

Microsoft Open Source Roadshow

4.0 | Containers



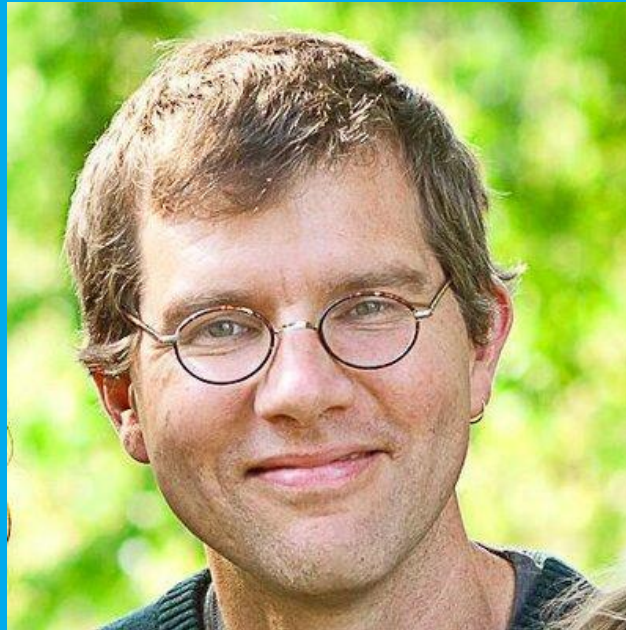
Quick quiz

Which key contributor to a Container-related tech works at Microsoft?



Quick quiz















Which key contributor to a Container-related tech works at Microsoft?



Containers overview

- IaaS:
 - Docker Agent for Linux VMs
 - docker-machine and docker-compose support for Azure VM creation
 - Roll your own environment – run VMs and use Azure File Service for persistent volumes
 - Images in the Marketplace
- PaaS / IaaS:
 - Azure Container Service (ACS)
 - Service Fabric
- PaaS:
 - Managed Kubernetes on Azure Container Service (AKS)**
 - Azure Container Instances (ACI)
 - Azure Container Registry (ACR)
 - App Service on Linux
 - Azure Batch.

Containers on IaaS

NAME	PUBLISHER	CATEGORY
 Containers	Microsoft	Monitoring + Manage...
 Azure Container Service	Microsoft	Compute
 Azure Container Registry	Microsoft	Compute
 Aqua Container Security Platform	Aqua Security	Compute
 Clear Linux OS - Containers	Clear Linux Project	Compute
 Windows Server 2016 Datacenter - with Containers	Microsoft	Compute
 Atomic Secure Docker for CentOS	Atomicorp	Compute
 DevTest Labs	Microsoft	Developer tools
 Machine Learning Workspace	Microsoft	Data + Analytics
 Cello Loading Optimizer	Samsung SDS	Compute
 Power BI Report Server	Microsoft	Compute
 Twistlock Enterprise Edition for Azure Marketplace	Twistlock	Compute
 CKAN Server	TSA Public Service GmbH	Compute
 RancherOS	Rancher Labs	Compute

Azure Container Registry



- Based on Open Source Docker Registry 2.0
- “Classic” or Managed Registries available.
- Security provided by a local Registry admin account or Azure AD Users* or a Service Principal.
- Web-hooks supported to drive CD
- Geo-replication now available for high availability (Premium tier).

Azure Container Instances

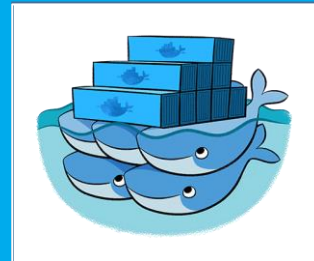


- “Containers in a single command”
- Tight billing model – per-second, per-CPU, per-GB
- Pull images from Docker Hub or Azure Container Registry
- Multi-container support = shared services between Containers.
- Kubernetes Connector available.

Azure Container Service



- Open Source provisioning engine
- Supports public or private workloads running on Linux or Windows Server Containers
- Pull Images from any addressable Registry, including ACR
- Supports leading Container orchestrators.



Azure Container Service (AKS)



- 100% API Compatible Kubernetes
- Management nodes managed by Microsoft
- You only pay for the compute on container nodes hosting your workload – management nodes are free!




Azure App Service



- App Service Web Apps on Linux utilises Containers to deliver Node, PHP and .Net Core features
- You can also use BYOD Docker Containers from either Docker Hub or a private registry like ACR
- Continuous Delivery for App Service on Linux can be pointed at a Dockerfile in remote repository.

Azure App Service



 sv [redacted] 1 - Docker Container
App Service

Search (Ctrl+ /)

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

DEPLOYMENT

Quickstart

Deployment credentials

Deployment slots


Deployment options

Continuous Delivery (Preview)

SETTINGS

Application settings

Docker Container

 **Docker Container**

Web App for Containers lets you bring your own Docker formatted

Image source

Azure Container Registry

Docker Hub

Private registry

* Registry


* Image

demo-container

* Tag

9

Startup File

 **Continuous Deployment**

Continuous Deployment will automatically deploy your Azure Conta

Azure App Service



Configure Continuous Deliv... ☐ ✕

PREVIEW

* Container image source

>

Choose container registry

* Source code

>

Configure continuous delivery

* Team Services

>

Select a Team Services account

Source ☐ ✕

PREVIEW

* Code repository

Visual Studio Team Service ▼

* Visual Studio Team Services account ●

sjw001 ▼

* Project

Project Crank ▼

* Repository

\$/Project Crank ▼

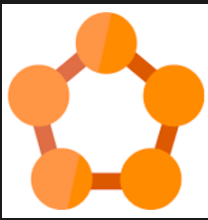
* Branch

No branches found ▼

* Dockerfile path ●

**/Dockerfile

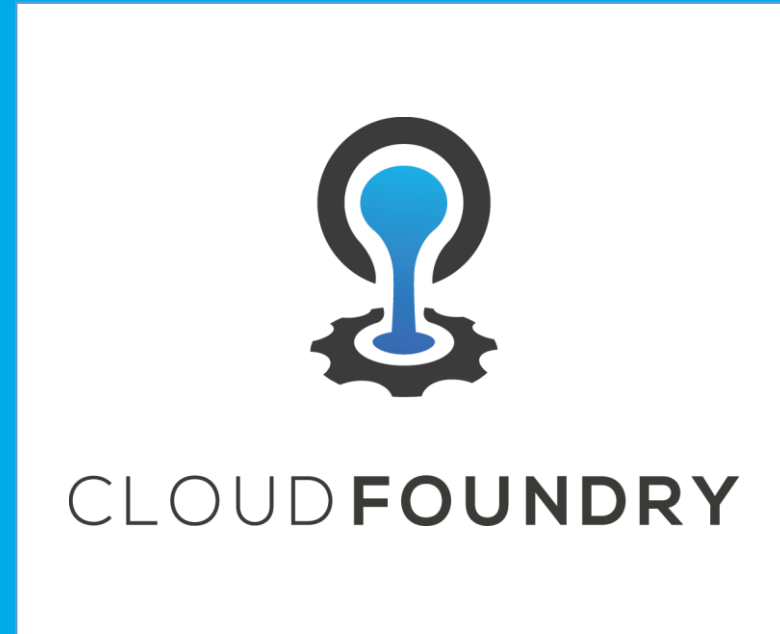
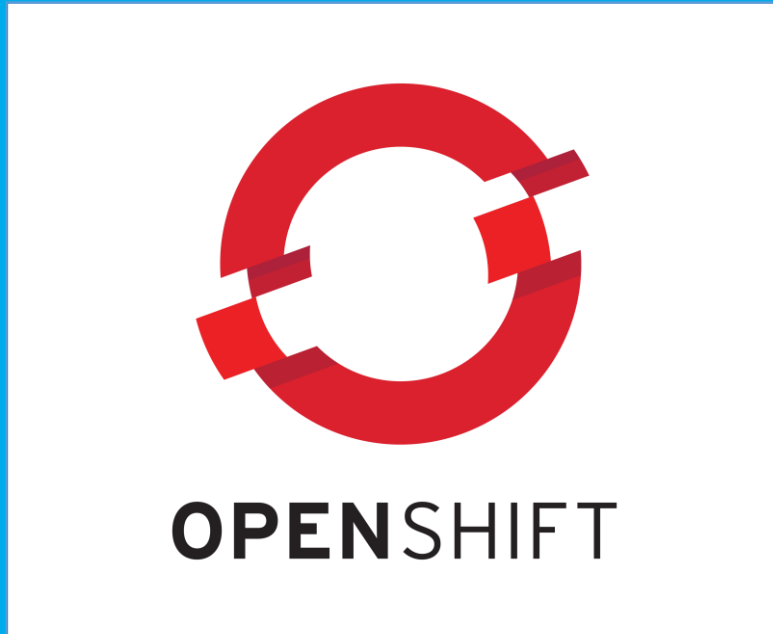
Service Fabric



- Utilised as host for some core Microsoft and Azure services
- Run it anywhere, not just in Azure
- Consider it as both an Orchestrator and a microservices development framework
- Supports Linux, Windows and Hyper-V Containers.

BYOD platform!







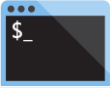
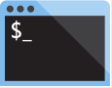
- Azure IaaS provides features that allow you to bring almost any solution you want
- Want to run your own flavour of PaaS? Sure Can!



4.0 | LAB

<https://github.com/sjwaight/OpenSourceRoadLabs/>

Overview of the day

Morning		Afternoon	
Open Source and Azure Application hosting options		Continuous Deployment (CD): BYO or App Service	
Lab: Deploying solutions to Azure		Lab: Setting up CD in Azure	
Morning tea		Afternoon tea	
Morning guest speaker		Afternoon guest speaker	
Open Source Datastores on Azure.		Containers on Azure	
Lab: Open Source Datastores		Lab: using Containers on Azure	
Lunch		Wrap up / lab tear down.	

Before we end...

- Hosts: Simon Waight
- Labs: <https://github.com/sjwaight/OpenSourceRoadLabs/>

About me... Simon Waight

- Microsoft MVP for Azure from Sydney
- Day job: Cloud Architect @ Kloud
- 20 years industry experience
- Run the Sydney Azure User Group (our next Meetup on 29 November!)
- Blog: <https://blog.siliconvalve.com/>
- Tweet me @simonwaight

