Peering Negotiations at MENOG

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disclaimer: all opinions are all mine

Peering Principles

- 99.5% of all Internet peering is done by "handshake" (source: PCH, 2011)
- Peering is unregulated (almost) worldwide
- Peering arrangements are made voluntarily based on mutual benefit
- If there is no peering in place, all of the Internet is reachable via transit

The Internet has successfully scaled for >20 years without regulation:

- 8 orders of magnitude increase in traffic
- 5 orders of magnitude decrease in unit price

"That will be $0.0000008 for IP transit, or 100,000x more for voice please"

Source: OECD

Benefits of Peering

- For users:
  - Lower latency
  - Higher reliability
  - Better performance
- For network operators:
  - Lower costs
  - Higher reliability
  - More predictable routing
  - Better performance for customers
  - No third parties involved
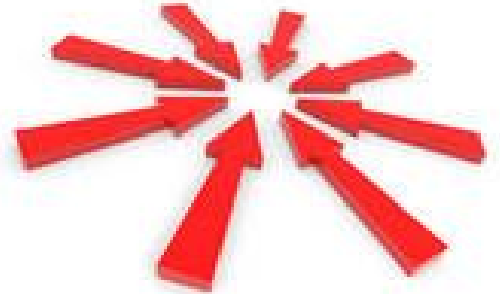 - Mutually beneficial relationship with partner

Who are peering managers?

- IP engineers
- Network planners
- CTOs
- Sales people
- Marketing
- ...

Prerequisites for Peering

Technical requirements for Peering:

- Public AS in use
- Public IP address block in use
- Register your AS on www.peeringdb.com
- Presence at a mutual location
  - IX or private peering location

How to Peer

1. Define your objectives
2. Book a meeting
3. Have a meeting at MENOG, discuss peering
4. Set up the peering
5. Profit!

1. **Decide on your objectives**

Who should I meet and why?

MENOG attendees include:
- Network Operators
  - your competitors
  - similar operators in other countries
- Internet Exchanges, both local and global
- Content Providers and CDNs
- Hosting Providers and datacentres
- Educational institutions
- Regulators and government officials

Who should I peer with?

- Check your traffic volumes
  - Netflow/Sflow analysis
  - Proxy and cache logs
  - Ask the other network...
- Look for key local content and access providers
- Review
  - lists of members at Internet Exchanges
  - lists of operators in facilities
- Check the other party's peering policy

Where to peer?

- PeeringDB.com has
  - List of all networks and where they peer
  - List of all facilities and who is there
  - List of all IXPs, where they are and who peers there

Batelco

		Public Peering Exchange Points		Filter
Organization	Batelco			
Also Known As		Exchange ▼	IPv4	Speed
Company Website		ASN	IPv6	RS Peer
Primary ASN	5416	Nothing matched your filter		
IRR Record		You may filter by **Exchange, ASN** or **Speed**		
Route Server URL		Private Peering Facilities		Filter
Looking Glass URL		Facility ▼	Country	
Network Type	Not Disclosed	ASN	City	
IPv4 Prefixes	0	Nothing matched your filter		
IPv6 Prefixes	0	You may filter by **Facility, ASN, Country, City**		

2. Find a delegate to meet with

Mohammed	Manhal	National Information Center	SD
Mohammed	Yahiya	Etisalat	AE
Mohanan	Saju	HCT	OM
Mohseni	Fuad	Batelco	BH
Myasoedov	Sergey	NetArt Group	CZ
Nasreddine	Bassel	Masco group	LB
Nystrom	Fredrik	Omantel	OM

3. Have a meeting!

- Peering is built on *relationships*
- Make sure you understand each other's objectives, costs, and benefits
- Find a mutually agreed place to peer
- Agree action items and next steps

Negotiating Peering

How to encourage someone who doesn't want to peer with you, to peer with you?

- Exchange lots of traffic (e.g. host content on your network if they are an eyeball network)
- Find another location to peer in, that works for both sides
- Buy another operator who already has peering
- Leverage a broader business arrangement
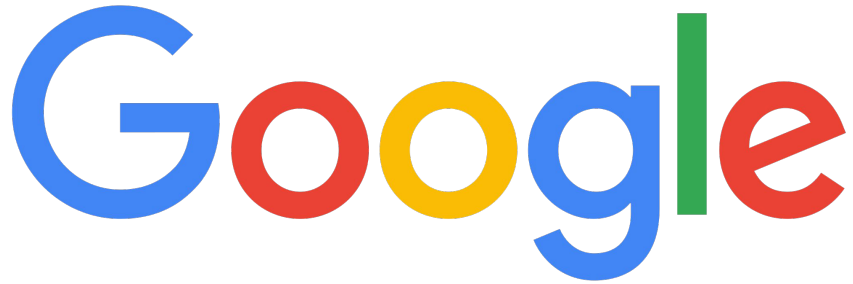- Make friends
    - Buy them tea/juice/dinner... :-)

5. **Set up the peering (the easy part)**

```
router bgp 12345
  neighbor 2001:1:2:3:4:1:5169:1 remote-as 15169
  address-family ipv6 unicast
    neighbor 2001:1:2:3:4:1:15169:1 prefix-list announce-my-ipv6 out
```

Conclusions

Do your research, then...

1. Define your objectives
2. Meet some potential peers
3. Exchange ideas, details, agree to set up peering
4. Set up peering
5. Enjoy better performance, and lower costs!

AS15169, AS36040, AS43515

https://isp.google.com/iwantpeering
https://isp.google.com/iwantggc/

We peer in most peering locations around the world

Your contact for Gulf/Middle East region is tvolmer@google.com