

Visual Studio と Azure Container Service (AKS) を 用いたモダンなコンテナアプリ開発

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アーキテクト
廣瀬一海（デプロイ王子）



Microsoft
Connect();

2017

A man with glasses and a red polo shirt stands in front of a large window. The window shows a view of a body of water and a city skyline. The man is looking directly at the camera.

Scott Guthrie
EVP, Cloud & Enterprise

EMACS	ASP.NET	DEVICE
VIM	C#	AZURE CONTAINER SERVICE
VISUAL STUDIO	C++	WINDOWS DEVICE
VISUAL STUDIO CODE	NODE.JS	AZURE WEB APP
VISUAL	PYTHON	AZURE

Any developer

Any app

Any platform

VISUAL STUDIO	ASP.NET	AZURE LINUX VM
VISUAL STUDIO CODE	C#	iOS DEVICE
XAMARIN STUDIO	C++	AZURE WINDOWS VM
EMACS	NODE.JS	ANDROID DEVICE

EMACS	PYTHON	CONTAINER SERVICE
VIM	HTML/JS	WINDOWS DEVICE
VISUAL STUDIO	ASP.NET	AZURE WEB APP
VISUAL STUDIO CODE	C#	AZURE LINUX VM
VISUAL	C	iOS

VIM	C#	CONTAINER SERVICE
VISUAL STUDIO	C++	WINDOWS DEVICE
VISUAL STUDIO CODE	NODE.JS	AZURE WEB APP
VISUAL STUDIO MAC	PYTHON	AZURE LINUX VM
EMACS	HEML/JS	iOS

EMACS	ASP.NET	DEVICE
VIM	C#	AZURE CONTAINER SERVICE
VISUAL STUDIO	C++	WINDOWS DEVICE
VISUAL STUDIO CODE	NODE.JS	AZURE WEB APP
VISUAL	PYTHON	AZURE

STUDIO	HTML/JS	WEB APP
VISUAL STUDIO CODE	ASP.NET	AZURE LINUX VM
VISUAL STUDIO MAC	C#	iOS DEVICE
EMACS	C++	AZURE WINDOWS VM
VIM	NODEJS	ANDROID

STUDIO	C#	DEVICE
EMACS	NODE.JS	AZURE WEB APP
VIM	PYTHON	AZURE LINUX VM
VISUAL STUDIO	HTML/JS	iOS DEVICE
VISUAL STUDIO	ASP.NET	AZURE WINDOWS

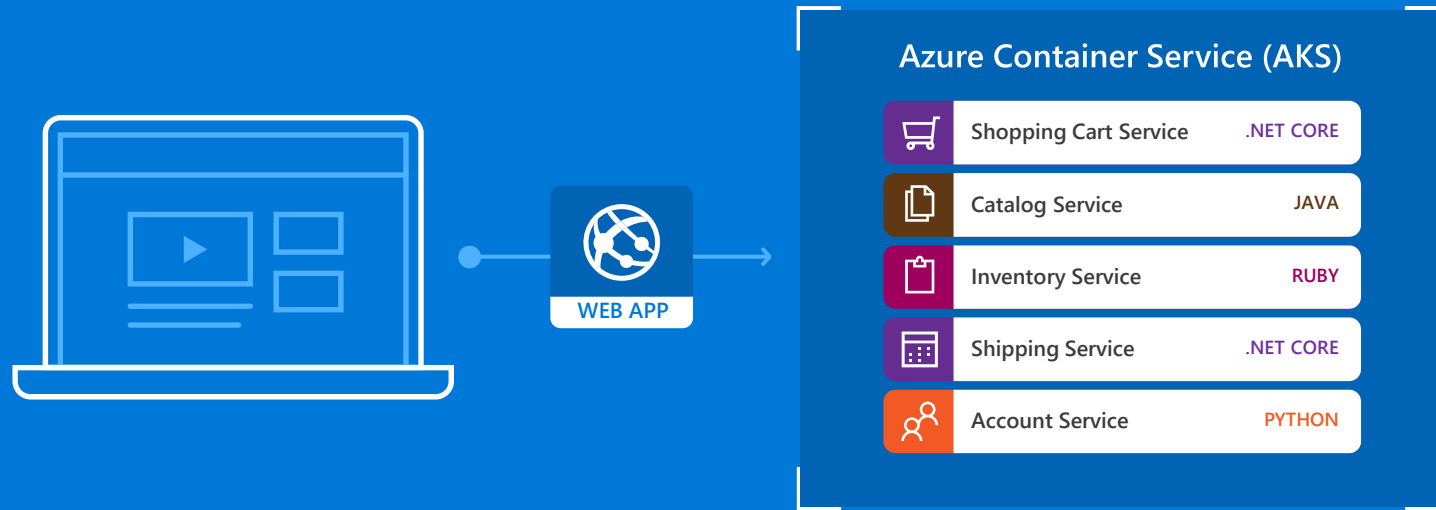


The Visual Studio Family — Microsoft Azure

Best-in-class tools for *every* developer

Containers

Microservices + Containers





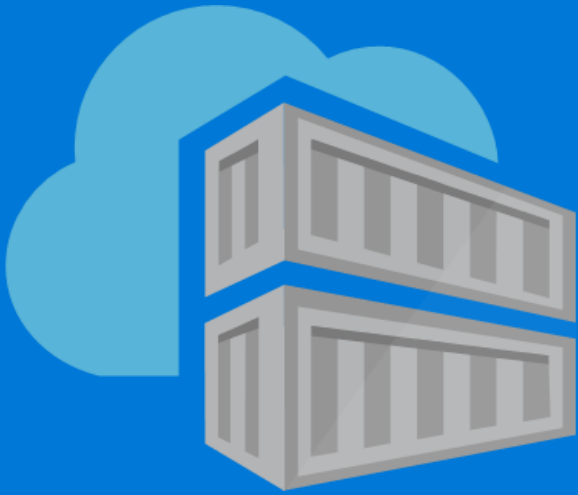
Azure Container Services (AKS)

Fully managed Kubernetes orchestration service

Auto patching, auto scaling, auto updates

Use the full Kubernetes ecosystem

Azure and Azure Stack



Azure Container Registry

Single registry/image/tag names can be used across multiple regions

Network-close registry access from regional deployments

Keep container images near deployments to reduce latency and costs

Single management of a registry across multiple regions

The image shows a Siemens medical imaging workstation. The main monitor displays a dual-view of a brain MRI scan, with axial and coronal slices visible. Below the images is a software interface with various panels, including a list of scan parameters on the left and a larger panel on the right showing a green progress bar and numerical data. A secondary monitor on the left shows a different view of the same scan. The Siemens logo is overlaid in the center of the image.

SIEMENS



Production-Grade Container Orchestration

Automated container deployment, scaling, and management

[Try Our Interactive Tutorials](#)

Kubernetes is an open-source system for automating deployment, scaling, and management of containerized applications.

It groups containers that make up an application into logical units for easy management and discovery. Kubernetes builds upon [15 years of experience of running production workloads at Google](#), combined with best-of-breed ideas and practices from the community.



Planet Scale

Designed on the same principles that allows Google to run billions of containers a week, Kubernetes can scale without increasing your ops team.

Never Outgrow

Whether testing locally or running a global enterprise, Kubernetes flexibility grows with you to deliver your applications consistently and easily no matter how complex your need is.



NOW AVAILABLE: SELF-PACED CLASS KUBERNETES FUNDAMENTALS

Learn how to deploy a containerized application and manipulate resources via the API.

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kubernetes

Orchestration



Prometheus

Monitoring



OPENTRACING

Distributed Tracing API



fluentd

Logging



linkerd

Service Mesh



Remote Procedure Call



CoreDNS

Service Discovery



Container Runtime



Container Runtime



CNI

Networking API



envoy

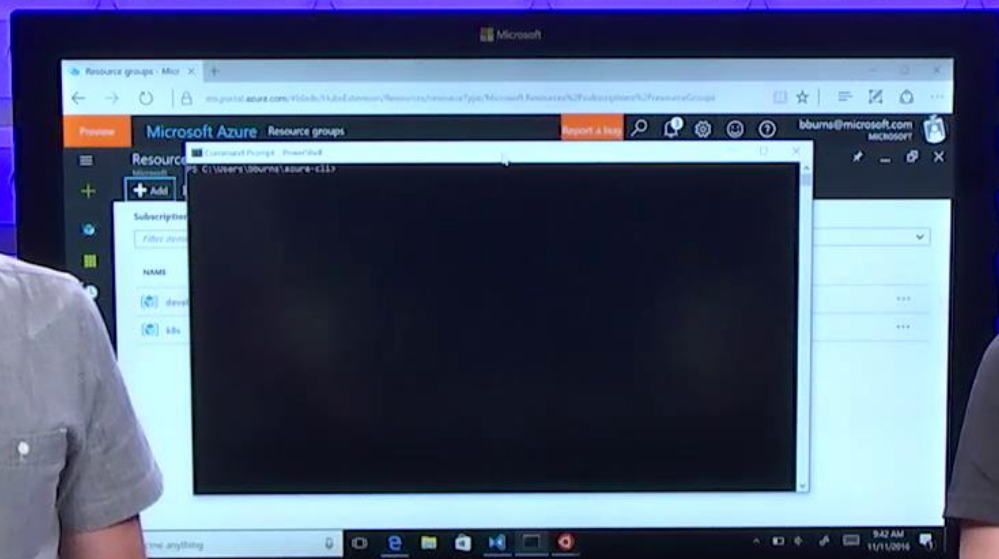
Service Mesh



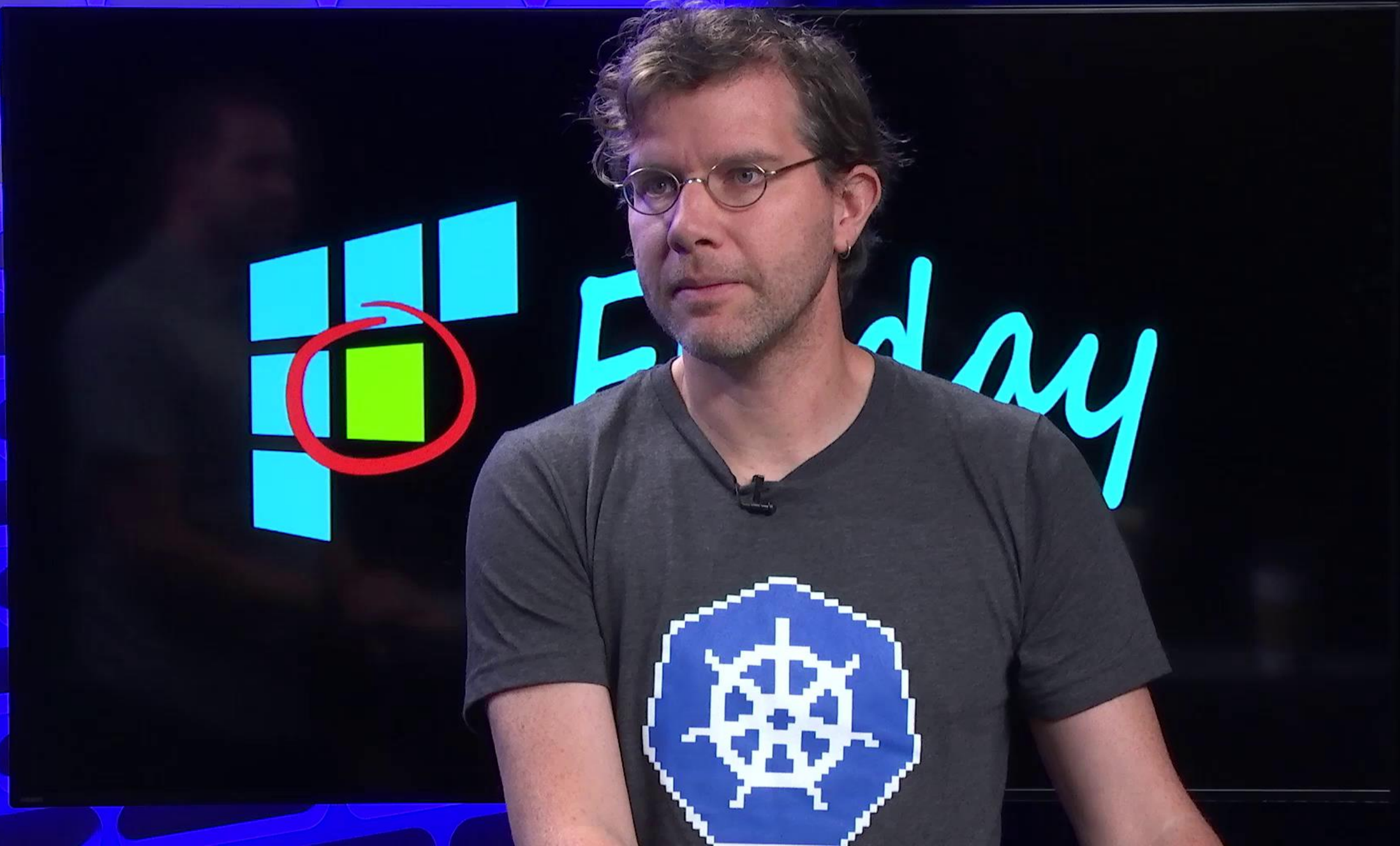
JAEGER

Distributed Tracing

Frida
Microsoft



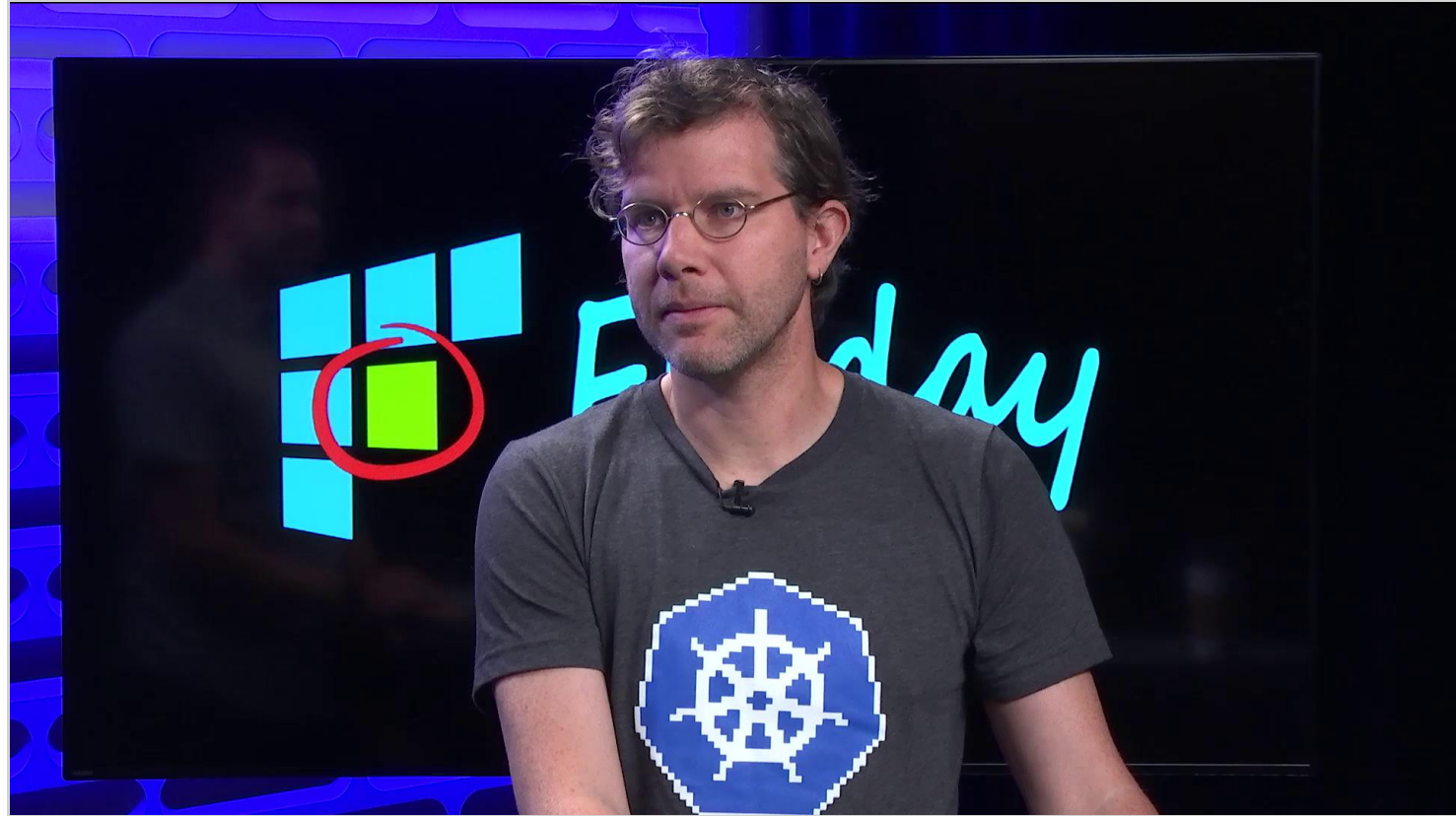
Frida
Microsoft Azure



Brendan Burns

Distinguished Engineer at Microsoft

DevOps & Containers on Azure:
Azure Container Service, Azure
Container Instances, Azure Cloud
Console, Azure Resource Manager



Demo

Azure Container Service and Azure Container Registry

NEW

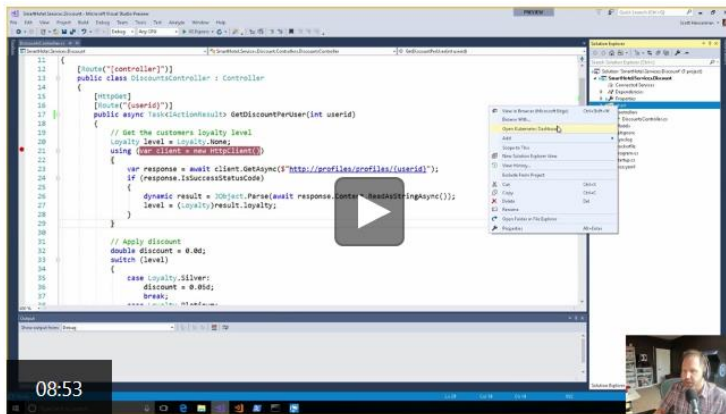
Visual Studio Connected Environment for AKS

Inner-loop development with containers

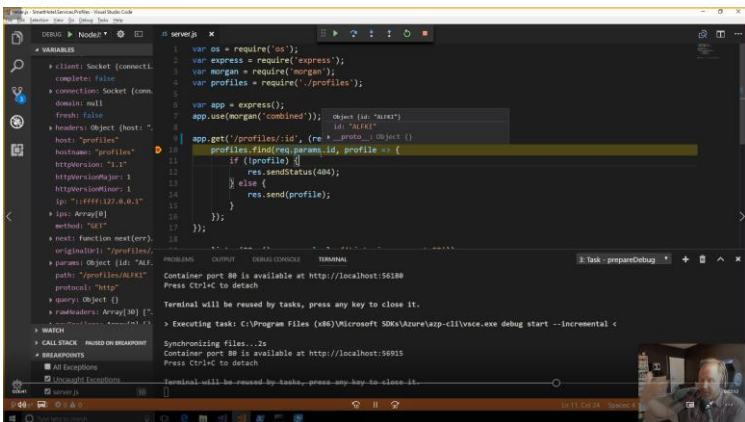
Iteratively develop with speed on Kubernetes

Test in your team's shared environment

Harness the power of open ecosystems



直接デバッグとステップ実行



Azure Container Registry



デプロイメントとオーケストレーション



Azure Container Service (AKS)



Bookings API



Hotel API



Suggestions API



Config API



Notifications API



Tasks API



Sentiment API



Reviews API



Home Page - SmartHotel36

Pods - Kubernetes Dashbo

Microsoft Office Home

Connect2017-Appnovation

Pods - Kubernetes Dast

localhost:8001/api/v1/namespaces/kube-system/services/kubernetes-dashboard/proxy/#/pod/default

kubernetes

Search

+ CREATE

Workloads

Pods

Cluster

Namespaces

Nodes

Persistent Volumes

Roles

Storage Classes

Namespace

default

Overview

Workloads

Daemon Sets

Deployments

Jobs

Pods

Replica Sets

Replication Controllers

Stateful Sets

Discovery and Load Balancing

Ingresses

Services

Config and Storage

Config Maps

Persistent Volume Claims

CPU usage

Memory usage

Pods

Name	Node	Status	Restarts	Age	CPU (cores)	Memory (bytes)
discounts-22cb4e98-3595054412-0rkxp	k8s-agent-44993eb8-0	Running	0	an hour	0.005	13.969 Mi
profiles-4e683276-357262147-lfvpq	k8s-agent-44993eb8-0	Running	0	5 hours	0.005	32.598 Mi
publicweb-0bee8382-4260669726-mh4rc	k8s-agent-44993eb8-0	Running	2	a day	0.011	1.009 Gi
config-97a1fe94-957009092-shrbl	k8s-agent-44993eb8-0	Running	2	a day	0.006	222.887 Mi
frontend-3067058168-c1v18	k8s-agent-44993eb8-0	Running	5	3 days	0	1.582 Mi
reviews-4029336652-v74d8	k8s-agent-44993eb8-0	Running	2	3 days	0	1.013 Gi
notifications-1544147415-rstq6	k8s-agent-44993eb8-0	Running	1	3 days	0	99.094 Mi
tasks-825303949-6b92z	k8s-agent-44993eb8-0	Running	2	3 days	0	1.004 Gi
suggestions-3440980848-858t0	k8s-agent-44993eb8-0	Running	2	3 days	0	
bookings-832020595-wvn5s	k8s-agent-44993eb8-0	Running	1	3 days	0	
hotels-303196297-mlkfl	k8s-agent-44993eb8-0	Running	1	3 days	0	

https://localhost:8001/api/v1/namespaces/kube-system/services/kubernetes-dashboard/proxy/#/pod/default/frontend-3067058168-c1v18?namespace=default

Type here to search

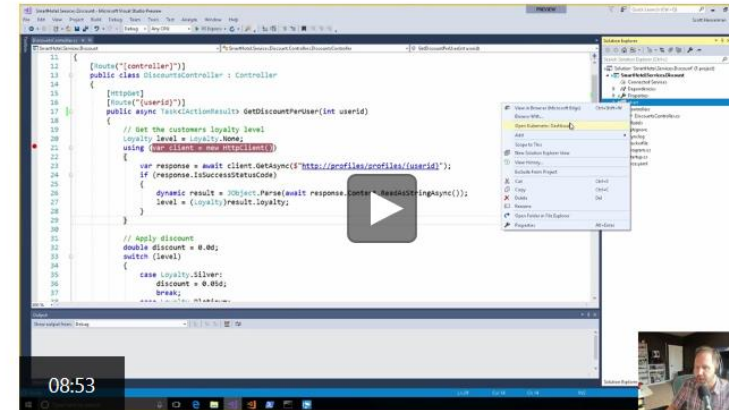
Visual Studio Connected Environment for AKS

Previewユーザーを募集中です。
<http://landinghub.visualstudio.com/vsce>

Visual Studio Connected Environment

Sign Up

Visual Studio Connected Environment for AKS Rapid Kubernetes Development in Azure

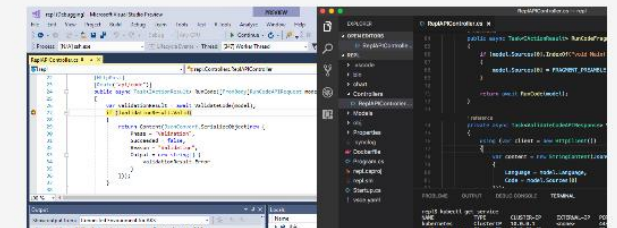


[Join the preview](#) and shape the future of cloud native application development

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Iteratively develop with speed on Kubernetes

Today's iterative development loop for building containerized applications is laborious: edit code, build containers, publish updated images, deploy, diagnose via logs... Each iteration takes minutes! With Visual Studio Connected Environment, you can run and debug your container code just by hitting F5. Connected Environment links Visual Studio to Azure-managed Kubernetes and automatically syncs and launches your code with minimal setup on your local machine.





Microsoft
Connect();

2017