Network Managed Services 2023–2024 RadarView™ – Report Excerpt
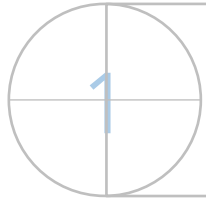
Improving network efficiency through data-driven insights

April 2024

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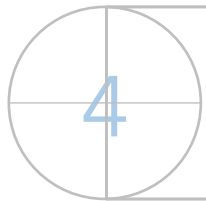# About the Network Managed Services 2023-2024 Market Insights report

1 The increasing need for network bandwidth and security against cyber threats compels enterprises to enhance their network infrastructure. By leveraging the Anything-as-a-Service (XaaS) model, clients can dynamically scale their network infrastructure and streamline resource management.
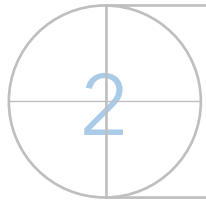
2 Enterprises are increasingly keen on implementing network observability tools to facilitate comprehensive monitoring of network infrastructure, applications, and user experiences. Through the analysis of network traffic, performance metrics, and user interactions, businesses can detect patterns and anomalies in their network operations.
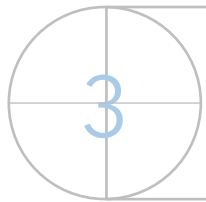
3 Avasant's ongoing interactions with industry leaders indicate that companies are looking to explore generative AI use cases such as infrastructure provisioning and configuration, automate network monitoring processes, and recommend adjustments to routing protocols, quality of service configurations, and bandwidth allocation for improved scalability and reliability.

4 The *Network Managed Services 2023–2024 Market Insights* aims to provide a view into important market trends and developments. It offers insights into network modernization adoption by enterprise types and key industries, as well as key challenges faced by companies.

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Defining network managed services

Network managed services refer to the range of offerings delivered by service providers to help enterprise customers configure, monitor, and manage the performance of their network infrastructure.
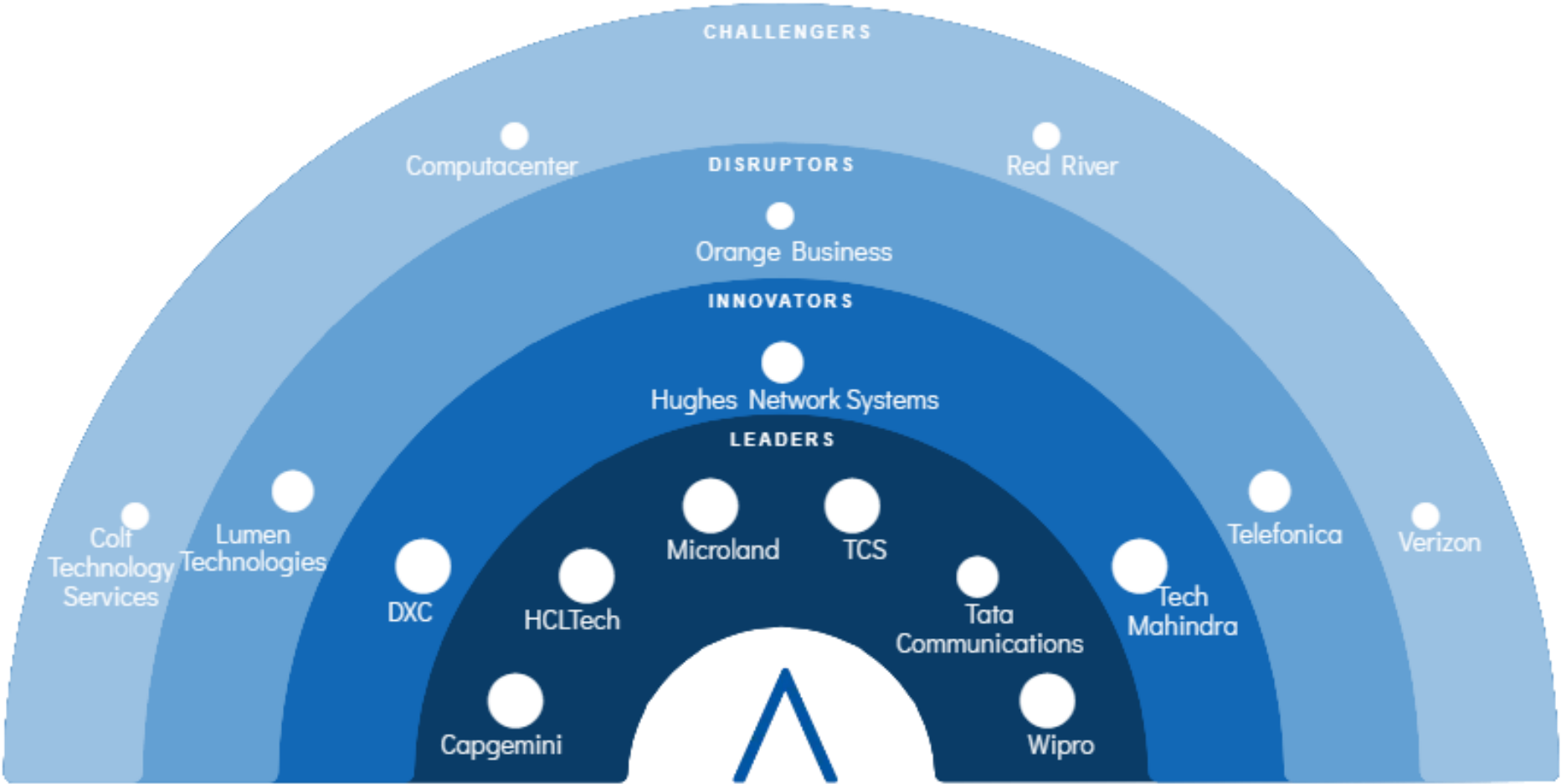
The providers use a closely integrated network management system, a set of applications that helps network engineers manage the network's independent components. These applications include network design, network administration, network provisioning, network monitoring, network security, and network optimization.

These services cover the entire value chain:

1. **Advisory, consulting, and network assessment** – This involves thoroughly evaluating an organization's existing network infrastructure, network design, planning and executing network migrations and upgrades, and compliance and security.

2. **Implementation and integration** – This typically involves setting up hardware and software components, configuring network devices, ensuring compatibility, and aligning the network with the organization's specific requirements and goals.

3. **Unified network operations center (NOC) services and network performance management** – This refers to a centralized system through which an organization monitors, manages, and maintains client networks. At the same time, network performance management focuses on optimizing the performance of a network infrastructure.

4. **Automation and orchestration** – This involves using software tools to automate the configuration, management, provisioning, and monitoring of network devices and infrastructure. Orchestration involves coordinating multiple network automation tasks across different devices and systems.

5. **Network engineering and administration** – This area covers the delivery of network managed services outside of the NOC and might include capabilities such as field engineering services, hosting and colocation, SaaS, and platform-based offerings.

6. **Service procurement, resale, or warranty** – This includes hardware and software support services associated with the acquisition, distribution, and support of assets for network services.

7. **Security and compliance management** – This includes delivering security services such as zero-trust network access (ZTNA), secure web gateways (SWG), cloud access security broker (CASB), network access control, network behavior and detection, distributed denial of service (DDoS) mitigation, threat detection and prevention, and network forensics.

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Avasant recognizes 16 top-tier providers offering network managed services

Practice maturity

CHALLENGERS

DISRUPTORS

INNOVATORS

LEADERS

Computacenter

Red River

Orange Business

Hughes Network Systems

Colt Technology Services

Lumen Technologies

DXC

HCLTech

Microland

TCS

Tata Communications

Tech Mahindra

Telefonica

Verizon

Capgemini

Wipro

Note: Please refer to Avasant's *Network Managed Services 2023–2024 RadarView* for detailed insights on the service providers and supply-side trends.

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# Enterprises are modernizing their network landscapes to remain competitive in a fast-paced digital world

Businesses prioritize network modernization for improved performance and security, leveraging flexible XaaS models to scale infrastructure and streamline management processes.

Increasing demand for bandwidth and performance

As digital activities continue to grow, businesses require networks capable of handling higher data volumes and delivering optimal performance to support various applications and services.

Industries moving towards XaaS model

XaaS model enables clients to scale their network infrastructure more flexibly according to their evolving needs. They can easily add or remove network resources as required without being tied down by long-term commitments or the hassle of procuring and managing hardware themselves.
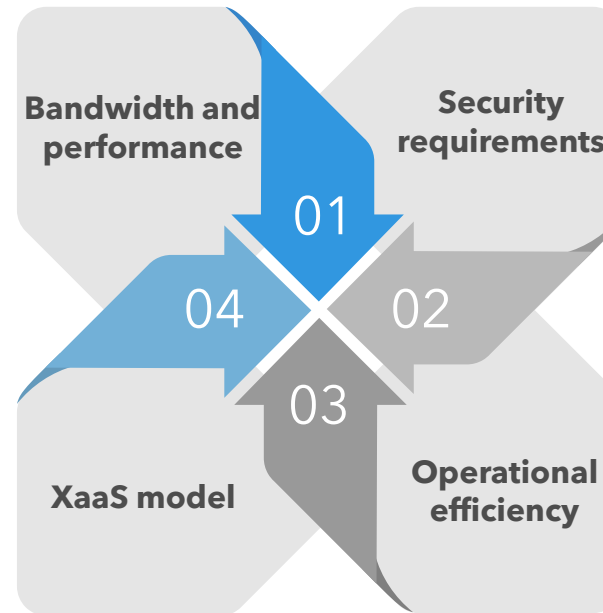
Enhanced security requirements

With the rise of cyber threats and data breaches, businesses prioritize network modernization to implement robust security measures, such as firewalls, intrusion detection systems, and encryption protocols, to safeguard sensitive data and protect against unauthorized access.

Improved operational efficiency

Enterprises aim to streamline network management processes, automate repetitive tasks, enhance visibility and control over network infrastructure, and optimize operational efficiency to reduce downtime and improve overall productivity.

Bandwidth and performance — 01
Security requirements — 02
Operational efficiency — 03
XaaS model — 04

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Legacy infrastructure management and complexities in navigating security and compliance persist as prominent challenges for enterprises

Challenges also include a shortage of skilled resources, vendor lock-in periods, reliance on manual NetOps, and lengthy procurement times.

Legacy infrastructure

Legacy network infrastructure hampers modernization due to compatibility issues with modern protocols like IPv6, posing security risks and impeding the adoption of advanced services such as software-defined networking (SDN), leading to increased maintenance costs.

Lack of skilled resources

Customers often grapple with a shortage of skilled resources within their network teams to effectively manage the diverse range of original equipment manufacturer (OEM) solutions.

Vendor lock-ins

Enterprises with a strong dependence on a single vendor's network technology encounter challenges when considering a switch to an alternative vendor, primarily due to the expenses associated with integrating the current network infrastructure extensively.
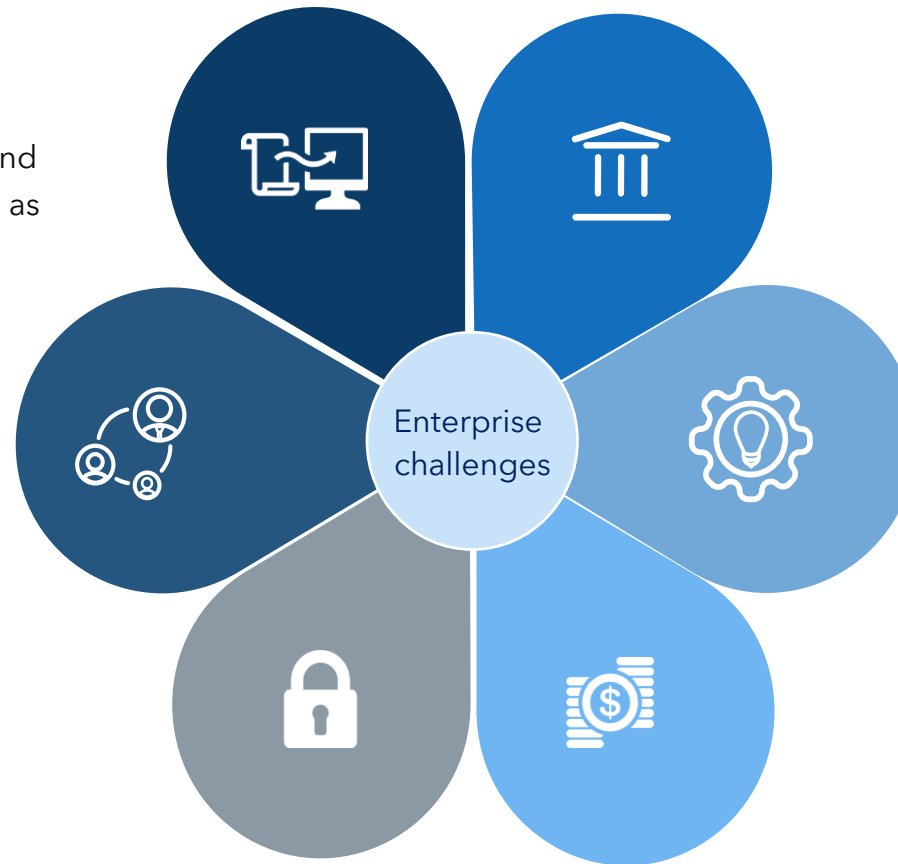
Security and compliance requirements

Abiding by network security protocols like SSL/TLS and IPSec and regulations such as the GDPR complicate enterprise decision-making processes. Neglecting these concerns risks exposing the network to vulnerabilities and legal ramifications.

Reliance on manual NetOps

Relying on human intervention for network configuration, device provisioning, troubleshooting, and incident management increases the mean time to repair (MTTR) and introduces the risk of human error.
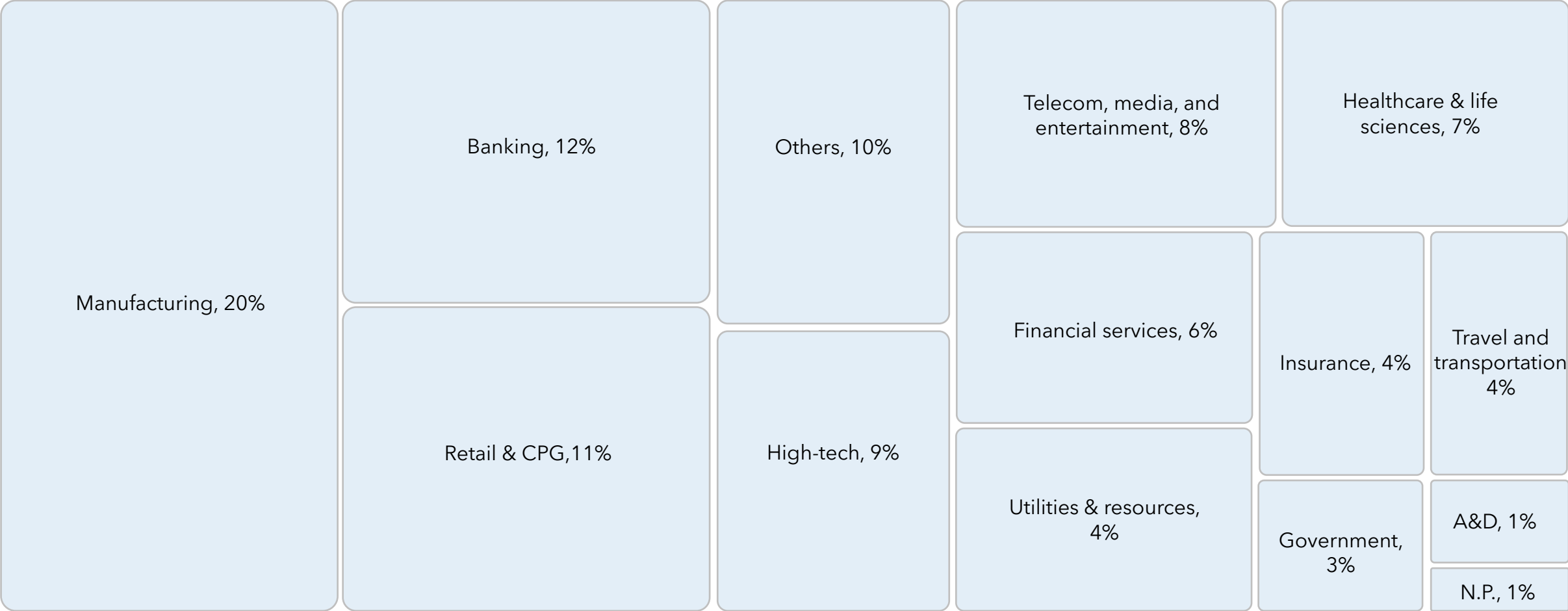
Lengthy procurement lead times

Extended lead times for network hardware delivery, especially for devices such as routers, switches, firewalls, and servers, affect project schedules due to regional variations and regulatory uncertainties.

Enterprise challenges

Source: Avasant Network Managed Services RadarView Survey, October 2023–November 2023

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Around 20% of traction for network managed services comes from the manufacturing industry

Network modernization is sought after in manufacturing to facilitate Industry 4.0 transformations, optimize supply chains, enhance operational efficiency, and support remote work and collaboration.

Revenue from different verticals for network managed services, by percentage

Manufacturing, 20%

Banking, 12%

Retail & CPG, 11%

Others, 10%

High-tech, 9%

Telecom, media, and entertainment, 8%

Financial services, 6%

Utilities & resources, 4%

Healthcare & life sciences, 7%

Insurance, 4%

Government, 3%

Travel and transportation 4%

A&D, 1%

N.P., 1%

Note: A&D refers to aerospace and defense, and N.P. refers to nonprofits.

Source: Avasant Network Managed Services RadarView Survey, October 2023–November 2023

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Enterprises increasingly seek network observability tools to gain comprehensive insights into their network infrastructure, applications, and user experiences

These tools enable enterprises to proactively identify and address issues, enhance user satisfaction, and improve network efficiency through automation and data-driven insights.

Infrastructure monitoring
Monitoring the health and performance of network infrastructure components such as routers, switches, firewalls, servers, and storage devices to ensure they are functioning optimally and to identify potential issues or bottlenecks.

Application performance monitoring
Monitoring the performance and availability of network-connected applications and services to identify performance bottlenecks, latency issues, errors, or crashes that may impact user experience or business operations.

Log management and analysis
Collecting, aggregating, and analyzing log data generated by network devices, applications, and systems to identify security incidents, operational issues, or compliance violations and to gain insights into network activity and behavior.

Traffic monitoring
Analyzing network traffic patterns, volumes, and flows to understand how data moves across the network, detect anomalies or deviations from normal behavior, and troubleshoot performance issues or security threats.

End-user experience monitoring
Monitoring and measuring the quality of end-user experiences when accessing network services or applications, including response times, page load speeds, and transaction success rates, to ensure optimal performance and user satisfaction.

Security monitoring and threat detection
Monitoring network traffic and behavior for signs of malicious activity, intrusion attempts, malware infections, or other security threats, and alerting security teams to potential risks or breaches in real-time.

A North American broadcaster — Leveraged end-user experience monitoring service to ensure consistent customer support across global call centers, including remote personnel. This managed service implemented user-centric tools to monitor network applications, run tests, and measure transactions, thus enhancing application reliability and performance.

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Enterprises are utilizing generative AI to optimize network operations and provide automated monitoring services

Generative AI use cases that are either integrated or in pilot stages for network managed services

Network planning and design

Businesses are leveraging generative AI to analyze historical data and trends and generate network capacity requirements designs while considering factors such as topology and bandwidth requirements.

Infrastructure provisioning and configuration

Enterprises are utilizing generative AI to generate network device configurations, including router and switch settings, VLAN configurations, and firewall rules.

Network optimization

Organizations are using generative AI models to optimize network performance by adjusting routing protocols, quality of service configurations, and bandwidth allocations.

Automated network observability

Enterprises are leveraging generative AI to streamline network operations and automate observability to provide faster analysis and reveal deeper patterns and insights.

Incident management and log simplification

Businesses are using generative AI to manage incidents, ensuring automatic extraction of key details, identifying incident impact across the network landscape, and generating simplified logs.

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Tata Communications profile

Tata Communications: RadarView profile

Practice maturity ★★★★

Partner ecosystem ★★★★★

Investments and innovation ★★★★★

Invests in multidomain orchestration, integrating edge, core, and cloud networks to enable customers with enhanced service delivery and optimized performance.

Practice overview

- Practice size: 7,100+
- Practice growth: ~9%
- Active clients: 910+
- Certified and trained resources: 600+ external certifications
- Delivery highlights: More than 65,000 network devices managed in the last three years

>$500M NMS revenue as of September 2023	10%–20% NMS revenue YOY growth as of September 2023

Client case studies

- Helped a Europe-based energy firm move away from multiprotocol label switching (MPLS) and implemented internet WAN for better price performance. It also leveraged its monitoring as a service (MaaS) offering and helped the client with a single network view with data-driven metrics.
- Modernized the WAN architecture of a UK-based bank for improved internet connectivity. It leveraged its IZO Internet WAN solution to enable site-to-site communication and used Zscaler internet access to ensure connectivity in remote areas.
- Clariant moved from MPLS heavy network to an internet-first network to reduce network expenditure. IZO Multi-Cloud Connect provided Clariant, predictable internet connections from 100+ sites. The migration planning resulted in improved savings and enhanced scalability.
- Replaced a third-party MPLS provider solution with a hybrid IZO Internet WAN solution and offered managed security services for DNV to improve network agility and reduce costs. This improved end-to-end life cycle management, and resulted in faster delivery and high network availability.

Key IP and assets

- Monitoring as a service offering: A network health monitoring tool that offers end-to-end resolution assistance
- TCx Portal: A self-service portal providing end-to-end architecture visibility
- IZO™ Internet WAN: A solution for end-to-end WAN services
- IZO Multi Cloud Connect: A software defined Cloud interconnect service

Partnerships/alliances

Platform/technology partners

CISCO · FERTINET · HPE aruba networking · VERSA NETWORKS · EXCLUSIVE NETWORKS · octopian · Westcon · neeco GLOBAL ICT SERVICES · nsc} · allied digital IT managed Responsibly

Sample clients

- A food and beverage retailer based in Asia Pacific region
- A global bank
- A global brewery company
- A global chemical company
- A power grid company
- A medical technology company
- Clariant
- DNV
- Europe-based energy firm
- Starbucks
- UK-based bank

Industry coverage

- Aerospace & defense
- Banking
- Financial services
- Insurance
- Healthcare & life sciences
- High-tech
- Telecom, media & entertainment
- Retail & CPG
- Manufacturing
- Travel & transportation
- Utilities & resources
- Nonprofits (development banks, charities)
- Government

Darker color indicates higher industry concentration: ●●●●

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Tata Communications: RadarView profile

Analyst insights

Practice maturity ★★★★

- Tata Communications has over 620 points of presence and over 110 global cloud service connections across geographies such as North America, Latin America, EMEA, and APAC.
- It offers advisory, consulting, and network assessment services to optimize network infrastructure. Their advisory services guide organizations in strategy development for cost savings and performance enhancement. Consulting services aid in network strategy, transformation, and optimization. Network assessments evaluate current and target states, identify improvement areas, and align with SLAs, experience level agreements, and key performance indicators to enhance user experience.
- It operates a 24/7 network operations center (NOC) with multi-skilled professionals to ensure uninterrupted customer service. The NOC team utilizes industry tools for monitoring, ticketing, reporting, and analytics, integrating various systems such as ordering, provisioning, service management, and billing into an automated workflow for efficient data processing and event management.
- Its MaaS portal provides centralized monitoring and reporting functions, significantly reducing delays in identifying and restoring faults.

Partner ecosystem ★★★★★

- Tata Communications collaborates with over 230 regional and partner networks, extending its internet ecosystem across more than 190 countries. This extensive reach is facilitated through selected partners, bound by specific routing arrangements and SLAs.
- It has announced the launch of the Skill Africa Program in partnership with the Smart Africa Alliance. This initiative aims to tackle the skills gap in the tech industry and train 150 engineers in advanced skills such as cybersecurity, IoT, cloud, big data, robotics, and smart cities.
- It has collaborated with Equinix Cloud Fabric Infrastructure to connect with multiple cloud service providers through Network-to-Network Interfaces integrated with Tata Communications Global VPN network, enhancing their service reach and reliability.

Investments and innovation ★★★★★

- Tata Communications plans to invest in multi-domain orchestration, integrating edge, core, and cloud networks to enable customers with enhanced service delivery and optimized performance. It also ensures end-to-end visibility and control, streamlining operations across diverse network environments.
- It focuses on developing intent-based policy management solutions, seamlessly integrating LAN and WAN. This approach allows enterprises to specify business intents, such as latency and performance, for application traffic from the user to remote endpoints such as cloud or data centers. The network proactively manages and implements these intents, ensuring optimal performance under normal conditions and during network disruptions.

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Appendix:
About RadarView

The Network Managed Services 2023–2024 RadarView assesses service providers across three critical dimensions

Practice maturity

- This dimension considers the current state of a provider's network outsourcing practice in terms of its strategic importance for the provider, the maturity of its offerings and capabilities, and client engagement.
- The crucial aspects in this dimension are the width and depth of the client base, usage of proprietary/outsourced tools and platforms, and quality of talent and execution capabilities.

Partner ecosystem

- This dimension assesses the nature of the ecosystem partnerships of the provider, the objectives of the partnerships (codevelopment and co-innovation), and engagement with solutions providers, startup communities, and industry associations.
- Vital aspects in this dimension are joint development programs around offerings, go-to-market approaches, and the overall depth of partnerships.

Investments and innovation

- This dimension measures the strategic direction of the provider's investments and resultant innovations in the offerings and commercial model and how it aligns with the future direction of the industry.
- The critical aspects of this dimension include both organic and inorganic investments toward capability and offering growth, technology development, and human capital development, along with innovative solutions developed with strategic partners.

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Research methodology and coverage

Avasant based its analysis on several sources:

Public disclosures
Publicly available information such as Securities and Exchange Commission filings, annual reports, quarterly earnings calls, and executive interviews and statements

Market interactions
Discussions with enterprise executives leading outsourcing initiatives and influencing service provider selection and engagement

Provider inputs
Inputs collected through an online questionnaire and structured briefings in September–December 2023

Of the 46 service providers assessed, the final 16 featured in the Network Managed Services 2023–2024 RadarView are:

Capgemini

colt

Computacenter

DXC TECHNOLOGY

HCLTech

HUGHES

LUMEN

MICROLAND

orange Business

TATA COMMUNICATIONS

tcs TATA CONSULTANCY SERVICES

Red River

Tech Mahindra

Telefónica

verizon

wipro

Note: Assessments for Colt, Hughes Network Systems, Lumen Technologies, and Orange Business were conducted based on public disclosures and market interactions only.

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Reading the RadarView

Avasant has recognized service providers in four classifications:

Leaders show consistent excellence across all key dimensions of the RadarView assessment (practice maturity, domain ecosystem, and investments and innovation) and have had a superior impact on the marketplace. These providers have shown true creativity and innovation and have established trends and best practices for the industry. They have proven their commitment to the industry and are recognized as thought leaders in their space, setting the standard for the rest of the industry to follow. Leaders display a superior quality of execution and a reliable depth and breadth across verticals.

Innovators show a penchant for reinventing concepts and avenues, changing the very nature of how things are done from the ground up. Unlike leaders, innovators have chosen to dominate a few select areas or industries and distinguish themselves through superior innovation. These radicals are always hungry to create pioneering advancements in the industry and are actively sought after as trailblazers, redefining the rules of the game.

Disruptors enjoy inverting established norms and developing novel approaches that invigorate the industry. These providers choose to have a razor-sharp focus on a few specific areas and address those at a high level of granularity and commitment, which results in tectonic shifts. While disruptors might not have the consistent depth and breadth across many verticals like leaders or the innovation capabilities of innovators, they exhibit superior capabilities in their areas of focus.

Challengers strive to break the mold and develop groundbreaking techniques, technologies, and methodologies on their way to establishing a unique position. While they may not have the scale of the providers in other categories, challengers are eager and nimble and use their high speed of execution to great effect as they scale heights in the industry. Challengers have a track record of delivering quality projects for their most demanding Global 2000 clients. In select areas and industries, challengers might have capabilities that match or exceed those of the providers in other categories.

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