

Gas Station

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Gas Station enables developers to build experiences that completely abstract gas - both for their end-users and themselves. The developer can sponsor network fees for the end-user, removing the need for end-users to hold native tokens in their wallets. The sponsored gas fees will be charged to the credit card on file; hence, you will not have to hold native tokens across chains. This abstracts gas: one of the biggest problems of building blockchain apps.

Problem with Gas Fees

Blockchains require gas transaction fees to incentivize blockbuilders and protect networks against DOS attacks. The mechanics for these fees have traditionally been built into the blockchain itself, often requiring gas fees to be paid in native tokens and sourced by the address that initiated the transaction.

The experience of sourcing native tokens by the originating wallet makes it hard for users to interact on-chain and limits the usability of blockchain applications. However, with the introduction of [ERC-4337](#) (account abstraction), there is a way to simply abstract gas.

Circle's Gas Station Solution

Circle's Gas Station utilizes account abstraction to create a solution that completely abstracts gas. Circle has deployed paymaster smart contracts that developers can use programmable wallets.

The solution has the following components:

1. Paymaster:
2. Smart contract (ERC-4337 standard) that pays on-chain gas fees according to sponsorship conditions.
3. Policy:
4. Let developers set up custom rules & limits on the transactions, wallets, and contracts they want to sponsor.
5. Billing:
6. Let developers pay all the gas fees using their preferred payment modes (cards).

This solution is built on the ERC-4337 (account abstraction) standard; hence, the wallet must be an ERC-4337-compliant smart contract account. Developers can create these wallets by passing "accountType": "SCA" in the create wallet API for programmable wallets.

To learn more on creating a SCA wallet follow one of the two guides:

1. [Create your first developer-controlled wallets](#)
2. .
3. [Create your first user-controlled wallet](#)
4. .

Supported blockchains

Circle Gas Stations support the following blockchains:

Blockchain Network PW User-Controlled PW Developer Controlled Avalanche Fuji Testnet Avalanche Mainnet Ethereum Sepolia Testnet Ethereum Mainnet Polygon Mumbai Testnet Polygon Mainnet Updated 16 days ago

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