Network Observability: Analytics, Automation, and Artificial Intelligence

IDC's Network Observability: Analytics, Automation, and Artificial Intelligence service examines customer requirements, tracks technology advancements, evaluates key success factors, and forecasts market adoption of next-generation enterprise network management solutions. As networks grow in complexity and criticality, enterprises across the globe are demanding detailed real-time intelligence and actionable insights focused on improving the state of their network infrastructure, connected resources, and digital experiences. Meanwhile, the scale of network data available to enterprises is exploding as connections, flows, traffic volumes, active threats, and complex exchanges continue to climb. In response, powerful AI-driven network observability solutions combine comprehensive data collection and in-depth analytics to direct automated management, thus driving more precise, productive, and proactive enterprise network and IT operations, engineering, and support.

MARKETS AND SUBJECTS ANALYZED

- Data collection — from logs to polls to telemetry to synthetic transactions — and correlation across events, alerts, and IT domains
- The rise of AI and ML as core capabilities of next-gen network observability solutions
- Network automation: Embedded validation, low/no-code development, continuous governance, observation-triggered actions
- The cloud operating model and SaaS-delivered network observability solutions: Requirements, results, and directions
- Use and integration of network observability toolsets and data sets across IT (e.g., SecOps, DevOps, AIOps, SRE, platform engineering)
- Key innovations: AI/ML-driven insights, predictive analytics, data visualization, intelligent automation, cloud visibility, ease of use, open source, APIs
- Solution evolution: Hardware versus software,on premises versus SaaS delivered, agent versus agentless, standalone versus embedded
- Impact on IT staff productivity and teamwork: Shift from reactive to proactive responsibilities, from siloed to collaborative roles
- Evaluating the ROI of network observability and automation
- Network equipment vendors: Products, positions, and potential impact on network observability and automation
- Generative AI and its impact on network engineering and operations
- Partnerships, mergers, and acquisitions that accelerate advancements and adoption
- Shifting enterprise requirements, best practices, and spending patterns
- The rising and future impact of managed services on network observability solutions and market development
- The enterprise IT journey in network automation: Analysis to action, scripting to programming, operating to optimizing, test to governance

CORE RESEARCH

- Enterprise Network Observability Market Forecast, 2025–2029
- Top Trends in Network Observability: Intelligence, Insights, Inclusion, Integration, and Innovation
- The Hyperscalers and Network Observability: Providers and Partners
- AI: Acceleration Expectations in Network Management
- Network Observability as a Managed Service: Opportunities and Options
- AI/ML-powered Network Observability: Real Solutions Driving Improved Network Engineering, Operations, and Evolution
- IDC Innovators: Network Automation Tools
- Top 10 Issues and Answers in Network Observability, 1H25
- IDC's Future of Enterprise Resiliency and Spending Survey, 2025: Impact and Outlook for Network Management Requirements

In addition to the insight provided in this service, IDC may conduct research on specific topics or emerging market segments via research offerings that require additional IDC funding and client investment. To learn more about the analysts and published research, please visit: Network Observability: Analytics, Automation, and Artificial Intelligence.

KEY QUESTIONS ANSWERED

1. What are the key trends driving network observability and automation? How will advancements impact future solutions, buyer preferences, use cases, supplier success, and digital innovation?
2. What is the market size/forecast for network observability solutions? Which are the major suppliers? Technology innovators? Inhibitors?
3. What is the impact of network observability and automation solutions on IT organizations and practices? Where is the ROI?
4. Where/when will AI/ML drive real impact in network management?
5. How are critical network management functions — data acquisition, intelligent analysis, and management automation — evolving to match advancing customer requirements?
6. How are network observaility and automation solutions and managed services driving greater impact across the enterprise network?

COMPANIES ANALYZED

This service examines the overall strategies, solution offerings, partner ecosystems, industry positioning, and future direction of key providers in the network observability and automation markets, including:

7Signal, Adrem, Allot, Apcon, AppViewX, AT&T, Auvik, AWS, Backbox, BMC, Broadcom Software, Catchpoint, Cisco-ThousandEyes, Colasoft, CommScope-Ruckus, cPacket, Datadog, Dynatrace, Entuity, Ericsson, ExtraHop, Extreme Networks, Forward Networks, Gigamon, Gluware, Google Cloud Platform, HPE–Aruba, Huawei, IBM, Infovista, IP Fabric, Itential, Juniper-Mist, Kaseya, Kentik, Keysight, Kyndryl, LiveAction, LogicMonitor, ManageEngine, Micro Focus, Microsoft Azure, NetBrain, Netscout, New Relic, Nokia, Obkio, Opentext, Opmantek, Oracle, Paessler, Palo Alto Networks, Park Place, PathSolutions, Plixer, Progress, Red Hat, Riverbed, Sandvine, SolarWinds, Spectrum, Statseeker, Viavi Solutions, Verizon, VMware, Wyebot, Zabbix.