



What is a Pipe?

A Pipe is a collection of one or more SQL queries (each query is called a [Node](#)).

What should I use Pipes for?

Use Pipes to build features over your data.

Write SQL that joins, aggregates, or otherwise transforms your data and publish the result.

You have three options to publish the result of a Pipe: [API Endpoints](#), [Materialized Views](#), and [Copy Pipes](#).

A Pipe can only have a single output at one time. This means that you cannot create a Materialized View and an API Endpoint from the same Pipe, at the same time.

Creating Pipes

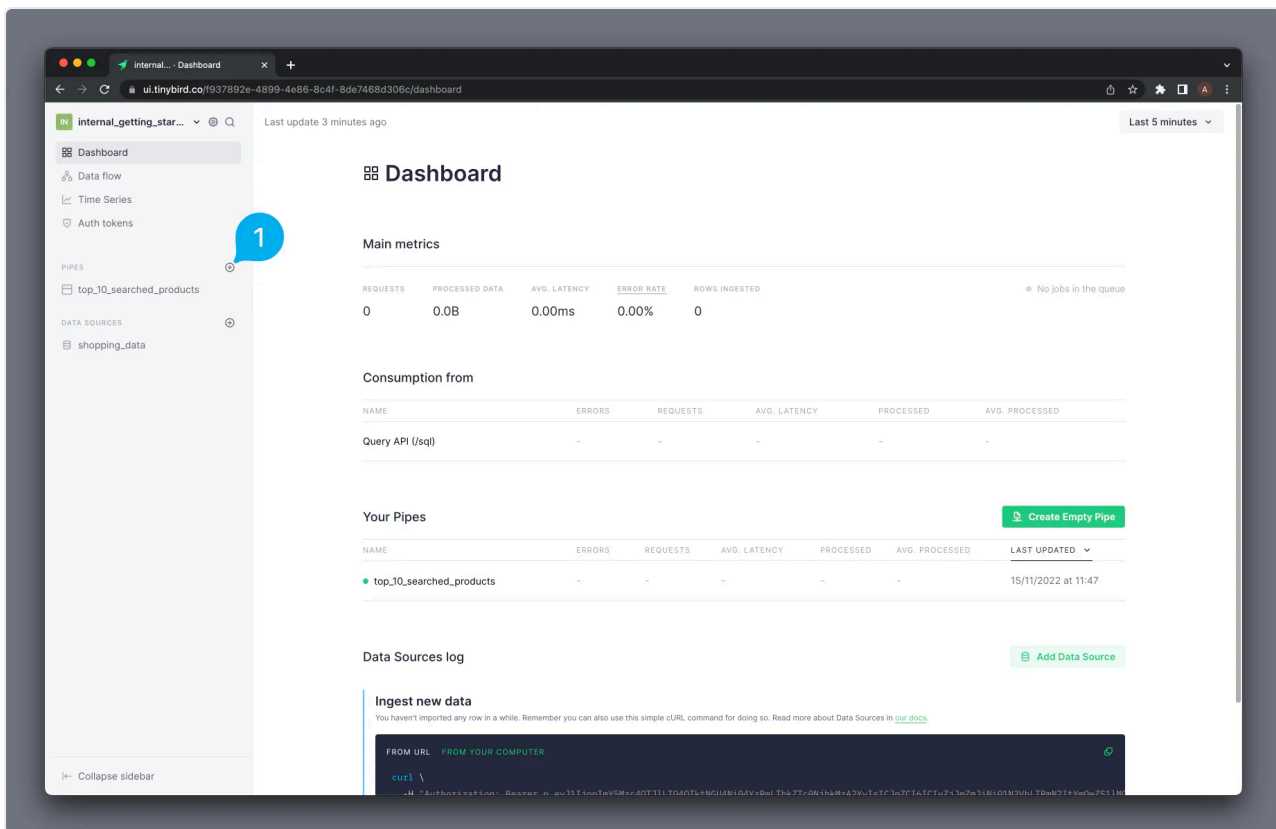
You can create as many Pipes in your Workspace as needed.

Top tip: press `⌘+K` or `CTRL+K` at any time in the Tinybird UI to open the Command Bar and view all your Workspace resources.

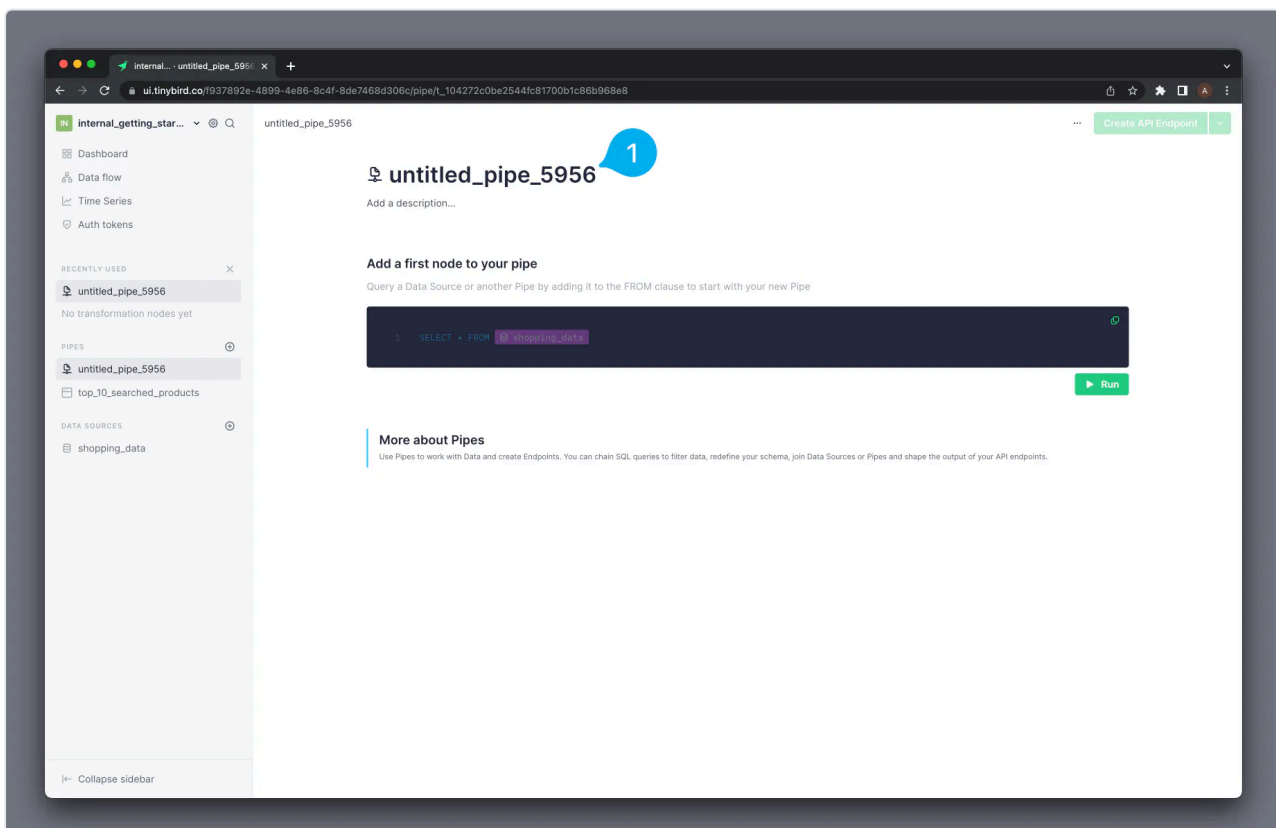
Creating Pipes in the UI

To add a Pipe, click the Plus (+) icon in the left side navigation bar next to the Pipes section (see Mark 1 below).





At the top of your new Pipe, you can change the name & description. **Click on the name or description** to start entering text (see Mark 1 below).



In time, you might end up with a lot of Pipes. Tinybird doesn't yet offer a way to organize your Pipes into folders, but a quick and easy alternative is to group your Pipe names by name - like `mktg-<pipe-name>` so all your marketing Pipes are together.

Pipes are ordered alphabetically, and must always start with a letter (but you can use numbers and underscores in the rest of the name).

Creating Pipes in the CLI

tb pipe generate

You can use `tb pipe generate` to generate a `.pipe` file. You must provide a name for the Pipe & a single SQL statement.

This command will generate the necessary syntax for a single-Node Pipe inside the file. You can open the file in any text editor to change the name, description, query and add more Nodes.

Defining your Pipes in files allows you to version control your Tinybird resources with git.

The SQL statement must be wrapped in quotes or the command will fail.

```
tb pipe generate my_pipe_name "SELECT 1"
```



Generating the `.pipe` file does **not** create the Pipe in Tinybird. When you are finished editing the file, you must push the Pipe to Tinybird.

```
tb push my_pipe_name.pipe
```



If you list your Pipes, you'll see that your Pipe exists in Tinybird.

```
tb pipe ls
```



```
** Pipes:
```

version	name	published date	nodes

	my_pipe_name	2022-11-30 21:44:55	1

Format descriptions using Markdown

It is possible to use Markdown syntax in Pipe description fields so you can add richer formatting.

Here's an example using headings, bold and external links:

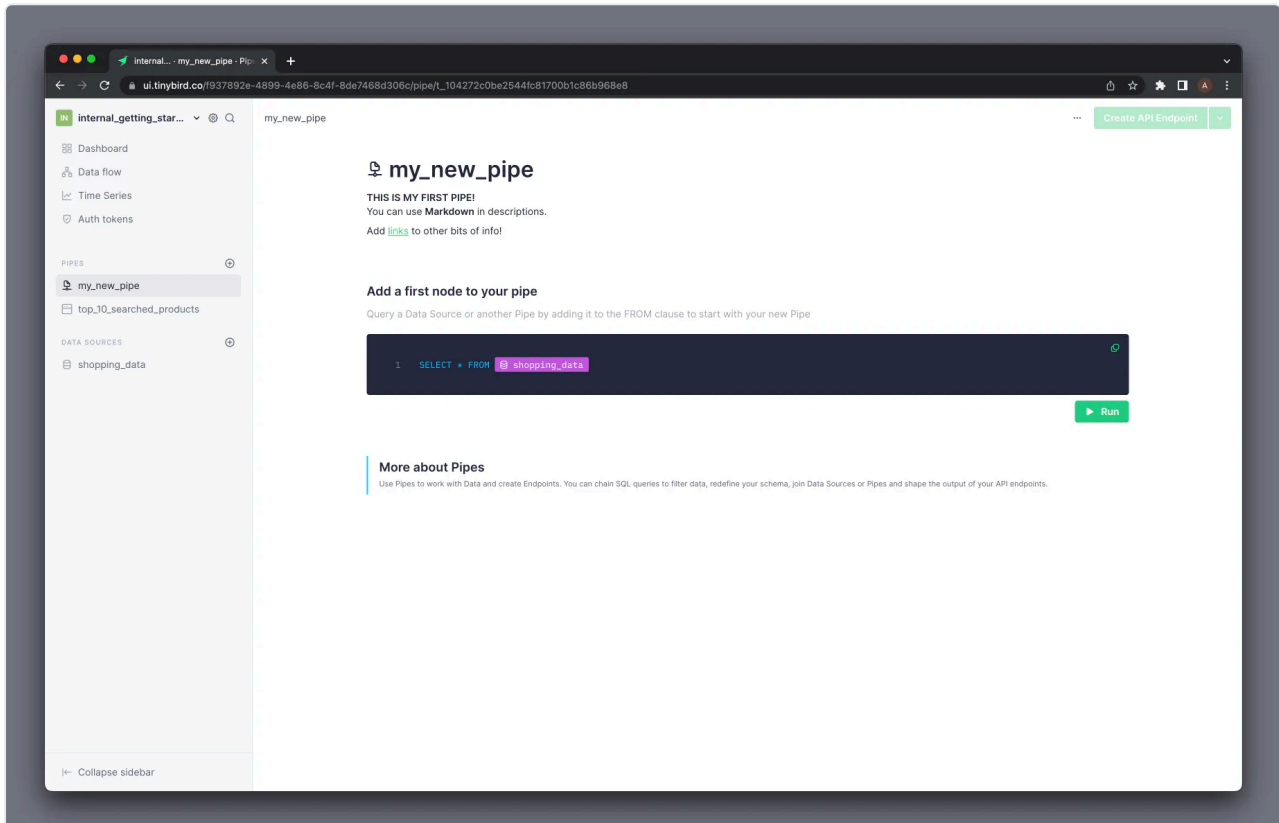
```
## This is my first Pipe!
```



```
You can use Markdown in descriptions.
```

```
Add [links](https://www.tinybird.co) to other bits of info!
```

This will be rendered in the UI like this:



Nodes

What is a Node?

A Node is a container for a single SQL `SELECT` statement. Nodes live within Pipes, and you can have many Nodes inside the same Pipe.

A query in a Node can read data from a [Data Source](#), other Nodes inside the same Pipe, or from [API Endpoint](#) Nodes in other Pipes.

What should I use Nodes for?

Nodes allow you to break your query logic down into multiple, smaller queries. You can then chain Nodes together to build the logic incrementally.

Each Node can be developed & tested individually. This makes it much easier to build complex query logic in Tinybird as you avoid creating large monolithic queries with many sub-queries.

Company

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- ROI Calculator
- About Us
- Shop
- Careers
- Request a demo

Resources

- Docs
- Blog
- Community
- Live Coding
- Customer Stories
- RSS Feed

Integrations

- Amazon S3
- Kafka Data Streams
- Google Cloud Storage
- Google BigQuery
- Snowflake
- Confluent

Use cases

- In-Product Analytics
- Operational Intelligence
- Realtime Personalization
- Anomaly Detection & Alerts
- Usage Based Pricing
- Sports Betting/Gaming
- Smart Inventory Management
- Serverless ClickHouse

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