App-Specific Rollup

In the blockchain domain, rollups are layer 2 scaling solutions designed to help increase the throughput of the network by processing transactions and contract interactions off the main Ethereum chain in parallel to it. Readers might be asking, what is the differentiating factor between an alternate EVM-compatible chain and a rollup? Well, rollups inherit the security properties of their L1 chain by enforcing the rollup's canonical state on the L1. This is coupled with the mechanism on how these canonical state can change which is enforced by smart contracts on the L1.

What is App-Specific Rollup

When referring to an "app-specific rollup," it generally means a rollup that is designed for a specific application or set of applications. Unlike general rollups, which aim to support a broad range of contracts and transactions, an app-specific rollup is optimized for the specific requirements of a particular application. In the context of Automata 2.0, this means a rollup laser-focused on enabling attestation enhancing the way how all of us can handle and verify attestation reports, or in general, digital proofs.

Benefits of Using App-Specific Rollups for Attestation

By focusing on an app-specific rollup rather than a general-purpose rollup we can several advantages:

- Custom Logic
- : App-specific rollups can include logic that is highly specialized for attestation, which might be cumbersome or inefficient to implement on a general rollup. For example support for custom cryptographic ciphers.
- User Experience
- : A tailored environment can offer a more streamlined and user-friendly experience, specifically designed for attestation tasks.
- Focused Decision-Making
- : Governance and updates can be more straightforward because decisions only affect a specific application, rather than a broader range of use-cases or stakeholders.
- Quick Adaptation
- : Easier to make rapid changes and adapt to new requirements, as we are not constrained by the needs and rules of other applications.
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