Mempool Services: BSC, Polygon, and ETH Performance Benchmark

CHICAGO, ILLINOIS, UNITED STATES, October 3, 2022 /EINPresswire.com/ -- bloXroute is excited to share the results of an independent transaction performance benchmark of the three leading EVM networks - Ethereum, BSC, and Polygon.

This performance benchmark was completed in conjunction with CertiK team in August 2022. The goal was to evaluate bloXroute's performance in terms of transaction propagation speed and gain an independent perspective on our infrastructure's capabilities across the BSC, Polygon, and ETH chains.

CertiK is one of the global leaders in the web3 and blockchain security space. Their security services in code auditing, KYC, bug bounties, and monitoring on-chain activities benefit from access to the fastest and most reliable networks currently existing. Naturally, this collaboration felt like a win-win for both parties: CertiK had an opportunity to explore the potential of performance improvements for real-time monitoring, while we were given a chance to demonstrate to the community once again that the Blockchain Distribution Network (BDN) is the fastest solution for hearing and trading on DeFi.

Testing Logic

-The benchmarking test was performed four times on every blockchain network: Binance Smart Chain, Polygon, and Ethereum.
-Two transaction streams were monitored during each benchmark testing:
---One stream from the node used by CertiK (through Geth client P2P connection)
---One stream from the bloXroute Gateway (via bloXroute BDN connection)
-The comparison script logged the transaction hash and timestamp for each transaction in both streams.
-The comparison script then calculated how many transactions had been seen first on each endpoint, as well as the time difference between the two endpoints.
-The Gateway was running under a bloXroute Enterprise Elite account.

Performance Benchmark

CertiK is considered a leading BSC validator. In order to assess performance, CertiK ran a total of four separate tests on each blockchain to evaluate the transaction propagation speed. Each test

was designed to measure which endpoint received transactions faster and what was the time difference between the two endpoints.

Below are the aggregated results recorded for one of the tests comparing a BSC node to the Gateway. The results of other tests were similar:

BSC

Analysis of Transactions received on both feeds:
Number of transactions: 99100
Number of transactions received from Gateway first: 95930
Number of transactions received from BSC node first: 1678
Percentage of transactions seen first from gateway: 98%
Average time difference for transactions received first from gateway (ms): 619
Average time difference for transactions received first from BSC node (ms): 35

Total Transactions summary:
Total tx from gateway: 111931
Total tx from eth node: 99818
Number of low fee tx ignored: 0

3 of 3 intervals included.

The results above show that 98% of all transactions were recorded first from the Go Gateway at an average of 619 milliseconds faster than the regular p2p BSC node.

Below are the aggregated results recorded after running the script on Polygon blockchain:

polygon

Analysis of Transactions received on both feeds:
Number of transactions: 109073
Number of transactions received from Gateway first: 89376
Number of transactions received from Polygon node first: 16786
Percentage of transactions seen first from gateway: 84%
Average time difference for transactions received first from gateway (ms): 262
Average time difference for transactions received first from Polygon node (ms): 76

Total Transactions summary:
Total tx from gateway: 136459
Total tx from eth node: 116693
Number of low fee tx ignored: 0

4 of 4 intervals included.

The results above show that 84% of all transactions were recorded first from the Gateway at an average of 262 milliseconds faster than the regular p2p Polygon node.

To conclude, below are the aggregated results recorded after running the same script on Ethereum blockchain:

Eth

Analysis of Transactions received on both feeds:
Number of transactions: 41334
Number of transactions received from Gateway first: 36043
Number of transactions received from Ethereum node first: 3267
Percentage of transactions seen first from gateway: 92%
Average time difference for transactions received first from gateway (ms): 170
Average time difference for transactions received first from Ethereum node (ms): 75

Total Transactions summary:
Total tx from gateway: 68739
Total tx from eth node: 85927
Number of low fee tx ignored: 0

3 of 3 intervals included.

Across 41,334 transactions received, 36,043 were seen first from the Gateway (approximately 92% of all transactions), while only 3,267 transactions were first seen from the Ethereum node. Moreover, the Gateway received these transactions at an average of 170 milliseconds faster than the regular p2p Ethereum node.

Test conclusion

The bloXroute Go Gateway delivers better performance regardless of what chain you are operating on. On average, on the BSC, Polygon, and Ethereum chains, transactions were received faster by 619 ms, 262 ms, and 170 ms, respectively. The performance results may vary based on the tester's/user's infrastructure, network connection, and tier of the bloXroute subscription plan.

Traders using the bloXroute infrastructure get significant reduction in the time it takes to receive transactions. This allows them to win more trades and improve profitability

This post can be found on bloXroute's Medium.

About CertiK

CertiK's mission is to secure the Web3 world. Starting with blockchain, CertiK applies cutting-edge innovations from academia into Enterprise, enabling mission-critical applications to be built with security and correctness. Headquartered in New York City, CertiK was founded by computer science professors Ronghui Gu and Zhong Shao. CertiK is backed by industry leaders, including Insight Partners, Tiger Global, Sequoia, Coatue Management, Advent International, Goldman Sachs, Lightspeed, Hillhouse Capital, Binance, Coinbase Ventures, and more.

About bloXroute

bloXroute Labs is a leading blockchain software company. We're on a mission to bring transactions and data transmission on blockchain to the next level. bloXroute's proprietary Blockchain Distribution Network (BDN) offers unmatched speed advantage to competitive DeFi traders and infrastructure performance improvements to DeFi service providers and projects. Over 300 trading firms run DeFi trade strategies on bloXroute's BDN to get faster data and identify more trade opportunities combined with faster transaction propagation on the blockchain. On an average day, bloXroute users send $1.5 Billion+ transactions in value on its BDN.

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