4.0 Card Services - Interactive Push Notifications

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1. OVERVIEW.

This document outlines how **wallet messaging service** supports the Core Banking Service with **Firebase Cloud Messaging** capabilities of sending out **Push Notifications** to customers.
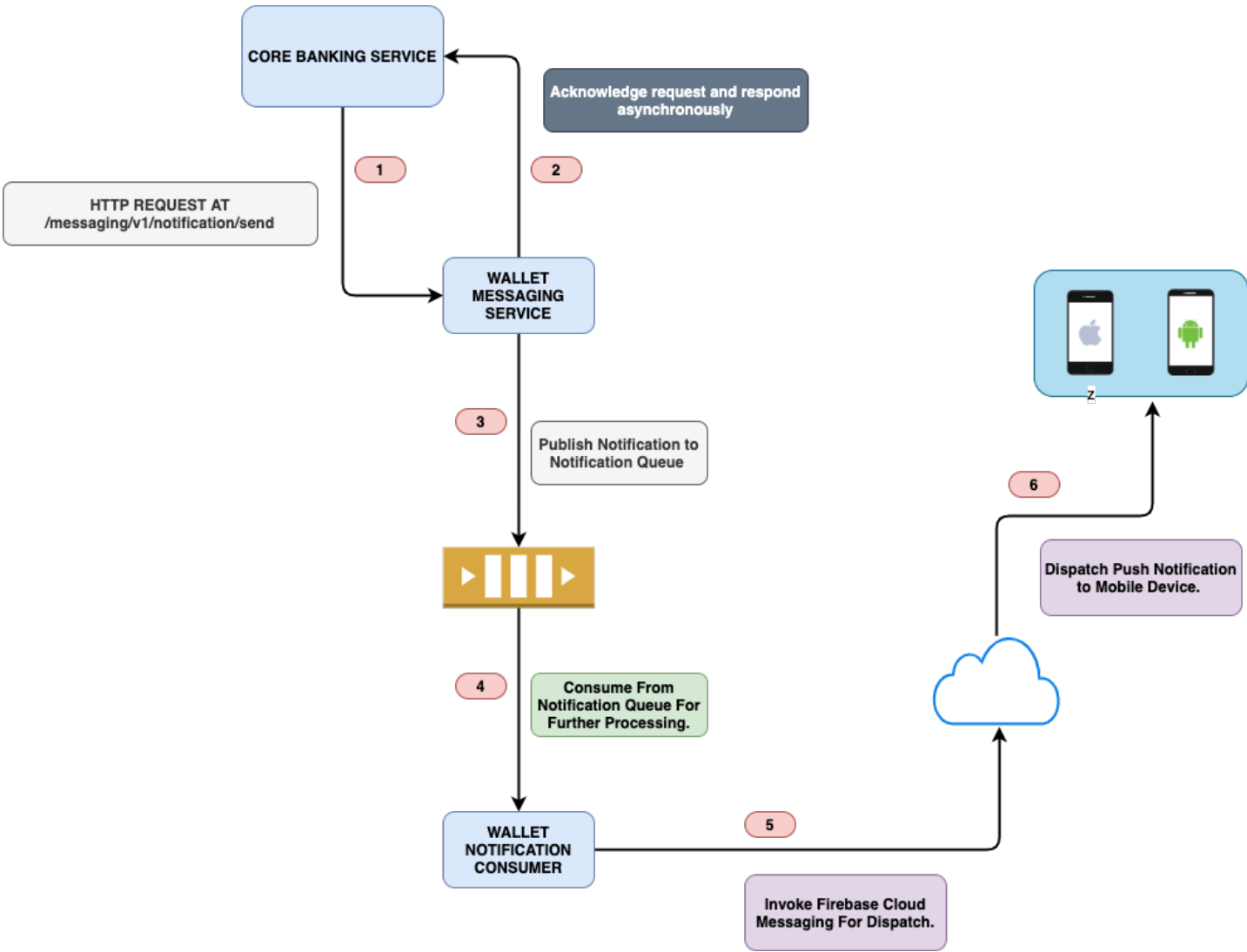
2. DESIGN OBJECTIVE.

	Objective.	Description.
1	Send out push notifications to customers.	The Core Banking service should successfully invoke the wallet messaging service with a push notification request. This request shall be processed and notifications sent out to customers.

3. SUCCESS METRICS.

	Goal	Metric
1	Allow Customers to receive Push Notifications.	The wallet messaging service shall expose an API, invoked from Core Banking Systems, that will allow successful dispatch of Push Notifications.

4. HIGH LEVEL ARCHITECTURE.

CORE BANKING SERVICE

Acknowledge request and respond asynchronously

1

2

HTTP REQUEST AT
/messaging/v1/notification/send

WALLET MESSAGING SERVICE

3

Publish Notification to Notification Queue

6

Dispatch Push Notification to Mobile Device.

4

Consume From Notification Queue For Further Processing.

WALLET NOTIFICATION CONSUMER

5

Invoke Firebase Cloud Messaging For Dispatch.

5. HTTP CONTRACT.

	Endpoint	Method	Description.

1	`/messaging /v1/notifica tion/send`	POST	This endpoints provides the capability to dispatch notifications to customers.

	Environment	Endpoint.
1	**Production - LADC**	https://10.4.243.1/{affiliate-code}/messaging/v1 /notification/send
2	**Production - ACDC**	https://10.8.243.1/{affiliate-code}/messaging/v1 /notification/send
3	**UAT - Cloud**	https://b804a4da-eu-gb.lb.appdomain.cloud /staging /profile-services/customers/details

5.1 REQUEST PARAMETERS.

These are categorised into two are essential in fulfilling the request successfully:-

- Request Body.
- Request Headers.

5.1.1 REQUEST BODY.

	PARAMETER	DESCRIPTION	OPTIONAL /REQUIRED	TYPE
1	notificationType	Defines the type of notification been sent out. In the case of Core Banking, this value can be **null or 1**	OPTIONAL	INTEGER.
2	title	Defines the title of the notification to be displayed on the mobile device's notification bar.	REQUIRED	STRING.
3	notificationMessage	Defines the message to be displayed to the customer.	REQUIRED	STRING.
4	requestId	This is a unique id that can be used to track the status of the notification.	OPTIONAL	INTEGER.
5	msisdn	This is the customer mobile number that is used during the transaction.	REQUIRED	STRING

6	serviceKey	This defines the service been consumed, for instance this value can be **ecobank-domestic.**	OPTIONAL	**STRING**
7	serviceDetails	This defines any other information that is crucial with regard to a particular transactional.	OPTIONAL	**OBJECT**

5.1.2 REQUEST HEADERS.

	PARAMETER	DESCRIPTION	OPTIONAL /REQUIRED	TYPE
1	Authorization	This contains the **JWT** security token that is fetched from the authentication service. The Format of this Header is "**Bearer <Token>."** This header must always be in the request.	REQUIRED	**STRING**

2	x-headers	This defines a JSON String that contains a set of parameters that is important for the messaging service to keep track of a request.	REQUIRED	JSON STRING

5.2 SAMPLE REQUEST.

5.2.1 SAMPLE REQUEST BODY.

```
1  {
       "notificationType": 1,
       "title": "Transaction",
       "notificationMessage": "Dear customer, your transcation has failed",
       "requestID": "1234",
       "msisdn": "254743434342",
       "serviceDetails": {
           "amount": 2000,
           "sourceAccount": "8789999",
           "service": "split-payments",
           "transactionID": "3231123",
           "affiliate": "EGH"
       },
       "serviceKey": "ecobank-domestic"
   }
```

5.2.2 SAMPLE REQUEST HEADERS.

```
1  "x-headers":{
       "channel": "android", // Can Remain as is.
       "uuid": "D2E1CD00-CCBF-49CC-932E-1E89B8316DA1", // Can Remain as is.
       "languageCode": "en", // Can Remain as is.
       "msisdn": "2348181570545", // Pass the customer msisdn,
       "appVersion": "4.0.5", // Can remain as is.
       "affiliateCode": "EKE", // Pass the affiliate code.
       "clientRequestID": "zz1867809xxehab6bda--15755510403111q4sssqqadoud" // Generate a
   random alphanumeric value.
       }
```

5.2.3 SAMPLE RESPONSE.

```
1  {
       "statusCode": 6000, // This is the success status Code.
       "statusMessage": "Successfully send push notification",
       "result": {
           "message": "Successfully send push notification",
           "referenceID": "",
           "data": []
       }
   }
```

Important to note in the above response, is the **statusCode.** The success statusCode is **6000** and any other response status code should be treated as a **FAILURE.**

5.3 CARD SERVICES REQUEST STRUCTURE.

	Notification	Notification Type	Request Body	Expected Response.
1	Reset Card Pin	11	`{` `"notificationType": 11,` `"title": "Card Pin tries exceeded",` `"notificationMessage": "Dear Customer, your attempted transaction with card 4554 xxxx xxxx 5432 failed due to exceeded number of allowed pin tries. Select Option below to`	`{` `"statusCode": 6000, // This is the success status Code.` `"statusMessage": "Successfully send push notification",` `"result": {` `"message": "Successfully send push notification",` `"referenceID": "",` `"data": []`

			reset your pin. Thank you",
			"requestID":
			"85022812",
			"msisdn":
			"233558296125",
			"serviceDetails":
			{
			"pan": "Fg0+s+5B0U
			+kmDC+KU9VQ6JP1Zdt2
			FBj",
			"cardAccountNumber
			": "1441000229735",
			
			"expiryDate":
			"1656547200000"
			},
			"serviceKey":
			"resetcardpin",
			"recipients": []
			}
				}
				}

2	Activate Card Pin.	17	{
			"notificationType"
			: 17,
			"title": "Card
			Activation",
			"notificationMessa
			ge": "Dear
			Customer, Your
			card 5432 xxxx
			xxxx 1254 has been
			processed. Click
			here to activate
				{
				"statusCode":
				6000, // This is
				the success status
				Code.
				"statusMessage":
				"Successfully send
				push notification",
				
				"result": {
				"message":
				"Successfully send

card",
"requestID":
"85022812",
"msisdn":
"233558296125",
"serviceDetails":
{
"pseudoPAN": "4846
80TODNRB5326",
"nameOnCard":
"Visa Cardholder",
"expiryDate":
"1656547200000",
"status":
"inactive",
"pan": "Fg0+s+5B0U
+kmDC+KU9VQ6JP1Zdt2
FBj",
"scheme": "VISA",
"cardAccountNumber
": "1441000229735"
},
"serviceKey":
"activatecard",
"recipients": []
}

push notification",

"referenceID": "",
"data": []
}
}

| 3 | Renew Card. | 12 | { "notificationType": 12, "title": "Card Expiration", "notificationMessage": "Dear Kelly | { "statusCode": 6000, // This is the success status Code. "statusMessage": "Successfully send |

Abena, your card with number 4554 xxxx xxxx 5432 will expire in 60 days. Visit the new car request section on your mobile app for renewal",
"requestID": "85022812",
"msisdn": "233558296125",
"serviceDetails": {
"pseudoPAN": "4846 80TODNRB5326",
"nameOnCard": "Visa Cardholder",
"expiryDate": "1656547200000",
"status": "inactive",
"pan": "tKlEf/OgCg Vhkgs8LZMKD6JP1Zdt2 FBj",
"scheme": "VISA",
"cardAccountNumber": "1441000229735"
},
"serviceKey": "renewcard",
"recipients": []
}

push notification",

"result": {
"message": "Successfully send push notification",

"referenceID": "",
"data": []
}
}

| 4 | Card Limit Exceeded | 16 | {
"notificationType": 16,
"title": "Card Limit Exceeded",
"notificationMessage": "Dear Customer, your attempted transaction with card 1234 xxxx xxxx 4321 failed because it exceeds your allowable limit. Adjust the limit to proceed",
"requestID": "85022812",
"msisdn": "233558296125",
"serviceDetails": {
"pan": "tKlEf/OgCg Vhkgs8LZMKD6JP1Zdt2 FBj",
"expiryDate": "21656547200000"
},
"serviceKey": "renewcard",
"recipients": []
} | {
"statusCode": 6000, // This is the success status Code.
"statusMessage": "Successfully send push notification",

"result": {
"message": "Successfully send push notification",

"referenceID": "",
"data": []
}
} |

| 5 | Out of Bound card Authentication | 7 | `{`
`"notificationType": 7,`
`"title": "Card Debit Authentication",`
`"notificationMessage": "Dear Kinuthia J, A request on Amazon to debit GHS 5,960.00 has been issued on your card 4134 XXXX XXXX 8743. Click to respond",`
`"requestID": "1111",`
`"msisdn": "233558296125",`
`"serviceDetails": {`
`"transactionID": 1111,`
`"cardPan": "4134432412348743",`
`"amount": 5960.00,`
`"currency": "GHS",`
`"customerName": "Kinuthia J"`
`},`
`"serviceKey": "manage-cards",`
`"recipients": []`
`}` | `{`
`"statusCode": 6000, // This is the success status Code.`
`"statusMessage": "Successfully send push notification",`
`"result": {`
`"message": "Successfully send push notification",`
`"referenceID": "",`
`"data": []`
`}`
`}` |

| 6 | Block card. | 15 | `{`
`"notificationType": 15,`
`"title": "Card Transaction Declined",`
`"notificationMessage": "Dear Customer, an attempted transaction with your card 4321 xxxx xxxx 1234 in China was devclied. If this was done by you, kindly activate your card for non-chip transactions.",`
`"requestID": "85022812",`
`"msisdn": "233558296125",`
`"serviceDetails": {`
`"cardNumber": "484680TODNRB5326",`
`"accountAlias": "Bancassurance 2",`
`"reason": "suspectedFraud"`
`},`
`"serviceKey": "blockcard",` | `{`
`"statusCode": 6000, // This is the success status Code.`
`"statusMessage": "Successfully send push notification",`

`"result": {`
`"message": "Successfully send push notification",`

`"referenceID": "",`
`"data": []`
`}`
`}` |

			"recipients": [] }	

Attachments:

☐ Messaging Service High Level Architecture..png (image/png)