OceanTEA: Open Data Publication and Exploration of Ocean Observation Data

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Context

Autonomous ocean observation systems produce an increasing amount of time series data. The web-based tool OceanTEA supports scientists at interactively exploring and analyzing high-dimensional datasets.

Observation

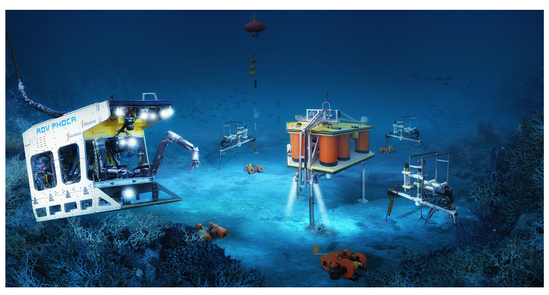
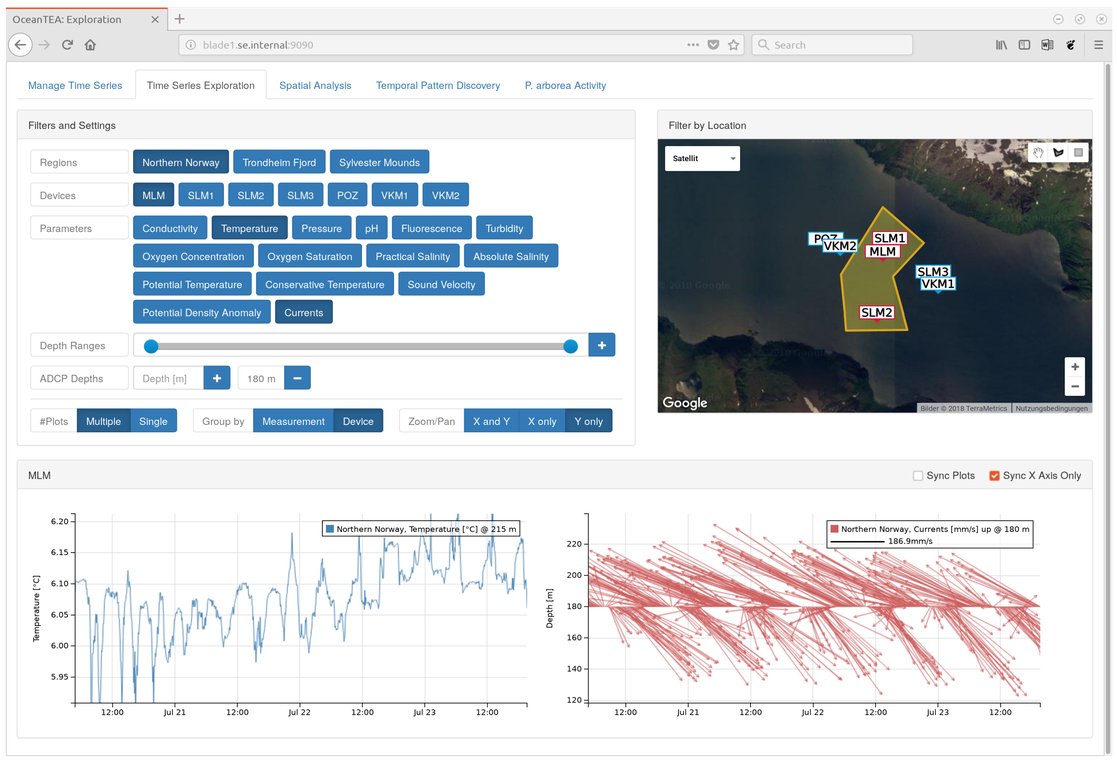


Illustration of a MoLab configuration

The stand-alone Modular Ocean Laboratory (MoLab) from GEOMAR enables the collection of multi-sensory observation data.

oceanrep.geomar.de/22245

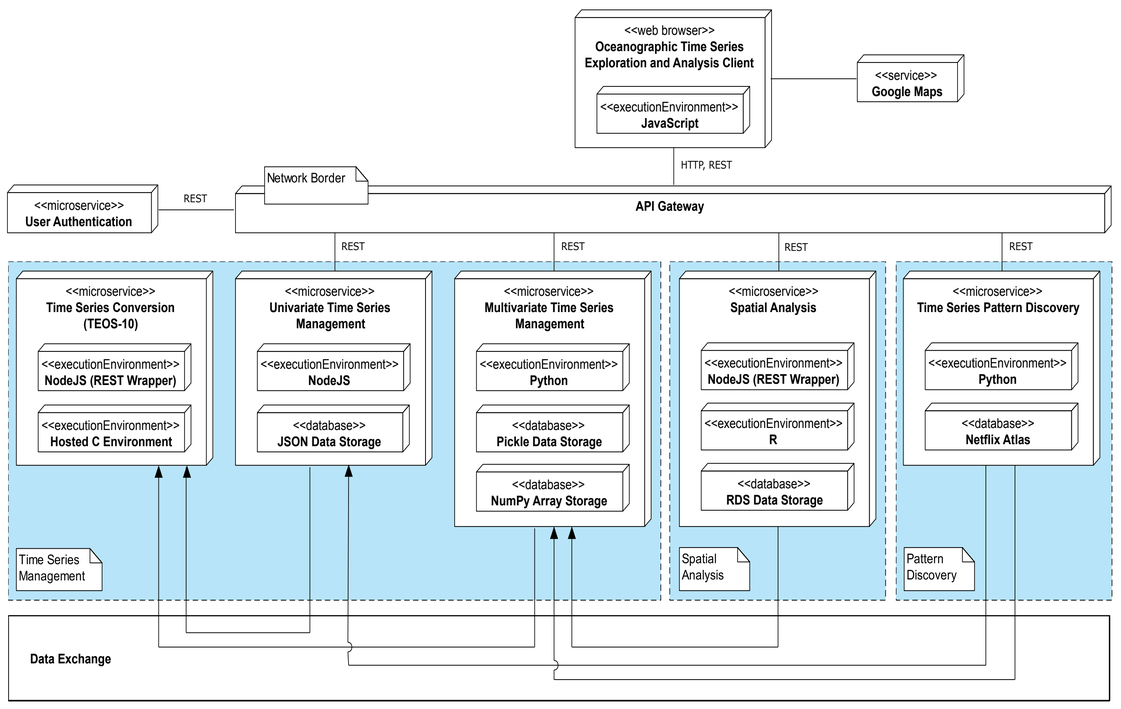
Data Exploration



Extensible Architecture

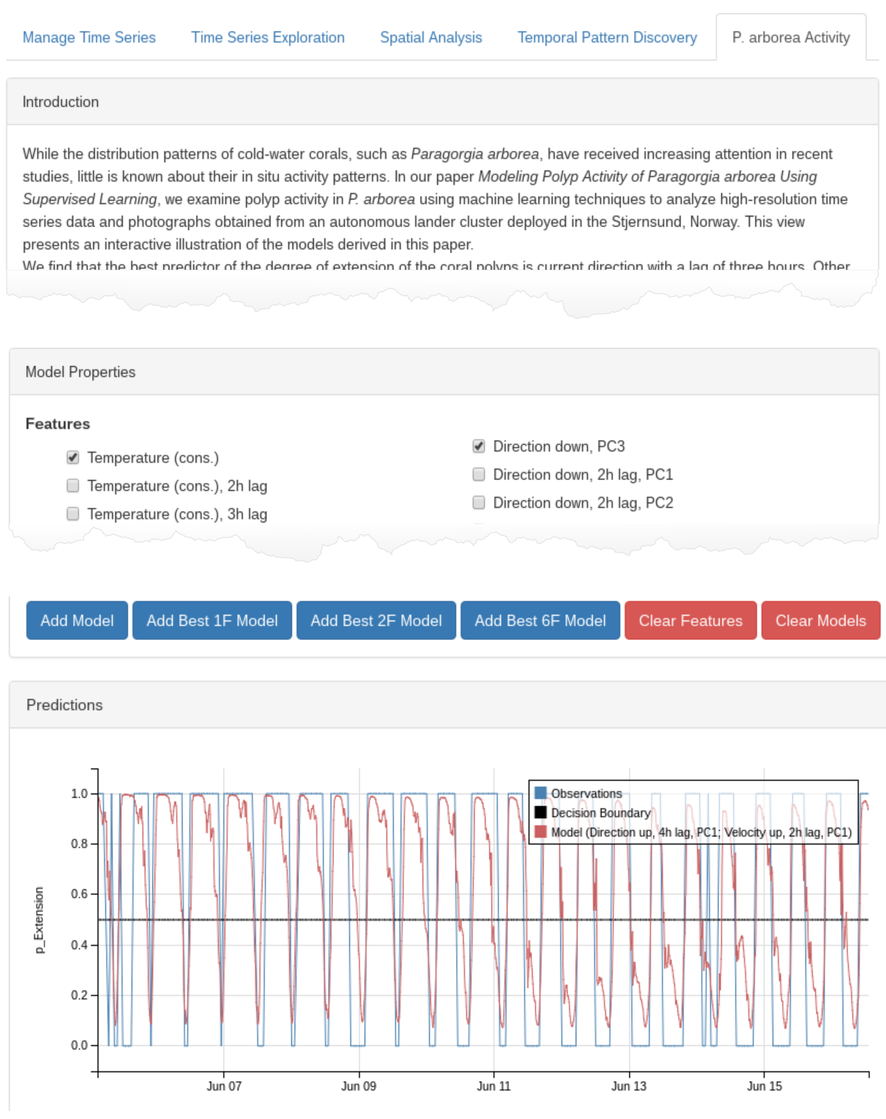
OceanTEA is composed of microservices: Small self-contained applications with a singular functional responsibility. They can be developed and operated independently.

- Bespoke implementation and storage technologies for each microservice
- Scales from desktop computers to cloud computing infrastructure



Microsoftservice architecture of OceanTEA

Interactive Publication



Supplement to "Modeling Polyp Activity of Paragorgia arborea using Supervised Learning" (http://dx.doi.org/10.1016/j.ecoinf.2017.02.007)

Our examplary setup supports:

- Interactive data visualization
- Spatial analysis
- Modelling distribution and movement patterns of cold-water corals

Try our live demo at: **oceantea.uni-kiel.de**

Downloads: **github.com/a-johanson/oceantea**

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