

EE/CprE/SE 492 WEEKLY REPORT

4/7/18 – 4/20/18

Implementing OpenPLC's into a Cyber Defense Competition

Group number: 16

Faculty Advisors: Drs. Jacobson and Rursch

Team Members/Role:

Matthew McGill — *Meeting Facilitator, Project Manager*

Brennen Ferguson — *Hardware Engineer*

Joseph Young — *Security Engineer*

Liam Briggs — *Hardware Engineer*

Joshua Przybyszewski — *Software Engineer*

Nicholas Springer — *Security Engineer*

Val Chapman — *Testing Engineer*

○ Weekly Summary

This week the team finalized all the documentation and prepared all we have been working on to be transferred to the next team to work on this project. Preparing the poster and final presentation has been a longer process than anticipated. We want our work to be clear and have the next team able to jump right in where we left off. We currently have our demo working and need only to finish logistics.

○ Past week accomplishments

Matthew McGill: Me and the other app developers set up a backend web API, exposing endpoints for the front end of our application to hit, reading and writing data to our instance of Factory I/O. As of now, we have OpenPLC properly controlling our simulated factory environment, and the backend application reading and updating specific control values. We have worked extensively to make this work, and will now connect the front end to these backend endpoints.

Brennen Ferguson: Worked on the final report, meet with team about the demo, and worked on the final presentation.

Joseph Young: Began creation of Final Poster. Compiled information to present on the poster and created a rough draft.

Liam Briggs: Prepared and oversaw final report. Cleaned virtual machines of unnecessary and old files.

Joshua Przybyszewski: Surprise! Matthew got a server running, so the previously unusable Dart app became viable again. Got that spinning up so that we can actually have a web client. A lot of documentation and other stuff for the finals week.

Nicholas Springer: Worked on Final Report, presentation and other documentation.

Val Chapman: Worked on final report and presentations. Helped prepare final demo of our system.

○ **Pending issues (if applicable)**

Team: From the meeting this week we learned about the resources available for a CDC. Currently our implementation uses a large portion of the available resources to a CDC so we will be looking into reducing the number of cores we use if possible.

Matthew McGill: All technical issues have been resolved from the development perspective. We ran into some issues connecting Factory I/O to the Engine I/O SDK. These issues have been resolved, and we will be recording our demo before our presentation.

○ **Individual contributions**

Team Member	Contribution	Biweekly Hours	Total Hours
Matthew McGill	I continued development on the implementation of the Factory I/O SDK and looked into some system resource issues we are running into as a team.	15	117
Brennen Ferguson	Worked on the final report, met with team about the demo, and worked on the final presentation.	15	115
Joseph Young	Finished documentation for VCenter. Finished poster and other final documents	16	110
Liam Briggs	Oversaw final report, 'cleaned' virtual machines for simple project passing and organized packaging	16	109
Joshua Przybyszewski	Continued progress for the web application; investigate feasibility of client side work with limited resources; went on spring break	18	122

Nicholas Springer	Finished up portion for report and presentation	14	130
Val Chapman	Finalized final presentation material. Practiced presentation for Final report and Demo.	18	118

Plan for coming week

Turn in all final assignments and have our final presentation.