



# 6 causes of poor app performance and how to fix them

# In today's business environment, yesterday's networks don't work

Since the hybrid work explosion, enterprises across all industries have accelerated their digital transformation. As IT leaders adopt more modern cloud-based applications and services like unified communications (UC), 6 major network performance challenges have emerged.

We will explore those challenges, along with ways enterprise IT leaders can overcome them.



**80%** of respondents view their network as important or critical to the success of their company's digital transformation efforts<sup>1</sup>



**66%** of respondents do not believe that their WAN solution fully supports unified communications for all employees<sup>1</sup>

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# The top 6 causes of slow application performance

Here are the main culprits slowing down your enterprise applications.

## 1 **Unnecessary network traffic:** Corporate networks have seen a dramatic increase in personal traffic from remote workers.

Business applications are competing with streaming music, live sporting events and all kinds of social media. The resulting strain on a traditional, fixed-bandwidth network can slow down applications, especially those that are bandwidth-intensive like IP voice and videoconferencing. Even though it's not practical or even necessary to block non-work-related sites, they shouldn't get in the way of what's crucial to the business.

## 2 **Growing security vulnerabilities:** While workplace flexibility provides new opportunities for enterprises and their employees, it also poses increased security risks as remote workers log on from home or public WiFi hotspots using a mix of personal and company devices.

Because of this, the number of ransomware and malware attacks [has skyrocketed](#) over the last few years. Traditional network security relies on firewalls, installed as customer premises equipment (CPE), that reside on the network edge. These firewalls are designed to prevent unauthorized access into or out of a network. But firewall protection [does not extend](#) beyond the fixed network edge.

## 3 strategic network priorities for enterprises

Based on Forrester Consulting's survey of IT and business leaders across diverse industries in the United States<sup>1</sup>



Improve network security



Refresh, update or re-architect the WAN



Modernize the network

**3 Mismanagement of existing bandwidth:** Even though inadequate enterprise network design can lead to slow application performance, often the real problem is insufficient provisioning.

For example, a single app like voice or video might get 60% of total bandwidth when it only needs 30%. Meanwhile, other under-provisioned apps now share the remaining 40%, resulting in unintended

performance issues. To manage them optimally, IT needs to have enough visibility into those apps to know how much bandwidth they need, along with the control to provision it.

**4 Lack of visibility:** Many IT departments lack an accurate, complete view of how many applications are running on their networks, how much bandwidth they consume or who's using them.

This is mostly caused by shadow IT—users or departments who install their own cloud apps (such as Dropbox) without informing the enterprise IT department. Additionally, the growing number

of Internet of Things (IoT) devices leads to insufficient network and application performance. Because of this, IT is often unaware and caught off guard when it comes to bandwidth provisioning.

\$265B

The global cost of ransomware damages will exceed **\$265B** by 2031<sup>2</sup>

**5 Lack of control:** The inability to fine-tune bandwidth by application leads to inefficiencies and the adoption of new cloud services.

A flat, unsegmented enterprise network can result in bandwidth bottlenecks that slow down app performance overall, similar to a highway where everyone fights to get into the fast lane.

Additionally, provisioning new apps and services on a site-by-site basis within a traditional MPLS architecture is labor-intensive, which leads to further delays and expense.

**6 Lack of cloud-specific expertise:** Cloud networking and security require specialized skills beyond traditional network management.

Finding the IT professionals with the practical expertise to implement cloud networking is challenging. Moreover, upgrading staff skills

takes time away from daily network management tasks, making it difficult for team members to upskill independently.



**85%** of enterprises surveyed stated that they need more visibility into their WAN traffic<sup>1</sup>

# The fixes

Identifying these problems is the first step. From there, you can breathe new life into your network by implementing these solutions.



## Find a better way to the cloud

Many enterprises don't realize how much bandwidth the cloud needs. When you move apps from the data center to the cloud, the data paths often shift from the LAN to the WAN. By decentralizing them, application performance and reliability can suffer—and your end users will suffer, too.

Cloud application optimization solutions, like cloud exchanges, are a simple fix. Network service providers (NSPs) can provide these using their networks to connect customer sites directly to cloud vendors like AWS, providing privacy and security while optimizing cloud apps.

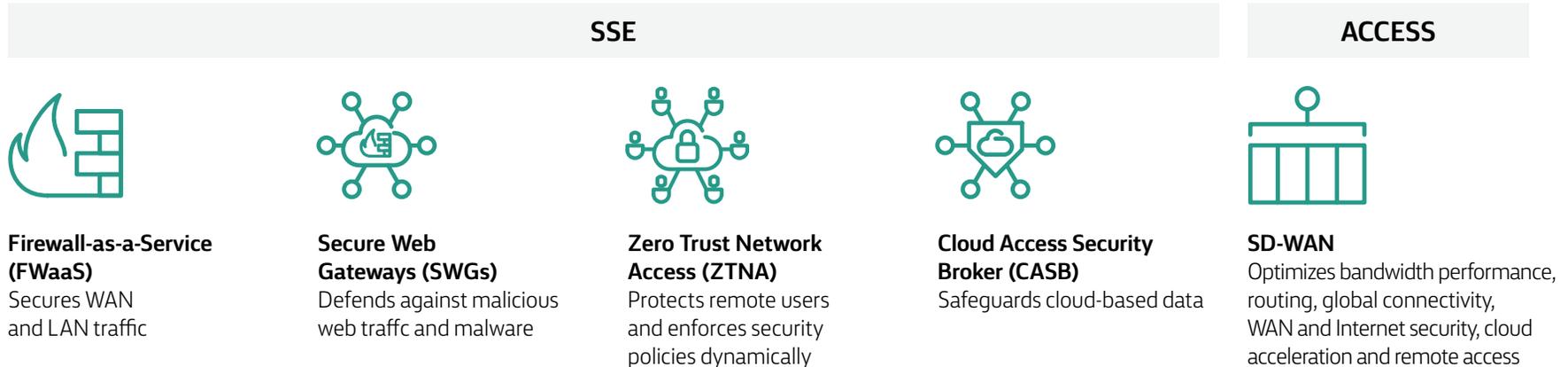


## Embrace dynamic networking

By routing applications and users based on predefined profiles and current network conditions, top-priority traffic gets to its destination faster, bypassing lower-priority traffic along the way.

[SD-WAN](#) is the best way to introduce this kind of routing. It uses software intelligence to route traffic dynamically across distributed branches and remote locations in real time, based on established business policies along with network quality and availability. Since SD-WAN separates the software-based control plane from the hardware-based data plane, it can ride over an existing MPLS network, minimizing impacts to the enterprise infrastructure.

## Get SASE



Traditional network security models were designed to accommodate employee devices and systems that were located within the enterprise's perimeter, making it easier to secure endpoints. But these assumptions no longer hold true.

[Secure Access Service Edge \(SASE\)](#) is a cloud-native network and security framework that provides users with secure cloud access to applications, data and services and protects an organization's data and systems from unwanted access.

Using SD-WAN as the network layer, SASE incorporates [Security Service Edge \(SSE\)](#) capabilities to enable robust security services and support enterprise mobility beyond the network perimeter. IT can centrally apply one security policy across all of its locations to protect the network, rather than having to update physical endpoints at each location.



### Get a single pane of glass

By running the network with a centralized network controller, IT can gain the deep visibility and control to optimize each app pathway by ensuring business-critical apps get the optimal priority across all devices and locations.

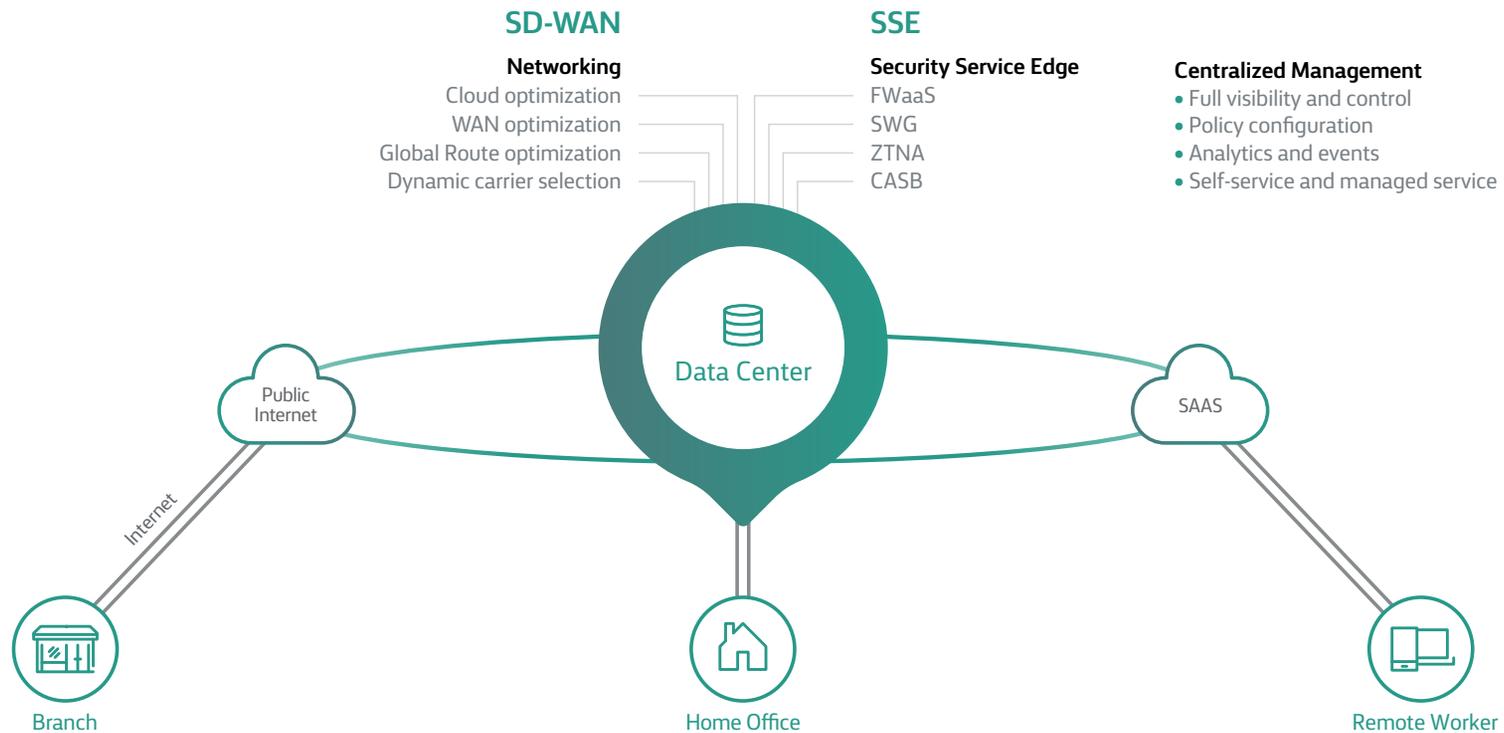
The result? Dramatic improvements in application performance and lower per-megabit bandwidth costs. Customer and user experience will also improve.



By 2025, **at least 60%** of enterprises will have explicit strategies and timelines for SASE adoption, up from 10% in 2020<sup>3</sup>

# Cloud-ready network architecture

This diagram illustrates how the various components work together to cover the enterprise network—both within and outside the perimeter.



# Take action

Armed with this information, you're ready to bring the culprits back in line. Even better, you're prepared to move your entire organization forward to a higher-performance future.

## Discover the Windstream Enterprise vision for cloud networking

Adapt, reinvent and succeed in today's rapidly changing business environment by harnessing the power of the cloud. Start by enhancing your network with the nation's first and only cloud-native [SASE solution](#). Then add [WE Connect](#), our single-pane-of-glass portal, to gain the full visibility and control you need to optimize your bandwidth. Streamline your

operations and improve employee productivity with our powerful [OfficeSuite UC](#)® collaboration solution. And rely on our [Professional Services team](#) to design, deploy and manage it all—and relieve your team from tedious site installations and rollouts so they can focus on your organization's strategic priorities.

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## Cloud-enabled connectivity, communications and security. Guaranteed.

Windstream Enterprise drives business transformation through the convergence of our proprietary software solutions and cloud-optimized network to unlock our clients' revenue and profitability potential. Our managed services streamline operations, enhance productivity and elevate the experience of our clients and their end users while securing their critical data and brand reputation. Analysts certify Windstream Enterprise as a market leader for our product innovation, and clients rely on our unrivaled service guarantees and best-in-class management portal. Businesses trust Windstream Enterprise as their single source for a high-performance network and award-winning suite of connectivity, collaboration and security solutions—delivered by a team of technology experts whose success is directly tied to our clients' complete satisfaction.

1. "Shift Your Network Thinking to SD-WAN and Security." A Forrester Consulting Thought Leadership Paper. Commissioned by Windstream Enterprise, March 2022.
2. Morgan, Steve. "Global Ransomware Damage Costs Predicted to Reach \$20 Billion (USD) by 2021." Cybercrime Magazine. October 21, 2019.
3. MacDonald, Neil, et al. "2021 Strategic Roadmap for SASE Convergence." Gartner. March 25, 2021.

To learn more about Windstream Enterprise network  
and security solutions, visit [windstreamenterprise.com](https://windstreamenterprise.com)