**EOSIO Installation:**

**Linux Distribution:**

Ubuntu: ubuntu 20.04 LTS

**Step 1: Execute following commands in terminal**

* sudo apt-get install update
* sudo apt-get install vim
* sudo apt-get install git
* sudo apt-get update
* sudo apt-get install build-essential
* sudo apt-get install docker

**Verify the g++ version:**

* g++ - - version

**Step 2: Ubuntu 20.04 Package Install:**

* wget https://github.com/eosio/eos/releases/download/v2.1.0/eosio\_2.1.0-1-ubuntu-20.04\_amd64.deb
* sudo apt install ./eosio\_2.1.0-1-ubuntu-20.04\_amd64.deb

**Step 3: Set up a development directory, stick to it**

You're going to need to pick a directory to work from, it's suggested to create a contracts directory somewhere on your local drive.

* mkdir contracts
* cd contracts

**Step 4: Install the EOSIO.CDT**

* wget https://github.com/eosio/eosio.cdt/releases/download/v1.8.0/eosio.cdt\_1.8.0-1-ubuntu-20.04\_amd64.deb
* sudo apt install ./eosio.cdt\_1.8.0-1-ubuntu-20.04\_amd64.deb
* git clone <https://github.com/EOSIO/eos> --recursive
* cd eos
* cd scripts
* ./eosio\_build.sh
* sudo ./eosio\_install.sh

**Step 5: EOSIO Development**

* keosd &
* pkill keosd

**Copy the following whole commands and paste it on terminal**

nodeos -e -p eosio --delete-all-blocks \

--plugin eosio::producer\_plugin \

--plugin eosio::producer\_api\_plugin \

--plugin eosio::chain\_api\_plugin \

--plugin eosio::http\_plugin \

--plugin eosio::history\_plugin \

--plugin eosio::history\_api\_plugin \

--filter-on="\*" \

--access-control-allow-origin='\*' \

--contracts-console \

--http-validate-host=false \

--verbose-http-errors >> nodeos.log 2>&1 &

**Then Paste the following command:**

* tail -f nodeos.log

**See if block producing**

**Press “Control C” to cancel it**

**Step 6: Wallet creation**

* cleos wallet create --to-console -n {wallet-name}
* cleos wallet open -n {wallet-name}
* cleos wallet unlock -n {wallet-name}

**To see the wallet list execute following command:**

* cleos wallet list

**Create key pairs (Private and Public key and save it in a safe place)**

* cleos create key --to-console

**Import newly generated private key into a wallet: Hint: (previous step key)**

* cleos wallet import -n {wallet-name} --private-key (newly generated private key)

**Varify the keys:**

* cleos wallet keys

**Import eosio default private key into wallet:**

* cleos wallet import -n {wallet-name} --private-key 5KQwrPbwdL6PhXujxW37FSSQZ1JiwsST4cqQzDeyXtP79zkvFD3

**Account creation for deployement:**

* cleos create account eosio {name e.g., bob} (PUBLIC KEY: that is last created using create key)
* cleos get account {e.g., bob}

**Open VS studio**

**Build a contract.**

* cd VS Studio
* cd contaracts

**Compile contract:**

* eosio-cpp -abigen -o hello.wasm hello.cpp

**Navigate the directory and deploy contract: {Here I am using /home/cyber/contracts/hello directory}**

* cleos set contract {e.g., bob} /home/cyber/contracts/hello hello.wasm —abi hello.abi -p {e.g., bob}@active

**Interact with Contract:**

* cleos push action {e.g., bob} hi ‘[“bob”]’ -p {e.g., bob}@active
* cleos push action {e.g., bob} hi ‘[“bob”, “parameter”]’ -p {e.g., bob} @active

**For IPFS**

* cleos push action {e.g., bob} store ‘[“file name”, “IPFS hash”]’ -p {e.g., bob} @active
* cleos push action {e.g., bob} retrieve ‘[“file name”]’ -p {e.g., bob}@active
* cleos get account {e.g., bob}
* cleos get info

**Contract Information:**

* cleos get transaction <transaction hash>
* cleos get transaction <transaction hash> | grep expiration
* cleos get block <block number> | grep timestamp
* cleos get transaction <block hash>
* date +%s
* cleos get block <block number> | grep timestamp
* date -d @<generated timestamp>

**Install IPFS:**

**Install following the website commands.**

**After installation:**

**Open new terminal:**

* cd kubo/
* ipfs --version
* Ipfs init
* ipfs init —profile server
* Ipfs daemon

**Locate to file directory**

* Ipfs add <file name>
* Initialize kubo node an interact

**EOS-VM Installation**

Step 1:

* sudo apt-get update

Step 2:

* sudo apt-get install -y build-essential cmake git libboost-all-dev libssl-dev

Step3:

* git clone https:// gihub.com/EOSIO/eos-vm

Step 4:

* cd eos-vm

Step 5:

* mkdir build
* cd build
* cmake ..
* make -j(dollar sign)(nproc)