



EGI Pay4Use VO

OPERATIONAL LEVEL AGREEMENT

Service provider	EGI Foundation
Component Provider	100%IT
User	DIGITbrain/vo.digitbrain.eu
First day of service delivery	01/01/2021
Last day of service delivery	31/12/2023
Status	FINAL
Agreement finalization date	31/01/2021
SLA/OLA Link	https://documents.egi.eu/document/3696



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DOCUMENT LOG

<i>Issue</i>	<i>Date</i>	<i>Comment</i>	<i>Author</i>
FINAL	31/01/2021	Agreed OLA with the Component Provider	Giuseppe La Rocca/EGI Foundation
v0.2	16/07/2021	Added a statement to clarify that the unused budget during the service reporting period will be freed.	Giuseppe La Rocca/EGI Foundation

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 **100%IT (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.

DIGITbrain¹ is an EU innovation program to give SMEs easy access to digital twins. A Digital Twin is a computer-based application/simulation that mimics the real production line of a company and runs in parallel with the real manufacturing process. Using this Digital Twin, companies can rationalise the manufacturing process, make predictions regarding expected machine failures and can predict maintenance needs.

The Customer is a consortium represented by **PNOConsultant**.

This Agreement is valid from **01/01/2021** to **31/12/2023**.

The Component Provider will guarantee the availability of the platform for a maximum of 90 days from the end of the agreement, or until the final DIGITbrain review takes place (with no additional costs). In order to review the terms and conditions for a possible additional extension, a check-point will take place 3 months before the end of this agreement.

The Agreement was discussed and approved by the EGI Foundation and the Component Provider **31/01/2021**.

The Agreement extends the Resource Center OLA² with the following information:

1 The Services

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-for-use** - Model where a customer directly pays for the service used.

The Services are defined by the properties summarised in the following table described in the below links:

- **Cloud Compute:** <https://www.egi.eu/services/cloud-compute/>

¹ <https://digitbrain.eu/>

² <https://documents.egi.eu/document/31>

- **Online Storage:** <https://www.egi.eu/services/online-storage/>

Cloud Compute	
Resource Centre:	100%IT
Category:	Cloud Compute
Number of virtual CPU cores:	160 vCPUs @ £3.75 per vCPU per month
Memory per core (GB):	400GB RAM @ £1.75 per GB per month
Local disk (GB):	4000GB standard disk @ £0.035 per GB per month 500GB NVMe Flash high-speed disk @ £0.12 per GB per month
Public IP addresses:	50 IPv4 addresses @ £1.75 per address per month
Allocation type:	Pledged
Other technical requirements:	<p>All computing servers use Dell hardware running Intel(R) Xeon(R) CPUs (min spec E5-2680 v4 @ 2.40GHz). CPUs are not over-contended, so users will achieve the maximum possible performance from the servers.</p> <p>Dual redundant power supplies feed all racks, and network connectivity also features multiple redundant connectivity based on Cisco and Juniper networking components throughout the network. Multiple independent internet connections are also in place to ensure the service is always available.</p> <p>Data is stored on multiple redundant servers, so no single hardware failure can cause any loss of data. In addition, we can offer NVMe flash disk for the high performance SSD storage, offering very high IO capability in excess of that normally achieved with conventional SSDs and capable of handling the most demanding workloads.</p> <p>Additional resources can be added at a cost of:</p> <ul style="list-style-type: none"> ● £3.75 per vCPU per month ● £1.75 per GB RAM per month ● £0.035 per GB of Disk per month
Payment mode offer:	Pay-for-use ³
Duration:	01/01/2021 - 31/12/2023

³ See service offer for specifications (e.g. pricing, administration)

Virtual Organisation	
Supported VOs:	vo.digitbrain.eu
VO ID card:	https://operations-portal.egi.eu/vo/view/voname/vo.digitbrain.eu
VO-wide list:	https://appdb.egi.eu/store/vo/vo.digitbrain.eu
Provider AUP link	https://documents.egi.eu/document/2623
Service Offer/Cost [£]	
Compute	1587.50£ ⁴ per month ⁵
Technical support	Technical support on the IaaS platform is included to help with initial setup. Support on VMs and application setup and deployment is not included, but can be provided at additional cost.
Total	19050.0 £ ⁴ per year ⁵
Other	The costs reported in this agreement are based on actual usage. Unused budget during the service delivery period will be freed.

The Services are supported by additional services:

- Accounting⁶
- Service Monitoring⁷ (EGI operational Virtual Organization only).

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

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

2 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:

⁴ Excluding VAT (reverse charging)

⁵ In case all the pool of resources will be used.

⁶ <http://accounting.egi.eu/>

⁷ <http://argo.egi.eu/>

- Planned maintenance windows or service interruptions (“scheduled downtimes”⁵) will be notified via email in a timely manner i.e. 24 hours before the start of the outage, to the Customer through the Broadcast Tool⁸.
- The provider must provide justification for downtime periods exceeding 24 hours.
- Human support is provided during support hours.

3 Support

Support is provided via the EGI Service Desk⁹. Access requires a valid X.509 or the login via a EGI SSO account¹⁰. Support is available between:

- Monday to Friday.
- From 09:00 to 17:00 CET/CEST in the time zone of the relevant Resource Centres.

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

3.1 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 in this Agreement has level: **Medium**¹¹

The Quality of Support levels are defined as follows:

Medium level:

Incident priority	Response time	Comment
Less urgent	5 working days	wishes and enhancements that are "nice to have"
Urgent	1 working day	service degraded; workaround available
Very Urgent	1 working day	service degraded; no workaround available
Top priority	1 working day	service interrupted; needs to be addressed as soon as possible

Response time is provided as a service level target.

⁸ <https://operations-portal.egi.eu/broadcast>

⁹ <http://helpdesk.egi.eu/>

¹⁰ <https://www.egi.eu/sso/>

¹¹ https://wiki.egi.eu/wiki/FAQ_GGUS-QoS-Levels

3.2 Service requests

In addition to resolving incidents, standard service requests¹² (e.g. change requests, information requests, documentation) will be fulfilled through the defined support channels in the same way as incidents. Service requests are classified as “Less urgent”.

4 Service level targets

Monthly Availability

- Defined as the ability of a service to fulfil its intended function at a specific time or over a calendar month.
- Minimum (as an average percentage per month):
 - Cloud Compute: 99%
 - 100%IT: 99%

Monthly Reliability

- Defined as the ability of a service to fulfil its intended function at a specific time or over a calendar month, excluding scheduled maintenance periods.
- Minimum (as an average percentage per month):
 - Cloud Compute: 99%
 - 100%IT: 99%

Quality of Support level

- Medium (Section 3)

5 Limitations and constraints

The provisioning of the service under the agreed service level targets is subject to the following limitations and constraints:

- Support is provided in the following language: English
- Downtimes caused due to upgrades for fixing critical security issues are not considered 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

¹² <https://confluence.egi.eu/display/EGISLM/EGI+Service+requests>

- war, embargo, riot, civil disorder, rebellion, revolution which is beyond the Provider's control, or any other causes beyond the Provider's control
- Availability and Reliability calculations are based on the Service Monitoring operational results.
- 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.

Provider contact	David Blundell David.Blundell@100percentit.com
Provider technical contact	Alan Platt Alan.Platt@100percentit.com Graham Lenton graham.lenton@100percentit.com
EGI contact	Giuseppe La Rocca, EGI Foundation slm@mailman.egi.eu SLM manager
EGI technical contact	Matthew Viljoen, EGI Foundation operations@egi.eu Operations manager
Service Support contact	EGI Service Desk (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	Content	Frequency	Produced by	Delivery
Service Performance Report	The document provides an overall assessment of service	Every 6 months, unless otherwise specified/requested by the customer.	Component Provider	Email to EGI contact together with invoice for period.



	performance (per month) and OLA target performance achieved during the reporting period based on values from EGI monitoring ¹³			
Agreement Violation	Agreement violation justification and a plan for service enhancement	Within 10 working days from the date of notification to/from the EGI Foundation about violation	Component Provider	Email to EGI technical contact together with invoice for period.

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 in the event of the Agreement violation:

- In case of violations of the Services targets for **four months** or **two consecutive months**, the Component Provider will provide justifications to EGI Foundation.
- 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** or **two consecutive months**, a review of the Agreement will take place involving the parties of the Agreement.
- Complaints or concerns about the Services provided directed to the EGI Foundation contact will be shared with the Service component provider.

¹³ <http://argo.egi.eu/>

7 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 Component Provider is making every effort to maximize security level of users' data and minimize possible harm in the event of an incident.
- The Component Provider must define and abide by an information security and data protection policy related to the service being provided.
- This must meet all requirements of any relevant EGI policies or procedures¹⁴ and also must be compliant with the relevant national legislation.

8 Responsibilities

8.1 Of the Component Provider

Additional responsibilities of the Component Provider are as follow:

- The Component Provider is responsible for monitoring and/or limiting the usage of resources defined in this agreement. The Component Provider will send an alert to the EGI Foundation when the 50-60% of the total capacity assigned to the Customer is used. EGI Foundation is not responsible for any costs incurred by over usage of what was otherwise defined in this agreement.
- The Component Provider shall not terminate the user allocated resources (virtual machines, storage) without agreement with EGI Foundation.
- The Component Provider should not reboot the user virtual machines without user consent unless it is strictly needed.
- Notification of resource termination shall be provided to the EGI Foundation within 15 calendar days.
- EGI Foundation is not responsible for any costs incurred as a result of resources not terminated by the component providers.
- Ensure
 - Sufficient computational and storage resources and network connectivity to support the proper operation of its services, as indicated by passing all relevant Monitoring Service tests.
 - The provisioning of services in itself does not create any intellectual property rights in software, information and data provided to the services provided by the Component Provider, or in data generated by the services provided.

¹⁴ https://www.egi.eu/about/policy/policies_procedures.html

- A system administrator (person) from the side of 100%IT will be available for supporting the project requirements.
- The full scale deployment of resources will be made available after **1 week** after the signing of the agreement.
- The pledged resources will be used to set-up the DIGITbrain testbed and run experiments.
- The security policy will allow the creation of custom-images in the tenant allocated to the Customer.
- **The availability of the testbed for a maximum of 90 days from the end of the agreement, or until the final DIGITbrain review takes place (with no additional costs). In order to review the terms and conditions for a possible additional extension, a check-point will take place 3 months before the end of this agreement.**

8.2 Of the EGI Foundation

As defined in Resource Center OLA and:

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

8.3 Of the Customer

All responsibilities of the User are listed in relevant VO SLA.

9 Finance and Administration

9.1 Service Offers

Component Provider is expected to adhere to the service offer and associated costs provided and agreed timescales, unless changes are otherwise agreed between both parties in writing (See Section 2).

9.2 Invoicing and Payment Schedule

Component Providers are to invoice the EGI Foundation according to the below schedule.

Note that invoices need to be accompanied by a Service Performance Report (see Section 6.2), and need to be based on actual consumption.

Service delivery period	Invoicing frequency	Produced by	Delivery
Period 1. 01/01/2021 – 31/05/2021	Once, based on actual consumption + VAT by 30/06/2021	Component Provider	Email to EGI contact

Period 2. 01/06/2021 – 30/11/2021	Once, based on actual consumption + VAT by 31/12/2021	Component Provider	Email to EGI contact
Period 3. 01/12/2021 – 31/05/2022	Once, based on actual consumption + VAT by 30/06/2022	Component Provider	Email to EGI contact
Period 4. 01/06/2022 – 30/11/2022	Once, based on actual consumption + VAT by 31/12/2022	Component Provider	Email to EGI contact
Period 5. 01/12/2022 – 31/05/2023	Once, based on actual consumption + VAT by 30/06/2023	Component Provider	Email to EGI contact
Period 6. 01/06/2023 – 30/11/2023	Once, based on actual consumption + VAT by 31/12/2023	Component Provider	Email to EGI contact

Invoice details:

- Name: Tiziana Ferrari, EGI Foundation Director
- Address: Science Park, 140 - 1098XG – Amsterdam, The Netherlands
- VAT: NL8219.84.986.B.01
- Email: inkoop@egi.eu
- Date: [DD/MM/YYYY]: last day of the year in which the cloud provisioning has been delivered
- Reference: DIGITbrain, 952071

10 Review, extensions and termination

This agreement is subject to review on an annual basis (at the end of the calendar year from the service delivery date) by which a Customer performance validation will be conducted and a report produced (see Section 6.2).

The continuation of this agreement is subject to successfully meeting customer performance requirements outlined in Section 4.

Reviews of the agreement can be performed at any time by written request by any party.

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

EGI Foundation 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 EGI Foundation and the Customer according to Section 6.