

Success Stories

Update of the connection of a minicomputer with the banking platform for Vending Solutions

Soluciones Vending

Soluciones Vending is a company dedicated to providing the installation service of Vending Machines for companies, offices, schools, or other facilities. They belong to the GDenis group, a distributor with more than 18 years in the Panamanian market focused on hotels, restaurants, schools, cafeterias, mini supermarkets, convivial stores, supermarket chains, and retail.

Challenge

Soluciones Vending is a company that runs candy vending machines. They worked with a minicomputer called raspberry pi to connect a dataphone, which used to use Wi-Fi to connect to each other to make card transactions, whether credit or debit.

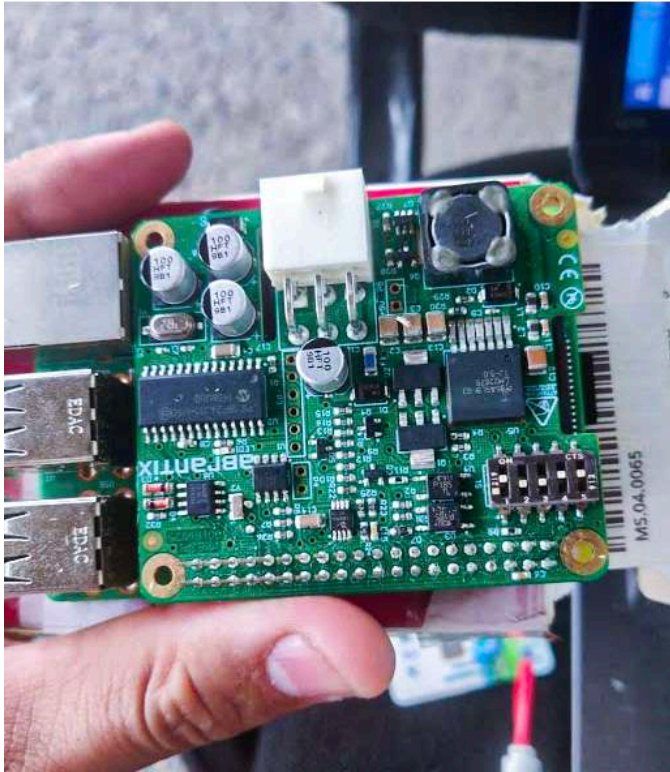
This changed and they would no longer use wi-fi to avoid problems, for example, a power outage, rendering the machine unusable. Now, the bank itself has a Simcard system and a network that is provided by the bank.

Our solution

Rootstack worked on updating the project. The connection of the minicomputer was from an RS232 cable, the idea was



that from that cable the approved or rejected, or validated transactions were given to the program. The second part was to activate the contact list mode, which is nothing more than placing the card and making the purchase immediately, and finally to ensure that the machine did not listen to the raspberry at all times and did not allow closing the day automatic, so the bank had to go to the store to close the month.



The project was made in C# or .Net and programmed with Visual Studio. Microservices separated it: one constitutes the master program, another special one that works to make the call to the bank, another module that works to send the mail and another one combines the minicomputer with the big machine, which is the food vending machine.

All this together manages to make the entire user order: you press number 2 for example, then pay with your card, and the product associated with that number is delivered.

```

pi@raspberrypi: ~/dev
Pestañas Ayuda
17:10 - SerialDriver[MDBDetail] : MDB: -> 12 (POLL)
17:10 - SerialDriver[MDBDetail] : MDB: <- <no data>
17:10 - SerialDriver[MDBDetail] : CP: <- 02 00 10 03
17:10 - CashlessDeviceSimulator[HighLevel]: Total proces
selecting a product... 00:38.18
17:11 - SerialDriver[MDBDetail] : CP: -> 02 00 12 10 03 ()
17:11 - SerialDriver[MDBDetail] : MDB: -> 12 (POLL)
17:11 - SerialDriver[MDBDetail] : MDB: <- <no data>
17:11 - SerialDriver[MDBDetail] : CP: <- 02 00 10 03
17:11 - CashlessDeviceSimulator[HighLevel]: Total proces
selecting a product... 00:39.498
17:12 - SerialDriver[MDBDetail] : CP: -> 02 00 12 10 03 ()
17:12 - SerialDriver[MDBDetail] : MDB: -> 12 (POLL)
17:12 - SerialDriver[MDBDetail] : MDB: <- <no data>
17:12 - SerialDriver[MDBDetail] : CP: <- 02 00 10 03
17:13 - CashlessDeviceSimulator[HighLevel]: Total proces
selecting a product... 00:40.858
17:14 - SerialDriver[MDBDetail] : CP: -> 02 00 12 10 03 ()
17:14 - SerialDriver[MDBDetail] : MDB: -> 12 (POLL)
17:14 - SerialDriver[MDBDetail] : MDB: <- <no data>
17:14 - SerialDriver[MDBDetail] : CP: <- 02 00 10 03
17:14 - CashlessDeviceSimulator[HighLevel]: Total proces
selecting a product... 00:42.337
  
```

Technologies

To achieve this project, C# or .Net was used and it was programmed with Visual Studio.

C# is a modern, object-oriented, type-safe programming language. C# enables developers to build many types of robust and secure applications that run on the .NET ecosystem. It has its roots in the C family of languages and will be immediately familiar to C, C++, Java, and JavaScript programmers.

The project started about a year ago and we worked together with the team that developed the raspberry pi to complete the library.

