

Creating Web-based and Serverless RemoteLabs with Edrys-lite – A Path to OER in Lab Education?

Objectives:

Gain insights into the potential of edrys-lite for preparing RemoteLabs:

- Understand the capabilities and advantages of edrys-lite for educational applications.

- Gain insight into how serverless technology enables scalable and cost-effective solutions.

Gain practical experience with edrys-lite:

- Explore the platform's modular features through live demonstrations.

- Acquire the expertise to create and personalize RemoteLabs via a web browser.

Collaborate to develop RemoteLab concepts:

- Formulate new RemoteLabs in collaboration with other professionals, ensuring alignment with the specific educational goals of the client.

- You will leave with a clear understanding of the knowledge required to implement these concepts and access to resources for continued exploration.

Audience

This workshop is designed for educators in the STEM sector. No prior technical expertise is required for edrys-lite, although a basic familiarity with digital teaching tools or remote learning concepts would be beneficial.

Overview

In this interactive session, we will examine the potential of edrys-lite for creating web-based, serverless RemoteLabs tailored for the education sector.

As web technologies continue to advance, they offer unparalleled potential for the design of innovative Open Educational Resources (OER). Today's browsers are no longer simply interfaces; they have become robust platforms capable of performing tasks that were previously reliant on server infrastructure.

Edrys-lite takes advantage of these developments by offering a modular and accessible approach to the design and sharing of remote laboratories. With just a browser, educators can create and share RemoteLabs with learners, negating the need for complex technical setups or expensive infrastructure.

The workshop is structured in two phases and is conducted in a hands-on format. In the initial phase, attendees will gain insight into the capabilities of edrys-lite through guided demonstrations. We will present real-world examples to demonstrate how this platform can be adapted to suit a variety of educational contexts.

In the second phase, attendees will actively design their own web-based, serverless RemoteLabs. By participating, attendees will receive practical exercises, actionable ideas and foundational knowledge to implement edrys-lite in their institutions.

Join us to see how edrys-lite can benefit both educators and learners.

Topic

The workshop will examine the use of edrys-lite, a web-based, serverless platform designed for the creation and deployment of RemoteLabs in educational contexts. It demonstrates the potential of browser-based tools to enhance accessibility, scalability and innovation in the field of teaching and learning.

Detailed Agenda

The first 30 - 60 min: Introduction and Demonstrations

The session will begin with an overview of edrys-lite and its features. The program includes live demonstrations of practical applications in different contexts.

Hours 2-3: Hands-on Exploration

The second and third hours will be devoted to guided exercises in which participants will have the opportunity to create RemoteLabs using edrys-lite.

We will provide comprehensive, step-by-step instructions and dedicated troubleshooting support.

Special Requirements

Please ensure that you bring a laptop with an updated browser (Chrome or Firefox) to the session.

Instructors

The team of instructors comprises edrys-lite developers, **André Dietrich** and **Sebastian Zug**, as well as early adopter, **Ines Aubel**. The team is currently engaged in the development and implementation of RemoteLabs in STEM, including Computer Science and Chemistry (Chemical Technology). The team has already acquired valuable experience as instructors of comparable workshops on the use of LiaScript, having led e.g. sessions at OEB2019 and eLearning Africa 2024. Furthermore, the partners are involved in a joint project, CrossLab, which is funded by Stiftung Innovation in der Hochschullehre (Germany; Grant number: FBM2020-VA-182-3-00390). Some of the technical improvements and essential functions for an enhanced e-learning experience with edrys-lite are result of the CrossLab project.