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How to Achieve Network Observability Maturity

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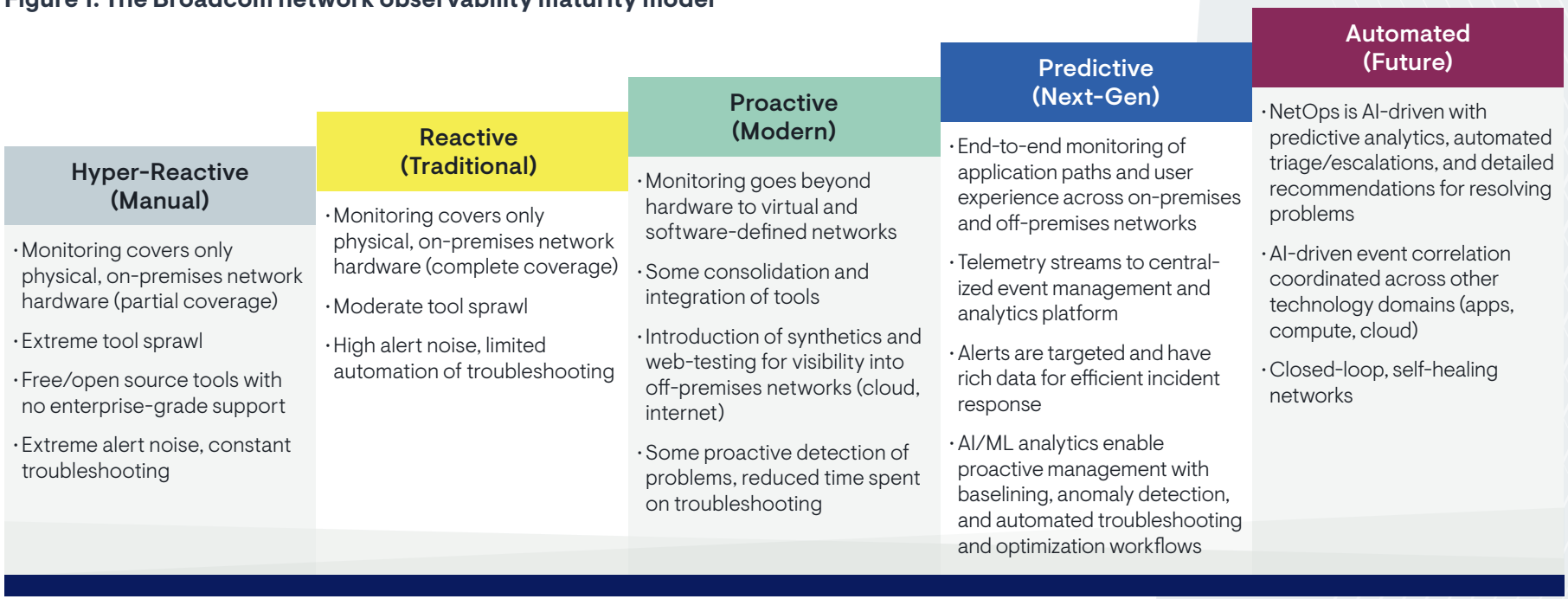
A Network Observability Maturity Model

Maturity models are benchmarking tools that organizations use to map how effective they are relative to their peers. They also help organizations chart a path toward improvement. In the world of network operations, in which infrastructure, tools, and processes are changing rapidly, a network observability maturity model can help IT organizations ensure that they have the right strategy for monitoring, troubleshooting, and optimizing their evolving networks.

Broadcom developed a network observability maturity model (see **Figure 1**) that evaluates maturity based on monitoring coverage, platform architecture, workflow support, and advanced analytics capabilities. Enterprise Management Associates (EMA) believes that Broadcom's maturity model is a helpful tool for evaluating network operations effectiveness. EMA bases this judgment on our experience with evaluating the network operations strategies of thousands of companies over the last decade.

Figure 1. The Broadcom network observability maturity model



This maturity model maps a progression from fragmented toolsets with limited coverage to a more integrated platform approach with coverage for modern, hybrid networks and advanced analytics. As network operations teams progress along this model, they can shift from reactive postures (in which most of their time is spend on responding to and troubleshooting alerts) to a proactive posture (in which they are detecting and resolving problems before the business is impacted). Eventually, many of these operations are automated, allowing engineers to focus on strategic projects and ongoing optimization of the network.

How to Advance to the Leading Edge

EMA research identified several key steps that IT decision-makers can take to help their network operations teams advance along the Broadcom maturity model. We advise readers to follow these basic steps.

Align Network Observability with Technology Roadmaps

The first step may seem obvious, but it should not be overlooked: identify the technology trends that are challenging your networks and driving changes to it. Work with your procurement and engineering teams and your vendors to ensure that your network observability solutions are aligned with these drivers of change. EMA research recently found that the top five drivers of change in enterprise network observability today are:

1. Consumption of AI products and services
2. Next-generation network technology (e.g., Wi-Fi 7, RDMA over converged Ethernet)
3. Hybrid, multi-cloud architecture
4. AI projects (developing and training AI internally)
5. Work from anywhere (hybrid workers)[1]

[1] All data and industry insights cited in this paper were originally published in the January 2025 EMA research report "Network Observability: Managing Performance Across Hybrid Networks."

Break Down Tool Silos

EMA analysts often find that IT organizations have four or more network observability tools. Some of these tools address narrow use cases. Others are designed to work with only a single network infrastructure vendor or within a single network domain. Tools that are siloed in this manner add complexity and create gaps in management.

Network teams should assemble network observability tools that support multi-vendor, multi-domain networks. Tools should manage networks across data centers, offices, branches, clouds, and wide-area networks, including managed WAN services (e.g., MPLS) and the public internet. Tools should work across these domains regardless of how many network vendors are installed. EMA research found that IT organizations are more successful with network observability when they prioritize multi-vendor support in their tools.

As network operations teams establish this end-to-end observability, they should consolidate and integrate as much as possible to minimize tool sprawl. EMA research found that 80% of IT organizations make it a high priority to consolidate their network tools. The goals of this consolidation are usually improved resilience and performance and greater operational efficiency. Furthermore, 725 of organizations aim for tight integration across their network observability tools. This tight integration correlates with more effective toolsets. The most popular goals for this integration are:

- Data sharing across tools
- Workflow integration across tools
- Unified, centralized alerting
- Event correlation

Mature Your Approach to Network Data

Immature IT organizations tend to focus on collecting and analyzing a modest amount of device metrics (usually via SNMP MIBs and traps) and network flows. For troubleshooting, they often do selective packet capture and analysis. However, today's best-in-class network operations teams are advancing beyond the basics.

Ninety-five percent of enterprise IT organizations report that the volume of data they collect with network observability tools is increasing, which requires them to scale up their toolsets to ensure effective collection, analysis, and retention of data. Additionally, organizations need to collect a greater diversity of data, which can challenge immature toolsets.

For instance, 71% of IT organizations report that cloud provider VPC flow logs are becoming more important to network operations in recent years. Not all network observability tools support this data today. Synthetic network traffic is also becoming more important for monitoring digital experience, WAN circuits, global internet performance, and SaaS applications. Many also want to monitor configuration changes on their network to understand how bad changes impact performance.

Even existing classes of data are evolving. SNMP is no longer sufficient for network metric collection. More than 48% of IT decision-makers report that adopting streaming network telemetry as an alternative or supplement to SNMP-based data collection is a high priority. They believe streaming telemetry will primarily improve data quality and enable more real-time insights into their networks.

Embrace AI-Driven Network Operations

Tool vendors are investing in AI and machine learning to drive more automation and insights from their tools. More than 59% of IT stakeholders say it is very important for their tool vendors to provide AI-driven capabilities in their network observability solutions. They believe AI can drive operational efficiency, proactive problem prevention, and network optimization.

Vendors typically train AI algorithms to develop knowledge and expertise about networks so that they can detect anomalies, isolate and understand problems, and recommend fixes. It is essential that these tools develop expertise across multiple domains of enterprise networks, allowing them to extrapolate end-to-end insights regardless of which part of the network an engineer is analyzing. EMA research determined that today's IT organizations especially want AI-driven network observability to have expertise about public cloud networks, WAN underlays (SD-WAN and SASE), Wi-Fi, and data center fabrics.

EMA Perspective

Broadcom's network observability maturity model is a useful tool for evaluating how effective your network operations team is today. EMA recommends measuring yourself against this model to ensure you are supporting digital operations. Start by evaluating your company's digital roadmap and consult with vendors about how their solutions can support your future technology investments. Next, focus on opportunities for tool consolidation and integration. Look for tools that can support data scalability and diversity. Finally, embrace AI-driven analytics to drive efficiency and effectiveness. EMA's ongoing research shows that regardless of where you are on this maturity model, network operations teams will experience more success by following the guidance offered in this paper.

About Enterprise Management Associates, Inc.

Founded in 1996, Enterprise Management Associates (EMA) is a leading IT research and consulting firm dedicated to delivering actionable insights across the evolving technology landscape. Through independent research, market analysis, and vendor evaluations, we empower organizations to make well-informed technology decisions. Our team of analysts combines practical experience with a deep understanding of industry best practices and emerging vendor solutions to help clients achieve their strategic objectives. Learn more about EMA research, analysis, and consulting services at **www.enterprisemanagement.com** or follow EMA on **X** or **LinkedIn**.

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