

The diagram illustrates the architecture of Azure storage services. At the top left, the Azure logo is shown. Below it, a blue cube icon represents the '资源组' (Resource Group). The central part of the diagram shows a hierarchy of storage services: '容器' (Container) leads to 'Blob', which leads to 'Page' and 'Block'. 'Blob' also leads to 'Table' (表), which is associated with '键-值' (key-value) and '实体' (entity). 'Table' leads to '队列' (Queue), which is associated with '通讯' (communication). 'Queue' leads to '文件' (File), which is associated with '目录' (directory). '文件' leads to 'SMB'. On the right, a box lists various data types: '图像' (Image), '文档' (Document), '视频' (Video), '音频' (Audio), '大数据' (Big Data), '备份文件' (Backup file), '件数据库' (Database), and '日志' (Log). Below this box, a table shows fields: 'Name = ...', 'Email = ...', 'Photo ID = ...', and 'Date = ...'. To the right of the table, a box lists 'imagesTODownload' and 'imagesTOresize'. Below this box, a box lists file types: '.txt', '.exe', and '*.*'. Handwritten notes include 'HTTP' pointing to 'Blob', 'Binary large object' pointing to 'Page', '循序' (Sequential) pointing to 'Page', 'Random' pointing to 'Table', and 'VHD' pointing to 'Table'.

Azure 资源组

容器 → **Blob** → **Page** → **Block**

Table (表) → **键-值** (key-value) → **实体** (entity)

Queue (队列) → **通讯** (communication)

File (文件) → **目录** (directory) → **SMB**

Storage Account (存储帐户) → **容器** → **Table** → **Queue** → **File**

Data Types

- 图像 (Image)
- 文档 (Document)
- 视频 (Video)
- 音频 (Audio)
- 大数据 (Big Data)
- 备份文件 (Backup file)
- 件数据库 (Database)
- 日志 (Log)

Table Fields

- Name = ...
- Email = ...
- Photo ID = ...
- Date = ...

Operations

- imagesTODownload
- imagesTOresize

File Types

- .txt
- .exe
- *.*

Handwritten Notes

- HTTP → Blob
- Binary large object → Page
- 循序 → Page
- Random → Table
- VHD → Table

存储帐户	建议用途
标准常规用途 v2	包括 Blob、文件、队列、表和 Data Lake Storage 等大多数场景。
高级块 blob	具有高事务率的块 blob 场景，或使用较小对象或需要存储延迟始终较低的场景。
高级文件共享	Enterprise 或高性能文件共享应用程序。
高级页 Blob	高级高性能页 blob 场景。

Throughput / IOPS

Azure Outage as Lightning Strike Forces Data Centre Offline

By **CBR Staff Writer** 05 Sep 2018

Microsoft was scrambling to get a number of cloud-based services up and running this morning, after a lightning strike near one of its San Antonio data centres caused a voltage surge. This in turn forced a power-down when cooling equipment failed, triggering an Azure outage locally and issues with Office 365 globally.

The outage even took the Azure service status monitor offline.

2021 Millions of websites offline after fire at French cloud services firm

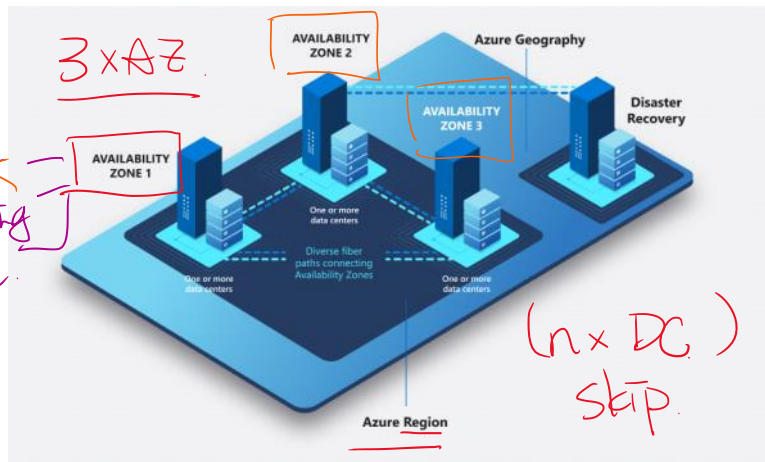
By Mathieu Rosemain, Raphael Satter

3 MIN READ



©Microsoft Corporation

Azure



Redundancy (4+2)

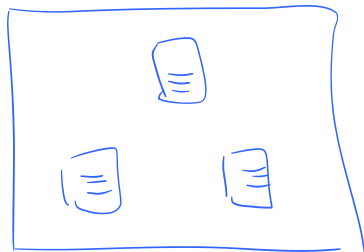
3 ~ 6 copies

Region, AZ, Data Center

LRS (Local)

- 1 Region, - 1 AZ

3 copies



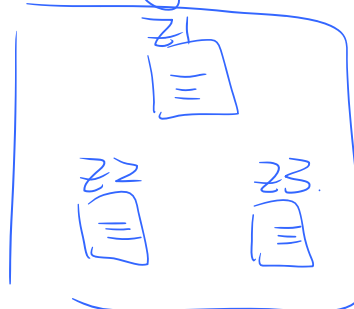
99.9-99%

ZRS (Zone)

1 Region, 3 AZ

3 copies

Region



GRS (Geo)

6 copies

GRS (Geo) 6 copies

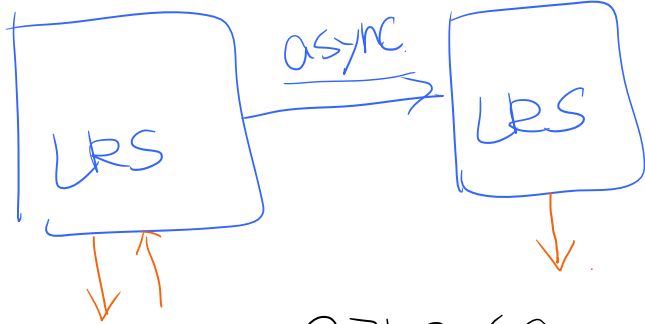
2 Region, 2 AZ

East US
Region 1

Auto

~~Japan East~~
Region 2

Region Pair

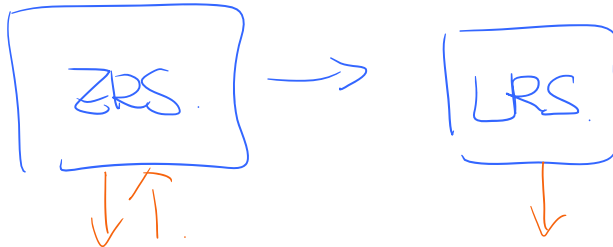


RA (Read - Access)

GZRS (Geo - Zone) 6 copies
2 Region, 3+1 AZ

Primary

Secondary



Pricing = Space Transaction

Access Tier = Hot (存取层) Cool

(By Blob)

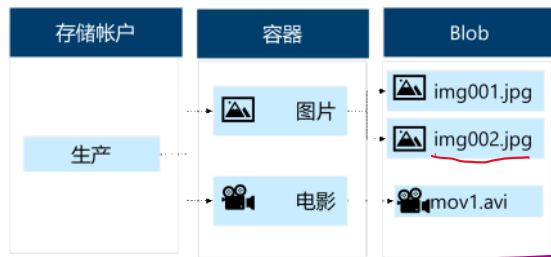
Archive

(Lifecycle Management)

single layer

(Lifecycle Management)

single layer
↓



2020/01/img.jpg Blob name.
↓ ↓
Folder Folder.

SAS → 链接 (Key → Access key / User key)

Service: Blob, File, Table, ...

Scope = Container, Blob.

Permission = Read, Write, Add, Del, ...

Time Range = Start, End.

(Omit) IP = ...

↓
<https://demo0208stor.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=2023-02-08T03:27:39Z&se=2023-02-08T11:27:39Z&spr=https&sv=2021-06-08&sr=b&sig=WwURcvHVOdwWx63Nm6QjRSNytebXjFdYklq4flucnrU%3D>

+ key 1 → Private Key

Access Policy → Pre Config.

<https://demo0208stor.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=2023-02-08T03:27:39Z&se=2023-02-08T11:27:39Z&spr=https&sv=2021-06-08&sr=b&sig=WwURcvHVOdwWx63Nm6QjRSNytebXjFdYklq4flucnrU%3D>

<https://demo0208stor.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=demo0208policy&spr=https&sv=2021-06-08&sr=b&sig=b%2Fvnxm6oGp4str7JdMgK9xfUX0Gft49p2wotyDL4B2M%3D>

key, Policy

Azure File Sync

VM



VM SHA

Region, RG, Size, x2VM, → HA Y/N

零錯誤

Availability Set

10- AZ

Fault Domain 1~3
Hardware

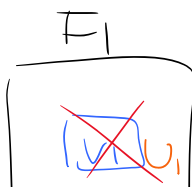
Site Recovery

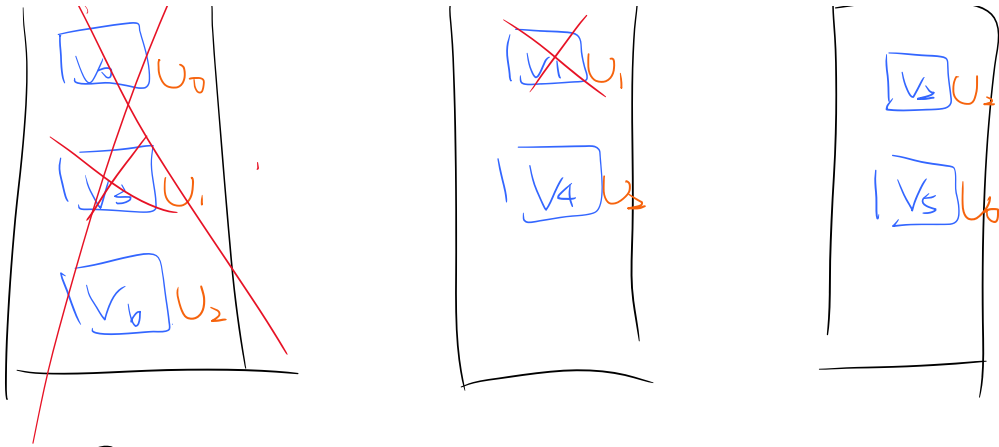
Geo-Redundant

Availability Zone

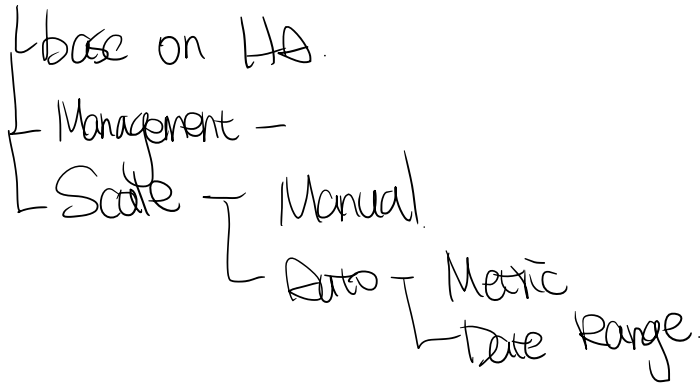
更新域
Update Domain 1~20
Update

VMSS



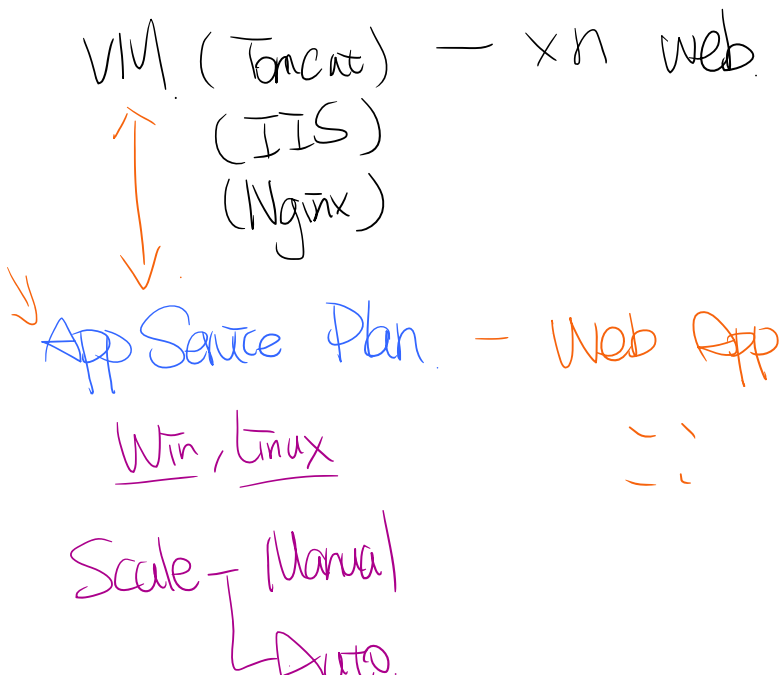


VM Scale Set.



PaaS vs IaaS

1. Azure App Service (Azure Web App).



Auto.

Performance Unit:- ACU.

Container Image

Azure Container Registry (PaaS)

Base on Docker Registry 2.0

Azure Container Instance (ACI) (PaaS)

AKS

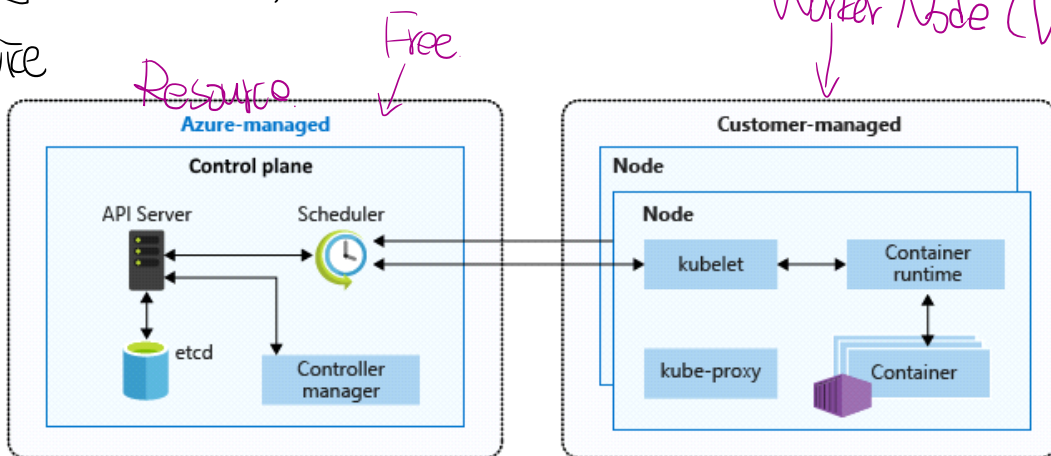
Pod - 1 or more Container.

Deployment - Pod,

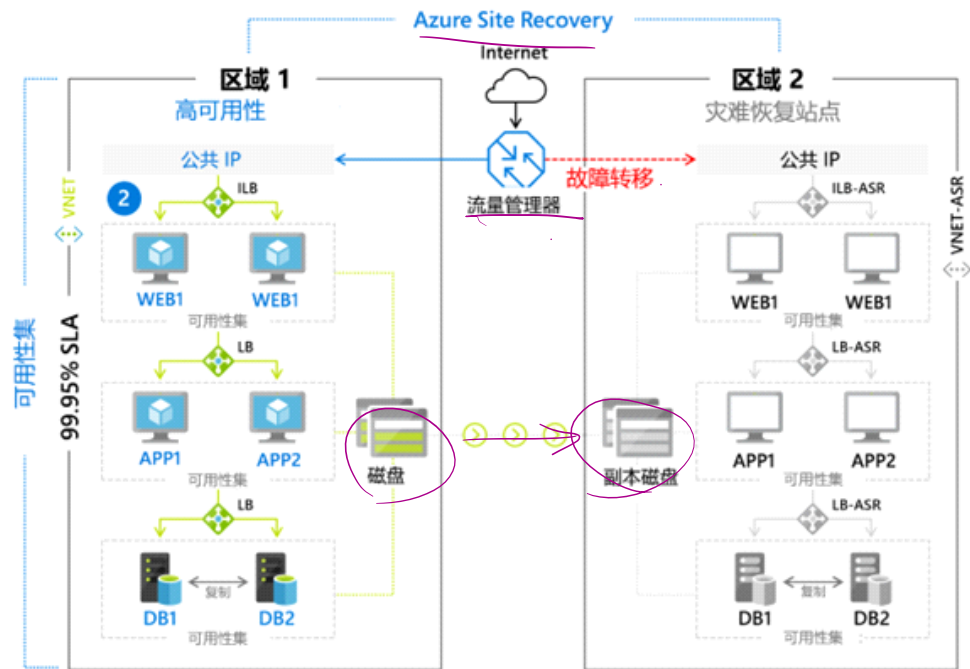
Service

Node

[Kubernetes
CNI



Virtual Node - ACI.



RTO

↓

Time

RPO

↓

Point

Kusto ⇒ SQL like logic