefits. First of all, you have to be careful when choosing the right SD-WAN solution. The SD-WAN label today covers an abundant and heterogeneous offer and support may be necessary to navigate and select a complete product whose philosophy, architecture, and functionalities will be adapted to the technological environment and business needs of the company, your company’s security policies and, above all, its priorities and objectives, quality of service and user experience, agility and usability, as well as cost reduction.

The articulation of overlay and underlay: a key success factor

From a technical point of view, the articulation between the underlay (the circuits of the operators) and the overlay (the SD-WAN infrastructure itself) is also a business investment choice. In the light of our experience, the obvious trend – and one to which Capgemini fully subscribes – is to choose a “pure overlay” approach to SD-WAN & SASE. In this model, which is adopted by most companies, the SD-WAN and SASE overlay solution of choice is decoupled from the underlay WAN transport circuits and their operators. SD-WAN and SASE based networks are a business asset that creates value on which we can capitalize, while the underlay transport circuits become commodities, chosen and consumed judiciously to optimize the quality of experience/cost ratio.

Cybersecurity at the heart of the new system: the SD-WAN and SASE model

SD-WAN and SASE enabled networks are the preferred entry and exit point to the internet and to Cloud, which must be secured in line with the requirements of your companies security policy and business regulations.

To do this, SD-WAN and SASE solutions must be:

- Backed by a recognized, adapted and integrated cybersecurity solution, whatever its mode of deployment – Hybrid SASE, which is physical, virtual, or SaaS (SASE)
- Integrated into the company’s security incident detection and management system.

New skills to develop

The old wide area network solutions and approaches often boiled down to the management of operated service contracts. The newer SD-WAN and SASE model therefore substitutes two skills to be internalized. First, an Underlay Management program must be set up in order to choose and maintain the best telecom circuits and transport at the best price to be used with the SD-WAN topology considered and selected. While the WAN transport underlay is a standardized commodity, SD-WAN will perform better and be more resilient if the underlying circuits are properly specified and diversified.



In the digital age, SD-WAN & SASE based solutions undoubtedly appears to be the indispensable secure network connectivity solution, of choice and the preferred secure onramp to Cloud”



The second skill to be developed concerns of course the management of the SD-WAN itself. The overlay SD-WAN and SASE network is intended to become a long-lasting, differentiating asset for the company, highly personalized and integrated, and with high added value. This requires a dedicated team, usually supported by a solutions partner capable of bringing together all the necessary skills: network, applications, cloud, cybersecurity, management, etc.

In conclusion, we agree with our customers and many market players that SD-WAN with SASE is more than a simple underlay transport carrier network, more than a carrier service only, but that it is above all:

- A network solution adapted to the organization of the company, its context and its constraints
- An automated network solution, allowing rapid and reliable deployments
- A network solution integrated into an ecosystem (service portal, SIEM-SOC, LAN, etc.)
- A network solution delivered for business, applications and/or articulated within a digital transformation strategy.

Three points to remember

- Traditional legacy WAN approaches suffer from a lack of agility in the face of digital demands.
- SD-WAN is a mature technology that enables decoupling of the functionalities and management of the wide area network (overlay) from the operator circuits (underlay).
- A professional SD-WAN project, from the technological choice to the RUN, associated with a comprehensive Underlay Management program are the guarantors of a rapid ROI and an efficient WAN over time for the benefit of the businesses.





About Capgemini

Capgemini is a global leader in partnering with companies to transform and manage their business by harnessing the power of technology. The Group is guided everyday by its purpose of unleashing human energy through technology for an inclusive and sustainable future. It is a responsible and diverse organization of 290,000 team members in nearly 50 countries. With its strong 50 year heritage and deep industry expertise, Capgemini is trusted by its clients to address the entire breadth of their business needs, from strategy and design to operations, fueled by the fast evolving and innovative world of cloud, data, AI, connectivity, software, digital engineering and platforms. The Group reported in 2020 global revenues of €16 billion.

Get the Future You Want | www.capgemini.com

Connect with us at SASE@capgemini.com:

Michel Zenone
Network Chapter Lead
Project & Consulting, CIS
Capgemini, France
michel.zenone@capgemini.com

Jay Dowling
Vice President
Global Alliance Executive - VMware
Capgemini
jay.dowling@capgemini.com

Skander Guetari
Director
Head of Portfolio, CIS
Capgemini, France
skander.guetari@capgemini.com