

MCP MARITIME MESSAGING SERVICE SEMINAR



Saturday September 30, 2023 (09:00 ~ 12:00)
IALA HQ 10 rue des Gaudines, 78100, St Germain en Laye, France



Introduction to MMS

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Outline



Yesterday ▾



Thomas Christensen 2:47 PM

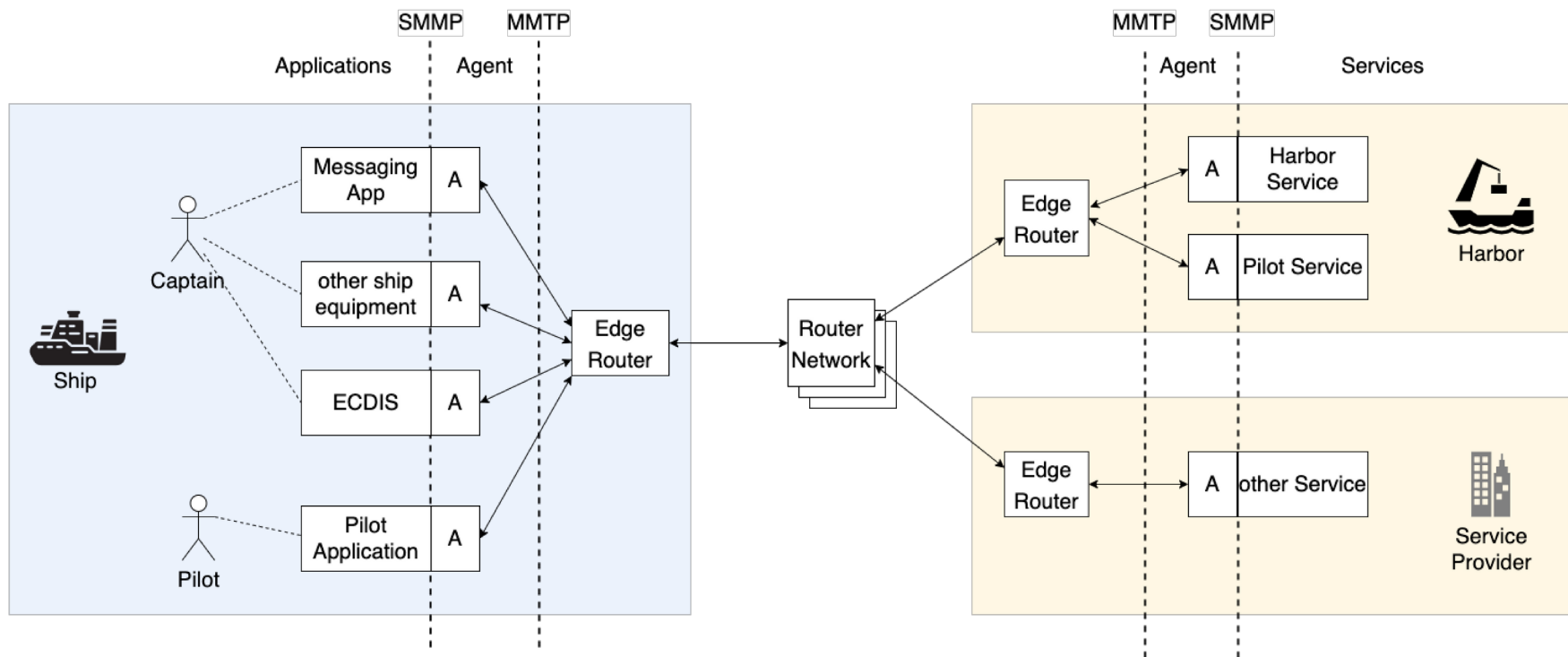
Architecture, functionality, benefits

Motivation

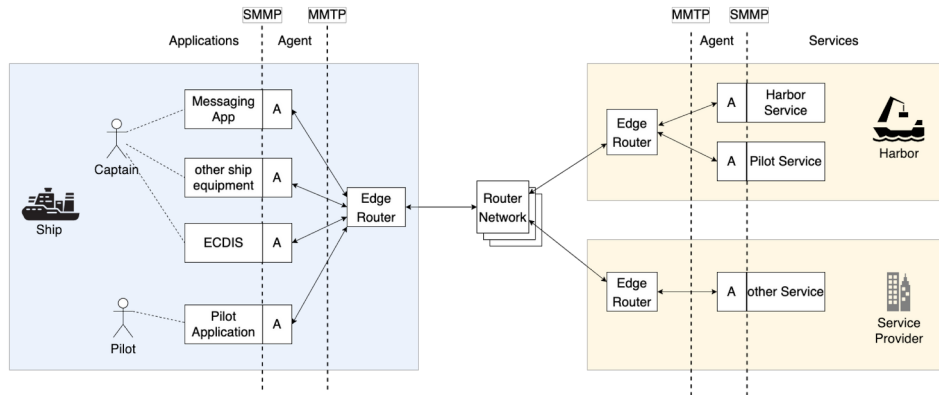


- Exchange of messages: both direct (MRN) and topic cast/geocast
- Message authentication
- Possibility for:
 - Transfer over both IP and non-IP channels (right now VDES)
 - Encryption and non-repudiation
 - Message bundling for efficient transfer
 - Separation of networks, handling within trusted/untrusted network

Overview

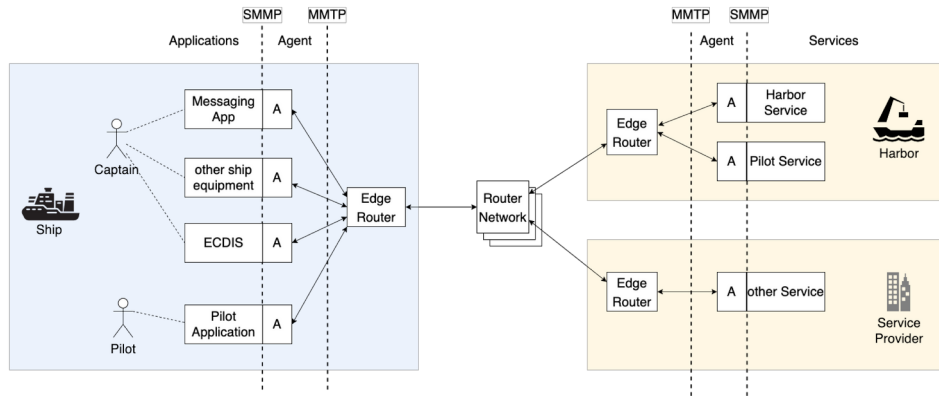


MMS Agent



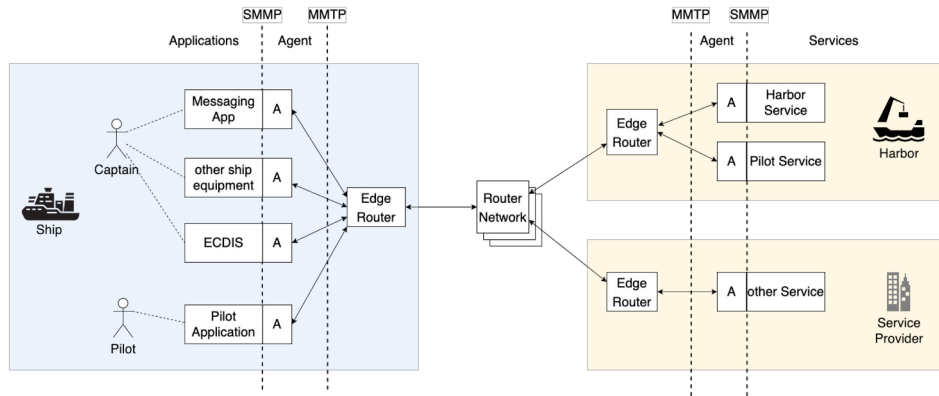
- has been assigned a MCP-MRN, in a MIR
 - has been assigned a MIR certificate,
- or
- operates anonymously.

MMS Edge router



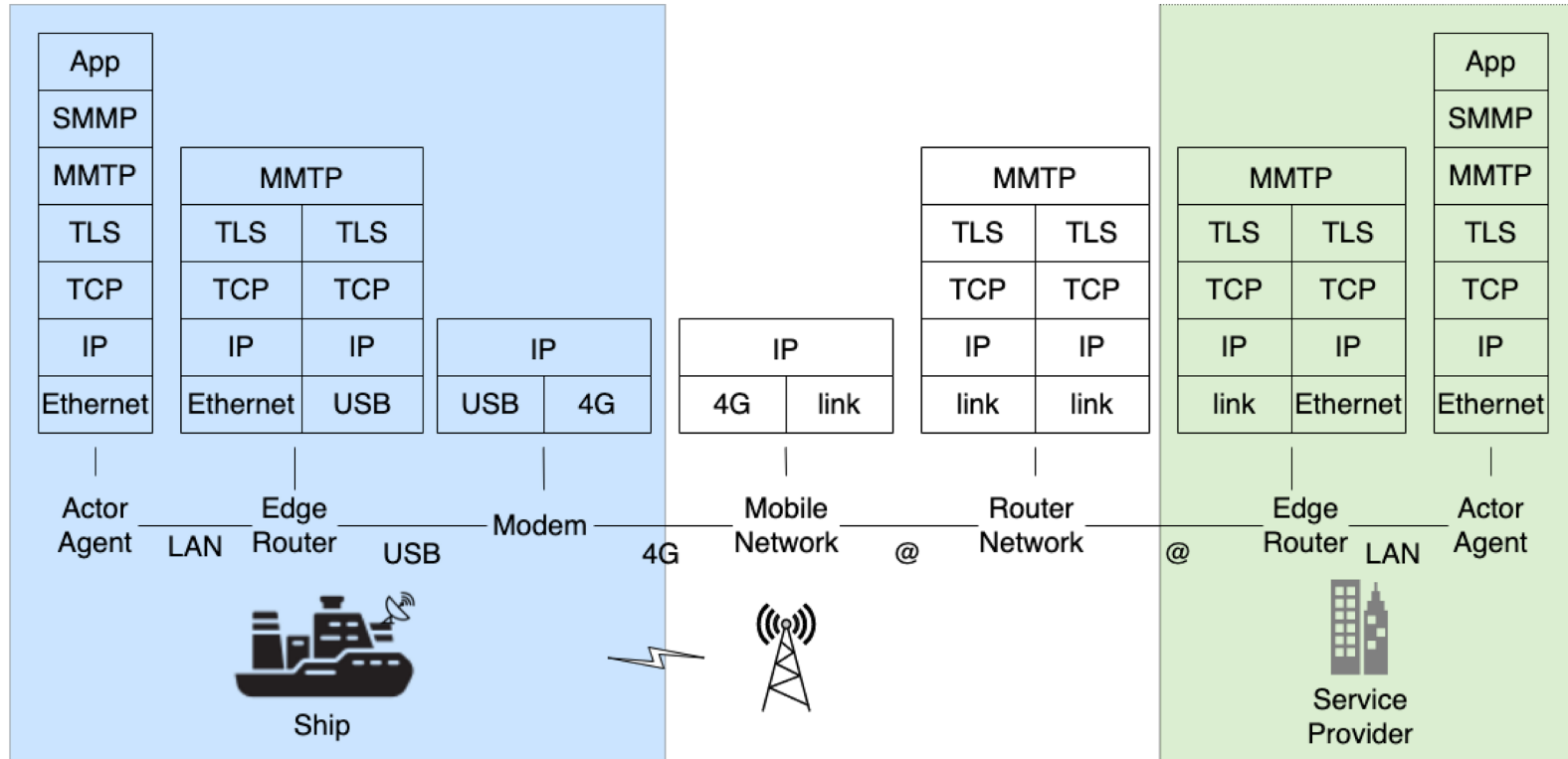
- local transport of MMS messages between Agents in the same set,
- store and forward of MMS messages between the Router Network and the local Agents,
- subscription to Router Network provided subjects on behalf of the local Agents, and
- distribution of subject messages received from the Router Network to the local Agents.

MMS Router network

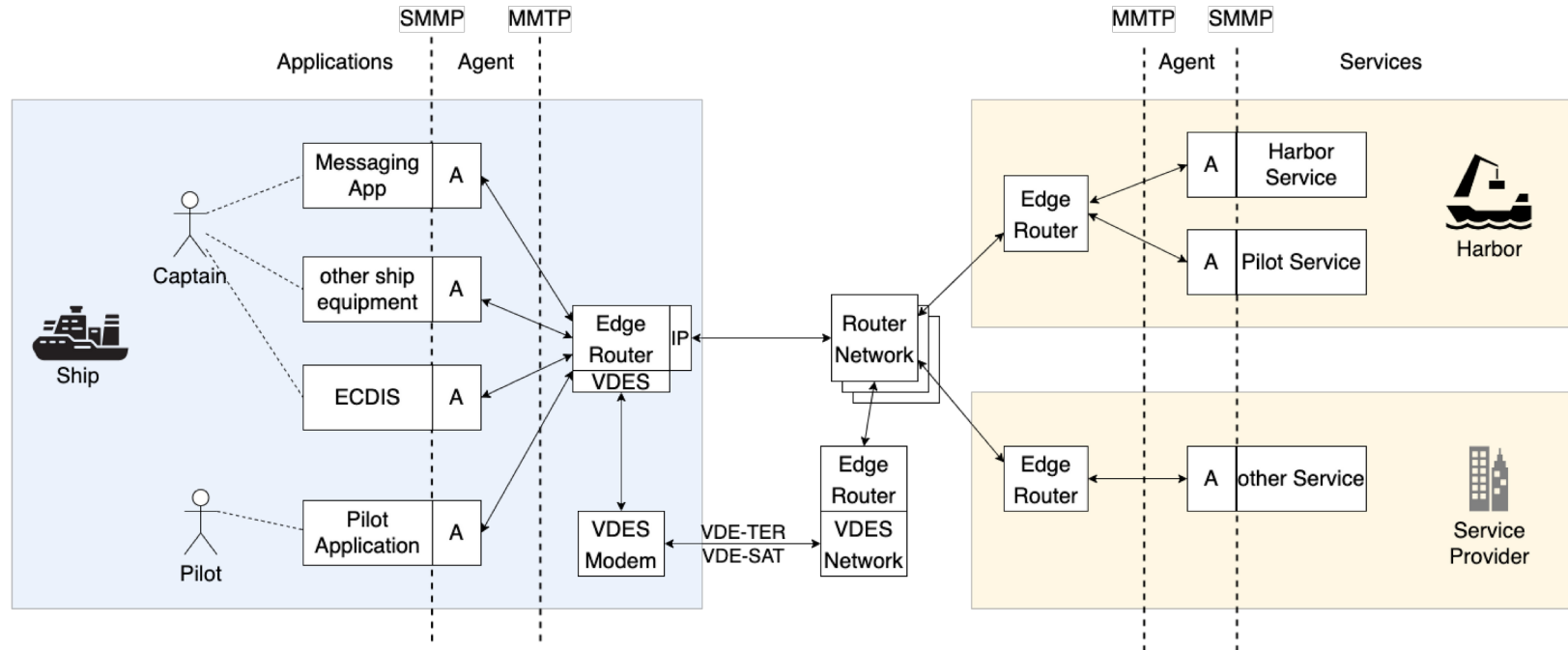


- Distribute messages between Edge routers
- Distributed and de-central network

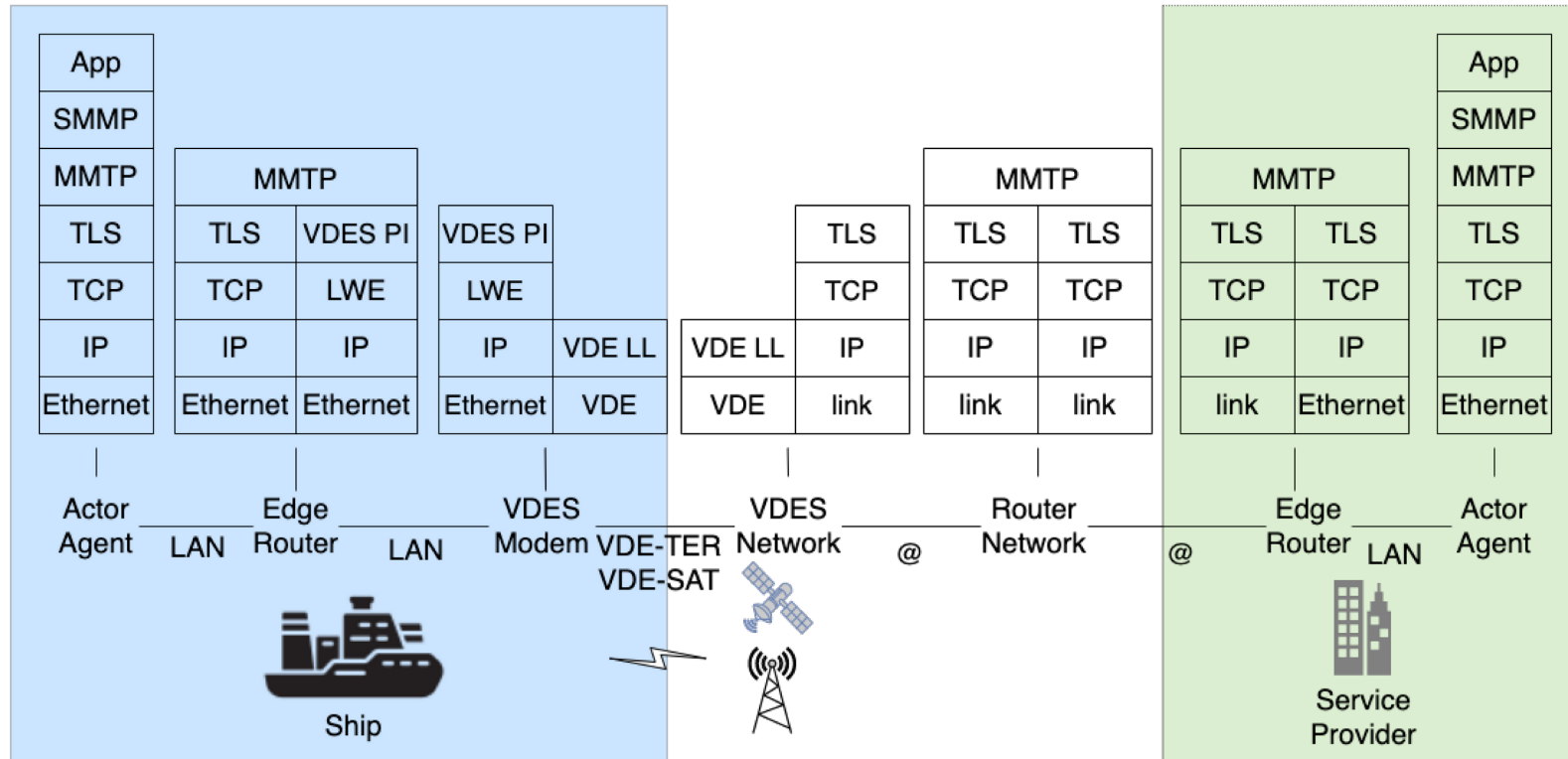
Protocols



VDES overview



VDES protocols



Security



- Certificates from MIR
- MMTP:
 - Message authentication
- SMMP
 - Encryption
 - Non-repudiation

Technology



- Router network
 - Routing with libp2p
 - Transport over websockets / TLS
- Protocols
 - Protobuf
- Towards RTCM
 - Input is much welcome