



ATM Software

XFS4IoT SP-Dev Workgroup

3rd June 2025

- Recap from previous meeting
- Review of previous hardware demos
- XFS4IoT architecture demo
- Hybrid system demo
- What's next?
- Next meeting

Recap from previous meeting

- Intro to Intelligent Banknote Neutralisation System (IBNS)
 - Use cases
 - XFS3 vs XFS4IoT
 - Actions performed
 - E2E security under XFS4IoT
 - Support in the framework
- IBNS demo from Oberthur

Review of previous hardware demos

- 2021
 - March: Card Reader on Windows and Linux
 - July: Cash dispenser
 - October: Pin Pad
- 2022
 - March: Biometrics
 - April: Cash acceptor

- 2023
 - April: Receipt printer (Sigma)
 - June: Cloud application with tablet display
- 2024
 - March: Camera
 - April: Cheque scanner
 - May: Android camera
 - June: Android POS device

- 2025
 - February: Contactless card reader
 - April: Mixed XFS3 and XFS4IoT
 - May: IBNS (Oberthur Cash Protection)

XFS4IoT architecture demo

- Contactless Card Reader
 - PinPad
 - Receipt printer
 - Cash Dispenser
 - Virtual Machine running application
 - Tablet to display UI
- All components connected over WiFi network
 - All running on separate hardware
 - All SPs could be on the same mini-PC or Raspberry Pi

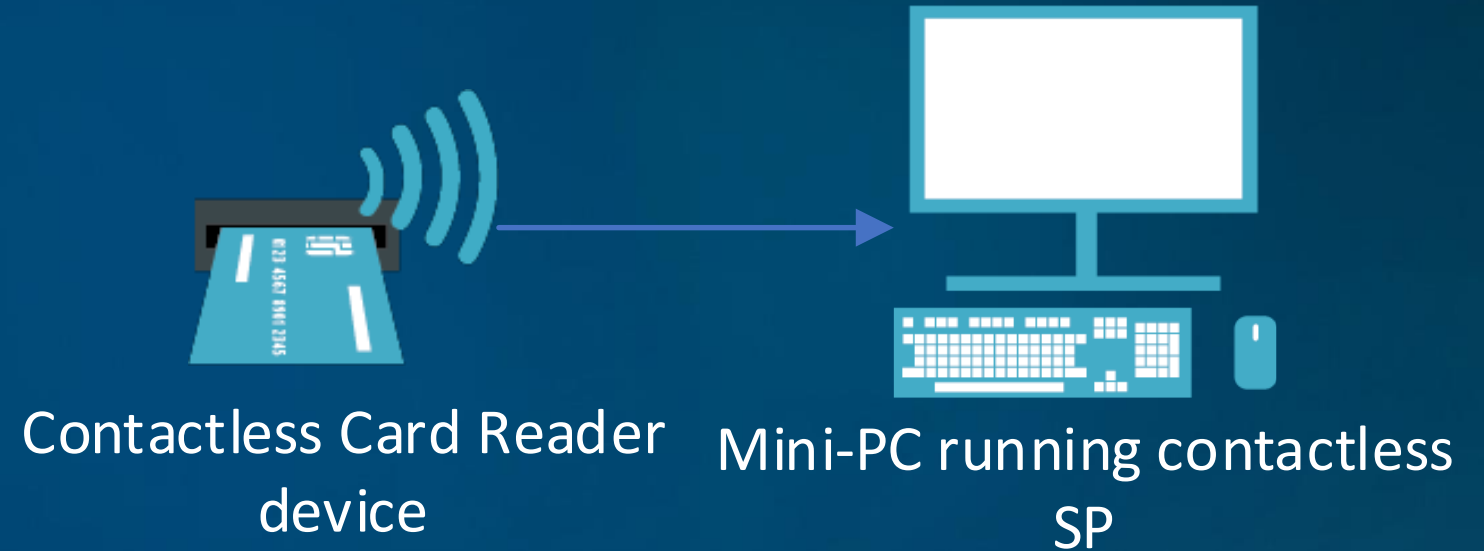
Windows-based mini-PC

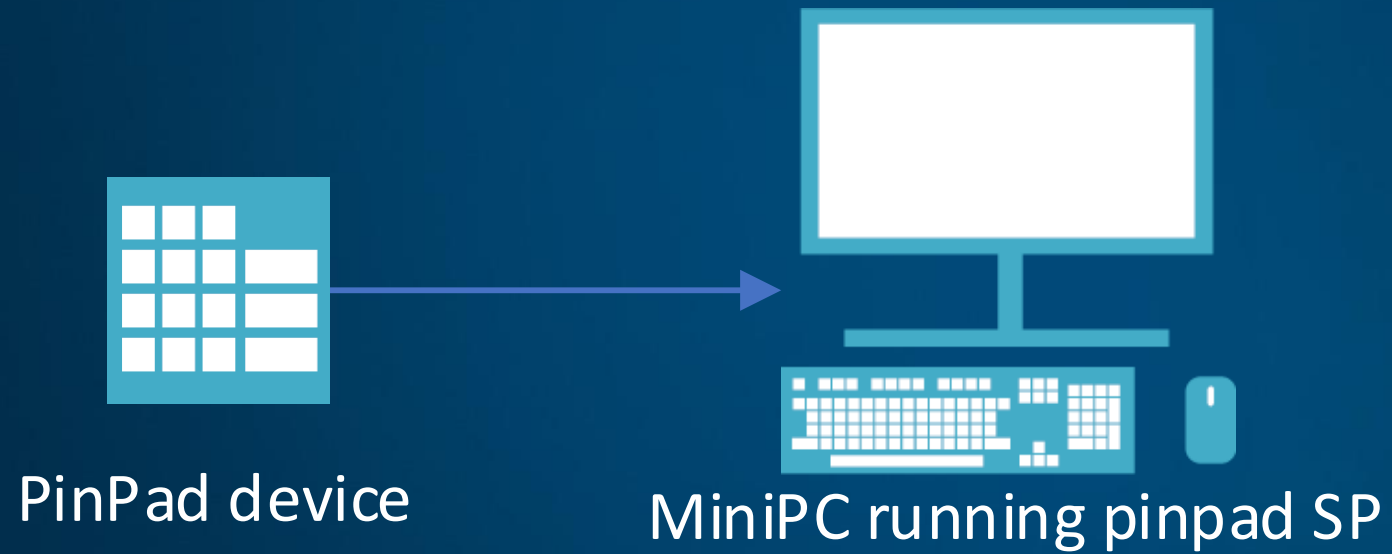
- Windows 11
- X86-based CPU
- Devices connected with USB
- Higher cost/power

Linux-based Raspberry Pi Zero

- Raspberry Pi OS
- ARM64-based CPU
- Devices connected with USB to serial cables
- Low cost/low power
- The Raspberry Pi XFS4 SPs can also run on Windows

- SP running on Windows 11 mini PC
- Same SP previously running on a Raspberry Pi





- SP running on Windows 11
- Connected via USB

- SP running on Raspberry Pi OS
- Form loading and text positioning handled by SP-Dev framework



Receipt Printer device



Raspberry Pi running Receipt Printer SP

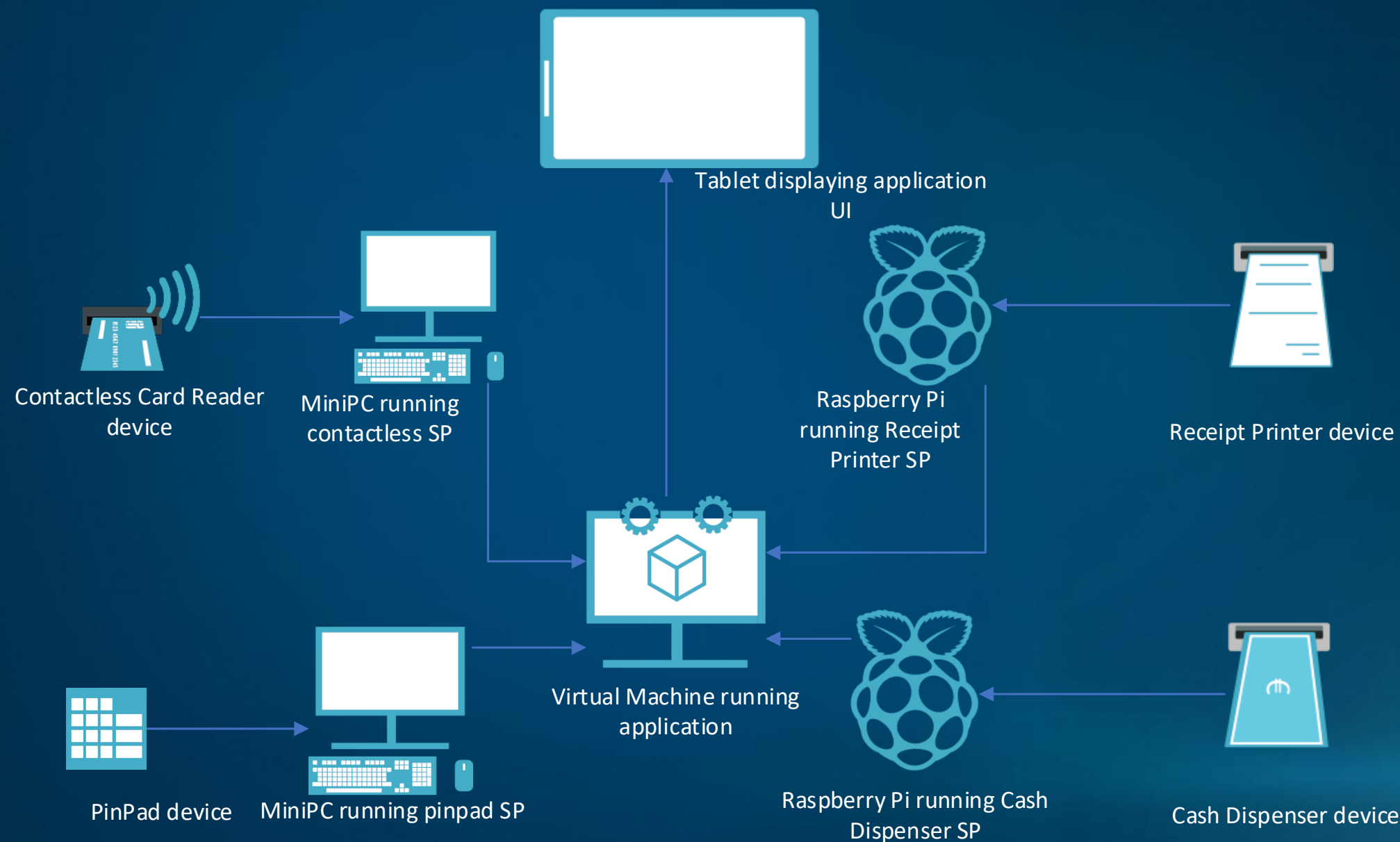


Cash Dispenser device

Raspberry Pi running Cash
Dispenser SP

- SP running on Raspberry Pi OS
- Dispenser with multiple units/denominations
- Mix handled by SP-Dev framework

Everything together



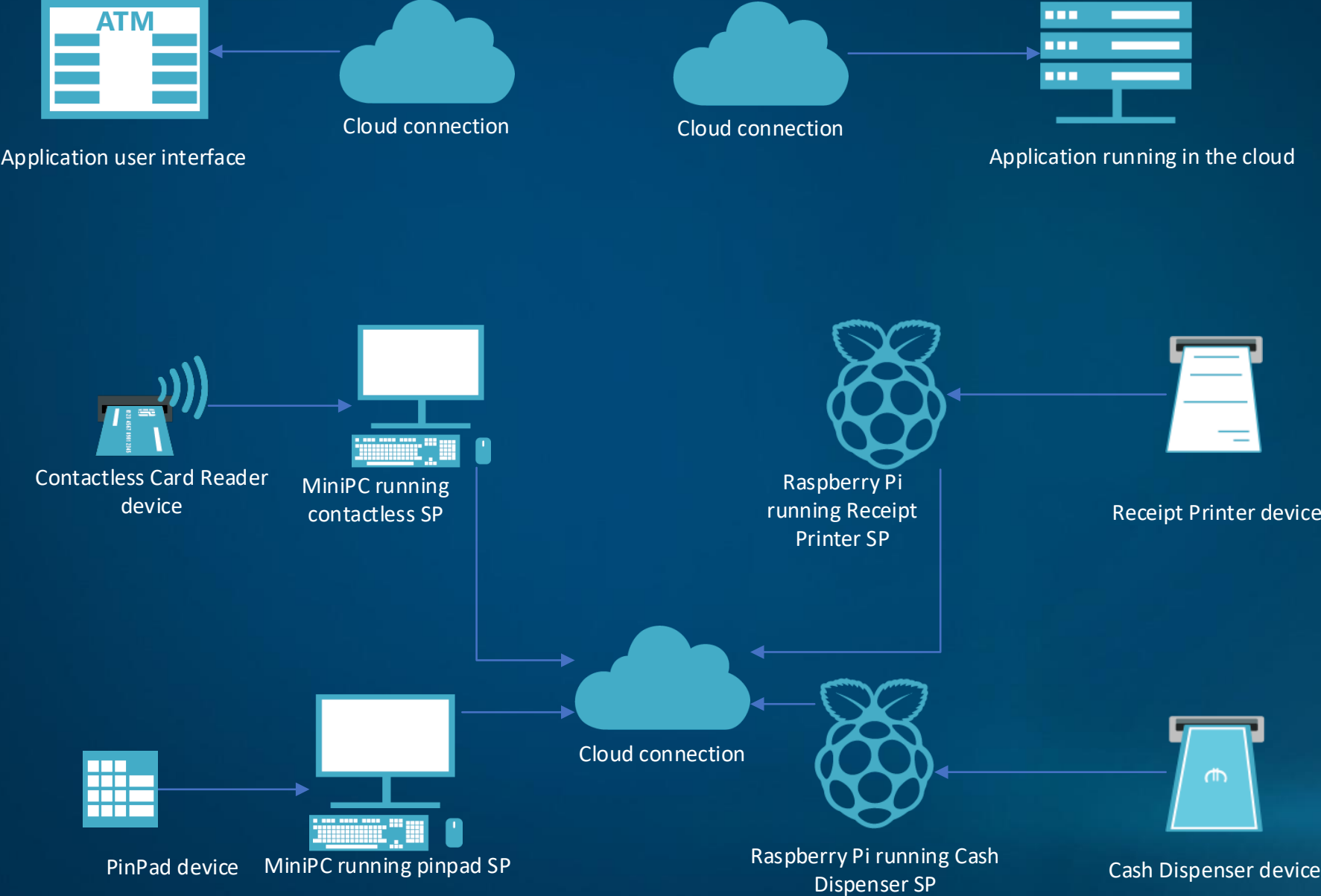


Hybrid system - Demo



Hybrid system - Demo

Cloud example



- Add new devices to existing hardware
 - E.g. Biometrics, contactless card readers
- Add devices physically separate from the existing hardware
 - E.g. Cameras
- Move applications to the cloud



What's next?

- Two-month break over the summer
- Framework updates and roadmap
- Guest speakers
- DK specification
- More demos (biometrics and more)

Zoom

- First Tuesday of each month at 1300 UK time for 30 mins

Holiday break

Next call: **2nd September 2025**
1300 UK, 0800 US EDT, 2100 Tokyo time

Calls are 30 mins long

We will continue to use Zoom

(Interpretation in Japanese, Chinese and Spanish is available using Zoom's interpretation feature)