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smart health

voozanoo

Reference sheets

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Table of contents

Introduction

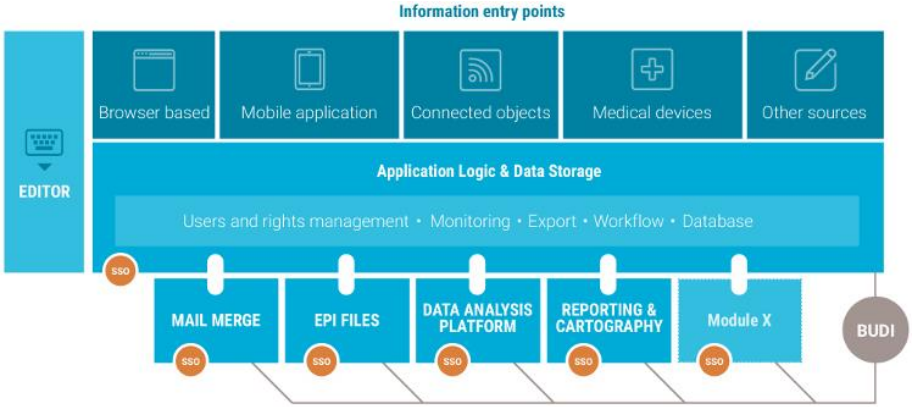
This document describes the organisation and use of the core block of the Voozanoo 4 Database Application Framework. A Voozanoo created application is typically created by using both the core application and the Epicraft editor application. You can find a separate document which explains the use of the Editor. In general, the core is where one manages the use of the data and the users, and the editor is for creating the various screens of the application.

This document will use the > sign to indicate “then go to” to instruct the reader how to access a given screen or function. ex: Home > Roles > Add.

The concept and differences with Voozanoo 3

Voozanoo 4 is a major update to the Voozanoo application development framework. In general, you could say that where Voozanoo 3 was one monolithic environment in which to create a database application, Voozanoo 4 takes a modular approach where different modules can be included or not. As with all evolutions, this has its pros and cons. The disadvantage is that one has to get comfortable with and learn which modules do what, and thus which module to go to when there is a problem or when one needs to make modifications to the application.

The advantage is that Voozanoo 4 relies on a very structured layer of software called Zend. It is an MVC framework. That is, it separates the logical Model, from the Visualisation, and uses Controllers. This makes Voozanoo much more reliable and flexible. The other advantage is that parts of what were exclusively the domain of the backend, can be given to certain users in the front end. The most common example is that of allowing a specific user role (“categories” of users in Voozanoo 3) to manage and create other users. That is, back-end features can be turned into front-end features.



In the diagram above, notice that around the core of Voozanoo 4 (Application logic & Data Storage) are modules (top) that specifically deal with getting information into the system. The web browser is the default method of getting information into your created application.

Below and to the left of the core are the output and creation modules respectively. These are shown in the table on the following page with their functionality. The minimal requirements to create an application are by using the Voozanoo core and the Epicraft editor.

The application and modules' functions

Below is the table showing where different functions can be found.

The application itself	Epicraft Editor	Mail Merge	EpiFiles (ASIP certified File depot)	R Statistics: analysis, cartography & reporting	Mobile App on (Android & iOS)
Create & manage user roles Create, manage & import individual users Grant & revoke role rights Create & Manage groups Create & Manage listings Create & Manage exports Create & Manage filters Create & Manage resource files Manage inter-module access - Oauth Manage personal data policies settings	Create & modify an application (project) ● pages ● navigation ● input fields ● sets of variables ● data queries Import pages/variables Import and manage dictionaries	Create Bulk mailings Create PDF files for printing Create templates Import templates Query an application	File storage for humans and applications Drop-off Pickup Auto-delete stale files Controllable by BuDi script	Create Reports Visual presentation of data ● textual ● graphs ● cartographic ● tables Execute mathematical analyses	Download – pages and forms Complete forms – online or off-line Send completed forms back to the application

The "Epicraft" Editor & the Resource files

A Voozanoo 4 application is piloted through human readable resource files, primarily written in XML. It is a layer between what the end-user sees as "The application" and the low-level execution of the MySQL database and PHP execution code. Thus, it would actually be possible to create a Voozanoo 4 application without the Epicraft editor, though this would be a very slow and tedious process by writing many resource files. The editor provides a graphical user-interface to create the resource files for the viewable end-user pages (data entry and data visualisation pages). The Listings creator gives a graphical tool to create listing resource files, and the filter creator is a graphical tool to create filter resource files. Modifying the resource files of an application are typically only done by Epiconcept software developers as manipulating these low-level resources could easily cause your application to crash. Rarely are customers given direct access to the XML resources. The Epicraft editor does have a special custom field for each element allowing an experienced user to add specific XML code to a screen object and thus to the resource files.

An application's pages are built by using the Epicraft editor and publishing it to the project itself with the menu command Deploy. This is similar to the Voozanoo 3 process of going between the pink editor screens and the real application (blue screens).

Glossary

Bulk: An element to be displayed on a page that allows extended functionality. Some features do not have a simple graphical user interface in Epicraft that the user can use and are therefore described in an XML format that will be transferred into the resource file that describes a given page.

Coherence control: Checks that the user only enters useful and within-limits responses. It allows one to limit the type of information entered by the user or to signal questionable inputs.

Environment: An Epicraft project can be configured to be deployed (published) on multiple servers that may be in different physical or logical environments. An environment can be thought of as the URL of the Voozanoo application and can be considered as a type of environment such as "staging", "pre-production" or "production".

Epicraft: Epicraft is the editor within the Voozanoo ecosystem for creating and modifying pages of an online information system.

Epicraft Project: The graphical and logical representation of the information system that can be deployed to a Voozanoo application. This is the set of forms and pages that describe the information system and database.

Export: The data stored in your application's database can be exported in a number of formats. The export utility allows one to create and modify exports that can be executed at any time.

Field: Allows the user to enter information. There are five types of fields:
- Text: for alphanumeric texts (a-z, 0-9) and special characters.
- Number: for positive and negative numbers with or without a decimal.
- Date/time: To select a date (from a calendar) or enter a time of day.
- Choice: a predetermined set of responses.
- Boolean: allows one to select yes, no or null.

Filter: Filters are probably the most important tool when searching and displaying information in your application's database. A filter can be static (it filters for specific fixed values) or dynamic (values can be changed during use). A filter can be applied to a tabular data listing or an export.

Form: Corresponds to what the user sees on the screen and must fill in. A form is composed of several elements (fields) that allow a user to enter information and includes organizational elements as well as data listings. A new form typically means a new varset is created unless it is an extension of an existing form.

Group: A data partitioning system. In organizations, it is sometimes necessary to divide the data into a hierarchical set of groups where users at the higher levels have access to the data of lower levels, but not the other way around.

Label: The text that the user sees next to the input field to indicate what the system expects as a response (the question).

Link (parent-child): A link or relationship establishes a specific relationship between two varsets. A set of records from one varset will be sub-grouped to belong to a single record from the other varset. This is what is known as a parent-child relationship. That is, each child record "belongs" to a specific parent record. Taking a typical example: the “Patient” varset contains several variables (name, address, date of birth, etc.) and is considered the parent varset; it has a relationship to a child varset “Visit” containing other data (weight, blood pressure, etc.) that is collected at various time periods. Thus, a Patient record will be linked to (or has) one or more Visit records, which are created each time a new visit record is entered and saved for the given patient.

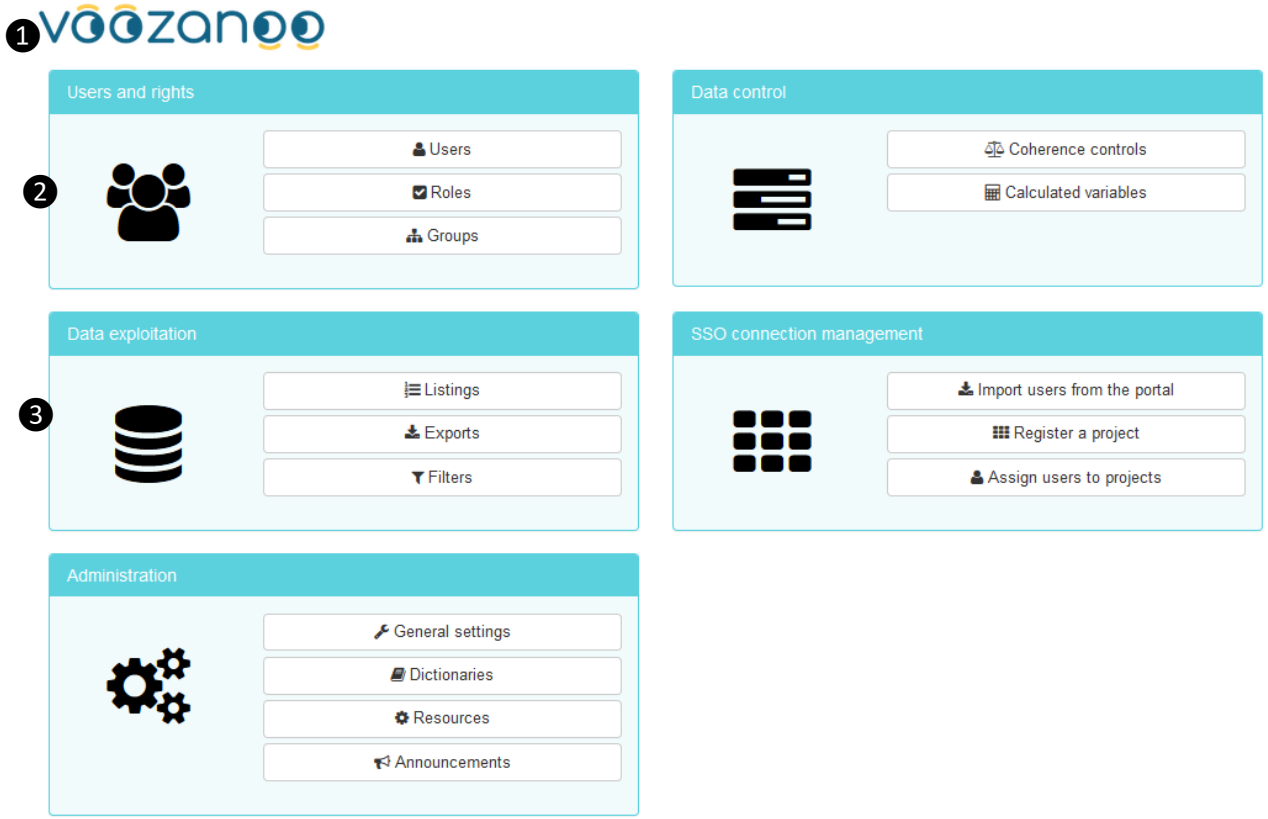
Listing: A presentation of information from the database in tabular form. It is the most commonly used form to present database information. Listings are built and saved using the listing editor. Each column represents a variable and each row a record (a saved form).

Roles: Roles define what a user can and cannot do. Each user is assigned one or more roles that define their ability to access pages, data and features. In general, these roles reflect real-world organizational roles.

Varset: Logical grouping of variables that correspond to a "table" in the MySQL Database.

New projects: Users, rights and data exploitation

A new application is blank and has the basic options shown below. Through the use of the resource files, role management and the pages created with the Epicraft editor, different user roles will see different screens upon login.



Explanation

1. Voozanoo Logo

At any time, click on the Voozanoo logo to return to this initial screen of the application.

2. Users and Rights

Groups: Allows one to create and manage a hierarchical system of partitioned data spaces. See the section *Rights and Users > Groups*.

Roles: Allows one to create and manage the various roles available for individual users to be assigned to as well as the read/write/delete rights the role has. See the section *Rights and Users > Roles*.

Users: Allows one to create and manage the parameters of each individual user. See the section *Rights and Users > Users.*

3. Data exploitation

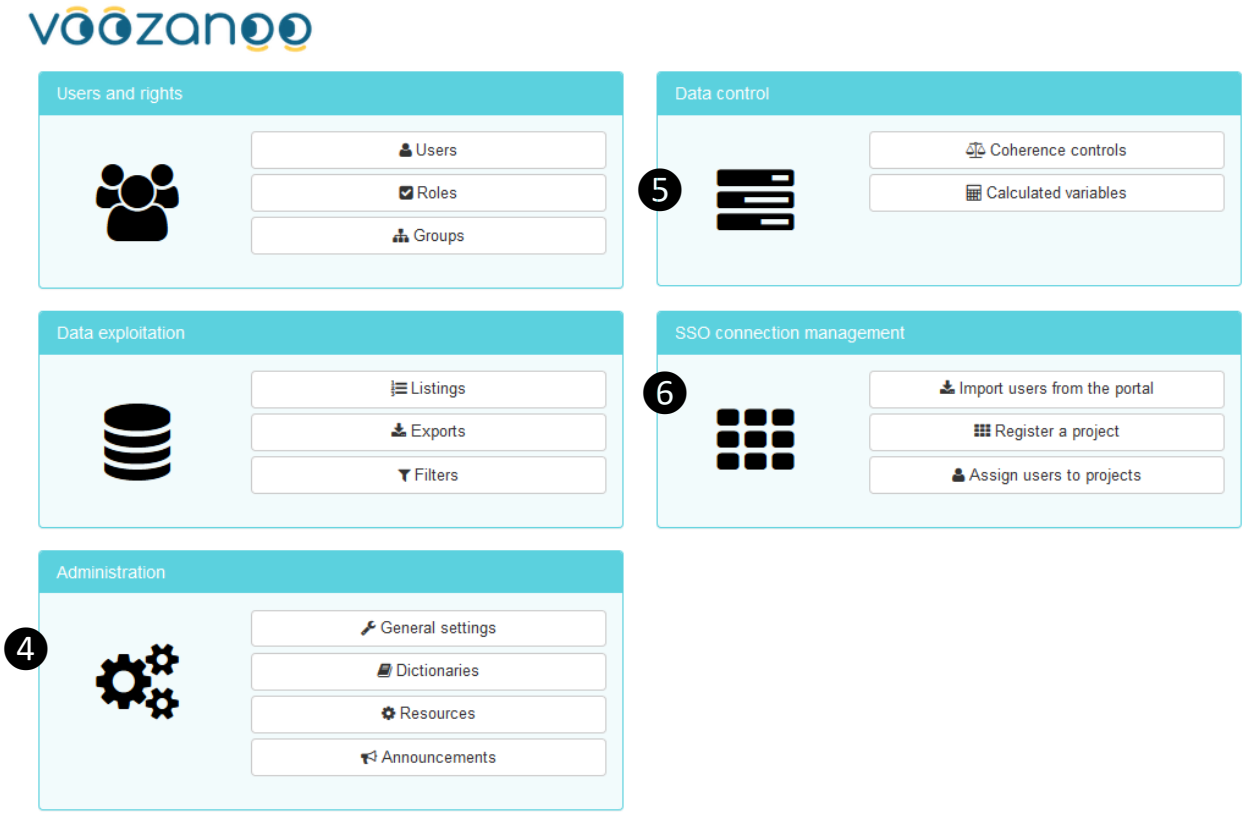
Listings: Displays all the listings that have been created and allows for editing them or creating new ones. See the section *Listings*.

Exports: Displays a list of available data export packages and allows for the creation of new ones. See the section *Exports*.

Filters: Displays a list of available filters and allows for the creation of new ones. See the section *Filter creation*.

Blank project: Structure and settings

(…continued) Initial screen with basic operations.



Explanation

4. Administration

General settings show information about your project and allows one to configure system-wide settings. See the section *General settings* further down.

Dictionaries (list of fixed responses available to a question): WARNING: Do not modify the dictionaries here. Modify dictionaries in Epicraft.

Resources: Access to the list of resources that make your application what it is. Typically, only Epiconcept developers have access to the resource files. Modifying these files without full knowledge of how they work can easily render your project unusable.

Announcements: Allows individuals with the appropriate rights to create announcements (see the *Announcements* section toward the end of these reference sheets) that are displayed to other users when they log in.

5. Data control

Coherence controls (input constraints): One can create, modify, and delete controls on the inputs to a given variable. One uses the MySQL syntax to define the conditions under which a field's input value is valid or not and if this blocks or warns the user of the problematic value.

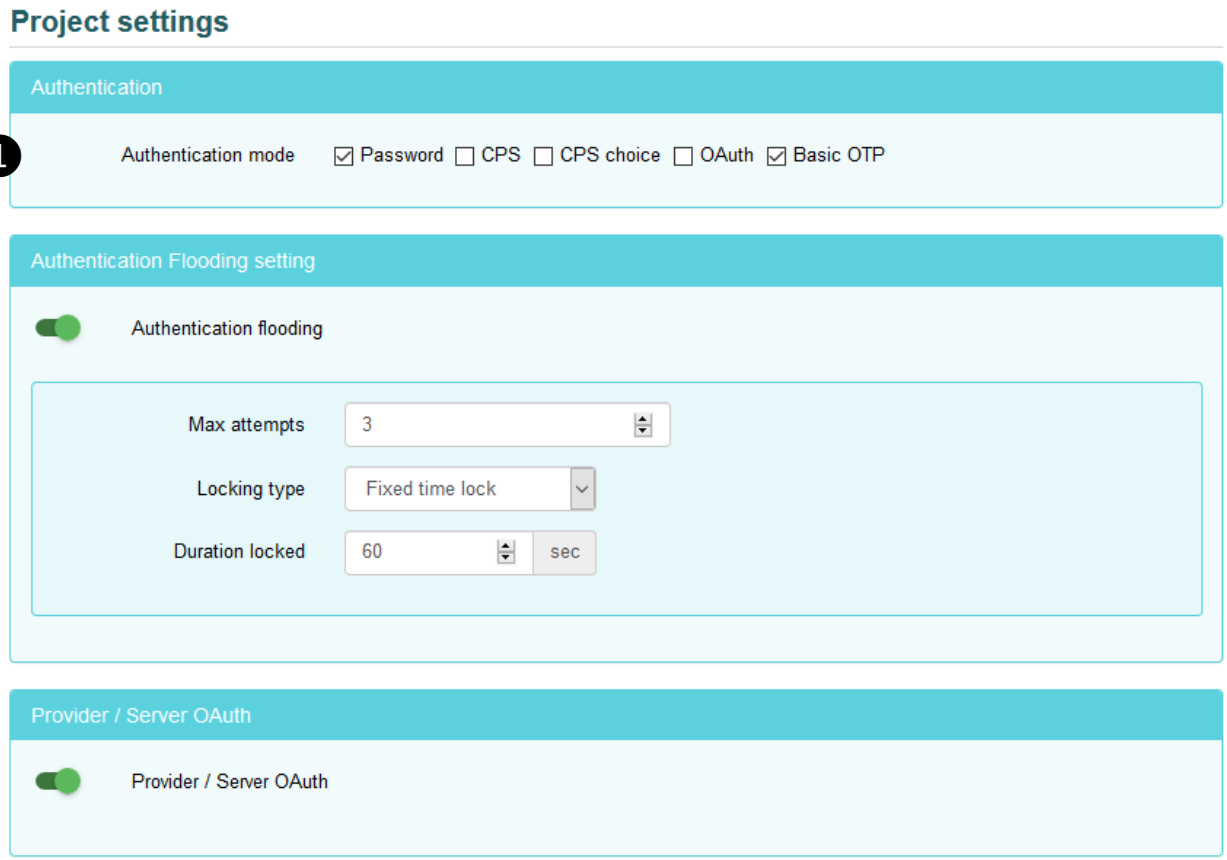
Calculated variables: Allows you to create new variables calculated from other variables. See the advanced section *Calculated Variables* in the Epicraft reference sheets.

6. SSO connection management

See the advanced section entitled *Provider and Consumer Applications*.

General Settings 1 of 3

The Authentication settings determine how a user may gain access to your application. Included here also are the settings for the Personal Health Data module for tracking patients' legal rights to their stored personal data as well as inter-application authentication, password difficulty, language choice and settings for using the project on mobile devices.



Explanation

1. Login

How will users be allowed to authenticate themselves (log in) to the application?

Password: the classic and most typical form of authentication, checking this allows a person to log into the system with a user name and password as per the *User management* section.

CPS: stands for Professional Health Card distributed by the French Agency for digital health. It is a recognized plastic card with a chip that is inserted into a USB connected card reader or integrated into some laptop computers. The card contains an electronic certificate. Checking this option allows a user to log into the system by using his/her CPS card.

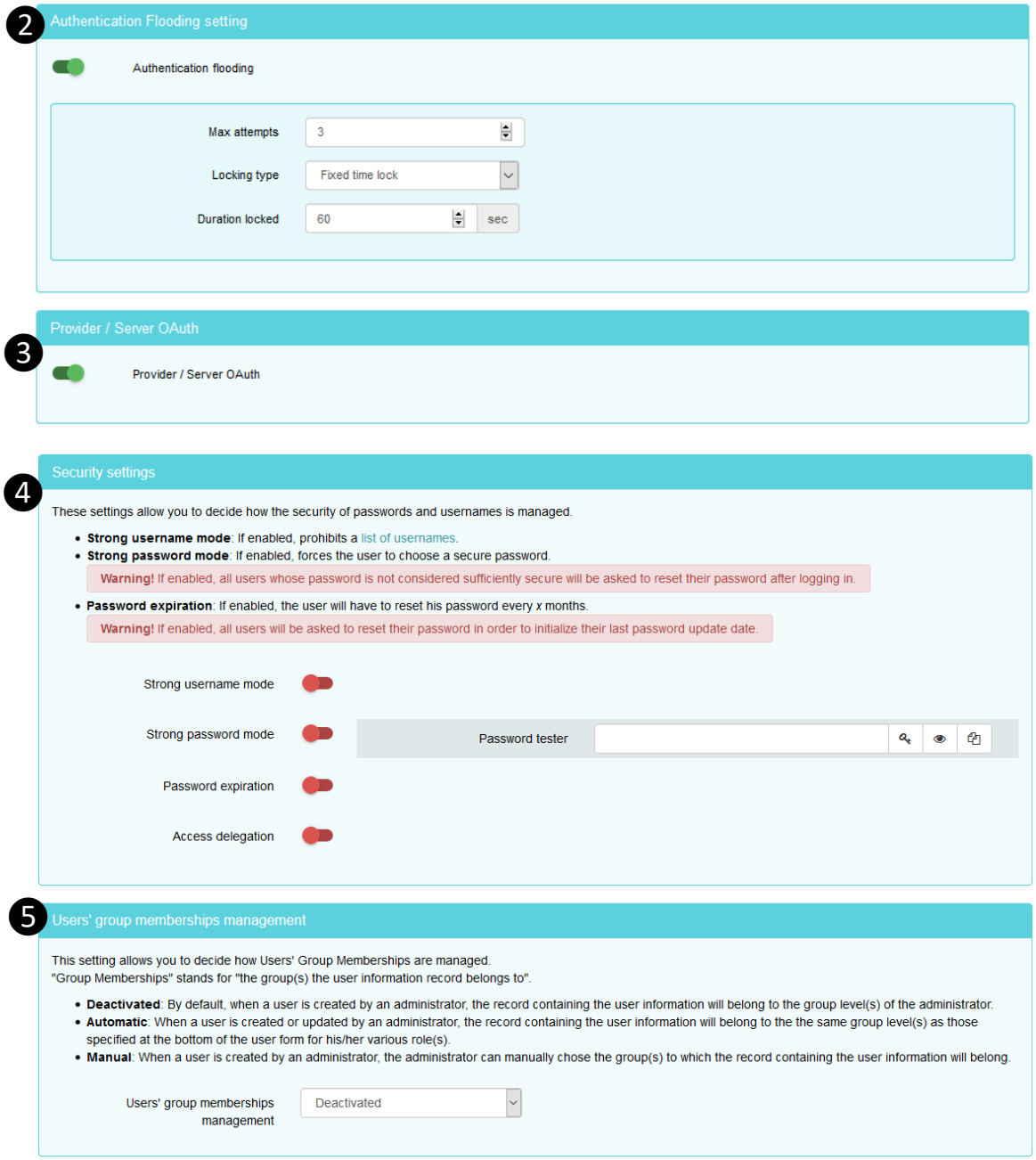
CPS Choice: Allows the user to choose between using either the classic Username/password pair and the CPS card.

OAuth: Open Authentication allows a person to use this application if they have already been authenticated by a "Provider" application. See details in the section *Provider and Consumer applications* in this guide.

Basic OTP: allows for a One-time Passcode to be sent to the user's telephone via an SMS text message. The received code is then entered to gain access to the application. The telephone number must first be saved with the user's personal information in the *User management* section.

System Settings 2 of 3

(…continued) settings related to authentication security and personal health data.



Explanation

2. Authentication flooding setting

Max attempts: number of incorrect passwords before the user is temporarily blocked from connecting.

Locking type: The user can be blocked for a fixed amount of time or an exponential amount of time for each lockout.

Duration locked: number of seconds a user is blocked for.

3. Provider / Server OAuth

Logging into this application gives authentication for another application. See details in the section *Provider and Consumer applications* in this guide.

4. Security settings

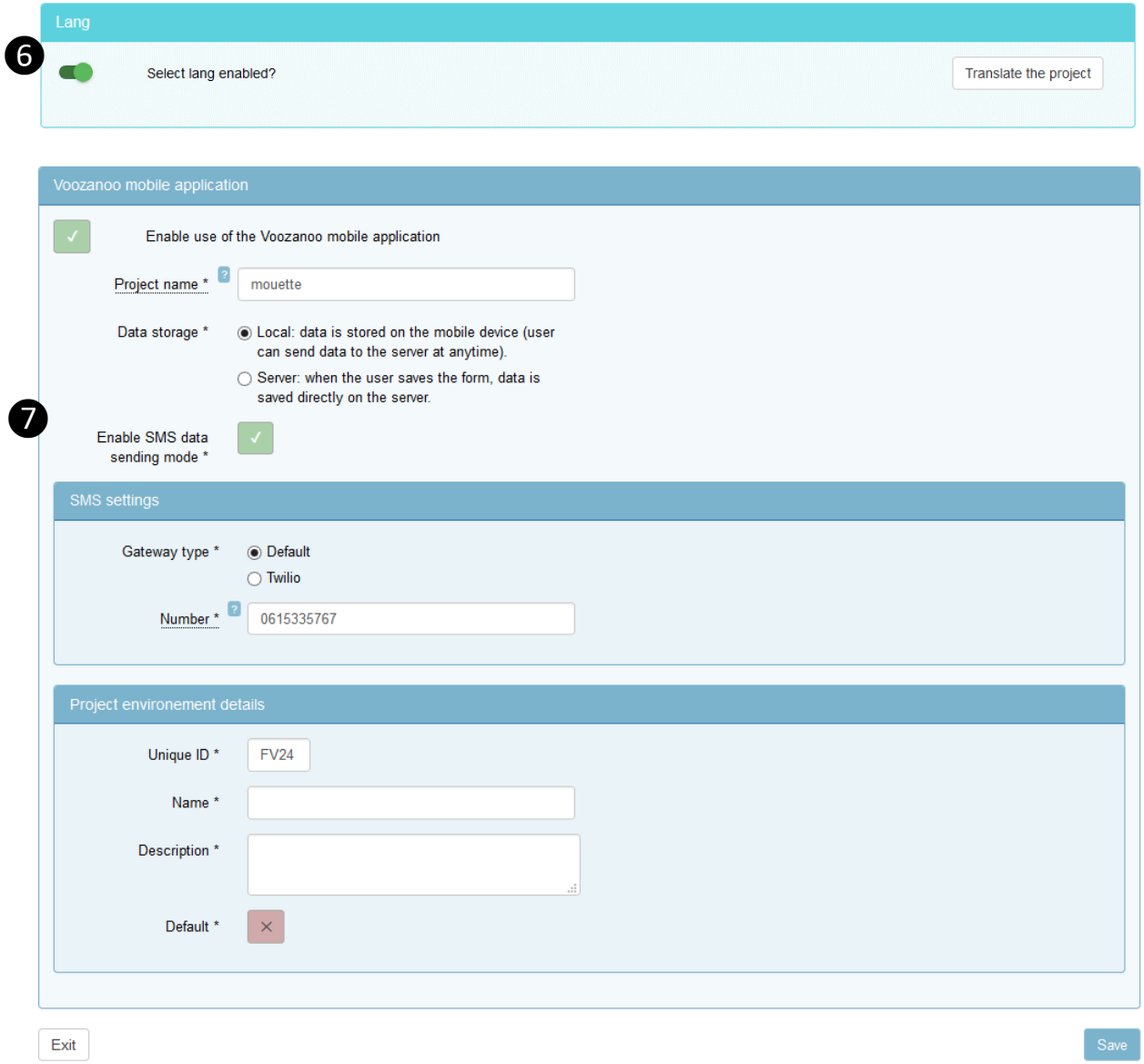
The settings for requiring strong passwords, for strong user names, and for setting a password expiration. For Access delegation, see the section titled **User accounts: Delegating access to another user**.

5. Users' Group Memberships Management

Determines what group membership(s) the user information record will have. This will apply to all roles that have the right to create and manage users.

System Settings 3 of 3

(…continued) settings related to language and the mobile application.



Explanation

6. Language

Allows the user to select another language for the interface via a drop-down menu on the top right of the page. This is not necessary if you have applied a vertical or horizontal menu system (see https://epiconcept-paris.github.io/epidocs/menu_navigation.html)

Translate the project: See the section toward the end of this guide *Project Translation with Crowdin™* for details.

7. Voozanoo mobile application

By enabling this, a user can complete the forms designated for his/her role on an Android ~~or iOS tablet or~~ smartphone.

Project Name: the name of the project shown on the mobile device. This is also the project name the user will have to enter when creating an account on a device.

Data Storage: Local – means that the user must send saved forms manually (it is stored "locally" on the device when saved. **Server** – means that if the device has an Internet connection, tapping the "Save" button will send the form contents immediately to the server.

Enable SMS: this function has been indefinitely suspended due to Google's policy for use of SMS on Android.

Unique ID: is automatically provided and should not need to be modified.

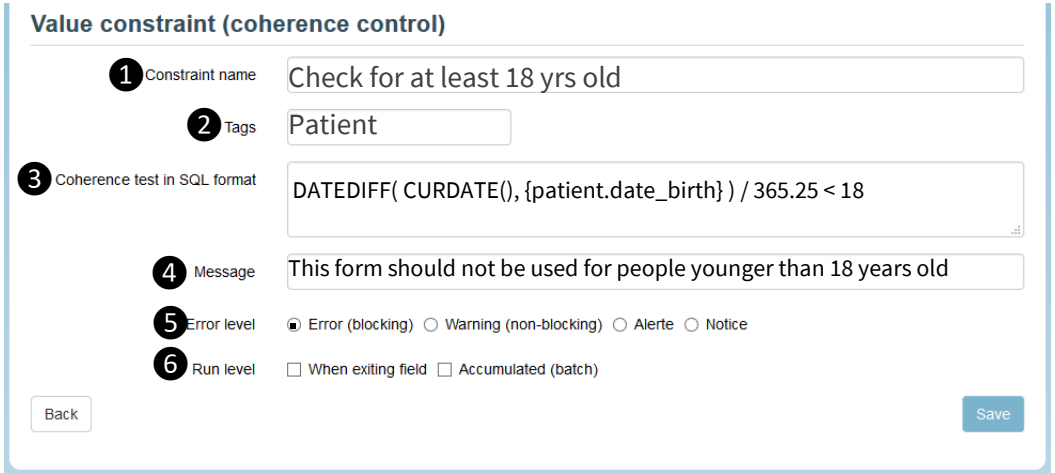
Name: The name you would like to call this environment (*pre-production*, *production*, etc.)

Description: Provide a description of the environment.

Default: If Epicraft publishes to multiple environments, set one project as default true. This environment will be preselected in the mobile app settings under "Advanced".

Coherence Control

If you want to be sure that the user enters useful data, then it makes sense to make sure each input field rejects or warns on unacceptable responses. Coherence controls, also known as constraints, allow you to restrict or signal a warning to what the user has entered into an input field.



Other examples below. The value entered by the user will produce an error/warning/alert/notice message if:

{patient.full_name} = "John Doe"	the **full_name** variable of the patient is "John Doe".
{patient.temp_corp} > 37	the patient's temperature variable **temp_corp** is greater than 37.
{patient.dob} <= "2010-12-31"	the date of birth variable **dob** is equal to or less than 31/12/2010.
{patient.naiss_time}< "18:00"	the time variable **naiss_time** is before 18:00 (24 hour time is used).
{patient.date_birth_est} < CURDATE()	the estimated date of birth **date_birth_est** is before today.
[patient.mchoix.4] IN ({patient.mchoix})	the **mchoix** checkbox dictionary variable has the item with a code of **4** checked.
[patient.rtype.'PR'] IN ({patient.rtype})	the **rtype** checkbox dictionary variable has the item with a code of **PR** checked.
{visite.sched} = [visite.sched.0]	the selected **sched** single-choice dictionary variable has a code of **0**.
{event.itype} = [event.itype.'l\'autr']	the selected **itype** single-choice dictionary variable has a code of **l'autr**
{project.gonogo} = True	the Boolean variable **gonogo** is set to "on" (true). When a boolean toggle is set to the center "neither on nor off" position, all coherence tests on it will return false.

Explanation

Warn for bad entries

The user's entry into a given field will return a message if the comparison returns a TRUE response.

1. Name: Enter a descriptive name for the test, such as "Check for at least 18 yrs old" in this example.

2. Tags: Enter one or more tags if desired to help you organize the types of constraints you create.

3. Coherence test: Enter the comparison statement using MySQL functions and comparators and the syntax {varset.varname} to describe a variable.

4. Message: Enter the message that you want the user to see when the test condition is TRUE.

5. Error level: Select the desired error level.

Error: The message is shown in red and blocks the user from saving the record until he/she fixes the error.

Warning: The message is shown in orange but the user can still save the record.

Alert: The message is shown in blue but the user can still save the record.

Notice: The message is shown in green but the user can still save the record.

6. Run level: Select when you want the constraint test to take place. Typically, it is when the user exits the field.

Exiting field: As soon as the cursor leaves the input field

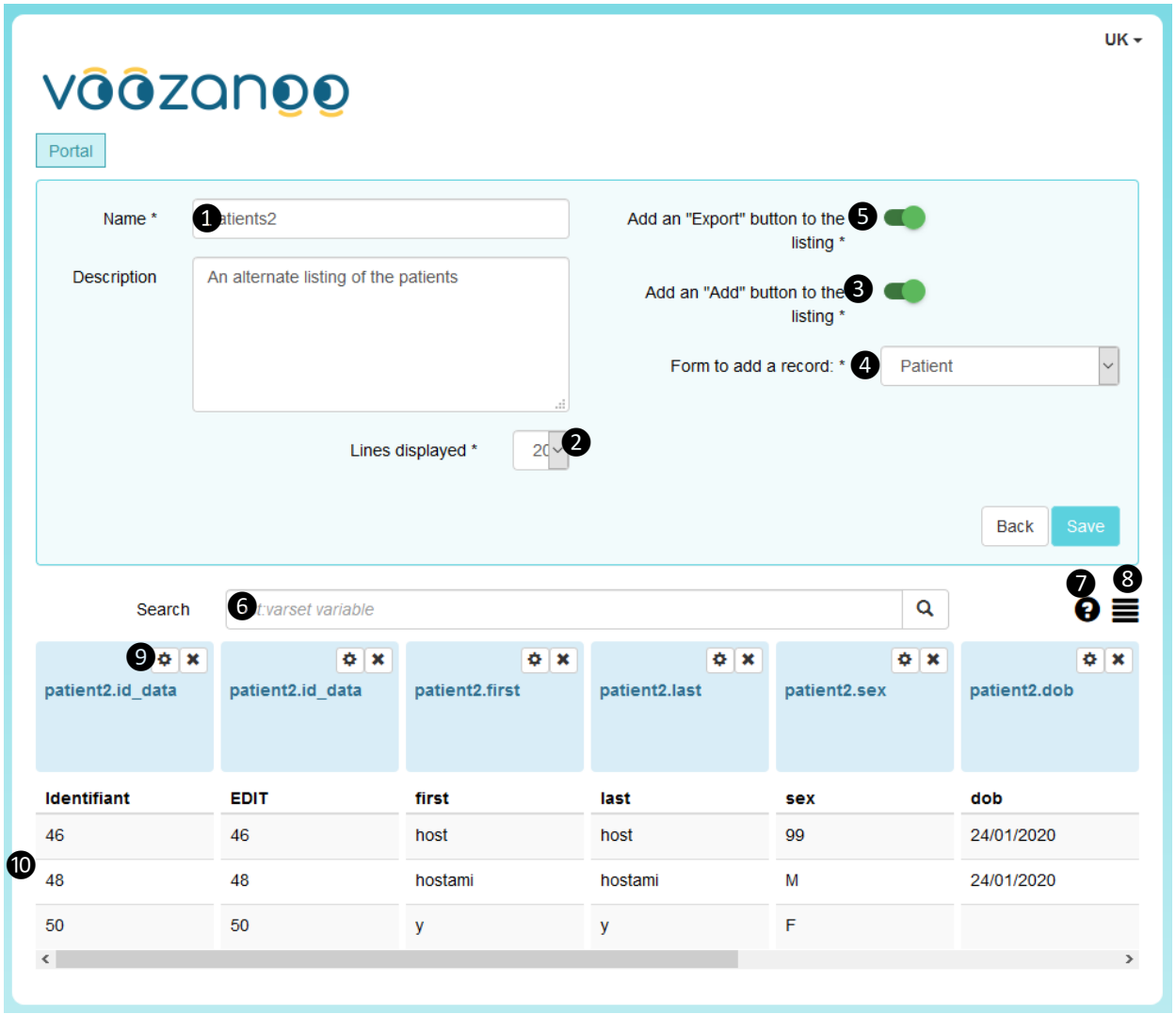
Accumulated: Allows for a programmed automation of all the constraint tests on all the data stored in the database.

```
<?xml version="1.0" encoding="UTF-8"?>
<form id="qudohavdgw1483461238356">
  <config>
    <coherence_test_panel_position>right</coherence_test_panel_position>
  </config>
```

NB: To change the position of the error panel on the user's screen, add the element <config> to the page's form resource using "left", "right", "top" or "bottom" to place the panel.

Listing creation 1 of 3

A data listing is the principal form of displaying information stored in the data base. Listings are constructed and saved with the Listings editor where each column is a variable and each line a data record.



Explanation

Principle

The principle of creating a data listing is that you will build it visually by finding and adding the desired variables one-by-one. You will see three lines of real data thus allowing you to see what your final listing will resemble.

1. Name: Give a good descriptive name to the listing.

2. Lines Displayed: The number of lines displayed for the user for each page of the listing.

3. Add enabled: Select this to place an *Add record* button at the bottom of the user's listing.

4. Add form name: When Add enabled is selected, select the form that the user will be presented with when he/she clicks the Add button below the listing.

5. Export enabled: Allow the user to export the data he/she sees in the listing with an Export data button.

6. Search: allows you to search for any variable or varset within your database.

7. Varsets: Select a varset to display all of its variables.

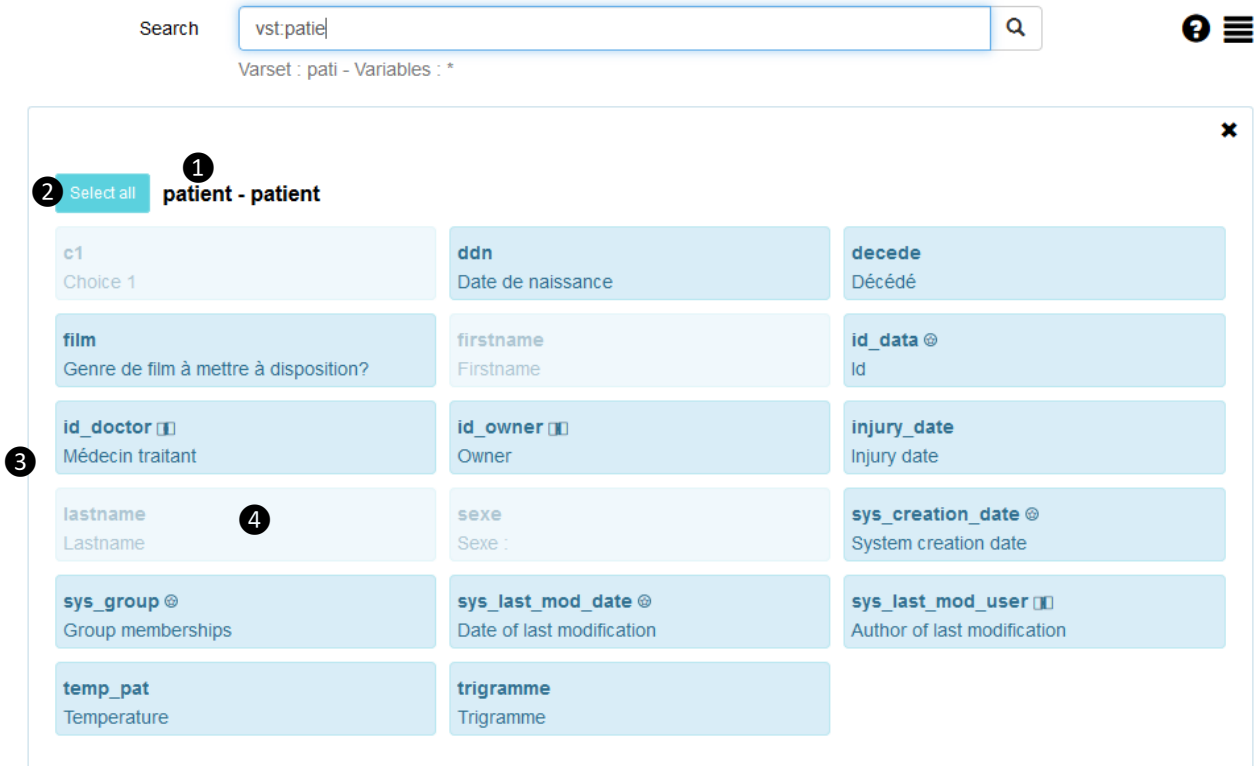
8. Order: Order the presentation of the search results.

9. Settings: Used to adjust the settings of each column.

10. Previsualisation: Display a previsualisation of the listing (show only three random lines of data) that the user will be presented with. Columns can be dragged and dropped in any order.

Listing creation 2 of 3

The search field will present its results directly below the search bar showing the varset name and the variables. It will include the variables you have created with the Epicraft editor as well as the system variables such as id_data, id_owner, sys_creation_date, etc.



Important notice about search results

You may get a response “no results” when you are absolutely sure that a varset or a specific variable exists. This is normal and due to the fact that the variables already added to the listing determine what other variables may be found and added. If you search for a variable that exists in a varset that does not have a proper relationship to the varset of one of the other included variables, then you will get a “no results” reply on the search even though the variable or varset does exist.

Explanation

Search methods & results

Search by varsets: To search for specific varsets, prefix your search with **vst:**. The search vst:pat will return the varsets *patient*, *alt_patient*, *patient_history*, *repatriation*. The **vst:** prefix searches in both the varset name and its label.

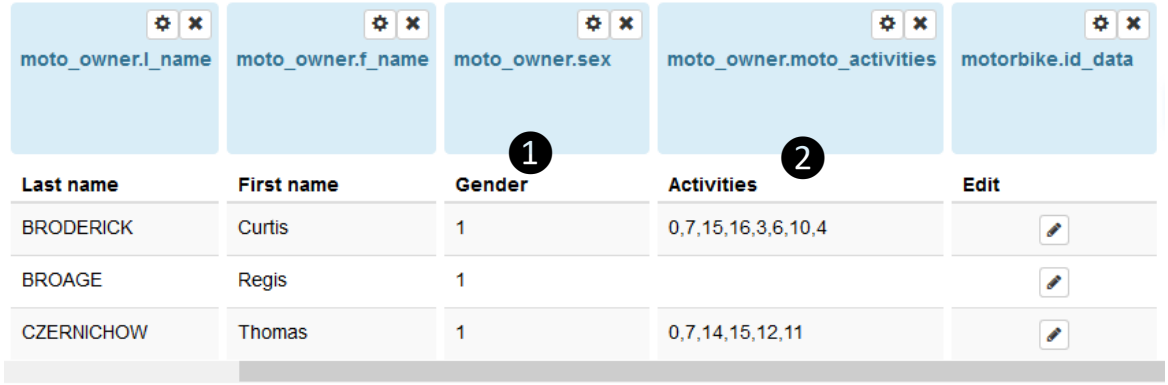
Search by variables: You can also search for individual variables by typing in a few letters of the variable’s name or a word or two of the variable’s label.

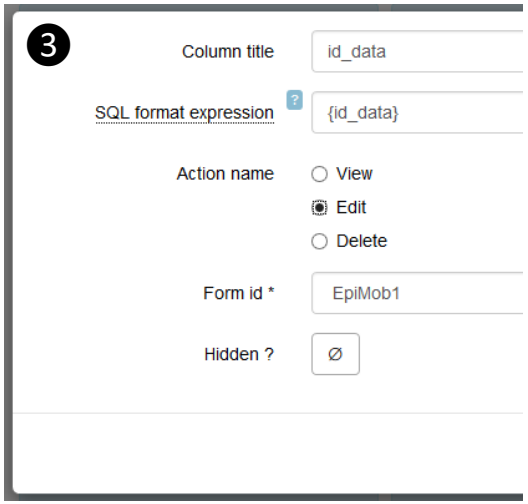
Search entry	Varsets solicited	Variables containing
name	*All varsets*	“name”
name young	*All varsets*	“name” **AND** “young”
name young vst:patient	“patient”	“name” **AND** “young”
“name of joung”	*All varsets*	“name of joung”
vst:patient vst:visit	“patient” **OR** “visit”	*All the variables*
vst:patient vst:”cohort 3”	“patient” **OR** “cohort 3”	*All the variables*

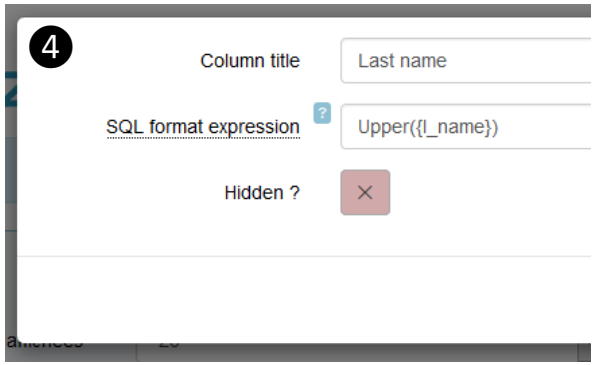
1. Varset name
2. Click to add all the variables to the listing.
3. Variables available to add one by one to the listing
4. Colour change for a variable already added to the listing.

Listing creation 3 of 3

Variable types may have particular functions or ways to be pre-visualised. We'll look at that here. Also, you can make Edit, View, and Delete actions available to the user for each line on the listing.







Explanation

Displayed data

In the three rows of data previsualisation, you will see the following particularities.

1. Dictionary: The values shown are the codes. In the real listing, the user will see the dictionary's label.

2. Check boxes: Checkbox dictionary variables are previsualised as the codes that were checked whereas the real listing will show the labels. You can view each code as its own column with or without a check by selecting "Split" in the settings (gear icon) of the variable.

Edit, View or Delete a line

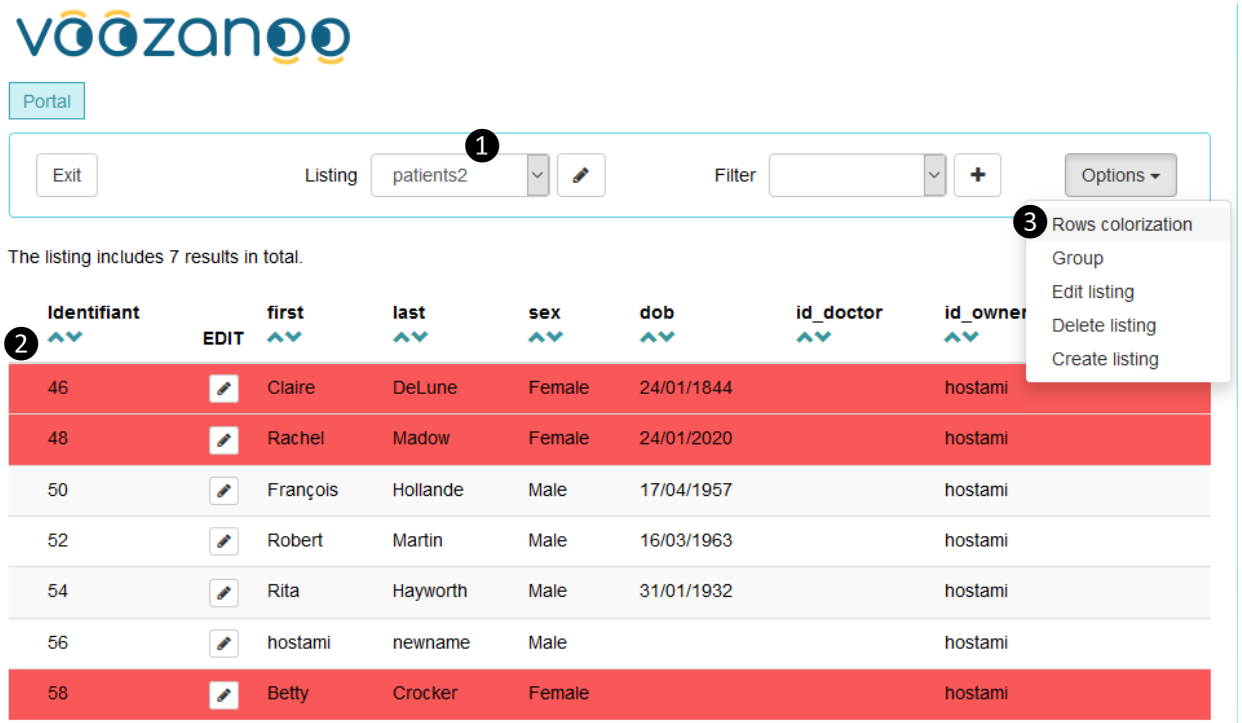
3. User control: To give the user of your listing the possibility to edit the data in the record from which a given line comes, you will need to insert that varset's variable id_data. If you click on the settings icon (gear) of this variable, you can choose among the three actions (Edit, View, Delete). You can add id_data multiple times.

Column names and SQL functions

4. MySQL functions: In the settings of each column, you can modify the name displayed to the user as well as modify the values returned from the database by using MySQL functions. A simple example could be **Upper({lastname})** which would show the last name of the person in the listing in upper case letters.

Listings: Order and colorization

Users have access to all the listings created by individuals in their group and in lower groups. Once executed, a listing can be ordered by any column and lines can be conditionally coloured.



Explanation

Listing functions

1. Listing: Choose a listing that you or someone else* has created.

2. Order. Order the list by any variable either alphabetically or numerically. Click the left arrow icon next to the name for an order of A-Z and 0-9 or click the other arrow for a reverse order.

3. Colorize: Choose the option Rows colorization** and enter the name of the variable, the condition, and choose the colour to be applied when the condition is true.

"Lock colors" locks in the selected colorization for all users.

* A listing is treated as regular data records are in that you can see the saved listings from everyone else in your group as well as those saved by people in lower level groups.

** Note that each successive color will cover over a previous color. For example, if you colored lines red for weight over 90 kg then additionally coloured blue for gender equals male, then any line with a male over 90 kg would be coloured blue because that was the last colour applied.

Listings: Grouping

When a listing is shown, one may ask about the nature of a given variable based on the response type of a specific column. By using the grouping option, one can group all lines with the same value of a given column and return information about all the other variables for that group.

Portal

Exit | Listing: Liste des visites | Filter | Options

Options menu: Rows colorization; 1 Group; Edit listing; Delete listing; Create listing

The listing includes 13 results in total.

Date of visit	Edit	Nom	Sexe	Se sentir	Poids	Repas hier	Date
07/01/2016		Seleron	Male	très bien	70.0	petit déjeuner, goûter, dinner	06/19
07/01/2016		Broage	Male	neutre	69.5	petit déjeuner, dinner	06/15/2016
07/01/2016		Broage	Male	pas bien	71.0	dinner, goûter	05/03/2016
07/01/2016		Broderick	Male	pas bien	100.0	petit déjeuner, dinner, goûter, déjeuner	05/03/2016
07/01/2016		Broage	Male	pas de tout bien	74.0	petit déjeuner, déjeuner, dinner	06/08/2016
07/01/2016		Seleron	Male	pas bien	72.0	petit déjeuner, déjeuner, dinner, goûter	06/30/2016
07/01/2016		Broage	Male	très bien	68.0	petit déjeuner, dinner	06/29/2016
07/01/2016		Seleron	Male	pas bien	71.0	petit déjeuner, déjeuner, dinner	06/26/2016
07/01/2016		Lore	Female	bien	60.0	petit déjeuner, déjeuner, goûter	06/16/2016
07/01/2016		Martin	Female	neutre	54.0	petit déjeuner, déjeuner, dinner	06/23/2016
07/01/2016		Lore	Female	très bien	60.0	petit déjeuner, déjeuner, dinner, goûter	06/16/2016
07/01/2016		Martin	Female	bien	61.0	petit déjeuner, goûter, dinner	06/29/2016
07/01/2016		Broderick	Male	pas bien	97.5	petit déjeuner, déjeuner, goûter, dinner	06/16/2016

Date of visit	Edit	Nom	Sexe	Se sentir	Poids	Repas hier	Date sortie resto
6		6	1	pas du tout bien	88.7	24	2016-14
24		23	0	pas bien	77.3	85	2016-14
45		44	1	neutre	67.1	135	2016-13
12		12	0	bien	61.9	38	2016-12
13		13	0	très bien	61.6	37	2016-08

Explanation

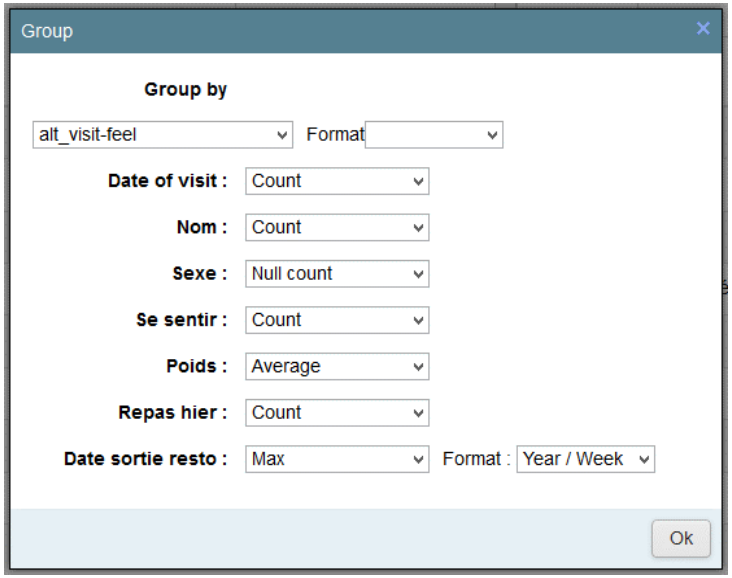
1. Choose the grouping variable

Using new example, we may want to group the lines by the value of a given column. If we group by the 5th column "Se sentir" (wellness), this will give us exactly five lines in our listing (each line corresponding to one of the responses given in the form's question).

Comment vous sentez-vous aujourd'hui ?

- ○ pas du tout bien
- ○ pas bien
- ○ neutre
- ○ bien
- ○ très bien

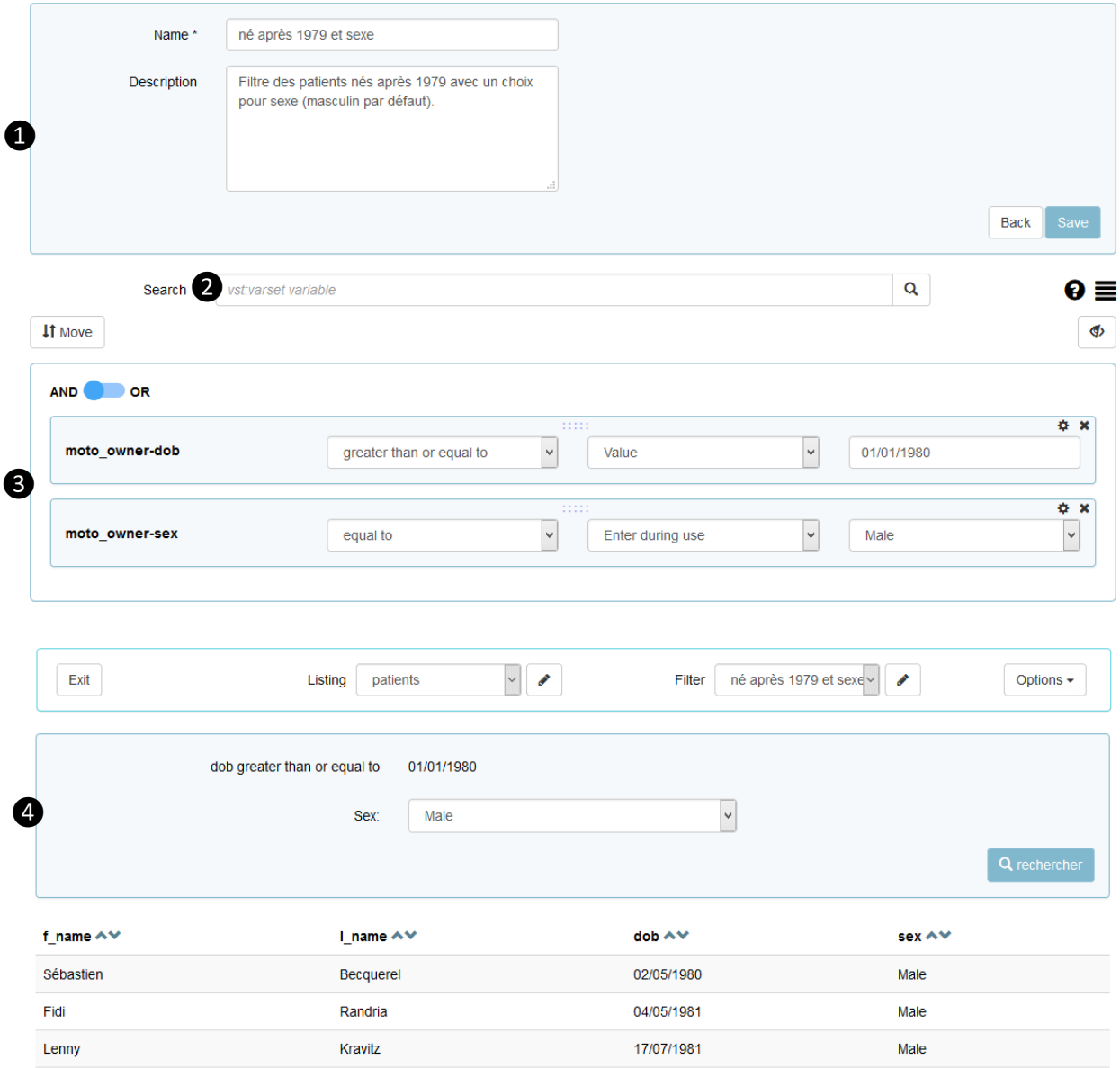
Choose **Group**, select the grouping variable, and then select what type of results you want for the other columns.



For integer, decimal, and date values, you can choose the count, min, max, or mean. For text and dictionary values, you can choose to display the count or the number of missing values.

Filter creation 1 of 2

Filters are arguably the most important tool for finding and viewing information in your application's database. A filter can be static (it filters for specific data values) or it can be dynamic (values can be modified during use). A filter can be applied to a listing or an export.



Explanation

1. Name and Description

Give your filter a meaningful name and a full description.

2. Find the necessary variables

This is exactly the same method to find a variable when creating a listing. See the section *Listing creation* on how to use the search field to find and add the desired variables for the filter.

3. The filter criteria

The listing or export that this filter is applied to will only show the records in which the stated conditions are true. Thus, in this example, both the conditions for the varset-variable pair *moto_owner-dob* (date of birth of the patient) AND *moto_owner-sex* (the sex of the patient) must be true in order for a record (row of data) in the listing or export to be displayed.

The first condition in this example has a static or fixed value of 1 January 1980. The second condition is a dynamic condition, that is, one can enter the desired value for the variable *sex* while viewing the listing. The initial default value has been set to *Male*.

4. Using the filter

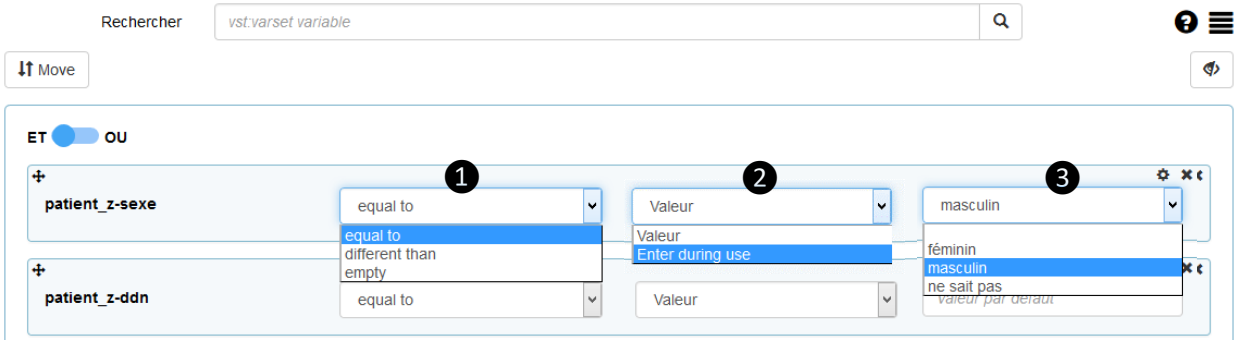
Here is the filter applied to a listing. Notice that the filter's user can modify the value for *Sex*.

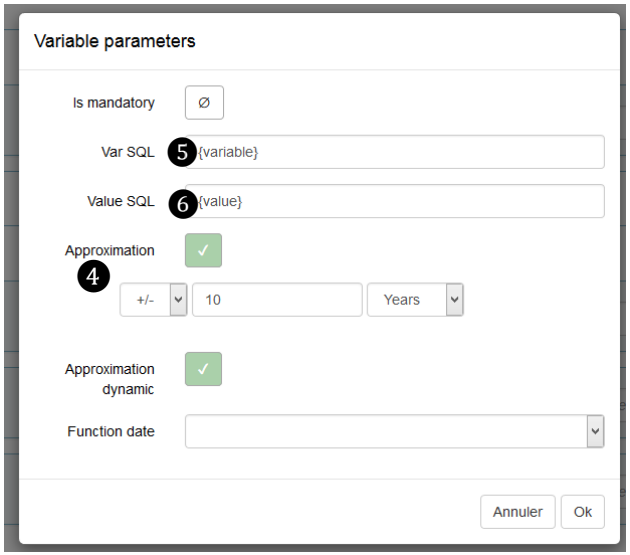
5. Choice of filters

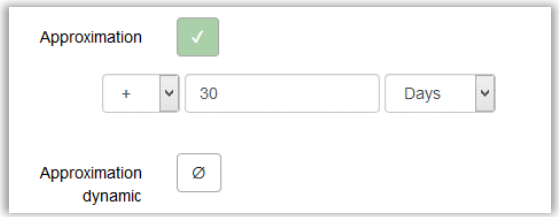
Only the filters that can be logically applied to the given listing or export (includes the filter variables) will be displayed in the Filter drop-down menu.

Filter creation 2 of 2

Once you have selected the filtering variables, you can then adjust the type(s) of comparison(s) to make or use approximations.







Explanation

Set the comparison

1. Comparator: The available comparisons are adapted to the variable type chosen. "Empty" is available for all types meaning that the record contains no entry for that variable.

2. Value/Enter during use: Choose if you want to compare with a static value or allow the user to enter/choose one (dynamic) while using the filter.

3. Value: Enter or choose the static value for the comparison. If the value is dynamic, this entry will become the default value.

allows you to move a variable upward or downward

gives access to approximations and advanced settings

displays the condition under each of the filter variables

removes the variable from the filter

4. Approximations

Within the advanced settings, the approximation allows you to filter for a range of values around the stated static or dynamic value for integers, decimals, dates, time, and text. You can give fixed values such as +/- 10 years, relative values such as +/- 10% for number variables, or one-sided approximations such as + 30 days. Additionally, you can make the approximation values adjustable (dynamic) when someone is using your filter.

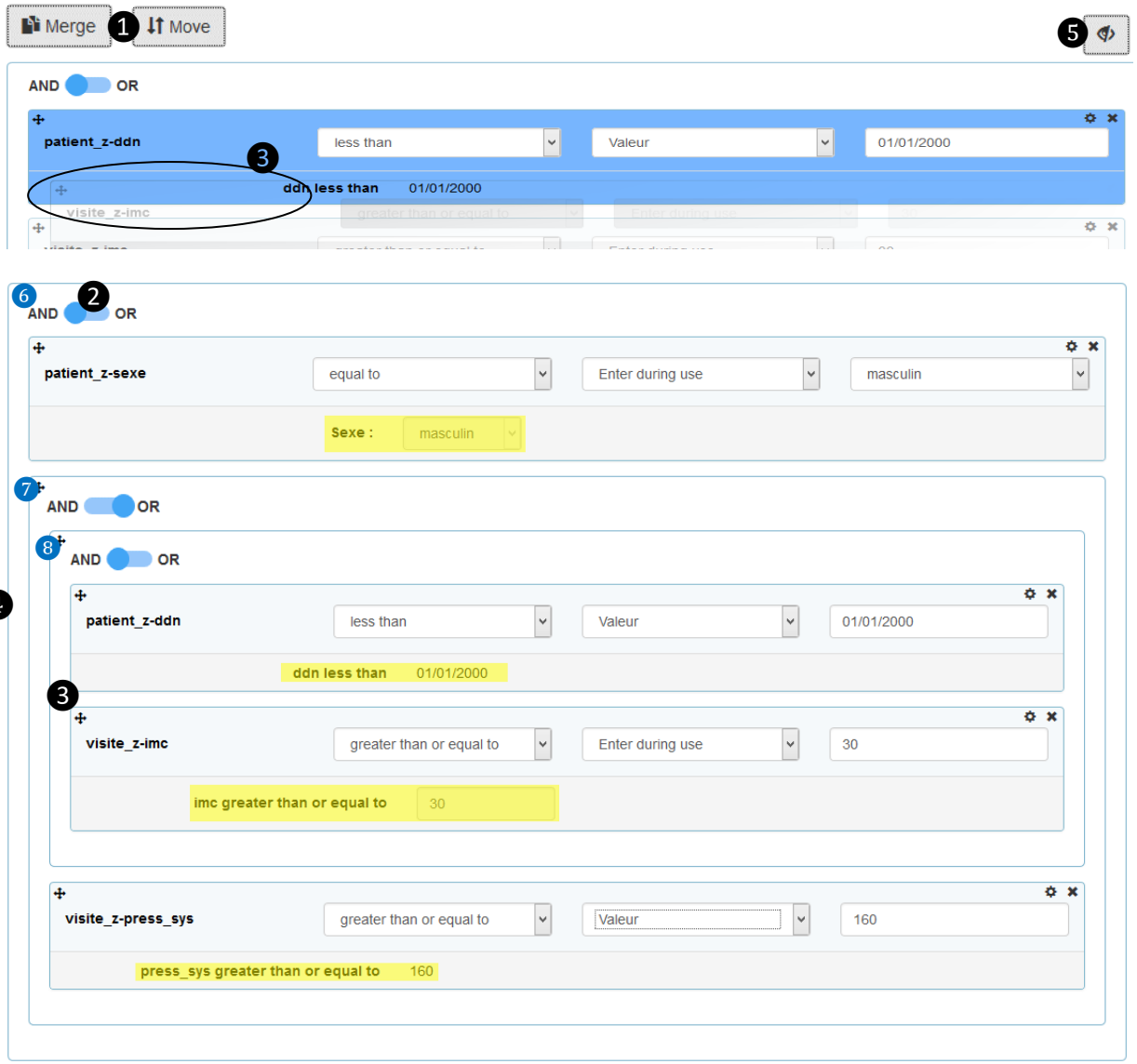
The SLQ fields (for advanced users)

5. If you want to modify the value of the variable retrieved from the database, enter the MySQL statement that modifies it here.

6. If you want to modify the value that the variable is being compared with, enter the MySQL statement that modifies it (the static or dynamic value) here.

Filter creation: complex filters

A complex filter is one in which AND and OR logic is required. The number of variables and type of logic is only limited by what can reasonably be understood by a human being.



Explanation

AND and OR grouping

1. In order to create AND and OR groupings, change from the mode *Move* to the mode *Merge*.

2. The relationship among the variables once they are merged together can be changed between AND and OR.

3. In *Merge* mode, as you drag a variable over another variable or group of variables, it will highlight in blue to indicate that it will be merged with this variable or group. The result in this example will represent

(date of birth < 01/01/2000 AND imc >= 30)

4. A complex filter

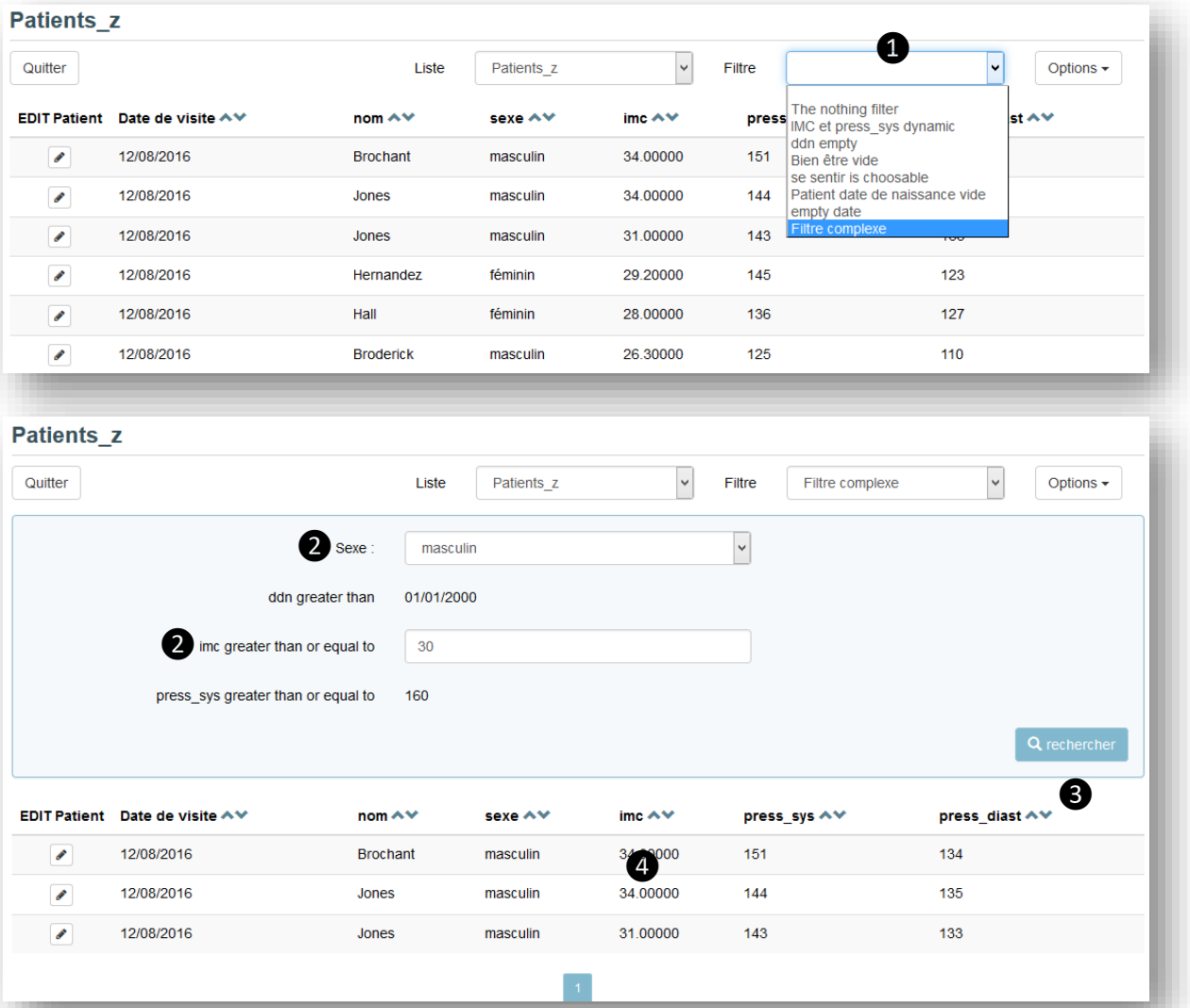
In this example we have used four variables to create a complex filter expression equivalent to

sex = m AND ((ddn < 1-1-2000 AND imc > 30) OR press_sys > 140)
6 8 7

Notice that two of the variables (ddn [date of birth], press_sys [systolic pressure]) are set to fixed values while the other two (sexe [sex], imc [body mass index]) are dynamic (with given default values) and thus can be modified while the filter is being used. You can return to the *Move* mode ❶ and move variables inside and outside of your groups as needed. Turn on the view option ❺ to display the comparisons below each variable (highlighted in yellow here).

Using filters

A filter can be used on a Listing or on an Export. Only the filters that can logically be applied to the given listing or export will be available for selection.



Explanation

Using the complex filter created on the previous page, notice the following.

1. Available filters

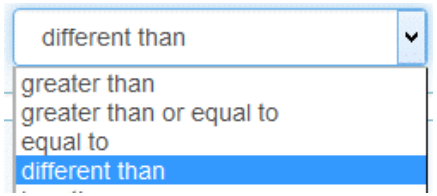
Here is the available list of filters to choose from. You may have created these filters or other individuals may have, depending on their role's rights. Other filters that operate on unrelated varsets will only be shown when a listing or export can logically apply the filter. For example, a filter that includes variables from both a parent and child varset will not be available when displaying a listing of just the parent.

Note: Initially, the listing is shown with the last filter used. If you do not want to use a filter, choose the top empty line.

2. Dynamic filter variables

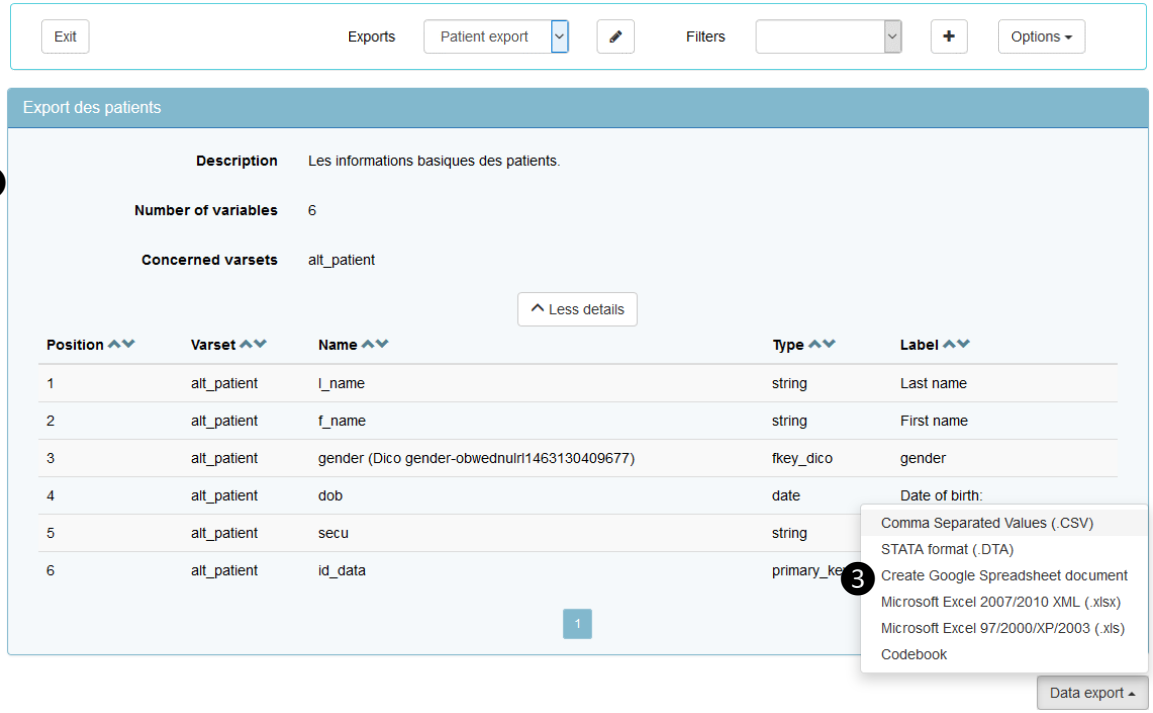
You can change the values of the variables that were set to *Enter during use* when the filter was created. In this case, the variables *sexe* and *imc* were set as dynamic values. Once these are modified, click on the *Filter* button ❸ for the listing to be updated. Remember also that columns can be sorted ❹ in order of lowest to highest or highest to lower values.

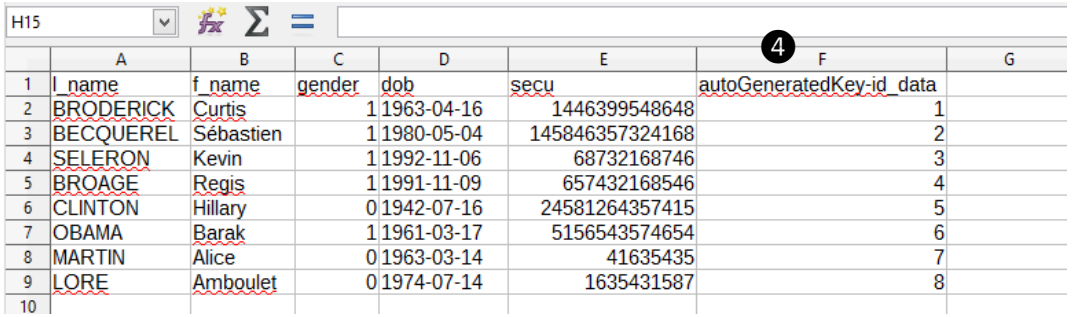
NB: using the filter comparator *Different than*, will always return a false value if the variable is empty (and thus not display the line). For example, if the filter on a dictionary variable is *different than* "Yes" and there is record without a response for this variable, it will not display the record.



Exporting data

Data stored in your application's database can be exported in a number of different formats. The export utility allows you to create and modify export packages to run these by yourself and others and any given time.





The exported data shown in a spreadsheet application

Explanation

Constructing an export

An export is constructed in exactly the same way as a listing is created (see the section in this document *Listing Creation*). You will choose variables one-by-one from the various varsets and place them in the desired order.

alt_patient.l_name	alt_patient.f_name	alt_patient.gender	alt_patient.dob	alt_patient.secu
l_name	f_name	gender	dob	secu
BRODERICK	Curtis	1	16/04/1963	01446399548648
BECQUEREL	Sébastien	1	04/05/1980	145846357324168
SELERON	Kevin	1	06/11/1992	68732168746

Previsualisation of the export

Executing an export package

1. The choice of exports you and your group members have created.

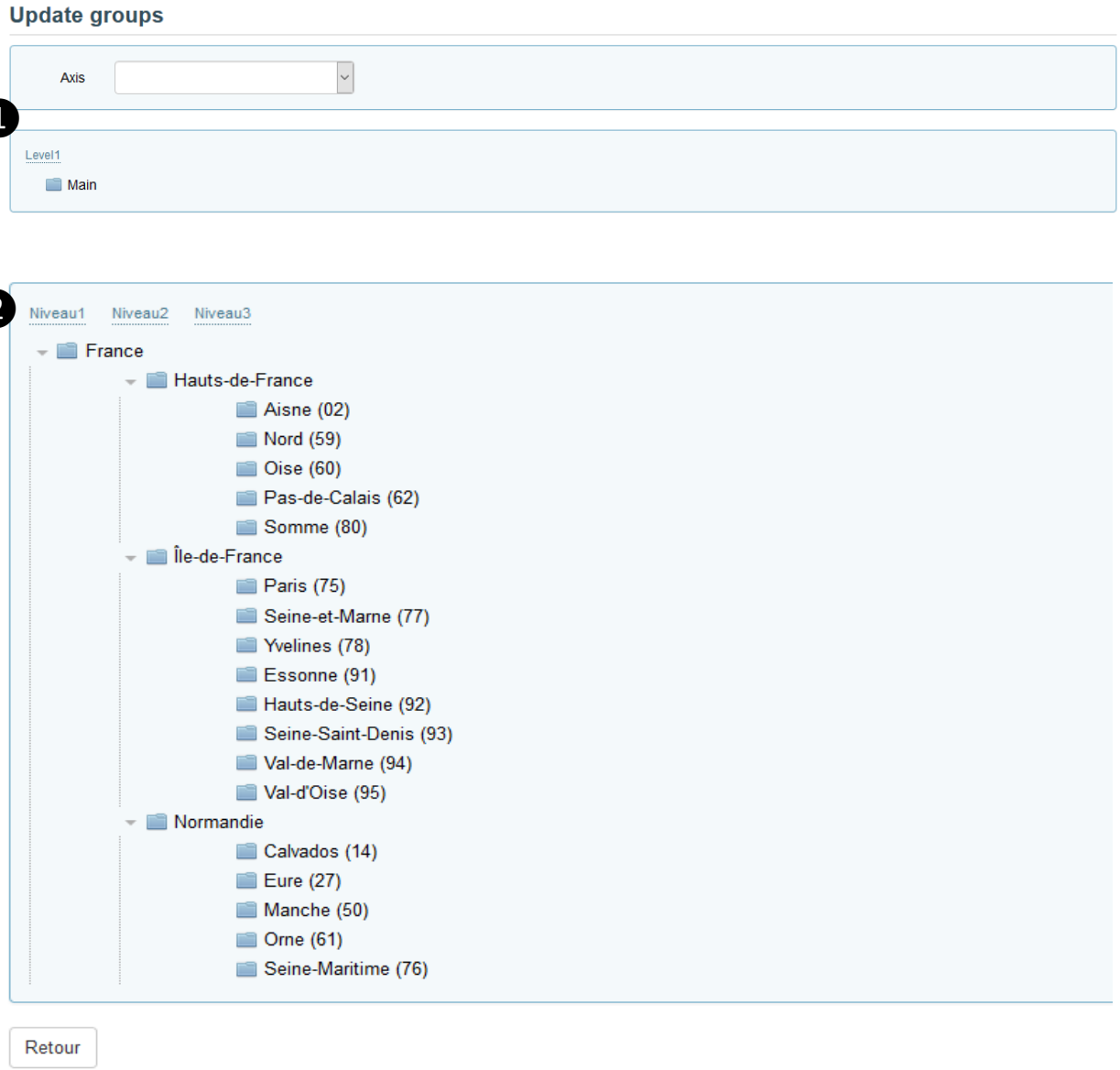
2. Click on the button **More details** to see a recap of what will be in the exported file.

3. The choice of format of your export. Note that the export *Codebook* is an extended version of the recap and can include dictionaries and references if desired. It does not include data.

4. The data export will include a "key" column for each included varset in the export. These columns give the id_data primary key from the database.

Groups - Introduction

It is often the case where a large number of people will be using your application to store and lookup information. In large organisations there is often a need to partition data into a hierarchical set of groups where higher levels have access to lower levels but not vice-versa.



Explanation

1. No groups

When no groups have been configured, there is just one single group into which all users are placed and in which all data is stored. This group is called **Main**.

2. Separately partitioned data

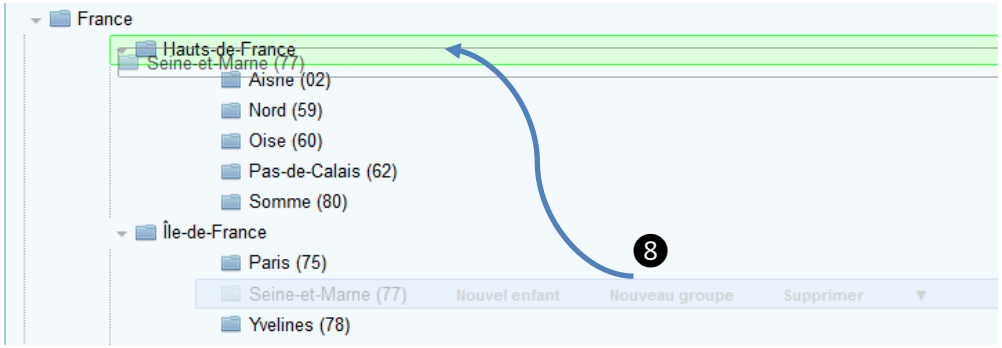
Compare this now to the second figure where groups have been created to align with the geographic distribution of head offices and local offices. This means that if you as a user are in the group Normandie, you can access data records created by people in Normandie and the sub-groups Calvados, Eure, Manche, etc. However, you cannot access any of the data records in the groups Île-de-France, Hauts-de-France nor their sub groups. A person in the group Yvelines cannot access any data in the group Paris or above. It is as if those other groups do not even exist. There are parameters that can be set in each specific *Role* which will allow fine tuning of exceptions to this general hierarchical data separation.

Example: You can set up the role of a Doctor to be able only to read records from all levels, yet be able to modify and delete records at his own level (say *Normandie*) and lower. Likewise, the role of Nurse may be restricted to only reading records at his/her own level and below, yet be able to read, write, and delete the records that he/she created.

NB: The Axis element is a legacy element kept for early projects which had implemented this Axis partitioning.

Groups: Creating a hierarchy

One can modify the hierarchy of the groups by adding a group to the same level (New group), adding a sub-group (Add child), deleting a group (delete), moving a group (drag & drop), merging a group into another group (merge), or creating multiple groups at once (Import).



Explanation

Modifying the structure of your groups

3. Click on a line to highlight it, then perform an action.

4. Adds a new sub-group (child) to the currently selected group.

5. Adds a new group at the same level as the selected line.

6. Deletes the currently selected group and any sub-groups (children) it may contain.

7. Modify a name by clicking on the name to highlight it.

8. Modify the placement of a group by dragging it to another area in the hierarchy.

Exceptions to the hierarchy

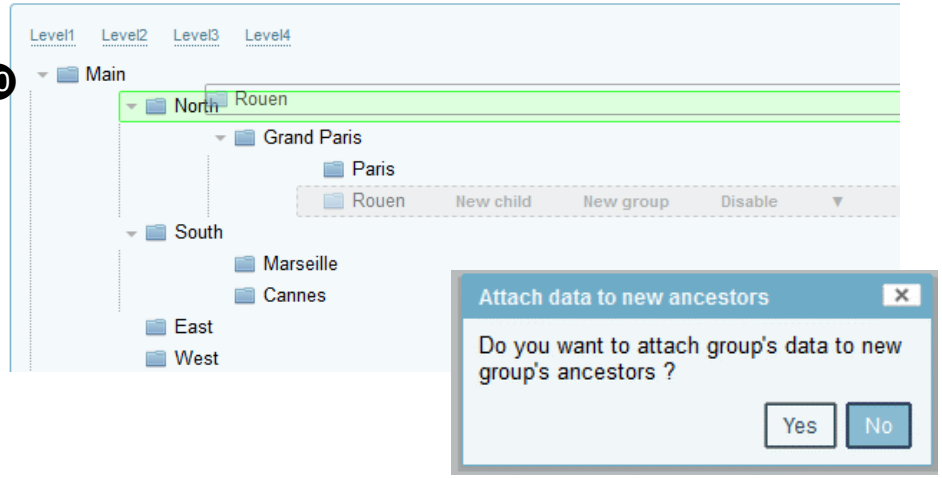
It is possible to have special relationships among groups that is not hierarchical. This cannot be done through this user interface but can be done by a software developer. For example, there might be a special case where the group Yvelines is a sub-group of Île-de-France but must be a sub-group of Paris as well. A developer can make such special cases that are not strictly hierarchical. Note that if you created another Yvelines as a sub-group of Paris, it would be completely separate from the Yvelines under Île-de-France.

Groups: Add multiple and fusion

There are functions which allow many groups to be added at once or for groups to be merged together.

9

10



Explanation

9. Add multiple groups

To add multiple groups to a specific branch, highlight the level in which you want to add multiple sub-groups and then select Add Multiple from the triangle drop-down menu.

In the text box, type-in or paste-in the names of the groups you want to add as sub-groups (children) to the currently selected group. See the next page *Groups: importing and exporting* for complex structure updating.

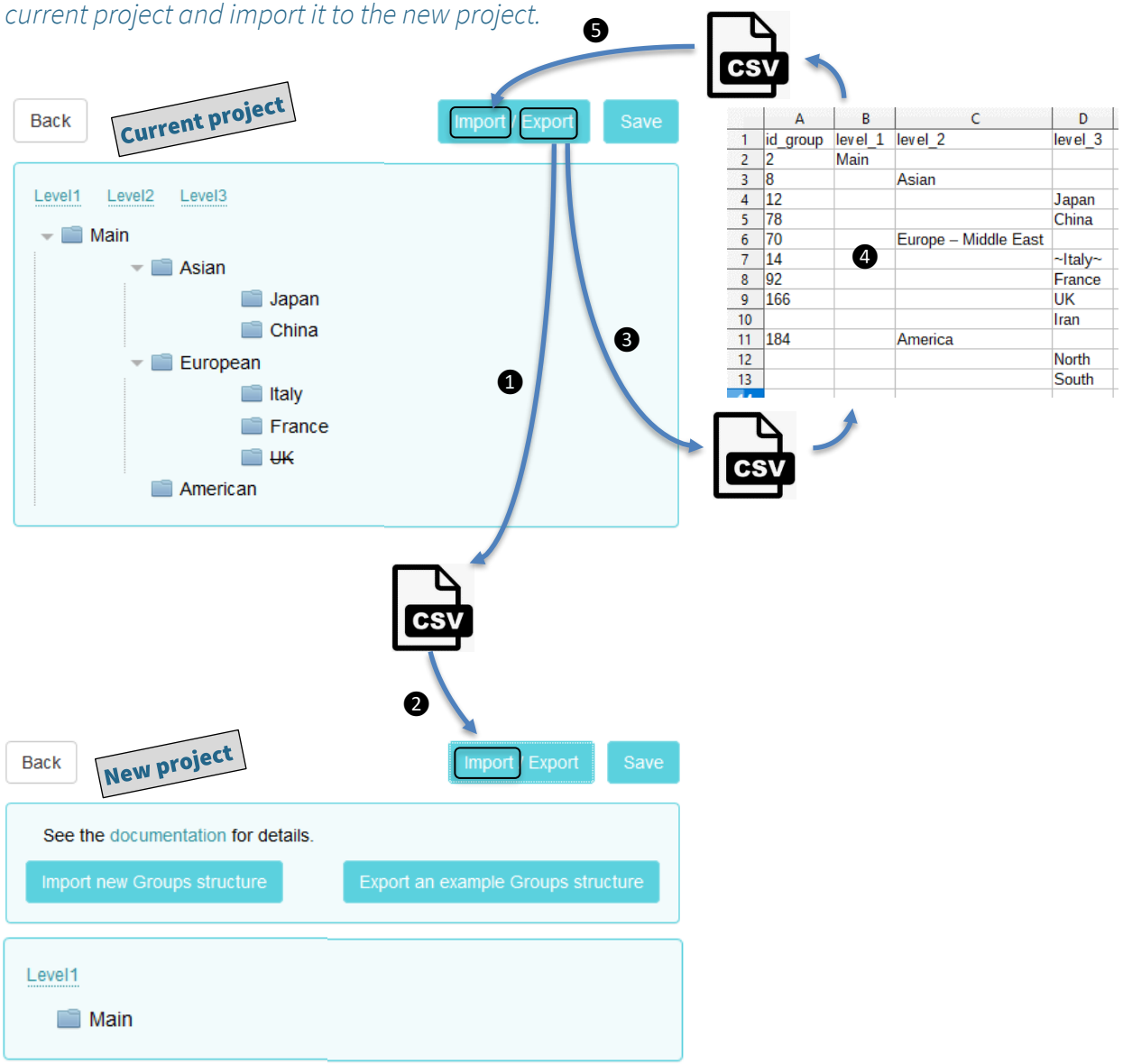
10. Merging groups together

If you would like the group A to be merged into the group B, then highlight group A, and select Merge from the triangle drop-down menu. Now drag it on top of group B. Group B will turn green to show you that it has been selected.

You will be asked whether you want to “Attach data to new group’s ancestors”. If you choose Yes, the records that belonged to the group A that you merged into the group B will belong only to group B. However, if you choose No, the records that belonged to group A that you merged into group B will belong to group B as well as any other group that it belonged to previously that is not in the path between B and the root (Main). In the example to the left, suppose that the group **Cannes** needs to be merged with the group **North**. If the user selects No to “attach group’s data to new group’s ancestors”, then the records would belong not just to **North** but also to **South**. If the response were Yes, the records would belong only to North.

Groups: Importing and exporting

If you have a complex Groups structure or an empty Groups structure in which modifying it manually would take too much time, you can import your modifications via a CSV file. Or if you have a structure in one environment and would like to use it in a new one, you can export it from the current project and import it to the new project.



	A	B	C	D
1	id_group	level_1	level_2	level_3
2	2	Main		
3	8		Asian	
4	12			Japan
5	78			China
6	70		Europe – Middle East	
7	14			~Italy~
8	92			France
9	166			UK
10				Iran
11	184		America	
12				North
13				South

Explanation

Importing = modifying

It is extremely important to understand that one does not "write over" the current structure when importing groups. You will only be allowed to import a modification of the current structure.

Case 1: Copying groups to a new environment

Start first by exporting the groups structure of your current project ❶. You can open it in Excel® or another spreadsheet application to see the compatible format for importing to another project. Go to your new project which has only the one group called *Main*. You can simply import ❷ the .CSV file that you just exported and your new project will have an identical structure*.

Case 2: Modifying the current structure

Your current structure is limited to modifications to the name of a group, addition of new groups, disabling, or re-enabling existing groups. Start by first exporting ❸ the current structure. This is the basis your new structure. Now modify ❹ it as desired keeping the *id_group* of the original lines.

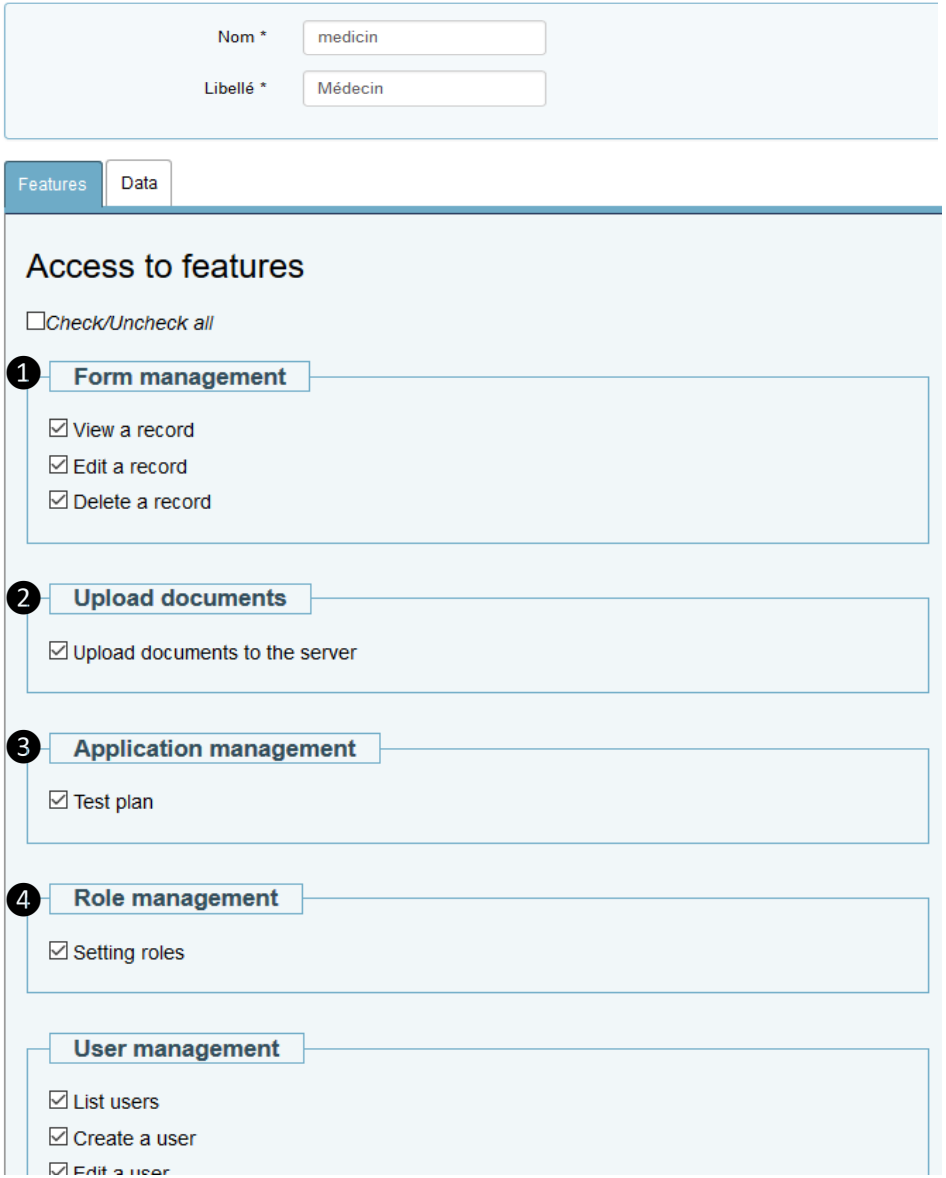
- **Group Name:** You can change the names of the groups but not their positions nor their *id_group* value.
- **New Groups:** You can add new groups by inserting new lines between existing groups. Voozanoo will create the new *id_group* values for these new groups.
- **Disable groups:** You can disable a group by adding the **~** character before and after its name. For example, *~Asian~* would disable the group *Asian* and all of its lower levels.
- **Re-enable groups:** You can re-enable a disabled group and all its lower levels by removing the **~** characters before and after its name.

Finally, import ❺ the saved modifications.

* Hierarchically, the structures are the same. However, if you export the structure of this new environment, you will probably notice that the id_group column will have different values than the original structure.

Roles: Form reading, saving, and deleting

Roles define what a user may and may not do. Every user is attributed one or more roles which define what capabilities he/she has in terms of accessing pages, data, or functionality. Typically, these roles are a reflection of already existing organisational roles in the real world.



Explanation

Since all individuals are attributed one or more roles, we will speak in terms of the rights of a role. Each role will have rights on what Functions are available to it, and rights on the Data tables (varsets) within the system.

1. Forms

View a form: Must be checked if the role should be able to view a form (even if he/she may not be able to fill it in).

Fill in a form: must be checked if the role should have the right to fill in and save a form.

Delete a record: Must be checked if the role should be able to delete a form (given that he has such a right on the data table side.

2. Document storage

Upload documents to the server: Some applications may include the possibility to upload documents to the information system. This must be checked if the role is to be allowed to upload files.

3. Application Management

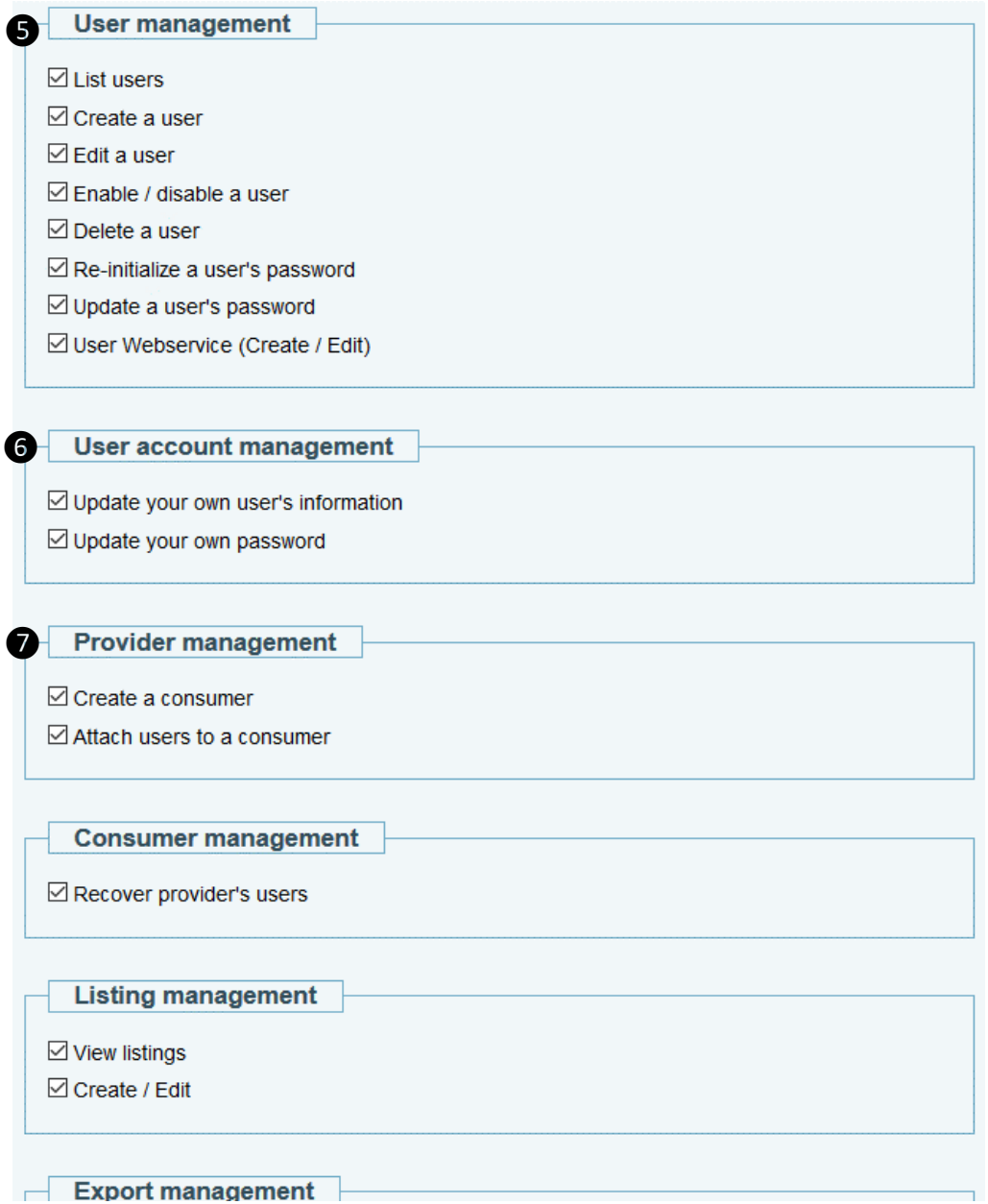
Test plan: Allows a user (usually just an administrator) to view detailed application-level technical information in the general settings.

4. Role Management

Setting roles: allows this role to access and modify the project's roles settings (this screen).

Roles: User, account, and provider rights

(…continued) role management



Explanation

5. User management

List users: allows the role to view a list of the users.

Create a user: allows the role to create a new user.

Edit a user: allows the role to modify a user's info.

Enable/disable a user: allows the role to activate or deactivate a user.

Delete a user: allows the role to permanently delete a user.

Re-initialise a user's password: allows the role to reinitialise the password. The user receives an email with link.

Update a user's password: allows the role to update a user's password directly by typing it in (with confirmation entry).

Webservice user: Allows the role to use this application's webservices.

6. User account management

Update own information: allows the role to update his/her account information (name, e-mail, etc.).

Update own password: allows the role to modify his/her own password.

7. Provider

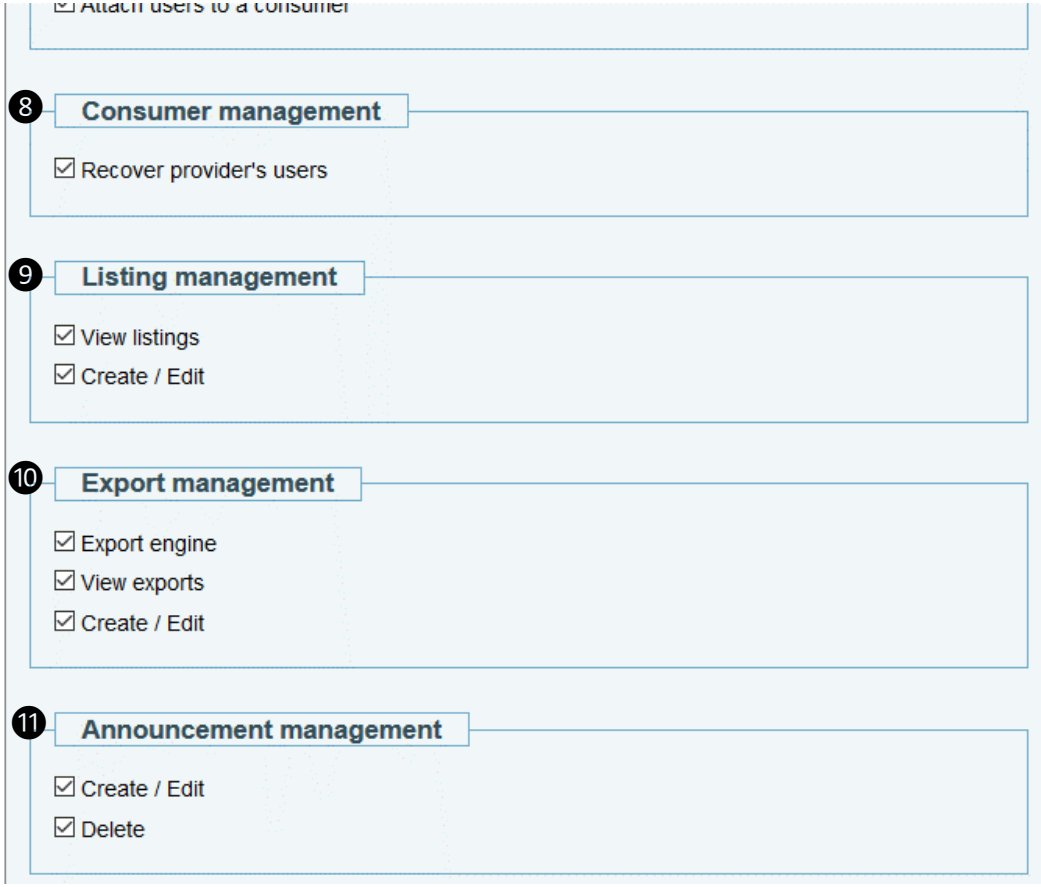
A provider application is one in which it provides the authentication "OK" to a "consumer" application so that the user does not have to log in to the consumer application to use it. Any application can be a consumer or provider to another application. See the section at the end of this guide *Provider and Consumer applications*.

Create a consumer: allow this role to declare a consumer application for this application.

Attach users to a consumer: allow this role to declare a user as a valid user for a consumer application.

Roles: Consumer, listing, export, announcement

(…continued) role management



Explanation

8. Consumer management

If this is a consumer application, allow this role to choose from the users of a provider application to be added as users to this application.

9. Listing management

View: Allow the role to view and use listings.

Creation/Modification: Allow the role to create and modify listings.

10. Export management

Export engine: Enable exports to be viewed or created.

View exports: Allow the role to view a list of the exports and execute any given one.

Creation/Edit: Allow the role to create and modify exports.

11. Announcement management

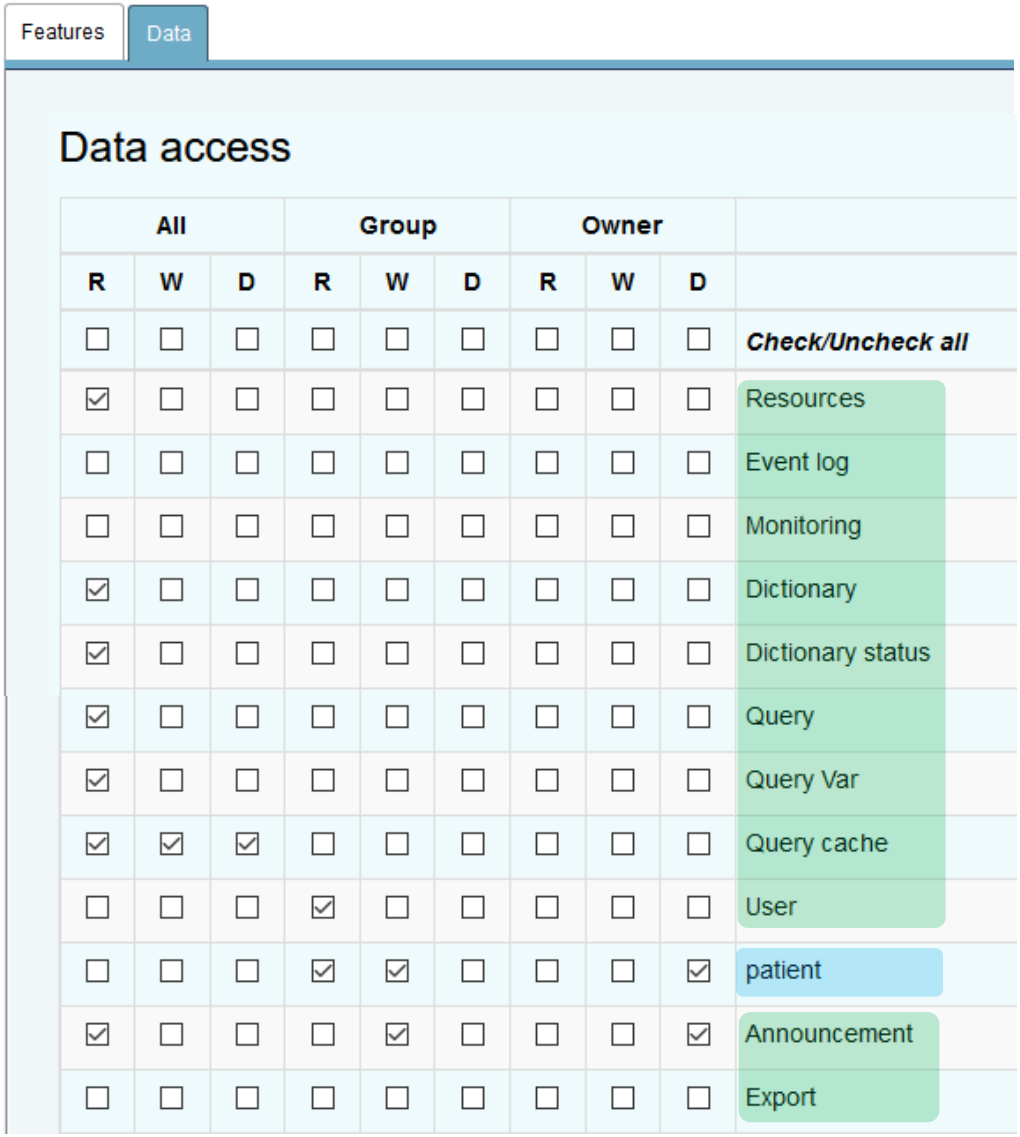
Create/Edit: Allow the role to create new announcements or edit existing ones (corresponding read and write rights must also be set for the announcements table).

Delete: Allow the role to delete and announcement (a corresponding delete right for the announcement table must be made as well)

See the section Announcements further down in this document for details about setting the table rights.

Roles: Read, write, and delete rights

The other half of the rights parameters is the setting of rights for each individual varset (database table). Alongside these varsets are the Voozanoo system varsets.



1

2

Explanation

1. System varsets

The system varsets should be checked as shown to the left. An administrative role will probably need to have the table *user* checked with Group-W and Owner-D. Very rarely do the rights need to deviate from this.

2. Epicraft created varsets

You will find the various varsets created when you have deployed (written to your application) your modifications made with the Epicraft editor.

The rights are

- R=Reading (viewing)
- W=Writing (creation & modification)
- D=Deleting

A given user may have the right to fill in a form in general (set in the functionalities side of the rights – see above), but it is here where one determines on which individual forms the role has read, write, and delete privileges.

All: If you check boxes under this column, the role will have R,W,D rights for all records of the varset regardless of the group the user with this role may belong to. Using this is highly discouraged.

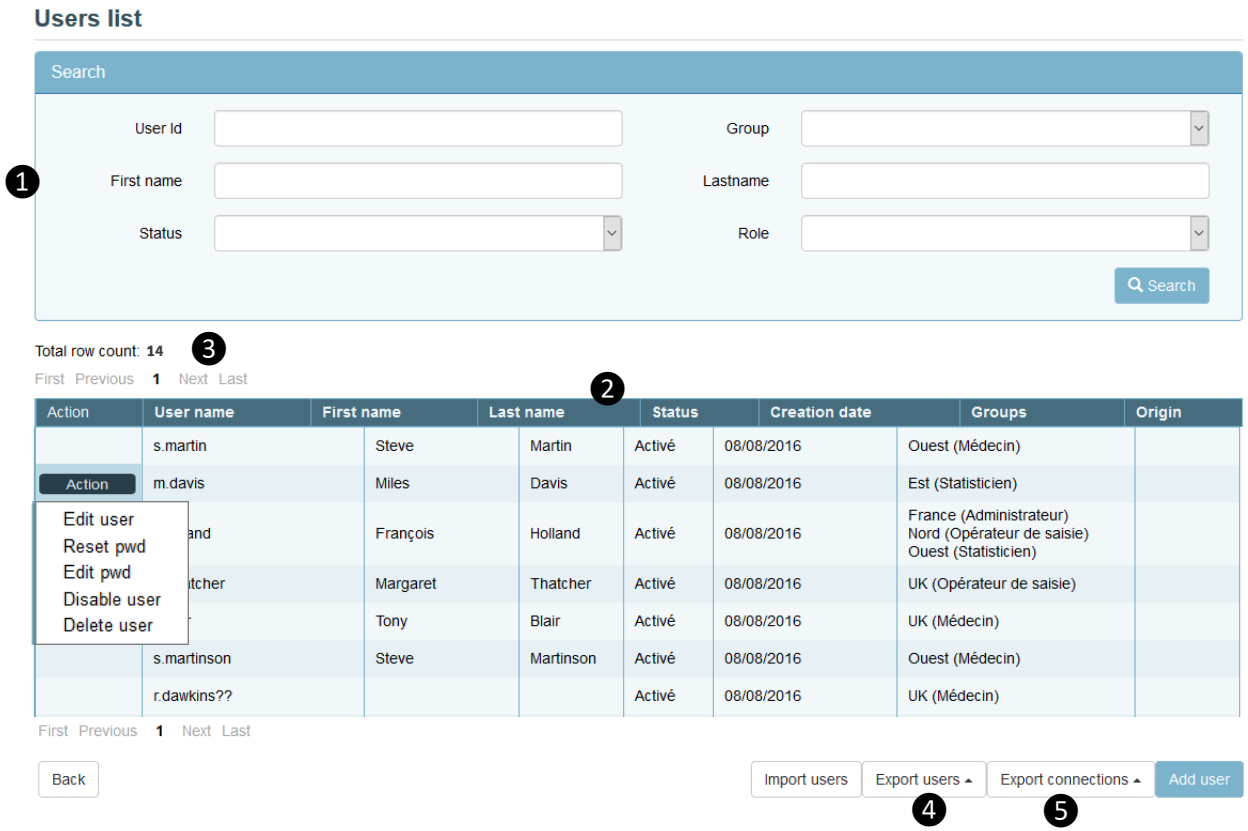
Group: If you check boxes under this column, the role will have R,W,D rights only for records that have been created in his/her group or that group's subgroups.

Owner: If you check boxes under this column, the role will have R,W,D rights only for records that have been created by the specific user themselves.

Nb: the Export system varset is only present when the Voozanoo application is preconfigured to export in asynchronous mode. No rights are to be checked.

User accounts: Find a user

Users of your information system are assigned one or more roles and assigned to one or more groups if specific groups have been created. Upon opening this screen, one is presented with a list of the application's user accounts.



Explanation

1. Find users

Using the various fields as search criteria, the list of users below it will reflect those filtering criteria. The User ID, Firstname, and Lastname allow partial completion so that if Br is entered in the Lastname field, the list of users below might contain Brody, Branson, and Albrecht. The logical connector AND is used among the six fields and thus the number of matches will diminish as more fields are filled.

2. List of users

This is based on the search criteria you may have entered above the list. The column headers can be clicked on in order to sort the list forward or backward (click a second time) by that column. Placing the mouse over a line reveals the **Action** button allowing various modifications to the specific user's account.

3. List count and navigation

Shows the number of accounts in the list and allows you to jump forward, backward or to any part of the list.

4. Export users

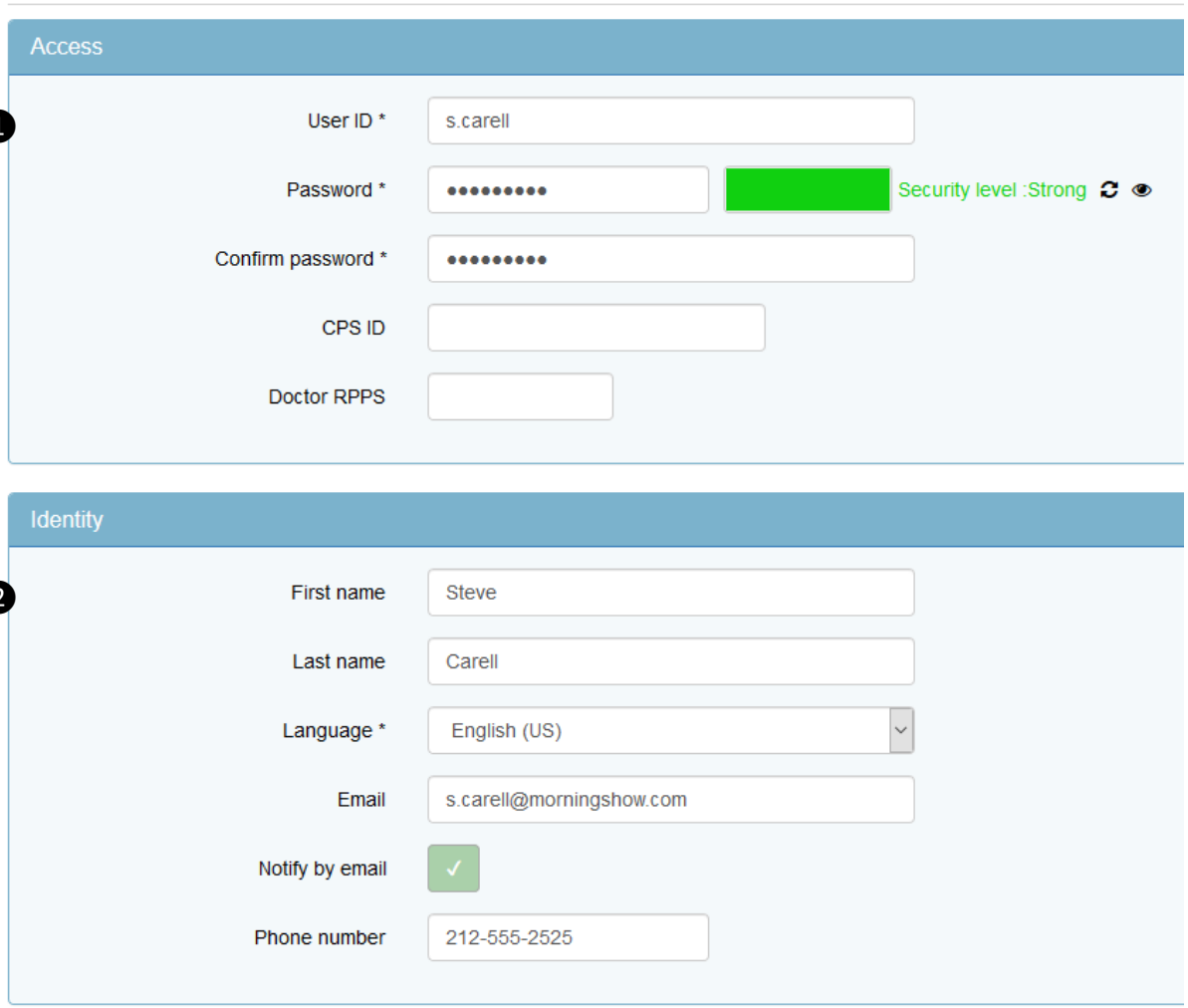
Allows you to download a file of the currently displayed list.

5. Export connections

Allows you to download the connection history (date and time of log-in) of the users in the displayed list.

User accounts: Creation and management 1 of 2

When a given role has the right to manage other user accounts, these are the available user account settings.



Explanation

Items with * are obligatory.

1. Access

User ID: The name the user will log in with.

Password: The password should meet the requirements of a strong password by including upper- and lower-case letters, numbers, and be at least eight characters long.

CPS ID: Some applications may require a Health Professional's smart card (French national system) to gain access to the application.

RPPS: All state certified doctors in France have an RPPS number. If a CPS is used and the user is a doctor, enter the RPPS here.

2. Identity

Language: Choose the user's default interface language.

E-mail: Enter the user's e-mail address.

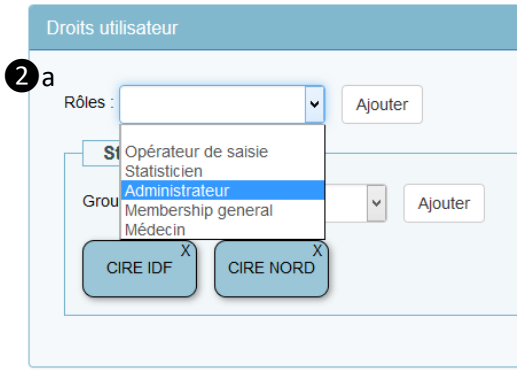
Notify by mail: When checked, the user will receive two e-mails about his newly created account. One with his/her username and the URL of the application, and another with his/her password.

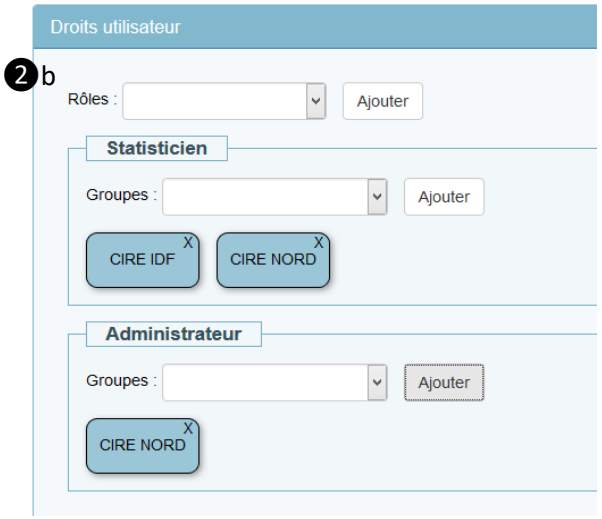
Phone number: This phone number is used in the case that the One-Time-Password system is employed (the system sends an SMS access code) or if the box below is checked.

Send password by SMS *[not seen in the image to the left]*
This functionality must be turned on by an Epiconcept developer. If Checked, the system will send the account password to the telephone number via SMS and not by email.

User accounts: Creation and management 2 of 2

Each user's rights are based on the role(s) he/she belongs to and in which group(s) he/she is a member of.





Explanation

1. A role and groups

This user already has the role of *Statistician* in the two groups *CIRE IDF* and *CIRE NORD*.

2. Adding another role

2a. Select the role from the drop-down menu to be assigned to the user and then click on Add. The role of *Administrator* will be assigned in this example.

2b. Now that the role is added, select which group the user will have this role in, and then click Add. You now see all the roles the user has for the given groups. If necessary, click on the X on the right to delete a role from the user or on the X of a group to remove the user from that group. Finally click on Save for these settings to take effect.

3. SYS_GROUP setting

Since the version Voozanoo 4.2.26 19w26, if you have the Users' group memberships management setting (found in the General Settings – see the section above *System Settings 2*) set to ***Manual***, you can determine at what group level the new user record is stored and thus who has access to it.

User accounts: Importing users

One can add user accounts one by one with the Add user button or you can create numerous user accounts by uploaded a CSV file with account descriptions (Import Users). The example below shows an example CSV file for importing new users into the application.

* These columns always require values

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Username *	Password *	Group *	Role *	Firstname	Lastname	Email	Locale *	Cps id	RPPS	Notify	OTP Phone number	send_pwd_by_sms	adapt_sys_group
2	Account name (unique)	password	The group level of the user	The role assigned to the user	user's first name	user's sir name	email address	Language and region code	ID of french professional card	French physician ID number	Email user's credentials and URL	Phone for one-time password	initial password sent via sms not email	user info record set to same level as user
3	j.cousteau	pmt675et	Nord	saisie	Jacques	Cousteau	jc@waterworld	fr_FR	451563745	5143874168	1			
4	l.pasteur	rtq874pi	Nord	stat	Louis	Pasteur	loulou@nobact	fr_FR			1			
5	s.martin	raz089ge	Ouest	medecin	Steve	Martin	stevemartin@f	en_US				867-9305		1
6	m.davis	mtr623df	Est	stat	Miles	Davis	m.davis@jazz.c	en_US	125435445		1			1
7	f.holland	mlkgh321	France	admin	François	Holland	f.holland@gouv	fr_FR			1	06.15.33.57.37	1	
8			Nord	saisie										
9			Ouest	stat										
10	m.thatcher	lnb881pe	UK	saisie	Margaret	Thatcher	m.thatcher@au	en_GB			1	+44 746-3729-122	1	
11	t.blair	mpz775hu	UK	medecin	Tony	Blair	t.blair@uk.gov	en_GB			1	+44 2155-256-654	1	

Note for Locale

Here are the languages/regions available for column H.

en_GB, fr_FR, en_US, ar_AE, hy_AM, bg_BG, zh_CN, cs_CZ, da_DK, nl_NL, et_EE, fi_FI, ka_GE, de_DE, el_GR, hu_HU, it_IT, km_KH, lv_LV, lt_LT, mt_MT, pl_PL, pt_PT, ro_RO, ru_RU, sk_SK, sl_SI, es_ES, sv_SE

** In Libre Office, when presented with the file dialog box, check the box “Edit filter settings” which will allow you to select UTF-8 as the encoding method.

Explanation

Create a CSV file with any spreadsheet application. If the file will contain accented or foreign characters, save it in UTF-8 encoding in order to preserve these characters. Libre Office**, Google sheet, and newer versions of Microsoft Excel have various methods to assure a UTF-8 encoding.

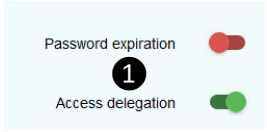
CSV file rules for user accounts

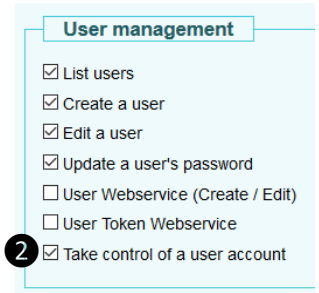
- All the CSV header names must be included and exact (Username, Password, Group, role, etc.) and in the order shown.
- You cannot write over a previously existing username. It will stop the CSV from importing.
- Users which need to belong to multiple groups must have the extra groups placed on lines after their initial group (example: f.hollande)
- Do not include line 2 or the asterisks shown in this example. Format column L as text in order to retain the leading 0 of a phone number (ex: line 7)
- The 1’s found in column K, M, and N mean “yes”. Entering 0 or leaving them blank means “no”.
- To allow a user to create their own password, you can import an empty password but only if the user has an email address.

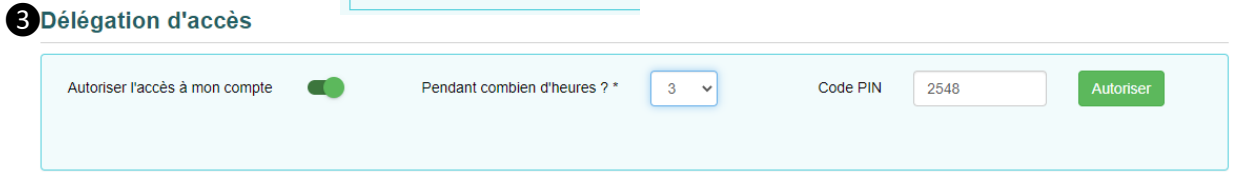
User accounts: Delegating access to another user

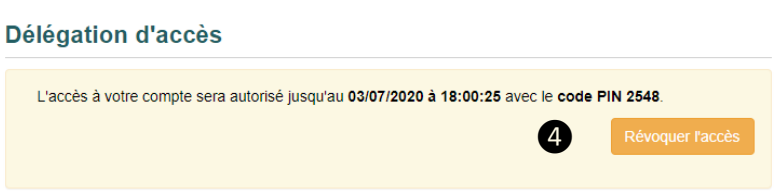
Explanation

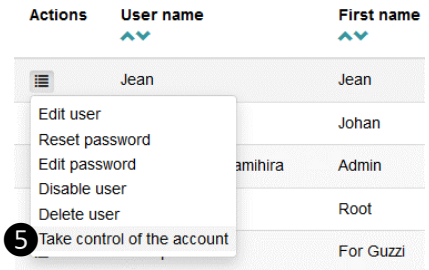
There are times when a user would like to give control of their account to another person, for a short period of time, so that the other person can see exactly what is happening in that user's session. This is typically the case when an Epiconcept developer needs to see a real or perceived error but does not experience it with their own account. Epiconcept will never log in as another person nor ask for a password to do so. However, with account delegation, a user can give temporarily permission to an administrator in order that the latter use the application as if they were the person experiencing the problem. All actions executed by this user are traced and stored (evtlog/monitoring) in order to clearly show that such actions were not that of the account owner.











Enabling Access delegation

A project administrator with rights to modify the General settings can turn on this functionality ❶ under the **Security settings** of the General settings.

Which role for delegated users

A system administrator decides which role or roles can take control of another account. Check the feature option **Take control ...** ❷ for the role. Any person with that role will thus have the potential to take control of another account if offered to them. Note: persons with this role cannot themselves delegate their account to another person.

In the **Access Delegations** screen ❸, the user that is delegating their account enters the number of hours their account can be used and a PIN code. How one gets to this screen varies and will be communicated by the project administrator. (The technical location is `project/access-delegation/index`)

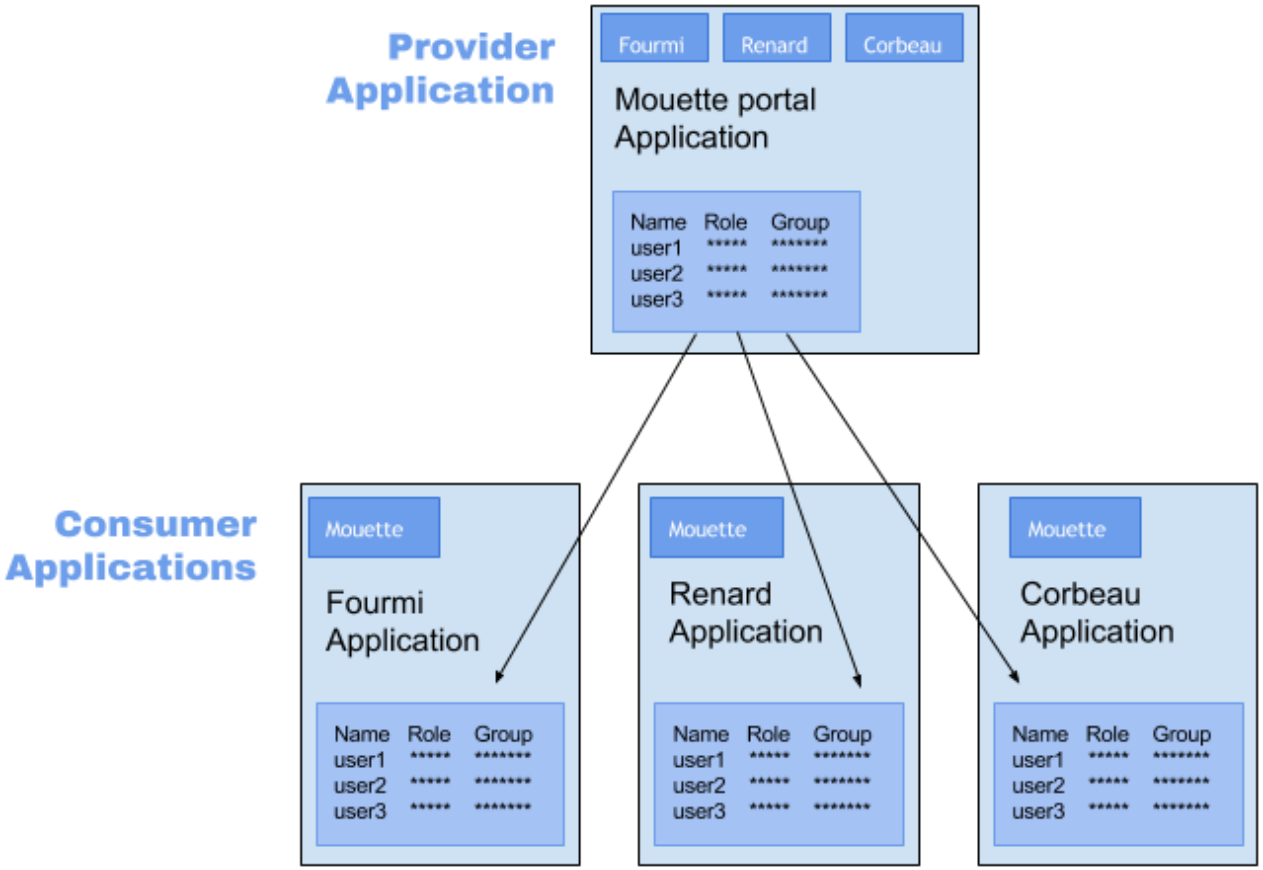
The user communicates the PIN code to the person who will be using their account. The delegating user does not need to stay logged in if they do not wish to. The delegated user can take control of the account for the time indicated or can be immediately logged out if the delegating user clicks on ❹ Revoke Access.

Taking control of the other account

The delegated person goes to the list of **Users**, finds the user that has allowed them access to their account and selects ❺ **Take control of this account**. When they connect using the correct PIN code ❻, they'll be connected "as if" they were that other user and go to that user's home page. A red frame ❼ reminds them that they are not in their own account. The delegated user can stop using the other account by simply logging out.

Provider and consumer applications 1 of 5

The concept of provider and consumer applications is that of having one user login action for multiple Voozanoo applications. This makes getting into each application much easier. For the administrators, their task is simplified because they can modify one account on the provider application and it is then replicated to all the consumer applications. The concept is similar to that of being able to sign into certain web applications by signing into your Google or Facebook account. These latter two, using Oauth, are the provider apps that provide the webapp (consumer) with authentication.



Explanation

1. The Provider app

This is the application, often called a portal (because it is the way to enter any of the other applications), which “provides” a way to log in (authenticate) into one application and have access to others without having to log into each one of the others with a specific user name and password.

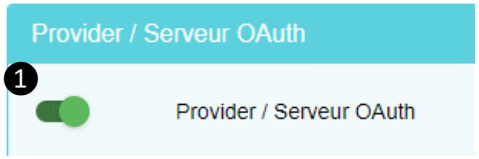
2. The Consumer apps

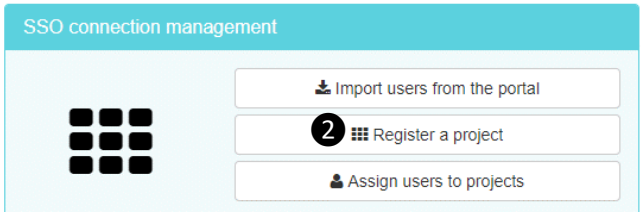
These applications “consume” the authentication information from the provider app and allow the user into the app without asking them to log in.

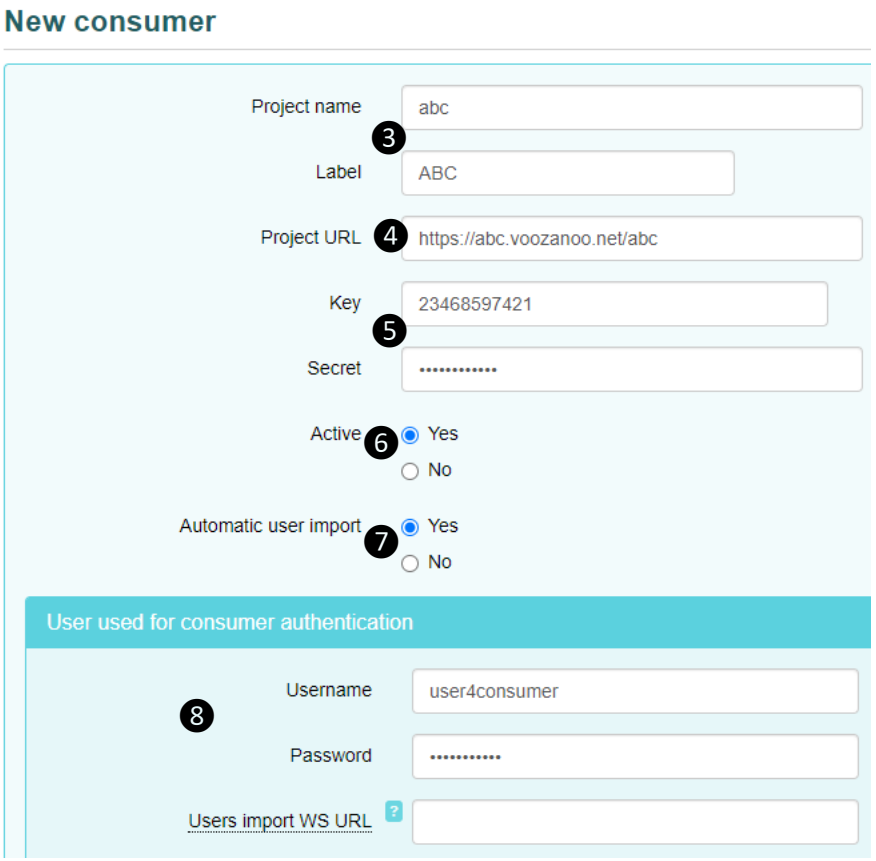
When one designates a Voozanoo application as the Provider, buttons to the consumer applications are automatically placed on the top of the home page. When a Voozanoo application is designated as a Consumer, a button directing one back to the Provider application is automatically placed on the top of the home page.

Provider and consumer applications 2 of 5

In the Provider application, turn on the provider function and give yourself the rights to the OAuth tables, then declare a given app as a consumer application.







Explanation

1. Provider & Rights: In the general settings, turn on **Provider / Server OAuth** and then go to the roles and give your role the read/write/delete rights to the OAuth tables.

2. Register a consumer project: Click the **Register a project** option on the system home page and then click **Add**.

3. Project Name & Label: Enter a consumer application's project name and its label (found on the general settings page of the consumer app).

4. Project URL: Give the URL of that project.

5. Security key and secret: Create a Key using a string of ten or so characters to identify the current project as its provider. Enter a different string as the Secret password.

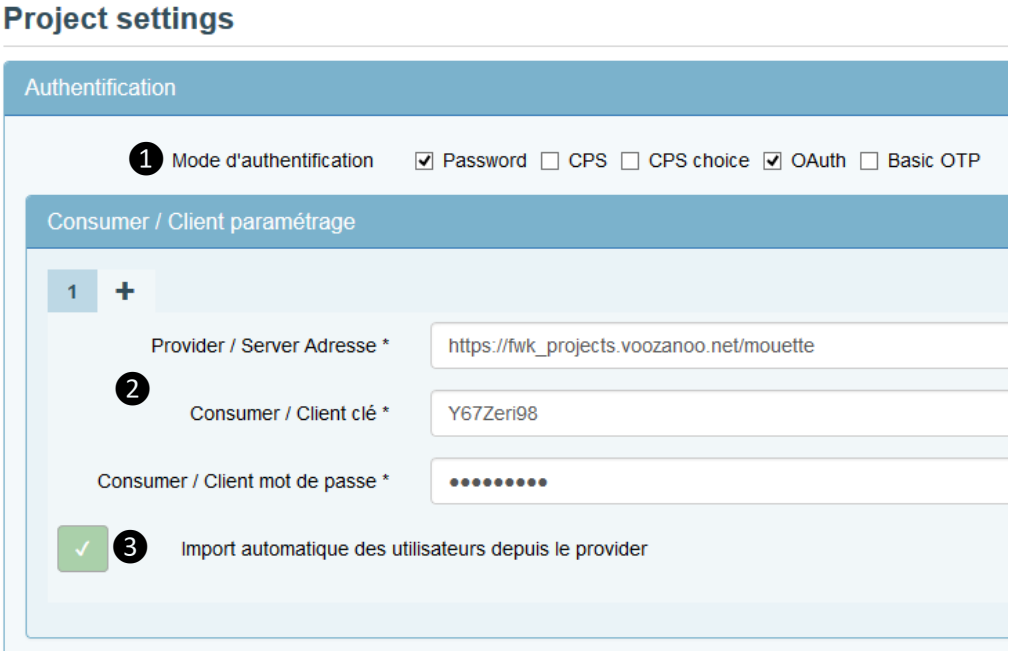
6. Activate: Make this an active consumer. Click **Yes**.

7. Automatic import: Turn this on if you want changes to the provider's existing and new user accounts to be automatically dispatched to the consumer application.

8. Login credentials: If automatic user import is turned on ❼, you will need to give a user/password combination of an account in the consumer application that has the right to modify the other user accounts. This way, when you modify a user in the provider app, it can open a connection to the consumer and send those modifications to that app's User settings.

Provider and consumer applications 3 of 5

On the other side, we need to tell the consumer app to recognize a specific provider application.



Explanation

1. Authentication mode

In the consumer application, click on OAuth in the general settings to tell this application to be a consumer (allow access via OAuth).

2. Linking to the provider app

Give the URL of the provider application, and the Key string and Secret password that you created and entered there.

3. Automatic import

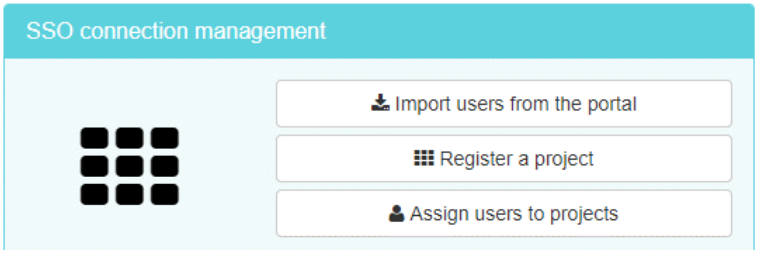
If you selected the Automatic user import on the provider application, you will need to select it here as well. Save the settings.

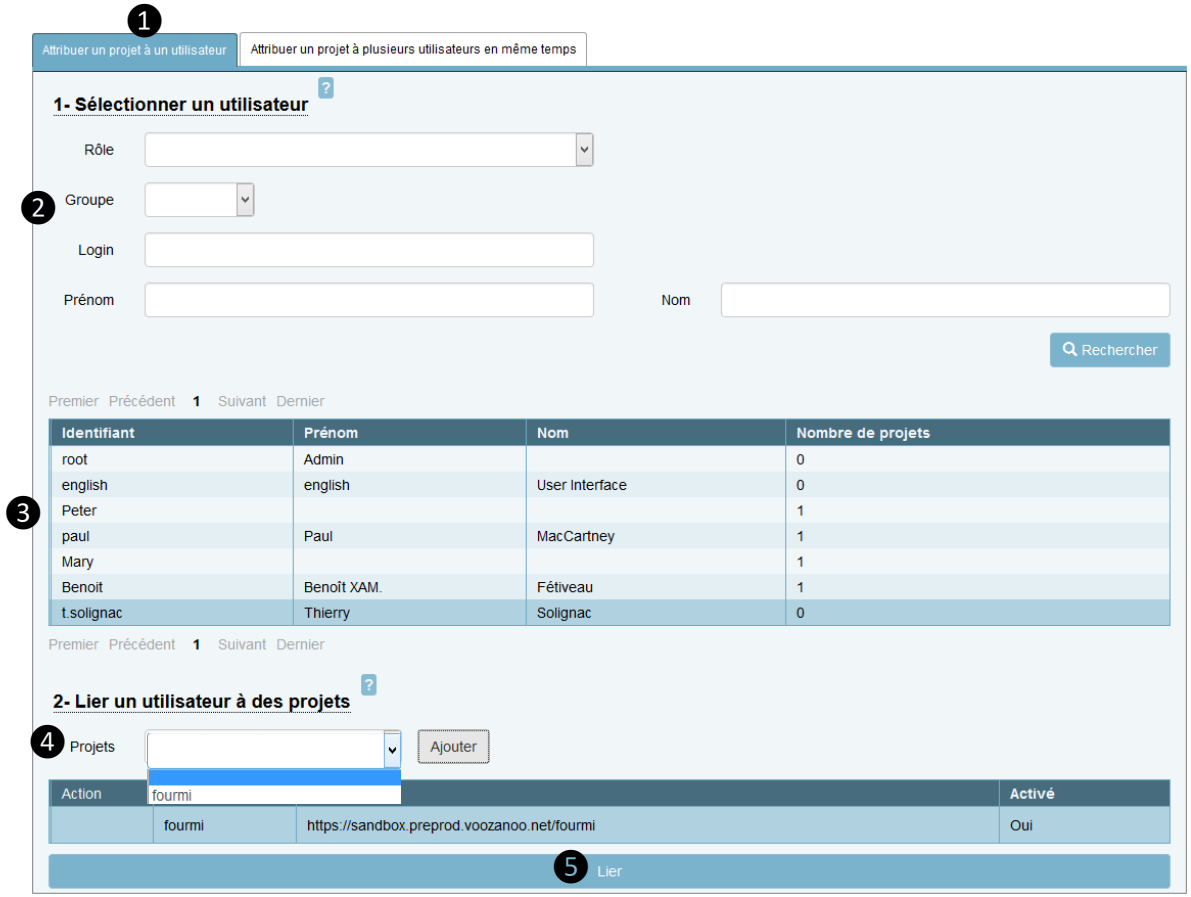
Connection is complete

The provider application and the consumer are now connected. You can now add more connections between the provider and other consumer apps by repeating these steps both in the provider and the consumer applications. The next task will be to get user name/password pairs into the provider application and link them to the same user name/password pairs in the consumer application.

Provider and consumer applications 4 of 5

You will need to attach users individually or together to the specific consumer application(s). Start by clicking Assign users to projects in the Provider application.





Explanation

1. Individual / Multiple

Choose the left tab if it is only an individual you are attaching to a consumer application or the right tab for multiple users.

2. Find users

Use this section to find a particular user by supplying some information about the user or users you are looking for. Click the button Search to see the results.

3. The users

If you are in the left tab (individual user), click on the individual that you want to attribute to a consumer application. In this example, the user Thierry Solignac was selected. If you are in the right tab (multiple users), all users listed will be attributed to the consumer. Note the last column in the list. It tells you how many consumer applications the user is already linked to.

4. Projects

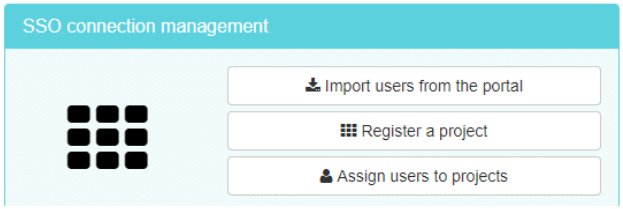
Choose the consumer application you would like to attach the user or users to and then click Add. You can attach the user(s) to other consumer applications if desired by using the Add button again.

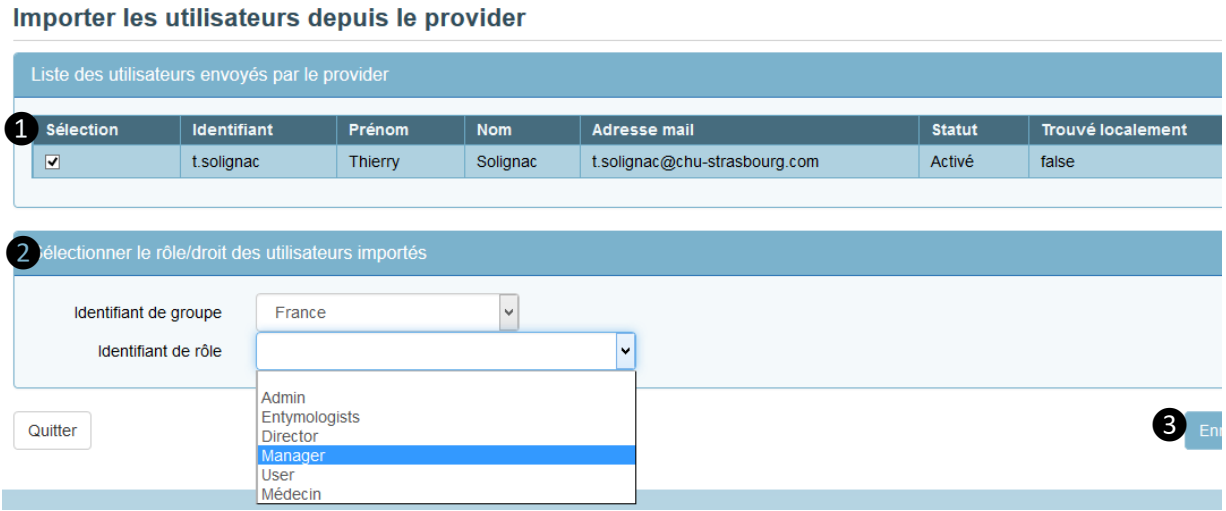
5. Link users

Click on the Link button to link the users to the consumers. If the Consumer application is set to Automatic import and the same Role and Group names exist in the Provider and the Consumer applications for the user(s), they will be linked to the consumer application. If, however, there are no such similar Roles and Groups, the linking process ONLY gives them the right to be imported into a consumer application where their Role and Group will be set. Once that it done, any future changes to the accounts in the provider application will be automatically passed on to the consumer application (so long as Automatic import is selected in both the provider and consumer applications).

Provider and consumer applications 5 of 5

If you did not use the automatic import back in the Consumer application or there were no matching Roles and Groups between the Provider and Consumer, you now need to import the user(s) that you granted as "linked to a consumer" into the Consumer's table of users.





4

Explanation

Click on **Import users from the portal** (provider) on the system home page.

1. Enable import

Check off the user or users, which you previously linked to this consumer application that you want to be imported.

2. Group and Role

Notice that we have to choose here what role in the consumer application the new user from the provider application will be considered as. Although it is possible to map a user from one role (statistician for example) as a user in the provider application to some other role in the consumer application, it quickly becomes confusing and difficult for other administrators to understand the relationships. Thus, it is suggested to have the same set of roles on the provider application and on the consumer application and give a Manager a Manager role, a Statistician a Statistician role, etc. The same logic applies for the hierarchical Groups structure of the provider and consumer applications.

3. Save

Save your importations. Imported users can now log into the provider application and automatically be authenticated when they go to any of the consumer applications.

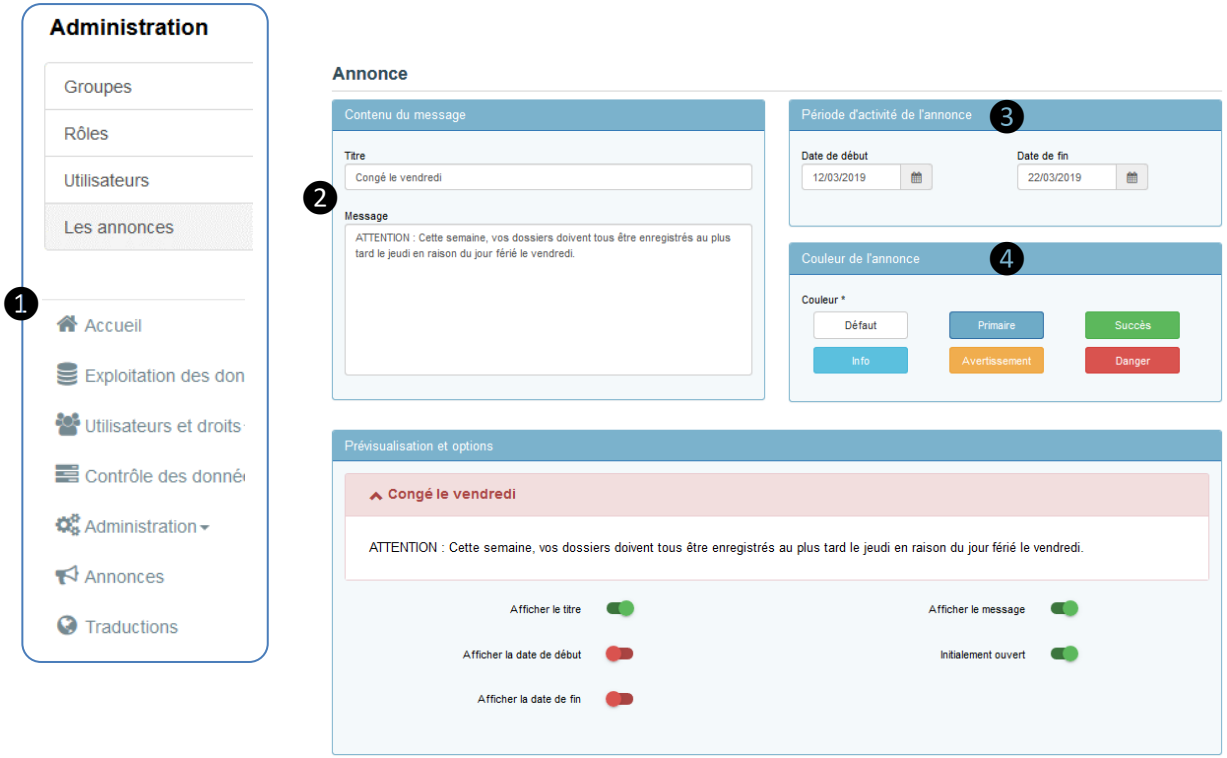
4. Automatic buttons

The Voozanoo system will automatically create buttons on the user's home pages allowing them to traverse among the various consumer applications.

Announcements 1 of 2

The system of announcements allows an administrator or some designated role to create announcements targeted to specific roles, specific groups, and for specific periods on a given page. Typically, the announcements are placed on all of the home pages.

Example announcement that the user Alexi (is in the group Strasbourg) sees when he logs in.



Explanation

Create a new announcement

Depending on your menu system ❶, select the Announcement option to see the list of existing announcements and Add a new one.

The first thing to do is enter the ❷ title and the text of your message. Then if you desire a specific time period, begin or end date, ❸ enter one or both dates. The message will first appear on the start date and disappear the day after the end date. Choose a colour ❹ for the message (the names on each colour can be used as a common reference for your team or disregarded in favour of what you like).

A user must have the rights to read from the table containing the announcements. Make sure that all roles that will potentially see announcements have the right to READ the announcement table from ALL groups.

☑	☐	☐	☐	☐	☐	☐	☐	☐	Announcement

If the role should have the right to create and delete announcements, then the role should be given the following table rights

☑	☐	☐	☐	☑	☐	☐	☐	☑	Announcement

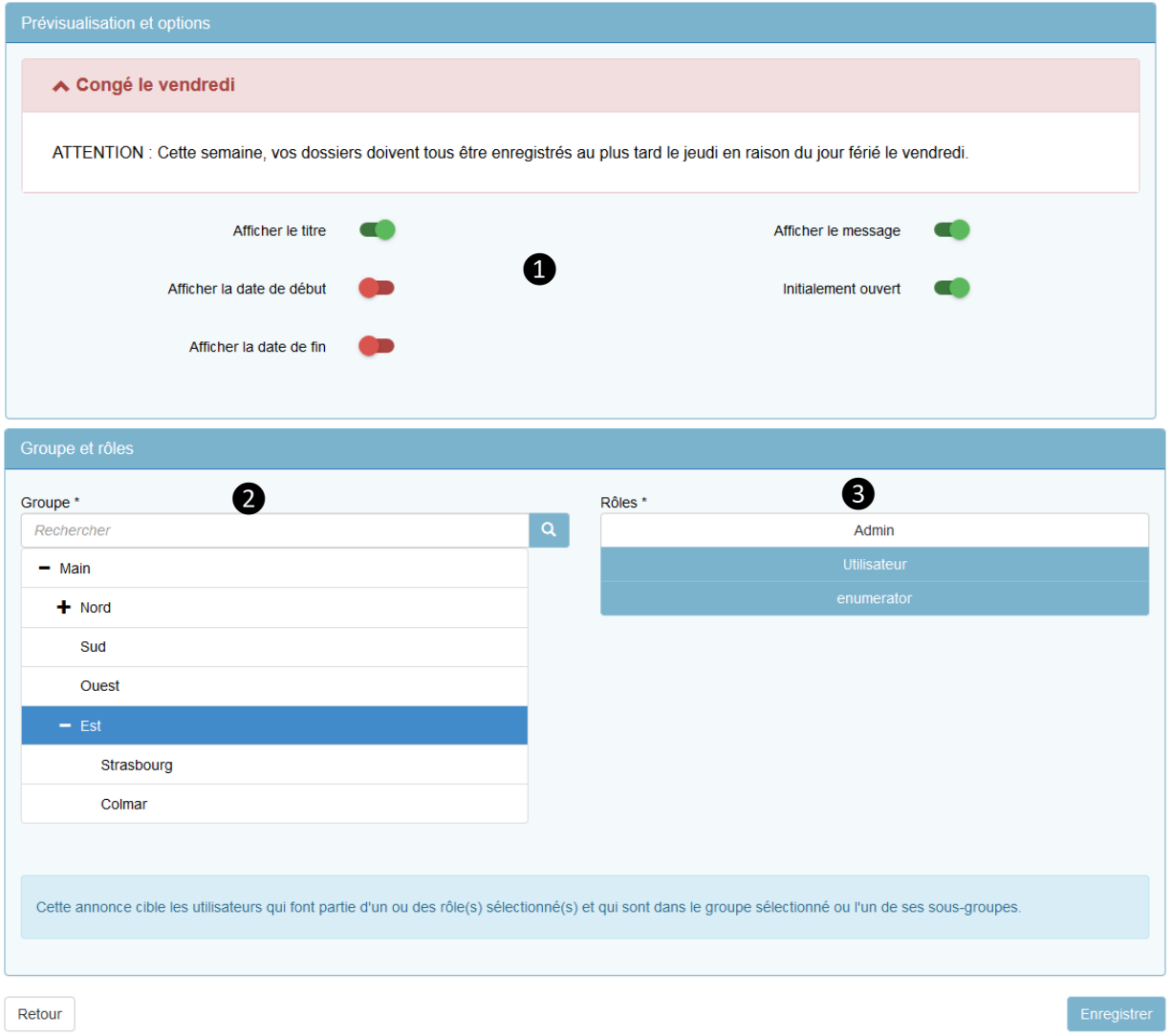
as well the following functional rights.

Gestion des annonces

☑ Créer/Éditer
☑ Supprimer

Announcements 2 of 2

The next sections are to set the presentation options and most importantly, which users will be presented with the message.



Explanation

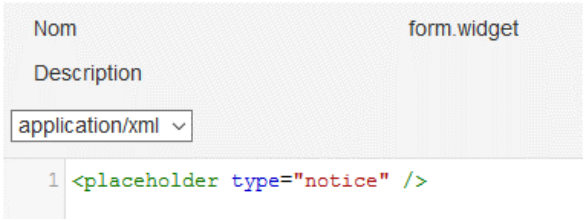
Presentation, groups and roles

The presentation settings ❶ are self-explanatory. The Group setting ❷ specifies which group (and its subgroups if any exist) will see the message. If it's a message for everyone, then one would choose the top level, *Main* in this example. Since our user Alexi is in the group *Strasbourg*, he is targeted for the message. Secondly, the message will only be shown to people who have a specific Role ❸. In this case, since the message only affects the roles *Utilisateur* and *Enumerator*, it makes sense to select those roles (in blue) to show the message only to those users. Alexi has the role of *Utilisateur* (user), and thus will see the message. People with the *Admin* role, even if they are in the group *Est* or below, will not see the message.

Placement

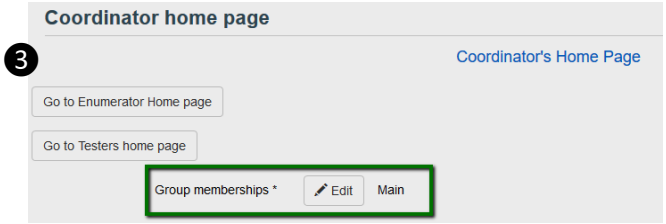
Finally, the message must appear on a page somewhere. Typically, it is best to place it at the top of all of the home pages. In the Epicraft editor, place a Bulk component on the page, and create a personalised property called **form.widget** . Then in the text enter the following XML line:

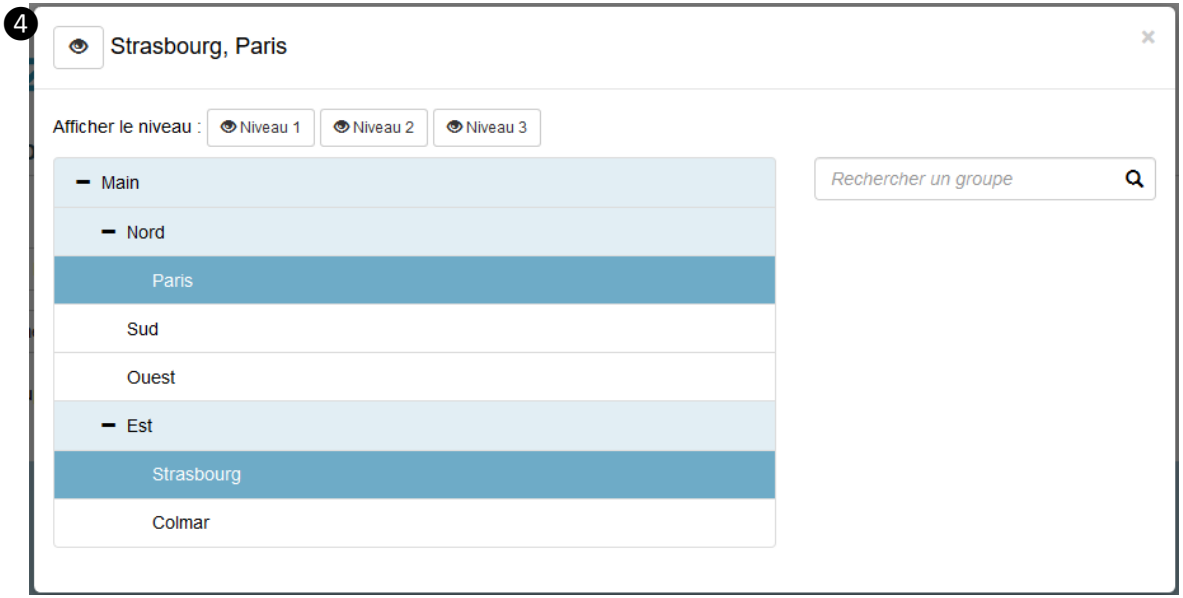
<placeholder type="notice" />



Group selection

When your project has multiple Groups with multiple levels, it is often necessary for a user to be able to choose which group level(s) they'd like their records to belong to. It's easy to put in place the visual selection widget "Edit Group" to allow the person to decide at which level(s) they'd like a saved record to belong to.





Explanation

The system variable sys_group

This is a very special variable. It is the only system variable that you can set as writable. All other system variables are always read-only.

In Epicraft, place a new text variable on the page where you want the Group selection to be displayed. ❶ Give it the reserved name *sys_group* and agree to the warning message using this system variable. ❷ Verify that the box *read-only* under the *structure* property is unchecked.

In the table rights for the role that has write privileges for the records, make sure the table *User* has the following rights checked (alternately the delete checked on Group).

☐	☐	☐	☑	☑	☐	☐	☐	☑	User

❸ The user will see an Edit button on the page to set which group(s) the record will belong to.

Group choice

❹ The user can select one or more groups (blue). The light blue background indicates that the members that belong to these groups will be able to read and modify that same record because of their higher level in the hierarchy.

Note: There are multiple display options for this Group selector. See the WidgetEditGroup in Epidocs for a complete description of options.

Warning: If a user belongs to multiple groups that are on the same branch to *Main* (the root), the appearance of the widget may seem strange as it will show selections for both groups even though they are on the same branch.

Project Translation with Crowdin™ 1 of 3

The translation manager allows you to create the necessary files for your project to be presented in others languages. This requires that your buttons, question labels, help texts, dictionary labels, etc. all be translated to the new target language. Voozanoo itself is already translated to 28 languages.

Roles list

Action	Id role	Name	Description
	2	admin	Admin
	4	user	User
	6	group_admin	Group Administrator
	8	basic	Basic
	10	translator	Translator

Back | Add role

❶

❷

All			Group			Owner			
R	W	D	R	W	D	R	W	D	
☐	☐	☐	☐	☐	☐	☐	☐	☐	*Check/Uncheck all*
☑	☐	☐	☐	☐	☐	☐	☐	☐	Resources
☐	☐	☐	☐	☐	☐	☐	☐	☐	Event log
☐	☐	☐	☐	☐	☐	☐	☐	☐	Monitoring
☑	☐	☐	☐	☐	☐	☐	☐	☐	Dictionary
☑	☐	☐	☐	☐	☐	☐	☐	☐	Dictionary status
☑	☐	☐	☐	☐	☐	☐	☐	☐	Query
☑	☐	☐	☐	☐	☐	☐	☐	☐	Query Var
☑	☑	☑	☐	☐	☐	☐	☐	☐	Query cache
☐	☐	☐	☑	☐	☐	☐	☐	☐	User
☐	☐	☐	☑	☐	☐	☐	☐	☐	patient
☐	☐	☐	☑	☐	☐	☐	☐	☐	pat_restr

System tables | User created varsets

❸

☑ Languages
☑ disconnection

Horizontal Menu

☑ Display
☐ Voozanoo 4
☑ Home

Explanation

English first

Any project that potentially needs to be available in multiple languages should begin as an English language project. Why is it best to begin with English?

- It is the most common software approach to start with English. Automatic translations are most accurate when translating from English to other languages.
- International users of a given software often desire to have an English version if their native language is not available.

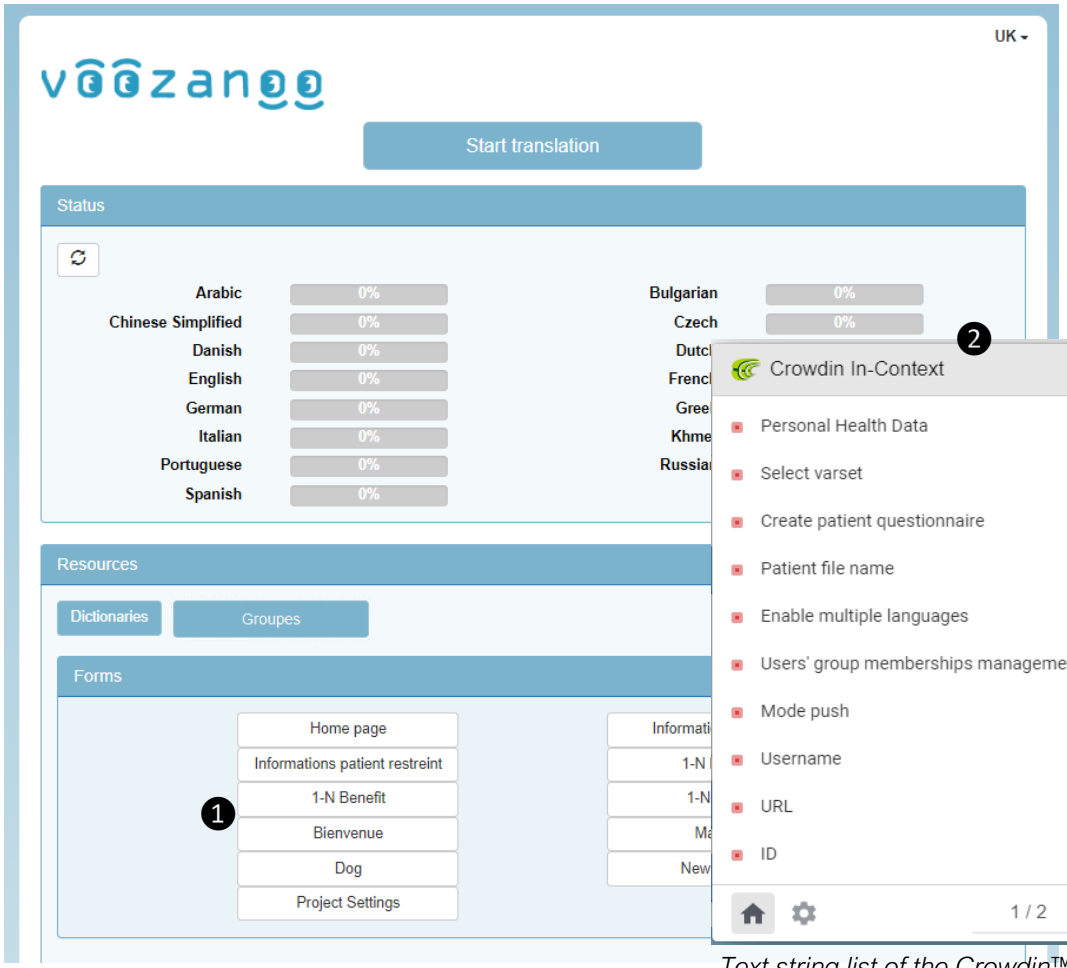
First of all, see your Epiconcept project manager to make sure that your application has been CrowdIn™ translation “enabled”. The translation happens at the application level, thus if there are multiple projects on a given application environment, they will share the translation.

The project will need a new role ❶ called translator. This is a reserved role name that will be able to translate the application. The rights for this role are minimal and the Data and Features rights should be set as shown in ❷ and ❸ to the left. A user with this role will be directed to the main translation page when he or she logs in.

Attention: If your application exists on both a pre-production environment and a production environment, you should first translate your preproduction environment and then import that translation into your production environment.

NB: You may need to add the functional right **View listings** under the Listings manager if there are any reference table data that need to be translated. Also, the Translator role will need to have the menu items for **Structure** and **Coherence control** checked in order to translate the coherence control messages.

When a user with the translator role logs in, they will automatically be directed to the translation start page where they will see the translation completion percentage, buttons to translate dictionaries and groups, and the list of pages to translate.



Translation start page

Text string list of the Crowdin™ interface

Explanation

Before entering the CrowdIn™ user interface, you can look at the various pages of your project ❶ in any of the languages to see which pages have and have not been translated. The same can be done for the dictionaries.

Start Translation

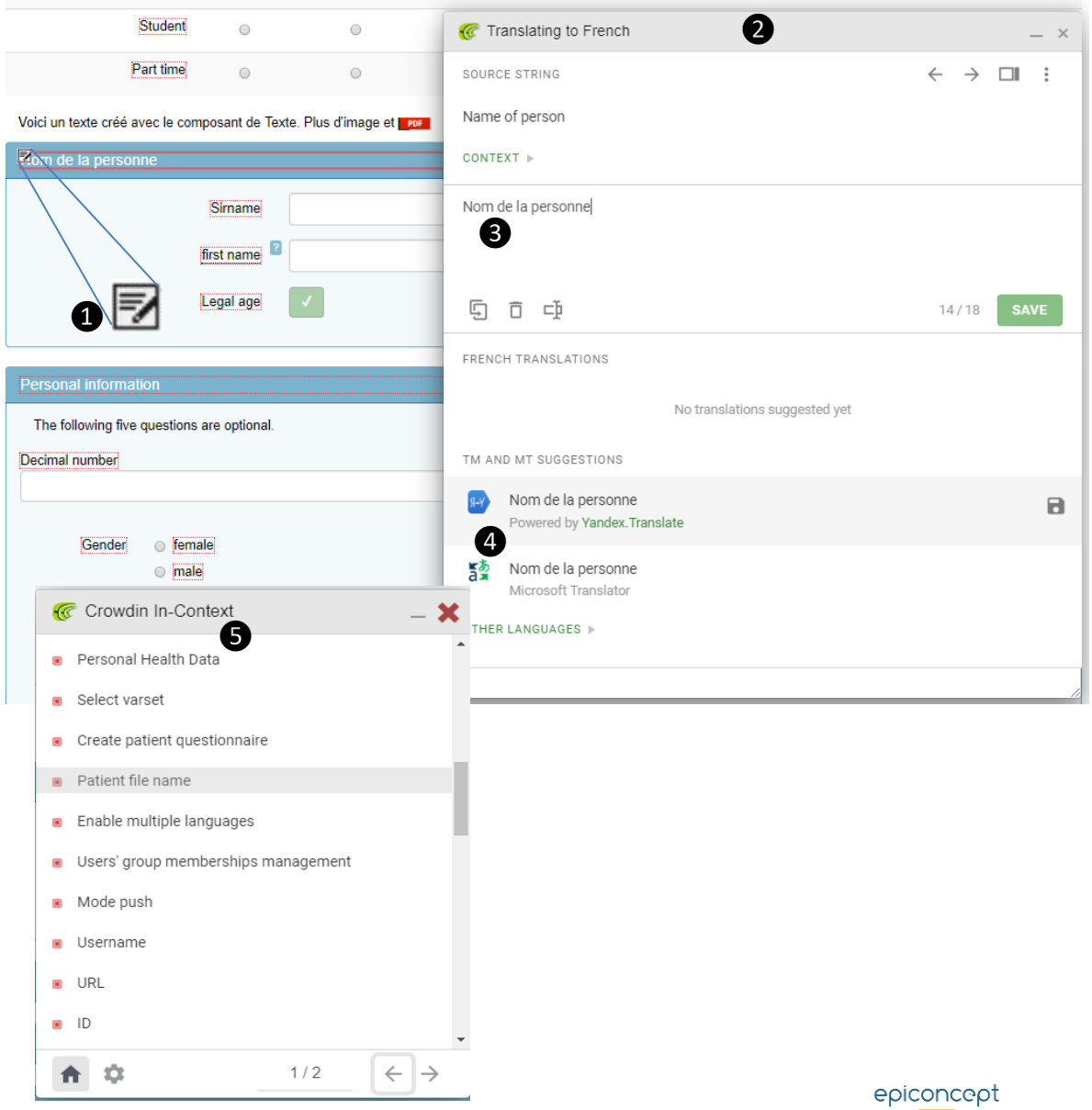
When you click on the Start Translation button, you can add more languages. ATTENTION: for technical reasons, once a language is added, it cannot be removed. Click on the Start Translation button again to enter the CrowdIn™ interface. The very first time you do this, you may have to agree with the conditions and create a CrowdIn™ user account. You will have two floating panels, the phrase list (list of strings ❷) and the translation entry (❷on the following page). Start by selecting the phrase list and the settings screen ⚙ in order to choose the language you want to translate to.

Pseudo-language

While you are using the CrowdIn™ interface, you will notice that the selected language is ZU (Zulu). This is used as a pseudo-language while you are translating. Do not change this language while translating your pages. You can change which language you are translating to at any time via the settings ⚙ screen.

Project Translation with Crowdin™ 3 of 3

The great advantage of using CrowdIn™ for your translation is that you get to see the text to translate in the context of the page. It is not a blind word translation. Secondly, you are offered suggestions from automated translation systems.



Explanation

Translate what you see

Select a page from the translation start page. You will notice that all the form labels and texts have dotted-line boxes around them. When you mouse-over on one of the texts on the page, the translate icon ❶ will appear. Click on it to open the translation entry panel ❷. You can either type in the translation ❸ or choose one of the suggested translations ❹. Don't forget to click **SAVE** after each text string has been translated (or click on the "use and save" icon of a suggested translation). You can also translate all the texts without context by clicking on a word in the phrase ❺ panel.

Conditional display

Some pages will have single variables or groups of variables displayed only when certain form conditions are met (conditional variables or groups). To translate these hidden items, either enter the form values that force the display of the items (the project leader will know these) or just make sure you have translated all phrases from the phrase list panel ❺.

Finishing your session

You do not, of course, have to finish all your translations in one session. To quit the CrowdIn™ translation interface and save all your translations to the application, go back to the home page (translation start page) by clicking on the Home icon and then click on the orange button now labelled **End translation**. You will see your new translations being written to your application.