Corporate Customers Payment Portal

API Documentation

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1.0 Introduction

This document describes the technical specifications for the API endpoints used by the CCPP (corporate customers payment portal) which connects the billing systems to the Paystack payment channels for expanding opportunities for self-service and touch-point with the ipNX brand.

2.0 Objectives

1. Introduce the CCPP
2. Itemize the APIs involved

3.0 API Categories

The following are the two API category endpoints

1. User management API endpoints
2. Transaction API endpoints

   The user management API endpoints will address tasks such as change password, login, logout etc. while the transaction API endpoints will address the customer information and transactions such as retrieve invoice and invoice line items; apply payments, check wallet balance, fund wallet etc.

4.0 API TECHNICAL SPECIFICATIONS

The API endpoints are the following:

4.1 Login
4.2 Change Password
4.3 Logout
4.4 Forgot Password
4.5 Reset Password
4.6 Invoice
4.7 Invoice Line Items
4.8 Wallet Balance
4.9 Fund Wallet
4.10 Apply Wallet
4.11 Apply Payments

Appearing below are the specific API endpoints details and descriptions:

4.1 Login

1. Verified customers will be able to login to their account and make transactions.
2. For first time login, in response to the login request the ***force_password_change*** field will be set to 1. As a result, the user will be redirected to the change password page.
3. After a successful password change, the user is directed to the dashboard showing the list of open invoices.

URL	/api/v1/user/login
Method:	POST

Headers:

Accept	application/json

URL Parameters:
None.

Data Parameters:

Name	Description	Required	Data Type
customer_number	customer number on billing system	Yes	string
password	Customer's chosen password	Yes	string

Response Parameters:

Name	Description	Expected	Data Type
response	Response message	Yes	string
status_code	HTTP status code	Yes	integer constant
customer_number	customer number on billing system	Yes	string
email	Verified customer email	Yes	string
access_token	This token is available for verified users when logging in. This token is expected to be sent in the header of every request for all protected resources such as invoices, balances, payments, etc.	Yes	*string*
force_password_change	When set to 1 (or *True),* this hidden flag forces customers to change their password on initial login. Note that the default value is 0.	Yes	Boolean (0 or 1) (where 1 means password must be changed, while 0 means a forced change is not required)

Error Response: (403)

Name	Description
error	Error String
error_description	Description of error

Request/Response Sample
(1) Successful Login

Request	```{ "customer_number": "300100000000", "password": "@hSDJ7gLIK2*1%BKBBB", }```
Response	```{ "status_code": 200, "response": "Account Found", "customer_number": "300100000000", "email": "customer_email@gmail.com", "force_password_change": 0, "access_token": "{access_token}" }```

(2) Unsuccessful Login

Request	```{ "customer_number": "300100000000", "password": "@hSDJ7gLIK2*1%BKBBB", }```
Response	```{ "status_code": 403, "error": "unauthorised" }```

4.2 Change Password

Verified customers can change their passwords using this endpoint. They will however need to provide their customer_number, the old and new passwords.

URL	/api/v1/user/password/change
Method:	POST

Headers:

Accept	application/json
Authorization	Bearer {access_token}

Header Parameters:

Name	Description	Required	Data Type
access_token	This token is available for verified users when logging in. This token is expected to be sent in the header of every request for all protected resources such as invoices, balances, payments, change password etc.	Yes	string

Data Parameters:

Name	Description	Required	Data Type
customer_number	customer number on billing system	Yes	string
old_password	Customer's old password	Yes	string
password	Customer's chosen password	Yes	string
password_confirmation	New password confirmed	Yes	string

Response Parameters:

Name	Description	Expected	Data Type
response	Response message	Yes	string
status_code	HTTP status code	Yes	integer constant

Error Response: (422)

Name	Description
error	Error String
error_description	Description of error

Request/Response Sample

(1) Successful Password Change

Request	{
	    "customer_number": "300100000000",
	    "old_password": "@hSDJ7g@hSDCCCCCL",
	   "password": "@hSDJ7gLIK2*1%BKBBB",
	    "password_confirmation": "@hSDJ7gLIK2*1%BKBBB"
	}

Response	{
	    "status_code": 200,
	    "response": "Password successfully changed"
	}

(2) Unsuccessful Password Change

Request	{
	    "customer_number": "300100000000",
	    "old_password": "@hSDJ7g@hSDCCCCCL",
	   "password": "@hSDJ7gLIK2*1%BKBBB",
	    "password_confirmation": "@hSDJ7gLIK2*1%BKBBB"
	}

Response	{
	    "status_code": 422,
	   "error": "Password cannot be changed"
	}

4.3 Logout

Customers will be able to login and then logout of their accounts. This API works after successful login for only verified accounts. The header must contain an authorization bearer access token obtained during login. The entire session variables will be destroyed after calling this endpoint.

URL	**/api/v1/user/logout**
Method:	POST

Headers:

Accept	application/json
Authorization	Bearer {access_token}

URL Parameters:
None.

Response Parameters:

Name	Description	Expected	Data Type
status_code	HTTP status code	Yes	integer constant
response	Response message	Yes	string

Error Response: (400)

Name	Description
error	Error String
error_description	Description of error

Response Sample
(1) Successful Logout

Response	{
	   "status_code": 200,
	   "response": "You have been successfully logged out."
	}

(2) Unsuccessful Logout

Response	{
	
	   "status_code": 403,
	   "error": "unauthorised"
	
	}

4.4. Forgot Password

Verified customers can receive a password-reset link using this endpoint. They will however need to provide their customer_number. The password reset link will be sent to their email boxes based on the supplied *customer_number.*

URL	**/api/v1/user/password/email**
Method:	POST

Headers:

Accept	application/json

URL Parameters:
None.

Data Parameters:

Name	Description	Required	Data Type
customer_number	customer number on billing system	Yes	string

Response Parameters:

Name	Description	Expected	Data Type
status_code	HTTP status code	Yes	integer constant
response	Response message	Yes	string

Error Response: (400)

Name	Description
error	Error String
error_description	Description of error

Request/Response Sample

Request	{
	  "customer_number": "300100000000",
	}

Response	{
	    "status_code": 200,
	    "response": "We have emailed your password reset link to you"
	}

4.5 Reset Password

This internal endpoint would be called by the customer's reset action from his/her inbox. This endpoint processes the password reset request sent to the customer's email boxes. It only works when activated by clicking on the *password_reset_link.* This link is expected to contain a *password_reset_token* with an appropriately expiry datetime.

This endpoint using a GET request method redirects to the secured reset password page if authorized by the user. There would be a comparison of the *password_reset_token* sent to the customer's emailbox and the *password_reset_token* saved in the database, if it matches, the customer will be allowed to access the password reset page. If not an error message is generated, such as an "unauthorized action" message.

This endpoint is invoked only when the user successfully activate the *password_reset_link.* It uses a POST request method to set the user's password based on the parameters received from the reset password page. The required parameters are customer_number, password and

password_confirmation. Again, there would be a comparison of the *password_reset_token* from the header and the *password_reset_token* saved in the database, if it matches, the customer will be allowed to reset password. If not, an error message is generated. This header check is necessary to protect the endpoint and avoid a scenario where users access this page directly. After successful password reset, the user is directed to the dashboard (the page showing the list of invoices).

A. Activating Reset Link

URL	**/api/v1/user/password/reset/** {password_reset_token}
Method:	GET

Headers:

Accept	application/json

URL Parameters:

Name	Description	Required	Data Type
password_reset_ token	The token to reset password. This is unique for each customer.	Yes	string

Response Parameters:

Name	Description	Expected	Data Type
status_code	HTTP status code	Yes	integer constant
response	Response message	Yes	string

Error Response: (400)

Name	Description
error	Error String
error_description	Description of error

Request/Response Sample
(1) Successful Reset Link Activation

Response	{
	"status_code": 200,
	"response": "Kindly proceed to password reset page"
	}

(2) Unsuccessful Reset Link Activation

Response	{
	"status_code": 400, "error": "unauthorized password reset action" }

B. Completing Reset Action:

URL	**/api/v1/user/password/reset**
Method:	POST

Headers:

Accept	application/json
Authorization	Bearer {password_reset_token}

Header Parameters:

Name	Description	Required	Data Type
password_reset_token	The token to reset password. This is unique for each customer.	Yes	string

Data Parameters:

Name	Description	Required	Data Type
customer_number	customer number on billing system	Yes	string
password	Customer's new password	Yes	string
password_confirmation	New password confirmed	Yes	string

Response Parameters:

Name	Description	Expected	Data Type
response	response	Yes	string
status_code	HTTP status code	Yes	integer constant

Error Response: (400)

Name	Description
error	Error String
error_description	Description of error

Request/Response Sample

(1) Successful Password Reset

| Request | ```
{
   "customer_number": "300100000000",
  "password": "@hSDJ7gLIK2*1%BKBBB",
   "password_confirmation": "@hSDJ7gLIK2*1%BKBBB"
}
``` |
| --- | --- |
| Response | ```
{
   "status_code": 200,
   "response": "Password reset is successful"
}
``` |

(2) Unsuccessful Password Change

| Request | ```
{
   "customer_number": "300100000000",
  "password": "@hSDJ7gLIK2*1%BKBBB",
   "password_confirmation": "@hSDJ7gLIK2*1%BKBBB"
}
``` |
| --- | --- |
| Response | ```
{

   "status_code": 400,

   "error": "unauthorized password reset action"

}
``` |

4.6 Invoice

Customers will be able to view all outstanding invoices

URL	**/api/v1/invoice**
Method:	GET

Headers:

Accept	application/json
Authorization	Bearer {access_token}

URL Parameters:
None.

Data Parameters:

Name	Description	Required	Data Type
customer_number	customer number on billing system	Yes	string

Response Parameters:

Name	Description	Expected	Data Type
status_code	HTTP status code	Yes	integer constant
response	Response message	Yes	Array
invoice_id	The invoice number on the billing system	Yes	Integer
invoice_date	The invoice due date on the billing system	Yes	Date

Error Response: (400)

Name	Description
error	Error String
error_description	Description of error

Request/Response Sample

Request	/api/v1/invoice?customer_number=300100000000

Response	{
	   "status_code": 200,
	   "response": [
	     {
	       "invoice_id": 31380,
	       "invoice_date": "14/04/2021"

```
            },
            {
               "invoice_id": 32506,
               "invoice_date": "16/06/2021"
            }
         ]
      }
```

4.7 Invoice Line Items

Customers will be able to view all invoice line items in the outstanding invoices

URL	/api/v1/invoice/details
Method:	GET

Headers:

Accept	application/json
Authorization	Bearer {access_token}

URL Parameters:
None.

Data Parameters:

Name	Description	Required	Data Type
customer_number	customer number on the billing system	Yes	string
invoice_id	The invoice number on the billing system	Yes	integer

Response Parameters:

Name	Description	Expected	Data Type
invoice_id	The invoice number on the billing system	Yes	integer
invoice_date	The invoice due date on the billing system	Yes	Date
item_id	A hidden field to identify each line item type for payment purposes. This field must be returned during payment	Yes	integer
unique_item_id	A hidden field to identify each line item type for selection purpose only, not for payment purposes. The "unique_item_id" appends	Yes	integer

	three digits to the **item_id.** Those digits represents the index of that line item in the invoice.		
unit_price	The price for a specific invoice line item which can be multiplied with the quantity to determine the amount to pay	Yes	string
quantity	The number of similar invoice line item used to estimate the amount to pay	Yes	integer
ref	Package number for each line item	Yes	string
invoice_items	An array of JSON objects. Each JSON object contains the following elements: **"ref, amount, tax, item_id, unique_item_id, description, quantity, unit_price"**	Yes	array
amount	Amount to pay	Yes	string
status_code	HTTP status code	Yes	integer constant
description	Package description for each line item	Yes	string
tax	The corresponding tax for each selected invoice line item must be included in the total tax (VAT) to be displayed to the user	Yes	string
response	Response message	Yes	Array

Error Response: (400)

Name	Description
error	Error String
error_description	Description of error

Request/Response Sample

Request	/api/v1/invoice/details?customer_number=300100000000&invoice_id=33040

Response	{
	   "status_code": 200,
	   "response": {
	     "invoice_items": [
	       {
	        "ref" : 13852,
	        "quantity" : 1,

```
                    "tax" : "4875.00",
                    "unique_item_id" : "70030001",
                    "description" : "1.5Mbps Fibre Internet Access (14/08/2021 - 13/09/2021)",
                    "item_id" : 70030,
                    "amount" : "65000.00",
                    "unit_price" : "65000.00"
                },
                {
                    "ref" : 13854,
                    "quantity" : 1,
                    "tax" : "15000.00",
                    "unique_item_id" : "70031002",
                    "description" : "1.5Mbps Radio Internet access link (14/08/2021 -
13/09/2021)",
                    "item_id" : 70031,
                    "amount" : "200000.00",
                    "unit_price" : "200000.00"
                }
                ],
                "invoice_id": 31380,
                "invoice_date": "14/04/2021"
            }
}
```

4.8 Wallet Balance

Customers will be able to view their wallet balance from the billing system

URL	/api/v1/wallet/balance
Method:	GET

Headers:

Accept	application/json
Authorization	Bearer {access_token}

URL Parameters:
None.

Data Parameters:

Name	Description	Required	Data Type
customer_number	customer number on billing system	Yes	string

Response Parameters:

Name	Description	Required	Data Type
status_code	HTTP status code	Yes	integer constant
wallet_balance	The wallet balance on the billing system showing the total unapplied payments	Yes	string
wallet_number	The NUBAN for wallet transfer	Yes	integer
wallet_bank	The Bank associated with the NUBAN	Yes	string

Error Response: (400)

Name	Description
error	Error String
error_description	Description of error

Request/Response Sample

Request	/api/v1/wallet/balance?customer_number=300100000000
Response	```{
"status_code": 200,
"response": {
"wallet_balance": "0.00",
"wallet_bank": "Providus Bank",
"wallet_number": 1234567890
}
}```

4.9 Fund Wallet

Customers will be able to fund their wallet by calling this endpoint

URL	**/api/v1/wallet/fund**
Method:	POST

Headers:

Accept	application/json
Authorization	Bearer {access_token}

URL Parameters:
None.

Data Parameters:

Name	Description	Required	Data Type
customer_number	customer number on billing system	Yes	string
payment_reference	Unique payment information	Yes	string
amount	Amount to pay	Yes	float
transaction_date	Transaction date format **yyyy-mm-dd hh:mm:ss**	Yes	Date string

Response Parameters:

Name	Description	Required	Data Type
status_code	HTTP status code	Yes	integer constant
response	Response message	Yes	string

Error Response: (400)

Name	Description
error	Error String
error_description	Description of error

Request/Response Sample

Request	{
	 "customer_number": "300100000000",
	 "amount":70.07,
	 "payment_reference":"TESTING",
	 "transaction_date":"2021-06-21 11:48:59"
	 }

Response	{
	    "status_code": 200,
	    "response": "Payment posted successfully"
	 }

4.10 Apply Wallet

URL	/api/v1/wallet/apply
Method:	POST

Headers:

Accept	application/json

Authorization	Bearer {access_token}

URL Parameters:
None.

Data Parameters:

Name	Description	Required	Data Type
customer_number	customer number on the billing system	Yes	string
invoice_id	The invoice number on the billing system	Yes	integer
ref_amount	An array of selected JSON objects. Each JSON object contains the following elements: **"amount, tax, item_id"**	Yes	Array
	1. **amount**: Amount to pay for each line item	Yes	float
	2. **tax**: The corresponding tax for each selected invoice line item must be included in the total tax (VAT) added to the total amount paid as expected	Yes	float
	3. **item_id**: A hidden field to identify each line item type for payment purposes. This field must be returned during payment	Yes	integer
amount	Total amount paid in NGN for the transaction. It must be equal to the total of all "amount" and "tax" elements in the ref_amount	Yes	float

Response Parameters:

Name	Description	Required	Data Type
response	Response message	Yes	string

Error Response: (400)

Name	Description
error	Error String
error_description	Description of error

Request/Response Sample

Request	{
	"customer_number": "300100000000",
	"amount":193500,
	"invoice_id": 31379,
	"ref_amount": [
	{"item_id":66188,"amount":90000.00,"tax":6750.00},
	{"item_id":66190,"amount":45000.00,"tax":3375.00},
	{"item_id":66189,"amount":45000.00,"tax":3375.00}
	]
	
	}

Response	{
	    "status_code": 200,
	    "response": "Wallet balance applied to selected items successfully"
	}

4.11 Apply Payments

URL	/api/v1/payments/apply
Method:	POST

Headers:

Accept	application/json
Authorization	Bearer {access_token}

URL Parameters:
None.

Data Parameters:

Name	Description	Required	Data Type
customer_number	customer number on the billing system	Yes	string
invoice_id	The invoice number on the billing system	Yes	integer
payment_reference	Unique payment information	Yes	string
ref_amount	An array of selected JSON objects. Each JSON object contains the following elements: **"amount, tax, item_id"**	Yes	Array
	1. **amount**: Amount to pay for each line item	Yes	float

	2. **tax**: The corresponding tax for each selected invoice line item must be included in the total tax (VAT) added to the total amount paid as expected	Yes	float
	3. **item_id**: A hidden field to identify each line item type for payment purposes. This field must be returned during payment	Yes	integer
amount	Total amount paid in NGN for the transaction. It must be equal to the total of all "amount" and "tax" elements in the ref_amount	Yes	float
transaction_date	Transaction date format **yyyy-mm-dd hh:mm:ss**	Yes	Date

Response Parameters:

Name	Description	Required	Data Type
response	Response message	Yes	string

Error Response: (400)

Name	Description
error	Error String
error_description	Description of error

Request/Response Sample

Request	{
	"customer_number": "300100000000",
	"invoice_id": 31380,
	"payment_reference": "TESTINGPAYMENT5",
	"transaction_date": "2021-06-24 12:41:32",
	"amount":535760.01,
	"ref_amount": [
	{"item_id":66192,"amount":28877.51,"tax":4875.00},
	{"item_id":66193,"amount":464507.50,"tax":37500.00}
	
	]
	
	}

Response	{
	    "status_code": 200,
	    "response": "Payment posted and applied successfully"

	`}`

`}`