

iPay Web Payment Integration Document

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iPay Web Payments Integration

iPay Web Payments gives your purchasers a rearranged checkout encounter that keeps them neighborhood to your site or mobile application all through the payment authorization process and gives them a chance to utilize bank account to pay without sharing or entering any sensitive data on your site.

How iPay Web Payments works

1. Go to the iPay website using following URL.

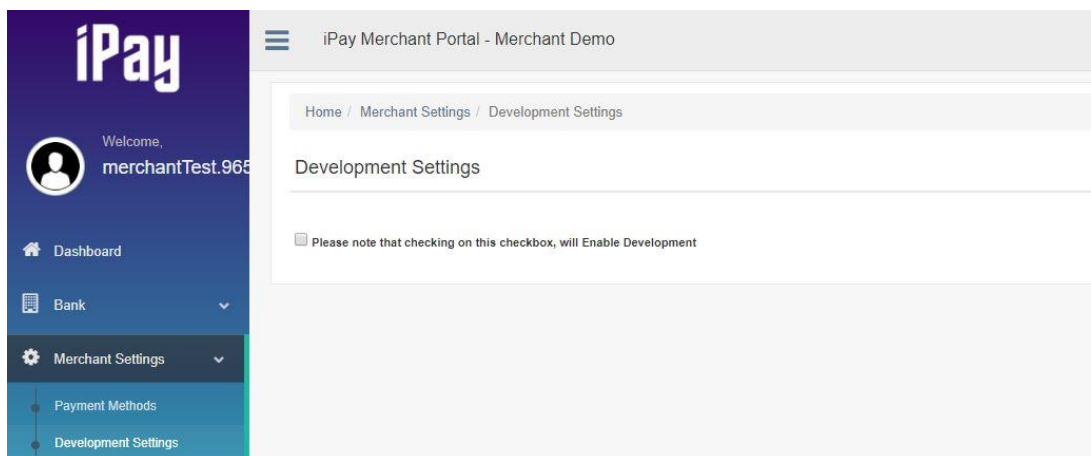
Sandbox: <https://sandbox.ipay.lk>

Production: <https://ipay.lk>

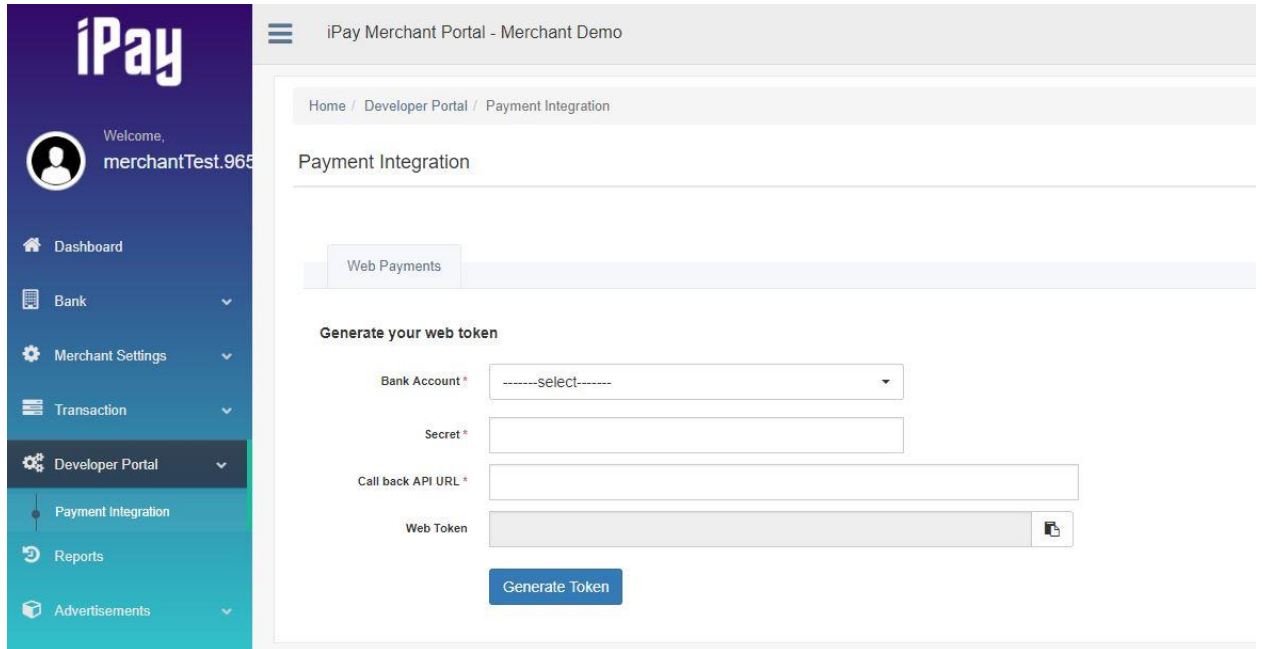
Register as a merchant. Next log in to the merchant portal by using the username and password.

2. Go to the ‘Merchant Settings’ on the side bar and click on ‘Development Settings’.

Then the page will display a check box which enables the development options. Then the merchant should enable development by clicking on the checkbox.



3. After enabling development option 'Developer Portal' will automatically display on the side bar. Then go to the 'Payment Integration' and merchant should generate his web token by giving required details.



The screenshot displays the iPay Merchant Portal interface. On the left is a dark blue sidebar with the iPay logo and a navigation menu including Dashboard, Bank, Merchant Settings, Transaction, Developer Portal (highlighted), Payment Integration, Reports, and Advertisements. The main content area is titled 'iPay Merchant Portal - Merchant Demo' and shows a breadcrumb trail: Home / Developer Portal / Payment Integration. Below this, the 'Payment Integration' section is active, with a sub-tab for 'Web Payments'. The 'Generate your web token' form contains the following fields: 'Bank Account *' (a dropdown menu showing '-----select-----'), 'Secret *' (a text input field), and 'Call back API URL *' (a text input field). A 'Web Token' field is present below the others, currently empty, with a copy icon to its right. A blue 'Generate Token' button is positioned at the bottom of the form.

4. Then Merchant should give value for the 'Secret' option. This secret code is used to make checksum.
5. Merchant should give a Call back API URL. This is use to notify the payment status.
6. Web Token will be automatically displayed when merchant click on Generate Token button. It is specified for the merchant and when using the JavaScript file which is given for the merchant from iPay, merchant should use this 'web token' in JavaScript file.

iPay Web Merchant Integration JavaScript Library

Merchants have to import iPay JavaScript library in to merchant's webpage. Merchants should not download the iPay JavaScript library and use it locally. Merchant should always use the Library using the CDN given below.

NOTE: If a merchant hasn't added the JQuery CDN to merchant's web page, he/she has to add following script as well to his/her webpage.

```
<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>

SANDBOX
<script src="https://sandbox.ipay.lk/resources/js/ipay-web-payments-1.0.0.min.js"></script>

PRODUCTION
<script src="https://ipay.lk/resources/js/ipay-web-payments-1.0.0.min.js"></script>
```

After those steps implement iPay's JavaScript checkout code snippet in to your web page. (An example is given below).

```
ipaywebpayment({
  env: 'sandbox', // sandbox | production
  token : {
    sandbox : 'eyJhbGciOiJIUzUxMiJ9.eyJiYW5rQWNjb3VudCI6ImFjYy512RlIjoizWNoIiw',
    production : ''
  },
  drawPayButton : false, // optional

  // payment() is called when the button is clicked
  payment: function() {
    return payInfo({
      totalAmount : 1800.00,
      currency : 'LKR',
      additionalAttributes : {}
      // merchant additional attributes if any (optional)
    });
  },
  //onConfirm() is called when the buyer confirms the payment or scan the QR code
  onConfirm: function(data) {
    //merchant should save the transaction reference against the order
  },
});
```

```

        //onAuthorize() is called when the buyer make the payment by iPay mobile
application
        onAuthorize: function(data) {
            // merchant should validate the transaction status with their backend
        }
    }, "#btnPay"); // html element (button, href etc..)

```

Checkout Script Functions

Payment()	Function called by the script when a buyer clicks on the iPay button or the particular button given by the website for checkout.
onConfirm()	Function called by the script when the buyer confirms the payment or scan the QR code by iPay APP. Merchant should save the transaction reference against the order.
onAuthorize()	Function called by the script when the customer make the payment by iPay APP.

Once the payment is authorized by customer, iPay will trigger *onAuthorize()* function and notify the payment status to your call-back API same time. Payment notification will contain the following data as POST parameters, so you need to make sure the call-back API URL you set is accepting these parameters on a POST request & update your database accordingly.

Call-back API Parameters

Parameter Name	Data Type	Description
transactionReference	String	iPay web payment reference number for particular transaction
transactionTimeInMillis	String	Transaction initiated time in milliseconds
transactionAmount	String	Transaction amount passed to iPay from web merchant to proceed the transaction.
creditedAmount	String	Amount credited to web merchant account after deducting commissions

transactionStatus	String	Status of the transaction (A, P, D)
transactionMessage	String	Message for the transaction
additionalAttributes	Json	Merchant additional attributes provided at the initiation of the web payment
checksum	String	Checksum generated using payload data

Transaction status codes

A - Accepted (Transaction process is successfully completed)

P - Pending (Money successfully deducted from the customer bank account, but unable to transfer to merchant's account. The amount will be transferred at the EOD)

D - Decline (Transaction failed)

Verifying Payment Status

It is important to verify payment notification before taking any action on the payment response. You can do the verification using the checksum parameter generated and sent by iPay.

The checksum is generated using the below combination of parameters. Checksum is generated using HMAC SHA256 algorithm.

$$message = transactionReference + transactionTimeInMillis + transactionAmount + creditedAmount + transactionStatus + transactionMessage + secret$$

$$checksum = H(key1 || H(key2 || message))$$

PS: refer the below links for further clarification

<https://en.wikipedia.org/wiki/HMAC>

<https://www.jokecamp.com/blog/examples-of-creating-base64-hashes-using-hmac-sha256-in-different-languages/>

Once you receive the payment notification from iPay, you can locally generate this checksum using above mentioned parameters and the secret you have locally. Your locally generated checksum should equals to the checksum sent by iPay if the payment notification is valid.

And also once we invoke the call-back API, you should return HTTP response code 200 (OK) if your whole operation is succeeding from your side. Any other HTTP response code will be taken as failure responses.

iPay Web Payment Button

iPay Web Payments comes with a default iPay button which is used to do start the payment process. Merchants can either use the default button (which is a div tag) given or any custom button (any relevant tag) or element according to the wish of the merchant.