Ocean Data View - Online Services

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ODV – As Standalone Tool

- Interactive analysis and visualization software for Windows, Linux and MacOS
- Very large user community (>66,000 registered users; ca. 20 new users per day; ca. 200 website visitors per day; >8000 ODV5 installations since Mar/15/2018)
- ODV graphics published in high-level scientific journals (e.g., Nature, Science, PNAS and PlosOne) as well as textbooks
- ODV formats adopted by international projects and data systems (e.g., EU SeaDataCloud, US SeaCube, ERDDAP)
- Widely used importers for SeaDataNet, World Ocean Database, Argo, GTSPP, WOCE, SeaBird, etc.

ODV – Usage in SeaDataCloud

- **Aggregation of data files**
- **Aggregation and unit harmonization of parameters**
- **Data quality control**

Resulting in large, quality controlled data collections.

Future

- Continue ODV standalone development
- In addition create wsODV (ODV + Websocket Server) for Webservice applications and integration in the SeaDataCloud VRE.
- Service types: (a) interactive via webbrowser, and (b) automatic machine-to-machine interaction

ODV – As Online Tool

Client

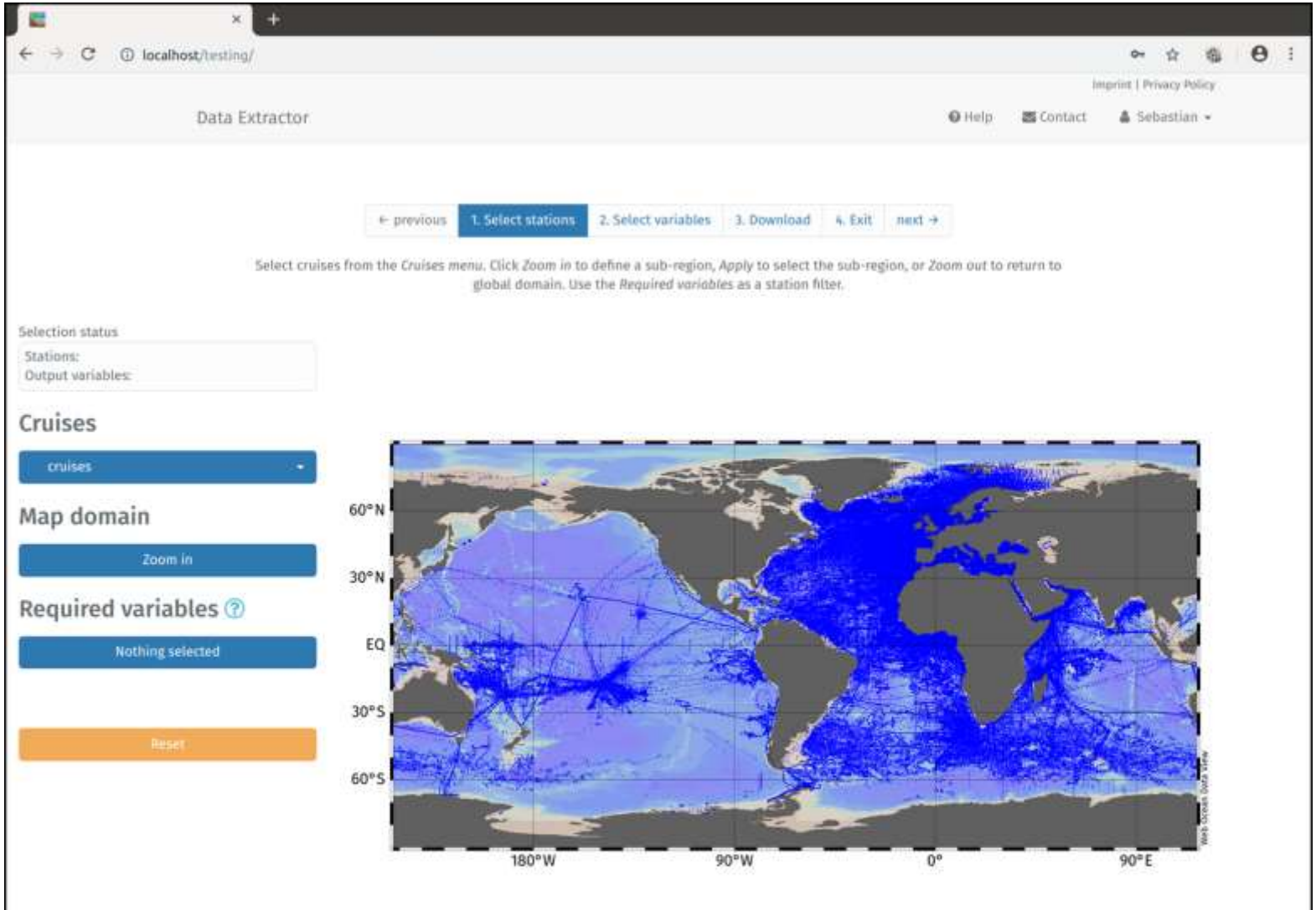
User working in web-browser

Secure https + websocket communication

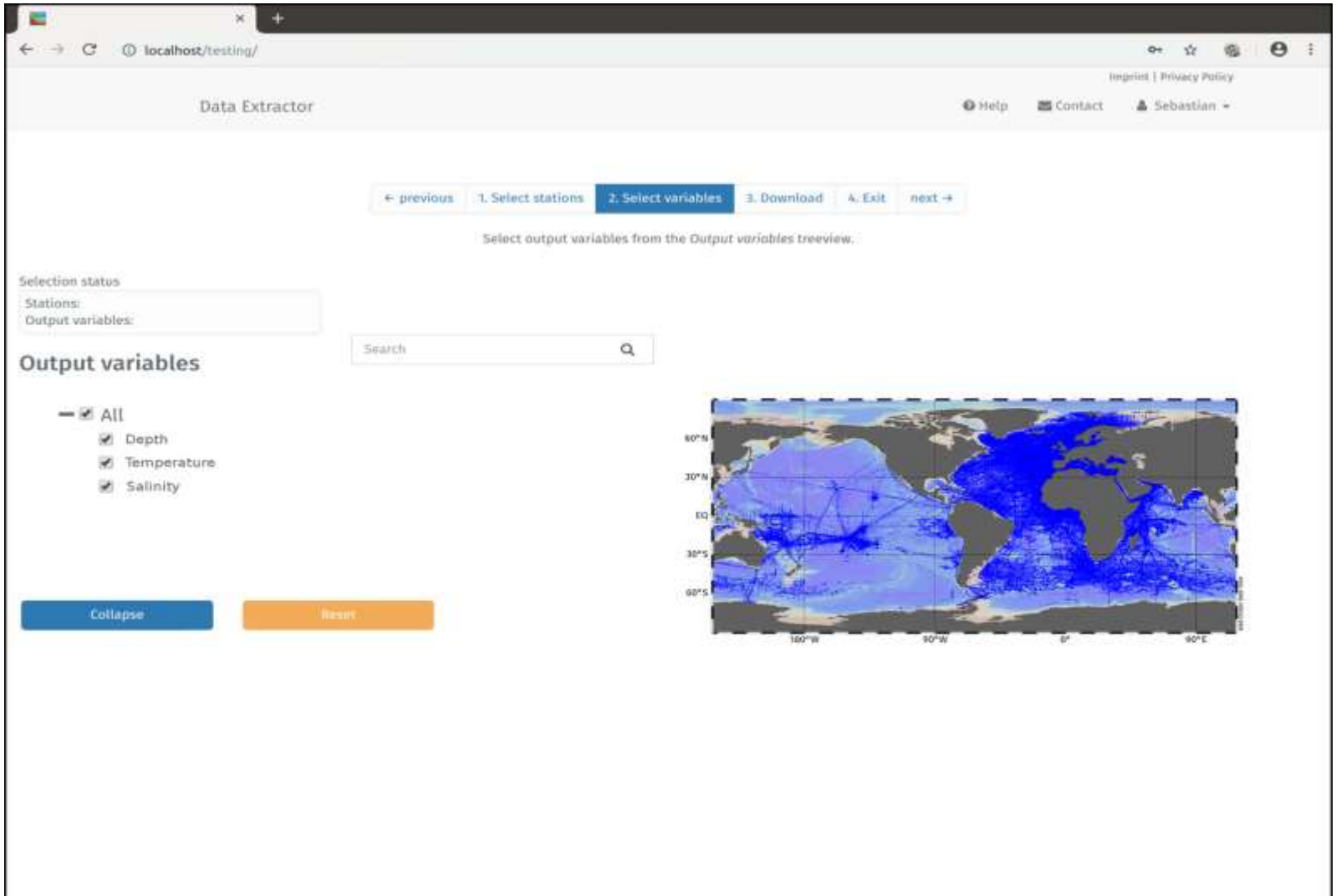
Server / VRE

- User authentication system
- **ODV server software (wsODV)**
- **Data collections to be served**

Data Extraction Service (operational)



Data Extraction Service (operational)



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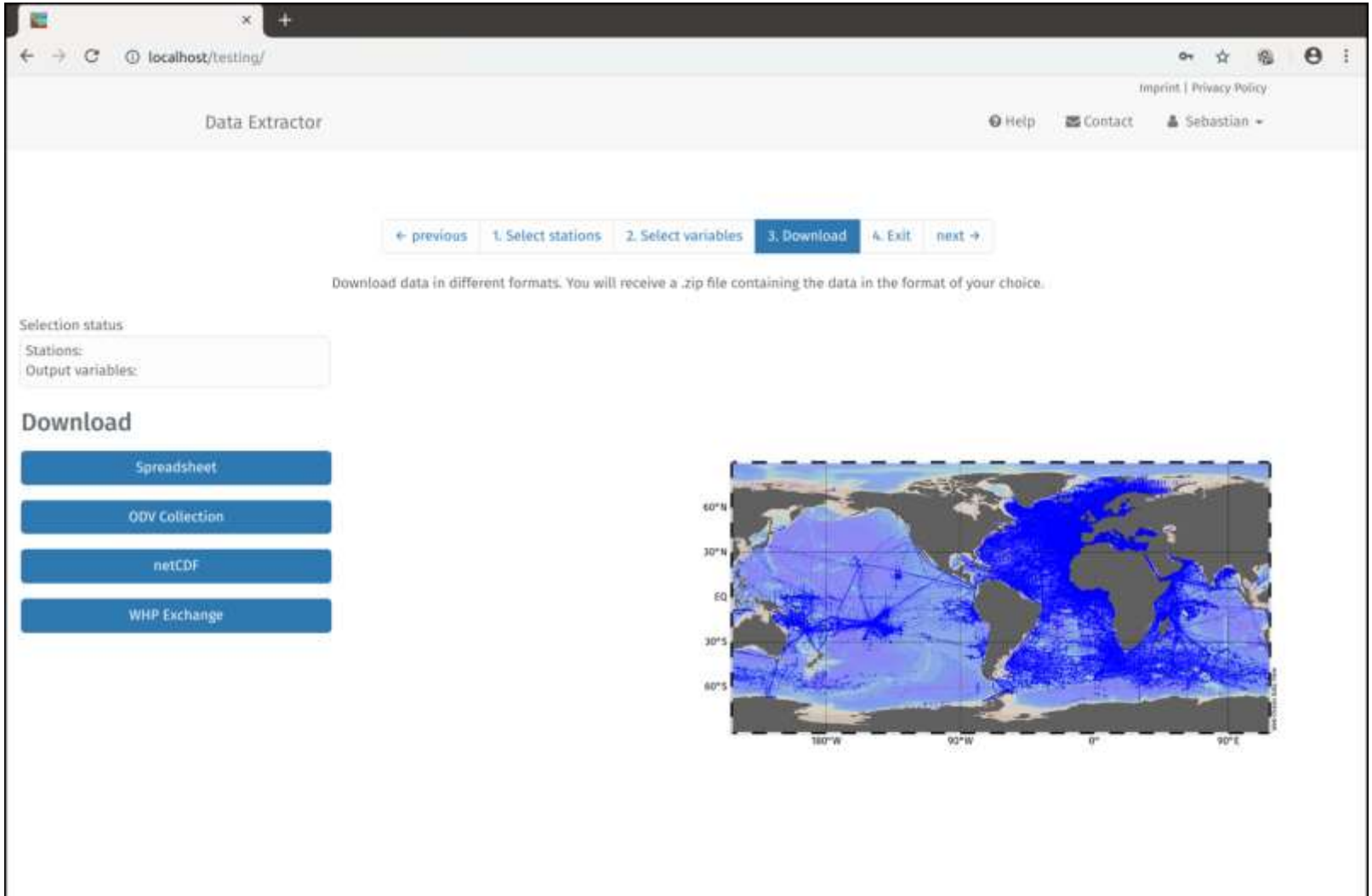
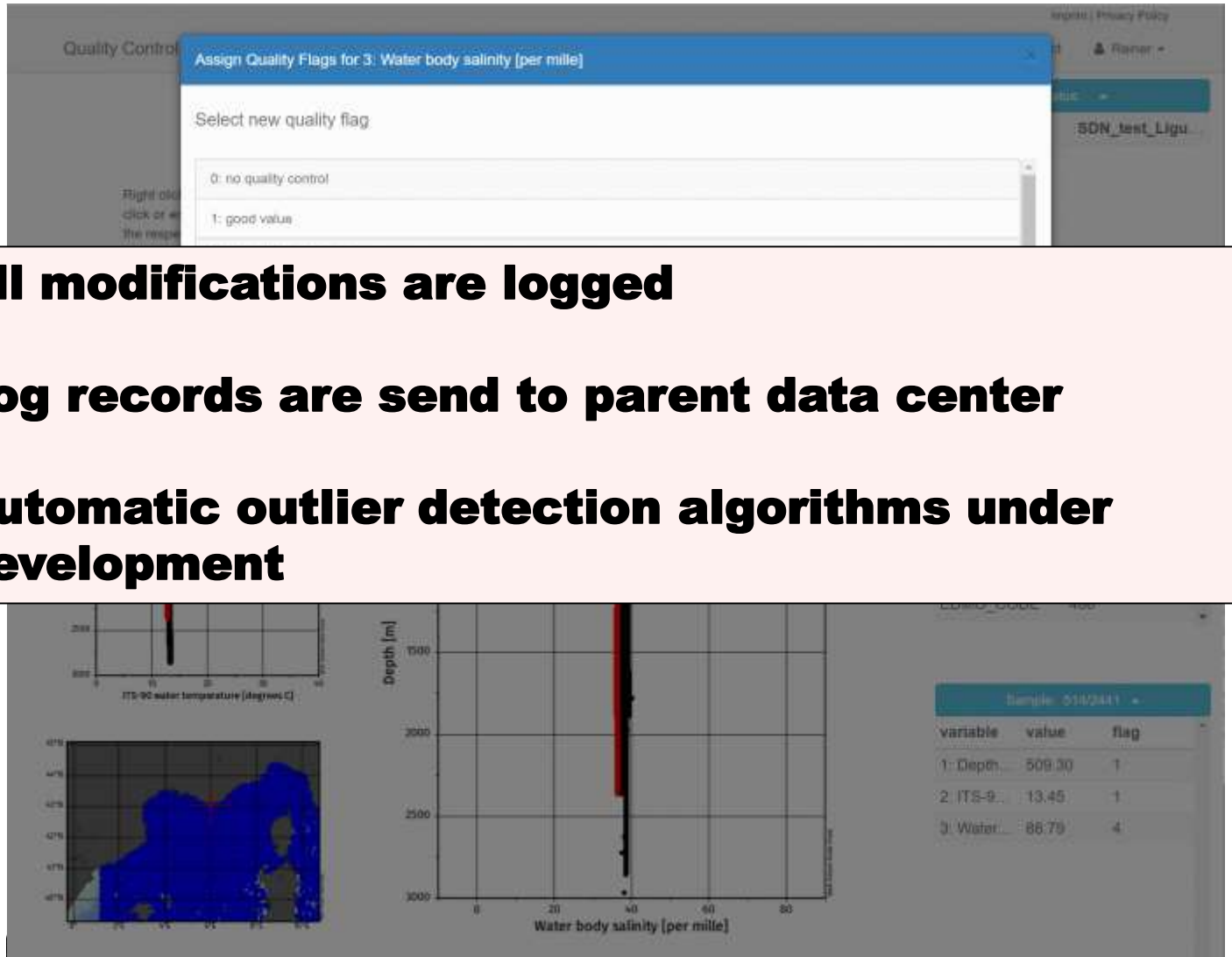
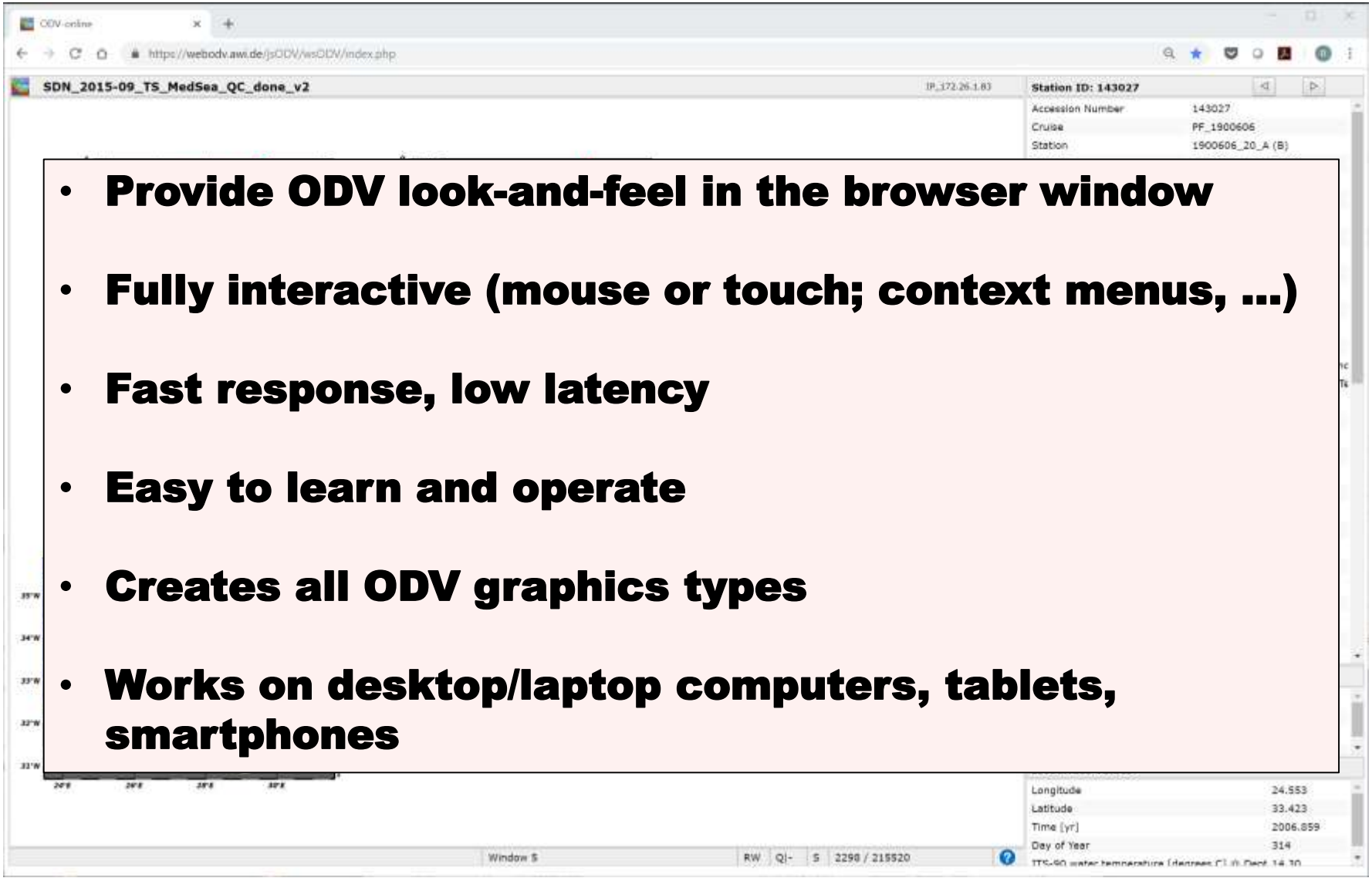


Quality Control Service (beta)



- **All modifications are logged**
- **Log records are send to parent data center**
- **Automatic outlier detection algorithms under development**

Visualization Service (beta)



- **Provide ODV look-and-feel in the browser window**
- **Fully interactive (mouse or touch; context menus, …)**
- **Fast response, low latency**
- **Easy to learn and operate**
- **Creates all ODV graphics types**
- **Works on desktop/laptop computers, tablets, smartphones**

Summary

- **Development driven by users / SDC partners**
- **Websocket technology allows truly interactive user experience**
- **Integration into SDC VRE underway**