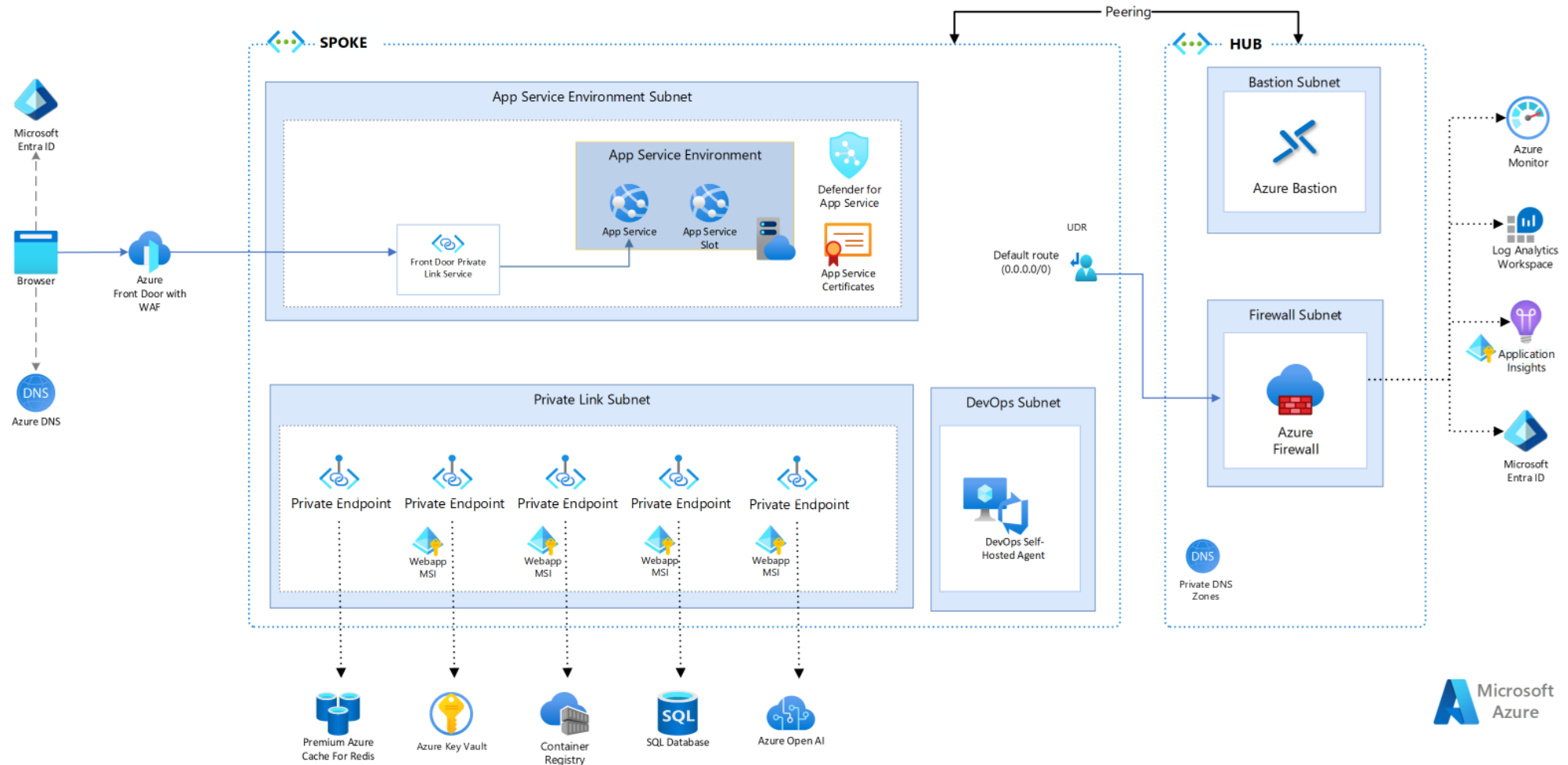


Azure Managed DevOps Pools MDP



Azure DevOps self-hosted build agent runs on IaaS VM





Azure DevOps Build Agents

To run the pipelines in Azure DevOps, there are 3 options:

- **Azure pipelines (Hosted pool)** - managed by Microsoft (GitHub)
- **Self-hosted agent pool** - managed by customers
- **Virtual machine scaleset (VMSS)** - managed by customers in their own azure subscriptions

The screenshot displays the Azure DevOps web interface. The top navigation bar shows 'Azure DevOps' with the user 'houssemdellai' and the current path 'Settings / Agent pools'. On the left, a sidebar lists 'Organization Settings', 'Pipelines', 'Agent pools', 'Settings', 'Deployment pools', 'Parallel jobs', and 'OAuth configurations'. The main content area is titled 'Agent pools' and contains a table with two entries:

Name
 Azure Pipelines Azure Pipelines
 azure-mdp-neu Housseem Dellai

An 'Add agent pool' dialog box is open in the foreground. It features a close button (X) in the top right corner. Below the title, it states 'Agent pools are shared across an organization.' The 'Pool type:' section contains a dropdown menu with the text 'Select an agent pool type' and a downward arrow. The dropdown is currently open, showing two options: 'Self-hosted' and 'Azure virtual machine scale set'.

<https://t.me/learningnets>

Challenges with Azure DevOps Build Agents

Azure pipelines

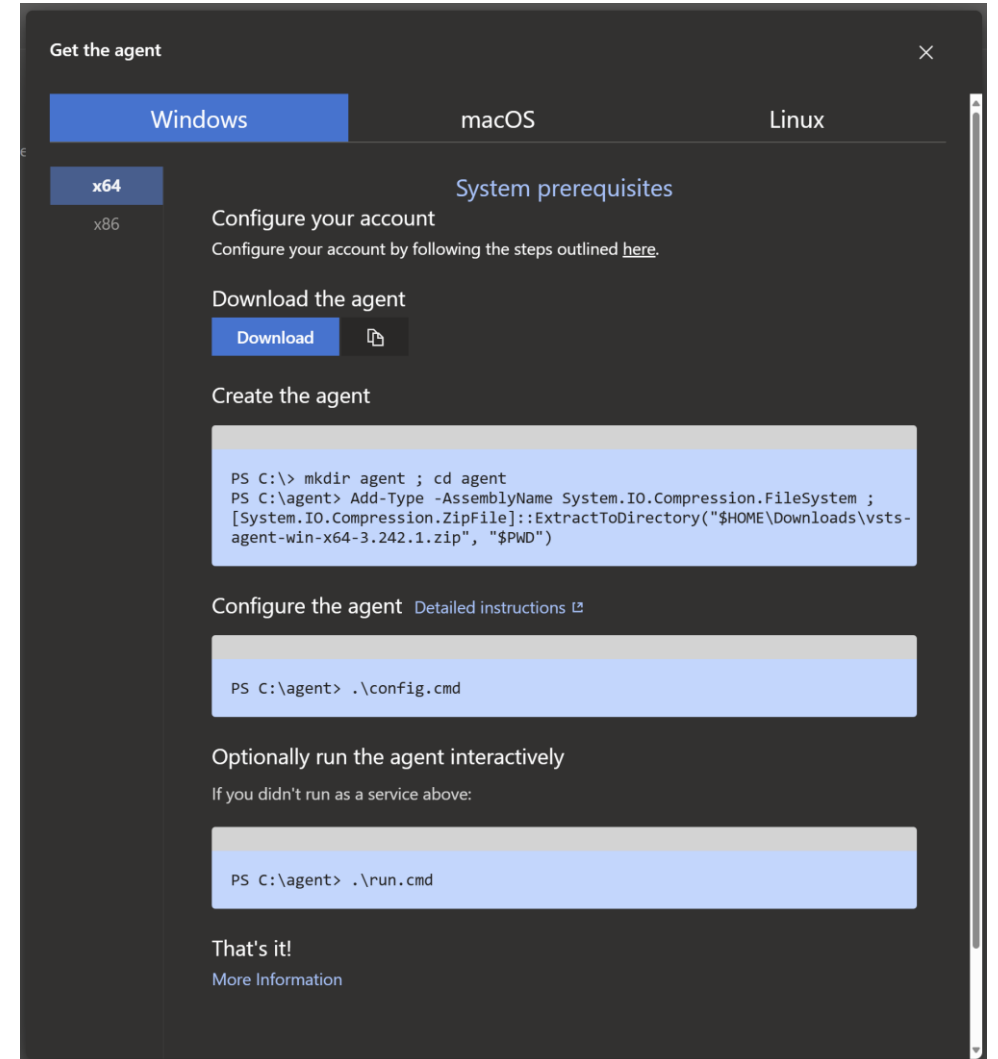
- Cannot install required software on these images
- Cannot link build agent to customer network
- Limits on resources (CPU, memory, disk spaces)
- Not the high end VMs

Self-hosted pool

- Tough to manage, upgrade etc.

VMSS

- Performance issues, not scalable
- Lack of support for some of platform architecture



Get the agent

Windows macOS Linux

x64
x86

System prerequisites

Configure your account
Configure your account by following the steps outlined [here](#).

Download the agent
[Download](#)

Create the agent

```
PS C:\> mkdir agent ; cd agent
PS C:\agent> Add-Type -AssemblyName System.IO.Compression.FileSystem ;
[System.IO.Compression.ZipFile]::ExtractToDirectory("$HOME\Downloads\vsts-agent-win-x64-3.242.1.zip", "$PWD")
```

Configure the agent [Detailed instructions](#)

```
PS C:\agent> .\config.cmd
```

Optionally run the agent interactively
If you didn't run as a service above:

```
PS C:\agent> .\run.cmd
```



That's it!
[More Information](#)

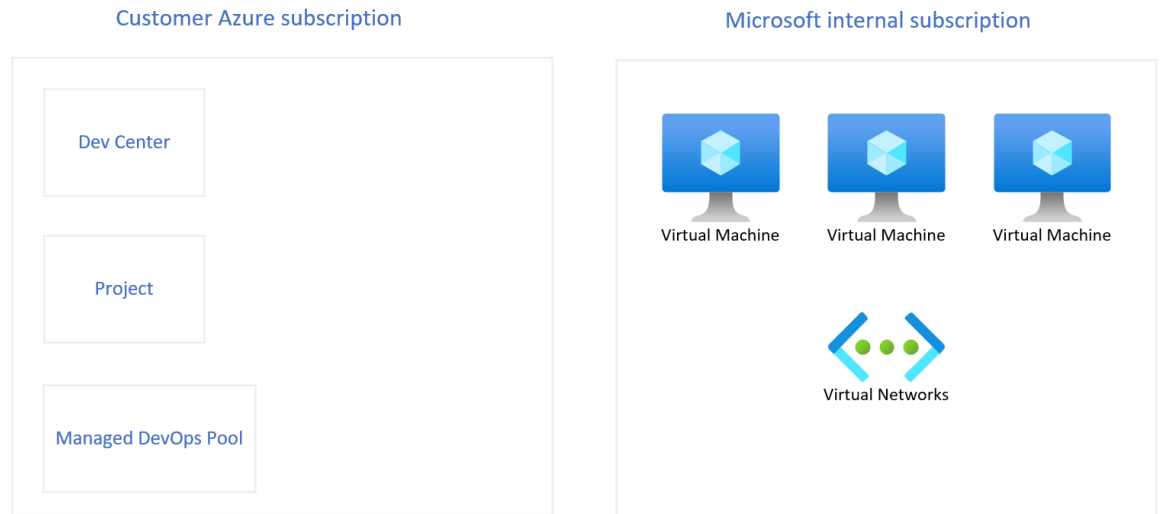
Managed DevOps Pools

- Provides **managed build agents** for customers' CI/CD Workloads.
- Bring your own **Azure virtual network**
- Can use Azure pipeline images or custom images from a gallery
- Highly **scalable** and reliable (can scale up to 1000s of agents)
- Use of different kind of images in same pool
- Support for almost **all kind of platform architecture**
- Same pool can be associated with **multiple organizations** and specific projects
- Customers are charged only for compute resources and parallelism.

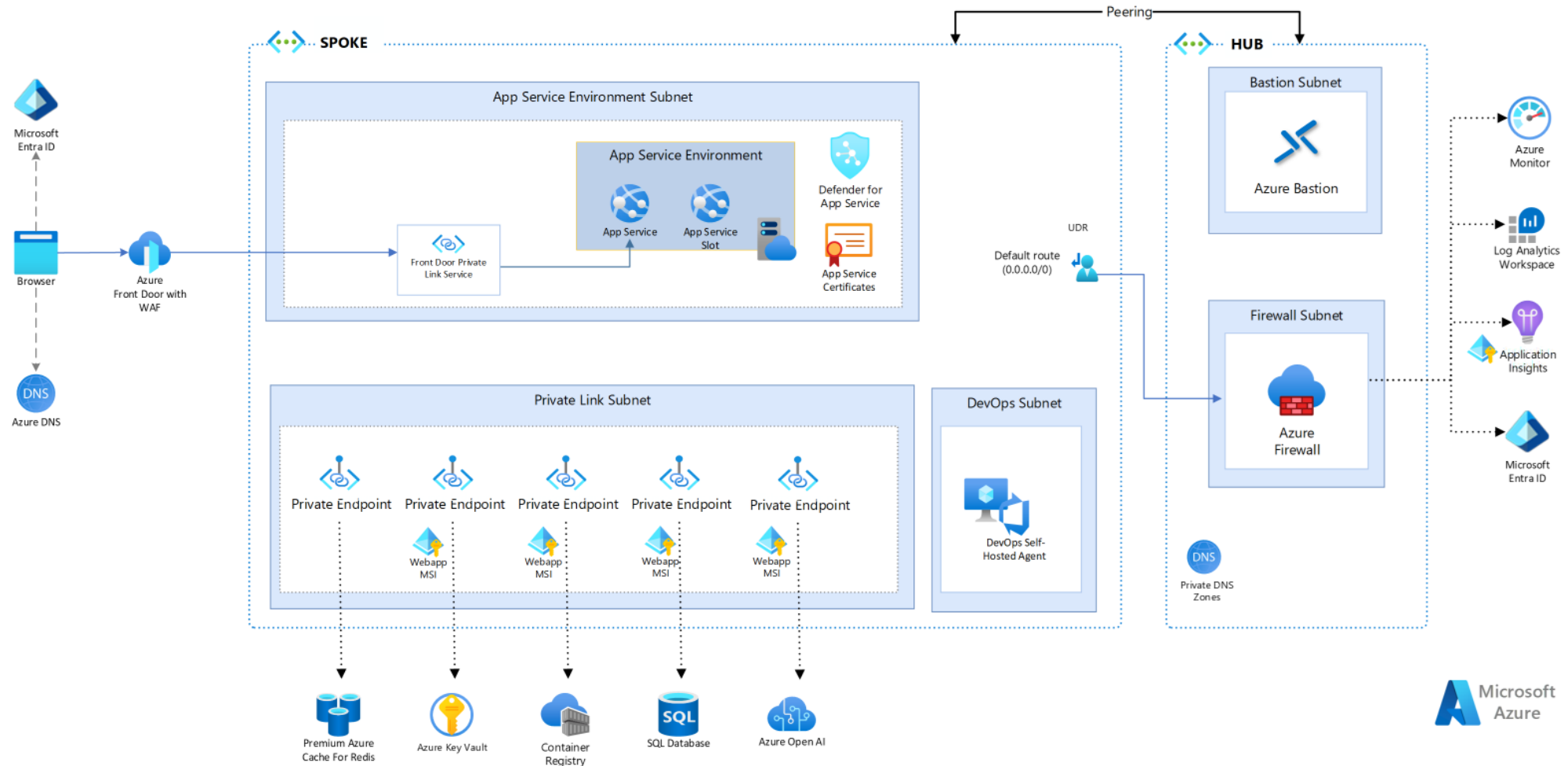


Managed DevOps Pools uses Dev Center

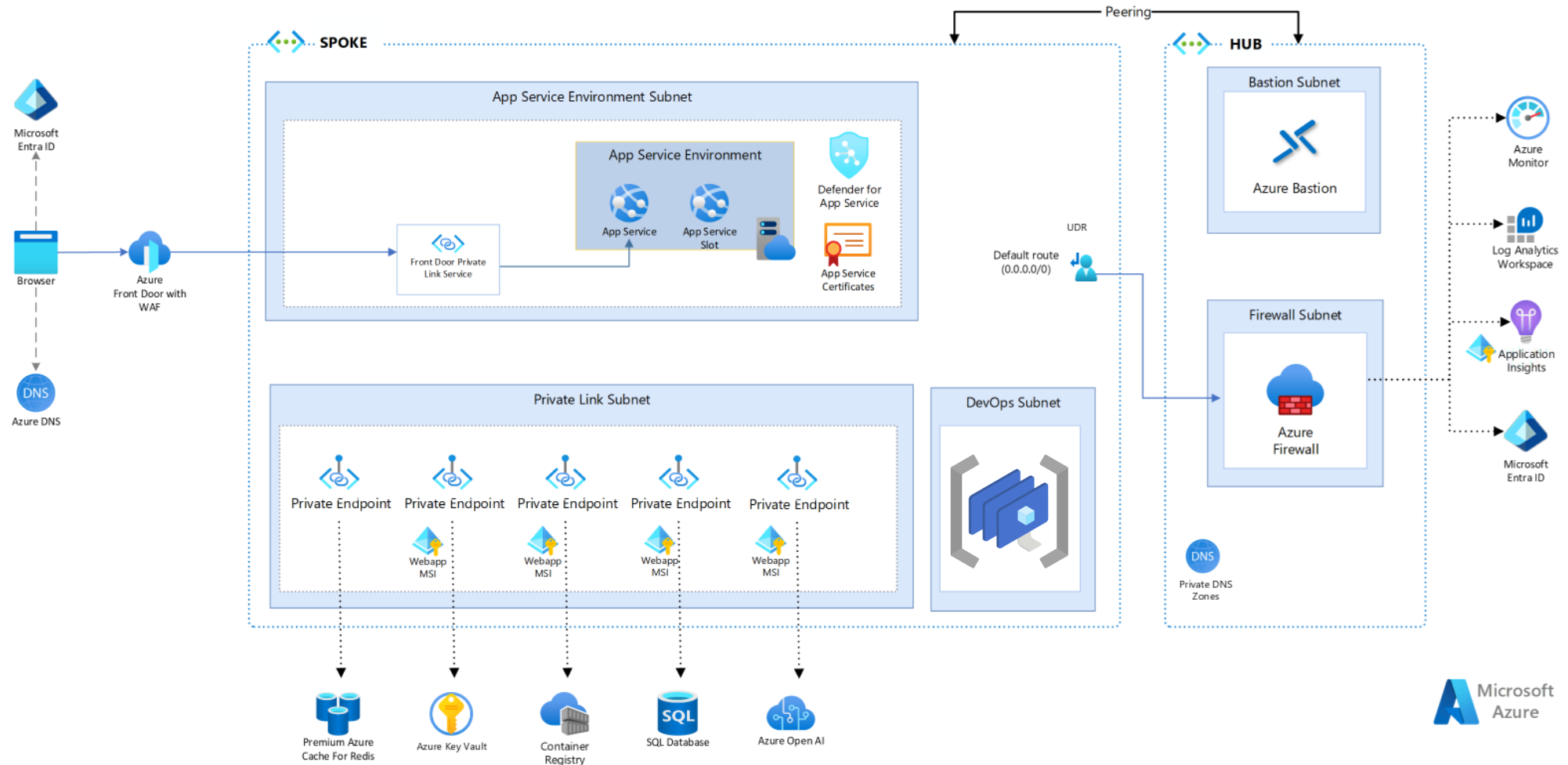
Name ↑	Type
 azure-mdp-neu ... Managed DevOps Pool	
 devcenter-neu ... Dev center	
 identity-mdp ... Managed Identity	
 project-neu (project-neu) ... Project	
 vnet-mdp-neu ... Virtual network	



No more IaaS service



Managed DevOps Pool



Managed DevOps Pool - demo

pool

name azure-mdp-neu

demands

ImageOverride -equals ubuntu-22.04

azure-mdp-neu | Agents ☆ ...
Managed DevOps Pool

Search ◇ « ↻ Refresh

- Security
- Networking
- Storage
- Security
- Identity
- Agents**

<input type="checkbox"/>	Name ↑		Type
<input type="checkbox"/>	azure-mdp-neu	...	Managed DevOps Pool
<input type="checkbox"/>	devcenter-neu	...	Dev center
<input type="checkbox"/>	identity-mdp	...	Managed Identity
<input type="checkbox"/>	project-neu (project-neu)	...	Project
<input type="checkbox"/>	vnet-mdp-neu	...	Virtual network

Filter by agent machine name

Agent Machine N... ↑↓	Image ↑↓	Image version	Status ↑↓
54520aa3e000000	Azure Pipelines - Ubun...	20240804.1.0	Ready
5f189498e000000	Ubuntu Server 20.04 LT...	20.04.202407310	Ready

vnet-mdp-neu | Subnets

Virtual network

- Overview
- Activity log
- Access control (IAM)
- Tags
- Diagnose and solve problems
- Resource visualizer
- Settings
 - Address space
 - Connected devices
 - Subnets**
 - Bastion
 - DDoS protection
 - Firewall
 - Microsoft Defender for Cloud
 - Network manager
 - DNS servers

+ Subnet +

- Name ↑↓
- default

Edit subnet

Network security group ⓘ

Route table

Service Endpoints

Create service endpoint policies to allow traffic to specific azure resources from your virtual network over service endpoints. [Learn more](#)

Services

Remove service endpoint

Subnet Delegation

Delegate subnet to a service

Network Policy for Private Endpoints

The network policy affects the types of network policies that control traffic going to the private endpoints in this subnet. [Learn more](#)

Private endpoint network policy

- Overview
- Activity log
- Access control (IAM)
- Tags
- Diagnose and solve problems
- Resource visualizer
- Settings
 - Pool**
 - Scaling
 - Networking
 - Storage
 - Security
 - Identity
 - Agents
 - Properties
 - Locks
- Monitoring
 - Alerts
 - Metrics
 - Diagnostic settings

Dev Center * ⓘ

Dev Center project * ⓘ

Azure DevOps organization * ⓘ

Maximum agents * ⓘ

Agent size * ⓘ



 Standard D2ads v5 Change size

OS disk type ⓘ

Images

Pick one or more from Images with which to create our CI/CD agents.

[+ Add from Image Library](#)

Name	Version	Aliases	
Ubuntu Server 20.04 LTS - x64 Gen 2	latest		 ⋮
Azure Pipelines - Ubuntu 22.04	latest	Default Alias: ubuntu-22.04	 ⋮



Overview



Activity log



Access control (IAM)



Tags



Diagnose and solve problems



Resource visualizer



Settings



Pool



Scaling



Networking

Agent state



Fresh agent every time



Same agent can be reused by multiple builds

Standby agent mode



Off



Manual



Automatic

Standby agent mode off.

If you know your workloads' usage patterns, you can configure standby agents as per the scale conditions.

If you don't know your usage patterns, you can rely on automatic forecasting based on past data.



azure-mdp-neu | Networking



Managed DevOps Pool

Search

Resource visualizer

Settings

Pool

Scaling

Networking

Storage

Security

Identity

Virtual network type

- Isolated virtual network
- Agents injected into existing virtual network

Subnet resource ⓘ

Subscription Id: 38977b70-47bf-4da5-a492-88712fce8725
Resource group: rg-mdp
Virtual network: vnet-mdp-neu
Subnet: default

[Configure](#)



azure-mdp-neu | Agents

Managed DevOps Pool



Refresh

- Pool
- Scaling
- Networking
- Storage
- Security
- Identity
- Agents

Agent Machine Name	Image	Image version	Status
b297b930e000000	Azure Pipelines - Ubuntu 22.04	20240804.1.0	Returned
b8ef6741e000000	Ubuntu Server 20.04 LTS - x64 ...	20.04.202407310	Returned



Search

resource visualizer

Settings

Pool

Scaling

Networking

Storage ☆

Security

Identity

Agents

Properties

Locks

Monitoring

Alerts

Metrics

Diagnostic settings

Logs

Advisor recommendations

Use pool in multiple organizations

Add pool to all projects Yes No

Project Name

The list of projects displayed here may not be accurate. This is a list of projects inputted at the time of pool creation. Projects added directly in Azure DevOps won't be shown here. Projects removed directly from Azure DevOps will be added back when the pool is updated.

Azure Managed DevOps Pools demo

Enable Interactive Mode

Key Vault Configuration (Coming soon)

Certificates ⓘ