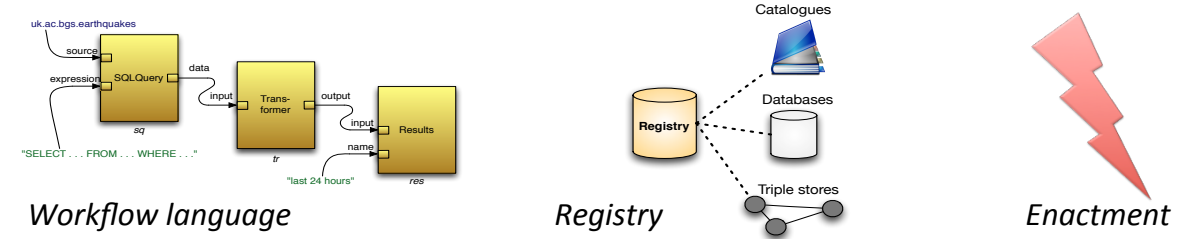


Designing for Data-Driven Seismology in Europe

Iraklis Klampanos, Michelle Galea, Amy Krause, Paul Martin, Alessandro Spinuso, Luca Trani, Malcolm Atkinson, University of Edinburgh

Core components



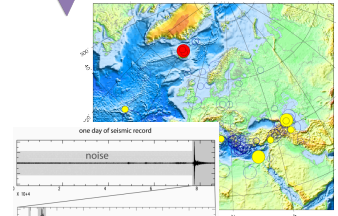
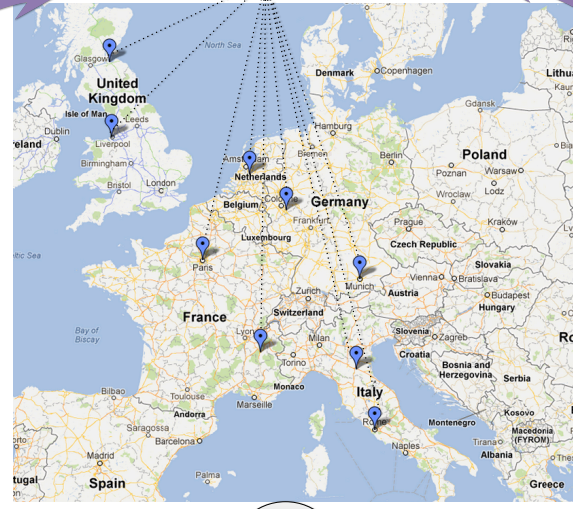
VERCE Platform for Seismology

- Customisable workflows
- Localised views of data and programs
- Re-use of methods and data

- Movement between local grids, stores and HPCs.
- Transparent management of derivative data, redundancy, provenance



VERCE Scientific Gateway



Scientific Data



Seismologist

Co-design for global consistency, local agility, ease of use

Overview

Modern seismologists are presented with increasing amounts of data that may help them better understand the Earth's structure and systems. However:

- they have to access these data from globally distributed sites via different transfer protocols and security mechanisms;
- to analyse these data they need to access remote powerful computing facilities;
- their experiments result in yet more data that need to be shared with scientific communities around the world.

In the vast majority of cases, the labourious tasks of data management, transfer and execution of scientific codes is handled manually by the scientist and on an ad hoc basis. This hinders seismologists from making full use of the data and tools they have at their disposal for scientific discovery.

The VERCE project is designing and developing a research platform to deliver a seismology and earthquake community e-Infrastructure, an integrated computational and data environment that presents a coherent virtual environment in which to conduct research.

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