



This handout is for the AZ-900 Azure Fundamentals Certification Course by John Savill hosted at <https://onboardtoazure.com> on the playlist [https://www.youtube.com/playlist?list=PLIVtbbG169nED0\\_vMEniWBQjS0xTsBYS3](https://www.youtube.com/playlist?list=PLIVtbbG169nED0_vMEniWBQjS0xTsBYS3).

**Updated – August 2023 for latest changes to AZ-900**

The most current version of this document lives at <https://github.com/johnthebrit/AZ900CertCourse>, the repository for this course.

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- CapEx, OpEx and Consumption-based - <https://youtu.be/WiwV9wb0GMo> [00:07:13]
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- Benefits and Usage of Azure Marketplace - <https://youtu.be/b7RuB4Bymgc> [00:03:12]

### Describe Core Solutions and Management Tools on Azure

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- Functionality and Usage of Key Vault - <https://youtu.be/ZBXVAD4S0Tc> [00:07:37]
- Functionality and Usage of Microsoft Sentinel - <https://youtu.be/xaqiPXL6tz0> [00:09:36]
- Functionality and Usage of Azure Dedicated Hosts - <https://youtu.be/RnNqmTH9xok> [00:06:49]
- Concept of Defense in Depth - <https://youtu.be/CHKS2FcEMek> [00:07:17]
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- Functionality and Usage of NSGs - <https://youtu.be/fICoRc1uv9o> [00:08:32]
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### Describe Identity, Governance, Privacy, and Compliance Features

- Explain Authentication and Authorization - <https://youtu.be/GA-yNu6aFMk> [00:03:52]
- Functionality and Usage of Azure AD - [https://youtu.be/3JCxrM\\_Y4Go](https://youtu.be/3JCxrM_Y4Go) [00:08:36]
- Functionality of Conditional Access, MFA and SSO - <https://youtu.be/DFwERh9Xxk0> [00:12:29]
- Overview of Microsoft Entra - [https://youtu.be/bSIF\\_GjaCmo](https://youtu.be/bSIF_GjaCmo) [00:11:34]
- Functionality and Usage of RBAC - <https://youtu.be/0iVyJBG06fM> [00:09:19]
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- Functionality and Usage of Tags - [https://youtu.be/eaf63hE\\_6SQ](https://youtu.be/eaf63hE_6SQ) [00:05:06]
- Functionality and Usage of Azure Policy - <https://youtu.be/z7WMqHE3R8g> [00:10:50]
- Purpose of Microsoft Purview - <https://youtu.be/mXjXcBr1ajY> [00:10:47]
- Governance Hierarchy Constructs - [https://youtu.be/ge8r\\_Z0LKxM](https://youtu.be/ge8r_Z0LKxM) [00:06:13]
- Functionality and Usage of Azure Blueprints - <https://youtu.be/SJbDcvkySCY> [00:05:22]
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### Describe Azure Cost Management and Service Level Agreements

- Factors That Affect Costs - [https://youtu.be/fMSHW\\_RGcxY](https://youtu.be/fMSHW_RGcxY) [00:06:32]
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- Purpose of Service Level Agreements - <https://youtu.be/3QIVbgnNrR0> [00:13:42]
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## Introduction

### Links

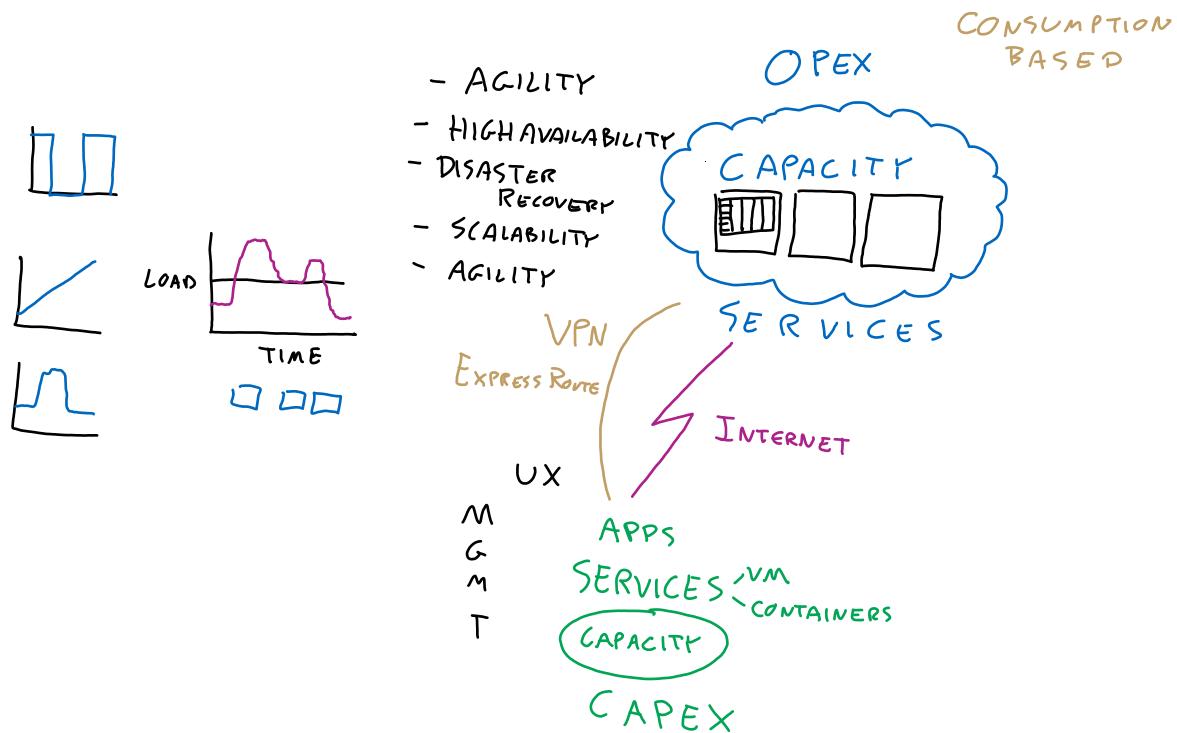
- John's YouTube Channel - <https://onboardtoazure.com>
- Microsoft AZ-900 Certification Page - <https://docs.microsoft.com/en-us/learn/certifications/exams/az-900>
- Microsoft Certification Poster - <http://aka.ms/traincertposter>
- Free Azure Subscription - <https://azure.microsoft.com/en-us/free/>
- Curated Azure Learning Path - <https://learn.onboardtoazure.com>

## Describe Cloud Concepts

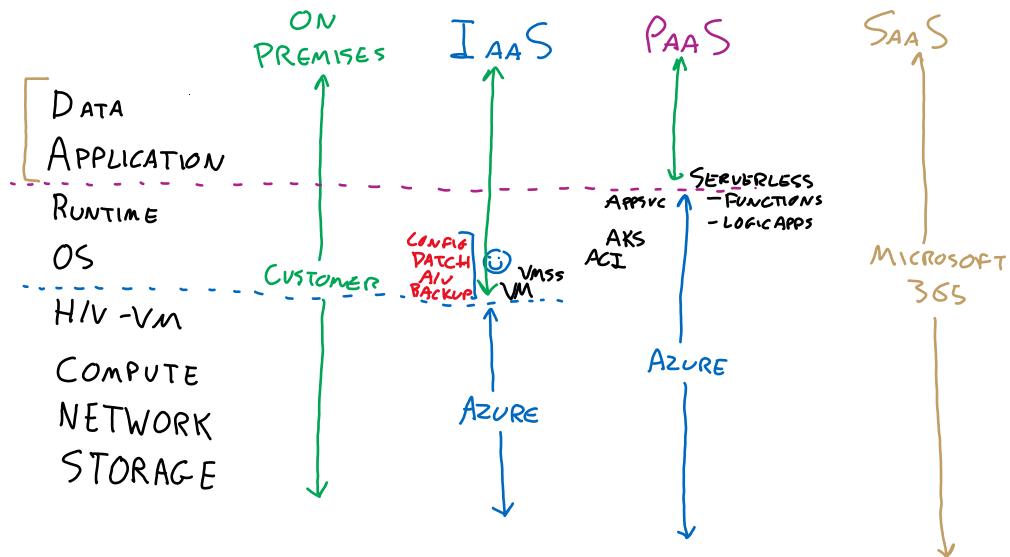
Identify the Benefits of Cloud Computing

Links

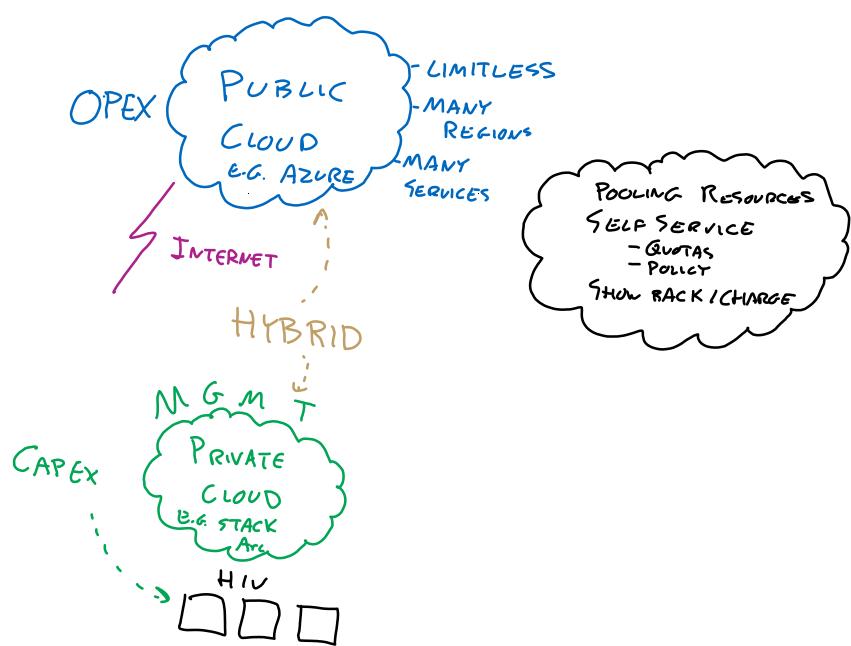
- Azure Regions - <https://infrastructuremap.microsoft.com/>



## Differences Between Cloud Service Categories



## Differences Between Types of Cloud Computing



## Reliability and Predictability

### RELIABILITY

- AUTO HEALING
- STORAGE  
x3
- AUTO SCALE
- SLA
- DESIGN FOR FAILURE
- MONITOR

### PREDICTABILITY

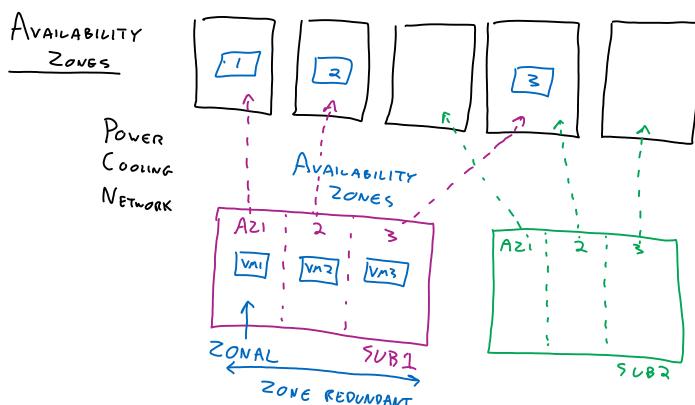
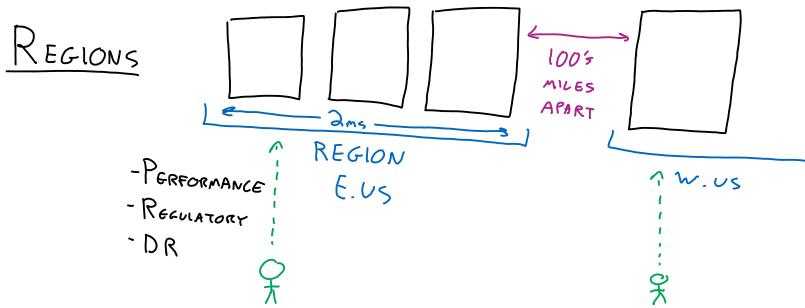
- SKU
- ACU
- BEHAVIOR
- USE TEMPLATES
- AUTOMATION  
DevOps

## Describe Core Azure Services

Benefits and Usage of Regions and Region Pairs

Links

- Regional pairings - <https://docs.microsoft.com/en-us/azure/availability-zones/cross-region-replication-azure#azure-cross-region-replication-pairings-for-all-geographies>



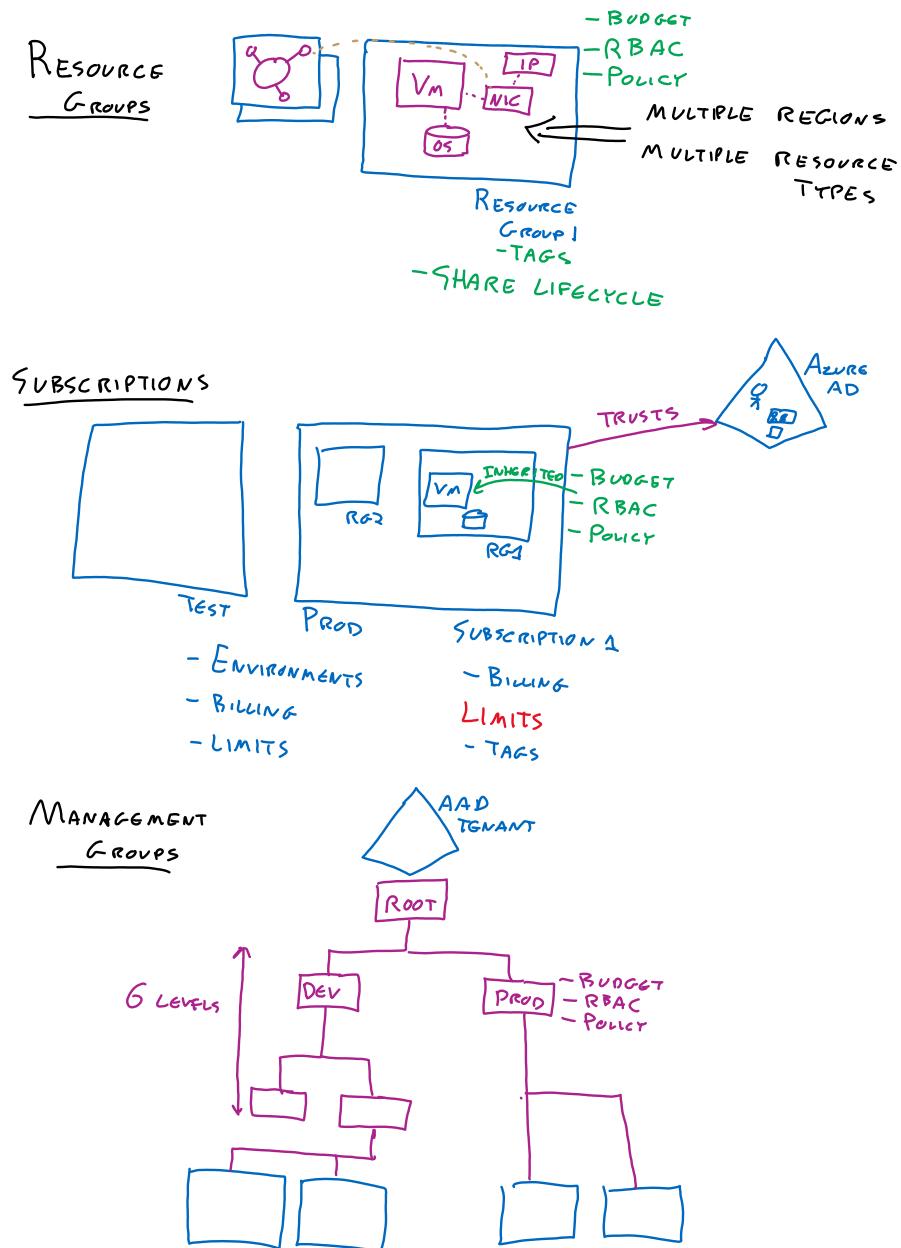
Code

```
Get-AzEnvironment #List environments
Get-AzLocation | ft #get regions in current environment
```

## Benefits and Usage of Resource Groups

### Links

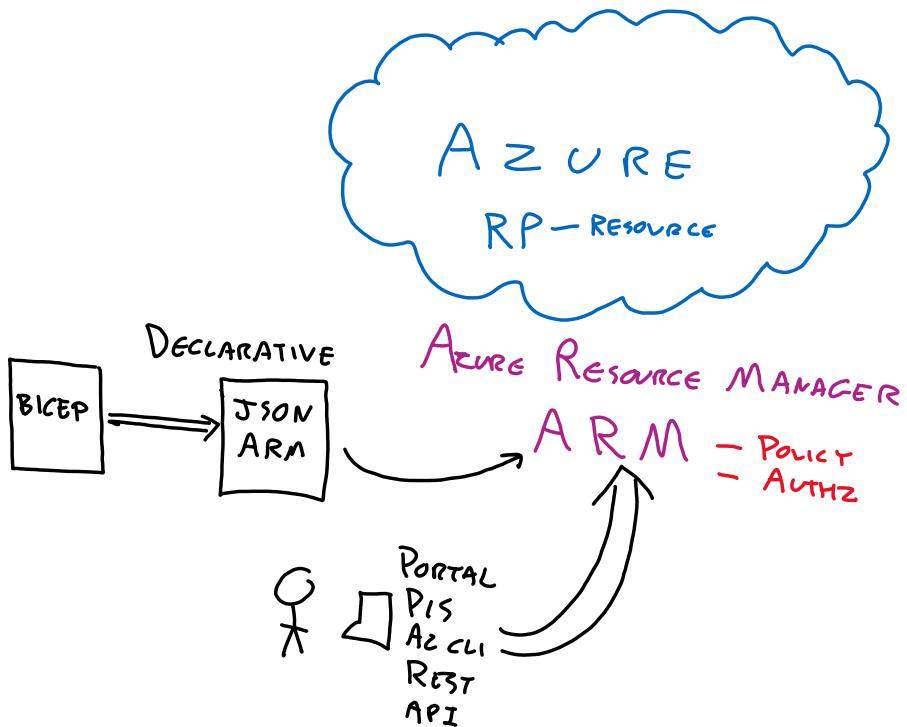
- Azure Subscription Limits - <https://docs.microsoft.com/azure/azure-resource-manager/management/azure-subscription-service-limits>



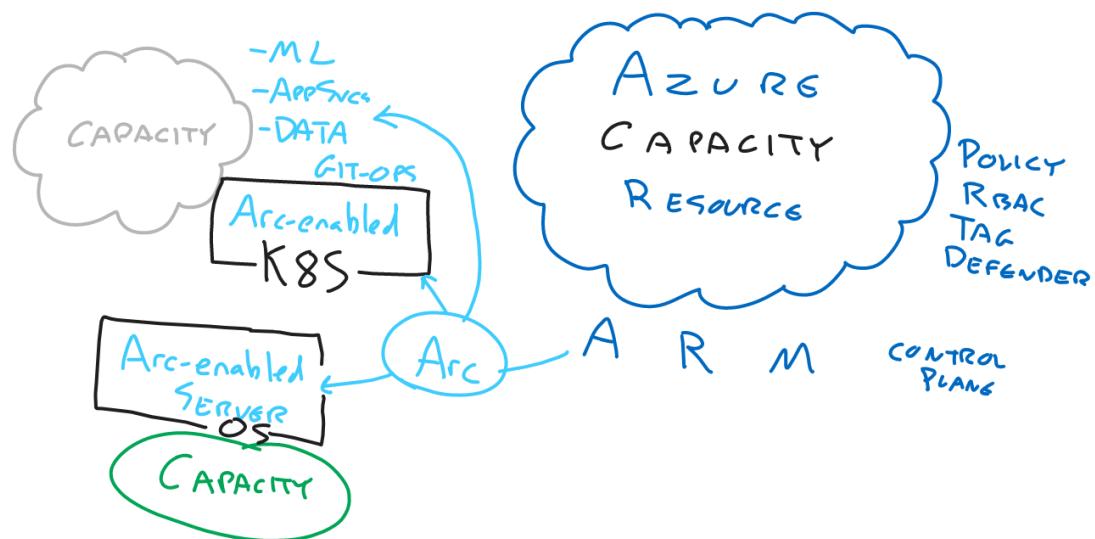
## Benefits and Usage of Azure Resource Manager

### Code

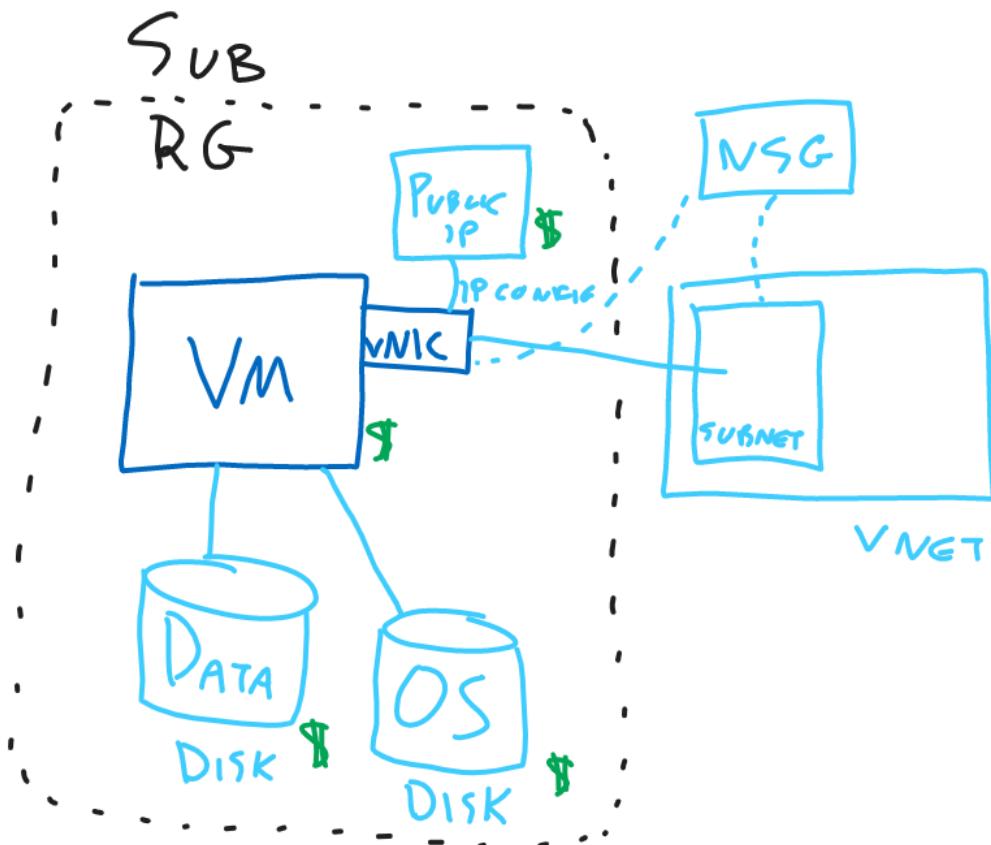
```
Get-AzResourceProvider  
Get-AzResourceProvider -ProviderNamespace microsoft.compute | ft  
ResourceTypes
```



Describe the Purpose of Azure Arc



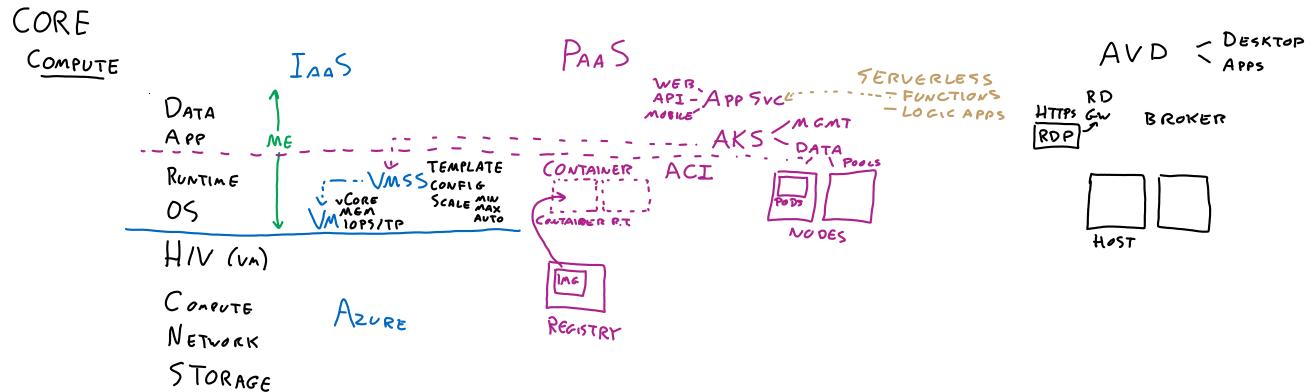
Describe the Resources Required for Virtual Machines



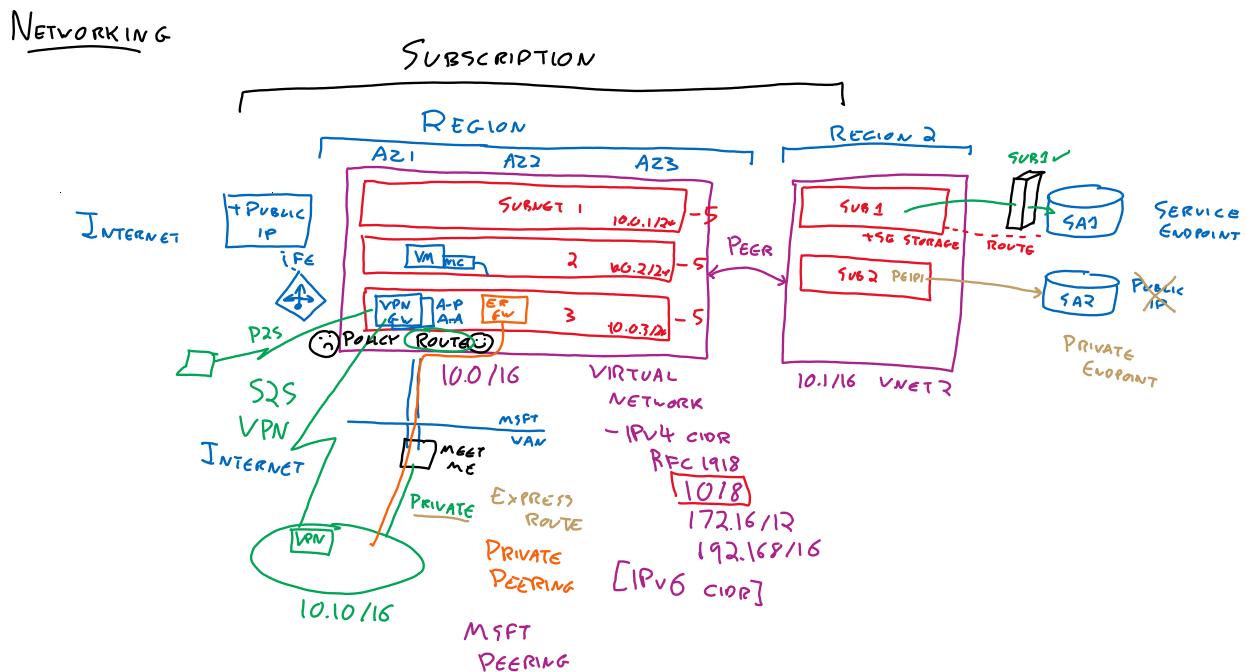
## Benefits and Usage of Core Compute Resources

### Links

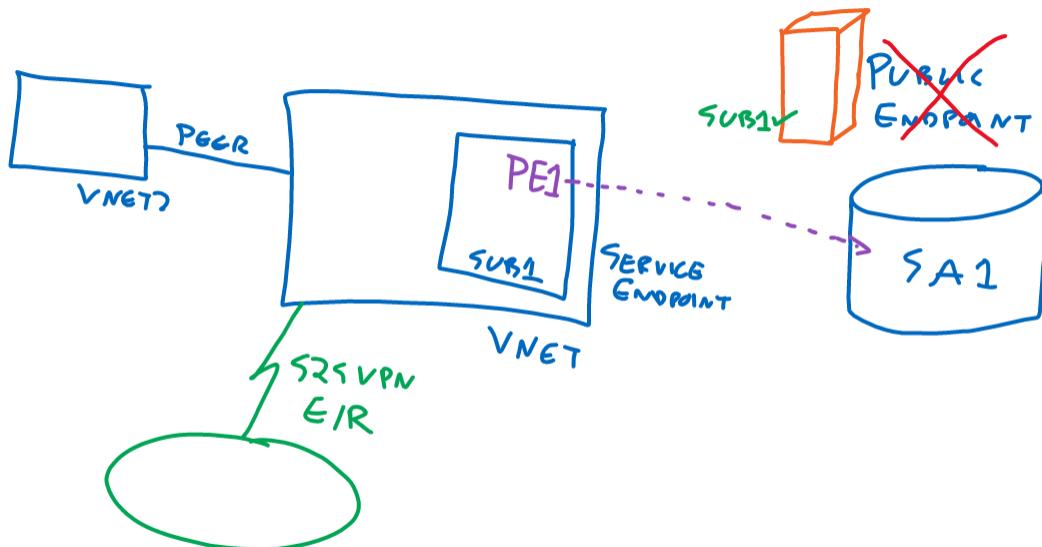
- VM SKUs - <https://docs.microsoft.com/azure/virtual-machines/sizes>



## Benefits and Usage of Core Network Resources



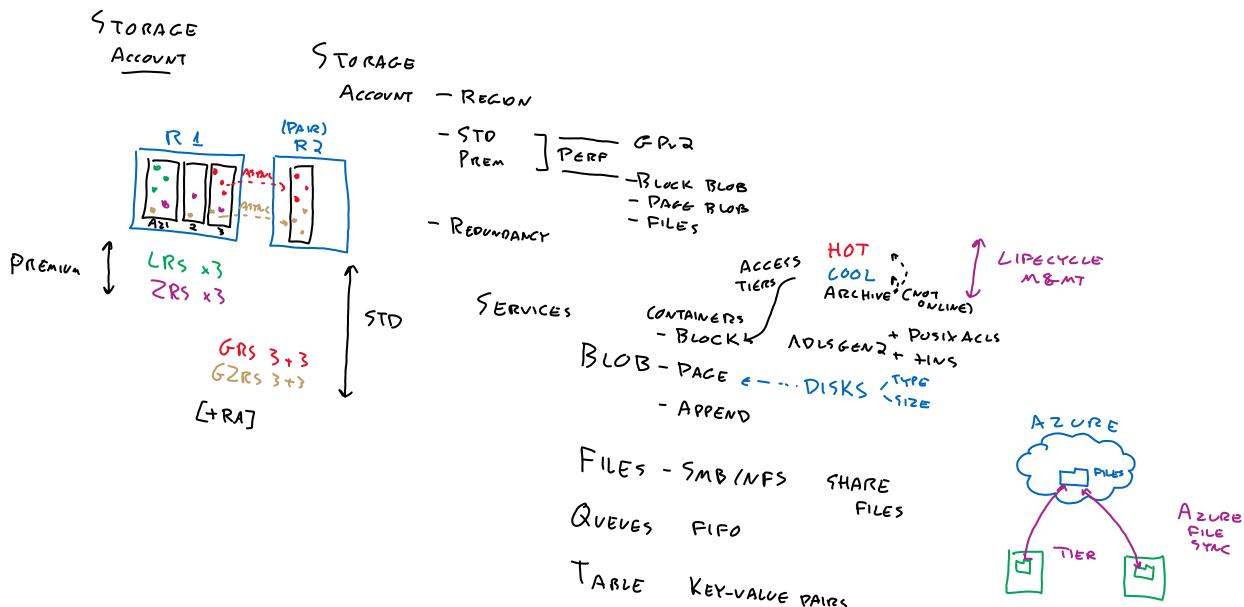
## Describe Public and Private Endpoints



## Benefits and Usage of Storage Account Resources

## Links

- Managed Disks - <https://azure.microsoft.com/pricing/details/managed-disks/>

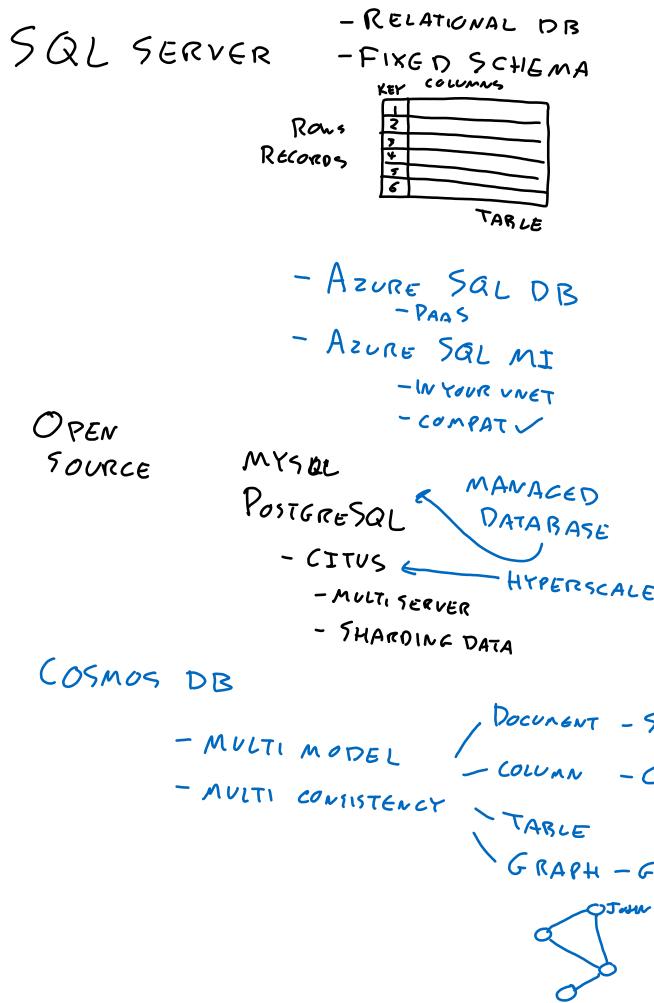


## Benefits and Usage of Database Resources

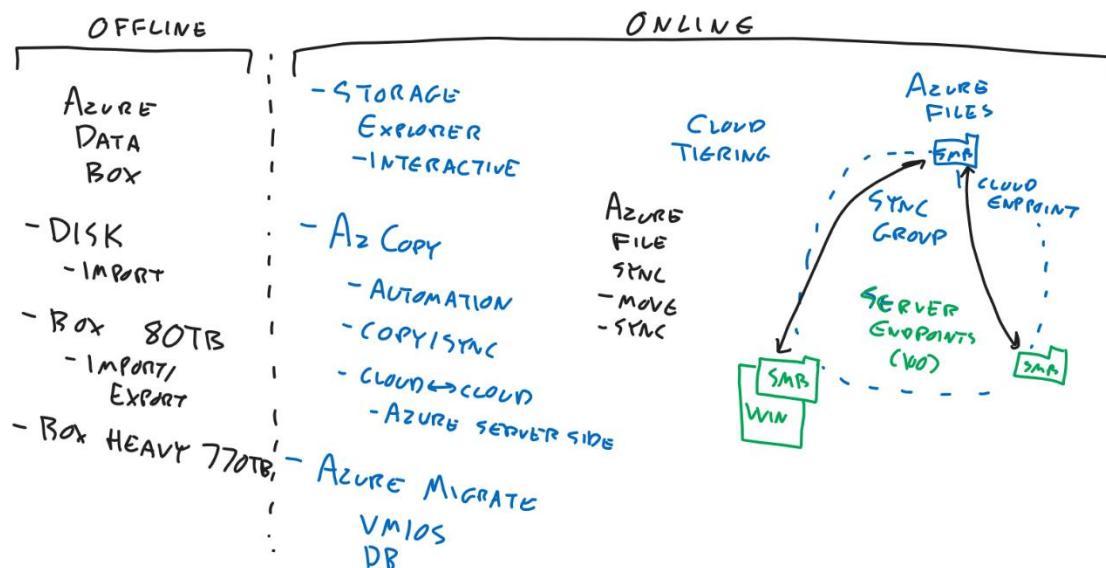
## Links

- SQL Feature Comparison - <https://docs.microsoft.com/azure/azure-sql/database/features-comparison>

DATA  
R  
BASE  
RESOURCES

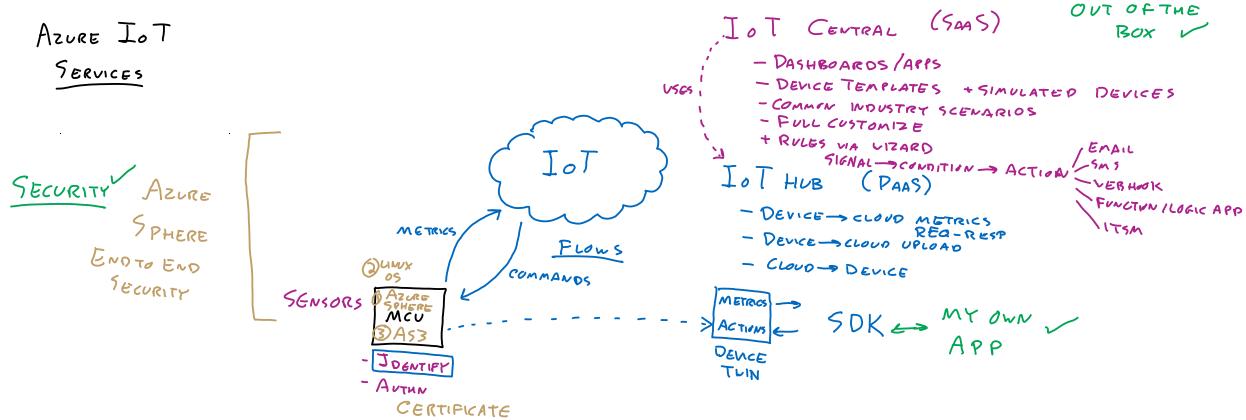


## Data Movement and Migration Options



## Describe Core Solutions and Management Tools on Azure

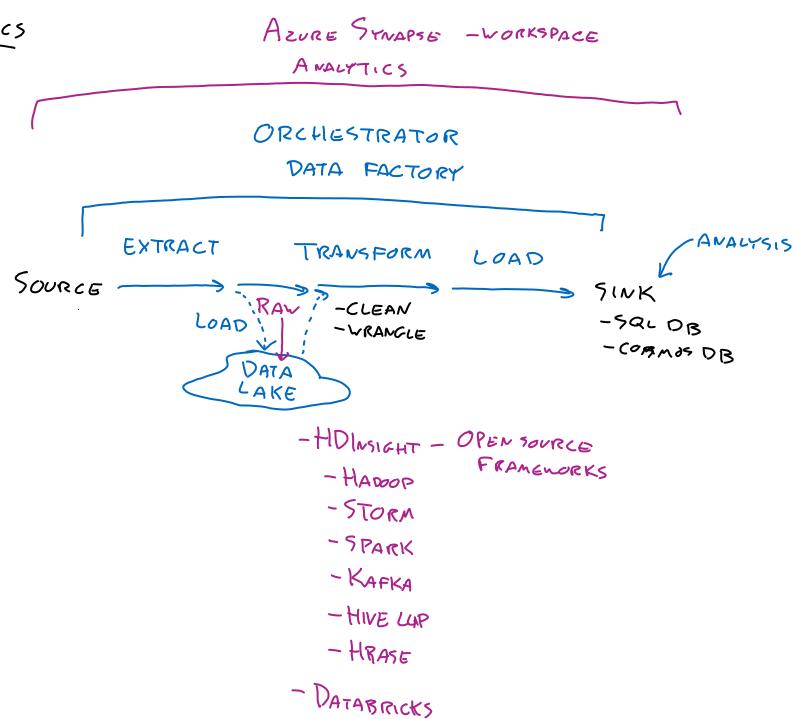
### Benefits and Usage of Azure IoT Services



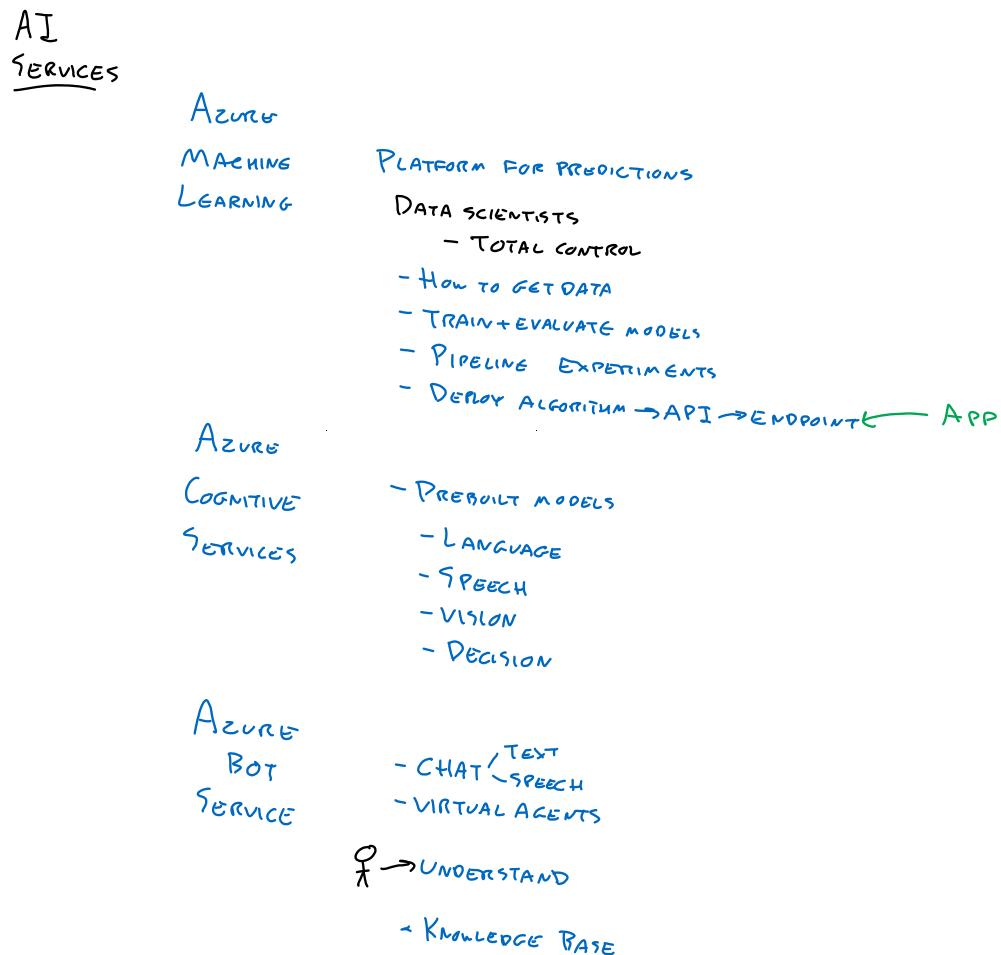
### Benefits and Usage of Big Data and Analytics Services

#### BIG DATA

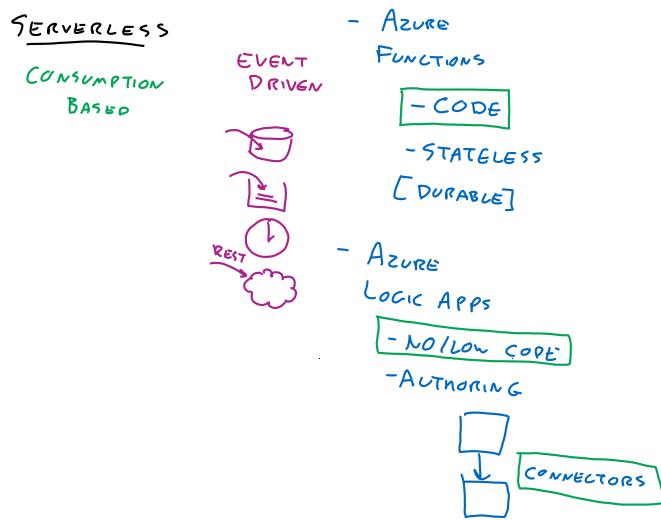
#### + ANALYTICS



## Benefits and Usage of AI Services

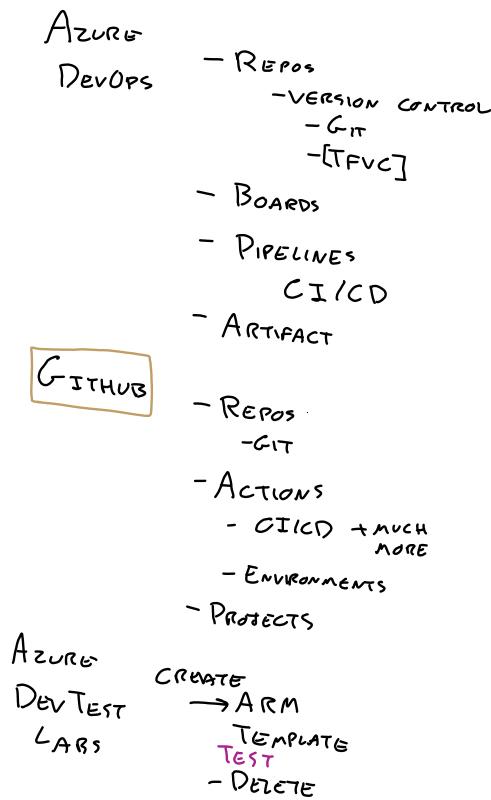


## Benefits and Usage of Serverless Technologies

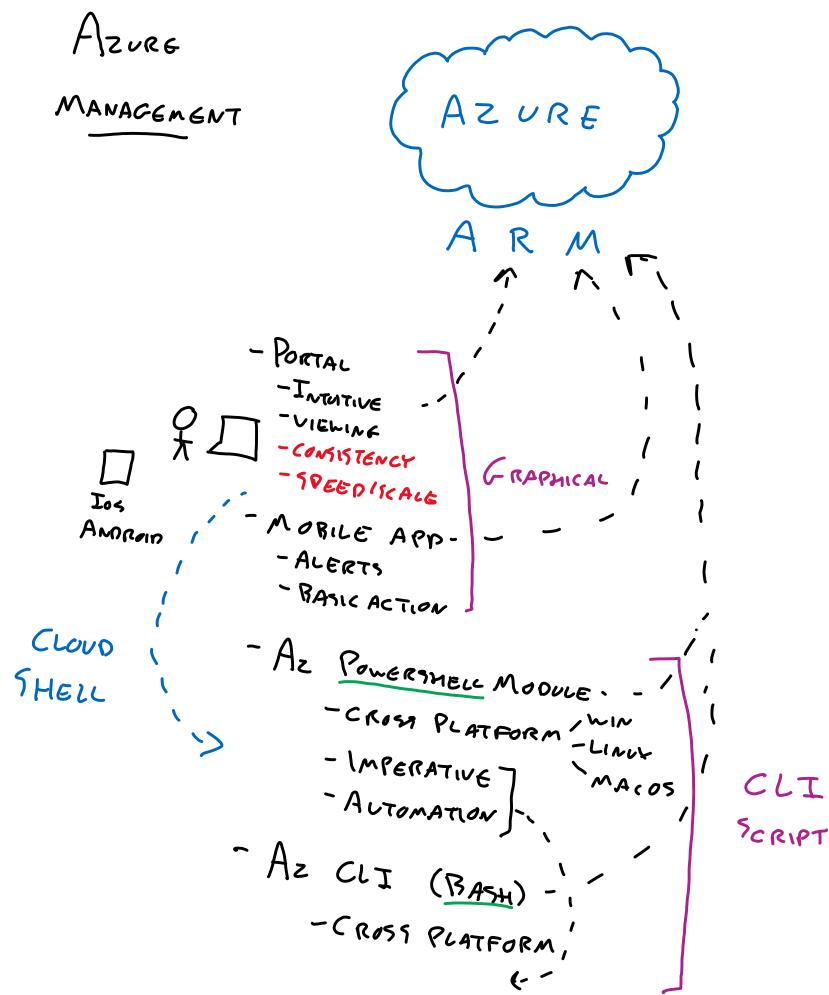


## Benefits and Usage of DevOps Technologies

### DevOps



## Functionality of Azure Management Solutions

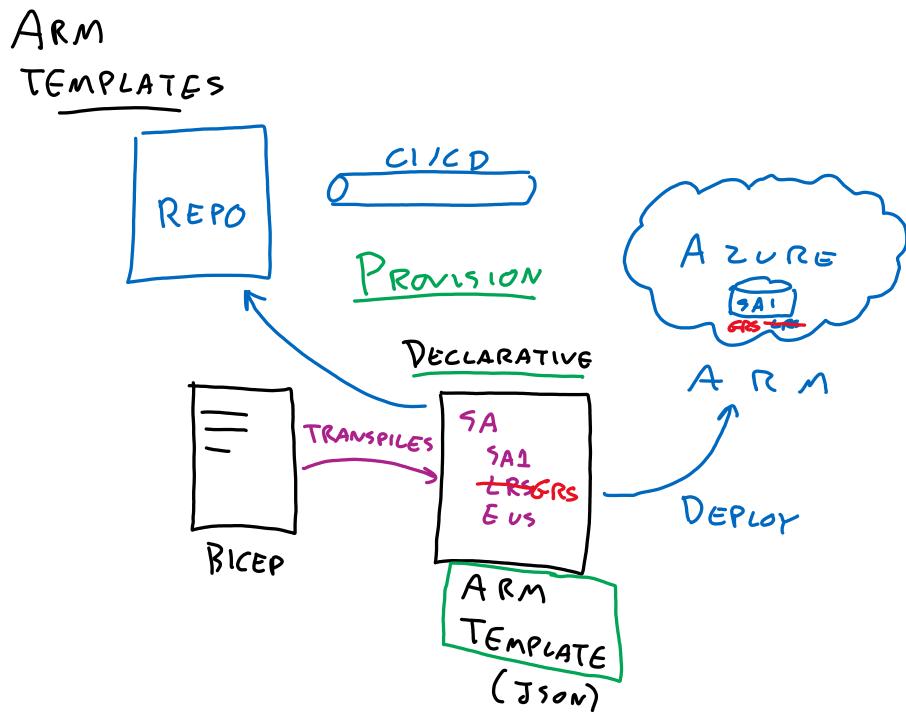


## Functionality and Usage of ARM Templates

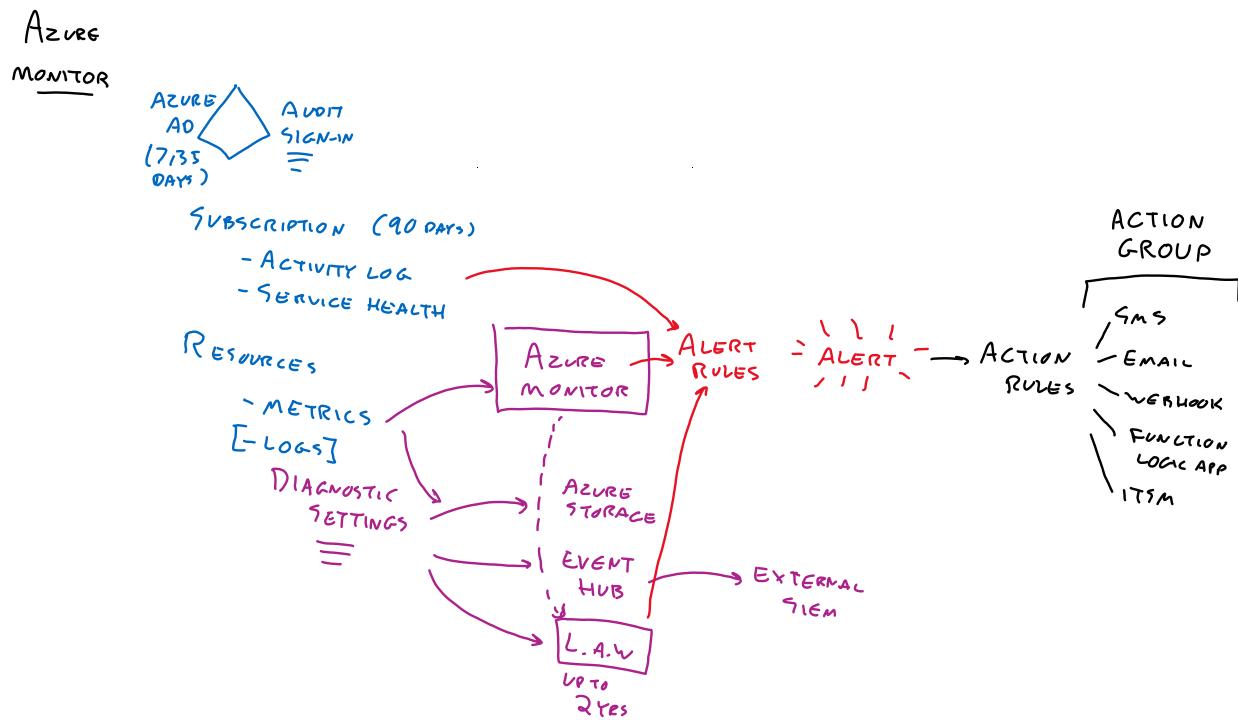
## Links

- Sample ARM template -

<https://github.com/johnthebrit/AzureMasterClass/blob/master/Part11aCandDevOps/StorageRepo/ARMTemplates/StorageAccount.json>

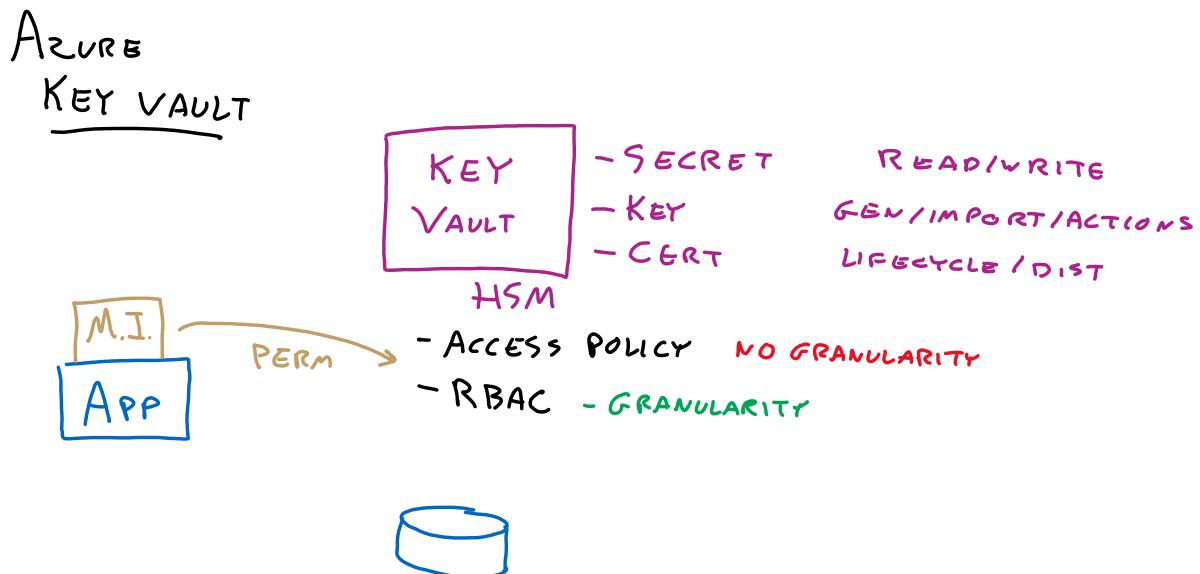


## Functionality and Usage of Azure Monitor

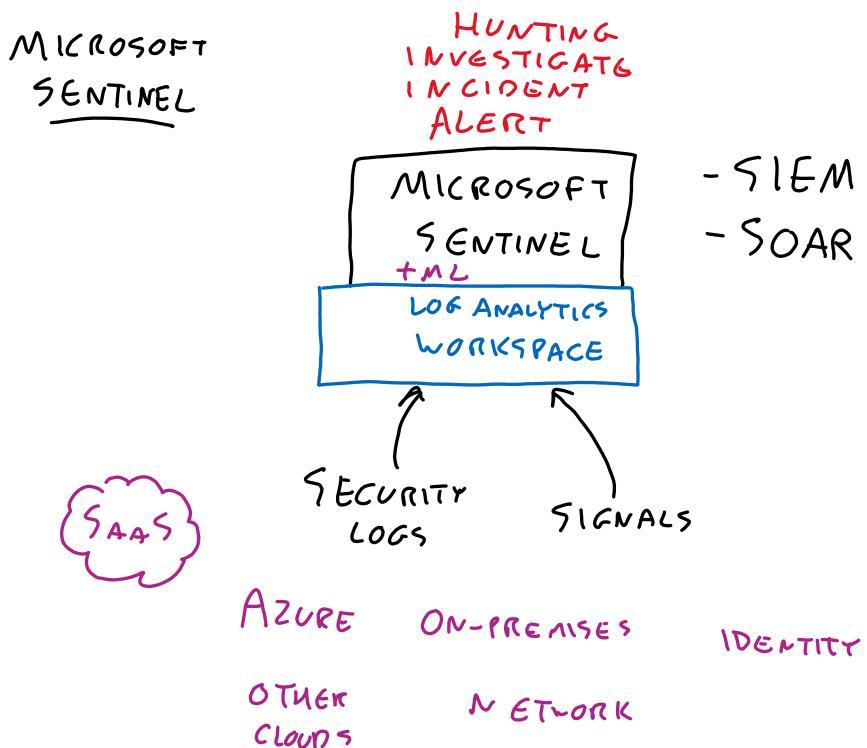


## Describe General Security and Network Security Features

### Functionality and Usage of Key Vault



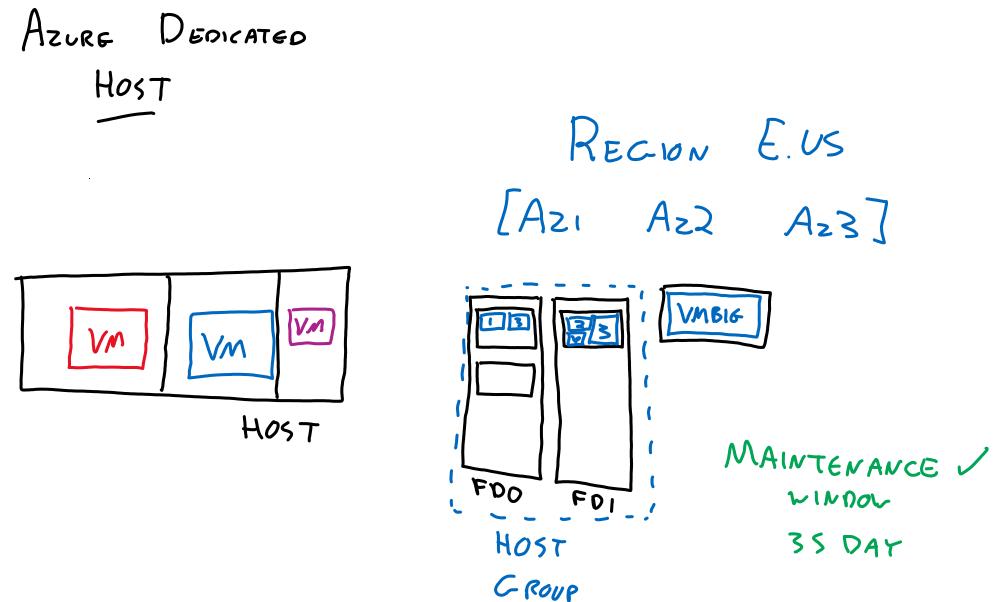
### Functionality and Usage of Microsoft Sentinel



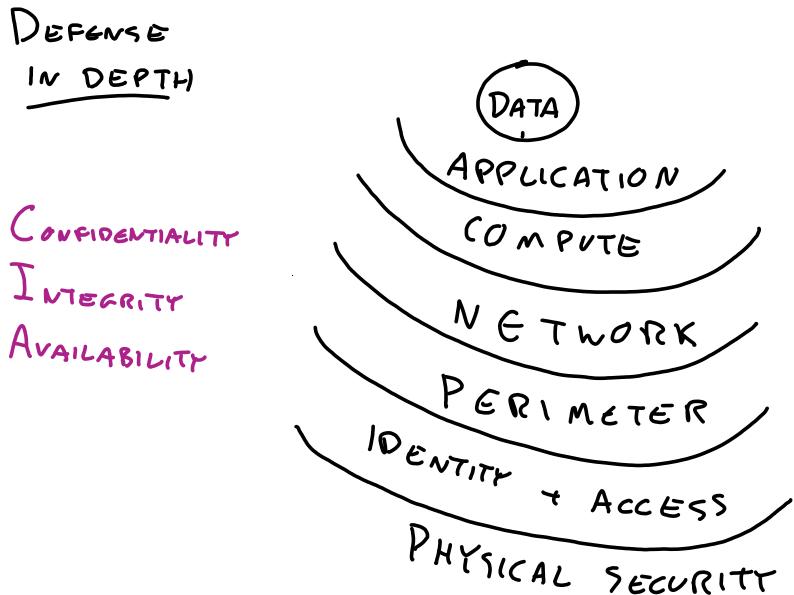
## Functionality and Usage of Azure Dedicated Hosts

### Links

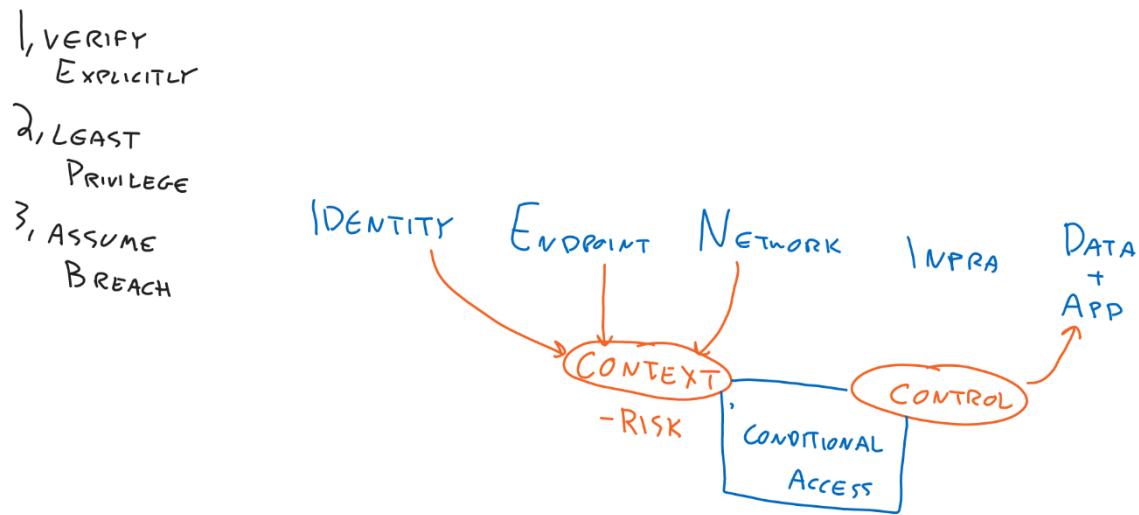
- Azure Dedicated Host - <https://azure.microsoft.com/pricing/details/virtual-machines/dedicated-host/>
- Azure Isolated VMs - <https://docs.microsoft.com/azure/virtual-machines/isolation>



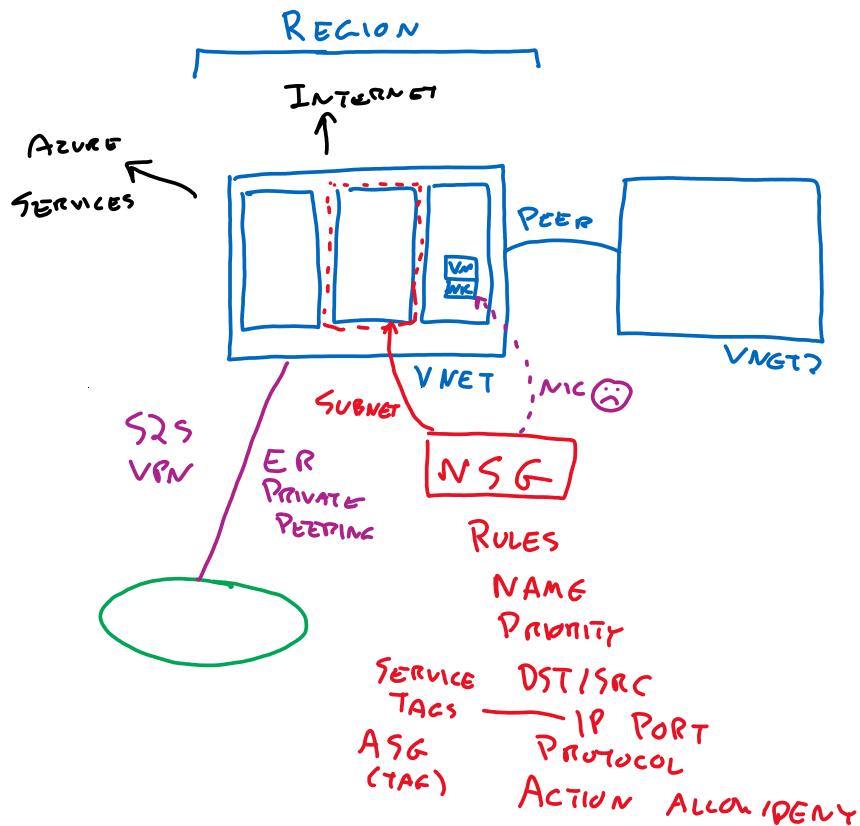
## Concept of Defense in Depth



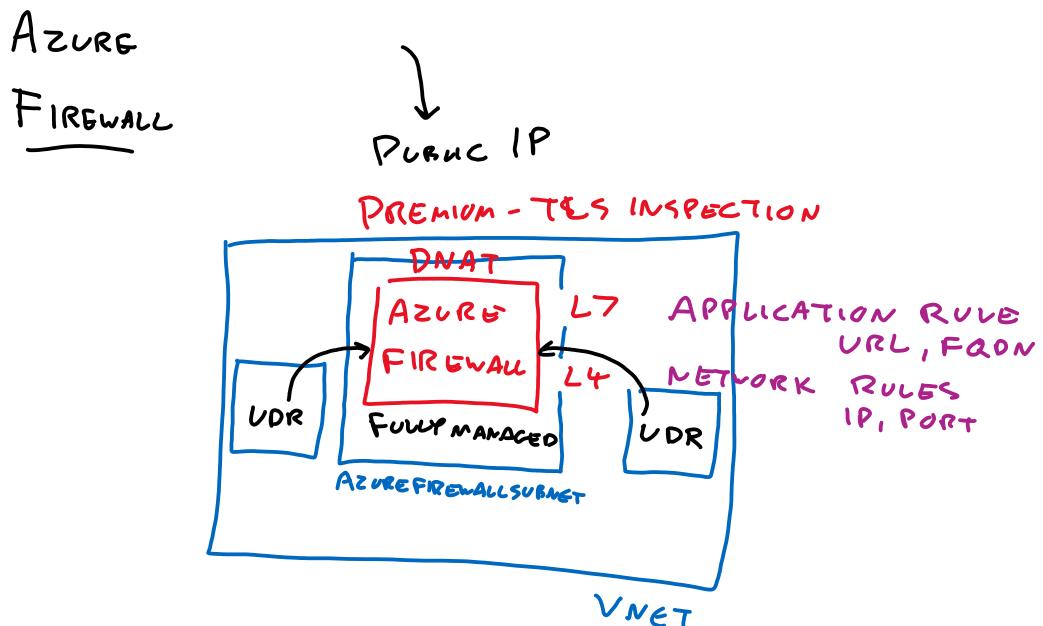
Describe the Concept of Zero Trust



## Functionality and Usage of NSGs

NETWORKSECURITYGROUPLS

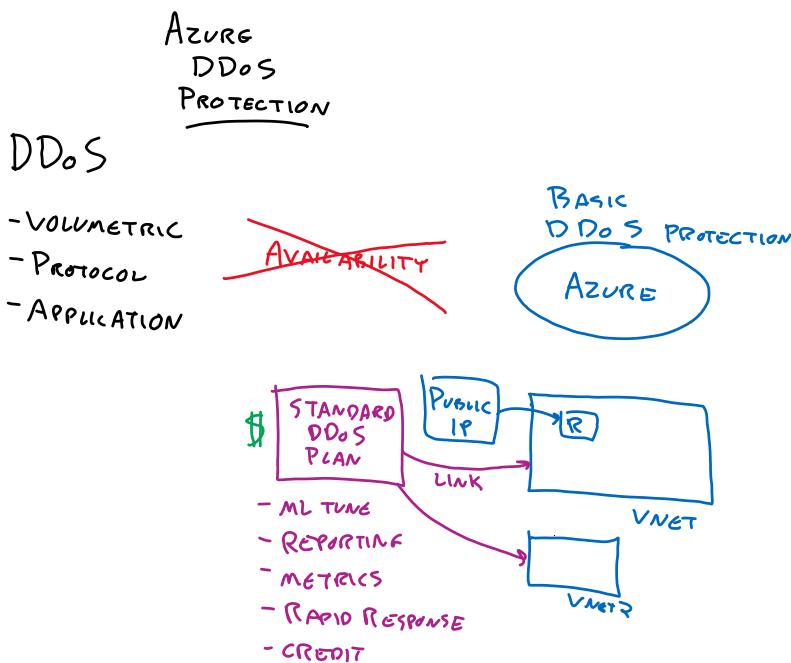
## Functionality and Usage of Azure Firewall



## Functionality and Usage of Azure DDoS Protection

### Links

- DDoS Overview - <https://docs.microsoft.com/azure/ddos-protection/ddos-protection-overview>



Describe Identity, Governance, Privacy, and Compliance Features  
 Explain Authentication and Authorization

## AUTHENTICATION (AUTHN)

### VALIDATING IDENTITY

- WE KNOW (PASSWORD)
- WE ARE (BIOMETRIC)
- WE HAVE (TOKEN, PC)

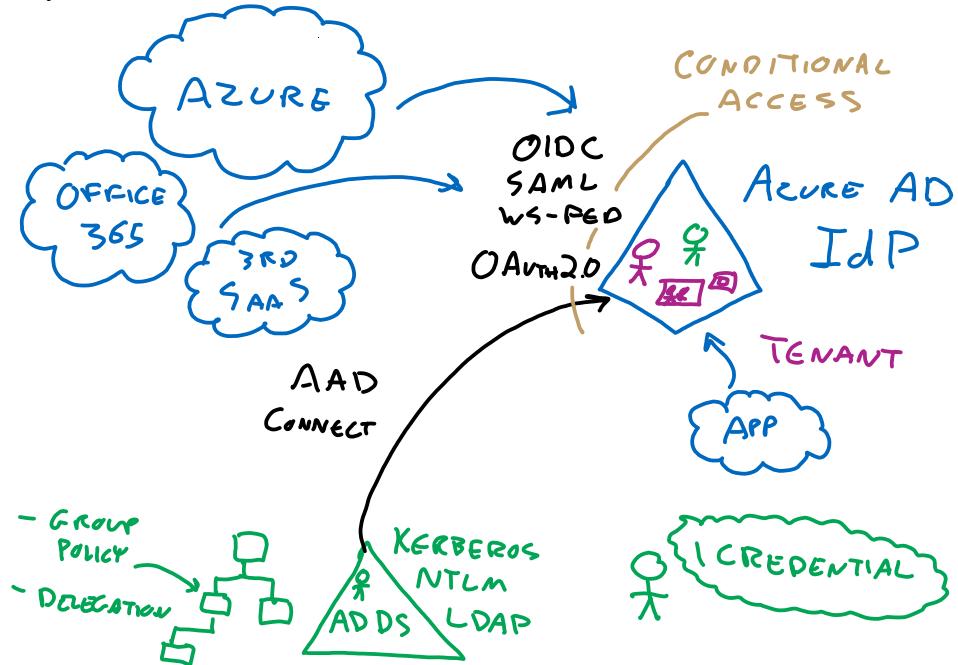
## AUTHORIZATION (AUTHZ)

### WHAT WE CAN DO

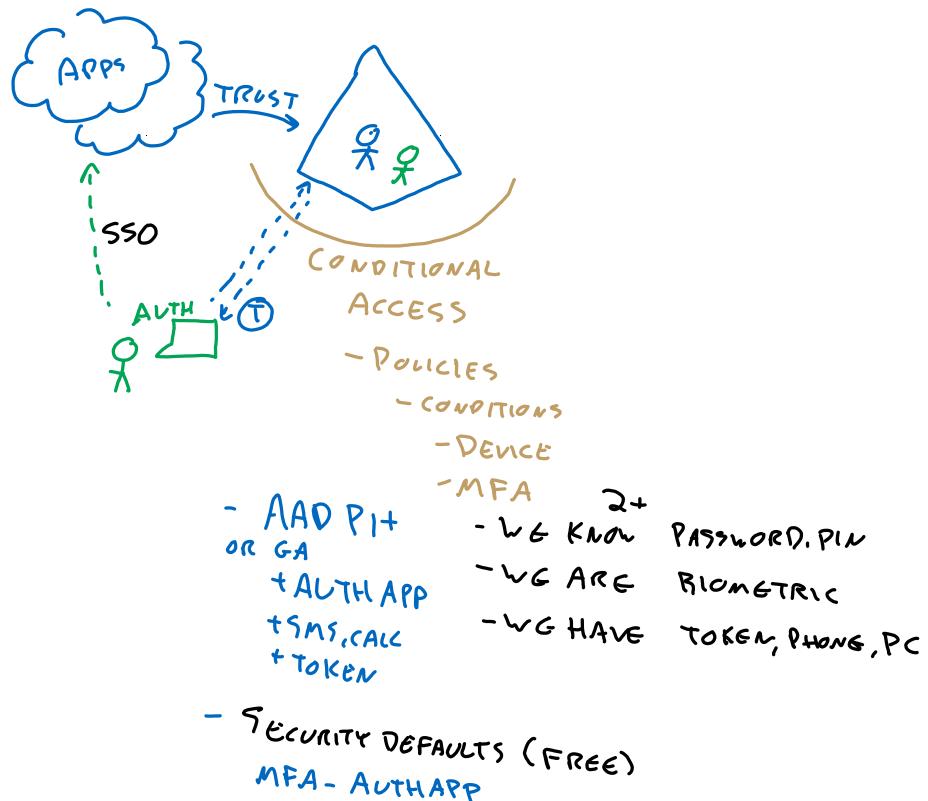
### RBAC

Functionality and Usage of Azure AD

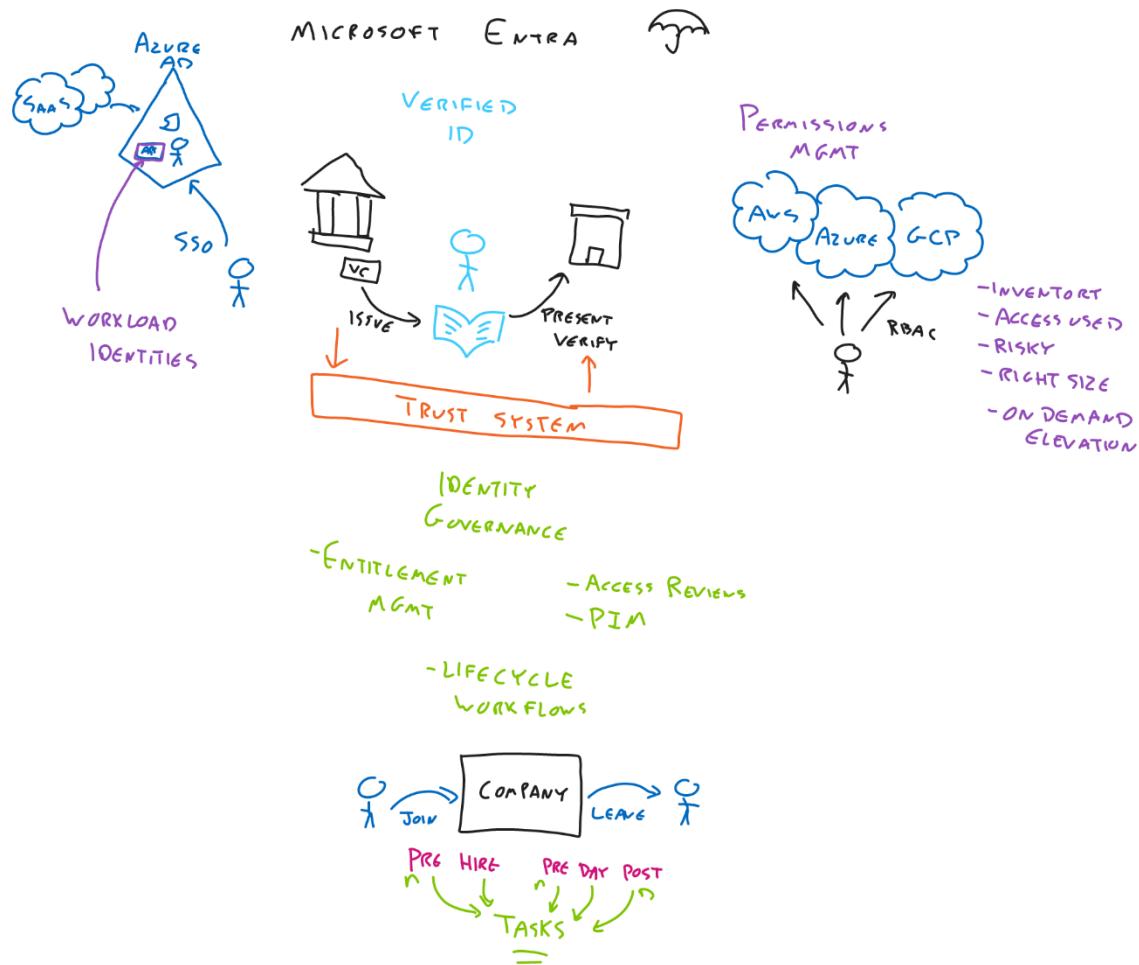
## Azure AD



## Functionality of Conditional Access, MFA and SSO

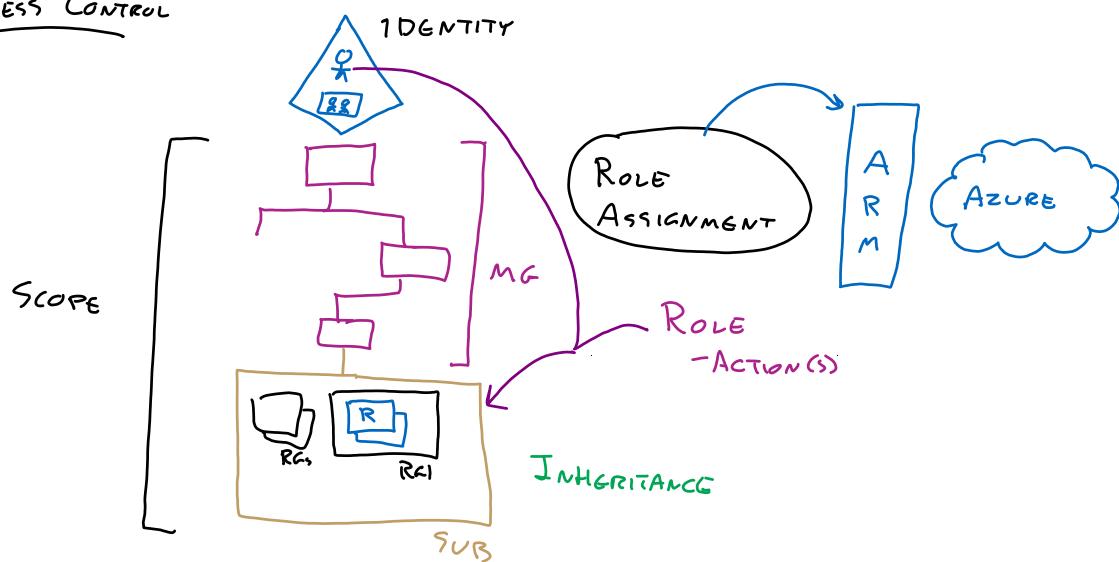
CONDITIONAL ACCESS,MFA + SSO

## Overview of Microsoft Entra



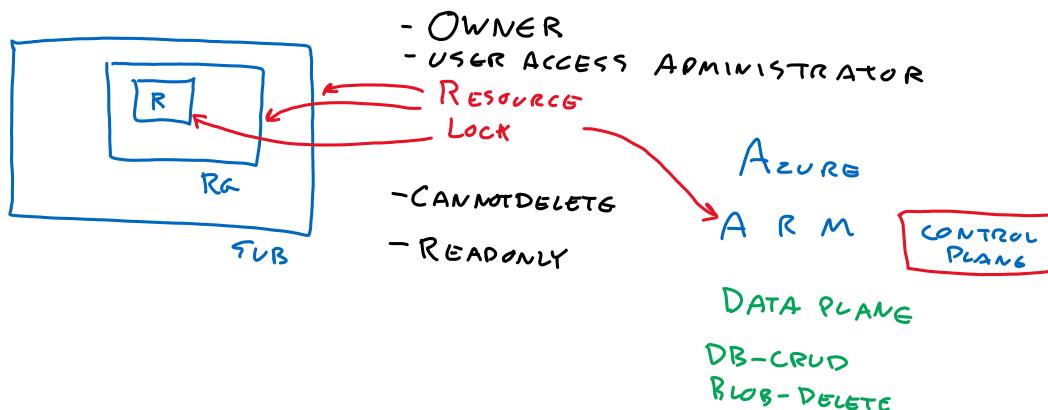
## Functionality and Usage of RBAC

Role Based Access Control

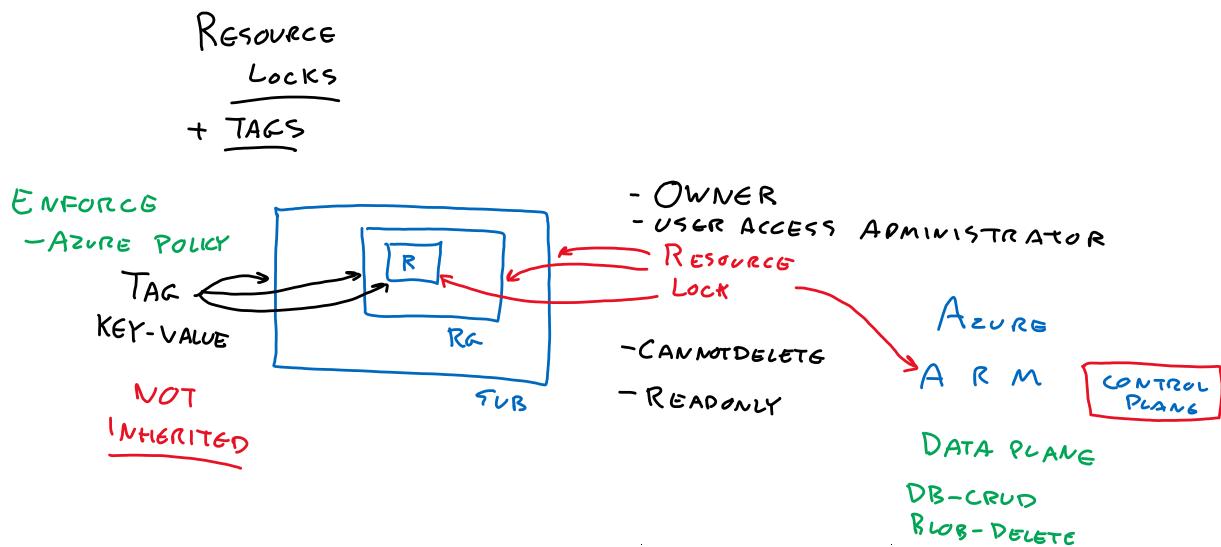


## Functionality and Usage of Resource Locks

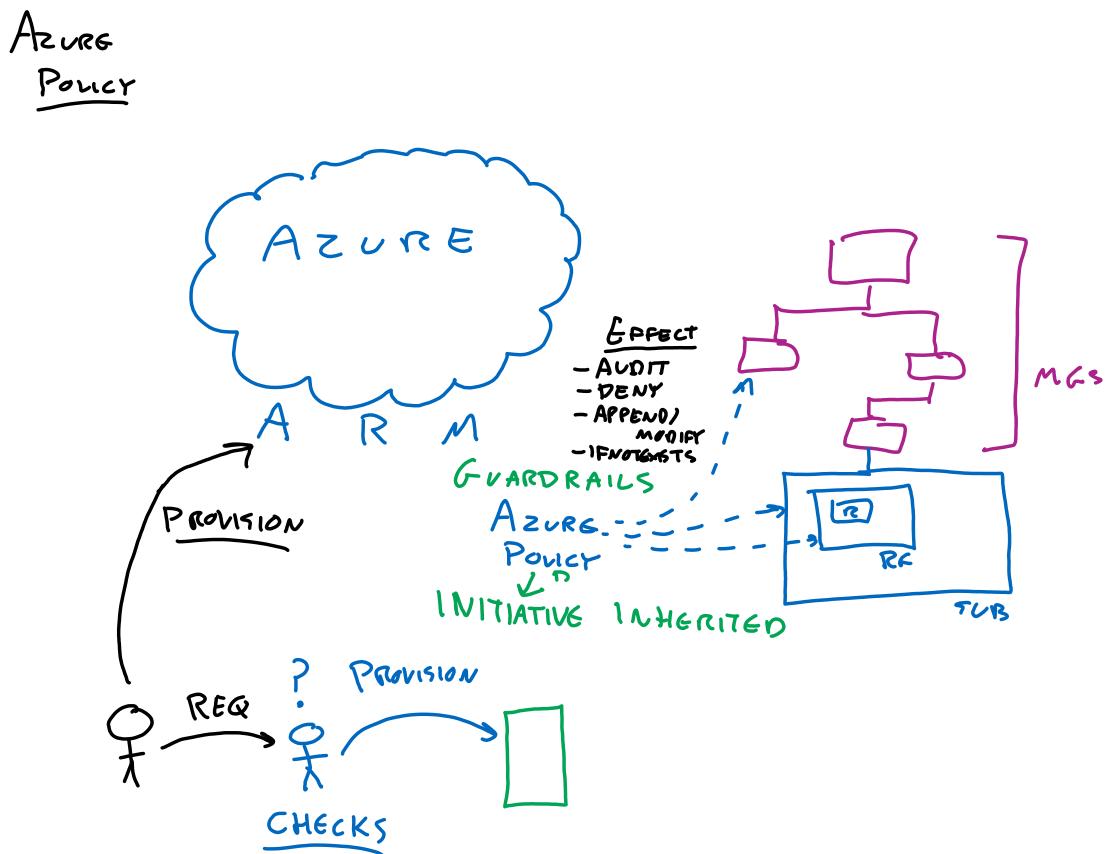
Resource Locks



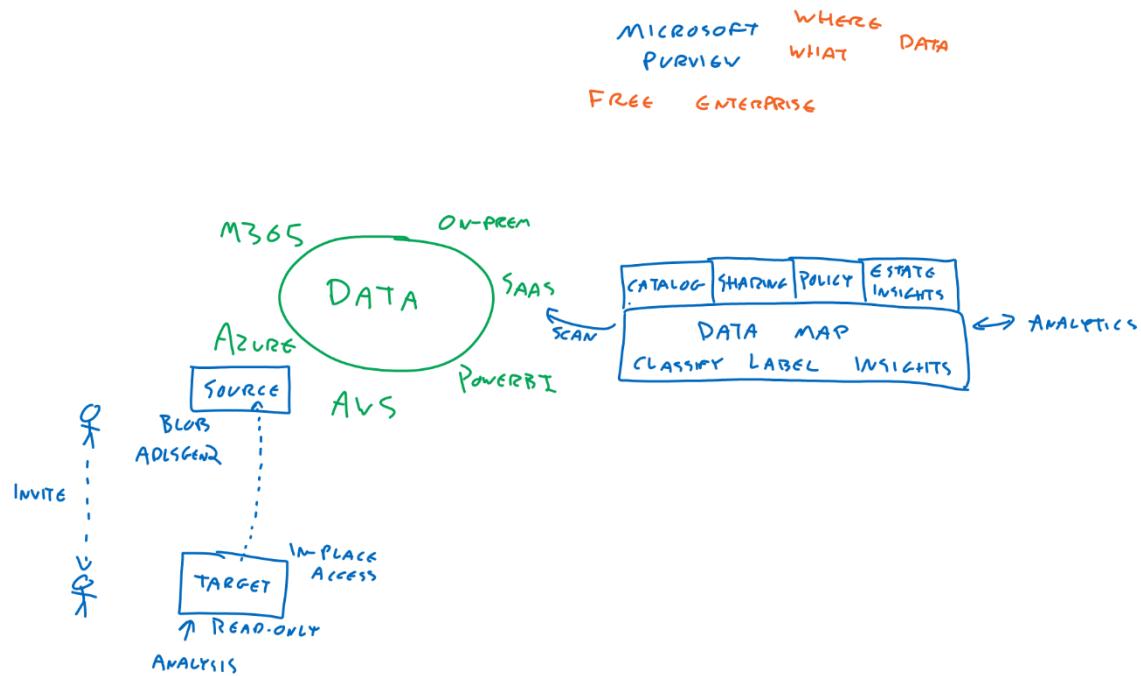
## Functionality and Usage of Tags



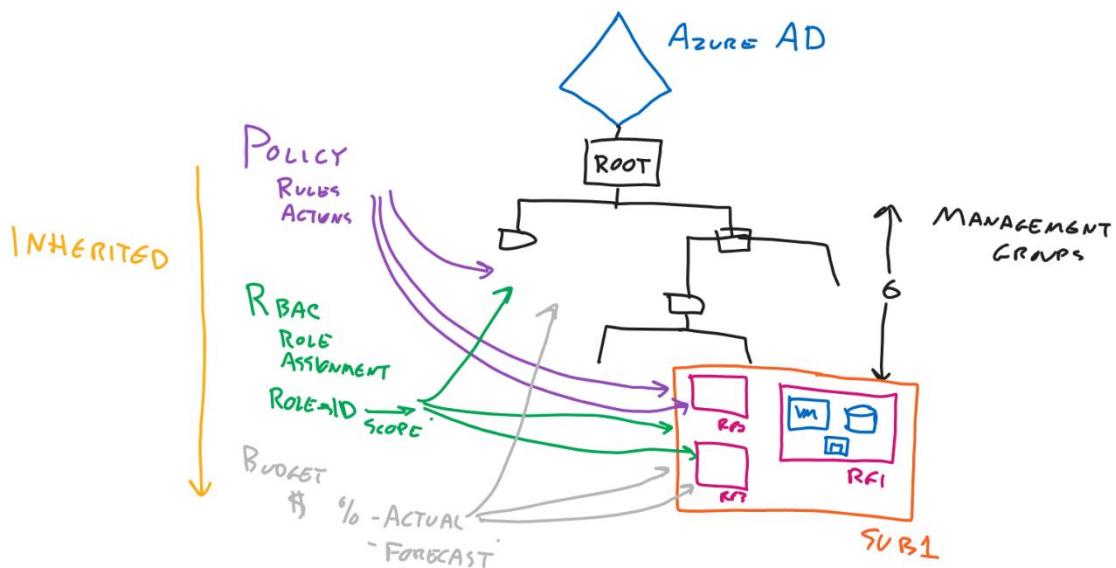
## Functionality and Usage of Azure Policy



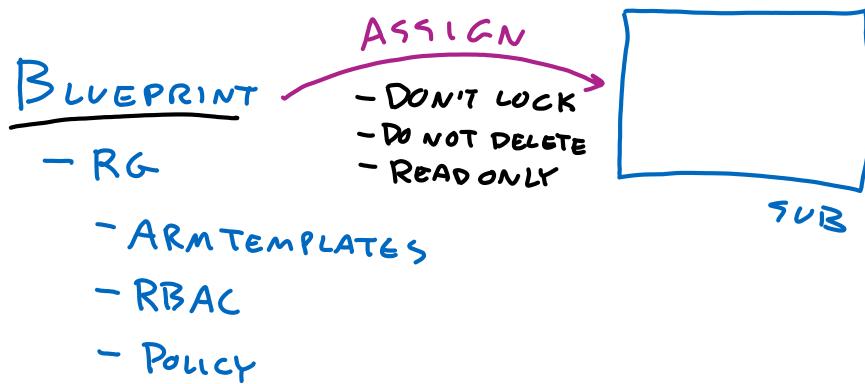
## Purpose of Microsoft Purview



## Governance Hierarchy Constructs



## Functionality and Usage of Azure Blueprints



## Describe Cloud Adoption Framework

### Links

- CAF Overview - <https://docs.microsoft.com/azure/cloud-adoption-framework/overview>

## Describe Microsoft Privacy Statement, Online Services Terms (OST) and Data Protection Amendment (DPA)

### Links

- Microsoft Privacy Statement - <https://privacy.microsoft.com/privacystatement>
- OST - <https://www.microsoft.com/licensing/terms/product/ForAllOnlineServices?azure-portal=true>
- DPA - <https://www.microsoft.com/licensing/docs/view/Microsoft-Products-and-Services-Data-Protection-Addendum-DPA>

## Purpose of Trust Center and Azure Compliance Documentation

### Links

- Trust Center - <https://www.microsoft.com/trust-center>

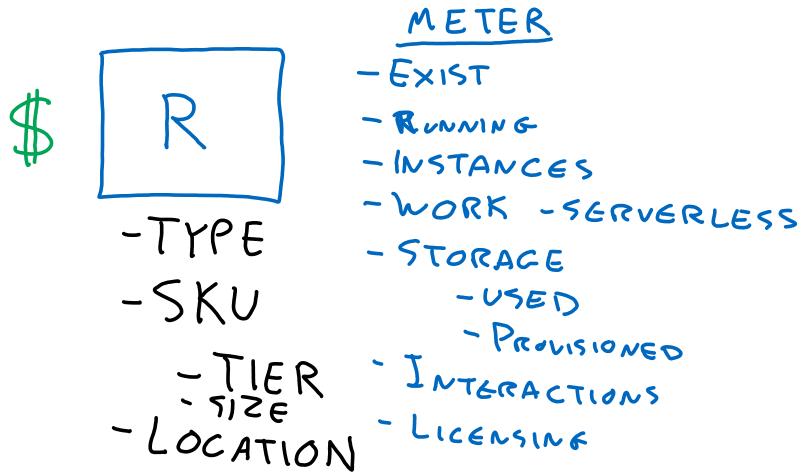
## Purpose of Azure Sovereign Regions

### Links

- Gov CIIS - <https://docs.microsoft.com/compliance/regulatory/offering-cjis>

## Describe Azure Cost Management and Service Level Agreements

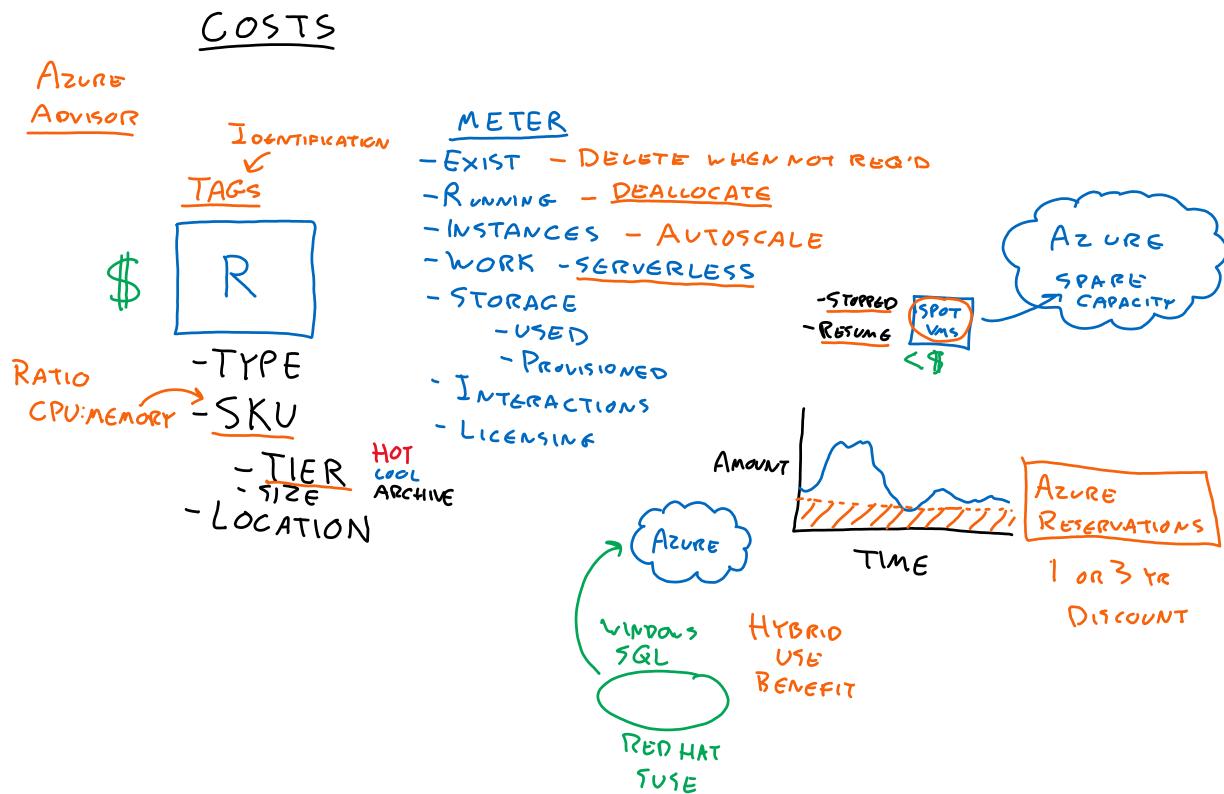
### Factors That Affect Costs



### Factors to Reduce Cost

#### Links

- <https://azure.microsoft.com/pricing/calculator/>
- Pricing Calculator Deep Dive - <https://youtu.be/rMKmbZ1SYQg>
- Azure Reservations Deep Dive - <https://youtu.be/vpTDXenagcM>



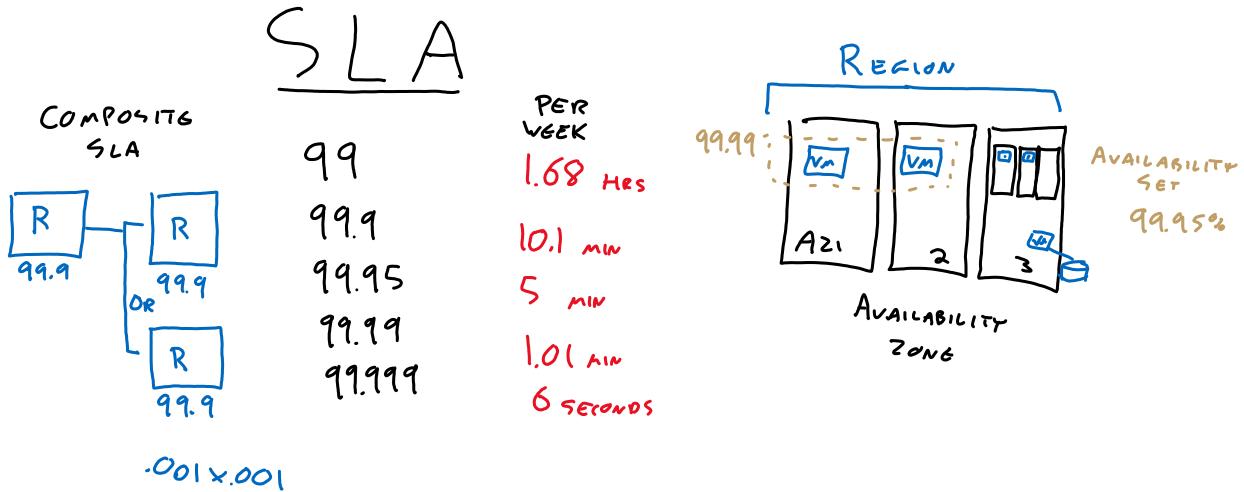
## Functionality and Usage of Pricing and TCO Calculators

### Links

- Azure Pricing Calculator - <https://azure.microsoft.com/pricing/calculator/>
- Azure TCO Calculator - <https://azure.microsoft.com/pricing/tco/calculator/>

## Purpose of Service Level Agreements

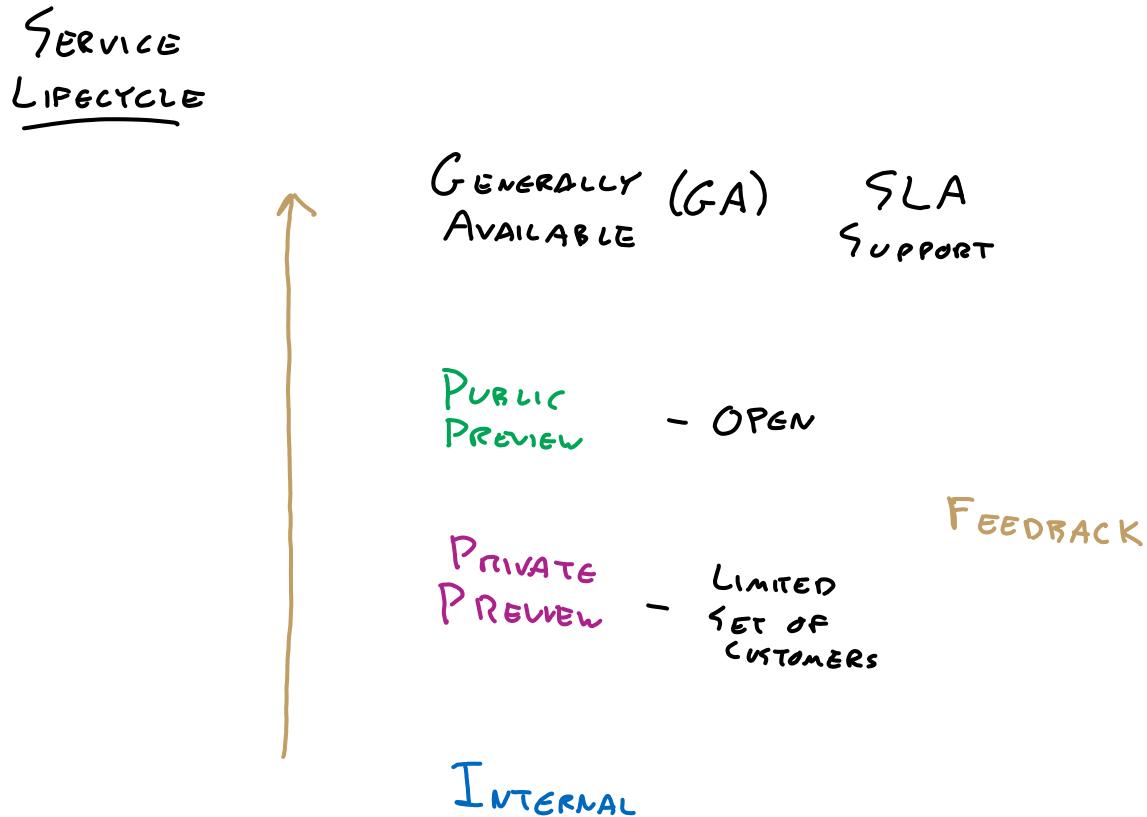
- Azure SLAs - <https://azure.microsoft.com/support/legal/sla/>
- Azure Status - <https://status.azure.com/status>
- Composite SLA documentation - <https://docs.microsoft.com/azure/architecture/framework/resiliency/business-metrics#understand-service-level-agreements>
- Composite SLA Deep Dive - [https://youtu.be/\\_a3LPSZmkqY](https://youtu.be/_a3LPSZmkqY)



## Describe Service Lifecycle in Azure

### Links

- Azure preview portal - <https://preview.portal.azure.com>
- Azure updates - <https://azure.microsoft.com/updates/>
- Azure weekly update playlist channel - <https://onboardtoazure.com>



## Closing Thoughts

# THANK YOU

Appreciate you watching this course.

Please subscribe and help support the channel.

Please watch the various videos and crams I have over at my channel and see you on another course soon!

<https://onboardtoazure.com>

<https://learn.onboardtoazure.com>

