

# ETSS Market Data API (1.0.4)

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The ETSS Market Data API is an HTTP [REST](#) API served by ENEX. It is the same API the ETSS web client uses to communicate with the Market Data server, so everything the web client can do, can be done with the API. Most of the client's commands map directly to API endpoints.

## Authentication

The authentication for ETSS Market Data API is centralized and implements single sign-on and access control for modern web applications and APIs using protocol [OAuth2](#) . Moreover, the authentication process is token based, which means that in order to access an API, the API request must include a valid access token, issued by the ENEX authentication service. To obtain an access token, a standard OAuth2 'client credentials' flow should be followed against the ENEX Identity Management System. All subsequent calls to the API methods POST / GET / DELETE should send an `Authorization: Bearer <access token>` header.

## OAuth2\_bearer

The API consumer must provide a valid JWT access token, obtained after successful authentication (by either 'code' or 'client credentials' OAuth2 flows) against the ENEX authentication server.

|                                  |        |
|----------------------------------|--------|
| <b>Security Scheme Type</b>      | HTTP   |
| <b>HTTP Authorization Scheme</b> | bearer |
| <b>Bearer format</b>             | "JWT"  |

# OAuth2\_implicit

This API uses OAuth 2 with the implicit grant flow. [More info](#)

|                      |                                                                                                                                                                                                               |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Security Scheme Type | OAuth2                                                                                                                                                                                                        |
| implicit OAuth Flow  | <p><b>Authorization URL:</b><br/>https://login.helex.gr/ms_oauth/oauth2/endpoints/oauthservice/tokens</p> <p><b>Scopes:</b></p> <ul style="list-style-type: none"><li><code>openid</code> - default</li></ul> |

## System

Requests in this section, provide Trading System specific data, for eventual use in subsequent requests.

## Market Data server local time.

GET /api/serverTime



Returns the Market Data System local (Europe/Athens) time.

AUTHORIZATIONS: [OAuth2\\_bearer](#)

## Responses

> 200 successful operation

Response samples

200

Content type

application/json; charset=UTF-8

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```
{
  "localTime": "2022-01-01T23:00:00.000000+02:00",
  "marketTime": "2022-01-01T13:00:00.000000+01:00"
}
```

Get a list of products

GET /api/products



The list of traded products as defined in the XBID trading system.

AUTHORIZATIONS: OAuth2\_bearer

QUERY PARAMETERS

|             |                                                                                                                                     |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------|
| productName | string<br>Example: <code>productName=XBID_Half_Hour_Power, XBID_Hour_Power, XBID_Quarter_Hour_Power</code><br>The product id sought |
| state       | string<br>Enum: <code>"ACTI"</code> <code>"IACT"</code> <code>"HIBE"</code><br>The state of products sought                         |

HEADER PARAMETERS

X-ETSS-CUID

string <uuid>

---

Responses

- > **200** Successful operation returns a list of XBID Products
- > **400** Bad request.
- > **401** Authentication Error when Access Token is invalid
- > **403** Authorization Error when the backend system refuses the user
- > **404** The specified resource was not found.
- > **560** A database error has occured.
- > **561** A runtime error has occured.

Response samples

200

400

401

403

404

560

561

Content type  
application/json; charset=UTF-8

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```
{
  "serverTime": "2022-01-01T23:00:00.000000+02:00",
  "data": {
    "products": { ... }
  }
}
```

# Get a list of contracts per date

GET /api/contracts



AUTHORIZATIONS: OAuth2\_bearer

QUERY PARAMETERS

|              |                                                                                                                                                                   |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| date         | string<br>Example: <code>date=2022-02-24</code><br>The delivery date for which the contracts are effective. (YYYY-MM-DD ISO 8601)                                 |
| dateTo       | string<br>Example: <code>dateTo=2022-02-25</code><br>The last (inclusive) delivery date of the range for which the contracts are effective. (YYYY-MM-DD ISO 8601) |
| contractId   | integer <int64><br>The contract id sought                                                                                                                         |
| state        | string<br>Enum: <code>"ACTI"</code> <code>"IACT"</code> <code>"HIBE"</code><br>The state of contracts sought                                                      |
| tradingPhase | string<br>Enum: <code>"CLSD"</code> <code>"CONT"</code><br>The trading phase of contracts sought                                                                  |
| product      | string<br>Example: <code>product=XBID_Hour_Power, XBID_Quarter_Hour_Power</code><br>The (comma delimited) product names of contracts sought                       |

HEADER PARAMETERS

|             |               |
|-------------|---------------|
| X-ETSS-CUID | string <uuid> |
|-------------|---------------|

## Responses

- > **200** Successful operation returns an array of tradable Contracts with their full properties (orders,trades).
- > **400** Bad request.
- > **401** Authentication Error when Access Token is invalid
- > **403** Authorization Error when the backend system refuses the user
- > **404** The specified resource was not found.
- > **560** A database error has occurred.
- > **561** A runtime error has occurred.

## Response samples

**200****400****401****403****404****560****561**

### Content type

application/json; charset=UTF-8

[Copy](#) [Expand all](#) [Collapse all](#)

```
{
  "serverTime": "2022-01-01T23:00:00.000000+02:00",
  - "data": {
    + "property1": { ... },
    + "property2": { ... }
  }
}
```

## Markets

Everything about markets

# Get the list of market areas

GET /api/markets



AUTHORIZATIONS: OAuth2\_bearer

QUERY PARAMETERS

marketAreaId string  
The market area sought

HEADER PARAMETERS

X-ETSS-CUID string <uuid>

## Responses

- > 200 Successful operation returns the market area with it's corresponding delivery areas
- > 400 Bad request.
- > 401 Authentication Error when Access Token is invalid
- > 403 Authorization Error when the backend system refuses the user
- > 404 The specified resource was not found.
- > 560 A database error has occured.
- > 561 A runtime error has occured.

## Response samples

200

400

401

403

404

560

561

Content type

application/json; charset=UTF-8

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```
{
  "serverTime": "2022-01-01T23:00:00.000000+02:00",
  - "data": {
    + "markets": { ... }
  }
}
```

# Miscellaneous

Miscellaneous requests

## server-info data

GET /api/serverInfo



Gets operational information of the API Application Server

AUTHORIZATIONS: OAuth2\_bearer

## Responses

> 200 successful operation

Response samples

200

Content type

application/json; charset=UTF-8

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```
{
  "company": "string",
  "wsInstance": "string",
  "loginMode": "string",
  "wsVersion": "string",
  "apiVersion": "string",
  "remoteIp": "string"
}
```

Unauthenticated API server connectivity check.

GET   /api/ping



Returns the API server local (Europe/Athens) time.

Responses

> 200 successful operation

Response samples

200

Content type

application/json; charset=UTF-8

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```
{
  "serverTime": "2022-01-01T23:00:00.000000+02:00"
}
```

# Capacities

## Get the list of Hub To Hub available capacities

GET /api/hub2hub



AUTHORIZATIONS: OAuth2\_bearer

QUERY PARAMETERS

|               |                                                                                                                                                                                             |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| date          | string<br>Example: date=2022-05-18<br>The delivery date for which the atcs are effective. (YYYY-MM-DD ISO 8601)                                                                             |
| hubFrom       | string<br>The source hub's delivery area Id (EIC)                                                                                                                                           |
| deliveryStart | string<br>Example: deliveryStart=2022-01-01T23:00+01:00<br>The deliveryStart datetime in Europe/Amsterdam timezone, for which the atcs are effective. CET/CEST ISO 8601 YYYY-MM-DDThh:mmTZD |

HEADER PARAMETERS

X-ETSS-CUID

string <uuid>

## Responses

- > 200 Successful operation returns an array of Hub to Hub available capacities per MTU
- > 400 Bad request.
- > 401 Authentication Error when Access Token is invalid
- > 403 Authorization Error when the backend system refuses the user
- > 404 The specified resource was not found.
- > 560 A database error has occured.
- > 561 A runtime error has occured.

## Response samples

200

400

401

403

404

560

561

Content type  
application/json; charset=UTF-8

Copy

Expand all

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```
{
  "serverTime": "2022-01-01T23:00:00.000000+02:00",
  "data": [
    + { ... }
  ]
}
```

# Get the list of cross-border available capacities.

GET /api/atcs



AUTHORIZATIONS: OAuth2\_bearer

QUERY PARAMETERS

|               |                                                                                                                                                                                                          |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| date          | string<br>Example: <code>date=2022-05-18</code><br>The delivery date for which the atcs are effective. (YYYY-MM-DD ISO 8601)                                                                             |
| hubFrom       | string<br>The source hub's delivery area Id (EIC)                                                                                                                                                        |
| deliveryStart | string<br>Example: <code>deliveryStart=2022-01-01T23:00+01:00</code><br>The deliveryStart datetime in Europe/Amsterdam timezone, for which the atcs are effective. CET/CEST ISO 8601 YYYY-MM-DDThh:mmTZD |

HEADER PARAMETERS

|             |               |
|-------------|---------------|
| X-ETSS-CUID | string <uuid> |
|-------------|---------------|

## Responses

- > 200 Successful operation returns an array of cross-border available capacities per MTU
- > 400 Bad request.
- > 401 Authentication Error when Access Token is invalid
- > 403 Authorization Error when the backend system refuses the user
- > 404 The specified resource was not found.
- > 560 A database error has occurred.

> **561** A runtime error has occurred.

## Response samples

**200****400****401****403****404****560****561**

### Content type

application/json; charset=UTF-8

[Copy](#)[Expand all](#)[Collapse all](#)

```
{
  "serverTime": "2022-01-01T23:00:00.000000+02:00",
  - "data": [
    + { ... }
  ]
}
```

## Streaming SSE

The SSE endpoint propagating private events concerning the orders residing in ETSS

GET /sse/private



AUTHORIZATIONS:

[OAuth2\\_bearer](#)

Responses

> 200 ok

---

The SSE endpoint propagating public messages for the state of the XBID Single Order Book

GET /sse/public



---

AUTHORIZATIONS:      [OAuth2\\_bearer](#)

Responses

> 200 ok

