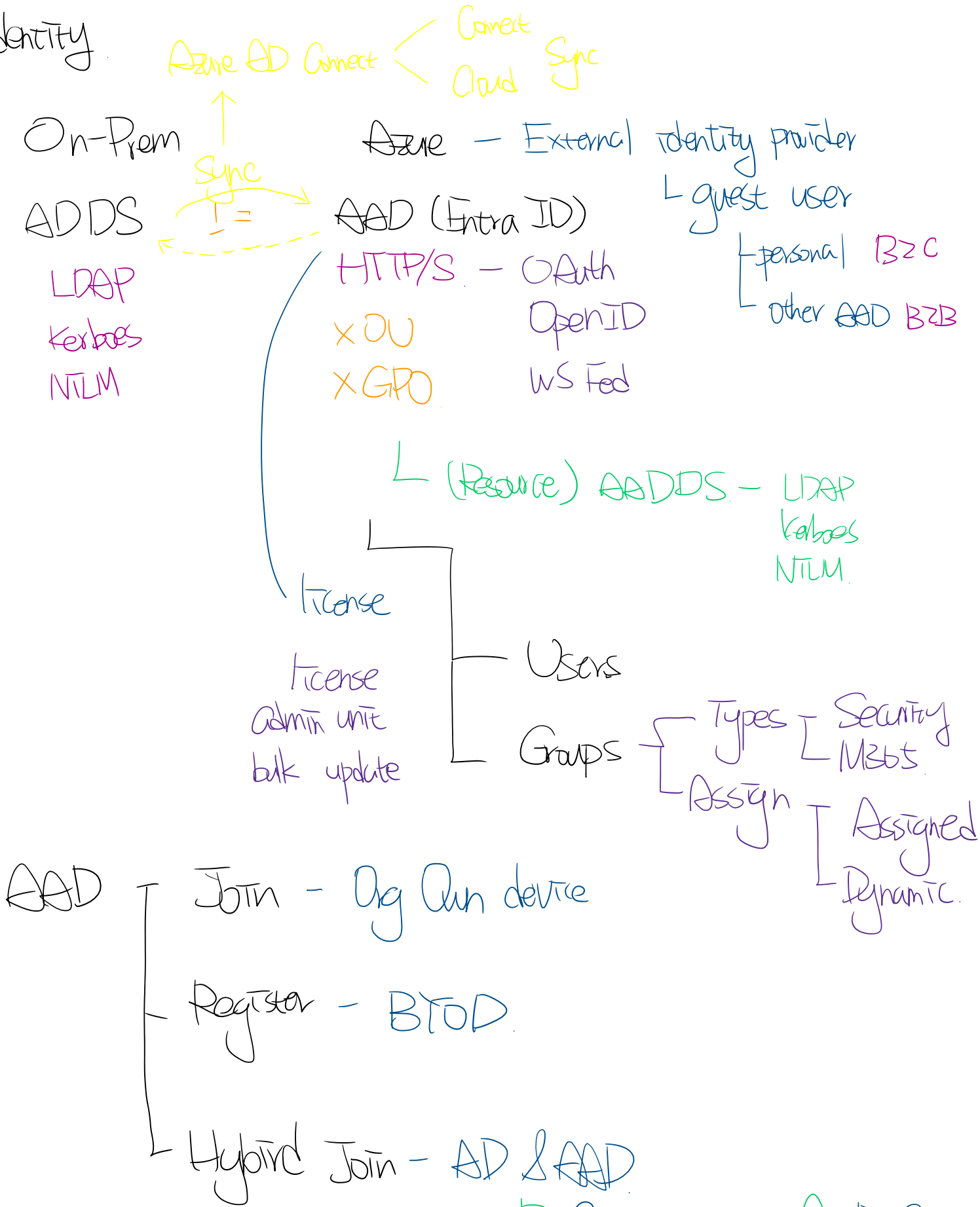
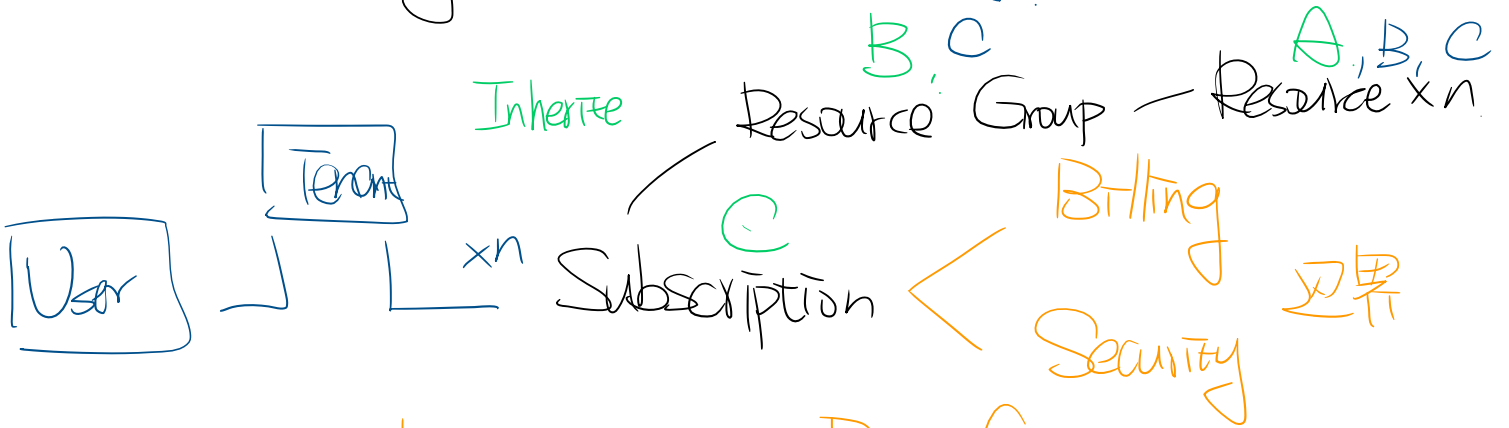


Identity



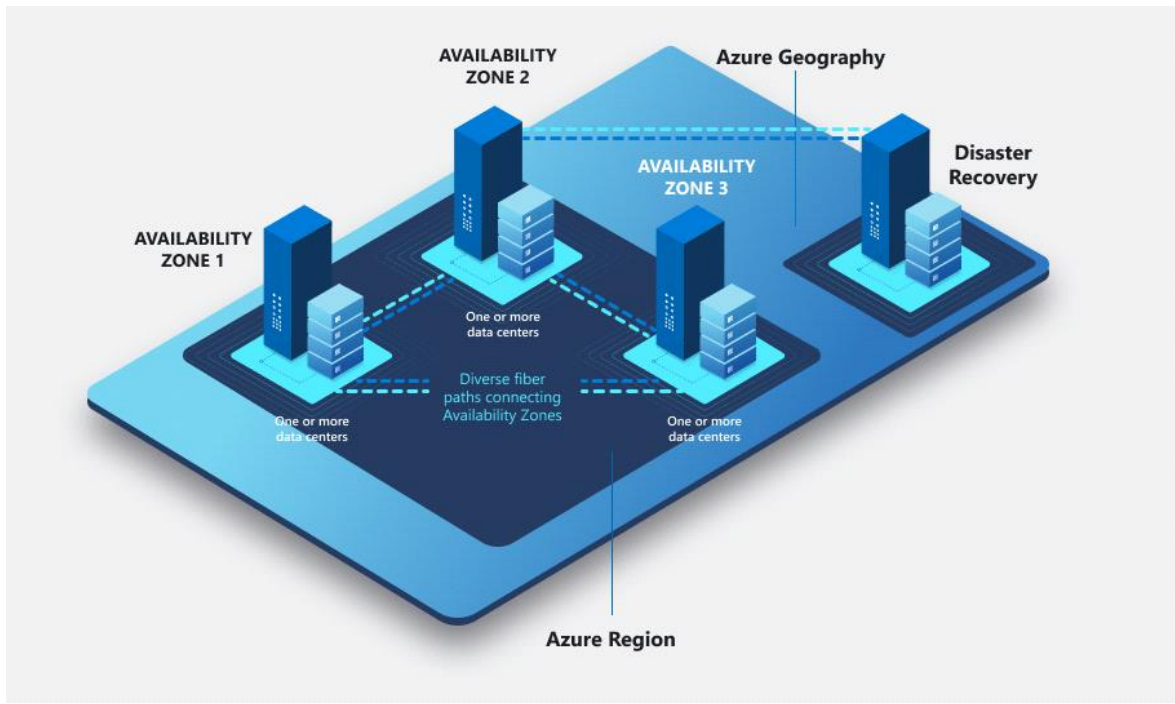
Hybrid Join - ~~AV~~ & ~~AV~~



Region - AZ - Data Center
 $x3$ xn

├ Par
├ Coding
└ Core Net





Region Pair

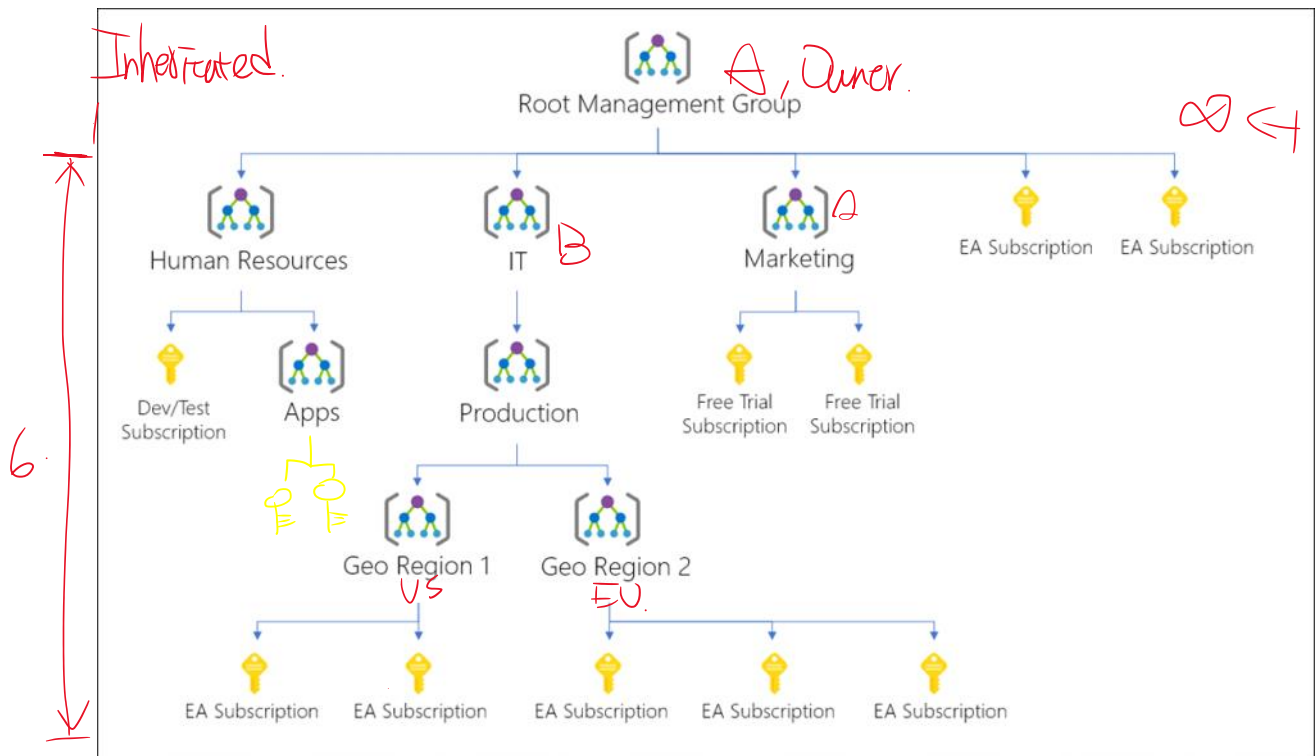
↳ latency

Geo

Pricing

BTOI - Hybrid Benefit.

Management Group. - Root. - Tree Structure.
 ↓
 跨 Sub



Cost Management → Service

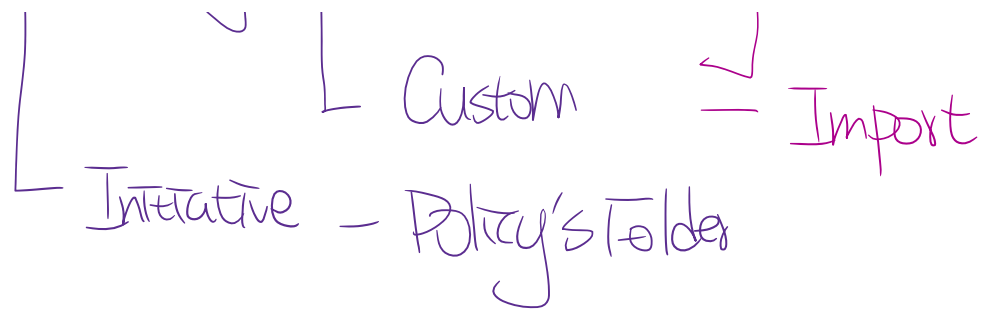
Services vs Resource
↳ create

Tag - Metadata - key / value

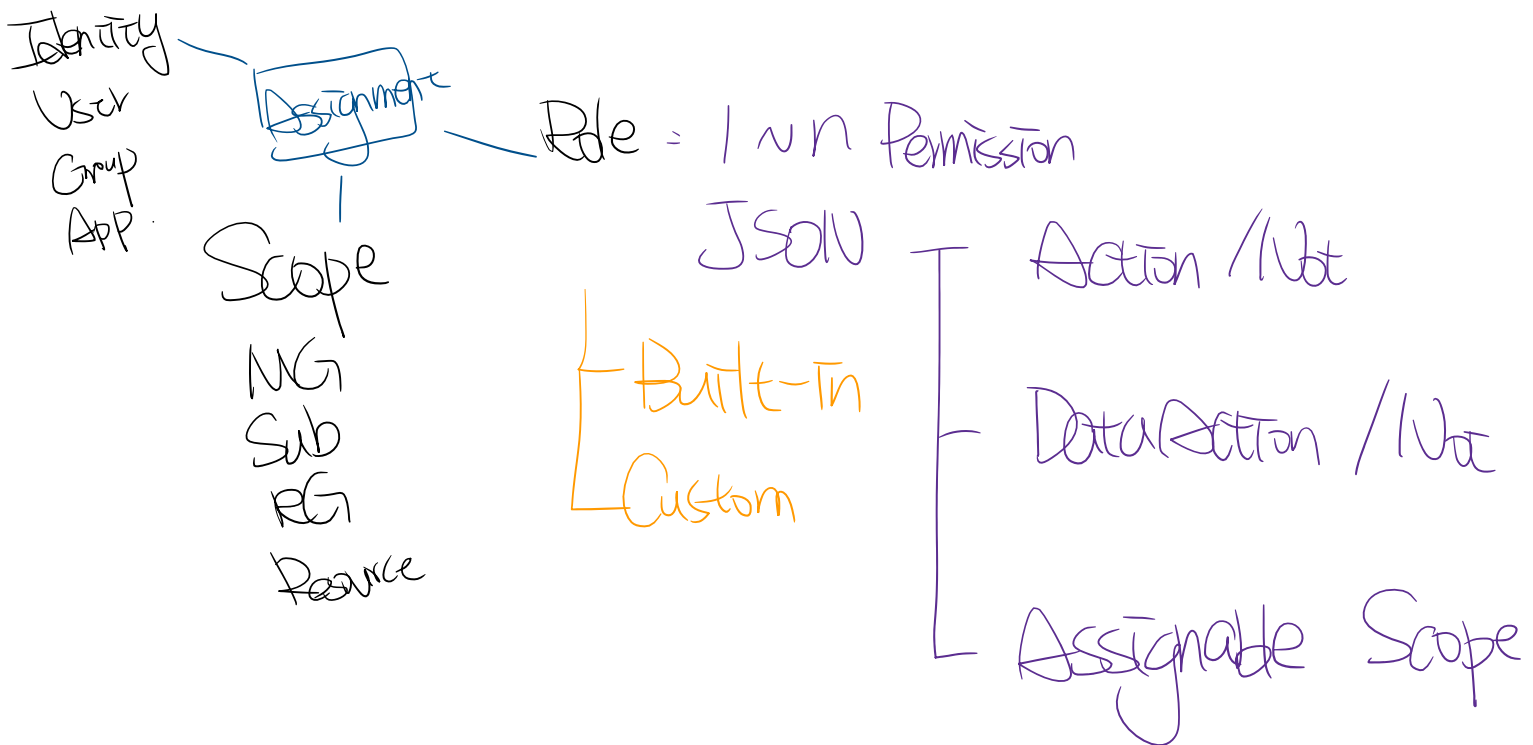
Azure Policy → 規則

[検査
" & 強制]

Definition | Policy | Built-in] JSon
[Custom]



RBAC (Role-based Access Control)



Administration Tools (Container)

Azure Portal → Azure Cloud Shell

Azure PowerShell → PowerShell's Module.

命令式 Syntax.

↳ Cross Platform

Azure CLI.

Cmdlet → v.-n.

↳ Bash, Cross Platform New-AZUM

AZ group subgroup command

声明式 Syntax. (配置性)

(Management Layer)

Azure Resource Manager

ARM Template - JSON

Azure Bicep. (x)

Azure REST API.

[Parameter
Variable
Resource
Function
Output

< UDF.
PDF

Virtual Network (VNET) - Addr Space - CIDR

Independent
Subnet x N

SDN

10.10.0.0/16

10.20.0.0/24

Sub1 10.10.1.0/24 $\Rightarrow$ 251, .0, .1, .2, .3, .255

Sub2 10.10.2.0/24 $\Rightarrow$ 27, .0, .1, .2, .3, .31

IP - Private IP - Dynamic / Static

Public IP - Azure Resource
IPv4/IPv6 FQDN

Basic x
Standard AZ - Static

Start
2.2.2.2

IP Pool

1.1.1.1

NSG (Network Security Group)

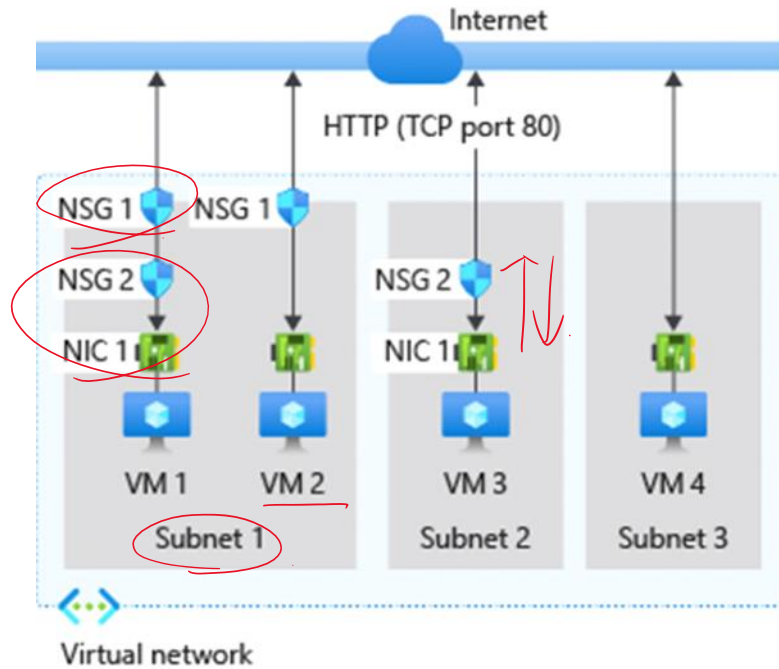
Layer4 FW (TCP/IP)
Stateless

InBand

OutBand

- Rule x N - Priority (int) Smaller
100 - 4096

Appliance
Subnet.

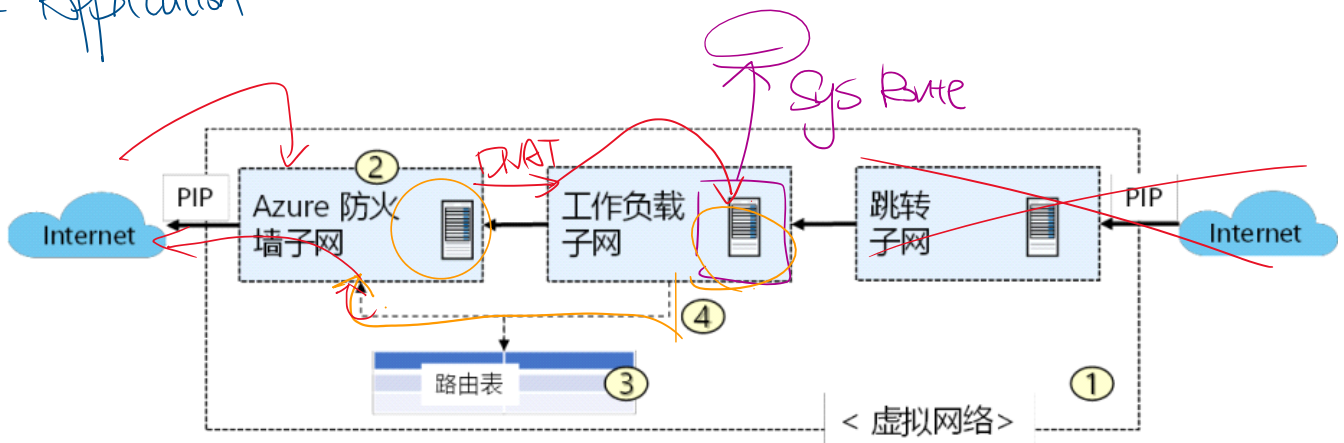


Azure Firewall (PaaS) - (VM) → Dedicated Subnet

└ NAT
└ Network
└ Application

└ HA
└ Scale
└ Maintain

Layer 7 Stateful



Route └ System Route ← Azure Managed
└ User Define Route

L Route Table - Route x n

L Associate subnet x n

Azure DNS Zone (PaaS DNS Server)

L Public DNS Zone

L Child Zone

~~Not~~ Resource

www (rd)

web (it)

sales (hr)

(money.com)

L Private DNS Zone = Any Name money.local

L link vnet x n

☑ Auto Registration (Discovery) By VNET

Inter-Connectivity

VNET ↔ VNET

(VPN)
Peering
(对等)

同-Region
跨 Region
跨 Sub

VNET ↔ Other

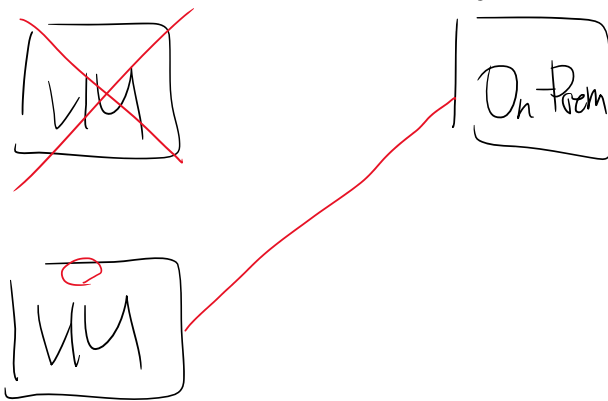
On-Prem
Other Cloud
Azure



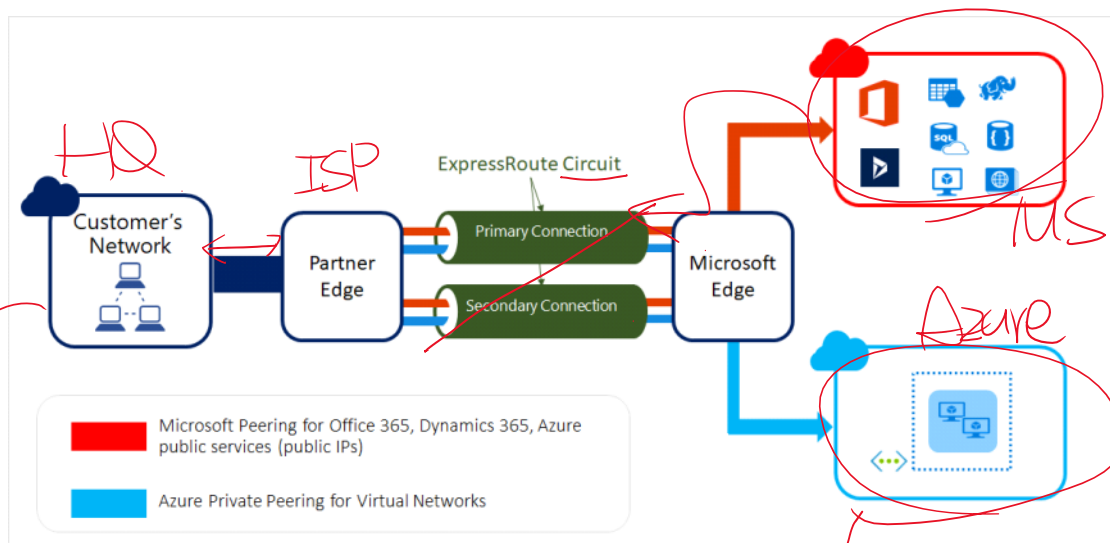
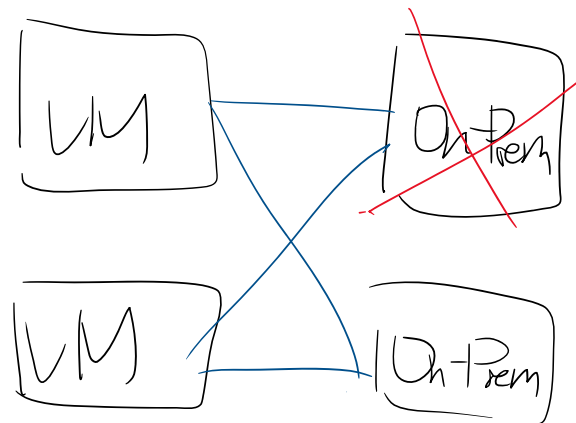
Virtual Network Gateway (VPN Gateway) (PaaS) (VM) gateway subnet ^{→ HA}

{ VPN Express Route }
 { Point to Site }
 { Site to Site }
 { Site }
 { VNET }

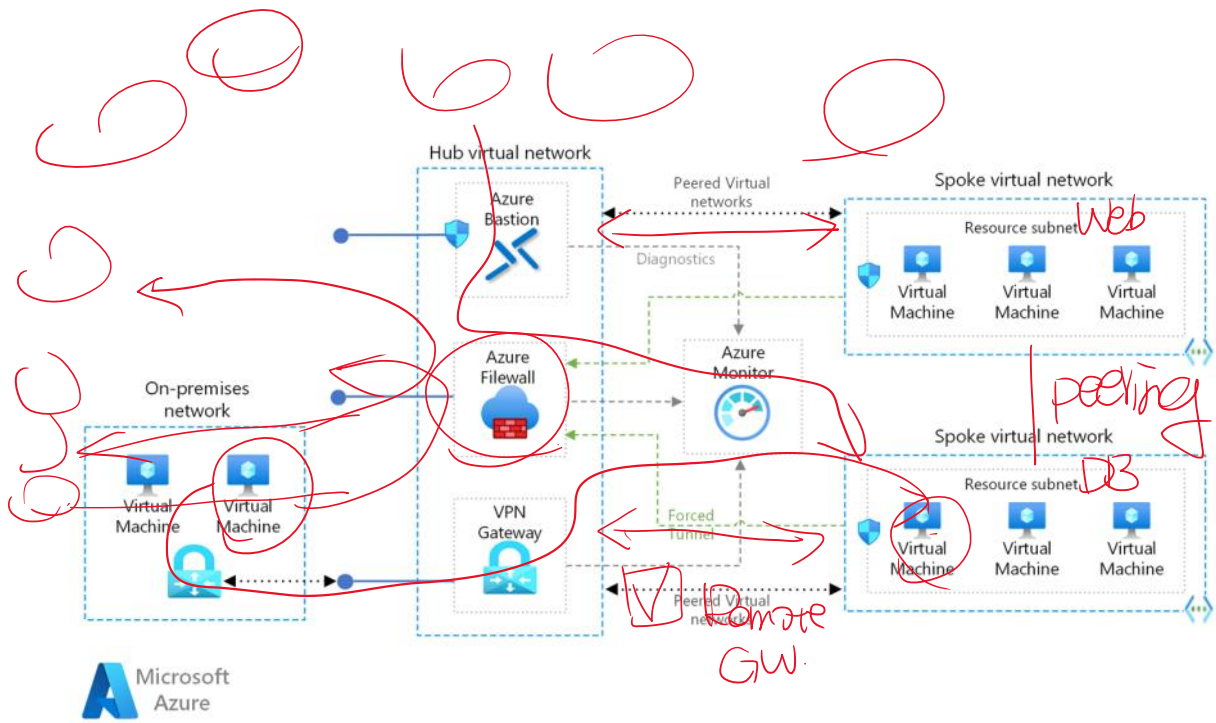
Active - Standby



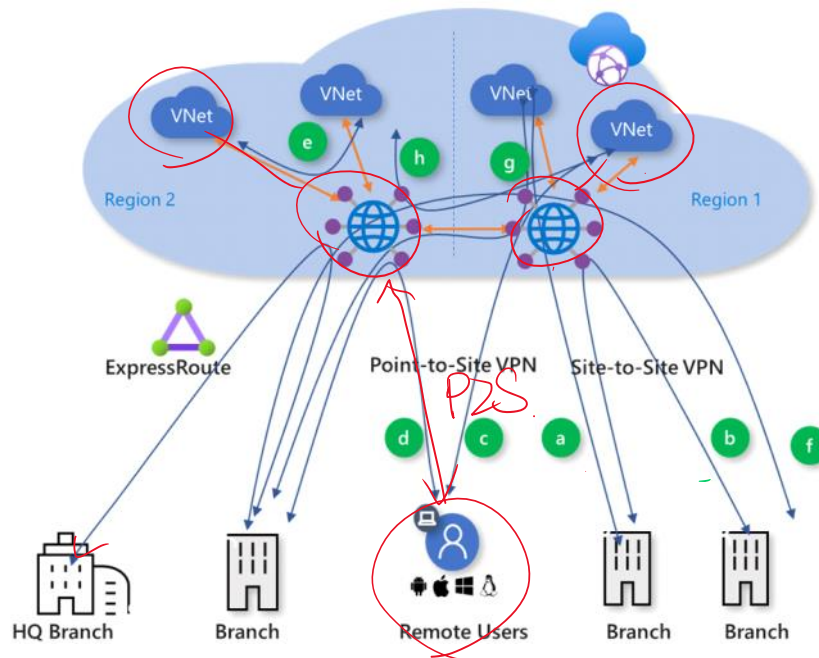
Active - Active



備後.

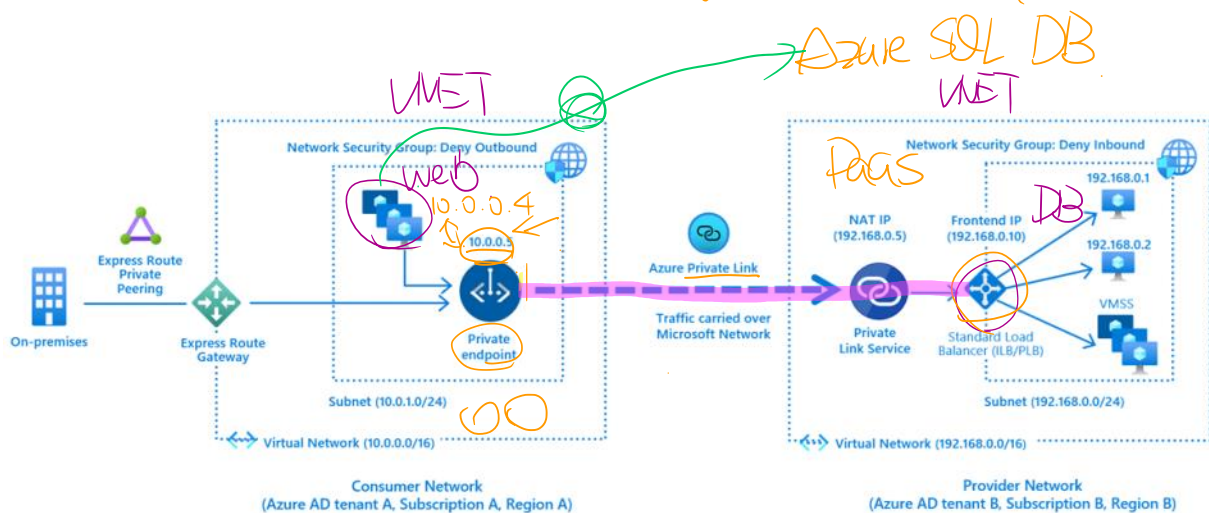


Virtual-WAN (Hub-Spoke)



Private Endpoint / Private link

web Service Endpoint → VNET → Public Endpoint → Poas



LB Layer 4

CDN Layer 4

DNS

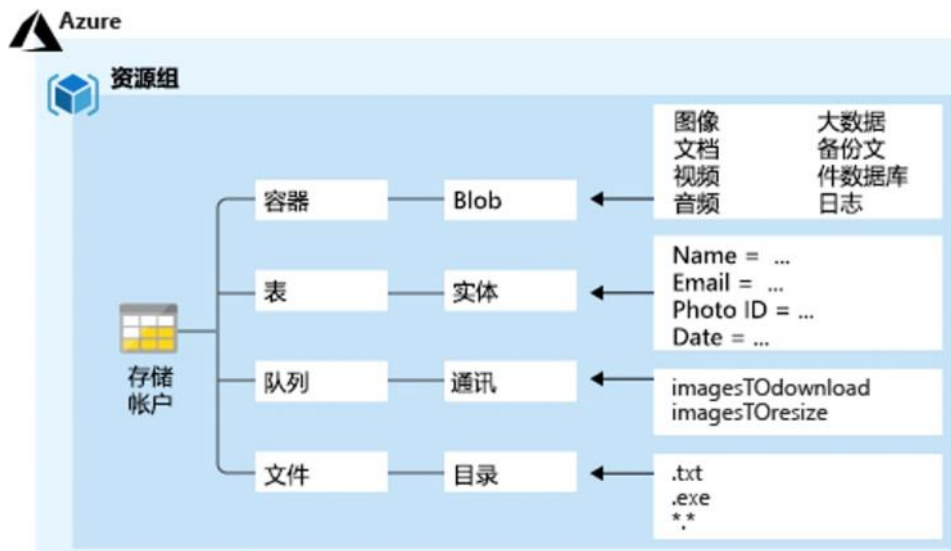
功能	应用程序网关	Front Door	负载均衡器	流量管理器
使用情况	使用 Web 应用程序防火墙增强应用程序安全性时，优化来自应用程序服务器场的交付。 <i>domain, path</i>	可缩放的安全增强型交付点，适用于基于微服务的全局 Web 应用程序。 <i>+WAF</i>	均衡入站和出站连接以及对应用程序或服务器终点的请求。	在全球 Azure 区域内以最佳方式向服务分发流量，同时提供高可用性和响应性。
协议	HTTP, HTTPS, HTTP2	HTTP, HTTPS, HTTP2	TCP, UDP	Any
专用	是 <i>Region</i>	是 <i>Global</i>	是	是
Env	Azure、非 Azure 云、本地	Azure、非 Azure 云、本地	Azure	Azure、非 Azure 云、本地
安全性	WAF <i>Integrate</i>	WAF, NSG	NSG	

Public Internet

Money.com

Storage

- Blob - HTTP/S (SFTP)
- Files - SMB, NFS
- Queue - MSG
- Table - NoSQL, Key-Value



Redundancy 4+2, 3 ~ 6 copies

LRS (Local)

同 Region, 同 AZ 3 copies

Zone

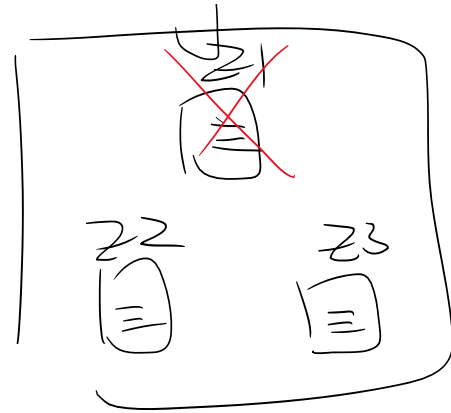
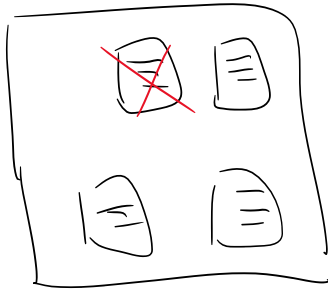


ZRS (Zone)

同 Region, 3 AZ 3 copies

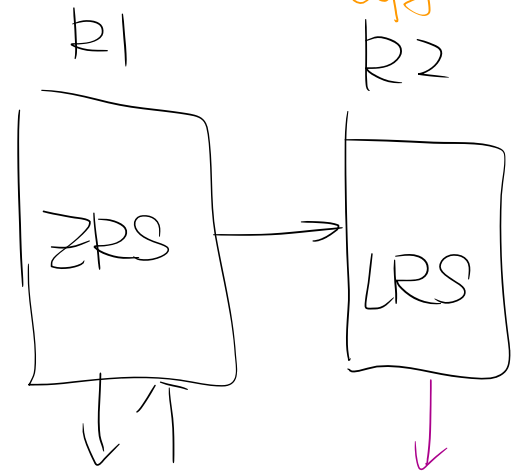
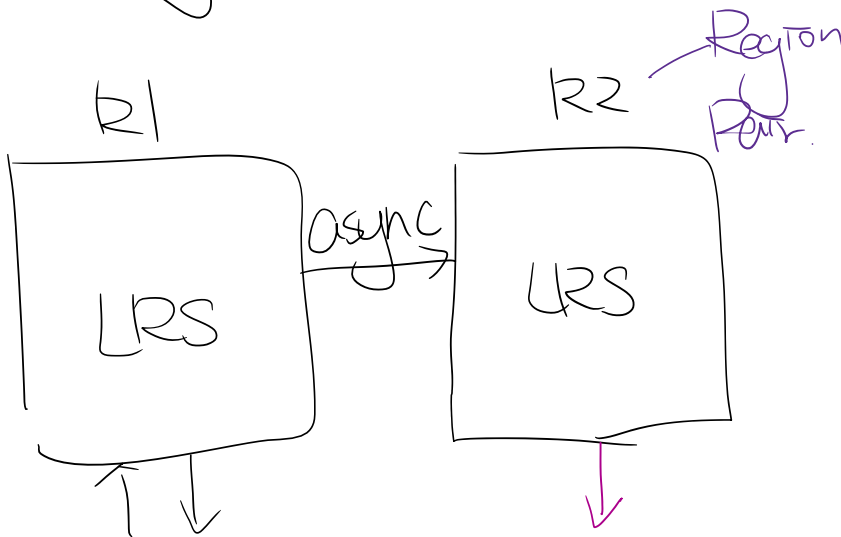
Region





GRS (Geo)
2 Region, 2x AZ 600pys

GRS (Geo-Zone)
2 Region, 3+1 AZ. 600pys



~~RA~~ GRS

~~RA~~ GZRS

Pricing { Space
Transaction

Access Tier: Hot
Cool
Gold
Archive
By Blob

Life Cycle Management
JSON Rules ↓

Blob Storage

Storage Account — ^{Single layer} Container — Blob

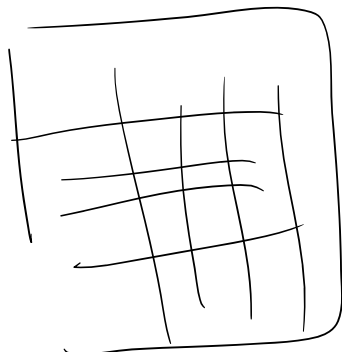
Images

name
2023/08/img1.jpg

Block Blob → Sequential Access Append Blob

Page Blob → Random Access

100M .mp4

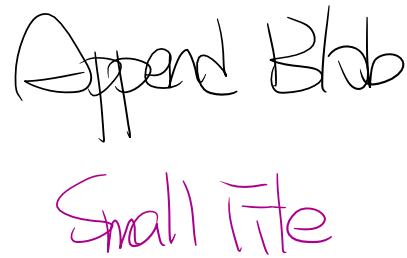


4M

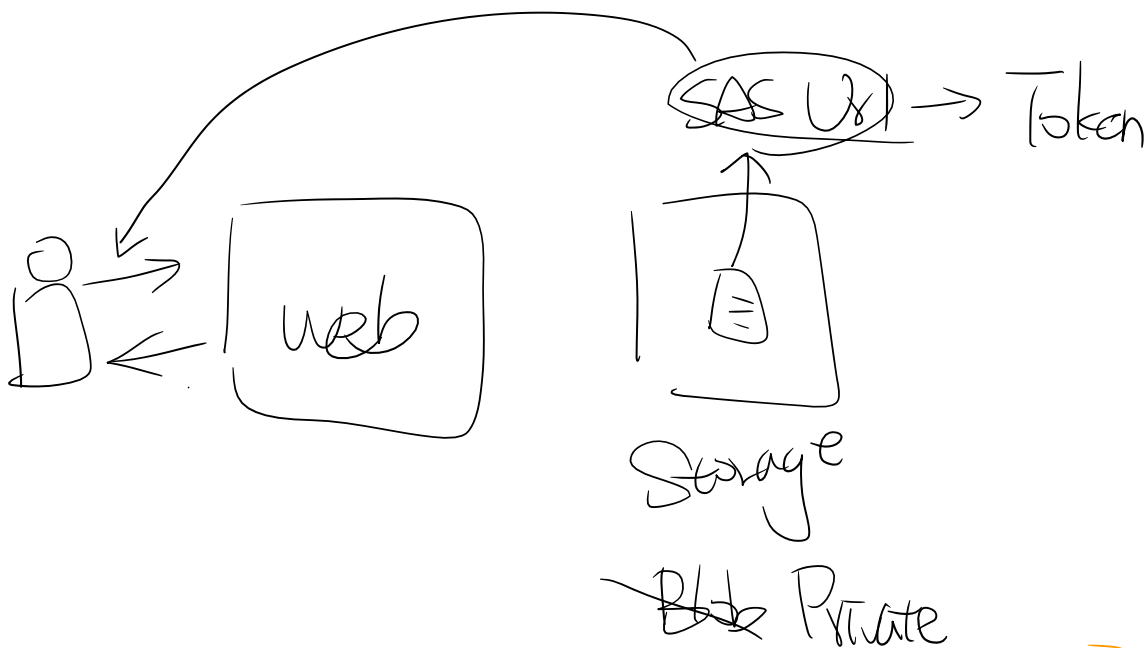
⇒ 25 Block

Block size = 64k — 400M

64 KB



Shared Access Signature



→ Hey!

<https://demo0830stor.blob.core.windows.net/?sv=2022-11-02&ss=b&srt=sco&sp=rwdlaciytfx&se=2023-08-30T11:05:04Z&st=2023-08-30T03:05:04Z&spr=https&sig=XbO7Ygt7UqstzRJHcz6lqciyw2eicvv4Phxvtohc3pk%3D>

Q

<https://demo0830stor.blob.core.windows.net/images/%E3%81%8B%E3%81%90%E3%82%84%E5%87%A8%E3%81%AF%E7%89%A9%E8%AA%9F.png>

<https://demo0830stor.blob.core.windows.net/images/%E3%81%8B%E3%81%90%E3%82%84%E5%A7%AB%E3%81%AE%E7%89%A9%E8%AA%9E.jpg?sp=r&st=2023-08-30T03:09:44Z&se=2023-08-30T11:09:44Z&spr=https&sv=2022-11-02&sr=b&sig=4ljqM094CawxUg%2BBLf%2FnQaDACJO50BQTNeFQtYt853o%3D>

Key ← Revoke

Access Policy → Pre Configuration
→ 做為 SAS token
Part of.

<https://demo0830stor.blob.core.windows.net/images/%E3%81%8B%E3%81%90%E3%82%84%E5%A7%AB%E3%81%AE%E7%89%A9%E8%AA%9E.jpg?si=demo0830acpolicy&spr=https&sv=2022-11-02&sr=b&sig=kVzFgL9LzlCAkPgTCKAsoliwnso948MPYzmHx0pRJbM%3D>

VM.

Compute - Type - Series - Size
Storage - Managed Disk → Resource.

UnManaged Disk - VHD - Storage Account

10VAD x 5000IOPS

$\Rightarrow 50,000\text{IOPS}$

HA.

(Resource) (Copy)

(x) Availability Set

Availability Zone

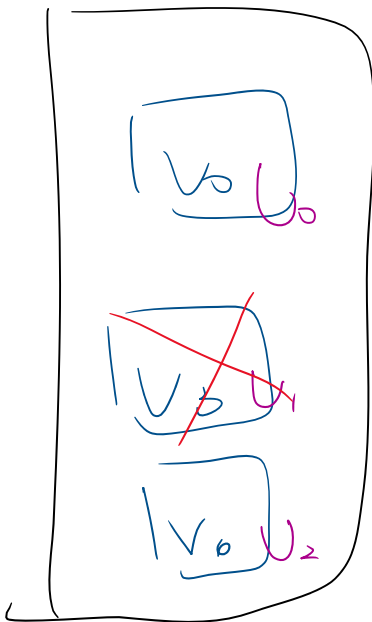
1~3
Fault Domain — Hardware

容错域

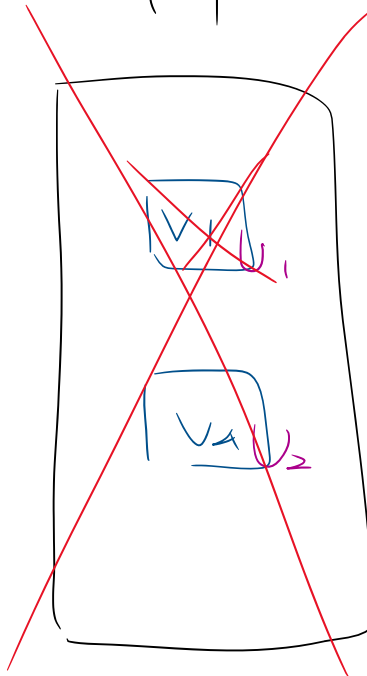
1~20
Update Domain — Update

更新域

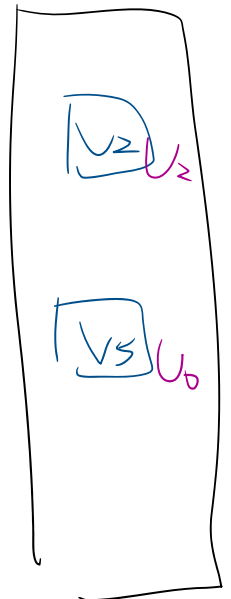
F0



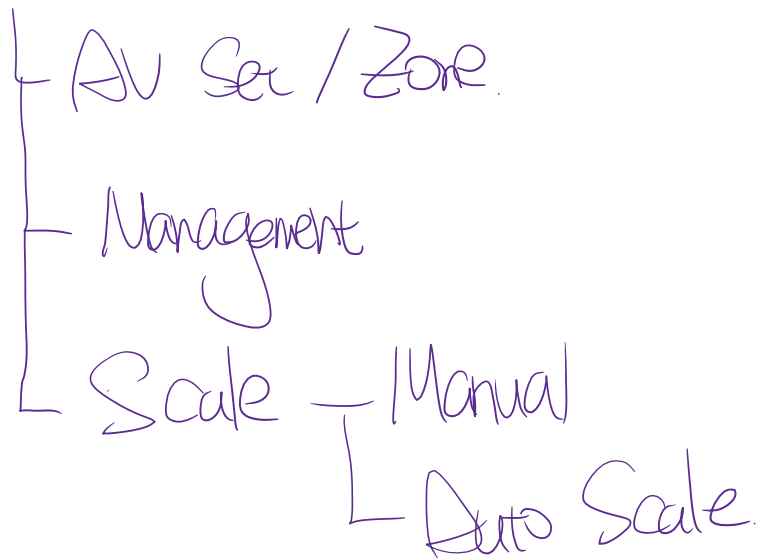
F1



F2

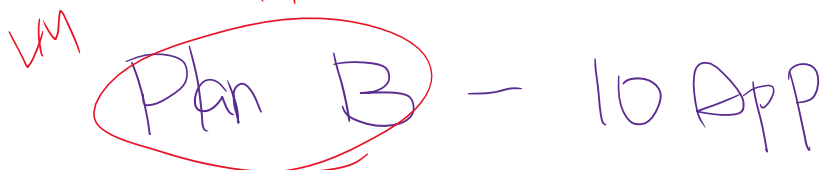
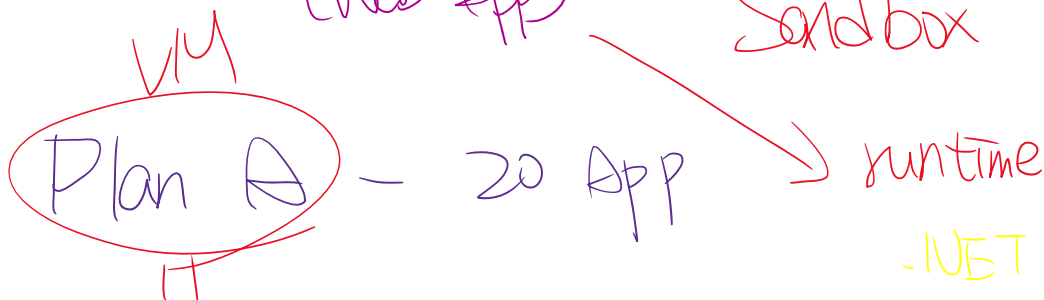
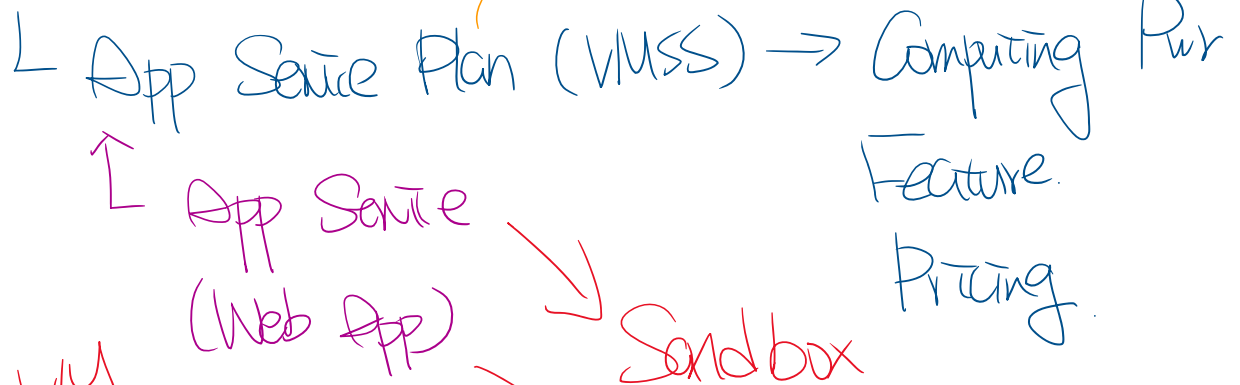


VMSS
(Scale Set)



PaaS

Azure App Service



Container

Win
Linux

NET, Java, Python
Ruby, JS, Go

Azure Compute Unit 100 ACU

Container

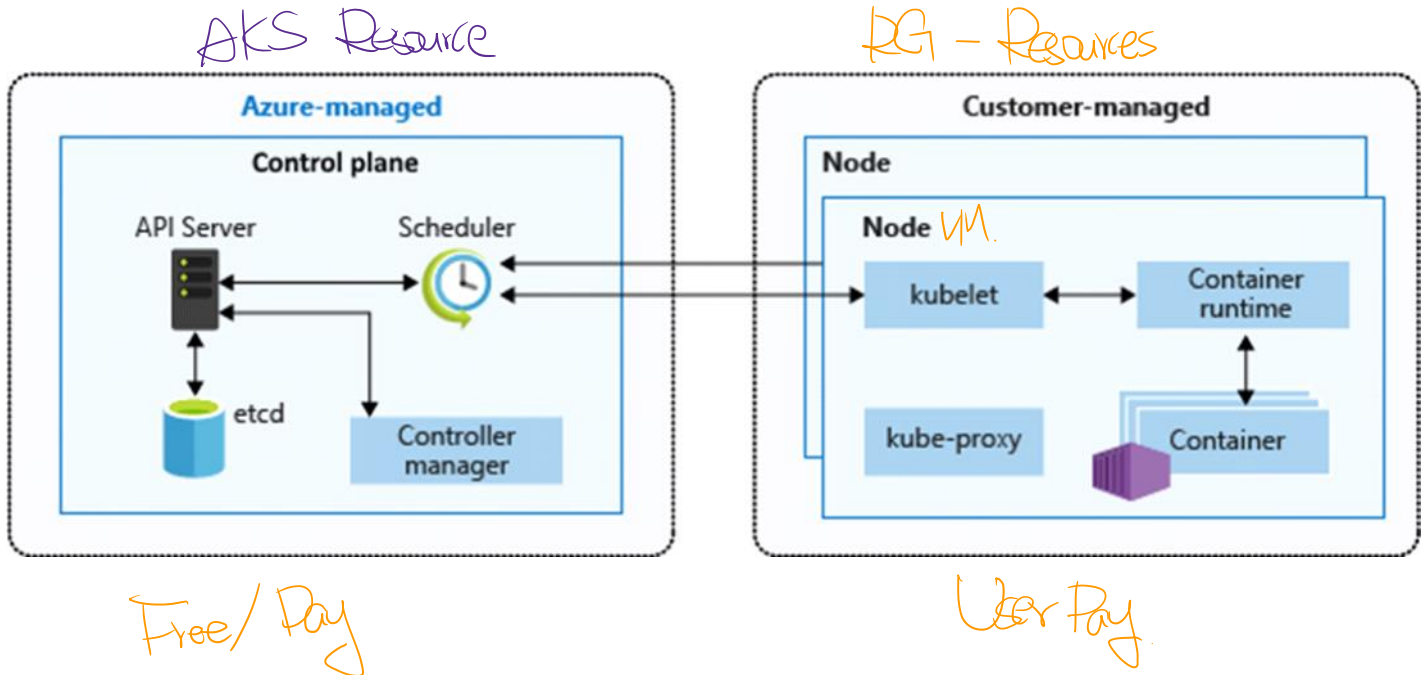
Azure Container Registry - Docker Registry 2.0

Azure Container Instance

Azure Web App for Container

Azure K8S Service (AKS)

Azure Kubernetes Service (AKS) (PaaS)
 ↳ kubectl Pod



Azure Container App (KaaS)

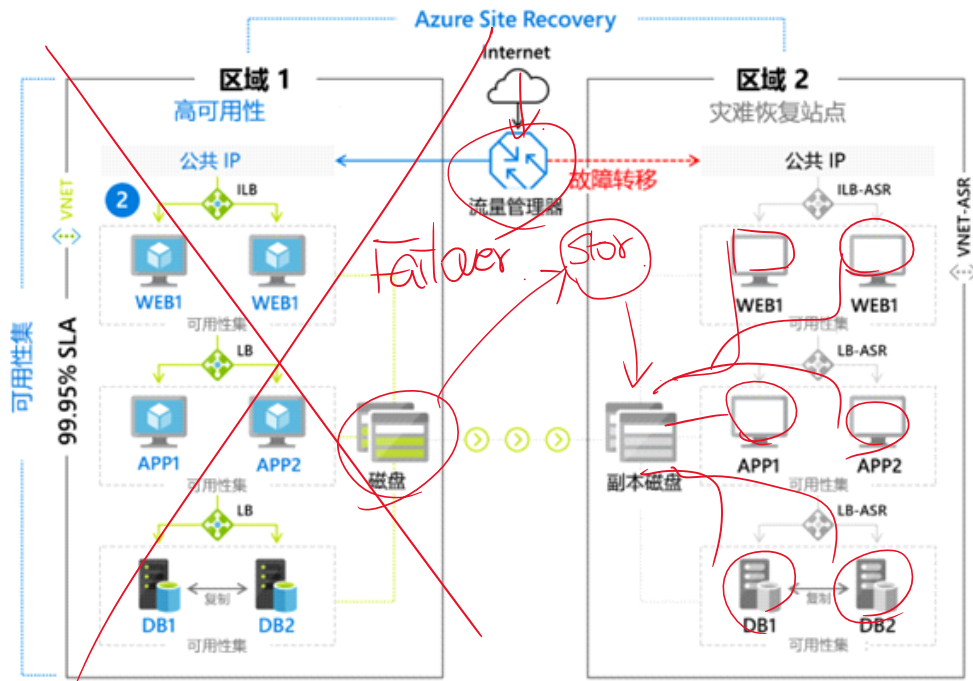
Backup

File/Folder
 VM
 Site

MARS
MABS

Recovery Service Vault

Backup Center



Logs.

(Resource)

Log Analytics Workspace.

[Metric] Table
[Log]

L Built-in Storage.

L 30 ~ 90 day.

L LTR. | Interactive

By Table | Archive.

Workspace default setting

Pricing | Ingest.
| Space

Azure Monitor

KQL - Kusto Query Language

↳ SQL like logic