Microsoft Dynamics 365
and Power Platform Community Conference
MAY 25 – 27, 2026
Portorož, Slovenia, Europe

How to NOT depend on 3rd parties when consuming APIs

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What's the problem?

We need to integrate with more and more systems via APIs

We also integrate our ERP / CRM / whatever into more and more other systems

During development and automated tests, we often face challenges

- Availability might not be easy
- Data often is an issue
- Scaling isn't easy: What if 3 pipelines run at the same time?

"Mocking" can be a solution: Instead of the real ERP / CRM or 3rd party system, you have a "mock", which is a system that behaves in the same way

- For an API, that means it accepts the same (relevant) requests and send the same responses

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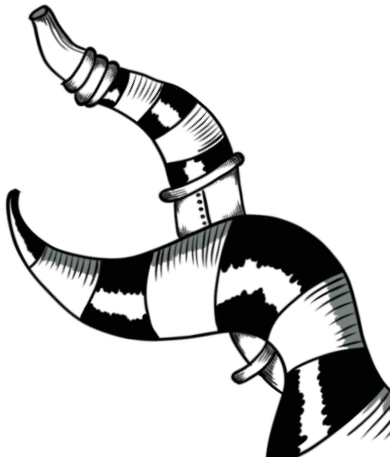
What is WIREMOCK?

https://github.com/wiremock/wiremock:
WireMock is a popular open-source tool for API mock testing with over 5 million downloads per month. It can help you to create stable test and development environments, isolate yourself from flaky 3rd parties and simulate APIs that don't exist yet.

Key features:

- Mock APIs by defining them via JSON or code
- Record API calls and create mocks from that
- Stateful behavior simulation



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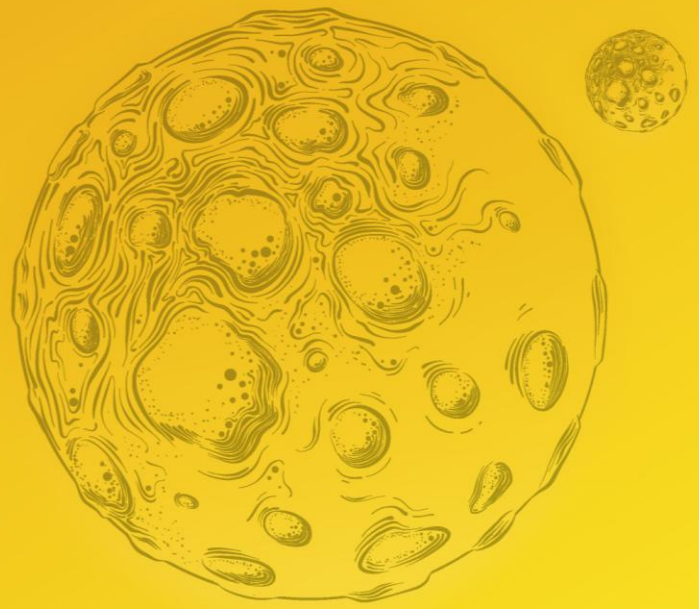

Demo

Of course, hello world!

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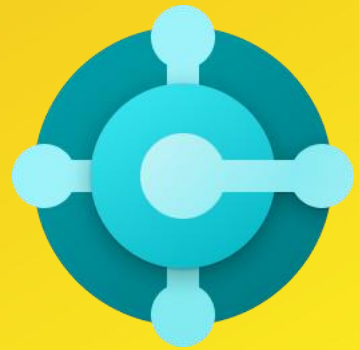
WireMock for BC mocking

Scenario 1: Use WireMock to mock BC

Client application

API Call



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WireMock for BC mocking

Scenario 1: Use WireMock to mock BC

Client application

API Call

Example: Get companies, CRUD actions for customers

Scenario 1: Mock BC

For reading, we need to mock responses to:

- GET /companies
- GET /companies(<id>)/customers
- GET /companies(<id>)/customers(<id>)

Done with “standard” WireMock in Java using recorded and optimized JSON files

Client is tiny C# Console application

- Dev and test

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Advanced topics: Stateful behavior

Scenario:

- A new customer is created
- Only then can it be retrieved and updated
- There must be a different response before and after the update if the customer is retrieved
- The customer can only be deleted after it was created, but also after it was modified
- Once it is deleted, it can’t retrieved

Done via a “scenarioName”, “requiredScenarioState” and “newScenarioState”

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Advanced topics: Stateful behavior

Mock responses to:

- GET /companies(<id>)/customers(<id>) – multiple different ones
- POST /companies(<id>)/customers
- PATCH /companies(<id>)/customers(<id>)
- DELETE /companies(<id>)/customers(<id>)v

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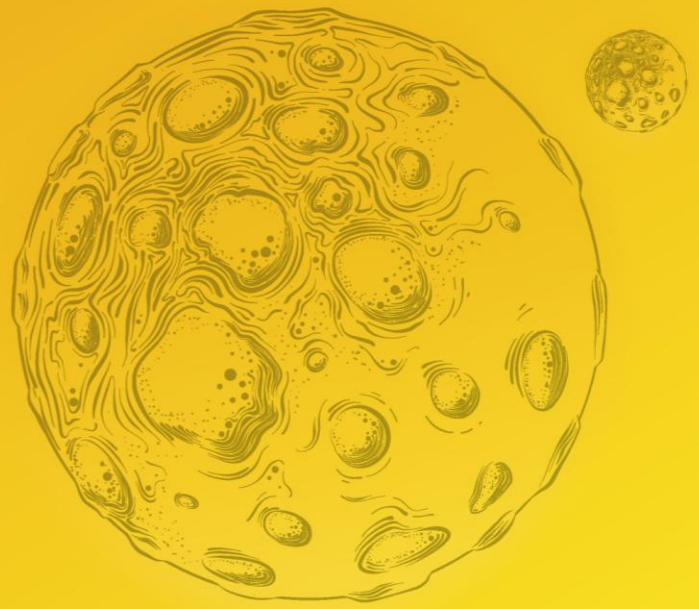

Demo

Mock BC

What have we seen:

- Set up WireMock for recording
- Record the required steps
- Optimize: Rename, dynamic values, header handling
- Stateful scenarios
- Usage of the mocked backend during development and test development

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WireMock for 3rd-party mocking

Scenario 2: Use WireMock to mock 3rd-party applications

API Call

3rd party backend

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WireMock for 3rd-party mocking

Scenario 2: Use WireMock to mock 3rd-party applications

API Call

3rd party backend

Example: CRUD actions for PetStore application (OpenAPI demo)

Scenario 2: Mock PetStore API

Mock responses to:

- GET /pet/<id> - fixed and dynamic
- POST /pet
- PUT /pet
- DELETE /pet/<id>

Done with WireMock.NET using recording and generated code

Client is BC

- Dev and test

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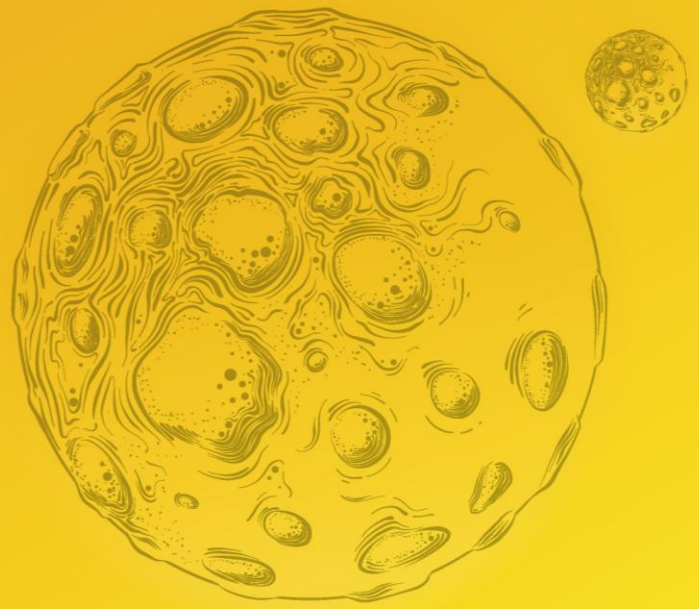

Demo

Mock PetStore

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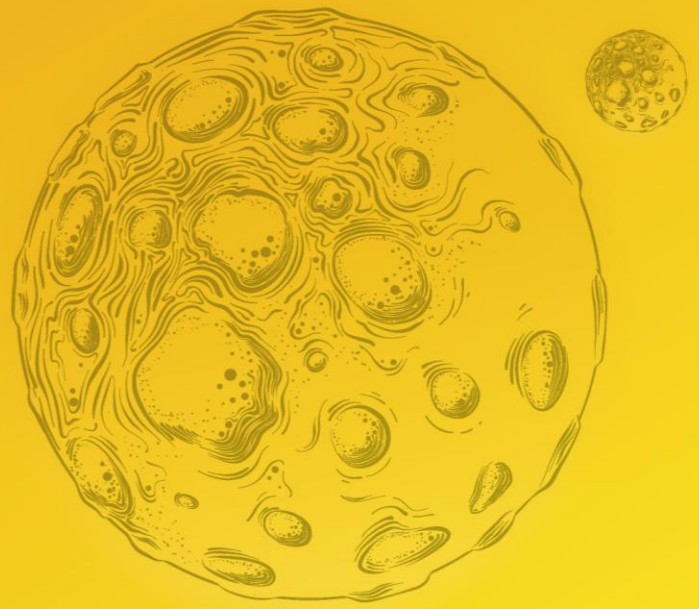
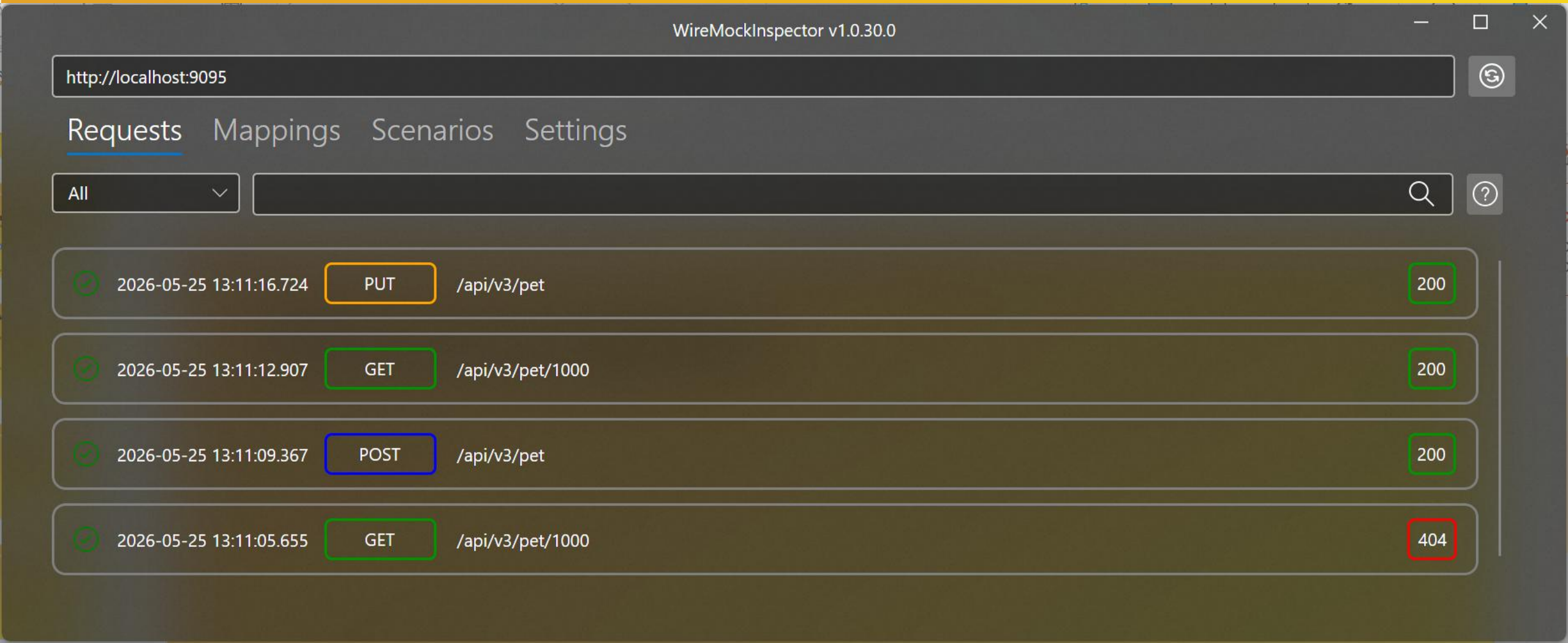


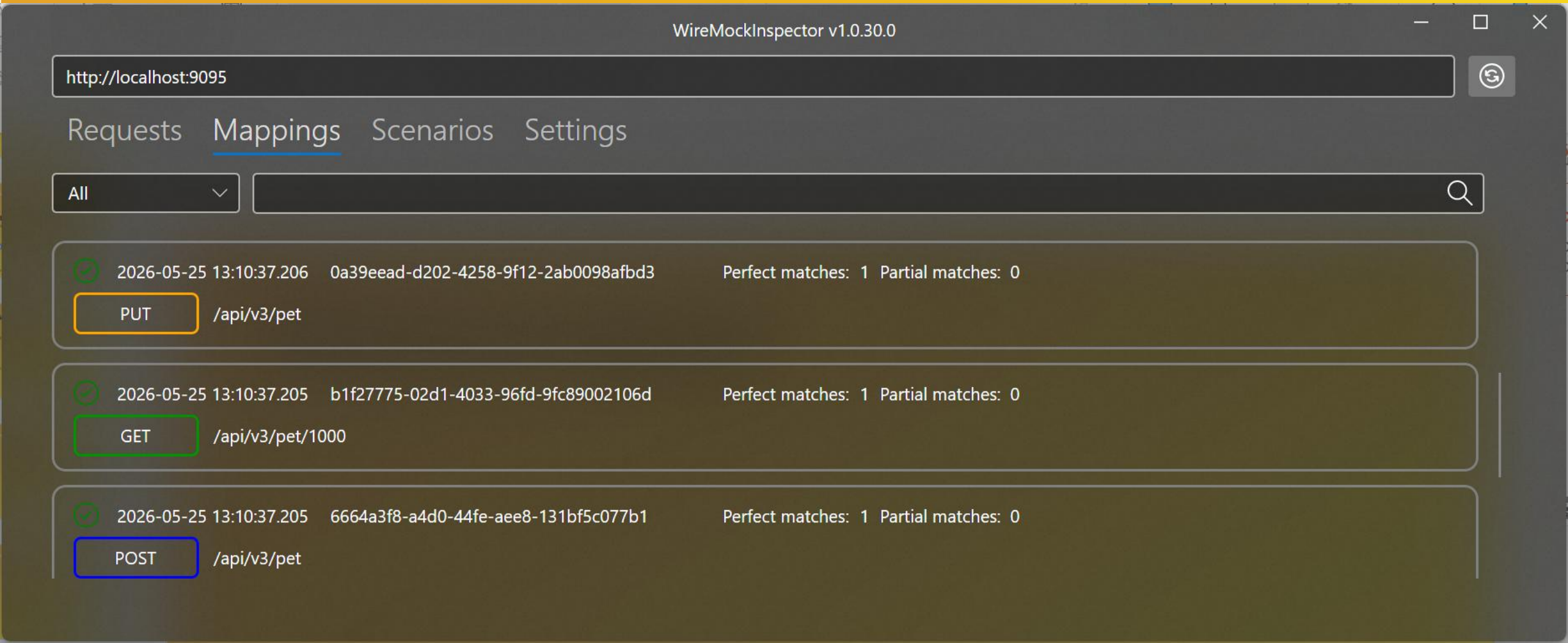
Demo

PetStore Client in BC

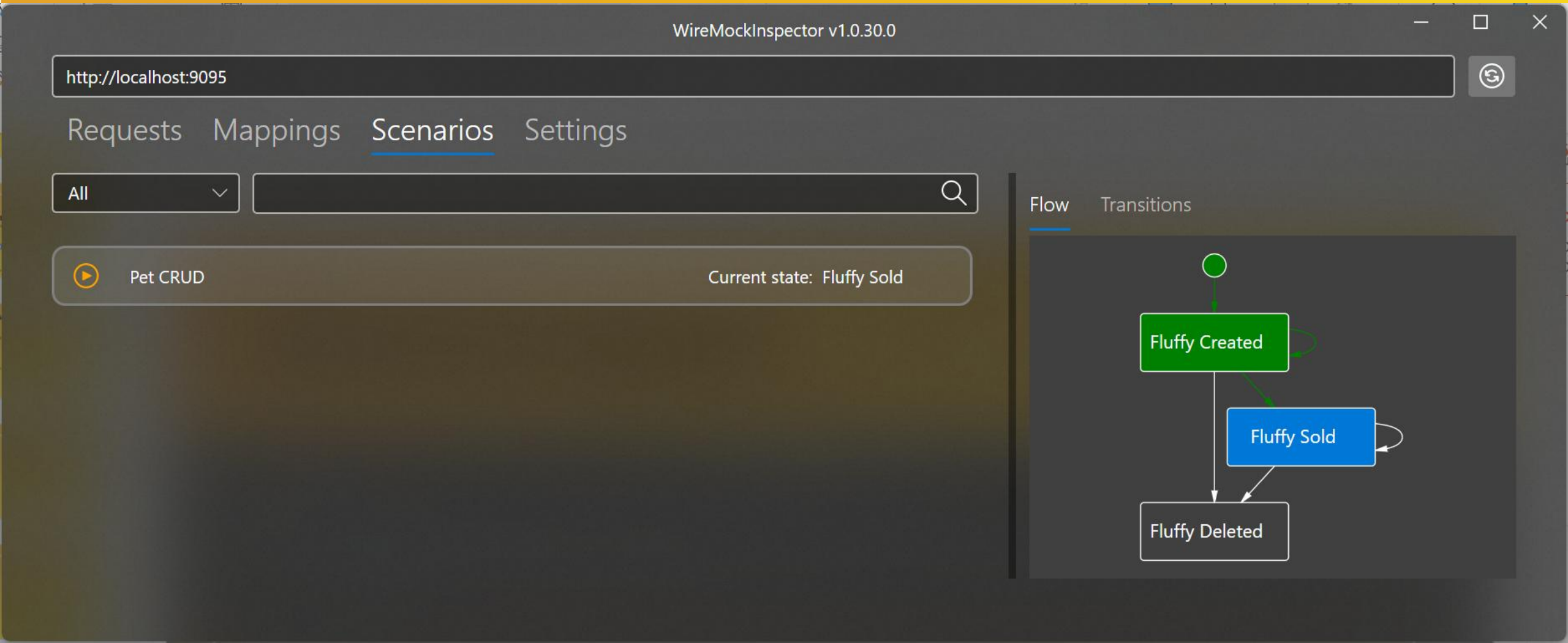
Wiremock Inspector



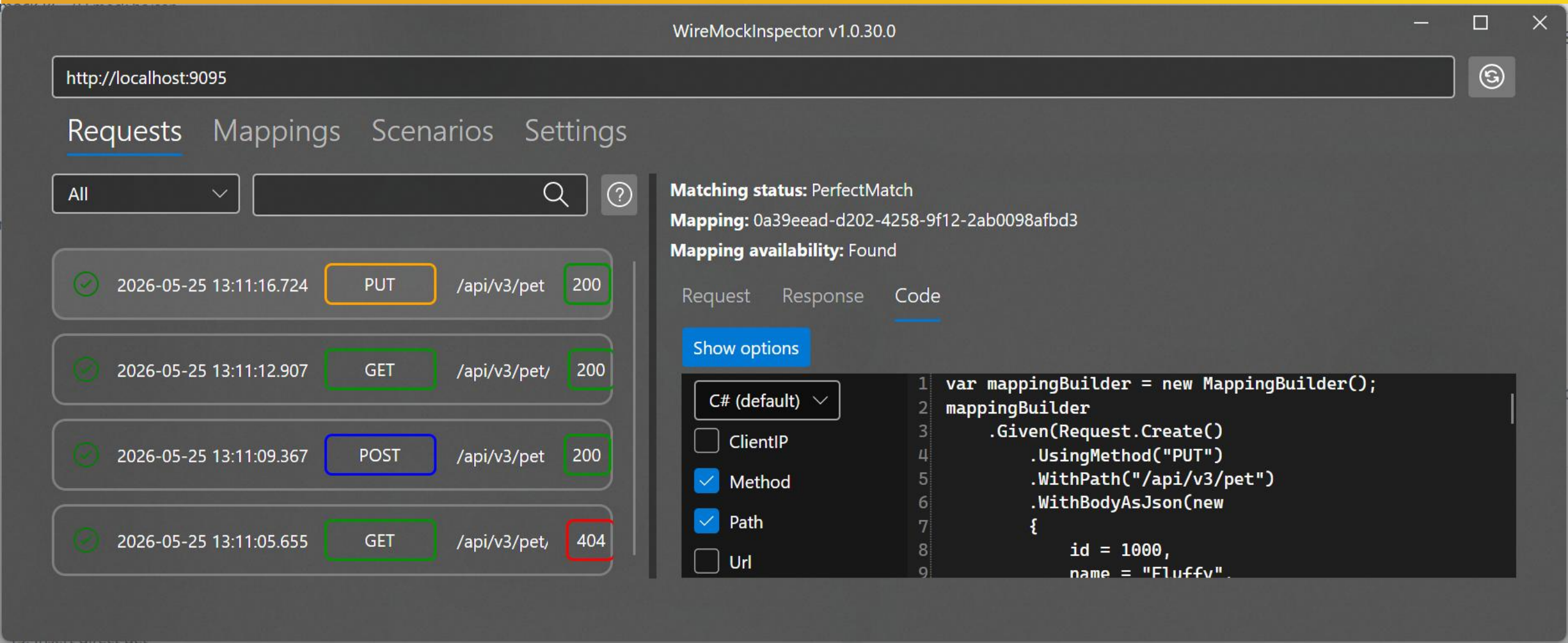
Wiremock Inspector



Wiremock Inspector



Wiremock Inspector

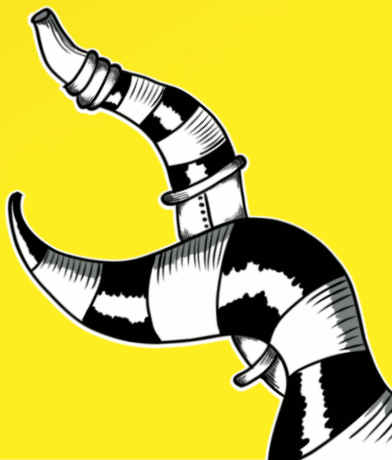


Closing remarks

WireMock can also do a bit of “chaos engineering”: Induce faults and delays

There are of course alternatives like mocking features natively in your ERP / CRM / whatever environment

- If you only use that → WireMock is probably not the best fit
- If you are not afraid of a little JSON / Java / C# and/or you have additional clients with a need to mock your bakcend
  → WireMock is worth a look!



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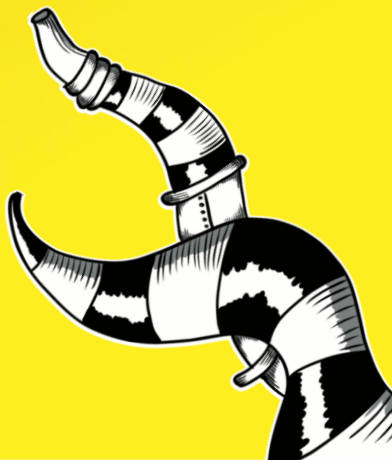
Closing remarks

What I hope you have learned today:

- You don’t always need a real backend to develop against APIs
- WireMock works with either JSON or code (C# / Java)
- It supports recording, dynamic returns and stateful scenarios
- The client code does ideally need no changes at all



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Questions?

THANK YOU!

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