Sprint 0 Plan

Goal: For the front end team, spend time getting familiar with Jupyter, AWS, and Open Daylight. For the back end team, understand how OMNET++, SUMO, and Veins coordinate with each other, and how to run and change simulations.

User Stories:
Subteam 1
1. As a developer, I want to learn how to interact with an AWS cluster programmatically. (4)
    a. Set up AWS account (1)
    b. Learn how to create and interact with AWS cluster by hand (1)
    c. Learn how to interact with AWS cluster in code (Python and Javascript) (2)
2. As a developer, I want to learn how to connect an AWS cluster to Jupyter interface. (4)
    a. Learn Jupyter front-end (2)
    b. Learn how to create Jupyter extensions (2)
    c. Learn how to connect AWS cluster to Jupyter extension (2)
3. As a developer, I want to learn how to interact with OpenDaylight. (8)
    a. Set up Open Daylight account (1)
    b. Download OpenDaylight (1)
    c. Follow basic OpenDaylight tutorial (2)
    d. Play around with OpenDaylight to get familiar with it
4. As a developer, I want to learn how to interact with OpenDaylight programmatically. (8)
    a. Learn about OpenDaylight API calls
    b. Create a function that logs into OpenDaylight
5. As a developer, I want to learn how to connect OpenDaylight to the Jupyter Interface. (8)
    a. Figure out how to connect OpenDaylight with Jupyter
Subteam 2
1. As a developer, I want to learn how to simulate traffic, build a network of roads, and generate a scenario map within SUMO. (1)
    a. Read SUMO documentation, go through the hello SUMO tutorial and update to [Google Drive](#)
    b. Use one of the available road traffic scenarios, implement example programs.
2. As a developer, I want to learn how to use Veins to implement simulation models for vehicular networking. (1)
    a. Read Veins documentation, go through the veins demo scenario and update to [Google Drive](#)
    b. Use one of the available road traffic scenarios, implement and modify example programs.
3. As a developer, I want to learn how to coordinate OMNET++, SUMO, and Veins to implement complex traffic simulations using MiXiM, TraCI and other various communication protocols. (7)
    a. Write a custom simulation module
4. As a developer, understand how to generate DSRC app messages using Veins.

a. Study the DSRC protocol
b. Implement a small (barebones) network in veins that uses DSRC.