Cyber 5G and Edge Computing

Connected Everything: Cyber 5G and Edge Computing

5G connects industry transforming applications and devices. How are you securing it?

Advanced Connectivity, 5G, and Edge technologies are introducing a new ecosystem of emerging technology vendors producing new devices, radios, edge deployments, and cloud-native platforms. Enhancements in advanced connectivity are bringing processing capabilities closer to the edge and driving use cases that depend on an ever-growing network of connected devices as well as data flow.

Yet, this vast ecosystem also creates interoperability, integration, cybersecurity, and regulatory challenges that require a shift in how enterprises securely manage their data, infrastructure, and edge devices. Enterprise will need to work to provide secure and reliable networks and applications through mechanisms such as Zero Trust Architecture (ZTA), agent/agent-less edge security, and network/device interoperability — supported by integrated monitoring and increased near-real-time visibility into cybersecurity threats.

Deloitte can help you align with security, performance, and compliance requirements to help protect your enterprise through your network transformation journey.

Current trends

The mobile communications spectrum is congested. It is anticipated that current networks may not adequately meet the projected increase in consumer demands for data, connected devices, and processing power. 5G has been designed with extended capacity to enable next-generation user experiences, empower new deployment models, and provide new services. By 2030, the global 5G services market is estimated to reach USD 1.67 trillion with a compounded annual growth rate (CAGR) of 52.0%1 while the global 5G security market is expected to grow to USD 7.2 billion by 20272.

Organizations leading the way on 5G are driving industry standards and bringing innovative products and services to market, with significant impact on a myriad of industries from healthcare to manufacturing, from power and utilities to the military.

While the benefits of 5G include enhanced security features, the software-defined nature of 5G, complexities in security configurations, and the increased attack surface associated with the increase in connected devices also exposes enterprises to additional cybersecurity risks.

Deloitte's Cyber 5G and Edge Computing team is working with key alliances across traditional and non-traditional 5G service providers and security vendors to provide next-generation 5G security testing, monitoring and visibility capabilities. We can help you meet your security, performance, and compliance requirements to protect your enterprise throughout your network transformation journey.

Desired outcomes

Enhanced speed, reliability, latency: 5G networks enable hyper-speed transmission and advanced communication protocols that enable enhanced capacity while reducing network latency and increasing latency.

Elevated security: 5G offers two-way authentication and a stronger 256-bit encryption for devices, compared with 3G and 4G, which offer 128-bit encryption. This enables 5G to provide a higher level of protection for end users and hinder bad actors’ ability to decrypt data.

Flexible deployment: 5G networks offer increased flexibility through the creation of multiple virtual 5G networks using a single physical infrastructure (network slicing). The higher density of 5G nodes and its closer proximity to end devices enables targeted coverage on smart devices, equipment, or in densely populated areas where speed is in high demand.

Real-time use cases: Mobile Edge Compute (MEC), powered by 5G, allows for the collection and analysis of data closer to end devices such as Internet of Things (IoT) devices, cameras, and sensors enabling 5G use cases that demand near real-time performance.

Advanced connectivity industry applications

Smart Manufacturing

5G connects Industry 4.0 to provide smart factory autonomous systems. The use of autonomous technologies (e.g., vehicles, mobile robots) can further increase productivity and improve supply chain management by monitoring assets in real-time for asset health and maintenance performance.

Consumer

5G enables near-real-time processing for retail-based systems, applications, and transportation services to improve overall customer experience. 5G will allow sensors and other IoT-enabled devices to transform the customer experience in retail as well as connected vehicles and Vehicle-to-Everything (V2X) ecosystems.

Technology, Media, and Telecommunications (TMT)

5G provides low-latency and reliable connection to enhance the way enterprises provide services, experiences, and training. Whether it’s deploying holographic video calls that can be presented virtually, to accelerating the process of broadcast production to provide Ultra-High Definition (UHD), 5G will transform how we live, play, and work.

Energy, Renewables, and Industrials (ER&I)

The shift in 5G architecture revolutionizes the way the future of energy is delivered across the electrical grid. As an enabler, 5G and IoT will provide system operators and on-site engineers near-real-time data to analyze current infrastructure demands to predict and proactively resolve electrical faults or other quality-driven issues.

Life Sciences and Healthcare (LSHC)

5G and edge computing enables enterprises to drive safety, quality, efficiency, and automation throughout core functions of healthcare while empowering patients to own their wellbeing. 5G and edge computing also accelerates innovations in research, development, and manufacturing of next-generation therapeutics.

Government and Public Services (GPS)

5G will have a significant effect on military, intelligence, and field operation activities. The ability to transmit massive amounts of data with very low latency is driving the next frontier of productivity in base operations.
Turn complex challenges into opportunities
Our industry-tailored approach enables us to apply the right solutions to your precise business challenges.

When you're looking for global leadership
Deloitte is a global leader in cybersecurity allowing us to bring leading solutions and the latest insights around securing 5G, advanced connectivity, and edge networks to our clients.

When you need a strong ecosystem of alliances
Our strong ecosystem and alliance of technology vendors, industry, and research organizations, as well as our work with government entities allows us to provide recommendations on leading practices and cybersecurity solutions to clients.

When you need a commitment to innovation
Deloitte spearheads innovation powered by advances in 5G, Advanced Connectivity, and Edge technologies by leveraging our 5G and cybersecurity collaboration spaces across the world as well as our investments in smart factory and warehouse locations.

We're well-positioned to help you achieve your objectives
Outcomes-driven
In the face of growing complexity, we make finding a Cyber & Strategic Risk provider easy. Our breadth and depth allows us to provide the outcomes (and value) you seek as a trusted advisor, a technology-savvy pioneer, a visionary integrator, and a dependable operator. We connect the dots, so you don't have to—helping you to improve security, trust, and resilience.

Quality-oriented
We bring together a powerful combination of proprietary technology, domain experience, leading alliances, and industry knowledge to deliver better. Our obsession with quality means we consistently work to help realize your vision, because Cyber & Strategic Risks are mission critical.

Value-focused
We act as a leader in times of crisis, a teammate to help you navigate change, and a force to have your back when you are on the front lines. We create value for our clients beyond the deal, pioneering cutting-edge resources and innovation, paving the way for forward-leaning collaboration, and leading bold thinking on tomorrow’s emerging technologies so you can turn risks into opportunities.

Our capabilities:

Securing the wireless evolution: 5G, Advanced Connectivity, and Edge Networks
Deloitte helps you meet security, performance, and compliance requirements to protect your enterprise throughout your network transformation journey.

Advanced Connectivity Standards-and Compliance Services
We help you translate the technical requirements of designing, deploying, and operating secure networks, as well as implementing cybersecurity controls, in adherence with industry guidelines and regulations.

Advanced Connectivity Testing as a Service
We conduct open architecture assessments and cybersecurity tests to highlight security areas of improvement, enhance user experience, improve key performance indicators, and align with cybersecurity standards and regulations.

5G Interoperability, Network Integration, and Cybersecurity (IONIC) Center
At IONIC, we have created a diverse open innovation LTE/5G private network ecosystem and visitor experience in Deloitte’s Virginia office to showcase Deloitte’s testing capabilities by providing advanced connectivity services related to interoperability, integration, and cybersecurity compliance.

Connected Everything: Cyber 5G and Edge Computing

Chief Technology Officers and Chief Information Officers
Oversee digital transformation and foster innovation in emerging technology and next-generation wireless communications.

Chief Information Security Officers
Protect the confidentiality, integrity, and availability of data within your edge networks while enabling business value through security.

Chief Operating Officers
Improve efficiencies in manufacturing and production through innovations in quality sensing and asset tracking technologies to securely capture the power of data and connected devices

Engineered for:

Chief Technology Officers and Chief Information Officers

Chief Operating Officers

Chief Information Security Officers

Chief Technology Officers and Chief Information Officers

Chief Operating Officers

Chief Information Security Officers

Start the conversation

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