



CTECH PAYMENT GATEWAY
STUDENT INTEGRATION DOCUMENTATION

INTRODUCTION

Ctech Pay for Students is a Malawian payment platform designed to help students easily and securely accept payments for their projects and ventures. Whether you're selling handmade crafts, offering tutoring services, or organizing events, Ctech Pay provides a simple and reliable way to test fund collection.

GETTING STARTED

You ought to have received a Ctech Payment Gateway API by this point. Please get in touch with your project coordinator if you haven't received this API.

To continue with the integration steps in this document, you will need your CtechPay account's API key, so make a note of it now.

YOU ARE ENCOURAGED TO DOWNLOAD AND USE POSTMAN API CLIENT

CREATING AN ORDER

1. CARD PAYMENTS

We can now create orders in the Ctechpay gateway now that the service API key has been provided. An order is always necessary before we can take a payment from a customer so that we have something to work with when interacting with the gateway's API.

HTTP Request Method: POST

Resource (URI): <https://api-sandbox.ctechpay.com/student/>

Params:

Add these params to your request to create an Order

Parameter (Header)	value
endpoint	order

Body:

Include the following **mandatory** JSON data in your request's form or body content.

Parameter	Description	Example Value
token	Your API token	abcdefg123456
registration	Your registration number	REG123
amount	Order amount	100

Note: These are the mandatory minimum input parameters for creating an order using the Ctech Payment Gateway API for Students - many more values are available.

For instance, you may also wish to add some optional attributes

Parameter	Description	Example Value
merchantAttributes	Merchant attributes enable you to include your custom options when the customer is interacting with the payment page. Set to true to enable the following compulsory and optional parameters: (redirectUrl, cancelUrl, cancelText)	true
redirectUrl	A compulsory URL to redirect the user after a payment has been made.	https://example.com/ Note: Only https requests are supported
cancelUrl	A compulsory URL to redirect the user when they choose to cancel the payment.	https://example.com/ Note: Only https requests are supported
cancelText	An optional custom text on the cancelUrl link	“Go back to shop,” “Cancel Payment”

Example requests.

a. PHP (Curl)

<?php

```
$curl = curl_init();
```

```
curl_setopt_array($curl, array(
    CURLOPT_URL => 'https://api-sandbox.ctechpay.com/student/?endpoint=order',
    CURLOPT_RETURNTRANSFER => true,
    CURLOPT_ENCODING => '',
    CURLOPT_MAXREDIRS => 10,
    CURLOPT_TIMEOUT => 0,
    CURLOPT_FOLLOWLOCATION => true,
    CURLOPT_HTTP_VERSION => CURL_HTTP_VERSION_1_1,
    CURLOPT_CUSTOMREQUEST => 'POST',
    CURLOPT_POSTFIELDS => array('registration' => 'REG123','token' => '1234abcd','amount' => '100'),
));
```

```
$response = curl_exec($curl);
```

```
curl_close($curl);
echo $response;
```

b. NodeJs (Axios)

```
const axios = require('axios');
```

```
const FormData = require('form-data');
let data = new FormData();
data.append('registration', 'REG123');
data.append('token', '1234abcd');
data.append('amount', '100');

let config = {
  method: 'post',
  maxLength: Infinity,
  url: 'https://api-sandbox.ctechpay.com/student/?endpoint=order',
  headers: {
    ...data.getHeaders()
  },
  data : data
};

axios.request(config)
.then((response) => {
  console.log(JSON.stringify(response.data));
})
.catch((error) => {
  console.log(error);
});
```

c. Python (requests)

```
import requests

url = "https://api-sandbox.ctechpay.com/student/?endpoint=order"

payload = {'registration': 'REG123',
'token': '1234abcd',
'amount': '100'}
files=[

]
headers = {}

response = requests.request("POST", url, headers=headers, data=payload,
files=files)

print(response.text)
```

d. Dart (Dio)

```
var data = FormData.fromMap({
  'registration': 'REG123',
  'token': '1234abcd',
  'amount': '100'
});
```

```
var dio = Dio();
var response = await dio.request(
  'https://api-sandbox.ctechpay.com/student/?endpoint=order',
  options: Options(
    method: 'POST',
  ),
  data: data,
);

if (response.statusCode == 200) {
  print(json.encode(response.data));
}
else {
  print(response.statusMessage);
}
```

e. Dart (http)

```
var request = http.MultipartRequest('POST', Uri.parse('https://api-
sandbox.ctechpay.com/student/?endpoint=order'));
request.fields.addAll({
  'registration': 'REG123',
  'token': '1234abcd',
  'amount': '100'
});
```

```
http.StreamedResponse response = await request.send();
```

```
if (response.statusCode == 200) {
  print(await response.stream.bytesToString());
}
else {
  print(response.reasonPhrase);
}
```

Example response (JSON)

```
{
  "order_reference": "0123erf-834fg-bsh73-dhaydm2aa",
  "payment_page_URL": "https://paypage.sandbox.com/?code=6a6a6a5b8hdgd6"
}
```

Note: For the subsequent steps, you need the *order_paypage_URL* (hosted payment page URL) values. You might also find it useful to extract and store the *order_reference* value.

Request payment from your customer

Now that we have successfully established an order in the Ctech Payment Gateway, the next thing we need to do is request our customer to make a payment.

You must refer the customer to the **payment_page_URL** that was provided as a response to our request to establish an order in order to accomplish this. The Ctech payment page will take care of the 3-D Secure and authorization process for us.

Depending on your needs, this redirect can be carried out or executed as a full-page redirect, as a 'Lightbox' implementation, or inside an HTML tag.

Request payment from your customer

In order to receive the outcome of the payment, you may also interrogate the "**ref**" query parameter that will be added to the redirectUrl you have specified. This will contain the order reference value, which you may use to query the outcome of a payment with a call to the Ctech Payment Gateway APIs.

2. MOBILE PAYMENTS (AIRTEL MONEY)

This API allows you to initiate a payment request through the CtechPay platform using the Airtel payment method.

The API is a RESTful API and utilizes HTTP request methods. The API is designed to have predictable, resource-oriented URLs and to use HTTP response codes to indicate API errors. JSON will be returned in all responses from the API, including errors.

HTTP Request Method: POST

Resource (URI): <https://api-sandbox.ctechpay.com/student/mobile/>

Request Parameters:

Include the following mandatory JSON data in your request's form or body content.

| Parameter | Type | Value | Description |
|--------------|---------|--|--|
| airtel | integer | 1 | Set to 1 to indicate that the payment is being made using the Airtel payment method. |
| token | string | Your service API token | A valid authentication token |
| registration | string | REG123 | Your valid registration number |
| amount | string | 50 | Amount to be paid |
| phone | string | Valid Airtel phone number eg, 0999xxxxxx | The phone number of the payer. It should start with either +265, 265, or 0 |

Example requests

Follow the same examples from [here](#), just replace with the new parameters.

Example response (JSON Object)

```
{
  "data": {
    "transaction": {
      "id": "TRANSID285920CTEHPAY",

```

```

        "status": "Success."
    },
    "status": {
        "response_code": "DP00800001006",
        "code": "200",
        "success": true,
        "result_code": "ESB000010",
        "message": "Success."
    }
}

```

Response description

data (object): Contains information about the transaction.

transaction (object): Contains transaction details.

id (string): The unique identifier for the transaction.

status (string): The status of the transaction.

status (object): Provides information about the status of the response.

response_code (string): A response code indicating the status of the response.

code (string): The HTTP status code of the response.

success (boolean): Indicates whether the request was successful.

result_code (string): A result code indicating the outcome of the request.

message (string): A message describing the outcome of the request.

QUERY ORDER STATUS

1. CARD PAYMENTS

This API allows you to retrieve the status of a transaction using its unique identifier (orderRef).

The API is a RESTful API and utilizes HTTP request methods. The API is designed to have predictable, resource-oriented URLs and to use HTTP response codes to indicate API errors. JSON will be returned in all responses from the API, including errors.

HTTP Request Method: POST

Resource (URI): <https://api-sandbox.ctechpay.com/student/status/>

Request Parameters:

| Parameter | Type | Value | Description |
|--------------|--------|---------------------------------|-----------------------------------|
| token | string | Your service API token | A valid authentication token |
| registration | string | REG123 | Your valid registration number |
| orderRef | string | 26fb1c2b-cfa6-5758-f7bk-hjkhj77 | Your Transaction Reference Number |

Example requests

Follow the same examples from [here](#), just replace with the new parameters.

Example response (JSON)

```
{
  "_id": "69f6c621-0e29-49c0-a88b-f5ad7b1e55bd",
  "orderReference": "e58635b5-c3e4-47dc-a72d-fd30d9925a66",
  "status": "PURCHASED",
  "currencyCode": "MWK",
  "amount": 100,
  "formattedAmount": "MWK 200",
  "cardHolderName": "INNOCENT"
}
```

2. MOBILE PAYMENTS (AIRTEL MONEY)

This API allows you to retrieve the status of a transaction using its unique identifier (trans_id).

The API is a RESTful API and utilizes HTTP request methods. The API is designed to have predictable, resource-oriented URLs and to use HTTP response codes to indicate API errors. JSON will be returned in all responses from the API, including errors.

HTTP Request Method: GET

Resource (URI): <https://apisandbox.ctechpay.com/student/mobile/status/>

Request Parameters:

| Parameter | Type | Value | Description |
|-----------|--------|-----------------------|--|
| Trans_id | string | TRANSID1234567CTEHPAY | The unique identifier of the transaction |

Example request

GET

https://apisandbox.ctechpay.com/student/mobile/status/?trans_id=TRANSID1234567CTEHPAY