John Schlagbaum

Final Self-Assessment

For Team Covert’s project, I contributed mainly through one of our three main projects, the covert network channel. Overall, I did apply many of my skills that I learned throughout the past five years here at Cincinnati such as: python coding, network communications, and cryptography. This project allowed me to further build upon these skills as I have never touched TCP/IP communications before and the entire purpose of creating this code was exploiting said protocol. Additionally, a good amount of teamwork and coordination was a must while working through this semester, which further honed my skills when it comes to working with others.

The first step in creating the covert network channel was first creating a good base of an actual network channel that we then could exploit and send our covert message through. After some research we decided the most basic form of a network channel would be that which uses TCP/IP protocol to send byte packets from a sender to a receiver. Unfortunately, this was by far the most difficult part to implement for this part of our project, setting up a network channel in such a way that we could later exploit it was very difficult and we fought the kernel on multiple different instances. In the end, however, we ended up getting this to work. After the base was up and working the implementation of the actual covert part was a breeze, this part I worked on solely by myself. Feeding a bit sequence into the packets was very fun and I had a fully working proof of concept network channel only after a couple days of work.