
API HUB: API Specification

OTP Payment API | Version 0.3

Document Release Notes

Grameenphone Ltd. – API Hub Functional Specification Document	
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1. Introduction

This document details out the REST API of API Hub Platform of Telenor - Grameenphone. External Application needs to implement the API for making transactions with the API Hub. The API Hub accepts different HTTP methods but for OTP Payment API it will support POST, the request body should always be in the JSON format and the platform responds with the JSON body as response.

API Hub always responds with the status code for each request submitted. In case if the transaction is successful server gives status code as **200** and for all other un-successful transactions in the requests server responds with the **400** and with the details error code & error description in the response.

Rate limiting policy violation it will give **429** and invalid API Keys/Token expires or any other internal server error it will provide **500** errors.

2. OAuth Validation

2.1 Get Token

This is used to get Access Token from API Hub.

2.1.1 URL

<https://apigw.grameenphone.com:9001/oauth/v1/token>

2.1.2 Method

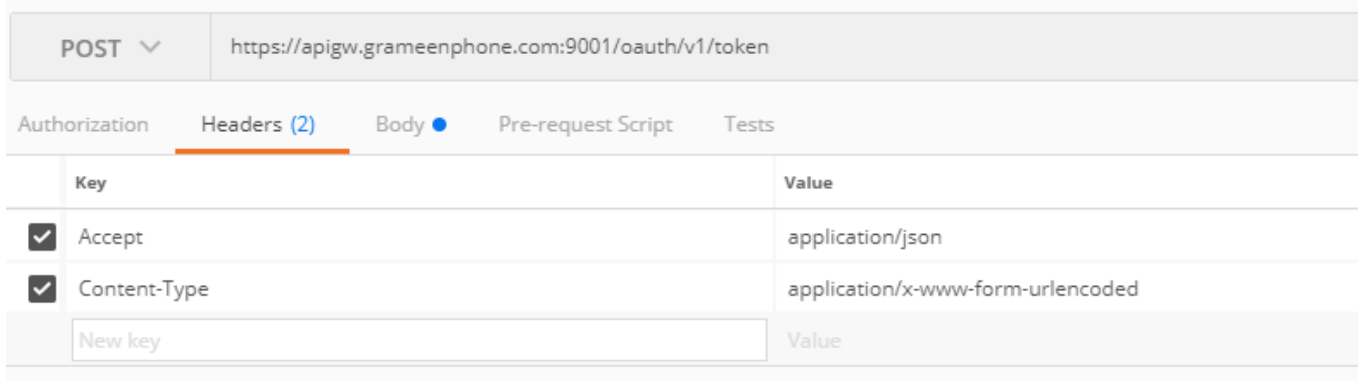
POST

2.1.3 Header

2.1.3.1 Header Fields

Key	value
Accept	application/json
Content-Type	application/x-www-form-urlencoded

1.1.1 Header snapshot from postman



The screenshot shows a Postman interface for a POST request to `https://apigw.grameenphone.com:9001/oauth/v1/token`. The 'Headers' tab is selected, showing a table with the following headers:

Key	Value
<input checked="" type="checkbox"/> Accept	application/json
<input checked="" type="checkbox"/> Content-Type	application/x-www-form-urlencoded
<input type="text" value="New key"/>	<input type="text" value="Value"/>

1.2 Body

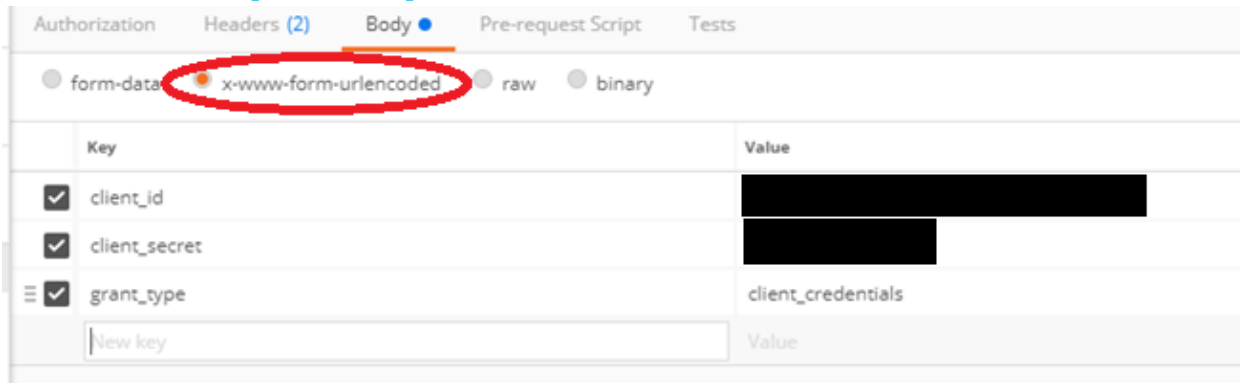
1.2.1 Encoding type

x-www-form-urlencoded

1.2.2 Fields

Key	Description
client_id	client id provided by GP
client_secret	client secret provided by GP
grant_type	value should be "client_credentials" (Static)

1.2.3 Header snapshot from postman



1.3 Response

1.3.1 Success response

Key	Description
Status	Value will contain "approved"
accessToken	Token that will be used in all other API call
expiresIn	Validity of token in seconds
Scope	Can have 3 values : Read/Write/ Read Write
tokenType	BearerToken (static)

```
{
  "status": "approved",
  "accessToken": "████████████████████████████████████████",
  "expiresIn": "3599",
  "scope": "Read Write",
  "tokenType": "BearerToken"
}
{"ErrorCode" : "invalid_client", "Error" : "ClientId is Invalid"}
```

1.3.2 Error response

```
{"ErrorCode" : "string", "Error" : "string"}
```

3. OTP Payment API

3.1 Push OTP

This is used by API Hub users to send OTP through SMS to Grameenphone subscriber prior to any purchase request initiated by the end user.

3.1.1 URL

<https://apigw.grameenphone.com:9001/payments/v2/customers/<PhoneNumber>/pushotp>

For each API call, access token need to be passed in header of each API.

KEY	VALUE	DESCRIPTION
<input checked="" type="checkbox"/> Accept-Encoding	application/gzip	
<input checked="" type="checkbox"/> Content-Type	application/json	
<input checked="" type="checkbox"/> Authorization	Bearer [REDACTED]	

3.1.2 Method

POST

3.1.3 Request

3.1.3.1 Parameters

Parameter	Data Type	Description
sourceId	String (M)	Id of the source system/channel
idType	String (M)	Type of the Subscriber Identifier. i.e: MSISDN
amount	String (M)	Charged amount need to be put here
priceCode	String (M)	Price code of the service. Please collect price code from System Admin.

serviceId	String (M)	Service identifier. Please collect price code from System Admin.
description	String (M)	Short description of the service.

3.1.3.2 Format

```
{
  "sourceId":"string",
  "idType":"MSISDN",
  "amount":"string",
  "priceCode":"string",
  "serviceId":"string",
  "description":"string"
}
```

3.1.4 Response

3.1.4.1 Parameters

Parameter	Data Type	Description
accessInfo	JSON Object (M)	This object defines the Transaction Status properties for the API call
statusCode	String (M)	200 → Success 400 → Error 404 → Resource not found 429 → Rate limit violation 500 → Internal Server Error
timestamp	String (M)	timestamp given by API Hub to the partner
Data		
serverReferencecode	String (M)	Reference code of the request
otpTrasactionId	String (M)	OTP transaction ID
transactionId	String (M)	Transaction id of API GW

For Errors:		
Code	String (M)	Error Code given by the Platform
message	String (M)	Description of the error code
transactionId	String (M)	Id of the transaction
type	String (M)	Type of error.
timestamp	String (M)	Event time of the request
Status code	String (M)	Backend status code

3.1.4.2 Success Format

```
{
  "accessInfo": {
    "timestamp": "2018-03-20T15:27:12+06:00",
    "statusCode": "200"
  },
  "data": {
    "serverReferencecode": "5460211141521538032210727",
    "otpTrasactionId": "5460211141521538032210727",
    "transactionId": "2018-03-20T09:27:12.204Z525141"
  }
}
```

3.1.4.3 Error Format

```
{
  "code": "400.01.52021",
  "message": "CHARGE CODE DOES NOT EXIST IN THE SERVICE",
  "transactionId": "2018-03-20T09:24:50.420Z198762",
  "type": "Error from Backend",
  "accessInfo": {
    "timestamp": "2018-03-20T15:24:50+06:00",
    "statusCode": "52021"
  }
}
```

3.2 Charge with OTP

This is used by API Hub users to charge Grameenphone's end customer by validating OTP.

3.2.1 URL

<https://apigw.grameenphone.com:9001/payments/v2/customers/<PhoneNumber>/chargeotp>

For each API call, access token need to be passed in header of each API.

KEY	VALUE	DESCRIPTION
<input checked="" type="checkbox"/> Accept-Encoding	application/gzip	
<input checked="" type="checkbox"/> Content-Type	application/json	
<input checked="" type="checkbox"/> Authorization	Bearer [REDACTED]	

3.2.2 Method

POST

3.2.3 Request

3.2.3.1 Parameters

Parameter	Data Type	Description
sourceId	String (M)	Id of the source system/channel
idType	String (M)	Type of the Subscriber Identifier. i.e: MSISDN
serviceId	String (M)	Service identifier. Please collect price code from System Admin.
transactionPin	String (M)	Pin code need to be put here.
otpTransactionId	String (M)	OTP transaction ID which obtained from the push otp request
category	String (M)	Category of the product like app, web, sms etc.
description	String (M)	Short description of the service.

3.2.3.2 Format

```
{
  "sourceId": "string",
  "idType": "MSISDN",
```

```

"serviceId": "string",
"transactionPin": "string",
"otpTransactionId": "string",
"category": "string",
"description": "string"
}

```

3.2.4 Response

3.2.4.1 Parameters

Parameter	Data Type	Description
accessInfo	JSON Object (M)	This object defines the Transaction Status properties for the API call
statusCode	String (M)	200 → Success 400 → Error 404 → Resource not found 429 → Rate limit violation 500 → Internal Server Error
timestamp	String (M)	timestamp given by API Hub to the partner
Data		
serverReferencecode	String (M)	Reference code of the request
amount	String (M)	Amount of the product
transactionId	String (M)	Transaction id of API GW
For Errors:		
Code	String (M)	Error Code given by the Platform
message	String (M)	Description of the error code
transactionId	String (M)	Id of the transaction
type	String (M)	Type of error.

timestamp	String (M)	Event time of the request
Status code	String (M)	Backend status code

3.2.4.2 Success Format

```
{
  "data": {
    "serverReferenceCode": "5760211171521545410522578",
    "amount": "0.95",
    "transactionId": "5720211171521545362674355"
  },
  "accessInfo": {
    "timestamp": "2018-03-20T17:30:10+06:00"
  },
  "statusCode": "200"
}
```

3.2.4.3 Error Format

```
{
  "code": "400.02.51029",
  "message": "TRANSACTION REFERENCE CODE DOES NOT EXIST OR TARANSACTION NOT FOUND IN LAST 3 MINS",
  "transactionId": "5720211171521545362674355",
  "type": "Error from Backend",
  "accessInfo": {
    "timestamp": "2018-03-20T17:32:22+06:00",
    "statusCode": "51029"
  }
}
```

3.3 Error Codes

Error code Format: HTTP Status Code. APIGW Proxy number. Backend Error Code

Code	Error	Description	HTTP Error Code
404.02.001	Resource not found	Resource not found/Invalid resource	404
429.02.002	Too Many Requests	Spike arrest violation	429
429.02.003	Too Many Requests	Quota limit exceeded	429
429.02.004	Too Many Requests	Concurrent rate limit connection exceeded	429
500.02.005	Internal Server Error	JavaScript runtime error	500
500.02.005	Internal Server Error	Invalid ApiKey for given resource	500
500.02.007	Internal Server Error	Request input is malformed or invalid	500
500.02.008	Internal Server Error	Invalid JSON path	500
500.02.009	Internal Server Error	Internal Server Error: {faultName}	500
400.01.002	Bad Request	Missing input parameter: sourceId	400
400.01.001	Bad Request	Missing input parameter: idtype	400
400.01.004	Bad Request	Missing input parameter: amount	400
400.02.008	Bad Request	Missing input parameter: OTP Transaction ID	400

Backend Error Codes: For example: 400.02. **52002**

S. No.	Error Code	Error Type	Error Description	Remarks
1.	52001	Major	INVALID JSON OBJECT. : {OBJECT NAME}	
2.	52002	Major	{PARAM NAME} PARAMETER IS MISSING	

			EX: API ACCESS KEY PARAMETER IS MISSING	
3.	52003	Critical	PLATFORM AUTHENTICATION FAILED	
4.	52004	Critical	METHOD NOT ALLOWED	
5.	52005	Major	DUPLICATE CRM TRANSACTION REQUEST.	
6.	52006	Major	INVALID DATE VALUE FOR PARAMETER {PARAM NAME}.	
7.	52007	Major	INVALID ACCESS CHANNEL	
8.	52008	Major	INVALID MSISDN	
9.	52009	Minor	INVALID PROFILE STATUS	
10.	52010	Minor	INVALID LANGUAGE PARAMETER VALUE	
11.	52011	Minor	INVALID EMPLOYEE FLAG VALUE	
12.	52012	Minor	INVALID DND FLAG VALUE	
13.	52013	Minor	INVALID BLACKLIST VALUE	
14.	52014	Minor	INVALID SERVICE CATEGORY	
15.	52015	Minor	INVALID SERVICE SUB CATEGORY	
16.	52016	Minor	SERVICES LIST NOT FOUND FOR THE PASSED REQUEST	
17.	52017	Minor	INVALID PAGINATION START INDEX	
18.	52018	Minor	SERVICE NOT FOUND OR SERVICE IDENTIFIER DOES NOT EXIST	
19.	52019	Minor	PRODUCT IDENTIFIER NOT FOUND IN PASSED SERVICE	
20.	52020	Minor	SERVICE NOT ACTIVE	
21.	52021	Minor	CHARGE CODE DOES NOT EXIST IN THE SERVICE	
22.	52022	Minor	INVALID AUTO RENEWAL FLAG VALUE	
23.	52023	Minor	INVALID CHARGE USER FLAG VALUE	

24.	52024	Minor	SUBSCRIBER DOES NOT HAVE ANY SUBSCRIPTION BASED TRANSACTIONS FOR THE PASSED REQUEST	
25.	52025	Minor	SUBSCRIBER DOES NOT HAVE ANY TRANSACTIONS MADE ON THE PLATFROM FOR THE PASSED REQUEST	
26.	52026	Minor	INVALID TRANSACTION TYPE FILTER VALUE	
27.	52027	Minor	SUBSCRIBER DOES NOT HAVE ANY TRANSACTIONS MADE ON THE PLATFROM FOR THE PASSED REQUEST	
28.	52028	Minor	REFUND TRANSACTION FAILED, CHARGING REFERENCE CODE DOES NOT EXIST	
29.	52029	Minor	MNP PORT OUT TRANSACTION FAILED, SUBSCRIBER ALREADY IN PORT OUT STATE	
30.	52030	Critical	TPS LIMIT EXCEEDED	
31.	52031	Critical	CRM API GATEWAY INTERNAL APPLICATION ERROR	
32.	52032	Minor	TRANSACTION FAILED, INTERNAL REQUEST TIMEOUT OCCURED	
33.	52033	Critical	CHARGING GATEWAY INTERNAL ERROR (DIAMETER) - {FAILURE REASON}	
34.	52034	Major	CHARGING GATEWAY IS BUSY(DIAMETER)	
35.	52035	Minor	CHARGING FAILED- {ACTUAL FAILURE REASON}	
36.	52036	Minor	NO ACTION CAN BE PERFORMED FOR THIS REQUEST	
37.	52037	Minor	INVALID PARAMETER VALUE	
38.	52038	Major	OTP TRANSACTION REFERENCE AND OTP PIN DOES NOT MATCH	
39.	52039	Minor	TRANSACTION REFERENCE CODE DOES NOT EXIST OR TARANSACTION NOT FOUND IN LAST 10 MINS	
40.	52040	Minor	OTP NO OF ATTEMPTS EXCEEDED	

41.	52041	Minor	YOU ARE ALREADY SUBSCRIBED FOR THIS SERVICE	
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