Breakout - Native Account Abstraction

R&D Session at Forschungsingenieurtagung - June 2025.

Duration: 1 hr

Moderator: Alex Forshtat (Telegram: @forshtat)

Note taker: Marissa Posner

Agenda

[10 mins] Account Abstraction today

[20 mins] EIP-7701 Native AA design discussion

[10 mins] Mempool and block building with Native AA

[10 mins] Native AA with FOCIL, Statelessness & AA-VOPS

[remaining time] Feedback and discussion

Summary

We will discuss Account Abstraction starting with a snapshot of its current landscape. A substantial portion of our time will be dedicated to a deep dive into the latest Native AA design in EIP-7701.

Following our design discussion, we'll examine the effects of Native AA on the mempool and the mechanics of block building. The meeting will culminate in a collaborative exchange, inviting everyone to share their insights and perspectives on these advancements.

Goals

- Determine the level of alignment between Native AA and other upcoming EIPs
- Work out an optimal design for Native AA and adopt it in EIP-7701
- Consider scheduling of EIP-7701 for the Glamsterdam update

Pre-reads

Here are some resources to warm up on relevant topics:

Must read

EIP-7701: Native Account Abstraction (https://eips.ethereum.org/EIPS/eip-7701)

ERC-4337: Account Abstraction Using Alt Mempool (https://eips.ethereum.org/EIPS/eip-4337)

Advanced reading

ERC-7562: Account Abstraction Validation Scope Rules (https://eips.ethereum.org/EIPS/eip-7562)

Interoperability

EIP-7805: Fork-choice enforced Inclusion Lists (https://eips.ethereum.org/EIPS/eip-7805)

A Protocol Design View on Statelessness (https://ethresear.ch/t/a-protocol-design-view-on-statelessness/22060)

A pragmatic path towards Validity-Only Partial Statelessness (VOPS) (https://ethresear.ch/t/a-pragmatic-path-towards-validity-only-partial-statelessness-vops/22236)

Relevant code repositories

* (RIP-7560 is an RIP variation of EIP-7701)

Erigon's RIP-7560 based Native AA issue tracker (https://github.com/erigontech/erigon/issues/14049)

Eth-Infinitism experimental RIP-7560 geth fork (https://github.com/eth-infinitism/go-ethereum)