

Request for SUAPP

I would love to see a SUAPP which is a searcher programmed in solidity. Basically, it would be a smart contract that owns a private key in the confidential data storage that corresponds to an EOA on Ethereum. Then, you could design a smart contract which pulled ETH L1 data and used that to size profitable arbitrage trades. Finally, you could create an ETH L1 tx with your EOA that executed these trades - potentially with a flashloan so that there are limited funds needed.

This is definitely a challenging SUAPP, but one that is possible and pretty interesting!

Complications

There are a few things that are hard about this.

When and where it is executed

Right now the programming model would require that this smart contract is called by a SUAVE transaction. It would be best if this is executed at the bottom of built blocks, or after a private transaction.

What arbs to look for

You need some notion of what arbs to look for, e.g. to check for arbs between certain pools. Choosing this state is not trivial. A few possibilities:

- Checking for popular pools like ETH/USD
- Using hints that leak touched pools
- Having pools fed in some other way

How the arb is calculated

Finally, we need some way of calculating an arb. A simple, generalized way to do this would be doing binary search and taking the most profitable trade if any exists.