Shanoir NG – Study

Software Design Description

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# Microservice context

## Microservice presentation

This microservice is a part of the Shanoir-NG application and is responsible for study management.

## Main functionalities

Shanoir NG main functionalities are:

* Listing available studies (studies the user has access to)
* Create study
* See details
* Edit study
* Delete study
* Manage members
* Manage requests to join study
* View examinations and datasets
* Download report
* Export study

## Application users

Target population is:

* Shanoir administrators
* Shanoir users of any level

# Functional architecture

## Study

### Name

Mandatory

### Status

In progress or finished. Mandatory.

Once study is finished it is no longer possible to add any new datasets

### Start date

Facultative

### End date

Facultative

### Is clinical

### Is with examinations

### Visible by default

### Data downloadable by default

### List of subjects associated

### List of centers

Study must have at least one center

### List of members (new)

Move the members’ management part directly to Edit page

### Principal investigator

In case there is only one center with one investigator he automatically becomes the principal investigator.

### Protocol

## Role

Possible roles for users in study:

1. Is responsible for the research study
2. Can see and download datasets
3. Can see, download and import datasets
4. Can see, download, import datasets and modify the study parameters
5. Cannot see or download datasets

## Functionalities

### List available studies

Administrators can see all studies but other users (users, experts and guests) can only see study they are allowed to.

The list of studies contains:

* Name
* Status
* Start date
* End date
* Subjects
* Examinations
* Buttons:
  + delete, edit (visible for administrators and person responsible for the study)
  + details, report, protocol

On the top of the list is it possible to create a new study.

### Create research study

Administrators and experts can create new research studies. All obligatory fields must be set.

### See details

Everyone linked to study can see details but only Administrator and Experts can edit it.

### Edit study

Allows to modify all the fields, add/remove subjects, members, centers.

### Delete study

Can me deleted if it doesn’t have any examinations.  
The relations between members and study and between investigators/centers and study are automatically deleted as well.

Study card is deleted or must be deleted before the study.

Only for Administrators and Experts.

### Manage members

For administrators and experts.

On the **Edit page** it is possible to add/delete user to study.

Only active users can be added to study.

### Manage requests to join study

User can ask for rights to see study / download datasets etc.

The request is visible to the persons responsible for the research study and administrators.

### View examinations and datasets

From the subject details page, it is possible to check the list of datasets and examinations that belong to this study.

### Download report

# Software/technical Architecture

## Interfaces

### Communication with other microservices

Study management microservice uses web services and message queues.

#### MS Users

MS Study sends messages to MS Users to:

* Get details of user already in study (GET /users/{userId})
* Get list of users (all) – to add one to study (GET /users/all)

The ID of the users in the study are kept in MS Study along with their role.

#### MS Center

MS Study sends a message to MS Center to get list of the centers, equipment and investigators.

* Get details of one specific item
* Get list centers/inv etc. that are linked to study
* Get list of all the items that can be added to study

#### MS Subject

To get the list of subjects.

* Get details on one subject
* Get list of all subjects in the study
* Get list of all subject (to choose one to add to study)

#### MS Study cards

Get study cards

* Get details on one study card
* Get list of study cards in the study
* Get list of all study cards (to choose one)

#### MS Examinations/dataset

Get datasets

* Get details on one exam/dataset
* Get list of exam/datasets in the study

### Communication with Shanoir

Every time a request is sent from Shanoir, it arrives via MQ to Shanoir-NG.