

“Unified Ethereum” vs “L2 Ecosystem Competition”

Can we have both?

Hart Lambur @ Across, **Ben Jones** @ Optimism,
Jesse Pollak @ Base, **Steven Goldfeder** @ Arbitrum,
Vitalik Buterin @ Ethereum





**4 years ago Ethereum had
a scaling problem**

November 2020

15 TPS

ETH TPS

>>\$50

Cost of Uniswap Swap



Ethereum Magicians

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A rollup-centric ethereum roadmap

ethereum-roadmap, layer-2



vbuterin

4



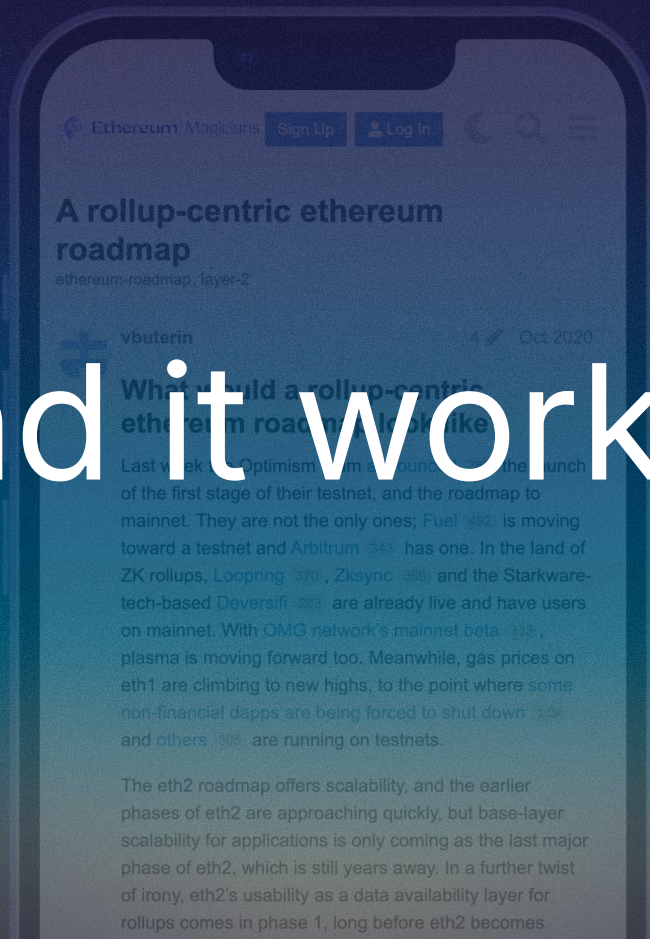
Oct 2020

What would a rollup-centric ethereum roadmap look like?

Last week the Optimism team [announced](#) ⁷⁸⁶ the launch of the first stage of their testnet, and the roadmap to mainnet. They are not the only ones; [Fuel](#) ⁴⁹² is moving toward a testnet and [Arbitrum](#) ³⁴³ has one. In the land of ZK rollups, [Loopring](#) ³⁷⁰, [Zksync](#) ³⁶⁹ and the Starkware-tech-based [Deversifi](#) ²⁸³ are already live and have users on mainnet. With [OMG network's mainnet beta](#) ³³³, plasma is moving forward too. Meanwhile, gas prices on eth1 are climbing to new highs, to the point where [some non-financial dapps are being forced to shut down](#) ^{1.0k} and [others](#) ³⁰⁵ are running on testnets.

The eth2 roadmap offers scalability, and the earlier phases of eth2 are approaching quickly, but base-layer scalability for applications is only coming as the last major phase of eth2, which is still years away. In a further twist of irony, eth2's usability as a data availability layer for rollups comes in phase 1, long before eth2 becomes

And it worked



Daily average TPS

2020 May 31 — 2024 Nov 08

336.38 TPS

26.08x ⓘ

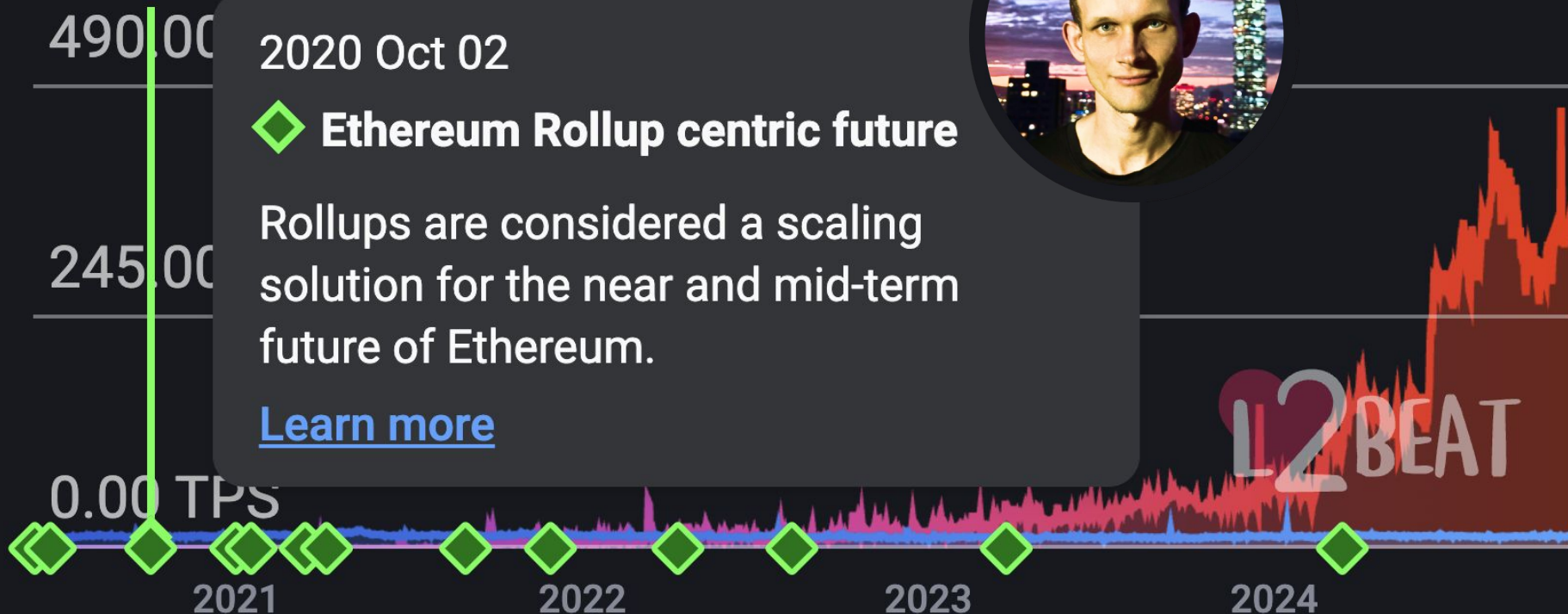


2020 Oct 02

◆ Ethereum Rollup centric future

Rollups are considered a scaling solution for the near and mid-term future of Ethereum.

[Learn more](#)

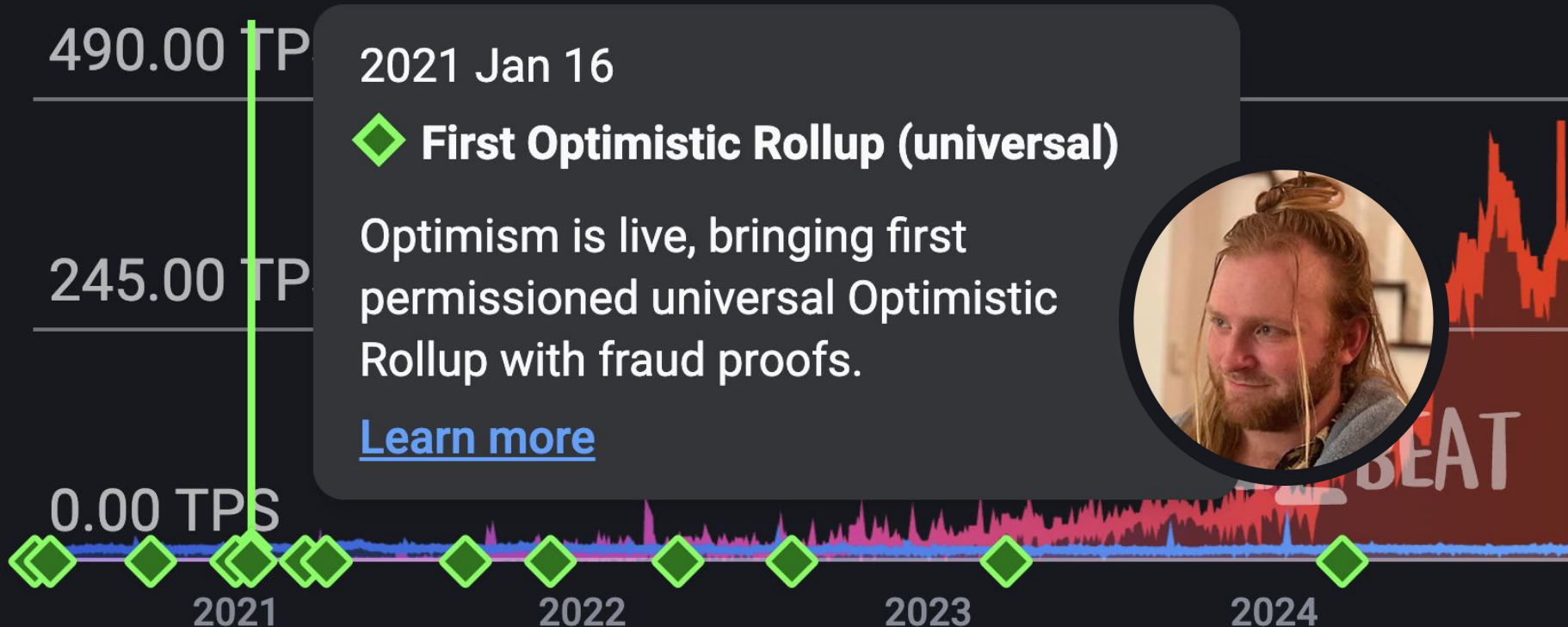


Daily average TPS

2020 May 31 — 2024 Nov 08

336.38 TPS

26.08x ⓘ



Daily average TPS

336.38 TPS

2020 May 31 — 2024 Nov 08

26.08x ⓘ

490.00 TPS

245.00 TPS

0.00 TPS



2021 Aug 31

◆ **First public Optimistic Rollup
(universal)**

Arbitrum removed whitelist, becoming first publicly open universal Optimistic Rollup.

[Learn more](#)

2021

2022

2023

2024



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336.38 TPS

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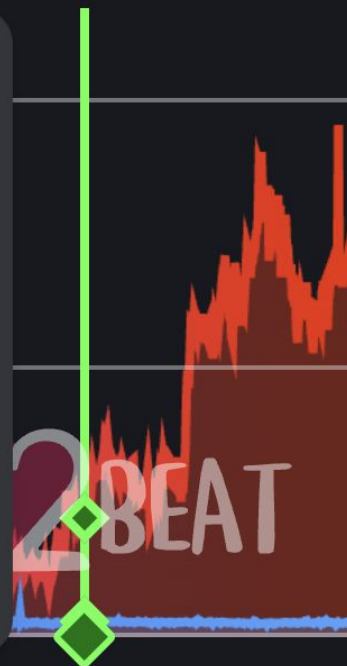
0.00 TPS

2024 Mar 13

◆ **EIP-4844 (Protodanksharding) is live on mainnet**

Blobs create a new, cheap way to post data on-chain that is specialized for rollups.

[Learn more](#)



Daily average TPS

2020 May 31 — 2024 Nov 08

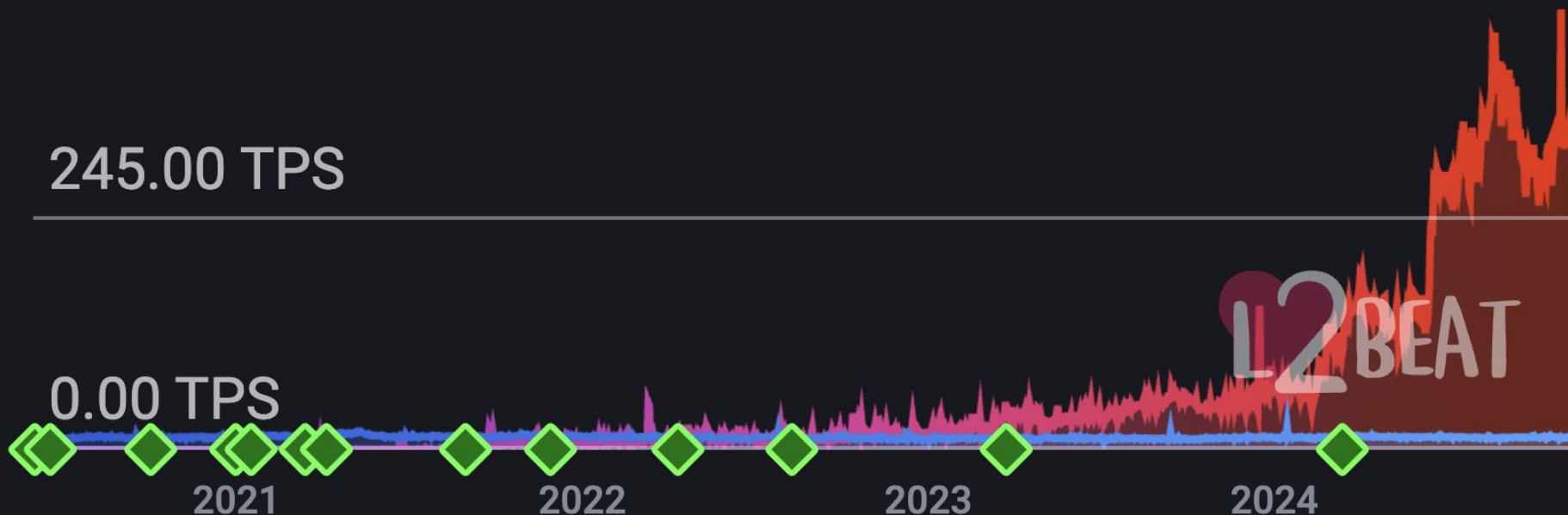
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0.00 TPS



Daily average TPS

336.38 TPS

2020 May 31 — 2024 Nov 08

26.08x ⓘ

490.00 TPS

We have scaled Ethereum!

245.00 TPS

0.00 TPS

2021

2022

2023

2024

L2BEAT



The background is a smooth gradient from light pink at the top to a darker pink at the bottom. On the left and right sides, there are decorative borders of stylized flowers and leaves in various shades of pink and purple. In the bottom left corner, there is a small, stylized illustration of a pink, multi-faceted structure, possibly a house or a tower, partially obscured by the floral border.

But now we have a new problem...

Ethereum is Fragmented

Unify Ethereum