

ClassNK Cyber Security Approach

ClassNK has compiled the "ClassNK Cyber Security Approach" as a basic way of thinking about onboard cyber security based on trends in international institutions and maritime bodies.

1. Ensuring navigational safety is of the highest priority

The most important goal of onboard cyber security controls is to ensure navigational safety. To achieve it, it is of high priority to ensure availability of systems in terms of operation technology (OT) as well as information technology (IT) systems, which support operation of ships.

To mitigate cyber risks in both IT and OT, we will propose controls based on a balanced combination of physical, technical, and organizational approaches, such as designing ships and onboard equipment with security by design, constructing management systems during service, etc.

2. Setting layers of cyber security controls

We will classify cyber security controls into different layers, and clarify what each of stakeholders should do for each layer by adopting requirements from the existing standards on cyber security that are considered applicable to ships.

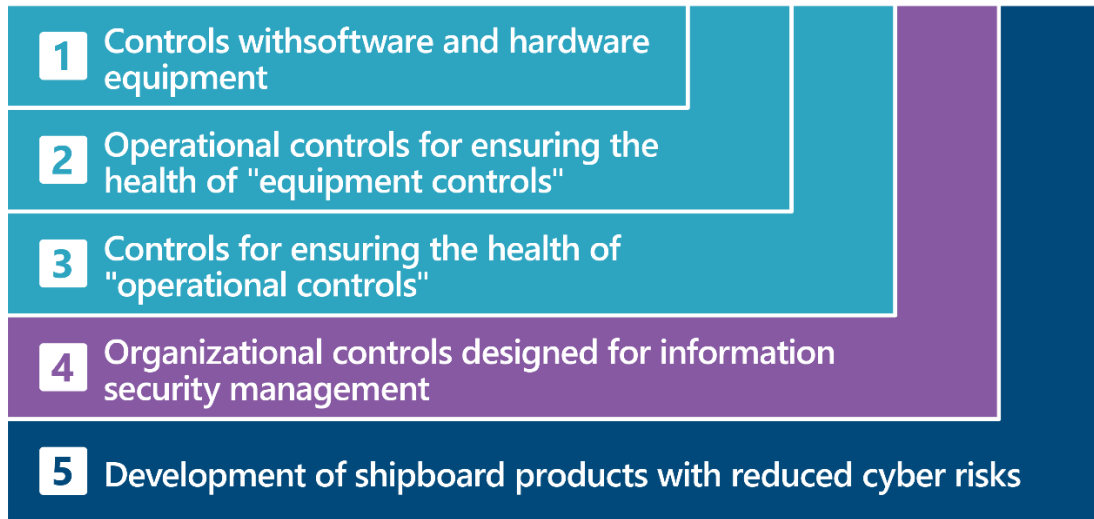
3. Ongoing revisions and updates

In light of the increased use of IT for the operation of ships and international trends in cyber security, we will analyze the latest information with experts and propose current best practices in cyber security controls for ships.

Based on these concepts, we will continually publish guidelines and standards that specify the parties responsible for implementing cyber security controls and the details thereof as part of the "ClassNK Cyber Security Series".

ClassNK Cyber Security Approach

Layers of Cyber Security Controls



1

Guidelines for Designing Cyber Security Onboard Ships

2

Target Shipyards and shipowners

3

- Extract controls applicable to ships from NIST SP800-53 using NIST SP800-82 as a reference
- Examine the IACS Recommendations

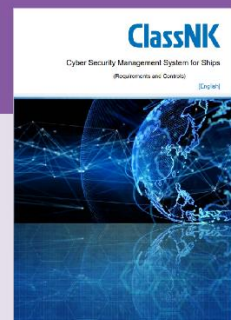


4

Cyber Security Management System for Ships

Target Ship management companies and ships

- Management system aimed at compatibility with the ISM Code system using the basic structures of ISO 27001 and ISO 27002



5

Software Security Guidelines

Target Shipboard equipment manufacturers

- Verify development process and functional requirements based on guidelines with elements required for ships extracted from relevant ISO/IEC standards

