CheatSheet for using seismological data

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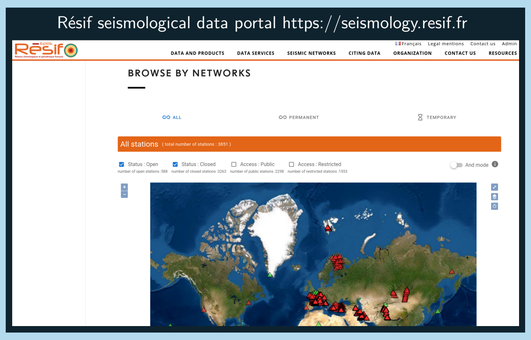
1. Find the data

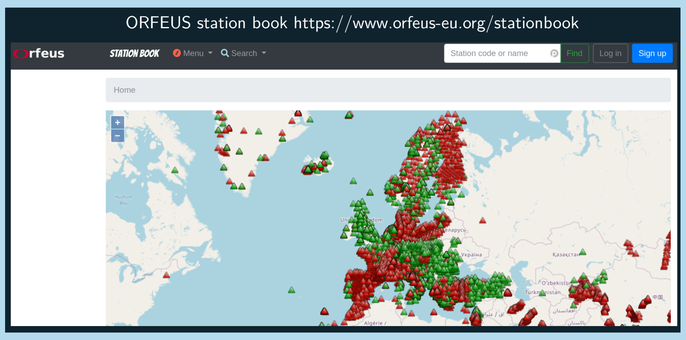
Résif-DC is one of the 19 FDSN compliants seismological data repositories. The data is hosted in one of them, but which one ?
There are interfaces for human and for machines or software.

Human being

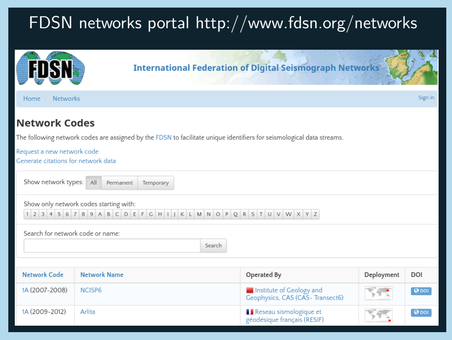
Résif seismological data portal https://seismology.resif.fr



ORFEUS station book https://www.orfeus-eu.org/stationbook



FDSN networks portal http://www.fdsn.org/networks



Machine

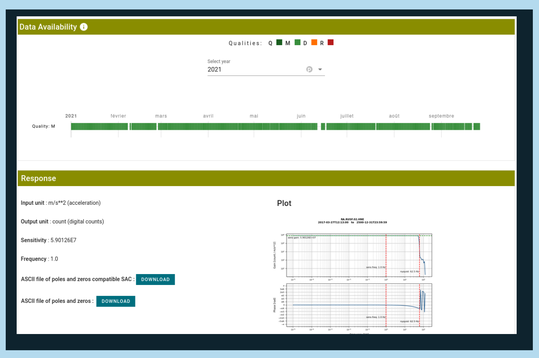
- Routing services : FDSN, EIDA
- EPOS DCAT-AP description

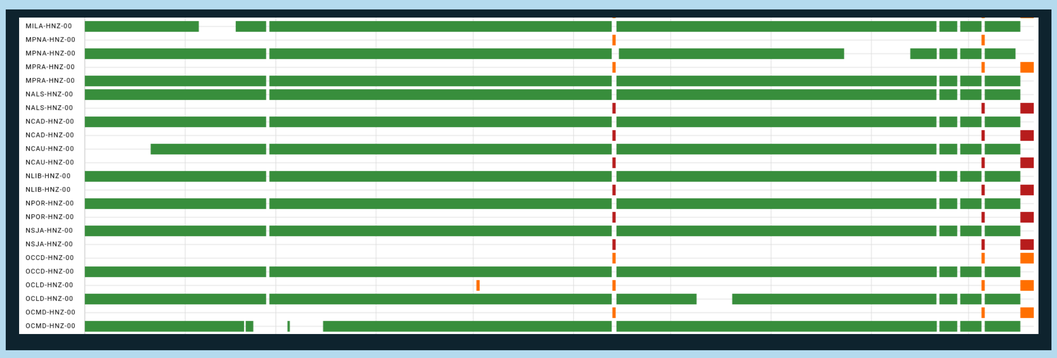
Used by obspy or smart clients or other software.

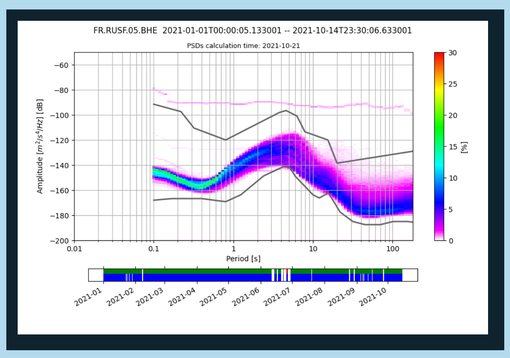
2. Get the metadata, evaluate the data quality

Human being

Résif-DC offers a user-friendly view of the metadata at network, station and channel level.
Those views aggregate metadata from several places:
- StationXML for seismology related metadata
- Data and services access instructions
- Citation and licences information
- Waveform availability
- Instrumental response evaluation graph
- Spectrograms and PPSD







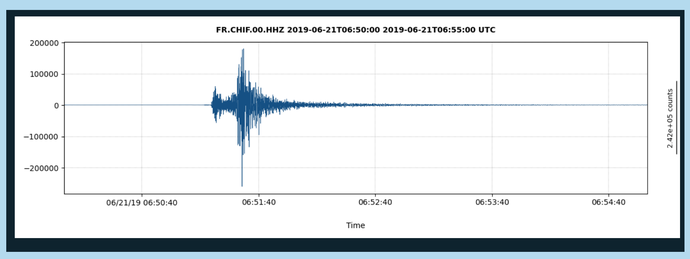
Machine

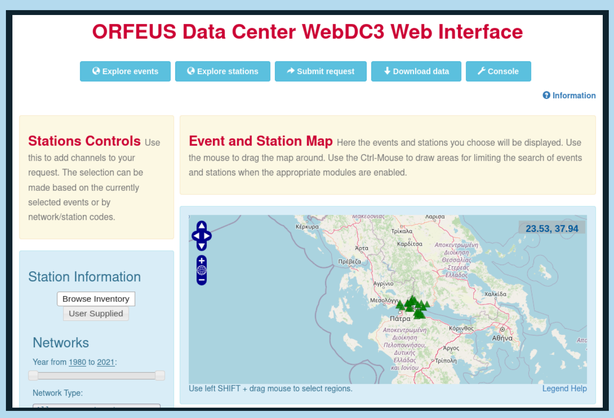
- fdsnws-station to get StationXML metadata
- fdsnws-availablity to get waveform availability
- DataCite DOI metadata to get usage information (Licence)

3. Get the data

Human being

Data can be downloaded using :
- webdc3 online http://orfeus-eu.org/webdc3
- fdsnfetch scripts
- EPOS IC data portal (experimental)
- plain fdsnws-dataselect HTTP queries.
  URL builder in http://seismology.resif.fr can help
- resifws-timeseries





Machine

- fdsnws-dataselect HTTP queries
- ObsPy Python library
- EPOS IP data portal
- EIDA federator

4. Do science

5. Publish your results

Very important : Cite the data in your references as a normal paper.
- Each seismological network has a unique identifier, pointing to its landing page. There you shall find the citation informations and guidelines.
- Use **DataCite's DOI Citation Formatter** to get references in various formats (bibtex) https://citation.crosscite.org/
- Use FDNS's network citation service to get references for complex data mix http://fdsn.org/networks/citation/

6. Need help ?

helpdesk: **sismo-help@resif.fr**

Documentation of all the webservices : https://ws.resif.fr