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
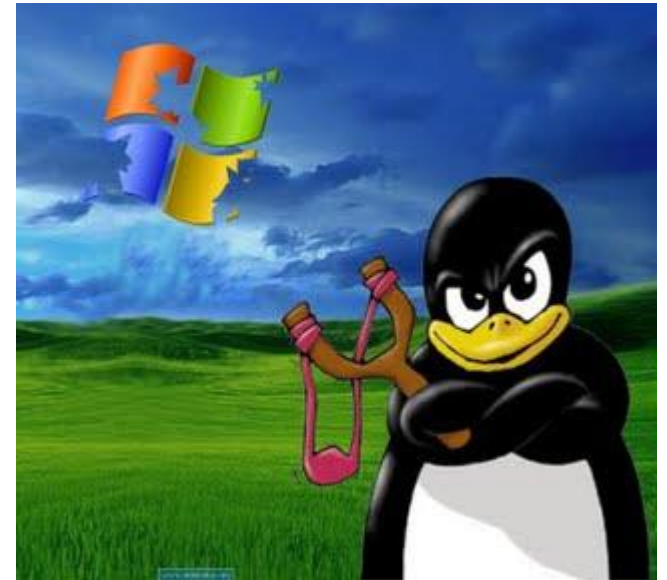
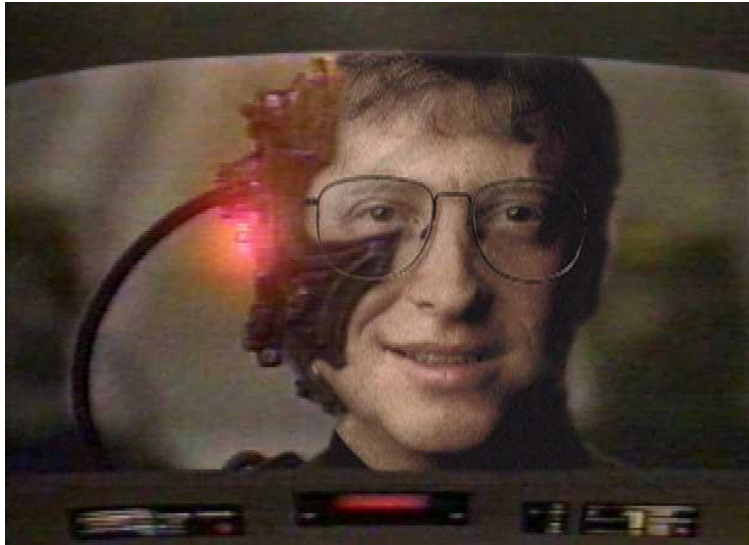The Cloud Revolution

Microsoft's Cultural Shift

Some background
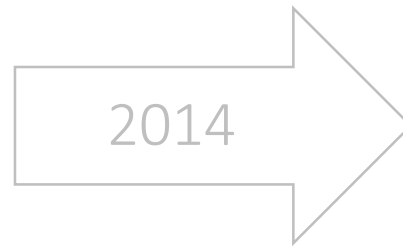
Anti-Microsoft Culture of 90s and 00s

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**.

Satya Nadella

2014

Steve Balmer

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
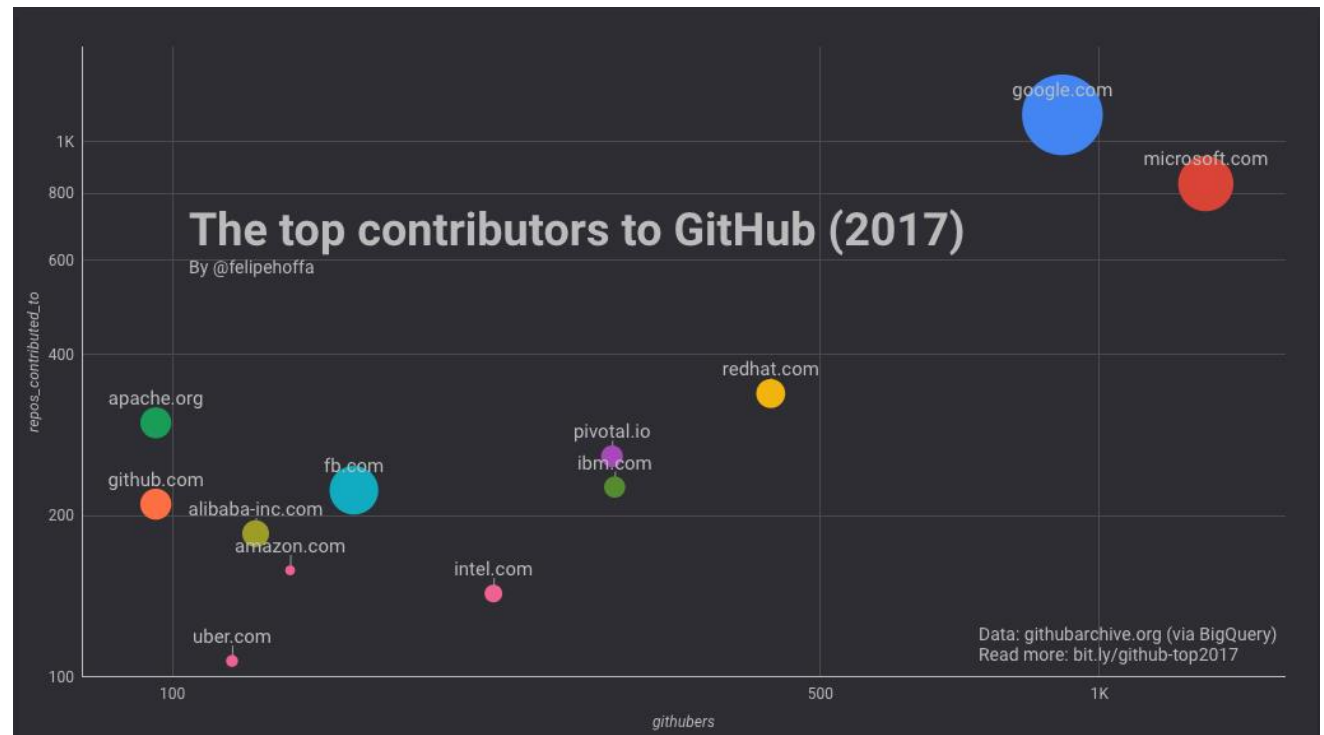
Microsoft joins Linux Foundation

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

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
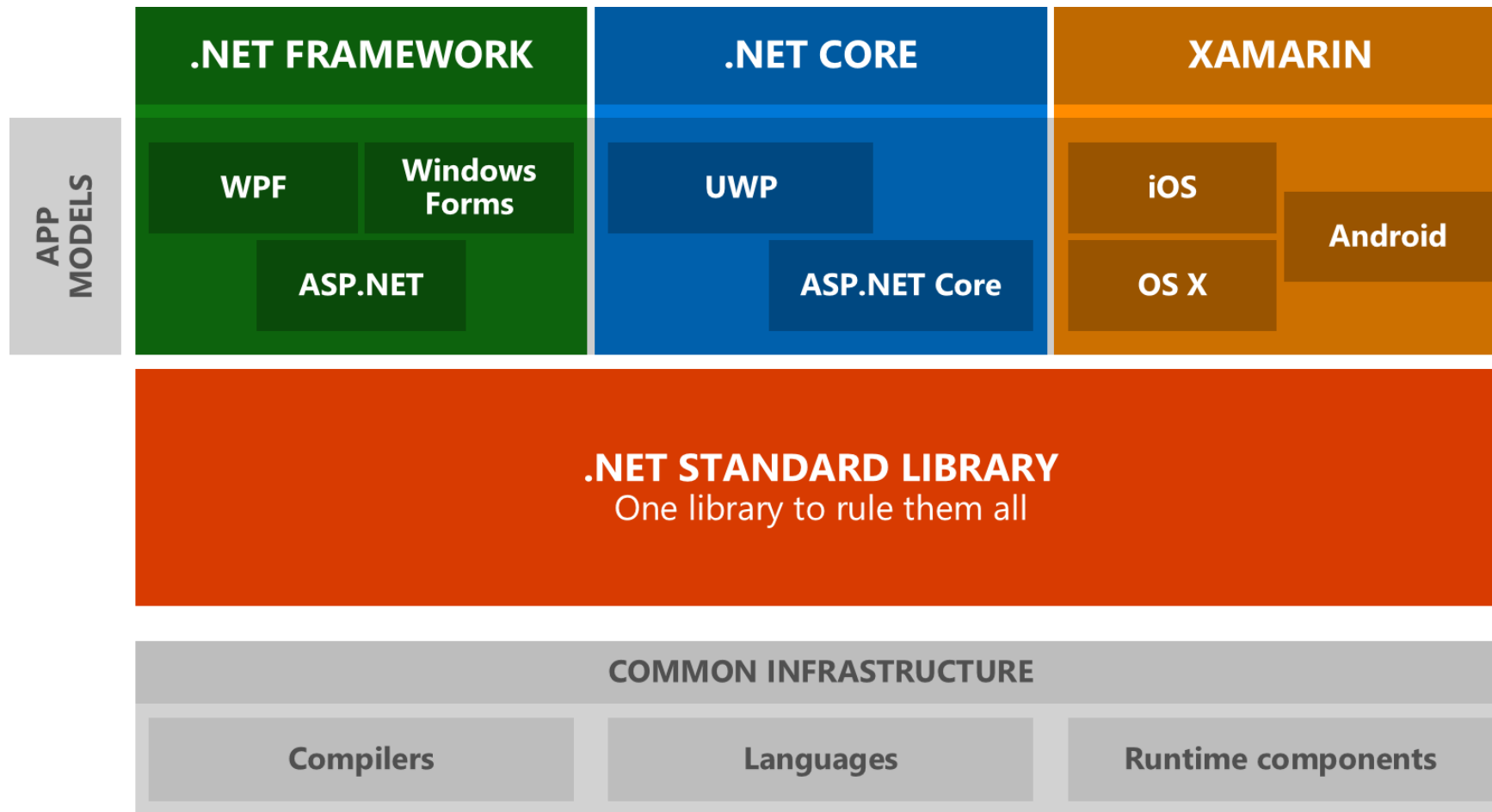
Mono

Xamarin.iOS

Xamarin.Android

Xamarin.Mac

Universal Windows Platform (Win10 apps)

Windows 8

Windows Phone

Unity (video games)

.NET Standard

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

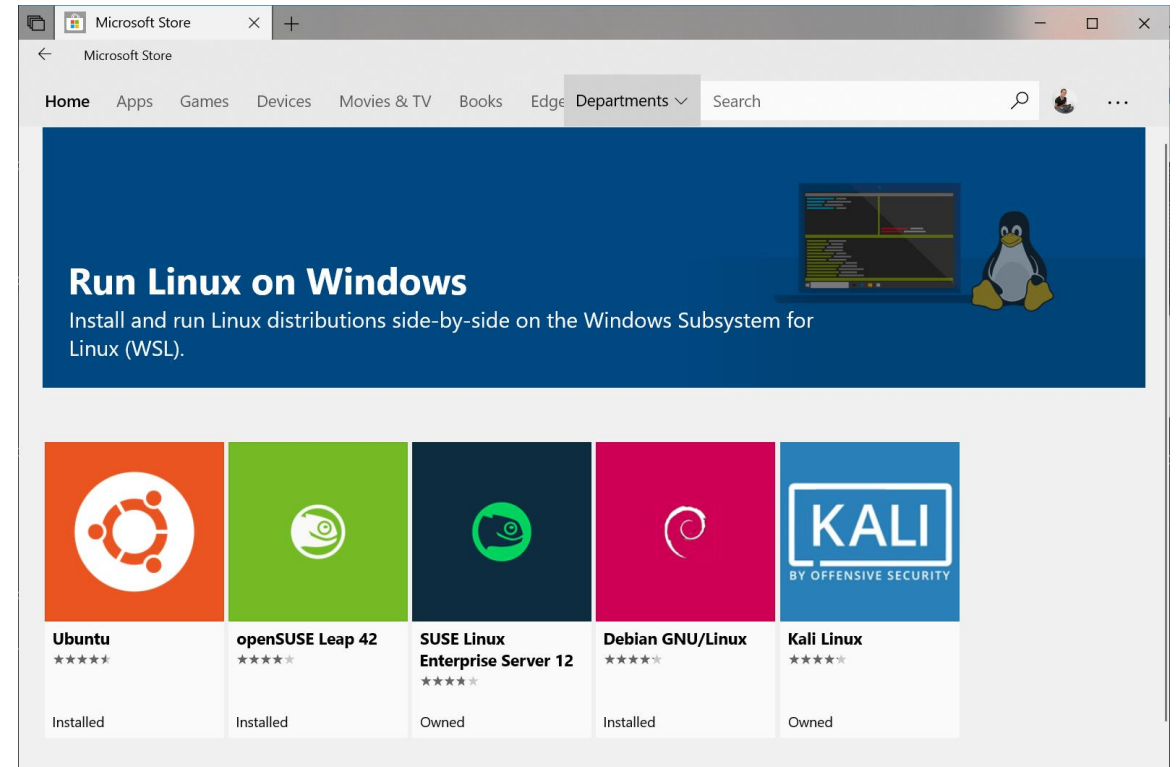# Windows Linux Subsystem (WSL)

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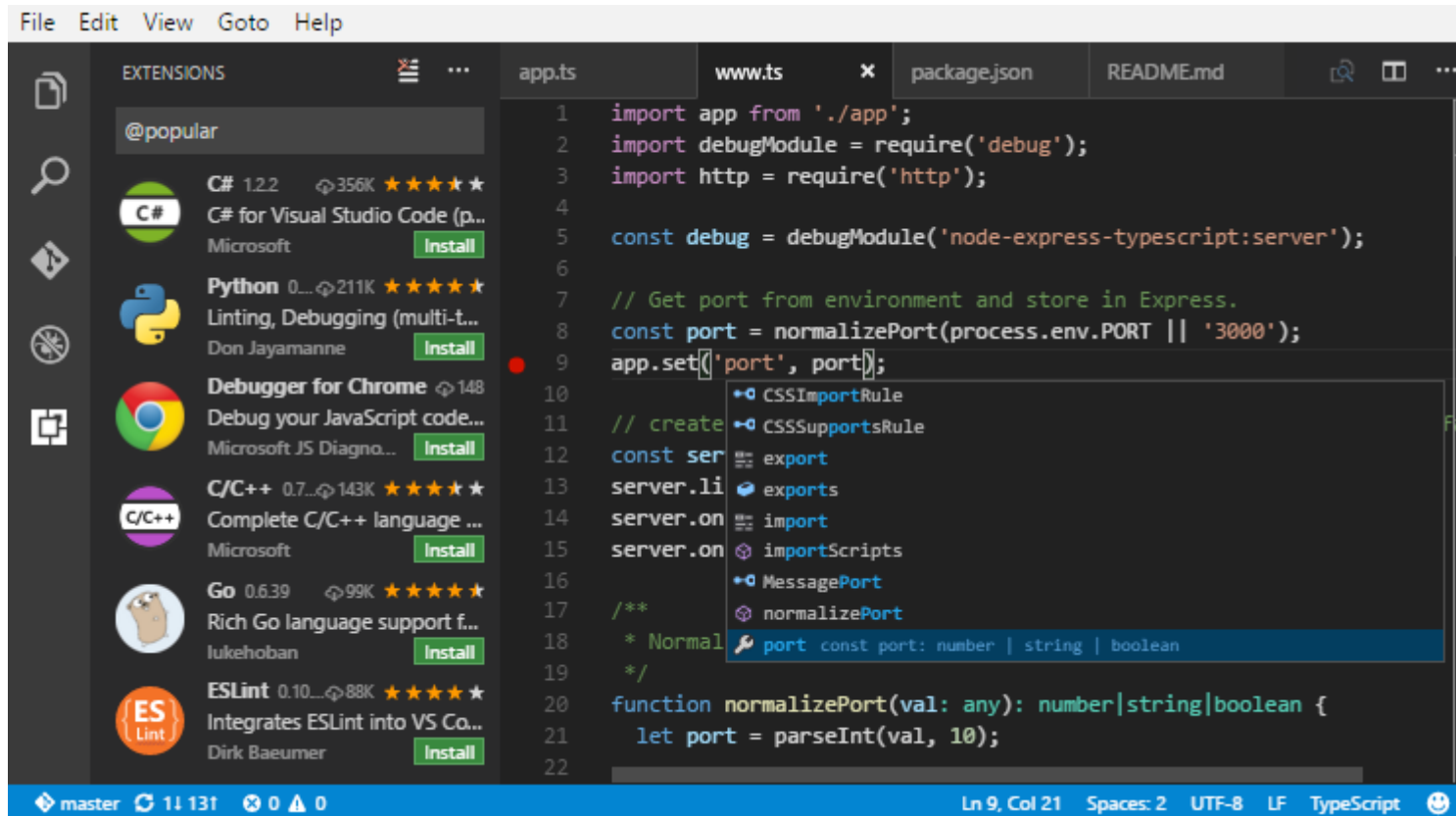
Shared file system

<u>Not</u> an emulator or VM

Linux kernel interface mapped to Windows kernel operations

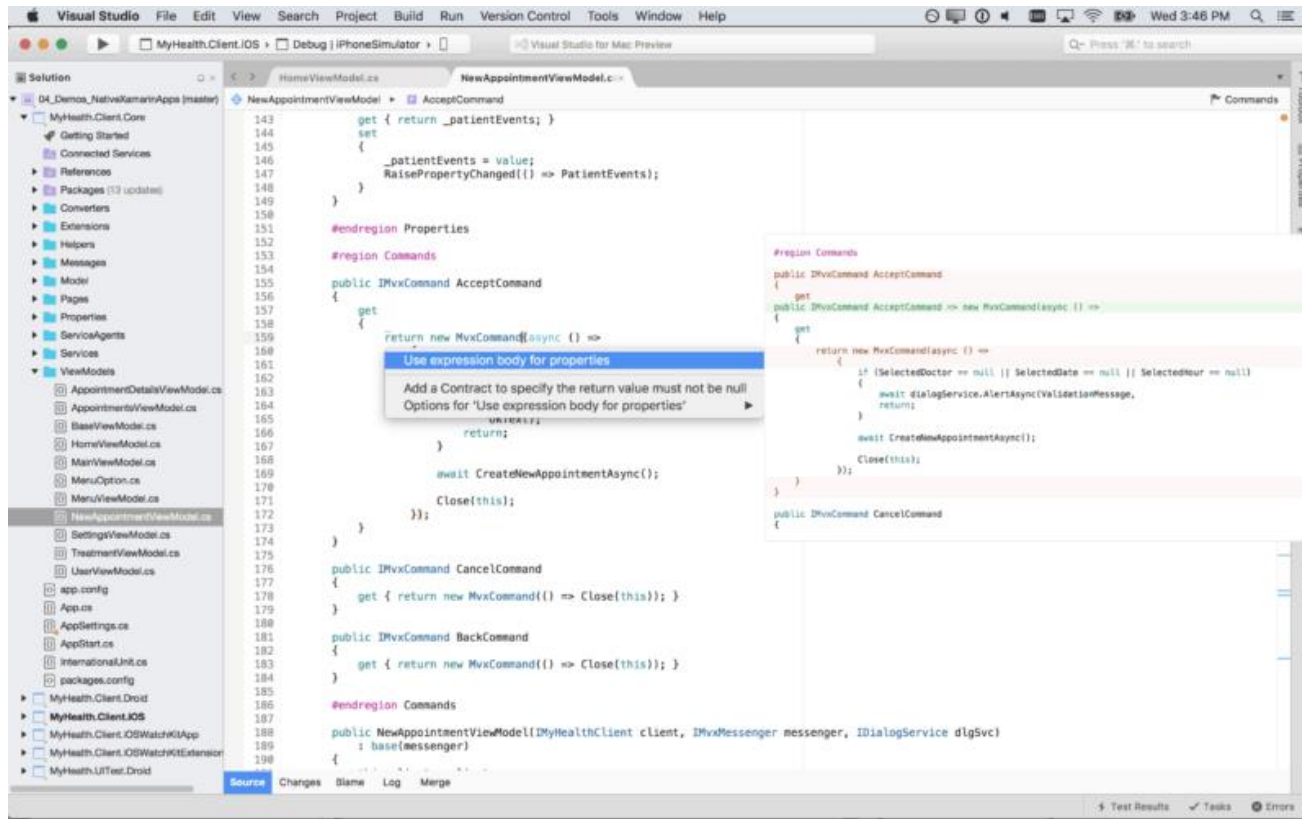Great for devs or sysadmins that want to use command-line tooling in bash

DEMO

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
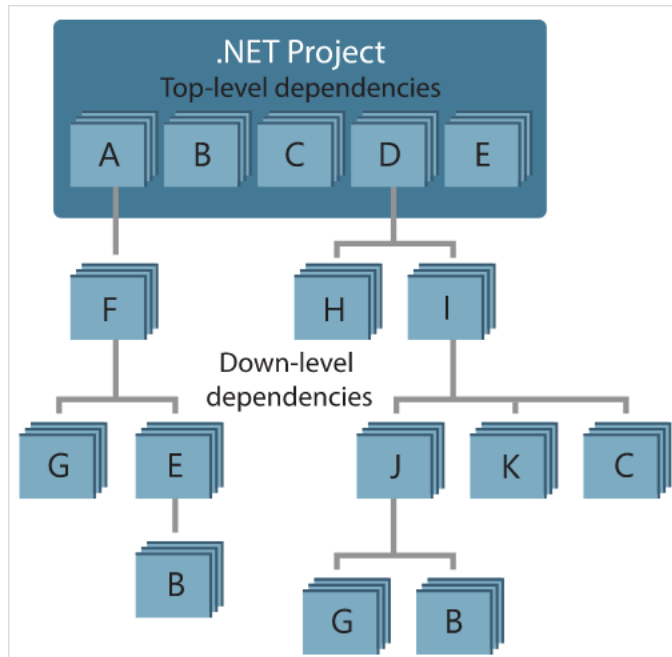
CodeLens

Live unit tests

Smart refactorings

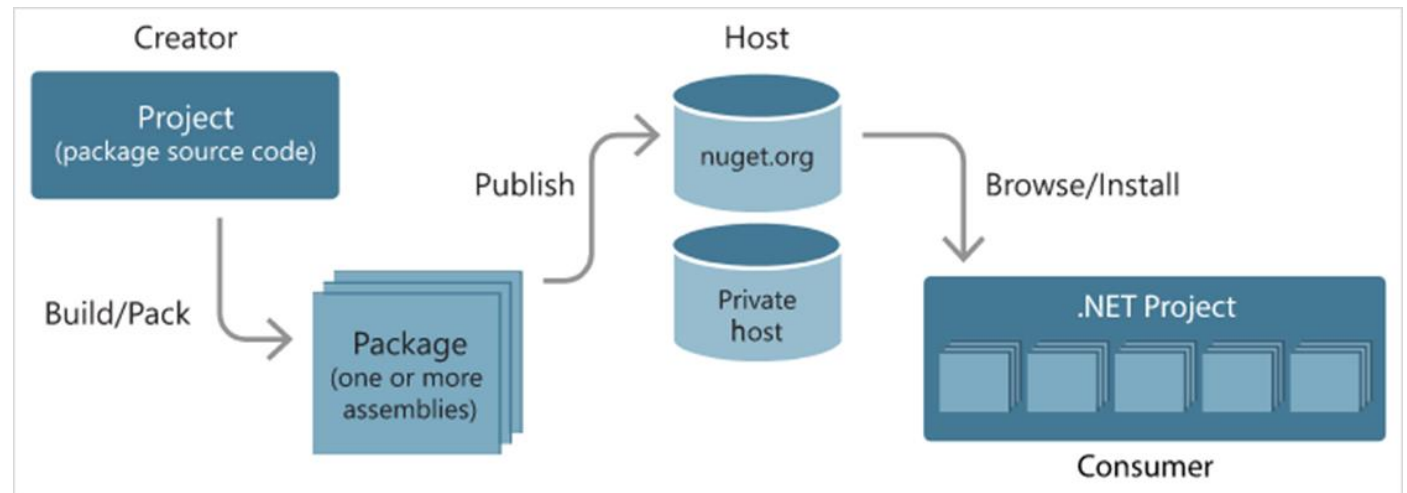Snapshots and IntelliTrace step-back

Nuget

The package manager for .NET

Allows code to be packaged and shared

Automatically manages complex dependencies

https://www.nuget.org/packages

Search for packages...

There are 131,852 packages

☑ **Include prerelease**

NUnit ✓   by: rprouse charliepoole

↓ 29,127,736 total downloads | ⏱ last updated 25 days ago | ⚑ Latest version: 3.11.0 | ⊘ nunit test testing tdd framework fluent assert theory plugin ...

NUnit features a fluent assert syntax, parameterized, generic and theory tests and is user-extensible. This package includes the NUnit 3 framework assembly, which is referenced by your tests. You will need to install version 3 of the nunit3-console program or a third-party runner that supports... More information

Newtonsoft.Json ✓   by: newtonsoft jamesnk

Json.NET

↓ 158,361,328 total downloads | ⏱ last updated 2 days ago | ⚑ Latest version: 12.0.1-beta1 | ⊘ json

Json.NET is a popular high-performance JSON framework for .NET

EntityFramework ✓   by: Microsoft EntityFramework aspnet

↓ 51,725,032 total downloads | ⏱ last updated 10/26/2017 | ⚑ Latest version: 6.2.0 | ⊘ Microsoft EntityFramework EF Database Data O/RM ADO.NET

Entity Framework is Microsoft's recommended data access technology for new applications.
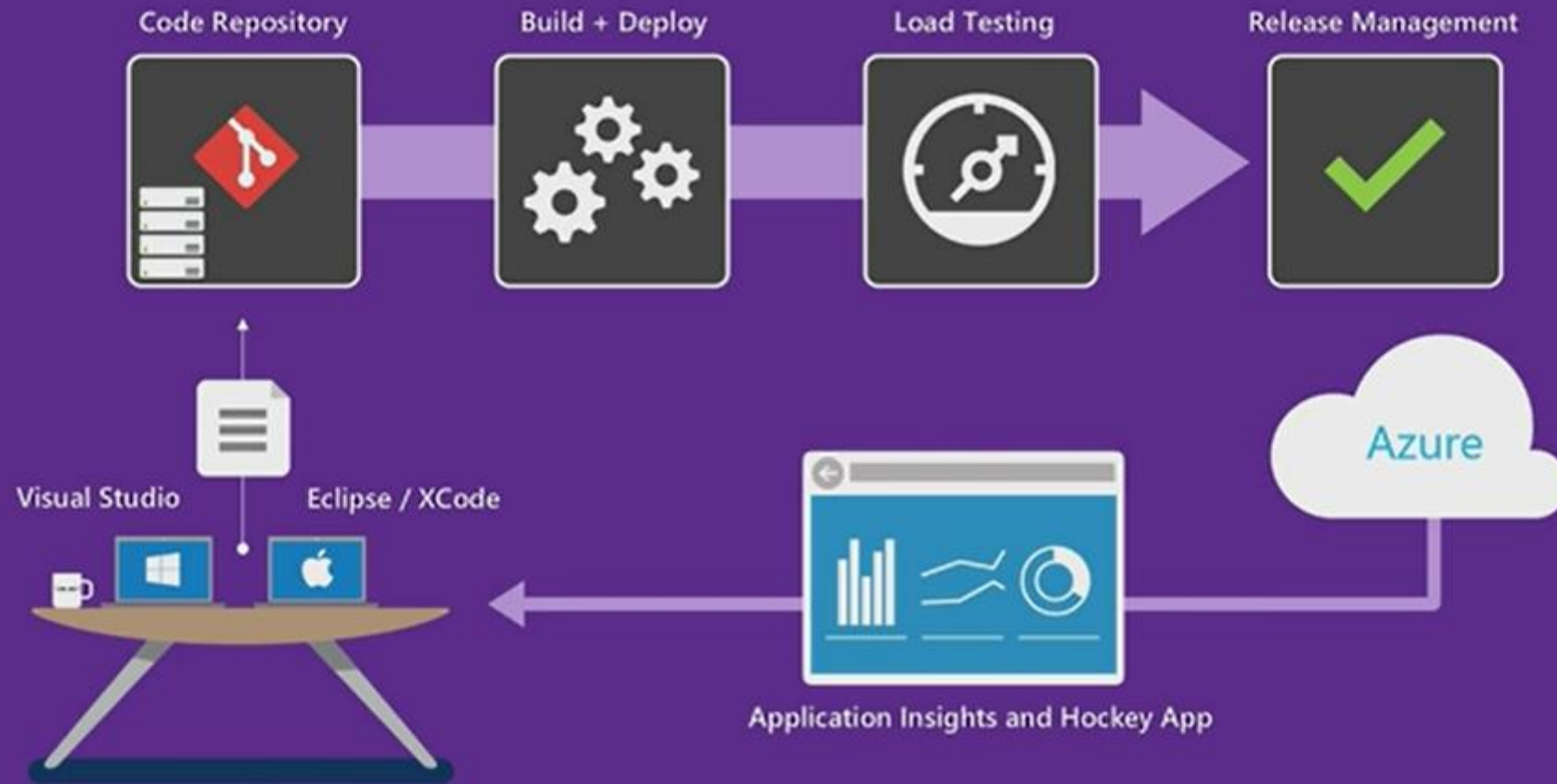
bootstrap   by: twbs Supergibbs

Bootstrap CSS

↓ 21,385,937 total downloads | ⏱ last updated 3 months ago | ⚑ Latest version: 4.1.3 | ⊘ css mobile-first responsive front-end framework web

The most popular front-end framework for developing responsive, mobile first projects on the web.

The Cloud Revolution

Azure DevOps

Azure DevOps

Source control repositories

Work item tracking

Kanban (task) boards

Build and deploy pipelines

Automated testing & Test plans

Wikis

FREE for open source or teams of <= 5 users
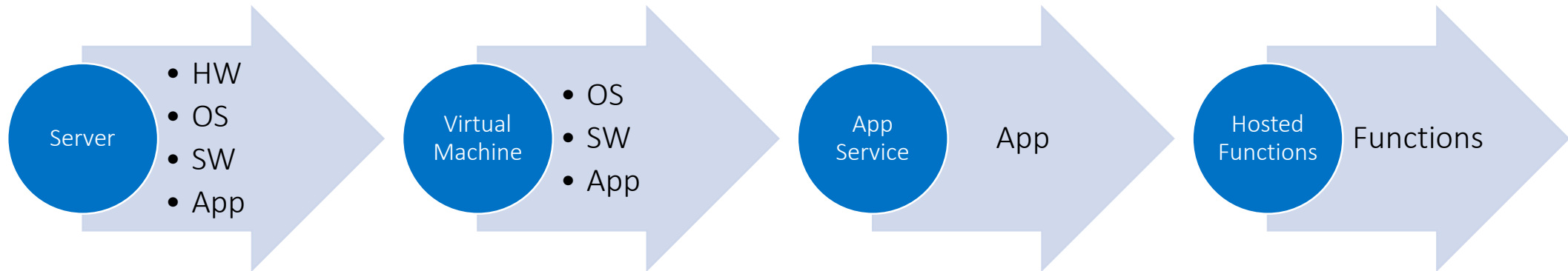
Azure Functions

DEMO

"Serverless"

Eliminates need for server management

Functions hosted by a 3rd-party

FaaS – Functions as a Service

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

Server
- HW
- OS
- SW
- App

Virtual Machine
- OS
- SW
- App

App Service

App

Hosted Functions

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

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channel9.msdn.com

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pluralsight.com (PAID)

coursera.org (PAID)

udemy.com (PAID)

bit.ly/2ES1QAV

Recap

Cultural Shift

Cross-Platform Development

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Thanks! Questions?

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