

Get Ready for 2025: Mastering MATS API for EPEX SPOT's New Trading Platform



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EPEX SPOT Webinar
6 November 2024



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Agenda

- 01** MATS API Key Principles, MATS vs ETS
- 02** Overview of the MATS API online documentation
- 03** Sample Test client demonstration
- 04** API testing (SIMU access, support, conformance test, timeline)
- 05** Q&A

Your panelists



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MATS API Key Principles reminder

01



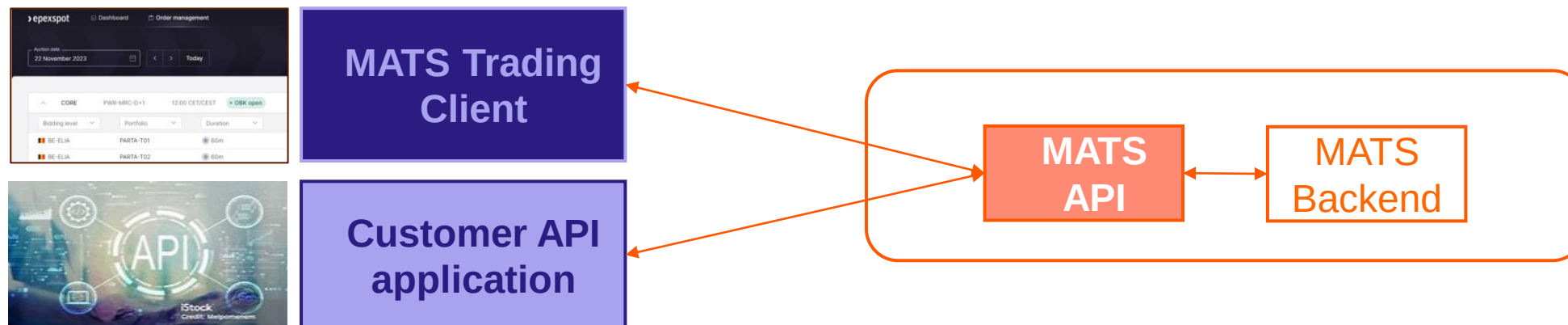
MATS API key principles reminder

A developer friendly environment



MATS API key principles reminder

A unique API pipeline for the trading client and customers' apps



1

Streamlined: One single entry point, one single protocole

2

Scaling: Same functionalities natively offered for the EPEX Trading Client and API clients

3

Quality: Implicit testing when using the MATS Trading Client

MATS API key principles

MATS API Requests overview

1/ AUTHENTICATION

Manage login and passwords

- ✓ Login/logout (connect/disconnect)
- ✓ Set or Reset a new password
- ✓ Modify your user password

2/ CONFIGURATION REFERENCE DATA

Retrieve your user configuration: what your user is assigned to

- ✓ Get your participant information and portfolios
- ✓ Get your Read or Write trading permissions on (Portfolio, bidding level)
- ✓ Get your settlement members (for trading limits)

Retrieve auctions configuration:

- ✓ Get your auctions, markets and bidding levels
- ✓ Get related auction sessions and delivery periods

3/ ORDER MANAGEMENT

Manage your orders:

- ✓ Retrieve, Submit, Modify, Delete, Delete All
- ✓ Linear, block, scalable complex orders

4/ Public and private MARKET RESULTS

✓ Continuation from ETS, mixing private & public results:

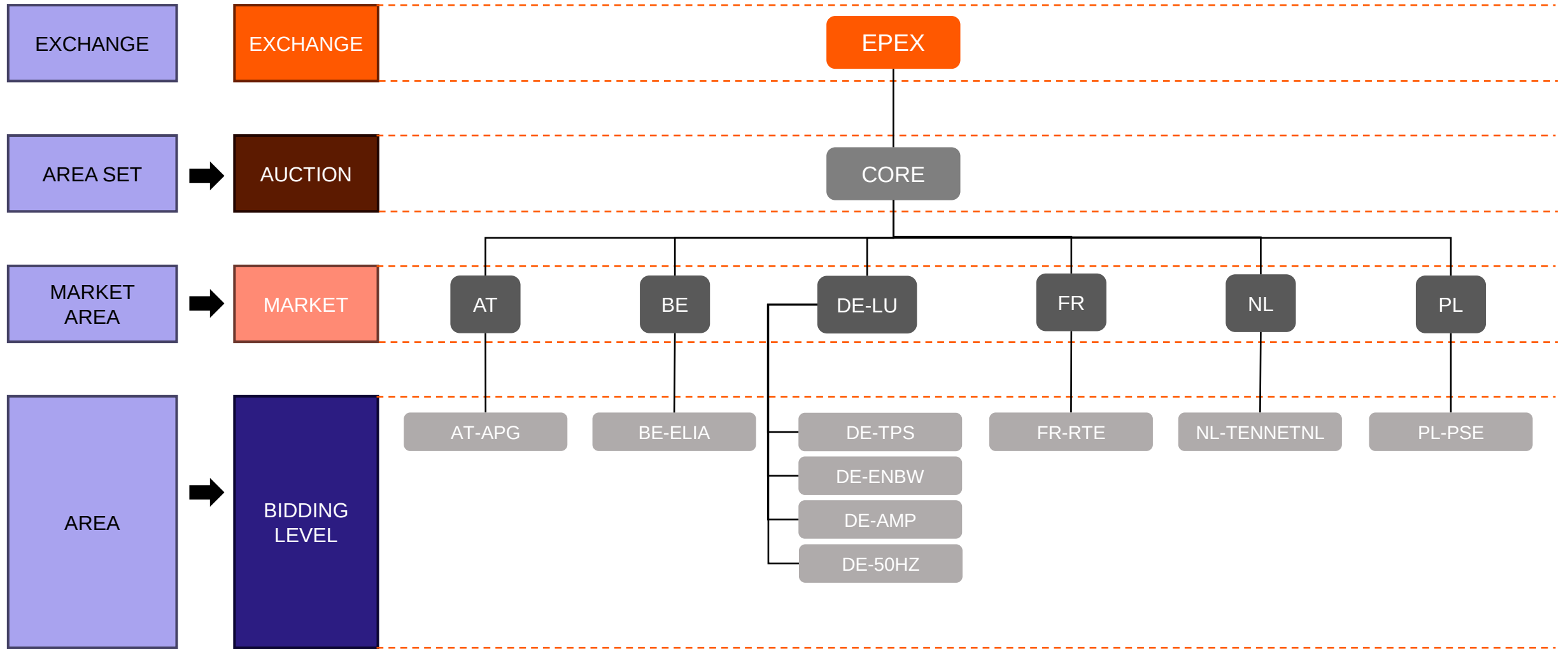
- ✓ Retrieve CSV results, Retrieve Trade report (XML)

✓ New, pure JSON:

- ✓ **Public:** Retrieve Market Results
- ✓ **Private:**
 - ✓ Aggregated results,
 - ✓ Individual linear/block/scalable orders results

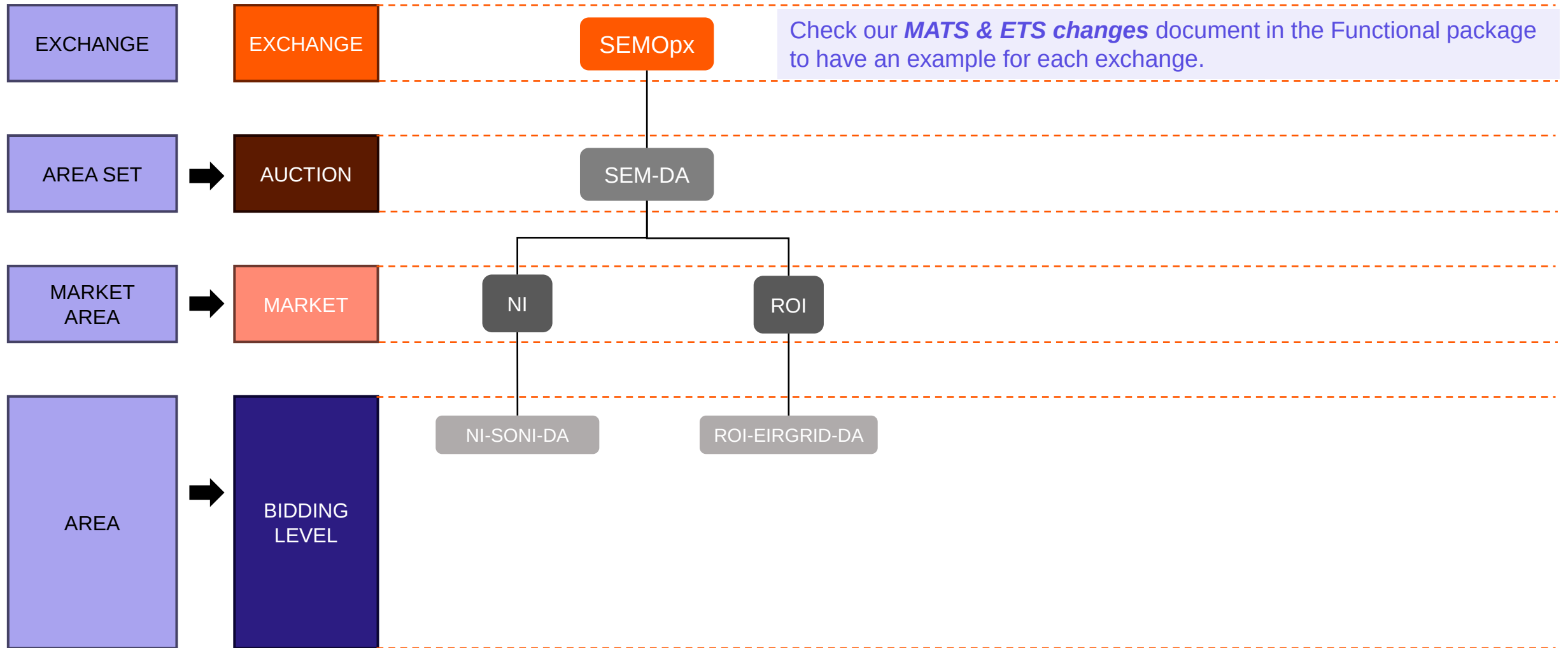
Terminology : MATS versus ETS

EPEX



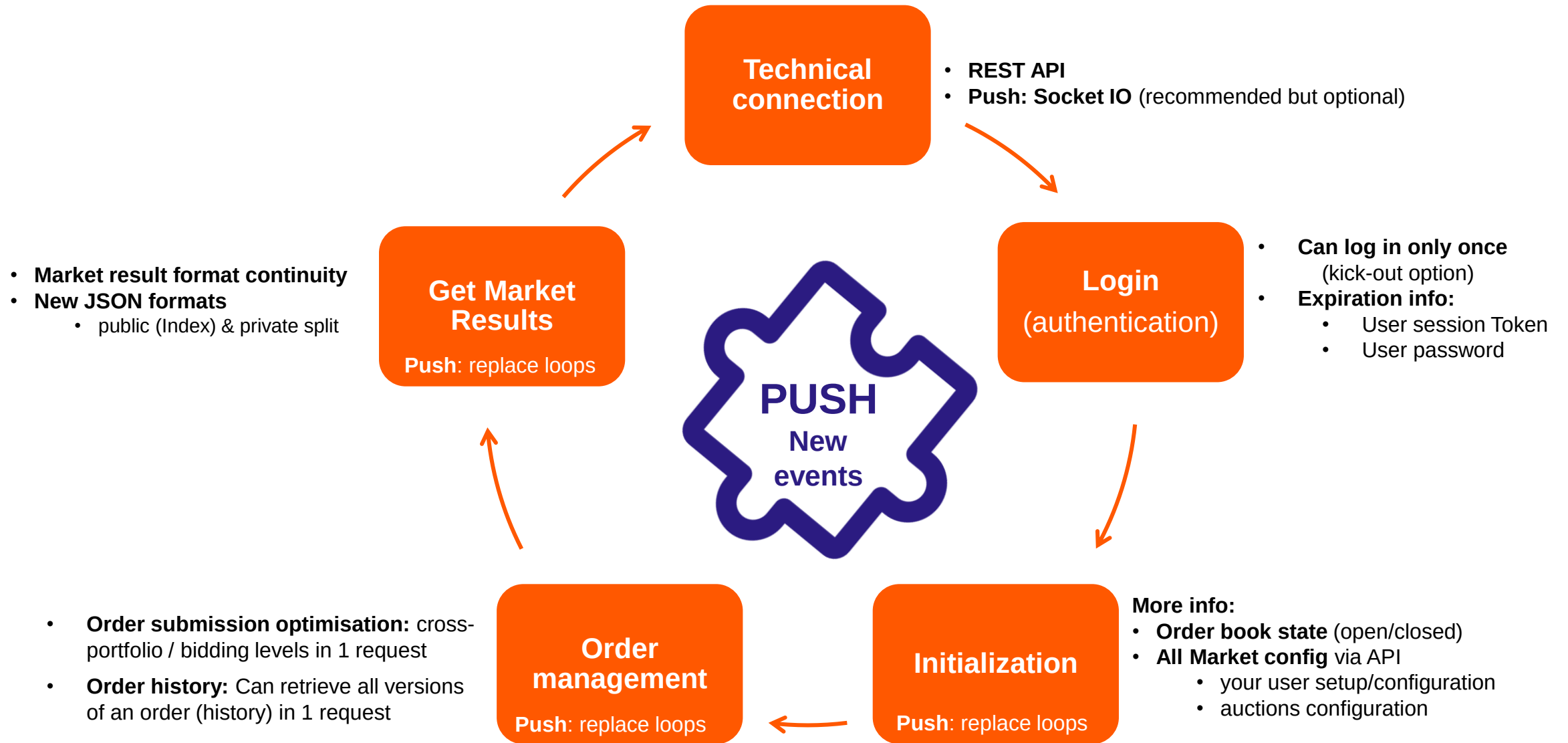
Terminology : MATS versus ETS

SEMOpX



MATS API Enhancements Overview

Note: the API URL is different for each Exchange



Understanding Login/Logout: Connect, Tokens & Disconnection

ETS API

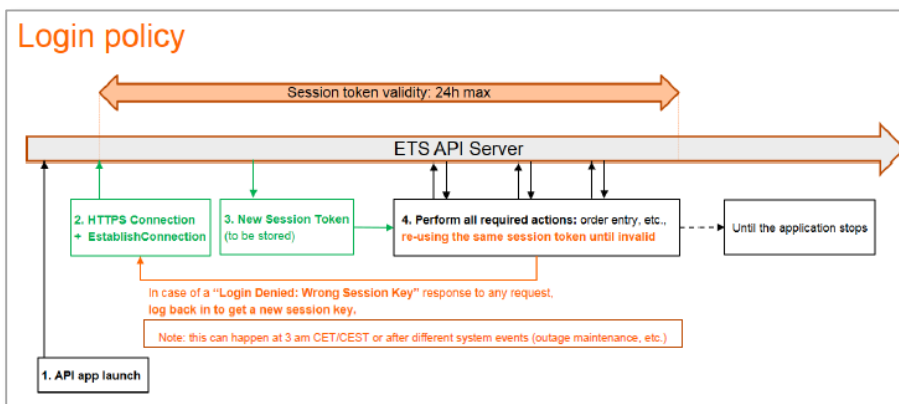
› Login: *EstablishConnection*

- **Technically:** you can send as many EstablishConnection as you want, and create many **session keys**.
 - **session token = user + session key**
- Each token is valid and can be successfully used in parallel.
- **Terms of Reference :** must store the token in the response, and use it as long as valid (until getting an error)

› Token duration: All tokens expire at 03:00am.

› Logout (user + session key):

- log out from one specific session,
- No impact on other sessions of this user.



MATS API

› Login: *Connect*

- “Can log in only once” = “can only have one active token at a time”
- Not required anymore to store a persistent token...but you must handle one single active token at a time: flag **alreadyConnected**:

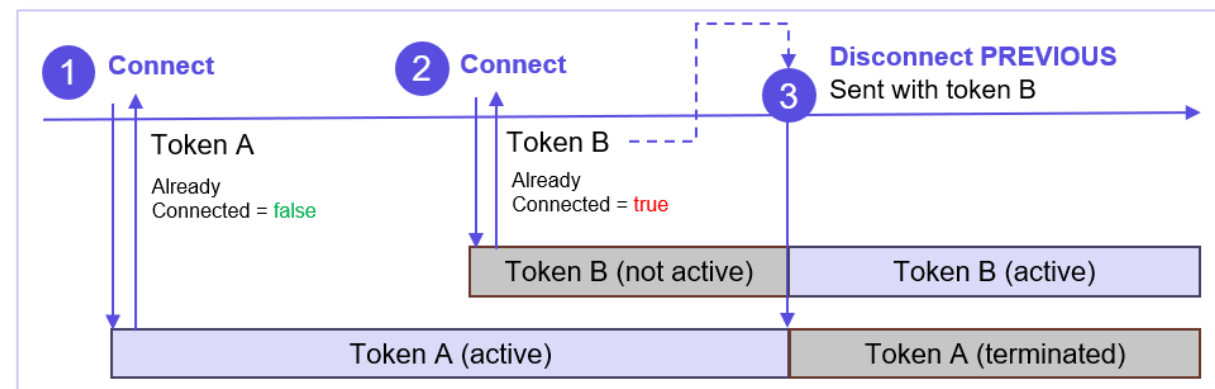
If **true**, disconnect the previous active token

› Token duration: 24 hours

› Logout: *Disconnect*

- from CURRENT session
- from PREVIOUS sessions

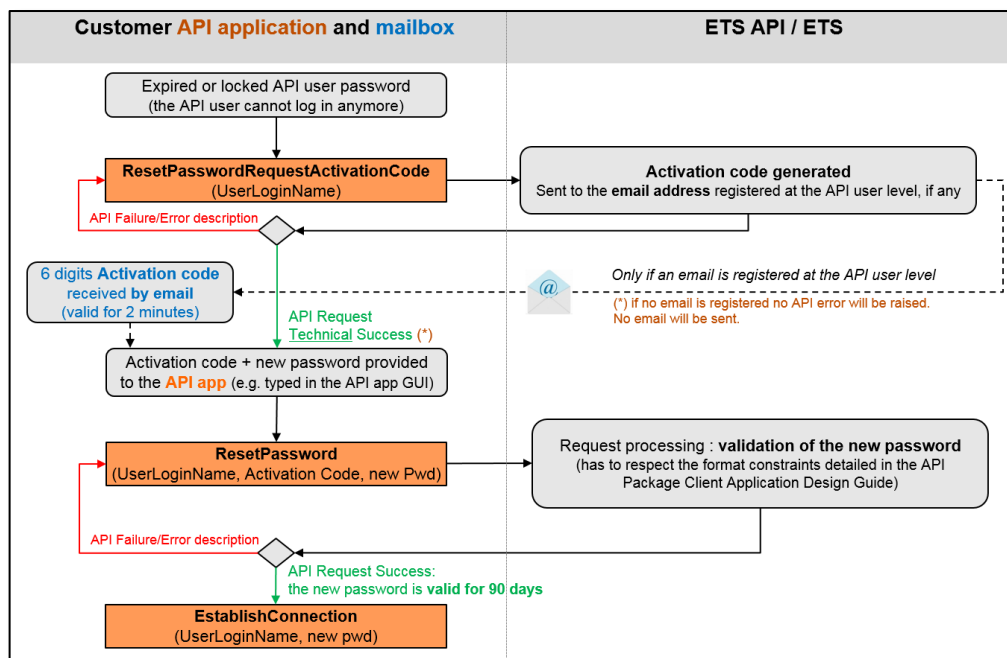
```
{
  "_data": {
    "token": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ",
    "group": "TRADER",
    "userName": "APIUSER",
    "login": "APIUSER",
    "tokenDuration": 1440,
    "alreadyConnected": true,
    "passwordTimeIntervalBeforeExpiry": 7548103
  }
}
```



User Password management (1/2)

ETS API

- **Initial password** provided by Market Operations
 - Password default validity = 7 days, can be extended to 90 days.
- **UpdatePassword** (current pwd, new pwd)
- **ResetPasswordRequestActivationCode**
- **ResetPassword**



MATS API

- **Initial password:** email with a **reset token** (email at user level)
Note: the **pwd remaining validity** in seconds given in the connect response

Email Subject: [MATS] - EPEX - Password Reset Request

Dear APIUSER,

We received a request to reset your password for APIUSER. If this request does not come from you or your organization, please contact Market Operations team.

To reset your password:

Please use the token below:

eyJ0eXAI0iKjV1QlJC1hGGOi0SUz11NiU.eyJpc3MiOiUuYXRXZiwiZWVkiOiJ0TjpljiWVXVkiOiUuVZC3I2WtZCZVzSylmhdC1C6MTczMDQ0OTY4MiwZXBhZj0xNzNmNtC2MDgyQ. Q886MCZQF912JAW6u0z2hKjNrRwVN1JfUvsnXRb0FvYd4BgArJcnC0fHSFdtk5u6j6fPOu8U9r7XrAoXGlmth06DLdrtgT9_BZ-
eyRiRlS359p6d4LkNm3mfvMk3m4fMn90e 9CR9PvY14wMacq64m6q59rKMcZUkynz29K9aQaoA00A00 C1hLe0Le TP4I05rd1P05S1se1FMFCYjB6NT1KznwJFz 8wsPQ

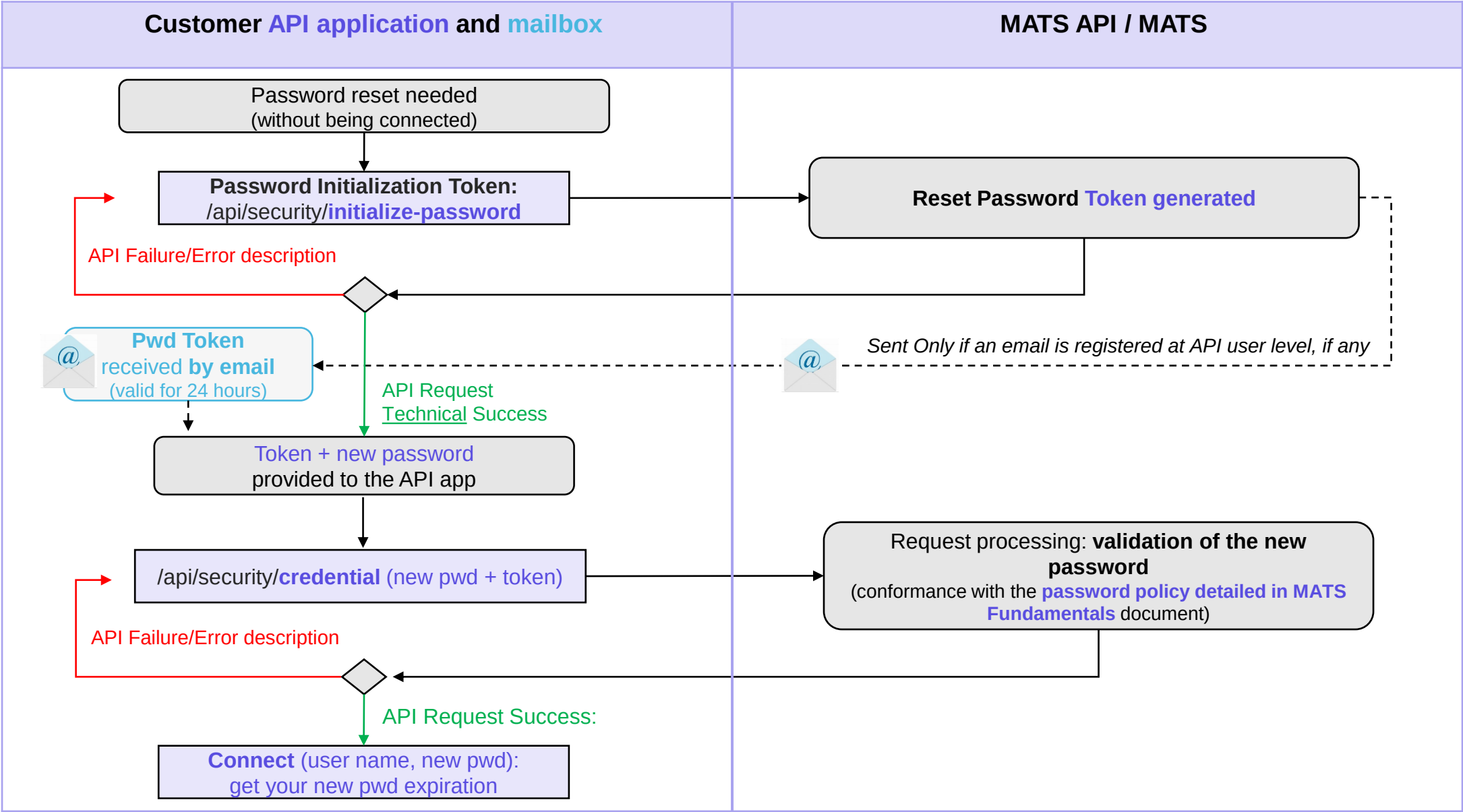
For security purpose, the token is valid only for the next 24 hours. After this period, you will need to restart the password reset process.

If you encounter any issues or have any questions, please do not hesitate to contact us.

Kind regards,
Market Operations team

- **Password Initialization:** /api/security/credential
 - **Reset password:** new pwd + pwd reset token
 - **Modify current password :** current pwd + new pwd (being connected)
- **Password Initialization/Reset Token:** /api/security/initialize-password
 - Request a **password token** which can be used to **reset password**.
 - No token required.
 - A valid email address must be configured for the user (please contact Market Operations).

User Password management (2/2)



MATS Password Policy

MATS Fundamentals document:

› A user password must have:

- a minimum of 12 characters
- a maximum of 128 characters
- a minimum of one capital letter
- a minimum of one small letter
- a minimum of 1 digit
- a minimum of 1 special sign (space,!#\$%&'()*+,-.:=?@[^_`{}~\ / " | :<>)
- the first character and last character must not be a space

› Last 5 passwords cannot be reused

› Password cannot be same as login

› Maximum password age = 90 days



› User account **lockout** policy:

- After **3 failed connection** attempts due to invalid credentials, user will be **temporarily banned for 5 minutes**. The user will be notified about the temporary ban via email.
- Once the temporary ban is removed and **if a user fails** to connect to the trading system due to invalid credentials **the next 2 attempts**, then user account is **permanently locked**. User will be notified about the permanent account lockout via the email.
- If locked**, please contact **Market Operations Team** to unlock your user account.

Reference data

ETS API

No Participant info: must be configured “manually”

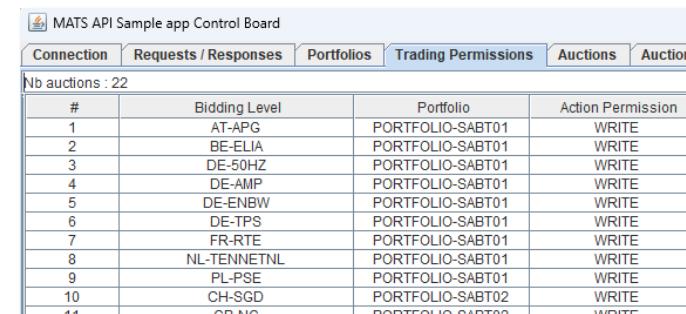
Retrieve Trading Permissions:
RetrieveAreaPortfolioInformation

MATS API

Participant info: `/api/participants` request
→ Input for Private results & Trade reports

Retrieve Trading Permissions: `/api/trading-permissions` request

- Response:
 - list of **portfolio, bidding level, action** = READ or WRITE triplets

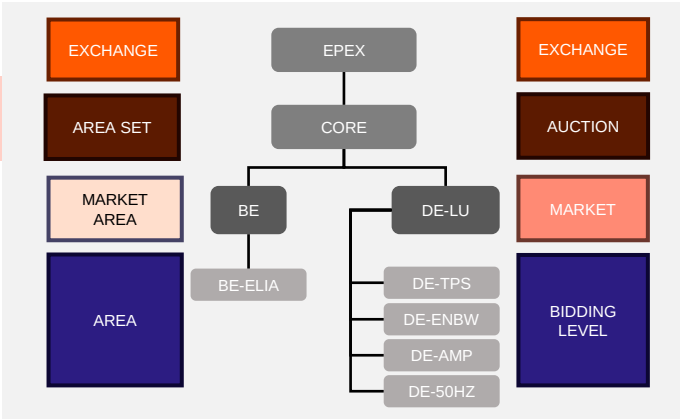


MATS API Sample app Control Board			
Connection	Requests / Responses	Portfolios	Trading Permissions
Nb auctions : 22			
#	Bidding Level	Portfolio	Action Permission
1	AT-APG	PORTFOLIO-SABT01	WRITE
2	BE-ELIA	PORTFOLIO-SABT01	WRITE
3	DE-50HZ	PORTFOLIO-SABT01	WRITE
4	DE-AMP	PORTFOLIO-SABT01	WRITE
5	DE-ENBW	PORTFOLIO-SABT01	WRITE
6	DE-TPS	PORTFOLIO-SABT01	WRITE
7	FR-RTE	PORTFOLIO-SABT01	WRITE
8	NL-TENNETNL	PORTFOLIO-SABT01	WRITE
9	PL-PSE	PORTFOLIO-SABT01	WRITE
10	CH-SGD	PORTFOLIO-SABT02	WRITE
11	GB-MC	PORTFOLIO-SABT02	WRITE

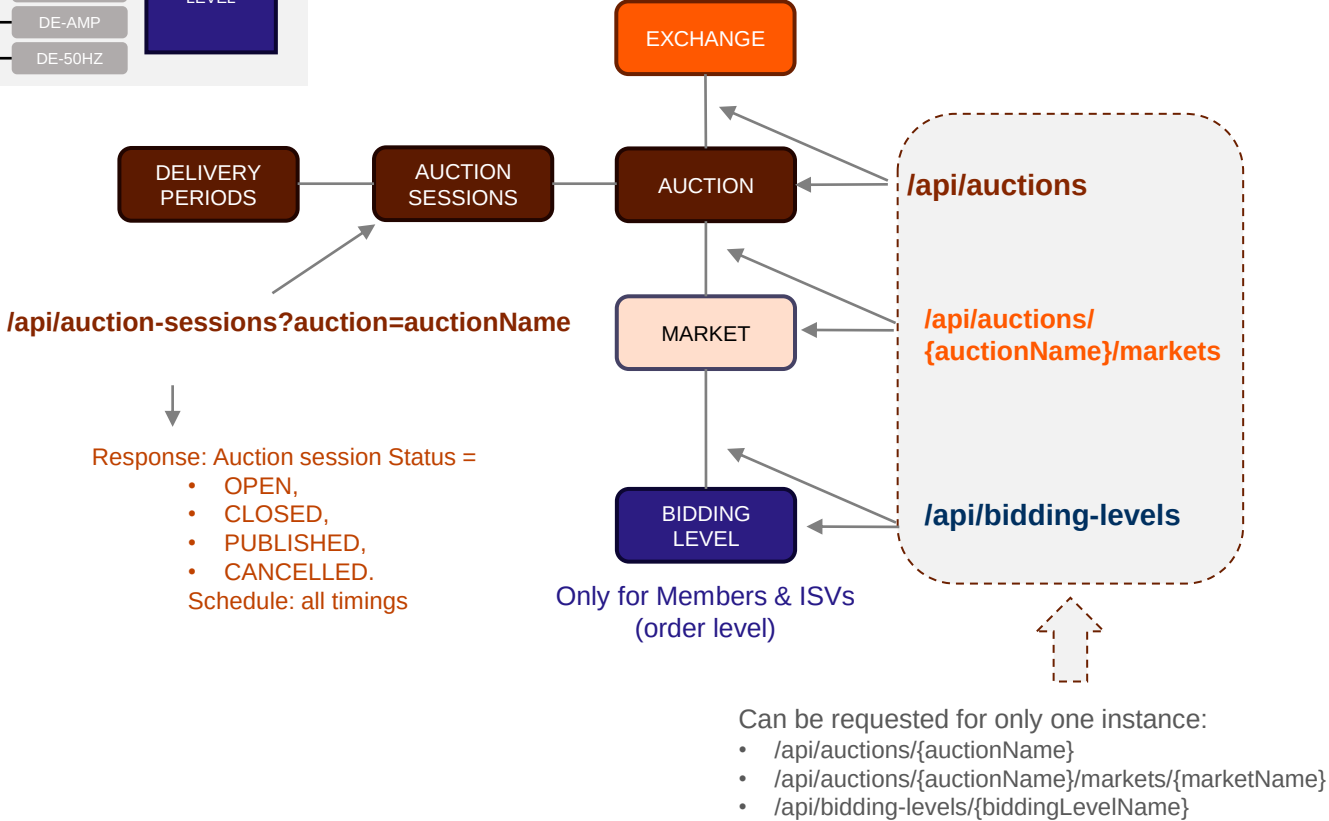
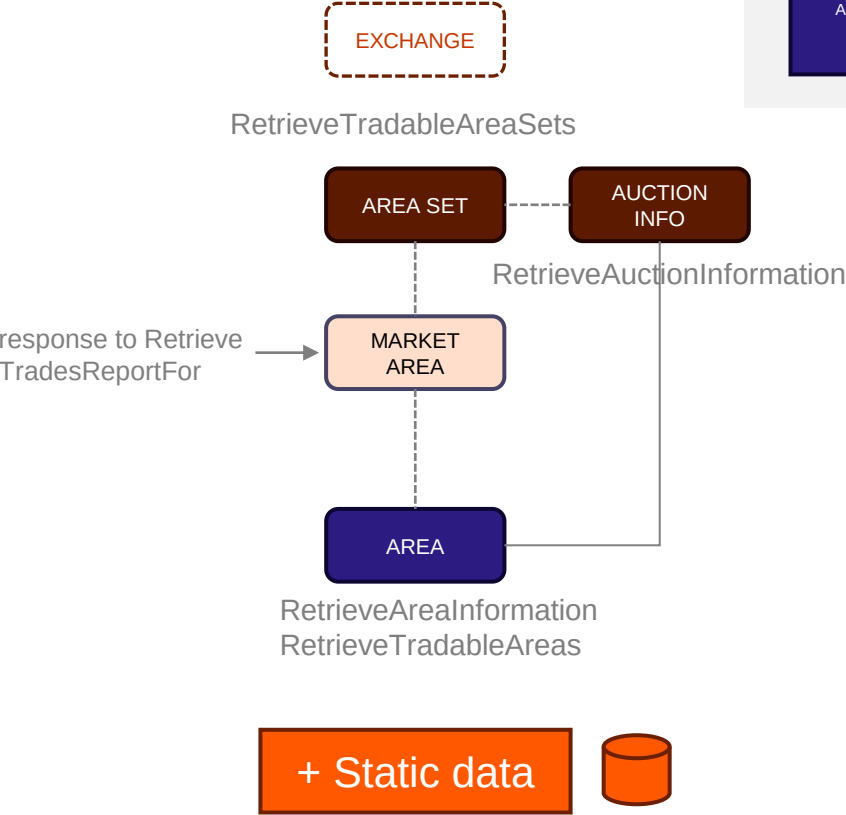
General rule:
You only see data you are assigned to

Reference data

ETS API



MATS API



Order management

ETS API

Manage your orders:

- Submit, Modify, Delete, Delete All
- Linear, block, scalable complex orders
- Curve points : based on number (period 1, 2, etc. , 24)

MATS API

Manage your orders:

- **Retrieve:** modified based on the user's permissions
 - GET /api/auction-sessions/{auctionSessionId}/linear-orders
 - GET /api/auction-sessions/{auctionSessionId}/linear-orders/{linearOrderId}
- **Retrieve Order history of one given order:**
 - GET /api/auction-sessions/{auctionSessionId}/linear-orders/{linearOrderId}?version=all
- **Submit & Modify:**
 - POST /api/auction-sessions/{auctionSessionId}/linear-orders
 - Orders can be submitted or modified based on the user's permissions.
 - In case of **modification**, the order id must be provided in the API request.
 - **Curve points:** based on actual delivery start and end time, using auction sessions delivery periods
 - **Multiple orders** can be added in the same request: new combination possibilities
 - **Order submission optimization:** cross (portfolio/bidding levels) in 1 request
 - If multiple orders are included in the request, the complete operation will fail at the first error encountered
- **Delete:**
 - DELETE /api/auction-sessions/{auctionSessionId}/linear-orders/{linearOrderId}
- **Delete All**
 - DELETE /api/auction-sessions/{auctionSessionId}/linear-orders/all

Order management: linear order submission example

ETS API

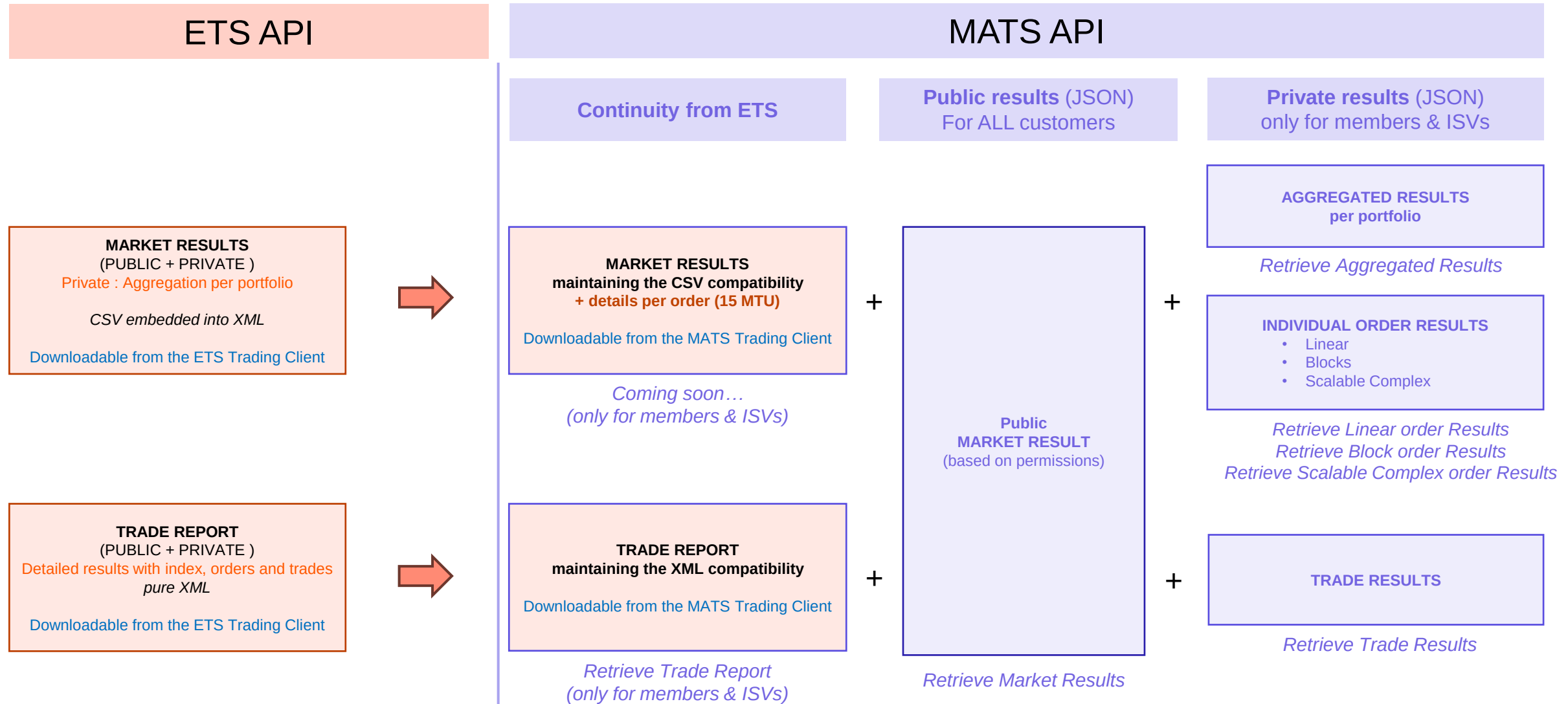
```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/">
  <soapenv:Header>
    <urn:SessionToken>
      <urn:userLoginName>USERAPI01</urn:userLoginName>
      <urn:sessionKey>13788588913042964877047093081861089500464810762</urn:sessionKey>
    </urn:SessionToken>
  </soapenv:Header>
  <soapenv:Body>
    <urn:EnterOrder>
      <Order>
        <urn:area>DE-AMP</urn:area>
        <urn:portfolio>PORTFOLIO-T01</urn:portfolio>
        <urn:deliveryDay>2024-11-05</urn:deliveryDay>
        <urn:Curve>
          <urn:period>1</urn:period>
          <urn:CurvePoint>
            <urn:price>-500</urn:price>
            <urn:volume>10</urn:volume>
          </urn:CurvePoint>
          <urn:CurvePoint>
            <urn:price>4000</urn:price>
            <urn:volume>10</urn:volume>
          </urn:CurvePoint>
        </urn:Curve>
      </Order>
    </urn:EnterOrder>
  </soapenv:Body>
</soapenv:Envelope>
```

MATS API

- Request URL :/api/auction-sessions/17/linear-orders
- Request Body:

```
[ {
  "portfolioName" : "PORTFOLIO-T01",
  "biddingLevelName" : "DE-AMP",
  "duration" : 60,
  "settlementCurrency" : "EUR",
  "curves" : [ {
    "comment" : "Test",
    "deliveryStartDateTime" : "2024-11-04T23:00:00.000Z",
    "deliveryEndDateTime" : "2024-11-05T00:00:00.000Z",
    "curvePoints" : [ {
      "price" : -500.0,
      "volume" : 10
    }, {
      "price" : 4000.0,
      "volume" : 10
    } ]
  } ]
} ]
```

MATS API market results – comparison with the ETS API – Members, ISVs & Data Vendors



General REQUEST Messages Structure

ETS SOAP API / XML format

Technical header

- **SOAP Action:** e.g. EstablishConnection, EnterOrder
- Content-Type
- ...

XML request envelope

Header

- **SessionToken** = userLoginName + sessionKey

Body

Request detail
e.g. Enter order content

MATS REST API / JSON format

Technical header

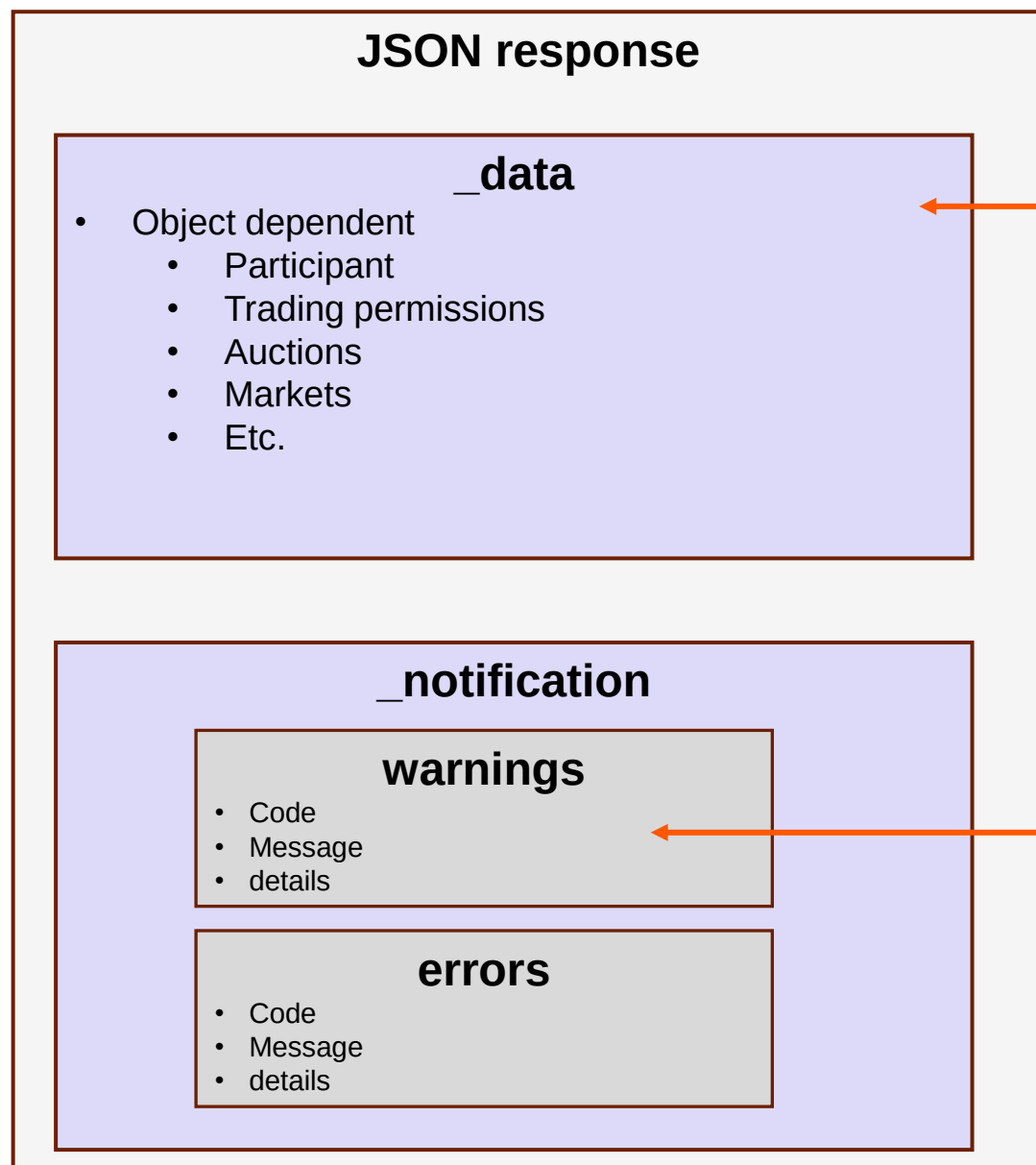
- **Endpoint:** URL to which the request is sent,
 - including query parameters (?param=...)
- **HTTP Method:** GET, POST (submit), PUT (update), DELETE
- **Headers:**
 - Content-Type: application/json
 - Accept: application/json
 - **Authorization:** Bearer token

JSON request

Body

Request detail
e.g. order content

General RESPONSE Messages Structure



Example: Response to: /api/bidding-levels/?market=DE-LU

```
{
  "_data": [
    {
      "name": "DE-50HZ",
      "marketName": "DE-LU",
      "countryCode": "DE",
      "minPrice": -500,
      "maxPrice": 4000,
      "priceTick": 0.1,
      "volumeTick": 0.1,
      "settlementCurrency": "EUR",
      "curveType": "HYBRID",
      "curveMaxVolume": 100000,
      "maxCouplesPerPeriod": 256,
      "durations": [15,30,60]
    }, ...
  ]
}
```

Example: Market results retrieval before results are published

```
{
  "_notification": {
    "warnings": [ {
      "code": "GLOIW0004",
      "message": "No results is available for the requested auction session",
      "details": null
    } ]
  },
  "_data": [ ]
}
```

API schema: how to parse JSON messages with classes

Java Example: Markets: nested classes to match the response message structure

Example: Retrieve markets response:

```
{  "_data" : [ {    "name" : "GB-IDA2",    "auctionName" : "GB-IDA2",    "minPrice" : -150,    "maxPrice" : 3000,    "priceTick" : 0.01,    "volumeTick" : 0.1,    "indexDefinitions" : [ {      "name" : "BASE",      "duration" : 30,      "periodSequenceIntervals" : [ {        "start" : 1,        "end" : 24      } ],      "sortIndex" : 10,      "showAsIndex" : true,      "showInOrderSubmission" : true    } ],    {      "name" : "PEAK",      "duration" : 30,      etc.    }  ]  }
```

```
public class MarketRespMsg {    public Market[] _data; // array    @JsonProperty("_notification") // decorellate JSON field names from Java names    public Notification _notification;}
```

All Market nested classes:

```
public class Market {    public String name;    public String auctionName;    public String minPrice;    ...    public IndexDefinition[] indexDefinitions;}
```

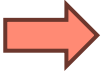
```
public class IndexDefinition {    ...}
```

```
public class Notification {    @JsonProperty("errors")    public List<Error> errors;    public List<Warning> warnings;}
```

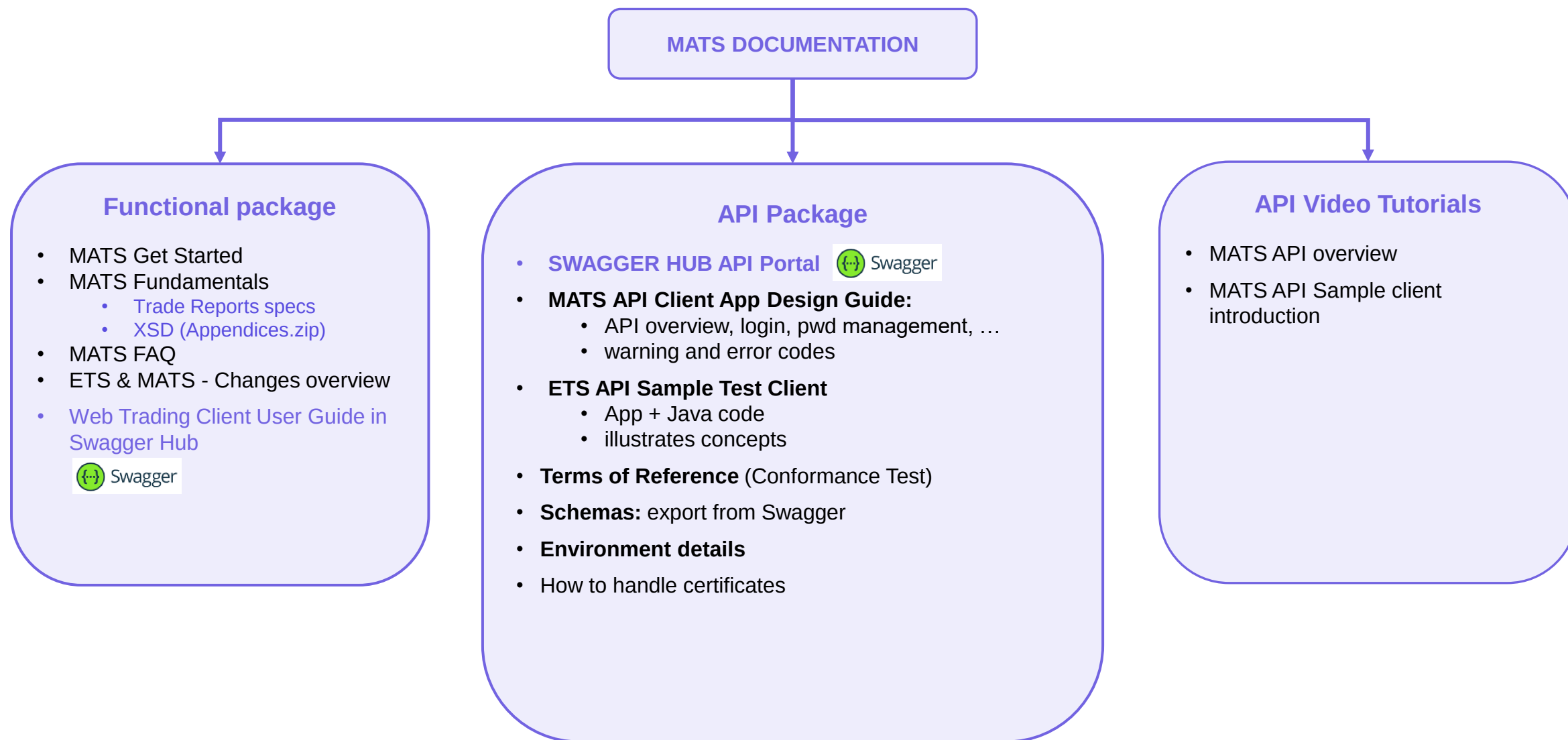
```
Public class Warning {    public String code;    public String message;    public List<String> details;}
```

```
Public class Error {    public String code;    public String message;    public List<String> details;}
```

To parse the JSON response (jackson library):



```
ObjectMapper objectMapper = new ObjectMapper();MarketRespMsg message = objectMapper.readValue(jsonString, MarketRespMsg.class);for (Market market : message._data) {    String marketName = market.name; // access each market fields}
```



Further updates to come...

What will come soon?

› Authentication changes:

- 2FA: 2nd level upcoming
- Certificates management

› Market Results maintaining the CSV compatibility

› Push:

- Push orders notifications available as of SIMU opening
- Push for other objects to come, starting with auctions notifications (e.g. PUBLISHED status to request market results)

› Trading limits

› Backward compatibility N-1/N

Overview of the MATS API online documentation

02



MATS Portal (SwaggerHub)

1

Product list

2

Collection of API resources

3

Request & Example

4

Client SDK & JSON/YAML

5

Response & Example

MATS Portal

mats

Search across all products...

MATS API

Welcome to Mats API Documentation

MATS Web Client

Welcome to Mats Web Client Documentation

Introduction | MATS API | MATS

mats.portal.swaggerhub.com/mats-api/default/introduction

mats

MATS API

Introduction

MATS API

Authentication

Back Office Configuration

Auction Configuration

Auction Session

FX Rate

Linear Order

Block Order

Scalable Complex Order

Public Market Results

Private Results

Reports

Logs

MATS API / Introduction

Last modified on 01.11.2024, 09:28 CET

Introduction

Welcome to the MATS API documentation!

MATS (Multiple Auction Trading System) offers a RESTful API with JSON requests and responses format, synchronous API and security measures based on industry standards.

The MATS API enables customers to perform their trading and monitoring activities in the Day-Ahead and Intraday Power Auction Markets.

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MATS Community

MATS API is available for customers of the following Exchanges:

MATS API

Connect

POST https://api.example.com/api/security/connect

This operation allows the user to log into the trading system.

Available for:

Trader

Non Market Participant

Request

Body

login string required

password string required

Request Sample: Shell / curl

curl -X POST https://api.example.com/api/security/connect -H 'Content-Type: application/json' -d '{ "login": "USER01", "password": "pwd123" }'

Responses

200 400 401 500

Successful operation

Body

data

token string required

group string required

username string required

login string required

tokenDuration integer required

alreadyConnected boolean required

passwordIntervalBeforeExpiry integer required

Client SDK

Server Stub

Documentation

Download API

Auth

Token: 123

Body

{ "login": "USER01", "password": "pwd123" }

Response Example

1 {

2 "data": {

3 "token": "eyJ0eXAiOiJKV1Qi",

4 "group": "TRADER",

5 "username": "USER01",

6 "login": "USER01",

7 "tokenDuration": 3600,

8 "alreadyConnected": false,

9 "passwordIntervalBeforeExpiry": 7931547

10 }

11 }

Sample Test client
demonstration

03



MATS API Sample Test Client

Requests: URL / Body

Responses

MATS API Sample app Control Board

Connection Requests / Responses (108) Portfolios Trading Permissions Auctions Auctions Sessions Auction Sessions Delivery Periods Markets Bidding levels Linear Orders (90) Block Orders Market Results Trade Reports

Nb of request_responses = 108

#	Sending Time	Response Time	Type	Method	State	Resp Code	Client RTT	Request URL (without https://...)	Request Body	Response JSON payload	Token	Warnings	Errors
001	16:33:11.737	-	REQUEST	POST	Sent			/api/security/connect	{"login": "APIUSER", "pass...				
002		16:33:12.669	RESPONSE		Received	200	0,921 sec			{ "_data": { "token": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1ND9...			
003	16:33:13.239	-	REQUEST	POST	Sent			/api/security/disconnect	{"connection": "PREVIO...		LojoQ (5 last characters)		
004		16:33:13.428	RESPONSE		Received	200	0,186 sec			{ "_data": [] }			
005	16:33:13.432	-	REQUEST	GET	Sent			/api/participants			LojoQ (5 last characters)		
006		16:33:13.586	RESPONSE		Received	200	0,151 sec			{ "_data": [{ "name": "COMPANY", "companyName": ...			
007	16:33:13.599	-	REQUEST	GET	Sent			/api/portfolios			LojoQ (5 last characters)		
008		16:33:13.782	RESPONSE		Received	200	0,177 sec			{ "_data": [{ "name": "PORTFOLIO-SABT01", "partici...			
009	16:33:13.804	-	REQUEST	GET	Sent			/api/trading-permissions			LojoQ (5 last characters)		
010		16:33:14.186	RESPONSE		Received	200	0,378 sec			{ "_data": [{ "portfolioName": "PORTFOLIO-SABT01", ...			
011	16:33:14.199	-	REQUEST	GET	Sent			/api/auctions			LojoQ (5 last characters)		
012		16:33:14.581	RESPONSE		Received	200	0,379 sec			{ "_data": [{ "name": "CH", "statu": "RESPONSIVE", ...			
013	16:33:14.591	-	REQUEST	GET	Sent			/api/auction-sessions?auction=CH			LojoQ (5 last characters)		
014		16:33:14.789	RESPONSE		Received	200	0,194 sec			{ "_data": [{ "id": 21, "auctionName": "CH", "stat...			
015	16:33:14.802	-	REQUEST	GET	Sent			/api/auction-sessions?auction=CORE			LojoQ (5 last characters)		
016		16:33:15.235	RESPONSE		Received	200	0,429 sec			{ "_data": [{ "id": 24, "auctionName": "CORE", "st...			
017	16:33:15.242	-	REQUEST	GET	Sent			/api/auction-sessions?auction=GB			LojoQ (5 last characters)		
018		16:33:15.442	RESPONSE		Received	200	0,196 sec			{ "_data": [{ "id": 22, "auctionName": "GB", "stat...			
019	16:33:15.454	-	REQUEST	GET	Sent			/api/auction-sessions/21/periods					
020		16:33:15.648	RESPONSE		Received	200	0,190 sec			{ "_data": [{ "auctionSessionId": 21, ...			
021	16:33:15.668	-	REQUEST	GET	Sent			/api/auction-sessions/7/periods					
022		16:33:15.854	RESPONSE		Received	200	0,180 sec			{ "_data": [{ "auctionSessionId": 7, "s...			
023	16:33:15.869	-	REQUEST	GET	Sent			/api/auction-sessions/15/periods					
024		16:33:16.055	RESPONSE		Received	200	0,180 sec			{ "_data": [{ "auctionSessionId": 15, ...			
025	16:33:16.066	-	REQUEST	GET	Sent			/api/auction-sessions/14/periods					
026		16:33:16.264	RESPONSE		Received	200	0,195 sec			{ "_data": [{ "auctionSessionId": 14, ...			
027	16:33:16.282	-	REQUEST	GET	Sent			/api/auction-sessions/24/periods					
028		16:33:16.481	RESPONSE		Received	200	0,194 sec			{ "_data": [{ "auctionSessionId": 24, ...			
029	16:33:16.589	-	REQUEST	GET	Sent			/api/auction-sessions/19/periods					
030		16:33:16.809	RESPONSE		Received	200	0,215 sec			{ "_data": [{ "auctionSessionId": 19, ...			
031	16:33:16.995	-	REQUEST	GET	Sent			/api/auction-sessions/17/periods					
032		16:33:17.195	RESPONSE		Received	200	0,197 sec			{ "_data": [{ "auctionSessionId": 17, ...			
033	16:33:17.438	-	REQUEST	GET	Sent			/api/auction-sessions/2/periods					
034		16:33:17.628	RESPONSE		Received	200	0,186 sec			{ "_data": [{ "auctionSessionId": 2, "s...			
035	16:33:17.933	-	REQUEST	GET	Sent			/api/auction-sessions/1/periods					
036		16:33:18.138	RESPONSE		Received	200	0,202 sec			{ "_data": [{ "auctionSessionId": 1, "s...			
037	16:33:18.505	-	REQUEST	GET	Sent			/api/auction-sessions/9/periods					
038		16:33:18.713	RESPONSE		Received	200	0,203 sec			{ "_data": [{ "auctionSessionId": 9, "s...			
039	16:33:19.143	-	REQUEST	GET	Sent			/api/auction-sessions/8/periods					
040		16:33:19.338	RESPONSE		Received	200	0,191 sec			{ "_data": [{ "auctionSessionId": 8, "s...			
041	16:33:19.852	-	REQUEST	GET	Sent			/api/auction-sessions/22/periods					
042										{ "_data": [{ "auctionSessionId": 22, ...			

MATS API Action buttons

Log in & kickout previous Log in, no kickout Log out Current Log out Previous Current token = LojoQ

Test Request Get Public Market Results Get Trade Reports Get Linear Orders Submit Linear Orders

Cell content APIUSER

JSON Data

```
{
  "_data": [
    {
      "portfolioName": "PORTFOLIO-SABT01",
      "biddingLevelName": "AT-APG",
      "action": "WRITE"
    },
    {
      "portfolioName": "PORTFOLIO-SABT01",
      "biddingLevelName": "BE-ELIA",
      "action": "WRITE"
    },
    {
      "portfolioName": "PORTFOLIO-SABT01",
      "biddingLevelName": "DE-50HZ",
      "action": "WRITE"
    },
    {
      "portfolioName": "PORTFOLIO-SABT01",
      "biddingLevelName": "DE-AMP",
      "action": "WRITE"
    }
  ]
}
```

MATS API Sample Test Client Logic: initialization sequence

Initialization/starting sequence:

1. Login: Connect
 - If already connected: Disconnect previous session
2. Request Participant info
3. Request Portfolios
4. Retrieve Trading permissions
5. Retrieve Auctions
6. Retrieve Auctions sessions
 - For each auction session, retrieve Delivery Periods
7. Retrieve Markets
8. Retrieve Bidding Levels

is Auction Sessions Delivery Periods Markets Bidding levels Linear Orders (90) Block Orders Market Results Trade Rep		
Request URL (without https://...)	Request Body	Reponse JSON payload
/api/security/connect	{"login": "APIUSER", "pass..."}	{ "_data": { "token": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1Ni9..."
/api/security/disconnect	{"connection": "PREVIO..."}	{ "_data": { }}
/api/participants		
/api/portfolios		{ "_data": [{ "name": "COMPANY", "companyName": ...
/api/trading-permissions		{ "_data": [{ "name": "PORTFOLIO-SABT01", "partici...
/api/auctions		{ "_data": [{ "portfolioName": "PORTFOLIO-SABT01", ...
/api/auction-sessions?auction=CH		{ "_data": [{ "name": "CH", "status": "RESPONSIVE", ...
/api/auction-sessions?auction=CORE		{ "_data": [{ "id": 21, "auctionName": "CH", "stat...
/api/auction-sessions?auction=GB		{ "_data": [{ "id": 24, "auctionName": "CORE", "st...
		{ "_data": [{ "id": 22, "auctionName": "GB", "stat...

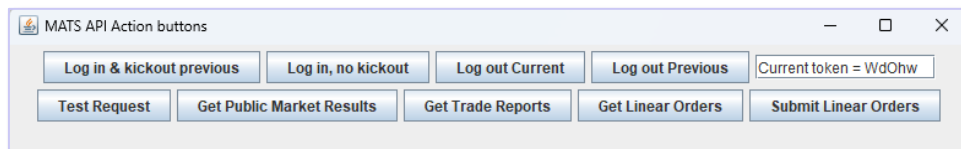
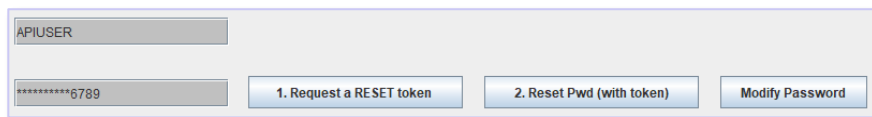
• Buttons:

• Connection>Password:

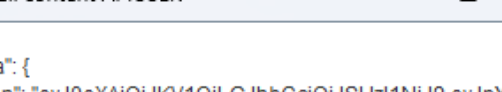
- Reset password: request a token
- Reset password with your token
- Modify password

• Action buttons panel

- Log in / out with different options
- Test request: get trading permissions
- Get Market results for all your auction sessions with Published status
- Get Trade Reports for all your auction sessions with Published status
- Submit linear orders



1 Connect response



The screenshot shows a web browser window with the title "Cell content APIUSER". The main content area displays a JSON object:

```
{
  "_data": {
    "token": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9.eyJpYXQiOiJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9",
    "group": "TRADER",
    "userName": "APIUSER",
    "login": "APIUSER",
    "tokenDuration": 1440,
    "alreadyConnected": true,
    "passwordTimeIntervalBeforeExpiry": 7444930
  }
}
```

2 Participant info

```
{
  "_data": [
    {
      "name": "COMPANY",
      "companyName": "Company Energy Limited",
      "role": "TRADER",
      "exchangePermissions": [
        {
          "exchangeName": "EPEX"
        }
      ]
    }
  ]
}
```

MATS API Sample app Control Board											
Connection	Requests / Responses (108)	Portfolios	Trading Permissions	Auctions	Auctions Sessions	Auction Sessions Delivery Periods	Markets	Bidding levels	Linear Orders (90)	Block Orders	Market Results
Nb portfolios : 4											
#	Portfolio name	Participant name	Exchange Name	Settlement Member Name	Delivery Type	Order Types					
1	PORTFOLIO-SABT01	COMPANY	EPEX		NORMAL	{{type = BIG BLOCK ; side = PURCHASE-SALE}, {type = CLASSIC BLOCK ; side = PURCHASE-SALE}}					
2	PORTFOLIO-SABT02	COMPANY	EPEX		NORMAL	{{type = BIG BLOCK ; side = PURCHASE-SALE}, {type = CLASSIC BLOCK ; side = PURCHASE-SALE}}					
3	PORTFOLIO-T01	COMPANY	EPEX		NORMAL	{{type = LINEAR ; side = PURCHASE-SALE}}					
4	PORTFOLIO-T02	COMPANY	EPEX		NORMAL	{{type = LINEAR ; side = PURCHASE-SALE}}					

MATS API Sample app Control Board			
Connection	Requests / Responses (108)	Portfolios	Trading Permissions
Nb trading permissions : 22			
#	Bidding Level	Portfolio	Action Permission
1	AT-APG	PORTFOLIO-SABT01	WRITE
2	BE-ELIA	PORTFOLIO-SABT01	WRITE
3	DE-50HZ	PORTFOLIO-SABT01	WRITE
4	DE-AMP	PORTFOLIO-SABT01	WRITE
5	DE-ENBW	PORTFOLIO-SABT01	WRITE
6	DE-TPS	PORTFOLIO-SABT01	WRITE
7	FR-RTE	PORTFOLIO-SABT01	WRITE
8	NL-TENNETNL	PORTFOLIO-SABT01	WRITE
9	PL-PSE	PORTFOLIO-SABT01	WRITE
10	CH-SGD	PORTFOLIO-SABT02	WRITE
11	GB-NG	PORTFOLIO-SABT02	WRITE

MATS API Sample Test Client Logic

5 Your Auctions

MATS API Sample app Control Board						
Connection	Requests / Responses (108)	Portfolios	Trading Permissions	Auctions	Auctions Sessions	Auction Sessions Delivery Periods
Nb auctions : 3						
#	Auction Name	Status	Schedule	Volume Unit	Time zone	Currency
1	CH	RESPONSIVE	DAILY	MW	CET/CEST	EUR
2	CORE	RESPONSIVE	DAILY	MW	CET/CEST	EUR
3	GB	RESPONSIVE	DAILY	MW	CET/CEST	GBP

6 Your Auctions Sessions

MATS API Sample app Control Board													
Connection	Requests / Responses	Portfolios	Trading Permissions	Auctions	Auctions Sessions	Auction Sessions Delivery Periods	Markets	Bidding levels	Linear Orders	Block Orders	Market Results	Trade Reports	Messages
Nb auctions Sessions : 11													
#	Id	Auction Name	Status ▾	Currency	Time zone	Display Name	auctionSessionDateTime	orderEntryStartDateTime	orderEntryEndDateTime	publicationDateTime	deliveryPeriodStartDateTime	deliveryPeriodEndDateTime	horiz
7	8	CORE	PUBLISHED	EUR	CET/CEST	PWR-MRC-D+1	2024-11-02T11:00:00.000Z	2024-09-18T10:00:00.000Z	2024-11-02T11:00:00.000Z	2024-11-02T11:45:00.000Z	2024-11-02T23:00:00.000Z	2024-11-03T23:00:00.000Z	2024-11-03
11	12	GB	PUBLISHED	GBP	CET/CEST	PWR-MRC-D+1	2024-11-02T09:20:00.000Z	2024-09-18T10:00:00.000Z	2024-11-02T09:20:00.000Z	2024-11-02T09:30:00.000Z	2024-11-02T23:00:00.000Z	2024-11-03T23:00:00.000Z	2024-11-03
1	7	CH	OPEN	EUR	CET/CEST	PWR-CH-D+1	2024-12-17T10:00:00.000Z	2024-11-02T10:00:00.000Z	2024-12-17T10:00:00.000Z	2024-12-17T10:10:00.000Z	2024-12-17T23:00:00.000Z	2024-12-18T23:00:00.000Z	2024-12-18
2	15	CH	OPEN	EUR	CET/CEST	PWR-CH-D+1	2024-11-03T10:00:00.000Z	2024-09-19T09:00:00.000Z	2024-11-03T10:00:00.000Z	2024-11-03T10:10:00.000Z	2024-11-03T23:00:00.000Z	2024-11-04T23:00:00.000Z	2024-11-04
4	2	CORE	OPEN	EUR	CET/CEST	PWR-MRC-D+1	2024-12-17T11:00:00.000Z	2024-11-02T11:00:00.000Z	2024-12-17T11:00:00.000Z	2024-12-17T11:45:00.000Z	2024-12-17T23:00:00.000Z	2024-12-18T23:00:00.000Z	2024-12-18
5	1	CORE	OPEN	EUR	CET/CEST	PWR-MRC-D+1	2024-12-16T11:00:00.000Z	2024-11-01T11:00:00.000Z	2024-12-16T11:00:00.000Z	2024-12-16T11:45:00.000Z	2024-12-16T23:00:00.000Z	2024-12-17T23:00:00.000Z	2024-12-17
6	9	CORE	OPEN	EUR	CET/CEST	PWR-MRC-D+1	2024-11-03T11:00:00.000Z	2024-09-19T10:00:00.000Z	2024-11-03T11:00:00.000Z	2024-11-03T11:45:00.000Z	2024-11-03T23:00:00.000Z	2024-11-04T23:00:00.000Z	2024-11-04
8	6	GB	OPEN	GBP	CET/CEST	PWR-MRC-D+1	2024-12-17T09:20:00.000Z	2024-11-02T11:00:00.000Z	2024-12-17T09:20:00.000Z	2024-12-17T09:30:00.000Z	2024-12-17T23:00:00.000Z	2024-12-18T23:00:00.000Z	2024-12-18
9	5	GB	OPEN	GBP	CET/CEST	PWR-MRC-D+1	2024-12-16T09:20:00.000Z	2024-11-01T11:00:00.000Z	2024-12-16T09:20:00.000Z	2024-12-16T09:30:00.000Z	2024-12-16T23:00:00.000Z	2024-12-17T23:00:00.000Z	2024-12-17
3	14	CH	CLOSED	EUR	CET/CEST	PWR-CH-D+1	2024-11-02T10:00:00.000Z	2024-09-18T09:00:00.000Z	2024-11-02T10:00:00.000Z	2024-11-02T10:10:00.000Z	2024-11-02T23:00:00.000Z	2024-11-03T23:00:00.000Z	2024-11-03
10	13	GB	CLOSED	GBP	CET/CEST	PWR-MRC-D+1	2024-11-03T09:20:00.000Z	2024-09-19T10:00:00.000Z	2024-11-03T09:20:00.000Z	2024-11-03T09:30:00.000Z	2024-11-03T23:00:00.000Z	2024-11-04T23:00:00.000Z	2024-11-04

7 Your Auctions Sessions Delivery Periods

MATS API Sample app Control Board						
Connection	Requests / Responses (108)	Portfolios	Trading Permissions	Auctions	Auctions Sessions	Auction Sessions Delivery Periods
Nb delivery periods : 1416						
#	Auction Session Id	Auction name	Sequence nb	Duration	Delivery Start DateTime	Delivery End DateTime
1	21	CH	1	60	2024-12-20T23:00:00.000Z	2024-12-21T00:00:00.000Z
2	21	CH	2	60	2024-12-21T00:00:00.000Z	2024-12-21T01:00:00.000Z
3	21	CH	3	60	2024-12-21T01:00:00.000Z	2024-12-21T02:00:00.000Z
4	21	CH	4	60	2024-12-21T02:00:00.000Z	2024-12-21T03:00:00.000Z
5	21	CH	5	60	2024-12-21T03:00:00.000Z	2024-12-21T04:00:00.000Z
6	21	CH	6	60	2024-12-21T04:00:00.000Z	2024-12-21T05:00:00.000Z
7	21	CH	7	60	2024-12-21T05:00:00.000Z	2024-12-21T06:00:00.000Z
8	21	CH	8	60	2024-12-21T06:00:00.000Z	2024-12-21T07:00:00.000Z
9	21	CH	9	60	2024-12-21T07:00:00.000Z	2024-12-21T08:00:00.000Z
10	21	CH	10	60	2024-12-21T08:00:00.000Z	2024-12-21T09:00:00.000Z

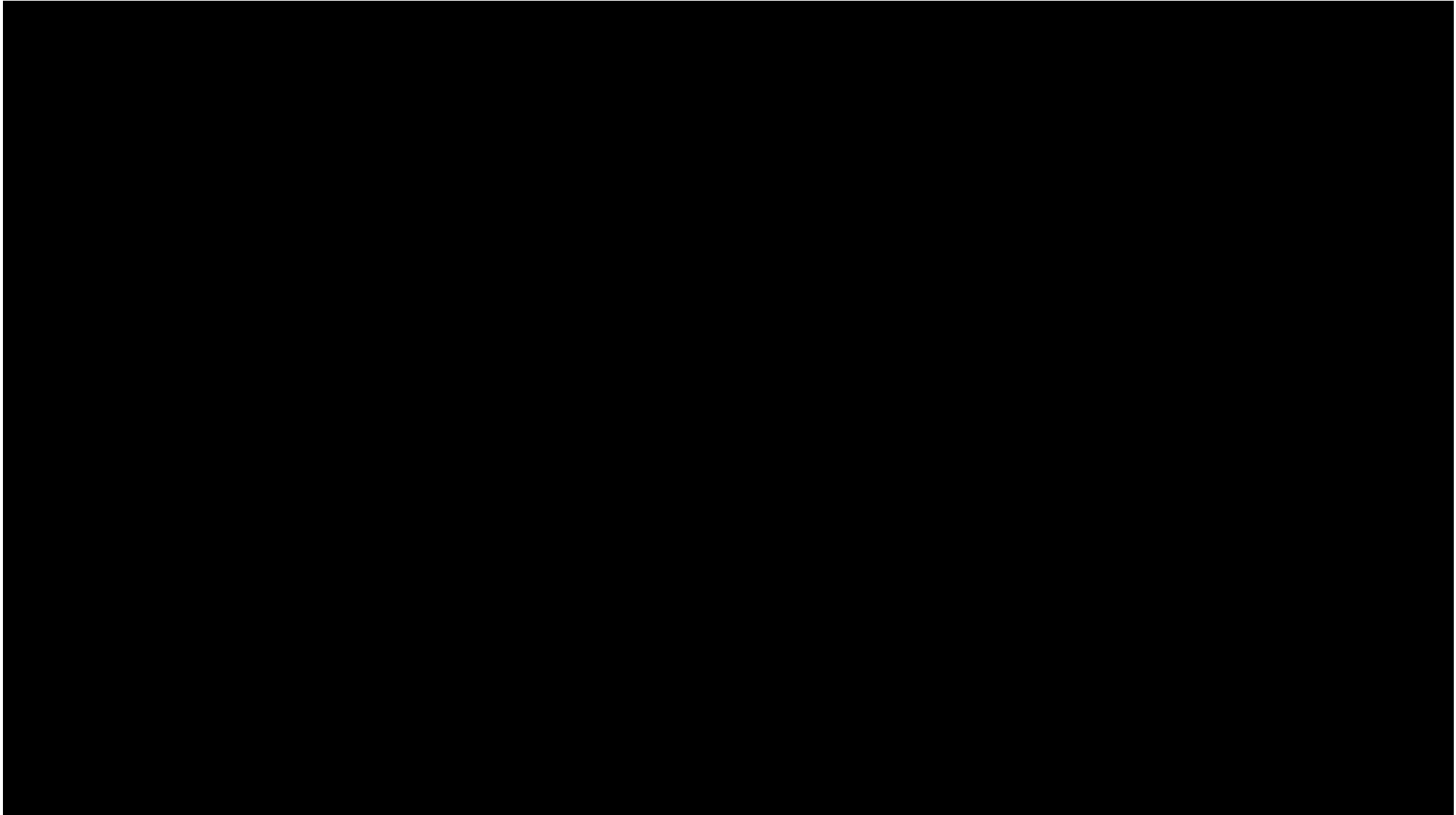
MATS API Sample Test Client Logic

8 Your Markets

MATS API Sample app Control Board

Connection	Requests / Responses	Portfolios	Trading Permissions	Auctions	Auctions Sessions	Auction Sessions Delivery Periods	Markets	Bidding levels	Linear Orders	Block Orders	Market Results	Trade Reports	Messa
Nb markets : 8													
#	Market name	Auction name	Min Price	Max Price	Price Tick	Volume Tick	Index definitions						
1	CH	CH	-500	4000	0.01	0.1	name: 'Baseload', duration: 60, periodSequenceIntervals: [{start: 1, end: 24}], sortIndex: 10, showAsIndex: true, showInOrderSubmission: true,...						
2	AT	CORE	-500	4000	0.01	0.1	name: 'Baseload', duration: 60, periodSequenceIntervals: [{start: 1, end: 24}], sortIndex: 10, showAsIndex: false, showInOrderSubmission: tru...						
3	BE	CORE	-500	4000	0.01	0.1	name: 'Bas						
4	DE-LU	CORE	-500	4000	0.01	0.1	name: 'Bas						
5	FR	CORE	-500	4000	0.01	0.1	name: 'Bas						
6	NL	CORE	-500	4000	0.01	0.1	name: 'Bas						
7	PL	CORE	-500	4000	0.01	0.1	name: 'Bas						
8	GB	GB	-500	6000	0.01	0.1	name: 'BA						

MATS API Sample Test Client Demo Video



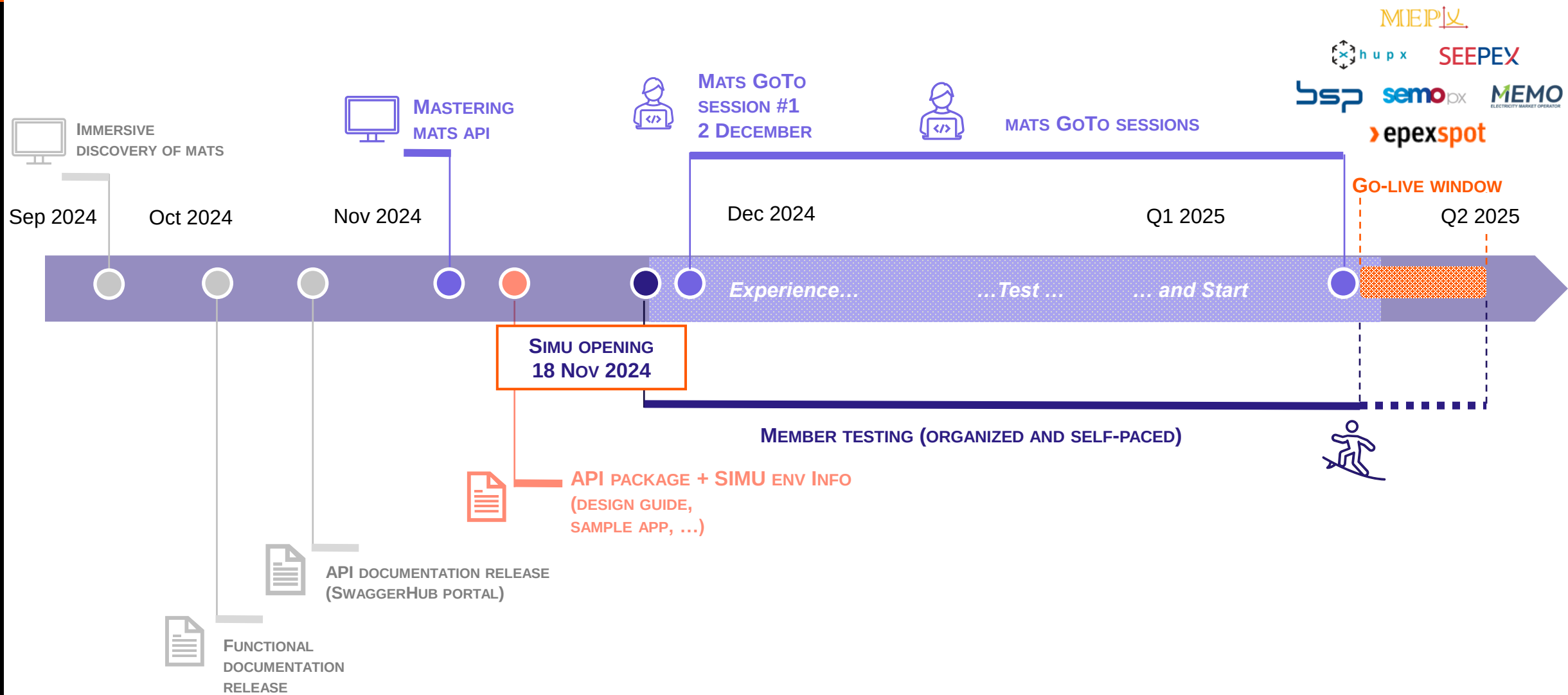
API testing
(SIMU access, support,
conformance test,
timeline)

04



From ETS to MATS, concept and planning

Your must-have planning



API testing: Users migration to simu & Access

ETS users' migration to MATS

- › All ETS active existing accounts in PROD will be migrated to MATS automatically.
- › Note that if you have an active user account in ETS that does not have any associated email address, we will follow this approach:
 - If any of the active user accounts in your organization have an associated email, we will re-use the same one.
 - If none of the active user accounts in your organization have an associated email, we will use the Front office Desk contact we have in Customer Center.
- › We will not migrate inactive user accounts or portfolios.



How will I receive my MATS credentials?

- › You will receive an email named:
 - “[MATS] - EPEX - Password Reset Request”
 - “[MATS] - HUPX - Password Reset Request”
 - etc.
- › And ...you just have to follow instructions!



How will I get the environment details?

- › We will send the next MATS project update with environment information (e.g., URL), email from which will receive your credentials, etc.



API apps Conformance Test: accompany you best towards Production

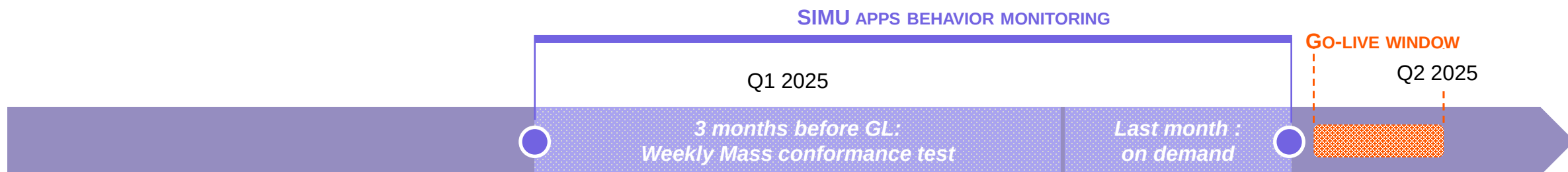
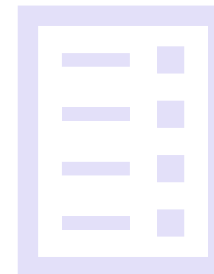
The principles of API apps Conformance tests remain:

› Conformance Test to our Terms Of Reference (ToR)

- ToR will be slightly simplified (e.g. login), but principles remain the same: chasing “abusive” patterns (ad hoc requests always allowed).

› Accompany you best, not block you from going live!

- Conf test can be passed with a caveat (x weeks to fix a behavior)



When can I go through a conformance test?

- › 3 months before Go-live: weekly mass conformance test session,
- › Last month: on demand,
- › Please contact us when ready! (once your app is fully tested on your own)

API testing: support process

Our Experts at your service

CUSTOMER SUPPORT



Contact us at
EPEX:
mats-support@epexspot.com

and

Serviced Exchanges:
mats-support-svpx@epexspot.com

DOCUMENTATION



Swagger

[MATS Portal](#)

Listed and available on your
EPEX SPOT website Member
Area
(or Market Data webshare)

and

Dedicated Serviced Exchange
member areas / SFTP

Q&A

05





part of eex group

» **epexspot**

For more information on MATS make sure to attend our
MATS GoTo session #1 on December 2nd 2024.