This document provides info to install Geth on Ec2 Instance.

Instance id for ***ec2 i-0f333ca218b311b26***

1. Create Ec2 Instance on aws with t3a.medium instance type.
2. Connect using putty and ppk file .
3. After logging into Ec2 Instance , execute the below commands.

***3.1 Install the necessary packages***

sudo add-apt-repository -y ppa:ethereum/ethereum

sudo apt-get update

sudo apt-get install ethereum

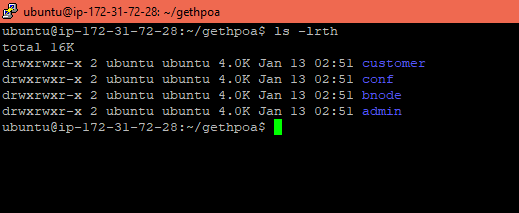
***3.2 Creates a directory for setting up geth instance.***

mkdir gethpoa

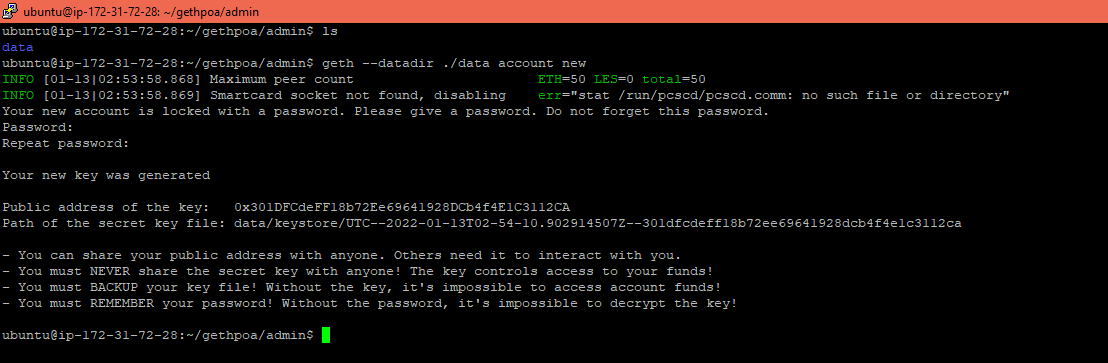
cd /home/ubuntu/gethpoa

mkdir {conf,bnode,admin,customer}

cd admin && mkdir data



1. ***Account Creation***
   1. ***Admin/Sealer nodes***



password: Test@12345

Public address of the key: 0x301DFCdeFF18b72Ee69641928DCb4f4E1C3112CA

Path of the secret key file: data/keystore/UTC--2022-01-13T02-54-10.902914507Z--301dfcdeff18b72ee69641928dcb4f4e1c3112ca

* 1. ***Customer Nodes***

cd ..

cd customer && mkdir data

Repeat the same steps as admin

geth --datadir ./data account new

password: Test@12345

0x135e92E7F858F806012b24C7e44BF2c52c665c4A

Path of the secret key file: data/keystore/UTC--2022-01-13T02-56-41.616603987Z--135e92e7f858f806012b24c7e44bf2c52c665c4a

1. ***Genesis File Creation***

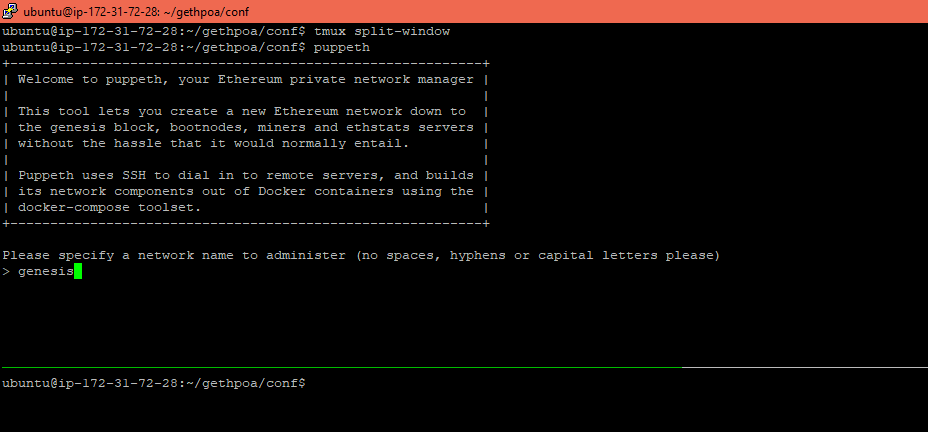
Sealer Node/Admin Node : 0x301DFCdeFF18b72Ee69641928DCb4f4E1C3112CA

Customer Node: 0x135e92E7F858F806012b24C7e44BF2c52c665c4A

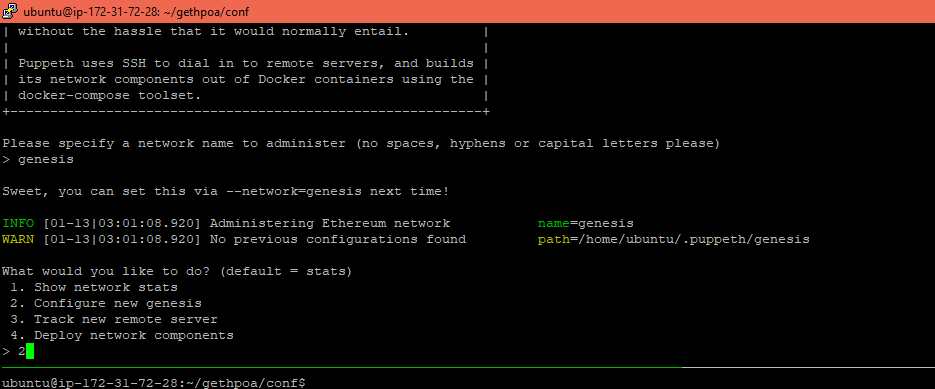
cd .. && cd conf

type puppeth in terminal

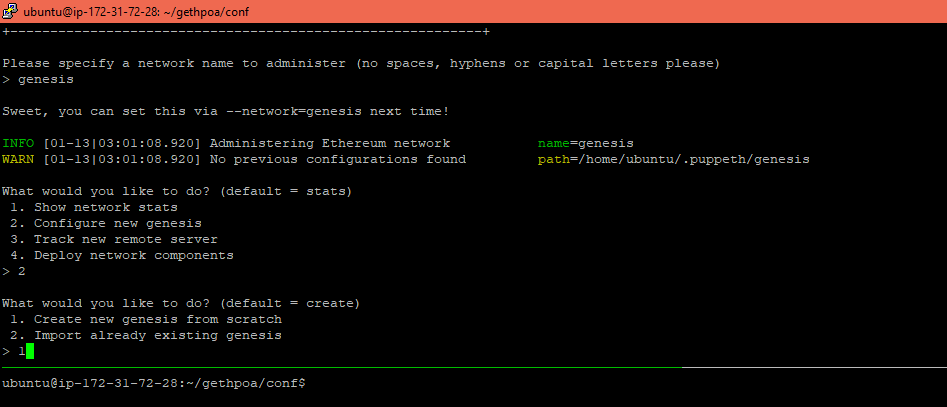
genesis

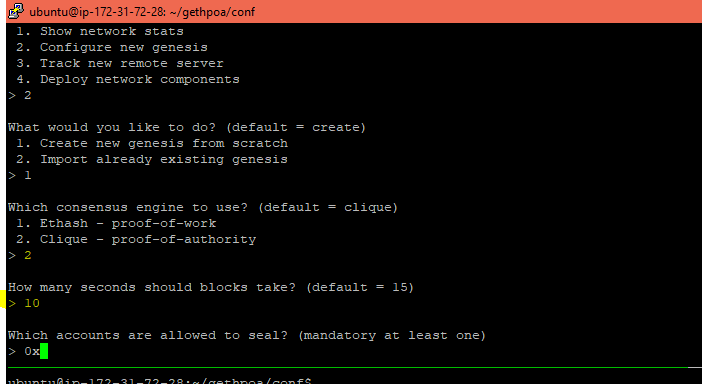


Enter option 2

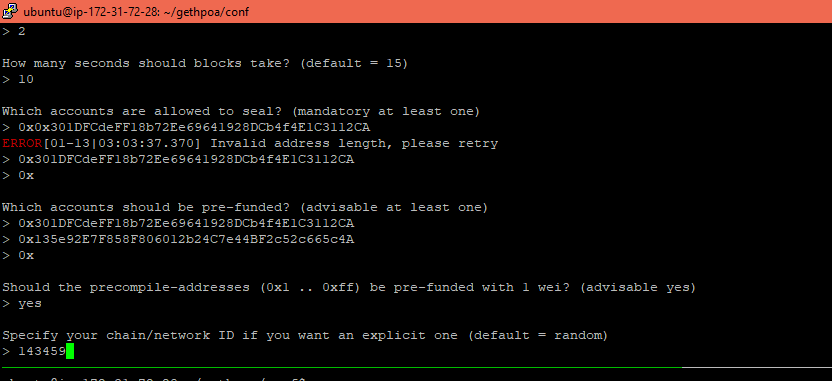


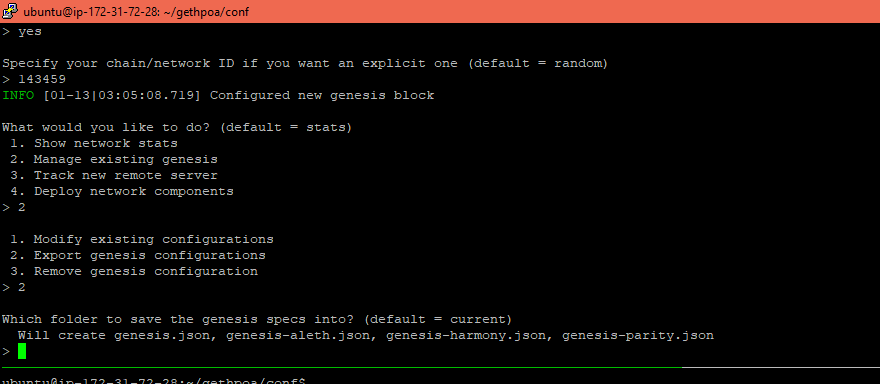
Create option 1 to create a new genesis from scratch





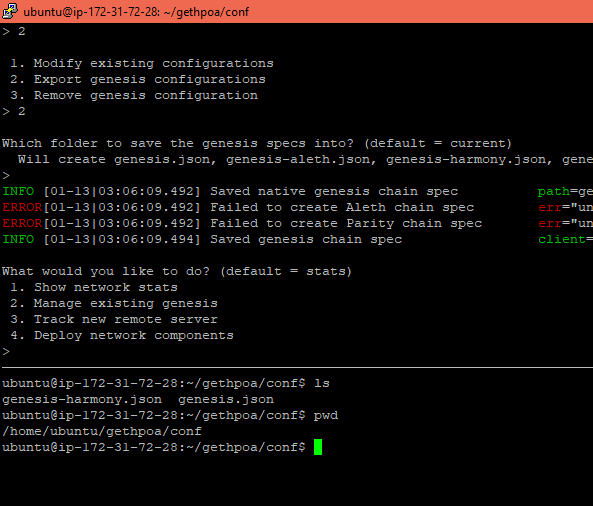
Enter the admin public address for sealer and both the accounts for prefund option





Press Enter

After this step the genesis file should be created in the below path

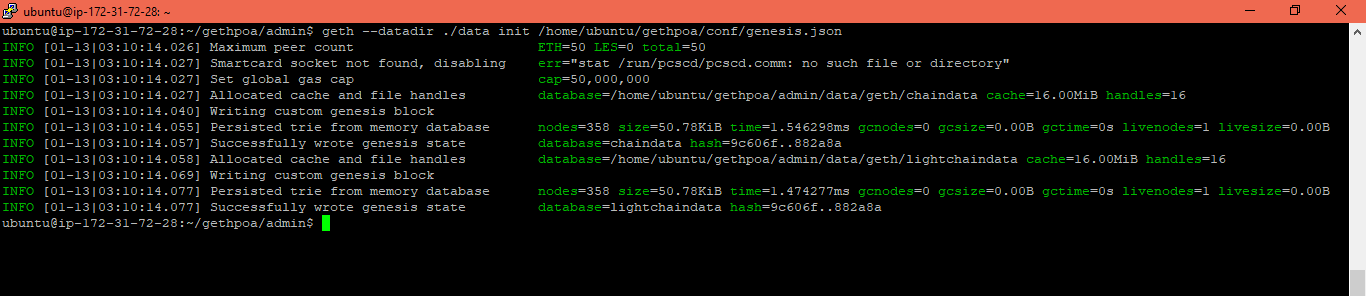


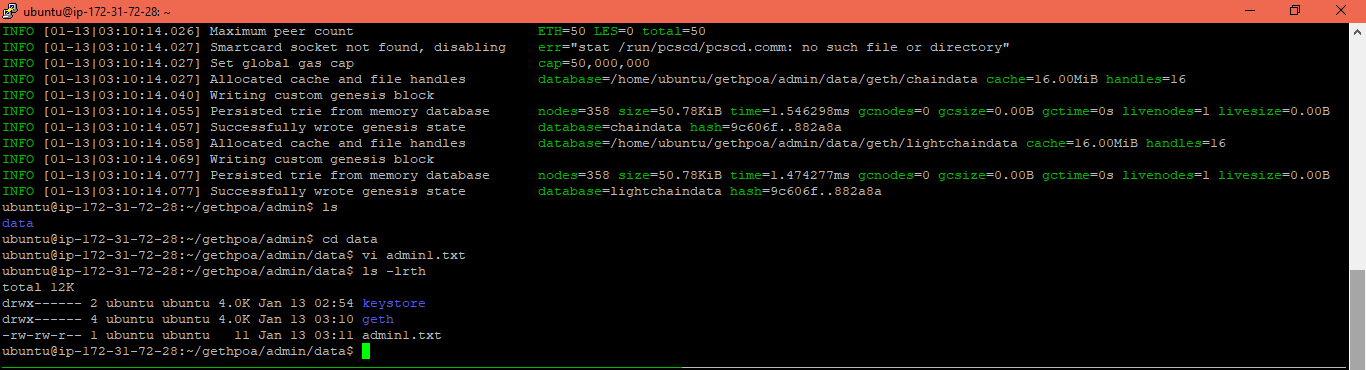
1. ***Initialize Admin and customer node to start using the genesis file***
   1. ***Admin node***

cd /home/ubuntu/gethpoa/admin

geth --datadir ./data init /home/ubuntu/gethpoa/conf/genesis.json

Create a text file inside data folder and add Test@12345 and save the file.





* 1. ***Customer Node***

Repeat the same steps but inside customer folder.

cd /home/ubuntu/gethpoa/customer

geth --datadir ./data init /home/ubuntu/gethpoa/conf/genesis.json

password file = /home/ubuntu/gethpoa/customer/data/customer1.txt

Create a text file inside data folder and add Test@12345 and save the file.

1. ***Boot Node setup***

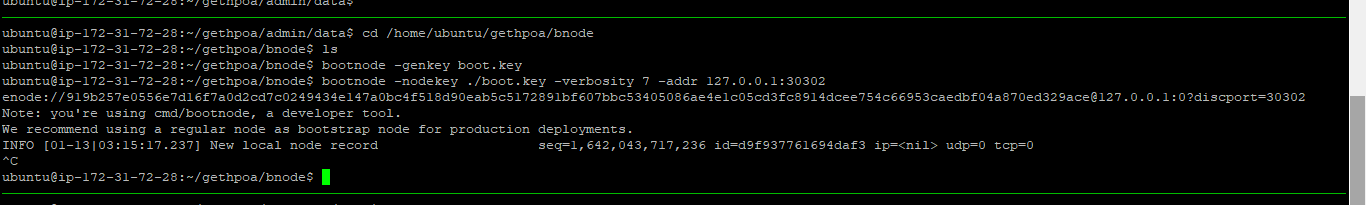
cd /home/ubuntu/gethpoa/bnode

bootnode -genkey boot.key

bootnode -nodekey ./boot.key -verbosity 7 -addr 127.0.0.1:30302

Note down the enode value.

enode://919b257e0556e7d16f7a0d2cd7c0249434e147a0bc4f518d90eab5c5172891bf607bbc53405086ae4e1c05cd3fc8914dcee754c66953caedbf04a870ed329ace@127.0.0.1:0?discport=30302



1. ***Starting nodes***
   1. ***Boot Node***

Navigate to folder where boot node is installed

cd /home/ubuntu/gethpoa/bnode

Execute the below command.

bootnode -nodekey ./boot.key -verbosity 7 -addr 127.0.0.1:30302

* 1. ***Admin Node***

cd /home/ubuntu/gethpoa/admin

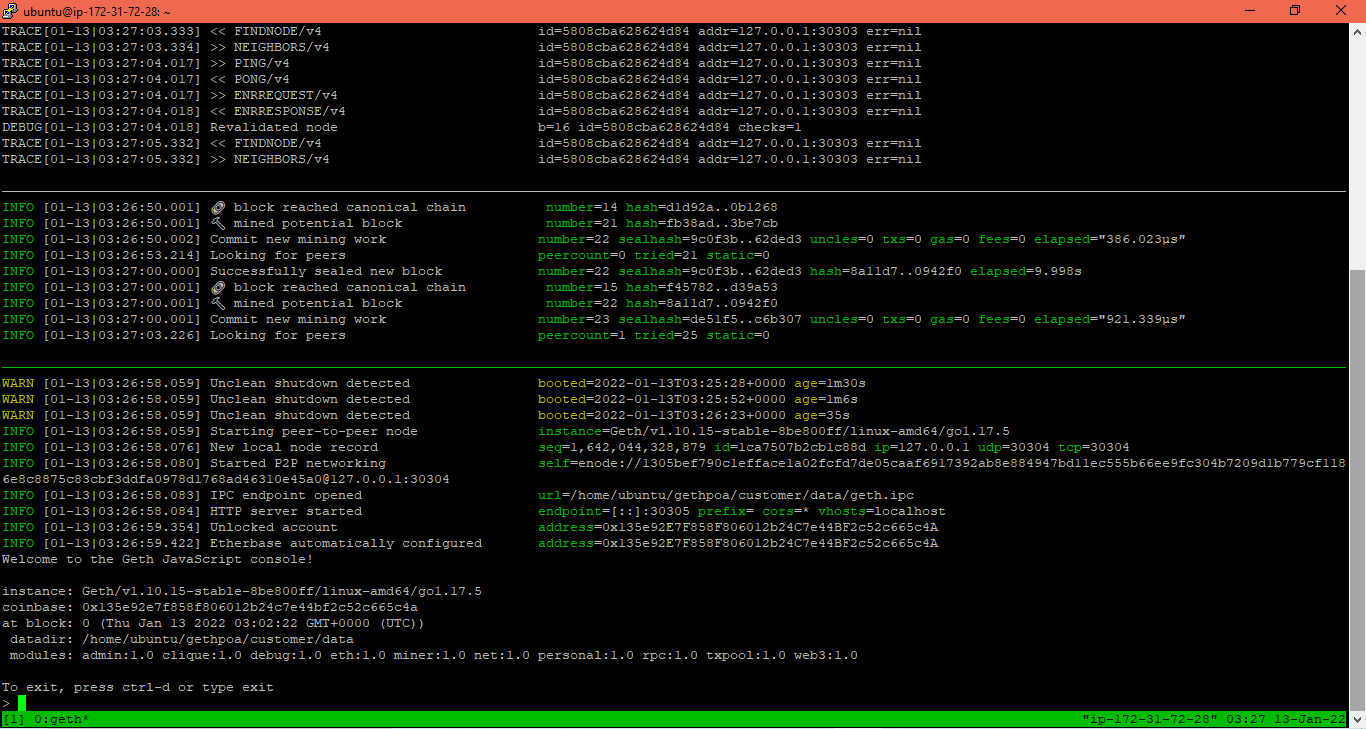
geth --datadir ./data --bootnodes enode://919b257e0556e7d16f7a0d2cd7c0249434e147a0bc4f518d90eab5c5172891bf607bbc53405086ae4e1c05cd3fc8914dcee754c66953caedbf04a870ed329ace@127.0.0.1:0?discport=30302 --http.port 8545 --syncmode 'full' --allow-insecure-unlock --http --http.addr 0.0.0.0 --http.corsdomain '\*' --unlock 0x301DFCdeFF18b72Ee69641928DCb4f4E1C3112CA --password /home/ubuntu/gethpoa/admin/data/admin1.txt --***mine console***

* 1. ***Customer Node***

Navigate to folder where customer node is installed

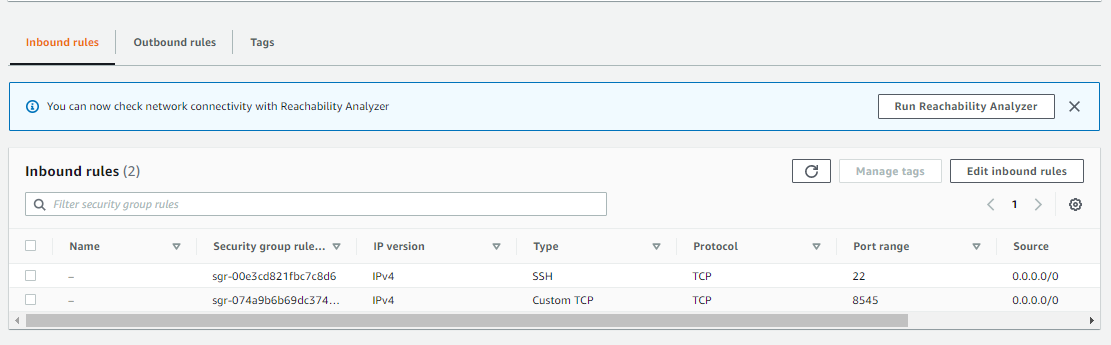
cd /home/ubuntu/gethpoa/customer

geth --datadir ./data --bootnodes enode://919b257e0556e7d16f7a0d2cd7c0249434e147a0bc4f518d90eab5c5172891bf607bbc53405086ae4e1c05cd3fc8914dcee754c66953caedbf04a870ed329ace@127.0.0.1:0?discport=30302 --port 30304 --http.port 30305 --syncmode 'full' --allow-insecure-unlock --http --http.addr 0.0.0.0 --http.corsdomain '\*' --unlock 0x135e92E7F858F806012b24C7e44BF2c52c665c4A --password /home/ubuntu/gethpoa/customer/data/customer1.txt ***console***

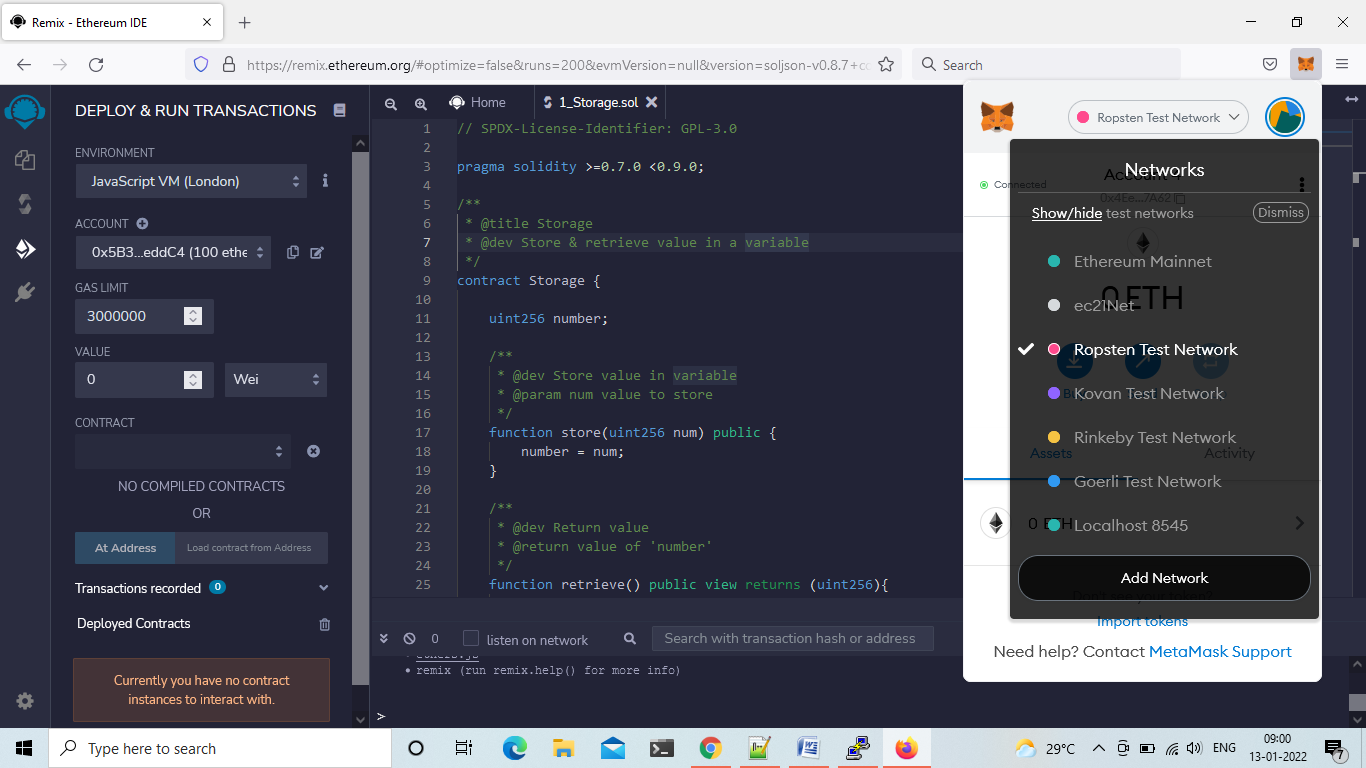


1. ***Opening the ec2 ports for outside communication***

***9.1 open port 8545 in ec2 instance***



***9.2 Login to Metamask and add new Network***

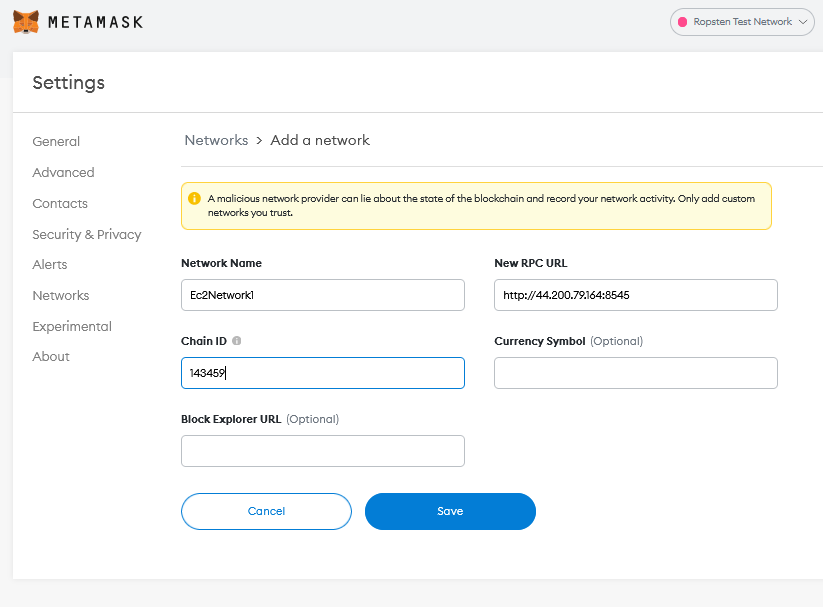


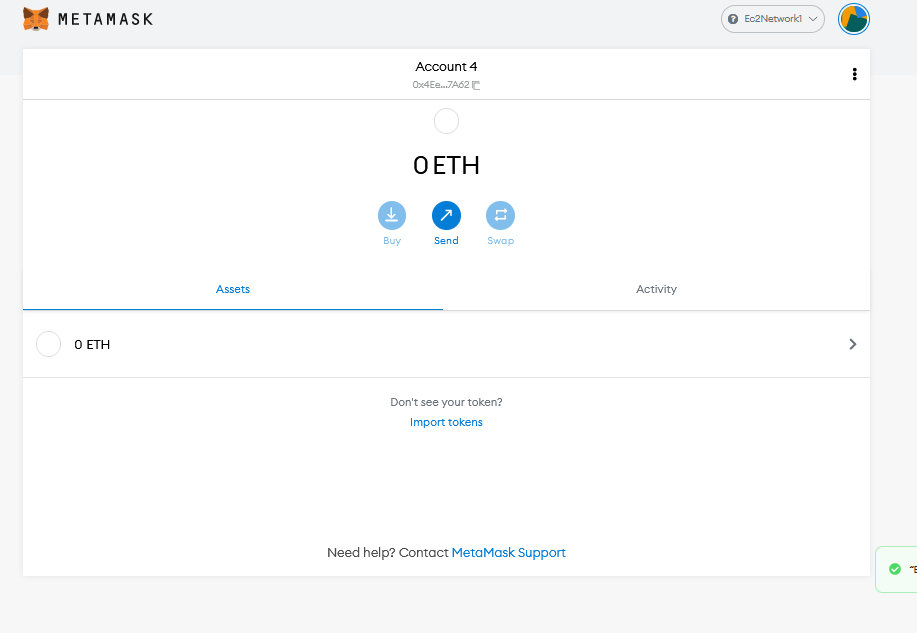
***9.3 Configure new Network in metamask***

Find the public address of ec2 (44.200.79.164)

<http://44.200.79.164:8545>

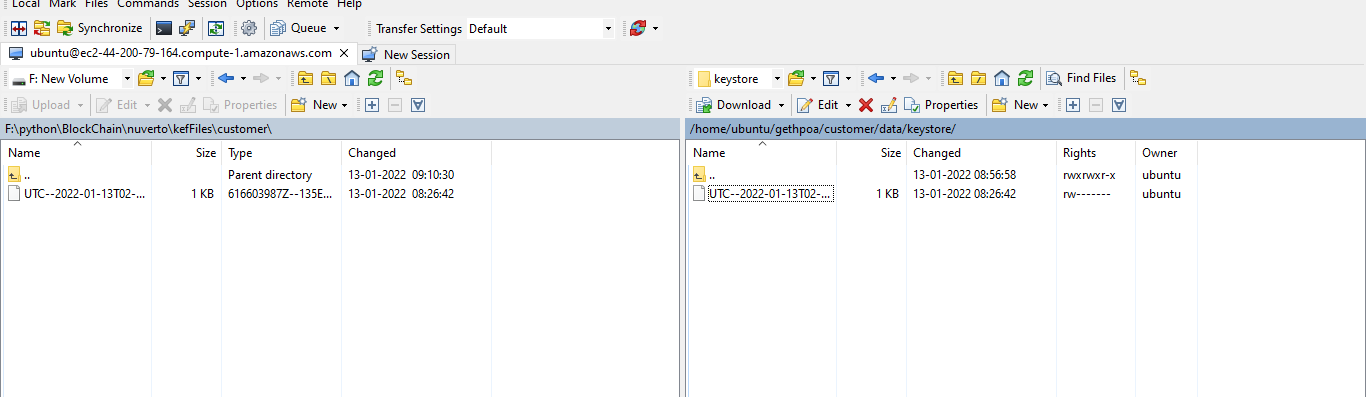
chain Id: 143459





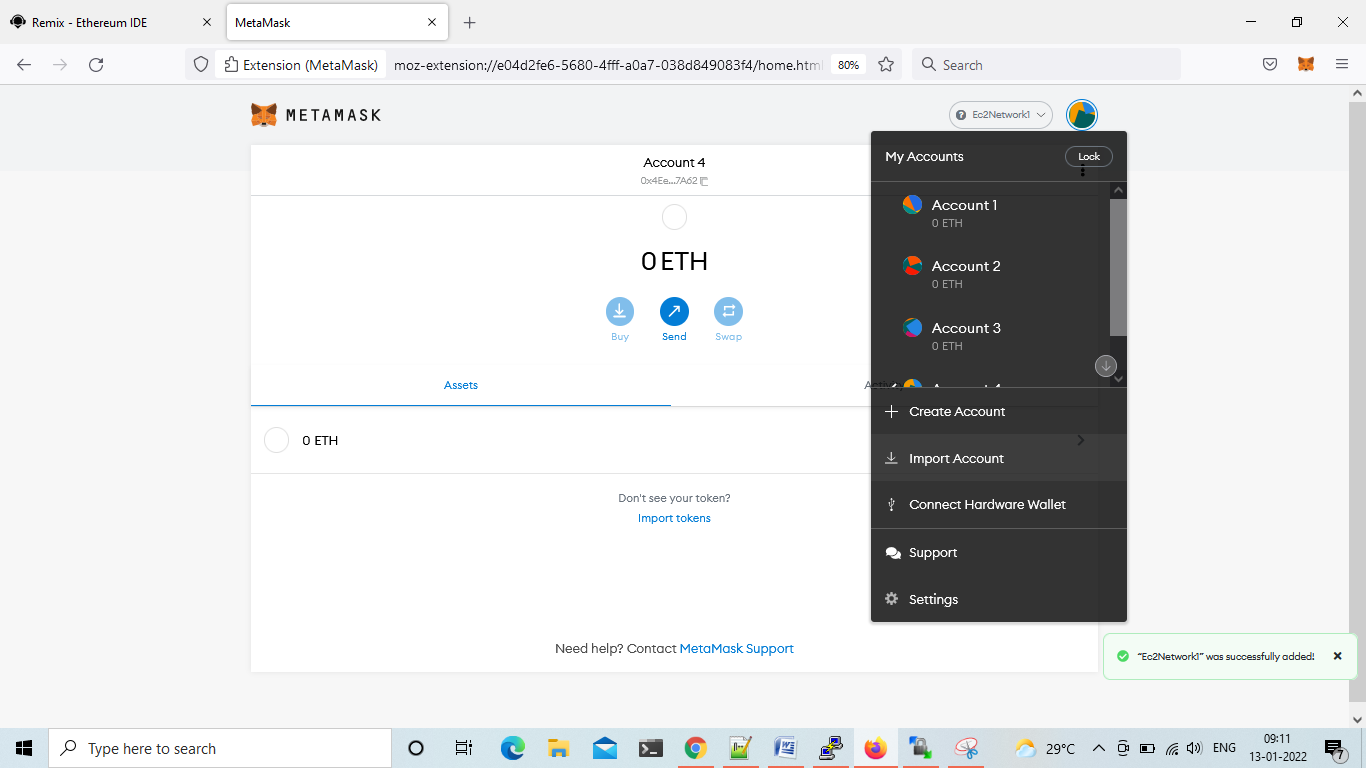
9.4 ***Importing new Accounts to metamask.***

Connect to Ec2 Instance using winscp and download the keystore files

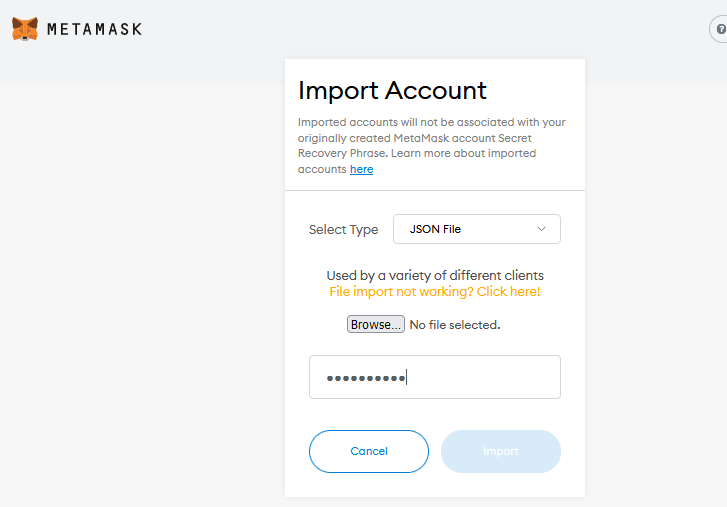


***9.5 Import Accounts***

***9.5.1 Click on Import Account***

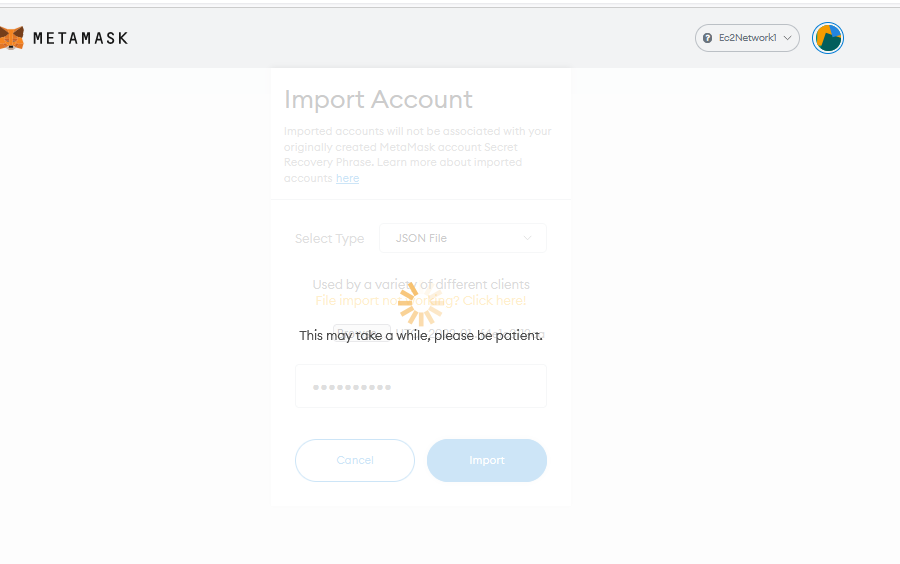


***9.5.2 Enter the password entered during account creation and select type as json file***

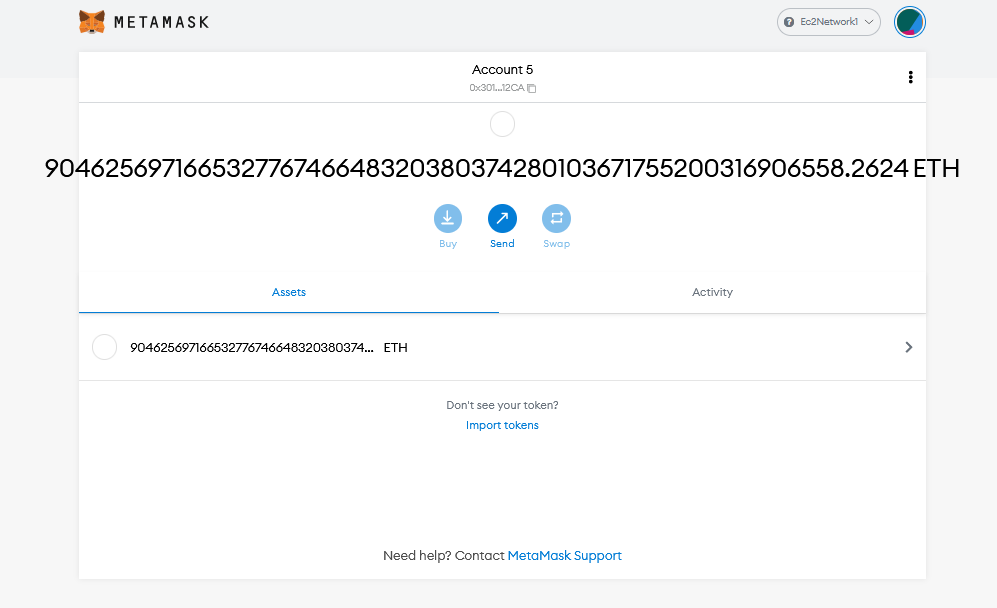


***9.5.3 Browse and open the file downloaded from ec2 instance***

Click Import

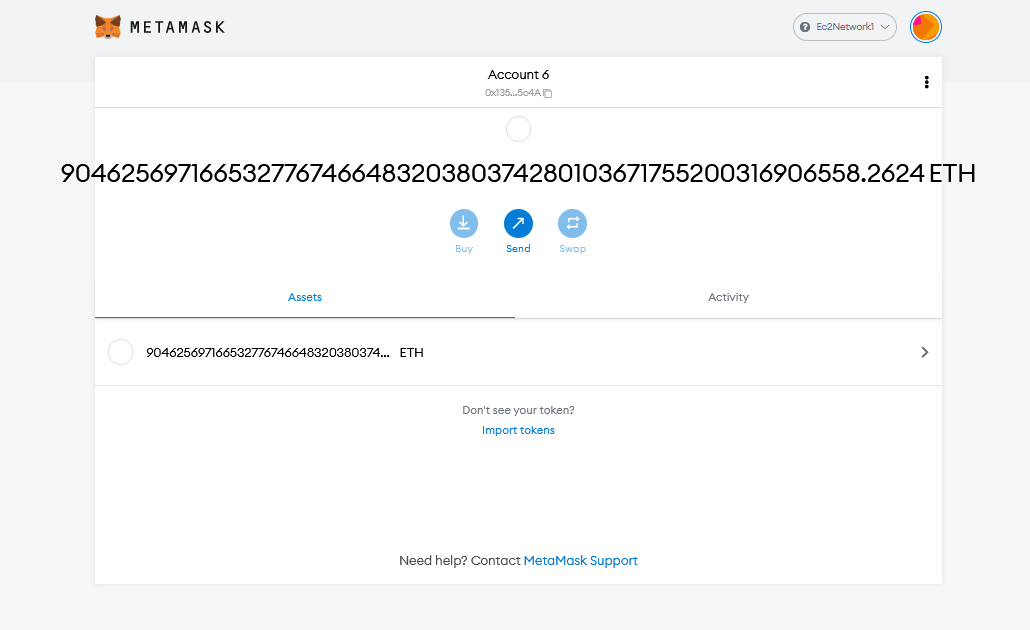


Wait for few minutes



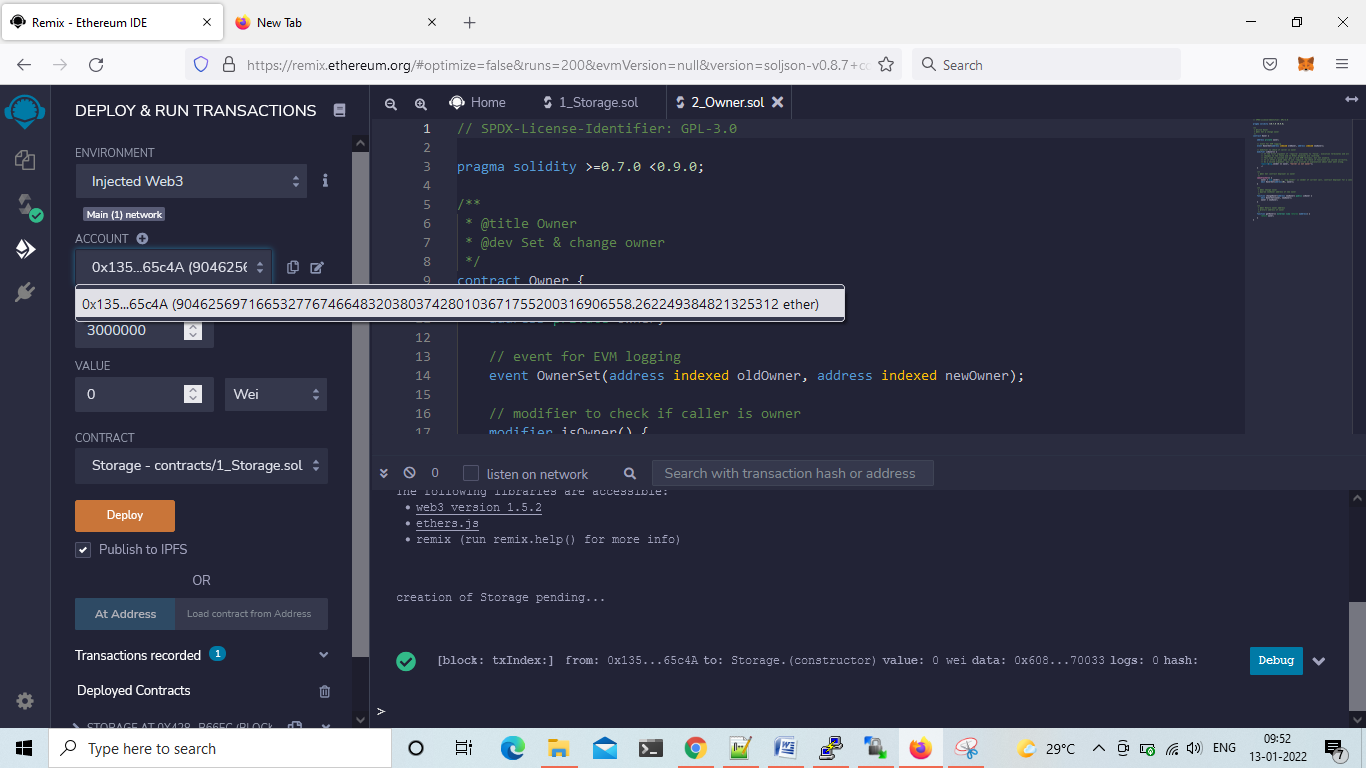
0x301DFCdeFF18b72Ee69641928DCb4f4E1C3112CA

***9.5.4 Do the steps from 9.5.1 to 9.5.3 for customer account also.***

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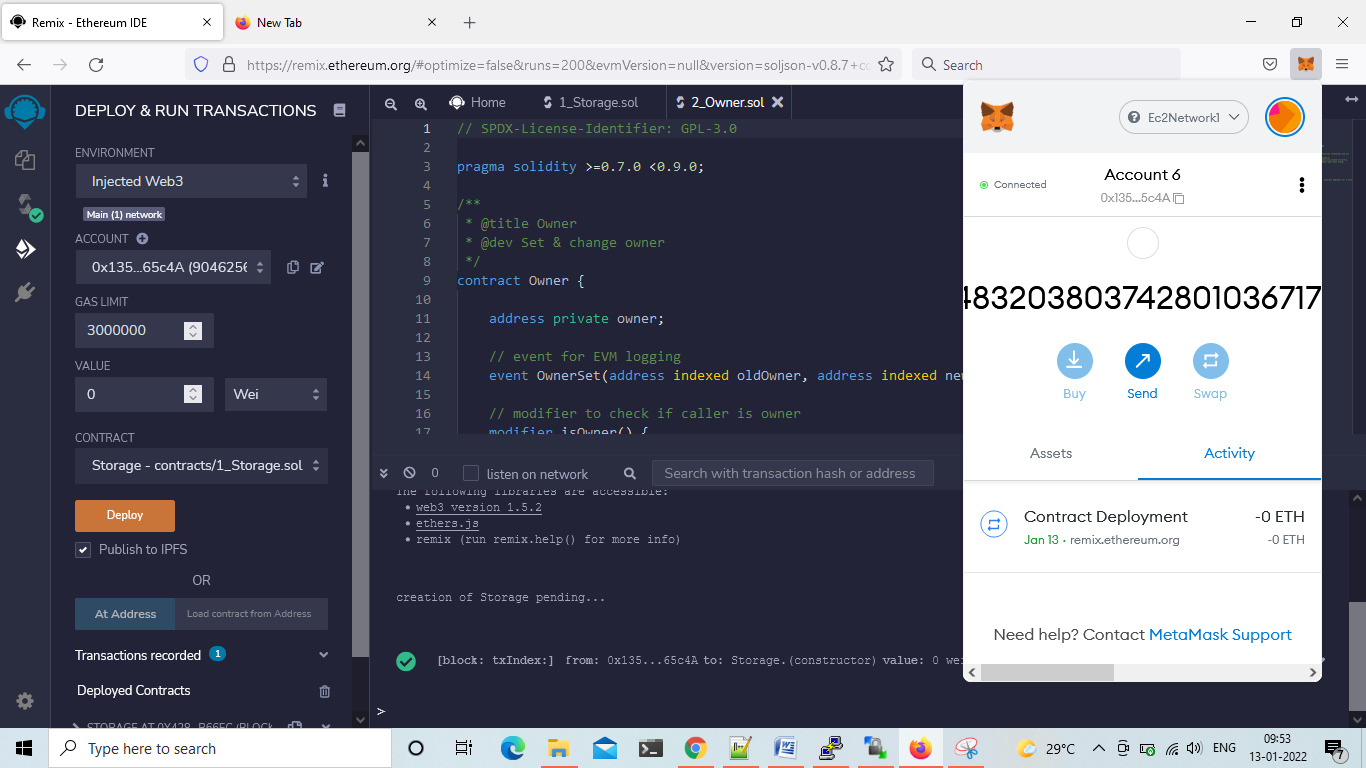
0x135e92E7F858F806012b24C7e44BF2c52c665c4A

***10 Detecting Network in Remix IDE***

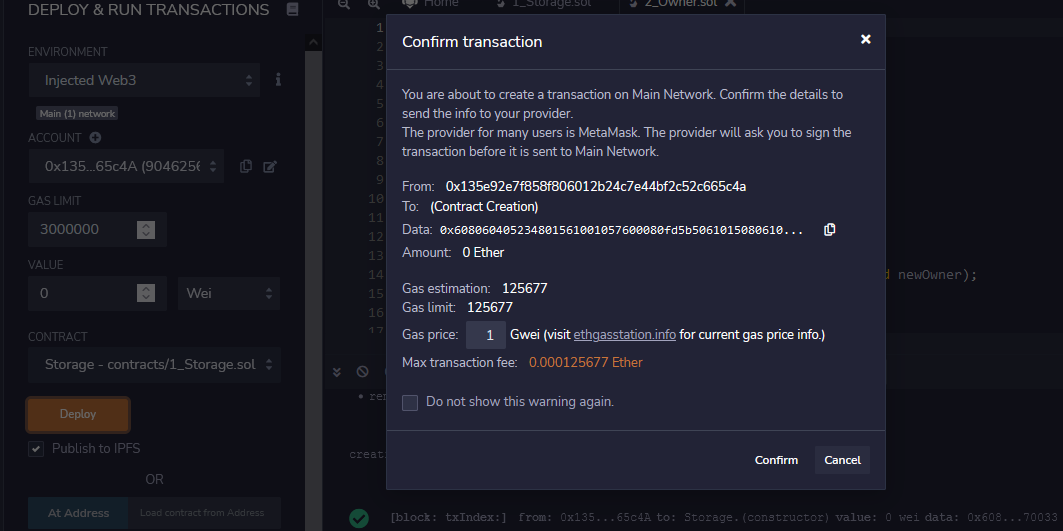
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1. ***Deploying contract to Geth Network***

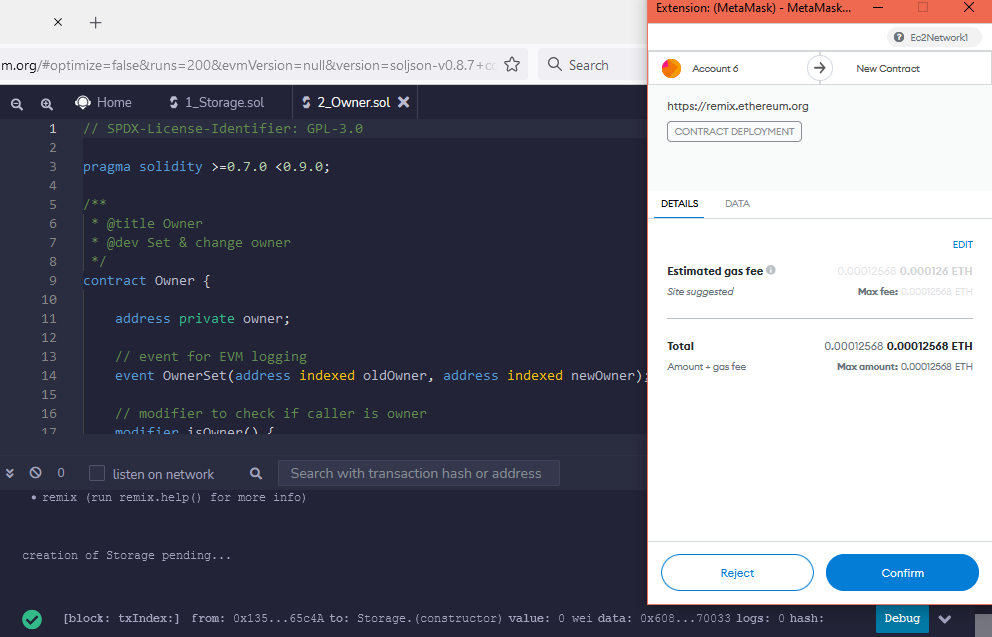
***Ensure network connected in Metamask***

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***Click on Deploy***

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Click Confirm



Click Confirm

