Osiz Technologies
Technology Through Innovation

Blockchain Development - Tron Fork

Scope of Work

Delineation - Tron Fork

Tron is a robust blockchain ecosystem designed and developed by blockchain developers all over the world, which follows the philosophy of "Decentralize the Web". There are multiple kinds of products involved in the Tron ecosystem, including public chains, wallet clients, decentralized applications(DAPPs), Etc. These products are closely related to each other, and together, this supports the stability of the whole ecosystem.

Tron public chain realizes the design of highly abstract modularisation. It separates the system into several core modules, including the underlying network, data storage, consensus, transaction actuator, TVM, and application layer interface.

NOTE: The native token is mentioned as ABC in the proposal and it has its own token standard to mint new tokens

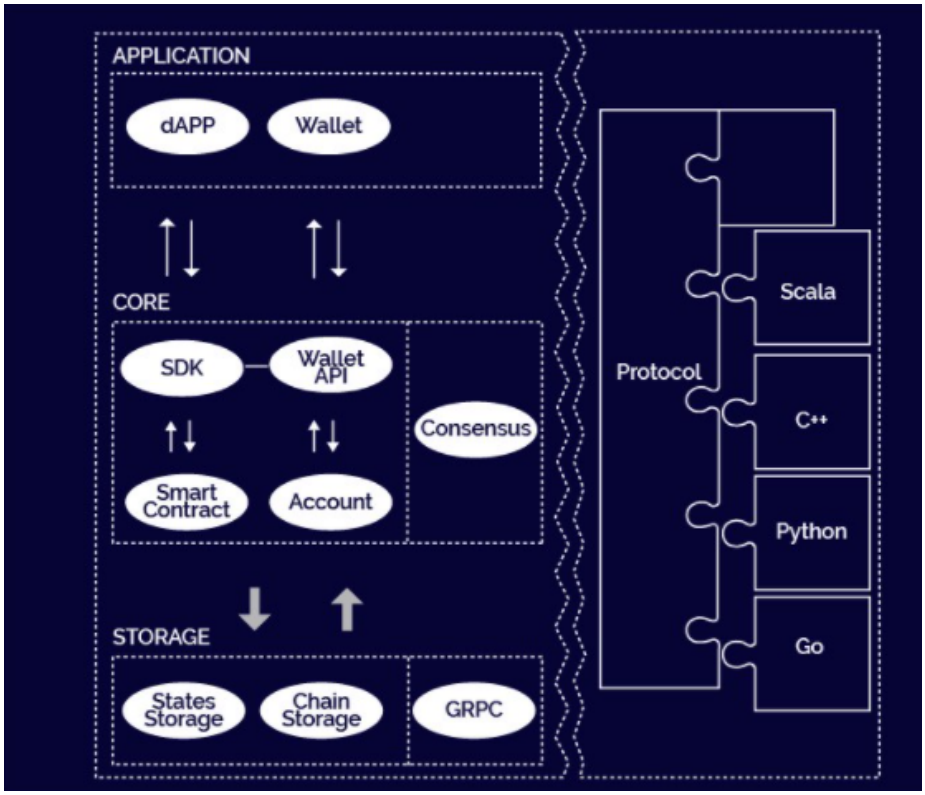
Technicalities

Consensus Algorithm - Delegated Proof Of Stake
No. of Validators - 21 (Optional)
Mean Block Time - ~3s (Variable)
Programmability - Support TVM-compatible smart contracts
Cross Chain - Proposed chain comes with efficient native dual chain communication; Optimized for scaling high-performance dApps that require fast and smooth user experience

DPoS Consensus

The DPoS consensus selects some nodes as witnesses in the blockchain system based on the number of votes they receive. First, when the blockchain system starts to operate, a certain number of tokens will be issued, and then the tokens will be given to nodes in the blockchain system. A node can apply to be a witness candidate in the blockchain system with a portion of the tokens. Any token-holding node in the blockchain system can vote for these candidates. Every t period of time, the votes for all the candidates will be counted. The top N candidate nodes with the most votes will become witnesses for the next t period. After a period of time, the votes will be counted again to elect the new witnesses, and the cycle continues.

ARCHITECTURE



Major modules

1. Complete Network

- Explore the transaction history and blocks on the chain, via Our Blockchain Explorer, API, and node RPC interfaces.
- Run a full node to listen to and broadcast live updates on transactions, blocks, and consensus activities
- Extract other data of the proposed Chain via full node or APIs
- Develop tools and applications to help users use Chain and DEX
- Issue new tokens to digitize assets
- Migrate existing DApps
- Run a full node to listen to and broadcast live updates on transactions, blocks, and consensus activities
- Become a validator of New chain
- Develop wallets and tools to help users use Dapps

2. Wallet | Native Extension

- Send and receive ABC and other chain-based tokens cross-chain
- Explore the transaction history and blocks on the chain, via Own Blockchain, API, and node RPC interfaces.
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- Explore the transaction history and blocks on the chain, via your Own Blockchain, API, and node RPC interfaces.

3. Block explorer (Testnet / mainnet)

4. Compiler for deploying smart contracts

5. Interface for issuing tokens

6. Native currency and token standard

ABC

ABC is the primary currency used in the Proposed network. ABC can be used to vote for super representatives and obtain bandwidth. Freezing the ABC balance in a wallet gives the user Chain Power (TP in Tron), which is used to vote for Super Representatives (SRs).

ABC10

ABC-10 tokens are issued by system contract. ABC-10 is a technical token standard supported by the Proposed blockchain natively without the Tron Virtual Machine (TVM). Every account is capable of issuing tokens at the expense of 1024 ABC. Users can lock their tokens separately. To issue tokens, the issuer needs to specify a token name, total capitalization, the exchange rate to ABC, circulation duration, description, website, maximum bandwidth points consumption per account, total bandwidth points consumption, and token freeze.

ABC20

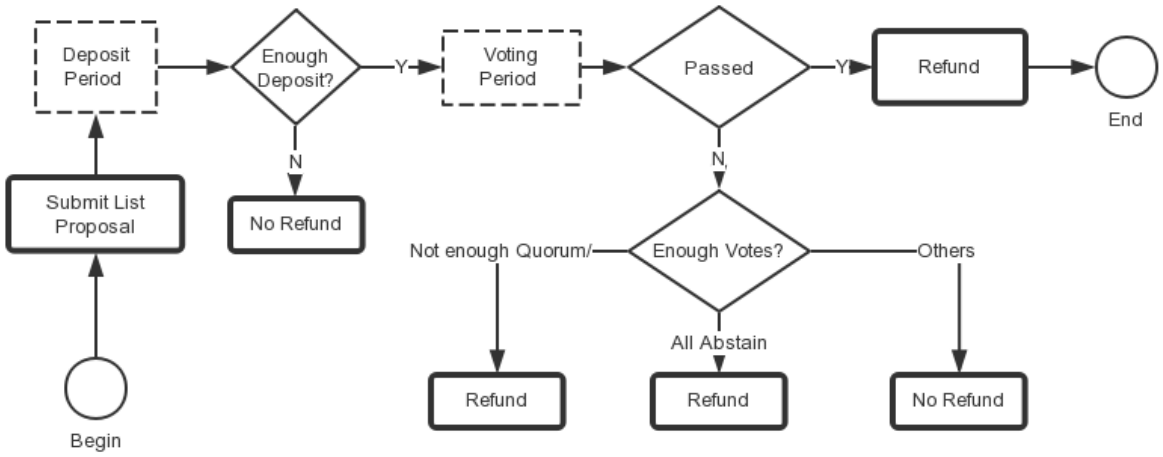
ABC-20 is a technical standard used for smart contracts on the Proposed blockchain for implementing tokens with the Tron Virtual Machine (TVM). It is fully compatible with TRC-20.

ABC721

ABC-721 is a set of standard interfaces, for issuing non-fungible tokens(NFT) on the Proposed network. ABC-721 is fully compatible with TRC-721.

- Functionality for a native token named ABC and token standard let's say ABC20 will be implemented
- To digitize assets, and use Our Chain as an underlying exchange/transfer network for the assets
- Send, receive, burn/mint, and freeze/unfreeze tokens
- Submit an on-chain governance proposal for the Proposed Chain

GOVERNANCE



Complete Network - Ecosystem

- Decentralized complete blockchain network
- Users on the network will be able to create their own tokens and build smart contracts
- Dapps on the network and make use of Governance along with the Wallet | Block explorer & API as listed below

Other Technicalities Covered

- Consensus Structure
- Node Roles
- Validator Node
- Witness Node
- Accelerated Node
- Blocking Structure

- Blockchain State
- Cryptographic Design
- Account and Address
- Keys
- Address
- Signature

Smart Contract Development

- A contract will be created for the token in which all the functionalities will be built in with the token's unique characteristics and features
- This contract will be deployed in the platform for any kind of transaction.

Wallet

- Send | Receive
- Deposit | Withdraw
- DApp compatibility

Own Node

Once the Entire Blockchain is developed, Any Exchange Platforms or Developers can use our Blockchain to set up a New Node from the Master Node, Using this any Platforms can use/generate our Wallets to Store the Coins/Tokens.

Feasibility checks

What is your experience with blockchain development?
> 7+ Years

What is the scope of the project, and how long do you anticipate it will take to complete?

> It is mentioned above

How will you ensure the security of the blockchain and the data stored on it?

> The required security measures will be implemented in terms of wallets & transfers

What is your process for testing and validating the blockchain before deployment?

> Our Quality Analyst team will carry out 3 levels of Testing before & after deployment

> Smart contracts will be audited internally before the deployment

What ongoing maintenance and support services do you offer after the blockchain is deployed?

> Support period is applicable in which all kind of support can be provided

How will you ensure that the blockchain is interoperable with other systems and technologies we use in our organization?

> Testing & Auditing will be done

What is your pricing model, and how will you charge for the blockchain development project?

> Project development cost is mentioned in the Document shared with Mr.Cherifi

What is your approach to project management and communication? How often will we receive progress updates, and how will we communicate throughout the project?

> Communication is through Skype and Emails

> Project updates will be provided twice a Week

Discussed Scenarios & Possibilities

1. There are two major types of Delicates
one is Importance - Its Validators
second is Contribution - Its normal users

There are two types of reward Block rewards & Voting rewards

The Validators must stake some coins to become a validators
The Validators run the peer node (mining server), then only the validator will get the Block rewards.

The users, vote for the validators, so the network will check every 6 hours, the validator's votes count and the vote counts based on the rank system defined.

Which validators have high vote counts, that validators produce the blocks. This validation and Block produce system will perform automatically

The normal users To freeze some coins then only voting power will get, After 72 hours users can able to unfreeze their coins. Once users vote for particular validators means, the users will get the voting rewards.

Transaction Work process
1. User submit the transaction
2. The transaction submitted the network
3. the Network validators validate the user submitted transaction (DPoS)
4. Once validate successfull, then Broadcaste the transaction
5. The transaction bytes data added into the blockchain

Technical Details
1. Blockchain support wallet (Address and private key)
2. Blockchain support smart contract (Solidity)

3. Blockchian is opensource , so anyone can join the validators
4. Blockchain support tokens (send and receive)
5. Blockchian support NFT's and Dapp's

Transaction Fees
Every transactions the Tx fee will be deducted, The transaction fee calculate based on the transaction size (Bytes),
Various type of transactions
1. Coin transfer
2. Token transfer
3. Contract function triggers

All transaction fess goes to genesis wallet address

Note: The genesis wallet address you unable to change after launch the blockchain

Use cases & applications

Users They can send and receive transactions in the network, and participate in staking and voting for delegates.

Delegates They are responsible for validating transactions and creating new blocks in the network. They are elected by the community through a voting system and are incentivized through block rewards and transaction fees.

Miners They perform the proof-of-work component of the consensus algorithm, adding a level of security to the network.

Validators They validate the work done by the miners and ensure that the network remains secure and stable.

Developers They build decentralized applications on top of the DPoS blockchain.

Deliverable

- Website & Admin Panel
- Wallet for Coin
- Block Explorer
- Smart Contracts
- Whitepaper
- Full Source code
- Security Measures & Free Deployment
- 50 Days of Free Technical Support

Server Specification for your project *(May extend & Upgrade based on the space acquired)*

Processor - 4 (or) 6
Memory - 16 GB (or) 32 GB
Disk Size - 1000 GB
Speed - More than 2TB Bandwidth
Operating System - Linux - Ubuntu 16.04

SECURITY MEASURES

AES Encryption Prevention - It is an Encryption algorithm used to decrypt the encrypted data in order to obtain confidential texts. It can be avoided in our solution as there are hackers out there.

Anti CSRF Token - CSRF is a Cross-site Request Forgery which is a type of attack that makes an unwanted action on a trusted site by some malicious website. Prevention measures have been taken in our solution.

XSS Clean: To avoid SQL injection

PHP End of support: We are using an updated PHP version to overcome the security holes in the old version of PHP

Missing Secure HTTP Headers

- Request/Response
- X-Frame-Options
- HTTPOnly
- Secure flag
- Software / System details disclosure

Found PHP version on HTTP Response. Malicious users can know system details to find vulnerabilities from public sources or research private exploits.

Maybe bypass the Upload of malicious files - Prevented the malicious file uploading process.

Debug mode enabled - Error from debug mode has been enabled.

Google ReCaptcha - Implementation of Google ReCaptcha during user login due to this we can protect auto login using this.

Mail ID encryption

Implementation of email encryption method. So, hackers could not decrypt/edit our email address using our DB.

- Session expiry with user re-login
- Devise-based tracking (IP Address, MAC Address/ Mobile device ID, User)
- Device-based or IP-based Admin panel login

TECH STACK (Website)

Programming Language: Mean
Smart Contract: SOLIDITY
Database: MYSQL / MongoDB
Design: Twitter Bootstrap
All browsers & Devices Responsive.