



Sydney Ethereum

Wifi: giddygiddy
password: FT2015tyro

FINHAUS
LABS



Brontech

ty tyro
fintech
hub

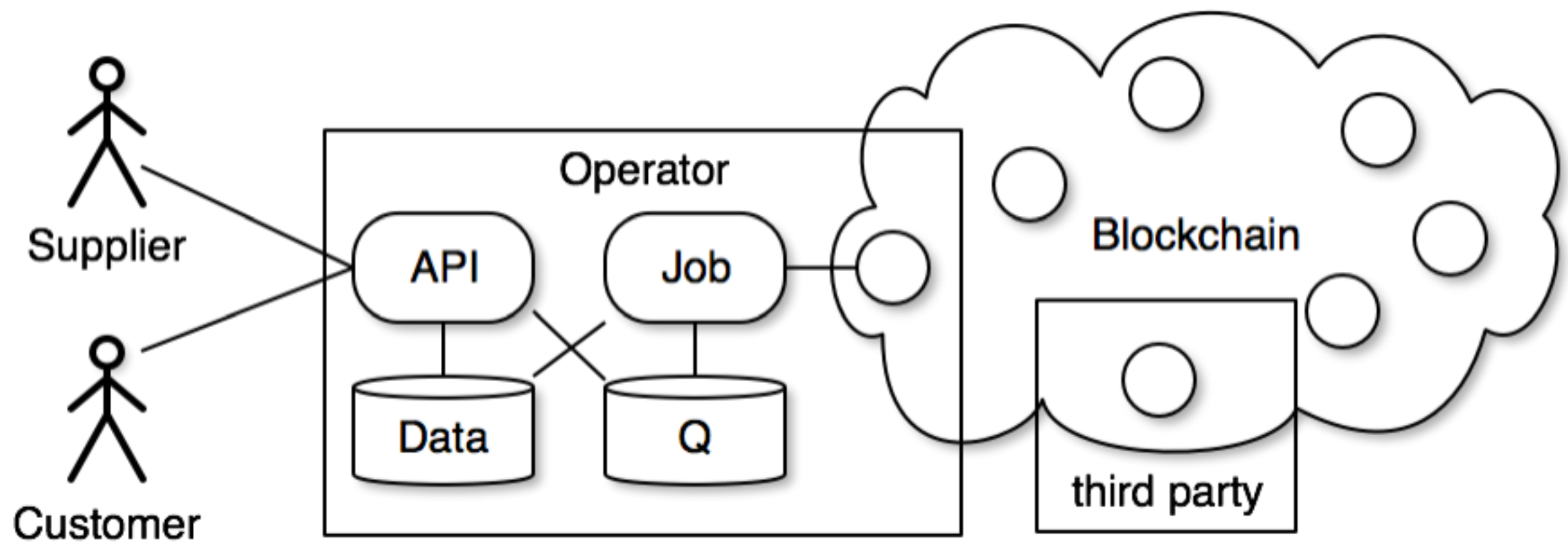
Welcome!

Agenda

- 10.30am - 11.20am Ethereum and Geth
Luke Anderson
- 11.30am - 12:20pm - Solidity 101
Nick Addison
- 12.20am - 1:00pm - lunch
- 1.00pm - 1.50pm - Build, deploy and test using Truffle
Vojdan
- 2.00pm - 2.50pm - JavaScript API and Meteor
Emma Poposka
- 3.00pm - 3.30pm - Contract design patterns
Nick Addison

Lunch

- On the roof - level 12
- Please take your own drinks up



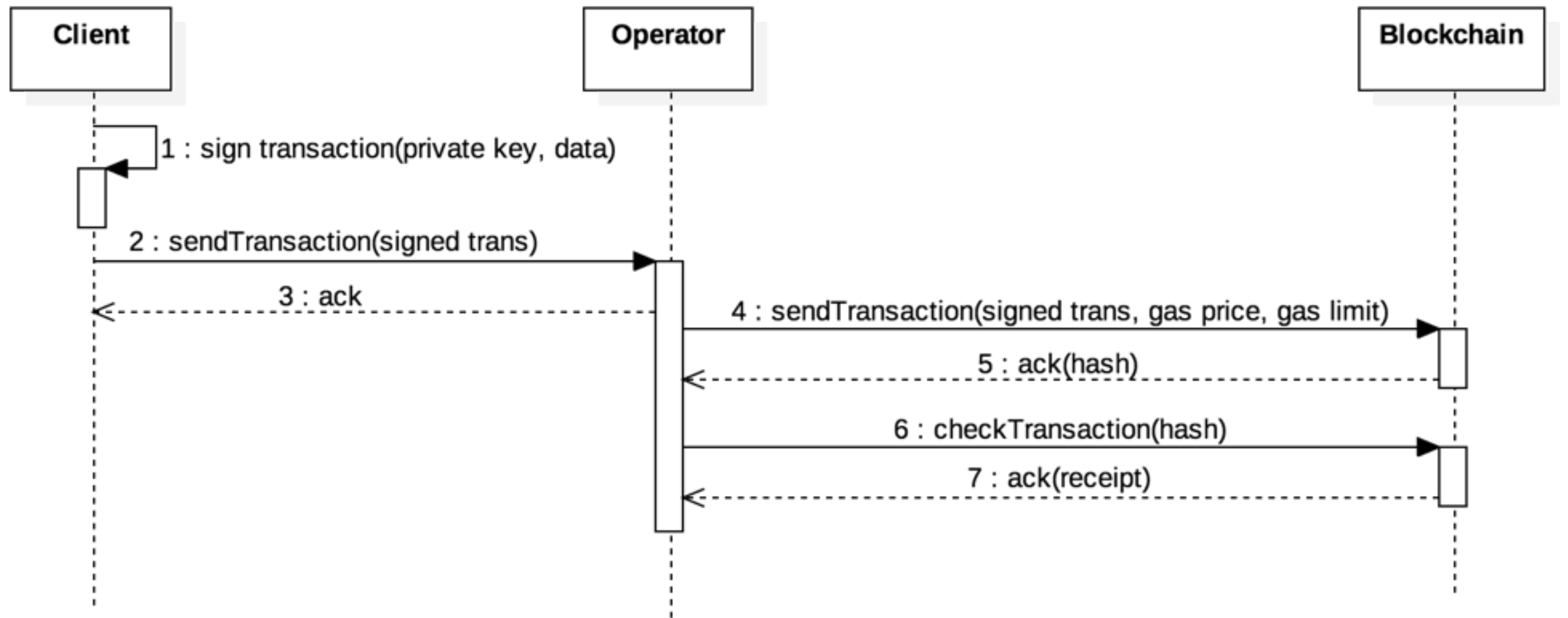
SDK's

- Web3 - JavaScript
- Nethereum - .Net

Key storage

- with client
- in an external key store

Blockchain interaction



Constant Functions

- Constant functions do not change state hence do not need consensus. They can just be run against the connecting node and does not cost any gas

Permissioning access

```
contract TestOwnerModifier {  
  
    address owner;  
  
    function TestModifiers() {  
        owner = msg.sender;  
    }  
  
    modifier onlyOwner {  
        if (owner != msg.sender) {  
            throw;  
        }  
        —  
    }  
  
    function testIsOwner() onlyOwner returns (bool success) {  
        return true;  
    }  
}
```

Fallback function

```
contract SomeContractName {  
  
    // return Ether if someone sends Ether to this  
    contract  
  
    function() { throw; }  
  
}
```

Mutex modifier

```
contract MutexProtected
{
    // Mutex contract on all state mutating external/public functions for protecting against
    // Re-entry and `Solar Storm` attacks

    modifier isMutexed() {

        if(mutex) throw; // Exclusion already set so bail.

        else mutex = true; // Set exclusion and continue with function code
        —

        delete mutex; // release contract from exclusion

        return; // functions require single exit and return parameters
    }

    bool mutex; // the exclusion state variable
}
```

Upgrade strategies

- Proxy contract
- Delegate contract
- Stateless contract

Transactions v Events

- Transactions can be accessed from a contract
- Events can not be accessed from a contract

Upcoming Events

- Devcon2, Shanghai, 19-21 Sept
- Devcon2 Debrief, Thursday, 29 Sept