



## EGI VO

# SERVICE LEVEL AGREEMENT

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<b>Customer</b>	Terradue
<b>Provider</b>	EGI Foundation
<b>User(s)</b>	Terradue (NextGEOSS Pilots)
<b>First day of service delivery</b>	August 2017
<b>Last day of service delivery</b>	May 2020
<b>Status</b>	DRAFT
<b>Agreement finalization date</b>	26/02/2019
<b>SLA Link</b>	<a href="https://documents.egi.eu/document/3426">https://documents.egi.eu/document/3426</a>
<b>OLA Link</b>	<a href="https://documents.egi.eu/document/3426">https://documents.egi.eu/document/3426</a>

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## DOCUMENT LOG

<i>Issue</i>	<i>Date</i>	<i>Comment</i>	<i>Author</i>
<b>V1</b>	3 Dec 2018	First draft	Björn Backeberg, EGI.eu
<b>V2</b>	13 Feb 2019	Reviewed by client	Hervé Caumont, Terradue
<b>FINAL</b>	26 Feb 2019	SLA agreed with customer	Björn Backeberg, EGI.eu Małgorzata Krakowian, EGI.eu

## 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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# 1 Introduction

The present Service Level Agreement (“the Agreement”) is made between **EGI Foundation (the Provider)** and **Terradue (the Customer)** to define the provision and support of the provided services as described hereafter to support the NextGEOSS Pilot services.

The currently supported Pilots are listed below, which will be updated as new Pilots come online:

1. ARMINES Solar Radiation Mapping
2. NERSC Sea Ice Classification
3. SATCEN Detection Change
4. VITO's Sentinel2 Biopar Application (Use Case A)
5. WUR ALTERRA Maxent Habitat Monitoring

Representatives and contact information are defined in Section 6.

The NextGEOSS project, a European contribution to GEOSS, proposes to develop and exploit a next generation data hub and platform for Earth Observation data, where the users can connect to and access data, as well as deploy and operate EO-based applications. The concept revolves around providing the data and cloud computing resources to the user communities, together with resources for the lifecycle management of applications, seamlessly connected in order to provide an integrated ecosystem for supporting application developers and users.

The Customer is Terradue, an “EO solutions and Platform operations” specialist, representing a consortium of Scientific Institutions, National Centers, and commercial operators producing the NextGEOSS Pilots.

This Agreement is valid from 28/08/2017 to 31/05/2020.

The Agreement was discussed and approved by the Customer and the Provider on 26/02/2019.

# 2 Services

All services provided by EGI are listed under <https://www.egi.eu/services/>, and are accessible via the EGI Marketplace: <https://marketplace.egi.eu/>.

Possible allocation types:

- **Pledged** - Resources are exclusively reserved to the Community and the job will be executed immediately after submission.
- **Opportunistic** - Resources are not exclusively allocated, but subject to local availability.
- **Time allocation** - Resources are available in fair share-like mode 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-per-use** - Model where customer directly pay for the service used.

The NextGEOSS Pilot Services are defined by the following categories:

- Cloud Compute (category: Compute): <https://www.egi.eu/services/cloud-compute/>
- Online Storage (category: Storage): <https://www.egi.eu/services/online-storage/>

The current resources allocated per pilot are summarised in the below table, which will be updated as new Pilots come online:

<b>Pilot</b>		<b>1. VITO's Sentinel2 Biopar Application (Use Case A)</b>	<b>2. ARMINES Solar Radiation Mapping</b>	<b>3. WUR ALTERRA Maxent Habitat Monitoring</b>	<b>4. SATCEN Detection Change</b>	<b>5. NERSC Sea Ice Classification</b>
<b>Resource Centre</b>		INFN-Bari	IISAS-FedCloud	RECAS-BARI	100%IT	CESNET
<b>Master node VM type</b>	<b>No. nodes</b>	1	1	1	1	1
	<b>CPUs</b>	2	2	2	2	2
	<b>RAM (GB)</b>	8	4	8	8	8
	<b>Storage (GB)</b>	100	100	100	100	100
<b>Slave node VM type</b>	<b>No. nodes</b>	4	4	4	2	8
	<b>CPUs</b>	2	2	2	2	2
	<b>RAM (GB)</b>	8	4	8	16	16
	<b>Storage (GB)</b>	200	100	200	200	200
<b>Additional permanent storage (GB)</b>			500	500	500	500
<b>Public IP addresses</b>		5	5	5	3	9
<b>Allocation type</b>		Pledged	Pledged	Pledged	Pledged	Pledged
<b>Payment mode offer</b>		Pay-per-use	Pay-per-use	Pay-per-use	Pay-per-use	Pay-per-use
<b>Other technical requirements</b>						
<b>Duration</b>	<b>Start date</b>	1 Aug 2018	1 Jan 2018	1 Aug 2018	16 Apr 2018	1 Oct 2018
	<b>End date</b>	31 May 2020	31 May 2020	31 May 2020	15 Jun 2020	31 May 2020
<b>Supported VOs</b>		<a href="https://vo.nextgeoss.eu">vo.nextgeoss.eu</a>				
<b>VO ID card</b>		<a href="https://operations-portal.egi.eu/vo/view/voname/vo.nextgeoss.eu">https://operations-portal.egi.eu/vo/view/voname/vo.nextgeoss.eu</a>				
<b>VO-wide list</b>		<a href="https://appdb.egi.eu/store/vo/vo.nextgeoss.eu">https://appdb.egi.eu/store/vo/vo.nextgeoss.eu</a>				

The Services are supported by additional services:

- Accounting<sup>1</sup>

<sup>1</sup> <https://accounting.egi.eu/>

- Service Monitoring (operational only)

Note: Please note that following services are not provided by EGI Foundation:

- Monitoring of the vo.nextgeoss.eu VO
- Monitoring of services provided by the Customer on agreed resources

## 3 Service hours and exceptions

IT services according to the service catalogue are in general delivered during 24 hours per day, 7 days per week (i.e. 365 days or 8,760 hours), to seamlessly support business operations. Planned and announced interruptions may reduce the effective operating time of a service.

The following exceptions apply:

- Planned maintenance windows or service interruptions (“scheduled downtimes”<sup>5</sup>) will be notified via e-mail in a timely manner i.e. 24 hours before the start of the outage, to the Customer through the Broadcast Tool<sup>2</sup>.
- The provider must provide justification for downtime periods exceeding 24 hours
- Human services are provided during support hours.

## 4 Support

Support is provided via EGI Service Desk<sup>3</sup>. Access requires a valid X.509 or the login via a EGI SSO account<sup>4</sup>. Support is available between:

- Monday to Friday.
- From 9:00 to 17:00 CET/CEST.

Service times always apply with the exception of public holidays in the country of the supporting Resource Centres.

### 4.1 Incident handling

Incidents will be handled according to the Quality of Support level that is estimated according to the impact of the outage or service quality degradation.

The Quality of Support levels are defined as **Medium**<sup>5</sup>, so the incidents based on their priority will be responded to with the following response times:

Incident priority	Response time	Comment
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<sup>2</sup> <https://operations-portal.egi.eu/broadcast>

<sup>3</sup> <http://helpdesk.egi.eu/>

<sup>4</sup> <https://www.egi.eu/sso/>

<sup>5</sup> [https://wiki.egi.eu/wiki/FAQ\\_GGUS-QoS-Levels](https://wiki.egi.eu/wiki/FAQ_GGUS-QoS-Levels)

<b>Less urgent</b>	5 working days	wishes and enhancements that are "nice to have"
<b>Urgent</b>	5 working day	service degraded; work-around available
<b>Very Urgent</b>	1 working day	service degraded; no work-around available
<b>Top Priority</b>	1 working hours	service interrupted; needs to be addressed as soon as possible

## 4.2 Service requests

In addition to resolving incidents, standard service requests ([https://wiki.egi.eu/wiki/EGI\\_Service\\_requests](https://wiki.egi.eu/wiki/EGI_Service_requests)) will be fulfilled through the defined support channels in the same way as incidents. Service requests are classified as “Less urgent”.

## 5 Service level targets

Service level targets are detailed in the below table, which will be updated as new Pilots come online, with a general guideline provided below:

<i>Pilot</i>		<i>ARMINES Solar Radiation Mapping</i>	<i>NERSC Sea Ice Classification</i>	<i>SATCEN Detection Change</i>	<i>VITO's Sentinel2 Biopar Application (Use Case A)</i>	<i>WUR ALTERRA Maxent Habitat Monitoring</i>
<b>Service Level Targets</b>	<b>Monthly Availability</b>	99.95%	95.00%		95.00%	95.00%
	<b>Monthly Reliability</b>	99.98%	95.00%		95.00%	95.00%

### 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. As reported by EGI monitoring services.
- 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. As reported by EGI monitoring services.
- Minimum (as a percentage per month): 95%

### Quality of Support level

- Advanced (Section 4)

## 6 Limitations and constraints

The Services provisioning is subject to the following limitations and constraints.

- Support is provided in English.
- Availability and Reliability calculations are based on the Service Monitoring operational results.
- Failures in VO monitoring are not considered as SLA violations.
- Downtimes needed to ensure the security of the Service issues are not considered Agreement violations.
- Failures of resource provider not being part of EGI production infrastructure are not considered as Agreement violations.
- Force Majeure. A party shall not be liable for any failure of or delay in the performance of this Agreement for the period that such failure or delay is due to causes beyond its reasonable control. Means any
  - fire, flood, earthquake or natural phenomena,
  - war, embargo, riot, civil disorder, rebellion, revolution

which is beyond the Provider's control, or any other causes beyond the Provider's control

## 7 Communication, reporting and escalation

### 7.1 General communication

The following contacts will be generally used for communications related to the service in the scope of this Agreement. The authoritative contact information is available in the EGI configuration database GOCDB.

<b>Customer contact</b>	Cesare Rossi <a href="mailto:cesare.rossi@terradue.com">cesare.rossi@terradue.com</a> Terradue
<b>EGI Foundation contact</b>	Małgorzata Krakowian <a href="mailto:sla@mailman.egi.eu">sla@mailman.egi.eu</a> SLA Coordinator at EGI Foundation
<b>Service Support contact</b>	See Section 4

### 7.2 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
<b>Services Performance Report</b>	The document provides the overall assessment of service performance (per month) and SLA target performance achieved during last 6 months	Every six month	Provider	Email to the Customer
<b>Scientific publications report</b>	The document provides list of scientific publications benefiting from the Service.	Yearly and with the Agreement ending.	Customer	During satisfaction review
<b>Platform Service report</b>	The document provides usage records (resources used, users) of the Customer service during last 6 months	Yearly and with the Agreement ending.	Customer	During satisfaction review

All reports shall follow predefined templates<sup>6</sup>.

### 7.3 Violations

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

- In case of violations of the Services targets for three consecutive months, the Provider will provide justifications to the Customer.
  - In case of unavailability of the Resource Provider to provide the service, the Provider will search for a new Resource Provider and support migration.
- The Customer will notify the supporting Resource Centres 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.

<sup>6</sup> <https://documents.egi.eu/public/ShowDocument?docid=2748>

## 7.4 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.), the Provider contact (section 6.1) point shall be used, and the following rules apply.

- In case of repeated violation of the Services targets for four consecutive months, a review of the Agreement will take place involving the parties of the Agreement.
- Complaints or concerns about the Services provided should be directed to the Provider contact who will promptly address these concerns. Should the Customer still feel dissatisfied, about either the result of the response or the behaviour of the supporting Resource Centres, [complaints@egi.eu](mailto:complaints@egi.eu) should be informed.

## 8 Information security and data protection

The following rules for information security and data protection apply:

- Assertion of absolute security in IT systems is impossible. The Provider is making every effort to maximize security level of users' data and minimize possible harm in the event of an incident.
- The Provider must 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 of the Provider<sup>7</sup> and will comply with the applicable national legislations.

## 9 Responsibilities

### 9.1 Of the Provider

Additional responsibilities of the Provider are as follow:

- The Provider adheres to all applicable operational and security policies and procedures<sup>8</sup> and to other policy documents referenced therein.
- The Provider allows monitoring of the Service in order to measure the fulfilment of the agreed service level targets.
- The Provider retains the right to introduce changes in how the Service is provided, in which case the Provider will promptly inform the Customer and update the Agreement accordingly.

### 9.2 Of the Customer

The responsibilities of the customer are:

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<sup>7</sup> [https://www.egi.eu/about/policy/policies\\_procedures.html](https://www.egi.eu/about/policy/policies_procedures.html)

<sup>8</sup> [https://wiki.egi.eu/wiki/Policies\\_and\\_Procedures](https://wiki.egi.eu/wiki/Policies_and_Procedures)

- The customer facilitates the use of EGI acknowledgement by communicating to users the need of adding the following sentence in acknowledgements in e.g. scientific publications, reports, popular articles and online media articles, presentations and metadata: “This work used the EGI infrastructure with the dedicated support from <IISAS-FedCloud, CESNET, 100%IT, INFN-Bari or RECAS-BARI>”.
- The Customer will provide during Agreement review (yearly) list of scientific publications benefiting from the Service.
- The Customer must not share access credentials with anyone else.
- The data stored in the system by the Customer must not cause any legal violation due to the content type (such as copyright infringement, dual use, illegal material).
- The use must be consistent with the Acceptable Use Policy<sup>9</sup> of the Service.
- The Customer will notify the Provider in case the actual amount of the Service used results in being under- or over-estimated. The Customer will request an update of the Agreement to ensure optimal usage of the Service.
- The Customer will create one or more Virtual Organizations (VOs) to define the group of users entitled to access the Service. Information about the VO will be regularly updated in EGI Operations Portal<sup>10</sup>.
- The Customer must request EGI Service Desk support<sup>11</sup> to enable assigning tickets with appropriate VO name.
- When applicable, the Customer is responsible of ensuring that the Virtual Machine images endorsed and listed in the AppDB<sup>12</sup> VO image list are properly maintained and updated.

## 10 Review

The Services performance will be reviewed against the defined Service level targets according to Section 5. The Agreement will be annually reviewed until expiration.

If the Customer wishes to extend the duration after the Agreement termination date, an extension will be negotiated with the Provider.

The Provider retains the right to introduce changes in the Service, in which case the Customer retains the right of terminating the Agreement.

The Agreement can be terminated at any time upon agreement of the parties. Amendments, comments and suggestions must be addressed to the Provider and the Customer according to Section 7.

<sup>9</sup> <https://documents.egi.eu/public/ShowDocument?docid=74>

<sup>10</sup> <http://operations-portal.egi.eu/>

<sup>11</sup> [https://wiki.egi.eu/wiki/FAQ\\_GGUS-New-Support-Unit](https://wiki.egi.eu/wiki/FAQ_GGUS-New-Support-Unit)

<sup>12</sup> <https://appdb.egi.eu/>