



THE FINE WINE MARKET

## Account Activity API Documentation

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Confidential

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## 1. Purpose

To provide the API end point information and examples of the web services available to merchants for their Liv-ex account status and Trading activity.

## 2. Glossary of Terms

Term	Meaning
<b>L-WIN</b>	L-WIN - the Liv-ex Wine Identification Number – serves as a universal wine identifier for the wine trade. L-WIN is a unique seven to eighteen-digit numerical code that can be used to quickly and accurately identify a product. L-WIN allows wine companies to keep their preferred naming system, while introducing a new universal code.
<b>Wine</b>	The word wine below is referring to a specific wine (the producer and brand, grape or vineyard), vintage and unit size combination.
<b>Bid</b>	A buyer places a bid on the Exchange for buying a certain amount of wine.
<b>Offer</b>	A seller places an offer on the Exchange for selling a certain amount of wine.
<b>Order</b>	Order is a generic term for both bid/offer.
<b>Market Price</b>	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.
<b>SIB</b>	Standard in Bond trade terms: <a href="http://www.liv-ex.com/staticPageContent.do?pageKey=Rules_and_Regulations">http://www.liv-ex.com/staticPageContent.do?pageKey=Rules and Regulations</a>
<b>SEP</b>	Standard En Primeur: <a href="http://www.liv-ex.com/staticPageContent.do?pageKey=Rules_and_Regulations">http://www.liv-ex.com/staticPageContent.do?pageKey=Rules and Regulations</a>
<b>Contract Type</b>	Contract type is a generic term for SIB, SEP or Special (X).
<b>Trade</b>	A bid and offer match for a trade to take place on the Exchange for a certain amount of wine.
<b>UID</b>	UID is Liv-ex's unique identification number allocated to a case of wine in the Vine warehouse.
<b>In Bond (IB)</b>	Wines 'in bond' have not yet had the Duty and VAT paid on them. They must be stored in a bonded warehouse approved by HM Customs & Excise.
<b>Duty Paid (DP)</b>	Purchased wines which have passed through customs, with UK Duty and VAT paid on them.

## 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 in this document.
- 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's will support the following methods:
  1. POST for create operation
  2. GET for read operation
  3. PUT for update operation
  4. DELETE for delete operation
- Pretty printing for output readability only is supported if required
- Compression for bandwidth savings are used
- For HTTP users who can only work on GET & POST methods, we provide a Header 'X-HTTP-Method-Override' for PUT & DELETE
- Authentication mechanism will be custom based on CLIENT\_KEY and CLIENT\_SECRET
- For PUSH services we require a direct POST URL which should be backed by a service capable of accepting and process XML payload as POST request.
- The APIs will be accessible at <https://api.liv-ex.com/> followed by their specific base URIs.

## 4. Request Header

The data within the request header will be used to authenticate valid access to the REST API.

### Note:

Each user will have to provide the following information in the request header of all API listings in this document.

### Param

Name	Mandatory	Description
CLIENT_KEY	Y	A valid merchant GUID / token which is unique for each merchant.
CLIENT_SECRET	Y	Password/Secret for the merchant's access.
ACCEPT	N	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.

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": "Unauthorized"
  "internalErrorCode": null
  "apiInfo": {
    "version": "1.0"
    "timestamp": 1467994706636
    "provider": "Liv-ex"
  }
}
```

### Invalid header XML response

```
<Response>
  <Status>Unauthorized</Status>
  <HttpCode>401</HttpCode>
  <Message>Unauthorized</Message>
  <InternalErrorCode xsi:nil="true" />
  <ApiInfo>
    <Version>1.0</Version>
    <Timestamp>2016-07-08T17:23:54.859+01:00</Timestamp>
    <Provider>Liv-ex</Provider>
  </ApiInfo>
</Response>
```

## 5. API Listing

### 5.1 Account Status Service (GET Method)

#### Description

This API call will retrieve a merchant’s Liv-ex account status, trading privileges, balances and limits in either JSON or XML response formats.

#### Base URI

[accounts/v1/status](https://api.liv-ex.com/accounts/v1/status)

#### Response

The Account status service will respond with HTTP Code 200 - OK in a successful response to the GET request with the valid credentials provided within the request header.

#### JSON Response

##### Response with valid authentication details

```
{
  "status": "OK"
  "statusCode": "200"
  "message": "Request completed successfully."
  "internalErrorCode": "R001"
  "apiInfo": {
    "version": "1.0"
    "timestamp": 1467976504854
    "provider": "Liv-ex"
  }
  "accountStatus": {
    "currentBalance": 25523.78,
    "netAmountDue": 22200.82
    "dueDate": 1471820400000
    "overdueAmount": 2245.67
    "membershipRenewalDate": 1483228800000
    "accountStatus": "Live"
    "tradingPrivilege": "Full Trading"
    "releaseAllowed": "Yes"
    "marginDeposit": 0
    "availableBuyingHeadroom": 362798
    "availableBuyingLimit": 400000
    "availableSellingHeadroom": 40251
    "availableSellingLimit": 50000
    "availableEP":
      {
        "vintage": 2009
        "availableEPSellingHeadroom": 5000
        "availableEPSellingLimit": 10000
      }
  }
  "errors": null
}
```

**Response with invalid authentication**

```
{
  "status": "Unauthorized"
  "statusCode": "401"
  "message": "Unauthorized"
  "internalErrorCode": null
  "apiInfo": {
    "version": "1.0"
    "timestamp": 1467994706636
    "provider": "Liv-ex"
  }
}
```

**XML Response**

**Response with valid authentication**

```
<accountStatusResponse>
  <Status>OK</Status>
  <HttpCode>200</HttpCode>
  <Message>Request completed successfully.</Message>
  <InternalErrorCode>R001</InternalErrorCode>
  <ApiInfo>
    <Version>1.0</Version>
    <Timestamp>2016-07-15T16:55:34.748+01:00</Timestamp>
    <Provider>Liv-ex</Provider>
  </ApiInfo>
  <accountStatus>
    <currentBalance>12838.44</currentBalance>
```

```

<netAmountDue>6547.6</netAmountDue>
<dueDate>2016-09-16T00:00:00.000+01:00</dueDate>
<overdueAmount>0.00</overdueAmount>
<membershipRenewalDate>2017-01-01T00:00:00.000Z</membershipRenewalDate>
<accountStatus>Live</accountStatus>
<tradingPrivilege>Full Trading</tradingPrivilege>
<releaseAllowed>Yes</releaseAllowed>
<marginDeposit>100000.0</marginDeposit>
<availableBuyingHeadroom>96929.0</availableBuyingHeadroom>
<availableBuyingLimit>250000.0</availableBuyingLimit>
<availableSellingHeadroom>135300.0</availableSellingHeadroom>
<availableSellingLimit>250000.0</availableSellingLimit>
<availableEP>
  <availableEPSellingHeadroom>50000.0</availableEPSellingHeadroom>
  <availableEPSellingLimit>50000.0</availableEPSellingLimit>
  <vintage>2014</vintage>
</availableEP>
<availableEP>
  <availableEPSellingHeadroom>23.0</availableEPSellingHeadroom>
  <availableEPSellingLimit>2000.0</availableEPSellingLimit>
  <vintage>2013</vintage>
</availableEP>
<errors xsi:nil="true" />
</accountStatus>
</accountStatusResponse>

```

**Note:**

Monetary values are provided in the merchant’s trading currency (GBP or EUR).

## 5.2 Trading Activity Service (GET / POST Method)

### Description

This service will retrieve the status and invoice details of a merchant’s open Liv-ex wine trades.

**Note:**

A request using the GET method will return the trade status and invoice details of ALL open trades of a merchant.

The POST method should be used to request the status and details of a given Lxtrade number or merchant reference specified within the body of the POST request.

### Base URI

[accounts/v1/tradingactivity](https://api.liv-ex.com/accounts/v1/tradingactivity)

### Param

Name	Mandatory	Description
LXtraden0	N	Liv-ex trade number of the wine trade.
merchantRef	N	The merchant’s reference for the trade. (Buyer/Seller ref)

		The value is a string of up to 30-character length that was initially associated to the order/trade by the merchant.
--	--	--

**Sample JSON Request Body (Post method)**

```
{"tradingActivity": {"lxTradeNo": "150719","merchantRef": "PO22849"}}
```

**Sample XML Request Body (Post method)**

```
<root>
  <tradingActivity>
    <lxTradeNo>150719</lxTradeNo>
    <merchantRef>PO22849</merchantRef>
  </tradingActivity>
</root>
```

**Response**

The Trading Activity service will respond with HTTP Code 200 - OK in a successful response to the GET or POST request with the valid credentials provided within the request header.

**JSON Response**

**Response with valid authentication or LXTrade No and/or MerchantRef**

```
{
  "status": "OK",
  "httpCode": "200",
  "message": "Request completed successfully.",
  "internalErrorCode": "R001",
  "apiInfo": {
    "version": "1.0",
    "timestamp": 1468944935936,
    "provider": "Liv-ex"
  },
  "recentActivities": [
    {
      "lxTradeNo": "149236",
      "lxTradeDate": 1452124800000,
      "role": "Buy",
      "lwin18": "116074320120300750",
      "description": "LX149236 - Masseto 2012 3x75",
      "merchantRef": "myref",
      "status": "In Account - Awaiting payment - pay by 16/06/2016",
      "invoiceDate": 1453939200000,
      "invoiceNo": "166456",
      "currency": "GBP",
      "amount": 1744.2,
      "vat": 4.84,
      "total": 1749.04
    }
  ]
}
```

Below is a list of the possible trade statuses that can be returned within a successful response within the 'Status' parameter:

If trade role is Buy:

- In Vine - Awaiting payment - Overdue



- In Account - Awaiting payment - Overdue
- Released - Awaiting payment - Overdue
- In Vine - Awaiting payment - pay by {date}
- In Account - Awaiting payment - pay by {date}
- Released - Awaiting payment
- Live issue - Please contact Vine Manager
- Please contact Vine manager
- Received - Processing in warehouse
- Processing in warehouse {warehouse}
- Received - In account shortly
- In transit to Vine
- Due in {date}
- EP - Awaiting payment - Overdue
- EP - Awaiting payment - pay by {date}
- EP - Processing in warehouse {warehouse}
- EP - Pending invoice
- EP - Due In June {Vintage year plus 3 years}

If trade role is Sell:

- Live issue - Please contact Settlement
- Please contact Vine manager
- Please deliver on or before {due date}
- Received -Processing in warehouse {warehouse}
- In transit to {warehouse}
- Ready for payment {expected date}
- EP - Please deliver on or before May {Vintage year plus 3 years}
- EP - Processing in warehouse {warehouse}
- EP - Ready for payment {expected date}

**Response with no access to service**

```
{
  "status": "Unauthorized"
  "httpCode": "403"
  "message": "Forbidden"
  "internalErrorCode": null
  "apiInfo": {
    "version": "1.0"
    "timestamp": 1468249750820
    "provider": "Liv-ex"
  }
}
```

**Response with invalid LXTrade No or MerchantRef**

```
{
  "status": "Bad Request"
  "httpCode": "400"
  "message": "Request was unsuccessful."
  "internalErrorCode": "R000"
  "apiInfo": {
    "version": "1.0"
    "timestamp": 1468491619834
  }
}
```

```

        "provider": "Liv-ex"
    }
    "recentActivities": null
    "errors": null
}

```

## XML Response

### Response with valid authentication or LXTrade No and/or MerchantRef

```

<recentActivitiesResponse>
  <status>OK</Status>
  <statusCode>200</HttpCode>
  <message>Request completed successfully.</Message>
  <internalErrorCode>R001</InternalErrorCode>
  <apiInfo>
    <Version>1.0</Version>
    <Timestamp>2016-07-11T16:34:21.556+01:00</Timestamp>
    <Provider>Liv-ex</Provider>
  </apiInfo>
  <recentActivities>
    <lXTradeNo>150723</lXTradeNo>
    <lXTradeDate>2016-06-06T00:00:00.000+01:00</lXTradeDate>
    <role>Buy</role>
    <lwin18>100765120091200750</lwin18>
    <description>LX150723 - Cantemerle 2009 12x75.0, SIB</description>
    <merchantRef>100022853</merchantRef>
    <status>Due in 20/06/2016</status>
    <invoiceDate xsi:nil="true" />
    <invoiceNo>-</invoiceNo>
    <currency>GBP</currency>
    <amount>252.0</amount>
    <vat>0.0</vat>
    <total>252.0</total>
  </recentActivities>
</recentActivitiesResponse>

```

### Invalid XML Response

```

<recentActivitiesResponse>
  <Status>Bad Request</Status>
  <HttpCode>400</HttpCode>
  <Message>Request was unsuccessful.</Message>
  <InternalErrorCode>R000</InternalErrorCode>
  <ApiInfo>
    <Version>1.0</Version>
    <Timestamp>2016-07-14T13:42:02.320+01:00</Timestamp>
    <Provider>Liv-ex</Provider>
  </ApiInfo>
</recentActivitiesResponse>

```

## 6. Response Codes

This section describes the response codes that will be returned by the Account Activity services.

Code	Message
<b>R000</b>	Request was unsuccessful
<b>R001</b>	Request completed successfully

## 6.1 Validation error codes

Code	Message
V000	Mandatory field missing.
V001	Merchant is not allowed to access the requested feed.
V002	Invalid parameter(s).

## 6.2 HTTP Status codes

HTTP defines a few of the meaningful status codes that can be returned from our API. These can be leveraged to help 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 or invalid authentication details are provided. Also useful to trigger an auth popup if the 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.
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. The client cannot really do much about this. We should return a Status 500 with a brief error reason.