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ShipEngine
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title: Webhooks
descripion: Webhooks let you respond to events in real-time.
ShipEngine will tell you as soon someone places an order on your
store, one of your shipments gets delivered, or whenever any other
package-tracking event occurs.

Webhooks
=================================
Think of webhooks as a way to receive automatic updates about
something that has happened. These events can be as simple as
receiving an update about the status of a shipment. Some companies
call them push notifications or even web callbacks.

For example, consider tracking a package without a webhook. You would
likely need to do the following:

 - Write code to call our servers every few minutes.
 - Integrate your code for each of your shipments.
 - Stack up countless API calls to receive 'no update.'
 - Waste server time and bandwidth.

Webhooks reverse the communication direction. Here's how:
 - Create a webhook in your ShipEngine admin panel.
 - When an event is updated by the carrier, your server receives an
alert about the update in real-time.
 - The result is one HTTP request rather than many.

Don't worry, we show you how so keep reading. Below is how a
ShipEngine tracking event alerts your server with a webhook once a
package has been delivered.

![what is a webhook](webhooks2.png)

How are APIs different than webhooks? APIs help you get the
information you requested. Webhooks push information to you
automatically once they're set-up in your ShipEngine account.

Types of Webhooks

Only one webhook can exist for each event. Below is a table of the
ShipEngine webhooks:

| Event | Description |

|--|--|
Tracking	Updates about your shipment status.
Batch completed	A collection of new shipping labels is complete.
Shipment rate updated	Updates shipping rate.
Carrier connected	Carrier is connected to your ShipEngine account.
Sales orders imported	Sales orders have been imported to your ShipEngine account.
Store refresh completed	Your store data has been refreshed.

Retry & Backoff

Sometimes your webhooks don't return an alert. When this occurs, the ShipEngine policy is that we attempt 3 times with a 2 hour delay between each attempt after which it will be discarded. But relax, all of your data is still accessible by calling the ShipEngine API.

HTTPS Endpoint URLs

You need your own HTTPS endpoint URL to help process your webhook alerts. From here on out, we'll refer to the HTTPS endpoint URL as your 'endpoint.'

If you don't have your own servers, we recommend getting a free endpoint at RequestBin.com. Another is Webhook.site.

For those users who have their own servers, here's what you need to set-up your webhooks:

 1. A web server. Preferably HTTPS for security reasons.
 2. Your server must accept the JSON request format.
 3. Your server must have a publicly-accessible URL so ShipEngine can access it.

Warning: since your endpoint will be public on the Internet, take all of the normal security precautions necessary for any public web server to guard against malicious attacks.

Creating Webhooks in Your Dashboard

1. Log into the ShipEngine portal.
2. Select **API Management**.
3. Choose the **Webhooks** tab.

4. Click the **edit** link at the top of the grid.
5. Enter the endpoint for your event(s).
6. Turn on the **Status** slider for your event(s).
7. Click **Save**.

Configuring Webhooks With the API

Below are the webhooks ShipEngine supports along with the required values:

Event	Value
Batch completed	`batch`
Shipment rate updated	`rate`
Any tracking event	`track`
Carrier connected	`carrier_connected`
Sales orders imported	`sales_orders_imported`
Order source refresh complete	`order_source_refresh_complete`

Testing a Webhook
In the following batch completed example call, replace `https://your-server.com` with your new endpoint URL. We'll use `https://your-server.com` for the following examples.

 Request
```
curl -iX POST https://api.shipengine.com/v1/environment/webhooks \
-H 'Content-Type: application/json' \
-H 'API-Key: __YOUR_API_KEY_HERE__' \
-d '{
    "url": "https://your-server.com",
    "event": "batch"
}'
```


JSON Response
```
{
    "webhook_id": "5519",
    "url": "https://your-server.com",
    "event": "batch"
}
```


Warning: HTTP 409 Conflict

If a webhook already exists in your ShipEngine account, you'll receive an `HTTP 409 Conflict` error after your request is sent. If this occurs, you need to review your active webhooks.

Tracking Status Codes

Below is a table of the tracking status codes and descriptions:

Status Code	Description
`AC`	The package was accepted by the carrier.
`IT`	The package is in transit to its destination.
`DE`	Hooray, the package was delivered.
`EX`	An exception was identified.
`UN`	The tracking status is unknown.
`AT`	An attempt was made to deliver the package.

Getting Rates Example

```
{
    "resource_url": "https://api.shipengine.com/v1/shipments/
se-2120221/rates",
    "resource_type": "API_RATE"
}
```

Batches Example

```
{
    "resource_url": "https://api.shipengine.com/v1/batches/
se-1013119",
    "resource_type": "API_BATCH"
}
```

Carrier Connected Example

```
{
    "resource_url": "https://api.shipengine.com/v1/carriers/se-1234",
    "resource_type": "API_CARRIER_CONNECTED"
}
```

Sales Order Imported Example (beta)

```
{
    "resource_url": "https://api.shipengine.com/v-beta/sales_orders",
```

```
    "resource_type": "API_SALES_ORDERS_IMPORTED",
    "data": [
    {
        "sales_order_id": "2078df4d-49c1-53da-837a-ad2781b782e0",
        "external_order_id": "611699195963",
        "external_order_number": "SH21622",
        "order_source":
        {
            "order_source_id": "4e4af80f-6974-48b6-b88f-e46f1c2a0b28",
            "order_source_nickname": "Shippity Shop Shopify",
            "order_source_code": "shopify",
            "order_source_friendly_name": "Shopify",
            "refresh_info":
            {
                "status": "idle",
                "last_refresh_attempt": "2018-09-12T19:29:21.657Z",
                "refresh_date": "2018-09-12T19:29:16.837Z"
            },
            "active": true
        },
        "sales_order_status":
        {
            "payment_status": "paid",
            "fulfillment_status": "unfulfilled",
            "is_cancelled": false
        },
        "order_date": "2018-09-12T19:18:12Z",
        "created_at": "2018-09-12T19:29:18.69Z",
        "modified_at": "2018-09-12T19:29:18.69Z",
        "payment_details":
        {
            "subtotal":
            {
                "currency": "usd",
                "amount": 40.0
            },
            "estimated_shipping":
            {
                "currency": "usd",
                "amount": 0.0
            },
            "estimated_tax":
            {
                "currency": "usd",
                "amount": 0.0
            },
            "grand_total":
            {
                "currency": "usd",
                "amount": 40.0
```

```
        }
    },
    "customer":
    {
        "name": "Greg Smith",
        "phone": null,
        "email": "greg.smith@example.com"
    },
    "bill_to":
    {
        "email": "greg.smith@example.com",
        "address":
        {
            "name": null,
            "phone": null,
            "company_name": null,
            "address_line1": "",
            "address_line2": null,
            "address_line3": null,
            "city_locality": null,
            "state_province": null,
            "postal_code": null,
            "country_code": null,
            "address_residential_indicator": "no"
        }
    },
    "ship_to":
    {
        "name": "Greg Smith",
        "phone": "",
        "company_name": null,
        "address_line1": "3800 N LAMAR BLVD STE 220",
        "address_line2": null,
        "address_line3": null,
        "city_locality": "Austin",
        "state_province": "",
        "postal_code": "78756",
        "country_code": "US",
        "address_residential_indicator": "no"
    },
    "sales_order_items": [
    {
        "sales_order_item_id": "6f8f3f51-7a5a-50b2-a842-
d6e89a5b5b26",
        "line_item_details":
        {
            "name": "Bubble Popper 4XL",
            "sku": "BUB-1-T",
            "weight":
            {
```

```
                        "value": 2.8,
                        "unit": "ounce"
                    }
                },
                "ship_to":
                {
                    "name": "Greg Smith",
                    "phone": "",
                    "company_name": null,
                    "address_line1": "3800 N LAMAR BLVD STE 220",
                    "address_line2": null,
                    "address_line3": null,
                    "city_locality": "Austin",
                    "state_province": "",
                    "postal_code": "78756",
                    "country_code": "US",
                    "address_residential_indicator": "no"
                },
                "requested_shipping_options":
                {
                    "shipping_service": null,
                    "ship_date": null
                },
                "price_summary":
                {
                    "unit_price":
                    {
                        "currency": "usd",
                        "amount": 40.0
                    },
                    "estimated_tax":
                    {
                        "currency": "usd",
                        "amount": 0.0
                    },
                    "estimated_shipping": null,
                    "total":
                    {
                        "currency": "usd",
                        "amount": 40.0
                    }
                },
                "quantity": 1,
                "is_gift": false
            }]
        }]
    }
```

Viewing Active Webhooks

Remember, your ShipEngine account can have only one active webhook for
each event. Viewing your active webhooks is done by making a GET
request to the `v1/environment/webhooks` endpoint.

Example Request
```
curl -iX GET https://api.shipengine.com/v1/environment/webhooks \
-H 'Content-Type: application/json' \
-H 'API-Key: __YOUR_API_KEY_HERE__'
```
JSON Response
```
[
    {
        "webhook_id": "5517",
        "url": "https://your-server.com/listener/batch",
        "event": "batch"
    },
    {
        "webhook_id": "5515",
        "url": "https://your-server.com/listener/rate",
        "event": "rate"
    },
    {
        "webhook_id": "5516",
        "url": "https://your-server.com/listener/track",
        "event": "track"
    }
]
```
To list a specific webhook, add the webhook ID, such as `5519`, to the
last part of the endpoint like the following example:
```
curl -iX GET https://api.shipengine.com/v1/environment/webhooks/5519 \
-H 'Content-Type: application/json' \
-H 'API-Key: __YOUR_API_KEY_HERE__'
```
JSON Response
```
curl -iX GET https://api.shipengine.com/v1/environment/webhooks/5519 \
-H 'Content-Type: application/json' \
-H 'API-Key: __YOUR_API_KEY_HERE__'
```