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# Telco security transformation through automation with Nokia Managed Security Services

Case study





A major communications service provider (CSP) in Asia-Pacific wanted to assure readiness against cyber threats in its telecom domain undergoing digital transformation including hybrid telco cloud adoption. They called on Nokia’s Managed Security Services (MSS) to help improve their security posture with automated incident detection and response — as well as to automate complex compliance and audit management at the same time.

## Business benefits

- ~4,000 telecom security incidents detected and remediated annually
- Automated cyber playbook with Nokia’s own security orchestration, automation and response (SOAR) solution
- Assured automated compliance with security policies and regulations
- Semi-Automated security configuration audit and remediation across multi-vendor and multi technology network elements
- Reduced time and effort spent for compliance and audits due to automation & centralized evidence management

## Challenge

As part of its digital transformation, a major CSP in Asia-Pacific wanted to shift its telecoms production system and enterprise IT environment into a hybrid cloud. Opening up the network that way would bring agility and efficiency, but it would also extend the attack surface.

While the CSP's traditional best-in-class defenses were powerful at keeping threats out of a network with a protected perimeter, they weren't as well suited to the new open environment — or to mitigating advanced persistent threats once they got in. The added complexity of meeting regulatory and contractual compliance requirements in a multi-technology & multi-vendor environment posed a further challenge, with time- and human resource-intensive audit & compliance management processes to carry out.

The CSP quickly realized it needed more visibility into its security posture and new approach and tools for cybersecurity measures to keep its network secure and its transformation on track.

## The CSP lacked fast incident detection and response capabilities in the telecom domain



SRI on 13 security control domains

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Automate audit and compliance functions for 80 security controls

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Automated security configuration of 35k network element

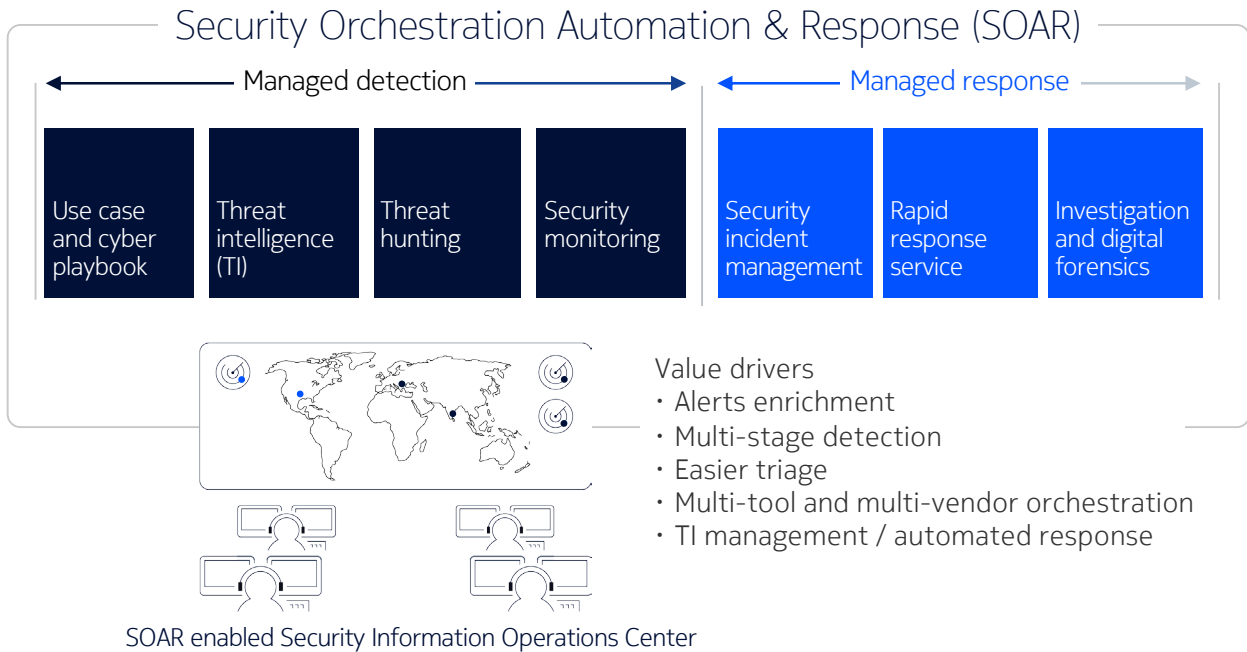
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SIOC monitors 200 telecom attack use cases

## Solution

The CSP chose Nokia for its deep and unique telecoms-specific expertise in securing critical networks. Nokia Managed Security Services (MSS) helped this CSP to establish security postures that meet the requirements for 3G, 4G, 5G and Industry 4.0 through a robust set of assessment framework, policies and technologies designed exclusively for telecommunications. In this case, the solution included:

- **An initial security risk index (SRI) assessment:** Nokia established visibility on CSP's current security posture through an end-to-end assessment against 13 security control domains based on various security standards and regulatory mandates for telecommunications networks.
- **Governance, risk and compliance management:** Nokia developed an information security framework specific to telecom networks, comprised of security policies, procedures, standards and guidelines. The framework made it possible to automate audit and compliance functions for more than 80 security controls — saving time and effort during internal and external audits. It also covered the design and implementation of security configuration and hardening controls for 300 unique telecom network element types, enabled automated compliance monitoring for more than 35K network elements. The service scope also includes ongoing quarterly vulnerability assessments of more than 35K network elements.
- **Managed detection and response:** Nokia established comprehensive incident detection and response capabilities through the combination of SIEM & SOAR (Security Automation and Orchestration Response) technologies, which not only detects incidents faster and more precisely but also automatically execute remediation measures like blocking malicious traffic through firewalls, close ports and block user accounts in access/identity management systems when an attack is detected. Nokia SOAR Solution leverages the NetGuard Security Management Center, which drives Nokia's Security Intelligence and Operation Center (SIOC). This SIOC monitors everyday more than a terabyte of telecom telemetry data against Nokia's proprietary library of more than 200 telecom attack use cases. The use cases are defined through Nokia's unique threat modelling methodology designed specifically for a telecom infrastructure. Every month Nokia's security consultants define new telco SOAR use-cases and improve as such the security maturity of the CSPs.



## Benefits

Nokia's Managed Security Services has allowed this CSP to evolve its network environment, increase and automate compliance, embrace multivendor, hybrid cloud technology and prepare to deliver secure telco connectivity to its customers. The customer now has much better visibility into its overall security posture and is better prepared to respond to security incidents.

Specific, measurable benefits include:

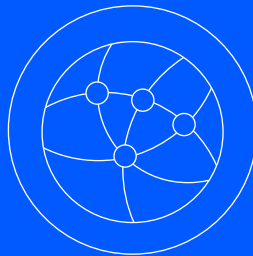
- **Avoidance of more than 300 security incidents** in the telecom domain each month through automated incident detection and response.
- **50 percent reduction in staff time** to manage compliance and audits through automation. Personnel can focus on developing better and higher-value security capabilities and processes that address more critical incidents.

Today, the CSP avoids more than 300 security incidents in the telecom domain per month and has cut compliance and audit management time in half.

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**View the Security Risk Index and Managed Security Service video.**

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At Nokia, we create technology that helps the world act together.

As a B2B technology innovation leader, we are pioneering the future where networks meet cloud to realize the full potential of digital in every industry.

Through networks that sense, think and act, we work with our customers and partners to create the digital services and applications of the future.

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