PRIMAR support to IHO

Protection Scheme Administrator (SA)

Operated by the Norwegian Mapping Authority, Hydrographic Service

FREEDOM TO CHOOSE

Background

- PRIMAR and ECC have provided support in protection scheme administrator support for S-63 and S-100e4

- PRIMAR PAC 2022 decision to support IHO for S-100e5

- Support since 2003 has covered
  - Development of IHO Scheme Administrator application
  - General training IHO S-63/S-100e4/e5 data protection
  - Scheme Administrator work procedures and operation
  - Ad-hoc IHO SA support (VERY little, basically 2nd line)
  - Ad-hoc analyses of scheme participant errors

- Cost covered by PRIMAR Member States

- Development of MoU between IHO and PRIMAR

Scheme Administrator application

- Functionality
  - Create S-63/S-100 Data Server certificates (.CSR)
  - Digitally sign IHO feature/portrayal/interoperability catalogues compliant with S-100e5.1
    - Creates compressed S-100e5.1 Exchange Set with CATALOG.XML, CATALOG.SIGN and FC/PC/IC file

- Application standards compliance
  - S-63e1.2.1 (Installed looooong time ago)
  - S-100e4.0.0 (further use to be discontinued)
  - S-100e5.1.0 (Installed September 2023)

- Refactored source code to have one application with three configurations (S-63/S-100e4/S-100e5.1)

Deliveries
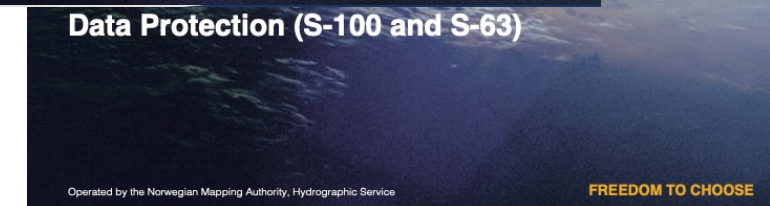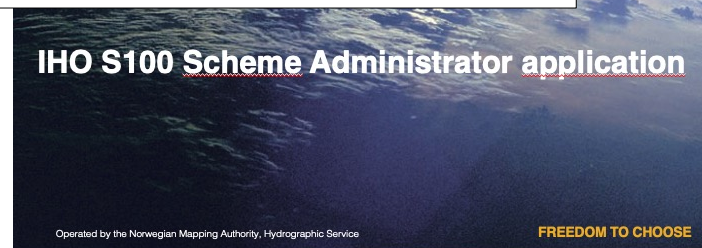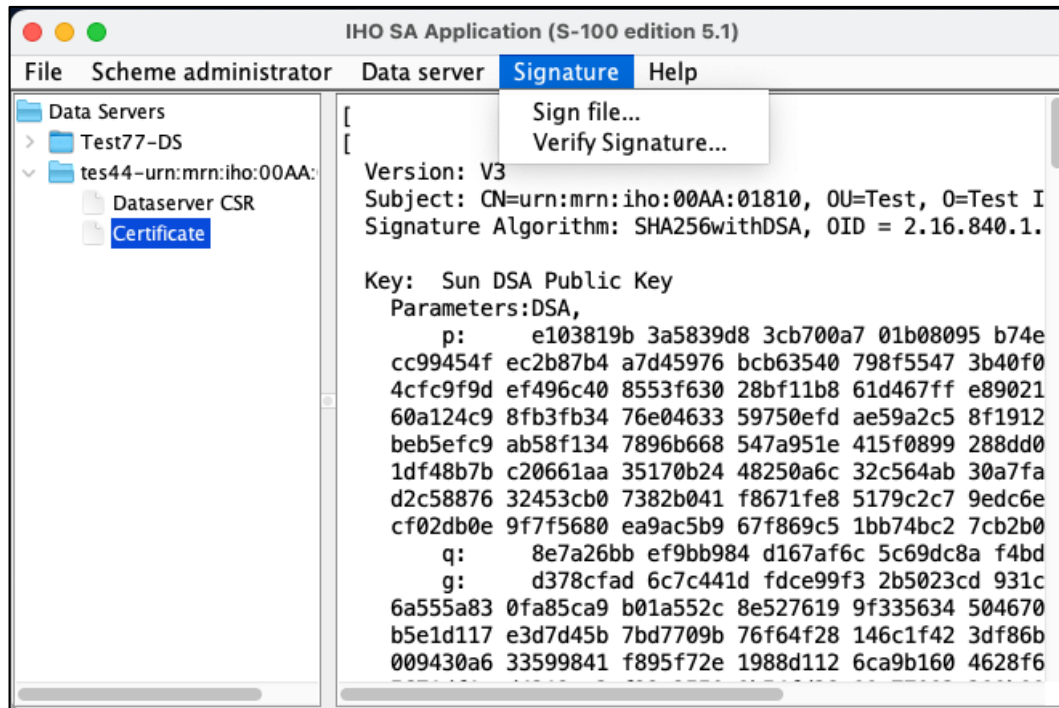
IHO use of Digital Certificates

- S-100e5.1 IHO Scheme Administrator root certificate
  - Created 09-23 and IHO SA root certificate duration: 2063
  - Only used to create organisational Data Server certificates
  - Identified change to S-100e5 standard
    - DSA q-parameter must be 256 bits
- S-100e5.1 IHO Data Server certificate
  - Only used to digitally sign Feature/Portrayal/Interoperability catalogues
  - IHO Data Server certificate duration: 2063
- Scheme participant certificates duration: 2 years

Outstanding Work

- Additional check that Data Server Certificate Signing Request (.CSR file) has DSA q-parameter = 256 bits

- Update signing functionality for FC/PC/IC catalogues
  - Ensure application creates compliant exchange sets
  - Await consensus on protection encoding in S-164 Test Data
  - Completion November 2023

- Agreed repeat training IHO staff Spring 2024
  - IHO standards, application, procedures