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TL;DR

- Users should decide how, when and by who their transactions are executed. This enables them to internalize their MEV and be included on-chain faster.
- Flashbots is launching a beta release of MEV-Share with trusted orderflow sharing to give users more control and bargaining power in the MEV supply chain.
- Users, wallets, and dapps can access MEV-Share through the [Flashbots Protect RPC](#). Searchers can [subscribe](#) to the Flashbots Matchmaker to search on programmable private orderflow, and Builders can [register](#) to receive orderflow from MEV-Share.
- Flashbots invites actors in the MEV supply chain to [join](#) the the Decentralized Orderflow Working Group to align community efforts towards research and developing solutions for the decentralized future of the MEV supply chain.

Orderflow originators are an important part of the MEV supply chain. Users, wallets, and dapps generate the orderflow that produces MEV — but they lack the power to harness it. It's time for a change:

- Users should decide how, when and by who their transactions are executed.
- Users should internalize the MEV they create, and wallets and dapps should have tools to leverage MEV on behalf of their users.

In February 2023, Flashbots proposed a protocol called [MEV-Share](#) that lets users control how their transactions are shared with other actors in the MEV supply chain. By empowering users in this way, MEV-Share enables them to internalize the MEV that they generate while transacting. Today Flashbots is releasing an early implementation of MEV-Share. We invite users, wallets, dapps, searchers, builders, and other parties in the MEV supply chain to test, experiment, and collaborate on its design.

Moreover, Flashbots invites actors in the MEV supply chain to join the the Decentralized Orderflow Working Group to align community efforts towards research and development for the decentralized future of the MEV supply chain.

MEV-Share

The MEV-Share protocol allows users to selectively share data about their transactions with searchers who bid to include them in bundles. MEV-Share introduces a new actor, called the Matchmaker, to mediate this exchange.

The Matchmaker is responsible for:

- Receiving transactions from users
- Selectively sharing data about those transactions with searchers
- Receiving partial bundles from searchers, which identify user transactions that should be inserted
- Inserting user transactions in partial bundles to create full bundles
- Sending full bundles, along with a validity condition, to block builders. Builders are required to fulfill the validity condition (eg. transfer a refund to the user) for any bundles it includes in a block.

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Permissionlessness and Programmable Privacy

MEV-Share is an important step in decentralizing the MEV supply chain.

By not enshrining a set of builders, and making orderflow non-exclusive and usable by any searcher, MEV-Share ensures that the MEV market doesn't centralize around exclusive orderflow. In addition to being core to decentralization, permissionlessness also drives better outcomes for users by maximizing competition in the MEV supply chain.

Another key to improving user outcomes is programmable privacy

. Programmable privacy lets users control how their orderflow is shared with other actors in the MEV supply chain. Specifically, MEV-Share leverages programmable privacy to let users selectively share data about their transactions with searchers. This lets users decide how, when, and by who their transactions are executed — giving them the bargaining power to internalize the MEV they create. Importantly, MEV-Share supports a wide range of options for selective data sharing. This lets users fine tune their execution through tradeoffs that they control, rather than being forced by market structures to decide between extremes.

Flashbots Matchmaker

Flashbots is releasing an early implementation of MEV-Share to kickstart a collective experiment with programmable privacy. Specifically, we are releasing the Flashbots Matchmaker — a service that implements the MEV-Share protocol

. Find more information about the Flashbots Matchmaker and its API [here](#), and read on for a specific calls to action.

Orderflow Sharing

In addition to the improving interaction between users and searchers, programmable privacy can also be leveraged to improve the interaction with block builders. Today, users and searchers must share their orderflow with builders who they hope will act neutrally and not negatively impact their execution. Users have little recourse if a builder misbehaves, and lack granular control over how builders treat their transactions.

In the short term, Flashbots is experimenting with ways to safely share orderflow with trustworthy builders to provide users with fast inclusion rates for their transactions. In order to receive orderflow from the Flashbots Matchmaker, builders must support the [MEV-Share bundle API](#) and agree to uphold a set of [Fair Market Principles](#) designed to ensure the MEV supply chain is efficient, open, and transparent. Ultimately, users are in control with MEV-Share — the Flashbots Matchmaker will only share orderflow with builders that the user opts in to share with.

In the medium term, the need for builders to be trusted to receive orderflow creates a barrier to entry for builders in the MEV supply chain. Flashbots intends to iterate towards fully trustless orderflow sharing, so that any

builder can receive orderflow from MEV-Share.

Flashbots Protect

The Flashbots Matchmaker is integrated into an improved version of the Flashbots Protect RPC. Transactions sent to Flashbots Protect are automatically routed through the Flashbots Matchmaker, making them eligible to receive improved execution. The Flashbots Matchmaker will share a limited set of data with searchers by default, and users can explicitly restrict or expand this by configuring their RPC request. Users can also configure their RPC request to opt in to share their orderflow with registered block builders. Sharing with additional builders will ensure that users' transactions are included as soon as possible.

Searcher bundles sent to the Flashbots Auction will also be routed through the Flashbots Matchmaker. By default, the Matchmaker will not share any data about these bundles or send them to any additional builders. Searchers will be able to opt in to share additional data or submit their bundles to additional builders soon.

This is a beta release. The Flashbots Matchmaker is actively under development and may experience service interruptions or API breaks as we add new features

. Updates to Flashbots Protect will be rolled out over multiple stages, of which this is only the first.

Calls to action

We invite wallets, dapps, users, and searchers to join us in experimenting with programmable privacy via the Flashbots Matchmaker.

- Users

— Add the [Flashbots Protect RPC](#) to your wallet to receive MEV kickbacks and faster inclusion. Customize your request to share with additional builders.

- Wallets and dapps

— Switch your RPC to Flashbots Protect to extend privacy and redistribution coverage to all of your users. Follow our [integration guide](#) to customize your privacy settings and find optimal execution and redistribution. To get a direct line to the Flashbots product team for early feature access and support, we recommend filling out this [short form](#).

- Searchers

— [Subscribe](#) to the Flashbots Matchmaker to access selective data shared from new sources of orderflow. And share feedback and feature requests for the MEV-Share APIs!

- Block builders

— [Register](#) to receive bundles from the Flashbots Matchmaker. Flashbots intends to support orderflow sharing with several block builders to maximize competition in the block builder market and improve inclusion guarantees for users.

Invitation for R&D

Flashbots invites MEV supply chain researchers to join us in further hardening and decentralizing the MEV supply chain. There are two primary lines of research that we believe are needed to improve and expand on MEV-Share: programmable privacy and orderflow sharing. Below are an initial set of questions in these areas.

Programmable privacy

- What is the shape of the privacy and efficiency frontier?

Put another way: how much more efficient is MEV extraction as users share more data? What is the optimal point on this curve, and does it differ for certain cases?

- Trusted execution environments like Intel's SGX provide guarantees of privacy and tamperproof execution — even from the party that physically owns the hardware. Given these properties they are ideal candidates to introduce more privacy into the MEV supply chain. What is the marginal cost of an attack on a trusted execution environment?
- What are alternatives to trusted execution environments for short term and trust minimized privacy solutions?

Orderflow sharing

- How do we design protocols that allow any

builder — and not only trusted

builders — to use orderflow from mev-share in their bundles?

- What is the relationship between orderflow sharing and decentralized block building?
- Does privacy for bundle merging differ from the privacy needed for auctioning orderflow? Is the information that would be useful to share similar? Can more information be shared as more orderflow is merged together, or is this subject to attacks by adversarial actors?

If you are interested in collaborating with us on these research areas, please reach out [here](#) and join the conversation on the MEV-share protocol [here](#).

In summary

MEV-share uses programmable privacy to decentralize the MEV supply chain and create better outcomes for users.

Integrate with the Flashbots matchmaker to test MEV-share.

- Users — Reap the benefits of private, MEV-aware orderflow by using the [Flashbots Protect RPC](#).
- Wallets and dapps — Share your interest in integrating [here](#) and find an integration guide in our docs [here](#).
- Searchers and builders — [Subscribe](#) to the Flashbots Matchmaker and [register](#) to receive orderflow from MEV-share.

All — [Join us](#) in tackling open R&D questions and creating protocols that enable everyone to participate in the MEV supply chain.