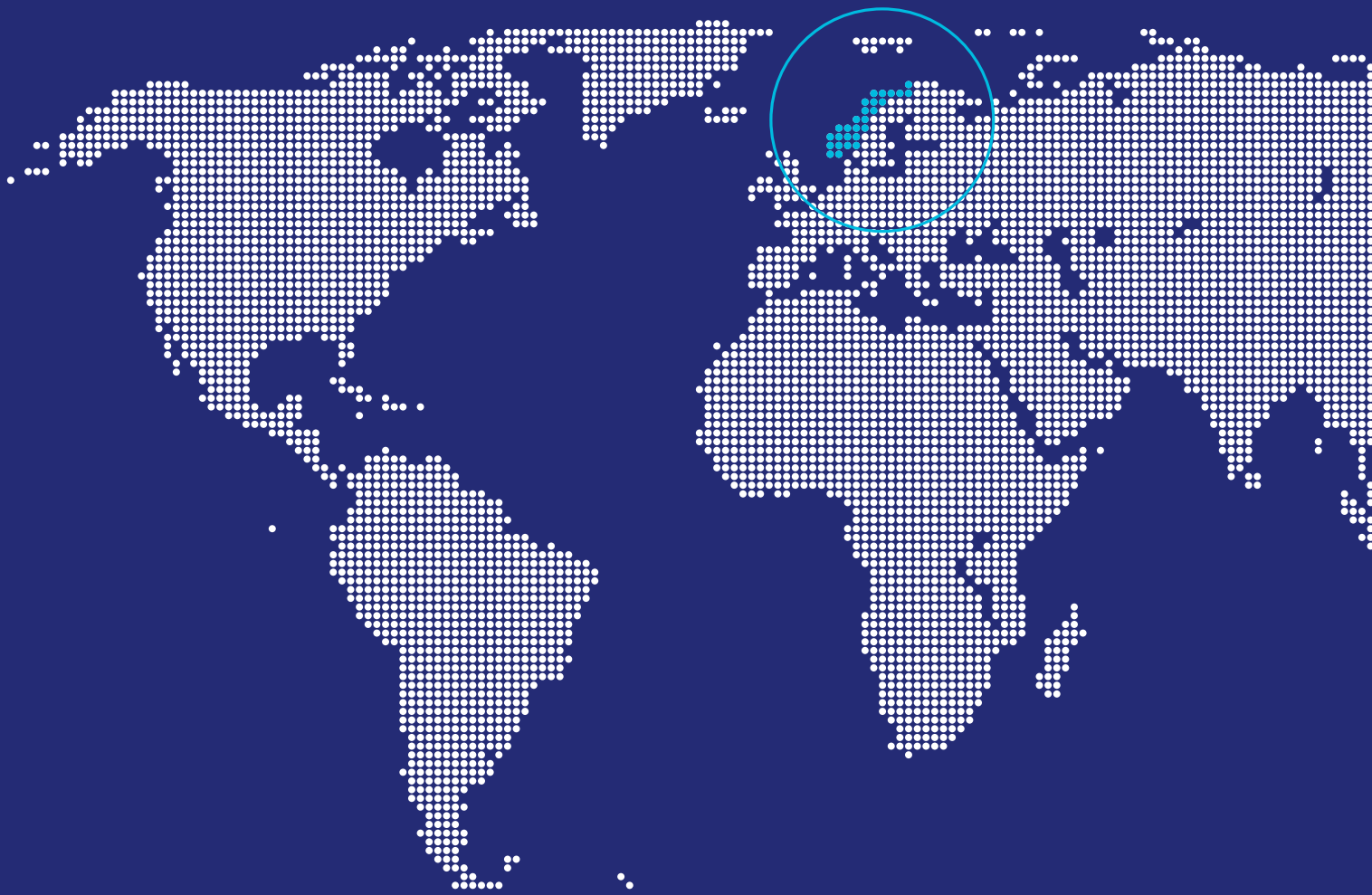


X0mail

# Secure information exchange





THALES

## TOGETHER. SAFER. EVERYWHERE.

Whenever critical decisions need to be made, Thales has a role to play. In all its markets – aerospace, space, ground transportation, defence and security – Thales solutions help customers to make the right decisions at the right time and act accordingly.

World-class technology, the combined expertise of 65,000 employees and operations in 56 countries have made Thales a key player in keeping the public safe and secure, guarding vital infrastructure and protecting the national security interests of countries around the globe.

Thales Norway is one of the largest industrial centres of expertise for development of mission critical solutions in Norway. With a history dating almost 100 years back, Thales Norway is a trusted partner in developing and delivering world leading secure and robust systems for extreme challenges in defence and security markets in Norway and internationally.

When security matters, you can rely on Thales to provide the solution for your specific needs.

XOmail is a complete modular solution, designed to provide a robust Formal Messaging Service.

**25**

years of  
experience

**7**

independent  
components

**1**

complete  
solution

# THE IMPORTANCE OF MILITARY MESSAGE HANDLING SYSTEMS

Messaging systems are relied on by military organisations for the distribution of plans, orders and other vital information. Today, advanced C4I systems and a number of disjoint messaging applications adds to the overwhelming availability of information. A formal messaging system is a key element in both peace time and in times of crisis.

A formal messaging service is an essential component of a modern Defence Command and Control Infrastructure. Formal Messaging allows commanders at all levels to efficiently execute their command function and provides a mechanism for the reliable transmission of orders and instructions.

## YOUR FORMAL MESSAGING SERVICE SHOULD INCLUDE THE FOLLOWING FEATURES

- Workflow Support, replacing error-prone manual operations with automated procedures
- Message Surveillance, confirming that the message has been delivered and processed
- Interoperability with existing military systems and civilian email systems
- True Prioritisation ensuring high-priority data is delivered ahead of low-priority data
- Trusted Security Classification, enabling Multi-Level Security
- Explicit Access Control to all data elements, including messages, logs and storage
- Security Auditing of operations and data access, ensuring accountability
- Complete Logging of message traffic
- Centralised Archive, fulfilling organisational archive regulations



Thales is proud to deliver XOmail as a nation wide messaging service to several NATO member countries.

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**BENGT KRISTIANSEN** Product Manager, XOmail

## SOLUTION

XOmail is dedicated to meet the specific needs of message handling in military organisations, and has been developed in close cooperation with the Norwegian Armed Forces and other NATO nations.

XOmail is designed for tri-service operations as well as seamless message flow from strategic commands to the lowest tactical levels of operations.

XOmail is a key component in information handling and transfer, either as a stand-alone system or as part of C4ISR solutions. Its functionality is specifically tailored to messaging tasks in military organisations. This includes functions such as archiving, battle log, acknowledgment, priority and security classification. Store and forward allows reliable message flow, even across disruptive communication links.

XOmail offers both official messaging between organisational units and personal messaging between users. XOmail interoperates with the NATO Messaging System (NMS) as well as legacy protocols (e.g. ACP 127). In addition, the system's modular concept allows a step-wise modernisation of existing message infrastructures.

Through its unique combination of formal security mechanisms and automated active message surveillance, XOmail ensures that critical information is reliably communicated and handled even in crisis scenarios and high-stress environments.

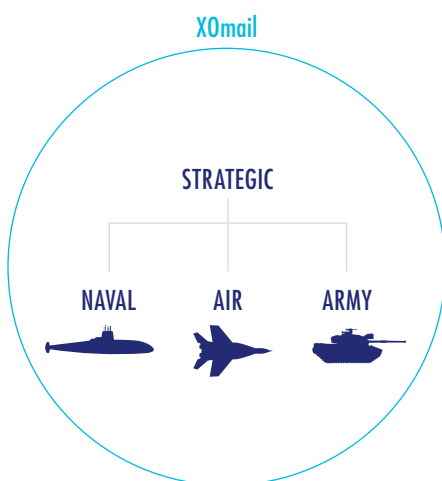
XOmail ensures reliable and prioritised message flow, guaranteeing that you will handle the most important message first. Through reports and replies, XOmail lets you know the true status of your messages.

XOmail is a native STANAG 4406 system and is not dependent on continuously changing third-party software.

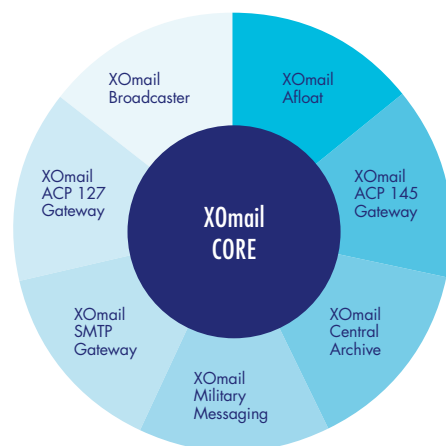
### KEY BENEFITS

- One solution, from HQ to soldier
- Step-wise deployment
- Military priorities and efficient use of bandwidth
- Allied connectivity according to STANAGs and ACPs
- True interoperability with legacy systems
- Simple integration with C2 applications
- Compatible with and adaptable to a range of infrastructures
- Secure connection of systems with different security classifications
- Integrates with National PKI systems
- Multi-Level Security design

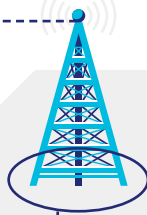
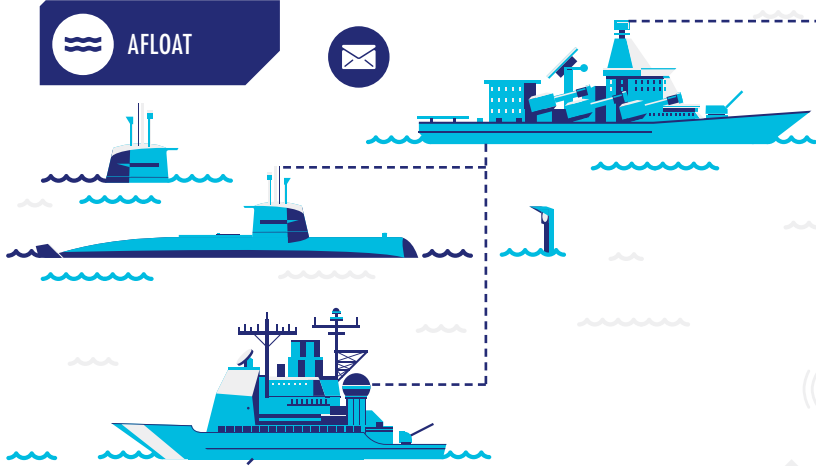
### A COMPLETE MESSAGE SOLUTION FOR THE MODERN CYBER DEFENCE



### 7 COMPONENTS WITH A COMMON SECURE CORE



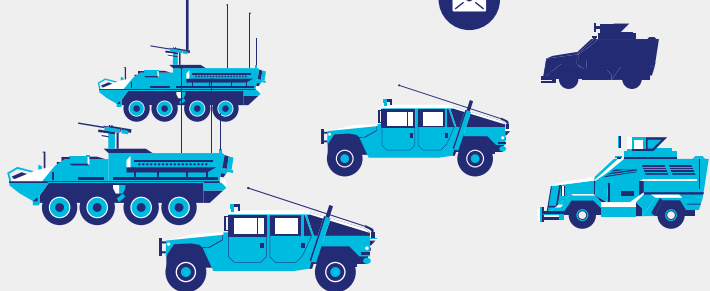
**AFLOAT**



**MILITARY MESSAGING**



**BROADCASTER**



ACP 127 GW



ACP 145 GW

CENTRAL ARCHIVE



## XOmail COMPONENTS



### MILITARY MESSAGING

Dedicated to meet specific needs for message handling in military organisations



### BROADCASTER

Broadcast, Ship-Shore and Maritime Rear Link through STANAG 4406/5066 and ACP 127



### AFLOAT

Functionality tailored for surface vessels and submarines



### ACP 145 GATEWAY

Implements NATO standard for connecting nations to NATO Messaging System (NMS)



### SMTP GATEWAY

Provides interoperability with MS Exchange and other email systems



### ACP 127 GATEWAY

Automatic gateway between ACP 127 and STANAG 4406

SMTP GW



### CENTRAL ARCHIVE

Assured automatic storage of all messages



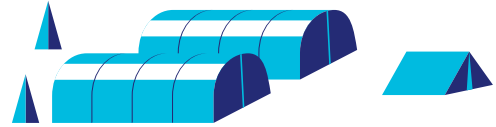
### XOmail GUARD

High-assurance information exchange gateway





## XOmail MILITARY MESSAGING



This is the messaging component of the XOmail product family. It supports military messaging for strategic and tactical systems, with required features for security, military workflow, priority handling, STANAG 4406 communications and gateways to other systems and networks.

Messaging functions are tailored to the needs of large organisations. The system differentiates strictly between official messages (to organisational departments and roles) and personal messages (to individual users).

### FEATURES

#### DIRECTORY

The integrated ACP 133-based Directory Service provides capabilities for the administration of addresses, address lists, certificates, etc. XOmail uses standardised protocols to integrate XOmail nodes and third-party Directory servers into an overall Directory System, e.g. using Shadowing and Chaining.

#### INTEROPERABILITY

Military messaging depends on connectivity to legacy systems. XOmail provides field-proven gateways towards systems using ACP 127, SMTP and STANAG 4406, including systems from other vendors. This allows existing networks to be stepwise upgraded according to operational needs and economical limitations.

#### HIGH AVAILABILITY/CLUSTER CONFIGURATION

XOmail can be configured in a high-availability solution using clustering technology. A cluster system comprises two or more identical XOmail installations.

#### WORKFLOW SUPPORT

XOmail can be easily tailored to reflect organisational processes and responsibilities. This includes functions for drafting, coordination and message release. Incoming messages are automatically distributed based on Subject Indicator Codes (SIC) and other criteria.

#### MILITARY CHARACTERISTICS

Messages are handled according to precedence, both within and between nodes. Higher precedence messages take priority and may suspend lower precedence messages until the resource becomes available. This ensures efficient use of bandwidth, even when small high-priority messages frequently interrupt other traffic.

#### ADVANCED USER INTERFACE

Users are provided with a powerful application for drafting, releasing, receiving and archiving messages. The user interface is highly configurable, but still ensures that e.g. the security label is always prominently displayed. Operators get access to additional functionality for monitoring the flow of traffic and correcting errors.

#### MULTI LEVEL SECURE DESIGN

XOmail is designed as a Multi Level Secure (MLS) system. All objects within XOmail are associated with a security label. XOmail manages users with different security clearances, and ensures that users only get access to objects within their clearance.

#### PKI

XOmail uses Public Key Infrastructure (PKI) components to provide message integrity services in accordance with STANAG 4406 Ed 2 and S/MIME. Integration with PKI components uses industry-standard interfaces, allowing adaptation to a range of PKI products, including nationally specified crypto algorithms.

#### ADMINISTRATION

An administration tool provides powerful functions for setting up and maintaining local components. Remote administration makes it easy to administrate a nationwide service from one or more sites. Inter-node queuing can be supervised and powerful commands allow queued messages to be moved towards another node.

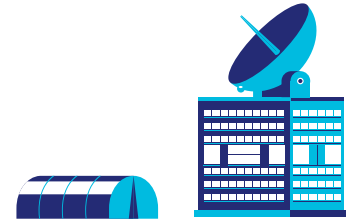


## XOmail BROADCASTER

XOmail Broadcaster provides a modern and flexible solution to maritime messaging, while maintaining the ability to use legacy protocols and operating modes.

XOmail Broadcaster provides functions for handling Broadcast, Ship-Shore and Maritime Rear Link (MRL) circuits. XOmail Broadcaster supports both the modern STANAG 4406/5066 channels and legacy ACP 127 infrastructures.

XOmail Broadcaster is in full operational use in several countries and provides field-proven integration of BRASS and BRASS Enhancement One (EO) functions with national and NATO messaging systems. XOmail Broadcaster is a platform for emerging tri-service BLOS systems.



### FEATURES

- Automatic broadcast compilation
- Ship-Shore functions
- MRLs
- ACP127 Channels and STANAG 4406
- BRASS EO tactical protocols (PMUL, DMP)
- Supports surface and submarine formats
- IP or ACP 127 over STANAG 5066



## XOmail AFLOAT

XOmail Afloat is a Military Message Handling System (MMHS) tailored for surface and sub-surface (submarine) naval vessels.

XOmail Afloat provides Broadcast reception, Ship-Shore transmission, Inter-Ship traffic and re-Broadcast. XOmail Afloat integrates with existing ACP 127 and STANAG 4406 infrastructures. XOmail Afloat increases overall combat effectiveness through automated message handling and integration with internal command and control systems.



### FEATURES

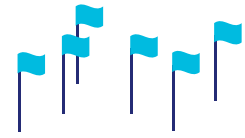
- Broadcast Reception
- Ship-Shore, Inter-Ship and MRL transmission
- Highly automated operation
- Supports STANAG 4406 over 2G and 3G HF radios and SATCOM
- Integrates ACP 127, STANAG 4406 and SMTP (BFEM)
- Hides legacy equipment and procedures
- Formal messaging and Inter-Ship chat
- Tactical Directory (Address book)



## XOmail ACP 145 GATEWAY

XOmail ACP 145 Gateway interconnects both national messaging systems and the NATO messaging system. The Gateway connects networks with different security policies in the strategic domain and in multilateral operations.

The XOmail ACP 145 Gateway provides nations with complete flexibility in terms of national messaging implementation. This is achieved by having national-specific gateway functions on one side and ACP 145 specific functions on the other.



### FEATURES

- Implements NATO standard for connecting nations to NMS
- Allows integration of different nations in a mission network
- Secure information exchange between nations (or security domains)
- Bridge different PKI systems (e.g. between nations)
- Serves as a gateway between tactical and strategic PKI systems

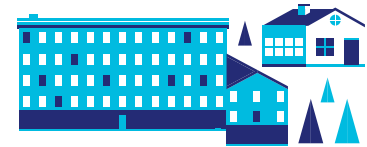


## XOmail SMTP GATEWAY

XOmail SMTP Gateway offers seamless integration of messaging systems and is crucial to effective information flow in modern military and governmental organisations, as well as towards international partners and non-governmental organisations.

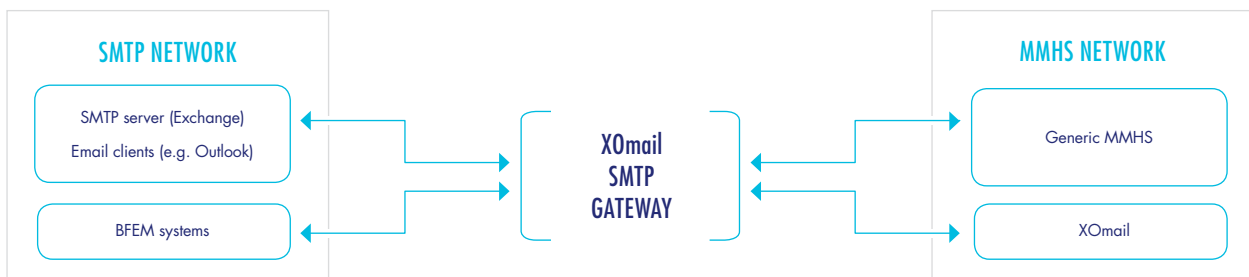
XOmail SMTP Gateway provides interoperability with modern and legacy military messaging systems as well as Microsoft Exchange and other email systems. The system also provides a bridge between MMHS and military SMTP-based products, like Battle-Force Email. The SMTP Gateway allows a wide range of SMTP-based messaging applications to be integrated into a military messaging infrastructure.

XOmail SMTP Gateway can be configured to map all STANAG 4406 protocol elements into SMTP X-fields. Hence, the gateway can provide alternative routes for military messaging through an SMTP network.



### FEATURES

- Full interoperability MMHS - SMTP
- Maps STANAG 4406 protocol elements according to RFC 6477 in both directions
- Mapping between MIME and STANAG 4406 body parts
- Extends message surveillance into SMTP domains
- Address conversion





## XOmail ACP 127 GATEWAY

XOmail ACP 127 Gateway provides interoperability with legacy ACP 127 systems and allows the step-wise deployment of a modern STANAG 4406 system.

ACP 127 Gateway is based on the STANAG 4406 Annex D, extended with automated functions that greatly reduce the need for manual interactions.

The XOmail ACP 127 Gateway can be provided as an add-on function to a XOmail-based MMHS, or as a standalone gateway between ACP 127 and STANAG 4406 or SMTP systems.



### FEATURES

- Connects to networks e.g. AIFS and teleprinters
- Multiple channels to a single destination to increase throughput
- Logging of traffic into Channel List logs
- Automated procedures for important Abbreviated SVCs
- Automatic sectioning and de-sectioning of long messages
- Syntax checking and Security Label conversions
- Surveillance functions



## XOmail CENTRAL ARCHIVE

XOmail Central Archive provides functionality for storing all messages within a system, in one central location. The archive provides longterm storage of messages and powerful mechanisms that allow authorised users to search and retrieve archived messages. The typical use of the Central Archive is to archive all messages that originate within the system, along with all messages received from external systems via gateways. Optionally, filtering mechanisms can limit the number of messages to be archived. XOmail Central Archive supports clustering for enhanced availability and reliability.



### FEATURES

- Assured automatic central storage of all messages
  - from all message servers
  - from connected ACP127 networks
  - messages sent from locally defined users or departments
- Supports long-term storage of messages
- Access-controlled search and retrieval directly from the XOmail user interface
- Supports high-availability and reliability configurations

## XOmail IS BACKED BY A HIGHLY COMPETENT & DEDICATED TEAM AT THALES

Thales is a major supplier in the demanding NATO market, and provides solutions for reliable and controlled message exchange inside countries and between member nations as well as mission specific coalition partners.

Our ambitious goal is to enable our customers to provide modern MMHS services covering users from a strategic level HQ to the tactical level. We put pride in continuously tracking the STANAG 4406 with its emerging extensions, in order to ensure maximum interoperability and utilization of bandwidth.



MILITARY MESSAGING



BROADCASTER



AFLOAT



ACP 145 GATEWAY



SMTG GATEWAY



ACP 127 GATEWAY



CENTRAL ARCHIVE



XOmail GUARD

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