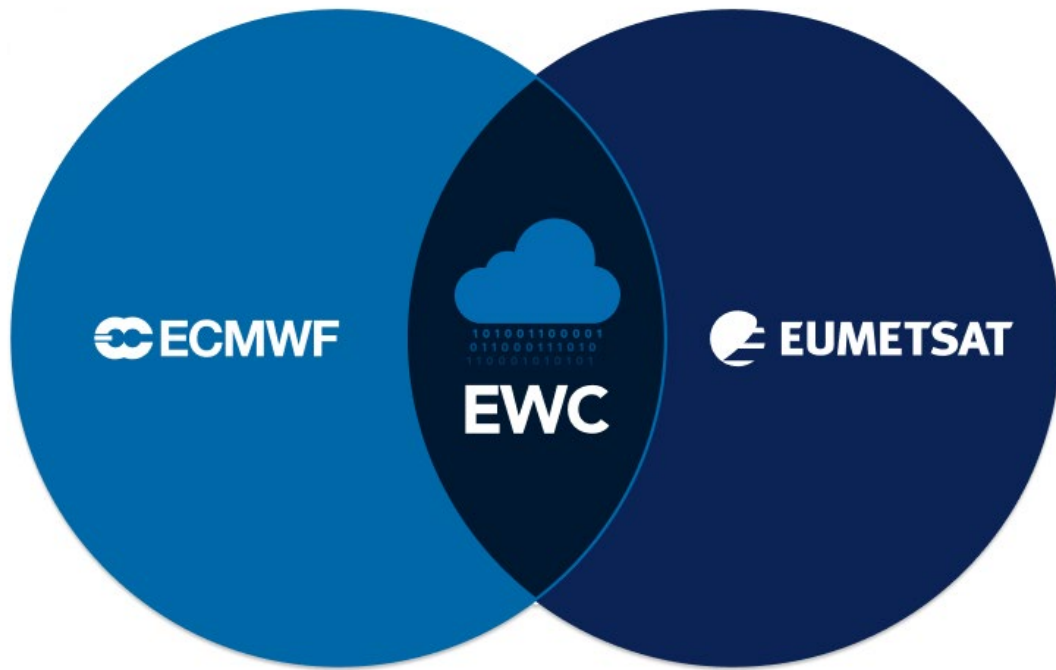# The European Weather Cloud (EWC)

Collaboration Platform for Meteorological
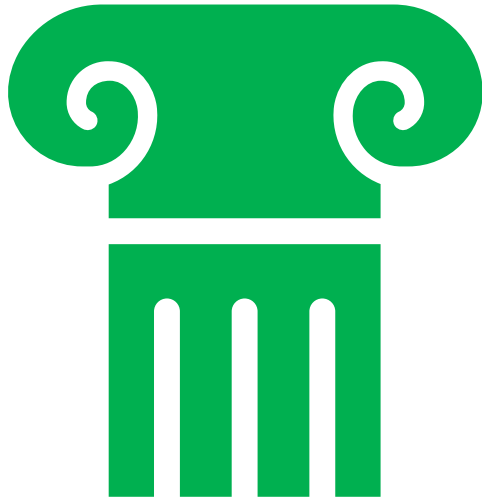Development from Research to Applications

"The European Weather Cloud is the *cloud-based collaboration platform* for *meteorological application development and operations* in Europe and enables the digital transformation of the European Meteorological Infrastructure. The European Weather Cloud is dedicated to support the National Hydro-meteorological Services of the Member States of both ECMWF and EUMETSAT in fulfilling their *official duties* to protect life and property from impending meteorological hazards."
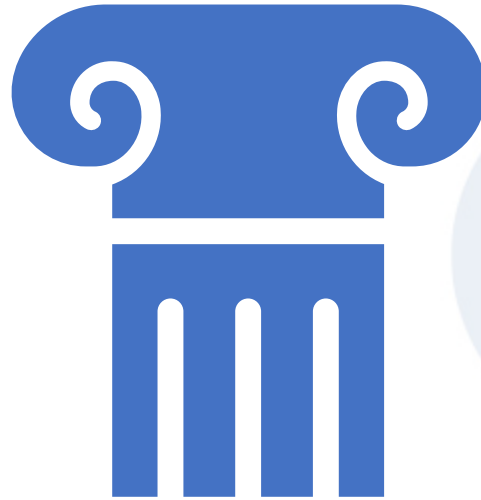
"a community cloud"

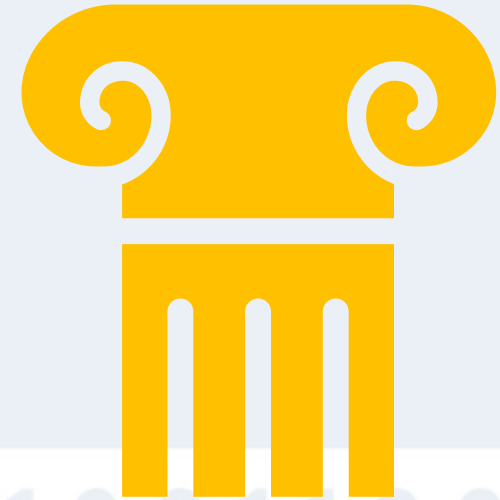EUROPEAN WEATHER CLOUD

Data proximity

Flexibility

Community

Who is it for?

ECMWF and EUMETSAT Member and Cooperating States

Research & Development

ECMWF Special projects
EUMETSAT annual R&D calls

European Meteorological Infrastructure (e.g. EUMETNET)

Internal use

SAFs
Support training / hackatons
International partners, contractor interaction

ECMWF

EUMETSAT

How we got here

Inception

Pilot phase
expansion

2 User
Workshops

Migration to
operational
infrastructure

1 User
Workshop

2 Training events

**Start of
operations**

Thematic
Webinar series

New features
development

8th User
Workshop

2019   2020   2021   2022   2023   2024   2025

Pilot phase
starts

First selected
use cases

2 User
Workshops

Preoperational
phase

1 User
Workshop

Operational
Consolidation

Thematic
Webinar series

7th User
Workshop

Growing community

EUROPEAN WEATHER CLOUD

200 tenancies in total

20 new tenancies in 2025

On-boarded to EWC

Not yet on-boarded

R&D and Special Projects
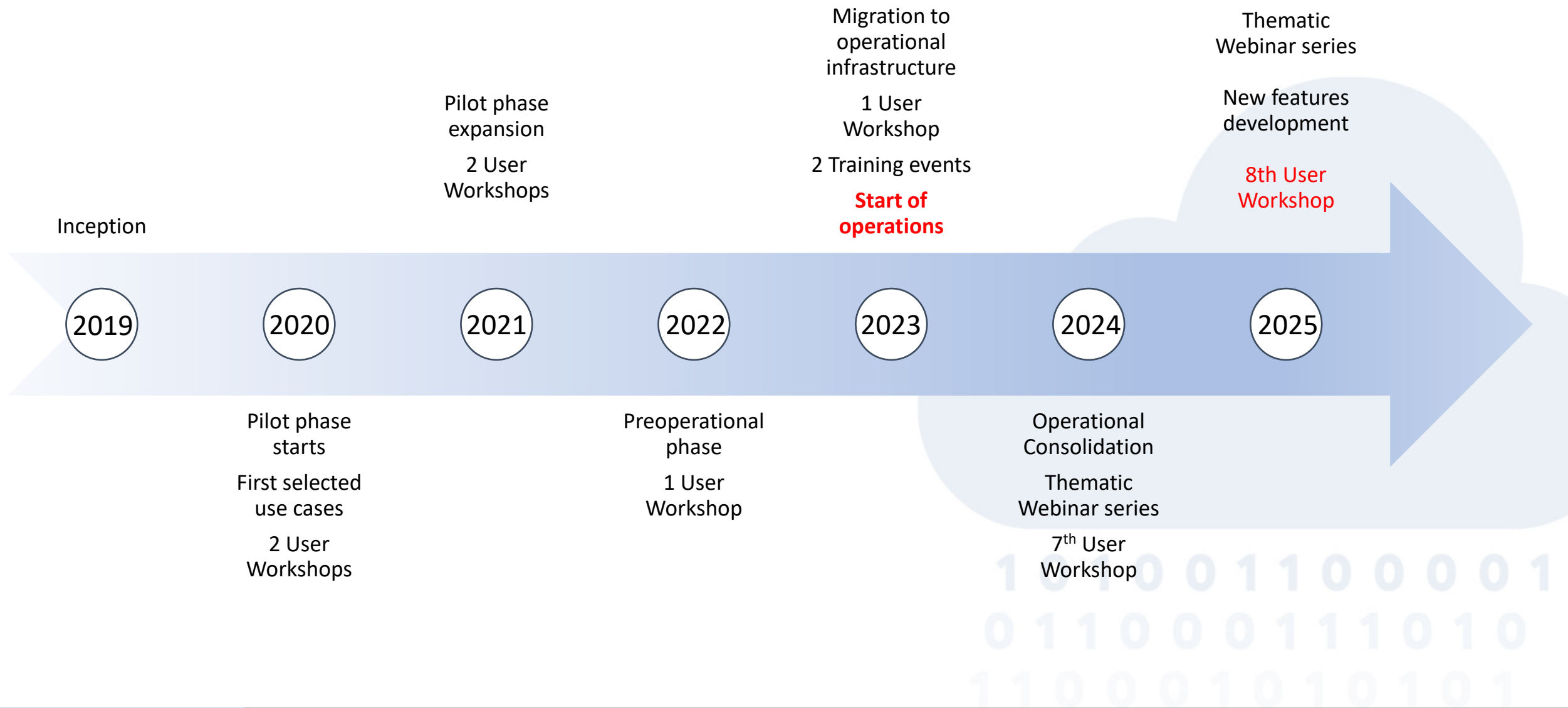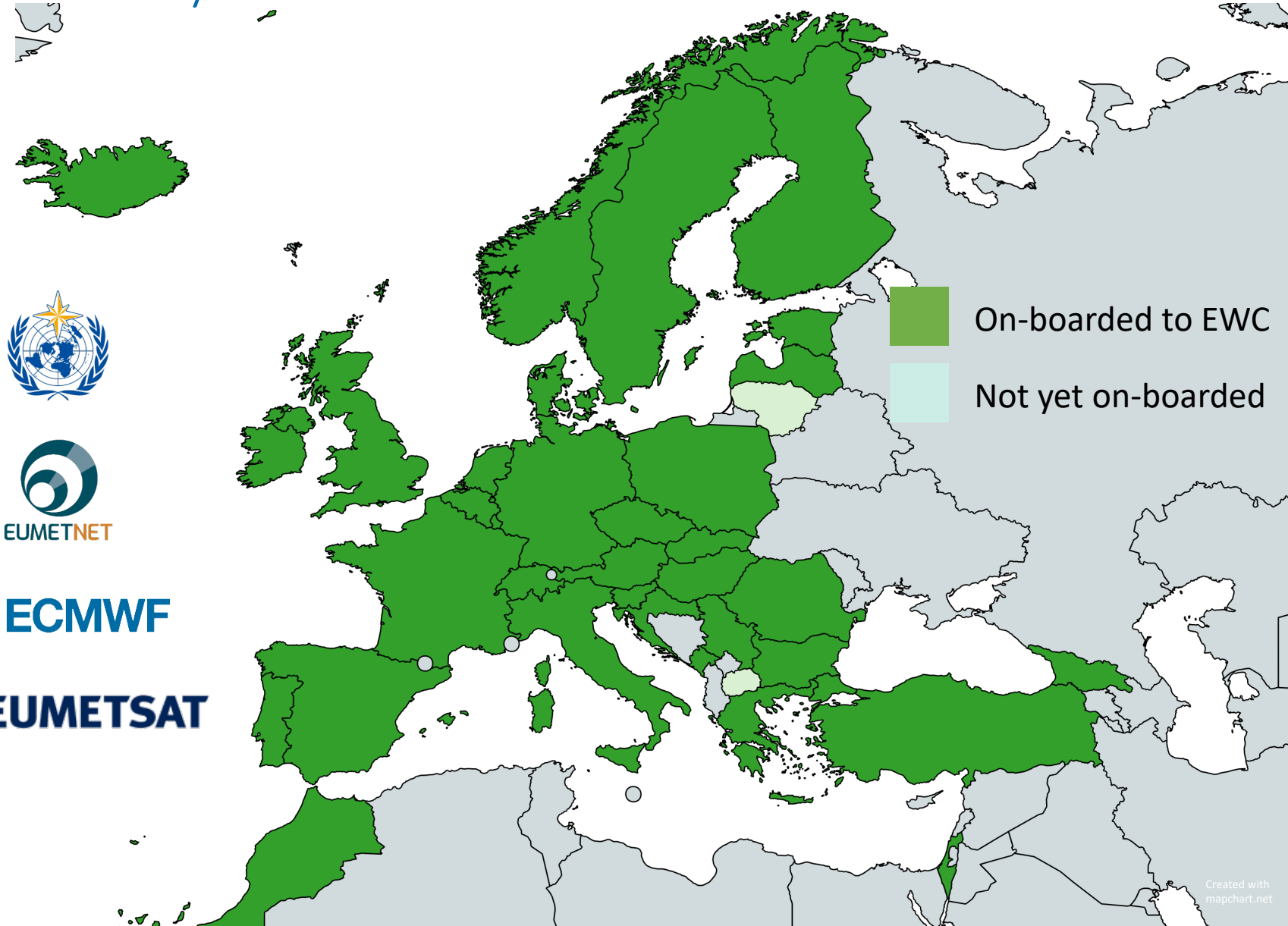
EUMETSAT

Research & Development

Objectives on improving, development and using products in applications and using the cloud infrastructure

13 active R&D projects

Special projects

ECMWF

Experiments or investigations of a scientific or technical nature, undertaken by one or more Member States, likely to be of interest to the general scientific community

9 active special projects

Annual calls: Deadline 30 June

Fast-track / late requests possible for small projects

Operational Infrastructure

EUMETSAT

Cores	5936
Memory	47.5 TB
Storage	5.9 PB usable
GPUs	371 VGPUs (10 GB partitioning)

- Hosted externally with 10 Gbps link to EUM
- Sizing may increase in following years based on demand

ECMWF
EUROPEAN CENTRE FOR MEDIUM-RANGE WEATHER FORECASTS

Cores	5632
Memory	53 TB
Storage	4.2 PB usable
GPUs	32 x A100 80 GB

- Co-located with HPCF and DHS in Bologna DC
- 2 Production clouds – one on each computer hall

Member and Cooperating State allocations 2025

EUMETSAT

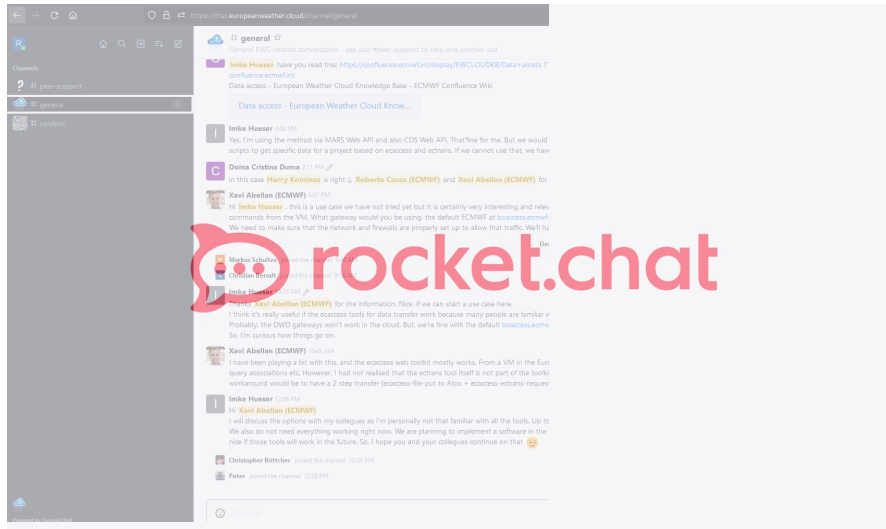| EUMETSAT Member State	EWCU / CBU	As illustration, combinations of hardware resources equivalent to the allocated EWCU / CBU			
		# vCPUs	Memory [GB]	Storage [TB]	# vGPUs*
Austria	48012	64	512	63	4
Belgium	48012	64	512	63	4
Bulgaria	36009	48	384	47	3
Croatia	36009	48	384	47	3
Czech Republic	36009	48	384	47	3
Denmark	48012	64	512	63	4
Estonia	36009	48	384	47	3
Finland	48012	64	512	63	4
France	156038	208	1664	206	13
Germany	204050	272	2176	269	17
Greece	36009	48	384	47	3
Hungary	36009	48	384	47	3
Iceland	36009	48	384	47	3
Ireland	48012	64	512	63	4
Italy	120029	160	1280	158	10
Latvia	36009	48	384	47	3
Lithuania	36009	48	384	47	3
Luxembourg	36009	48	384	47	3
Netherlands	72017	96	768	95	6
Norway	48012	64	512	63	4
Poland	48012	64	512	63	4
Portugal	36009	48	384	47	3
Romania	36009	48	384	47	3
Slovakia	36009	48	384	47	3
Slovenia	36009	48	384	47	3
Spain	96023	128	1024	127	8
Sweden	60015	80	640	79	5
Switzerland	60015	80	640	79	5
Turkey	72017	96	768	95	6
United Kingdom	156038	208	1664	206	13
SAF Basic allocation	24006	32	256	32	2
SAF Specific allocation	72017	96	768	95	6
R&D calls	900219	1200	9600	1186	75

ECMWF

ECMWF Member/Co-operating State	EWCU / CBU	As illustration, combinations of hardware resources equivalent to the allocated EWCU / CBU			
		# vCPUs	Memory [GB]	Storage [TB]	# vGPUs *
Austria	78,348	197	930	72	4
Belgium	88,797	223	1054	81	5
Bulgaria	35,302	89	419	32	2
Croatia	38,218	96	454	35	2
Czech Republic	44,388	111	527	41	2
Denmark	70,815	178	840	65	4
Estonia	35,073	88	416	32	2
Finland	60,673	152	720	55	3
France	322,463	810	3827	294	17
Georgia	32,592	82	387	30	2
Germany	456,412	1146	5416	417	24
Greece	52,408	132	622	48	3
Hungary	40,096	101	476	37	2
Iceland	34,211	86	406	31	2
Ireland	66,296	166	787	61	4
Israel	53,226	134	632	49	3
Italy	240,252	603	2851	219	13
Latvia	33,561	84	398	31	2
Lithuania	34,660	87	411	32	2
Luxembourg	37,108	93	440	34	2
Montenegro	32,006	80	380	29	2
Morocco	38,327	96	455	35	2
Netherlands	127,900	321	1518	117	7
North Macedonia	32,359	81	384	30	2
Norway	76,308	192	906	70	4
Portugal	56,000	141	665	51	3
Romania	44,763	112	531	41	2
Serbia	37,224	93	442	34	2
Slovak Republic	37,296	94	443	34	2
Slovenia	37,453	94	444	34	2
Spain	172,235	432	2044	157	9
Sweden	92,587	232	1099	85	5
Switzerland	106,959	269	1269	98	6
Türkiye	108,767	273	1291	99	6
United Kingdom	317,510	797	3768	290	17
Special Projects	192,568	483	2285	176	10

CBU – Cloud Billing Unit

CBUs consider several cloud resources (CPU, Memory, Storage, etc)

CBU distribution done proportionally to Member State contributions, with a basic component to ensure meaningful allocation
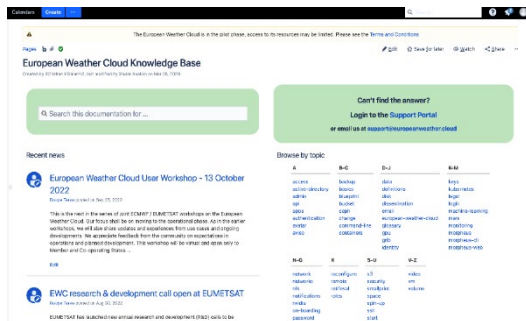
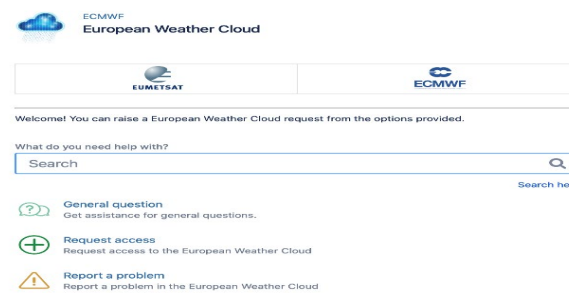Member State shares are managed by the Computing Representatives

Working together

https://chat.europeanweather.cloud
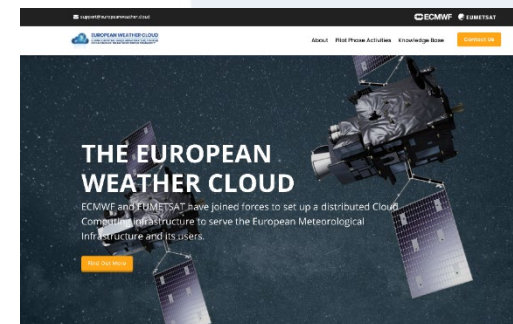
Users are invited to discussion platform

- Three public channels for #general, #peer-support, and #random discussion

- EWC users can create their own private channels and send direct messages

- EWC staff are present

- Official documentation and support via Confluence and Jira

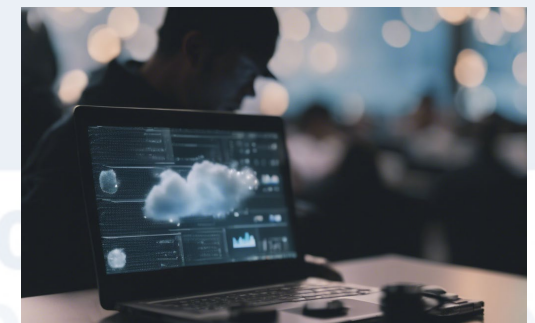- Very important tool for users to stay in connect and for EWC staff to get direct feedback

Knowledge Base

User Support

https://www.europeanweather.cloud

Trainings and workshops