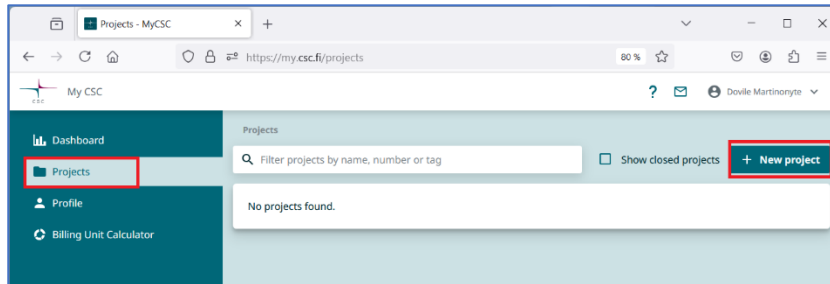


## 1 Create a new project in MyCSC portal

1. Log in to the CSC environment, <https://my.csc.fi/>.
2. Navigate to the **Projects** tab in MyCSC portal management view and click **+ New Project**.



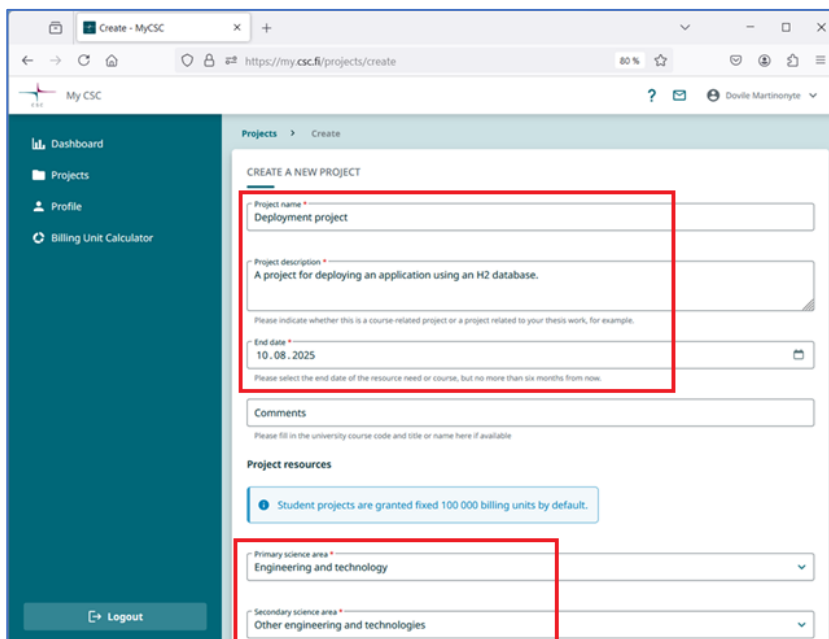
3. Enter the required project details:
  - **Project name and description**
  - **Course end date:** can be at most six months from the creation date.
  - **Project resources:**
    - o Primary science area: **Engineering and technology**
    - o Secondary science area: **Other engineering and technologies**
  - Review the Terms of Use and READ CAREFULLY [documentation about CSC services for students](#)

Click the **Create Project** button.

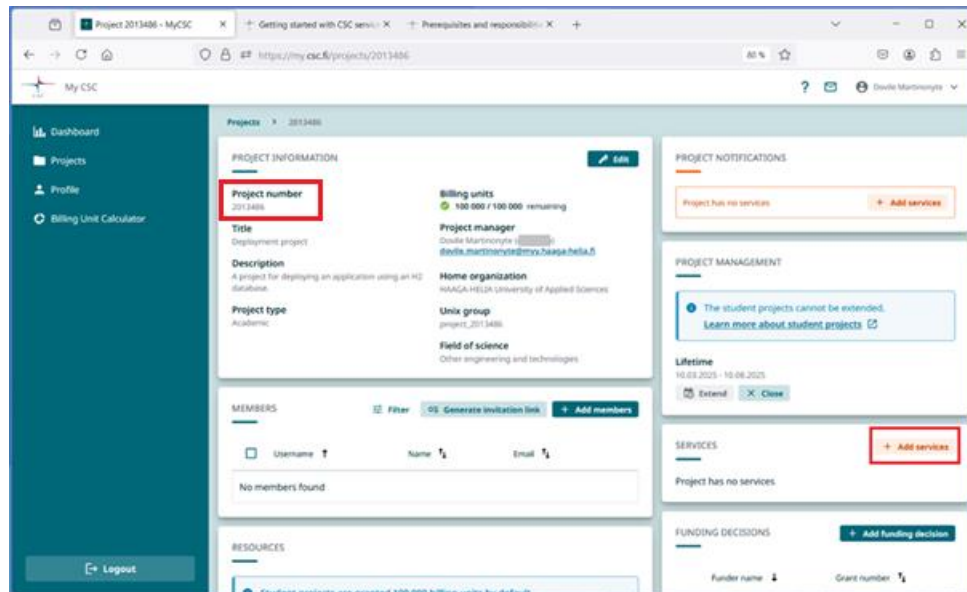
\* A course project is single-use. It cannot be extended, copied, or allocated additional resources. The default resource allocation for the project is 100 000 BU (billing units).

\* The project and all its resources will be automatically deleted after the end date.

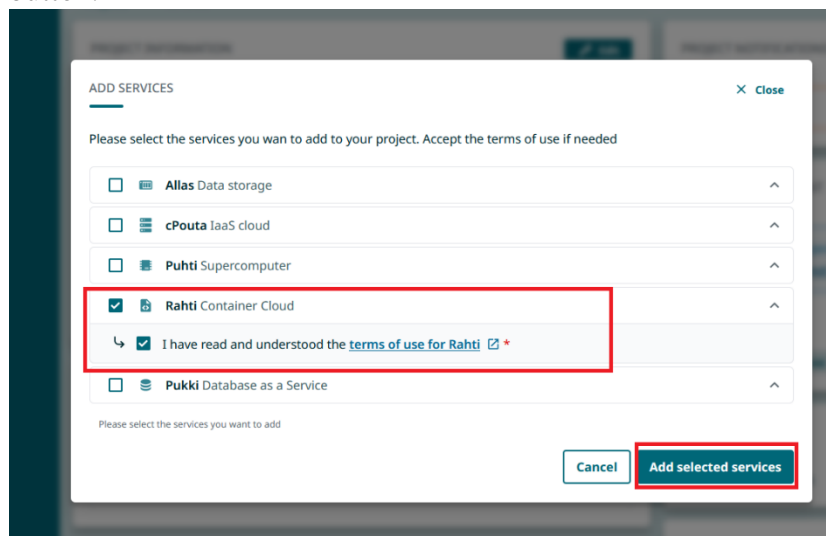
**Note: Personal data must not be stored in course project services.**



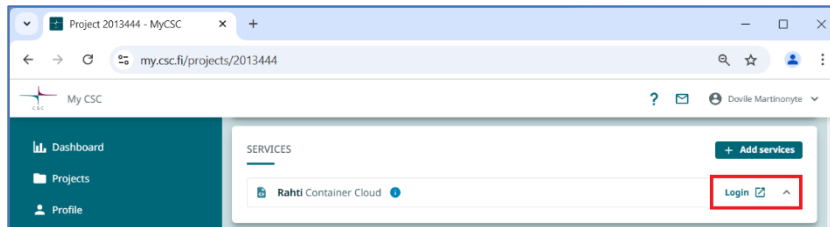
4. Add services to your project. In this course, you will need the Rahti service from CSC's offerings. You will also need the **project number** later for the actual application deployment.



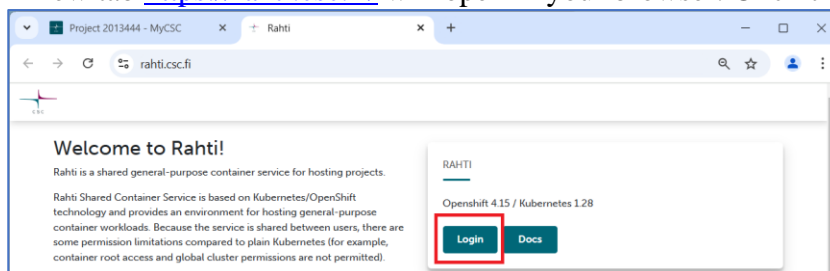
5. Click on the **+ Add services** button. A new view with services listed will appear. Select **Rahti**, accept the terms of use for the Rahti and click **Add selected services** button.



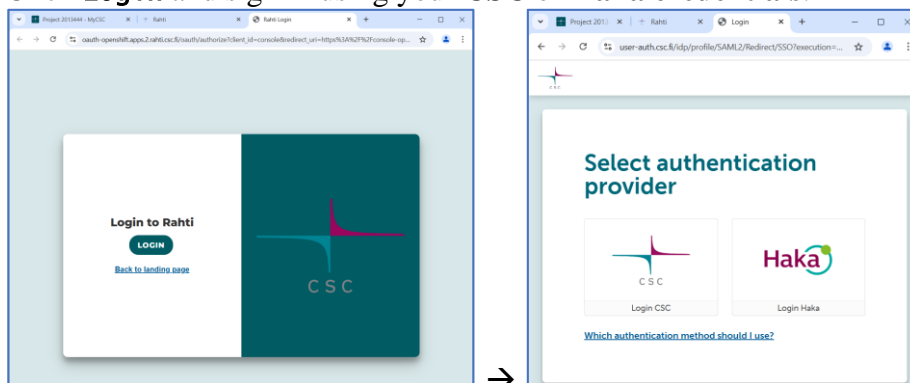
6. In the **Services** card, you will now see **Rahti Container Cloud** service. Log in to the Rahti service by clicking the **Login** button.



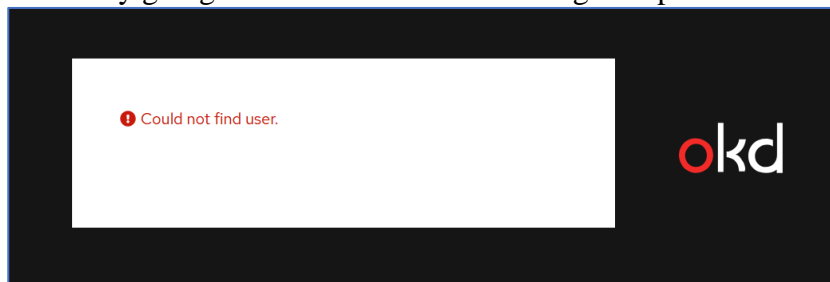
A new tab <https://rahti.csc.fi/> will open in your browser. Click the **Login** button.



Click **Login** and sign in using your **CSC** or **Haka** credentials.



**Note:** if you have registered to my.csc.fi just before following these instructions, it may take some time for your account to activate, so you might see an error message: “Could not find user”. Try going back to the Rahti service login step after a while.

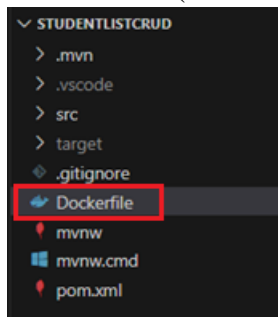


Once your login is successful, you can get started with a tour to improve your workflow or skip it.

## 2 Deploy a Spring Boot Application with an H2 database on Rahti

### 2.1 Prepare your Spring Boot Application

1. Create a new file in the **root** directory of your Spring Boot application and name it **Dockerfile** (without a file extension).

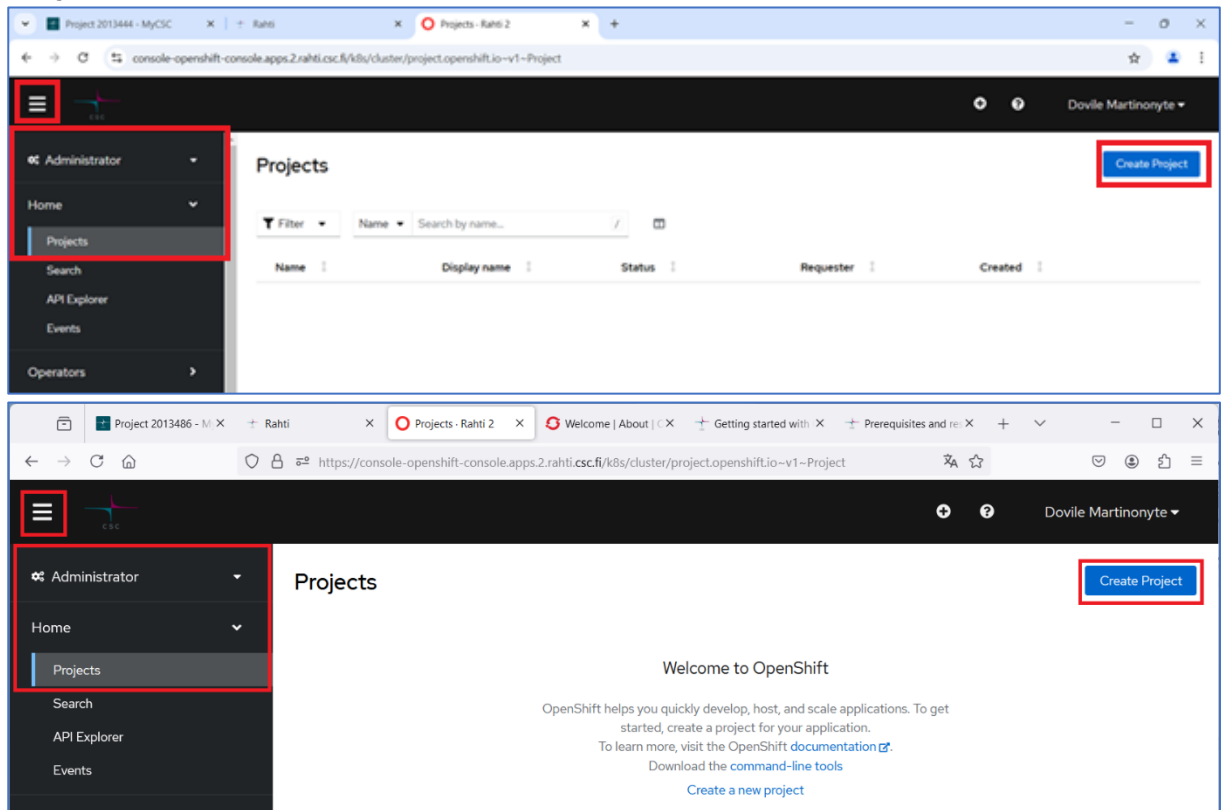


2. Copy the following content into the **Dockerfile** (this can also be found in the course's Moodle page):

```
FROM eclipse-temurin:17-jdk-focal as builder
WORKDIR /opt/app
COPY .mvn/ .mvn
COPY mvnw pom.xml ./
RUN chmod +x ./mvnw
RUN ./mvnw dependency:go-offline
COPY ./src ./src
RUN ./mvnw clean install -DskipTests
RUN find ./target -type f -name '*.jar' -exec cp {} /opt/app/app.jar \; -
quit
FROM eclipse-temurin:17-jre-alpine
COPY --from=builder /opt/app/*.jar /opt/app/
EXPOSE 8080
ENTRYPOINT ["java", "-jar", "/opt/app/app.jar"]
```
3. Push your updated application to GitHub.  
**Note:** These instructions assume your GitHub repository is **public**. (If needed, you can make it public temporarily during deployment and switch it back to private later.) Private repositories can also be used, but this document does not cover that method.

## 2.2. Spring Boot application deployment

1. Navigate to the top left menu. Choose your role **Administrator** → **Home** → **Projects**. The deployment is done by creating a new project in the Rahti service, click the **Create Project** button.



2. Enter the required details. **Name** must be **unique** and it is **case sensitive**. Click **Create** button.  
**Note:** To successfully create the project, you must enter the **CSC project number** (e.g. **csc\_project:<project number>**) in the **Description** field.  
If you don't know project number, see **step 1.4**.

### Create Project

An OpenShift project is an alternative representation of a Kubernetes namespace.

[Learn more about working with projects](#)

**Name** \* ?

studentlist-project

**Display name**

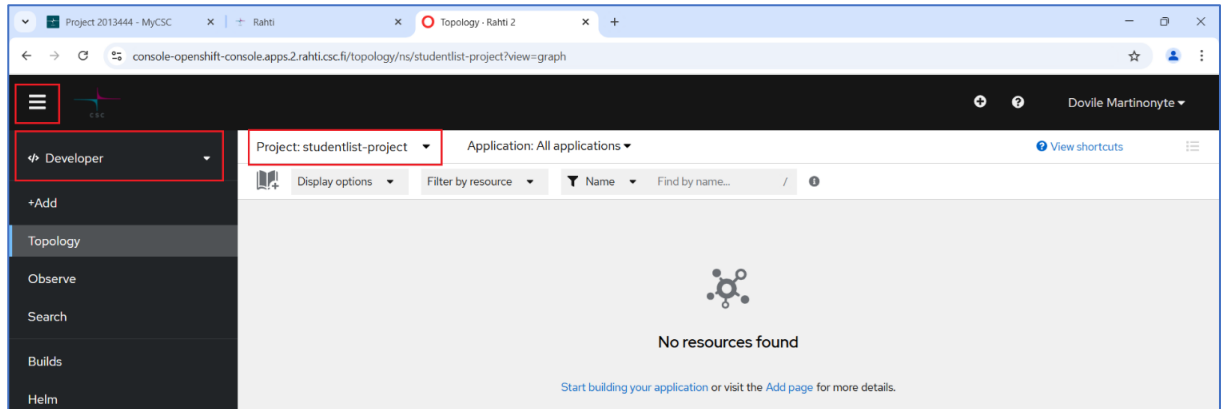
Student list deployment with H2 database

**Description**

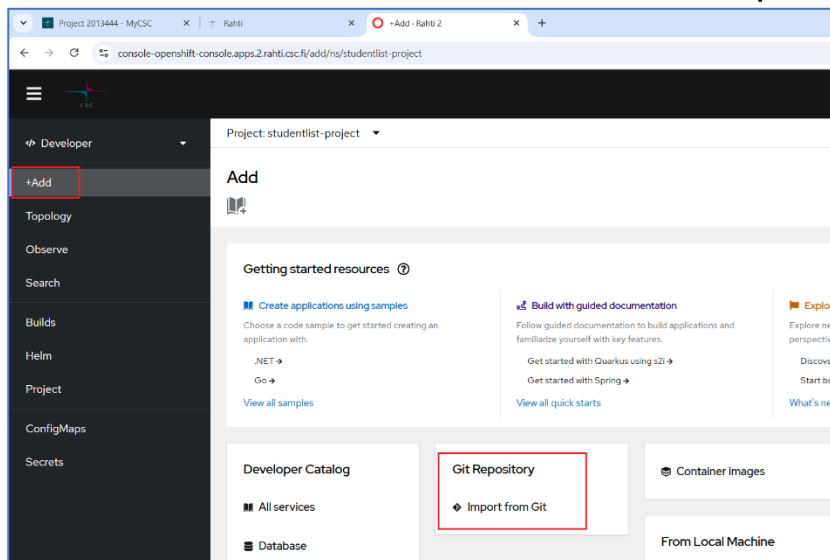
csc\_project:2013444

Cancel Create

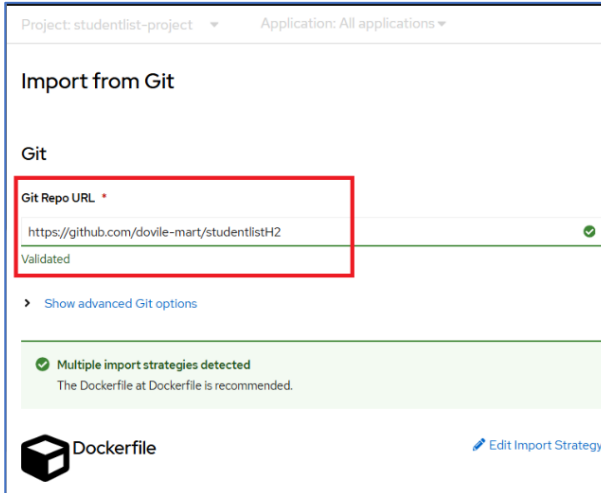
- Now you can deploy your Spring Boot application inside the newly created project in the Rahti service. Navigate to **Developer** mode. If your project name is not visible, select it from the **Project** drop-down menu.



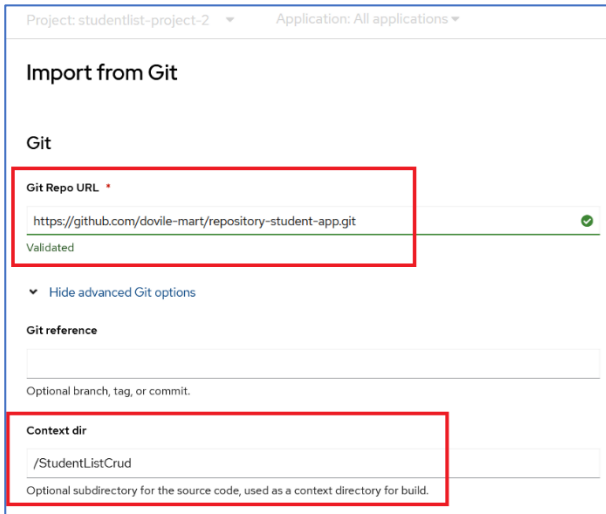
- Click **+Add** and from the available resources select **Git Repository** → **Import from Git**.



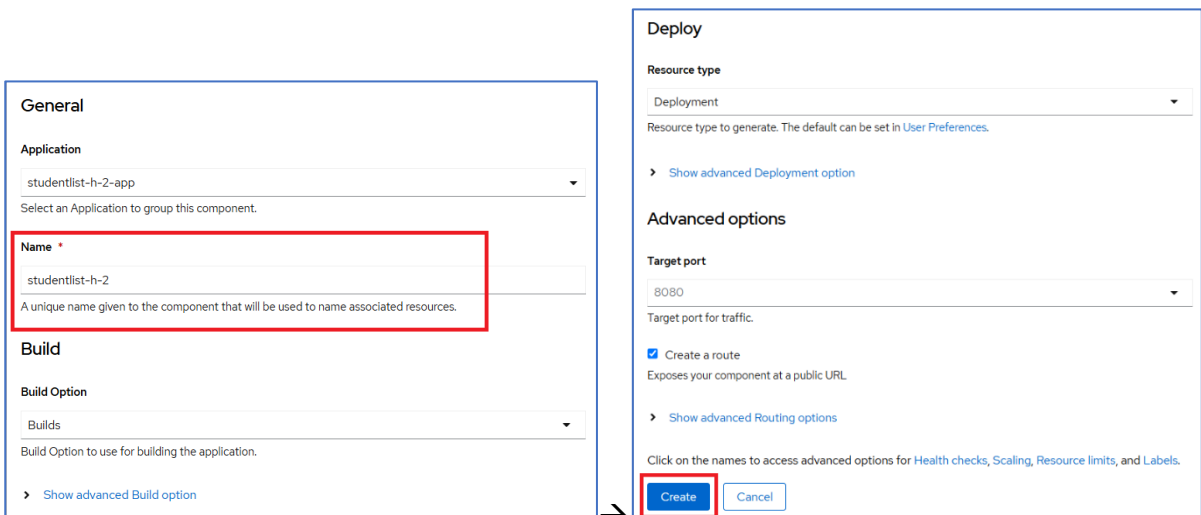
5. Fill in the **Import from Git** form by entering the **Git Repo URL**.



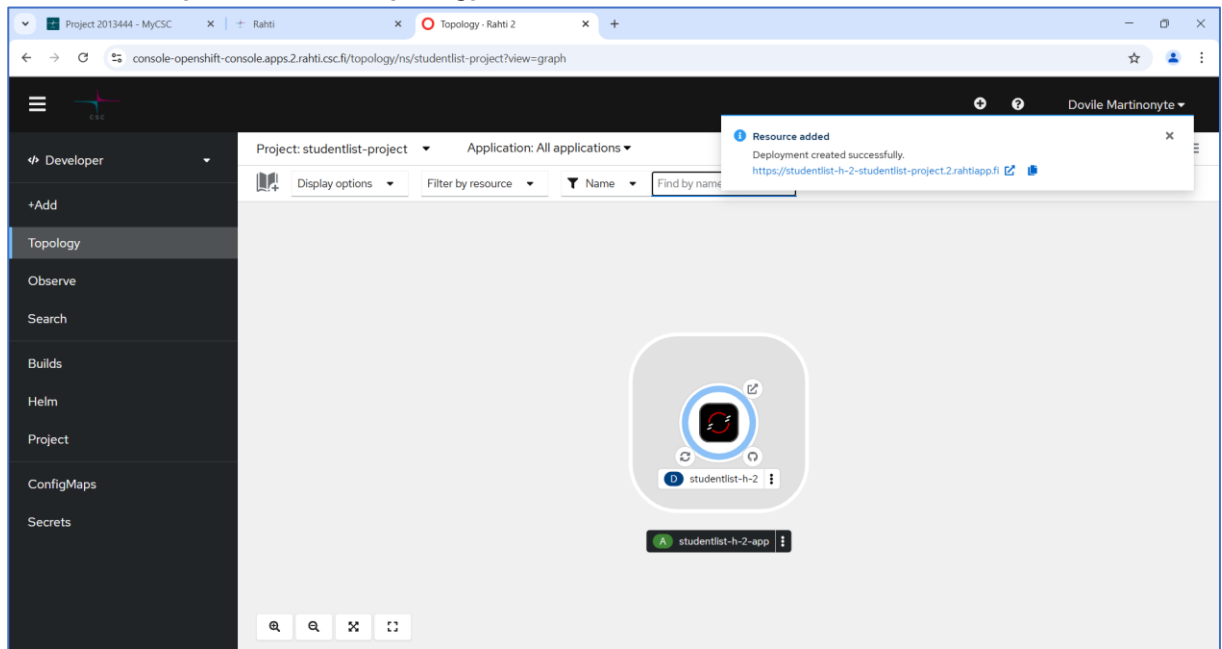
If your repository contains multiple projects, open **Advanced Git options** and specify the path to the root folder in the **Content dir** field:



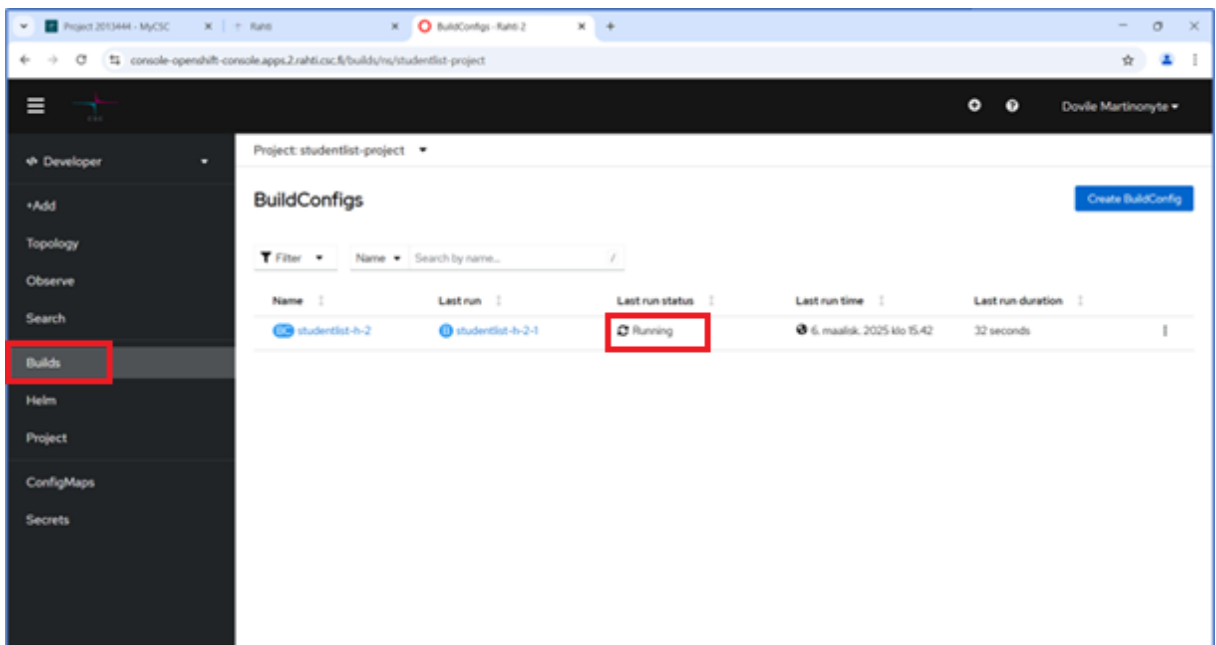
A name for your application component in **Name** field is be generated automatically but you can also create your own **unique name**. This component will be used to name associated resources. Then click the **Create** button.



6. The build process will start and may take a few minutes. You can find application component under **Developer** mode → **Topology** view:

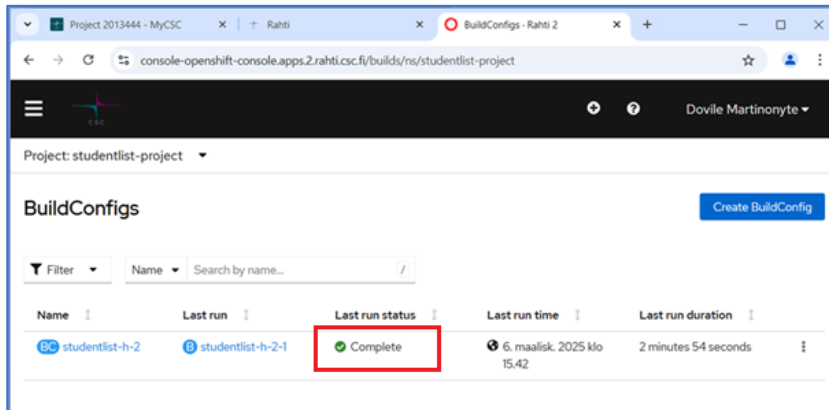


7. Follow the build progress in the **Developer** mode → **Builds** view. While application is being built, its status will be **Running**.

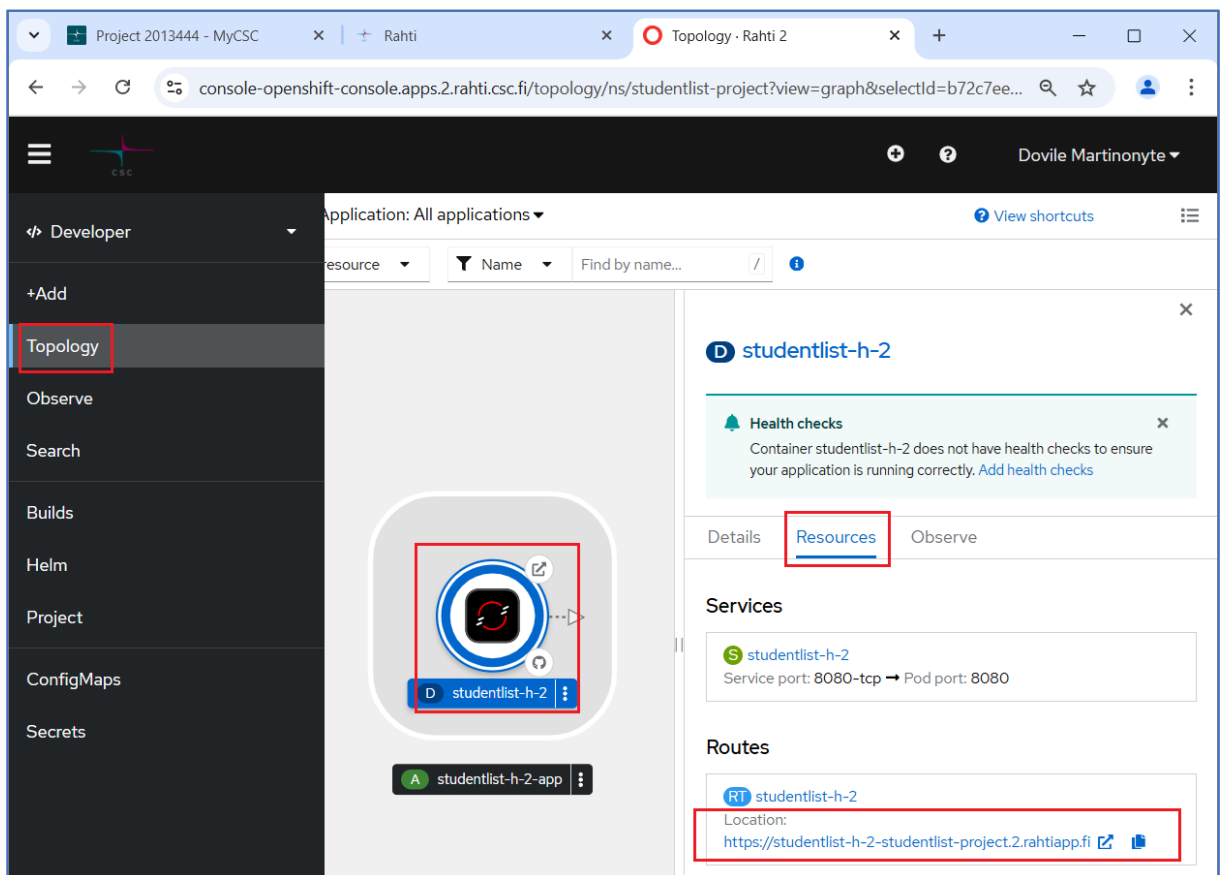




8. Once the build is complete, the status will change to **complete**.



9. You can find your application's URL, by navigating to the **Topology** view → selecting the component → when the sidebar on the right opens, navigate to the **Resources** tab → the application's URL will be under **Routes**. Click the link, and the application will open in your web browser.



10. Congratulations, your application is deployed!

