



# European Weather Cloud – Use Case Webinar

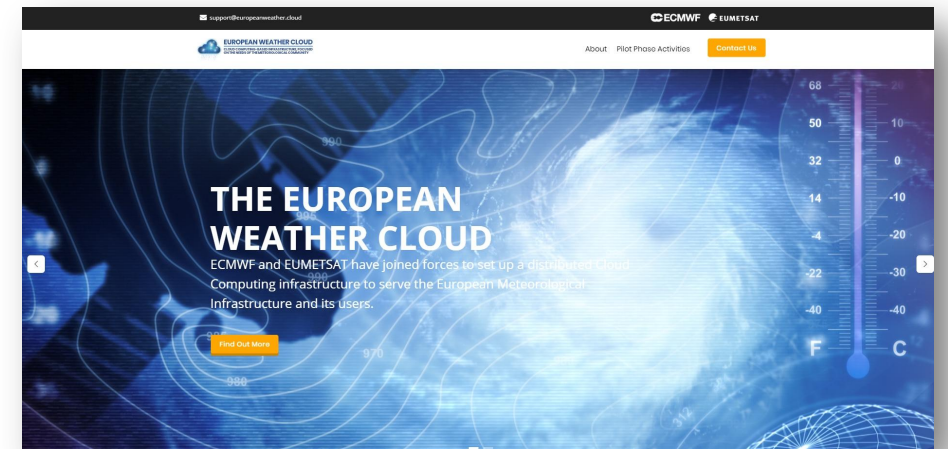
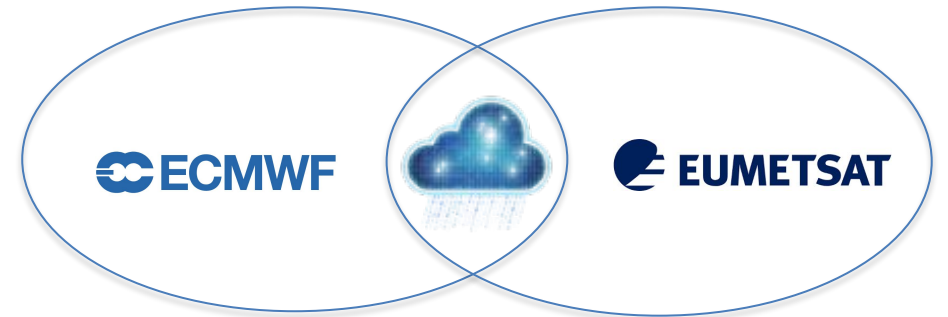
-Using the EUMETSAT Pull Data Access Services  
through EWC-

# Agenda

- The European Weather Cloud
- Getting a tenancy workflow
- Data Access Services
  - Data Store
  - Data Tailor
  - EUMDAC
- Demonstration

# European Weather Cloud

- Pilot project started 2019 by ECMWF and EUMETSAT
- ECMWF new operational infrastructure in ECMWF Bologna Data Centre
- EUMETSAT running on public cloud infrastructure
- **Start of Operations on 26 September 2023**



[www.europeanweather.cloud](http://www.europeanweather.cloud)

# Who is it for?

Member and Cooperating States

Research & Development

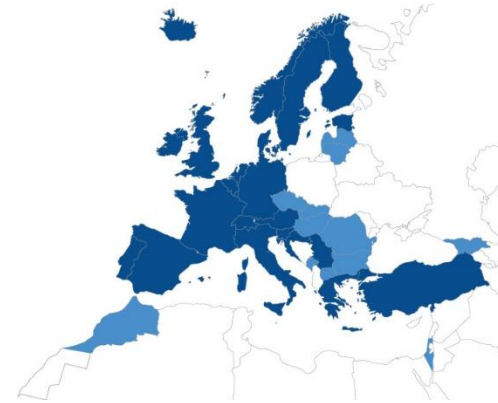
ECMWF Special Projects  
EUMETSAT annual R&D calls

EMI Partners (e.g. EUMETNET)

Internal use at ECMWF and EUMETSAT

Member and Cooperating States usage authorized by Computing Representatives

- Access requests via Computing Representatives or [EWC support](#)



ECMWF

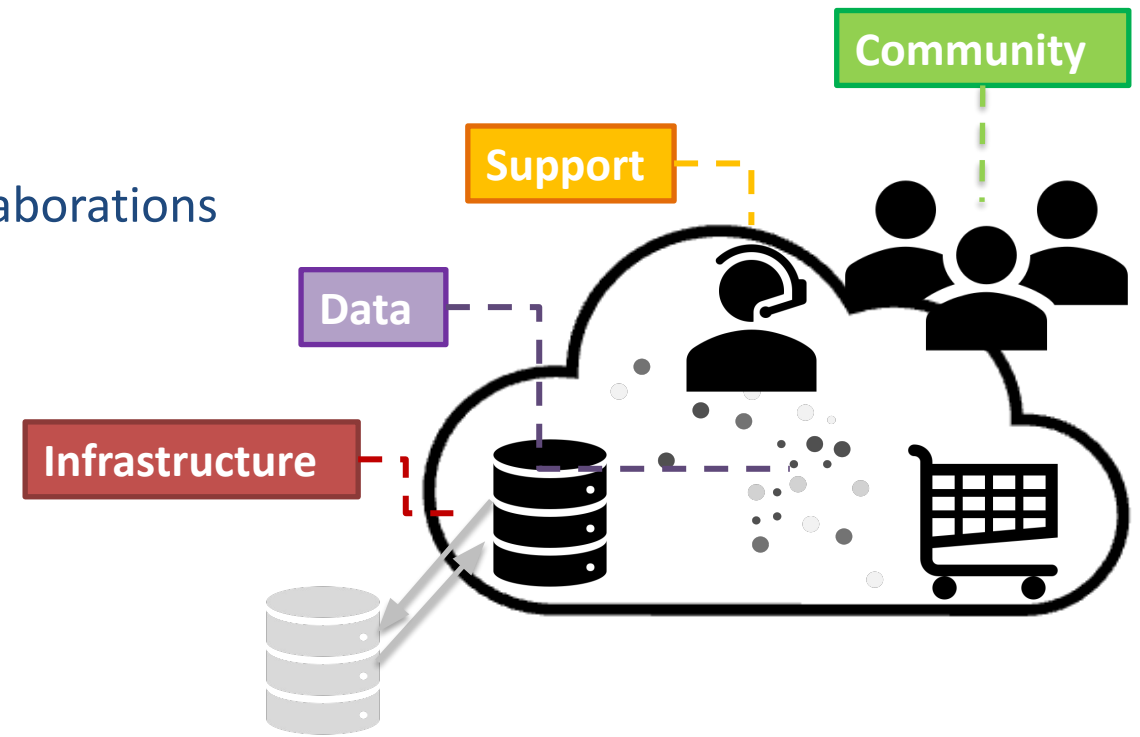


EUMETSAT

EWC provides compute capacity and access to ECMWF and EUMETSAT data holdings, additional external data sets and allows users to easily share their own data with others.

# Benefits to the users

- Online access to the cloud computing resources
- Flexibility in provisioning, managing and deleting resources on-demand
- Data availability and data locality for processing
- Community : knowledge, applications, synergies, collaborations



# Cloud Service Description

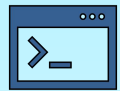
The service consists of cloud computing resources provided by ECMWF and EUMETSAT and controlled by cloud management software Morpheus.



## Virtual Environments



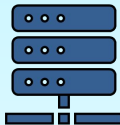
Isolated cloud tenancy



Virtual Machines



Block and Object Storage



Virtual Networking

.....

## Resources Management



Blueprints and Instance types



Automation tools



Monitoring and Reporting



Metering and Accounting Service

.....

## Support and Collaboration



Support Portal



Knowledge Base  
Documentation



Discussion Platform

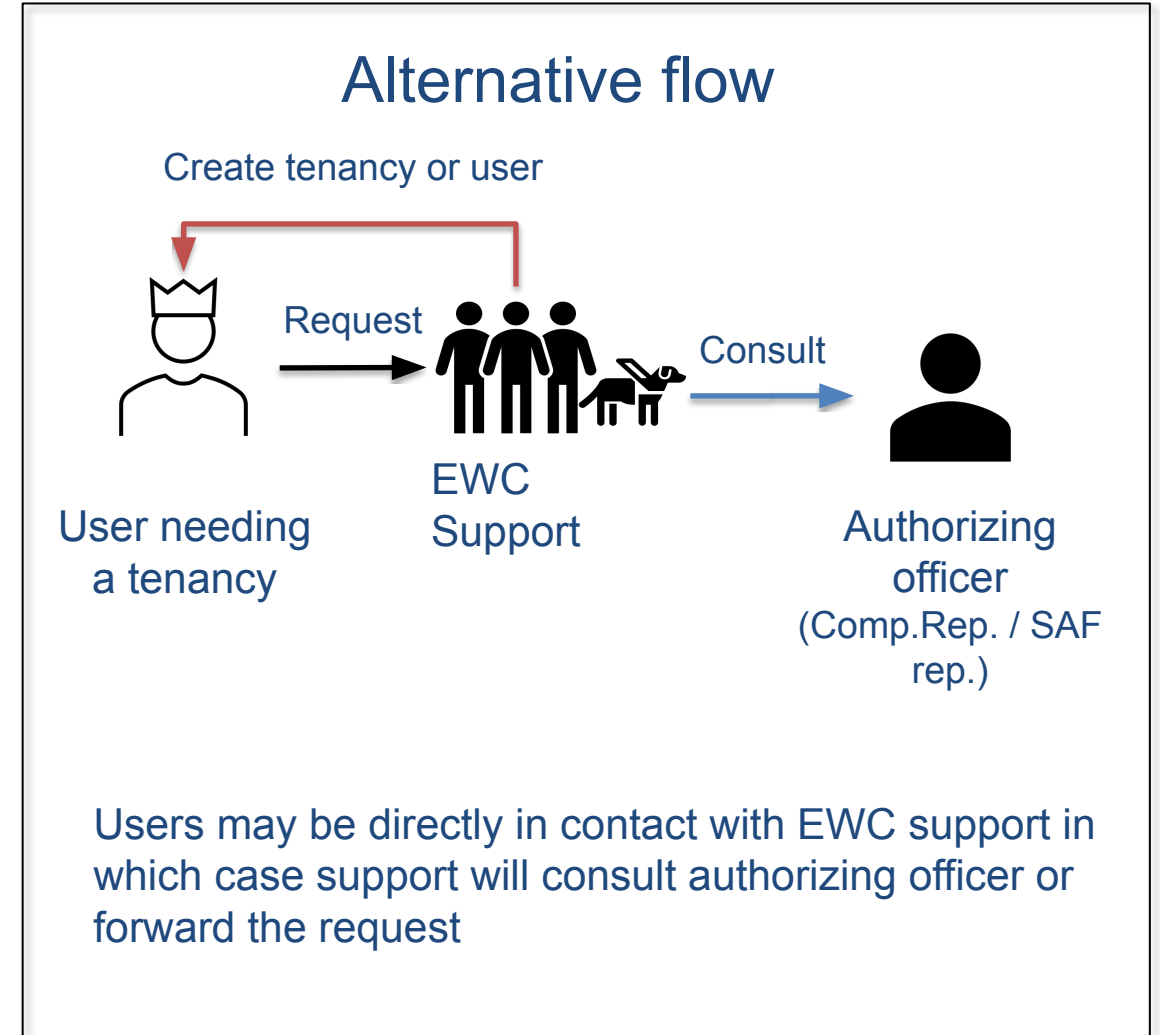
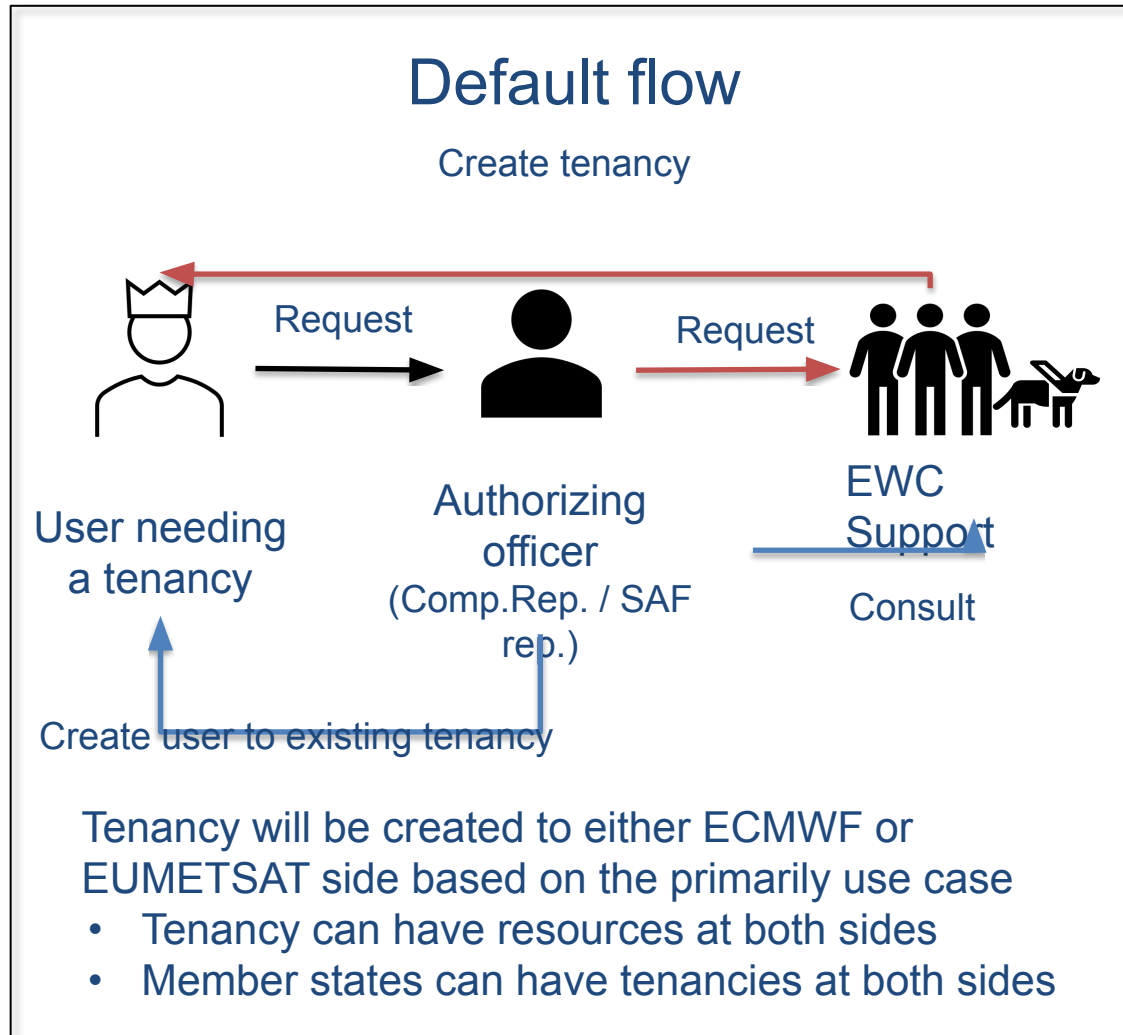
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**EUROPEAN WEATHER CLOUD**  
CLOUD COMPUTING-BASED INFRASTRUCTURE, FOCUSED  
ON THE NEEDS OF THE METEOROLOGICAL COMMUNITY

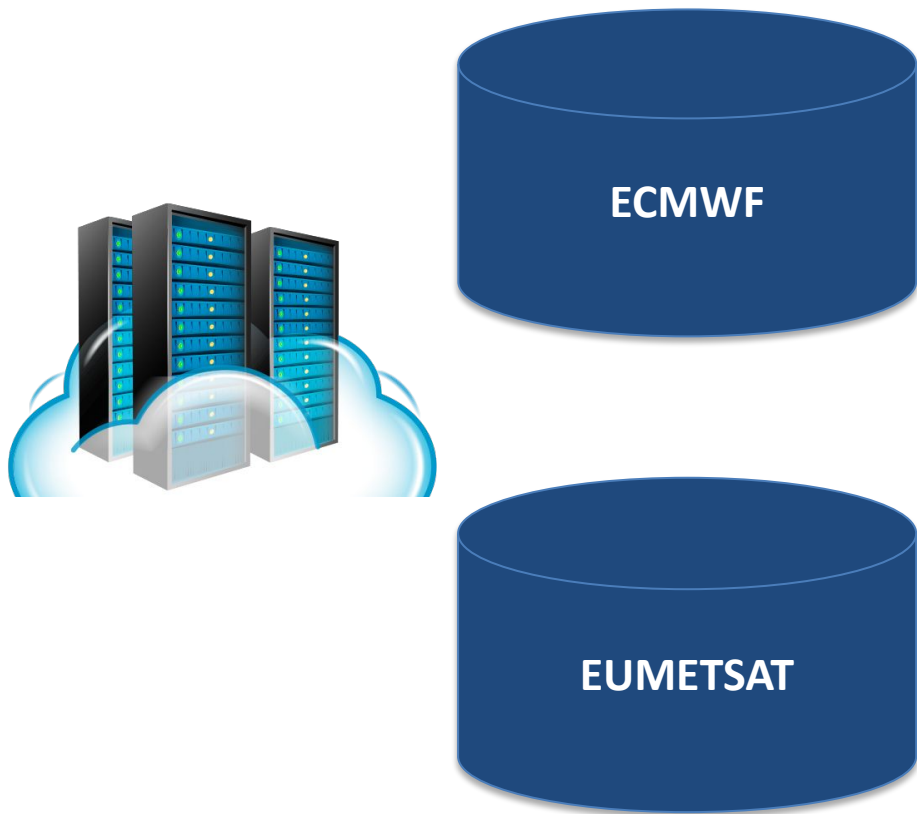


# Getting a tenancy workflow



# Data Access from EWC

Combined set of “pull” and “push” data access services:

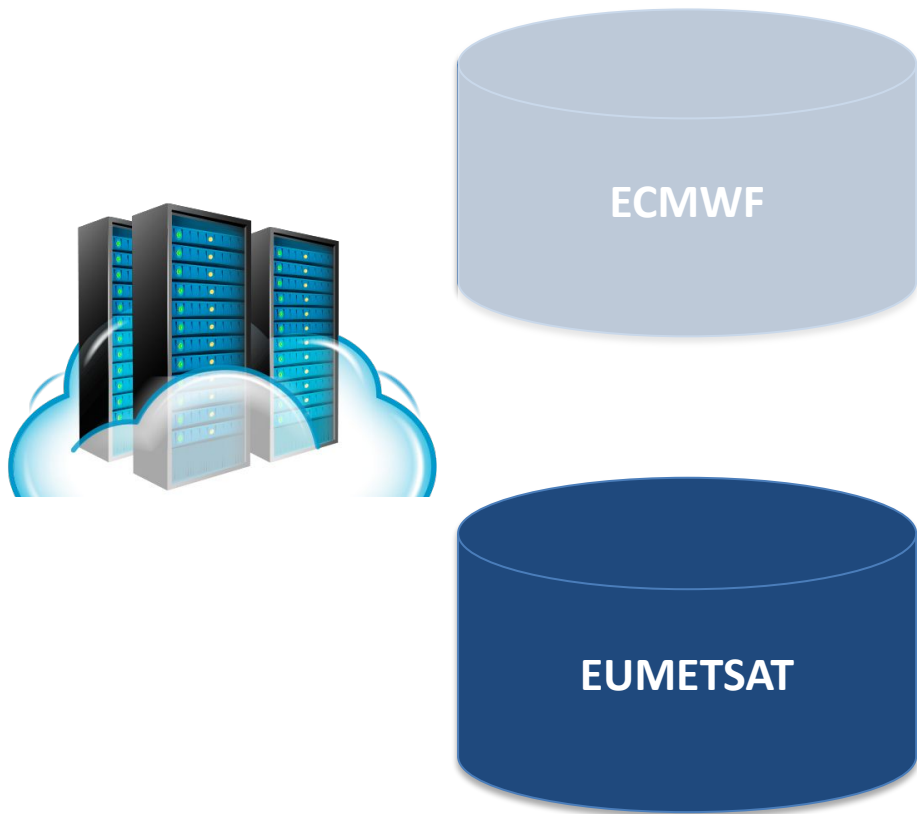


- Meteorological Archival and Retrieval System (MARS)
  - ❖ ECMWF Petabytes-scale data archive providing APIs for data discovery and retrieval
- ECMWF Production Data Store (ECPDS)
  - ❖ Data dissemination service for customised data delivery
- Copernicus Climate and Atmospheric Data Stores (CDS/ADS)
  - ❖ Copernicus Climate Change (C3S) and Atmospheric Monitoring (CAMS) services data
- EUMETSAT Data Store & Data Tailor
  - ❖ Access to all EUMETSAT meteorological, climate and ocean data through a suite of APIs, and incorporating data tailoring capability (including DT Standalone)
- EUMETCast Terrestrial
  - ❖ Near-real time data delivery via terrestrial network



# Data Access from EWC

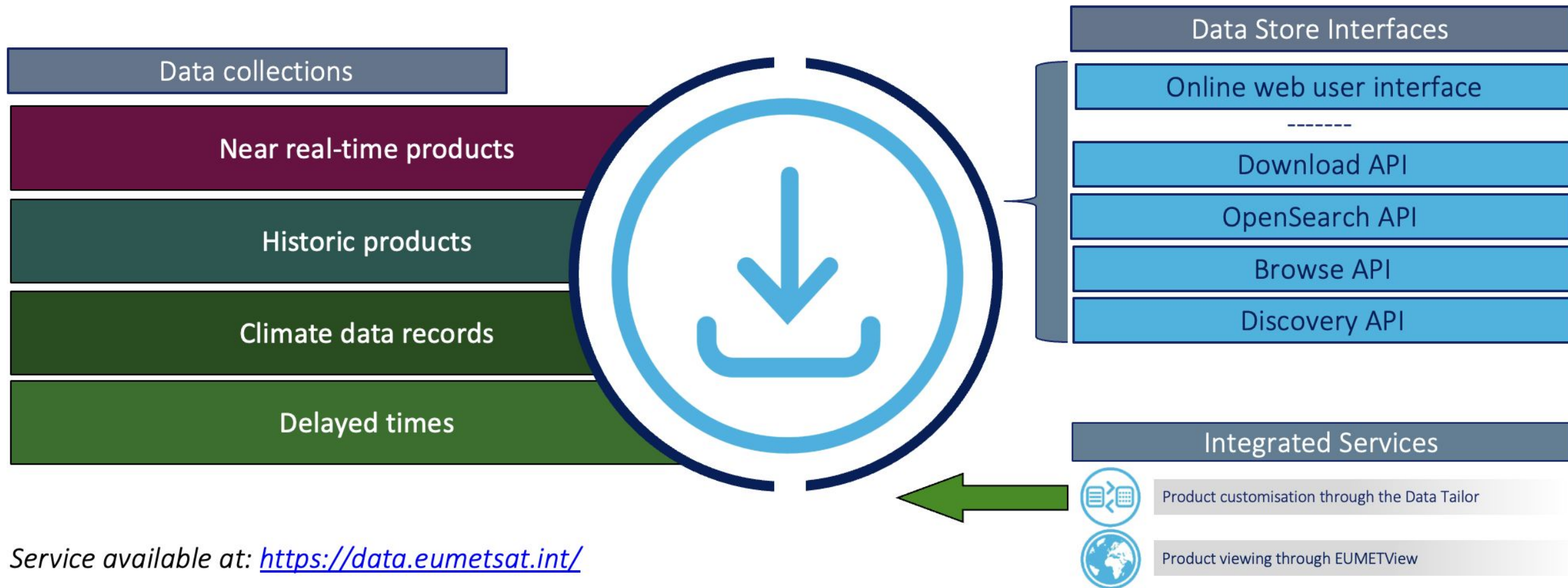
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# EUMETSAT Data Store

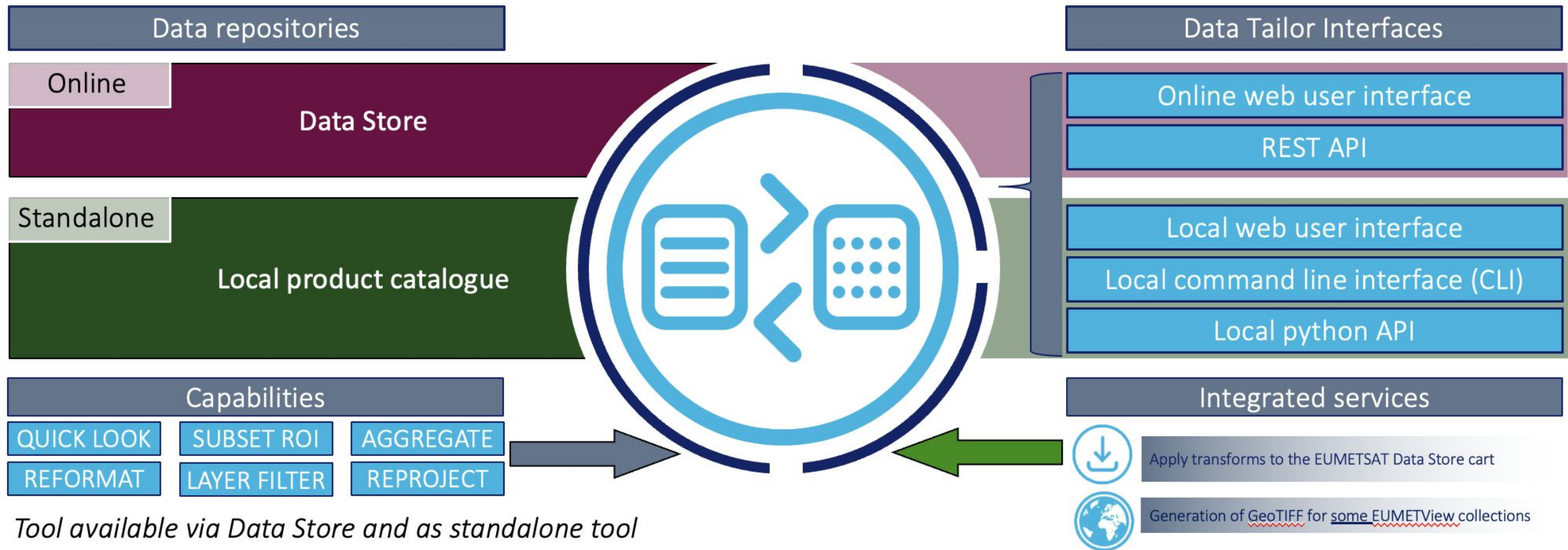
The EUMETSAT Data Store provides users with a download and [linked data tailoring service](#) for online data; providing access through an online web user interface and via a suite of APIs.



Service available at: <https://data.eumetsat.int/>

# EUMETSAT Data Tailor

The EUMETSAT Data Tailor allows users to subset and aggregate our data products in space and time, filter layers, generate quicklooks, re-project, and reformat into common GIS formats (netCDF, GeoTIFF, etc.). It offers a uniform way to transform both historical and near real-time satellite data provided by EUMETSAT.



*Tool available via Data Store and as standalone tool*

# EUMETSAT Data Access Client (EUMDAC)



```
username ~$ ssh -80-24
08081 ?? 2149.62 /System/Applications/App Store.app/Contents/MacOS/App
08084 ?? 0:00.06 /Library/Developer/PrivateFrameworks/CoreSimulator.Frs
08085 ?? 0:01.52 /Library/Developer/PrivateFrameworks/CoreSimulator.Frs
08086 ?? 0:00.06 /usr/libexec/taskgated
08087 ?? 11:50.88 /System/Applications/Maps.app/Contents/MacOS/Maps
07466 ?? 0:00.36 /System/Library/CoreServices/SharedFileListd
09039 ?? 0:02.44 /System/Applications/Reminders.app/Contents/MacOS/Remi
90080 ?? 0:00.06 /Applications/Trello.app/Contents/Frameworks/Trello He
90083 ?? 0:00.99 /Applications/Trello.app/Contents/Frameworks/Trello He
90084 ?? 0:00.62 /Applications/Trello.app/Contents/Frameworks/Trello He
90085 ?? 0:00.76 /Applications/Trello.app/Contents/Frameworks/Trello He
90086 ?? 0:01.48 /System/Cryptex/App/usr/libexec/PasswdReachAgent
90083 ?? 0:107.58 /Applications/Xcode.app/Contents/MacOS/Xcode
90086 ?? 0:00.77 /Library/Developer/PrivateFrameworks/CoreSimulator.Frs
90087 ?? 0:03.78 /Library/Developer/PrivateFrameworks/CoreSimulator.Frs
90087 ?? 0:27.85 /Applications/Xcode.app/Contents/SharedFrameworks/Sour
90082 ?? 0:00.56 /Applications/Xcode.app/Contents/Developer/Platform/iF
90197 ?? 0:00.30 /Applications/Xcode.app/Contents/SharedFrameworks/XCDS
40940 tsys01 0:00.02 login -pf username
40940 tsys01 0:00.02 -sh
44827 tsys02 0:00.02 login -pf username
44828 tsys02 0:00.03 -sh
44879 tsys02 0:00.01 ps -ax
(base) username@MacBook-Pro ~$
```

# EUMDAC Commands

```
# installing eumdac
$ conda install -c conda-forge eumdac

# print available collections
$ eumdac describe

# describe a collection
$ eumdac describe -c EO:EUM:DAT:METOP:AMSUL1

# search options
$ eumdac search -c EO:EUM:DAT:MSG:MSG15-RSS --start 2022-09-21T12:15 --end 2022-09-21T12:45

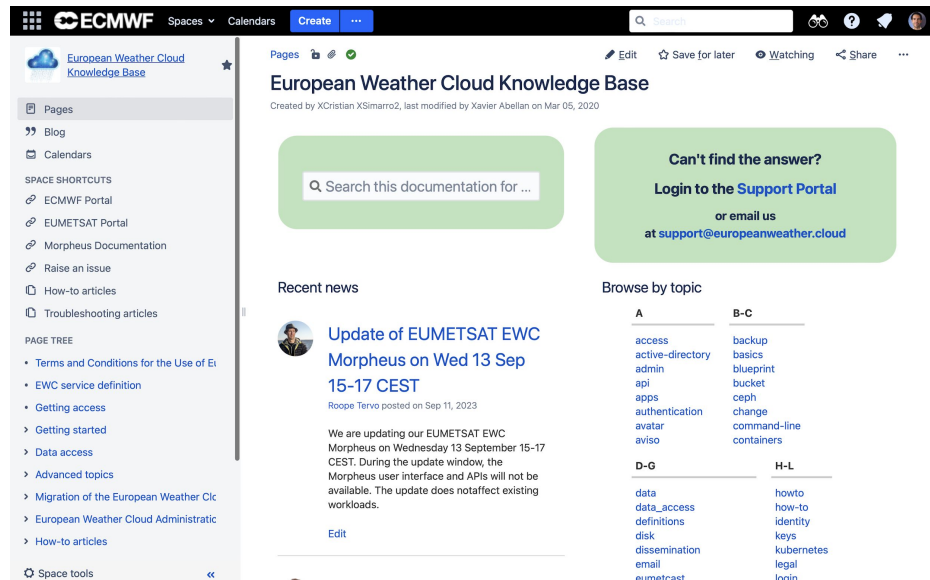
# download options
$ eumdac download -c EO:EUM:DAT:MSG:MSG15-RSS --start 2022-09-21T12:15 --end 2022-09-21T12:45

# use Data Tailor Web Service on latest HRSEVIRI product
$ eumdac download -c EO:EUM:DAT:MSG:HRSEVIRI --limit 1 --tailor "product: HRSEVIRI, format: geotiff"

# download latest HRSEVIRI product
$ eumdac download -c EO:EUM:DAT:MSG:HRSEVIRI --limit 1
# run it with Data Tailor Standalone
$ epct run-chain -f chain.yaml MSG3-SEVI-MSG15-0100-NA-20240321094242.192000000Z-NA.zip

# Script for downloading from Data Store and customising it with the Data Tailor Web Service
$ python examples/eumdac_dt_standalone.py
```

# Knowledge Base



The screenshot shows the Confluence interface for the 'European Weather Cloud Knowledge Base'. The page title is 'European Weather Cloud Knowledge Base', created by XChristian XSimarro2 and last modified by Xavier Abellan on Mar 05, 2020. A search bar is present with the text 'Search this documentation for ...'. A green callout box asks 'Can't find the answer? Login to the Support Portal or email us at support@europeanweather.cloud'. Below this, there is a 'Recent news' section with a post titled 'Update of EUMETSAT EWC Morpheus on Wed 13 Sep 15-17 CEST' by Roope Tervo, dated Sep 11, 2023. The post content states: 'We are updating our EUMETSAT EWC Morpheus on Wednesday 13 September 15-17 CEST. During the update window, the Morpheus user interface and APIs will not be available. The update does not affect existing workloads.' A 'Browse by topic' section lists various topics under four columns: A, B-C, D-G, and H-L. The 'A' column includes: access, active-directory, admin, api, apps, authentication, avatar, and aviso. The 'B-C' column includes: backup, basics, blueprint, bucket, ceph, change, command-line, and containers. The 'D-G' column includes: data, data\_access, definitions, disk, dissemination, email, and eumetrast. The 'H-L' column includes: howto, how-to, identity, keys, kubernetes, legal, and login.

<https://confluence.ecmwf.int/x/6J83Cg>



## KB Content



- Terms and Conditions
- Getting access
- Getting started
- Data access
- Advanced topics
- How-to articles
- Troubleshooting articles
- Discussion platform



## Blog Posts

# Support Portal

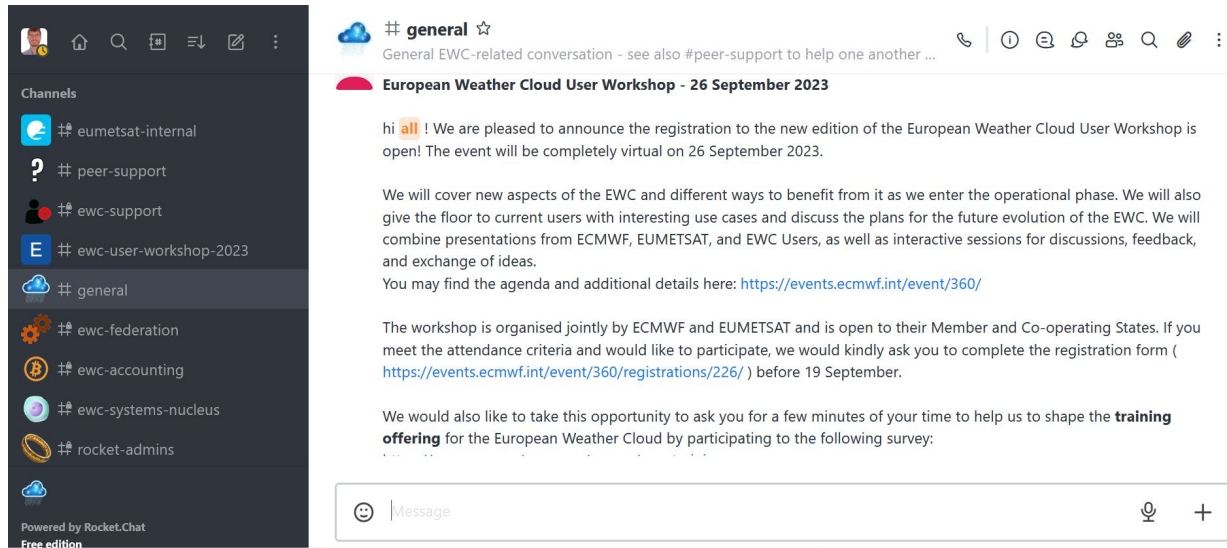
The screenshot shows the ECMWF user interface. At the top, there is a navigation bar with the ECMWF logo and a search bar. Below the navigation bar, there are several tabs: Operations, Provisioning, Library, Infrastructure, Back, and Administration. The 'SUPPORT PORTAL - EUROPEAN WEATHER CLOUD' option is highlighted with a red box, and a red arrow points from it to the right. Below the navigation bar, there is a 'FAVORITES' section with a table of instances. The table has columns for INSTANCE, TYPE, and ADDRESS. The first row shows 'my-new-vm' with type 'Rocky' and address '136.156.132.135'. Below the table, there are three charts: 'INSTANCE STATUS' showing 1 instance, 'INSTANCES BY CLOUD' showing 1 cloud, and 'DAILY CLOUD INSTANCES' showing a bar chart for the week of 9/19 to 9/25.

The screenshot shows the ECMWF European Weather Cloud support portal landing page. At the top, there is the ECMWF logo and the text 'European Weather Cloud'. Below the logo, there are two logos: EUMETSAT and ECMWF. Below the logos, there is a welcome message: 'Welcome! You can raise a European Weather Cloud request from the options provided.' Below the welcome message, there is a search bar with the text 'What do you need help with?' and a search icon. Below the search bar, there is a 'Search help' link. Below the search bar, there are three categories of help: 'General question' (Get assistance for general questions), 'Request access' (Request access to the European Weather Cloud), and 'Report a problem' (Report a problem in the European Weather Cloud).

<https://jira.ecmwf.int/servicedesk/customer/portal/9>

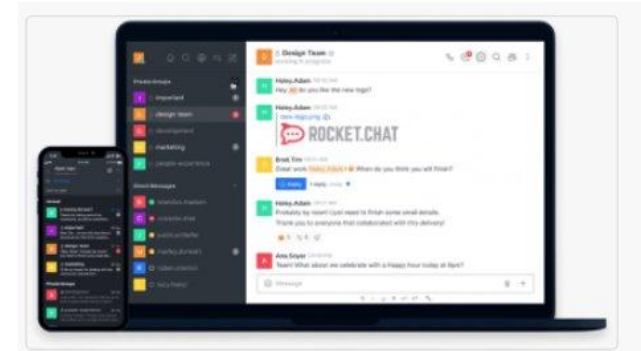


# EWC Discussion Platform: Rocketchat



## Installation

- Web based
- Desktop App
- Mobile



## How do I join?

Member and Cooperating States users can self-register (based on email domain):

<https://chat.europeanweather.cloud>

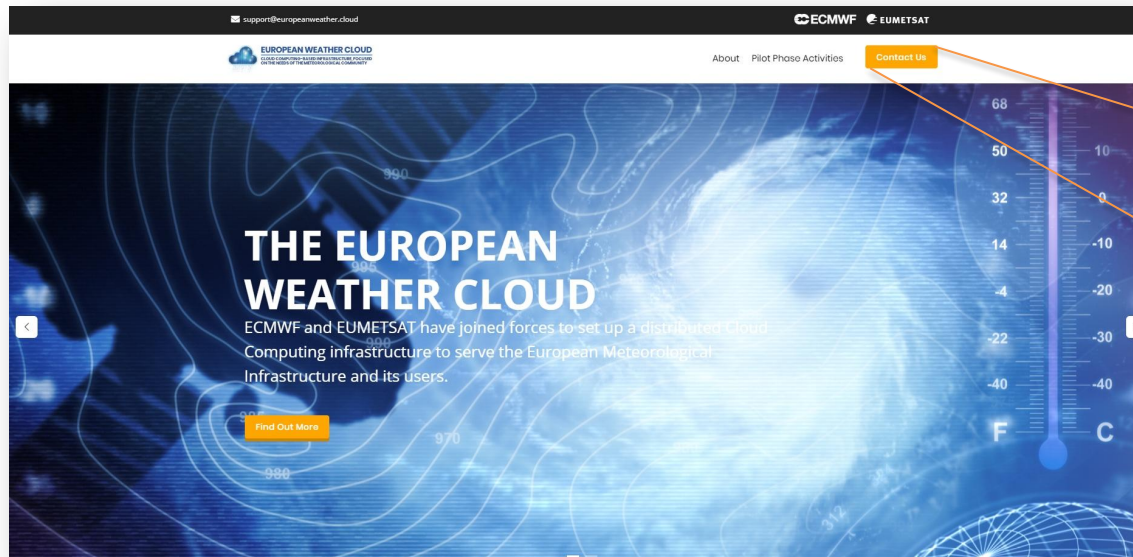
External users can't self-register but can be invited. They need to be accepted by admins.



# Contact Us and Request Access



[www.europeanweather.cloud](http://www.europeanweather.cloud)



Contact Us



[support@europeanweather.cloud](mailto:support@europeanweather.cloud)





# Questions?



**Tutorial:**

**<https://confluence.ecmwf.int/x/lwKaFQ>**