Blockchain Platforms: Tezos, Stellar, Klaytn, EOSIO, Ripple

Discover the strengths and weaknesses of blockchain platforms and choose the right one for your project.

by Aaditya Khetwani

Tezos Platform - Architecture and History

Self-Amending Protocol

Tezos was designed to have a flexible protocol that can evolve over time without the need for a hard fork.

Energy Efficiency

Tezos uses a Proof of Stake consensus mechanism which is more energy-efficient than Proof of Work.

XTZ Token

The native cryptocurrency, XTZ, is used for transaction fees and as a reward for block validators.

Stellar Platform - Use Cases and Advantages

Stellar Consensus Protocol

SCP is a fast and secure consensus mechanism that doesn't require mining.

Decentralized Exchange

Stellar has a built-in DEX that can be used to trade various assets, including fiat and crypto.

Low Transaction Fees

Stellar's transaction fees are a fraction of a cent, making it more affordable for users.

Anchor System

Stellar has an anchor system that allows users to exchange assets between networks.

Klaytn Platform - Features and Benefits

1

Klaytn Governance Council

The council is composed of leading industry players and oversees the development of the Klaytn platform.

2

Innovative Technologies

Klaytn uses advanced technologies like a Dual Node Structure and a BApps Booster to enhance performance and usability.

3

Klaytn Service Partners

Klaytn has a network of partners who provide technical support, marketing, and business development services.

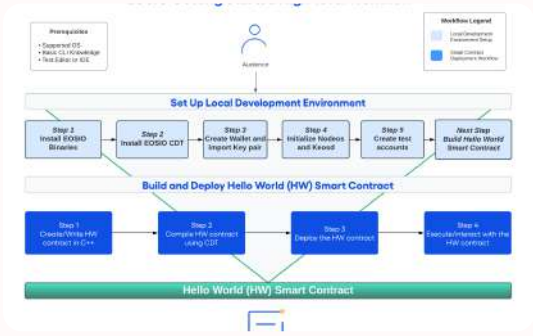
EOSIO Platform - Consensus and Governance

EOSIO Software

EOSIO is a decentralised software platform that facilitates the development of dApps.

Delegated Proof of Stake

EOSIO uses a variation of the PoS mechanism called Delegated Proof of Stake.



EOSIO Constitution

EOSIO has a constitution that outlines the rights and responsibilities of network participants.

Ripple Platform - Cross-Border Payments and Partnerships

1 XRP Ledger

Ripple uses the XRP Ledger, a decentralised open-source blockchain technology, to enable cross-border payments.

2 Partnerships

Ripple has formed partnerships with over 350 financial institutions, including Santander and American Express.

3 RippleNet

RippleNet is a global network that connects banks, payment providers, and digital asset exchanges.

Comparison of Each Platform's Strengths and Weaknesses

Tezos

- Flexible protocol
- Energy-efficient consensus mechanism
- High transaction fees
- Steeper learning curve

Stellar

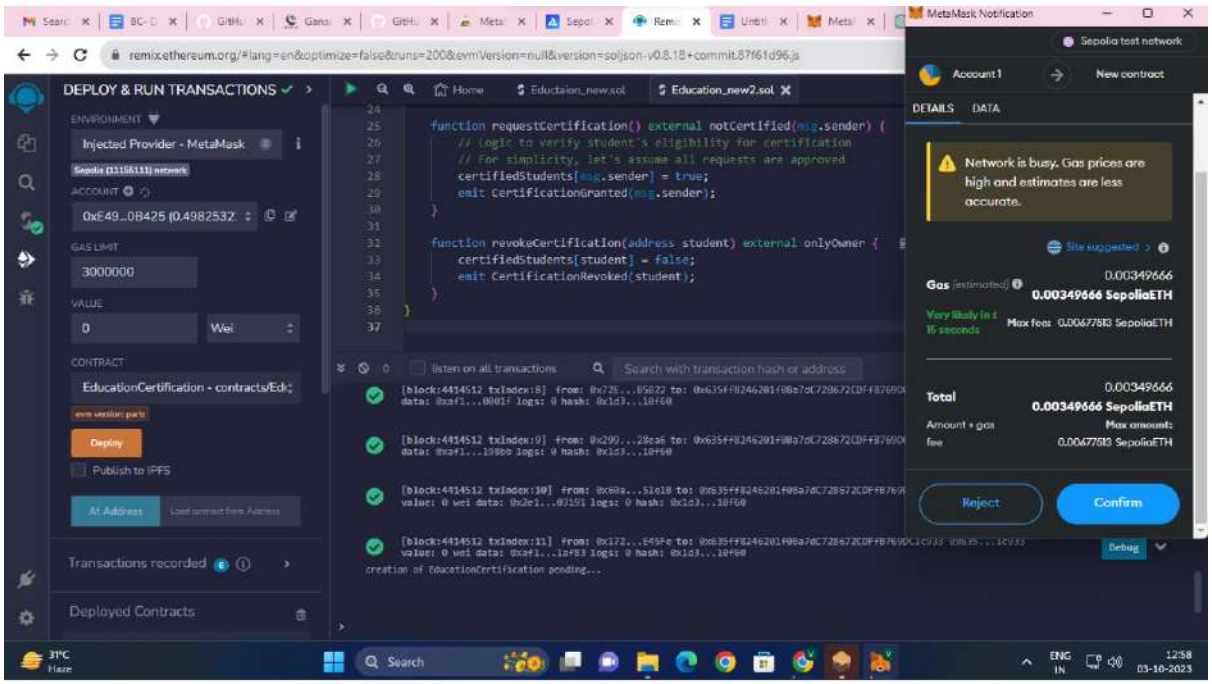
- Fast and secure consensus mechanism
- Low transaction fees
- Limited smart contract functionality
- Still a relatively new platform

Klaytn

- Centralized governance structure
- Innovative technologies
- Less developed ecosystem
- Restricted access for developers

EOSIO

- Advanced smart contract functionality
- Fast and scalable performance
- Centralized governance
- Less community participation


DEPLOY & RUN TRANSACTIONS
ENVIRONMENT
Injected Provider - MetaMask
ACCOUNT
0xE49...0B425 (0.4982532
GAS LIMIT
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VALUE
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CONTRACT
EducationCertification - contracts/Edu
Deploy
Publish to IPFS
At Address
Transactions recorded
Deployed Contracts
Home
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Education_new2.sol
function requestCertification() external notCertified(msg.sender) {
// Logic to verify student's eligibility for certification
// For simplicity, let's assume all requests are approved
certifiedStudents[msg.sender] = true;
emit CertificationGranted(msg.sender);
}
function revokeCertification(address student) external onlyOwner {
certifiedStudents[student] = false;
emit CertificationRevoked(student);
}
}
Listen on all transactions
Search with transaction hash or address
creation of EducationCertification pending...
MetaMask Notification
Sepolia test network
Account 1
New contract
DETAILS
DATA
Network is busy. Gas prices are high and estimates are less accurate.
Site suggested
Gas (estimated)
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Max fee: 0.00677583 SepoliaETH
Total
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0.00349666 SepoliaETH
Amount + gas fee
Max amount:
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Reject
Confirm
Search
ENG
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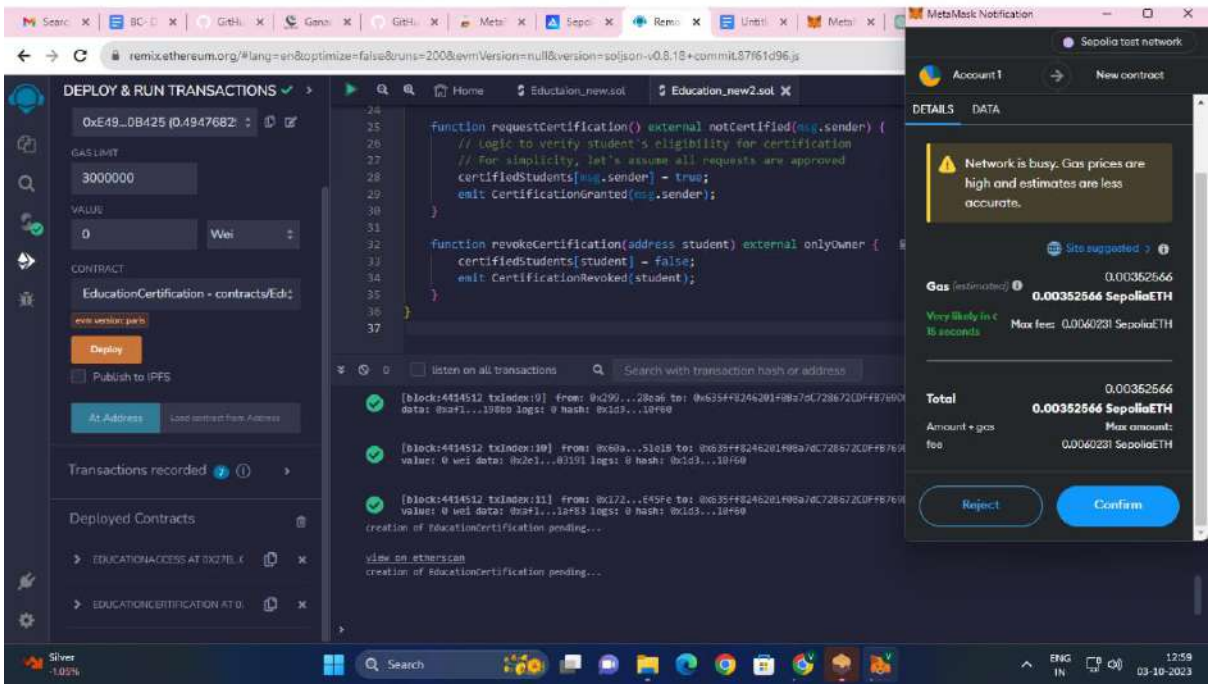
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EDUCATIONACCESS AT 0X27D...
EDUCATIONCERTIFICATION AT 0...
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Listen on all transactions
Search with transaction hash or address
creation of EducationCertification pending...
view on etherscan
creation of EducationCertification pending...
MetaMask Notification
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DETAILS
DATA
Network is busy. Gas prices are high and estimates are less accurate.
Site suggested
Gas (estimated)
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Max fee: 0.0060231 SepoliaETH
Total
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0.00352566 SepoliaETH
Amount + gas fee
Max amount:
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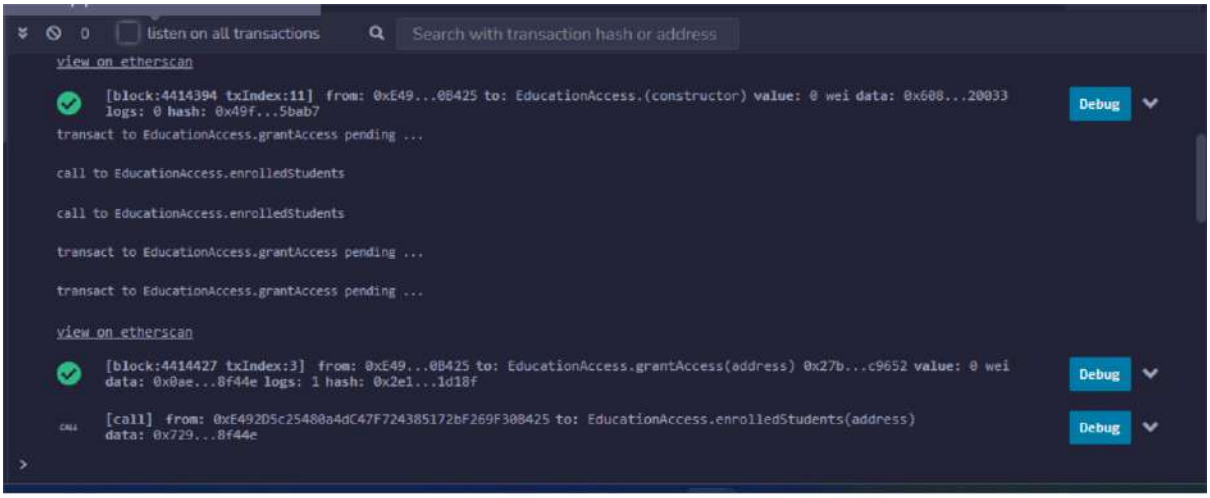
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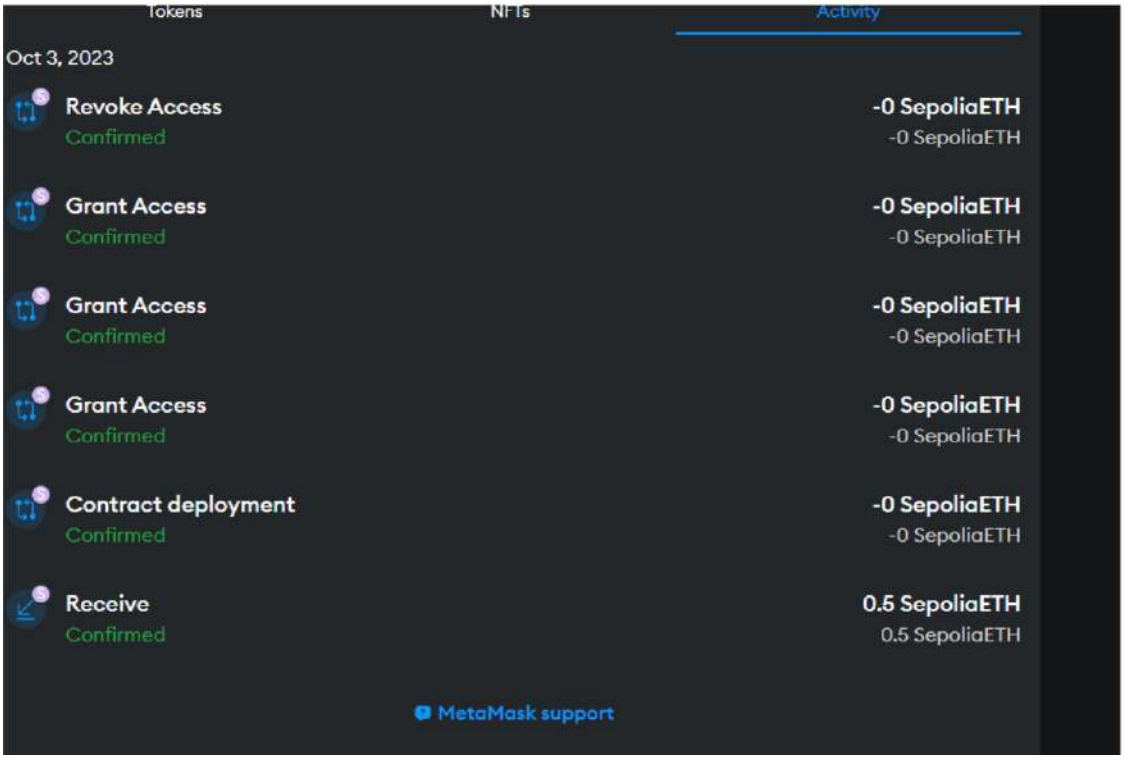
listen on all transactions
Search with transaction hash or address
view on etherscan
[block:4414394 txIndex:11] from: 0xE49...0B425 to: EducationAccess.(constructor) value: 0 wei data: 0x608...20033 logs: 0 hash: 0x49f...5bab7
Debug
transact to EducationAccess.grantAccess pending ...
call to EducationAccess.enrolledStudents
call to EducationAccess.enrolledStudents
transact to EducationAccess.grantAccess pending ...
transact to EducationAccess.grantAccess pending ...
view on etherscan
[block:4414427 txIndex:3] from: 0xE49...0B425 to: EducationAccess.grantAccess(address) 0x27b...c9652 value: 0 wei data: 0x0ae...8f44e logs: 1 hash: 0x2e1...1d18f
Debug
CALL
[call] from: 0xE492D5c25480a4dC47F724385172bF269F30B425 to: EducationAccess.enrolledStudents(address) data: 0x729...8f44e
Debug
>


Tokens
NFTs
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Oct 3, 2023
Revoke Access
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Contract deployment
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-0 SepoliaETH
Receive
Confirmed
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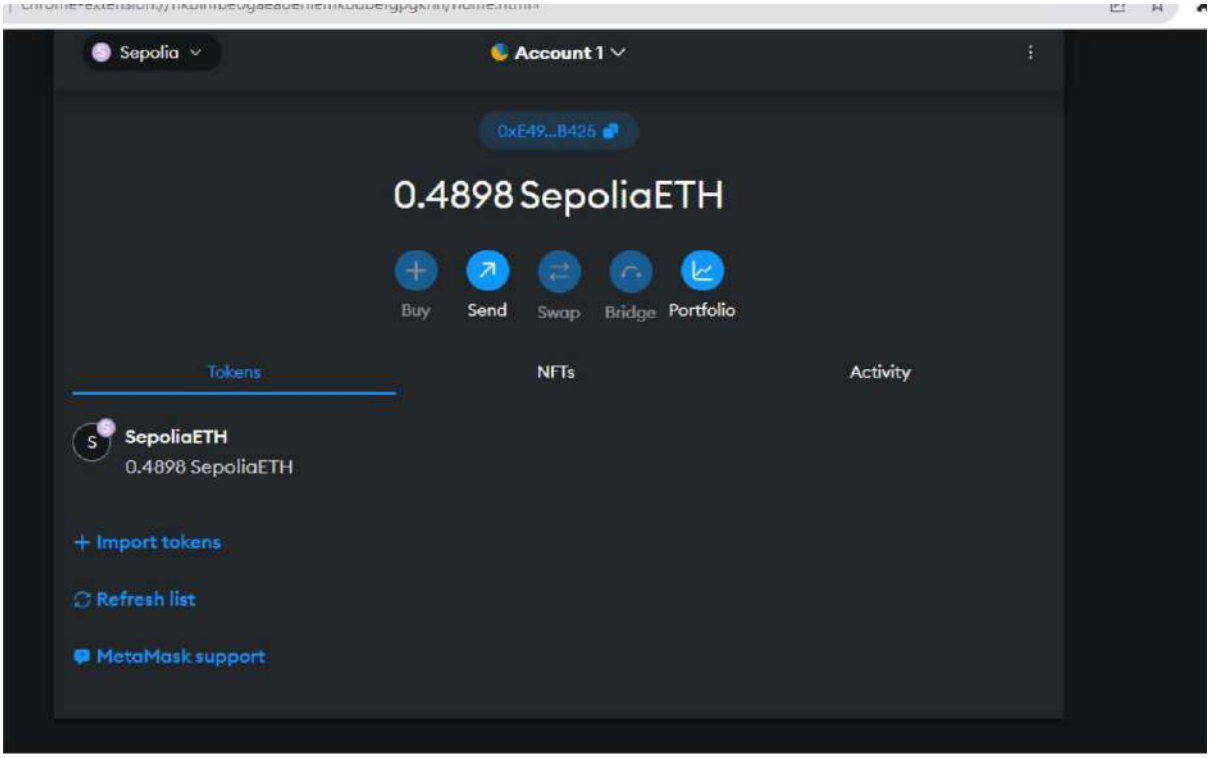
MetaMask support


Sepolia
Account 1
0xE49...B425
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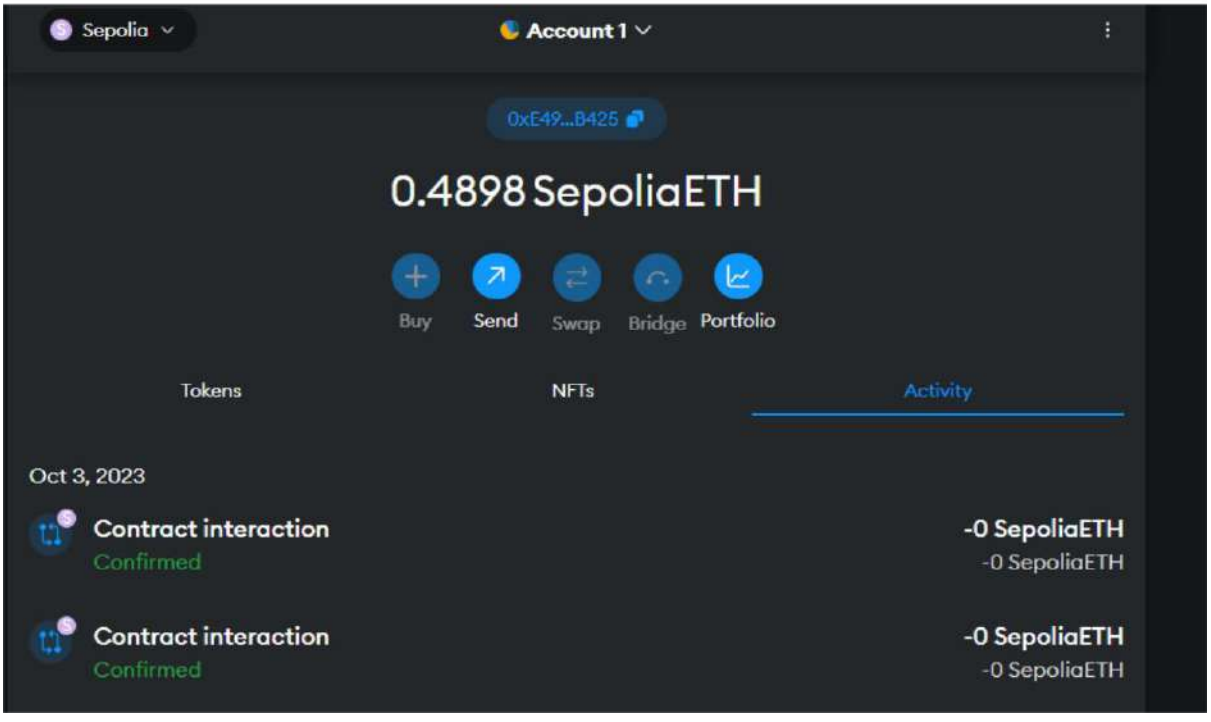
Buy
Send
Swap
Bridge
Portfolio
Tokens
NFTs
Activity
SepoliaETH
0.4898 SepoliaETH
+ Import tokens
Refresh list
MetaMask support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