



EGI-ACE Open Call no.1

Checkpoint meeting with Shepherds

OpenBiomaps

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Dissemination level:

Disclosing Party:

Recipient Party:



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Outline - Max 10' long talk

- *Background about the scientific use case*
- *Ambition, Impact and Challenges*
- *Integration Support*
- *Capacity Requirements*
- *Timeline*

Background about the scientific use case



The OpenBioMaps is a collaborative framework for biodiversity research and conservation. The service includes database and computational servers for building biodiversity related databases and performing scientific analyses on collected data

The OpenBioMaps used by governmental institutes, research groups, NGO-s and citizen science initiatives mostly in Hungary and Romania. It currently has about 60 active projects with nearly 1,000 users.

TEAM: University of Debrecen, Dept. of Evolutionary Zoology and Humanbiology / OpenBioMaps Consortium

Ambition, Impact, Challenge(s)



In this project we would like to extend the computational abilities of OBM service network. Computing objective(s): In this project we would like to extend the OBM service capacity with computational nodes and a long term supported database node

The new OBM database and computational nodes will target new research teams and conservation institutes from Croatia, Slovakia, Poland, Greece, the United Kingdom and Germany. In Hungary, OpenBioMaps is used in 9 National Parks, which have many international nature conservation and scientific connections with foreign nature conservation institutions and research sites

Resource Providers:

- IFCA (with VA) -> Will allocate big Computational server.
- SZTAKI -> Will allocate the other 2 nodes including the GPU one.

Integration Support



- *Deploy the application using EGI Cloud Compute resources.*
- *TOSCA experts to create the topology document to deploy the whole application.*
 - *Initial version (one single node) created in the EOSC-Hub project will be extended.*

Capacity Requirements



Three virtual servers:

- OpenBioMaps database server:
 - 32 CPU cores
 - 64 Gb RAM
 - 512 Gb storage capacity
- Computational Server 1:
 - 128 CPU cores -> Will be reduced (about 80 CPUs)
 - 256 Gb RAM
 - 2Tb storage capacity
- Computational Server 2
 - 32 CPU cores
 - 256 Gb RAM -> Will be reduced (about 64 Gb)
 - 4Tb storage capacity
 - Strong GPU Capacity for AI: e.g. 2x NVIDIA GeForce RTX 2070 SUPER

- Current Status:
 - Evaluating requirements.
 - Reducing the amount of requested CPUs on the Computational server.
 - Negotiating with IFCA a reasonable VM size.
 - Resource providers contacted and resources accepted.
 - Working on software configuration to launch the initial testbed.
- Next planned actions:
 - Q1:
 - Deploy and Configure OBM nodes in test environment manually.
 - Q2
 - Create TOSCA Recipes and Ansible roles needed to deploy the application automatically using IM.
 - Q3:
 - Deploy OBM nodes in to the production environment using the developed recipes
 - Test functionality of the application.
 - Evaluate with real use cases.
 - Q4:
 - Evaluate performance of all nodes and fine tune the configuration.





Thank you!

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