Running Functions in Containers

Mark Heath

MICROSOFT AZURE MVP

@mark_heath   www.markheath.net

Hosting Function Apps

App Service Plan in Azure

Locally for development (cross-platform)

In a Docker container

Azure Functions Dotnet

By **Microsoft**

Azure functions dotnet image

⬇ **100K+**

Container   x86-64   Base Images

DESCRIPTION   REVIEWS   RESOURCES

Featured Tags

```
docker pull mcr.microsoft.com/azure-functions/dotnet:2.0
```

- `latest`

- `2.0`

https://hub.docker.com/_/microsoft-azure-functions-dotnet

Azure Functions Node

By **Microsoft**

Azure functions node image

500K+

Container   x86-64   Base Images

DESCRIPTION   REVIEWS   RESOURCES

Featured Tags

```
docker pull mcr.microsoft.com/azure-functions/node:2.0
```

- `latest`

- `2.0`

https://hub.docker.com/_/microsoft-azure-functions-node

Azure Functions Python

By **Microsoft**

Azure functions python image

⬇ **500K+**

Container   x86-64   Base Images

DESCRIPTION   REVIEWS   RESOURCES

Featured Tags

```
docker pull mcr.microsoft.com/azure-functions/python:2.0
```

- `latest`

- `2.0`

Hosting in Containers

Advantages of using containers

- Host in an on-premises data center
- Host on other cloud providers

Hosting containers in Azure

- Azure Container Instances (ACI)
- Azure Kubernetes Service (AKS)

Consistent deployment model

Limitations

Consumption plan benefits

– Automatic scaling

– Pay only while your functions run

KEDA (https://keda.sh)

– Kubernetes Event-Driven Autoscaling

Connected resources

– Azure Storage Accounts

– Azure Application Insights
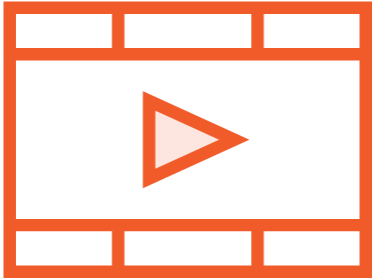
Demo

Creating a Dockerfile

Demo

Running a container locally

Azure CLI: Getting Started

by Mark Heath

This course is packed full of practical examples that show how the Azure CLI, a cross-platform, open source command line tool, can be used to manage Virtual Machines, storage accounts, web apps, databases, ARM deployments, and more.

Start Course

🔖 Bookmark

((•)) Add to Channel

Course author

Mark Heath

Mark Heath is a software developer based in Southampton, England, working for NICE Systems as a software architect creating cloud based digital evidence management systems for the police. He is the...

Course info

Level	Beginner
Rating	★★★★½ (15)
Duration	2h 32m
Released	6 Nov 2017

Share course

f twitter g+ in

Table of contents   Description   Exercise files   Discussion   Recommended

Expand all

▶ Course Overview	🔖	1m 32s	⌄
▶ Introducing the Azure CLI	🔖	32m 48s	⌄
▶ Managing Virtual Machines	🔖	25m 26s	⌄

Running Containers in Azure

Docker on a VM

Azure Kubernetes Service (AKS)

Azure Service Fabric

Azure App Service

Azure Container Instances

Demo

Running in Azure Container Instances

Demo

Making proxies configurable

Try it yourself!

Create an Azure Storage Account

Copy demo static website resources into a public blob container

Run the container locally (Linux container mode)

```
docker run
-e WEB_HOST=https://xyz.blob.core.windows.net/website
-e AzureWebJobsStorage=$yourstorageconnectionstring
-p 8080:80
markheath/serverlessfuncs:v2
```

Test at http://localhost:8080

Overview

Hosting Function Apps in containers

- Run locally
- On-premises
- Run containers in Azure
- Other cloud providers

func init --docker

docker run

Azure Container Instances

Configurable proxies.json

Thanks for watching!