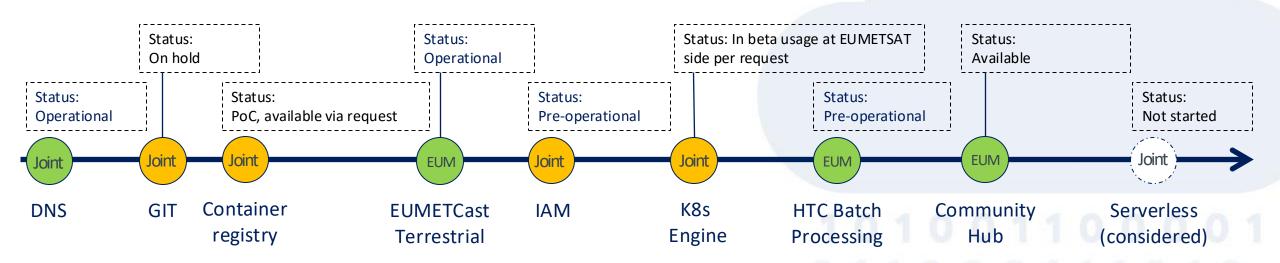


Moving forward to provide platform services

- Currently, the service mainly laaS meaning that users can deploy VMs and additional infrastructure resources
- We are updating the EWC to contain more centrally managed platform and software services
- All services are first released as beta versions and later either operationalized or terminated based on their usefulness and feasibility
- The roadmap is open for updates and reprioritization, based on the user needs





EUMETSAT and ECMWF are actively working to harmonise the service over the whole EWC



Developed platform services will be harmonised as part of platform services development



VM plans and private network naming will be harmonised via infrastructure update



EUMETSAT default setup and various instance types will be harmonised in Community Hub



4 identified differences are not currently planned to be harmonised

We analysed ~120 service aspects ~100 of them are harmonised

All Terraform and Ansible templates work at both side with minimal changes



EUMETSAT and ECMWF are considering alternatives for cloud management layer

Example of required features in the analyses

The EWC Team did an analyses of required features and possible outcomes and asked from Users in the previous user survey about Morpheus

 8 verbal comments regarding Morpheus, all negative or very negative, most with specific point. Many challenges can be addressed by lower-level access to OpenStack

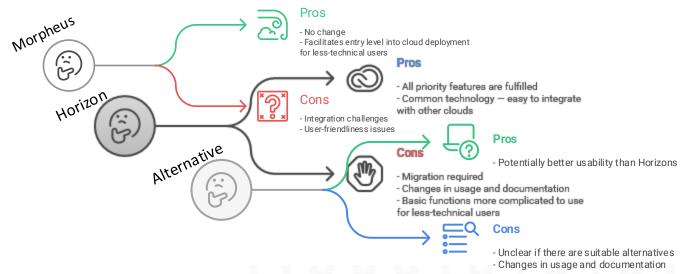
Morpheus provides some crucial features such as easy deployment for non-technical users, monitoring of the VMs, and secret management

Alternatives like OpenStack have a steep learning curve

No easy alternatives but we shall continue evaluating the best possible options. Any potential changes would naturally happen with sufficient transition period, documentation, and training

Comments welcome!

MUST HAVE NICE TO HAVE User management in IAM integration **VMs** Full admin to the tenancy Run tasks and workflows (incl. VMs, network, storage) Centralize log Commonly supported API management User Interface for the basic Secret management functions Support for application and infrastructure blueprints Monitoring





Small update to the Terms & Conditions

Small updates to the EWC Terms and Conditions are planned to clarify tenants' responsibilities on their tenancies, used data, and software



The Tenancy Owners are ultimately responsible for all activities taking place within their Tenancy. The Tenancy Users are responsible for properly using the EWC Services to secure, protect and backup their accounts.



Access to the EWC Services is restricted to a Tenancy Owner specifically authorised by the Authorizing Officer or a Tenancy User specifically authorised by a Tenancy Owner or another Tenancy User.



The Tenancy Owner and Tenancy User shall **implement**, in coordination with the European Weather Cloud Partners, the required **technical safeguards** to ensure that only those with a right to access the EWC Services can do so.



If the Tenancy Owner or Tenancy User becomes aware that their account is **compromised** or becomes aware of any non-permitted activity, they shall **inform** immediately the European Weather Cloud Partners through the <u>European Weather Cloud Support</u> Portal.



Users providing software, data and products shall retain ownership in the items provided



The European Weather Cloud Partners reserve the right to **monitor** and screen on-going **aggregate activity** deemed to be incompliant with Terms and Conditions or otherwise unacceptable or inappropriate, be it for legal or other reasons. Non-compliance with these Terms and Conditions and any illegal or improper use of the EWC Services may lead to the immediate **suspension** of Tenancy



The European Weather Cloud Partners shall bear no liability for any consequences, whether direct or indirect, arising from the use of the EWC Services except in the case of wilful misconduct or gross negligence.



https://confluence.ecmwf.int/display/EWCLOUDKB/Terms+and+Conditions+for+the+Use+of+European+Weather+Cloud+Operational+Service



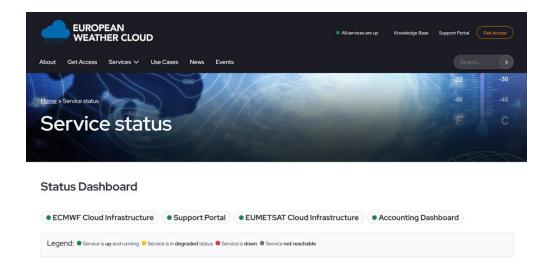


EWC Service Status page

In June 2025, a dedicated Service Status page has been introduced within the EWC Website meant to be the reference point for real time updates on the operational status of all EWC services.

With this new feature, users can:

- monitor live service availability
- consult timely **notifications** about any service disruptions
- stay informed about scheduled system maintenance

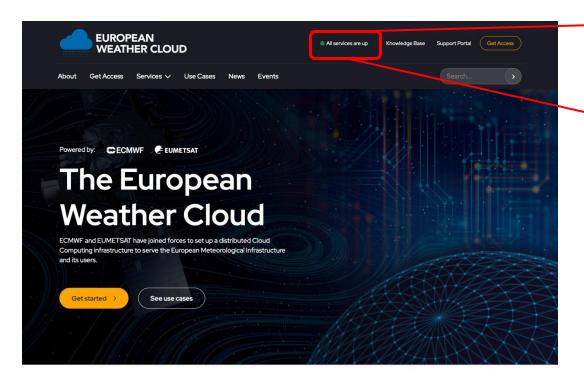


https://europeanweather.cloud/service-status

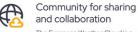
24/09/2025 EWC Status Dashboard



EWC Service Status page



Key benefits for the user



The European Weather Cloud is a hub for the meteorological

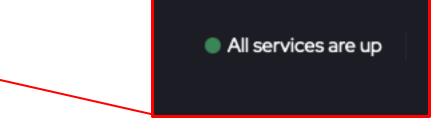


Data access
The platform offers optimised

The platform offers optimised access to the data repositories of ECMWF and EUMETSAT.



Computing and storage
Data proximate cloud computing
facilities and storage solutions are
provided to boost research,



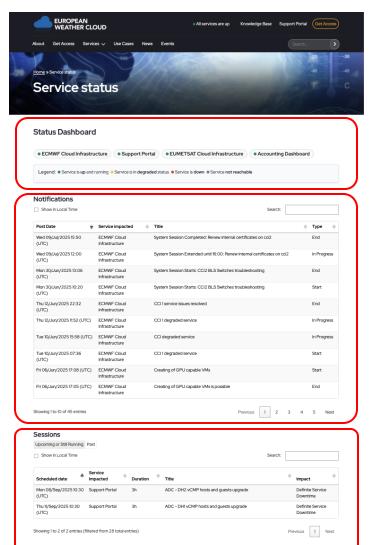
The coloured dot follows the convention:

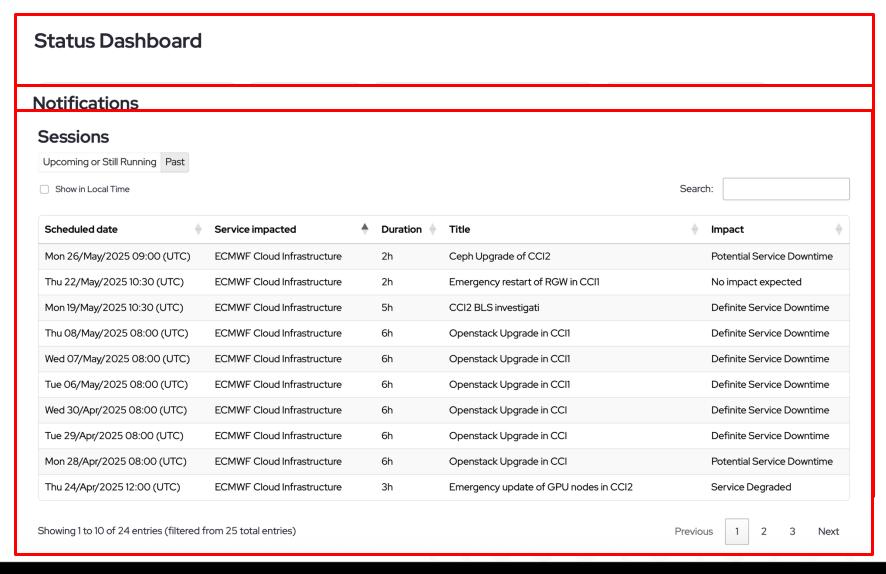
- Green → All services are up and operational
- Orange → Some services are in a degraded status or down
- Red → Both ECMWF and EUMETSAT Cloud Infrastructures are down



EWC Service Status page

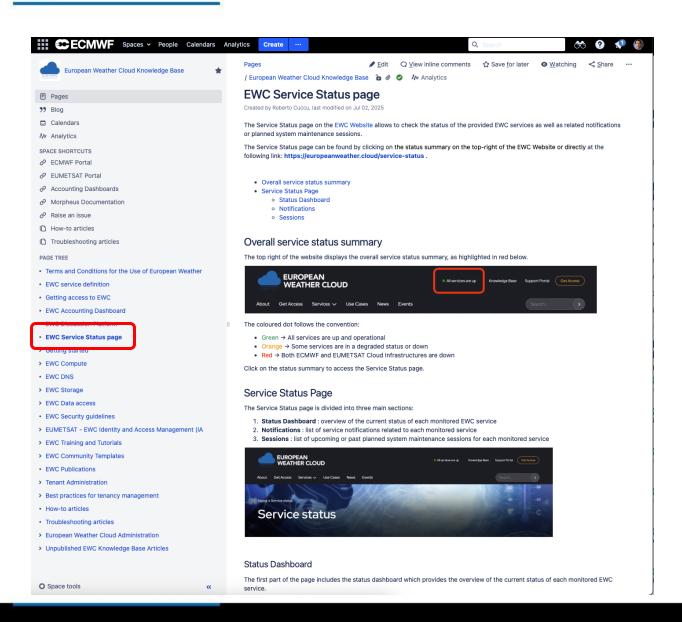
https://europeanweather.cloud/service-status







Status Dashboard



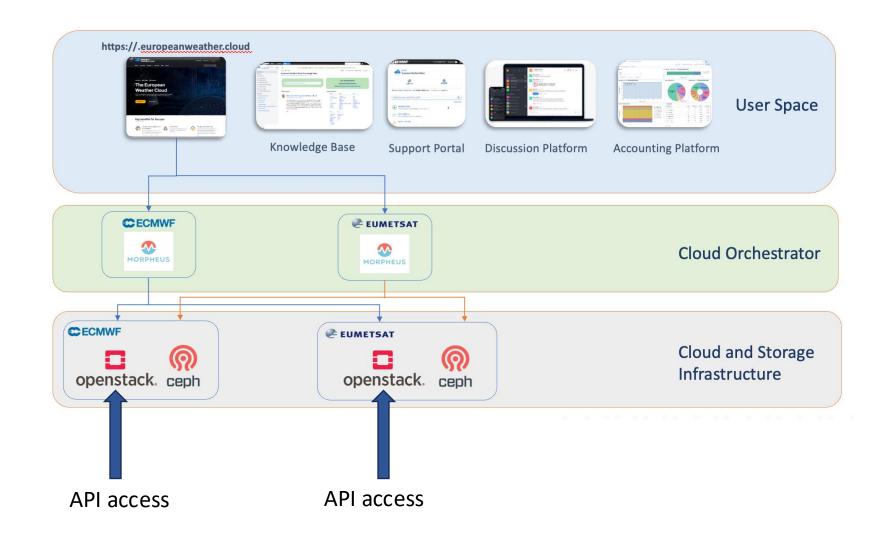
More info in the EWC Knowledge Base documentation:

https://confluence.ecmwf.int/x/QCo_I





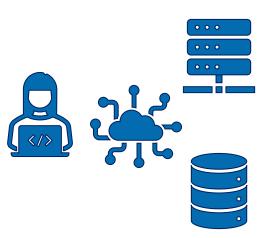
Openstack API access





Motivation for Openstack API access on EWC

- Automate the deployments
- Support to Infrastructure as Code



Improve synergies and harmonization with other infrastructures















How to request Openstack Application Credentials

https://support.europeanweather.cloud





Openstack App Credentials Request

<u>Description</u> including:

- Tenancy Name (e.g. ms-nmhsproject)
- Scope and description of use
- Owner (if different from the requestor)
- Any other relevant note



openrc.sh file

clouds.yaml file

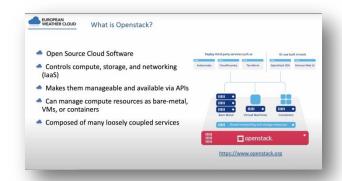


Documentation and Training

EWC Knowledge Base

- EWC Compute
 - · Working with Apps and Blueprints in Morpheus
 - · Reconfigure instances in Morpheus
 - · Creating Security Groups in Morpheus
 - > VM Backups in Morpheus
 - > GPUs
 - ▼ EWC Openstack API access
 - EWC ECMWF CCI Openstack version and services
 - EWC EUMETSAT Openstack version and services
 - EWC How to request Openstack Application Credentials
 - EWC OpenStack Command-Line client
 - . EWC VM images and default users
 - · EWC How to create a VM using the Openstack CLI
 - > EWC IaC via Terraform and OpenTofu
 - EWC How to revoke Openstack Application Credentials

Training Webinars





Introduction to Openstack
API access and usage in EWC

OpenStack Infrastructure as Code in the EWC

https://confluence.ecmwf.int/x/TCRNH

https://confluence.ecmwf.int/x/-xO2G





Contacts and references



https://europeanweather.cloud



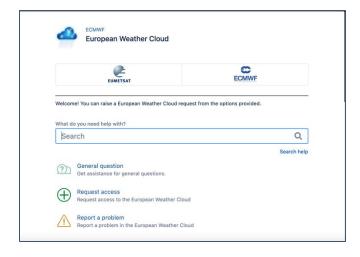


https://chat.europeanweather.cloud

https://support.europeanweather.cloud

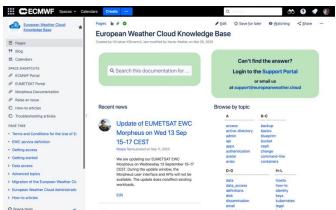


Support Portal





Knowledge Base





EWC Community Hub

8th EWC User Workshop (hybrid), 18th September 2025

Samuel Langlois (ECMWF)
Francesco Murdaca (EUMETSAT)



Agenda

≜EWC Community Hub

- Definition and Goals
- Target Users and Roles
- Type of items, Item Metadata and how to create an item
- How to contribute with your item

EWC Community Hub Dashboard

- Description
- Features (search, filters, metadata)

Deploying EWC Community Hub items

- Ansible
- Terraform
- o CLI





EWC Community Hub

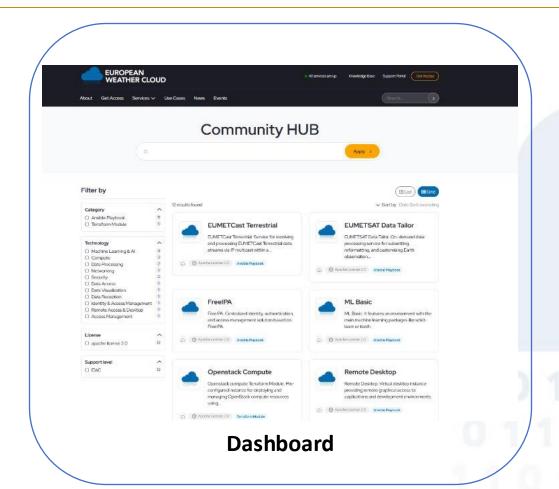


EWC Community Hub

As with the whole EWC, using the service does not affect IPRs

The European Weather Cloud (EWC) Community Hub wants to provide users with a centralized platform where users can discover, evaluate, select and deploy items and services for the European Meteorological Community.





- Ansible
- OpenTofu/Terraform
- Helm Charts
- EWC CLI python package
- •••

Tooling & Documentation



Goals

- **Engagement and collaboration**: Foster collaboration among EWC users of EUMETSAT & ECMWF Member and Co-Operating States.
- Improve usability: Cloud technologies tailored for meteorological applications.
- Reduce redundant effort: Reuseable and community-vetted Items that help you avoid redundant development.
- **Foster learning**: Practical examples and self-training on cloud technologies or exploration of use-cases that run natively in the EWC.
- Turn legacy software into cloud-compatible solutions: Existing software turned into cloud-native tools, through shared contributions.



Target Users and Roles

Audience	Roles
Everyone	Browse, utilize Items
EWC Users	All of the above + Apply Items directly in EWC tenancies
EWC Contributors	All of the above + Contribute and maintain Items; Engage with the community
EWC Admins	All of the above + Approve/remove Items; Provide guidance and guard-rails; Maintain only EWC Items



Adding a new item to the EWC Community Hub

Proposal



Onboarding evaluation



Community **Hub Listing**



Community Engagement



Contributor

EWC users that have account



EWC staff



Contributions needs to be checked for required

metadata. They need to

- have:
- Name and description
- License
- Owner
- **Indication of planned** support level



EWC staff

Accept the proposal



EWC staff



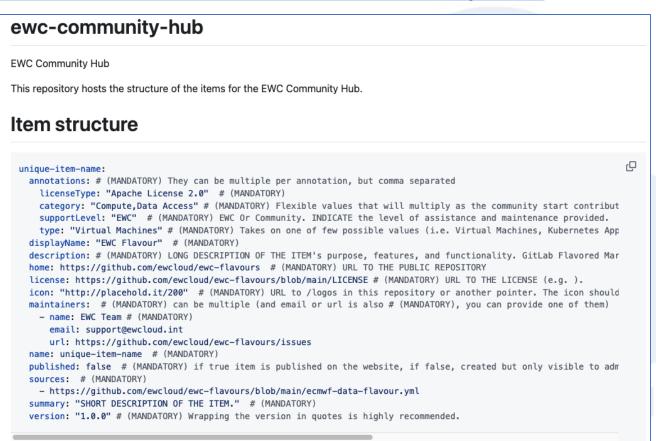
Contributor

- Handle feedback
- **Monitor**
- Provide Support
- Handle feedback
- **Update**



Creating a new item (Pull Request)

- Fork the GitHub repository https://github.com/ewcloud/ewc-community-hub
- Specify the metadata
- Propose it
- •



If you are not familiar with GitHub, you can open a ticket, EWC team will support!



Update an item in the EWC Community Hub





Onboarding evaluation

LIGHT VERSION



EWC staff

Contributor

EWC users that have account

Contributions needs to be checked for required metadata. They need to have:

- Name and description
- License
- Owner
- Indication of planned support level



Community Hub Listing



Community Engagement



EWC staff

Accept the

proposal



EWC staff



Contributor

- Handle feedback
- Monitor
- Provide Support
- Handle feedback
- Update

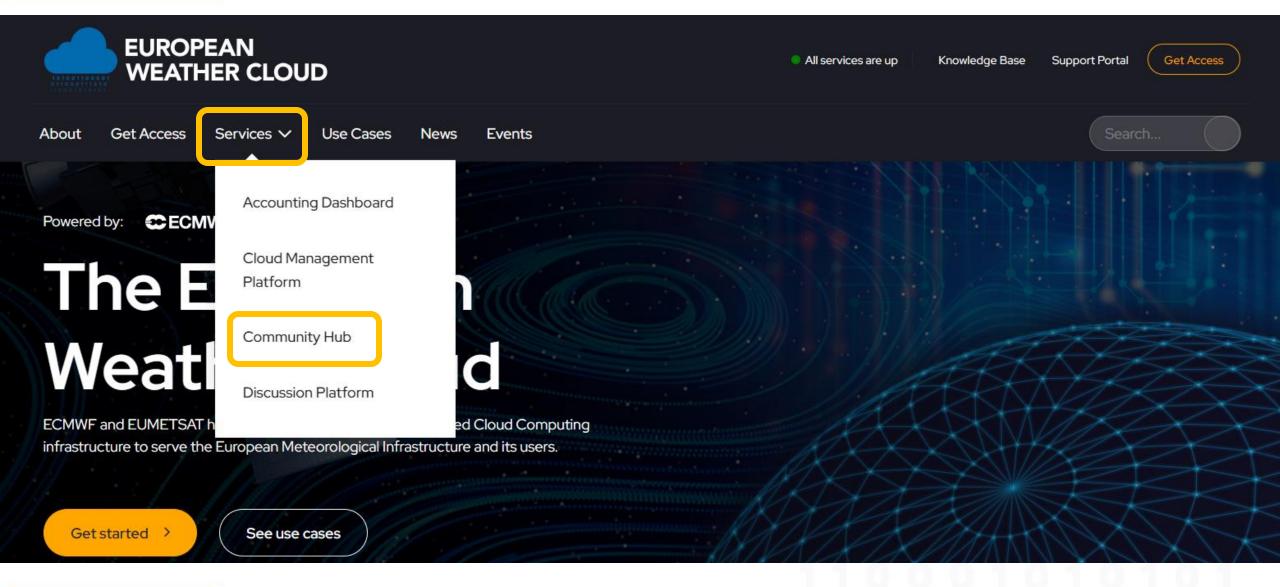


EWC Community Hub Dashboard

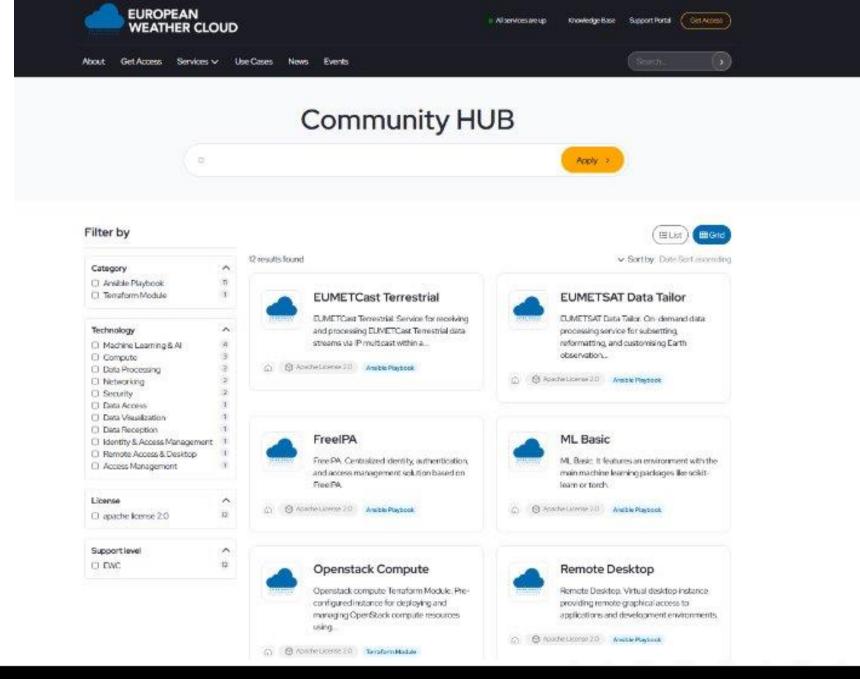
24/09/2025 EWC Community Hub



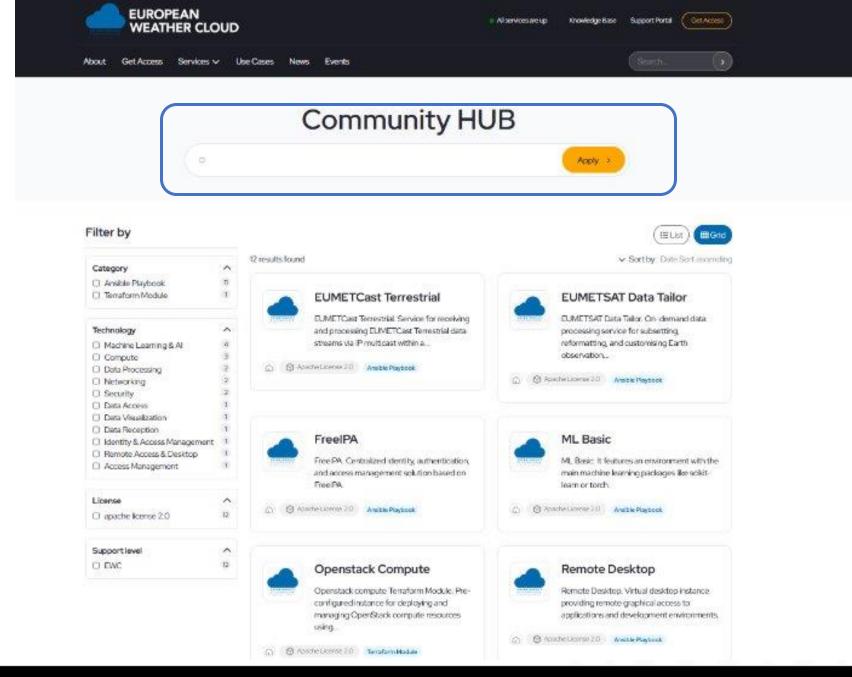
Community Hub in the EWC website



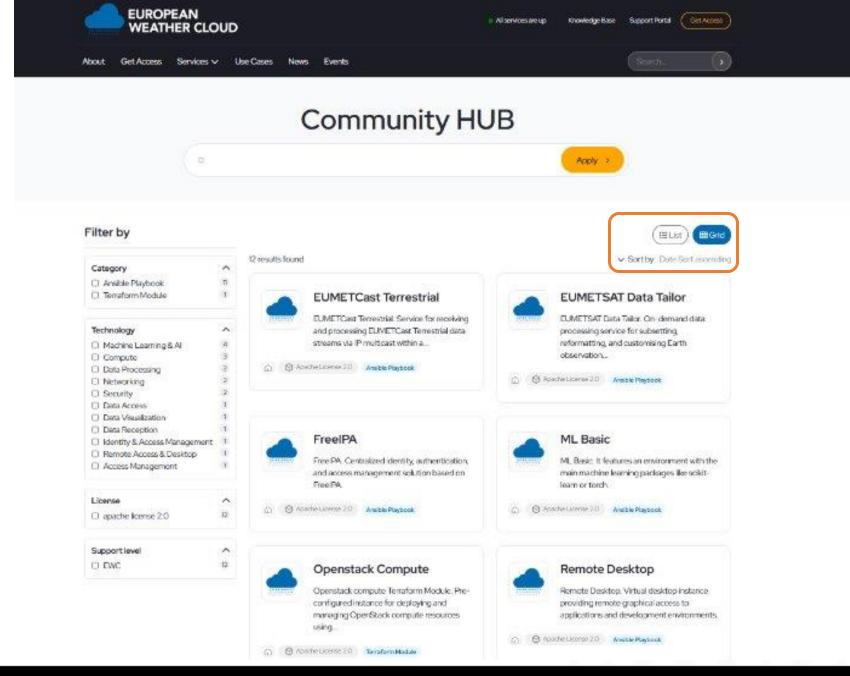




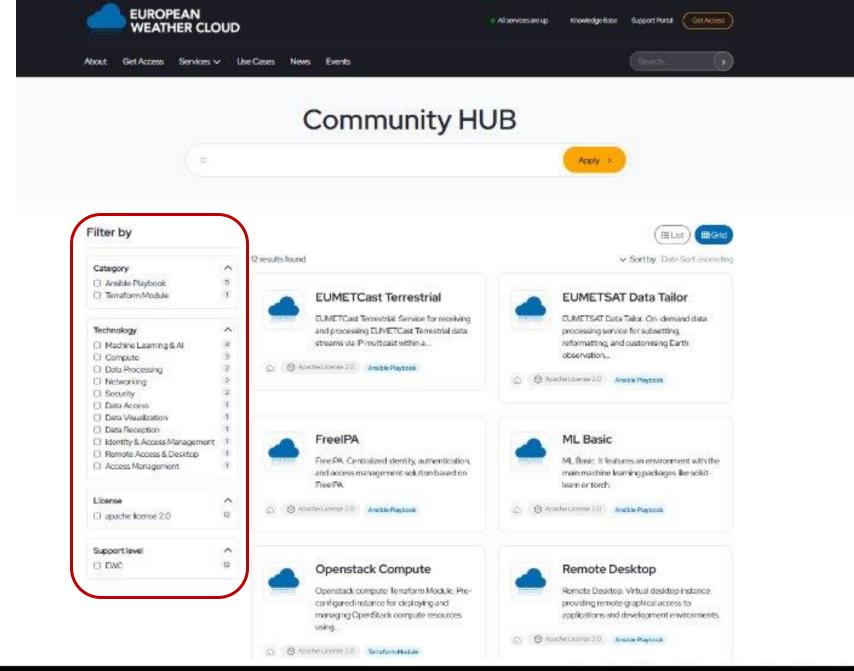




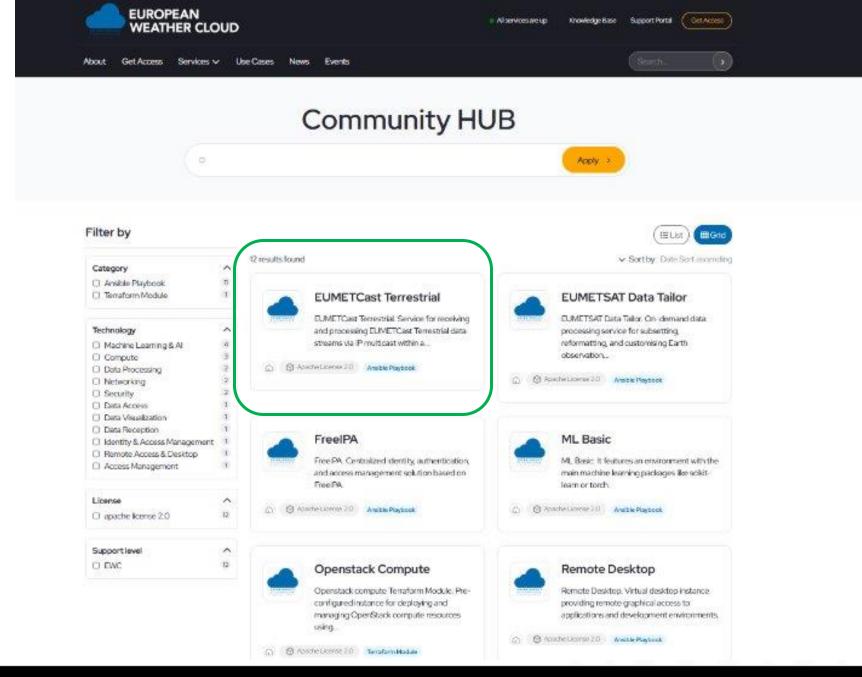












ECMWF Data Flavour







Maintainers

⊠ support[at]europeanweather.cloud

License

Apache License 2.0

Support level

EWC

Category

Compute Data Access

ECMWF Data Flavour

Includes the basic ECMWF software stack, with MARS client and an environment with ecCodes, Metview, Earthkit and Aviso.

Getting started

- Clone or download the code from the source repository.
- Install ansible and other dependencies. You may want to do it in its own virtual environment (pip install -r requirements.txt)
- Fetch the external requirements
- \$ ansible-galaxy role install -r requirements.yml roles/
- · Define your inventory in inventory
- Run the apropriate playbook
- \$ ansible-playbook -i inventory ecmwf-data-flavour.yml

Variable	Description	Type Default	Required
reboot_if_required	Reboot the instance if required after an update.	booleantrue	no
ecmwf_toolbox_env_wipe	Decide whether to wipe the environment if exists prior to a reinstallation.	boolean no	no
ecmwf_toolbox_env_wipe	Name of the environment containing the ECMWF toolbox.	string ecmwf- toolbox	no

ECMWF Data Flavour







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ECMWF Data Flavour







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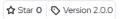
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ECMWF Data Flavour





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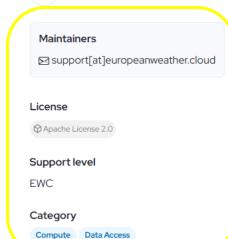
Home » Community HUB » ECMWF Data Flavour

ECMWF Data Flavour









ECMWF Data Flavour

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ECMWF Data Flavour







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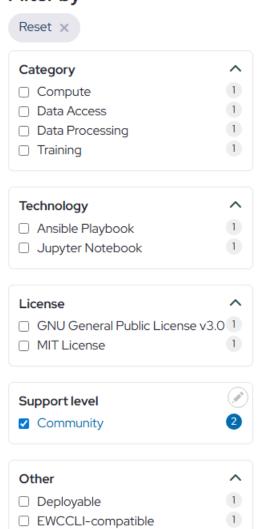
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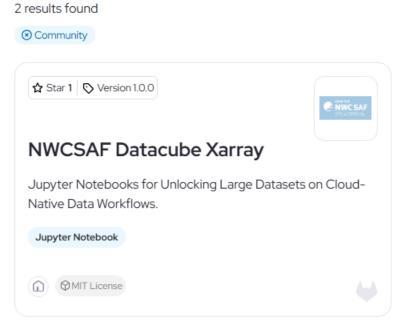


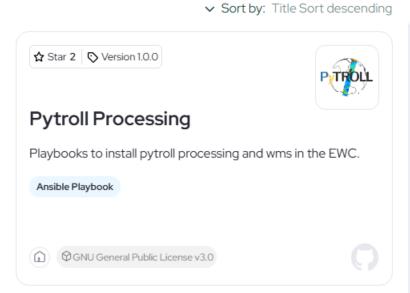
Community Items













Deploying EWC Community Hub items

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Not all items are deployable

- Deployable items can be executed to provision, configure or deploy a resource:
 - Ansible playbooks
 - Terraform modules
 - Helm charts
 - Ansible playbook/Terraform modules
 - •
- Non deployable items support your workflows, for instance:
 - Jupyter notebooks
 - Tools
 - Examples
 - Libraries
 - ...



Deploying items by technology







Items technology

Created by Francesco Murdaca, last modified just a moment ago

if there is a technology or popular framework you wish was featured on the Community Hub, please let us know over the EWC Support Portal or the peer-support channel on the EWC discussion platform.

This page describes more in details what technologies are currently considered in the EWC Community Hub. (but we are not limiting them!)

Technology	Description	Example Use Case	Deployment Pre-requisites	References
Ansible Playbook	Configuration blueprints, mainly used for compute instances, but capable of much more	Setting up software on existing VMs	Ansible installed, SSH access, compute instance on EWC	Ansible Playbook
Terraform Module	Infrastructure as code (IaC) used to provision compute, network and storage resources in the cloud	Provisioning a new Kubernetes cluster	Terraform installed, OpenStack application credentials	Terraform Module
Helm Chart	Deployment manifests for containerized application tailored for running on Kubernetes (production-grade distributed compute service)	Deploying web application with load- balancing, logging, monitoring and alerting capabilities	Helm client installed, Kubernetes cluster on EWC	https://helm.sh/docs/topics/charts
Notebook	Python or R based interactive interface for documentation and execution of algorithms, code snippets or statistical models	Publishing a notebook for a step-by-step data fitting approach and result plots	Jupyter frameworks (e.g. Jupyterlab, Jupyterhub)	https://jupyter- notebook.readthedocs.io/en/latest
Dataset	Pointers to data collections, data samples, model weights, etc	Sharing a wide table, periodically updated, for reporting on frontal and cyclonic lift	Dependent on the type of dataset	N/A
Container Image	Software neatly bundled up with all of its dependencies, and simple to execute, across operative systems and CPU/GPU architectures, as containerized applications	Open-sourcing an image equipped with a scientific application, installable and usable via a single command	Container runtime installed, compute instance or Kubernetes cluster on EWC	Containers explained: What they are and why you should care
Documentation	Tutorials, step-by-step guides, reports, and any other source of information relevant in the context of the EWC	Publishing a how-to article about running a particular GPU-accelerated data pipeline on EWC	N/A	N/A

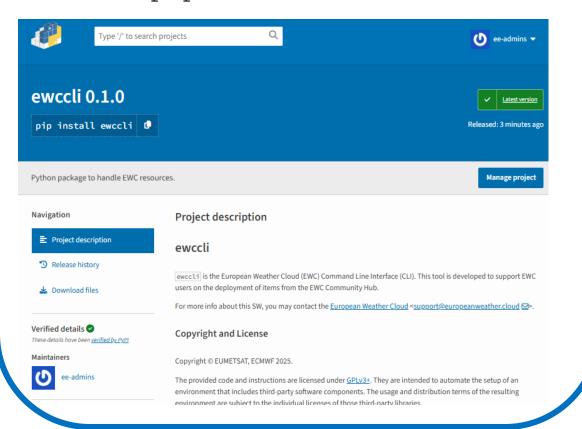


Deploying items by ewccli

Use virtual environments to avoid clashes with existing dependencies!

PyPI

pip install ewccli



conda-forge

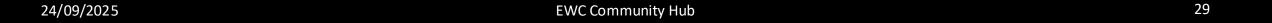
COMING SOON

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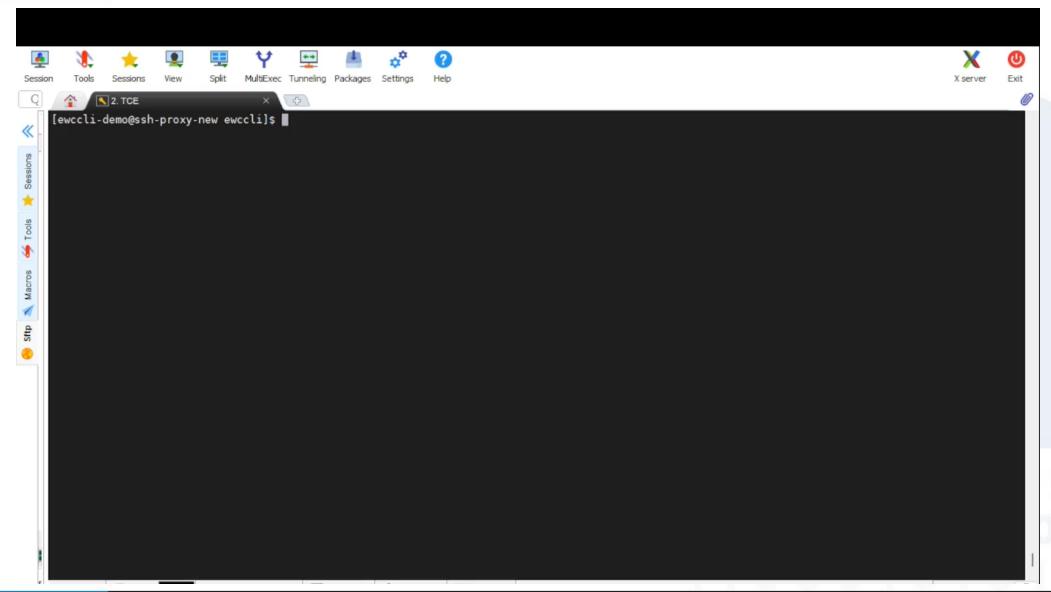
Deploying items by ewccli

- ewc login
- ewc hub list
- ewc hub deploy pytroll





Deploying items by ewccli



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Links

- EWC Community Hub Dashboard: <u>Community HUB | The European Weather Cloud</u>
- EWC Community Hub Documentation: <u>EWC Community Hub European Weather Cloud</u>
 Knowledge Base ECMWF Confluence Wiki
- EWCCLI: <u>ewccli · PyPl</u>
- EWC Community Hub Tooling <u>Community Hub Tooling European Weather Cloud</u> Knowledge Base - ECMWF Confluence Wiki

24/09/2025



Questions & Feedback



We'd love to hear your thoughts and questions.

Feedback on the Community Hub

24/09/2025

