



# SD-WAN Revolutionizes Networks for the Cloud Era



White paper

Consult Build Transform Support



Software-Defined Wide Area Network (SD-WAN) technology enables service providers to offer enterprise clients a revolutionary, cloud-delivered, agile way to deploy, manage, and monitor hybrid public, private, wireline, and wireless networks.

Predicted by IDC to grow to \$8B by 2021, SD-WAN is changing the way providers serve their clients, expand existing product lines, and meet the increasing bandwidth requirements and performance of cloud applications and services.

The advantages SD-WAN delivers are perhaps best told by several global service providers who have been selling VeloCloud cloud-delivered SD-WAN to their enterprise clients in recent years.

SD-WAN brings network visibility and control to the masses, and that is just one part of what makes it so powerful.

The solution allows a service provider to deliver a material service improvement for clients via visibility, management, and control of a network. Why wouldn't you choose to transform the experience businesses can have with their network?

VeloCloud's compelling mix of functionalities includes dynamic packet routing, deployment simplicity, and functionality in its Orchestrator management tool.

Genuine SD-WAN measures quality, routes traffic, and remediates impairments across multiple network pathways to reliably deliver applications and traffic volume across branch offices, data centers, and the cloud. Four years ago, it was just a vision, but it has now reached the point of transforming WAN architectures that run over various conduits such as private MPLS links, broadband Internet, and LTE. With branch office network traffic doubling every three years, service providers are growing wise to the SD-WAN market opportunity.

Retailers that earlier had MPLS with T1s are realizing significant savings by getting rid of their MPLS and shifting to broadband and 4G LTE for backup. They are seeing at least 30 to 40 percent savings with the switch to VeloCloud SD-WAN.

Enterprises can meet their current and future needs with a hybrid networking approach. Companies of all sizes, across all industries, have an opportunity with SD-WAN to optimize bandwidth expense based on the unique needs of each site.

Genuine SD-WAN platforms are easier to manage and quicker to deploy than other approaches. Enterprises can lower expenses by using lower-cost connections, such as broadband.

The appeal of SD-WAN has been strong amongst North American service providers, and VeloCloud has offices around the world to support regional service providers and clients in over 120 countries, including Macquarie and others in the Pacific region. "The increased interest in SD-WAN is a global trend, but varies in level of maturity. Service providers that have not yet adopted SD-WAN or where it is not part of the future road map are missing out. The market is moving fast and the time to strike is now," said Sasha Emmerling, senior director of marketing for VeloCloud.




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## VeloCloud Leads Fast-Growing, Competitive Market

According to Gartner, there are over 40 vendors associating with the space over the last two years, but many are traditional networking vendors pivoting their business models to include SD-WAN as a feature to take advantage of for the revenue opportunities. VeloCloud is unique in offering a genuine, cloud-delivered SD-WAN solution, which works with any cloud service, Infrastructure as a Service (IaaS) including AWS or Azure, any network transport system, and is vendor agnostic. VeloCloud SD-WAN offers a comprehensive and flexible cloud infrastructure that includes an Orchestrator, controllers, gateways, and edges.

The VeloCloud Orchestrator provides network-wide visibility and enables the service provider to proactively monitor, manage, and analyze all issues across the network from a central location. It can be deployed in the cloud or as an on-premises solution. The distributed system of multi-tenant, multi-segmented VeloCloud Gateways is deployed at top-tier cloud facilities around the world and extends the enterprise network to cloud services, resources, and applications around the world. This system of VeloCloud Gateways is able to federate using VeloCloud Cloud Gateway Federation (CGF) to VeloCloud Powered service provider gateways. VeloCloud Edges are deployed on-premises at each branch office for secure, high performance, reliable connectivity over private and public links either as an X86-based appliance or virtualized software.

VeloCloud has moved beyond startup status, with more than 1,000 clients and 50,000 sites. With the technology, team, and expertise established to date, VeloCloud enables service providers to quickly introduce a VeloCloud service without first having to provision a global buildout, Gartner noted. By partnering with VeloCloud and leveraging a proprietary partner launch program, VeloCloud Ready Set Go, service providers can stand up their OTT SD-WAN instance in less than 30 days, significantly reducing the contract-to-cash time lag.

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Our ability to connect to MPLS means we don't have to move everything and we can overlay and take on new greenfield networks.

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## SD-WAN's Role in a Changing WAN World

"SD-WANs are hot," ZK Research analyst, Zeus Kerravala, recently declared. "Part of the interest comes from a pent-up demand for more efficient changes in WAN architecture that started in the early 2000s."

With "software-defined" introduced to WANs, enterprises could begin separating the control plane from the data plane, which meant IT could transition components of the network to the cloud and deploy network components from a central location without having to configure each edge device one at a time.

"SD-WAN has helped create a mini-perfect storm where we see broadband to the business and cloud coming into its own," Kerravala said. "There's been more interest and awareness in SD-WAN and there's not a company I've talked to that's not interested."

"Many customers want to keep MPLS, oftentimes because they have existing, long-term contracts with carriers. With broadband, 4G wireless, satellite, or cable, that means managing a hybrid network, which is where SD-WAN management can make a difference," Kerravala said.

"You get SD-WAN for more network agility," he added. "At the end of the day, SD-WAN is a different, better way to run a network that makes it more agile in an era where digital transformation has run amuck."

For service providers, SD-WAN offers a new line of business at a time when clients are increasingly interested in moving away from MPLS.

## Wait, is MPLS Going Away?

VeloCloud is a chosen provider of SD-WAN technology by many companies. Part of the reason VeloCloud wins business is that their cloud-delivered SD-WAN supports a combination of critical features as part of its standard offering: aggregation, forward error correction, and packet duplication.

Many service providers worry that SD-WAN could cannibalize existing MPLS revenues because MPLS costs so much more than broadband or 4G. However, in reality, the cannibalization is seen with T1s on MPLS, while MPLS above T1 is growing like crazy.



We don't see MPLS going away any time soon as many clients want to retain a hybrid approach.

The impact of VeloCloud cloud-delivered SD-WAN has provided clients with complete visibility into their own network operations; it enables and delivers clarity for each packet, application, and circuit. With one or two clicks you can re-architecture bandwidth to a specific application flow, which is really powerful. The client's TCO and application performance per dollar spent is vastly improved.

Some clients are expected to substitute MPLS with SD-WAN and other technologies. But for the best results, they should pick the solution that allows them to mix all access choices, based on their unique needs at each site.

With so many apps being located in the cloud, service providers are finding that enterprises want to add more bandwidth, but a private link often costs too much and can even introduce network latency.

"SD-WAN is a business enabler, introducing network-wide visibility and reducing clients' total cost of ownership. It's become an investment in future-proofing the network and reducing the barrier to utilizing corporate-wide, cloud-based applications and services," VeloCloud's Emmerling added.



VeloCloud cloud-delivered SD-WAN provides limitless and optimized access across the entire enterprise organization for cloud applications and services while simplifying implementations and centrally managing all network activity. Using a flexible, agile, and scalable delivery model, VeloCloud is the only SD-WAN solution fully able to leverage all benefits of the cloud.

The adoption of cloud technologies, such as SD-WAN, requires a comprehensive strategy along with the trust and reassurance of a proven IT partner.



OnX Canada helps organizations across Canada navigate this journey by providing tailored cloud solutions that result in significant cost savings and improved operational efficiencies. Consistently recognized as a leading technology innovator, OnX helps companies of all sizes by developing cloud migration strategies that address not just their overarching corporate goals, but also the needs of individual lines of business. Architecting tailored cloud solutions that achieve measurable business outcomes, while managing and monitoring your solution after installment, makes OnX Canada a preferred IT partner. What sets us apart is the agility, flexible delivery models, and client focus of a smaller company coupled with the ability to deliver the resources, scale, and capabilities required by large organizations.

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Ask how OnX Canada can help you capitalize on the cloud today.