Kaiko

MIGRATION GUIDE

Volatility of Volatility

Amberdata → Kaiko

2026

www.kaiko.com

1 At a glance

What this endpoint gives you: one row per day with Deribit's **DVOL** volatility index for BTC or ETH (itself an annualised 30-day implied volatility) and its **volatility of volatility**, which is the volatility of the index over the last 30 days. A high value means the market's own volatility expectation moved sharply over the month.

What changes for you

- You will call a new endpoint, `/analytics/volatility/volatility-of-volatility`, using your Kaiko API key in the `X-Api-Key` header (§2).
- `currency=BTC` becomes `base_asset=btc`, in lowercase and without a quote asset (§3, §6).
- The request shape stays the same: there are no dates, and you get the full daily series in one response, newest first.
- Volatilities are now returned as decimals, for example `0.3811` where Amberdata returned `38.11` (percent).
- Kaiko annualises with the exact √365 and does not round, whereas Amberdata multiplied by 1910 and rounded to one decimal, so values can differ by about 0.1 point (§7).
- Field names have been updated: `closeDvol` becomes `dvol`, `volVol30` becomes `volatility_of_volatility_30` and `timestamp` becomes `value_time`, an ISO 8601 string (§5).

Coverage & distribution

Data type: Daily series, one row per UTC day (stamped 00:00 UTC), newest first

Index: Deribit DVOL for BTC and ETH, close at 00:00 UTC

Metric: Sample standard deviation of the last 30 daily log returns of the index, annualised by √365

Range: The full series in one response

History: From March 2021

Distribution: REST API

2 Endpoint & authentication

	Amberdata (today)	Kaiko (new)
Method	GET	GET
Base URL	`https://api.amberdata.com`	`https://api.kaiko.io`
Path	`/markets/derivatives/analytics/volatility/volatility-of-volatility`	`/analytics/volatility/volatility-of-volatility`
Auth	API key header `x-api-key`	API key header `X-Api-Key` (your Kaiko key)

Header names are not case-sensitive, so `x-api-key` and `X-Api-Key` refer to the same header: only the key itself changes. **Versioning:** Amberdata reported its version in `payload.metadata.api-version` (`2023-09-30`). Kaiko accepts an optional `api_version` query parameter (the default and current version is `2026-10-01`) and returns it in `meta.api_version`.

3 Request parameters

Amberdata param	Kaiko param	Change	Notes
`currency` (required)	`base_asset` (required)	RENAMED	`BTC` → `btc`, `ETH` → `eth`. Lowercase only. No quote asset.
`timeFormat` (optional)	None	REMOVED	Kaiko times are always ISO 8601 strings, the same as Amberdata's `timeFormat=iso`. You can simply remove it from your requests.
None	`exchange` (optional)	NEW	`drbt` (Deribit), the default and only value.
None	`api_version` (optional)	NEW	Lets you pin the response format. The default is `2026-10-01`.

Range

- **No date parameters, on both sides:** every request returns the full daily series in one response, newest first, without pagination.
- **One row per UTC day**, stamped 00:00 UTC, with the index close of that minute.
- **History:** from March 2021.

4 Response envelope & metadata

These are the fields around the data, in other words the wrapper your parser reads before reaching the numbers. This envelope is **identical on every Amberdata endpoint**.

Amberdata field	Kaiko field	Change	Notes
`status`	None	REMOVED	Please use the HTTP status code (200) instead.
`title`	None	REMOVED	There is no equivalent on success.
`description`	None	REMOVED	There is no equivalent on success.
`payload.data`	`data`	RENAMED	Now at the top level. An **array** with one row per day.
`payload.metadata`	`meta`	RENAMED	Now at the top level.
`api-version`	`api_version`	RENAMED	`2026-10-01` (Amberdata: `2023-09-30`).
None	`count`	NEW	The number of rows in `data` (days).
None	`next_url`	NEW	Always `null`, since there is a single page.
None	`url`	NEW	Your request URL, including `api_version`.

On Amberdata, `api-version` sits inside `payload.metadata`. On Kaiko, `api_version`, `count`, `next_url` and `url` all sit inside `meta`.

Errors and empty results

- **Asset without a DVOL index:** Amberdata returned a 200 response with an empty `data` array (for example `DOGE`). Kaiko returns a **404** error with the code `unknown_instrument` (for example "drbt does not serve a volatility index for doge").
- **Uppercase or Amberdata codes:** Amberdata accepted any case. Kaiko returns a **400** error (for example `BTC`, `exchange=deribit`).
- **Missing or invalid parameter:** both APIs return a 400 error. Kaiko errors are `application/problem+json` (RFC 9457) bodies that include `status`, `title`, a `detail` message naming the parameter, and the code `invalid_parameter`.

5 Response data fields

Amberdata field	Kaiko field	Type	Change
`timestamp`	`value_time`	string	RENAMED
`closeDvol`	`dvol`	number	RENAMED
`volVol30`	`volatility_of_volatility_30`	number	RENAMED

- **value_time** is the day at 00:00 UTC, as an ISO 8601 string (`"2026-10-23T00:00:00.000Z"`), whereas Amberdata returned a number of milliseconds by default.
- **dvol** is the DVOL close at 00:00 UTC, as a decimal. Deribit quotes DVOL in percentage points, so `38.11` becomes `0.3811`.
- **volatility_of_volatility_30** is the sample standard deviation (n – 1) of the 30 daily log returns of the index ending on that day, annualised by √365, as a decimal and unrounded.

Units: both fields are annualised volatilities. Amberdata expressed them in percent (`45.8` = 45.8%), while Kaiko uses decimals (`0.4577` = 45.77%).

6 Exchange & venue names

For this endpoint, the venue is the exchange **publishing the volatility index**. Please map the currency you send:

Amberdata currency	Kaiko exchange	base_asset	History from
BTC	drbt	btc	Mar 2021
ETH	drbt	eth	Mar 2021

The index is Deribit's DVOL. On Kaiko, `exchange` is optional and defaults to `drbt`, its only value, and there is no `quote_asset`.

7 Will your values change?

Short answer

The calculation is the same: once divided by 100, the values are directly comparable with Amberdata's. The volatility of volatility can differ by about 0.1 point, because of the annualisation constant and the rounding.

- **Same methodology:** both use the DVOL close at 00:00 UTC each day and the sample standard deviation of the last 30 daily log returns of the index. `dvol` is the same value as `closeDvol`.
- **Annualisation:** Amberdata multiplied by the rounded constant 1910, whereas Kaiko uses the exact √365 (1910.49 in percent). Kaiko's value is 0.026% higher (relative) before rounding.
- **Rounding:** Amberdata rounded `volVol30` to one decimal (for example `45.8`), whereas Kaiko returns the full precision (for example `0.45772939`). Together with the constant, the first decimal can move by 0.1.

8 Before / after example

Request

Amberdata

```
GET https://api.amberdata.com
    /markets/derivatives/analytics
    /volatility
    /volatility-of-volatility
    ?currency=BTC
x-api-key: <your-amberdata-key>
```

Kaiko

```
GET https://api.kaiko.io
    /analytics/volatility
    /volatility-of-volatility
    ?base_asset=btc
X-Api-Key: <your-kaiko-key>
```

Response (real responses, two most recent days; Kaiko volatility of volatility rounded to 4 decimals)

Amberdata


```
{
  "status": 200,
  "title": "OK",
  "description": "Successful request",
  "payload": {
    "data": [ {
      "timestamp": 1792713600000,
      "closeDvol": 38.11,
      "volVol30": 45.8
    }, {
      "timestamp": 1792627200000,
      "closeDvol": 37.11,
      "volVol30": 45.3
    },
    … 2,036 more days, back to 2021-03-24
    ],
    "metadata": {
      "api-version": "2023-09-30"
    }
  }
}
```


Kaiko


```
{
  "data": [ {
    "value_time": "2026-10-23T00:00:00.000Z",
    "dvol": 0.3811,
    "volatility_of_volatility_30": 0.4577
  }, {
    "value_time": "2026-10-22T00:00:00.000Z",
    "dvol": 0.3711,
    "volatility_of_volatility_30": 0.4529
  },
  … 2,036 more days, back to 2021-03-24
  ],
  "meta": {
    "api_version": "2026-10-01",
    "count": 2038,
    "next_url": null,
    "url": "https://api.kaiko.io/analytics/
volatility/volatility-of-volatility?
base_asset=btc&api_version=2026-10-01"
  }
}
```