

Dish of the day

Blockchain with Ruby



We are looking for Ruby enthusiasts!

You think you might be interested?
Drop us a line at jobs@nopio.com.





Hello!

I am Kuba Wilczek

Ruby on Rails Developer at Nopio

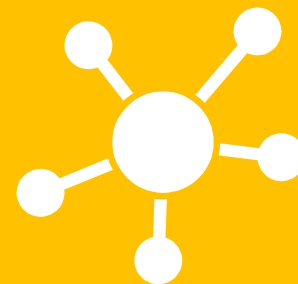
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Agenda

1. Introduction to blockchain
2. Smart contracts
3. Decentralized application architecture
4. Build simple application using `ethereum.rb`
5. Summary

Introduction to **blockchain**



What is **blockchain**?

A blockchain is a digitized, decentralized, public ledger of all cryptocurrency transactions. Constantly growing as 'completed' blocks (the most recent transactions) are recorded and added to it in chronological order, it allows market participants to keep track of digital currency transactions without central recordkeeping. Each node (a computer connected to the network) gets a copy of the blockchain, which is downloaded automatically.

Source: <https://www.investopedia.com>

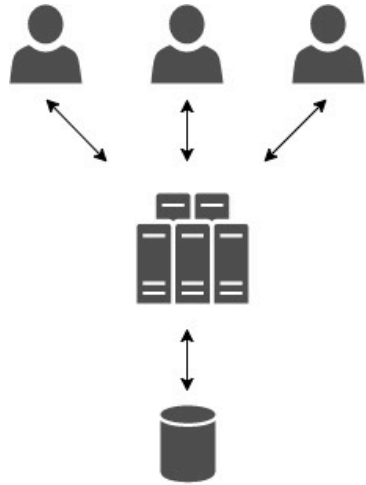
Smart contracts

- Ability to create programs
- Solidity programming language
- Visible for all users
- Run by EVM
- Immutability - can't be updated (!)

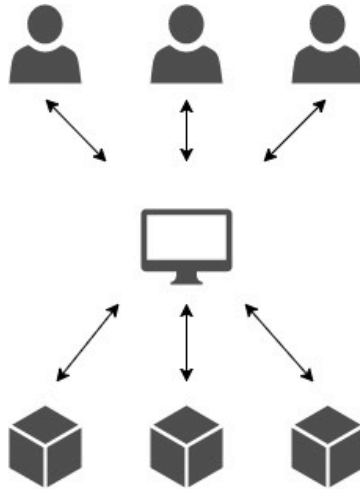


ethereum

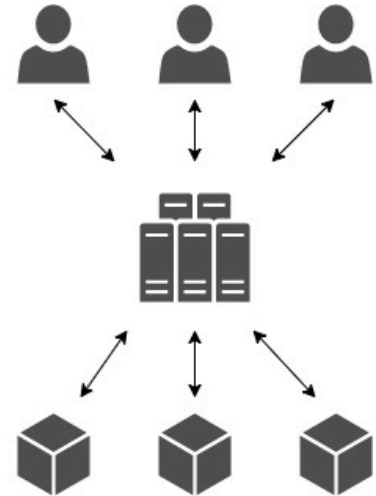
Decentralized application architecture



centralized application



decentralized application



decentralized application
with server



Lunch voting app - **Ruby dApp**



Technology stack

Ethereum.rb

- Deploy and interact with contracts on the blockchain
- Compile Solidity contracts with solc compiler from ruby
- Make direct json rpc calls to node from ruby application

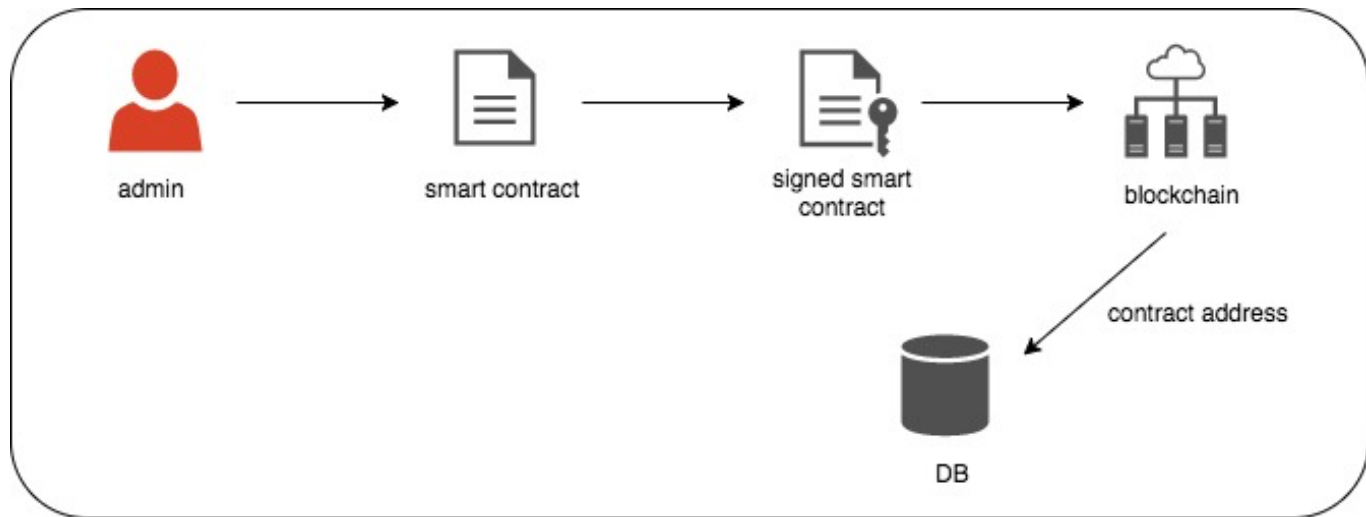
Eth

- Create ethereum transaction
- Sign transaction

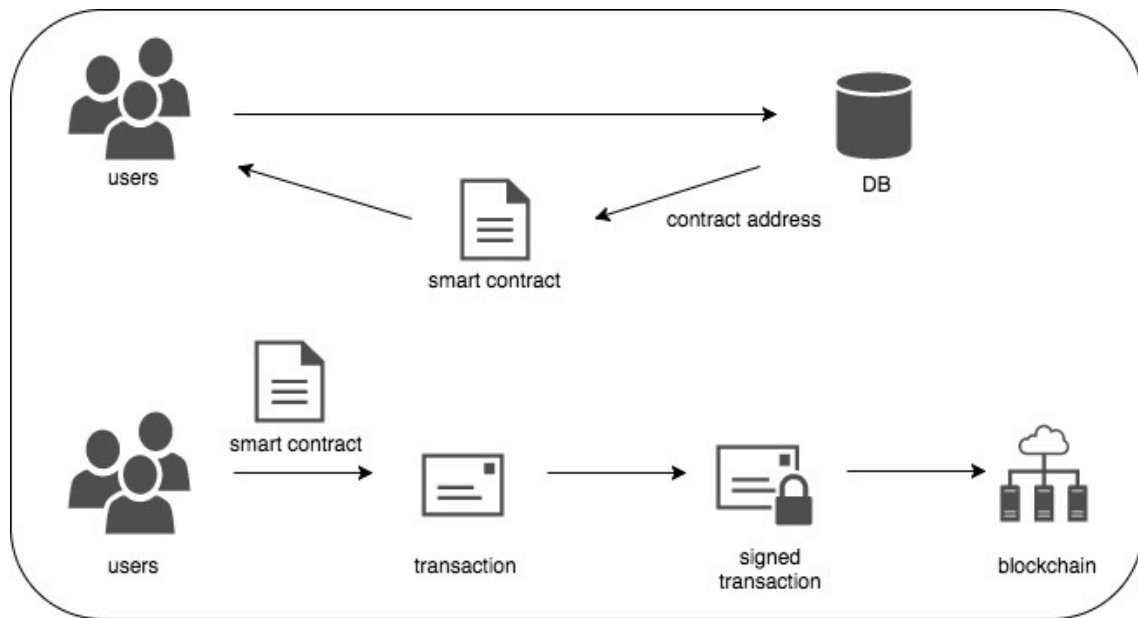
Parity

- Supported by ethereum.rb
- GUI for ethereum interaction

Lunch vote **admin** flow



Lunch vote **user flow**



Summary

- Do it on client side!
- Remember about security
- Test it and then test it
- Blockchain seems to be awesome, but we need to use it

More about **blockchain**

- Blog Nopio <https://www.nopio.com/blog/>
- Blockchain introduction
<https://marmelab.com/blog/2016/04/28/blockchain-for-web-developers-the-theory.html>
- Smart contracts <https://blockgeeks.com/guides/smart-contracts/>
- DApp tutorial
<https://medium.com/@mvmurthy/full-stack-hello-world-voting-ethereum-dapp-tutorial-part-1-40d2d0d807c2>
- Ethereum.rb <https://github.com/EthWorks/ethereum.rb>
- Solidity documentation <https://solidity.readthedocs.io/en/develop/>



Q&A

Any questions?

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