Azure Functions, FakeXrmEasy, Dataverse, and dotnet core

Jordi Montaña

¡GRACIAS PATROCINADORES!

PLATINO

ESIC

INFOAVAN

avanade

ORIANA
ENDLESS INNOVATION

innovar
Tecnologías

ORO

bravent

prysma

TechData
A TD SYNNEX Company

prodware

axazure
Techedge Group

intelequia

V-Valley

PLATA

encamina
PIENSA EN COLORES

CrossPoint

devoteam

Bizz Summit
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ABOUT ME

Jordi Montaña

- Coding at **10 yrs old**

- **.Net** in 2006

- Master's Degree in Computer Science, **Universitat Politècnica Catalunya (UPC)**, 2007

- Started with **CRM 4** in 2011

- Author of **FakeXrmEasy** since 2014

- Founded **DynamicsValue** in 2015

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SOCIAL MEDIA

- Twitter: https://twitter.com/jordimontana

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TALK LINKS

- Slides: https://github.com/DynamicsValue/bizzsummit-es-2022

- Sample code: https://github.com/DynamicsValue/fake-xrm-easy-samples

- FakeXrmEasy Docs: https://dynamicsvalue.github.io/fake-xrm-easy-docs/quickstart/

AGENDA

- The Journey of **FakeXrmEasy (FXE)**
- Why?
- Evolution of Unit Testing in Dynamics / Dataverse
- The new Dataverse Client SDK, and new FXE versions
- Demo
- OSS Licensing Considerations
- Q & A

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Journey of FakeXrmEasy (FXE)

In 2013 I was told...

- "Unit testing is **too complex**, **too time consuming**"
- "It's xRM man, **no one cares** about **quality** of the software"
- "Not **worth** it"

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Journey of FakeXrmEasy (FXE)

... but what if it's **complex BECAUSE** ...

- you're **mocking every single request, every time?**
- and mocks don't actually **mimic Dataverse / Dynamics behavior?**
- and the code for mocking is actually **bigger** than, say, **plugin** code?
- and **maybe thay's WHY is not worth it?**...

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Journey of FakeXrmEasy (FXE)

... and so ... what IF ...

- you **didn't** have to mock anything (and it was **done for you?**)
- you could just use the **IOrganizationService** (something you're already **familiar** with?)
- it could **mimic Dataverse / Dynamics** behavior?
- more like **data-driven**, like when you doing **normal development?**

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Journey of FakeXrmEasy (FXE)

… and **SO** we could…

- **reduce costs** because we could spot **issues** much **earlier**?
- run **thousands** of tests **at scale**? (because they run **In-Memory**)
- **speed-up the dev process** because **no need to deploy** in-between changes?

Journey of FakeXrmEasy (FXE)

... and **so** In 2014 I **started working on FakeXrmEasy**...

YET, for a couple of YEARS I was....

- working pretty much alone as a single contributor, **and**
- repeatedly told... ..... guess what??

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Journey of FakeXrmEasy (FXE)

... the SAME :)

- "It's xRM man, **no one cares** about **quality** of the software"
- "Not **worth** it"
- "You're **wasting your time** man..."

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Journey of FakeXrmEasy (FXE)

BUT, things started to change…

- Met Raz and delivered (my first) **CRM Saturday** talk in Manchester, 2016
- There **were 4 people** attending
- Yes, you read that right :)

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Journey of FakeXrmEasy (FXE)

Next CRM Saturday in London:

- Over **100 attendees...**

Journey of FakeXrmEasy (FXE)

Following CRM Saturday events:

- Zurich (Switzerland)
- Dubai (UAE)
- Manchester (UK)
- Madrid and Barcelona (Spain)
- Dallas, Texas (US)
- Kyiv (Ukraine)
- …

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Journey of FakeXrmEasy (FXE)

TODAY, more than 7 YEARS later...

FakeXrmEasy Use

- 2 M+ downloads: https://www.nuget.org/packages?q=FakeXrmEasy

- ~ 20% of **Microsoft Crm Sdk** downloads

- Used in **multi-million** dollar projects (many Fortune 100s included)

Journey of FakeXrmEasy (FXE)

TODO, more than 7 YEARS later...

FakeXrmEasy in books

(PHOTOS)

Journey of FakeXrmEasy (FXE)

I'm very proud, that **TODAY**, more than **7 YEARS** later...

FakeXrmEasy in MS Docs

(PHOTOS)

Journey of FakeXrmEasy (FXE)

I'm very proud, that **TODAY**, more than **7 YEARS** later...

FakeXrmEasy as a LinkedIn skill

(PHOTOS)

Journey of FakeXrmEasy (FXE)

I'm very proud, that TODAY, more than 7 YEARS later...

Even JOBS asking for FakeXrmEasy exp...

(PHOTOS)

Journey of FakeXrmEasy (FXE)

I'm very proud, that **TODAY**, more than **7 YEARS** later...

And, finally, happy customers :D ...

(PHOTOS)

- https://dynamicsvalue.com/customer-stories

Moral of the Story ...

- Don't listen to naysayers...
- Be consistent

Why?

Increased developer efficiency

https://dynamicsvalue.com/white-paper

Evolution of Unit Testing in Dataverse

- **Level 0**: No unit tests at all (many companies, surprisingly, still here)

- **Level 1**: Manual mocks / fakes

- **Level 2**: In-Memory data-driven unit testing with FakeXrmEasy

- **Level 3**: Simulation: Azure functions + plugins firing In-Memory

DEMO

Scenario

- A contact is created via an azure function
- A plugin triggers to create a follow up task activity

DEMO

Scenario

- 1. Azure function unit tests
- 2. Plugin unit tests
- 3. Pipeline Simulation

Code snippet ...

```csharp
// Some code here
public class FakeXrmEasyTestsBase
{
    private readonly IXrmFakedContext _context;
    private readonly IOrganizationService _service;

    public FakeXrmEasyTestsBase()
    {
        _context = MiddlwareBuilder.New();
        _service = _context.GetOrganizationService();
    }
}
```

Code snippet (II)

```
public class FollowupPlugin : IPlugin
{
    //Omitted for simplicity, please see the full source code above
}
```

Quote styles

Some paragragraph with a `quote text here`.

" Some quoted text here

" Another Quote here

Other

heading 6

Swipe

Some other text

Notes