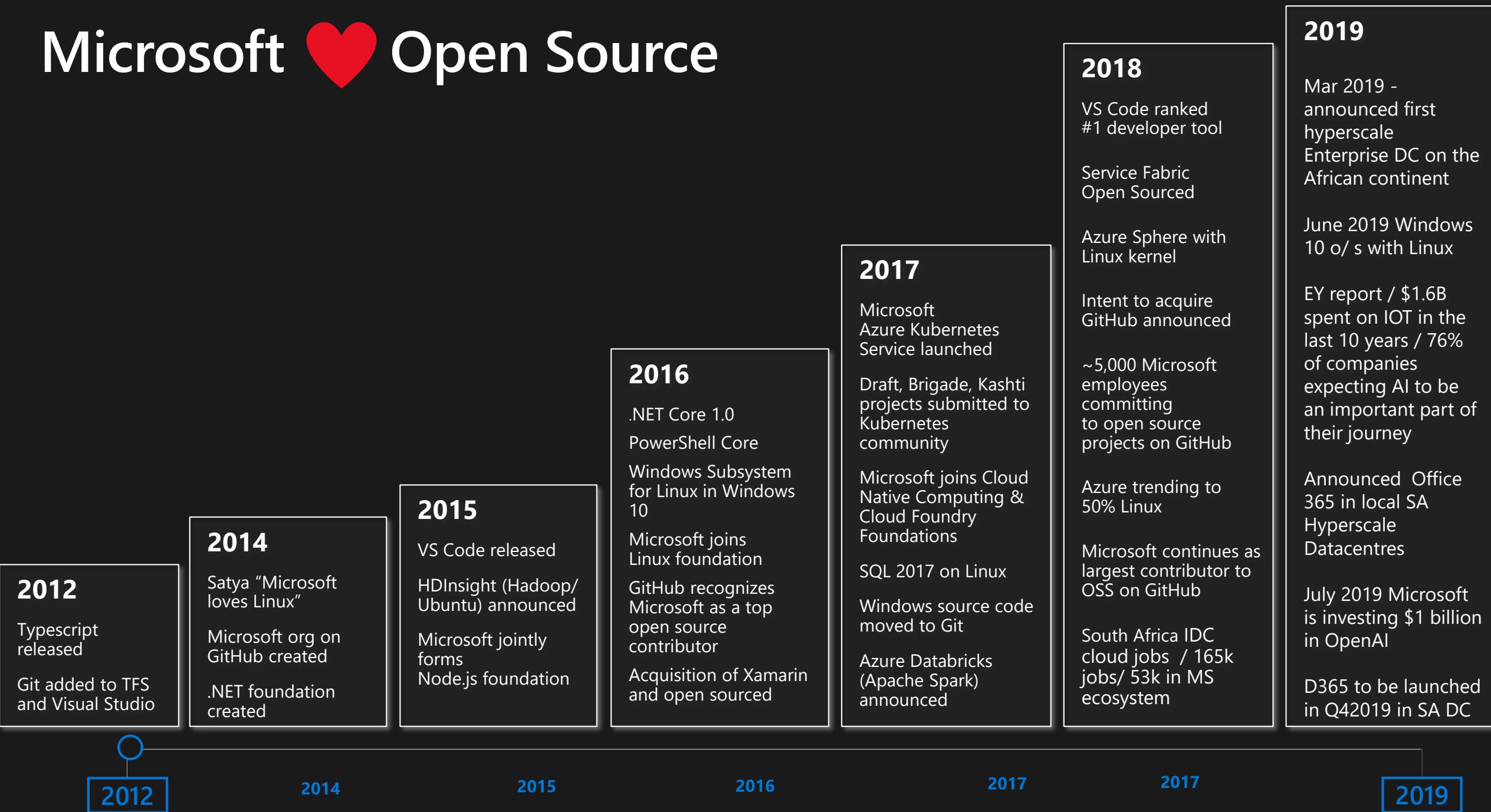


What Is DevOps?

Rory Preddy
@rorypreddy



Microsoft ❤️ Open Source



What is DevOps?

“DevOps is development and operations **collaboration**”

“DevOps is using automation”

“DevOps is **small** deployments”

“DevOps is treating your **infrastructure** as code”

“DevOps is feature switches”

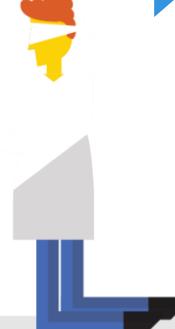
“Kanban for Ops?”

It's DevOps!

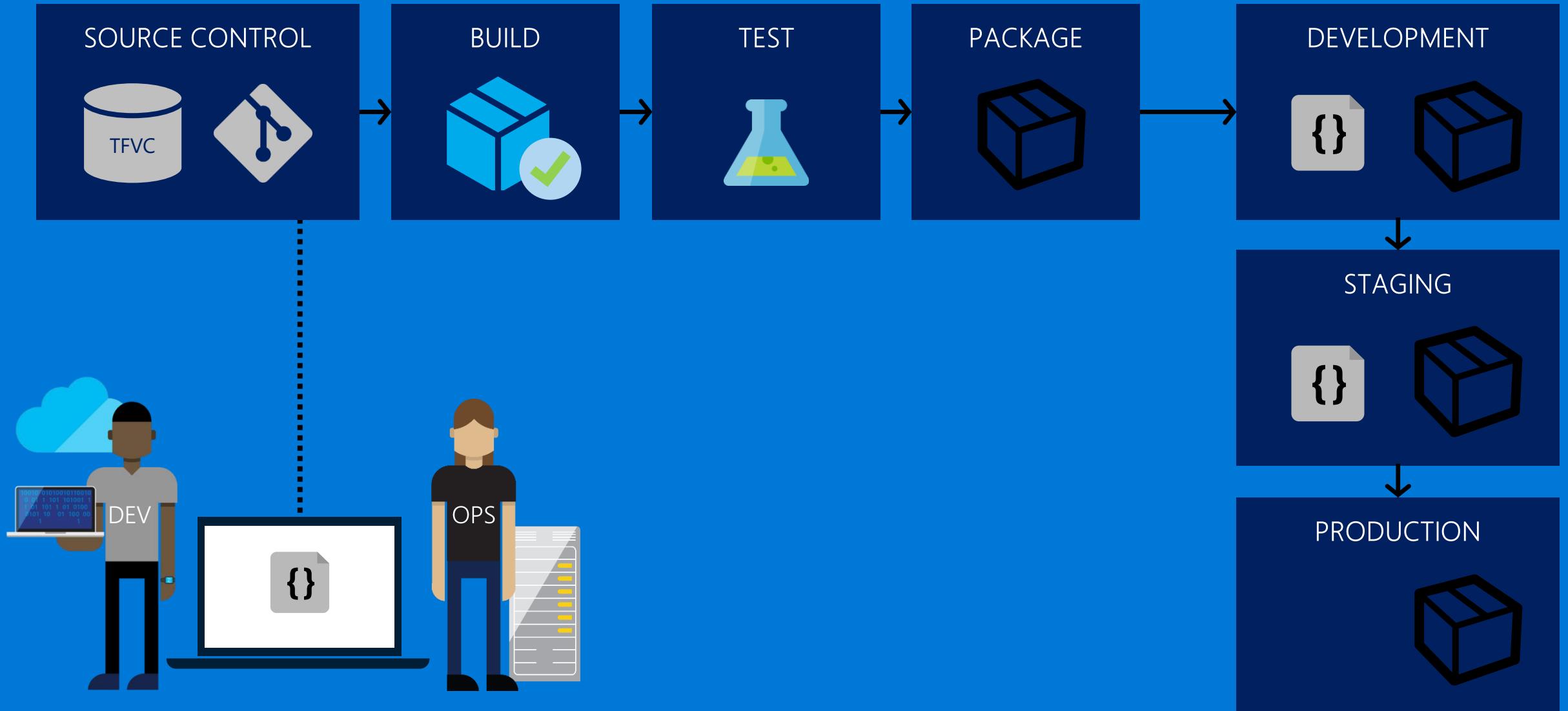
It's DevOps!

It's DevOps!

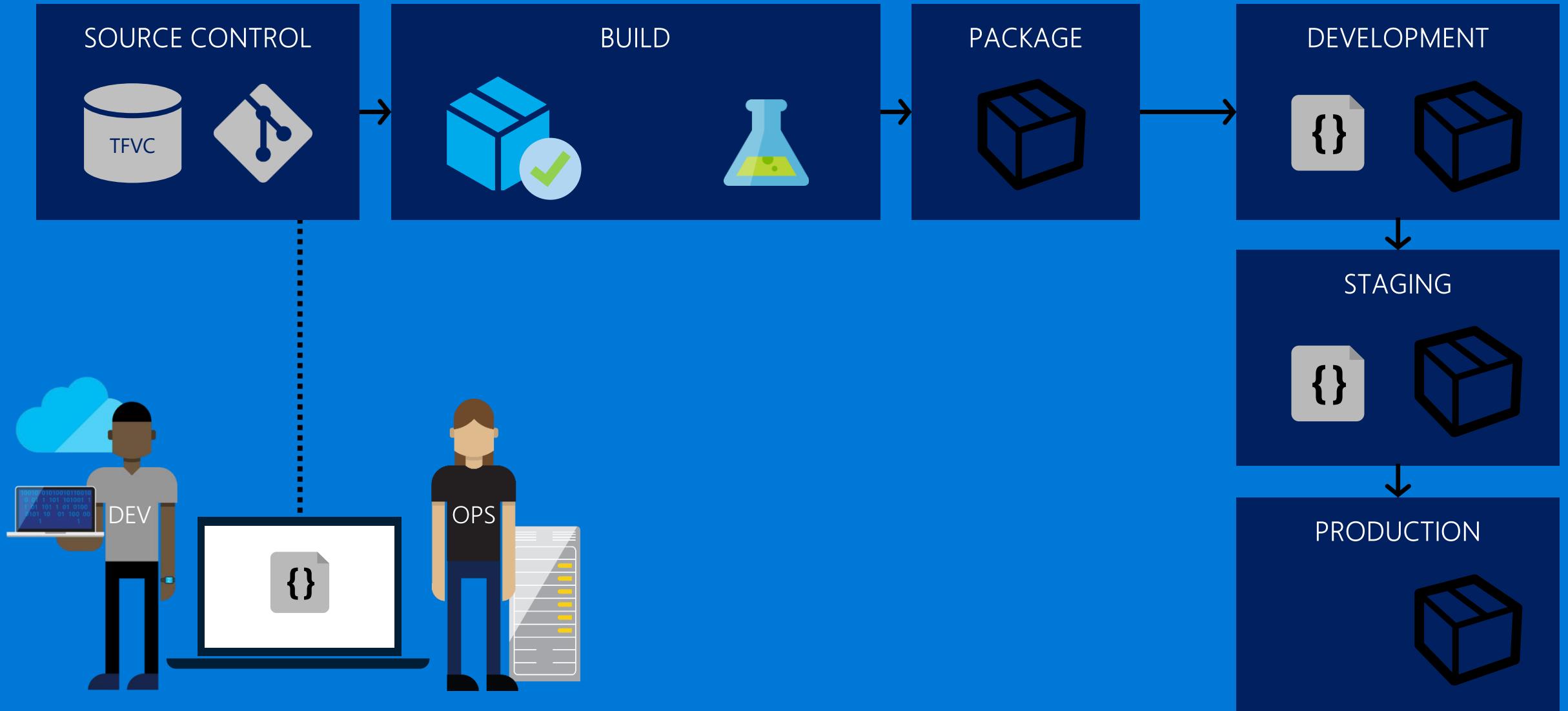
It's DevOps!



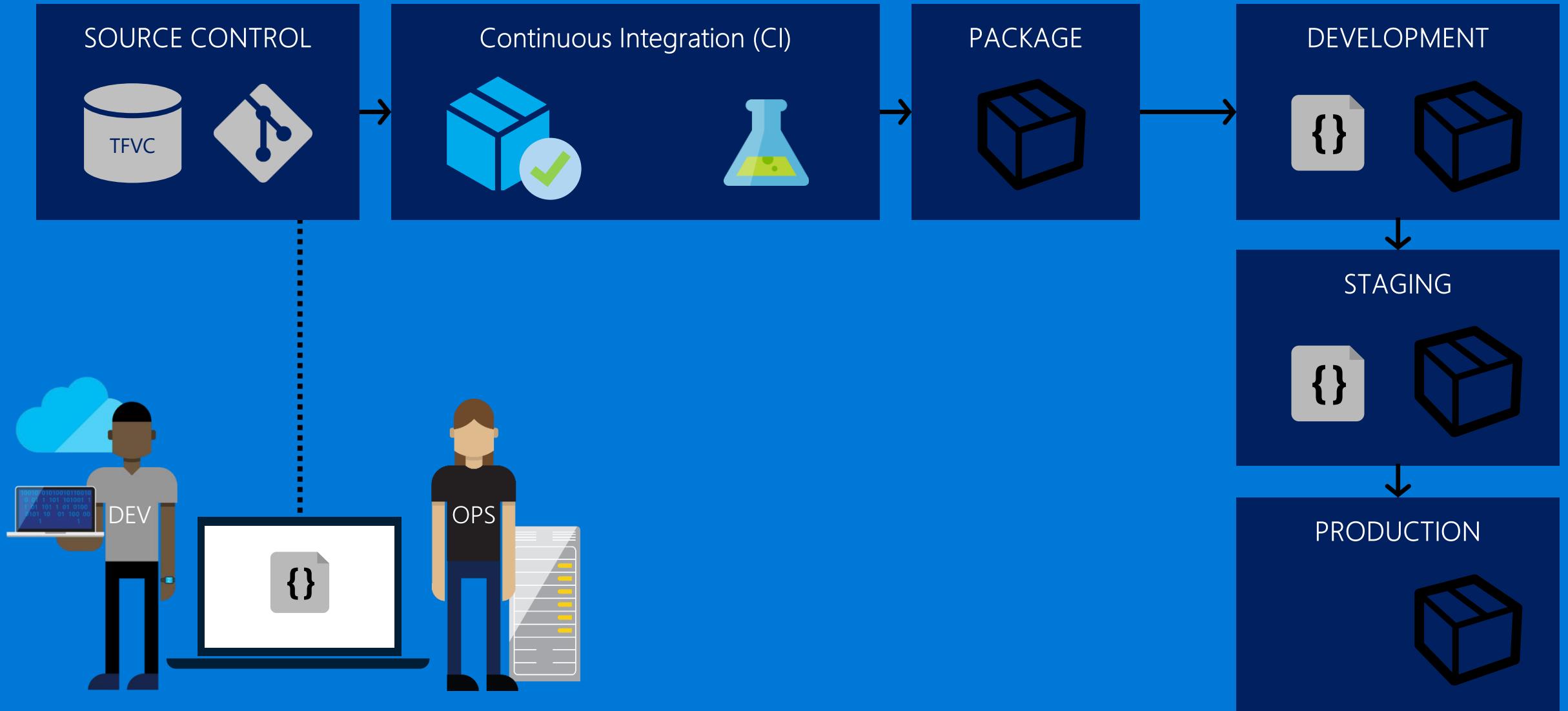
Continuous Delivery



Continuous Delivery

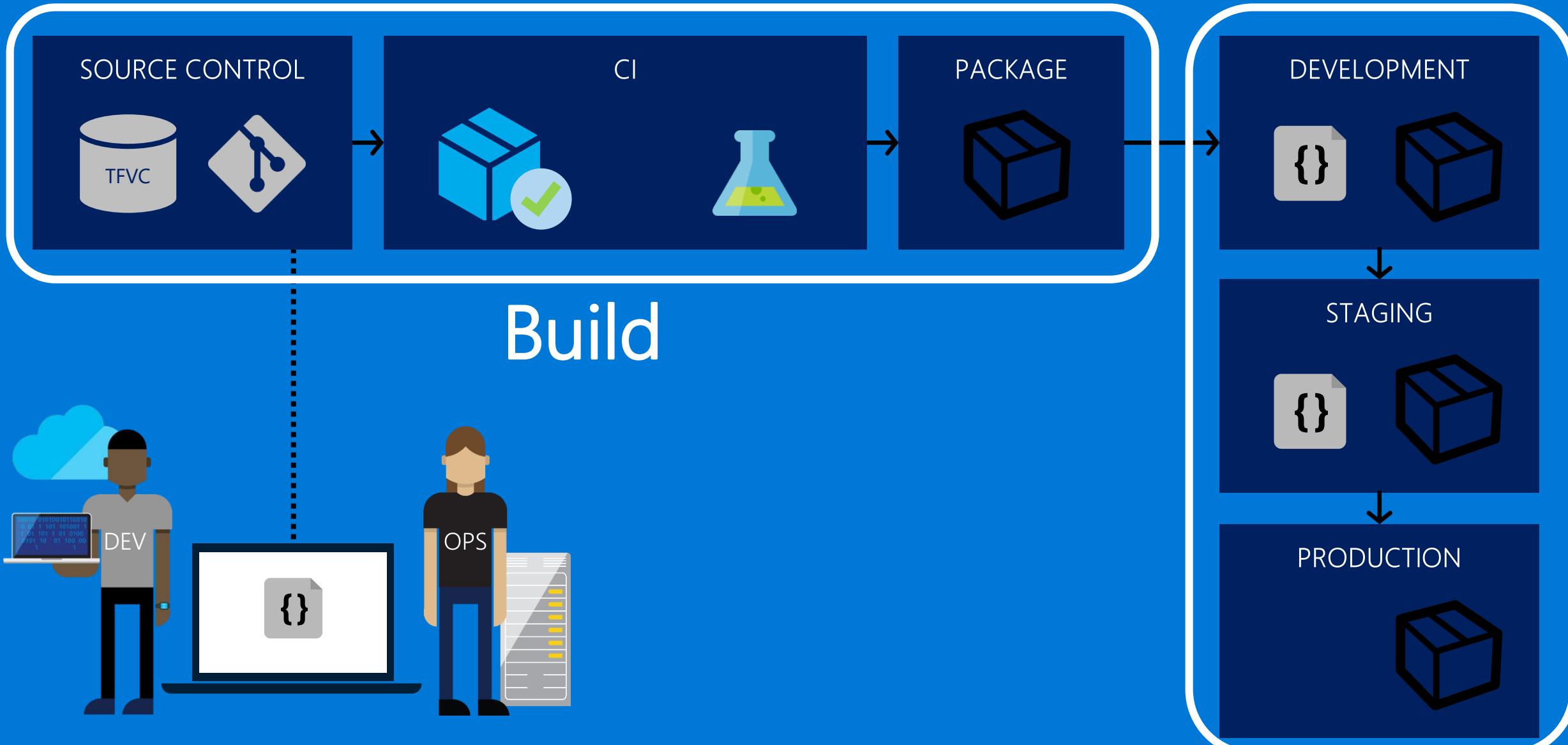


Continuous Delivery

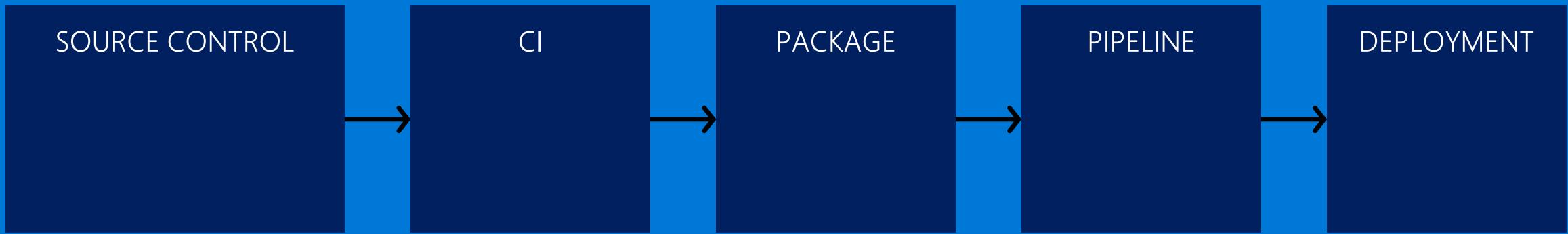


Continuous Delivery

Deploy
/RM



Continuous Delivery



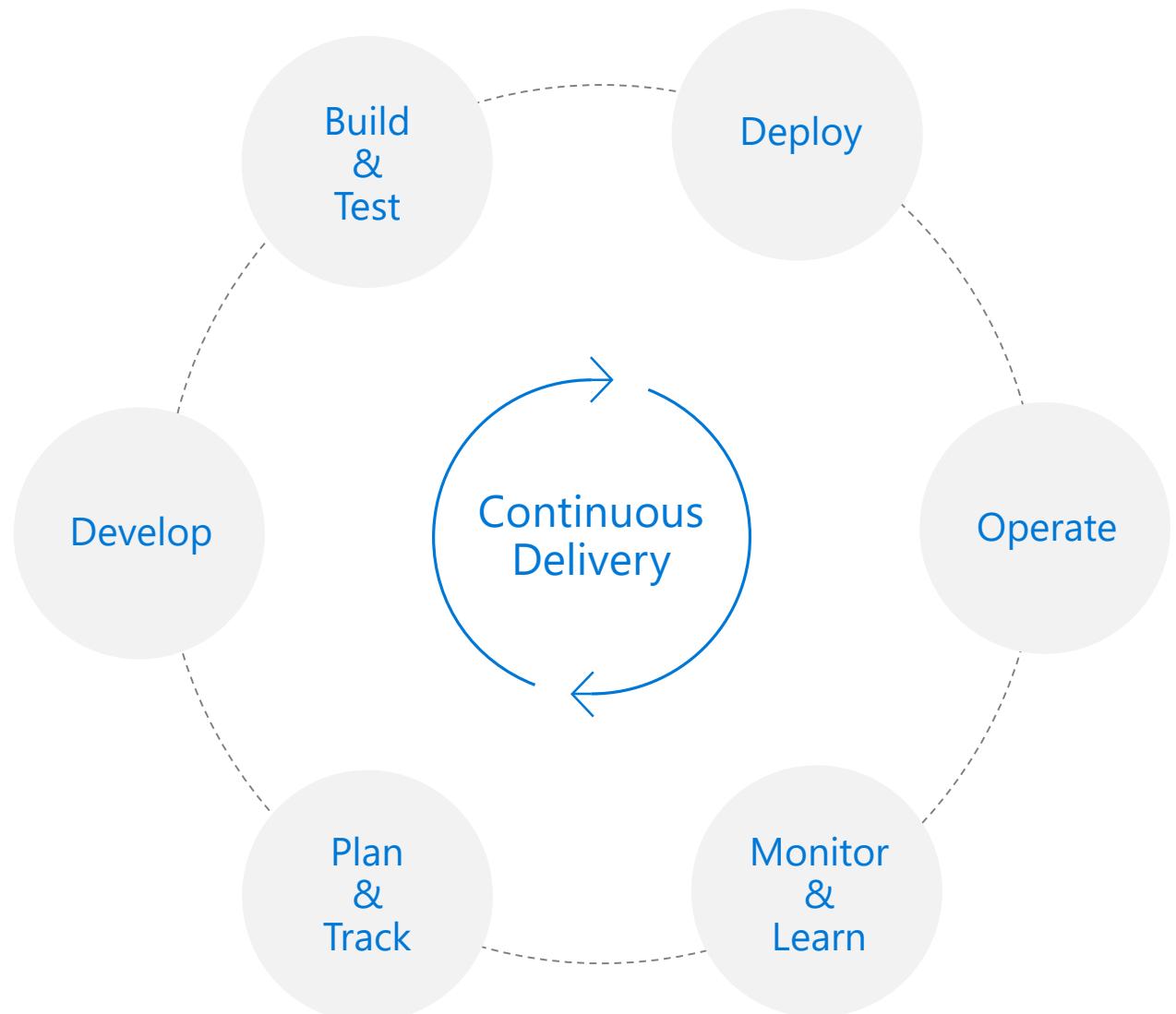
What is DevOps?

People. Process. Products.

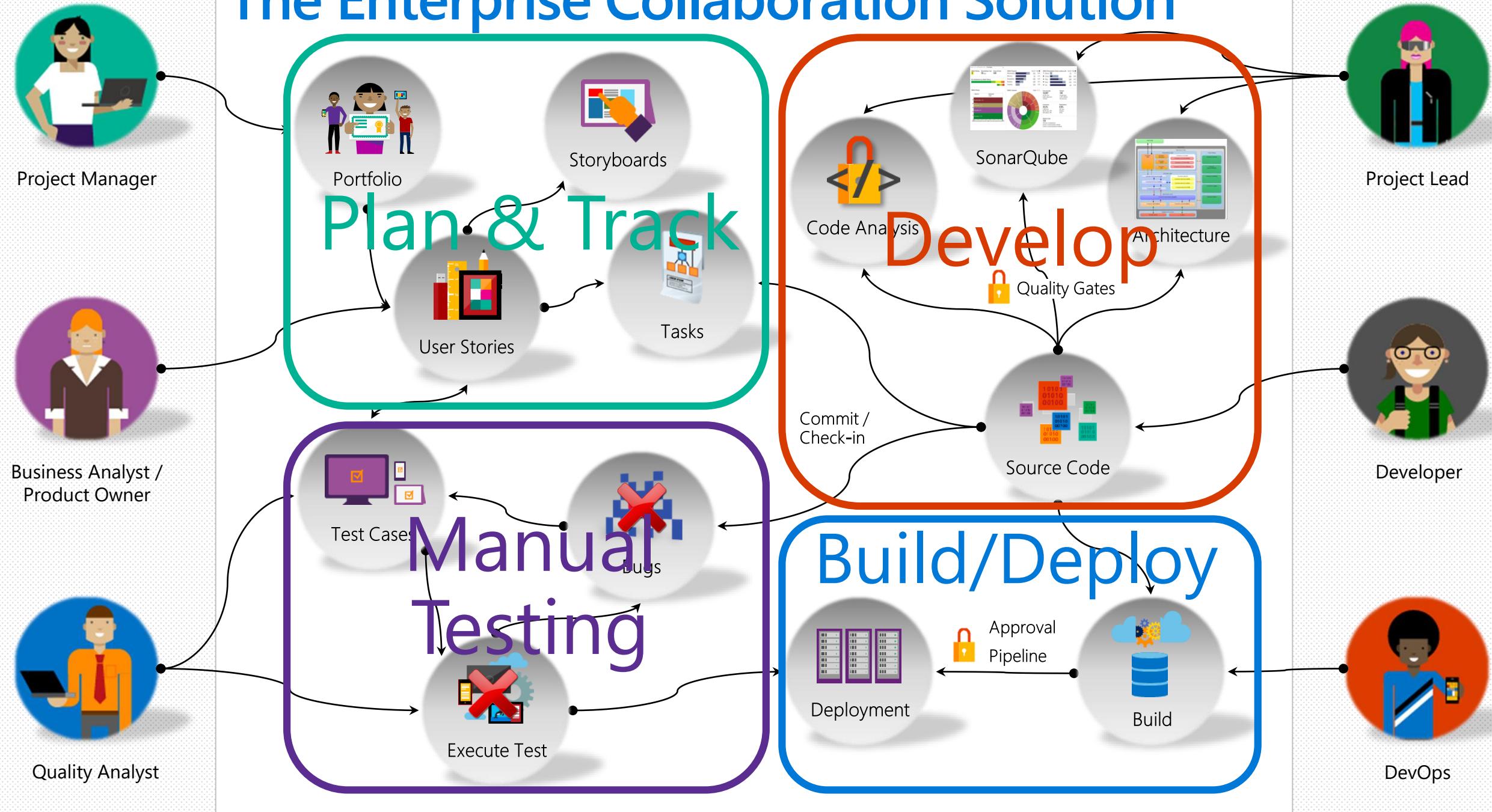
“

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

”



The Enterprise Collaboration Solution



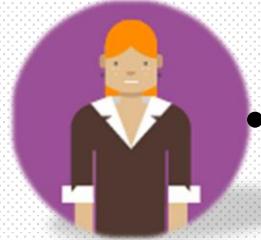
The Enterprise Collaboration Solution



Plan & Track



Project Manager



Business Analyst /
Product Owner



Quality Analyst

Develop



Project Lead



Developer



DevOps

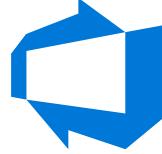
Manual Testing



Build/Deploy



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 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.



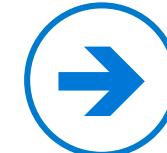
Azure Test Plans

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



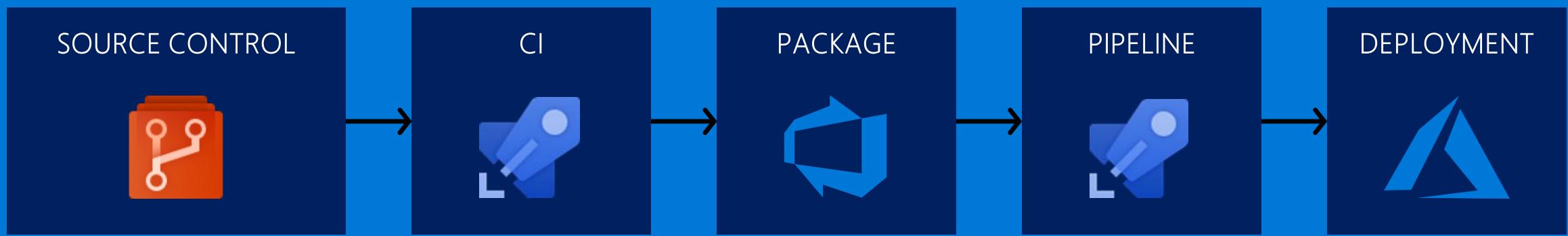
Azure Artifacts

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



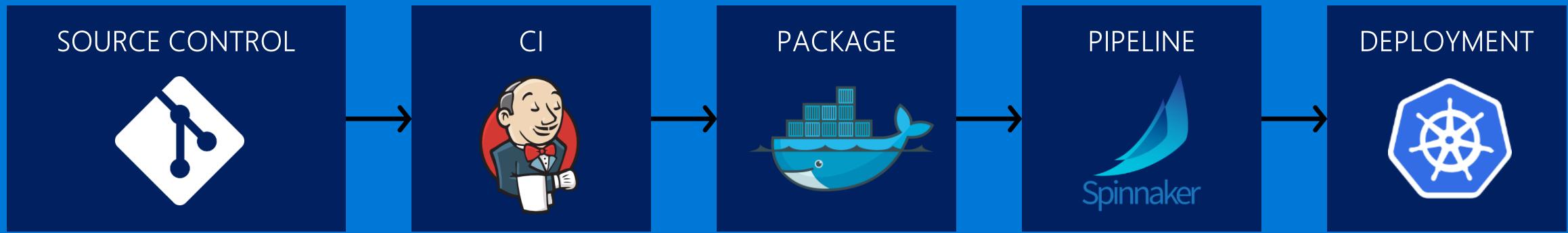
<https://azure.com/devops>

Continuous Delivery



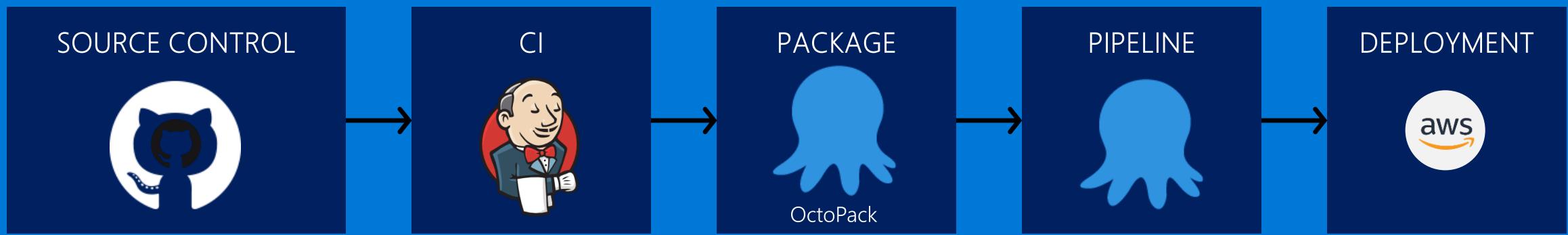
Azure DevOps and Azure

Continuous Delivery



Azure Container Registry to Azure Container Service with Kubernetes

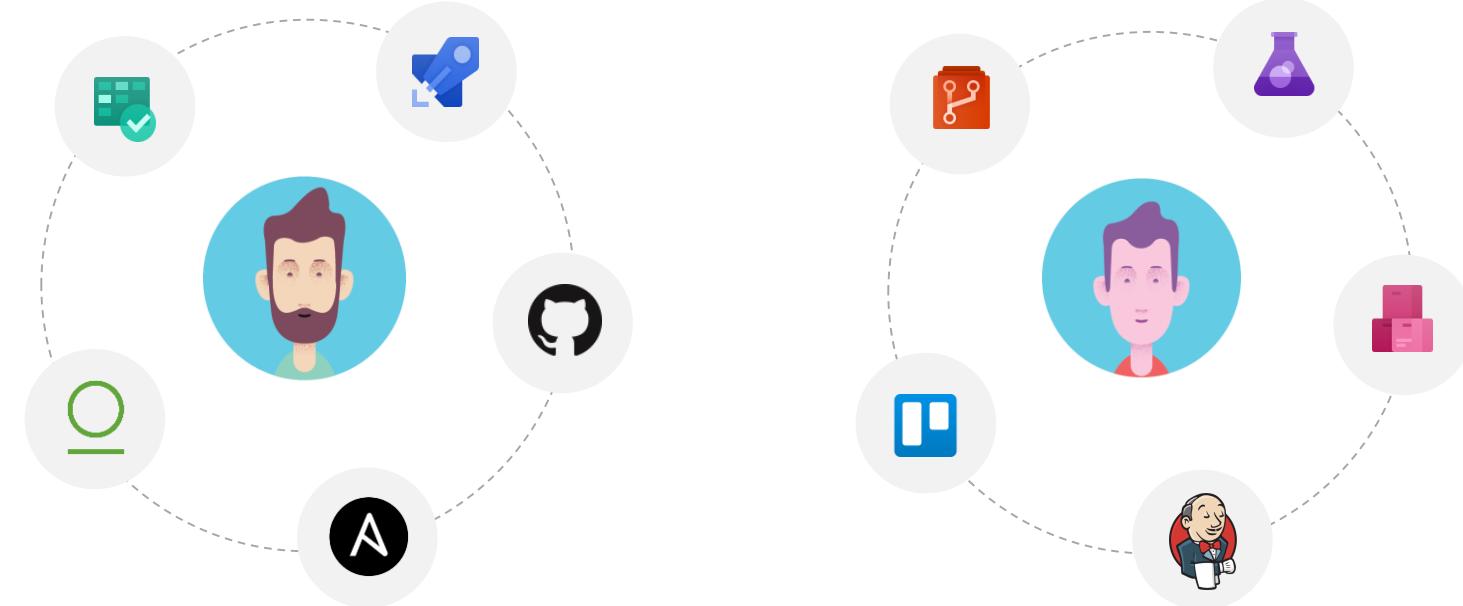
Continuous Delivery



Octopus Deploy ASP.NET Web App

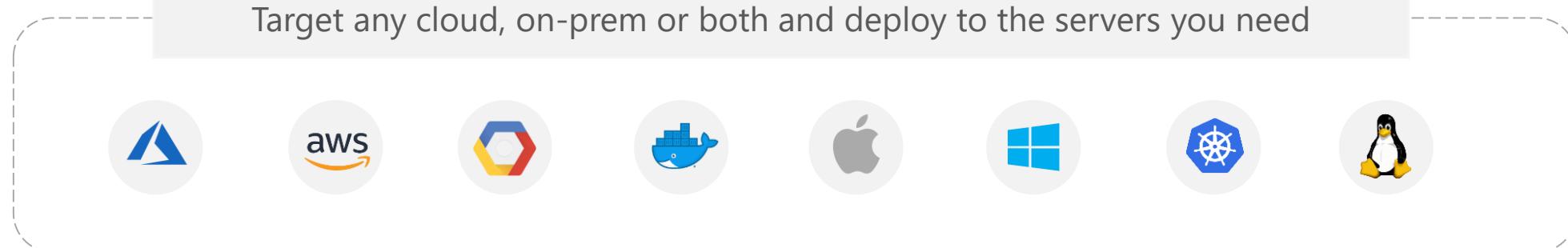
Azure DevOps: Choose the tools and clouds you love

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

Target any cloud, on-prem or both and deploy to the servers you need



Get 3rd Party Extensions in the Azure DevOps Marketplace

Visual Studio | Marketplace

Dave Burnison (dabu@microsoft.com) Sign out

Visual Studio Visual Studio Code Azure DevOps Subscriptions Build your own Publish extensions

Jenkins AWS Chef Docker Terraform RedGate

24 Results Showing: All categories Hosted On: Any Price: Any Visibility: All Sort By: Relevance

 AWS Tools for Microsoft Amazon Web Services 6.7K Tasks for Amazon S3, AWS Elastic Beanstalk, AWS CodeDeploy, AWS Lambda... ★★★★★ FREE	 Docker Integration Microsoft 10.6K Build, push, run or deploy Docker images and multi-container Docker applications. ★★★★★ FREE	 Jenkins Integration Microsoft 4.7K Jenkins is an award-winning, cross-platform, continuous integration and continuous... ★★★★★ FREE	 Redgate ReadyRoll Redgate Software 2.8K Develop and deploy databases in Visual Studio with migration scripts ★★★★★ FREE	 AWS S3 Upload Marcus Felling 653 Build task to upload a file to S3 bucket in AWS. ★★★★★ FREE	 Terraform Peter Groeneweger 975 Build extension that enables you to run Terraforms on the build agent. ★★★★★ FREE
 Chef Integration Chef 594 Tasks for performing common Chef operations against the Chef Automate platform. ★★★★★ FREE	 Docker build task Lambda3 1.3K Adds a build task that enables Docker actions. ★★★★★ FREE	 Terraform Tyler Evert 154 Build extension for running Terraform commands. ★★★★★ FREE	 Terraform Jamie Phillips 22 Use Terraform with VSTS. ★★★★★ FREE	 VSTS Terraform James Sheridan 1 Build extension that enables you to run Terraform via a build agent. ★★★★★ FREE	 CloudBees Jenkins Platform CloudBees 119 Configure CloudBees Jenkins Platform to integrate with your Visual Studio Team... ★★★★★ FREE



<https://marketplace.visualstudio.com/azuredevops>

Get 3rd Party Extensions in the Azure DevOps Marketplace

Visual Studio | Marketplace

Dave Burnison (dabu@microsoft.com) Sign out 

Visual Studio Visual Studio Code Azure DevOps Subscriptions Build your own Publish extensions

Jenkins AWS Chef Docker Terraform RedGate 

24 Results Showing: All categories Hosted On: Any Price: Any Visibility: All Sort By: Relevance

 AWS Tools for Microsoft Amazon Web Services 6.7K Tasks for Amazon S3, AWS Elastic Beanstalk, AWS CodeDeploy, AWS Lambda...  FREE	 Docker Integration Microsoft 10.6K Build, push, run or deploy Docker images and multi-container Docker applications.  FREE	 Jenkins Integration Microsoft 4.7K Jenkins is an award-winning, cross-platform, continuous integration and continuous...  FREE	 Redgate ReadyRoll Redgate Software 2.8K Develop and deploy databases in Visual Studio with migration scripts  FREE	 AWS S3 Upload Marcus Felling 653 Build task to upload a file to S3 bucket in AWS.  FREE	 Terraform Peter Groeneweger 975 Build extension that enables you to run Terraforms on the build agent.  FREE
 Chef Integration Chef 594 Tasks for performing common Chef operations against the Chef Automate platform.  FREE	 Docker build task Lambda3 1.3K Adds a build task that enables Docker actions.  FREE	 Terraform Tyler Evert 154 Build extension for running Terraform commands.  FREE	 Terraform Jamie Phillips 22 Use Terraform with VSTS.  FREE	 VSTS Terraform James Sheridan 1 Build extension that enables you to run Terraform via a build agent.  FREE	 CloudBees Jenkins Platform CloudBees 119 Configure CloudBees Jenkins Platform to integrate with your Visual Studio Team...  FREE



<https://marketplace.visualstudio.com/azuredevops>

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.



<https://azure.com/devops>

The screenshot shows the Azure DevOps Boards interface. At the top, there's a navigation bar with 'Azure DevOps' logo, 'Contoso / AdventureWorks Mobile / Boards / FabrikamFiber'. Below the navigation is a sidebar with links: 'AdventureWorks Mobile', 'Overview', 'Boards' (which is selected and highlighted in grey), 'Work Items', 'Backlogs', 'Sprints', 'Queries', 'Plans', 'Repos', 'Pipelines', 'Test Plans', and 'Artifacts'. To the right of the sidebar is the main 'FabrikamFiber Board' area. It has tabs for 'New' (selected), 'Active', '5/5 Staging', and '15/5 Deployed'. The board itself is a Kanban-style view with columns for 'Home page (selected room)', 'Home page (no room selected)', 'Entry + validations', 'Navigation menu', 'Login page', 'Ambient settings', and 'Notifications list'. Each column contains several cards, each with a title, a brief description, and a list of team members involved. For example, the 'Home page (selected room)' column has cards for 'Hotels filter page' (in progress, assigned to Carlos Slattery) and 'NFC open door' (in progress, assigned to Cecil Folk). The 'Entry + validations' column has a card for 'Images from api' (blocked, assigned to Carole Poland). The 'Navigation menu' column has a card for 'Search component complex features' (in progress, assigned to Carlos Slattery). The 'Login page' column has a card for 'Adapt some parts of UI to UWP for Desktop' (blocked, assigned to Carole Poland). The 'Ambient settings' column has a card for 'Notifications list' (in progress, assigned to Carole Poland). The 'Notifications list' column has a card for 'Code of Cond' (in progress, assigned to Celeste Burton).

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

The screenshot shows the Azure DevOps Pipelines interface for the AdventureWorks Mobile project. The pipeline is titled "Enabling feature flags for Preview Attachment and Grid Views". It includes three parallel jobs: "Windows Job" (Running, 1m 53s), "Linux Job" (Running, 3m 29s), and "macOS Job" (Running, 3m 07s). The "Logs" tab is selected, displaying the command-line output for the macOS job:

```
yarn install v1.7.0
$ node build/npm/preinstall.js
[1/4] Resolving packages...
[2/4] Fetching packages...
[3/4] Linking dependencies...
[4/4] Building fresh packages...
$ npm run compile
> code-oss-dev-build@1.0.0 compile ./adventureworks/build
> tsc -p tsconfig.build.json

* Done in 4.89s.
$ node ./postinstall
[##] 2/2 removed './adventureworks/extensions/node_modules/typescript/lib/tsc.js'
removed './adventureworks/extensions/node_modules/typescript/lib/tsserverlibrary.d.ts'
removed './adventureworks/extensions/node_modules/typescript/lib/tsserverlibrary.js'
removed './adventureworks/extensions/node_modules/typescript/lib/typescriptServices.d.ts'
removed './adventureworks/extensions/node_modules/typescript/lib/typescriptServices.js'
```



<https://azure.com/pipelines>

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.



<https://azure.com/devops>

The screenshot shows the Azure DevOps interface for the 'AdventureWorks Mobile' project. The left sidebar has a dark theme with white icons and text. It includes links for Overview, Boards, Repos (which is selected), Files, Commits, Pushes, Branches, Tags, Pull requests (also selected), Pipelines, Test Plans, and Artifacts. At the bottom of the sidebar is a 'Project settings' link. The main content area is titled 'Pull requests' and shows a list of pull requests under four categories: 'Mine', 'Active', 'Completed', and 'Abandoned'. The 'Mine' tab is selected. A search bar at the top of the list allows filtering by keyword or ID. Below the search bar are sections for 'Created by me', 'Assigned to me', and 'Assigned to my team', each listing several pull requests with their titles, creators, and descriptions. The interface uses a light gray background with blue and orange highlights for selected items and active tabs.

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 on-premises application from the cloud and vice-versa.

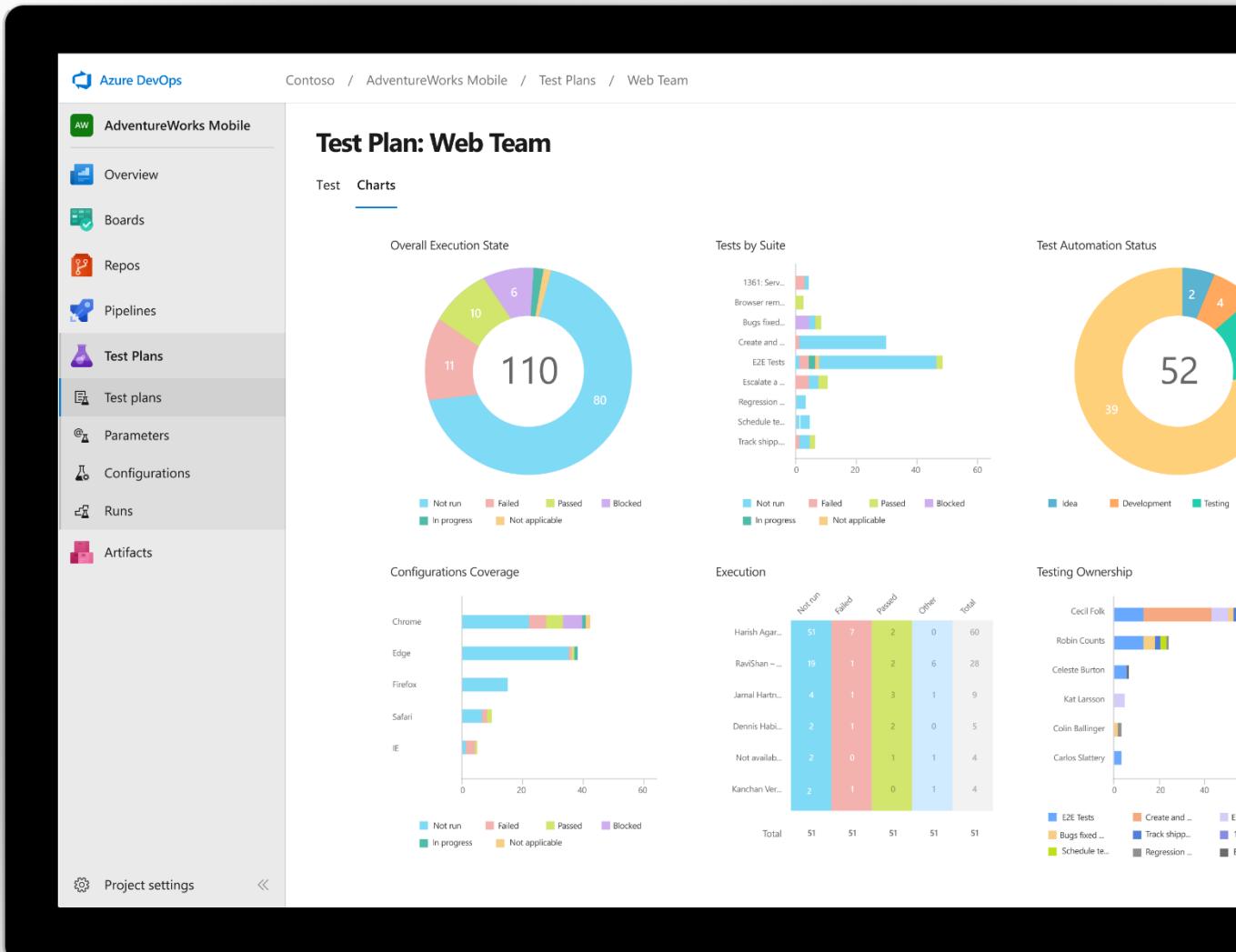


Get end-to-end traceability

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



<https://azure.com/devops>



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.



<https://azure.com/devops>

The screenshot shows the Azure DevOps interface for managing artifacts. On the left, there's a sidebar with links for 'AdventureWorks Mobile' (selected), 'Overview', 'Boards', 'Repos', 'Pipelines', 'Test Plans', and 'Artifacts'. The main area is titled 'Artifacts' and shows a table of packages. The columns are 'Package', 'Views', 'Source', 'Last pushed', and 'Description'. The packages listed are:

Package	Views	Source	Last pushed	Description
abbrev		nuget	a year ago	Like ruby's abbrev module, but in js
accepts		npmjs	a year ago	Higher-level content negotiation
acorn		MyFeed	a year ago	ECMAScript parser
acorn-dynamic-import		maven	a year ago	Support dynamic imports in acorn
aclr-jsx		nuget	a year ago	Alternative, faster React.js JSX parser
acorn-object-spread		maven	a year ago	Custom JSON-Schema keywords for ajv validator
ajv		npmjs	a year ago	Alphanumeric sorting algorithm
ajv-keywords		nuget	a year ago	ANSI escape codes for manipulating the terminal
alphanum-sort		npmjs	a year ago	An elegant lib that converts the chalked (ANSI) text to HTM

Demo

Azure DevOps

Free to use

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 public Git repos
- **Azure Artifacts:** package management
- Unlimited stakeholders



<https://azure.microsoft.com/en-us/pricing/details/devops/azure-devops-services/>

Labs

roryp.github.io/linuxconf



Thank You

ευχαριστώ Salamat Po متشرّم شكرًا Grazie

благодаря ありがとうございます Kiitos Teşekkürler 谢谢

ឃុំបញ្ជីណូរវិប Obrigado شكريه Terima Kasih Dziękuję

Hvala Köszönöm Tak Dank u wel дякую Tack

Mulțumesc спасибо Danke Cám ơn Gracias

多謝晒 Ďakujem הִתְהִזֵּן දෙන්ගි Děkuji 감사합니다