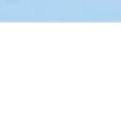


REGION FOCUS: WORLDWIDE

# Top 5 Considerations When Modernizing Your Network Edge

How edge networking delivers the agility and flexibility of digital infrastructure



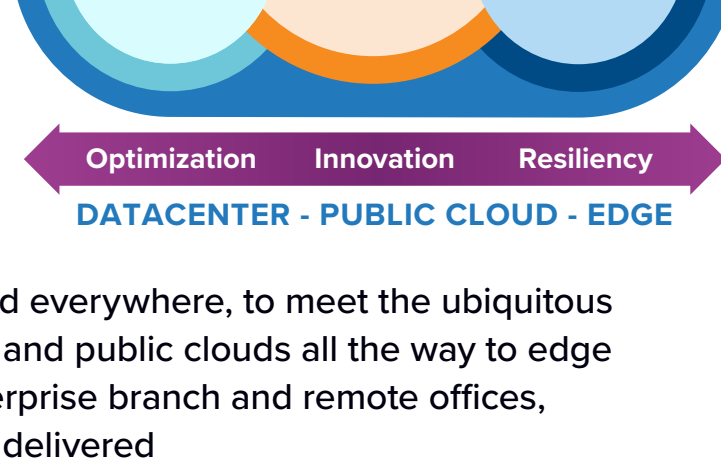
**Brad Casemore**  
Research Vice President, Datacenter Networks, IDC

## Digital Infrastructure Must Include a Modern Network

The network becomes the digital nervous system, connecting and supporting all digital experiences

### The Network Is Integral to Digital Infrastructure

- ✔ Digital infrastructure is required to meet the digital business imperatives of automated agility, flexibility, resiliency, optimization
- ✔ Network modernization is integral to digital infrastructure
- ✔ The network must be modernized everywhere, to meet the ubiquitous demands — from the datacenter and public clouds all the way to edge environments, including the enterprise branch and remote offices, where data and applications are delivered



Source: IDC, 2023

## Network Modernization Is an Imperative

The need for digital infrastructure implies transformation spanning all places in the network

### The Need for Network Modernization Is Ubiquitous

**DURING THE LAST DECADE**

Shift from *on-premises datacenter to cloud and multcloud*

**THE LAST TWO YEARS**

Shift from *campus/branch to distributed users and devices*

**NOW**

Distributed users/devices accessing distributed multcloud applications

**The network must evolve to meet modern needs**

**79%** of respondents say investments in edge computing will require **significant changes to their network architectures** over the next two years

n = 652, Source: IDC's Future Enterprise Resiliency and Spending Survey — Wave 10, October 2021

## Addressing Security and Appliance Sprawl

Meeting security requirements and complexity of managing multiple appliances cited as most significant WAN challenges

- Security** is the most significant WAN challenge, particularly relating to cloud and web apps (SaaS and IaaS and other internet services)
- Complexity** of managing multiple network appliances is also highly problematic and costly
- A robust **SD-WAN platform** is a solution to both challenges, providing multifaceted edge security and integration and simplification of network functions

### Q. Please select the three most significant WAN challenges (from the following) that best relate to your company.

Security requirements relating to IaaS and SaaS cloud services, and other internet applications	<b>27.3%</b>
Managing multiple network appliances in the branch, including routing, security, and performance management, among others	<b>27.2%</b>
Need for better analytics and visibility into network performance, applications and resources delivered by the network	<b>25.5%</b>

Source: IDC's Software-Defined WAN (SD-WAN) Survey, November 2022

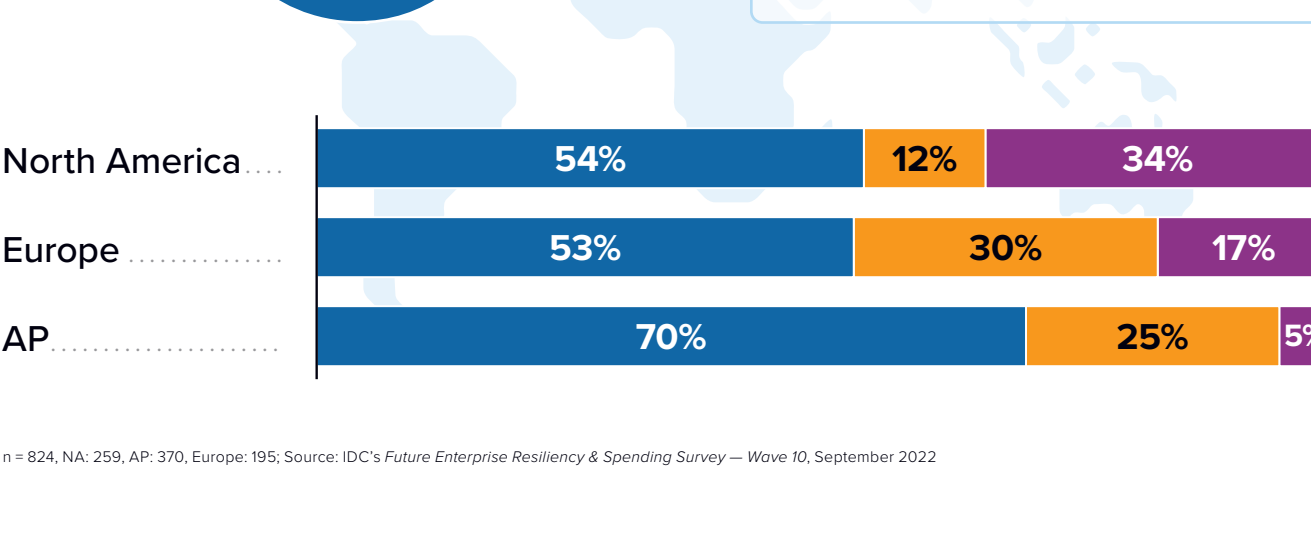
## The Value of Open-Source Software Infrastructure

Flexibility conferred by open-source infrastructure software seen as providing protection against supply-chain disruptions

- Open-source infrastructure software, such as the SONiC network operating system, provides choice and flexibility in underlying hardware
- Choice and flexibility help to reduce the impact of supply-chain disruptions that affect hardware system availability

**60%** of enterprises worldwide appreciate how open-source infrastructure software can help counteract supply-chain challenges

### Investing in open-source digital infrastructure software solutions in order to counteract the risk of IT supply chain disruptions — to what degree are each of these a current priority for your organization?



Region	Top priority corporate initiative / Important corporate initiative	Selective business unit or IT team level initiative	Not a priority / Unsure
North America	54%	12%	34%
Europe	53%	30%	17%
AP	70%	25%	5%

n = 824, NA: 259, AP: 370, Europe: 195, Source: IDC's Future Enterprise Resiliency & Spending Survey — Wave 10, September 2022

## SONiC at the Network Edge

SONiC expands to edge, delivers compelling operational and business benefits

- ✔ SONiC consolidates management silos, reducing complexity
- ✔ As a single unified network operating system — spanning the datacenter to the edge — SONiC supports and extends datacenter tools and capabilities throughout the network
- ✔ IDC forecasts SONiC-based Ethernet switches to be worth more than \$3 billion in 2027
- ✔ In 2022, SONiC was transferred from the Open Compute Project (OCP) to the Linux Foundation, where it will benefit from a robust and expanding community of contributors
- ✔ Existing use cases will benefit from the enlarged community, and new use cases will emerge through further development
- ✔ SONiC now extends to every place in the network, including the branch and other edge environments
- ✔ SONiC value proposition: automated agility, flexibility, microservices-based composability, open-source innovation, cost-effectiveness
- ✔ SONiC edge value proposition: reduced management silos, extension of datacenter tooling and capabilities to the edge through a single, unified NOS that runs in all places of the network

Source: IDC, 2023

## The Value of Edge Platform Flexibility

Edge platforms must accommodate integration of scalable network and security functionality

- Ensure that edge network platform supports choice, flexibility, and scale of virtual network and security functions
- Edge platforms should accommodate integration of scalable network and security functionality
- Leverage open-source software, such as SONiC, for hardware flexibility and software innovation in edge switching
- Understand that network and security requirements will evolve, requiring a platform that is adaptable and elastically scalable
- Platform choice can confer significant investment protection and long-term benefits

Source: IDC, 2023

## Message from the Sponsor



Dell Networking maximizes customer choice, flexibility and innovation from the **edge** to the **core** to the **cloud**.

Dell Networking solutions are open, agile, and cloud-based, incorporating modern, open technologies that are software-driven and embrace the disaggregated approach of software-defined networking that bring scalability, agility and simplicity

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