

DOCUMENTATION OF LINKED IN CLONE

NAME – KRUTI KAUSHIK MOHAPATRA

Email – krutikaushikm@gmail.com

CONTACT NO – 7205172909

❖ TECH STACK – MERN STACK WEB DEVELOPMENT

- MONGODB(DATA BASE)
- REACT.JS(FRONTEND)
- NODE.JS(BACKEND)
- GITHUB(HOSTING)

Github link - <https://github.com/kruticode/Linked-In-Clone-KKM>

DESCRIPTION:-

1. Help students to connect with each other
2. Login Credentials (Only Engineering students)
3. Notificaiton (Chatting) - Messaging Feature
4. Applicaiton ML (You can decide how you are going to apply ML concept)
5. Database - MongoDB
6. Announcing Internship Opportunities

(Direct access for companies , HR Team - Announce - Only HR team can announce oportunties - Not students)

LinkedIn-Clone

- Developed user profile, connections, job listing and application modules using MERN Stack and Kafka.
- Implemented Redis for data caching, containerized the application services and hosted on AWS.
- Implemented MongoDB replication and tested the performance on JMeter and Mocha.

Features Provided

- User Login and Sign Up
- Recruiter Login and Sign Up
- Search People
- Search Jobs
- Connect People / Recruiters
- Easy Apply / Custom Apply
- View Connections
- Search Jobs based on Location, Company Name
- Accept / Remove / Ignore Connections
- Post Jobs
- Specific To Recruiter
- Send / Receive Messages
- View Half Filled Forms (specific to recruiter)
- Number of views of your post (specific to recruiter)
- View Clicks on your post (specific to recruiter)
- View Number of Applicants of your post (specific to recruiter)
- View Your Top Posts (specific to recruiter)

Technologies Used

- React
- Redux
- Node
- AWS RDS MySql
- Mongo DB Cluster
- Kafka
- Plotly
- S3 Buckets
- Json Web Token

What is Kafka?

Kafka is a distributed messaging queue which is an imperative programming structure which is based event-driven programming.

Kafka Features

- Publish and subscribe messaging queue.
- Reacts to events in a real time
- High tolerance with highly available .

Kafka Semantics

- Atleast Once
- Atmost Once
- Only once (most difficult one)

Scaling Techniques

- Mongo DB Cluster with Replica sets
- Auto Scaling groups with Elastic Load Balancing
- AWS RDS Cluster

Installation Requirements

For development, you will only need Node.js installed on your environment. And please use the appropriate Editorconfig plugin for your Editor (not mandatory).

Node

Node is really easy to install & now include NPM. You should be able to run the following command after the installation procedure below.

```
$ node --version
```

```
v0.10.24
```

```
$ npm --version
```

```
1.3.21
```

Node installation on Linux

```
sudo apt-get install python-software-properties
```

```
sudo add-apt-repository ppa:chris-lea/node.js
```

```
sudo apt-get update
```

```
sudo apt-get install nodejs
```

Node installation on Windows

Just go on official Node.js website & grab the installer. Also, be sure to have git available in your PATH, npm might need it.

Front End

cd LinkedIn-Clone/linkedin-frontend

npm install

BACKEND

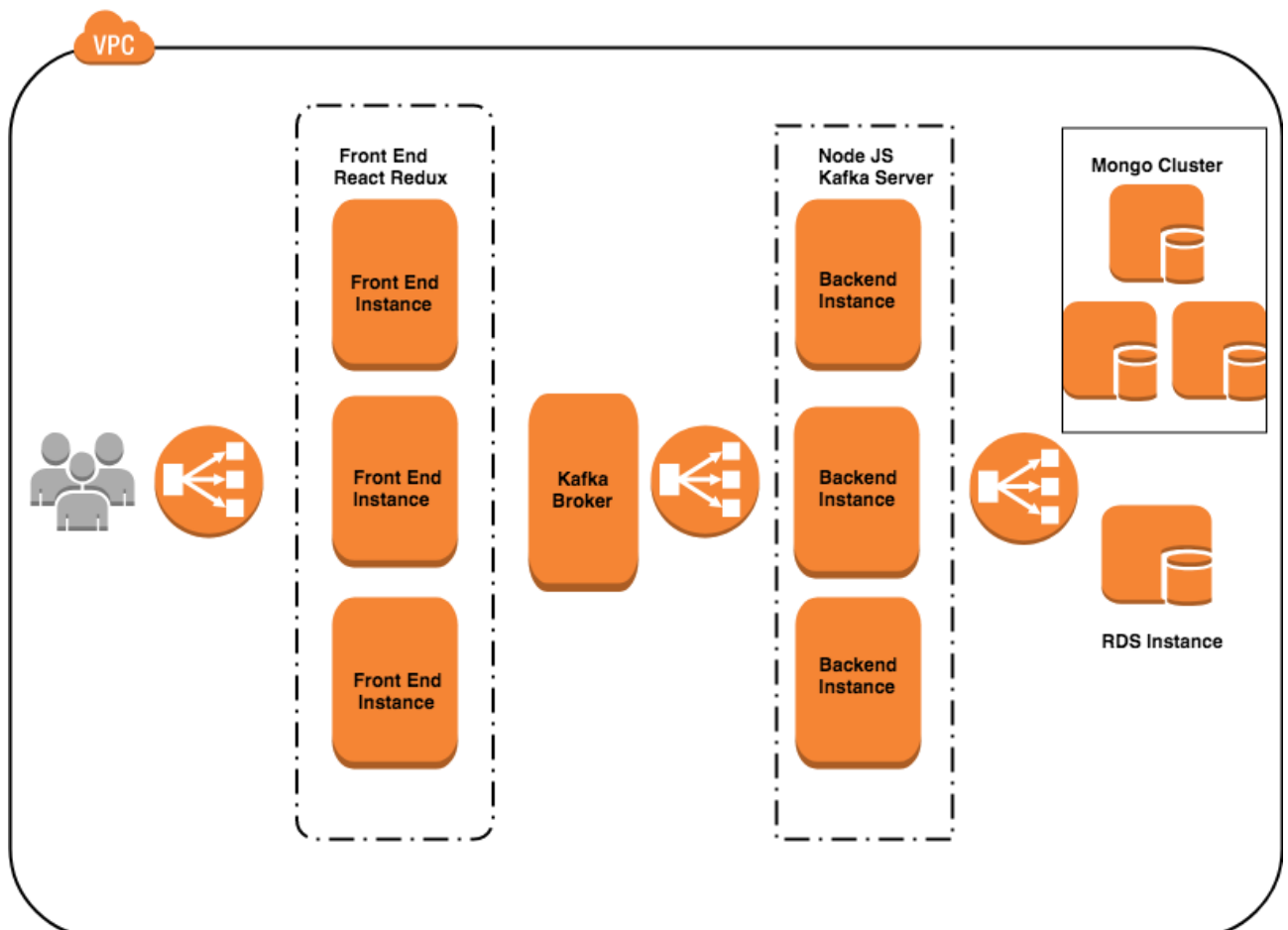
cd LinkedIn-Clone/linkedin-backend/

npm install

Start & watch

npm start

Application Architecture Diagram



Database Schema

Object : Users
<pre>user_id: Int first_name:String last_name: String recruiter_flag:Boolean email:String password:String status: String address: String state: String city: String country: String zip_code: Number company: String experience: String education: String school: String skills: String profile_summary: String headline: String job_title:String profile_img:String resume_path: Array<String> saved_job: Array<String> applied_job: Array<String> connections:[{ email:String, first_name:String, last_name:String, job_title:String, experience:Number, }], pending:[{ email:String, first_name:String, last_name:String, job_title:String, }], waiting:[],</pre>

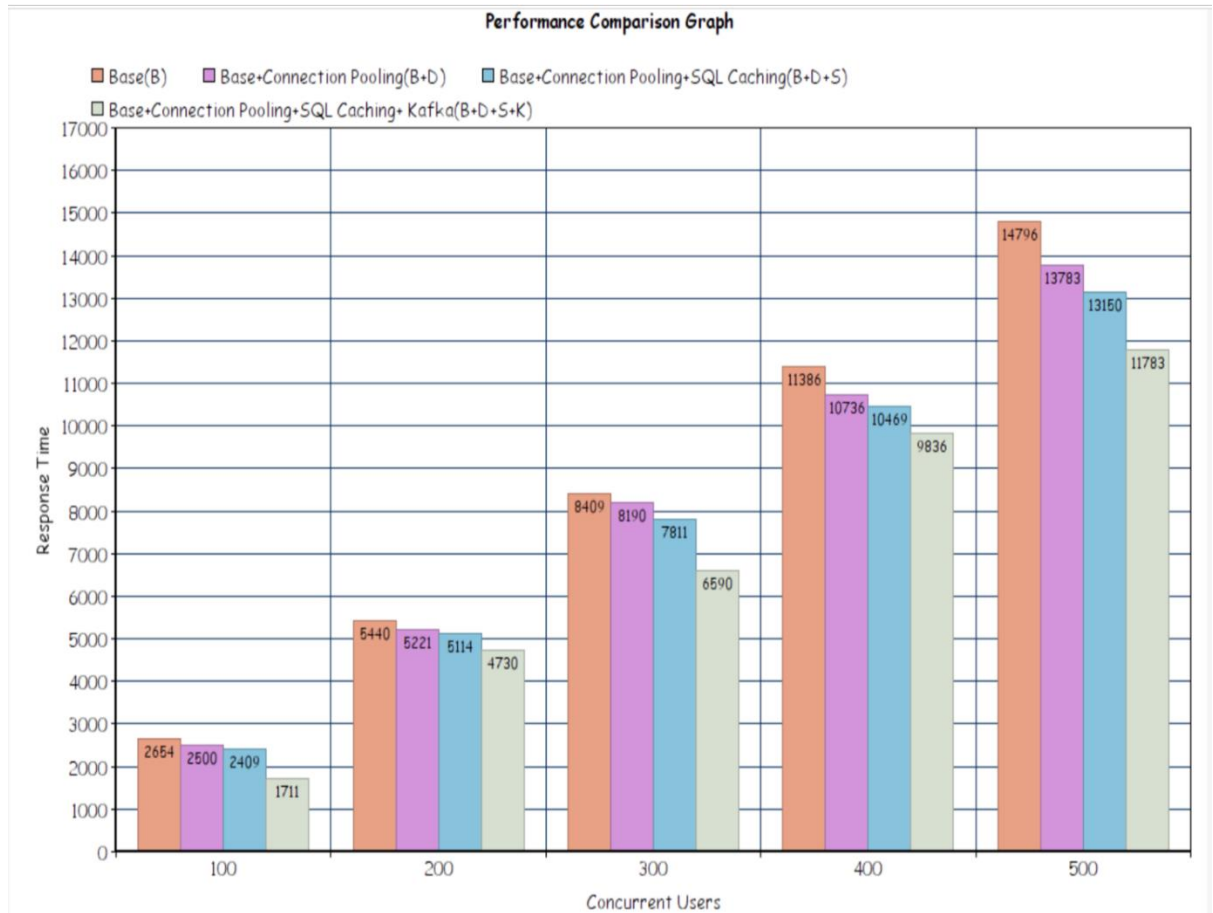
Object: Applications
<pre>application_id :Int, Applied : Boolean, Saved : Boolean, easyApply : Boolean, job_id : String, CompanyName:String JobTitle:String, JobLocation: String, applicant_id:String, applied_date:Date Email:String, CompanyLogo: String</pre>

Object: Job Posting
<pre>job_id:Int, easyApply:Boolean, CompanyName:String, Email:String CompanyLogo:String, JobTitle:String, jobFunction:String, JobLocation:String, numberOfApplicants:Int, seniorityLevel:String, description:String, postingDate:Date, employmentType:String, industryType:String, experience:String, degree:String, budget:String, recruiterId:Int recruiterName:String</pre>

Object : Messges
<pre>thread_id: Int to_id : Int, from_id : Int, chat : Array<String></pre>

Object: User_Traces
<pre>id :Int, applicant_id: Int, timestamp: Date, viewer_applicant_id:Int</pre>

Performace Trace (JMeter Testing)



Performance Comparison Graph Distributed System

