

Deployment and Monitoring

Modern DevOps with GitHub and Azure DevOps (Part 2)

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Agenda

- What is DevOps? Why Does it Matter? (Recap)
- Continuous Delivery
- GitHub and Azure DevOps
- What is Infrastructure as Code?
- Deployment and Monitoring
- Demo and Discussion
- Resources to learn and do more

What is DevOps?

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

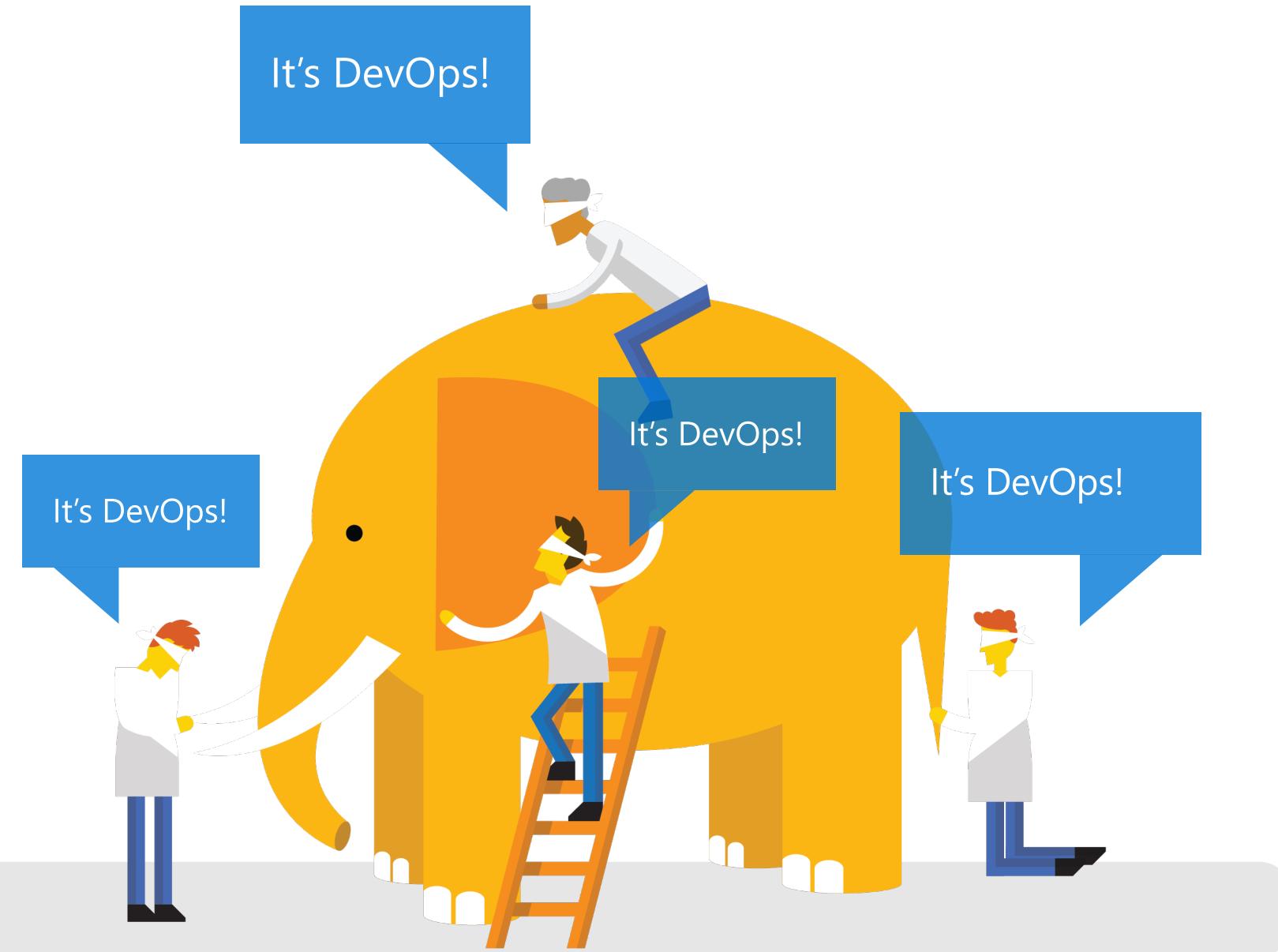
“DevOps is using automation”

“DevOps is **small** deployments”

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

“DevOps is feature switches”

“Kanban for Ops?”



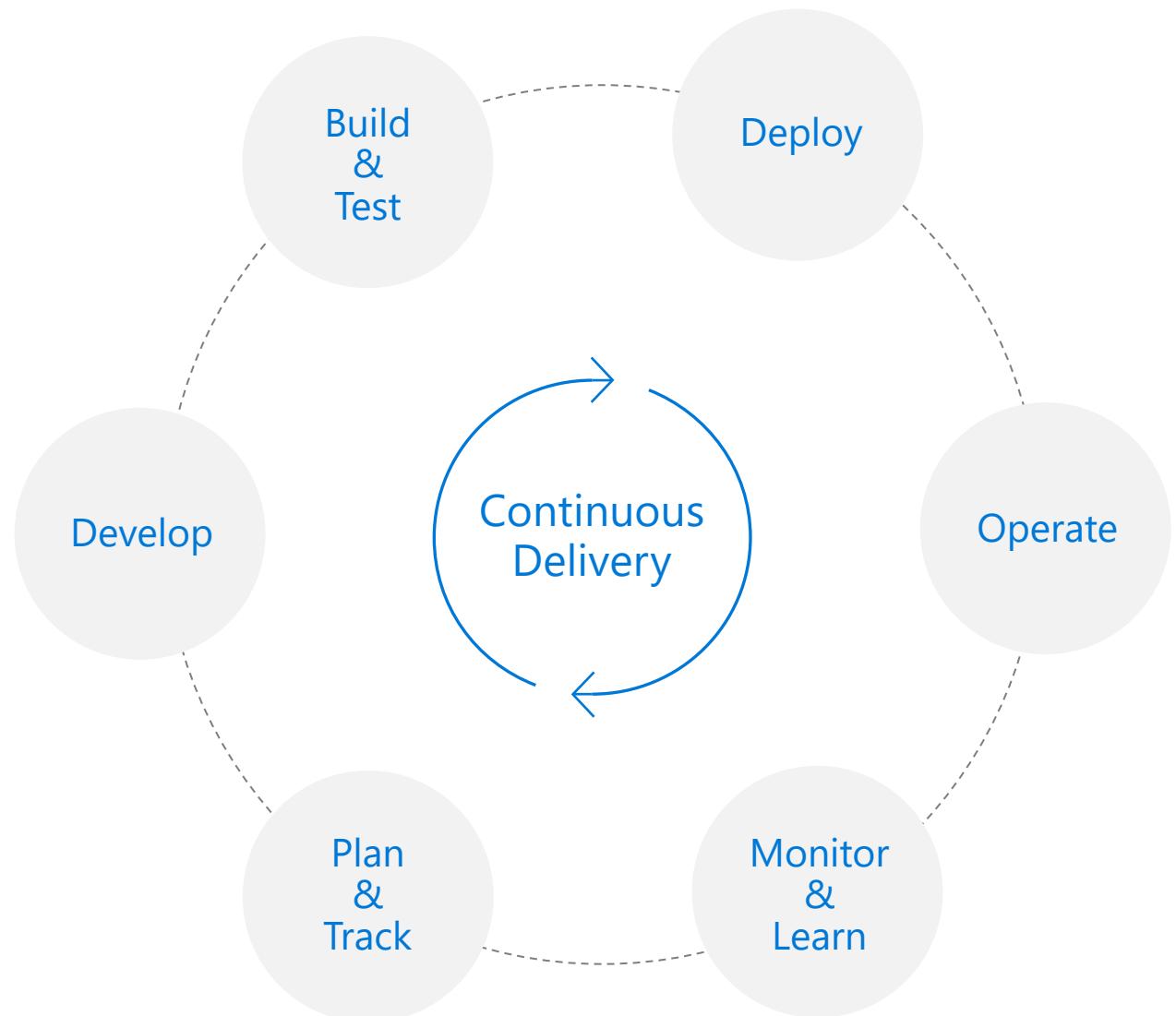
What is DevOps?

People. Process. Products.

“

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

”



Why Does DevOps Matter?



Business Needs



Drive
innovation



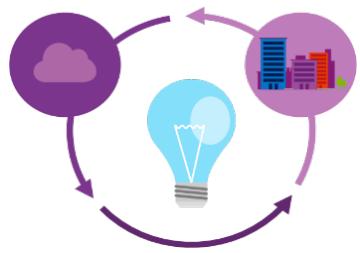
Reach and
engage your
customers



Accelerate
time-to-market while
reducing costs



What needs to change to address those needs?



Shorten cycle times
and deliver value
faster



Improve **quality**
and availability



Optimize resources
and eliminate waste



Deliver **innovation**
and great customer
experience through
experimentation

DevOps and the app of the future

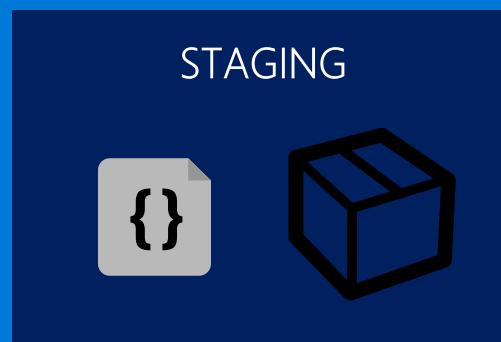
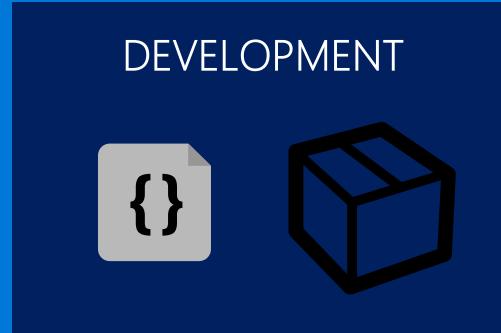
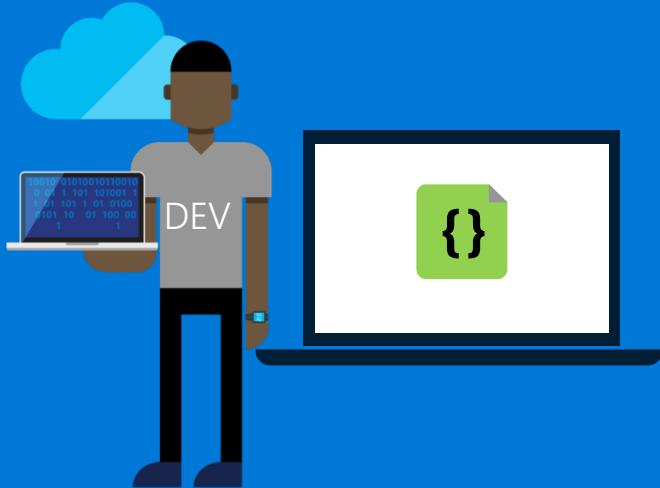
DevOps is to software development what the assembly line is to automobile manufacturing.

It is the logistics to get software to end users like delivery logistics get vehicles to dealers.

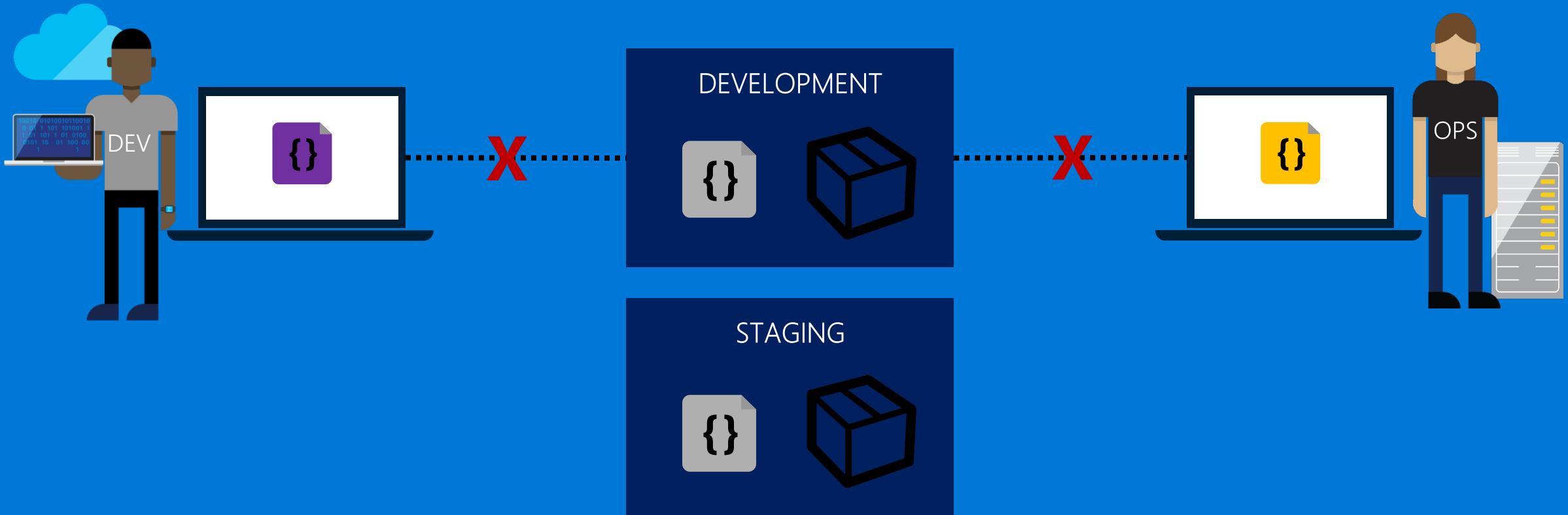
What does this mean for you?

If you setup a secure, efficient, robust, resilient assembly line
you will innovate faster than your competition!

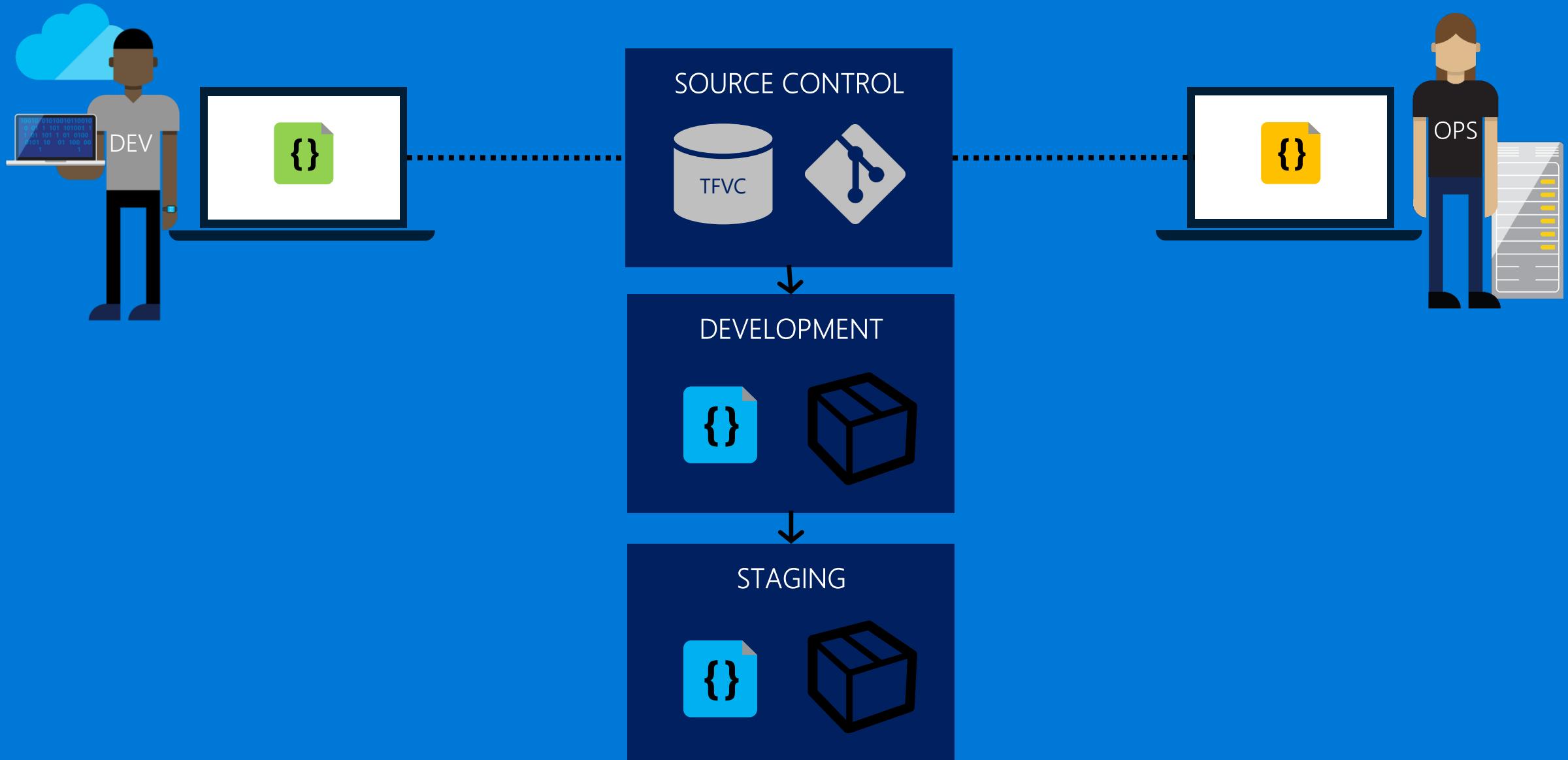
The Old Way



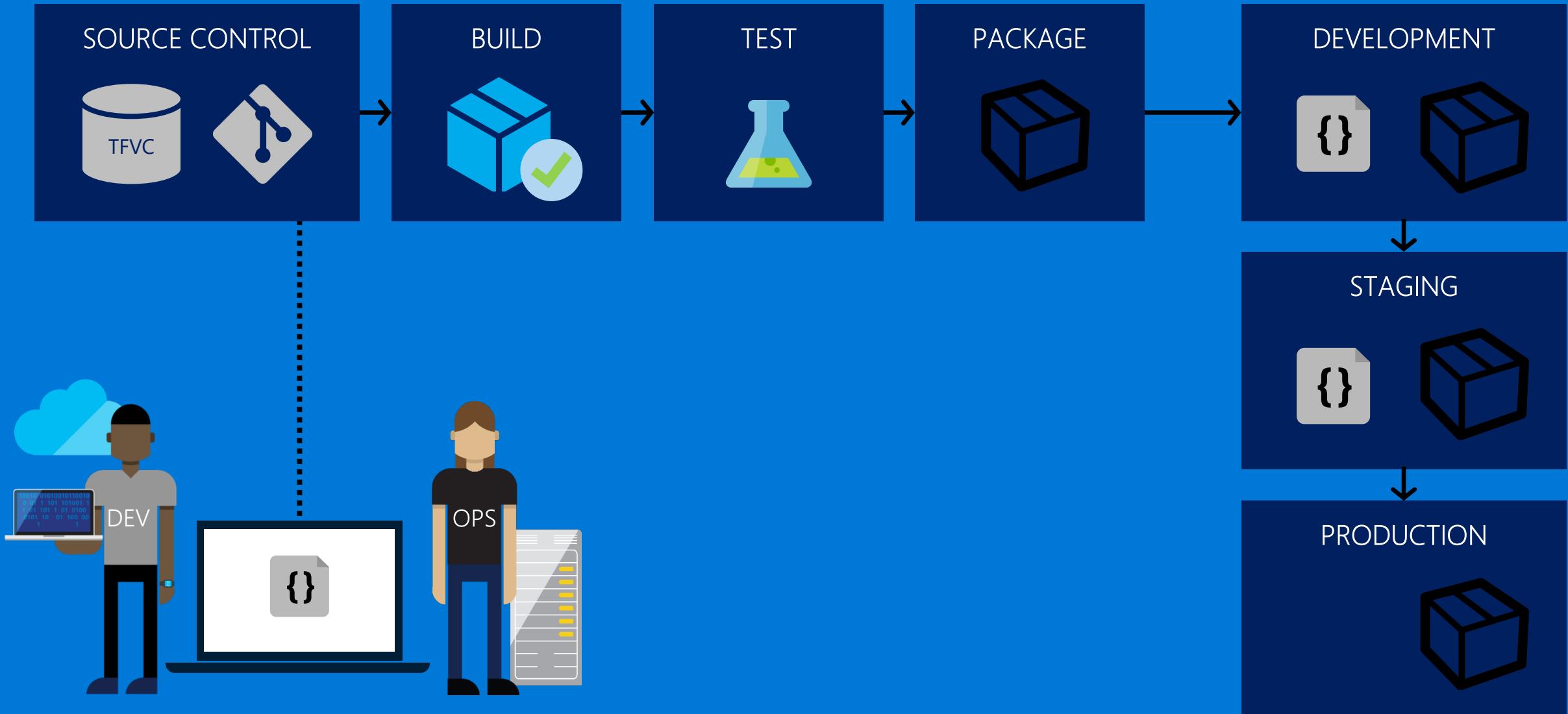
The Old Way



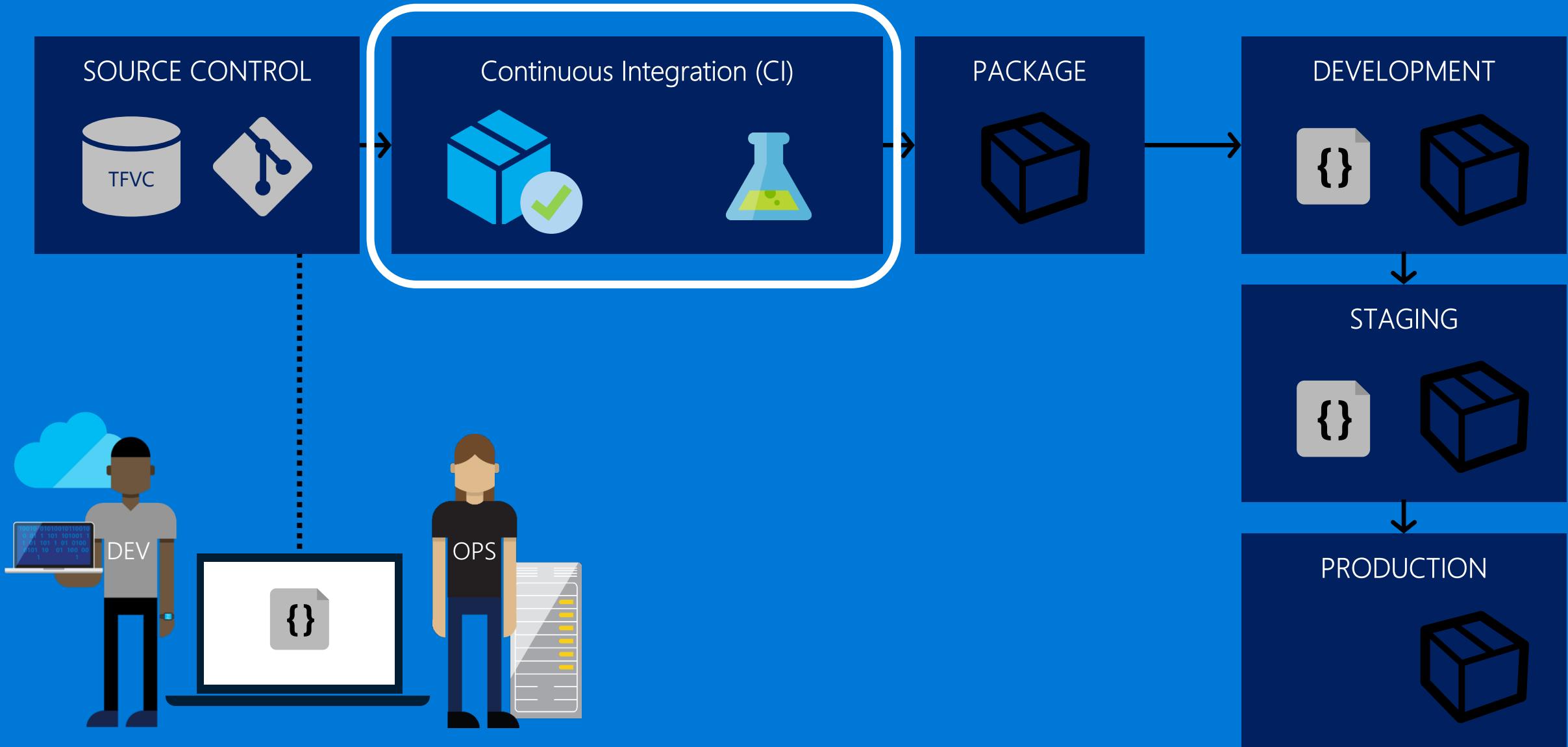
Source Control



DevOps Pipeline

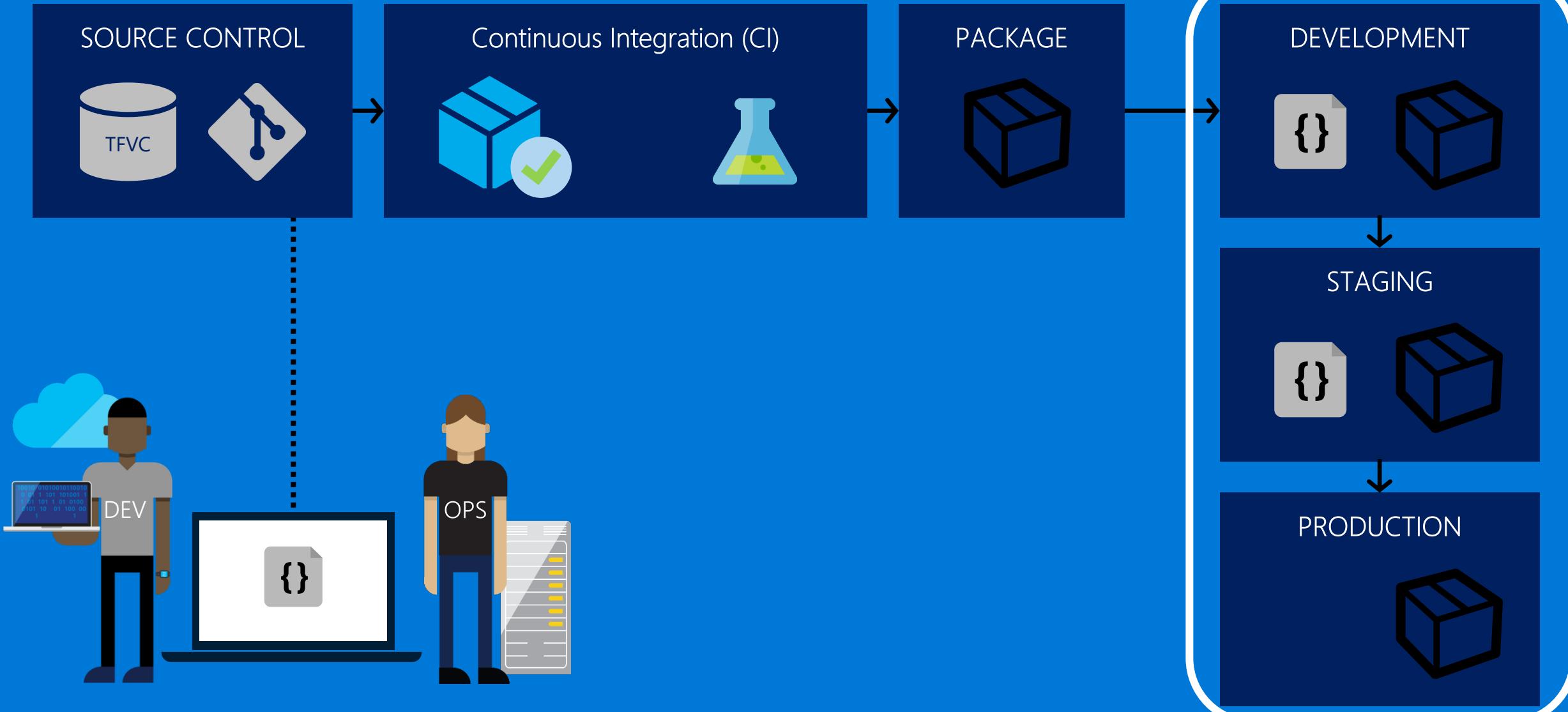


DevOps Pipeline



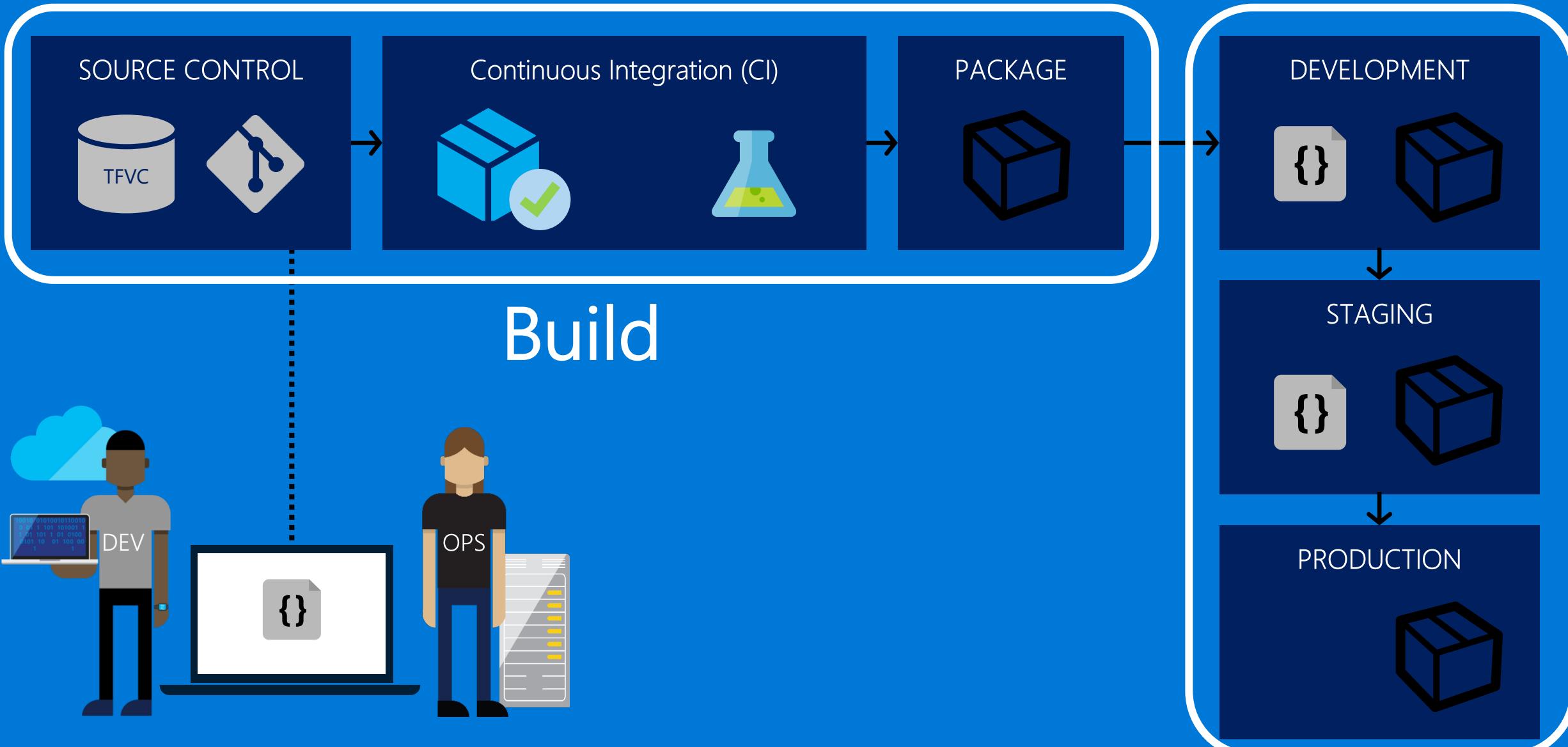
DevOps Pipeline

Deploy



Continuous Delivery

Deploy



The Enterprise Collaboration Solution



Plan & Track



Project Manager



Business Analyst /
Product Owner



Quality Analyst

Develop

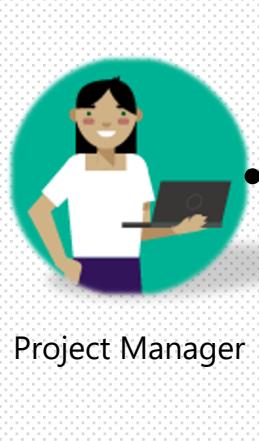


Project Lead

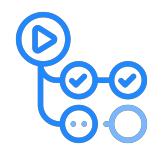


Developer

Manual Testing



Build/Deploy



IT/Operations

What is Infrastructure as Code?

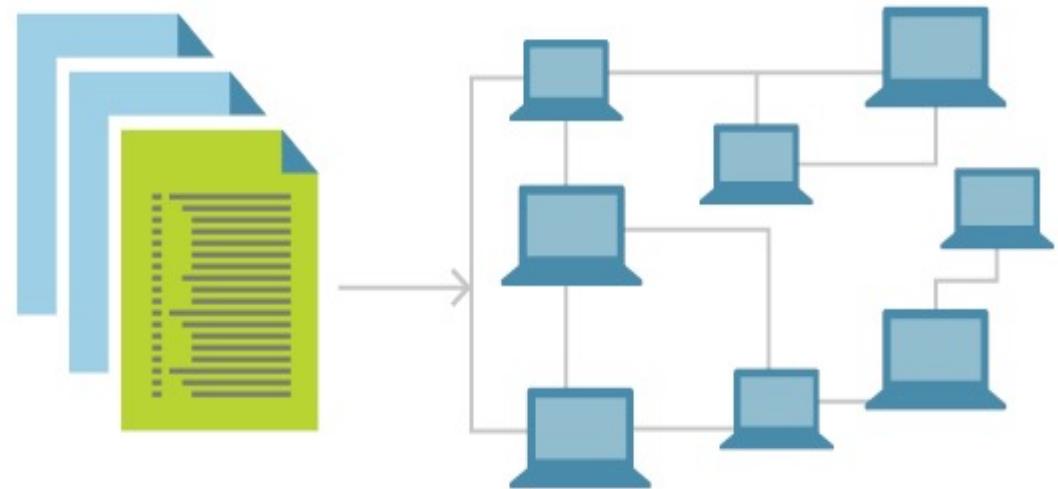
Infrastructure as Code

“

Infrastructure as Code (IaC) is the **management of infrastructure** (networks, virtual machines, load balancers, and connection topology) in a descriptive model, using the same versioning as a DevOps team uses for source code.

—Sam Guckenheimer

”

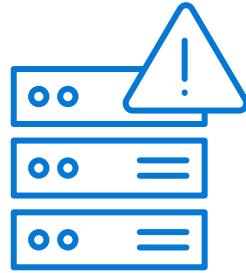


<https://aka.ms/micd/iac>

Managing Infrastructure in the Past



Create Request for
Infrastructure



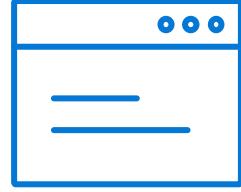
Datacenter Engineers
Action Request



Infrastructure is Online and
Accessible Weeks Later



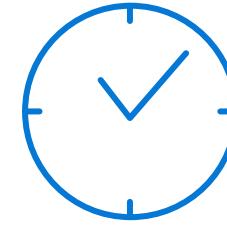
Managing Infrastructure Now



Request
Infrastructure



Automated Systems
Deploy



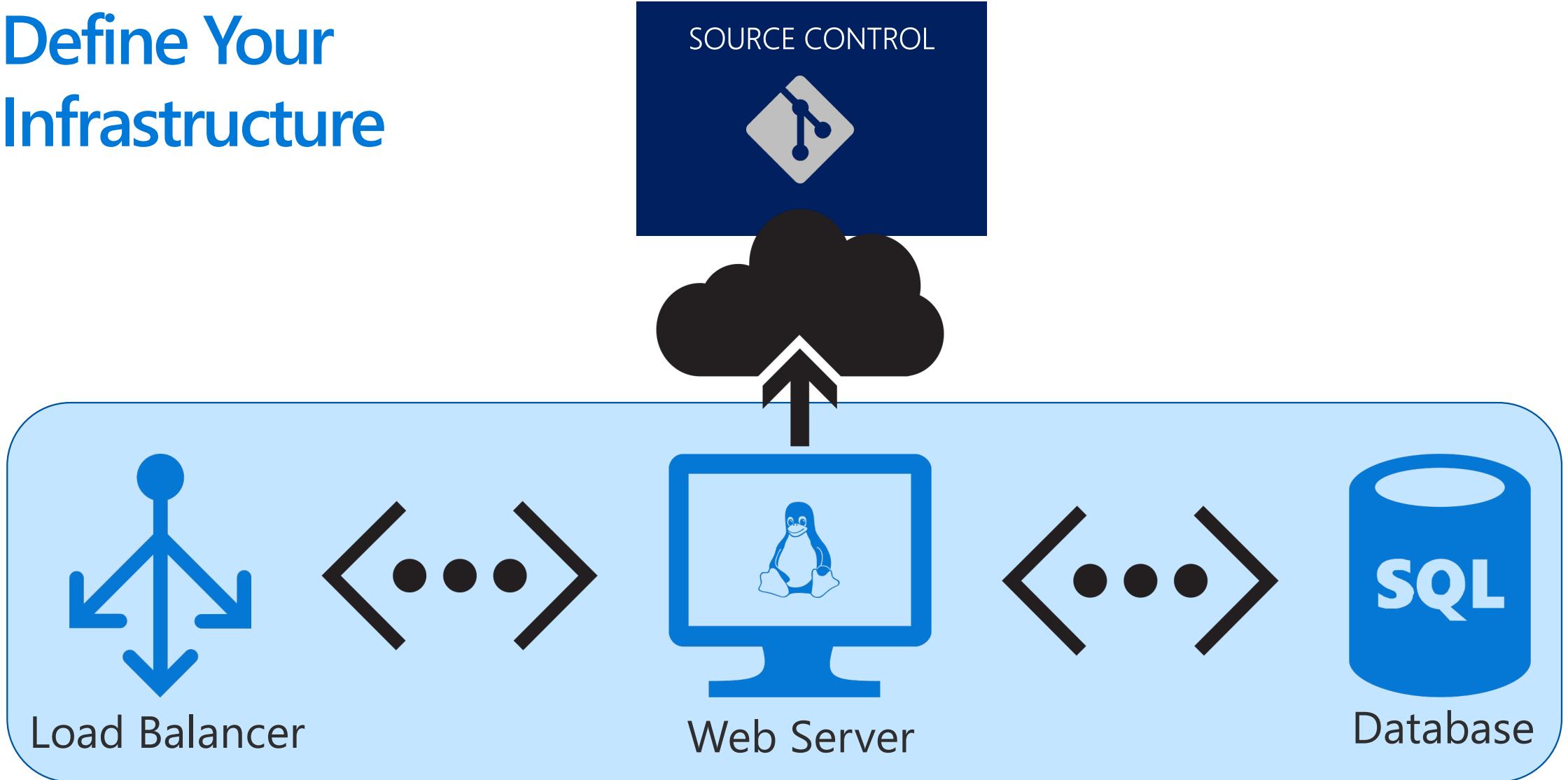
Infrastructure is Online and
Accessible Within Minutes



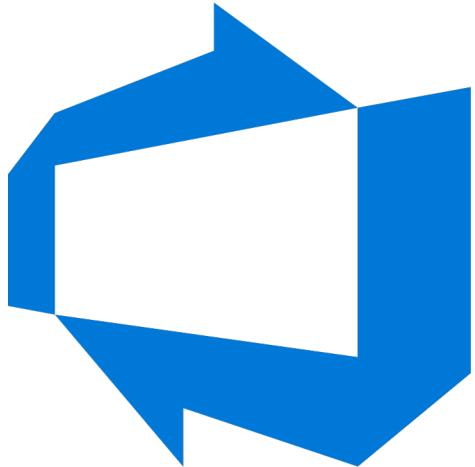
Example Application



Define Your Infrastructure



What are ARM Templates?



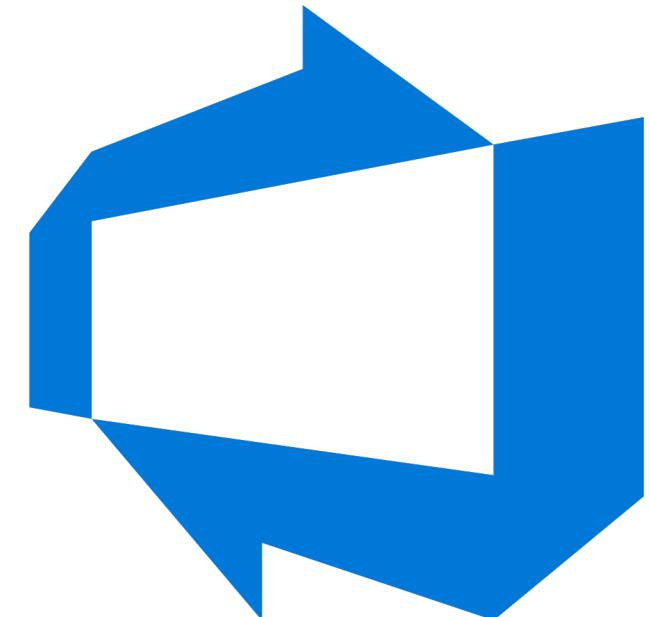
```
ApplicationRG.json X
ApplicationRG.json
1 child: Microsoft.Powershell.DSC (extensions)

191 "type": "Microsoft.Compute/virtualMachines",
192 "apiVersion": "2019-07-01",
193 "name": "[parameters('vmname')]",
194 "location": "[parameters('location')]",
195 "dependsOn": [
196     "[resourceId('Microsoft.Network/networkInterfaces', 'vmNic')]",
197     "[resourceId('Microsoft.Storage/storageAccounts', 'vmosdiskstorage')]"
198 ],
199 "properties": {
200     "hardwareProfile": {
201         "vmSize": "Standard_D4s_v3"
202     },
203     "osProfile": {
204         "computerName": "[take(parameters('vmname'), 15)]",
205         "adminUsername": "[parameters('username')]",
206         "adminPassword": "[parameters('password')]"
207     },
208     "storageProfile": {
209         "imageReference": {
210             "publisher": "MicrosoftSQLServer",
211             "offer": "SQL2017-WS2016",
212             "sku": "SQLDEV",
213             "version": "latest"
214         },
215         "osDisk": {
216             "createOption": "FromImage",
217             "managedDisk": {
218                 "storageAccountType": "Premium_LRS"
219             }
220         }
221     }
222 }
```

<https://aka.ms/micd/ARMTemplates>

Managing Azure Resources Programmatically

- Azure Resource Manager (ARM) Templates
- Infrastructure as Code
- JSON
- Declarative
- Idempotent



<https://aka.ms/micd/ARMTemplates>

Azure Quickstart Templates

Deploy, learn, fork and contribute back.

→ Deploy Azure resources through the Azure Resource Manager with community contributed templates to get more done.

→ Azure Resource Manager allows you to provision your applications using a declarative template.

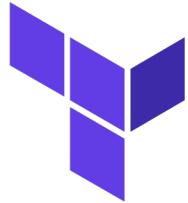
→ In a single template, you can deploy multiple services along with their dependencies.

→ You use the same template to repeatedly deploy your application during every stage of the application lifecycle.

→ <https://aka.ms/micd/ARMQuickStart>

The screenshot shows the Microsoft Azure homepage with a dark theme. The top navigation bar includes links for Overview, Solutions, Products, Documentation, Pricing, Training, Marketplace, Partners, Support, Blog, and More. A search bar and a 'Free account' button are also visible. The main content area features a large banner titled 'Azure Quickstart Templates' with the subtext: 'Deploy Azure resources through the Azure Resource Manager with community contributed templates to get more done. Deploy, learn, fork and contribute back.' Below the banner, there's a section titled 'What is Azure Resource Manager' with a brief description and a 'Learn more >' link. To the left, there are sorting options: 'Sort by:' with choices 'Date updated', 'Template name', 'Author name', and 'Most popular'; and a 'Resource Types:' dropdown set to 'All' with a 'Microsoft.Aad (1)' option. On the right, there's a search bar and a message 'Showing all 926 templates. Refine results with search.' Below the search bar, three template cards are displayed: 'Deploy a VM into an Availability Zone' by Brian Moore (last updated 8/3/2020), 'On-demand SFTP Server using an existing storage account' by Ben Hummerstone (last updated 8/2/2020), and 'Dokku Instance' by Steven Edouard (last updated 8/1/2020). The background of the page features a stylized blue server icon and clouds.

What is Terraform?



HashiCorp
Terraform

<https://terraform.io>

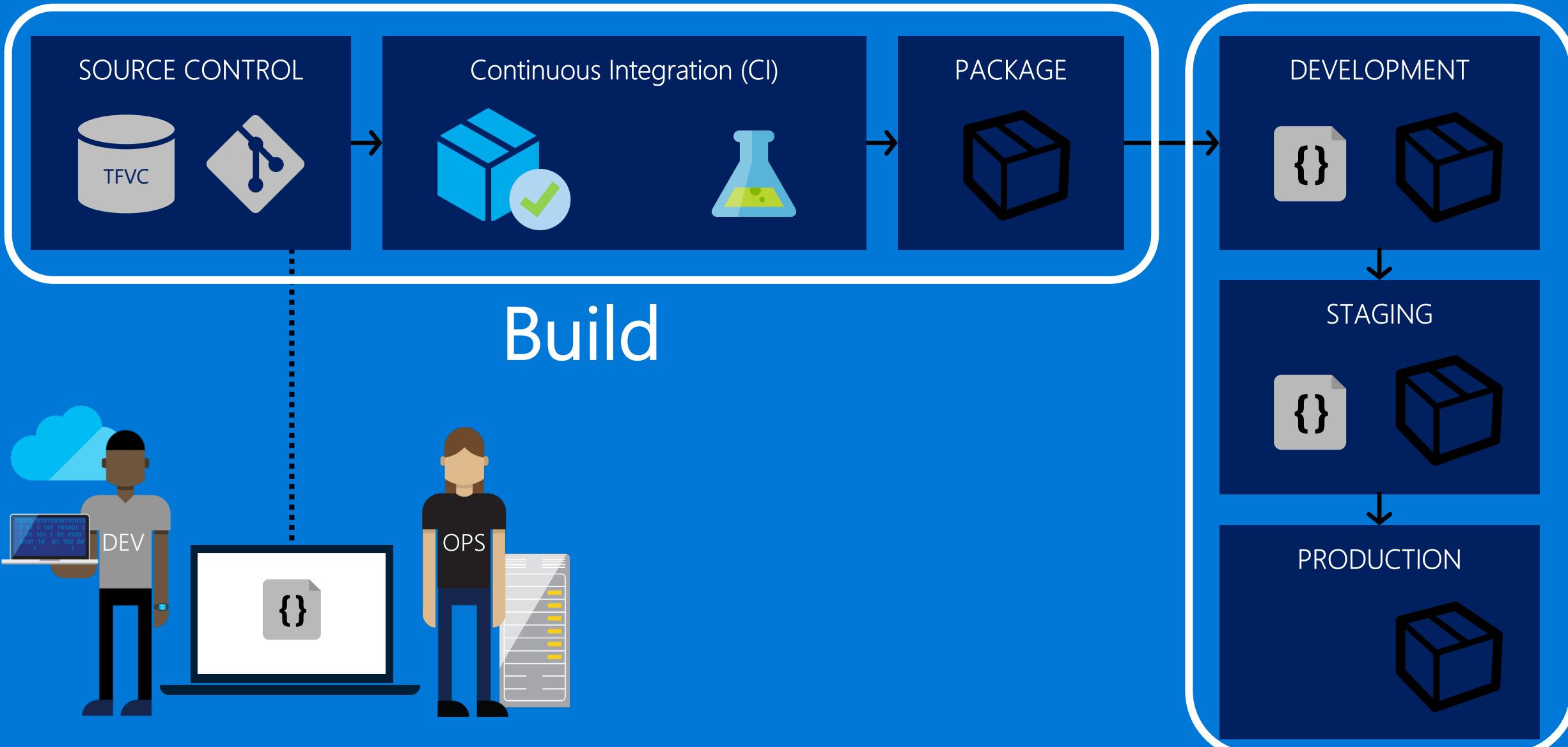
A screenshot of a code editor interface showing two files: README.md and main.tf. The main.tf file contains Terraform configuration code for creating an Azure resource group, a virtual network, and a public subnet.

```
 8  # Configure the Azure Provider
 9  provider "azurerm" {
10    features {}
11  }
12
13  # Create a resource group
14  resource "azurerm_resource_group" "tfdemo_resource_group" {
15    name      = "tfdemo_resource_group"
16    location  = "westus2"
17
18    tags = { environment = "demo", build = "tfdemo" }
19  }
20
21  # Create a virtual network
22  resource "azurerm_virtual_network" "tfdemo_network" {
23    name          = "tfdemo_network"
24    location      = azurerm_resource_group.tfdemo_resource_group.location
25    resource_group_name = azurerm_resource_group.tfdemo_resource_group.name
26    address_space   = ["10.0.0.0/16"]
27
28    tags = { environment = "demo", build = "tfdemo" }
29  }
30
31  # Create a public subnet
32  resource "azurerm_subnet" "tfdemo_public_subnet" {
33    name           = "tfdemo_public_subnet"
```

Deployment and Monitoring

Continuous Delivery

Deploy





Azure Pipelines

Build, test, and deploy with CI/CD that works with any language, platform, and cloud.

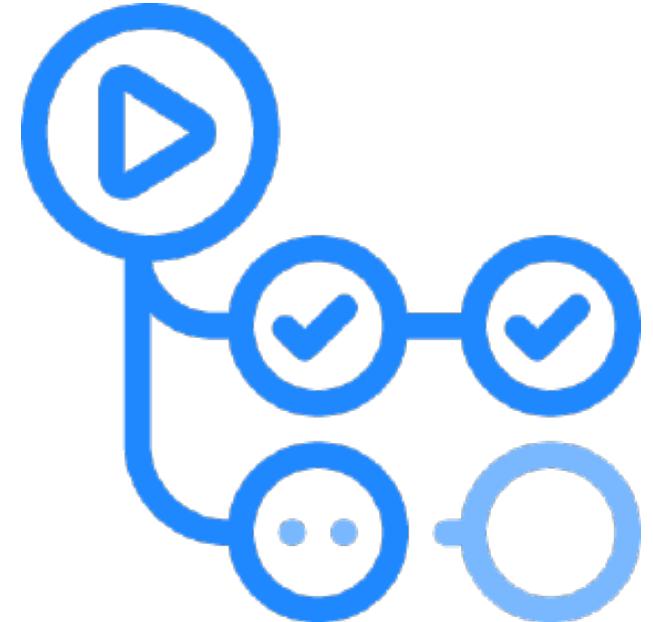
- AKS & k8s support
- YAML CI Pipelines
- YAML, Multi-stage CD Pipelines
- Templates
- Elastic self-hosted agents

<https://aka.ms/micd/AzurePipelines>

The screenshot shows the Azure Pipelines web interface for a pipeline named '#20201020.2'. The summary pane displays details such as the trigger (a pull request from 'DemoOrg'), repository ('PartsUnlimitedGitHub'), commit ('master'), start time ('Oct 20 at 8:21 AM'), duration ('15d 2h 29m'), work items ('1 published'), and a link to 'Get started'. Below this, the 'Warnings' tab is selected in the error/warning section, showing a single warning about a Vtest failing. A note indicates that one approval is required before the pipeline can proceed to Production, with a 'Review' button. The main area shows the pipeline's stages: CI, Dev, QA, and Production. The CI stage has completed 1 job with 100% test coverage and 1 artifact. The Dev stage has completed 1 job with 100% test coverage. The QA stage has completed 1 job with 66.6% test coverage and 2 checks passed. The Production stage is currently waiting. A 'Rerun stage' button is available for the QA stage.

GitHub Actions

- Build, deploy, test – all from GitHub
- Linux, MacOS, Windows, ARM, and containers
- Matrix builds
- Any language
- Live logging
- Built in secret store



<https://github.com/features/actions>

Automated Delivery

Automating workflows from code to cloud

Accelerate delivery through automation

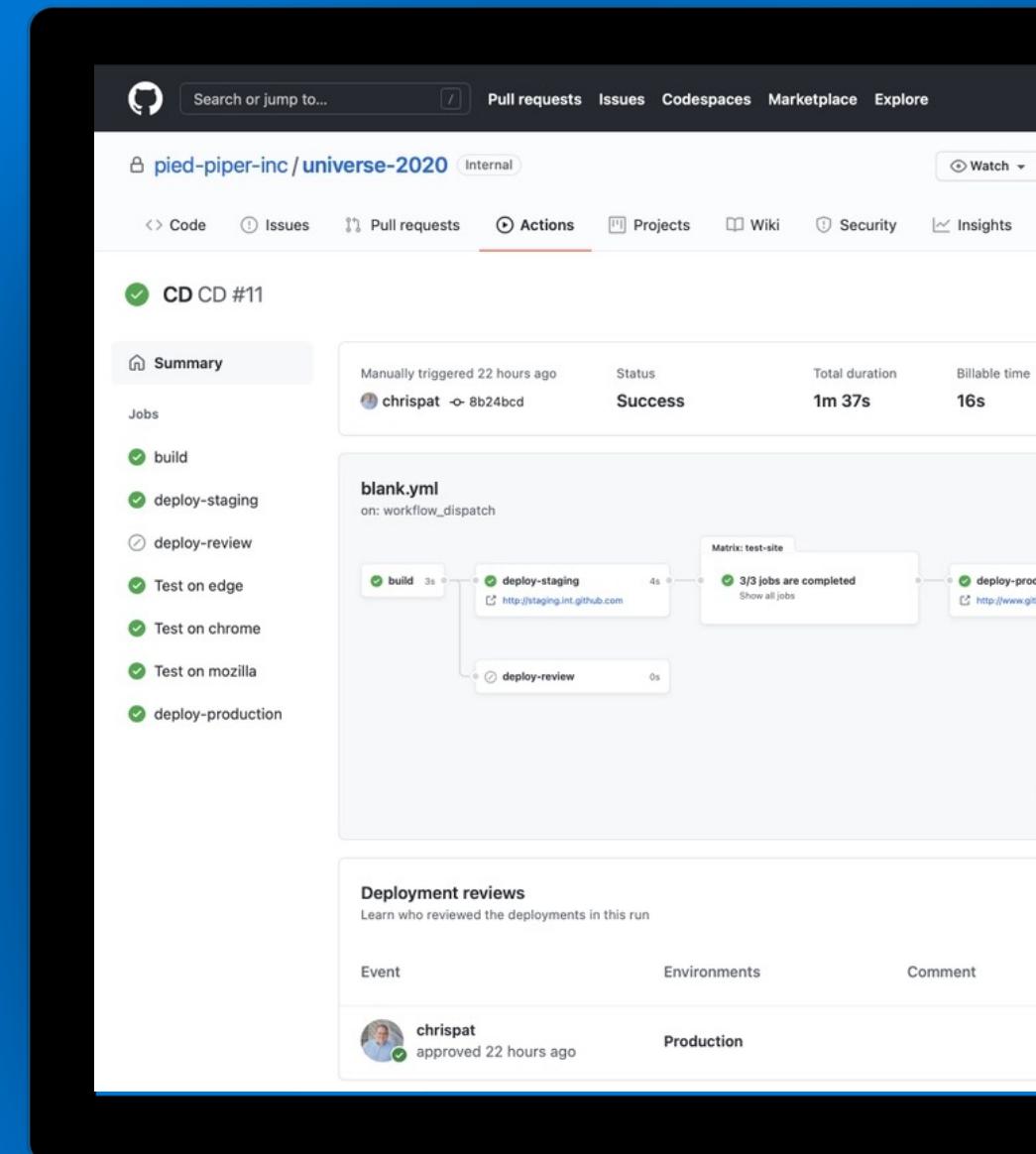
Automation triggers for 20+ project events allows for automation beyond just CI/CD to any available API

Simple and easy to use

Configuration based on YAML with a host of sample workflows to learn from and get started

Global community for actions

Thousands of open source Actions, maintained by the community and by companies offering integrations, including Microsoft Azure



GitHub Action – Deploy ARM Template

- Available in GitHub Marketplace
- Detailed documentation
- Easily added to a workflow

The screenshot shows the GitHub Marketplace listing for the "Deploy Azure Resource Manager (ARM) Template" action. The page has a dark theme. At the top, there's a header with the GitHub logo and the text "GitHub Action". Below it is the title "Deploy Azure Resource Manager (ARM) Template" with a blue icon to its left. A green button on the right says "Use latest version". Under the title, it says "v1 Latest version". To the right of the main content area, there's a sidebar with sections for "Verified creator" (marked with a checkmark), "GitHub has verified that this action was created by Azure.", "Learn more about verified Actions.", "Stars" (11), "Contributors" (7), and "Categories" (Deployment). The main content area contains a description of the action, its dependencies, and deployment scopes.

GitHub Action

Deploy Azure Resource Manager (ARM) Template

v1 Latest version

Use latest version

Verified creator

GitHub has verified that this action was created by **Azure**.

Learn more about verified Actions.

Stars

Star 11

Contributors

Categories

Deployment

GitHub Action for Azure Resource Manager (ARM) deployment

A GitHub Action to deploy ARM templates. With this action you can automate your workflow to deploy ARM templates and manage Azure resources.

This action can be used to deploy Azure Resource Manager templates at different [deployment scopes](#) – resource group deployment scope, subscription deployment scope and management group deployment scopes.

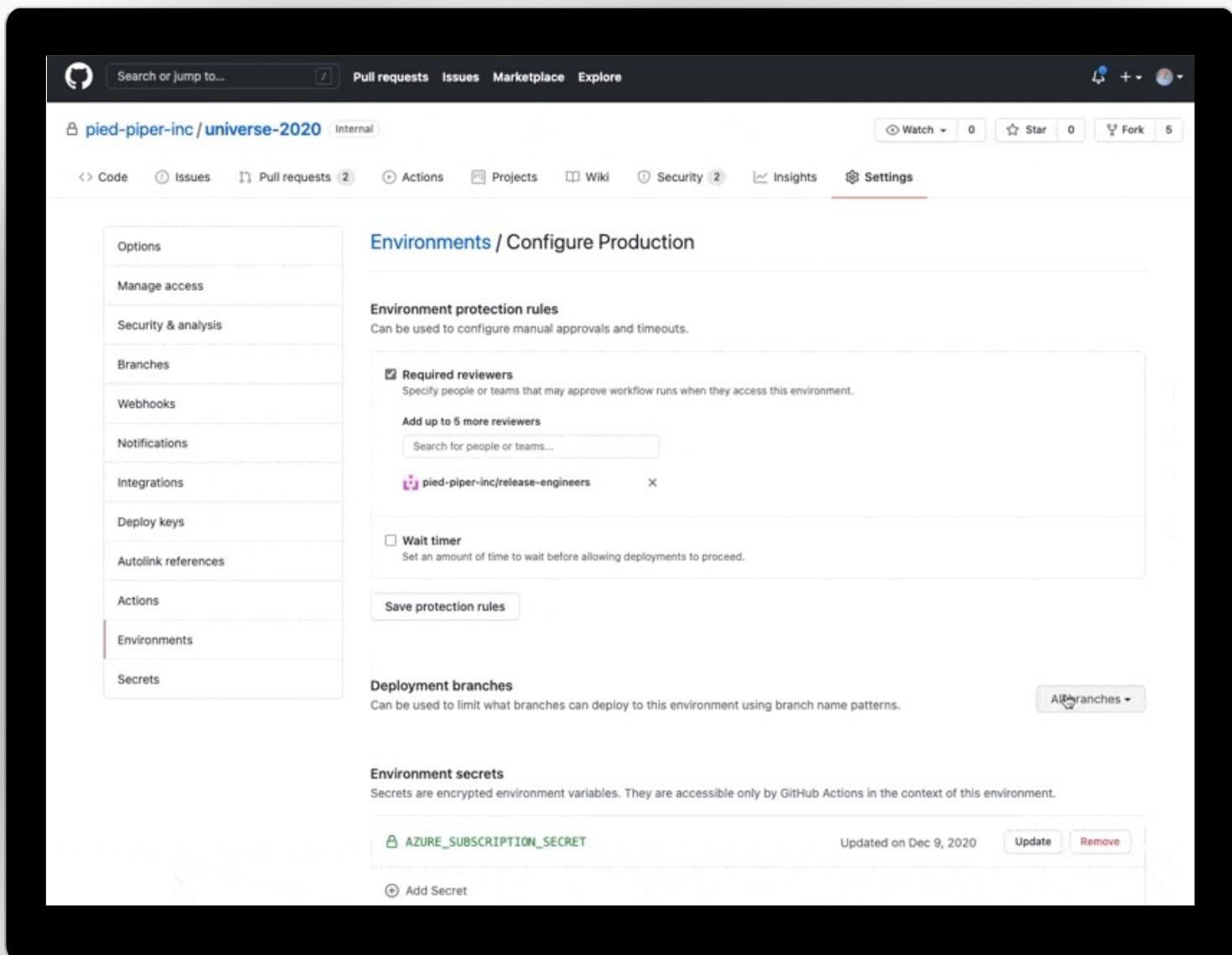
Dependencies

- [Azure Login](#) Login with your Azure credentials
- [Checkout](#) To checks-out your repository so the workflow can access any specified ARM template.

<https://github.com/marketplace/actions/deploy-azure-resource-manager-arm-template>

GitHub Environment Protection

- Limit deployments to environments based on branch
- Add required reviewers to approve workflow jobs
- Set a wait timer to delay a job for a specific amount of time



<https://docs.github.com/actions/reference/environments>

Use Microsoft Teams as your DevOps Hub

Microsoft Teams makes collaborating on projects a breeze - from idea to completion.



Collaborate, communicate and celebrate

Teams is your chat-centered workspace. Azure DevOps teams get instant access to everything they need in a dedicated hub for teamwork, that brings your teams, conversations, content and tools together into one place.



Messaging Extension

You can search, find, and discuss specific work items with your colleagues from within Microsoft Teams. The messaging extension will work for both team and individual chat discussions.



Dashboards

Keep track of your project by adding your favorite Azure DevOps dashboard directly into Microsoft Teams.



Kanban boards

Track and create new work items with Kanban boards right into Microsoft Teams. All your favorite Kanban board features - live refresh, card styling, tag coloring, extensions, and more - are available without leaving your team's channel.



<https://aka.ms/micd/TeamsIntegration>

The screenshot shows the Microsoft Teams interface with the DevOps Hub integrated. On the left, the Teams sidebar lists 'Your teams' including 'Dabu Azure DevOps Demos' (General, DotNetCoreOnAppService, Mercury Health Azure DevOps Feed), 'Meetings', 'Calls', and 'Files'. The main Conversations tab displays a feed of messages from the 'Mercury Health Azure DevOps Feed' channel. The messages include:

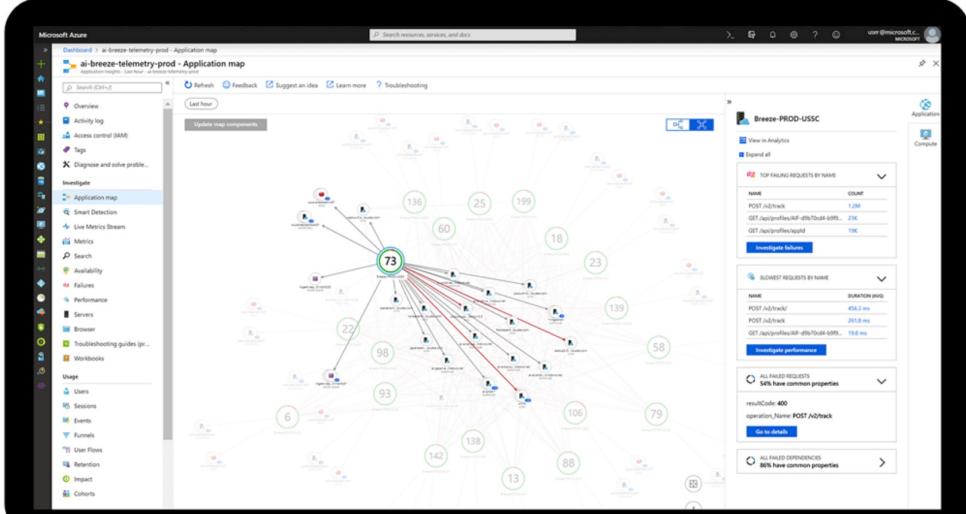
- Azure Pipelines 6/2 2:47 PM: Pre-deployment approval pending for release MercuryHealthCI_1.2.19153.02-1 on stage BlueGreen. Triggered by MercuryHealthCI. Approver: Dave Burnison. Buttons: Approve, Reject.
- Azure Pipelines 6/2 2:47 PM: Deployment of release MercuryHealthCI_1.2.19153.02-1 on stage BlueGreen started. Triggered by MercuryHealthCI.
- Azure DevOps 6/12 10:47 AM: Bug 2490: Food Item should have a color field (Exploratory Test). Commented by Dave Burnison.

Azure Monitor

- Store and analyze operational telemetry
- Reveal patterns within your application and infrastructure
- Integrate with popular DevOps, issue management, IT service management, security information, and event management tools.

Monitor your applications

Get everything you need to monitor the availability, performance, and usage of your web applications, whether they're hosted on Azure or on-premises. Azure Monitor supports popular languages and frameworks, such as .NET, Java, and Node.js, and integrates with DevOps processes and tools like Azure DevOps, Jira, and PagerDuty. Track live metrics streams, requests and response times, and events.

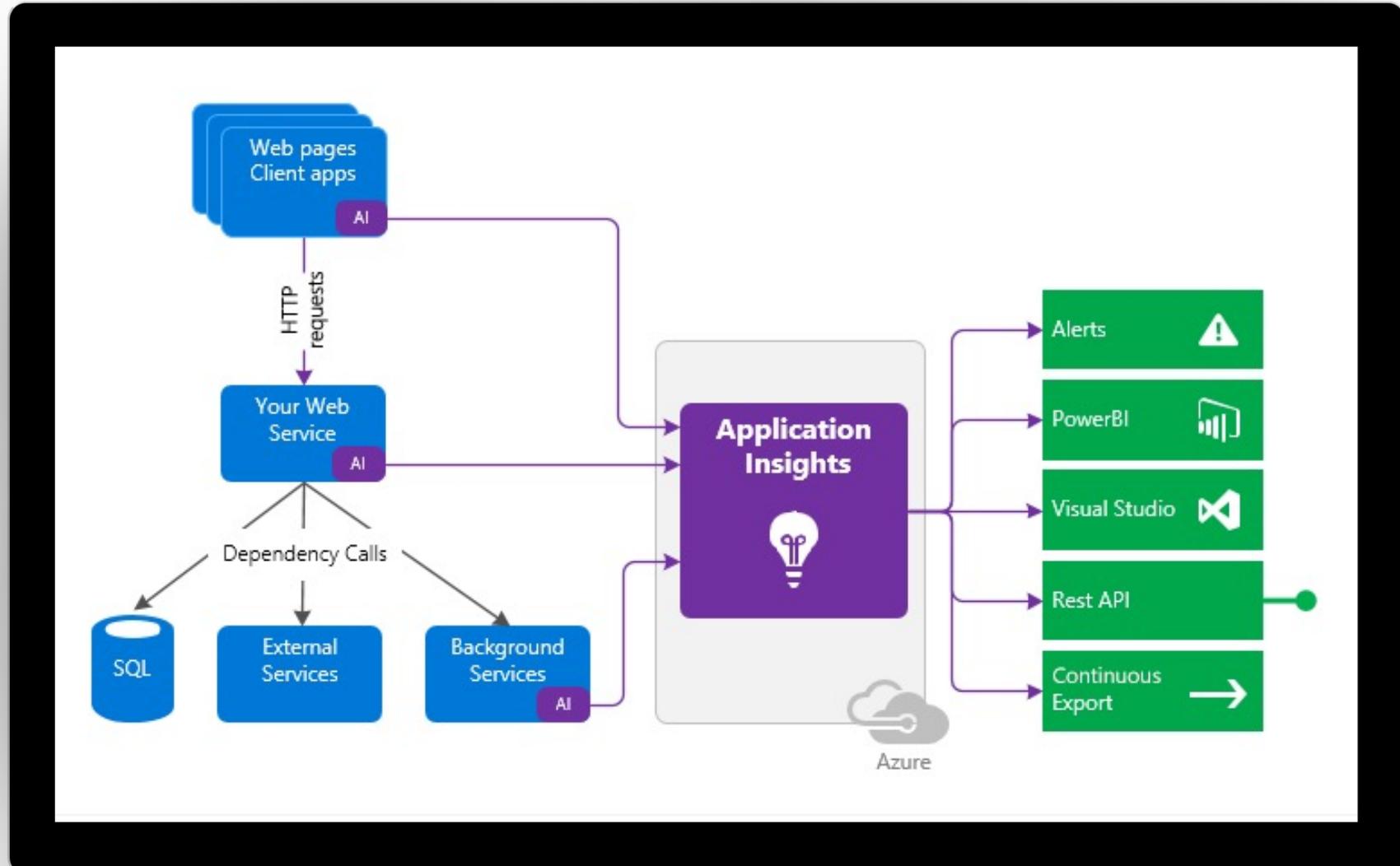


Monitor your infrastructure

Analyze and optimize the performance of your infrastructure, including virtual machines (VMs), Azure Kubernetes Service (AKS), Azure Storage, and databases. Monitor your Linux and Windows VMs and their health and dependencies—all on a single map.

Application Insights

- Application Performance Management (APM) Service
- Live monitoring of your application to detect anomalies
- Designed to help you continuously improve performance and usability within your applications



<https://aka.ms/micd/AppInsights>

Demo

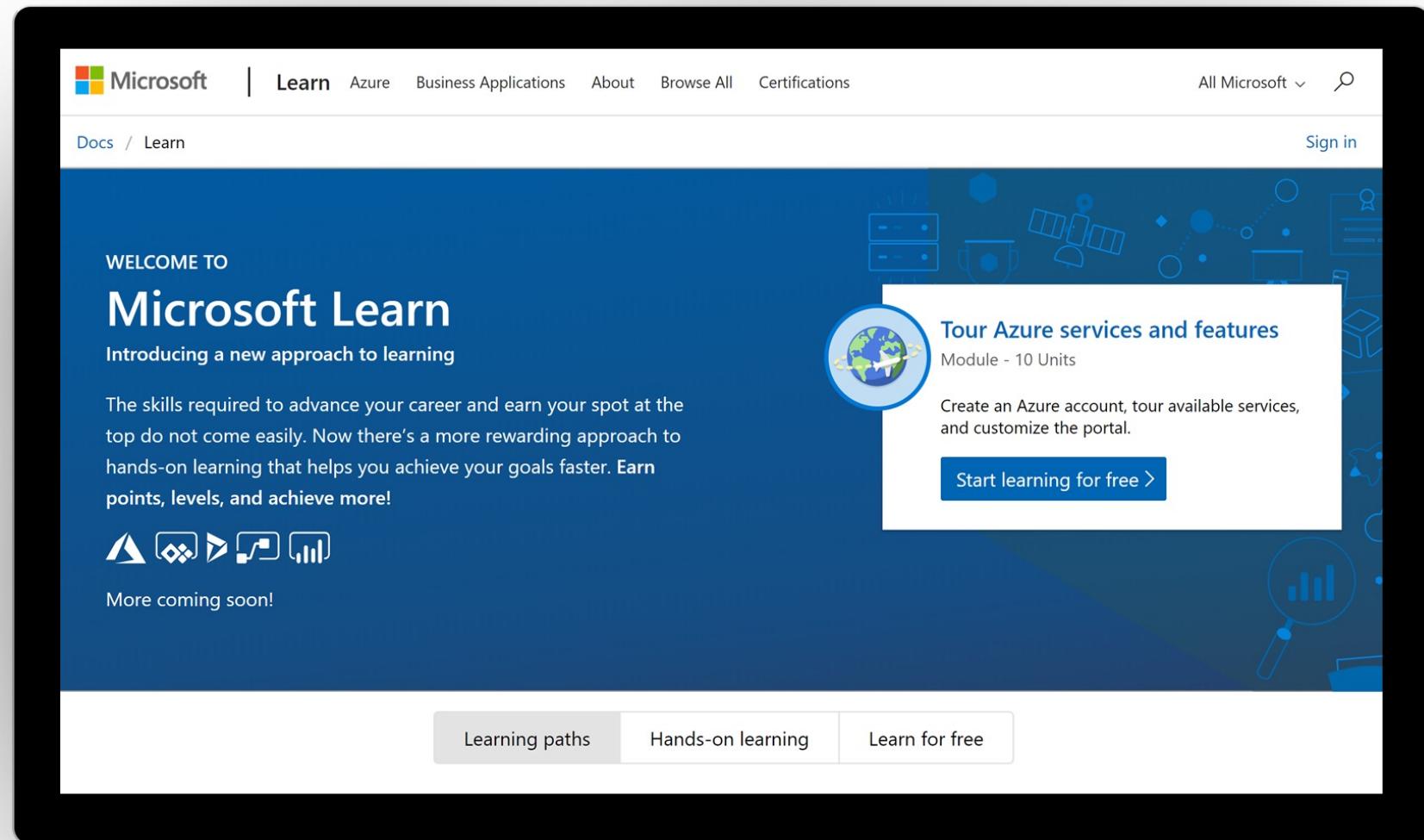
Deployment and Monitoring with GitHub and Azure DevOps

Resources

Microsoft Learn

Build your skills fast with free, interactive tutorials at Microsoft Learn, a new training experience for technical users.

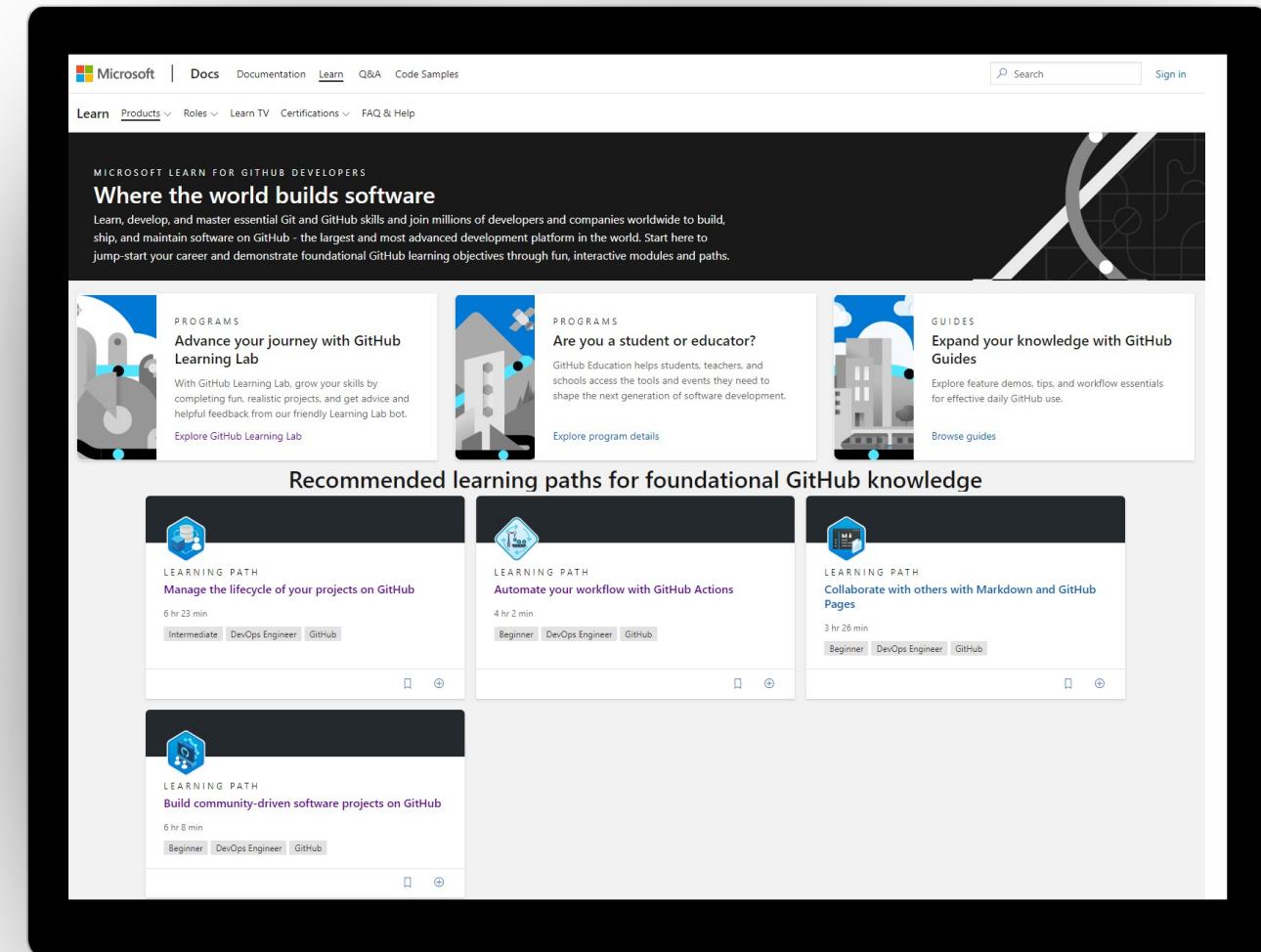
- Step-by-step training to fit your schedule
 - Interactive coding environments for hands-on experience
 - Earn achievements and recognition for your Azure skills
 - For many modules we provide free Azure sandboxes, free virtual machines, etc. so there is nothing to setup ahead of time
- <http://aka.ms/micd/Learn/>



Microsoft Learn

Check out the growing collection of DevOps & GitHub related Learning Paths

- Take full control of your GitHub projects.
Through work planning and tracking, effective branching strategies.
- Extend GitHub through its API, manage releases all the way from idea to working software in the hands of your users
- Learn how GitHub Actions enables you to automate your software development cycle and deploy applications to Azure.
- Whether you manage enterprise or open-source software projects, learn how GitHub enables you to build communities that foster communication and collaboration while reinforcing recommended guidelines, codes of conduct, and security best practices.



<https://aka.ms/micd/LearnGitHub>

Azure Quickstart Templates

Deploy, learn, fork and contribute back.

→ Deploy Azure resources through the Azure Resource Manager with community contributed templates to get more done.

→ Azure Resource Manager allows you to provision your applications using a declarative template.

→ In a single template, you can deploy multiple services along with their dependencies.

→ You use the same template to repeatedly deploy your application during every stage of the application lifecycle.

→ <https://aka.ms/micd/ARMQuickStart>

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GitHub Learning Lab

Grow your skills by completing fun, realistic projects. Get advice and helpful feedback from our friendly Learning Lab bot.

- Hands-on lessons created by the GitHub community and taught by the Learning Lab bot.
- Learn new skills while working in your own copy of a real project.
- Our friendly bot provides instructions and feedback throughout your journey.
- Real workflow - Everything happens in GitHub Issues and Pull Requests.

The screenshot shows the GitHub Learning Lab homepage. At the top, there's a navigation bar with the GitHub logo, 'Learning Lab', a search bar, and links for 'For Organizations' and 'Teach on Learning Lab'. A prominent blue button says 'Start learning'. Below the header, a large heading reads 'Advance your journey' with a subtext: 'With GitHub Learning Lab, grow your skills by completing fun, realistic projects. Get advice and helpful feedback from our friendly Learning Lab bot.' A cartoon cat with a circuit board pattern on its face is surrounded by colorful code snippets. A blue button labeled 'Find your first course' is visible. Below the cat, there's a section titled 'Our most popular courses' featuring three cards:

- Introduction to GitHub**
Created by The GitHub Training Team
If you are looking for a quick and fun introduction to GitHub, you've found it. This class will get you started using GitHub in less than an hour.
• Git • GitHub Pages • Branches
• Commits • Pull Requests
- GitHub Actions: Hello World**
Created by The GitHub Training Team
Create a GitHub Action and use it in a workflow.
• GitHub Actions • Workflows
• Hello World
- Communicating using Markdown**
Created by The GitHub Training Team
This course will walk you through everything you need to start organizing ideas and collaborating using Markdown, a lightweight language for text formatting.
• GitHub • Markdown

→ <https://lab.github.com/>

Azure DevOps Hands-On Labs

Learn to plan smartly, collaborate better, and ship faster with a set of modern development services.

- Get Hands On Experience with Azure DevOps Services – Learn how you can plan better, code together and ship faster with Azure DevOps Services.
- Getting started - These labs will help you to get started with Azure DevOps services to automate software delivery and meet business needs.
- Deep Dive into Azure DevOps - Learn how to integrate with popular OSS and 3rd party tools and services. Use the tools and languages you know.

The screenshot shows the Azure DevOps Labs website. At the top, there's a navigation bar with icons for mail, notifications, and search, followed by a search bar labeled "search...". Below the header, a large banner features the text "Azure DevOps Labs" and "What is DevOps?". It explains that DevOps brings people, processes, and technology together to automate software delivery. A sub-section titled "Getting started with Azure DevOps" provides an overview of how labs help simplify and speed up the DevOps process. A grid of twelve lab cards is displayed, each with an icon and a title:

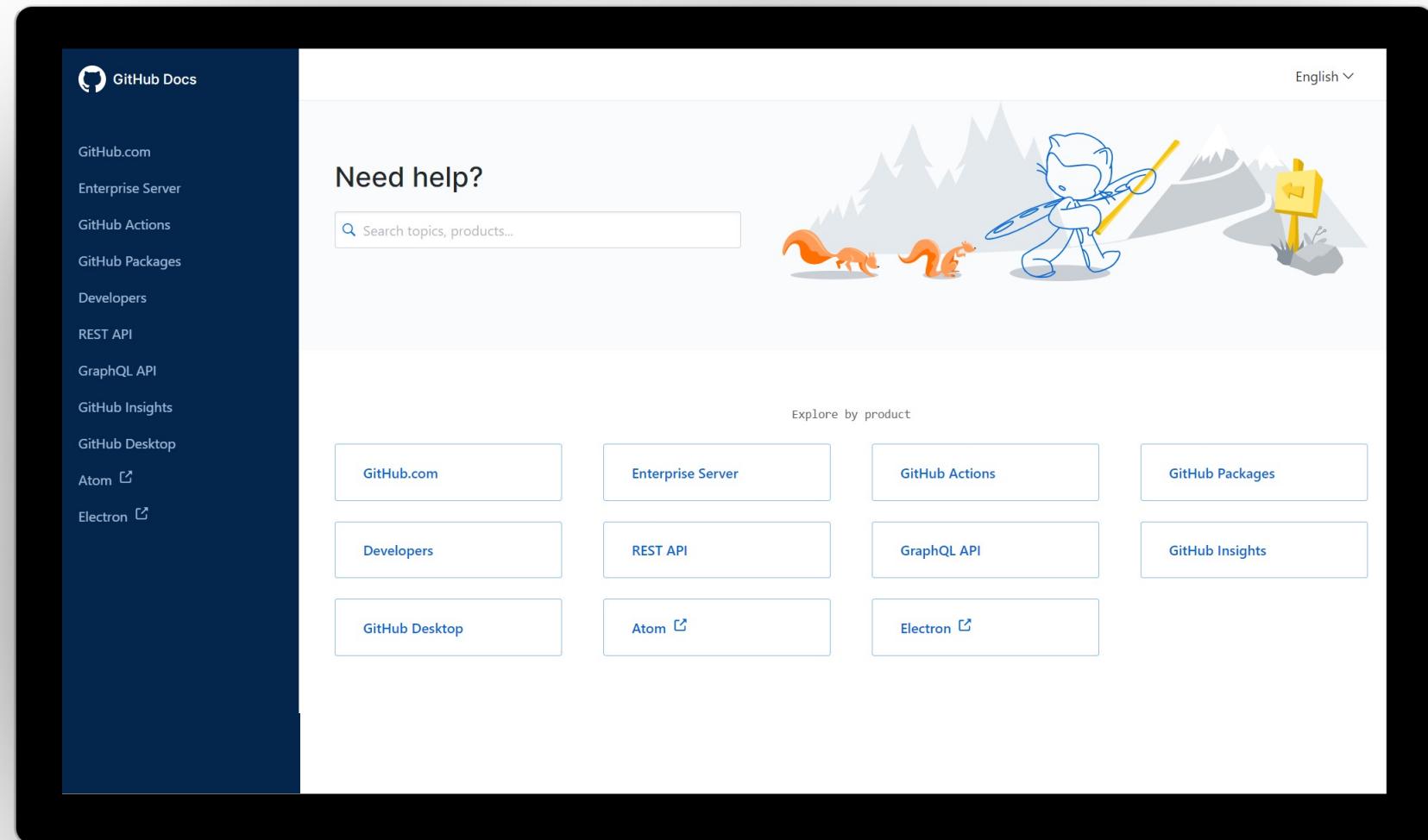
Agile Planning and Portfolio Management with Azure Boards	Managing Project Schedules across Teams with Delivery Plans	Version Controlling with Azure Repos	Working with Pull Requests
Configuring Build as Code with YAML in Azure Pipelines	Enabling Continuous Integration with Azure Pipelines	Embracing Continuous Delivery with Azure Pipelines	Package Management with Azure Artifacts
Collaborating with Azure DevOps Wiki	Test Planning and Management with Azure Test Plans	Exploratory Testing with Azure Test Plans	Web Application Load and Performance Testing

At the bottom of the page, a note states: "For the on-premises platform, Azure DevOps Server (previously named Visual Studio Team Foundation Server), see [Azure DevOps Server 2019 Labs](#)". A "Got a moment" button is located in the bottom right corner.

Documentation - GitHub

Discover all of GitHub's product documentation!

- If you only save one Favorite in your browser related to GitHub, this is the link to save as a favorite!

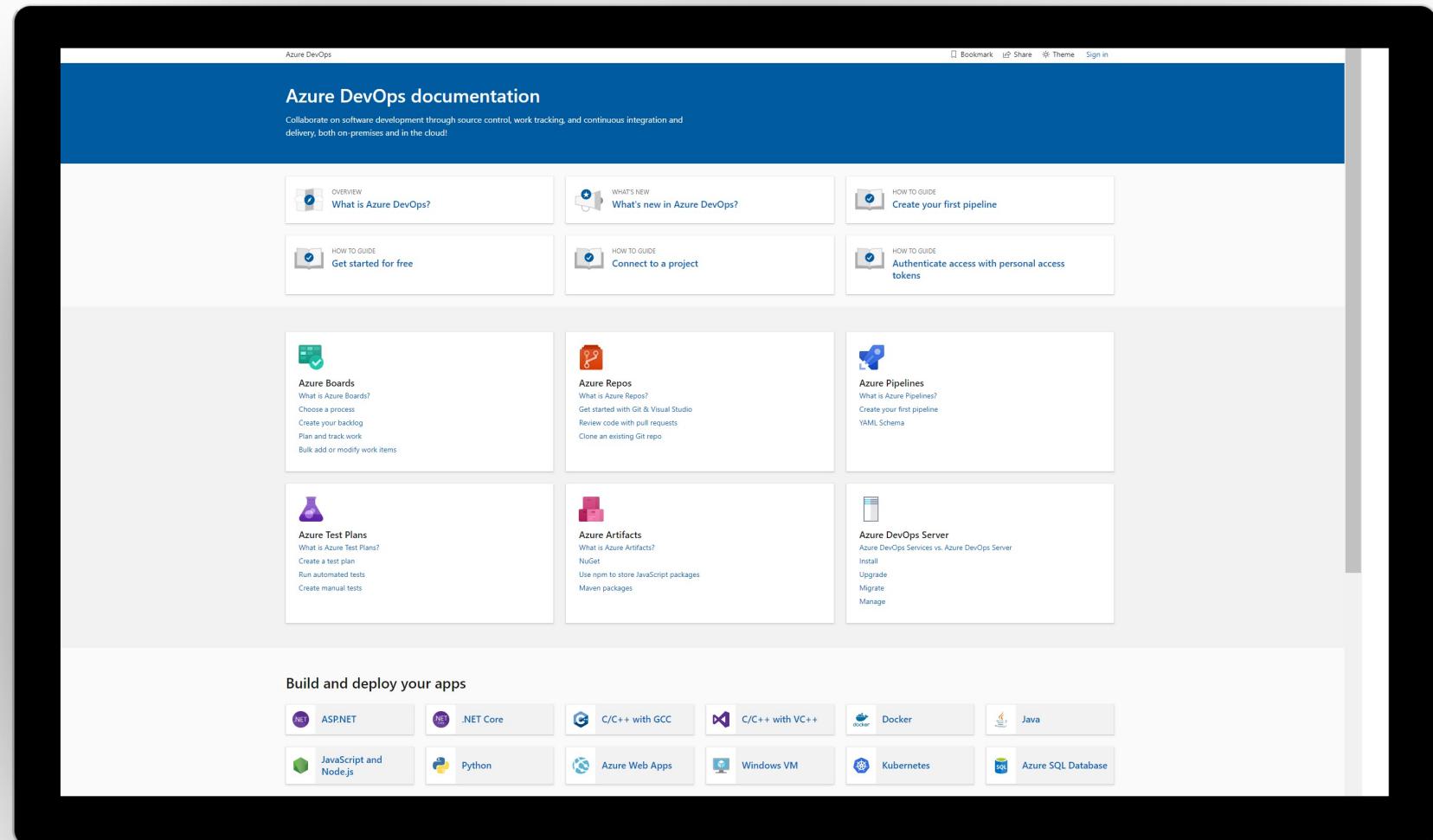


<https://docs.github.com/en>

Documentation - Azure DevOps

Use this landing page to learn about all the features available in Azure DevOps

→ If you only save one Favorite in your browser related to Azure DevOps, this is the link to save as a favorite!

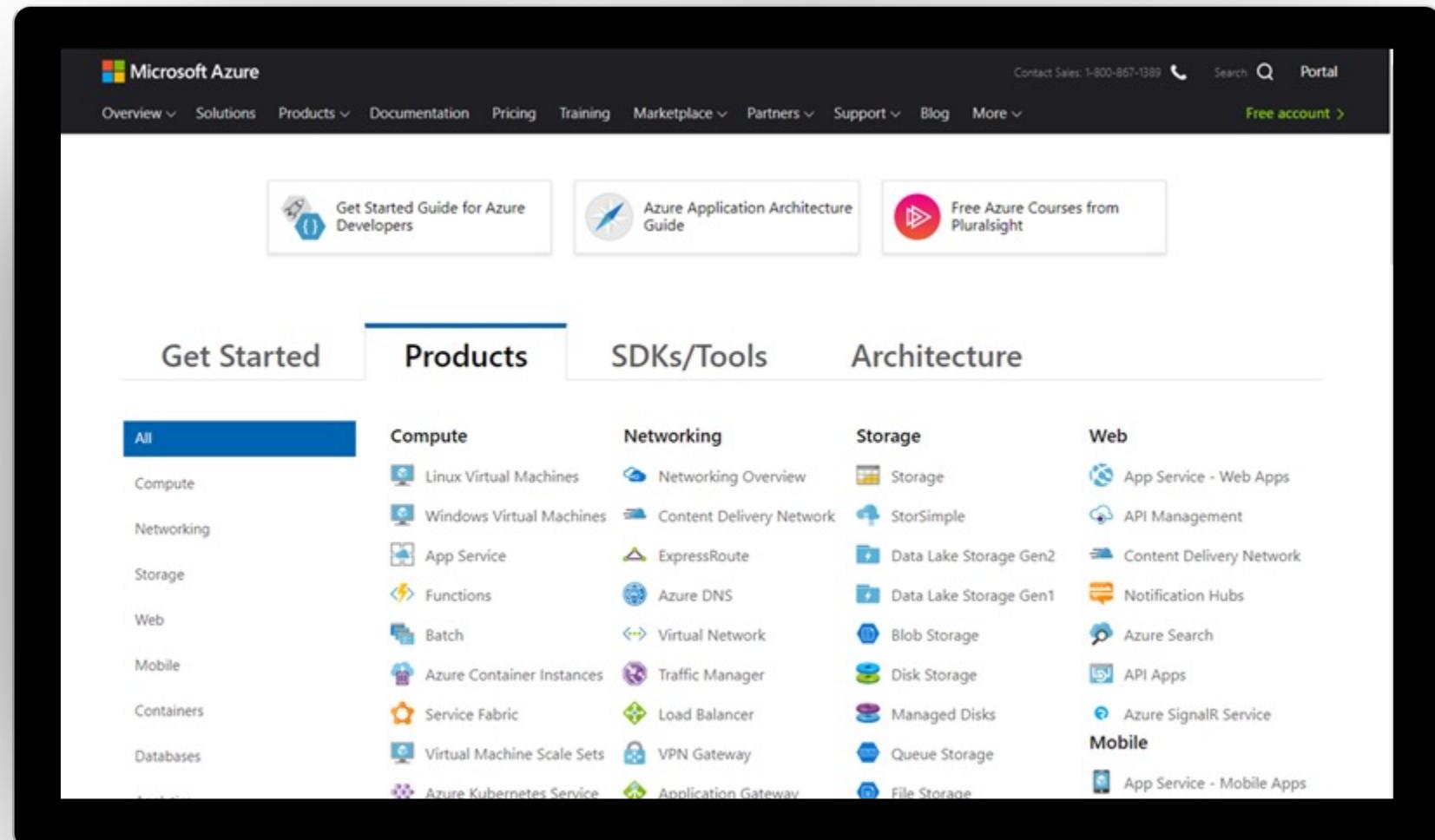


<https://aka.ms/micd/AzureDevOpsDocs>

Documentation - Azure

Use this end-to-end index to learn about all the services available in Azure

- Use this end-to-end feature index to learn about all Azure services.
- If you only save one Favorite in your browser related to Azure, this is the link to save as a favorite!
- Most topics contain Quickstarts and Tutorials allowing you to gain hands-on experience quickly
- Take advantage of the *FREE* training from Pluralsight!



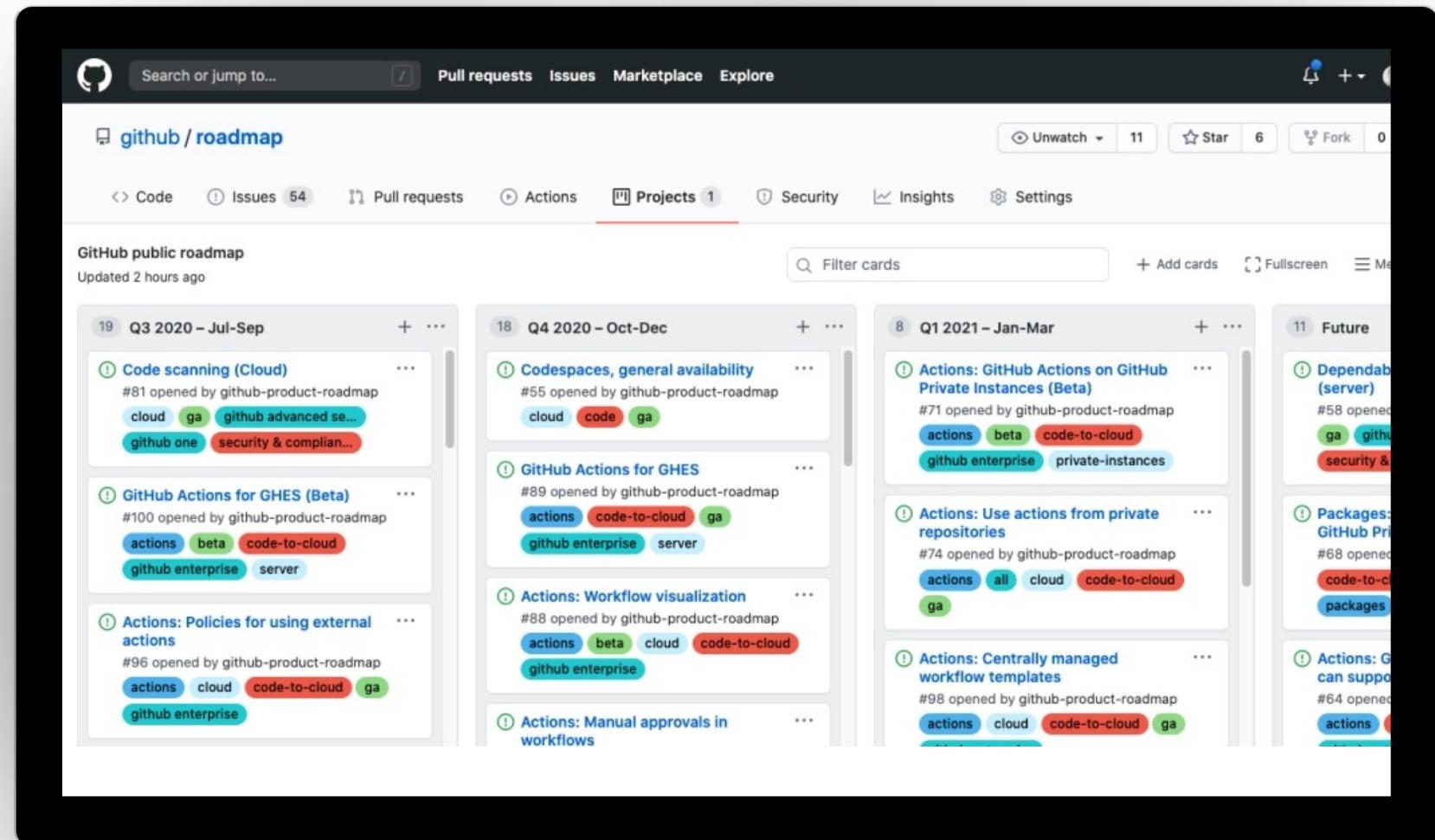
→ <https://aka.ms/micd/AzureDocs>

GitHub Public Roadmap

A public repository on GitHub that anyone can access.

→ Give your team more information about what features and functionality you can expect from GitHub over the coming quarters.

→ With more transparency into what we're building, you can also plan better.

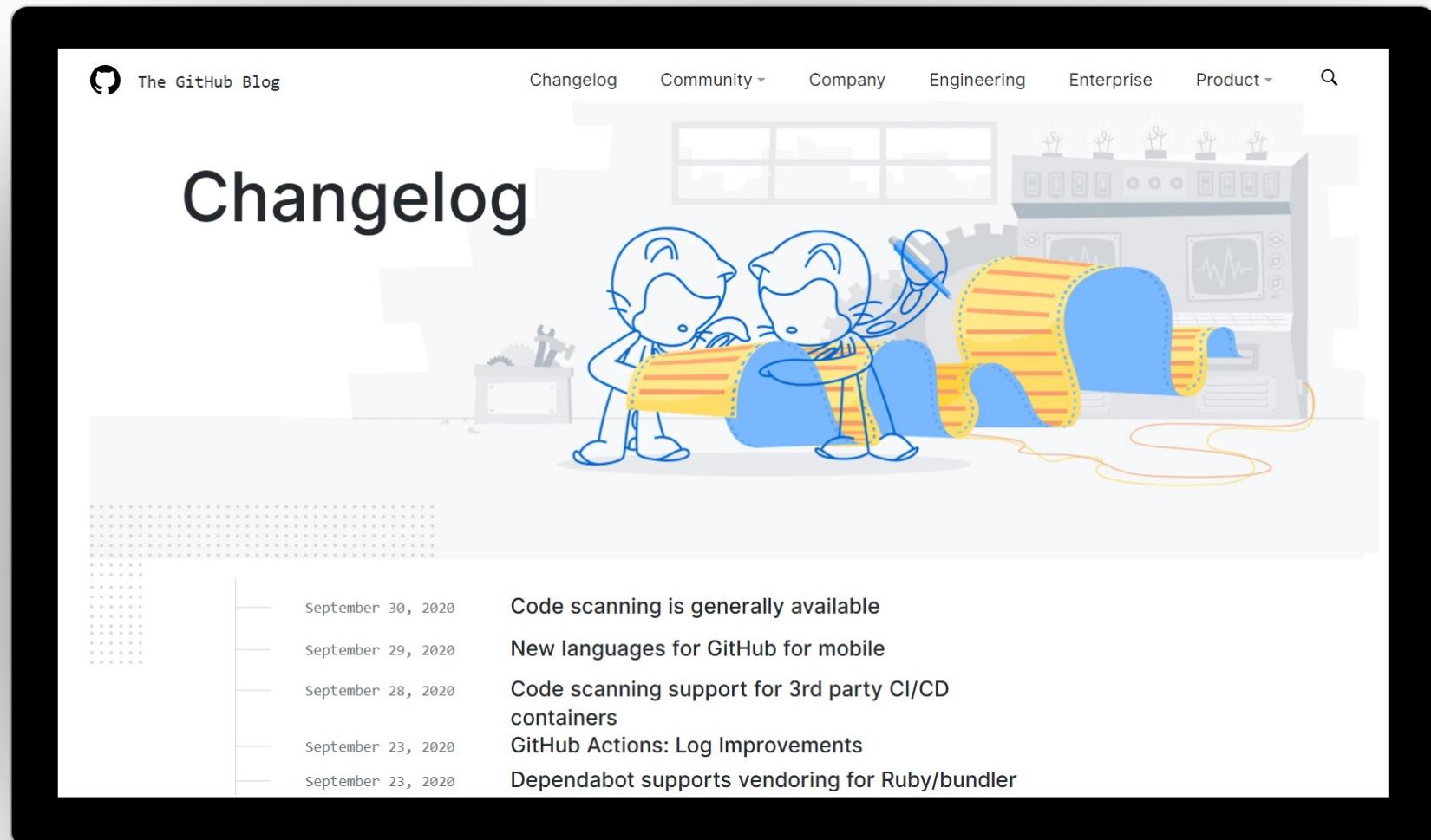


<https://github.com/github/roadmap/projects>

GitHub Changelog

<https://github.blog/changelog/>

- Track the release of new features. These are the GitHub "Release Notes".
- Go to <https://github.blog/> and click on "Changelog".



Learn DevOps in the DevOps Resource Center

This center combines our resources on learning DevOps practices, Git version control, Agile methods, how we work with DevOps at Microsoft, and how you can assess your own DevOps progression

- Learn DevOps - DevOps is the union of people, process, and products to enable continuous delivery of value to our end users
- DevOps at Microsoft - This center will keep you current on how we adopt DevOps at Microsoft
- DevOps Self-Assessment - Get tailored recommendations on how to improve your organization's ability to develop and deliver value to customers, pivot when necessary, and beat competitors to market

The screenshot shows the Microsoft DevOps Resource Center landing page. At the top, there's a navigation bar with links for Microsoft, Visual Studio, Visual Studio Team Services, Features, Pricing, News, Support, Subscriber Access, and a Free Account button. To the right are links for All Microsoft, Search, and Sign in.

The main content area is titled "DevOps Resource Center". It features a sub-header: "This center combines our resources on learning DevOps practices, Git version control, Agile methods, how we work with DevOps at Microsoft, and how you can assess your own DevOps progression. Alternatively, you can jump to documentation on [getting started with DevOps on Azure](#) or to dive in, [start your own Azure DevOps project](#). If you're interested in practices, read on."

The page is organized into several sections with accompanying illustrations:

- Learn DevOps**: DevOps is the union of people, process, and products to enable continuous delivery of value to our end users.
- Learn Git**: Git is a distributed version control system to track changes you make in your code over time.
- Learn Agile**: Agile approaches to software development emphasize incremental delivery, team collaboration, continual planning, and continual learning.
- DevOps at Microsoft**: This center will keep you current on how we work with DevOps at Microsoft.
- DevOps Events and Talks**: Take a look at some of our recent events and talks.
- DevOps Self-Assessment**: Get tailored recommendations on how to improve your organization's ability to develop and deliver value to customers, pivot when necessary, and beat competitors to market.



<http://aka.ms/micd/DevOps>

The DevOps journey at Microsoft

See how teams across Microsoft are transforming through DevOps adoption

- Create a series of “Lunch & Learn” sessions. Watch a video and have a follow up discussion with your team
- Or, treat it like a book club, i.e. have everyone watch a video and read the related narrative, then discuss it over lunch
- Either way, discuss with your team what is/is not applicable to your company, (or, what should be applicable in the future!)

The screenshot shows the Microsoft Azure Solutions page for DevOps. The main title is "The DevOps journey at Microsoft" with the subtitle "See how teams across Microsoft are transforming through DevOps adoption". Below this, there's a section titled "The promise and challenge of DevOps" with a paragraph of text and a "Watch later" video thumbnail. To the right, there are three sections: "How Microsoft does DevOps" (with an icon of a server), "Collaborating across teams" (with an icon of a hexagonal network), "Adopting a growth mindset" (with an icon of a bar chart), and "Enabling change through technology" (with an icon of laboratory glassware). Each section has a brief description.

The promise and challenge of DevOps

By changing the way we work through DevOps, we deliver better products to our customers and better results to the business. But DevOps adoption isn't easy. Beyond implementing new processes and technology, the ultimate key to a successful DevOps practice is embracing a DevOps culture. And cultural change is hard, especially in a large company that's been building technology for decades.

At Microsoft, we know a lot about this challenge. Here are stories of some of the experimentation and learning we've experienced in our ongoing DevOps journey.

How Microsoft does DevOps

Collaborating across teams

Breaking down silos between teams is essential to a successful DevOps adoption. Communication, visibility, and aligning on goals is how teams streamline DevOps collaboration and build better

Adopting a growth mindset

DevOps at Microsoft is about continuous learning. Teams must change the way they work, adopt new processes, and see failure as an opportunity to learn. The journey never ends.

Enabling change through technology

Microsoft teams rely on the best tools available. Azure enables us to reliably operate infrastructure at scale and automate processes. Using and contributing to open source accelerates our ability



<https://aka.ms/micd/DevOpsStories>

DevOps at Microsoft

Learn from our DevOps journey and share our lessons learned with your team

- Create a series of "Lunch & Learn" sessions. Watch a video and have a follow up discussion with your team
- Or, treat it like a book club, i.e. have everyone watch a video and read the related narrative, then discuss it over lunch
- Either way, discuss with your team what is/is not applicable to your company, (or, what should be applicable in the future!)

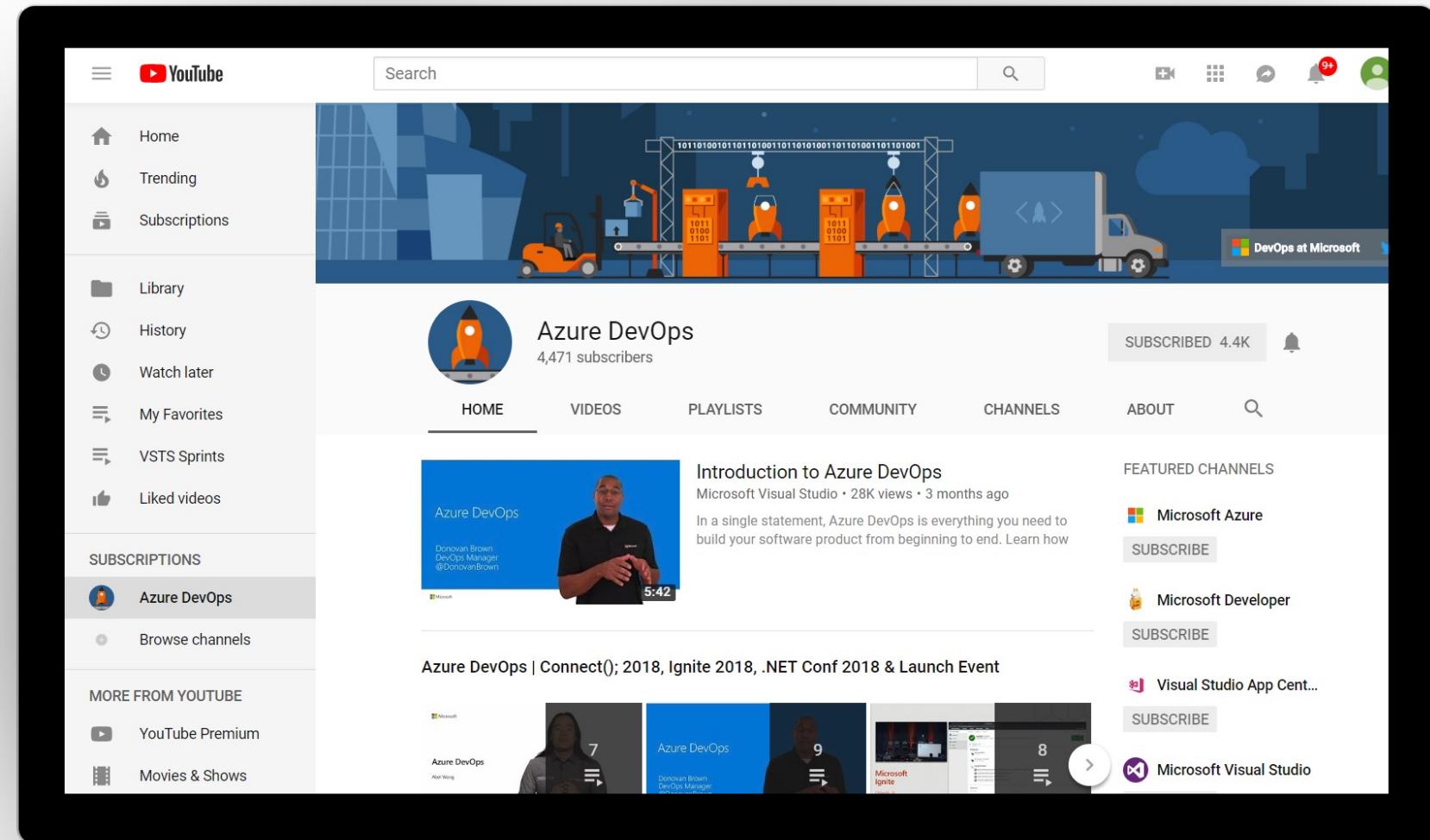
The screenshot shows a Microsoft web page titled 'DevOps at Microsoft'. The page includes a navigation bar with links to Azure, DevOps, Services, Pricing, News, Support, and Subscriber Access. A 'Try for free' button is also present. The main content area features a heading 'DevOps at Microsoft' with a sub-headline '09/09/2018 • 4 minutes to read' and author information 'By: Sam Guckenheimer'. Below the heading, there's a summary text about the DevOps Resource Center, mentioning its purpose of keeping users current on DevOps practices across Microsoft. It highlights the selection of best videos and articles from public conferences and internal training sessions, focusing on practices used in Azure DevOps. The text also notes the transition from Visual Studio Team Services (VSTS) to Azure DevOps. A section titled 'Why We Do DevOps at Microsoft' is shown, featuring a video thumbnail of Martin Woodward speaking at an O'Reilly event. The video title is 'Why Microsoft does DevOps - Martin Woodward (Microsoft)'. On the right side of the page, there's a sidebar titled 'In this article' with links to other DevOps-related content.

→ <http://aka.ms/micd/DevOpsAtMicrosoft>

"Azure DevOps" YouTube channel

Learn more about Azure DevOps through videos

- Events - Keynotes and break out sessions from events such as Connect(); Ignite, .NET Conf and //Build
- DevOps Interviews (Channel 9 Shows) - DevOps Interviews from around Microsoft and the community hosted by Microsoft's Donovan Brown
- DevOps Labs (Channel 9 Shows) - Damian Brady goes deep into various DevOps Pipelines topics
- DevOps On Azure - OSS Projects, Jenkins, Terraform & more

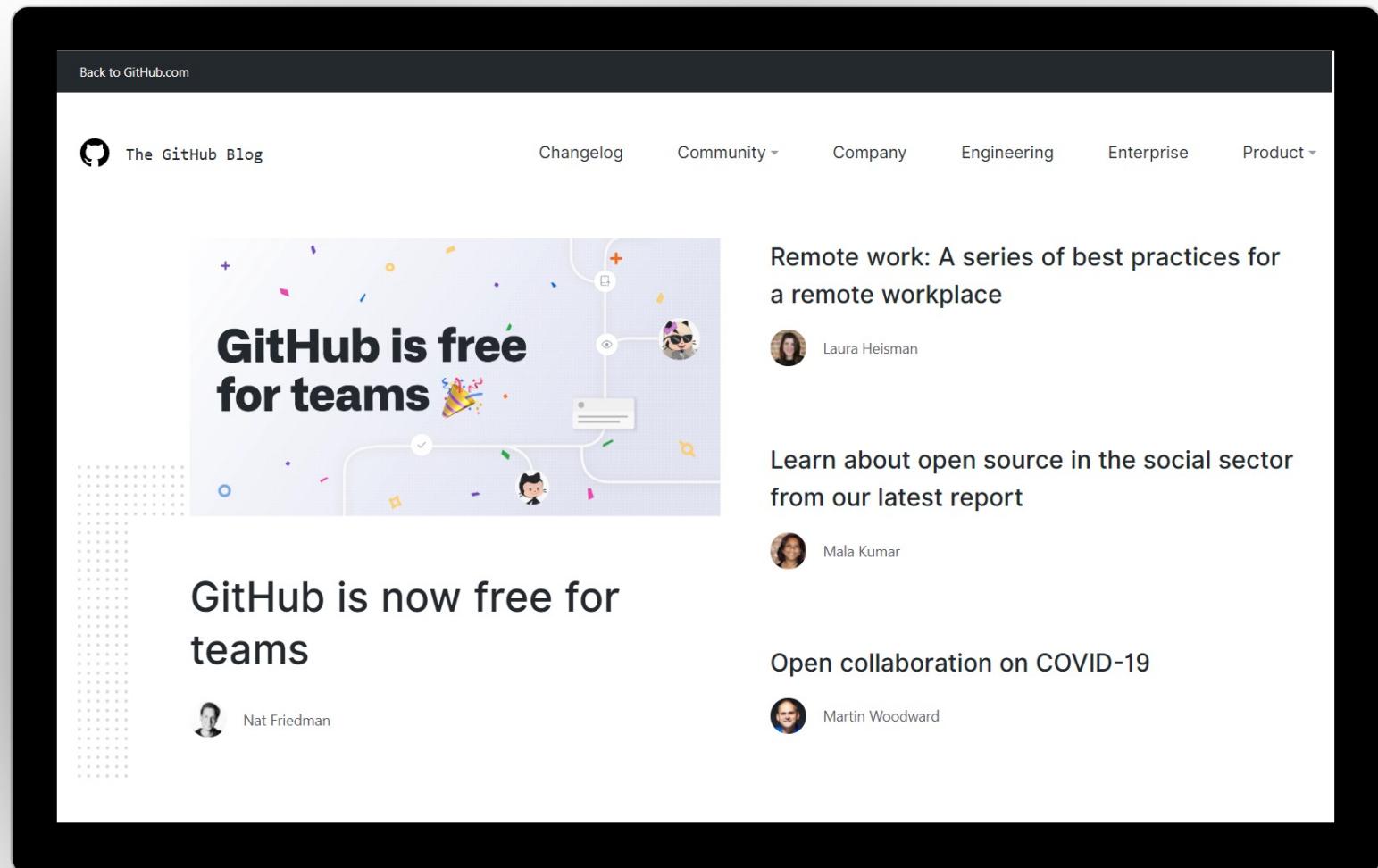


→ <https://aka.ms/micd/AzureDevOpsYouTube>

GitHub Blog

Get the latest news on all things related to GitHub

- Learn about everything GitHub such as...
- Community - Education, Events, Insights, Open source
- Company - Policy, Remote work, Updates
- Product - Editor tools, Features, Security



→ <https://github.blog/>

Azure DevOps Blog

Get the latest news from the teams that build and work with Azure DevOps

→ Learn about new and upcoming features

→ Get a weekly listing of the top Stories from the Microsoft DevOps Community

→ Look for past posts on specific topics such as CI/CD, Git, Open Source, etc.

The screenshot shows the Microsoft DevOps Blog homepage. At the top, there's a navigation bar with links to Latest, CI/CD, Git & Version Control, Agile, Azure & Cloud, Test, Open Source, Community, and TFS. Below the navigation is a large blue header section featuring three people working on laptops. Three thought bubbles above them contain icons related to DevOps, Git, and Agile. The text "DevOps, Git, and Agile updates from the team building VSTS" is displayed in the center of the blue area. Below this, a blog post card for "Azure DevOps Agents on Azure Container Instances (ACI)" by Máté Barabás on January 7, 2019, is shown. The post summary explains how to run Azure DevOps agents on Windows Server Core based containers. To the right of the post, there's a search bar and a "Search" button, followed by a "Other Resources" section with links to Documentation, DevOps in Microsoft, and Visual Studio Home.

→ <https://aka.ms/micd/DevOpsBlog>

<https://aka.ms/optc/5-devopsing-everything-as-code>

Questions?

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Thank you

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