EGI-Engage

Long tail of science platform deployment report

M5.1

Date	15 January 2016
Activity	SA1
Lead Partner	EGI.eu
Document Status	FINAL
Document Link	https://documents.egi.eu/document/2697

Abstract

This document contains the release information and the technical usability review of the long tail of science platform, the portal: access.egi.eu

The goal of the portal is to provide a zero-barrier access point to EGI services for the individual users or the small groups of researchers.

The EGI-Engage project is co-funded by the European Union (EU) Horizon 2020 program under Grant number 654142 http://go.egi.eu/eng

COPYRIGHT NOTICE

DELIVERY SLIP

	Name	***Partner/Activity***	***Date***
From:	Peter Solagna	EGI.eu/WP5	18.12.2015
Moderated by:	Alessandro Paolini	EGI.eu/WP5	11.12.2015
Reviewed by	Genevieve Romier	CNRS/WP5	11.12.2015
Approved by:	AMB and PMB		6.01.2016

DOCUMENT LOG

Issue	***Date***	***Comment***	***Author/Partner***
v.1	4.12.2015	Version ready for external review	Peter Solagna/EGI.eu
FINAL	18.12.2015	Final version after external review	Peter Solagna/EGI.eu

TERMINOLOGY

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

Contents

Executive summary

This milestone records the release of the long tail of science platform, and its deployment as a prototype service for the EGI individual users and small research groups.

The platform reduces the barriers for new users in terms of requesting specific credentials for EGI, and of requesting resources.

The deployed services are a user registration portal, access.egi.eu, where users request access to the Long Tail of Science (LTOS) pool of resources, and where the requests are authorized and membership are managed, and an attribute authority that is queried by the services to retrieve the authorization status of the user trying to access the services.

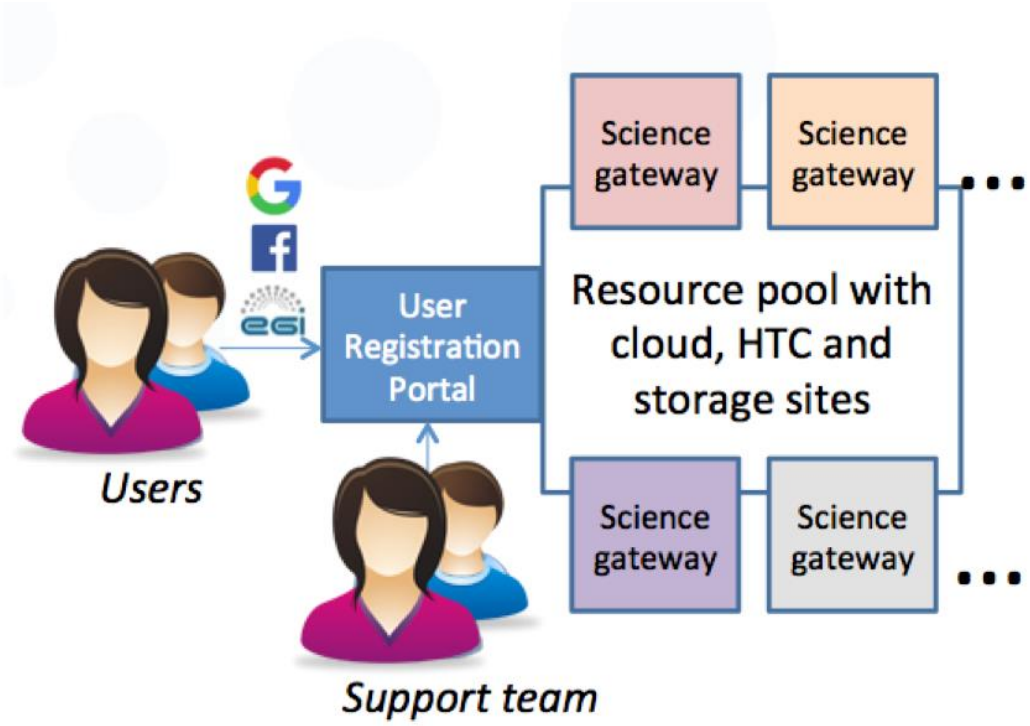
The platform is complemented by science gateways, a catch-all VO, and a pool of dedicated resources, which are out of the scope of this document. With all these enabling components, users of the long tail of science, do not need to worry about entering a VO, or having their own VO approved and supported, neither users need to worry about credentials. The platform should guide the users from the first contact to the actual submission of their tasks.

1 Introduction

Tool name	Access.egi.eu
Tool url	https://access.egi.eu/
Tool wiki page	https://wiki.egi.eu/wiki/LToS
Description	The long-tail of science refers to the individual researchers and small laboratories who - opposed to large, resourced collaborations - do not have access to computational resources and online services to manage and analyse large amount of data. This EGI platform allows individual researchers and small research teams to perform compute and data-intensive simulations on large, distributed networks of computers in a user friendly way.
Customer of the tool	Individual researchers and small research groups. NGIs exposing their services through the platform
User of the service	Individual researchers or small research groups with limited need for sharing their work with a distributed team.
User Documentation	https://access.egi.eu/start
Technical Documentation	https://wiki.egi.eu/wiki/Long-tail_of_science
Product team	ACK Cyfronet
License	Apache 2
Source code	https://git.plgrid.pl/projects/LTOS/

2 Service architecture

2.1 High-Level Service architecture



- **Access.egi.eu** (user registration portal): The entry point for users who wants to access the EGI services. It provides also management tools for the support team to authorize requests
- **Resource pool**: accessible through the per user sub proxies, that are robot certificates containing information about the individual user accessing the platform. The resources in the pool support the catch-all VO dedicated to the LTOS.
- **Science gateways and portals** exposing services and tools to the users. The have to be integrated with the authentication and authorization services in the platform.

2.2 Integration and dependencies

Access.egi.eu needs to integrate with:

- Unity as an attribute authority and IDP proxy, it is deployed by the same team deploying access.egi.eu, but not maintained by them

  - UNITY is being supported by the long term PLGrid project and being deployed in the Human Brain Project (HBP), PLGrid, and EUDAT2020
  - Unity is licensed under: Open source Permissive BSD Licence
  - Interaction between access.egi.eu and unity is through standard API, which ensures medium term compatibility. Long term compatibility will require developments in case of change in the APIs.
- Science Gateways and services. Access.egi.eu enables users to access third party services, such as science gateways.
- PUSP: The resources supporting the long tail of science, need to enable the per user sub proxies, this is released as part of the LCMAPS tool, and already in UMD.

3 Release notes

3.1 Requirements covered in the release

This is the first release of the tool, the main requirements were the user stories as described in section 4.

A set of additional detailed requirements have been registered in the EGI RT[1], and the following have been implemented:

- https://rt.egi.eu/rt/Ticket/Display.html?id=9686
- https://rt.egi.eu/rt/Ticket/Display.html?id=9684
- https://rt.egi.eu/rt/Ticket/Display.html?id=9680
- https://rt.egi.eu/rt/Ticket/Display.html?id=9642
- https://rt.egi.eu/rt/Ticket/Display.html?id=9601
- https://rt.egi.eu/rt/Ticket/Display.html?id=9599
- https://rt.egi.eu/rt/Ticket/Display.html?id=9598

[1] https://rt.egi.eu/rt/Dashboards/6458/LTOS%20requirements

4 Feedback on satisfaction

4.1 User Story: new user wants to access resources

4.1.1 Description

A researcher, or small group of researchers, need to access computing/storage/cloud resources, or need to access more specialized services available.

The user will need to access the portal access.egi.eu with username/password credentials. The user needs to insert their information (the portal will guide the user through the registration), the information needed are the affiliation or references of a research institution, and the relevant personal data. The user needs to ask for resources meeting the needs of their research, and the purpose of the research. User should accept the VO AUP.

Once the request is being approved, the user should be notified, and then they should be able to access the science gateways linked in the portal access.egi.eu, and use EGI resources through the science gateways.

4.1.2 Structured review - Genevieve Romier

Is the tool satisfying the use case?	Globally yes it is satisfying. The issues are mainly on the presentation, lack of consistency in information, the help, and the explanations. Results: affiliation accepted; login tested with SSO and google account; request accepted; access to Catania portal possible; run of the "hello word" application. My job was submitted and running; I got also a semantic search result. But the user experience was not really satisfying! Non satisfying points: 1) Depending on the browser I used, Facebook was proposed or not as authentication method. I was not previously connected to google or facebook with this browser. 2) What about the small group of researchers. I did not see how to register for a small group. *Answer: This is not supported, small group of researchers, should be able to share their work as they are doing without EGI, but using EGI services in their individual work.*

	3) "Indicate what you would like to achieve with the resources so we can help you find the most suitable ones." Is not true for the moment. The user cannot really indicate what he/she would like to achieve and there is no mean to know what the most suitable resources are and nobody will help the user. The help is a self-made help! *Answer: not all the processes are currently implemented. But yes, it could be misleading.*
Are all the sections and links properly working?	1) General Usage Policy links to https://wiki.egi.eu/wiki/Long-tail_of_science_pilot#Proposed_AUP_for_the_Long-tail_VO but it seems that the anchor doesn't exist. There is a Policies paragraph (at the end of the web page) but the name of the document is different: "Acceptable Use Policy and Conditions of Use of the EGI Platform for the Long-tail of Science" If I follow the links to the document server page, I find the document in docx format and not pdf that would be better for users that have no prerequisites on their machine. The names of the documents have to be unified and the link should be direct to the PDF file (without the wiki and the document server steps). 2) I cannot see my first request in https://e-grant.egi.eu/ltos/ I think I've submitted this request but I'm not informed of its status. *Answer: Asked for notifications* 3) I cannot logout from https://e-grant.egi.eu/ltos/ (enter the site to see if my request was accepted). I have to close the browser to exit. *Answer: the EGI SSO does not allow log-off, unfortunately this is a problem that needs to be reported, as the reviewer rightly did, but out of the scope of LTOS.*
Learnability (how easy is it for users to accomplish basic tasks of the use case?)	I have no comment on this point. It seems not difficult.
Ease in finding the information in the tool	1) There is no link to EGI web site on the portal. The consequence is that the visitor doesn't know what EGI is. My opinion is that the user needs to know EGI.eu is we want him to acknowledge or recommend EGI and also if we want he trusts the portal. 2) The AUP document is not adapted (title, format, certain parts of the text) and already in draft status. *Answer: this will be corrected and ported to PDF.* 3) In the "Hello" part, a link is given to a short manual. The link target is https://wiki.egi.eu/wiki/Long-tail_of_science. I think a wiki is not a manual, this page is not written for end users and newbies. They do not have to know they are considered as "long tail of

	science". We have to provide users with a real short manual, easy to read and understand. 4) During the resources' request, if I create a draft, it is not really clear how to submit the request later. I have to edit and to see that I need to put other information in the resources' part. *Answer: I just tried again, and the portal is notifying me if there are missing fields.* 5) We could propose a default request for a trial or to evaluate the needs. 6) During the resources' request, there is no mention of available services, what the necessary resources to use them are and how to ask for them. *Answer: this is a good point, I have not opened a ticket yet, since I am not sure how the problem can be solved.* 7) The home page announces "Request resources from the platform: Indicate what you would like to achieve with the resources so we can help you find the most suitable ones." At this moment the help is not here. I think explanations are needed. 8) We miss a contact to ask questions if needed 9) We miss legal and practical information about the portal owner/provider. "©2015 EGI.eu. Website hosted by CYFRONET, Kraków on behalf of EGI.eu" on the home page is not enough. We need users trust in this portal. As the user is conducted from the portal to the e-grant portal and at the end to the services portals It is important to give him/her trust elements such as link to egi.eu web site on each page, contact email with an egi.eu email address… *Answer: Yes, this is going to be implemented, it has already been submitted as a request*. *10)* We miss access to the General Usage Policy after it has been accepted. This access should be permanent. On the home page (even before to accept it) and on all pages. *11)* Verifications criteria should be shortly explained to give transparency to the process. What is affiliation verification for example? *Answer: The process is under finalization, links will be added.*
Ease to keep track of the location in the site	*The url changes (access, unity, e-grant, csgf) it is a little bit disturbing.* The site forces certain pages at certain steps. It's not very helpful if you want to go back to read again an explanation for example.
Is the help section explaining well how to	1) EGI SSO is not explained. There is no link to create one if the user doesn't have a google or facebook account or do not want to use them: certain research organisms' security policies recommend

use the tool?	their employees not to mix work and personal accounts and actions. We should facilitate the work for employees that want to follow these rules in such way that we want them to follow our own rules. a. *Answer: We prefer EGI SSO for the login, in this moment. But also we did not want to limit users who do not want multiple accounts.* 2) Cookies are used by the portal and this should be explained. This is mandatory in several countries (such as France) a. Answer: this is being tackled in an action that considers all the sites of the egi.eu domain. 3) There is a possibility to "star" a request. I put a star and my request was visible in the starred. I do not know what it means. No information at all on this functionality. 4) Request motivation is short (limited to 1500? I suppose characters) How can it be really explained and evaluated? *Answer: the purpose is to maintain the process manageable, more info can be linked if necessary.*
Ease to make mistakes when performing an action	1) Globally no. 2) The resources quantities are not obvious for a new user I think. They may ask haphazardly. 3) It is possible to ask for 0 resources (I tested cloud + comment) 4) When I fill in the request for allocation, field discipline. The help gives a url but it is impossible to copy-paste the link or to click on it and it is long enough to do mistakes!
Is the interface familiar/intuitive for the users?	1) Are there two country fields? I think yes (I filled in just one). It has to be explained. 2) My affiliation is pending and I do not know what it means. An explanation should be good and also the maximum delay to get it approved. And also a contact In case of timeout. 3) The period between my affiliation request and its validation is a silent period. I propose to send a short email to the user to acknowledge his/her request and to give an approximate delay (or maximum) for the answer. I received the validation email the day after. 3) affiliation validation email: Here is the email: sender: mailerpng@gmail.com Comment: how to know it is related to EGI? Again how the user may trust in the portal? Subject: [LTOS] Affiliation accepted Comment: from a user point of view, what is LTOS? What does it mean?

	Text: Dear User, your affiliation (IdGC/CNRS/France) was accepted. Best wishes, Support Team The user doesn't know what this support team is; there is no mean to ask a question. The message has to be improved. 4) SLA request. I think it is difficult for the user to ask for quantitative needs because at this step he/she doesn't know concretely what it means. 5) Now my request for resources is invisible (I've got a short message on the screen "This document has been sent and is being processed by another party " I have not been notified by email, request resources is blue on the dashboard page ; I have no item to display in any request type in the resources page.). At this step I would like to see information) 5bis)"Another party" is mysterious. It has to be specified or dropped. 6) https://access.egi.eu/#/science-gateways page This text « The Science Gateway for the EGI Long Tail of Science Pilot has been built using the standard-based Catania Science Gateway Framework in order to provide small groups and even single researchers with the possibility to seamlessly execute scientific applications on the EGI Grid and Federated Cloud Infrastructures as well as on local High Performance Computing clusters. » is not useful. It is an internal text, not a text for users. It should be replaced by a text describing what the user will be able to do with this portal. 7) When my request for resources is accepted I'm not notified with an email. I have to go to the portal to see if my request is validated and because I do not know the approximate delay I think there is a risk that the user will lose patience and give up. 8) What is the purpose of a new affiliation? (Change of affiliation? Double affiliation?). It has to be explained.
Unexpected or confusing behaviour of the tool, including bugs	1) the EGI logo on the portal links to itself and not to EGI website (as we could expect) 2) When signing up with a browser containing a certificate, the certificate is required. The message is: "This site has requested that you identify yourself with a certificate: unity.egi.eu:443

	Organisation: “” Issued Under: “COMODO CA Limited” It’s confusing: my Firefox configuration is to ask which certificate I want to present to a web site among my certificates; unity is different of access.egi.eu(it may be source of untrusty for users ; there is no Organisation name). *Answer: this is unfortunately out of portal’s control. The portal uses a certificate that is among the issuers normally trusted by the browsers and this should reassure the user.* 3) When login with EGI SSO I can give my GRID certificate ;-) It’s useful If the user have one ;-) 4) When I’m on the https://access.egi.eu/#/registration page, it’s impossible to go back to the home page! 5) My affiliation is pending. I logout. When login again or signing up on the same machine/browser I enter the portal without credentials! It seems to be dangerous. (If the browser is closed, authentication is required again). 6) The interface remembers what the previous mean of authentication in the browser was and proposes it. This is not explained in the portal and perhaps not useful if the researcher does not use its own machine. *Answer: the previous two are common features of many online services. Unfortunately SSO does not allow sign-off.* 7) My affiliation is pending for a while and I do not know for how much time. A message would be useful to explain. 8) when I request for resources, the system asks for a certificate (see previous comment, I have certificates in my browser) 9) When I click on “request new allocation” I get this message “Document is not complete therefore it cannot be sent. Complete document should have all required fields set and contain at least one type of resources.” 10) When I fill in the request for allocation, status info gives unnecessary information (for example Campaign: EGI LTOS) 11) When I fill in the request for allocation, fields of dates, the help information seems too complicated (“within the SLA” is not necessary and may be replaced by within this request). SLA is a technical term for end users. 12) When I fill in the request for allocation, field discipline. The help gives a url but it is impossible to copy-paste the link or to click on it and it is long enough to do mistakes! 13) When I fill in the request for allocation, field discipline. the help

	gives an url. This url should be https://wiki.egi.eu/wiki/Scientific_Disciplines and not https://wiki.egi.eu/wiki/VT_Scientific_Discipline_Classification 14) When I fill in the request for allocation, field discipline. the help gives an url the field is too short and the box too long (30 is not enough for a lot of scientific disciplines in the classification). It's not really clear to understand why the box is red. The system of help when the mouse browses the box is not very useful in this case. I'm not sur every user will find/read the help. 16) I waited for the resources validation without any information and any mean to ask help. Finally with the help of P Sologna the situation was unlocked and my second request validated. Now I have access to the Catania portal. I have to accept new terms of use! It is a little bit strange that these terms are different of the LTOS ones. 17) On the Catania portal, the terms of use I signed are different from the terms of use available at the bottom of the page. I cannot compare accurately (those I signed are no more available) but the first one referred to laws of Los Angeles and the second one to laws of Italy. Consistency should be good! And Italy laws better ;-) 99) typos on the portal: Hello: …researches… -> researchers

4.1.3 Structured review Alessandro Paolini

Is the tool satisfying the use case?	*Yes, the tool seems satisfying the users needs*
Are all the sections and links properly working?	*Yes*
Learnability (how easy is it for users to accomplish basic tasks of the use case?)	*All the steps to perform for accomplishing the several tasks are easy to do*
Ease in finding the information in the tool	*Very easy*
Ease to keep track of the location in the site	*<Please report your findings here>*
Is the help section explaining well how to use the tool?	*yes*

Ease to make mistakes when performing an action	*Very low probability*
Is the interface familiar/intuitive for the users?	*The interface is very intuitive and familiar*
Unexpected or confusing behaviour of the tool, including bugs	*Not for the moment*

4.2 User Story: admin user approves or rejects requests

4.2.1 Description

The access.egi.eu portal has a restricted area where the user support users can access and have an overview of the pending requests, have access to the information filled in by the users, and approve or reject the requests.

Note: this section is not open to all the users and therefore the individual operators can be trained: the interface can be less intuitive than for the previous user case.

4.2.2 Structured review Alessandro Paolini

Is the tool satisfying the use case?	The tool allows to manage the users subscritpions and their resources requests
Are all the sections and links properly working?	In the Approve affiliation section something doesn't work properly: • clicking on the "messages" button brings you on a white page • clicking on the "notification" button doesn't produce anything • clicking on the "tasks" button doesn't produce anything • no one of the 4 coloured button on the left menu produces any action • neither the logout button works • in the "Affiliation page" when selecting one or more users and performing the action proposed at the bottom of the page, the action is executed but the page is not refreshed • in the "Users" page, it seems not possible deleting the subscribed users
Learnability (how easy is it for users to accomplish basic tasks	It is not immediate understanding the actions an operator can perform

of the use case?)	
Ease in finding the information in the tool	Poor information about the tasks to perform
Ease to keep track of the location in the site	*<Please report your findings here>*
Is the help section explaining well how to use the tool?	No help section is present
Ease to make mistakes when performing an action	In many cases you should click only on ACCEPT/REJECT buttons, so the probability to make mistakes is low
Is the interface familiar/intuitive for the users?	quite intuitive
Unexpected or confusing behaviour of the tool, including bugs	See above

4.3 Open review

4.3.1 Open review from Genevieve Romier

Globally I think that the tool works but there are issues with the presentation, we miss explanations and messages at different steps and we miss the link with the EGI website.

The user doesn't know what the criteria used to validate the requests are. I think simple criteria should be given.

The help and the different documents referred such as the VO AUP are often wiki pages or docx documents that are not relevant for end users of the long tail of science. There are inconsistencies in the documents and explanations.

The users should see a simple interface with well adapted and consistent documents and help. They do not have to know they are considered as LTOS. They are users of this service. The gateways have to be presented as services (tools or services with functionalities), the presentation has to be focused on what can do the user with the services and not on why we built them.

In addition:

Is the tool fit for production?

The tool does not fit for production as is. There are a lot of lacks to put it in production. If we put it now in production there are risks that users do not trust it, do not adopt it because they do not have enough information and step to step messages and the benefit is not really clear (what are the services to be used). I think the work to do is not technically difficult and is more a writing and presenting effort with the point of view of a user who doesn't know what is EGI but has to trust in EGI services. Words such as LTOS, SLA for example have to be dropped and replaced. Help must be improved and examples or default quantities proposed (for the resources for example). A solution could be to give the possibility to ask for a set of resources that correspond to a service usage (for example Catania gateway test or 30 semantic searches or about 50 runs of an application for example). That could help users to formulate their needs.

In addition, if users may know how much they consumed and how much is available it could be very useful.

It is not clear if they can ask for several requests at the same time (I did it without problem but my first request disappeared).

Are the information in section 1,2 and 3 of this document complete?

As the review is also a workflow review (or a step by step review), it would be easier if the structured view would be organised in a same way. I hope my explanations are accurate enough to understand at which step I was when the comments came up. If it is not the case feel free to ask.

4.3.2 Open review from Alessandro Paolini

4.3.2.1 User portal

When accessing for the first time to https://access.egi.eu/start, it is presented in a simple way the purpose of the portal and what is the service provided.

The user is soon invited to register to the tool for trying the service, and the navigation through the page is intuitive for getting more information about the platform. It is also explained how to access to it.

The access to the platform is done through either an EGI SSO account or a social network account (Google,Facebook).

Once the user is registered and signed in (https://access.egi.eu/#/dashboard) there are two steps to do before accessing to the Science Gateway: adding her affiliation and requesting the resources.

- In the https://access.egi.eu/#/account page, the user can easily edit her profile and affiliation(s): there is also the possibility to connect this account to the LinkedIn and ResearchGate ones.
- In the "resources" page (https://e-grant.egi.eu/ltos/) the user can perform an allocation resources request, providing some basic information like the time period, the scientific discipline, and a motivation; then also more specific information are required, like the CPU and/or the storage capacity needed for using the HTC resources, and/or the equivalent ones for the CLOUD resources. The so filled in request can be sent for the approval or also saved in case the user prefer sending it in another moment; other options are the cancellation (for cleaning all the information and filling them in again) and the invalidation (completely delete the request). Always in the "resources" page it is shown all the requests made by the user (submitted, accepted, rejected, drafts, starred) and a click on the request name will display all the details.

In case the user needs more information about the platform, in the dashboard page there is a link to the "Long tail of science" wiki with detailed explanations.

During my review I was able to test the email notifications that are properly sent when an affiliation is accepted or rejected.

For the user is not possible deleting any old affiliation owned: maybe the developers can add this feature in the future.

4.3.2.2 Approve affiliation portal

Link: https://access.egi.eu:8888/modules#/list/Affiliations

When accessing to the main page, for me at the first use of the portal it's not clear which action I can do and where to go for doing anything. It would be helpful, when passing the mouse cursor over the buttons, if it appeared a menu with a brief information regarding that particular button.

There is somethings that doesn't work properly:

- clicking on the "messages" button brings you on a white page
- clicking on the "notification" button doesn't produce anything
- clicking on the "tasks" button doesn't produce anything

- no one of the 4 coloured button on the left menu produces any action
- neither the logout button works

Through the left menu the operator can browse the subscribed users and their affiliations:

- in the "Affiliations" page it is possible to accept or reject any users affiliations; after clicking on the button in the "Action" column for a particular user, the page is updated; when selecting one or more users and performing the action proposed at the bottom of the page, the action is executed but the page is not refreshed.
- In the "Users" page it is only possible seeing the users details but no other action is allowed; it would be useful having the possibility to accept/reject the affiliations also on the users details page.

In any case, it seems not possible deleting the subscribed users.

During my review, I was not able to test the email notifications to admins.

4.3.2.3 Approve resources portal

Link: https://e-grant.egi.eu/ltos/

When accessing to the page, the requests are displayed into several categories: inbox, outbox, accepted, rejected, starred, and all.

The operator can easily check the details of any request, and in case perform the proper actions on the incoming ones: change, accept or reject request, and find resources.

With the change request action, the admin can modify any field of the request, and then send it to the customer. The request so modified is displayed into the outbox category for being processed by another party (even though is not clear to me what does it means).

There is also a button for creating a resources request: it is not clear the sense of having this available for the admins. After creating a request in this way, it is not displayed with the ones coming from the users.

4.3.2.4 Conclusion

In addition:

Is the tool fit for production?

In conclusion, the User Portal is intuitive and easy to use and in my opinion is ready for production.

Instead, the “Approve Affiliation Portal” is not intuitive as the users one and it is required a certain expertise for using it at the best, though only a restricted number of people will access to it. Several things have to be fixed before entering the production.

Regarding the “Approve Resource Portal”, it is easy to use and ready for production, even though it would be useful having more information about the sections of the portal and the meaning of the buttons for performing any action.

Are the information in section 1,2 and 3 of this document complete?

Yes, they well explain the purpose of the platform

5 Future plans

The following are the tasks that still need to be performed on the technical LTOS platform:

1. Monitoring of access.egi.eu, Science Gateways (SGs). Update SG integration documentaiton in Wiki accordingly.
2. Setup GGUS units for trouble tickets as needed. Update SG integration doc in Wiki accordingly. Setup email list for user profile and resource request approvers. Register this in URP for notification about new requests.
3. Define identity vetting manual (what is a ‘good enough profile’, how much capacity to allocate) – for user request approvers.
4. Define and implement security monitoring and user suspension process.
5. Manage user-level quota inside the SG (e.g. user X cannot start more than X VMs in parallel) SG to get input from URP.
6. Define and implement process for downtime notification.
7. Separate accounts for user request approvers.
8. Notification about new requests, about request approval/rejection.
9. Notification emails about new requests should include user’s country in the subject (so NGI people could identify and respond easily to their new users).
10. eduGAIN integration
11. ORCID and ResearchGate links in affiliation profile
12. Discuss acknowledgement text (about providers and SGs)
13. Provide a method for users to check their resource consumption

14. Instructions for users on how to propose new applications, gateways, sites for integration

5.1 Tickets submitted to track the suggestions from the reviewers

- https://rt.egi.eu/rt/Ticket/Display.html?id=10226
- https://rt.egi.eu/rt/Ticket/Display.html?id=10229
- https://rt.egi.eu/rt/Ticket/Display.html?id=10233
- https://rt.egi.eu/guest/Ticket/Display.html?id=10235
- https://rt.egi.eu/rt/Ticket/Display.html?id=10236
- https://rt.egi.eu/rt/Ticket/Display.html?id=10237
- https://rt.egi.eu/rt/Ticket/Display.html?id=10238
- https://rt.egi.eu/rt/Ticket/Display.html?id=10239
- https://rt.egi.eu/rt/Ticket/Display.html?id=10240
- https://rt.egi.eu/rt/Ticket/Display.html?id=10241
- https://rt.egi.eu/rt/Ticket/Display.html?id=10227
- https://rt.egi.eu/rt/Ticket/Display.html?id=10228
- https://rt.egi.eu/rt/Ticket/Display.html?id=10230
- https://rt.egi.eu/rt/Ticket/Display.html?id=10231
- https://rt.egi.eu/rt/Ticket/Display.html?id=10336