

XFS4IoT SP-Dev Workgroup

3rd December 2024

- Recap from previous meeting
- TLS - Answer question from previous meeting
- 2024 retrospective
- Recap of demos in 2024
- CEN specification update
- What's next?
- Next meeting

Recap from previous meeting

- SP-Dev framework v2.4
 - Corrections and updates
 - How to compare between releases on GitHub
- TLS encryption
 - What it is
 - Why it is important
 - TLS handshake
 - Demo on Windows using Wireshark

TLS - Authentication

- Question from November's meeting:

Are there any plans to introduce some kind of Authentication for the initial HTTP/S call? I'm thinking of employing the HTTP Authorization header or URL query arguments to include a JWT token.

Options

- Mutual TLS – client certificate used to authorise connections. How are certificates managed?
- 'Logon' process to gain token such as JWT. Requires 'logon' details – how are these managed?
- Other options?

2024 XFS4IoT SP-Dev Workgroup Retrospective

February 2024 meeting

- Support for XFS4IoT specification 2023-2 in the SP-Dev framework
 - Updated framework and samples were made available in the repository
 - All commands, events and parameters updated to the 2023-2 specification
- Migrated to .NET 8 and C# 12

March meeting

- Reviewed the availability of SP Framework package 2.1.0
- Documentation includes a complete API Reference for XFS4 SP-Dev Framework
- Migrated all template projects to .NET8

April meeting

- Reviewed SP Framework support for Check Scanner (IPM: Item Processing Module in XFS 3) including accept single or bundle of checks / Scan front and back generate images / Read code line / Print

May meeting

- Presentation by First National Bank (South Africa) discussing their work in supporting XFS4IoT

June meeting

- Presentation by Synaforce (Germany) reviewing cloud-based ATMs project at Shell stations
— Discussed plans to improve interoperability by using XFS4IoT

July / August – summer break

September meeting

- Presentation by SBS (Germany) – overview of DK (“German specific interface”) specification & certification overview including changes and status of DK for XFS4IoT

October – no meeting

November meeting

- Overview of the updated SP-Dev Framework v2.4
- Presented how Transport Layer Security (TLS) works and its importance to XFS4IoT

December – last meeting of 2024



2024 - Demos

February: Migrating Card Reader Sample

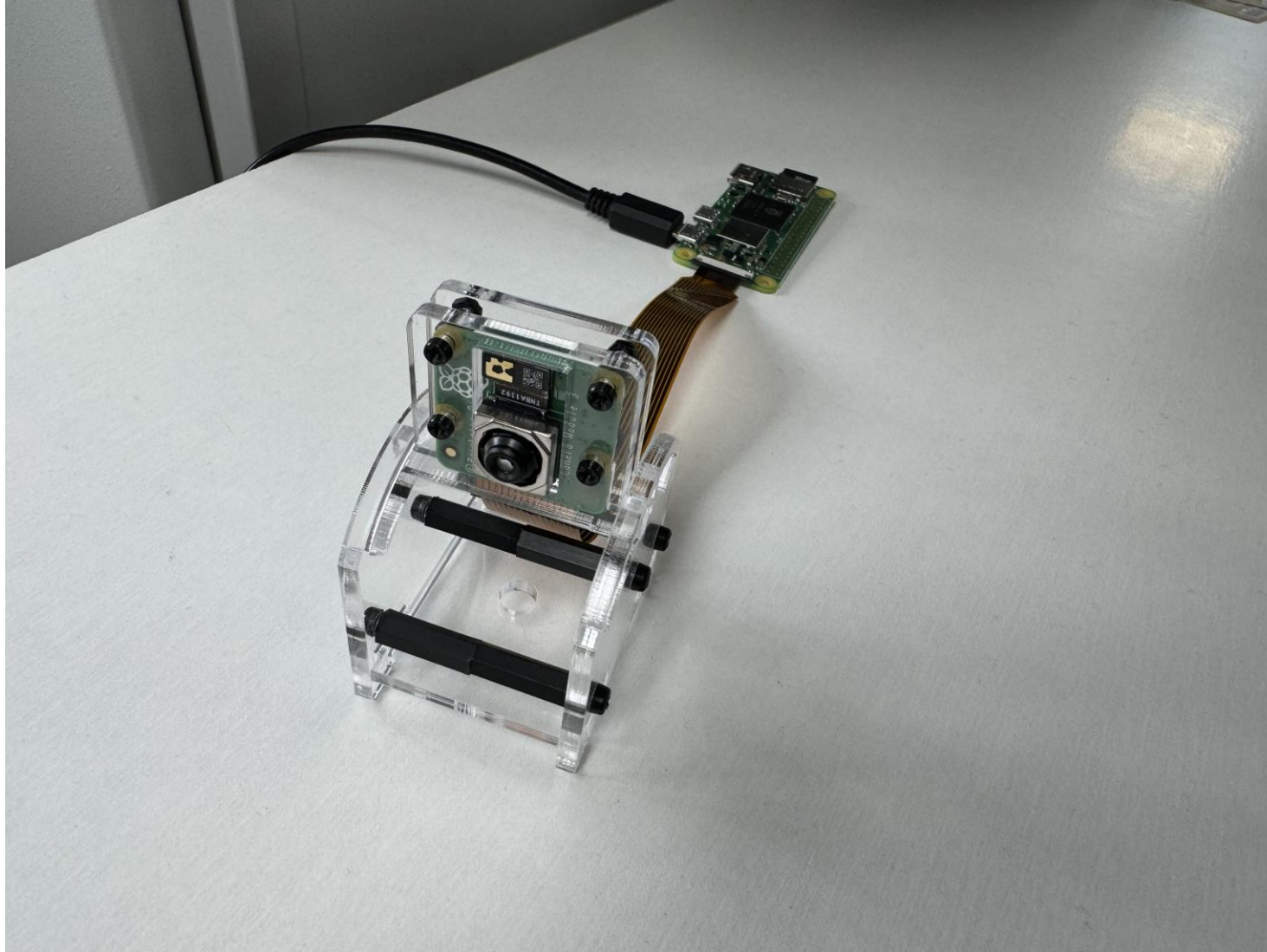


- Updated CardReader sample to XFS4 2023-2
- Update Package version using NuGet

```
namespace KAL.XFS4IoTSP.CardReader.Sample
{
    /// <summary>
    /// Sample CardReader device class to implement
    /// </summary>
    public class CardReaderSample : ICardReaderDevice, ICommonDevice, IStorageDevice
    {
        /// <summary>
        /// Constructor
        /// </summary>
        /// <param name="Logger"></param>
        public CardReaderSample(ILogger Logger)
        {
            Logger.IsNotNull(message: $"Invalid parameter received in the {nameof(CardReaderSample)} constructor.",
                this.Logger = Logger;

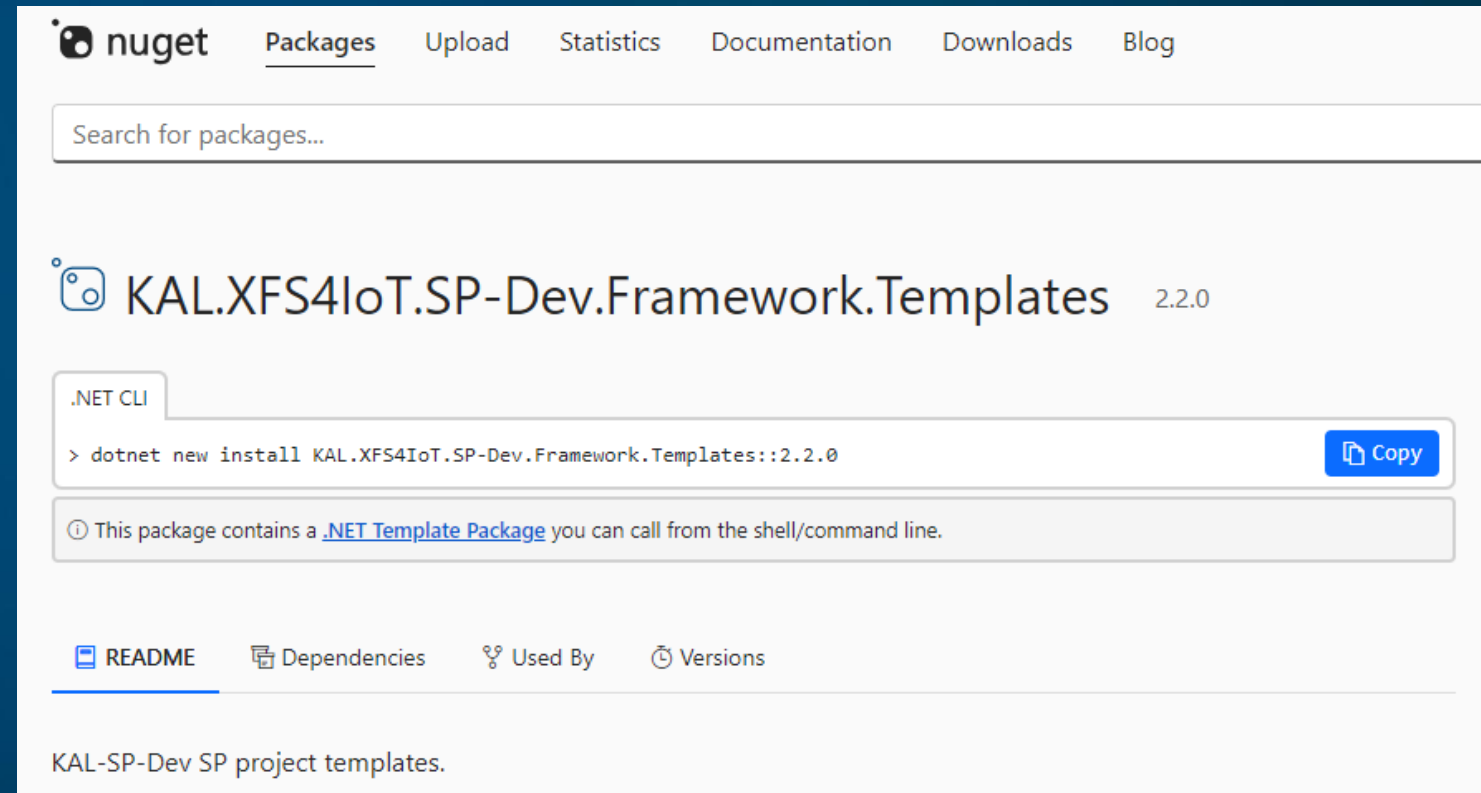
            CommonStatus = new CommonStatusClass(CommonStatusClass.DeviceEnum.Online,
                CommonStatusClass.PositionStatusEnum.InPosition,
                CommonStatusClass.PowerSaveRecoveryTime: 0,
                CommonStatusClass.AntiFraudModuleEnum.NotSupported,
                CommonStatusClass.ExchangeEnum.NotSupported,
                CommonStatusClass.EndToEndSecurityEnum.NotSupported);

            CardReaderStatus = new CardReaderStatusClass(CardReaderStatusClass.MediaEnum.NotPresent,
                CardReaderStatusClass.SecurityEnum.NotSupported,
                CardReaderStatusClass.ChipPowerEnum.NoCard,
                CardReaderStatusClass.ChipModuleEnum.Ok,
                CardReaderStatusClass.MagWriteModuleEnum.Ok,
                CardReaderStatusClass.FrontImageModuleEnum.NotSupported,
                CardReaderStatusClass.BackImageModuleEnum.NotSupported);
        }
    }
}
```



- Low-cost device
- 13 lines of code on top of Camera Sample SP
- Connection over Wi-Fi

- Check scanner demo
- Templates demo
- Creating the camera SP from March live

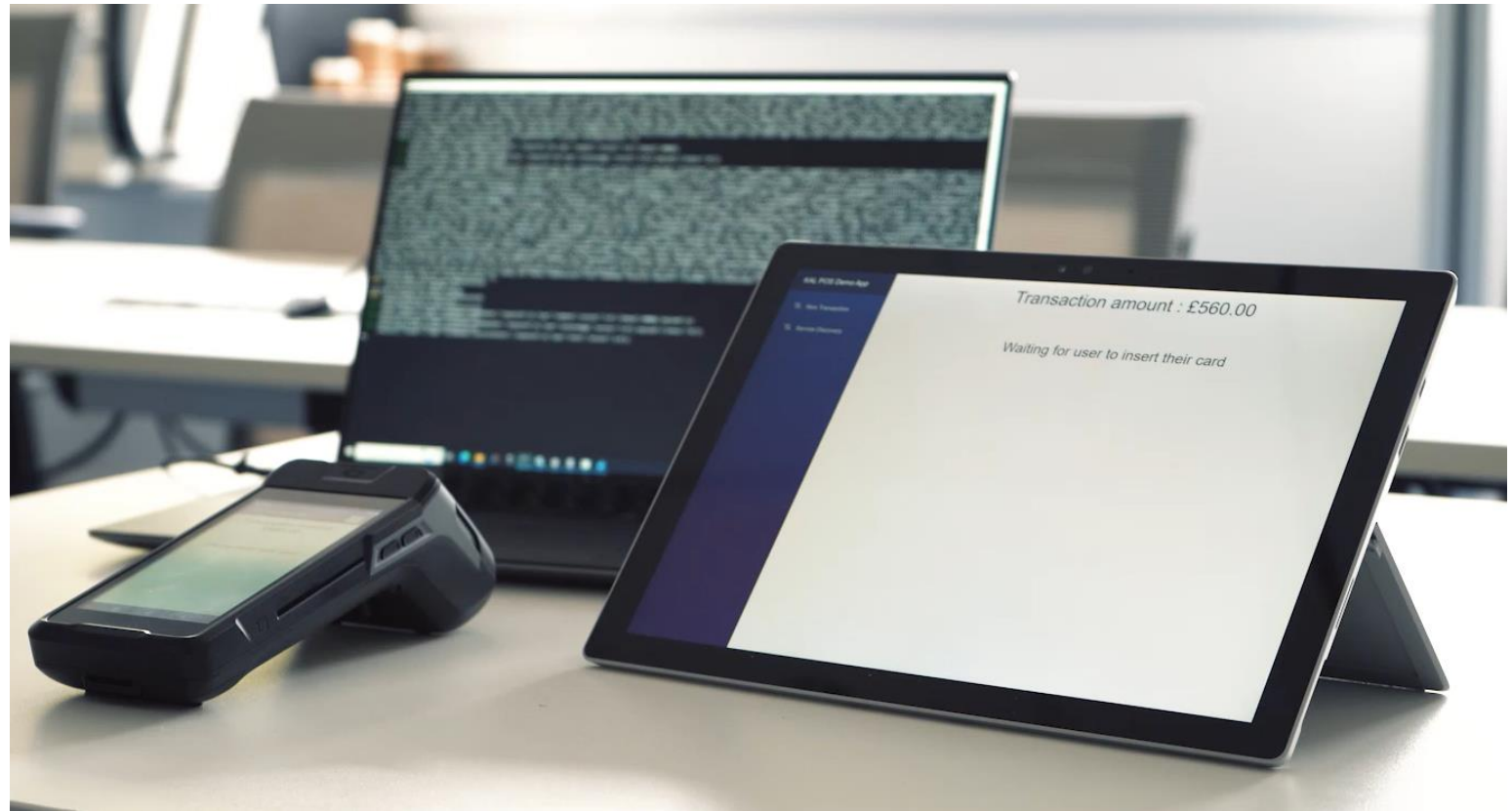


May: Camera SP on Android phone

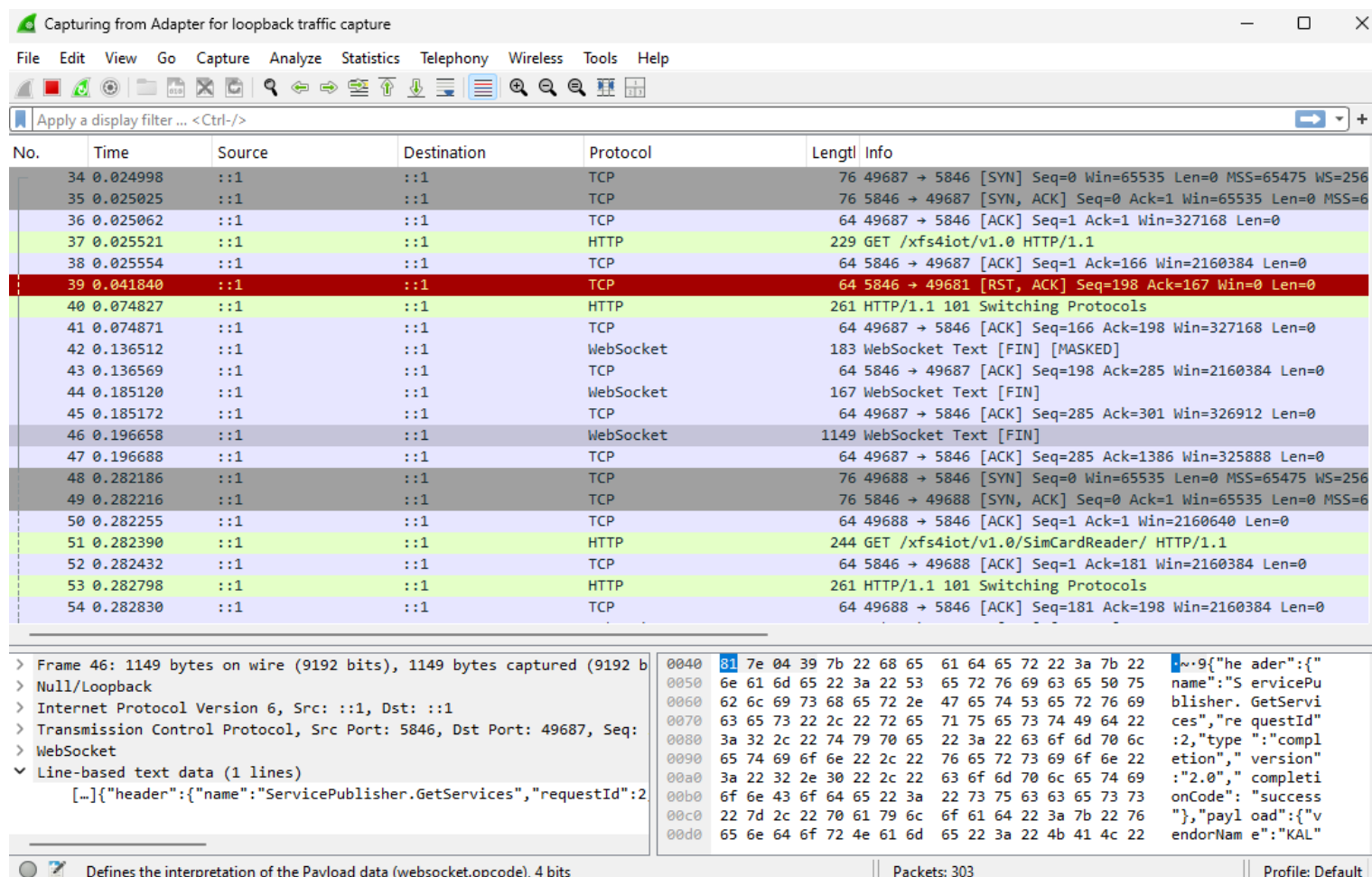
- Camera SP on Android phone
- Using .NET MAUI



- XFS4 SP running on Android POS device
- Operator UI on separate tablet



- Demo HTTP and HTTPS connection to SP
- Wireshark used to view network traffic





CEN specification update

Workshop in Paris 13th/14th of November

Aim to finalise 2024 release of specification before the end of year

- New banknote neutralisation interface
- New power management interface
- Support for German DK card specification
- Data sensitivity information on fields
- New JSON form format for text terminal and printer
- Many improvements, clarifications, and fixes



What's next?

- Framework updates and roadmap
- Migrating to new specification versions
- DK
- More guest speakers
- More demos (contactless card reader, biometrics, and more)

Zoom

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

Next call: 4th February 2025

1300 UK, 0800 US EST, 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)