



5x5 series: Insights and actions

Securing 5G, advanced connectivity and edge



The rise of technology and growing innovation has resulted in digital transformation that creates new opportunities for cyberattacks, and it is changing the risk profile of many industries. Now is the time for enterprises to evaluate their security, performance, and compliance requirements to protect themselves throughout their network transformation journey.

5 things you should know

System architecture tends to be more open and flexible — allowing multiple vendors to develop and implement advanced connectivity that connects networks, users, and devices.

Implementing network security at the edge has become a responsibility of the enterprise. Edge locations are most vulnerable to: 1) known and unknown inbound and outbound threats; 2) data exfiltration; and 3) lateral movement across applications and within networks.

Organizations adopting 5G, advanced connectivity (wired, wireless, Wi-Fi, LTE, 5G, and others), and edge technologies are looking to **align their solutions with industry cybersecurity standards, regulations, and guidelines**, such as 3GPP, NIST, CSA, and NERC/CIP.

The software-defined functions of LTE/5G networks introduce **security and network accountability challenges** especially because technical telco knowledge and know-how has not commonly been a part of security teams.

Diverse network technologies and use cases will require **varying levels of monitoring and information correlation** across IT/OT, IoT, and cellular devices.

5 actions you can take

1 Conduct open architecture assessments to identify security areas that need improvement, enhance user experience, improve network performance, and align with cybersecurity standards, regulations and guidelines.

2 Implement cohesive end-to-end security controls in the underlying wired and wireless infrastructure including edge networks and devices, using next-generation firewalls in containerized and virtualized environments.

3 Translate the technical requirements of designing, deploying, and operating secure networks, as well as implementing cybersecurity controls, in **adherence with industry standards, regulations and guidelines.**

4 Define advanced connectivity governance models to establish security boundaries, responsibility areas, and accountability measures for multi-vendor cloud, advanced connectivity, and edge architecture demands.

5 Probe and correlate various types of traffic (application, user plane, and signaling planes) to protect networks, and provide valuable insights and alerts to security threats and vulnerabilities.

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