Phoenix Global PHB Whitepaper

July 2021

Phoenix Global

Phoenix Global is the blockchain that hosts next-generation consumer-focused DApps. Phoenix Oracle relays real-world asset prices to the blockchain. PHB, the Phoenix Global cryptocurrency, executes transactions on the blockchain. Phoenix Chain is sidechain-agnostic and bridges with Binance Smart Chain (BSC), Ethereum, Solana, NEO, and Tron. Phoenix Global augments Big Data-based Artificial Intelligence (AI) via Federated Learning.

History

In Q3 of 2020, after months of meticulous planningand discussion, APEX Network and Red Pulse Phoenix made a calculated decision to take both projects, platforms, and ecosystems to the next stage through a merger that created a comprehensive enterprise data blockchain platform. The merger created a larger, more powerful infrastructure and ecosystem, effectively leveraging the best resources both projects have to offer (technology, platforms, token economies, token liquidity, human talent, community, and marketing).

The combined entity became Phoenix Global, achieving synergies via a combined greater user base, market cap, and real-world applications, catalyzing growth and expanding the ecosystem.

Strategic benefits from this merger:

- A more comprehensive enterprise data blockchain platform consisting of 1st party (consumer-related) data applications + 3rd party data (market data, external data, enterprise ESG data) with a larger enterprise ecosystem (B2C companies + financial institutions).
- Combined technical resources and teams, with continuous expansion, gives Phoenix Global a talent edge in the competitive blockchain landscape.
- Greater exposure, stronger combined marketing resources for pre and post-merger, and a much larger community created. Community management and outreach resources will be maintained and combined.
- Leveraging the best of both projects includes PHB exchanges and liquidity — available via existing Phoenix Global token listings on Binance, Huobi, and others.
- Catalyzes the time-to-value of various existing applications on both platforms (data exchange protocols, federated learning, reward points etc) adding more diverse use cases and scenarios.
- Combined resources allows for the incubation and development of new apps and platforms.

Phoenix Mainnet

Phoenix Mainnet is the next generation enterprise blockchain enabling agile and scalable consumer apps. Phoenix Mainnet is built for the enterprise, with the consumer in mind. It allows rapid development and deployment of decentralized consumer apps built to scale, and fit within the existing customer experience. It is more private, interactive, and connected.

Phoenix Oracle

Built-in connectivity to the real world. Connect your dApps to external systems and data sources easily and efficiently with proprietary integration middleware.

Enterprise Sidechains

Optimize scalability by separating enterprise-level workstreams from the main network. Scale your own application ecosystems in multiple sidechains.

Two-fold Consensus

Consensus mechanism designed for a combination of performance and agility in deploying consumer dApps. Easily transfer assets between the main network (DPOS) and side networks (POS).

Multi-layered Smart Contracts

Increase the scalability, flexibility, and ease of deployment of smart contracts and dApps via a multi-layered smart contract system, allowing certain components to be stored off-chain.

Data Transaction Engine

Built-in data transaction protocols to Phoenix Global Virtual Machine designed to increase B2C trust and increase consumer data ownership and security, as well as decentralized encrypted data storage.

Phoenix Mainnet Applications

- Marketing
- CRM & Loyalty
- Consumer Data
- Customer Experience
- Artificial Intelligence
- Federated Learning

Industries

- Retail
- Financial Services
- Automotive
- Travel
- Luxury & Lifestyle
- Consumer Internet

Phoenix Oracle

Phoenix Oracle is a proprietary Oracle used in a variety of enterprise dApp and DeFi use cases. It fundamentally connects real world data with the blockchain in a safe, secure, and private manner.

Price Feeds

Potential price feeds that Phoenix Oracle will provide include:

- Traditional financial market indices
    - Economic indices
    - Stock indices
    - Volatility indices
- Equity assets
    - Public and private equity of well-known companies
- Physical assets
    - Art
    - Collectibles
- Datasets of Value
    - Alternative datasets
    - Proprietary datasets
- Crypto assets
    - Long and short
    - NFTs

Usage Mechanism

In the future, PHB will integrate into all Phoenix Oracle modules and will be used as payment for any and all usage related to data requests and price-feed streams. The current mechanism is to distribute fees to PHB stakers/nodes and the remaining part burned. The exact mechanism, ratios, and calculations are still under discussion and being designed.

Phoenix Oracle Nodes

Phoenix Global node operators in the Platinum (1m), Zirconium (5m) and Diamond (10m) tiers will function as Oracle nodes. Oracle node operators will play a role in:

- Data Source Connections — Data Connectors and APIs that will connect to off-chain data sources and feeds
- On-Chain Contract Execution — the middleware protocols in charge of responding to data queries from other requesting Apps and smart contracts
- Phoenix Oracle Client — the basic node client that acts as the fundamental bridge between the on-chain and off-chain environments

More details on Phoenix Global nodes and reward structures are available in our Phoenix Global Node Ecosystem article.

The basic transactional model between the Oracle Node Network and requesting users is relatively simple — the nodes essentially "sell data" to the smart contracts and dApps requesting the particular data. The exact mechanism for calculating Oracle fees is still under consideration pending initial launch results and enterprise pilot tests. The current plan to have a baseline reward for Oracle Operators per node/month with data transaction fees in addition.

Cross Chain Interoperability

Phoenix Oracle is being developed as chain-agnostic, meaning that it would eventually be interoperable with public blockchains, including but not limited to, Phoenix Chain (PHB), Ethereum (ETH), Binance Smart Chain (BSC), and Klaytn (KLAY).

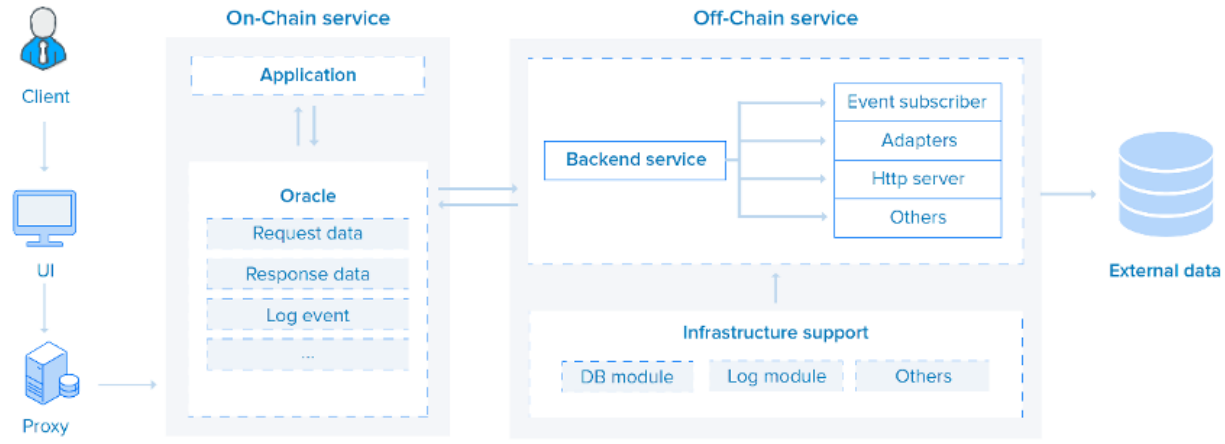
Initial Launch and Use Case

Phoenix Oracle's first test use case with a partnership to provide Horizon Protocol's token price feed is live with the initial module in production-mode. This is the first mainnet trial use case that will provide the foundation for further rapid expansion of price feeds based on monitoring the results.

Enterprise Pilot Test Case

Phoenix Oracle is also being utilized in the next wave of enterprise pilots to further test performance, stability, and security. For additional detail on enterprise pilots see Phoenix Global Blockchain Enterprise Pilots First Wave Announced.

Phoenix Oracle Architecture



Federated Learning

A merger between APEX network and Red Pulse Phoenix gave birth to Phoenix Global. During the Q2 development in 2020, we decided to work extensively on Federated Learning (FL) use cases and ecosystems. This desire stems from these facts:

- FL is a blockchain use case bound to scale to collaborate with existing AI capabilities and use cases.
- FL can create incremental value as more people participate in the blockchain network.
- China has a high appetite for AI consumer applications.

To protect consumer privacy, as more people use data-driven AI applications, the system needs to decentralize Nex-Gen DApps and create AI applications.

In particular, here are a few strategic moves that we will take:

Integration with existing AI systems

FL is in essence decentralized AI, and in order to serve functional and vertical use cases, it will need to be integrated with existing systems and models, such as APEX IQ.

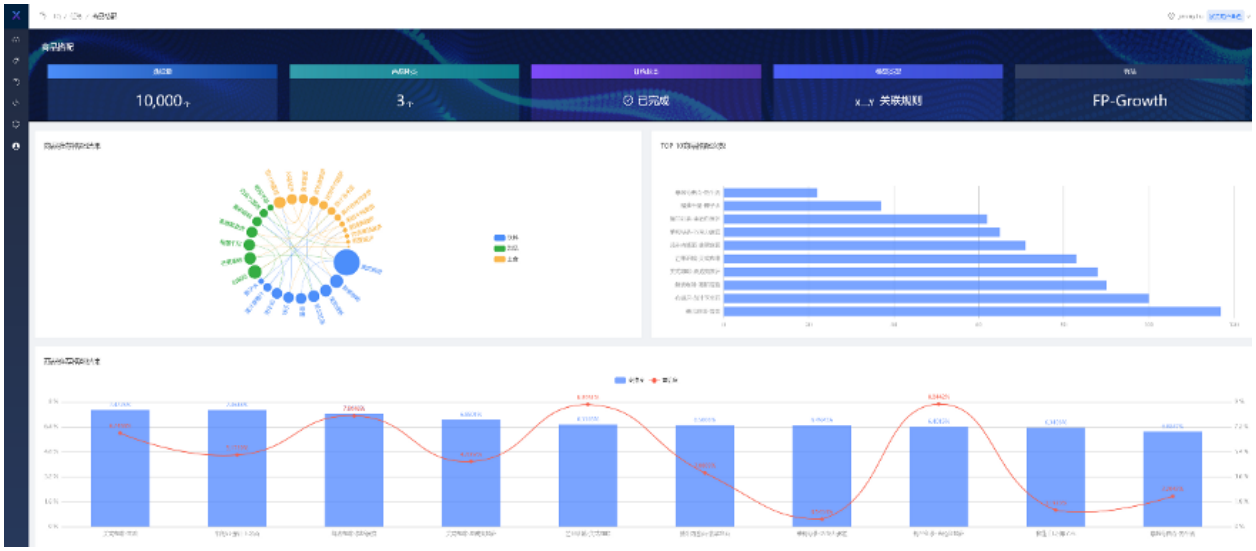


Figure 1. (Screenshot of APEX IQ product recommendation AI model used by companies such as Spring Airlines, Alibaba Food Delivery, Bank of China, and Starbucks)

Integration with Phoenix Oracle

Integration with an enterprise-ready oracle is sooner-or-later a must have for blockchain-enabled FL — this is crucial in order for the FL applications at hand to maximize the value of the blockchain as well as solve certain issues dealing with data integrity, security, anti-cheating, and transparency. It will also help connect faster and in more reliable ways to various AI platforms.

Ecosystem, Network, and Alliance Expansion

Although at the most minimum there are only two parties required for FL to work, the value is amplified with a larger number of participants and larger datasets. Additionally, the value, differentiation, and business model of a FL "platform" or network, is amplified with more ecosystem participants. The next generation of large data-driven networks will not be centralized players like Facebook, Google, or Amazon, but rather decentralized protocols and platforms with increased transparency and democratization of data & AI.

We believe that federated learning will be one of the use cases that can easily bridge off-chain data analytics and AI, with simple and easy to use blockchain solutions that have minimal interference and are easy to deploy and link.

PHB Supply

Inflation

The supply of PHB will increase over time at a rate of 10% per year. All of this is currently rewarded through Phoenix Staker according to current staking tiers. We anticipate this to change when Phoenix Oracle's modules are online and operational. PHB held Phoenix Staker in wallets, exchanges, and other locations will not receive rewards from Phoenix Staker.

Deflationary Mechanism and the Future

In the future, the plan is to introduce more deflationary mechanisms to stabilize the supply of PHB. The working idea is when PHB integration with Phoenix Oracle is complete, for Phoenix Staker to come offline. Then, reallocate the 10% inflation to be split in half, with 5% redirected to users supporting Phoenix Global by running nodes/staking and the other 5% burned.

Other burn mechanisms are being explored.