



EGi Foundation

Accounting Repository and Portal

OPERATIONAL LEVEL AGREEMENT

Service Provider	EGi Foundation
Service Suppliers	UKRI, CESGA
Start Date	1 st January 2021
End Date	30th June 2023
Status	FINAL
Agreement Date	10 th Dec 2020
Agreement Link	https://documents.egi.eu/document/3672



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DOCUMENT LOG

Issue	Date	Comment	Author
0.1			Małgorzata Krakowian
0.2	31/03/2016	Edits from Peter Solagna and Stuart Pullinger	Stuart Pullinger
0.3	29/04/2016	Final version from Peter Solagna	P.Solagna
1.0	13/06/2017	First review, added a reference to the availability and continuity plans	Alessandro Paolini
2.0	17/11/2017, 02/08/2018	New OLA covering 2018, 2019, 2020 years	Alessandro Paolini, Adrian Coveney
2.1	12/09/2019	yearly review. STFC renamed in UKRI, introduced Service Provider and Component Provider roles, updated Violation, Escalation and Complaints sections;	Alessandro Paolini
3.0	04/12/2020	Covering EGI ACE from Jan 2021 to June 2023; renamed EGI Corporate Level as EGI Default OLA; updated section 7 on security requirements; changed frequency of the reports; added Software and ITSM compliance in section 8; added in section 9 the requirement about periodic supplier process audits conducted by EGI Foundation	Alessandro Paolini, Adrian Coveney, Carlos Fernandez
3.1	23/02/2022	yearly review; introduced the term Service Supplier; updated section 7 and section 8.	Alessandro Paolini
3.2	07/11/2022	updated some links; updated service suppliers contact; updated section 7	Alessandro Paolini

TERMINOLOGY

The EGI glossary of terms is available at: <http://go.egi.eu/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.

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This Operational Level Agreement (“the Agreement”) is made between the **EGI Foundation (the Service Provider)**, and **UK Research and Innovation (UKRI) and Centro de Supercomputación de Galicia (CESGA) (the Service Suppliers)** to define the provision and support of the provided services as described hereafter. Representatives and contact information are defined in Section 6.

This Agreement is valid from **1st January 2021 to 30th June 2023**.

The Agreement was discussed and approved by the Service Provider and the Service Suppliers on **10 December 2020**.

The Service Suppliers are bound by the terms and conditions of the EGI Default Operational Level Agreement¹ supplemented by the terms and conditions of this specific agreement:

1 The Services

The Services are defined by the following properties:

Technical	<p>The Accounting Repository stores compute (serial and parallel jobs), storage, and cloud resource accounting data collected from Resource Centres of the EGI Federation. Accounting information is gathered from a variety of distributed sensors, some of which are developed by the APEL team, into a central accounting repository where it is processed to generate summaries that are available through the EGI Accounting Portal. The Accounting Repository is based on the APEL software and provides interfaces for the exchange of accounting data in a standard format.</p> <ul style="list-style-type: none"> • This service component is operated by UKRI <p>The Accounting Portal receives the site, user, and VO level aggregated summaries generated by the Accounting Repository, and provides views via a web portal, for example, by grouping sites in a country on custom time intervals. The databases are organized into a CPU record database, a user record database, and a topology database.</p> <ul style="list-style-type: none"> • This service component is operated by CESGA
IT Service Management	<ul style="list-style-type: none"> • All staff involved in the delivery of the service have achieved the Foundation level FitSM certification and the service owner for the service has achieved both of the Advanced level FitSM certifications. New team members will receive Foundation FitSM training as a minimum. • The Service team interacts with EGI’s Service Management System, providing the required information to the following processes:

¹ <https://documents.egi.eu/document/2752>

	<p>Service Portfolio Management, Service Level Management, Service Reporting Management, Service Availability and Continuity Management, Information Security Management, Change Management.</p> <ul style="list-style-type: none"> ● The Service team will work with other service teams across the Scientific Computing Department to consolidate the service management system within UKRI. ● The Accounting Repository and Accounting Portal teams will work together to ensure their respective SMS processes don't conflict.
Coordination	<p>This activity is responsible for:</p> <ul style="list-style-type: none"> ● Coordination between the service partners, STFC and CESGA ● The coordination of the APEL database operations and upgrade activities with those partners that are in charge of operating systems that depend on the central APEL Accounting Repository and Portal, or on which the accounting infrastructure depends. ● The Coordination with the EGI Operations to support accounting clients' upgrade campaigns and other operational activities aiming at improving the accuracy and completeness of the accounting information gathered. ● Requirements gathering from service providers and end-users.
Operation	<ul style="list-style-type: none"> ● Daily running of the system including the repositories and the Portal for compute and storage accounting ● Provisioning of a high availability configuration: <ul style="list-style-type: none"> ○ The Accounting Portal service is available in a dedicated virtual machine running in the CESGA cloud framework based on OpenNebula software, which offers high availability thanks to its resources: <ul style="list-style-type: none"> ▪ A pool of physical servers where the virtual machine can run ▪ Storage is provided in a NetApp HA storage solution, providing redundant configuration for data movers (servers) and RAID protection for the disks; the backup of this storage is performed on a daily basis ○ The Accounting Repository runs on a dedicated physical machine running in the STFC RAL Data Centre. It is powered via a generator-backed UPS. <ul style="list-style-type: none"> ▪ The database and filesystem are backed up daily.

	<ul style="list-style-type: none"> ▪ Server hardware is covered by a 4-hour mission critical support contract that ensures that service can be restored in minimum time. ▪ In a disaster recovery situation, the latest database can be recovered from backup. Additionally, the accounting messages are cached in the messaging system, so in case of a disruption lasting more than one day, the data can be retrieved once service is restored. • A testing infrastructure to verify interoperability and the impact of software upgrades on depending systems • Maintaining an Availability and Continuity Plan² and implementing countermeasures to mitigate the risks defined in the related risk assessment • A testing infrastructure to verify interoperability and the impact of software upgrades on depending systems • Deployment of new releases in production
Maintenance	<p>This activity includes:</p> <ul style="list-style-type: none"> • Bug fixing, proactive maintenance, and improvement of the system • Coordination of software maintenance activities with other technology providers that provide software for the EGI Core Infrastructure or remote systems deployed by integrated and peer infrastructures that interoperate with the central EGI components of the system. • Maintenance of probes to test the functionality of the service • Gathering information on changing and developing requirements • Documentation

2 Service hours and exceptions

As defined by the EGI Default Operational Level Agreement.

² <https://confluence.egi.eu/x/9AQRB> and <https://confluence.egi.eu/x/HgPhBw>

3 Support

As defined by the EGI Default Operational Level Agreement.

Support is provided via the following EGI Service Desk³ Support Units:

- Accounting Repository: *APEL client & Accounting Repository*
- Accounting Portal: *Accounting Portal*

Support is available between:

- Monday and Friday
- 9:00 and 17:00 GMT/BST
 - during the months between June and September, the Accounting Portal provides support from 8:00 to 15:00 CET

This excludes public holidays and site closures for the Component Providers. During holidays of supporting staff, support will be provided on a best-effort basis. For that period of time an AT RISK downtime should be declared in the Service Registry GOCDDB.

3.1 Incident handling

As defined by the EGI Default Operational Level Agreement.

3.2 Service requests

As defined by the EGI Default Operational Level Agreement.

4 Service level targets

Monthly Availability

- Defined as the ability of a service or service component to fulfil its intended function.
- Minimum (as a percentage per month): 99%

Monthly Reliability

- Defined as the ability of a service or service component to fulfil its intended function, excluding scheduled maintenance periods.
- Minimum (as a percentage per month): 99%

Quality of Support level

- Medium (Section 3)

³ <http://helpdesk.egi.eu/>

5 Limitations and constraints

As defined by the EGI Default Operational Level Agreement.

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.

Service Provider contact	Alessandro Paolini operations@egi.eu
Service Suppliers contact	Adrian Coveney (APEL Team Leader) apel-admins@stfc.ac.uk Ian Collier ian.collier@stfc.ac.uk Carlos Fernandez Sanchez carlosf@cesga.es
Service Support contact	See Section 3

6.2 Regular reporting

As part of the fulfilment of this Agreement and provisioning of the service, the following reports will be provided:

Report title	Contents	Frequency	Produced by	Delivery
Service Performance Report	The document provides the overall assessment of service performance (per month) and OLA target performance achieved during last 9 months	10 months (first report covering the period Jan – Oct 2021)	Service Suppliers	Survey form prepared by EGI Foundation

6.3 Violations

The Service Suppliers commits to inform the Service Provider, if this Agreement is violated, or violation is anticipated. The following rules are agreed for communication in the event of violation:

- In case of any violations of the Services targets, the Service Suppliers will provide justifications and a plan for Services enhancement to the Service Provider. The Service Suppliers will produce a status report and a Service enhancement plan for the improvement of the Services within one month from the date of the first notification.
- The Service Provider will notify the supporting Resource Centres in case of suspected violation via the EGI Service Desk. The case will be analysed to identify the cause and verify the violation.

6.4 Escalation and complaints

For escalation and complaints, the Service Suppliers contact point shall be used, and the following rules apply.

- In case of repeated violation of the Services targets for two consecutive months, or four months over a period of 12 months, a review of the Agreement and of the Services enhancement plan will take place involving the parties of the Agreement.
- Complaints or concerns about the Services provided should be directed to the Service Suppliers contact who will promptly address these concerns. Should the Service Provider still feel dissatisfied, about either the result of the response or the behaviour of the Service Suppliers, the EGI Foundation Director director@egi.eu should be informed.

7 Information security and data protection

As defined in the EGI Default Operational Level Agreement.

The following rules for Information Security and data protection should be enforced when they are applicable:

- The Service Suppliers must make every effort to maximise security level of users' data and minimise possible harm in the event of an incident. Security Incidents affecting the services described in Section 1 must be immediately reported to the EGI Foundation using ism@mailman.egi.eu and will have to be reported to EGI CSIRT using abuse@egi.eu within 4 hours after their discovery and handled according to the SEC01⁴ procedure.
- EGI Foundation holds the role of the Data Controller while the Service Suppliers holds the role of Data Processor. Data Processing Agreements must be signed between EGI Foundation (the Data Controller) and Service Suppliers (the Data Processor).
- The Service Suppliers must comply with the EGI Policy on the Processing of Personal Data⁵ and provide a Privacy Notice. This privacy Notice must be agreed with EGI Foundation and must be based on the Privacy Policy template provided by the AARC Policy Development Kit (PDK)⁶.

⁴ <https://go.egi.eu/sec01>

⁵ <https://documents.egi.eu/public/ShowDocument?docid=2732>

⁶ <https://aarc-project.eu/policies/policy-development-kit/>

- The Service Suppliers must enforce the EGI WISE Acceptable Usage Policies⁷.
- The Service Suppliers shall comply with all principles set out by the GÉANT Data Protection Code of Conduct⁸ in its most current version, which will be made available to the Service Suppliers by EGI Foundation upon request.
- Security incidents affecting the services described in Section 1 must be handled according to SEC01 procedure.
- The Service Suppliers must meet all requirements of any relevant EGI policies or procedures⁹ and also must be compliant with the relevant national legislation. Regarding EGI requirements, please refer to the following reference documentation:
 - [EGI-doc-3015: e-Infrastructure Security Policy](#)
 - [EGI-doc-3601: Service Operations Security Policy](#)
 - [EGI-doc-2732: Policy on the Processing of Personal Data](#)
 - [EGI-doc-3600: Acceptable Use Policy and Conditions of Use](#)
 - [EGI-doc-2934: Security Traceability and Logging Policy](#)
 - [EGI-doc-2935: Security Incident Response Policy](#)
 - [SEC01: EGI CSIRT Security Incident Handling Procedure](#)

8 Responsibilities

8.1 Of the Service Suppliers

Additional responsibilities of the Service Suppliers are as follows:

- Using communication channels defined in the agreement.
- Attending the OMB¹⁰ and other operations meeting when needed.
- Accepting EGI monitoring services provided to measure fulfilment of agreed service level targets.
- The Services with associated roles are registered in GOCD¹¹ as site entities under EGI.eu Operations Centre hosting EGI central operations tools¹²
- Any loss of accounting data stored in the APEL repositories should be recovered 100%
- The Service Suppliers shall support EGI Operations and the resource centres to recover any loss of accounting data not directly imputable to the APEL service
- Changes in the system must be rolled out to production in a controlled way in order to avoid service disruption.

⁷ <https://documents.egi.eu/public/ShowDocument?docid=3600>

⁸ <https://wiki.refeds.org/display/CODE/Data+Protection+Code+of+Conduct+Home>

⁹ <https://confluence.egi.eu/display/EGIPP/EGI+Policies+and+Procedures+Home>

¹⁰ <https://confluence.egi.eu/display/EGIBG/Operations+Management+Board>

¹¹ <http://goc.egi.eu/>

¹² https://goc.egi.eu/portal/index.php?Page_Type=NGI&id=4

- An effective way to manage and control configuration items and changes such that they can meet the CHM requirements coming from EGI as a customer including making risk assessments and considering high risk changes.

8.1.1 Software compliance

Unless explicitly agreed, software being used and developed to provide the service should:

- Be licensed under an open source and permissive licence (e.g., MIT, BSD, Apache 2.0, ...).
- Allow to grant unlimited access and exploitation rights upon request.
- Have source code publicly available via a public source code repository. (If needed a mirror can be put in place under the EGI organisation in GitHub¹³.) All releases should be appropriately tagged.
- Adopt best practices:
 - Defining and enforcing code style guidelines.
 - Using Semantic Versioning.
 - Using a Configuration Management framework such as Ansible.
 - Taking security aspects into consideration at every point in time.
 - Having automated testing in place.
 - Using code reviews.
 - Treating documentation as code.
 - Documentation should be available for developers, administrators and end users.

8.1.2 IT Service Management compliance

- Key staff who deliver services should have foundation or basic level ITSM training and certification
 - ITSM training and certification could include standards and best practices such as FitSM, ITIL, ISO 20000 etc.
- Key staff and service owners should have advanced/professional training and certification covering the key service management processes for their services
- Service Suppliers should have clear interfaces with the EGI SMS processes and provide the required information
- Service Suppliers should commit to the continuous improvement of their management system used to support the services they provide

8.2 Of the Service Provider

The responsibilities of the Service Provider are:

- Delivering and planning the Services component according to an ISO 20000 compliant manner.
- Raising any issues deemed necessary to the attention of the Service Suppliers.

¹³ <https://github.com/EGI-Federation>

- Collecting requirements from the Resource infrastructure Providers.
- Supporting coordination and integration with other EGI services.
- Provide monitoring to measure fulfilment of agreed service level targets.
- Providing clear interfaces to the EGI SMS processes.

9 Review, extensions, and termination

There will be reviews of the service performance against service level targets and of this Agreement at planned intervals with the Service Provider according to the following rules:

- Technical content of the agreement and targets will be reviewed on a yearly basis.
- The EGI Foundation shall be entitled to conduct audits or mandate external auditors to conduct audits of suppliers at a reasonable frequency. These will aim to evaluate the effective provision of the service components and the execution of activities related to providing and managing the service prior to the commencement of this agreement and then on a regular basis. The EGI Foundation will announce audits at least one month in advance. The provider shall support the EGI Foundation and all auditors acting on behalf of EGI Foundation to the best of their ability in carrying out the audits. The provider is obliged to provide the auditors, upon request, with the information and evidence necessary. Efforts connected to supporting these audits by the provider will not be reimbursed.