EGI VO

OPERATIONAL LEVEL AGREEMENT

Service Provider	EGI Foundation
Component Provider	**CLOUDIFIN**
Customer	**Perovskite material studies/perla-pv.ro**
First day of service delivery	23/08/2021
Last day of service delivery	22/08/2022
Status	FINAL
Agreement finalization date	13/08/2021
SLA and OLA Link	https://documents.egi.eu/document/3761
Template Version	v2.12

DOCUMENT LOG

Issue	Date	Comment	Author
v0	23/07/2021	Created first version of the document	Marta Gutiérrez David
V0.1	17/08/2021	Final version	Marta Gutiérrez David

TERMINOLOGY

The EGI glossary of terms is available at: https://wiki.egi.eu/wiki/Glossary

For the purpose of this Agreement, the following terms and definitions apply. The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in RFC 2119.

Contents

The present Operational Level Agreement ("the Agreement') is made between **EGI Foundation (the Service Provider)** and **CLOUDIFIN (the Component Provider)** to define the provision and support of the provided services as described hereafter. Representatives and contact information are defined in Section 6.

Molecular dynamics simulations will be run to characterize halide perovskite materials, interfaces and defects for energy efficient solar cells. LAMMPS[1] software package will be used to run these simulations.

Density functional theory (DFT) and machine learning (ML) with SIESTA code and artificial neural networks using TensorFlow library with Keras frontend will be used to predict electronic properties of hybrid perovskite materials and interfaces.

The customer responsible for the Perovskite material studies use case is **University of Bucharest.**

This Agreement is valid from **23/08/2021** to **22/08/2022.**

Once approved, **this Agreement is automatically renewed**, as long as the Component Provider does not express a decision to terminate the Agreement at least a month before the end date of the Agreement.

The Agreement was discussed and approved by the EGI Foundation and the Component Provider **13/08/2021.**

The Agreement extends the Resource Center OLA[2] with the following information:

1 The Services

Possible allocation types:

- **Pledged** - Resources are exclusively reserved to the Community.
- **Opportunistic** - Resources are not exclusively allocated, but subject to local availability.
- **Time allocation** - Resources are available for a fixed time period.

Possible payment mode offer:

- **Sponsored** - Model where the Customer uses services that are funded, or co-funded by the European Commission or government grants.
- **Pay-for-use** - Model where the Customer directly pays for the service used.

The Services are defined by the following properties:

Cloud Compute (category: Compute)

---

[1] https://lammps.sandia.gov/
[2] https://documents.egi.eu/document/31

Description: https://www.egi.eu/services/cloud-compute/

- Resource Centre: **CLOUDIFIN (Country: Romania)**
    - Cloud Compute
        - Number of virtual CPU cores: 320
        - Memory per core (GB): 4
        - Local disk (GB): 10
        - Public IP addresses: 1
        - Payment mode offer: Sponsored
        - Other technical requirements: Technical support for Slurm, Tensor Flow, Keras and MPI libraries.
        - Duration: 23/08/2021 – 22/08/2022
    - Allocation type: Pledged
    - Provider AUP link: https://documents.egi.eu/public/ShowDocument?docid=2623
    - Supported VOs: perla-pv.ro
    - VO ID card: https://operations-portal.egi.eu/vo/view/voname/perla-pv.ro
    - VO-wide list: https://appdb.egi.eu/store/vo/perla-pv.ro
    - GOCDB endpoints urls: cloud-ctrl.nipne.ro (org.openstack.nova)

Check-In (category: Security)

Description: https://www.egi.eu/services/check-in/

- Component Provider:
    - Check-In (as community AAI/IdP): https://aai.egi.eu/registry/
        - Deployment Type[3]: Shared
        - AAI protocol[4]: SAML/OIDC
        - Authentication options (select all that apply)[5]: all supported
        - User registration and group management service operated by[6]: EGI/Community
        - User registration and group management[7]: COmanage (perla-pv.ro)
        - Access to the e-infrastructure services[8]:EGI

---

[3] Shared, Dedicated

[4] OIDC, SAML (multiple option can be selected)

[5] eduGAIN, ORCID, Google, Facebook, LinkedIn, X.509 digital certificates, Other (please specify)

[6] Community, EGI

[7] COmanage, Perun, VOMS, ask EGI support to choose the group management technology, Other (customer can specify other group management systems)

[8] EGI, EUDAT, GEANT (multiple options can be selected)

2 Service hours and exceptions

As defined in Resource Center OLA[9].

3 Support

As defined in Resource Center OLA[10].

3.1 Incident handling

As defined in Resource Center OLA.

3.2 Service requests

As defined in Resource Center OLA[11].

4 Service level targets

Monthly Availability

- •   Defined as the ability of a service or service component to fulfil its intended function at a specific time or over a calendar month.
- •   Minimum (as a percentage per month): 90%

Monthly Reliability

- •   Defined as the ability of a service or service component to fulfil its intended function at a specific time or over a calendar month, excluding scheduled maintenance periods.
- •   Minimum (as a percentage per month): 90%

Quality of Support level

- •   Medium (Section 3)

5 Limitations and constraints

As defined in Resource Center OLA and:

- •   Availability and Reliability calculations are based on the Service Monitoring operational results.

---

[9] https://documents.egi.eu/document/31
[10] https://documents.egi.eu/document/31
[11] https://documents.egi.eu/document/31

- Failures in VO monitoring are not considered as the Agreement violations.

6 Communication, reporting and escalation

6.1 General communication

The following contacts will be generally used for communications related to the service in the scope of this Agreement.

EGI Foundation contact	Giuseppe La Rocca sla@mailman.egi.eu SLA Coordinator at EGI Foundation
EGI Foundation technical contact	Matthew Viljoen operations@egi.eu Operations manager at EGI Foundation
Component Provider contact	Dr. Mihnea Dulea, mihnea.dulea@nipne.ro Head of DFCTI at IFIN-HH
Component Provider technical contact	Dr. Mihnea Dulea, mihnea.dulea@nipne.ro Head of DFCTI at IFIN-HH
Service Support contact	See Section 3

6.2 Regular reporting

As defined in Resource Center OLA.

6.3 Violations

The Component Provider commits to inform the EGI Foundation, if the Agreement is violated or violation is anticipated.

The following rules are agreed for communication at the event of the violation:

- In case of violations of the Services targets for **four months (within reporting period)** or **two consecutive months**, the Component Provider will provide justifications to EGI Foundation.
- In case of service target violation, the Component Provider must provide justifications and a plan for service enhancement **within 10 working days** from the date of the notification to/from the EGI Foundation.
  - In case of no or unsatisfactory justification and plan for improvement, EGI Foundation reserves the right to replace the Component Provider.

- EGI Foundation will notify the supporting Component Provider in case of suspected violation via the EGI Service Desk (Section 3). The case will be analysed to identify the cause and verify the violation.

6.4 Escalation and complaints

For escalation and complaints (A customer complaint is a customer's expression of dissatisfaction with an EGI service, either orally or in writing), EGI Foundation contact (section 6.1) point shall be used, and the following rules apply.

- In case of repeated violation of the Services targets for **four months (within reporting period)** or **two consecutive months**, a review of the Agreement will take place involving the parties of the Agreement.
- Customer complaints or concerns about the Service(s) provided directed to the EGI Foundation contact will be shared with corresponding Component Providers.

7 Information security and data protection

The following rules for information security and data protection related to the Service apply.

- Assertion of absolute security in IT systems is impossible. The Component Provider is making every effort to maximize the security level of users' data and minimise possible harm in the event of an incident.
- The Component Provider will define and abide by an information security and data protection policy related to the service being provided.
- The parties of the Agreement will meet all requirements of any relevant policy or procedure to the Component Provider[12] and will comply with the applicable national legislation.
- The Component Provider holds the role of the data controller.

8 Responsibilities

8.1 Of the Component Provider

As defined in Resource Center OLA[13].

In addition:

- The Component Provider is responsible for monitoring of the usage and taking appropriate action to avoid overuse of resources defined in this agreement. EGI Foundation is not

---

[12] https://www.egi.eu/about/policy/policies_procedures.html
[13] https://documents.egi.eu/document/31

responsible for any costs incurred by over usage of what was otherwise defined in this agreement.

- The Component Provider shall not terminate the virtual machines without agreement with EGI Foundation.
  - Notification of resource termination shall be sent to the EGI Foundation 15 calendar days before.

8.2 Of EGI Foundation

As defined in Resource Center OLA[14] and:

- Support coordination with other Component Providers;
- Support coordination and conflict resolution with the Customer;
- Support the Customer with data movement in case of OLA termination.

8.3 Of the Customer

- All responsibilities of the Customer are listed in relevant VO SLA.

9 Review, extensions and termination

As defined in Resource Center OLA[15].

---

[14] https://documents.egi.eu/document/31
[15] https://documents.egi.eu/document/31