Introduction

What is the Attestation Stack?

Attestation Stack

TheAttestation Stack is the entire collection of development toolkits and components that powers Automata 2.0 as an modular attestation layer. It's an open-source initiative to achieve[Proof of Machinehood](#) and allows anyone to contribute and use it for public good.

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Attestation Layer

The attestation layer consists of a set of smart contracts that manages the lifecycle of attestation, including its creation, publication, verification, expiration and revocation. It also includes the corresponding SDK implementation for other participants like attestor, challenger to interact with the 2.0 protocol.

The detailed spec can be found from the protcol[specification](#) .

Execution Layer

The execution layer is the engine for attestation that offers great performance and scalability. In many cases, a rollup implementation is preferred because of the lower execution and storage cost compared to directly running attestation on Ethereum. Depending on the requirements for security, performance, cost, and other factors, one can choose any of the EVM rollup as the execution layer, including optimistic rollup, zk rollup, etc.

Automata 2.0 is using[Altlayer](#) 's managed rollup solution to provide an optimistic rollup execution layer with fraud proofs, decentralized sequencers, and bridges back to Ethereum.

Settlement Layer

The settlement layer provides the underlying security for the entire stack. It aggregates everything happening in execution layer into a single state root which get periodically committed by the rollup node. Once the attestation is published on execution layer and passes the rollup checkpoint, its attestation state can be accessible via rollup-native communication from L2 to L1 or trusted bridging. This will make the attestation accessible at the settlement layer, benefiting other high-profile applications.

If the settlement layer already offers cheap execution and storage (e.g., it's already an L2), the attestation layer can be directly deployed to the settlement layer, therefore provides affordable attestation to the application directly.

Open-Source Release

The release of ATA Stack currently includes

- Automata v2 smart contracts for attestation
- Automata v2 attestation SDK
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Was this helpful?