**Locomotive Application**

The Locomotive client application consist of the following microservices:

1. **locomotive-simulator-service** : This microservice will randomly generates 3 main data set and call the locomotive-dataingestion-service which will in turn push the simulator data into the timeseries database. The data set consists of :
   1. RPM
   2. Torque
   3. Location
      1. Latitude
      2. Longitude

We have introduced two sets of dataset for 2 locomotives namely LOCOMOTIVE\_1 and LOCOMOTIVE\_2.

For each Locomotive, the dataset is being generated by the simulator and pushed to cloud

URL to start the locomotive-simulator-service:

<http://locomotive-simulator-service.run.aws-usw02-pr.ice.predix.io/simulator/start>

URL to stop the locomotive-simulator-service:

<http://locomotive-simulator-service.run.aws-usw02-pr.ice.predix.io/simulator/stop>

1. **locomotive-dataingsetion-service** : This microservice will ingest data from the locomotive-simulator-service and push the data to the timeseries DB.

It ingest data into the timeseries database mainly the rpm,torque and the location data

1. **locomotive-client-service**: This microservice exposes the following endpoints
   1. /locomotive/tags : This end point will fetch the tags under which the data is stored in the TS db in the UI
   2. /locomotive/datapoints : This end point will fetch the first 100 datapoints for the LOCOMOTIVE\_1 rpm, torque and location
   3. /locomotive/latest : This endpoint will fetch the latest data from the TS db
   4. /locomotive/acslatest : This end point will fetch the latest record from the TS db provided the username has the access to the resource after the ACS policy evaluation
2. **locomotive-predix-seed** : This is the UI microservice which has 3 tabs
   1. Dashboard : This tab will show the 3 datapoints in a tabular format for LOCOMOTIVE\_1
   2. Asset : This tab will show all the assets in a layout format which has been loaded into the asset service (as of now 7 locomotive data has been loaded out of which 2 locomotive has live simulator data)
   3. DataGraph : This tab will show the live datachart for 3 types of data rpm, torque and location depending on the selection of Asset on the Asset tab (by default it will show data for Locomotive\_1)

**ACS:**

1. For ACS , we have created 2 users : geuser/geuser who is the admin and geoperator/geopeartor.

geuser has all the access for GET/POST/PUT/DELETE where as the geoperator does not have the privilege to GET/PUT/POST/DELETE

URL to test the geuser – PERMIT as per policy

[**http://locomotive-client-service.run.aws-usw02-pr.ice.predix.io/locomotive/acslatest?id=LOCOMOTIVE\_1&username=geuser&password=geuser**](http://locomotive-client-service.run.aws-usw02-pr.ice.predix.io/locomotive/acslatest?id=LOCOMOTIVE_1&username=geuser&password=geuser)

URL to test the geoperator –DENY as per policy

[**http://locomotive-client-service.run.aws-usw02-pr.ice.predix.io/locomotive/acslatest?id=LOCOMOTIVE\_1&username=geopeartor&password=geoperator**](http://locomotive-client-service.run.aws-usw02-pr.ice.predix.io/locomotive/acslatest?id=LOCOMOTIVE_1&username=geopeartor&password=geoperator)

**UAA:**

Setting up UAA service is done via all the commands listed in the file ‘UAA Set Up - Locomotive-Training.txt’