



Hubtel

Recurring Payments API Documentation



API Change Log

Changes between document issues are cumulative. The latest document issue contains all the changes made in earlier issues.

v1.0 (2019-10-31)

This issue is the first official release

v1.1 (2019-12-12)

This issue contains a cancel invoice API endpoint.

v1.2 (2020-02-12)

This issue includes changes to the callback structure and additional payment channels.

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1.0 Overview

The **Hubtel Recurring Payments API** allows you to setup and receive recurring payments from your customers for services provided using mobile money and card options.

With a single integration, you can easily and securely accept recurring mobile money payments on your application. All you need to do is to simply provide the customer debit details and Hubtel will handle the scheduling and the various debits.

The following provides an overview of the REST API endpoints for interacting programmatically with the Hubtel Recurring P API within your application.

2.0 Getting Started

First you need to create a Hubtel Account to be able to use the Recurring Payments API. If you already have a Hubtel account, then skip to step 2.

Step 1: Create a Hubtel Account

Step 2: Have the Account Verified and approved.

2.1 Authentication

You need to authenticate every API request you make to the Recurring Payments API using Basic Auth. Authenticate by encoding your username and password to Base64 HTTP Basic Authorization. Use your **API ID** as your username and **API KEY** as your password.

Login to your Hubtel account using <https://app-site.hubtel.com/settings/integrations> to generate your API ID and API KEY.

A Base64 encoding of your API keys should have your Authorization header appear like this:
Basic a2hlcW2sb3U6bWdhtHd9YW8=.

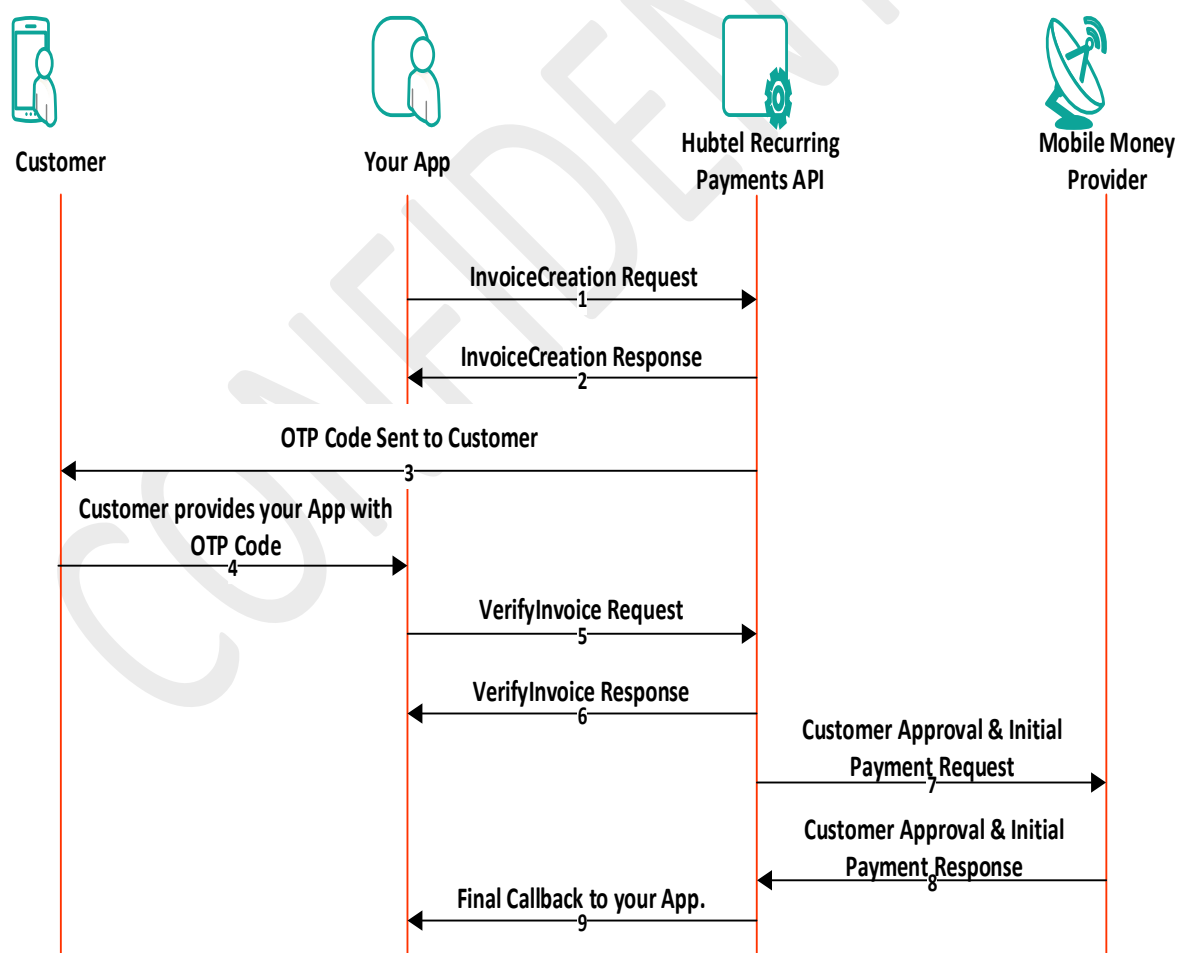
You will also have to share your public IP address for whitelisting. Only requests from this IP will be accepted. Send this via email to support@hubtel.com.

3.0 Understand the Service Flow

The Hubtel Recurring Payments service includes two main API endpoints which are used together to setup a recurring payment invoice. They are

- **Create Invoice Endpoint:** This allows you to create a recurring payment invoice on a customer wallet. The invoice will stay in a temporary state until the verification is done. This step initiates the invoice creation process.
- **Verify Invoice Endpoint:** This allows you to verify the invoice with the customer involvement through an OTP code. This completes the invoice creation process.

The entire process is asynchronous. The figure below shows the process of creating and verifying a Recurring Payment Invoice using these two endpoints:



The table below describes the process for creating and verifying a Recurring Payment Invoice:

Step	Description
1	Your App sends an Invoice Creation request to Hubtel.
2	Hubtel performs authentication on request and sends response to your App with a unique identifier (<i>RecurringInvoiceId</i>)
3	Hubtel sends verification OTP code to customer number to provide to third party (your app).
4	Your App sends an Invoice Verification request to Hubtel with the customer OTP code and unique identifier (<i>RecurringInvoiceId</i>)
5	Hubtel performs authentication on request and sends a response to Your App.
6	Hubtel goes to Mobile Money provider (with customer confirmation) to perform the initial debit on the customer wallet.
7	After first payment is taken, a callback is sent to your App based on the provided URL.
8	Whenever the invoice is due (scheduled time), a direct debit is made on the customer mobile money wallet and a callback is sent to your App.

4.0 API Reference

4.1 Create Invoice API

To initiate a Create Invoice transaction, make an HTTP POST to the below URL with the required parameters:

API Endpoint	https://rip.hubtel.com/api/proxy/{HubtelAccountNumber}/create-invoice
Request Type	POST
Content Type	JSON

Request Parameters:

<u>Parameter</u>	<u>Type</u>	<u>Requirement</u>	<u>Description</u>
orderDate	String	Mandatory	The Date of invoice creation. This is a timestamp of format MM/DD/YYYY HH:MM:SS Eg: 11/01/2019 08:57:00
invoiceEndDate	String	Optional	The date the recurring invoice is supposed to end. This is a timestamp of format MM/DD/YYYY HH:MM:SS Eg: 11/01/2019 08:57:00
startTime	String	Mandatory	The time of day when the debit would be taken whenever it is due. Format is HH:MM Eg: 10:00
paymentInterval	String	Mandatory	The interval between payments from the customer. The possible options are: “ DAILY ” – This means the customer will be debited every day. “ WEEKLY ” – This means the customer will be debited every week (7 days) “ MONTHLY ” – This means the customer will be debited every month. “ QUARTERLY ” – This means the customer will be debited every Quarter (3 months).

customerMobileNumber	String	Mandatory	The customer's mobile money number. This should be in the international format. Eg: 233249111411
paymentOption	String	Mandatory	The payment option which the customer selects to pay for. Currently, the available options are: "MobileMoney" .
channel	String	Mandatory	The mobile money channel provider. Currently the available channels are: "mtn_gh_rec" – This is for payments using an MTN mobile money wallet. "hubtel_gh" – This is for payments using a hubtel wallet.
customerName	String	Optional	The name of the customer.
recurringAmount	Double	Mandatory	The amount of money which will be debited from the customer wallet whenever the invoice is due.
totalAmount	Double	Mandatory	The total amount to be debited from the customer wallet. Currently pass the same value as the recurringAmount.
initialAmount	Double	Mandatory	The amount to be debited from the customer wallet for the first payment. This can be different from the recurringAmount.
currency	String	Mandatory	The currency of the transaction.
callbackUrl	String	Mandatory	A URL used to receive the callback for successful invoice creation and debit. All subsequent debit callbacks are also sent to this same URL.
description	String	Mandatory	A brief description of the transaction. You can specify the use of the transaction in this: Eg: "Extreme Gaming Service"

Response Parameters:

<u>Parameter</u>	<u>Type</u>	<u>Description</u>
ResponseCode	String	The unique response code on the status of the transaction.
message	Double	The message accompanying the response code. This gives a brief description of the response from the API.
data	Double	An object containing the required data response from the Create Invoice API.
recurringInvoiceId	String	The unique ID used to identify a recurring invoice. This ID will be used anytime a debit is done on the customer wallet for this invoice.
requestId	String	The verification request ID which is to be used in the Verify Invoice request payload.
otpPrefix	String	A 4 letter word prefix which is to be used together with the actual OTP code send to the customer in the Verify Invoice request payload.

Sample Request

POST **Endpoint** HTTP/1.1

Host: **BaseURL**

Accept: **application/json**

Content-Type: **application/json**

Authorization: **Basic endje0BiZHhza250fT3=**

Cache-Control: **no-cache**

```
{
  "orderDate": "11/05/2019 13:53:00",
  "invoiceEndDate": "11/10/2019 13:53:00",
  "description": "Extreme Gaming Service",
  "startTime": "14:00",
```

```
"paymentInterval": "DAILY",
"customerMobileNumber": "233246012176",
"paymentOption": "MobileMoney",
"channel": "mtn-gh",
"customerName": "Daniel Barnes",
"recurringAmount": 0.10,
"totalAmount": 0.10,
"initialAmount": 0.10,
"currency": "GHS",
"callbackUrl": "https://webhook.site/b503d1a9-e726-f315254a6ede"
}
```

Sample Response

```
{
  "responseCode": "0001",
  "message": "Your request has been processed successfully.",
  "data": {
    "recurringInvoiceId": "0f84e20a2839482e807128e8c21d08d6",
    "requestId": "a6487bc44eae44849fd80326a0dd802a",
    "otpPrefix": "OQDM"
  }
}
```

4.2 [Verify Invoice API](#)

To send a Verify Invoice request, make an HTTP POST to the below URL with the required parameters:

API Endpoint	https://rip.hubtel.com/api/proxy/Verify-Invoice
Request Type	POST
Content Type	JSON

Request Parameters:

<u>Parameter</u>	<u>Type</u>	<u>Requirement</u>	<u>Description</u>
recurringInvoiceId	String	Mandatory	The unique ID used to identify the recurring invoice being verified. It is taken from the create invoice response.
requestId	String	Mandatory	The verification request ID which is received in the create invoice response.
otpCode	String	Mandatory	The OTP code used for verification. It consists of the four letter otpPrefix received in the create invoice response and the four digit OTP code sent to the customer. Eg: "RTYE-9231"

Response Parameters:

<u>Parameter</u>	<u>Type</u>	<u>Description</u>
ResponseCode	String	The unique response code on the status of the transaction.
message	Double	The message accompanying the response code. This gives a brief description of the response from the API.
data	Double	An object containing the required data response from the Verify Invoice API.
recurringInvoiceId	String	The unique ID used to identify the recurring invoice. This ID will be used anytime a debit is done on the customer wallet for this invoice.

Sample Request

POST *Endpoint* HTTP/1.1

Host: *BaseURL*

Accept: *application/json*

Content-Type: *application/json*

Authorization: *Basic endje0BiZHhza250fT3=*

Cache-Control: *no-cache*

```
{
  "recurringInvoiceId": "0f84e20a2839482e807128e8c21d08d6",
  "requestId": "a6487bc44eae44849fd80326a0dd802a",
  "otpCode": "OQDM-9514"
}
```

Sample Response

```
{
  "responseCode": "0001",
  "message": "Your request has been processed successfully. You will receive a callback on the final status shortly.",
  "data": {
    "recurringInvoiceId": "0f84e20a2839482e807128e8c21d08d6"
  }
}
```

4.3 Callback

When you provide a callback URL in your invoice creation request, you will be sent a callback on the final state of the invoice as well as the final state of all payments made on that invoice. This means the callback URL you specify should be implemented to listen for an HTTP POST payload from Hubtel.

Recurring invoice creation requires a one-time approval from the customer in order for money to move from the mobile money wallet into your Hubtel Account. As a result, invoice creation has an asynchronous flow on all networks. This also means that the final status of

an invoice cannot be determined immediately after the request. It may take some time (usually less than 10 minutes). So you're required to implement an HTTP callback on your server to be able to receive final status of the transaction.

We recommend using service likes [RequestBin](#) or [Webhook Tester](#) to test your callback. These services allow you to define temporary dummy endpoints which will show you the requests and all the data you are receiving from Hubtel.

Sample Callback 1 (successful transaction)

```
{
  "ResponseCode": "0000",
  "Message": "success",
  "Data": {
    "OrderId": "1d0e06bc689c4de2bb87a54829a89640",
    "Description": "My recurring service",
    "RecurringInvoiceId": "8ae267e31af748d4934b0420be6f47f0",
    "TransactionId": "5814152092296267804084",
    "ClientReference": "8ae267e31af748d4934b0420be6f47f0",
    "ExternalTransactionId": "5814152092296267804084",
    "OrderDate": "2020-02-10 09:58:00",
    "InvoiceEndDate": "2019-10-14 12:00:00",
    "CustomerMobileNumber": "233246912184",
    "Charges": 0.01,
    "AmountAfterCharges": 0.19,
    "AmountCharged": 0.20,
    "Amount": 0.20,
    "InitialAmount": 0.20,
    "RecurringAmount": 0.10
  }
}
```

Sample Callback 2 (failed transaction)

```
{
  "ResponseCode": "2001",
  "Message": "Failed",
  "Data": {
    "OrderId": "1d0e06bc689c4de2bb87a54829a89640",
    "Description": "My recurring service",
    "RecurringInvoiceId": "8ae267e31af748d4934b0420be6f47f0",
    "TransactionId": "5814152092296267804084",
    "ClientReference": "8ae267e31af748d4934b0420be6f47f0",
    "ExternalTransactionId": null,
    "OrderDate": "2020-02-10 09:58:00",
    "InvoiceEndDate": "2019-10-14 12:00:00",
    "CustomerMobileNumber": "233246912184",
    "Charges": 0.01,
    "AmountAfterCharges": 0.19,
    "AmountCharged": 0.20,
    "Amount": 0.20,
    "InitialAmount": 0.20,
    "RecurringAmount": 0.10
  }
}
```

4.4 Cancel Invoice API

To send a Cancel Invoice request, make an HTTP POST to the below URL with the required parameters:

API Endpoint	https://rip.hubtel.com/api/proxy/{HubtelAccountNumber}/cancel-invoice/{recurringInvoiceId}
Request Type	DELETE
Content Type	JSON

Request Parameters:

<u>Parameter</u>	<u>Type</u>	<u>Requirement</u>	<u>Description</u>
recurringInvoiceId	String	Mandatory	The unique ID used to identify the recurring invoice being cancelled. It is taken from the initial invoice creation process.

Response Parameters:

<u>Parameter</u>	<u>Type</u>	<u>Description</u>
ResponseCode	String	The unique response code on the status of the request.
message	Double	The message accompanying the response code. This gives a brief description of the response from the API.

Sample Request

DELETE [/api/proxy/11920/Cancel-Invoice/0f84e20a2839482e807128e8c21d08d6](https://rip.hubtel.com/api/proxy/11920/Cancel-Invoice/0f84e20a2839482e807128e8c21d08d6)

HTTP/1.1

Host: rip.hubtel.com

Accept: [application/json](#)

Content-Type: [application/json](#)

Authorization: Basic [endje0BiZHhza250f3=](#)

Cache-Control: [no-cache](#)

Sample Response

```
{
  "responseCode": "0000",
  "message": "Your request has been processed successfully"
}
```

5.0 API Response Codes

The Hubtel Recurring Payments API uses standard HTTP error reporting. Successful requests return HTTP status codes in the 2xx. Failed requests return status codes in 4xx and 5xx.

Response Codes are included in the JSON response body, which contains information about the error or status:

<u>Response Code</u>	<u>Description</u>
0001	Pending State. The transaction has been processed successfully. A callback will be sent on the final state.
0000	The transaction was successful. (final status)
2001	The transaction failed. Either because the approval failed with the network provider or because the initial payment failed.
0005	There was an HTTP failure/exception when reaching the payment partner.
4000	Validation Errors. Something is not quite right with this request. Please check and try again.
4101	Authorization for request is denied.
4103	Permission denied

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