

sdmay18-16: Implementing OpenPLCs into a Cyber Defense Competition

Week 6 Report

October 21 - October 27

Team Members

Matthew McGill — *Meeting Facilitator, Project Manager*

Brennen Ferguson — *Hardware Engineer*

Joseph Young — *Security Engineer/Meeting Scribe*

Liam Briggs — *Hardware Engineer*

Joshua Przybyszewski — *Software Engineer*

Nicholas Springer — *Security Engineer*

Val Chapman — *Test Engineer*

Summary of Progress this Report

This week was spent building the basis of all the systems to be used by the teams in the CDC. Our entire team now has access to all the utilities that we need to build these systems. Initializing and configuring the systems will continue to be an important part of the project because many of the possible security vulnerabilities are entirely dependent upon the independent platforms and how they interact with each other. We also spoke with a representative from Siemens which turned out to be less than helpful than we expected. He wanted to know about our project and encouraged us to use Siemens version of Factory IO, but did not have the kind of suggestions or inspiration we were looking for.

Pending Issues

Currently, the issues facing the team are envisioning specifics for the end product. Developing all the parts of the project at the same time makes for very efficient work, but also requires a lot of speculation of how it will all come together. This is entirely expected and we are communicating these disparities and assumptions between the whole team and making the necessary changes as production continues.

Plans for Upcoming Reporting Period

With all the basic pieces in place, the team intends within the next week or two to produce a basic prototype featuring all of the project's essential features. After producing a product, reliability and penetration testing will be the next big steps in the process.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Matthew McGill	Organized and maintained Gitlab issue assignment and completion, organized communication with people outside of the team, and lead team meetings	4	26
Brennen Ferguson	Continued to use and learn more parts of OpenPLC and the capabilities it has within Factory IO, researched the Siemens version of	5	29

	Factory IO, and prepared a short demo		
Joseph Young	Communicated with the representative from Siemens and researched vulnerabilities in the OpenPLC System	4	25
Liam Briggs	Trouble-shot virtual machines and maintained team website	8	31
Joshua Przybyszewski	Started using Angular Dart to create web app prototypes	8	27
Nicholas Springer	Initialized virtual machines, created users, and installed necessary software	11	35
Val Chapman	Communicated with the representative from Seimens, continued working on documentation in multiple documents for the project and reorganized the team's timeline	5	27