

Community support requirements

Introduction

We define a Community Support as a subsystem concerned with managing, controlling and tracking users' activities within an RI and with supporting all users to conduct their roles in their communities. It includes many miscellaneous aspects of RI operations, including for example (non-exhaustively) authentication, authorization and accounting, the use of virtual organizations, training and helpdesk activities.

The questions we asked for RIs communities focused on 3 aspects: 1) functional requirements, 2) non-functional requirements (e.g., privacy, licensing, performance), and 3) training.

with help from go betweens and others she co--opts.

Overview and summary of community support requirements

Functional requirement

- **Data Portal:** is highly requested. Many RIs already have own data portal while some others are in the process of development. Data portals provide (single point) access to system and data products both for human and machines (APIs). The following functionalities are commonly requested:
 - **Access Control:** AAI management is requested by many RIs. For example, IS-ENES2 currently uses OAuth2, OpenID, SAML, X509 for AAI management.
 - **Discovery facilities:** metadata-based discovery mechanisms are commonly used.
 - **Accounting:** tracking of user activities is commonly requested, which is useful for analysis the impact of the RI. For example, EMBRC records where users are going, what facilities they are using, and the number of requests. The EMBRC head office will in the future provide system to analyse resource DOIs, metrics for number of yearly publications and impact factor, and questionnaires submitted by users about their experience with their services. Within LTER, tracking of the provenance of the data as well as the usage of them (e.g. download or access of data and data services) is planned. With the new version of DEIMS, statistics on the level of generic users will be implemented, mainly to allow a better planning of the features. For tracking the use of data, features to be implemented by EUDAT services, e.g. provenance support of B2SHARE, will be used. Google analytics currently used to track the usage of the DEIMS interface. B2SHARE (data repository), DEIMS (developed by US LTER and extended by LTER Europe with regard to site documentation), standard data services (e.g. SOS, geoserver, geonetwork, etc.),
 - **Issue tracker:** e.g., recently, ACTRIS has been introduced issue tracker to link data users and providers, and to follow up on feedback on datasets at individual level
 - **Community software:** e.g., EPOS is in the process to decide which private software to use and how to intergrate them in the data portal. In LTER, R statistical software, different models (e.g. VSD+, LandscapeDND, etc.) are provided.
- **Wiki:** this is often used to organise community information and served as a blackboard for community members to collaborate work (e.g. adding names and responsibilities to a list of tasks to be done). Sometimes, it is also used to keep track of progresses of a task, both for strategic and IT purposes. A special type is FAQ pages (and other materials targeting at a more general audience, outreach materials for educational institutes), which are a set of Wiki pages describing more technical aspects of data handling and data products, and also a system for collecting user feedback.
- **Mailing lists, twitter & Forums:** they are intended to facilitate the communication to and from groups of community members. Forums and mailing list can be interlinked so that any message in the mailing list is redirected to the forum and vice-versa.
- **Files and images repository:** a common area for uploading/downloading files and exchanges them with members and stakeholders. Also, it will be a fundamental tool to store and categorize images and other outreach material.
- **Shared calendars:** to keep track and disseminate relevant events for community members.
- **Events organization:** tools to organize meetings, events and conferences are requested. It should handle all the aspect of a conference /meeting: programme, user registration, deadlines, document submission, dissemination of relevant material etc. Tools like Indico^[1] are currently popularly used.
- **Website:** The purpose of the website is to disseminate community relevant information to all stakeholders. The website shouldn't contain reserved material but only publicly accessible material (e.g. documents and presentations external or internal stakeholders, images for press review). The website should include also news and interactions from social networks. The website should be simple enough to allow almost anyone with basic IT skill to add pages, articles, images. A simple CMS (content management system) is the most reasonable solution (e.g. Wordpress, Joomla)
- **Teleconferencing tools:** Communication with all stakeholders (internal and external) is also carried on by teleconference. For this purposes some good quality tools (Screen sharing, multi-user, document exchange, private chat etc.) are desired. Popular tools includes, Adobe Connect, Web Ex, GoToMeeting, Google Hangout and SKYPE.
- **Helpdesk & Technical support:** For example, the data products that ICOS produces are complex and often require experience of, and detailed knowledge about, the underlying methods and science to be used in an optimal way. Technical support must be available to solve any problems. The ICOS Thematic Centers (for Atmosphere, Ecosystems and Ocean) are ready to provide information and guidance for data users. If needed, requests for information may also be forwarded to the individual observation stations. The mission of ICOS also comprises a responsibility to support producers of elaborated products (typically research groups performing advanced modelling of greenhouse gas budgets) by providing custom-formatted "data packages".

As final remark, at the moment, it is difficult to find a pre-existing software package with the aforementioned features. On the other hand, it would be better to re-use tools that community members are familiar with, then the best approach seems to be manually build an internal environment with a single sign-on which give access to a bundle of tools.

Non-functional Requirements

Mainly include:

- **Performance:** requests robust, fast-react, protecting privacy, secure. Good performance for high data volumes.
- **Data policy and Licensing constraints:** Some communities' data have licensing constraints that will restrict access to a certain group of users. For example, ICOS will not require its users to register in order to use the data portal or to access & download data. However, ICOS plans to offer an enhanced usage experience to registered users (including automatic notifications of updates of already downloaded datasets, access to additional tools at the web site, and the possibility to save personalized searches and favorites in the user profile). Everyone who wishes to download ICOS data products must also acknowledge the ICOS data policy and data licensing. (Registered users may do so once, while others must repeat this step every time.)

Training

Training activities within ENVRI+ communities can be categorized as follows:

- No training plan: Majority ENVRI+ RI communities do not have a common training plan at the moment.
- No community-wide training activities: For example:
 - *SIOS*: many organisations have their own training activities. Trainings are provided to students or scientists. E.g., The University Centre in Svalbard (UNIS) has its own high quality training program for new students related to field security, i.e. how to operate safe and in accordance with environmental regulations, for all students and scientists.
 - *ACTRIS*: each community has their own set of customized training plans. Courses and documentations are made available via web. E.g. for teaching how to use the data products. ACTRIS considers to organize webinars. Appropriated methods for delivering training would be community website, target session at community specific workshop
 - *ICOS*, does not have a common training plan as such at the moment. The Carbon Portal organizes occasional training events, e.g. on Alfresco DMS (the Document Management System used by ICOS RI). The different Thematic Centers periodically organize training for their respective staff and in some cases also for data providers (station PIs). ICOS also (co-)organizes and/or participates in summer schools and workshops aimed at graduate students and post-docs in the relevant fields of greenhouse gas observational techniques and data evaluation. Representatives of ICOS have participated in training events organized by EUDAT, e.g. on PID usage and data storage technology. The method to deliver training requested to be One- or two-day face-to-face workshops, concentrated on a given topic and with focus on hands-on activities, are probably the most effective. These should also be backed up by webinars (including recordings from the workshops) and written materials.
- Community training plan under development: A number of communities are in the process of developing of such, For example:
 - *LTER*: Currently a community training plan is going to be developed. Within LTER Europe the Expert Panel on Information Management is used to exchange information on a personal level and guide developments, e.g. DEIMS, towards the user needs. By this also dissemination and training activities to selected user groups are done. Training activities will enhance the quality of data provided, by application of standardised data quality control procedures for defined data sets. This aspects are still in development within LTER Europe.
 - *EPOS*: The training is part of the EPOS' communication plan, which is a derivable at month 6.
- Advanced Level:
 - *IS-ENES2*: Workshops are organised from time to time. Also communications inside the communities are carried out about training course and workshops organized by HPC center or European projects (PRACE, EGI,...).
 - *EMBRC*, a comprehensive Training web portal is provided offering e-Learning platform also b

[1] Indico: <https://indico.cern.ch/>

Research Infrastructures

The following RIs contributed to developing community support requirements

<Delete from the following list any that were not able to contribute on this topic>

<Add an interest inducing sentence or two, to persuade readers to look at the contribution by a particular RI. e.g., What aspect of the summary of requirements, or the special cases, came from this RI. Check with RIs that they feel they are correctly presented.>

ACTRIS: <e.g., This RI ... and therefore has XYZ <Topic> requirements, with a particular emphasis on ...>

AnaEE:

EISCAT-3D:

ELIXIR:

EMBRC:

EMSO:

EPOS:

Euro-ARGO:

EUROFLEETS2:

ESONET:

EUROGOOS:

FIXO3:

IAGOS:

ICOS:

INTERACT:

IS-ENES2:

JERICO:

LTER:

SEADATANET:

SIOS:

