

Blockchain Beyond the Hype: Hackpack

September 13, 2021 / 4:00 PM - 5:00 PM ET

Description

Blockchain is a fascinating field, yet it is sometimes difficult to see past the marketing hype and understand what is the fundamental value proposition of the many projects in the field. Many people get this wrong, and many people have lost. In this workshop, we'll go to fundamentals and understand what a blockchain is, but most importantly, what it isn't.

Learning Outcomes

This is what you will walk away from the workshop able to do:

- Know which fundamental problem does a Blockchain solve
- Understand in high-level how a Blockchain does that
- Be aware of the fundamental blockchain problems and limitations
- How newer Blockchain projects are trying to counter said disadvantages

Prerequisite Knowledge

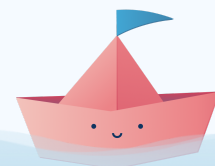
In order to get the most out of this workshop you should be comfortable with the following concepts:

- High-level understanding of basic Cryptographic operations, such as hashing, signing, and asymmetric encryption.

Pre-Workshop Checklist

Before the workshop, please make sure you complete the following items:

- Brush up on basic high-level understanding of Cryptography such as hash functions, asymmetric encryption, and signatures.
- Get ready to learn!



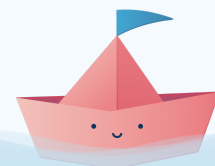
Timeline (1 hour)

Time	Module	Description
30 min	Value propositions of a Blockchain	Explore a Blockchain fundamentally - what does it guarantee, and how. You will also get to explore a live and running Blockchain yourself :)
10 min	Bitcoin, how does it work, and why does it have value?	We will go over how currencies work at a very high-level, why bitcoin is a completely different model, and how it uses blockchain to create value.
10 min	Ethereum and its smart contract ecosystem	We will introduce Ethereum as another very successful example on the application of blockchain tech.
5 min	Up next for Blockchain projects	What problems are left unsolved, and which other projects are working on them.

Workshop Lead Contact

Zvezdin Besarabov

@Zvezdin#7454 (Discord handle)
me@zvezd.in



Additional Resources

Hack the North Resources

[Hack the North 2021 Event Schedule](#)

Check this out to stay up-to-date on activities, workshops, and other key happenings this weekend.

Workshop-Specific Resources

[Ethereum Whitepaper](#)

For good general Blockchain understanding

[Ethereum Yellowpaper](#)

Goes very very deep into Ethereum's Virtual Machine, and how exactly it works to execute smart contracts correctly and consistently.

[Tendermint](#)

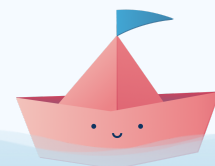
A framework for building separate blockchain networks specialised in running any particular computer program. Has a different consensus algorithm called "pBFT" you might want to look into. It has different compromises compared to Ethereum, Bitcoin.

[Cosmos SDK](#)

The standard way of developing applications for use in Tendermint blockchains. Written in Go, the Cosmos SDK provides you with a convenient, secure, and modular way of developing blockchain applications.

[Cosmos Network](#)

A blockchain network that aims to connect many different Tendermint blockchain networks with the idea that they form one ecosystem. Keep in mind that Tendermint blockchains have their own independent consensus mechanism, and Cosmos does not change that. They propose an "Inter Blockchain Communication" protocol that allows individual blockchains with otherwise separate consensus



building mechanisms to trust each other. It is still WIP and information about it is scarce, but from what they've published, how it works is at least very interesting.

Polkadot

A competitor to Cosmos Network, Polkadot's advantage is that it takes an entirely different take on consensus protocols. Polkadot aims to create an ecosystem with interoperating blockchains, but its compound blockchains do not have independent consensus. In fact the entire group of all blockchains runs under the same consensus. Usually, in order for that to happen, you have to sacrifice scalability by a long shot. However, Polkadot has worked around this with a clever consensus protocol.

Parity Substrate

The standard (and only!) way of developing blockchain applications for the main Polkadot blockchain. Written in rust, it also helps you develop convenient and secure blockchain applications.

Awesome lists on Blockchain!

Take a look at those, a very broad collection of useful resources.

