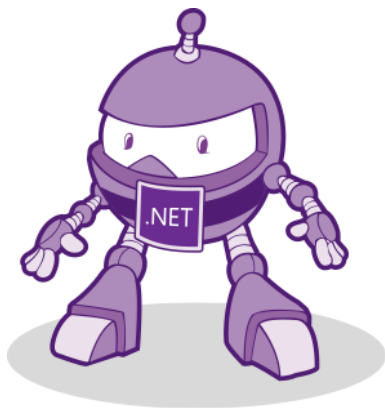




# Conociendo la plataforma .NET Core

El futuro es .NET Core





# Hola!

## Geovani de León (Yova)

Software Engineer and Architect at PensoTec

Docente Universitario USAC –CUNOR-

Líder de Microsoft Dev Group Cobán

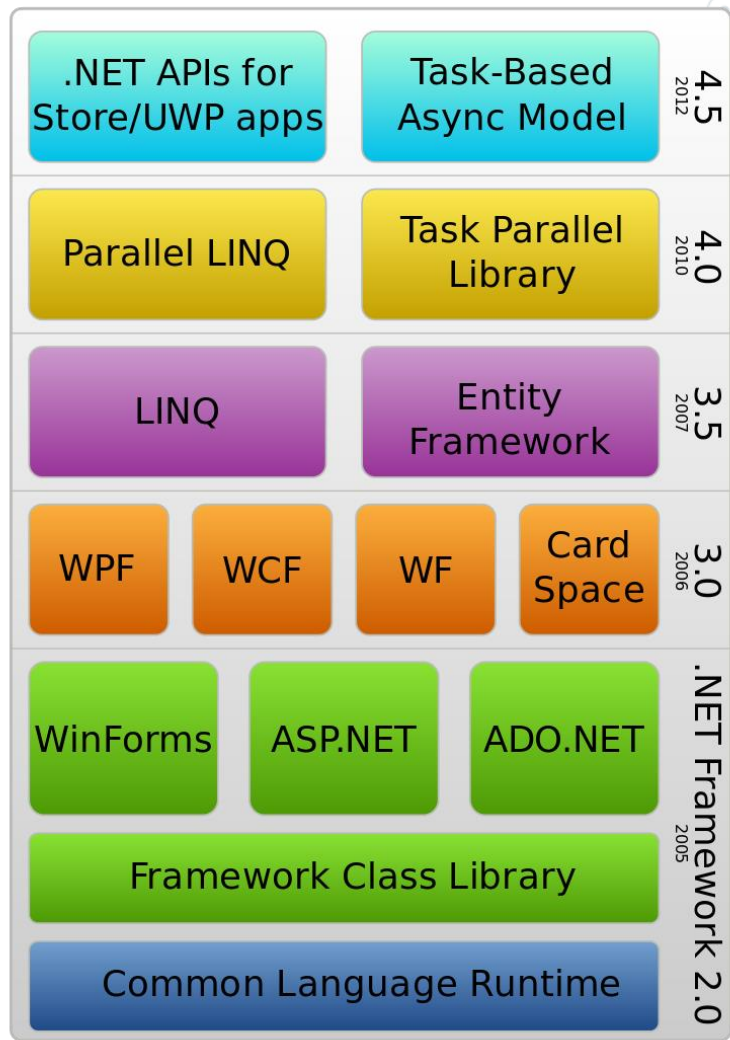
<https://github.com/yovafree>

## Qué es .NET Framework

- ◎ Es un conjunto de librerías lanzados por Microsoft en 2002
- ◎ Lenguajes empleados en .NET Framework: C#, Visual Basic, J#, F#
- ◎ Tecnología nativa de Microsoft, solo corre sobre sistemas operativos Windows

# Historía de .NET





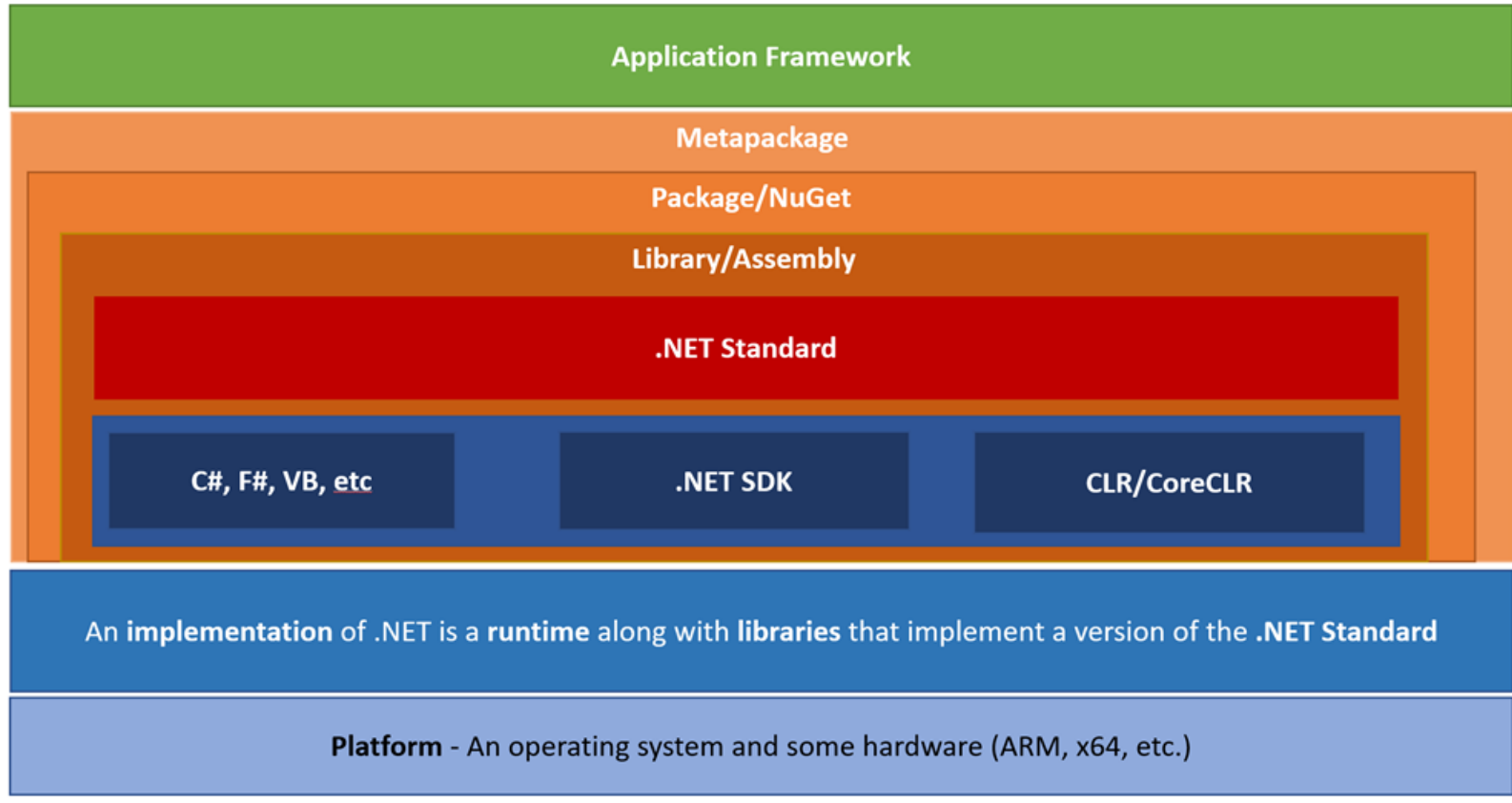
## Qué es .NET Standard

- © .NET Standard es un conjunto de API que se implementan mediante la biblioteca de clases base de una implementación de .NET.

## Versiones de .NET

Milestone	Release Date
.NET Core 2.1.x (servicing)	LTS (Long Term Support) release. Approximately every 1-2 months or as needed.
.NET Core 3.0.x (servicing)	Maintenance. Approximately every 1-2 months or as needed.
.NET Core 3.1.x (servicing)	LTS (Long Term Support) release. Approximately every 1-2 months or as needed.
.NET 5.0	Release scheduled for November 2020
.NET 6.0	LTS (Long Term Support) release, scheduled for November 2021
.NET 7.0	Release scheduled for November 2022
.NET 8.0	LTS (Long Term Support) release, scheduled for November 2023

# .NET - “Do you know .NET?”





# APIs en .NET Standard 2.0

## XML

XLinq • XML Document • XPath • Schema • XSL

## SERIALIZATION

BinaryFormatter • Data Contract • XML

## NETWORKING

Sockets • HTTP • Mail • WebSockets

## IO

Files • Compression • MMF

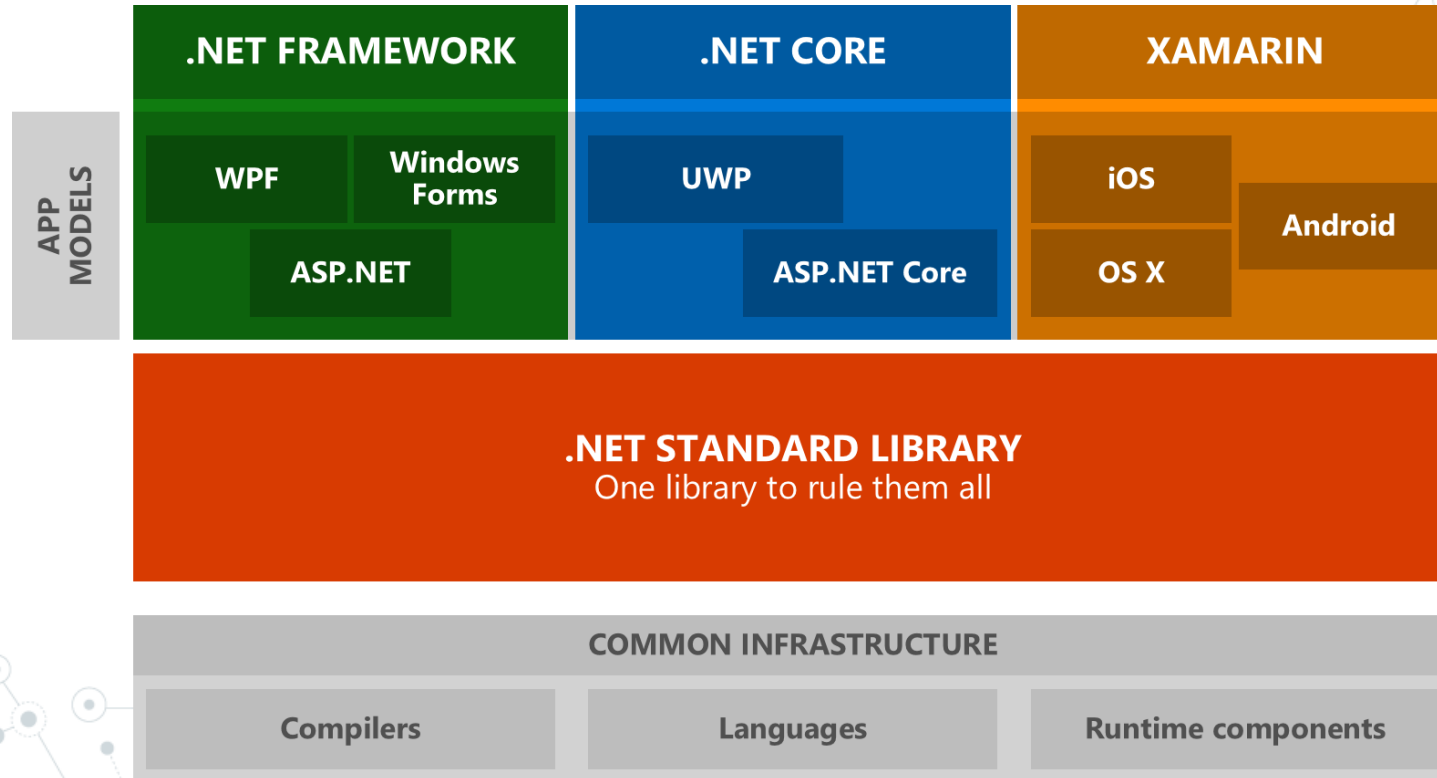
## THREADING

Threads • Thread Pool • Tasks

## CORE

Primitives • Collections • Reflection • Interop • Linq

# Implementación de .NET Standard

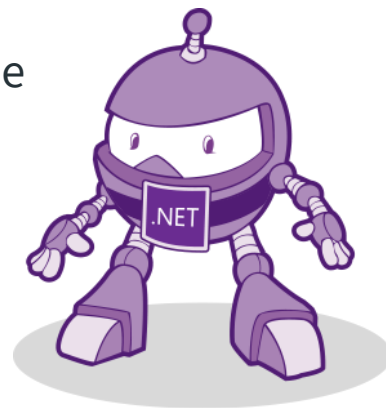


# .NET Core

## .NET Core

- © .NET Core es una implementación multiplataforma de .NET diseñada para controlar cargas de trabajo de servidor y en la nube a escala.
- © Se ejecuta en Windows, macOS y Linux.
- © Implementa .NET Standard, de forma que cualquier código que tenga como destino .NET Standard se puede ejecutar en .NET Core.

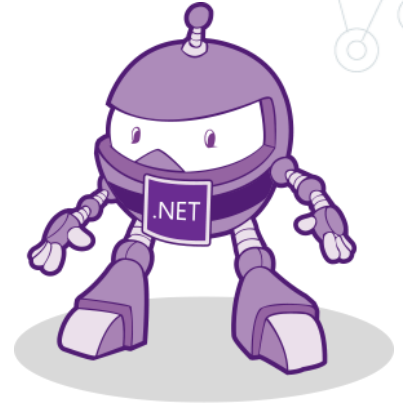
ASP.NET Core, Windows Forms y Windows Presentation Foundation (WPF) se ejecutan todos en .NET Core.



## Características de .NET Core

# .NET Core

- ⦿ Modular
- ⦿ Preparado para la nube
- ⦿ Open Source
- ⦿ Editores o herramientas de desarrollo
- ⦿ Cross Platform



MODULAR



MULTI PLATAFORMA

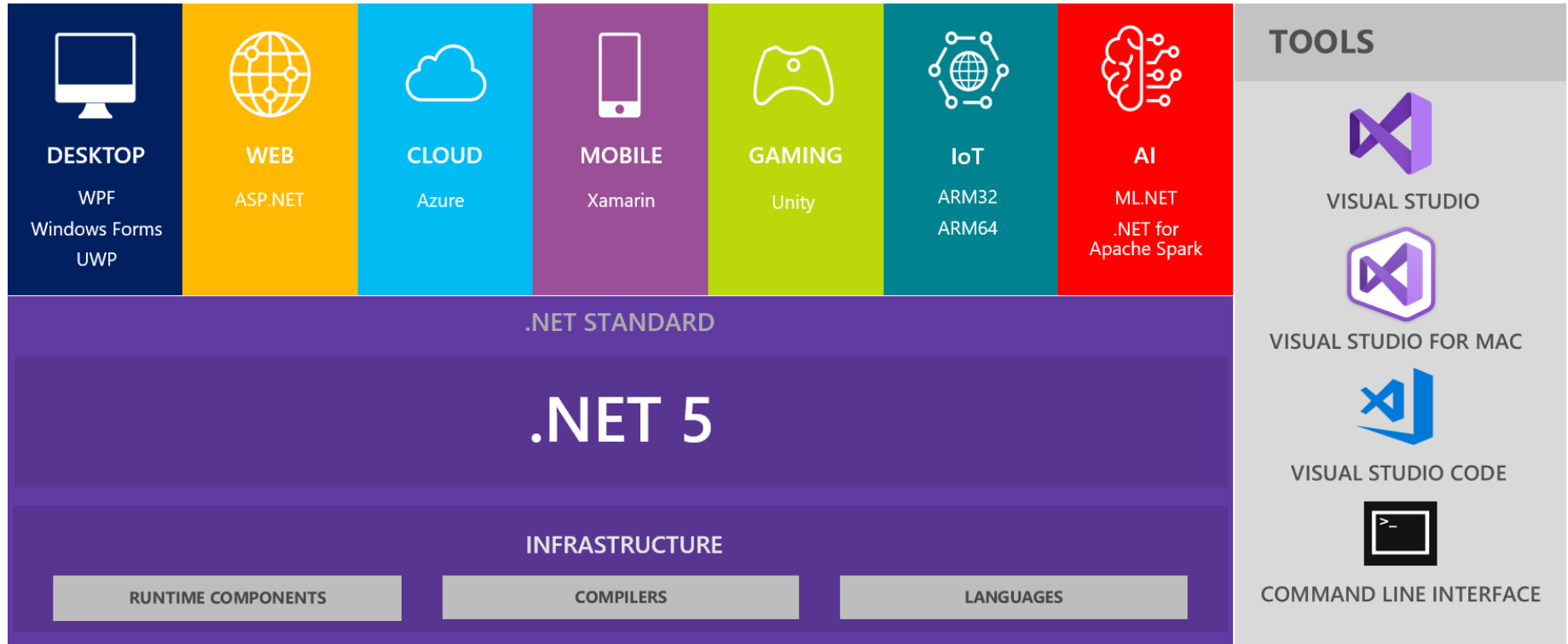


OPEN SOURCE



CLI

# Ámbito de .NET – Una plataforma unificada



# Versiones de .NET Core y su nueva versión 3.1

## Long-term support

.NET Core 3.1 is an LTS release with support from Microsoft for the next three years. It's highly recommended that you move your apps to .NET Core 3.1. The current lifecycle of other major releases is as follows:

Release	Note
.NET Core 3.0	End of life on March 3, 2020.
.NET Core 2.2	End of life on December 23, 2019.
.NET Core 2.1	End of life on August 21, 2021.

## ¿Qué hay de nuevo en .NET Core 3?

- ◎ Language improvements C# 8.0
- ◎ .NET Standard 2.1
- ◎ Windows Native Interop
- ◎ Linux
  - GPIO Support for Raspberry Pi
  - ARM64 Linux support
  - Docker and cgroup memory Limits

The background of the slide features a complex, light gray network pattern. It consists of numerous small circles, some of which are solid gray and others are hollow with a gray outline. These circles are interconnected by a web of thin, light gray lines, creating a dense, interconnected mesh that covers the entire slide area.

# 85%

API .NET a .NET Core



A decorative network diagram in the top-left corner, featuring a complex web of interconnected nodes and lines. Some nodes are highlighted with blue circles, and others with blue dots.

**¿Cómo  
empiezo?**

# Download .NET

Downloads for .NET Framework and .NET Core, including ASP.NET and ASP.NET Core

❓ Not sure where to start? See the [Hello World in 10 minutes tutorial](#) to install .NET and build your first app.

Windows

Linux

macOS

Docker

**.NET**  
Core

## .NET Core 3.1

.NET Core is a cross-platform version of .NET for building websites, services, and console apps.

Run Apps ⓘ

[Download .NET Core Runtime](#)

Build Apps ⓘ

[Download .NET Core SDK](#)

Advanced ⓘ

[All .NET Core downloads...](#)

**.NET**  
Framework

## .NET Framework 4.8

.NET Framework is a Windows-only version of .NET for building any type of app that runs on Windows.

Run Apps ⓘ

[Download .NET Framework Runtime](#)

Build Apps ⓘ

[Download .NET Framework Dev Pack](#)

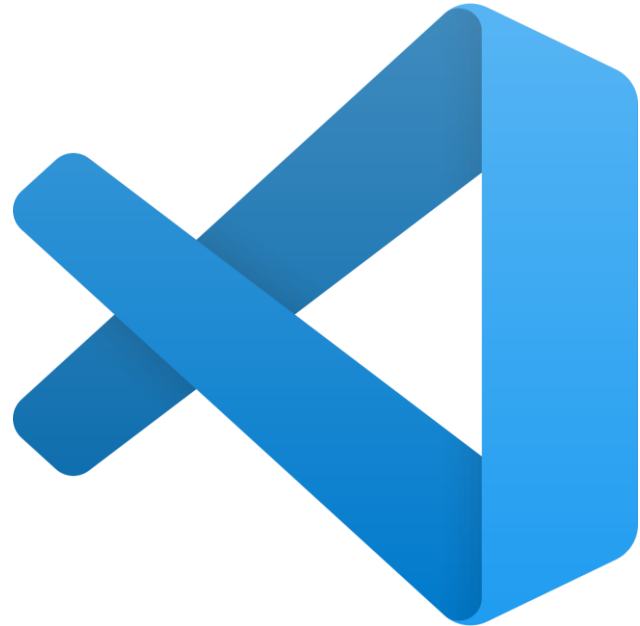
Advanced ⓘ

[All .NET Framework downloads...](#)

<https://dotnet.microsoft.com/download>

## Necesitamos un IDE! – Visual Studio Code

© <https://code.visualstudio.com/>



# Demo 1

Hola Mundo

# Mi primer proyecto



```
dotnet new console -n demo01  
dotnet run
```



# Tipos de proyectos

🕒 dotnet new --help

Templates	Short Name	Language	Tags
Console Application	console	[C#], F#, VB	Common/Console
Class library	classlib	[C#], F#, VB	Common/Library
WPF Application	wpf	[C#]	Common/WPF
WPF Class library	wpflib	[C#]	Common/WPF
WPF Custom Control Library	wpfcustomcontrollib	[C#]	Common/WPF
WPF User Control Library	wpfusercontrollib	[C#]	Common/WPF
Windows Forms (WinForms) Application	winforms	[C#]	Common/WinForms
Windows Forms (WinForms) Class library	winformslib	[C#]	Common/WinForms
Worker Service	worker	[C#]	Common/Worker/Web
Unit Test Project	mstest	[C#], F#, VB	Test/MSTest
NUnit 3 Test Project	nunit	[C#], F#, VB	Test/NUnit
NUnit 3 Test Item	nunit-test	[C#], F#, VB	Test/NUnit
xUnit Test Project	xunit	[C#], F#, VB	Test/xUnit
Razor Component	razorcomponent	[C#]	Web/ASP.NET
Razor Page	page	[C#]	Web/ASP.NET
MVC ViewImports	viewimports	[C#]	Web/ASP.NET

## Conociendo NuGet

- © NuGet es un administrador de paquetes gratuito y de código abierto diseñado para la plataforma de desarrollo de Microsoft.



# Demo 2

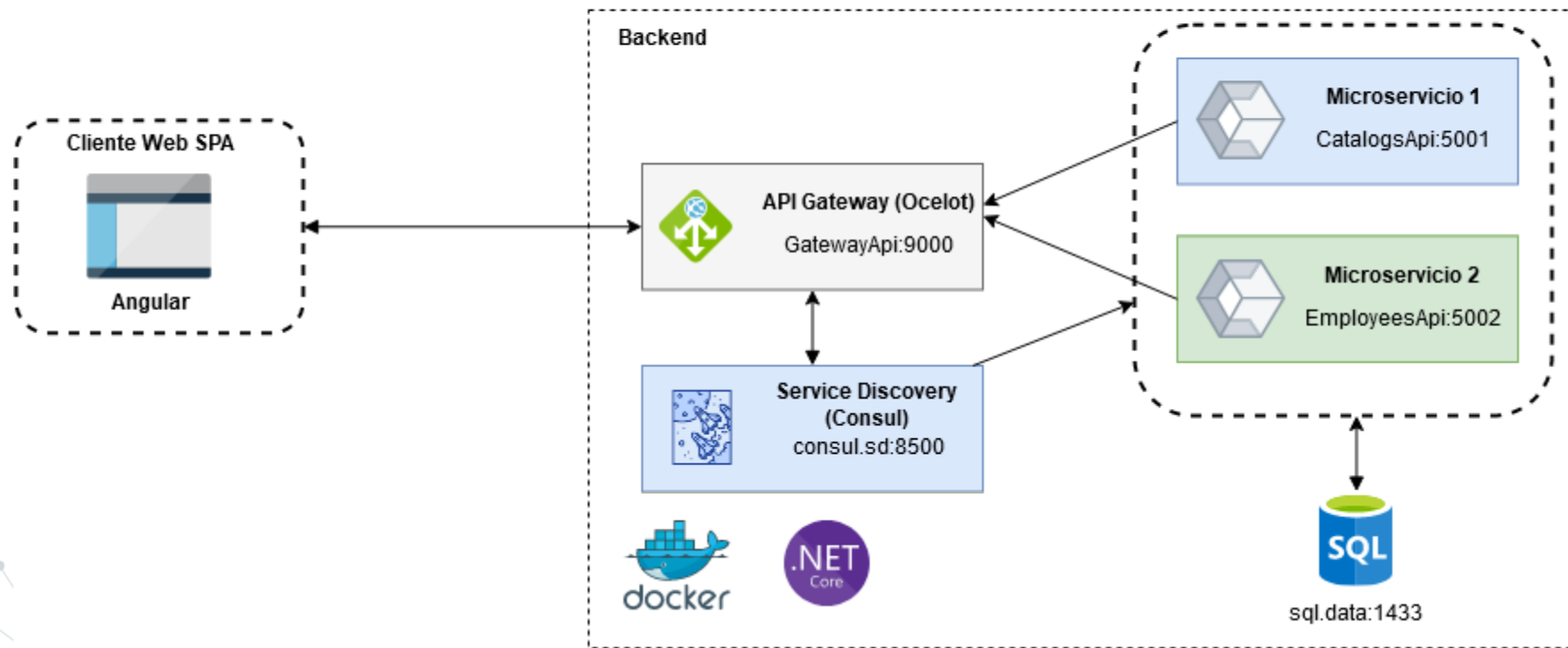
MVC .NET Core



# Demo 3

Microservicios con .NET Core, Contenedores y mucho más!

## Diagrama de Arquitectura



# Demo 4

IoT con .NET Core  
Raspberry Pi !

## Siguientes pasos

- ◎ gRPC .NET Core
- ◎ Razor para .NET Core
- ◎ Async / await
- ◎ Blazor
- ◎ Persistencia (Entity Framework Core y LINQ)
- ◎ Base de Datos (SQL Server, MySQL, PostgreSQL)
- ◎ Microservicios

IoT



# Gracias!

## ¿Preguntas?

Puedes contactarme mediante:

@yovafree

[erwingeo1021@gmail.com](mailto:erwingeo1021@gmail.com)

<https://github.com/yovafree>

