

In the implementation of proposer/builder separation (PBS) with [MEV-Boost](#) there are still some roles that need to be trusted and there are still some risks of centralization.

The risks get riskier when a single organization plays multiple roles. We are calling this vertical integration.

Let's make it clear which organizations are taking the most prominent roles, while we explore the system in production, learn from it, and keep building improvements. We have to make sure that trusted roles are minimized, that the organizations taking these roles are being responsible stewards contributing to the exploration towards full permission-less PBS, and alert when a single party is starting to get enough power to manipulate the blockchain.

These are the roles in the system:

- private orderflow source
- searcher
- builder
- relay
- relay monitor
- proposer

Currently, these are the most prominent organizations:

(to be updated as the system evolves and power shifts)

- [Flashbots](#): runs an RPC endpoint to receive private orderflow from searchers, a builder, and a relay.
- [Lido](#): runs a big decentralized network of proposer node operators.
- [Coinbase](#): runs many proposer nodes.

What follows is copied from the initial exploration by [@jolene](#). If you are concerned about a particular combination of roles, or about a particular organization, please share your thoughts.