# XFS4IoT SP-Dev Workgroup

7 June 2022

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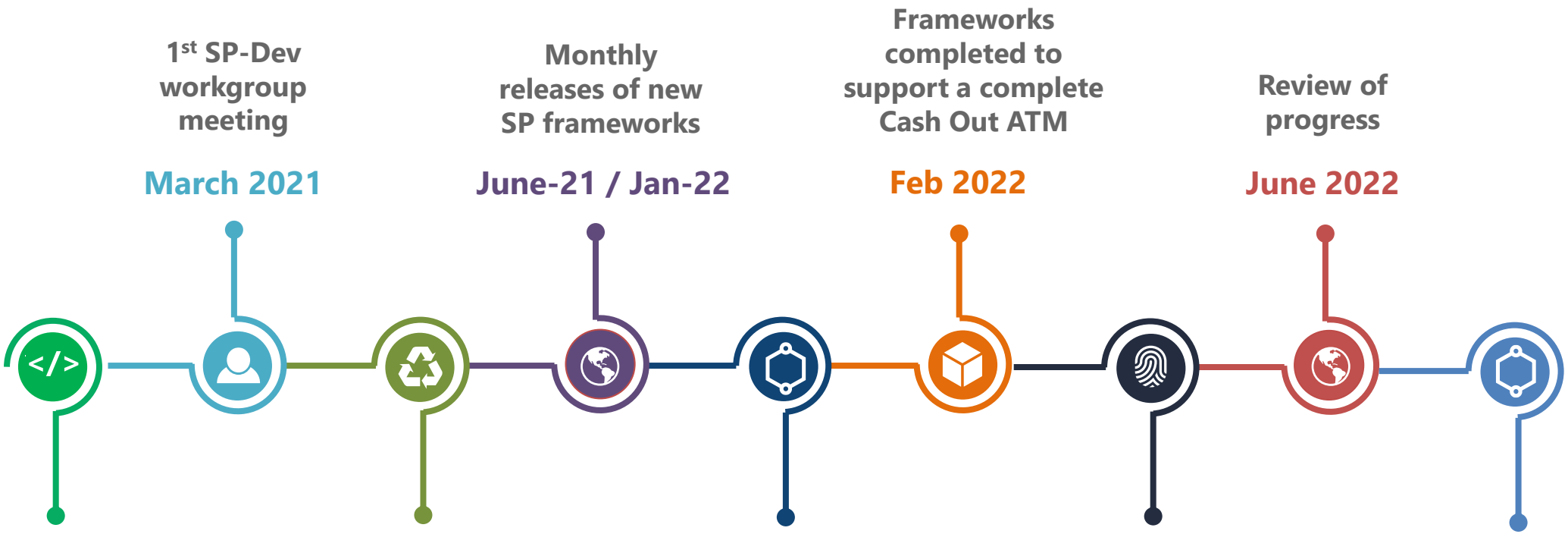
# XFS4IoT SP-Dev Workgroup Agenda

- Retrospective of workgroup achievements
- SP Template
- Q&A frequently asked questions
- Roadmap and what's next

# XFS4IoT Workgroup achievements

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# XFS4IoT Workgroup Achievements

- Framework support for full Cash-out, Cash-In and Recycler ATMs
- Up-to-date with 2021-1 specification release

☑ *Card Reader with support for dispensing*

☑ *Cash Dispenser without end-to-end security*

☑ *Text Terminal Unit*

☑ *EPP Key Management and Crypto classes*

☑ *Keyboard and PinPad classes*

☑ *End-to-end security partially complete*

☑ *Printer / Guide lights*

☑ *Vendor Mode and Vendor Application*

☑ *Auxiliaries*

☑ *Barcode reader*

☑ *Biometrics - All biometric data types supported*

☑ *Cash Acceptor*

# XFS4IoT Workgroup Achievements

We have created and shared XFS4IoT videos on the YouTube KAL ATM Software channel.

YouTube

KAL XFS4IoT SP-Dev Framework on Windows

411 views • 1 year ago

KAL XFS4IoT SP-Dev Framework on Linux

613 views • 1 year ago

XFS4IoT SP-Dev framework - E2E on a small device

123 views • 5 months ago

XFS4IoT SP-Dev PIN encryption

99 views • 7 months ago

XFS4IoT SP-Dev demo with PinPad

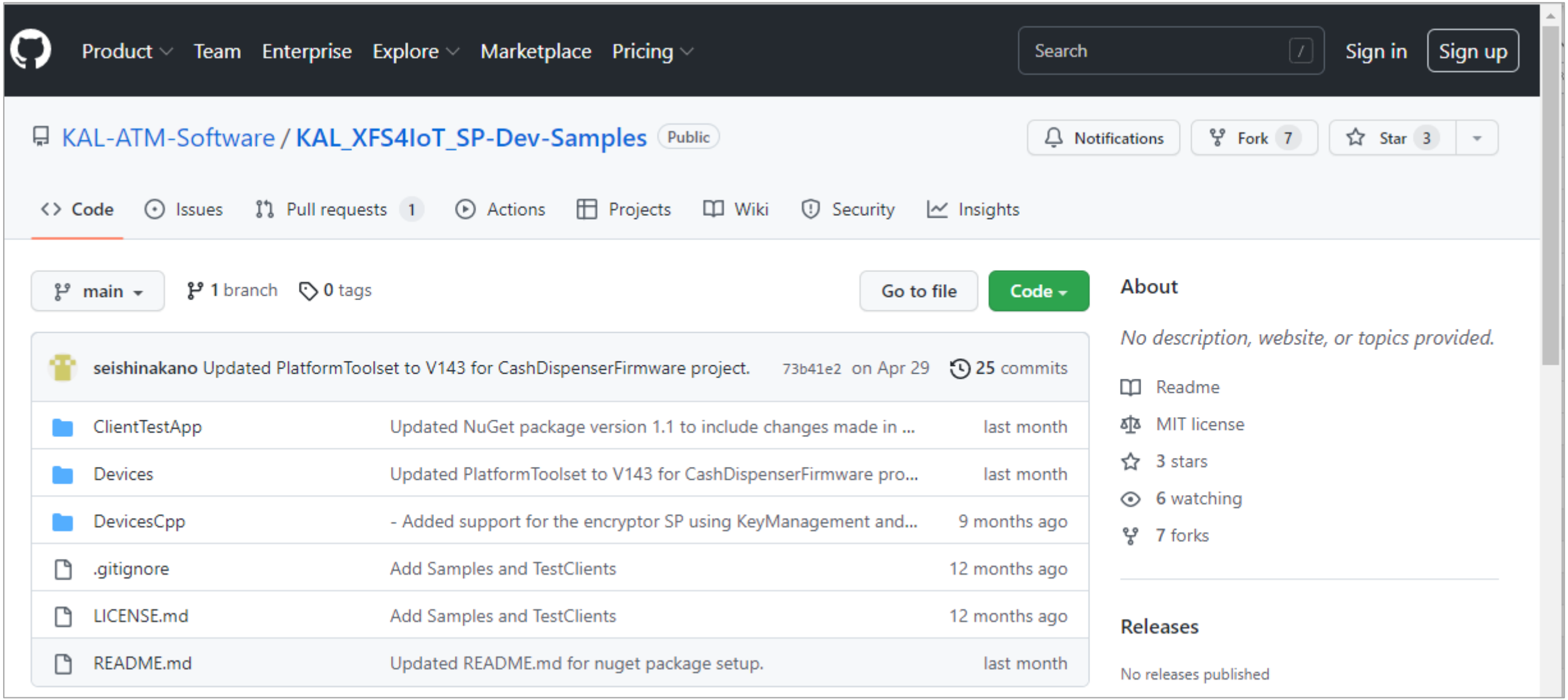
189 views • 8 months ago

XFS4IoT SP-Dev CashDispenser demo

199 views • 9 months ago

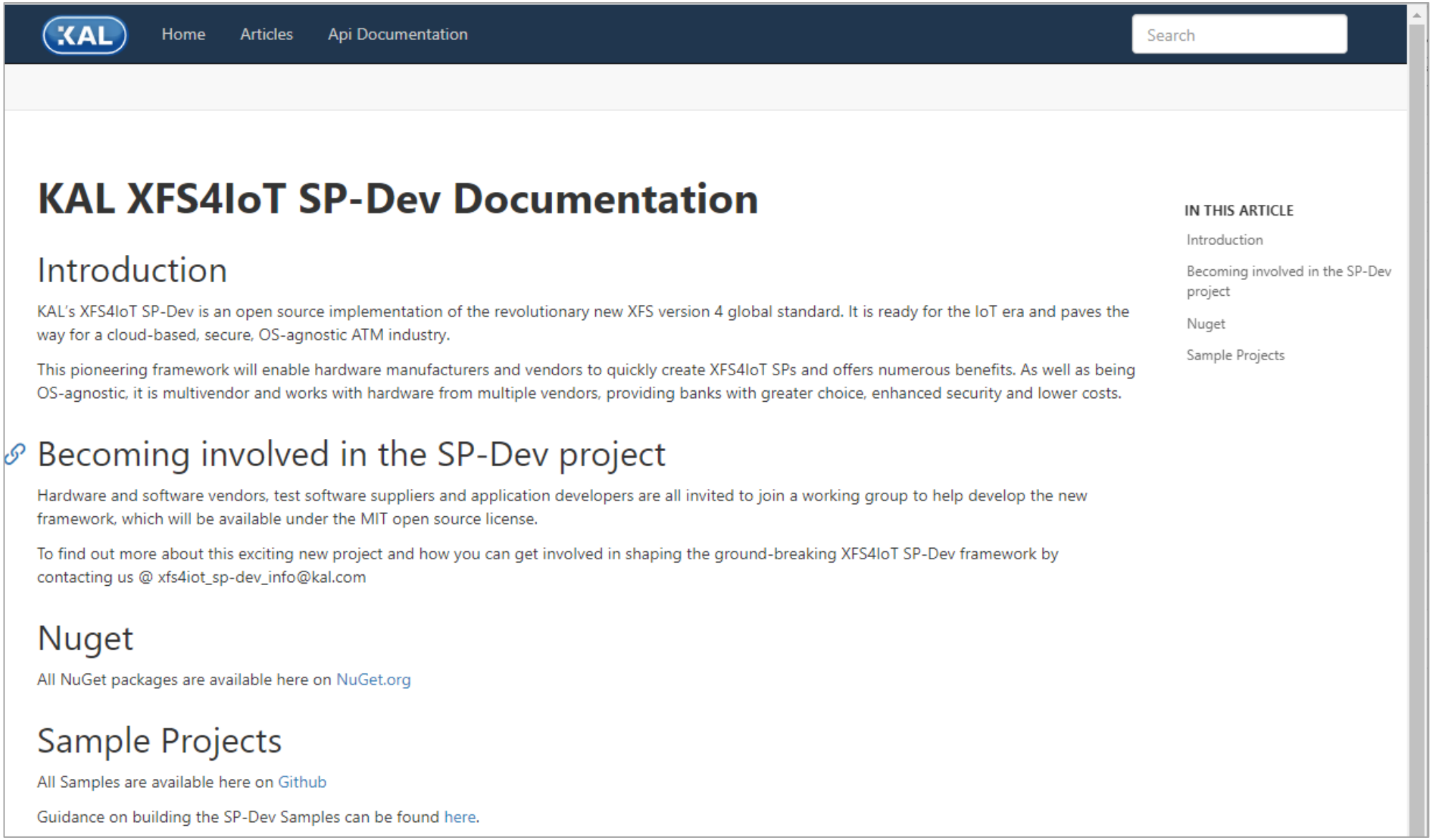
# XFS4IoT Workgroup Achievements

We have created SP framework code samples on GitHub for each device that we have released.



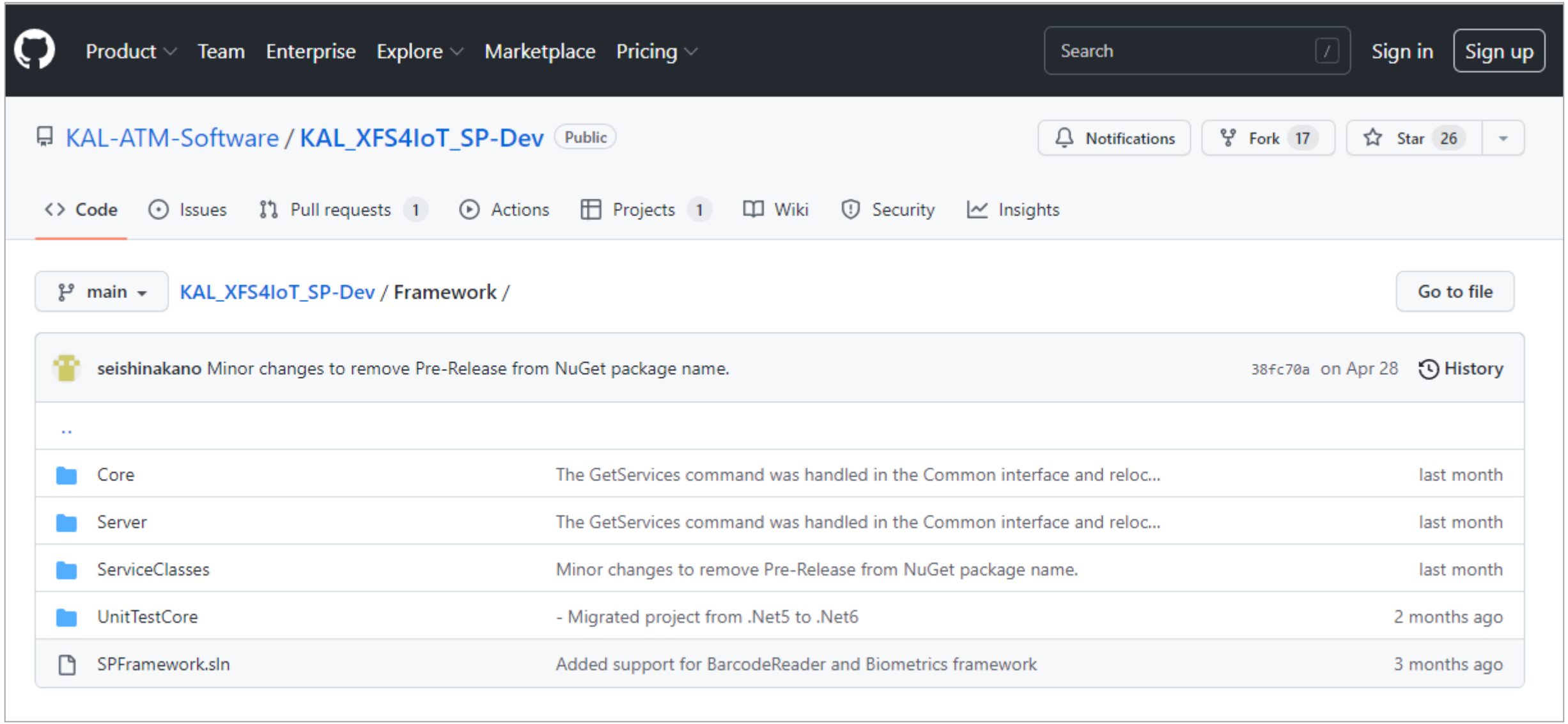
# XFS4IoT Workgroup Achievements

There is XFS4IoT SP-Dev documentation on GitHub.



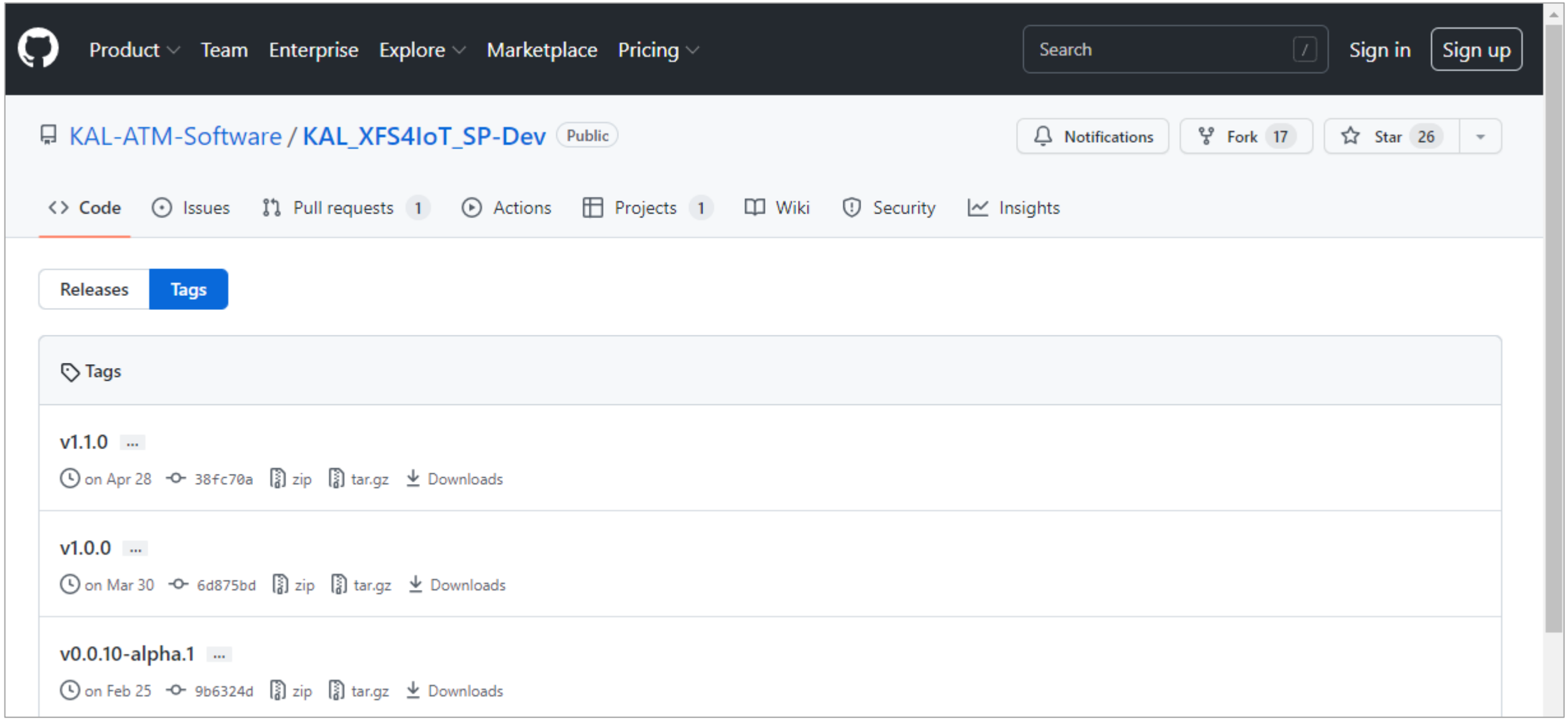
# XFS4IoT Workgroup Achievements

The SP-Dev framework is available on GitHub.



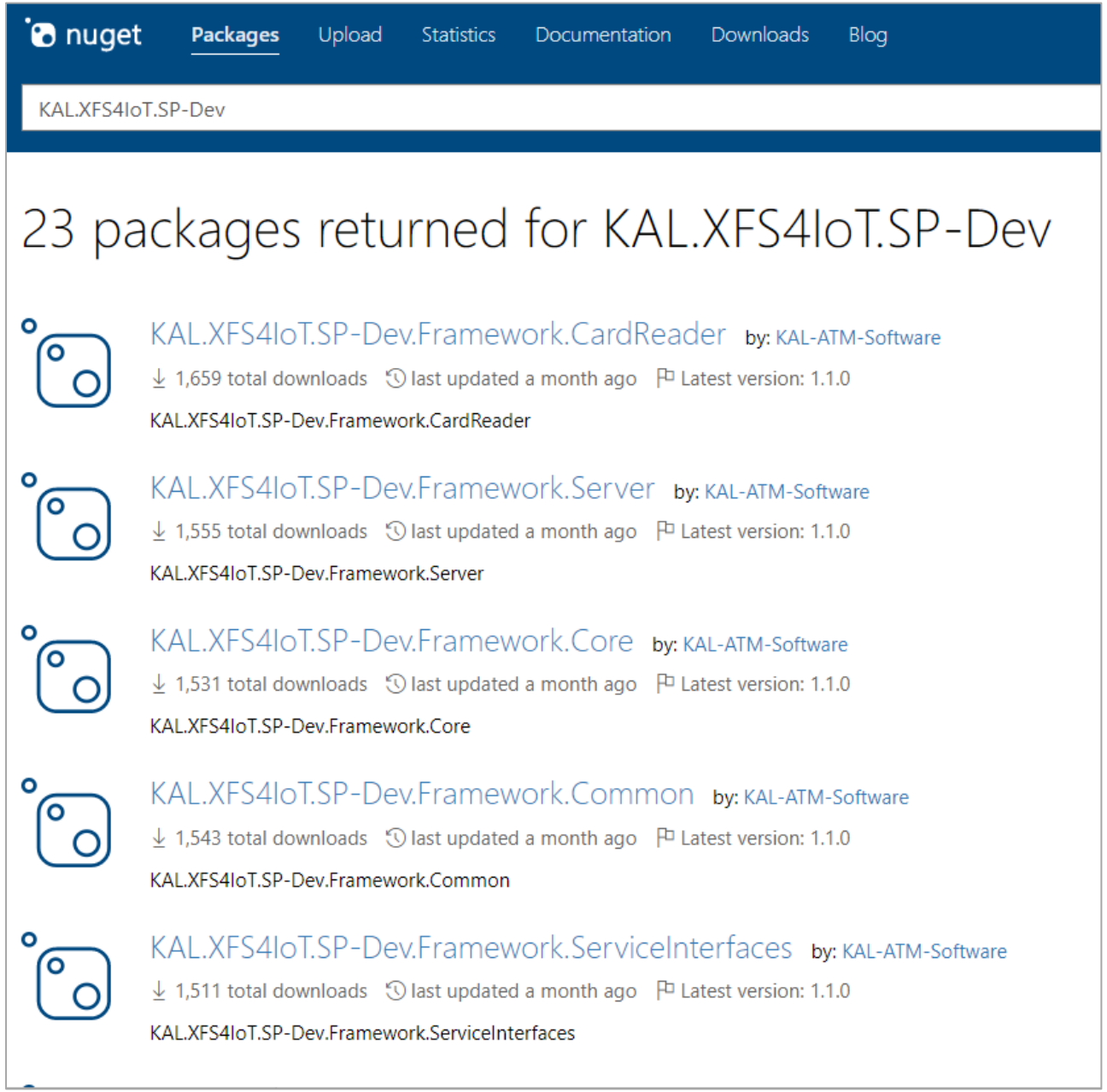
# XFS4IoT Workgroup Achievements

The SP-Dev framework releases are available on GitHub.



# XFS4IoT Workgroup Achievements

SP-Dev NuGet packages are available on nuget.org



# XFS4IoT SP templates

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# XFS4IoT SP templates

- .Net project templates
- Starting point for creating an XFS4 Service Provider
- Supplied as a NuGet package
- Can be installed via:
  - dotnet command line
  - Through IDEs such as Visual Studio

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# XFS4IoT SP templates – Installation

- Pre-requisites:
  - .Net 6 SDK
  - Visual Studio 2022

- Simple installation with command line:
  *dotnet new --install KAL.XFS4IoT.SP-Dev.Framework.Templates*

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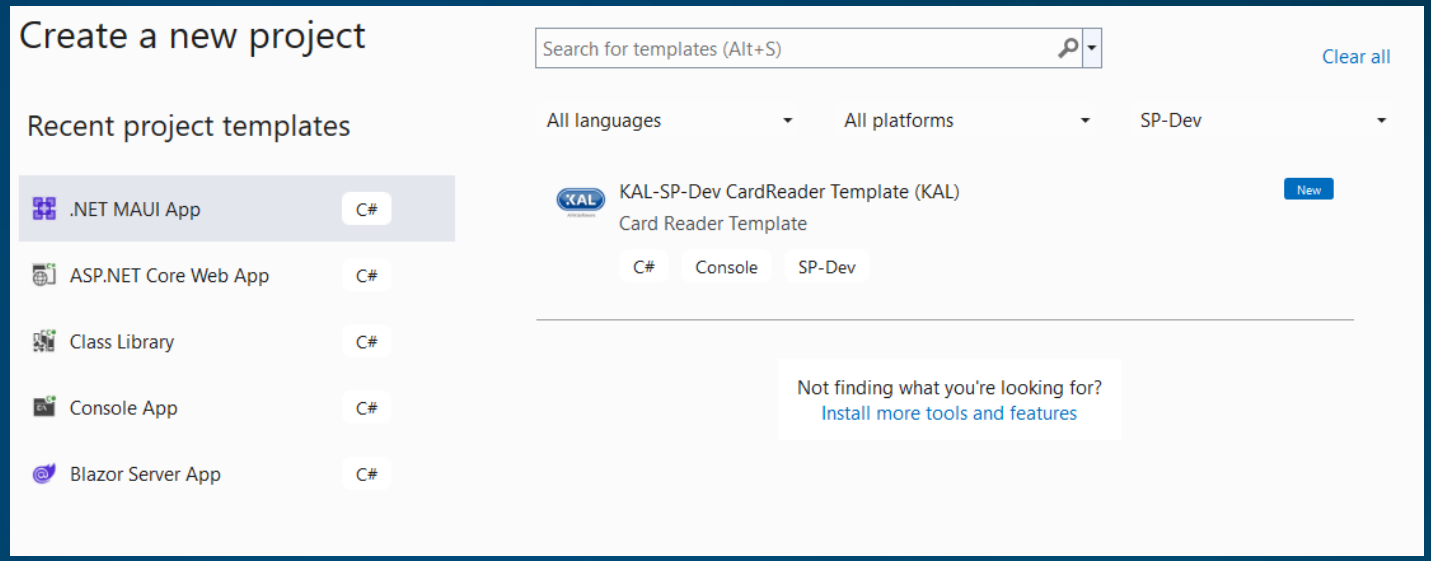
# XFS4IoT SP templates – How to use?

- Via VS2022 UI




- Command line from .Net CLI:
  *dotnet new spdev-cr (example for card reader)*

*Details available on the documentation page:*
*https://kal-atm-software.github.io/KAL_XFS4IoT_SP-Dev-Documentation/*

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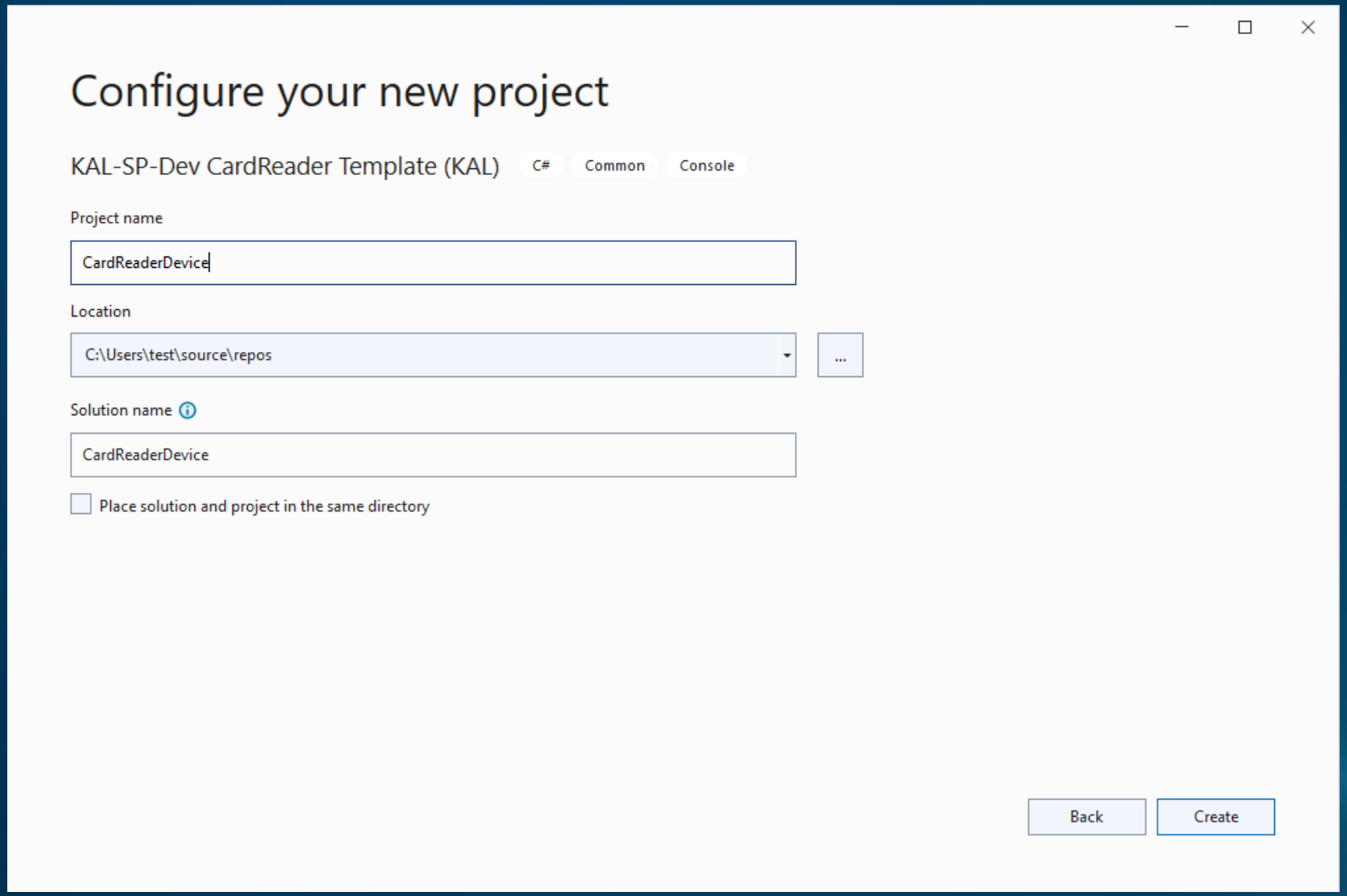
# XFS4IoT SP templates – What it does

## Start a new SP project …

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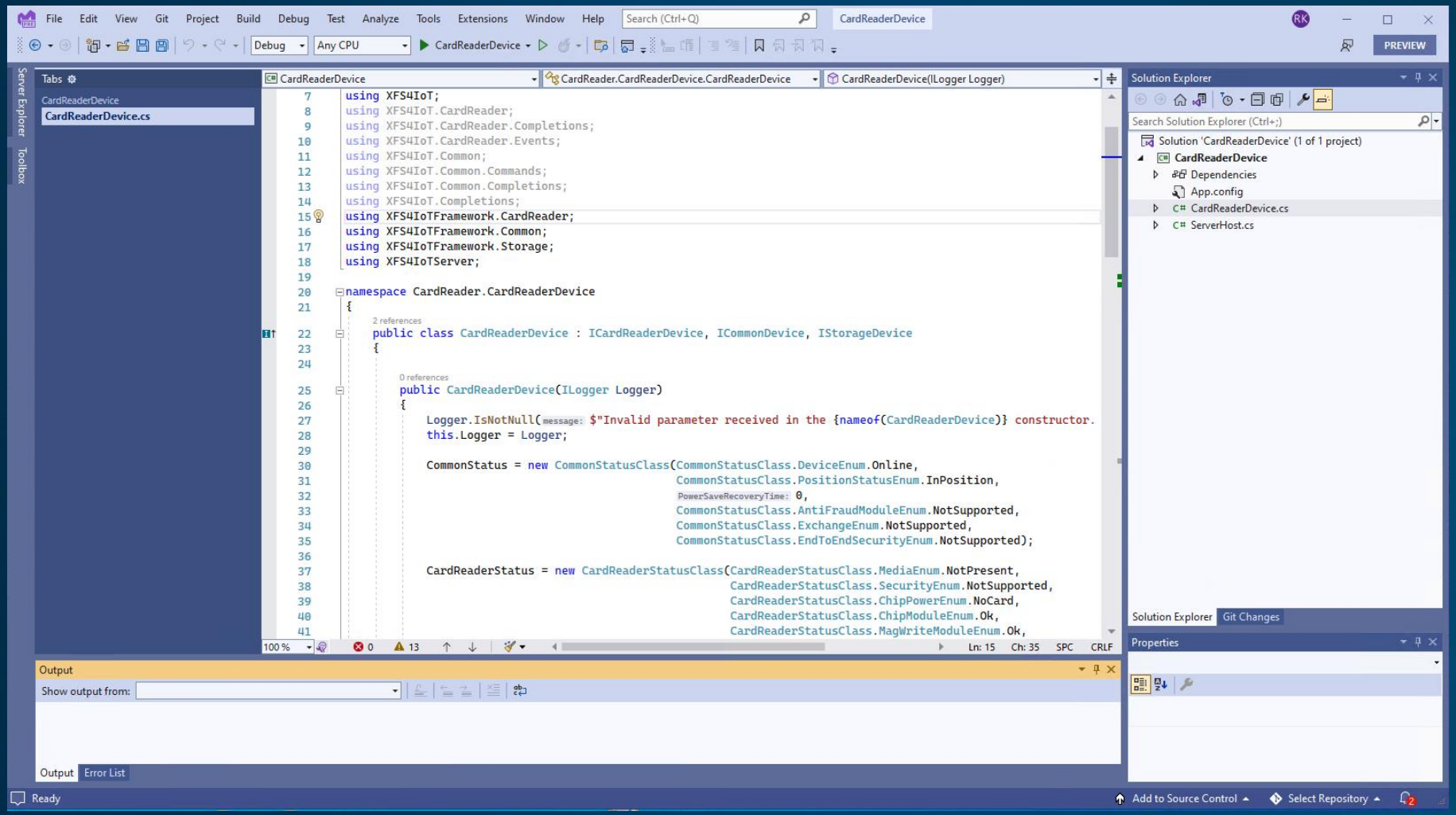
# XFS4IoT SP templates – What it does




...with all the structure for the customization defined!

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# FAQ

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# FAQ

- Is the framework ready to write XFS4IoT production SPs?
  *Absolutely yes!*

- What is needed to write an XFS4IoT SP?
  *Everything you need is available on the KAL GitHub repos.*
  *This includes framework, templates, samples and documentation.*

- Can I licence my XFS4IoT SPs to my customers the way I want?
  *Completely! KAL has no say in the end-user licencing model you choose.*

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# FAQ

- What to do if I want XFS4IoT SPs but don't want to develop them?
  *KAL or any vendor should be able to develop them.*

- When will hardware manufacturers release XFS4IoT SPs?
  *We do not know. We recommend to ask the vendors directly to get their roadmap and timelines.*

- Is it worth pushing towards XFS4IoT?
  *This is the future of the largest used ATM standard in the world… so we strongly believe so!*

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# What’s next?

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# CEN XFS Committee roadmap

- Next release planned for mid 2022
- Work in progress:
  - E2E security (other device commands…)
  - Cheque deposit interface
  - Clarification etc
- Multiple releases every year

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# KAL XFS4IoT SP-Dev Framework roadmap

- Stay up to date with CEN XFS specification
- Finalise E2E security support
- Include TPM framework
- Fine-tune framework by experience/feedback from XFS4 SPs development

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# Next call

Zoom

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

**No call in July and August**

**Next call: 6th September 2022, 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 using Zoom's interpretation feature)

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