White Paper

The Era of Connectivity Platforms: Reimagining Networking Across the Enterprise

Sponsored by: Extreme Networks

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EXECUTIVE SUMMARY

The era of enterprise connectivity platforms is upon us. IDC research shows that organizations across the globe are increasingly adopting platform-based approaches to their enterprise connectivity infrastructure to overcome complexity and unlock new business value. When enhanced by AI, enterprise platforms can increase productivity, enrich end-user experiences, enhance security, and ultimately drive new opportunities for innovation.

The need to address rising complexity in network and security operations is a primary motivating factor for the emergence of connectivity platforms. However, a platform that addresses the pressing needs of today's modern digital business must go beyond bringing together network operations and basic network security capabilities. It must have AI that is built-in, working across every aspect of the platform. The true value of a platform is enabling it to bring value across the enterprise, from IT to business functions and beyond. Adjacent teams such as planning, procurement, and compliance should stand to benefit from an enterprise connectivity platform. Doing so requires the platform to enable cross-functional collaboration and automation across a range of learning, planning, delivery, and fixing workflows and decision points.

> According to IDC's *Worldwide AI in Networking Special Report* (n = 1,209), 78% of respondents agreed or strongly agreed with the statement: "I am moving to an AI-powered platform approach for networking."

Enterprise connectivity platforms are defined by IDC as an integrated set of infrastructure, software, licenses, and advanced management tooling that enables

consistent control across disparate domains of the IT estate. There are several key elements to a successful connectivity platform:

- A focus on one integrated experience to manage networking, security, inventory, and other domains
- Automation enhanced with built-in AI that is based on deep integration of workflows, common services, and data, including from partner ecosystem services
- Simplified and all-inclusive licensing for all platform capabilities and support services

This White Paper explores drivers of the enterprise connectivity platform era and outlines key challenges organizations face in advancing their digital and network transformation strategies. It provides an overview of essential elements for connectivity platforms and highlights the opportunities they enable.

Introduction: The Platform Era

The confluence of several important trends has spurred the enterprise connectivity platform era. Some key factors are:

- **The hyper-distributed enterprise:** Enterprises are more distributed than ever now. Organizations rely on distributed, cloud-based services (e.g., SaaS and IaaS) for mission-critical applications. Meanwhile, users and devices — including an increasingly diverse set of IoT-connected devices — are more distributed than ever now too. Organizations are fundamentally rethinking their enterprise network and security strategies to reflect the hyper-distributed nature of assuring that any user can securely access any application.
- **The rise of cloud management tools:** Organizations are also increasingly leveraging the cloud for network and security management, enabling a range of benefits:
  - Eliminates on-premises resource management
  - Centralizes management of distributed environments
  - Enables fast access to new cloud-based management features/functionality
- **Disparate management:** Despite the rise of cloud-based management tools, too often, organizations are still separately managing individual components of their network and security infrastructure — for example, separate management of wired and wireless LAN, LAN and SD-WAN, or access layer connectivity and security. Disparate management leads to inefficient operations, poor user experiences, and potential security vulnerabilities.

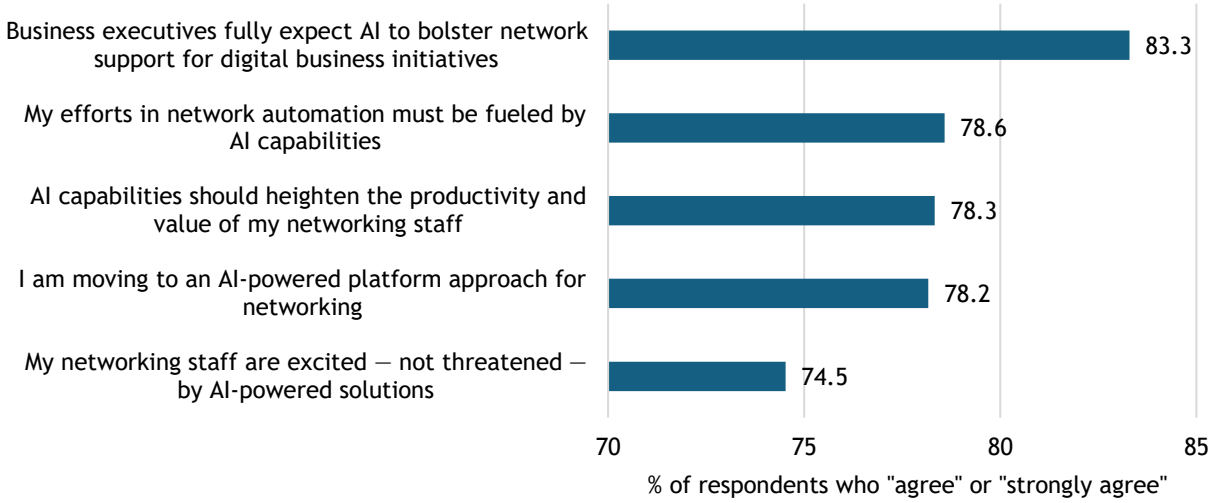
- **AI's promise:** AI-enhanced automation is reshaping how organizations manage their infrastructure, but to get the full advantage of AI requires that it be built into every aspect of the platform, along with common data and advanced algorithms beyond AIOps or GenAI.

Enterprise connectivity platforms represent a next-generation approach to more integrated, AI-powered management of cloud-managed network and security domains. 83% of business executives expect AI to bolster network support for digital business initiatives; 78% of respondents agree or strongly agree they are "moving to an AI-powered platform approach to networking" (see Figure 1).

FIGURE 1

Network Management Practices and Plans

Q. Considering network management practices and plans in place within your organization, to what extent do you agree with each of the following statements?



n = 1,209

Source: IDC's *AI and Networking Survey,* July 2024

Connectivity Transformation

The rise of connectivity platforms is happening now. IDC survey data shows organizations expect to make significant changes to their connectivity strategy in the coming years.

According to IDC's 2024 *Future Enterprise Connectivity Survey* (n = 751), respondents were asked to what extent global respondents were connected across their entire global network footprint today and to what extent they expect to be digitally connected in two

years. The results are striking: On a five-point scale, 74% of respondents report being in one of the four lowest levels of connectivity maturity today; only 26% were in the highest level of connectivity maturity. But, in two years, 60% of respondents report they expect to be in the highest level of connectivity strategy, defined as "extensively connected, where networks are intelligent, edge enabled, and self-aware."

The data points to a dramatic connectivity transformation that is underway, driven in part by the rise of connectivity platforms. Other drivers for connectivity transformation include the increased realization of connectivity as a digital business driver and the need to simplify network operations while assuring secure, reliable, and high-quality connectivity to all users and devices. But, as organizations undergo connectivity transformation, they face a variety of challenges.

Enterprise Transformation Challenges

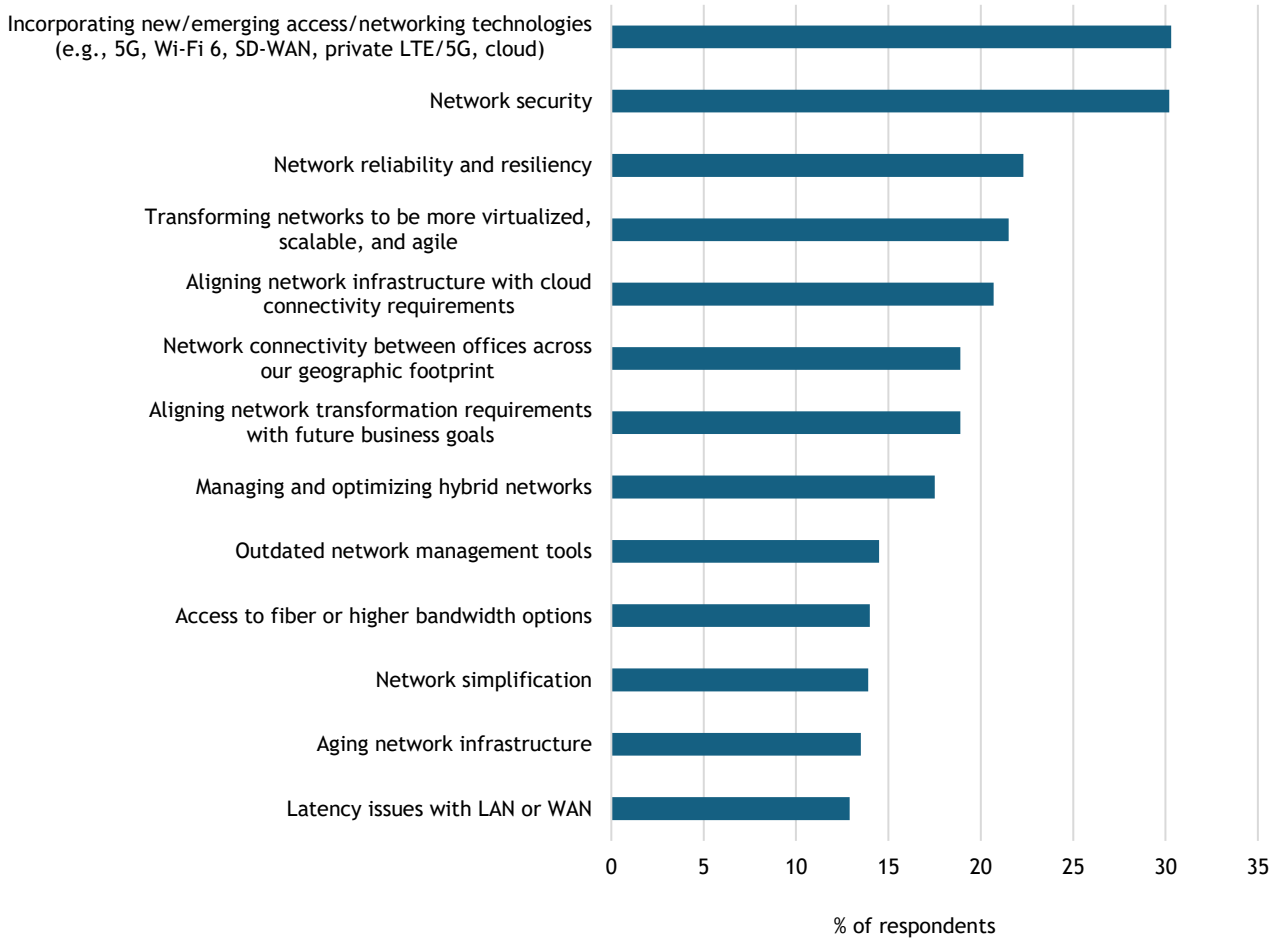
As organizations look to advance their connectivity strategy, they face a variety of hurdles. IDC survey data points to some of the key connectivity-related challenges enterprises report facing (see Figure 2). Some important challenges to highlight are:

- Lack of operational efficiency, stemming from siloed management of IT infrastructure, assets, and licensing, including networking and security tools and services across the entire network
- Lack of common data for AI models, and not being able to fully harness internal and external data for business benefit
- Difficulty incorporating new technologies, including connectivity-related technologies (e.g., Wi-Fi 7, multi-gigabit switching, and SD-WAN/SASE), as well as those across the broader IT footprint (e.g., AIOps and GenAI)
- Need to improve connectivity experiences for users/devices and network reliability and resiliency
- Need to better respond in dynamic ways to changing market conditions and customer requirements to help enable new business opportunities
- Complex licensing and management practices
- Staffing and skills shortages

FIGURE 2

Top Challenges Organizations Face in Their Connectivity Transformation

Q. From a networking perspective, what are the top 3 connectivity-related challenges your organization currently faces?



n = 751

Source: IDC's *Future Enterprise Connectivity Survey,* 2024

Key Elements of a Connectivity Platform

Connectivity platforms are emerging as a means for organizations across the globe to overcome the myriads of challenges they face in transforming their network and security strategy. The modern digital landscape — dominated by AI, the need for enterprisewide benefits, and a desire for simplification — is driving specific requirements of a connectivity platform. Some key elements of an enterprise connectivity platform are:

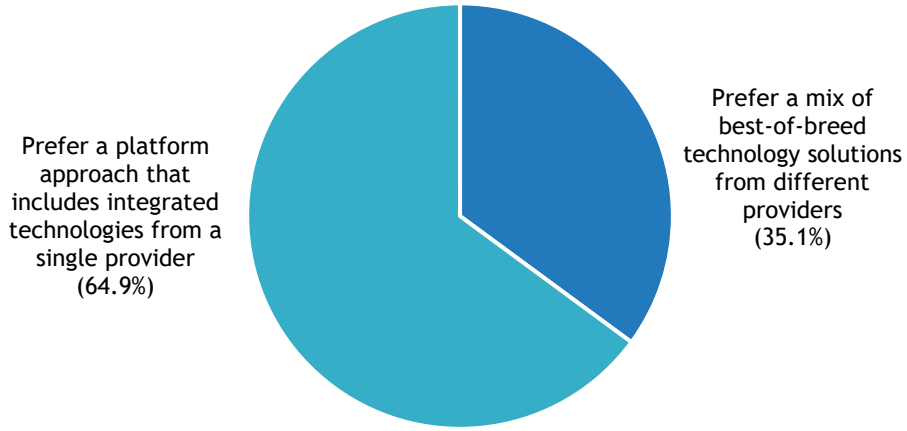
- Simplified, intuitive user experiences
- Integrated management across networking, security, inventory, and other domains including ecosystem solutions
- End-to-end views of devices, clients, licenses, security, and related business operations
- Enhanced automation with built-in AI, enabled by a shared data lake, common services, and partner ecosystem services and data
- Reporting and analytics that provide both personalized and unified views of network, security, and related commercial metrics
- Simple setup and administration of organizations and accounts, notification and alert policy, and role-based access control
- Extensibility via APIs for integrations with broader IT management tools
- Simple, predictable, and all-inclusive licensing for platform capabilities and support services

IDC survey data reveals the importance organizations are placing on platform approaches. Figure 3 shows a question from IDC's *Worldwide AI in Networking Special Report* (n = 1,209), which asked global respondents about their preferred approach for a technology stack to support their organization's GenAI workloads. Almost two-thirds of respondents (65%) prefer a platform approach that includes integrated technology from a single provider compared with a best-of-breed technology solution from different providers. The survey data reveals the significant emphasis organizations are increasingly placing on enterprise platforms, in this case for GenAI workloads.

FIGURE 3

Platform-Based Versus Best-of-Breed–Based Approaches for GenAI workloads

Q. Which of the following approaches do you prefer when implementing a technology stack — e.g., networking, compute, storage, security, observability — that will support your organization's GenAI workloads?



n = 1,209

Source: IDC's *AI and Networking Survey,* July 2024

Benefits of a Connectivity Platform

Connectivity platforms enable a range of benefits for organizations. As organizations increasingly consider connectivity platforms, they should ensure benefits are enabled enterprisewide. Connectivity platforms should not just enable benefits to teams within networking and security but across the entire organization: business teams and stakeholders outside of IT.

For IT teams, connectivity platforms can enable simplified planning, deployment, operations, personalized visualizations, and analytics, as well as AI-assisted and automated remediation of network or security problems. For business teams, the platform can provide information about assets, licenses and contracts, budgetary guidance, and subscriptions status and renewals. The benefits are far-reaching for IT and adjacent teams, including finance, procurement, operations, and beyond.

Thus connectivity platforms enable a range of operational capabilities:

- **Business operations:** Increases operational efficiency and organizational agility; simplifies owning and operating the network and its security over the course of the learning, planning, delivery, and fixing life cycle with built-in subscription and asset management tools and analytics

- **Technical operations:** Increases IT team efficacy and productivity; gains holistic views of network and security footprint; facilitates more predictable costs; enhances IT collaboration with other enterprise teams

The Role of AI in the Connectivity Platform

AI is fundamentally reshaping how organizations manage their network and security engineering and operations. Current approaches to AI in networking tend to be single purpose, focused on remediation or optimization. While these use cases benefit network operations teams, it leaves out much of the promise of AI for other non-IT or business teams. Platform-based approaches help ensure organizations get the full value from AI. This is done in the following ways:

- Provide accelerated and new experiences that maximize IT and business team productivity.
- Reduce process time from days to minutes by automating routine and complex IT tasks across learning, planning, delivery, and fixing.
- Provide guided and automated actions, personalized visualizations, and advanced analytics.

Some examples of how AI can be leveraged in a connectivity platform are:

- A GenAI conversational interface for IT and business teams to query and interact with AI and data, enabling efficiencies in managing enterprise assets
- Connectivity scoring metrics that enable IT operators and business leaders to easily understand end-user and application experiences, fueled by rich network telemetry data that is quickly analyzed in real time by AI
- Reduction of mean time to find and fix network or security issues through rapid anomaly detection and guided or automated remediation
- Faster decision-making and accelerated planning via AI-generated commercial and technical scenario planning

These broad use cases are only possible with AI that is built into every aspect of the platform and that leverages a common data lake.

How to Get Started with Connectivity Platforms

As organizations consider how connectivity platforms can be evaluated and implemented within their organization, IDC has the following advice:

- Consider whether best-of-breed solutions for specific domains (e.g., wired and wireless networking and access security) or a connectivity platform that spans LAN/WAN, SD-WAN, security, and other domains better suits the organization's

needs. Ensure the platform benefits not just IT practitioners but provides value to IT leaders and line-of-business executives and their operations teams too.

- Evaluate how a platform strategy can enhance your AI capabilities.
- Give thought to how a platform will fit into the rest of the IT infrastructure, whether the platform provides broad ecosystem support with point-and-click integration with common tools or requires more involved API programming.
- Measure the pros and cons of how and whether the platform solves short- or long-term challenges, how future proof the platform is overall, and whether the vendor has a clear, value-oriented road map.

PROFILE OF Extreme Networks Platform ONE

Extreme Platform ONE is a radically simplified enterprise connectivity platform that delivers one integrated experience, automation enhanced with built-in AI, and simplified licensing. This helps organizations regain control, unlock innovation, and boost productivity. Extreme Platform ONE offers:

- One intuitive, integrated experience for IT and business teams through an easy-to-use, real-time composable workspace
- Automation enhanced by built-in AI that boosts productivity and reduces networking and security use case cycles time from days to minutes across the learn, plan, deliver, and fix life cycle
- Simplified licensing inclusive of networking, security, inventory management, and AI — complete with support services to make it as easy to buy and renew as it is to use

Extreme Network's Approach to AI

AI is a core part of Extreme Platform ONE. Extreme's innovative approach goes beyond AIOps to address a broader set of use cases spanning the learning, planning, delivery, and fixing life cycle across Extreme's networking and security services. This enables capabilities including:

- Natural language conversation
- Anomaly detection
- Network data analysis and visualizations
- Technical and financial scenario planning
- Step-by-step assisted workflows
- Script and API application template generation
- Other capabilities with natural language prompts and interaction

Extreme AI Expert supports users through various modes: conversational, interactive, and autonomous with AI agents, and it is built on Extreme's Secure by Design cloud to meet or surpass industry requirements for data privacy and protection.

Licensing

Simple, all-inclusive, and licensing structure that includes AI, life-cycle management, and 24 x 7 technical support to make budgeting, buying, and consuming easy with flexible pricing models that are device based or part of an enterprise agreement

Challenges

As Extreme Platform ONE emerges in the market, the company will face a variety of challenges, including:

- **Competition:** Many networking and security vendors are racing to deliver a platform for their customers, each with their own take. While this raises the stakes for Extreme Networks, it also validates the need and the market for a platform approach.
- **Enterprise learning curve:** One consideration for an AI-powered connectivity platform is its novelty. While there will be benefits to consolidating and integrating workflows, this will require new learning curves for IT and business partner teams. Here, training by Extreme Networks — both directly to customers and through its network of partners — will be a critical enabler of Extreme Platform ONE.
- **A more complex purchasing process:** A platform can bring together the needs of IT and adjacent teams in one place and enable them to collaborate more effectively. However, this represents a significant shift in how these teams operate and cooperate, in terms of purchase processes. While the bulk of an enterprise connectivity platform may benefit IT sufficiently to make the business case, some IT teams may struggle with aligning other management stakeholders on purchase.
- **Security and data privacy:** As broadly beneficial as AI is, it also raises continuing concerns about security and data privacy, including how customer data is used by the AI and what protections are in place for sensitive enterprise data. Extreme — along with any vendor incorporating AI into its platform — must educate customers on the security and protection measures in place with platforms to ensure proper anonymized usage of customer information and multiple layers of protection related to the AI system.

CONCLUSION

The platform era of enterprise connectivity has arrived. Increasing complexity of enterprise networking and its adjacent domains in network security, procurement, compliance, and digital experience are key drivers. Platforms offer enterprise customers a compelling value proposition compared with best-of-breed solutions. Research suggests that IT leaders want more cross-domain value and simplicity in a cost-effective package with AI. Further, without greater automation and easier scalability in networking, IT resources are likely to remain constrained and focused on maintenance and basics, such as the integration of new and emerging technology.

Thus a new breed of essential elements of a connectivity platform has crystalized: enabling value for both IT and business teams across the life cycle of a deployment, from planning to ongoing operations and optimization, and accelerating innovation through built-in AI. Across the platform, AI leverages a common data lake and set of organic and broader ecosystem partner services to create automation that reduces cycle times down to minutes. The era of AI-powered connectivity platforms stands to enable a range of benefits for organizations to ensure their network and security strategies can be a powerful enabler — rather than an inhibitor — to innovation and new business opportunities.

ABOUT IDC

International Data Corporation (IDC) is the premier global provider of market intelligence, advisory services, and events for the information technology, telecommunications, and consumer technology markets. With more than 1,300 analysts worldwide, IDC offers global, regional, and local expertise on technology, IT benchmarking and sourcing, and industry opportunities and trends in over 110 countries. IDC's analysis and insight helps IT professionals, business executives, and the investment community to make fact-based technology decisions and to achieve their key business objectives. Founded in 1964, IDC is a wholly owned subsidiary of International Data Group (IDG, Inc.).

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