



Understanding Peering

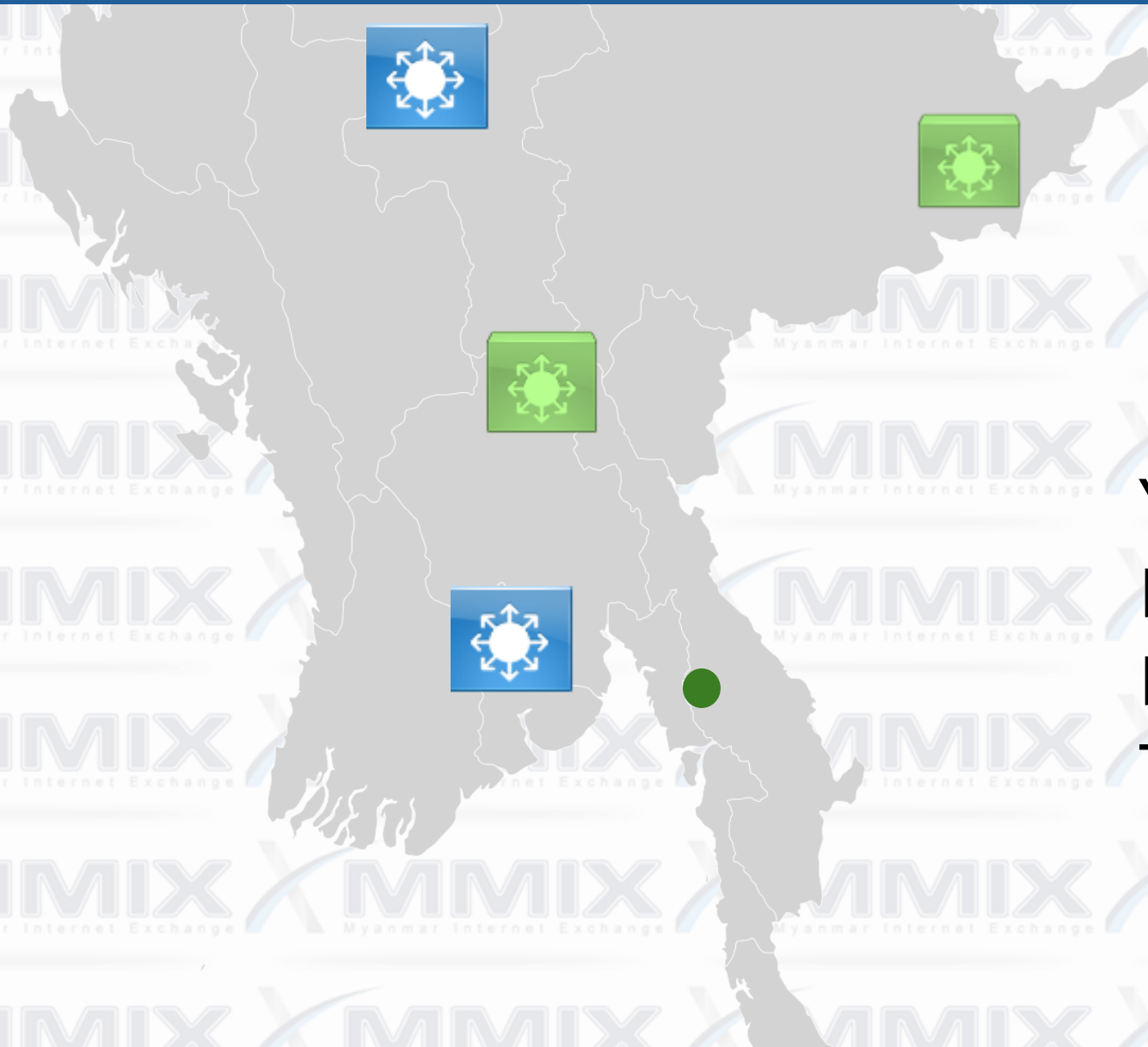
@ MMIX

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Version : 0.0

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MMIX POPs



Yangon – IXP

Mandalay – IXP

Naypyitaw – POP

Tachileik - POP

Basic Data for Peering at MMIX

Yangon IXP

ISPs Region - Yangon, Naypyitaw &
AS - 9654

Peering LAN – 103.116.194.0/24

Route-Servers – 103.116.194.1, 103.116.194.2

Mandalay IXP

ISPs Region - Mandalay

AS - 9333

Peering LAN – 103.116.193.0/24

Route-Servers – 103.116.193.1, 103.116.193.2

Preparation

- peeringDB account create/join exchange – <https://www.peeringdb.com>
- Get peering info for bgp setup – peering IP + route server IPs
- Get BGP Communities list for CDN subscription
- Get necessary procedures to subscribe CDNs
- Activate RTBH feature

Peeringdb records

/www.peeringdb.com/ix/2102			
official docs - Drop... QR Code Generator Login to Cacti Grades Image result for Au... Zawgyi to Unicode			
29	785G	56	
Myanmar Internet Exchange Association Inc.			
Myanmar Internet Exchange			
Yangon			
MM			
Asia Pacific			
Not Disclosed			
Not Disclosed			
2022-12-25T11:00:36Z			
MMIX is the first IXP in Myanmar. MMIX is neutral and industrial owned exchange. It was founded on September, 2017. Our POP is at MICT Park, Hlaing township, Yangon, Myanmar.			
Translate »			
https://mmix.net.mm			

Peers at this Exchange Point			
Filter			
Peer Name A-Z v IPv4	ASN IPv6	Speed Port Location	Policy ?
AGB Communication AS134739 103.116.194.11	134739	20G	Open
Akamai Technologies 103.116.194.25	20940 2001:df3:1300::940:25	200G	Open
Campana MYTHIC 103.116.194.31	136168	1G	Open
Fortune International Ltd. 103.116.194.16	135371 2001:df3:1300::5371:16	10G	Open
Golden Dragon 2000 103.116.194.43	150692 2001:df3:1300::692:43	10G	Open
HANTHAR NET 103.116.194.54	132060 2001:df3:1300::2060:54		Open
Hepta Alliance Technology Group 103.116.194.49	151965 2001:df3:1300::4484:49	10G	Open
HORIZON	132148	30G	Open

Default content allowed by MMIX

- DNS root Server - K-root from MMIX; L-root from YTP
- PCH country level root DNS server
- Quad9 DNS, 9.9.9.9 DNS Resolver
- Mobile Legend
- Kaopu Cloud
- Other contents from our peering members

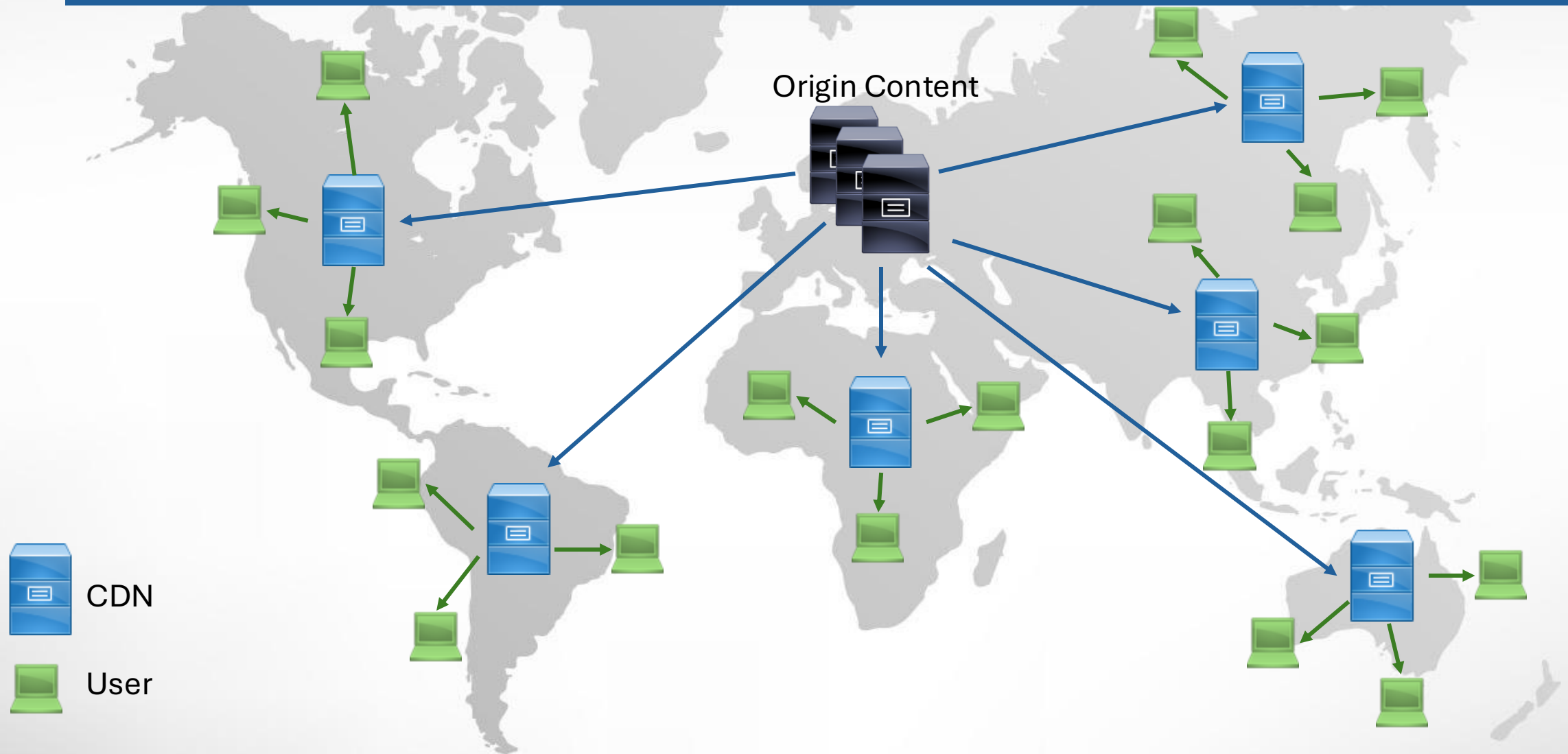
Content to be subscribed

All CDNs such as

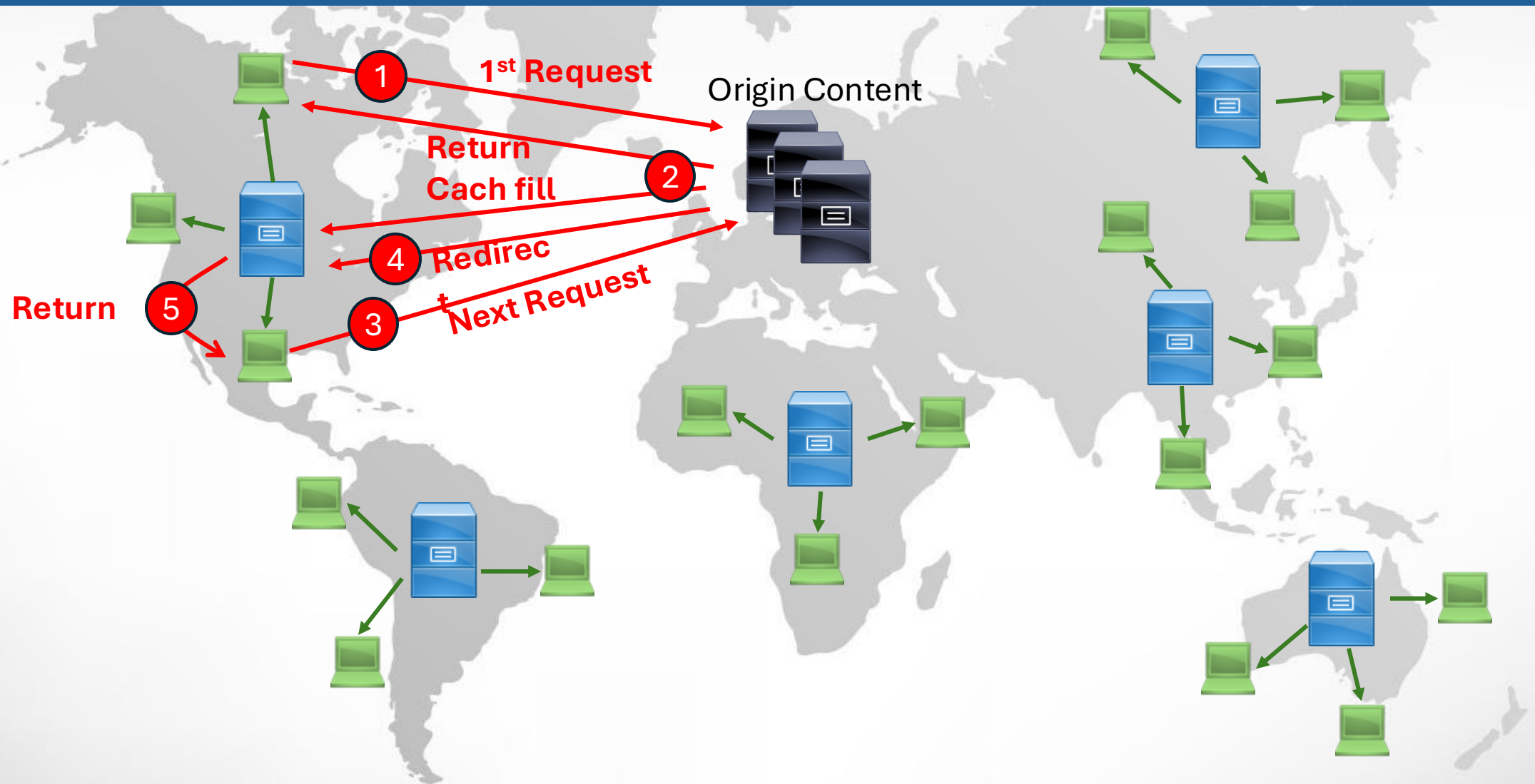
- Google GGC – Capacity limited, no more available.
- Netflix – activate with bgp community
- Wangsu – activate with bgp community and manual request
- Akamai – activate with bgp community and manual request

Content Delivery Network CDN

CDN Structure



DNS Flow



Route based CDNs

GGC, Netflix, Wangsu

- Traffic feeding is based on advertised prefixes.
- Partial prefix announcement shall allow partial traffic.

GGC & Netflix

- Traffic subscription effects within 24 hours (mostly, traffic appear within a few minutes)

Wangsu

- Need manual request for subscription. MMIX Operations team can subscribe on behalf of member.
- Need to wait maximum one month for activation.

DNS Based CDN

Akamai

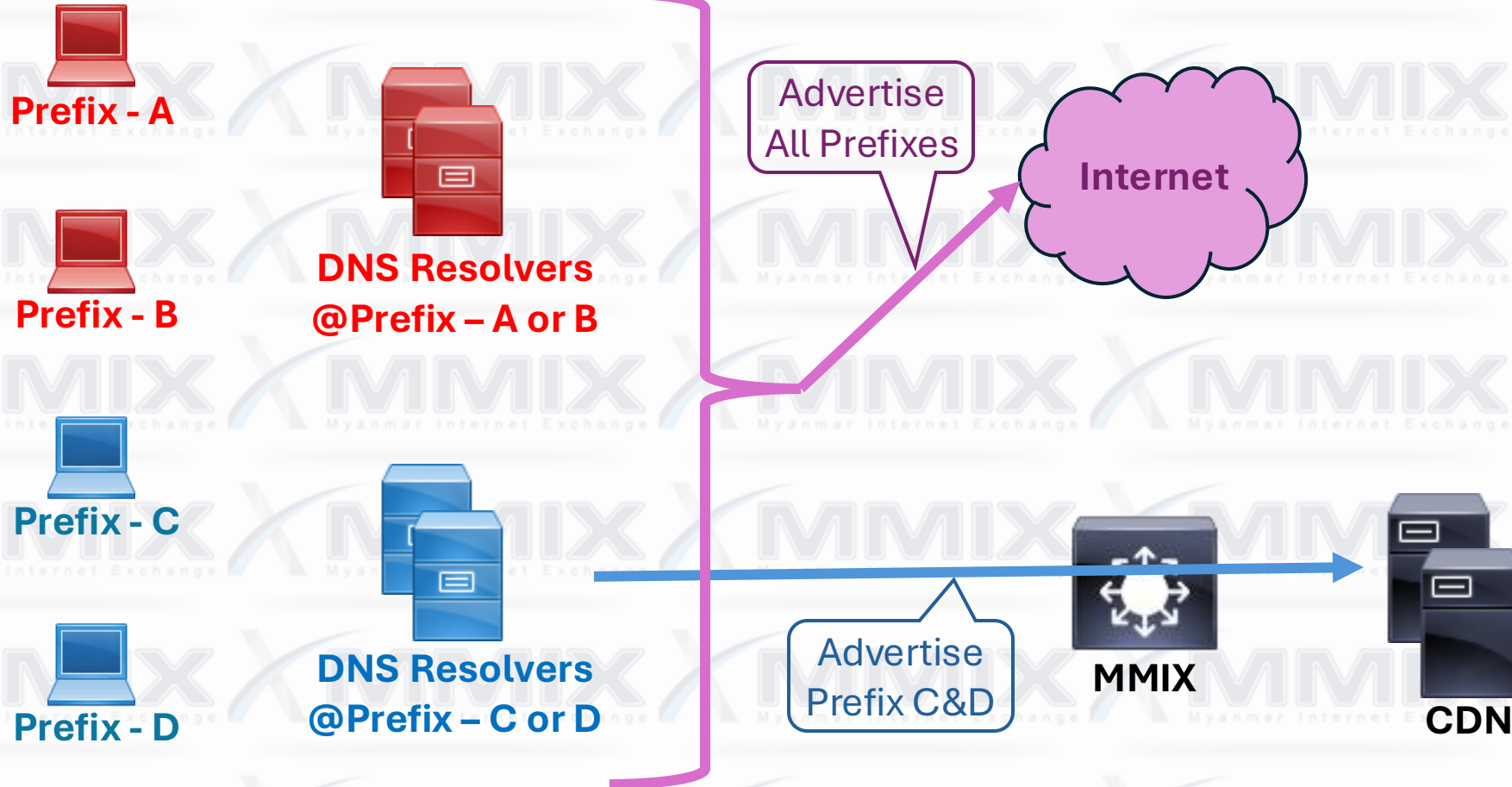
- Traffic Request
- DNS Resolvers
- Partial CDN subscription

Akamai – DNS Resolvers

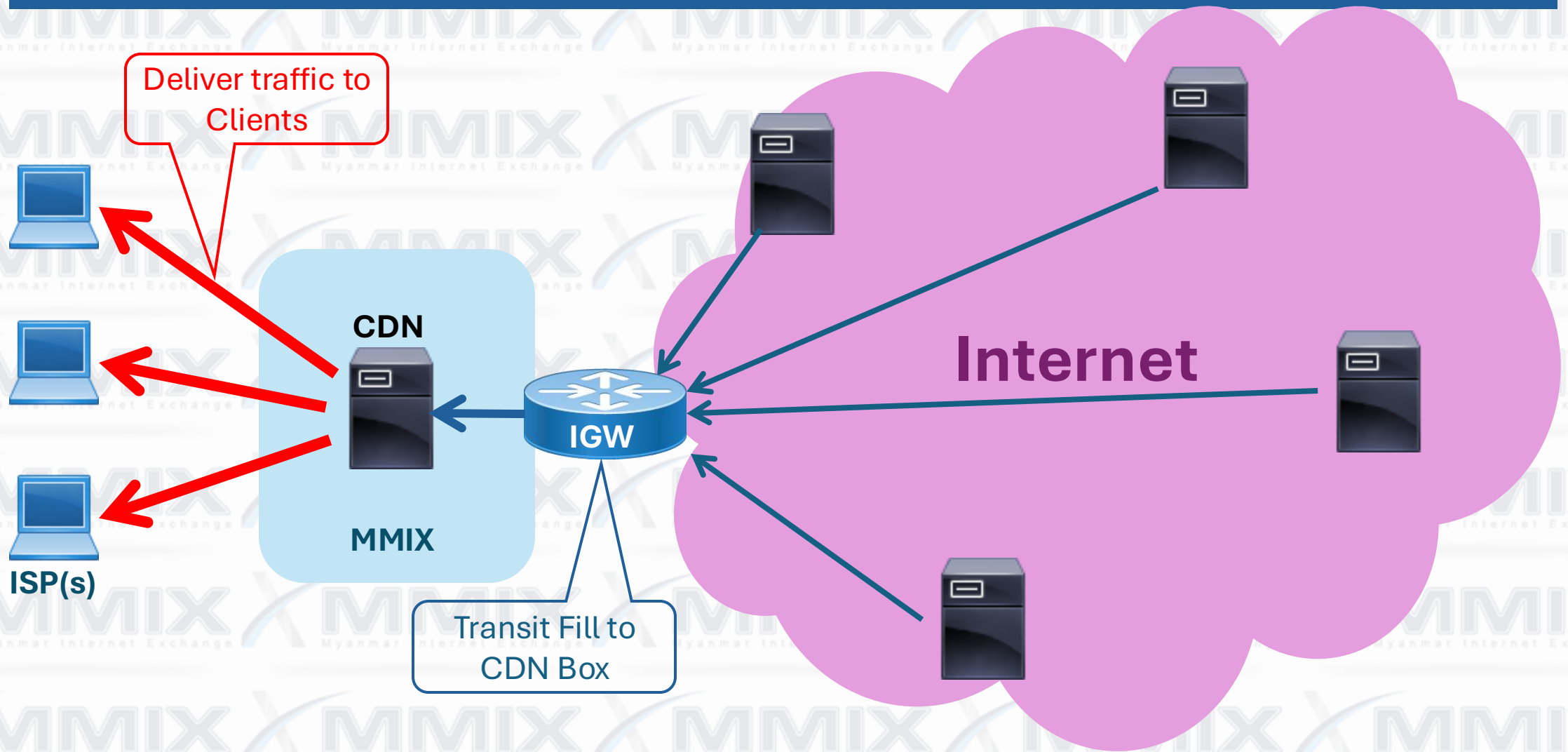
Recommendation

- Own DNS Resolver – able partial traffic subscription
- Public DNS Resolver - Full traffic subscription under same ASN
 - Google (8.8.8.8, 8.8.4.4)
 - Open DNS (208.67.222.222, 208.67.220.220)
 - Quad9 (9.9.9.9, 149.112.112.112)

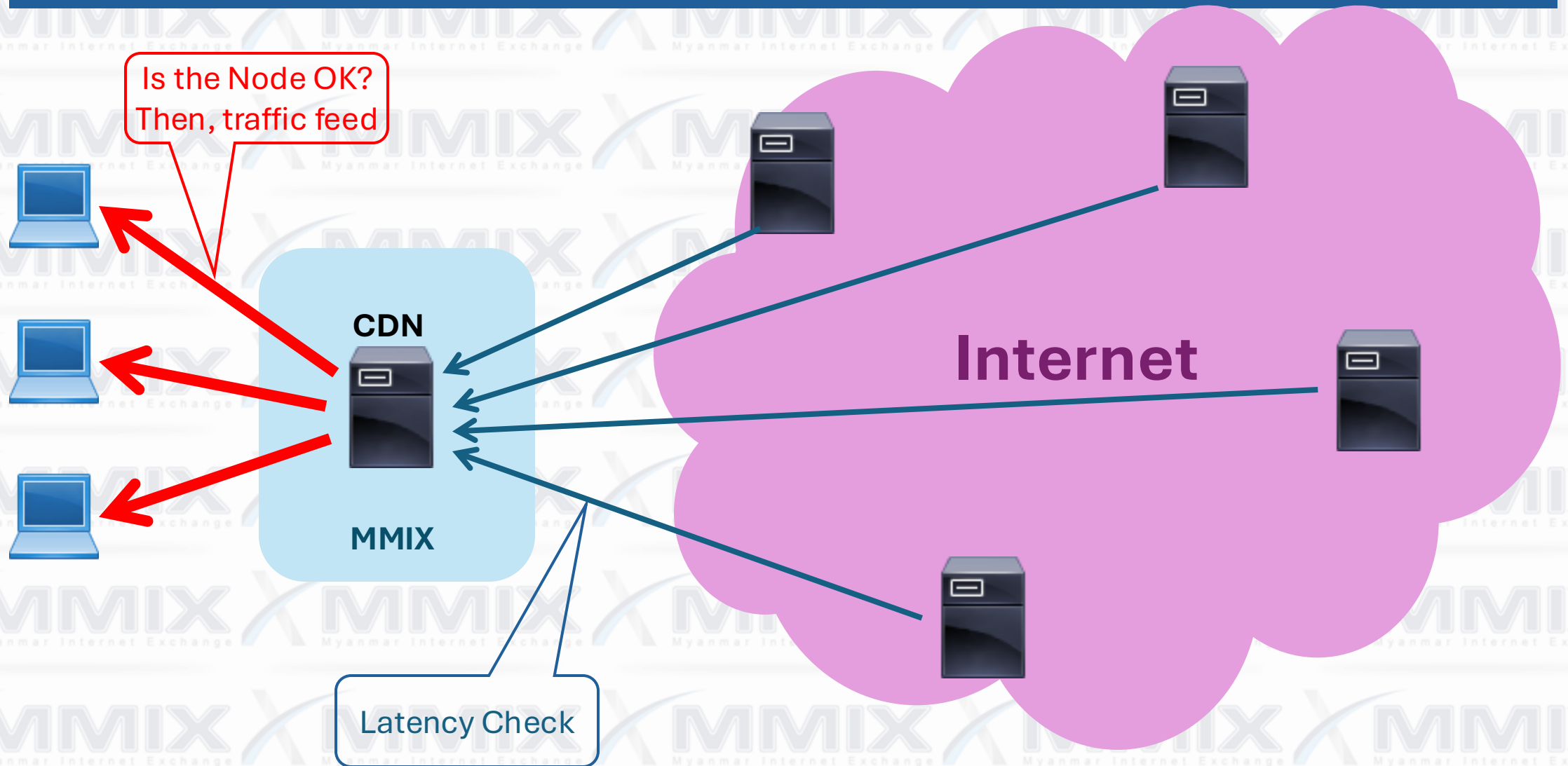
Partial traffic subscription



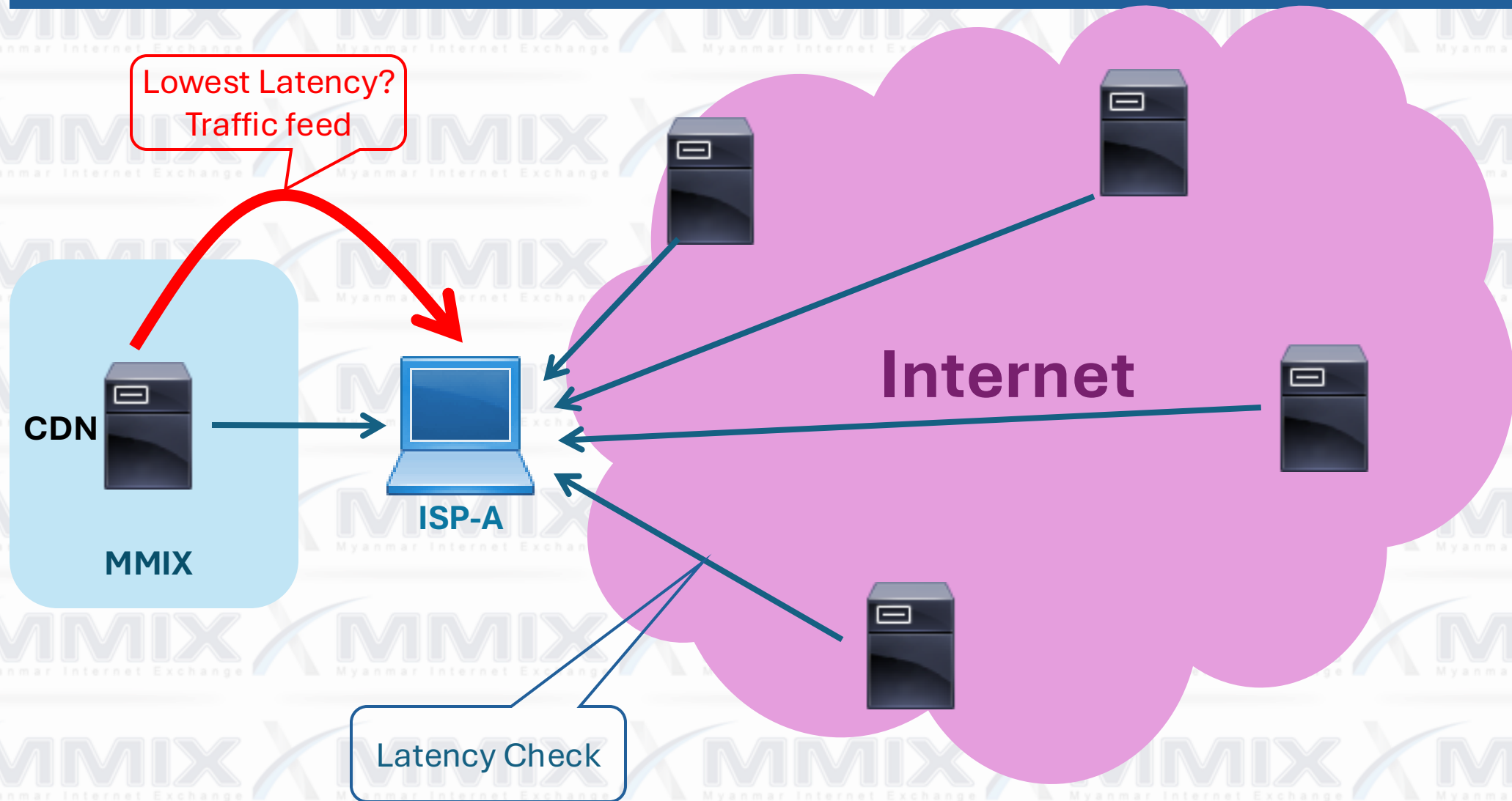
CDN Data Flow



Monitoring CDN node



Monitoring to ISP Network



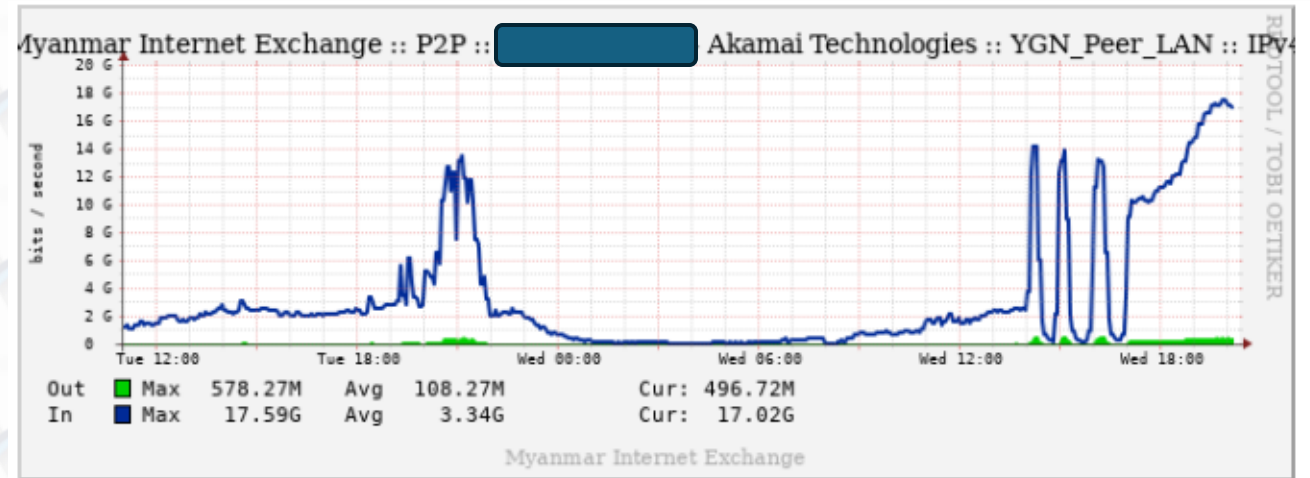
Common Problems

The whole CDN Node down.

- IP Transit, upstream network down.
- High latency to Monitoring nodes.

Specific Client Node traffic degrade

- Lost or high latency to Monitoring IP(s) of client.





Thank you!

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