**Spike Plan**

**Name:** Serverless

**Context:**

This spike implements the functions created in the previous spike in a serverless application

**Gap:**

This spike serves to evaluate the performance of and difficulty developing a serverless application using Firebase cloud functions. The results will be used to compare against an on-premise implementation.

**Goals/Deliverables:**

A serverless implementation of the following:

* A node.js based program that reads the data from the Arduino using a motion detector and pushes it to the firebase. The data that the program pushes should be in the json format with 3 attributes:
  + Timestamp
  + Motion start time
  + Motion end time
* A program that does the following:
  + Listens to firebase
  + For every new object:
    - Send email to pre-defined address if motion is long
    - Send email to pre-defined address that shows how many long and short motions have been detected

**Planned start date**: 07/09/2017

**Deadline:** 10/09/2017

**Planning notes:**

To achieve this spike we have decided to have one team member create the first component that will read data from the board, and have the other implement sending through the serverless firebase function. This will allow one us to finish the spike at the same time, and both work together to complete the report.