



Maritime challenges and priorities from an Information Security Manager's perspective

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OPPORTUNITIES AND CHALLENGES



Bigger Data

IoT

Smart
Applications

Smart Devices

Access to Data

Access to on-
board systems

New Business
Models. Vessel-
as-a-service

IMPACT ANALYSIS OF THE MAIN ICT CHANGE DRIVERS

Digitization → Increased Demand on Sat Communications and **Cybersecurity**

Vessel Automation → Increased Demand on Sat Communications, Hardware, and **Cybersecurity**

Cyber Threats → **Cybersecurity**

Regulation → **Cybersecurity**

Remote Access and Remote Support → Increased Demand on Sat Communications and **Cybersecurity**

New Communication channels → **Cybersecurity**



TOP CYBERSECURITY CHALLENGES

- Remote Access
- Social Engineering
- IoT
- Third-Party Systems and Personnel onboard (Third Party Risk)
- Unauthorized Devices onboard
- Security vs Performance
- Holistic Approach / Central Management
- Cloud Services / Integration
- Hybrid Connectivity



HOW WE RESPOND

1. PAM for Remote Access control
2. Multifactor Authentication
3. Modern VPN (Optimized for Sat Connections e.g. SSL VPN)
4. NextGen Firewall/UTM
5. Network Access Control (NAC)
6. Vendor Risk Assessment
7. Security by Design
8. User Cybersecurity Awareness
9. Cybersecurity systems that allow quick service provisioning (e.g. Cloud Services)
10. Cybersecurity Core Systems Central Console , Integration and Orchestration
11. SD-WAN (unification of interfaces, best interface per application / data type)
12. Zero-Trust Model. Application-Level Cybersecurity

INDUSTRY CYBER-MATURITY

New Generation of Ship Owners and IT Executives

New Generation of Seafarers

More mature Corporate Governance Models

IMO Cybersecurity Guidelines and gradual development of new cybersecurity culture.

Class society cyber-maturity