# Setting up Your Own Blockchain

In this document, you will find the instructions to set up your own blockchain on your local machine.

You will need the following tools:

* Git Bash
* Geth
* Puppeth
* Notepad (or Notepad++)

The following process will create 2 nodes and connect the second to the first.

1. From a Git Bash command prompt in the folder where the geth.exe and puppeth.exe files are, create a folder for blockchain. For example, a new folder named “lambo”.
2. Run the geth command to create the directories and accounts for each node. When prompted, type in a password for each node:
   1. ./geth account new --datadir lambo/crockett  
      Password: johnson  
      Account Address: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. ./geth account new --datadir lambo/tubbs

Password: thomas

Account Address: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Run the puppeth command and create the new network:
   1. ./puppeth miamivice
2. Now select the options to create a new Genesis block. Because we’re going to choose Proof of Authority, we will need to supply the two accounts filled in above.
   1. Select menu option 2 – Configure new genesis,
   2. Then 1 – Create new genesis from scratch
   3. Then 2 – Clique – proof-of-authority
   4. Then enter to accept the default (15 seconds)
   5. Then paste in both account addresses to allow them to seal blocks from step 2 above, one after the other, leave the third 0x prompt blank and press enter to proceed
   6. Then paste in both account addresses to be pre-funded from step 2 above, one after the other, leave the third 0x prompt blank and press enter to proceed
   7. Then type in yes to allow the precompile-addresses to be pre-funded
   8. Then press enter to allow a random chain id
3. Now export the genesis configuration to a json file:
   1. Select menu option 2 – Manage existing genesis
   2. Then 2 – Export genesis configuration
   3. Then enter to accept the default files
   4. Ignore the two errors, it wrote the files we need
4. Finally, press ctrl-c to exit from puppeth
5. Next, record the passwords from step 2 into files.
   1. echo johnson > crockettpwd.txt
   2. echo thomas > tubbspwd.txt
6. Now we need to initialize the nodes from the network created in step 5.
   1. ./geth init miamivice.json --datadir crockett
   2. ./geth init miamivice.json --datadir tubbs
7. Finally, we are ready to start node 1.
   1. ./geth --datadir crockett --mine --minerthreads 1 --unlock "0xAddressFromStep2" --rpc --allow-insecure-unlock --password "crockettpwd.txt"
   2. Watch the geth command, locate the “enode” line and copy the enode address given
8. Now we can start node 2.
   1. ./geth --datadir tubbs --port 30304 --unlock "0xAddressFromStep2" --bootnodes "enode://..........@127.0.0.1:30303" --ipcdisable --password "tubbspwd.txt"
9. Done.