LIST OF SOME POPULAR CRYPTOCURRENCY

Ethereum (ETH)

Cardano (ADA)

Stellar (XLM)

DogeCoin

CARDANO (ADA)

Cardano is third generation, proof-of-stake, decentralized platform for ADA crypto currency.

Cardano platform is written in Haskell functional programming language.

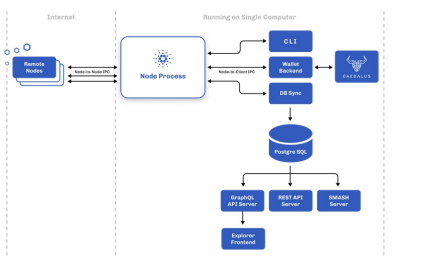
Uses Ouroboros, a peer-reviewed, verifiable, secure blockchain protocol.

Ouroboros enables the network's decentralization in Cardano.

Setting Up Cardano Node Using Docker

Download Cardano Image	docker image pull inputoutput/cardano-node:<TAG>
Create local cardano-node-data and cardano-node-ipc volumes:	docker volume create cardano-node-data docker volume create cardano-node-ipc
Run the Cardano Node	docker run -v cardano-node-ipc:/ipc -v cardano-node-data:/data inputoutput/cardano-node run --help

Cardano Architecture Overview



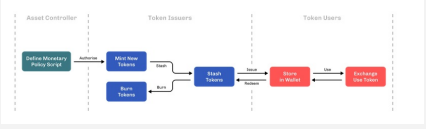
Cardano Architecture Components : NODES

A blockchain system consists of a set of nodes distributed across a network that communicate with each other to achieve consensus about the system’s state.
Nodes are responsible for:
Executing the Ouroboros protocol
Validating and relaying blocks
Producing blocks (some nodes)
Providing information about the state of the blockchain to other local clients

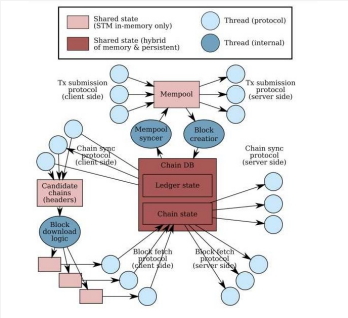
Cardano Architecture Components : DAEDALUS WALLET

Daedalus is a full node wallet that helps users to manage their ada, and can send and receive payments on the Cardano blockchain
Daedalus consists of a wallet frontend and a backend. The frontend is the graphical application that users see and interact with. The backend is a service process that monitors the state of the user’s wallet

CARDANO (ADA) TOKEN LIFECYCLE



CARDANO NETWORK



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MINTING A NEW COIN

```
1. Download the node config files
wget https: //h ydr a.i ohk.io /bu ild /52 666 41/ dow nlo ad/ 1/c ard ano -no de- 1.2 4.2 -li nux.tar.gz
tar xzvf cardan o-n ode -1.2 4.2 -l inu x.t ar.gz
mkdir lpconfig && cd lpconfig
wget https: //h ydr a.i ohk.io /bu ild /51 023 27/ dow nlo ad/ 1/l aun chp ad- con fig.json
wget https: //h ydr a.i ohk.io /bu ild /51 023 27/ dow nlo ad/ 1/l aun chp ad- byr on- gen esi s.json
wget https: //h ydr a.i ohk.io /bu ild /51 023 27/ dow nlo ad/ 1/l aun chp ad- she lle y-g ene sis.json
wget https: //h ydr a.i ohk.io /bu ild /51 023 27/ dow nlo ad/ 1/l aun chp ad- top olo gy.json
cd ..
2. Run the Cardano Node
./card ano -node run --topology ./lpco nfi g/l aun chp ad- top olo gy.json --data bas e-path ./state-lp --
port 3001
--config ./lpco nfi g/l aun chp ad- con fig.json --sock et-path ~/card ano -lp.socket
export CARDAN O_N ODE _SO CKE T_P ATH =~/ car dan o-l p.s ocket
3. Generate a verifi cation key and a signing key:
cardan o-cli address key-gen \
        --v eri fic ati on- key -file pay.vkey \
        --s ign ing -ke y-file pay.skey
4. Generate the payment address:
./card ano-cli address build \
--paym ent -ve rif ica tio n-k ey-file pay.vkey \
--out-file pay.addr \
--test net -magic 3
5. Check the balance of the payment address:
./card ano-cli query utxo --address addr_t est 1vq vlk u0y tsc qg3 2rp v66 0uu 4sg xlj e25 s5x rpz 7zj -
qsv a3c 8pfckz --test net -magic 3 --mary-era
6. Fund the address and check again:
./card ano-cli query utxo --address addr_t est 1vq vlk u0y tsc qg3 2rp v66 0uu 4sg xlj e25 s5x rpz 7zj -
qsv a3c 8pfckz --test net -magic 3 --mary-era
7. Export the protocol parameters to a file for later use:
cardan o-cli query protoc ol- par ameters \
--mainnet \
--out-file protoc ol.json
```


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