



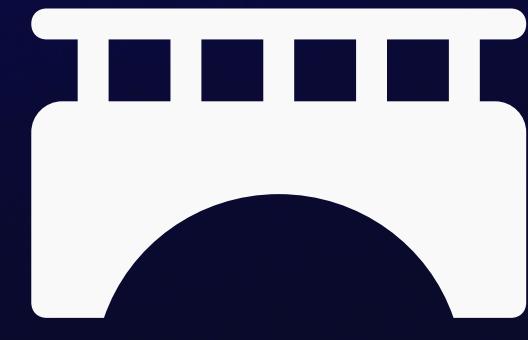
Helix Token Bridge

 hello@helixbridge.app

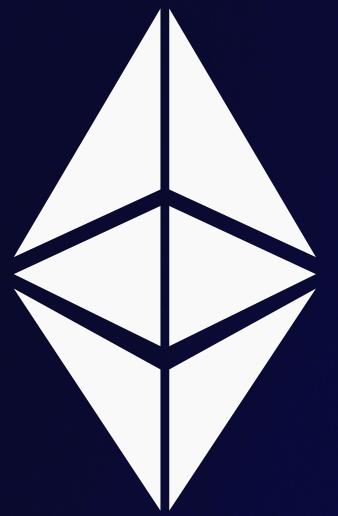
What is Helix Bridge

A decentralized and non-custodial cross-chain token bridge.

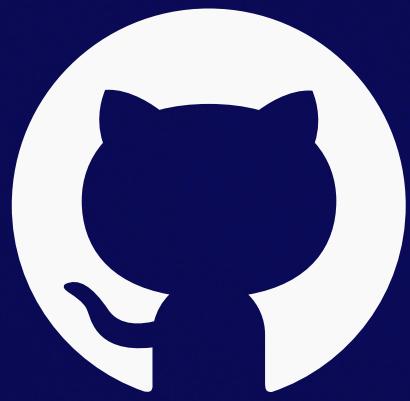
Depend on Order and Solver.



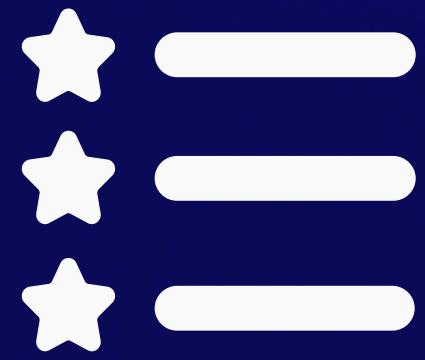
Cross-Chain Bridge



Decentralized



Open-Source



Safe & Fast & Low Cost

Intents

User specifies the following parameters to start an “intent to cross-chain transfer” order.

Solver fill the order using this special parameters

```
{
```

```
remoteChainId;
```

```
solver;
```

```
sourceToken;
```

```
targetToken;
```

```
amount;
```

```
receiver;
```

```
}
```

Register Solver

also to be a Liquidity Provider



Prepare Liquidity on
Target Chain



Register on
Source Chain



Deposit Penalty on
Source Chain

Solver Account + Solver Client Program

Fill order

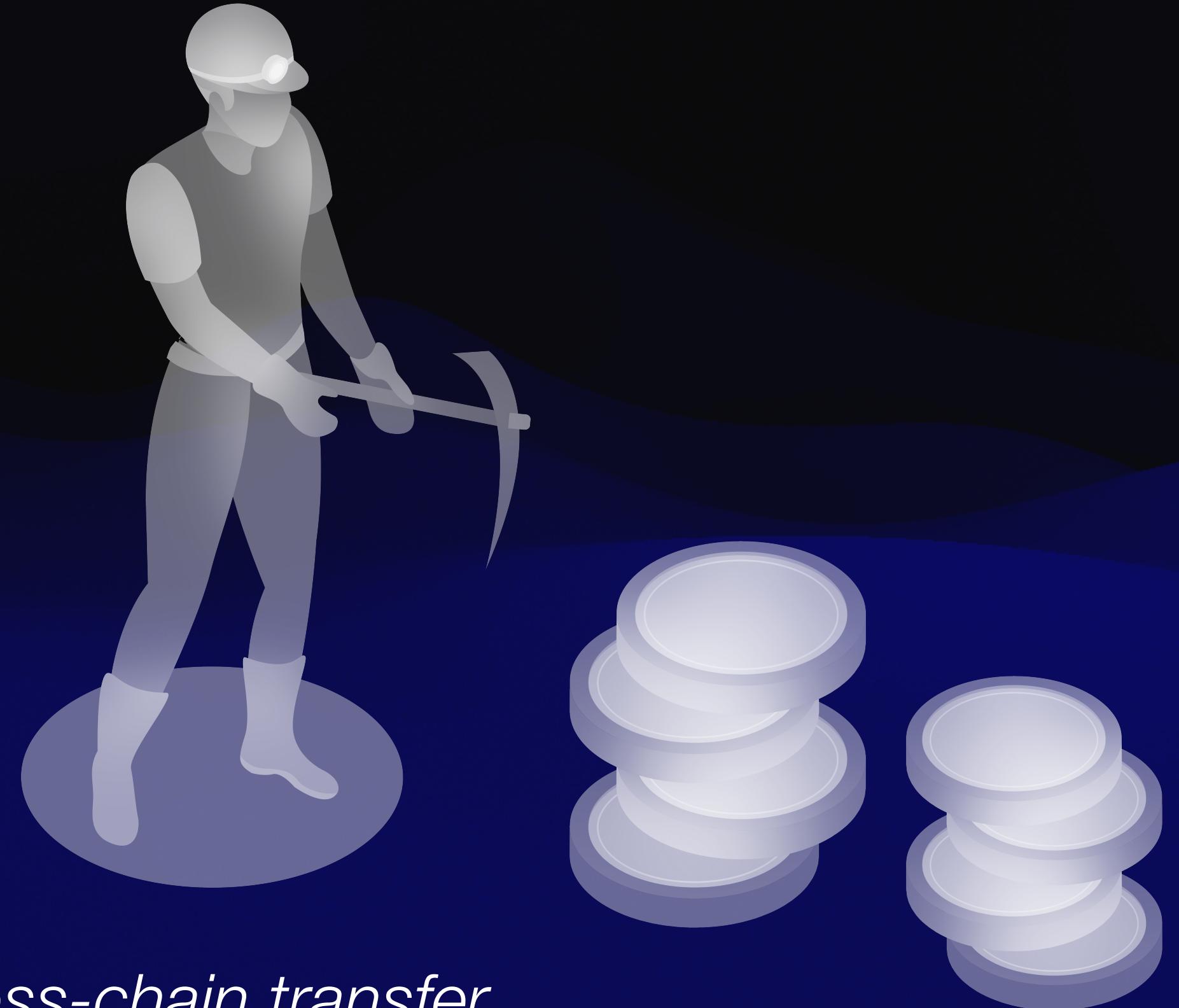
Monitor user's transfer event

Send filled transaction on target chain

Support liquidity

Support liquidity on target chain, waiting for user's cross-chain transfer

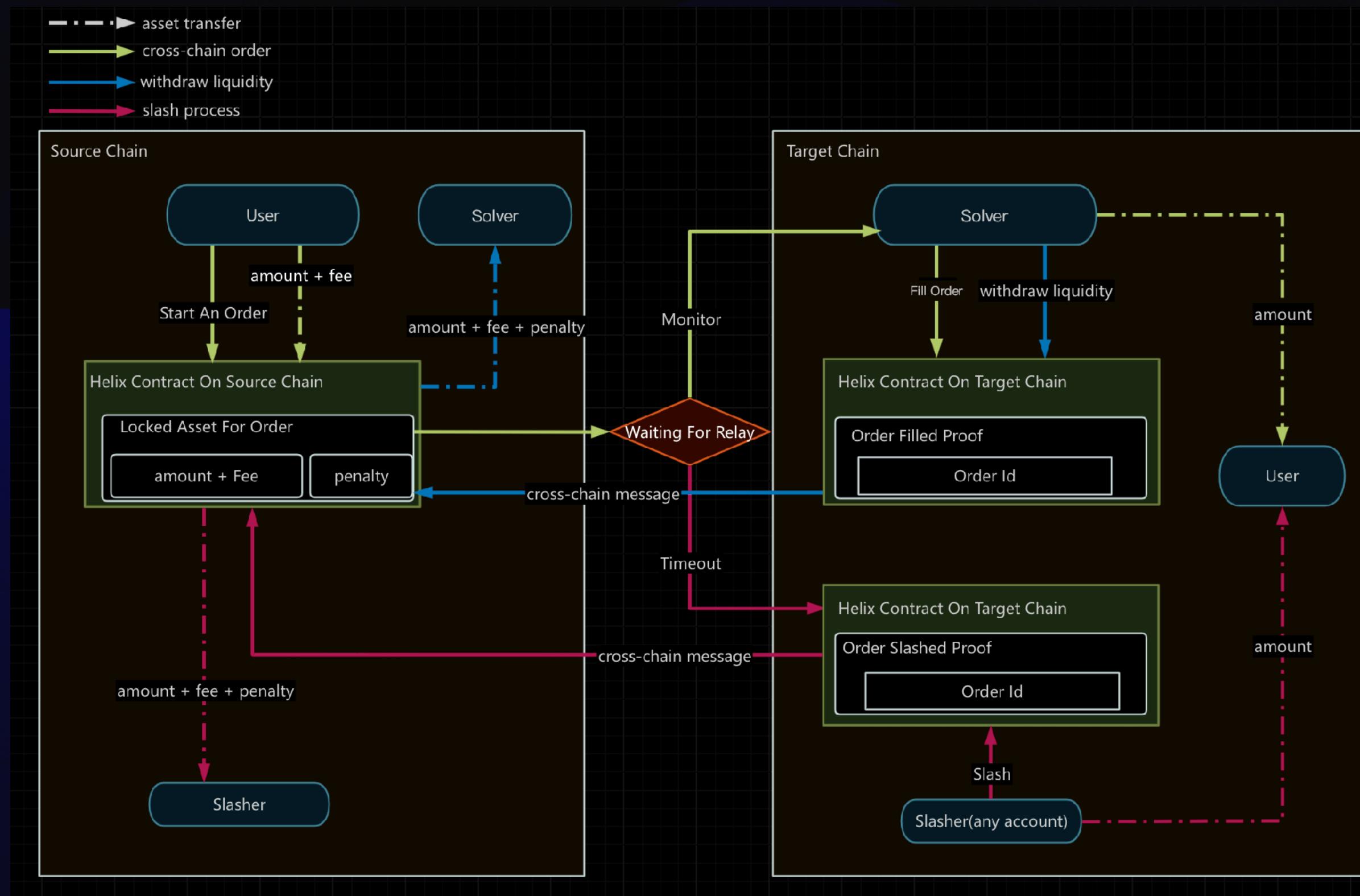
Swap token with user: receive on source chain & send on target chain



Order Flow

User start an order on source chain

Order amount + fee + relayer's penalty => Locked



Solver fill the order on target chain

Transfer token to User & generate order filled proof

Solver request withdraw liquidity if it's want

Send order filled proof & Unlock asset

Slasher slash order if timeout

Transfer token to User & generate order filled proof

Send order slashed proof & Unlock asset

Feature



Non-custodial: solver's liquidity not need to locked



Message decoupling: cross-chain message is only used when slashing or withdrawing liquidity



Decentralized: does not rely on any centralized services



Combinability: can be easily combined with various Defi protocols.

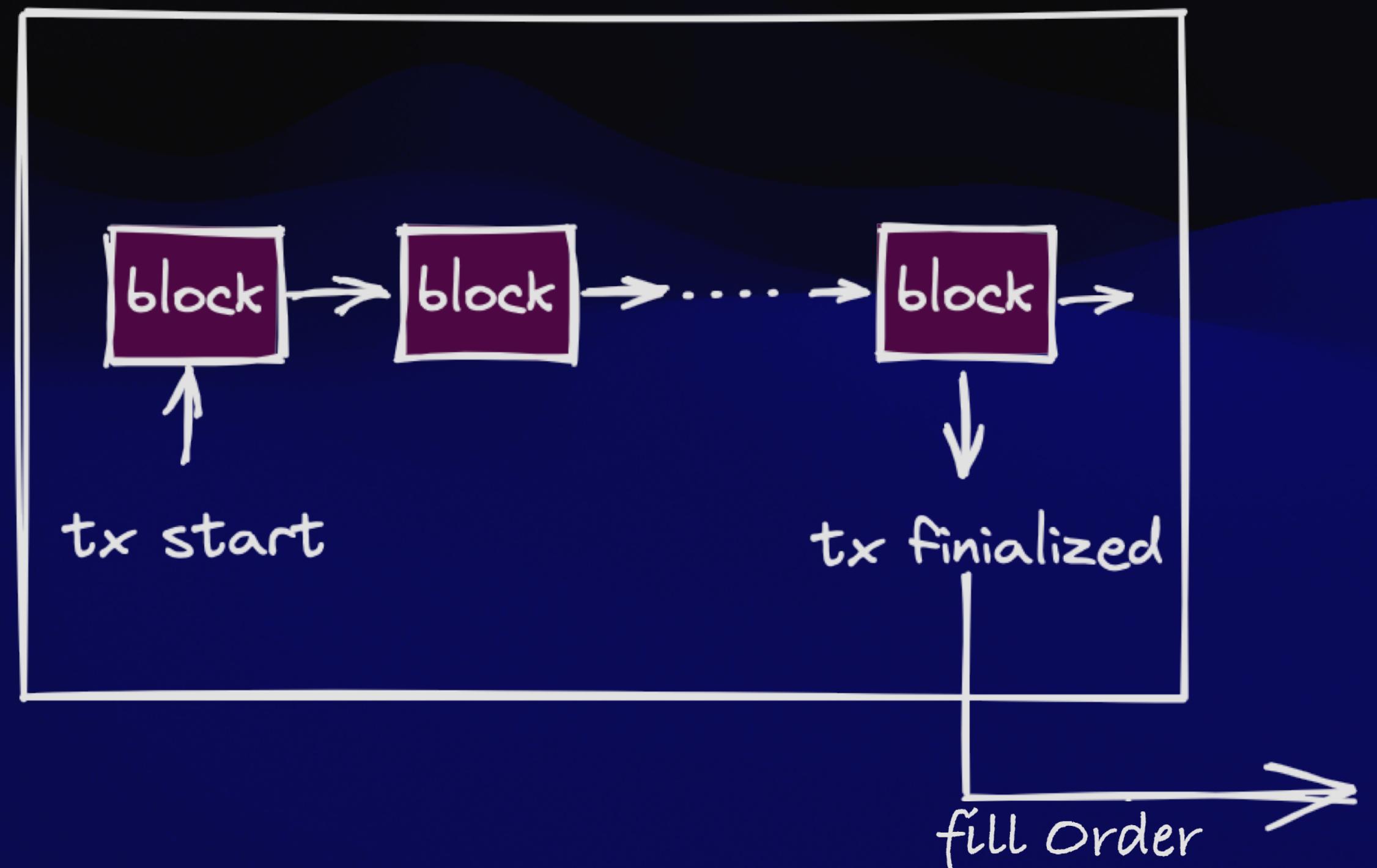
Feature

Why it's Fast

Cost Time = Tx Finalized - Tx Start

It's finalized time on source chain (Safe Time)

Solver can even start to fill order before the finalized block when the value of the transfer amount is small



Feature

Why it's Low-Cost

No message fee for token transfer

Cost = Two gas fee + message fee for bulk withdrawals

User's transaction gas fee on source chain

Solver's transaction gas fee on target chain

Multiple orders merged together withdraw message fee

Feature

Why it's Security

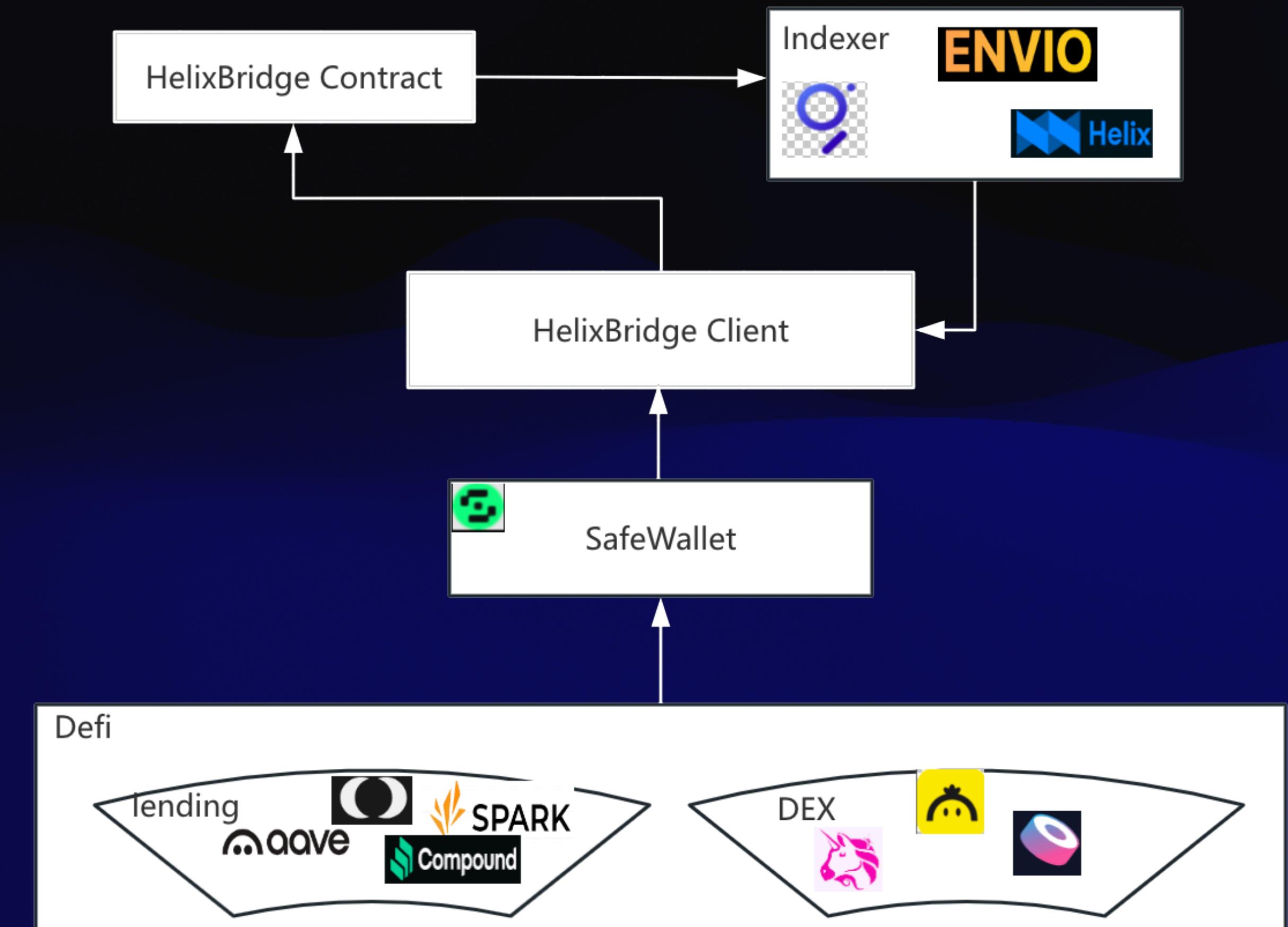
Solver does not need to deposit large amounts of assets to the protocol

Solver can approve token transfer and fill order at the same time

Can sacrifice performance for high general cross-chain message security

Relayer Client

*Open source
Decentralized
Assemblies*



UI

Transfer Tokens

Base informations

Which Token

Transfer Amount

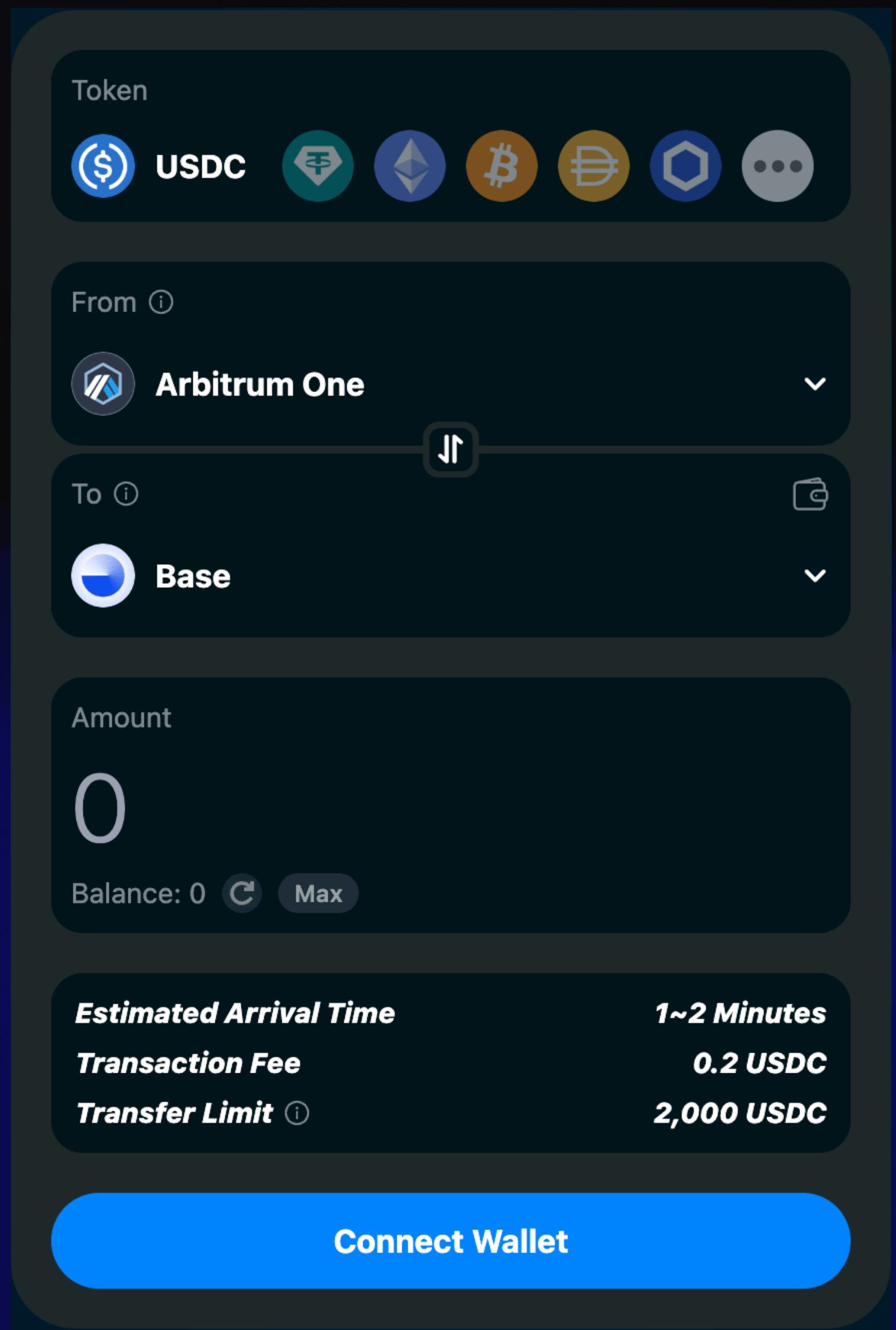
From Chain & To Chain

Fee & Estimated Time

Exception handling is hidden for users

UI help user to select best relayer

Role Slasher to simplify user operations



UI

Transaction history

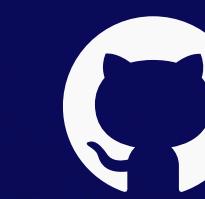
| From | To | Sender | Recipient | Amount | Status |
|--|--|-----------------------------------|-----------------------------------|---|---------------------------------|
|  Darwinia |  Arbitrum One | 0x020...0bcf View | 0x020...0bcf View |  20,000 RING | 2024-09-13 11:47:54 Finished |
|  Arbitrum One |  Polygon PoS | 0x535...a608 View | 0x535...a608 View |  0.05 USDT | 2024-09-13 10:48:59 Finished |
|  Arbitrum One |  Polygon PoS | 0x0bb...8cf1 View | 0x0bb...8cf1 View |  0.05 USDT | 2024-09-13 10:43:26 Finished |
|  Darwinia |  Arbitrum One | 0x111...490c View | 0x111...490c View |  14,000 RING | 2024-09-13 07:34:18 Finished |
|  Astar zkEVM |  Arbitrum One | 0x5e0...ff9a View | 0x5e0...ff9a View |  0.0081 ETH | 2024-09-13 05:10:54 Finished |
|  Arbitrum One |  Astar zkEVM | 0xee3...650d View | 0xee3...650d View |  0.0005 ETH | 2024-09-13 05:04:12 Finished |
|  Darwinia |  Arbitrum One | 0xfc4...ed66 View | 0xfc4...ed66 View |  86,365 RING | 2024-09-13 04:20:48 Finished |
|  BSC |  Arbitrum One | 0x773...edd6 View | 0x773...edd6 View |  8.8421 USDT | 2024-09-12 07:07:15 Finished |
|  Darwinia |  Ethereum | 0x822...6a5b View | 0x822...6a5b View |  1,990,000.8442 RING | 2024-09-12 03:44:18 Finished |
|  Polygon PoS |  Arbitrum One | 0x0d9...d4ad View | 0x0d9...d4ad View |  0.7993 USDC | 2024-09-12 03:32:20 Finished |



Thanks !



bridge.helix.box



github.com/helix-bridge



hello@helixbridge.app



twitter.com/helixofficialx