

Knight Foundation School of Computing & Information

Spring 2024 Capstone II Project

AmLight Kytos-NG

Student: Pedro Garcia-Romo

Mentor: Vasilika Chergarova

Instructor/Faculty: Dr. Masoud Sadjadi, Florida International University



Knight Foundation
School of Computing
and Information Sciences

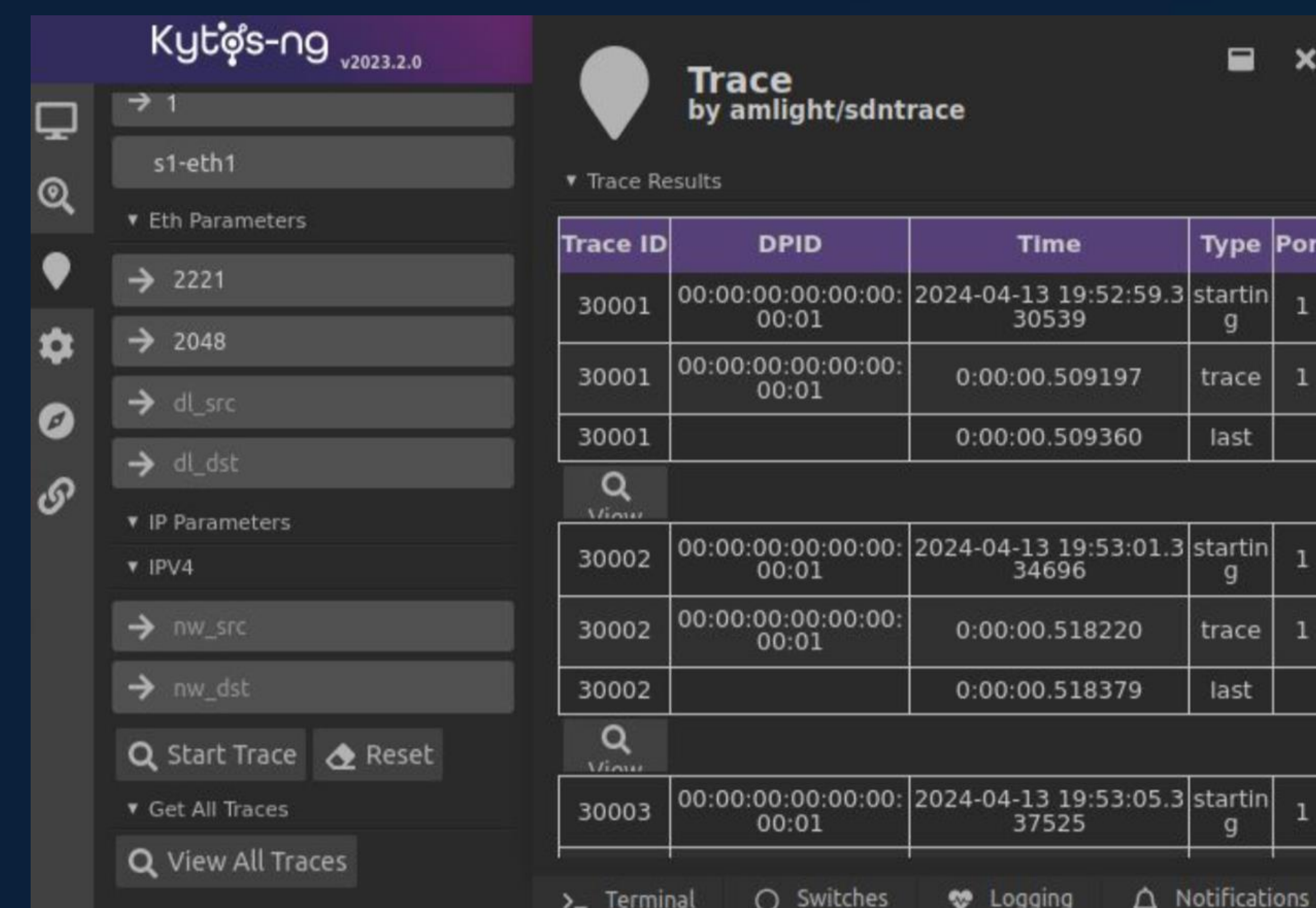
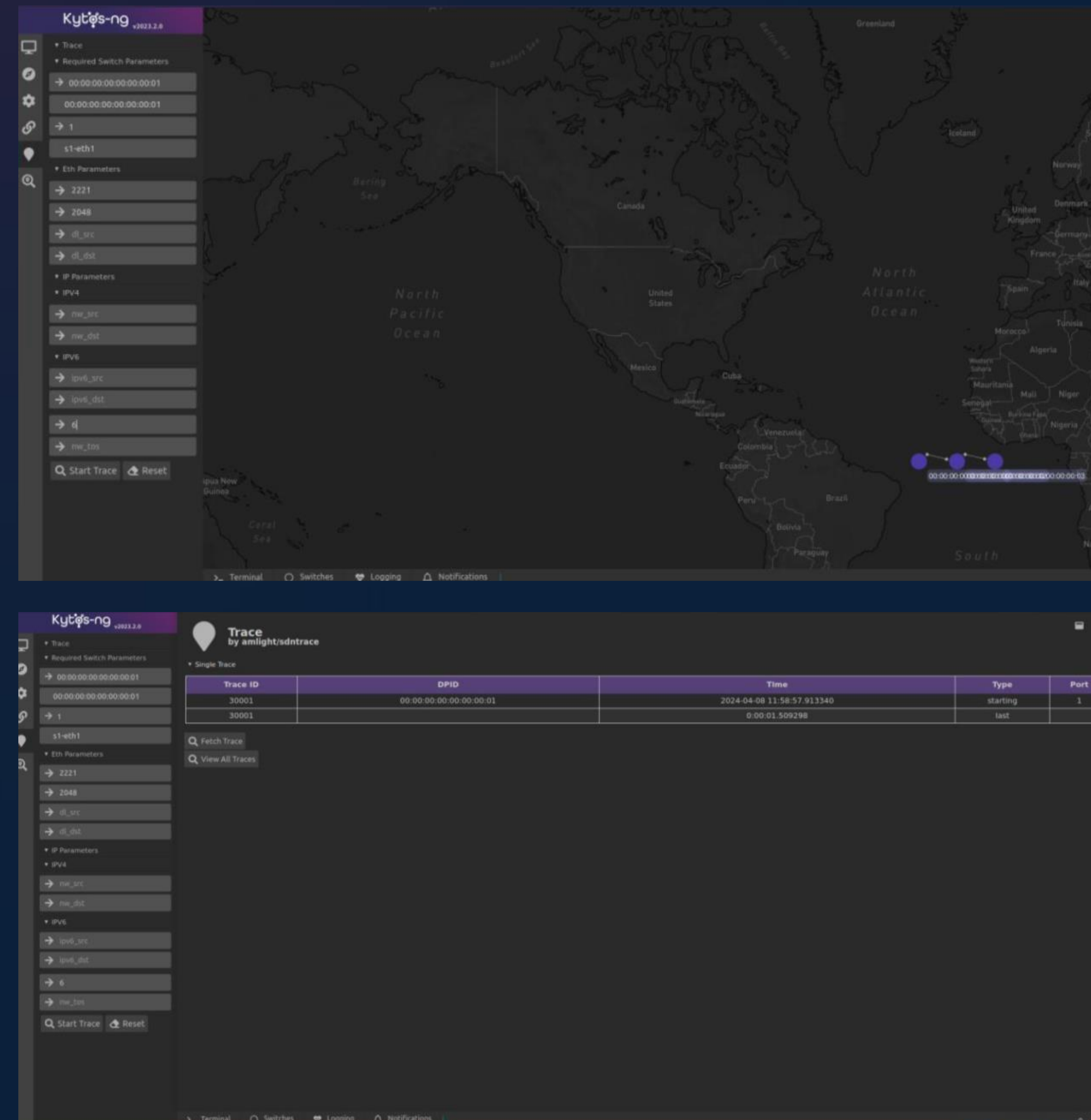
PROBLEM

- Our goal with Kytos-NG was to finalize one of the Network Applications (NApps) already in use, namely Sdntrace. The aim of these NApps is to segment the various functions of the webpage into separate sections, allowing for greater flexibility and independent scaling. Our objective was to enhance the modularity and scalability of the Sdntrace application within Kytos-NG, enabling more efficient management of its different functionalities.
- The primary function of the Sdntrace NApp is to generate traces, which are logs documenting network activity recorded by the infrastructure, utilizing the input provided. Subsequently, it retrieves and monitors these traces, presenting their data in a user-friendly and comprehensible manner.

VERIFICATION/SYSTEM DESIGN

- The majority of the system is constructed using Python, encompassing everything from the backend architecture to the API connections and the startup files.
- For the frontend, we employ HTML, CSS, and JavaScript, leveraging the Vue.js framework. This framework enables us to utilize modern libraries like jQuery, facilitating seamless API responses. Through this approach, we craft responsive user interfaces that enhance the user experience.

WEB DESIGN



IMPLEMENTATION

- Creating a new k-info-panel with a table showing all trace results, the table should have searchable rows on each column, and also sortable (by default sortable by the date). All of the attributes of the trace should be mapped in the table. With two buttons



- A button to fetch all the traces.
- A button on each row to fetch just a single trace response again and show in a new panel.

SUMMARY

In summary, we developed the entire frontend of the Sdntrace NApp, establishing the API connections linking the frontend to the backend. This involved creating a toolbar enabling users to input necessary information for trace creation and fetching single trace data. Furthermore, we implemented two info panels: the first presents single trace data in a table format, while the second displays data for all ongoing traces, allowing users to view individual trace details.



Engineering
& Computing

ACKNOWLEDGEMENT

We would like to thank Vasilika Chergarova, Vinicius Arcanjo, Aldo Ortega, Italo Valcy and David Ramirez for helping us in the completion of this project.

FLORIDA INTERNATIONAL UNIVERSITY