

未來的CDN服務主流：

複合式CDN平台的管理與效用

蔡培駿 Joey Tsai



為何需要使用CDN?



1

萬一網站異常訪問量暴增或被DDoS攻擊，網站須能持續提供服務。



2

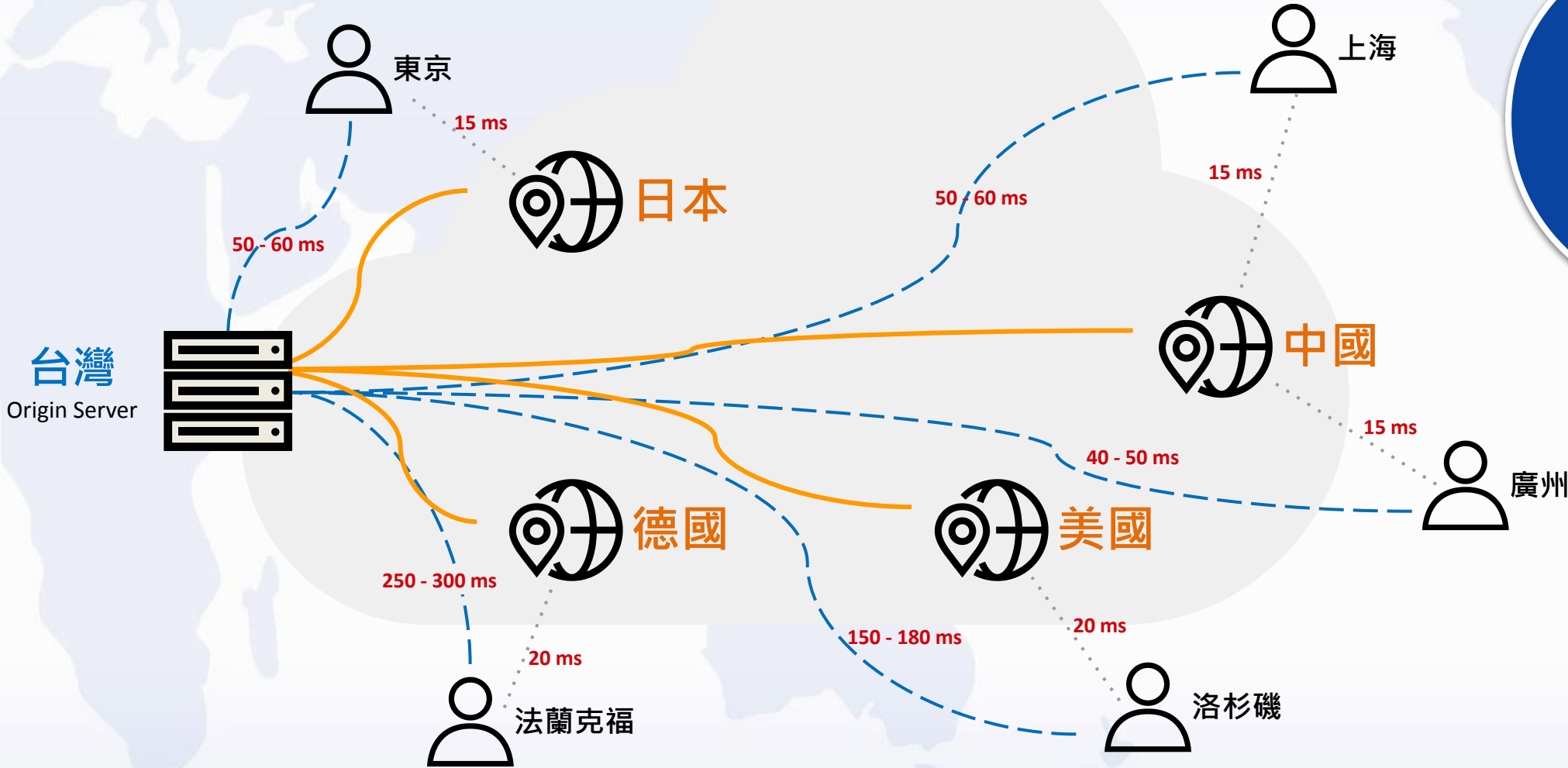
隨用戶增加使用量漸增，需有效控制主機建置、頻寬與維運成本。



3

網站有許多圖檔影片，為增加使用者體驗，網站瀏覽速度不能慢。

使用CDN提供更快速的服務



CDN need to supports a **High** cache-hit ratio!

為何需要Multi-CDN?

Reasons:

- ✓ 使用單一CDN，若該CDN服務異常，網站服務也受影響。
- ✓ 使用多個CDN，雖可加強備援效益，但也增添管理複雜度。
- ✓ 市場上眾多CDN要如何選擇搭配，既適合應用也符合商業效益。

管理多個CDN的困擾

- ✓ CDN知名品牌一堆如何選，不同平台操作管理複雜，一堆帳單付款雜亂。



沒有一個CDN是完美的



CDN type	Managed / Owned	Managed / Owned	Managed / Owned	Managed / Owned	Owned	Owned	Managed / Owned	Managed / Owned	Managed / Owned	Managed / Owned	Managed / Owned
Best region	NA, EU, SEA	NA, EU	Asia, CN	Asia, CN	NA, EU	NA, EU	CN, Asia	CN	CN, Asia	TW	VN
Global	✓	✓	✓	✓	✓	✓	×	×	×	×	×
China access	×	×	✓	✓	×	×	✓	✓	✓	×	×
China access w/o ICP	×	×	×	✓	×	×	✓	×	✓	✓	×
Websocket	✓	✓	×	×	×	✓	✓	✓	×	×	✓
Wildcard domain	×	✓	✓	✓	-	-	✓	×	✓	×	×

Multi CDN服務特色



單一平台
自主管理



服務彈性
管理便利



多種組合
高效運用



即時量測
智能調度



多層防護
使用安心

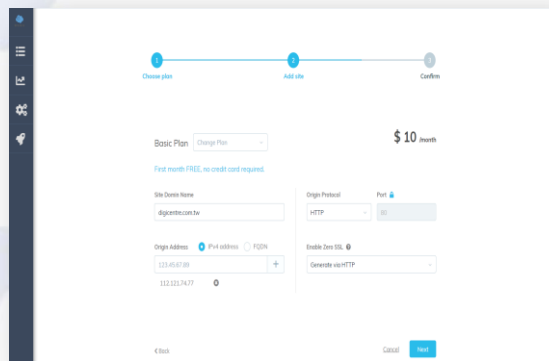
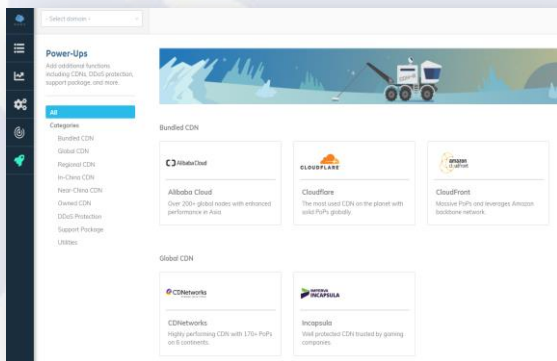


簡便開通設定流程

服務上線
自動監測

簡便操作設定

方案內容制定



選擇CDN方案

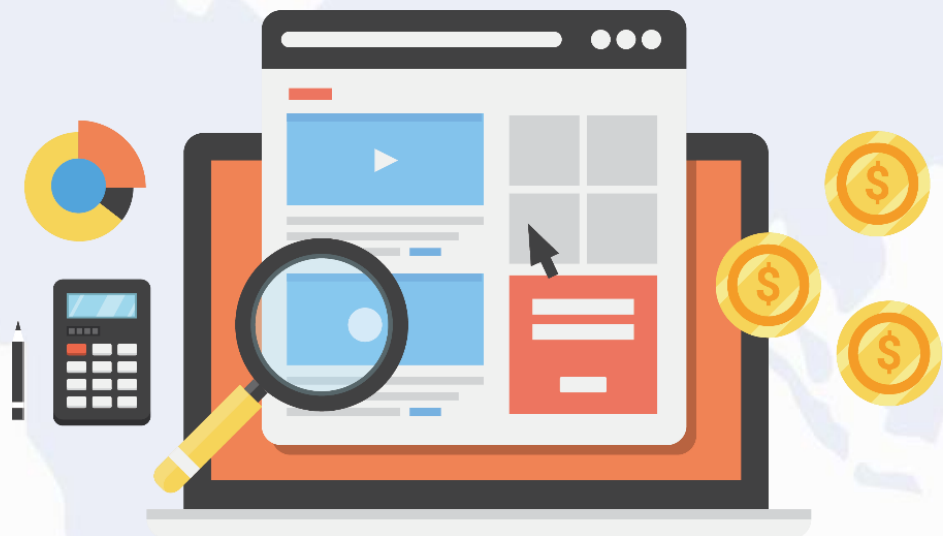
域名原站配置

WAF防護啟動



服務彈性管理便利

- ✓ 可隨時自行增添或調整各個CDN，有效控管成本，不受個別管理多個CDN服務約期等問題困擾



Global CDN

China CDN

in-China CDN

 Alibaba Cloud 1,000+ China nodes and 200+ global nodes.	 Tencent Cloud 800+ China nodes and 100+ global nodes in 30+ regions.	 Wangsu 1,000+ China nodes with the best performance in the region.
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Near-China CDN

 CDNetworks Utilizes PoPs around China to provide speedy connection.	 Chungwa Taiwan CDN with geo-advantage for fast China connection.	 Wangsu Massive nodes near China for accelerated performance.
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Global CDN

 Alibaba Cloud Over 200+ global nodes with enhanced performance in Asia.	 Cloudflare The most used CDN on the planet with solid PoPs globally.	 CloudFront Massive PoPs and leverages Amazon backbone network.
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Global CDN PLUS

 CDNetworks Highly performing CDN with 170+ PoPs on 6 continents.	 Incapsula Well protected CDN trusted by gaming companies.
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CDN應用類型

Bundled CDN



Cloudflare

The most used CDN on the p
solid PoPs globally.



Chunghwa

Taiwan CDN with geo-
fast China connection.



CloudFront

Massive PoPs and leverages Amazon
backbone network.

Region CDN



VNCDN

Best CDN in Vietnam for fast China and
SEA connection.



Chunghwa

Taiwan CDN with geo-advantage for
fast China connection.

Global CDN



Akamai

The world's largest CDN which covers
30% of the web traffic.



Incapsula

Well protected CDN trusted by gaming
companies.



Alibaba Cloud

Over 200+ global nodes with enhanced
performance in Asia.



Alibaba Cloud DCDN

Accelerate content delivery for hybrid
sites and dynamic sites.



CDNetworks

Highly performing CDN with 170+ PoPs
on 6 continents.

CDN應用類型

China CDN



ChinaCache

Great China PoP coverage for fast in and near China performance.



Tencent Cloud

800+ China nodes and 100+ global nodes in 30+ regions.



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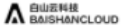










Wangsu

Massive nodes near China for accelerated performance.

CDN應用類型

Own CDN

✓ 平台可接入非平台使用之CDN同步調度。

 Akamai Connect your Akamai CDN to the platform.	 Alibaba Cloud Alibaba Cloud DCDN Connect your Alibaba DCDN to the platform.	 Alibaba Cloud Alibaba Cloud Connect your Alibaba Cloud CDN to the platform.	 Baidu Cloud Connect your Baidu Cloud CDN to the platform.	 BaishanCloud Connect your BaishanCloud CDN to the platform.
 CDNetworks Connect your CDNetworks CDN to the platform.	 ChinaCache ChinaCache Connect your ChinaCache CDN to the platform.	 Chunghwa Connect your Chunghwa Telecom CDN to the platform.	 Cloudflare Connect your Cloudflare CDN to the platform.	 CloudFront Connect your AWS CloudFront CDN to the platform.
 Incapsula Connect your Incapsula CDN to the platform.	 Tencent Cloud Connect your TencentCloud CDN to the platform.	 Verizon Connect your Verizon CDN to the platform.	 VNCN Connect your VNCN CDN to the platform.	 Wangsu Connect your Wangsu CDN to the platform.

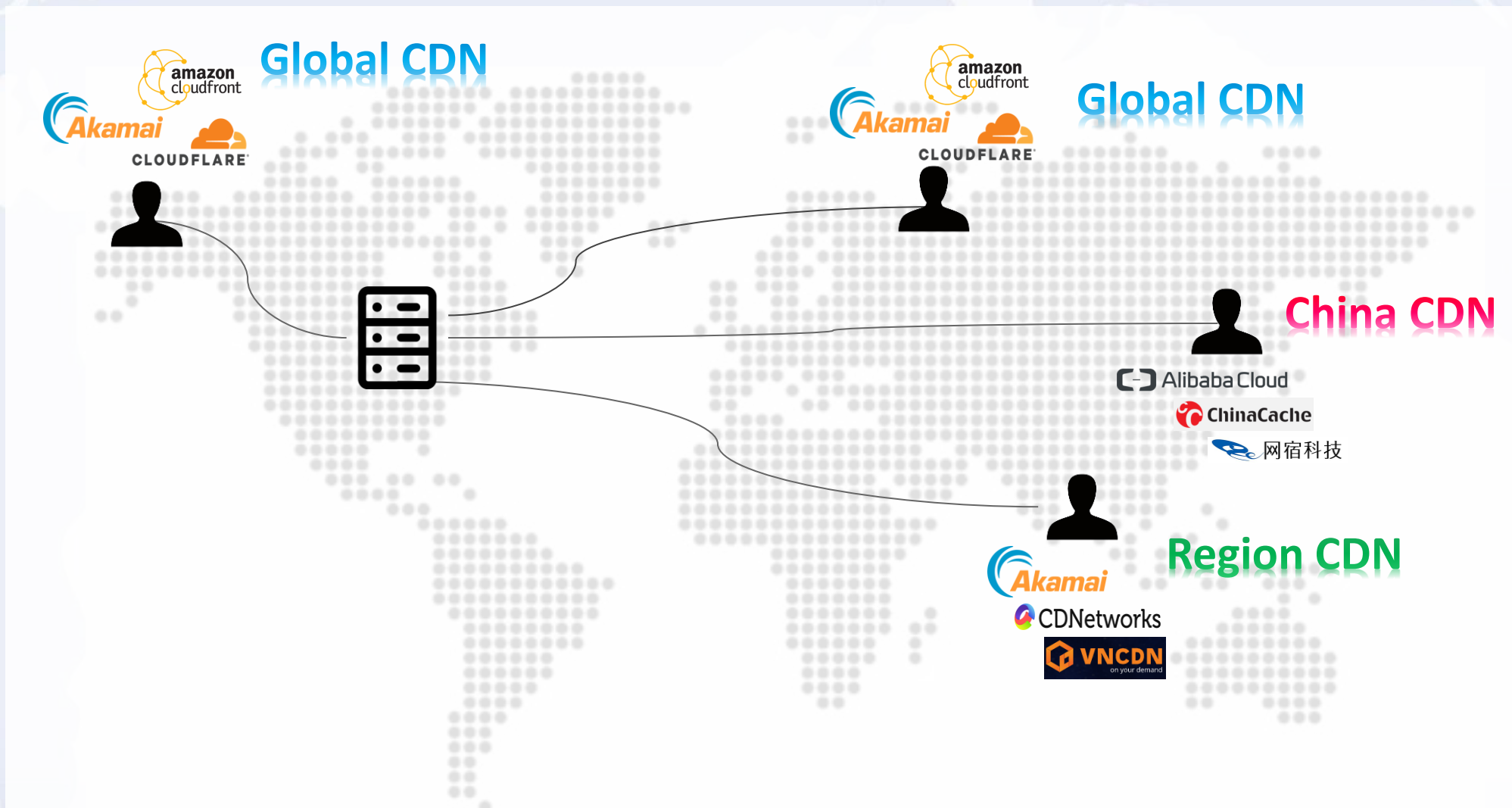
CDN組合與管理



- ✓ 合作知名品牌，Akamai、Cloudflare等，因應網站服務地區，搭配合適CDN，網站效能最佳化。
- ✓ 平台提供免費SSL憑證並自動更新。

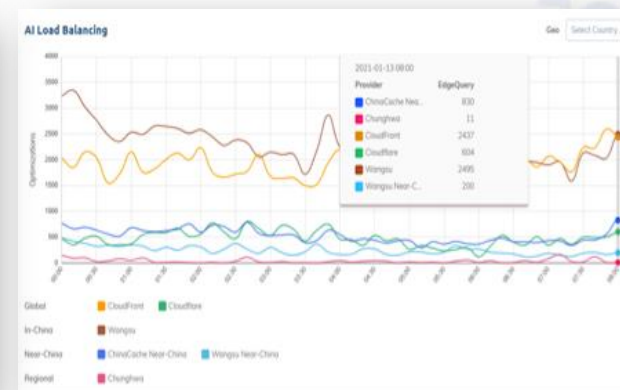
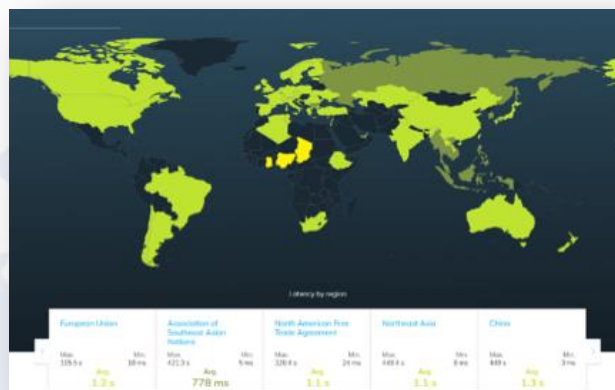
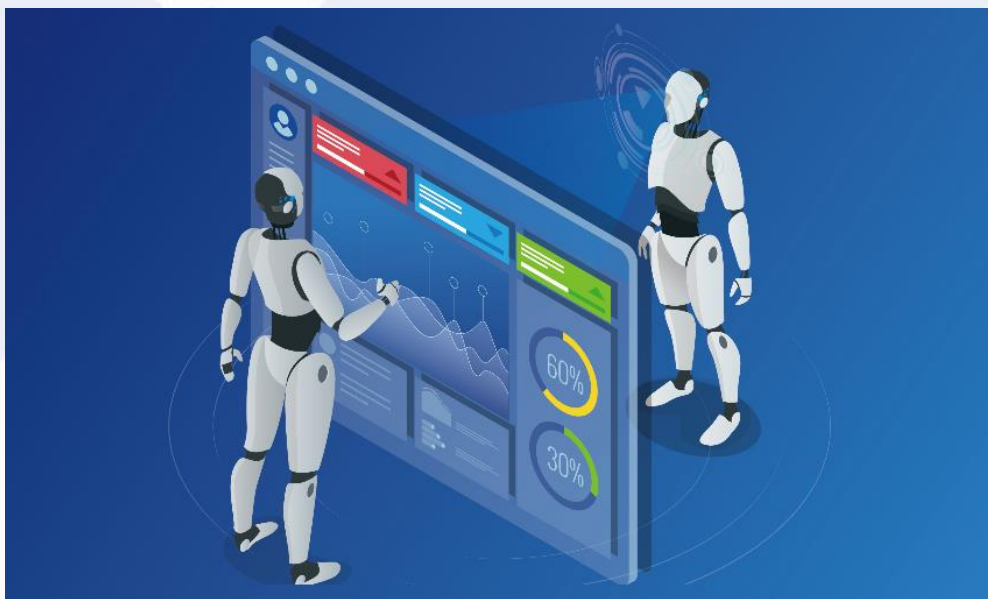


CDN組合與管理



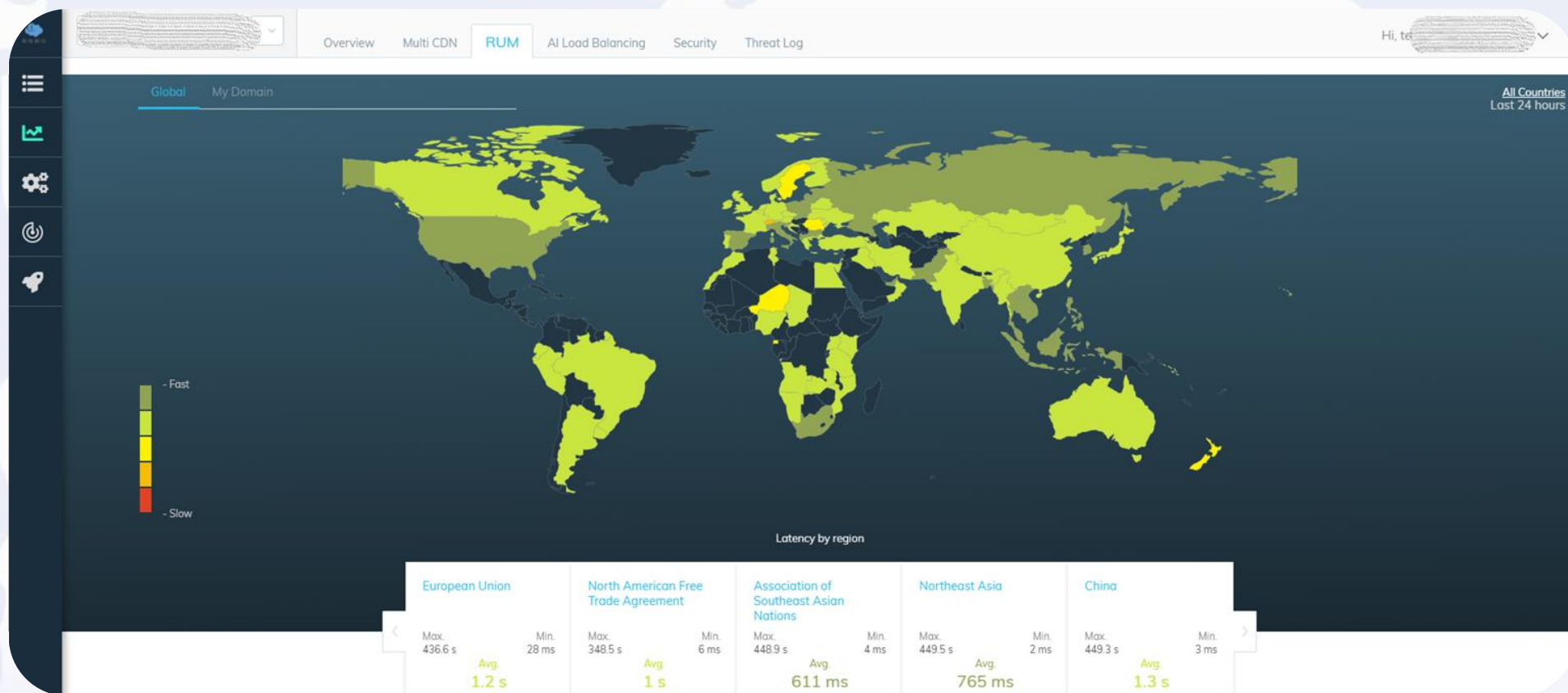
AI 自動監測調度機制

- ✓ 多個CDN建立服務與備援機制，透過平台 RUM (real user monitor) AI 智能監控與AI Load Balancing 自動調度機制，依省份或城市級別執行CDN自動調度。



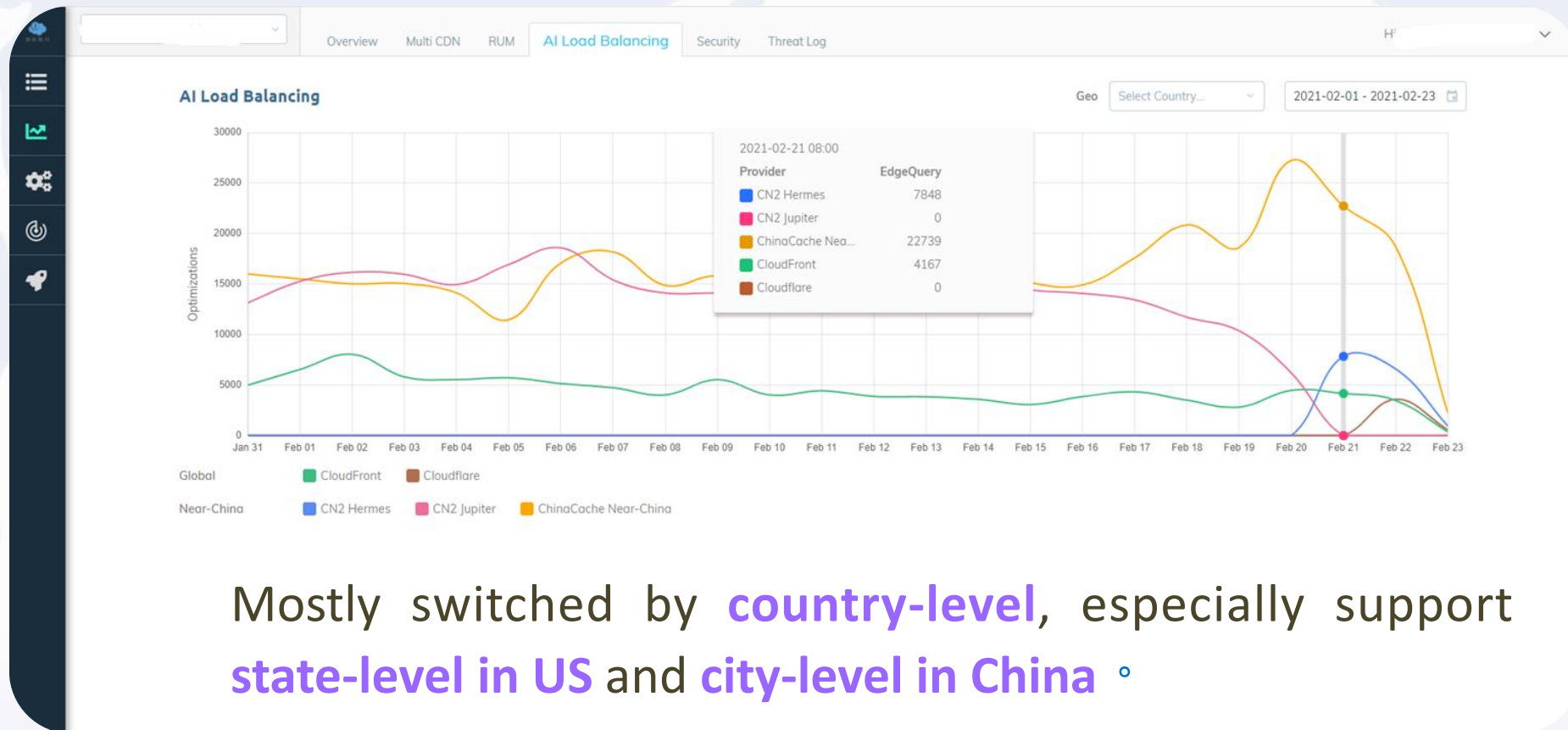
全球智能監測服務

- ✓ RUM (real user monitor) 全球監測服務：透過平台各地200+監測點量測各CDN品質，Own CDN 可客製化一併加入量測與調度。



自動化調度服務

- ✓ AI Load Balancing 自動化調度服務：依據平台RUM量測結果，由平台AI Load Balancing功能每30秒自動調度目前品質最佳的CDN服務。



CDN防護與管理

- ✓ 平台提供DDoS與WAF、BOT等防護功能，搭配黑白名單/國家IP分類等管理、依據OWASP Top 10為基準提供防護，可依需求自行調整規則，確保服務不受攻擊影響營運。



Threat Statistics

XSS/SQL/Generic Injection
Attack Protection
提供隱碼攻擊、跨站指令碼攻擊等泛類型攻擊行為防禦機制。

Access Control

提供黑白IP名單配置等控管機制。
可透過Geo location配置
限制訪問國家等功能。

Network Layer

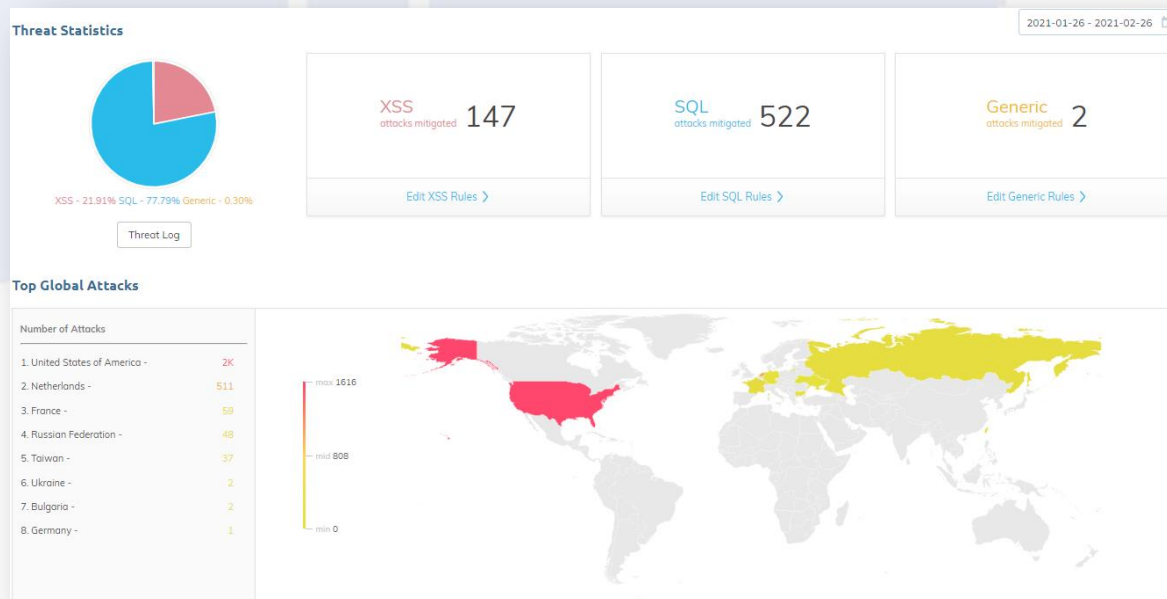
DDoS Protection
平台提供L3,4 層DDoS防禦機制。

Application Layer

平台提供L7 層特殊行為防禦機制。

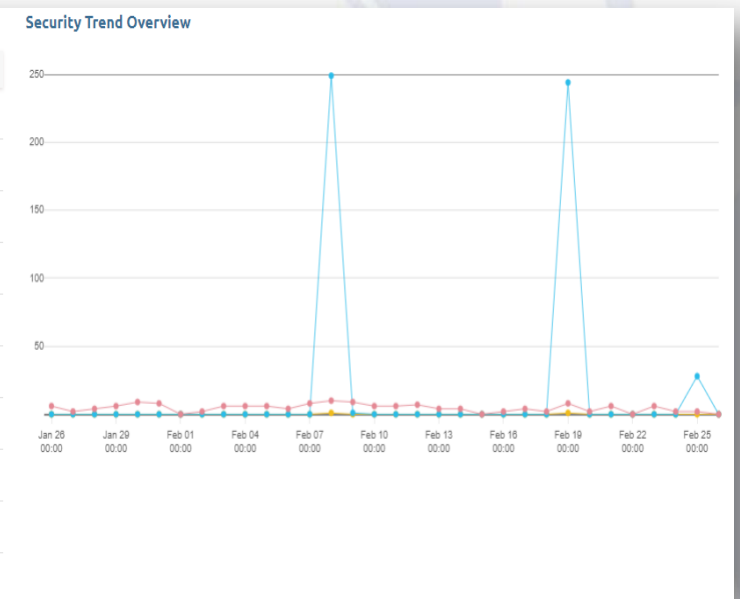
攻擊分析統計報表

- ✓ Threat statistics analysis ◦
- ✓ Top Global Attacks 、 Top IP Attacks 、 Security Trend Overview ◦



Top IP Attacks

Ranking	Country	IP Address	Attacks
1.	United States of America	216.244.66.249	2K
2.	Netherlands	141.98.80.58	256
3.	Netherlands	45.227.255.149	251
4.	France	54.36.148.181	55
5.	Taiwan	210.61.124.248	28
6.	United States of America	64.137.69.111	6
7.	United States of America	154.16.213.67	6
8.	United States of America	181.214.98.72	6
9.	Russian Federation	91.200.150.249	4
10.	Netherlands	193.42.108.196	4



攻擊分析統計報表

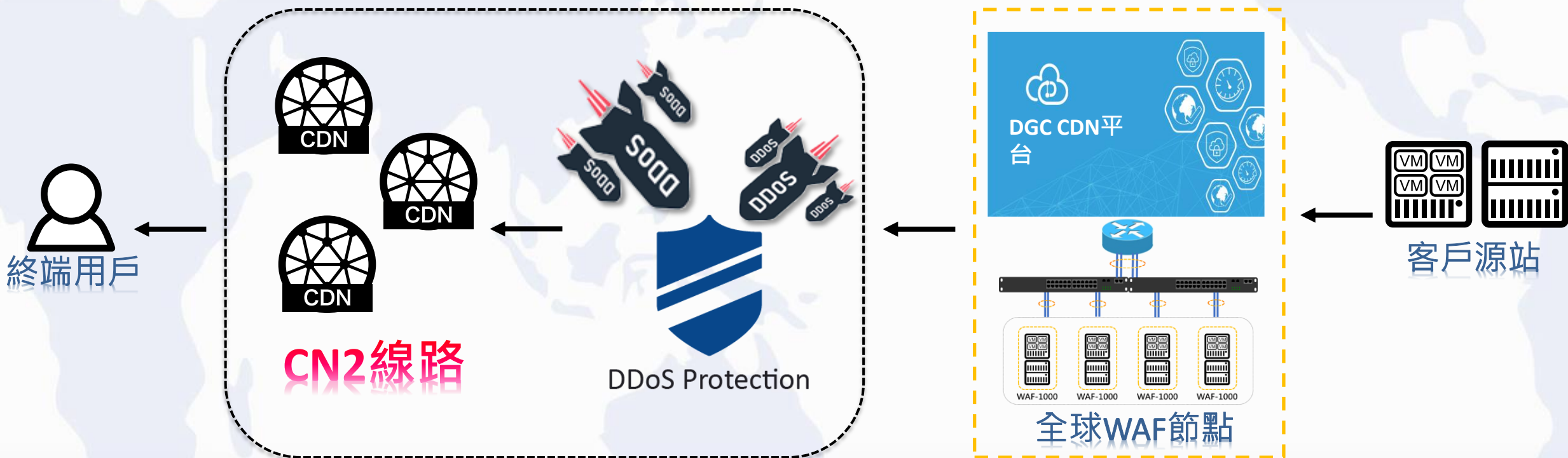
✓ 提供Attack log 分析紀錄，依據分析結果調整最佳防護條件。

The screenshot displays a web-based interface for analyzing attack logs. At the top, there is a search bar for 'Incident ID' and a date range filter set to '2021-02-01 - 2021-02-28'. Below the search bar are several filter checkboxes: XSS, SQL, Generic, Global Agents, and HTTP Protocol. The main content is a table with columns: Time, Incident ID, Domain, Category, Country, IP, and Action. The first row shows an incident on 2021/02/26 at 16:27:59 with ID 7692534f92937e774da7d98cb24e8370, categorized as 'Global Agents' from the 'United States of America' at IP 72.79.45.58, with the action 'Block'. A 'Details' link is provided for this entry. An expanded view of the details for this incident is shown below the table, containing 'Request Info' and 'Global Agents' sections. The 'Request Info' section lists: Http_user_agent: panscient.com, Scheme: https, Server_protocol: HTTP/1.1, Request_method: GET, Query_string, and Uri: /. The 'Global Agents' section lists: Message: Rogue web site crawler and Match_vol: panscient.com. Below this, two more rows of incident data are visible, both categorized as 'Global Agents' and blocked. The bottom right corner of the interface shows '1 of 1' and navigation arrows.

Time	Incident ID	Domain	Category	Country	IP	Action
2021/02/26 16:27:59	7692534f92937e774da7d98cb24e8370	[REDACTED].com	Global Agents	United States of America	72.79.45.58	Block Details
Request Info		<ul style="list-style-type: none">Http_user_agent: panscient.comScheme: httpsServer_protocol: HTTP/1.1Request_method: GETQuery_string:Uri: /				
Global Agents		<ul style="list-style-type: none">Message: Rogue web site crawlerMatch_vol: panscient.com				
2021/02/26 16:27:57	3897dcc3504288d4c76b690a5c86dd96	[REDACTED].com	Global Agents	United States of America	72.79.45.58	Block Details
2021/02/10 01:03:42	10d2dcc75d58fb87841ebd50c965507f	[REDACTED].com	Global Agents	Germany	134.96.235.27	Block Details

CDN平台架構

- ✓ CDN平台架構整合了CDN、DDoS與WAF等防護功能，另搭配全球DDoS清洗中心聯防服務，確保服務不受攻擊影響營運。

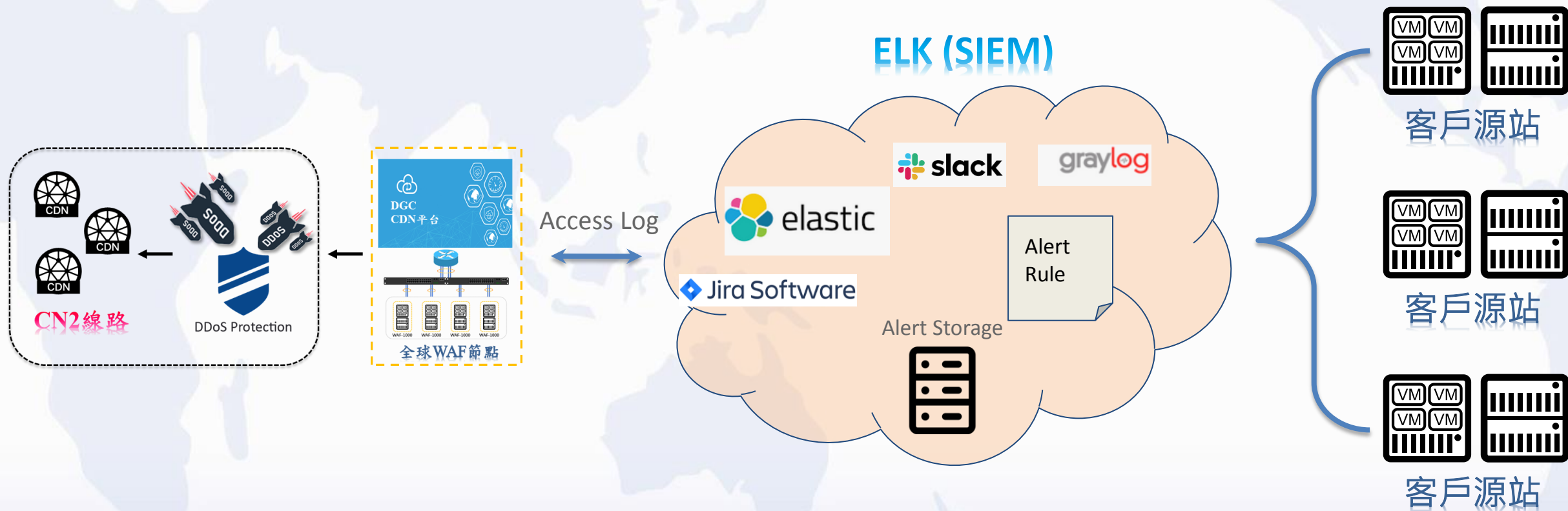


WAF節點包含Hong Kong, Ireland, Singapore, Taiwan, US LA等。

Manage Service (add-on service)

✓ ELK + AI 回源監控與自動調度服務：

ELK(SIEM)彙整Log資訊提供統計分析除錯，AI回源監控主動排除連線品質不佳源站。



服務綜合效益

支援多域名管理

有效管理多域名，免費提供SSL憑證且自動更新



全球網絡最佳效能

RUM 全球200+探針，透過AILB機制，每30秒調度一次最佳CDN。

快速資料傳輸 全球遞送不分區



全面網站防護

分散式架構減緩DDoS攻擊，WAF/BOT防護，7*24 SOC監控，網站防護最安心。



成本最佳化

自由搭配CDN，依需求隨時可更換CDN組合。



一站式管理

一個平台同步管理多個CDN資源，大幅提升維運效能。

客戶案例



- ✓ EC客戶遭受DDoS攻擊影響網站服務，緊急提出需求至導入CDN平台的DDoS防護約1.5小時，平台提供加速也提供最佳防護。



- ✓ 線上遊戲商遞送中國地區品質不佳，導入CDN平台後，服務加載時間減少了50%以上，客戶滿意度也提高了60%以上，並且阻擋了多次大規模的DDoS攻擊，網站服務仍保持穩定。

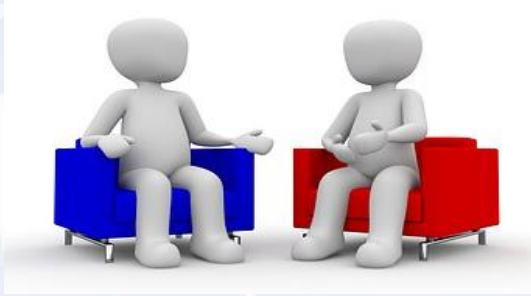


- ✓ 某客戶遭受了每分鐘3億個請求的CC攻擊，透過平台的地域限制與WAF演算過濾出CC攻擊機器人，並成功阻擋了再來的攻擊。



- ✓ Nownews自使用MCDN平台後，經過平台的優化調整，僅僅三個月內讓Page View增加了50%；並於使用MCDN平台後，攔阻了多次爬蟲攻擊，免讓源站受遭爬蟲惡意攻擊。

我們提供最優質的服務



需求訪談:

- ✓ 與客戶訪談，協助了解需求。
- ✓ 對目前使用管理需求，找出最佳方案。



產品服務規劃:

- ✓ 規劃合適使用CDN。
- ✓ 確認規格。



服務測通與上線服務:

- ✓ 服務測通與調教。
- ✓ 24*7*365 SOC 協助上線與監控服務。





果核數位
Digicentre

THANK YOU