The Stakeholders

 After a close inspection of the industry in Kerala, six class of entities were identified as participating in the process:

1. Manufacturer : The manufacturer of the bottle (breweries)
2. Stockist/Super Stockist : An entity which recieves the assets in bulk from the manufacturer and distributes it down the chain.
3. (Government) Warehouse: A warehouse where the the assets are stored before they're destributed to the point of sale. This is usually operated by the government.
4. Point of Sale: The place from where the customer buys the bottle for consumption. This could be the various hotels with the proper licenses or the so-called Beverages Shops.
5. The customer: The consumer who buys the product for consumption.
6. Excise Department: The government department which regulates the whole process, governing over everyone above. They are assumed to be maintaining the nodes for this network.

Individual Capabilites

1. Excise department allow/disallow access into the blockchain network for various entities.
2. Stakeholders 1- 4 are active in adding onto the blockchain.
3. The customer only has access to read from the blockchain to view the history of travel of a particular id which corresponds to a bottle.
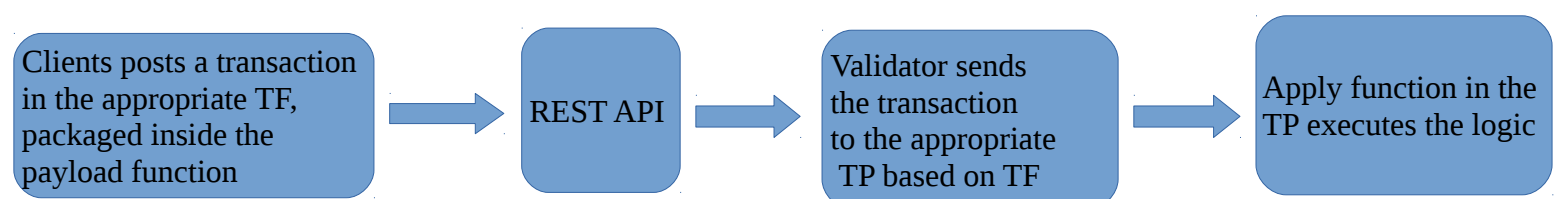
Since Stockists and Warehouses do similar work from an implementation perspective, both their transactions are clubbed into one, called Transfer, with the TransferHandler TP

In addition to this, ExciseHandler takes care of setting up the network and governing the process etc.

List of TPs in the network:

1. ExciseHandler: Governs the network.
2. ManufacturerHandler: Processes transactions in the transaction family 'manufacturing'
3. TransferHandler: Processes transactions in the transaction family 'transfer'
4. SalesHandler: Processes transactions in the transaction family 'sales'

Flow of information/logic:

Clients posts a transaction in the appropriate TF, packaged inside the payload function → REST API → Validator sends the transaction to the appropriate TP based on TF → Apply function in the TP executes the logic

Addressing:

The address is derived by hashing the unique bottle id that's entered by the Manufacturer.

Assumptions taken:

Each of the entities in the supply chain is provided with a view, wherein they only have access to post transactions/make changes based on their role in the network.

The Excise department is assumed to have vetted each entity (except consumer) before giving them access to the corresponding views.