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Sign up

Solana training: next-generation blockchain
2 days (14 hours)

Presentation

Our Solana training course will enable you to develop a more modern blockchain than Bitcoin and etherium. Solana is a fast-growing cryptocurrency thanks to its profitability, speed and environmental friendliness. Solana also enables developers to easily create decentralized applications focused on the transfer of value from one party to another.

Our program will familiarize you not only with the key concepts of Solana, but also with the basic concepts of the Rust programming language, which is essential for the development of this blockchain. You'll learn about the key concepts of memory management and the ownership system.

Our training will teach you how to create dApps in the Anchor framework and deploy them with Solana, as well as how to secure your programs against all common attacks. Our program includes security audits.

Like all our training courses, it will be run on the latest version of the tool: Solana 1.17.

Objectives

- Understanding Solana's concepts
- Understanding Rust concepts
- Creating dApps with Anchor
- Mastering the development of NFTs

Target audience

- **Developers**
- Anyone with an interest in cryptocurrencies

Prerequisites

- Programming language experience recommended
- Knowledge of blockchain and cryptocurrencies

Our Solana training program

INTRODUCTION TO SOLANA

- Introducing Solana and its distinctive features
- Proof of History (PoH) technology
- Configuring the development environment
- Getting started with Solana CLI
- Introduction to Smart Contracts

RUST FUNDAMENTALS FOR SOLANA DEVELOPMENT

- Rust programming basics
- Memory management and ownership
- Advanced features and error handling
- Concurrency in Rust and its importance in Solana
- Development tools and test environments

DEVELOP WITH ANCHOR AND CREATE DAPPS

- Introduction to the Anchor framework
- Setting up Anchor projects and basic structure
- Development of Smart Contracts functions
- Writing and running tests with Mocha
- Deploying a dApp on Solana's devnet and front-end integration

WORKING WITH TOKENS ON SOLANA

- Introduction to SPL tokens and their ecosystem
- Create, manage and interact with personalized SPL tokens
- Using Solana Pay for transactions
- Front-end integration for token management
- Good security and transaction verification practices

MANAGING NFTS AND USING METAPLEX

- Using Metaplex and Candy Machine to create NFTs

- Processes for minting, transferring and burning NFTs
- Front-end integration for displaying and interacting with NFTs
- Safety and best practices in NFT development
- Deploying and interacting with NFTs on the market

STAKING AND WALLET INTERACTIONS ON SOLANA

- Understanding staking and delegation mechanisms
- Creating and managing staking accounts
- Interaction with wallets such as Phantom
- Integrating wallets into web applications
- Security and best practices in wallet-dApp interactions

SECURITY AND ADVANCED ON-CHAIN PROGRAMMING

- Approaches to program security
- Using Program Derived Addresses (PDAs) and Cross-Program Invocations (CPIs)
- Validation of authentication and program permissions
- Prevention of common attacks and security audits
- Advanced strategies for updating and managing smart contracts

Companies concerned

This training course is aimed at both individuals and companies, large or small, wishing to train their teams in a new advanced computer technology, or to acquire specific business knowledge or modern methods.

Positioning on entry to training

Positioning at the start of training complies with Qualiopi quality criteria. As soon as registration is finalized, the learner receives a self-assessment questionnaire which enables us to assess his or her estimated level of proficiency in different types of technology, as well as his or her expectations and personal objectives for the training to come, within the limits imposed by the selected format. This questionnaire also enables us to anticipate any connection or security difficulties within the company (intra-company or virtual classroom) which could be problematic for the follow-up and smooth running of the training session.

Teaching methods

Practical course: 60% Practical, 40% Theory. Training material distributed in digital format to all participants.

Organization

The course alternates theoretical input from the trainer, supported by examples, with brainstorming sessions and group work.

Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition of skills.

Sanction

A certificate will be issued to each trainee who completes the course.