Kaiko

MIGRATION GUIDE

Decorated Trades

Amberdata → Kaiko

2026

www.kaiko.com

1 At a glance

What this endpoint gives you: for the options of one underlying on one exchange, this endpoint returns one row per trade, decorated with everything around it: the trade itself (time, contract, size, price, implied volatility, greeks), the top of the order book just before and just after the trade (bid, ask, mid and mark, with their implied volatilities and sizes), the open interest before and after, and two aggressor verdicts: the side the venue reported and Kaiko's own reading of who initiated the trade. This is the dataset behind the options flow analytics (top trades, put/call distribution and gamma exposure).

What changes for you

- You will call a new endpoint, `/analytics/trades-flow/decorated-trades`, using your Kaiko API key in the `X-Api-Key` header (§2).
- The underlying is now three lowercase parameters: `exchange=deribit` becomes `exchange=drbt`, and `currency=BTC` becomes `base_asset=btc` with `quote_asset=usd`. A linear book follows the same rule, for example `currency=SOL_USDC` becomes `base_asset=sol` with `quote_asset=usdc` (§3, §6).
- Dates are now full timestamps with a time zone: `startDate` and `endDate` become `start_time` and `end_time`, for example `2026-10-26T00:00:00.000Z`. The window itself stays the same, `[start, end)`, 24 hours by default and at most (§3).
- The filters are renamed: `expiration` becomes `expiry`, `putCall` becomes `option_type` (`call` / `put`), and `blockTradeId` splits into `is_block_trade` (`true` / `false`) and `block_trade_id` (an id). The `instrument` filter now takes the Kaiko instrument code, for example `btc27nov2664000p` (§3).
- Values are now returned as decimals, for example `0.5114` where Amberdata returned `51.14` (percent). Directions are now words: `amberdataDirection` `1` / `-1` becomes `kaiko_direction` `buy` / `sell` (or `unknown` where Amberdata returned `null`), and `exchange_direction` follows the same `buy` / `sell` rule (§5).
- Field names move to snake_case, for example `exchangeTimestamp` becomes `timestamp` and `preTradeBidIv` becomes `pre_trade_bid_iv`. Times are returned as ISO 8601 strings with milliseconds instead of epoch milliseconds, so `timeFormat` is removed. `liquidation` and `tickDirection` are no longer returned (§5).
- The decoration and the direction logic are the same: once the implied volatilities are divided by 100, a trade carries the same values on both sides (§7).
- A pair the exchange does not list is now an error: Kaiko returns a 404, not an empty result (§4).

Coverage & distribution

Data type: One row per option trade, newest first

Metrics: Trade, implied volatility, greeks and USD value · pre-trade and post-trade top of book (bid, ask, mid, mark) · open interest before and after · venue direction and Kaiko direction

Exchange: Deribit (`drbt`), inverse and linear options. Our teams are working to extend this coverage to further exchanges

Underlyings: Every option listed on the exchange, selected by base asset and quote asset (§6)

Range: Up to 24 hours per request

History: From 29 November 2016. The order book, the open interest and the greeks beyond delta start on 1 June 2021 (§7)

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/trades-flow/decorated-trades`	`/analytics/trades-flow/decorated-trades`
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
`exchange` (required)	`exchange` (required)	RENAMED	The name is unchanged, but the value is now the Kaiko code (§6): `deribit` → `drbt`. Lowercase only: `DRBT` returns a 400 error (Amberdata accepted any case).
`currency` (required)	`base_asset` + `quote_asset` (both required)	RENAMED	`BTC` becomes `base_asset=btc` and `quote_asset=usd`; `SOL_USDC` becomes `base_asset=sol` and `quote_asset=usdc` (§6). Both must be lowercase: `BTC` returns a 400 error.
`startDate` (optional)	`start_time` (optional)	RENAMED	**Inclusive**, as before. Please use an RFC 3339 timestamp with a time zone, for example `2026-10-26T00:00:00.000Z` (seconds or milliseconds, at most three fractional digits). A date on its own or a time without zone, which Amberdata accepted, returns a 400 error.
`endDate` (optional)	`end_time` (optional)	RENAMED	**Exclusive**, as before: the window covers `[start_time, end_time)`. The same format rule as for `start_time` applies.
`instrument` (optional)	`instrument` (optional)	RENAMED	The name is unchanged, but the value is now the Kaiko instrument code, as the rows carry it: `BTC-27NOV26-64000-P` becomes `btc27nov2664000p`. The Amberdata name returns a 400 error.
`expiration` (optional)	`expiry` (optional)	RENAMED	An exact match on the option's expiry, as a full timestamp with a time zone: `2026-11-27T08:00:00Z` (Deribit options expire at 08:00 UTC). A date on its own returns a 400 error.
`strike` (optional)	`strike` (optional)	IDENTICAL	An exact match, for example `64000`. The value must be positive.
`putCall` (optional)	`option_type` (optional)	RENAMED	`C` → `call`, `P` → `put`, lowercase only: `P` returns a 400 error.

Amberdata param	Kaiko param	Change	Notes
`blockTrade Id` (optional)	`is_block_ trade` + `block_trade_ id` (optional)	RENAMED	One parameter becomes two: `true` becomes `is_block_trade=true`, `false` becomes `is_block_trade=false`, and an id becomes `block_trade_id=BLOCK-303828`.
`timeFormat` (optional)	None	REMOVED	Kaiko times are always ISO 8601 strings (§5). Sending it returns a 400 error, so you can simply remove it from your requests.
None	`sort` (optional)	NEW	`desc` (the default, newest first, as on Amberdata) or `asc`.
None	`api_version` (optional)	NEW	Lets you pin the response format. The default is `2026-10-01`.

Defaults and limits

- **Boundary, the same as Amberdata:** the window is `[start_time, end_time)`. A trade at `start_time` is included, a trade at `end_time` is not.
- **No dates, the same as Amberdata:** if you include no dates, the last 24 hours up to now are returned.
- **One date only:** if you only provide `start_time`, the window runs from that time up to now, within the 24-hour limit. If you only provide `end_time`, the 24 hours before it are returned, as on Amberdata.
- **Limits, the same as Amberdata:** up to 24 hours per request. A wider window returns a 400 error naming the cap: the window is never shortened automatically. The whole window comes in one response, without pagination. A window that would hold 100,000 trades or more returns a 400 error asking for a narrower window, never a truncated response.
- **Checks:** the start must be before the end, otherwise Kaiko returns a 400 error (Amberdata returned an empty result).
- **Filters:** they combine, so a trade is returned only when it passes every filter sent. A filter that matches nothing returns a 200 response with an empty `data` array, as on Amberdata. `is_block_trade=false` cannot be combined with `block_trade_id`: that returns a 400 error.
- **Parameter names:** Kaiko rejects a parameter it does not know with a 400 error (for example `timeFormat: unknown parameter`), so please rename every Amberdata parameter, `currency` and `timeFormat` included.

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.

Amberdata field	Kaiko field	Change	Notes
`payload.data`	`data`	RENAMED	Now at the top level. An **array**, one row per trade, or empty.
`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`.
None	`next_url`	NEW	Always `null`: the whole window comes in one response.
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

- **No trade in the window,** or a filter that keeps nothing: both APIs return a 200 response with an empty `data` array (`meta.count` = 0 on Kaiko).
- **Underlying not found** (a misspelled `base_asset` or `quote_asset`, or a pair the exchange does not list): Kaiko returns a 404 error with the code `unknown_instrument` and a detail naming the pair, where Amberdata returned a 200 response with an empty `data` array. An `exchange` outside the served list returns a 400 error on Kaiko, naming the allowed values.
- **Uppercase values:** Amberdata accepted any case. Kaiko returns a 400 error, for example for `BTC`.
- **Start equal to or after end, or a window wider than 24 hours:** Kaiko returns a 400 error (Amberdata returned a 400 error for the wide window, and an empty result for the inverted one).
- **Missing or invalid key:** Kaiko returns a 401 error with the code `missing_api_key` or `invalid_api_key`.
- **Missing, unknown 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

Each row carries the same information on both sides: the trade, its decoration before and after, the greeks, the open interest and the two directions. Names move to snake_case, and the notes below the table explain the values that change shape.

Amberdata field	Kaiko field	Type	Change
`exchangeTimestamp`	`timestamp`	string	RENAMED
`tradeId`	`trade_id`	string	RENAMED
`exchange`	`exchange`	string	RENAMED
`currency`	`base_asset` `quote_asset`	string	RENAMED
`instrument`	`instrument`	string	RENAMED

Amberdata field	Kaiko field	Type	Change
`instrumentNormalized`	`instrument_normalized`	string	RENAMED
`expirationTimestamp`	`expiry`	string	RENAMED
`strike`	`strike`	number	IDENTICAL
`putCall`	`option_type`	string	RENAMED
`blockTradeId` `numberOfLegs`	`block_trade_id` `number_of_legs`	string integer	RENAMED
`exchangeDirection`	`exchange_direction`	string	RENAMED
None	`is_buy_side`	boolean	NEW
`amberdataDirection`	`kaiko_direction`	string	RENAMED
`liquidation`	None	number	REMOVED
`tickDirection`	None	string	REMOVED
`tradeAmount` `tradeIv`	`trade_amount` `trade_iv`	number	RENAMED
`price`	`price`	number	IDENTICAL

`priceUsd`
`indexPrice`
`underlyingPrice`
	`price_usd`
	`index_price`
	`underlying_price`
		number	RENAMED

`volume24h`
`priceHigh24h`
`priceLow24h`
	`volume_24h`
	`price_high_24h`
	`price_low_24h`
		number	RENAMED

`preTradeOrderbookTimestamp` `postTradeOrderbookTimestamp`	`pre_trade_order_book_timestamp` `post_trade_order_book_timestamp`	string	RENAMED

`preTradeBidPrice`
`preTradeBidIv`
`preTradeBidVolume`
	`pre_trade_bid_price`
	`pre_trade_bid_iv`
	`pre_trade_bid_volume`
		number	RENAMED

`preTradeAskPrice`
`preTradeAskIv`
`preTradeAskVolume`
	`pre_trade_ask_price`
	`pre_trade_ask_iv`
	`pre_trade_ask_volume`
		number	RENAMED

`preTradeMidPrice`
`preTradeMidIv`
`preTradeMarkPrice`
`preTradeMarkIv`
	`pre_trade_mid_price`
	`pre_trade_mid_iv`
	`pre_trade_mark_price`
	`pre_trade_mark_iv`
		number	RENAMED

The ten post-trade fields follow the same pattern: `postTradeBidPrice` → `post_trade_bid_price`, and so on through `postTradeMarkIv` → `post_trade_mark_iv`.			
`delta` `gamma` `theta` `vega` `rho`	`delta` `gamma` `theta` `vega` `rho`	number	IDENTICAL

Amberdata field	Kaiko field	Type	Change

`preTradeOpenInterest`
`postTradeOpenInterest`
`openInterestChange`
	`pre_trade_open_interest`
	`post_trade_open_interest`
	`open_interest_change`
		number	RENAMED

- **timestamp** is the time of the trade as the venue reported it, as an ISO 8601 UTC string with milliseconds (`"2026-10-26T00:02:37.921Z"`); Amberdata returned epoch milliseconds (`1792972957921`). The same format applies to `expiry` and to the two order-book timestamps.
- **exchange, base_asset, quote_asset** echo your request (`drbt` , `btc` , `usd`) where Amberdata returned `deribit` and `BTC` .
- **instrument** is now the Kaiko instrument code (`btc27nov2664000p` for Amberdata's `BTC-27NOV26-64000-P`), the value the `instrument` filter takes. **instrument_normalized** keeps exactly the same value as on Amberdata (`DERIBIT-BTC-27NOV26-64000.0-P`), which makes it the easiest key to match rows between the two APIs.
- **option_type** is `call` or `put` (Amberdata: `C` / `P`).
- **exchange_direction** is the taker side as the venue reported it, `buy` or `sell` (Amberdata: `1` / `-1`). **is_buy_side** is the same information as a boolean. **kaiko_direction** is Kaiko's verdict on who initiated the trade, read from the top of book, the implied volatilities and the size around it, the same role as Amberdata's `amberdataDirection` , again as `buy` or `sell` . It reads `unknown` (Amberdata: `null`) where no verdict could be read: every trade before 1 June 2021, and a small number since (§7).
- **block_trade_id** and **number_of_legs** identify the block a trade belongs to and the number of legs the venue declared for it (futures legs included). Both are `null` on an on-screen trade, as on Amberdata. On older trades, `block_trade_id` is the id as published at the time (`72404` in early 2023, `BLOCK-303828` today), and `number_of_legs` reads `0` rather than `null` on on-screen trades until early 2025, and on block trades whose leg count was not published, from 2022 to early 2024.
- **trade_amount** is the size in contracts, **price** the trade price in the option's quote currency (the base asset for inverse options, for example `0.004` BTC), **price_usd** the same price in USD, **index_price** the venue's index and **underlying_price** the price of the option's underlying future or index, all unchanged. **volume_24h**, **price_high_24h** and **price_low_24h** are the option's trailing 24-hour statistics as the venue's ticker reported them.
- **pre_trade_*** is the top of book just before the trade: bid and ask with their sizes and implied volatilities, the mid (the average of bid and ask) and the venue's mark. **post_trade_*** is the same top of book just after the trade. The two order-book timestamps tell you when each snapshot was taken. A quote the venue did not publish is `null` on both sides, and the mid price is `null` when either side is missing.
- **pre_trade_open_interest**, **post_trade_open_interest** and **open_interest_change** are the open interest before and after the trade, in contracts, and their difference.
- **liquidation** (always empty on Amberdata) and **tickDirection** are not returned by Kaiko.

Units: implied volatilities are annualised. Amberdata expressed them in percent (`51.14` = 51.14%), while Kaiko uses decimals (`0.5114` = 51.14%). Prices, sizes, USD values, open interest and greeks keep their units on both sides.

6 Exchange & venue names

For this endpoint, the venue is an **options exchange**. Please map the identifier you send and receive as follows:

Amberdata name	Kaiko code	Exchange
`deribit`	`drbt`	Deribit

The underlying follows the same idea. Amberdata's `currency` named the book in one word, while Kaiko separates the base asset from the currency the options are quoted and settled in: `quote_asset=usd` selects the inverse options (quoted in the base asset, on a USD index) and `quote_asset=usdc` the linear ones. For example:

Amberdata `currency`	Kaiko `base_asset`	Kaiko `quote_asset`	Options
BTC	btc	usd	Inverse, settled in BTC
ETH	eth	usd	Inverse, settled in ETH
BTC_USDC	btc	usdc	Linear, settled in USDC
ETH_USDC	eth	usdc	Linear, settled in USDC
SOL_USDC	sol	usdc	Linear, settled in USDC
XRP_USDC	xrp	usdc	Linear, settled in USDC

Every option listed on the exchange is served, so any other underlying follows the same rule. A pair the exchange does not list returns a 404 error (§4). Deribit is the exchange served today, and our teams are working to extend this coverage to further exchanges. History on Kaiko starts on 29 November 2016 (§7).

7 Will your values change?

Short answer

The data and the logic are the same: the venue's trade with its implied volatility and greeks, the top of book captured just before and just after it, the open interest around it, and the two directions. Once the implied volatilities are divided by 100, a trade carries the same values on both sides. What changes is the naming and the time format.

- **Same decoration:** on both sides, the pre-trade fields come from the last top of book published at or before the trade and the post-trade fields from the first one published after it. The mid is the average of the bid and the ask, the open-interest change is the post-trade open interest minus the pre-trade one, and the trade's implied volatility and greeks are the venue's.
- **Same directions:** `exchange_direction` is the taker side the venue reported. `kaiko_direction` follows the same approach as Amberdata's `amberdataDirection`: it reads the aggressor from the top of book before the trade (price against bid, ask, mid and mark, and the implied volatilities), it treats the legs of a block trade together, and it falls back to the venue's side when the reading is undecided.
- **Units:** Amberdata used percent for implied volatilities, while Kaiko uses decimals (§5). Prices stay in the option's quote currency, USD values stay in USD, and sizes and open interest stay in contracts.
- **Nulls:** a decoration the venue did not publish is `null` on both sides.
- **History:** Kaiko's history starts on 29 November 2016. A window before that date returns an empty `data` array.
- **Two eras of decoration:** from 1 June 2021 the rows are decorated with the top of book, the open interest, the greeks and the 24-hour statistics. Before that date, a row carries the trade itself (time, contract, size, price, USD price, implied volatility, delta, index and underlying price, the venue's side and the block id) while the top of book, the open interest, gamma, theta, vega, rho and the 24-hour statistics are `null`, and `kaiko_direction` is `unknown`.

8 Before / after example

Request (one put, the trades of a three-minute window)

Amberdata

```
GET https://api.amberdata.com
    /markets/derivatives/analytics
    /trades-flow/decorated-trades
    ?exchange=deribit
    &currency=BTC
    &startDate=2026-10-26T00:00:00
    &endDate=2026-10-26T00:03:00
    &instrument=BTC-27NOV26-64000-P
x-api-key: <your-amberdata-key>
```

Kaiko

```
GET https://api.kaiko.io
    /analytics/trades-flow/decorated-trades
    ?exchange=drbt
    &base_asset=btc
    &quote_asset=usd
    &start_time=2026-10-26T00:00:00.000Z
    &end_time=2026-10-26T00:03:00.000Z
    &instrument=btc27nov2664000p
X-Api-Key: <your-kaiko-key>
```

Response, part 1 of 2 (real responses for the same trade; the fields are regrouped in the same order on both sides)

Amberdata


```
{
  "status": 200,
  "title": "OK",
  "description": "Successful request",
  "payload": {
    "data": [ {
      "exchange": "deribit",
      "currency": "BTC",
      "exchangeTimestamp": 1792972957921,
      "tradeId": "456245413",
      "instrument": "BTC-27NOV26-64000-P",
      "instrumentNormalized":
        "DERIBIT-BTC-27NOV26-64000.0-P",
      "expirationTimestamp": 1795766400000,
      "strike": 64000,
      "putCall": "P",
      "blockTradeId": null,
      "numberOfLegs": null,
      "exchangeDirection": -1,
      "amberdataDirection": 1,
      "tickDirection": "Plus Tick",
      "liquidation": null,
      "tradeAmount": 30,
      "price": 0.004,
      "priceUsd": 320.00104,
      "tradeIv": 51.14,
      "indexPrice": 80000.26,
      "underlyingPrice": 80377.58,
      "volume24h": 65,
      "priceHigh24h": 0.0038,
      "priceLow24h": 0.0036,
      "delta": -0.05902,
      "gamma": 1e-05,
      "theta": -22.40631,
      "vega": 28.13052,
      "rho": -4.49566,
      "preTradeOpenInterest": 389.5,
      "postTradeOpenInterest": 389.5,
      "openInterestChange": 0,
```


Kaiko


```
{
  "data": [ {
    "exchange": "drbt",
    "base_asset": "btc",
    "quote_asset": "usd",
    "timestamp": "2026-10-26T00:02:37.921Z",
    "trade_id": "456245413",
    "instrument": "btc27nov2664000p",
    "instrument_normalized":
      "DERIBIT-BTC-27NOV26-64000.0-P",
    "expiry": "2026-11-27T08:00:00.000Z",
    "strike": 64000,
    "option_type": "put",
    "block_trade_id": null,
    "number_of_legs": null,
    "exchange_direction": "sell",
    "is_buy_side": false,
    "kaiko_direction": "buy",
    "trade_amount": 30,
    "price": 0.004,
    "price_usd": 320.00104,
    "trade_iv": 0.5114,
    "index_price": 80000.26,
    "underlying_price": 80377.58,
    "volume_24h": 65,
    "price_high_24h": 0.0038,
    "price_low_24h": 0.0036,
    "delta": -0.05902,
    "gamma": 1e-05,
    "theta": -22.40631,
    "vega": 28.13052,
    "rho": -4.49566,
    "pre_trade_open_interest": 389.5,
    "post_trade_open_interest": 389.5,
    "open_interest_change": 0,
```

Response, part 2 of 2 (the pre-trade and post-trade top of book, then the metadata)

Amberdata


```
      "preTradeOrderbookTimestamp": 1792972956772,
      "preTradeBidPrice": 0.004,
      "preTradeBidIv": 51.14,
      "preTradeBidVolume": 30,
      "preTradeAskPrice": 0.0043,
      "preTradeAskIv": 52,
      "preTradeAskVolume": 40.8,
      "preTradeMidPrice": 0.00415,
      "preTradeMidIv": 51.57,
      "preTradeMarkPrice": 0.0041,
      "preTradeMarkIv": 51.5,
      "postTradeOrderbookTimestamp":
        1792972957927,
      "postTradeBidPrice": 0.0039,
      "postTradeBidIv": 51.14,
      "postTradeBidVolume": 47.8,
      "postTradeAskPrice": 0.0043,
      "postTradeAskIv": 52,
      "postTradeAskVolume": 40.8,
      "postTradeMidPrice": 0.0040999999999999995,
      "postTradeMidIv": 51.57,
      "postTradeMarkPrice": 0.0041,
      "postTradeMarkIv": 51.5
    } ],
    "metadata": {
      "api-version": "2023-09-30"
    }
  }
}
```


Kaiko


```
    "pre_trade_order_book_timestamp":
      "2026-10-26T00:02:37.306Z",
    "pre_trade_bid_price": 0.004,
    "pre_trade_bid_iv": 0.5113999999999999,
    "pre_trade_bid_volume": 30,
    "pre_trade_ask_price": 0.0043,
    "pre_trade_ask_iv": 0.52,
    "pre_trade_ask_volume": 40.8,
    "pre_trade_mid_price": 0.00415,
    "pre_trade_mid_iv": 0.5156999999999999,
    "pre_trade_mark_price": 0.0041,
    "pre_trade_mark_iv": 0.515,
    "post_trade_order_book_timestamp":
      "2026-10-26T00:02:37.927Z",
    "post_trade_bid_price": 0.0039,
    "post_trade_bid_iv": 0.5113999999999999,
    "post_trade_bid_volume": 47.8,
    "post_trade_ask_price": 0.0043,
    "post_trade_ask_iv": 0.52,
    "post_trade_ask_volume": 40.8,
    "post_trade_mid_price": 0.0040999999999999995,
    "post_trade_mid_iv": 0.5156999999999999,
    "post_trade_mark_price": 0.0041,
    "post_trade_mark_iv": 0.515
  } ],
  "meta": {
    "api_version": "2026-10-01",
    "count": 1,
    "next_url": null,
    "url": "https://api.kaiko.io/analytics/trades-
flow/decorated-trades?
exchange=drbt&base_asset=btc&quote_asset=usd&start
_time=2026-10-26T00%3A00%3A00.000Z&end_time=2026-1
0-26T00%3A03%3A00.000Z&instrument=btc27nov2664000p
&api_version=2026-10-01"
  }
}
```