SECOM overview

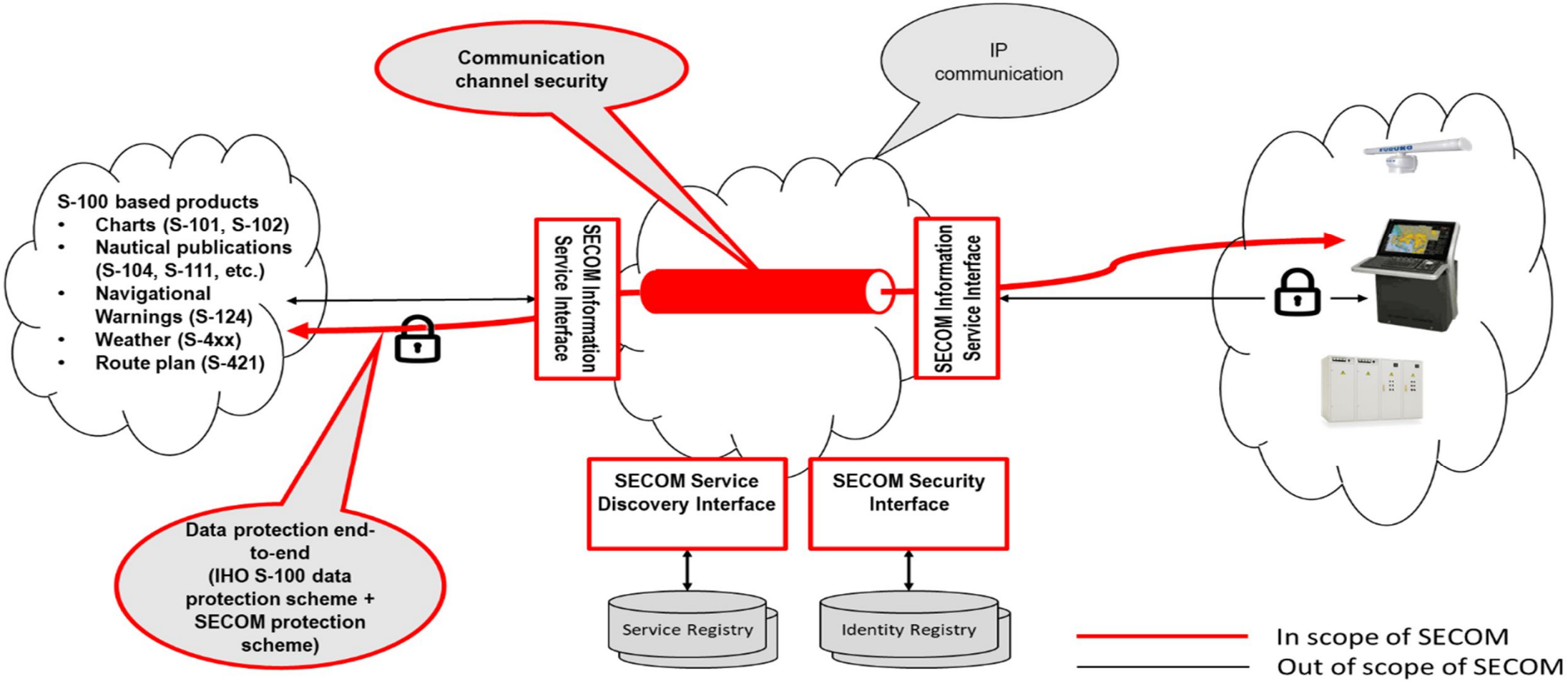
IEC 63173-2 MARITIME NAVIGATION AND RADIOCOMMUNICATION EQUIPMENT AND SYSTEMS – DATA INTERFACE –

Part 2: Secure exchange and communication of S-100 based products (SECOM)

What is SECOM

- Scope;
  - interfaces (APIs) for data exchange (information services);
  - information security measures to enable secure communication;
  - interfaces for service discoverability.
- provides technical interoperability, where the same service interface is used for exchanging the information regardless of its operational use
- designed for S-100 based products, SECOM is technically payload agnostic and applicable also for other types of data.
- IP communication based
- Service provider agnostic.

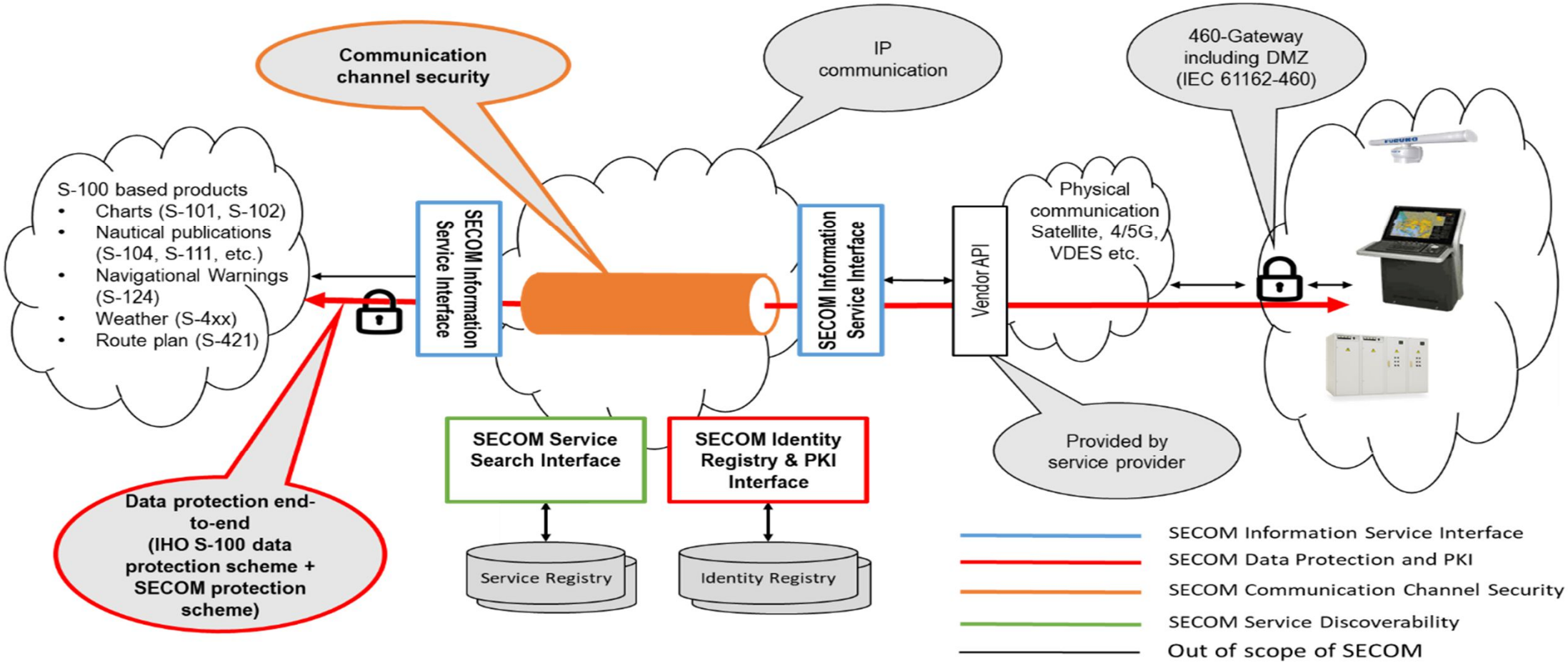
Overview of SECOM



SECOM Information Service Interface

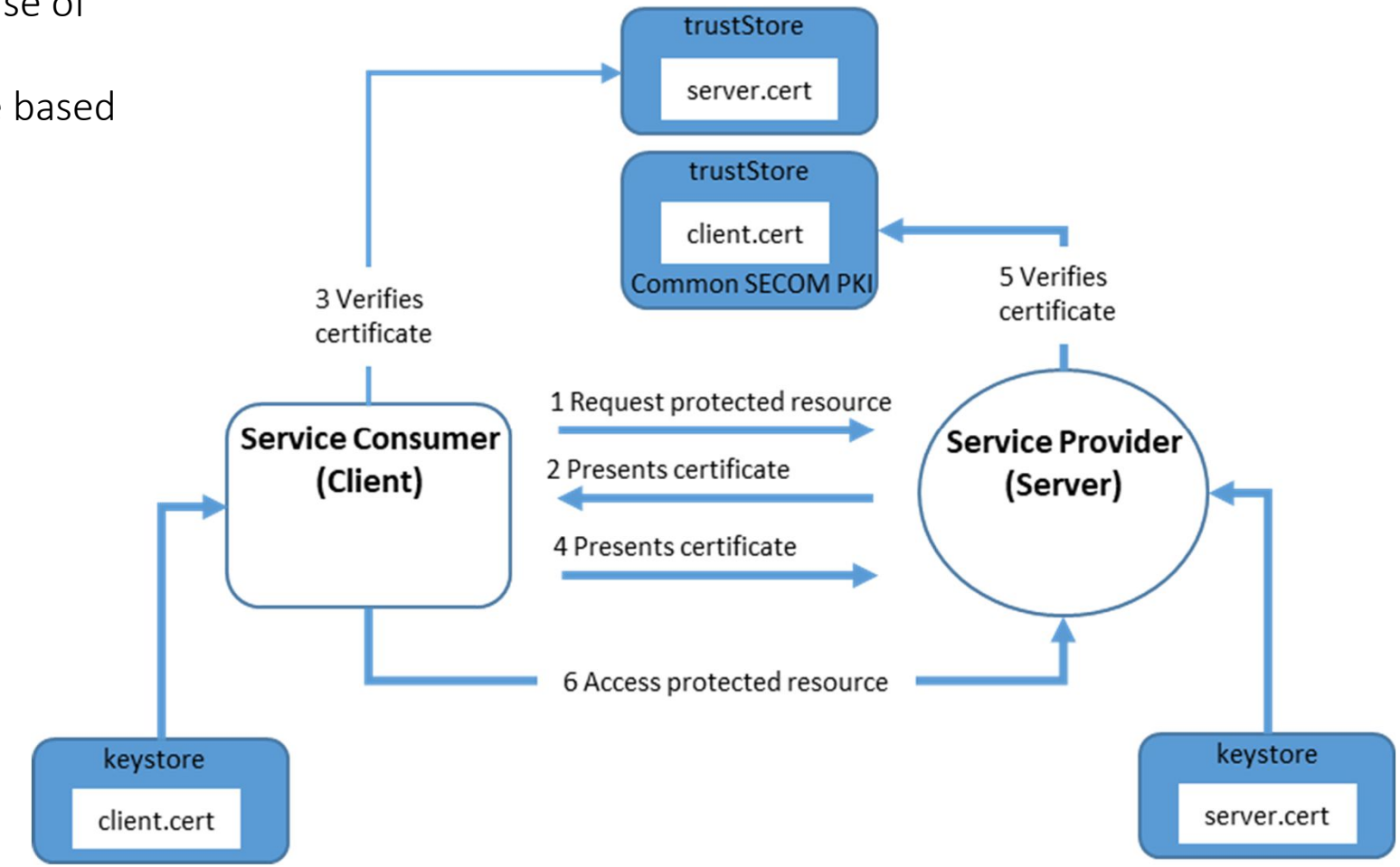
- Two of the service interfaces used for data exchange; Upload and Get
  - Upload service interface is used by producers of information to push data to a consumer
  - The Get service interface is used when a consumer pulls data from the producer
- The Get Summary interface is used to receive a short summary of available data
- If a consumer does not have access to data, e.g. retrieval of specific data is not authorized, the consumer uses the Request Access interface from the producer. The producer then responds with Access Notification to the consumer with the decision, accept or deny.

Elaborated SECOM Overview



Secure communication channel

- Encryption of channel by the use of Transport Layer Security
- Service authentication shall be based on X.509 Certificates



SECOM Data Protection

- SECOM Data Protection includes digital signature on the data exchanged that facilitate end-to-end data authentication
- SECOM supports the use of compression that may be applied on data. The individual S-100 based Product Specifications provides the details.
- SECOM support the same technology for data signing and encryption as described in S-100 Part 15-8 Data Authentication.