

Quick summary of what's currently happening in and around MEV-Boost, as of Nov. 3, 2022.

Upcoming release of [mev-boost v1.4.0](#)

- Notably includes the ability to set a minimum bid value, under which mev-boost won't provide a bid to the beacon node.
- Several minor improvements.
- More details at [Upcoming mev-boost release: v1.4.0 · Issue #377 · flashbots/mev-boost · GitHub](#)

EIP 4844

- [EIP 4844](#) will require changes to the builder-specs, mev-boost and the relays.
- See also [Changes for Capella and EIP-4844 · Issue #392 · flashbots/mev-boost · GitHub](#)

Updated getValidator

relay data API

- An API that's both useful to get verify active validators, and at the same time preserving proposer privacy
- [Privacy Concerns with Data API](#)

Profit-switching for the beacon node (WIP)

See also [\[RFC\] Engine API: Add block value in response to engine_getPayload execution-apis#307](#)([geth PR](#))

Block scoring standard & Payment proofs (ongoing discussion)

[Ongoing discussions \[2\]](#) about how to define the "bid value".

Current options that are discussed:

1. Payment transaction at the end of the block
2. Proposer balance different before/after the block

Main considerations include:

- Representation of "additional value provided to the proposer over a local EL block"
- Ability for adding payment proofs to the bid, which reflect that score and can be verified by mev-boost

Inclusion lists (ongoing research)

Ongoing research on about adding inclusion lists, both outside and inside mev-boost.

There's several open questions, including authorization of setting an inclusion list for a proposer/slot, timing of sending the IL, and ability to verify successful inclusion and valid exclusion reasons inside mev-boost.

See also:

- [Notes on Transaction Inclusion List for MEV-Boost](#)
- [PBS - Key Research & References](#)

Allowing SSZ encoded payloads (in addition to JSON)

Currently, the beacon node communicates with the builder network exclusively with JSON payloads. SSZ encoded payloads would increase encoding and decoding performance significantly, and reliably shave off hundreds of milliseconds off the request roundtrips.

See also:

- [Allow SSZ encoding in addition to JSON encoding \(for request and response payloads\) · Issue #53 · ethereum/builder-specs · GitHub](#)
- [Provide first-class support for SSZ · Issue #250 · ethereum/beacon-APIs · GitHub](#)

SSE subscription to trigger block building (stagnant)

Currently, block builders depend on a custom Prysm fork to trigger block production as soon as all parameters are available.

This could also be a simple SSE subscription on the beacon node.

See also [SSE subscription for newPayload event to trigger block building · Issue #244 · ethereum/beacon-APIs · GitHub](#)

Relays

Eight relays have been delivering payloads in the last 24 hours:

Relay

Payloads (24h)

boost-relay.flashbots.net

4503

bloxroute.max-profit.bloxrdn.com

669

relay.edennetwork.io

259

bloxroute.ethical.bloxrdn.com

221

builder-relay-mainnet.blocknative.com

184

bloxroute.regulated.bloxrdn.com

101

mainnet-relay.securerpc.com

49

relayoor.wtf

41

(Source: [Data API on the relays](#))

Note: multiple relays can deliver the same payload for a given slot (i.e. when a builder sends a winning bid to multiple relays).

Flashbots Relay

At the time of writing, 83.3% of validators are running mev-boost connected to the [Flashbots mainnet relay](#) (382,719 out of 459,190). Here's a chart of active validators over the past four weeks:

[

active validators over past four weeks

1665×465 23.8 KB

](<https://collective.flashbots.net/uploads/default/original/1X/dc915822d6943d297fc805410e922e04dc7e87f2.png>)

Builders

The Flashbots relay receives 300 bids from 30 builders for any given slot on average. These are builders who submitted

more than 100 winning payloads (landed on chain) in the last 7 days:

Builder

Blocks (7d)

Operator

[0xb194b2...3027](#)

6937

builder0x69

[0xa1dead...27fc](#)

4628

Flashbots

[0x81babe...80f9](#)

4249

Flashbots

[0x81beef...994f](#)

3507

Flashbots

[0xa4fb63...6772](#)

2448

builder0x69

[0x80c731...d3d5](#)

1753

bloXroute

[0xa1daf0...14e9](#)

1213

[0x94aa4e...7c67](#)

1204

bloXroute

[0x976e63...6013](#)

1187

bloXroute

[0x96a59d...fc27](#)

1081

[beaverbuild.org](#)

[0x8eb772...8ad0](#)

359

[eth-builder.com](#)

[0xb8fcee...e899](#)

316

builder0x69

[0x91afe2...945a](#)

190

[0x8b8edc...5fba](#)

157

bloXroute

[0xa30251...d5b8](#)

117

[0x987ff8...bb99](#)

112

[0x8d6e6c...3efd](#)

106

(Source: [Flashbots Relay Data API](#))