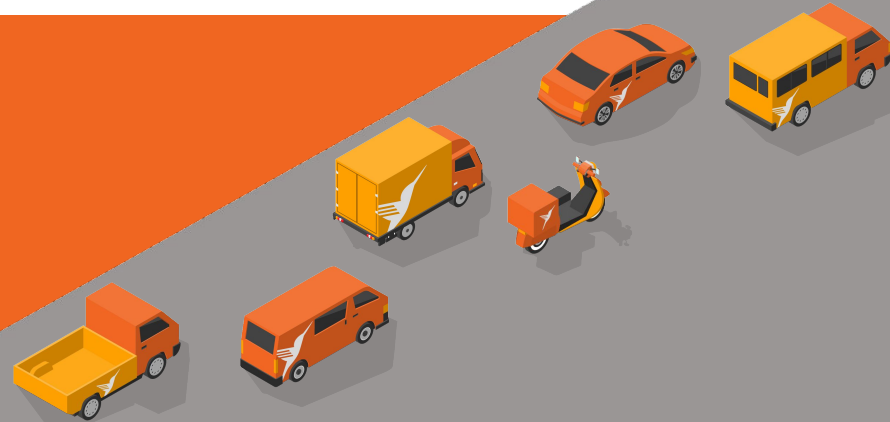



Tutorial on Lalamove Webhook

Lalamove Developers
July, 2021



Objectives

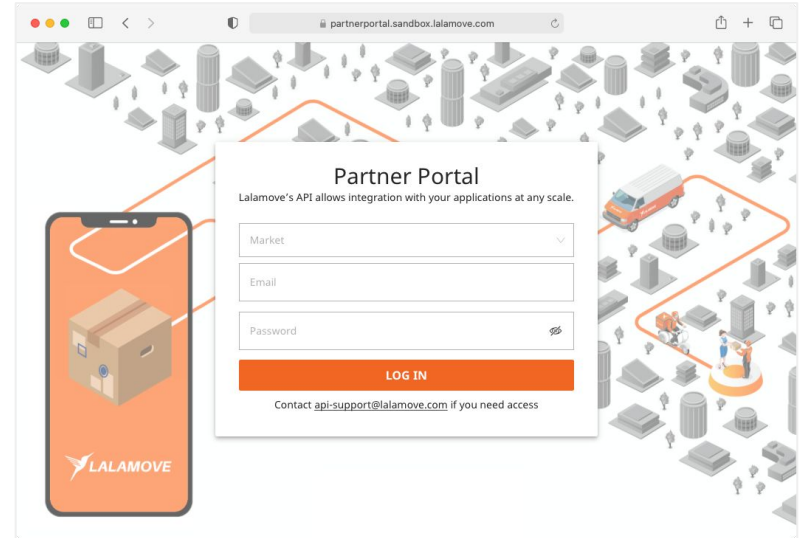
- This deck explains the details of Lalamove's webhook in the sandbox environment (that is `rest.sandbox.lalamove.com`)
- We use  `webhook.site` to demonstrate the idea

Pre-requisites

1. API credentials, commonly known as `key` AND `secret` *
2. Access to Lalamove' Partner Portal for sandbox environment (`partnerportal.sandbox.lalamove.com`)
 - For demonstration, we will use the sandbox environment
 - Access information should be listed in the welcome message

Partner Portal (Sandbox)

1. Navigate to partnerportal.sandbox.lalamove.com
2. Select the country that you are granted access
3. Login with the provided credentials



Partner Portal (Sandbox)

- Click "WEBHOOKS" at the header bar

4

LALAMOVE PARTNER PORTAL (SANDBOX) RECORDS WEBHOOKS username@gmail.com LOGOUT

Current City: Singapore [CHANGE] Local Date & Time: 2021-05-18 08:33:04 (UTC +08:00) Wallet Balance (SGD): S\$-551.0

Status	Order ID	Order Date & Time (Local Time)	Service Type	Special Request	Order Amount	Contact Info (Pick-Up Point)	Driver / Servicer	Action
ASSIGNING DRIVER	122900207063 (A)	23:05 2021-05-17	2.4M Van	ROUND_TRIP	S\$50.9	Derek Lowe 2180 0000	N/A	No actions available

- Enter the webhook URL, click "Save"
(We use webhook.site for the demonstration)

LALAMOVE PARTNER PORTAL (SANDBOX) RECORDS WEBHOOKS username@gmail.com LOGOUT

Sandbox Webhooks

Input your webhook URL here Cancel Save

Receiving the webhooks

6. For initial connection, make sure to send status 200 even when Lalamove doesn't send anything in the body
7. Once the connection is successful, make sure to validate the receive Webhook update's signature. After validation, send 200 as well.
8. Whenever there is a status update, our Webhook will try to send the update 3 times, each with 10 second interval. If we don't receive 200 for all 3 attempts, we will try again for the next 2 status updates. By the 3rd status update, if we still don't receive any, we will disable the URL. At this point, the client is responsible for going back to Partner Portal to update their Webhook URL.

Validating the webhooks

```
const WEBHOOK_INFO = {  
  apiKey: "",  
  timestamp: 1625220901,  
  signature: "86bf559d1049ec27f40858f4bae31b65497009eb3d73e6ad9f9938df7678f104",  
  eventId: "FBA2A57F-A42B-37E1-9090-AF0509E17EC9",  
  eventType: "ORDER_STATUS_CHANGED",  
  data: {  
    order: {  
      id: "169110900050",  
      city: "TW_TPE",  
      status: "ON_GOING",  
      driverId: "80031",  
      shareLink: "https://share.sandbox.lalamove.com/?TW100210702180312410810010077661853&lang=zh_TW&version=2&sign=020f4c5713ca04888c0e108d8912206d",  
      previousStatus: "ASSIGNING_DRIVER",  
      updatedAt: "2021-07-02T18:15.00Z",  
    },  
  },  
};  
const API_SECRET = ""; // need replace it to your own api secret  
const HTTP_VERB = "POST"; // hard code  
const PATH = "/lalamove/webhook"; // the path of you webhook url  
const BODY = JSON.stringify(WEBHOOK_INFO.data);  
  
const rawSignature = `${WEBHOOK_INFO.timestamp}\r\n${HTTP_VERB}\r\n${PATH}\r\n\r\n${BODY}`;  
const SIGNATURE = CryptoJS.HmacSHA256(rawSignature, API_SECRET).toString();  
  
const verifyResult = SIGNATURE === WEBHOOK_INFO.signature;  
console.log(verifyResult);
```

- 1 Check whether this apiKey is the same
- 2 Insert your API Secret
- 3 Insert your URL path after the root domain
(ex:https://abc.com/lalamove/webhook => /lalamove/webhook)
- 4 If two signatures are identical, then it's a valid Lalamove Webhook update

[Link to the code](#)



When will Lalamove push message to your webhook?

8. You will receive a webhook push if any of the followings happen to your orders:
 - a. Status Change (`ORDER_STATUS_CHANGED`)
 - b. Order Amount Changed (`ORDER_AMOUNT_CHANGED`)
 - Priority fee added
 - Add-on fee adjustment
 - c. Order Replaced (`ORDER_REPLACED`)
 - d. Wallet Balance Changed (`WALLET_BALANCE_CHANGED`)

Status Change (ORDER_STATUS_CHANGED)

```
{
  "apiKey": "e95d490411514629977580bfcdf831a1",
  "timestamp": 1627035549,
  "signature": "dda29bd8eeb47c819d25a1dfd0abc1f800663804e1909b5d94b0a0a0f1a966b0",
  "eventId": "8FF5E8A1-83B0-2970-B42D-55CA4CC6C955",
  "eventType": "ORDER_STATUS_CHANGED",
  "data": {
    "order": {
      "id": "191320800049", 1
      "city": "HK_HKG",
      "status": "EXPIRED",
      "driverId": "",
      "shareLink": "https://share.sandbox.lalamove.com/?HK100210723165911520910010090198410&lang=zh_
      "previousStatus": "ASSIGNING_DRIVER",
      "updatedAt": "2021-07-23T18:19.00Z"
    }
  }
}
```

1 Note that this the `orderRef` id in `developers.lalamove.com`

Order Amount Changed (ORDER_AMOUNT_CHANGED)

```
{
  "apiKey": "e95d490411514629977580bfcd831a1",
  "timestamp": 1627035982,
  "signature": "aff36647d91c526694a5f2fa7f67c15f7ec1d296fa49187b17d1b366705a0019",
  "eventId": "F12153E1-8494-81B0-FAFB-72B6EF66B7FF",
  "eventType": "ORDER_AMOUNT_CHANGED",
  "data": {
    "order": {
      "id": "196420801049",
      "city": "HK_HKG",
      "status": "ASSIGNING_DRIVER",
      "price": {
        "currency": "HKD",
        "subTotal": "55",
        "priorityFee": "9",
        "totalPrice": "64"
      },
    },
    "balance": {
      "currency": "HKD",
      "amount": "101486",
      "updatedAt": "2021-07-23T18:26.00Z"
    }
  }
}
```

Wallet Balance Changed (WALLET_BALANCE_CHANGED)

```
{
  "apiKey": "e95d490411514629977580bfcdf831a1",
  "timestamp": 1627035826,
  "signature": "74b059a8e337d0a3a7e438641b16ed9ca06e49239625c0fbd54e5fed38003af7",
  "eventId": "9B684EE2-8680-A632-E9D4-C9EC39BD8B8E",
  "eventType": "WALLET_BALANCE_CHANGED",
  "data": {
    "balance": {
      "currency": "HKD",
      "amount": "101540",
      "updatedAt": "2021-07-23T18:23.00Z"
    }
  }
}
```

Cancel-and-Clone

- Currently, Lalamove cancels an old order and creates a new order by cloning when **post-match adjustments** (ex: driver waiting fees) need to be made for API orders.
- Previously clients didn't have an effective way of tracking which new orders were cloned from what.
- To solve this, we have also created Webhook updates for Cancel-and-Clone orders. We will sequentially send updates of two order statuses (Canceled & Assigning) and `ORDER_REPLACED` event to indicate the replacement

Normal Cancellation

This is what clients would see when they cancel the order themselves

```
{
  "apiKey": "e95d490411514629977580bfcd831a1",
  "timestamp": 1627036154,
  "signature": "2c33e3f795c0282dce35dcc53caef85cb5b130b29392dced5d90fba42547a83d",
  "eventId": "0A53185C-E25C-C67D-B22E-7C78AE233247",
  "eventType": "ORDER_STATUS_CHANGED",
  "data": {
    "order": {
      "id": "196420801049",
      "city": "HK_HKG",
      "status": "CANCELED",
      "driverId": "",
      "shareLink": "https://share.sandbox.lalamove.com/?HK100210723182618785910010096563408&lang=zh_HK&version=2&si",
      "previousStatus": "ASSIGNING_DRIVER",
      "updatedAt": "2021-07-23T18:29.00Z"
    }
  }
}
```

Step 1: Cancel existing order

```
{
  "apiKey": "cdb681e961394549b9ac25243478b7b1",
  "timestamp": 1625204537,
  "signature": "1895a6eca35520b2eda94a0d4c05c562db48672b75fd5725dd5f753db16e82f0",
  "eventId": "EE0B978F-0E93-CD24-CE9B-96CCE677E6E8",
  "eventType": "ORDER_STATUS_CHANGED",
  "data": {
    "order": {
      "id": "121110205030",
      "city": "SG_SIN",
      "status": "CANCELED",
      "driverId": "",
      "shareLink": "https://share.sandbox.lalamove.com/?SG100210702132923809310010080245024&lang=en_SG&version=2&sign=e45fcfe14be6b6fc",
      "previousStatus": "ON_GOING",
      "updatedAt": "2021-07-02T13:42.00Z",
      "remark": "Canceled by Customer Service" 1
    }
  }
}
```

- 1 To distinguish orders canceled by users, note that the update includes **remark that states that the cancellation is from Lalamove's Customer Service**

Step 2: Create (Clone) new order

```
{
  "apiKey": "cdb681e961394549b9ac25243478b7b1",
  "timestamp": 1625204590,
  "signature": "17a8d002b6a540147b411efa4802b53c5e90ffa479da2462e503535f6100f32d",
  "eventId": "E8DDDAFF-023A-9A6C-93C7-FAE20942EF30",
  "eventType": "ORDER_STATUS_CHANGED",
  "data": {
    "order": {
      "id": "126110205030",
      "city": "SG_SIN",
      "status": "ASSIGNING_DRIVER", 1
      "driverId": "",
      "shareLink": "https://share.sandbox.lalamove.com/?SG100210702134309702310010010971011&lang=en_SG&version=2&sign=17b1890d64903acd6de6625f4bc",
      "previousStatus": "",
      "updatedAt": "2021-07-02T13:43.00Z"
    }
  }
}
```

- 1 Note that there may be several status updates of new order to match the previous order status (ASSINGING, ON_GOING, and etc.)

Step 3: Replacement

```
{
  "apiKey": "cdb681e961394549b9ac25243478b7b1",
  "timestamp": 1625204595,
  "signature": "6067cd8d7bc501caab421d1948127b1920ed3322b8aec413e2536501ea86b2fe",
  "eventId": "BA60728F-3C9A-B567-BEAA-C06D086B670C",
  "eventType": "ORDER_REPLACED",
  "data": {
    "order": {
      "id": "126110205030"
    },
    "prevOrderId": 121110205030
  }
}
```


Thank you!

Documentation: developers.lalamove.com

Questions? Contact api-support@lalamove.com