

# Online DIVAnd

## Recent progress & hurdles



# A work by

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the VRE team



**1. How do we perform data interpolation?**

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URL of the observation to force		
Name of the variable		
Bounding box (east, south, w. degrees)		
Comma separated list of depth levels (meters)	0,20,50	
Correlation length in zonal and meridional direction (meters)	100000,100000	
Error variance of observation (relative to the error variance of the background field)	1	
Resolution in zonal and meridional direction (in degrees)	0.5,0.5	
Start and end year	1900,2018	
Month of every season	1,2,3	4,5,6
	7,8,9	10,11,12
URL of the bathymetry file	sampledata:gebco_30sec	

**Metadata ▶**

[Run DIVAnd](#)

[Download results](#)

# Deployment in the VRE

- [Jupyter-hub](#) to manage multiple users
- [Docker](#) container for the deployment
- Management/orchestration using [Kubernetes](#)



# DIVAnd REST API

```
docker pull abarth/divand_rest  
docker run --detach --name=divand_rest_container -it -p 8002:8002 abarth/divand_rest
```

<http://localhost:8002/> in the web browser

## **2. VRE developments**



# Liège VRE code sprint (February 4-6, 2019)



# We are we heading?

Concentrate Mikael's time  
on the integration of the jupyter-notebook interface  
for multiple-user

# Current status of the component?

 DIVAnd running in isolation

 DIVAnd Jupyter-hub container

 DIVAnd API and file selector

 Integration with other VRE components: 20%  
(difficult to estimate)

# Open issues

- 1- Passing user-credentials (B2DROP username, password, WebDAV URL) to the container
- 2- Single-sign-on approach to access the individual services (now hard-coded)
- 3- B2DROP handling ~20 users downloading/uploading a file?  
*"B2DROP is not for development and testing"*
- 4- Implementing the WebDAV put and get requests in the container
- 5- Updating the file selector for the GUI interface of DIVAnd
- 6- Testing that the VRE dashboard can start containers

# Open issues: how to tackle?

WebDAV put and get requests

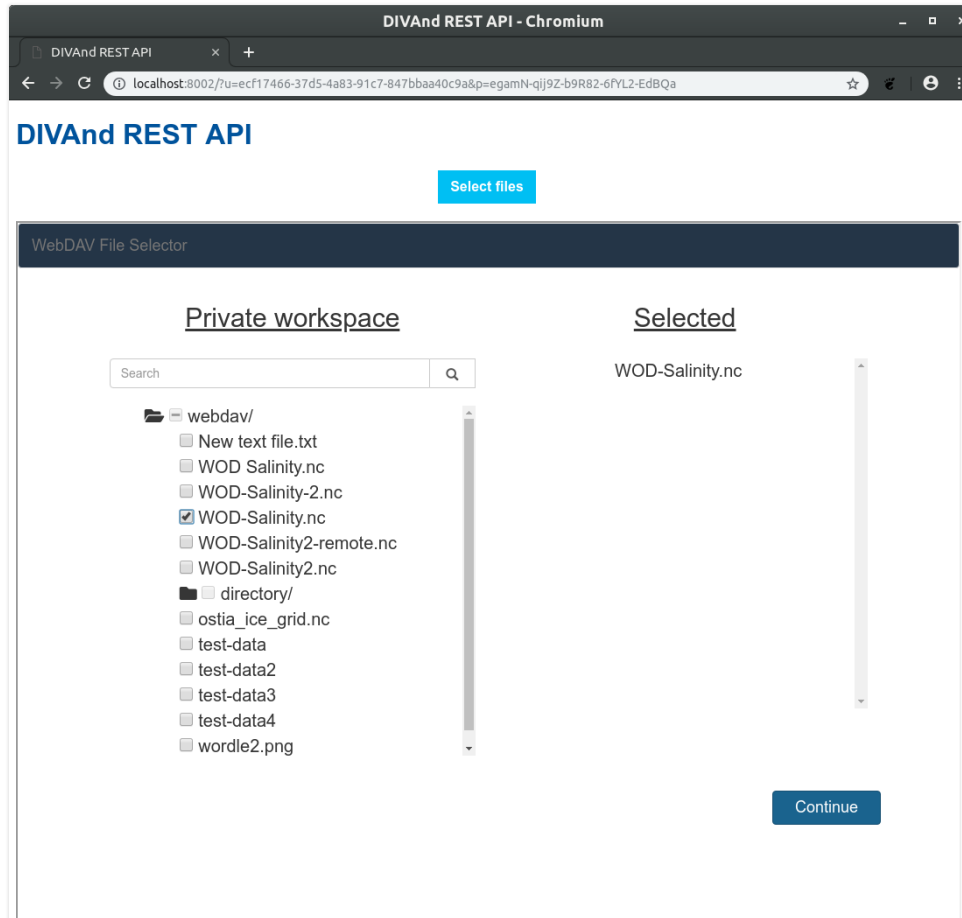
→ Alex

File selector for the GUI interface of DIVAnd

→ in collaboration with Sebastian

**Others:** dependent on EUDAT for the integration

# DIVAnd API and file selector



# File upload/download using WebDAV

Configure WebDAV environment variables

```
ENV["WEBDAV_USERNAME"] = "app-username"  
ENV["WEBDAV_PASSWORD"] = "app-password"  
ENV["WEBDAV_URL"] = "https://b2drop.eudat.eu/remote.php/webdav"
```

Download the file to the selected folder

```
get("Adriatic/AdriaticSea_SDC.txt", "Adriatic/AdriaticSea_SDC.txt")
```

WEBDAV\_USERNAME

WEBDAV\_PASSWORD

WEBDAV\_URL should be set by kubernetes (not by the user)

# Demo

<https://diva.seadatacloud.ml/1234/tree>



**Thanks for your attention**