



Heartbeat API

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1. Purpose

To provide the API endpoint information and examples of the web services available for Exchange Integration.

2. Glossary of Terms

Term	Meaning
LWIN	LWIN - the Liv-ex Wine Identification Number – serves as a universal wine identifier for the wine trade. LWIN is a unique seven to eighteen-digit numerical code that can be used to quickly and accurately identify a product. LWIN allows wine companies to keep their preferred naming system, while introducing a new universal code.
Wine	The word wine below is referring to a specific wine (the producer and brand, grape or vineyard), vintage and unit size combination.
Bid	A buyer places a bid on the Exchange for buying a certain amount of wine.
Offer	A seller places an offer on the Exchange for selling a certain amount of wine.
Order	Order is a generic term for both bid/offer.
Market Price	The Market Price is based on the cheapest 6 and 12-pack prices advertised by leading merchants in the EU and Switzerland. (Where appropriate, alternative unit sizes are used for the calculation.) It provides a guide as to the price you are likely to pay for SIB-compliant stock in the market
SIB	Standard in Bond trade terms: https://www.liv-ex.com/knowledge/liv-ex-trading-contracts/
SEP	Standard En Primeur: https://www.liv-ex.com/knowledge/liv-ex-trading-contracts/
Special	Special contract trade terms: https://www.liv-ex.com/knowledge/liv-ex-trading-contracts/
Special Now	An offer of stock that is ready for immediate dispatch from Liv-ex warehouses.
Contract Type	Contract type is a generic term for SIB, SEP or Special (X).

3. Technical Standards

- Permitted users will be issued with a unique token (CLIENT_KEY) and password (CLIENT_SECRET) combination to control the access for all the web services covered under Exchange Integration.
- The web services will consume and produce both XML and JSON. The user can provide the content type in the request header. If the user does not provide any information, then the default content type will be JSON.
- The project will support ISO 8601.
- The project will only support HTTPS protocol for client and server communications.

- The API will support the following method(s):
 1. GET / HEAD for read operation
- Pretty printing for output readability only is supported if required
- Compression for bandwidth savings are used
- Authentication mechanism will be custom based on CLIENT_KEY and CLIENT_SECRET
- The Heartbeat API will be accessible at <https://api.liv-ex.com/exchange>

4. Request Header

This information will be used to authenticate valid access to the REST API. Each user will have to provide the following information in the request header.

Param

Name	Mandatory	Description
CLIENT_KEY	Y	A valid merchant GUID which will be unique for each merchant.
CLIENT_SECRET	Y	Password/Secret for the merchants CLIENT_KEY.
ACCEPT	Y	Accept header is a way for a client to specify the media type of the response content it is expecting. The values for the content type will be application/json or application/xml. If no/ invalid content type is found in the request, then JSON format will be used by default.
CONTENT-TYPE	Y for POST requests	Content-type is a way to specify the media type of request being sent from the client to the server. The values for the content type will be application/json or application/xml. If no/ invalid content type is found in the request, then JSON format will be used by default.

e.g.

CLIENT_KEY: 94B5CC70-BC3D-49C3-B636-C3C7552E543D

CLIENT_SECRET: merchantpasswd

ACCEPT: application/json

CONTENT-TYPE: application/json

Invalid header JSON response

```
{
  "status": "Unauthorized",
  "statusCode": "401",
  "message": "Request was unsuccessful",
  "livexCode": "R000"
  "apiInfo": {
    "version": "2.0",
    "timestamp": "2017-11-04T11:12:30",
  }
}
```

```

    "provider": "Liv-ex"
  }
}

```

Invalid header XML response

```

<Response>
  <Status>Unauthorized</Status>
  <HttpCode>401</Code>
  <Message>Request was unsuccessful.</Message>
  <LivexCode>R001</LivexCode>
  <ApiInfo>
    <Version>2.0</Version>
    <Timestamp>2017-11-04T11:12:30</Timestamp>
    <Provider>Liv-ex</Provider>
  </ApiInfo>
</Response>

```

5. API Listing

5.1 Heartbeat (HEAD or GET method)

Description

This may be used by merchant systems to ping/poll the Exchange Integration service for availability, and if its available then further requests for Orders may be placed.

Base URI

[exchange/heartbeat](https://api.liv-ex.com/exchange/heartbeat)

Response

Exchange Integration service will respond with HTTP Code 200 - OK in the response, depending on whether a HEAD or GET request was made.

HTTP HEAD - <https://api.liv-ex.com/exchange/heartbeat>

```
OK 200
```

HTTP GET - <https://api.liv-ex.com/exchange/heartbeat>

```

{
  "status": "OK",
  "httpCode": "200",
  "message": "available",
  "internalErrorCode": null,
  "apiInfo": {
    "version": "1.0",
    "timestamp": 1511190157556,
    "provider": "Liv-ex"
  },
  "orders": null
}

```

If the Exchange Integration service is down (because of maintenance or any network issues) then the response will return HTTP Error Code **500 - Internal Server Error**.

Note: Liv-ex will automatically suspend integrated merchants' SIB orders with 'suspended' status on the restart of the Exchange Integration service (if the Exchange Integration service has been down because of maintenance or any network issues). This should be followed by delete + add requests by the merchant system to be able sync and reinstate their respective positions.

Throttling

Every heartbeat invocation registers as a valid API request, and will be used against the allowable throttling limit i.e. API calls made on hourly basis. Once threshold is reached no more calls will be allowed till next allowable time period.

6. Supplementary API services

orders API – place bids and offers on the exchange

heartbeat API – check the exchange is available

orderStatus API – check the status of specific bid/offer positions on the exchange

orderByUID API – sell stock you have stored in the Liv-ex Vine warehouse as Special Now

myPositions API – view and reconcile all your positions with Liv-ex (live or suspended)

bulkOrderAction API – suspend, reactivate and renew positions on the exchange in bulk

7. Response Codes

This section describes the response codes that will be returned by the Exchange Integration services.

Code	Message
R000	Request was unsuccessful
R001	Request completed successfully
R002	Request partially completed

7.1 HTTP Status codes

HTTP defines a bunch of meaningful status codes that can be returned from our API. These can be leveraged to help our API Merchants/consumers route their responses accordingly:

Code	Message
200 OK	Response to a successful GET, POST, PUT, DELETE. Can also be used for a POST that doesn't result in a creation.
201 Created	Response to a POST that results in a creation.

202 Accepted	The request has been accepted and will be processed later. It is a classic answer to asynchronous calls (for better UX or performances).
204 No Content	Response to a successful request that won't be returning a body (like a DELETE request)
400 Bad Request	The request is malformed, such as if the body does not parse
401 Unauthorized	When no and/or invalid authentication details are provided. Can also be used to trigger an auth popup if API is used from a browser
403 Forbidden	When authentication succeeded but authenticated user doesn't have access to the resource
404 Not Found	When a non-existent resource is requested
405 Method Not Allowed	When an HTTP method is being requested that isn't allowed for the authenticated user
406 Not Acceptable	Nothing matches the Accept-* Header of the request. As an example, you ask for an XML formatted resource but it is only available as JSON.
409 Conflict	Indicates one or more supplied parameters are triggering a validation error. A relevant TR code should be returned in the response.
410 Gone	Indicates that the resource at this end point is no longer available. Useful as a blanket response for old API versions
415 Unsupported Media Type	If incorrect content type was provided as part of the request
422 Unprocessable Entity	Used for validation errors. Should be used if the server cannot process the entity, e.g. if an image cannot be formatted or mandatory fields are missing in the payload.
429 Too Many Requests	When a request is rejected due to rate limiting
500 Internal Server Error	The general catch-all error when the server-side throws an exception. The request may be correct, but an execution problem has been encountered at our end.