3.2 **Remote clients and Test Network**

Remote clients do not store a local copy of blockchain or validates the transaction and blocks.

They are wallets and can create and broadcast transaction.

They can be used to connect the existing network such as:

* Own Full Node
* Public Blockchain (main net)
* Test net
* Private Local Blockchain

Remote client for example **meta mask and Jaxx**

**They are like wallets which can create, assign and broadcast the transaction.**

Remote client works like the bridge it connects your application to the blockchain through web3.js (js library)

Bitcoin Lite Node (Simplified Payment Verification (SPV)) is different to Ethereum Remote Client it validates the transaction through block header while **ERC cannot validate the transaction.**

**ERC trust the network blockchain 100%. It has some security consensus due to its remote function.**

**While BTC use the Merkle root to validate the transaction**

**Ethereum Full Node Advantages:**

* With full node you can validate the transaction.
* Can create the transaction on smart contract, deploy the smart contract and validate the state of smart contact
* Does not need intermediate to validate the transaction.

**Ethereum Full Node Disadvantages:**

* Requires significant and growing hardware and bandwidth resources.
* May require several days to fully sync the blockchain
* Must be maintained, upgraded and online remain synched.

**Ethereum Test net advantages:**

* 10 GB size
* Sync fully in few hours

**Disadvantages:**

* Can’t find the actual GAS fee (i.e. on actual network)
* On main network sometime due to traffic, transaction may be delayed. it’s not available in Test net

**Ethereum local blockchain:**

**Advantages:**

* Lightweight and no need to synching, no data on disk
* No other user
* No other contracts other than yours

**Disadvantages:**

* Can’t provide the behavior of main network
* No other miners you can’t predict the same scenario in actual public network.
* You can’t recreate the some of the public contracts and their addresses to test some scenario (e.g. DAO contract)