**Research ideas based on DHALSIM**

1. I think I will be able to containerize it. Even though the code base is tightly connected, I think I will be able to do it. I have studied the code base and it seems feasible. My idea is
2. Keep the physical part (WNTR, epynet) in one container
3. Keep the network part (mininet, minicps) in one container
4. Keep the common config files, data base and out put in another container. Since database will be used by multiple components from both containers, we should not use a file based database (which has been used here), rather should expose it as a daemon. Also the parser has to be divided into three parts for each container.
5. In the experiments shown in the paper capture packets for long time and save them. Then these packets are analyzed. I think analysis of packets should be real time. These packets can be streamed to another system that will do real time analysis.
6. Current system lacks monitoring system. Maybe above idea can be used to develop a live monitoring system.
7. The attack models are quite simple (though MITM attack code looks quite complex), more sophisticated attack models can be deployed.