EPOS collated requirements

Introduction to EPOS

EPOS, the European Plate Observing System (http://www.epos-eu.org/) is a long-term plan for the integration of research infrastructures for solid Earth science in Europe. Its main aim is to integrate communities to make scientific discovery in the domain of solid earth science. EPOS integrates the existing (and future) advanced European facilities into a single, distributed, sustainable infrastructure taking full advantage of new e-science opportunities. Complex interconnected physical and chemical processes control earthquakes, volcanoes, landslides, and floods, and drive tectonics and Earth surface dynamics. Unravelling them requires accessible harmonized data and new tools to foster innovative cross-disciplinary research. By improving access to data and data products, together with tools for their use in analysis and modeling, EPOS will transform the European research landscape, driving discovery and developing solutions to the geo-hazards and geo-resources challenges facing European society.

Requirements gathered

General requirements

General requirements for EPOS

Now, more specifically, EPOS can identify two basic uses cases:

- A basic multidisciplinary use case, dealing with the discovery of heterogeneous data by a user who connects to the ICS-C (Integrated Core Services Central Hub) portal to discover and access (e.g. download) such data.
- An extended, single discipline, computational oriented use case, dealing with the usage, from user's side, of a computational seismology or geodesy tool which orchestrates the access to data and to computational resources on behalf of the user

Scientists by using EPOS could:

- Make integrated use of SAR, GPS, Accelerometric Data, etc.
- Use different codes and languages (python, fortran, any other…)
- Perform heavy processing online (use of HPC resources)
- Compare results (e.g. focal mechanism catalogues)
- Compare different data
- Save data in personal area
- download the data

Identification and citation

Identification and citation in EPOS

Curation

Curation in EPOS

Cataloguing

Cataloguing in EPOS

Processing

Processing in EPOS

Optimisation

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Provenance

Provenance in EPOS

Community support

Community support in EPOS

Summary and conclusions