**Persons API module**

This module manages Person resources (this is based on requirement to refactor Udaconnect application). Since connections were associated with a person resource, it was kept as part of Persons module. The Udaconnect-app communicates with this person API over REST .

**Locations API module**

This module is used to manage location data (created based on requirement to refactor Udaconnect application). Clients communicate with locations API over REST

**Kafka Message Queue module**

Kafka message queue will store messages for later consumption and **will allow Udaconnect application to ingest high volumes of location data**. Message will be stored in queue to be later processed by Kafka consumers.

**Kafka Consumer**

This module implements the Kafka consumer(s) that processes location data from Kafka message queue named **geolocations** and posts those messages to the location API to be written to the database. Kafka consumers will use REST to communication with Location REST API endpoint.

**Kafka Producer**

This module writes location message items into Kafka queue. It implements a gRPC server for processing messages from grpc client front end. Because of high volume of data being ingested, gRPC is better choice for message passing; gRPC also provides built in data validation.

**Grpc Client Front end Module**

This module serves a ingestion point for mobile location data. Clients send location date REST API endpoint and then endpoint uses gRPC to post data to kafka producer (gRPC server) (the grpc client is set up in grpc-client-frontend module. It exposes Nodeport over 3008 for postman testing)

**Udaconnect Front end app**

This provided module implements the Front end web application that users will interact with. The Udaconnect front end will communicate to Person services using REST over HTTP. Service exposed over port 30000