3.6 **Ethereum-Concurrency**

Ethereum platform allow the concurrency of operations (nodes, clients, dapps) but the state is singleton and manage through consensus.

**First Approach:**

In the large organization or exchanges the numbers of machine are working on transaction, to achieve concurrency issue a single machine is providing to nonce to others machine but some problems can also come e.g.

* Single Point of Failure
* Transactions can be stuck on non-confirmation

e.g. in banks the counter machine which provide the tokens to the customer on first-come strategy

**2nd Approach:**

In this approach by having a single machine for assigning nonce there is a full node(blockchain) option which will assign the transaction a nonce by itself.

In this case the multiple wallets generate the transactions and send these transactions to the node (having full blockchain) which provide the signature and nonce and then propagate to the network.

It also has some con like when there is rush of transactions

* Chocking point under load
* Unsigned transactions are risky

Concurrency should be avoided in the Ethereum because it can provide unwanted result.

The exchanges now have hot wallets so they do transaction using them to avoid concurrency.