NODE STREAM POOL

www.nodestreampool.com

Multichain Network

NODE POOL PHANTOM V17.4

World's most reputable Multi Chain node pool, Mixing Security
of Blockchain and node validation with Speed of Ethereum

NODE PATH

The evolution of blockchain technology has been swift since the inception of Bitcoin, marked by continual advancements and the emergence of new challenges. Among these challenges lies the blockchain trilemma, encompassing Security, Scalability, and Decentralization. Traditionally, blockchain networks have grappled with balancing these three parameters. NODE STREAM POOL represents an innovative approach aimed at addressing this trilemma.

This paper introduces a protocol and pool system that diverges from the conventional linear chain of blocks, to operating an autonomous node pool, instead of employing Light Nodes (SPV Nodes) designed for devices with limited processing power, which rely on full nodes for validation.

We delve into the algorithms governing the creation and ordering of the NODESTREAM POOL, while also elucidating how the protocol ensures both security and scalability.

BLOCKCHAIN

Blockchain is a distributed and decentralized technology that underlies cryptocurrencies like Bitcoin and Ethereum. At its core, a blockchain is a chain of blocks, where each block contains a batch of transactions. These transactions are grouped, verified, and added to the chain in chronological order. Blockchain's core strength lies in its decentralized and secure nature. It creates an immutable record maintained by a distributed network of computers. This fosters trust and transparency, eliminating the need for a central authority. However, as blockchain adoption surges, its limitations in scalability become ncreasingly evident. Processing large volumes of transactions can be slow and expensive, hindering widespread application.

OVERVIEW

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NODE STREAM POOL

Node Stream Pool is a hybrid mechanism that combines features of both traditional blockchains and Block creation. It retains the benefits of node multichain network, such as high scalability and faster transaction processing, while integrating the security and trust of blockchain consensus mechanisms.

NODE STREAM POOL offers a potential solution to blockchain's cryptocurrency pool scalability woes. Unlike blockchains, NODE STREAM POOL don't rely on linear blocks. Instead, transactions reference previous validated transactions across all multichain networks in the pool, enabling parallel processing, faster yield earning/pool validation and potentially faster transaction speeds. This makes NODE STREAM POOL ideal for high-throughput pools.

INTRODUCTION

Blockchain networks such as Bitcoin and Ethereum (PoW version) operate on the Proof of Work (PoW) model and Proof of Stake model, where miners are responsible for creating blocks. Each block consists of new transactions submitted by users, a proof-of-Stake puzzle, and a reference to the previous block. These networks follow a linear chain structure, where new blocks are appended to the end of the longest chain while disregarding other blocks.

The security of these chains' hinges on the assumption that honest nodes are sufficiently interconnected. When a miner extends the chain with a new block, it must propagate to all honest nodes before the next block is created. Consequently, the protocol regulates the creation of new blocks to ensure that the previous block reaches the maximum number of honest nodes in time. For instance, in Ethereum, this interval is set to 10 minutes.

Node Stream pool network introduces a novel protocol that utilizes a multichain cryptographic structure to organize blocks and run nodes, hence termed NODE STREAM. Unlike traditional blockchain architectures, where blocks reference a single previous block, the blocks in NODE STREAM reference all leaf nodes of the multichain networks (Dogecoin, Ethereum, Bitcoin, Solana, Render, Litecoin). This approach

enables the inclusion of more blocks, thereby accommodating more transactions and achieving higher throughput. However, realizing this objective presents several challenges. Firstly, there is a need to mitigate the inclusion of blocks from malicious users. Secondly, a method to linearly order the NODE STERAM to determine the sequence of transactions must be established.

Illustrated by an example of a block NODE STREAM 'H', each block references all blocks known to its miner at the time of creation. The terminology associated with the NODE STREAM, demonstrated using block H as an example, Is elucidated herein.

- Past(H) = {Genesis, C, D, E} – blocks which H references directly or indirectly, and which were provably created before H;

- Future (H) = {J, K, M} – blocks which reference H directly or indirectly, and which were provably created after H;

- Anticone (H) = {B, F, I, L} – the order between these blocks and H is ambiguous. Deciding the order between H and blocks in anticone (H) is the main challenge of a traditional pool protocol.

- Tips(G) = {J, L, M} – leaf-blocks, namely, blocks with in-degree 0; these will be referenced in the header of the next block

WELL-CONNECTED CLUSTER

The initial step entails creating a node pool account, and automatically selecting a pool cluster comprising well-connected blocks from the multichain network (Dogecoin, Ethereum, Bitcoin, Solana, Render, Litecoin). This cluster is pivotal as it forms the foundation for subsequent processing steps. The selection criteria prioritize blocks with robust connectivity within the node pools. { www.nodestreampool.com}
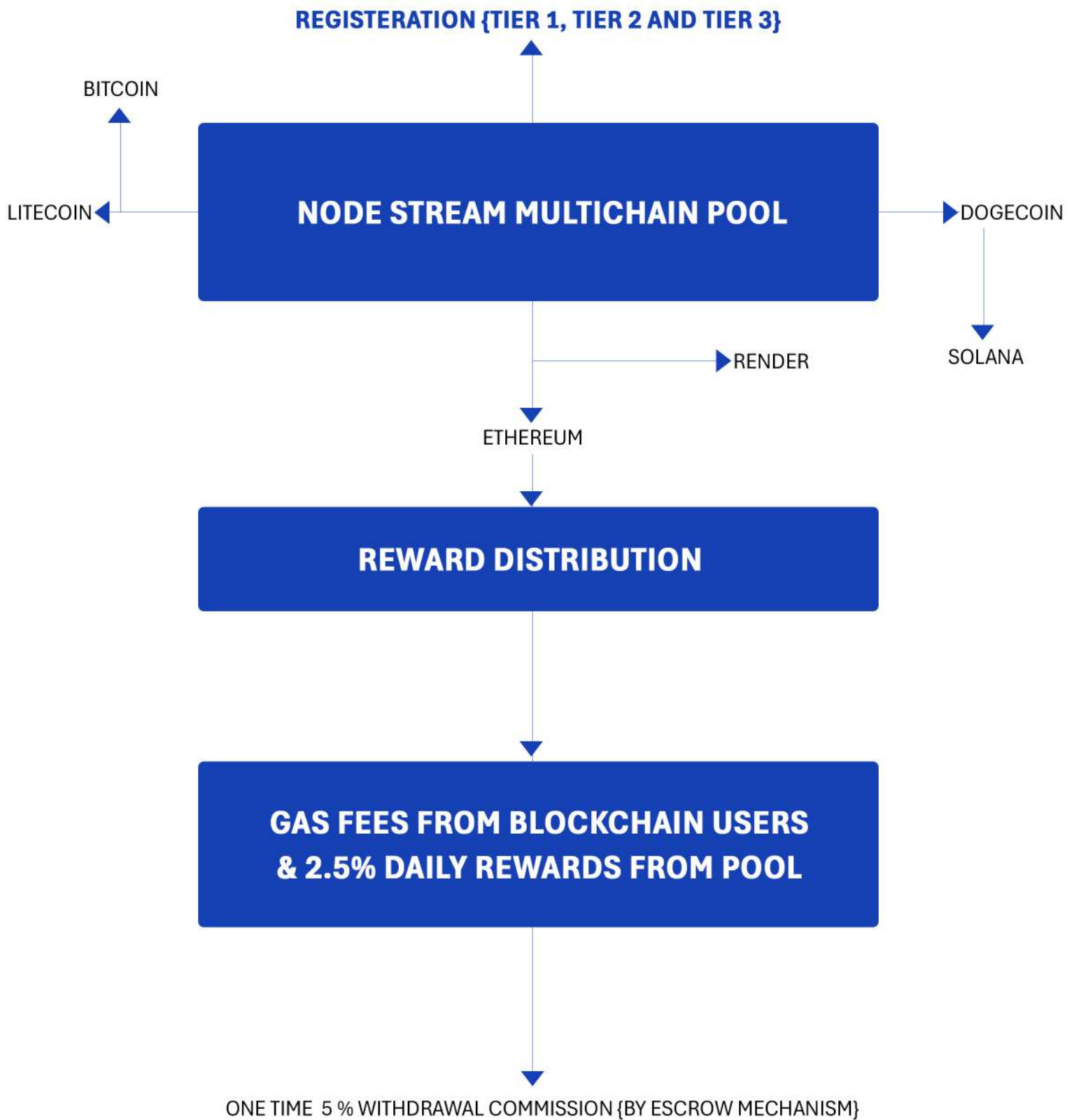
ALGORITHM 1 ORDERING THE NODE STREAM POOL

PHANTOM V17.4 facilitates transaction ordering within its Multichain network structure through an ingenious algorithm known as Greedy Heaviest Observed Sub-stream (GHOSTNODE)

CORE CONCEPTS

Unlike traditional blockchains characterized by a single, linear chain, NODE STREAM POOL MULTICHAIN network architecture permits parallel block creation. Consequently, an algorithm is necessitated to ascertain the ultimate order in which transactions within these blocks are processed and validated.

ENERGY CONSUMPTION

Node Stream efficiently powers its pools by integrating solar, wind, and conventional electricity sources, generating over 20 MW daily to support blockchain operations. This diversified energy mix enhances sustainability and reduces reliance on fossil fuels, addressing concerns about increased energy consumption in blockchain technology. Advanced cryptographic measures ensure security and privacy without compromising transparency, overcoming the challenge of balancing confidentiality in public blockchains. The use of renewable energy sources also underscores the commitment to efficiency and environmental responsibility.

REGISTERATION {TIER 1, TIER 2 AND TIER 3}

BITCOIN

LITECOIN

NODE STREAM MULTICHAIN POOL

DOGECOIN

RENDER

SOLANA

ETHEREUM

REWARD DISTRIBUTION

GAS FEES FROM BLOCKCHAIN USERS & 2.5% DAILY REWARDS FROM POOL

ONE TIME 5 % WITHDRAWAL COMMISSION {BY ESCROW MECHANISM}

TIER 1	BITCOIN; Minimum 0.1 BITCOIN ETHEREUM: 0.5 ETH SOLANA: 11 SOL DOGECOIN: 10,000 RENDER: 22 LITECOIN: 27
TIER 2	BITCOIN; Minimum 0.5 BITCOIN ETHEREUM: 11 ETH SOLANA: 77 SOL DOGECOIN: 40,000 RENDER: 81 LITECOIN: 221
TIER 3	BITCOIN; Minimum 1 BITCOIN ETHEREUM: 23 ETH SOLANA: 312 SOL DOGECOIN:163,000 RENDER:93 LITECOIN: 507

PRIOTISING "HEAVINESS"

A fundamental aspect of NODE STREAM POOL involves the prioritization of blocks within the queue {Tier 1, Tier 2 and Tier 3}. Blocks that receive more references from previously validated blocks are deemed "heavier." Consequently, these heavier blocks are prioritized for processing in the node pool, being removed from the queue first.

This incentivizes miners to construct upon the most widely accepted sections of the multichain node network, progressively establishing a comprehensive order for transactions.

SECURITY

The security of the NODE STREAM POOL MULTICHAIN network protocol is upheld by several crucial pillars: Honest Majority Assumption Similar to many blockchain protocols, NODE STREAM POOL relies on the assumption that most miners participating in the network are honest actors. These miners and node validators are incentivized to adhere to the protocol's rules and contribute to the network's security. However, if a malicious majority were to gain control, they could potentially disrupt the network's functionality and compromise its security. { www.nodestreampool.com}

NODE STREAM POOL AND CHAIN DOMINANCE

The GHOST NODE (Greedy Heaviest Observed Sub-NODE) algorithm serves as a cornerstone in securing the NODE STREAM POOL MULTICHAIN network. By prioritizing blocks with more references from previously validated blocks, it encourages miners and node validators to build upon the most widely accepted portions of the node stream pool. This fosters a self-reinforcing mechanism where the chain maintained by the honest majority accumulates weight and dominance over time. While malicious actors might attempt to create "orphan branches" or engage in double-spending attacks, their efforts are likely to be futile against the superior computational power of the honest majority. Eventually, the honest chain would overtake any malicious chains due to its cumulative weight of references.

LEGAL CONSIDERATIONS

Disclaimers and Limitations of Liability

To the maximum extent allowed by applicable law, the issuer of the node pool (hereinafter referred to as "the Company"), along with its subsidiaries, affiliates, licensors, employees, agents, and contractors, explicitly disclaims all express and implied warranties. These include, but are not limited to, warranties of merchantability, fitness for a particular purpose, non-infringement, and accuracy concerning any cryptocurrency tokens, smart contracts, or related technologies. Furthermore, the Company provides no assurances or warranties for any third-party services, such as wallets or marketplaces, which users may employ to access the node pools.

Users acknowledge and accept the inherent risks associated with internet-based interactions, including the provision of sensitive information and the execution of blockchain transactions. The Company is not liable for losses resulting from: User errors, such as forgotten passwords or misconfigured smart contracts.

Data loss or server failures

Unauthorized access to digital wallets caused by phishing, malware, or brute force attacks.

The Company, its affiliates, and contractors are also not liable for any indirect, incidental, consequential, or exemplary damages. These may include loss of profits, goodwill, business reputation, data, or procurement costs for substitute services. Some jurisdictions may limit the applicability of these disclaimers, particularly concerning personal injury claims.

Governing Law and Jurisdiction

All actions or disputes arising from the use of the node pool services shall be governed by the laws of the Seychelles, the United States, Canada, and the United Kingdom, depending on jurisdictional applicability. Any legal action is subject to the exclusive jurisdiction of the courts of the Seychelles. By engaging with the Company, users explicitly waive objections to this venue.

Regulatory Compliance

The Company commits to adherence to all relevant financial and data privacy regulations in its operating jurisdictions, including KYC (Know Your Customer) and AML (Anti-Money Laundering) procedures.

Arbitration Clause

The Company and users agree to resolve all disputes exclusively through individual arbitration. These disputes will be mediated in accordance with the Centre for Effective Dispute Resolution (CEDR) Model Mediation Procedures, with a mediator nominated by the CEDR. By using the Company's services, users waive their rights to traditional court litigation.

No Class Action

All claims must be brought individually. Users agree not to bring claims as part of a class or collective action against the Company.

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