



KONGSBERG



cVIEW

C-Scope web based operator client

FEATURES

- Live track display (Raw AIS or C-Scope fused tracks)
- Radar return presentation
- Hyper fast data set replay
- 2D/3D "seamless" switch
- Integration with KSAT products, SAR images, oil spill, wind and vessel detections
- Support for various catalog service/formats: WMS/WMTS, GeoJSON, GeoRSS, CZML, KMZ, ArcGIS Server and others

C-Scope Web Client

C-Scope is Kongsberg Norcontrol's 7th generation situational awareness solution to identify and proactively manage risk within the maritime domain. C-Scope provides ultimate situational awareness for tactical operations and strategic planning for ports authorities, coastal administrations, inland waterways authorities, offshore operators and military organizations.

cView is the C-Scope web-based operator client for easy access to invaluable information on the maritime common operating picture. cView can be used to display vessel traffic, prevent environmental disaster or combat illegal activities together with other maritime domain awareness assets.

Sensors feeding into the system include AIS and radar systems. In addition to land-based sensors, cView has integrated satellite information sources allowing for coverage of very large areas in near real-time and independent of weather conditions.

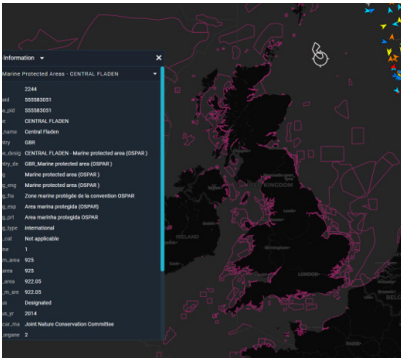
The user can display ship traffic in a given area with live track display, analysis and visualization. The system can load historical AIS data to replay events and load WFS/WMS features such as satellite images and oil spills. It supports both 3D and 2D map engines, using Cesium and Leaflet respectively. It can also be used to visualize and analyze incidents.

System environment

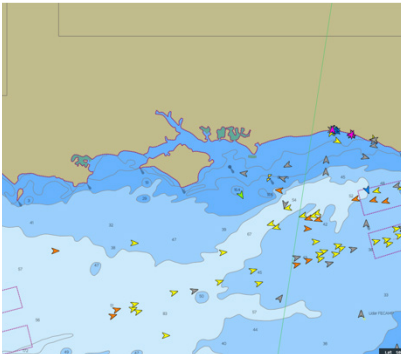
- Web based, hosted in Azure in Virtual Machines (or on premise)
- Containerized (Docker). Ease development, deployment and upgrades

Security

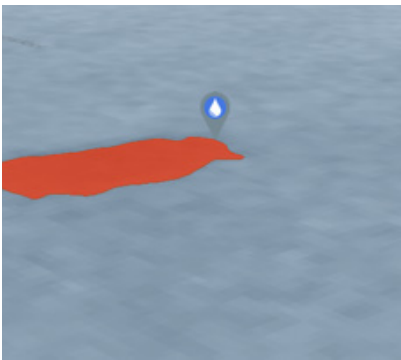
- Two factor authentication. AD federation (Keycloak)
- Internal traffic router (Traffic gateway)
- Recent penetration testing by Kongsberg Cyber Security division, without any notable findings.



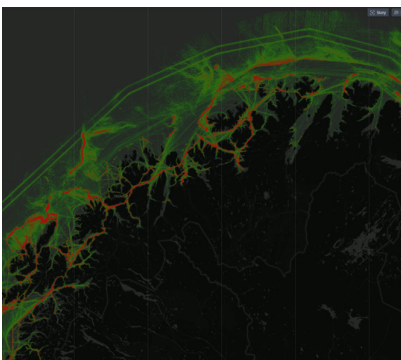
Overlays: Marine Protected Areas



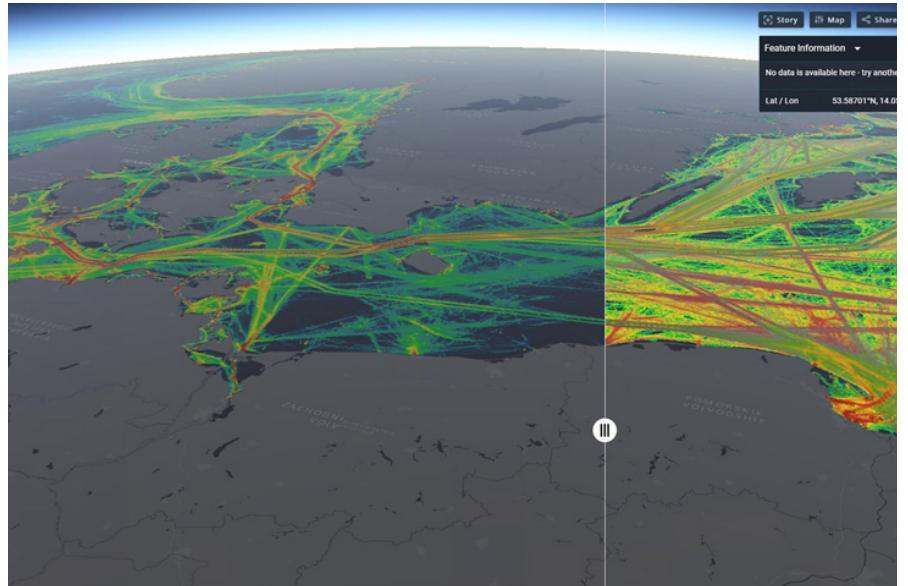
Base map of choice. In-house S57 WMTS service



Oil spill detected.

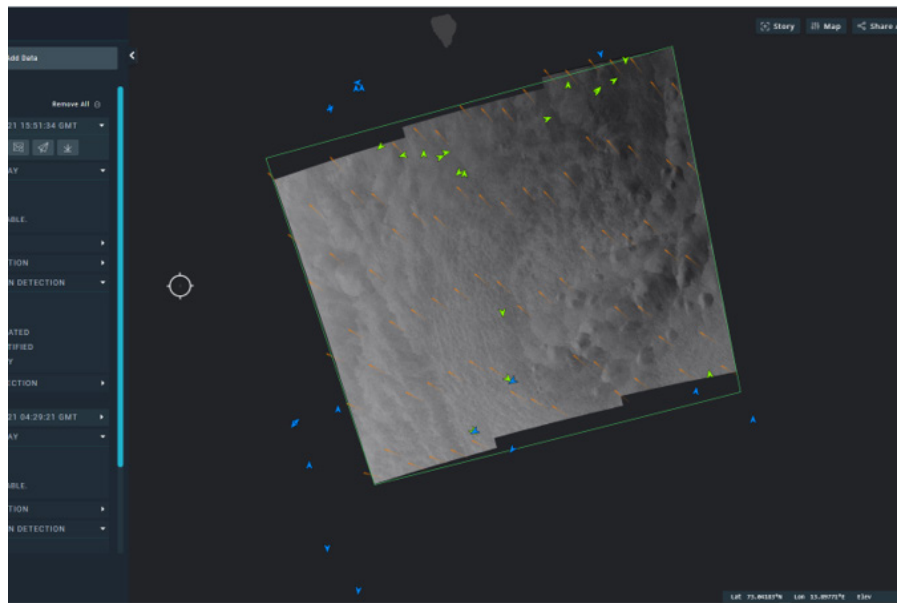


Traffic Analysis: Heatmaps



Analytics:

Historical vessel patterns. Split view functionality for comparing two data sets (Vessel traffic from 2013 (left) compared with 2019 (right))



Earth Observation Service (EOS):

Connected to KSAT detection service. Synthetic Aperture Radar (SAR) image, Oil spill, vessel and wind detection

Looking forward

- Extend system with more analytics features
- Utilize more PaaS and SaaS and cloud native features

