



# EGI Foundation

## CVMFS Stratum-0

### Operational level Agreement

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<b>Service Provider</b>	EGI Foundation
<b>Component Provider</b>	UKRI
<b>First day of service delivery</b>	1/01/2016
<b>Last day of service delivery</b>	31/12/2020
<b>Status</b>	FINAL
<b>Agreement finalization date</b>	1/11/2016
<b>Agreement Link</b>	<a href="https://documents.egi.eu/document/3369">https://documents.egi.eu/document/3369</a>

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## DOCUMENT LOG

<i>Issue</i>	<i>Date</i>	<i>Comment</i>	<i>Author</i>
<b>FINAL</b>	1.09.2016	Final version	Giuseppe La Rocca Małgorzata Krakowian
	06/12/2017	Discussing one year extension, until Dec 2018	Alessandro Paolini
<b>v1.1</b>	22/01/2018	OLA extended until Dec 2018, added some information about HA configuration	Alessandro Paolini, Catalin Condurache
<b>v1.2</b>	30/01/2019	Yearly review, 1 year extension until Dec 2019	Alessandro Paolini, Catalin Condurache
<b>v1.3</b>	03/12/2019	yearly review, 1 year extension until Dec 2020, updated Component Provider contact, updated Violations, Escalations 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 Agreement (“the Agreement”) is made between **EGI Foundation (the Service Provider)** and **UKRI (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.

This Agreement is valid from **1/01/2016** to **31/12/2020**.

The Agreement was discussed and approved by EGI Foundation and the Component Provider **1/11/2016**; the 1 year extension of the agreement was discussed and approved on **03/12/2019**.

The Component Provider is bound by the terms and conditions of the EGI Default Operational Level Agreement<sup>1</sup> supplemented by the terms and conditions of this specific Agreement:

## 1 The Services

The Services are defined by the following properties:

<b>Technical</b>	<p>The CernVM File System (CernVM-FS or CVMFS) is a read-only file system designed to deliver scientific software onto virtual machines and physical worker nodes in a fast, scalable, and reliable way.</p> <p>CernVM-FS is a file system with a single source of data. This single source, the repository Stratum-0, is maintained on a dedicated release manager machine or CVMFS Uploader.</p> <p>The CVMFS Uploader is hosted by a server that offers read-write access to the repository maintainers via a GSI interface.</p> <p>The Stratum-0 server is publishing the current state of the repository from the release manager machine and is hosted by a node providing Scientific Linux OS, AUFS-enabled kernel (maintained by CERN developers), Apache HTTP server and specific CernVM-FS packages (maintained and distributed by CERN).</p>
<b>Coordination</b>	<p>This activity is responsible for the coordination of the system operation and upgrade activities with those partners that are in charge of operating other systems that depend on it.</p>
<b>Operation</b>	<ul style="list-style-type: none"> <li>● Daily running of the system.</li> <li>● Provisioning of a high availability configuration             <ul style="list-style-type: none"> <li>○ Stratum-0 node is deployed on a 8-core Intel(R) Xeon(R) CPU E5-2407 @ 2.20GHz metal box (32GB RAM, 12TB disk)</li> </ul> </li> <li>● Automated back-up process for each CVMFS repository on Uploader server</li> </ul>

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

	<ul style="list-style-type: none"> <li>• Critical parts of the service are part of the 365/24/7 RAL Tier-1 monitoring (host status, httpd status)</li> </ul>
<b>Maintenance</b>	<ul style="list-style-type: none"> <li>• Bug fixing, proactive maintenance, improvement of the system.</li> <li>• Maintenance of probes to test the functionality of the service.</li> <li>• Requirements gathering and development based on such</li> </ul>

## 2 Service hours and exceptions

As defined in EGI Default Operational Level Agreement.

## 3 Support

Support is provided via EGI Service Desk<sup>2</sup> Support Unit: Software and Data Distribution (CVMFS)

Support is available between:

- Monday and Friday
- 09:00 and 17:00 GMT/BST

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.

### 3.1 Incident handling

As defined in EGI Default Operational Level Agreement.

### 3.2 Service requests

As defined in 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 at a specific time or over a calendar month.
- Minimum (as a percentage per month): 95%

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<sup>2</sup> <http://helpdesk.egi.eu/>

### 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): 97%

### Quality of Support level

- Medium (Section 3)

## 5 Limitations and constraints

As defined in 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.

<b>EGI Foundation contact</b>	Alessandro Paolini: <a href="mailto:operations@egi.eu">operations@egi.eu</a> EGI Foundation Operations Officer
<b>Component Provider contact</b>	Ian Collier: <a href="mailto:ian.collier@stfc.ac.uk">ian.collier@stfc.ac.uk</a> Alastair Dewhurst: <a href="mailto:alastair.dewhurst@stfc.ac.uk">alastair.dewhurst@stfc.ac.uk</a> EGI CernVM-FS Service Managers
<b>Service Support contact</b>	See Section 3

### 6.2 Violations

The Component Provider commits to inform EGI Foundation, 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 violation 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.

- EGI Foundation 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.

## 6.3 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 EGI Foundation still feel dissatisfied, about either the result of the response or the behaviour of the Component Provider, EGI Foundation Director [director@egi.eu](mailto:director@egi.eu) should be informed.

# 7 Information security and data protection

As defined in EGI Default Operational Level Agreement

# 8 Responsibilities

## 8.1 Of the Component Provider

Additional responsibilities of the Component Provider are as follow:

- Adhere to all applicable operational and security policies and procedures<sup>3</sup> and to other policy documents referenced therein;
- Use communication channel defined in the agreement;
- Attend OMB<sup>4</sup> and other operations meeting when needed;
- Accept EGI monitoring services provided to measure fulfilment of agreed service level targets.
- Service with associated roles are registered in GOC DB<sup>5</sup> as site entity under EGI.eu Operations Centre hosting EGI central operations tools<sup>6</sup>

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<sup>3</sup> [https://www.egi.eu/about/policy/policies\\_procedures.html](https://www.egi.eu/about/policy/policies_procedures.html)

<sup>4</sup> <https://wiki.egi.eu/wiki/OMB>

<sup>5</sup> <http://goc.egi.eu/>

<sup>6</sup> [https://goc.egi.eu/portal/index.php?Page\\_Type=NGI&id=4](https://goc.egi.eu/portal/index.php?Page_Type=NGI&id=4)

- Whilst the responsibility to maintain a master copy of the repository relies with the repository maintainers, the Component Provider should have in place a backup mechanism of the repository, so it could, at maintainers' request, provide a copy no older than 14 days of the repository
- Shall ensure protection against data corruption at CVMFS Uploader and Stratum-0 server level
- Due to the specifics of the CernVM File System, there is no read protection of the data as the repository has to be configured world-readable.

## 8.2 Of EGI Foundation

The responsibilities of the EGI Foundation 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.

## 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 EGI Foundation according to the following rules:

- Technical content of the agreement and targets will be reviewed on a yearly basis.