SHIPMENT TRACKING - UNIFIED PUSH API

101 GUIDE



DEFINITION

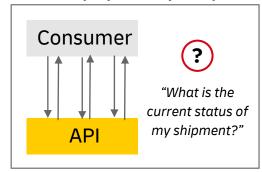
DHL SHIPMENT TRACKING – UNIFIED PUSH API 101

A "Push" API proactively pushes updates to a user, so there is no need to make a call every time they want to check a status.

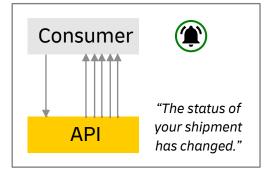
Different to other APIs, Shipment Tracking - Unified Push calls are composed in the "Body" section.

Although this API "unifies" the sources of shipment data information, it does not provide a "unified" structure in the response. Then, the response structure you can get from tracking a Post and Parcel Germany shipment can be different to the one of an Express shipment.

Standard (request response) API



Push API

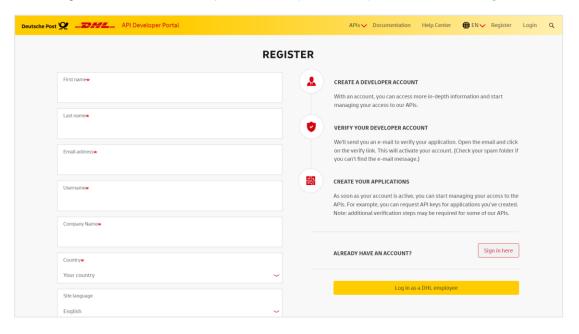




ACCESS

DHL SHIPMENT TRACKING - UNIFIED PUSH API 101

Register in the DHL Developer Portal: https://developer.dhl.com/user/register

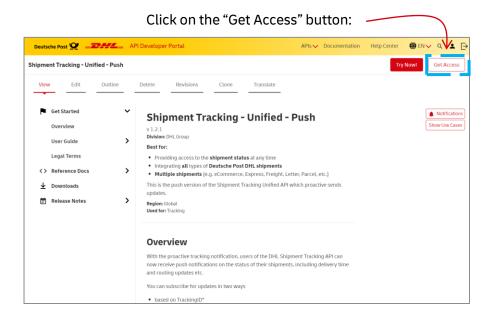




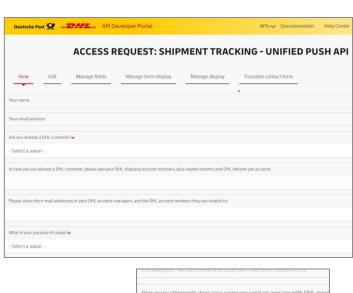
ACCESS

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Go to the API documentation: https://developer.dhl.com/api-reference/shipment-tracking-unified-push#get-started-section



Fill out the form and send





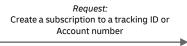


USE FLOW

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Customer User or Application



Request: Activate a subscription to a tracking ID or Account number using subscription

ID + secret - If it's Account ID, a DHL API



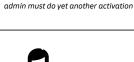
Waiter Push API



Interface Webhook system confirms subscription creation + "subscription ID" and "secret"



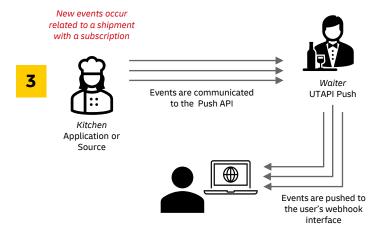
Customer User or Application



Waiter Push API



Interface Webhook system displays subscription activation confirmation







Push API



Interface Webhook system



API stops

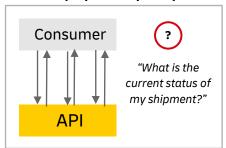
THE "WHY" OF THE API

DHL SHIPMENT TRACKING - UNIFIED PUSH API 101

Customers, merchants and marketplaces always want the most up-to-date information about their shipments. With the regular <u>Unified Tracking API</u>, they must send a request every time they want to know the status.

Some users want updated information up to the minute, and they bombard the API with requests, quickly consuming their quota. This process is costly and not the most efficient.

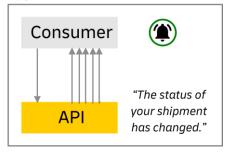
Standard (request response) API



The Unified Tracking Push API solves this issue by proactively sending notifications to the user whenever there's a new event update related to a subscribed shipment.

In this way, users don't need to program to knock our door several times a day; but simply wait until we send them the new notifications, and then they can program their systems to work with them.

Push API





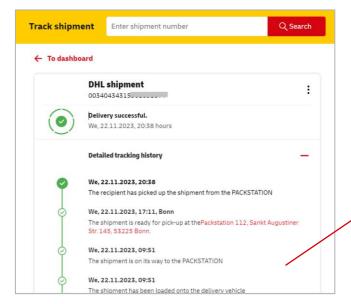
THE "WHY" OF THE API

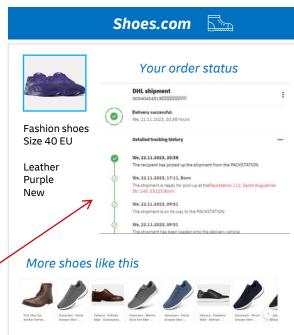
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The added benefits are the same as the general <u>Shipment Tracking</u> – Unified API.

Merchants can use this data to provide up to date notifications to their customers about their shipments, instead of making the customer open a new tab and consult on DHL.

Our Push API makes this possible by providing the event status data to the merchants or marketplaces in a machine-readable format that can be easily adapted to their user interface







SCOPE

DHL SHIPMENT TRACKING – UNIFIED PUSH API 101

This Push API does not support every single kind of shipment and service offered by the DHL group.

The list and the supported services are constantly updated in the documentation's Scope. Please check the most recent version on the website.

Service availability as of June of 2025:

DHL Parcel Germany Subscription by shipment ID: No Subscription by account ID: No

DHL Post Germany (post-de)
Subscription by shipment ID: Yes*
Subscription by account ID: No

DHL Global Forwarding SBR** (dgf)
Subscription by shipment ID: Yes
Subscription by account ID: Yes

DHL Global Forwarding Sameday (sameday)
Subscription by shipment ID: Yes
Subscription by account ID: Yes

DHL Express

Subscription by shipment ID: No Subscription by account ID: No

DHL Parcel Connect (ecommerce-europe)
Subscription by shipment ID: Yes
Subscription by account ID: Yes

DHL eCommerce BENELUX (parcel-nl)
Subscription by shipment ID: Yes
Subscription by account ID: No

PPL (DHL eCommerce Czechia) (ecommerce-ppl) Subscription by shipment ID: Yes Subscription by account ID: No DHL eCommerce UK (parcel-uk) Subscription by shipment ID: Yes Subscription by account ID: Yes

DHL eCommerce Iberia (ES, PT) Subscription by shipment ID: No Subscription by account ID: No

DHL eCommerce Americas (ecommerce)
Subscription by shipment ID: Yes
Subscription by account ID: Yes

DHL eCommerce APAC (ecommerce-apac) Subscription by shipment ID: Yes Subscription by account ID: No

DHL Freight (freight)

Subscription by shipment ID: Yes Subscription by account ID: Yes

DHL Supply Chain Subscription by shipment ID: No Subscription by account ID: No



^{*}The API supports Registered mail. Internetmarke is not included.

[→] Registered mail is the service customers get at the DHL service points; Internetmarke are stamps customers can print at home and put directly on envelopes.

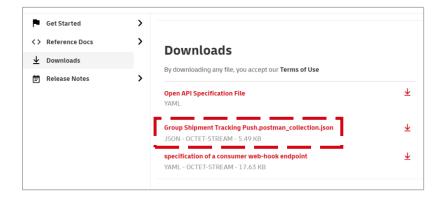
^{**}SBR: Star Broker

SETTING UP THE API

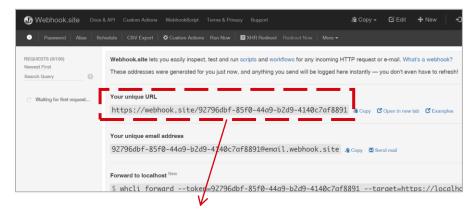
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In order to directly an easily test the API, please install the provided Postman collection on the API documentation:

https://developer.dhl.com/api-reference/shipment-tracking-unified-push#downloads-section



A user will also need to have a system to connect the Push API, where the responses from the API can be fed into. For testing purposes, the following public website can be used: https://webhook.site/
Please note that webhook.site is not related to the DHL Group. It should not be used for production usage, but for short tests whose subscriptions would be deleted on the same day.



The given URL in this section will need to be provided later when doing the Create Request to the API



ENVIRONMENTS

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An Environment is an instance where a given system works. For APIs, there are often Production, Acceptance, Test and Development environments, all living at once.

This Push API does only offer the Production environment to users, they will use it for their regular operations and must use it as well for user testing in case it's needed.

Even though there are more environments, these are restricted to developers-use only.

Production Environment URL/URI address:

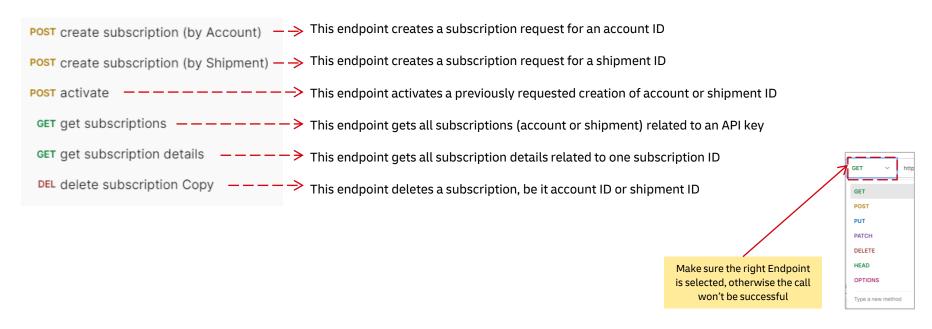
https://api-eu.dhl.com/tracking/push/v1



ENDPOINTS

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An Endpoint is a specific "location" within an API that can accept requests and send back responses. UTAPI PUSH has multiple Endpoints:



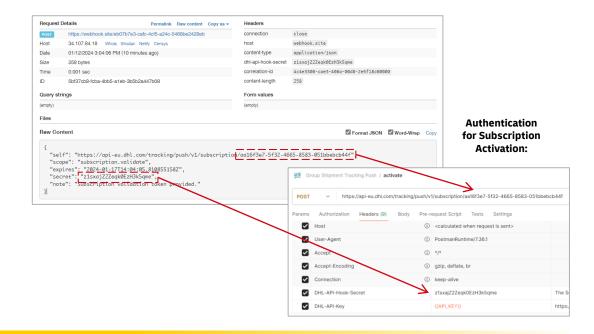


AUTHENTICATION

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Different to the regular Shipment Tracking – Unified API, for the Push solution the users will need initially their API key to create a subscription. Then they will need the "subscription ID" and a "secret" to activate a subscription. More details on how to use the API in the following slides.

Authentication for Subscription Creation: Group Shipment Tracking Push / create subscription (by Shipment) POST https://api-eu.dhl.com/tracking/push/v1/subscription Pre-request Script Params abla(1) <calculated when request is sent> PostmanRuntime/7.36.1 (i) */* Accept-Encoding gzip, deflate, br keep-alive DHL-API-Key Header text must be exactly "DHL-API-Kev"





AUTHENTICATION

DHL SHIPMENT TRACKING – UNIFIED PUSH API 101

When creating a subscription request, you may also add additional lines to provider a Header authentication (commonly an API key to your webhook system – Please note that such header and token are different to your DHL Developer Account app API key).

Below examples of the Body text subscription creation request with the additional authentication lines:

Account ID subscription creation:

```
"hook": {
  "uri": "ADD HERE THE URL OF YOUR WEBHOOK SYSTEM",
  "authentication": {
  "type": "ApiKeyAuthentication",
  "header": "ADD HERE YOUR HEADER STRING",
  "token": "ADD HERE YOUR TOKEN STRING"
  }
},
  "format": "Default",
  "type": "Account",
  "service": "ADD HERE THE SERVICE",
  "events": [
  "Transit", "Delivered", "Pre-Transit", "Failure", "Unknown"
  ],
  "accountID": "ADD HERE THE ACCOUNT ID"
}
```

Shipment ID subscription creation:

```
{
    "hook": {
        "uri": "ADD HERE YOUR WEBHOOK SYSTEM URL",
        "authentication": {
            "type": "ApiKeyAuthentication",
            "header": "ADD HERE YOUR HEADER STRING",
            "token": "ADD HERE YOUR TOKEN STRING"
        }
    },
        "format": "Default",
        "type": "Shipment",
        "service": "ADD HERE THE SERVICE",
        "events": [
        "Transit", "Delivered", "Pre-
Transit", "Failure", "Unknown"
        ],
        "shipmentIDs": ["ADD HERE YOUR SHIPMENT ID"]
```

Example on Postman:



WEBHOOK SETUP PER ENDPOINT

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POST call: 1a Create a subscription by account ID

> → You will aet a "subscription ID" and a "secret"

POST call: Activate a subscription with the subscription ID and the secret

→ You will get a preapproval message, still need a business approval

2a

The DHI Push API managers will get a notification about your account subscription

→ They will Approve or Reject your subscription request

2b

The DHI Push API managers approve your request

 \rightarrow You will receive a webhook message confirmation of subscription ready for notifications

Receive push messages

new event of a account, a new push the Webhook system

POST call: Create a subscription by shipment ID

> → You will get a "subscription ID" and a "secret"

POST call: Activate a subscription with the subscription ID and the secret

→ Your subscription is now activated

Receive push messages

 \rightarrow Every time there is a new event of the shipment, a new push message will arrive to the Webhook system

 \rightarrow Every time there is a

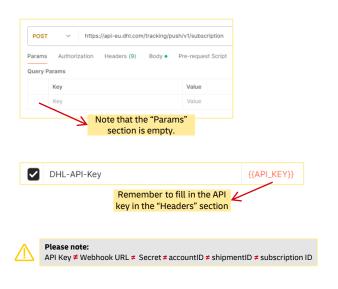
shipment related to the message will arrive to

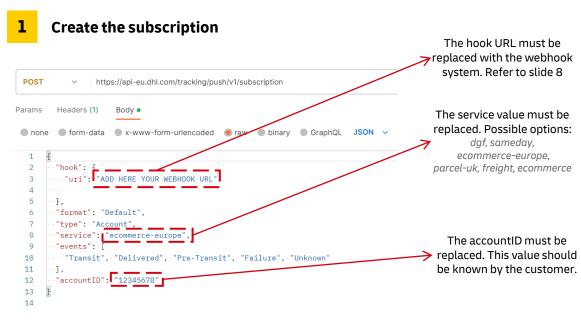




DHL SHIPMENT TRACKING – UNIFIED PUSH API 101

The Parameters define variable elements of a URL path when calling an API. They can be query parameters, headers, or request body. Different to regular APIs, our parameters won't be filled in at the "Parameters" section but directly editing the "Body" and URL of the call.







DHL SHIPMENT TRACKING – UNIFIED PUSH API 101

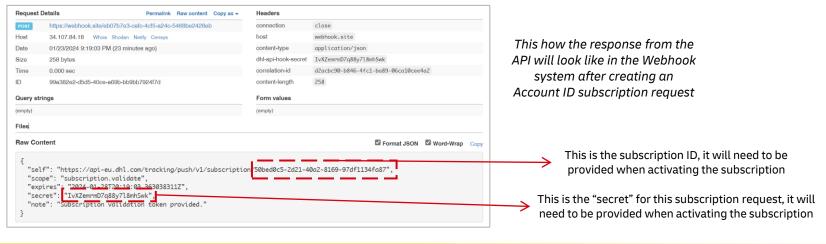
2



This how the response from the API will look like after creating a request to create a subscription by Account ID

This is the subscription ID, it will also appear in the hook website

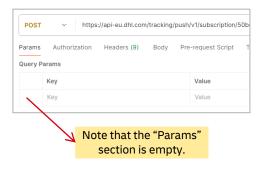
3

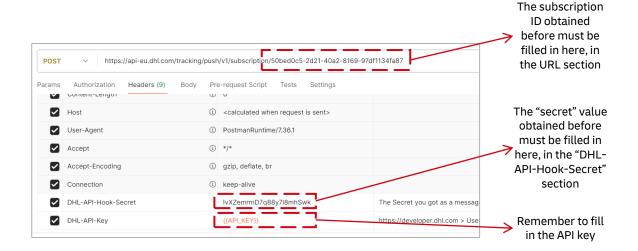




DHL SHIPMENT TRACKING – UNIFIED PUSH API 101

4 Activate a subscription





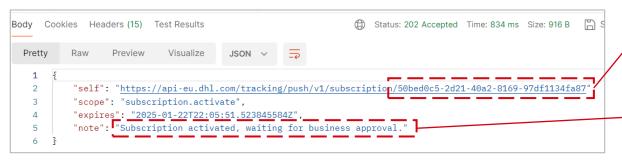
Nothing else should be filled in the "Body" section, after filling the subscription ID and the Secret, click on "Send"



DHL SHIPMENT TRACKING – UNIFIED PUSH API 101

This how the response from the API will look like after requesting to activate a subscription by account ID

5



This is the subscription ID, it will also appear in the hook website

The activation of a subscription for an account ID will require yet another activation from an API admin. Once step 4 has been successfully completed, we will receive a notification of your subscription to give the final business Approval. If your subscription hasn't been approved in more than 3 business days or rejected, feel free to open a ticket on the DHL Developer Portal Help Center

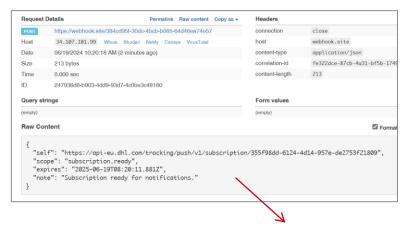


Trying to repeat a call for the activation of a subscription ID and secret that has been sent before will result in an error



DHL SHIPMENT TRACKING - UNIFIED PUSH API 101

Once we have approved your request, you will receive a notification in your webhook system that looks like this:

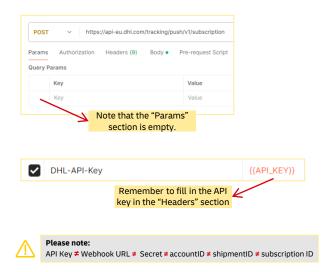


This how the response looks on the webhook system. If everything is correct, the push messages will start arriving as soon as there's a change in a related shipment Once your subscription activation is completed, you will start receiving shipment updates related to your account number as soon as they are available in our databases

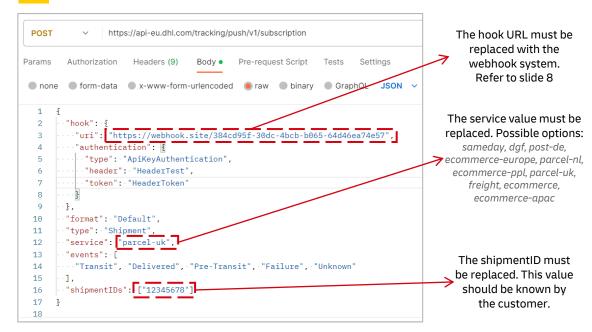




DHL SHIPMENT TRACKING - UNIFIED PUSH API 101



1 Create the subscription





DHL SHIPMENT TRACKING – UNIFIED PUSH API 101

Multiple shipments subscription request

It is possible to create a shipment ID subscription with up to 10 shipment IDs at the time.

Please note that all the shipments added in the query must belong to the same service.

It's not possible to create a Shipment ID subscription request for more than one service. A new request must be made if there is the need of subscribing for more than 10 shipments, or if the shipments belong to different services.

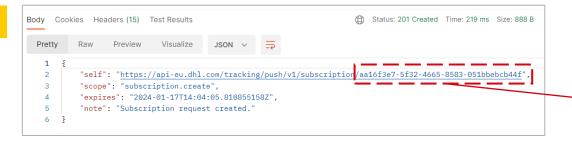
Request example:

```
1
 2
       ···"uri": "https://webhook.site/384cd95f-30dc-4bcb-b065-64d46ea74e57"
         "authentication": }
           "type": "ApiKeyAuthentication",
           "header": "ApiKey",
 6
          ·"token": · "zxF9V6Lme9wN"
 8
 9
10
      ·"format": · "Default".
11
      "type": "Shipment",
       "service": "sameday",
12
13
      · "events": -
14
      ···"Transit"
15
      ·"shipmentIDs": [
16
17
         "12345678",
18
       .. "23456789",
19
         "34567890",
20
         "45678901",
21
         "93828585"
22
23
```



DHL SHIPMENT TRACKING - UNIFIED PUSH API 101

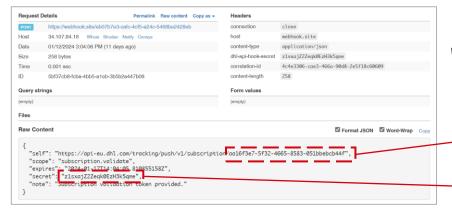
2



This how the response from the API will look like in Postman after creating a request to create a subscription by Shipment ID

This is the subscription ID, it will also appear in the hook website

3



This how the response from the API will look like in the Webhook system after creating a Shipment ID subscription request

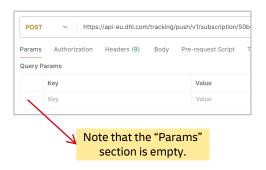
This is the subscription ID; it will need to be provided when activating the subscription

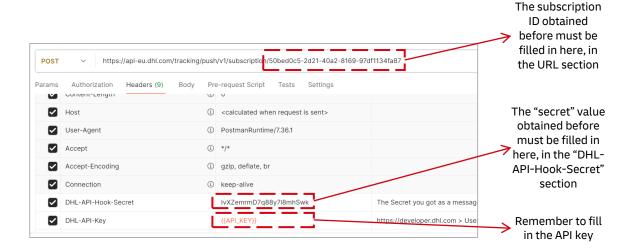
This is the "secret" for this subscription request, it will need to be provided when activating the subscription



DHL SHIPMENT TRACKING – UNIFIED PUSH API 101

4 Activate the subscription





Nothing else should be filled in the "Body" section, after filling the subscription ID and the Secret, click on "Send"



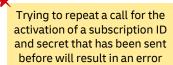
DHL SHIPMENT TRACKING - UNIFIED PUSH API 101

5

This how the response from the API will look like after requesting to activate a subscription by Shipment ID.



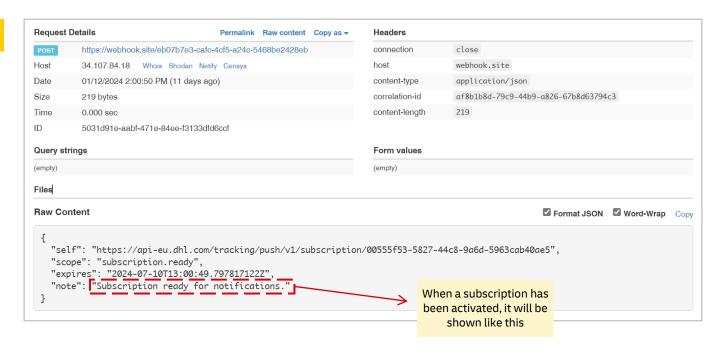
This is the subscription ID, it will also appear in the hook website





DHL SHIPMENT TRACKING - UNIFIED PUSH API 101

6





PUSH MESSAGES

DHL SHIPMENT TRACKING – UNIFIED PUSH API 101

Receiving notifications

The webhook system will receive notifications when the status of a shipment has changed, for example, when a parcel or a group of them have completed the customs inspection.

The format of the message will be often similar to what the source and business unit sends to the regular DHL Shipment Tracking – Unified API (Pull), only that this time each event will be pushed independently to the webbook system

```
"self": "https://api-eu.dhl.com/push/subscription/94d0131a-66b1-450d-82ac-4566b29c3dc1",
"scope": "subscription.push",
"expires": "2025-04-08T12:26:31.919Z",
"note": "Event push message",
"shipments": [
   "id": "777777770",
   "service": "express",
   "status": {
     "timestamp": "2023-03-02T07:53:47Z".
     "location": {
       "address": {
         "countryCode": "NL",
         "postalCode": "1043 AG".
         "addressLocality": "Oderweg 2, AMSTERDAM"
     "statusCode": "transit",
     "status": "in customs".
     "description": "The shipment is pending completion of customs inspection.".
     "piecelds": [
       "JD014600006281230701",
       "JD014600006281230702",
       "JD014600006281230703"
     "remark": "The shipment is pending completion of customs inspection.",
     "nextSteps": "The status will be updated following customs inspection."
```



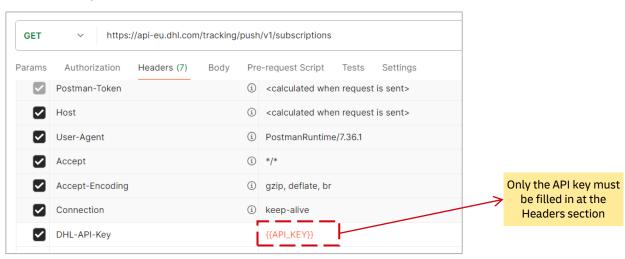
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Get subscriptions

This endpoint gets all subscriptions (account or shipment) related to an API key







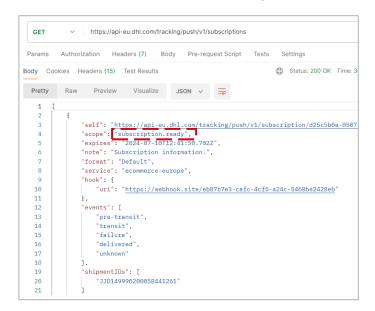
DHL SHIPMENT TRACKING - UNIFIED PUSH API 101

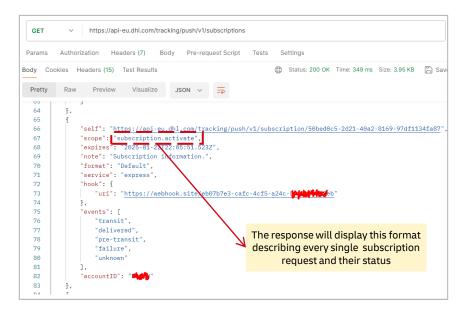


Get subscriptions

This endpoint gets all subscriptions (account or shipment) related to an API key

2







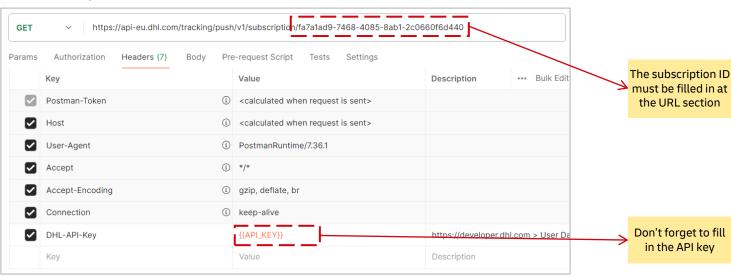
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Get subscription details

This endpoint gets all subscription details related to one subscription ID, be it an account or a shipment

1



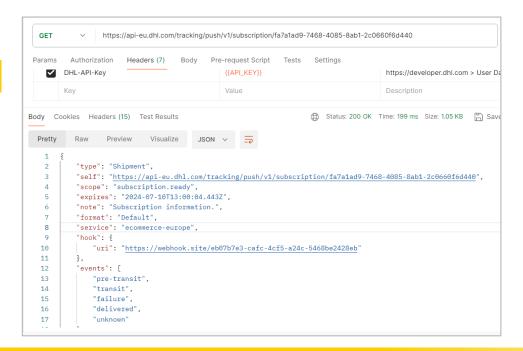


DHL SHIPMENT TRACKING - UNIFIED PUSH API 101



Get subscription details

2



Similar to what has been shown before for the endpoint to get all subscriptions, this is how the response look for a single subscription

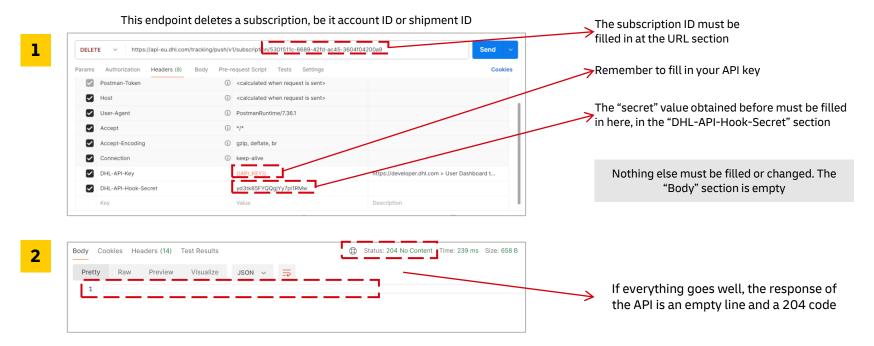
The API will also send an event to the webhook system, but the information provided there has little relevance



DHL SHIPMENT TRACKING - UNIFIED PUSH API 101



Delete subscription



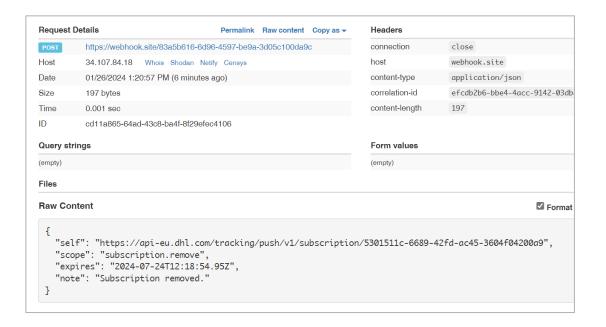


DHL SHIPMENT TRACKING - UNIFIED PUSH API 101



Delete subscription

3





Different to the API response, the webhook system will display a notification with more details in it.

This notification contains information like the subscription ID, confirmation of the subscription removal, etc.



RESPONSE CODES

DHL SHIPMENT TRACKING – UNIFIED PUSH API 101



Source: https://apidocs.whitehatsec.com/whs/docs/error-handling

- 200 OK: The response was successfully completed.
- 401 Unauthorized error: The user doesn't have the right credentials to do the call (API key is wrong, Endpoint is wrong).
- 404 Not found: The system didn't find the requested call. Something can be wrong with the URL, or the shipment ID is not supported/doesn't exist.
- 429 Too many requests: The user attempted to do more calls than possible, either with spike arrest or daily quota limit.
- 500 Internal server error: Something is wrong with the API systems.
- 504 Gateway Timeout error: The API spent too much time looking for a request and didn't find anything before timing out.

