

Artesian Software Test

Sensor Emulator

Scenario

We have several projects where data is streamed into a Linux station from 5 different sensors, each individual sensor sends data every 2 seconds. As the data is received into the Linux station calculations are performed, and the results are sent to a PostgreSQL database on the cloud. With these projects we currently do not have access to live sensors, but need a way to simulate this incoming data to test our software interfaces.

Objective

Create a program using NodeJS or Python that simulates the above scenario. Generate random clustered data (within a user inputted/specified mean and standard deviation) coming from X (user inputted/specified) sources every Y (user inputted/specified) seconds and send it into a Postgres database hosted on AWS (Free-tier) account. Data in the database should be easily sorted and searched.

Important Notes

- Use of libraries is important. For example, native file reading is more efficient than a library; but using a library makes the process easier.
- Creating an AWS account and setting up a database is an important part of the test.
- Database structure matters.

Timeline

Time taken to complete this emulator needs to be minimized as this is for internal testing only. Please send an expected timeline for approval prior to proceeding with this development and follow up with how long it took following completion.

Completion

Please push to a personal Git and publish on an EC2 instance and we can update the locations once access to the Artesian accounts are provided.