IDC MarketScape

IDC MarketScape: Worldwide Telecom Autonomous Network Operations Solutions 2026 Vendor Assessment

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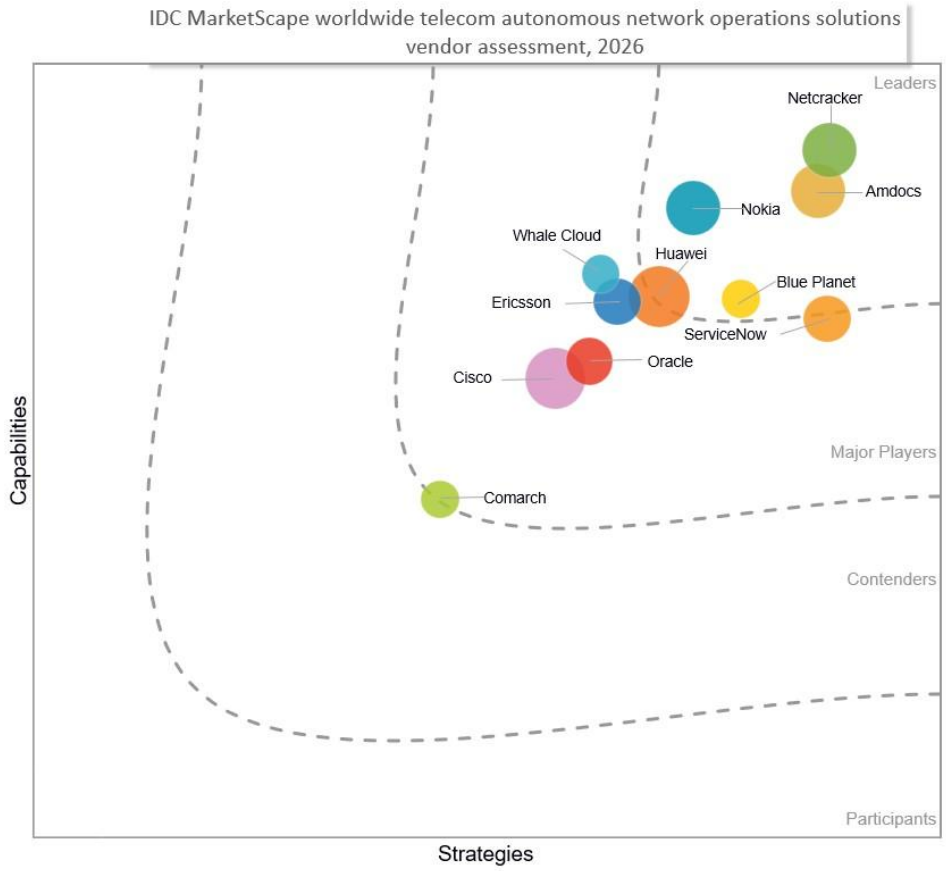
THIS EXCERPT FEATURES NETCRACKER AS A LEADER

IDC MARKETSCAPE FIGURE

FIGURE 1

IDC MarketScape worldwide telecom autonomous network operations solutions vendor assessment



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Please see the Appendix for detailed methodology, market definition, and scoring criteria.

ABOUT THIS EXCERPT

The content for this excerpt was taken directly from IDC MarketScape: Worldwide Telecom Autonomous Network Operations Solutions 2026 Vendor Assessment (Doc # US54129326).

IDC OPINION

The telecom industry's pursuit of autonomous networks did not begin with the publication of TM Forum's Autonomous Network Level (AN Level) framework, but its publication has provided a common language to drive industry progress. The framework spans from AN Level 0 (manual management) to AN Level 5 (fully autonomous network). According to IDC's April 2026 *Worldwide Telco Digital Transformation (DX), IT, Applications, and AI Survey*, the average telco is between AN Level 1.5 and AN Level 2 (partially autonomous network). The ambition for most telecom operators is to achieve AN Level 4 (highly autonomous network) capabilities by 2030.

Progressing network autonomy is founded on network domain–specific systems and the operational support systems (OSS) that act either within a domain or horizontally. Often, these interact over several layers to influence the level of automation and autonomy of a network. For instance, a domain may have a specific domain inventory system mapping its resources, which is then streamed up to a horizontal network inventory system tasked with recording, reconciling, and providing insight into the availability of resources across the entire network. This IDC MarketScape considers vendors' OSS capabilities across the orchestration, assurance, and inventory required to support telcos to achieve higher levels of network autonomy.

Today, many operators progress their autonomous network road map through targeted domain-specific investments. This could be increasing energy efficiency in the radio access network (RAN), reducing mean time to repair (MTTR) in the optical network, or reducing alarm noise in the network operations center. These initiatives meaningfully progress autonomy and deliver business value, often relying on partners with deep domain expertise. However, reaching higher AN Levels eventually means moving from domain-centric progress to end-to-end autonomy, requiring strategic OSS suppliers capable of delivering autonomy across all network domains.

As a telecom moves up in AN Level, more responsibility is passed to the systems: first, executing network changes, second reviewing and analyzing network data to inform

courses of action, and finally, decision-making on what to do to resolve a particular fault or how to configure a network service to meet a customer intent. The further up the AN Levels, the more agentic AI capabilities will be part of autonomous network operations. Although AI is not new in networking, agentic AI is still in the early days for many operators implementing it within their network operations. For this reason, suppliers that wish to be strategic partners need a clear vision and tangible capabilities — including auditability and clear boundaries on autonomous action — that give telcos confidence in their ability to execute on agentic AI safely.

IDC MARKETSCAPE VENDOR INCLUSION CRITERIA

Although IDC strives to include as many relevant vendors as possible, no market study can be entirely comprehensive. Additionally, given the nature of the telecom OSS market and wider autonomous network operations ecosystem, many players have partial solutions or play strongly only within a limited geography. To ensure a valuable decision-making tool, IDC will prioritize vendors that meet the following criteria:

- **Product portfolio completeness**. Vendors should have a broad range of OSS products across orchestration, assurance, and inventory, which are deployed with telecom customers.
- **Customer relevance**. Vendors must have a significant number of telecom clients overall and must be supporting telecom clients across their portfolio.
- **Global relevance**. Vendors must be supporting telecom clients with autonomous network operations solutions across a majority of global regions.

ADVICE FOR TECHNOLOGY BUYERS

Autonomous network operations are a marathon, not a sprint. The premise is simple; the execution is difficult. Telecom operators evaluating partners for their journey must balance between the deep domain and technical expertise to understand the complexity of operational minutiae and the capability to extend and connect autonomous decision-making and action chains end to end. In most deployments, operators will be choosing multiple partners because of existing investments, the variability in the depth of each provider's specific domain expertise, and the networking equipment these systems manage. At the same time, AI is shifting the technical capability to analyze and direct network operations. A new equilibrium is still to be decided on how governing, developing, and managing the life cycle of AI capabilities in operations for critical networks is managed by telcos and vendors. This complex mandate and the evolving environment mean telcos should carefully consider the following factors when choosing strategic autonomous network operations partners:

- **Know your starting point**. Whether your operations are at AN Level 1.6 or 3.5, it is important to know where you are starting in a particular domain or across your operations to decide where you must focus investment.
- **Data foundations are crucial**. Invest in network inventory and data capabilities that provide accurate, real-time views on your network, which can create early value by decreasing mean time to detect and resolve issues. These will be foundational in making the leap from human managed operations to autonomous operations at higher AN Levels. Choose standards-aligned partners and those with strong integration capabilities to ensure data is generated, cleaned, and diffused reliably.
- **Plan for organizational change**. Moving to autonomous network operations involves a lot of change in processes, expertise, and exercise of judgement that operations teams will make day to day. Look for partners that can support to make what will be multiple transitions easier for your people.
- **There is no autonomous network without AI; governance is key**. Vendors must support enterprise-grade governance and data security capabilities, including audit trails, explainability, and compliance with global data privacy standards. Observability will be critical to the safe operation of autonomous network operations.
- **Build foundations for confidence to cross the cross-domain chasm**. The industry is comfortable in raising autonomy in individual network domains, but the cross-domain chasm in confidence of what it takes to move from AN Level 3 to 4 is real. Any partnership, even if it is in a single domain, must be incentivized to make this move easier; horizontal data foundations and operational context are key.
- **Partners must be ecosystem players**. How a partner integrates with other vendors is as important as the product capability it offers. The brownfield reality of telecom networks means every vendor must be confident automating across and on top of solutions from multiple third parties, including legacy systems.

VENDOR SUMMARY PROFILES

This section briefly explains IDC's key observations resulting in a vendor's position in the IDC MarketScape. Although every vendor is evaluated against each of the criteria outlined in the Appendix, the description here provides a summary of each vendor's strengths and opportunities.

Netcracker Technology

After a thorough evaluation of its offerings and capabilities, IDC has positioned Netcracker Technology (Netcracker) in the Leaders category in this IDC MarketScape: Worldwide Telecom Autonomous Network Operations Solutions 2026 vendor assessment.

Netcracker, headquartered in Waltham, Massachusetts, is a wholly owned subsidiary of NEC Corporation and has served the telecom OSS market for 33 years. It employs more than 15,000 people across 68 offices and operates in around 60 countries, spanning APAC, Central America and Latin America (CALA), EMEA, and North America.

Netcracker provides an intent-driven Orchestration Suite that works in a closed loop with its service assurance and inventory solutions. It supports automation across the service and resource life cycle from design and deployment through assurance and optimization. The suite is underpinned by heavy investment in ontology and end-to-end reasoning as well as a delivery model built on professional services, reusable blueprints, and phased minimum viable product (MVP) adoption that ties automation to business outcomes. Netcracker is explicit about ensuring the security of its solutions and managing the governance, costs, and efficacy of the AI workloads running within and over its systems.

Strengths

Netcracker performs strongly across cross-domain use case coverage, SLA support, service road map, portfolio breadth, planned investment, and AI functionality. Its ability to support customers from fixed networks to mobile, satellite, and combinations of these is a differentiator. Customers described the company as a strategic platform partner across their OSS, praising its cloud-native fit with CI/CD pipelines, product stability, and delivery track record. Several customers chose Netcracker precisely because it is an engineering-led, full-stack, TM Forum–compliant, fully cloud-native partner that can integrate across a heterogeneous estate and scale with fast-growing networks. Netcracker also has demonstrated advanced AI capabilities with its telecom intelligence layer, end-to-end reasoning engine, and developing portfolio of AI agents embedded in its OSS.

Challenges

Although Netcracker's solutions are modular, its focus is on being a strategic OSS transformation partner rather than delivering point solutions. To get full value from a Netcracker partnership, operators need to invest in defining requirements upfront. This can be more difficult for telcos with a weaker autonomous network vision or limited in-house resources.

Consider Netcracker When

Consider Netcracker if you are an ambitious network operator seeking to drive network autonomy across multiple network domains. It provides an architecturally unified orchestration–assurance–inventory suite with a strong, cost-aware autonomy road map and a comprehensive services offering to ensure successful deliveries and programmatic improvements. It is a natural fit for providers consolidating fragmented OSS onto one closed-loop, cloud-native platform and for engineering-led operators that value native integration, delivery certainty and a phased path to AI-first operations.

APPENDIX

Reading an IDC MarketScape graph

For the purposes of this analysis, IDC divided potential key measures for success into two primary categories: capabilities and strategies.

Positioning on the y-axis reflects the vendor's current capabilities and menu of services and how well aligned the vendor is with customers' needs. The capabilities category focuses on the capabilities of the company and product today, here and now. Under this category, IDC analysts will look at how well a vendor is building/delivering capabilities that enable it to execute its chosen strategy in the market.

Positioning on the x-axis or strategies axis indicates how well the vendor's future strategy aligns with what customers will require in three to five years. The strategies category focuses on high-level decisions and underlying assumptions about offerings, customer segments, and business and go-to-market plans for the next three to five years.

The size of the individual vendor markers in the IDC MarketScape represents the market revenue bracket of each individual vendor within the specific market segment being assessed.

IDC MarketScape methodology

IDC MarketScape criteria selection, weightings, and vendor scores represent well-researched IDC judgment about the market and specific vendors. IDC analysts tailor the range of standard characteristics by which vendors are measured through structured discussions, surveys, and interviews with market leaders, participants, and end users. Market weightings are based on user interviews, buyer surveys, and the input of IDC experts in each market. IDC analysts base individual vendor scores and, ultimately, vendor positions on the IDC MarketScape, detailed surveys and interviews with vendors, publicly available information, and end-user experiences in an effort to provide an accurate and consistent assessment of each vendor's characteristics, behaviors, and capabilities.

Market definition

This IDC MarketScape focuses on the OSS capabilities required to support telecom operators advance toward higher levels of network autonomy. These systems encompass orchestration, assurance, and inventory, which provide the foundational capabilities and systems of record required for networks to be planned, operated, and optimized at scale.

LEARN MORE

Related research

- *Market Analysis Perspective: Worldwide Telecom Operations and Monetization, 2026* (IDC #US54202326, August 2026)
- *DTW 2026 — Reality Check for Autonomous Networks, Agentic AI, and the Future of Telco Monetization* (IDC #IcUS53652426, July 2026)
- *IDC Survey: Telecom Operations and Monetization Highlights, 2026* (IDC #US54600026, June 2026)
- *IDC Survey: Telecom Transformation, 2026: Partner Signals* (IDC #US54201726, June 2026)
- *Worldwide Telecom Operations and Monetization Solution Forecast, 2026–2030* (IDC #US54536426, June 2026)
- *IDC Market Glance: Telecom Network Infrastructure and IT, 1Q26* (IDC #US54330726, March 2026)
- *IDC's Worldwide Digital Transformation Use Case Taxonomy, 2025: Telecommunications* (IDC #US53685825, August 2025)

Synopsis

The IDC MarketScape assesses the worldwide telecom autonomous network operations capabilities for the telecommunications sector and discusses what criteria are the most important for companies to consider when selecting a vendor. It reviews the critical operational support systems (OSS) capabilities of key suppliers across orchestration, assurance, and network inventory, which are foundational for autonomous network operation strategies. It also considers the long-term road map for these vendors and how they are supporting customers to leverage agentic AI to unlock higher levels of network autonomy.

"Telecom operators have been striving for increasingly autonomous networks for a long term. Backed up by a foundational vision provided by the TM Forum Autonomous Network (AN) framework, operators are now making strides to achieve AN Level 4 (highly autonomous networks) by 2030. To do this, they need a mix of strategic partners that can deliver autonomy horizontally across network domains, with the depth expertise necessary to ensure reliability and efficiency when executing at a domain level," says Chris Silberberg, research manager, IDC.

ABOUT IDC

International Data Corporation (IDC) is the premier global market intelligence, data, and events provider 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 and industry opportunities and trends in over 110 countries. IDC's analysis and insight help IT professionals, business executives, and the investment community make fact-based technology decisions and achieve their key business objectives.

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