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# The Power of DDI in Network Transformation

## How advanced core DDI services enable a change-ready network to overcome connectivity modernization gaps

**Brandon Butler**
Senior Research Manager,
Enterprise Networks, IDC

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# In This InfoBrief

Networking has never been more important as organizations across the globe look to assure secure and reliable connectivity for any user or application. But in today's modern dynamic environment where users can be anywhere and applications are everywhere, organizations increasingly realize they need to **modernize their connectivity strategy to ensure their core network services meet the needs of their modern digital business operations.**

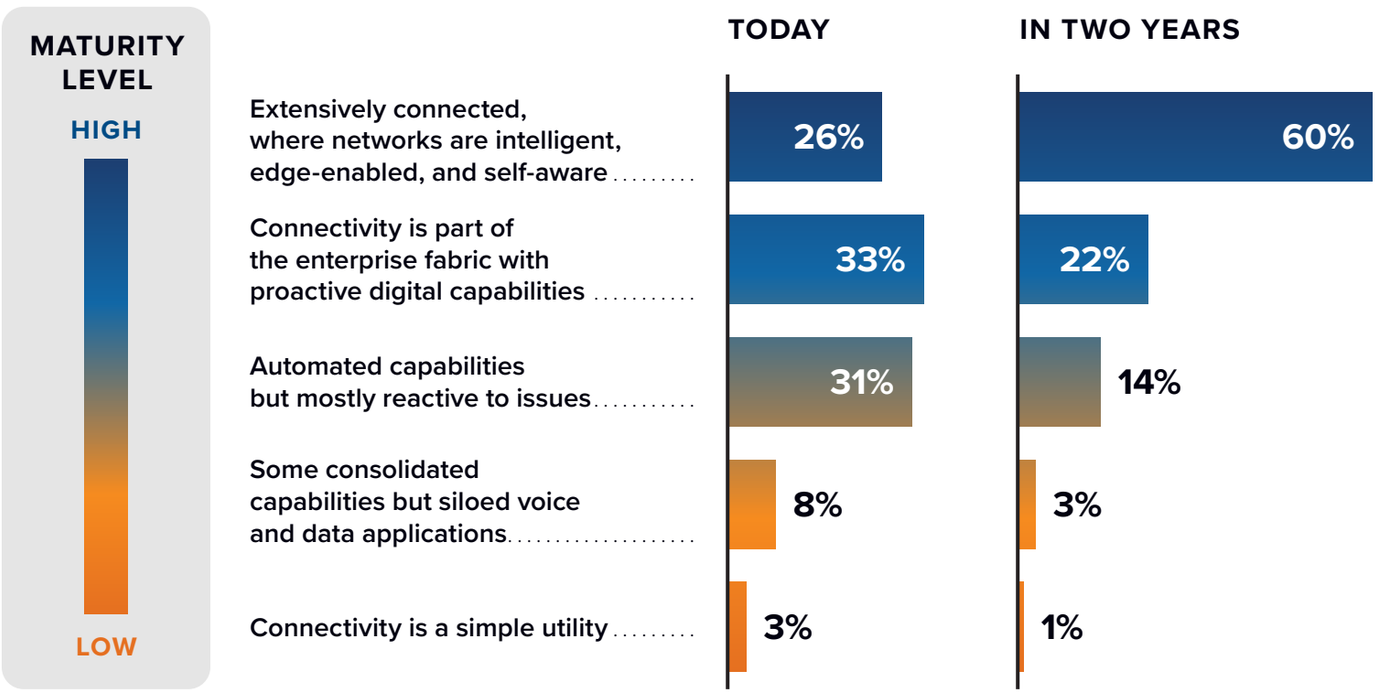
This InfoBrief will leverage IDC research and worldwide survey data to explore the following topics:

- The connectivity modernization gap
- The importance of change-ready networks
- The power of DDI in enabling network transformation
- Key elements of advanced DDI
  - Flexible platforms, integrated security, and AI-enhanced capabilities
- Essential guidance for transforming core network services

# What Is the Connectivity Modernization Gap?

## Connectivity modernization describes the delta between business connectivity needs and current connectivity strategy.

### Connectivity Maturity: Today and in Two Years




IDC survey data shows **significant gaps in connectivity strategy modernization** while also indicating a **rapid maturation of connectivity strategy** to overcome the modernization gap.

**Organizations can accelerate their connectivity modernization strategy:** A foundational element is advancing the core network services that enable connectivity.

n = 751; Source: IDC's *Future Enterprise Connectivity Survey*, 2024 | For an accessible version of the data on this page, see Supplemental Data in the Appendix.

# The Importance of Change-Ready Networks

## Change-ready networks are flexible, intelligent, and secure connectivity platforms for supporting the needs of a modern digital business.

### Change-ready networks are a lynchpin to connectivity modernization. They must support:

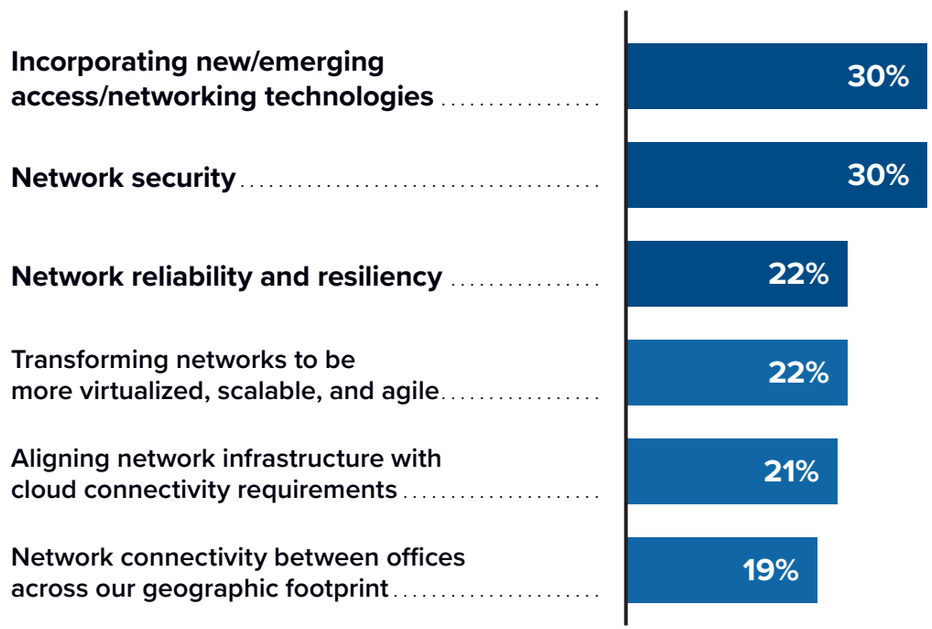
- **Workers across operations teams:** NetOps, SecOps, CloudOps, and AppDev
- **Workloads across disparate domains:** On premises, hybrid cloud, multicloud, and edge
- **Workflows across complex functions:** Any application, any user, anytime, anywhere

### Challenges driving the need for change-ready networks include:

- Supporting new technologies and business use cases
- Enhancing security
- Hardening network reliability/resiliency
- Simplifying operations
- Managing the complexity of workloads/tools across on premises, cloud, and edge
- Dealing with a lack of visibility/analytics

### Top Connectivity Challenges

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




Note: New/emerging access/networking technologies are, for example, 5G, Wi-Fi 6, SD-WAN, private LTE/5G, and cloud.
n = 751; Source: IDC's *Future Enterprise Connectivity Survey*, 2024

# The Power of DDI Services in Enabling Change-Ready Networks

**DDI components are core network services that power connectivity. DDI is an integrated offering of domain name services (DNS), dynamic host configuration protocol management, and IP address management functionality in a single solution.**

## DDI enables a variety of key advantages for powering change-ready networks:

- **Automated systems:** DDI replaces manually managed or siloed core network services, which do not scale as organizations grow and distribute workloads and are a security burden.
- **Centralized visibility:** DDI enables a single source of truth for network operations, including devices, domains, and IP addresses.
- **Enhanced reliability and security:** DDI hardens network operations with standardized processes and enables faster identification and remediation of network and security threats and problems.
- **Policy-based management:** DDI ensures unified network and security policies across on premises, hybrid cloud, and multicloud.

## The key elements of advanced DDI for closing the connectivity modernization gap are:

Flexible Platforms

Integrated Security

ML/AI-Enhanced Capabilities

# Flexible Platforms: Foundational to Change-Ready Networks

## Key elements of flexible DDI platforms:

### Centralized visibility and control of hybrid DDI resources

- Consistent DDI policies with two-way synchronization, enabling seamless DDI management across on-premises and cloud DDI components

### Choice in deployment and management style

- Physical, virtual, or SaaS-delivered DDI appliances
- Hardened and tightly integrated DDI services or software-based orchestration

### Robust management of APIs

- For integrations with security and IT service management tools and the broader IT ecosystem

# **Integrated Security:** Leveraging the Power of DDI to Secure the Enterprise

**DDI goes beyond powering core network services to play a critical role in securing enterprises. Purpose-built security tools should seamlessly integrate with flexible DDI platforms and third-party security tools. Key elements of a successful integrated security approach to core network services include:**

### Analyze

Use smart analytics to identify DNS-based threats and stop data exfiltration tactics like tunneling, domain generation algorithms, or beaconing to command-and-control servers.

### Automate

Leverage policy-based, automated management to limit access to sensitive data, lock down critical systems, and reduce overall attack surface.

### Integrate

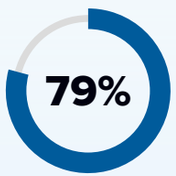
Take advantage of robust integrations with third-party security tools, including security information and event management and security orchestration, automation, and response tools.

### Protect

Support use cases such as distributed denial-of-service protection, advanced threat protection, and faster identification and remediation of security events.

# ML/AI-Enhanced Assurance: A Key Enabler of Network Modernization

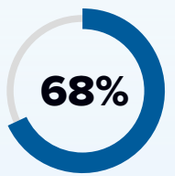
## IDC research shows that organizations are increasingly keen to leverage AI to power network engineering and operations.




**agreed or strongly agreed:**

**"My efforts in network automation must be fueled by AI capabilities."**

n = 1,209, Source: IDC's *Worldwide AI in Networking Special Report*, 2024




**agreed or strongly agreed:**

**"AI capabilities are a top selection criteria for campus and branch networking systems."**

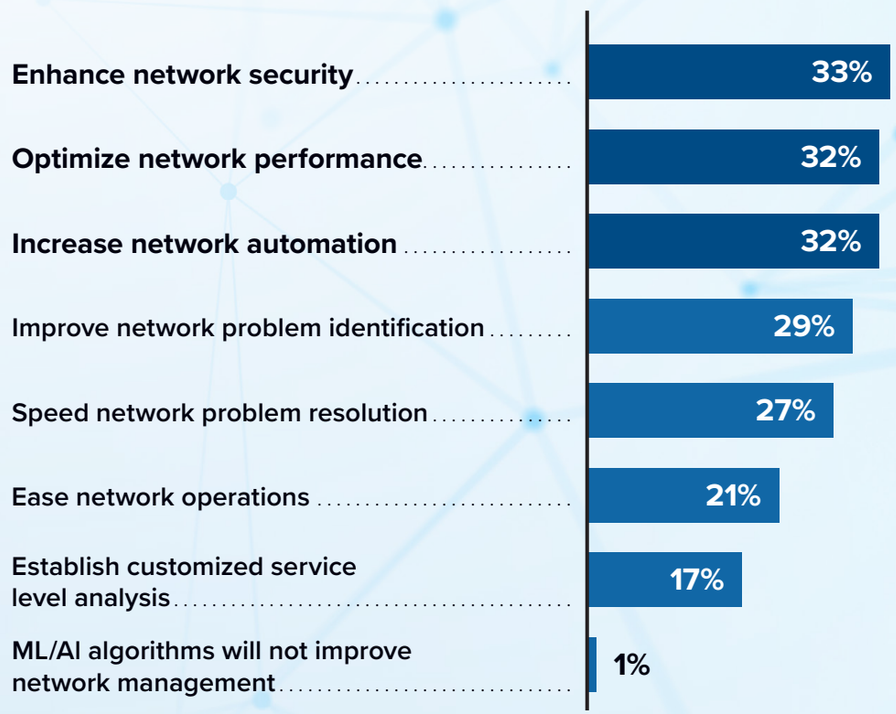
n = 630; Source: IDC's *Worldwide AI in Networking Special Report*, 2024

**Foundational to AI-powered network management is the quantity and quality of data to fuel AI models.**

Network visibility and analytics derived from core DDI services provide unified views of disparate resources, enabling powerful AI-enhanced management capabilities.

## Top Ways AI Improves Network Management

In what ways do you believe ML/AI algorithms will most improve network management?




n = 751; Source: IDC's *Future Enterprise Connectivity Survey*, 2024

# Essential Guidance

**As organizations look to modernize their connectivity strategy, embrace change-ready networks, and focus on advanced core DDI services, IDC has the following advice:**

- Evaluate where modernization gaps exist and develop a plan to address them.
- Consider platform-based approaches to core network services that enable operational efficiency and flexibility in deployment options (e.g., on-premises or cloud-based resources).
- Ensure core network services support cross-domain and cross-functional workflows, including integrated visibility/analytics.
- Prioritize security integrations to secure the enterprise.
- Explore the opportunity for enhancing efficiencies with AI-powered network assurance.

# Appendix: Supplemental Data

The table in this appendix provides an accessible version of the data for the complex figure in this document. Click “Return to original figure” below this table to get back to the original data figure.

SUPPLEMENTAL DATA FROM PAGE 4

## Connectivity Maturity: Today and in Two Years

| | Today | In Two Years |
|---|---|---|
| Extensively connected, where networks are intelligent, edge-enabled, and self-aware | 26% | 60% |
| Connectivity is part of the enterprise fabric with proactive digital capabilities | 33% | 22% |
| Automated capabilities but mostly reactive to issues | 31% | 14% |
| Some consolidated capabilities but siloed voice and data applications | 8% | 3% |
| Connectivity is a simple utility | 3% | 1% |

n = 751; Source: IDC’s *Future Enterprise Connectivity Survey*, 2024

Return to original figure

# About the IDC Analyst

**Brandon Butler**
Senior Research Manager,
Enterprise Networks, IDC

Brandon Butler is a senior research manager covering enterprise networks within IDC's network infrastructure group. His research focuses on market and technology trends, forecasts, and competitive analysis in enterprise campus and branch networks. His coverage includes technologies used in local and wide area networking such as Ethernet switching, routing/SD-WAN, wireless LAN, and enterprise network management platforms. While contributing to ongoing forecast and market share updates, he also assists in end-user surveys, interviews, and advisory services and contributes to custom projects for IDC's Consulting and Go-To-Market Services practices.

More about Brandon Butler

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With BlueCat, organizations can build reliable, secure, and agile mission-critical networks that can support network modernization initiatives such as cloud adoption, SD-WAN, SASE and automation of key network provisioning and administration tasks. BlueCat's growing portfolio includes services and solutions for automated and unified DDI management, network security, multi-cloud management, network observability, performance management and health. The company is headquartered in Toronto and New York and has additional offices in Germany, Iceland, Japan, Singapore, Serbia, and the United Kingdom.

Learn more at www.bluecatnetworks.com/resources/the-change-ready-network

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IDC Research, Inc.
140 Kendrick Street, Building B, Needham, MA 02494, USA
T +1 508 872 8200

idc.com @idc @idc

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