EGI VO

SERVICE LEVEL AGREEMENT

Customer	WeNMR/vo:enmr.eu
Provider	EGI Foundation
First day of service delivery	01/01/2016
Last day of service delivery	31/12/2020
Status	FINAL
Agreement finalization date	18/02/2016
SLA link	**https://documents.egi.eu/document/2751**
OLA Link	**https://documents.egi.eu/document/2751**

DOCUMENT LOG

Issue	Date	Comment	Author
FINAL	16/02/2016	SLA signed with the Customer	Giuseppe La Rocca Małgorzata Krakowian
v2	21/03/2018	New version of SLA. Extended till 12/2020	Giuseppe La Rocca
	24/07/2019	change name of the provider from CESNET-MetaCloud to CESNET-MCC	Małgorzata Krakowian
	25/07/2019	Change customer name from Mobrain to WeNMR	Małgorzata Krakowian

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.

Contents

The present Service Level Agreement ("the Agreement') is made between **EGI.eu (the Provider)** and **WeNMR/vo:enmr.eu (the Customer)** to define the provision and support of the provided services as described hereafter. Representatives and contact information are defined in Section 6.

The main objective of WeNMR is to lower barriers for scientists to access modern e-Science solutions from micro to macro scales. By building on grid- and cloud-based infrastructures and on the existing expertise available within WeNMR[1] and N4U[2] and by integrating molecular structural biology and medical imaging services and data.

The Customer is a consortium represented by **the Faculty of Science – Chemistry, Utrecht University.**

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

The Agreement was discussed and approved by the Customer and the Provider on **16/02/2016**.

1 The Services

All services provided by EGI are listed under: https://www.egi.eu/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-per-use - Model where customer directly pay for the service used.

The Services are defined by the following properties:

Cloud Compute (category: Compute)

Description: https://www.egi.eu/services/cloud-compute/

- Resource Centre: **CESNET-MCC (Country: Czech Republic)**

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[1] www.wenmr.eu
[2] neugrid4you.eu

- o Cloud Compute:
  - Number of virtual CPU cores: up to 60
  - Memory per core (GB): up to 360 in total
  - Local disk (GB): 4TB
  - Public IP addresses: yes (up to 10, more available upon request)
  - Allocation type: pledged
  - Payment mode offer: sponsored
  - Other technical requirements:
  - Duration: 01/01/2016 – 31/12/2020
  - Supported VOs: enmr.eu
- o VO ID card: https://operations-portal.in2p3.fr/vo/view/voname/enmr.eu
- o VO-wide list: https://vmcaster.appdb.egi.eu/store/vo/enmr.eu/image.list

- Resource Centre: **INFN-PADOVA-STACK (Country: Italy)**
  - o Cloud Compute:
    - Number of virtual CPU cores: 100
    - Memory per core (GB): 2GB per core, 200GB in total
    - Local disk (GB): up to 160 GB
    - Public IP addresses: yes
    - Allocation type: Pledged
    - Payment mode offer: sponsored
    - Other technical requirements: 100 AMD Opteron 6238 physical CPU cores
    - Duration: 01/01/2016 – 31/12/2020
    - Supported VOs: enmr.eu
  - o VO ID card: https://operations-portal.in2p3.fr/vo/view/voname/enmr.eu
  - o VO-wide list: https://vmcaster.appdb.egi.eu/store/vo/enmr.eu/image.list

High-Throughput Compute (category: Compute)

Description: https://www.egi.eu/services/high-throughput-compute/

- Resource Center: **NCG-INGRID-LP (Country: Portugal)**
  - o High-Throughput Compute:
    - Guaranteed computing time [HEPSPEC-hours]:
    - Opportunistic computing time [HEPSPEC-hours]: 1 Million
    - Max job duration [hours]: 52
    - Min local storage [GB] (scratch space per each core used by the job): 10GB
    - Min physical memory per core [GB]: 2GB
    - Middleware: UMD3 (gLite, EMI3)
    - Payment mode offer: sponsored
    - Other technical requirements:

- - - Duration: 01/01/2016 – to 31/12/2020
  - o Allocation type: fair-share for HTC
  - o Supported VOs: enmr.eu
  - o VO ID card: https://operations-portal.egi.eu/vo/view/voname/enmr.eu

- Resource Center: **INFN-PADOVA (Country: Italy)**
  - o High-Throughput Compute
    - Guaranteed computing time [HEPSPEC-hours]:
    - Opportunistic computing time [HEPSPEC-hours]: up to 10 Million per year
    - Max job duration [hours]: 72
    - Min local storage [GB] (scratch space per each core used by the job): 1GB
    - Max number of cores per node:
    - Min physical memory per core [GB]: 2GB, 288GB in total
    - Middleware: gLite CREAM CE
    - Payment mode offer: sponsored
    - Other technical requirements: 144 AMD Opteron 6174 physical CPU cores
    - Duration: 01/01/2016 – 31/12/2020
  - o Allocation type: LSF fair-share for HTC
  - o Supported VOs: enmr.eu
  - o VO ID card: https://operations-portal.in2p3.fr/vo/view/voname/enmr.eu

- Resource Center: **NIKHEF-ELPROD (Country: The Netherlands)**
  - o High-Throughput Compute:
    - Guaranteed computing time [HEPSPEC-hours]:
    - Opportunistic computing time [HEPSPEC-hours]: 20 Millions
    - Max job duration [hours]: 36 hours (medium queue), 72-96 hours (long queue)
    - Min local storage [GB] (scratch space for each core used by the job): 60 - 200 GB
    - Min physical memory per core [GB]: 3 - 8 GB
    - Middleware: UMD3 (gLite, EMI)
    - Payment mode offer: sponsored
    - Other technical requirements:
    - Duration: 01/01/2016 – to 31/12/2020
  - o Allocation type: Opportunistic via Grid interface
  - o Supported VOs: enmr.eu
  - o VO ID card: https://operations-portal.egi.eu/vo/view/voname/enmr.eu
- Resource Center: **SARA-MATRIX (Country: The Netherlands)**
  - o High-Throughput Compute:
    - Guaranteed computing time [HEPSPEC-hours]:
    - Opportunistic computing time [HEPSPEC-hours]: 20 Millions
    - Max job duration [hours]: 36 hours (medium queue), 72-96 hours (long queue)

- Min local storage [GB] (scratch space for each core used by the job): 75 - 200 GB
- Min physical memory per core [GB]: 4 - 8 GB
- Middleware: UMD3 (gLite, EMI)
- Payment mode offer: sponsored
- Other technical requirements:
- Duration: 01/01/2016 – to 31/12/2020
  - o Allocation type: Opportunistic via Grid
  - o Supported VOs: enmr.eu
  - o VO ID card: https://operations-portal.egi.eu/vo/view/voname/enmr.eu

- Resource Center: **TW-NCHC (Country: Taiwan)**
  - o High-Throughput Compute:
    - Guaranteed computing time [HEPSPEC-hours]:
    - Opportunistic computing time [HEPSPEC-hours]: 2 Millions
    - Max job duration [hours]: 8 hours
    - Min local storage [GB] (scratch space for each core used by the job): 5 GB
    - Min physical memory per core [GB]: 2 GB
    - Middleware: gLite EMI-3, CVMFS
    - Payment mode offer: sponsored
    - Other technical requirements:
    - Duration: 01/01/2016 – to 31/12/2020
  - o Access mode offer: Opportunistic
  - o Supported VOs: enmr.eu
  - o VO ID card: https://operations-portal.egi.eu/vo/view/voname/enmr.eu

Online Storage (category: Storage)

Description: https://www.egi.eu/services/online-storage/

- Resource Center: **CESNET-MCC (Country: Czech Republic)**
  - o Online Storage
    - Guaranteed storage capacity [TB]:
    - Opportunistic storage capacity [TB]: 2TB
    - Standard interfaces supported[3]: POSIX
    - Storage technology[4]:
    - Payment mode offer: sponsored
    - Other technical requirements:
    - Duration: 01/01/2016 – 31/12/2020

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[3] CDMI, POSIX, SWIFT, etc.
[4] DPM, dCache, STORM, etc.

- o Allocation type: pledged
- o Supported VOs: enmr.eu
- o VO ID card: https://operations-portal.in2p3.fr/vo/view/voname/enmr.eu

- Resource Center: **INFN-PADOVA-STACK (Country: Italy)**
  - o Online Storage
    - Guaranteed storage capacity [TB]: 1
    - Opportunistic storage capacity [TB]:
    - Standard interfaces supported[5]: POSIX
    - Storage technology: Cinder (OpenStack block storage), Onedata (experimental)
    - Payment mode offer: sponsored
    - Other technical requirements:
    - Duration: 01/01/2016 – 31/12/2020
  - o Allocation type: pledged
  - o Supported VOs: enmr.eu
  - o VO ID card: https://operations-portal.in2p3.fr/vo/view/voname/enmr.eu

- Resource Center: **NIKHEF-ELPROD (Country: The Netherlands)**
  - o Online Storage
    - Guaranteed storage capacity [TB]: 1
    - Opportunistic storage capacity [TB]:
    - Standard interfaces supported: POSIX
    - Storage technology:
    - Payment mode offer: sponsored
    - Other technical requirements:
    - Duration: 01/01/2016 – 31/12/2020
  - o Allocation type: pledged
  - o Supported VOs: enmr.eu
  - o VO ID card: https://operations-portal.in2p3.fr/vo/view/voname/enmr.eu

- Resource Center: **SARA-MATRIX (Country: The Netherlands)**
  - o Online Storage
    - Guaranteed storage capacity [TB]:
    - Opportunistic storage capacity [TB]: 0.05
    - Standard interfaces supported[6]: POSIX
    - Storage technology[7]:
    - Payment mode offer: sponsored

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[5] CDMI, POSIX, SWIFT, etc.
[6] CDMI, POSIX, SWIFT, etc.
[7] DPM, dCache, STORM, etc.

- Other technical requirements:
- Duration: 01/01/2016 – 31/12/2020
  - o Allocation type: pledged
  - o Supported VOs: enmr.eu
  - o VO ID card: https://operations-portal.in2p3.fr/vo/view/voname/enmr.eu

- Resource Center: **TW-NCHC (Country: Taiwan)**
  - o Online Storage
    - Guaranteed storage capacity [TB]:
    - Opportunistic storage capacity [TB]: 50
    - Standard interfaces supported: POSIX
    - Storage technology:
    - Payment mode offer: sponsored
    - Duration: 01/01/2016 – 31/12/2020
  - o Allocation type: pledged
  - o Supported VOs: enmr.eu
  - o VO ID card: https://operations-portal.in2p3.fr/vo/view/voname/enmr.eu

The Services are supported by additional services:

- • Accounting[8]
- • Service Monitoring[9] (operational only)

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

- • Monitoring of enmr.eu VO
- • Monitoring of services provided by the Customer on agreed resources

2 Service hours and exceptions

The Services operate during the following hours: twenty-four (24) hours a day, seven (7) days a week, three hundred sixty-five (365) days a year.

The following exceptions apply:

- • Planned maintenance windows or service interruptions ("scheduled downtimes"[10]) will be notified via e-mail in a timely manner i.e. 24 hours before the start of the outage[11].

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[8] http://accounting.egi.eu/
[9] http://argo.egi.eu/
[10] https://wiki.egi.eu/wiki/GOCDB/Input_System_User_Documentation#Downtimes
[11] http://goc.egi.eu/

- Downtime periods exceeding 24 hours need justification.

3 Support

Support is provided via EGI Service Desk[12]. Access requires a valid X.509 or the login via a EGI SSO account[13]. Support is available between:

- Monday to Friday.
- From 9:00 to 17:00 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**[14]

Incident priority	Response time
Less urgent	5 working days
Urgent	5 working days
Very Urgent,	1 working day
Top Priority	1 working day

so the incidents, based on their priority will be responded to with the following response times:

Incident priority[15]	Response time	Comment
Less urgent	5 working days	wishes and enhancements that are "nice to have"
Urgent	5 working days	service degraded; work-around available
Very Urgent	1 working day	service degraded; no work-around available
Top Priority	1 working day	service interrupted; needs to be addressed as soon as possible

Table 1. Response times to incidents according to the incident priority of "Medium" services

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[12] http://helpdesk.egi.eu/
[13] https://www.egi.eu/sso/
[14] https://wiki.egi.eu/wiki/FAQ_GGUS-QoS-Levels
[15] https://wiki.egi.eu/wiki/FAQ_GGUS-Ticket-Priority

3.2 Service requests

In addition to resolving incidents, standard 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".

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: 85%
    - CESNET-MCC: 85%
    - INFN-PADOVA-STACK: 85%
  - High-Throughput Compute: 86%
    - INFN-PADOVA: 85%
    - NCG-INGRID-PT: 85%
    - NIKHEF-ELPROD: 85%
    - SARA-MATRIX: 85%
    - TW-NCHC: 90%
  - Online Storage: 86%
    - CESNET-MCC: 85%
    - INFN-PADOVA: 85%
    - NIKHEF-ELPROD: 85%
    - SARA-MATRIX: 85%
    - TW-NCHC: 90%

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: 90%
    - CESNET-MCC: 90%
    - INFN-PADOVA-STACK: 90%
  - High-Throughput Compute: 90%
    - INFN-PADOVA: 90%
    - NCG-INGRID-PT: 90%
    - NIKHEF-ELPROD: 90%
    - SARA-MATRIX: 90%

- TW-NCHC: 90%
    - o Online Storage: 90%
        - CESNET-MCC: 90%
        - INFN-PADOVA: 90%
        - NIKHEF-ELPROD: 90%
        - SARA-MATRIX: 90%
        - TW-NCHC: 90%

Quality of Support level

- Medium (Section 3)

5 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
    - o fire, flood, earthquake or natural phenomena,
    - o war, embargo, riot, civil disorder, rebellion, revolution

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

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.

Customer contact	Alexandre Bonvin

	a.m.j.j.bonvin@uu.nl
EGI Foundation contact	Małgorzata Krakowian sla@mailman.egi.eu SLA Coordinator at EGI Foundation
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
Services Performance Report	The document provides the overall assessment of service performance (per month) and SLA target performance achieved during last 6 months	Every six months	Provider	Email to the Customer
Scientific Publications report	The document provides list of scientific publications benefiting from the Service.	Yearly and with the Agreement ending.	Customer	During satisfaction review
Platform Service report	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[16].

6.3 Violations

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

- In case of violations of the Services targets for three consecutive months, the Provider will provide justifications to the Customer.

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[16] https://documents.egi.eu/document/2748

- o 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.

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.), 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 should be informed.

7 Information security and data protection

The following rules for information security and data protection related to the Service apply.

- Assertion of absolute security in IT systems is impossible. The Provider is making every effort to maximize security level of users' data and minimalize possible harm in the event of an incident.
- The Provider will 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[17] and will comply with the applicable national legislations.

8 Responsibilities

8.1 Of the Provider

Additional responsibilities of the Provider are as follows.

- The Provider adheres to all applicable operational and security policies and procedures[18] and to other policy documents referenced therein.

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[17] https://www.egi.eu/about/policy/policies_procedures.html

- 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.

8.2 Of the Customer

The responsibilities of the Customer are:

- **The customer facilitates the use of EGI acknowledgement by communicating to users the need of adding the following sentence in acknowledgement: "The FP7 WeNMR (project# 261572), H2020 West-Life (project# 675858) and the EOSC-hub (project# 777536) European e-Infrastructure projects are acknowledged for the use of their web portals, which make use of the EGI infrastructure with the dedicated support of CESNET-MCC, INFN-PADOVA, NCG-INGRID-PT, TW-NCHC, SURFsara and NIKHEF, and the additional support of the national GRID Initiatives of Belgium, France, Italy, Germany, the Netherlands, Poland, Portugal, Spain, UK, Taiwan and the US Open Science Grid".**
- 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[19] 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[20].
- The Customer must request EGI Service Desk support[21] 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[22] VO image list are properly maintained and updated.

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[18] https://www.egi.eu/about/policy/policies_procedures.html
[19] https://documents.egi.eu/document/74
[20] http://operations-portal.egi.eu/
[21] https://wiki.egi.eu/wiki/FAQ_GGUS-New-Support-Unit

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9 Review, extensions and termination

The Services performance will be reviewed against the defined Service level targets according to Section 4. 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 6.

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[22] https://appdb.egi.eu/