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# AppDev Workshop

**Cloud Native App Dev&Innovation with Azure Apps / DevOps / GitHub**

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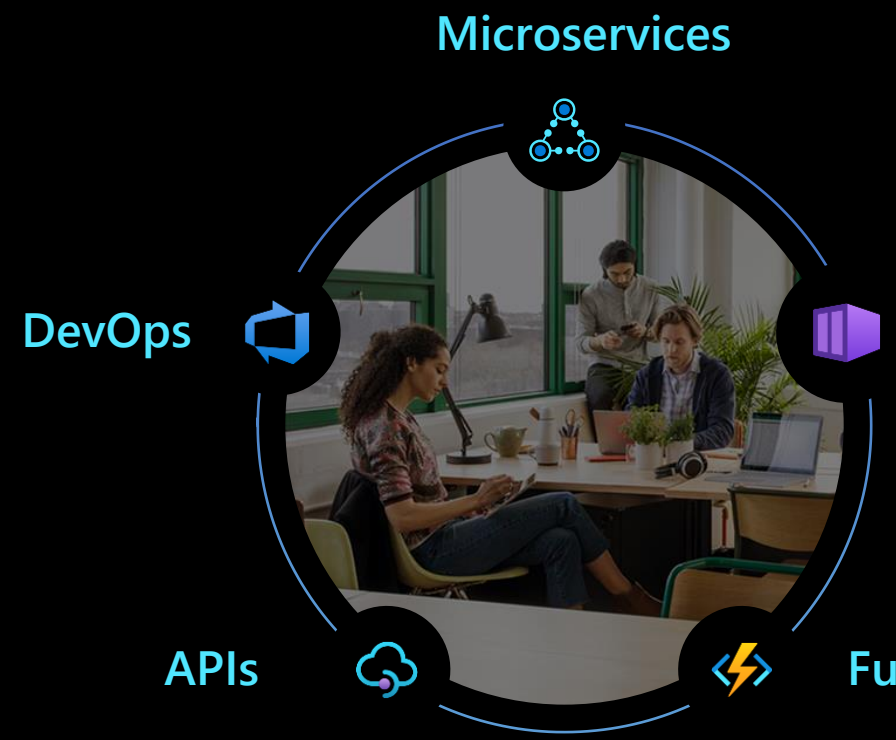
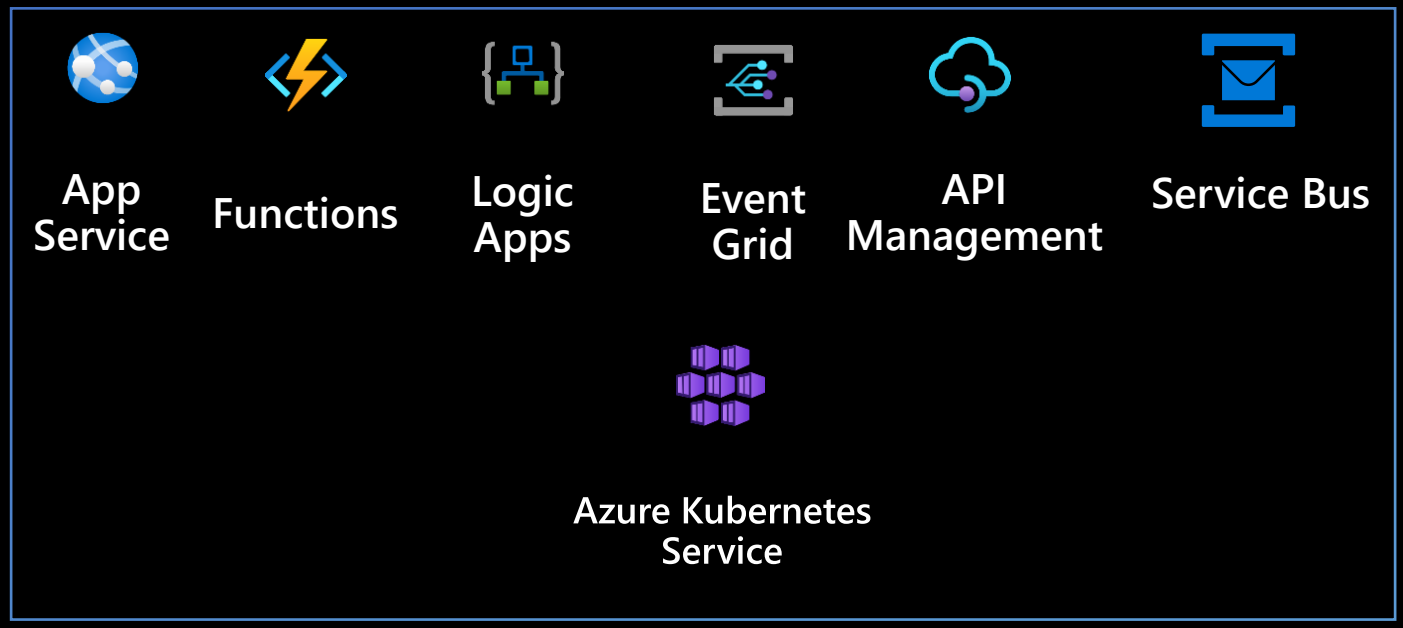
# Build new intelligent cloud-native applications



# Azure application services

**Run your apps, anywhere**



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# Azure App Service

## Build, deploy and scale web applications on a fully-managed platform

### Quickly build secure web apps

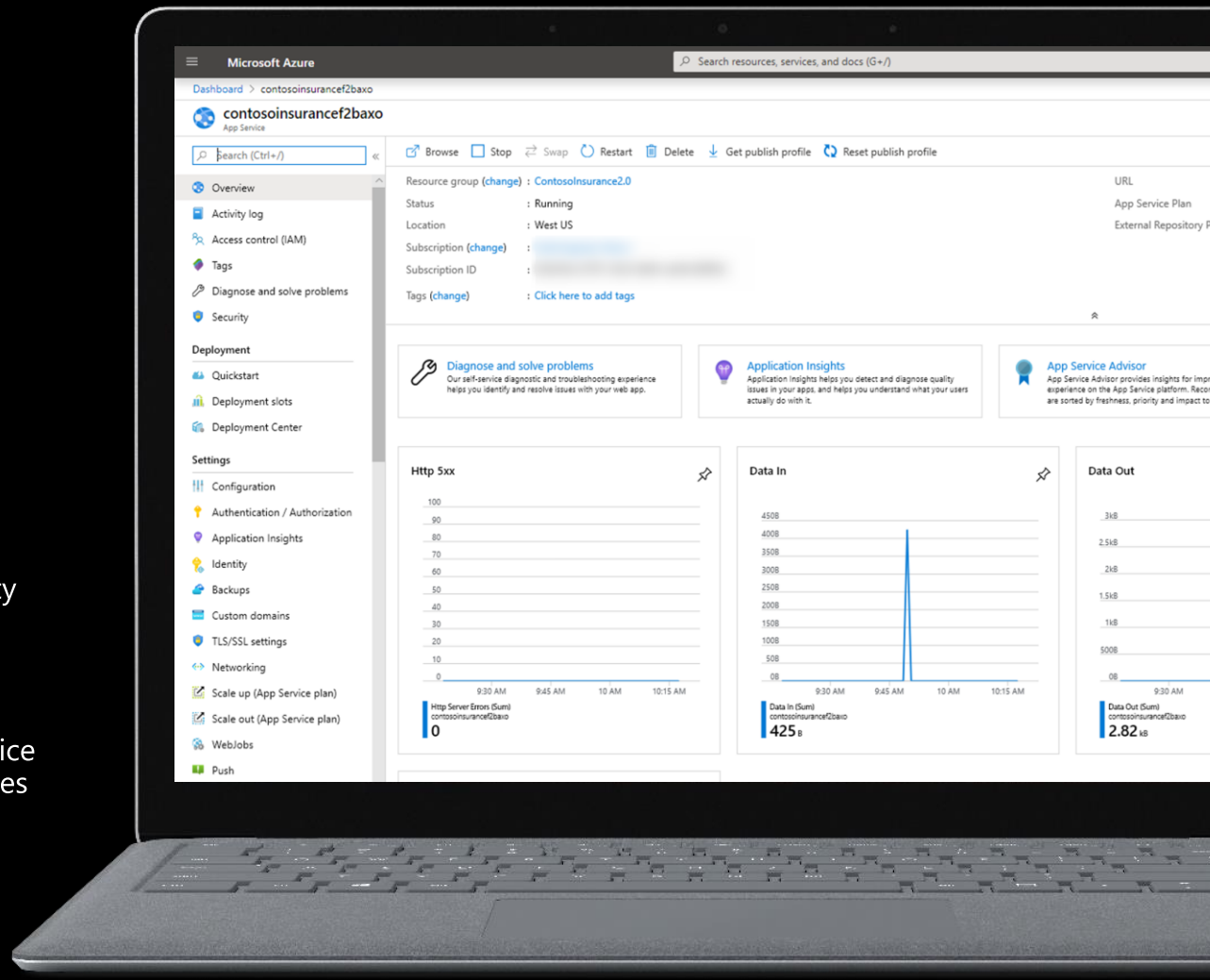
Bring your code using any framework and language. Build with best-in-class Visual Studio tooling and deploy across cloud and hybrid environments

### Simplify operations

Manage applications with built-in CI/CD, infrastructure management, security patching and intelligent diagnostics. Scale globally with a 99.95% uptime

### Modernize existing apps

Migrate existing web apps with minimal to no code changes using App Service Migration Assistant. Extend app functionality and build innovative experiences with easy-to-use Serverless and Cognitive Services



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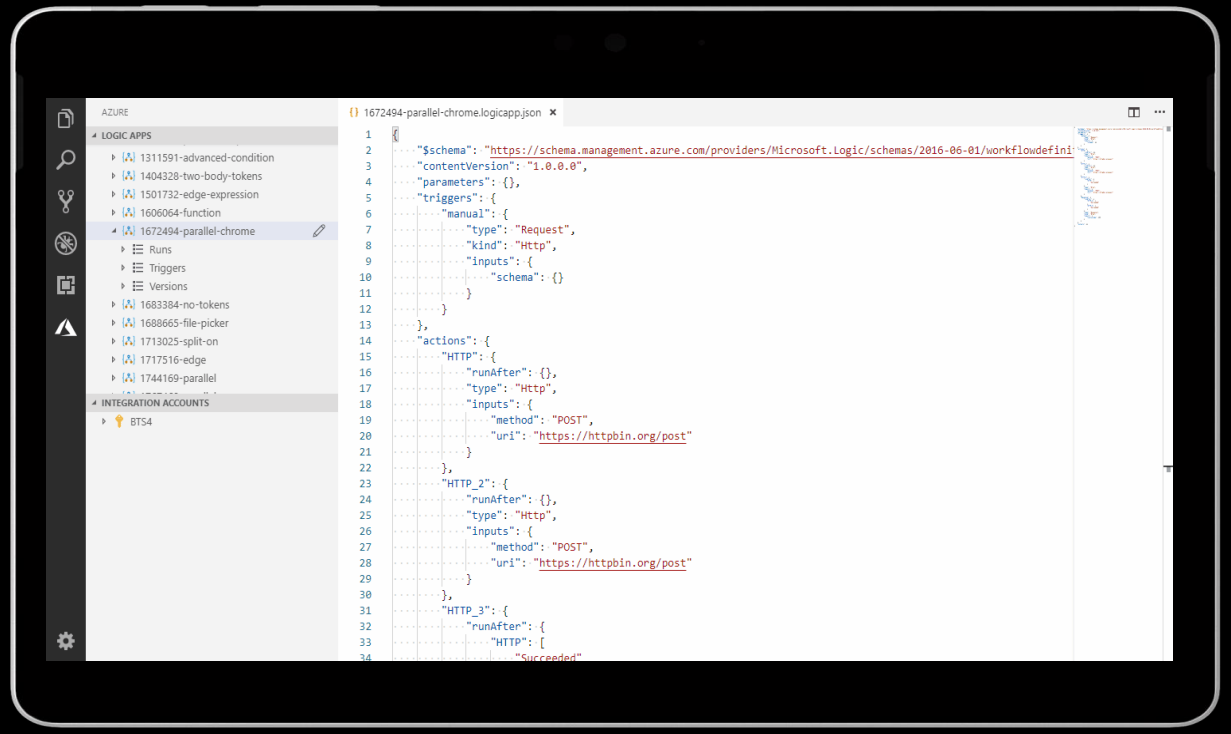


# Logic Apps

**Build automated scalable workflows, business processes, and enterprise orchestrations to integrate your apps and data across cloud services and on-premises systems**

## Workflow

A workflow is a series of steps that defines a task or process. Each workflow starts with a single trigger, after which you must add one or more actions

## Trigger

A trigger is always the first step in any workflow and specifies the condition for running any further steps in that workflow. For example, a trigger event might be getting an email in your inbox or detecting a new file in a storage account

## Action

An action is each step in a workflow after the trigger. Every action runs some operation in a workflow

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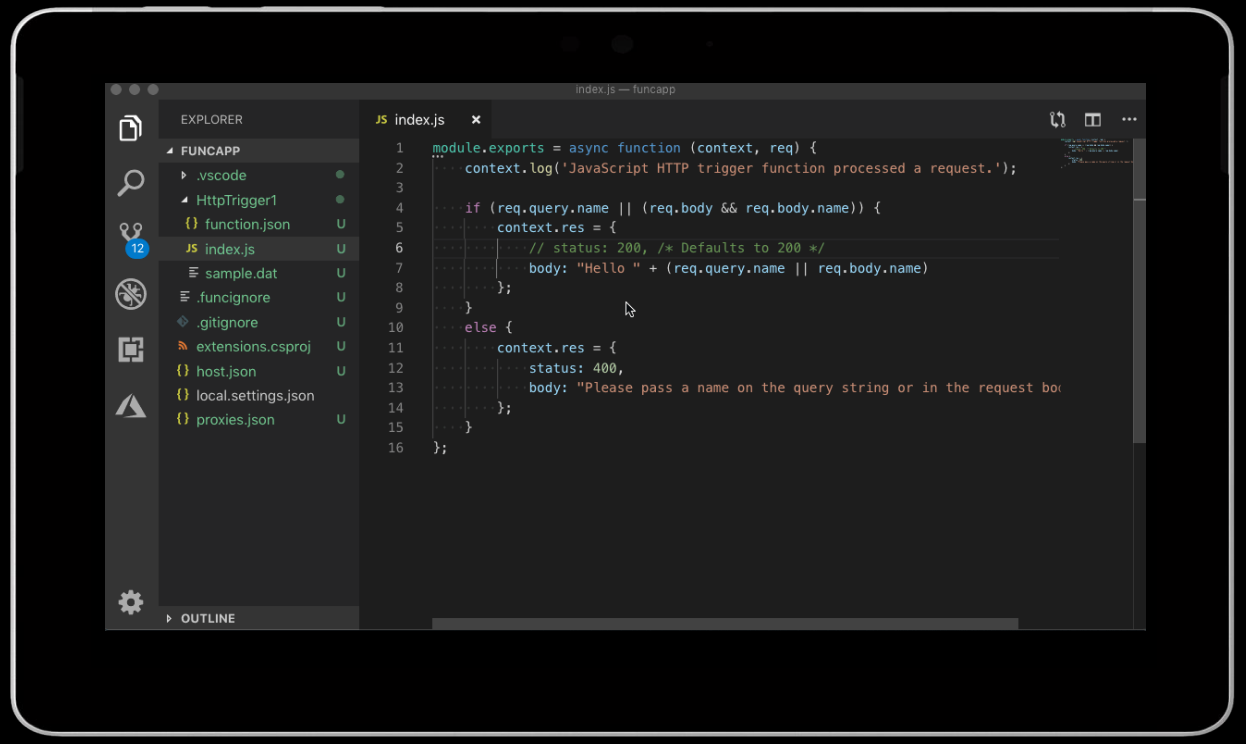



# Azure Functions

**Accelerate and simplify application development with event-driven serverless compute**

## Simplify app development

Save coding time with a programming model based on triggers and bindings, responding to events and connecting other services seamlessly. Use the technology stack you already know and love

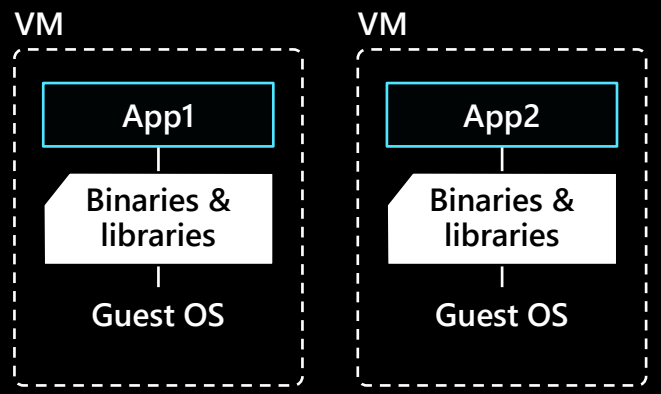
## Increase development productivity

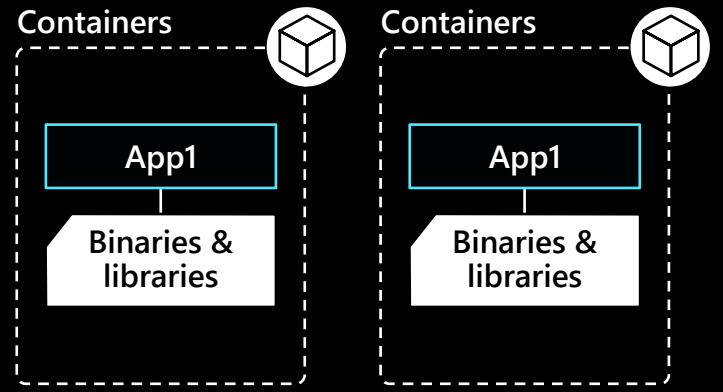
Take advantage of an end-to-end development experience—from building and debugging locally, to deploying and monitoring in the cloud. Simplify complex stateful coordination with Durable Functions

## Build once, deploy anywhere

Deploy the same code to multiple targets: public cloud, your own infrastructure, Kubernetes, Azure Stack, or Azure IoT Edge

# What is a container?




## Virtual machines

Virtualize the hardware

VMs as units of scaling

## Containers

Virtualize the operating system

Applications as units of scaling

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# Azure Container Instances

**Run Docker containers on-demand in a managed, serverless Azure environment**

## Hypervisor-level security

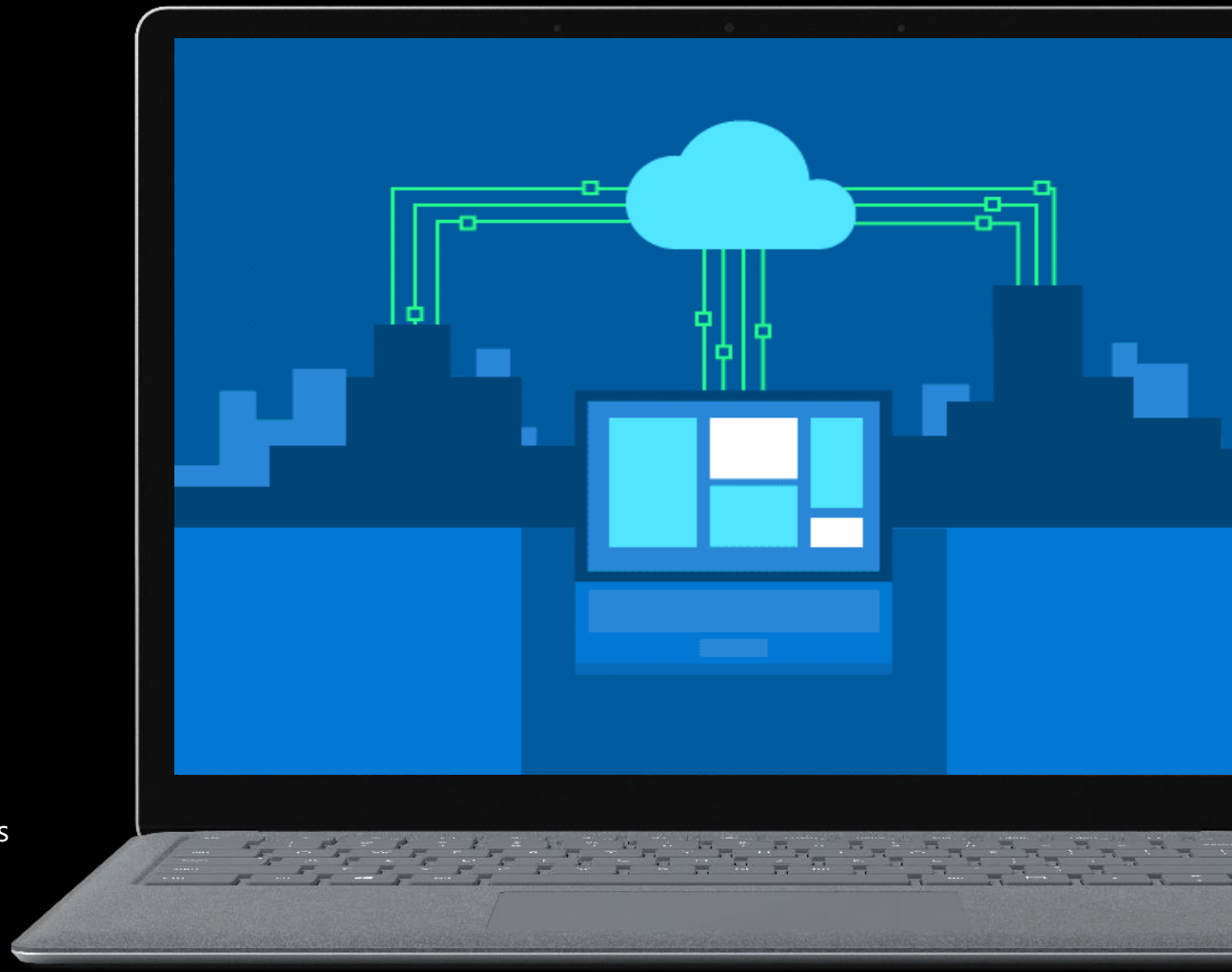
containers have offered application dependency isolation and resource governance but have not been considered sufficiently hardened for hostile multi-tenant usage

## Custom sizes

Azure Container Instances provides optimum utilization by allowing exact specifications of CPU cores and memory

## Linux and Windows containers

Azure Container Instances can schedule both Windows and Linux containers with the same API



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# Azure API Management

API consumers

AZURE API MANAGEMENT

| Facade | Middleware | Monitoring | Developer |
|---|---|---|---|
| decouple | secure | usage | discover |
| modernize | protect | health | document |
| optimize | cache | monetization | on-board |
| ... | ... | ... | ... |

| APIs on Azure | Azure APIs | On-prem APIs | 3rd party APIs |
|---|---|---|---|

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# End-to-end, code-to-cloud DevOps

## Automating workflows from code to any cloud

### Home for all developers
### Home for the world's code

- Elastic, to any scale
- Fully managed
- Always the latest packages
- Supports all OS for CI/CD
- Largest ecosystem
- Community-led automation


### Deploy anywhere, including your own data centers

- On-prem
- Azure
- AWS
- Google Cloud Platform

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# Azure DevOps

# Azure DevOps

Azure Boards

Plan, track and discuss work

Azure Pipelines

Build, test and deploy with CI/CD

Azure Repos

Cloud-hosted repos

Azure Artifacts

Create, host and share packages