Company background

Ciena is a North American-based networking company specializing in high-capacity, highly reliable, deterministic networks typically using fiber-optic modem technology. The company also produces software products that are used to plan, manage, and operate networks within and beyond the Ciena product portfolio. Ciena offers services to plan, deploy, operate, and upgrade networks.

A description of the work to be done

API access to network devices has evolved since the 1980's. A common implementation today is for a device to use Netconf/YANG. This is a machine friendly methodology, but challenging to use for humans.

The goal of this project is to develop an opensource framework that can be locally installed on a network device (or any server that supports netconf/YANG).

The package should be deployable as a docker container or natively

Projects for inspiration/reference:

https://github.com/CESNET/Netopeer2GUI (server/client architected)

https://swagger.io/tools/swagger-ui/

Any desired skill set for the students (but remember that students are expected to learn new technologies/languages as part of the course)

Schema Modeling (YANG), python, UI framework (Vue/React/Angular), docker

Preferred team size.

3-4 students.

Ciena liaison:

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