Title: Aztec Explorer

Contact Info

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Summary

The Aztec Explorer will function as a fast, open-source, and highly-available explorer for the Aztec ecosystem. Public block, address, and transaction confirmation data will be displayed in an easy-to-digest format while maintaining privacy for users and their interactions. Both a REST API and RPC API will be available for application developers to immediately begin interacting with the Aztec testnet. The testnet will be launched and supported for a period of 1 year within Blockscout's optimized hosting environment. Once the MVP testnet is operational we will scope additional requested and/or advanced features for the mainnet explorer. This proposal will provide Aztec with a working, reliable testnet explorer as we develop/prioritize the additional feature set for mainnet.

Estimated Start and End Date

- Start Date: 1 August, 2024
- Launch Date: by 30 October, 2024

Details

The Blockscout team has been developing EVM-based block explorers for the past 6+ years, with broad community adoption by more than 500 chains. We bring our years of expertise and experience to the explorer development process. This is especially relevant when it comes to indexer operations and fast, accurate data retrieval. Building a block explorer is not easy, and we've had several years to work on optimizing the infrastructure that Aztec can now benefit from. All development is open-source and community-based participation is welcome.

Our explorer is optimized for EVM environments, and we will use this explorer as the baseline for the Aztec testnet. Once basic feature support is established we will look into additional requirements and customizations for the mainnet explorer and scope these modifications separately. We'll work with the Aztec team to create a prioritization plan for items not yet supported in the functional testnet.

We have experience with customizations for various networks requiring unique functionality and views. Recent examples include:

- https://optimism.blockscout.com/
- L1 ↔ L2 views, output roots, dispute games
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- https://zksync.blockscout.com/
- L1 status batch lifecycle, various indexer improvements.
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We see several advantages to utilizing Blockscout as an explorer option for Aztec:

- The baseline explorer and underlying architecture has already been developed and Blockscout has the experience required to implement a reliable, working solution. We will be able to incorporate the Aztec chain quickly, reducing time and development costs. This will provide a functional testnet for developers and users while we create a plan for additional advanced features.
- Blockscout is a common and convenient tool used by many networks. This makes onboarding easier, creates a unified cross-chain experience, and allows developers to quickly integrate with the Aztec ecosystem.
- We will host, support and provide maintenance for the Aztec testnet for a period of 1 year (beginning August 1) in our optimized, private data center. This provides high availability and uptime as well as patches, updates, and any needed technical support.
- Blockscout is an open-source project which values decentralization and is aligned with the Aztec community in our support for privacy in blockchain transactions.

Tech Stack

- Fronted: React
- Backend: Elixir
- Microservices: Rust
- DB: Postgres

Milestones

Milestone 1: 30 August

Working testnet explorer with baseline functionality, scoping for advanced features.

We will use our existing indexer infra to support the following:

- Block data
- Transaction data
- Contract Address data
- Search capabilities
- Contract interaction (read, write)

We will look into the following items to determine additional scope and requirements. Depending on complexity some may be included, some may need to be moved to a 2nd phase. We will create a scoping document with these items and additional costs required for development:

- “block header data” - implement additional fetcher and extra storage in the DB.
- User friendly way of viewing transaction state effects.
- Display/storage of L1 info will require additional research and implementation plan
- Plan for additional fields such as contract private code

, contract class ID

, salt

, note tagging scheme registered

and other fields that may require additions and/or changes.

- Other items that may surface during the initial discovery.

Milestone 2: 30 September

Implement modifications, customizations and testing

We will address the following items to support Aztec-specific features:

- Account for extemporaneous field removal and/or add additional fields
- Ensure fee data is properly cataloged and displayed
- Implement required contract data views
- Review privacy features, ensure compatibility with requirements.
- Aztec Branding Customizations

Milestone 3: 30 October

Testnet Launch, calibrations and bug fixes

We will launch the testnet using an available RPC and make appropriate fixes and adjustments. We will initiate monitoring services to ensure uptime, review the instance for any inconsistencies, and implement fixes as needed.

Milestone 4: TBD

Testnet Support and Mainnet Preparation

We will continue hosting the testnet and upgrading with the latest Blockscout versions. We will provide ongoing support through a dedicated channel as well as end-user support managed via Discord. We will host the instance in our data center which is managed by our devops team and tuned for reliability, privacy, and speed.

Mainnet prep: We will request additional funding to work through prioritized features from the scoping document and continue adding these to the testnet. Once ready, mainnet will also be deployed to our hosting environment with some additional hosting costs.

Blockscout is committed to ongoing support for the Aztec ecosystem. As we develop new features we will upgrade instances, providing additional functionality and ensuring an optimized explorer environment.

Grant Info

Grant amount requested

- Total Requested: $42,000
- 12K development, design and research using existing Blockscout architecture
- 30K hosting, support, maintenance and upgrades of testnet for 1 year.
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- 30K hosting, support, maintenance and upgrades of testnet for 1 year.

Grant budget rationale

We will be able to spin up a testnet instance relatively quickly using our infrastructure, then make updates to the design and backend to support a number of Aztec-specific features while we research implementation strategies for the remaining requirements. We will host the instance in our private data center, which can be difficult and costly for projects without the proper infrastructure or devops team in place. This will ensure Aztec has a functional testnet explorer available for users at all times for the upcoming year. We will request additional funds for advanced features and mainnet hosting costs.