

SOLUTION BRIEF

NETWORK OBSERVABILITY BY BROADCOM

Make Every Network
Work For You

KEY CAPABILITIES

Optimize Network Operations

- Reduce MTTR with unified visibility of multi-technology and hybrid cloud networks
- Leverage multi-layer topology and alarm-to-performance triage workflows
- Monitor baselines, tracking deviation from normal and doing time-over-threshold alerting
- Reduce alarm noise via correlation of related events
- Employ highly scalable, multi-vendor network monitoring

Accelerate Network Transformations

- Gain real-time visibility of dynamic routes, Border Gateway Protocol (BGP) paths, and virtual private clouds
- Leverage SD-WAN insights on overlay, underlay, and app performance
- Visualize ISP network paths and segment topologies
- Use a scalable, cloud-ready architecture
- Hold ISPs accountable for performance issues or changes

Enhance Connected Experiences

- Correlate user experience with real-time, end-to-end network performance
- Optimize triage using hop-by-hop latency, packet loss, and jitter data
- Track data loss and capacity violations across the entire network delivery path
- Use continuous monitoring and dynamic thresholds for 24/7 proactive alerting
- Leverage objective evidence of ISP performance issues, shielding the internal network team from finger pointing

The Business Challenges

As they seek to monitor and manage connectivity and networking services, today's network operations teams face several significant challenges:

- First, the move to adopt cloud services has transformed network architectures, creating new visibility gaps and complexities for operations teams and other stakeholders, including developers, SREs, and security teams. According to a recent EMA study, 56% of network teams support multi-cloud environments.¹
- Second, the study also found that, in more than 50% of organizations, teams are using six or more network tools. The complexity and scale of data generated by all these tools overwhelm operators, who now spend 39% of their time on troubleshooting.
- Third, only 9% of IT groups find it easy to hire skilled networking personnel, while the vast majority are struggling to find, hire, and retain qualified staff, often while contending with significant budget constraints.

Given all these obstacles, organizations continue to be exposed to lengthy outages, poor service levels, reduced productivity, and lost revenue opportunities.

The Requirements

To combat these visibility gaps, teams need a network observability solution that goes beyond traditional device-centric monitoring. They need a solution that offers end-to-end visibility across entire network delivery paths, whether those paths reside within the data center or span hybrid cloud environments. This visibility must apply to all traffic and the connectivity experience, no matter which local area network (LAN), wide area network (WAN), or software-defined WAN (SD-WAN) traffic traverses, and whether networks are managed by internal teams or by internet service providers (ISPs), cloud vendors, or any other external entities.

Teams in network operations centers (NOCs) need to be able to leverage data from disparate sources, aggregate and correlate it, and gain actionable insights, so they focus on what matters. With these capabilities, teams can rapidly fix issues and proactively address potential problems before users or the business are affected.

The Solution

Network Observability by Broadcom provides end-to-end visibility across your entire network infrastructure, including data centers, corporate offices, branches, and edge locations. It monitors legacy and modern network technologies, offering coverage of both underlay and overlay environments as well as SASE services.

At Broadcom, we recognize that network groups are responsible for service delivery, yet they increasingly lack control over all the elements that shape the user experience. That's why we deliver a scalable, enterprise-grade solution that provides complete visibility across any technology, vendor, and network. The solution allows you to observe routing decisions being made by external network providers. You can track virtualized firewalls, load balancers, CDNs, interconnects at cloud endpoints, and traffic flow within and between clouds, data centers, and SaaS services. The solution provides the actionable insights needed not only to speed resolution and improve uptime, but crucially, enhance the connected experiences of employees and customers.

By leveraging Network Observability by Broadcom, NOC teams gain full visibility into every hop across the network delivery path, enabling quick identification and isolation of degradation points and root causes of issues. Featuring advanced, patented analytics and AI-enabled observability capabilities, the solution gives teams the insights they need to optimize network operations and ensure networks are resilient, scalable, and high performing. By integrating user experience perspectives with overlay and underlay monitoring, teams can prioritize issues that actually affect the user experience and continuously improve network design.

HCA Healthcare

AI-Enabled Network
Visibility Reduces Alarm
Noise by 99%.

OUR COMMITMENT

To better meet our customers' evolving needs, we are committed to delivering continued enhancements in these areas:

- **Expert-driven intelligence.** Leverage successful customers' practices to deliver enhancements, empowering all users to achieve improved outcomes.
- **Cloud-native focus.** Provide complete cloud visibility, enabling customers to adopt modern infrastructures such as VMware Cloud Foundation.
- **Scalable and streamlined.** Ensure our solution is designed to scale and is easy to setup, configure, upgrade, and manage.
- **Consistent user experience.** Offer a unified architecture that supports any customer environment, now and in the future, fueling consistently optimized outcomes across teams and organizations.

HCA Healthcare

Based in Nashville, Tennessee, HCA Healthcare is one of the nation's leading providers of healthcare services. HCA Healthcare has served more than 37 million patients to date. For decades, HCA Healthcare has continued to expand its usage of diverse networks and networking technologies. More recently, the organization's use of networks managed by third parties, such as ISPs and cloud providers, started to exceed the use of networks in their own data centers. These increasingly dynamic and complex networks introduced visibility gaps and left teams contending with lengthy troubleshooting efforts.

To address these challenges, the IT operations team at HCA started to leverage the Network Observability by Broadcom. The solution provides the organization with a highly scalable unified data model, advanced analytics, and intelligent triage workflows. With the solution, the NOC team reduced alarm noise by 99%, accelerated triage, and boosted their efficacy in managing complex networks. This left the organization better positioned to deliver consistent, quality patient care. To learn more, view the [HCA Healthcare case study](#).

Key Benefits

Optimize Network Operations

Fact: 77% of IT teams say network operations are more complex today.²

Network Observability by Broadcom scales visibility to support the largest enterprises and most complex networks. The solution delivers AI-enabled observability insights into the NOC, helping reduce operational complexity, enabling rapid problem identification, and improving mean time to resolution (MTTR) of network issues. The solution offers seamless, zero-touch administration and simplified correlation of data from alarms, faults, performance, flows, configurations, and logs.

The solution provides a range of advanced features, including expert intelligence from successful implementations, end-to-end network delivery visualization with new topology analytics, enhanced cloud-ready deployments, horizontal scaling, and platform resiliency.

Accelerate Network Transformations

Fact: 82% of teams report visibility gaps due to cloud adoption.³

Broadcom offers centralized, unified visibility into the cloud services and resources your organization depends upon constantly. With the solution, you can quickly validate your transformation across multi-vendor networks, including wireless networks, software-defined environments, and cloud services.

Enhance Connected Experiences

Fact: 80% of teams report troubleshooting blind spots in network delivery paths.⁴

Broadcom expands network visibility into every domain that affects the end-user experience, including SaaS services and virtual private cloud environments. The solution provides active monitoring across the entire network delivery path, testing every hop to validate the user experience. By quickly identifying the root cause of any issues, including those arising in third-party networks, your team can boost mean time to innocence (MTTI) and minimize the impact on users.

For more information, please visit the [Network Observability by Broadcom](#) page.

¹ EMA, "Network Management Megatrends 2024," May 2024

^{2,3,4} Dimensional Research, sponsored by Broadcom, "Cloud and Internet Usage Generates Network Observability Blind Spots," 2024

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