Tackle digital transformation with secure software-defined WAN (SD-WAN):

Improve the overall speed, efficiency, economics, and security of your network
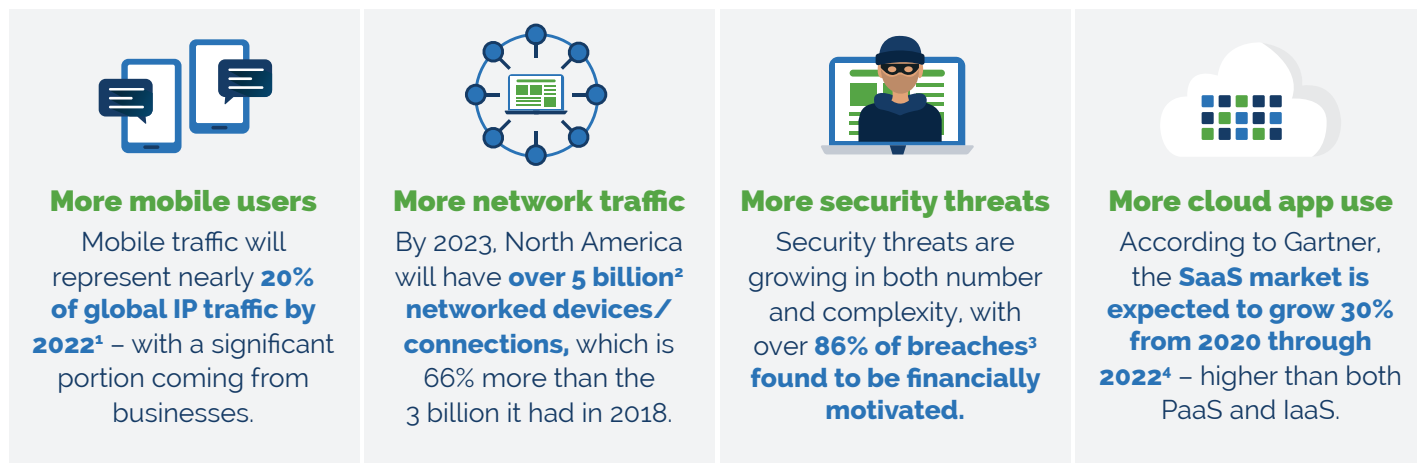
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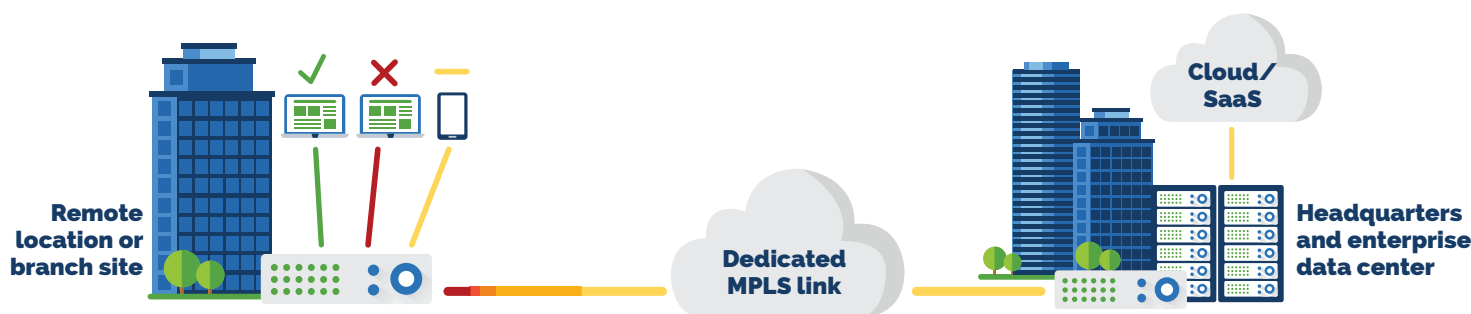
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Digital transformation requires a unified multi-cloud network

Digital initiatives may vary across organizations, but one thing remains consistent: digital transformation is creating unprecedented demands on enterprise networks, especially in organizations with multiple locations. With more mobile users, network traffic, security threats, and cloud applications, traditional wide-area network (WAN) architectures are being pushed to their limits.

More mobile users	**More network traffic**	**More security threats**	**More cloud app use**
Mobile traffic will represent nearly **20% of global IP traffic by 2022**[1] – with a significant portion coming from businesses.	By 2023, North America will have **over 5 billion**[2] **networked devices/ connections,** which is 66% more than the 3 billion it had in 2018.	Security threats are growing in both number and complexity, with over **86% of breaches**[3] **found to be financially motivated.**	According to Gartner, the **SaaS market is expected to grow 30% from 2020 through 2022**[4] – higher than both PaaS and IaaS.

These demands make it increasingly difficult for networks to keep up. To compete in today's digital era, your WAN must provide a secure foundation and address the complexities brought on by digital transformation. It's for this reason that many multi-location organizations are turning to software-defined WAN (SD-WAN).

Challenges with traditional WAN architectures

Remote location or branch site

Dedicated MPLS link

Cloud/ SaaS

Headquarters and enterprise data center

An organization's WAN connects their branch or remote locations with headquarters, as well as key applications and services. In traditional WAN architectures, traffic is backhauled through headquarters in an effort to control access and apply security services. This has worked well historically, but in today's multi-cloud environment has the following limitations:

- ✕ Traditional WAN architectures and approaches are not cloud friendly
- ✕ Mobile users and distributed cloud applications suffer from poor application performance
- ✕ Most organizations experience a laundry list of challenges with their local circuit providers
- ✕ It's expensive and not always possible to improve performance through more MPLS connections
- ✕ Mobile users circumventing device and connection policies create more security risks

If you are experiencing performance, cost, operational, or security issues across your WAN, your organization could benefit greatly from the software-defined approach to WAN management that SD-WAN offers.

SD-WAN offers a better approach to WAN connectivity
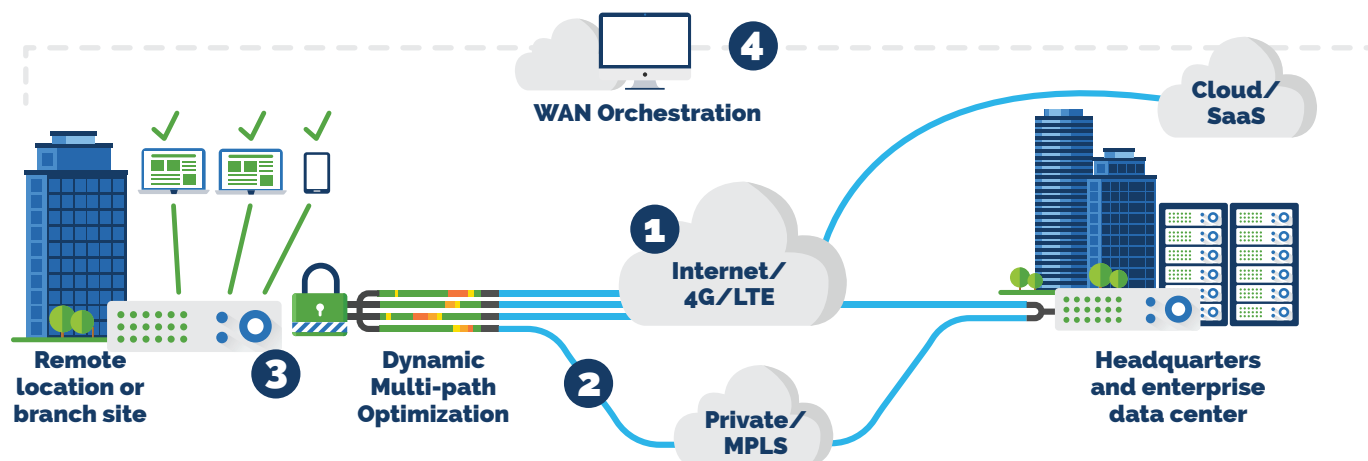
Through SD-WAN, your organization can securely connect its branch and remote users to any location or cloud, all with a consistently great user experience. In addition to helping you overcome carrier challenges, it enables you to augment MPLS connections with broadband or cellular connectivity to create a WAN "fabric" to use bandwidth more intelligently. SD-WAN will dynamically choose the best path for all your network traffic based on pre-defined policies and network conditions – ensuring the highest level of application performance without sacrificing security.

Key Benefits of SD-WAN

1 Quickly add bandwidth

Respond to business needs faster by using broadband/4G/LTE connectivity to securely add bandwidth or failover capabilities

2 Improve app experiences

Route WAN traffic through the best path to ensure optimal app performance and user experience, all without direct IT oversight

3 Improve security

Segment your networks and apply security easily to all network traffic without having to backhaul data through headquarters

4 Gain network visibility

See real-time performance and better understand the apps, users and devices on your WAN through a simple dashboard

SD-WAN will help you achieve dynamic alignment between business strategy, application policy and WAN configuration. It enables your WAN to provide the application performance and security required by the business, whether that application is in the cloud or corporate data center. Organizations who have implemented SD-WAN can:

✔ Deploy new branch locations faster

✔ Move applications to the cloud with confidence

✔ Add WAN bandwidth quickly and securely

✔ Lower 5-year cost of WAN operations by 38%[5]

Place your trust in best-in-class solutions from trusted vendors

While SD-WAN presents well on paper, it needs to be backed by the right vendor (and IT partner) to reach its full potential. Cisco is at the forefront of modern WAN innovation and a leader in the SD-WAN space. They offer a best-in-class SD-WAN solution that you can deploy on your platform of choice (on-premises, cloud, or hybrid) to create an intelligent and secure SD-WAN fabric. In fact, Cisco was named the **Product of the Year for Software-Defined Networking by CRN.**

What outcomes and business impact can I expect from SD-WAN?

SD-WAN makes it easier to securely connect your users to applications and ensures that they have the best user experience. With Cisco and Internetwork Engineering (IE), you can create a cloud-first WAN architecture that enables you to connect data centers, branches, campuses and colocation facilities with the speed, efficiency, and security that you need to tackle digital transformation. Organizations that have deployed a comprehensive SD-WAN solution are benefitting from:

Better app experiences
SD-WAN dynamically steers traffic around network problems for optimal delivery of all your cloud and on-premises applications. You can even create policies to reserve bandwidth for business-critical applications.

Improved economics
SD-WAN allows you to incorporate low-cost broadband circuits into a single, logical WAN that's capable of lowering costs and improving business agility. Organizations migrating to a hybrid WAN are reducing costs by 50%[2] or more.

Simpler operations
SD-WAN simplifies network management, provides more network insight, and delivers consistent performance levels to users allowing IT to spend less time managing and provisioning resources, and more time on the business.

Stronger security
SD-WAN solutions that are comprehensive include firewall, VPN, and threat management functionality that harden your network's security and make it easier to meet compliance and corporate security policy.

Easier cloud adoption
SD-WAN offers API integrations to major public clouds and makes it easy to connect users at branch or remote locations to cloud applications in a seamless, secure, and reliable fashion over any transport.

Why Internetwork Engineering (IE) for SD-WAN?

Technology doesn't always live up to the hype. It has to be thoughtfully designed, deployed, and operated to maximize it's benefits. At Internetwork Engineering (IE), we're experts in translating business requirements to infrastructure solutions such as SD-WAN. Our Ideas to Execution (I2E) process is built to ensure client success and our years of experience across multiple industries provide relevant business impact. IE can help you through digital transformation in a cloud first world with the leading SD-WAN solutions.

As new business models continue to emerge, new network models must follow. **IE can help you make a smooth, impactful transition to a software-defined WAN.**

Visit our SD-WAN resources page

You'll find a collection of content that you can use to learn more about the business value and use cases of SD-WAN, as well as why organizations are choosing it over traditional WAN architectures.

Schedule a Demo

Explore more SD-WAN Resources

Have a question? Email with our SD-WAN experts
Get an answer through email from one of our SD-WAN subject matter experts – **sdwan@ineteng.com**

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About Internetwork Engineering (IE)

At IE, we are people connecting people. Since 1996, IE has been connecting people to their customers, coworkers, suppliers, patients, citizens, and students throughout the Southeast, creating more meaningful interactions with the people you care about most. Our mission is to provide technology solutions that inspire innovation and achievement, knowing that the right technology at the right time has the power to transform industries, countries, and lives.

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SOURCES: [1]Cisco VNI Mobile Forecast, 2019-2020 | [2]Cisco Annual Internet Report, updated in March 2020 | [3]Verizon Data Breach Investigations Report, 2020 | [4]Gartner Public Cloud Worldwide Forecast, 2019 | [5]Cisco, Top 5 reasons to choose Cisco SD-WAN, 2019