Class: OrderBookApi

The CoW Protocol OrderBook API client.

This is the main entry point for interacting with the CoW Protocol OrderBook API. The main advantage of using this client is the batteries-included approach to interacting with the API. It handles:

- Environment configuration (mainnet, staging, etc.)
- Rate limiting
- Retries
- Backoff
- Error handling
- Request signing
- Request validation

Example

import

{ OrderBookApi , OrderSigningUtils , SupportedChainId }

from

'@cowprotocol/cow-sdk' import

{ Web3Provider }

from

'@ethersproject/providers'

const account =

'YOUR_WALLET_ADDRESS' const chainId =

100

// Gnosis chain const provider =

new

Web3Provider (window . ethereum) const signer = provider . getSigner ( )

const quoteRequest =

{ sellToken :

'0x6a023ccd1ff6f2045c3309768ead9e68f978f6e1' ,

// WETH gnosis chain buyToken :

'0x9c58bacc331c9aa871afd802db6379a98e80cedb' ,

// GNO gnosis chain from : account , receiver : account , sellAmountBeforeFee :

(0.4

*

10

**

18) . toString ( ) ,

// 0.4 WETH kind : OrderQuoteSide . kind . SELL , }

const orderBookApi =

new

OrderBookApi ({ chainId : SupportedChainId . GNOSIS_CHAIN

```
} )

async

function

main ( )

{ const

{ quote }

=

await orderBookApi . getQuote ( quoteRequest )

const orderSigningResult =

await OrderSigningUtils . signOrder ( quote , chainId , signer )

const orderId =

await orderBookApi . sendOrder ( {

... quote ,

... orderSigningResult } )

const order =

await orderBookApi . getOrder ( orderId )

const trades =

await orderBookApi . getTrades ( { orderId } )

const orderCancellationSigningResult =

await OrderSigningUtils . signOrderCancellations ( [ orderId ] , chainId , signer )

const cancellationResult =

await orderBookApi . sendSignedOrderCancellations ( { ... orderCancellationSigningResult , orderUids :

[ orderId ]

} )

console . log ( 'Results: ' ,

{ orderId , order , trades , orderCancellationSigningResult , cancellationResult } ) } See
```

- Swagger documentationhttps://api.cow.fi/docs/#/
- OrderBook APIhttps://github.com/cowprotocol/services

Constructors

constructor

•new OrderBookApi (context?):OrderBookApi

Creates a new instance of the CoW Protocol OrderBook API client.

Parameters

Name Type Description context Partial <ApiContext

&RequestOptions The API context to use. If not provided, the default context will be used.

Returns

OrderBookApi

Defined in

external/cow-sdk/src/order-book/api.ts:137

Properties

context

•context :ApiContext &RequestOptions

Defined in

external/cow-sdk/src/order-book/api.ts:129

rateLimiter

•Private rateLimiter :RateLimiter

Defined in

external/cow-sdk/src/order-book/api.ts:131

Methods

fetch

▸fetch <T

    (params ,contextOverride?):Promise <T

Make a request to the API.

Type parameters

Name T

Parameters

Name Type Description params FetchParams The parameters for the request. contextOverride Partial <ApiContext

    Optional context override for this request.

Returns

Promise <T

The response from the API.

Defined in

external/cow-sdk/src/order-book/api.ts:410

getApiBaseUrls

▸getApiBaseUrls (env):ApiBaseUrls

Get the base URLs for the API endpoints given the environment.

Parameters

Name Type Description env CowEnv The environment to get the base URLs for.

Returns

ApiBaseUrls

The base URLs for the API endpoints.

Defined in

external/cow-sdk/src/order-book/api.ts:398

getAppData

▶getAppData (appDataHash ,contextOverride?):Promise <[AppDataObject](#)

Retrieve the full app data for a given app data hash.

Parameters

Name Type Description appDataHash string bytes32 hash of the app data contextOverride Partial [ApiContext](#)

> Optional context override for this request.

Returns

Promise <[AppDataObject](#)

Full app data that was uploaded

Defined in

external/cow-sdk/src/order-book/api.ts:328

getContextWithOverride

▶getContextWithOverride (contextOverride?):[ApiContext](#) &[RequestOptions](#)

Apply an override to the context for a request.

Parameters

Name Type Description contextOverride Partial [ApiContext](#)

> Optional context override for this request.

Returns

[ApiContext](#) &[RequestOptions](#)

New context with the override applied.

Defined in

external/cow-sdk/src/order-book/api.ts:389

getNativePrice

▶getNativePrice (tokenAddress ,contextOverride?):Promise <[NativePriceResponse](#)

Get the native price of a token.

NOTE : The native price is the price of the token in the native currency of the chain. For example, on Ethereum this would be the price of the token in ETH.

Parameters

Name Type Description tokenAddress string The address of the ERC-20 token. contextOverride Partial [ApiContext](#)

> Optional context override for this request.

Returns

Promise <[NativePriceResponse](#)

The native price of the token.

Defined in

external/cow-sdk/src/order-book/api.ts:308

getOrder

▶getOrder (orderUid ,contextOverride?):Promise <[EnrichedOrder](#)

Get an order by its unique identifier,orderUid .

Parameters

Name Type Description orderUid string The unique identifier of the order. contextOverride Partial [ApiContext](#)

Optional context override for this request.

Returns

Promise <[EnrichedOrder](#)

The order matching the request.

Defined in

external/cow-sdk/src/order-book/api.ts:223

getOrderLink

▶getOrderLink (orderUid ,contextOverride?):string

Generate an API endpoint for an order by its unique identifier,orderUid .

Parameters

Name Type Description orderUid string The unique identifier of the order. contextOverride? Partial [ApiContext](#)

Optional context override for this request.

Returns

string

The API endpoint to get the order.

Defined in

external/cow-sdk/src/order-book/api.ts:379

getOrderMultiEnv

▶getOrderMultiEnv (orderUid ,contextOverride?):Promise <[EnrichedOrder](#)

Attempt to get an order by its unique identifier,orderUid , from multiple environments.

NOTE : The environment refers to eitherprod orstaging . This allows a conveience method to attempt to get an order from both environments, in the event that the order is not found in the environment specified in the context.

Parameters

Name Type Description orderUid string The unique identifier of the order. contextOverride Partial [ApiContext](#)

Optional context override for this request.

Returns

Promise <[EnrichedOrder](#)

The order matching the request.

Throws

If the order is not found in any of the environments.

Defined in

external/cow-sdk/src/order-book/api.ts:240

getOrders

▶getOrders (request ,contextOverride?):Promise <[EnrichedOrder](#) []>

Get a list of orders for a givenowner .

Parameters

Name Type Description request [GetOrdersRequest](#) The request parameters withrequest.offset = 0 andrequest.limit = 1000 by default. contextOverride Partial <[ApiContext](#)

    Optional context override for this request.

Returns

Promise <[EnrichedOrder](#) []>

A list of orders matching the request.

See

- [GetOrdersRequest](#)
- [EnrichedOrder](#)

Defined in

external/cow-sdk/src/order-book/api.ts:185

getQuote

▶getQuote (requestBody ,contextOverride?):Promise <[OrderQuoteResponse](#)

Get a quote for an order. This allows for the calculation of the total cost of an order, including fees, before signing and submitting.

Parameters

Name Type Description requestBody [OrderQuoteRequest](#) The parameters for the order quote request. contextOverride Partial <[ApiContext](#)

    Optional context override for this request.

Returns

Promise <[OrderQuoteResponse](#)

A hydrated order matching the request ready to be signed.

Defined in

external/cow-sdk/src/order-book/api.ts:268

getSolverCompetition

▶getSolverCompetition (auctionId ,contextOverride?):Promise <[SolverCompetitionResponse](#)

Given an auction id or tx hash, get the details of the solver competition for that auction.

Parameters

Name Type Description auctionId number - contextOverride? Partial <ApiContext

Optional context override for this request.

Returns

Promise <SolverCompetitionResponse

An object containing the solver competition details

Defined in

external/cow-sdk/src/order-book/api.ts:350

▶getSolverCompetition (txHash ,contextOverride?):Promise <SolverCompetitionResponse

Given an auction id or tx hash, get the details of the solver competition for that auction.

Parameters

Name Type Description txHash string - contextOverride? Partial <ApiContext

Optional context override for this request.

Returns

Promise <SolverCompetitionResponse

An object containing the solver competition details

Defined in

external/cow-sdk/src/order-book/api.ts:352

getTotalSurplus

▶getTotalSurplus (address ,contextOverride?):Promise <TotalSurplus

Given a user's address, get the total surplus that they have earned.

Parameters

Name Type Description address string The user's address contextOverride Partial <ApiContext

Optional context override for this request.

Returns

Promise <TotalSurplus

Calculated user's surplus

Defined in

external/cow-sdk/src/order-book/api.ts:318

getTrades

▶getTrades (request ,contextOverride?):Promise <Trade []>

Get all the trades for either anowner OR orderUid .

Given that an ordermay be partially fillable, it is possible that a discrete order (orderUid) may havemultiple trades.
Therefore, this method returns a list of trades, either forall the orders of a givenowner , or for a discrete order (orderUid).

Parameters

Name Type Description request Object Either an owner or an orderUid MUST be specified. request.orderUid? string - request.owner? string - contextOverride Partial <[ApiContext](#)

     Optional context override for this request.

Returns

Promise <[Trade](#) []>

A list of trades matching the request.

Defined in

external/cow-sdk/src/order-book/api.ts:162

getTxOrders

▶getTxOrders (txHash ,contextOverride?):Promise <[EnrichedOrder](#) []>

Get a list of orders from a given settlement transaction hash.

Parameters

Name Type Description txHash string The transaction hash. contextOverride Partial <[ApiContext](#)

     Optional context override for this request.

Returns

Promise <[EnrichedOrder](#) []>

A list of orders matching the request.

See

[EnrichedOrder](#)

Defined in

external/cow-sdk/src/order-book/api.ts:208

getVersion

▶getVersion (contextOverride?):Promise <string

Get the version of the API.

Parameters

Name Type Description contextOverride Partial <[ApiContext](#)

     Optional context override for this request.

Returns

Promise <string

The version of the API.

See

https://api.cow.fi/docs/#/default/get_api_v1_version

Defined in

external/cow-sdk/src/order-book/api.ts:148

sendOrder

▶ sendOrder (requestBody ,contextOverride?):Promise <string

Submit an order to the order book.

Parameters

Name Type Description requestBody [OrderCreation](#) The signed order to be submitted. contextOverride Partial <[ApiContext](#)

Optional context override for this request.

Returns

Promise <string

The unique identifier of the order.

Defined in

external/cow-sdk/src/order-book/api.ts:295

sendSignedOrderCancellations

▶ sendSignedOrderCancellations (requestBody ,contextOverride?):Promise <void

Cancel one or more orders.

NOTE : Cancellation is on a best-effort basis. Orders that are already in the process of being settled (ie. transaction has been submitted to chain by the solver) cannot not be cancelled.CAUTION : This method can only be used to cancel orders that were signed usingEIP-712 oreth_sign (EIP-191) .

Parameters

Name Type Description requestBody [OrderCancellations](#) Orders to be cancelled and signed instructions to cancel them. contextOverride Partial <[ApiContext](#)

Optional context override for this request.

Returns

Promise <void

A list of order unique identifiers that were successfully cancelled.

Defined in

external/cow-sdk/src/order-book/api.ts:282

uploadAppData

▶ uploadAppData (appDataHash ,fullAppData ,contextOverride?):Promise <[AppDataObject](#)

Upload the full app data that corresponds to a given app data hash.

Parameters

Name Type Description appDataHash string bytes32 hash of the app data fullAppData string Full app data to be uploaded contextOverride Partial <[ApiContext](#)

Optional context override for this request.

Returns

Promise <[AppDataObject](#)

The string encoding of the full app data that was uploaded.

Defined in

external/cow-sdk/src/order-book/api.ts:339