



Resilience of the VO membership vetting process

AKA seeing social accounts handled in an satisfying way

Sven Gabriel, on behalf of Baptiste Grenier

SDIS Officer, IRTF member

2023/03/16

Report on EGI CSIRT activities

TLP:CLEAR Public



<https://csirt.egi.eu/>

MISSION

EGi CSIRT coordinates operational security activities within the EGI Infrastructure to deliver a secure and stable infrastructure, giving scientists and researchers the protection and confidence they require to safely and effectively carry out their research.

[Find more about EGI CSIRT](#)

CONTACTS

To report a security incident:

- EGI data centres: follow [SEC01](#) and [report an incident](#)
- Everyone else: abuse@egi.eu

To report a software vulnerability:

- report-vulnerability@egi.eu or use [this web form](#)

Cookies

diverse catalogue of training modules, developed by the team or by partner institutions.

Joint F2F meeting in Prague

A joint face to face meeting of the EGI CSIRT / EGI-ACE T7.5 / EOSC-Future T7.5 activities was held between 16th-18th January in Prague. This very productive meeting focused both on current work and on the future development of these activities in the coming years,...

[Read More](#)

Successful security workshop in Edinburgh

On the 11th of January, members of EGI CSIRT delivered a lively and well-received security workshop for the IRIS digital research infrastructure in the UK. This workshop focused on security architecture and risk management, building on work on materials from the...

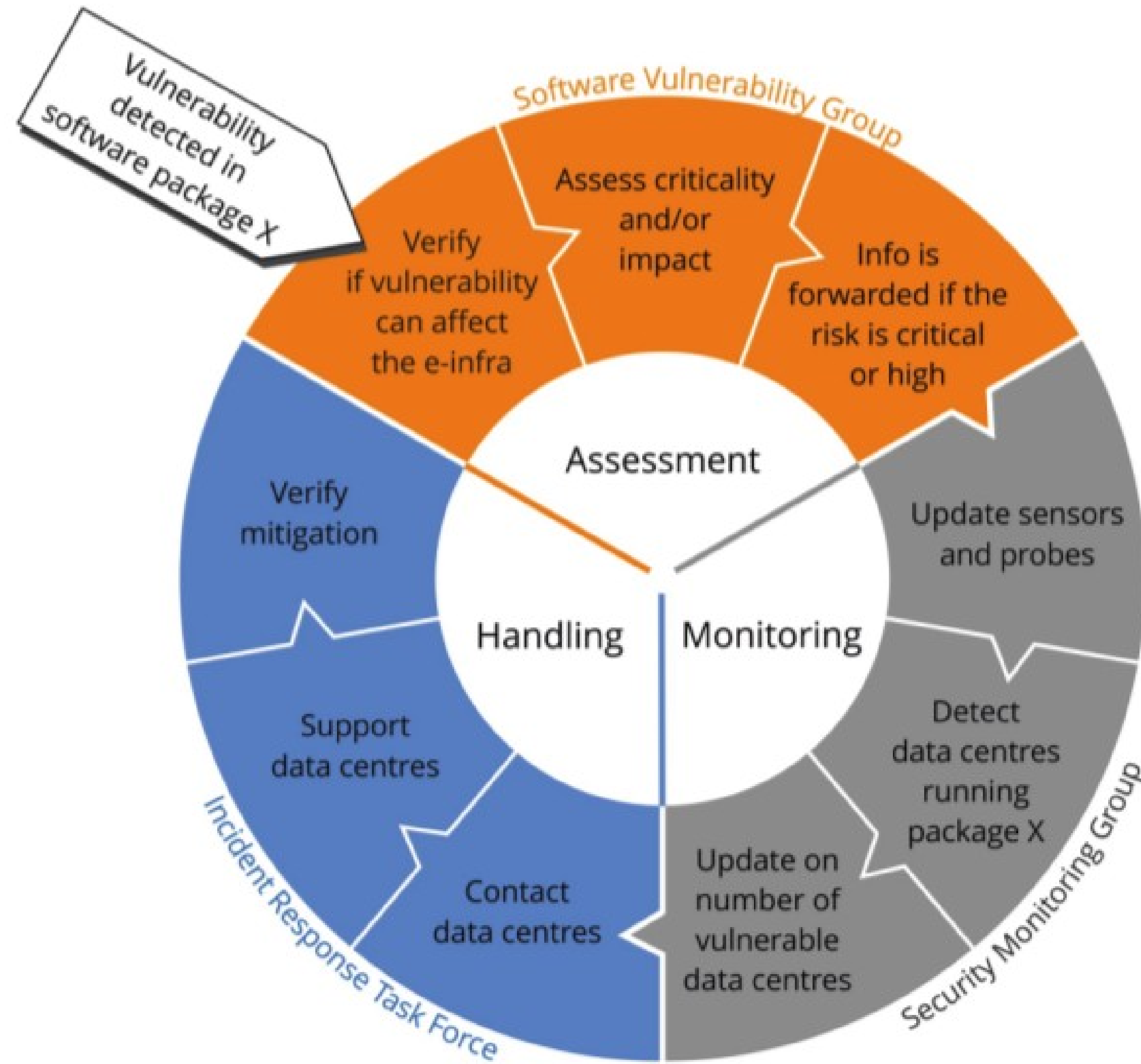
[Read More](#)



EGI-CSIRT

Members: NGI-Security-Officers





Pakiti CVEs by tags results-Mozilla Firefox <2>

File Edit View History Bookmarks Tools Help

egi.eu https://pakiti.egi.eu/ssc5/tags_sites.php?tag=EGI-Critical&country=&site=&cve=

EGISecurity Nikhef-CSIRT Nikhef-Monitoring BooksDocs Security-Virtuali... OSCT Gemfony simplesamphp Monnickendam Stanford Encyclope...

Pakiti CVEs by tags results

EGI-Critical	[REDACTED]	x86_64	Scientific Linux CERN 5.5	CVE-2010-4170	24.5.11 09:13
EGI-Critical	[REDACTED]	x86_64	Scientific Linux CERN 5.5	CVE-2010-4170	19.5.11 01:09
EGI-Critical	[REDACTED]	x86_64	Scientific Linux CERN 5.5	CVE-2010-4170	22.5.11 18:49
EGI-Critical	[REDACTED]	x86_64	Scientific Linux 5.4	CVE-2010-3081	22.5.11 17:02
EGI-Critical	[REDACTED]	x86_64	Scientific Linux 5.4	CVE-2010-3081	25.5.11 08:57
EGI-Critical	[REDACTED]	x86_64	Scientific Linux 5.4	CVE-2010-3081	22.5.11 03:12

Statistics

Sites

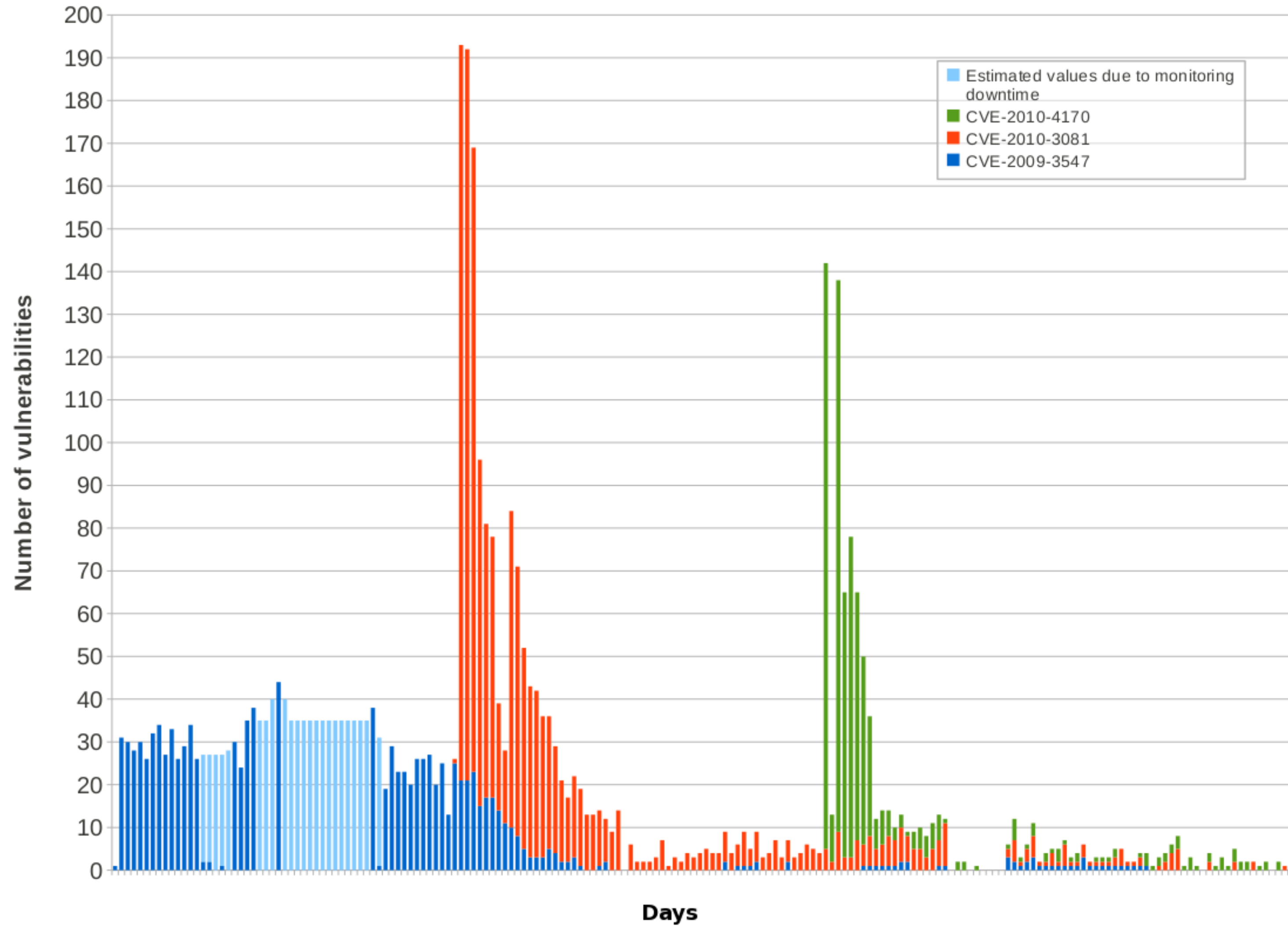
Site	CSIRT Mail	Vuln. hosts	EGI-Critical	EGI-High
[REDACTED]	[REDACTED]	3	3	0
[REDACTED]	[REDACTED]	18	18	0

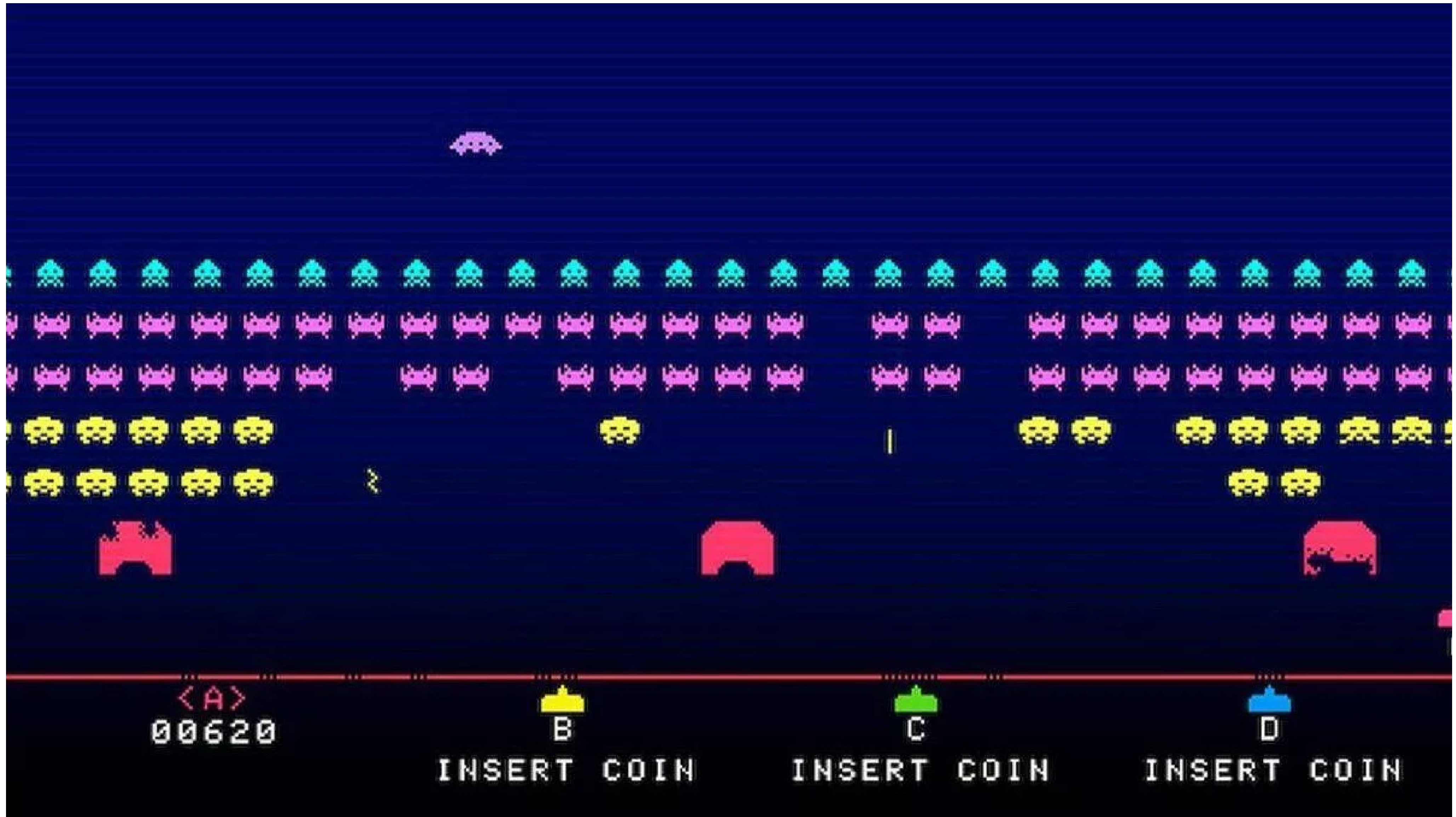
CVEs

CVE	Vuln. sites	Vuln. hosts
CVE-2010-3081	1	3
CVE-2010-4170	1	18

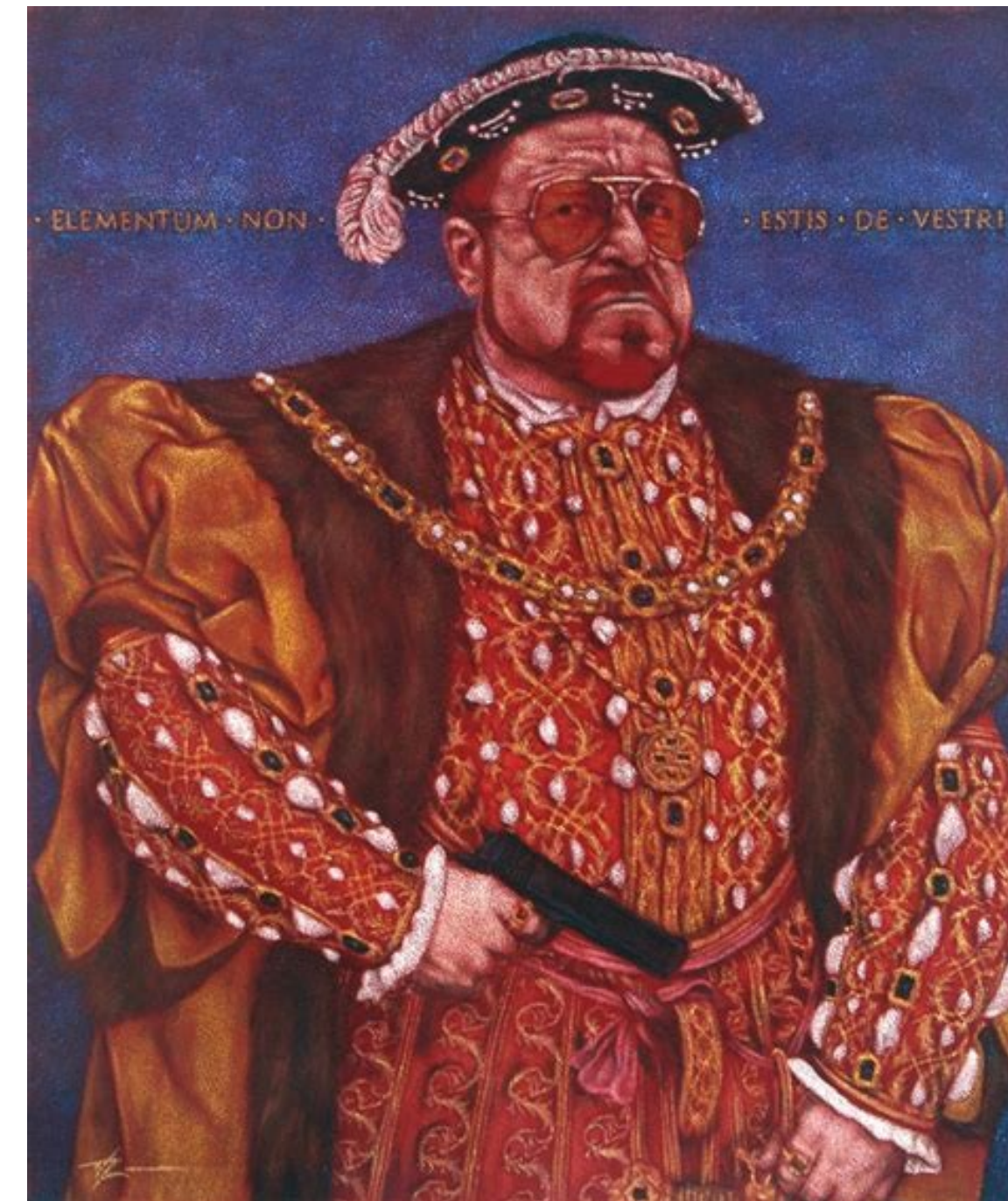
Countries

Country	Vuln. hosts	EGI-Critical	EGI-High
[REDACTED]	3	3	0





- Chit chats between some IRTF members leading to the idea of testing the vetting process of a cloud VO, using an identity from a social media platform
 - "What is needed to start a VM in fedcloud? A registered account in a VO?"
 - "Maybe we should get some social media accounts and check if they get accepted there :-)"
 - "Sure, seem an interesting exercise, let's do it!"



Open Science and Open Access do not mean there is no need to control who can use resources and services

- Many **security incidents** caused by the, **possibly on purpose, lack of authorisation and vetting** when granting access to resources and services. Social media IdPs, like Google, are providing unlimited accounts allowing to verify an email for free.
 - [EGI-20210318-001] **Proxying of nefarious content** via a misconfigured IaaS platform allowing anyone to create a local account and deploy services.
 - [EGI-20210430-01] **Crypto-mining** on a JupyterHub notebook, access granted without any vetting to every Check-in user.
 - [EGI-20220107-01] **Crypto-mining** on a JupyterHub notebook, access granted without any vetting to every Indigo IAM user. Also possible to access by creating a local account with just a mail verification.
 - [EGI-20220114-01] **Crypto-mining** on a JupyterHub notebook, access granted without any vetting to every Check-in user.



Ralph's
Just
Southern
California

Price
Breaker
Extra Savings
Every Day.

Free!
All Natural
BUZZY
SHACK
PLEDINGS

Low

#0: pretext impersonating a researcher in need of cloud resources

Welcome Dr Sobchack

- Dr Walter Sobchack is a researcher, looking for cloud resources to do some analysis in the context of their research

- **Identity card**

- Name: Walter Sobchack
- Title: Dr
- Institute: Nizhny Novgorod State Academy of Medicine (Russia)
- Email: dr.walter.sobchack@gmail.com

- **Research papers - online proofs**

- <https://www.researchgate.net/scientific-contributions/DM-Sobchak-33763131>
 - Content already available online, from a real researcher with a similar name

- **Inspiration: Walter Sobchak character from "The Big Lebowski" movie**

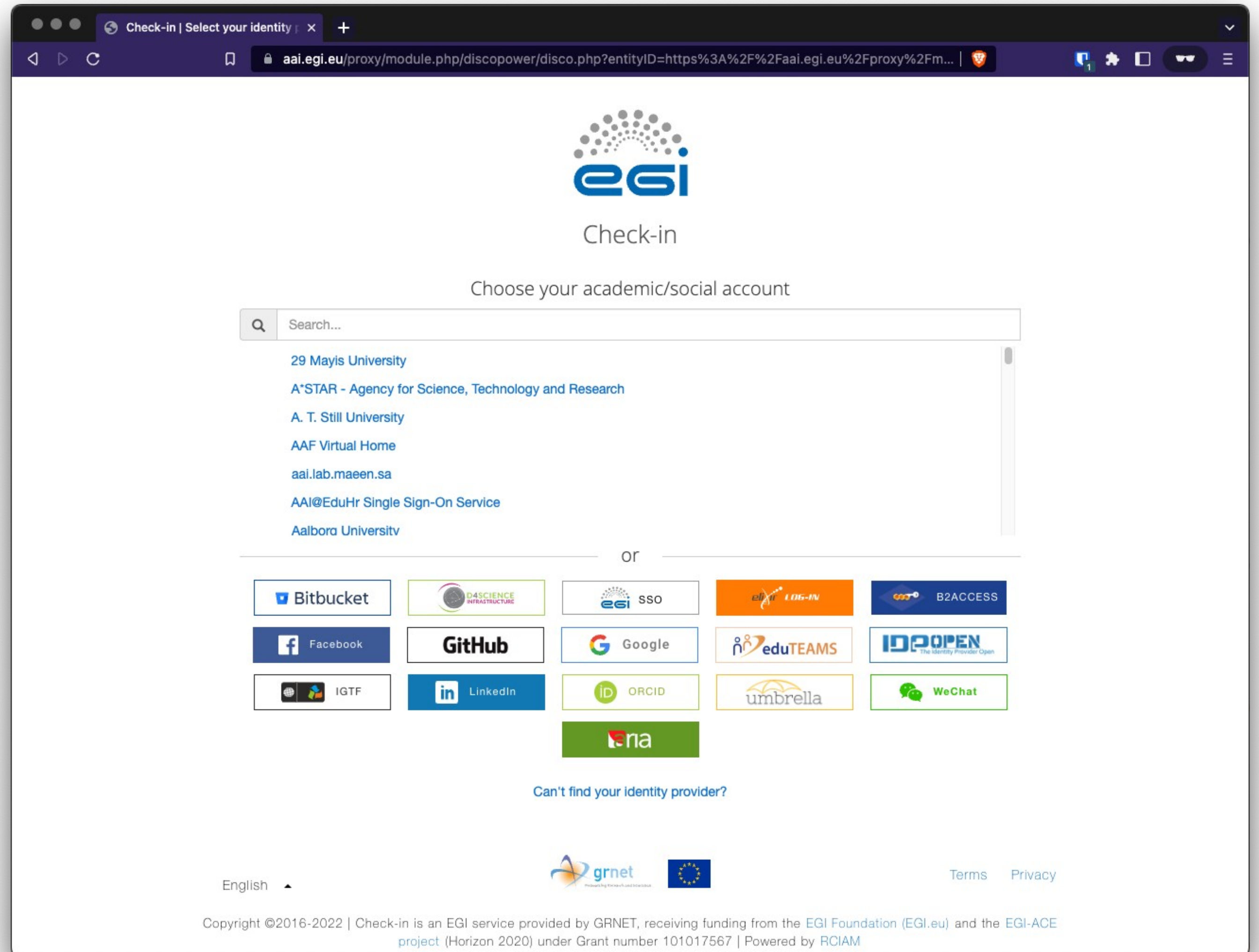
- https://coenbrothers.fandom.com/wiki/Walter_Sobchak



1: Getting a social media account integrated with Check-in

May options to choose from

- Google, GitHub, ORCID, LinkedIn...
- Decided to go with a **Google account** as it also provides a convenient way to have a **working email address**
- Easy to create and manage
- **One requirement:** having a phone number used at account creation

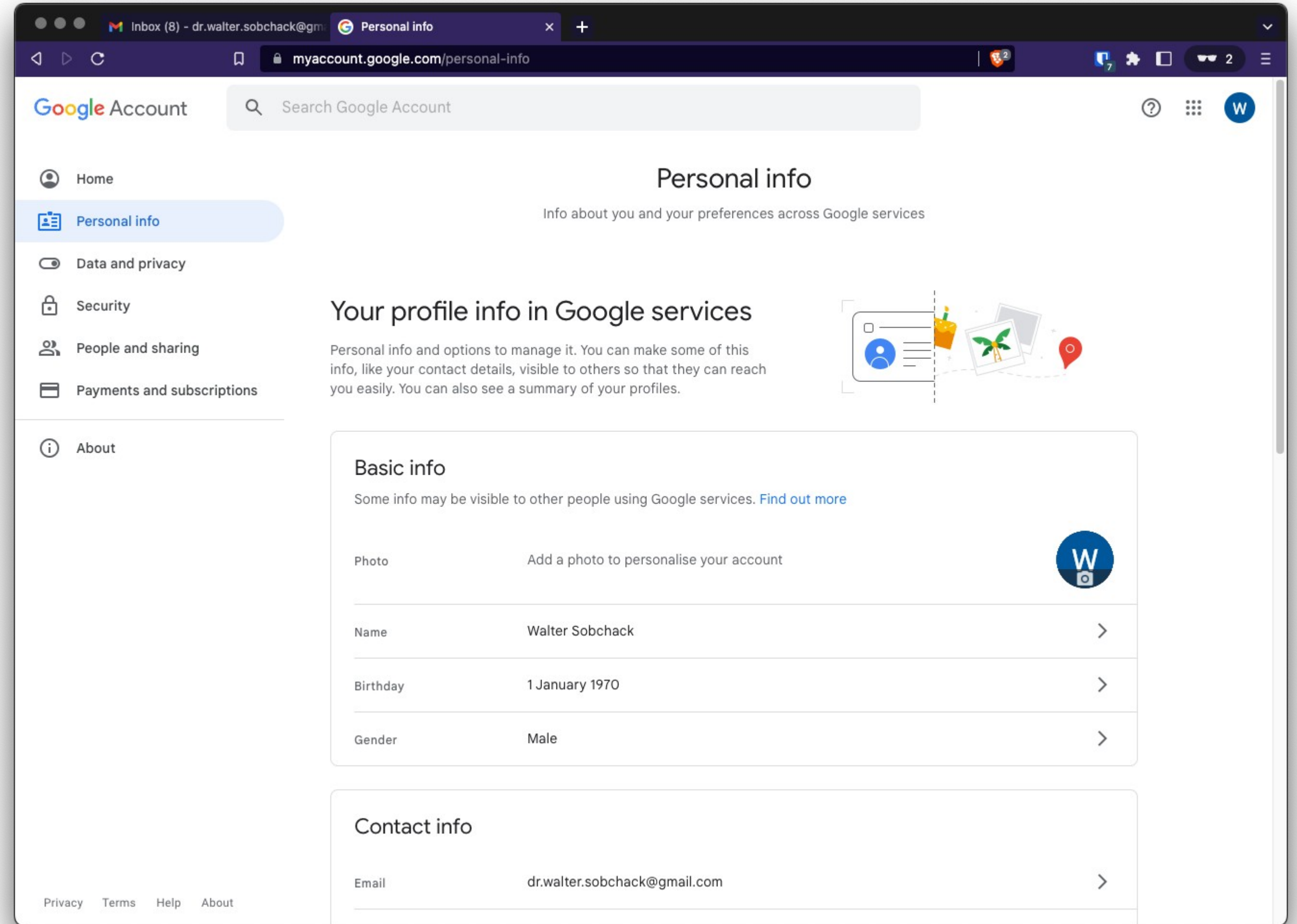


1: Dr Walter Sobchack's Google account

An easy first step

- Welcome Dr Sobchack!

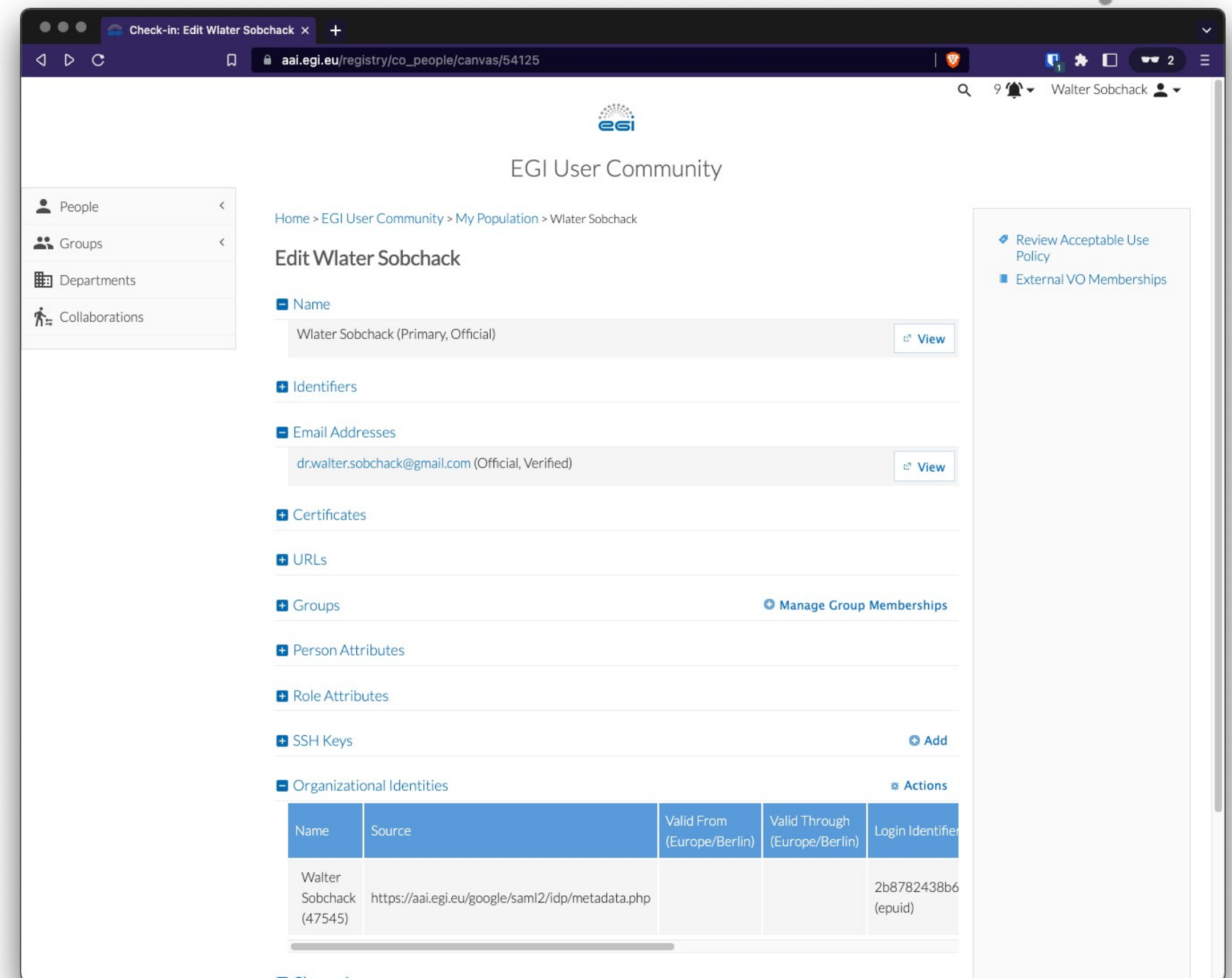
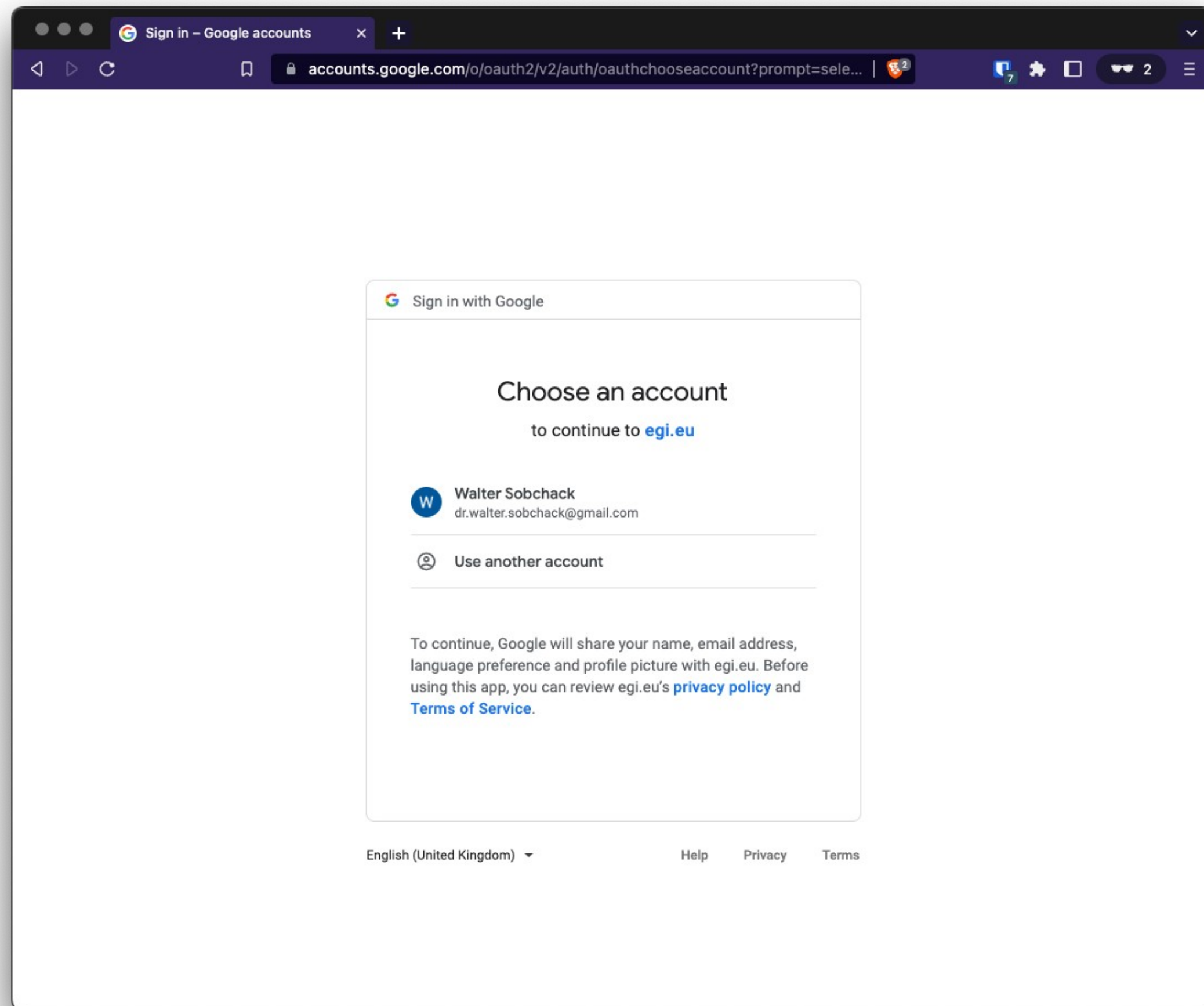
- Email: dr.walter.sobchack@gmail.com



#2 getting a Check-in account associated with the GMail account

Check-in account is one email verification away

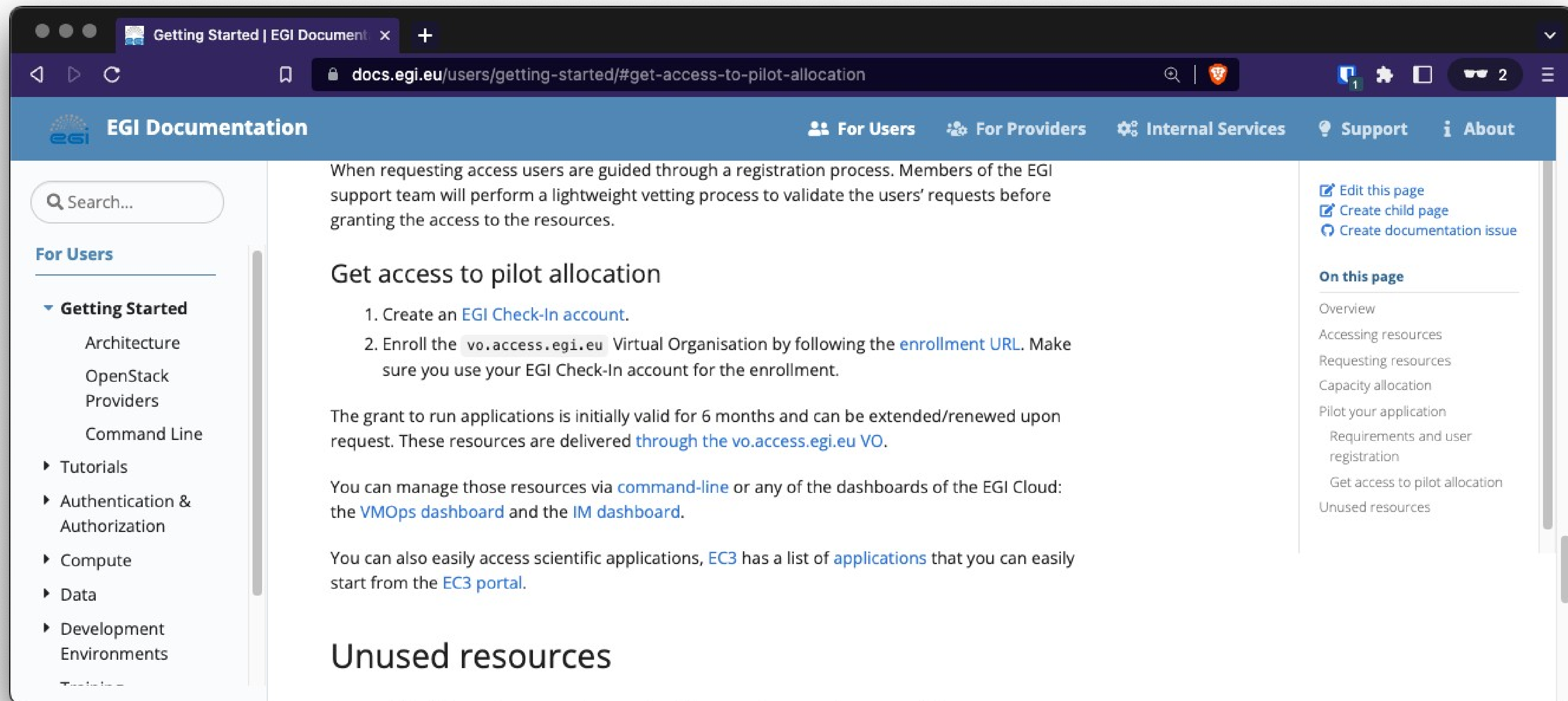
- Registering and managing EGI Check-in account at <https://aai.egi.eu/registry>



#3: enrolling to a VO for piloting activities

Looking for "easily" available resources

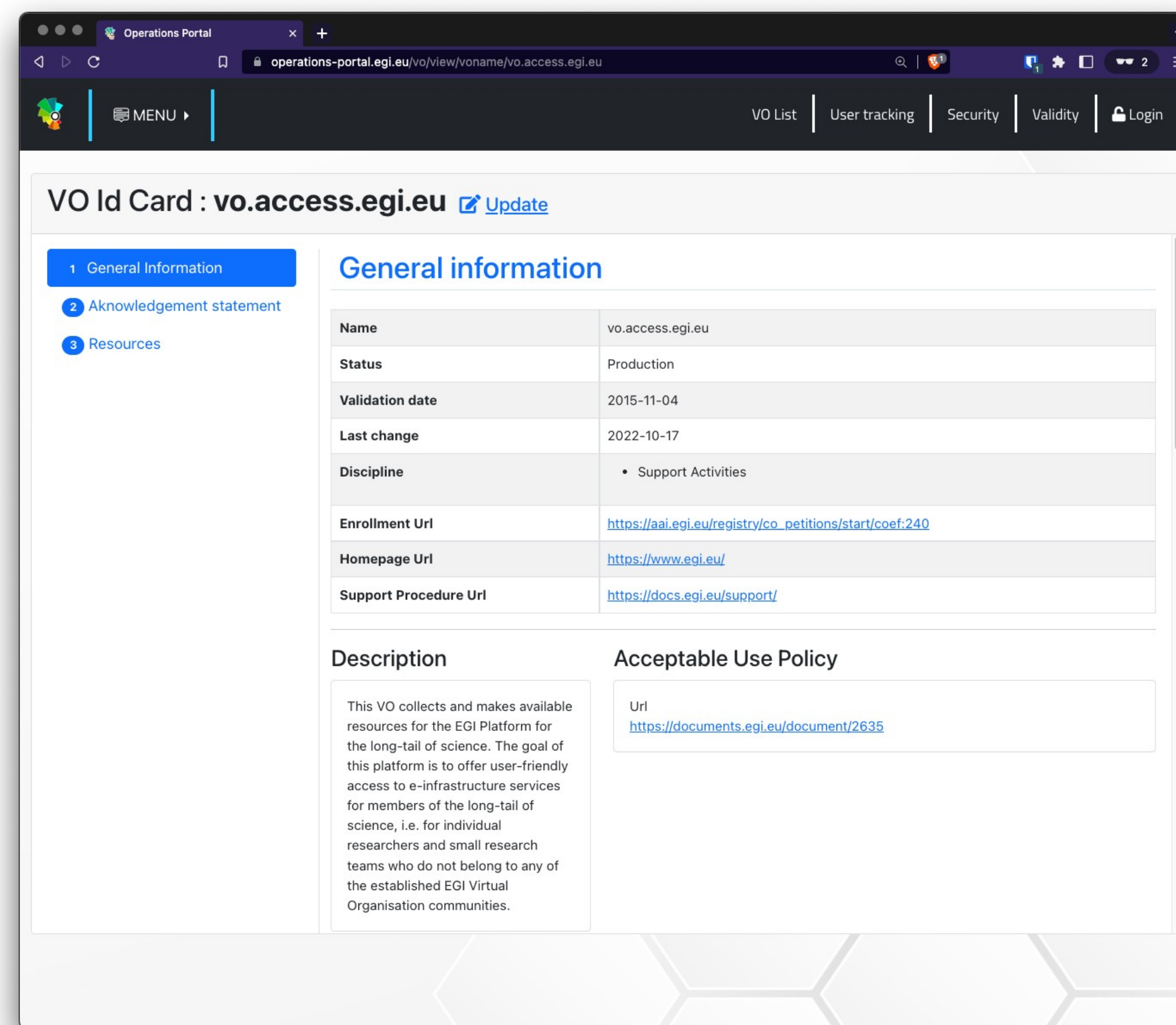
- See <https://docs.egi.eu/users/getting-started/#get-access-to-pilot-allocation>



#3: enrolling to a VO for piloting activities

vo.access.egi.eu: a Check-in managed and cloud-enabled VO for piloting activities and the Long Tail of Science

- VO ID Card: <https://operations-portal.egi.eu/vo/view/voname/vo.access.egi.eu>
- VO managers from EGI Foundation
 - EGI Community Support Team (CST)
 - <https://www.egi.eu/egi-foundation/team/#cst>
 - EGI Technical Solutions Team (TST)
 - <https://www.egi.eu/egi-foundation/team/#tst>
- Members on duty following a rota
- Reviewing and vetting access requests
- According to a clearly defined vetting procedure



#3: enrolling to a VO for piloting activities

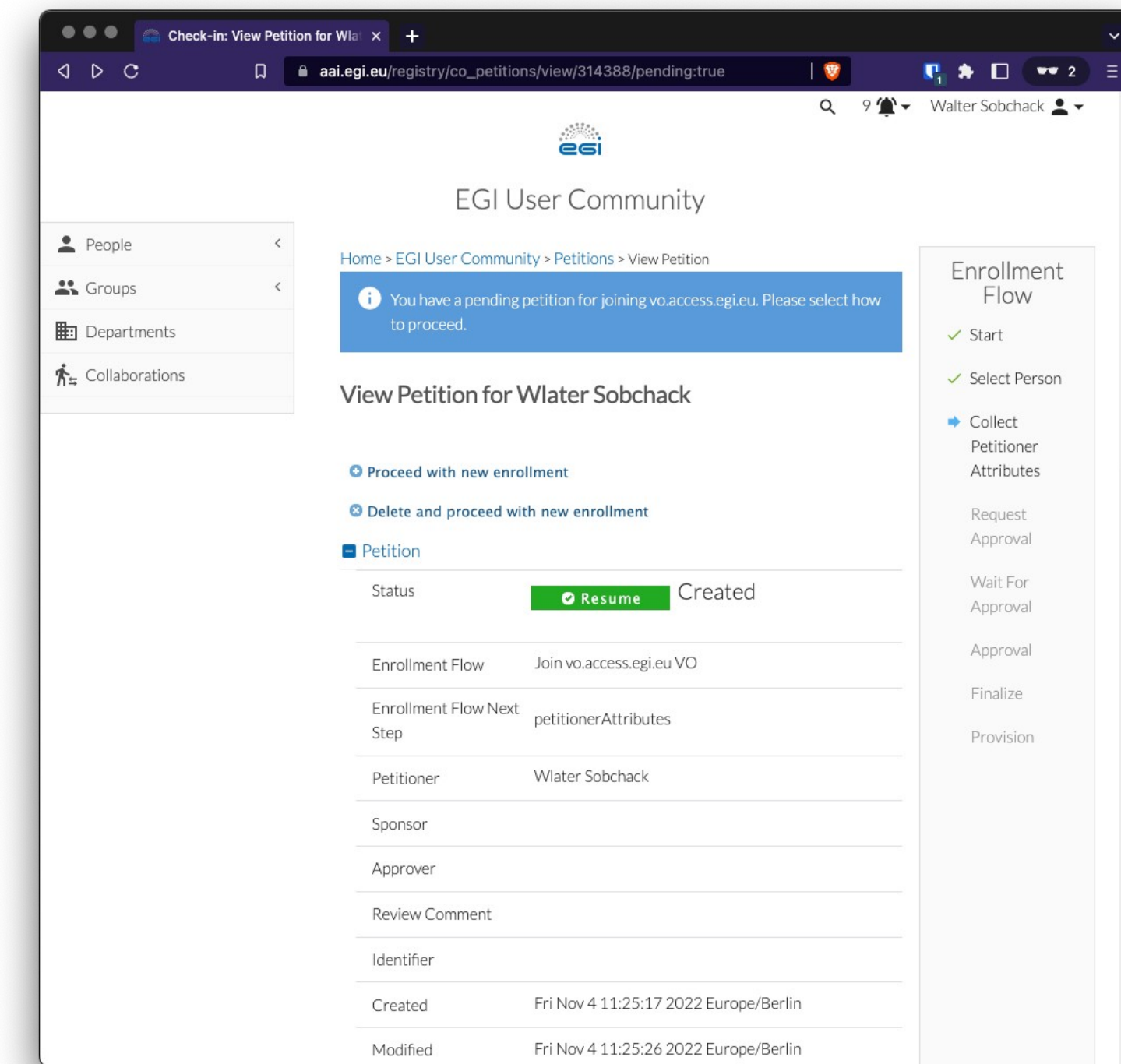
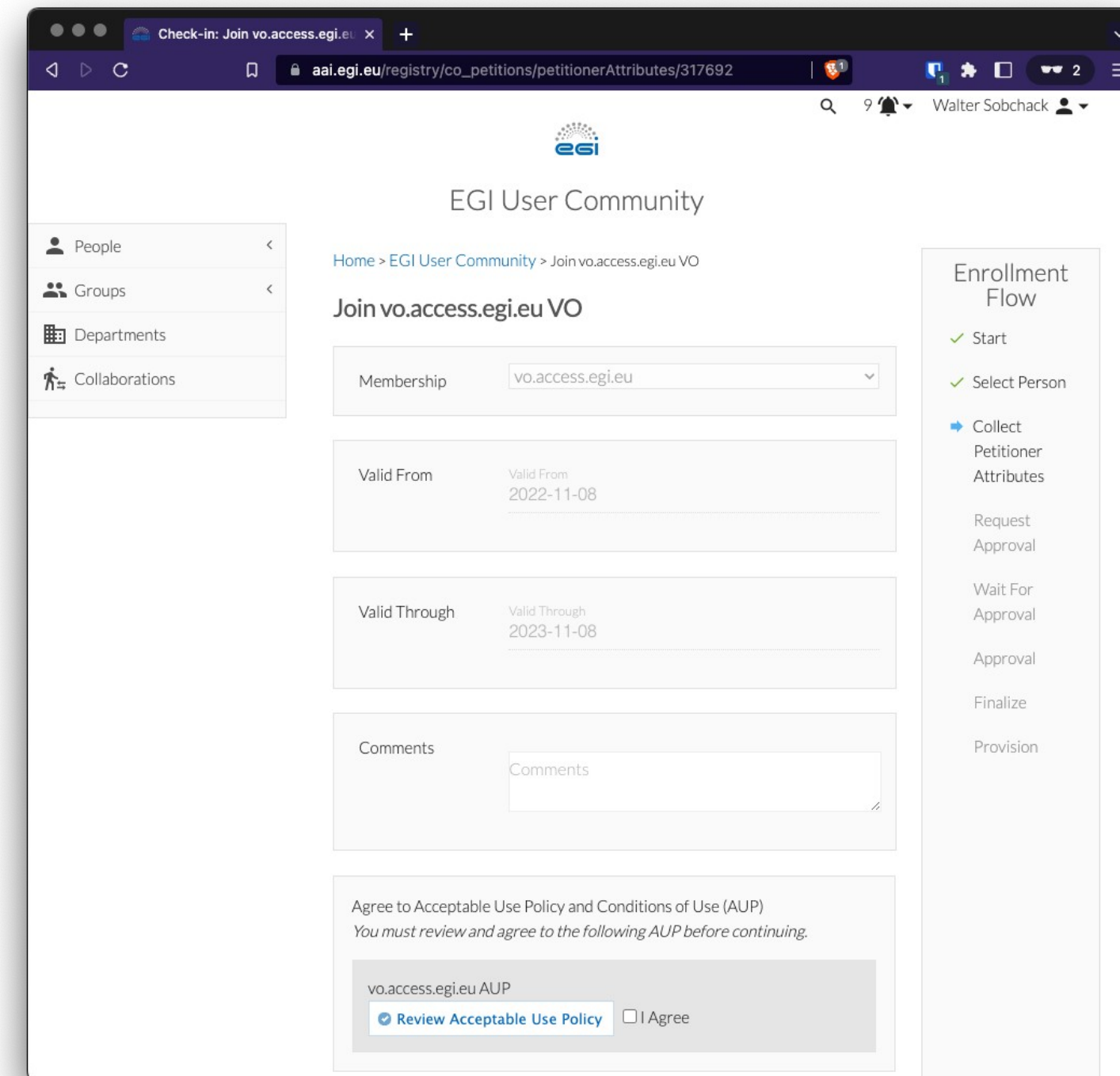
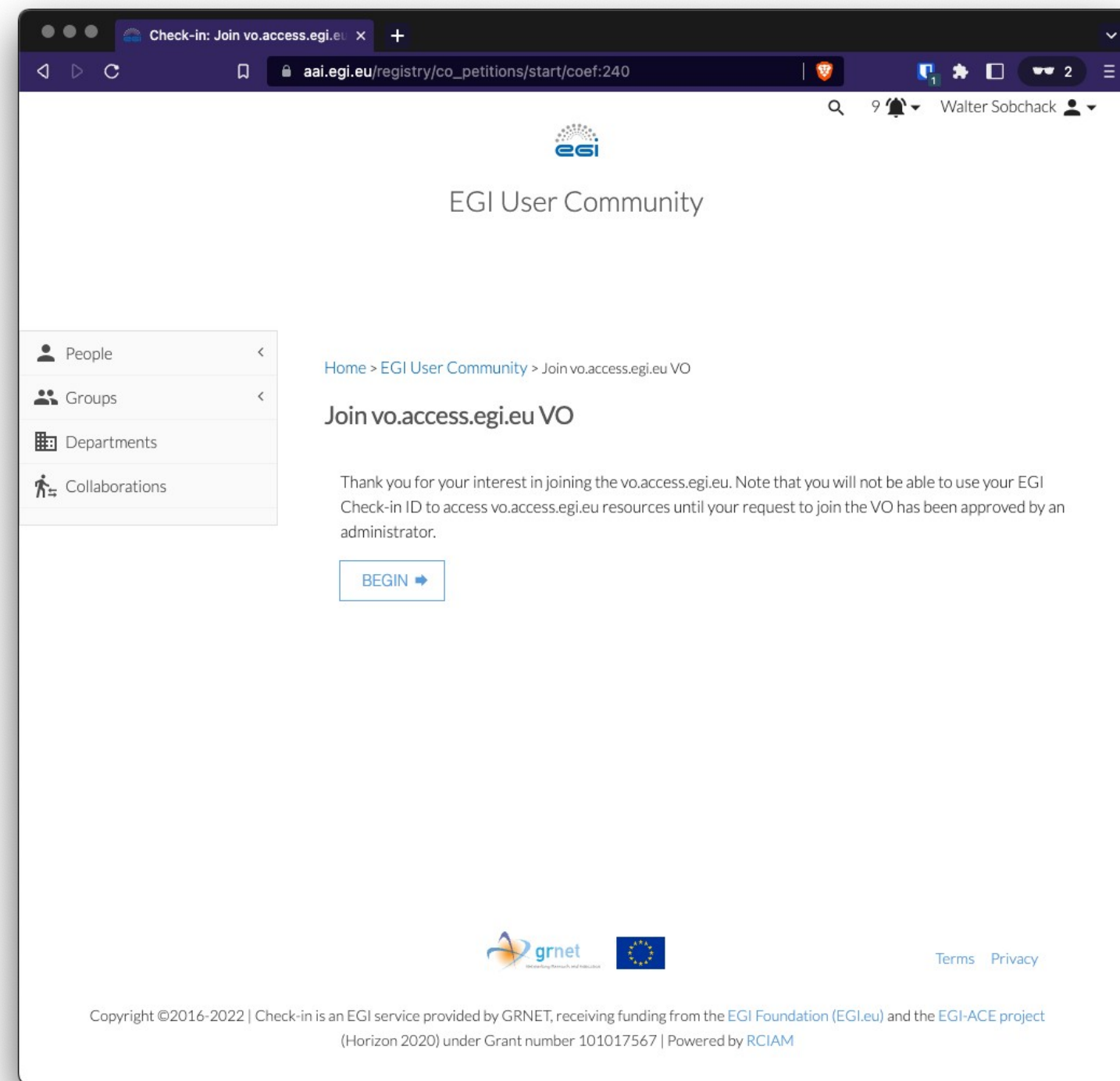
Investigating public information about the VO

- Cloud Compute EGI Service: <https://docs.egi.eu/users/compute/cloud-compute/>
- Supporting sites, images and flavours: <https://appdb.egi.eu/store/vo/vo.access.egi.eu>

#3: enrolling to a VO for piloting activities

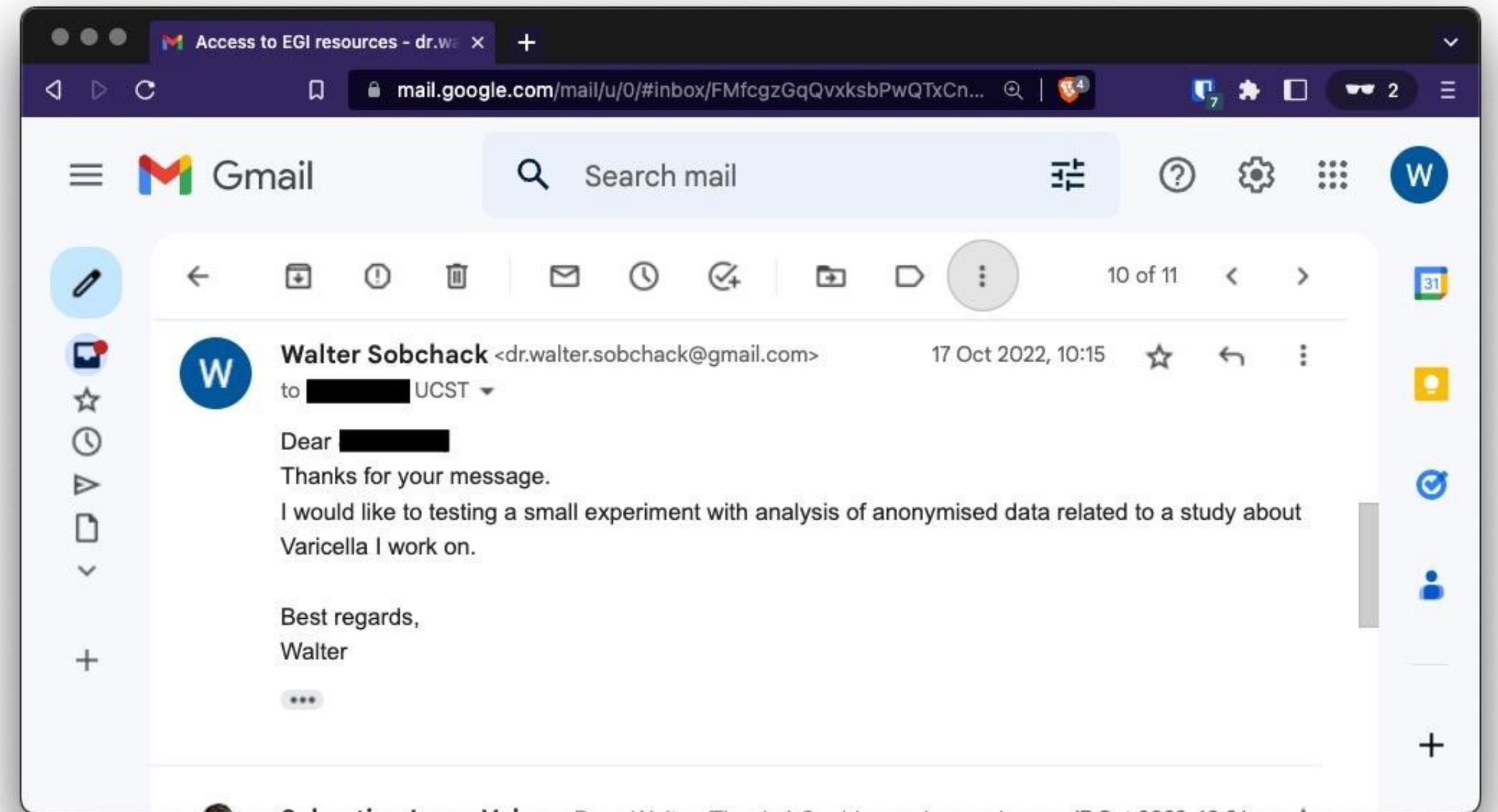
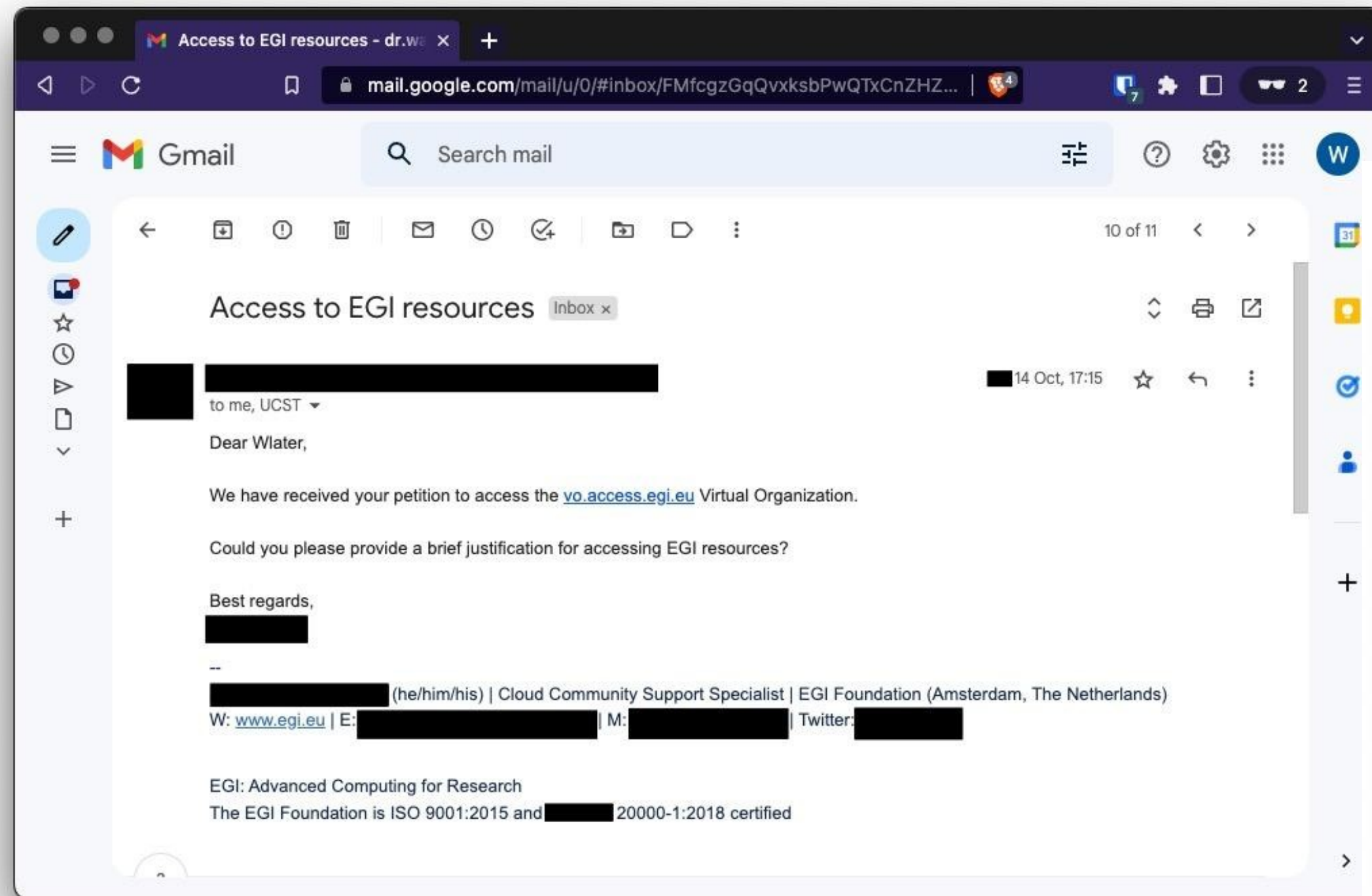
Using Check-in to enroll to the VO

- **Enrolling:** https://aai.egi.eu/registry/co_petitions/start/coef:240



#4: Going through the vetting process

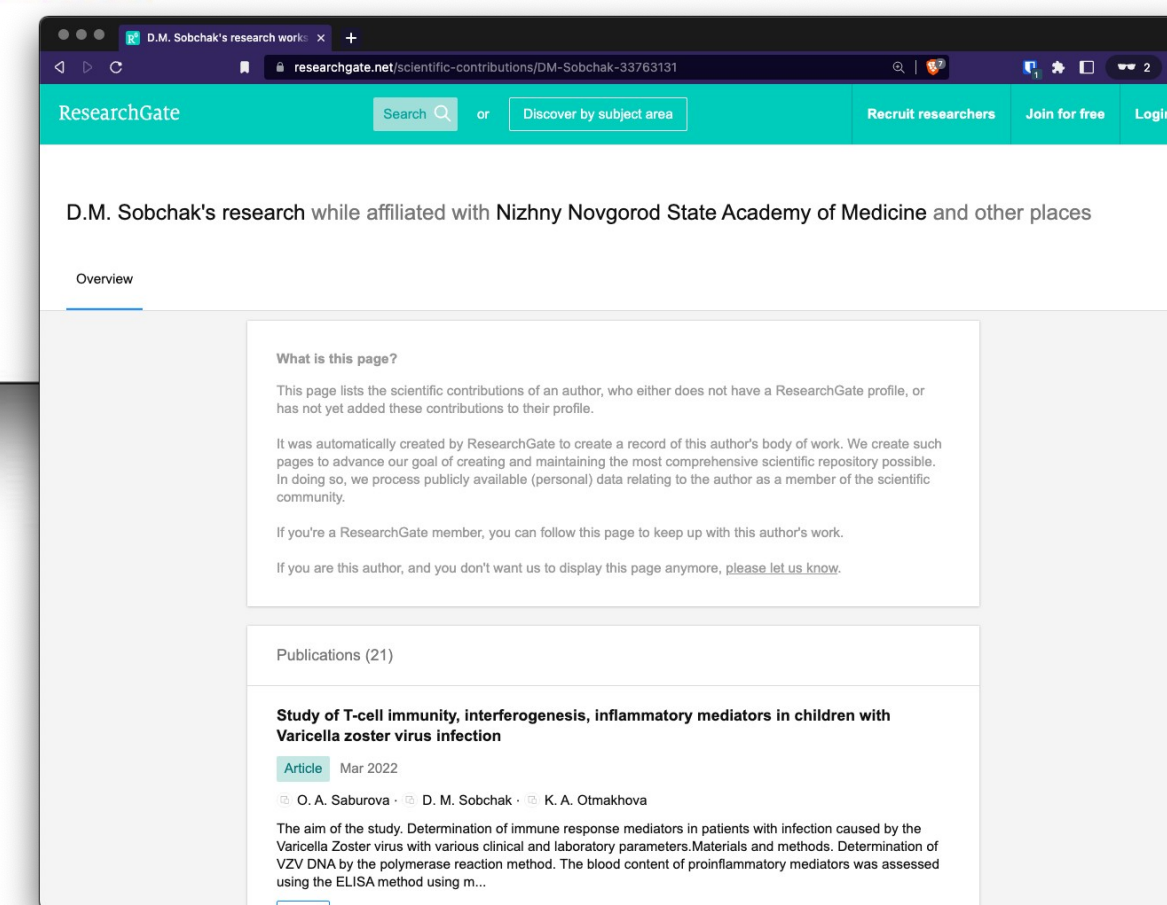
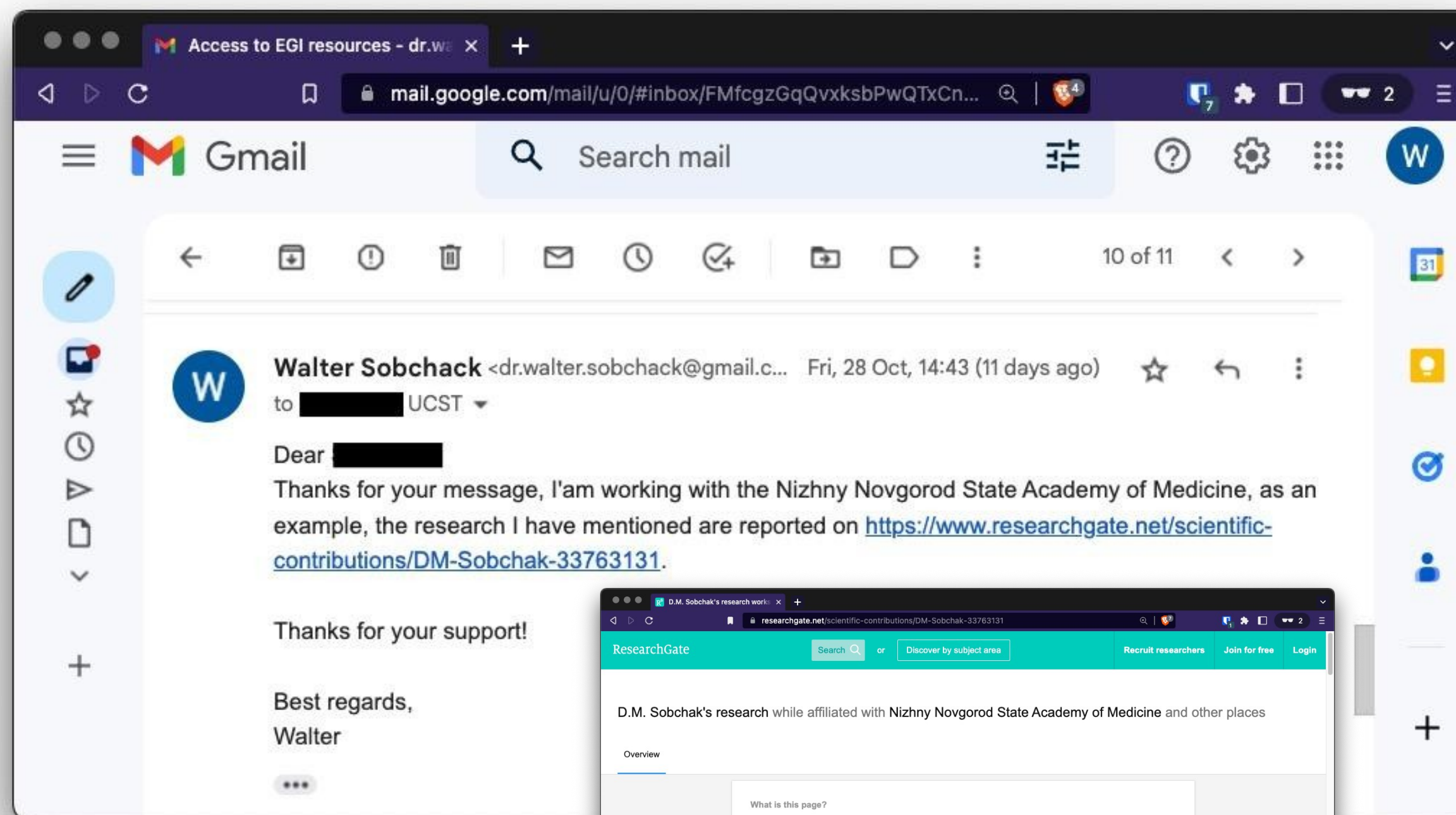
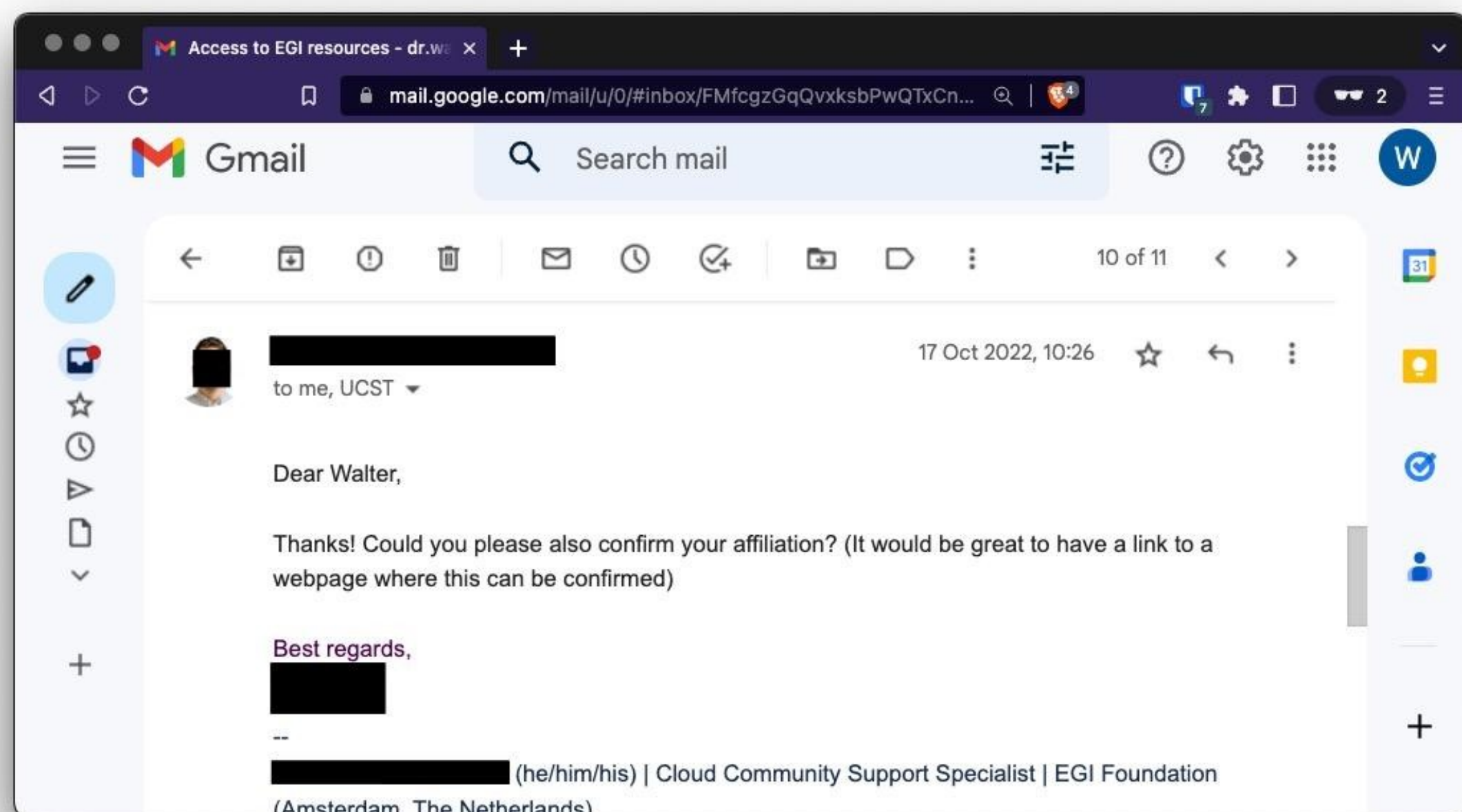
Welcome message and discussing the justification for requesting resources



#4: Going through the vetting process

Checking the Affiliation. Pointing to Dr Sobchak's research on ResearchGate...

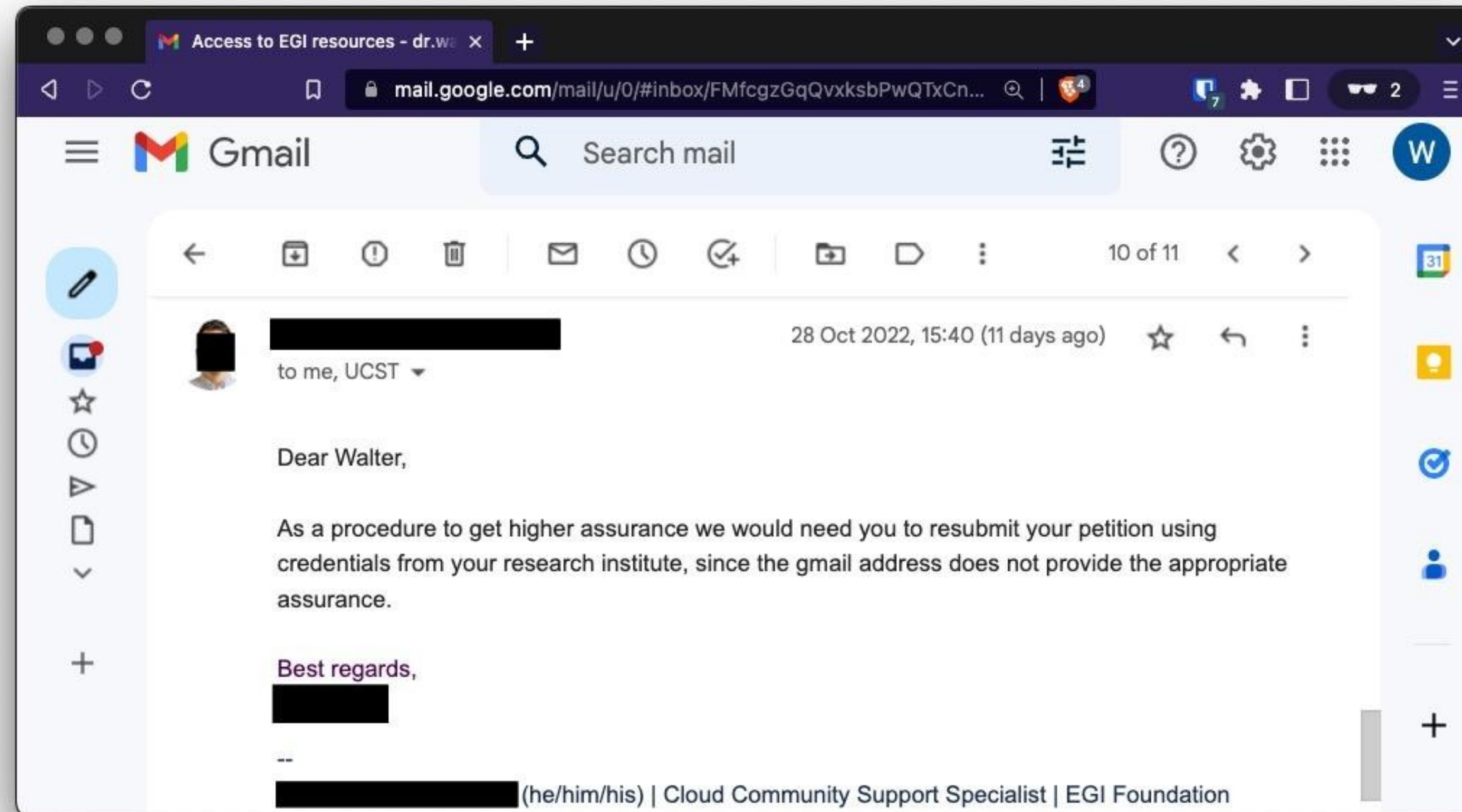
[DM Sobchak's research while affiliated with Nizhny Novgorod State Academy of Medicine and other places](#)



#4: Going through the vetting process

Not enough trust, please use a higher assurance level Identity Provider

- Well done guys better not let me in!



#4: A few details about the legacy EGI AoDS vetting process

Vetting process for the legacy Applications on Demand Service (AoDS)

● EGI Applications on Demand - Documentation for operator

- <https://documents.egi.eu/document/3127>

2.4.4 How to study a service-order request (Applications)

Before to approve any Applications, the Operator must verify whether the information reported by the Applicant are correct. If the information is not enough to verify the identity of the Applicant and/or validate his/her research scope, the Operator can invite the Applicant to provide additional information and/or clarifications. The Operator can ask for additional information and/or clarifications adding a comment in the RT ticket.

If, for several reasons, the additional information provided by the Applicants are lacking or cannot be verified, the Application will be rejected.

From a technical standpoint, study an Application means verify whether the following two conditions are met:

9

1. Check the Applicant's profile information.

The Operator needs to verify whether the Applicant has:

- Specified references to his/her institution and department.
- Included enough technical details to identify the purpose of the Applicant's research (if the purpose is for-profit, the request is rejected);

If some of this information is missing, the Operator can use the template **E1** in Appendix II to ask for additional information.

2.5.1.1 Tracking of the approved service requests

The EGI User Support operators MUST record the evidence of the vetting process in the corresponding RT ticket as such as the following example:

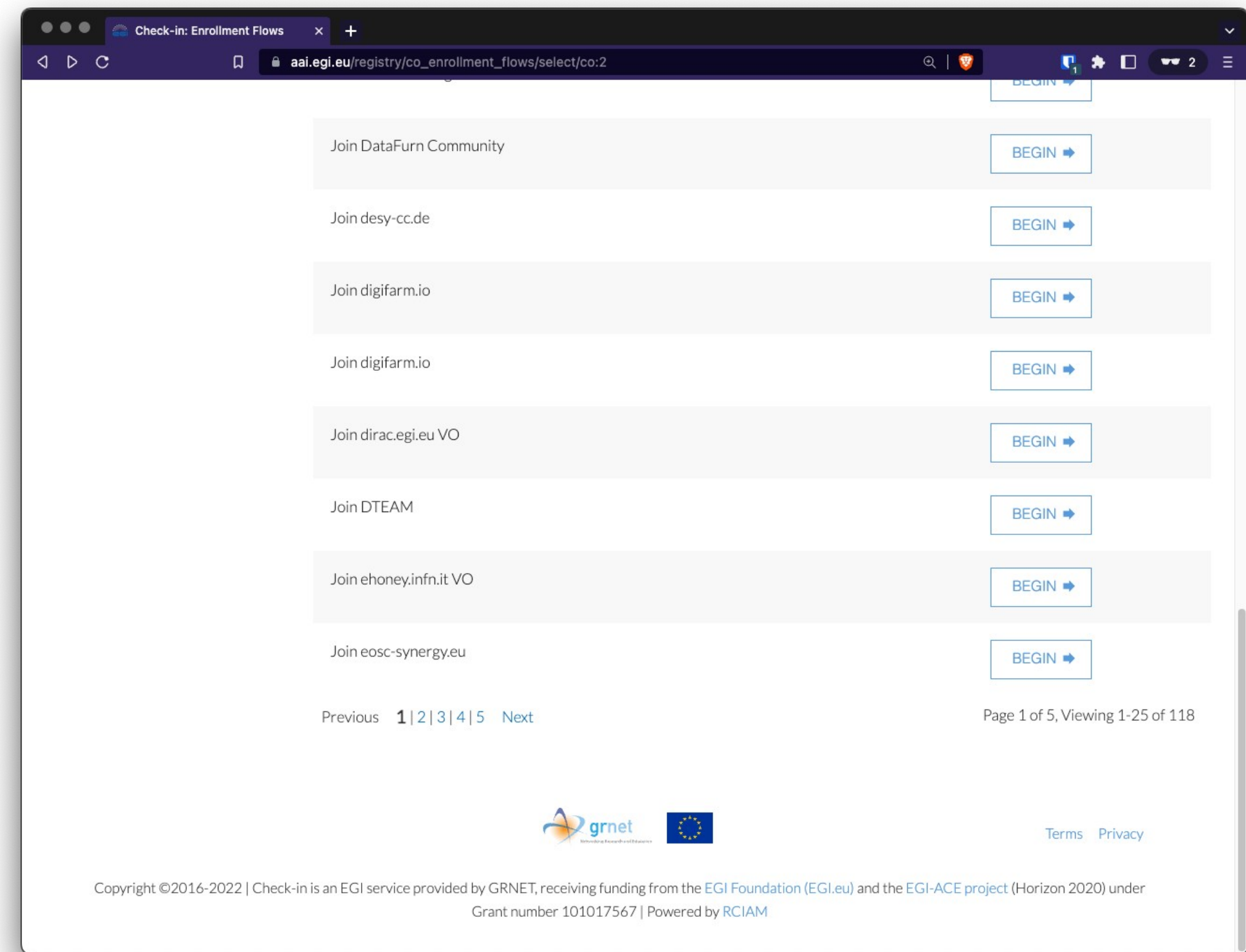
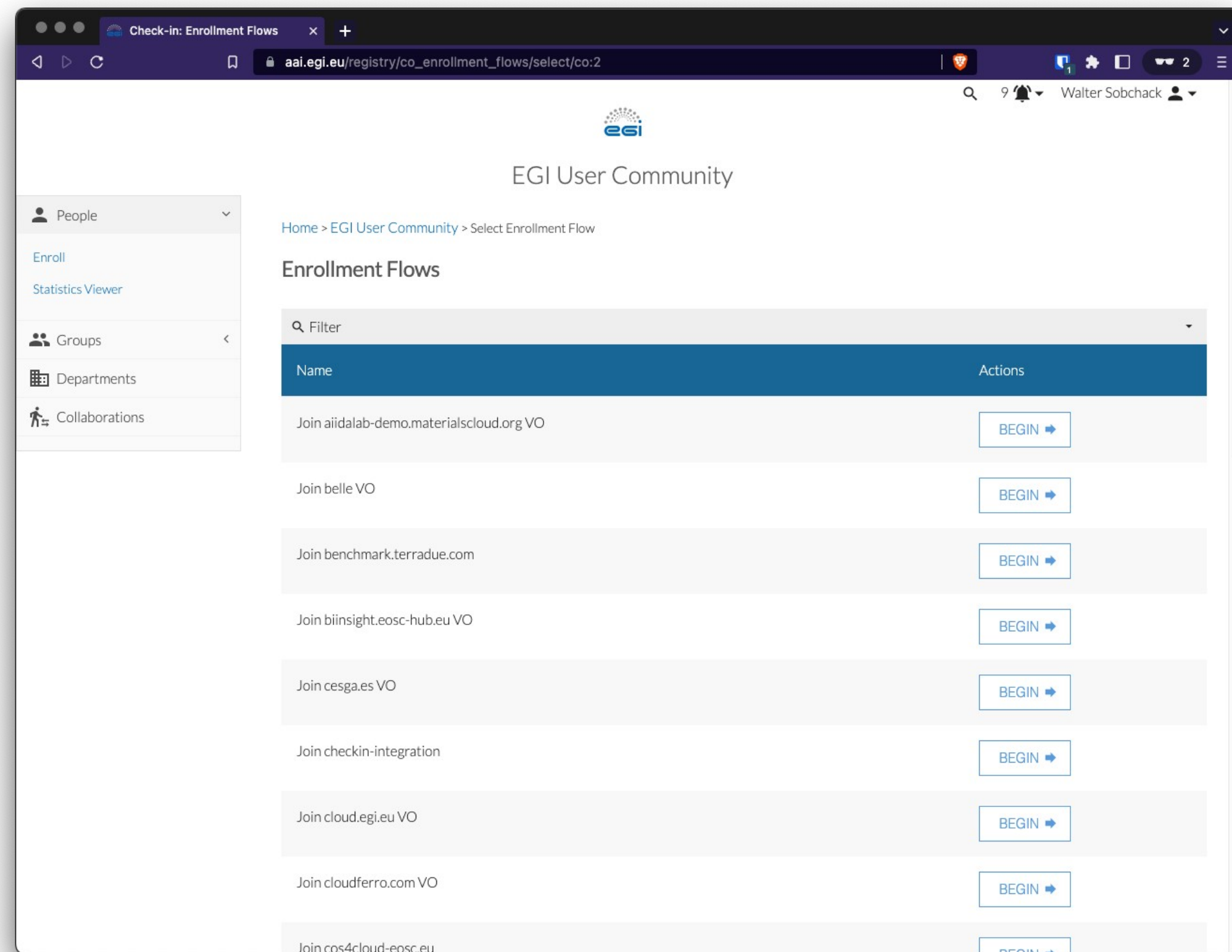
The service-order has been APPROVED as the following conditions have been verified:

- The Applicant has specified a valid LinkedIn/ResearchGate/... profiles.
- A referee has been specified in the order and he/she has successfully confirmed the Applicant's research scope.
- The Applicant has successfully acknowledged EGI (if the scientific publications have been produced benefiting from the allotted resources).
- The Applicant's research activity is in line with EGI's scope.

#5: Are we done?

Going through the list of available VO in Check-in, opened to self-enrollment

- Currently 118 available VO available for self enrollment



#6: Knocking at heaven's door

Trying to enrolling to the first 25 VOs, requesting or not to write a comment to justify request

The image displays four overlapping browser screenshots of the EGI User Community enrollment process. The first screenshot shows the 'Join desy-cc.de' page. The second shows 'Join DTEAM'. The third shows 'Join cloud.egi.eu VO' with a warning message: 'Thank you for your interest in participating in cloud.egi.eu. Please, note that you will not be able to use your EGI Check-in ID to access EGI resources until your request to join the community has been approved by an administrator.' The fourth screenshot shows the 'Join cryoem.instruct-eric.eu VO' page with a form for comments, membership selection (cryoem.instruct-eric.eu), valid dates (2022-11-08 to 2023-11-08), and a checkbox for 'Review Acceptable Use Policy'. An enrollment flow sidebar on the right lists steps: Start, Select Person, Collect Petitioner Attributes, Request Approval, Wait For Approval, Approval, Finalize, Provision.

#6: Doors staying closed

No VO managers granted access to Walter...

EGU User Community - Notifications for Wlaler Sobchack (Recipient, All)

Action	Comment	Created (Europe/Berlin)
CPUP	Petition for Wlaler Sobchack changed status from Pending Approval to Denied (Join aiidalab-demo.materialscloud.org VO)	Yesterday, 10:5
CPUP	Petition for Wlaler Sobchack changed status from Pending Approval to Denied (Join ehoney.infn.it VO)	Friday November 04, 09:23
CPUP	Petition for Wlaler Sobchack changed status from Pending Approval to Denied (Join DataFurn Community)	Friday November 04, 08:17
CPUP	Petition for Wlaler Sobchack changed status from Pending Approval to Denied (Join cloud.egi.eu VO)	Friday November 04, 08:15
CPUP	Petition for Wlaler Sobchack changed status from Pending Approval to Denied (Join biinsight.eosc-hub.eu VO)	Friday November 04, 08:15
CPUP	Petition for Wlaler Sobchack changed status from Pending Approval to Denied (Join benchmark.terradue.com)	Friday November 04, 08:15
CPUP	Petition for Wlaler Sobchack changed status from Pending Approval to Denied (Join desy-cc.de)	Thursday November 03, 18:16
CPUP	Petition for Wlaler Sobchack changed status from Pending Approval to Denied (Join vo.access.egi.eu VO)	Thursday November 03, 18:02
CPUP	Petition for Wlaler Sobchack changed status from Pending Approval to Denied (Join crystal_channelling_simulation.vo.egi.eu VO)	Thursday November 03, 17:49

Page 1 of 1

Gmail - Request to join crystal_channelling_simulation.vo.egi.eu has been denied

EGU Check-in Notifications <noreply@faai.grnet.gr> to me
Thu, 3 Nov, 17:49 (5 days ago)

Your request to join [crystal_channelling_simulation.vo.egi.eu](#) has been denied for the following reason:
No comment provided.

Thank you,
EGU Check-in Support

Gmail - About your join petition in [redacted] VO

[redacted] to me
Fri, 4 Nov, 08:43 (4 days ago)

Hi:

I'm [redacted] from [redacted] and I'm the administrator for VO [redacted]

I noticed that you request for join the VO [redacted]

In principle, this VO is only for [redacted] staff. So if you want to use the fedcloud infrastructure, I suggest you that select any other generic VO, as for example ["vo.access.egi.eu"](#). This VO "vo.access.egi.eu" is a VO for tests and training.

Regards.

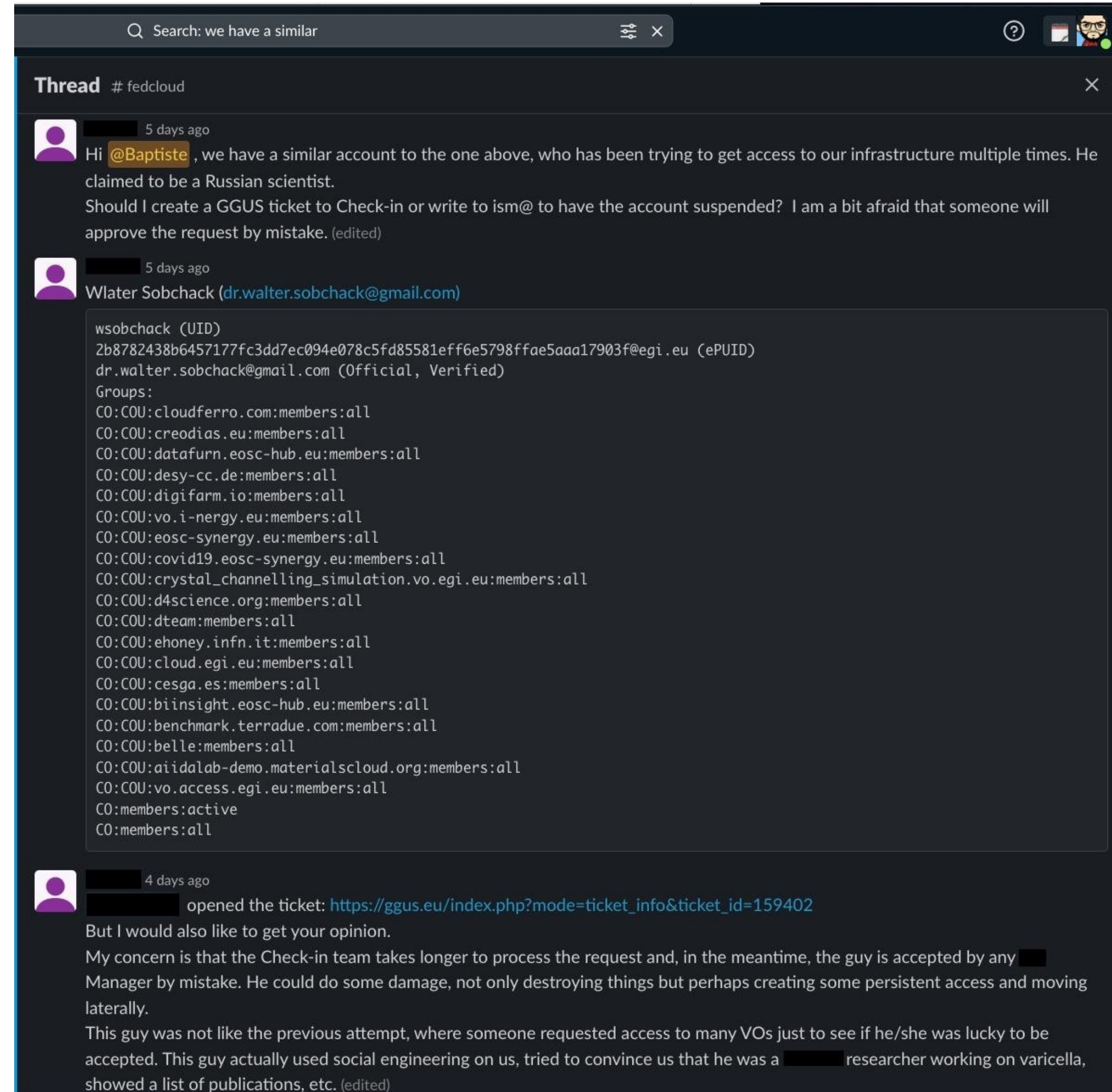
--

Role Attributes Table:

COU	Title	Affiliation	Valid From	Valid Through	Status	Actions
cloudferro.com		Member	2022-11-03 00:00:00	2023-11-03 00:00:00	Pending Approval	Edit
creodias.eu		Member	2022-11-03 00:00:00	2023-11-03 00:00:00	Pending Approval	Edit
datafurn.eosc-hub.eu		Member	2022-11-03 00:00:00	2023-11-03 00:00:00	Denied	Edit
desy-cc.de		Member	2022-11-03 00:00:00	2023-11-03 00:00:00	Denied	Edit
digifarm.io		Member	2022-11-03 00:00:00	2023-11-03 00:00:00	Pending Approval	Edit
vo.i-nergy.eu		Member	2022-11-03 00:00:00	2023-11-03 00:00:00	Pending Approval	Edit
eosc-synergy.eu		Member	2022-11-03 00:00:00	2023-11-03 00:00:00	Pending Approval	Edit
covid19.eosc-synergy.eu		Member	2022-11-03 00:00:00	2023-11-03 00:00:00	Pending Approval	Edit
crystal_channelling_simulation.vo.egi.eu		Member	2022-11-03 00:00:00	2023-11-03 00:00:00	Denied	Edit
4science.org		Member	2022-11-03 00:00:00	2023-11-03 00:00:00	Pending Approval	Edit
iteam		Member	2022-11-03 00:00:00	2023-11-03 00:00:00	Pending Approval	Edit
ehoney.infn.it		Member	2022-11-03 00:00:00	2023-11-03 00:00:00	Denied	Edit
cloud.egi.eu		Member	2022-11-03 00:00:00	2023-11-03 00:00:00	Denied	Edit
esga.es		Member	2022-11-03 00:00:00	2023-11-03 00:00:00	Pending Approval	Edit
biinsight.eosc-hub.eu		Member	2022-11-03 00:00:00	2023-11-03 00:00:00	Denied	Edit
benchmark.terradue.com		Member	2022-11-03 00:00:00	2023-11-03 00:00:00	Denied	Edit
xelle		Member	2022-11-03 00:00:00	2023-11-03 00:00:00	Pending Approval	Edit
aiidalab-demo.materialscloud.org		Member	2022-11-03 00:00:00	2023-11-03 00:00:00	Denied	Edit
vo.access.egi.eu		Member	2022-10-14 00:00:00	2023-10-14 00:00:00	Denied	Edit
		Member	2022-10-14 00:00:00	2023-10-14 00:00:00	Active	Edit

#7: Triggering alerts in EGI Foundation

EGI Foundation Central VO management team getting suspicious



Search: we have a similar

Thread # fedcloud

5 days ago
Hi @Baptiste, we have a similar account to the one above, who has been trying to get access to our infrastructure multiple times. He claimed to be a Russian scientist. Should I create a GGUS ticket to Check-in or write to ism@ to have the account suspended? I am a bit afraid that someone will approve the request by mistake. (edited)

5 days ago
Wlater Sobchack (dr.walter.sobchack@gmail.com)

```
wsobchack (UID)
2b8782438b6457177fc3dd7ec094e078c5fd85581eff6e5798ffae5aaa17903f@egi.eu (ePUIID)
dr.walter.sobchack@gmail.com (Official, Verified)
Groups:
CO:COU:cloudferro.com:members:all
CO:COU:creodias.eu:members:all
CO:COU:datafurn.eosc-hub.eu:members:all
CO:COU:desy-cc.de:members:all
CO:COU:digifarm.io:members:all
CO:COU:vo.i-nergy.eu:members:all
CO:COU:eosc-synergy.eu:members:all
CO:COU:covid19.eosc-synergy.eu:members:all
CO:COU:crystal_channelling_simulation.vo.egi.eu:members:all
CO:COU:d4science.org:members:all
CO:COU:dteam:members:all
CO:COU:ehoney.infn.it:members:all
CO:COU:cloud.egi.eu:members:all
CO:COU:cesga.es:members:all
CO:COU:biinsight.eosc-hub.eu:members:all
CO:COU:benchmark.terradue.com:members:all
CO:COU:belle:members:all
CO:COU:aiidalab-demo.materialscloud.org:members:all
CO:COU:vo.access.egi.eu:members:all
CO:members:active
CO:members:all
```

4 days ago
opened the ticket: https://ggus.eu/index.php?mode=ticket_info&ticket_id=159402
But I would also like to get your opinion.
My concern is that the Check-in team takes longer to process the request and, in the meantime, the guy is accepted by any Manager by mistake. He could do some damage, not only destroying things but perhaps creating some persistent access and moving laterally.
This guy was not like the previous attempt, where someone requested access to many VOs just to see if he/she was lucky to be accepted. This guy actually used social engineering on us, tried to convince us that he was a researcher working on varicella, showed a list of publications, etc. (edited)

- In fact many VOs are managed by the EGI Foundation team
 - They got multiple access requests from the same user
 - => reported to the EGI Foundation Information Security Manager, asking for support

#7: Requesting the account suspension

EGI Foundation Central VO management team taking actions

The screenshot shows the GGUS Helpdesk interface. The browser address bar indicates the URL is `ggus.eu/?mode=ticket_info&ticket_id=`. The page header includes the GGUS logo and the text "GGUS - the Helpdesk". A navigation menu on the left contains links for "Documentation", "Registration", "Data Protection", "Terms of use", "My dashboard", "Search ticket", "Submit ticket", and "Support staff".

The main content area displays ticket information for a ticket with ID [REDACTED]. The information is organized into three columns:

Submitter: [REDACTED] E-Mail: [REDACTED] Concerned VO: none User notification: on Every Change	Date of issue: 2022-11-04 08:04:00 Change issue type: Other Priority: urgent VO specific: No Scope: EGI	Origin SG: GGUS Ticket Category: Service Request Responsible unit: Check-in (AAI) Status: solved Support unit history: info window
---	--	---

The ticket description is as follows:

Description: Check-In: Please suspend account "dr.walter.sobchack@gmail.com"

Detailed Description:

Hello,

Would it be possible to suspend the account "dr.walter.sobchack@gmail.com"? https://aai.egi.eu/registry/co_people/canvas/54125

The user is trying to get access to as many VOs as possible without legitimate reasons.

It is the first time I request this. Please let me know if I should follow a different procedure.

Best regards,
[REDACTED]

Solution: Thanks for reporting this. The account has been suspended.

I would suggest using `check-in-abuse@mailman.egi.eu` mailing list for handling security related issues.

- Requesting account suspension in GGUS

#7: A VO manager reporting to EGI CSIRT

EGi Foundation Central VO management team getting suspicious

- First report about suspicious activity sent to it-support@egi.eu
- Identifying the pretext's context
- Then forwarding to abuse@egi.eu

The screenshot shows a web browser window displaying an RT ticket. The ticket ID is #17891. The subject is "Fwd: unknown and suspicious petition to join VO [redacted]". The sender is [redacted] and the recipient is abuse@egi.eu. The ticket was created on Fri Nov 04 16:05:49 2022. The body of the ticket contains a message from the sender to the recipient, asking for advice on how to handle a user who tried to access a VO. The sender mentions that the user's nickname is from a movie character and that the registry shows the user as active in the VO, which is strange. The sender asks if it is safe to assume that the user has no access to the cloud resources. The sender also mentions that this is the first time a user has requested access to one of their VOs before contacting them. The sender thanks the recipient for their help. The recipient's response is also visible, dated Fri Nov 04 18:45:43 2022. The response states that the security team is already aware of the activities and that the user has been banned on EGI Check-in. The recipient guarantees that the user does not pose any threat to the infrastructure and its services and that there is no action needed from the sender's side. The recipient signs off with "regards, EGI CSIRT".



Lessons from the exercise

It was both successful (from a defender side) and a failure (from an attacker side)

● What went well

- Dr Sobchak **never got access to any resources**
- **Vetting** of vo.access.egi.eu was very **effective**
 - Professional tone in communication
 - Following a defined procedure, looking for:
 - Justifications for accessing the resources
 - Justifications on the identity, researcher status and institute
 - Asked for using a Identity Provider providing more assurance
- **Reporting** dubious activity to the **local security team**
- Taking **protective measures** (account suspension)
 - Check-in team was reactive, account got blocked
- A VO manager **reported** suspicious request **to EGI CSIRT**

● What may be improved

- Account suspension request in GGUS should have been managed with the involvement of the local security team and possibly of the EGI CSIRT
- It's possible to easily discover many VO and try to enroll
 - Not all VO Managers may be as careful
- Due to a configuration error, for some time, the Check-in account was still usable

● Ideas for the future

- Promoting/sharing VO vetting procedure
- Only exposing VO that needs to be exposed
- Running the tests on a more targeted way, like for the SSC



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Let's talk. Or
meet in person

Get in touch with us

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