

**EGI-Engage**

Operational tools development roadmap revised

M3.3

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Abstract

TODO (about 120 words)

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**DELIVERY SLIP**

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**TERMINOLOGY**

A complete project glossary is provided at the following page: <http://www.egi.eu/about/glossary/>

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**Executive summary**

TODO

# Introduction

# Operations tools roadmap definition

## Procedure to update the roadmap

# Authentication and authorization infrastructure

*[add a short task introduction]*

## Roadmap summary

*[describe your roadmap with some text – highlight the update with respect the previous one]*

*[update the below table]*

Table 1 - Authentication and authorization infrastructure roadmap

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Task Number** | ***Task*** | ***Start Date (MM/YY)*** | ***Release Date (MM/YY)*** | ***Status*** | ***Dependencies***  ***From other***  ***tasks*** |
| **1.1** | Identification of and liaison with stakeholders:   * WP3 F2F and EGI Conference * Liaise with AARC * Connections with GN4, EUDAT2020 and PRACE * Identification of Tools | 05/15 | 06/15 | Done |  |
| **1.2** | Requirements capturing:   * Use FIM4R as the starting point * Align with AARC DJRA1.1 * Identify the most important use cases (EGI-Engage CCs) * Technical guidelines for enabling federated access in an initial set of tools (GOCDB, Monitoring and Accounting) | 05/15 | 08/15 | Done | 1.1 |
| **1.3** | Technical architecture and pilot implementation - Phase 1:   * Identify which AA services are needed * Collaboration with the AAI pilot and the user portal activity for the LTOS * Pilot: Connection of the first set of EGI tools to the EGI IdP proxy | 09/15 | 12/15 | Done | 1.2 |
| **1.4** | Technical architecture and pilot implementation - Phase 2:   * Expansion to EGI  Tools and selected CCs * Interaction with SA2.1 and SA2.2 (Training & User support) | 01/16 | 04/16 | Done | 1.3 |
| **1.5** | Technical architecture and pilot implementation - Phase 3:   * Technology reassessment * Pilot services and best practices to enable federated AAI solutions released | 05/16 | 07/16 | Started | 1.4 |
| **1.6** | Technical architecture and pilot implementation - Phase 4:   * Pilot services and best practices to enable federated AAI solutions released * Architecture and solution for the production EGI AAI services. | 07/16 | 02/17 | Planned | 1.5 |
| **1.7** | Identity Management for Distributed User Communities report | 02/17 | 02/17 | Planned | 1.6 |
| **1.8** | Refinements to the architecture and pilot wrap-up | 03/17 | 08/17 | Planned | 1.6, 1.7 |

# Service registry and marketplace

*[add a short task introduction]*

## Roadmap summary

*[describe your roadmap with some text – highlight the update with respect the previous one]*

*[update the below table]*

Table 2 - Service registry and marketplace

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Task Number** | ***Task*** | ***Start Date (MM/YY)*** | ***Release Date (MM/YY)*** | ***Status*** | ***Dependencies***  ***From other***  ***tasks*** |
| **2.1** | Stakeholder involvement   * Involvement with Engage participants * EGI Lisbon conference session | 04/2015 | 08/2017 | Started |  |
| **2.2** | Marketplace strategy   * Collaboration with FHNW on paper | 04/2015 | 07/2015 | Started |  |
| **2.3** | Update EGI business development strategy   * Discussions with EGI strategy team * Discussions with potential business partners | 04/2015 | 07/2015 | Started |  |
| **2.4** | Identify/collect EGI services   * Task assigned within the JRA1.2 team | 05/2015 | 07/2015 | Planned |  |
| **2.5** | Design of the EGI Service Registry and Marketplace   * Outcome of discussion with stakeholders and JRA 1.2 participants | 05/2015 | 02/2016 | Planned | 2.1, 2.2, 2.3, 2.4 |
| **2.6** | Populate service catalog   * Tasks assigned to JRA 1.2 participants to gather information | 08/2015 | 04/2016 | Planned | 2.1, 2.2, 2.3, 2.4 |
| **2.7** | Integrate service catalog to EGI web site   * Tasks assigned to JRA 1.2 participants to gather information | 10/2015 | 04/2016 | Planned | 2.6 |
| **2.8** | First release of the EGI Service Registry and Prototype   * Leveraging existing tools for prototype | 03/2016 | 08/2016 | Planned | 2.6 |
| **2.9** | Second release of the EGI Service Registry and Prototype   * Refine based on feedback from first release | 08/2016 | 04/2017 | Planned | 2.8 |
| **2.10** | Final report on EGI Service Registry and Marketplace   * To be done collectively by participants in JRA 1.2 | 06/2017 | 08/2017 | Planned | 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9 |

# Accounting

The target of this task is the evolution of the EGI accounting system. Its main components are the Accounting Repository and the Accounting Portal. The development guidelines will be:

* Evolve the accounting system to be able manage larger volumes of data: the accounting team will investigate techniques to manage huge amounts of data, such as Apache Hadoop or Cassandra;
* Add support for data set usage accounting to record who accesses data, how often, how much is transferred, and where to;
* Extend the current accounting measurements:
  + Cloud accounting: the current system will be extended adding features to normalise the CPU usage on different kinds of cloud resources and to account for the usage of the cloud storages supported in the EGI Federated Cloud;
  + Storage accounting: the number of the supported storage systems will be increased;
  + GPU accounting: increase the number of systems supported;
* Improve the portal, designing new and easier ways to access and visualise data for the end users;
* Develop unified views in the portal for different kinds of resources (e.g. CPU usage for grid and cloud resources);
* Create new views to show the new types of data available in the accounting repository (e.g. data set usage accounting);
* Expose an API allowing third parties to gather accounting data from the system;
* Create new views of the Accounting Portal adapted to the particular needs of user communities.

This task will collaborate with the OGF Usage Record Working Group, in particular to agree a schema for a data usage record. Moreover, support for the OGF standard UR2 will be improved.

## Accounting Repository

APEL is an accounting tool that collects accounting data from sites participating in the EGI and WLCG infrastructures as well as from sites belonging to other Grid organisations that are collaborating with EGI, including OSG, NorduGrid and INFN.

The accounting information is gathered from different sensors into a central Accounting Repository where it is processed to generate statistical summaries that are available through the EGI/WLCG Accounting Portal.

Statistics are available for view in different detail by Users, VO Managers, Site Administrators and anonymous users according to well-defined access rights.

### Roadmap summary

The main target of this task is the evolution of the EGI accounting system. The development themes identified are:

* re-design the accounting repository to be ready to manage increasing volumes of data with lower latency;
* create more generic parsers to enable faster integration of other accounting data sources;
* including new types of accounting measurement (e.g. data set usage accounting) and extend the current ones (e.g. cloud (3.1.1, 3.1.3) and storage (3.1.2, 3.1.6, 3.1.10));

The re-design of the accounting repository to manage large volumes of data started with an analysis of the tools available (3.1.11). Following this, the tools analysed will be tested to see which one is most suitable for application to the Accounting Repository while allowing for greater throughput and lower latency (3.1.12).

The creation of more generic parsers will run in three development cycles (3.1.4, 3.1.7, 3.1.13) where a new parser will be developed in each. A parser for the ARC batch system to increase the number of batch systems supported, an ‘XML’ parser which will allow input from a standard XML format, and an ‘SQL’ parser which will allow extraction of data directly from a client database.

Data set usage accounting will be developed over three development cycles. An initial proof of concept has been developed based on a user questionnaire and interviews (3.1.5). Currently, a set of minimum requirements are being defined to create an initial prototype (3.1.9). This will allow us to report on the design of the data accounting system (3.1.4) and implement this by the end of the project (3.1.15).

*Table 3 - Accounting repository*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ***Task Number*** | ***Task*** | ***Start Date (MM/YY)*** | ***Release Date (MM/YY)*** | ***Status*** | ***Dependencies From other tasks*** |
| **3.1.1** | Cloud Accounting: Usage Record V0.4 (Benchmarks etc.) | 03/15 | 07/16 | Open | 3.1.3 |
| **3.1.2** | Storage Accounting: Contact sites and test of the current solution | 03/15 | 10/15 | Done |  |
| **3.1.3** | Cloud Accounting: Long running VMs | 03/15 | 07/16 | Open |  |
| **3.1.4** | ARC Parser | 04/15 | 07/16 | Open |  |
| **3.1.5** | Data Accounting: proof of concept | 06/15 | 01/16 | Done |  |
| **3.1.6** | Storage Accounting: Usage Record V2.0 | 07/15 | 10/16 | Planned | 3.1.2 |
| **3.1.7** | XML Parser | 12/15 | 07/16 | Planned |  |
| **3.1.8** | D3.3: Accounting Repository Release | 02/16 | 02/16 | Done | 3.1.2, 3.1.5 |
| **3.1.9** | Data Accounting: minimal requirements implemented | 02/16 | 09/16 | Planned | 3.1.5 |
| **3.1.10** | Storage Accounting: support new storage systems | 03/16 | 10/16 | Planned | 3.1.6 |
| **3.1.11** | D3.6: Analysis on techniques to manage big data on the EGI accounting system | 02/16 | 02/16 | Done |  |
| **3.1.12** | Investigating Big Data tools to improve accounting repository | 07/16 | 02/17 | Planned | 3.1.11 |
| **3.1.13** | SQL Parser | 08/16 | 03/17 | Planned |  |
| **3.1.14** | D3.8: First data accounting prototype | 10/16 | 10/16 | Planned | 3.1.9 |
| **3.1.15** | Data Accounting: production requirements | 10/16 | 05/17 | Planned | 3.1.14 |
| **3.1.16** | GPGPU Accounting | 10/16 | 05/17 | Planned |  |
| **3.1.17** | Support AAI evolution | 01/17 | 08/17 | Planned |  |
| **3.1.18** | D3.12: Second release of the Accounting Repository | 02/17 | 02/17 | Planned | 3.1.1, 3.1.4, 3.1.6, 3.1.8, 3.1.9, 3.1.10, 3.1.12, 3.1.14 |
| **3.1.19** | D3.13: Report on Data Accounting | 02/17 | 02/17 | Planned | 3.1.15 |
| **3.1.20** | D3.15: Second data accounting prototype | 06/17 | 06/17 | Planned | 3.15 |
| **3.1.21** | D3.17: Final release of the Accounting Repository | 08/17 | 08/17 | Planned | 3.1.13, 3.1.15, 3.1.16, 3.1.17, 3.1.18 |

## Accounting Portal

The EGI Accounting Portal receives data from APEL and ultimately from sites participating in the EGI and WLCG infrastructures as well as from sites belonging to other Grid organisations that are collaborating with EGI. This is crossed with metadata from other sources to offer a integrated view of accounting data on the EGI Infrastructure.

### Roadmap summary

We have arrived at the first release of the new Portal, which will be effective in 04/16 including the covered tasks and a great number of additional requirements collected by EGI RT and several meetings.

Table 4 - Accounting portal

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Task Number** | ***Task*** | ***Start Date (MM/YY)*** | ***Release Date (MM/YY)*** | ***Status*** | ***Dependencies***  ***From other***  ***tasks*** |
| **3.2.1** | Requirements collection | 03/15 | 08/15 | Done |  |
| **3.2.2** | D3.1: Technical design of the new Accounting Portal and implementation plan | 03/15 | 08/15 | Done | 3.2.1 |
| **3.2.3** | Modernize the accounting Portal with the adoption of technologies easier to maintain | 06/15 | 01/16 | Done | 3.2.1 |
| **3.2.4** | Simplify access to some basic functionality. Avoid the use of complex forms for common statistics and get accounting information for some common queries | 07/15 | 04/16 | Done |  |
| **3.2.5** | Support Cloud Usage Record V0.4 and accounting of long running VMs | 07/15 | 04/16 | Done | 3.1.1, 3.1.3 |
| **3.2.6** | EGI Federated AAI Integration | 04/16 | 04/16 | On hold | Depends on outcome of AAI TF and EGI policy |
| **3.2.7** | D3.5: First release of the new Accounting Portal deployed in production | 04/16 | 04/16 | In progress | 3.2.2, 3.2.3, 3.2.4, 3.2.5 |
| **3.2.8** | Define a complete API to get accounting data directly from the accounting portal | 05/16 | 12/16 | Planned |  |
| **3.2.9** | Integrate data in maps for a graphical distribution of the information | 07/16 | 01/16 | Planned |  |
| **3.2.10** | Integrate analytics to extract intelligence operation from the data | 08/16 | 05/17 | Planned |  |
| **3.2.11** | D3.10: Second release of the new Accounting Portal deployed in production | 02/17 | 02/17 | Planned | 3.2.7, 3.2.8, 3.2.9, 3.2.10 |
| **3.2.12** | Support Data Accounting | 01/17 | 08/17 | Planned | 3.1.5, 3.1.8, 3.1.9, 3.1.15, 3.1.18 |
| **3.2.13** | Support GPGPU Accounting | 01/17 | 08/17 | Planned | 3.1.16, 3.1.18 |
| **3.2.14** | Support Big Data tools | 01/17 | 08/17 | Planned | 3.1.12, 3.1.18 |
| **3.2.15** | D3.19: Final release of the new Accounting Portal deployed in production | 08/17 | 08/17 | Planned | 3.2.11, 3.2.12, 3.2.13, 3.2.14 |

# Operations tools

The evolution of these tools has been driven by the need to support new technologies (e.g. cloud) and to satisfy new requirements emerging from service providers and user communities, in particular from the Research Infrastructures contributing to EGI-Engage via the EGI Competence Centres and the Resource Providers (RP) who contribute infrastructure services to the federation. The development roadmap has been defined according to a requirement gathering process, which has been accomplished in collaboration with the other EGI Engage WPs in charge of the communication with users and key stakeholders.

## Operations portal

The Operations Portal features have been broadened with the integration of the VO Administration and operations PORtal (VAPOR), which now supports cloud technology and has been extended with a GLUE2 based resource browser. Further information have been added to the VO ID card and proper interfaces are available to retrieve the data stored in the portal.

A new module has been developed in order to provide metrics for the EGI reports.

### Roadmap summary

For the coming year the aim is to enforce the features of Vapor by adding key features of Gstat . Then we will work on the integration of Cloud monitoring information . This part will be dependent from the progress of the monitoring group and the possibilities offered by the current technologies (tasks 4.1.11, 4.1.12 and 4.1.13) .

In parallel, we will work on the integration of the Operations Portal into the AAI ecosystem and the use of Perun as alternative solution to the VOMS servers.

Table 5 - Operations portal

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Task Number** | ***Task*** | ***Start Date (MM/YY)*** | ***Release Date (MM/YY)*** | ***Status*** | ***Dependencies***  ***From other***  ***tasks*** |
| **4.1.1** | LavUpgrade  Upgrade Vapor configuration for lavoisier | 05/2015 | 02/2016 | Done |  |
| **4.1.2** | LavGlue  Replace Glue1.3 queries by Glue 2 | 05/2015 | 02/2016 | Done | 4.1.1 |
| **4.1.3** | LavCloud  Capture Cloud Resources in Lavoisier | 06/2015 | 02/2016 | Done |  |
| **4.1.4** | RBExtension  Extend the resource browser to cloud resources | 06/2015 | 02/2016 | Done | 4.1.3 |
| **4.1.5** | VaporExtension  Extend Vapor views to cloud resources | 06/2015 | 02/2016 | Done | 4.1.3 |
| **4.1.6** | DashboardExtension  Extend dashboard views to cloud resources | 10/2015 | 02/2016 | Done | 4.1.3 |
| **4.1.7** | ReplaceGstat  Replace Gstat Main Features | 11/2015 | 02/2017 | In progress |  |
| **4.1.8** | ExtendAPI1  Extend dashboard API | 04/2016 | 02/2017 | Planned |  |
| **4.1.9** | ExtendAPI2  Extend Vapor API | 04/2016 | 02/2017 | Done |  |
| **4.1.10** | ExtendAPI3  Extend Gstat API | 04/2016 | 02/2017 | Done | 4.1.7 |
| **4.1.11** | MonitorVM1  monitor running/creation requests VM | 06/2016 | 02/2017 | Planned |  |
| **4.1.12** | MonitorVM2  monitor success/error/time-out rates for cloud sites | 06/2016 | 02/2017 | Planned | 4.1.11 |
| **4.1.13** | ExtendVoDataManagement  Support cloud storage solutions / File catalog | 01/2017 | 08/2017 | Planned |  |
| **4.1.14** | OpsPortalEgiMetrics Extends the current metrics and add new ones | 05/2016 | 09/2016 | Done |  |
| **4.1.15** | OpsPortalVoAcknowledgement  Add Vo Acknowledgement section in VO ID card | 10/2015 | 11/2015 | Done |  |
| **4.1.16** | OpsPortalVoRobotCertificate  Add certificate robot section | 11/2015 | 12/2015 | Done |  |
| **4.1.17** | OpsPortalAAI  Add Operations Portal into AAI infrastructure | 06/2016 | 12/2016 | Planned |  |
| **4.1.18** | OpsPortalPerunSupport  Support Perun and its usage into VO ID cards and VO Metrics | 05/2016 | 09/2016 | In progress |  |

## GOCDB

During the year a number of new features were introduced without introducing backward compatibility issues or loss of service (details given below). The internal GOCDB release procedure served as template for the new EGI core operations tool release procedure. Time was spent engaging with the WLCG Information-Systems Task Force to provide input into their information system review, designed to inform the future evolution of the WLCG information system. Given the successful delivery of WLCG feature-requests, WLCG have since decided to prototype GOCDB (and OIM in the US) as a candidate system to replace the BDII (currently under review). Effort was also spent researching Federated Identity Management (FIM) solutions for EGI and the Elixir project. The GOCDB test system was used to test/develop the ProxyIdP as an attribute provider and service provider. All findings/recommendations were disseminated on the GOCDB wiki. During the year, time was also spent on operational support and service delivery.

### Roadmap summary

Existing tasks: Three major GOCDB updates (v5.4, 5.5, 5.6) were released during the period which addressed a number of core tasks. Version 5.4 addressed tasks 4.2.0 and 4.2.1. This included extending the data model, role action logging, fine-grained content rendering and refactoring the downtime time-zone logic. Version 5.5 completed task 4.2.2 for multi-tenant/multi-project support and also integrated the task for Federated AAI and integration with the EGI ProxyIdP (formerly listed as task 4.2.6). Task 4.2.3 was completed for the first release of the operational tools.

New tasks: A number of new high-priority tasks were added to the roadmap during the year to address the requirements of the WLCG user community. These were addressed in the v5.6 release (now listed as task 4.2.4). This included the introduction of reserved scope tags for WLCG, a new downtime calendar with fine grained downtime filtering, and bulk edit/upload of custom property files. A new/ongoing task was introduced to apply forced paging on a number of core API methods to address server loading issues (4.2.4.1). A new/ongoing task (4.2.5) was introduced to develop a writeable rest API as requested by WLCG and the EGI Federated Cloud.

Previously documented tasks for object diff auditing of core objects and for new NGI Certification/Suspension rules were de-prioritised (now under task 4.2.6). The remaining task to refactor the UI (4.2.7) is currently less well defined and new tasks will undoubtedly emerge. The updated roadmap is given below.

Table 6 – GOCDB

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Task Number** | ***Task*** | ***Start Date (MM/YY)*** | ***Release Date (MM/YY)*** | ***Status*** | ***Dependencies***  ***From other***  ***tasks*** |
| **4.2.0** | * Extend Data Model | 03/15 | 08/17 | Done / ongoing |  |
| **4.2.1** | v5.4   * Role action logging * Finer grained content rendering (PermitAll and Protected pages) * Downtime declaration in local timezone | 04/15 | 07/15 | Done |  |
| **4.2.2** | v5.5   * Multi-tenant (apply different rules/roles on a per-project basis) * SAML/FIM authentication, Elixir | 06/15 | 12/15 | Done |  |
| **4.2.3** | D3.4: First release of the Operational tools - GOCDB | 02/16 | 02/16 | Done |  |
| **4.2.4** | V5.6   * Reserved Scope Tags - Restrict user tagging of resources using reserved/protected scope tags. Will allow WLCG/Elixir sites to apply tags only to their resources and prevent other sites from using same tags. * Downtime Calendar with fine grained filtering by scopes and other params. * Bulk addition/upload of multiple custom properties. * Integration with EGI ProxyIdp - Allow access for users without client certificate. | 11/15 | 03/16 | Done |  |
| **4.2.4.1** | v5.6.1   * Forced Paging on PI - Selected PI queries should page by default. If the 'page' URL parameter is not provided, then query will return the first page by default. Apply to get\_downtime\*, get\_service\* methods and review others for paging. | 05/16 | 07/16 | Planned |  |
| **4.2.5** | v5.7   * Writable REST API to post updates to sites/services. Will require Site's to manage their own API keys per site required to post updates for a site/service. | 03/16 | 09/16 | Planned |  |
| **4.2.6** | v5.8   * NGI certification / suspension rules * Object diff auditing * Review/clarify automatic freshness of data check task | 10/16 | 02/17 | Planned |  |
| **4.2.7** | MVC GUI refactoring  Replace proprietary MVC with e.g. Symfony3 | 01/17 | 06/17 | Planned |  |
| **4.2.8** | D3.11: Second release of the Operational tools - GOCDB | 02/17 | 02/17 | Planned |  |
| **4.2.9** | |  |  | | --- | --- | |  | D3.18: Final release of the Operational tools - GOCDB | | 08/17 | 08/17 | Planned |  |

## Monitoring

*[add a short introduction on the tool activity in WP3]*

### Roadmap summary

*[describe your roadmap with some text – highlight the update with respect the previous one]*

*[update the below table]*

Table 7 – Monitoring

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Task Number** | ***Task*** | ***Start Date (MM/YY)*** | ***Release Date (MM/YY)*** | ***Status*** | ***Dependencies***  ***From other***  ***tasks*** |
| **4.3.1** | ARGO Compute Engine & Web API:   * automatic recomputation triggers * multi-tenant support   stability and performance improvements | 04/15 | 06/15 | Done |  |
| **4.3.2** | ARGO Monitoring Engine:   * probe framework * support documentation (Guides)   stability and performance improvements | 04/15 | 06/15 | Done |  |
| **4.3.3** | ARGO EGI Web UI   * ACL mechanism (support groups/roles)   UI Enhancements | 04/15 | 06/15 | Done |  |
| **4.3.4** | ARGO EGI Connectors & Consumer:   * improved support for VOs   stability and performance improvements | 04/15 | 06/15 | Done |  |
| **4.3.5** | ARGO POEM:   * ACL mechanism (support groups/roles)   stability and performance improvements | 04/15 | 06/15 | Done |  |
| **4.3.6** | ARGO Compute Engine & Web API:   * API for data ingestion specification * separation of A/R and Metric stores * APIv2 Specification   stability and performance improvements | 07/15 | 09/15 | Done | 4.3.1 |
| **4.3.7** | ARGO Monitoring Engine:   * FedCloud probes   stability and performance improvements | 07/15 | 09/15 | Done | 4.3.2 |
| **4.3.8** | ARGO EGI Web UI:   * UI Enhancements   initial support for federated logins using SAML | 07/15 | 09/15 | Done | 4.3.3 |
| **4.3.9** | ARGO EGI Connectors & Consumer:   * use of CE ingestion API   stability and performance improvements | 07/15 | 09/15 | Postponed | 4.3.4 |
| **4.3.10** | ARGO POEM   * initial support for federated logins using SAML * support for probe management   stability and performance improvements | 07/15 | 09/15 | Postponed | 4.3.5 |
| **4.3.11** | ARGO Compute Engine & Web API:   * API for data ingestion specification * APIv2   stability and performance improvements | 09/15 | 12/15 | Done | 4.3.6 |
| **4.3.12** | ARGO Monitoring Engine:   * fedcloud probes update   stability and performance improvements | 09/15 | 12/15 | Done | 4.3.7 |
| **4.3.13** | ARGO EGI Web UI:   * UI Enhancements   support for federated logins with IdP Discovery | 09/15 | 12/15 | Done | 4.3.8 |
| **4.3.14** | ARGO EGI Connectors & Consumer:  stability and performance improvements | 09/15 | 12/15 | Done | 4.3.9 |
| **4.3.15** | ARGO POEM:   * support for federated logins with IdP Discovery   stability and performance improvements | 09/15 | 12/15 | Rejected | 4.3.10 |
| **4.3.16** | First release of the Operational tools (D3.4) | 03/15 | 02/16 | Done | 4.3.1 – 4.3.15 |
| **4.3.17** | ARGO Compute Engine & Web API:  stability and performance improvements | 01/16 | 03/16 | Done | 4.3.11 |
| **4.3.18** | ARGO Monitoring Engine:   * FedCloud probes update   stability and performance improvements | 01/16 | 03/16 | Done | 4.3.12 |
| **4.3.19** | ARGO EGI Web UI:  join as a SP to eduGAIN | 01/16 | 03/16 | Rejected | 4.3.13 |
| **4.3.20** | ARGO EGI Connectors & Consumer  stability and performance improvements | 01/16 | 03/16 | Done | 4.3.14 |
| **4.3.21** | ARGO POEM   * join as a SP to eduGAIN   stability and performance improvements | 01/16 | 03/16 | Rejected | 4.3.15 |
| **4.3.22** | ARGO Compute Engine & Web API:   * API for data ingestion * stability and performance improvements | 03/16 | 09/16 | Started | None |
| **4.3.23** | ARGO Monitoring Engine:   * FedCloud probes update * stability and performance improvements | 03/16 | 09/16 | Done/On demand | None |
| **4.3.24** | ARGO EGI Web UI:   * join as a SP to EGI AAI | 03/16 | 09/16 | Planned | None |
| **4.3.25** | ARGO EGI Connectors & Consumer   * stability and performance improvements | 03/16 | 09/16 | Started | None |
| **4.3.26** | ARGO POEM   * join as a SP to the EGI AAI * stability and performance improvements | 03/16 | 09/16 | Started | None |
| **4.3.27** | ARGO Compute Engine & Web API:   * Support for stream processing * stability and performance improvements | 10/16 | 02/17 | Planned | 4.3.22 |
| **4.3.28** | ARGO Monitoring Engine:   * FedCloud probes update * stability and performance improvements | 10/16 | 02/17 | Planned | None |
| **4.3.29** | ARGO EGI Web UI:   * UI Enhancements | 10/16 | 02/17 | Planned | None |
| **4.3.30** | ARGO EGI Connectors & Consumer   * stability and performance improvements | 10/16 | 02/17 | Planned | None |
| **4.3.31** | ARGO POEM   * Probe management interface * stability and performance improvements | 10/16 | 02/17 | Planned | None |
| **4.3.32** | Second release of the Operational tools - ARGO (D3.11) | 10/16 | 02/17 | Planned | 4.3.22– 4.3.31 |
| **4.3.33** | D3.18: Final release of the Operational tools – ARGO (D3.18) | 03/17 | 08/18 | Planned | 4.3.32 |

## Messaging

*[add a short introduction on the tool activity in WP3]*

### Roadmap summary

*[describe your roadmap with some text – highlight the update with respect the previous one]*

*[update the below table]*

Table 8 – Messaging

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Task Number** | ***Task*** | ***Start Date (MM/YY)*** | ***Release Date (MM/YY)*** | ***Status*** | ***Dependencies***  ***From other***  ***tasks*** |
| **4.4.1** | Preparatory phase | 04/05 | 06/05 | Done |  |
| **4.4.2** | APIv1 alpha specification | 07/05 | 09/05 | Done | 4.4.1 |
| **4.4.3** | APIv1 test implementation  APIv1 final draft specification (ready for external party review) | 09/05 | 12/05 | Done | 4.4.2 |
| **4.4.4** | APIv1 final specification | 01/06 | 03/06 | Done | 4.4.3 |
| **4.4.5** | APIv1 beta implementation | 03/16 | 9/16 | Started | 4.4.4 |
| **4.4.6** | APIv1 production implementation | 9/16 | 2/17 | Planned | 4.4.5 |
| **4.4.7** | Second release of the Operational tools - ARGO (D3.11) | 01/17 | 02/17 | Planned | 4.4.1 – 4.4.6 |
| **4.4.8** | D3.18: Final release of the Operational tools – ARGO (D3.18) | 03/17 | 08/18 | Planned | 4.4.8 |

## Security Monitoring

Security incidents may cause significant problems for users, service providers and infrastructure operators. Security monitoring tools try to identify weaknesses that lead to a security incident. Current technologies, namely federated clouds, bring new security challenges that must be addressed by new approaches. In this task we will identify the new areas and provide solutions for proper monitoring of them.

### Roadmap summary

The goal of the activity is to develop a framework for security assessment of cloud services. Over the first project year we explored areas that play crucial role in cloud security. Resilience of virtual machines against known and common Internet threats manifested as the key functionality. The main attention is paid to assessment of images of virtual images to detect know vulnerabilities that could lead to a security incident. In order to cover the needs identified, we started developing a framework for automated assessment of images of virtual machines. We plan to verify the approach in the context of EGI cloud services.

Table 9 - Security Monitoring

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Task Number** | ***Task*** | ***Start Date (MM/YY)*** | ***Release Date (MM/YY)*** | ***Status (Planned***  ***/Done)*** | ***Dependencies***  ***From other***  ***tasks*** | ***Issues*** |
| **4.5.1** | Gap analysis | 04/15 | 11/15 | Done |  |  |
| **4.5.2** | VM Image assessment | 12/15 | 09/16 | Ongoing |  |  |
| **4.5.3** | Cloud resources monitoring | 10/16 | 06/17 | Planned |  |  |

# Resource Allocation – e-Grant

e-GRANT is a platform that enables EGI customers to apply and get allocation of compute and storage resources. Task's main goal is to enable EGI Customers to apply for both: free and paid resources available in the Infrastructure in a consistent matter reflected in a complete SLA life-cycle. The two types of available resources (paid are free) are supported by different SLA life-cycles, which concludes in e-GRANT's main activity: creation of coherent and fully-integrated platform supporting different types of resources, numerous infrastructures and diverse processess connected with them.

## Roadmap summary

During last period no new tasks were added to e-GRANT's roadmap as the development was focused on existing ones and no new requirments from other teams were expressed.

Main area of development was focused on integration of pay-for-use resources in Resource Allocation Platform. As a result the first prototype of a platform is available under e-grant.egi.eu/v2 link, where EGI Customer can apply for paid resources and negotiate the price and amount of them. Existing platform supports the majority of pay-for-use SLA life-cycle and is being supported by EGI Pay-for-Use team.

Finalization of some of the integrational task were postponed due to the continous improvement and development of given tools: EGI LTOS platform anf authorization platform.

The updated roadmap is given below.

Table 10 - Resource Allocation – e-Grant

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Task Number** | ***Task Name*** | ***Start Date (MM/YY)*** | ***Release Date (MM/YY)*** | ***Status*** | ***Dependencies***  ***From other***  ***tasks*** |
| **5.1** | Defining extensions and interface with other tools and processes. | 04/15 | 12/15 | Done |  |
| **5.2** | Continual implementation of improvement needed for resources allocation process | 04/15 | 08/17 | In progress | 5.1 |
| **5.3** | Alignment with EGI SLA framework for existing process | 04/15 | 06/15 | In progress | 5.1 |
| **5.4** | Implementing support for tracing site configuration for allocated SLA | 07/15 | 06/16 | Planned | 5.1, 5.2 |
| **5.5** | Integration with market-place | 10/16 | 03/17 | Planned | 5.1 |
| **5.6** | Integration with EGI monitoring framework | 01/16 | 12/16 | Planned | 5.1 |
| **5.7** | Integration with LTOS portal | 04/15 | 12/16 | In progress | 5.1 |
| **5.8** | Integration with EGI Accounting system | 02/16 | 12/16 | Planned | 5.1, 5.2 |
| **5.9** | Integration with EGI Accounting Portal | 02/16 | 12/16 | Planned | 5.1, 5.2 |
| **5.10** | Integration with EGI authorization platform | 10/16 | 12/16 | Planned | 5.1, 5.2 |
| **5.11** | Further integration with GOCDB | 06/16 | 06/16 | Planned | 5.1, 5.2 |
| **5.12** | Pilot execution of pay-for-use process in e-GRANT | 08/15 | 11/15 | Done |  |
| **5.13** | First prototype of pay-for-use process in production | 01/16 | 03/16 | Done | 5.1 |
| **5.14** | Extending support for pay-for-use process | 03/16 | 12/16 | In progress | 5.1 |
| **5.15** | Extensions needed for including new types of EGI services | 10/16 | 07/17 | Planned | 5.1 |
| **5.16** | Final release of e-GRANT | 08/17 | 08/17 | Planned | 5.2-5.11, 5.14, 5.15 |

# Summary

1. Appendix example