EG-CI: The Cloud Infrastructure for the Greek Node

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www.elixir-greece.org

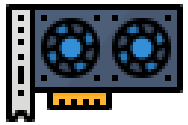
At a glance

32 converged nodes

28 cores / 2.6 GHz / 512GB RAM

2 “fat” nodes

48 cores / 2.1 GHz / 1,024GB RAM



3 GPU-enabled nodes

28 cores / 2.6 GHz / 768GB RAM / 2GPUs

8 I/O nodes

28 cores / 2.6 GHz / 512GB RAM / 2 SSD disks (6GB/s)

9 infrastructure nodes

28 cores / 2.6 GHz / 512GB RAM

1,552 physical cores in total

https://egci-beta.imsi.athenarc.gr/

Delivery of equipment: Dec 2020 (delayed)
EG-CI on new equipment: Feb 2021

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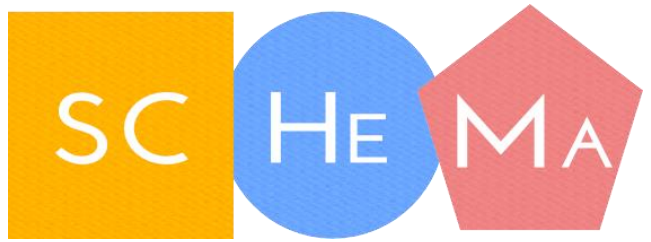
Access to EG-CI

- Cloud resources managed by ***CLIMA***
  - Open source platform developed by ATHENA RC
  - https://github.com/athenarc/clima

- Management of on-demand computations: ***SCHeMa***
  - Open source, developed by ATHENA RC
  - https://github.com/athenarc/schema



- These platforms can be installed on top of OpenStack and Kubernetes

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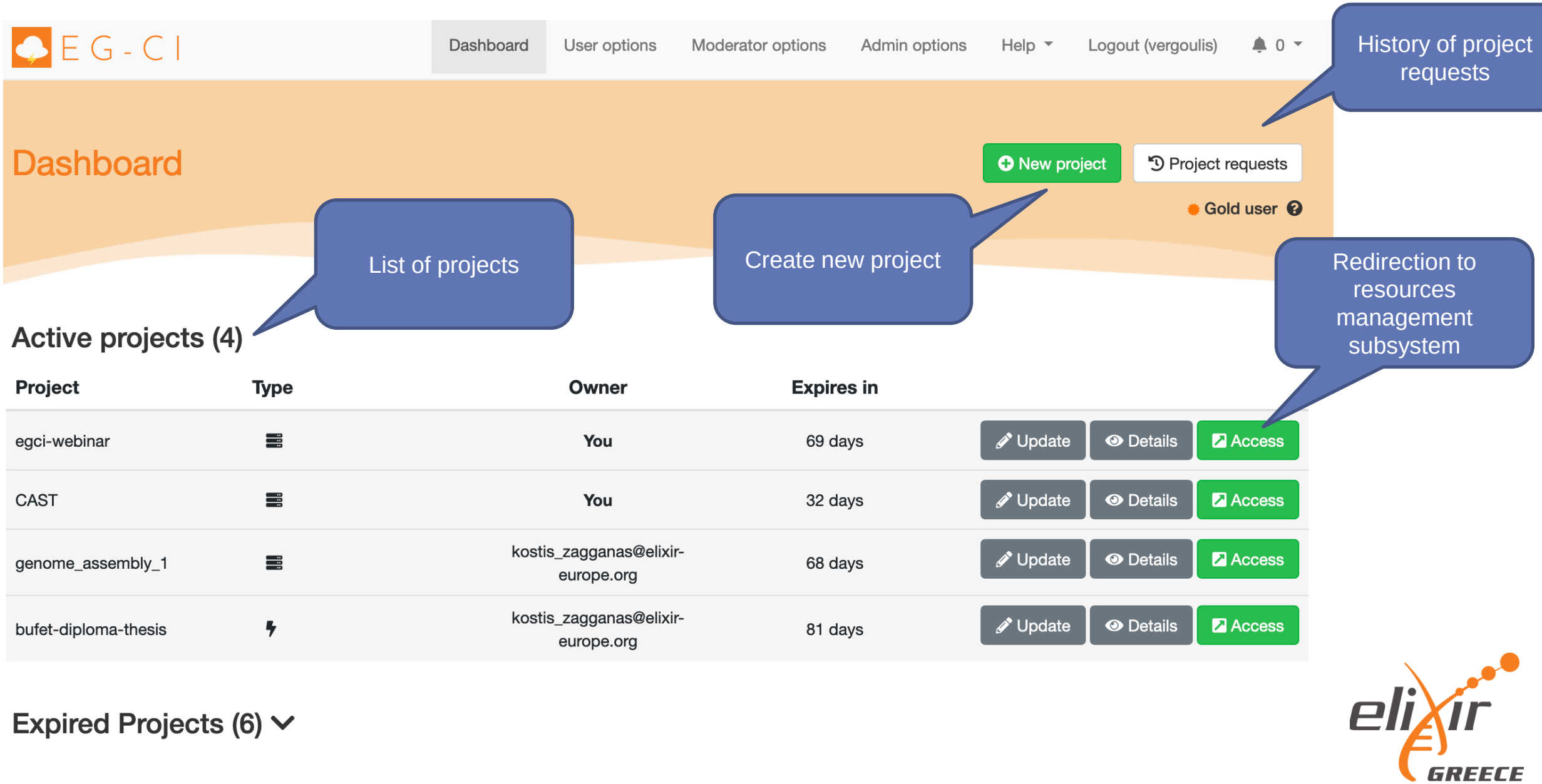
Access to EG-CI: through three types of projects

1. **24/7 services**
   - Providing virtual private servers (VMs) for 24/7 services
2. **On-demand computation**
   - Supporting batch execution of workflows
3. **Cold storage** *[Q1 2021]*
   - Providing tape storage to support dataset backup

Access based on ELIXIR AAI

Main interface



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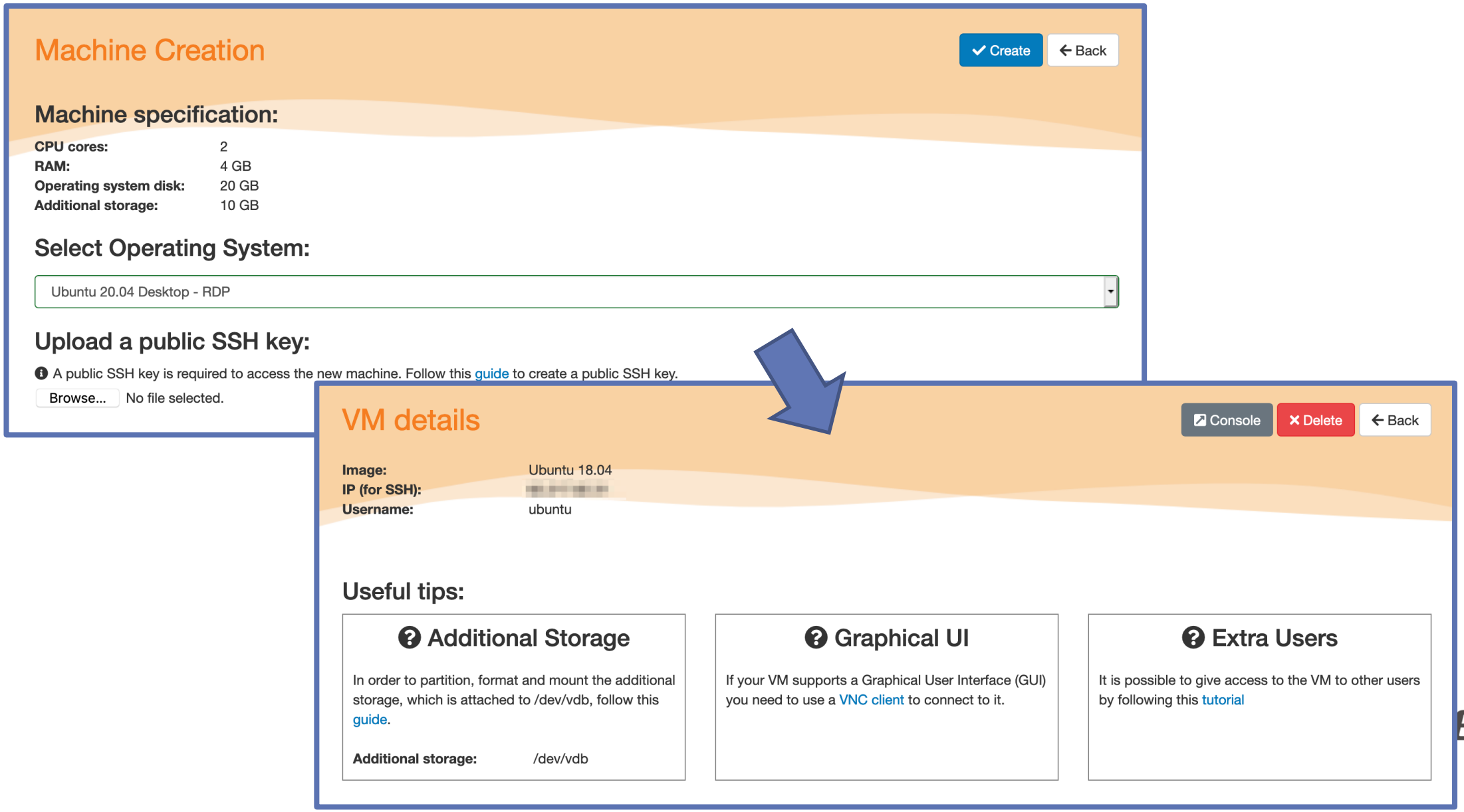
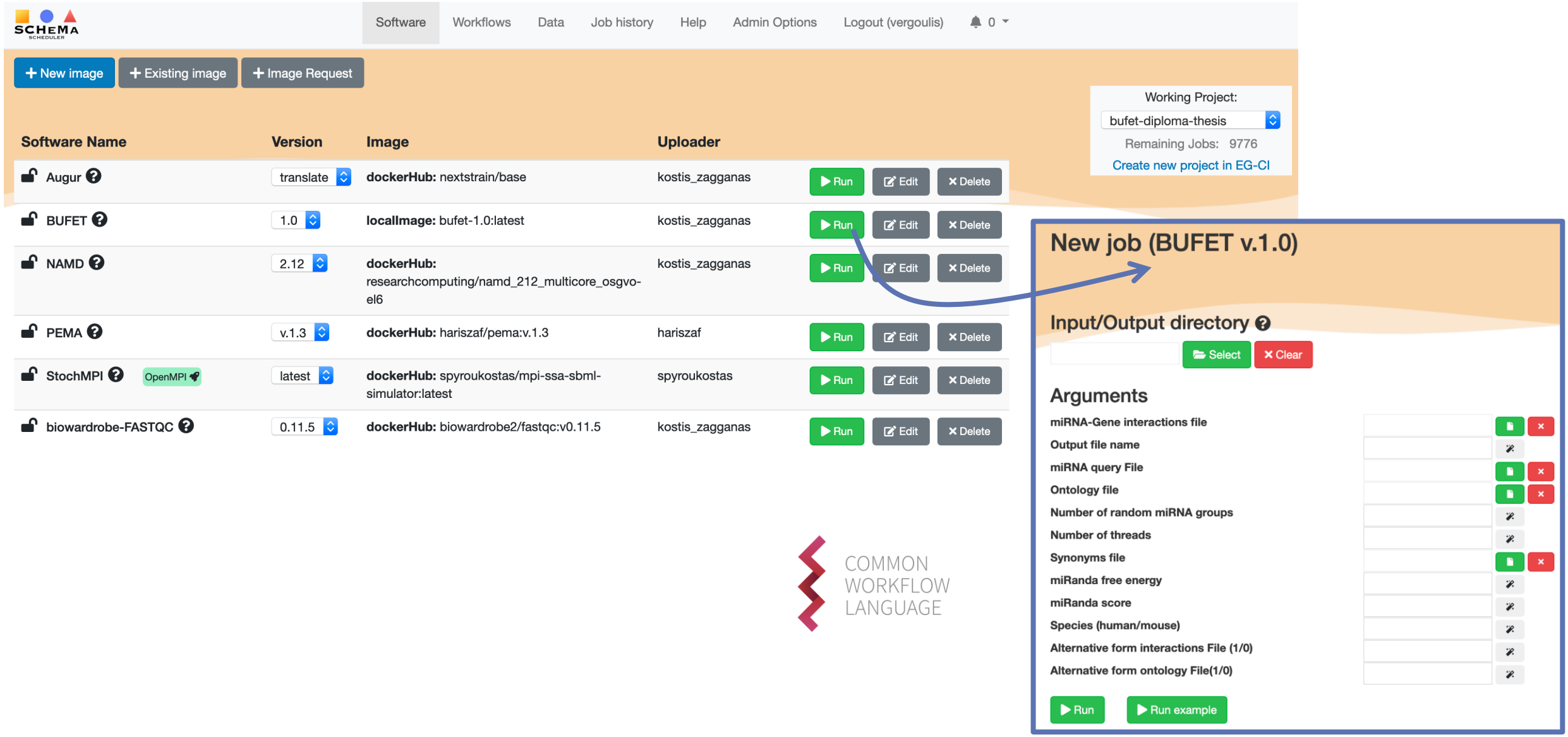
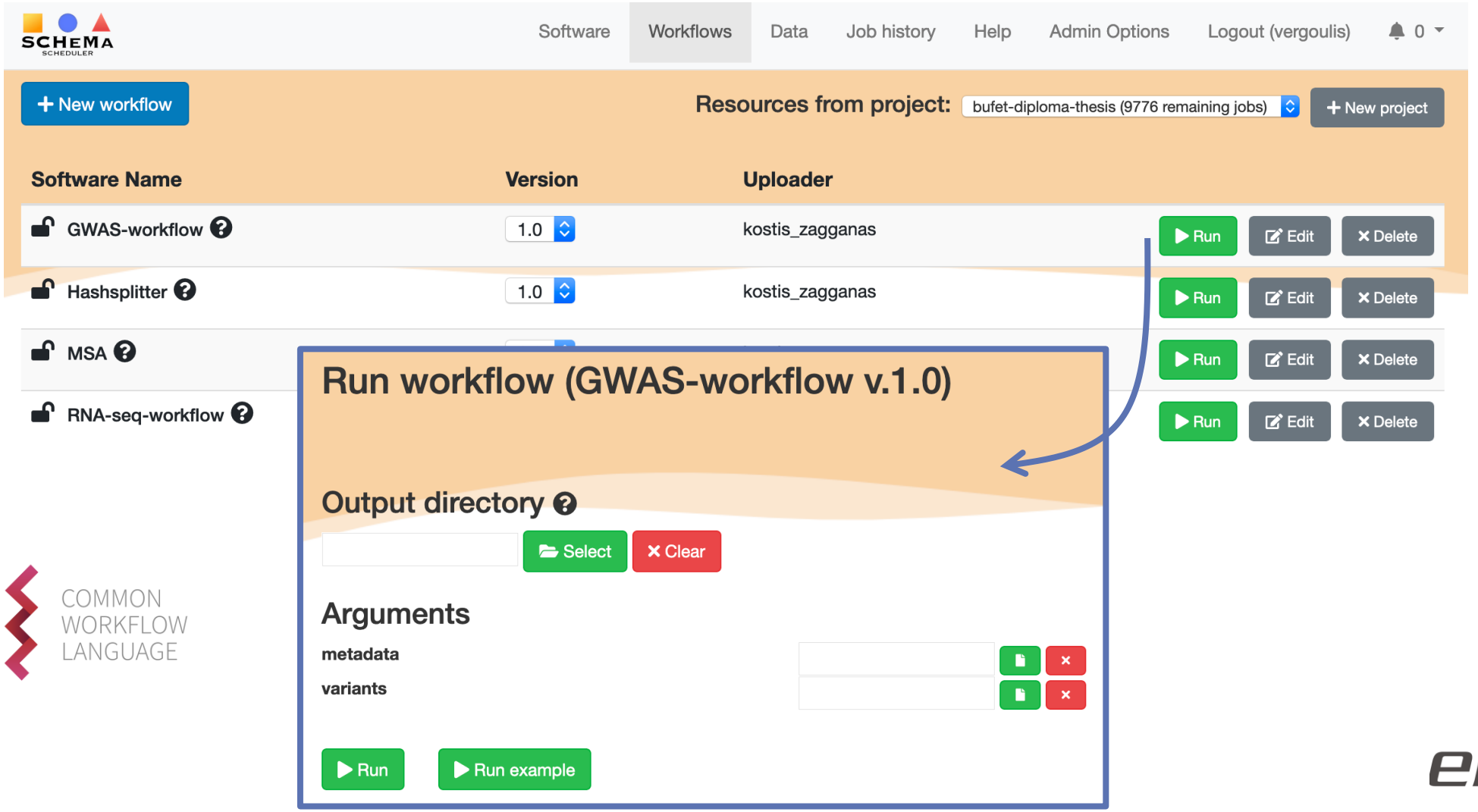
VM creation for 24/7 services



On-demand software catalogue



On-demand workflow catalogue



COMMON WORKFLOW LANGUAGE

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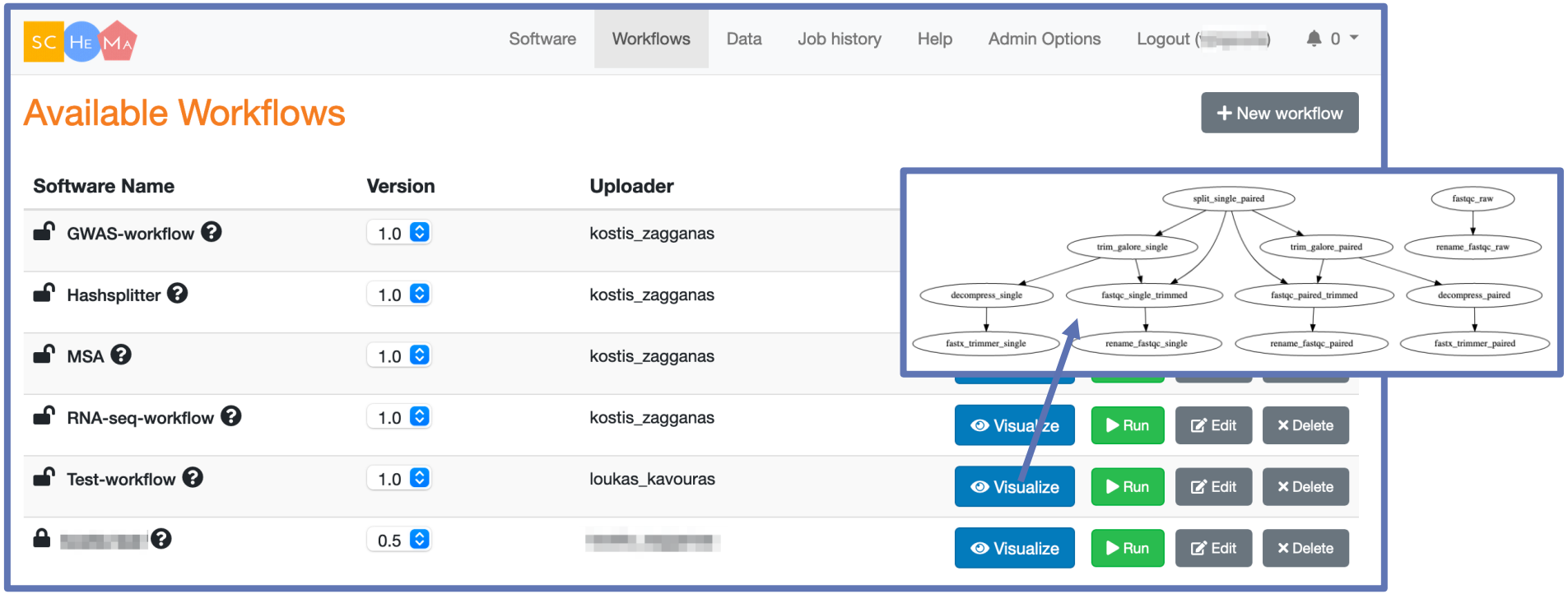
New and upcoming features



Until Jan 2021:

1) Interconnection with data repositories:

HELIX

zenodo

2) Support packaging executed analyses in RO-crate objects:

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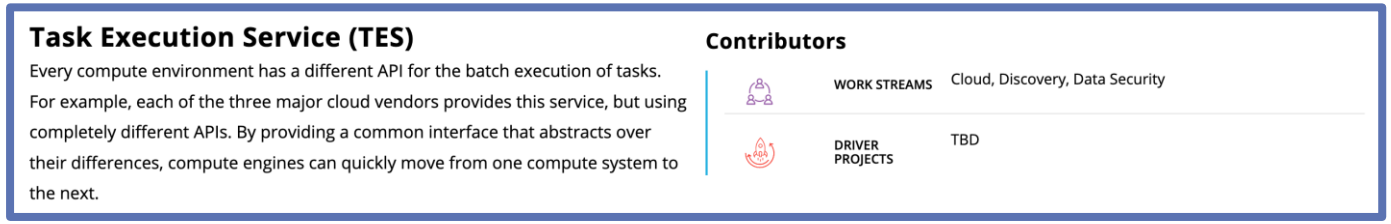
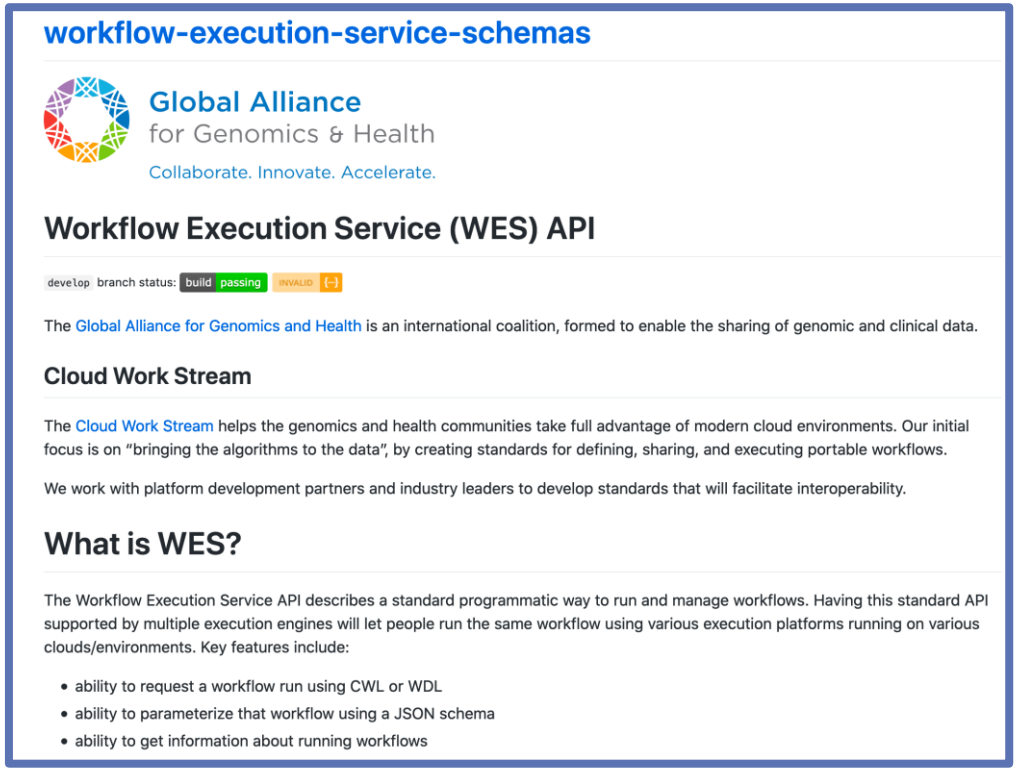
Using international standards

- EG-CI's SCHeMa implements:
  - GA4GH's **TES specification** for simple job execution
  - GA4GH's **WES specification** for workflow execution

- By providing **TES & WES endpoints** we make it very easy to federate our resources with those of other ELIXIR Clouds
  - We test this feature using GRNET's resources during various events.





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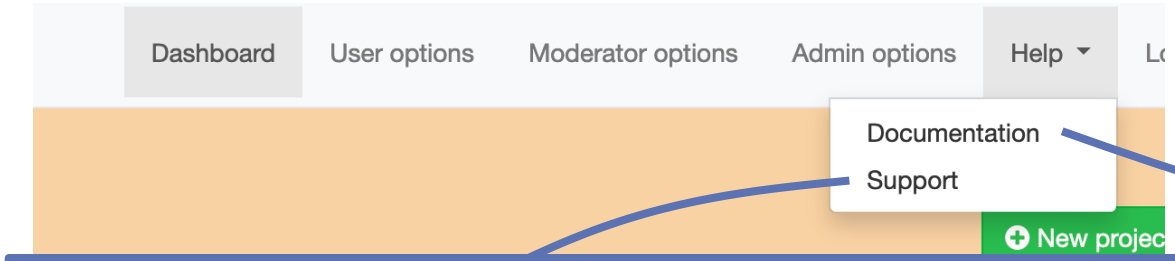
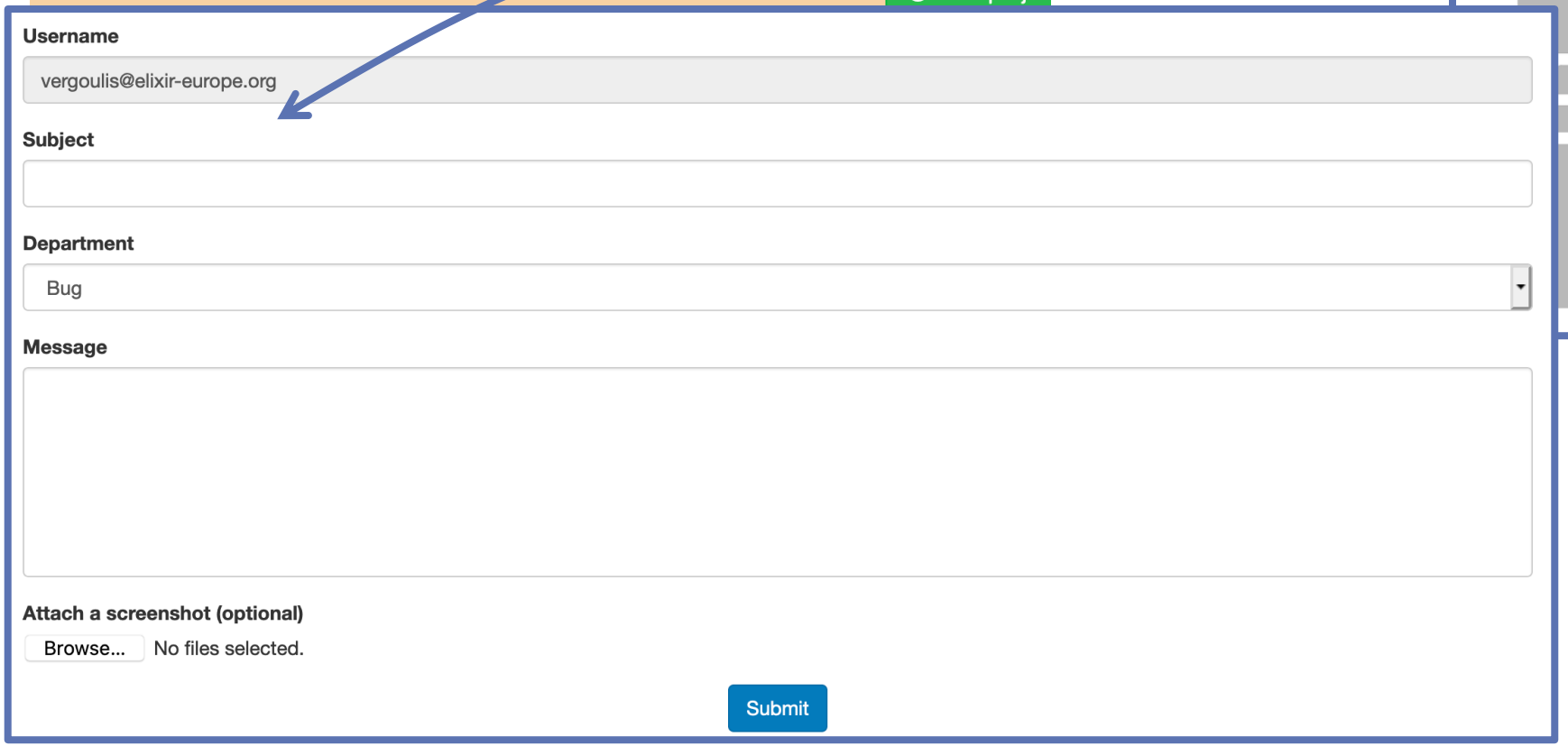
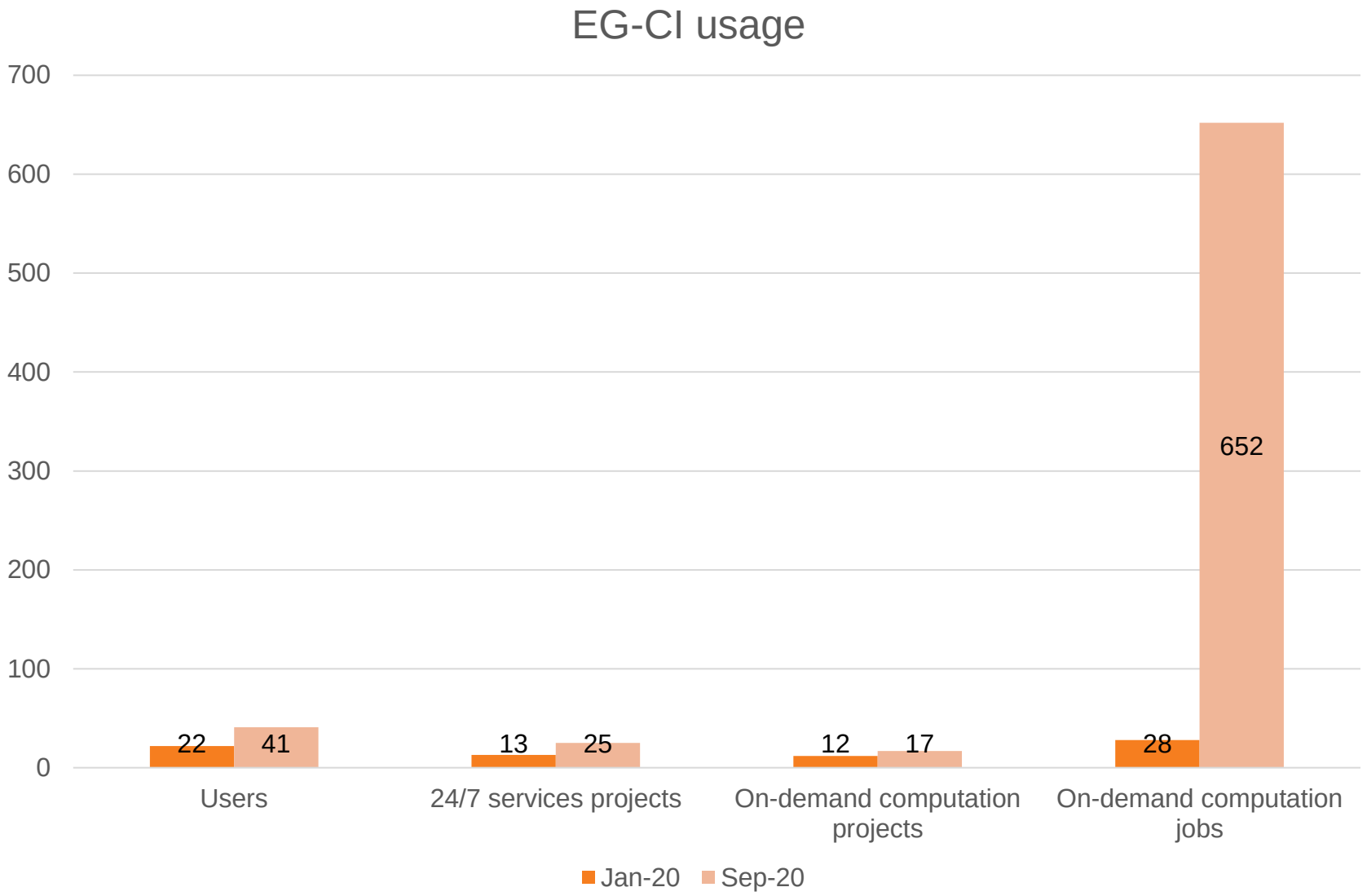
Help, support & bug reporting



User manual for the ELIXIR-GR Cloud Infrastructure (EG-CI)



Statistics


EG-CI usage
700
600
500
400
300
200
100
0
22
41
13
25
12
17
28
652
Users
24/7 services projects
On-demand computation projects
On-demand computation jobs
Jan-20
Sep-20

Stay tuned!

https://twitter.com/ELIXIRGR_Comp

https://www.youtube.com/channel/UC6ek-jYFfq0FDEcSJF4UEuw

*There are links to the social media accounts at the footer section of EG-CI.

Thank you!

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Third-party graphics used:

- Calm icon (slide 2): Icon made by Freepik from www.flaticon.com
- Dragon icon (slide 2): Icon made by Freepik from www.flaticon.com
- SSD-drive (slide 2): Icon made by Nikita Golubev from www.flaticon.com
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