

# Azure Container Services Meetup

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# Containers in Azure

Docker support for  
Azure VMs



Container-based  
PaaS



Service  
Fabric



CLOUD  
FOUNDRY™



OPENSHIFT

Azure  
Container Service



DC/OS



docker



kubernetes

Container  
Management



docker



DC/OS



kubernetes



CoreOS

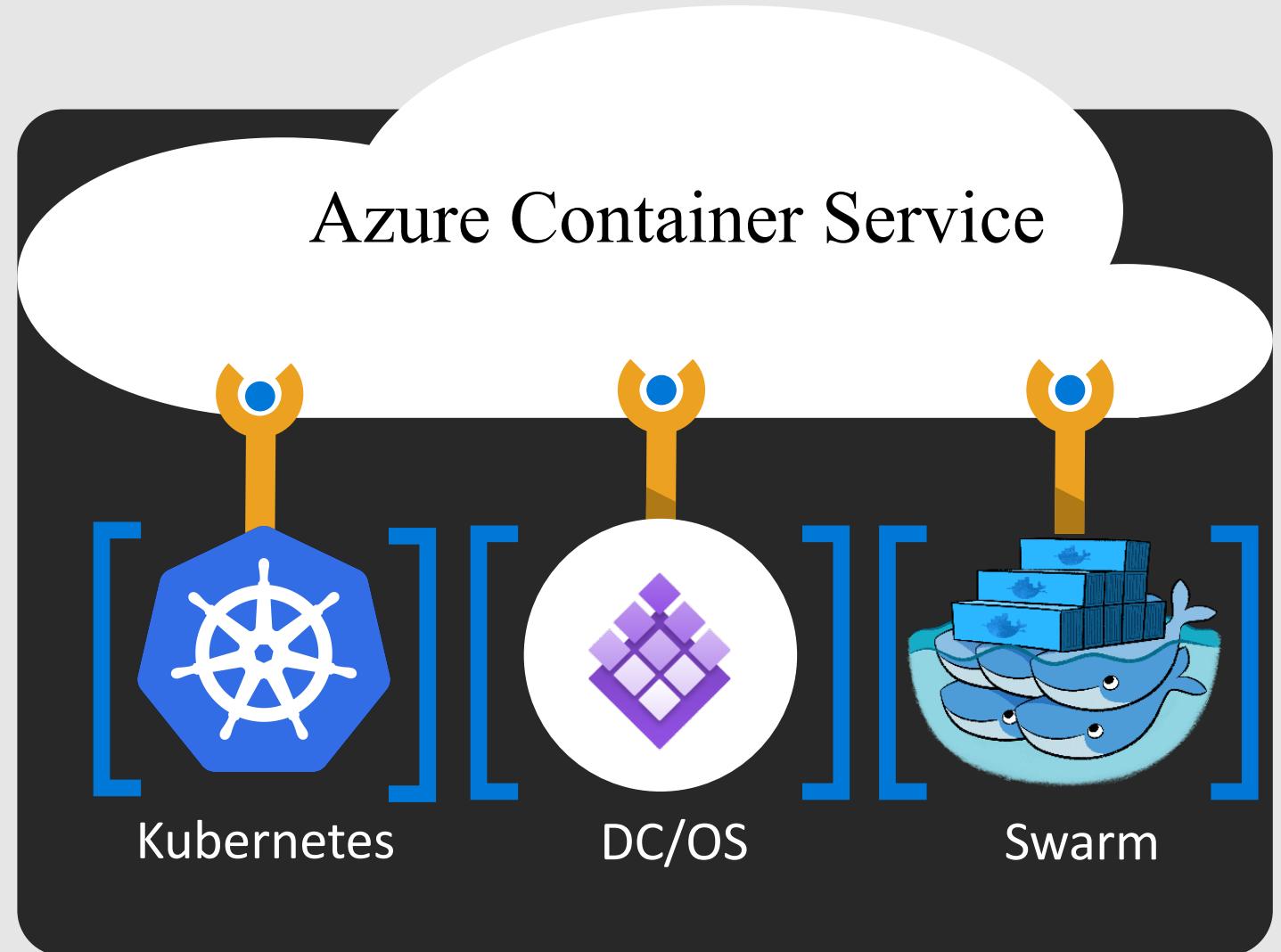


RANCHER

Microsoft Azure

# Azure Container Services Overview

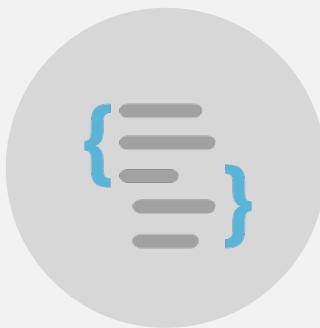
- Standard tooling and API support
- Streamlined provisioning of DC/OS, Docker Swarm and Kubernetes (in preview)
- Free Service! Customer pays for the VMs and associated resources (storage and networking)



# How do you deploy an ACS?



Azure Portal



Templates



Azure CLI/  
PowerShell

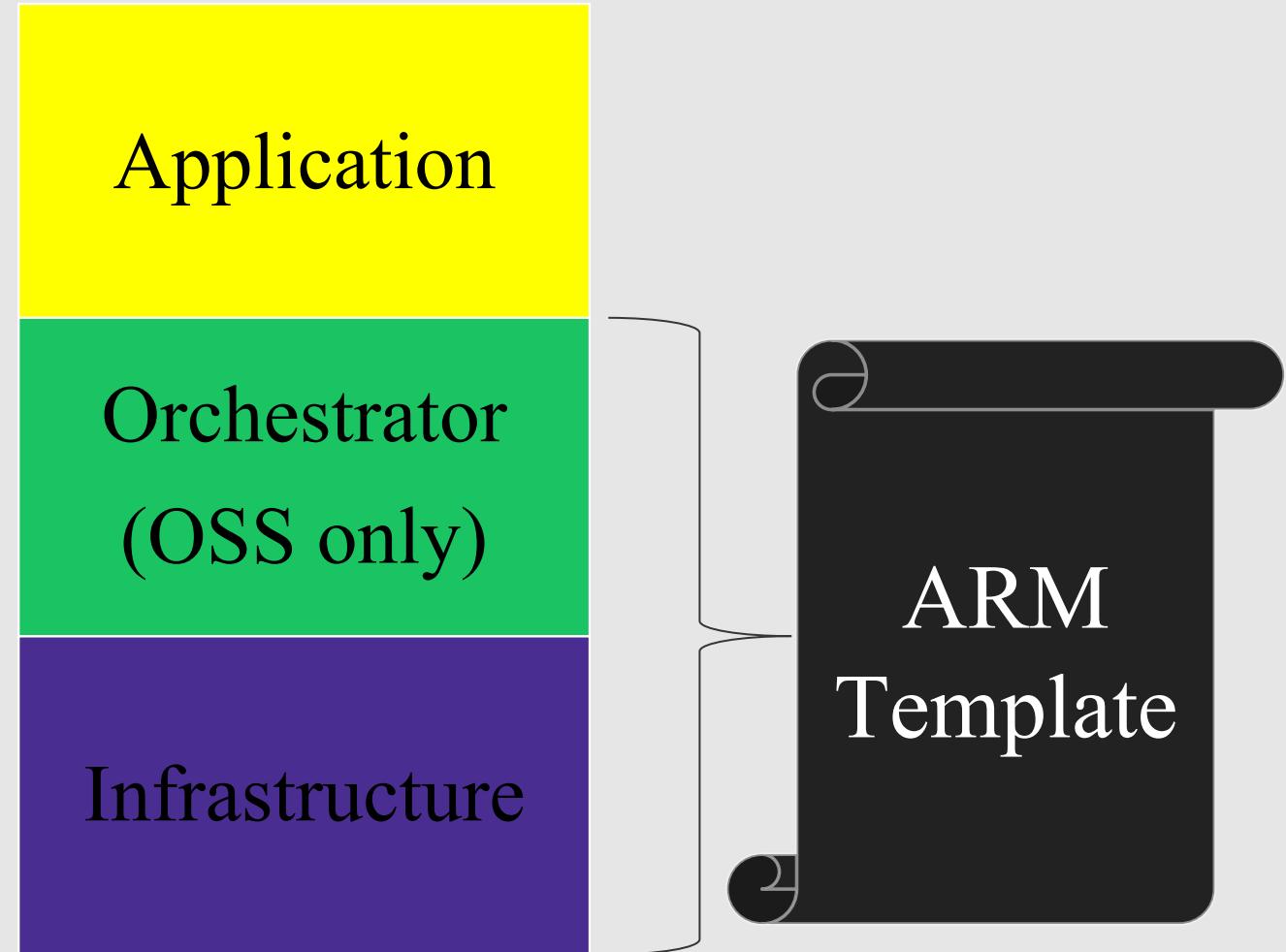


Client SDKs



REST API

# Azure Container Service



# Lab Setup





Now get 12 months of free access to popular products.

<https://azure.microsoft.com/en-us/free>

# Create your Azure free account today



## Get started with a \$200 credit

Start free with \$200 in credit to use on any Azure products for 30 days.



## Keep going with free products

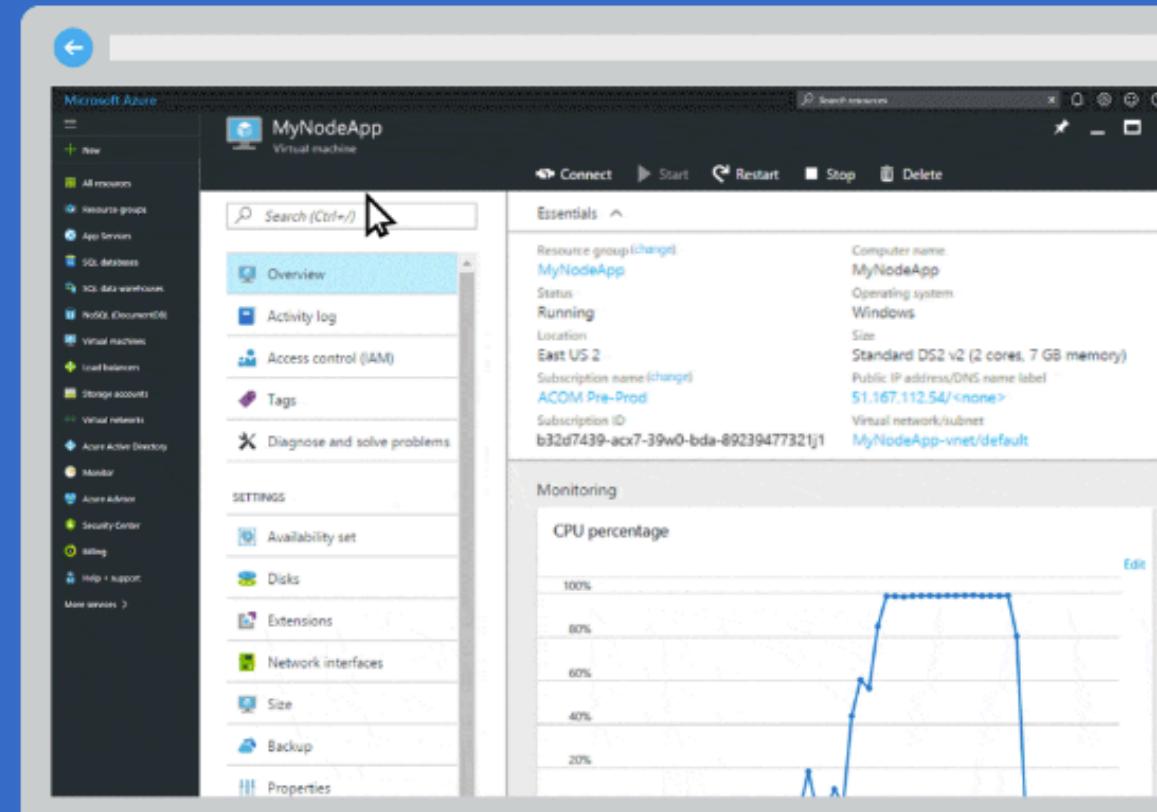
Build your next great idea with free access to our most popular products for 12 months and to more than 25 always free products.



## Pay nothing until you choose

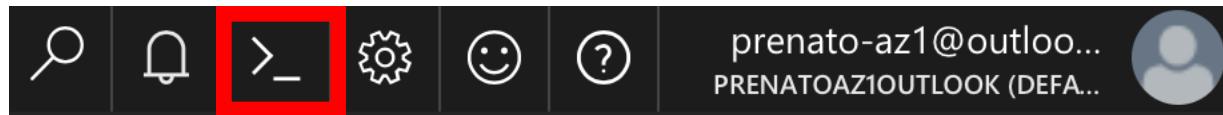
We use your credit card information for identity verification, but you will not be charged until you choose to upgrade.

Start free >



# Prepare the environment

```
# Access Azure Cloud Shell
```



```
# Choose Bash
```



PowerShell

```
# Generate SSH key
ssh-keygen -t rsa
```

Generating public/private rsa key pair.

Enter file in which to save the key (/home/prenato-az1/.ssh/id\_rsa): **/home/prenato-az1/clouddrive/.ssh/id\_rsa <put it under clouddrive>**

Enter passphrase (empty for no passphrase): **<leave it empty>**

Enter same passphrase again: **<leave it empty>**

Your identification has been saved in /home/prenato-az1/clouddrive/.ssh/id\_rsa.

Your public key has been saved in /home/prenato-az1/clouddrive/.ssh/id\_rsa.pub.

# Deploying Azure Container Services via Azure CLI

```
# Define environment information
RESOURCE_GROUP=rg-acss-meetup
LOCATION=westus
ORCHESTRATOR=kubernetes
DNS_PREFIX=acs-meetup
CLUSTER_NAME=acs-meetup
KEY="/home/prenato-az1/clouddrive/.ssh/id_rsa.pub"
PKEY="/home/prenato-az1/clouddrive/.ssh/id_rsa"

# Create Resource Group
az group create --name=$RESOURCE_GROUP --location=$LOCATION

# Create Cluster
az acs create --orchestrator-type=$ORCHESTRATOR --resource-group=$RESOURCE_GROUP --name=$CLUSTER_NAME
--dns-prefix=$DNS_PREFIX --ssh-key-value=$KEY --agent-count 1

## Add the master Kubernetes cluster configuration to ~/.kube/config
az acs kubernetes get-credentials --resource-group=$RESOURCE_GROUP --name=$CLUSTER_NAME --ssh-key-
file=$PKEY
```

## Platform Services



## Infrastructure Services



## Datacenter Infrastructure (38 Regions, 34 Online)



# Azure is an open cloud



DevOps



Clients



Management



Applications



PaaS and DevOps



App frameworks and tools



Databases and middleware



Infrastructure



redhat.



# Find the Azure service for your container needs

YOU WANT TO...	USE THIS
Scale and orchestrate containers using Kubernetes, DC/OS or Docker Swarm	<a href="#">Azure Container Service</a>
Easily run containers on Azure with a single command	<a href="#">Azure Container Instances (New)</a>
Store and manage container images across all types of Azure deployments	<a href="#">Azure Container Registry</a>
Develop microservices and orchestrate containers on Windows or Linux	<a href="#">Azure Service Fabric</a>
Deploy web applications on Linux using containers	<a href="#">Azure App Service</a>
Run repetitive compute jobs using containers	<a href="#">Azure Batch</a>

# Why Container?



**Developers**

Enable ‘write-once, run-anywhere’ apps  
Enables microservice architectures  
Great for dev/test of apps and services  
(thousands available from Docker)  
Production realism



**Operations**

Portability, Portability, Portability  
Standardized development, QA, and prod environments  
Abstract differences in OS distributions and underlying infrastructure  
Higher compute density  
Easily scale-up and scale-down in response to changing business needs

**DevOps**

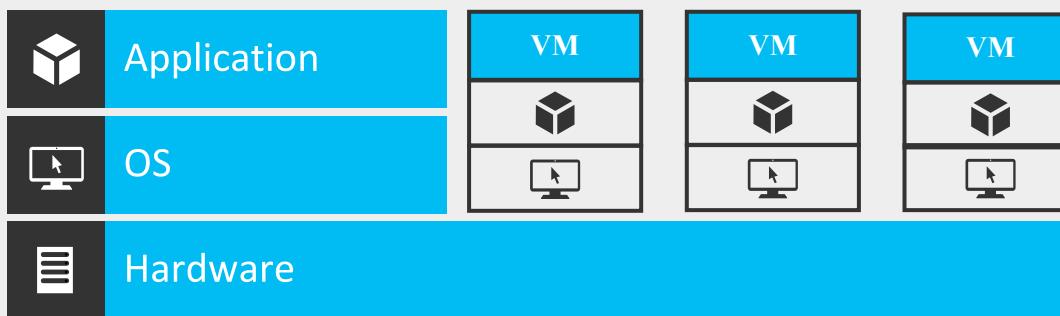


# How Containers Work

**Containers** = Operating system virtualization

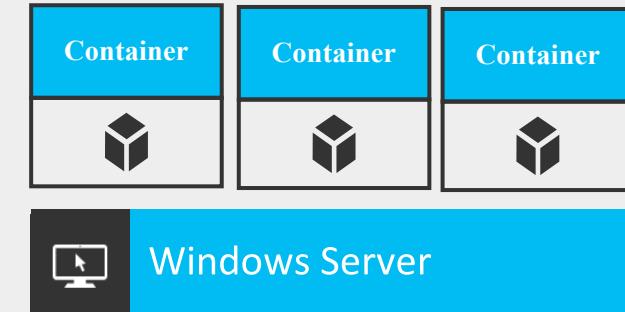


**Traditional virtual machines** = hardware virtualization



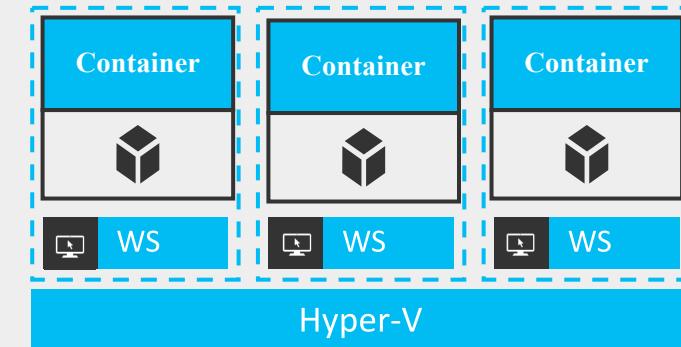
**Windows Server containers**

No different from Linux containers

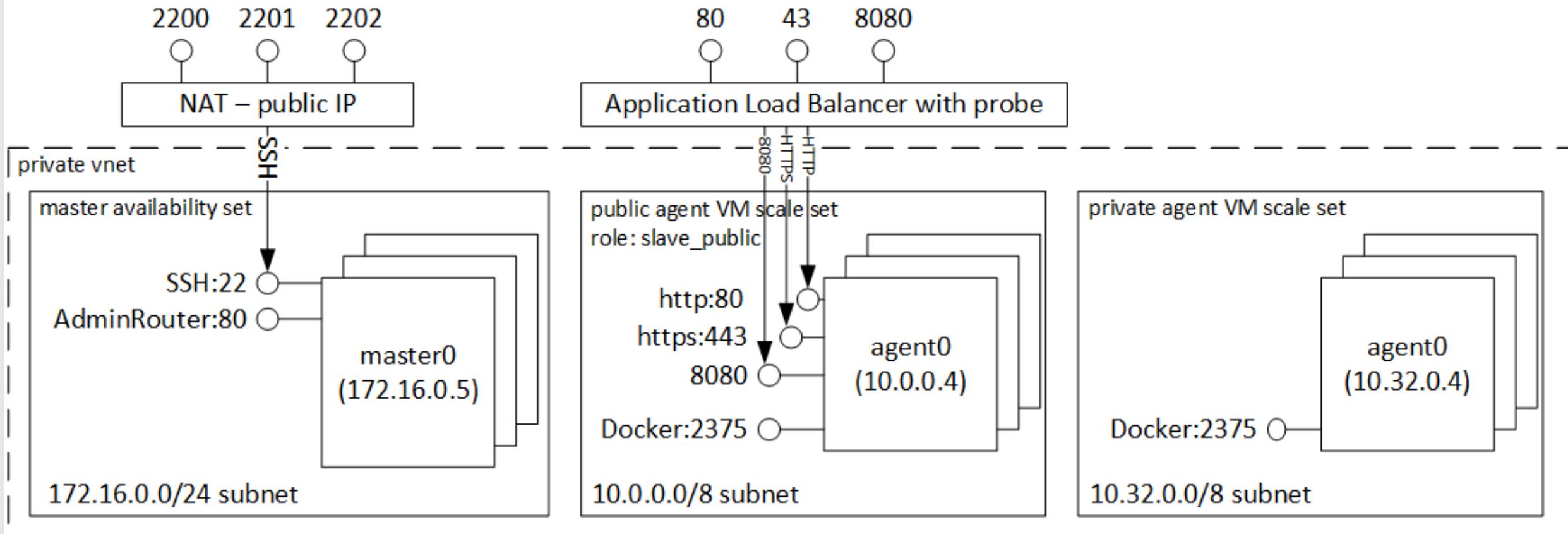


**Hyper-V containers**

Isolation plus performance



# Azure Container Service



# Contribute to the Future of ACS

Azure / **acs-engine** Private

Code Issues 4 Pull requests 1 Projects 0 Wiki Pulse Graphs Settings

Azure Container Service Labs - a place for community collaboration on templates leveraging the Azure Container Service. — Edit

85 commits 9 branches 0 releases 6 contributors MIT

Branch: master ▾ New pull request Create new file Upload files Find file Clone or download ▾

anhowe committed on GitHub Merge pull request #41 from Azure/anhowe-addgeneratedfile ... Latest commit 97c9f88 3 days ago

fix kube e2e script after rename	3 days ago
acstgen: kubernetes: add e2e deploy script	4 days ago
kubeconfig as yaml	4 days ago
add autogenerated files	3 days ago
flatten and rename acstgen to acsengine (#25)	5 days ago
add autogenerated files	3 days ago
Add License	18 days ago
add autogenerated files	3 days ago
rename acs-engine	3 days ago
README.md	

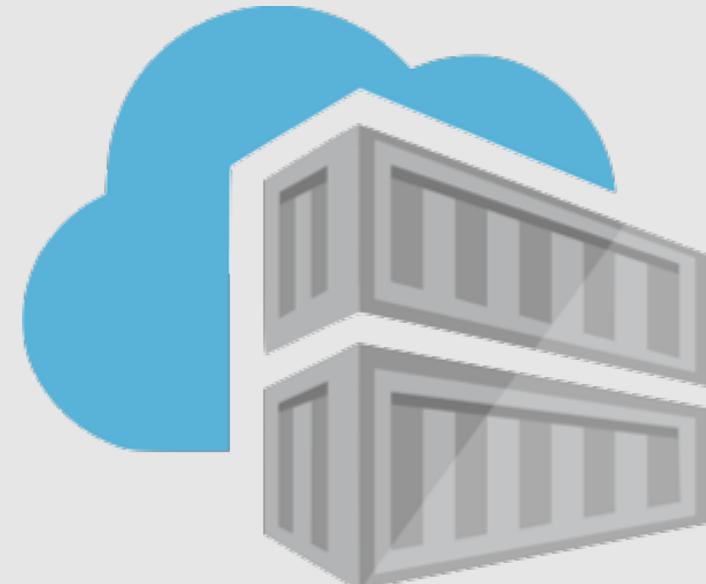
# Azure Container Registry

Private, secure, network-close registry for Docker images

Azure Active Directory Integration

Windows and Linux containers

Command-line, VSTS & API driven





# Thank You!

