

The Providus Bank Cards Application

What is the Providus Bank Card Application?

The Providus Bank Cards Application is an application that enables CSOs at the bank to print “Customer Names” on ATM cards instantly. Printing customer names on the cards is the last phase of the instant issuance card process we currently have in Nigeria.

4 years ago, I worked on this application for Providus Bank with the following features:

1. Desktop Application
2. In-App User Management
3. Connection to ViaCard for get the printing queue
4. Printing of customer names on ATM Cards

Why Desktop Application?

The desktop application model was used because Providus bank wanted something quickly at the time and they didn't want anything too far from what they were using at the time which was another desktop based card printing application.

The desktop application model was adopted because we could deliver in less than 48 hours which we did.

Why was this Application rebuilt?

The previous desktop application at the time had an issue printing on some specialized printers and the developer of the previous application could not be found.

Why in-App User Management?

I used in-App User Management because of the time constraints and Providus Bank at the time hadn't trusted me to interface with their Active Directory; remember, this is a Bank and security is their watch word.

Why connect to ViaCard?

ViaCard by AppZone is the only application used by all banks in Nigeria for Instant Card Issuance Process. They are the reason why you can walk into a bank and get your debit card instantly.

Bank cards are manufactured, chipped and pre-processed by ViaCard. After the pre-processing, when a customer requested for a card, viacard maps the customer to the pre-processed card by interfacing with the core-banking application. They are the only ones who can integrate directly with the core-banking application. We do not have the rights to perform such integration. We can only integrate with Via-Card to collate the print queue.

The card print queue is a list of mapped customers to cards which should be identified by names. The names of these customers are printed on the mapped blank card after mapping. Note that the blank cards already have the CVV, the PAN and the expiry date but no names. Our application is only responsible for printing the names on the cards.

Why print names on the cards?

A customer needs to be identified by his name on a debit card. The card needs to be mapped to the customer by name.

How does the Card printing process work?

1. The CSO has already processed the card using ViaCard. This card is now mapped to a customer who has requested for the card. This mapping is done using viacard and the core banking application (This has nothing to do with us)

2. The customer is added to a print queue on the viacard application end.
3. Our card printer application will then access this queue of customer cards to be printed (Note that we are only printing the names of the customers on the card)
4. Access of the queue is done using the viacard API endpoint which will be given to us. The endpoint gives us access to only the queue. The previous application has this integration. Integration is usually done at the Providus Bank Premises.
5. When the queue is accessed by our application, the use can now select a customer name and then print the name on the card
6. After the card is printed, our application calls another ViaCard API endpoint to alert ViaCard that the card belonging to the customer has been printed.

The issues with the current system?

1. The current system is a desktop application. Configuring it on a new computer is cumbersome and time consuming.
2. The current system does not have an inventory management of the cards. You cannot tell when blank cards are out of stock
3. The current system does not have a reorder alert system for cards
4. The current system cannot reprint cards without making a call to the viacard API
5. The user management system is in-App. It is not integrated with their Active Directory User Management.

What does Providus Bank need?

1. A browser based bank cards application so that the application is deployed once on the server and when a new computer arrives on the bank network, the computer and the user can access the application without installation and configurations. (Deploy once, use multiple times in multiple places)
2. Integration with the bank's Active Directory instead of an in-App user management

3. An inventory control feature for the cards. There should be an opening balance for blank cards which will be checked as cards are being printed so that when it is running out of stock, the management can be alerted.
4. A notification feature to tell when cards are running out of stock and a feature to create a stock reorder

What are the micro-services required?

1. Notification Microservice
 - a. This will use the bank's SMTP to alert users of the system as required.
2. User Microservice
 - a. This is just a wrapper for the bank's Active Directory. This will only connect to the AD, generate JWT and allow a user gain access to the application
3. Inventory Microservice
 - a. This will allow the user to configure opening balance (stock) for the blank cards
 - b. This will allow the user configure reorder level for blank cards when cards are running out of stock
4. Card Microservice
 - a. This will allow the user to print names of people on the card
 - b. This will also update the current stock of cards via the inventory service
 - c. This will also wrap the viacard API to allow access to the printing queue
 - d. This will also wrap the viacard API to notify the viacard printing queue that the card has been successfully printed
 - e. This will allow a user to reprint a card without the viacard integration just incase there has been a mistake

What frontend is required?

1. User login screen
2. Dashboard Screen
3. Opening Balance Screen
4. Reorder Configuration Screen
5. Card Printing Screen
6. Reporting Screen