



E-BOOK

Leading Transformation with the Right SD-WAN Solution

Key considerations for any organization
evaluating SD-WAN



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1 Complexity is the Problem

SD-WAN that reduces risks and simplifies operations is the right solution.



For many organizations, the requirements to control costs is high, even as the need to improve productivity and revenue increases. Lost uptime and lost productivity put organizations at a disadvantage. To achieve key results, an increasingly distributed workforce requires real-time, bandwidth-intense communications, collaboration, and productivity tools and exceptional user experience.



At the same time, network and security complexity continue to rapidly increase. IT teams have been under unprecedented pressure to lead their organizations through rapid, sustained change. Cloud IT environments make network and application issues more difficult to troubleshoot, while threats such as malware and ransomware are becoming more pervasive.



Legacy SD-WAN solutions offer some benefits, but are not well-equipped for modern challenges. As a technology, SD-WAN offers a cost-effective way to improve connectivity and continuity. However, SD-WAN can also be a challenge to deploy and manage. Further, most SD-WAN solutions lack the comprehensive visibility and control required to address contemporary productivity and user experience needs. **Finding the right solution is critical** to reap all the benefits of an investment into SD-WAN.

Recommendations

While decision criteria, processes, and success metrics will vary from one organization to the next, organizations should consider the following criteria and questions to guide their solution evaluation and selection process.



2 Business Transformation Goals

How will SD-WAN help achieve them?

As organizations continue to increase their use of SaaS and IaaS applications, consistently good user experiences across the network is critical to the success of digital transformation efforts.

SD-WAN can help organizations **modernize WAN infrastructure and security** while **improving business agility**. It can also improve efficiency and productivity for users and reduce complexity and simplify operations for IT teams.

As IT leaders work with their top management teams to **achieve critical business goals**, they should carefully consider how the organization **will measure success, what metrics SD-WAN will affect**, and how SD-WAN will create value for the organization.



Accelerate Digital Transformation

Scale digital initiatives, simplify multi-cloud and SaaS connectivity, and take full advantage of new technologies.



Drive Organizational Key Results

Increase business agility, enable data-driven decisions, and deliver the best performance at the lowest cost and risk.



Modernize WAN Infrastructure and Security

Centralize configuration and management, improve resilience, and reduce security risk.



Improve Operational Efficiency

Automate and optimize IT processes. Accelerate root cause analysis. Improve end user experience and productivity.

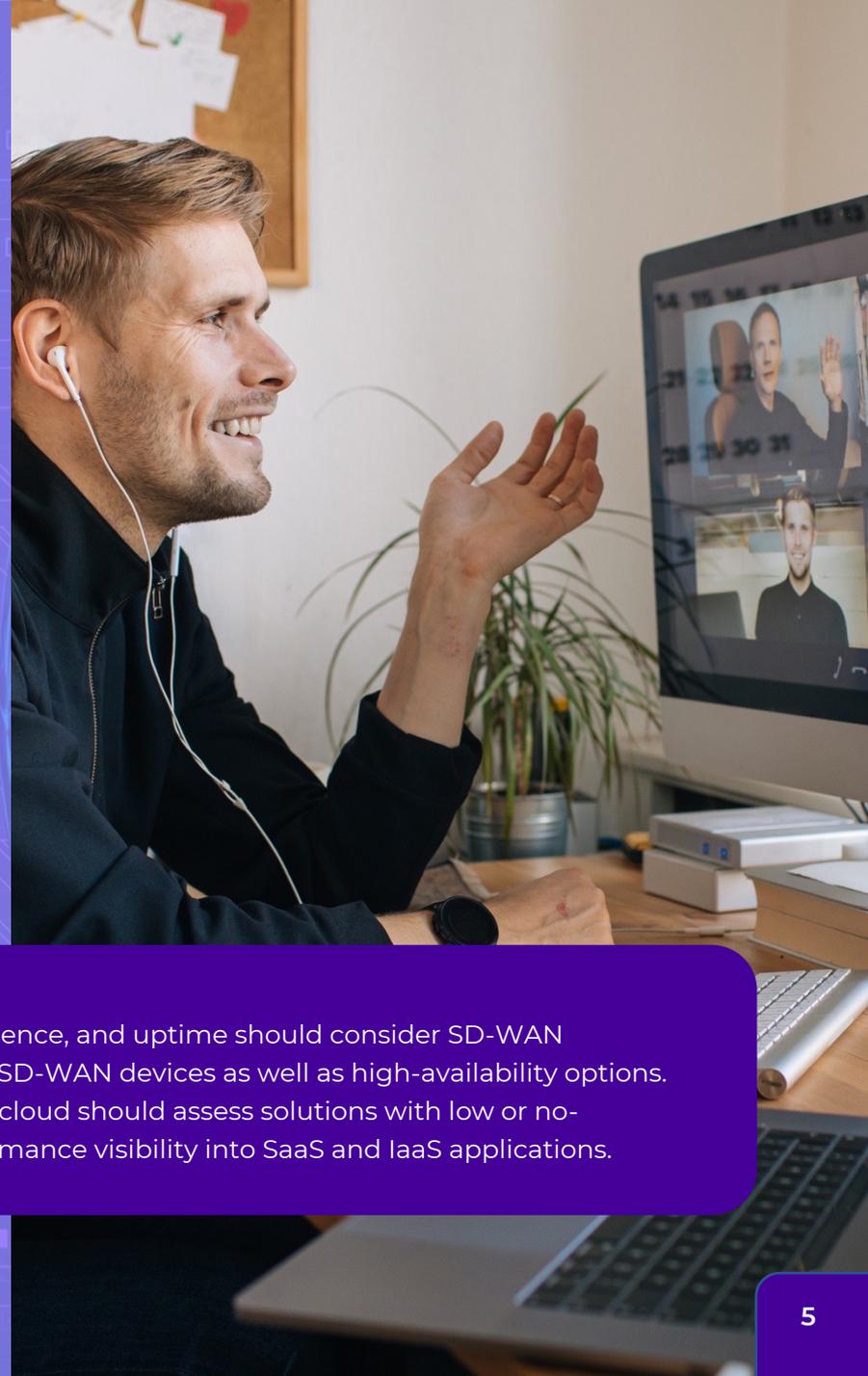
Key questions to consider

As organizations evaluate their business goals for SD-WAN, they should give thought to the following questions:

- Does the organization need to improve growth, risk, or cost? If so, which, to what degree, and with what priority?
- What current digital transformation or cloud migration efforts are underway? How do they relate to SD-WAN?
- Does the organization need to deploy new sites, applications, or network services more quickly to meet business goals?
- How will SD-WAN reduce network downtime, increase operational efficiency, or improve productivity?
- What are the current risks and costs of potential downtime at remote locations? How can SD-WAN help?

Recommendations

Organizations that need to improve efficiency, agility, user experience, and uptime should consider SD-WAN solutions that enable fast setup and centralized configuration of SD-WAN devices as well as high-availability options. Further, organizations planning to migrate key workloads to the cloud should assess solutions with low or no-maintenance cloud on-ramps that can extend application performance visibility into SaaS and IaaS applications.



What to ask a potential SD-WAN provider

As organizations consider SD-WAN, IT leaders should work with heads of human resources, finance, and other teams to identify concrete business goals for an SD-WAN deployment and the value of achieving those goals.

Cloud and SaaS access: Can the solution provide simple, secure, and agile cloud on-ramps? Does it require VNFs to do so? How does the solution enable secure digital transformation with policy-based internet breakout for SaaS applications at the branch?

Intelligent application performance visibility and control: How does the solution reallocate bandwidth on a per-application and per-session basis to deliver the best performance for the lowest cost? What tools does the solution provide to visualize per-application performance results?

High availability: How does the solution supply site-specific resilience? What next-business day hardware replacement policy does it provide? How does it enable zero-downtime architecture?





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Financial Considerations

How does SD-WAN fit with the organization's current financial picture?

Large scale CAPEX purchases can impose significant opportunity costs on an organization, tying up financial resources over a multi-year period.

There are pros and cons to CAPEX and OPEX purchasing models. However, many organizations benefit from the predictable costs and lower financial risks of a monthly subscription.

SD-WAN as a subscription can provide the benefits of SD-WAN without the typical financial risks. When paired with flexible subscription terms, and inclusive support and service, SD-WAN as a pure OPEX cost can offer even more value with even fewer risks.

SD-WAN as CAPEX	VS	SD-WAN as OPEX
Full project budget typically for a 3-year period of ownership is allocated up-front.		A fractional monthly cost is budgeted for terms as short as 12 months.
With a flexible payment schedule, opportunity to invest in other initiatives is reduced as capital is already earmarked.		Organizations are free to invest their capital into other initiatives in ways that suit their needs.
Support, maintenance and customer success programs may be offered at extra cost in the fine print.		An inclusive subscription should provide the latest software, support, maintenance and other elements customers need.
Rapidly evolving technology quickly makes hardware obsolete, although resale is possible.		In most consumption-based models, the newest hardware is provided by the vendor on a regular basis.

Key questions to consider

As organizations undertake fiscal planning for IT purchases, they should give thought to how SD-WAN will improve revenue and productivity, net revenue retention, or other financial metrics.

- Does the organization prefer to make purchases as CAPEX or OPEX?
- Does the organization need to better control the costs of network services, branches, or both?
- Do branches require an infrastructure refresh to meet business objectives?
- Does the organization have the tools it needs to make evidence-based decisions about network change?
- What unique application or infrastructure needs do small branches and other points of presence have?

Recommendations

As organizations seek to improve cost control, avoidance, or reduction, financially efficient SD-WAN solutions may supply significant savings and, as important, greater financial flexibility. Value-conscious organization should evaluate solutions that offer SD-WAN in an OPEX subscription licensing model rather than in a CAPEX model.



What to ask a potential SD-WAN provider

As organizations evaluate their need for SD-WAN relative to their current financial resources, they should work with vendors to understand the following capabilities:

❑ Consumption licensing: Is the solution available as a subscription or on a consumption model? What are the current licensing terms? What is extra and what is included in the basic package, such as support and maintenance or customer success offerings?

❑ Speed tiers and a range of appliances: How does the solution handle differences in the size and throughput needs of branches, campuses, and data centers? Are any of the appliances ready for 10G transport?

❑ Performance reporting: How does the solution reporting capabilities enable evidence-based decisions about the network? Do reports enable both real-time and trend-over-time reporting for performance as set by policy?





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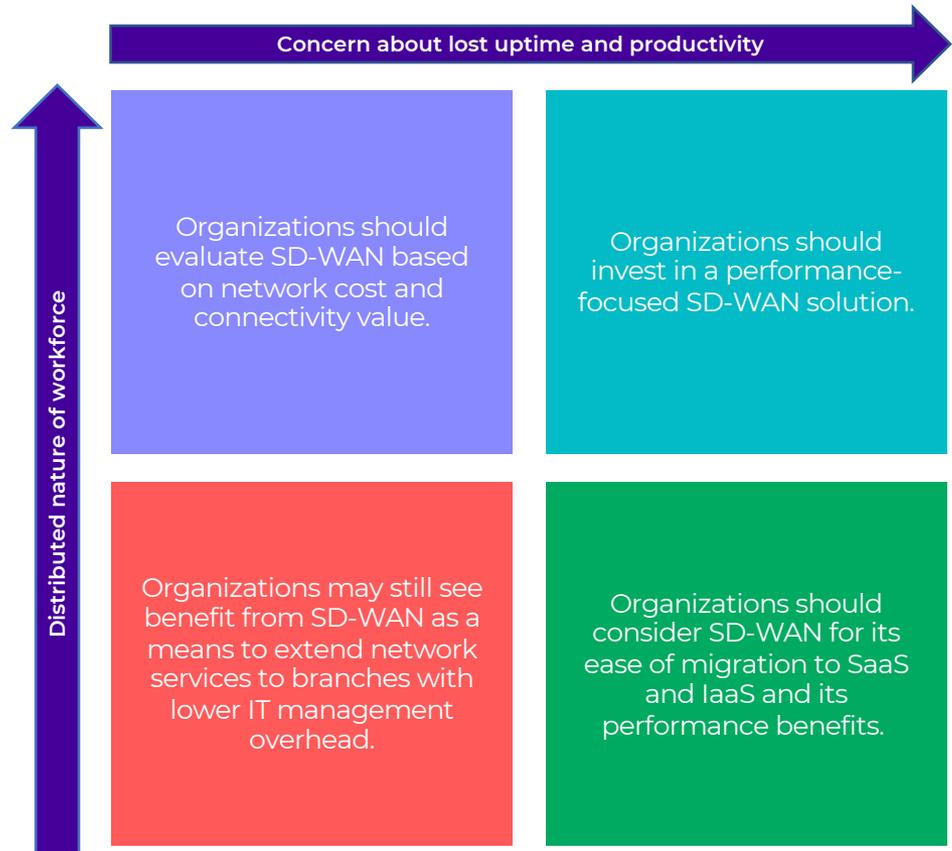
IT Initiatives and Resourcing

How will SD-WAN improve operational efficiency and effectiveness?

For many organizations, the benefits of SD-WAN stems from its ability to connect sites, users, and application at scale.

However, most legacy SD-WAN solutions were not designed for the increasingly complex mix of bandwidth-intense communication and collaboration tools and the need to deliver exceptional application experiences cost-effectively.

As network and application complexity increase, it makes **finding and fixing issues** that affect user experience more difficult. Solutions that enable **centralized configuration and management** of WI-FI LANs, Ethernet switches, and SD-WAN with **automated application performance control** reduce complexity. Solutions that can visualize application performance in the **LAN, WAN, and cloud** reduce time spent on troubleshooting, risk, and cost.



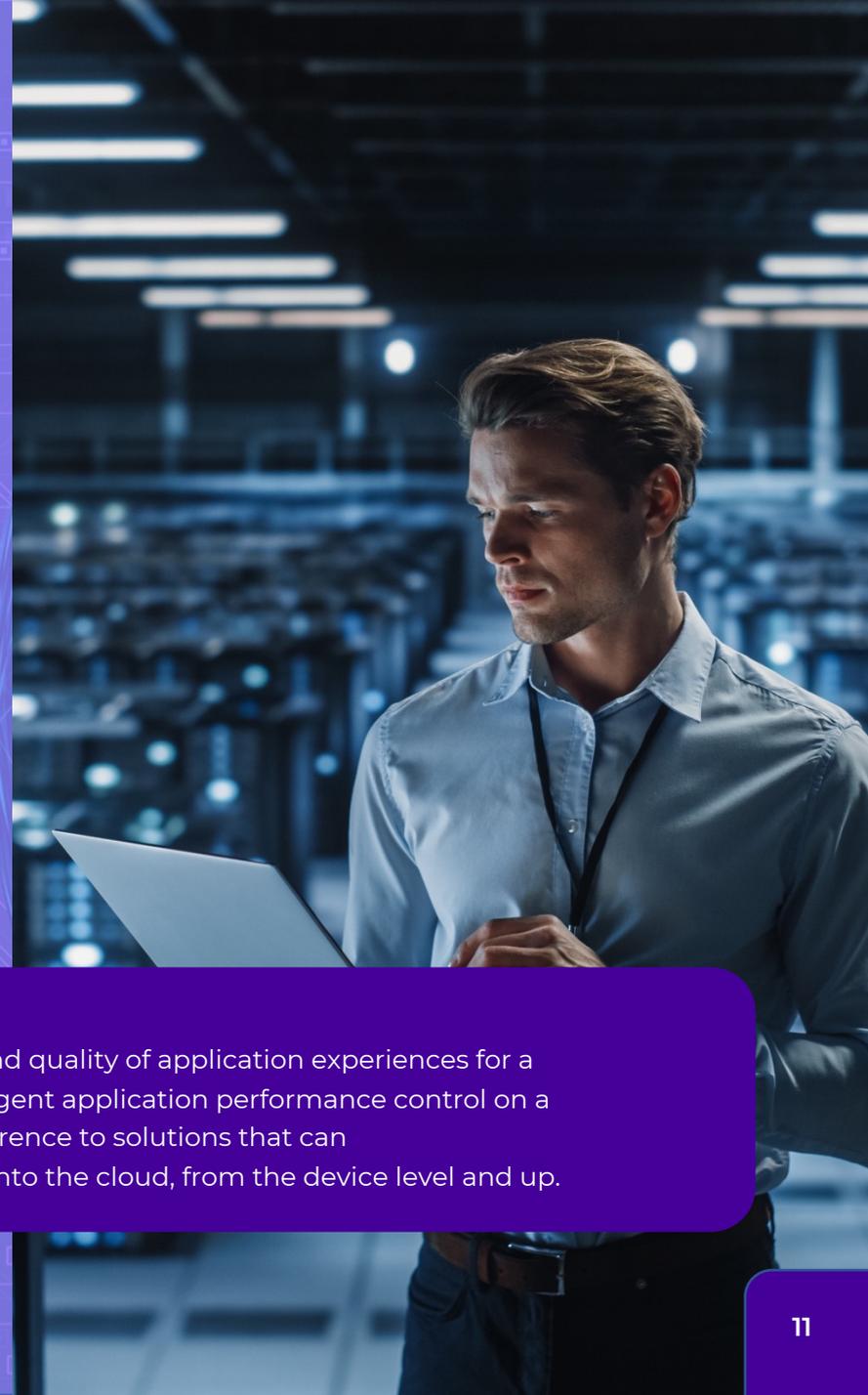
Key questions to consider

As organizations ask their IT teams to continue to adapt to the rapid pace of change, they should evaluate the impact of SD-WAN on IT resourcing.

- How is the IT team managing increased complexity? What additional tools does it need? Are there any skills gap or vendor consolidation initiatives?
- To what degree is the organization dependent on making per-site or per-device changes to the network?
- To what extent and at what cost is the organization affected by poor application performance or WAN security issues?
- Does the IT team have granular visibility into services and applications as they span the LAN, the WAN, and cloud?

Recommendations

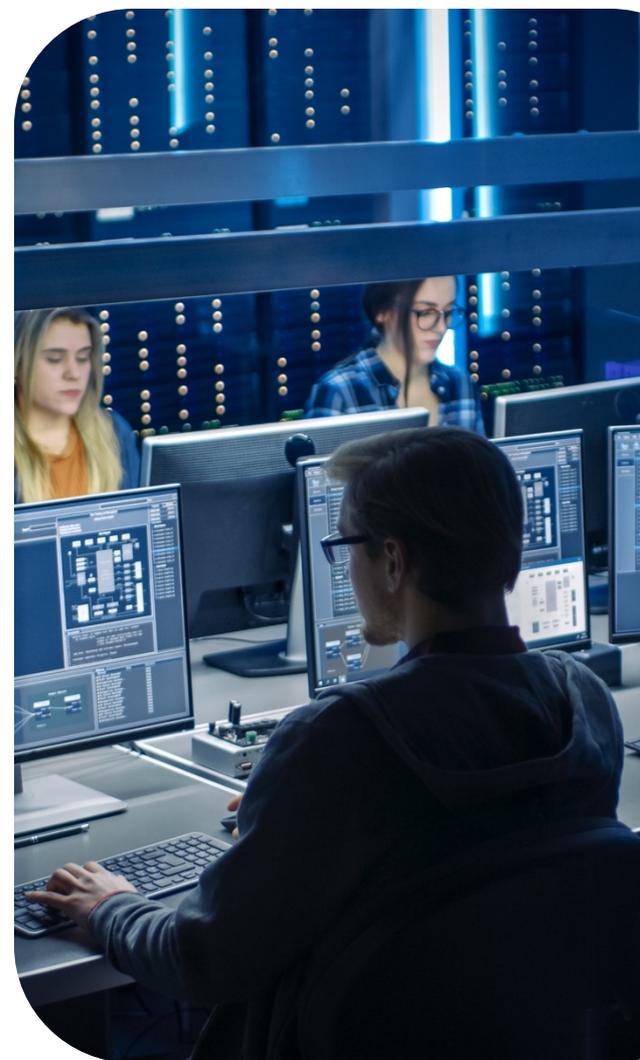
Organizations considering SD-WAN to improve the consistency and quality of application experiences for a distributed workforce should focus on solutions that enable intelligent application performance control on a per-application, per-session basis. Organizations should give preference to solutions that can visualize application performance across the LAN, the WAN, and into the cloud, from the device level and up.



What to ask a potential SD-WAN provider

As organizations evaluate their need to improve productivity as they become increasingly distributed, they should ask potential SD-WAN vendors about the following capabilities:

- Unified management:** How does the solution provide a scalable, cloud-native way to manage Wi-Fi access points, Ethernet switches, and SD-WAN devices seamlessly? What about third-party devices?
- Automated application discovery and configuration:** What features in the solution enable simpler, faster deployment and configuration? How does the solution automate application or device discovery? Can it identify shadow IT?
- Enhanced, end-to-end observability:** Does the solution enable visualization only of applications in the WAN, or can it offer broad, deep application performance visualization across devices, networks services, and applications from the data center to network edges and cloud?





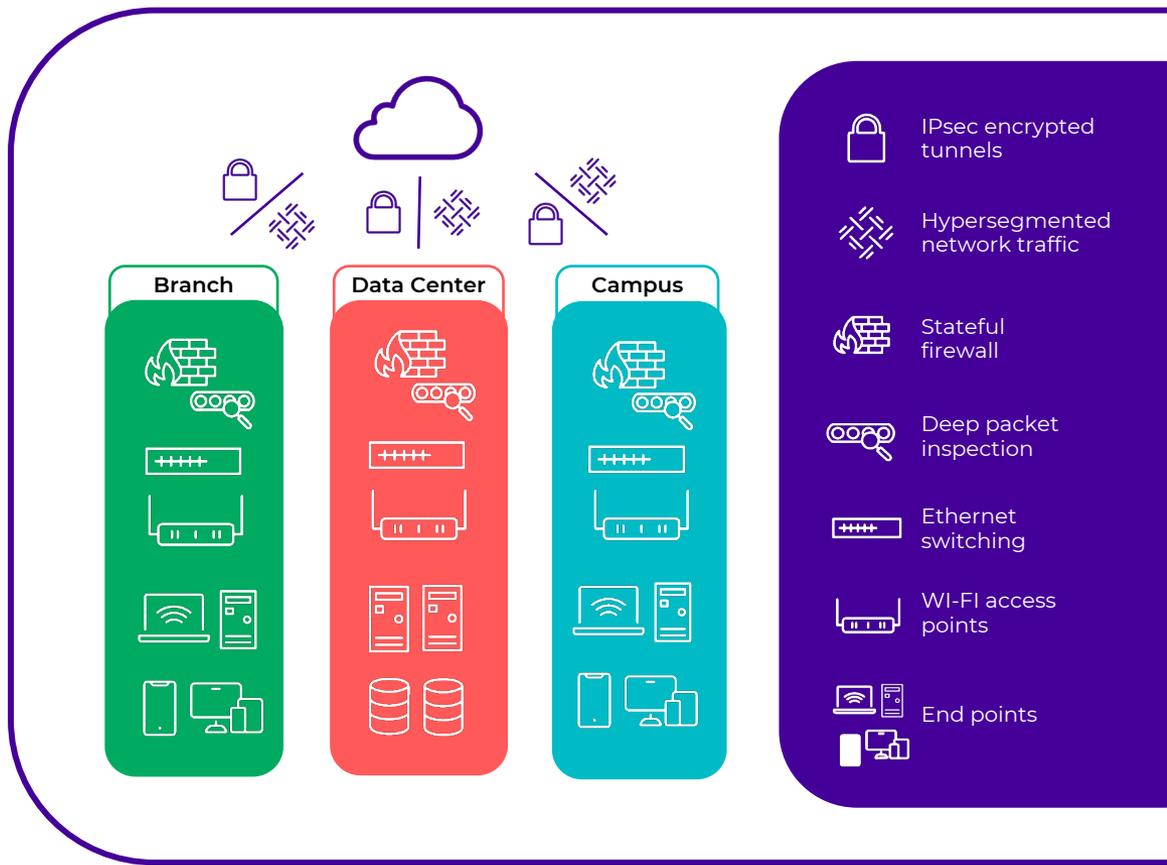
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Security Posture and Investments

How will SD-WAN influence secure risk and cost?

The attack surface is expanding, and **the threat landscape continues to escalate**. While the internet is the main source of many new threats, defense approaches that focus solely on the network perimeter leave organizations vulnerable.

As organizations become increasingly distributed, however, **many are struggling to extend security** across the network due to cost and complexity. Point solutions can provide a specific fix, but they often create complexity in the long run. **Instead, a multi-layered security posture** that protects LAN, WAN, and cloud holistically is the best approach.



Key questions to consider

As organizations consider SD-WAN through a security lens, they should align on key security and policy matters.

- What are the current security investments and what would new investments complement them?
- What points of potential attack are of greatest concern, and how are resources being allocated to address these risks?
- To what degree can employees use SaaS and IaaS applications directly from remote locations and what are the potential risks?
- With which regulatory requirements does the organization need to comply?
- Are there currently IT security skills gaps, and if so, for which functions or systems?

Recommendations

Organizations should consider SD-WAN solutions that interoperate with their current security investments while providing robust integrated WAN secure and secure internet access to protect their networks from threats emerging from the World Wide Web. Policy-based access to SaaS and IaaS applications via local breakout can improve performance without sacrificing security and reduce the use of shadow IT. Fabric-enabled hypersegmentation further enables secure connectivity and reduces risk of lateral threat movement.



What to ask a potential SD-WAN provider

As organizations evaluate the relationship between security and SD-WAN, they should ask potential providers about the following capabilities:

- WAN and internet access security:** Does the solution offer the choice of a built-in WAN security solution? Does the solution include fully integrated firewall as a service, secure web gateway, intrusion prevention system, or other capabilities?
- Interoperability:** Does the solution require replacement of current security investments, or can it interoperate with other security devices or platforms? If the latter, from which vendors and to what degree? Does it enable a bring your own security approach?
- Fabric-enabled security:** Does the solution have a campus-only fabric, or can it be seamlessly run over SD-WAN? How does the fabric increase attack resistance or protect against lateral threats and how does it enable or inhibit compliance initiatives?





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Why SD-WAN from Extreme Networks?

ExtremeCloud™ SD-WAN is a flexible, cost-effective, and performance-focused SD-WAN solution that reduces risk, simplifies operations, and improves productivity.



Unified management simplifies IT operations for WI-FI access points, Ethernet switching, and SD-WAN.



Advanced application performance visibility and control improves productivity and supports the success of digital transformation.



Extension of Extreme Fabric services from data centers all the way to branches at the edge reduces complexity.



Secure SaaS and IaaS breakout enables controlled access to SaaS applications and maintenance-free cloud on-ramps to AWS and Azure.



Integrated WAN and internet access security reduces risk with stateful firewall and optional firewall as a service, secure web gateway, and more.



A flexible, 100% OPEX subscription solution negates the capital risks of increased traffic and bandwidth consumption.



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WITH US™