

Product Engineering Services for NextGen Networks

Communications, Media & Technology



The need for consumers to continuously stay connected has led to an exponential increase in data. This requires communication networks to provide higher bandwidth, speed, and availability, making them more complex with every passing day. Fast emerging software-centric networks, the evolution of network topologies, and the need to provide information data security are changing the dynamics for the network, semiconductor, and device companies. The industry is thus investing in next generation technologies to deliver multi-faceted services.

Tata Consultancy Services' (TCS') Product Engineering Services for NextGen Networks offer end-to-end development and sustenance services across new and mature products, helping companies optimize costs and accelerate product development. We help network equipment vendors build innovative products and future proof business by leveraging the latest technologies such as 5G, Software Defined Networks (SDN), Network function virtualization (NFV), and Machine Learning.

Overview

The unprecedented spurt in data and voice traffic has put relentless pressure on communications providers to find ways to manage this traffic, expand capacity, and increase speeds. Future-ready technologies such as 5G and LTE are being developed and deployed to make networks faster. Meanwhile, technologies such as NFV and SDN continue to make network functionality a function of software rather than hardware. These technologies are making networks highly scalable, IoT enabled, and future-ready, while enabling them to integrate with the current ecosystem seamlessly.

TCS' Product Engineering Services for NextGen Networks provide a comprehensive portfolio of tools, frameworks, and solution accelerators that can create and sustain network technologies of the future. Our services are designed to deliver better predictability, manageability, dynamic scaling, and service agility. We leverage our product engineering expertise to create product suite roadmaps and optimize the usage of networking resources. Our services help customers:

- Stay competitive by accelerating turnaround times
- Optimize cost and resource utilization
- Maximize Return on Investment (ROI)
- Maximize Network Monetization

Benefits

TCS' Product Engineering Services for NextGen Networks help communications companies build capabilities to ideate, design, and develop innovative network solutions through:



Accelerated Product Engineering: Jumpstart the product development journey with TCS' in-house solution accelerators and tools, supported by our extensive product engineering experience across-domains and technologies



Rapid Innovation: Accelerate the launch of differentiated products and solutions by leveraging our significant investments in next-generation network technologies



Our Solution

TCS offers wide-ranging product engineering services across:

- **SDN:** Develop software-defined networking (SDN) controller applications to facilitate management, configuration, monitoring, and troubleshooting from a single pane
- **NFV:** Enable virtualized network functions (VNFs) that comply with carrier and industry standards
- **Wireless Infrastructure:** Develop future-ready 5G wireless infrastructures such as MEC and Cloud RAN
- **Routing and Switching:** Create plug-ins to facilitate interoperability and enable devices to accelerate packet processing and implement L2/L3 protocols for white box switches
- **Broadband Transport:** Develop advanced optical access and transport solutions
- **DevOps:** Provide product engineering lifecycle automation services for testing, integration, monitoring, and deployment
- **Network Analytics:** Develop innovative product support and service solutions that leverage machine and deep learning, and predictive and prescriptive network analytics
- **Management Systems:** Develop new multi-layer management systems for legacy and programmable networks

The TCS Advantage

TCS' Product Engineering Services for NextGen Networks combine 25+ years of network product engineering and telecom experience for end-to-end device engineering. Our engagements in building capabilities and developing solutions have helped us ideate, design, and develop innovative solutions. TCS' labs and Centers of Excellence (CoEs) offer expertise across domains including SDN, NFV, 5G, and routing. Our offerings are based on globally proven skills in network management and analytics, DevOps, switching, and various emerging technologies. Our continuous active participation in open source communities such as OpenDaylight, Open Platform for NFV (OPNFV), OpenVSwitch, and OpenStack reinforces our technical know-how and strengthens our thought leadership.

With over 10,000 industry experts across the globe, TCS provides end-to-end product engineering services to the telecom and networking industry. We have over 50 unique solution enablers across multiple domains that help customers strengthen their product engineering life cycles with accelerated solution designs. Our strategic alliances with platform and technology providers and semiconductor companies enable us to leverage our expertise and solutions to help customers launch innovative products and solutions at a faster pace.



Quick Prototyping: Leverage TCS' Concept-to-Create services, enabled by our manufacturing and global product support, to quickly build prototypes



Maximizing Quality and ROI: Optimize resources, improve quality, and increase ROI with TCS' extensive product engineering sustenance expertise; balance investments in developing innovative new products while sustaining the existing portfolio

Awards & Recognition



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About Tata Consultancy Services Ltd (TCS)

Tata Consultancy Services is an IT services, consulting and business solutions organization that delivers real results to global business, ensuring a level of certainty no other firm can match. TCS offers a consulting-led, integrated portfolio of IT and IT-enabled infrastructure, engineering and assurance services. This is delivered through its unique Global Network Delivery Model™, recognized as the benchmark of excellence in software development. A part of the Tata Group, India's largest industrial conglomerate, TCS has a global footprint and is listed on the National Stock Exchange and Bombay Stock Exchange in India.

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