



Azure

Your vision. Your cloud.



**2 Mil**  
kilometers  
intra-datacenter fiber

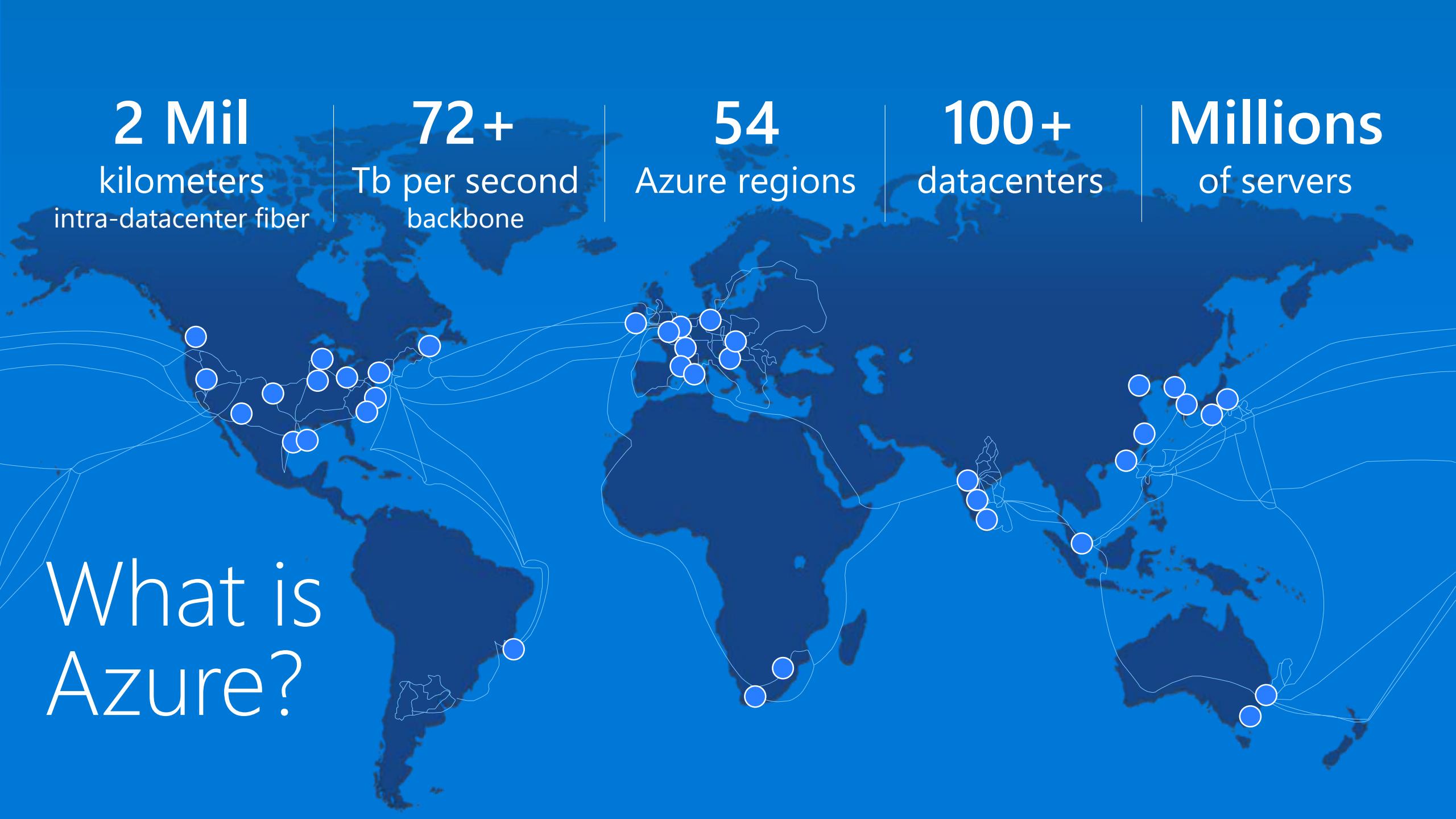
**72+**  
Tb per second  
backbone

**54**  
Azure regions

**100+**  
datacenters

**Millions**  
of servers

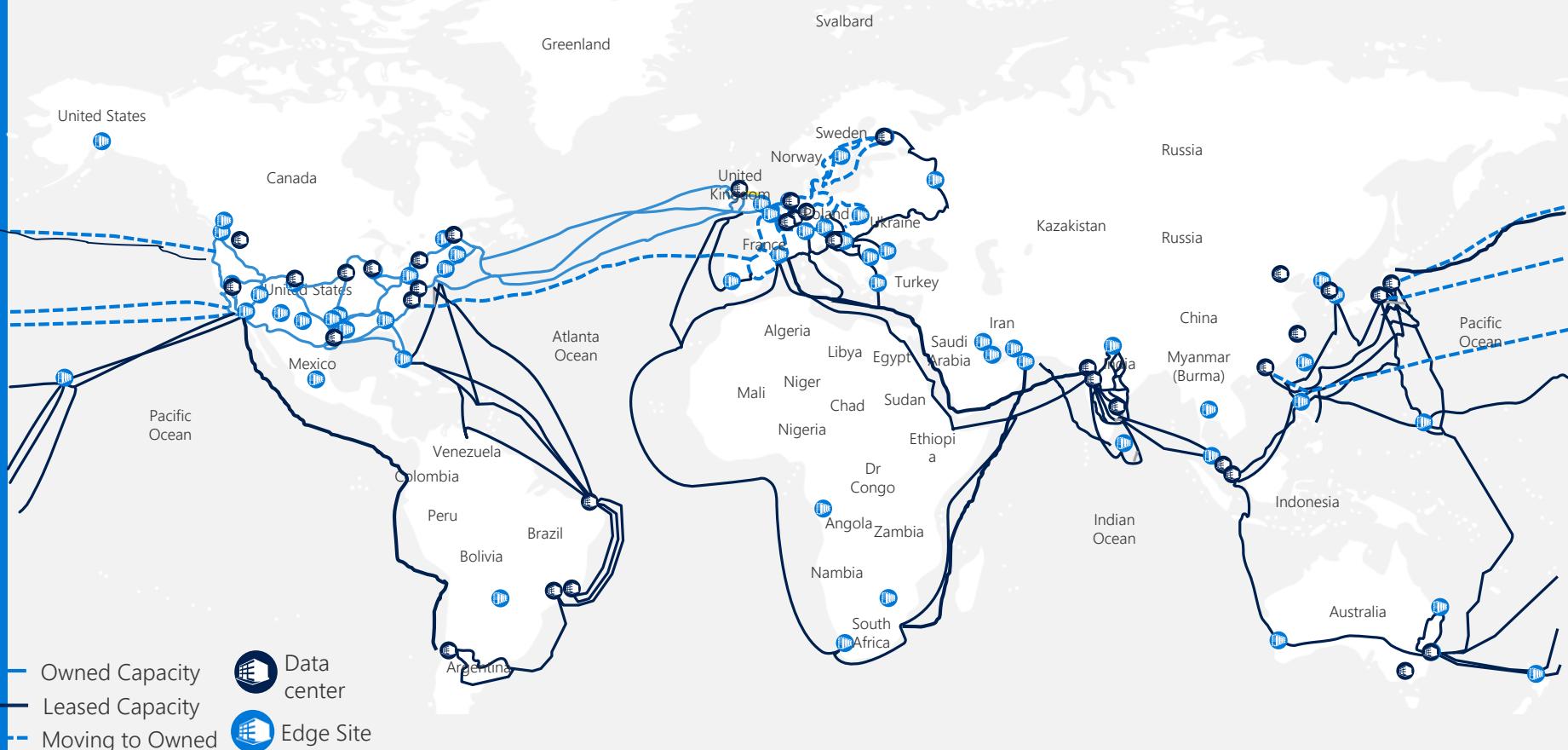
What is  
Azure?



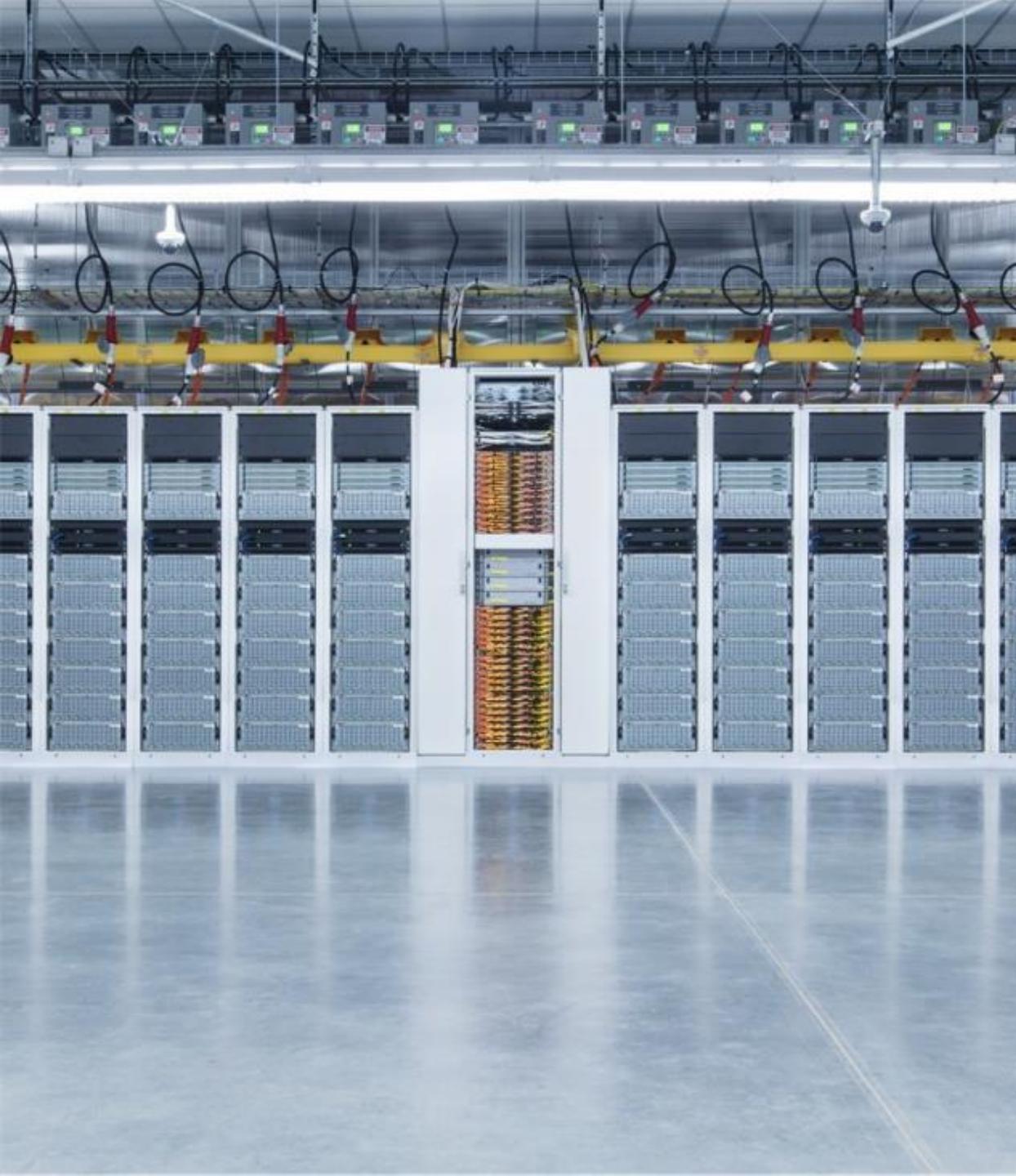
# Microsoft Global Network

**One of the largest private networks in the world**

- 8,000+ ISP sessions
- 130+ edge sites
- 44 ExpressRoute locations
- 33,000 miles of lit fiber
- SDN Managed (SWAN, OLS)



*DCs and Network sites not exhaustive*



Project Olympus: Next generation  
rack level hardware solution



# What is it really ?

## REST API Browser Preview

Welcome to the REST API Browser – your one-stop shop for REST APIs from Microsoft. Start searching for any REST APIs by typing in the box below. If you have any feedback, create a new issue in the [MicrosoftDocs/feedback repo on GitHub](#).

Azure ▾

Search

## Azure REST API Reference

Name	Description
Advisor Service	Azure Advisor is a personalized cloud consultant that helps you follow best practices to optimize your Azure deployments. For a more detailed overview, see the <a href="#">Azure Advisor product page</a> .
AKS Service	AKS manages your hosted Kubernetes environment, making it quick and easy to deploy and manage containerized applications without container orchestration expertise. It also eliminates the burden of ongoing operations and maintenance by provisioning, upgrading, and scaling resources on demand, without taking your applications offline.
Analysis Services Service	Built on the proven analytics engine in Microsoft SQL Server Analysis Services, Azure Analysis Services provides enterprise-grade data modeling in the cloud.
API Management Service	Azure API Management provides a REST API for performing operations on selected entities, such as users, groups, products, and subscriptions. This reference provides a guide for working with the API Management REST API, as well as specific reference information for each available operation, grouped by entity.
App Service Service	Azure App Service lets you run web apps, mobile app back ends, and API apps in Azure. For a more detailed overview, see the <a href="#">Azure App Service product page</a> .
Application Gateway Service	Application Gateway is a Network Service which provides HTTP Load balancing as a Service to Azure customers. This is a fully managed service implemented as dedicated Hosted Service in a subscription owned by Gateway Manager but deployed in customer vnet. In addition to basic HTTP Load balancing, it provides other Layer 7 features like Cookie based client affinity and SSL offload, URL routing and multi-site hosting.
Application Insights Service	REST API functions available for Azure Application Insights

# How ?

The screenshot shows the Microsoft Azure Portal interface. On the left, there's a sidebar with various service icons like Resource groups, All resources, Recent, Web Apps, etc. The main area displays the 'Documentation' page for Ansible 2.5. It features a large search bar at the top and a sidebar with sections for Installation, Upgrade & Configuration, and Using Ansible. The main content area contains the Ansible documentation itself.

The screenshot shows the Azure Command Line Interface (CLI) running in a terminal window. The command history includes creating a resource group ('az group create') and a virtual machine ('az vm create'). Below the CLI, a search result for 'Ansible' is shown in the Azure portal's search interface. The results list various Azure commands related to Ansible, such as 'azurerm' and 'azure\_rm'. To the right, there are sections for 'Top languages' (C#, Java, JavaScript, Python, PowerShell) and 'Most used topics' (azuractive-directory, identity, microsoft, azure-ad-b2c, azure). A search bar at the bottom is partially visible.

## Security & Management

-  Security Center
-  Portal
-  Azure Active Directory
-  Azure AD B2C
-  Multi-Factor Authentication
-  Automation
-  Scheduler
-  Key Vault
-  Store/ Marketplace
-  VM Image Gallery & VM Depot

## Platform Services

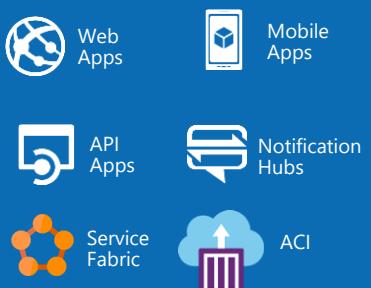
### Media & CDN



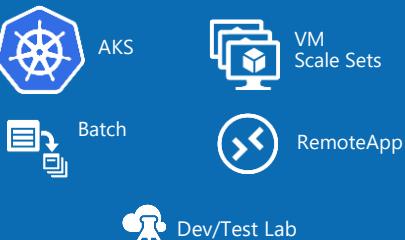
### Integration



### Application Platform



### Compute Services



### Developer Services



### Data



### Intelligence



### Analytics & IoT



## Hybrid Cloud



### Compute



### Storage



### Infrastructure Services



### Networking



## Datacenter Infrastructure



# Azure roadmap

As Azure continues to grow, we want to keep you informed—so that we can plan for the future together. This product roadmap is the place to find out what's new and what's coming next. Let us know what you think by providing feedback and voting on items. You can also subscribe to notifications, so you'll always be the in the know.

Product Category

Status

Search

 [Subscribe](#)

## Azure France Central and France South regions now generally available

Date updated: Friday, March 23, 2018

Azure regions in France Central and France South are now generally available.

## Explore

Check out recent Azure releases.

[Azure updates >](#)

Tell us what you think of Azure and what you want to see in the future.

Azure is available in more regions than any other cloud provider.

[Check product availability in your region >](#)

Read the Azure blog for the latest news.

[Blog >](#)

## Azure Database for MySQL and Azure Database for PostgreSQL are now generally available

Date updated: Friday, March 23, 2018

Azure Database for PostgreSQL and Azure Database for MySQL are now generally available.

Now available

## Tags

All

[API Management](#)

[App Service](#)

[Application Insights](#)

[Azure Active Directory](#)

[Azure Active Directory B2C](#)

[Azure AD](#)

[Azure Availability Zones](#)

## Azure Migrate

Date updated: Friday, March 9, 2018

Azure Migrate, a discovery and assessment tool that will help you confidently plan your migration, is now generally available.

Now available

Azure Managed Applications

# Preview features

To obtain your feedback, Azure offers the following preview features to you for evaluation purposes. A preview may include preview, beta, or other pre-release features, services, software, or regions. Previews are subject to reduced or different service terms, as set forth in your service agreement and the [preview supplemental terms](#). Previews are made available to you on the condition that you agree to these terms of use, which supplement [your agreement](#) governing the use of Azure.



## Azure SQL Database Managed Instance

Managed Instance is a new deployment option in Azure SQL Database that provides SQL Server compatibility and native virtual network support. Move your SQL Server workloads to an intelligent, fully managed service without rearchitecting your apps and use the new vCore-based performance tiers for easy translation of on-premises requirements to the cloud. Save up to 30 percent today by moving your SQL Server databases to Managed Instance with Azure Hybrid Benefit for SQL Server. If you're already using Azure, [try Managed Instance](#) from the portal today. If you're new to Azure, [create a free account](#) first.

[Learn more >](#)[Try it >](#)

**<https://azure.microsoft.com/services/preview/>**



## Azure Location Based Services

Add maps, location search, routing, and traffic capabilities to your applications with Azure Location Based Services—a portfolio of geospatial services APIs that integrate seamlessly with other Azure tools and services. Enhance your IoT, mobility, asset tracking, and logistics solutions with geospatial services that use familiar REST APIs and give you JavaScript Map Controls.

[Learn more >](#)[Try it >](#)

## IoT Edge

IoT Edge extends cloud intelligence to edge devices. It enables cloud services to run locally on your Windows and Linux IoT devices. Develop and test workloads in the cloud, then deploy to the edge seamlessly via Docker-compatible containers to distribute intelligence across your edge devices. Integrate Microsoft Azure and third-party services, or augment existing services to create a custom IoT application with your own business logic.

[Learn more >](#)[Try it >](#)

 Share  Fullscreen  Clone  Delete

## Send us feedback

Thank you for taking the time to give us feedback about the Azure portal.



If you need help, please contact [Support](#).



---

Are you satisfied with your experience?



Tell us about your experience...

## (General Feedback)

New and returning users may [sign in](#)

Do you have an idea or suggestion based on your experience with Azure? We would love to hear it! Please take a few minutes to submit your idea in the one of the forums available on the right or vote up an idea submitted by another Azure customer. All of the feedback you share in these forums will be monitored and reviewed by the Microsoft engineering teams responsible for building Azure.

This forum (General Feedback) is used for any broad feedback related to Azure. If you have feedback on a specific service such as Azure Virtual Machines, Web Apps, or SQL Database, please submit your feedback in one of the forums available on the right.

**Remember that this site is only for feature suggestions and ideas!**

If you have technical questions or need help with Azure, please try [StackOverflow](#) or visit our [MSDN forums](#)

### I suggest you ...

- enter your idea (new feature, new scenario, etc) -

### (General Feedback)

[Post a new idea...](#)

[All ideas](#)

[My feedback](#)

Availability 582

azure.microsoft.com 652

Offers 282

Other 293

Search



[Give feedback](#)

# <https://feedback.azure.com>

634

votes

[Vote](#)

### Allow e-mail unsubscribe

I have received three e-mails in one day from azure. One about downtime (I have no services right now), and two advertising features. None of these e-mails have unsubscribe buttons, and I cannot find a way to suppress them in the account page. All contact checkboxes are un-checked.

60 comments · Flag idea as inappropriate...



PLANNED

· Kimberly Bolton (Admin, Azure Feedback Forum, Microsoft Azure) responded

Thank you everyone for your feedback. The email in question is called "Product and service updates" that is sent every two weeks. While it does not currently have an unsubscribe link, the team is actively working to resolve the issue. Thank you for your patience.

319

votes

[Vote](#)

### Datacenter in Russia

In Russia we have law act about storing some sensitive data(such as personal information , IPR and others) in Russia located Data Centers only.

Does any plans to support it ? Does any plans to create Russia Region in Azure Portal for some services such as

[Analytics Platform System](#) 3

[API Apps](#) 0

[API Management](#) 276

[Application Insights](#) 293

[Automation](#) 310

[Azure Active Directory](#) 1,473

[Azure Active Directory Application Requests](#) 166

[Azure Alert Management](#) 21

[Azure Analysis Services](#) 74

[Azure Backup and SCDPM](#) 372

[Azure Bot Service](#) 35

[Azure Cloud Shell](#) 55

[Azure Container Instances](#) 24

[Azure Container Registry](#) 21

[Azure Cosmos DB](#) 240

[Azure Cosmos DB: DocumentDB API](#) 4

[Azure Cosmos DB: Graph API](#) 1

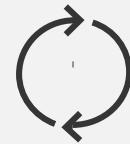
[Azure Cosmos DB: MongoDB API](#) 0

# Our approach to open source...



## Enable

open source use cases in the cloud



## Integrate

open source technologies in our platform



## Release

innovative technologies as open source

Draft  
R Server  
.NET Core  
CNTK  
Roslyn  
TypeScript  
F#  
  
PowerShell  
ACS Engine  
Graph Engine  
PowerBI Visuals  
Office UI Fabric  
MSR projects



## Contribute

to the open source ecosystem



OPEN SOURCE ECOSYSTEM

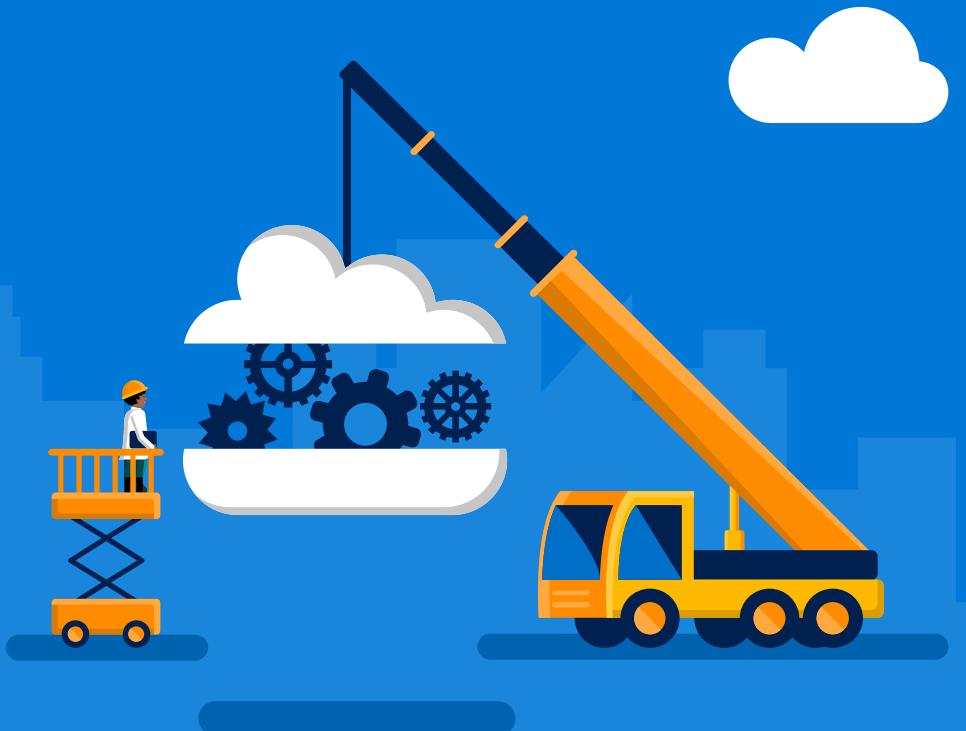


# Microsoft OSS Fun Facts

1. Has the most GitHub contributors (16000), second most projects (3000). Internally we track 10000 OSS components cross company
2. Is a member of the Linux Foundation, Cloud Native Computing Foundation, Cloud Foundry Foundation, Apache Software Foundation, MariaDB and .NET Foundation
3. More than 50% of Azure VMs are Linux, more than 1 in 2 VMs created last quarter were Linux.
4. The Executive Vice President of the Apache Software Foundation is in the Azure Compute team
5. The Windows team has Docker contributor rights
6. The co-creator of Kubernetes, Brendan Burns, is the development manager of Azure Resource Manager and Azure Container Service

# "Some" Azure services

Alexander Young



## Security & Management

Security Center

Portal

Azure Active Directory

Azure AD B2C

Multi-Factor Authentication

Automation

Scheduler

Key Vault

Store/ Marketplace

VM Image Gallery & VM Depot

## Media & CDN



Media Services



Media Analytics



Content Delivery Network

## Integration



API Management



BizTalk Services



Logic Apps



Service Bus

## Application Platform



Web Apps



Mobile Apps



API Apps



Notification Hubs



Service Fabric



ACI

## Data



Azure DB Service:  
SQL/MySQL/  
Postgres/MariaDB



SQL Data  
Warehouse



Redis Cache



Storage  
Tables



Cosmos DB



Azure  
Search

## Intelligence



Cognitive Services



Bot Framework



Cortana

## Analytics & IoT



HDInsight



Machine  
Learning



Stream Analytics



Data Catalog



Data Lake  
Analytics Service



Data Lake  
Store



IoT Hub



Event Hubs



Data Factory



Power BI  
Embedded

## Developer Services



Visual Studio



Mobile  
Engagement



Azure Dev/Ops



Xamarin



Application  
Insights



HockeyApp

## Compute

Virtual Machines

Containers

## Storage

Blob

Queues

Files

Disks

## Networking

Virtual Network

Load Balancer

DNS

Express Route

Traffic Manager

VPN  
Gateway

App  
Gateway

## Datacenter Infrastructure



## Hybrid Cloud

Azure AD Health Monitoring

AD Privileged Identity Management

Domain Services

Backup

Operational Analytics

Import/Export

Azure Site Recovery

StorSimple

# Networking infrastructure services



## Virtual Network

Provision private networks, optionally connect to on premise datacenters. NSG, User Defined Routes, & IP addresses.



## Load Balancer

Deliver high availability and network performance to your applications



## Application Gateway/WAF

Build scalable and highly-available web front ends in Azure



## DDoS Protection

Protect your Azure resources from DDoS attacks



## VPN Gateway

Establish secure, cross-premise connectivity



## Azure DNS

Host your DNS domain in Azure



## Content Delivery Network

Ensure secure, reliable content delivery with broad global reach



## Traffic Manager

Route incoming traffic for high performance and availability



## ExpressRoute

Dedicated private network fiber connections to Azure

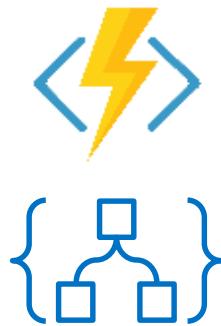


## Network Watcher

Network performance monitoring and diagnostics solution

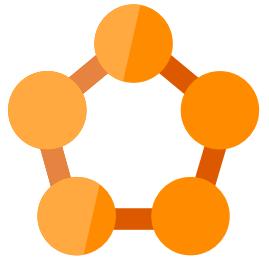


App Service

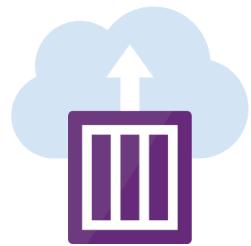


Functions  
Logic Apps

Clusterless &  
Serverless



Service Fabric

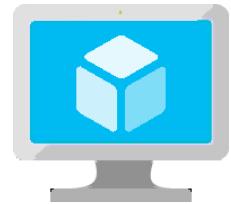


Container  
Instances

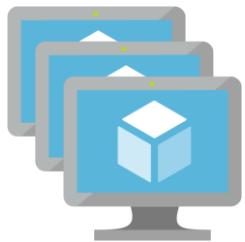


Kubernetes

Managed  
Containers



VMs



VM  
Scale Set

Infrastructure

# Virtual Machines

Multiple families and sizes, GPUs

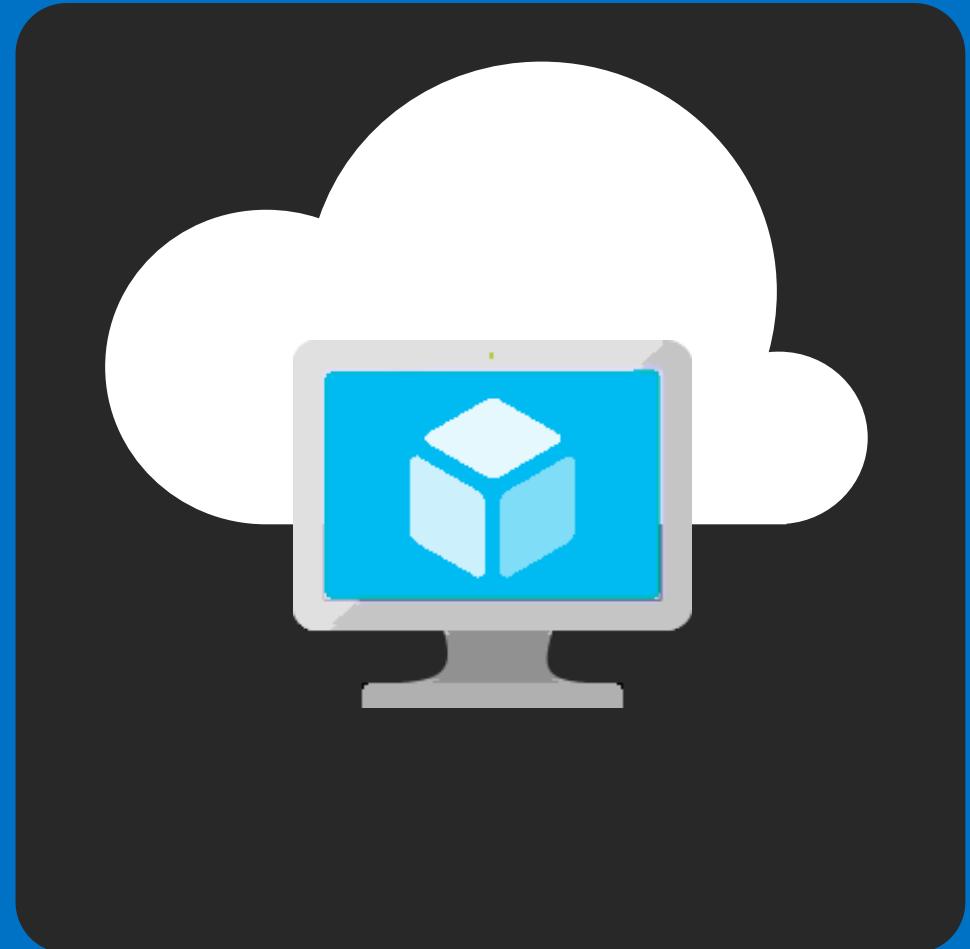
HDD/SSD, Managed/Unmanaged Disks, Accelerated Networking

Availability Sets, scheduled events, planned maintenance

Ubuntu, Red Hat, Windows, SUSE, CoreOS

VM Extensions

DevOps Extensions with Chef and Puppet



# VM Scale Sets

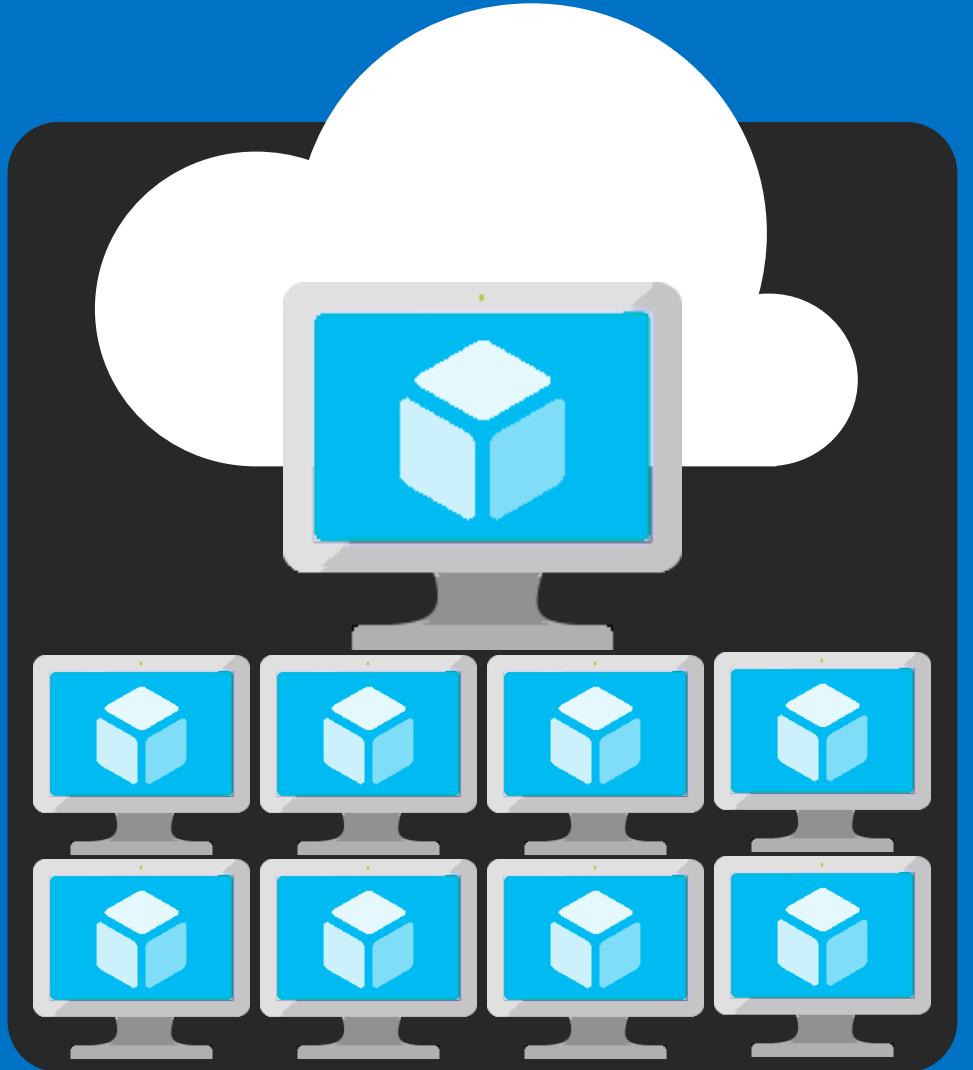
A single resource to provision up to 1000 VMs

Auto-configuration at scale

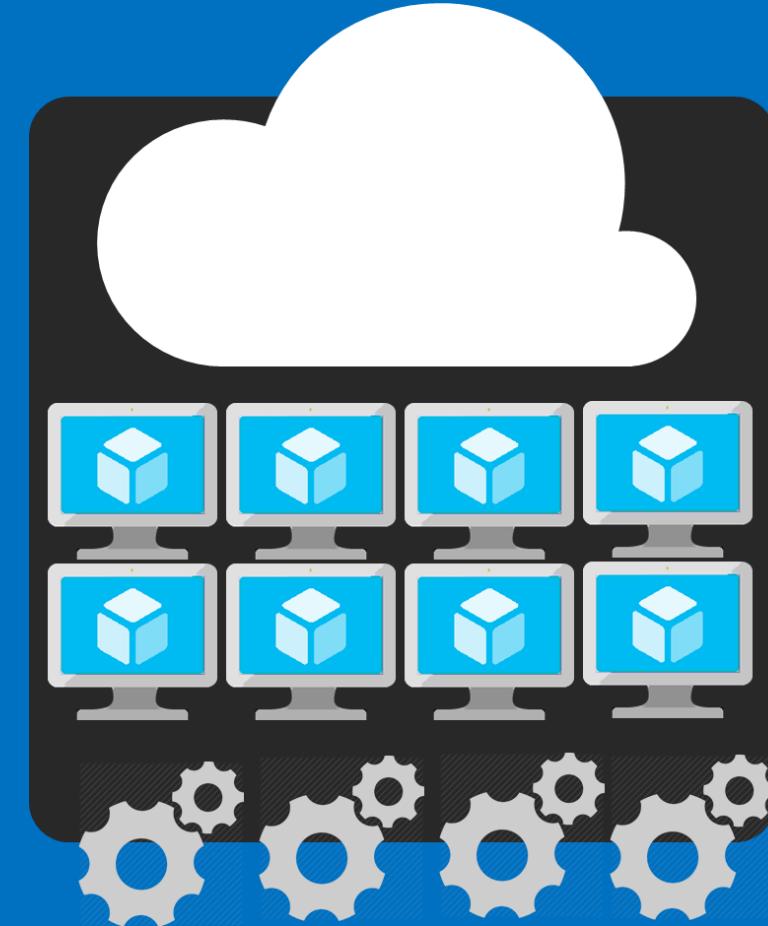
Auto-scale based on schedule and resource metrics

**NEW:** Span AvailabilityZones

**PREVIEW:** Low-priority scale set with up to 80% discount

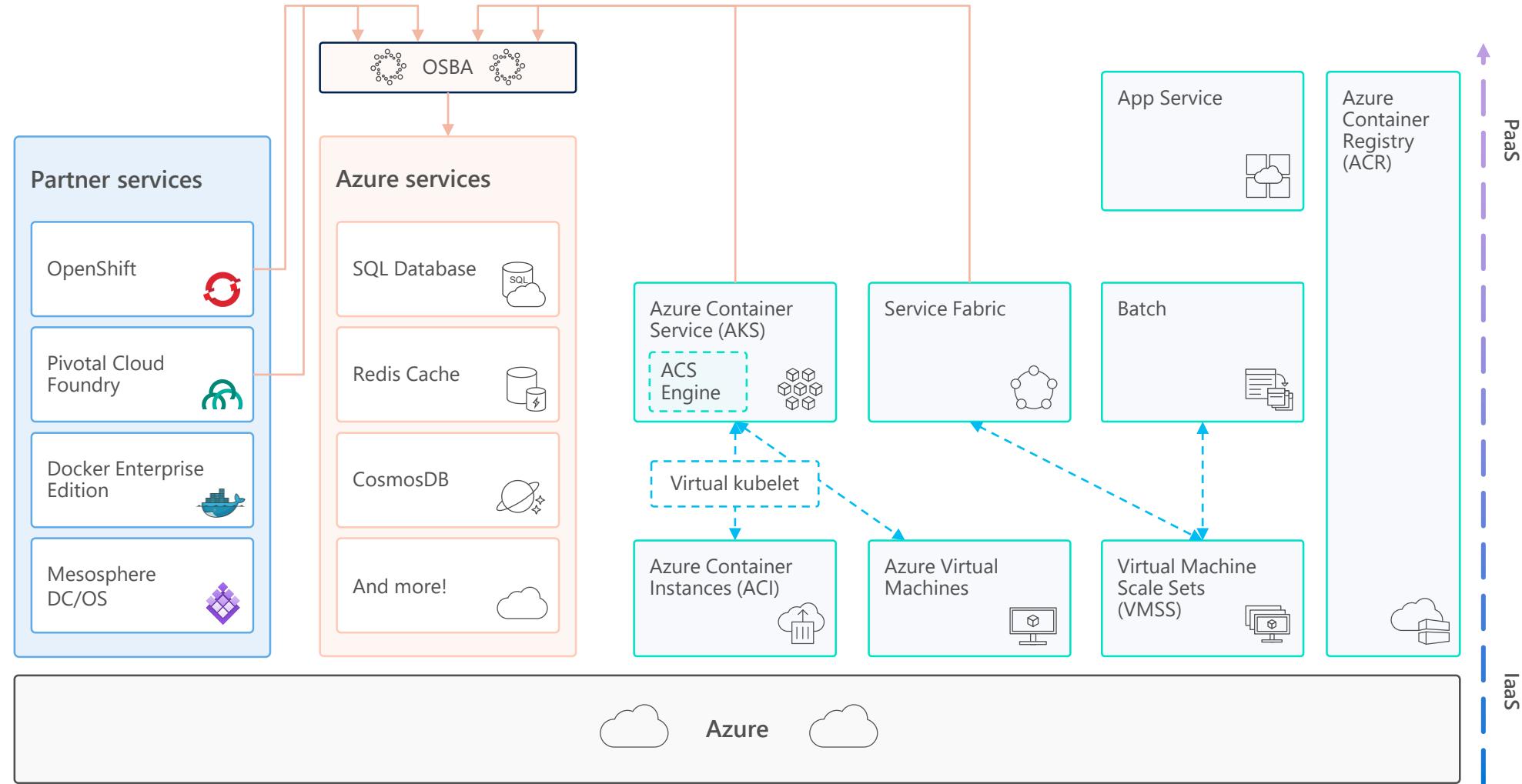


# Azure Batch



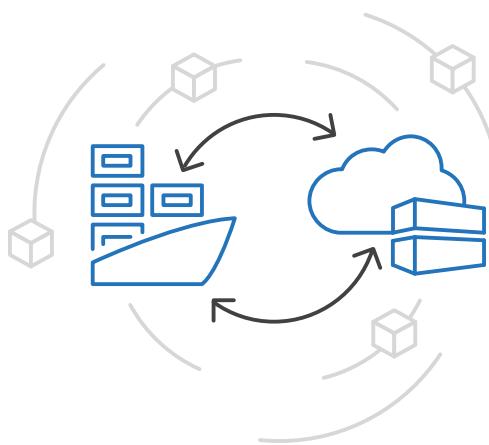
- Compute pools for job processing
- Automatic scaling and regional coverage
- Linux and Windows
- Automatically recover failed tasks
- Input/Output handling
- Low-Priority (discounted) option

# Azure container ecosystem

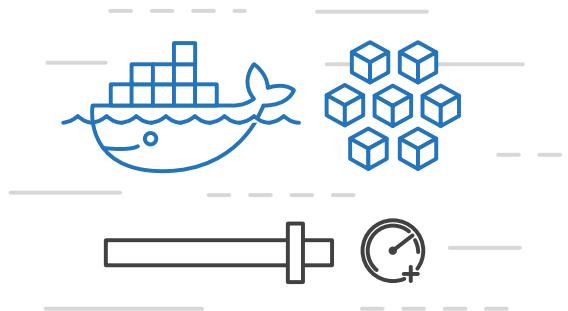


# Azure Container Instances (ACI)

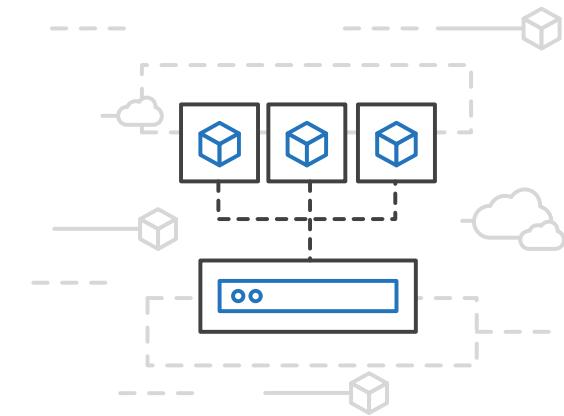
Easily run containers on Azure with a single command



Start using  
containers right away

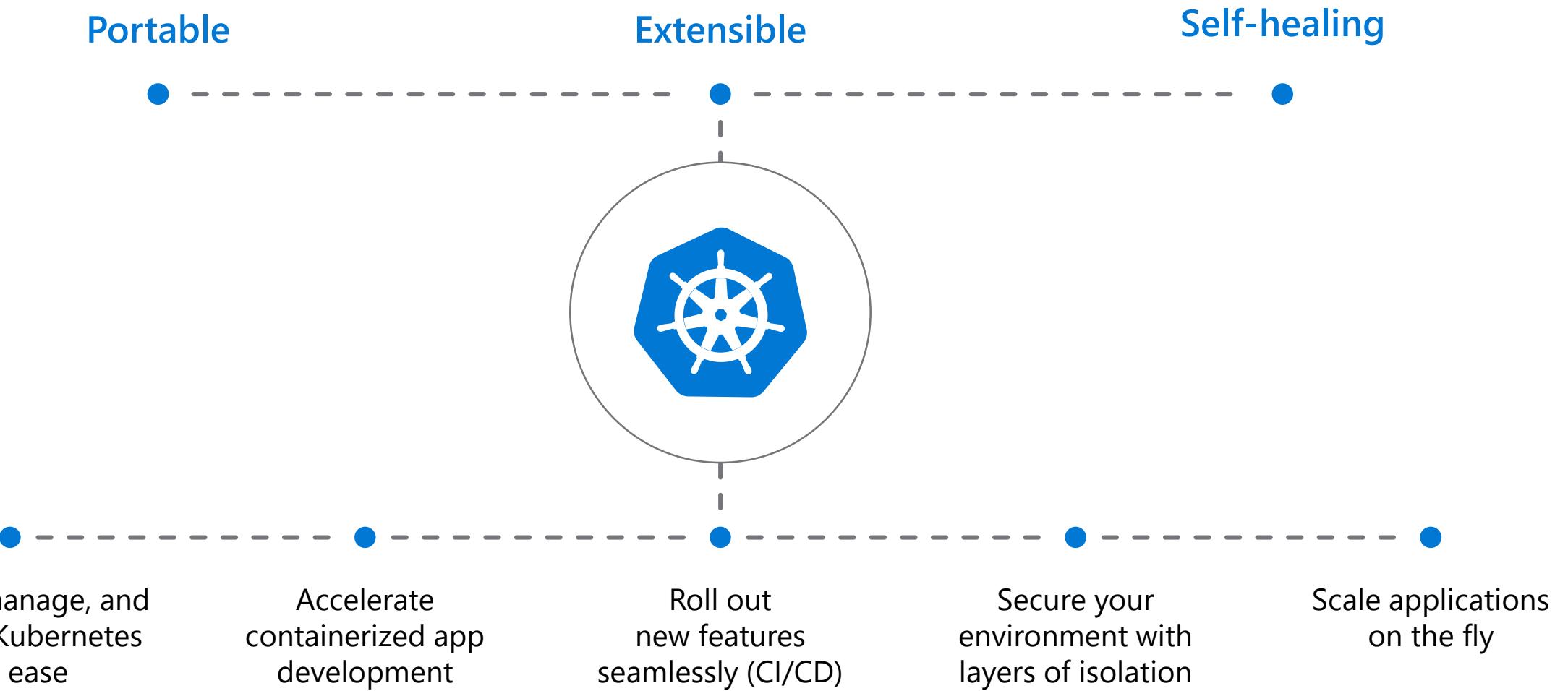


Cloud-scale  
container capacity



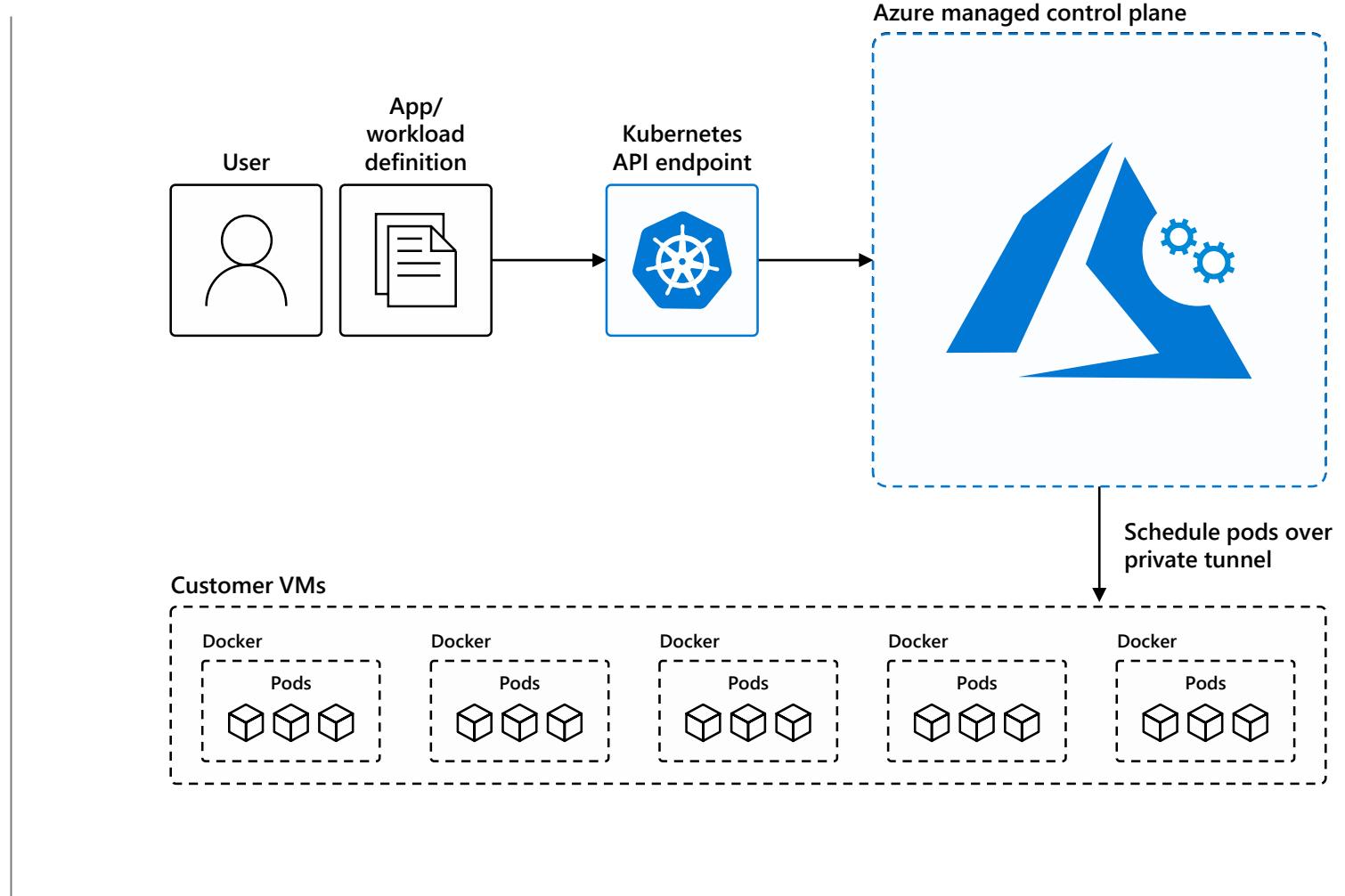
Hyper-visvor  
isolation

# Azure Kubernetes Service: simplify the deployment, management, and operations of Kubernetes



# How managed Azure Kubernetes Service works

- Automated upgrades, patches
- High reliability, availability
- Easy, secure cluster scaling
- Self-healing
- API server monitoring
- At no charge



# 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.



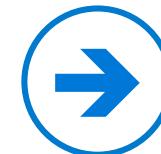
## Azure Artifacts

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



## Azure Repos

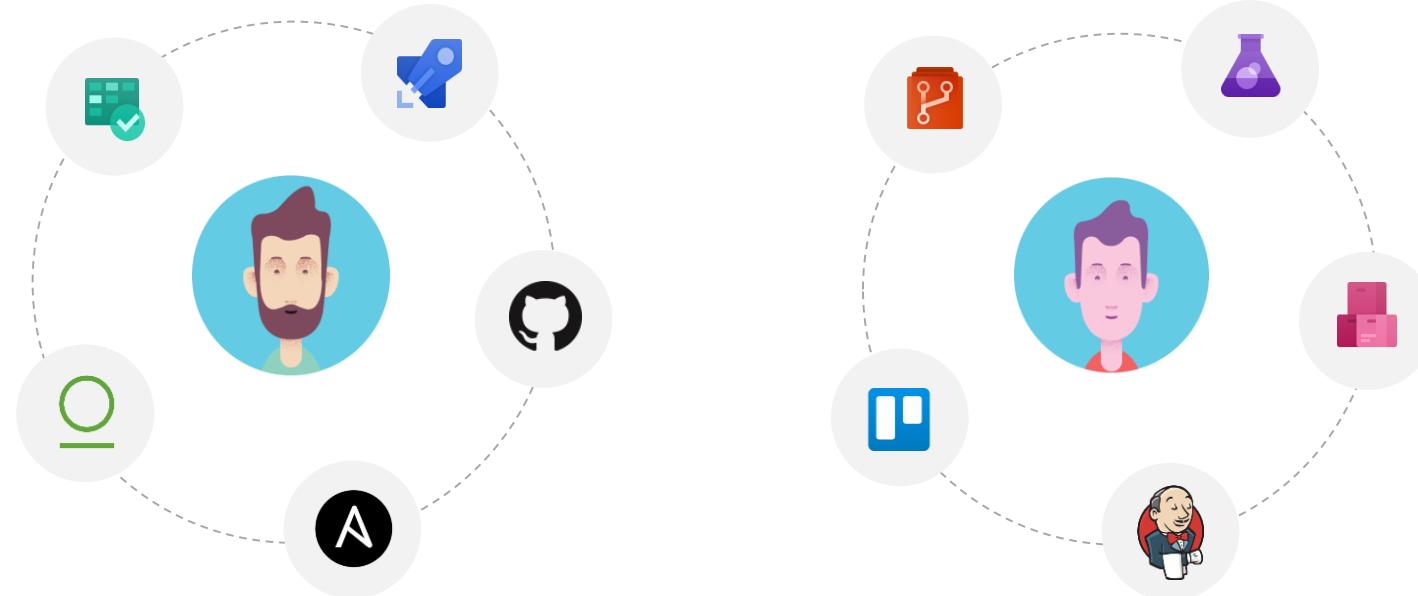
Get unlimited, cloud-hosted private Git repos and collaborate to build better code with pull requests and advanced file management.



<https://azure.com/devops>

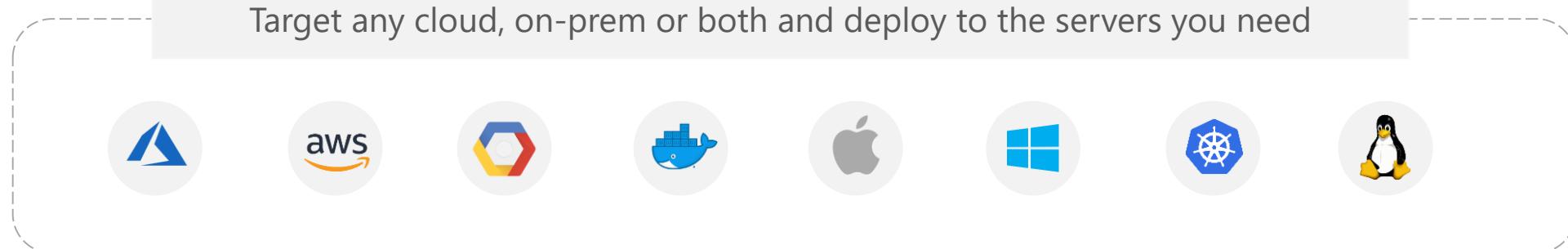
# Azure DevOps: Choose the tools and clouds you love

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



# Development and Test infrastructure



**30%**

Average number of servers dedicated to development and testing

**3-5%**

Average utilization of development and testing servers

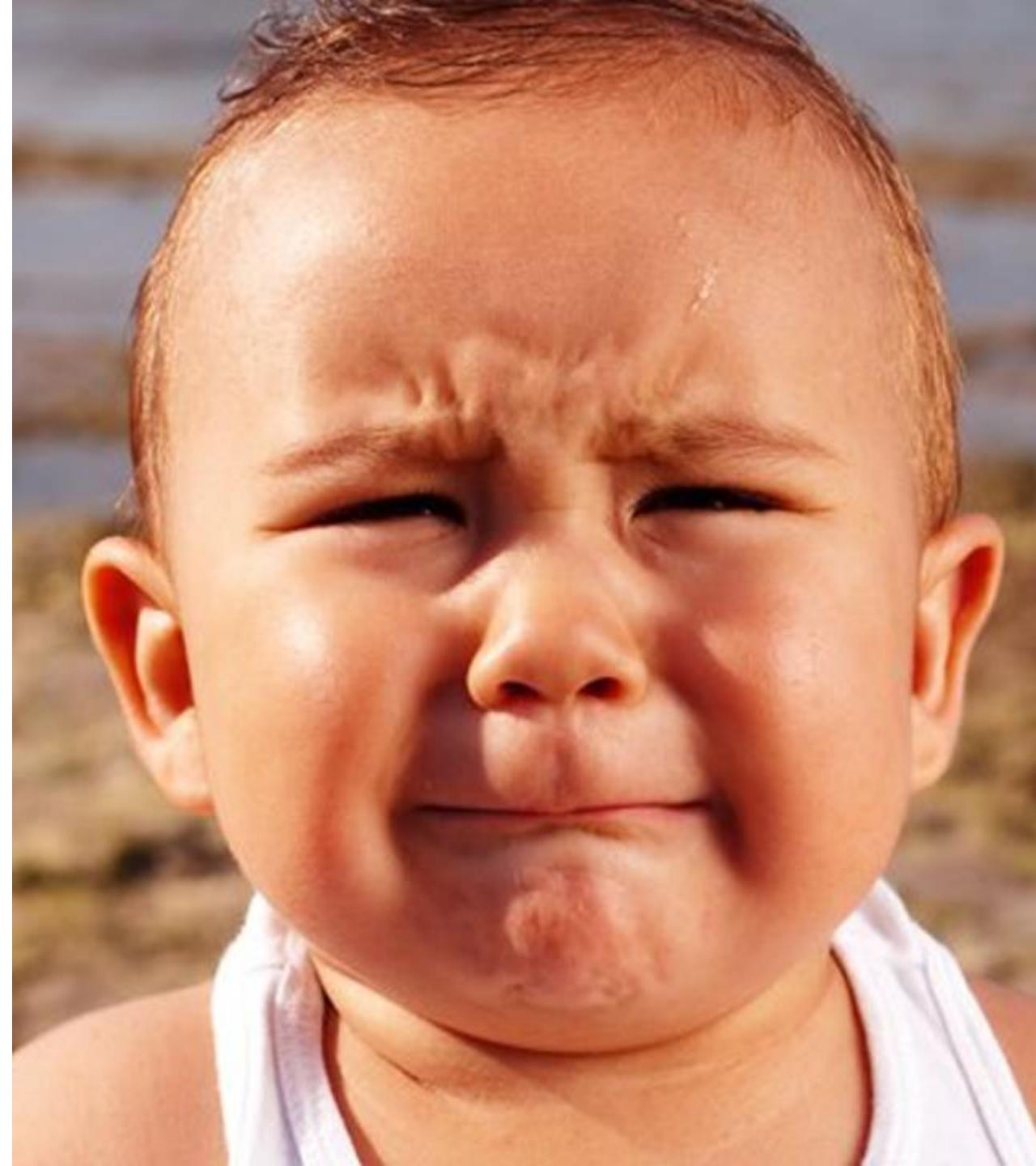
Today, developers find that:

Provisioning of infrastructure **takes too long**

System configuration takes **more and more time**

Costs are **out of control**

Usage is **not predictable**



# The benefits of development and testing on Azure



## Increase Agility

Fast, easy, and agile dev-test environments on your timeline and on your terms!



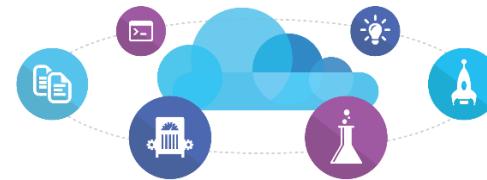
## Significant Savings

Provision the exact compute, storage and network resources and enjoy special Dev/Test discounts.



## Governance

Be in control of the different development and test environments in the cloud.



# Enterprise Dev/Test offer

## Best Rates

- Special discounts for development and testing
- No Microsoft software charges on Virtual Machines

## No Compromises

- Exclusive Dev/Test images including Windows 10 available in the Enterprise Dev/Test offer

## One Bill

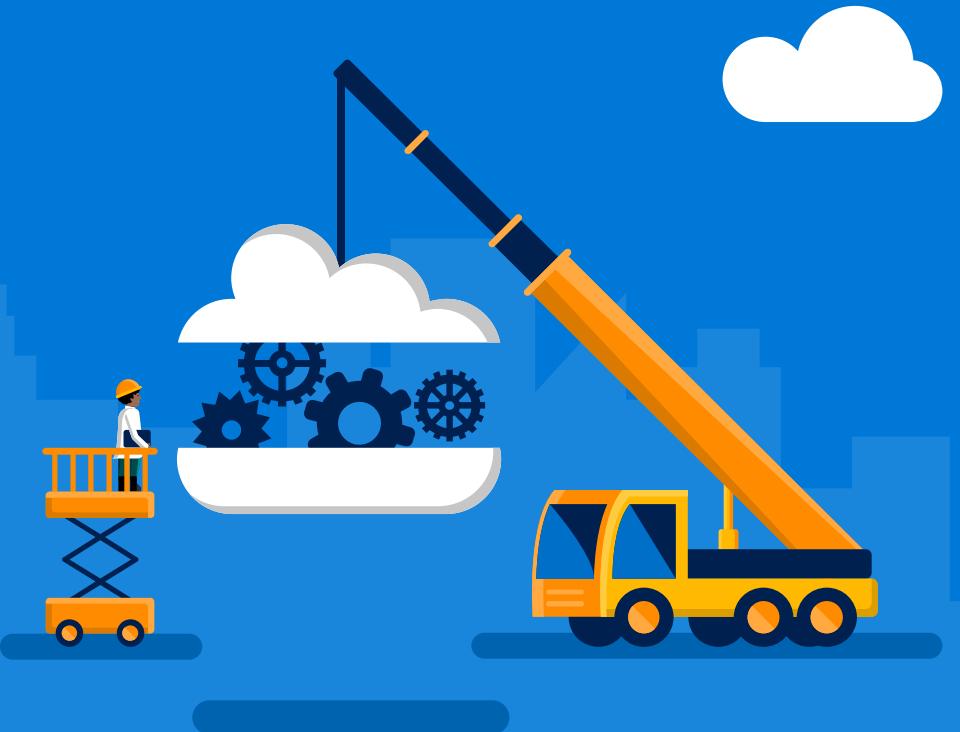
- Azure Monetary Commitment funds cover both production and Dev/Test workloads
- Unified administration in Azure Account Portal

\*Offer available to active Visual Studio subscribers





# Demo Jenkins on Azure



# Jenkins server

Preview Microsoft Azure Report a bug Search resources, services, and docs alyoun@microsoft.com MICROSOFT

Create a resource Home Dashboard All services FAVORITES Resource groups All resources Recent App Services Virtual machines (classic) Virtual machines SQL databases Cloud services (classic) Security Center Subscriptions Azure Active Directory Monitor Help + support Cost Management + Billing Advisor Application Insights Tools Agent Tools as a Service (SaaS)

Marketplace Everything List 1 jenkins Pricing All Operating System All Publisher All

Results

NAME	PUBLISHER	CATEGORY
Jenkins	Microsoft	Compute
Jenkins Cluster	Bitnami	Compute
Jenkins Certified by Bitnami	Bitnami	Developer Tools
Jenkins Container Image	Bitnami	Containers
Hardened Jenkins on Ubuntu 14.04 LTS	Cognosys Inc.	Storage
Hardened Jenkins on CentOS 7.3	Cognosys Inc.	Networking
Jenkins on CentOS 7.3 Azure Application	Cognosys Inc.	Compute
JFrog Artifactory Open Source Certified by Bitnami	Bitnami	Storage
Octopus Deploy	Octopus Deploy	Compute
Managed Ubuntu 16.04 - Linnovate Open Source SLA	Linnovate Technologies Ltd.	Compute
Managed Ubuntu server - Linnovate Open Source SLA	Linnovate Technologies Ltd.	Compute

Jenkins Microsoft

- git for source control
- Azure Credentials plugin for connecting securely
- Azure VM and Container Agents plugin for elastic build, test and continuous integration
- Azure Storage plugin for storing artifacts
- Azure CLI to deploy apps using scripts
- Azure plugins to make it easy for you to deploy to App Service, Function, AKS, Service Fabric and VMSS.

For a detailed walkthrough of the steps this solution automates for you, please visit this [quickstart](#).

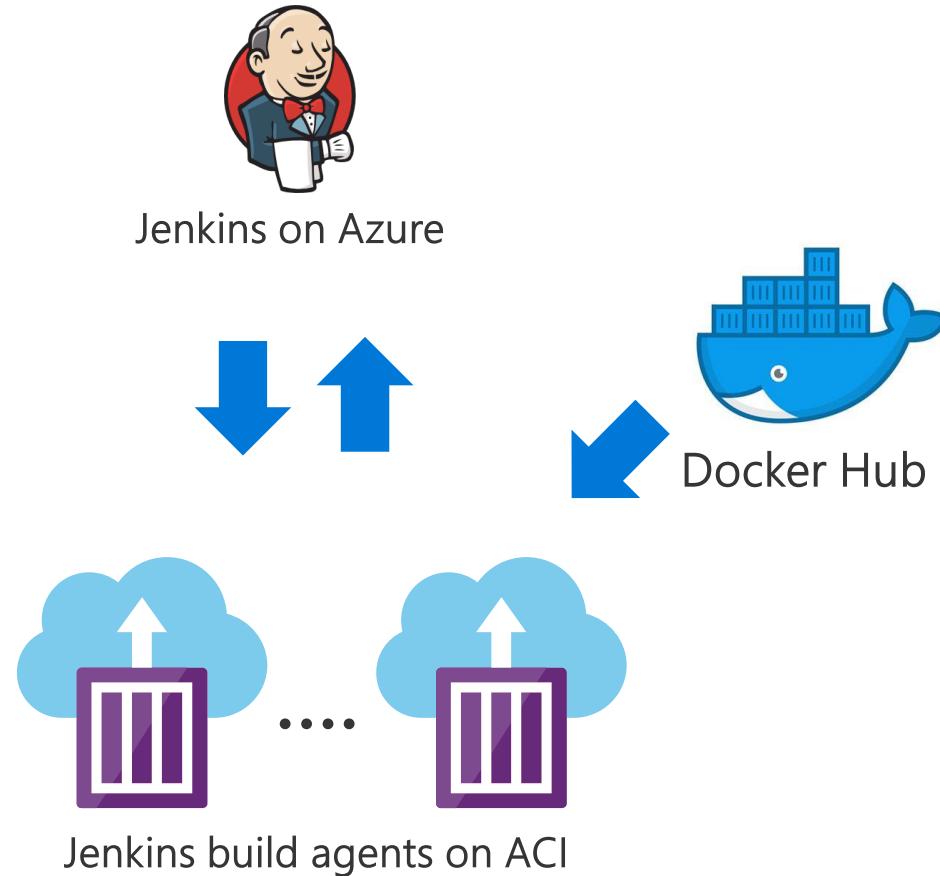
Jenkins® is a registered trademark of Software in the Public Interest, Inc.

This solution template is designed to configure a Jenkins instance following best practices with minimal Azure knowledge. With a handful of user inputs and a simple single-click deployment through the Azure portal, you can provision a fully configured Jenkins instance in minutes, which can use Azure services anywhere across the globe.

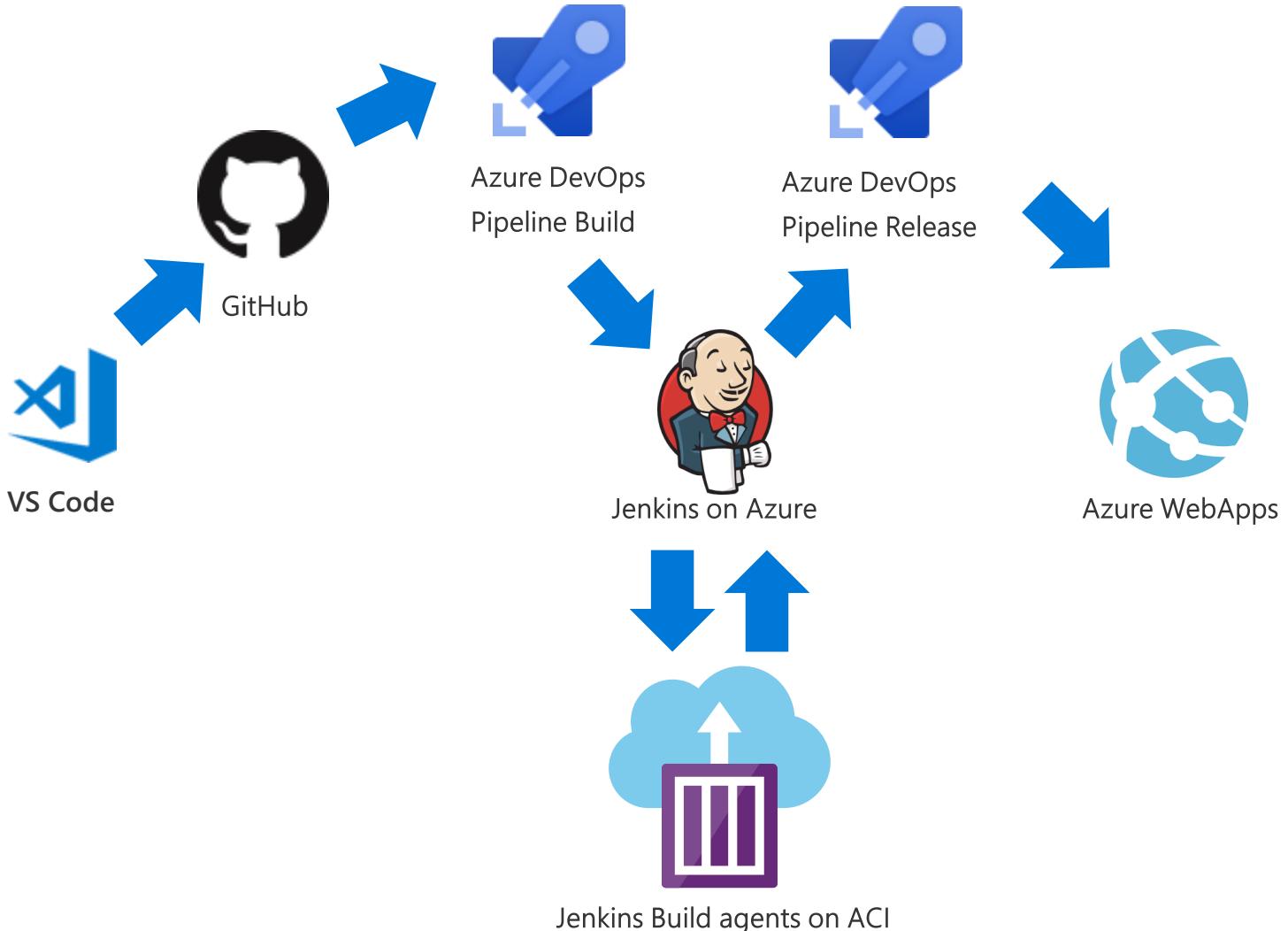
Save for later

The diagram illustrates the Jenkins architecture and its integration with various Azure services. At the center is a cartoon character of a man in a suit holding a coffee cup, representing Jenkins. Arrows point from Jenkins to several components: VM Agents (pointing to VMs), Container Agents (pointing to Container Instance, Container Service, and Container Agents), Docker (pointing to Container Service), Storage (pointing to Storage and Container Agents), and another Jenkins icon (pointing to Container Agents).

# Demo Jenkins with build agents in ACI



# Demo "a step too far ?"



# Q&"A"

?