

## Context

Last week, we saw the blob market enter price discovery mode after a surge of activity on L2s. To meet the demand, rollups posted a lot of blobs, which drove up blob fees and tested the market's ability clear demand for blobs on L1.

As a result, rollups like Arbitrum and Base saw it take strangely long for their blobs to land. And what's more confusing is that blobs weren't always included in the order you'd expect. Blobs with lower

prices often got included faster.

## Possible factors

A number of parties are involved in propagating blobs today — from rollups, to L1 clients, to block builders and relays.

### 1. Latency

: Blobs are slow. The flashbots rust builder often takes 30% longer to seal blocks when the blob market spikes. Serialization can be especially bad for blocks with blobs (in the 10s of milliseconds). This compounds when you add networking latency and overhead at relays.

### 1. Mempool

: Most blobs are submitted to the public mempool. This means they need to be propagated by L1 clients before they reach block builders. We've seen it take CL clients over half a slot (7 seconds!) to propagate blocks, and EL clients often have other restrictions on top of this.

### 1. Strategy

: Rollups control important factors in blob inclusion: price and timing. We've already seen cases where they could cut their costs by updating their submission strategies, eg. to switch to calldata when it's cheaper.

## Calls to action

We'd like to bring more visibility into how the choices at each layer could impact blob propagation. If you have data or input, please share!

- Builders: How would you calculate a "fair" price for blobs given the latency they introduce?
- Relays: Should we consider updating the spec to better accommodate blobs? (Eg. to allow asynchronous blob submission after the payload?)
- Execution client teams: Are there mempool policies that make it hard for blobs to propagate? How often do blobs get ejected under conditions like we saw last week?
- L2s: How are you pricing blobs (do you consider congestion or the added cost to builders)? How late in a slot do you submit them?