

Graphic Bundle

Chapter 2: Understanding How Ethereum Works

The screenshot displays a web interface for an Ethereum wallet. At the top, there are navigation tabs for 'WALLETS' and 'SEND', a status bar for 'PRIVATE-NET' with 0 peers and a 12-minute block interval, and a 'CONTRACTS' tab. The main balance is shown as 790.00 ETH.

Accounts Overview

ACCOUNTS

Accounts are password protected keys that can hold ether, secure ethereum-based tokens or coins and control contracts. Accounts can't display incoming transactions.

- MAIN ACCOUNT..**: 790.00 ether (Address: 0x8032a2d432fd2493e...)
- ACCOUNT 1**: 0.00 ether (Address: 0x4f1fd7fb628f1764b...)
- ACCOUNT 2**: 0.00 ether (Address: 0xd964a7e3b659b71...)
- ACCOUNT 3**: 0.00 ether (Address: 0xd0e19f1fa253d9f3...)
- ACCOUNT 5**: 0.00 ether (Address: 0xd732c23e448f9c9c75144868306a507268fd0369)

ADD ACCOUNT

WALLET CONTRACTS

These are contracts that are stored on the blockchain and can hold and secure ether. They can have multiple accounts as owners and keep a full log of all transactions.

ADD WALLET CONTRACT

LATEST TRANSACTIONS

Filter transactions

Date	Description	Amount	Direction
Sep 26	Transfer between accounts	-0.098899222 ETH	Account 5 → Main account (Etherbase)
Sep 26	Transfer between accounts	-0.099319222 ETH	Account 5 → Account 5
Sep 26	Transfer between accounts	-0.90 ETH	Account 5 → Account 3

Chapter 4: Getting Started with web3.js

Upload any file

Choose file...

Browse

Enter owner name

Submit

Get Info

You can either submit file's details and get information about it.

Live Transactions Mined

No Transaction Found

Upload any file

Choose file...

Browse

Enter owner name

Narayan Prusty

Submit

Get Info

Transaction hash:

0x829f4ae84a16ba63a16382f3bb4f101aad7e6a93459624ce68c69b04780ddbd8

Live Transactions Mined

No Transaction Found

Upload any file

Choose file...

Browse

Enter owner name

Narayan Prusty

Submit

Get Info

Transaction hash:

0x829f4ae84a16ba63a16382f3bb4f101aad7e6a93459624ce68c69b04780ddb8

Live Transactions Mined

1.

Txn Hash:

0x829f4ae84a16ba63a16382f3bb4f101aad7e6a93459624ce68c69b04780ddb8

Owner: Narayan Prusty File Hash:

0663f8458e52971cd7e257db0250ffac362d1af8

Upload any file

Choose file...

Browse

Enter owner name

Narayan Prusty

Submit

Get Info

Timestamp: 1479667414 Owner: Narayan Prusty

Live Transactions Mined

1. Txn Hash:
0x829f4ae84a16ba63a16382f3bb4f101aad7e6a93459624ce68c69b04780ddb8
Owner: Narayan Prusty File Hash:
0663f8458e52971cd7e257db0250ffac362d1af8

Chapter 5: Building a Wallet Service

Create or use your existing wallet.

Enter 12-word seed

Generate Details

Generate New Seed

Address, Keys and Balances of the seed

Send ether

From address

To address

Ether

Send Ether

Create or use your existing wallet.

Enter 12-word seed

mutual obscure inch roast stable silent shine shy mail garbage cradle s

Generate Details

Generate New Seed

Address, Keys and Balances of the seed

1. **Address:** 0xe922fec586b0578bb022fe148d667d0d37e6306f

Private Key:

0xc8be4ac85648777ba50b1741c0ea971e3ccddcd6f6309b052be5565b00805f98

Balance: 0 ether

2. **Address:** 0x76e0699914e6cd2e05353e3d52112fd1fa4f2e87

Private Key:

0x33a6b11f6e308b4c55a6ad392ab926baff19d1882228ef08afffee9a6eeabc28

Balance: 0 ether

Send ether

From address

To address

Ether

Send Ether

Create or use your existing wallet.

Enter 12-word seed

mutual obscure inch roast stable silent shine shy mail garbage cradle s

Generate Details

Generate New Seed

Address, Keys and Balances of the seed

1. **Address:** 0xba6406ddf8817620393ab1310ab4d0c2deda714d

Private Key:

0x1a56e47492bf3df9c9563fa7f66e4e032c661de9d68c3f36f358e6bc9a9f69f2

Balance: 1009.09663936 ether

2. **Address:** 0x2bdbec0ccd70307a00c66de02789e394c2c7d549

Private Key:

0x053c8a5754ce99e3a909b968b23dcb3314f3c88e16ef00658f0aa3f255579a7a

Balance: 0.9 ether

Send ether

From address

To address

Ether

Send Ether

Create or use your existing wallet.

Enter 12-word seed

mutual obscure inch roast stable silent shine shy mail garbage cradle s

Generate Details

Generate New Seed

Address, Keys and Balances of the seed

1. **Address:** 0xba6406ddf8817620393ab1310ab4d0c2deda714d

Private Key:

0x1a56e47492bf3df9c9563fa7f66e4e032c661de9d68c3f36f358e6bc9a9f69f2

Balance: 1009.09663936 ether

2. **Address:** 0x2bdbec0ccd70307a00c66de02789e394c2c7d549

Private Key:

0x053c8a5754ce99e3a909b968b23dcb3314f3c88e16ef00658f0aa3f255579a7a

Balance: 0.9 ether

Send ether

From address

0xba6406ddf8817620393ab1310ab4d0c2deda714d

To address

0x2bdbec0ccd70307a00c66de02789e394c2c7d549

Ether

23

Send Ether

Txn hash:

0x1a56e47492bf3df9c9563fa7f66e4e032c661de9d68c3f36f358e6bc9a9f69f2

Enter 12-word seed

mutual obscure inch roast stable silent shine shy mail garbage cradle s

Generate Details

Generate New Seed

Address, Keys and Balances of the seed

1. **Address:** 0xba6406ddf8817620393ab1310ab4d0c2deda714d

Private Key:

0x1a56e47492bf3df9c9563fa7f66e4e032c661de9d68c3f36f358e6bc9a9f69f2

Balance: 986.09663936 ether

2. **Address:** 0x2bdbec0ccd70307a00c66de02789e394c2c7d549

Private Key:

0x053c8a5754ce99e3a909b968b23dcb3314f3c88e16ef00658f0aa3f255579a7a

Balance: 23.9 ether

Send ether

From address

0xba6406ddf8817620393ab1310ab4d0c2deda714d

To address

0x2bdbec0ccd70307a00c66de02789e394c2c7d549

Ether

23

Send Ether

Chapter 6: Building a Smart Contract Deployment Platform

1	Address
<input type="button" value="Compile"/>	<input type="text" value="Prefixed with 0x"/>
	Private Key
	<input type="text" value="Prefixed with 0x"/>
	<input type="text"/>
	<input type="text"/>
	<input type="button" value="Deploy"/>

1 <code>pragma solidity 0.4.8;</code>	Address
2	<input type="text" value="Prefixed with 0x"/>
3 <code>contract sample{</code>	Private Key
4 <code> int a;</code>	<input type="text" value="Prefixed with 0x"/>
5	<input type="text"/>
6 <code> function sample(int b)</code>	Arguments
7 <code> {</code>	<input type="text" value="int256"/>
8 <code> a = b;</code>	<input type="text"/>
9 <code> }</code>	<input type="text"/>
10 <code>}</code>	
11	<input type="button" value="Deploy"/>
<input type="button" value="Compile"/>	

```
1 pragma solidity 0.4.8;
2
3 contract sample{
4     int a;
5
6     function sample(int b)
7     {
8         a = b;
9     }
10 }
11
```

Compile

Address

0x8cc00cfc1c0c2f95f29e812726ec9d21c9fa002f

Private Key

0x6e580bca2e258f4365f710bb5f8eac7165387ce72a32084d219ff36fcb

Arguments

12

Deploy

localhost:8080 says:

Txn Hash:
 0xa7b4baa8ab3530340abc73f1319ac544bca25fbae56e62f
 a5d991cc86b32040

Prevent this page from creating additional dialogs.

OK

Chapter 7: Building a Betting App

[Home](#)

Match ID	Start Time	Home Team	Away Team	Winner
123945	2017 Feb 27 04:30:00	Lokomotiv Tashkent	Al Ahli (UAE)	home
123063	2017 Feb 27 05:00:00	Home United	Courts Young Lions	home
123061	2017 Feb 27 05:00:00	Hougang United	Geylang International	home
90293	2017 Feb 27 08:30:00	Mersin İdmanyurdu	Denizlispor	draw
126758	2017 Feb 27 08:30:00	Ashanti Gold	Asante Kotoko	away
123641	2017 Feb 27 08:40:00	Al Fateh	Lekhwiya	draw
124173	2017 Feb 27 09:00:00	Al Jazira	Esteghlal Khuzestan	away
123667	2017 Feb 27 09:00:00	Esteghlal	Al Taawoun	home
126759	2017 Feb 27 09:30:00	Lyngby	Esbjerg	draw
86683	2017 Feb 27 10:30:00	Galatasaray	Beşiktaş	away
68211	2017 Feb 27 10:30:00	Ruch Chorzów	Śląsk Wrocław	home
68346	2017 Feb 27 11:30:00	Viborg	AGF Aarhus	draw
119466	2017 Feb 27 11:30:00	Melgar	USMP	home
76297	2017 Feb 28 12:45:00	St Pauli	Karlsruher	home
96417	2017 Feb 28 01:00:00	Bari	Brescia	home
91822	2017 Feb 28 01:15:00	Florentina	Torino	draw
67919	2017 Feb 28 01:15:00	Stade de Reims	Brest	draw
69287	2017 Feb 28 01:30:00	Leicester City	Liverpool	home
85271	2017 Feb 28 01:30:00	Arouca	Belenenses	away
119697	2017 Feb 28 02:00:00	Deportivo Lara	Portuguesa (VEN)	home
114730	2017 Feb 28 03:30:00	Deportes Valdivia	San Marcos de Arica	draw
119692	2017 Feb 28 04:30:00	Zamora	Estudiantes de Mérida	home
120929	2017 Feb 28 05:00:00	Curicó Unido	Deportivo Ñublense	draw
119470	2017 Feb 28 05:30:00	Cantolao	Alianza Atlético	away
119076	2017 Feb 28 06:15:00	Deportes Quindío	Unión Magdalena	home

Matches

Deploy betting contract

From address:

Private Key:

Match ID:

Bet Amount (in ether):

Deploy

Bet on a contract

From address:

Private Key:

Contract Address:

Team:

Bet

Display betting contract

Contract Address:

Find

Matches

Deploy betting contract

From address:

Private Key:

Match ID:

Bet Amount (in ether):

Transaction Hash:

0xf4e70b22c61cbd5485138b682af90ed234257aae4b0416a7d1d5dfdc7784717d and contract address is: 0x46ed72d44f7cc35ff815a1c12e427dfe90ae5a94

Deploy

Bet on a contract

From address:

Private Key:

Contract Address:

Team:

Bet

Display betting contract

Contract Address:

Find

Matches

Deploy betting contract

From address:

0x7e96b4827056119575c18e127a3aeb901

Private Key:

0xf120383dfa5b9d9bd1a642f20fd653d2

Match ID:

123945

Bet Amount (in ether):

1

Transaction Hash:

0xf4e70b22c61cbd5485138b682af90ed234257aae4b0416a7d1d5dfdc7784717d and contract address is: 0x46ed72d44f7cc35ff815a1c12e427dfe90ae5a94

Deploy

Bet on a contract

From address:

0x57d2d9af2074ed21a35b2c7c63cab965:

Private Key:

0xb0c9b292d78b5bdef56fe36eed7891d3l

Contract Address:

0x46ed72d44f7cc35ff815a1c12e427dfe90

Team:

Away

Transaction Hash:

0x2cd5c759916ad7d02729dd1789687fd67e156436b36330628ba620893f8afcb4

Bet

Display betting contract

Contract Address:

Find

Matches

Deploy betting contract

From address:

0x7e96b4827056119575c18e127a3aeb901

Private Key:

0xf120383dfa5b9d9bd1a642f20fd653d2

Match ID:

123945

Bet Amount (in ether):

1

Transaction Hash:

0xf4e70b22c61cbd5485138b682af90ed234257aae4b0416a7d1d5dfdc7784717d and contract address is: 0x46ed72d44f7cc35ff815a1c12e427dfe90ae5a94

Deploy

Bet on a contract

From address:

0x57d2d9af2074ed21a35b2c7c63cab965:

Private Key:

0xb0c9b292d78b5bdef56fe36eed7891d3l

Contract Address:

0x46ed72d44f7cc35ff815a1c12e427dfe90

Team:

Away

Transaction Hash:

0x2cd5c759916ad7d02729dd1789687fd67e156436b36330628ba620893f8afcb4

Bet

Display betting contract

Contract Address:

0x46ed72d44f7cc35ff815a1c12e427dfe90

Contract balance is: 2, Match ID is: 123945, bet amount is: 1 ETH, 0x9743038620ec860365c336fc3afd52ea8900f8a7 has placed bet on home team and 0x57d2d9af2074ed21a35b2c7c63cab96524c38bc1 has placed bet on away team

Find

Matches

Deploy betting contract

From address:

Private Key:

Match ID:

Bet Amount (in ether):

Transaction Hash:

0xf4e70b22c61cbd5485138b682af90ed234257aae4b0416a7d1d5dfdc7784717d and contract address is: 0x46ed72d44f7cc35ff815a1c12e427dfe90ae5a94

Deploy

Bet on a contract

From address:

Private Key:

Contract Address:

Team:

Transaction Hash:

0x2cd5c759916ad7d02729dd1789687fd67e156436b36330628ba620893f8afcb4

Bet

Display betting contract

Contract Address:

Contract balance is: 0, Match ID is: 123945, bet amount is: 1 ETH, 0x9743038620ec860365c336fc3afd52ea8900f8a7 has placed bet on home team and 0x57d2d9af2074ed21a35b2c7c63cab96524c38bc1 has placed bet on away team

Find

Chapter 8: Building Enterprise Level Smart Contracts

Send Metacoins	Find Balance
Select Account Address <input type="text" value="0xde55f78fc7831c749a82cf5ee777a971d57abbcf"/>	Select Account Address <input type="text" value="0xde55f78fc7831c749a82cf5ee777a971d57abbcf"/>
How much metacoin you want to send? <input type="text"/>	<input type="button" value="Check Balance"/>
Enter the address to which you want to send metacoins <input type="text" value="Prefixed with 0x"/>	
<input type="button" value="Submit"/>	

Send Metacoins	Find Balance
Select Account Address <input type="text" value="0xde55f78fc7831c749a82cf5ee777a971d57abbcf"/>	Select Account Address <input type="text" value="0xde55f78fc7831c749a82cf5ee777a971d57abbcf"/>
How much metacoin you want to send? <input type="text" value="5"/>	<input type="button" value="Check Balance"/>
Enter the address to which you want to send metacoins <input type="text" value="0x7f933a37039d497d1cc9698e1f03981410e11873"/>	
<input type="button" value="Submit"/>	

localhost:8080 says:
Transaction mined successfully. Txn Hash:
0xe07a80c0eb6e642961f91619671999fab96ef249aac139f1139e08f7ad21f6e00

Prevent this page from creating additional dialogues.

Send Metacoins

Select Account Address

0xde55f78fc7831c749a82cf5ee777a971d57abbcf

How much metacoin you want to send?

5

Enter the address to which you want to send metacoins

0x7f933a37039d497d1cc9698e1f03981410e11873

Submit

Find Balance

Select Account Address

0x7f933a37039d497d1cc9698e1f03981410e11873

Check Balance

localhost:8080 says:

Balance is: 5 metacoins

Prevent this page from creating additional dialogues.

OK

Chapter 9: Building a Consortium Blockchain

```
2017-04-19 00:29:59 Imported #868 bc6f...dfa8 (0 txs, 0.00 Mgas, 0.57 ms, 0.56 KiB)
2017-04-19 00:30:04 Imported #869 080b...7964 (0 txs, 0.00 Mgas, 0.60 ms, 0.56 KiB)
2017-04-19 00:30:10 Imported #870 552c...4fd8 (0 txs, 0.00 Mgas, 0.51 ms, 0.56 KiB)
2017-04-19 00:30:15 Imported #871 2fed...27d4 (0 txs, 0.00 Mgas, 0.58 ms, 0.56 KiB)
2017-04-19 00:30:17 0/ 1/25 peers 309 KiB db 302 KiB chain 0 bytes queue 17 KiB
2017-04-19 00:30:19 Imported #872 834c...9d78 (0 txs, 0.00 Mgas, 0.49 ms, 0.56 KiB)
2017-04-19 00:30:25 Imported #873 62ee...6335 (0 txs, 0.00 Mgas, 0.48 ms, 0.56 KiB)
2017-04-19 00:30:29 Imported #874 8043...7a5d (0 txs, 0.00 Mgas, 0.51 ms, 0.56 KiB)
2017-04-19 00:30:35 Imported #875 9b7d...a9c9 (0 txs, 0.00 Mgas, 0.46 ms, 0.56 KiB)
2017-04-19 00:30:40 Imported #876 493b...9cc6 (0 txs, 0.00 Mgas, 0.65 ms, 0.56 KiB)
2017-04-19 00:30:45 Imported #877 a672...f06f (0 txs, 0.00 Mgas, 0.53 ms, 0.56 KiB)
2017-04-19 00:30:47 0/ 1/25 peers 311 KiB db 302 KiB chain 0 bytes queue 17 KiB
2017-04-19 00:30:49 Imported #878 cedf...1ee5 (0 txs, 0.00 Mgas, 0.47 ms, 0.56 KiB)
2017-04-19 00:30:55 Imported #879 4381...8fcc (0 txs, 0.00 Mgas, 0.58 ms, 0.56 KiB)
2017-04-19 00:30:59 Imported #880 b383...ef90 (0 txs, 0.00 Mgas, 0.53 ms, 0.56 KiB)
2017-04-19 00:31:05 Imported #881 25cf...aeeb (0 txs, 0.00 Mgas, 0.46 ms, 0.56 KiB)
2017-04-19 00:31:10 Imported #882 8dee...ca2c (0 txs, 0.00 Mgas, 0.53 ms, 0.56 KiB)
2017-04-19 00:31:15 Imported #883 770a...f85b (0 txs, 0.00 Mgas, 0.53 ms, 0.56 KiB)
```