

# Indexer API v1.0.0

Scroll down for code samples, example requests and responses. Select a language for code samples from the tabs above or the mobile navigation menu. Base URLs:

- For the deployment by DYDX token holders
- , use [\[https://indexer.dydx.trade/v4\]\(https://indexer.dydx.trade/v4\)](https://indexer.dydx.trade/v4)
- For Testnet
- , use [\[https://dydx-testnet.imperator.co/v4\]\(https://dydx-testnet.imperator.co/v4\)](https://dydx-testnet.imperator.co/v4)

Note: Messages on Indexer WebSocket feeds are typically more recent than data fetched via Indexer's REST API, because the latter is backed by read replicas of the databases that feed the former. Ordinarily this difference is minimal (less than a second), but it might become prolonged under load. Please see [Indexer Architecture\(opens in a new tab\)](#) for more information.

## Authentication

## Default

### GetAddress

Code samples import requests headers =

```
{ 'Accept' :  
'application/json' }
```

**For the deployment by DYDX token holders, use**

**baseURL = 'https://indexer.dydx.trade/v4'**

**baseURL**

'https://dydx-testnet.imperator.co/v4'

**r**

```
requests . get ( { ' { baseURL } /addresses/ { address } ' , headers = headers)  
  
print (r. json ()) const  
  
headers  
  
= { 'Accept' : 'application/json' };  
  
// For the deployment by DYDX token holders, use // baseURL = 'https://indexer.dydx.trade/v4' const  
  
baseURL  
  
=  
  
'https://dydx-testnet.imperator.co/v4'  
  
fetch ( { baseURL } /addresses/ { address } , { method :  
  
'GET' ,  
  
headers : headers }) .then ( function (res) { return  
res .json (); }) .then ( function (body) { console .log (body); }); GET /addresses/{address}
```

### Parameters

Name In Type Required Description address path string true none Example responses 200 Response { "subaccounts" : [ {

"address" :

"string" , "subaccountNumber" :

0 , "equity" :

"string" , "freeCollateral" :

"string" , "openPerpetualPositions" : { "property1" : { "market" :

"string" , "status" :

"OPEN" , "side" :

"LONG" , "size" :

"string" , "maxSize" :

"string" , "entryPrice" :

"string" , "realizedPnl" :

"string" , "createdAt" :

"string" , "createdAtHeight" :

"string" , "sumOpen" :

"string" , "sumClose" :

"string" , "netFunding" :

"string" , "unrealizedPnl" :

"string" , "closedAt" :

null , "exitPrice" :

"string" } , "property2" : { "market" :

"string" , "status" :

"OPEN" , "side" :

"LONG" , "size" :

"string" , "maxSize" :

"string" , "entryPrice" :

"string" , "realizedPnl" :

"string" , "createdAt" :

"string" , "createdAtHeight" :

"string" , "sumOpen" :

"string" , "sumClose" :

"string" , "netFunding" :

"string" , "unrealizedPnl" :

"string" , "closedAt" :

null , "exitPrice" :

"string" } } , "assetPositions" : { "property1" : { "symbol" :

"string" , "side" :

"LONG" , "size" :

```
"string" , "assetId" :
"string" } , "property2" : { "symbol" :
"string" , "side" :
"LONG" , "size" :
"string" , "assetId" :
"string" } } , "marginEnabled" :
true } ] , "totalTradingRewards" :
"string" }
```

## Responses

Status Meaning Description Schema 200 [OK\(opens in a new tab\)](#) Ok [AddressResponse](#) This operation does not require authentication

## GetSubaccount

Code samples import requests headers =

```
{ 'Accept' :
'application/json' }
```

**For the deployment by DYDX token holders, use**

**baseURL = 'https://indexer.dydx.trade/v4'**

**baseURL**

'https://dydx-testnet.imperator.co/v4'

**r**

```
requests . get ( f ' { baseURL } /addresses/ { address } /subaccountNumber/ { subaccountNumber } ' , headers = headers)
```

```
print (r. json ()) const
```

```
headers
```

```
= { 'Accept' : 'application/json' };
```

```
// For the deployment by DYDX token holders, use // baseURL = 'https://indexer.dydx.trade/v4' const
```

```
baseURL
```

```
=
```

```
'https://dydx-testnet.imperator.co/v4'
```

```
fetch ( { baseURL } /addresses/ { address } /subaccountNumber/ { subaccountNumber } , { method :
```

```
'GET' ,
```

```
headers : headers }) .then ( function (res) { return
```

```
res .json (); }) .then ( function (body) { console .log (body); }); GET
/addresses/{address}/subaccountNumber/{subaccountNumber}
```

## Parameters

Name In Type Required Description address path string true none subaccountNumber path number(double) true none  
Example responses 200 Response { "address" :

"string" , "subaccountNumber" :

0 , "equity" :

"string" , "freeCollateral" :

"string" , "openPerpetualPositions" : { "property1" : { "market" :

"string" , "status" :

"OPEN" , "side" :

"LONG" , "size" :

"string" , "maxSize" :

"string" , "entryPrice" :

"string" , "realizedPnl" :

"string" , "createdAt" :

"string" , "createdAtHeight" :

"string" , "sumOpen" :

"string" , "sumClose" :

"string" , "netFunding" :

"string" , "unrealizedPnl" :

"string" , "closedAt" :

"string" , "exitPrice" :

"string" } , "property2" : { "market" :

"string" , "status" :

"OPEN" , "side" :

"LONG" , "size" :

"string" , "maxSize" :

"string" , "entryPrice" :

"string" , "realizedPnl" :

"string" , "createdAt" :

"string" , "createdAtHeight" :

"string" , "sumOpen" :

"string" , "sumClose" :

"string" , "netFunding" :

"string" , "unrealizedPnl" :

"string" , "closedAt" :

"string" , "exitPrice" :

"string" } } , "assetPositions" : { "property1" : { "symbol" :

"string" , "side" :

"LONG" , "size" :

```
"string" , "assetId" :
"string" } , "property2" : { "symbol" :
"string" , "side" :
"LONG" , "size" :
"string" , "assetId" :
"string" } } , "marginEnabled" :
true }
```

## Responses

Status Meaning Description Schema 200 [OK\(opens in a new tab\)](#) Ok [SubaccountResponseObject](#) This operation does not require authentication

## GetAssetPositions

Code samples import requests headers =

```
{ 'Accept' :
'application/json' }
```

**For the deployment by DYDX token holders, use**

**baseURL = 'https://indexer.dydx.trade/v4'**

**baseURL**

'https://dydx-testnet.imperator.co/v4'

**r**

```
requests . get ( f ' { baseURL } /assetPositions' , params = { 'address' : 'string' , 'subaccountNumber' : '0' } , headers =
headers)
```

```
print (r. json ()) const
```

```
headers
```

```
= { 'Accept' : 'application/json' };
```

```
// For the deployment by DYDX token holders, use // baseURL = 'https://indexer.dydx.trade/v4' const
```

```
baseURL
```

```
=
```

```
'https://dydx-testnet.imperator.co/v4'
```

```
fetch ( { baseURL } /assetPositions?address= { address } &subaccountNumber= { subaccountNumber } , { method :
```

```
'GET' ,
```

```
headers : headers }) .then ( function (res) { return
```

```
res .json (); }) .then ( function (body) { console .log (body); }); GET /assetPositions
```

## Parameters

Name In Type Required Description address query string true none subaccountNumber query number(double) true none  
Example responses 200 Response { "positions" : [ { "symbol" :

```
"string" , "side" :  
"LONG" , "size" :  
"string" , "assetId" :  
"string" } ] }
```

## Responses

Status Meaning Description Schema 200 [OK\(opens in a new tab\)](#) Ok [AssetPositionResponse](#) This operation does not require authentication

## GetCandles

Code samples import requests headers =

```
{ 'Accept' :  
'application/json' }
```

**For the deployment by DYDX token holders, use**

**baseURL = 'https://indexer.dydx.trade/v4'**

**baseURL**

'https://dydx-testnet.imperator.co/v4'

**r**

```
requests . get ( f ' { baseURL } /candles/perpetualMarkets/ { ticker } ' , params = { 'resolution' : '1MIN' , 'limit' : '0' }, headers =  
headers)
```

```
print (r. json ()) const
```

```
headers
```

```
= { 'Accept' : 'application/json' };
```

```
// For the deployment by DYDX token holders, use // baseURL = 'https://indexer.dydx.trade/v4' const
```

```
baseURL
```

```
=
```

```
'https://dydx-testnet.imperator.co/v4'
```

```
fetch ( { baseURL } /candles/perpetualMarkets/{ticker}?resolution=1MIN&limit=0 , { method :
```

```
'GET' ,
```

```
headers : headers }) .then ( function (res) { return
```

```
res. json (); }) .then ( function (body) { console .log (body); }); GET /candles/perpetualMarkets/{ticker}
```

## Parameters

Name	In	Type	Required	Description	ticker	path	string	true	none	resolution	query	<a href="#">CandleResolution</a>	true	none	limit	query
number(double)	true	none	fromISO	query	string	false	none	toISO	query	string	false	none				

## Enumerated Values

Parameter	Value
resolution	1MIN resolution 5MINS resolution 15MINS resolution 30MINS resolution 1HOUR resolution 4HOURS resolution 1DAY
Example responses	200 Response { "candles" : [ { "startedAt" :

```

"string" , "ticker" :
"string" , "resolution" :
"1MIN" , "low" :
"string" , "high" :
"string" , "open" :
"string" , "close" :
"string" , "baseTokenVolume" :
"string" , "usdVolume" :
"string" , "trades" :
0 , "startingOpenInterest" :
"string" , "id" :
"string" } ] }

```

## Responses

Status Meaning Description Schema 200 [OK\(opens in a new tab\)](#) Ok [CandleResponse](#) This operation does not require authentication

## Screen

Code samples import requests headers =

```

{ 'Accept' :
'application/json' }

```

**For the deployment by DYDX token holders, use**

**baseURL = 'https://indexer.dydx.trade/v4'**

**baseURL**

'https://dydx-testnet.imperator.co/v4'

**r**

```

requests . get ( f ' { baseURL } /screen' , params = { 'address' : 'string' }, headers = headers)
print (r. json ()) const
headers
= { 'Accept' : 'application/json' };
// For the deployment by DYDX token holders, use // baseURL = 'https://indexer.dydx.trade/v4' const
baseURL
=
'https://dydx-testnet.imperator.co/v4'
fetch ( { baseURL } /screen?address=string , { method :
'GET' ,

```

```
headers : headers }) .then ( function (res) { return  
res .json (); }) .then ( function (body) { console .log (body); }); GET /screen
```

## Parameters

Name In Type Required Description address query string true none Example responses 200 Response { "restricted" :  
true , "reason" :  
"string" }

## Responses

Status Meaning Description Schema 200 [OK\(opens in a new tab\)](#) Ok [ComplianceResponse](#) This operation does not require authentication

## GetFills

Code samples import requests headers =  
{ 'Accept' :  
'application/json' }

**For the deployment by DYDX token holders, use  
baseURL = 'https://indexer.dydx.trade/v4'**

## baseURL

'https://dydx-testnet.imperator.co/v4'

## r

```
requests . get ( f ' { baseURL } /fills' , params = { 'address' : 'string' , 'subaccountNumber' : '0' , 'market' : 'string' ,  
'marketType' : 'PERPETUAL' , 'limit' : '0' } , headers = headers)
```

```
print (r. json ()) const
```

```
headers
```

```
= { 'Accept' : 'application/json' };
```

```
// For the deployment by DYDX token holders, use // baseURL = 'https://indexer.dydx.trade/v4' const
```

```
baseURL
```

```
=
```

```
'https://dydx-testnet.imperator.co/v4'
```

```
fetch ( { baseURL } /fills?address=string&subaccountNumber=0&market=string&marketType=PERPETUAL&limit=0 , { method :
```

```
'GET' ,
```

```
headers : headers }) .then ( function (res) { return
```

```
res .json (); }) .then ( function (body) { console .log (body); }); GET /fills
```

## Parameters

Name In Type Required Description address query string true none subaccountNumber query number(double) true none  
market query string false none marketType query [MarketType](#) false none limit query number(double) false none  
createdBeforeOrAtHeight query number(double) false none createdBeforeOrAt query [IsoString](#) false none



## Enumerated Values

Parameter Value marketType PERPETUAL marketType SPOT Example responses 200 Response { "fills" : [ { "id" :

"string" , "side" :

"BUY" , "liquidity" :

"TAKER" , "type" :

"LIMIT" , "market" :

"string" , "marketType" :

"PERPETUAL" , "price" :

"string" , "size" :

"string" , "fee" :

"string" , "createdAt" :

"string" , "createdAtHeight" :

"string" , "orderId" :

"string" , "clientMetadata" :

"string" } ] }

## Responses

Status Meaning Description Schema 200 [OK\(opens in a new tab\)](#) Ok [FillResponse](#) This operation does not require authentication

## GetHeight

Code samples import requests headers =

```
{ 'Accept' :
```

```
'application/json' }
```

## For the deployment by DYDX token holders, use

## baseURL = 'https://indexer.dydx.trade/v4'

## baseURL

```
'https://dydx-testnet.imperator.co/v4'
```

## r

```
requests . get ( f ' { baseURL } /height' , headers = headers)
```

```
print (r. json ()) const
```

```
headers
```

```
= { 'Accept' : 'application/json' };
```

```
// For the deployment by DYDX token holders, use // baseURL = 'https://indexer.dydx.trade/v4' const
```

```
baseURL
```

```
=
```

```
'https://dydx-testnet.imperator.co/v4'
```

```
fetch ( { baseURL } /height , { method :  
'GET' ,  
headers : headers }) .then ( function (res) { return  
res .json (); }) .then ( function (body) { console .log (body); }); GET /height
```

Example responses 200 Response { "height" :

```
"string" , "time" :
```

```
"string" }
```

## Responses

Status Meaning Description Schema 200 [OK\(opens in a new tab\)](#) Ok [HeightResponse](#) This operation does not require authentication

## GetTradingRewards

Code samples import requests headers =

```
{ 'Accept' :
```

```
'application/json' }
```

**For the deployment by DYDX token holders, use**

**baseURL = 'https://indexer.dydx.trade/v4'**

## baseURL

```
'https://dydx-testnet.imperator.co/v4'
```

**r**

```
requests . get ( f ' { baseURL } /historicalBlockTradingRewards/ { address } ' , params = { 'limit' : '0' }, headers = headers)
```

```
print (r. json ()) const
```

```
headers
```

```
= { 'Accept' : 'application/json' };
```

```
// For the deployment by DYDX token holders, use // baseURL = 'https://indexer.dydx.trade/v4' const
```

```
baseURL
```

```
=
```

```
'https://dydx-testnet.imperator.co/v4'
```

```
fetch ( { baseURL } /historicalBlockTradingRewards/{address}?limit=0 , { method :
```

```
'GET' ,
```

```
headers : headers }) .then ( function (res) { return
```

```
res .json (); }) .then ( function (body) { console .log (body); }); GET /historicalBlockTradingRewards/{address}
```

## Parameters

Name In Type Required Description address path string true none limit query number(double) true none startingBeforeOrAt

query [IsoString](#) false none startingBeforeOrAtHeight query string false none Example responses 200 Response { "rewards" : [ { "tradingReward" : "string" , "createdAt" : "string" , "createdAtHeight" : "string" } ] }

## Responses

Status Meaning Description Schema 200 [OK\(opens in a new tab\)](#) Ok [HistoricalBlockTradingRewardsResponse](#) This operation does not require authentication

## GetHistoricalFunding

Code samples import requests headers =

```
{ 'Accept' :  
'application/json' }
```

**For the deployment by DYDX token holders, use**

**baseURL = 'https://indexer.dydx.trade/v4'**

**baseURL**

'https://dydx-testnet.imperator.co/v4'

**r**

```
requests . get ( f ' { baseURL } /historicalFunding/ { ticker } ' , params = { 'limit' : '0' }, headers = headers)
```

```
print (r. json ()) const
```

```
headers
```

```
= { 'Accept' : 'application/json' };
```

```
// For the deployment by DYDX token holders, use // baseURL = 'https://indexer.dydx.trade/v4' const
```

```
baseURL
```

```
=
```

```
'https://dydx-testnet.imperator.co/v4'
```

```
fetch ( { baseURL } /historicalFunding/{ticker}?limit=0 , { method :
```

```
'GET' ,
```

```
headers : headers }) .then ( function (res) { return
```

```
res .json (); }) .then ( function (body) { console .log (body); }); GET /historicalFunding/{ticker}
```

## Parameters

Name In Type Required Description ticker path string true none limit query number(double) true none effectiveBeforeOrAtHeight query number(double) false none effectiveBeforeOrAt query [IsoString](#) false none Example responses 200 Response { "historicalFunding" : [ { "ticker" :

```
"string" , "rate" :
```

```
"string" , "price" :
```

"string" , "effectiveAt" :

"string" , "effectiveAtHeight" :

"string" } ] }

## Responses

Status Meaning Description Schema 200 [OK\(opens in a new tab\)](#) Ok [HistoricalFundingResponse](#) This operation does not require authentication

## GetHistoricalPnl

Code samples import requests headers =

```
{ 'Accept' :
```

```
'application/json' }
```

**For the deployment by DYDX token holders, use**

**baseURL = 'https://indexer.dydx.trade/v4'**

**baseURL**

'https://dydx-testnet.imperator.co/v4'

**r**

```
requests . get ( f ' { baseURL } /historical-pnl' , params = { 'address' : 'string' , 'subaccountNumber' : '0' , 'limit' : '0' }, headers  
= headers)
```

```
print (r. json ()) const
```

```
headers
```

```
= { 'Accept' : 'application/json' };
```

```
// For the deployment by DYDX token holders, use // baseURL = 'https://indexer.dydx.trade/v4' const
```

```
baseURL
```

```
=
```

```
'https://dydx-testnet.imperator.co/v4'
```

```
fetch ( { baseURL } /historical-pnl?address=string&subaccountNumber=0&limit=0 , { method :
```

```
'GET' ,
```

```
headers : headers }) .then ( function (res) { return
```

```
res .json (); }) .then ( function (body) { console .log (body); }); GET /historical-pnl
```

## Parameters

Name In Type Required Description address query string true none subaccountNumber query number(double) true none limit query number(double) true none createdBeforeOrAtHeight query number(double) false none createdBeforeOrAt query [IsoString](#) false none createdOnOrAfterHeight query number(double) false none createdOnOrAfter query [IsoString](#) false none Example responses 200 Response { "historicalPnl" : [ { "id" :

"string" , "subaccountId" :

"string" , "equity" :

"string" , "totalPnl" :

```
"string" , "netTransfers" :  
"string" , "createdAt" :  
"string" , "blockHeight" :  
"string" , "blockTime" :  
"string" } ] }
```

## Responses

Status Meaning Description Schema 200 [OK\(opens in a new tab\)](#) Ok [HistoricalPnlResponse](#) This operation does not require authentication

## GetAggregations

Code samples import requests headers =

```
{ 'Accept' :  
'application/json' }
```

**For the deployment by DYDX token holders, use**

**baseURL = 'https://indexer.dydx.trade/v4'**

**baseURL**

```
'https://dydx-testnet.imperator.co/v4'
```

**r**

```
requests . get ( f ' { baseURL } /historicalTradingRewardAggregations/ { address } ' , params = { 'period' : 'DAILY' , 'limit' : '0'  
, headers = headers)
```

```
print (r. json ()) const
```

```
headers
```

```
= { 'Accept' : 'application/json' };
```

```
// For the deployment by DYDX token holders, use // baseURL = 'https://indexer.dydx.trade/v4' const
```

```
baseURL
```

```
=
```

```
'https://dydx-testnet.imperator.co/v4'
```

```
fetch ( { baseURL } /historicalTradingRewardAggregations/{address}?period=DAILY&limit=0 , { method :
```

```
'GET' ,
```

```
headers : headers }) .then ( function (res) { return
```

```
res .json (); }) .then ( function (body) { console .log (body); }); GET /historicalTradingRewardAggregations/{address}
```

## Parameters

Name	In	Type	Required	Description
address	path	string	true	none
period	query	<a href="#">TradingRewardAggregationPeriod</a>	true	none
limit	query	number(double)	true	none
startingBeforeOrAt	query	<a href="#">IsoString</a>	false	none
startingBeforeOrAtHeight	query	string	false	none

## Enumerated Values

Parameter Value period DAILY period WEEKLY period MONTHLY Example responses 200 Response { "rewards" : [ { "tradingReward" :  
 "string" , "startedAt" :  
 "string" , "startedAtHeight" :  
 "string" , "endedAt" :  
 "string" , "endedAtHeight" :  
 "string" , "period" :  
 "DAILY" } ] }

## Responses

Status Meaning Description Schema 200 [OK\(opens in a new tab\)](#) Ok [HistoricalTradingRewardAggregationsResponse](#) This operation does not require authentication

## GetPerpetualMarket

Code samples import requests headers =

```
{ 'Accept' :  
'application/json' }
```

**For the deployment by DYDX token holders, use**

**baseURL = 'https://indexer.dydx.trade/v4'**

**baseURL**

'https://dydx-testnet.imperator.co/v4'

**r**

```
requests . get ( f ' { baseURL } /orderbooks/perpetualMarket/ { ticker } ' , headers = headers)
```

```
print (r. json ()) const
```

```
headers
```

```
= { 'Accept' : 'application/json' };
```

```
// For the deployment by DYDX token holders, use // baseURL = 'https://indexer.dydx.trade/v4' const
```

```
baseURL
```

```
=
```

```
'https://dydx-testnet.imperator.co/v4'
```

```
fetch ( { baseURL } /orderbooks/perpetualMarket/{ticker} , { method :
```

```
'GET' ,
```

```
headers : headers }) .then ( function (res) { return
```

```
res .json (); }) .then ( function (body) { console .log (body); }); GET /orderbooks/perpetualMarket/{ticker}
```

## Parameters

Name In Type Required Description ticker path string true none Example responses 200 Response { "bids" : [ { "price" :

```
"string" , "size" :  
"string" } ] , "asks" : [ { "price" :  
"string" , "size" :  
"string" } ] }
```

## Responses

Status Meaning Description Schema 200 [OK\(opens in a new tab\)](#) Ok [OrderbookResponseObject](#) This operation does not require authentication

## ListOrders

Code samples import requests headers =

```
{ 'Accept' :  
'application/json' }
```

**For the deployment by DYDX token holders, use**

**baseURL = 'https://indexer.dydx.trade/v4'**

**baseURL**

```
'https://dydx-testnet.imperator.co/v4'
```

**r**

```
requests . get ( f ' { baseURL } /orders' , params = { 'address' : 'string' , 'subaccountNumber' : '0' , 'limit' : '0' }, headers =  
headers)
```

```
print (r. json ()) const
```

```
headers
```

```
= { 'Accept' : 'application/json' };
```

```
// For the deployment by DYDX token holders, use // baseURL = 'https://indexer.dydx.trade/v4' const
```

```
baseURL
```

```
=
```

```
'https://dydx-testnet.imperator.co/v4'
```

```
fetch ( { baseURL } /orders?address=string&subaccountNumber=0&limit=0 , { method :
```

```
'GET' ,
```

```
headers : headers }) .then ( function (res) { return
```

```
res .json (); }) .then ( function (body) { console .log (body); }); GET /orders
```

## Parameters

Name In Type Required Description address query string true none subaccountNumber query number(double) true none limit query number(double) true none ticker query string false none side query [OrderSide](#) false none type query [OrderType](#) false none status query array[any] false none goodTilBlockBeforeOrAt query number(double) false none goodTilBlockTimeBeforeOrAt query [IsoString](#) false none returnLatestOrders query boolean false none

## Enumerated Values

Parameter Value side BUY side SELL type LIMIT type MARKET type STOP\_LIMIT type STOP\_MARKET type TRAILING\_STOP type TAKE\_PROFIT type TAKE\_PROFIT\_MARKET Example responses 200 Response [ { "id" :

"string" , "subaccountId" :

"string" , "clientId" :

"string" , "clobPairId" :

"string" , "side" :

"BUY" , "size" :

"string" , "totalFilled" :

"string" , "price" :

"string" , "type" :

"LIMIT" , "reduceOnly" :

true , "orderFlags" :

"string" , "goodTilBlock" :

"string" , "goodTilBlockTime" :

"string" , "createdAtHeight" :

"string" , "clientMetadata" :

"string" , "triggerPrice" :

"string" , "timeInForce" :

"GTT" , "status" :

"OPEN" , "postOnly" :

true , "ticker" :

"string" , "updatedAt" :

"string" , "updatedAtHeight" :

"string" } ]

## Responses

Status Meaning Description Schema 200 [OK\(opens in a new tab\)](#) Ok Inline

## Response Schema

Status Code 200

Name Type Required Restrictions Description anonymous [\[OrderResponseObject\]](#) false none none » id string true none none » subaccountId string true none none » clientId string true none none » clobPairId string true none none » side [OrderSide](#) true none none » size string true none none » totalFilled string true none none » price string true none none » type [OrderType](#) true none none » reduceOnly boolean true none none » orderFlags string true none none » goodTilBlock string false none none » goodTilBlockTime string false none none » createdAtHeight string false none none » clientMetadata string true none none » triggerPrice string false none none » timeInForce [APITimeInForce](#) true none none » status any true none none anyOf

Name Type Required Restrictions Description » » anonymous [OrderStatus](#) false none none or

Name Type Required Restrictions Description » » anonymous [BestEffortOpenedStatus](#) false none none continued

Name Type Required Restrictions Description » postOnly boolean true none none » ticker string true none none » updatedAt [IsoString](#) false none none » updatedAtHeight string false none none

## Enumerated Values



Property Value side BUY side SELL type LIMIT type MARKET type STOP\_LIMIT type STOP\_MARKET type TRAILING\_STOP type TAKE\_PROFIT type TAKE\_PROFIT\_MARKET timeInForce GTT timeInForce FOK timeInForce IOC anonymous OPEN anonymous FILLED anonymous CANCELED anonymous BEST\_EFFORT\_CANCELED anonymous UNTRIGGERED anonymous BEST\_EFFORT\_OPENED This operation does not require authentication

## GetOrder

Code samples import requests headers =

```
{ 'Accept' :  
'application/json' }
```

**For the deployment by DYDX token holders, use**

**baseURL = 'https://indexer.dydx.trade/v4'**

**baseURL**

'https://dydx-testnet.imperator.co/v4'

**r**

```
requests . get ( f ' { baseURL } /orders/ { orderId } ' , headers = headers)
```

```
print (r. json ()) const
```

```
headers
```

```
= { 'Accept' : 'application/json' };
```

```
// For the deployment by DYDX token holders, use // baseURL = 'https://indexer.dydx.trade/v4' const
```

```
baseURL
```

```
=
```

```
'https://dydx-testnet.imperator.co/v4'
```

```
fetch ( { baseURL } /orders/{orderId} , { method :
```

```
'GET' ,
```

```
headers : headers }) .then ( function (res) { return
```

```
res .json (); }) .then ( function (body) { console .log (body); }); GET /orders/{orderId}
```

## Parameters

Name In Type Required Description orderId path string true none Example responses 200 Response { "id" :

"string" , "subaccountId" :

"string" , "clientId" :

"string" , "clobPairId" :

"string" , "side" :

"BUY" , "size" :

"string" , "totalFilled" :

"string" , "price" :

"string" , "type" :

```
"LIMIT" , "reduceOnly" :
true , "orderFlags" :
"string" , "goodTilBlock" :
"string" , "goodTilBlockTime" :
"string" , "createdAtHeight" :
"string" , "clientMetadata" :
"string" , "triggerPrice" :
"string" , "timeInForce" :
"GTT" , "status" :
"OPEN" , "postOnly" :
true , "ticker" :
"string" , "updatedAt" :
"string" , "updatedAtHeight" :
"string" }
```

## Responses

Status Meaning Description Schema 200 [OK\(opens in a new tab\)](#) Ok [OrderResponseObject](#) This operation does not require authentication

## ListPerpetualMarkets

Code samples import requests headers =

```
{ 'Accept' :
'application/json' }
```

**For the deployment by DYDX token holders, use**

**baseURL = 'https://indexer.dydx.trade/v4'**

**baseURL**

```
'https://dydx-testnet.imperator.co/v4'
```

```
r

requests . get ( f ' { baseURL } /perpetualMarkets' , params = { 'limit' : '0' }, headers = headers)

print (r. json ()) const

headers

= { 'Accept' : 'application/json' };

// For the deployment by DYDX token holders, use // baseURL = 'https://indexer.dydx.trade/v4' const

baseURL

=

'https://dydx-testnet.imperator.co/v4'
```

```
fetch ( { baseURL } /perpetualMarkets?limit=0 , { method :  
'GET' ,  
headers : headers }) .then ( function (res) { return  
res .json (); }) .then ( function (body) { console .log (body); }); GET /perpetualMarkets
```

## Parameters

Name In Type Required Description limit query number(double) true none ticker query string false none Example responses 200 Response { "markets" : { "property1" : { "clobPairId" :

"string" , "ticker" :

"string" , "status" :

"ACTIVE" , "oraclePrice" :

"string" , "priceChange24H" :

"string" , "volume24H" :

"string" , "trades24H" :

0 , "nextFundingRate" :

"string" , "initialMarginFraction" :

"string" , "maintenanceMarginFraction" :

"string" , "openInterest" :

"string" , "atomicResolution" :

0 , "quantumConversionExponent" :

0 , "tickSize" :

"string" , "stepSize" :

"string" , "stepBaseQuantums" :

0 , "subticksPerTick" :

0 } , "property2" : { "clobPairId" :

"string" , "ticker" :

"string" , "status" :

"ACTIVE" , "oraclePrice" :

"string" , "priceChange24H" :

"string" , "volume24H" :

"string" , "trades24H" :

0 , "nextFundingRate" :

"string" , "initialMarginFraction" :

"string" , "maintenanceMarginFraction" :

"string" , "openInterest" :

"string" , "atomicResolution" :

0 , "quantumConversionExponent" :

0 , "tickSize" :

"string" , "stepSize" :

```
"string" , "stepBaseQuantums" :
```

```
0 , "subticksPerTick" :
```

```
0 } } }
```

## Responses

Status Meaning Description Schema 200 [OK\(opens in a new tab\)](#) Ok [PerpetualMarketResponse](#) This operation does not require authentication

## ListPositions

Code samples import requests headers =

```
{ 'Accept' :
```

```
'application/json' }
```

**For the deployment by DYDX token holders, use**

**baseURL = 'https://indexer.dydx.trade/v4'**

**baseURL**

```
'https://dydx-testnet.imperator.co/v4'
```

**r**

```
requests . get ( f ' { baseURL } /perpetualPositions' , params = { 'address' : 'string' , 'subaccountNumber' : '0' , 'status' : [
```

```
"OPEN" ] , 'limit' : '0' } , headers = headers)
```

```
print (r. json ()) const
```

```
headers
```

```
= { 'Accept' : 'application/json' };
```

```
// For the deployment by DYDX token holders, use // baseURL = 'https://indexer.dydx.trade/v4' const
```

```
baseURL
```

```
=
```

```
'https://dydx-testnet.imperator.co/v4'
```

```
fetch ( { baseURL } /perpetualPositions?address=string&subaccountNumber=0&status=OPEN&limit=0 , { method :
```

```
'GET' ,
```

```
headers : headers }) .then ( function (res) { return
```

```
res .json (); }) .then ( function (body) { console .log (body); }); GET /perpetualPositions
```

## Parameters

Name In Type Required Description address query string true none subaccountNumber query number(double) true none status query array[string] true none limit query number(double) true none createdBeforeOrAtHeight query number(double) false none createdBeforeOrAt query [IsoString](#) false none

## Enumerated Values

Parameter Value status OPEN status CLOSED status LIQUIDATED Example responses 200 Response { "positions" : [ { "market" :

```

"string" , "status" :
"OPEN" , "side" :
"LONG" , "size" :
"string" , "maxSize" :
"string" , "entryPrice" :
"string" , "realizedPnl" :
"string" , "createdAt" :
"string" , "createdAtHeight" :
"string" , "sumOpen" :
"string" , "sumClose" :
"string" , "netFunding" :
"string" , "unrealizedPnl" :
"string" , "closedAt" :
"string" , "exitPrice" :
"string" } ] }

```

## Responses

Status Meaning Description Schema 200 [OK\(opens in a new tab\)](#) Ok [PerpetualPositionResponse](#) This operation does not require authentication

## Get

Code samples import requests headers =

```

{ 'Accept' :
'application/json' }

```

**For the deployment by DYDX token holders, use**

**baseURL = 'https://indexer.dydx.trade/v4'**

**baseURL**

'https://dydx-testnet.imperator.co/v4'

**r**

```
requests . get ( f ' { baseURL } /sparklines' , params = { 'timePeriod' : 'ONE_DAY' }, headers = headers)
```

```
print (r. json ()) const
```

```
headers
```

```
= { 'Accept' : 'application/json' };
```

```
// For the deployment by DYDX token holders, use // baseURL = 'https://indexer.dydx.trade/v4' const
```

```
baseURL
```

```
=
```

```
'https://dydx-testnet.imperator.co/v4'
```

```
fetch ( { baseURL } /sparklines?timePeriod=ONE_DAY , { method :  
'GET' ,  
headers : headers }) .then ( function (res) { return  
res .json (); }) .then ( function (body) { console .log (body); }); GET /sparklines
```

## Parameters

Name In Type Required Description timePeriod query [SparklineTimePeriod](#) true none

## Enumerated Values

Parameter Value timePeriod ONE\_DAY timePeriod SEVEN\_DAYS Example responses 200 Response { "property1" : [ "string" ] , "property2" : [ "string" ] }

## Responses

Status Meaning Description Schema 200 [OK\(opens in a new tab\)](#) Ok [SparklineResponseObject](#) This operation does not require authentication

## GetTime

Code samples import requests headers =

```
{ 'Accept' :  
'application/json' }
```

**For the deployment by DYDX token holders, use**

**baseURL = 'https://indexer.dydx.trade/v4'**

## baseURL

```
'https://dydx-testnet.imperator.co/v4'
```

**r**

```
requests . get ( f ' { baseURL } /time' , headers = headers)
```

```
print (r. json ()) const
```

```
headers
```

```
= { 'Accept' : 'application/json' };
```

```
// For the deployment by DYDX token holders, use // baseURL = 'https://indexer.dydx.trade/v4' const
```

```
baseURL
```

```
=
```

```
'https://dydx-testnet.imperator.co/v4'
```

```
fetch ( { baseURL } /time , { method :
```

```
'GET' ,
```

```
headers : headers }) .then ( function (res) { return
```

```
res .json (); }) .then ( function (body) { console .log (body); }); GET /time
```

Example responses 200 Response { "iso" :

"string" , "epoch" :

0 }

## Responses

Status Meaning Description Schema 200 [OK\(opens in a new tab\)](#) Ok [TimeResponse](#) This operation does not require authentication

## GetTrades

Code samples import requests headers =

{ 'Accept' :

'application/json' }

**For the deployment by DYDX token holders, use**

**baseURL = 'https://indexer.dydx.trade/v4'**

**baseURL**

'https://dydx-testnet.imperator.co/v4'

**r**

requests . get ( f ' { baseURL } /trades/perpetualMarket/ { ticker } ' , params = { 'limit' : '0' }, headers = headers)

print (r. json ()) const

headers

= { 'Accept' : 'application/json' };

// For the deployment by DYDX token holders, use // baseURL = 'https://indexer.dydx.trade/v4' const

baseURL

=

'https://dydx-testnet.imperator.co/v4'

fetch ( { baseURL } /trades/perpetualMarket/{ticker}?limit=0 , { method :

'GET' ,

headers : headers }) .then ( function (res) { return

res .json (); }) .then ( function (body) { console .log (body); }); GET /trades/perpetualMarket/{ticker}

## Parameters

Name In Type Required Description ticker path string true none limit query number(double) true none createdBeforeOrAtHeight query number(double) false none createdBeforeOrAt query [IsoString](#) false none Example responses 200 Response { "trades" : [ { "id" :

"string" , "side" :

"BUY" , "size" :

"string" , "price" :

"string" , "type" :

"LIMIT" , "createdAt" :

"string" , "createdAtHeight" :

"string" } ] }

## Responses

Status Meaning Description Schema 200 [OK\(opens in a new tab\)](#) Ok [TradeResponse](#) This operation does not require authentication

## GetTransfers

Code samples import requests headers =

```
{ 'Accept' :
```

```
'application/json' }
```

**For the deployment by DYDX token holders, use**

**baseURL = 'https://indexer.dydx.trade/v4'**

**baseURL**

'https://dydx-testnet.imperator.co/v4'

**r**

```
requests . get ( f ' { baseURL } /transfers' , params = { 'address' : 'string' , 'subaccountNumber' : '0' , 'limit' : '0' } , headers = headers)
```

```
print (r. json ()) const
```

```
headers
```

```
= { 'Accept' : 'application/json' };
```

```
// For the deployment by DYDX token holders, use // baseURL = 'https://indexer.dydx.trade/v4' const
```

```
baseURL
```

```
=
```

```
'https://dydx-testnet.imperator.co/v4'
```

```
fetch ( { baseURL } /transfers?address=string&subaccountNumber=0&limit=0 , { method :
```

```
'GET' ,
```

```
headers : headers }) .then ( function (res) { return
```

```
res .json (); }) .then ( function (body) { console .log (body); }); GET /transfers
```

## Parameters

Name In Type Required Description address query string true none subaccountNumber query number(double) true none limit query number(double) true none createdAt query number(double) false none createdAt query [IsoString](#) false none Example responses 200 Response { "transfers" : [ { "id" :

"string" , "sender" : { "subaccountNumber" :

0 , "address" :

"string" } , "recipient" : { "subaccountNumber" :



```
0 , "address" :  
"string" } , "size" :  
"string" , "createdAt" :  
"string" , "createdAtHeight" :  
"string" , "symbol" :  
"string" , "type" :  
"TRANSFER_IN" , "transactionHash" :  
"string" } ] }
```

## Responses

Status Meaning Description Schema 200 [OK\(opens in a new tab\)](#) Ok [TransferResponse](#) This operation does not require authentication

# Schemas

## PerpetualPositionStatus

"OPEN"

### Properties

Name	Type	Required	Restrictions	Description
anonymous	string	false	none	none

### Enumerated Values

Property	Value
anonymous	OPEN
anonymous	CLOSED
anonymous	LIQUIDATED

## PositionSide

"LONG"

### Properties

Name	Type	Required	Restrictions	Description
anonymous	string	false	none	none

### Enumerated Values

Property	Value
anonymous	LONG
anonymous	SHORT

## IsoString

"string"

### Properties

Name	Type	Required	Restrictions	Description
anonymous	string	false	none	none

## PerpetualPositionResponseObject

```
{ "market" :  
"string" , "status" :  
"OPEN" , "side" :  
"LONG" , "size" :  
"string" , "maxSize" :
```

```
"string" , "entryPrice" :  
"string" , "realizedPnl" :  
"string" , "createdAt" :  
"string" , "createdAtHeight" :  
"string" , "sumOpen" :  
"string" , "sumClose" :  
"string" , "netFunding" :  
"string" , "unrealizedPnl" :  
"string" , "closedAt" :  
"string" , "exitPrice" :  
"string" }
```

## Properties

Name	Type	Required	Restrictions	Description
market	string	true	none none	status <a href="#">PerpetualPositionStatus</a> true none none
side	<a href="#">PositionSide</a>	true	none none	size string true none none
entryPrice	string	true	none none	maxSize string true none none
realizedPnl	string	true	none none	createdAt <a href="#">IsoString</a> true none none
createdAtHeight	string	true	none none	sumOpen string true none none
sumClose	string	true	none none	netFunding string true none none
unrealizedPnl	string	true	none none	closedAt <a href="#">IsoString</a>  null false none none
exitPrice	string	null false none none		

## PerpetualPositionsMap

```
{ "property1" : { "market" :  
"string" , "status" :  
"OPEN" , "side" :  
"LONG" , "size" :  
"string" , "maxSize" :  
"string" , "entryPrice" :  
"string" , "realizedPnl" :  
"string" , "createdAt" :  
"string" , "createdAtHeight" :  
"string" , "sumOpen" :  
"string" , "sumClose" :  
"string" , "netFunding" :  
"string" , "unrealizedPnl" :  
"string" , "closedAt" :  
"string" , "exitPrice" :  
"string" } , "property2" : { "market" :  
"string" , "status" :  
"OPEN" , "side" :  
"LONG" , "size" :  
"string" , "maxSize" :  
"string" , "entryPrice" :
```

```
"string" , "realizedPnl" :  
"string" , "createdAt" :  
"string" , "createdAtHeight" :  
"string" , "sumOpen" :  
"string" , "sumClose" :  
"string" , "netFunding" :  
"string" , "unrealizedPnl" :  
"string" , "closedAt" :  
"string" , "exitPrice" :  
"string" } }
```

## Properties

Name	Type	Required	Restrictions	Description	additionalProperties
					<a href="#">PerpetualPositionResponseObject</a>

false	none	none
-------	------	------

## AssetPositionResponseObject

```
{ "symbol" :  
"string" , "side" :  
"LONG" , "size" :  
"string" , "assetId" :  
"string" }
```

## Properties

Name	Type	Required	Restrictions	Description	symbol	string	true	none	none	side	<a href="#">PositionSide</a>	true	none	none	size	string
					true	none	none	assetId	string	true	none	none				

## AssetPositionsMap

```
{ "property1" : { "symbol" :  
"string" , "side" :  
"LONG" , "size" :  
"string" , "assetId" :  
"string" } , "property2" : { "symbol" :  
"string" , "side" :  
"LONG" , "size" :  
"string" , "assetId" :  
"string" } }
```

## Properties

Name	Type	Required	Restrictions	Description	additionalProperties
					<a href="#">AssetPositionResponseObject</a>

false	none	none
-------	------	------

## SubaccountResponseObject

```
{ "address" :
```

"string" , "subaccountNumber" :  
0 , "equity" :  
"string" , "freeCollateral" :  
"string" , "openPerpetualPositions" : { "property1" : { "market" :  
"string" , "status" :  
"OPEN" , "side" :  
"LONG" , "size" :  
"string" , "maxSize" :  
"string" , "entryPrice" :  
"string" , "realizedPnl" :  
"string" , "createdAt" :  
"string" , "createdAtHeight" :  
"string" , "sumOpen" :  
"string" , "sumClose" :  
"string" , "netFunding" :  
"string" , "unrealizedPnl" :  
"string" , "closedAt" :  
"string" , "exitPrice" :  
"string" } , "property2" : { "market" :  
"string" , "status" :  
"OPEN" , "side" :  
"LONG" , "size" :  
"string" , "maxSize" :  
"string" , "entryPrice" :  
"string" , "realizedPnl" :  
"string" , "createdAt" :  
"string" , "createdAtHeight" :  
"string" , "sumOpen" :  
"string" , "sumClose" :  
"string" , "netFunding" :  
"string" , "unrealizedPnl" :  
"string" , "closedAt" :  
"string" , "exitPrice" :  
"string" } } , "assetPositions" : { "property1" : { "symbol" :  
"string" , "side" :  
"LONG" , "size" :  
"string" , "assetId" :

```
"string" } , "property2" : { "symbol" :  
"string" , "side" :  
"LONG" , "size" :  
"string" , "assetId" :  
"string" } } , "marginEnabled" :  
true }
```

## Properties

Name	Type	Required	Restrictions	Description
address	string	true	none	none
subaccountNumber	number(double)	true	none	none
equity	string	true	none	none
freeCollateral	string	true	none	none
openPerpetualPositions	<a href="#">PerpetualPositionsMap</a>	true	none	none
assetPositions	<a href="#">AssetPositionsMap</a>	true	none	none
marginEnabled	boolean	true	none	none

## AddressResponse

```
{ "subaccounts" : [ { "address" :  
"string" , "subaccountNumber" :  
0 , "equity" :  
"string" , "freeCollateral" :  
"string" , "openPerpetualPositions" : { "property1" : { "market" :  
"string" , "status" :  
"OPEN" , "side" :  
"LONG" , "size" :  
"string" , "maxSize" :  
"string" , "entryPrice" :  
"string" , "realizedPnl" :  
"string" , "createdAt" :  
"string" , "createdAtHeight" :  
"string" , "sumOpen" :  
"string" , "sumClose" :  
"string" , "netFunding" :  
"string" , "unrealizedPnl" :  
"string" , "closedAt" :  
null , "exitPrice" :  
"string" } } , "property2" : { "market" :  
"string" , "status" :  
"OPEN" , "side" :  
"LONG" , "size" :  
"string" , "maxSize" :  
"string" , "entryPrice" :  
"string" , "realizedPnl" :  
"string" , "createdAt" :
```

```

"string" , "createdAtHeight" :
"string" , "sumOpen" :
"string" , "sumClose" :
"string" , "netFunding" :
"string" , "unrealizedPnl" :
"string" , "closedAt" :
null , "exitPrice" :
"string" } } , "assetPositions" : { "property1" : { "symbol" :
"string" , "side" :
"LONG" , "size" :
"string" , "assetId" :
"string" } , "property2" : { "symbol" :
"string" , "side" :
"LONG" , "size" :
"string" , "assetId" :
"string" } } , "marginEnabled" :
true } ] , "totalTradingRewards" :
"string" }

```

## Properties

Name	Type	Required	Restrictions	Description	subaccounts
totalTradingRewards	string	true	none	none	none

## AssetPositionResponse

```

{ "positions" : [ { "symbol" :
"string" , "side" :
"LONG" , "size" :
"string" , "assetId" :
"string" } } ] }

```

## Properties

Name	Type	Required	Restrictions	Description	positions
		true	none	none	none

## CandleResolution

"1MIN"

## Properties

Name	Type	Required	Restrictions	Description	anonymous
	string	false	none	none	none

## Enumerated Values

Property	Value
anonymous	1MIN
anonymous	5MINS
anonymous	15MINS
anonymous	30MINS
anonymous	1HOUR
anonymous	4HOURS
anonymous	1DAY

## CandleResponseObject

```
{ "startedAt" :  
  "string" , "ticker" :  
    "string" , "resolution" :  
      "1MIN" , "low" :  
        "string" , "high" :  
          "string" , "open" :  
            "string" , "close" :  
              "string" , "baseTokenVolume" :  
                "string" , "usdVolume" :  
                  "string" , "trades" :  
                    0 , "startingOpenInterest" :  
                      "string" , "id" :  
                        "string" }
```

### Properties

Name	Type	Required	Restrictions	Description
startedAt	<a href="#">IsoString</a>	true	none none	ticker string true none none resolution
<a href="#">CandleResolution</a>		true	none none	low string true none none high string true none none open string true none none close
baseTokenVolume	string	true	none none	usdVolume string true none none trades number(double)
startingOpenInterest	string	true	none none	id string true none none

## CandleResponse

```
{ "candles" : [ { "startedAt" :  
  "string" , "ticker" :  
    "string" , "resolution" :  
      "1MIN" , "low" :  
        "string" , "high" :  
          "string" , "open" :  
            "string" , "close" :  
              "string" , "baseTokenVolume" :  
                "string" , "usdVolume" :  
                  "string" , "trades" :  
                    0 , "startingOpenInterest" :  
                      "string" , "id" :  
                        "string" } ] }
```

### Properties

Name	Type	Required	Restrictions	Description
candles	<a href="#">CandleResponseObject</a>	true	none none	

## ComplianceResponse

```
{ "restricted" :
```

true , "reason" :

"string" }

## Properties

Name Type Required Restrictions Description restricted boolean true none none reason string false none none

## OrderSide

"BUY"

## Properties

Name Type Required Restrictions Description anonymous string false none none

## Enumerated Values

Property Value anonymous BUY anonymous SELL

## Liquidity

"TAKER"

## Properties

Name Type Required Restrictions Description anonymous string false none none

## Enumerated Values

Property Value anonymous TAKER anonymous MAKER

## FillType

"LIMIT"

## Properties

Name Type Required Restrictions Description anonymous string false none none

## Enumerated Values

Property Value anonymous LIMIT anonymous LIQUIDATED anonymous LIQUIDATION anonymous DELEVERAGED  
anonymous OFFSETTING

## MarketType

"PERPETUAL"

## Properties

Name Type Required Restrictions Description anonymous string false none none

## Enumerated Values

Property Value anonymous PERPETUAL anonymous SPOT

## FillResponseObject

{ "id" :

"string" , "side" :

"BUY" , "liquidity" :



```
"TAKER" , "type" :  
"LIMIT" , "market" :  
"string" , "marketType" :  
"PERPETUAL" , "price" :  
"string" , "size" :  
"string" , "fee" :  
"string" , "createdAt" :  
"string" , "createdAtHeight" :  
"string" , "orderId" :  
"string" , "clientMetadata" :  
"string" }
```

## Properties

Name	Type	Required	Restrictions	Description
id	string	true	none	none
side	<a href="#">OrderSide</a>	true	none	none
liquidity	<a href="#">Liquidity</a>	true	none	none
type	<a href="#">FillType</a>	true	none	none
market	string	true	none	none
marketType	<a href="#">MarketType</a>	true	none	none
price	string	true	none	none
size	string	true	none	none
fee	string	true	none	none
createdAt	<a href="#">IsoString</a>	true	none	none
createdAtHeight	string	true	none	none
orderId	string	false	none	none
clientMetadata	string	false	none	none

## FillResponse

```
{ "fills" : [ { "id" :  
"string" , "side" :  
"BUY" , "liquidity" :  
"TAKER" , "type" :  
"LIMIT" , "market" :  
"string" , "marketType" :  
"PERPETUAL" , "price" :  
"string" , "size" :  
"string" , "fee" :  
"string" , "createdAt" :  
"string" , "createdAtHeight" :  
"string" , "orderId" :  
"string" , "clientMetadata" :  
"string" } ] }
```

## Properties

Name	Type	Required	Restrictions	Description
fills	<a href="#">FillResponseObject</a>	true	none	none

## HeightResponse

```
{ "height" :  
"string" , "time" :  
"string" }
```

## Properties

Name Type Required Restrictions Description height string true none none time [IsoString](#) true none none

## HistoricalBlockTradingReward

```
{ "tradingReward" :  
  "string" , "createdAt" :  
    "string" , "createdAtHeight" :  
      "string" }
```

## Properties

Name Type Required Restrictions Description tradingReward string true none none createdAt [IsoString](#) true none none  
createdAtHeight string true none none

## HistoricalBlockTradingRewardsResponse

```
{ "rewards" : [ { "tradingReward" :  
  "string" , "createdAt" :  
    "string" , "createdAtHeight" :  
      "string" } ] }
```

## Properties

Name Type Required Restrictions Description rewards [[HistoricalBlockTradingReward](#)] true none none

## HistoricalFundingResponseObject

```
{ "ticker" :  
  "string" , "rate" :  
    "string" , "price" :  
      "string" , "effectiveAt" :  
        "string" , "effectiveAtHeight" :  
          "string" }
```

## Properties

Name Type Required Restrictions Description ticker string true none none rate string true none none price string true none none  
effectiveAt [IsoString](#) true none none effectiveAtHeight string true none none

## HistoricalFundingResponse

```
{ "historicalFunding" : [ { "ticker" :  
  "string" , "rate" :  
    "string" , "price" :  
      "string" , "effectiveAt" :  
        "string" , "effectiveAtHeight" :  
          "string" } ] }
```

## Properties

Name	Type	Required	Restrictions	Description
historicalFunding	<a href="#">HistoricalFundingResponseObject</a>	true	none	none

## PnlTicksResponseObject

```
{ "id" :  
  "string" , "subaccountId" :  
    "string" , "equity" :  
      "string" , "totalPnl" :  
        "string" , "netTransfers" :  
          "string" , "createdAt" :  
            "string" , "blockHeight" :  
              "string" , "blockTime" :  
                "string" }
```

### Properties

Name	Type	Required	Restrictions	Description
id	string	true	none	none
subaccountId	string	true	none	none
equity	string	true	none	none
totalPnl	string	true	none	none
netTransfers	string	true	none	none
createdAt	string	true	none	none
blockHeight	string	true	none	none
blockTime	<a href="#">IsoString</a>	true	none	none

## HistoricalPnlResponse

```
{ "historicalPnl" : [ { "id" :  
  "string" , "subaccountId" :  
    "string" , "equity" :  
      "string" , "totalPnl" :  
        "string" , "netTransfers" :  
          "string" , "createdAt" :  
            "string" , "blockHeight" :  
              "string" , "blockTime" :  
                "string" } ] }
```

### Properties

Name	Type	Required	Restrictions	Description
historicalPnl	<a href="#">PnlTicksResponseObject</a>	true	none	none

## TradingRewardAggregationPeriod

"DAILY"

### Properties

Name	Type	Required	Restrictions	Description
anonymous	string	false	none	none

### Enumerated Values

Property	Value
anonymous	DAILY
anonymous	WEEKLY
anonymous	MONTHLY

## HistoricalTradingRewardAggregation

```
{ "tradingReward" :
```

"string" , "startedAt" :  
"string" , "startedAtHeight" :  
"string" , "endedAt" :  
"string" , "endedAtHeight" :  
"string" , "period" :  
"DAILY" }

## Properties

Name	Type	Required	Restrictions	Description
tradingReward	string	true	none none	startedAt <a href="#">IsoString</a> true none none
startedAtHeight	string	true	none none	endedAt <a href="#">IsoString</a> false none none
endedAtHeight	string	false	none none	period <a href="#">TradingRewardAggregationPeriod</a> true none none

## HistoricalTradingRewardAggregationsResponse

```
{ "rewards" : [ { "tradingReward" :  
  "string" , "startedAt" :  
  "string" , "startedAtHeight" :  
  "string" , "endedAt" :  
  "string" , "endedAtHeight" :  
  "string" , "period" :  
  "DAILY" } ] }
```

## Properties

Name	Type	Required	Restrictions	Description
rewards	<a href="#">HistoricalTradingRewardAggregation</a>	true	none none	

## OrderbookResponsePriceLevel

```
{ "price" :  
  "string" , "size" :  
  "string" }
```

## Properties

Name	Type	Required	Restrictions	Description
price	string	true	none none	size string true none none

## OrderbookResponseObject

```
{ "bids" : [ { "price" :  
  "string" , "size" :  
  "string" } ] , "asks" : [ { "price" :  
  "string" , "size" :  
  "string" } ] }
```

## Properties

Name	Type	Required	Restrictions	Description
bids	<a href="#">OrderbookResponsePriceLevel</a>	true	none none	asks <a href="#">OrderbookResponsePriceLevel</a> true none none

## APITimeInForce

"GTT"

## Properties

Name	Type	Required	Restrictions	Description
anonymous	string	false	none	none

## Enumerated Values

Property	Value
anonymous	GTT
anonymous	FOK
anonymous	IOC

## OrderStatus

"OPEN"

## Properties

Name	Type	Required	Restrictions	Description
anonymous	string	false	none	none

## Enumerated Values

Property	Value
anonymous	OPEN
anonymous	FILLED
anonymous	CANCELED
anonymous	BEST_EFFORT_CANCELED
anonymous	UNTRIGGERED

## BestEffortOpenedStatus

"BEST\_EFFORT\_OPENED"

## Properties

Name	Type	Required	Restrictions	Description
anonymous	string	false	none	none

## Enumerated Values

Property	Value
anonymous	BEST_EFFORT_OPENED

## APIOrderStatus

"OPEN"

## Properties

anyOf

Name	Type	Required	Restrictions	Description
anonymous	<a href="#">OrderStatus</a>	false	none	none or

Name	Type	Required	Restrictions	Description
anonymous	<a href="#">BestEffortOpenedStatus</a>	false	none	none

## OrderType

"LIMIT"

## Properties

Name	Type	Required	Restrictions	Description
anonymous	string	false	none	none

## Enumerated Values

Property	Value
anonymous	LIMIT
anonymous	MARKET
anonymous	STOP_LIMIT
anonymous	STOP_MARKET
anonymous	TRAILING_STOP
anonymous	TAKE_PROFIT
anonymous	TAKE_PROFIT_MARKET

## OrderResponseObject

{ "id" :

"string" , "subaccountId" :

"string" , "clientId" :  
"string" , "clobPairId" :  
"string" , "side" :  
"BUY" , "size" :  
"string" , "totalFilled" :  
"string" , "price" :  
"string" , "type" :  
"LIMIT" , "reduceOnly" :  
true , "orderFlags" :  
"string" , "goodTilBlock" :  
"string" , "goodTilBlockTime" :  
"string" , "createdAtHeight" :  
"string" , "clientMetadata" :  
"string" , "triggerPrice" :  
"string" , "timeInForce" :  
"GTT" , "status" :  
"OPEN" , "postOnly" :  
true , "ticker" :  
"string" , "updatedAt" :  
"string" , "updatedAtHeight" :  
"string" }

## Properties

Name	Type	Required	Restrictions	Description
id	string	true	none	none
subaccountId	string	true	none	none
clientId	string	true	none	none
clobPairId	string	true	none	none
side	<a href="#">OrderSide</a>	true	none	none
size	string	true	none	none
totalFilled	string	true	none	none
price	string	true	none	none
type	<a href="#">OrderType</a>	true	none	none
reduceOnly	boolean	true	none	none
orderFlags	string	true	none	none
goodTilBlock	string	false	none	none
goodTilBlockTime	string	false	none	none
createdAtHeight	string	false	none	none
clientMetadata	string	true	none	none
triggerPrice	string	false	none	none
timeInForce	<a href="#">APITimeInForce</a>	true	none	none
status	<a href="#">APIOrderStatus</a>	true	none	none
postOnly	boolean	true	none	none
ticker	string	true	none	none
updatedAt	<a href="#">IsoString</a>	false	none	none
updatedAtHeight	string	false	none	none

## PerpetualMarketStatus

"ACTIVE"

## Properties

Name	Type	Required	Restrictions	Description
anonymous	string	false	none	none

## Enumerated Values

Property	Value
anonymous	ACTIVE
anonymous	PAUSED
anonymous	CANCEL_ONLY
anonymous	POST_ONLY
anonymous	INITIALIZING
anonymous	FINAL_SETTLEMENT

## PerpetualMarketResponseObject

{ "clobPairId" :  
"string" , "ticker" :  
"string" }

```

"string" , "status" :

"ACTIVE" , "oraclePrice" :

"string" , "priceChange24H" :

"string" , "volume24H" :

"string" , "trades24H" :

0 , "nextFundingRate" :

"string" , "initialMarginFraction" :

"string" , "maintenanceMarginFraction" :

"string" , "openInterest" :

"string" , "atomicResolution" :

0 , "quantumConversionExponent" :

0 , "tickSize" :

"string" , "stepSize" :

"string" , "stepBaseQuantums" :

0 , "subticksPerTick" :

0 }

```

## Properties

Name	Type	Required	Restrictions	Description
clobPairId	string	true	none	ticker
status	string	true	none	PerpetualMarketStatus
oraclePrice	string	true	none	priceChange24H
priceChange24H	string	true	none	volume24H
trades24H	number(double)	true	none	nextFundingRate
nextFundingRate	string	true	none	initialMarginFraction
initialMarginFraction	string	true	none	maintenanceMarginFraction
maintenanceMarginFraction	string	true	none	openInterest
openInterest	string	true	none	atomicResolution
atomicResolution	number(double)	true	none	quantumConversionExponent
quantumConversionExponent	number(double)	true	none	tickSize
tickSize	string	true	none	stepSize
stepSize	string	true	none	stepBaseQuantums
stepBaseQuantums	number(double)	true	none	subticksPerTick
subticksPerTick	number(double)	true	none	

## PerpetualMarketResponse

```

{ "markets" : { "property1" : { "clobPairId" :

"string" , "ticker" :

"string" , "status" :

"ACTIVE" , "oraclePrice" :

"string" , "priceChange24H" :

"string" , "volume24H" :

"string" , "trades24H" :

0 , "nextFundingRate" :

"string" , "initialMarginFraction" :

"string" , "maintenanceMarginFraction" :

"string" , "openInterest" :

"string" , "atomicResolution" :

0 , "quantumConversionExponent" :

0 , "tickSize" :

```

```

"string" , "stepSize" :
"string" , "stepBaseQuantums" :
0 , "subticksPerTick" :
0 } , "property2" : { "clobPairId" :
"string" , "ticker" :
"string" , "status" :
"ACTIVE" , "oraclePrice" :
"string" , "priceChange24H" :
"string" , "volume24H" :
"string" , "trades24H" :
0 , "nextFundingRate" :
"string" , "initialMarginFraction" :
"string" , "maintenanceMarginFraction" :
"string" , "openInterest" :
"string" , "atomicResolution" :
0 , "quantumConversionExponent" :
0 , "tickSize" :
"string" , "stepSize" :
"string" , "stepBaseQuantums" :
0 , "subticksPerTick" :
0 } } }

```

## Properties

Name	Type	Required	Restrictions	Description
markets	object	true	none	none
»additionalProperties		false	none	none

## PerpetualPositionResponse

```

{ "positions" : [ { "market" :
"string" , "status" :
"OPEN" , "side" :
"LONG" , "size" :
"string" , "maxSize" :
"string" , "entryPrice" :
"string" , "realizedPnl" :
"string" , "createdAt" :
"string" , "createdAtHeight" :
"string" , "sumOpen" :
"string" , "sumClose" :
"string" , "netFunding" :

```



"string" , "unrealizedPnl" :

"string" , "closedAt" :

"string" , "exitPrice" :

"string" } ] }

## Properties

Name	Type	Required	Restrictions	Description	positions			
					<a href="#">PerpetualPositionResponseObject</a>	]	true	none none

## SparklineResponseObject

```
{ "property1" : [ "string" ] , "property2" : [ "string" ] }
```

## Properties

Name	Type	Required	Restrictions	Description	additionalProperties	[string]	false	none	none
------	------	----------	--------------	-------------	----------------------	----------	-------	------	------

## SparklineTimePeriod

"ONE\_DAY"

## Properties

Name	Type	Required	Restrictions	Description	anonymous	string	false	none	none
------	------	----------	--------------	-------------	-----------	--------	-------	------	------

## Enumerated Values

Property	Value	anonymous	ONE_DAY	anonymous	SEVEN_DAYS
----------	-------	-----------	---------	-----------	------------

## TimeResponse

```
{ "iso" :
```

"string" , "epoch" :

```
0 }
```

## Properties

Name	Type	Required	Restrictions	Description	iso	<a href="#">IsoString</a>	true	none	none	epoch	number(double)	true	none	none
------	------	----------	--------------	-------------	-----	---------------------------	------	------	------	-------	----------------	------	------	------

## TradeType

"LIMIT"

## Properties

Name	Type	Required	Restrictions	Description	anonymous	string	false	none	none
------	------	----------	--------------	-------------	-----------	--------	-------	------	------

## Enumerated Values

Property	Value	anonymous	LIMIT	anonymous	LIQUIDATED	anonymous	DELEVERAGED
----------	-------	-----------	-------	-----------	------------	-----------	-------------

## TradeResponseObject

```
{ "id" :
```

"string" , "side" :

"BUY" , "size" :

"string" , "price" :

```
"string" , "type" :  
"LIMIT" , "createdAt" :  
"string" , "createdAtHeight" :  
"string" }
```

## Properties

Name	Type	Required	Restrictions	Description
id	string	true	none	none
side	<a href="#">OrderSide</a>	true	none	none
size	string	true	none	none
price	string	true	none	none
type	<a href="#">TradeType</a>	true	none	none
createdAt	<a href="#">IsoString</a>	true	none	none
createdAtHeight	string	true	none	none

## TradeResponse

```
{ "trades" : [ { "id" :  
"string" , "side" :  
"BUY" , "size" :  
"string" , "price" :  
"string" , "type" :  
"LIMIT" , "createdAt" :  
"string" , "createdAtHeight" :  
"string" } ] }
```

## Properties

Name	Type	Required	Restrictions	Description
trades	<a href="#">TradeResponseObject</a>	true	none	none

## TransferType

```
"TRANSFER_IN"
```

## Properties

Name	Type	Required	Restrictions	Description
anonymous	string	false	none	none

## Enumerated Values

Property	Value
anonymous	TRANSFER_IN
anonymous	TRANSFER_OUT
anonymous	DEPOSIT
anonymous	WITHDRAWAL

## TransferResponseObject

```
{ "id" :  
"string" , "sender" : { "subaccountNumber" :  
0 , "address" :  
"string" } , "recipient" : { "subaccountNumber" :  
0 , "address" :  
"string" } , "size" :  
"string" , "createdAt" :  
"string" , "createdAtHeight" :  
"string" , "symbol" :
```

"string" , "type" :  
"TRANSFER\_IN" , "transactionHash" :  
"string" }

Properties

Name	Type	Required	Restrictions	Description	id	string	true	none	none	sender	object	true	none	none	»	subaccountNumber			
number(double)	false	none	none	»	address	string	true	none	none	recipient	object	true	none	none	»	subaccountNumber			
number(double)	false	none	none	»	address	string	true	none	none	size	string	true	none	none	createdAt	string	true	none	none
createdAtHeight	string	true	none	none	symbol	string	true	none	none	type	<a href="#">TransferType</a>	true	none	none	transactionHash				
string	true	none	none																

TransferResponse

{ "transfers" : [ { "id" :  
"string" , "sender" : { "subaccountNumber" :  
0 , "address" :  
"string" } , "recipient" : { "subaccountNumber" :  
0 , "address" :  
"string" } , "size" :  
"string" , "createdAt" :  
"string" , "createdAtHeight" :  
"string" , "symbol" :  
"string" , "type" :  
"TRANSFER\_IN" , "transactionHash" :  
"string" } ] }

Properties

Name	Type	Required	Restrictions	Description	transfers	<a href="#">[TransferResponseObject]</a>	true	none	none	Last updated on	May 30, 2024	<a href="#">Composite Client Indexer Websocket</a>
------	------	----------	--------------	-------------	-----------	--	------	------	------	-----------------	--------------	--