README

INTRO:

A simple tracker application for email marketing team

HOW TO USE THIS TRACKER APP?

You need to make post request to this API/App various params are as follows

1. emid: Token generation requires this field to be present (can be empty)
2. token: URI whose data needs to be displayed (cannot be empty)
3. stats: count (open) and count (unique open) for all tokens
    a. from: from datetime (YYYY-MM-DD HH:MM:SS)
    b. to: to datetime (YYYY-MM-DD HH:MM:SS)

ARCHITECTURE?

Refer architecture image in this directory.

Database selected: Elasticsearch

Why? Because of followings

1. Can handle large amount of data, we currently handles nearly 3-5 million hits (indexing) per day
2. Ability to perform aggregations on large data, we perform it on 20-30 million
3. Flexible enough to accommodate tweaks required for search
4. Ability to adapt new nodes/delete nodes at run time
5. Supports for sharding, replication, fault tolerance, kibana dashboard
6. Open source

Stats? I had provided real-time stats with Elasticsearch as backend.

Cron-Job: For simple stats we won't require any job, but for complex processing in future we may/may not require.

FRAUD DETECTION: HOW TO IDENTIFY SAME CLIENT?

On each click we will check cookie lets name it "le", if its not present will create it and insert data like "1_xdrewq_20180505181222", lets decode what we have inserted in our new cookie le, its nothing but constant 1 followed by random number followed by datetime, all three separated by "_" (underscore).

If cookie present will transfer this data to our API, our API will insert it as part of token generation process, and hence it will act as unique identifier for a device, further at backend we can use email_id and le cookies combination and stitch them to find all devices which one email id uses.