Running Geth from Docker

**Reference**: [https://gist.github.com/fishbullet/4c36ecd6d6932adae24c68c8750894e6](%20https:/gist.github.com/fishbullet/4c36ecd6d6932adae24c68c8750894e6)

Step 1:

Dockerfile (the name can’t have .txt, edit it from windows cli rename Dockerfile.txt Dockerfile)

FROM ubuntu:16.04

LABEL version="1.0"

LABEL maintainer="anirudh16b@gmail.com"

ENV DEBIAN\_FRONTEND=noninteractive

RUN apt-get update && apt-get install --yes software-properties-common

RUN add-apt-repository ppa:ethereum/ethereum

RUN apt-get update && apt-get install --yes geth

RUN adduser --disabled-login --gecos "" eth\_user

USER eth\_user

WORKDIR /home/eth\_user

ENTRYPOINT bash

Step 2:

Change the DNS Server Address to “8.8.8.8”, “8.8.4.4” for the working internet connection

Step 3:

Now build an image:

docker build -t demo-evm .

Step 4:

After the building process, let's start it:

docker run --rm -it -p 8545:8545 demo-evm

Step 5:

From the docker container:

For Local Blockchain

eth\_user@e93b2a03889a:~$ geth --datadir %ethereum\_home%/block1 --nodiscover --r--rpcport "8545" –-rpccorsdomain "\*" console 2>console.log

Step 5:

To View a running docker container (from independent session)

$ docker ps -as

CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES SIZE

62c4cc1bdef5 demo-evm "/bin/sh -c bash" 14 minutes ago Exited (0) 14 minutes ago modest\_ramanujan 0B (virtual 291MB)

c25997193049 ethereum/client-go "geth" 2 days ago Exited (1) 47 hours ago pedantic\_spence 2.89GB (virtual 2.93GB)

To Remove a Container:

biswas@DESKTOP-KNQN1BH MINGW64 /c/Program Files/Docker Toolbox

$ docker rm modest\_ramanujan

modest\_ramanujan

biswas@DESKTOP-KNQN1BH MINGW64 /c/Program Files/Docker Toolbox

$ docker rm pedantic\_spence

pedantic\_spence

Starting the Blocks

mkdir ethereum

vi /d/Docker/eth/genesis.json

genesis.json:

{ "nonce": "0x0000000000000042", "timestamp": "0x0", "parentHash": "0x0000000000000000000000000000000000000000000000000000000000000000", "extraData": "0x0", "gasLimit": "0x8000000", "difficulty": "0x400", "mixhash": "0x0000000000000000000000000000000000000000000000000000000000000000", "coinbase": "0x3333333333333333333333333333333333333333", "alloc": { } }

1. initialise the block geth --datadir "$ethereum\_home/youtube1" init "$ethereum\_home/genesis.json"

2. start the console geth --datadir /d/Docker/eth/block1 --port 60303 --rpc --rpcport "8599" --ipcdisable console

3.create a 2nd node geth --datadir "$ethereum\_home/youtube1-a" init "$ethereum\_home/genesis.json"

4. Start on a different port and specify networkid geth --datadir "$ethereum\_home/youtube1-a" --port 30304 --nodiscover --networkid 1234 console 2 &gt console.log

5. get the admin.nodeInfo enode from the second instance and copy it into admin.addPeer in the first node

6. Restart specifying IPC path geth --datadir "$ethereum\_home/youtube1-a" --port 30304 --nodiscover --ipcpath "$ethereum\_home/youtube1-a/geth.ipc" --networkid 1234 console 2 &gt console.log

7 run get attach to attach another window to the node using the pic file geth attach ipc:$ethereum\_home/youtube1-a/geth.ipc

8 Key commands from the javascript console Personal.newAccount() (add password) Miner.start(1) - start mining eth.blockNumber - current block height eth.getBlock(number).miner - miner of block at that number eth.getBalance(account address) - current balance of that account

geth --datadir /d/Docker/eth/block1 --port 60303 --rpc --rpcport "8599" --ipcdisable console