

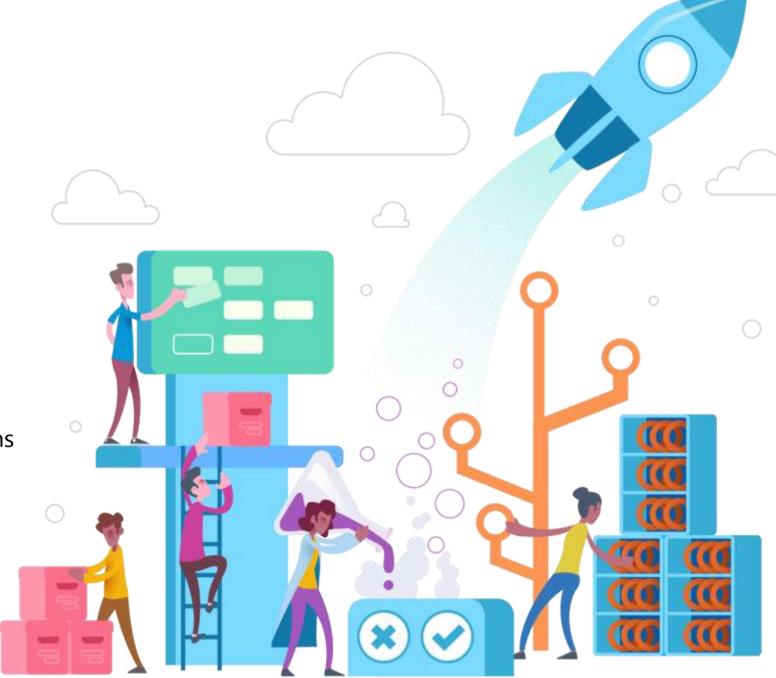
# Azure DevOps



### **Juan Rafael**

MVP |MCT Business Applications @jlc\_rve

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## **Azure DevOps**

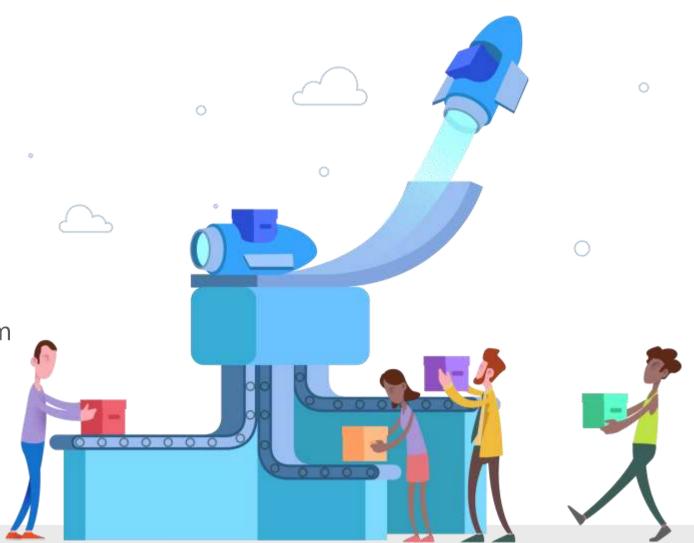
# #AzureDevOps



@AzureDevOps

https://aka.ms/AzureDevOpsForum

https://aka.ms/DevOpsBlog/

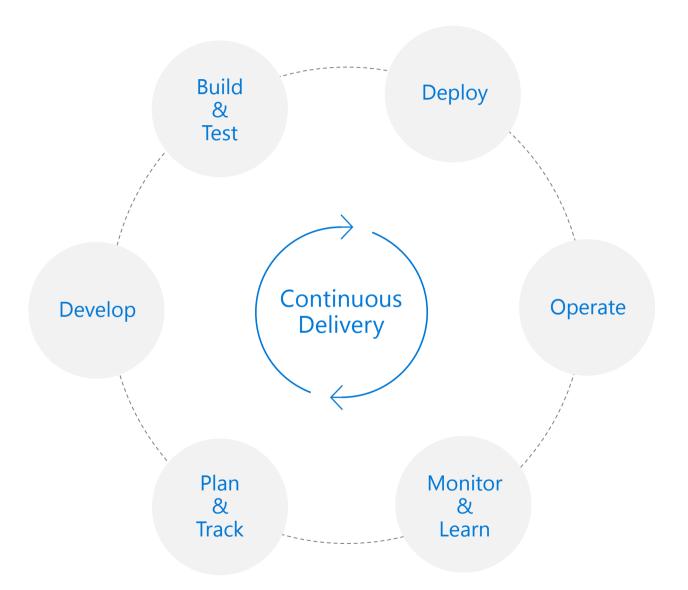


### What is DevOps?

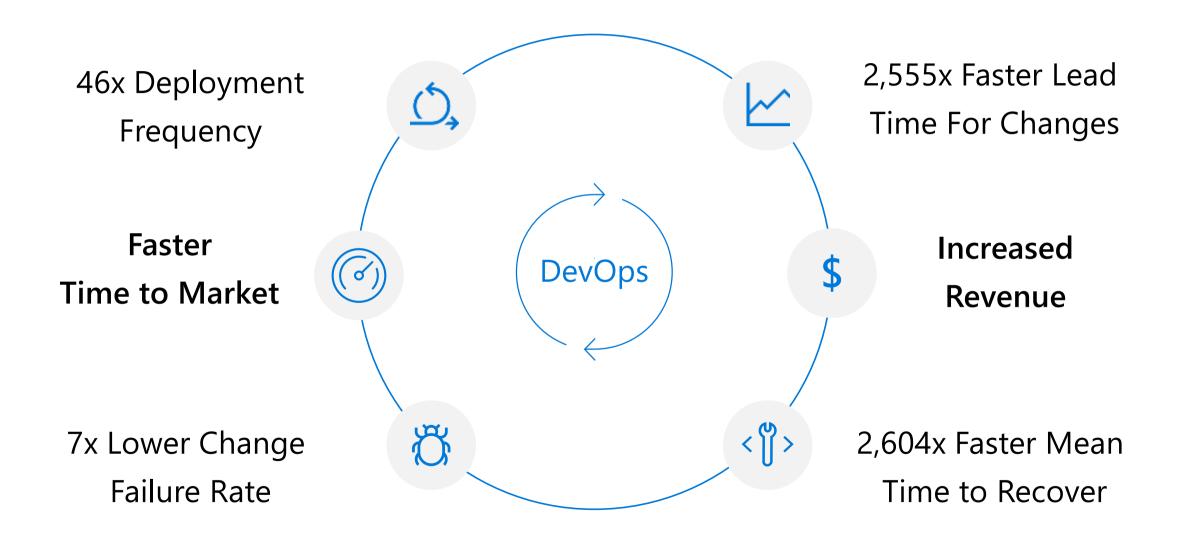
People. Process. Products.

66

DevOps is the union of people, process, and products to enable continuous delivery of value to your end users. ??



### High Performance DevOps Companies Achieve...

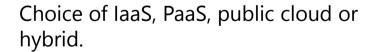


### How Microsoft can help

Microsoft Azure is a powerful and flexible foundation for past, present, and future apps – easily build, manage, and deploy any application and any stack on a massive, global network using your favorite tools and frameworks.

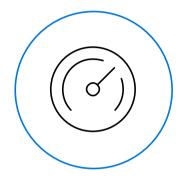


Flexible



Mirror or modernize app infrastructure with VMs, containers, microservices or serverless.

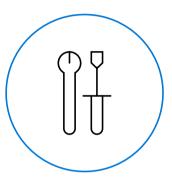
Supports all stages of the app modernization journey – from lift-andshift to Cloud-Native.



Powerful

Instantly improve the performance, scalability and resiliency of your apps by moving them to the cloud.

Increase business agility with Cloud-Native capabilities and built-in DevOps for continuous innovation.



Open

Bring your stack, we bring a cloud that runs any app, on any platform, and any language.

Build applications using the language and tools of your choice - Azure supports what you already use and love so you can get up and running fast – just bring code.

# What technologies do I need to support DevOps?

DevOps brings together people, processes, and technology, automating software delivery to provide continuous value to your users. Using Azure DevOps, you can deliver software faster and more reliably - no matter how big your IT department or what tools you're using.



#### **Continuous Integration (CI)**

- Improve software development quality and speed.
- When you use Azure Pipelines or Jenkins to build apps in the cloud and deploy to Azure, each time you commit code, it's automatically built and tested and bugs are detected faster.

101010 010101 101010

#### **Continuous Deployment (CD)**

- By combining continuous integration and infrastructure as code (IaC), you'll achieve identical deployments and the confidence to deploy to production at any time.
- With continuous deployment, you can automate the entire process from code commit to production if your CI/CD tests are successful.



#### **Continuous Learning & Monitoring**

- With Azure Application Insights you can identify how your applications are performing and test if the recent deployment made things better or worse.
- Using CI/CD practices, paired with monitoring tools, you'll be able to safely deliver features to your customers as soon as they're ready.

# Introducing Azure DevOps



#### **Azure Boards**

Deliver value to your users faster using proven agile tools to plan, track, and discuss work across your teams.



#### **Azure Test Plans**

Test and ship with confidence using manual and exploratory testing tools.



#### **Azure Pipelines**

Build, test, and deploy with CI/CD that works with any language, platform, and cloud. Connect to GitHub or any other Git provider and deploy continuously.



#### **Azure Repos**

Get unlimited, cloud-hosted private Git repos and collaborate to build better code with pull requests and advanced file management.



#### **Azure Artifacts**

Create, host, and share packages with your team, and add artifacts to your CI/CD pipelines with a single click.



https://azure.com/devops

### **Azure Pipelines**

Cloud-hosted pipelines for Linux, Windows and macOS, with unlimited minutes for open source



#### Any language, any platform, any cloud

Build, test, and deploy Node.js, Python, Java, PHP, Ruby, C/C++, .NET, Android, and iOS apps. Run in parallel on Linux, macOS, and Windows. Deploy to Azure, AWS, GCP or on-premises



#### Extensible

Explore and implement a wide range of community-built build, test, and deployment tasks, along with hundreds of extensions from Slack to SonarCloud. Support for YAML, reporting and more



#### **Containers and Kubernetes**

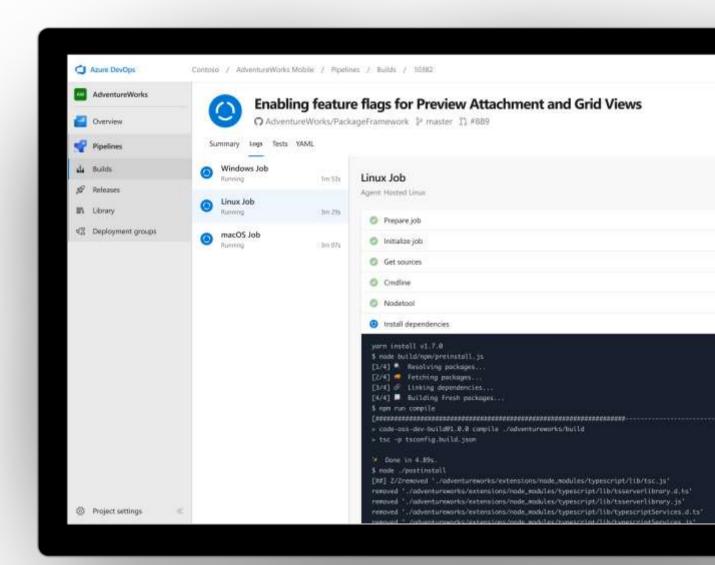
Easily build and push images to container registries like Docker Hub and Azure Container Registry. Deploy containers to individual hosts or Kubernetes.

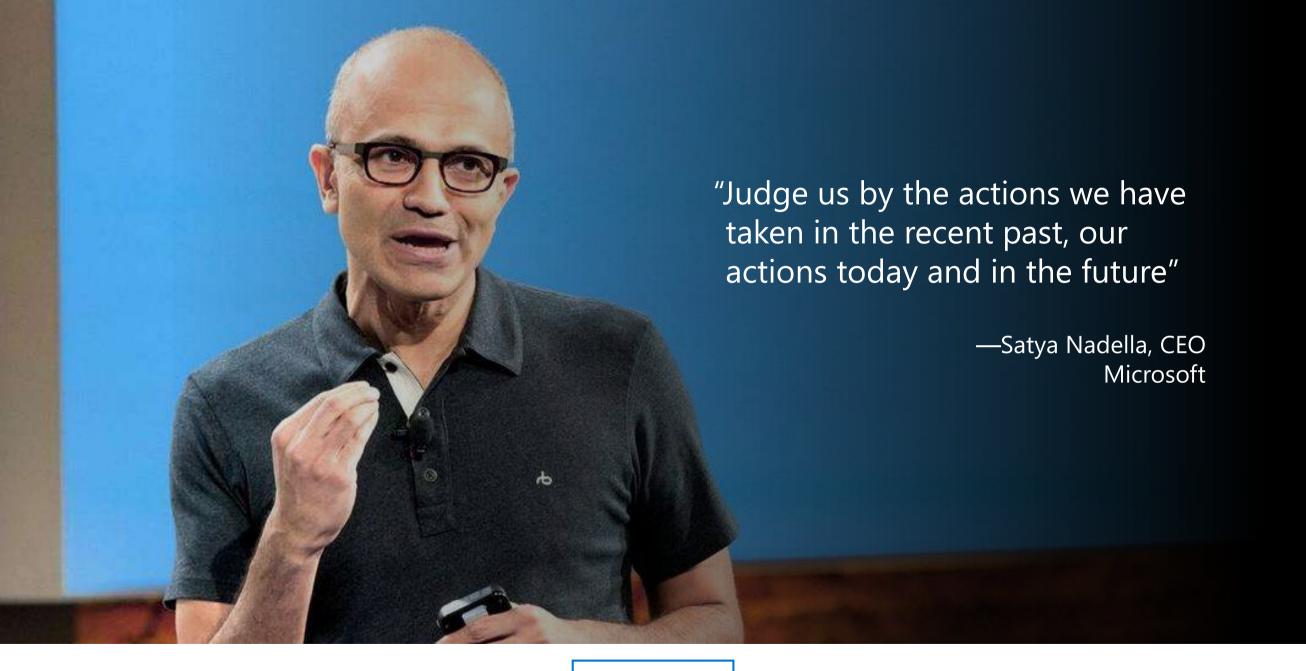


#### Best-in-class for open source

Ensure fast continuous integration/continuous delivery (CI/CD) pipelines for every open source project. Get unlimited build minutes for all open source projects with up to 10 free parallel jobs across Linux, macOS and Windows







#### 2012

Typescript released

Git added to TFS and Visual Studio

#### 2014

Satya "Microsoft loves Linux"

Microsoft org on GitHub created

.NET foundation created

#### 2015

VS Code released

HDInsight (Hadoop/ Ubuntu) announced

Microsoft jointly forms Node.js foundation

#### 2016

.NET Core 1.0

PowerShell Core

Windows Subsystem for Linux in Windows 10

Microsoft joins Linux foundation

GitHub recognizes Microsoft as a top open source contributor

### 2017

Microsoft Azure Kubernetes Service launched

Draft, Brigade, Kashti projects submitted to Kubernetes community

Microsoft joins Cloud Native Computing & Cloud Foundry Foundations

SQL 2017 on Linux

Windows source code moved to Git

Azure Databricks (Apache Spark) announced

#### 2018

VS Code ranked #1 developer tool

Service Fabric Open Sourced

Azure Sphere with Linux kernel

Intent to acquire GitHub announced

~5,000 Microsoft employees committing to open source projects on GitHub

Azure trending to 50% Linux

Microsoft continues as largest contributor to OSS on GitHub

2012

2014 2015 2016 2017

2018



Free **unlimited** build minutes for public projects

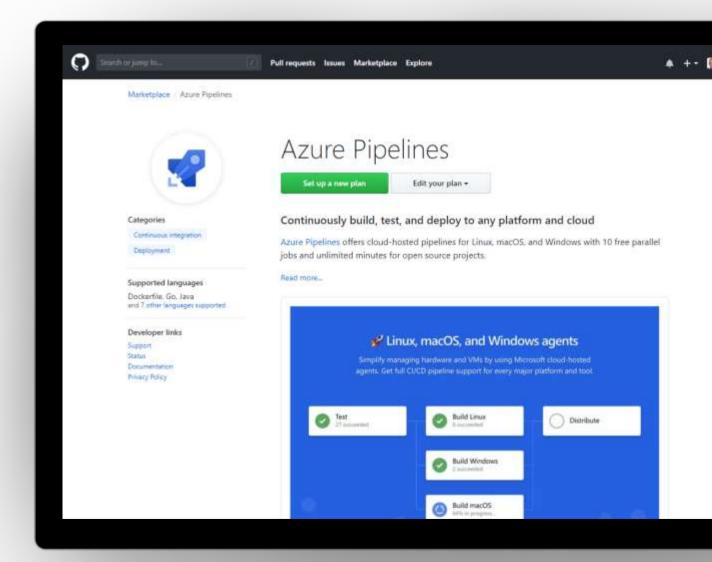
Up to 10 free parallel jobs across Windows, Linux and macOS

Microsoft Open Source



# **Integrated with GitHub**

Azure Pipelines available now to any developer from the GitHub Marketplace



### Azure DevOps



#### **Azure Boards**

Deliver value to your users faster using proven agile tools to plan, track, and discuss work across your teams.



#### **Azure Test Plans**

Test and ship with confidence using manual and exploratory testing tools.



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#### **Azure Repos**

Get unlimited, cloud-hosted private Git repos and collaborate to build better code with pull requests and advanced file management.



#### **Azure Artifacts**

Create, host, and share packages with your team, and add artifacts to your CI/CD pipelines with a single click.



https://azure.com/devops

### **Azure Boards**

Track work with Kanban boards, backlogs, team dashboards, and custom reporting



#### Connected from idea to release

Track all your ideas at every development stage and keep your team aligned with all code changes linked directly to work items.



#### Scrum ready

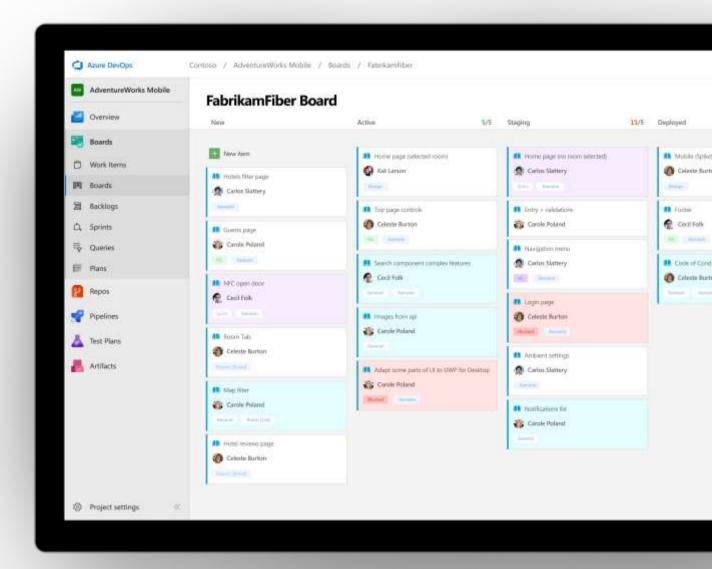
Use built-in scrum boards and planning tools to help your teams run sprints, stand-ups, and planning meetings.



#### **Project insights**

Gain new insights into the health and status of your project with powerful analytics tools and dashboard widgets.





### **Azure Repos**

Unlimited private Git repo hosting and support for TFVC that scales from a hobby project to the world's largest Git repositories



#### Works with your Git client

Securely connect with and push code into your Git repos from any IDE, editor, or Git client.



#### Web hooks and API integration

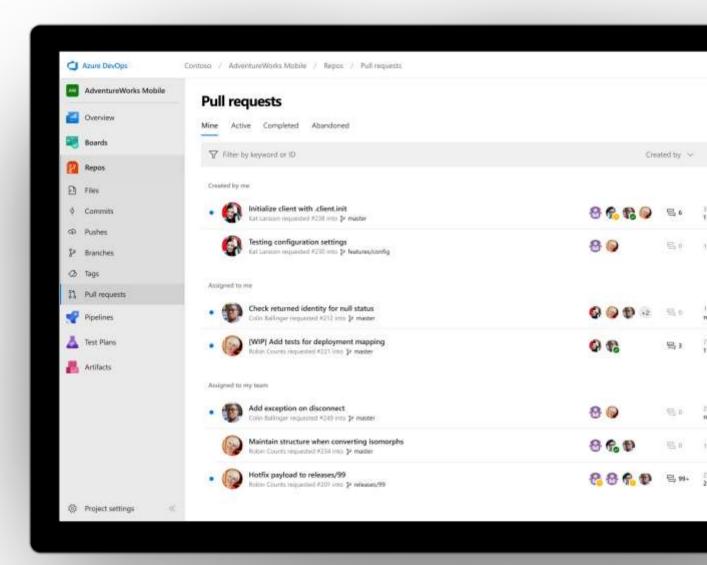
Add validations and extensions from the marketplace or build your own using web hooks and REST APIs.



#### Semantic code search

Quickly find what you're looking for with code-aware search that understands classes and variables.





### **Azure Test Plans**

Get end-to-end traceability. Run tests and log defects from your browser. Track and assess quality throughout your testing lifecycle.



#### Capture rich data

Capture rich scenario data as you execute tests to make discovered defects actionable. Explore user stories without test cases or test steps. You can create test cases directly from your exploratory test sessions.



#### Test across web and desktop

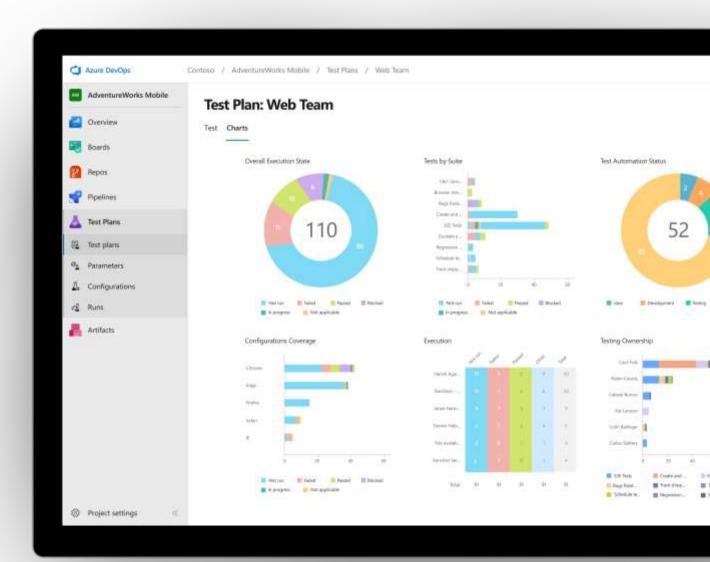
Test your application where it lives. Complete scripted tests across desktop or web scenarios. Test onpremises application from the cloud and vice-versa.



#### Get end-to-end traceability

Leverage the same test tools across your engineers and user acceptance testing stakeholders. Pay for the tools only when you need them.





### **Azure Artifacts**

Create and share Maven, npm, and NuGet package feeds from public and private sources – fully integrated into CI/CD pipelines



#### Manage all package types

Get universal artifact management for Maven, npm, and NuGet.



#### Add packages to any pipeline

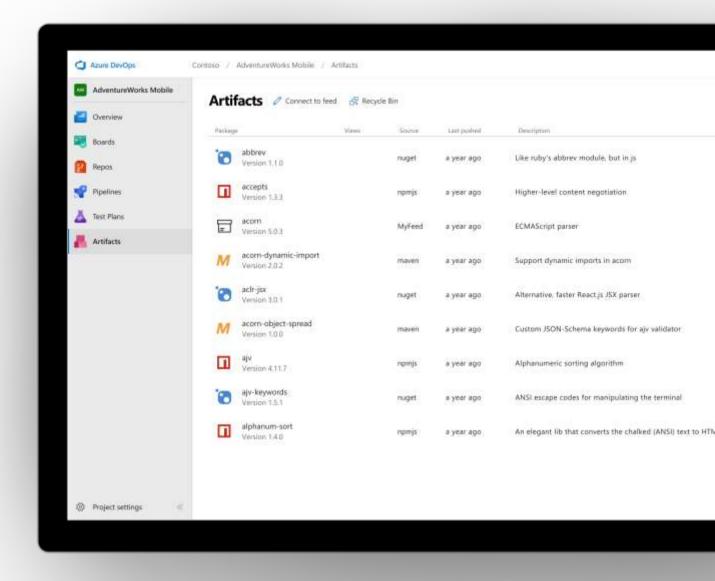
Share packages, and use built-in CI/CD, versioning, and testing.



#### Share code efficiently

Easily share code across small teams and large enterprises.





Demo

# Azure DevOps

Speaker Name

© Microsoft Corporation

### **Azure DevOps**

Better together











**Azure Repos** 

**Azure Pipelines** 

**Azure Test Plans** 

**Azure Artifacts** 

An end-to-end solution for organizations looking for an enterprise-grade toolchain

Fully Integrated with end to end traceability

Scalable to any team and project size

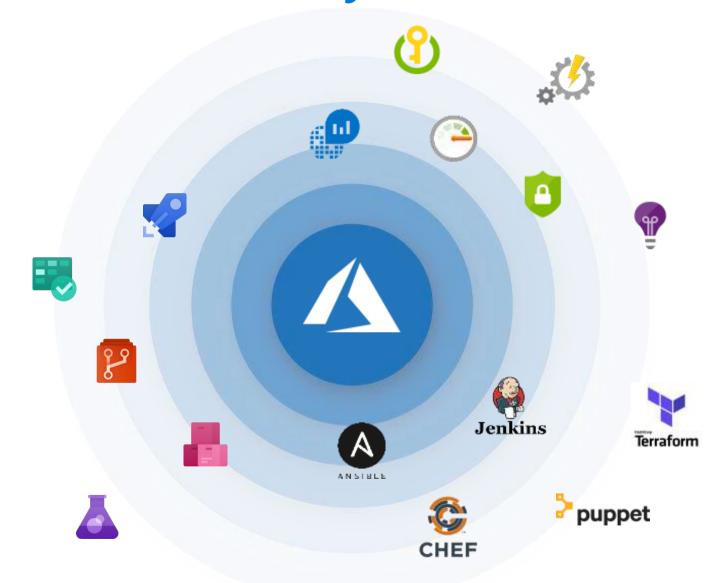
Highly available, multi region, hybrid cloud & on-prem

Customer Support

Consistent admin and access control



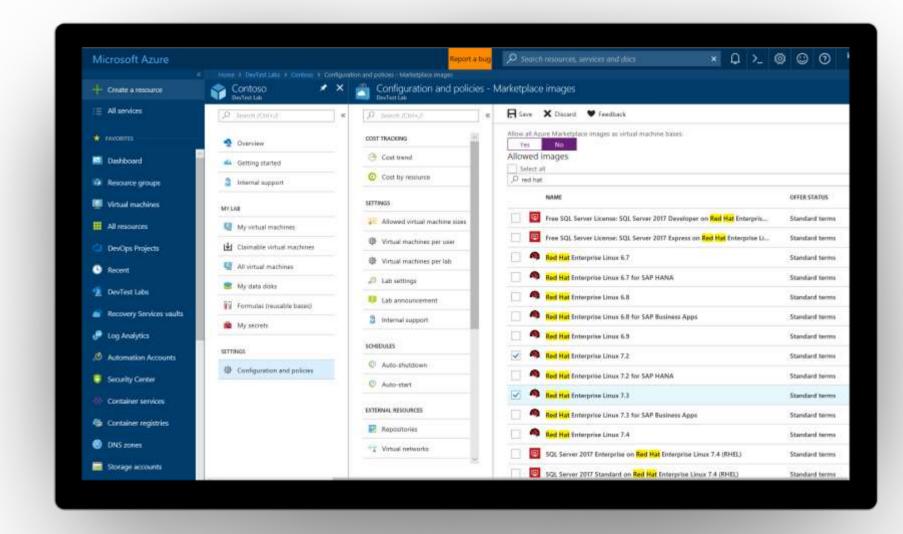
# **Broadening the Azure Ecosystem**



### **Self-Service Dev/Test Environments**

#### **Azure Lab Services**

- Simplify cloud environment management for developers and testers.
- Enforce policies and control costs with full visibility
- Use templates, custom images and formulas to reproduce environments.
- Orchestrate with Azure
  Pipelines or integrate using
  REST API



# Infrastructure and Configuration as Code

#### Azure Resource Manager, Automation & 3<sup>rd</sup> Party Integrations

- → Infrastructure as Code, built-in
- → Azure Config & Automation
- Support for 3<sup>rd</sup> party and OSS tooling such as Terraform, Ansible, Chef, Puppet & SaltStack

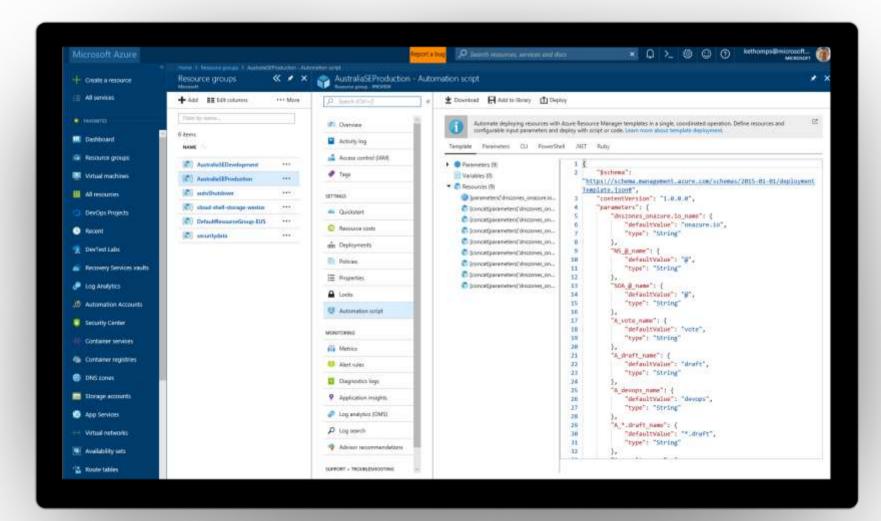










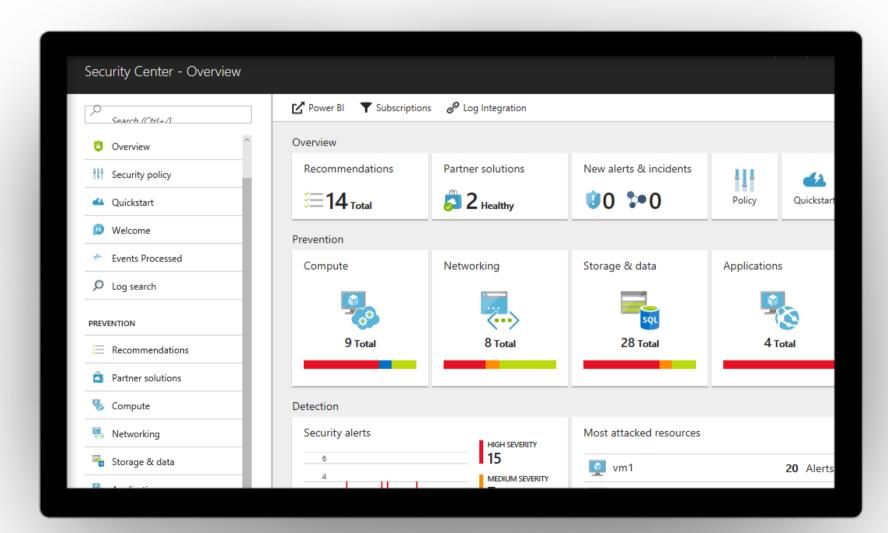


## **Continuous Security**

#### **Azure Security Center**

- → Gain full visibility and control of your cloud security state
- → Leverage ML to Proactively identify and mitigate risks to reduce exposure to attacks
- Quickly detect and respond to threats with advanced analytics

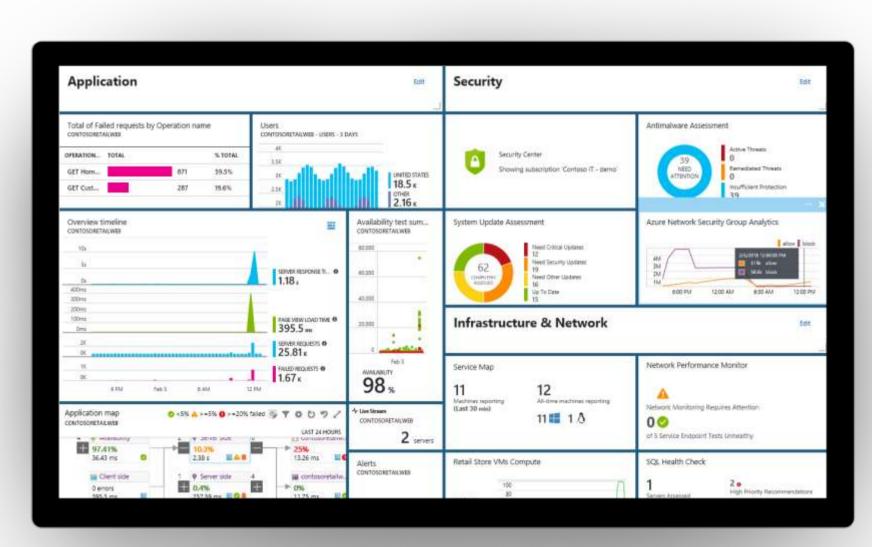




### **Smarter Insights, Faster**

#### **Azure Monitor, Application Insights & Log Analytics**

- → Pre-defined solutions with smart thresholds
- → Visualize data in intuitive and customizable dashboards
- → Separate the signal from the noise and accelerate root-cause analysis
- → Integrate your existing processes & tools like Service Now



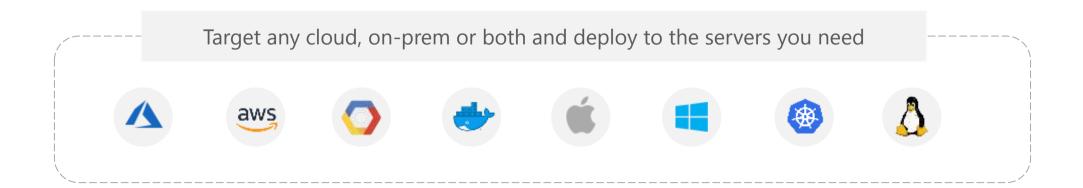
### Azure DevOps: Choose the tools and clouds you love

Azure
DevOps lets
developers
choose the
tools that
are right for
them





Mix and match to create workflows with tools from Microsoft, open source or your favorite 3rd party tools



### Azure DevOps supports small teams to largest enterprises



"Instead of telling people to wait for 6 months for a new feature, we can give it to them in a few weeks...Our 2800 worldwide developers can use the same backlog, user stories and tests whether they're on Windows or Linux... building for iOS or Android."

### Columbia

"Microsoft made it really easy to break outside the silos... and tie the DevOps process into the fulfilment of business process. Without the tools that we have today, we would not be successful."

# accenture

"Speed is gained in moving to the PaaS offering of Azure DevOps. PaaS provides regularly released features and a future-proof capability, eliminating the need for Accenture to maintain infrastructure and go through upgrade cycles."



"Branches sync 500 percent faster. Builds are 400 percent faster, with the typically six-hour process reduced to 90 minutes. We (now have) a highly streamlined process that operates with a few button clicks—and one-button deployment."

### **DevOps at Microsoft**

Azure DevOps is the toolchain of choice for Microsoft engineering with over 90,000 internal users



https://aka.ms/DevOpsAtMicrosoft

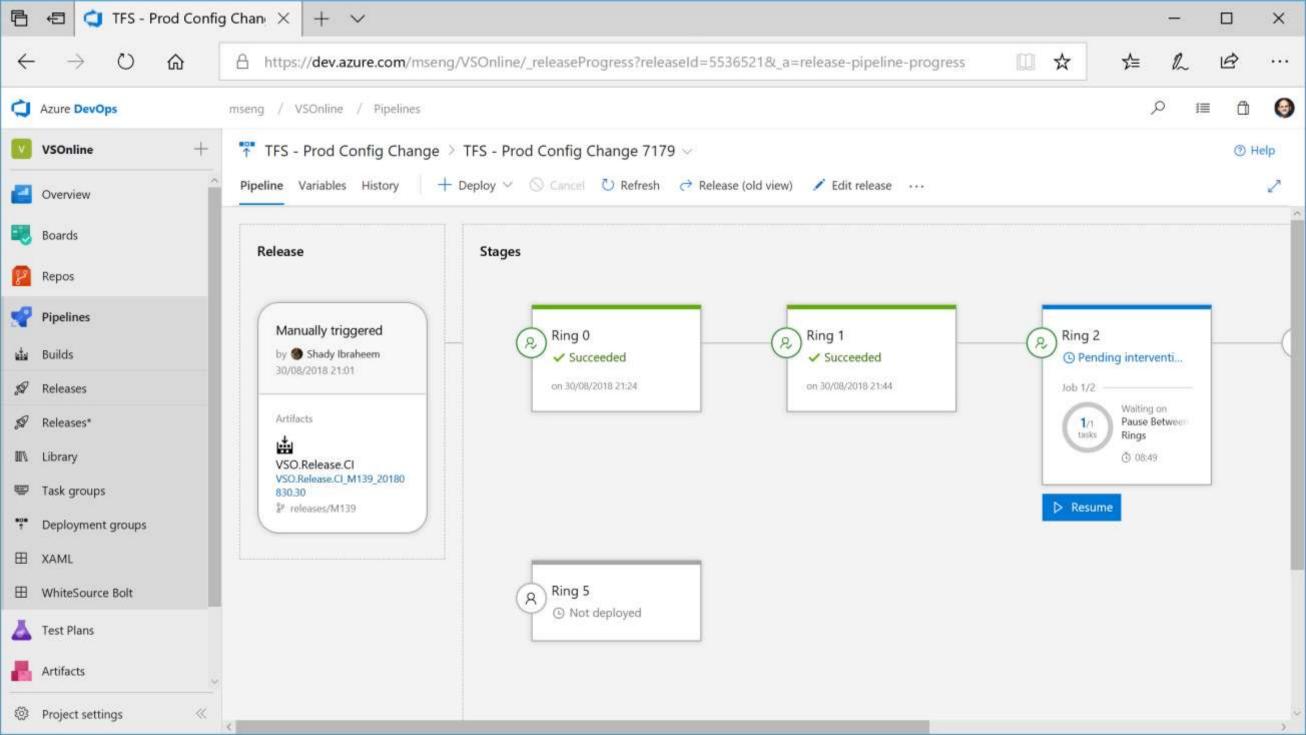
372k
Pull Requests per month

4.4m
Builds per month

5m Work items viewed per day

2m Git commits per month 500m
Test executions per day

500k Work items updated per day 78,000
Deployments per day



### Changes for existing VSTS / TFS customers

The same functionality you know and love today, with greater openness, flexibility and focus

#### **Existing Accounts**

- Existing https://contoso.visualstudio.com URL continues to work. https://dev.azure.com/contoso available for opt-in.
- New UI opt-in per user as preview feature. Will start
  advertising new UI once feedback from new accounts and
  early adopters has been incorporated.
- Can disable services on a per project basis for new UI
- New Azure branding in communications and documentation (emails, alerts etc).
- Websites and documentation will move from Visual Studio to Azure based locations (with redirects in place).
- Redirects available for some time.
- TFS will remain the on-premises brand until the next major version in 2019. The new UI will be enabled in that release.
- Existing TFS branded information and downloads remain in Visual Studio locations until next release.

#### **Pricing**

- Public project usage is now free.
- The free tier for Pipelines now includes 1,800 minutes per month, up from 240.
- Pipelines can be used independently from Repos so if you are only using Pipelines and your repos are hosted on GitHub you don't need to pay for Repos or Boards (Basic) users.

#### **New Accounts**

- https://dev.azure.com/contoso based URL.
- New navigation & branding by default.

### Migrating from TFS to Azure DevOps

Move from Team Foundation Server to Azure DevOps and bring your data along

#### Benefits of Cloud Hosted Azure DevOps Services

- Global availability
- Hosted and maintained by Microsoft with 99.9% uptime guarantee and 24x7 support
- Immediate access to latest features
- Simplified deployment to Azure

#### **TFS Import Service**

- Fully supported high fidelity migration path
- Trusted by many large enterprises
- Now faster and easier to use





### **Azure DevOps**













Plan smarter, collaborate better, and ship faster with a set of modern dev services



Any developer, any platform, any cloud. Full support for hybrid cloud, on-premises & containers.



Use all the Azure DevOps services or choose just what you need to complement your existing workflows



Best in class builds for open source. Free unlimited build minutes for public projects and up to 10 free concurrent jobs across Windows, Linux and macOS



Get started for free for small teams, scales to support the largest enterprises

Start free today



# **Azure DevOps Services Pricing**

#### **Open Source Projects**

### Free

#### Unlimited users and build time

- Azure Pipelines: 10 parallel jobs with unlimited minutes for CI/CD
- Azure Boards: Work item tracking and Kanban boards
- Azure Repos: Unlimited public Git repos

#### **Small Teams**

### Free

#### Start free with up to 5 users

- Azure Pipelines: Run 1 Microsoft-hosted job for 1,800 minutes per month and 1 self-hosted job for any amount of time
- Azure Boards: Work item tracking and Kanban boards
- Azure Repos: Unlimited private Git repos
- Azure Artifacts: package management
- Load testing (20,000 VUMs/month)
- Unlimited stakeholders

#### Teams of any size

### Starts at \$6

per user, per month for Boards & Repos\*

Easy pricing that grows with your team

- Azure Pipelines: Run 1 Microsoft-hosted job for 1,800 minutes per month and 1 self-hosted job for any amount of time
- Azure Boards: Work item tracking and Kanban boards
- Azure Repos: Unlimited private Git repos
- Azure Artifacts: package management
- Load testing (20,000 VUMs/month)
- Unlimited stakeholders
- Visual Studio subscribers included free
- \* 5 Boards & Repos users and 5 Artifacts users free. Pipelines with unlimited minutes, Test Plans users and additional Artifacts users also available. Please see the Azure pricing calculator for details.



# Thank You

EUXαριστώ Salamat Po شكراً வின் நின்ற Grazie благодаря ありがとうございます Kiitos Teşekkürler 谢谢 விவபிคุณครับ Obrigado شكريہ Terima Kasih Dziękuję Hvala Köszönöm Tak Dank u wel ДЯКУЮ Tack Mulţumesc спасибо Danke Cám ơn Gracias 多謝晒 Ďakujem תודה நன்ற Děkuji 감사합니다

© Microsoft Corporation Azure



### **Azure DevOps PowerPoint Template**

# **Deck Resources**

Spare Slides

**Fonts** 

**Brand Colors** 

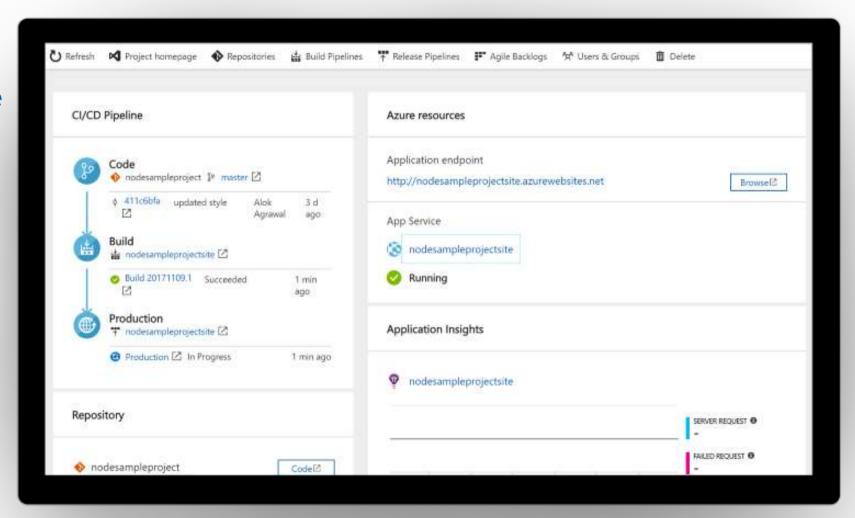
Common Icons (SVG format)

### **DevOps Pipelines in Minutes**

#### **Azure DevOps Projects**

- → Create a full DevOps pipeline with 3 easy steps from the Azure Portal
- → Start with a Git repo and any source language
- → Web apps, Kubernates, soon VMs and more.

Customize, extend and scale when needed.





# Early adopters

GitHub projects already powered by Azure Pipelines for CI









atom/atom

python/cpython

dotnet/reactive

microsoft/vscode

# **Device layout**

Subhead Segoe UI 28pt

Subhead Segoe UI 28pt

Subhead Segoe UI 28pt





© Microsoft Corporation Azur

# Segoe UI is the font that's used for on-screen and digital executions

# Follow these guidelines for PowerPoint

# Size and weight

Limit type to no more than three sizes on a slide.

Use Semibold for text larger than 28pt.

Use Regular for increased legibility at small sizes or over backgrounds.

Use Semibold for subheads and headlines.

Segoe Black, Light and Condensed should not be used.

#### Case

Sentence case is our standard for all communications.

Use all-uppercase sparingly – for titles, short headings, or subheadings, and never for full paragraphs.

Don't use all-lowercase type.

### **Justification**

Type should be set flush left, ragged right. Avoid windows, orphans and lines that end with hyphens.

#### Segoe UI Regular

ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz 123456789023@#\$%&\*

#### Segoe UI Semibold

ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz 123456789023@#\$%&\*

# **Azure brand colors**

Digital and on-screen applications use RGB or HEX color formulas. The color formulas are shown below.

Azure blue — a classic member of the Microsoft family of colors.

**Azure Blue** 

R0 G120 B215 0078D7 **Medium Blue** 

R77 G176 B255 4DB0FF **Light Blue** 

R177 G214 B242 B1D6F2

**Chart Colors** 

R3 G90 B160 035AA0 R0 G120 B215 0078D7 R77 G176 B255 4DB0FF R148 G208 B255 94D0FF R177 G214 B242 B1D6F2

# **Azure DevOps colors**

Digital and on-screen applications use RGB or HEX color formulas. The color formulas are shown below.

#### **Azure Blue**

R0 G120 B215 0078D7

#### **Service Colors**

R0 G178 B148	R216 G59 B1	R37 G96 B224	R133 G76 B199	R203 G46 B109
00B294	D83B01	2560E0	854CC7	CB2E6D
Boards	Repos	Pipelines	Test Plans	Artifacts

Colors and Accessibility

Type and background combinations must meet a minimum 4.5:1 contrast ratio or greater for accessibility. Examples below demonstrate correct color use for on-screen applications. Colors shown with notched corners require black/dark text to be accessible.

Light Yellow R255 G241 B0 FFF100	Light Orange R255 G140 B0 FF8C00		Light Magenta R227 G0 B140 E3008C	<b>Light Purple</b> R180 G160 B255 B4A0FF	Light Blue R0 G188 B242 00BCF2	<b>Light Teal</b> R0 G178 B148 00B294	Light Green R186 G216 B10 BAD80A	Light accent colors
<b>Yellow</b> R255 G185 B0 FFB900	Orange R216 G59 B1 D83B01	<b>Red</b> R232 G17 B35 E81123	Magenta R180 G0 B158 B4009E	Purple  R92 G45 B145 5C2D91	Blue  R0 G120 B215 0078D7	<b>Teal</b> R0 G130 B114 008272	<b>Green</b> R16 G124 B16 107C10	Microsoft 8 brand colors
		<b>Dark Red</b> R168 G0 B0 A80000	Dark Magenta R92 G0 B92 5C005C	<b>Dark Purple</b> R50 G20 B90 32145A	<b>Dark Blue</b> R0 G32 B80 002050	<b>Dark Teal</b> R0 G75 B80 004B50	<b>Dark Green</b> R0 G75 B28 004B1C	Dark accent colors (+ one mid accent color)
					<b>Mid Blue</b> R0 G24 B143 00188F			
For more infor visit: Microsoft	mation on acce c.com/enable	essibility,	White R255 G255 B255 FFFFFF	<b>Light Gray</b> R210 G210 B210 D2D2D2	Mid Gray R115 G115 B115 737373	<b>Dark Gray</b> R80 G80 B80 505050	<b>Rich Black</b> R0 G0 B0 000000	White, black and gray accent colors

# **Azure DevOps Branding Guidelines**

Our umbrella suite name is Azure DevOps.

We will use Azure DevOps Services & Azure DevOps Server to disambiguate between the cloud & on-premise versions (i.e. formerly VSTS & TFS) but where possible just use Azure DevOps as the umbrella term to refer to both.

**No abbreviations** should be used (especially not ADS). Azure DevOps or #AzureDevOps are the only permitted forms. DevOps should always be PascalCase.

While Azure DevOps is the term for the encompassing suite, emphasis should be placed on the core service being referred to, i.e "Build and Release to Any Cloud, Any Platform with Azure Pipelines".

There is no need to prefix with Microsoft for the name, (i.e. you do not need to say Microsoft Azure Pipelines). There are no trademark symbols required.

While the focus for Azure Repos will be Git version control, the centralized version control system it supports is still referred to as TFVC and the command line for it remains tf













Suite Icon for launch will remain the same as the VSTS Icon. However, as per corporate guidelines we will not be using the icon prominently in swag, stickers and launch materials. Instead focusing on the Microsoft and Azure brands.

#### **Backlinks**

When referencing Azure DevOps or an Azure DevOps service in the web then try to ensure the first reference in the content body of the page is back-linked to the appropriate landing page (see table below). In articles that historically mention VSTS or TFS then please link to the main landing page for Azure DevOps.

Area	Destination URL
Azure DevOps	https://azure.microsoft.com/services/devops/
Azure Pipelines	https://azure.microsoft.com/services/devops/pipelines/
Azure Boards	https://azure.microsoft.com/services/devops/boards/
Azure Repos	https://azure.microsoft.com/services/devops/repos/
Azure Artifacts	https://azure.microsoft.com/services/devops/artifacts/
Azure Test Plans	https://azure.microsoft.com/services/devops/test-plans/

# **Azure DevOps Icons**



Azure DevOps (Preferred)

**Azure Boards** 



Azure DevOps Shaded



Azure Repos



**Azure Pipelines** 



Overview



**Azure Test Plans** 



Wiki



**Azure Artifacts** 



Azure DevOps White Flat



Azure DevOps White Shaded



Azure



Azure (Shaded)



Azure

# **Logos and Wordmarks**











**Azure DevOps** 







Azure DevOps











**API** Apps



**API** Management



**App Service** 



**Applications Gateway** 



**Application Insights** 



Automation



Azure



Azure Active Directory



Azure Advisor



**Azure Analysis Services** 



Azure Backup



**Azure Bot Services** 



**Azure Container Registry** 



**Azure Container Service** ACS & AKS



Azure Content Delivery Network



Azure Database for PostgreSQL









Azure DNS



**Azure Event Grid** 



**Azure Functions** 



Azure Media Player



**Azure Monitor** 



Azure MySQL ClearDB Database



**Azure Policy** 



Azure SDK



Azure Search



Azure Service Health



Azure SQL Data Warehouse



Azure SQL Database



**Azure Virtual Machines** 



**Azure Virtual Network** 



Backup Online



Batch



**Blob Storage** 



Blockchain



Bug



Cloud



**Cloud Services** 



**Cloud Shell** 



**Cognitive Services** 



**Content Protection** 



Cosmos DB



Data Catalog



**Data Factory** 



Database Generic



Encoding



**Event Hubs** 



**Express Route** 



File Storage



Game Controller



Gears



**HD** Insight



IoT Hub



Key Vault



Kubernetes



Linux Virtual Mach.



Windows Virtual Mach.



Linux Penguin



Live + On-Demand Streaming



Load Balancer



Load Balancer (Generic)



Logic Apps



Machine Learning Studio



Maintenance



Media Services



Mobile Apps



Multi-Factor Authentication



Network Watcher



**Notification Hubs** 



**OMS Log Analytics** 



Power BL



PowerShell Script File



Queue Storage



Resource Group



Scheduler



Script File



Security Center



Server Farm



Server Rack



Server Bus



Service Fabric



Site Recovery



Smartcard



**SQL Server Switch Database** 



Status Badge – Cancelled



Status Badge – Critical



Status Badge – Info



Status Badge – Success



Status Badge – Warning



Storage



StorSimple



Stream Analytics



Table Storage



Tasks



Time Series Insights



Traffic Manager



Video



Visual Studio



**VPN** Gateway



Web

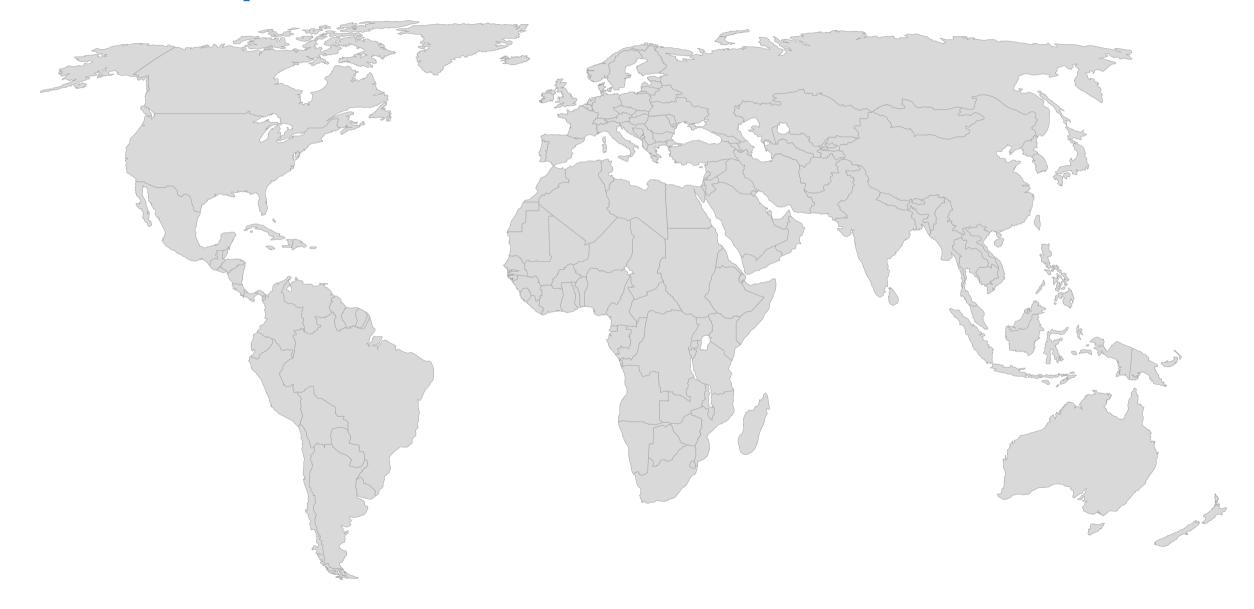


Web Apps



XML Web Services

# World map



# Additional resources

Additional Azure-related elements from across Microsoft

(may require Corpnet access)

# Branding

**Brand Central** 

C+E Brand Guidelines

Brand Architecture at Microsoft

# **Style Guides**

Microsoft Cloud Style Guide

**Azure DevOps Branding Guide** 

## PowerPoint templates

C+E branded template

Azure branded template

APEX | CDA branded template

Iconography

C+E Icon set