

Use Cases

Distributor:

- 1. Add shipper
- 2. View all operating carriers
- 3. View a specific carrier by id
- 4. Place Order
- 5. Track Order
- 6. Initiate Billing and give delivery rating
- 7. View all orders placed/quoted
- 8. They request price quotation from multiple carriers.

Logistics company :

- 1. Add carrier
- 2. Update location served
- 3. Update name
- 4. Update freight information
- 5. Confirm order
- 6. Track order
- 7. Update order status
- 8. Rate supplier post billing
- 9. View all orders received
- 10. Post bidding amount

Future Implementation

- 1. Our billing and order tracking service would be linked to a permissioned blockchain
- 2. Notification when something has been arrived/picked at/from its destination/location
- 3. Request quotation from multiple carriers at once
- 4. Role specific data search allowance (billing and rating)
- 5.

Assumptions

- 1. Shipper already has information coming in from the manufacturer like delivery batch code, etc
- 2. Routing information is available
- 3. A month is 28 days
- 4. The payment will be made in Ether

Won't Implement:

- 1. Order negotiation from supplier
- 2. Recommendation system with comments
- 3. Chat service for quotations
- 4. Dispute resolution

Constraints

- 1. Timescales : 3 week
- 2. ~1000 Daily active users
- 3. 5K requests per day ➤ 140K requests per month
- 4. System should be scalable
- 5. Minimum time to respond to each request
- 6. Real-time order tracking

Tech stack

- 1. Framework : Express JS
- 2. Database : MongoDB Cloud
- 3. Continuous integration with Github

Storage requirements

- 1. 1 request ➤ 2 KB
- 2. ~300 MB/month

API Design

- 1. POST /distributor
- 2. PUT /distributor/:id
- 3. GET /distributor/:id
- 4. GET /company
- 5. GET /company/:id
- 6. POST /quotation
- 7. POST /order/:quotationId
- 8. GET /order/track
- 9. POST /order/bill
- 10. POST /company
- 11. PUT /company/:id
- 12. PUT /order/acknowledgement
- 13. PUT /order/status
- 14. PUT /order/rating/distributor
- 15. GET /quotation
- 16. PUT /quotation
- 17. PUT /order/rating/company

