

EBOOK

# 4 IMPERATIVES FOR **MONITORING** MODERN NETWORKS



# Executive Summary

## The Internet is the new enterprise network

It's no longer a question of whether you use the Internet; it's a question of how many hours you're on it each day. After all, the first question we typically ask entering a new venue is, 'what's your WiFi code?' Everything from e-commerce and working from home, to student learning and medical diagnosis is increasingly conducted online. And the Covid pandemic has dramatically accelerated this change.

As a consequence, the enterprise network has expanded far beyond the corporate office walls to any device, on any network, anywhere in the world. Connectivity is more important than ever before – and the Internet is the new network.

It falls to the shoulders of IT operations to monitor these cloud systems and remote work environments. Any potential degradation in network performance, reduction in availability, or even an outage must be proactively prevented to ensure continued revenue growth and an engaging customer experience. You can no longer rely on traditional LAN and WAN monitoring tools to do this – the network is simply too vast, too complex, and too interconnected.

In this eBook, we explore four specific requirements for a forward-thinking network monitoring platform – experience, scale, security, and visibility – and reveal how a modern, intelligent network monitoring system reaches beyond the data center infrastructure; providing application-level insights that correspond with your digital experience.



**Now is the  
time to create  
visibility  
anywhere.**

## Digital change is fast, relentless, and unpredictable

Who could have imagined the pace of digital change could get any faster? The digital economy has been rapidly upending the way we live and work, transforming traditional activities, and introducing new opportunities. The change is fast, relentless, and unpredictable.

But then Covid happened. The pandemic accelerated that speed of change into another dimension. It's now happening at 'warp speed'. And the signs are everywhere.

Organizations are increasingly moving to hybrid working models, with more people working from home. Students are learning in virtual classrooms, patient diagnosis is frequently online, and e-commerce has never been more popular. Make no mistake, post-Covid most companies are rapidly adopting digital business models to reimagine their operations.

However, as the pandemic potentially subsides, many analysts agree that a large proportion of activities will permanently shift online or to remote working, making digital readiness a strategic investment to reduce risk and preparedness for next-generation business models.

## Digital readiness is a strategic priority


As these digital-first initiatives become more critical to lines of business, the hastened digital transformation introduces new challenges to the traditional network infrastructure. Increasingly, the network is no longer solely owned by the IT organization, instead relying on home infrastructure, Internet broadband, SaaS, and public cloud networks.

The new hybrid model has increased the complexity of the interconnected business, calling for borderless visibility from people working at home, to the cloud, and to the data center. According to Gartner, "by 2025 60% of organizations will have seen a reduction in traditional network monitoring tool needs owing to increases in remote work and cloud migration, as compared to 2021"<sup>1</sup>.



**Here's the problem. Most organizations have gaps in their approach to monitoring cloud systems and remote work environments. This in turn can lead to increased mean-time-to-repair (MTTR) when issues occur remotely or involve a mix of third-party and on-premises networks.**

<sup>1</sup> Gartner®, "Market Guide for Network Performance Monitoring", Josh Chessman, Padraig Byrne, Pankaj Prasad, Bjarne Munch, 9 August 2021. GARTNER is a registered trademark and service mark of Gartner, Inc. and/or its affiliates in the U.S. and internationally and is used herein with permission. All rights reserved.



**Your network monitoring strategy must be closely aligned with new business expectations, making the IT organization a better partner for accelerated digital transformation.**

## 1 EXPERIENCE

Moving application workloads from the traditional data centers to multi-cloud platforms and co-located data centers reduces visibility and introduces third-party networks as a performance dependency. You need to monitor between the on-premises data center and the cloud deployments to ensure seamless end-point and end-user experience. The fundamental challenge is how to monitor networks considering the complexity of modern infrastructures. For example, how do you achieve an accurate view on application performance when the network topology can change several times a day?

## 2 SCALE

Private 5G and SDx networks aim to deliver innovative use cases and capabilities that will expand the network edge to an unprecedented scale. Moving to multi-edge monitoring will require companies to develop partnerships with trusted network monitoring vendors that can help them harness all the potential of their SDN deployments. In practice, it is not sufficient to examine the network topology at a certain moment. You need to identify the performance problems associated with all the routes to optimize the whole process.

## 3 SECURITY

Critical business services such as SaaS, UCaas, CaaS, and SECaaS are now Internet-dependent. Those services that operate over the Internet are adding complexity, since they require network operations to fully understand performance variations caused by Internet issues or routing problems. Managing SD-WAN, SWG, and converged SASE across multiple third-party providers requires unified visibility and control for troubleshooting and resolving issues that can impact remote branch offices and the quality of the services you expose to your end-users. Additionally, configurations based on complex priorities and rules can be error-prone when managed manually and lead to security breaches.

## 4 VISIBILITY

The rapid development of remotely connected workplaces demands comprehensive visibility into a new ecosystem. An ecosystem you traditionally do not have control over. From the remote user digital experience, the WIFI/LAN performance, all the way to SaaS and on-prem services. Without solutions that deliver visibility into remote locations or provide insight into traffic from those locations, IT can become overly dependent on end-users to report app or service issues after these problems have impacted performance.

By 2023,

# 40%

of all enterprise workloads will be deployed in cloud infrastructure and platform services (integrated and stand-alone), up from 20% in 2020.

— Gartner®, “Forecast Analysis: Cloud Infrastructure and Platform Services, Worldwide”, Colleen Graham, Ed Anderson, 23 November 2021.

By 2025,

# 60%

of organizations will have seen a reduction in traditional network monitoring tool needs due to increases in remote work, as compared to 2021.

— Gartner®, “Market Guide for Network Performance Monitoring”, Josh Chessman, Padraig Byrne, Pankaj Prasad, Bjarne Munch, 9 August 2021.

By 2025, more than

# 70%

of SD-WAN customers will have implemented a SASE architecture, compared with 40% in 2021.

— Gartner®, “Magic Quadrant for WAN Edge Infrastructure”, Jonathan Forest, Naresh Singh, Andrew Lerner, Evan Zeng, 20 September 2021.

By 2024

# 45%

of contact centers supporting finance, retail, and hospitality industries will adopt ‘work from anywhere’ experiences.

— IDC FutureScape: Worldwide Future of Connectedness 2022 Predictions’

## Network visibility anywhere

Given today's overwhelming dependence on the Internet, comprehensive visibility into ISP and cloud provider network performance is a mandate.

Forward-thinking organizations are turning to monitoring tools that can extend their visibility out beyond the enterprise data center to internet monitoring, digital experience monitoring, active testing of network delivery, and network path tracing. Being equipped with such capabilities, they can assure the new 'work from anywhere' experience, SaaS, and Cloud adoption – and successful modern network adoption like SD-WAN.

All these capabilities need to be compatible with classic network operations triage workflows that combine alarms, faults, performance, flows, logs, and configuration data available from any part of the new network.

## Drive transformation with confidence

Broadcom Software delivers the unified network visibility to help you understand, manage, and optimize the performance of digital services running on traditional and modern software-defined network architectures. The solution extends your monitoring reach into edge services, multi-cloud, and ISP networks, enabling your teams to see every communication path – from the core network to the end-user – in a single pane of glass.

With patented AI and ML-driven capabilities, Broadcom Software delivers a solution that fuels intelligent insights, boosting your ability to manage emerging requirements for next-generation network technologies. The single console enables holistic awareness across domains and vendor technologies, helping to break down monitoring data silos, expedite issue remediation, and reduce operational complexities.



**One of the few solutions integrating both dimensions of network monitoring and digital experience monitoring, Broadcom Software ensures the most comprehensive visibility into how real network conditions are delivered to the end-user.**

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**Your network monitoring solution must reach applications and services beyond the edge of the data center infrastructure.**



**Broadcom Software integrates both dimensions of network monitoring and experience monitoring that let you secure your digital transformation initiatives.**

### Efficiently manage your evolving network infrastructure

- ✓ Gain the converged monitoring capabilities you need to obtain visibility, eliminate manual efforts, simplify workflows, and reduce operational costs.
- ✓ Address exponential growth in end-user and end-point devices without multiplying tools and specialized resources.
- ✓ Ensure the success of network transformations deploying internet-first strategies, SaaS adoption, and cloud migration as the needs of your business evolve.

### Deliver services which are reliable and perform well

- ✓ Improve and protect service delivery to the business by reducing MTTR from hours to minutes.
- ✓ Reduce operations fatigue by harnessing predictive insights and automation that identifies and remediates network issues before they affect users.
- ✓ Make informed decisions for network upgrades and drive a strategic process that delivers significant advance warning for budget and resource planning.

### Track and align end-point and end-user digital experience

- ✓ Empower work-from-anywhere workforce with consistent digital experience from different locations, devices, and networks.
- ✓ Hold service providers and application vendors accountable to SLAs with granular performance data.
- ✓ Regain visibility on the delivery path of SaaS applications and third-party services beyond your firewall.

**Broadcom Software is already helping customers worldwide to create visibility everywhere.**

**Here are some examples:**

### → Managed services provider reduces network alarm noise **by 70%**

The company manages multi-technology and multi-vendor network infrastructures for its European managed services customers. The organization lacked high-scale performance analysis that could store, analyze, and display massive volumes of information.

A single operational network portal, powered by Broadcom Software, lowered the total cost of ownership and improved operational visibility. The MSP ultimately realized a 70% alarm noise reduction, reducing hundreds of alarms per week to 5-10 alarms, improving RCA and MTTR.

### → Leading oil and gas services company increases work from anywhere **by 6-fold**

Most employees of this major oil and gas services company were working from home at the outset of the pandemic. The organization needed to scale up VPN and WAN infrastructure from 10,000 to 60,000 users in just a few weeks.

The challenge was a lack of visibility into VPN gateways, ISP links, and Internet router performance to manage this increase in use. By standardizing on Broadcom Software, the oil and gas services company benefits from unified VPN performance monitoring and capacity analytics and a reliable user experience. This in turn enabled it to increase the number of remote workers six-fold.

### → US CSP improves monitoring scale **by 100%**

Acquisitions resulted in this company contending with multiple network operations challenges, including too many monitoring tools. It also needed to manage more than a half million miles of fiber, hundreds of thousands of fiber-lit buildings and Wi-Fi hot spots, mobile, 5G and LTE networks.

Broadcom Software provides high-scale operations monitoring and assurance of the entire infrastructure estate. This spans 300,000+ devices, 6M+ polled items, 4M+ interfaces monitored, 1M+ metrics per second, 180 concurrent users and 5x increase for configuration tasks. Broadcom Software helped the company prove its SLA achievements, saving more than \$800,000 in penalties.

# DELIVERING NETWORK VISIBILITY ANYWHERE

**LEARN MORE TODAY.**

[HTTPS://BROADCOM.COM/NETOPS](https://broadcom.com/netops)



## About Us

Broadcom Software is one of the world's leading enterprise software companies, modernizing, optimizing, and protecting the world's most complex hybrid environments. With its engineering-centered culture, Broadcom Software is building a comprehensive portfolio of industry-leading infrastructure and security software, including AIOps, Cyber Security, Value Stream Management, DevOps, Mainframe, and Payment Security. Our software portfolio enables innovation, agility, and security for the largest global companies in the world.

For product information please visit our website at: [software.broadcom.com](https://software.broadcom.com)

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