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# Manual & Usage Documentation: Geth

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# Introduction to Pre-Defined Blockchain Environment

## **SecuToken Administrator (Sole Validator for the blockchain)**

- **Pre-funded 30 ETH on Account**

Admin Password: secutokenadmin

Address: 0x3B663aAb4fdd872C5B79882eef7159B9C11e0b52

## **User Account (Sole Demo User Account for the blockchain)**

- **Pre-funded 20 ETH on Account**

User Password: usertest

Address: 0x1f813224C89630dBf0059e7E2Df7879661470cA6

# Server Geth Initialisation:

(Must be in folder /SecuToken)

## Step 1.

### Initialise genesis.json

```
geth --datadir data init genesis.json
```

## Step 2.

### Start SecuToken Blockchain

```
geth --datadir data --networkid 2025 --mine --miner.etherbase "0x3B663aAb4fdd872C5B79882eef7159B9C11e0b52" --unlock "0x3B663aAb4fdd872C5B79882eef7159B9C11e0b52" --password data/admin_signer_password.txt --http --http.addr 127.0.0.1 --http.port 8545 --http.api eth,net,web3,personal --allow-insecure-unlock --nodiscover
```

### [OPTIONAL]

Force removing the dir /geth, also recursive so all directories in /geth as well to reset blockchain data

```
rm -rf data/geth
```

## Server-Sided Commands

### [OPTIONAL]

### Adds New Person to the blockchain

```
geth account new --datadir data
```

### Presents All Accounts in a list on the blockchain

```
geth --datadir data account list
```

# Launch Client Geth Terminal

## Open a Secondary Terminal

### Start Geth Javascript Console by attaching to SecuToken blockchain

```
geth attach http://127.0.0.1:8545
```

## [OPTIONAL]

### Open a Third Terminal

#### Unlock Account JSON-RPC Method

```
curl -X POST --data  
'{"jsonrpc":"2.0","method":"personal_unlockAccount","params":  
:["INSERT_ADDRESS", "INSERT_PASSWORD", 600],"id":1}' -H  
"Content-Type: application/json" http://localhost:8545
```

## Client-Sided Commands

## [OPTIONAL]

### Fetches and Presents Current Block Number

```
eth.blockNumber
```

### Presents all account addresses on the blockchain (Ordered by -> [0], [1], [...])

```
eth.accounts
```

### Fetches and Presents Transaction Information

```
eth.getTransaction('ID_IN_SERVER_OR_CLIENT_CONSOLE')
```

### Check balance of Admin wallet

```
web3.fromWei(eth.getBalance("0x3B663aAb4fdd872C5B79882eef715  
9B9C11e0b52"), "ether")
```

### Check balance of User wallet

```
web3.fromWei(eth.getBalance("0x1f813224C89630dBF0059e7E2Df78  
79661470cA6"), "ether")
```