

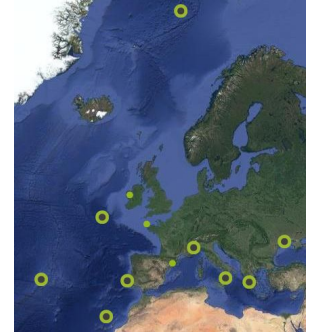
EMSO ERIC data services

Managing distributed data through an ERDDAP federation

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EMSO ERIC : infrastructure & data

- Distributed European RI : instruments, data & computing infrastructure
- 12 regional facilities
- Multiple sensors, biogeochemical & physical parameters
- Offering FAIR data & services to scientific community



ERDDAP overview

- Open Source Software developed by NOAA
- Input data : netCDF (tabular, gridded), CSV, acoustic, camera, databases...
- Output formats : netCDF, CSV, JSON, images...
- User Graphical Interface & REST API
- Metadata, search interface, data download, interactive plotting ...

sea_water_salinity
sea_water_sigma_theta
sea_water_temperature

3) The results of the search for long_name = sea_water_temperature

6 matching datasets, listed in alphabetical order. (Or, refine this search with [Advanced Search](#) 🗨)

Grid DAP	Sub-set	Table DAP	Make A Graph	W M Data Files	Source	Title
	set	data	graph		EMSO / MAREGAMI Marmara BPR2 station Lat:40.7934 Long:29.0312 Depth:1225m, Seaguard RCM data	
	set	data	graph		EMSO / MAREGAMI Marmara BPR3 station Lat:40.8568, Long:28.1523, Depth:1184m Seaguard RCM data	
	set	data	graph		EMSO Ligue Ouest MII capteur MICROCAT (NetCDF files)	
	set	data	graph		EMSO Ligue Ouest MII capteur OXYGEN (NetCDF files)	
		data	graph		SBE 16 CTD Data	
		data	graph		SBE 16 CTD Data	

Dataset Title: **EMSO Ligue Ouest MII capteur MICROCAT (NetCDF files)** [SD](#) [SD](#)
Institution: OSU Pytheas UMS 3470 CNRS (Dataset ID: Emso_Ligue_Ouest_MII_Microcat_NetCDF)
Information: [Summary](#) | [License](#) | [FGDC](#) | [ISO 19115](#) | [Metadata](#) | [Background](#) | [Subset](#) | [Make a graph](#)

Variable Check All Uncheck All

Optional Constraint #1 Optional Constraint #2 Minimum or a List of Values Maximum

stationname

latitude (degrees_north)

longitude (degrees_east)

time (UTC) 2017-09-29T16:42:28Z 2021-03-03T23:59:23Z

seaWaterTemperature (degree_C) 13.2925 13.327

seaWaterElectricalConductivity (S m-1) 4.58839 4.60202

seaWaterPressure (dbar) 2468.896 2472.295

Server-side Functions distinct

File type: [None \(R0\)](#)
[.ncf](#) | [Download a NetCDF-3 CF Discrete Sampling Geometries file \(Contiguous Ragged Array\)](#)
Just generate the URL:
http://erddap.emso.eu/erddap-tabledap/Emso_Ligue_Ouest_MII_Microcat_NetCDF [\(Documentation\)](#) / [Bypass this form](#)

Dataset Title: **EMSO Ligue Ouest MII capteur MICROCAT (NetCDF files)**
Institution: OSU Pytheas UMS 3470 CNRS (Dataset ID: Emso_Ligue_Ouest_MII_Microcat_NetCDF)
Range: longitude = 6.029 to 6.029°E, latitude = 42.822 to 42.822°N
Information: [Summary](#) | [License](#) | [FGDC](#) | [ISO 19115](#) | [Metadata](#) | [Background](#) | [Subset](#) | [Make a graph](#)

Graph Type:

X Axis:

Y Axis:

Constraints Optional Constraint #1 Optional Constraint #2

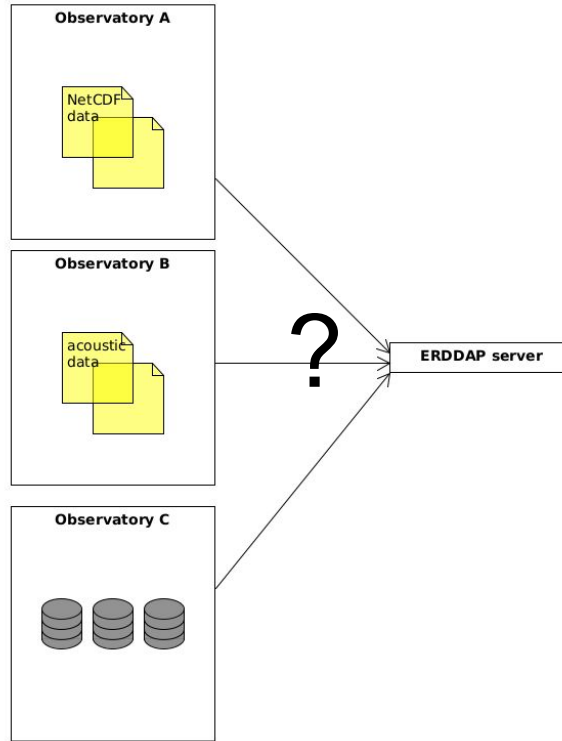
time 2021-03-01T16:50:50Z 2021-03-08T16:50:50Z

Server-side Functions distinct

Time range:

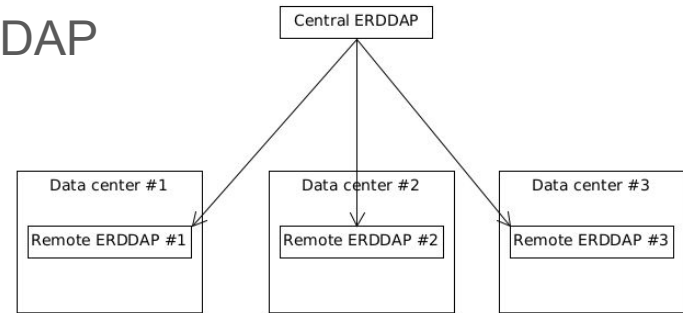
Sea Water Temperature (degree C) vs time (2021-03)

Handling scattered data



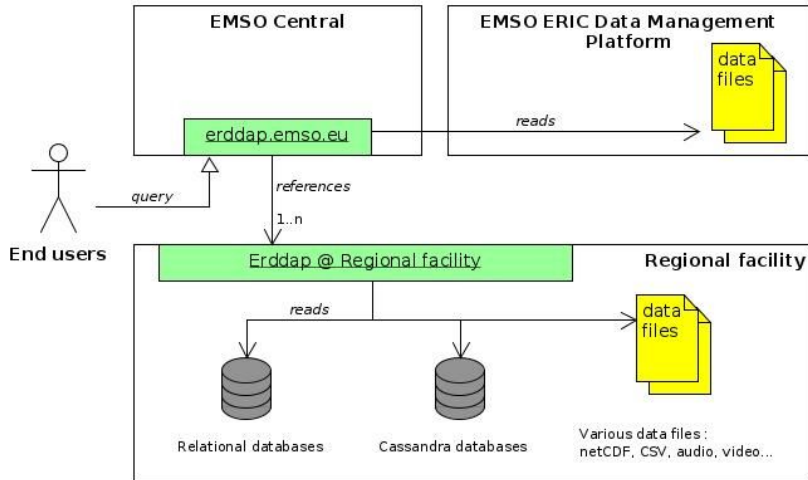
ERDDAP Federations

- Built-in feature
 - One ERDDAP server references remote ERDDAP servers
 - Central server only stores metadata
 - Central server routes queries to remote ERDDAP
-
- Avoids duplicating data
 - Minimizes costs
 - Each datacenter handle their data



Implementing ERDDAP federation through EMSO ERIC

- ERDDAP servers deployed at regional facilities
- Central ERDDAP links regional facilities
- Central ERDDAP server can host some facilities data



<http://erddap.emso.eu/erddap/index.html>

Implementing ERDDAP federation through EMSO ERIC

- Maintaining & extending
- Metadata harmonization (vocabularies, standard attributes)

Thank you for your attention !

Questions ?