EN Observability

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EN Observability

The EN provides several options for setting up observability. Configuring logs and sentry is described in the configuration section, so this section focuses on the exposed metrics.

This section is written with the assumption that you're familiar withPrometheusopen in new window andGrafanaopen in new window .

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Buckets

By default, latency histograms are distributed in the following buckets (in seconds):

[0.001, 0.005, 0.025, 0.1, 0.25, 1.0, 5.0, 30.0, 120.0]

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Metrics

EN exposes a lot of metrics, a significant amount of which aren't interesting outside the development flow. This section's purpose is to highlight metrics that may be worth observing in the external setup.

If you are not planning to scrape Prometheus metrics, please unsetEN_PROMETHEUS_PORT environment variable to prevent memory leaking.

Metric name Type Labels Description external_node_synced Gauge - 1 if synced, 0 otherwise. Matcheseth_call behavior external_node_sync_lag Gauge - How many blocks behind the main node the EN is external_node_fetcher_requests Histogram stage ,actor Duration of requests performed by the different fetcher components external_node_fetcher_cache_requests Histogram - Duration of requests performed by the fetcher cache layer external_node_fetcher_miniblock Gauge status The number of the last L2 block update fetched from the main node external_node_fetcher_l1_batch Gauge status The number of the last batch update fetched from the main node external_node_action_queue_action_queue_size Gauge - Amount of fetched items waiting to be processed server_miniblock_number Gauge stage =sealed Last locally applied L2 block number server_block_number Gauge stage =sealed Last locally applied L1 batch number server_block_number Gauge stage =tree_lightweight_mode Last L1 batch number processed by the tree server_processed_txs Counter stage =mempool_added, state_keeper Can be used to show incoming and processing TPS values api_web3_call Histogram method Duration of Web3 API calls sql_connection_acquire Histogram - Time to get an SQL connection from the connection pool

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Interpretation

After applying a dump, the EN has to rebuild the Merkle tree to verify the correctness of the state in PostgreSQL. During this stage,server_block_number { stage='tree_lightweight_mode' } is increasing from 0 toserver_block_number { stage='sealed' } , while the latter does not increase (EN needs the tree to be up-to-date to progress).

After that, the EN has to sync with the main node.server_block_number { stage='sealed' } is increasing, andexternal_node_sync_lag is decreasing.

Once the node is synchronized, it is indicated by theexternal_node_synced .

Metrics can be used to detect anomalies in configuration, which is described in more detail in the next section.

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