玩轉 Azure 彈性部署

Dino Wang

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- ASP.NET MVC 開發美學共同作者
- 現任 Microsoft Azure MVP
- dino.cool@gmail.com



Microsoft CERTIFIED Solutions Associate Cloud Platform

Microsoft CERTIFIED Solutions Expert Cloud Platform and Infrastructure

Microsoft CERTIFIED Solutions Developer App Builder

Microsoft CERTIFIED Solutions Associate Web Applications

Microsoft CERTIFIED AZURE ADMINISTRATOR ASSOCIATE

Microsoft CERTIFIED AZURE SOLUTIONS ARCHITECT EXPERT

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「部署」對應用程式的重要性

Availability

Maintainability



Performance

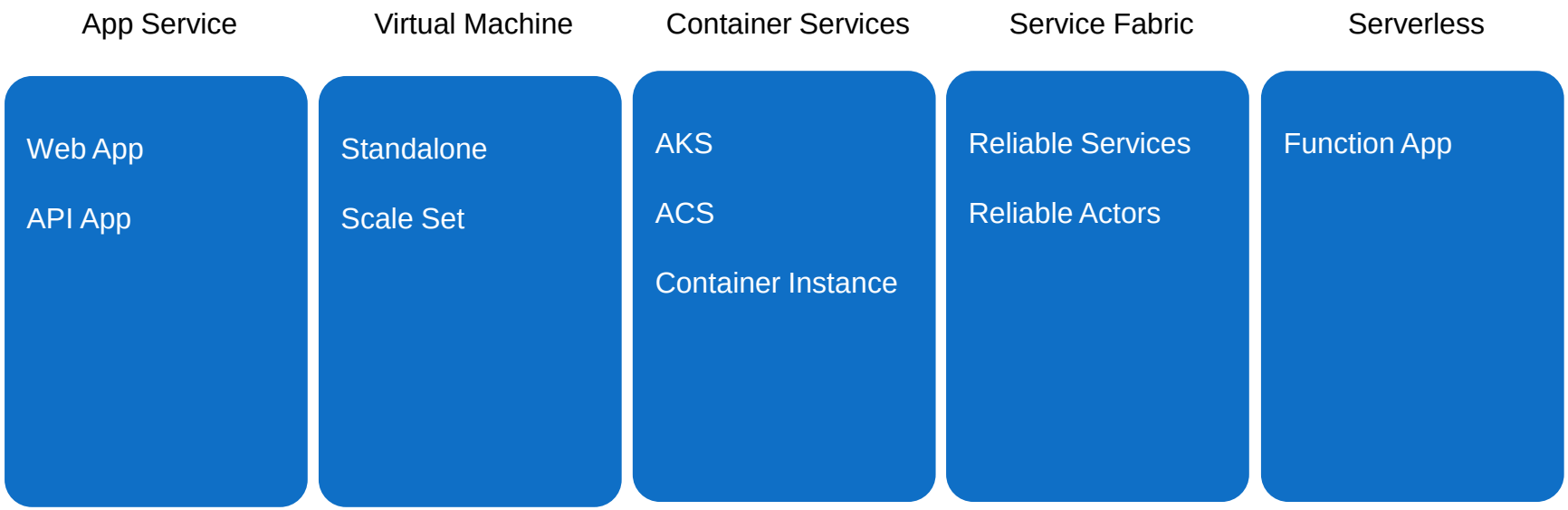
Complexity

Accessibility

今日重點：計算資源的部署

- 雲端上的計算資源，就是跑「你的程式」的地方

網站或 API 為例，「計算」在雲的落腳處



依去年使用量分析，大家用什麼

- Virtual Machine
- App Service
- Cloud Service (?)

App Service

- 最容易上手，靈活度最高
- 已為 web 最佳化
- 那為什麼排第二名，有很多 Server 在雲端上
  - Domain Controller
  - Exchange Server
  - SharePoint Server
  - SQL Server
  - Dynamic CRM Server
  - …

App Service Plan

	FREE	SHARED	BASIC	STANDARD	PREMIUM	ISOLATED *	APP SERVICE LINUX	CONSUMPTION PLAN (FUNCTIONS)
– Limits **								
Apps	10	100	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited	
Disk space	1 GB	1 GB	10 GB	50 GB	250 GB		1 TB	
Max instances			Up to 3	Up to 10	Up to 20		Up to 100	
SLA			99.95%	99.95%	99.95%		99.95%	
Functions on App Service Plans *			✓	✓	✓	✓		
– App Deployment								
Continuous Deployment *	✓	✓	✓	✓	✓	✓ 4	✓	✓
Deployment Slots				✓	✓	✓	✓	
Docker (Containers)							✓ 1	

https://azure.microsoft.com/en-us/pricing/details/app-service/plans/

App Service Plan

- 把 App Service Plan 想像成一台 Web Server (IIS)
- 什麼是 App? → Web App, Logic App, Mobile App

	FREE	SHARED	BASIC	STANDARD	PREMIUM	ISOLATED *	APP SERVICE LINUX
– Limits**							
Apps	10	100	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited

  - Apps 共用同一台 Web Server 上的計算資源

Use Case

- 準備部署到雲端，開發階段使用了這些元件與相關技術
  - Web (PHP)
  - API (ASP.NET)
  - MySQL
  - PHP

考慮 Web accessibility

- Domain-based routing
- Path-based routing

考慮 Web accessibility

- Domain-based routing
  - web1.azurewebsites.net
  - api1.azurewebsites.net

考慮 Web accessibility

- Path-based routing
  - myapps.azurewebsites.net/web
  - myapps.azurewebsites.net/api

考慮 Web accessibility

- Domain-based routing
- Path-based routing

選擇你需要的方式，Azure 有起碼兩種以上的方法完美搞定

Deploy Approach

- Virtual Machine
  - 大家一定懂 VM，新增 VM 安裝 IIS 部署程式打完收工？
  - 水平擴展
    - Availability Set → 你要放幾台 VM
    - Virtual Machine Scale-Set → 製作/更新映像檔
- App Service
  - Web 部署最佳選擇

App Service Plan

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Docker (Containers)							✓ 1	

https://azure.microsoft.com/en-us/pricing/details/app-service/plans/

等等，不考慮微服務嗎？

- 你想好了嗎？

Neomonolith

https://inconshreveable.com/10-07-2015/the-neomonolith/

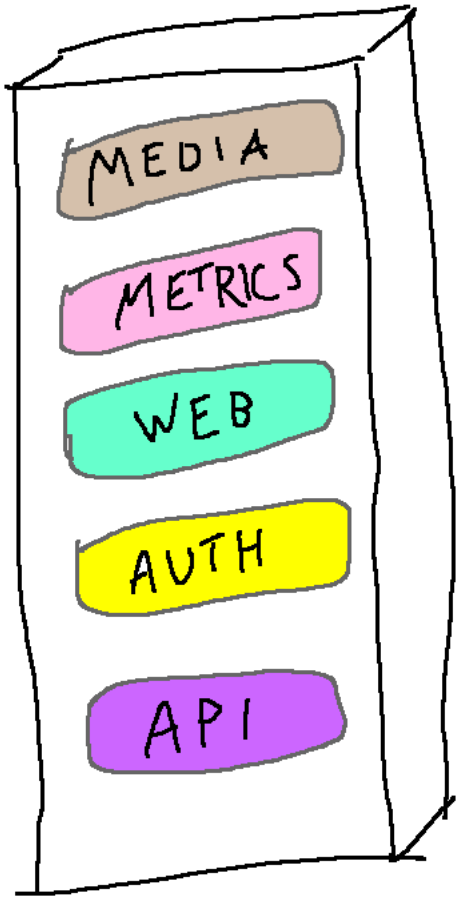
Microservices + Monolith = The Neomonolith

Alan Shreve, Founder of ngrok and equinox.io



Neomonolith

https://inconshreveable.com/10-07-2015/the-neomonolith/

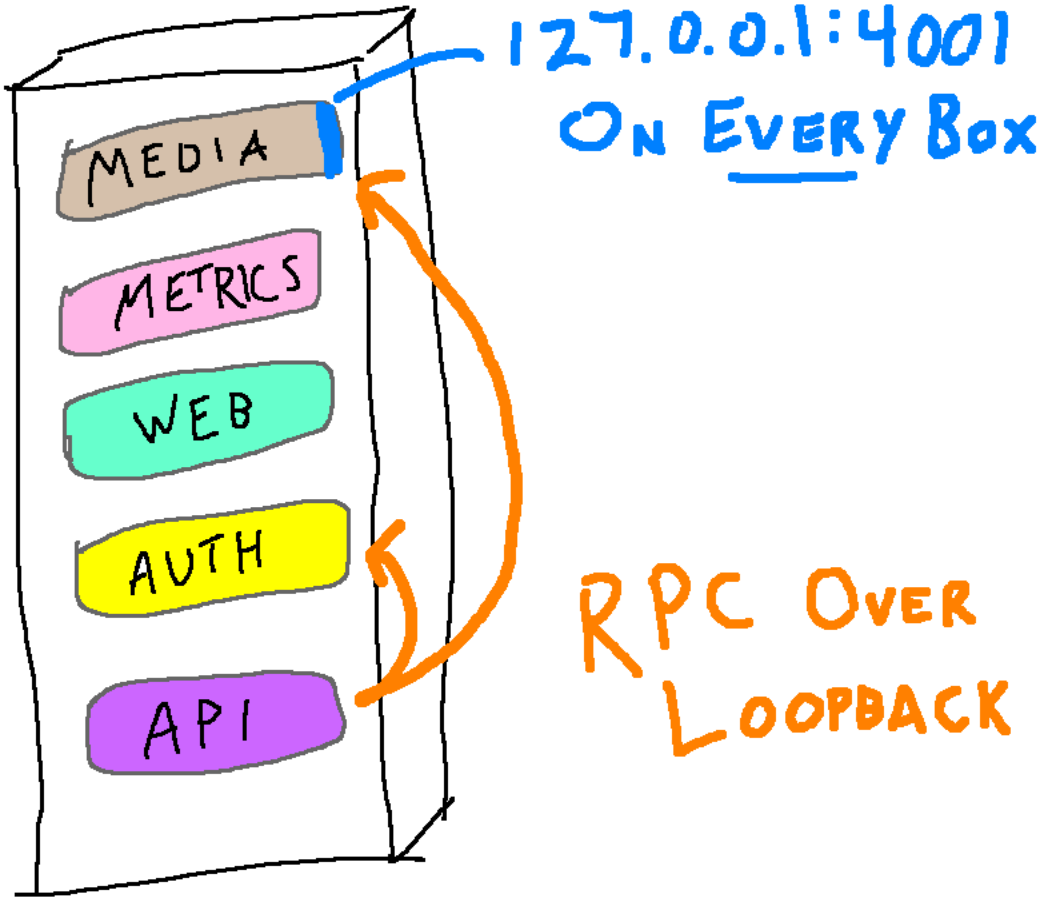


MANY SERVICES
ONE IMAGE

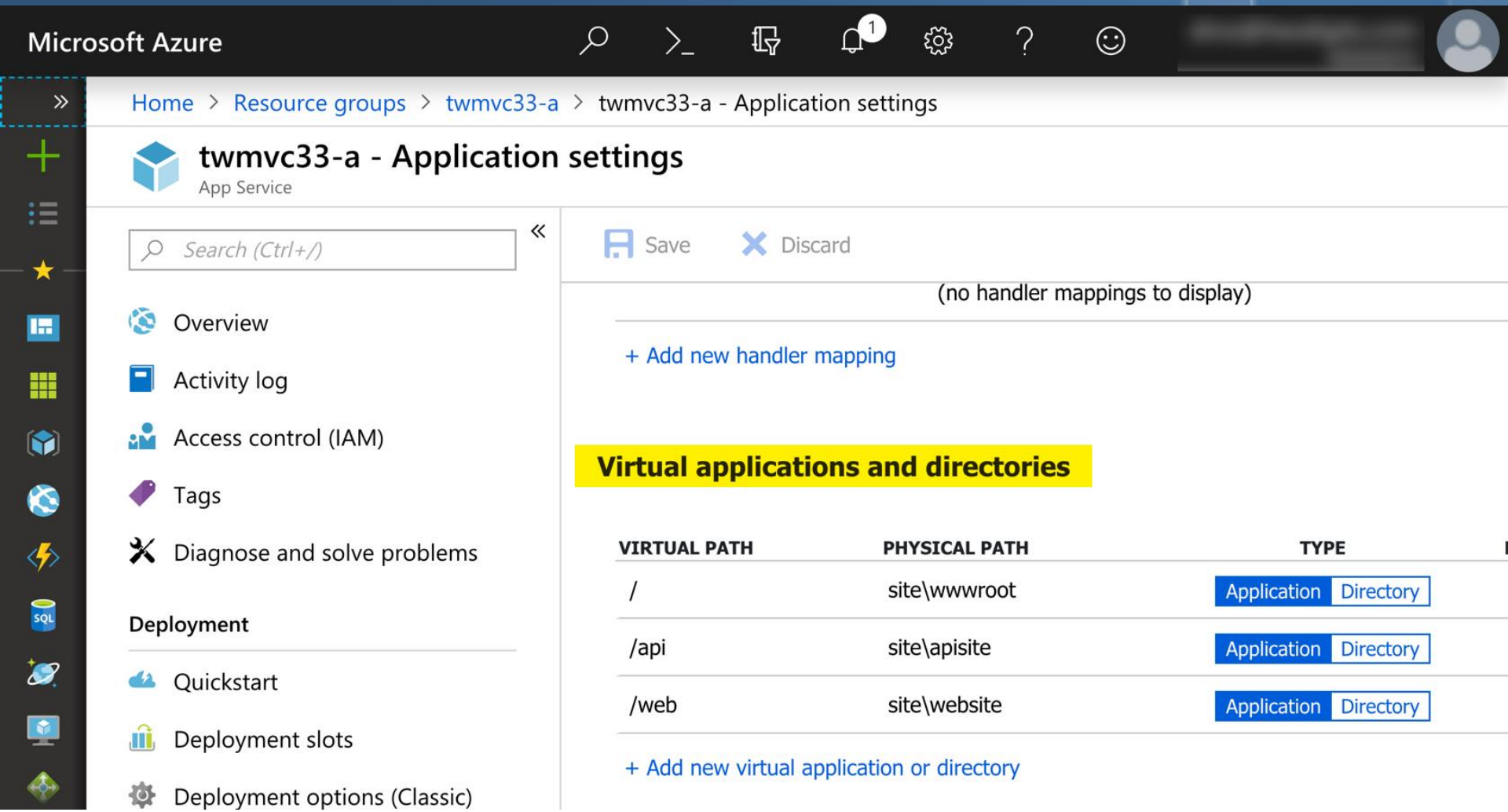


Neomonolith

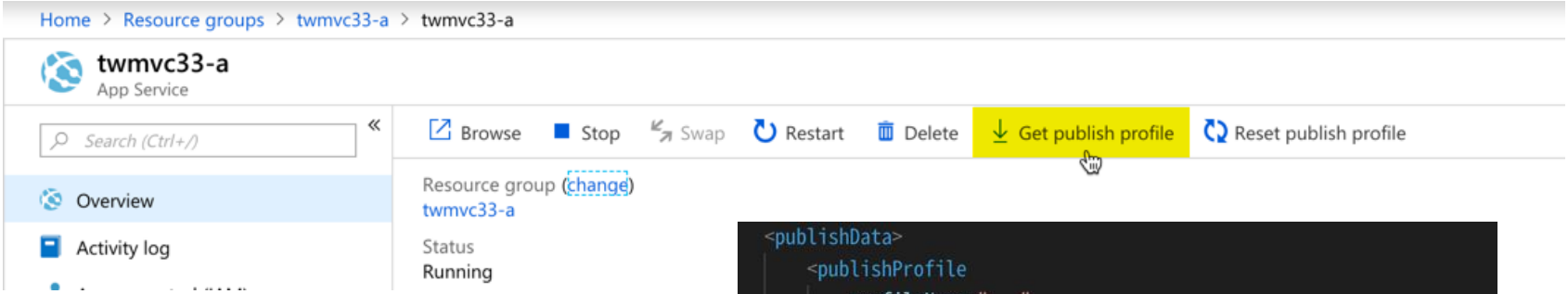
https://inconshreveable.com/10-07-2015/the-neomonolith/



Neomonolith in App Services ?



Publish Settings




```
<publishData>
    <publishProfile
        profileName="..."
        publishMethod="MSDeploy"
        publishUrl="your-webapp.scm.azurewebsites.net:443"
        msdeploySite="your-webapp"
        userName="$your-webapp"
        userPWD="..."
        destinationAppUrl="http://your-webapp.azurewebsites.net"
        SQLServerDBConnectionString=""
        mySQLDBConnectionString=""
        hostingProviderForumLink=""
        controlPanelLink="http://windows.azure.com"
        webSystem="WebSites">
        <databases />
    </publishProfile>
    ...
</publishData>
```

Publish Settings

預設設定

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<publishData>
    <publishProfile
        profileName="..."
        publishMethod="MSDeploy"
        publishUrl="your-webapp.scm.azurewebsites.net:443"
        msdeploySite="your-webapp"
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        <databases />
    </publishProfile>
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```

多應用程式

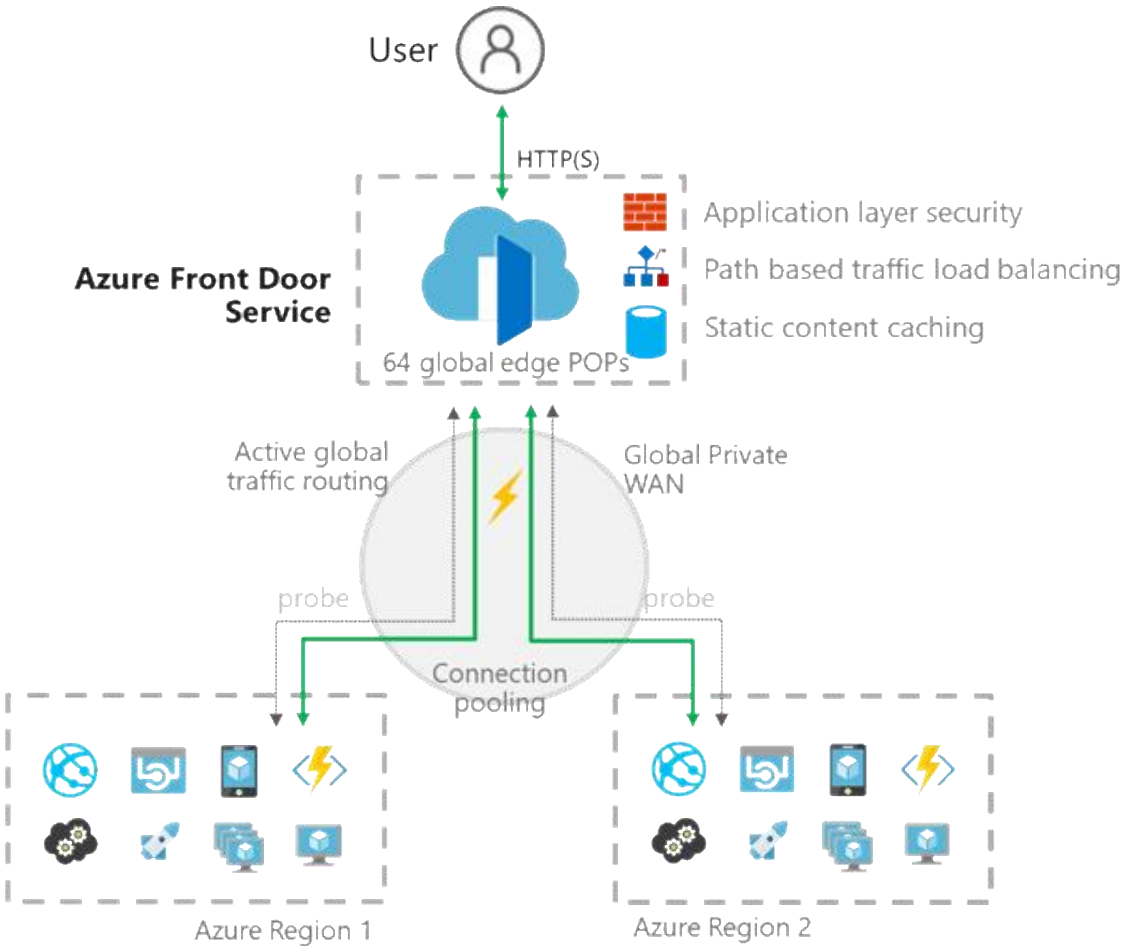
```
<publishData>
    <publishProfile
        profileName="..."
        publishMethod="MSDeploy"
        publishUrl="your-webapp.scm.azurewebsites.net:443"
        msdeploySite="your-webapp/web"
        userName="$your-webapp"
        userPWD="..."
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        SQLServerDBConnectionString=""
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```

現在起，你有更簡單的方式

Front-Door Services - preview

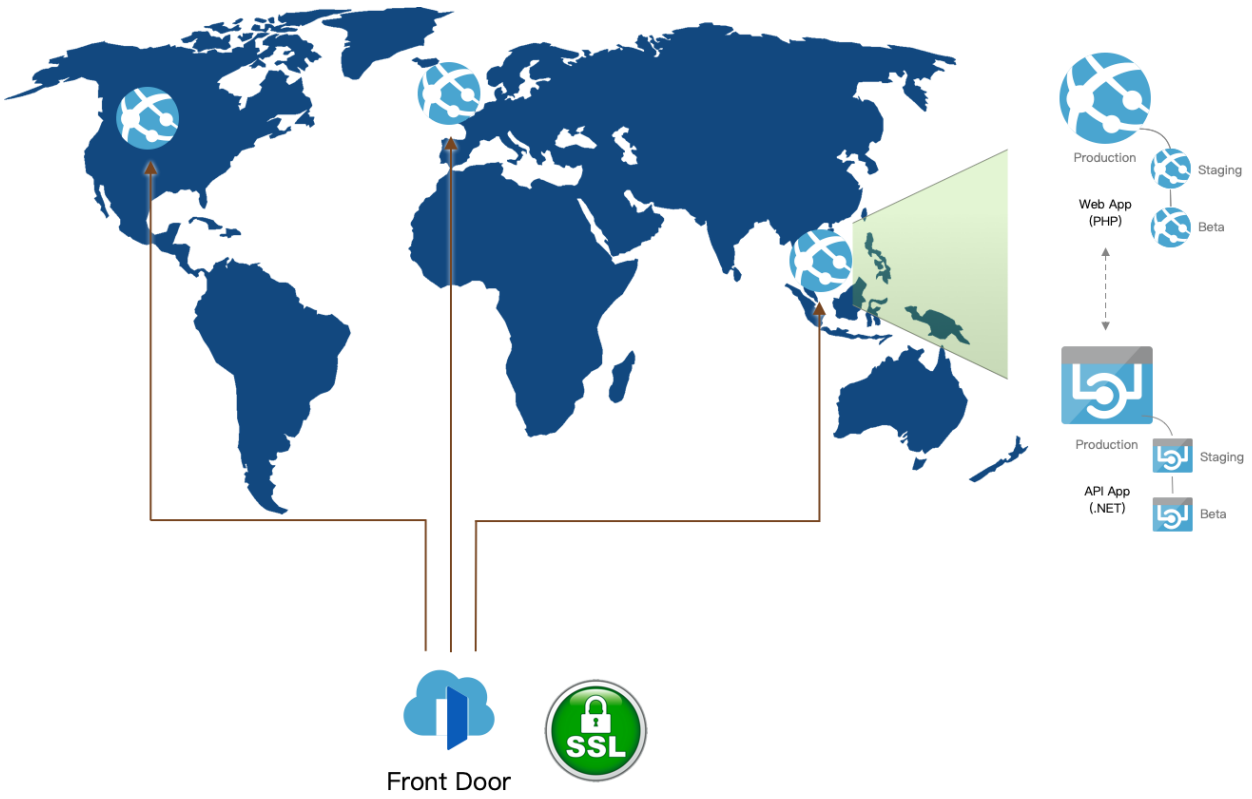
- 在靠近終端使用者的邊緣進行 SSL 卸載和應用程式加速
- 提供立即容錯移轉的全球 HTTP 負載平衡
- 可操作的使用者與後端相關見解
- 應用程式防火牆與 DDoS 保護
- 用於協調流量的中央控制台

Front-Door Services - preview

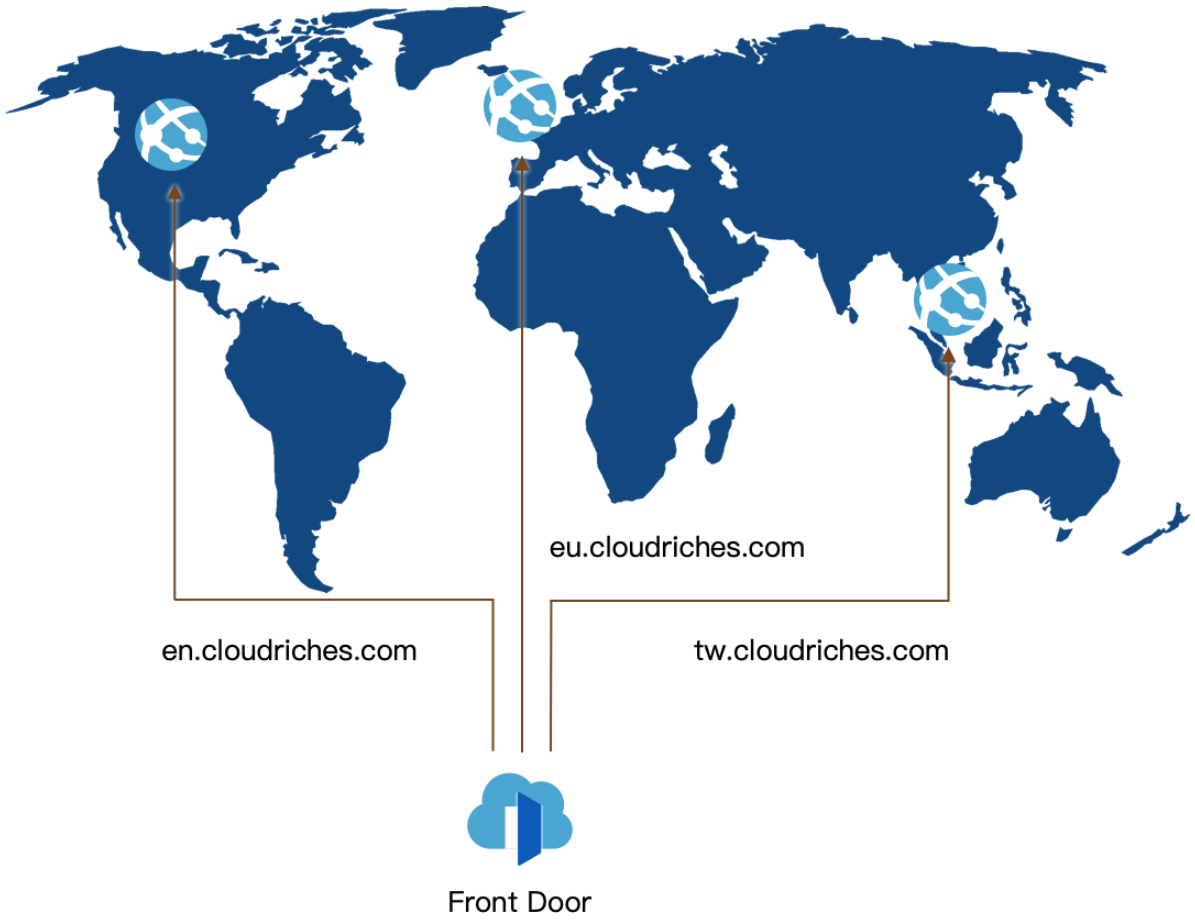


SSL Offload

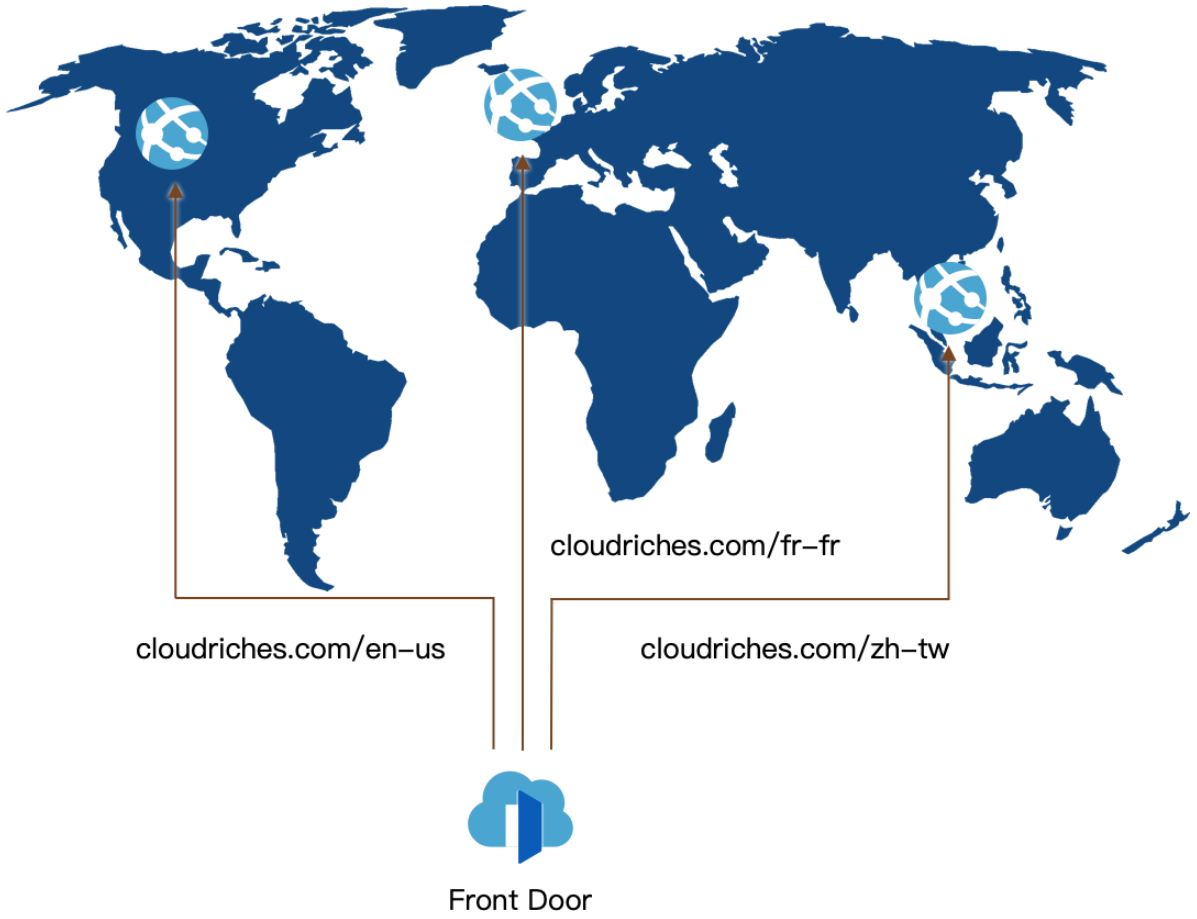
- 在靠近終端使用者的邊緣進行 SSL 卸載和應用程式加速



Host-based routing

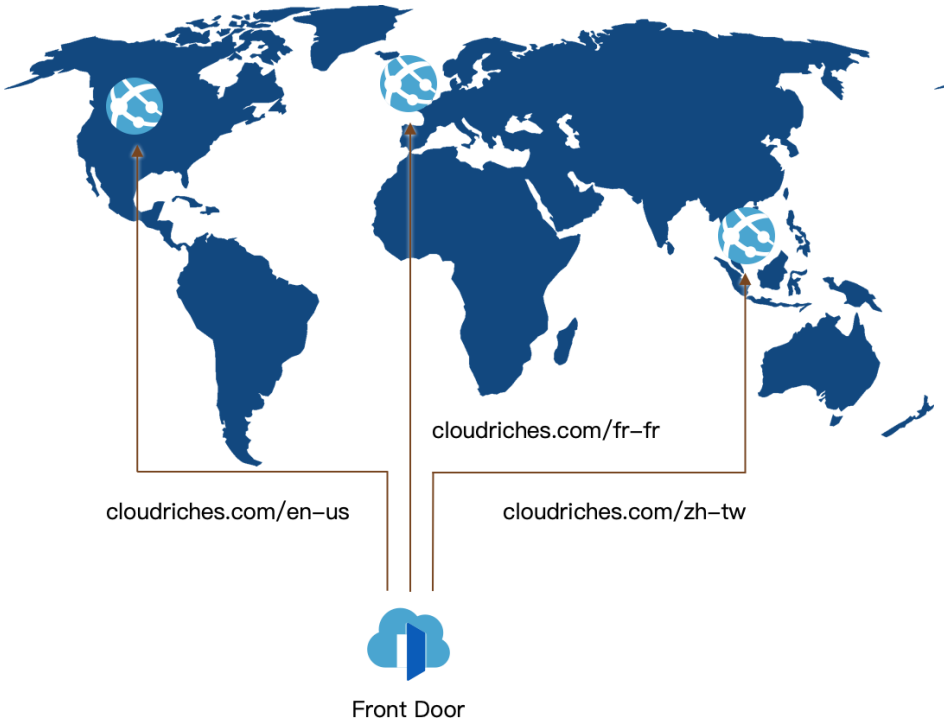


Path-based routing

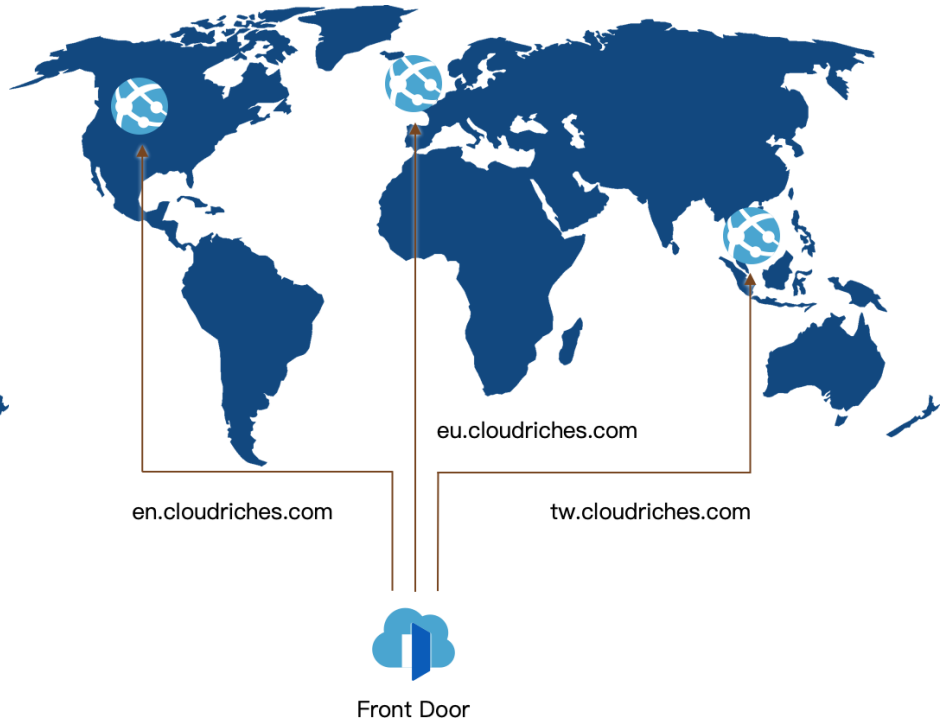


Compare routing approach

Path-based routing



Host-based routing





demo

Front Door Service

全球部署方式比較

Approach	Cost-Effective	Failover	DDoS Protection	Full-Managed
Traffic Manager + URL Rewrite	V			
Traffic Manager + Application Gateway	V	V	V	
Front-Door Service	V	V	V	V

功課很難做嗎？

這些知識取得不難，而優缺點分析、架構建議 你需要諮詢

你和雲端的距離 只差一個 MSP (Managed Service Provider)

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