Universität Graz
Profilbereich BioHealth

eLabFTW Guide

(User)

v1.1 (Author: Alexander Gruber)

Content

1) Role

Users are, of course, the main user group in eLabFTW and all have the same possibilities. There are no distinctions in this category, not even when it comes to people for whom University of Graz is not the parent institution. To be a user at all, you have to be assigned to at least one team. It is therefore possible to be in several teams at the same time, but it is advisable to keep this number as low as possible. As a user in several teams, there are special points to consider.

2) Get Access

You can access eLabFTW via elabftw.uni-graz.at and can log in there using eLabFTW login credentials. To get this login credentials you have to register once directly in the tool and then you will be unlocked. You can access it with any device that has internet access and a web browser. If you register for the first time and do not have an account yet, you will be added to the standard team (**Uni Graz General**). If you want to be added to an existing team, the admin of the team has to contact the SysAdmin (**Alexander Gruber, alexander.gruber@tugraz.at**). The SysAdmin will then take over this step. The next time you log in, you will see an overview of the teams you are a member of. You can then select the team and log in.

3)User Control Panel

The User Panel (Figure 1) is the first and most important place to go to configure the experience and settings in eLabFTW. Especially when logging in for the first time, you should familiarise yourself with this menu before proceeding. You can access it via the footer or the dropdown menu (top right).

Important: Questions or problems related to the visibility of experiments and database entries are usually due to incorrect settings in this panel.

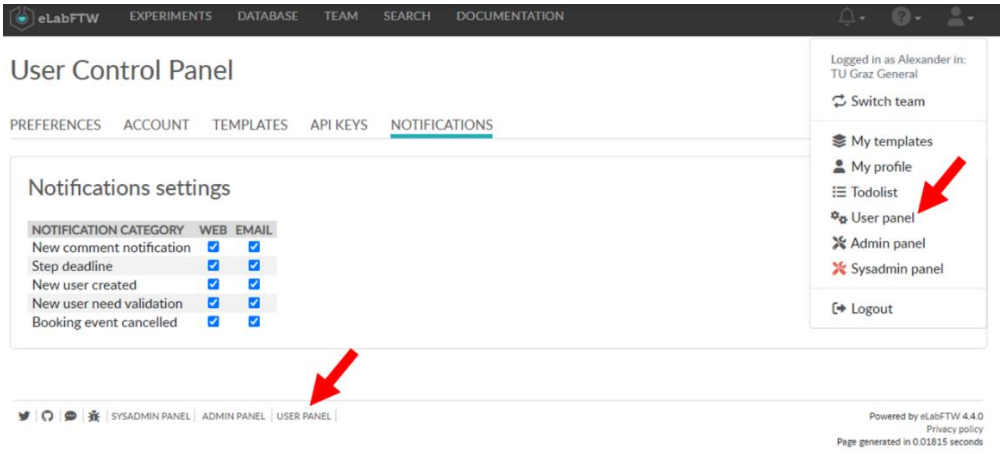


Figure 1: User Control Panel

1) Preferences

In the first tab of the User Control Panel, you can select your preferences for certain aspects of the tool. eLabFTW currently distinguishes between 5 areas:

Language: Here you can set the language in which eLabFTW is displayed for you.

Display: You can set how many entries are displayed simultaneously and in what size. You can also switch between lists and table view. The order of the entries displayed can also be changed using various parameters.

Keyboard Shortcuts: Four shortcuts are available for free assignment. The "ToDo" list is particularly helpful here.

PDF configuration: You can export entries as PDF and there are also some export settings available. Among other things, the format and language-specific fonts in Asian.

Miscellanous: This area is probably the most important in the User Panel. Here you can set whether entries and templates of your team are displayed directly in the overview or only after a search. In addition, you can display content from other teams in which you are also a member but are not currently logged in. You can select and deselect these settings to increase the overview. You can also define your desired default settings for the visibility and write permissions of your entries here.

2) Account

In the account area, the only relevant information for you is ORCID. The two-factor authentication can be activated manually by you, but is not mandatory. First and last name are set directly during registration. If you would like to enter your ORCID ID, you are welcome to do so.

3) Templates

Templates are a helpful invention to make work easier for yourself and others. In this section, you can create new templates yourself or update existing ones. The prerequisite for this is, of course, that the template has been authorised for you. Templates work very similarly to experiment entries and are briefly explained there.

4) API Keys

Accessing eLabFTW via the browser interface is not the only option. APIs can also be used and one or more API keys must be generated. This is also done directly in the user panel. Here you name your key, set whether it should have read-only or read/write rights and generate it directly. It is then only displayed once for you and you have to save it externally. The entire documentation on APIs in

eLabFTW is also available here via a link. You can use this key in combination with a Python script and e.g.: add experiments automatically or append attachments.

5) Notifications

Certain notifications for events in eLabFTW can be set here. This means whether you want to receive these notifications by email or only in the browser or not at all. Depending on your role, different options are available.

4) Experiments

The central element of eLabFTW is the documentation of all relevant additional information (metadata) on experiments, laboratory exercises and basically all research activities. For this task, the button "Experiments" is available in the header and we get to the overview of all experiment entries available to us. In addition to this overview (Figure 2), this view also provides us with a "Quick Search" bar, filter options and a sorting function. These functions are described below:

1. With the filter option you can filter the available entries according to certain parameters. You can filter by the status and owner of the experiments, but also for whom the entries are visible or which group of the team has access to the entries. The number of results can also be limited during filtering and the included tags can be set.
2. The "Quick Search" bar searches all elements in the "Experiments" area for the term entered. You do not have to be careful whether it is a tag, full text or heading. If the search term occurs in the content of the entries, the corresponding experiments are displayed.
3. eLabFTW also offers the possibility to sort the experiment entries according to a number of different sizes.
4. To create a new experiment entry, the "Create" button comes into action. This button is divided into two parts, although it is difficult to recognise. If you click on the right part ("Create"), a new entry is created based on the default team template. This template can only be created by the admin of the team, but it is not mandatory. The small arrow on the left side of the button offers the possibility to access the costume templates that have been created or shared and to create an experiment from them.

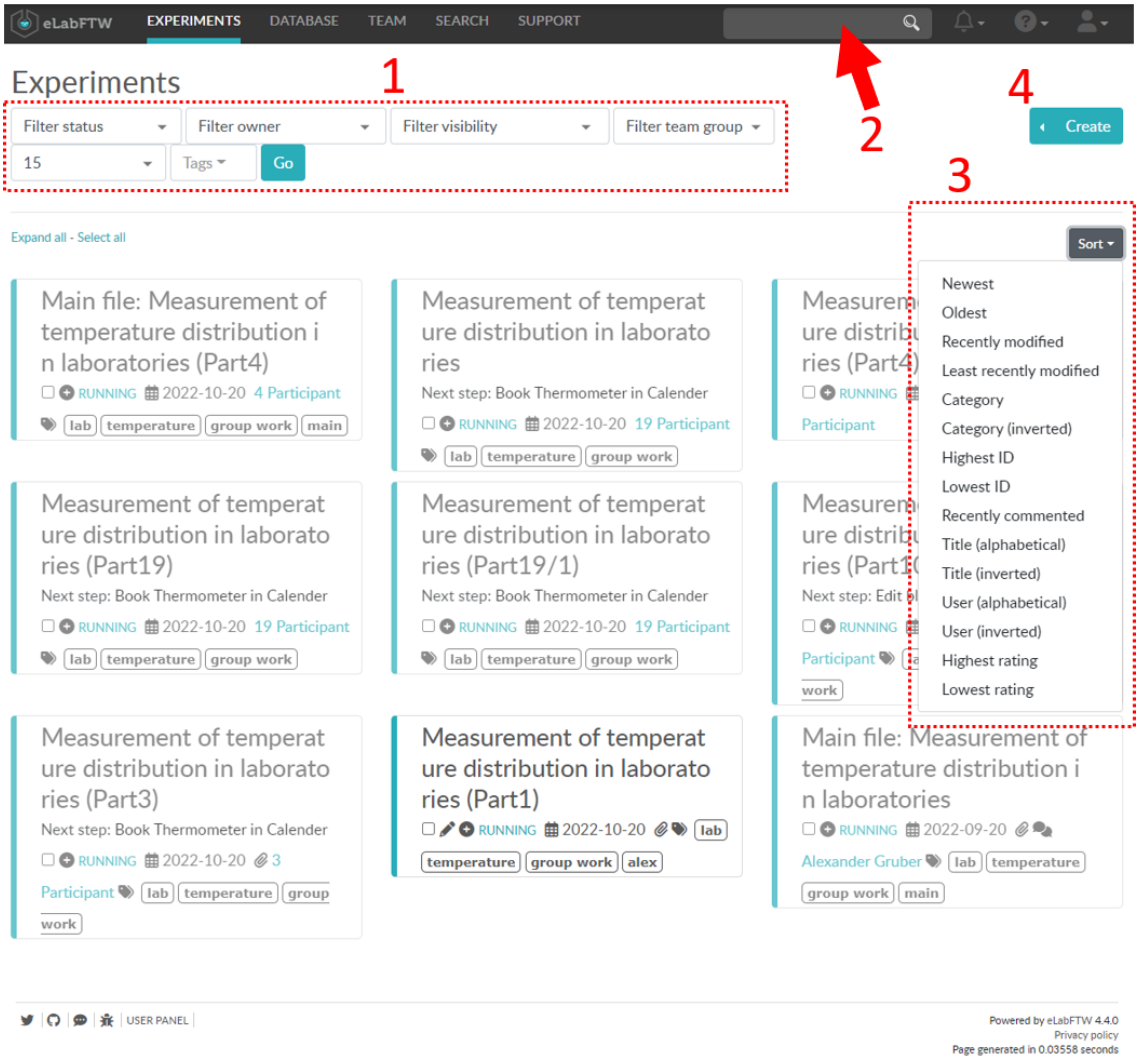


Figure 2: Experiments overview

When you create a new experiment, a new window opens (Figure 3). This view is always the same, but the content can differ depending on the templates used. The areas that appear in each experiment are explained in the next points:

5. You can set the start date (can be set as desired) and the status of the experiment at the beginning. Afterwards, it is important to check the read and write permissions of the entry. You have set default settings in your user panel that are automatically assigned here, but can be changed manually. **You can unlock an entry at different levels at the same time. In relation to the entire instance, several teams, different groups of teams and individual users.**

6. You can give your entry any title you wish. Entries can also have exactly the same title, as each entry is given a unique ID which is automatically assigned and which uniquely identifies the entry.

7. Below that, you assign the tags that replace the classic folder structure of known systems. Here you can use meaningful terms that relate to your experiment, e.g. project number, abbreviations, methods, etc. Tags can be predefined and moderated by the admin, but can also be created by the users themselves.

8. Experiments go through different steps and you can name these steps here. The advantage here is that you can mark them as done/open and they will show up in your "ToDo" list. **Steps can also be given a deadline and added to the notifications as well as directly as a link in the editor area.** Rarely do experiments stand on their own or require no tools. You can add existing experiment entries as well as database entries to your entry and thus create links to quickly get to other relevant entries. This function works in both directions and so the other entries also receive a link.

9. You can add all kinds of files to your entry. Currently there are no known restrictions on the file type, but the size is limited to 100 MB. Graphics of the type .png and .jpeg can also be transferred directly into the text editor area. You can drag and drop files into the field or click on it and the familiar selection editor opens.

10. There are three editors available that allow you to create additional information in special formats directly in eLabFTW. Of particular importance is the JSON editor, which not only allows the creation and adaptation of JSON files, but also to provide additional interactive fields in the experiment entry. The JSON editor has a very good documentation with which these additional fields can be easily created.

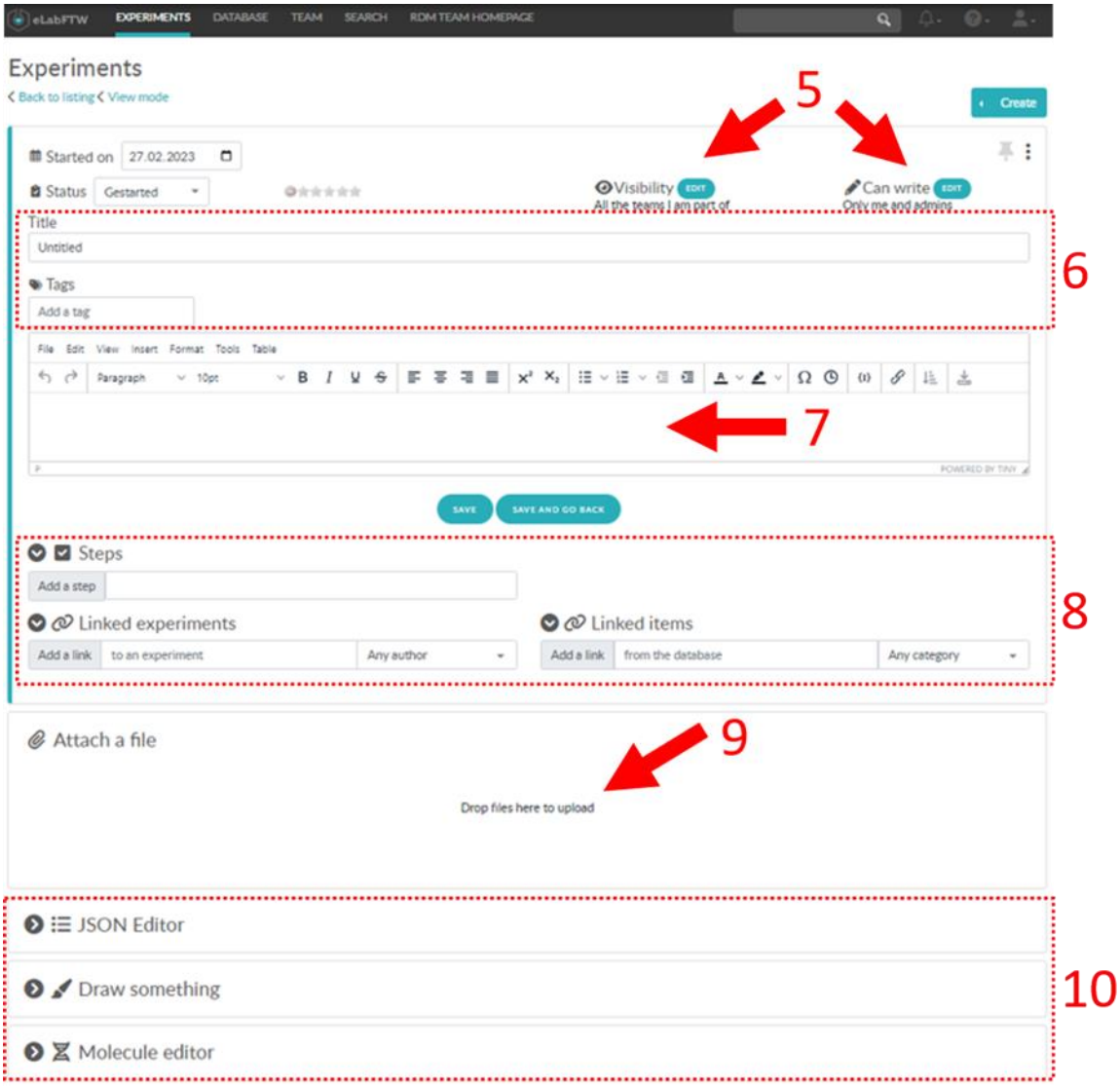


Figure 3: Experiments editor mode

When you are finished with your entry, you can save it at any time and edit it later. In any case, you can switch from the editing mode to the viewing mode (Figure 4) and check the entry:

11. In this area, you can see important information at a glance, such as the status, access rights, tags used and the title of the item. In addition, you get some important icons that fulfil practical tasks. On the far left we find the "pen" with which you can switch to editing mode. Then comes the "Copy" icon with which your entry can be copied and safely edited as a new entry, but without attached files. You can stop the editing function of your entry with the "lock". Only you as the owner can open this lock again. Important if several people can edit your entry. The "Calendar" icon allows you to time-stamp your entry. After that, it can no longer be edited, even by you, but it is date and time stamped. For further assurance of authenticity, you can also add your entry to a blockchain (optional only). The "Download" icon allows you to download your entry in various formats and make it available in other from.

12. Here you can see your work steps and check them off or open them again.

13. Here you have an overview of all linked elements in the database and the experiments. You can jump directly to the elements and, in the case of database entries, also directly to the schedular.

14. Similar to the previous point, here you get an overview of all attached files. You can also add a comment to them directly.

15. It is also possible to comment on the entire entry. Practical for feedback or messages.

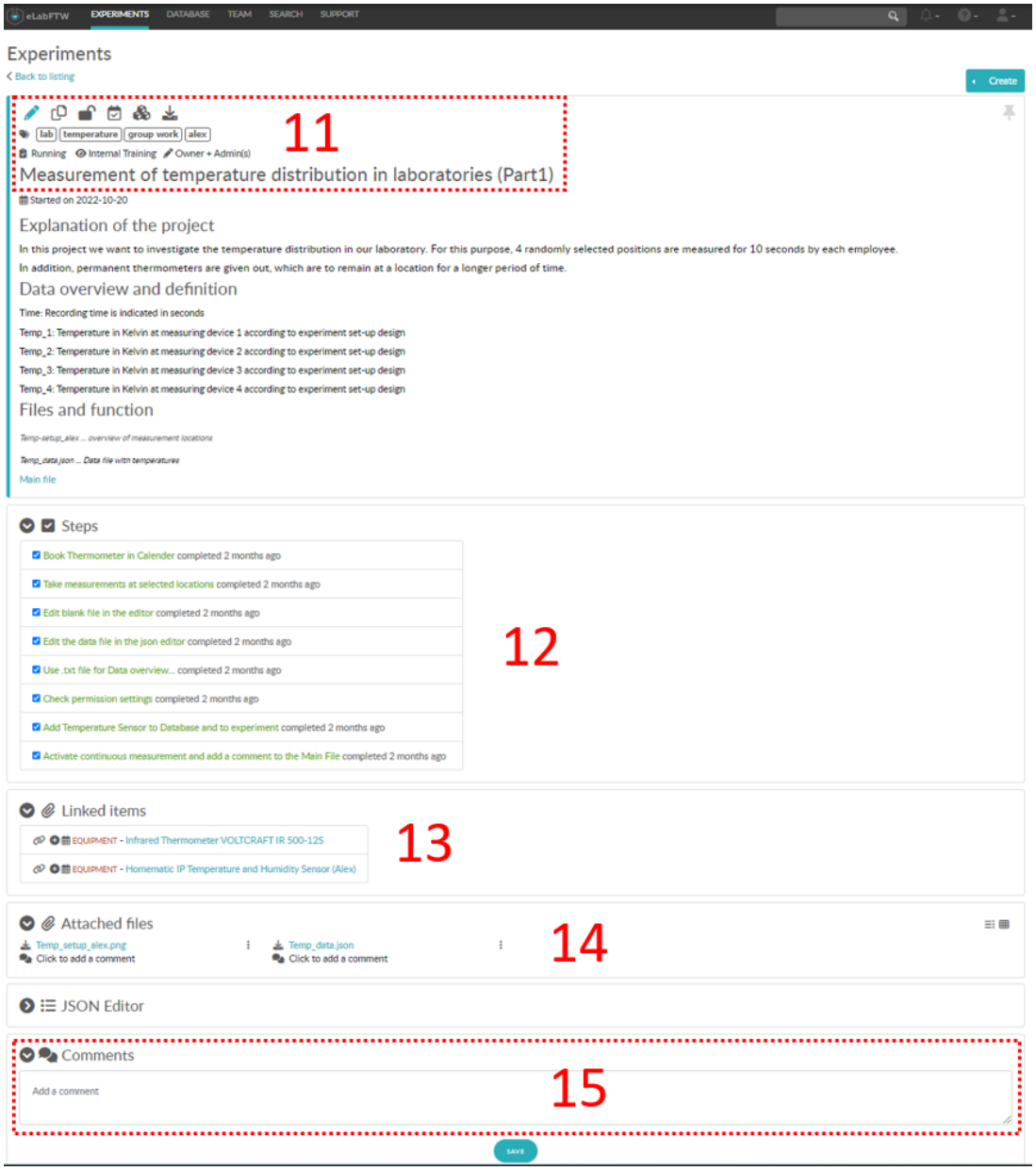


Figure 4: Experiments view mode

1) Templates

You can create and edit your templates in the user panel. Most of the fields and settings are the same as those of an experiment. Of course, some fields such as the date and the status are missing, as are the editors, with the exception of the JSON editor. These fields are added as soon as a new entry is created from the template. Templates can play an important role when it comes to documenting experiments with a similar structure. This not only saves time but can also be of great advantage for reasons of reproducibility. Laboratory exercises are another use case where templates can be very supportive. The template selection is displayed at the arrow of the Create button. To increase the overview, only templates that you have previously toggled are displayed there. You can do this in the TEAM menu or in the user panel.

5) Database

The second very important area in eLabFTW can be accessed through the "Database" button. The entries in this section (Figure 5) can be seen as part of our project and lab management, i.e. equipment, tasks, lab exercises. An important difference to the experiments is that each element in the "database" necessarily belongs to a certain type. These types are also templates for our entries. The possible types are defined by the admin of the team.

Note: You can also create a "Project" type that contains all the important information about your research project. Experiments can add this entry to themselves and thus, in addition to the tags, you have an additional possibility to link experiments and database elements to your project.

1. With the filter option you can filter the available entries according to certain parameters. You can filter by the type and owner of the database item, but also for whom the entries are visible or which group of the team has access to the entries. The number of results can also be limited during filtering and the included tags can be set.
2. The "Quick Search" bar searches all elements in the "Database" area for the term entered. You do not have to be careful whether it is a tag, full text or heading. If the search term occurs in the content of the entries, the corresponding database items are displayed.
3. To create a new database item, the "Create" button comes into action. This button is divided into two parts, although it is difficult to recognise. Both parts of the button perform more or less the same task. You get to a selection window where you have to choose the type of database entry. These types function as templates with special properties and can only be created by the admin of the team. The types differ not only in name and colour but can also be used as bookable elements in the schedular or not.

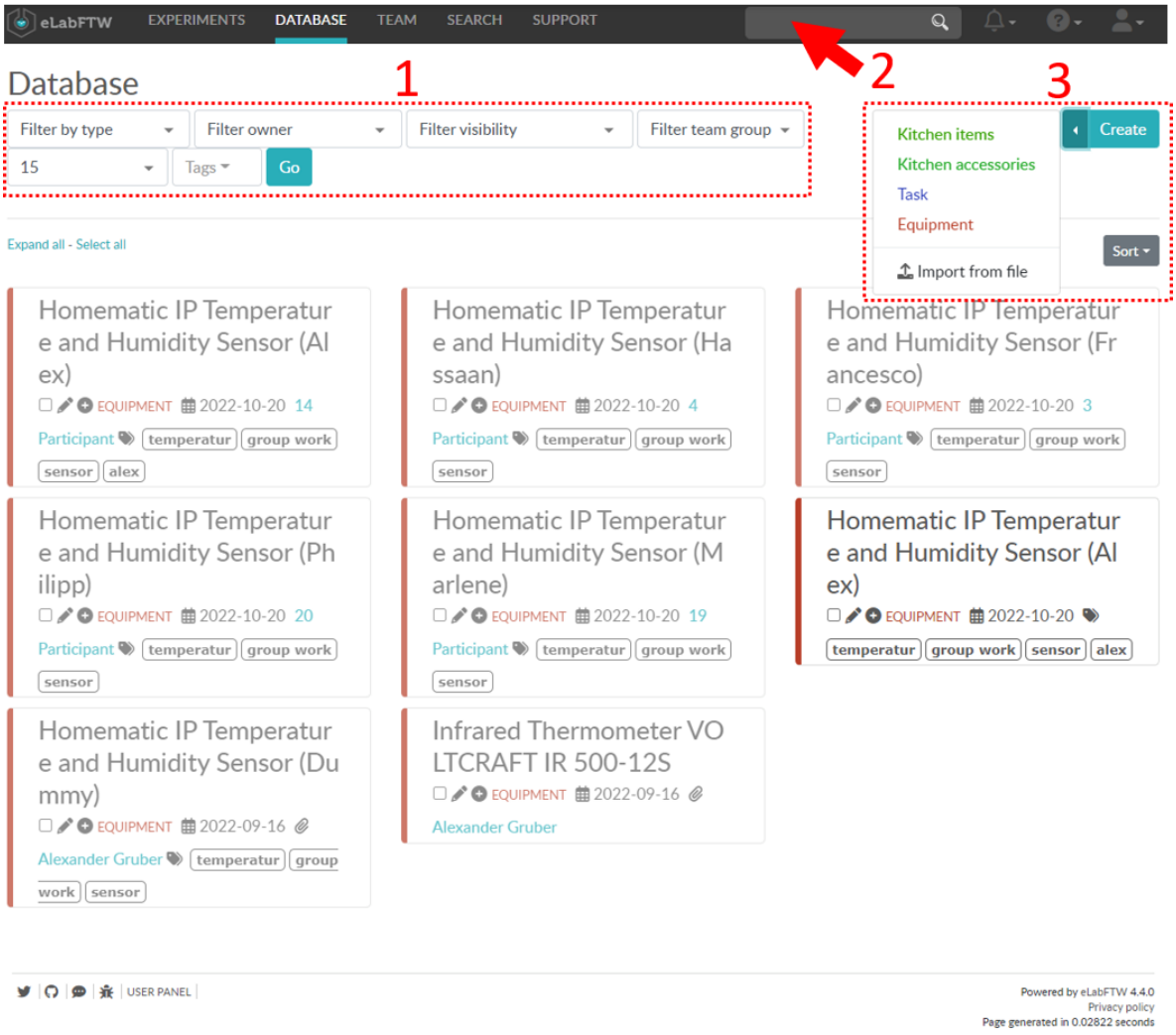


Figure 5: Database overview

The creation of a database entry works almost exactly the same way as in the experiments and can also be read there (Figure 3). Just as with the experiments, it is possible to switch back to the view mode (Figure 6) after editing and check the entry:

4. In this area, you can see important information at a glance, such as the status, access rights, tags used and the title of the item. In addition, you get some important icons that fulfil practical tasks. On the far left we find the "pen" with which you can switch to editing mode. Then comes the "Copy" icon with which your entry can be copied and safely edited as a new entry, but without attached files. You can stop the editing function of your entry with the "lock". Only you as the owner can open this lock again. Important if several people can edit your entry. With the "Calendar" icon you can jump directly to the schedular and book the selected item in it. For further assurance of authenticity, you can also add your entry to a blockchain (optional

only). The "Download" icon allows you to download your entry in various formats and make it available in other from.

5. Here you have an overview of all linked elements in the database and the experiments. You can jump directly to the elements and, in the case of database entries, also directly to the schedular.

6. Similar to the previous point, here you get an overview of all attached files. You can also add a comment to them directly.

7. It is also possible to comment on the entire entry. Practical for feedback or messages.

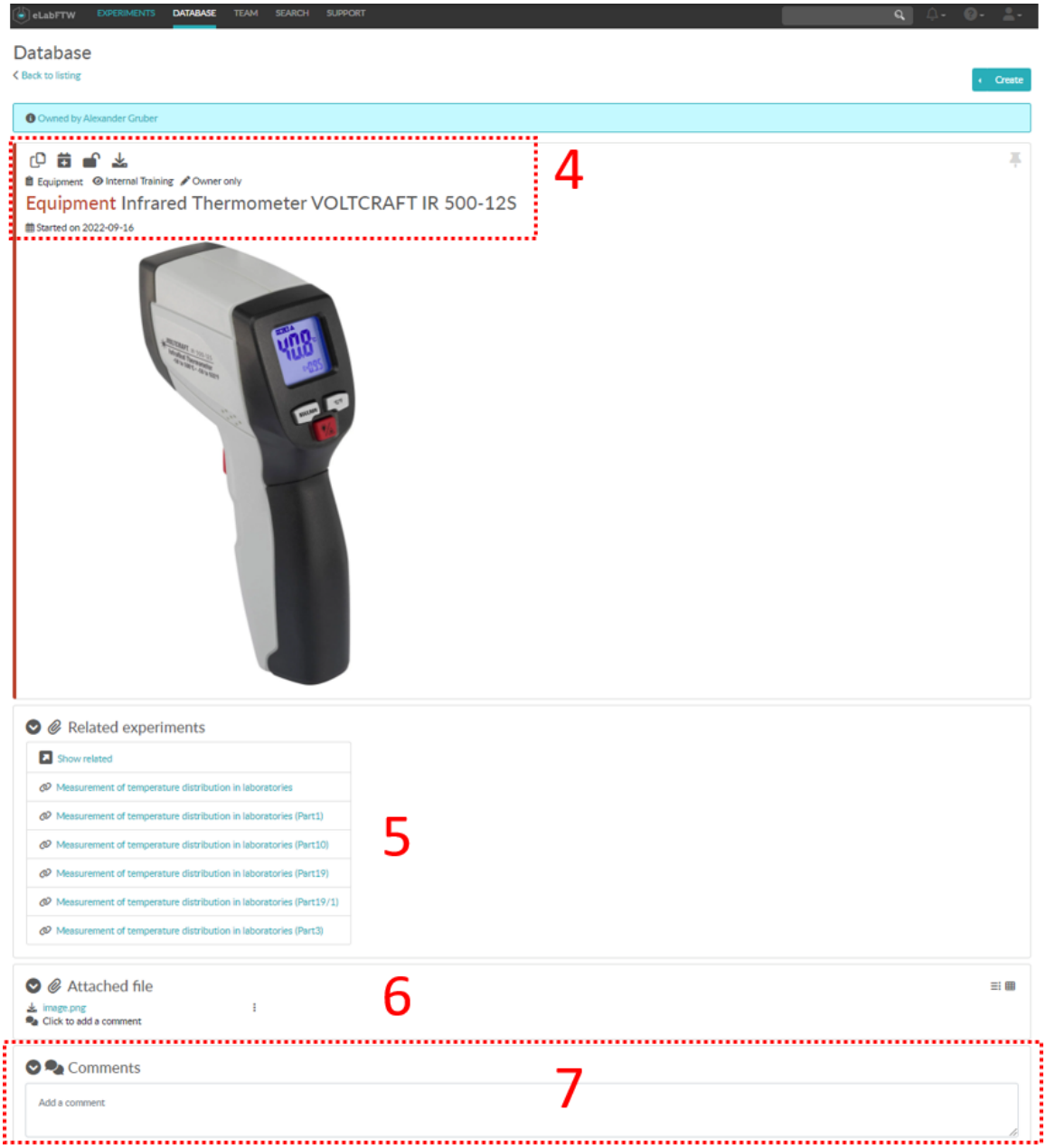


Figure 6: Database view mode

6) Team

In the team menu (Figure 7), relevant information about the team comes together and informs all members. There you can find four tabs:

Scheduler: Your team also has its own planner that can manage certain items of your team in the form of a schedular. Here, the database entries of your team (not the experiments) can be filtered by type of database item and individual database element. Then you can book the item in the calendar with a short note. You can also display several items at the same time. This provides you with a simple tool for managing your laboratory equipment or exercise groups or planned activities in the team.

Information: In this section you will get an overview of all members of your team. The role of the member and a contact option via email is also stored. Optionally, you can also look up the ORCID ID.

Templates: All templates available to your team can be found there and can be viewed in advance. You can then transfer the template to your own template collection and edit it using the 3 dots next to the template being viewed. This way, you can also start a new experiment with the template directly. With the appropriate rights, templates can also be deleted.

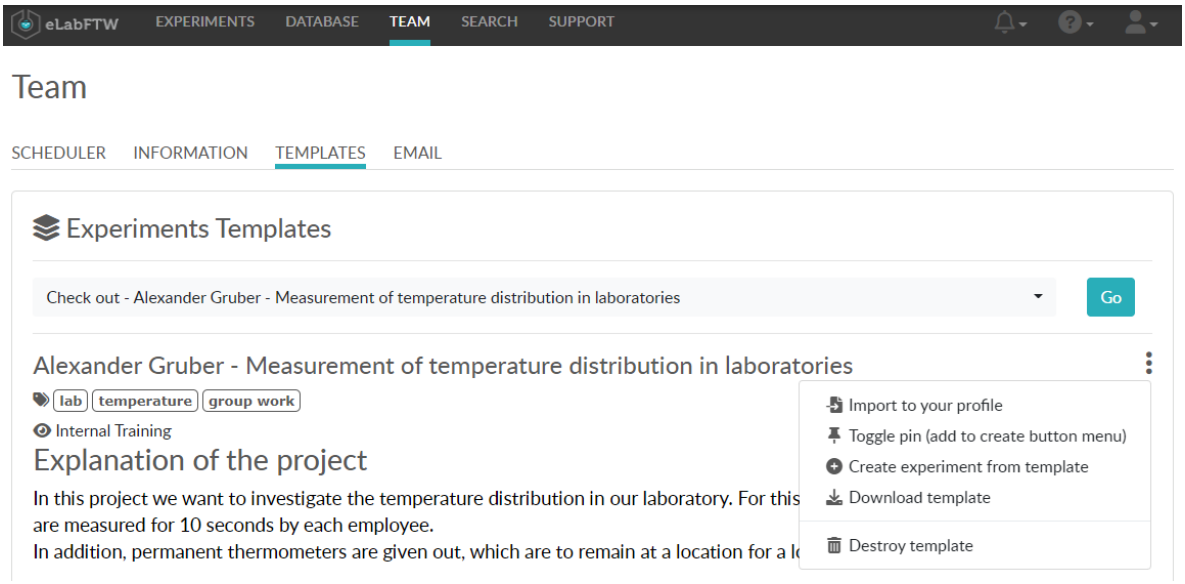


Figure 7: eLabFTW Team

EMail: If you have a message that concerns all participants of the team, you can do it directly here. Please use this option only if the message is really relevant for the majority of the team.

7) Search

Search (Figure 8) is a very powerful tool in eLabFTW. **Remember:** In eLabFTW there is no folder structure but categorisation is done with tags. This means that you can search for certain tags in the individual areas. However, the real strength lies in the extended fields, which allow a refined search in groups or for individual users. In addition, there are further specialised fields and also a search query if desired.

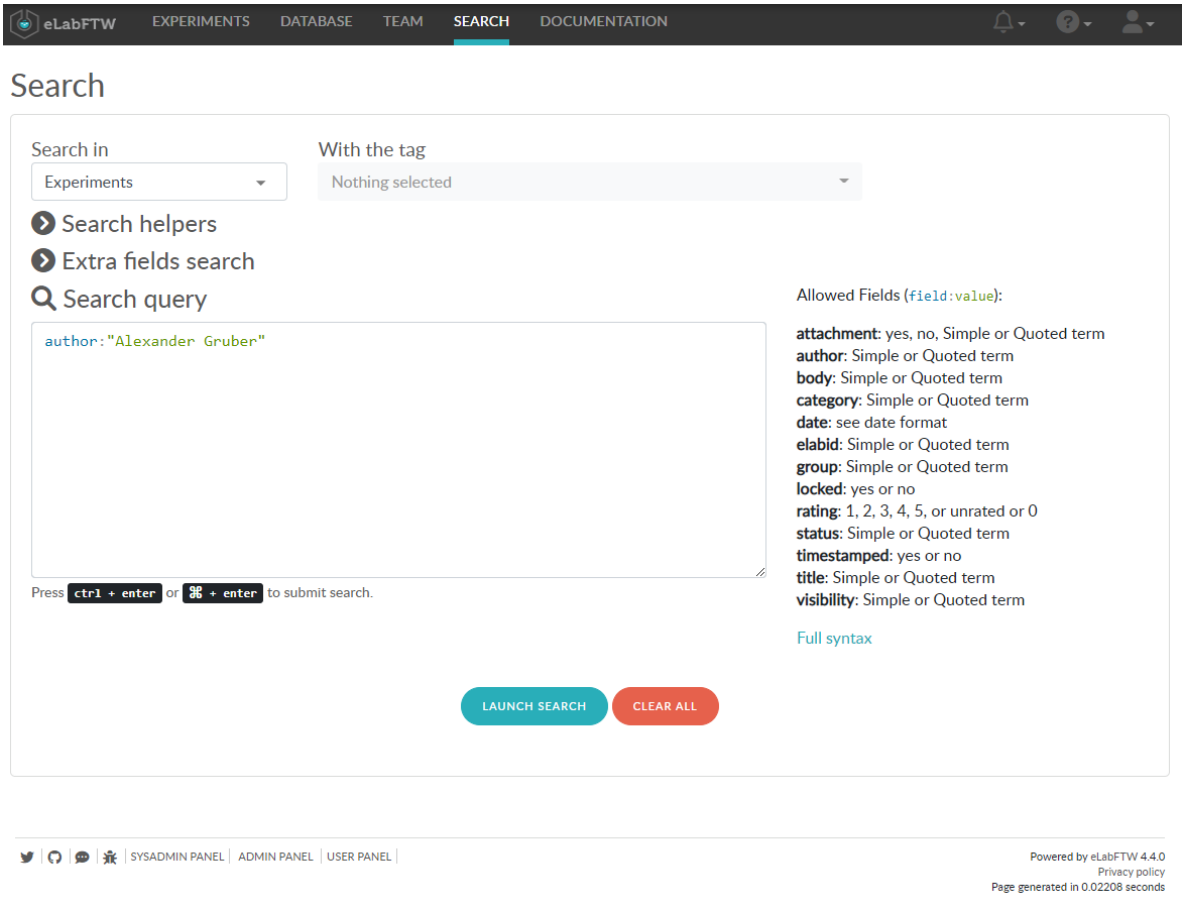
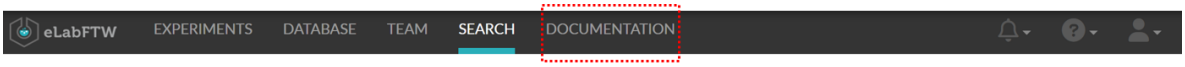


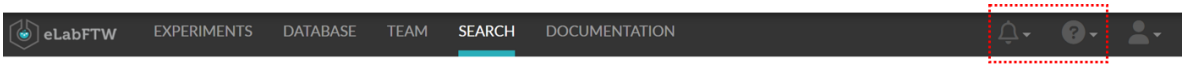
Figure 8: eLabFTW Search

8) Custom field a.k.a. Documentation



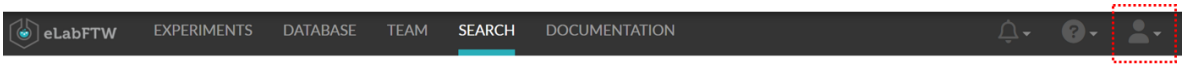
This field may or may not already have a new name in their team. The reason for this is that the admin of the team can assign a name himself and set the link behind it. This link can be anything, e.g. the website of their project team, the institute or a GitLab page.

9) Notifications and Help



On the right side of the header you will find three symbols. The first two are the **bell** and the **question mark**. The first one shows the overview of your open messages and the second one shows many links to the open source community of eLabFTW. These are fellow players outside of Graz University of Technology. An important point is the **"Support"** section, which links to the eLabFTW support page on GitHub. Here you will find the manuals and FAQ for eLabFTW.

10) Profile



The third symbol on the right in the header deals with the user's personal profile. Here you can see directly in which team you are currently logged in, get access to your control panels depending on your role and log out of eLabFTW. In addition, there are the following helpful buttons:

1) „Switch Team“

If you are a member of several teams, you can switch directly to another team here. You will then return to a selection window and choose an available team.

2) My Templates

Via the button "My Templates" you can jump directly to your personal templates in the User Control Panel.

3) My Profile

“My Profile” is a very important window for you, as it gives you a complete overview of all the teams you are in and a list of the groups you are also a member of. In addition, you can see who is in these groups and always know with whom you share your experiments. You also get statistics about the status of your experiments and can export all your experiments in different formats.

4) ToDo List

The "ToDo" list is a nice feature to leave yourself short notes as a reminder. In addition, you can keep track of open "steps" from experiments and database entries for yourself or your team. You can also access this via Short Cut.