



EGi Foundation

Accounting Repository and Portal

OPERATIONAL LEVEL AGREEMENT

Customer	EGi Foundation
Provider	UKRI, CESGA
Start Date	1 st January 2018
End Date	31 st December 2020
Status	FINAL
Agreement Date	5 th July 2018
Agreement Link	https://documents.egi.eu/document/3254



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DOCUMENT LOG

Issue	Date	Comment	Author
0.1			Małgorzata Krakowian
0.2	31/3/2016	Edits from Peter Solagna and Stuart Pullinger	Stuart Pullinger
0.3	29/4/2016	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

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.

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The present Operational Level Agreement (“the Agreement”) is made between **EGI Foundation (the Service Provider)** and **UKRI, CESGA (the Component Providers)** 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 2018** to **31st December 2020**.

The Agreement was discussed and approved by the Service Provider and the Component Providers on **5th July 2018**

The Component Providers are bound by the terms and conditions of the Corporate-level EGI Operational Level Agreement¹ supplemented by the terms and conditions of this specific agreement:

1 The Services

The Services are defined by the following properties:

<p>Technical</p>	<p>The Accounting repositories store compute (serial and parallel jobs), storage, and cloud resource accounting data collected from Resource Centres of the EGI Federation. Accounting information is gathered from distributed sensors into a central accounting repository where it is processed to generate summaries that are available through the EGI Accounting Portal. The Accounting Repository, based on the APEL software, has a MySQL database backend, and needs to ensure the exchange of accounting information with peer e-Infrastructures.</p> <ul style="list-style-type: none"> • This service component is operated by UKRI <p>The Accounting Portal receives and stores 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
<p>Coordination</p>	<p>This activity is responsible for:</p> <ul style="list-style-type: none"> • 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 databases and portal, or on which the accounting infrastructures depends.

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

	<ul style="list-style-type: none"> ● 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 ● 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 the generator-backed UPS. <ul style="list-style-type: none"> ▪ Database and filesystem are backed up every 24 hours to tape storage. Database binary logs are kept for 14 Days and are included in the tape backup. ▪ Server hardware is covered by Dell "ProSupport Plus" with 4Hour mission critical support that ensures that service can be restored in minimum time. ▪ In a disaster recovery situation, the latest database backup out the full backups can be recovered from tape and then the binlogs can be applied to do "Point in Time Recovery" of the database. Additionally, the accounting messages are cached on the EGI message brokers up to three days, so in case of a disruption lasting more than one day, the data can be retrieved once service is restored. ● Implementing all the measures for mitigating the risks listed in the Availability and Continuity Plan for the Accounting Portal

	<p>document²</p> <ul style="list-style-type: none"> ● A test 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 ● Requirements gathering ● Documentation

2 Service hours and exceptions

As defined in the Corporate-level EGI Operational Level Agreement.

3 Support

As defined in Corporate-level EGI Operational Level Agreement.

Support is provided via EGI Service Desk³ Support Unit:

- Accounting Repository: APEL
- Accounting Portal: Accounting Portal

Support is available between:

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

² https://wiki.egi.eu/wiki/Services_Availability_Continuity_Plans

³ <http://helpdesk.egi.eu/>

This excludes public holidays at the same time in all organizations providing the service. 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 in the Corporate-level EGI Operational Level Agreement.

3.2 Service requests

As defined in the Corporate-level EGI Operational Level Agreement.

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): 99%

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): 99%

Quality of Support level

- Medium (Section 3)

5 Limitations and constraints

As defined in Corporate-level EGI 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
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Component Provider contact	Adrian Coveney apel-admins@stfc.ac.uk APEL Team Leader
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	Every 9 months (first report covering the period Jan – Sep 2018)	Component Provider	Survey form prepared by EGI Foundation

6.3 Violations

The Component Provider 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 Component Provider will provide justifications and a plan for Services enhancement to the Service Provider. The Component Provider 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 Component Provider 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 Component Provider 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 Component Provider, the EGI Foundation Director director@egi.eu should be informed.

7 Information security and data protection

As defined in Corporate-level EGI Operational Level Agreement

8 Responsibilities

8.1 Of the Component Provider

Additional responsibilities of the Component Provider are as follows:

- Adhere to all applicable operational and security policies and procedures⁴ and to other policy documents referenced therein;
- Use communication channels defined in the agreement;
- Attend the OMB⁵ and other operations meeting when needed;
- Accept EGI monitoring services provided to measure fulfilment of agreed service level targets.
- Services with associated roles are registered in GOC DB⁶ as site entities under EGI.eu Operations Centre hosting EGI central operations tools⁷
- Any loss of accounting data stored in the APEL repositories should be recovered 100%
- The Provider 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

8.2 Of the Service Provider

The responsibilities of the Service Provider are:

- Raise any issues deemed necessary to the attention of the Component Provider;
- Collect requirements from the Resource infrastructure Providers;
- Support coordination with other EGI services;
- Provide monitoring to measure fulfilment of agreed service level targets.

⁴ https://www.egi.eu/about/policy/policies_procedures.html

⁵ <https://wiki.egi.eu/wiki/OMB>

⁶ <http://goc.egi.eu/>

⁷ https://goc.egi.eu/portal/index.php?Page_Type=NGI&id=4

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.