

EUROPEAN MIDDLEWARE INITIATIVE

DNA1.2.3 - SERVICE LEVEL AGREEMENT TEMPLATE - REV. 2

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Abstract:

This deliverable provides the general Service Level Agreement template used as the basis to negotiate SLAs with EGI, PRACE and other infrastructure providers. It contains a clear definition of what categories of services EMI provides (support, software products releases, consultancy, training, etc.) and how the EMI services can be evaluated to respond to the criteria of ‘fit for purpose’ and ‘fit for use’. The template will be revised when major changes occur and at least every 12 months.

I. DELIVERY SLIP

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II. DOCUMENT LOG

Issue	Date	Comment	Author/Partner
1	30/04/2012	v. 1.0 Ready for internal review	Alberto Di Meglio
2			
3		v1.x PEB approved version	PEB

III. DOCUMENT CHANGE RECORD

Issue	Item	Reason for Change
1	Revised template and template description	Added definition of working hours
2	Added OLA for regulating “Works with EMI” contributions	OLA are now used by EMI to manage the relationship with external contributors
3	Added SLA application analysis during year 2	

IV. DOCUMENT AMENDMENT PROCEDURE

This document can be amended by the EMI Service Level Agreement Manager (currently the Project Director) further to any feedback from other teams or people. Minor changes, such as spelling corrections, content formatting or minor text re-organisation not affecting the content and meaning of the document can be applied by the EMI Service Level Agreement Manager without peer review. Other changes must be submitted to peer review and to the EMI CB and PEB for approval.

When the document is modified for any reason, its version number shall be incremented accordingly. The document version number shall follow the standard EMI conventions for document versioning. The document shall be maintained in the CERN CDS repository and be made accessible through the OpenAIRE portal.

It is already foreseen that this document and the annexed SLA Template will be revised once per year following feedback from the actual establishment of SLAs with key Customers. The SLA Template will follow the same amendment procedures as the main document. The SLAs based on this template can be revised following the specific SLA amendment procedure described in the SLA Template itself.

V. GLOSSARY

Acronym	Long name or definition
CMMI	Capability Maturity Model Integration, a process improvement approach that provides organizations with the essential elements of effective processes that ultimately improve their performance - http://www.sei.cmu.edu/cmmi
EGI	European Grid Infrastructure – http://www.egi.eu

EMI	European Middleware Initiative – http://www.eu-emi.eu
IGE	Initiative for Globus in Europe (http://www.ige-project.eu)
ITIL	Information Technology Infrastructure Library, the most widely adopted approach for IT Service Management in the world. It provides a practical, no-nonsense framework for identifying, planning, delivering and supporting IT services to the business - http://www.itil-officialsite.com/home/home.asp
ITSM	Information Technology Service Management, it employs ITIL documented best practices and in most cases extends beyond into additional areas such as enhanced processes and implementation to provide additional value-added functionality - http://www.itsm.info/ITSM.htm
PRACE	Partnership for Advanced Computing in Europe, a unique persistent pan-European Research Infrastructure for High Performance Computing (HPC) - http://www.prace-project.eu/
SaaS	Software as a Service, software that is deployed over the internet and/or is deployed to run behind a firewall on a local area network or personal computer by a service provider without the need for the user to deploy or maintain it
SIIA	Software and Information Industry Association - http://www.siiia.net
SLA	Service Level Agreement, a part of a service contract where the level of service is formally defined
SLM	Service Level Management, the process responsible for negotiating Service Level Agreements and ensuring that these are met
SLR	Service Level Requirements, document recording the business requirements for an IT Service
SLT	Service Level Target, a commitment documented in a Service Level Agreement. Service Level Targets are based on Service Level Requirements, and are needed to ensure that the IT Service design is Fit for Purpose

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TABLE OF CONTENTS

1. INTRODUCTION	7
1.1. EXECUTIVE SUMMARY	7
1.2. PURPOSE AND SCOPE	7
1.3. DOCUMENT ORGANISATION.....	8
2. CHANGES IN THIS REVISION	9
3. SLA-BASED SERVICE PROVISION.....	10
3.1. MAIN CONCEPTS AND ELEMENTS OF AN SLA	10
3.2. MAIN CONCEPTS AND ELEMENTS OF AN OLA.....	11
3.3. MAPPING THE ITIL BEST PRACTICES ONTO EMI	11
4. THE EMI SLA AND OLA.....	14
4.1. AGREEMENT OVERVIEW	14
4.2. GOALS AND OBJECTIVES.....	14
4.3. STAKEHOLDERS	14
4.4. TERM, TERMINATION AND AMENDMENTS	14
4.5. SERVICE AGREEMENT	14
4.6. SERVICE MANAGEMENT	14
4.7. SECURITY AND CONFIDENTIALITY	14
4.8. LIMITATION OF LIABILITY.....	14
4.9. MISCELLANEOUS	14
4.10. OFFICE LOCATIONS.....	14
4.11. COMMUNICATION	15
4.12. SIGNATURES	15
5. SLA APPLICATION ANALYSIS	16
5.1. SLA MONITORING DATA.....	16
5.2. DATA ANALYSIS	17
6. CONCLUSIONS.....	19
7. REFERENCES.....	20
APPENDIX A: THE SERVICE LEVEL AGREEMENT TEMPLATE.....	21
1. AGREEMENT OVERVIEW	26
2. GOALS & OBJECTIVES.....	26
3. STAKEHOLDERS	26
4. TERM, TERMINATION AND AMENDMENTS.....	27
5. SERVICE AGREEMENT	27
6.1. SERVICE SCOPE.....	28
6.2. CUSTOMER RESPONSIBILITIES.....	29
6.2.1 <i>Staffing</i>	29
6.2.2 <i>Named Designated Contacts</i>	29
6.2.3 <i>Network Access</i>	29
6.2.4 <i>System Information</i>	29
6.2.5 <i>Backup and Removal of Data and Software</i>	29
6.2.6 <i>Upgrades, updates, recommended configurations</i>	30
6.2.7 <i>On-site Access</i>	30
6.3. SERVICE PROVIDER RESPONSIBILITIES.....	30
6.3.1 <i>Technical Support</i>	30

6.3.2	<i>Support Lifecycle</i>	31
6.3.3	<i>Nonconformance</i>	31
6.3.4	<i>Exclusions</i>	31
6.3.5	<i>Reporting Non-EMI Errors to the Customer</i>	32
6.4.	SERVICE ASSUMPTIONS	32
6.4.1	<i>Web-based and E-Mail Support</i>	33
6.4.2	<i>Contact Technical Experts</i>	34
6.	SERVICE MANAGEMENT	34
7.1.	SERVICE AVAILABILITY	34
7.2.	SERVICE REQUESTS	35
7.3.	MONITORING AND REPORTING	36
7.	SECURITY AND CONFIDENTIALITY	36
8.	LIMITATION OF LIABILITY	36
9.	MISCELLANEOUS	36
10.1.	FORCE MAJEURE	36
10.2.	ASSIGNMENT	37
10.3.	ENTIRE AGREEMENT	37
10.	OFFICE LOCATIONS	37
11.	COMMUNICATION	37
12.	SIGNATURES	39
	APPENDIX: DEFINITIONS	40
	APPENDIX B: THE OPERATIONAL LEVEL AGREEMENT TEMPLATE	43
1.	AGREEMENT OVERVIEW	47
2.	GOALS & OBJECTIVES	47
3.	STAKEHOLDERS	47
4.	TERM, TERMINATION AND AMENDMENTS	48
5.	OPERATIONAL AGREEMENT	48
11.1.	SERVICE SCOPE	49
11.2.	CONTRIBUTOR RESPONSIBILITIES	49
11.2.1	<i>Staffing</i>	49
11.2.2	<i>Named Designated Contacts</i>	50
11.2.3	<i>System Information</i>	50
11.2.4	<i>Upgrades, updates, recommended configurations</i>	50
11.3.	EMI RESPONSIBILITIES	50
11.3.1	<i>Technical Support</i>	51
11.3.2	<i>Support Lifecycle</i>	51
11.3.3	<i>Nonconformance</i>	51
11.3.4	<i>Exclusions</i>	52
11.3.5	<i>Reporting Non-EMI Errors to the Contributor</i>	52
11.4.	SERVICE ASSUMPTIONS	53
11.4.1	<i>Web-based and E-Mail Support</i>	53
11.4.2	<i>Contact Technical Experts</i>	54
6.	SERVICE MANAGEMENT	55
12.1.	SERVICE AVAILABILITY	55
12.2.	SERVICE REQUESTS	55
12.3.	MONITORING AND REPORTING	56



7. SECURITY AND CONFIDENTIALITY	56
8. LIMITATION OF LIABILITY	56
9. MISCELLANEOUS	57
15.1. FORCE MAJEURE.....	57
15.2. ASSIGNMENT	57
15.3. ENTIRE AGREEMENT	57
10. OFFICE LOCATIONS	57
11. COMMUNICATION	58
12. SIGNATURES	59
APPENDIX: DEFINITIONS	60

1. INTRODUCTION

1.1. EXECUTIVE SUMMARY

The EMI project brings together all key European middleware providers and carries out the collective task of supporting and maintaining the middleware for EGI, PRACE and their user communities from its very first day of existence. Starting from existing services already deployed in production infrastructures, EMI support and maintenance efforts will gradually shift to its new and improved services.

Infrastructures like EGI, PRACE and other European distributed computing and data infrastructures provide growing communities of researchers with sustainable and reliable services in their daily work. The middleware services play an important role in this context and must mark a clear transition from ad-hoc development, maintenance and support models to more standard, sustainable and professional models by adopting best-practice service provision methods as the ITIL processes or the CMMI guidelines.

Repositories of packages, reports, quality metrics and test and compliance programs must be created and maintained in support of the project software engineering activities and to other providers of applications and services based on the EMI middleware.

Particular focus is therefore put by EMI on supporting and maintaining its software services, both reactively by fixing software defects with SLA-based response times and quality attributes and proactively by monitoring and enhancing the services reliability, usability and scalability anticipating the usage trends in close collaboration with EGI, PRACE and the user communities.

This document describes the overall principles of the EMI Service Level Agreement strategy. It starts by describing the general principles and best practices in standard SLA-based service provision, then highlights the main service items covered by the EMI SLA and the associated quality attributes. It introduces for the first time also an Operational Level Agreement (OLA) template to manage relationships between EMI and EMI Contributors as part of the “Works with EMI” program. Finally, it provides generic templates for the SLA and the OLA based on the described principles to be used when negotiating specific SLAs and OLAs with external Customers and Contributors.

The SLA Template issued by EMI in 2010 and revised in 2011 has been used to establish a formal SLA with EGI. The SLA has been consistently used by EGI and EMI. The result of its application is described in this document with an analysis of any deviation and how it has been handled.

This document is presented as a complete, stand-alone revised document. In order to facilitate the understanding of what changes have been introduced in this revision, Chapter 2 has been dedicated to a description of the modifications compared to the previous version of the deliverable.

1.2. PURPOSE AND SCOPE

This document applies to all services provided by EMI or by EMI contributors to external Customers. The particular rights and duties of EMI Contributors towards EMI are described in the Operational Level Agreement introduced for the first time in this revision. This document contains the second revision of the SLA Template after an additional twelve months of experience with running the EMI services and discussions with the major EMI customers, most notably EGI and WLCG via the established collaboration channels (the EGI Technology Collaboration Board and the WLCG Management Board respectively). This version of the template obsoletes and supersedes the previous version at http://cdsweb.cern.ch/record/1277519/files/EMI-DNA1.2.2-1277519-SLA_Template-Rev.1-v1.0.pdf.

1.3. DOCUMENT ORGANISATION

This document is organized as follows:

Chapter 1 - Introduction: this section, explaining the content, purpose, scope and organization of the document.

Chapter 2 – Changes in this Revision: this section contains a description of the changes introduced in this revision compared to the previous one. The text in the following sections is the revised text after applying the described changes and maintains the same structure of the previous revision unless explicitly mentioned otherwise.

Chapter 3 - SLA-Based Service Provision: this section describes the principles of SLA-based service provision following industry-standard guidelines from ITIL and CMMI. It introduces the main concepts and definitions and the typical usage patterns for both SLAs and OLAs.

Chapter 4 - The Main Elements of the EMI SLA and OLA: this section describes in more detail each of the major elements of the EMI SLA and OLA templates with examples of the information to be provided and the expected roles and actions involved.

Chapter 5 – SLA Application Analysis: this section describes the application of the SLA between EMI and EGI during its first 12 months of usage, any deviation encountered and how it has been or it is planned to be addressed.

Chapter 6 - Conclusions: a brief description of the outcome, consequences or further work to be done beyond the work described in the document.

Appendix A: the EMI SLA Template

Appendix B: the EMI OLA Template

2. CHANGES IN THIS REVISION

The first issue of the SLA Template in DNA1.2.1 was used to negotiate the formal SLA with EGI.eu and to establish the formal service relationship planned as part of the EGI/EMI workplan. EGI and EMI went through a number of iterations to refine the agreement clauses and come to a mutually beneficial agreement.

The previous revision of the SLA Template was finalized in April 2011 and the agreement has been finally signed by the EMI Project Director and the EGI.eu Director on 14 April 2011 during the EGI User Forum/EMI Technical Conference in Vilnius.

With reference to the previous revision of the SLA as presented in DNA1.2.2, no major modifications have been introduced. The only formal modification has been a clarification of the definition of working hours and working days in the SLA glossary as a consequence of different interpretations of the original definition (EGI was considering public holidays and weekends as working days, which led to an incorrect calculation of the response times and the number of SLA deviations).

This version of the deliverable, however, introduces a new type of agreement, called an Operational Level Agreement or OLA. OLAs in the ITIL model are used to regulate the provision of services between different units of the same organization. In the case of EMI, OLAs are being proposed to regulate the provision of services by external software contributors, whose software is distributed with EMI and is therefore seen by EMI Customers as an integral part of the EMI distribution. This mechanism has been introduced as part of the “Work with EMI” technical program and applied for the first time with the EDGI project, whose desktop grid bridges are included in the EMI 2 Matterhorn distribution.

3. SLA-BASED SERVICE PROVISION

A service level agreement (generally abbreviated in SLA) is a negotiated agreement between two parties where one is the Customer and the other is the Service Provider. The SLA records a common understanding about the provided service, the defined priorities, the responsibilities of the parties, the guarantees, and the warranties associated with the service.

SLAs must contain clearly defined levels of service; these levels must be capable of measurement, and they must be directly relevant to the effective performance of the service supplier. The SLA may specify the levels of availability, serviceability, performance, operation, or other attributes of the service, such as billing. The "level of service" can also be specified as "target" and "minimum," which allows Customers to be informed about what to expect (the minimum), whilst providing a measurable (average) target value that shows the level of organization performance. In some contracts, penalties may be agreed upon in the case of non-compliance of the SLA. However this is not a mandatory element of an SLA. It is important to note that the "agreement" relates to the service the Customer receives, and not how the service provider delivers that service, which is defined by different agreements (service specifications). The linked concept of Service Level Management (or 'SLM') arises from the idea that, if an organisation has agreed levels of service, there should also be an agreed method of monitoring performance, of dealing with exceptions and changes, or in other words, with managing the service.

SLAs have been used since late 1980s by fixed line telecom operators as part of their contracts with their corporate Customers. This practice has spread such that now it is common for a Customer to engage a service provider by including a service-level agreement in a wide range of service contracts in practically all industries and markets. Internal departments (such as IT, HR, and Real Estate) in larger organization have also adopted the idea of using service-level agreements with their "internal" Customers that is users in other departments within the same organization (Operational Level Agreements, or OLAs). One benefit of this can be to enable the quality of service to be benchmarked with that agreed to across multiple locations or between different business units. This internal benchmarking can also be used to market test and provide a value comparison between an in-house department and an external service provider.

Service Level Agreements are a key method within ITIL and IT Service Management (ITSM) for setting out how two parties have agreed that a specific service (usually, but not necessarily, IT-related) will be delivered by one to the other, and the standards or levels to which it will be delivered.

Traditionally, SLAs have not been applied to software providers, since they usually provide products and not services in a strict sense. However, with the advent of distributed computing, grid computing, cloud computing and on-demand software provision, the need for more accountable methods of providing end-to-end software services including clear quality levels of maintenance and support has arisen. A report published in 2007 [R1] by the Software and Information Industry Association (SIIA) Software Division has highlighted this need and described the general principles of application of SLAs to software providers in the context of what is called Software as a Service (SaaS) provisioning model.

3.1. MAIN CONCEPTS AND ELEMENTS OF AN SLA

The ITIL best practices describe a **service** as *“a means of delivering value to Customers by facilitating Outcomes Customers want to achieve without the ownership of specific Costs and Risks.”* In order to provide such a service and make sure it is not only *“fit for use”*, but also *“fit for purpose”*, ITIL requires a set of **service levels** to be associated to the service. A service level is a *“measured and reported achievement against one or more Service Level Targets”* negotiated and agreed between the provider and the Customer in the Service Level Agreement.

The typical SLA document is divided into **segments**, each one describing a different aspect of the service to be provided and the associated quality attributes and targets [R2]. The most typical segments are for example a definition of the service, performance targets and measurement methods, incident and problem management, Customer responsibilities, warranties and remedies, security, disaster recovery, and termination of agreement.

The process responsible for negotiating Service Level Agreements and ensuring that these are met is called the **Service Level Management** Process (or SLM). SLM is responsible for ensuring that all “*Service Management Processes, Operational Level Agreements, and Underpinning Contracts, are appropriate for the agreed Service Level Targets*”. SLM monitors and reports on Service Levels, and holds regular Customer reviews and internal audits.

An **incident** is defined as “*an unplanned interruption to a Service or a reduction in the Quality of a Service*” based on the targets defined in the SLA. The process of receiving and handling incidents is called **Incident Management** and is performed by means of the **Service Desk** function, a single Point of Contact for users to report incidents and submit requests.

3.2. MAIN CONCEPTS AND ELEMENTS OF AN OLA

The ITIL concept of OLA is meant to solve the problem of “silos”, that is the independent and potential inconsistent provision of services of different units of the same organization. Since the services from different silos are either not directly seen by the Customers, in the case of service chains, or seen as part of the same service catalogue, the existence of independent silos is discouraged by ITIL. An OLA is therefore used as an internal “back to back” agreement that define how two different organizations will work together to support the delivery of defined services to Customers and Users.

From a certain point of view an OLA is very similar to a Service Level Agreement (SLA) and most of the principles described in the previous section still apply (incident management, response times, etc.). However, the OLA is also very different inasmuch it does not underpin a Customer or User service, but the SLA itself. Specifically, the OLA defines how the different units will work together to meet the Service Level Requirements (SLRs) documented in an SLA. The same elements described in Section 4 for the EMI SLA apply to the EMI OLA with the difference that where necessary the description will include more technical definitions.

3.3. MAPPING THE ITIL BEST PRACTICES ONTO EMI

The EMI project is committed to adopt best practice processes in support to its software development and maintenance activities. EMI is not an SaaS in the strict sense of the term, since it does not run the software services for its Customers. However, it has a close relationship with the major infrastructure projects like EGI and PRACE and it is part of a larger ecosystem that ultimately must indeed deliver distributed computing and data management services on demand.

The establishment of clear SLAs with the infrastructure project and with the user communities developing scientific applications based on the EMI middleware is therefore a critical step in the direction of creating a professional, sustainable environment.

The EMI project is composed of the following Work Packages [R3]:

NA1 - Administrative and Technical Management has the responsibility to put in place and run the project management, execution structure and the required decision and communication mechanisms. It provides administrative and technical management of the consortium of beneficiaries, supervises and guides the overall execution of the project program of work, defines and enforces the overall quality

assurance procedures, maintains the relationships with the European Commission and other decision-making bodies and represents the project vision and mission in European and international initiatives. NA1 also works in close collaboration with NA2 on the dissemination tasks, making sure that EMI maintains a high profile, is well represented in key events and is reaching out to new collaborations.

NA2 - Outreach and Collaborations is the Work Package focusing on the organization of dissemination and training events and is responsible for the overall management of collaboration programs with external entities, like EGI, PRACE, the standardization bodies, user communities and industrial companies and other FP7 and ESFRI projects. NA2 has the responsibility to create and promote the EMI brand either directly or in collaboration with other projects and to put in place mechanisms to ensure a continuous and efficient flow of information between EMI and the users (infrastructures and communities) and coordinate the project knowledge exploitation plans.

SA1 - Maintenance and Support owns the EMI production releases and the associated transition and support procedures. It provides coordination of the EMI user support activities (expert 3rd-level support), and is responsible for the reactive maintenance (software defects fixes) of the EMI services and Components. SA1 works closely with SA2 (Quality Assurance) to implement and execute the release configuration management process, the acceptance criteria validation process and the correct application of Service Level Agreements. SA1 contributes to the dissemination and training activities defined by NA2 by providing technical expertise, especially in the use of the project results by third-parties, such as users, system and service administrators, application developers and operating systems maintainers.

SA2 - Quality Assurance defines and monitors the software engineering and quality assurance process for all EMI engineers and developers and for external interested third parties. SA2 works in close relationship with the other technical Work Packages to make sure that the QA processes and procedures are shared, understood and applied by all members of the project. It has explicit endorsement from the EMI management to identify actual or potential issues and make sure that adequate corrective actions are taken by the development teams. SA2 works in collaboration with EGI (via the EGI SA2 - Middleware Unit Work Package and the MCB) and other DCIs technical personnel to identify and monitor acceptance criteria used to establish and enforce Service Level Agreements. SA2 is also responsible to coordinate the availability of testbeds for software build and test operations using resources provided by the project beneficiaries or with collaborating resource providers (NGIs, third-party projects, etc).

JRA1 – Middleware Development, Evolution and Integration is responsible to implement the project development plans, by consolidating and standardizing the middleware Components, performing proactive maintenance to improve reliability, performance and usability of Components according to agreed requirements, and developing the new functionality required for the project to achieve its technical objectives. JRA1 is also responsible to define and implement the integration, interoperability and standardization specifications, receives overall technical guidance from the Project Technical Board and interacts with SA2 for the execution of the QA procedures.

The definition, management and monitoring of the EMI SLA is mapped onto tasks from NA1, SA1 and SA2 in the following way:

NA1: this WP is the owner of the **Service Level Management** process. It is responsible to define with the Customers the **Service Level Requirements** (SLRs), negotiate the **Service Level Targets** (SLTs) and manage the **Service Level Agreements** (SLAs), periodically revising them together with the Customers to make sure they always meet the expectation and deliver value.

SA1: this WP is responsible for the EMI **Service Desk** function and the **Incident Management** and **Release Management Processes**, which are critical parts of the SLA, since release of software

distributions and user support are essentially the services that are regulated by the EMI SLA. It is also responsible to define and collect the service metrics used to measure the performance of the service provision.

SA2: this WP is the owner of the **Continual Improvement Process** and is responsible to define the software development metrics used to monitor the performance of the software development process. The metrics are collected by the individual EMI product teams as part of the development (JRA1) and maintenance (SA1) activities, digested by SA2 in consolidated reports and passed to NA1 for defining and enforcing any required improvement action.

The Service Desk function in EMI is implemented using the GGUS system as part of a wider user support strategy involving the National Grid Infrastructures, the major Distributed Computing Infrastructures (EGI and PRACE) and the software providers (EMI, IGE and others). In this context, the EMI Service Desk can be used as expert third-level support for EGI and PRACE or as initial entry point for users that are not part of the large research infrastructure ecosystem, although this is expected to be a minor case. More information on the EMI User Support strategies is available in the deliverable DSA1.1 - Software Maintenance and Support Plan [R3].

4. THE EMI SLA AND OLA

The EMI SLA and OLA are composed of a number of sections describing the service provided and the terms under which such service is provided. General SLA and OLA templates are available in Appendix A and B and will constitute the base for negotiation of specific SLAs with EMI Customers and users and OLAs with EMI Contributors.

The following sections describe the purpose and scope of each segment in the SLA and OLA templates together with some typical example of usage when required.

4.1. AGREEMENT OVERVIEW

A general description of the scope and context of the Agreement.

4.2. GOALS AND OBJECTIVES

A description of the agreed purpose of the Agreement as understood by the two parties.

4.3. STAKEHOLDERS

Definitions of the two parties entering into this Agreement.

4.4. TERM, TERMINATION AND AMENDMENTS

This section defines the terms of service provisions and the agreed procedures to terminate and amend the Agreement from either Party

4.5. SERVICE AGREEMENT

This section describes the conditions under which the SLA or the OLA is established. It is divided in a number of subsections:

- 1) The list of services covered by the SLA or OLA and references to documents describing the details of the services.
- 2) The description of the responsibilities of EMI as service provider and of the Customer or Contributor.
- 3) The general assumptions and conditions under which the SLA or the OLA is applicable.

4.6. SERVICE MANAGEMENT

This section describes the agreed levels of service for each of the services covered by the SLA or OLA and the methods by which the levels are monitored and reported by EMI to the Customer or by the Contributor to EMI.

4.7. SECURITY AND CONFIDENTIALITY

This section contains a standard confidentiality clause in case the Customer or the Contributor requires it. It may specify non-disclosure conditions and penalties in case of breach.

4.8. LIMITATION OF LIABILITY

A default limitation of liability clause.

4.9. MISCELLANEOUS

Any other contractual clause that does not fit in previous sections, like “Force Majeur”, “Assignment” and “Entire Agreement” clauses.

4.10. OFFICE LOCATIONS

Details of the EMI and the Customer or Contributor locations and web sites.



4.11. COMMUNICATION

Names and contact details of authorized people to be contacted in case of issues or questions about the SLA or OLA.

4.12. SIGNATURES

Official signatures of the EMI SLA Manager and the Customer or Contributor authorized representative with powers to enter into this Agreement.

5. SLA APPLICATION ANALYSIS

The SLA established between EMI and EGI in April 2011 has been constantly monitored throughout its application to the provision of software as part of the EMI 1 Kebnekaise distribution.

The goal of monitoring the application of the SLA is to understand where its application has been successful and where on the contrary deviations have been encountered and what caused them. The information resulting from the SLA monitoring has been regularly discussed between EMI and EGI and used to revise the SLA as necessary.

One of the major issues in the SLA monitoring during the past 12 months has been the lack of support in GGUS for monitoring the parameters used in the SLA. In particular as of April 2012, GGUS does not allow the Support Teams to generate reports on the Response Times that is the time between escalation of a user request from Level 2 Support to one of the EMI Support Units at Level 3. A number of workarounds have been adopted including direct extraction of raw data from the GGUS database and off-line analysis of that data. However, work is in progress to improve support for the required parameters and new functionality is expected in future releases.

5.1. SLA MONITORING DATA

During the period May 2011 to April 2012 the EMI Support Teams have received 531 support requests (incidents). The severity distribution is shown in Table 1. Please note that GGUS calls “Priority” what would normally be called “Severity” in the EMI SLA.

<i>Severity</i>	<i>#</i>
Top Priority	8
Very Urgent	41
Urgent	103
Less Urgent	379
Total	531

Table 1: User Support Request Severity Distribution (submitted tickets)

During the same period 493 incidents were closed with the severity distribution shown in Table 2.

<i>Severity</i>	<i>#</i>	<i>% of submitted tickets</i>
Top Priority	8	100%
Very Urgent	41	100%
Urgent	103	100%
Less Urgent	341	90%
Total	493	93%

Table 2: User Support Request Severity Distribution (closed tickets)

During the covered period 13 violations were reported with the distribution show in Table 4.

<i>Severity</i>	<i># violations</i>	<i>% of closed tickets</i>	<i>Average deviation</i>
Top Priority	2	25%	22h 43m
Very Urgent	0	0%	0h 0m
Urgent	4	4%	1d 9h 21m
Less Urgent	7	2%	8d 21h 21m
Total	13	< 3%	

Table 3: Number of SLA violation and average deviations

The distribution of violation over time is shown in Figure 1.

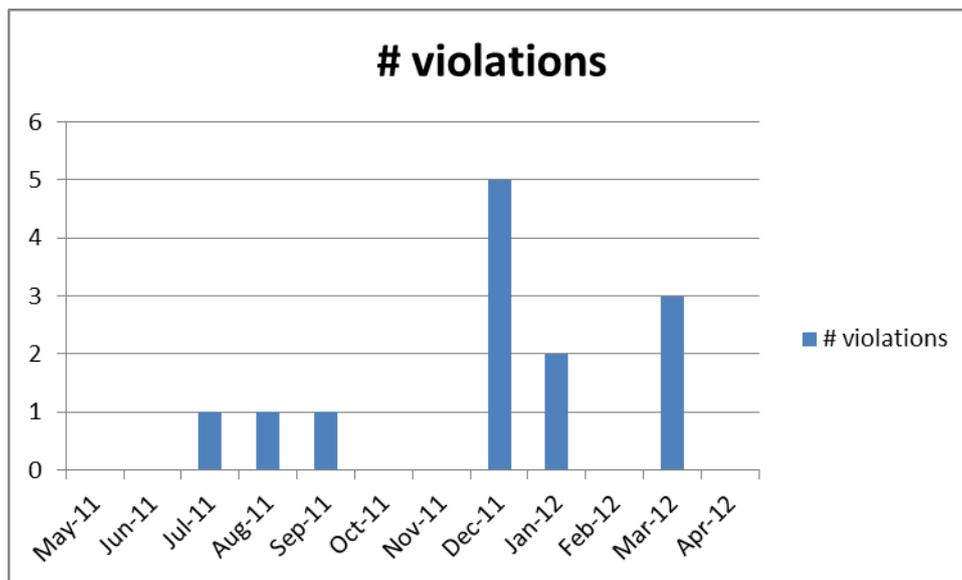


Figure 1: Number of violations over the reference period

5.2. DATA ANALYSIS

The SLA monitoring data shown in the previous sections allows us to draw some initial conclusions about the capability of EMI to comply with the agreed service level targets.

During the reference period, EMI has closed 93% of the submitted user requests (incidents) escalated to Level 3 support. Out of the number of closed incidents, the number of SLA Response Time violations has been lower than 3%. The number of violations per severity is higher for the Top Priority category and decreases with the severity level. This is easily explained with the very stringent service level target set for Top Priority and the decreasingly strict targets for lower severities. Conversely, the deviation from the SLA targets is lower for Top Priority violations and increases for lower severity incidents as a consequence of the increasingly lower priority assigned to the tickets during the EMI Incident management process.

The number of Top Priority violations was low in absolute value (2 violations). However, they represent 25% of the total closed Top Priority incidents, which has to be addressed in the next reference period with the goal of not having any Top Priority violations. We would also like to point out that of the two Top Priority violations one had a deviation of 1 minute, which although formally a violation, could be considered a glitch rather than a symptom of a systematic problem in applying the SLA.

In terms of distribution of violations over time, it is possible to notice that the SLA was remarkably well applied during the period following the release of EMI 1 Kebnekaise in May 2011 until December 2011. An increase in violations was observed in December 2011 and again in March 2012. This is explained with the occurrence of two key milestones within the yearly software development process, the EMI 2 functional code freeze in December 2011 and the EMI 2 Release Candidate in March 2012. The two events caused a temporary reallocation of effort from support to development with the observed consequences on the reaction time of some of the Product Teams.

6. CONCLUSIONS

The principles set forward in this document and the templates reported in Appendix A and B constitute the base for negotiation of Service Level Agreements with EMI Customers and Operational level Agreements with EMI Contributors. The main targets of the EMI Support Services are Distributed Computing Infrastructure (DCI) initiatives like the EGI and PRACE projects. Additional SLAs can be signed with specific communities as part of the EMI Collaboration Programs as described in DNA2.1 – Collaboration Programs [R4]. In particular after the signature of an MoU with PRACE in May 2012, the need to set up an SLA is being discussed.

The first SLAs has been signed with the European Grid Infrastructure in September 2010 and revised in April 2011 after detailed negotiations with the EGI Operations and Software Roll-Out managers. The SLAs has been monitored throughout its application and revised to take into account their dynamic operational nature and any changed conditions in the delivery of the EMI Services. The correct respect of the SLA and any deviations in its application have been analysed by EMI and EGI and periodically discussed as part of the continuous collaboration between the two projects.

It has been reported by EGI that they need to start looking into more commercially-oriented SLAs than what is currently provided by EMI. The establishment of commercial SLAs with financial provisions and compensations is beyond the scope of EMI, since EMI is not a legal entity able to enter into such commercial agreements. However, the discussion about establishing commercial SLA between EGI and individual EMI beneficiaries has started and will be better explored in the third year as part of the transition from EMI as a project to the future EMI Collaboration that is supposed to continue the provision of middleware services after the end of the project.

7. REFERENCES

R1	Setting Expectations in SaaS, SIIA, February 2007 http://www.l2soft.com/docs/saas_sla_wp_07.pdf
R2	The Service Level Agreement Zone (http://www.sla-zone.co.uk)
R3	The EMI Project Description of Work, EMI, April 2010 https://twiki.cern.ch/twiki/pub/EMI/EmiDocuments/EMI-Part_B_20100624-PUBLIC.pdf
R4	DSA1.1 - Software Maintenance and Support Plan, EMI, November 2010 http://cdsweb.cern.ch/record/1277556/files/EMI-DSA1.1-1277556-Software_Maintenance_Support_Plan-v1.0.pdf
R5	DNA2.1 – EMI Collaboration Programs, November 2010 http://cdsweb.cern.ch/record/1277553/files/EMI-DNA2.1.1-1277553-Collaboration_Programs-v1.0.pdf
R6	DNA1.2.1 – The EMI SLA Template, November 2011 http://cdsweb.cern.ch/record/1277517/files/EMI-DNA1.2.1-1277517-SLA_Template-v1.0.pdf



DNA1.2.3 - SERVICE LEVEL AGREEMENT TEMPLATE - Rev. 2

Doc. Identifier: EMI-DNA1.2.3-1277522-SLA_Template-Rev.2-v1.0

Date: **30/04/2011**

APPENDIX A: THE SERVICE LEVEL AGREEMENT TEMPLATE



DNA1.2.3 - SERVICE LEVEL AGREEMENT TEMPLATE - Rev. 2

Doc. Identifier: EMI-DNA1.2.3-1277522-SLA_Template-Rev.2-v1.0

Date: **30/04/2011**

European Middleware Initiative

Service Level Agreement

**For the Provision
of Software and Support Services**

Effective Date: 14 April 2012

Rev. 1.3

Version

Version	Date	Description	Authors
1.0	30-11-2010	Service Level Agreement	Alberto Di Meglio (EMI)
1.1	31-12-2010	First Revision	Alberto Di Meglio (EMI)
1.2	13-04-2011	Second Revision	Alberto Di Meglio (EMI) Michel Drescher (EGI)
1.3	13-04-2012	Third Revision	Alberto Di Meglio (EMI)

Approval

(By signing this document, all Approvers agree to all terms and conditions outlined in this Agreement.)

Approvers		Role	Approval Date
For EMI	Alberto Di Meglio	Project Director	
For Customer			

Table of Contents

1. AGREEMENT OVERVIEW	26
2. GOALS & OBJECTIVES.....	26
3. STAKEHOLDERS	26
4. TERM, TERMINATION AND AMENDMENTS	27
5. SERVICE AGREEMENT	27
6.1. SERVICE SCOPE.....	28
6.2. CUSTOMER RESPONSIBILITIES.....	29
6.3. SERVICE PROVIDER RESPONSIBILITIES.....	30
6.4. SERVICE ASSUMPTIONS	32
6. SERVICE MANAGEMENT	34
7.1. SERVICE AVAILABILITY	34
7.2. SERVICE REQUESTS	35
7.3. MONITORING AND REPORTING.....	36
7. SECURITY AND CONFIDENTIALITY	36
8. LIMITATION OF LIABILITY	36
9. MISCELLANEOUS	36
10.1. FORCE MAJEURE.....	36
10.2. ASSIGNMENT	37
10.3. ENTIRE AGREEMENT.....	37
10. OFFICE LOCATIONS	37
11. COMMUNICATION	37
12. SIGNATURES	39
APPENDIX: DEFINITIONS	40
APPENDIX B: THE OPERATIONAL LEVEL AGREEMENT TEMPLATE	43
13. AGREEMENT OVERVIEW	47
14. GOALS & OBJECTIVES.....	47
15. STAKEHOLDERS	47
16. TERM, TERMINATION AND AMENDMENTS	48
17. OPERATIONAL AGREEMENT	48
11.1. SERVICE SCOPE.....	49
11.2. CONTRIBUTOR RESPONSIBILITIES	49
11.3. EMI RESPONSIBILITIES	50
11.4. SERVICE ASSUMPTIONS	53
18. SERVICE MANAGEMENT	55
12.1. SERVICE AVAILABILITY	55
12.2. SERVICE REQUESTS	55
12.3. MONITORING AND REPORTING.....	56
19. SECURITY AND CONFIDENTIALITY	56
20. LIMITATION OF LIABILITY	56
21. MISCELLANEOUS	57



EUROPEAN MIDDLEWARE INITIATIVE

DNA1.2.3 - SERVICE LEVEL AGREEMENT TEMPLATE - Rev. 2

Doc. Identifier: EMI-DNA1.2.3-1277522-SLA_Template-Rev.2-v1.0

Date: 30/04/2011

15.1. FORCE MAJEURE.....	57
15.2. ASSIGNMENT	57
15.3. ENTIRE AGREEMENT.....	57
22. OFFICE LOCATIONS	57
23. COMMUNICATION	58
24. SIGNATURES	59
APPENDIX: DEFINITIONS	60

1. AGREEMENT OVERVIEW

This Agreement represents a Service Level Agreement (“SLA” or “Agreement”) between the European Middleware Initiative (EMI) project and the **Customer** for the provisioning of Software Development and Support (SDS) services required to support and sustain the **Customer Products or Services**.

This Agreement remains valid until superseded by a revised agreement mutually endorsed by the stakeholders.

This Agreement outlines the parameters of all SDS services covered as they are mutually understood by the primary stakeholders. This Agreement does not supersede current processes and procedures unless explicitly stated herein.

2. GOALS & OBJECTIVES

The purpose of this Agreement is to ensure that the proper elements and commitments are in place to provide consistent SDS service delivery to the Customer by the Service Provider.

The goal of this Agreement is to obtain mutual agreement for SDS service provision between the Service Provider and Customer.

The objectives of this Agreement are to:

- Provide clear reference to service ownership, accountability, roles and/or responsibilities.
- Present a clear, concise and measurable description of service provision to the Customer.
- Match perceptions of expected service provision with actual service support and delivery.

3. STAKEHOLDERS

The following Service Provider(s) and Customer(s) will be used as the basis of the Agreement and represent the primary stakeholders associated with this SLA:

Service Provider(s): EMI. (“Provider”)

Customer(s): XXXX (“Customer”)

4. TERM, TERMINATION AND AMENDMENTS

This Agreement is valid from the Effective Date outlined herein for a maximum period of 36 months and in any case not beyond the end date of the EMI Project on 30 April 2013. This Agreement should be reviewed at a minimum once per year; however, in lieu of a review during any period specified, the current Agreement will remain in effect.

Should they wish to terminate the Agreement before its expiration date, the Customer will inform EMI in writing with 30 days notice. Similarly, EMI will inform the Customer in writing with 30 days notice should they wish to terminate the Agreement before its expiration date. EMI can terminate the contract if the Customer does not apply reasonable effort in fulfilling their responsibilities as specified in section 5.2 (Customer Responsibilities).

The Service Level Agreement Manager is responsible for facilitating regular reviews of this document. This Agreement and the related EMI Support Plan offering details are operational in nature and may be modified at any time by EMI. EMI will take appropriate measures to inform the Customer of modifications and will give the Customer the right and window of time to review any proposed change, discuss it with EMI, and terminate the relationship if all parties cannot abide by the revisions. New revisions can be proposed by either parties following changes in the provided services or in the way services are used. At least one revision must be made at the end of the default review period. The new revision of this Agreement supersedes any previous service level agreements, which are considered expired. Any amendment will be considered accepted by both parties if not rejected within 30 days from the initial communication.

Service Level Agreement Manager: Alberto Di Meglio

Service Procurement Manager: Name Surname

Review Period: Yearly (12 months)

Previous Review Date:

Next Review Date:

5. SERVICE AGREEMENT

The following detailed service parameters are the responsibility of the Service Provider in the ongoing support of this Agreement.

6.1. SERVICE SCOPE

The following Services are covered by this Agreement:

Service name	Description
Software releases	EMI provides releases of its distributed computing middleware to infrastructure administrators and individual users based on its standard release policies and the requirements received by users
Requirements Analysis	EMI in collaboration with infrastructure managers, application and software developers and end users performs analysis and prioritization of the user requirements as the first step of the provision of targeted middleware components bringing value to the users
Requirements and software testing reports	As part of the specific agreement with each individual customer, EMI provides reports on the implementation of agreed requirements and the execution on its major releases of agreed acceptance tests provided by the customer
Web-based and E-Mail Support	EMI provides support to site administrators and end users through a web and e-mail support system called GGUS managed by EGI
Telephone Support	EMI doesn't provide a dedicated support telephone contact. However, direct telephone calls or conference calls can be organized with the customer to discuss urgent issues or exchange technical information. In this case, EMI will provide if necessary the telephone numbers and access information

Table 4: The EMI Service Catalogue

Details of the Services can be found in the EMI User Support Plan at

<http://www.eu-emi.eu/en/support>

6.2. CUSTOMER RESPONSIBILITIES

6.2.1 Staffing

All Customer personnel contacting EMI for Support must be fully trained on both the Major Release of the EMI Components and the current issue with which the Customer requires assistance. Fully trained means that they must be familiar with the EMI software and have attended the periodic training courses organized by EMI or in-house training courses organized by the Customer.

6.2.2 Named Designated Contacts

The Customer agrees that contact with EMI will be through the specified Designated Contacts. The Customer is responsible for specifying and updating valid Designated Contacts with person-specific email addresses. Designated Contacts can be contacted by EMI management to discuss any escalation issues or other issues related to the fulfillment of the present SLA.

6.2.3 Network Access

To the extent possible, and as requested by EMI, the Customer understands that it may be necessary to provide EMI or its authorized Technical Experts access to the affected network environment for any Severity 1 issue, or when EMI determines that its Technical Experts need to access the Customer network in order to remotely diagnose an issue. The Customer understands that if access is not provided as requested by EMI, problem determination will be slower or impaired.

6.2.4 System Information

Upon request the Customer must provide EMI with information on the Customer system, including the list of installed EMI Components, their version, the Operating System and other installed software.

6.2.5 Backup and Removal of Data and Software

To reconstruct lost or altered files, data, or programs, the Customer must make use of a backup system or procedure that is not dependent on the EMI Products under Support.

Where applicable, before installing workarounds, fixes or updated software, the Customer agrees to:

- (a) backup and secure all programs and data contained in the system (hardware or virtual machine) running the affected EMI Services, which the Customer wants to preserve in case of failure;

(b) update or roll-back any third-party program used by the EMI Products, but having different version than the one specified in the current Product requirements.

6.2.6 Upgrades, updates, recommended configurations

The Customer is aware that Products that are not within the agreed Support Life periods or are not updated to fix critical issues or are used outside the recommended configuration parameters are not entitled to be supported by EMI Technical Experts. EMI Technical experts can ask the Customer to upgrade, apply updates and restore the recommended configuration parameters before further investigating any reported issue.

6.2.7 On-site Access

Where applicable, the Customer agrees to provide EMI Technical Experts or Support Managers with sufficient and safe access to the Customer facilities in order to permit EMI to fulfill its obligations.

6.3. SERVICE PROVIDER RESPONSIBILITIES

A description of EMI Support offerings is given in the general EMI Support Plan. The latest version of the Support Plan can be downloaded from the EMI web site at:

<http://www.eu-emi.eu/en/support>

Upon the Customer and EMI acceptance of this SLA, the Customer will be entitled to receive Support according to the features and benefits provided under those offerings, subject to the terms and conditions of this Agreement.

6.3.1 Technical Support

For Customers covered under a valid EMI Support offering, technical support will be provided pursuant to the terms of the EMI Support Plan. EMI agrees to provide support, where appropriate, to the Customer, which may include but is not limited to, the following actions:

- (a) Provide the Customer with access to Product update releases, related Documentation and knowledge articles, upon general public release;
- (b) Provide the Customer with access to Technical Experts, who will work with him to diagnose issues, and provide Problem Resolutions, including escalating the issue through EMI management as needed.

6.3.2 Support Lifecycle.

(a) EMI provides support on the current EMI Major Releases and the current Components Releases of all the software Products listed in the EMI Products Catalogue. EMI will also provide reasonable technical assistance on all its software Products during their lifetime, starting from the General Availability date of the Products first Major Release version. Problem Resolution may be limited to the current Major Release of Product.

(b) EMI ends software support for a Major Release version when the second subsequent Major Release has been released. EMI will provide End-of-Support notification for discontinued software to the Customer through an announcement posted on the EMI website at the URLs:

<http://www.eu-emi.eu/releases>

http://www.eu-emi.eu/retirement_calendar

(g) EMI reserves the right to modify its Support Lifecycle policy at any time; changes will be presented to the Customer at least 6 months in advance. Notifications regarding changes in policy will also be posted on the website.

6.3.3 Nonconformance

If EMI determines the problem is due to nonconformance to published specifications of a software version, or another substantial EMI related Problem, then under the EMI Support Plan, EMI shall provide any software workaround for the reported nonconformance that may be available at the time the Problem is reported. If there is no such available workaround, EMI will use reasonable efforts to remedy such nonconformance and restore the Service, which may include temporary fix to the software. Permanent fixes will be provided in subsequent official public releases according to the priority of the Problem.

6.3.4 Exclusions.

Support does not include the following items or actions:

(a) Step-by-step installation of the software;

(b) Onsite activities;

(c) Altered, damaged, or modified Products and software code;

(d) Product Problems caused by Customer negligence, misuse, or misapplication, use of the Product other than as specified in the EMI Product documentation, or in any other case beyond the control of EMI;

(e) Products not installed from one of the EMI official or endorsed distribution channels. The current list of the approved distribution channels is available at:

http://www.eu-emi.eu/distribution_channels

(f) Products that are past their End-of-Support date, as provided in Section 5.3.2 above.

Support for the above listed items can be provided on a best effort basis by the EMI Technical Experts, but it is not part of the EMI Support Plan offerings, is not covered by this SLA and does not have to fulfill any agreed Service Level.

6.3.5 Reporting Non-EMI Errors to the Customer

Upon working the Service Request under normal processes, and with appropriate management review, if at that point EMI believes that a Problem reported by the Customer may not be due to an error in the EMI Products, EMI will notify the Customer. At that time, the Customer may: (a) ask EMI to proceed with problem determination outside the terms of this SLA; or (b) instruct EMI that they do not wish the Problem pursued further.

If the Customer requests that EMI proceed with problem determination, the terms and scope of the work to be performed will be negotiated on a case by case basis outside this SLA. EMI reserves the right to deny support or to charge any associated non-labour cost (travel expenses, subsistence, or material) to the Customer. If the Customer instructs EMI that they do not wish the Problem pursued further by EMI, EMI may, at its sole discretion, investigate independently the anomaly with no liability thereof.

6.4. SERVICE ASSUMPTIONS

EMI provides technical support to users of its publicly released Components. The support provided by EMI is typically at “expert level” and it is directed at handling incidents that lower level support desks within the Customer Organization could not solve without changing the Component source code or by applying known workarounds. The Technical Support and Escalation Procedures are described in the EMI Project Support Plan. The latest version of the Support Plan can be found on the EMI web site at:

<http://www.eu-emi.eu/support>

User support is provided via the GGUS portal managed by the EGI InSpire project (see section 5.4.1, Web-based Support), which is the single point of contact for infrastructure users to access the EMI Service Desk. The EMI Service Desk within GGUS is organized in Support Units. Every Support Unit is responsible for one or more Components. The number and definition of the EMI Support Units in GGUS

is not regulated by this SLA and can change at any time to fulfill the EMI Incident and Problem Management requirements.

Incidents are analysed by the EMI Technical Experts to identify the Problem or Problems that have caused them. If available, suitable workarounds are proposed to restore the Service to its agreed level as soon as possible. If the incident is caused by Problems in the software and a change is required, a software defect report is filed by the EMI Technical Experts in one of the EMI defect tracking systems and a change request is produced and scheduled for a future release depending on the Problem priority. The priority levels and their relationship with the Problem impact and severity are defined in Appendix: Definitions, the agreed response policies are defined in section 6 (Service Management).

This Service Level Agreement applies to Services provided by EMI for any Component making part of the EMI Product Catalogue. Conversely, the Product Catalogue lists all software Components that at any given time are supported by EMI. Components can be deprecated and removed from the Product Catalogue and new Components can be added during the lifetime of EMI according to the procedures described in the EMI Support Plan and the terms described in this SLA in section 5.3.2 (Support Lifecycle).

6.4.1 Web-based and E-Mail Support

EMI web-based and e-mail support is available through GGUS at:

<https://gus.fzk.de/pages/home.php>

It provides the Customer with access to EMI support via the Customer GGUS-based escalation process or via approved third-party organizations acting as first and second level support. EMI always provides expert third-level technical support. It is responsibility of the Customer to agree with EGI how to get access to GGUS.

The public EMI web site at:

<http://www.eu-emi.eu>

provides the Customer with:

(a) Product documentation, release notes, troubleshooting guides and technical white papers about EMI software Products, as releases become publicly

available. Technical previews can also be obtained if the Customer is additionally subscribing to the 'Works with EMI' technical program.

(b) Software Downloads, a public repository of all publicly available EMI Components releases, fixes, workarounds and utilities. Technical previews can also be obtained if the Customer is additionally subscribing to the 'Works with EMI' technical program.

(c) Product Forums, containing shared knowledge of EMI Products and solutions within an online community of Customers, user communities, technical partners and EMI developers, as well as news on EMI Products and technologies. Support Customers can view and post on the discussion threads in all Forums.

6.4.2 Contact Technical Experts

Direct access to EMI Technical Experts is provided on a best effort basis as a means to discuss technical details after a support request has been received and accepted by EMI. Contact should be either by web forms (GGUS or dedicated EMI software defect tracking systems), or by Email.

(a) By Web Forms: once a support request is available in GGUS, the Customer can update it with additional information or questions for the Technical Experts in charge of the issue. The Technical Experts may additionally provide access to the internal software defect tracking systems as necessary. In the latter case, they will provide the required access information.

(b) By Email: contact the EMI Technical Experts in charge of the support request with additional information about the issue. Contact can also be initiated by the Technical Experts in case additional information is needed. The additional information is logged to the GGUS application

(c) By Telephone: EMI doesn't provide a dedicated support telephone contact. However, direct telephone calls or conference calls can be organized with the customer to discuss urgent issues or exchange technical information. In this case, EMI will provide if necessary the telephone numbers and access information.

6. SERVICE MANAGEMENT

7.1. SERVICE AVAILABILITY

Coverage parameters specific to the Services covered in this Agreement are as follows:

Service name	Availability	Comments
Web support	Submission via GGUS available 24 hours, Monday to Sunday.	Web support requests are automatically acknowledged upon reception. Requests received after office hours will be stored in the support system, however no

		<p>action can be guaranteed until the next working day. The Acknowledgement time is not the same as the Response Time which is described in section 7.2.</p> <p>GGUS is not provided by EMI and is subject to separate availability guarantees not governed by this SLA. For more info please refer to https://gus.fzk.de/pages/home.php</p>
Email support	Monitored 9:00 A.M. to 5:00 P.M. Monday – Friday	Emails received outside of office hours will be collected, however no action can be guaranteed until the next working day
Telephone support	Upon request	Direct telephone calls or conference calls can be organized with the customer to discuss urgent issues or exchange technical information
On-site assistance		Negotiated on a case by case basis

7.2. SERVICE REQUESTS

In support of Services outlined in this Agreement, the Service Provider will respond to Service-related incidents and/or requests submitted by the Customer within the following time frames:

Severity Level	GGUS Ranking	Response time	Comments
Severity 1 (Critical)	Top Priority	4 hours	During office hours
Severity 2 (Major)	Very Urgent	2 working days	
Severity 3 (Medium)	Urgent	5 working days	
Severity 4 (Enhancements)	Less Urgent	15 working days	Although the SLA guarantees a response time within a certain period of time, there is no a priori commitment to implement the

			<p>enhancements requests, since they become part of the general prioritization and planning to be done with the Customer via the appropriate channels. However, all requests are considered and entered into the standard EMI software cycle for potential inclusion in the public releases.</p>
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7.3. MONITORING AND REPORTING

Acknowledgment and response times will be continuously measured and reported every quarter using the tools provided by the GGUS Support System.

7. SECURITY AND CONFIDENTIALITY

Except as contemplated by the terms hereof or as required by applicable law or pursuant to an order of a court with competent jurisdiction, EMI Partner Institutes shall ensure and procure that each of its employees, directors or representatives who provide a Service to the Customer shall keep confidential all non-public information provided to it by the Customer and/or to which it has access as a result of the Services provided hereunder and shall not disclose or otherwise make available such information to any third party.

8. LIMITATION OF LIABILITY

In no event will EMI, or any of its Partner Institutes and suppliers, be liable, under any contract, negligence, strict liability, or other legal or equitable theory, even if EMI or its Partner Institute and suppliers were advised of the possibility of such damages as is stated below. These damages include but are not limited to: (i) PUNITIVE, INCIDENTAL OR CONSEQUENTIAL DAMAGES; OR (ii) LOST DATA OR LOST PROFITS; OR (iii) COSTS OF PROCUREMENT OF SUBSTITUTE GOODS, TECHNOLOGY OR SERVICES; OR (iv) CLAIMS BASED ON ANY ERROR, DEFECT OR NONCONFORMITY IN THE PRODUCTS OR SERVICE; OR (v) ALL OTHER CLAIMS NOT RELATED TO AN ERROR, DEFECT OR NONCONFORMITY IN THE PRODUCT.

9. MISCELLANEOUS

10.1. FORCE MAJEURE

Neither party shall be liable for any delay or failure in performance due to event outside the defaulting party's reasonable control, including without limitation, acts

of God, labour disputes, and shortages of supplies, actions of governmental entities, riots, war, fire, epidemics, or other circumstances beyond its reasonable control. The obligations and rights of the excused party shall be extended on a day-to-day basis for the period equal to the period of the excusable delay.

10.2. ASSIGNMENT

The Customer may not assign this Agreement without the prior written consent of EMI. EMI may transfer its rights to any wholly owned subsidiary of its Partners.

10.3. ENTIRE AGREEMENT

This Agreement, outlining the terms and conditions of Software Technical Support Services for EMI Products, constitutes the entire agreement between EMI and the Customer and supersedes all previous written or oral agreements between the parties with respect to the subject matter of this Agreement. The terms in this Agreement override any contrary terms contained in any release note or other documentation.

10. OFFICE LOCATIONS

EMI

Headquarters: EMI Project Office
 CERN, European Centre for Nuclear Research
 1211 Geneva, Switzerland

EMI Web Site: <http://www.eu-emi.eu>

EMI Support Site: <http://www.eu-emi.eu/support>

Customer

Headquarters:

Customer Web Site:

11. COMMUNICATION

EMI Designated Contacts	Customer Designated Contacts
EMI SLA Manager Alberto Di Meglio	Customer Service Procurement Manager Name Surname



DNA1.2.3 - SERVICE LEVEL AGREEMENT TEMPLATE - Rev. 2

Doc. Identifier: EMI-DNA1.2.3-1277522-SLA_Template-Rev.2-v1.0

Date: 30/04/2011

EMI Support Manager Mathilde Romberg	Customer Support Manager Name Surname
EMI Release Manager Cristina Aiftimiei	Customer Release Manager Name Surname



12. SIGNATURES

The following agree to the terms and conditions of this SLA:

Alberto Di Meglio
Director EMI Project

Name Surname
Role within the Customer

Date

Date

APPENDIX: DEFINITIONS

Acknowledge	means informing the submitter that a support request has been received by the EMI Automated Support System (GGUS).
Acknowledgement time	means the amount of time elapsed between the initial submission by the Customer to EMI Support and the initial acknowledgement from the EMI. It can be an automated response from the support system
Age-change Release	means the issuance of Software that is designated by EMI with a change in the fourth part of (r) of its release number of the format x.y.z-r, signifying a change in the packaging, dependencies or documentation in an existing product level without any change in the source code.
Business Day	every official working day of the week. Working days are the days between and including Monday to Friday and do not include public holidays and weekends
Business Hours	the hours during the day in which business is commonly conducted. For the purpose of this agreement the working hours are 09:00 to 17:00 of every business day in the local timezone where each Support Unit is located
Component	means a software package or strictly related set of packages providing a specific functionality within an EMI Middleware Product (Service, Client or Library)
Customer	means the party identified as the organization entering into this Agreement with EMI.
Documentation	means user and technical manuals provided by EMI for use with its Software.
EMI	means European Middleware Initiative.
EMI Product(s)	means the set of software Products (Services, Clients or Libraries) maintained by EMI during their active support lifetime.
Enhancement	means all Software changes, including changes in the code, configuration, schemas, interfaces, etc which modify the software to provide additional or improved features.
Error	means an error in the product, which degrades the product as defined by the Severity definitions, as compared to EMI published functionality and performance specifications.
Level 1 Support	means the ability to provide general product information, software configuration information, collect relevant technical problem identification information, perform base problem determination, provide basic support on the standard products, protocols and features and propose workarounds to known Problems. This level of support is not provided directly by EMI, as described in the EMI Support Plan.
Level 2 Support	means the ability to provide Level 1 Support plus the ability to resolve the majority of misconfigurations, troubleshoot and simulate complex configuration, and software problems; support problem isolation and determination of product specification defects; provide simulation and interoperability and compatibility testing for new software releases prior to being deployed into the Customer production network; provide advanced Support on all products, protocols and features; have the ability to analyze traces, diagnose problems remotely, and provide End Users with complete steps to reproduce a problem. This level of support is not provided directly by EMI to End Users, but can be performed together with the Customers, as described in the EMI Support Plan.
Level 3 Support	means the ability to provide Level 2 Support plus the ability to provide software fixes and enhancements such as patches, fixing or generating workarounds that address software bugs; troubleshoot bugs that were not diagnosed during Level 2 Support; work with Customers to resolve critical situations, and building action plans with Customers to address complex issues.

Major Release	means the issuance of Software that is designated by EMI with a change in the first number (x) of its release number of the format x.y.z-r, signifying a new product level with major new functionality, fixes to known errors (bugs) and possibly non-backward-compatible interfaces or behaviour.
Minor Release	means the issuance of Software that is designated by EMI with a change in the second number (y) of its release number of the format x.y.z-r, signifying an enhancement of an existing product level with minor new functionality, possibly fixes to known errors (bugs) and with backward-compatible interfaces or behaviour.
Patch	means a set of one or more packages distributed to the Customer to issue changes in the EMI products. A patch can contain Minor, Revision or Age-Change releases of one or more products.
Previous Sequential Release	means Release of Software, which has been replaced by a subsequent version of the product.
Problem Resolution	means the use of reasonable efforts to resolve the reported problem. These methods may include (but are not limited to): configuration changes, patches that fix an issue, reinstalling the software, etc.
Product	means a set of installable packages providing together a defined set of interfaces and functional behaviours and owned by a specific team of EMI Technical Experts called Product Team. EMI Software offerings come in the form of Products. The EMI Support Service and this SLA apply to the current EMI Products or Products Catalogue as published in the EMI Web Site.
Release	means a Major or Minor Release of the same product.
Respond	means addressing the initial request and taking ownership of the issue.
Response Time	means the amount of time elapsed between the initial submission by the Customer to EMI Support through the agreed escalation mechanism and the first EMI Technical Experts response indicating that the ticket has been taken in charge.
Revision Release	means the issuance of Software that is designated by EMI with a change in the third number (z) of its release number of the format x.y.z-r, signifying a change in the Software to fix an error (bug) in an existing product level without any new functionality and with backward-compatible interfaces or behaviour.
Service Level Agreement (SLA)	means the Customer Service Level Agreement (SLA) that identifies the features and defines the processes involved with the delivery by EMI of various support functions to Customer, as presented by this document.
Service Request (SR)	means a single issue opened with EMI Support using the GGUS application. The SR number identifies the Service Request.
Service(s)	means: (a) the Software Provision and Support Services described in the EMI Technical Plans and the Support Plan and to which this SLA is applicable; (b) the distributed computing services provided by EMI as Software and making the object of the Software Provision and Support Services.
Severity 1	means: (a) an Error with a direct security impact on the product; (b) an Error isolated to Software or in a production environment that renders the product inoperative or causes the product to fail catastrophically; e.g., critical system impact, system down; (c) a reported defect in the product in a production environment, which cannot be reasonably circumvented, in which there is an emergency condition that significantly restricts the use of the product to perform necessary business functions; or (d) inability to use the product or a critical impact on operation requiring an immediate solution.
Severity 2	means: (a) an Error isolated to Software that substantially degrades the performance of the product or materially restricts business; e.g., major system impact, temporary

	<p>system hanging;</p> <p>(b) a reported defect in the product, which restricts the use of one or more features of the product to perform necessary business functions but does not completely restrict use of the product; or</p> <p>(c) ability to use the product, but an important function is not available, and operations are severely impacted.</p>
Severity 3	<p>means:</p> <p>(a) an Error isolated to the Software that causes only a moderate impact on the use of the product; e.g., moderate system impact, performance/operational impact;</p> <p>(b) a reported defect in the product that restricts the use of one or more features of the product to perform necessary business functions, while the defect can be easily circumvented; or</p> <p>(c) an Error that can cause some functional restrictions but it does not have a critical or severe impact on operations.</p>
Severity 4	<p>means:</p> <p>(a) a reported anomaly in the product that does not substantially restrict the use of one or more features of the licensed product to perform necessary business functions; this is a minor problem and is not significant to operation; or</p> <p>(b) an anomaly that may be easily circumvented or may need to be submitted to EMI Research and Development as a request for enhancement.</p>
Site	means the physical location where EMI services are installed.
Software	means the object code version of the intangible information constituting one or more computer or apparatus programs and the informational content of such programs, together with any Documentation supplied in conjunction with, and supplementing such programs, the foregoing being provided to Customer by way of electronic transmission or by being fixed in media furnished to Customer.
Software Support Services (SDS)	means the set of services provided by EMI and covered by this SLA
Support	means the Technical Support Services provided by EMI directly to Customer as set forth in the EMI Support Plan.
Support Plan	means the direct Support program offering and procedure described in the EMI Support Plan document.
Support Unit	means the team of people registered in GGUS as responsible to receive Support Requests for specific products or sets of Products.
Technical Expert	means an individual who has demonstrated technical competency in one or more of the products developed and maintained by EMI and is authorized by EMI to provide technical support the Customer.
Version Number	<p>means a sequence of numbers and letters in the form x.y.z-r identifying a specific version of a given Product:</p> <p>x = Major Version number</p> <p>y = Minor Version number</p> <p>z = Revision number</p> <p>r = Age number</p>
Workaround	means a known change in the followed installation or configuration procedures of a Product or its associated data to avoid an Error without substantially impairing use of the product.
Working Day	See Business Day
Working Hours	See Business Hours



DNA1.2.3 - SERVICE LEVEL AGREEMENT TEMPLATE - Rev. 2

Doc. Identifier: EMI-DNA1.2.3-1277522-SLA_Template-Rev.2-v1.0

Date: **30/04/2011**

APPENDIX B: THE OPERATIONAL LEVEL AGREEMENT TEMPLATE



DNA1.2.3 - SERVICE LEVEL AGREEMENT TEMPLATE - Rev. 2

Doc. Identifier: EMI-DNA1.2.3-1277522-SLA_Template-Rev.2-v1.0

Date: **30/04/2011**

European Middleware Initiative

Operational Level Agreement

**For the Provision
of Contributions to the EMI Distribution**

Effective Date: 14 April 2012

Rev. 1.0

Version

Version	Date	Description	Authors
1.0	13-04-2012	Operational Level Agreement	Alberto Di Meglio (EMI)

Approval

(By signing this document, all Approvers agree to all terms and conditions outlined in this Agreement.)

Approvers		Role	Approval Date
For EMI	Alberto Di Meglio	Project Director	
For Contributor			

Table of Contents

1. AGREEMENT OVERVIEW	47
2. GOALS & OBJECTIVES.....	47
3. STAKEHOLDERS	47
4. TERM, TERMINATION AND AMENDMENTS	48
5. OPERATIONAL AGREEMENT	48
11.1. SERVICE SCOPE.....	49
11.2. CONTRIBUTOR RESPONSIBILITIES	49
11.3. EMI RESPONSIBILITIES	50
11.4. SERVICE ASSUMPTIONS	53
6. SERVICE MANAGEMENT	55
12.1. SERVICE AVAILABILITY	55
12.2. SERVICE REQUESTS	55
12.3. MONITORING AND REPORTING.....	56
7. SECURITY AND CONFIDENTIALITY	56
8. LIMITATION OF LIABILITY	56
9. MISCELLANEOUS	57
15.1. FORCE MAJEURE.....	57
15.2. ASSIGNMENT	57
15.3. ENTIRE AGREEMENT.....	57
10. OFFICE LOCATIONS	57
11. COMMUNICATION	58
12. SIGNATURES	59
APPENDIX: DEFINITIONS	60

1. AGREEMENT OVERVIEW

This Agreement represents an Operational Level Agreement (“OLA” or “Agreement”) between the European Middleware Initiative (EMI) project and the **Contributor** for the provisioning of Software Contribution (SC) services required to include the **Contributor Products or Services** within EMI distributions.

This Agreement remains valid until superseded by a revised agreement mutually endorsed by the stakeholders.

This Agreement outlines the parameters of all SC services covered as they are mutually understood by the primary stakeholders. This Agreement does not supersede current processes and procedures unless explicitly stated herein.

2. GOALS & OBJECTIVES

The purpose of this Agreement is to ensure that the proper elements and commitments are in place to provide consistent SC service delivery to EMI by the Contributor in a way compatible and supporting the SLAs that EMI has established with its Customers.

The goal of this Agreement is to obtain mutual agreement for SC service provision between EMI and the Contributor.

The objectives of this Agreement are to:

- Provide clear reference to service ownership, accountability, roles and/or responsibilities.
- Present a clear, concise and measurable description of service provision to EMI and their impact on service provision from EMI to its Customers.
- Match perceptions of expected service provision with actual service support and delivery.

3. STAKEHOLDERS

The following Contributor definition will be used as the basis of the Agreement and together with EMI they will represent the primary stakeholders associated with this OLA:

Contributor: XXXX ("Contributor")

4. TERM, TERMINATION AND AMENDMENTS

This Agreement is valid from the Effective Date outlined herein for a maximum period of 12 months and in any case not beyond the end date of the EMI Project on 30 April 2013. This Agreement should be reviewed at a minimum once per year; however, in lieu of a review during any period specified, the current Agreement will remain in effect.

Should they wish to terminate the Agreement before its expiration date, the Contributor will inform EMI in writing with 30 days notice. Similarly, EMI will inform the Contributor in writing with 30 days notice should they wish to terminate the Agreement before its expiration date. EMI can terminate the contract if the Contributor does not apply reasonable effort in fulfilling their responsibilities as specified in section 5.2 (Contributor Responsibilities).

The Operational Level Agreement Manager is responsible for facilitating regular reviews of this document. This Agreement is operational in nature and may be modified at any time by EMI. EMI will take appropriate measures to inform the Contributor of modifications and will give the Contributor the right and window of time to review any proposed change, discuss it with EMI, and terminate the relationship if all parties cannot abide by the revisions. New revisions can be proposed by either parties following changes in the provided services or in the way services are used. At least one revision must be made at the end of the default review period. The new revision of this Agreement supersedes any previous operational level agreements, which are considered expired. Any amendment will be considered accepted by both parties if not rejected within 30 days from the initial communication.

Operational Level Agreement Manager: Alberto Di Meglio

Operation Procurement Manager: [Name Surname](#)

Review Period: Yearly (12 months)

Previous Review Date:

Next Review Date:

5. OPERATIONAL AGREEMENT

The following detailed service parameters are the responsibility of EMI and the Contributor in the ongoing support of this Agreement.

11.1. SERVICE SCOPE

The following Services are covered by this Agreement:

Service name	Description
Software releases	The Contributor provides releases of its distributed computing middleware to EMI in the form of source code and building instructions compatible with the EMI software engineering policies
Requirements Analysis	The Contributor in collaboration with EMI and infrastructure managers, application and software developers and end users performs analysis and prioritization of the user requirements as the first step of the provision of targeted middleware components bringing value to the users
Requirements and software testing reports	As part of the specific agreement with each individual Contributor, the Contributor provides information to EMI on the implementation of agreed requirements and the execution on its major releases of agreed acceptance tests provided by the EMI or its customers
Web-based and E-Mail Support	EMI provides support to site administrators and end users through a web and e-mail support system called GGUS managed by EGI. The Contributor agrees to use the system to respond to any user request concerning the Contributor's Products

Table 5: The Operational Service Catalogue

11.2. CONTRIBUTOR RESPONSIBILITIES

11.2.1 Staffing

All Contributor personnel providing software for inclusion to EMI must be trained with the EMI Software Engineering methodologies and any EMI components affected by or affecting the contributed software. Trained means that they must be familiar with the EMI software and have attended training courses organized by EMI or in-house training courses organized by the Contributor.

11.2.2 Named Designated Contacts

The Contributor agrees that contact with EMI will be through the specified Designated Contacts. The Contributor is responsible for specifying and updating valid Designated Contacts with person-specific email addresses. Designated Contacts can be contacted by EMI management to discuss any escalation issues or other issues related to the fulfillment of the present OLA.

11.2.3 System Information

Upon request the Contributor must provide EMI with information on the Contributor system, including the list of installed EMI Components, their version, the Operating System and other installed software.

11.2.4 Upgrades, updates, recommended configurations

The Contributor agrees that that contributed Products must comply with the EMI Support Life periods. Any contributed Product affected by or affecting EMI components must be updated in compliance with the EMI Products Support Life periods. Versions of the contributed Products relying on or providing functionality to unsupported EMI components will become unsupported and dropped from the EMI distributions. EMI technical experts can ask the Contributor to upgrade, apply updates and restore the recommended configuration parameters before further investigating any reported compatibility issue.

11.3. EMI RESPONSIBILITIES

The Contributor is entitled to receive technical support from EMI according to the standard EMI support policies and the extensions described in the “Work with EMI” technical program.

A description of EMI Support offerings is given in the general EMI Support Plan. The latest version of the Support Plan can be downloaded from the EMI web site at:

<http://www.eu-emi.eu/en/support>

A description of “Work with EMI” program can be downloaded from the EMI web site at:

<http://www.eu-emi.eu/works-with-emi>

Upon the Contributor and EMI acceptance of this OLA, the Contributor will be entitled to receive Support according to the features and benefits provided under those offerings, subject to the terms and conditions of this Agreement.

11.3.1 Technical Support

For Contributor covered under the “Work with EMI” program, technical support will be provided pursuant to the terms of the program. EMI agrees to provide support, where appropriate, to the Contributor, which may include but is not limited to, the following actions:

- (a) Provide the Contributor with access to Product update releases, related Documentation and knowledge articles, before general public release;
- (b) Provide the Contributor with access to Technical Experts, who will work with them to diagnose issues, and provide Problem Resolutions, including escalating the issue through EMI management as needed.

11.3.2 Support Lifecycle.

(a) EMI provides support on the current EMI Major Releases and the current Components Releases of all the software Products listed in the EMI Products Catalogue. EMI will also provide reasonable technical assistance on all its software Products during their lifetime, starting from the General Availability date of the Products first Major Release version. Problem Resolution may be limited to the current Major Release of Product.

(b) EMI ends software support for a Major Release version when the second subsequent Major Release has been released. EMI will provide End-of-Support notification for discontinued software to the Contributor through an announcement posted on the EMI website at the URLs:

<http://www.eu-emi.eu/releases>

http://www.eu-emi.eu/retirement_calendar

(g) EMI reserves the right to modify its Support Lifecycle policy at any time; changes will be presented to the Customer at least 6 months in advance. Notifications regarding changes in policy will also be posted on the website.

11.3.3 Nonconformance

If EMI determines the problem is due to nonconformance to published specifications of a software version, or another substantial EMI related Problem, then under the EMI Support Plan, EMI shall provide any software workaround for the reported nonconformance that may be available at the time the Problem is reported. If there is no such available workaround, EMI will use reasonable efforts

to remedy such nonconformance and restore the Service, which may include temporary fix to the software. Permanent fixes will be provided in subsequent official public releases according to the priority of the Problem.

11.3.4 Exclusions.

Support does not include the following items or actions:

- (a) Step-by-step installation of the software;
- (b) Onsite activities;
- (c) Altered, damaged, or modified Products and software code;
- (d) Product Problems caused by Contributor negligence, misuse, or misapplication, use of the Product other than as specified in the EMI Product documentation, or in any other case beyond the control of EMI;
- (e) Products not installed from one of the EMI official or endorsed distribution channels. The current list of the approved distribution channels is available at:

http://www.eu-emi.eu/distribution_channels

- (f) Products that are past their End-of-Support date, as provided in Section 5.3.2 above.

Support for the above listed items can be provided on a best effort basis by the EMI Technical Experts, but it is not part of the “Work with EMI” program, is not covered by this OLA and does not have to fulfill any agreed Service Level.

11.3.5 Reporting Non-EMI Errors to the Contributor

Upon working the Operation Request under normal processes, and with appropriate management review, if at that point EMI believes that a Problem reported by the Contributor may not be due to an error in the EMI Products, EMI will notify the Contributor. At that time, the Contributor may: (a) ask EMI to proceed with problem determination outside the terms of this SLA; or (b) instruct EMI that they do not wish the Problem pursued further.

If the Contributor requests that EMI proceed with problem determination, the terms and scope of the work to be performed will be negotiated on a case by case basis outside this OLA. EMI reserves the right to deny support or to charge any associated non-labour cost (travel expenses, subsistence, or material) to the Contributor. If the Contributor instructs EMI that they do not wish the Problem pursued further by EMI, EMI may, at its sole discretion, investigate independently the anomaly with no liability thereof.

11.4. SERVICE ASSUMPTIONS

EMI provides technical support to developers using its Components even before their public release. The support provided by EMI is typically at “expert level” and it is directed at handling incidents that lower level support desks within the Contributor Organization could not solve. The Technical Support and Escalation Procedures are described in the EMI Project Support Plan. The latest version of the Support Plan can be found on the EMI web site at:

<http://www.eu-emi.eu/support>

User support is provided via the GGUS portal managed by the EGI InSpire project (see section 5.4.1, Web-based Support), which is the single point of contact for infrastructure users to access the EMI Service Desk. The EMI Service Desk within GGUS is organized in Support Units. Every Support Unit is responsible for one or more Components. The number and definition of the EMI Support Units in GGUS is not regulated by this OLA and can change at any time to fulfill the EMI Incident and Problem Management requirements.

Incidents are analysed by the EMI Technical Experts to identify the Problem or Problems that have caused them. If available, suitable workarounds are proposed to restore the Service to its agreed level as soon as possible. If the incident is caused by Problems in the software and a change is required, a software defect report is filed by the EMI Technical Experts in one of the EMI defect tracking systems and a change request is produced and scheduled for a future release depending on the Problem priority. The priority levels and their relationship with the Problem impact and severity are defined in Appendix: Definitions, the agreed response policies are defined in section 6 (Service Management).

This Operational Level Agreement applies to Components provided by EMI and making part of the EMI Product Catalogue. Conversely, the Product Catalogue lists all software Components that at any given time are supported by EMI. Components can be deprecated and removed from the Product Catalogue and new Components can be added during the lifetime of EMI according to the procedures described in the EMI Support Plan and the terms described in this OLA in section 5.3.2 (Support Lifecycle).

11.4.1 Web-based and E-Mail Support

EMI web-based and e-mail support is available through GGUS at:

<https://gus.fzk.de/pages/home.php>

It provides the Contributor with access to EMI support via the Customer GGUS-based escalation process or via approved third-party organizations acting as first and second level support. EMI always provides expert third-level technical support. It is responsibility of the Contributor to agree with EGI how to get access to GGUS.

The public EMI web site at:

<http://www.eu-emi.eu>

provides the Contributor with:

(a) Product documentation, release notes, troubleshooting guides and technical white papers about EMI software Products, as releases become publicly available. Technical previews can be obtained as part of the the “Works with EMI” technical program.

(b) Software Downloads, a public repository of all publicly available EMI Components releases, fixes, workarounds and utilities. Technical previews from testing repositories can be obtained as part of the “Works with EMI” technical program.

(c) Product Forums, containing shared knowledge of EMI Products and solutions within an online community of Customers, user communities, technical partners and EMI developers, as well as news on EMI Products and technologies. The Contributor can view and post on the discussion threads in all Forums.

11.4.2 Contact Technical Experts

Direct access to EMI Technical Experts is provided on a best effort basis as a means to discuss technical details after a support request has been received and accepted by EMI. Contact should be either by web forms (GGUS or dedicated EMI software defect tracking systems), or by Email.

(a) By Web Forms: once a support request is available in GGUS, the Contributor can update it with additional information or questions for the Technical Experts in charge of the issue. The Technical Experts may additionally provide access to the internal software defect tracking systems as necessary. In the latter case, they will provide the required access information.

(b) By Email: contact the EMI Technical Experts in charge of the support request with additional information about the issue. Contact can also be initiated by the Technical Experts in case additional information is needed. The additional information is logged to the GGUS application

6. SERVICE MANAGEMENT

12.1. SERVICE AVAILABILITY

The Contributor agrees to comply with the service levels that EMI commits to provides to its Customers in the EMI SLA. The Service Levels are defined are as follows:

Service name	Availability	Comments
Web support	Submission via GGUS available 24 hours, Monday to Sunday.	Web support requests are automatically acknowledged upon reception. Requests received after office hours will be stored in the support system, however no action can be guaranteed until the next working day. The Acknowledgement time is not the same as the Response Time which is described in section 7.2. GGUS is not provided by EMI and is subject to separate availability guarantees not governed by this SLA. For more info please refer to https://ggus.org/pages/home.php
Email support	Monitored 9:00 A.M. to 5:00 P.M. Monday – Friday	Emails received outside of office hours will be collected, however no action can be guaranteed until the next working day
On-site assistance		Negotiated on a case by case basis

12.2. SERVICE REQUESTS

In support of Services outlined in this Agreement, the Contributor will respond to Service-related incidents and/or requests submitted by EMI or its Customers within the following time frames:

Severity Level	GGUS Ranking	Response time	Comments
Severity 1 (Critical)	Top Priority	4 hours	During office hours

Severity 2 (Major)	Very Urgent	2 working days	
Severity 3 (Medium)	Urgent	5 working days	
Severity 4 (Enhancements)	Less Urgent	15 working days	Although the OLA guarantees a response time within a certain period of time, it is agreed that there is no a priori commitment to implement the enhancements requests, since they become part of the general prioritization and planning to be done by the Contributor. However, all requests must be considered by the Contributor and a general estimate of the time to completion must be provided in case the request is accepted.

12.3. MONITORING AND REPORTING

Acknowledgment and response times will be continuously measured and reported every quarter using the tools provided by the GGUS Support System.

7. SECURITY AND CONFIDENTIALITY

Except as contemplated by the terms hereof or as required by applicable law or pursuant to an order of a court with competent jurisdiction, EMI Partner Institutes shall ensure and procure that each of its employees, directors or representatives who receive Services from the Contributor shall keep confidential all non-public information provided to it by the Contributor and/or to which it has access as a result of the Services provided hereunder and shall not disclose or otherwise make available such information to any third party.

8. LIMITATION OF LIABILITY

In no event will EMI, or any of its Partner Institutes and suppliers, be liable, under any contract, negligence, strict liability, or other legal or equitable theory, even if EMI or its Partner Institute and suppliers were advised of the possibility of such damages as is stated below. These damages include but are not limited to: (i) PUNITIVE, INCIDENTAL OR CONSEQUENTIAL DAMAGES; OR (ii) LOST DATA OR LOST PROFITS; OR (iii) COSTS OF PROCUREMENT OF SUBSTITUTE GOODS, TECHNOLOGY OR SERVICES; OR (iv) CLAIMS BASED ON ANY ERROR, DEFECT OR NONCONFORMITY IN THE PRODUCTS OR SERVICE;

OR (v) ALL OTHER CLAIMS NOT RELATED TO AN ERROR, DEFECT OR NONCONFORMITY IN THE PRODUCT.

9. MISCELLANEOUS

15.1. FORCE MAJEURE

Neither party shall be liable for any delay or failure in performance due to event outside the defaulting party's reasonable control, including without limitation, acts of God, labour disputes, and shortages of supplies, actions of governmental entities, riots, war, fire, epidemics, or other circumstances beyond its reasonable control. The obligations and rights of the excused party shall be extended on a day-to-day basis for the period equal to the period of the excusable delay.

15.2. ASSIGNMENT

The Contributor may not assign this Agreement without the prior written consent of EMI. EMI may transfer its rights to any wholly owned subsidiary of its Partners.

15.3. ENTIRE AGREEMENT

This Agreement, outlining the terms and conditions of Software Technical Support Services for EMI Products in exchange of software contributions, constitutes the entire agreement between EMI and the Contributor and supersedes all previous written or oral agreements between the parties with respect to the subject matter of this Agreement. The terms in this Agreement override any contrary terms contained in any release note or other documentation.

10. OFFICE LOCATIONS

EMI

Headquarters: EMI Project Office
CERN, European Centre for Nuclear Research
1211 Geneva, Switzerland

EMI Web Site: <http://www.eu-emi.eu>

EMI Support Site: <http://www.eu-emi.eu/support>

Contributor

Headquarters:



Customer Web Site:

11. COMMUNICATION

EMI Designated Contacts	Contributor Designated Contacts
EMI OLA Manager Alberto Di Meglio	Contributor Service Procurement Manager Name Surname
EMI Support Manager Mathilde Romberg	Contributor Support Manager Name Surname
EMI Release Manager Cristina Aiftimiei	Contributor Release Manager Name Surname



12. SIGNATURES

The following agree to the terms and conditions of this SLA:

Alberto Di Meglio
Director EMI Project

Name Surname
Role within the Contributor

Date

Date

APPENDIX: DEFINITIONS

Acknowledge	means informing the submitter that a support request has been received by the EMI Automated Support System (GGUS).
Acknowledgement time	means the amount of time elapsed between the initial submission by the Customer to EMI Support and the initial acknowledgement from the EMI. It can be an automated response from the support system
Age-change Release	means the issuance of Software that is designated by EMI with a change in the fourth part of (r) of its release number of the format x.y.z-r, signifying a change in the packaging, dependencies or documentation in an existing product level without any change in the source code.
Business Day	means normal working day in the time zone where the EMI Technical Experts in charge of a support request are located.
Component	means a software package or strictly related set of packages providing a specific functionality within an EMI Middleware Product (Service, Client or Library)
Contributor	means the party identified as the organization entering in to this Agreement with EMI
Customer	means the party identified as the organization having established SLAs with EMI.
Documentation	means user and technical manuals provided by EMI for use with its Software or by the Contributor for use of their software.
EMI	means European Middleware Initiative.
EMI Product(s)	means the set of software Products (Services, Clients or Libraries) maintained by EMI during their active support lifetime.
Enhancement	means all Software changes, including changes in the code, configuration, schemas, interfaces, etc which modify the software to provide additional or improved features.
Error	means an error in the product, which degrades the product as defined by the Severity definitions, as compared to EMI or the Contributor published functionality and performance specifications.
Level 1 Support	means the ability to provide general product information, software configuration information, collect relevant technical problem identification information, perform base problem determination, provide basic support on the standard products, protocols and features and propose workarounds to known Problems. This level of support is not provided directly by EMI nor the Contributor, as described in the EMI Support Plan.
Level 2 Support	means the ability to provide Level 1 Support plus the ability to resolve the majority of misconfigurations, troubleshoot and simulate complex configuration, and software problems; support problem isolation and determination of product specification defects; provide simulation and interoperability and compatibility testing for new software releases prior to being deployed into the Customer production network; provide advanced Support on all products, protocols and features; have the ability to analyze traces, diagnose problems remotely, and provide End Users with complete steps to reproduce a problem. This level of support is not provided directly by EMI to End Users nor by the Contributor, but can be performed together with the Customers, as described in the EMI Support Plan.
Level 3 Support	means the ability to provide Level 2 Support plus the ability to provide software fixes and enhancements such as patches, fixing or generating workarounds that address software bugs; troubleshoot bugs that were not diagnosed during Level 2 Support; work with Customers to resolve critical situations, and building action

	plans with Customers to address complex issues. Within the context of this OLA, Level 3 Support for contributed software is provided by the Contributor
Major Release	means the issuance of Software that is designated by EMI with a change in the first number (x) of its release number of the format x.y.z-r, signifying a new product level with major new functionality, fixes to known errors (bugs) and possibly non-backward-compatible interfaces or behaviour.
Minor Release	means the issuance of Software that is designated by EMI with a change in the second number (y) of its release number of the format x.y.z-r, signifying an enhancement of an existing product level with minor new functionality, possibly fixes to known errors (bugs) and with backward-compatible interfaces or behaviour.
Operational Level Agreement (SLA)	means the Operational Level Agreement (OLA) that identifies the features and defines the processes involved with the delivery by the Contributor of various software provision functions to EMI, as presented by this document.
Patch	means a set of one or more packages distributed to the Customer to issue changes in the EMI products. A patch can contain Minor, Revision or Age-Change releases of one or more products.
Previous Sequential Release	means Release of Software, which has been replaced by a subsequent version of the product.
Problem Resolution	means the use of reasonable efforts to resolve the reported problem. These methods may include (but are not limited to): configuration changes, patches that fix an issue, reinstalling the software, etc.
Product	means a set of installable packages providing together a defined set of interfaces and functional behaviours and owned by a specific team of EMI Technical Experts called Product Team or a team within the Contributor organization. EMI Software offerings come in the form of Products. The EMI Support Service, any SLA with EMI Customers and this OLA apply to the current EMI Products or Products Catalogue as published in the EMI Web Site and any contributed software from the Contributor compliant with the current EMI Products.
Release	means a Major or Minor Release of the same product.
Respond	means addressing the initial request and taking ownership of the issue.
Response Time	means the amount of time elapsed between the initial submission by the Customer to EMI Support through the agreed escalation mechanism and the first Contributor Technical Experts response indicating that the ticket has been taken in charge.
Revision Release	means the issuance of Software that is designated by EMI with a change in the third number (z) of its release number of the format x.y.z-r, signifying a change in the Software to fix an error (bug) in an existing product level without any new functionality and with backward-compatible interfaces or behaviour.
Service Level Agreement (SLA)	means the Customer Service Level Agreement (SLA) that identifies the features and defines the processes involved with the delivery by EMI of various support functions to Customer, as presented by this document.
Service Request (SR)	means a single issue opened with EMI Support using the GGUS application. The SR number identifies the Service Request.
Service(s)	means: (a) the Software Provision and Support Services described in the EMI "Works with EMI" program and the Support Plan and to which this OLA is applicable; (b) the distributed computing services provided by the Contributor as Software and making the object of the Software Provision and Support Services.
Severity 1	means: (a) an Error with a direct security impact on the product; (b) an Error isolated to Software or in a production environment that renders the product inoperative or causes the product to fail catastrophically; e.g., critical system impact, system down; (c) a reported defect in the product in a production environment, which cannot be reasonably circumvented, in which there is an emergency condition that significantly

	restricts the use of the product to perform necessary business functions; or (d) inability to use the product or a critical impact on operation requiring an immediate solution.
Severity 2	means: (a) an Error isolated to Software that substantially degrades the performance of the product or materially restricts business; e.g., major system impact, temporary system hanging; (b) a reported defect in the product, which restricts the use of one or more features of the product to perform necessary business functions but does not completely restrict use of the product; or (c) ability to use the product, but an important function is not available, and operations are severely impacted.
Severity 3	means: (a) an Error isolated to the Software that causes only a moderate impact on the use of the product; e.g., moderate system impact, performance/operational impact; (b) a reported defect in the product that restricts the use of one or more features of the product to perform necessary business functions, while the defect can be easily circumvented; or (c) an Error that can cause some functional restrictions but it does not have a critical or severe impact on operations.
Severity 4	means: (a) a reported anomaly in the product that does not substantially restrict the use of one or more features of the licensed product to perform necessary business functions; this is a minor problem and is not significant to operation; or (b) an anomaly that may be easily circumvented or may need to be submitted to EMI Research and Development as a request for enhancement.
Site	means the physical location where EMI services are installed.
Software	means the object code version of the intangible information constituting one or more computer or apparatus programs and the informational content of such programs, together with any Documentation supplied in conjunction with, and supplementing such programs, the foregoing being provided by the Contributor to EMI by way of electronic transmission or by being fixed in media furnished to EMI.
Software Contributions (SC)	means the set of Programs provided by the Contributor to EMI and covered by this OLA
Software Support Services (SDS)	means the set of services provided by EMI and covered by this SLA
Support	means the Technical Support Services provided by EMI or the Contributor directly to Customer as set forth in the EMI Support Plan.
Support Plan	means the direct Support program offering and procedure described in the EMI Support Plan document.
Support Unit	means the team of people registered in GGUS as responsible to receive Support Requests for specific products or sets of Products.
Technical Expert	Means: (a) an individual who has demonstrated technical competency in one or more of the products developed and maintained by EMI and is authorized by EMI to provide technical support to the Customer. (b) an individual who has demonstrated technical competency in one or more of the products developed and maintained by the Contributor and is authorized by the Contributor to provide technical support to EMI or its Customers.
Version Number	means a sequence of numbers and letters in the form x.y.z-r identifying a specific version of a given Product: x = Major Version number y = Minor Version number z = Revision number



DNA1.2.3 - SERVICE LEVEL AGREEMENT TEMPLATE - Rev. 2

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	r = Age number
Workaround	means a known change in the followed installation or configuration procedures of a Product or its associated data to avoid an Error without substantially impairing use of the product.
Working Day	See Business Day