

sddec18-07: Software-Defined Moving Target Defense

Week 1 Report

January 22 - January 26

Clients: Dr. Benjamin Blakely and Joshua Lyle (Argonne National Laboratory)

Faculty Advisor: Dr. Hongwei Zhang

Team Members

Andrew Thai — *Project Manager*

Connor Ruggles — *Quality Assurance*

Emily Anderson — *Delivery Manager*

Ryan Lawrence — *Communication Manager*

Weekly Summary and Accomplishments

We did research on Software Defined Networks as well as Moving Target Defense through research papers that we got from our client. We experimented with different pieces of software and systems to further our knowledge on how to create Software Defined Networks. Throughout the week we all read the collective papers about Software Defined Networks and Moving Target Defense that we obtained. Implemented a network to start testing out different methods of protection, like Snort.

Summary of Weekly Client/Advisor Meeting

This week we met with our client and talked more in detail about expectations of our project. We decided that to move forward, we should define a network and the types of attacks we are going to fend off. We made a goal that the end product needs to be a good balance between minimum configuration and maximum performance.

Pending Issues

The project is very open ended and research oriented. There is not a clear solution, so we need to experiment with different possibilities to decide which direction we want to go in.

Plans for Upcoming Week

We are going to watch YouTube videos recommended to us by our clients to better understand the systems in place. We will also work to more precisely define a network that we are going to protect, including deciding on types of attacks to protect against. We are also going to look into obtaining permission to use ISU resources instead of using our personal laptops. Next week we will have another meeting with our client to further discuss what we come up with.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Andrew Thai	Worked on creating virtual machines to plan out possible networks. Read research papers of SDNs and MTDs.	6	6
Connor Ruggles	Worked on investigating systems that we could use such as Mininet. Read research papers of SDNs and MTDs.	6	6
Emily Anderson	Worked on creating report templates for the semester and timeline for things that need to be done. Read research papers of SDNs and MTDs.	6	6
Ryan Lawrence	Worked on setting up weekly meetings. Did research into MTDs and looked at the different platforms that were given.	6	6