PayPal First billing agreement transaction

Overview

This tutorial takes you through the steps required to do your first transaction using PayPal billing agreement API with Verifone.

What is a billing agreement and how does it work?

Billing agreement API enables a customer and a merchant to enter a contract.

The merchant can bill a customer any time, without requiring a customer to login and authorize the transaction.

With a Billing Agreement the amount and the frequency of transactions are not fixed.

Examples

- An agreement to pay eBay seller fees for listing items on eBay
- An agreement between Uber and customer

In this scenarios, a customer gives their agreement only once, and later they do not have to authorize every time to PayPal. Billing the customer is done completely by merchant's side.

Step 1: Set up

Before making a transaction, you need:

- A PayPal account
- A valid JWT Token received from the entity service
- paymentProviderContract. It is created as part of onboarding merchant into Verifone via the Common Portal.

Step 2: Create a billing agreement token

First, we need to create a billing agreement token.

POST request URL: /billingAgreement/initiate

Body:

```
{
    "ppcUid": "21261b6f-07df-4b63-3f4f-7fa0b83a20db",
    "description": "Stored PayPal account with The Partner merchant",
    "enableAddressChange": true,
    "returnUrl":
"https://68f8497efb9ce8aeef3ed419c6ef0597.m.pipedream.net/success",
    "cancelUrl":
"https://68f8497efb9ce8aeef3ed419c6ef0597.m.pipedream.net/cancel"
}
```

Response:

```
{
    "approvalUrl":
"https://www.sandbox.paypal.com/agreements/approve?ba_token=BA-29L89918T33851208
",
    "billingToken": "BA-29L89998T33851208"
}
```

Step 3: Approve token

Copy the approval Url from the step 2. Open the link in a browser. Login and approve the billing agreement token.

Note: Store billingToken as you will need it in step 4 for creating a billing agreement.

Step 4: Create a billing agreement

After approving with PayPal, use POST request with PPC and billingToken to create a Billing agreement.

POST request URL:

/billingAgreement/create

Body:

```
{
    "billingToken":"BA-29L89998T33851208",
    "ppcUid":"21261b6f-07df-4b63-3f4f-7fa0b83a20db"
}
```

Response:

```
{
    "agreementId": {
        "id": "B-1WW844616B620123",
```

```
        "state": "ACTIVE",
        "description": "Stored PayPal account with The Partner merchant",
        "merchant": {
            "payeeInfo": {
                "email": "merchant@business.example.com"
            }
        },
        "payer": {
            "payerInfo": {
                "email": "payer@business.example.com",
                "firstName": "John",
                "lastName": "Doe",
                "payerId": "VJRXDDV4UWZ2W"
            }
        },
        "plan": {
            "merchantPreferences": {}
        },
        "createTime": "2021-03-03T11:56:27.000Z",
        "updateTime": "2021-03-03T11:56:27.000Z"
    }
}
```

Note: You need to store the billing agreement ID, as you need it for making subsequent transactions.

Step 5: Integrate PayPal Risk Mitigation components

FraudNet is a JavaScript library developed by PayPal and embedded into a merchant's web page to collect browser-based data to help reduce fraud. Upon checkout, these data elements are sent directly to PayPal Risk Services for fraud and risk assessment.

To integrate FraudNet, embed a short code snippet in the merchant website and add a custom header to the Verifone call. See Integrating FraudNet.

Please note that FraudNet is for desktop browsers only. For risk analysis data gathered on mobile devices, please refer to Magnes documentation.

Step 6: Set Transaction Context Overview

The Set Transaction Context API is a standalone service that works in conjunction with payment APIs. Use this API to set the transaction context to send additional data about a customer to PayPal before a customer transaction is processed. PayPal uses this data to complete a pre-transaction risk management evaluation.

See PayPal Risk Analysis.

Step 7: Create a transaction

Create a transaction that later will be used for capturing using billing agreement.

Note: Send the trackingId used in the Set transaction context API, and the Risk mitigation components in the header paypalFraudId. This would enable PayPal to make a decision by combining the information collected using Risk Mitigation components (FraudNet and Magnes), the Set transaction context API, and the create transaction API.

POST request URL:

/transactions

Body:

```json
{
    "context":    {
        "paymentProviderContract": "26761b6f-07df-4b63-9f4f-7fa0b83a20db"
    },
    "intent": "AUTHORIZE",
    "amount": {
        "currencyCode": "USD",
        "value": 20000
    },

    "applicationContext": {
    "returnUrl":
"https://68f8497efb9ce8aeef3ed419c6ef0597.m.pipedream.net/success",
    "cancelUrl":
"https://68f8497efb9ce8aeef3ed419c6ef0597.m.pipedream.net/cancel"
    },
    "shipping": {
        "address": {
            "country": "IN",
            "postalCode": "91",
            "countrySubdivision": "IN-MH",
            "city": "yyy",
            "addressLine1": "add1",
            "addressLine2": "add2"
        },
        "fullName": "JamesSmith"
    }
}
```

Response:

```json
{
    "id": "e432ddb2-82a8-4213-a7da-8a7c0a3952de",
    "status": "INITIATED",
    "orderId": "1W065188KT702530J",
    "createdAt": "2021-03-25T13:56:27Z",
    "approvalUrl":
"https://www.sandbox.paypal.com/checkoutnow?token=1W065188KT702530J"
}
```

Step 8: Authorize transaction by billing agreement

Use transaction ID from step 5 and agreement ID from step 4.

POST request URL:

/transactions/{TRANSACTION_ID}/authorize

Body:

```
{
    "agreementId":"B-1WW844616B620123"
}
```

Response:

```
{
    "id": "e123ddb2-82a8-4213-a7da-8a7c0a3952de",
    "authorizationId": "2JM15603JS454230B",
    "createdAt": "2021-03-25T14:00:46Z",
    "expiresAt": "2021-04-23T14:00:46Z",
    "status": "AUTHORISED",
    "payer": {
        "payerId": "VJRXDDV4UWZ4W",
        "shippingAddress": {
            "country": "IN",
            "postalCode": "400097",
            "countrySubdivision": "Maharashtra",
            "city": "Mumbai",
            "addressLine1": "Flat no. 507 Wing A Raheja Residency",
            "addressLine2": "Film City Road"
        }
    }
}
```

Step 9: Capture transaction by billing agreement

Use transaction ID from step 5 and agreement ID from step 4.

POST request URL:

/transactions/{TRANSACTION_ID}/capture

Body:

```
{
    "agreementId":"B-1WW844616B620123"
}
```

Response:

```
{
    "id": "9512303c-c7a2-4417-8cdd-92a617890053",
```

```json
        "captureId": "6CB11430732996717",
        "createdAt": "2021-03-25T14:07:23Z",
        "isFinalCapture": true,
        "status": "AUTHORISED"
}
```