World’s Marathons Webhook API

v1 (2019-05-20)

Summary

The World’s Marathons webhook API makes it possible for you as an event organizer to fully automate the data transfer from World’s Marathons to your own registration system. You can subscribe to events which are sent for every successful order on the World’s Marathons platform. Our webhooks follow the industry standard used by services such as Stripe, Slack etc.

Security

World’s Marathons will sign the webhook events it sends to your endpoints. We do so by including a signature in each event’s WM-Signature header. This allows you to verify that the events were sent by World’s Marathons, not by a third party. Below is a description on how you verify the signature.

```
WM-Signature:
t=1492774577,v1=5257a869e7ecebeda32affa62cdca3fa51cad7e77a0e56ff536d0ce8e10
8d8bd
```

Step 1: Extract the timestamp and signatures from the header

Split the header, using the , character as the separator, to get a list of elements. Then split each element, using the = character as the separator, to get a prefix and value pair.

The value for the prefix t corresponds to the timestamp, and v1 corresponds to the signature(s).

Step 2: Prepare the signed_payload string

You achieve this by concatenating:

- The timestamp (as a string)
- A dot (The character .)
- And the actual JSON payload (i.e., the request’s body)

Step 3: Determine the expected signature

Compute an HMAC with the SHA256 hash function. Use the endpoint’s signing secret as the key, and use the signed_payload string as the message.

Step 4: Compare signatures

Compare the signature(s) in the header to the expected signature. If a signature matches, compute the difference between the current timestamp and the received timestamp, then decide if the difference is within your tolerance.

To protect against timing attacks, use a constant-time string comparison to compare the expected signature to each of the received signatures.

Example Code .NET

```
[HttpPost]
[Route("webhook")]
public async Task<IHttpActionResult> Webhook()
{
    var signature =
System.Web.HttpContext.Current.Request.Headers["WM-Signature"];
    string jsonBody = await Request.Content.ReadAsStringAsync();

    if (IsSignedPayloadOk(signature, jsonBody))
    {
        // order is coming from us.
        // do stuff
    }

    return Ok();
}

private bool IsSignedPayloadOk(string signature, string jsonBody)
{
    var parts = signature.Split(',');

    var receivedTimeStamp = parts[0].Split('=')[1];
    var receivedSecureSignedPayload = parts[1].Split('=')[1];

    var signedPayload = $"{receivedTimeStamp}.{jsonBody}";
    var secureSignedPayload = "";

    using (HMACSHA256 hmac = new
HMACSHA256(Encoding.UTF8.GetBytes("your_secret_goes_here")))
```

```
    {
        var hash = hmac.ComputeHash(Encoding.UTF8.GetBytes(signedPayload));
        secureSignedPayload = BitConverter.ToString(hash).Replace("-",
"").ToLower();
    }

    return secureSignedPayload == receivedSecureSignedPayload;
}
```

Subscribe

To subscribe to the World's Marathon order webhooks navigate into the Settings menu in the Race Office. From there you'll be able to activate the Webhooks and add your endpoint in the text box. From here you'll also be able to get your Secret.

IMG (to be added)

Respond to Webhooks

To acknowledge receipt of an event, your endpoint must return a 2xx HTTP status code. We will retry the webhook 4 times if we get anything else than a 2xx response back from your server. If the event has not been successfully received you will always be able to find all the order details by logging into the Race Office. From here you can also resend the webhook manually.

Webhook Event Body

Method

HTTP POST (SSL mandatory)
We will only accept endpoints using https as the information transferred can be sensitive.

Body

The body will be in JSON format.

Event Attributes

id string	Internal event id from World's Marathons

created timestamp	The date of the webhook-event. Measured in seconds since the Unix Epoch.
data hash	Object containing the order data associated to the event (see **Order Attributes** for details)
type string	Event type **"order.successful"**

Order Attributes

order_reference string	Customer order reference. A unique ID to identify the order.
order_date timestamp	The date the order was completed. Measured in seconds since the Unix Epoch.
amount decimal	The total amount of the order
currency string	Currency set up. 3 letter currency code (ISO 4217)
coupon hash	If a coupon is used. Object containing the details of the coupon.
team_name string	Team name in case of a Team/Corp/Relay ticket
participants array of hashes	Array containing all the participants of the order (see **Participant Attributes** for details)

Participant Attributes

id string	Participant ID
first_name string	First name of the participant
last_name string	Last name of the participant
email string	Email of the participant
nationality string	Alpha-2 Country code (ISO 3166)

birth_date string	Birth date (yyyy-MM-dd) or “N/A” if not available
gender string	M (male) or F (female)
club string	Sports club
tickets array of hashes	Array containing the tickets for the participant. (see **Product Attributes** for details)
add_ons array of hashes	Array containing Add-Ons for the participant. (see **Product Attributes** for details)
info array of hashes	Array containing other information collected from the participant. (see **Options Attributes** for details)
team_leader bool	Indicates if the participant is the team leader. Only applicable for team orders.
address hash	Participant address if collected (See **Address Attribute**)
phone hash	Participant phone if collected (See **Phone Attribute**)
ice hash	Participant in case of emergency contact if collected (See **Phone Attribute**)

Product Attributes

product_id string	Internal unique product identifier
product_name string	Name of the product
product_type string	Type of product **“ticket”** or **“add_on”**
vat decimal	VAT % to be applied to the product
price decimal	Price of the product on the point of purchase
product_discount Decimal (optional)	Product discount if applicable
options	Options selected for the product such as size, color, group etc.

array of hashes	(see **Options Attributes** for details)
external_product_id string (optional)	An id field that can be used to map the product to an id in the receiving system

Options Attributes

label string	Id of the information e.g., “size”
value string	The value the participant selected/inserted. Multi option values are separated by pipe character |
external_option_id string (optional)	An id field that can be used to map the option to an option in the receiving system
external_value_id string (optional)	An id field that can be used to map the selected value to a value in the receiving system

Participant Address Attributes

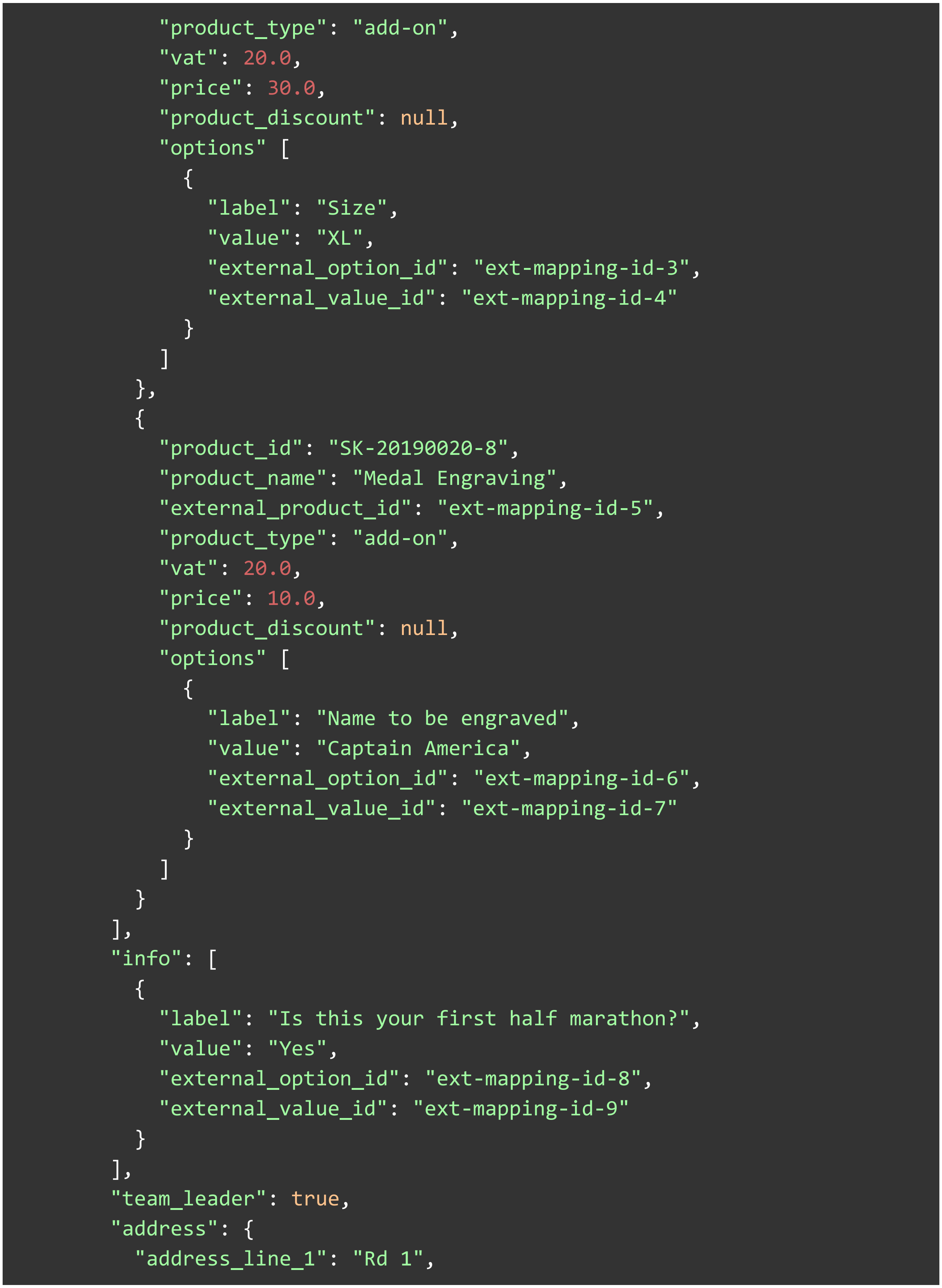
address_line_1 string	Address Line 1
zip string	Zip or Postal Code
city string	City
state string	State
country_code string	Alpha-2 Country code (ISO 3166)

Participant Phone Attributes

country_code string	Country Code
number string	Phone number without country code
full_name string	Only used for ICE

Example Body

```
{
  "id": "762a379d-1dee-4637-a387-077d1a84d280",
  "created": 1558345762,
  "type": "order.successful",
  "data": {
    "order_reference": "2019-00000001",
    "order_date": 1558345762,
    "amount": 130.00,
    "currency": "EUR",
    "coupon": {},
    "team_name": "The Avengers",
    "participants": [
      {
        "id": "1",
        "first_name": "Steve",
        "last_name": "Rogers",
        "email": "steve@worldsmarathons.com",
        "gender": "M",
        "nationality": "US",
        "birth_date": "1956-02-25",
        "club": "Cap",
        "tickets": [
          {
            "product_id": "SK-20190020-1",
            "product_name": "Half Marathon",
            "external_product_id": "ext-mapping-id-1",
            "product_type": "ticket",
            "vat": 20.0,
            "price": 90.0,
            "product_discount": null
          }
        ],
        "add_ons": [
          {
            "product_id": "SK-20190020-4",
            "product_name": "T-Shirt",
            "external_product_id": "ext-mapping-id-2",
```



```
            "product_type": "add-on",
            "vat": 20.0,
            "price": 30.0,
            "product_discount": null,
            "options" [
              {
                "label": "Size",
                "value": "XL",
                "external_option_id": "ext-mapping-id-3",
                "external_value_id": "ext-mapping-id-4"
              }
            ]
          },
          {
            "product_id": "SK-20190020-8",
            "product_name": "Medal Engraving",
            "external_product_id": "ext-mapping-id-5",
            "product_type": "add-on",
            "vat": 20.0,
            "price": 10.0,
            "product_discount": null,
            "options" [
              {
                "label": "Name to be engraved",
                "value": "Captain America",
                "external_option_id": "ext-mapping-id-6",
                "external_value_id": "ext-mapping-id-7"
              }
            ]
          }
        ],
        "info": [
          {
            "label": "Is this your first half marathon?",
            "value": "Yes",
            "external_option_id": "ext-mapping-id-8",
            "external_value_id": "ext-mapping-id-9"
          }
        ],
        "team_leader": true,
        "address": {
          "address_line_1": "Rd 1",
          "address_line_2": "c/o B",
          "city": "City",
          "state": "State",
          "postal_code": "111 11",
          "country": "US"
        },
        "phone": {
          "code": "+1",
          "phone": "555 01 01 01"
        },
        "ice": {
          "name": "Bruce Banner"
          "code": "+1",
          "phone": "555 01 01 02"
        }
      }
    ]
  }
}
```