Proof of Ape ($WORK)

"Proof of work—because sometimes, the real work is just trying to teach people what it means."

Abstract

In a world where proof of stake (PoS) has become the trendy new thing, our project aims to reintroduce a bit of the old-school grind to ApeChain, an Arbitrum Orbit L3 launched by the Apecoin DAO. ApeChain, with its Ape as the native gas token and focus on usability through Arbitrum tech like Stylus, Timeboost, BoLD, and Cluster Chains, has created a highly accessible and efficient ecosystem. But where's the fun if you don't have to put in a little *WORK*?

That's where we come in, introducing **Proof of Ape ($WORK)**—a proof of work (PoW) token that brings a touch of computational sweat to a chain built for ease. By integrating a PoW mechanism on ApeChain, we aim to remind users of the raw, competitive nature of mining, offering a simplified and engaging way to experience the fundamentals of Bitcoin's mining model, all while staying true to ApeChain's ethos of accessibility and experimentation.

Why Proof of Work on ApeChain?

ApeChain was launched with a focus on creating a seamless experience for developers and users alike, featuring tools like Timeboost for prioritizing transactions and Stylus for writing contracts in Rust. But while ApeChain's design makes it easy for users to navigate, build, and transact, it lacks one crucial element: the thrill of mining.

- Our $WORK token is an homage to Bitcoin's original PoW model. It's a reminder that sometimes, earning your tokens through computational effort feels better than simply staking them.
- PoW on ApeChain isn't about competing with its PoS foundation; it's about creating a sandbox where users can learn the ins and outs of mining without needing to be Bitcoin maximalists. It's blockchain 101, but with more… monkey business.
- ApeChain's user base loves a good challenge, and our $WORK token adds just that. With every hash, users get a taste of the old-school crypto grind— no ASICs needed, just a passion for finding that perfect nonce.

What Makes $WORK, Well, Work?

The Proof of Ape smart contract (deployed at 0x1655C0EF91C7b19FD59b42b1A89eBB2bb97448Fd) is built on ApeChain, but it comes with a twist. Here's how the contract and the mining script operate:

- $WORK is an ERC20 token that represents mining rewards on ApeChain. Each successful mining attempt adds $WORK to the miner's wallet.
- The difficulty of finding a valid hash adjusts based on the number of miners, mimicking Bitcoin's own model. This keeps the mining experience fresh and challenging without fundamentally altering ApeChain's overall security.
- Users generate hashes by combining their wallet address, a nonce, and the previous block's hash. The target is to find a hash below a dynamically adjusted threshold.
- When a valid hash is found, a mining transaction is submitted to the Proof of Ape contract, and $WORK is issued as a reward. While the rewards diminish slightly over time, they're designed to keep early adopters interested without locking out latecomers.

Tokenomics

Unlike most meme coins and staking rewards, $WORK is earned through effort—measurable, CPU-crushing effort. Here's how the tokenomics play out:

- 50 $WORK per successfully mined block, with a decrease over time as more tokens enter circulation.
- Every 210,000 blocks, rewards decrease by 50%. Why? Because making it harder to earn rewards is the crypto way.
- Because we like to keep things scarce, there's a total cap of 21 million $WORK, a number you might recognize if you've read any Bitcoin literature. Yeah, we went there.
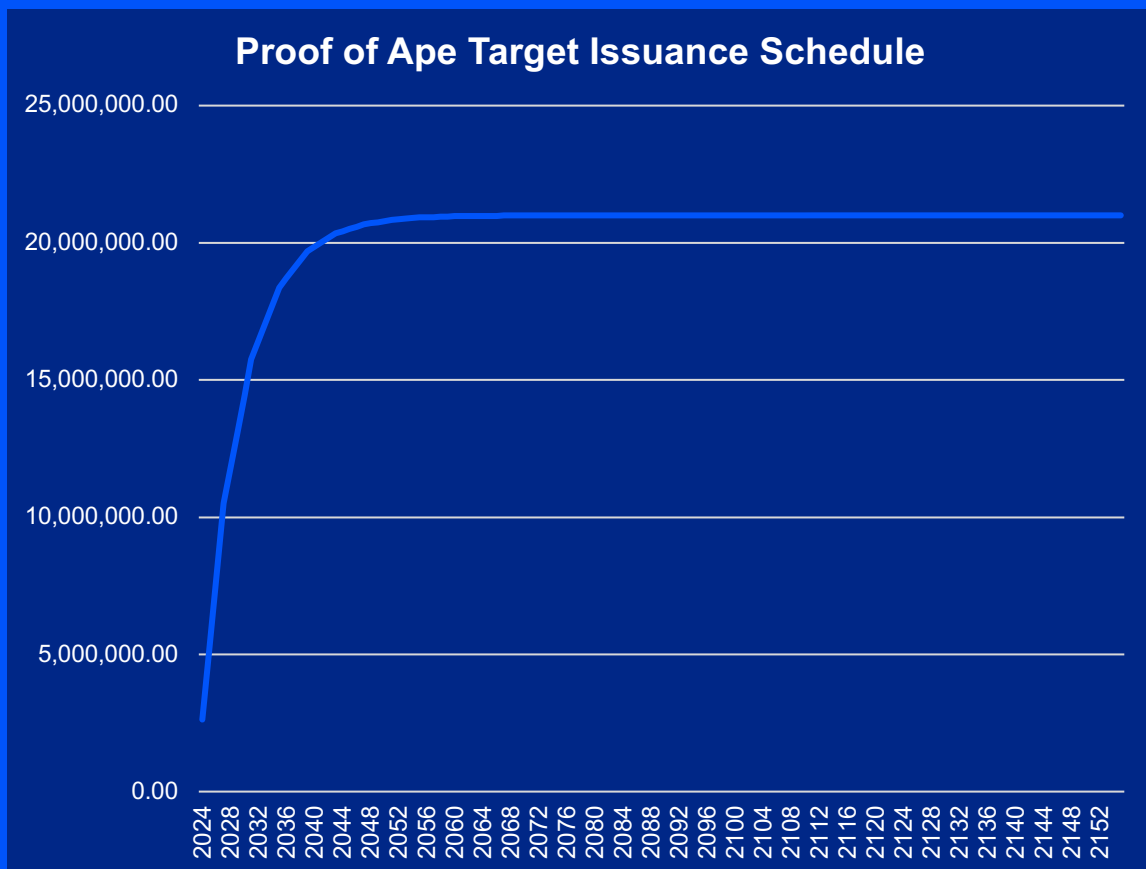

Figure 1. Proof of Ape Target Issuance Schedule

Block Data

Each mined block in the Proof of Ape ($WORK) protocol allows you to store 256 characters of data directly on-chain, offering a space for creativity and innovation:

- Messages: Leave a mark with every block—be it a shout-out, a memorable moment, or even a tiny poem. It's your chance to add a bit of personality to the blockchain.
- Protocol Building: Use these 256 characters as a foundation for new on-chain protocols. Store data pointers, create encrypted messages, or build mini-games that read data from blocks to trigger actions.

Open-Source Mining Software

To empower our miners and keep competition fierce, we're developing and publishing an open-source miner, available as both a **browser-based** and **CLI version**. This ensures that anyone can participate in mining on Apechain with powerful tools right out of the gate. The Proof of Ape smart contract is also **verified on Apescan**, allowing users to read the code, interact directly with the contract, and even build their own customized mining software.

By making the miner open source, we invite the community to innovate, optimize, and contribute. Whether you're tweaking the code to boost your hash rate or developing new mining strategies, the door is open. This approach ensures that the Proof of Ape ecosystem remains transparent, competitive, and truly community-driven.

How to Start Mining: The Simple Steps to $WORK

Mining on ApeChain with $WORK is as easy as loading up our browser miner or node mining script, pointing it at the ApeChain RPC endpoint, and watching the magic happen:

1. Import your own wallet or let the script generate one for you. If you're starting fresh, you'll need to fund your wallet with at least 0.01 Ape—think of it as the entry fee to this digital jungle.

2. Our software connects to the ApeChain WebSocket endpoint and listens for mining opportunities. It randomly generates nonces, hashes them against your wallet and the latest block, and checks if you've hit the jackpot.

3. When you find a hash that meets the difficulty target, the script automatically submits it to the contract, and you're rewarded with $WORK. If you've ever wanted to feel like you're mining Bitcoin without dealing with ASICs, this is your chance.

Proof of Ape
Miner

Wallet Information   (?)

Address: 0xE72AFA8A279742683e7069d66BA8a0410FE2F64F

Ape Balance: 0.138671033974726331 APE

WORK Balance: 96350.0 WORK

[👁 Show Private Key]   [🗑 Clear Wallet]

Blockchain Info

Current Difficulty: 237215

Block Height: 6209

Block Reward: 50.0 WORK

Mining Controls

☐ Stop Mining

Hash Rate	Total Hashes
203 H/s	**801,991**

Mining Duration
00:00:19

Mining History

Mined Blocks

Block Number	Miner
6161	0xc13fe6c653d2cAa3E58Ec5CF8092911FEBb98A7d
6162	0xc13fe6c653d2cAa3E58Ec5CF8092911FEBb98A7d

Figure 2. Alpha Mining Software

APECHAIN

POWERED BY 🐵 ApeCoin

Why We Did This?

Our goal with Proof of Ape ($WORK) is not to compete with ApeChain's existing structure but to offer an alternative way to engage with the network. We believe that by making mining accessible and a little bit chaotic, we can spark curiosity and teach a new generation of users about the underlying mechanics of Bitcoin's PoW model.

Conclusion

Proof of Ape ($WORK) isn't just another token—it's a bridge between the old and the new, a way to bring the excitement of mining to a community that's used to staking. Whether you're a seasoned Bitcoiner or just someone curious about what all this PoW fuss is about, we hope $WORK offers a fresh way to engage with ApeChain and learn about the backbone of blockchain security.

So load up your wallet, fire up the mining script, and start grinding those hashes. Because at the end of the day, we all have to put in the $WORK.