sdmay18-16: Implementing OpenPLCs into a Cyber Defense Competition
Week 5 Report
October 13 - October 20

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

Finding the best way to use our decided upon software, Factory IO has been the top priority for this past week. We now have different machines speaking with each other and using OpenPLC to control virtualized tools in the software. As we have become more organized in our project and design plans, the issue tracker in Gitlab has become an extremely helpful tool. While we have been relatively active on the page this semester, we didn't have specific or large enough actions for it to be useful.

Pending Issues

We need to build the base that holds all the parts of project together and will make it accessible to the contestants. This includes a webpage, usable framework, and virtual machine environment
Creating content and scenarios will be an on going process that will work toward an end goal but will be able to be changed up until we officially say we are complete with the project.

Plans for Upcoming Reporting Period

We believe we have all the tools to create the product we have envisioned, we are now piecing together the parts to find the best way to deliver it. To do this, we are exploring different creative resources. For influence on our direction, have set up a meeting with an employee of Siemens. Siemens has its own entire branch of the Factory IO software, so we are hoping they will be able to provide suggestions and examples of how to best put this software to use.
We also are planning to put work into the other, less creativity intensive, parts of the project that are necessary such as the interactive webpage and framework.
We expect to be able to use our designated virtual machine(s) very soon.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Matthew McGill	Created and organized most of our Gitlab issues and tracking as well as organizing meetings among the team, our mentors, and our outside resources. He has also began work on testing different frameworks for our	6	22

	specific use.		
Brennen Ferguson	Built and implemented connection in Factory IO as well as building test cases in the same software. He has also began work on ladder logic to be used in the OpenPLC system.	7	24
Joseph Young	Has begun implementing security into the web app, as well as making note of possible purposeful vulnerabilities.	5	21
Liam Briggs	Has been creating and exploring within Factory IO and website and report maintenance. He has also began work on ladder logic to be used in the OpenPLC system.	6	23
Joshua Przybyszewski	Taken charge on Gitlab by uploading and creating a productive git environment. He has also began work on testing different frameworks for our specific use.	5	19
Nicholas Springer	Discussed specifics of our resources for the virtual machines with mentors as well as started research on implementing security (and vulnerabilities) into the system.	6	24
Val Chapman	Has created documentation on our current implementation of Factory IO describing our implementation and our planned scapability. He has also done research on the Siemens version of Factory IO.	5	22