

# Antimony

## A visual approach to designing Containerlab networks.

### Students



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**Introduction:** The current tooling for emulating network topologies at OST relies heavily on an in-house solution called the Lab Topology Builder (LTB). While the LTB provides basic functionality and a graphical interface, it has limited support for advanced features and is also less likely to be properly maintained, as it is an OST in-house development. To combat this, OST decided to switch to an open-source alternative called Containerlab / Clabernetes, which Nokia is currently developing. The problem with this tooling is that it's purely CLI-based. With Antimony, we want to provide a UI-based open-source solution to address this issue.

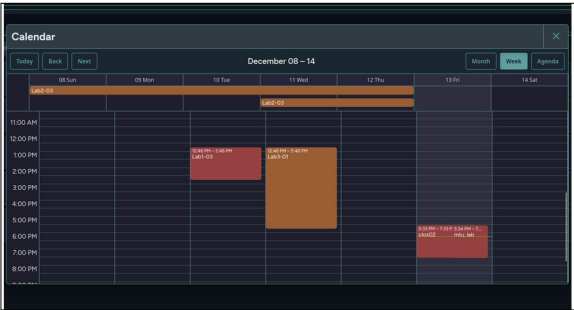
**Objective:** Antimony is meant to replace the current Lab Topology Builder. It will also be the first comprehensive graphical interface for the Containerlab / Clabernetes suite. With the design of Antimony, we want to focus on three key objectives.

- Improved Usability: Make the leap from a CLI-only tool to a web-based interface that allows users to visualize and maintain existing and design new Containerlab topologies.
- Educational Value: Enable students to understand and grasp cluster network concepts more easily through a graphical environment.
- Administrative Efficiency: Offer lecturers and lab coordinators a scalable solution to oversee multiple labs, monitor their status, and manage templates all through a single interface.

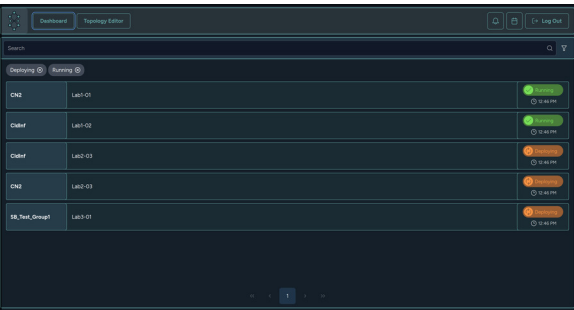
**Result:** The result is a flexible, scalable web-app that can be used by institutions and individuals alike to manage and deploy network topologies. Although, Antimony itself is in a stable state right now, it is important to note that it is still a prototype and the

complementary backend does not exist yet. This means, that the only practical use for Antimony thus far is its use as a standalone Containerlab / Clabernetes configuration editor. It is planned to complement Antimony with a backend next semester as a future student project at OST.

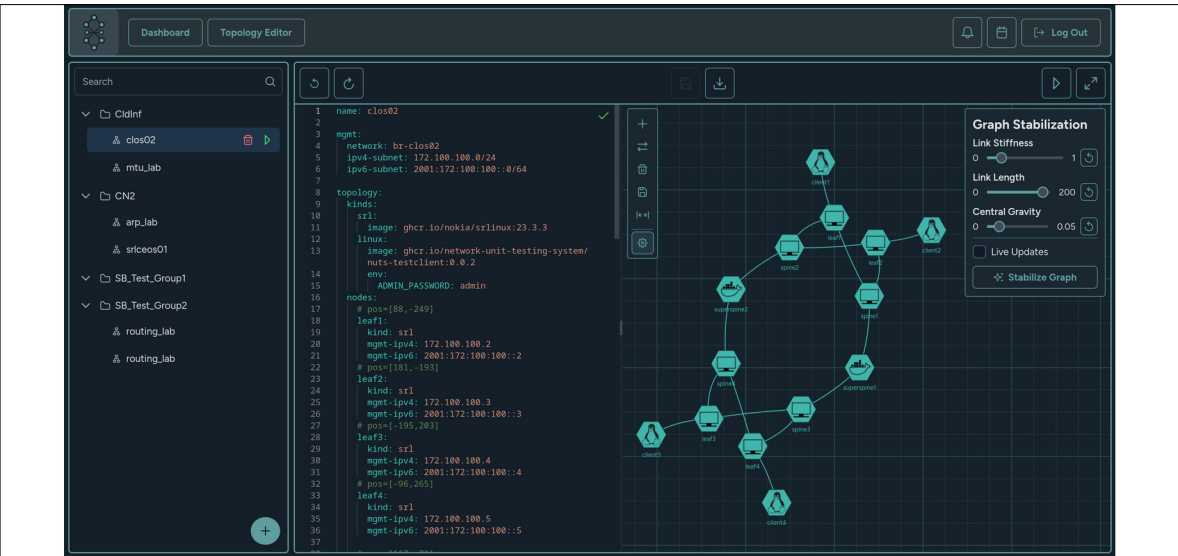
**Antimony's calendar, displaying upcoming, running and past labs.**  
Own presentation



**The lab management interface of Antimony.**  
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**The main interface of Antimony allows users to create, edit and delete network topologies.**  
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### Advisor

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### Subject Area

Internet Technologies and Applications, Application Design, Software, Networks, Security & Cloud Infrastructure

### Project Partner

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