



CLOUDFLARE

CDN & ISP Collaboration Trends

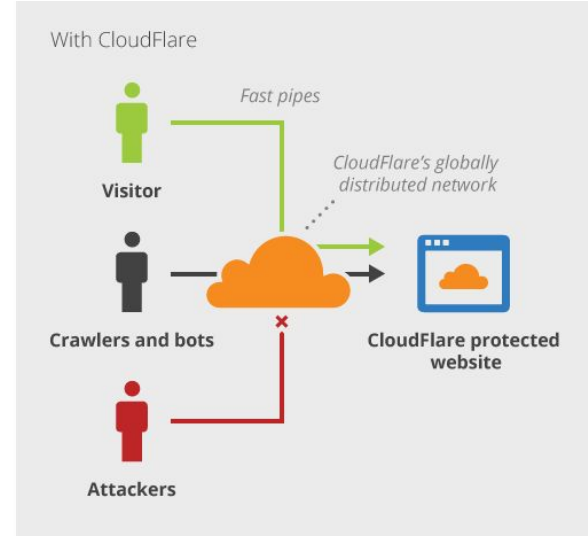
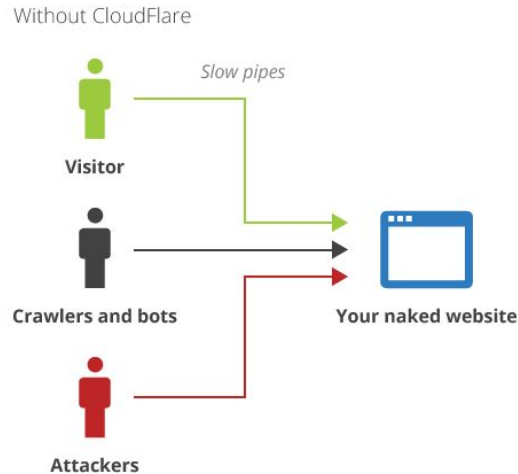
Frankie Hui

TWNOG 26th

What is CloudFlare?

CloudFlare makes websites faster and safer using our globally distributed network to deliver essential services to any website

- Performance
- Content
- Optimisation
- Security
- 3rd party services
- Analytics



How does CloudFlare work?

CloudFlare works at the network level

- Once a website is part of the CloudFlare platform, its web traffic is routed through our global network of 82+ data centres.
- At each edge node, CloudFlare manages DNS, caching, bot filtering, web content optimisation and third party app installations.



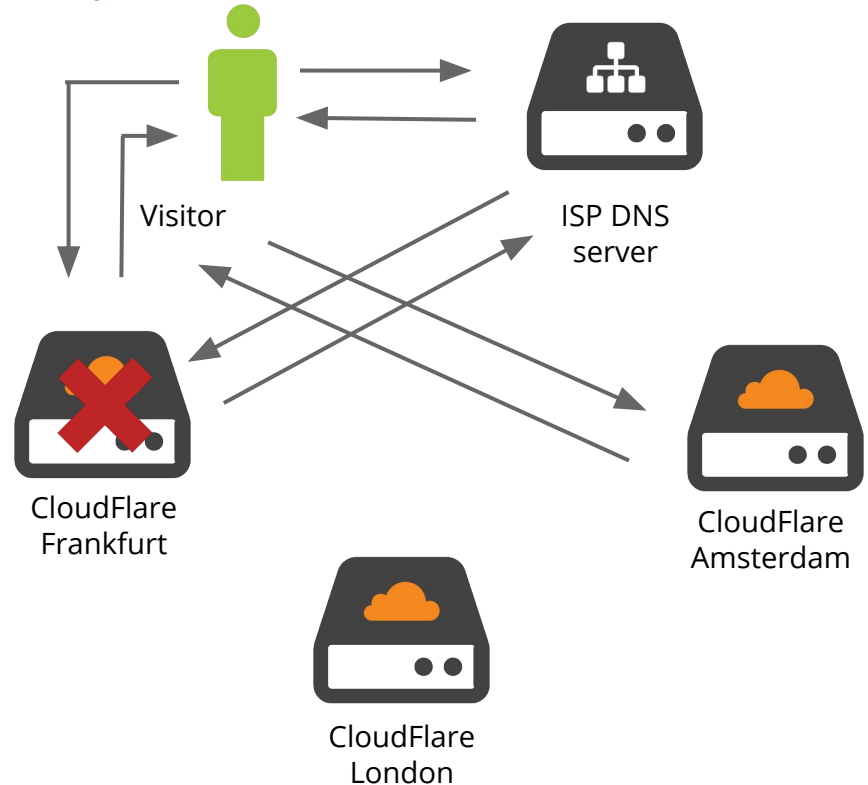
How does CloudFlare work?

How does it work?

- DNS Query - to anycast DNS address
- DNS result returned with Anycast IP
- Client makes connection to returned IP
- CloudFlare replies, session established

What happens in the event of an outage?

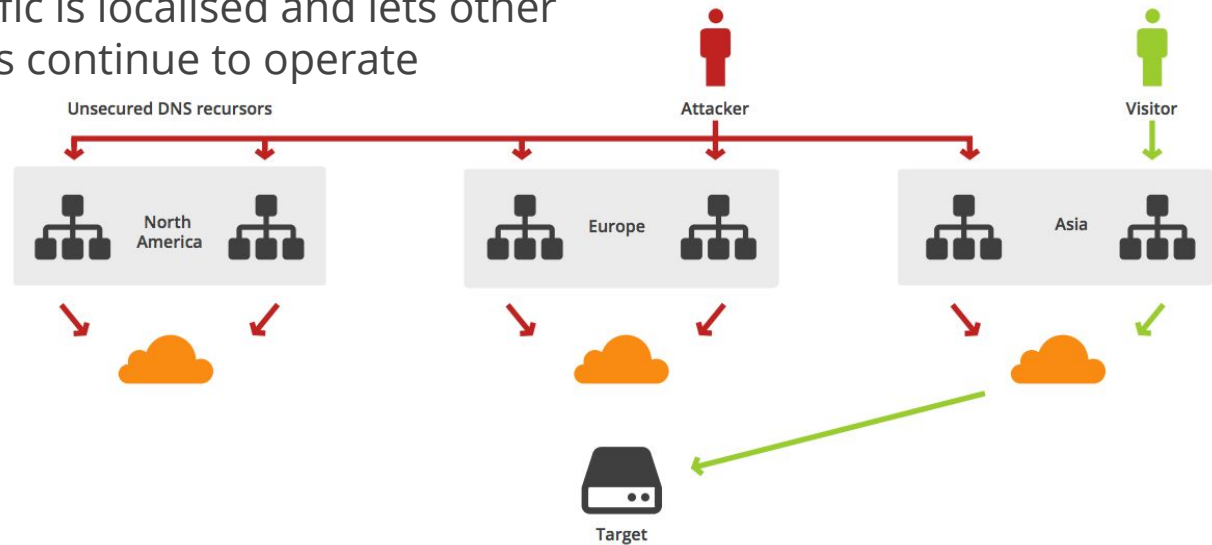
- Anycast prefixes are withdrawn from problematic PoP
- Traffic re-routes to next closest PoP
 - TCP session resets at this point



CloudFlare works globally

CloudFlare protects globally

- DDoS attack traffic is localised and lets other geographic areas continue to operate





Taipei: CloudFlare's 77th Data Center is Now Live

11 Apr 2016 by [Nitin Rao](#).

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台北：CloudFlare的第七十七個數據中心已經上線喔！



We are excited to announce the launch of our Taipei data center, which is our 28th data

CloudFlare blog

[Contact our team](#)

US callers

1 (888) 99-FLARE

UK callers

+44 (0)20 3514 6970

International callers

+1 (650) 319-8930

[Full feature list and plan types](#)

CloudFlare provides performance for any website. More than 2 million websites use CloudFlare.

There is no hardware or software installed on your website. It works at the DNS level. It takes only a few minutes to sign up. To learn more, please visit our [getting started](#) page.

CloudFlare features

[Overview](#)

[CDN](#)

[Optimizer](#)

[Security](#)



Why do we need a POP in Taiwan?

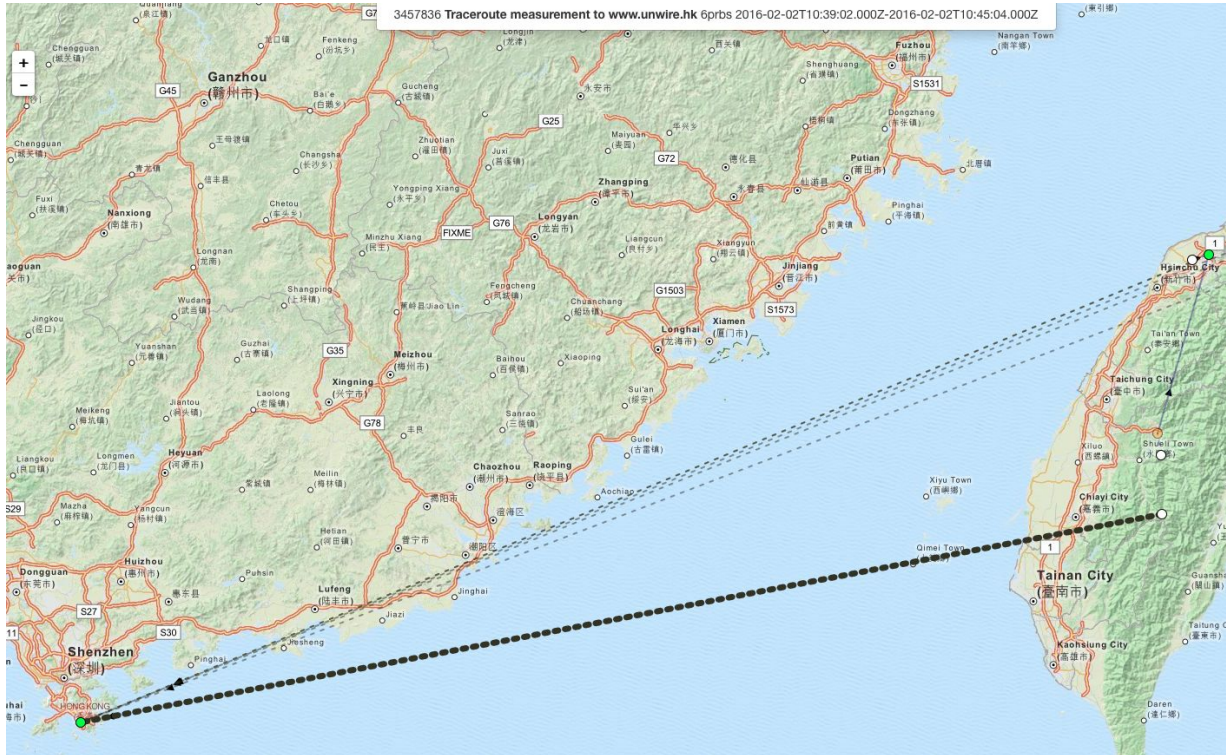


**KEEP
CALM
AND
IN-COUNTRY**



CLOUDFLARE

Latency Matters!



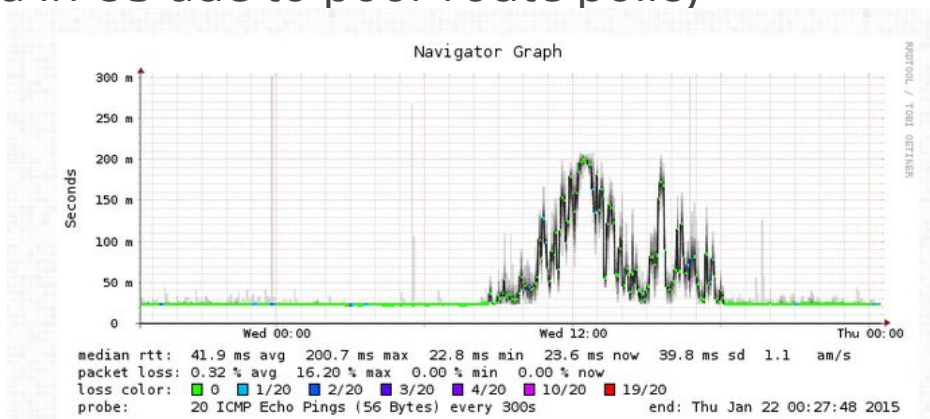
Why in-country matters?

Ping RTT between Taiwan ISP and CF Asia POP

	CF NRT POP	CF HKG POP	CF SIN POP
Taiwan ISP A	67ms	25.2ms	52.4ms
Taiwan ISP B	47.1ms	24.6ms	82.4ms
Taiwan ISP C	73.9ms	25.8ms	111.9ms

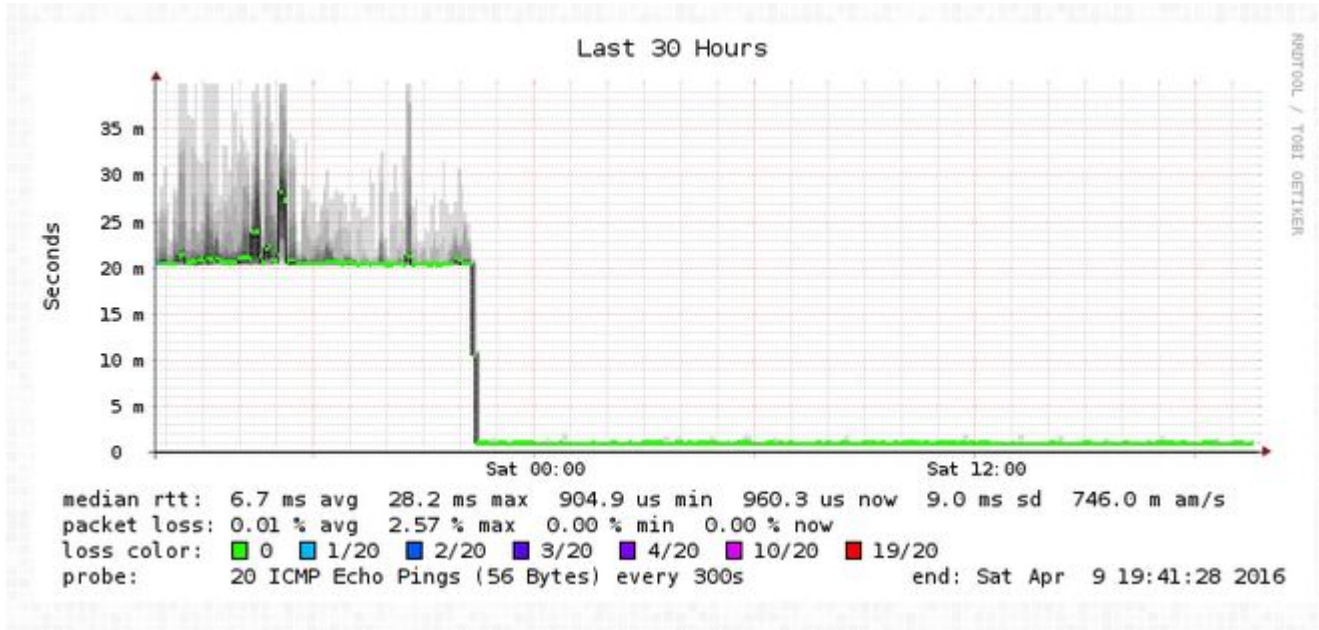
Connectivity between Taiwan and Asia

- Limited capacity between HiNet and all Asia providers
- Observed congestion during peak hour between CF Japan and Hong Kong POP
- Some Taiwan traffic was served in US due to poor route policy



source: <https://blog.gslin.org/archives/2015/01/22/5546/%e5%b0%8d%e4%bb%98%e6%9c%80%e8%bf%91-hinet-%e5%88%b0-cloudflare-%e4%b8%8d%e7%a9%a9%e5%ae%9a%e7%9a%84%e6%83%85%e6%b3%81/>

After April 9th!



source:<https://blog.gslin.org/archives/2016/04/12/6493/cloudflare-%e6%ad%a3%e5%bc%8f%e5%85%ac%e9%96%8b-taipei-pop-%e4%ba%86/>

How could an ISP collaborate with content provider?

Colo at Neutral Data Center

- Easier to have PNI with other local ISP and Content provider
- You might be able to connect to Internet exchanges easily
- More transit providers are available in neutral data center
- Visit <https://www.peeringdb.com> and take a look!

CloudFlare	
Organization	CloudFlare
Also Known As	
Company Website	https://www.cloudflare.com
Primary ASN	13335
IRR Record	AS-CLOUDFLARE
Route Server URL	
Looking Glass URL	
Network Type	Content
IPv4 Prefixes	500
IPv6 Prefixes	100
Traffic Levels	1 Tbps+
Traffic Ratios	Mostly Outbound
Geographic Scope	Global

Public Peering Exchange Points			TPIX
Exchange	IPv4	Speed	
ASN	IPv6	RS Peer	
TPIX-TW	203.163.222.39	10G	
13335	2406:d400:1:133:203:163:222:39	<input type="radio"/>	

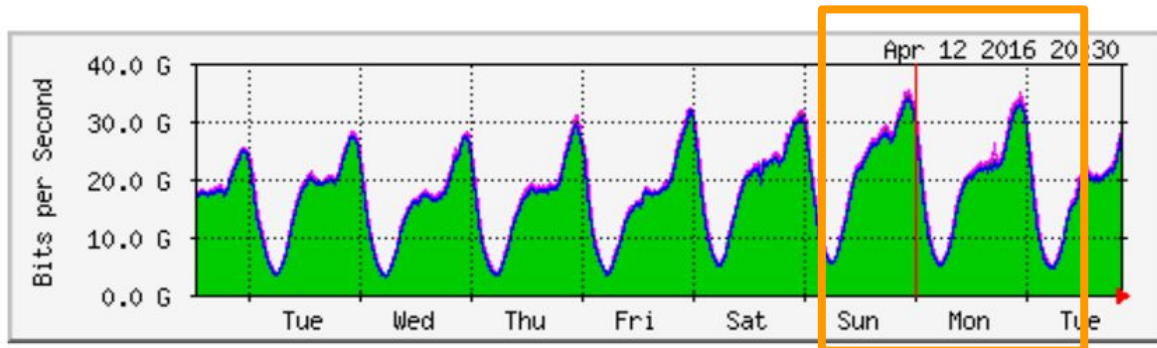
Private Peering Facilities		Taiwan
Facility	Country	
ASN	City	
Chief LY Building Taipei	Taiwan (Province of China)	
13335	Taipei	

Connect to Internet Exchanges!

- Connect to local and other Asia Internet exchanges like TPIX, HKIX, Equinix IX
- Content providers usually connect to IXPs and they are willing to peer!
- Peer with Route Server and keep your peeringDB up-to-date!

TPIX Taipei Internet eXchange - Traffic

'Weekly' Graph (30 Minute Average)



Questions?



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