Pagoda

NEAR Data Stack

Easier and Faster with Pagoda

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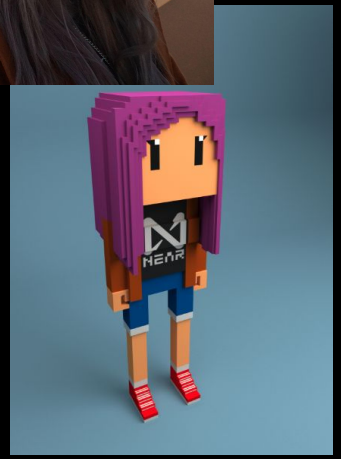
Slides: @pagodaplatform

Hi – I'm Yijia, Tiffany! 👋

- Product Manager @ Pagoda
- Computer Science, Data Science, Business, Media @ Columbia University + NYU
- Joined NEAR Family in 2020 and founder of NEAR Data Guild
- NFT of me! Thank you NEARbits!
- Love traveling, Barca fan, like to mess with my hair color and have a bartending license
- 📈🦊😜♊🎻🎿



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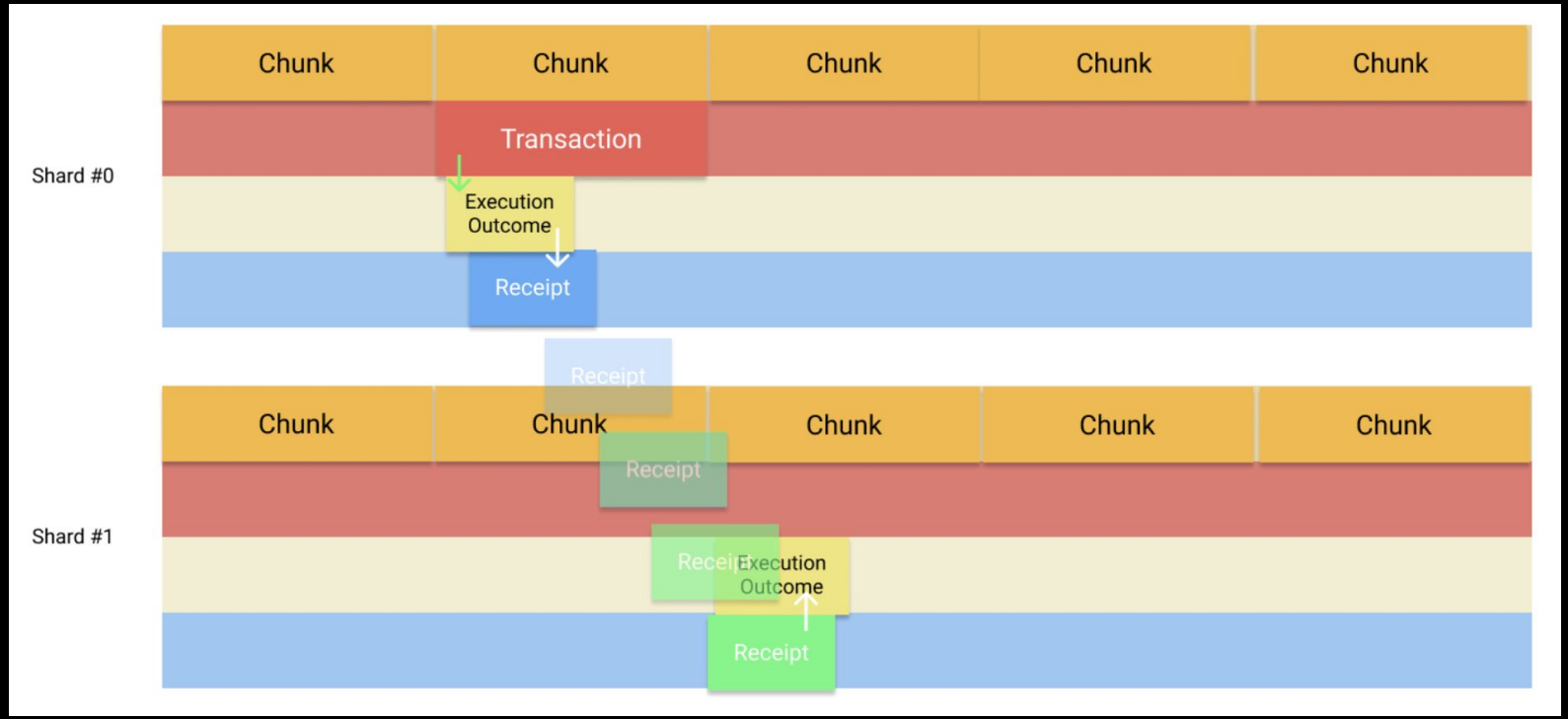
Agenda

- NEAR Lake
  - Intro + NEAR Data Flow + Events
  - Demo listening on Ref txs
  - NFT Tutorial Walkthrough
- Enhanced API - upgraded data query experience
- Pagoda Console - deploy in 15 mins with Alerts, Analytics, RPC Stats
- NEAR Data Stack Next Step

NEAR Data Flow



NEAR Event Standard

Motivation

NEAR and third-party applications need to track mint, transfer, burn events for all NFT-driven apps consistently. This extension addresses that.
Event Log is what enables this standardization

JSON string should have the following interface:

```
// Interface to capture data about an event
// Arguments
// * `standard`: name of standard, e.g. nep171
// * `version`: e.g. 1.0.0
// * `event`: type of the event, e.g. nft_mint
// * `data`: associate event data. Strictly typed for each set {standard, version, event} inside corres
interface EventLogData {
    standard: string,
    version: string,
    event: string,
    data?: unknown,
}
```

NEAR Event Standard

```rust
use near_sdk::log;

// ...
log!(
    r#"EVENT_JSON:{"standard": "nepXXX", "version": "1.0.0", "event": "YYY", "data": {"token_id": "{}"}
    token_id
);
// ...
```

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Valid event logs:

```
EVENT_JSON:{
    "standard": "nepXXX",
    "version": "1.0.0",
    "event": "xyz_is_triggered"
}
```

Copy

```
EVENT_JSON:{
    "standard": "nepXXX",
    "version": "1.0.0",
    "event": "xyz_is_triggered",
    "data": {
        "triggered_by": "foundation.near"
    }
}
```

There is a known limitation of 16kb strings when capturing logs

Beyond Indexer Framework

NEAR Lake: Stream blocks to your server

How does it work?
Define the accounts, contracts, events you want to listen to and get the data streamed to your preferred destination

```
<block_height>/
  block.json
  shard_0.json
  shard_1.json
  ...
  shard_N.json
```

`<block_height>` is a 12-character-long `u64` string with leading zeros (e.g "000042839521"). See this issue for a reasoning.

`block_json` contains JSON-serialized `BlockView` struct. **NB!** this struct might change in the future, we will announce it

`shard_N.json` where N is `u64` starting from `0`. Represents the index number of the shard. In order to find out the expected number of shards in the block you can look in `block.json` at `.header.chunks_included`

NEAR Lake: Stream blocks to your server

Reduce monthly costs by 25x

Spin up time reduced by 5x

Low Maintenance

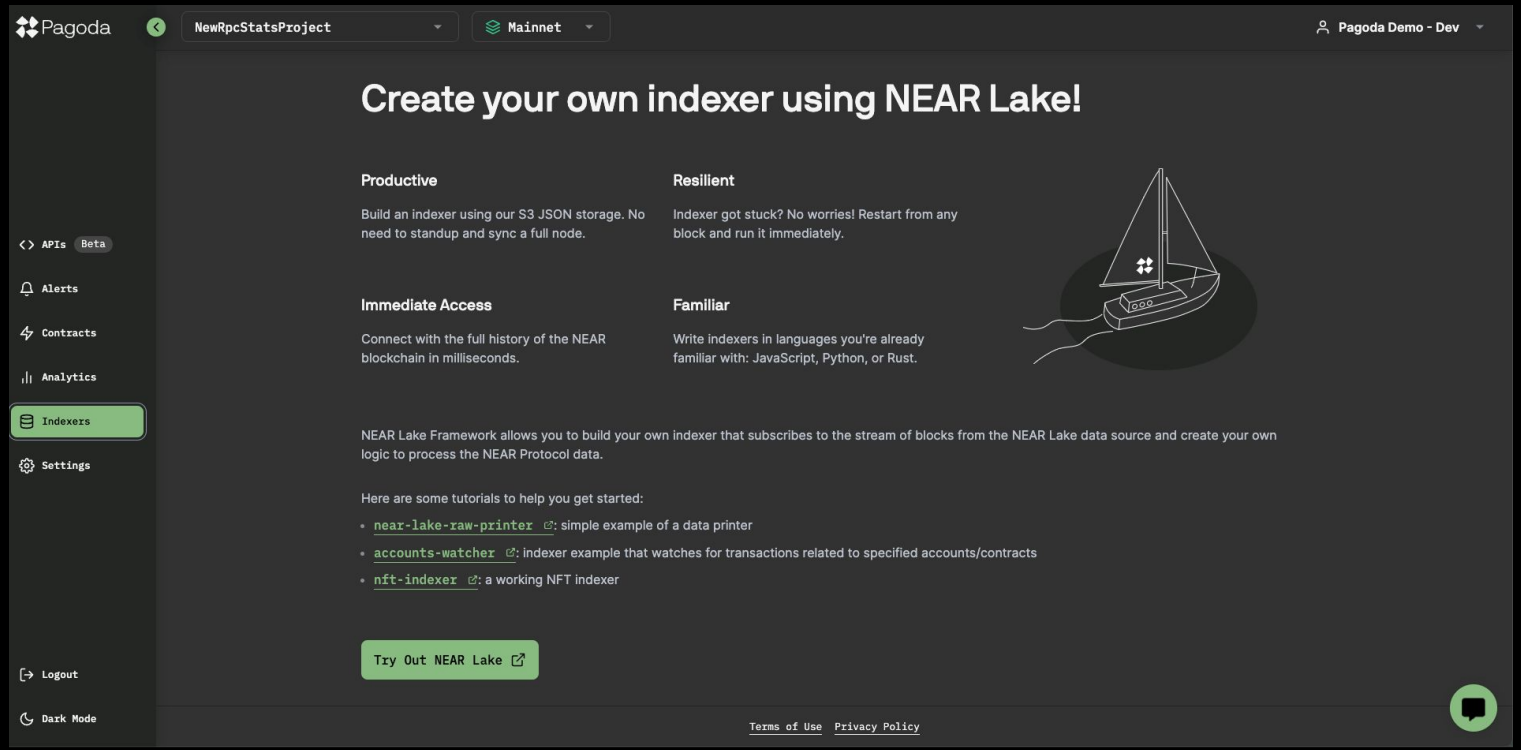
JavaScript, Python, Rust and more

Get started in 6 minutes

NEAR Lake Demo

Daniel Wang

Get started from Pagoda.co!



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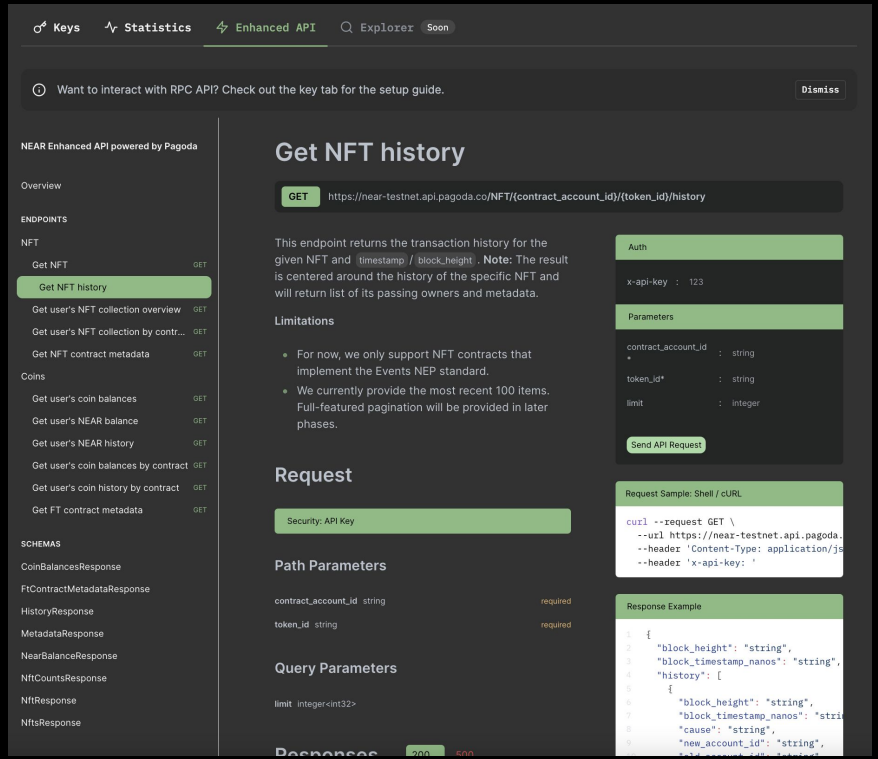
Enhanced API: Query token balances



- Indexing over 1k tokens under all NEP standards
- Balances of FTs, NFTs and (MTs soon)
- Balance history
- Metadata of FTs and NFTs
- Interactive Docs in Pagoda!

We want Feedback on what other APIs you want to see next! Feedback tool in Console!

* Support legacy FT and NFT by end of year and more to come in the future!

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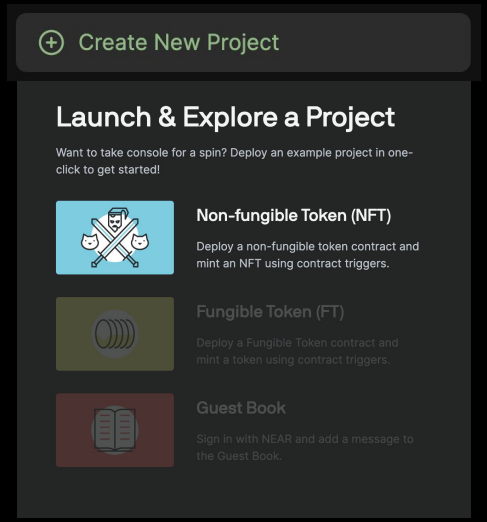
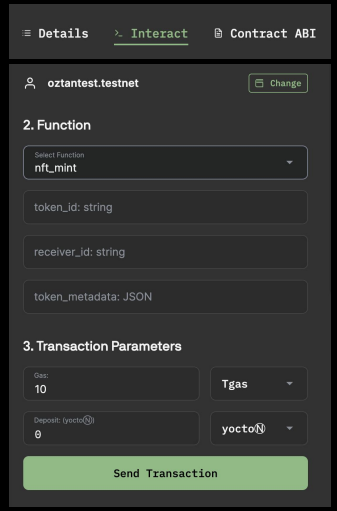
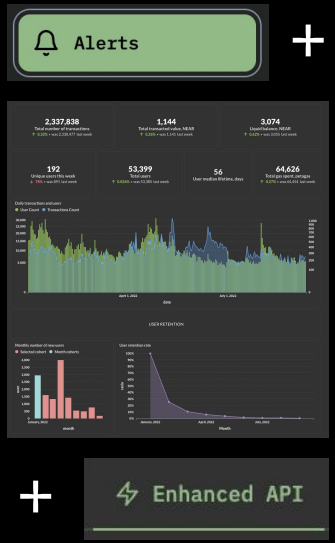
Build on Pagoda in 15 minutes







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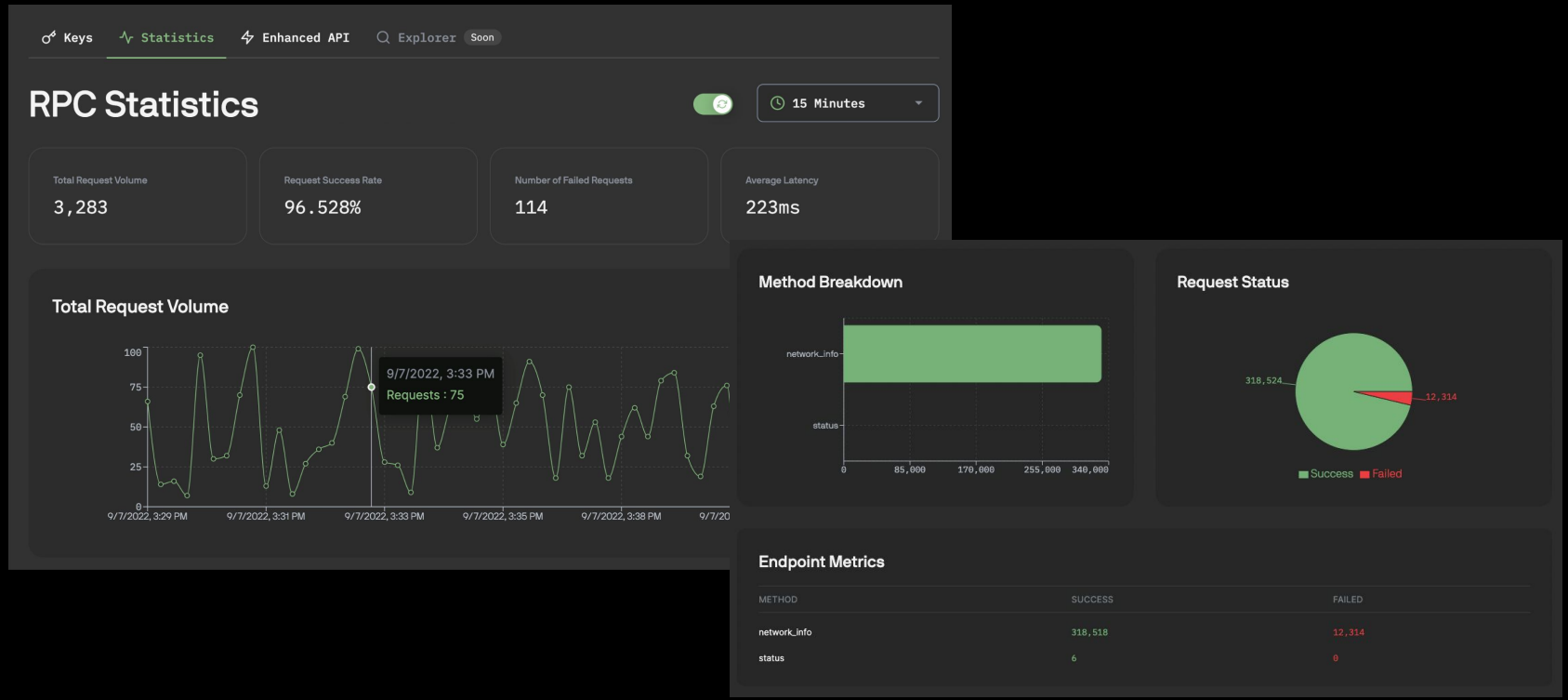
Pagoda.co

RPC Statistics: Get RPC usage insights



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NEAR Data Stack Mission

Unlock the full power of data, accelerate your build, operations and growth

Build better UX	More Observability	Business Insights
Quick start, less effort on indexers and integrations	*Visibility into your infrastructure and contracts*	*Customer insights for your growth strategy*

NEAR Lake
Enhanced API
Alerts
RPC Statistics
Analytics

What's Next?

Data infra that just works

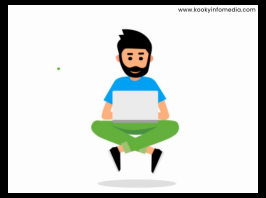
RPC Node

Indexer

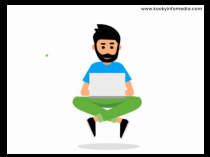
Google Cloud

aws

MySQL



Pagoda API



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Questions?