

Troubleshooting Guide for Open Roberta Lab

2024 IEEE RAS International Summer School on Educational Robotics



<https://edurob24.ist.tugraz.at/>

Preface

This document contains a troubleshooting guide for use of Open Roberta Lab in group settings. It outlines what technical issues teachers and students of the 6-week course may encounter and how to solve them. It aims at being friendlier and more brief than the Wiki, but in return it is more surface level. Relevant parts of Open Roberta Lab's Wiki and documentation are linked as further resources.

To get started with Open Roberta Lab, we recommend attending a teacher's training class and refer to the official Wiki page to start programming with the EV3 in Open Roberta's NEPO® language (<https://jira.iais.fraunhofer.de/Wiki/display/ORInfo/Programming+EV3>). We have structured this document as follows: Section 1 contains the assumptions and requirements for using Open Roberta Lab in the setting intended by the guide. In Section 2, we outline common issues and attempt to provide help on how to combat them. Section 3 summarises common quirks outside the scope of this document. Finally, Section 4 contains pointers on how to report a bug to Open Roberta Lab.

1 Assumptions/Requirements

For application of this document, students and teachers are assumed to have access to a device with a stable internet connection as well as a recent, Chromium-based browser. The Open Roberta Lab simulator is rather light in terms of resources. One tab uses memory in the range of a few 100 MB (usually 100 – 200 MB). This guide generally applies to the Open Roberta Sim EV3 leJOS 0.9.1 simulation platform within Open Roberta Lab, however, concepts of this document may be applicable to other simulation platforms within Open Roberta Lab.

In terms of accessibility, the entire window can be zoomed using the browser's zoom function, which also increases font size in all elements of the web page.

2 Help to combat common issues

2.1 Group and Login Issues

In general, group management features are explained in the Wiki on the following page: <https://jira.iais.fraunhofer.de/wiki/display/ORInfo/User+groups+in+the+Open+Roberta+Lab>

The default passwords haven't been changed by the students

Symptom: Students can avoid the mandatory password change by entering the default password when prompted.

Solution: Default password can't match the new password. Adding password requirements, such as capital letters, special characters and minimum length.

I cannot create a group

Symptom: When clicking on "Manage user groups..." an error message is received that says "You are not allowed to be a user group owner."

Solution: Make sure you have clicked the validation link in the email you were sent. If you are unable to validate your email address, or you never received the validation email, please see the issue "Account registration failed".

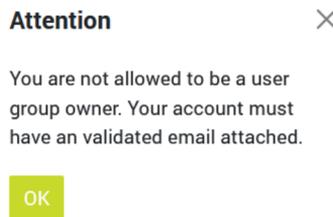


Figure 1: Warning prompt

A student has forgotten their password

Symptom: A student has forgotten their password for their account.

Solution: The group owner can reset the password of any group member by clicking the 'reset' button next to their name in the group management screen. This will reset the user's password to the default password (`user_group_name:user_name`).

NAME OF THE USER GROUP technical_issues				
USER	PASSWORD			
02	technical_issues:02	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>
03	technical_issues:03	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>
04	technical_issues:04	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>
05	technical_issues:05	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>
christian	*****	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>

Figure 2: Location of the reset button

My account registration failed

Symptom: No account activation email received and/or can not login and/or can not reset password with error message that email address is unknown.

Solution: Make sure that the internet connection is stable and register again. Preferably register with a Gmail email address.

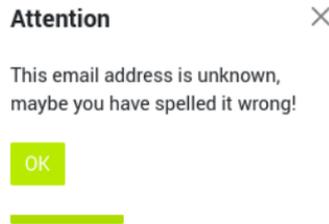


Figure 3: Warning prompt

Group members are not displayed properly; “can’t assign group member” error, etc.

Symptom: Group members are not (always) properly displayed after an entry has been edited in the group management interface.

Solution: Manually refresh group overview using the ‘refresh’ button at the top right of the group management table:

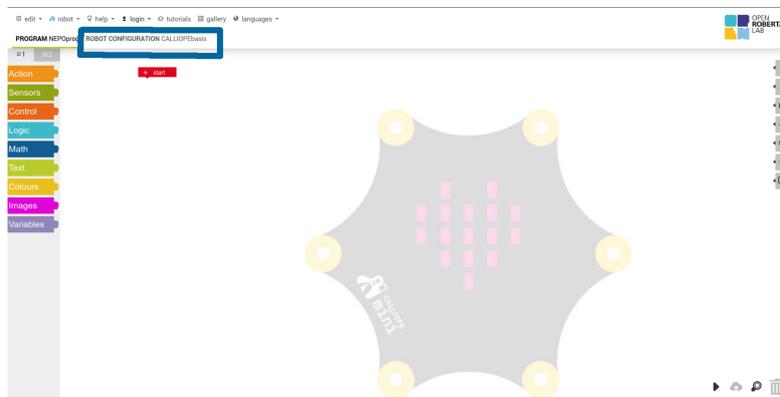


Figure 4: Caption

2.2 Interface Issues

'Wrong robot selected' problems

Symptom: The wrong robot is visible in the “Robot Configuration” Tab above the block programming environment. The wrong robot picture is shown in the background of the programming environment.

Solution: In the drop-down menu at the top of the page, the student has to click on “Robot”, then “back to Robot/System selection” and select the robot supported by this guide (Open Roberta Sim EV3 leJOS 0.9.1). See also <https://jira.iais.fraunhofer.de/wiki/display/ORInfo/The+Open+Roberta+Lab#DasOpenRobertaLab-Robots>

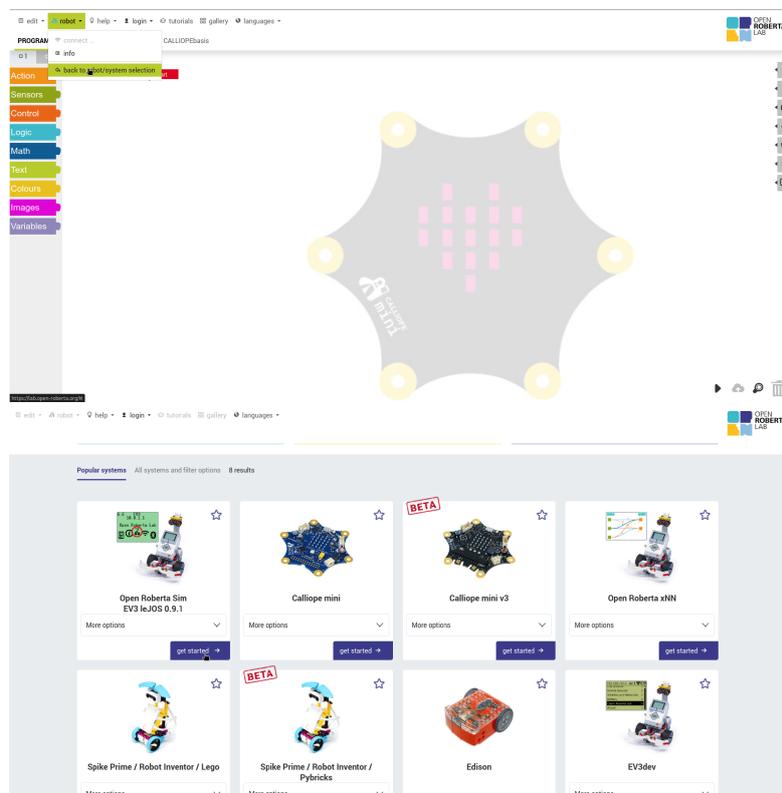


Figure 5: Solution: 'Wrong robot selected'

I have a problem with my sim robot (configuration error)

Symptom: An error is displayed saying that the robot is not properly configured.

Solution: This can occur if, in the code, you are asking for the wrong type of data from a sensor (e.g., if you ask a colour sensor to give you touch sensor information).

Double-check that your sensor blocks have the correct data-type selected. Please also double-check that your sensor blocks have the correct port information.

I can't add a sensor to my robot (errors, sim crashes)

Symptom: When you add new sensors to the robot's configuration, running your code causes errors to occur or the simulator to crash.

Solution: Some sensors are constrained by the simulator, for example you can only have one ultrasonic sensor (due to the real-life sensor's constraints). Please remove the sensors that are causing the issue from the robot's configuration.

No list of projects displayed for students

Symptom: For students, the list of projects under "my programs" is empty, even though the teacher has published some programs (see https://jira.iais.fraunhofer.de/wiki/display/ORInfo/Meine+Programme?showLanguage=en_GB#MeineProgramme-Sharingprograms)

Solution: This is another symptom of selecting the wrong robot. After sign-in, students need to select the correct robot supported by this guide (Open Roberta Sim EV3 leJOS 0.9.1). If they selected the wrong robot, change it to the supported one. This can be done from the programming environment by opening the "Robot" drop-down menu at the top of the page, then "back to Robot/System selection" and select the robot supported by this guide.

I was logged out when I changed the language, or I refreshed the page.

Symptom: If the language is selected in the language menu or refresh the page, (sometimes) the login status changes to logged out.

Solution: Log in again with username and password (teacher), teacher's username, group name, student's username and password (group/student) again. (See <https://jira.iais.fraunhofer.de/wiki/display/ORInfo/The+Open+Roberta+Lab#DasOpenRobertaLab-UserMenu-LogIn>)

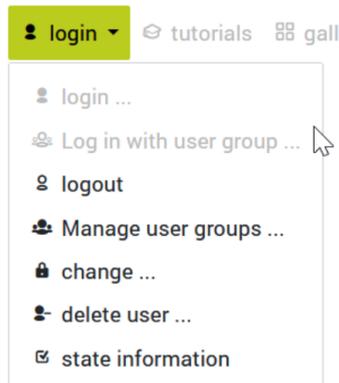


Figure 6: Login Menu

Am I logged in?

Symptom: The page does not visually update when you login.

Solution: You have to manually check you're logged in by opening the login menu (See <https://jira.iais.fraunhofer.de/wiki/display/ORInfo/The+Open+Roberta+Lab#DasOpenRobertaLab-UserMenu-LogIn> and figure 6)

I can't zoom in properly using the browser controls

Symptom: If you zoom into the Lab screen using your browser controls, the whole page is zoomed. This could lead to a state where the simulator image gets really small.

Solution: Don't worry, close the simulator and it will go back to the default zoom factor. It is best to avoid zooming the simulator view, and use the zoom controls inside the Lab (at the bottom of the code blocks view):



Figure 7: Zoom options at bottom right

The Wiki language is limited to German

Symptom: German is the only selectable language for the Wiki.

Solution: Go to the root of the Wiki and change the language in the drop down menu.

Then reload any open Wiki windows. <https://jira.iaais.fraunhofer.de/wiki/display/ORInfo/Open+Roberta+Wiki>



Figure 8: Language menu inside the wiki

I can't copy-and-paste code blocks

Symptom: Selected code blocks do not copy-and-paste using keyboard shortcuts.

Solution: This can occur if the simulator view is open. You will need to minimise the simulator view (so only the code blocks view is visible) before attempting to copy-and-paste code blocks.

2.3 Server Errors

Opening the tour causes server error

Symptom: If you click on “Take an interactive tour”, you will get a server error.

Solution: Just start without the interactive tour - the tooltips inside the Lab are quite helpful in absence of the interactive tutorial.

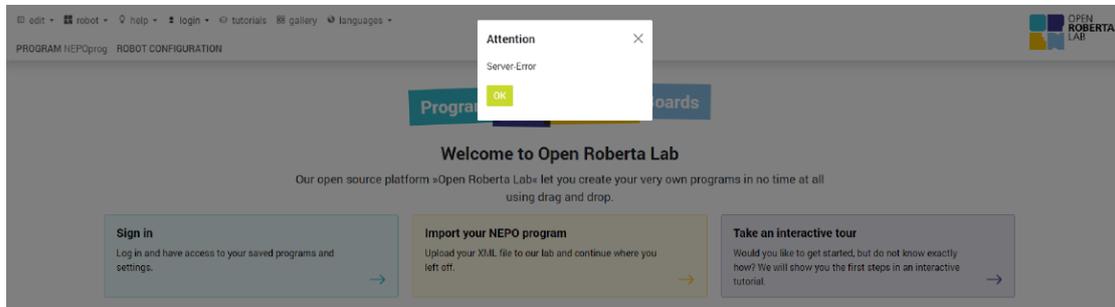


Figure 9: Warning prompt: Server-Error

Server error shows when “show text” block is present

Symptom: After having added a “show text” block to the robot’s program a server error is displayed when trying to open or run the simulation environment.

Solution: Remove the “show text” block from the program. Use the “serial text output” block instead.

3 Summary of common quirks

This is a (non-comprehensive!) list of quirks that are currently present in Open Roberta Lab. These are either bugs that aren't fixed or common pitfalls that you might come across.

- Support for non-Chromium browsers (e.g., Firefox, Apple Webkit) is not guaranteed, and you may run into issues using them.
- The Wiki cannot be found by Googling and the link is hard to find on the Lab website. You can access it here <https://jira.iaais.fraunhofer.de/wiki/display/ORInfo/Open+Roberta+Wiki>, or from the “Help” menu inside the Lab (click on “general help”).
- It can be tricky to select the right hardware on the main page. The suffix after the hardware platform name usually indicates the firmware running on the robot (e.g. Open Roberta Sim EV3 leJOS 0.9.1 → “Open Roberta Sim EV3” = platform, “leJOS 0.9.1” = firmware). You don't need to worry about what the firmware does - just make sure everyone has selected “Open Roberta Sim EV3 leJOS 0.9.1”!
- Simulated walls sometimes do not have collision enabled, especially in the Webots environments.
- “Tutorials” and “gallery” tabs are only available after selecting a robot platform
- Sometimes the editor changes the displayed language - just reselect your preferred language
- Assigning gyroscope data to a variable will cause the variable to become ‘undefined’ when you are running the code

4 Reporting a Bug

First, try to find the issue you are having via the Open Roberta Wiki search function (<https://jira.iaais.fraunhofer.de/wiki/display/ORInfo/Help>).

If there is no answer, you can contact Open Roberta via the email address linked on this page (<mailto:support-o-r@iaais.fraunhofer.de>).

If you choose to report a bug, try to include as much information as possible about the problem you are having:

- The symptom (the specific problem)
- Try to reproduce the error on another computer (preferably in an “incognito” or “safe browsing” tab) and write down the steps needed.

The “help” menu displayed in the top menu bar contains links to the Open Roberta Wiki and to the logging window where technical information is displayed to debug problems. If you are reporting an error to Open Roberta, it may be a good idea to add the information from the logging window.

There also is a Google Group (<https://groups.google.com/g/open-roberta>) and Github Issues to converse with the developers (<https://github.com/OpenRoberta/openroberta-lab/issues>).

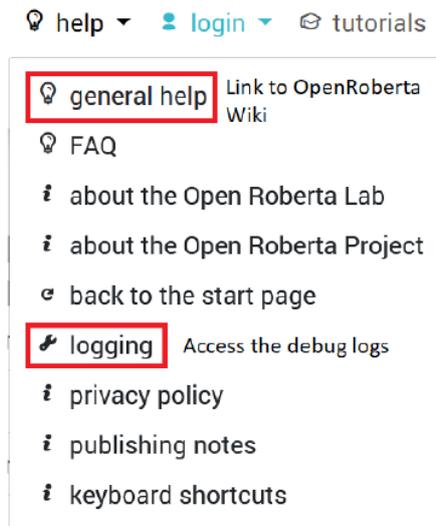


Figure 10: Access to reporting tools

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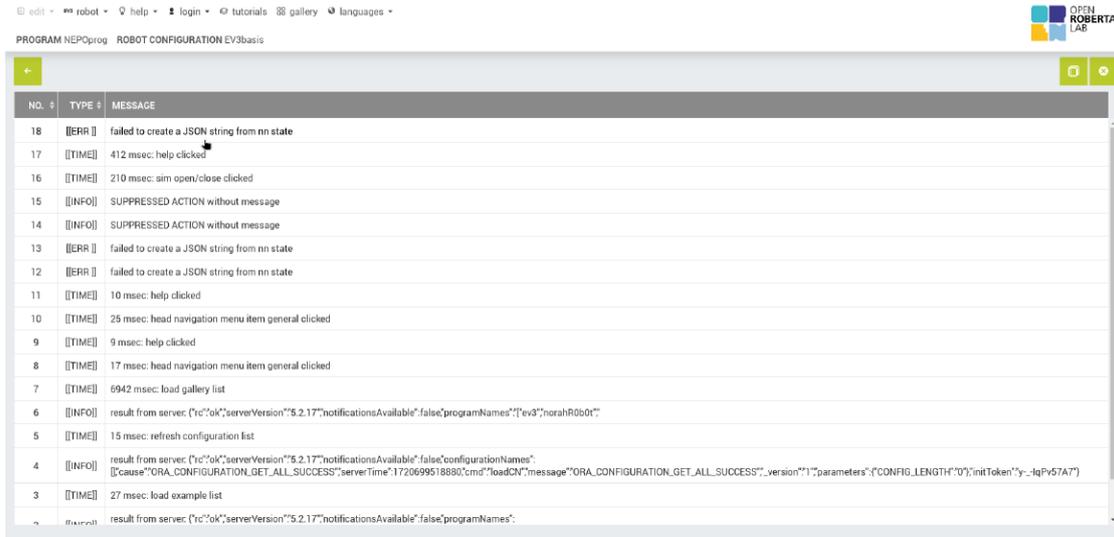


Figure 11: Debug logs