

XFS4IoT SP-Dev Workgroup

23 March 2021

Jumpstart XFS4IoT

Create XFS SPs as fast as possible

Maximize interoperability between applications and SPs

- ATM manufacturers
- ATM component manufacturers
- System integrators
- Software vendors / houses / companies
- Test tool developers

This may be interesting to other IoT industries too

61 companies have joined so far ...



| | | | | | |
|------------|---------------------------|-------------------------------------|-----------------------------|---------------------------|---------|
| Airtube | CR2 | Glory LTD | KAL | PayComplete (Suzohapp) | SiTrade |
| ARTI-NET | Cryptera | Gooao | Kaspi Bank | Plattnera | Sunson |
| ATEC | diagATM | GreatWall | Keba | Power kiosks | Triton |
| ATMDesk | Diebold Nixdorf | GRG | Laurel Bank Machine | Prosegur | Vortex |
| Auriga | East Link Engineering | HCL | LM Software | RedHat | YSIS |
| Belltech | Eastcom/Potevio | Hess | Mobil Pay (VnipiSport) | Rototype | Zijin |
| CashWay | Fichet Group | Hitachi Omron Terminal Solutions | NCR | Sankyo | |
| Ceska Bank | Freematic | Hyosung | NewBeiYang | SBS | |
| Cima | Fujitsu Frontech | INSUREATM | Oberthur Cash Protection | Selfmaker | |
| Citibank | Fujitsu Spain | ITecon | OKI | Serquo | |
| Consillion | Glory Global Solutions | JustTide | Paragon Edge | Sigma | |

The deliverable of the workgroup is an XFS4IoT SP framework

This will enable workgroup members to:

- Create XFS SPs for their hardware
- Create application software
- Create simulators
- Create test software

The framework will be licensed under the MIT Open-Source license

It is up to you how you license any derived work:

It could be a proprietary license
or an open-source license
or anything in between.

XFS4IoT facilitates the next generation of software and hardware architectures for ATMs:

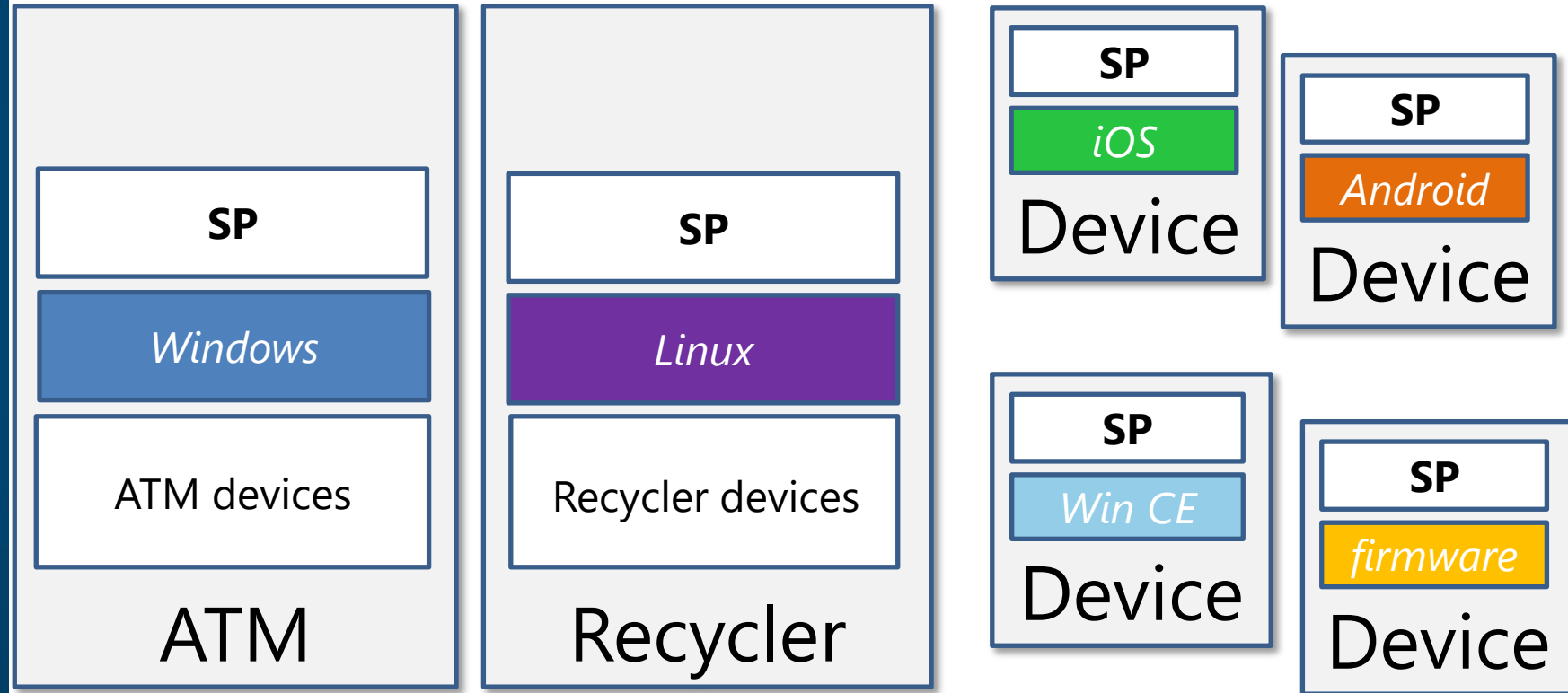
- OS-agnostic
- Cloud-native
- Built in end-to-end security
- Latest technologies

What are the benefits of XFS4IoT to your customers?



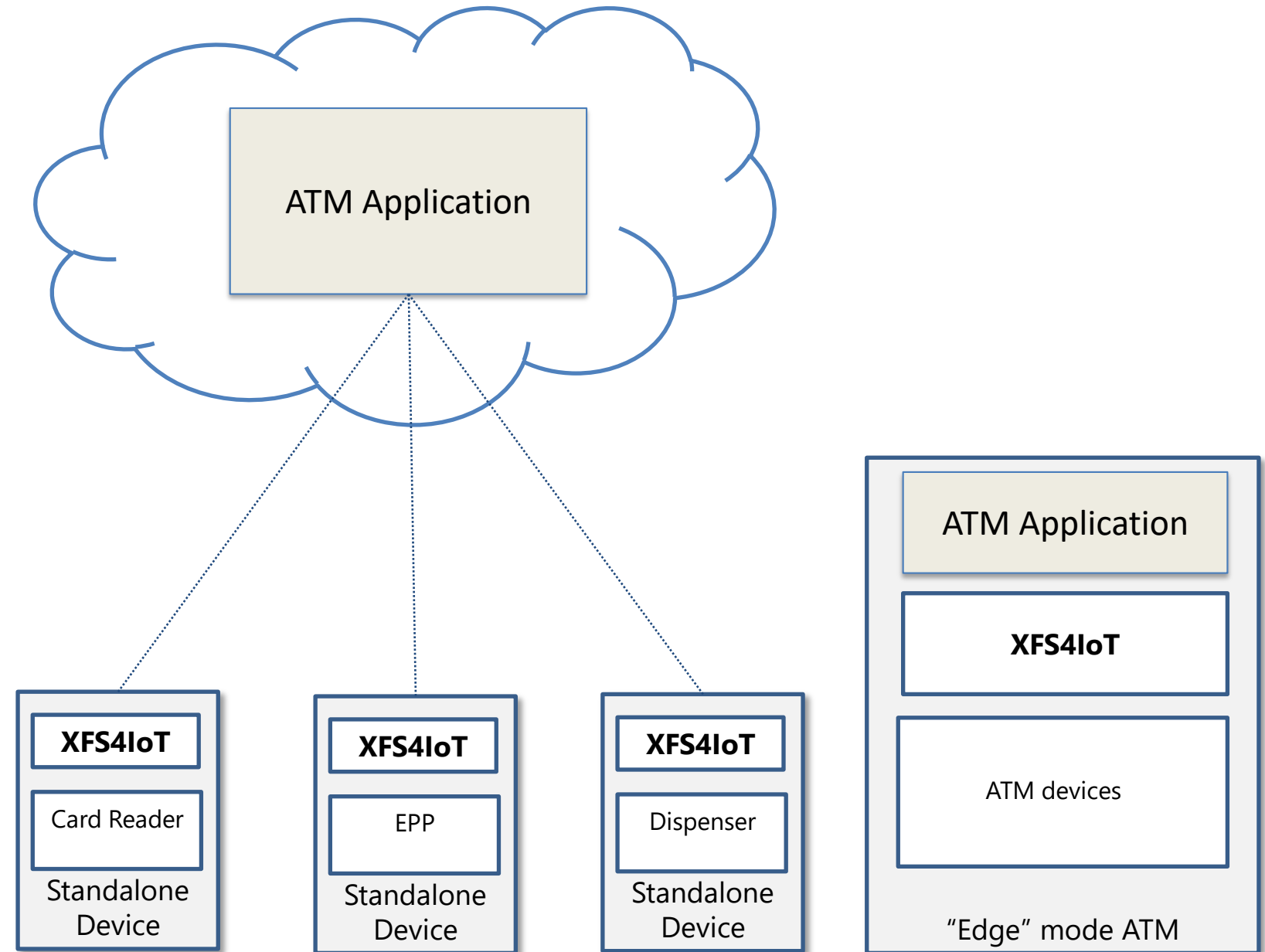
XFS4IoT is
operating
system
agnostic.

* KAL have tested the framework on a Raspberry Pi!



What are the benefits of XFS4IoT to your customers?

XFS4IoT enables devices from multiple manufacturers to be integrated and run from the cloud or in today's "Edge" mode



Built in security with end-to-end device authentication:

- Optional embedded hardware secure element (HSE) inside each component
- TR34 key distribution
- Encryption keys distributed to a key vault inside each device
- Device commands protected by an HMAC security token
- TLS 1.3 connectivity

XFS4IoT SP-Dev supports the latest technologies on the SP side:

- .NET Core
- WebSocket communications
- JSON format
- TLS 1.3 network security
- TR34 key distribution and HMAC device security
- Ready for 5G and IoT

KAL will create the XFS4IoT SP framework

We welcome input from the workgroup

- There is no commitment
- You may contribute as much or as little to the workgroup as you wish
- We hope you will use the SP-Dev framework
- We would like to have feedback if there are problems when you use it

The framework is open-source on GitHub

XFS = eXtension for Financial Services

- CEN/XFS Committee:
 - KAL, DN and NCR and many other members
 - Open to everyone

XFS3:

- Great success
- Used around the world

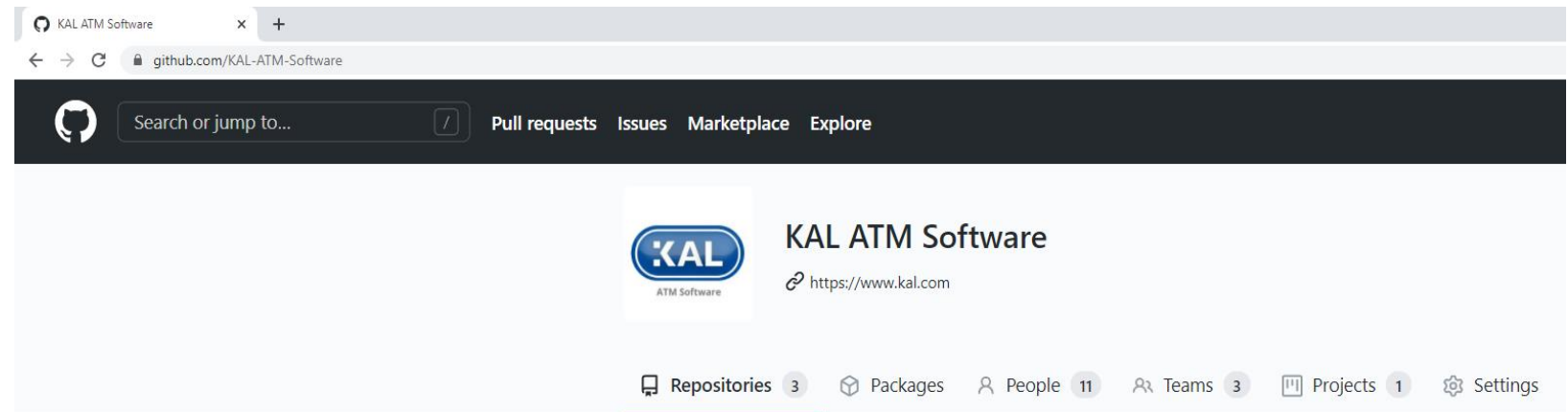
Latest version is XFS4 aka XFS4IoT

KAL organization on GitHub

GitHub

- Code hosting platform for version control and collaboration
- Over 56 million developers
- Open-source community

KAL ATM Software “organization” on GitHub



KAL XFS4IoT SP-Dev Repo



KAL-ATM-Software / KAL-XFS4IoT-SP-Dev Private Repo name

<> Code Issues Pull requests 1 Actions Projects Security Insights Settings

main 2 branches 0 tags Go to file Add file Code

Branch

Source code

MIT License License

Description

About

Open source project offering access to KAL XFS4IoT SP-Dev resources

Readme

MIT License

Contributors 4

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RossK-KAL

KaderBaadoud-KAL

KitPatterson Kit Patterson

Languages

C# 100.0%

RossK-KAL Remove packages.config file as not required fed681d 3 days ago 22 commits

| | | |
|---------------|------------------------------------------------------|-------------|
| ClientTestApp | Cancel token for the ConnectAsync was missing. | 3 days ago |
| Devices | Add correct copyright to all manually created files. | 3 days ago |
| Framework | Remove packages.config file as not required | 3 days ago |
| .gitignore | Update Gitignore for Visual Studio projects | 10 days ago |
| LICENSE.md | Add Licence file to root directory | 3 days ago |
| README.md | Put correct Readme content | 3 days ago |

README.md

KAL-XFS4IoT-SP-Dev

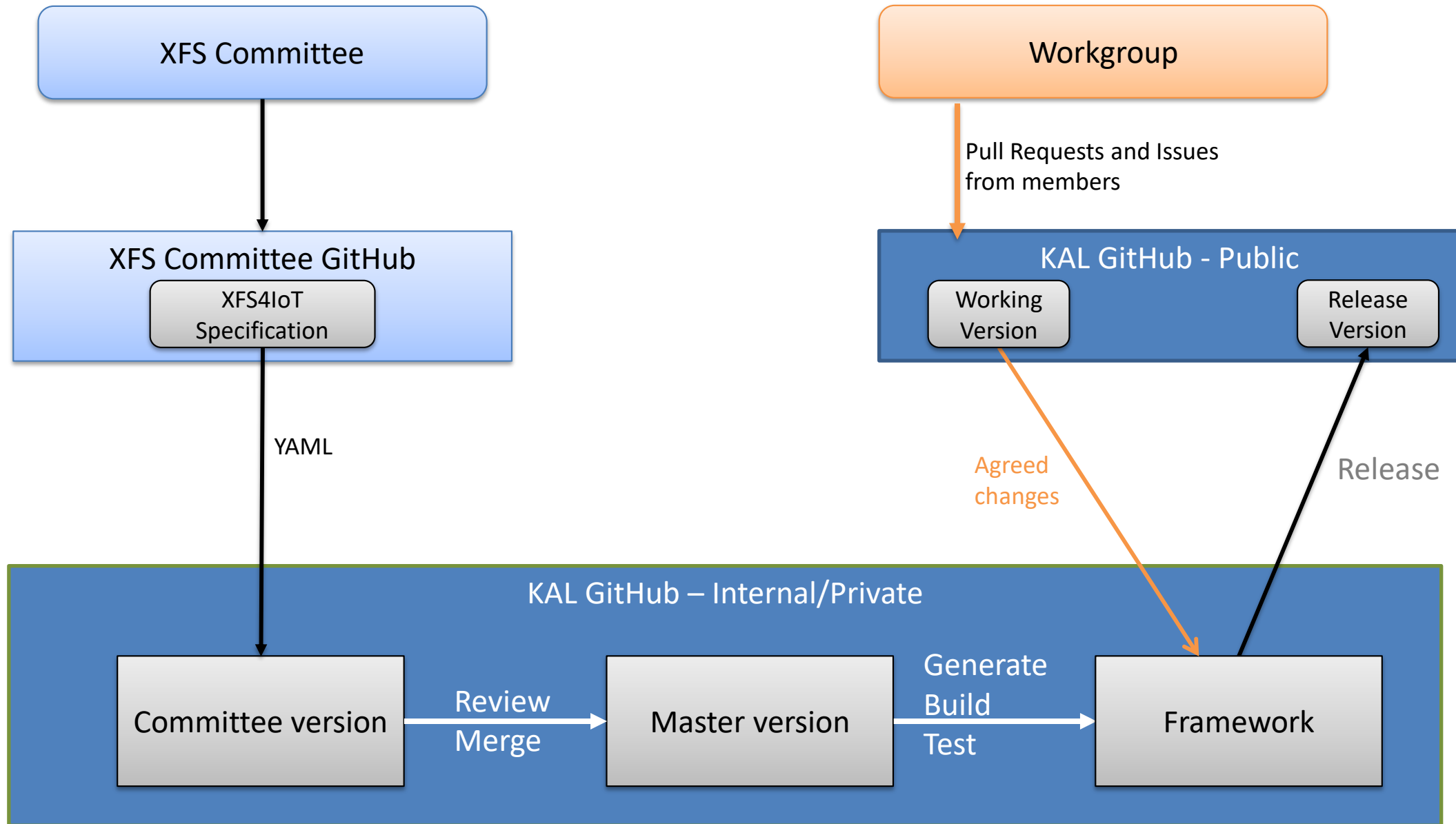
KAL's XFS4IoT SP-Dev is an open source implementation of the revolutionary new XFS version 4 global standard. It is ready for the IoT era and paves the way for a cloud-based, secure, OS-agnostic ATM industry.

This pioneering framework will enable hardware manufacturers and vendors to quickly create XFS4IoT SPs and offers numerous benefits. As well as being OS-agnostic, it is multivendor and works with hardware from multiple vendors, providing banks with greater choice, enhanced security and lower costs.

Hardware and software vendors, test software suppliers and application developers are all invited to join a working group to help develop the new framework, which will be available under the MIT open source license.

Find out more about this exciting new project and how you can get involved in shaping the ground-breaking XFS4IoT SP-Dev framework by contacting us @ xfs4iot_sp-dev_info@kal.com

KAL XFS4IoT SP-Dev working flow





ATM Software

Demo

2 Demo videos:

1. 2 Laptops/Windows OS/Card Reader XFS4 SP
2. Raspberry Pi & Laptop/Linux/Card Reader XFS4 SP

Based on KAL XFS4IoT SP-Dev Framework

Videos will be available on YouTube

Meetings and communication

Teams call

We will have video calls on MS Teams every two weeks

Tuesdays at 1300 UK time

(Note: clocks will change soon in the UK and around the world. The call will always be at 1300 UK time).

Next call is on the **6th April 2021**, 1300 UK, 0800 US EST, 2100 Tokyo time

Emails

You can also share thoughts and ideas with everyone by sending an email to:

xfs4iot_sp-dev_workgroup@kal.com

Note: the email above goes to everyone in the workgroup which is now 200+ people worldwide. Please use with care.

For support from the KAL XFS workgroup team, send your email to:

xfs4iot_sp-dev_info@kal.com