



THE FINE WINE MARKET

## Best Bid and Best Offer Push Notifications

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## 1. Purpose

To provide information and examples of the PUSH web service available for Best Bid / Best Offer notifications.

## 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>Position</b>	Generic term used for an order’s placement on the Liv-ex Exchange.
<b>SIB</b>	Standard in Bond trade terms: <a href="https://www.liv-ex.com/knowledge/liv-ex-trading-contracts/">https://www.liv-ex.com/knowledge/liv-ex-trading-contracts/</a>
<b>SEP</b>	Standard En Primeur: <a href="https://www.liv-ex.com/knowledge/liv-ex-trading-contracts/">https://www.liv-ex.com/knowledge/liv-ex-trading-contracts/</a>
<b>X (Special)</b>	Special contract trade terms: <a href="https://www.liv-ex.com/knowledge/liv-ex-trading-contracts/">https://www.liv-ex.com/knowledge/liv-ex-trading-contracts/</a>
<b>Contract Type</b>	Contract type is a generic term for SIB, SEP or Special (X).

## 3. Technical Standards

- Where relevant, permitted users will be issued with a unique token (CLIENT\_KEY) and password (CLIENT\_SECRET) combination to control the access for the Liv-ex web services.
- The PUSH service requires a URL from merchants which should be backed by a simple HTTP based POST service capable of accepting and processing JSON/XML payload.
- The PUSH service requires a preceding HTTP 200 - OK response to a heartbeat check to the merchant URL sent by Liv-ex systems via a HEAD request in order to receive the PUSH notification.
- The project will support ISO 8601.
- The project will only support HTTPS protocol for client and server communications.
- Pretty printing for output readability only is supported if required

## 4. Best Bid / Offer Notifications (PUSH)

### Description

A best bid or best offer PUSH notification can be sent to integrated systems when an event takes place on the Liv-ex exchange. An internal algorithm analyses every new/updated bid and offer being placed on every product and determines if an alert notification is required. The algorithm considers:

- If the customer has an existing bid or offer position on that product
- If the pack and bottle size of the new/updated position is relevant to the customer's existing position
- The % gap in value between existing position and the new/updated position. Bids that are significantly underpriced, or offers that are overpriced are ignored.
- If position is updated, the % change in value.

Alongside information about the best bid or offer, the payload also includes the spread on the wine and vintage i.e. other live positions including the merchant's own position. Other useful data points such as the last trade price and date are also included.

The payload will be pushed as a POST request (JSON/XML Payload) to the merchant URL if the service is enabled for them.

### Merchant URL

<merchant\_url>

This will be the URL which a merchant will provide to Liv-ex to push the best bid or offer notification to their system.

PUSH notifications to the merchant's URL can be disabled by Liv-ex if no longer required.

### Heartbeat check

The Best bid / offer notification service will first send a HEAD request to ping the Merchant URL before sending a push notification. If the Merchant URL fails to respond with HTTP Code 200 – OK, the push notification will not be sent to it.

**Push Data**

**Param**

<b>Name</b>	<b>Description</b>
notificationType	<b>Type: alphanumeric</b> The type of order notification. The possible values can be Bid Notification and Offer notification
lwin	<b>Type: integer (18-digit)</b> Returns the LWIN18 of the product. The LWIN18 defines the wine, vintage, bottle and pack-size that is the subject of the alert
contractType	<b>Type: alphanumeric</b> The contract type of the order. Possible types are 'SIB' (Standard In Bond), 'SEP' (Standard En Primeur) and 'X' (Special)
isNew	<b>Type: boolean ('true'/'false')</b> Defines whether the bid or offer position is new. For example, the value will be True if the bid or offer alert is about a new best position (meets set thresholds).
changePercentage	<b>Type: double</b> The percentage change value of an updated position. For example, if the bid or offer alert has been triggered due to a significant difference to the spread gap. The value will be shown to 1 decimal point.
price	<b>Type: double</b> A valid positive value of the order. Decimal point is only allowed for Euro per bottle customers such as 37.5.
quantity	<b>Type: integer</b> A positive integer value of quantity of packs. E.g. 1,2, 50 etc
packSize	<b>Type: 2-digit integer</b> The pack size of the product e.g. 01, 06, 12
bottleSize	<b>Type: 5-digit integer</b> The bottle size of the product in ml e.g. 00750, 01500
yourOffer / yourBid	<b>Type: boolean ('true'/'false')</b> If it is the merchant's own bid or offer, the value shown will be True. If the order has been placed by another merchant, the value shown will be False.
isBest	<b>Type: boolean ('true'/'false')</b> This position is the leading Bid or leading Offer on this particular LWIN18.
lastTradePrice	<b>Type: double</b> The most recent Liv-ex trade price
lastTradeDate	<b>Type: double</b> The date of the most recent Liv-ex trade

**New best bid example - New position**

JSON

```
{
  "notificationType": "Bid Notification",
  "ApiInfo": {
    "Provider": "Liv-ex",
    "Timestamp": "2017-07-12T09:52:20.522Z",
    "Version": "1.0"
  },
  "spread": [ {
    "lwin": "133060120111200750",
    "contractType": "SIB",
    "isNew": true,
    "changePercentage": "0.0",
    "bids": [ {
      "bid": [ {
        "price": "380.0",
        "quantity": "1",
        "packSize": "12",
        "bottleSize": "00750",
        "yourBid": "false",
        "isBest": "true"
      }
    ]
  }
],
  "offers": [ {
    "offer": [ {
      "price": 400.0,
      "quantity": 1,
      "packSize": "12",
      "bottleSize": "00750",
      "yourOffer": "true",
      "isBest": "true"
    }
  ]
},
  "lastTradePrice": 244.0,
  "lastTradeDate": "2017-07-11T00:00:00Z"
}]
}
```

**XML**

```
<?xml version="1.0" encoding="UTF-8"?>
<PushResponse>
  <notificationType>Bid Notification</notificationType>
  <ApiInfo>
    <Provider>Liv-ex</Provider>
    <Timestamp>2017-07-12T09:42:48.485Z</Timestamp>
    <Version>1.0</Version>
  </ApiInfo>
  <spread>
    <lwin>133060120111200750</lwin>
    <contractType>SIB</contractType>
    <isNew>true</isNew>
    <changePercentage>0.0</changePercentage>
    <bids>
      <bid>
        <price>380.0</price>
        <quantity>1</quantity>
        <packSize>12</packSize>
        <bottleSize>00750</bottleSize>
        <yourBid>false</yourBid>
        <isBest>true</isBest>
      </bid>
    </bids>
  </spread>
  <offers>
    <offer>
      <price>400.0</price>
      <quantity>1</quantity>
      <packSize>12</packSize>
      <bottleSize>00750</bottleSize>
      <yourOffer>true</yourOffer>
      <isBest>true</isBest>
    </offer>
  </offers>
  <lastTradePrice>244.0</lastTradePrice>
  <lastTradeDate>2017-07-11T00:00:00Z</lastTradeDate>
</PushResponse>
```

```
<offers>
  <offer>
    <price>400.0</price>
    <quantity>1</quantity>
    <packSize>12</packSize>
    <bottleSize>00750</bottleSize>
    <yourOffer>true</yourOffer>
    <isBest>true</isBest>
  </offer>
</offers>
<lastTradePrice>244.0</lastTradePrice>
<lastTradeDate>2017-07-11T00:00:00Z</lastTradeDate>
</spread>
</PushResponse>
```

**New best bid example - Changed position**

```
JSON
{
  "notificationType": "Bid Notification",
  "ApiInfo": {
    "Provider": "Liv-ex",
    "Timestamp": "2017-07-12T10:12:50.697Z",
    "Version": "1.0"
  },
  "spread": [ {
    "lwin": "101595520040600750",
    "contractType": "SIB",
    "isNew": false,
    "changePercentage": 2.06,
    "bids": [ {
      "bid": [ {
        "price": "495.0",
        "quantity": 4,
        "packSize": "06",
        "bottleSize": "00750",
        "yourBid": "false",
        "isBest": "true"
      } ]
    } ]
  },
  "offers": [ {
    "offer": [ {
      "price": 500.0,
      "quantity": 1,
      "packSize": "06",
      "bottleSize": "00750",
      "yourOffer": "true",
      "isBest": "true"
    } ]
  },
  "lastTradePrice": 520.0,
  "lastTradeDate": "2017-06-23T00:00:00Z"
} ] }
```

```
XML
<?xml version="1.0" encoding="UTF-8"?>
<PushResponse>
```

```

<notificationType>Bid Notification</notificationType>
<ApiInfo>
  <Provider>Liv-ex</Provider>
  <Timestamp>2017-07-12T10:12:50.697Z </Timestamp>
  <Version> false</Version>
</ApiInfo>
<spread>
  <lwin>101595520040600750</lwin>
  <contractType>SIB</contractType>
  <isNew>true</isNew>
  <changePercentage>2.06</changePercentage>
  <bids>
    <bid>
      <price>495.0</price>
      <quantity>4</quantity>
      <packSize>06</packSize>
      <bottleSize>00750</bottleSize>
      <yourBid>false</yourBid>
      <isBest>true</isBest>
    </bid>
  </bids>
  <offers>
    <offer>
      <price>500.0</price>
      <quantity>1</quantity>
      <packSize>06</packSize>
      <bottleSize>00750</bottleSize>
      <yourOffer>true</yourOffer>
      <isBest>true</isBest>
    </offer>
  </offers>
  <lastTradePrice>520.0</lastTradePrice>
  <lastTradeDate>2017-06-23T00:00:00Z </lastTradeDate>
</spread>
</PushResponse>

```

**New best offer (including the spread / order depth details)**

```

JSON
{
  "notificationType": "Offer Notification",
  "ApiInfo": {
    "Provider": "Liv-ex",
    "Timestamp": "2017-07-12T10:57:02.751Z",
    "Version": "1.0"
  },
  "spread": [ {
    "lwin": "101387620091200750",
    "contractType": "SIB",
    "isNew": "false",
    "changePercentage": "0.0",
    "bids": {
      "bid": [ {
        "price": "450.0",
        "quantity": 2,
        "packSize": "12",
        "bottleSize": "00750",
        "yourBid": "false",
        "isBest": "true

```



```

    }]
  },
  "offers" : {
    "offer" : [ {
      "price" : 670.0,
      "quantity" : 1,
      "packSize" : "12",
      "bottleSize" : "00750",
      "yourOffer" : false,
      "isBest" : true
    } ]
  },
  "lastTradePrice" : 670.0,
  "lastTradeDate" : "2017-05-04T00:00:00Z"
}, {
  "lwin" : "101387620090600750",
  "contractType" : "SIB",
  "isNew" : true,
  "changePercentage" : 0.0,
  "bids" : {
    "bid" : [ {
      "price" : 225.0,
      "quantity" : 4,
      "packSize" : "06",
      "bottleSize" : "00750",
      "yourBid" : "true",
      "isBest" : "true"
    } ]
  },
  "offers" : {
    "offer" : [ {
      "price" : 230.0,
      "quantity" : 1,
      "packSize" : "06",
      "bottleSize" : "00750",
      "yourOffer" : "false",
      "isBest" : "true"
    } ],
    {
      "price" : 250.0,
      "quantity" : 1,
      "packSize" : "06",
      "bottleSize" : "00750",
      "yourOffer" : "false",
      "isBest" : "false"
    } ]
  },
  "lastTradePrice" : 260.0,
  "lastTradeDate" : "2016-09-02T00:00:00Z"
}, {
  "lwin" : "101387620090600750",
  "contractType" : "X",
  "isNew" : false,
  "changePercentage" : 0.0,
  "bids" : {
    "bid" : [ {
      "price" : 225.0,
      "quantity" : 1,
      "packSize" : "06",
      "bottleSize" : "00750",
      "yourBid" : "false",
      "isBest" : "true"
    } ]
  }
}

```

```

    },
    "offers" : {
    },
    "lastTradePrice" : 260.0,
    "lastTradeDate" : "2016-09-02T00:00:00Z"
  }}
}

```

**XML**

```

<?xml version="1.0" encoding="UTF-8"?>
<PushResponse>
  <notificationType>Offer Notification</notificationType>
  <ApiInfo>
    <Provider>Liv-ex</Provider>
    <Timestamp>2017-07-12T11:27:46.178Z</Timestamp>
    <Version>1.0</Version>
  </ApiInfo>
  <spread>
    <lwin>101387620091200750</lwin>
    <contractType>SIB</contractType>
    <isNew>>false</isNew>
    <changePercentage>0.0</changePercentage>
    <bids>
      <bid>
        <price>450.0</price>
        <quantity>2</quantity>
        <packSize>12</packSize>
        <bottleSize>00750</bottleSize>
        <yourBid>>false</yourBid>
        <isBest>>true</isBest>
      </bid>
    </bids>
    <offers>
      <offer>
        <price>670.0</price>
        <quantity>1</quantity>
        <packSize>12</packSize>
        <bottleSize>00750</bottleSize>
        <yourOffer>>false</yourOffer>
        <isBest>>true</isBest>
      </offer>
    </offers>
    <lastTradePrice>670.0</lastTradePrice>
    <lastTradeDate>2017-05-04T00:00:00Z</lastTradeDate>
  </spread>
  <spread>
    <lwin>101387620090600750</lwin>
    <contractType>SIB</contractType>
    <isNew>>true</isNew>
    <changePercentage>0.0</changePercentage>
    <bids>
      <bid>
        <price>225.0</price>
        <quantity>4</quantity>
        <packSize>06</packSize>
        <bottleSize>00750</bottleSize>
        <yourBid>>true</yourBid>
        <isBest>>true</isBest>
      </bid>
    </bids>
  </offers>

```

```

<offer>
  <price>230.0</price>
  <quantity>1</quantity>
  <packSize>06</packSize>
  <bottleSize>00750</bottleSize>
  <yourOffer>>false</yourOffer>
  <isBest>>true</isBest>
</offer>
<offer>
  <price>250.0</price>
  <quantity>1</quantity>
  <packSize>06</packSize>
  <bottleSize>00750</bottleSize>
  <yourOffer>>false</yourOffer>
  <isBest>>true</isBest>
</offer>
</offers>
<lastTradePrice>260.0</lastTradePrice>
<lastTradeDate>2016-09-02T00:00:00Z</lastTradeDate>
</spread>
<spread>
  <lwin>101387620090600750</lwin>
  <contractType>X</contractType>
  <isNew>>false</isNew>
  <changePercentage>0.0</changePercentage>
  <bids>
    <bid>
      <price>225.0</price>
      <quantity>1</quantity>
      <packSize>06</packSize>
      <bottleSize>00750</bottleSize>
      <yourBid>>false</yourBid>
      <isBest>>true</isBest>
    </bid>
  </bids>
</offers/>
<lastTradePrice>260.0</lastTradePrice>
<lastTradeDate>2016-09-02T00:00:00Z</lastTradeDate>
</spread>
</PushResponse>

```

**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	This is the response to a successful HEAD request which is sent to Merchant’s URL before sending a push notification