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D1.1 Setup of the Integrated Communication Platform

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WISE&MUNRO



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Executive Summary

This document presents the Integrated Communication Platform (ICP)¹ offering a set of qualitative and effective services to support collaboration among the team members of the ROUTE-TO-PA project. The platform is currently active and already in use by the project participants at the address <http://intranet.routetopa.eu> and <http://services.routetopa.eu>.

The first section highlights the main objectives of the ICP: to facilitate asynchronous communication among members (i.e., forums, mailing list archives and document archive), synchronous communication (chat logs, remote meetings, etc.) and provide a document server to maintain project reports, deliverable and preliminary internal documents always accessible to the consortium members. A brief comparison of the existing collaborative systems is presented. Some qualitative criteria have been defined in order to compare the collaborative systems available. The ROUTE-TO-PA ICP infrastructure is based on the eXo and Seafile platforms. They are both Free, Open Source and self-hosted. At the end of Section 1, software and hardware components, of the proposed infrastructure, are described.

The second section presents a set of social collaboration and communication (synchronous and asynchronous) services provided by Exo platform and the document repository provided by Seafile for archiving and exchanging ROUTE-TO-PA private and public documents.

The third Section includes a list of “Answers to Frequently Asked Questions” as a step by step guide to simplify some interesting project activities.

¹ “Integrated Communication Platform (ICP)” is the correct name of the platform, whereas in the “Grant Agreement-645860-ROUTE-TO-PA” it is wrongly reported as “Integration Communication Platform” because of a typo.

1 INTEGRATED COMMUNICATION PLATFORM (ICP)

1.1 OBJECTIVES OF AN ICP

The Integrated Communication Platform (ICP) is a tool for building qualitative and effective collaboration among the team members.

ICP must be effective, easily usable, offer persistent storage for the information flows exchanged by the team members to provide an environment that fosters regular, documented and fruitful communication. Such an infrastructure has been assembled to facilitate communication among the project team members.

The platform makes extensive use of Web 2.0 based communication and collaboration tools and consists of the combination of the following servers (which are already installed and configured):

- A collaboration server for storing asynchronous communication among members (i.e., forums, mailing list archives, document archive) as well as storing synchronous communication (chat logs, minutes of the remote meetings, etc.). It will be valuable also to monitor the level of communication and integration among Work Packages (WPs) by the Continuous Integration Team.
- Video-conferencing and collaboration tools that will be used to manage the remote meetings project.
- Collaborative writing tools, such as Google Docs, whose collaborative, online writing and commenting has been heavily used during the preparation of the ROUTE-TO-PA proposal, and that will prove itself very handy during the collaborative writing of reports, with several revisions by several entities occurring in parallel.
- Document server, where all reports, and preliminary internal documents will be stored and be accessible to the consortium members.

The infrastructure is built upon Open Source Software (FOSS) with Free Licenses.

Free and open source software give the user the freedom to use, copy, distribute, examine, change and improve the software. The Free software is generally available at no cost and it can be obtained free of charge on the Internet.

1.2 COMPARISON CRITERIA

The following criteria were considered for the choice of the software:

1.2.1 FUNCTIONAL CRITERIA

- Messaging systems provide users with the functionality to communicate via synchronous (a chat logs, minutes of the remote meetings, etc.) and asynchronous messages (i.e., forums, mailing list archives, document archive)
- Video-conferencing and collaboration tools
- Document Management systems provide features such as indexing, searching and distributing documents to authorize users

1.2.2 PLATFORM CRITERIA

- Mobile Platforms: collaboration can be extended into mobile and handheld devices.
- Browser based platforms: collaboration can occur via any Web browser

1.2.3 SOFTWARE AND LICENSE

We adopt the “Free and Open Source” (FOSS) software development model. In fact, according to the guidelines of EU (see JoinUp activities of the European Commission, for example, at <https://joinup.ec.europa.eu/>) open source software favours integration, standardization, interoperability, diffusion and reusability of software products, thereby enhancing their effectiveness on the technological, social and economic context and improving the efficiency in terms of resources and budget.

1.2.4 SELF-HOSTING

Self-hosted infrastructure provides greater direct control over infrastructures.

The benefits to self-hosting your own servers are:

- Complete control and data privacy
- Save money, a self-hosted setup is almost always less expensive
- Web-apps can and do lock out or disable accounts without letting own save data

1.3 OVERVIEW OF THE COLLABORATIVE SYSTEMS

A range of collaborative platform was selected for the study to inform decision on the eventual choice. An overview of each reviewed platform follows:

1.3.1 ASANA

Asana (<https://asana.com/>) is a Web and mobile application designed to enable teamwork without email.

Asana puts tasks and conversations together to help teams in managing projects, and implying a less use of email. Asana enables to organize team projects, create and assign tasks, comment on progress, attach files, and track due dates to keep your teammates accountable and focused on results. Asana is available for the Web, Android, and iOS.

Asana provides the following features:

- Action planning
- Brainstorming
- Content management
- Discussion board
- Document management
- Group calendar
- Project management
- Task management

License: Freemium, it is free for teams of up to 15 people.

1.3.2 DOTPROJECT

Dotproject (<http://sourceforge.net/projects/dotproject/>) is a Project Management System which provides on-line collaborative management of scheduled workloads. On-line collaboration provides facilities for multiple people, who are working simultaneously on projects, to be able to monitor their workload, provide central updates on progress and accumulate supporting information in relation to the project.

DOT project provides the following features:

- Collaboration: forum, social collaboration platform, web conferencing, wiki
- Traditional project management: interactive gantt charts, project template, scheduling

- File Repository
- Contact List
- Calendar
- Resource Based Permissions: the permissions system is role based, users can have read-only access to certain modules by role
- User specific to-do lists and events: when a user logs in, they immediately see what project events they are involved in and what tasks are assigned to them

The software is available on SourceForge.net and the last update was done in 2013.

License: GNU General Public License version 2.0 (GPLv2)

1.3.3 SQWIGGLE

Sqwiggle (<https://www.sqwiggle.com/>) is an always-on online workplace for your remote team to work together.

Sqwiggle provides the following features:

- Instant video conference calls: group video calls up to 10 people
- Team chat which include rich media previews, drag-and-drop file sharing and @mentions
- Real presence shows a snapshot of each team member
- File sharing

License: Commercial

Free: Unlimited 1-on-1 video chat, 5GB file storage, Up to 5 chat streams

1.3.4 TRELLO

Trello (<https://trello.com/>) is a free Web-based project management application, which enable to organize anything and everything to keep your projects on task.

License: Freemium

1.3.5 ALFRESCO

Alfresco Community Edition (<http://sourceforge.net/projects/alfresco/>) is an Enterprise Content Management (ECM) System.

Alfresco provides the following features:

- Document management
- Google Docs and SharePoint integration
- Full-text search across document content and metadata
- Social features (e.g., 'like', 'comment' and 'follow')

License: Community edition, GNU Lesser General Public License (LGPLv3)

1.3.6 LOGICALDOC – DOCUMENT MANAGEMENT SYSTEM (DMS)

LogicalDOC (<http://www.logicaldoc.com/>) is Web-based, open source document management software that is designed to handle and share document within small and large companies.

LogicalDOC provides the following features:

Document Management

- Version Control
- Document Searching
- Multi-language Support

- Open source (Community Edition) and Self-hosted

Collaboration

- Check-in and check-out
- Annotation documents
- Document Rating

License: Commercial Edition, GNU LGPL v3

1.3.7 TIKIWIKI CMS/GROUPWARE

Tikiwiki (<http://info.tiki.org/tiki-index.php>) is an integrated Content Management System (CMS) groupware and it can create Web application with a powerful wiki, sites, intranet and extranet.

Tikiwiki provides the following features:

- Knowledge base: Wiki, FAQs, Tag, Search etc.
- Collaboration and Project Management: Forum, Votes etc.
- Social networking/Community: Friends, Maps, Comments, Calendar etc.
- E-learning: Quizzes, Slideshow etc.

License: LGPL 2.1

1.3.8 EXO

eXo platform is an open source, standard-based, Enterprise Social Platform written in Java and distributed under the GNU Lesser General Public License. It includes collaboration features and is easy to use and to install in any operating system. Chatting and file sharing features are also available. eXo is available in many languages.

eXo provides the following features:

Social Networking:

- User profiles: personalized avatars, job titles, skills and more
- Connections: connect to other team members
- Activity streams: follow what connections are sharing, such as status, documents and links

Collaboration:

- Collaboration workspaces: allow teams to share documents, tasks, events, wikis and more
- Wikis: build documentation, knowledge bases and more with templates and a WYSIWYG editor
- Forums: full-featured forums include moderation, permissions, polls, notifications, locking, bans and search

Productivity:

- Dashboards: customizable dashboards track metrics, feeds, status and analytics
- Calendars: multi-calendar application provides reminders, invitations and free/busy time
- Tasks: create and manage task lists, add tasks to your calendar and set reminders

The main advantage of eXo are:

- Number of add-ons and features
- Content Management: easy file uploads, document sharing, versioning, metadata, advanced search
- Ease of installation/administration
- eXo mobile application
- Open source (Community Edition) and Self-hosted

1.3.9 SEAFILE

Seafile (<http://seafile.com/>) is a file hosting software system and it is free and open source (published under the GPLv3 license). Files are stored on a central server and can be synchronized with personal computers and/or mobile devices via the Seafile client. Files are organised into libraries and can also be accessed via the server's Web interface.

Seafile provides the following features:

File Sharing and Syncing:

- Multi-platform File Sync, share libraries to Groups/Users, Version Control and public link

Online collaboration:

- Wiki, online file editing, group discussion, personal message

Mobile Office:

- File access, group discussion

The main advantages of Seafile are:

- Self-hosted enabling users to host their own Seafile servers without imposed limits on storage space or client connections
- Clients do not store file history, thus avoids the overhead of storing data twice
- Files are further divided into blocks for more efficient network transfer and storage usage;
- File transfer can be resumed;
- Support different storage back-ends on the server side;
- Support downloading from multiple block servers for accelerating file transfer;
- More user-friendly file conflicts handling similar to Dropbox (Add user's name as suffix to conflicted file).

1.3.9.1 FILE PERMISSION MANAGEMENT

Seafile manages files into libraries. Every library has an owner, who can share the library to other users or share it into groups. The sharing can be read-only or read-write.

1.3.9.2 READ-ONLY SYNCING

Read-only libraries can be synced to local desktop but the users cannot modify the files.

1.3.9.3 CASCADING PERMISSION

In Seafile, most permission management are done at the library level. This makes syncing very efficient without needing to check permission for every file. There are occasional cases where users want to set different permissions on sub-folders. You can set permissions on sub-folders for shared users and groups.

1.4 SELECTING OUR ICP

For our ICP, the Freemium or some Community Edition software (such as Alfresco and LogicalDOC) have not been considered because they limit some characteristics of the software. Dotproject has not been evaluated because the project seems not active anymore (last update was done in 2013). Wiki systems, such as TikiWiki, are appropriate to share and easily edit content for the web but a common criticism is that the architecture of Wikis reduces the accessibility of those platform types because it is not easy to find information quickly within specific wiki.

Therefore, our choice of the ICP were eXo and Seafile platforms since they are both Free and Open Source and self-hosted. The eXo platform provides status and activity updates, document sharing and management tools that helps enhancing communication and collaboration among research team and group members. The source code and a packaged edition are freely accessible via an open source licence (LGPL).

Seafile adds a feature called “online collaboration” for research team. Seafile is free and open-source, enabling users to host their own Seafile servers without limits on storage space or client connections. Both platforms can be easily used and managed using any Web browser. Moreover, Seafile can be also exploited using a client desktop which transparently synchronize files on a local storage.

The eXo platform is the main communication platform of the project and is reachable via Web browsers at the address <http://intranet.routetopa.eu/>. Seafile is the official document repository and is available at the address <http://service.routetopa.eu/>.

In addition, we set up a videoconferencing room, accessible at the address <http://meeting.routetopa.eu>, which relies on Google Hangout and a Doodle service for scheduling events, meetings, and appointments.

1.5 SOFTWARE COMPONENTS OF ICP: EXO PLATFORM AND SEAFILE

eXo Platform is an open source, standard-based, Enterprise Social Platform written in Java and distributed under the GNU Lesser General Public License. It is an open-source social-collaboration software suite. Rich collaboration features such as forums, wikis, documents and calendars are integrated around social networking, activity streams and workspaces (See Figure 1). The capabilities on collaboration and the activities stream enhance the connection between the partners who are geographically dispersed.

Open Source Enterprise Platform is an out-of-the-box social intranet solution that includes website management functionality. In addition, eXo tries to ease collaboration and integration by offering native Social Platform apps for iPhone, iPad, and Android devices.

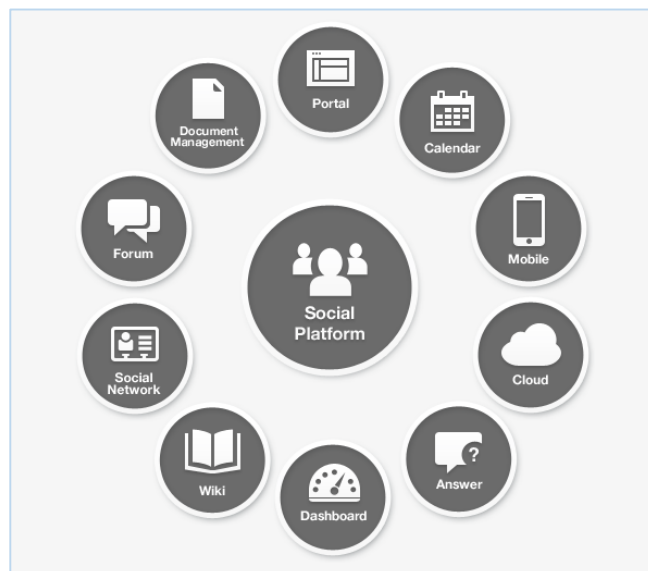


Figure 1: Overview all features of eXo platform

The collaboration and communication features of eXo platform are:

- **Social Network**

- **User profiles:** Profiles let users to personalize their avatar picture, their job title, contact details, skills and background
- **Connections:** Build your network by connecting to other people. You can track their activity through their activity streams. New connections are suggested automatically
- **Activity Streams:** Follow what your connections are sharing, such as links to documents or just moods. Follow team activities. All built-in apps are nicely integrated to update the activity streams of important things like events, changes to documents, new posts, etc.
- **Collaboration**
 - **Spaces:** Create collaboration workspaces for teams or projects where you can share documents, tasks, events, wikis and more. Spaces can be open or closed, private or public and space administrators can manage members and the applications that are available
 - **Wikis:** Wikis are the most unconstrained way to create content for everybody. Build documentation, a knowledge base or procedures super easily with a powerful enterprise wiki that has templates, WYSIWYG, search, cross-linking and more
 - **Forums:** Bulletin boards are a classic discussion tool, which are very popular with communities. Our full-featured forum app has all you need, such as moderation, permissions, polls, notifications, locking, pruning, bans and search
- **Content**
 - **Documents:** Upload files easily, preview them, share them and edit them remotely via WEBDAV. Advanced document management capabilities are available such as versioning, metadata, advanced search and digital asset management
 - **Websites:** Build content types and site structure online
 - **Unified Search:** Search any type of content using a single interface, including documents, events, tasks, posts and articles. Any content can be found with the clear and powerful search application. A quick search-ahead helper field shows the most relevant results and a more advanced search with advanced filtering lets you go further
- **Coordination**
 - **Dashboard:** Each user has a customizable dashboard. Gadgets help to track metrics, feeds, status and analytics
 - **Calendars:** Day, week and month views are available, of course, but it also manages reminders, invitations and free/busy time. Team calendars are managed in spaces and you can also share your calendars individually
 - **Tasks:** can be scheduled in your calendar and reminders will be sent to you. You can also track other people's tasks via activity streams
- **Localization:** the platform is translated in more than 50 languages .

Seafile is an open source storage platform for teams. Seafile's functionality is similar to other cloud storage services such as Dropbox and Google Drive. Seafile allows easily sharing files among a number of users, the main features are file syncing and sharing. Files are organized into library and each library can be shared among users and groups and can be synced separately. The platform provides a privacy protection encrypting files with a dedicated password, keeping password only on clients. Seafile and its desktop and mobile clients are published under the GPLv3.

- **File Syncing and Sharing:** Organize files into libraries. Each library can be shared between users and into groups. A library can also be selectively synced into any device
- **Team collaboration:** Edit and comment files online. Messaging, group discussion, activity notification and file versions make collaboration easy and reliable

- **Mobile Office:** Access files from mobile devices. Notifications and messages make it easy to connect with team members

1.6 HARDWARE ARCHITECTURE

The ROUTE-TO-PA infrastructure has been realized using the Virtualization Technology (VT).

Virtualization is a combination of software and hardware engineering that creates Virtual Machines (VMs) - an abstraction of the computer hardware that allows a single machine to act as if it were many machines. Virtualization enables multiple operating systems to run on the same physical platform. We have chosen the full VT in order to ensure the maximum level of flexibility in terms of the number of operating system that could be used.

The ROUTE-TO-PA infrastructure provides three main services managed on three public domains allocated on two distinct physical servers. On each server we use the hypervisor ESXi provided by VMware under free license.

The three public domains are:

- www.routetopa.eu, for the ROUTE-TO-PA Web site (Web)
- <http://intranet.routetopa.eu/>, for the ROUTE-TO-PA internal communication platform (eXo)
- <http://service.routetopa.eu/>, for the remaining services. Currently the following services are hosted:
 - ROUTE-TO-PA files service sharing
 - SPOD experiments servers
 - version control service
 - collaborative projects software development (Oxwall, Elgg, SPOD Test, DD-WRT)

Figure 2 shows the ROUTE-TO-PA service infrastructure architecture. The services are provided by two ESXi servers dislocated on two different locations. Each server has a local storage, Datastore 1 and Datastore 2 respectively. On the first network there is also available a second storage, Datastore 3, to allow the backup of the servers. The first server provides the ROUTE-TO-PA services. On the other hand the second server ensures the business continuity, disaster recovery and data recover.

The virtual machine servers for the Web, eXo, Seafile, Oxwall, Elgg and SPOD Test employ the Linux operating system Ubuntu Server 14.04 LTS. The Web and eXo service are directly accessible from the public network. The others services are managed by a Virtual LAN (192.168.39.0\24) handled with a DD-WRT, a Linux-based firmware for routers. The DD-WRT machine is in charge of forwarding requests to the services on the Virtual LAN.

The network infrastructure configuration is:

Public Network Address	Service Name	Machine Name	Virtual LAN Address	Default Storage
193.205.161.12	www.routetopa.eu	Web	-	Datastore 1
193.205.161.38	Intranet.routetopa.eu	eXo	-	Datastore 1
193.205.161.38	services.routetopa.eu	DD-WRT	192.168.39.1	Datastore 1
-	services.routetopa.eu	Seafile	192.168.39.2	Datastore 1
-	services.routetopa.eu/oxwall	Oxwall	192.168.39.3	Datastore 1
-	services.routetopa.eu/elgg	Elgg	192.168.39.4	Datastore 1

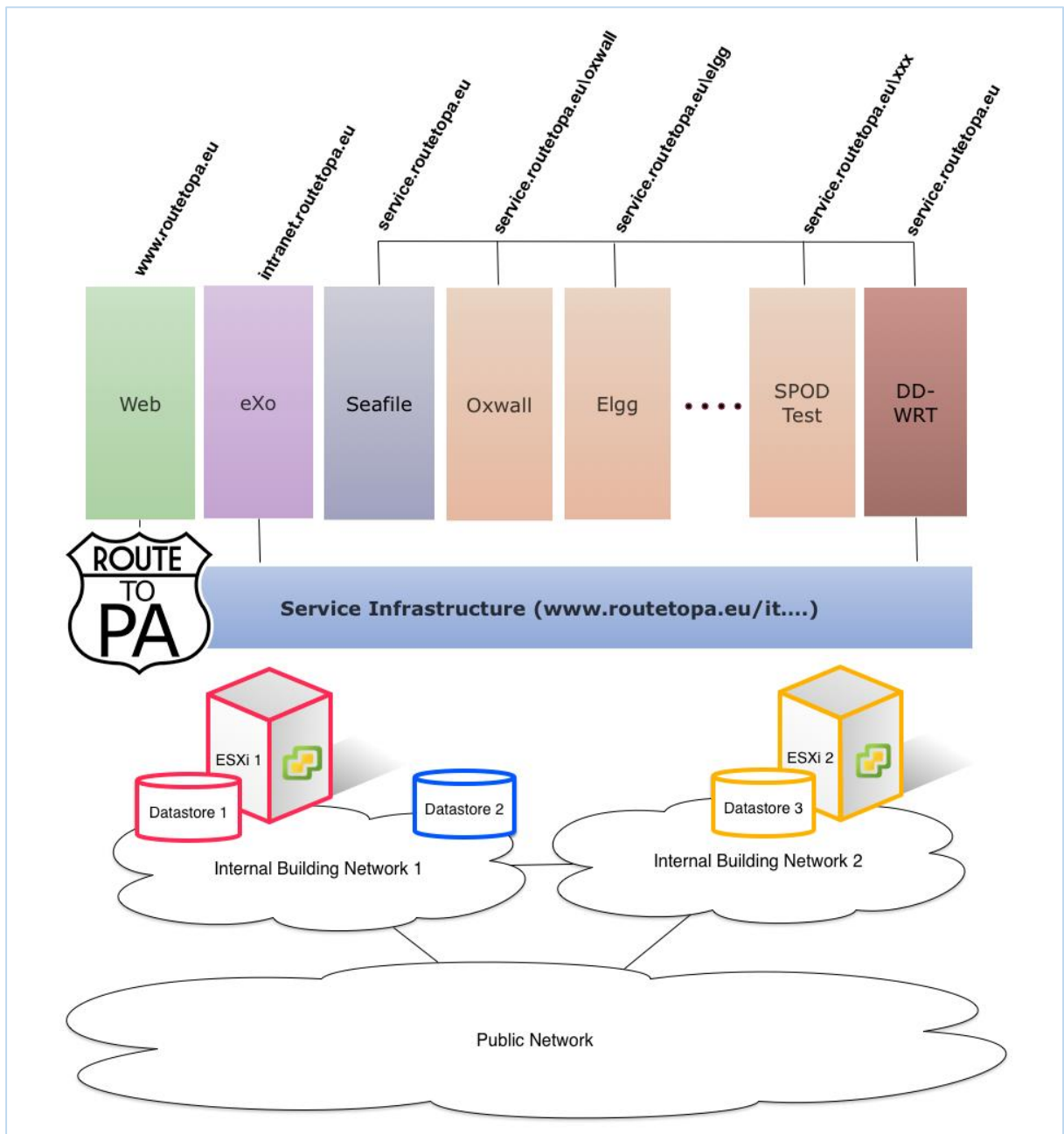


Figure 2: Service Infrastructure Architecture

2 ICP SERVICES

Our ICP includes a set of social collaboration and communication (synchronous and asynchronous) services provided by Exo platform and a document repository provided by Seafile for archiving and exchanging ROUTE-TO-PA private and public documents.

2.1 SOCIAL COLLABORATION

2.1.1 ACTIVITY STREAM

The activity stream provides a chronological display of all status updates, online discussion and notification of performed tasks, like/unlike activities, comment activities, delete activities and delete comments.

2.1.2 BLOGGING THE ACTIVITIES (WIKI)

In order to provide a dedicated activity blog for each team and for each Work Package, the wiki content has been organized. The **Wiki** organization appears as a page tree in which each page may contain many sub-pages. The page tree is depicted in the left panel. When a page is added, it becomes sub-page to the current page. There are different space types: *Intranet Wiki* and a *User Wiki*, the first is the global wiki of the Social Intranet, the second is the wiki of an individual user, namely every user has his own Wiki (personal/private wiki). It is possible to create a blank page or create a page choosing from a list of available templates. It is possible to attach file to a page, there are two forms of editors: Source Editor and Rich Text Editor (WYSIWYG, What You See Is What You Get).

The wiki is organized as follows: the welcome page is created to collect every information that could be useful to teams. Guidelines will be provided to keep the data organized and accessible when the wiki resources grow through collaboration.

One of the sections named “*Dissemination*”; is dedicated to dissemination of the results. All the activities of dissemination of each partners has to be reported in the respective section (e.g., Ancitel dissemination, CNRS dissemination, etc.). For instance, it is possible to add links or PDF file of newspaper article, interview or TV public service announcements. The section named “*Meetings*” is devoted to store the minutes of the meetings. It is possible to take meeting notes by exploiting the chat recording tool. The “*Meetings*” page also provides the agenda of each meeting. The “*Research*” page helps to keep track of information about upcoming conferences and journal publications. On the other hand, suggestions on interesting research papers are performed using the activity stream while the papers are shared in the library “*Papers and Reports*” of Seafile.

The “*WPs*” pages are reserved for WPs leaders.

The “*Teams Blog*” page reports the activity of each team (there is a wiki sub-page for each team).

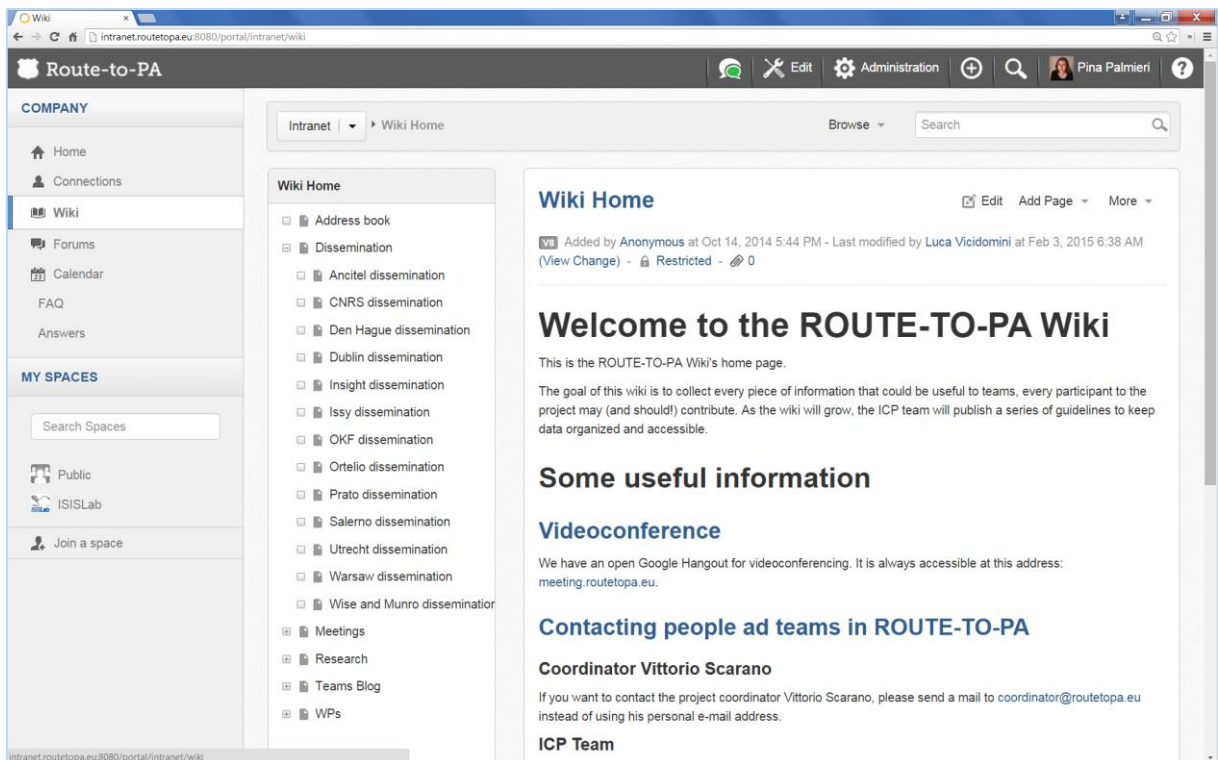


Figure 3: The wiki organization

2.2 DOCUMENT SHARING

Our Seafire repository organizes materials into libraries. A personal private library is also available for each user.

2.2.1 OUR ICP REPOSITORY

Our ICP offers a collaborative space where team members can exchange common documents and official documentation of the project. Shared library are accessible by clicking the **“Organization”** entry on the top-most menu (See Figure 4).

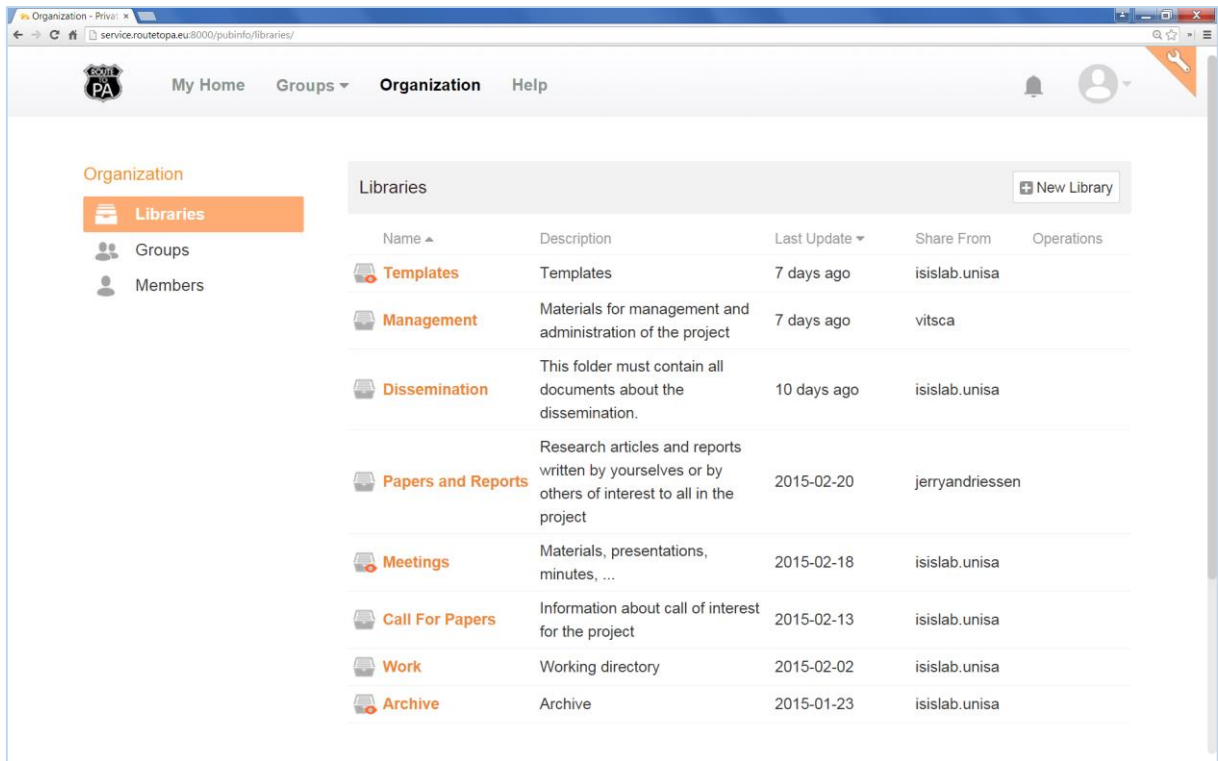


Figure 4: Official documents repository

The shared libraries are organized as follows:

- “Templates” (Read Only). It includes “Docs” and “PPT Presentations” folders. The first one contains document templates, i.e., templates to be used for all project documents a such as deliverables, project meeting minutes, official letter and flyers. The second one contains PPT presentations template to be used in conferences or workshops presentations
- “Management” (Read and Write). It collects all material for management and administration of the project
- “Dissemination” (Read and Write). It contains all documents about the dissemination activities of the project
- “Papers and Reports” (Read and Write). It includes all research articles and reports, shared by any user, that could be of interest for the project
- “Meetings” (Read Only). It collects PPT presentation, minutes of the meetings, videos and photos
- “Call For Papers” (Read and Write). It collects information about calls of interest for the project
- “Work” (Read and Write). It collects working directories, a folder for each Work Package, one for SPOD, one for TET, one for GUIDE
- “Archive” (Read only). It collects official final document of the project. Currently it is organized in the following folders: “Consortium agreement”, “Deliverable”, “Grant agreement”, “Internal Manuals” and “Project proposal”

2.2.2 MORE FEATURES

In the following we provide a short list of features provided by our ICP repository:

- Create and share a download link from a file or folder
- Create an upload link to collect files
- View older version of files, and recover a deleted file

- Sharing a sub-folder inside a library

2.3 SYNCHRONOUS COMMUNICATIONS

2.3.1 VIDEOCONFERENCING

We use Google Hangout for videoconferencing and it is always accessible at the address: meeting.routetopa.eu.

2.3.2 INSTANT MESSAGING (CHAT)

eXo Chat is an instant messaging application that enable real-time collaboration among team members. It provides standard features like notification, status, and so on. In addition it provides a recording feature which enable to save a discussions from the beginning to the end. Recorded data can be exported to a wiki page or sent by email.

2.4 ASYNCHRONOUS COMMUNICATION

2.4.1 MAILING LISTS

A section of the eXo wiki, named “Mailing Lists”, provides a list of active mailing lists to send materials to multiple recipients:

- *coordinator@routetopa.eu* is an alias for the Project Coordinator (PC)
- *mt@routetopa.eu* (*management team*) includes the Project Coordinator and the Project management Office
- *ga@routetopa.eu* (General Assembly) includes all team leaders and PC
- *ac@routetopa.eu* (advisory committee) includes all members of the Advisory Committee
- *teamleaders@routetopa.eu*, includes the leaders of each team
- *wpleaders@routetopa.eu*, includes the Work Package Leaders
- *team@routetopa.eu*, includes all participants of the project
- *euab@routetopa.eu*, includes all the pilot team leaders
- *webmaster@routetopa.eu* includes the members of the team in charge of the management of our ICP infrastructure

Moreover, there is also a dedicated mailing list for each partner (e.g., *ancitel@routetopa.eu*, *cncrs@routetopa.eu*, *isislab@routetopa.eu*, etc.).

2.4.2 ADDRESS BOOK

Another Wiki section, named “*Address book*”, contains the contacts of each member of the project. Each contact entry provides the following information: Name, Surname, E-mail and Membership.

2.4.3 CALENDAR

The Calendar tool, provided by the eXo platform, allows to schedule appointments, meeting and deadlines, establish recurring activities. It enables the creation of multiple calendar and allows to import events from external calendars (ics format).

Two kind of calendars are available: a personal calendar and group calendars that can be shared with specific users or groups. Some group calendars named have been created:

- *Deliverables*, to keep track of deadlines for the submission of deliverables
- *Call for Papers*, to keep track of deadlines for interesting call for papers

- *Meetings*, reports dates and locations of project meetings
- *Events*, that reports dates of public events or workshops dedicated to ROUTE-TO-PA dissemination

2.4.4 FORUM

The eXo Forum tool provides an online discussion site where members can exchange opinion and information, on specific topics, in the form of posted messages. Messages may contain text and/or attached files.

2.5 SUPPORT SERVICES

2.5.1 Q&A

The eXo Answers tool provides a “*Question and Answer*” (Q&A) functionality and enable each user to submit a question regarding the project. Questions are submitted by category and, in order to inform all the members, a new activity about the question is automatically generated in the activity stream. Similarly, each time a member answers a given question the corresponding activity is generated.

Currently the following list of Answer categories is available:

- “Research”, collects questions related to Call for Papers, research articles and reports of interest to all the project members
- “Administration” collects all questions about official documents of the project
- “Meetings”, collects all questions related to the organization of future meetings as well as information regarding past meetings
- “Dissemination” collects all questions regarding exploitation and dissemination of results
- “Deliverables” collects all question about deliverables (e.g., templates, review, deadline)
- “Intranet” collect all question regarding the ICP platform

2.5.2 FAQ

The eXo FAQ (Frequently Asked Questions) tool summarizes by categories, questions and answers that have been created in *Answers*.

2.5.3 SEARCH

The eXo Search tool, available by clicking on the magnifier icon (top-right of the page) allows members to look for all types of content, including documents, events, task, posts, and so on.

An example is depicted in Figure 5. It is possible to refine the search by selecting the desired content type in the “Filter By” panel.

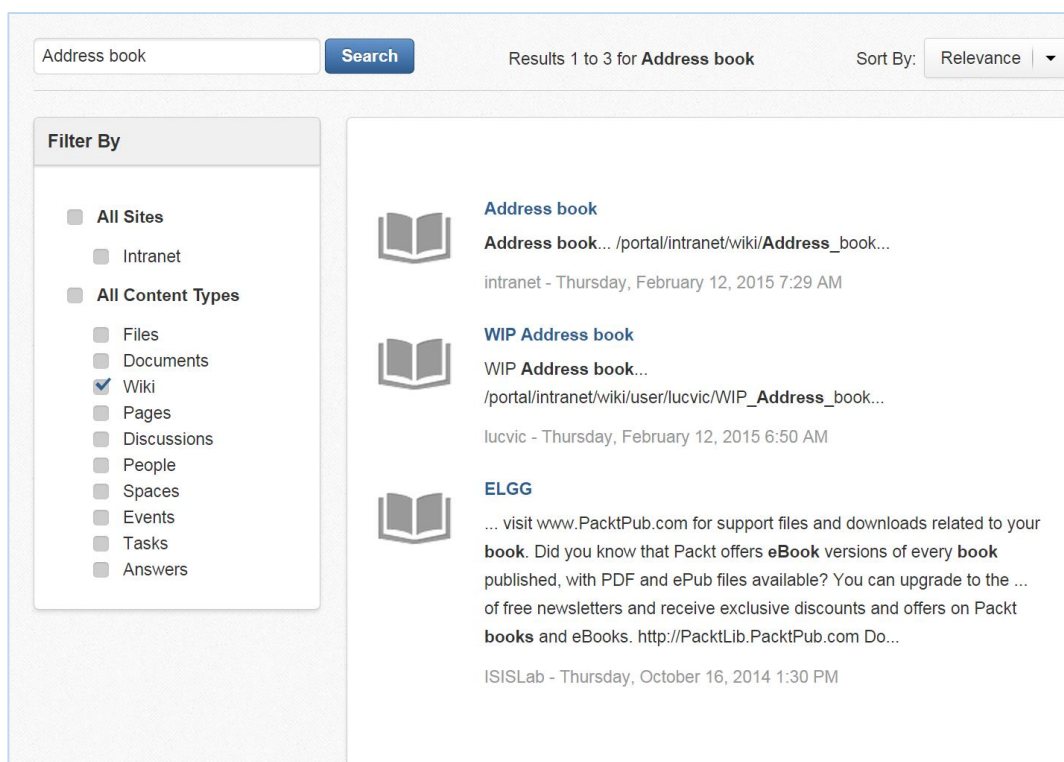


Figure 5: eXo Search tool. The result of the search “Address book” refined by “Wiki” content type

2.6 BACKUP STRATEGY

The data recovery of VMs providing the ROUTE-TO-PA infrastructure is guaranteed by the three levels of backup:

1. Backup of the service container like Wordpress (www.routetopa.eu) and eXo (<http://intranet.routetopa.eu/>). Performed weekly (each Friday). Saved data are maintained for one month.
2. Virtual Machines Snapshot. An incremental backup is performed two times per month. Saved data are maintained for three months.
3. Full Backup of all virtual machines is performed each month. Saved data are stored on a server placed in a different area and are maintained for two months.

The following table summarizes the backup strategy:

Backup Strategy	Frequency	Life time	Description
Copy of the service container data	Weekly	One month	Service container (Wordpress, eXo, Seafire, etc.) data will be copied on the Datastore 3
Virtual Machine Snapshot	Two times per month	Two months	The virtual machine state is saved as snapshot ²
Copy of all virtual machines	Monthly	Two months	Virtual machines data will be copied on the remote datastore

² Virtual machine snapshot allows the user to recover the state and data of a virtual machine at a specific point in time.

3 ANSWERS TO FREQUENTLY ASKED QUESTIONS

We have identified some interesting project activities. For each of these activities we provide a step by step guide the actions that member should perform in order to make the most of the provided ICP platform.

3.1 I HAVE AN INTERESTING CALL FOR PAPERS TO SHARE

Step	Description	ICP services
1	Write on the “Research” page of the Wiki (eXo)	Wiki
2	Share materials available in the “Call for Papers” folder (Seafile)	Repository
3	Post a comment into the Activity Stream (eXo)	Activity Stream

As an example, I want to share the following Call for Papers: “16th Annual International Conference on Digital Government Research”.

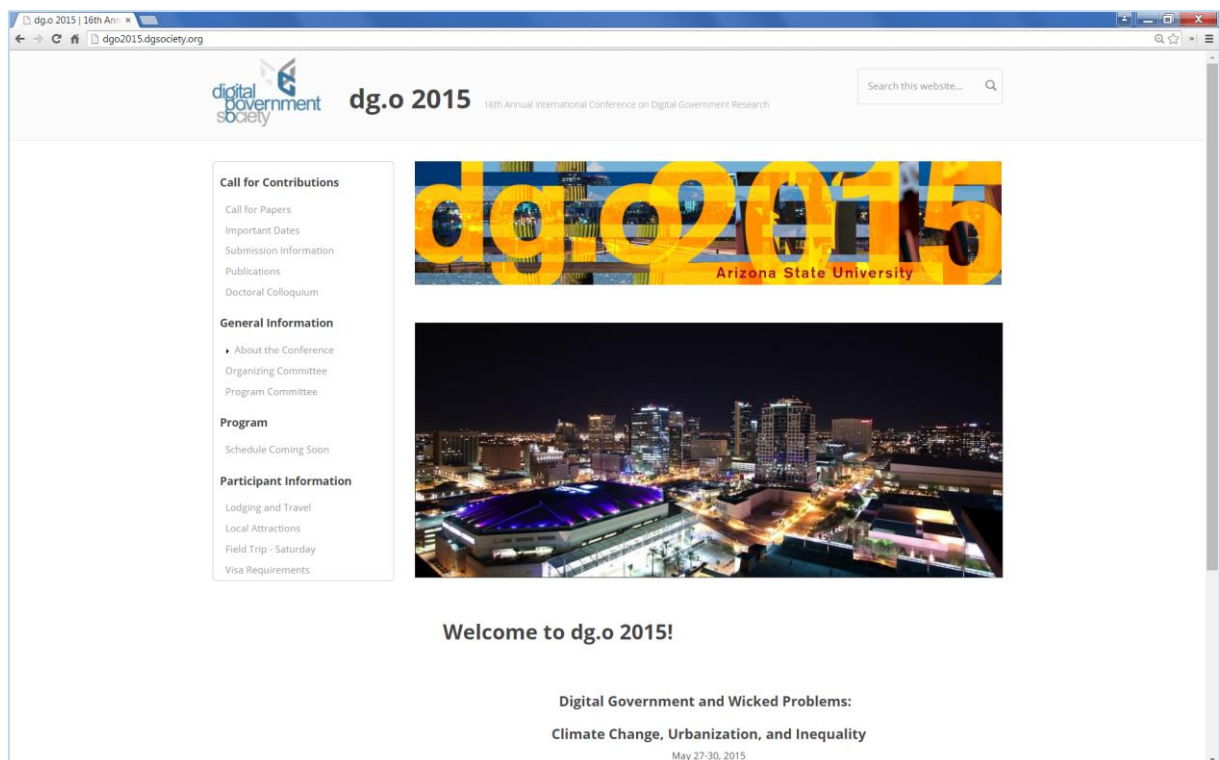


Figure 6: Call for Paper to share

- 1) Log in the eXo platform (Figure 7) and go to the Wiki section. Select the Intranet Wiki (Figure 8 [1](#)) and then select the research page (Figure 8 [2](#)). Create a “Call for paper” Wiki page containing all the information you would like to share about the “Call for Paper” (Figure 8 [3](#)). In our example, a new page with the title “Transparency” is added to the “Call for papers” section of the wiki.

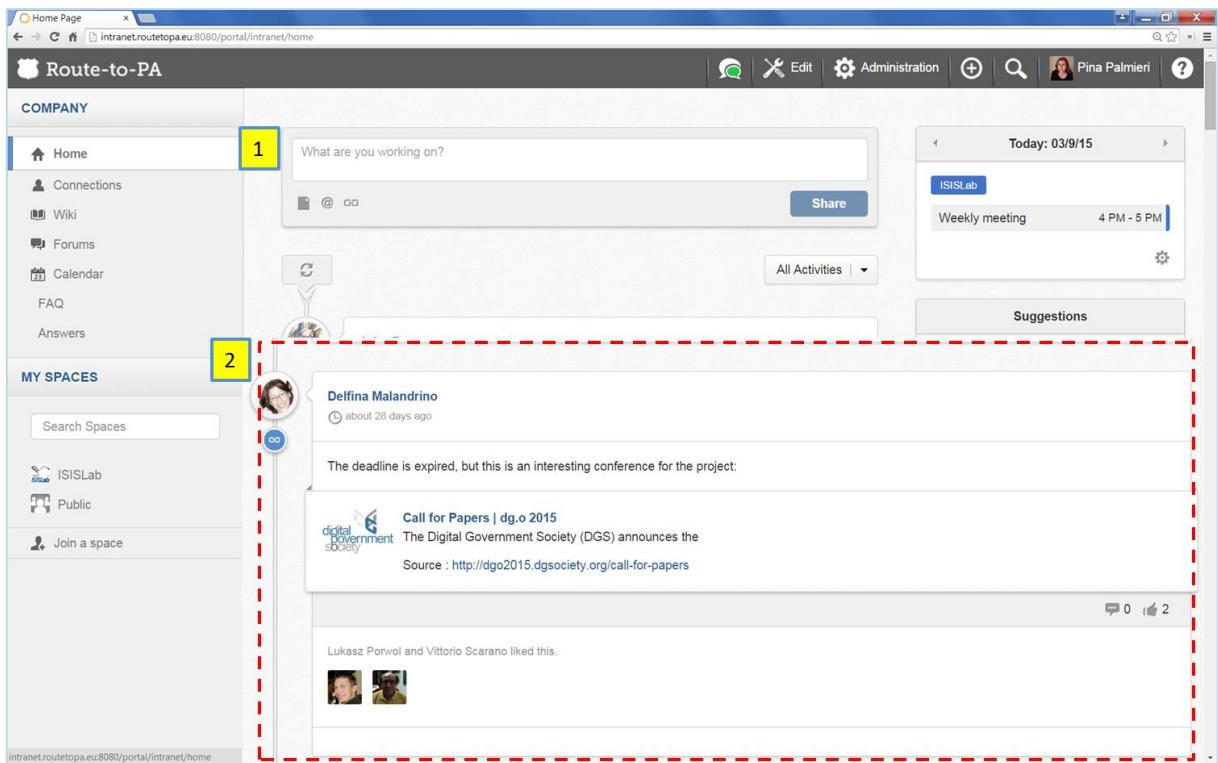


Figure 7: Log in to the eXo platform to go to the Wiki Section

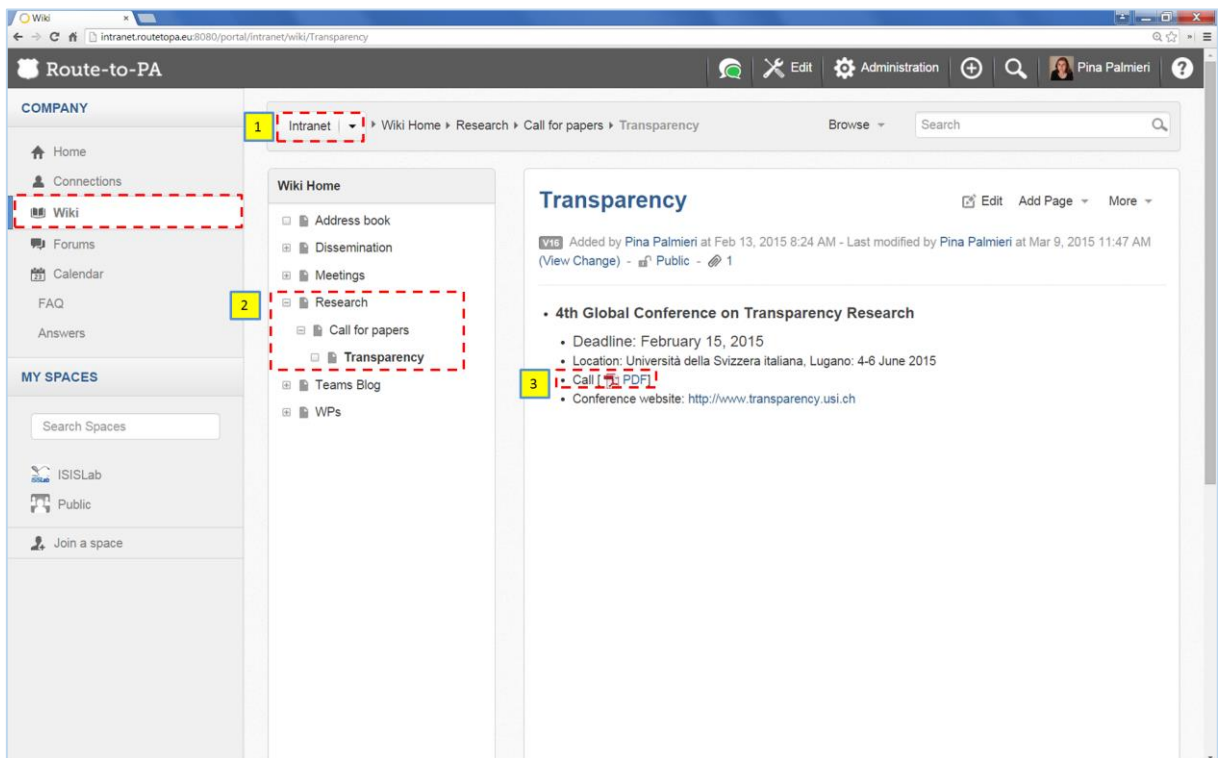


Figure 8: Select the Intranet Wiki to select the Research page

- 2) Log into Seafile (<http://service.routetopa.eu/>). Click on "Organization" (Figure 9 1) and open the "Call for Papers" library (Figure 9 2). Upload the call for paper and/or any other interesting material by clicking "Upload" (Figure 10 1). Select all the files to be uploaded using the "Add Files" button, then click on the "Start All" button to upload all the selected files (Figure 10 2). After uploading the files on the repository,

it is possible to share the link to the file selecting “Share” among “Operations” of the selected file (Figure 11 ¹). A direct address (link) is created to your file and it is possible to use it both on the Wiki page and the activity stream (Figure 11 ²).

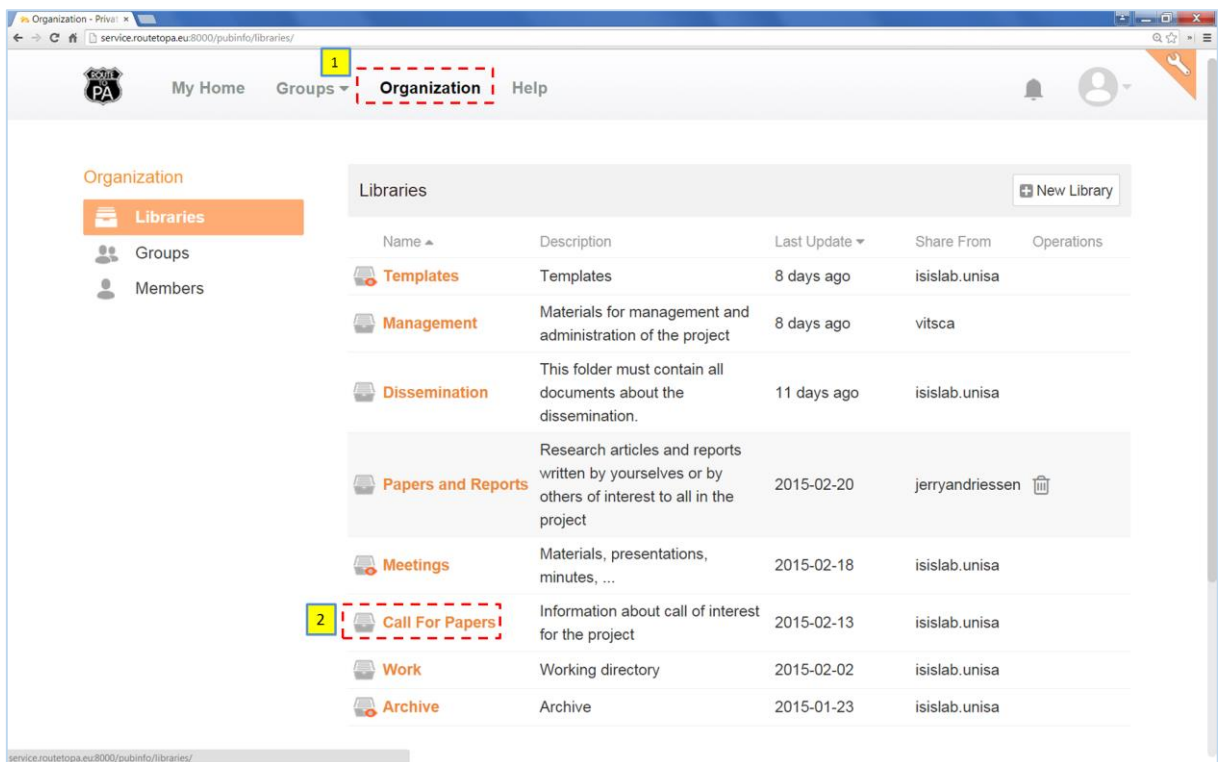


Figure 9: Log in into Seafile to share materials available in the “Call For Papers” folder

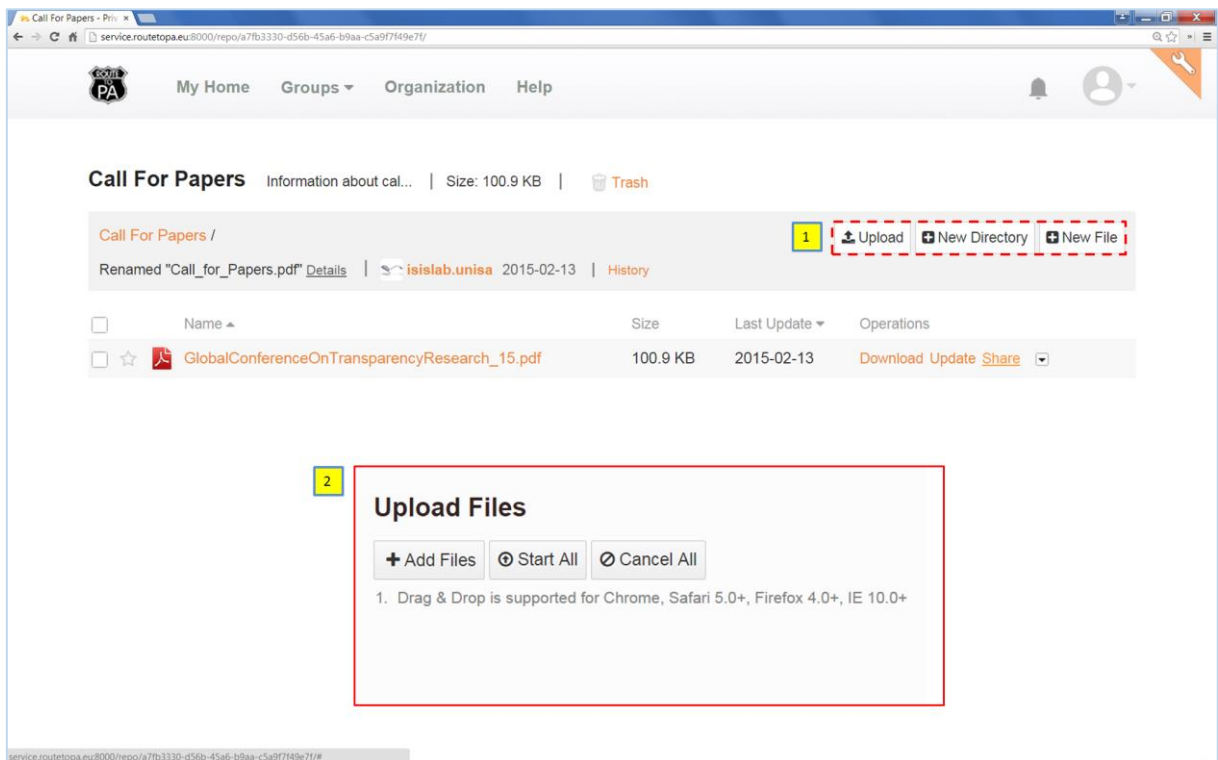


Figure 10: Uploading files and any other material into Seafile

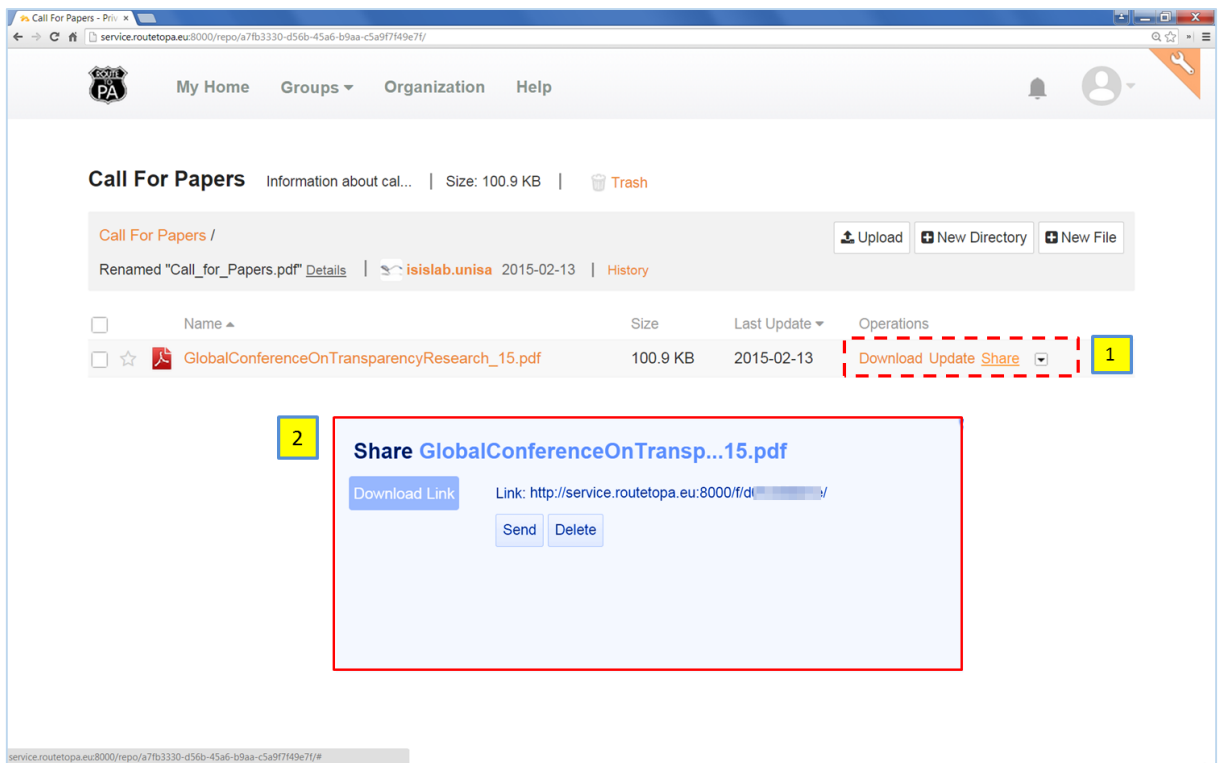


Figure 11: How to share files for all people (Public share)

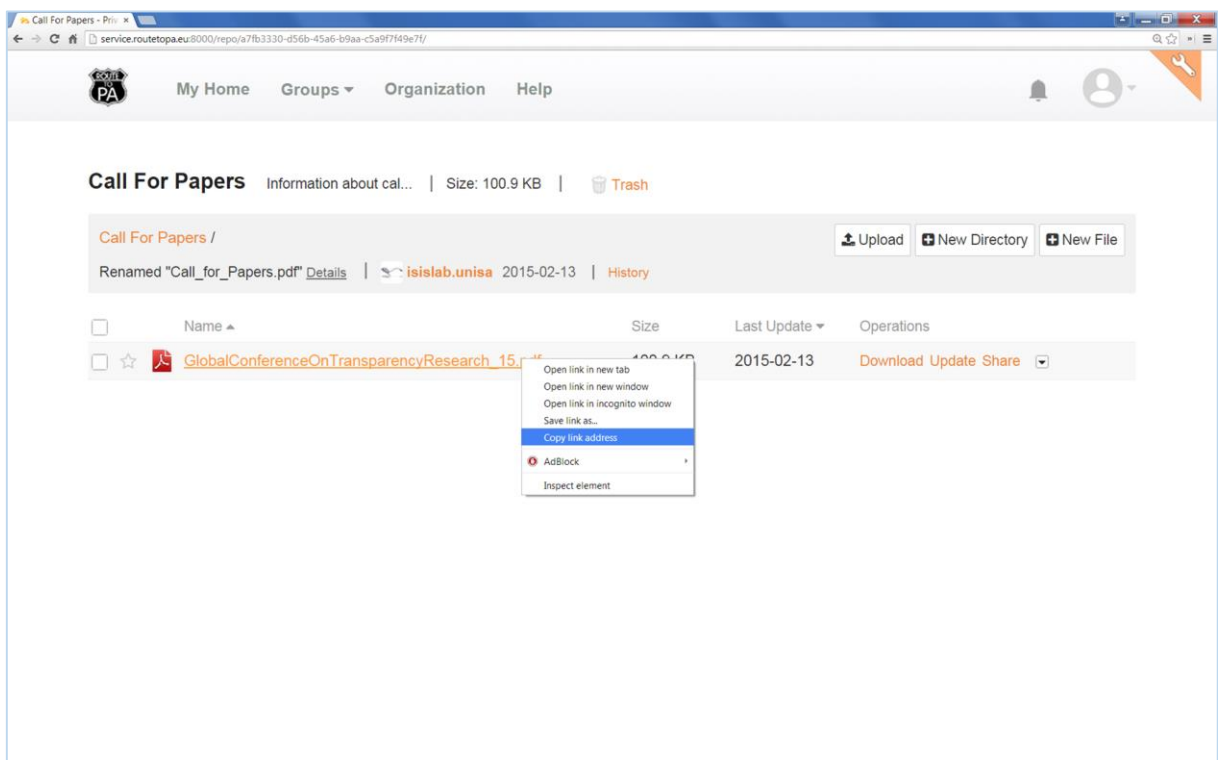


Figure 12: How to share files only for people having a Seafile account (Private share). The referenced resource will be available through the copied link address.

- 3) Once both the wiki page and the shared materials are available the user can publish those information into the Activity Stream (Figure 7 2)

3.2 I HAVE A PAPER TO SHARE

Step	Description	ICP services
1	Share the paper and related material on the “Paper and Reports” folder (Seafile)	Repository
2	Post a comment into the Activity Stream (eXo)	Activity Stream

- 1) Log on Seafile (<http://service.routetopa.eu/>). Click on “Organization” (Figure 13 ¹) and open the “Papers and Reports” library (Figure 13 ²). Upload the paper and/or any other interesting material by clicking “Upload” (Figure 14 ¹). Select all the files to be uploaded using the “Add Files” button, then click on the “Start All” button to upload all the selected files (Figure 14 ²).

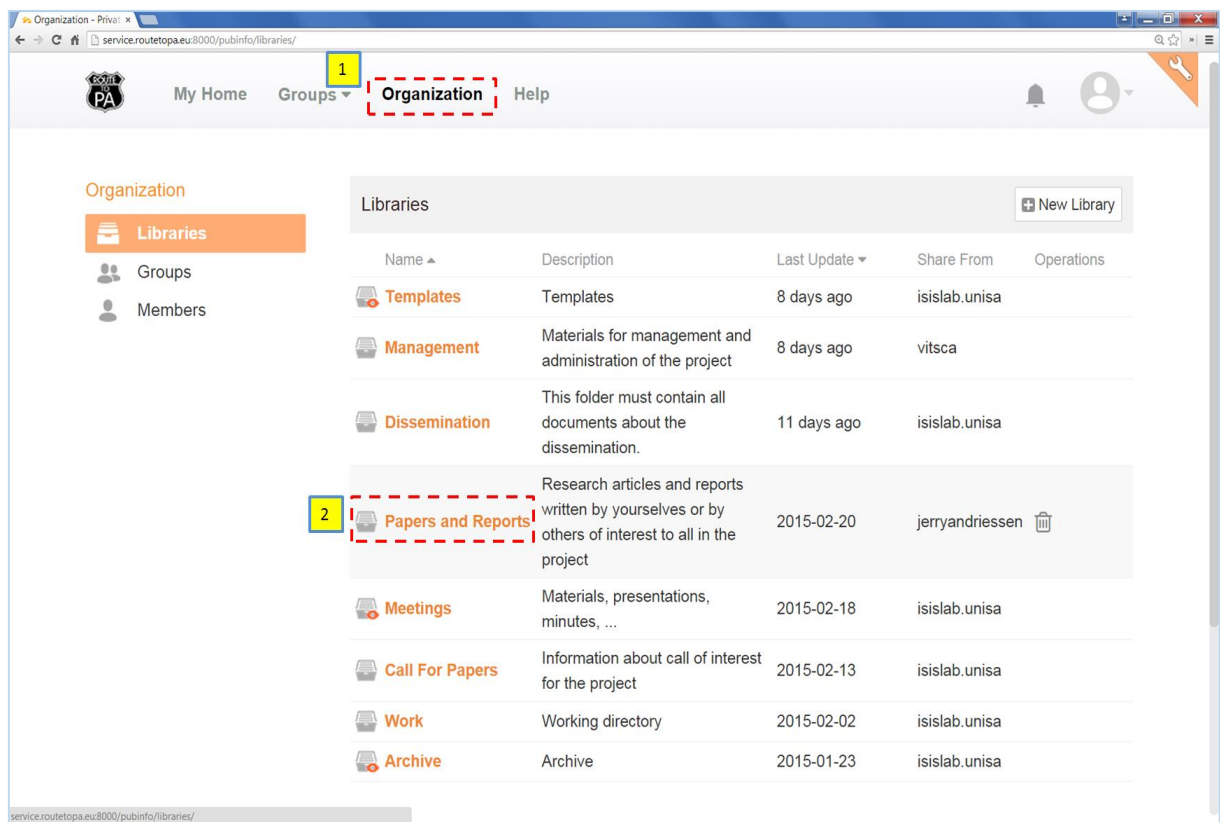


Figure 13: How to share papers

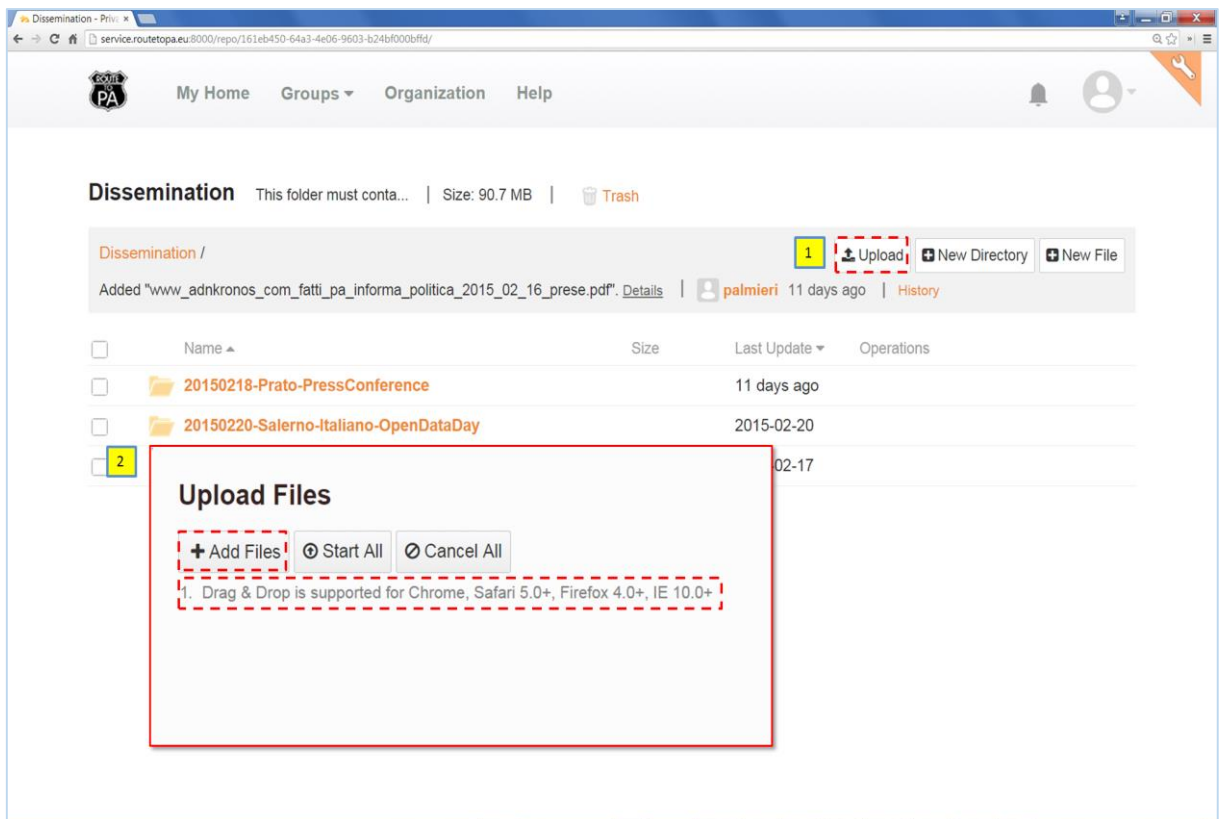


Figure 14: Uploading files

- 2) Log into the eXo platform and write a post on the Activity Stream to let all the members know about the new shared materials (Figure 7 2).

3.3 REPORT ON A DISSEMINATION EVENT THAT I PARTICIPATED

Step	Description	ICP services
1	Update the team “Dissemination” page of the Wiki (eXo)	Wiki
2	Share materials on the “Dissemination” folder (Seafile)	Repository
3	Post a comment into the Activity Stream (eXo)	Activity Stream

- 1) Log in the eXo platform (Figure 15) and go to the Wiki section. Select the Intranet Wiki (Figure 15 ¹) and then select your team “Dissemination” page (Figure 15 ²). Add the new activities at the top of the page. (Figure 15 ³), that is, click on edit, update the page and finally save the page.

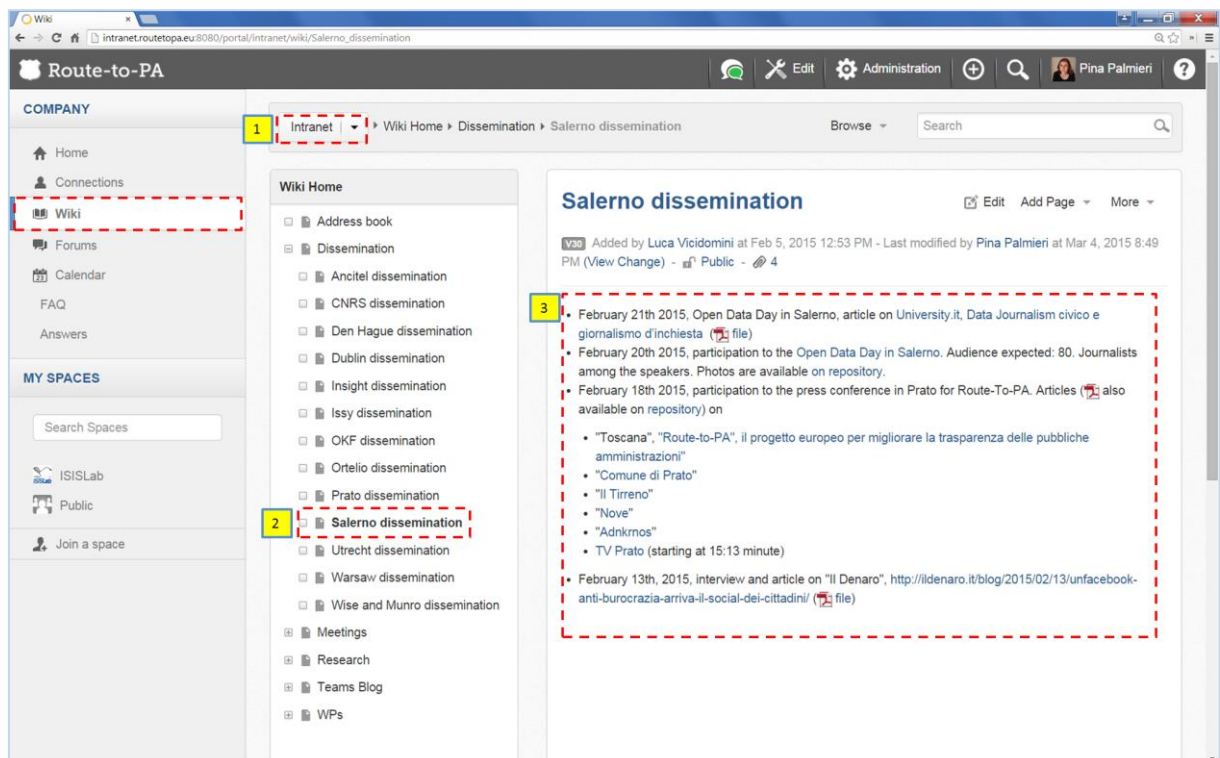


Figure 15: Log in into the eXo Platform to update the Dissemination Section

Log on Seafile (<http://service.routetopa.eu/>). Click on “Organization” (Figure 16 ¹) and open the “Dissemination” library (Figure 16 ²). Upload the dissemination material by clicking “Upload” (Figure 17 ¹). Select all the files to be uploaded using the “Add Files” button, then click on the “Start All” button to upload all the selected files (Figure 17 ²).

- 2) Log into the eXo platform and write a post on the Activity Stream (Step 3) to let all the members know about the new shared materials (Figure 7 ²).

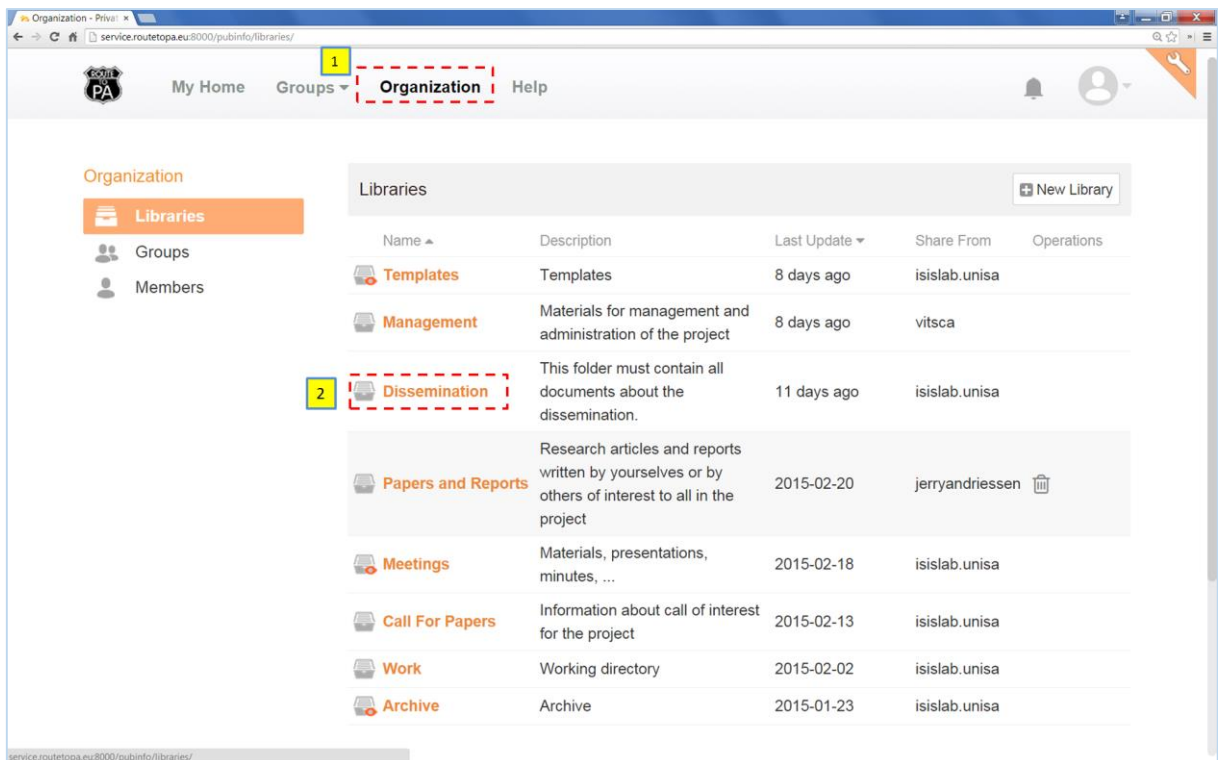


Figure 16: Access to the Seafile Dissemination folder to upload new resources

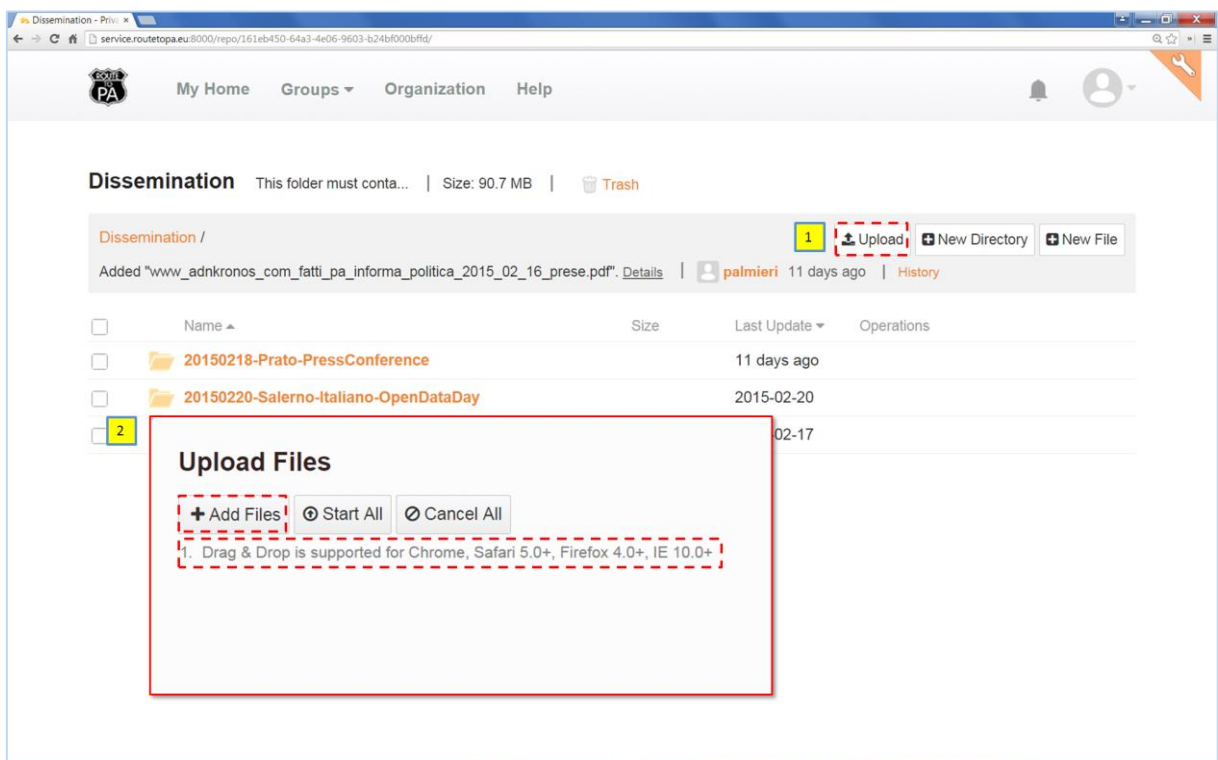


Figure 17: Uploading files

3.4 ADVERTISE A DISSEMINATION ACTIVITY WITH RELATED MATERIALS ON THE WEB

Step	Description	ICP services
1	Update the team “Dissemination” page of the Wiki (eXo)	Wiki
2	Post a comment into the Activity Stream (eXo)	Activity Stream

- 1) Log in the eXo platform (Figure 15) and go to the Wiki section. Select the Intranet Wiki (Figure 18 ¹) and then select your team “Dissemination” page (Figure 18 ²). Add the new activities at the top of the page (Figure 18 ³). Specifically, click on the edit button and add all the information. In order to share a link, select the “Link” icon from editor toolbar (Figure 19 ¹), select “Web page” from the drop down menu and a dialog appears. Fill the dialog and select “create link”. Once the update is complete, click save.

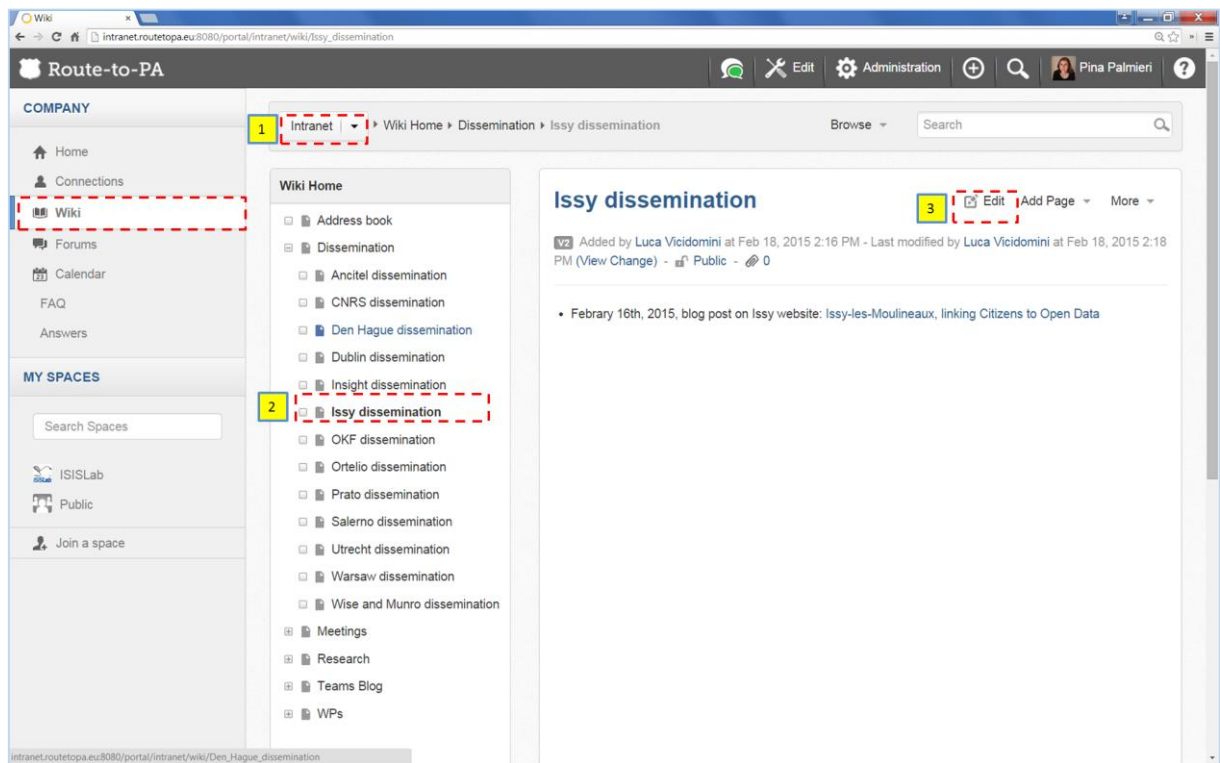


Figure 18: Wiki Page for a dissemination activity.

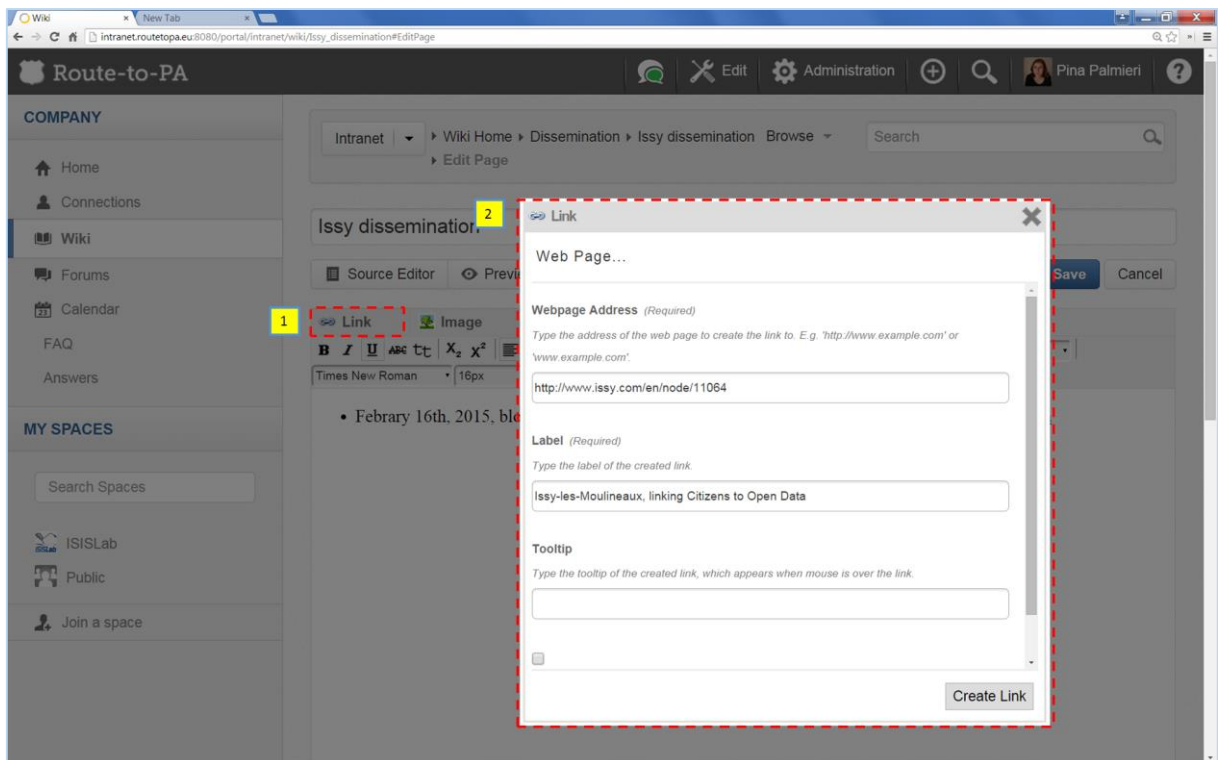


Figure 19: How to share a Link to a Web page.

- 2) Go to the home of the eXo platform and write a post on the Activity Stream to let all the members know about the update of the dissemination page. It is possible to share the link to the dissemination Web page also on the Activity Stream post.

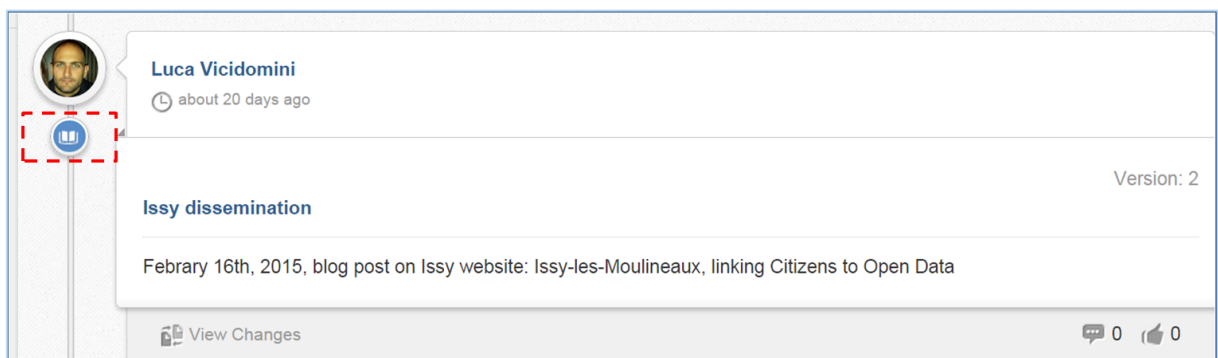


Figure 20: Activity Stream with information about a dissemination activity.

3.5 I HAVE A QUESTION FOR THE ADMINISTRATION

Step	Description	ICP services
1	Check the FAQ (eXo)	FAQ
2	Submit a new question on the Answers (eXo)	Answers

- 1) Log in the eXo platform (Figure 15) and go to the “FAQ” section. Read all the previous questions in order to check if a similar question has been already submitted and answered.
- 2) If no answer exists for your question go to the “Answers” section and submit a new question. Specifically, select a specific category (Figure 21 ¹). Once the category has been selected click on the button “Submit Question” (Figure 22 ¹). Fill in the dialog (Figure 22 ²) and click save to submit the question. When a question has been submitted, a new activity, with the content of the question will be automatically created on the Activity Stream.

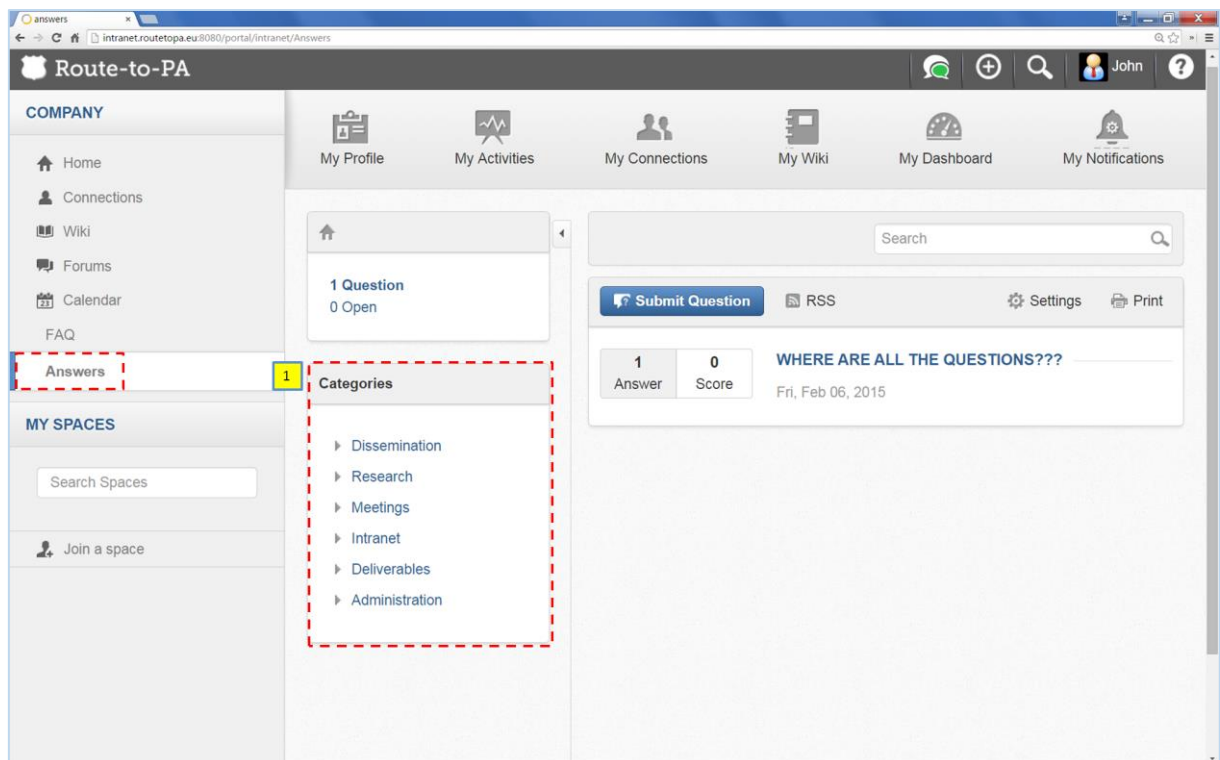


Figure 21: How to submit questions

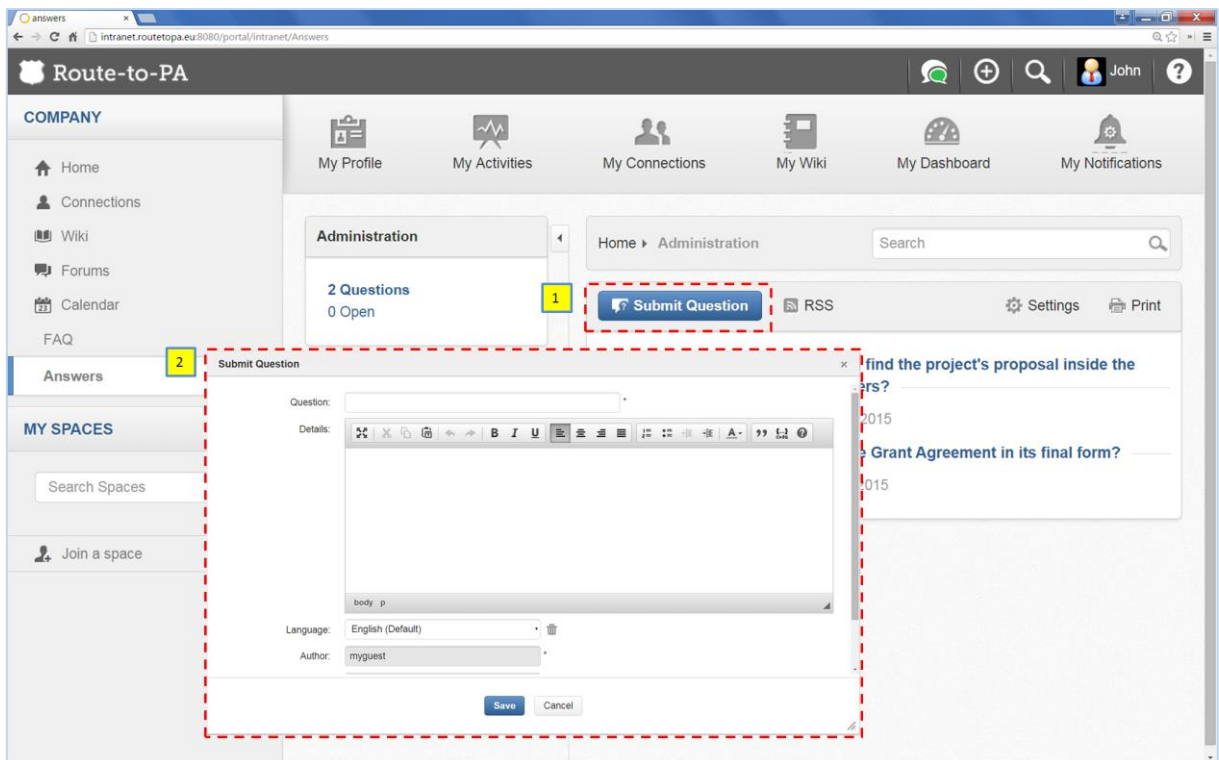


Figure 22: How to provide details about a new question

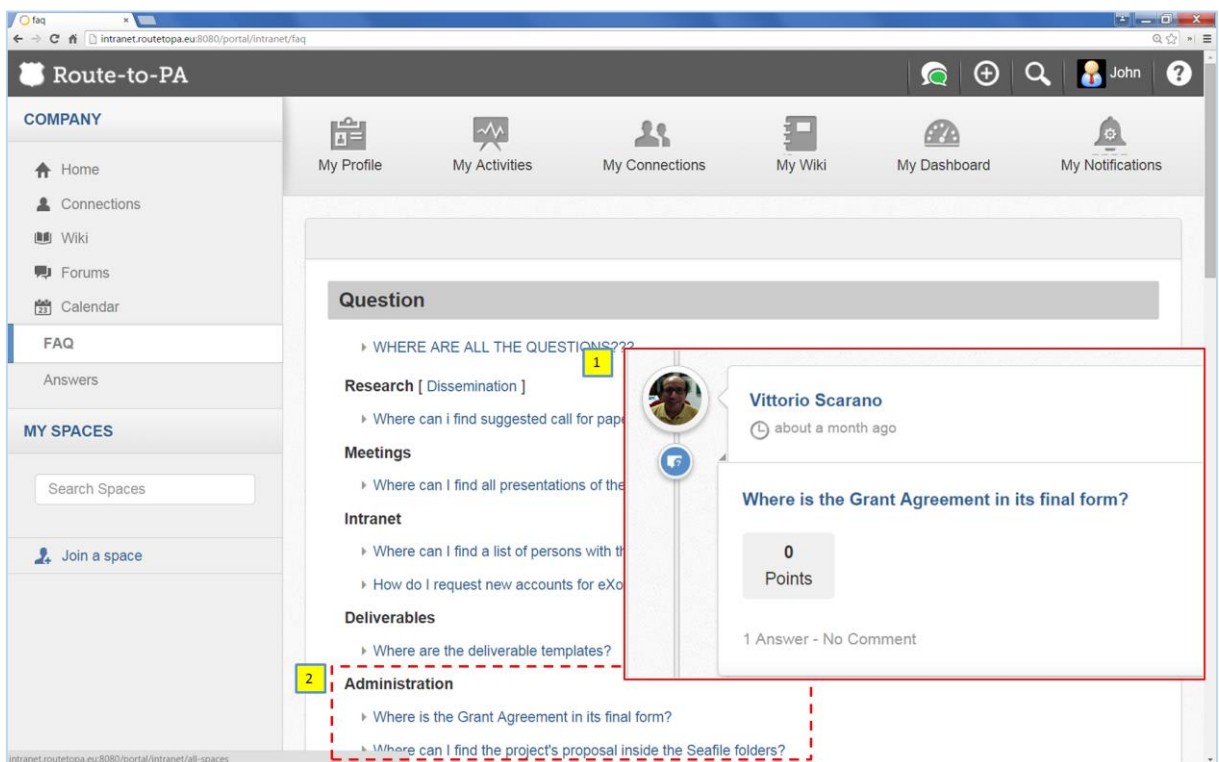


Figure 23: Example of a question about the Administration Category

3.6 I CANNOT LOCATE AN INTERESTING MATERIAL I FOUND EARLIER

Step	Description	ICP services
1	Search by keyword on the eXo platform	Search

- 1) Log into eXo and click the magnifier icon on the top navigation to open the search box (Figure 24 ¹) and enter one or more search terms into the search box (e.g., Conference on Transparency). The platform automatically displays quick results in the drop down menu grouped file type: Files, Wiki etc. Moreover is possible to display all the search results clicking on “See All Search Results” button (Figure 24 ²). It is also possible to filter results by content type, selecting the desired content in the “Filter By” section (Figure 25 ¹).

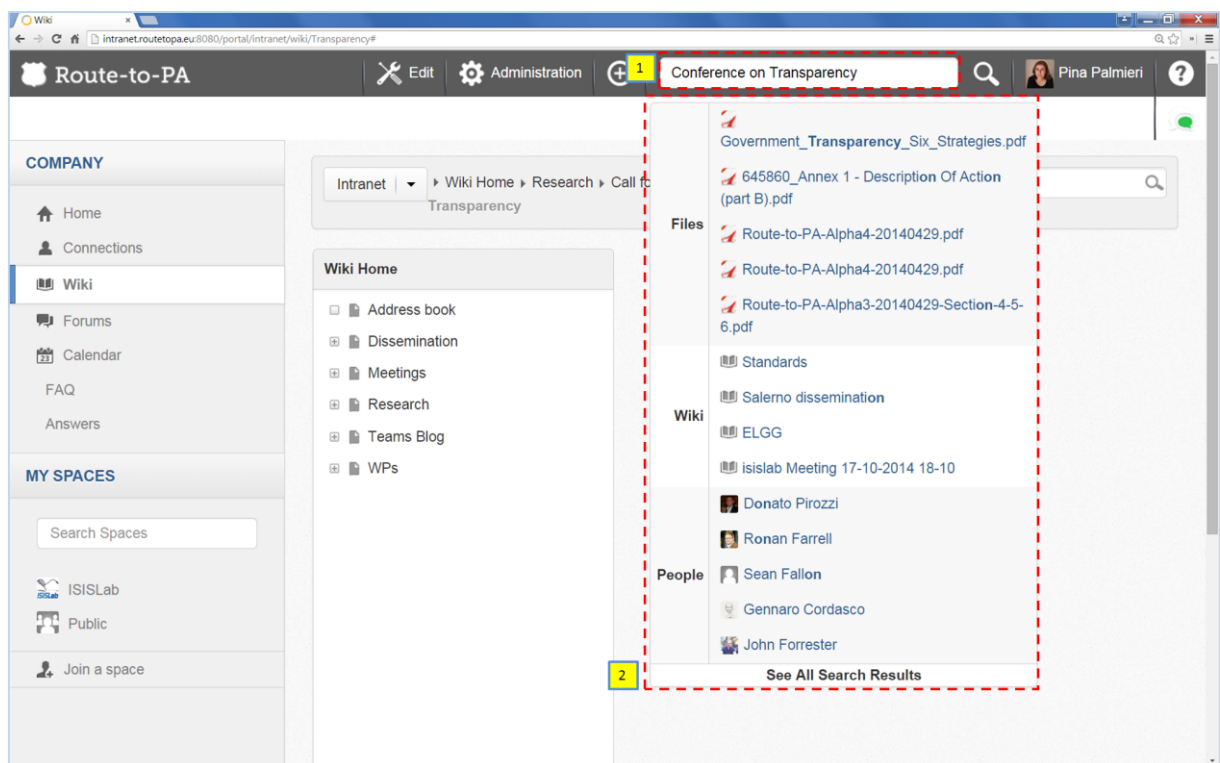


Figure 24: Search by keyword on the eXo platform

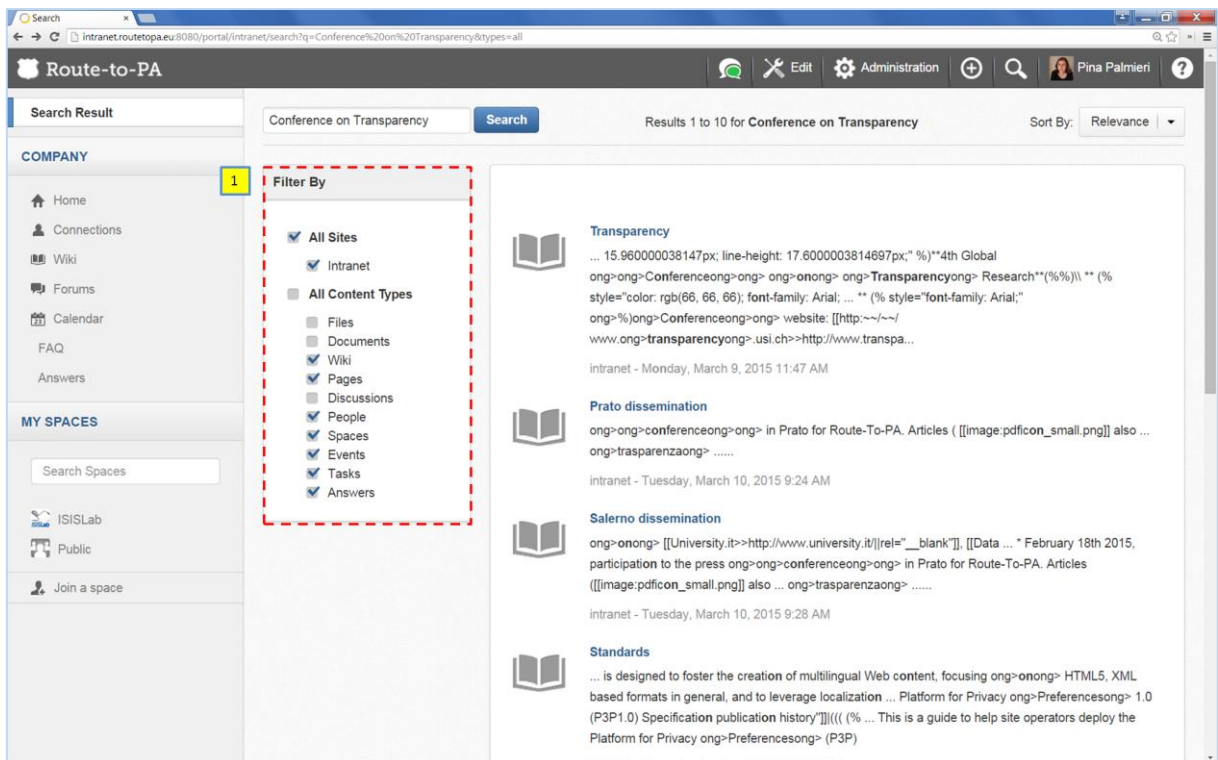


Figure 25: How to filter results when searching resources on the eXo platform

3.7 I WOULD LIKE TO ADD AN EVENT TO THE CALENDAR

Step	Description	ICP services
1	Add an Event on the “Calendar” (eXo)	Calendar

Log into eXo and go to the “Calendar” section (Figure 26 ¹) in order to add a new event. Click on the “Event” button (Figure 26 ²) and fill out the details of the event (Figure 26 ³). Do not forget to select the calendar where you wish to create the event (e.g. “Meetings”, “Deliverables”,...). In addition, you can add event details clicking on “More Details” button (Figure 27 ¹) and you can see a new dialog (Figure 27 ²) to complete the details such as add participants, send invitations to the participants, create a reminder for upcoming event etc... Finally, you will see the event updated in the “Activity Stream”.

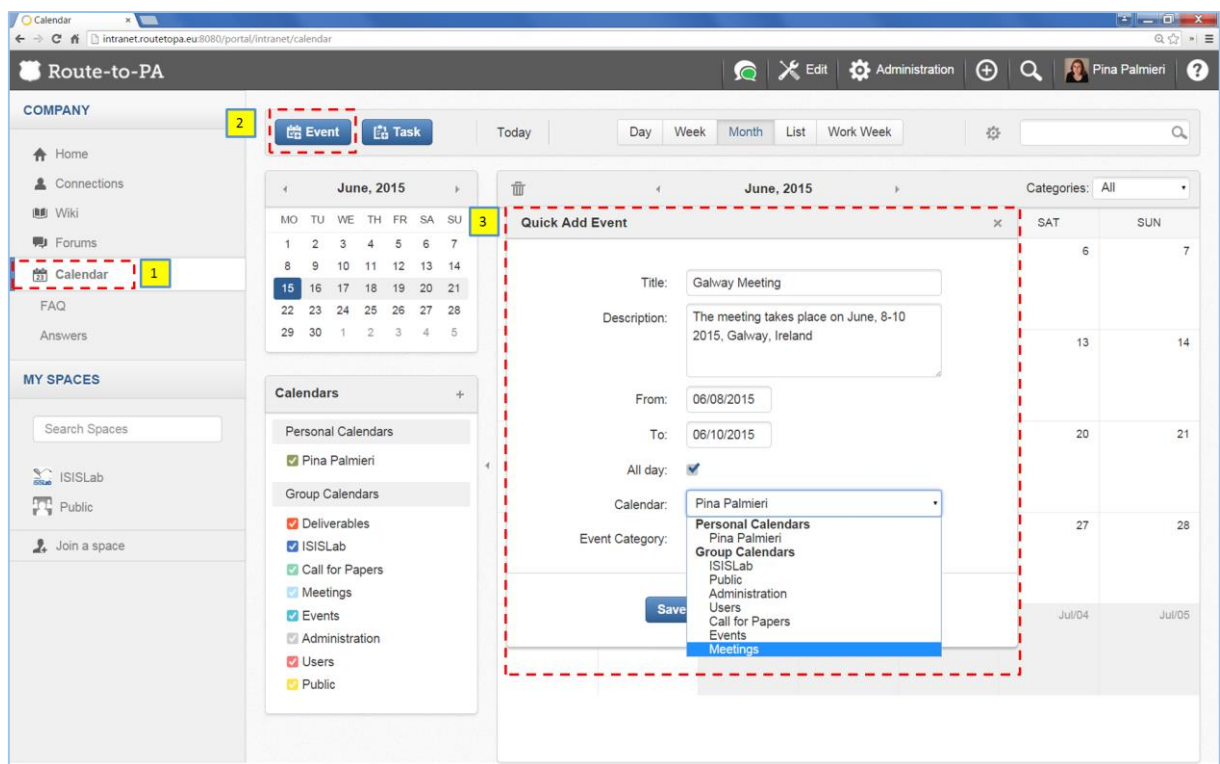


Figure 26: Adding events to the Calendar

Quick Add Event

?

Quick Add Event

Title:

Galway Meeting

Description:

The meeting takes places on June, 8-10 2015, Galway, Ireland

From:

06/8/2015

22:00

To:

06/10/1915

23:00

All day:

☐

Calendar:

Meetings

Event Category:

Meeting

Save

More Details

Cancel

Event Category:

Meeting

Save

?

More Details

Cancel

Figure 27: Adding details about an event

3.8 I HAVE SOME NOTES TO SHARE

Step	Description	ICP services
1	Create a new Wiki page	Wiki

- 1) Log into eXo and go to the “Wiki” section (Figure 28 ¹) in order to add a new wiki page. Select the place where you would like to create the new page in the Wiki home tree and click on the add page button. It is possible to choose a template page or start over with a blank page (Figure 28 ²). Edit page title and body and save the page (Figure 29). As soon as you save the page, an event will appear in the “Activity stream” to let all the members know about the new notes (Figure 30). Thereafter it is still possible to update, move or delete the created page.

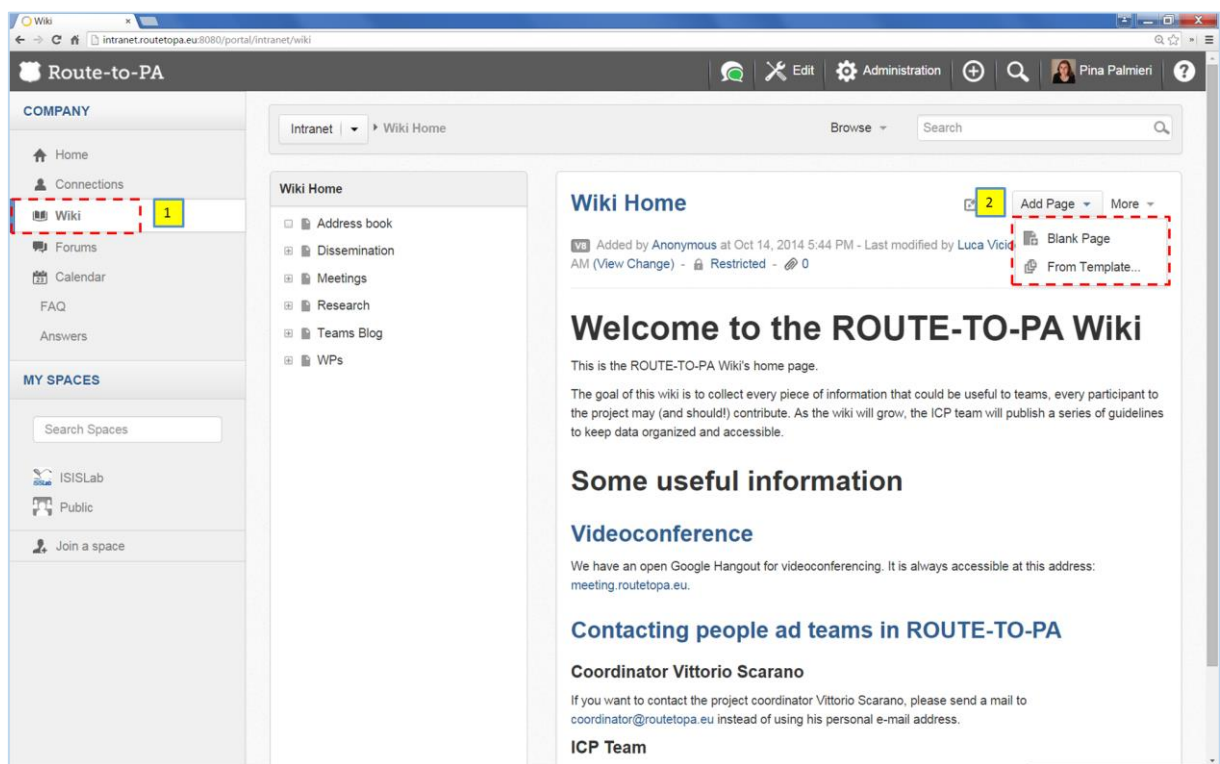


Figure 28: Adding notes

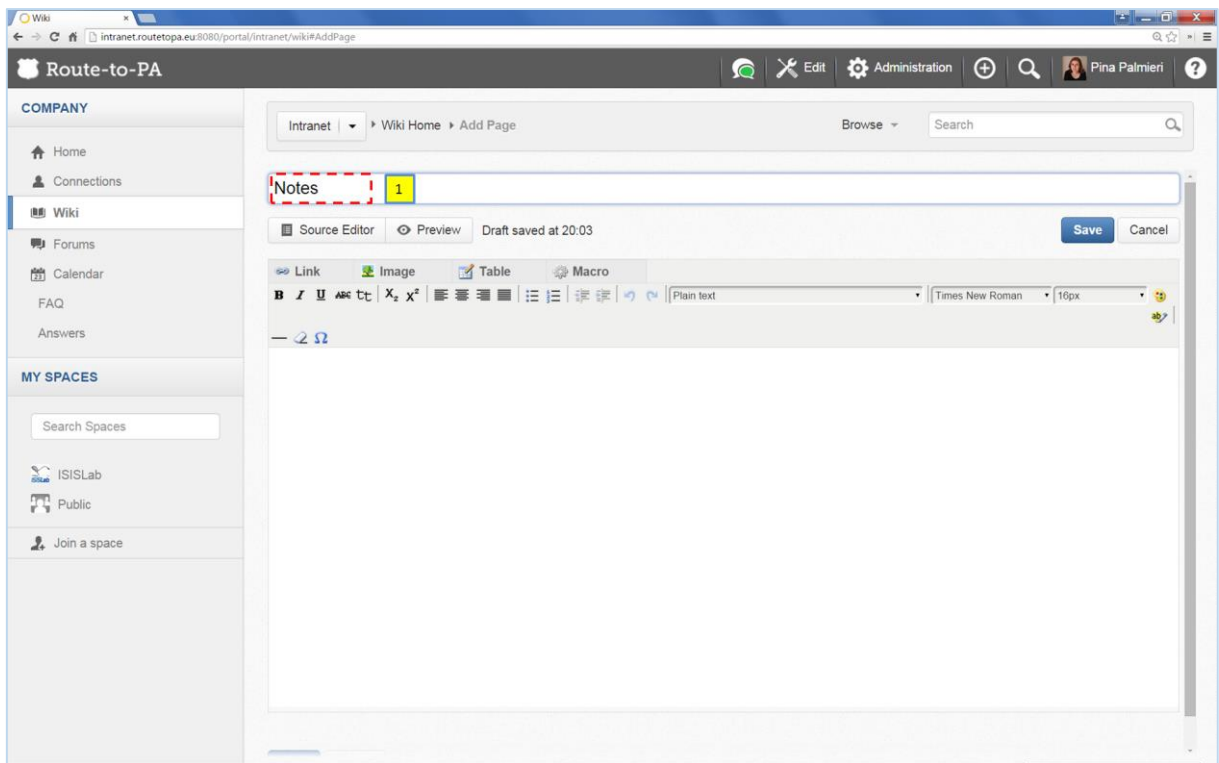


Figure 29: Edit and save your notes

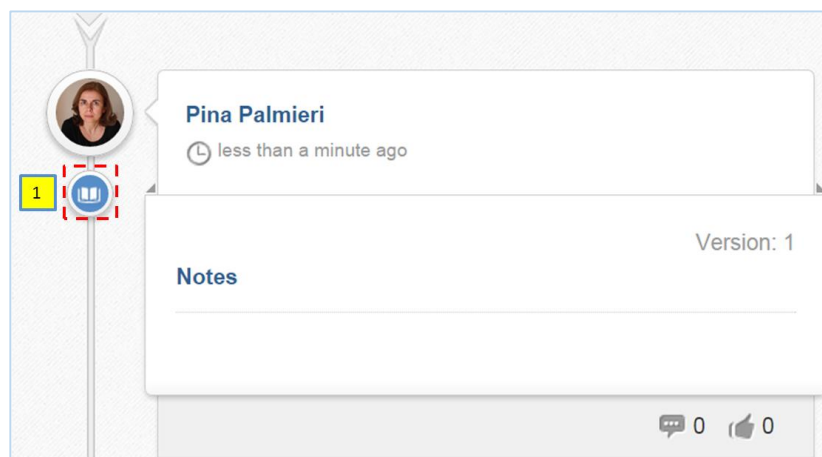


Figure 30: Note on the Activity Stream

3.9 I WOULD LIKE TO SEND AN EMAIL TO A TEAM MEMBER BUT I HAVE FORGOTTEN HIS/HER EMAIL ADDRESS

Step	Description	ICP services
1	Visit the Address book Wiki page (eXo)	Wiki

- 1) Log into eXo and go to the “Wiki” section. The wiki contains a wiki page named “Address book” which contains the email addresses of each member (Figure 31). Notice that if you are looking for a specific team, WP or group, some mailing lists have already been provided. You can see them in the wiki page named “Mailing Lists”.

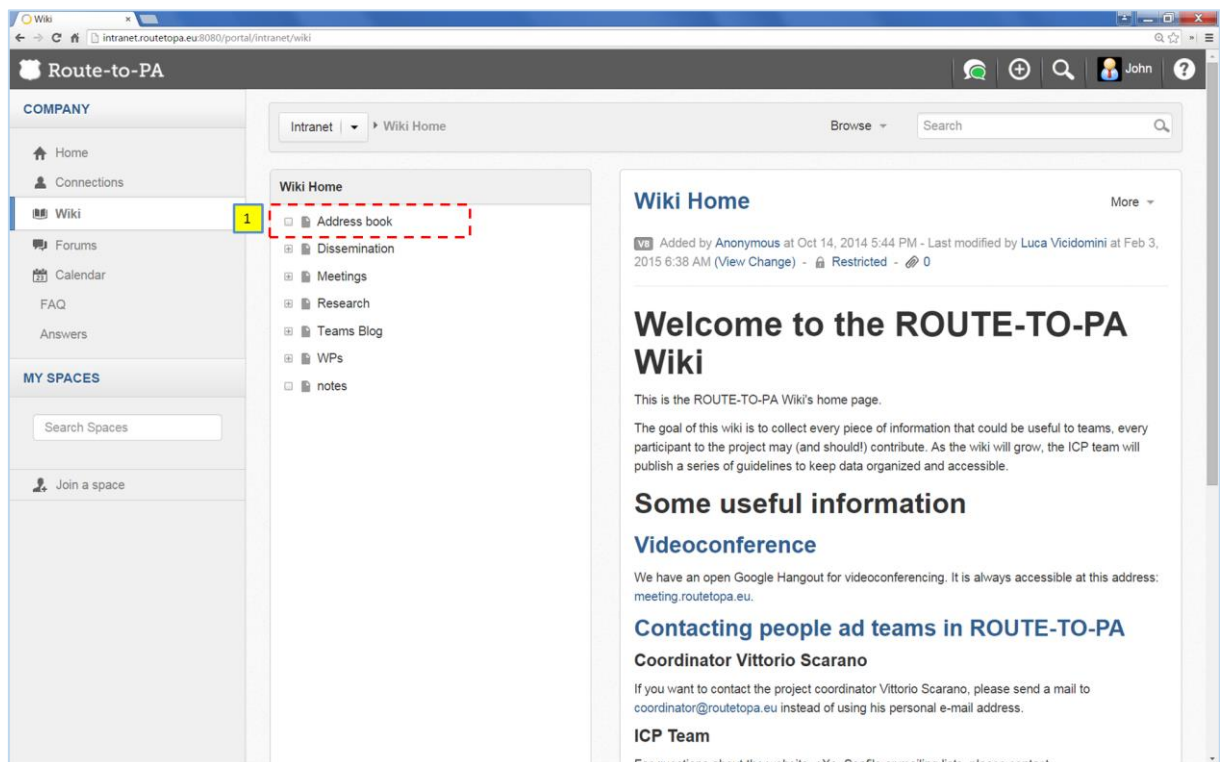


Figure 31: Accessing the Address Book

3.10 I WOULD LIKE TO START A DISCUSSION ON A SPECIFIC TOPIC

Step	Description	ICP services
1	Post a topic on the Forum (eXo)	Forums

- 1) Log into eXo and go to the “Forum” section (Figure 32 ¹). Choose the forum where you want to submit a new post (e.g. “Consortium Agreement”) (Figure 32 ²). Click on start topic and write the title and the post of the new topic. Click submit to post the topic. When a new topic is generated, a new activity is automatically created in the “Activity Stream” to let all the member know about the new topic. Alternatively if you would like to reply a topic you have to click on the name of the topic (Figure 33 ¹) and then you visualize the topic. There are many way to reply: clicking the “Post Reply” button (Figure 34 ¹), fill the dialog (Figure 34 ²) and click submit or typing a message in the “Quick Reply” box (Figure 34 ²); or posting a private reply (Figure 35). Again, once a reply is generated the corresponding event appears in the “Activity Stream” (See Figure 36).

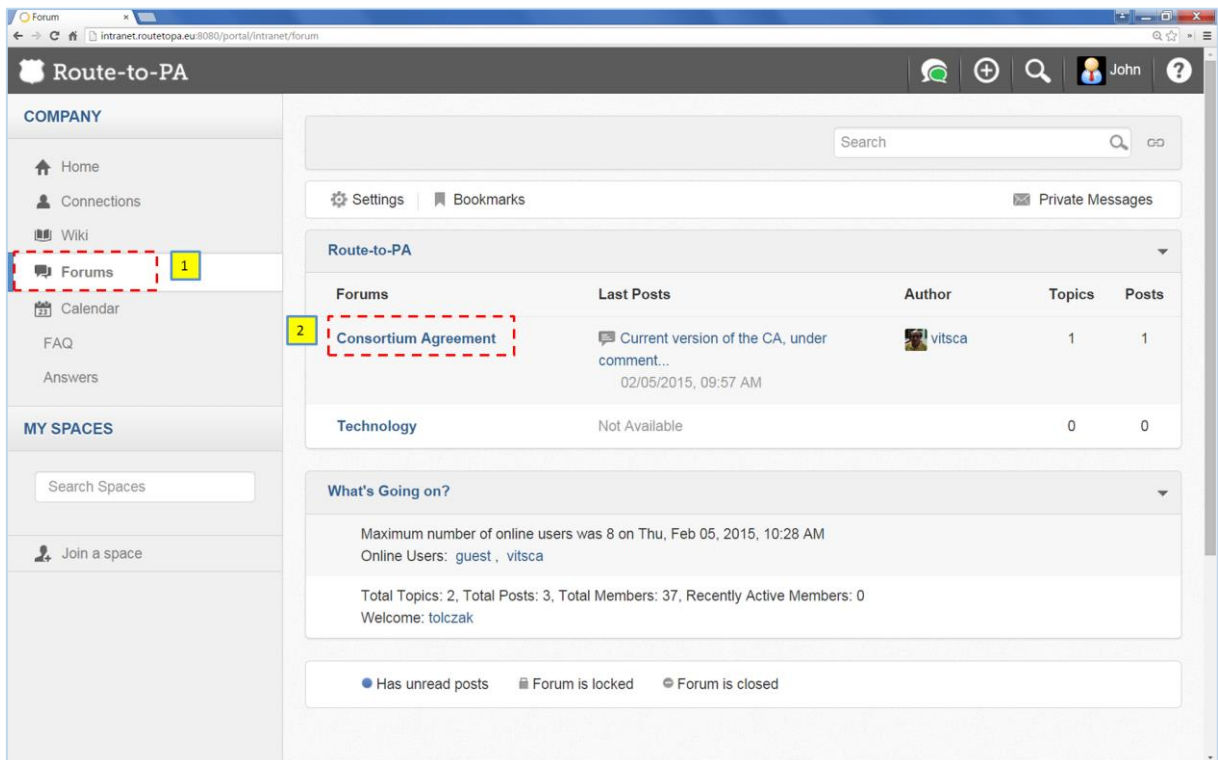


Figure 32: Discussion about a specific topic

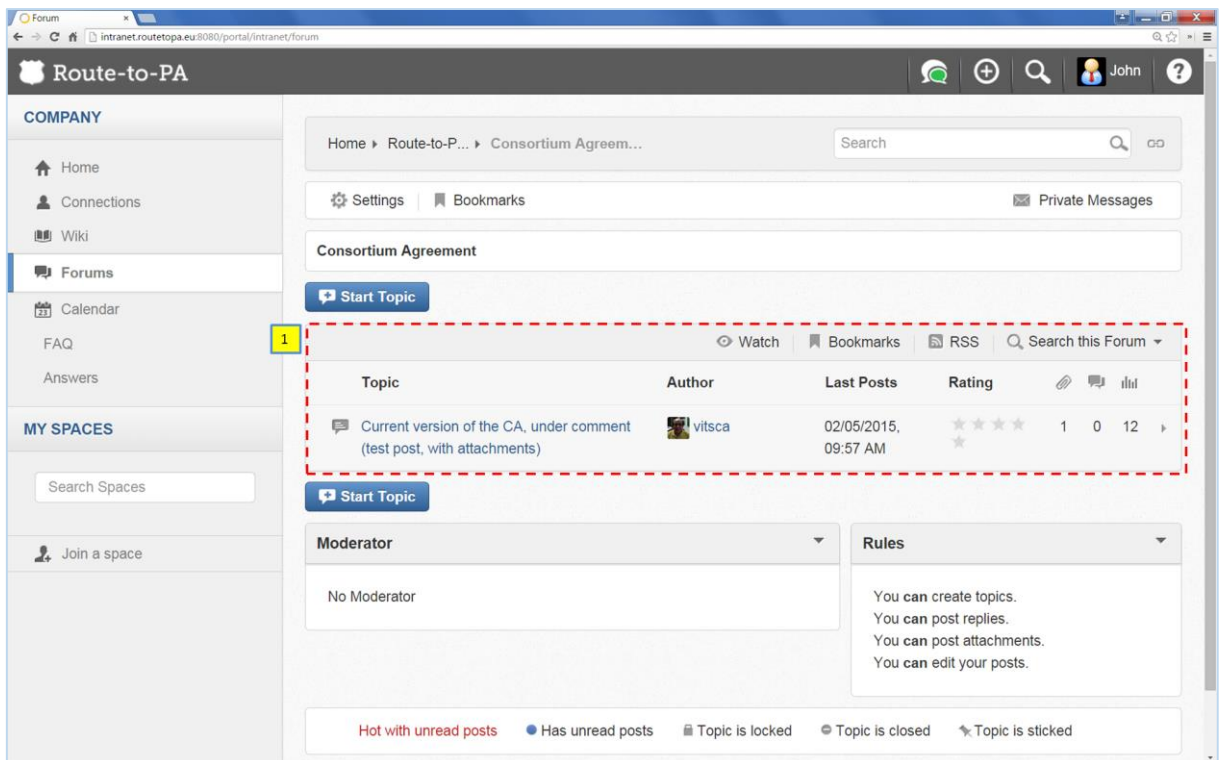


Figure 33: Reply to a topic

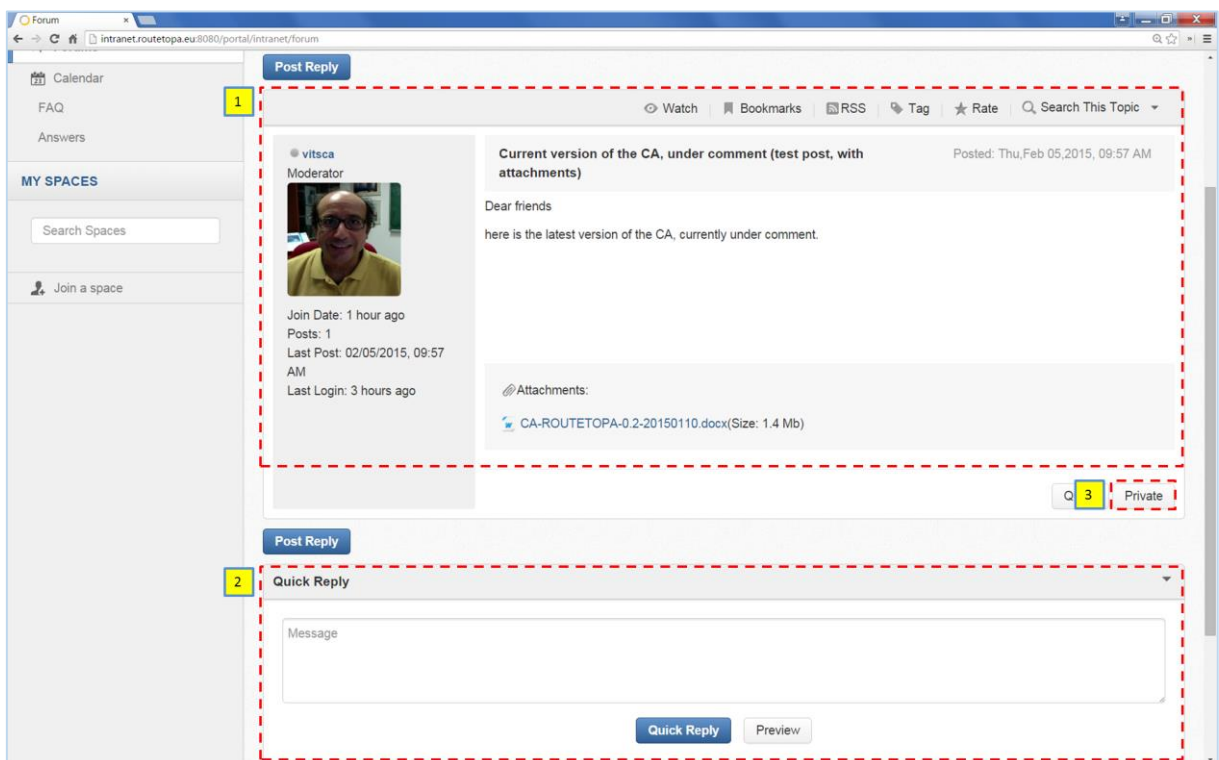


Figure 34: Reply to a topic with a quick reply

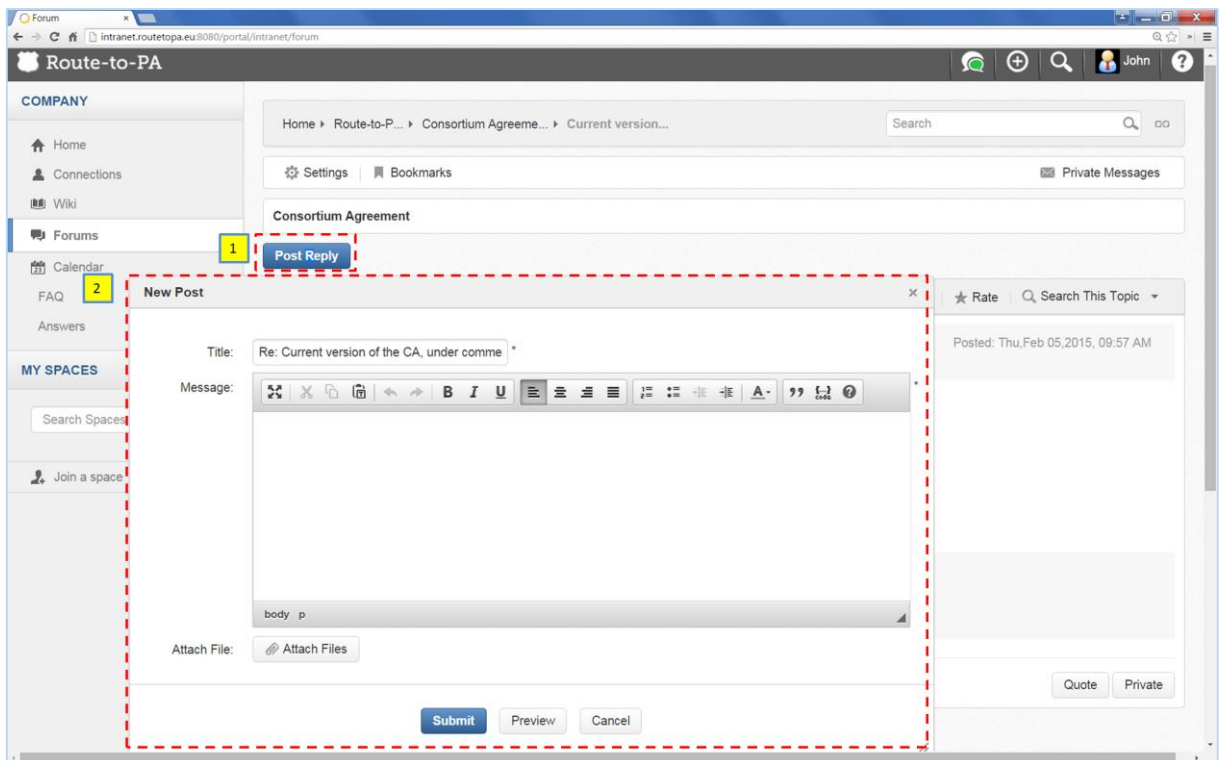


Figure 35: Posting a private reply

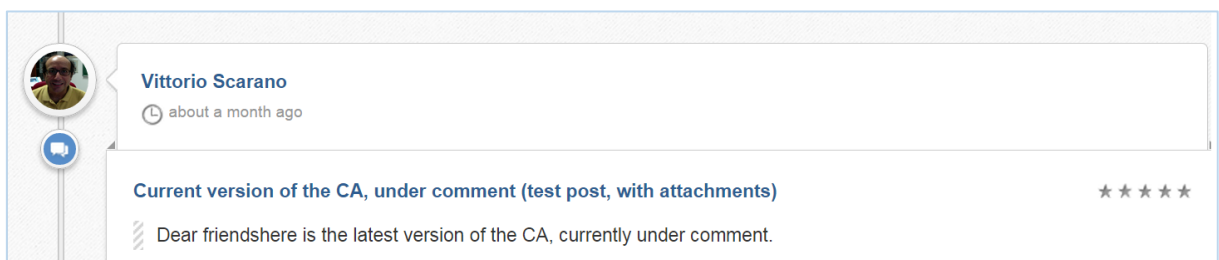


Figure 36: Output visualized in the Activity Stream