# Ifremer/RDAC and EU-GDAC

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Review of activities | GHRSST XX | ESA/ESRIN | 6th June 2019

- Ifremer is National French Marine Institute / CERSAT is its Satellite Data Center

- operates a Producer / RDAC & GDAC center since Medspiration project (2005)

- As a **producer or regional and global (L3/L4) – Odyssea products**

  - Regional products inherited from Medspiration

    - Mediterranean Sea

    - South Africa

    - Brazil/Tropical Atlantic

  - CMEMS products : only distributed by CMEMS Dissemination unit *(cf. CMEMS report)*

    - L4 Europe North Western Shelves/Iberian sea/Canary islands

    - Global multi-sensor L3S

- as a **R/G DAC**

  - Distribution of O&SI SAF, push to PODAAC mirror *(cf. OSI SAF report)*

  - Mirror some datasets from GDAC (used in Odyssea multisensor merging)

    - support projects requiring combination of multiple source of data, microwave data, etc...

  - Central Repository of In situ Radiometer Network Data *(cf: W. Wimmer)*
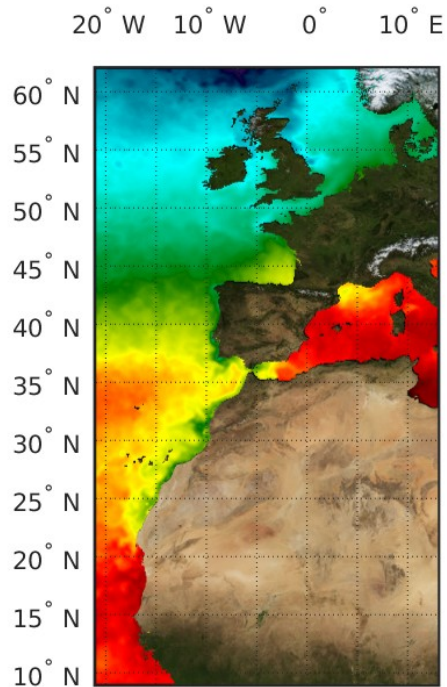
**Extended West Europe Area (ATL)**

- "ATL" : NWS + Iberian-Biscay-Irish (IBI) areas
- NRT Product
  - Update planned this year with addition of VIIRS, S3A&B, MSG Indian, GOES-16, Himawari
- Reprocessing for Copernicus Marine environment Monitoring Service (CMEMS) - 1982-2018
  - **Input observations** : AVHRR Pathfinder Version 5.3 (PFV53) L3C (1982-2014), extended to 2018 by including the real time AVHRR18-19G data
    - To be replaced with CCI SST data
  - **Method** : Kalman smoother (Tandéo et al., 2011)

**European North West Shelf (NWS) 1982-2017**
Reprocessing for Copernicus Marine environment Monitoring Service (CMEMS)

NWS products will be retired this year (superceded by ATL series)
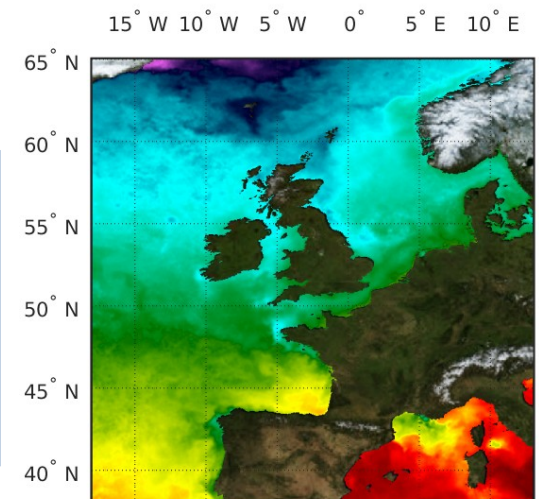
- Service migrated to central Ifremer Petascale infrastructure

    – More robust and sustained infrastructure

    – Full history of data available

- Access

    – FTP

        • OSI SAF (+HTTP) : request to http://osi-saf.org

        • CMEMS products : http://marine.copernicus.eu/

        • Others: http://cersat.ifremer.fr/data/collections/ghrsst

    – Thredds, OpeNDAP and WMS protocols for OSI SAF and Medspiration products :
    http://tdso.ifremer.fr/thredds/CERSAT.html

    – Remote processing with Jupyterlab : request to cersat@ifremer.fr

# Remote processing capabilities



Jupyterhub on HPC

Experimental service, on demand
(cersat@ifremer.fr)

Access to complete EU-GDAC data
archive
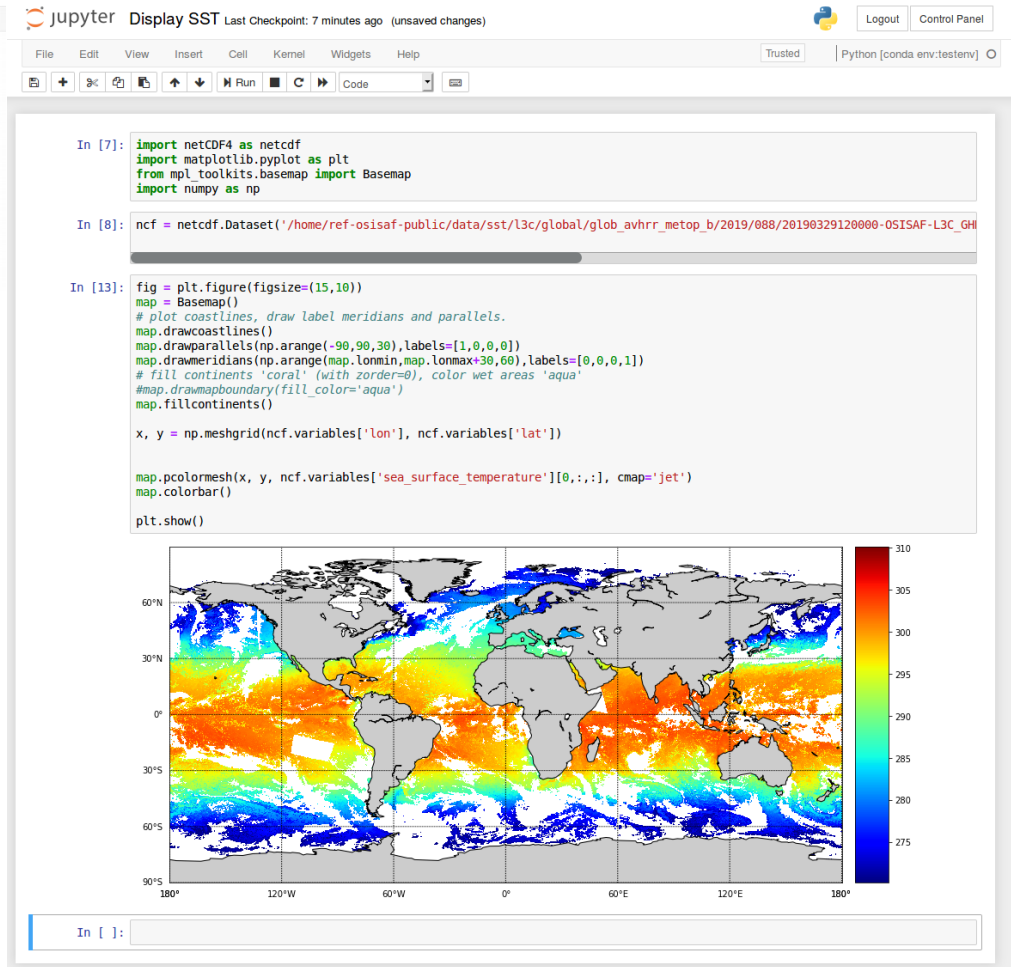
Different resource usage
configuration

Predefined or customizable conda
environments

Volume distributed, in TB
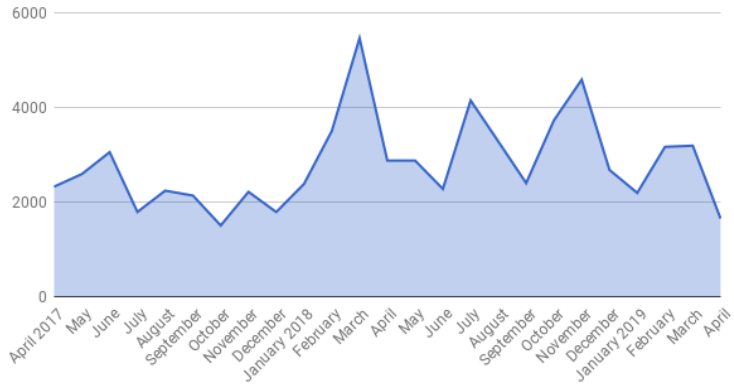


Non European data is less than 10 % of download

Mirroring of « light » products (« GDAC ») seems  not so relevant anymore, unless added value or services
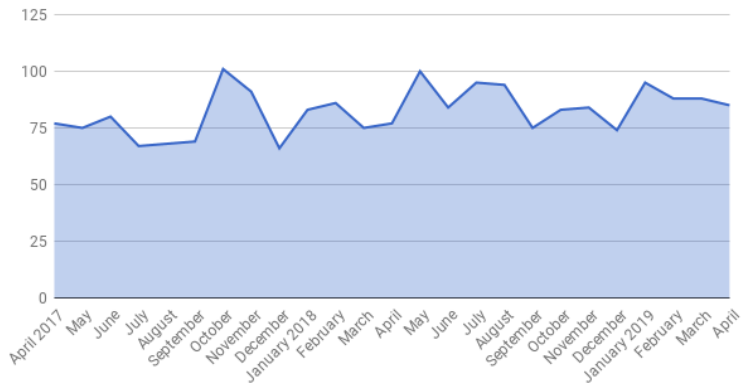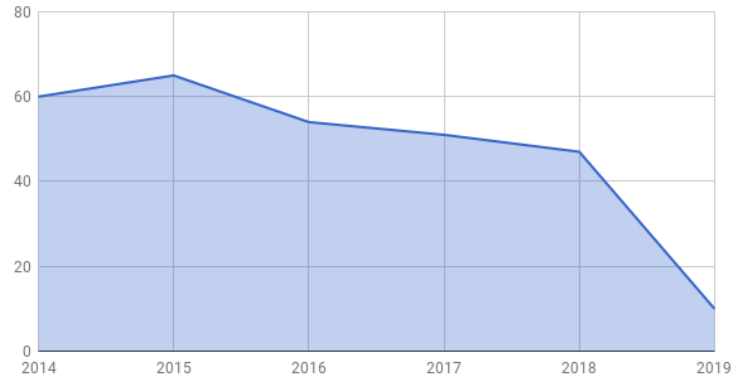
Number of unique visitors



New registered users every year (excl. CMEMS & OSI SAF)

- Build upon GDS success

  - Still quite unique consensus in a community

  - Used as an explicit model/reference in many other projects : CMEMS, Glob<*>, ESA CCI data standards

  - People are watching what we're doing !

- Growing number of sensors and products, multiple versions and reprocessings

  - Impossible to evaluate all alternatives

  - Need fair, objective, quantitative and independant evaluation criteria, intercomparison, tools, reference data resources

  - Traceability

    - log of changes and issues

    - Multiple copies

    - propagation of information (L2P > L3 > L4 > Applications)

  - Reproductability : references, metadata, practices, …

- Data on the cloud is here now

  - Commercial services (Google, Amazon,…) are now far ahead what can be implemented or offered by academic and national organizations

  - How do ease this while keeping some control on what data are made available?

  - Extra care should be paid to what we produce and distribute as it gets quickly out of control

  - Many challenges ahead: new ways to format/store data – NetCDF not well suited for massive processing