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.NET Core 2.0

Learn. Imagine. Build.

.NET Conf

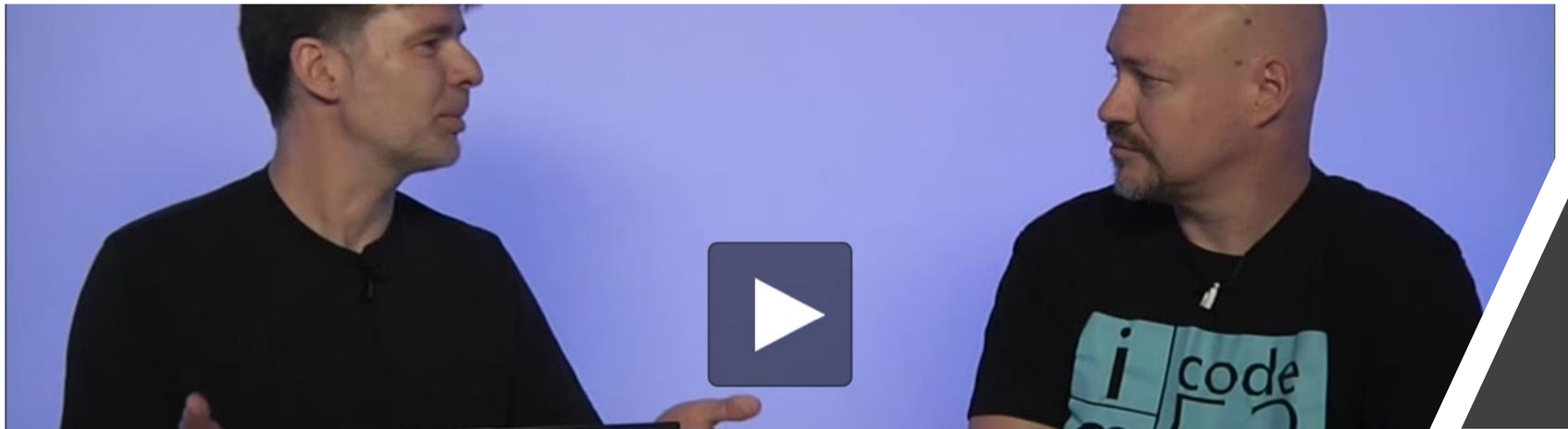
September 19-21

Save the date!

www.dotnetconf.net

Xamarin Show

Channel 9



Code Conversations

.NET Core 2.0 Released
Download today !
dot.net/core

CONTENT

What We Will Talk About

.NET Core 2.0

- .NET Core 2.0 overview
- Announcements
- Demo

ASP.NET Core 2.0

- Developers Delight
- Extending the App Models
- Happy in the cloud

.NET Core 2.0

SPEED

Fastest version of .NET

Simplification

Simplified packaging

Growth

More APIs

More project templates

More distros

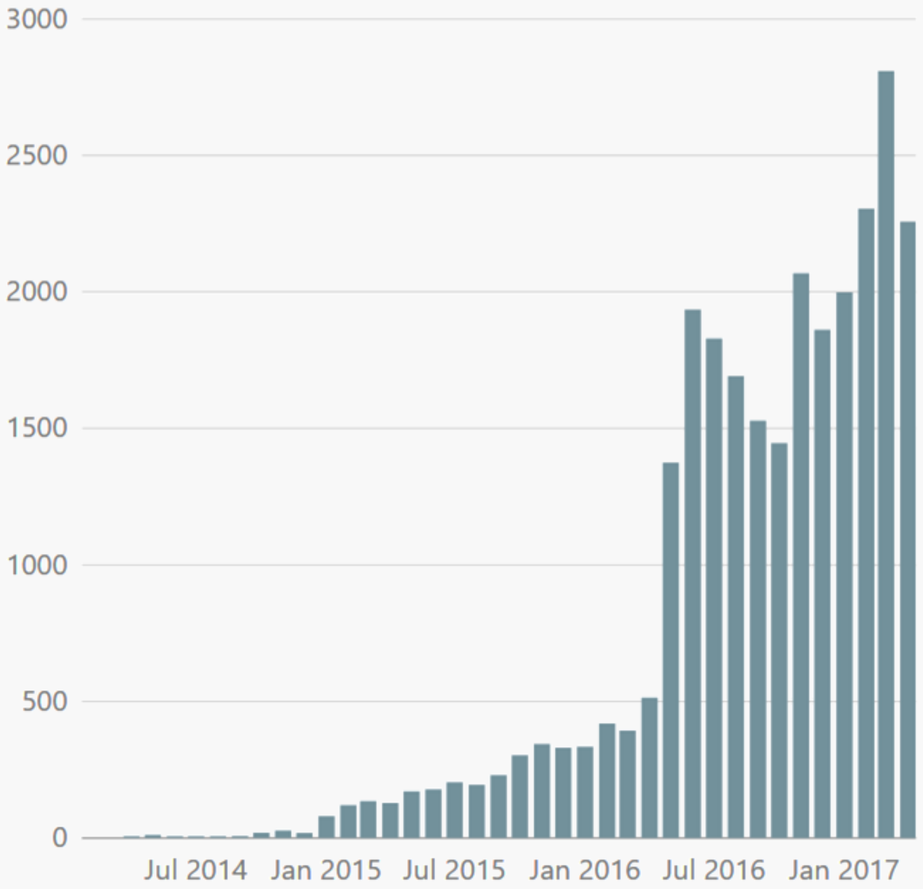
Tools

New improved Visual Studio tooling

Visual Studio for Mac Support

Thank you to all our contributors!

Community PRs by month



"Samsung is embracing .NET because it is a completely open source project." — Samsung

"ASP.NET is open source, that allows us to contribute back to it if we have any performance issues which Microsoft review and together we make a better product."

— Illyriad Games

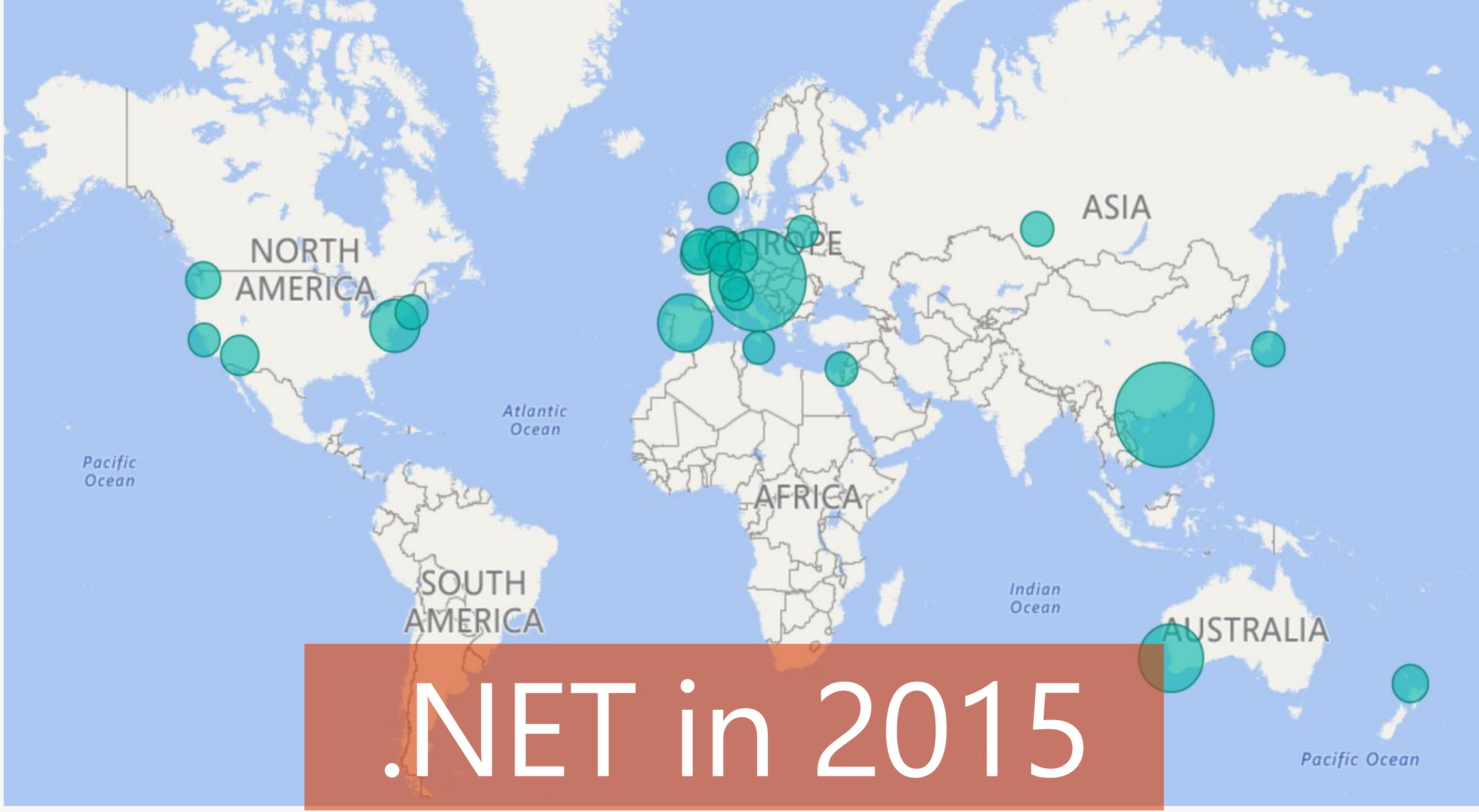
redhat.

unity

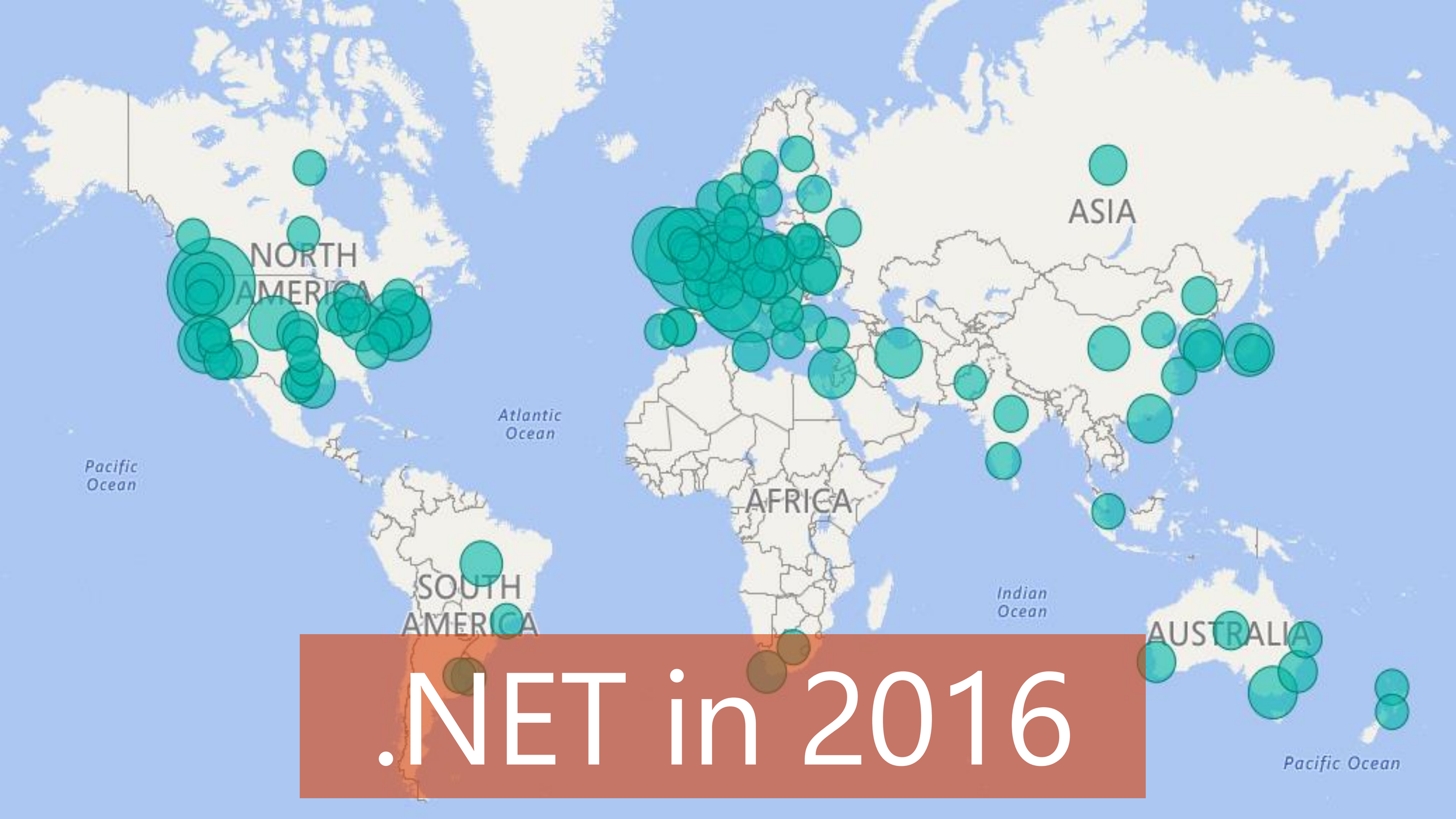
SAMSUNG

JET BRAINS

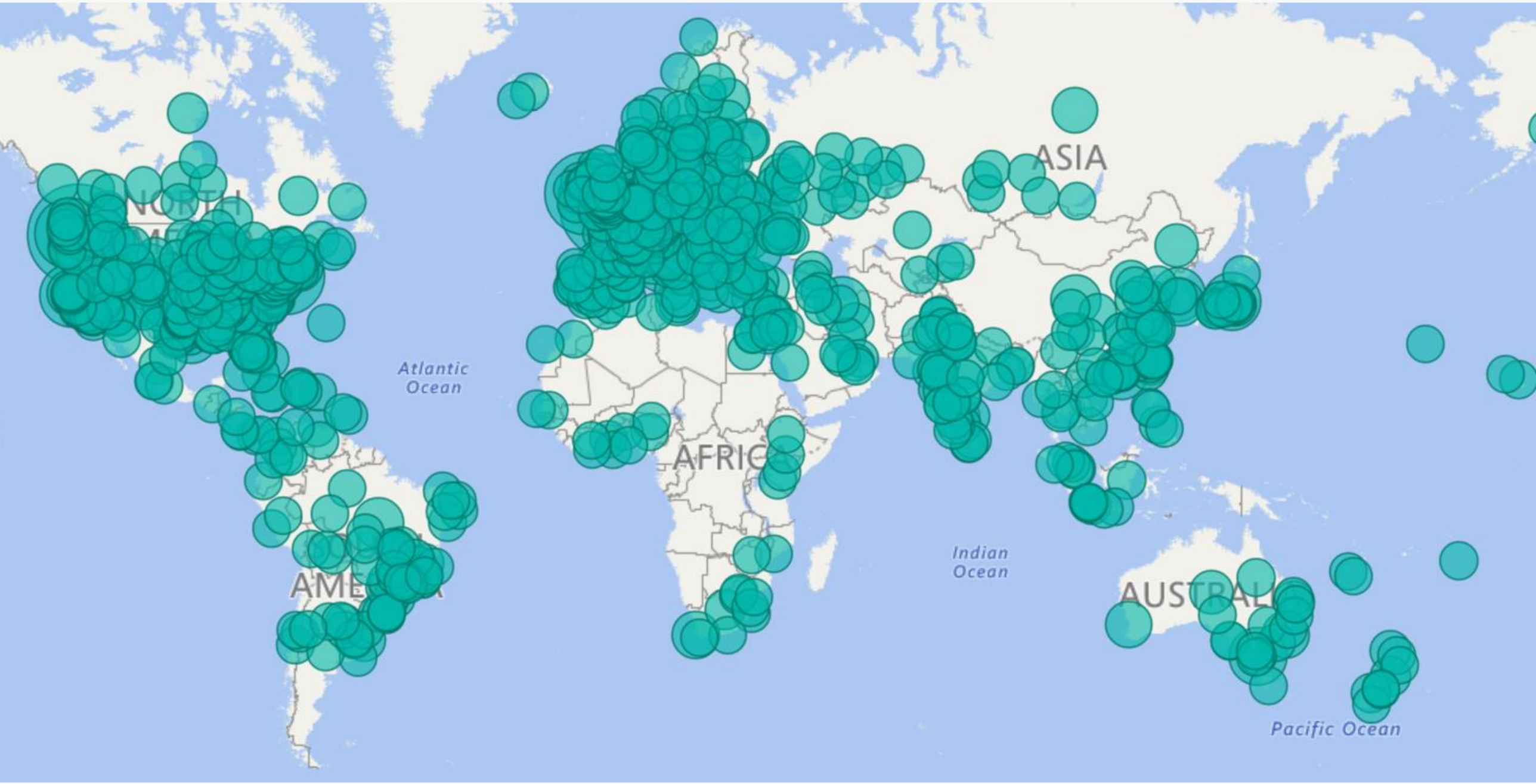
Google


NORTH AMERICA
EUROPE
ASIA
Atlantic Ocean
Pacific Ocean
AFRICA
SOUTH AMERICA
Indian Ocean
AUSTRALIA
Pacific Ocean

.NET in 2015


NORTH AMERICA
ASIA
Atlantic Ocean
Pacific Ocean
AFRICA
SOUTH AMERICA
Indian Ocean
AUSTRALIA
Pacific Ocean

.NET in 2016


ASIA
Atlantic Ocean
Indian Ocean
Pacific Ocean

.NET Standard 2.0 Released!

Has much bigger API surface

Extended to cover intersection between .NET Framework and Xamarin

Also makes .NET Core 2.0 bigger as it implements .NET Standard 2.0

+20K

More APIs than .NET Standard 1.x

Can reference .NET Framework libraries

Compatibility shim allows referencing existing .NET Framework binaries

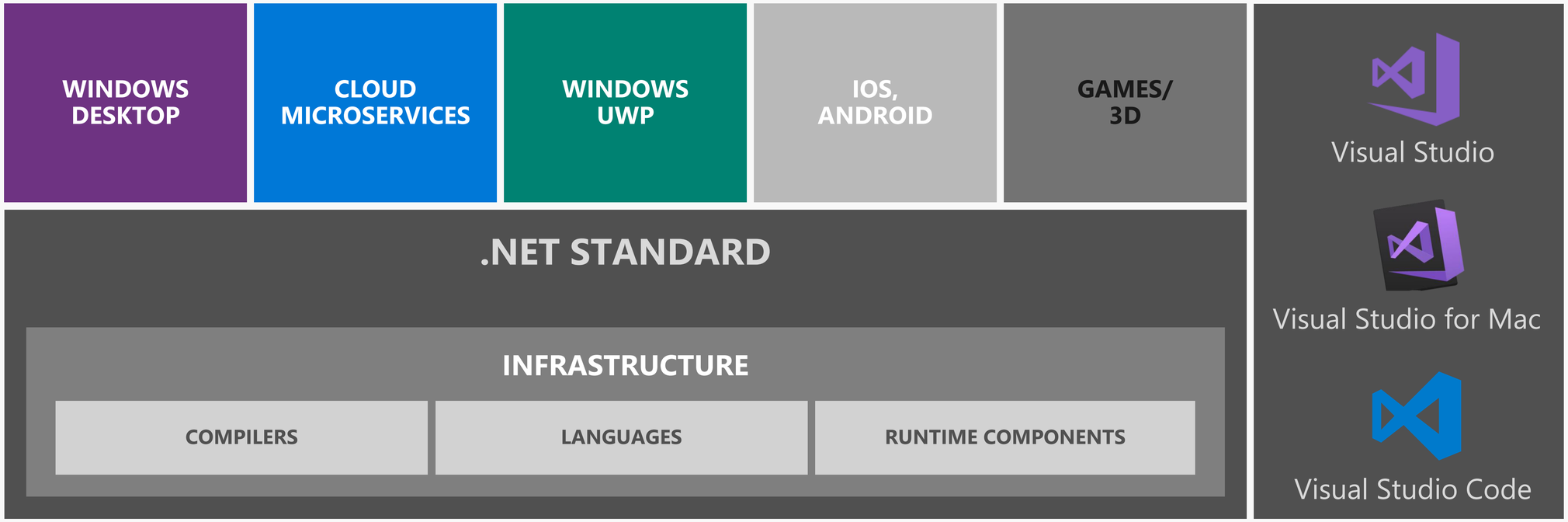
No recompile required – also covers existing NuGet packages

Limited to libraries that only use APIs that are available for .NET Standard

~70%

of NuGet packages are API compatible

.NET Standard

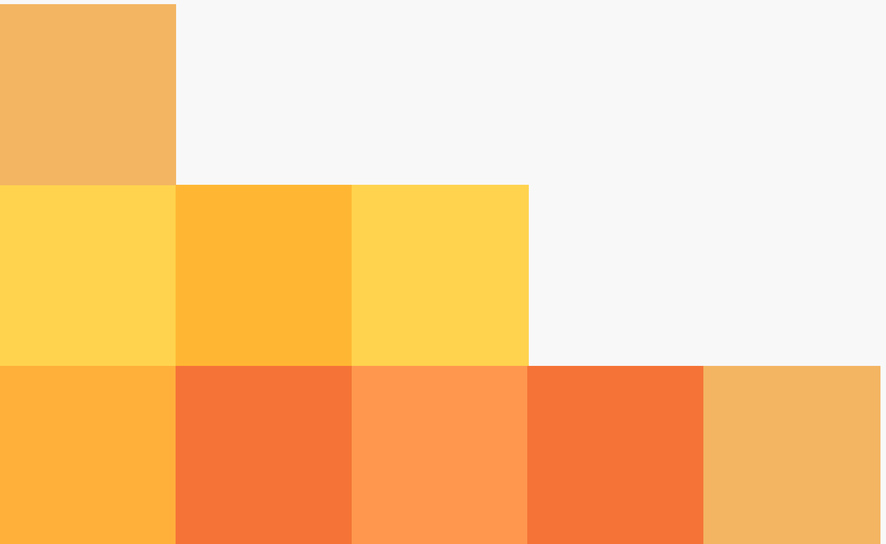


.NET Standard allows sharing code, binaries, and skills between .NET client, server, and all flavors

.NET Standard provides a specification for any platform to implement

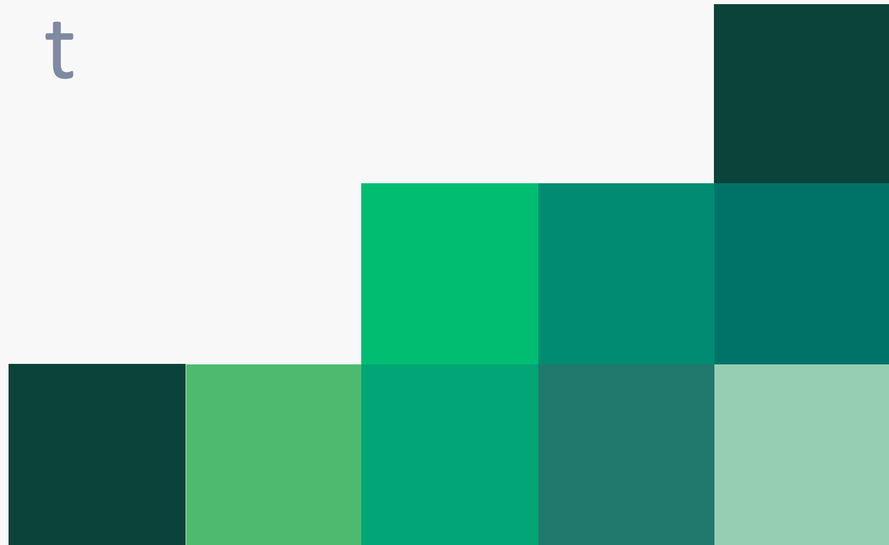
All .NET runtimes provided by Microsoft implement the standard

Demo: .NET Standard



ASP.NET Core

Developers Delight



New Project Templates

CLI & VS2017 now share project templates

New in 2.0:

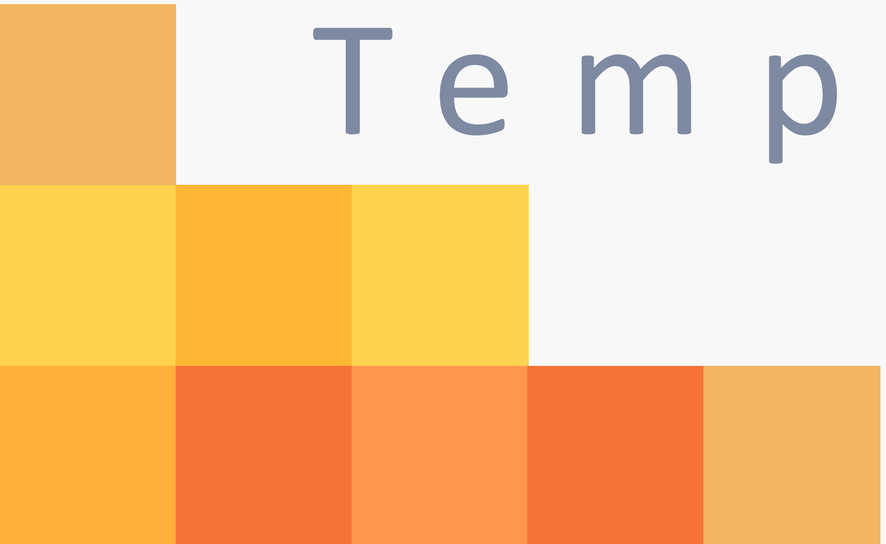
- SPA templates for Angular & React
- Razor Pages with Auth options
- Auth using Azure B2C

2-factor auth using Authenticator apps

Simplified default Experience

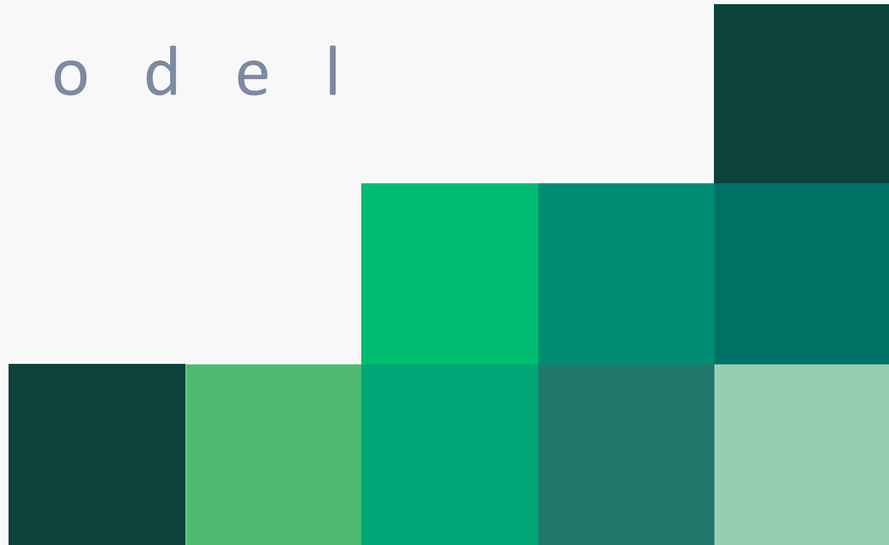
- Many defaults encapsulated in new API: **`WebHost.CreateDefaultBuilder`**
- All ASP.NET Core packages now referenced by default (on .NET Core only) so APIs are easy to discover
- A single ASP.NET Core version number to reason about (on .NET Core only)
- Configuration & loggers in DI container
- Logger filtering via configuration by default
- DI scope validation on by default in Development

Demo: Project Templates



ASP.NET Core

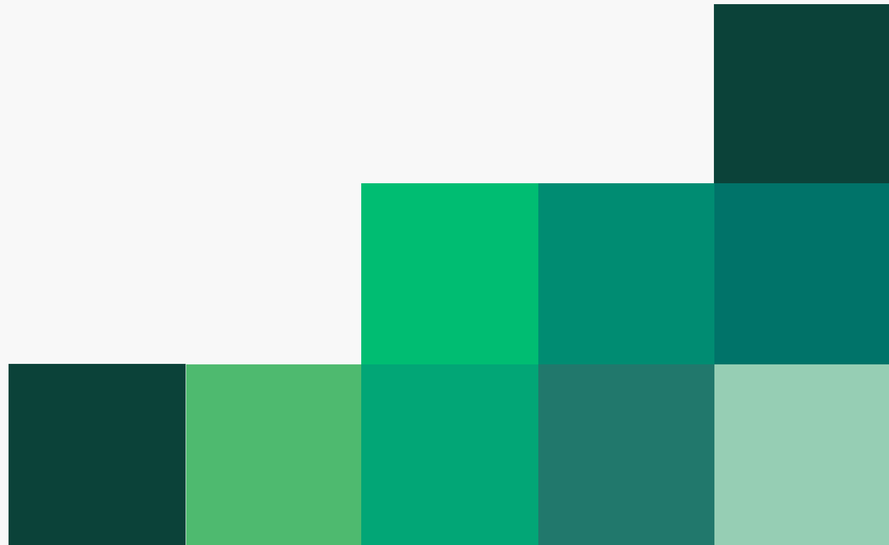
Extending the App Model



Demo: Razor Pages

ASP.NET Core

Performance



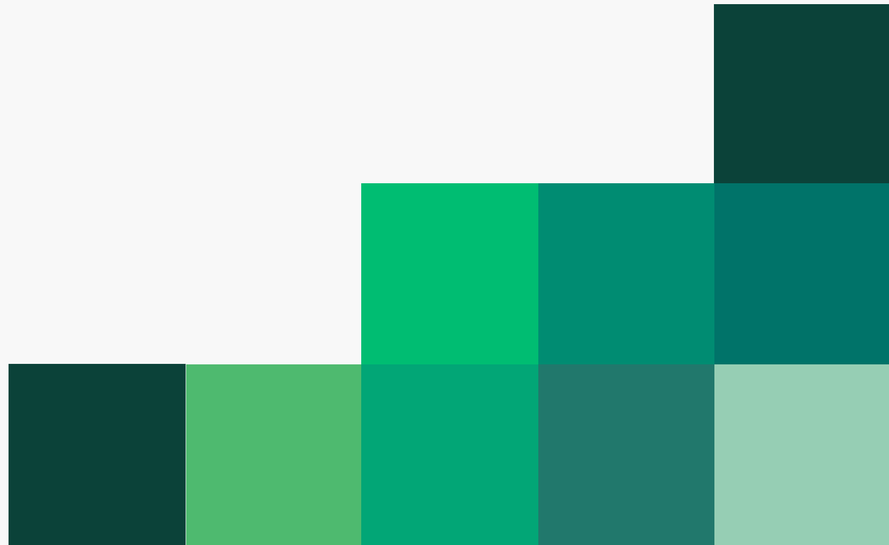
Performance – Azure 4-Core Ubuntu 16.04

- ASP.NET 1.1 - 444, 000 rps
- ASP.NET 2.0.0 – 558,000 rps

25 % Faster

ASP.NET Core

Happy in the cloud

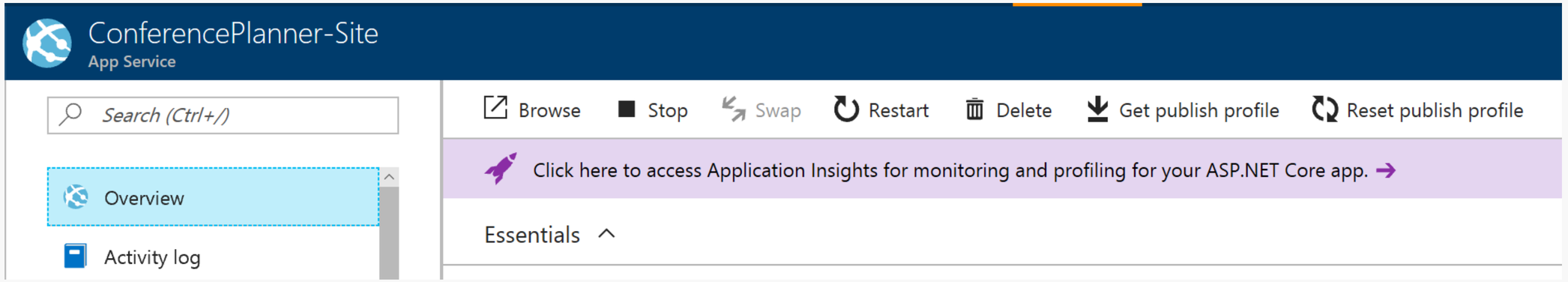


Improved Azure integration

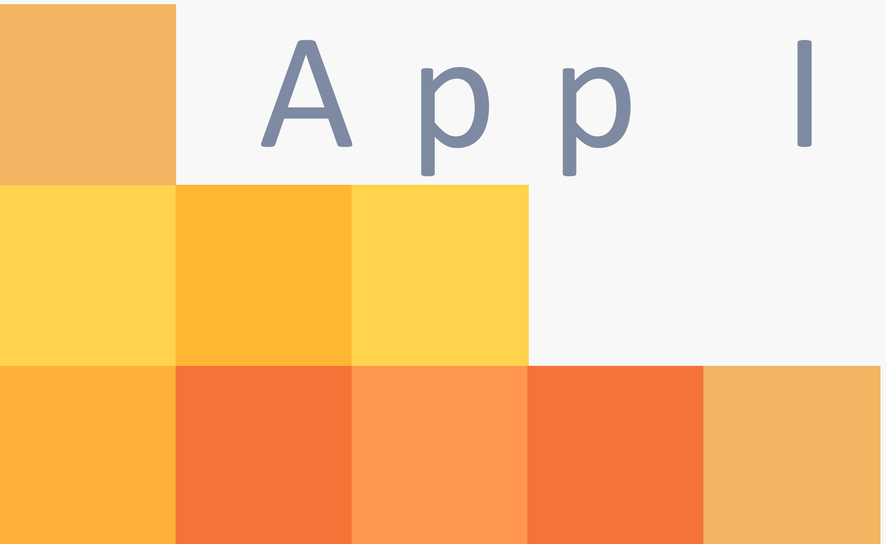
Automatic Azure App Service diagnostics

No-code Application Insights telemetry via the portal

Application Insights telemetry in VS debugger



Demo: Azure App Insights



Documentation

Architecture Guides

Microservices and Containers

Microservices are small, modular, and independently deployable services. Docker containers (for Linux and Windows) simplify deployment and testing by bundling a service and its dependencies into a single unit, which is then run in an isolated environment.

- Architecture eBook (draft)
- DevOps eBook (draft)
- Sample App
- Patterns

Web Applications

ASP.NET Core allows you to build high-performance, cross-platform web applications. Patterns like MVC and built-in support for Dependency Injection allow you to build applications that are easier to test and maintain.

- eBook (draft)
- Sample App

Cloud Applications

Production ready cloud applications need to be built for scalability, monitoring, management, security, resiliency, and more. The patterns covered in this guidance include example implementations for Microsoft Azure.

- Reference Architectures
- Best Practices
- Patterns

Mobile Applications

Xamarin allows you to build native Android, iOS, and Windows applications using .NET. Common patterns, such as MVVM, combined with good application layering, will maximize code sharing and result in an application that is easier to understand, test and maintain.

- eBook (draft)
- Sample App
- Patterns

.NET architecture guides

Available now at: https://dot.net/architecture

- eBooks & samples: Web, Containers, mobile
- Patterns: Health checks, queueing
- More books and patterns coming…