EUROPEAN WEATHER CLOUD

EWC Technical Basics

9th EWC User Workshop (hybrid), 22th September 2026

Tomas Gonzalo

Agenda

- EWC Technical Basics
  - IAM
    - Basic Concept
    - Overview of EWC Services and login
    - User Role and Permissions
  - Cloud Management UI and API
    - Login
    - Overview of the resources
    - Application Credentials
  - Storage
  - DNS
  - Accounting
  - Discussion Platform
  - Contacts and references

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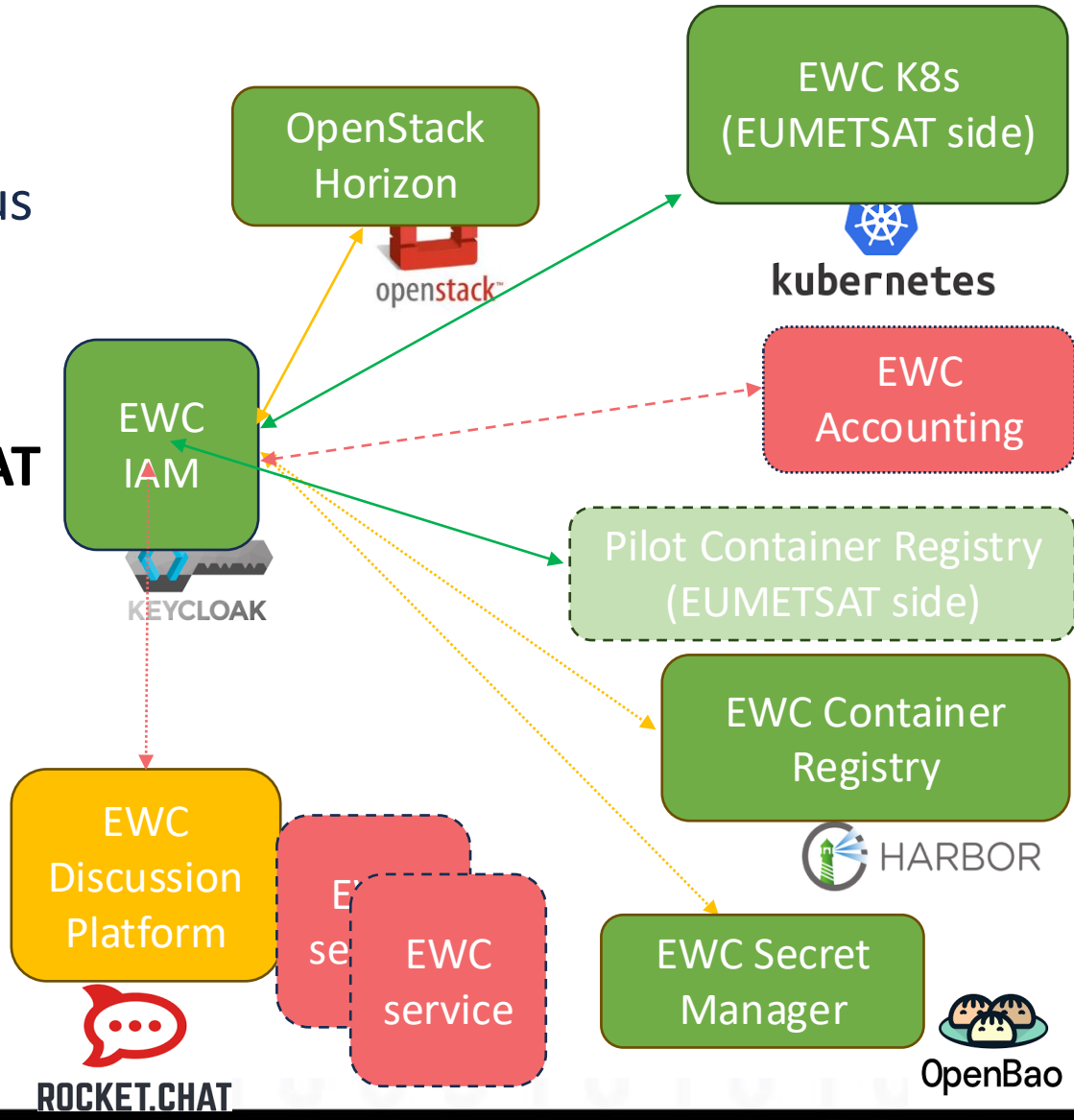
EWC IAM – Access to services

- EWC IAM, based on Keycloak, provides central identity and access management
  - Manages user identities and access across various EWC services
  - e.g. needed to log in to OpenStack

- **Harmonisation - one IAM for ECWMF and EUMETSAT**

- EWC IAM can federate with other existing IAMs
  - e.g. ECMWF IAM, EUMETSAT EOportal
  - Possible to integrate your organisation's IAM so you can sign in with your own credentials
    - Contact us for more info!



EWC IAM – Basic Concepts

Tenants Realms

A Realm in Keycloak is like a space where user identities, roles, and permissions are managed. Realms are logical units within Keycloak that keep different applications and their user bases separate. Each realm has its own setup, including unique configurations, users, roles, and clients.

For the EWC, each tenant in the EWC has its own unique Realm created during the on-boarding process.

Users

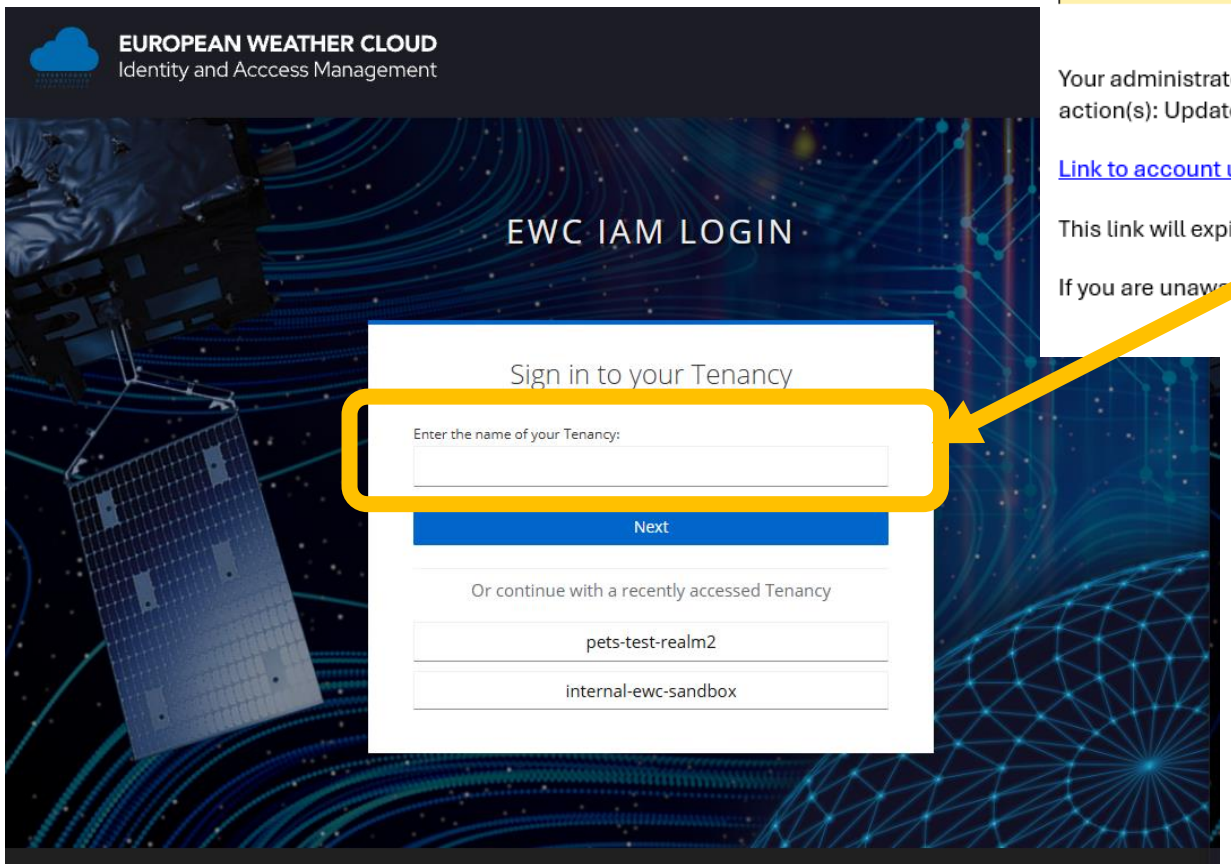
A User in Keycloak is anyone who needs to access the EWC services. Users have unique identities (like usernames and passwords) that they use to log in. Users are unique within a single tenancy. **Users having access to multiple EWC tenancies have a dedicated account in the IAM of each tenancy.**

Roles

Roles define what actions users or groups of users can perform within the EWC IAM and the connected clients (applications and services). **Tenant admins can create additional roles if their specific use cases require them.**

EWC IAM – Tenancy names

Tenancy name is the input to start with EWC IAM!



Update Your Account

EW European Weather Cloud IAM <systems@europeanweather.cloud>
To Francesco Murdaca

Reply | Reply All | Forward

Mon 16/03/2026 17:22

If there are problems with how this message is displayed, click here to view it in a web browser.

WARNING: This email originated outside the organisation. Treat links and attachments with caution.

Your administrator has just requested that you update your internal-eumetsat-dataprocessing EWC IAM account by performing the following action(s): Update Password. Click on the link below to start this process.

Link to account update

This link will expire within 12 hours.

If you are unaware that your administrator has requested this, just ignore this message and nothing will be changed.

EWC IAM – Account types

EWC IAM account is username and password that gives access to multiple EWC services integrated within EWC IAM with one set of credentials

- Credentials per Tenancy Realm. **Email can be the same, but you will be accessing as user in that specific tenancy.** Tenancy remain isolated environments. **If you want to change tenancy you need to logout from EWC IAM and relog in with another tenancy name.**

EWC Federated IAM account is username and password existing in a federated IAM that can be used to login to EWC services (e.g. ECMWF SSO, EUMETSAT User Portal)

- EWC IAM can federate with other existing IAMs as well (e.g. ECMWF SSO, EUMETSAT User Portal) therefore you will be able to use credentials from federated IAM if they are enabled for a certain service. If you would like to federate another identity provider with EWC IAM, **please raise a support ticket here**.

EWC IAM – Service Access Summary Table

Service Access Summary Table

Some EWC services exist on both EWC sites (ECMWF and EUMETSAT), such as core infrastructure services or Kubernetes service, while others are hosted only on one site but remain accessible to all EWC users. Because the two sites use different service URLs, you may see multiple entry points, but authentication is unified — all sites use the same EWC IAM login.

When you log in to an EWC service using IAM Single Sign-On, your browser keeps your session active. If you need to access **another tenancy**, you must **log out of the service first and from the SSO** before logging in again to another tenancy. Please check EWC IAM - Troubleshooting and FAQs for more information.

Service	Logging in using EWC IAM user credentials	Logging in without IAM / using local user credentials
EWC Accounting	N/A	**https://accounting.europeanweather.cloud/** (follow documentation EWC Accounting Dashboard)
EWC Cloud Management UI (Morpheus) **(To be decommissioned by the end of 2026)**	**ECMWF**: N/A → refer to local user login **EUMETSAT**: Logging in to Morpheus - Tenant login page (only available for the old cloud to a subset of users)	Logging in to Morpheus
EWC Cloud Management UI (OpenStack Horizon)	ECMWF: ▪ **CCI1** : https://dashboard.os-api.cci1.ecmwf.int/ ▪ **CCI2** : https://dashboard.os-api.cci2.ecmwf.int/ EUMETSAT: Please be aware you can use it only if you received onboarding to EWC IAM and to the OpenStack Horizon user interface for your tenancy. • **R1:** https://horizon.api.r1.cloud.eumetsat.int/ • **R2:** https://horizon.api.r2.cloud.eumetsat.int/ (follow documentationEWC Cloud Management UI - Accessing the Horizon portal)	N/A
EWC Container Registry	COMING SOON	N/A
EWC Discussion Platform	N/A	**https://chat.europeanweather.cloud/** (follow documentation EWC Discussion Platform)
EWC K8s	**ECMWF**: COMING SOON as part of OpenStack Horizon **EUMETSAT**: • **R1:** https://k8s-r1.kkp.cloud.eumetsat.int/ (new cloud) • https://k8s.eumetsat.europeanweather.cloud/ (old cloud, to be removed by December 2026) (documentation: EUMETSAT EWC Managed Kubernetes Service - Note: this is still in pilot phase, if you want access please raise a support ticket)	**ECMWF**: ECMWF EWC Managed Kubernetes Service EUMETSAT: N/A
EWC Secret Manager	COMING SOON	N/A

Link to page: EWC Services Login

EWC IAM – User Roles and Permissions

IAM-Related Roles

These roles are related to the Identity and Access Management (IAM) system:

- **ewc-iam-tenant-admin:** This role is for administrators who manage IAM. Users with this role can create, delete, and modify other users, assign roles, and eventually manage authentication clients and identity providers.

- **ewc-iam-user:** This role is for regular users. Users with this role can log in to the IAM self-service portal and update their basic profile information.

EWC IAM – User Roles and Permissions

EWC Services-Related Roles

These roles apply to the various applications integrated within the EWC. The specific features each role provides may vary depending on the application:

- **ewc-app-admin:** This role is for users who need full administrative access to any integrated application. They can manage, deploy, and create or modify resources within the applications.
- **ewc-app-maintainer:** This role is for users who have advanced permissions but not full administrative rights. They can deploy, create, and modify resources within integrated applications.
- **ewc-app-user:** This role is for regular users who need access to integrated applications but do not require administrative or advanced maintenance permissions.

IMPORTANT: Every service will have a specific page to describe the mapping between EWC services roles and specific service roles.

EWC IAM – Documentation

EWC Identity and Access Management (IAM) Service

Created by Alae Zouitni, last updated by Samuel Langlois on Jun 25, 2026 • 1 minute read

The EWC IAM (Identity and Access Management) system, based on Keycloak, provides a central identity and access management for the European Weather Cloud. It helps manage user identities and access across various EWC services.

It is a core component of the European Weather Cloud, available to all tenancies (at the EUMETSAT side of the EWC currently). It handles user identities and access for services like Morpheus and other EWC integrated applications.

Tenant Admins are in charge of managing IAM accounts and user roles within their tenancy.

You can find more details about using IAM on the following pages:

- EWC IAM - Basic Concepts
- EWC IAM - Accessing the system
- EWC IAM - Accessing EWC services using IAM credentials
- EWC IAM - User Roles and Permissions
- EWC IAM - User Management
- EWC IAM - Adding a Custom Authentication Client
- EWC IAM - Troubleshooting and FAQs

Link to webinar: EWC Thematic webinars

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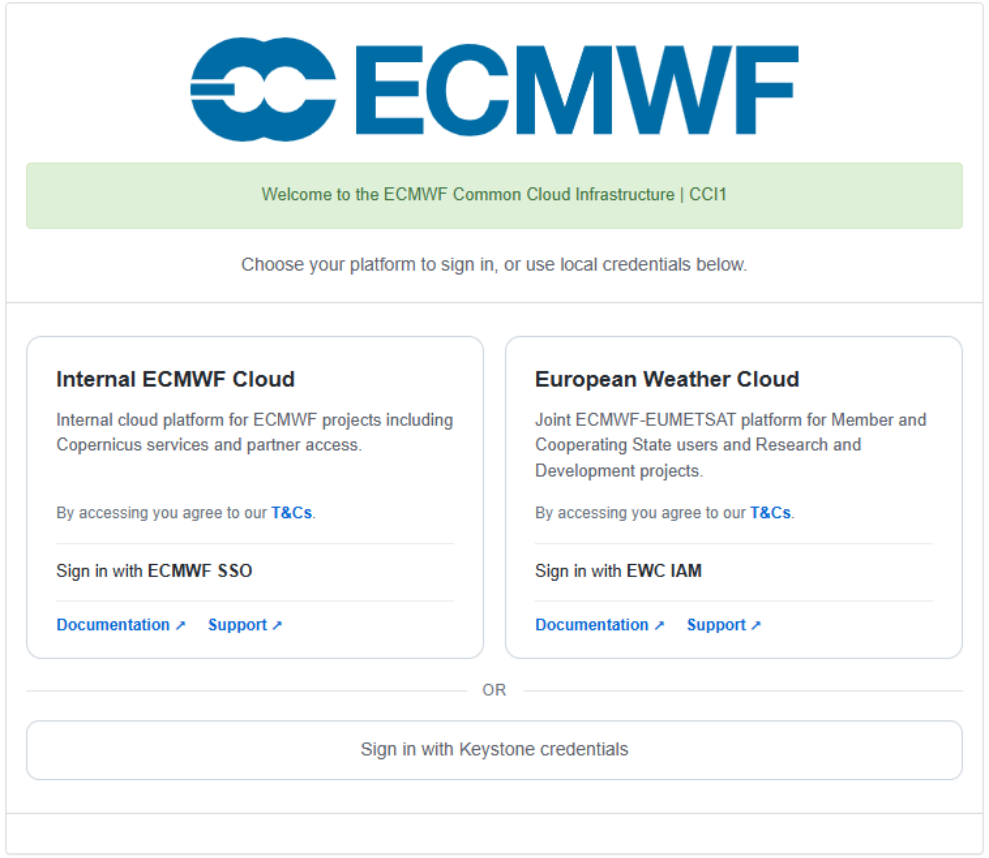
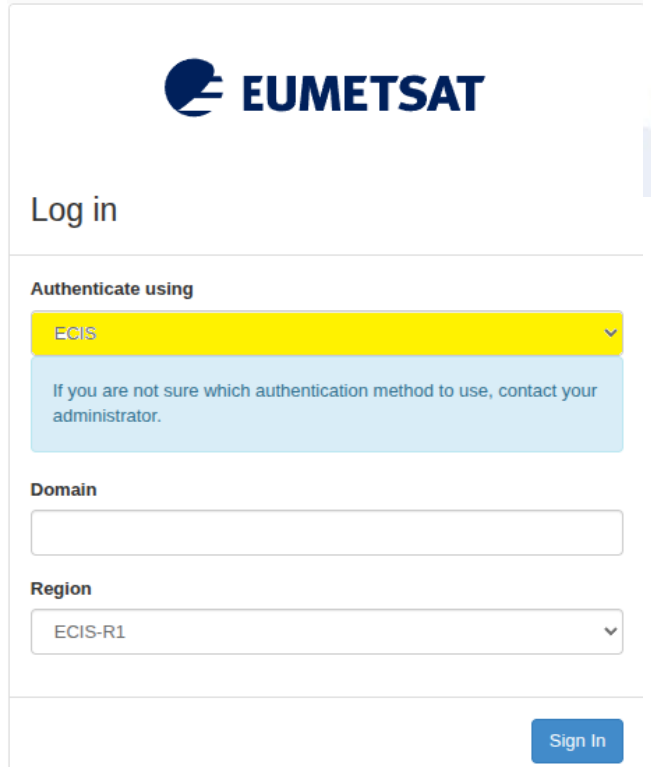
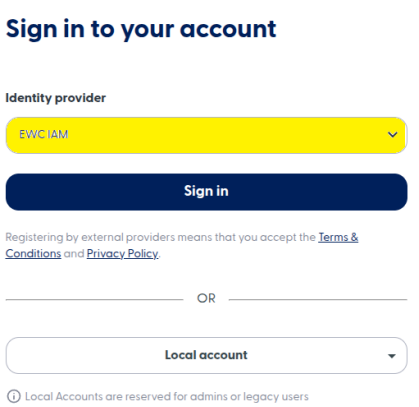
Cloud Management UI – Accessing the portal

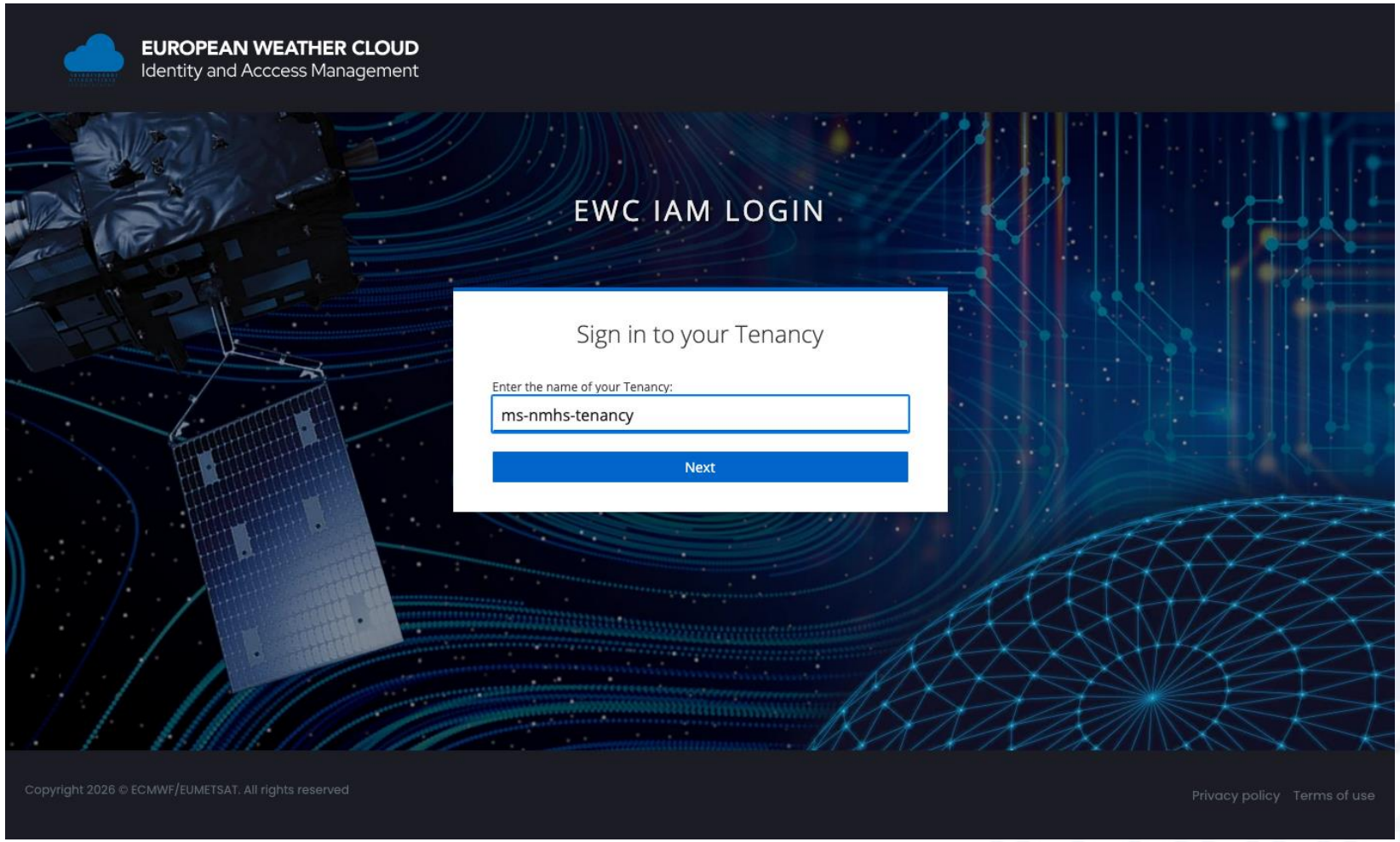
ECMWF	EUMETSAT
1. Select the URL for your region	
• **CCI1** : https://dashboard.os-api.cci1.ecmwf.int/ • **CCI2** : https://dashboard.os-api.cci2.ecmwf.int/	• **R1** https://horizon.api.r1.cloud.eumetsat.int/ • **R2** https://horizon.api.r2.cloud.eumetsat.int/







Cloud Management UI – Accessing the portal (EWC IAM)



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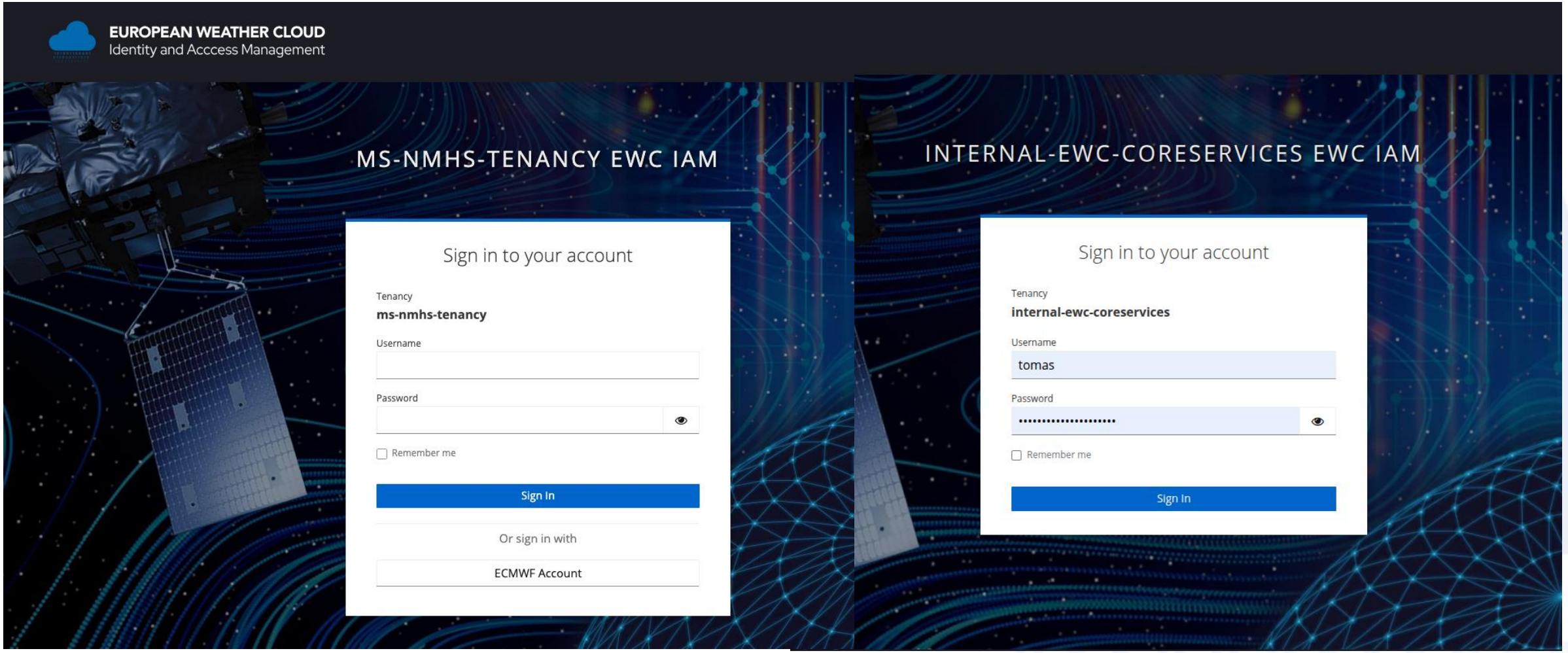
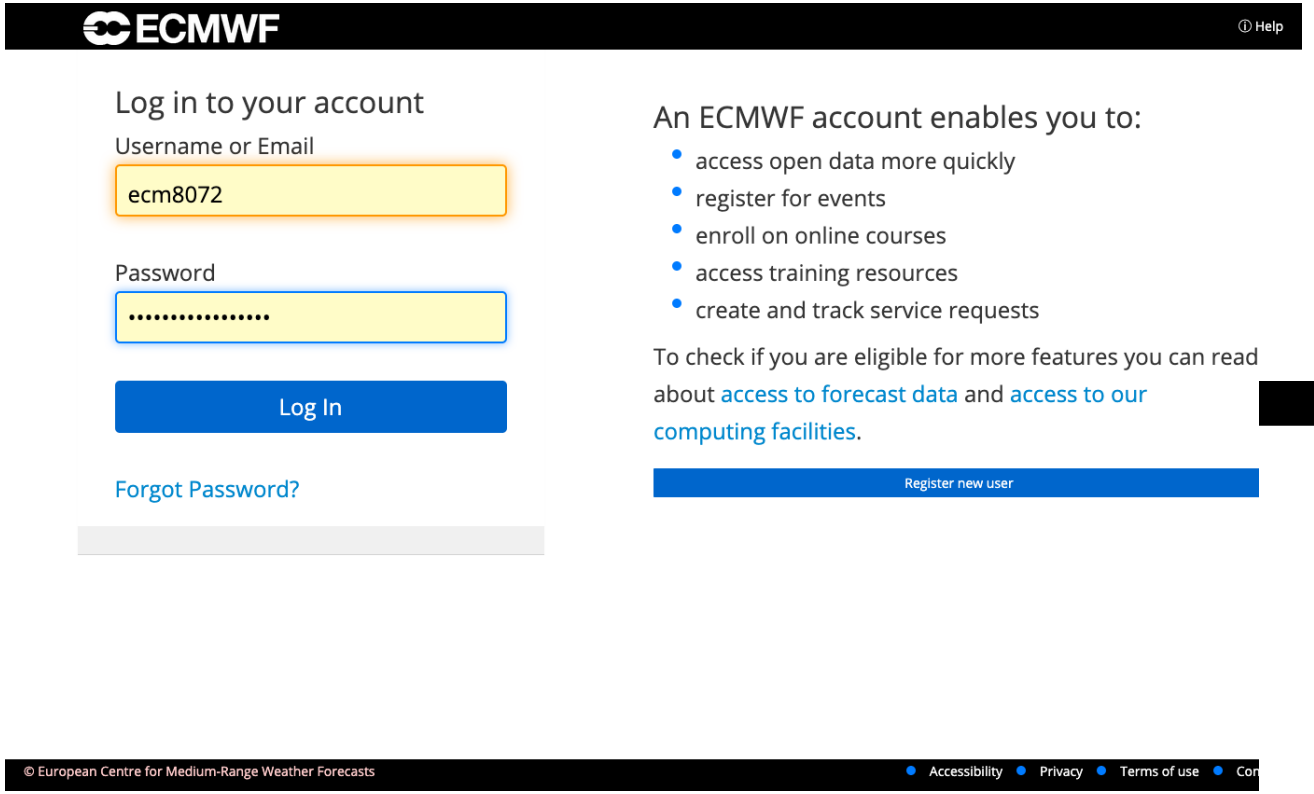
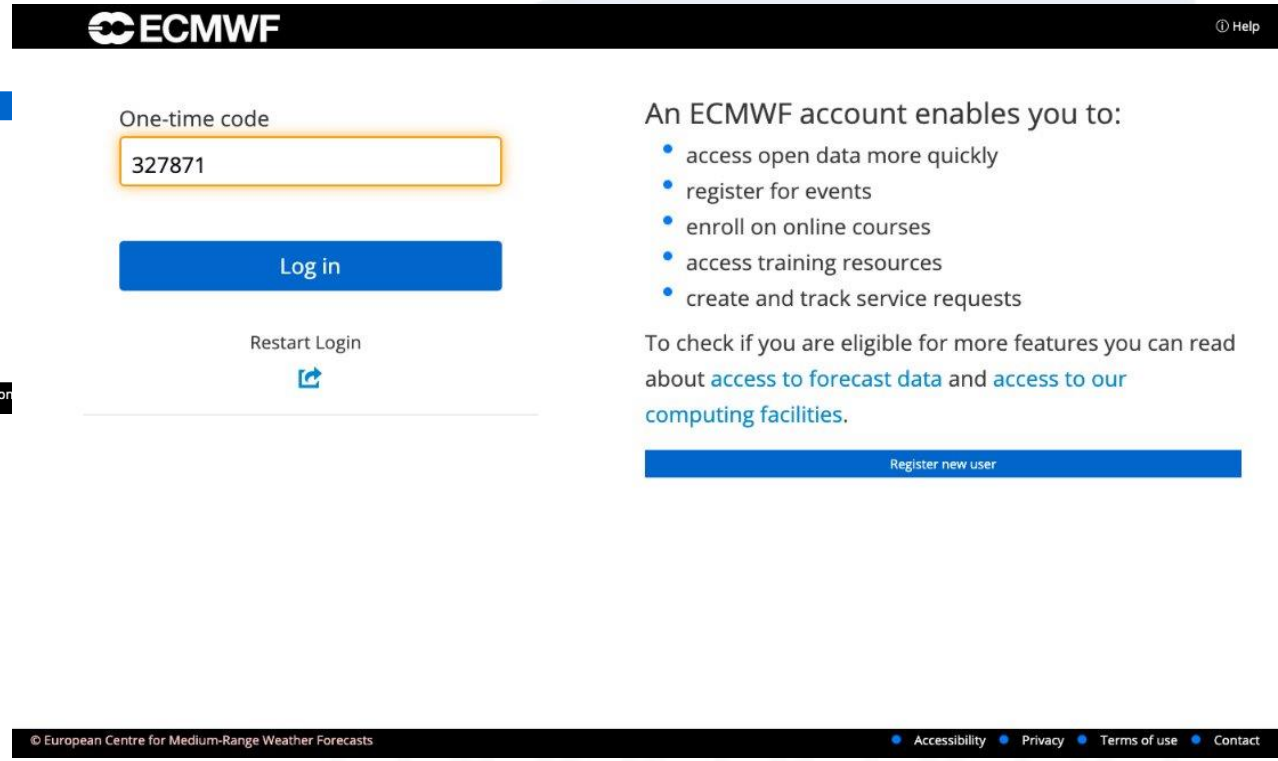
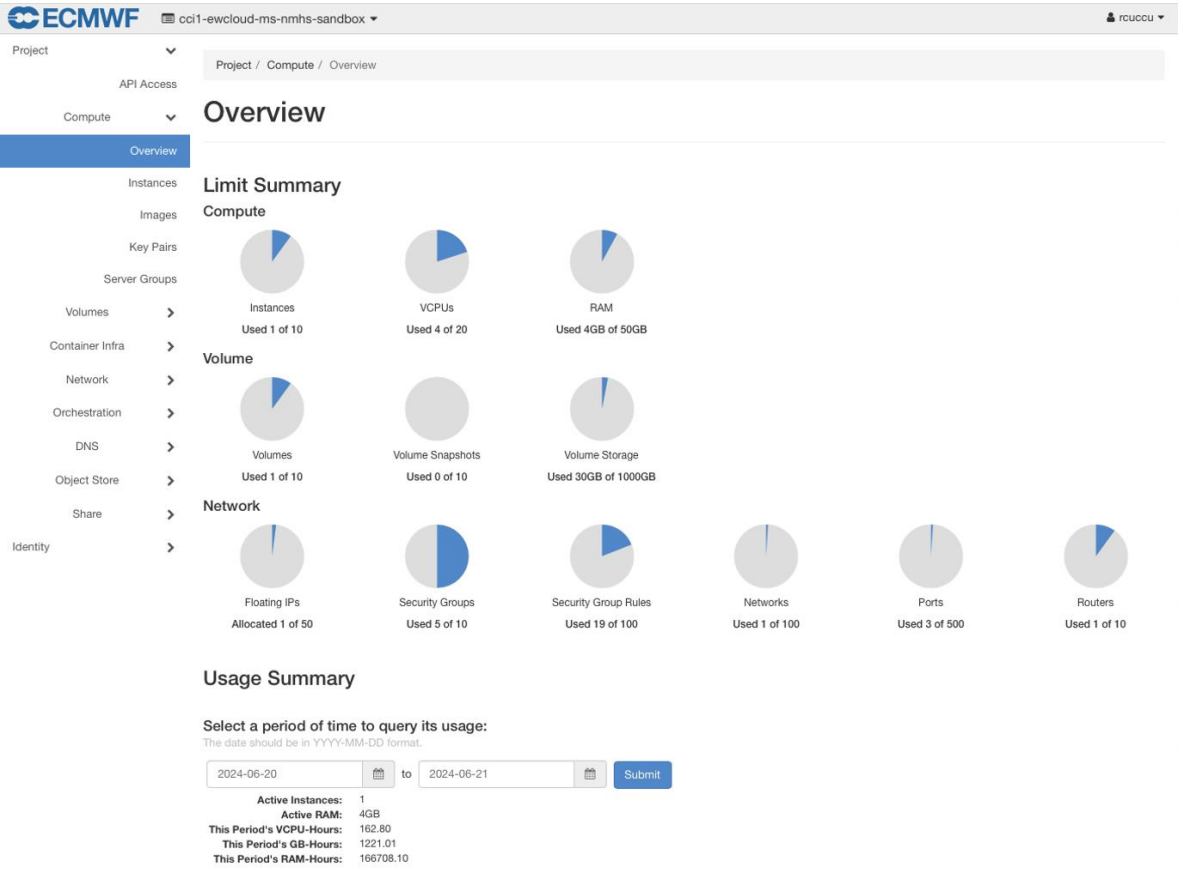


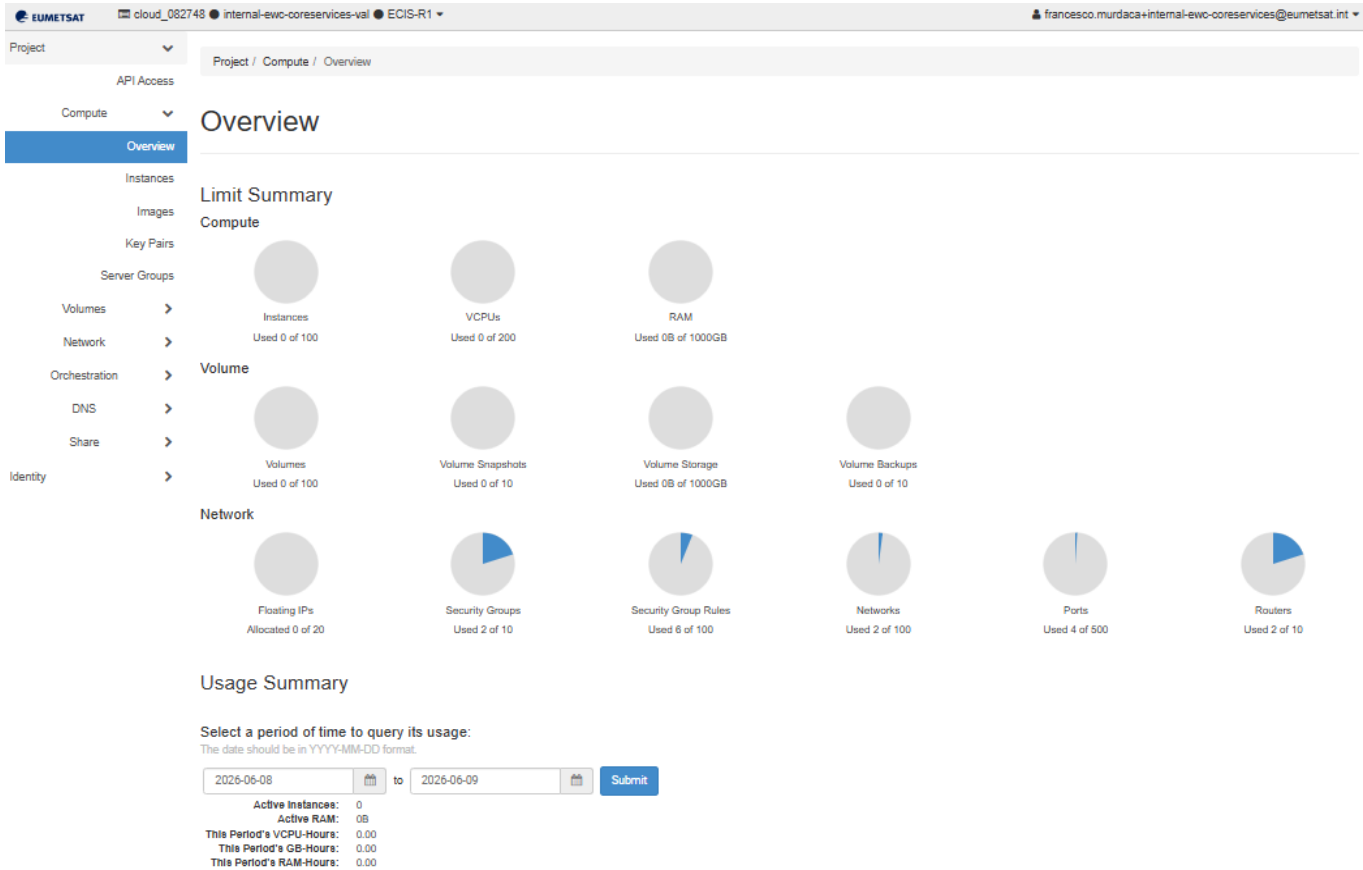
Cloud Management UI – Accessing the portal (ECMWF SSO)



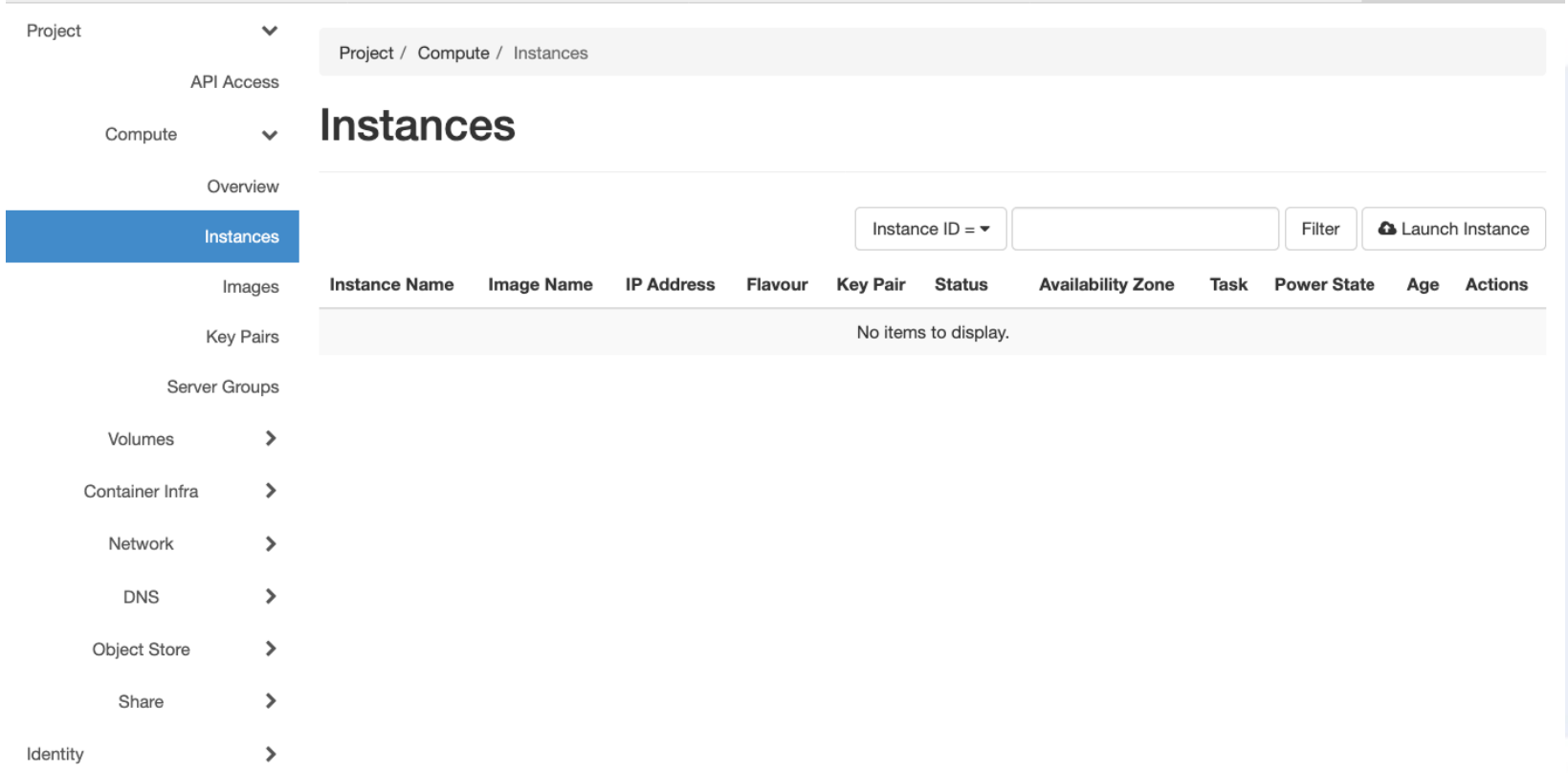


Cloud Management UI – Resource overview





Cloud Management UI – Create an instance



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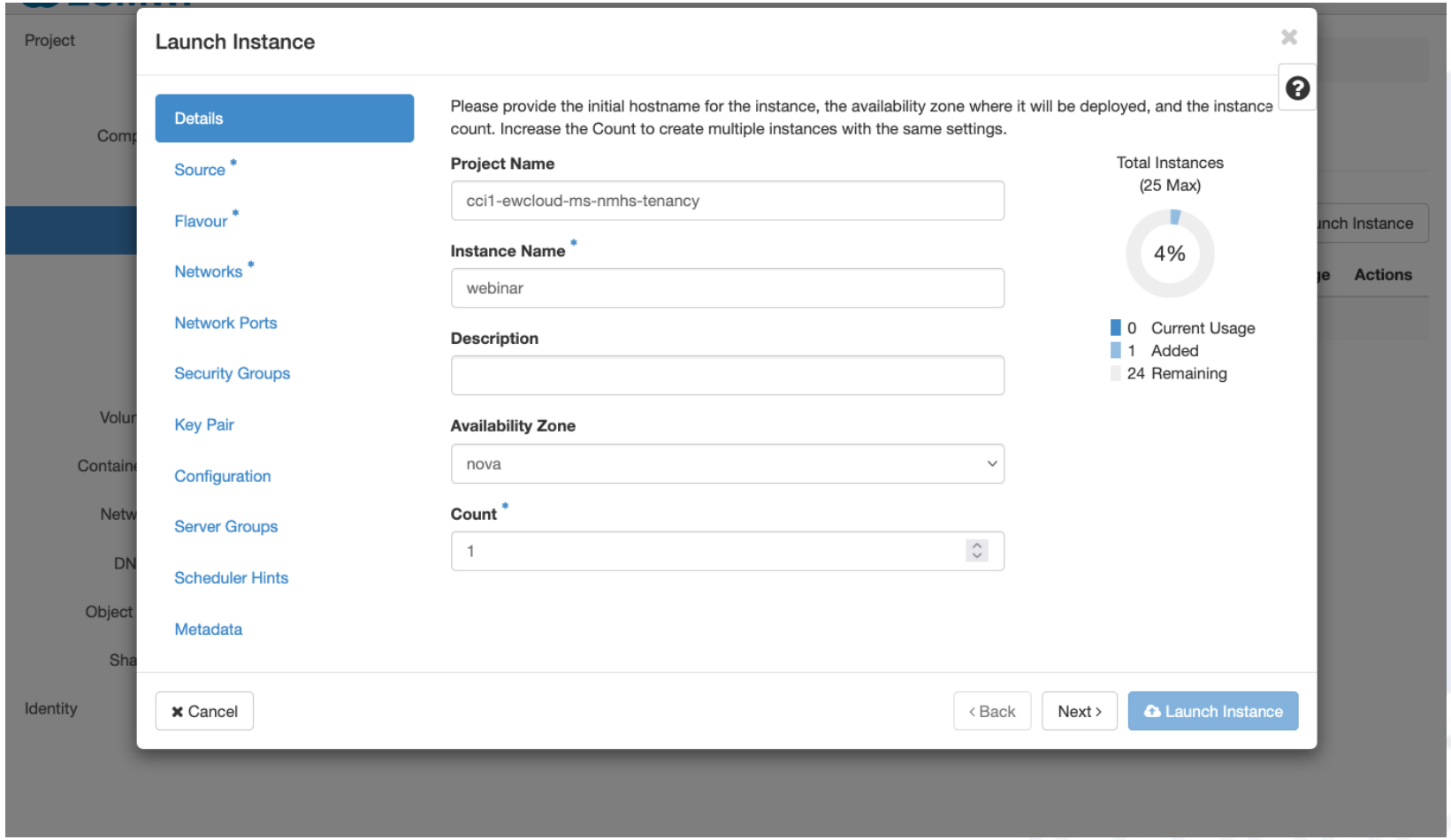
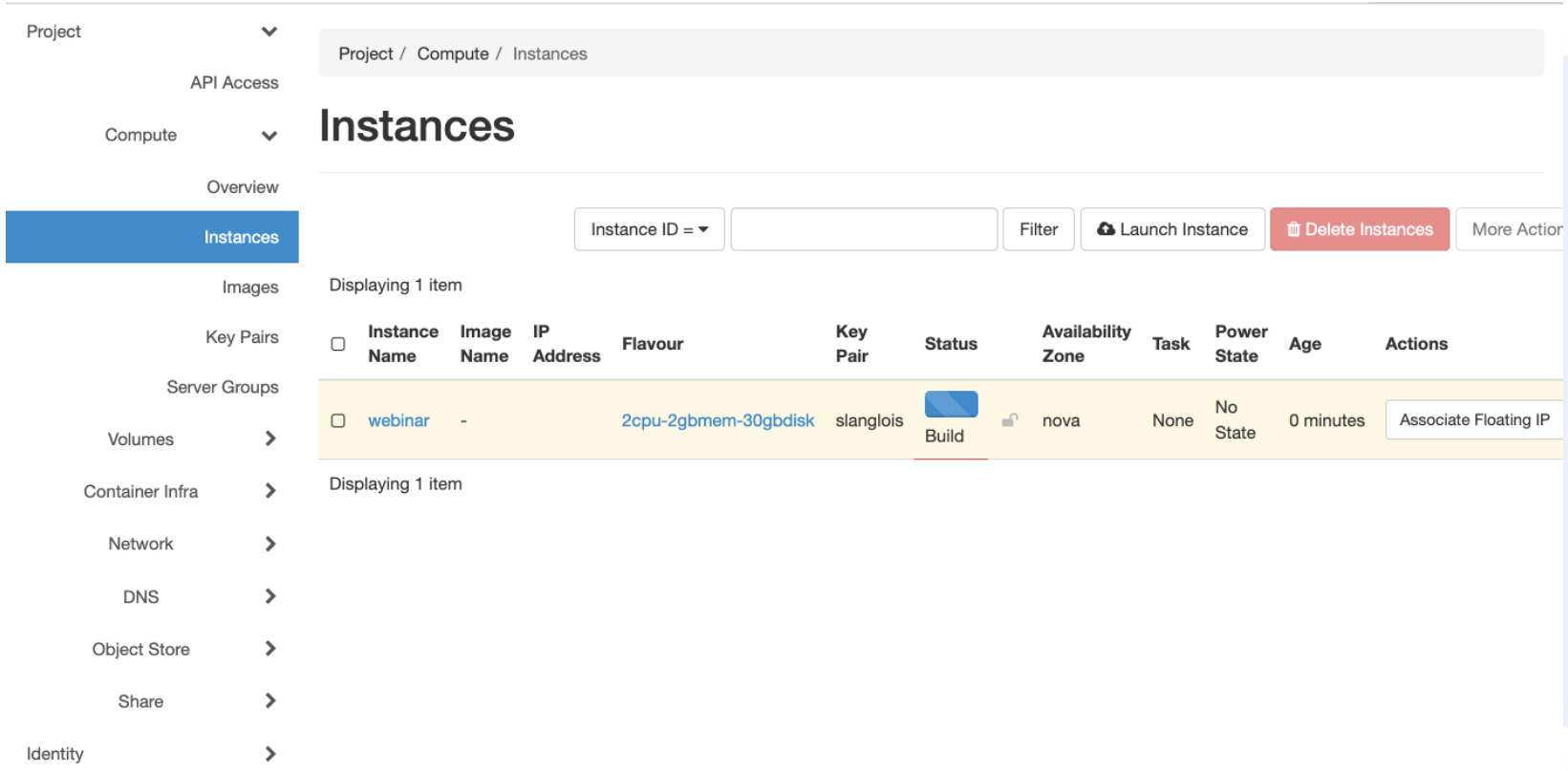
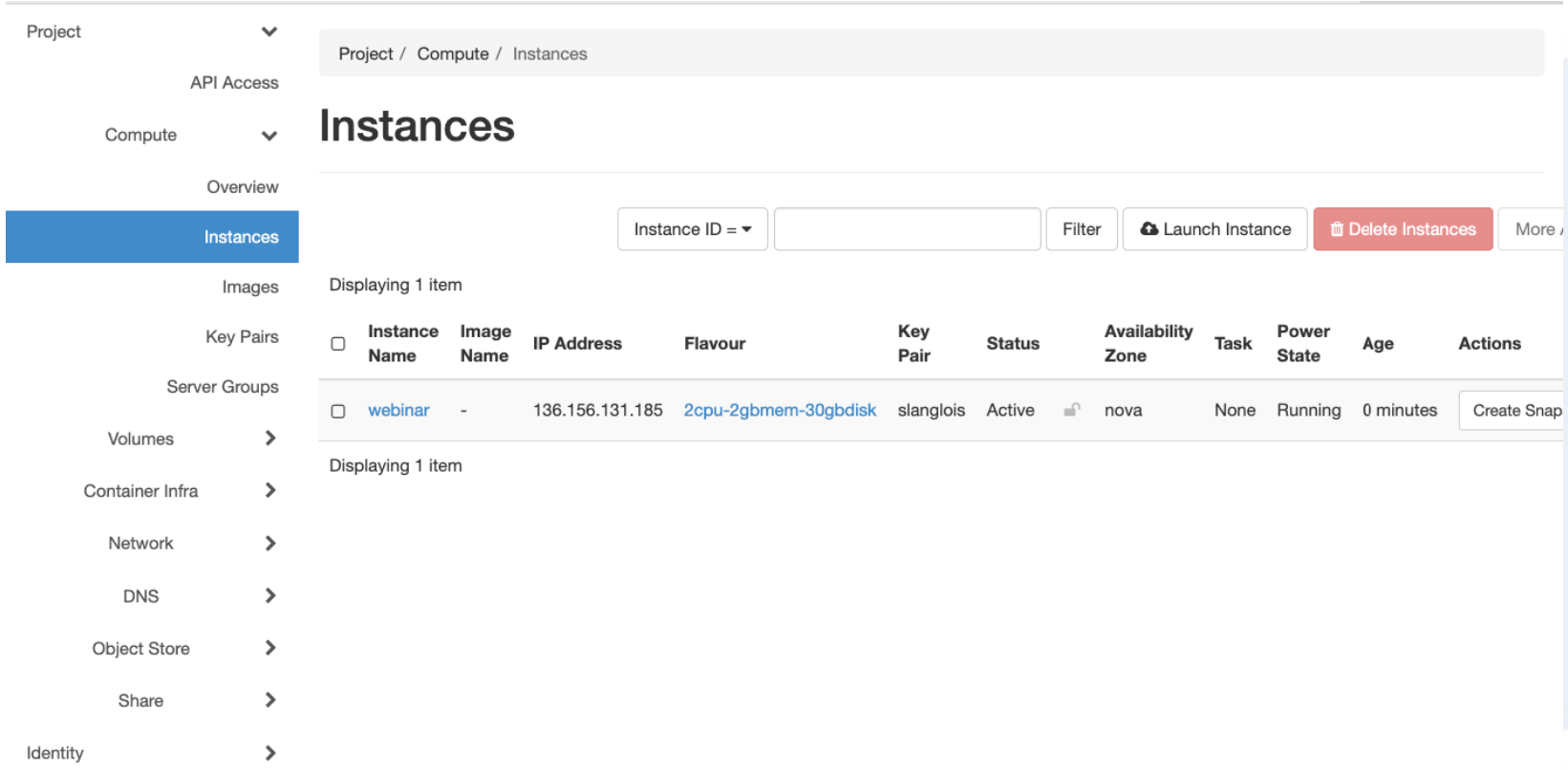


Cloud Management UI – Create an instance



Cloud Management UI – Create an instance



Cloud Management UI - Documentation

EWC Cloud Management UI

Created by Roberto Cuccu, last updated by Francesco Murdaca on Apr 20, 2026 • 1 minute read

The **EWC Cloud Management UI** is based on **OpenStack Horizon**, the open-source dashboard that provides a unified, web-based interface for managing cloud resources.

Horizon is a mature and widely adopted OpenStack component that offers a consistent, extensible, and secure way to interact with compute, storage, and networking services.

The Cloud Management UI is a **core component of the European Weather Cloud**, available to all tenancies.

You can find more details about using EWC OpenStack Horizon on the following pages:

- EWC Cloud Management UI - Accessing the Horizon portal
- EWC Cloud Management UI - Setup a Key Pair
- EWC Cloud Management UI - Compute - Instance (Virtual Machine) creation
- EWC Cloud Management UI - Compute - Access an Instance (Virtual Machine)
- EWC Cloud Management UI - Compute - Resize an instance
- EWC Cloud Management UI - Storage - Add a volume to an instance
- EWC Cloud Management UI - Storage - Resize a volume attached to an instance
- EWC Cloud Management UI - Identity - Create Application Credentials
- EWC Cloud Management UI - User Roles and Permissions
- EWC Cloud Management UI - Network - Add a Floating IP
- EWC Cloud Management UI - Network - Security Groups
- EWC Cloud Management UI - Changing the Language and Timezone

Documentation on the EWC Knowledge Base is already available. https://confluence.ecmwf.int/x/KnAEJQ

Cloud Management API Access - Documentation

Pages / European Weather Cloud Knowledge Base / EWC Cloud Management Analytics Edit View inline comments

EWC OpenStack API access

Created by Roberto Cuccu, last updated by Francesco Murdaca on Apr 17, 2026 • 1 minute read

Access to the OpenStack API can be granted on request in order to support use cases that require to automate their processes and to support Infrastructure as a Code implementations.

- EWC OpenStack API access - ECMWF CCI - OpenStack version and services
- EWC OpenStack API access - EUMETSAT - OpenStack version and services
- EWC OpenStack API access - Openstack Application Credentials
- EWC OpenStack API access - Install and use Command-Line client
- EWC OpenStack API access - Setup a KeyPair
- EWC OpenStack API access - VM images and default users
- EWC OpenStack API access - How to create a VM using the OpenStack CLI
- EWC OpenStack API access - IaC via Terraform and OpenTofu
- EWC OpenStack API access - How to revoke OpenStack Application Credentials
- EWC OpenStack API access - How to create backups from VMs
- EWC OpenStack API access - How to restore backups from VMs
- EWC OpenStack API access - EUMETSAT - How to manage Shared File Systems (SFS) with the OpenStack CLI
- EWC OpenStack API access - How to add security groups

Documentation on the EWC Knowledge Base is already published. https://confluence.ecmwf.int/x/TCRNH

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EWC Storage

Object Storage:

- Scalable and highly durable storage for unstructured data.
- Accessible from anywhere with secure and efficient retrieval methods.
- S3 admin keys available at onboarding time.
- See more about this in Object Storage: How to get started.

Block Storage

- Low latency and high-performance applications.
- Flexible storage for virtual machines.
- Add a volume to your instances in EWC Cloud Management UI - Storage - Add a volume to an instance.

NFS (Network File System) Shared Filesystems

- Data sharing and collaboration in real-time.
- Compatible and consistent across multiple users and systems.
- Set up your own self-managed NFS Shared storage via NFS.

SFS (Scale-Out File System) Shared Filesystems (EUMETSAT only)

- Scalable and distributed shared storage solution.
- Parallel Access, data availability and reliability through distributed storage architecture.
- More about this EUMETSAT - Shared File Systems (SFS): How to get started

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EWC DNS

Domain Name System (DNS) translates human-readable domain names (e.g., `xkcd.com`) into machine-readable **IP addresses** (e.g., `151.101.0.67`).
Each machine in the EWC is assigned a DNS record following this pattern:

```
<machine-name>.<tenancy-name>.<hosting-location>.ewcloud.host
```

(`<hosting-location>`: `f` for ECMWF-hosted VM, `s` for EUMETSAT-hosted VM)
Example: `myvm.example_tenancy.s.ewcloud.host`

- **Automatic DNS Record Creation**:
  - DNS records are created within **15 minutes** after provisioning a VM in **OpenStack Horizon**.
- **IP Assignment**:
  - If a VM has **both private and public IPs**, the **public IP** is assigned to the DNS record by default.
  - To use the **private IP**, submit a support ticket.
- **Testing/Development**: Default DNS names simplify usage.
- **Public-Facing Services**: Recommended to use a **custom or organizational DNS domain** for production.
- More documentation in: EWC DNS

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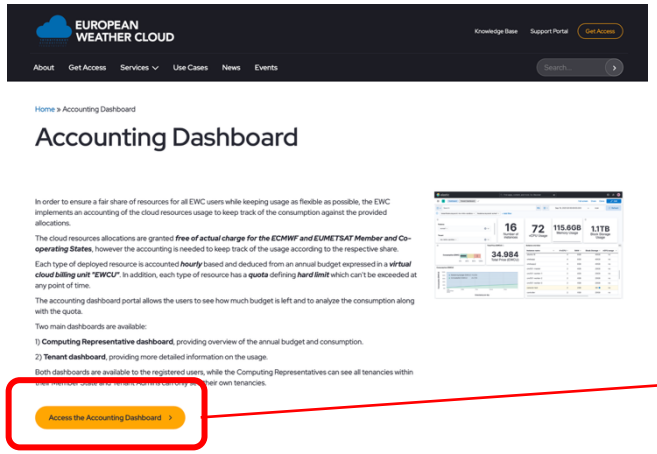
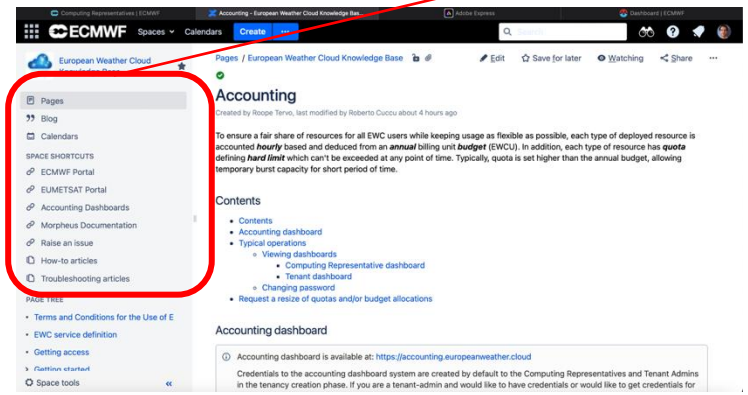
EWC Accounting – How to access it?

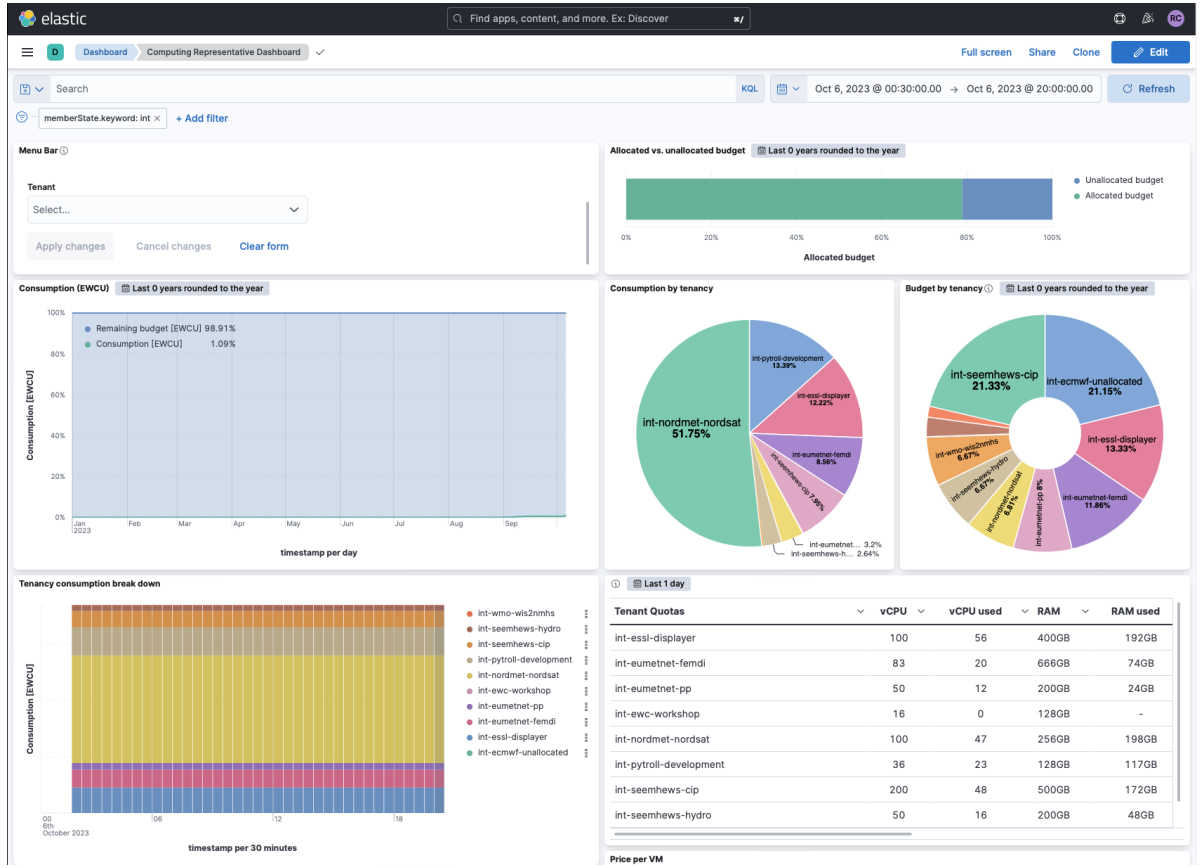




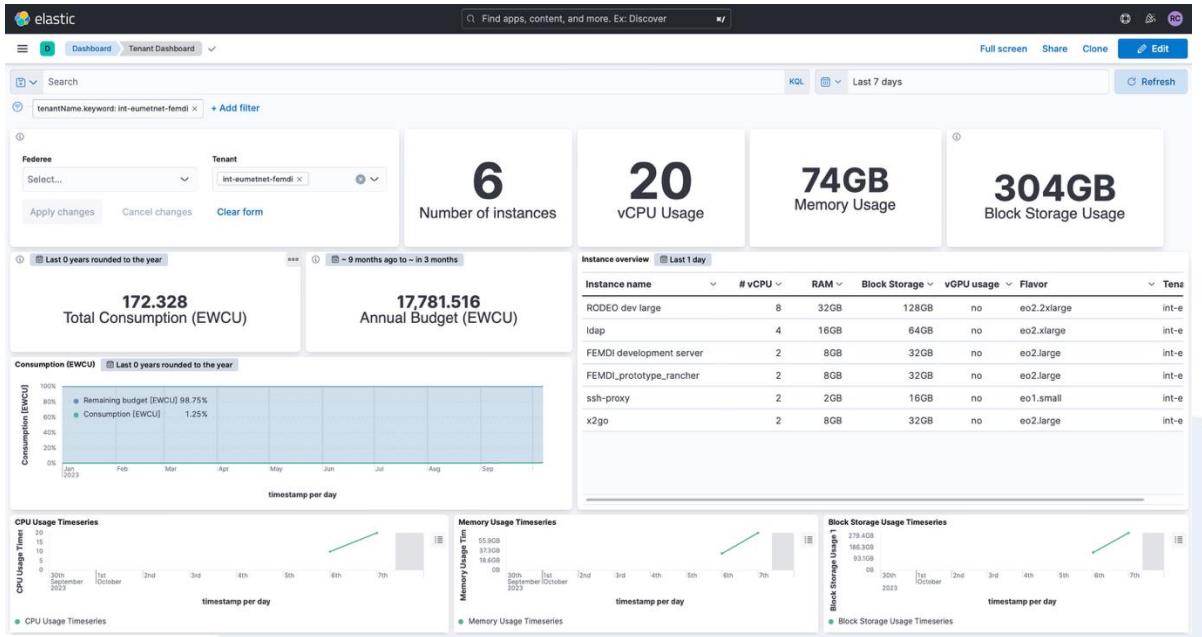
https://accounting.europeanweather.cloud

Accounting Dashboards link can be found on the EWC website or in the EWC Knowledge Base side bar.

EWC Accounting – Dashboards

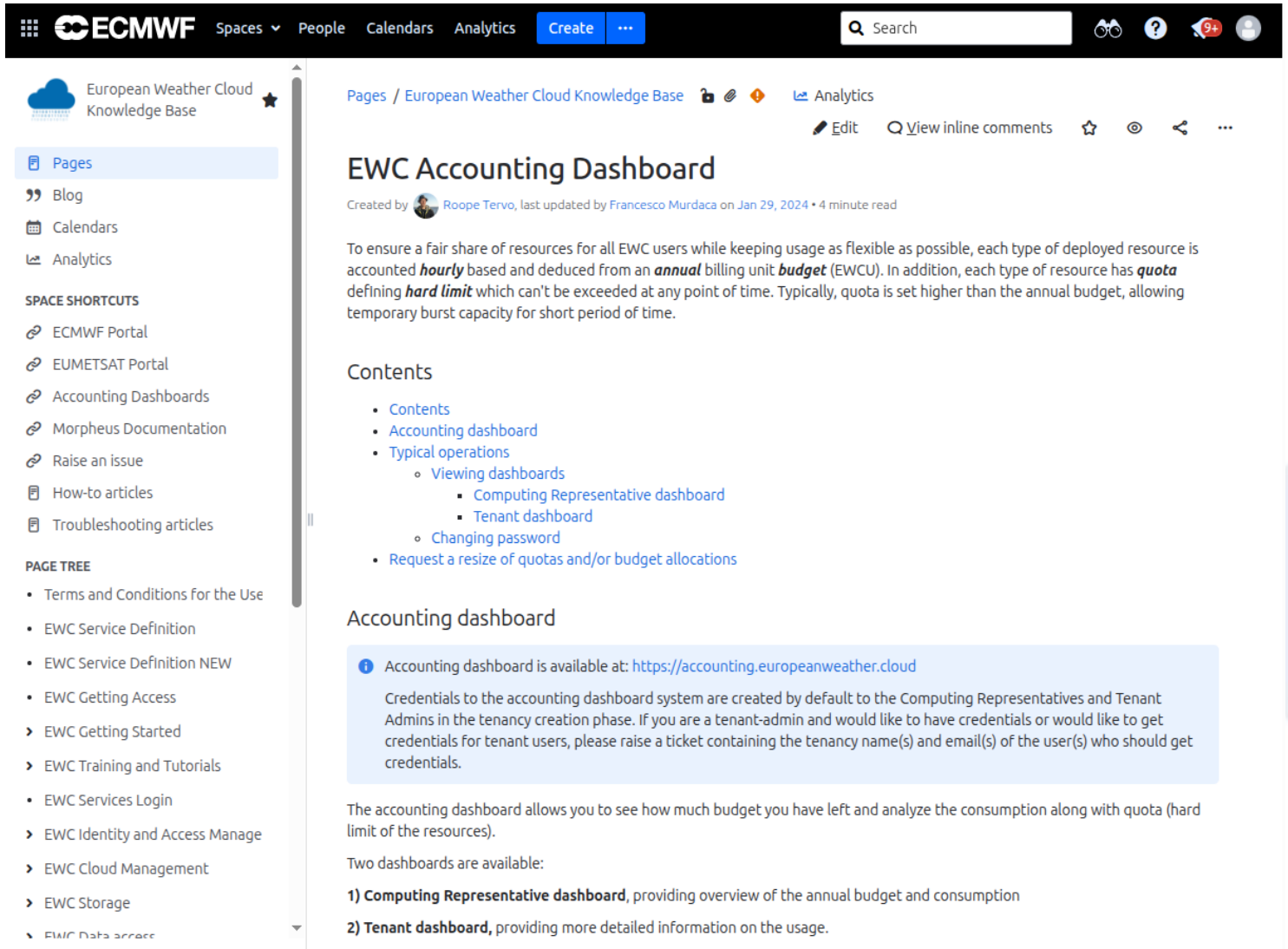


Computing Representative dashboard: providing overview of the annual budget and consumption



Tenant dashboard: providing more detailed information on the usage

EWC Accounting – Documentation



[EWC Knowledge Base Accounting]

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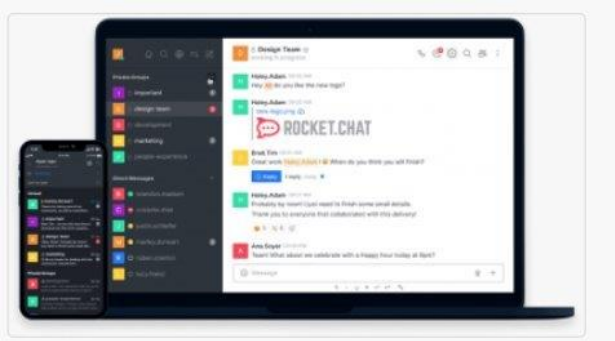
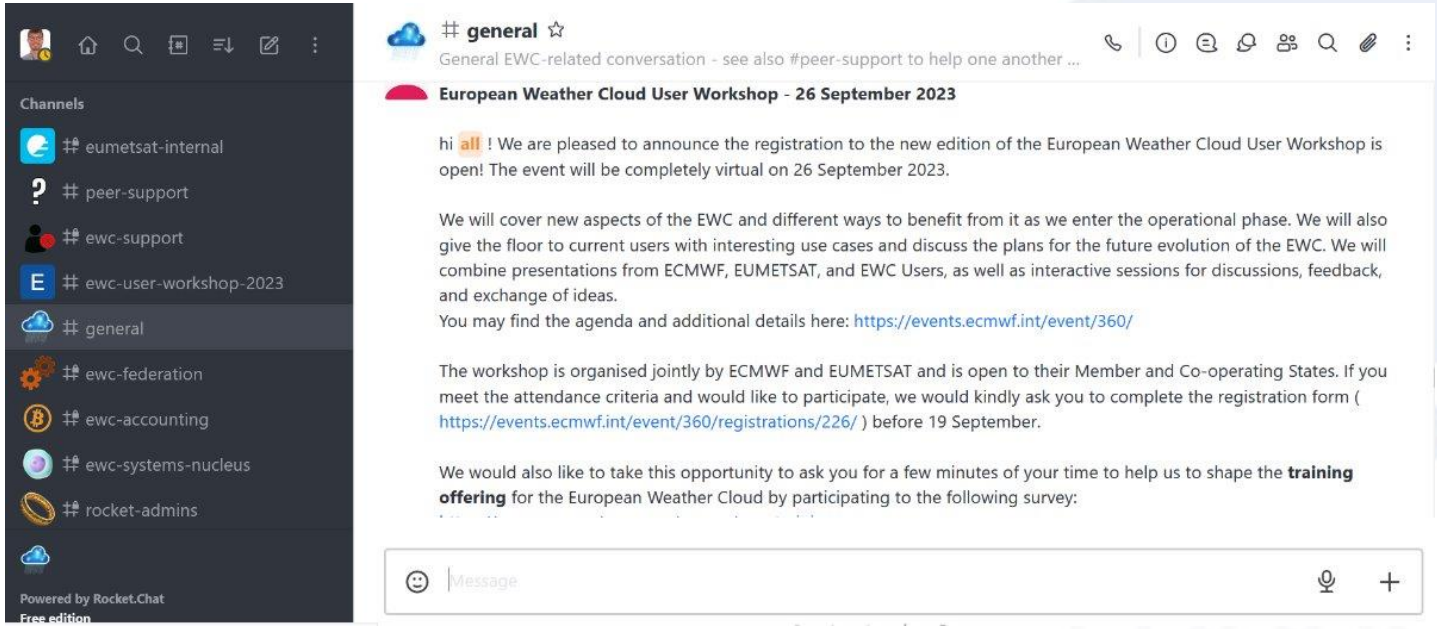
EWC Discussion Platform – RocketChat installation

Installation

- Web based
- Desktop App
- Mobile



Rocketchat
Customizable communication platform hosted on EWC
Secure and compliant to standards (e.g. E2E encryption, GDPR)
Open Source
Unlimited history of discussion
Not an official support tool!! -> JIRA ticket or support email
It's a pilot -> review process in place



ROCKET.CHAT

EWC Discussion Platform – Joining and channels

How do I join?
All Member States developers 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.

What channels are featured?	What Can I do here?
#general	• Learn about any news, updates from EWC community • Share interesting article/topics for the community • Discuss tools/solution you are using that could benefit the community
#peer-support	**#community-support channel**, if you are encountering issues with any tools or need recommendations on some technology or solution, you can ask the community
#random	**#off-topic channel** to share pictures, meme, anything to chill with the community

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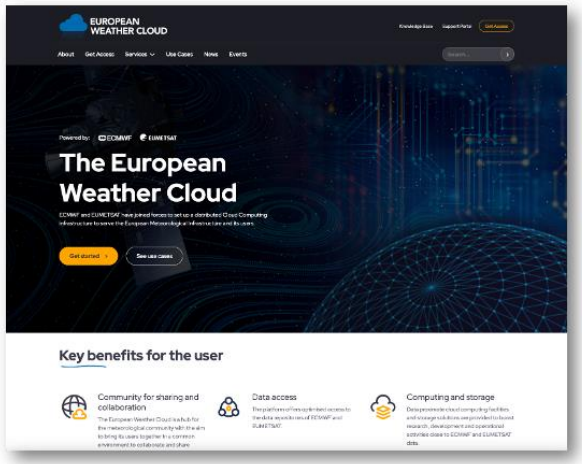
Contacts and references

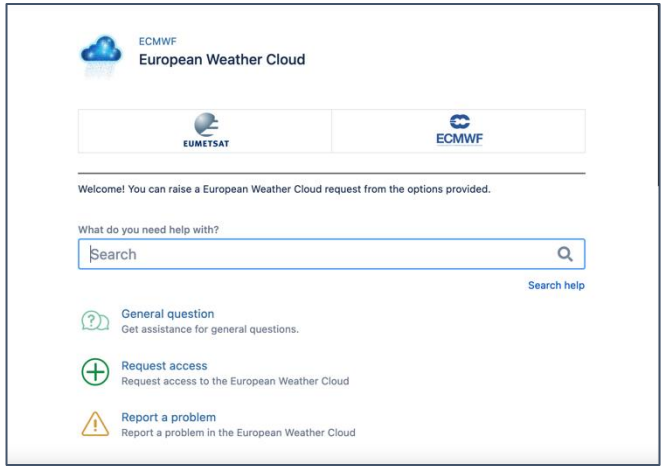
https://europeanweather.cloud



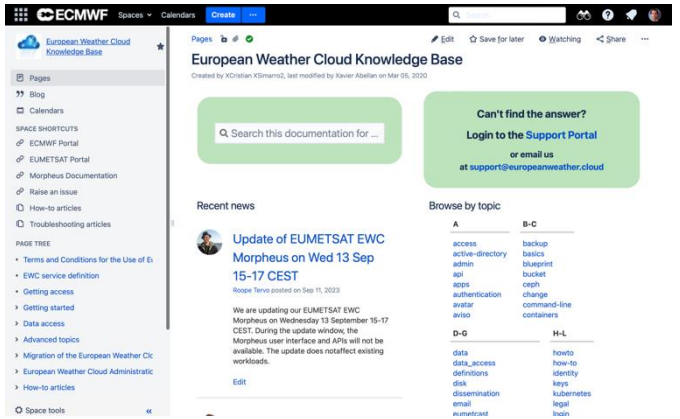
https://chat.europeanweather.cloud

https://support.europeanweather.cloud

Support Portal



Knowledge Base



Questions & Feedback

We’d love to hear your thoughts and questions.

Feedback on the Community Hub

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THANKS!