Shanoir NG – User Managment

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 user management and their requests.

## Main functionalities

Shanoir NG main functionalities are:

* Managing accounts (create, delete, update)
* Managing user’s role (user/guest/expert/admin)
* Managing user’s settings (i.e. is medical)
* Managing teams
* Validating users’ requests
* Sending global e-mails

## Application users

Target population is:

* Shanoir administrators
* Shanoir users of any level (could only update their own preferences)

# Functional architecture

## Properties

Each account in characterized by following properties:

### First name

May contain letters, numbers, whitespaces, special characters, accents. Minimum 2. Maximum: 50

### Last name

May contain letters, numbers, whitespaces, special characters, accents. Maximum length: 50

### Username – used also as a login (UNIQUE)

May contain letters, numbers, no whitespaces, accents, special characters are allowed.

Must be unique. Minimum: 4, maximum:20

### E-mail – used also as a login (UNIQUE)

Must be unique.

### Password

Password must contain at least 1 letter, 1 number and 1 special character (%,$,#,@) and be at least of 8 characters long.

### Creation date

Creation date of the account – visible but not modifiable in UI

### Expiration date

Expiration date of the account (the account becomes inactive).

Once inactive, user can send a request to extend this date (administrator accepts this with few clicks in **Manage user account requests** menu)

### Role

We define four roles of user account. One user can have only one role.

Role **Medical** disappears in new Shanoir. All users being Medical can be changed to User.

#### Guest

A guest can only see the data. He can't create any data.

There are two possible configurations:

* Challenge – where Guests can download data
* Neuroinfo – where Guests cannot download data

#### User

This is the basic role in Shanoir. Set this role to the users that are not intended to be responsible for any research study and who don't have a strong knowledge of the Shanoir features. This type of user can download and import data if they are allowed to by the responsible of the research study of the data.

#### Expert

The expert role aims to be set to the users that might create research studies and study cards, and define the quality checks. The users with this role may also delete data.

#### Administrator

An administrator has the same rights as a medical doctor-user and can manage the users of Shanoir.

### PACS import (canImportFromPACS)

Allows user to import from PACS: boolean

### PACS Access (canAccessToDicomAssociation)

Allows user to access PACS: boolean

### Medical

If user is medical: Boolean

**Not used in the Shanoir-NG – used only for migrated data**

### Institution

User’s institution – facultative (ex. Inria Rennes)

### Service

User’s service – facultative (ex. Visages)

### Function

User’s function – facultative (ex. PhD Student)

### Study

Study the user wants to have access to (ex. EMISEP)

### Contact

User’s contact in Shanoir – used in case of questions (ex. Anthony Hopkins)

### Motivation

“What would you like to do in Shanoir” -> to verify the suitable role for the user (ex. download and upload data, manage study)

### Team

Team is a group of users that share the datasets belonging to at least one of them, i.e. if one user is the owner of the dataset, all users in the team can see it.

Team is not obligatory.

One user can belong to only one team.

Only admin can add/delete/modify teams.

## User preferences

User preferences allow to personalize the display, i.e.:

* + Language (fr or en)

## Functionalities

### View user

* everyone can get another user data

### Create user

Creating a new user is possible by a:

* Person requesting to have an account. In this case the creation process has 2 steps:
  + Filling in the required fields (first name, last name, screen name, e-mail, password, institute, service, function, study, contact, comment and team for shanoir-challenges)
  + Accepting the user request by the administrator and filling in the other fields (role, pacs import, medical, comment, team). The account is now active.
* Administrator directly in the UI using the function “Create new user” and filling in all the fields manually, including password

### Manage user account requests

Available for administrators only. Two lists are managed:

#### Extension Request List

To modify the expiration date of the existing account.

#### Creation Request List

To validate new users – allow or deny requests.

If allow, administrator is allowed to modify all the fields and is forced to choose Role.

### Delete user

This action is reserved for the administrators. In the Administration panel he chooses the user to delete and confirms his choice. This option

*For the moment, deleting is only possible if user is not linked to any study – in the future we want to be able to delete the user along with the links to the studies*

### Update user

Fields updatable by user (for all the users except for Guests) are:

* first name
* last name
* e-mail
* password
* team

It is possible to update in the menu Preferences -> Edit profile.

Guest accounts are not allowed to edit any field.

Administrator can update all the fields (username) in menu Administration -> Manage Users.

# Software/technical Architecture

## Interfaces

### Communication with other microservices

User management microservices uses web services and message queues.

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### Communication with Shanoir

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

The request contains the fields of the account (in Shanoir, in menu Preferences -> Edit profile).

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