Visual Studio 2017 Launch

8:30   – Hello Visual Studio
9:45   – Exploring Mobile Stack
11:00   – DevOps
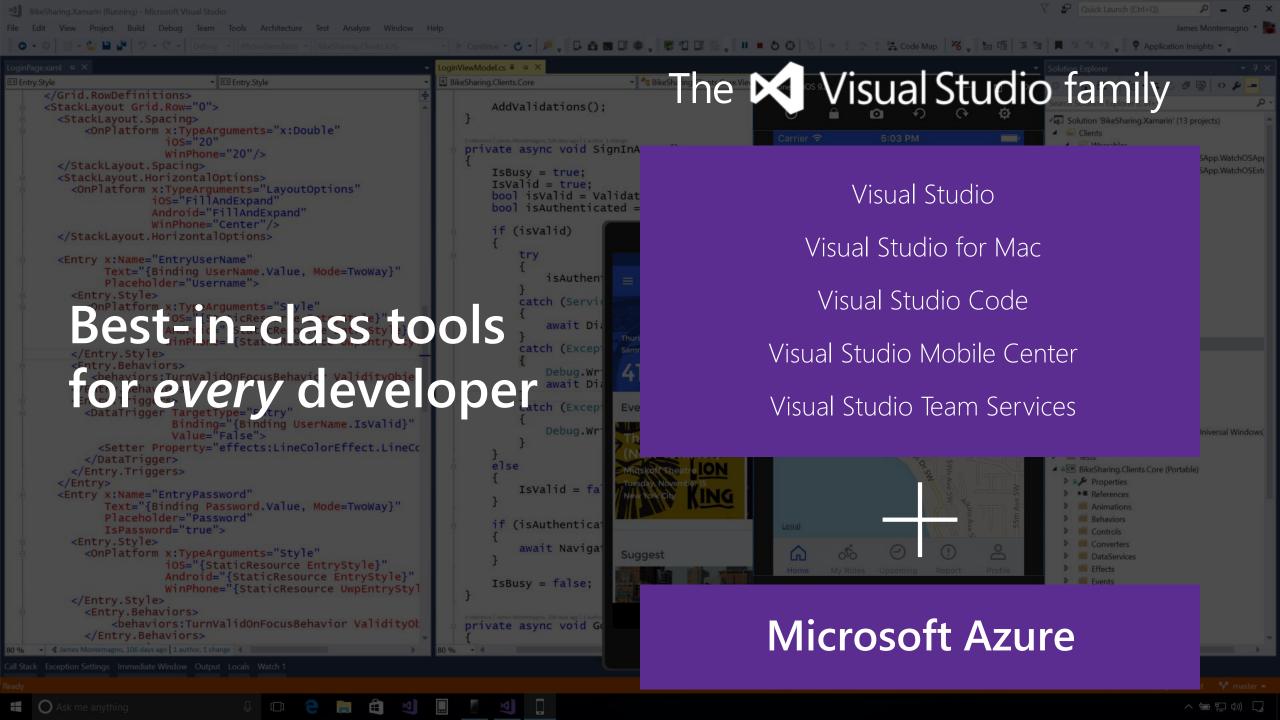12:00   – Pizza & HoloLens

WIFI
msevent00ib

Best of Launch Visual Studio 2017

Mike Benkovich
Mitch Muenster
Lance Larsen

WIFI
msevent00ib

Today...

- Hello Visual Studio 2017!
- Building with the Microsoft Mobile Stack
- DevOps, .NET Core, Azure and More

The **⧓ Visual Studio** family

Best-in-class tools
for *every* developer

Visual Studio

Visual Studio for Mac

Visual Studio Code

Visual Studio Mobile Center

Visual Studio Team Services

+

Microsoft Azure

Visual Studio 2017

FUNDAMENTALS

CLOUD

MOBILE

DEVOPS

Announcing
New value for Visual Studio Enterprise subscribers

Pluralsight: 1 year full catalog

Office 365 Dev: 25 seats

Parasoft: 6 months

WhiteSource: 6 months

Visual Studio 2017: Fundamentals
The developer inner loop

Mike Benkovich

Visual Studio 2017: Fundamentals

FOUNDATION
STREAMLINED

PRODUCTIVITY
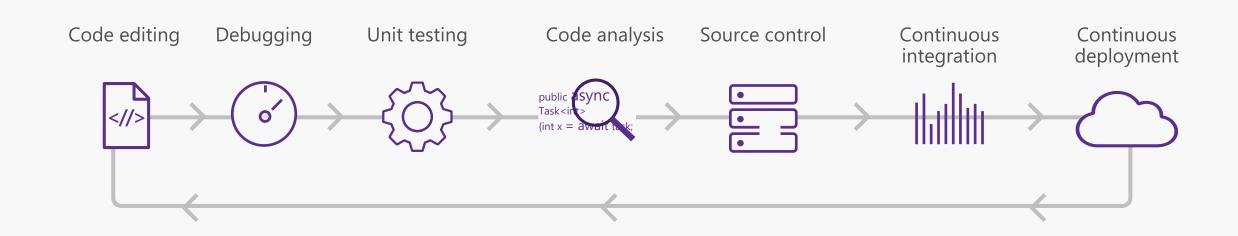BOOSTED

Demo
Developer Productivity

Microsoft

Trends

Software development is a team sport

Agile & DevOps change the flow

Individual productivity still matters

A traditional look at DevOps

Code editing · Debugging · Unit testing · Code analysis · Source control · Continuous integration · Continuous deployment

```
public async
Task<int>
{int x = await task;
```
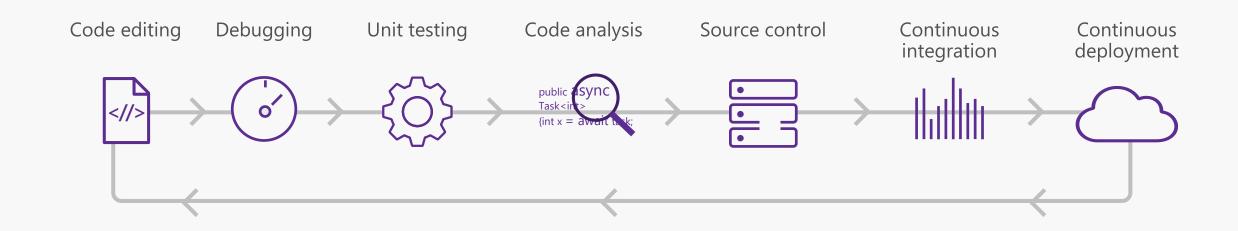
Development flows left to right and repeats

We can do better

Tighten the cycle
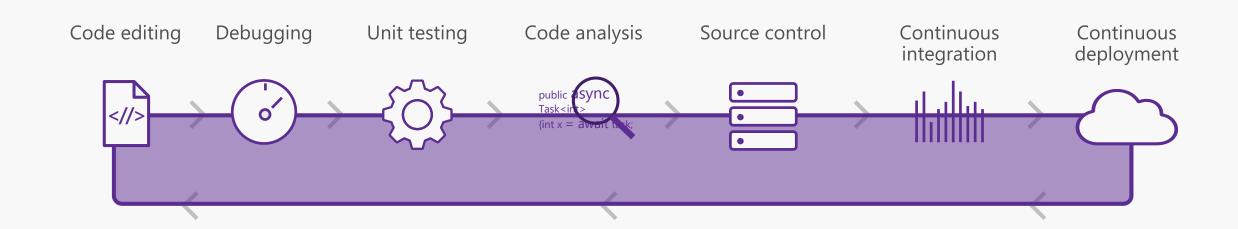
Catch issues before check-in
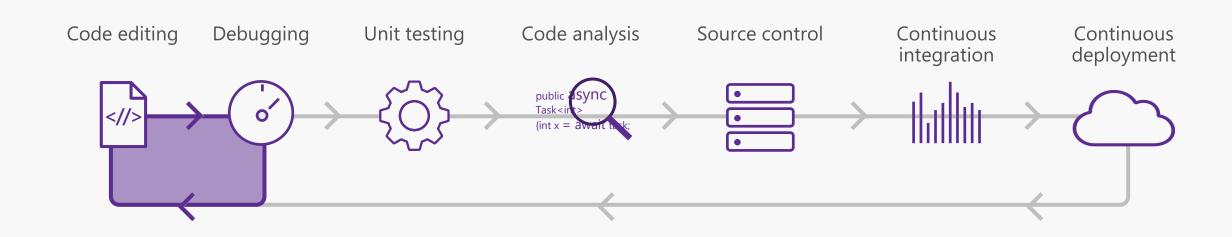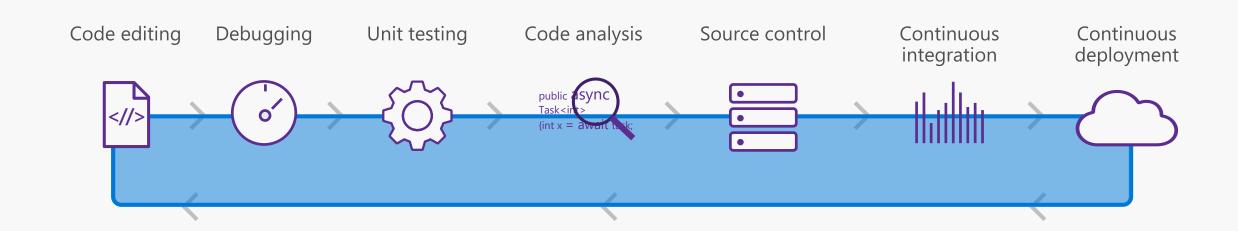
Identify issues in production

"Shift left"

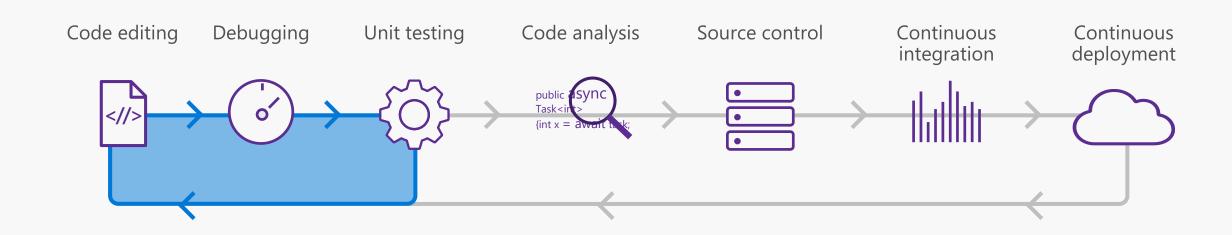Code editing Debugging Unit testing Code analysis Source control Continuous integration Continuous deployment

```
public async
Task<int>
{int x = await task;
```

Continuous integration + real-time experiences = **shift left**

"Shift left"

Code editing | Debugging | Unit testing | Code analysis | Source control | Continuous integration | Continuous deployment

"Shift left"

Code editing   Debugging   Unit testing   Code analysis   Source control   Continuous integration   Continuous deployment

```
public async
Task<int>
{int x = await task;
```

Edit and continue – pulled debugging into the edit/build cycle

"Shift left"

Code editing   Debugging   Unit testing   Code analysis   Source control   Continuous integration   Continuous deployment

```
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Task<int>
{int x = await task;
```

"Shift left"

Code editing   Debugging   Unit testing   Code analysis   Source control   Continuous integration   Continuous deployment

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Live unit testing – pulls quality further into the inner loop

"Shift left"

Code editing   Debugging   Unit testing   Code analysis   Source control   Continuous integration   Continuous deployment

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"Shift left"

Code editing   Debugging   Unit testing   Code analysis   Source control   Continuous integration   Continuous deployment

```
public async
Task<int>
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```

Live code analysis – immediate feedback loop

Demo
Productivity 2

Microsoft

Microsoft Azure

Platform Services

Web + Mobile	Identity Management
Internet of Things	Media Streaming
Microservices	High Performance Compute
Data + Analytics	Cognitive Services

Hybrid

Core Infrastructure

Compute   Storage   Networking   Security

Choice + OSS + Flexibility with Azure

DEVOPS

DATABASES & MIDDLEWARE

APPLICATIONS

INFRASTRUCTURE

APP FRAMEWORKS

.NET – A unified platform

.NET FRAMEWORK	.NET CORE	XAMARIN	TOOLS
WINDOWS APPLICATIONS	CROSS-PLATFORM SERVICES	MOBILE APPLICATIONS	Visual Studio

.NET STANDARD LIBRARY

COMMON INFRASTRUCTURE

Compilers	Languages	Runtime components

Visual Studio

Visual Studio for Mac

Visual Studio Code

Command Line
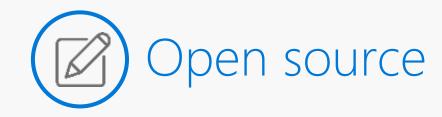
.NET Core is optimized for "cloud-native" apps

Cross-platform

Fast

Lightweight

Open source

Cloud
development
optimized

Visual Studio

$+$

.NET

$+$

Azure

Demo
.NET Core

Microsoft

Announcing
.NET Core Tooling
1.0

Visual Studio 2017
.NET Core CLI

www.dot.net/core

Why microservices?

Traditional approach

API	UI

Component Library 1	Component Library 2	Component Library 3

Data Access
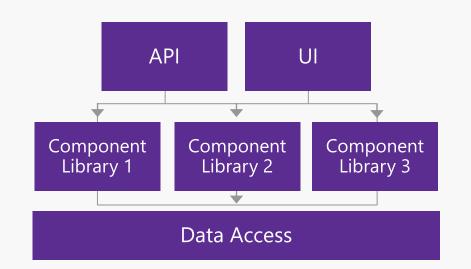
Microservices approach

Why microservices?

Traditional approach

API

UI

Component Library 1

Component Library 2

Component Library 3

Data Access
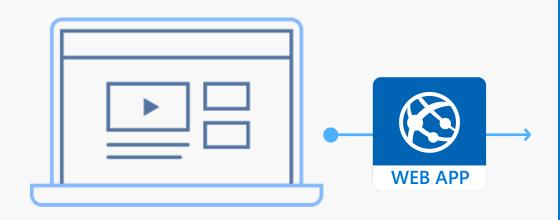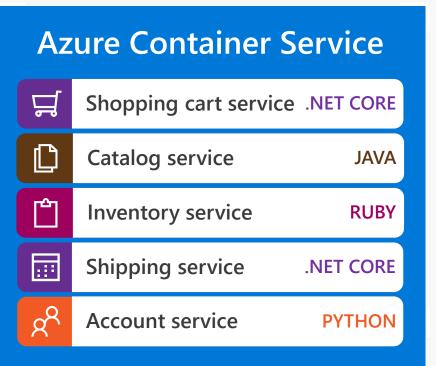
Microservices approach

Microservices + Containers
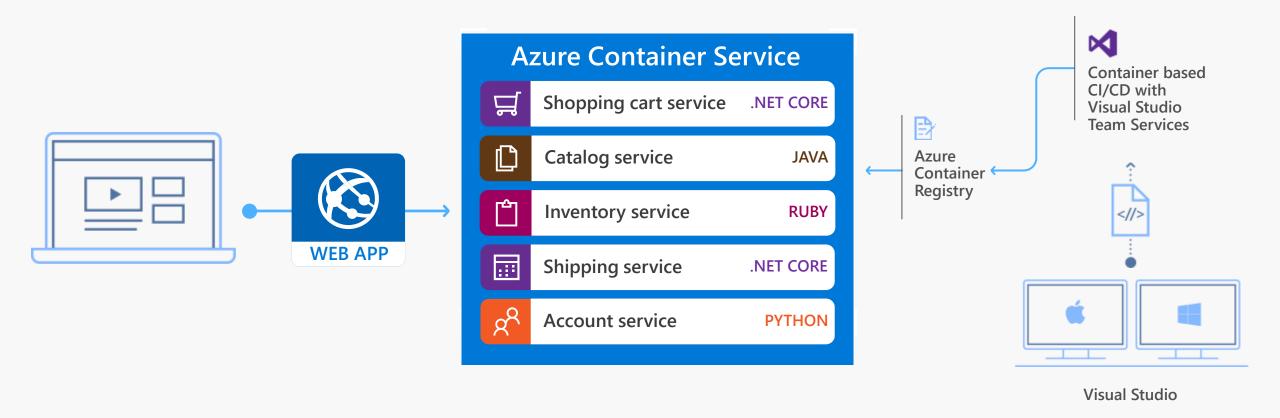
WEB APP

Azure Container Service

🛒	Shopping cart service	.NET CORE
📄	Catalog service	JAVA
📋	Inventory service	RUBY
📅	Shipping service	.NET CORE
👥	Account service	PYTHON

Continuous Integration with Containers

Azure Container Service

🛒	Shopping cart service	.NET CORE
📄	Catalog service	JAVA
📋	Inventory service	RUBY
📅	Shipping service	.NET CORE
👥	Account service	PYTHON

WEB APP

Azure Container Registry

Container based CI/CD with Visual Studio Team Services

Visual Studio

Demo
Containers

Microsoft
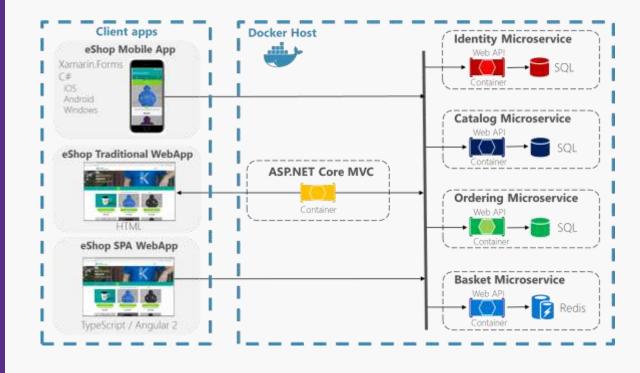
.NET Core microservices reference app

- Includes backend services architected with best practices

- Mobile and web client apps included

- Supported in Visual Studio 2017

- Supported on Docker and dotnet CLI on Mac, Linux or Windows

[e] eSHOP onCONTAINERS

Explore our beta release and provide feedback:

http://aka.ms/MicroservicesArchitecture

Visual Studio
Dev Essentials
1.4M members
and counting

Announcing
New value for Visual Studio Dev Essentials members

Opsgility: 3 months of Azure and DevOps training

Aka.ms/devessentials

Visual Studio 2017: Mobile

Mitch Muenster

1 Year anniversary:
Xamarin joins Microsoft

Microsoft

Xamarin.Forms Previewer **Visual Studio for Mac Preview** Platform Specifics

Xamarin included in Visual Studio Xamarin.Forms Native Embedding **Inspector**

Open Source Xamarin.Forms

Open Source Xamarin.Android Android Nougat

Xamarin.Forms URL Navigation Embedded Native Controls

iOS 10 .NET Standard

Remote iOS Simulator on Windows

MIT License Mono

Open Source Xamarin.Mac Workbooks **BitCode support** Vulkan API

Open Source Xamarin.iOS **Multi-process debugging on Mac** WatchOS 3

Hybrid AOT TLS 1.2 **Skia 2D Graphics** Xamarin.Forms Tizen

Announcing
Visual Studio for Mac
Preview 4

A mobile-first, cloud-first IDE. Made for the Mac.

Native mobile and Mac apps in C#

Build from the client to the cloud

Visual Studio 2017: Mobile

5-STAR APPS
MADE EASY

MOBILE DEVOPS
AUTOMATED

- Native user interface
- High-fidelity API access
- Native performance

Xamarin: Anything you can do in Objective-C, Swift or Java, you can do in C# and Visual Studio

Visual Studio Tools for Xamarin

Write code faster, with higher quality

Inspector

Connected services

Profiler

New templates

Forms previewer

Workbooks

iOS simulator

Test recorder

Demo
James Montemagno

Photo used under CC http://www.wocintechchat.com/

Microsoft

Test

Analytics

Build

Distribute

Live Update

Crash Reporting

A/B Testing

Storage

Identity

Push Notifications

Remote Config.

Tables

Demo

Keith Ballinger

Microsoft

BREAK

Some links from this morning

- http://visualstudioshortcuts.com/2017/
- http://www.dofactory.com/reference/visual-studio-shortcuts

Enterprise DevOps

Mike Benkovich
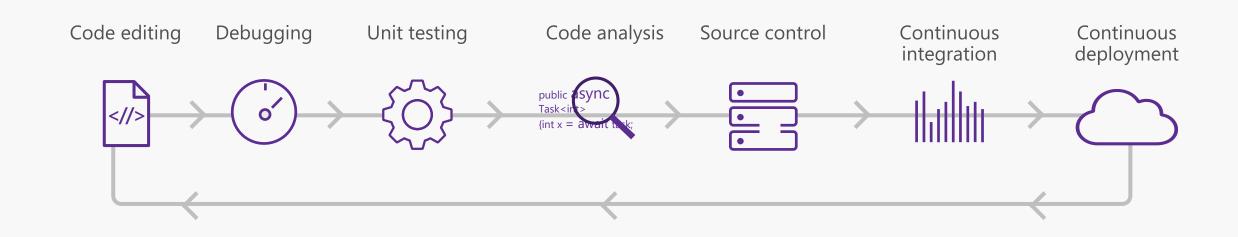
Evolving DevOps

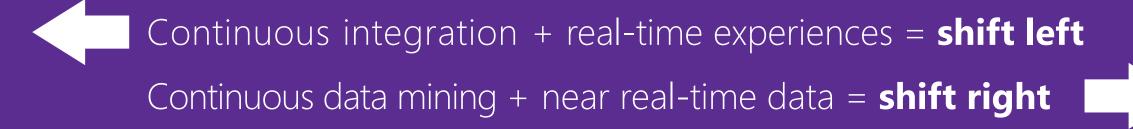Trends we see

Visual Studio 2017: DevOps

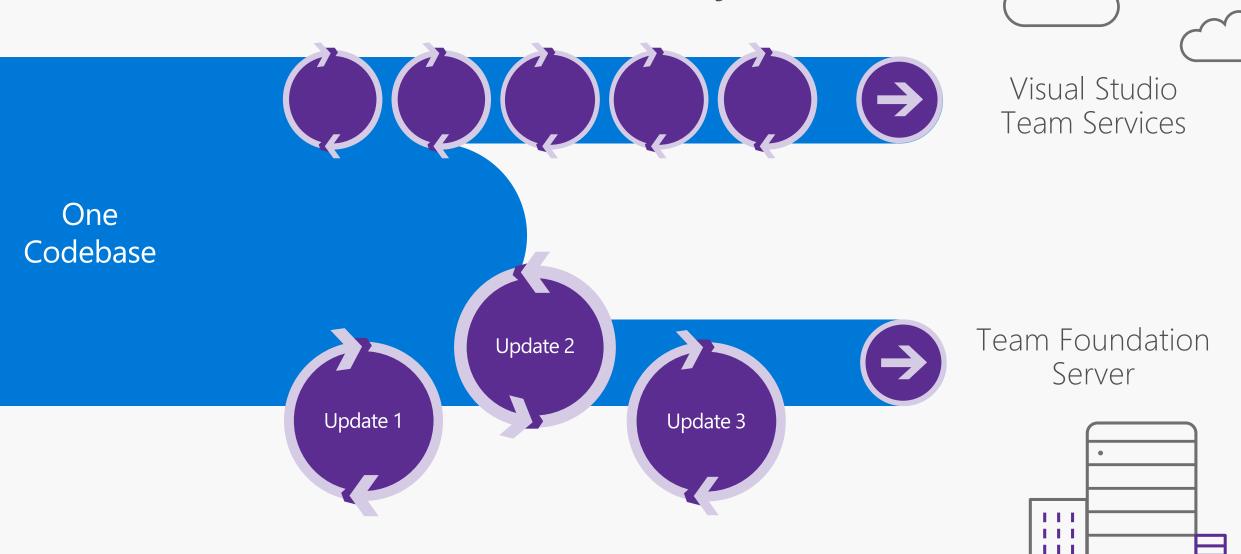**CONTINUOUS DELIVERY**
SIMPLIFIED

TRUSTED & SCALABLE
ENTERPRISE-GRADE

"Shift left" and "shift right"

| Code editing | Debugging | Unit testing | Code analysis | Source control | Continuous integration | Continuous deployment |

```
public async
Task<int>
{int x = await task;
```

Continuous integration + real-time experiences = **shift left**

Continuous data mining + near real-time data = **shift right**

One codebase, two delivery streams

One Codebase

Visual Studio Team Services

Update 1

Update 2

Update 3

Team Foundation Server

Repo Admin Permission Changes

Admin Work Hub

Build/Release Task Versioning

Commit Traceability

Personalized Home Page

Cherry Picking

Test Impact Analysis

Release Management Improvements

New Process Template Editor

Agile Improvements

Follow Pull Request

Team Foundation Server 2017 Update 1 Available

Social Pull Request Experience

Markdown and Emoji in Comments

View PRs for a Commit

Azure Integration

Code Search

Docker Integration

PR Merge Conflict Information
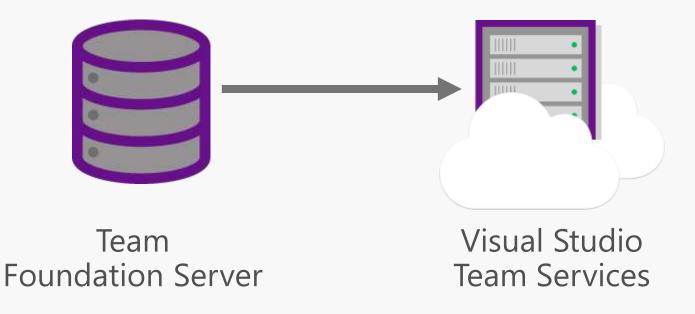
npm Support
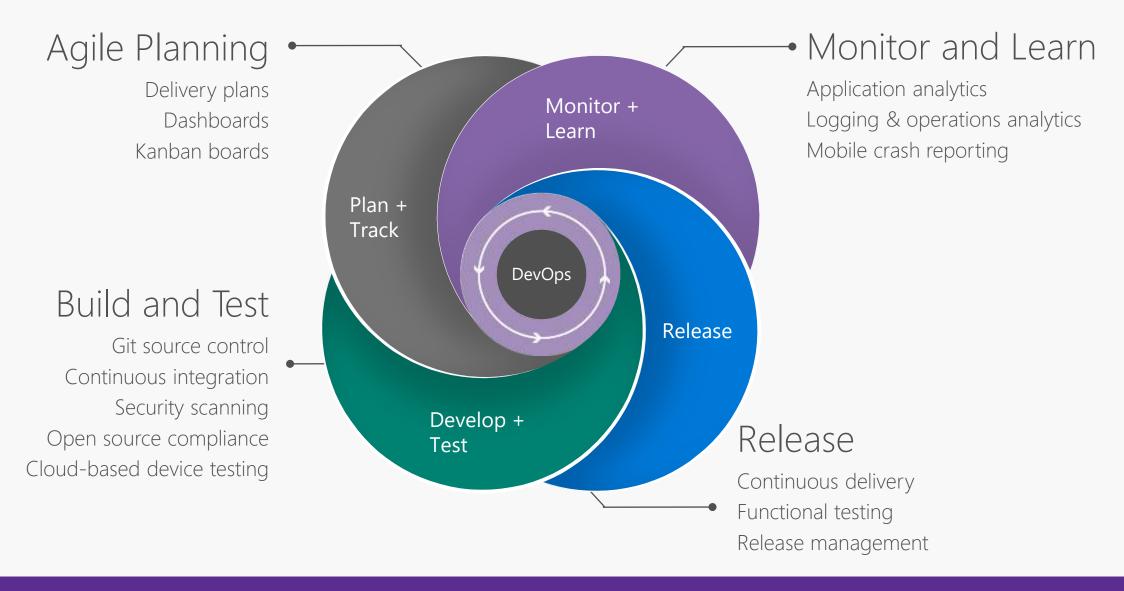
Azure SQL Database Deployment Task

Follow Work Items

Your on-ramp to the cloud

39k

Schlumberger

Microsoft

blackbaud™

Team
Foundation Server

Visual Studio
Team Services

https://aka.ms/tfsimportdata

Demo

Mike Benkovich

Microsoft
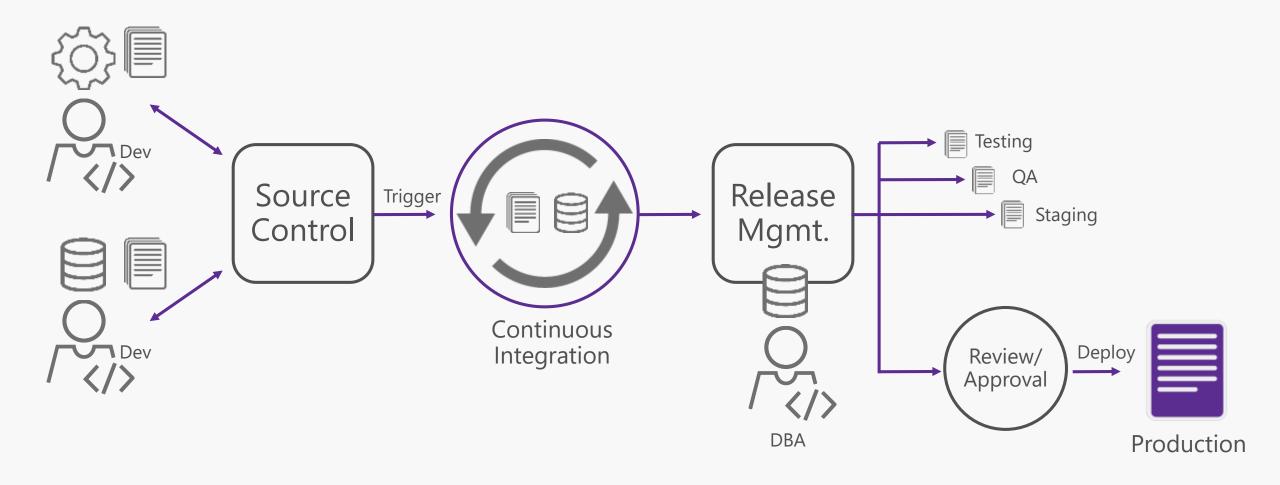
DevOps for databases: automated deployment

Dev

Dev

Source
Control

Trigger

Continuous
Integration

Release
Mgmt.

DBA

Testing

QA

Staging

Review/
Approval

Deploy

Production

redgate + Microsoft

Visual Studio Enterprise

- 5-Star mobile app development
- Manage complexity and shift left
- Put quality at the center
- Free training and Azure credits

Check out TechNet Labs

- Main Link: https://almvm.azurewebsites.net/

- [2017 Labs Now Available on TechNet Virtual Labs](#)

Visual Studio 2017

FUNDAMENTALS

CLOUD

MOBILE

DEVOPS

THANK YOU!

Download Visual Studio 2017!
Interact with our engineers
Full day of free training tomorrow

www.visualstudio.com

Visual Studio 2017 Launch
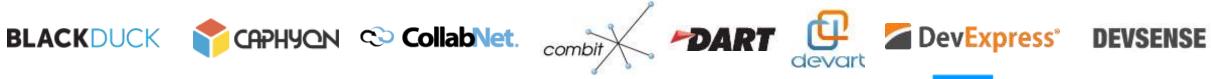
Visual Studio 2017 launch partners

116 launch partners   **+500** extensions