

EBOOK

MANAGING  
MODERN  
NETWORKS WITH  
CONSISTENCY:  
**3 STRATEGIES  
FOR SUCCESS**



Rates of **error-driven trouble** have been climbing over the last four years, from less than 26% in 2020 to nearly 30% in 2024.<sup>1</sup>

# Executive Summary

In today's rapidly evolving digital landscape, ensuring responsive, reliable network connectivity represents a critical imperative for virtually every organization in every industry. However, for today's network operations teams, managing modern networks continues to grow more complex and difficult.

Establishing consistent operational approaches is essential for effectively mitigating disruptions, improving performance, and ensuring optimal resource utilization. To achieve these goals, network operations teams must cultivate an effective mix of people, processes, and tools. However, teams in a significant proportion of organizations still struggle to achieve this mix. Operational inconsistencies stifle network operations efficiency and effectiveness, and erode organizational performance.

Network teams must prioritize operational consistency. By establishing standard, optimized practices, teams can spot and mitigate potential business problems and maximize the success of network initiatives.

This Broadcom eBook explores three essential strategies for achieving consistent management in modern network environments. By employing these strategies, organizations can more effectively manage multi-vendor technology integrations and navigate the complexities of digital transformation.

<sup>1</sup> Enterprise Management Associates, "Network Management Megatrends 2024," Shamus McGillicuddy, May 2024

# Are You Ready for Agile Networks?

Today, NetDevOps represents one of the most significant innovations in the networking arena.

NetDevOps practices promote agile testing and deployment across networks. Through this approach, network services are ready for consumption throughout the continuous integration/continuous delivery (CI/CD) pipeline. At the same time, network reliability engineering (NRE) approaches are gaining traction, promoting sustained resilience and faster innovation.

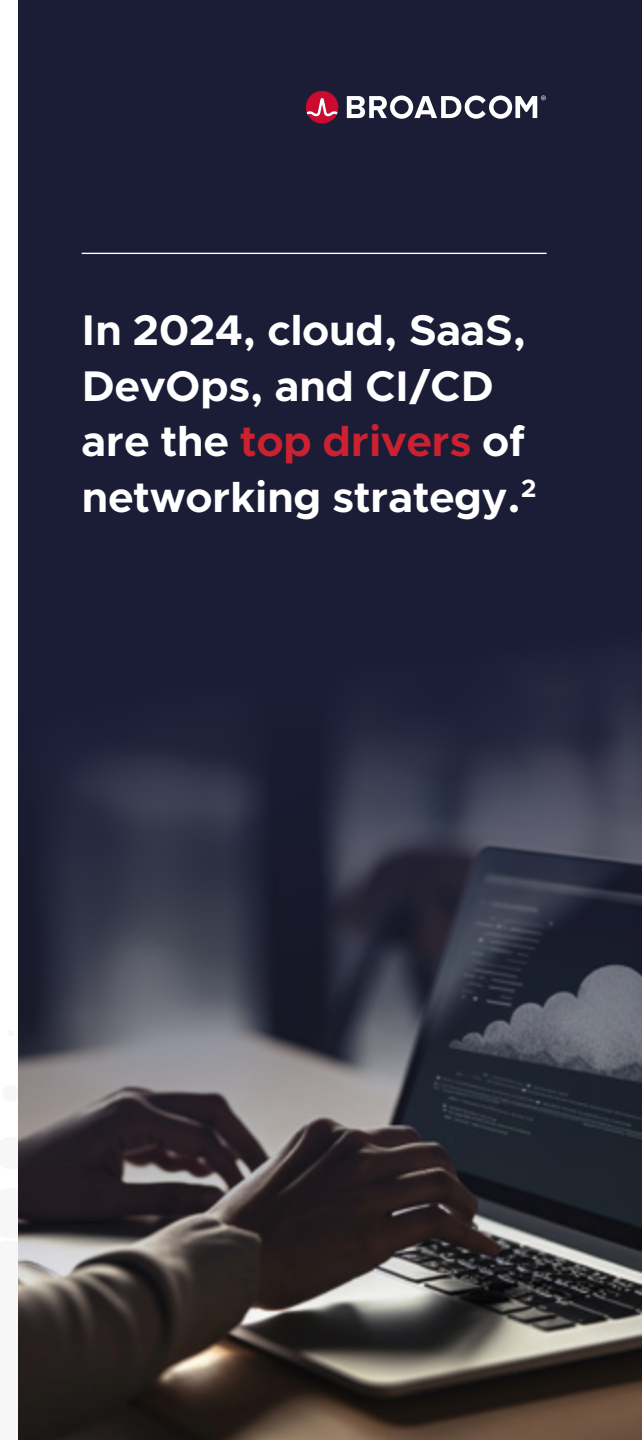
Agile network operations teams face the challenge of maintaining consistent operations and delivering reliable digital experiences—while contending with an increasing rate and volume of changes. To meet these imperatives, teams must reassess their network management strategies. To manage the rapid pace of network transformations, it essential to establish a solid foundation for improved operational consistency.

How can teams establish this consistency and gain the agility needed to accelerate their network transformations? The sections that follow provide three key strategies.

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**In 2024, cloud, SaaS, DevOps, and CI/CD are the **top drivers** of networking strategy.<sup>2</sup>**

<sup>2</sup>Enterprise Management Associates, "Network Management Megatrends 2024," Shamus McGillicuddy, May 2024



# Strategy #1: Unified Visibility Across Vendors and Technologies

Modern networks are composed of a diverse array of networking devices—including routers, switches, firewalls, load balancers, and servers—sourced from various vendors. Traditionally, these components are managed by distinct teams using different tools, creating operational silos within the organization.

However, to perform optimally, business services typically rely upon a technical foundation that spans multiple domains and environments. With siloed tools and teams, the process of triaging and troubleshooting issues with these business services becomes extremely complicated. This fragmented approach necessitates the engagement of multiple teams and the use of various tools and operating procedures, making fast, efficient problem resolution virtually impossible.

Given this, establishing unified network monitoring visibility is crucial. To establish this visibility, teams need to maintain a centralized, authoritative repository of network-related information. By consolidating network data into a single location for analysis, teams can achieve greater consistency in their network management efforts.

**Standardizing on a single network monitoring platform fosters better collaboration and knowledge sharing among different teams. This consistency helps ensure that the operational knowledge that teams acquire is fully leveraged and universally applied.**

<sup>3</sup>Enterprise Management Associates, "Network Management Megatrends 2024," Shamus McGillicuddy, May 2024

The typical team  
still has anywhere  
from **3 to 15 network  
management tools.**<sup>3</sup>



# 49%

of organizations are using a **synthetic network monitoring tool** today.<sup>4</sup>

## Strategy #2: Continuous Validation of the Connected Experience

Network operations teams are responsible for managing complex and often fragile environments. As a result, teams are hesitant to make changes and promote agility because they're concerned about potential disruptions. Ultimately, these concerns stifle the strategic transformations the organization requires.

When implementing network changes—such as infrastructure upgrades, configuration adjustments, and new device installations—teams must ensure that the user experience is not negatively affected. This challenge intensifies as organizations transition from traditional data centers to multi-cloud platforms and co-located infrastructures. When traffic is routed through third-party providers, network operations teams typically lose visibility into approximately 75% of the network delivery path.

By establishing active monitoring and efficient change control, teams can adopt a proactive approach, ensuring a consistent digital experience and accelerating network transformations.

**Active testing and synthetic monitoring enable continuous validation of the network experience, including before and after network changes are implemented. This provides deep insights, including into the performance of internet service provider (ISP) and cloud service provider (CSP) networks.**

<sup>4</sup> Enterprise Management Associates, "Network Management Megatrends 2024," Shamus McGillicuddy, May 2024



# Strategy #3: Cross-Domain Operations Workflows

As enterprise networks continue to evolve and incorporate new technologies, they become increasingly complex. This requires network operations teams to extend their expertise across more domains. However, finding qualified candidates with the necessary skills can be challenging.

Adding to these challenges is the fact that network operations personnel lack standardized workflows and visibility across diverse technologies, such as cloud connections, SaaS applications, and campus and branch Wi-Fi networks. As a result, network specialists contend with more disconnected and manual interventions, further exacerbating the skills shortage problem.

To effectively manage dynamic networking services, teams need tools that offer consistent, repeatable, and unified management of both traditional and software-defined environments. By collaborating more effectively and working seamlessly with third parties, organizations can improve operational readiness and better ensure successful network transformations.

**When a large number of tools are employed, it typically leads to suboptimal processes and policy enforcement. Because each tool has overlapping capabilities, it is difficult, if not impossible, to employ controls consistently.**

<sup>5</sup> Enterprise Management Associates, "Network Management Megatrends 2024," Shamus McGillicuddy, May 2024

**41%**  
**of respondents believe that it is somewhat to very difficult to hire networking professionals.<sup>5</sup>**



Network professionals believe that **better network management tools** could prevent or eliminate nearly **53%** of their network problems.<sup>6</sup>

# Financial Services Firm Unifies Network Management

The network operations group within a financial services company lacked a single source of truth for all their network monitoring intelligence, which meant groups from different domains had to rely on their own tools. As a result, troubleshooting was inconsistent, labor-intensive, and costly. Executives weren't able to get the insights they needed and staff spent a significant amount of time generating reports and chasing down status updates.

As the network environment continued to grow in scope and complexity, these teams needed to implement even more tools, which further reduced operational efficiency and left them struggling with lengthy remediation efforts.

Consolidating monitoring tools enabled the company to realize dramatic improvements in visibility and operational consistency. Monitoring scale was increased by eight-fold, enabling network teams to go from supporting 30,000 to 260,000 objects, while optimizing collaboration and improving agility across multiple domains.

**Most network tools are designed to manage certain aspects of networks, but they are not engineered to handle enterprise networks holistically. Relying on multiple tools, teams contend with inefficient, complex management workflows, having to extract data from one system and manually enter it into another.**

<sup>6</sup> Enterprise Management Associates, "Network Management Megatrends 2024," Shamus McGillicuddy, May 2024

# Drawing It All Together

Operational consistency is the cornerstone of efficient and effective network management. Through this consistency, network operations teams can ensure processes are standardized, promoting comprehensive visibility and enhanced collaboration across different groups and domains. By maintaining uniform practices, teams can reduce costs and improve scalability in complex, modern environments, while boosting agility and resilience.

These three strategies can help establish a foundation for improved consistency amidst today's accelerated network transformations:

- 1. Unified visibility across vendors and technologies.** Bridge domain silos and share operational knowledge between teams, to ensure consistent and efficient troubleshooting practices across multi-vendor devices.
- 2. Continuous validation of the connected experience.** Actively test network performance to safeguard against change issues and maintain quality digital experiences across third-party managed connections.
- 3. Cross-domain operations workflows.** Standardize and unify tools to enhance network management workflows, reduce manual interventions, and promote repeatable processes across diverse technologies.

Embracing these strategies will streamline network management and empower teams to navigate the complexities of modern network environments with greater agility and confidence. Now is the right time to review your network management strategies and establish approaches for improving operational consistency, so you can be best prepared for the next round of network transformations.



# Network Observability by Broadcom Can Help You Get There

With Network Observability by Broadcom, you can:

- Unify the monitoring of large-scale, multi-vendor networks, including software-defined and wireless.
- Gain control and minimize erroneous changes that lead to performance issues, even across ISP and CSP networks.
- Establish standardized, automated workflows to accelerate issue resolution and reduce overreliance on experts.

This comprehensive, modern network monitoring solution equips level-one and level-two operations staff with intelligent workflows that simplify triage and troubleshooting. The solution also provides level-three visibility, offering granular insights into faults, performance, and flows. It also provides coverage that spans traditional, software-defined, and cloud architectures.

With this solution, level-one operators gain access to the network intelligence they need, so they can identify and isolate issues without having to escalate to a network engineer or architect. As a result, expert network operations personnel spend less time on manual, mundane tasks and more time focusing on accelerating network transformations.

Visit our [accelerate network transformation page](#) to learn more about establishing a single source of truth, eliminating visibility gaps, and gaining the agility you need to speed network transformations.

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June 17, 2024