# Why Microsoft is the #1 Company

For Developers to be Watching

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# Hi, I'm J.

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github.com/jonathantower/why-microsoft

# Summary

Microsoft's Cultural Shift

Cross-Platform Development

Web Development

Best-in-Class Tooling

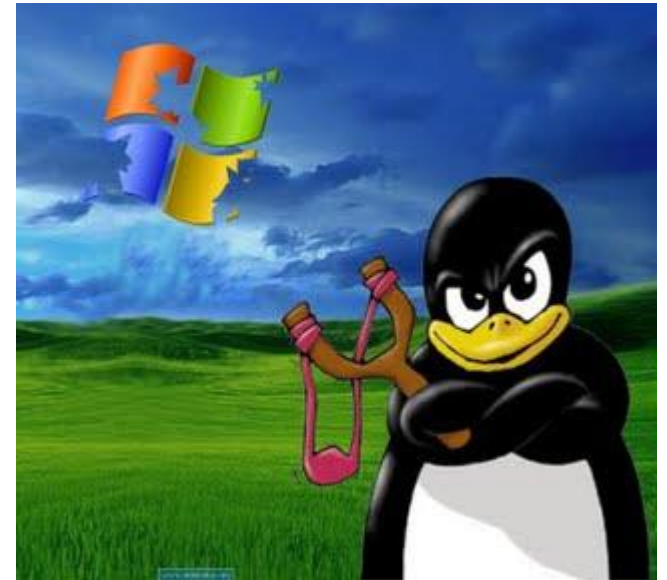The Cloud Revolution
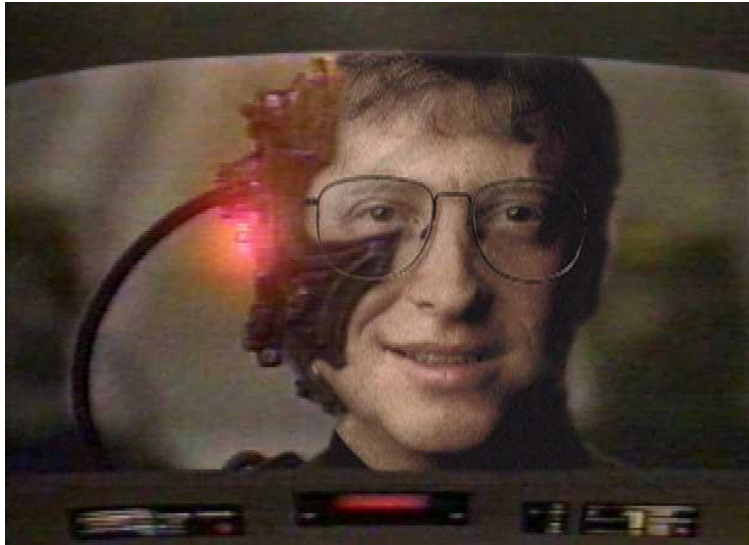
# Microsoft's Cultural Shift

Some background

# Anti-Microsoft Culture of 90s and 00s

## M$

Short for **Microsoft**, used to imply Microsoft cares more for money than it does for security, **stability**, and anything else that could make a good **Operating System**.

# Culture Shift: A Few Examples

Windows no longer at the center of everything

Office apps on iOS

Microsoft Android launcher

Over 40% Linux on Azure
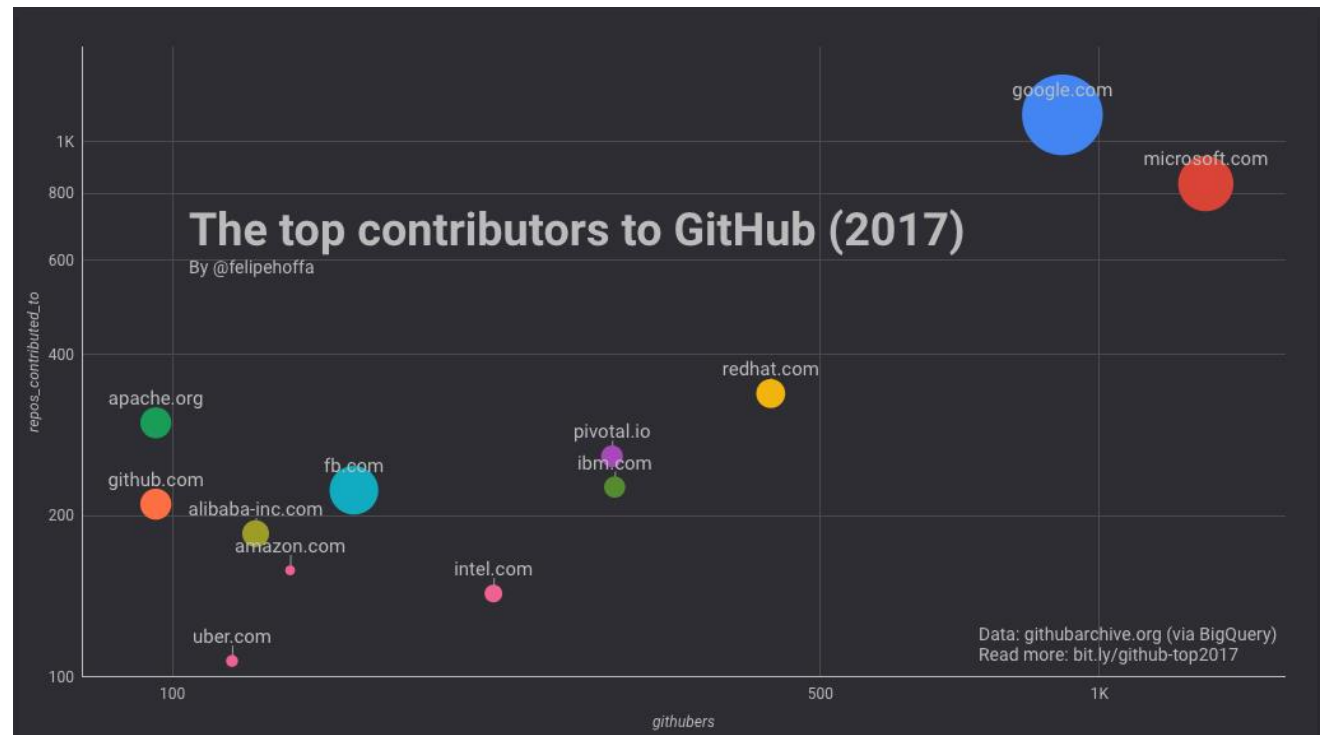
Microsoft joins Linux Foundation

Microsoft joins Open Invention Network with 60,000 patents

SQL Server on Linux
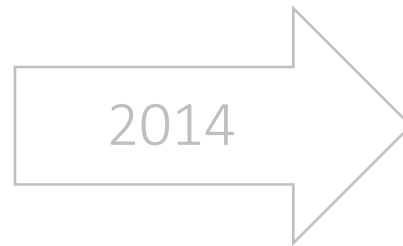
Open Sourcing of .NET (MIT License)

.NET Foundation

Top contributor to open source on GitHub



The top contributors to GitHub (2017)
By @felipehoffa

Data: githubarchive.org (via BigQuery)
Read more: bit.ly/github-top2017

Satya Nadella

2014 →

Steve Balmer

# Any developer, any app, any platform

Windows

Linux

iOS

Android

.NET

C++

JavaScript

PHP

Python

Node.js

R

Cordova

Unity

# Cross-Platform Dev

Any developer. Any App. Any Platform.

# .NET Core

Open-source, general-purpose development platform

Maintained by Microsoft and the .NET community on GitHub

Cross-platform (supporting Windows, macOS, and Linux)

Used to build web, device, cloud, and IoT applications.

DEMO

# Xamarin

Truly-native cross-platform apps

Target iOS, Android, Windows, and MacOS

Open source

Written in C#

Based on Mono framework

Develop on Mac or Windows

Reuse 75% of code
   With Xamarin.Forms UIs, reuse > 90%

DEMO

# .NET Standard

Formal specification for .NET implementations

Allows reusable code libraries across different .NET's

.NET Framework

.NET Core
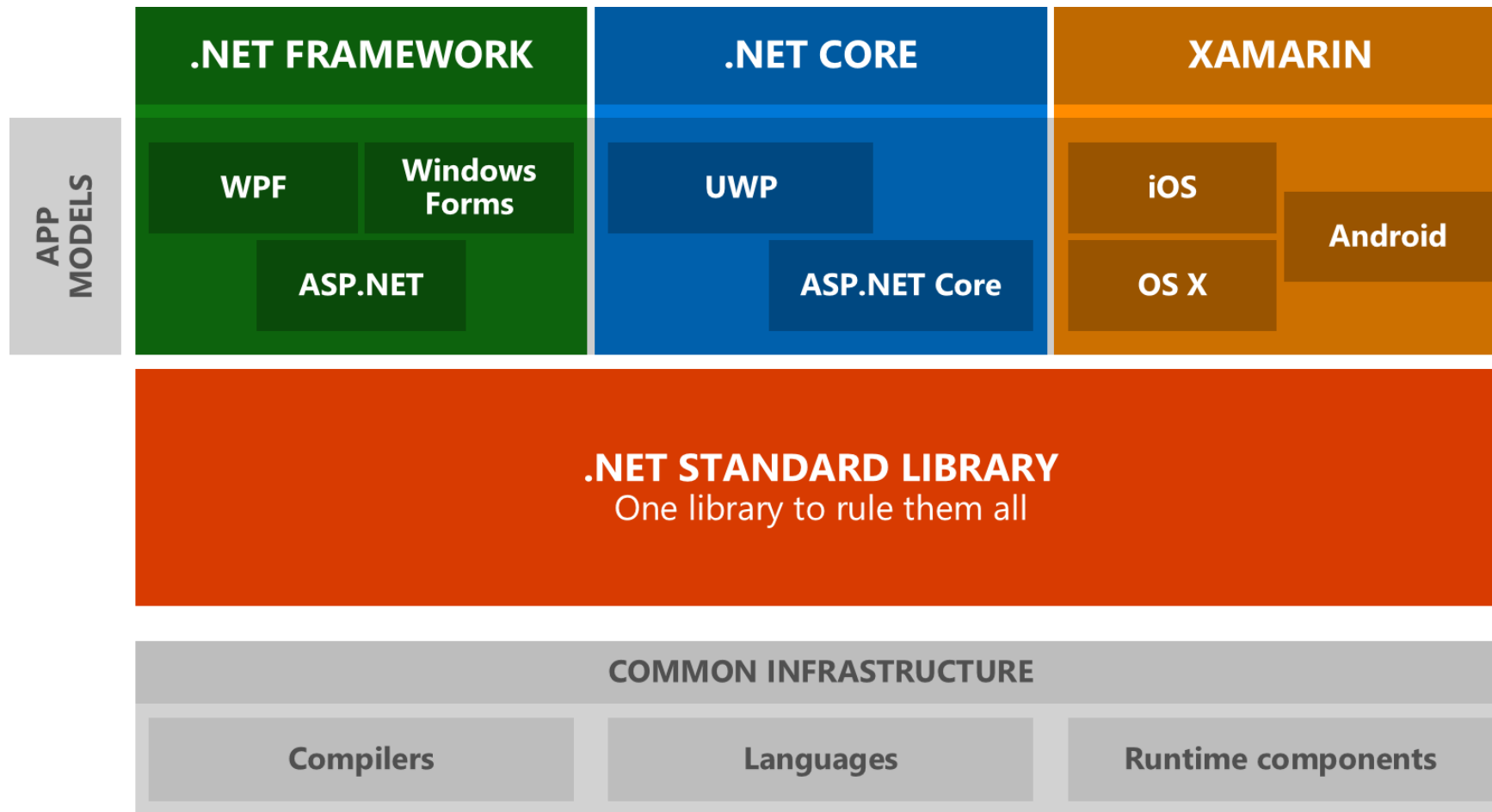
Mono

Xamarin.iOS

Xamarin.Android

Xamarin.Mac

Universal Windows Platform (Win10 apps)

Windows 8

Windows Phone

Unity (video games)

# .NET Standard



**APP MODELS**

| .NET FRAMEWORK | .NET CORE | XAMARIN |
|---|---|---|
| WPF / Windows Forms / ASP.NET | UWP / ASP.NET Core | iOS / OS X / Android |

**.NET STANDARD LIBRARY**
One library to rule them all

**COMMON INFRASTRUCTURE**

| Compilers | Languages | Runtime components |
|---|---|---|

# Web Development

Still the center of the software universe

# ASP.NET Core

Free, open source framework

Faster that ASP.NET

Cross-platform (runs on MacOS, Window, and Linux)

Docker support

**DEMO**

# TypeScript

Free, open source language that is a superset of JavaScript

Brings optional static type-checking to JavaScript

Transpiles into JavaScript

Also adds latest ECMAScript features to down-level browsers

Angular (Google) team's choice for Angular v2+

# Blazor

HTML5-based web apps

Client-side code written in C#

.NET in the browser

Powered by WebAssembly, no plugins

DEMO

# Best-in-Class Tooling

Microsoft's Mission:
To empower every person and every organization on the planet to achieve more
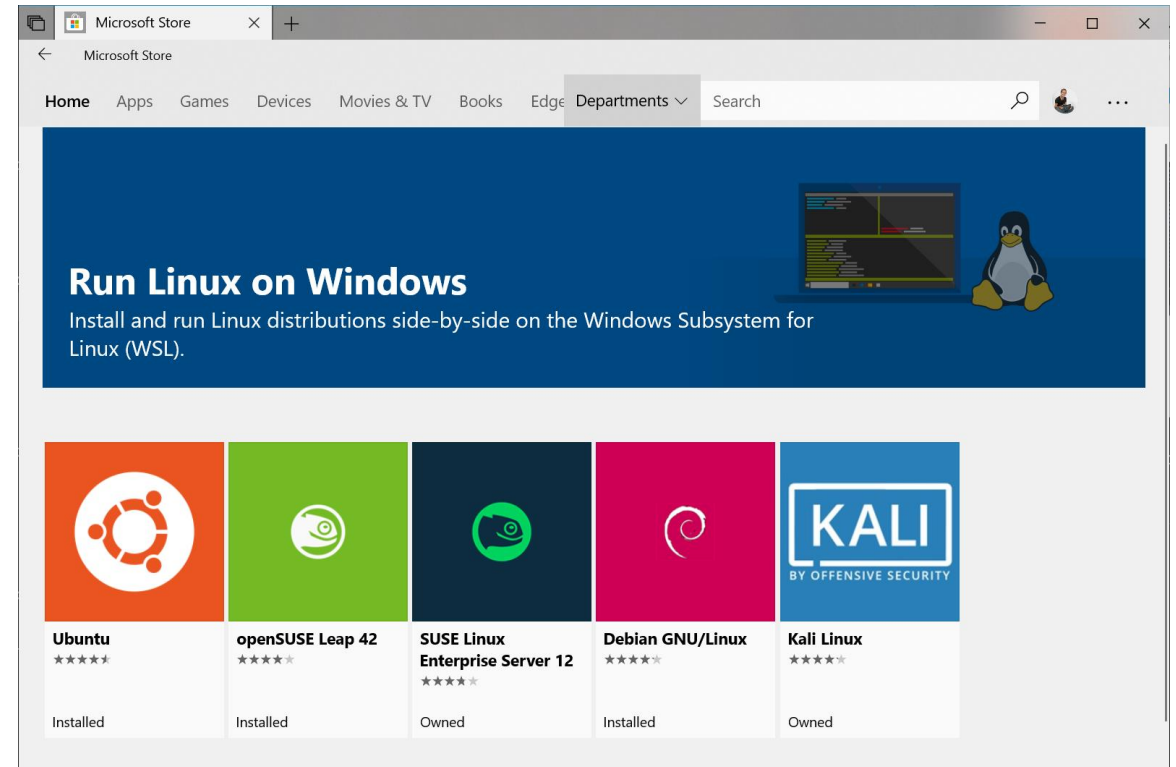
# Windows Linux Subsystem (WSL)

Runs Linux binary executables (ELF format) natively on Windows
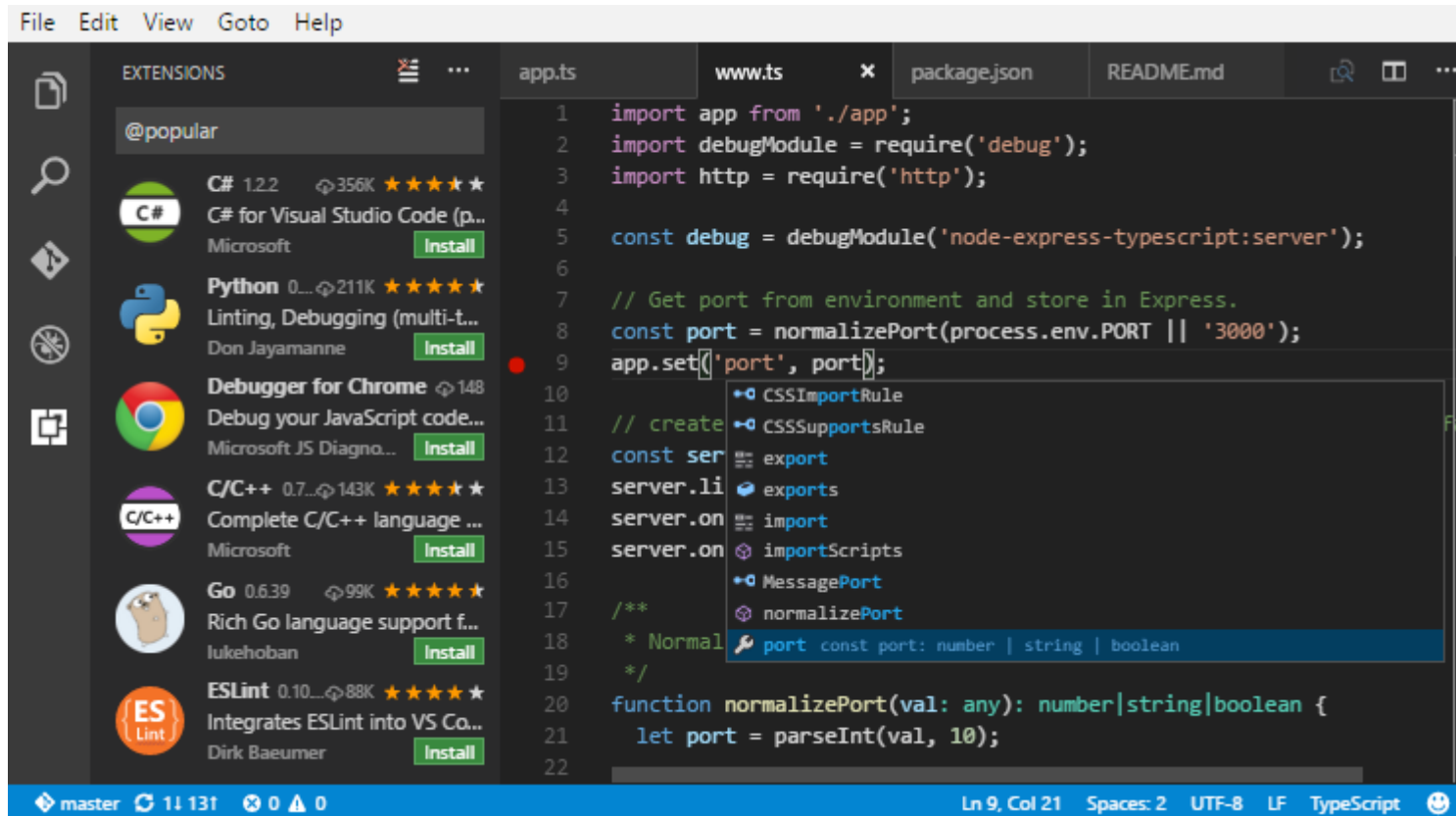
Shared file system

Not an emulator or VM

Linux kernel interface mapped to Windows kernel operations

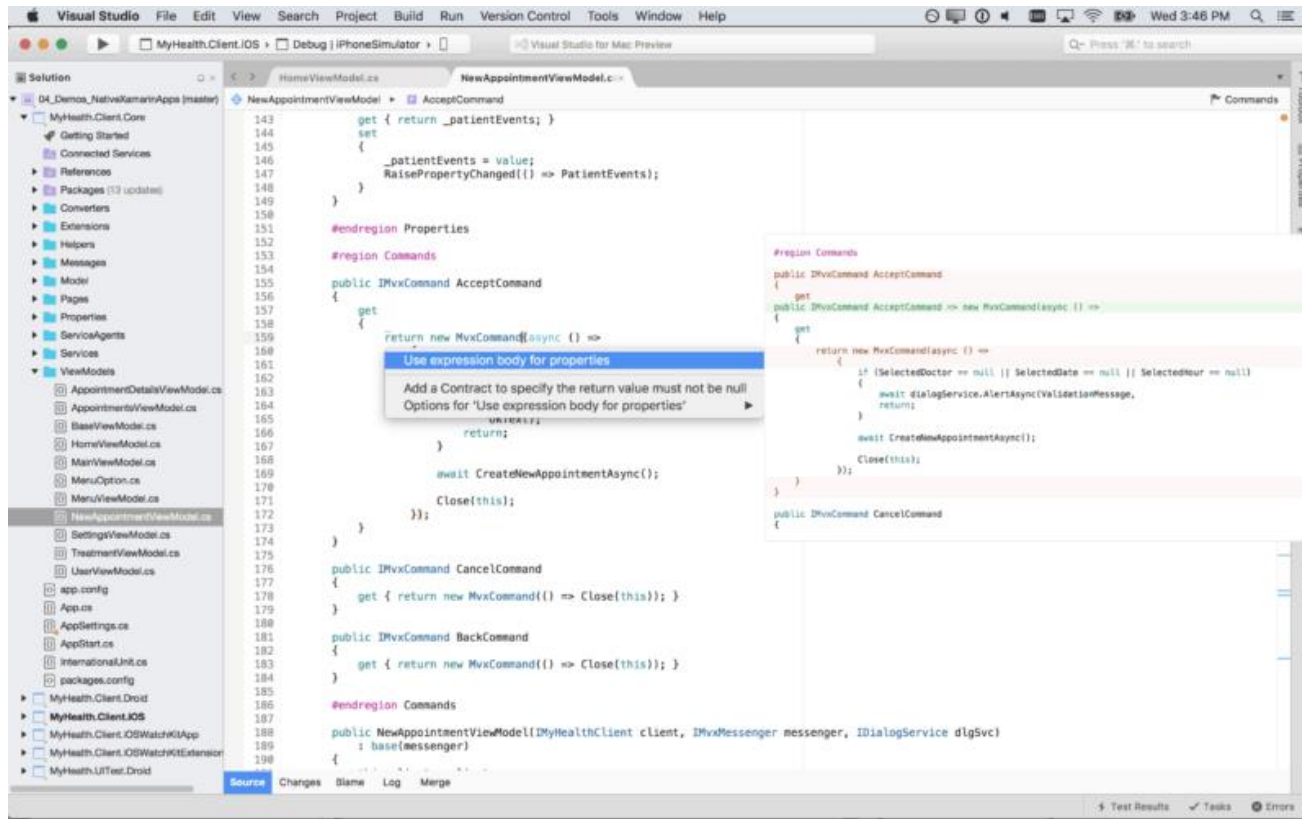Great for devs or sysadmins that want to use command-line tooling in bash

# Visual Studio Code

# Visual Studio for Mac



Build Android, iOS, MacOS, .NET Core, ASP.NET Core, and Unity applications on MacOS

# King of the IDEs

# Visual Studio - Power Features

Intellisense

Breakpoints

Watches
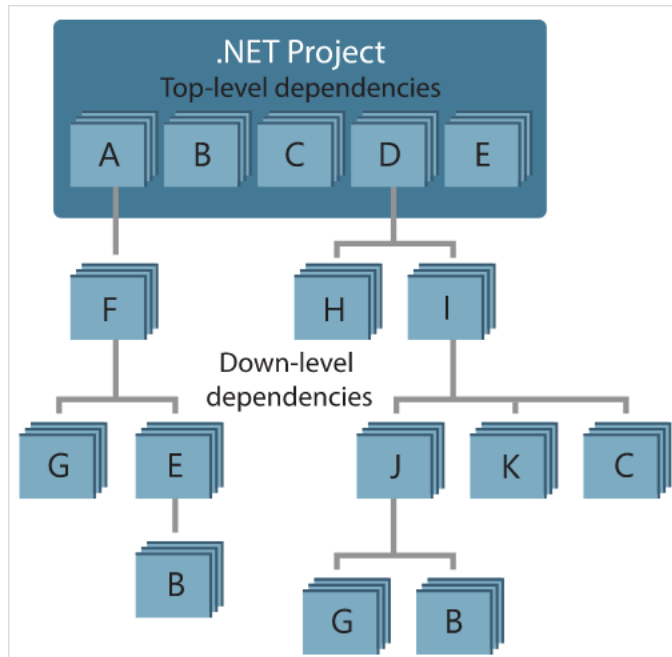
Find all references

CodeLens

Live unit tests
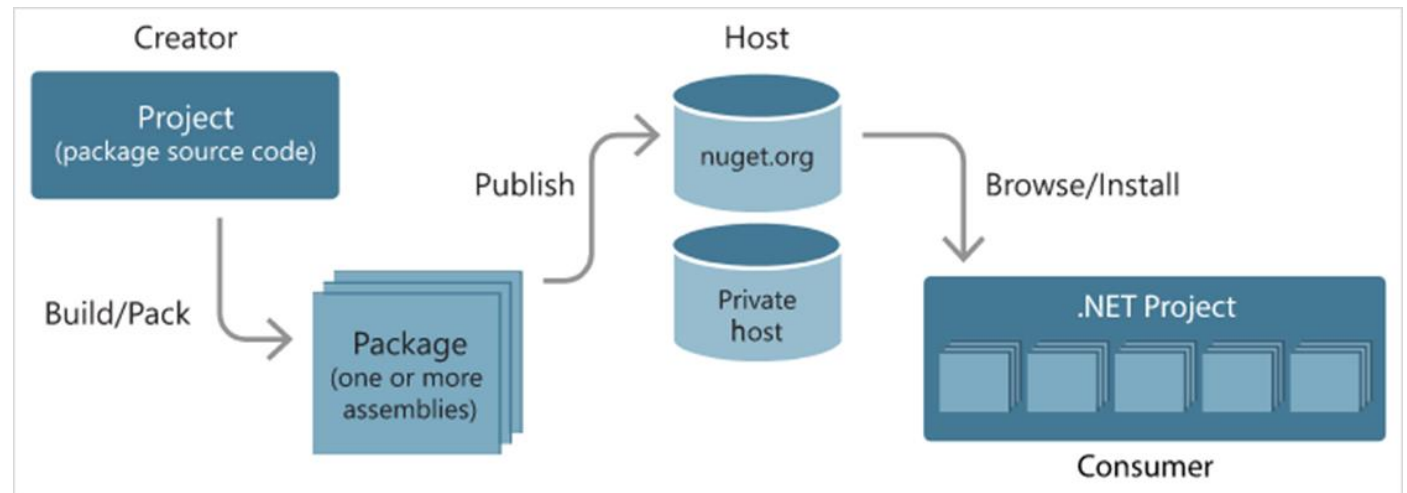
Smart refactorings

Snapshots and IntelliTrace step-back

# Nuget

The package manager for .NET

Allows code to be packaged and shared

## Automatically manages complex dependencies
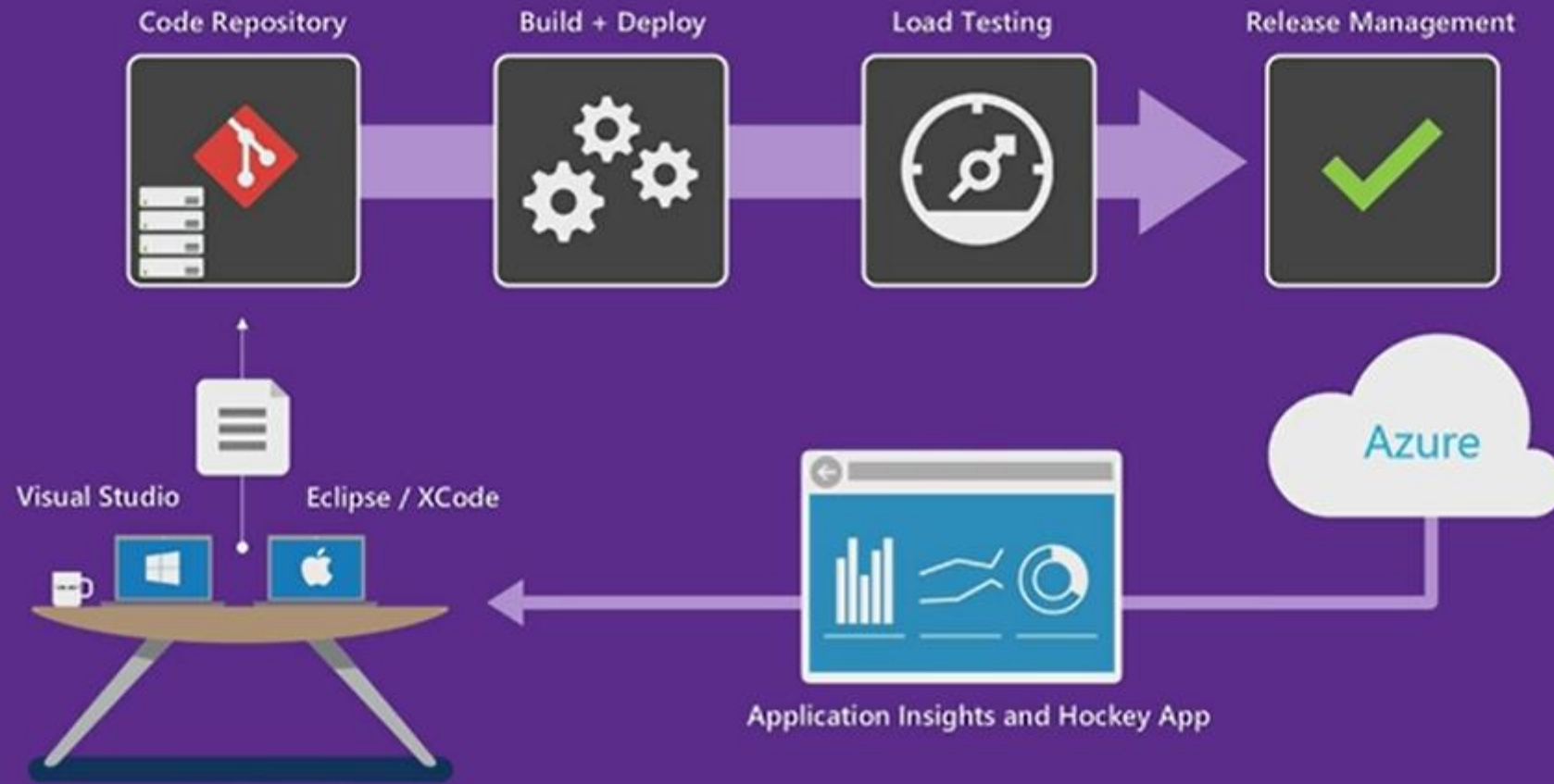
# The Cloud Revolution

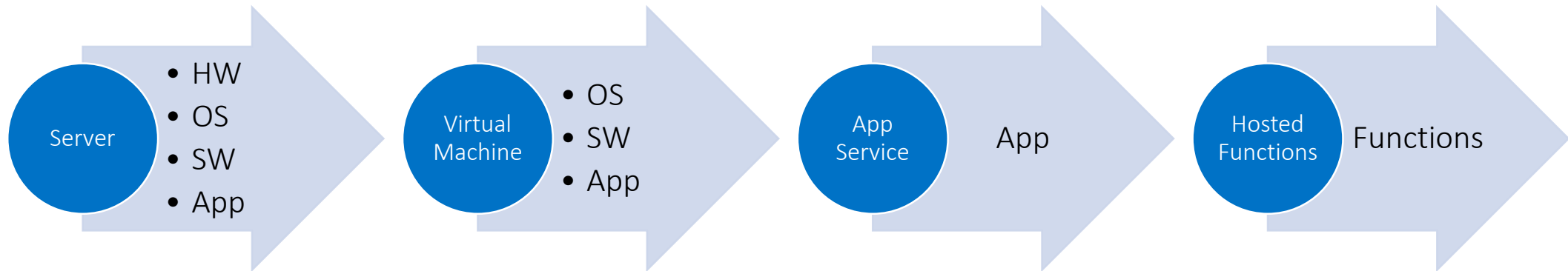# Azure DevOps

# Azure Functions

"Serverless"

Eliminates need for server management

Functions hosted by a 3$^{rd}$-party

FaaS – Functions as a Service

Cloud-hosted, but can self-host on-premises

| Server | | Virtual Machine | | App Service | | Hosted Functions | |
|--------|--|-----------------|--|-------------|--|------------------|--|
| • HW • OS • SW • App | | • OS • SW • App | | App | | Functions | |

# Azure AI, Chatbots, and Machine Learning

Chat bots

Computer vision

Video Indexer

Facial recognition

Video/Image moderator

Speech to text

Text to speech

Speaker recognition

Speech Translation

Test Analysis

Spell Check

Language Understanding

Text Translation

Text Moderator

Search

DEMO

# Next Steps

docs.microsoft.com

docs.microsoft.com/learn

microsoft.com/net/learn

asp.net/freecourses

asp.net/learn

channel9.msdn.com

linkedin.com/learning (PAID)

pluralsight.com (PAID)

coursera.org (PAID)

udemy.com (PAID)

bit.ly/2ES1QAV

# Recap

Cultural Shift

Cross-Platform Development

Web Development

Best-in-Class Tooling

The Cloud Revolution

# Thanks! Questions?

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