

DApp

2017/09/27 冀謙

Decentralized Application

Fronted + Contracts

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Truffle + testRPC

Before Starting

Preinstall nodejs v5 - v6

install

sudo npm install -g ethreumjs-testrpc

sudo npm install -g truffle

Run testRPC

testrpc

Run testRPC
testrpc

```
root@ChienVP5:~# testrpc
EthereumJS TestRPC v4.1.3 (ganache-core: 1.1.3)

Available Accounts
-----
10| 0x80f4c3e0948653e226a4987532ba55bc34d1f211
11| 0x4b374d5d741839c7fa328eda52345538758f626e
12| 0x222c0e071b8455efe97fd2e56e17a775c4f0ebdd
13| 0x433a01f0616619375a2659b0d9efc33614280bd
14| 0x31c00b188387a45b846487e564bd7af4c163cbff
15| 0x1e7ff2dd5d73982cc9922e3ea289cfa164ae9c9d
16| 0x355cbe87bcfc771ef4f8018e79d871dab57920d6
17| 0xd4a8e58fra7624514846a5122fd89a6e07908a4f
18| 0x032a71c3b10ad267c9e2471931b8287e154ee663
19| 0xb588e1851c7d3c4ed5490b8a34e0e715e189c22

Private Keys
=====
10| 508ed7e26b924d74c4e34e68be183189d363195d0b2647c30b24eeb9a1c8d125
11| 71971f158182b7e4f8573a3389f1ed4e071b79a2e135a0f27b35349e8bf7d033
12| fbfb8a4e14c8bc0329e205f03fc4e0dd5f87e4e040a2679923f1b725381416b
13| d5a50411c4ac781d94d6bd76da7dcd9f0ca4001d010a2756281127b18878f644
14| d5753ab3010df7c8827f1922b9d75a47f40ef231f2c02ae4e1fe976a96fd155b
```

Start New Truffle Project

truffle init

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truffle init

```

Mnemonic:      few lake royal vacant utility dose insane van chicken
zero
Base HD Path:  #/44'/60'/0'/0'/{account_index}
Listening on localhost:8545
^Croot@ChienWPS:~# cd trutest
-bash: cd: trutest: No such file or directory
root@ChienWPS:~# mkdir trutest
root@ChienWPS:~# cd trutest/
root@ChienWPS:~/trutest# truffle init
Downloading project...
Project initialized.

Documentation: http://truffleframework.com/docs

Commands:

Compile: truffle compile
Migrate: truffle migrate
Test:    truffle test

root@ChienWPS:~/trutest#
```

```
> config
├─ contracts
  ── Migrations.sol
  ── SimpleStorage.sol
├─ migrations
  JS 1_initial_migration.js
  JS 2_deploy_contracts.js
├─ node_modules
├─ public
├─ scripts
├─ src
├─ test
  JS simplestorage.js
  ── TestSimpleStorage.sol
├─ box-img-lg.png
├─ box-img-sm.png
├─ package.json
├─ truffle-config.js
├─ truffle.js
```

/contracts: 存放智能合約原始碼的地方，可以看到裡面已經有放兩個 sol 檔案。

/migrations: 這是 Truffle 用來部署智能合約的功能

/test: 測試智能合約的程式碼放這目錄，支援 js 與 sol 測試。

/public、/src: 存放 react web 的地方，後面用到會再說明。

truffle.js: Truffle 的設定檔案。

Start New Boxes

truffle unbox react-box

react-box 樣板

樣板已經整合 create-react-app，可以馬上開發 react web，省下專案設定的時間。我們將這 tutorial 專案稱作 push-button

truffle unbox react-box

Compile

truffle compile

Build

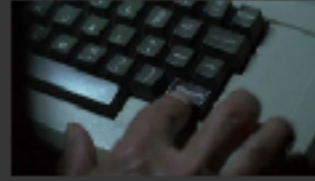
truffle migration

Test test code

truffle test

Run Page

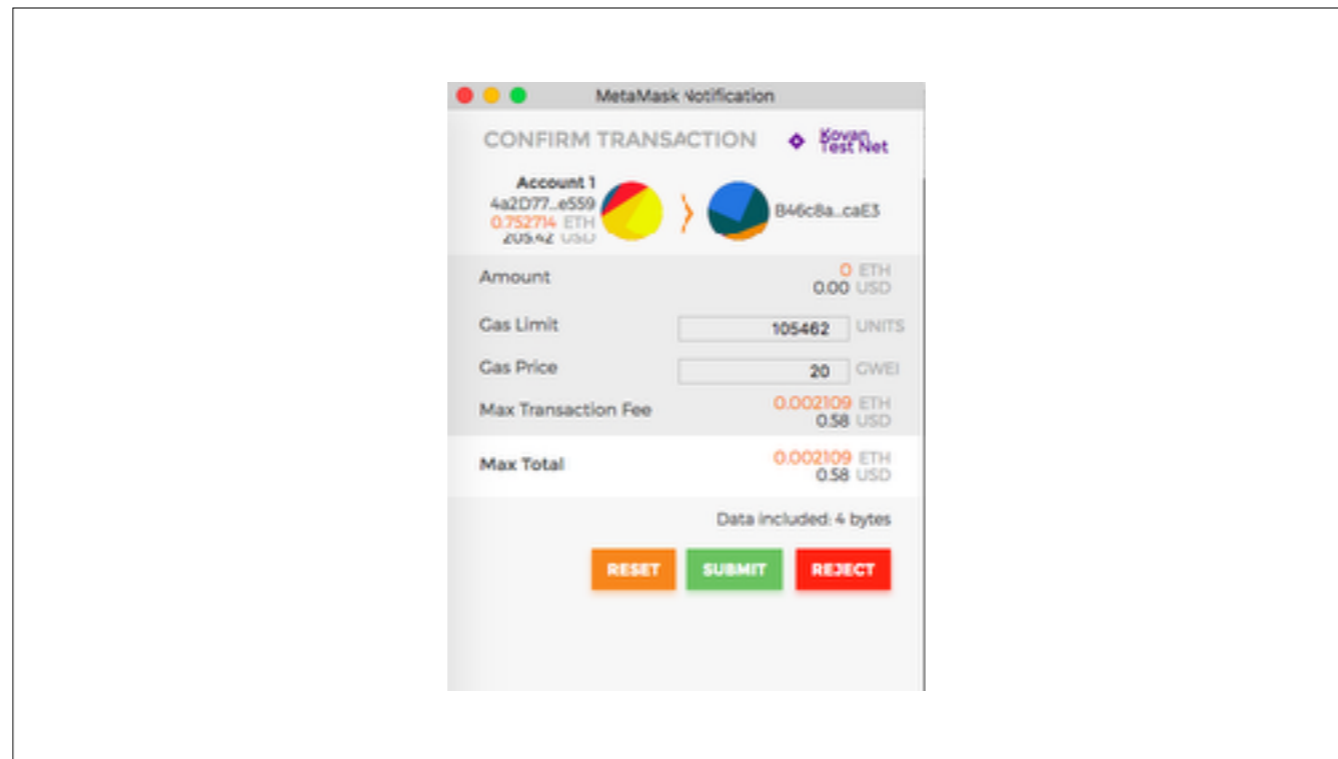
npm run start



Pushing the button every 108 minutes

Time:
Save times: 0
The world will be destroyed at: 3286150 hkok
Blackis holding: 13182





點下紅色按鈕後，會跳出 MetaMask 的 confirm transaction 視窗，若沒跳出來請檢查是否有安裝 MetaMask 以及登入 MetaMask