# From Traditional to Decentralized Cloud

## The Blockchain & Decentralization: Technologies, Platforms, Cloud

SoftUni Foundation




**Svetlin Nakov**
**Inspiration Manager**
**Software University**
http://softuni.bg

# About Svetlin Nakov

SoftUni Foundation

- Software engineer, trainer, entrepreneur, PhD, author of 15 books, blockchain expert

nakov.com

- 3 successful tech educational initiatives (100,000+ students):

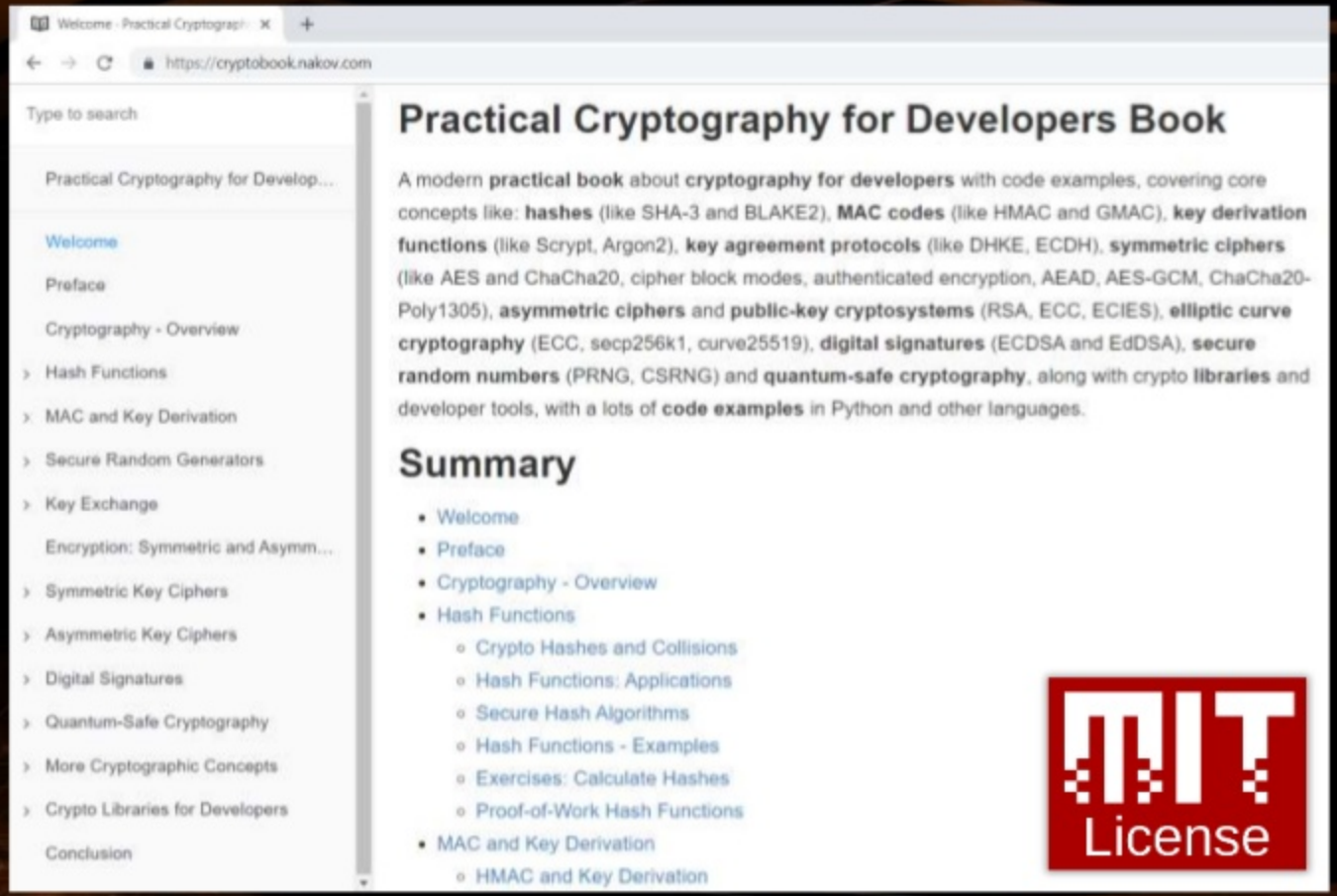
NASD
NATIONAL ACADEMY FOR SOFTWARE DEVELOPMENT

Telerik Academy

SoftUni

# Book "Practical Cryptography for Developers"

SoftUni Foundation




**Official site**:
https://cryptobook.nakov.com

**GitHub**:
https://github.com/nakov/practical-cryptography-for-developers-book

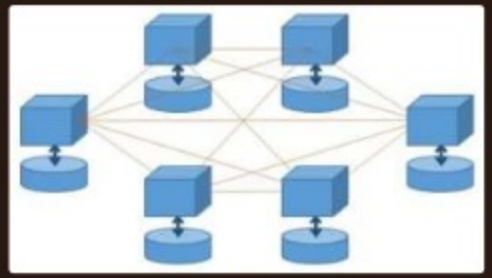
# Nakov – Blockchain & Crypto Projects


- Technical advisor @ **LockChain** / **LockTrip**: https://locktrip.com
  - Raised ~ **10.000 ETH** in token sale (Sep-Nov 2017)
  - Currently **LOC** token holders book hotels @ 20-30% better price
- Head of blockchain education (Jan-June 2018) @ **Academy School of Blockchain**: https://academytoken.com
  - Raised ~ **48M USD** in token sale (Jan-Apr 2018)
- Tech advisor for blockchain crypto startups:
  - **Tokenize Exchange**, **Bountie**, **Weidex**, **IRIS Payments Solutions** , **Aeternity Ventures**, **FFQuest**

# What is Blockchain?

SoftUni Foundation

## Distributed ledger



## Peer-to-Peer network

Nodes hold ledger of facts + history of updates

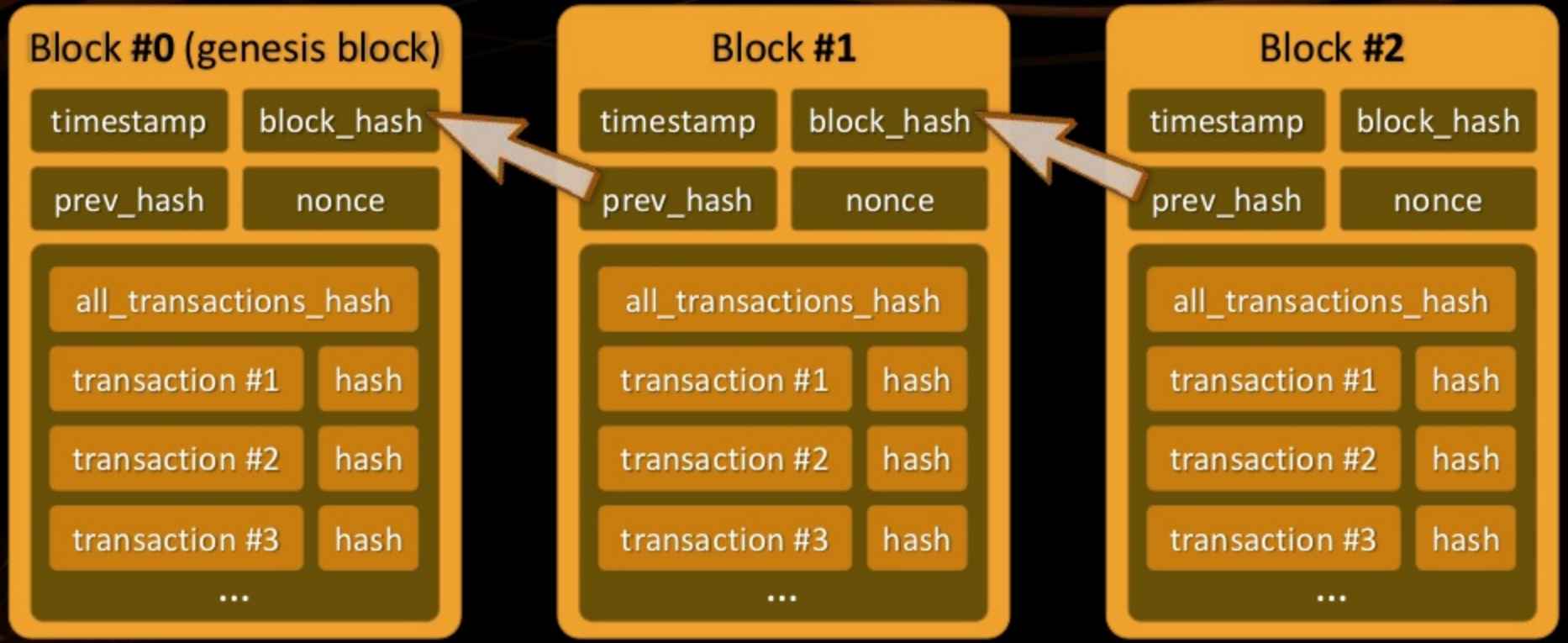
## Decentralized (no owner)

## Secure

Transactions are verified by the entire network

## Immutable

# Blockchain == Chain of Data Blocks




Demo: https://etherscan.io

# Smart Contracts: On-Chain Logic

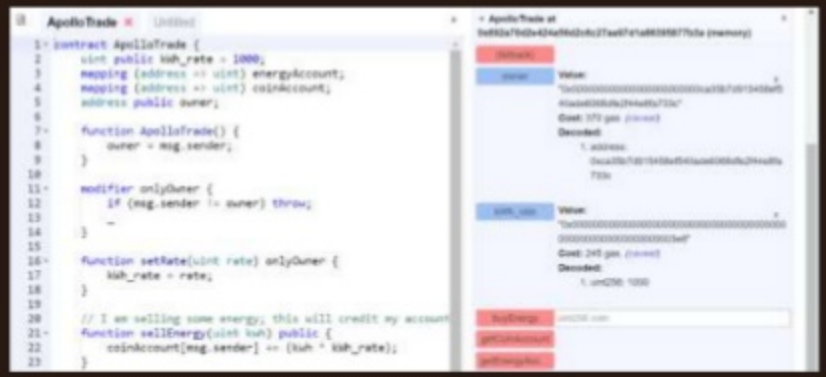
SoftUni Foundation

## Smart Contracts

Code (custom logic) running in the blockchain network

## Solidity

Blockchain programming language for the Ethereum network, running on EVM




Example: https://etherscan.io/address/0xcafe1a77e84698c83ca8931f54a755176ef75f2c

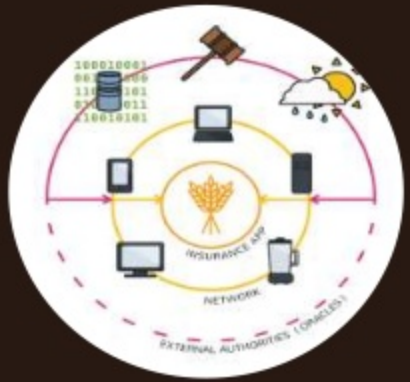
# Blockchain Applications

SoftUni Foundation

## Cryptocurrencies

Digital money with no central bank

## Decentralized applications




Removing the middlemen

## Digital investments

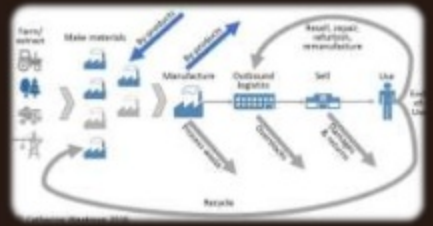
Fund raising / ICO / token sales

# Blockchain Transforms Many Industries

SoftUni Foundation

## Finances

## Supply Chain



## Healthcare

## Government

## Forecasting

## Insurance


## Mobility

## Voting

# Why Blockchain & Decentralization?

SoftUni Foundation

## Transparency

## Security

## Traceability

## Reduced Costs


## Cut-Out the Middleman

# Decentralized Computing

SoftUni Foundation

## Traditional Model

CPU + DB + storage:
local or in a data center
Payments: fiat money
Monetization: ads?

## Cloud Model

Cloud servers + cloud
DB + cloud storage
Payments: fiat money
Monetization: ads

## DApp Model

Decentralized logic
+ DB + storage + ...
Payments: crypto
Monetization: token
mechanics

# Decentralized Organizations (DAO)

SoftUni Foundation

## Decentralized Processes

Processes in the organization have no central point of control

## Decentralized Data

All data is public, transparent, and accessible to everyone

## Decentralized Governance

Stakeholders solve disputes, distribute incomes, drive the organization's future

# DAO Example: Decentralized Uber

SoftUni Foundation

- Taxi rides DApp on the blockchain (or at other DApp platform)
- Passengers request rides
  - See the drivers around and get matched with a driver
  - Each ride ends with a payment (through a smart contract)
- Drivers join and publish their location
  - See, take and serve rides
  - Collect payments (tokens) and feedback (rating)
- The DApp have no owner and it is unstoppable

# The Upcoming "Decentralized Cloud"

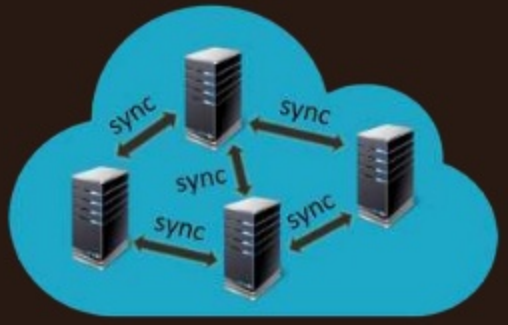
SoftUni Foundation

## Classical Public Cloud

- Cloud computing & PaaS
- Cloud databases
- Cloud storage
- Other cloud services

Platforms: AWS, Azure, Google

## Decentralized Cloud



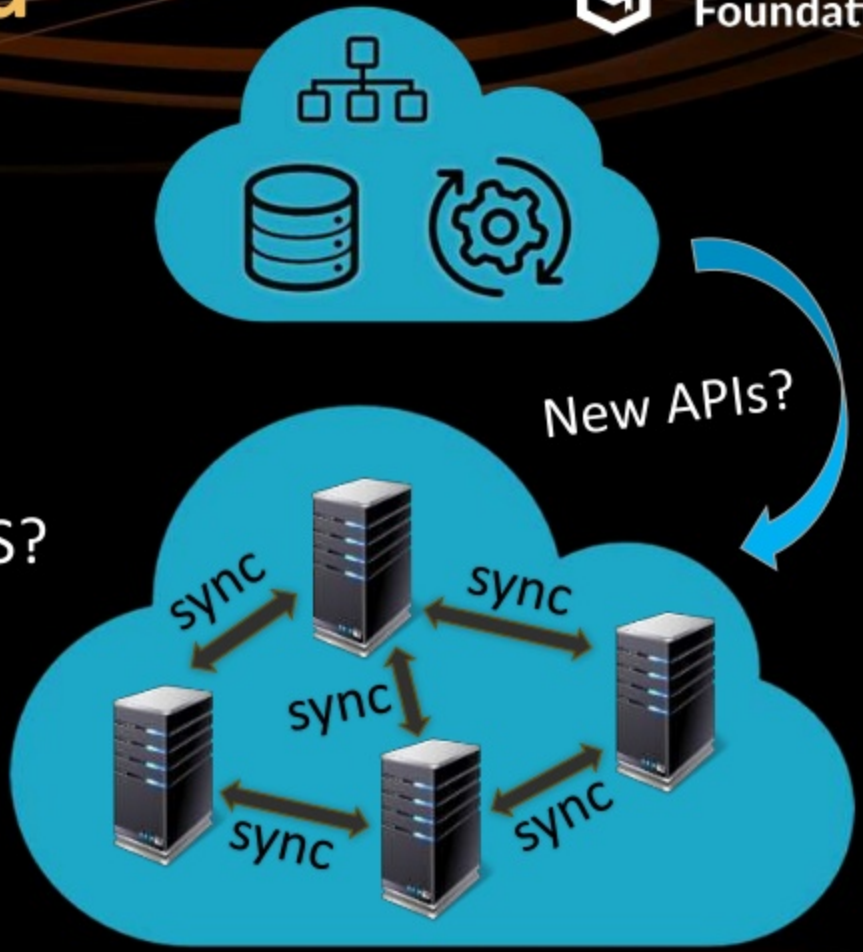

- Decentralized computing
- Decentralized databases
- Decentralized storage
- Other decentralized services

Platforms: EOS, TRON, Ethereum

# The "Decentralized Cloud"

SoftUni Foundation

- **Miners** and mining companies
  - Provide decentralized services
    - App hosting, DB, storage, etc.
  - Incentivized by token economy
  - Big players like Microsoft and AWS?
- **Developers** and **businesses**
  - Use decentralized services to write and run DApps
  - Pay by tokens or by staking



# Decentralized Infrastructure & Web 3.0


- Smart contract platforms (programmable blockchains)
  - Ethereum, EOS, Æternity, LockTripChain, POA Network
- Decentralized storage
  - IPFS, Storj, Filecoin
- Decentralized databases
  - BigChainDB, Bluzelle, Orbit DB, BlockStack, Fluence
- Decentralized messaging & append-only logs
  - IPFS Log, Matrix

# Web 3.0

SoftUni Foundation

# From Traditional to Decentralized Cloud

SoftUni Foundation

Questions?