

# Telecom Network Automation Market Forecasts to 2032 - Global Analysis By Component (Software and Services), Network Type, Organization Size, End User and By Geography

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## Abstracts

According to Statistics MRC, the Global Telecom Network Automation Market is accounted for \$11.17 billion in 2025 and is expected to reach \$53.56 billion by 2032 growing at a CAGR of 25.1% during the forecast period. Telecom Network Automation refers to the use of software, artificial intelligence, machine learning, and orchestration tools to automatically design, deploy, configure, manage, monitor, and optimize telecommunications networks with minimal human intervention. It enables service providers to streamline network operations across fixed, mobile, cloud, and virtualized environments by automating routine and complex tasks such as fault management, traffic optimization, service provisioning, and performance assurance. Telecom network automation improves operational efficiency, reduces costs and errors, enhances service reliability, and supports rapid scalability, making it essential for managing modern 5G, edge computing, and software-defined network infrastructures.

### Market Dynamics:

Driver:

Rising demand for 5G network automation

Operators increasingly require intelligent systems to manage complex, high-capacity networks without manual intervention. Automation enables real-time orchestration of services, predictive maintenance, and dynamic resource allocation. Vendors are embedding AI-driven solutions into telecom infrastructure to strengthen efficiency and

reduce downtime. Consumers expect seamless connectivity which is reinforcing the need for automated frameworks. Rising demand for automation is accelerating investment in next-generation telecom ecosystems. As 5G adoption intensifies, automation demand is propelling growth in telecom networks.

#### Restraint:

##### High initial deployment costs

Operators face heavy capital requirements for upgrading legacy systems, integrating AI-driven orchestration, and deploying edge infrastructure. Smaller regional carriers often delay adoption due to limited budgets and uncertain ROI. The complexity of integrating automation into multi-vendor ecosystems adds further expense. Rising energy and maintenance costs amplify financial challenges for operators. Vendors are experimenting with modular and subscription-based models to reduce upfront burdens. High deployment costs are slowing penetration despite strong demand for automated telecom solutions.

#### Opportunity:

##### Expansion in emerging markets

Rapid urbanization and rising mobile penetration in regions such as Southeast Asia, Africa, and Latin America are driving demand for scalable networks. Governments are investing in digital infrastructure to support economic growth and smart city initiatives. Local operators increasingly require automation to manage expanding subscriber bases and complex traffic patterns. Vendors are tailoring cost-effective automation platforms to meet regional needs and regulatory frameworks. Partnerships with local carriers and governments are reinforcing adoption. Expansion in emerging markets is fostering significant growth opportunities in telecom network automation.

#### Threat:

##### Regulatory compliance complexities

Governments impose strict mandates on data privacy, interoperability, and spectrum management that increase operational challenges. Operators must invest heavily in compliance audits and monitoring systems to sustain trust. Smaller providers struggle to meet certification requirements compared to established telecom giants. Frequent policy

changes create uncertainty for long-term investment planning. Vendors must adapt solutions to diverse regional regulations which slows scalability. Rising compliance complexities are restraining confidence and threatening consistent growth in telecom automation.

### **Covid-19 Impact:**

The Covid-19 pandemic accelerated demand for telecom automation as operators faced surging traffic loads from remote work and digital-first lifestyles. On one hand, supply chain disruptions delayed infrastructure projects and slowed deployments. On the other hand, rising demand for resilient and self-healing networks boosted adoption of automation platforms. Enterprises increasingly relied on AI-driven orchestration to ensure continuity during peak usage. Vendors embedded predictive monitoring and remote management features to strengthen resilience. The pandemic reinforced the importance of automation in sustaining telecom reliability. Overall, Covid-19 boosted awareness of automation as a strategic enabler of telecom modernization.

The software segment is expected to be the largest during the forecast period

The software segment is expected to account for the largest market share during the forecast period, driven by demand for orchestration, analytics, and AI-driven management tools. Software platforms enable operators to automate workflows, reduce downtime, and strengthen scalability. Vendors are embedding predictive analytics and real-time monitoring into software suites. Rising demand for flexible and modular solutions is reinforcing adoption in this segment. Operators view software-driven automation as critical for managing complex 5G ecosystems.

The large enterprises segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the large enterprises segment is predicted to witness the highest growth rate, supported by rising demand for automation in managing complex, high-capacity networks. Large enterprises increasingly require intelligent orchestration to strengthen efficiency and reduce operational risks. Vendors are embedding AI-driven solutions into enterprise telecom frameworks to improve scalability. Rising investment in digital transformation is reinforcing demand in this segment. Large enterprises view automation as critical for competitive differentiation and resilience. As enterprise adoption expands, automation platforms are accelerating growth in telecom networks.

### Region with largest share:

During the forecast period, the North America region is expected to hold the largest market share by mature telecom infrastructure, strong regulatory frameworks, and early adoption of automation technologies. Operators in the United States and Canada are leading investments in AI-driven orchestration to manage 5G rollouts. The presence of major cloud providers and telecom vendors further strengthens regional dominance. Rising demand for hybrid and multi-cloud governance is reinforcing adoption across large enterprises. North America's emphasis on innovation and digital trust is fostering sustained growth in telecom automation.

### Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR, fueled by rapid urbanization, expanding mobile penetration, and government-led digital initiatives. Countries such as China, India, and Southeast Asia are investing heavily in telecom automation to support 5G deployments and smart city ecosystems. Local operators are adopting cost-effective automation platforms to strengthen scalability and meet consumer demand. Startups and regional vendors are deploying tailored solutions to accelerate adoption in diverse markets. Government programs promoting digital transformation and connectivity are reinforcing demand.

### Key players in the market

Some of the key players in Telecom Network Automation Market include Cisco Systems, Inc., Nokia Corporation, Huawei Technologies Co., Ltd., Telefonaktiebolaget LM Ericsson, Juniper Networks, Inc., Hewlett Packard Enterprise Company (HPE), IBM Corporation, NEC Corporation, Netcracker Technology Corporation, VMware, Inc., Amdocs Limited, Ciena Corporation, Comarch S.A., Infosys Limited and Capgemini SE.

### Key Developments:

In November 2024, Cisco announced a significant expansion of its Cisco Nexus HyperFabric AI clusters solution, now validated with key telecom partners to automate and unify AI/ML workload management across data center, cloud, and far-edge telecom environments.

In March 2024, Nokia and Google Cloud announced a strategic collaboration to develop cloud-native 5G Core and network automation solutions for communication service

providers (CSPs). This partnership aims to leverage Google's AI/ML capabilities to enhance Nokia's network management and orchestration.

#### Components Covered:

Software

Services

#### Network Types Covered:

Fixed Line Networks

Mobile & Wireless Networks

Data Center Networks

Cloud & Virtual Networks

Other Network Types

#### Organization Sizes Covered:

Small & Medium Enterprises (SMEs)

Large Enterprises

Telecom Operators

Managed Service Providers (MSPs)

Other Organization Sizes

#### End Users Covered:

Telecom Service Providers

Cloud Service Providers & Hyperscalers

Enterprises (IT, BFSI, Manufacturing, Healthcare)

Government & Public Sector Organizations

Media & Entertainment Companies

Other End Users

#### Regions Covered:

North America

US

Canada

Mexico

Europe

Germany

UK

Italy

France

Spain

Rest of Europe

Asia Pacific

Japan

China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & Africa

### **What our report offers:**

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants

- Covers Market data for the years 2024, 2025, 2026, 2028, and 2032
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

### **Free Customization Offerings:**

All the customers of this report will be entitled to receive one of the following free customization options:

#### **Company Profiling**

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

#### **Regional Segmentation**

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

#### **Competitive Benchmarking**

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

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