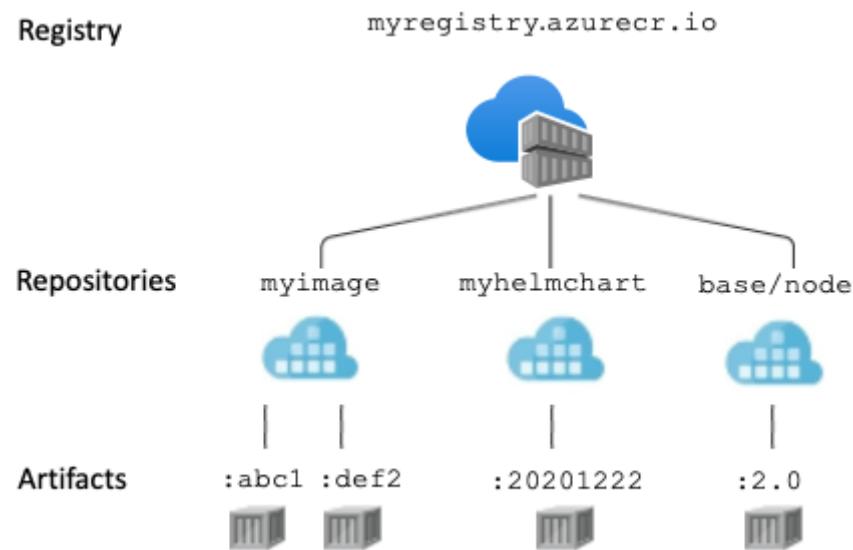
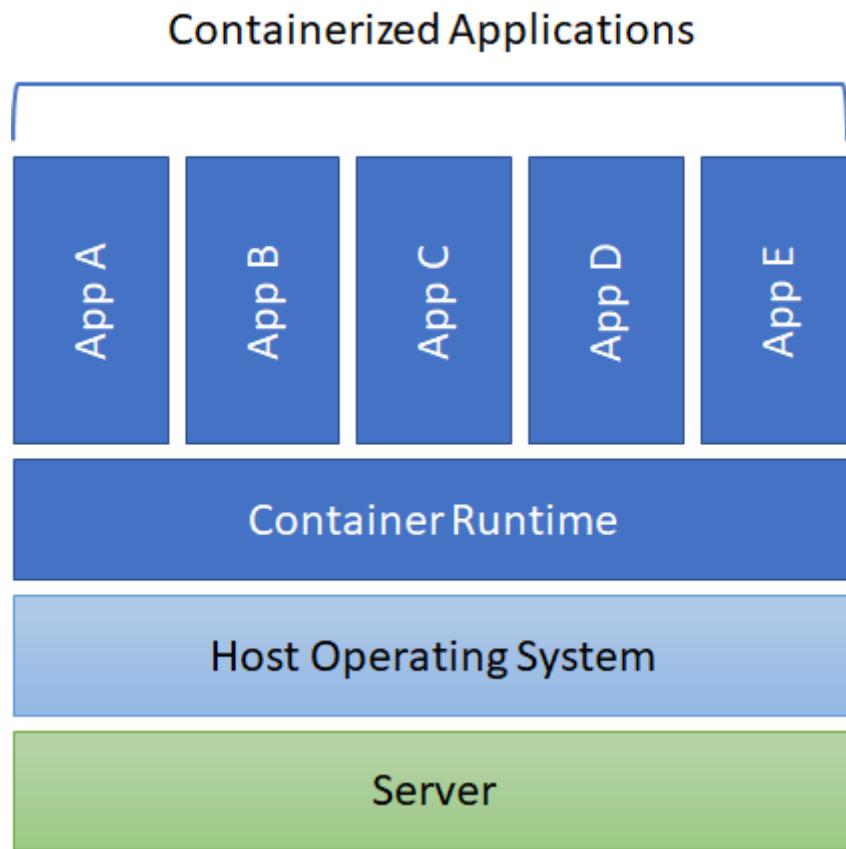
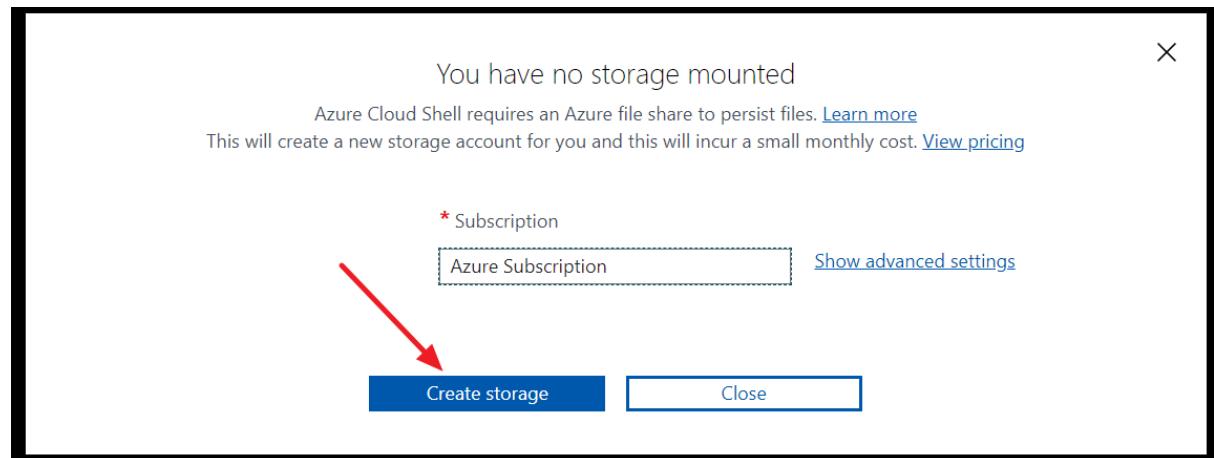
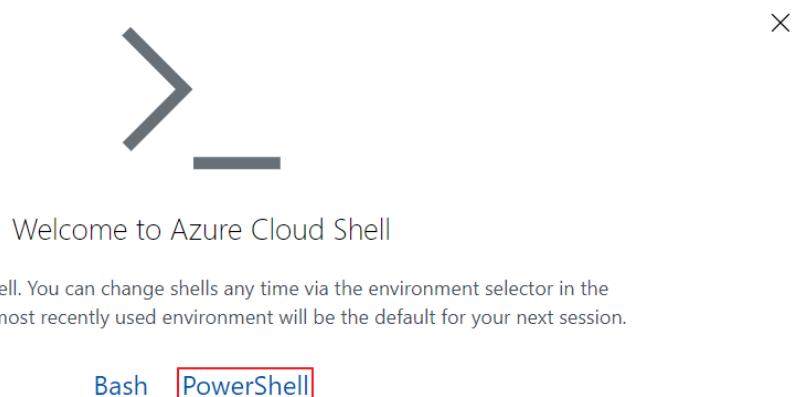


Chapter 1: Azure Containers – Pleased to Meet You



Chapter 2: Azure App Service – Running a Container Was Never That Difficult

A screenshot of a PowerShell session in the Azure Cloud Shell. The command 'az group show --name "rg-appserv-containers"' is run, displaying the JSON output of the resource group. The output shows the resource group's ID, location ('westeurope'), name ('rg-appserv-containers'), and provisioning state ('Succeeded'). A red arrow points from the 'Create storage' button in the previous screenshot to the 'az group show' command in this screenshot.

```
PowerShell ▾ | ⌁ ? ⚙ ↴ ⌂ ⌂ { } ⌁
    "skuCapacity": null,
    "tier": "Standard"
},
"spotExpirationTime": null,
"status": "Ready",
"subscription": "e378dee0-[REDACTED]6d91",
"systemData": null,
"tags": null,
"targetWorkerCount": 0,
"targetWorkerSizeId": 0,
"type": "Microsoft.Web/serverfarms",
"workerTierName": null
}
PS /home> █
```

```
PowerShell ▾ | ⌁ ? ⚙ ↴ ⌂ ⌂ { } ⌁
    "windowsFxVersion": null,
    "xManagedServiceIdentityId": null
},
"slotSwapStatus": null,
"state": "Running",
"suspendedTill": null,
"systemData": null,
"tags": null,
"targetSwapSlot": null,
"trafficManagerHostNames": null,
"type": "Microsoft.Web/sites",
"usageState": "Normal"
}
PS /home> █
```

Microsoft Azure

Search: web app

Azure services

- All (31)
- Services (31)
- Marketplace (20)
- Documentation (29)
- Resources (0)
- Resource Groups (0)

Services

- Web Application Firewall policies (WAF)
- App Services**
- Function App
- Static Web Apps
- Application gateways
- Power Platform
- Managed applications
- Container Apps

Recent resource

Name

- [REDACTED]
- [REDACTED]
- [REDACTED] Searching 1 of 2 subscriptions.

Marketplace

- Damn Vulnerable Web App
- Python Runtime for Web App
- Web App + Database
- Akumina EXP - Web App
- Java Runtime for Web App
- Container App Plan

See all

Give feedback

Home >

App Services

Pixelrobots.co.uk (pixelrobots.co.uk)

+ Create Manage view Refresh Export to CSV Open query Assign tags Start Restart Stop Delete Feedback

Filter for any field... Subscription == Azure Subscription Resource group == all Location == all Add filter

Showng 1 to 1 of 1 records.

| Name | Status | Location | Pricing Tier | App Service Plan | Subscription | App Type | ... |
|--------------------------|---------|-------------|--------------|------------------|--------------------|----------|-----|
| containersinazure | Running | West Europe | Standard | containersplan | Azure Subscription | Web App | ... |

Home > App Services >

containersinazure

App Service

Search (Ctrl+/) Overview

Browse Stop Swap Restart Delete Refresh Get publish profile Reset publish profile Share to mobile ...

Activity log Access control (IAM) Tags Diagnose and solve problems Security Events (preview)

Deployment Quickstart Deployment credentials Deployment slots Deployment Center

Essentials

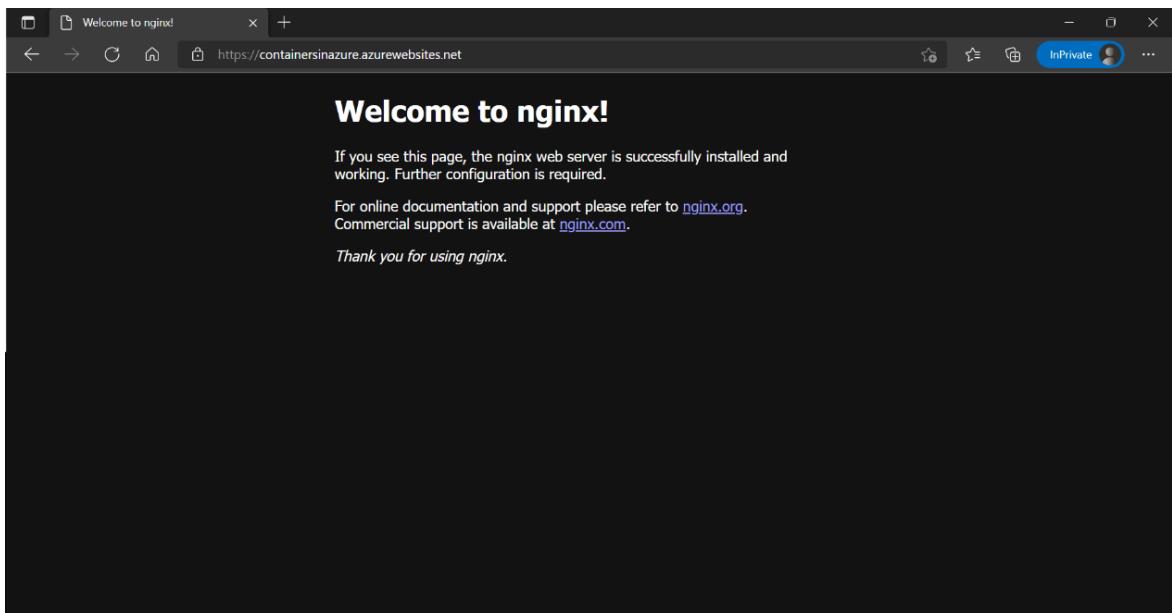
Resource group (move) rg:appserv-containers Status Running Location West Europe Subscription (move) Azure Subscription Subscription ID e378...d91

Tags (edit) Click here to add tags

URL <https://containersinazure.azurewebsites.net>

Health Check Not Configured App Service Plan containersplan (\$1:1) FTP/deployment username No FTP/deployment user set FTP hostname ftp://waws-prod-am2-533.ftp.azurewebsites.windows.net/site/wwwroot HTTPS hostname https://waws-prod-am2-533.ftp.azurewebsites.windows.net/site/wwwroot

Diagnose and solve problems Our self-service diagnostic and troubleshooting experience Application Insights Application Insights helps you detect and diagnose quality



Home > App Services > containersinazure

containersinazure | Deployment Center X

App Service

Search (Ctrl+ /) Save Discard Browse Manage publish profile Leave Feedback

Access control (IAM)

Tags

Diagnose and solve problems

Security

Events (preview)

Deployment

Quickstart

Deployment credentials

Deployment slots

Deployment Center

...

Settings * **Logs** **FTPS credentials ***

Use these settings to configure your container app deployment model and registry. We recommend GitHub Actions for greater operational efficiency. [Learn more](#)

Source *

Container Registry: Setup up your app to pull the container image from a registry.

GitHub Actions: Build, deploy, and manage your container app automatically with GitHub Actions.

Azure Pipelines: Configure a robust deployment pipeline for your application using Azure Pipelines, part of Azure DevOps Services (formerly known as VSTS).

GitHub Actions

App Service will place a GitHub Actions workflow in your chosen repository to build and deploy your app whenever there is a commit on the chosen branch. If you can't find an organization or repository, you may need to enable additional permissions on GitHub. [Learn more](#)

Chapter 3: Deploying Containers to Azure Functions

```
PowerShell ✓ | ⌂ ? ⚙️ 🖊️ { } 🔍
PS /home> az group show --name "rg-functions-containers"
{
  "id": "/subscriptions/[REDACTED]/resourceGroups/rg-functions-containers",
  "location": "westeurope",
  "managedBy": null,
  "name": "rg-functions-containers",
  "properties": {
    "provisioningState": "Succeeded"
  },
  "tags": null,
  "type": "Microsoft.Resources/resourceGroups"
}
PS /home>
```

```
PowerShell ✓ | ⌂ ? 🌐 🖊️ { } 🔍
{
  "microsoftEndpoints": null,
  "queue": "https://azfuncstor3421.queue.core.windows.net/",
  "table": "https://azfuncstor3421.table.core.windows.net/",
  "web": "https://azfuncstor3421.z6.web.core.windows.net/"
},
"primaryLocation": "westeurope",
"privateEndpointConnections": [],
"provisioningState": "Succeeded",
"publicNetworkAccess": null,
"resourceGroup": "rg-functions-containers",
"routingPreference": null,
"sasPolicy": null,
"secondaryEndpoints": null,
"secondaryLocation": null,
"sku": {
  "name": "Standard_LRS",
  "tier": "Standard"
},
"statusOfPrimary": "available",
"statusOfSecondary": null,
"tags": {},
"type": "Microsoft.Storage/storageAccounts"
}
PS /home>
```

[+ Create](#) [Edit columns](#) [Delete resource group](#) [Refresh](#) [Export to CSV](#) [Open query](#) | [Assign tags](#) [Move](#) [Delete](#) [Export template](#) | ...

[JSON View](#)

Essentials

Subscription ([move](#)) : [\[Subscription\]](#) Deployments : [2 Succeeded](#)
Subscription ID : [\[Subscription ID\]](#) Location : West Europe
Tags ([edit](#)) : [Click here to add tags](#)

[Resources](#) [Recommendations](#)

Filter for any field... Type == all × Location == all × [Add filter](#)

Showing 1 to 5 of 5 records. Show hidden types ⓘ

No grouping [▼](#) [List view](#) [▼](#)

| <input type="checkbox"/> Name ↑↓ | Type ↑↓ | Location ↑↓ | ... |
|--|----------------------|-------------|-----|
| <input type="checkbox"/>  acrregistry342 | Container registry | West Europe | ... |
| <input type="checkbox"/>  azfuncstor3421 | Storage account | West Europe | ... |
| <input type="checkbox"/>  containerinfunction01 | Application Insights | West Europe | ... |
| <input type="checkbox"/>  containerinfunction01 | Function App | West Europe | ... |
| <input type="checkbox"/>  containerplan | App Service plan | West Europe | ... |

Settings Logs FTPS credentials

Use these settings to configure your container app deployment model and registry. We reco

Source*

- Container Registry: Setup up your app to pull the contai
- GitHub Actions: Build, deploy, and manage your contai
- Azure Pipelines: Configure a robust deployment pipeline (VSTS).

Registry settings

Container Type

Single Container

Registry source

Docker Hub

Repository Access*

Public

Full Image Name and Tag*

whaakman/container-demos:billingsta...

Startup File

(empty input field)

Continuous deployment

On Off

Webhook URL

.....

```
PS> Invoke-RestMethod https://containerfunction01.azurewebsites.net/api/BillingStatements
```

| DateGenerated | BillingStatementId | Costs | Currency |
|---------------------|--------------------|-------|----------|
| 10/03/2022 18:21:45 | 1 | 100 | USD |
| 10/03/2022 18:21:45 | 2 | 200 | USD |
| 10/03/2022 18:21:45 | 3 | 300 | USD |
| 10/03/2022 18:21:45 | 4 | 400 | USD |
| 10/03/2022 18:21:45 | 5 | 500 | USD |

```
PS> |
```

```

PS> dir

      Directory: C:\AzureFunctionsContainerDemo

Mode                LastWriteTime         Length Name
----                -----          ----  --
d----
```

| Mode | LastWriteTime | Length | Name |
|-------|------------------|--------|------------------------------------|
| d---- | 10/03/2022 19:26 | | .vscode |
| d---- | 10/03/2022 19:38 | | bin |
| d---- | 10/03/2022 19:39 | | obj |
| -a--- | 10/03/2022 19:26 | 19 | .dockerignore |
| -a--- | 10/03/2022 19:26 | 4626 | .gitignore |
| -a--- | 10/03/2022 19:26 | 636 | AzureFunctionsContainerDemo.csproj |
| -a--- | 10/03/2022 19:39 | 1328 | BillingStatements.cs |
| -a--- | 10/03/2022 19:26 | 618 | Dockerfile |
| -a--- | 10/03/2022 19:36 | 55 | global.json |
| -a--- | 10/03/2022 19:26 | 231 | host.json |
| -a--- | 10/03/2022 19:26 | 163 | local.settings.json |

```

PS>

```

whaakman / container-demos

This repository does not have a description 

 Last pushed: a minute ago

Tags and Scans

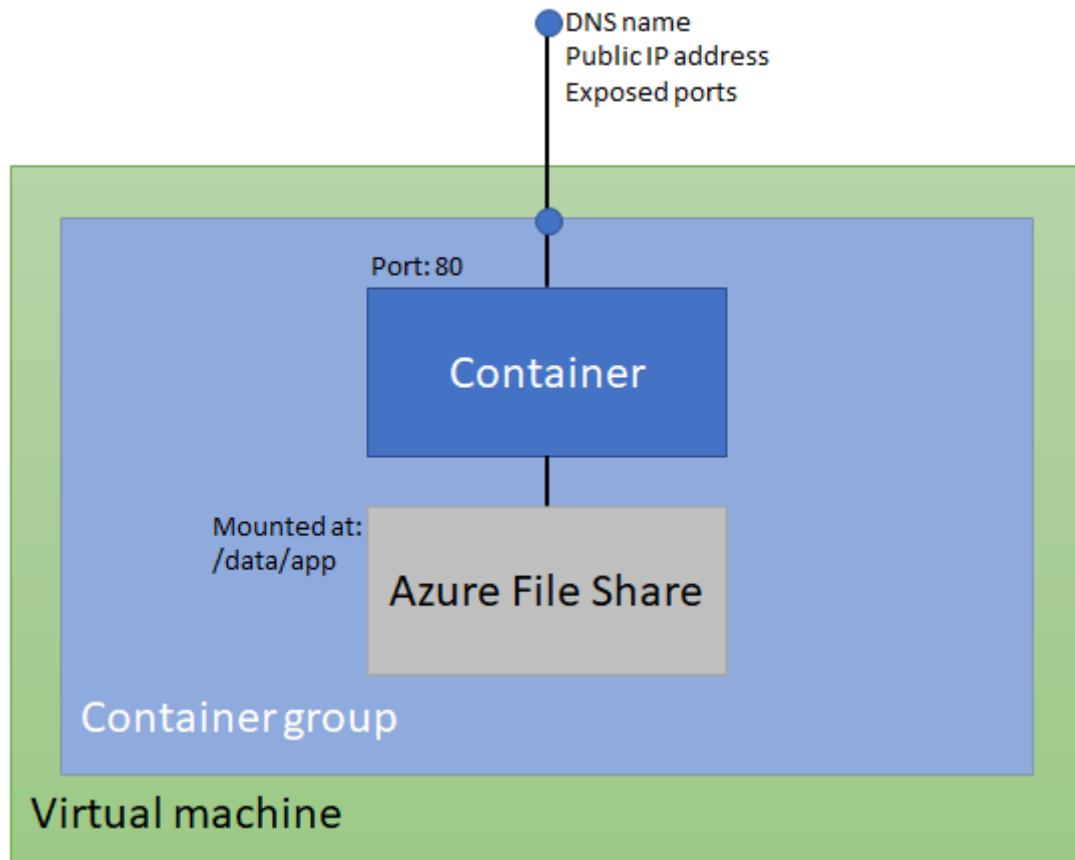
 VULNERABILITY SCANNING - DISABLED
[Enable](#)

This repository contains 4 tag(s).

| TAG | OS | PULLED | PUSHED |
|--|---|--------------|--------------|
|  billingstatementsexam... |  | --- | a minute ago |
|  billingstatementsfun... |  | 3 hours ago | 10 hours ago |
|  billingstatementsv2 |  | 10 hours ago | a day ago |
|  billingstatementsv1 |  | a day ago | a day ago |

[See all](#)

Chapter 4: Azure Container Instances for Serverless Containers

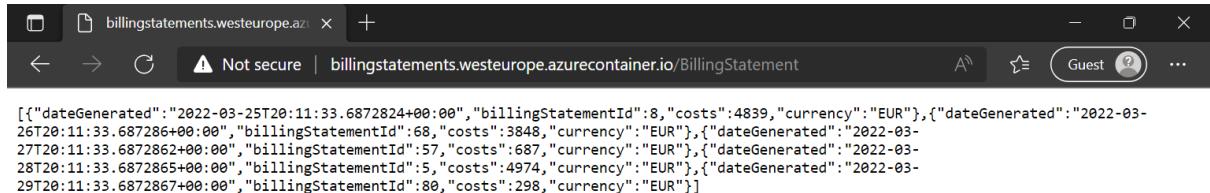


```
>> --location "west europe"
{
  "id": "/subscriptions/e378dee0-eef6-4335-bbd9-a3aa87496d91/resourceGroups/rg-containers-aci",
  "location": "westeurope",
  "managedBy": null,
  "name": "rg-containers-aci",
  "properties": {
    "provisioningState": "Succeeded"
  },
  "tags": null,
  "type": "Microsoft.Resources/resourceGroups"
}
PS /home> [ ]
```

```
"name": "billingstatementscontainer",
"osType": "Linux",
"provisioningState": "Succeeded",
"resourceGroup": "rg-containers-aci",
"restartPolicy": "Always",
"sku": "Standard",
"subnetIds": null,
"tags": {},
"type": "Microsoft.ContainerInstance/containerGroups",
"volumes": null,
"zones": null
}
PS /home> █
```

```
PS /home> az container show ` 
>> --resource-group "rg-containers-aci" ` 
>> --name billingstatementscontainer ` 
>> --query "{FQDN:ipAddress.fqdn,ProvisioningState:provisioningState}" --out table
FQDN                               ProvisioningState
----- 
billingstatements.westeuropre.azurecontainer.io  Succeeded
PS /home> █
```

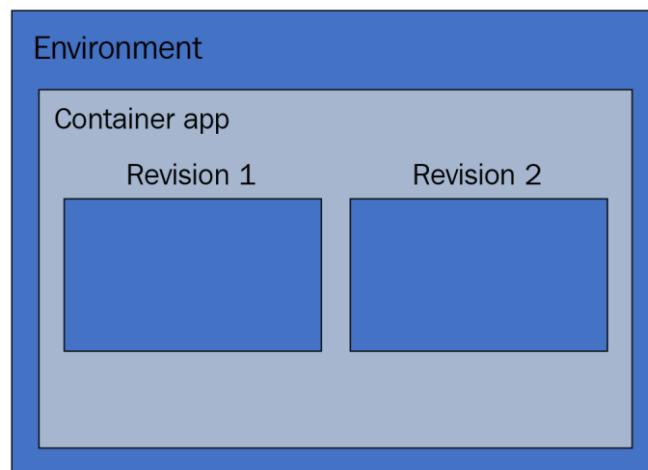
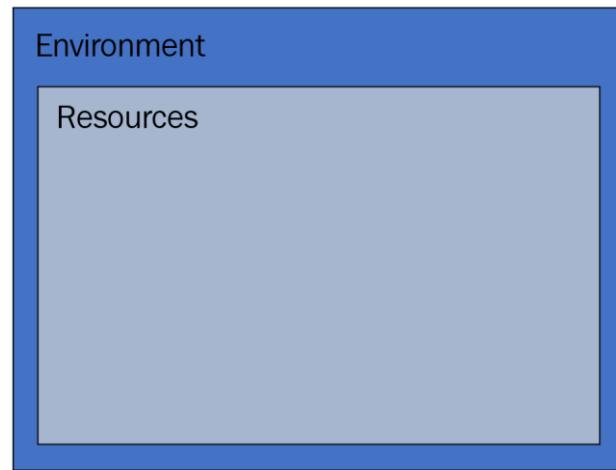
```
PS /home> Invoke-RestMethod billingstatements.westeuropre.azurecontainer.io/BillingStatement
dateGenerated          billingStatementId costs currency
----- 
3/25/2022 8:08:08 PM      54    2297 EUR
3/26/2022 8:08:08 PM      48    5149 EUR
3/27/2022 8:08:08 PM      17    1156 EUR
3/28/2022 8:08:08 PM      39    2777 EUR
3/29/2022 8:08:08 PM      31    5019 EUR
PS /home> █
```

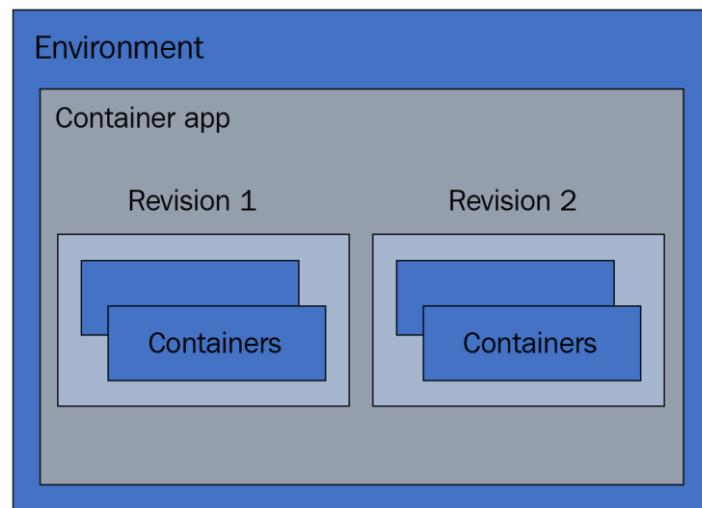
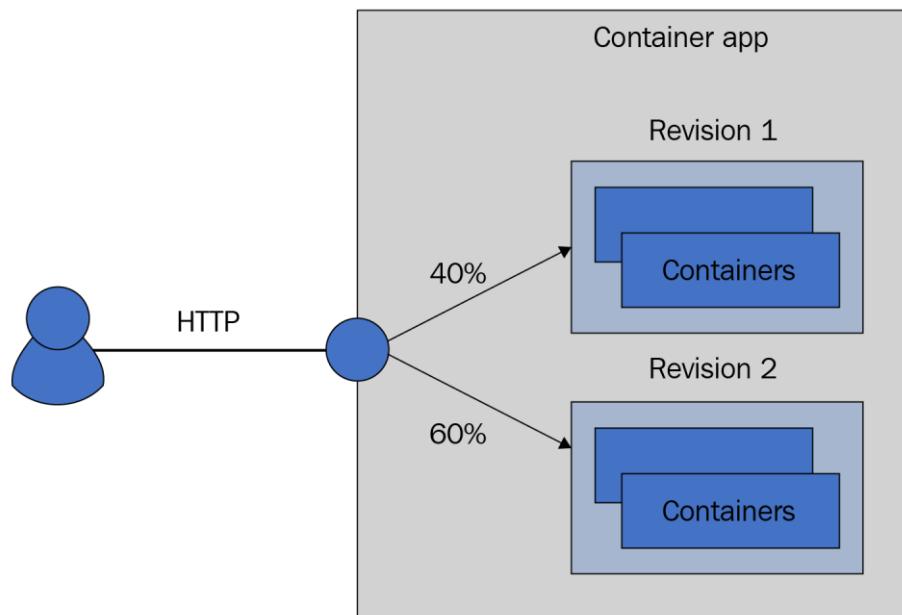


PowerShell ▾ | ⌂ ? ⚙ 🔍 { } 🔍

```
PS /home> az container show `>> --resource-group rg-containers-aci `>> --name billingcontainergroup `>> --query containers[*].image -o json [ "whaakman/container-demos:billinggeneratorv1", "whaakman/container-demos:billingstatementsv3" ] PS /home> []
```

Chapter 5: Azure Container Apps for Serverless Kubernetes





```
PS /> az provider show -n Microsoft.App
{
  "authorizations": [
    {
      "applicationId": "7e3bc4fd-85a3-4192-b177-5b8bfc87f42c",
      "roleDefinitionId": "39a74f72-b40f-4bdc-b639-562fe2260bf0"
    },
    {
      "applicationId": "3734c1a4-2bed-4998-a37a-ff1a9e7bf019",
      "roleDefinitionId": "5c779a4f-5cb2-4547-8c41-478d9be8ba90"
    }
  ],
  "id": "/subscriptions/                                     /providers/Microsoft.App",
  "namespace": "Microsoft.App",
  "providerAuthorizationConsentState": null,
  "registrationPolicy": "RegistrationRequired",
  "registrationState": "Registered"
  "resourceTypes": [
    {
      "id": "Microsoft.ContainerApp"
    }
  ]
}
```

```
PS /home> az group create ` 
>>   --name rg-containerapps ` 
>>   --location westeurope
{
  "id": "/subscriptions/                                     /resourceGroups/rg-containerapps",
  "location": "westeurope",
  "managedBy": null,
  "name": "rg-containerapps",
  "properties": {
    "provisioningState": "Succeeded"
  },
  "tags": null,
  "type": "Microsoft.Resources/resourceGroups"
}
PS /home> █
```

```
PS /home> az containerapp env create ` 
>>   --name billingmanagementapi ` 
>>   --resource-group rg-containerapps ` 
>>   --location westeurope
Command group 'containerapp' is in preview and under development. Reference and
No Log Analytics workspace provided.
Generating a Log Analytics workspace with name "workspace-rgcontainerapps0Sjk"
█- Running ..
```

```
PS /home> az containerapp create ` 
>> --name billingstatementscontainer ` 
>> --resource-group rg-containerapps ` 
>> --environment billingmanagementapi ` 
>> --image whaakman/container-demos:billingstatementsv3 ` 
>> --target-port 80 ` 
>> --ingress 'external' 
Command group 'containerapp' is in preview and under development. Reference and support: https://aka.ms/az-ref-containerapp 
- Running .. 
Container app created. Access your app at https://billingstatementscontainer.calmdesert-2ad0a8c9.westeurope.azurecontainerapps.io 

{ 
  "id": "/subscriptions/[REDACTED]/resourceGroups/[REDACTED]", 
  "identity": { 
    "type": "None" 
  }, 
  "location": "West Europe", 
  "name": "billingstatementscontainer", 
  "properties": { 
    "configuration": { 
      "activeRevisionsMode": "Single", 
      "ingress": { 
        "allowInsecure": false, 
        "external": true, 
        "port": 80, 
        "sslPort": 443 
      } 
    } 
  } 
}
```

```
PS /home> az containerapp show ` 
>> --resource-group rg-containerapps ` 
>> --name billingstatementscontainer ` 
>> --query properties.configuration.ingress.fqdn 
Command group 'containerapp' is in preview and under development. Reference and support: https://aka.ms/az-ref-containerapp 
"billingstatementscontainer.calmdesert-2ad0a8c9.westeurope.azurecontainerapps.io" 
PS /home> █
```

```
PS> Invoke-RestMethod https://billingstatementscontainer.mangocoast-61009fce.westeurope.azurecontainerapps.io/BillingStatement 

dateGenerated          billingStatementId costs currency 
-----          ----- 
09/04/2022 08:38:19          92  4210 EUR 
10/04/2022 08:38:19          46  3058 EUR 
11/04/2022 08:38:19          55  1310 EUR 
12/04/2022 08:38:19          61  5107 EUR 
13/04/2022 08:38:19          23  619 EUR 

PS>
```

[billingstatementscontainer | Ingress](#) ...

Container App

Search (Ctrl+ /)

[Refresh](#) [Send us your feedback](#)

Enable ingress for applications that need an HTTP endpoint.

HTTP Ingress * [?](#)

Disabled

Enabled

Ingress traffic *

Limited to Container Apps Environment

Limited to VNet: Applies if internalOnly is set to true on the Container Apps environment

Accepting traffic from anywhere: Applies if internalOnly is set to false on the Container Apps environment

Target port * [?](#)

Overview

Access control (IAM)

Tags

Diagnose and solve problems

Settings

Secrets

Ingress

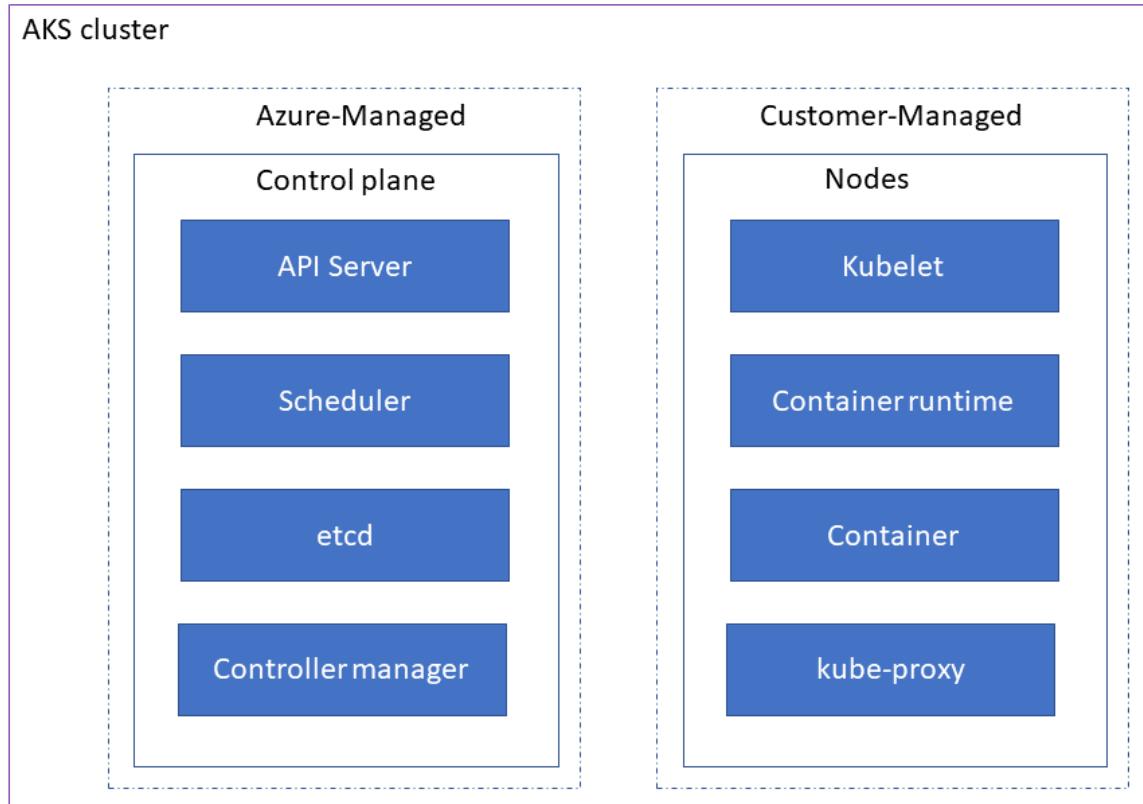
Continuous deployment

Locks

Revisions

Revision management

Chapter 6: Azure Kubernetes Service for Kubernetes in the Cloud



```
PS /home> az group create `>>   --name rg-aks `>>   --location westeurope`{>"id": "/subscriptions/e378dee0-eef6-4335-bbd9-a3aa87496d91/resourceGroups/rg-aks",>"location": "westeurope",>"managedBy": null,>"name": "rg-aks",>"properties": {>    "provisioningState": "Succeeded"}},>"tags": null,>"type": "Microsoft.Resources/resourceGroups"}PS /home> []
```

```
PS /home> az aks create `  
  >> --location westeurope `  
  >> --resource-group rg-aks `  
  >> --name aks `  
  >> --generate-ssh-keys  
The behavior of this command has been altered by the following extension: aks-preview  
  |- Running ..
```

```
PS /home> az aks get-credentials --resource-group rg-aks --name aks  
The behavior of this command has been altered by the following extension: aks-preview  
Merged "aks" as current context in /home/richard/.kube/config  
PS /home> █
```

```
PS /home> kubectl apply -f https://gist.githubusercontent.com/PixelRobots/3dab69a2e79e023c68fc0ede38b8e2ce/raw/5b574b86dc36933bab461898069b50e6d56f7f74/billingstatements.yaml  
deployment.apps/billingstatements created  
service/billingstatements created  
PS /home> █
```

```
PS /home> kubectl get deployments,pods,service  
NAME                                     READY   UP-TO-DATE   AVAILABLE   AGE  
deployment.apps/billingstatements   1/1     1           1          53s  
  
NAME                               READY   STATUS    RESTARTS   AGE  
pod/billingstatements-d446cf96-nz24z  1/1     Running   0          53s  
  
NAME              TYPE        CLUSTER-IP      EXTERNAL-IP      PORT(S)      AGE  
service/billingstatements  LoadBalancer  10.0.47.36    20.54.218.85   80:30353/TCP  53s  
service/kubernetes       ClusterIP    10.0.0.1      <none>        443/TCP     25m  
PS /home> █
```

```
PS /home> Invoke-RestMethod http://20.54.218.85/BillingStatement  
  
dateGenerated          billingStatementId costs currency  
-----  
4/22/2022 10:08:55 AM          4  1058 EUR  
4/23/2022 10:08:55 AM          15  2555 EUR  
4/24/2022 10:08:55 AM          9  2460 EUR  
4/25/2022 10:08:55 AM          69  5376 EUR  
4/26/2022 10:08:55 AM          4  3293 EUR  
  
PS /home> █
```

Chapter 7: The Single Container Use Case

No Images

Chapter 8: Deciding the Best Fitting Azure Technologies for Multiple Containers

```
PS /home> az group create `>>   --name rg-containerapps`>>   --location westeurope`>{>  "id": "/subscriptions/[REDACTED]"/resourceGroups/rg-containerapps",>  "location": "westeurope",>  "managedBy": null,>  "name": "rg-containerapps",>  "properties": {>    "provisioningState": "Succeeded"}>  },>  "tags": null,>  "type": "Microsoft.Resources/resourceGroups"}`>`>PS /home> █
```

```
"staticIp": "20.126.189.21",>"zoneRedundant": false`>},>"resourceGroup": "rg-containerapps",>"systemData": {>"createdAt": "2022-07-03T12:46:36.7044629",>"createdBy": "[REDACTED]",>"createdByType": "User",>"lastModifiedAt": "2022-07-03T12:46:36.7044629",>"lastModifiedBy": "[REDACTED]",>"lastModifiedByType": "User"`,>"type": "Microsoft.App/managedEnvironments"}`>`>PS /home> █
```

```
        "scale": {
            "maxReplicas": 1,
            "minReplicas": 1
        }
    },
    "resourceGroup": "rg-containerapps",
    "systemData": {
        "createdAt": "2022-07-03T13:30:05.3369642",
        "createdBy": "████████████████████████████████",
        "createdByType": "User",
        "lastModifiedAt": "2022-07-03T13:30:05.3369642",
        "lastModifiedBy": "████████████████████████████",
        "lastModifiedByType": "User"
    },
    "type": "Microsoft.App/containerApps"
}
PS /home> █
```

```
PS /home> az containerapp show \
>> --resource-group rg-containerapps \
>> --name tightlycoupledcontainers \
>> --query properties.configuration.ingress.fqdn
"tightlycoupledcontainers.ashywater-361bcfb8.westeurope.azurecontainerapps.io"
PS /home> █
```

Production
V1

Cloud
Adventures



```
PS /home> az group create `>> --name rg-aks `>> --location westeurope`> {`>   "id": "/subscriptions/e378dee0-eef6-4335-bbd9-a3aa87496d91/resourceGroups/rg-aks",`>   "location": "westeurope",`>   "managedBy": null,`>   "name": "rg-aks",`>   "properties": {`>     "provisioningState": "Succeeded" `>   },`>   "tags": null,`>   "type": "Microsoft.Resources/resourceGroups" `> }`> PS /home> []
```

```
        "azureKeyVaultKms": null,`>       "workloadIdentity": null`>     },`>     "servicePrincipalProfile": {`>       "clientId": "msi",`>       "secret": null`>     },`>     "sku": {`>       "name": "Basic",`>       "tier": "Free" `>     },`>     "systemData": null,`>     "tags": null,`>     "type": "Microsoft.ContainerService/ManagedClusters",`>     "windowsProfile": null`>   }`> PS /home/richard> []
```

```
PS /home> az aks get-credentials --resource-group rg-aks --name aks`> The behavior of this command has been altered by the following extension: aks-preview`> Merged "aks" as current context in /home/richard/.kube/config`> PS /home> []
```

```

    backend:
      service:
        name: exampleService
        port:
          number: 80
      path: /
  # This section is only required if TLS is to be enabled for the Ingress
  tls:
    - hosts:
      - www.example.com
      secretName: example-tls

If TLS is enabled for the Ingress, a Secret containing the certificate and key must also be provided:

apiVersion: v1
kind: Secret
metadata:
  name: example-tls
  namespace: foo
data:
  tls.crt: <base64 encoded cert>
  tls.key: <base64 encoded key>
type: kubernetes.io/tls

```

```

PS /home> kubectl apply -f https://raw.githubusercontent.com/PacktPublishing/-Up-and-Running-with-Azure-Containers/main/CH08/frontend.yaml
deployment.apps/frontend created
service/frontend created
ingress.networking.k8s.io/frontend created
PS /home> █

```

```

PS /home> kubectl apply -f https://raw.githubusercontent.com/PacktPublishing/-Up-and-Running-with-Azure-Containers/main/CH08/api.yaml
deployment.apps/billingstatements created
service/billingstatements created
ingress.networking.k8s.io/frontend configured
PS /home> █

```

```

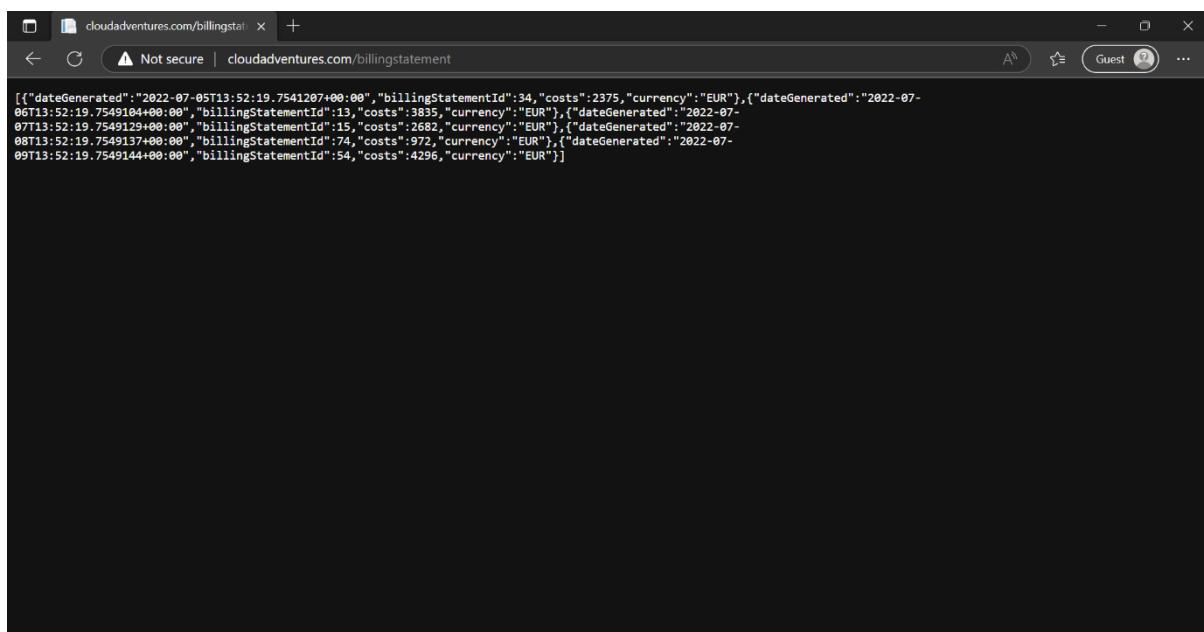
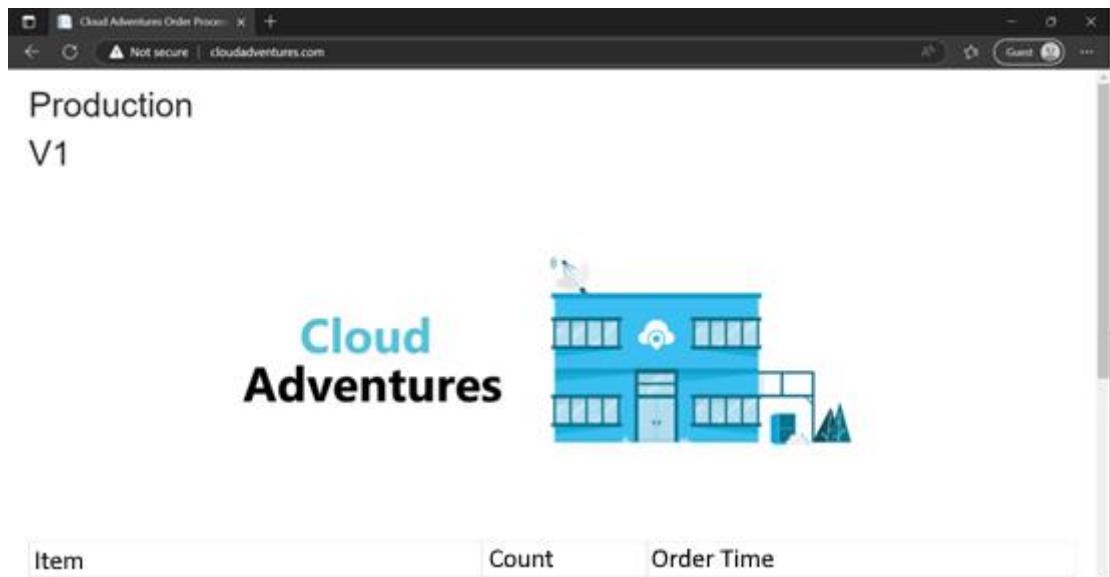
PS /home> kubectl get deployments,pods,service,ingress
NAME                 READY   UP-TO-DATE   AVAILABLE   AGE
deployment.apps/billingstatements   1/1     1           1          31s
deployment.apps/frontend            1/1     1           1          14s

NAME                  READY   STATUS    RESTARTS   AGE
pod/billingstatements-d446cf96-d4kbq   1/1    Running   0          31s
pod/frontend-7f9585f49-dl8ch         1/1    Running   0          14s

NAME                TYPE        CLUSTER-IP   EXTERNAL-IP   PORT(S)   AGE
service/billingstatements   ClusterIP   10.0.130.214   <none>       80/TCP    31s
service/frontend         ClusterIP   10.0.63.33    <none>       80/TCP    14s
service/kubernetes       ClusterIP   10.0.0.1     <none>       443/TCP   19h

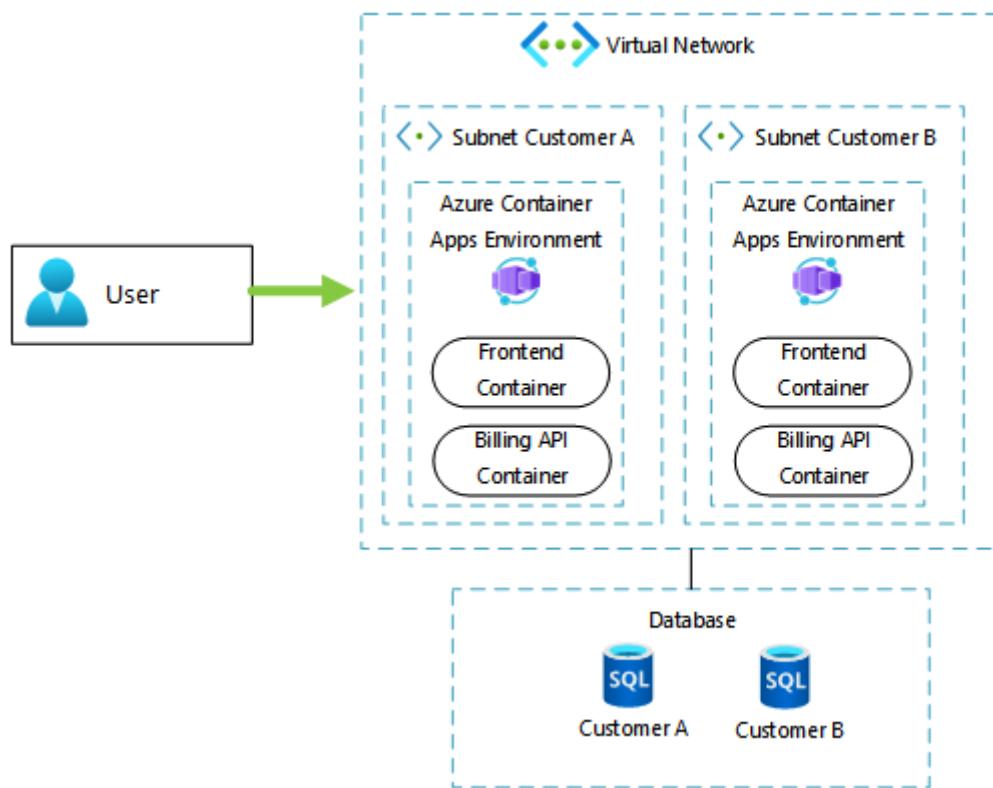
NAME           CLASS   HOSTS          ADDRESS        PORTS   AGE
ingress.networking.k8s.io/billingstatements   nginx   cloudadventures.com  20.103.175.158  80   31s
ingress.networking.k8s.io/frontend            nginx   cloudadventures.com  20.103.175.158  80   14s
PS /home> █

```



```
PS /home> kubectl scale deployments billingstatements --replicas=3
deployment.apps/billingstatements scaled
PS /home> kubectl get deployment billingstatements
NAME          READY   UP-TO-DATE   AVAILABLE   AGE
billingstatements   3/3      3           3          7m52s
PS /home> █
```

Chapter 9: Container Technologies for Startups



```
>> --location westeurope
{
  "id": "/subscriptions/e[REDACTED]/resourceGroups/rg-cloud-adventures",
  "location": "westeurope",
  "managedBy": null,
  "name": "rg-cloud-adventures",
  "properties": {
    "provisioningState": "Succeeded"
  },
  "tags": null,
  "type": "Microsoft.Resources/resourceGroups"
}
PS /home> █
```

```
"ipAllocations": null,  
"location": "westeurope",  
"name": "vnet-cloud-adventures",  
"provisioningState": "Succeeded",  
"resourceGroup": "rg-cloud-adventures",  
"resourceGuid": "2db5f752-105b-4e9e-adc1-628fded6b115",  
"subnets": [],  
"tags": {},  
"type": "Microsoft.Network/virtualNetworks",  
"virtualNetworkPeerings": []  
}  
}  
PS /home> █
```

```
"privateEndpoints": null,  
"privateLinkServiceNetworkPolicies": "Enabled",  
"provisioningState": "Succeeded",  
"purpose": null,  
"resourceGroup": "rg-cloud-adventures",  
"resourceNavigationLinks": null,  
"routeTable": null,  
"serviceAssociationLinks": null,  
"serviceEndpointPolicies": null,  
"serviceEndpoints": null,  
"type": "Microsoft.Network/virtualNetworks/subnets"  
}  
PS /home> █
```

```
PS /home> $subnetId = az network vnet subnet show `  
>> --resource-group rg-cloud-adventures`  
>> --vnet-name vnet-cloud-adventures`  
>> --name customer-a`  
>> --query "id" -o tsv | tr -d '[[:space:]]'  
PS /home> $subnetId  
/subscriptions/e.../resourceGroups/rg-cloud-adventures/providers/Microsoft.Network/virtualNetworks/vnet-cloud-adventures/subnets/customer-a  
PS /home> █
```

```

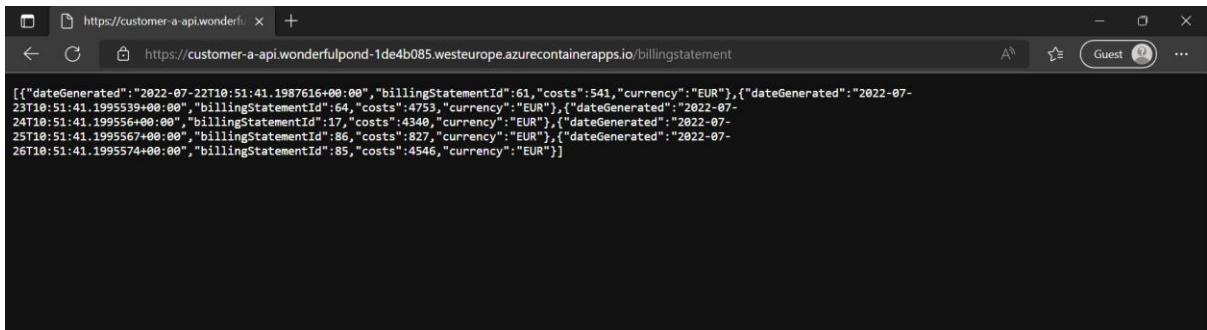
},
"resourceGroup": "rg-cloud-adventures",
"systemData": {
    "createdAt": "2022-07-21T09:11:00.9067885",
    "createdBy": "████████████████████████████████",
    "createdByType": "User",
    "lastModifiedAt": "2022-07-21T09:11:00.9067885",
    "lastModifiedBy": "████████████████████████████████",
    "lastModifiedByType": "User"
},
"type": "Microsoft.App/managedEnvironments"
}
PS /home> █

```

```

PS /home> az containerapp create \
>> --name customer-a-api \
>> --resource-group rg-cloud-adventures \
>> --environment ace-customer-a \
>> --image whaaakman/container-demos:billingstatementsv3 \
>> --ingress external \
>> --target-port 80 \
>> --query properties.configuration.ingress fqdn
- Running ..
Container app created. Access your app at https://customer-a-api.wonderfulpond-1de4b085.westeurope.azurecontainerapps.io/
"customer-a-api.wonderfulpond-1de4b085.westeurope.azurecontainerapps.io"
PS /home> █

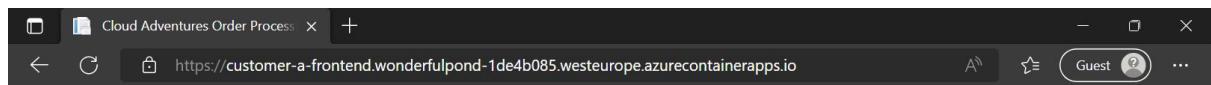
```



```

PS /home> az containerapp create \
>> --name customer-a-frontend \
>> --resource-group rg-cloud-adventures \
>> --environment ace-customer-a \
>> --image whaaakman/container-demos:cloudadventuresshopv1 \
>> --ingress external \
>> --target-port 80 \
>> --env-vars BILLING_API_ADDRESS="https://customer-a-api.internal.wonderfulpond-1de4b085.westeurope.azurecontainerapps.io" BILLING_API_KEY="API key" SQL_CON_STRING="Azure sql connection string" \
>> --query properties.configuration.ingress fqdn
\ Running ..
Container app created. Access your app at https://customer-a-frontend.wonderfulpond-1de4b085.westeurope.azurecontainerapps.io/
"customer-a-frontend.wonderfulpond-1de4b085.westeurope.azurecontainerapps.io"
PS /home> █

```



Production

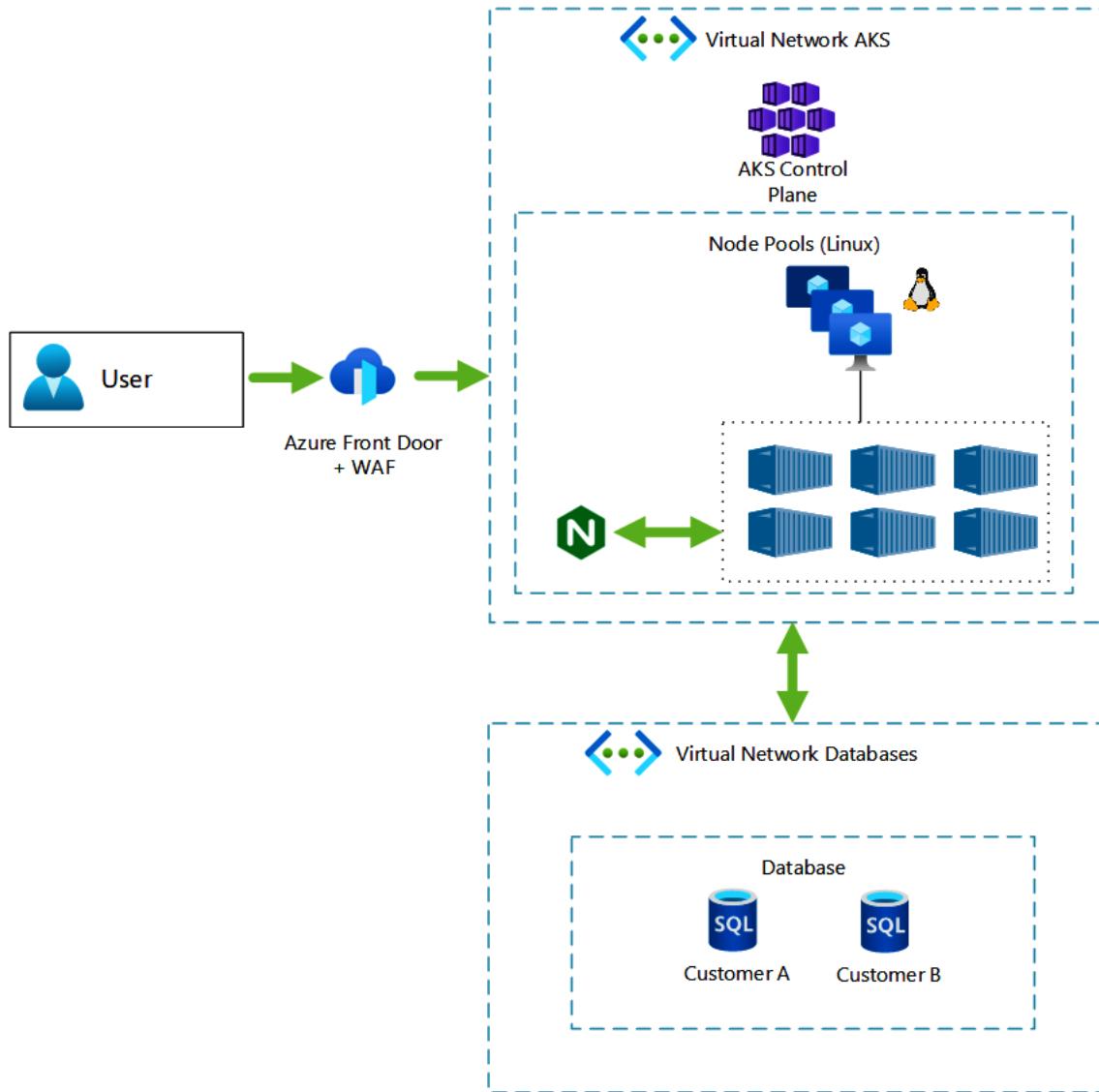
V1

Cloud Adventures



| Item | Count | Order Time |
|------|-------|------------|
| | | |

Chapter 10: Container Technologies for Small and Medium-Sized Businesses



```
PS /home/richard> az group create `>>   --name rg-aks-smb`>>   --location westeurope`>{>  "id": "/subscriptions/[REDACTED]/resourceGroups/rg-aks-smb",>  "location": "westeurope",>  "managedBy": null,>  "name": "rg-aks-smb",>  "properties": {>    "provisioningState": "Succeeded"`,>  },>  "tags": null,>  "type": "Microsoft.Resources/resourceGroups"}`>}>PS /home/richard> [
```

```
  "ipConfigurationProfiles": null,>  "ipConfigurations": null,>  "name": "akscluster",>  "natGateway": null,>  "networkSecurityGroup": null,>  "privateEndpointNetworkPolicies": "Disabled",>  "privateEndpoints": null,>  "privateLinkServiceNetworkPolicies": "Enabled",>  "provisioningState": "Succeeded",>  "purpose": null,>  "resourceGroup": "rg-aks-smb",>  "resourceNavigationLinks": null,>  "routeTable": null,>  "serviceAssociationLinks": null,>  "serviceEndpointPolicies": null,>  "serviceEndpoints": null,>  "type": "Microsoft.Network/virtualNetworks/subnets"}`>},>],>"tags": {},>"type": "Microsoft.Network/virtualNetworks",>"virtualNetworkPeerings": []`>}`>}
```

```

PS /home/richard> $AKSsubnetId = az network vnet subnet show --resource-group rg-aks-smb --vnet-name vnet-aks-smb --name akscluster --query id
PS /home/richard> az aks create \
>> --location westeurope \
>> --resource-group rg-aks-smb \
>> --name aks-smb \
>> --vnet-subnet-id $AKSsubnetId
The behavior of this command has been altered by the following extension: aks-preview
Waiting for AAD role to propagate[###] 10.0000%]

```

```

PS /home/richard> az aks get-credentials --resource-group rg-aks-smb --name aks-smb
The behavior of this command has been altered by the following extension: aks-preview
Merged "aks-smb" as current context in /home/richard/.kube/config
PS /home/richard>

```

```

backend:
  service:
    name: exampleService
    port:
      number: 80
  path: /
# This section is only required if TLS is to be enabled for the Ingress
  tls:
    - hosts:
      - www.example.com
    secretName: example-tls

If TLS is enabled for the Ingress, a Secret containing the certificate and key must also be provided:

apiVersion: v1
kind: Secret
metadata:
  name: example-tls
  namespace: foo
data:
  tls.crt: <base64 encoded cert>
  tls.key: <base64 encoded key>
  type: kubernetes.io/tls
PS /home/richard>

```

```

PS /home/richard> kubectl get pods,svc -n internal-ingress
NAME                                         READY   STATUS    RESTARTS   AGE
pod/internal-ingress-ingress-nginx-controller-dbc98c796-mc9px   1/1     Running   0          92s

NAME                TYPE        CLUSTER-IP   EXTERNAL-IP   PORT(S)
AGE
service/internal-ingress-ingress-nginx-controller   LoadBalancer   10.0.242.59   10.240.0.7   80:30590/TCP,443:30278/TCP
92s
service/internal-ingress-ingress-nginx-controller-admission   ClusterIP   10.0.200.248   <none>       443/TCP
92s
PS /home/richard>

```

```

PS /home/richard> kubectl apply -f https://raw.githubusercontent.com/PacktPublishing/-Up-and-Running-with-Azure-Containers/main/CH10/api.yaml
deployment.apps/billingstatements created
service/billingstatements created
ingress.networking.k8s.io/billingstatements created
PS /home/richard>

```

```
PS /home/richard> kubectl apply -f https://raw.githubusercontent.com/PacktPublishing/-Up-and-Running-with-Azure-Containers/main/CH10/frontend.yaml
deployment.apps/frontend created
service/frontend created
ingress.networking.k8s.io/frontend created
PS /home/richard> █
```

```
PS /home/richard> kubectl get deployments,pods,service,ingress
NAME                                READY   UP-TO-DATE   AVAILABLE   AGE
deployment.apps/billingstatements   1/1     1           1           36m
deployment.apps/frontend            1/1     1           1           35m

NAME                               READY   STATUS    RESTARTS   AGE
pod/billingstatements-d446cf96-zbh4d 1/1     Running   0          36m
pod/frontend-7f9585f49-nk8db        1/1     Running   0          35m

NAME              TYPE      CLUSTER-IP      EXTERNAL-IP      PORT(S)      AGE
service/billingstatements  ClusterIP  10.0.45.205  <none>        80/TCP       36m
service/frontend      ClusterIP  10.0.149.239 <none>        80/TCP       35m
service/kubernetes    ClusterIP  10.0.0.1      <none>        443/TCP     105m

NAME                CLASS      HOSTS          ADDRESS      PORTS      AGE
ingress.networking.k8s.io/billingstatements  internal-ingress  cloudadventures.com  10.240.0.7  80      36m
ingress.networking.k8s.io/frontend           internal-ingress  cloudadventures.com  10.240.0.7  80      35m
PS /home/richard> █
```

```
>> --profile-name fd-smb
>> --resource-group rg-aks-smb
>> --sku Premium_AzureFrontDoor
Command group 'afd' is in preview and under development. Reference and support levels: https://aka.ms/CLI\_refstatus
Resource provider 'Microsoft.Cdn' used by this operation is not registered. We are registering for you.
Registration succeeded.
{
  "frontDoorId": "af770d53-65a4-41c8-81a4-352f10677919",
  "id": "/subscriptions/e378dee0-eef6-4335-bbd9-a3aa87496d91/resourcegroups/rg-aks-smb/providers/Microsoft.Cdn/profiles/fd-smb",
  "kind": "frontdoor",
  "location": "Global",
  "name": "fd-smb",
  "originResponseTimeoutSeconds": 30,
  "provisioningState": "Succeeded",
  "resourceGroup": "rg-aks-smb",
  "resourceState": "Active",
  "sku": {
    "name": "Premium_AzureFrontDoor"
  },
  "systemData": null,
  "tags": {},
  "type": "Microsoft.Cdn/profiles"
}
PS /home/richard> █
```

```

PS /home/richard> az afd endpoint create \
>> --profile-name fd-smb \
>> --resource-group rg-aks-smb \
>> --endpoint-name cloudadventures \
>> --enabled-state Enabled
Command group 'afd' is in preview and under development. Reference and support levels: https://aka.ms/CLI_refstatus
{
  "autoGeneratedDomainLabelScope": "TenantReuse",
  "deploymentStatus": "NotStarted",
  "enabledState": "Enabled",
  "hostName": "cloudadventures-bdhuatepepfzb5cz.z01.azurefd.net",
  "id": "/subscriptions/e378dee0-eef6-4335-bbd9-a3aa87496d91/resourcegroups/rg-aks-smb/providers/Microsoft.Cdn/profiles/fd-smb/afdevents/cloudadventures",
  "location": "Global",
  "name": "cloudadventures",
  "profileName": null,
  "provisioningState": "Succeeded",
  "resourceGroup": "rg-aks-smb",
  "systemData": null,
  "tags": {},
  "type": "Microsoft.Cdn/profiles/afdevents"
}
PS /home/richard> []

```

```

"deploymentStatus": "NotStarted",
"healthProbeSettings": {
  "probeIntervalInSeconds": 60,
  "probePath": "/",
  "probeProtocol": "Http",
  "probeRequestType": "GET"
},
"id": "/subscriptions/e378dee0-eef6-4335-bbd9-a3aa87496d91/resourcegroups/rg-aks-smb/providers/Microsoft.Cdn/profiles/fd-smb/origingroups/fd-origin-smb",
"loadBalancingSettings": {
  "additionalLatencyInMilliseconds": 50,
  "sampleSize": 4,
  "successfulSamplesRequired": 3
},
"name": "fd-origin-smb",
"profileName": null,
"provisioningState": "Succeeded",
"resourceGroup": "rg-aks-smb",
"sessionAffinityState": "Disabled",
"systemData": null,
"trafficRestorationTimeToHealedOrNewEndpointsInMinutes": null,
"type": "Microsoft.Cdn/profiles/origingroups"
}
PS /home/richard> []

```

```

"id": "/subscriptions/e378dee0-eef6-4335-bbd9-a3aa87496d91/resourcegroups/rg-aks-smb/providers/Microsoft.Cdn/profiles/fd-smb/origingroups/fd-origin-smb/origins/pls-aks",
"name": "pls-aks",
"originGroupName": "fd-origin-smb",
"originHostHeader": "pls-aks.9e2fc521-5fe9-4869-a84c-d7ec1f188fd3.westeurope.azure.privateLinkService",
"priority": 1,
"provisioningState": "Succeeded",
"resourceGroup": "rg-aks-smb",
"sharedPrivateLinkResource": {
  "groupId": null,
  "privateLink": {
    "id": "/subscriptions/e378dee0-eef6-4335-bbd9-a3aa87496d91/resourceGroups/mc_rg-aks-smb_aks-smb_westeurope/providers/Microsoft.Network/privateLinkServices/pls-aks",
    "resourceGroup": "mc_rg-aks-smb_aks-smb_westeurope"
  },
  "privateLinkLocation": "westeurope",
  "requestMessage": "please approve",
  "status": null
},
"systemData": null,
"type": "Microsoft.Cdn/profiles/origingroups/origins",
"weight": 1000
}
PS /home/richard> []

```

Microsoft Azure

pls-aks

Azure services

All Resources (2) Documentation (2) Services (0) Resource Groups (0) Marketplace (0)

Azure Active Directory (0)

Resources

pls-aks.nic.87b6523b-dd3b-4bb6-baaa-40d57d0... Network Interface 

Documentations

Create an internal load balancer - Azure Kubernetes Service Azure subscription limits and quotas - Azure Resource Manager

Continue searching in Azure Active Directory

Give feedback

Recent Favorite

| Name | Type | Last Viewed |
|--|-----------------------------|-------------------|
| pls-aks.nic.87b6523b-dd3b-4bb6-baaa-40d57d066131 | Network interface | a few seconds ago |
| pls-aks | Private link service | a few seconds ago |
| fd-smb | Front Door and CDN profiles | 13 minutes ago |

Home > pls-aks

Private link service

Search (Ctrl+ /) Delete Refresh

Overview

Activity log Access control (IAM) Tags Diagnose and solve problems

Private endpoint connections 

NAT configuration Access security Properties Locks

Essentials

Resource group (move) mc_rg-aks-smb_aks-smb_westeurope Alias pls-aks.9e2fc521-5fe9-4869-a84c-d7ec1f188fd3.westeurope.azure...
Status Succeeded NAT subnet vnet-aks-smb/akscluster
Location West Europe NAT IPs 10.240.0.8
Subscription (move) Azure Subscription Load balancer kubernetes-internal
Subscription ID 
Tags (edit) k8s-azure-cluster-name : kubernetes More (1)
Visibility All

JSON View

Home > pls-aks

pls-aks | Private endpoint connections

Private endpoint Approve Reject Remove Refresh

Search (Ctrl+ /)

Overview Activity log Access control (IAM) Tags Diagnose and solve problems

Filter by name... All connection states

| Connection name | Connection state | Private endpoint | Description |
|--------------------------|------------------|--------------------------|----------------|
| 6d4b6b5c-e596-4198-9d... | Pending | 6d4b6b5c-e596-4198-9d... | please approve |

```
"httpsRedirect": "Disabled",
"id": "/subscriptions/e378dee0-eef6-4335-bbd9-a3aa87496d91/resourcegroups/rg-aks-smb/providers/Microsoft.Cdn/profiles/fd-smb/afddendpoints/cloudadventures/routes/aks-route",
"linkToDefaultDomain": "Enabled",
"name": "aks-route",
"originGroup": {
  "id": "/subscriptions/e378dee0-eef6-4335-bbd9-a3aa87496d91/resourceGroups/rg-aks-smb/providers/Microsoft.Cdn/profiles/fd-smb/originGroups/fd-origin-smb",
  "resourceGroup": "rg-aks-smb"
},
"originPath": null,
"patternsToMatch": [
  "*"
],
"provisioningState": "Succeeded",
"resourceGroup": "rg-aks-smb",
"ruleSets": [],
"supportedProtocols": [
  "Http"
],
"systemData": null,
"type": "Microsoft.Cdn/profiles/afddendpoints/routes"
}
PS /home/richard> 
```

```
"managedRules": {
  "managedRuleSets": []
},
"name": "wafsmrb",
"policySettings": {
  "customBlockResponseBody": null,
  "customBlockResponseStatus": null,
  "enabledState": "Enabled",
  "mode": "Prevention",
  "redirectUrl": null,
  "requestBodyCheck": "Enabled"
},
"provisioningState": "Succeeded",
"resourceGroup": "rg-aks-smb",
"resourceState": "Enabled",
"routingRuleLinks": [],
"securityPolicyLinks": [],
"sku": {
  "name": "Premium_AzureFrontDoor"
},
"tags": {},
"type": "Microsoft.Network/frontdoorwebapplicationfirewallpolicies"
}
PS /home/richard> 
```

```

    "mb/afdEndpoints/cloudadventures",
      "isActive": true,
      "resourceGroup": "rg-aks-smb"
    },
    "patternsToMatch": [
      "*"
    ]
  },
  "type": "WebApplicationFirewall",
  "wafPolicy": {
    "id": "/subscriptions/e378dee0-eef6-4335-bbd9-a3aa87496d91/resourceGroups/rg-aks-smb/providers/Microsoft.Network/frontdoorwebapplicationfirewallpolicies/wafSmb",
    "resourceGroup": "rg-aks-smb"
  }
},
"profileName": null,
"provisioningState": "Succeeded",
"resourceGroup": "rg-aks-smb",
"systemData": null,
"type": "Microsoft.Cdn/profiles/securitypolicies"
}
PS /home/richard> []

```

```

PS /home/richard> az afd endpoint show --profile-name fd-smb --endpoint-name cloudadventures --resource-group rg-aks-smb --query hostName -o tsv
Command group 'afd' is in preview and under development. Reference and support levels: https://aka.ms/CLI_refstatus
cloudadventures-bdhuatepepfzb5cz.z01.azurefd.net
PS /home/richard> []

```

Cloud Adventures Order Process

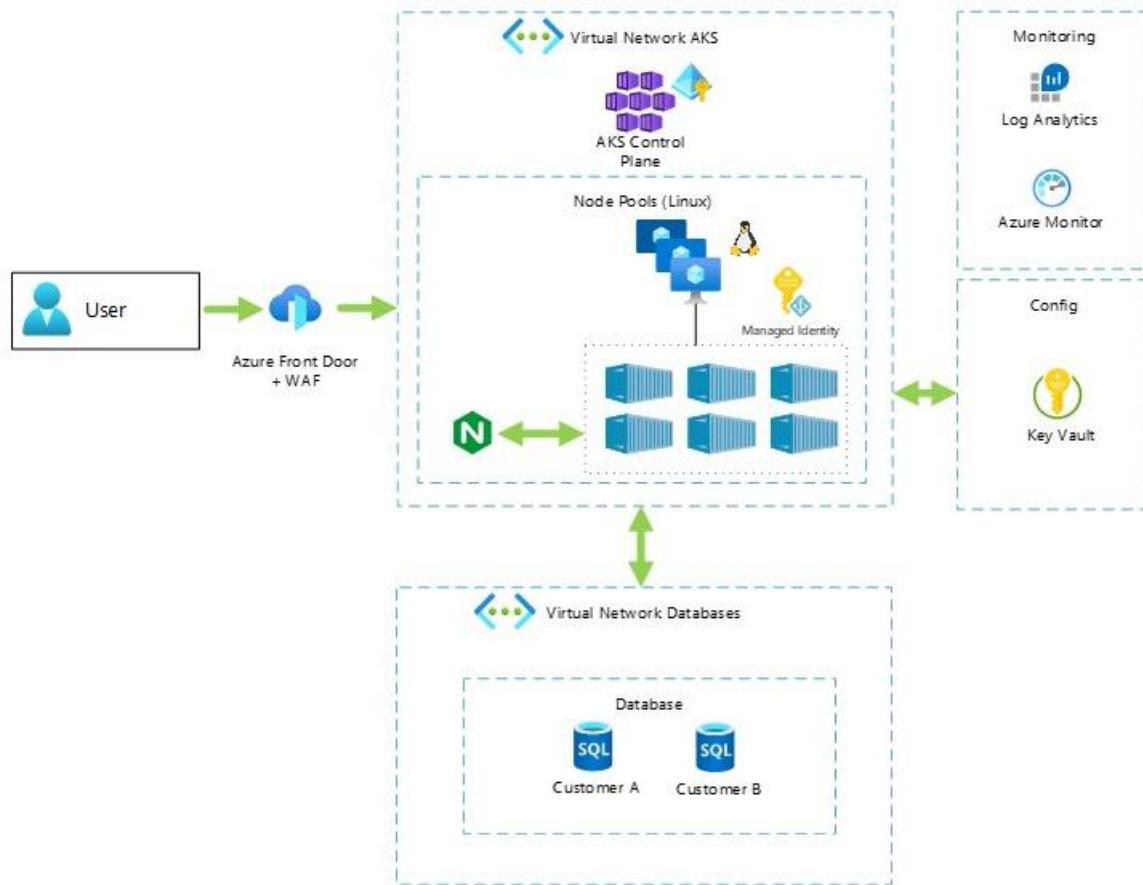
Not secure | cloudadventures-bdhuatepepfzb5cz.z01.azurefd.net

Production V1

Cloud Adventures

| Item | Count | Order Time |
|------|-------|------------|
| | | |

Chapter 11: Container Technologies for Enterprises



```
"lastSkuUpdate": "Fri, 26 Aug 2022 18:30:20 GMT",
  "name": "pergb2018"
},
"systemData": null,
"tags": null,
"type": "Microsoft.OperationalInsights/workspaces",
"workspaceCapping": {
  "dailyQuotaGb": -1.0,
  "dataIngestionStatus": "RespectQuota",
  "quotaNextResetTime": "Sat, 27 Aug 2022 09:00:00 GMT"
}
}
PS /home> []
```

```
PS /home> $resourceIdMonitoring = az monitor log-analytics workspace show --workspace-name log-aks-smb --resource-group rg-aks-smb --query id -o tsv
PS /home> az aks enable-addons \
>>   --addons monitoring \
>>   --name aks-smb \
>>   --resource-group rg-aks-smb \
>>   --workspace-resource-id $resourceIdMonitoring
The behavior of this command has been altered by the following extension: aks-preview
|| Running ..
```

Home > Kubernetes services > aks-smb

aks-smb | Insights X

Kubernetes service

Search (Ctrl+ /) Refresh View All Clusters Recommended alerts (Preview) View Workbooks Help ...

Policies Properties Locks

Monitoring Insights ←

Alerts Metrics Diagnostic settings Advisor recommendations Logs Workbooks

Upgrade your AKS cluster monitoring using managed identity (preview) to get a secure and simplified authentication model. [Learn more](#) Enable

Time range = Last 6 hours Add Filter Live: Off

What's new Cluster Reports Nodes Controllers Containers

Node CPU Utilization % 5m granularity Avg Min 50th 90th 95th Max Percentage of Total capacity

100%
80%
60%
40%

```
"enabled": true
    }
},
"systemData": null,
"tags": null,
"type": "Microsoft.ContainerService/ManagedClusters",
"windowsProfile": null,
"workloadAutoScalerProfile": {
    "keda": null,
    "verticalPodAutoscaler": null
}
}
PS /home> []
```

```
{  
    "clientId": "c0de1fe0-3de8-4c78-b146-6da5c1ca952a",  
    "id": "/subscriptions//resourcegroups/rg-aks-smb/providers/Microsoft.ManagedIdentity/userAssignedIdentities/aks-smb-mid",  
    "location": "westeurope",  
    "name": "aks-smb-mid",  
    "principalId": "1220b2dd-f227-46e0-a281-d33f3fc4f25",  
    "resourceGroup": "rg-aks-smb",  
    "tags": {},  
    "tenantId": "d8171bb5-a0de-40a6-afdf-8b569cf6dbb8",  
    "type": "Microsoft.ManagedIdentity/userAssignedIdentities"  
}  
PS /home> █
```

```
PS /home> az aks update --resource-group rg-aks-smb --name aks-smb --enable-managed-identity --assign-identity /subscriptions//resourcegroups/rg-aks-smb/providers/Microsoft.ManagedIdentity/userAssignedIdentities/aks-smb-mid  
The behavior of this command has been altered by the following extension: aks-preview  
Your cluster is already using systemassigned managed identity, and you are going to update the cluster to use userassigned managed identity.  
Are you sure you want to perform this operation? (y/N): █
```

```
{  
    "clientId": "ef29e00b-fa9d-4222-ab7b-8aaec68083c9",  
    "id": "/subscriptions//resourcegroups/rg-aks-smb/providers/Microsoft.ManagedIdentity/userAssignedIdentities/aks-smb-kubelet-mid",  
    "location": "westeurope",  
    "name": "aks-smb-kubelet-mid",  
    "principalId": "b5ad1d15-3cbc-4f99-8620-ec205723910b",  
    "resourceGroup": "rg-aks-smb",  
    "tags": {},  
    "tenantId": "d8171bb5-a0de-40a6-afdf-8b569cf6dbb8",  
    "type": "Microsoft.ManagedIdentity/userAssignedIdentities"  
}  
PS /home> █
```

```
PS /home> az aks update --resource-group rg-aks-smb --name aks-smb --enable-managed-identity --assign-identity /subscriptions//resourcegroups/rg-aks-smb/providers/Microsoft.ManagedIdentity/userAssignedIdentities/aks-smb-mid --assign-kubelet-identity /subscriptions//resourcegroups/rg-aks-smb/providers/Microsoft.ManagedIdentity/userAssignedIdentities/aks-smb-kubelet-mid  
The behavior of this command has been altered by the following extension: aks-preview  
You're going to update kubelet identity to /subscriptions//resourcegroups/rg-aks-smb/providers/Microsoft.ManagedIdentity/userAssignedIdentities/aks-smb-kubelet-mid, which will upgrade every node pool in the cluster and might take a while, do you wish to continue? (y/N): █
```

```
"onPremisesSyncEnabled": null,  
"preferredDataLocation": null,  
"preferredLanguage": null,  
"proxyAddresses": [],  
"renewedDateTime": "2022-08-26T20:01:39Z",  
"resourceBehaviorOptions": [],  
"resourceProvisioningOptions": [],  
"securityEnabled": true,  
"securityIdentifier": "S-1-12-1-2323264217-1231510072-2188620200-2134650630",  
"theme": null,  
"visibility": null  
}  
PS /home> █
```

```
PS /home> $groupID = az ad group show --group aks-smb-admin --query id --output tsv
PS /home> az aks update --resource-group rg-aks-smb --name aks-smb --enable-aad --aad-admin-group-object-ids $groupID
The behavior of this command has been altered by the following extension: aks-preview
\[ Running ..
```

```
        "enabled": true
    },
},
"systemData": null,
"tags": null,
"type": "Microsoft.ContainerService/ManagedClusters",
"windowsProfile": null,
"workloadAutoScalerProfile": {
    "keda": null,
    "verticalPodAutoscaler": null
}
}
PS /home> []
```

```
"id": "/subscriptions//resourcegroups/rg-aks-smb/providers/Microsoft.ContainerService/managedClusters/aks-smb/providers/Microsoft.Authorization/roleAssignments/2bd7aad4-6708-402f-905d-d2109d98edb7",
"name": "2bd7aad4-6708-402f-905d-d2109d98edb7",
"principalId": "83be4164-9da7-40af-bfc7-819ef7c900a0",
"principalType": "User",
"resourceGroup": "rg-aks-smb",
"roleDefinitionId": "/subscriptions//providers/Microsoft.Authorization/roleDefinitions/3498e952-d568-435e-9b2c-8d77e338d7f7",
"scope": "/subscriptions//resourcegroups/rg-aks-smb/providers/Microsoft.ContainerService/managedClusters/aks-smb",
"type": "Microsoft.Authorization/roleAssignments"
}
PS /home> []
```

```

        "enabled": true
    }
},
"systemData": null,
"tags": null,
"type": "Microsoft.ContainerService/ManagedClusters",
"windowsProfile": null,
"workloadAutoScalerProfile": {
    "keda": null,
    "verticalPodAutoscaler": null
}
}
PS /home> █
```

```

PS /home> az aks get-credentials --resource-group rg-aks-smb --name aks-smb
The behavior of this command has been altered by the following extension: aks-preview
A different object named clusterUser_rg-aks-smb_aks-smb already exists in your kubeconfig file.
Overwrite? (y/n): y
Merged "aks-smb" as current context in /home/richard/.kube/config
PS /home> █
```

```

PS /home> kubectl get pods -A
W0826 20:35:27.968217      728 azure.go:92] WARNING: the azure auth plugin is deprecated in v1.22+, unavailable in v1.25+; use https://github.com/Azure/kubelogin instead.
To learn more, consult https://kubernetes.io/docs/reference/access-authn-authz/authentication/#client-go-credential-plugins
To sign in, use a web browser to open the page https://microsoft.com/devicelogin and enter the code DAFZ9F933 to authenticate.
█
```

| | | | | | |
|-------------|-------------------------------------|-----|---------|---|-----|
| kube-system | csi-azurefile-node-x8wn8 | 3/3 | Running | 0 | 38m |
| kube-system | konnectivity-agent-7b98669647-trscl | 1/1 | Running | 0 | 38m |
| kube-system | konnectivity-agent-7b98669647-w8bct | 1/1 | Running | 0 | 40m |
| kube-system | kube-proxy-clp8k | 1/1 | Running | 0 | 40m |
| kube-system | kube-proxy-gbrdh | 1/1 | Running | 0 | 38m |
| kube-system | kube-proxy-nqqbt | 1/1 | Running | 0 | 44m |
| kube-system | metrics-server-948cff58d-8h7fw | 1/1 | Running | 0 | 38m |
| kube-system | metrics-server-948cff58d-gtn21 | 1/1 | Running | 0 | 42m |
| kube-system | omsagent-bgbwz | 2/2 | Running | 0 | 44m |
| kube-system | omsagent-rm9xz | 2/2 | Running | 0 | 40m |
| kube-system | omsagent-rs-6cc5d8ccb-t985t | 1/1 | Running | 0 | 38m |
| kube-system | omsagent-tg79k | 2/2 | Running | 0 | 38m |

```
PS /home> █
```

```
PS /home> az aks get-credentials --resource-group rg-aks-smb --name aks-smb --admin
The behavior of this command has been altered by the following extension: aks-preview
(BadRequest) Getting static credential is not allowed because this cluster is set to disable local accounts.
Code: BadRequest
Message: Getting static credential is not allowed because this cluster is set to disable local accounts.
PS /home>
```

```
        "enabled": true
    }
},
"systemData": null,
"tags": null,
"type": "Microsoft.ContainerService/ManagedClusters",
"windowsProfile": null,
"workloadAutoScalerProfile": {
    "keda": null,
    "verticalPodAutoscaler": null
}
}
PS /home> 
```

```
PS /home> kubectl get pods -n kube-system -l 'app in (secrets-store-csi-driver, secrets-store-provider-azure)'
W0828 15:57:09.638680      182 azure.go:92] WARNING: the azure auth plugin is deprecated in v1.22+, unavailable in v1.25+; use https://github.com/Azure/kubelogin instead.
To learn more, consult https://kubernetes.io/docs/reference/access-authn-authz/authentication/#client-go-credential-plugins
NAME                               READY   STATUS    RESTARTS   AGE
aks-secrets-store-csi-driver-74d9g   3/3     Running   0          105s
aks-secrets-store-csi-driver-n4ttr   3/3     Running   0          105s
aks-secrets-store-csi-driver-x18p2   3/3     Running   0          105s
aks-secrets-store-provider-azure-4x2xn 1/1     Running   0          105s
aks-secrets-store-provider-azure-jgjrf 1/1     Running   0          105s
aks-secrets-store-provider-azure-vv7gb 1/1     Running   0          105s
PS /home> 
```

```
"resourceGroup": "rg-aks-smb",
"systemData": {
    "createdAt": "2022-08-28T16:00:10.836000+00:00",
    "createdBy": "Richard.Hooper@pixelrobots.co.uk",
    "createdByType": "User",
    "lastModifiedAt": "2022-08-28T16:00:10.836000+00:00",
    "lastModifiedBy": "Richard.Hooper@pixelrobots.co.uk",
    "lastModifiedByType": "User"
},
"tags": {},
"type": "Microsoft.KeyVault/vaults"
}
PS /home> 
```

```
"resourceGroup": "rg-aks-smb",
"systemData": {
    "createdAt": "2022-08-28T16:00:10.836000+00:00",
    "createdBy": "Richard.Hooper@pixelrobots.co.uk",
    "createdByType": "User",
    "lastModifiedAt": "2022-08-28T16:10:57.194000+00:00",
    "lastModifiedBy": "Richard.Hooper@pixelrobots.co.uk",
    "lastModifiedByType": "User"
},
"tags": {},
"type": "Microsoft.KeyVault/vaults"
}
PS /home> 
```

```
        "updated": "2022-08-28T16:15:43+00:00"
},
"contentType": null,
"id": "https://kv-smb.vault.azure.net/secrets/customer1-connectionstring/32f89886c4ea45b09806d74937d5f4a8",
"kid": null,
"managed": null,
"name": "customer1-connectionstring",
"tags": {
    "file-encoding": "utf-8"
},
"value": "connectionstring"
}
PS /home> 
```

```
PS /home/richard> kubectl apply -f SecretProviderClass.yaml
W0828 16:28:42.127813      374 azure.go:92] WARNING: the azure auth plugin is deprecated in v1.22+, unavailable in v1.25+; use https://github.com/Azure/kubelogin instead.
To learn more, consult https://kubernetes.io/docs/reference/access-authn-authz/authentication/#client-go-credential-plugins
secretproviderclass.secrets-store.csi.x-k8s.io/azure-kvname-user-msi created
PS /home/richard> 
```

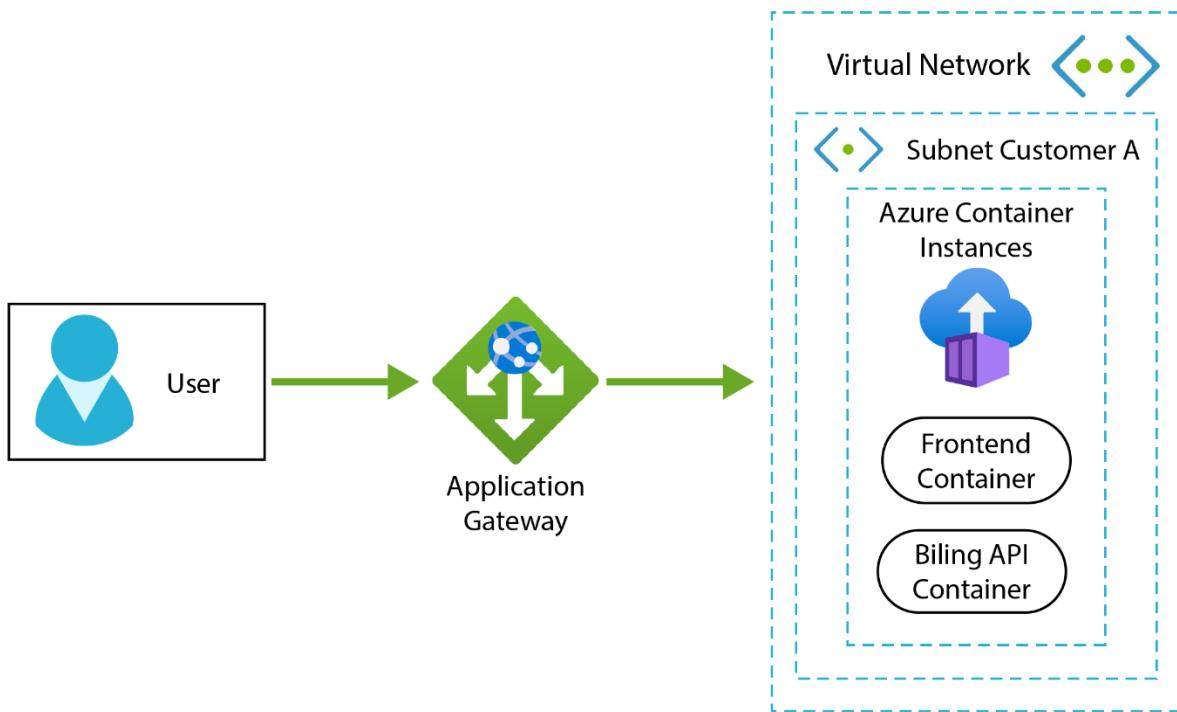
```
PS /home/richard> kubectl apply -f https://raw.githubusercontent.com/PacktPublishing/-Up-and-Running-with-Azure-Containers/main/CH11/frontend.yaml
W0828 16:43:16.943943      424 azure.go:92] WARNING: the azure auth plugin is deprecated in v1.22+, unavailable in v1.25+; use https://github.com/Azure/kubelogin instead.
To learn more, consult https://kubernetes.io/docs/reference/access-authn-authz/authentication/#client-go-credential-plugins
deployment.apps/frontend configured
service/frontend unchanged
ingress.networking.k8s.io/frontend unchanged
PS /home/richard> 
```

```
PS /home/richard> kubectl get pods
W0828 16:50:28.813103      544 azure.go:92] WARNING: the azure auth plugin is deprecated in v1.22+, unavailable in v1.25+; use https://github.com/Azure/kubelogin instead.
To learn more, consult https://kubernetes.io/docs/reference/access-authn-authz/authentication/#client-go-credential-plugins
NAME                  READY   STATUS    RESTARTS   AGE
billingsStatements-74cb855d74-z6czb   1/1     Running   0          44h
frontend-cffdb55c5-x8g8f       1/1     Running   0          115s
PS /home/richard> kubectl exec frontend-cffdb55c5-x8g8f -- cat /mnt/secrets-store/customer1-connectionstring
W0828 16:50:35.368885      548 azure.go:92] WARNING: the azure auth plugin is deprecated in v1.22+, unavailable in v1.25+; use https://github.com/Azure/kubelogin instead.
To learn more, consult https://kubernetes.io/docs/reference/access-authn-authz/authentication/#client-go-credential-plugins
connectionstring
PS /home/richard> 
```

Chapter 12: Migrating Between Container Technologies

No Images

Chapter 13: Azure Container Instances – I Like the Scalability But I Need More



Chapter 14: Beyond Azure Container Apps

No Images

Chapter 15: Azure Kubernetes Service – The Next Steps

No Images

Chapter 16: What's Next – Diving into Future Trends and More

No Images