Ideal API Endpoint Samples

(Last Updated: 10 Jun 2020)

INTRODUCTION

This API reference includes technical documentation needed to formulate/standardize exchange API endpoints. Outlined below are the **recommended** and **mandatory** requirements.

Exchanges are expected to **minimally** support the **mandatory** endpoints outlined below along with their corresponding mandatory data-points for integration.

SUMMARY

The public GET request endpoints are intended to allow access to market data. Endpoints return results in JSON format. Referenced in the /assets and /ticker endpoints is a Unified Cryptoasset ID (UCID). Please view this page for more information on the UCID.

- **Section A:** Spot Exchanges API endpoints
- **Section B:** Derivatives Exchanges API endpoints
- **Section C**: DEXes
- NFTs

STANDARDS AND CONVENTIONS

For exchanges looking to integrate with CoinMarketCap, here are some guidelines:

1. A REST API with no API authentication required on endpoints.
2. Return all the data at once - No pagination and no EMOJIs
3. Full market queries available every 60 seconds; We poll once per minute per market pair.
4. Dash, hyphen, or underscore base_quote pair notation. No base quote concatenation.
5. Prices standardized to the quote currency.
6. Data available in JSON format
7. If applicable, turn Cloudflare security level to OFF for API endpoints. See this Cloudlfare Support Article for more information.
8. Versioning required to avoid breaking changes (api/v1/asset, api/v2/asset, etc.)
9. Content encoding: gzip supported for optimized data transfer.
10. No region blocked API endpoints or IP address whitelisting required, as we risk losing data from the exchange if we change IPs for data collection in the future.

CoinMarketCap

[Section A] Spot Exchanges

ENDPOINT OVERVIEW

Name	Category	Status	Description
Summary Endpoint (See sample)	Summary	Mandatory	Overview of market data for **all** tickers and **all** markets.
Endpoint A1 (See sample)	asset	Mandatory	In depth details on crypto currencies available on the exchange.
Endpoint A2 (See sample)	ticker	Mandatory	24-hour rolling window price change statistics for all markets.
Endpoint A3 (See sample)	orderbook	Mandatory	Market depth of a trading pair. One array containing a list of ask prices and another array containing bid prices. Query for level 2 order book with full depth available as minimum requirement.
Endpoint A4 (See sample)	trades	Mandatory	Recently completed trades for a given market. 24 hour historical full trades available as minimum requirement.

SUMMARY ENDPOINT

The summary endpoint is to provide an overview of market data for **all** tickers and **all** market pairs on the exchange.

"**trading_pairs**": "ETC_BTC",
"**last_price**": 0.00067,
"**lowest_ask**": 0.000681,
"**highest_bid**": 0.00067,
"**base_volume**": 1528.11,
"**quote_volume**": 1.0282814600000003,
"**price_change_percent_24h**": -1.3254786450662739,
"**highest_price_24h**": 0.000676,
"**lowest_price_24h**": 0.000666
},
{
"**trading_pairs**": "XRP_BTC",
"**last_price**": 0.0000203,
"**lowest_ask**": 0.0000213,
"**highest_bid**": 0.0000202,
"**base_volume**": 350700,
"**quote_volume**": 7.139649999999999,
"**price_change_percent_24h**": -0.49019607843137253,
"**highest_price_24h**": 0.0000204,
"**lowest_price_24h**": 0.0000203
},
{
"**trading_pairs**": "LTC_BTC",
"**last_price**": 0.00469,
"**lowest_ask**": 0.00479,
"**highest_bid**": 0.00469,
"**base_volume**": 592.88,
"**quote_volume**": 2.7840513999999996,
"**price_change_percent_24h**": -0.635593220338983,
"**highest_price_24h**": 0.00471,
"**lowest_price_24h**": 0.00466

CoinMarketCap

Summary response descriptions.

Name	Type	Status	Description
trading_pairs	string	Mandatory	Identifier of a ticker with delimiter to separate base/quote, eg. BTC-USD (Price of BTC is quoted in USD)
base_currency	string	Recommended	Symbol/currency code of base currency, eg. BTC
quote_currency	string	Recommended	Symbol/currency code of quote currency, eg. USD
last_price	decimal	Mandatory	Last transacted price of base currency based on given quote currency
lowest_ask	decimal	Mandatory	Lowest Ask price of base currency based on given quote currency
highest_bid	decimal	Mandatory	Highest bid price of base currency based on given quote currency
base_volume	decimal	Mandatory	24-hr volume of market pair denoted in BASE currency
quote_volume	decimal	Mandatory	24-hr volume of market pair denoted in QUOTE currency
price_change_percent_24h	decimal	Mandatory	24-hr % price change of market pair
highest_price_24h	decimal	Mandatory	Highest price of base currency based on given quote currency in the last 24-hrs
lowest_price_24h	decimal	Mandatory	Lowest price of base currency based on given quote currency in the last 24-hrs

CoinMarketCap

ENDPOINT A1

ASSETS /assets

The assets endpoint is to provide a detailed summary for each currency available on the exchange.

{
  "BTC":{
    "name":"bitcoin",
    "unified_cryptoasset_id" :"1",
    "can_withdraw":"true",
    "can_deposit":"true",
    "min_withdraw":"0.01",
    "max_withdraw ":"100"
    "name":"bitcoin",
    "maker_fee":"0.01",
    "taker_fee":"0.01",
  },
  "ETH":{
    "name":"arbitrum",
    "unified_cryptoasset_id":"11841",
    "can_withdraw":"false",
    "can_deposit":"false",
    "min_withdraw":"10.00",
    "max_withdraw ":"0.00"
    "maker_fee":"0.01",
    "taker_fee":"0.01",
    "contractAddressUrl":
https://arbiscan.io/token/0x912CE59144191C1204E64559FE8253a0e49E6548,
https://etherscan.io/token/0xB50721BCf8d664c30412Cfbc6cf7a15145234ad1,
https://nova-explorer.arbitrum.io/token/0xf823C3cD3CeBE0a1fA952ba88Dc9EEf8e0Bf46AD
    "contractAddress": "0x912CE59144191C1204E64559FE8253a0e49E6548,
0xB50721BCf8d664c30412Cfbc6cf7a15145234ad1, 0xf823C3cD3CeBE0a1fA952ba88Dc9EEf8e0Bf46AD

  }
}

Assets response descriptions.

Name	**Type**	**Status**	**Description**
name	string	Recommended	**Full name** of cryptocurrency.
unified_cryptoasset_id	integer	Recommended	Unique ID of cryptocurrency assigned by Unified Cryptoasset ID.
can_withdraw	boolean	Recommended	Identifies whether withdrawals are enabled or disabled.

can_deposit	boolean	Recommended	Identifies whether deposits are enabled or disabled.
min_withdraw	decimal	Recommended	Identifies the single minimum withdrawal amount of a cryptocurrency.
max_withdraw	decimal	Recommended	Identifies the single maximum withdrawal amount of a cryptocurrency.
maker_fee	decimal	Recommended	Fees applied when liquidity is added to the order book.
taker_fee	decimal	Recommended	Fees applied when liquidity is removed from the order book.
contractAddressUrl	string	Recommended	URL of contract address on **each** chain 1. https://arbiscan.io/token/0x912CE59144191C1204E64559FE8253a0e49E6548 2. https://etherscan.io/token/0xB50721BCf8d664c30412Cfbc6cf7a15145234ad1 3. https://nova-explorer.arbitrum.io/token/0xf823C3cD3CeBE0a1fA952ba88Dc9EEf8e0Bf46AD
contractAddress	string	Recommended	Contract address of the asset on **each** chain (e.g. 0x32353a6c91143bfd6c7d363b546e62a9a2489a20)

ENDPOINT A2

TICKER /ticker

The ticker endpoint is to provide a 24-hour pricing and volume summary for each market pair available on the exchange.

```
{
  "BTC_USDT":{
    "base_id":"1",
    "quote_id":"825",
    "last_price":"10000",
    "quote_volume":"20000",
    "base_volume":"2",
    "isFrozen":"0"
```

```
  },
  "LTC_BTC":{
    "base_id":"2",
    "quote_id":"1",
    "last_price":"0.00699900",
    "base_volume":"20028,526",
    "quote_volume":"279594",
    "isFrozen":"0"
  },
"BNB_BTC":{
    "base_id":"1839",
    "quote_id":"1",
    "last_price":"0.00699900",
    "base_volume":"53819",
    "quote_volume":"99.3459",
    "isFrozen":"0"
  }
}
```

Ticker response descriptions.

Name	Type	Status	Description
base_id	integer	Recommended	The quote pair Unified Cryptoasset ID.
quote_id	integer	Recommended	The base pair Unified Cryptoasset ID.
last_price	decimal	Mandatory	Last transacted price of base currency based on given quote currency
base_volume	decimal	Mandatory	24-hour trading volume denoted in BASE currency
quote_volume	decimal	Mandatory	24 hour trading volume denoted in QUOTE currency
isFrozen	integer	Recommended	Indicates if the market is currently enabled (0) or disabled (1).

ENDPOINT A3

ORDERBOOK /orderbook/market_pair
The order book endpoint is to provide a complete level 2 order book (arranged by best asks/bids) with full depth returned for a given market pair.

Parameters:

Name	Type	Status	Description
market_pair	string	Mandatory	A pair such as "LTC_BTC"
depth	int	Recommended (used to calculate liquidity score for rankings)	Orders depth quantity: [0,5,10,20,50,100,500] Not defined or 0 = full order book Depth = 100 means 50 for each bid/ask side.
level	int	Recommended (used to calculate liquidity score for rankings)	Level 1 – Only the best bid and ask. Level 2 – Arranged by best bids and asks. Level 3 – Complete order book, no aggregation.


```
{
  "timestamp":"1585177482652",
  "bids":[
    [
      "12462000",
      "0.04548320"
    ],
    [
      "12457000",
      "3.00000000"
    ]
  ],
  "asks":[
    [
      "12506000",
      "2.73042000"
    ],
    [
      "12508000",
      "0.33660000"
    ]
  ]
}
```


Order book response descriptions.

Name	Type	Status	Description
timestamp	Integer (UTC timestamp in ms)	Mandatory	Unix timestamp in milliseconds for when the last updated time occurred.
bids	decimal	Mandatory	An array containing 2 elements. The offer price and quantity for each bid order.
asks	decimal	Mandatory	An array containing 2 elements. The ask price and quantity for each ask order.

ENDPOINT A4

TRADES /trades/market_pair
The trades endpoint is to return data on all recently completed trades for a given market pair.

Parameters:

Name	Type	Status	Description
market_pair	string	Mandatory	A pair such as LTC_BTC.


```
[
  {
    "trade_id":3523643,
    "price":"0.01",
    "base_volume":"569000",
    "quote_volume":"0.01000000",
    "timestamp":"1585177482652",
    "type":"sell"
  }
]
```


Trades response descriptions.

Name	Type	Status	Description
trade_id	integer	Mandatory	A unique ID associated with the trade for the currency pair transaction *Note*: Unix timestamp does not qualify as trade_id.
price	decimal	Mandatory	Last transacted price of base currency based on given quote currency

base_volume	decimal	Mandatory	Transaction amount in BASE currency.
quote_volume	decimal	Mandatory	Transaction amount in QUOTE currency.
timestamp	Integer (UTC timestamp in ms)	Mandatory	Unix timestamp in milliseconds for when the transaction occurred.
type	string	Mandatory	Used to determine whether or not the transaction originated as a buy or sell. Buy – Identifies an ask was removed from the order book. Sell – Identifies a bid was removed from the order book.

1.

CoinMarketCap

[Section B] Derivative Exchanges

ENDPOINT OVERVIEW

Name	Category	St in atus	Description
Endpoint B1 (See sample)	contracts	Mandatory	Summary of contracts traded on the exchange, helps to differentiate between different products available. Ideally, all information should be returned in a single endpoint.
Endpoint B2	contract_specs	Mandatory	Describes the specification of the contracts, mainly the pricing of the contract and its type (vanilla, inverse, or quanto). Note: Endpoint B2 may be combined with Endpoint B1 for ease of reference.
Endpoint B3 (See sample)	orderbook	Mandatory	Order book depth of any given trading pair, split into two different arrays for bid and ask orders.

CoinMarketCap

Endpoint B1 (Contracts)

Endpoint B2 provides a summary of **every single** contract traded on the exchange. There should be a clear delineation between the contract type (e.g. perpetual, futures, options). Ideally, all information should be returned in a single endpoint.

Name	Type	Status	Description
ticker_id	string	Mandatory	Identifier of a ticker with delimiter to separate base/quote, eg. BTC-PERPUSD, BTC-PERPETH, BTC-PERPEUR
base_currency	string	Mandatory	Symbol/currency code of base pair, eg. BTC
quote_currency	string	Mandatory	Symbol/currency code of quote pair, eg. ETH
last_price	decimal	Mandatory	Last transacted price of base currency based on given quote currency
base_volume	decimal	Mandatory	24 hour trading volume in BASE currency
USD_volume	decimal	Recommended	24 hour trading volume in USD
quote_volume	decimal	Mandatory	24 hour trading volume in QUOTE currency
bid	decimal	Mandatory	Current highest bid price
ask	decimal	Mandatory	Current lowest ask price
high	decimal	Mandatory	Rolling 24-hour highest transaction price
low	decimal	Mandatory	Rolling 24-hour lowest transaction price
product_type	string	Mandatory	Futures, Perpetual, Options
open_interest	decimal	Mandatory	The number of outstanding derivatives contracts that have not been settled
open_interest_usd	decimal	Mandatory	The sum of the Open Positions (long or short) in USD Value of the contract
index_price	decimal	Mandatory	Last calculated index price for underlying of contract
creation_timestamp	Integer (UTC timestamp in ms)	Mandatory (only for expirable futures/options)	Start date of derivative (**not needed for perpetual swaps**)
expiry_timestamp	Integer (UTC timestamp in ms)	Mandatory (only for expirable futures/options)	End date of derivative (**not needed for perpetual swaps**)
funding_rate	decimal	Mandatory	Current funding rate

next_funding_rate	decimal	Recommended	Upcoming predicted funding rate
next_funding_rate_timestamp	Integer (UTC timestamp in ms)	Mandatory	Timestamp of the next funding rate change
maker_fee	decimal	Recommended	Fees for filling a “maker” order (can be negative if rebate is given)
taker_fee	decimal	Recommended	Fees for filling a “taker” order (can be negative if rebate is given)

Endpoint B2 (Contract specifications)

Describes the specification of the contracts, mainly the pricing of the contract and its type (vanilla, inverse, or quanto). Endpoint B2 (contract_specs) can be combined with endpoint B1 (contracts).

Name	Data Type	Category	Description
contract_type	string	Mandatory	Describes the type of contract - Vanilla, Inverse or Quanto?
contract_price	decimal	Mandatory	Describes the price per contract.
contract_price_currency	string	Mandatory	Describes the currency which the contract is priced in (e.g. USD, EUR, BTC, USDT)

Endpoint B3 (Order book)

Provide order book information with at least depth = 100 (50 each side) returned for a given market pair/ticker.

Name	Data Type	Category	Description
ticker_id	string	Mandatory	A pair such as "BTC-PERPUSD", with delimiter between different cryptoassets
timestamp	Integer (UTC timestamp in ms)	Mandatory	Unix timestamp in milliseconds for when the last updated time occurred.
bids	decimal	Mandatory	An array containing 2 elements. The offer price and quantity fyor each bid order
asks	decimal	Mandatory	An array containing 2 elements. The ask price and quantity for each ask order

CoinMarketCap

Order book depth of any given trading pair, split into two different arrays for bid and ask orders. This is similar to Endpoint A3 for spot markets.

[Section C] DEXes

1. C0: Factory contract address
2. C1: Uniswap Sample
3. C2: Subgraph Sample
4. C3: Yield Farming Sample
5. C4: Order book DEX (Please refer to Section A or B for API format)
6. C5: Runes/Ordinals/BRC20 Sample

C0: Factory Contract address

Please review this document and prepare a factory contract address (if applicable).

C1: Uniswap Sample


```
{
  "0x2260FAC5E5542a773Aa44fBCfeDf7C193bc2C599_0xC02aaA39b223FE8D0A0e5C4F27eAD9083C756Cc2": {
    "base_id": "0x2260FAC5E5542a773Aa44fBCfeDf7C193bc2C599",
    "base_name": "Wrapped BTC",
    "base_symbol": "WBTC",
    "quote_id": "0xC02aaA39b223FE8D0A0e5C4F27eAD9083C756Cc2",
    "quote_name": "Wrapped Ether",
    "quote_symbol": "WETH",
    "last_price": "30.456925235964475464 78", // WBTC/WETH
    "base_volume": "1725.0451867",  // number of WBTC
    "quote_volume": "52450.878529932577252127"  // number of WETH
  },
  "0xC02aaA39b223FE8D0A0e5C4F27eAD9083C756Cc2_0xdAC17F958D2ee523a2206206994597C13D831ec7":
{
    "base_id": "0xC02aaA39b223FE8D0A0e5C4F27eAD9083C756Cc2",
    "base_name": "Wrapped Ether",
    "base_symbol": "WETH",
    "quote_id": "0xdAC17F958D2ee523a2206206994597C13D831ec7",
    "quote_name": "Tether USD",
    "quote_symbol": "USDT",
    "last_price": "345.2244580923542612263",
    "base_volume": "195644.931427163765765227",
    "quote_volume": "67443916.533922"
  },
  "0xA0b86991c6218b36c1d19D4a2e9Eb0cE3606eB48_0xC02aaA39b223FE8D0A0e5C4F27eAD9083C756Cc2": {
    "base_id": "0xA0b86991c6218b36c1d19D4a2e9Eb0cE3606eB48",
    "base_name": "USD//C",
    "base_symbol": "USDC",
```

"quote_id": "0xC02aaA39b223FE8D0A0e5C4F27eAD9083C756Cc2",
"quote_name": "Wrapped Ether",
"quote_symbol": "WETH",
"last_price": "0.00290132977471109834",
"base_volume": "73286693.891247",
"quote_volume": "213019.93511309204389843 7"

C2: Subgraph Sample

- Open environment for querying data
- A way to query settled transactions for all pairs with variables for price/volume/symbols/contracts/timestamps/decimals
- Sample: https://thegraph.com/hosted-service/subgraph/dodoex/dodoex-v2
- Contract address for quote_id & base_id
- Timestamp parameter for settled transactions
- Decimals might be necessary per asset to normalize base/quote volume

```
{ swaps(first: 3, orderBy: timestamp)
  {
          id
          fromAmount
          toAmount
          timestamp
          pair {
            fromToken {
              decimals
              symbol
              tradeVolume
            }
            toToken {
              decimals
              symbol
              tradeVolume
            }
          }
        }
      }
```

"data": {
  "swaps": [
   {
    "fromAmount": "10000000000000000",

```
        "id": "0x26f1c14cc968d9a38ba9578b5d01a266097475116f0b3a4a87e2fb256ea3b604",
        "pair": {
          "fromToken": {
            "decimals": 18,
            "symbol": "ETH",
            "tradeVolume": "5207944.760473916764396218"
          },
          "toToken": {
            "decimals": 18,
            "symbol": "SNX",
            "tradeVolume": "33150454.565463180328974321"
          }
        },
        "timestamp": "1569689186",
        "toAmount": "3475232359783357069"
      },
    {
        "fromAmount": "280000000000000000",
        "id": "0x889164e561a65fdd3990af835b8a369f2849d16fe32b6085c74056d70de1e889",
        "pair": {
          "fromToken": {
            "decimals": 18,
            "symbol": "ETH",
            "tradeVolume": "5207944.760473916764396218"
          },
          "toToken": {
            "decimals": 9,
            "symbol": "DGX",
            "tradeVolume": "3028.465867692"
          }
        },
        "timestamp": "1569689186",
        "toAmount": "1054116024"
      },
      {
        "fromAmount": "21475232359783357069",
        "id": "0xca0b3ff308f38769ae82a2b9074b04eb80823f030e2e3f36777ecceace79db38",
        "pair": {
          "fromToken": {
            "decimals": 18,
            "symbol": "SNX",
            "tradeVolume": "33150454.565463180328974321"
          },
          "toToken": {
            "decimals": 18,
            "symbol": "ETH",
            "tradeVolume": "5207944.760473916764396218"
          }
        },
        "timestamp": "1569689297",
```

"toAmount": "61421189600443173"
},

C3: Yield Farming Sample

```
{

provider: 'SushiSwap', // Project name - Sushi

provider_logo: 'URL', // Project logo, square, less than 100*100 px

provider_URL: 'URL', // Project URL

links: [ // social media info

{

title: 'Twitter',

link: 'https://twitter.com/sushiswap',

}

],

pools: [

{



name: 'Pool Name 1', // Pool name if any, eg. Sushi Party, Uniswap Sushi-ETH LP

pair: 'SUSHI-ETH' // Pool pairs, e.g SUSHI-ETH

pairLink: 'https://sushiswapclassic.org/farms/SUSHI-ETH%20SLP', // The URL to this pool

logo: 'URL', // Pool logo if any, otherwise just use Project logo

poolRewards: ['SUSHI'], // The reward token ticker

apr: 1.1, // APY, 1.1 means 110%

totalStaked: 13987213, // Total valued lock in USD



},

{
```

name: 'Pool Name 2',

pair: 'LEND-ETH'

pairLink: 'https://sushiswapclassic.org/farms/SUSHI-ETH%20SLP'

logo: 'URL',

poolRewards: ['SUSHI'],

apr: 1.1,

totalStaked: 13987213,

}

]

}

C4: Order book DEX
(Please refer to Section A or B for API format)

C5: Runes/Ordinals/BRC20 Sample

{"floorPrice":"0.0000562",（in BTC)
"inscriptionNumRange":"#66796189-#71393287",
"isBrc20":true,"slug":"pizza",(token symbol)
"totalVolume":"732.482853159999999924",
"volume24h":"1.30907077"（in BTC)}