

Developing on Hyperledger

Course Summary

Description

Hyperledger is an open source collaborative effort created to advance cross-industry blockchain technologies. It is a global collaboration, hosted by The Linux Foundation, including leaders in finance, banking, Internet of Things, supply chains, manufacturing and Technology.

Not since the Web itself has a technology promised broader and more fundamental revolution than blockchain technology. A blockchain is a peer-to-peer distributed ledger forged by consensus, combined with a system for “smart contracts” and other assistive technologies. Together these can be used to build a new generation of transactional applications that establishes trust, accountability, and transparency at their core, while streamlining business processes and legal constraints.

Think of it as an operating system for marketplaces, data-sharing networks, micro-currencies, and decentralized digital communities. It has the potential to vastly reduce the cost and complexity of getting things done in the real world.

Only an Open Source, collaborative software development approach can ensure the transparency, longevity, interoperability, and support required to bring blockchain technologies forward to mainstream commercial adoption. That is what Hyperledger is about – communities of software developers building blockchain frameworks and platforms.

Topics

- Brief history of Hyperledger project
- What is Hyperledger fabric?
- Ethereum versus Hyperledger
- Hyperledger Architecture overview
- Infrastructure setup#
- Chaincode development on Hyperledger#

Audience

This course is designed for those with coding experience and who want to understand what Hyperledger is about – communities of software developers building blockchain frameworks and platforms.

Prerequisites

This course is highly technical in nature and would require the student to be comfortable with coding. To prepare for the class all students MUST:

- Provide their own computer (Mac/PC/Linux)
- Carry out the prep work two weeks prior to the Bootcamp. Student will be required to follow the instructions to download and install software on their machines. Remote help will be provided to get the students up and running.
- Have working knowledge of at least one programming language

Duration

Two days

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Course Outline

- I. *Brief history of Hyperledger project*
- II. *What is Hyperledger fabric?*
- III. *Ethereum versus Hyperledger*
 - A. Technology
 - B. Use cases
 - C. Support
- IV. *Hyperledger Architecture overview*
 - A. CA,
 - B. Orderer,
 - C. Peers
 - D. MSP
 - E. Clients
- V. *Infrastructure setup#*
 - A. Docker containers for fabric
 - B. Using the tools such as cryptogen, configtxgen,
 - C. Using Fabric-CA Client and Server
- VI. *Chaincode development on Hyperledger#*
 - A. Simple Development environment setup
 - B. Developing and testing chaincode using Go
 - C. Developing client apps using Node SDK