

Peering Concepts and Definitions

Terminology and Related Jargon



Presentation Overview

- Brief On Peering Jargon
- Peering & Related Jargon

BRIEF ON PEERING JARGON

Brief On Peering Jargon

- ❑ A lot of terminologies used in the peering game.
- ❑ We shall look at the more common ones.
- ❑ Will be directly related to peering, as well as ancillary non-peering functions that support peering.

PEERING & RELATED JARGON

Peering & Related Jargon

- ASN (or AS - Autonomous System Number)
 - A unique number that identifies a collection/grouping of IP addresses or networks under the control of one entity on the Internet
- Bi-lateral (peering):
 - Peering relationships setup “directly” between two networks (*see “Multi-lateral [peering]”*).
 - BGP (Border Gateway Protocol)
 - Routing protocol used on the Internet and at exchange points as the de-facto routing technique to share routing information (IPs and prefixes) between networks or between ASNs
- Carrier-neutral (data centre):
 - A facility where customers can purchase network services from “any” other networks within the facility.
- Cold-potato routing:
 - A situation where a network retains traffic on its network for as long as possible (*see “Hot-potato routing”*).
- Co-lo (co-location):
 - Typically a data centre where customers can house their network/service infrastructure.

Peering & Related Jargon

– Dark fibre:

- Fibre pairs offered by the owner, normally on a lease basis, without any equipment at each end of it to “activate” it (*see “Lit fibre”*).

– Data centre:

- A purpose-built facility that provides space, power, cooling and network facilities to customers.

– Demarc (Demarcation):

- Typically information about a co-lo customer, e.g., rack number, patch panel and port numbers, e.t.c.

Peering & Related Jargon

- DFZ (Default Free Zone):
 - A situation where networks run their routers with the full Internet BGP routing table and no default route.
- De-peer:
 - A situation where a network terminates a peering relationship with another (*see “peer”*).
- Downstreams:
 - Typically a network’s customers (*see “Upstreams”*).
- Eyeballs:
 - End-users of a network that are typically requesting content off online resources.

Peering & Related Jargon

- Facility:

- May be synonymous with a data centre or co-lo site where networks house their infrastructure.

- Full circuit:

- A link provided by a network operator as an end-to-end connection between two points of interest to the customer (*see “half circuit”*).

- Half circuit:

- One end of an end-to-end circuit that is provided half-way the distance, before it is picked up by another network operator for completion (*see “Full circuit”*).

Peering & Related Jargon

- Hot-potato routing:
 - The ability of a network to hand traffic off to other networks at earliest possible moment (*see “Cold-potato routing”*).
- Interconnect charges:
 - Monies paid by peering parties for them to interconnect, e.g., cost of cabling.
- IPLC:
 - International Private Leased Circuit – a leased line that spans two or more countries.
- IRU:
 - Indefeasible right of use (IRU) is a contractual agreement between fiber optic infrastructure operator (submarine or terrestrial) and a client for purchase of capacity for any legal use.
- Looking glass:
 - A device/resource that permits anybody that is interested to analyze a network's view of the Internet.

Peering & Related Jargon

- Lit fibre:
 - Fibre pairs owned by network operator who has attached equipment at either end to generate bandwidth from them (see *“Dark fibre”*).
- Mandatory (peering):
 - A situation where members at an exchange point are “forced” to peer with one another.
- Mbps (Megabits Per Second)
 - Measurement of speed of a link (1000Mbps = 1Gbps)
- MB (MegaBytes)
 - Measurement of volume of data transferred (1MB = 0.125Mb and 1000MB = 1GB)
- MMR (Meet Me Room):
 - A centralized passive, cable switching panel in a data centre where interconnects between networks occur.
- Multi-lateral (peering):
 - Peering with a group of networks through a single negotiated policy (see *“Bi-lateral peering”*).

Peering & Related Jargon

- No (peering policy):
 - A network implementing this general policy is not interested in peering with any other network (see *“Open, Selective, Restrictive [peering policies]”*).
- Off-net (traffic):
 - Traffic that is handed off to another network at some point in its flight.
- On-net (traffic):
 - Traffic under the control of the same network, i.e., the origination and termination of traffic remains on the same network.

Peering & Related Jargon

- Open (peering policy):
 - A network implementing this general policy is happy to peer with any other network without restriction (*see “No, Selective, Restrictive [peering policies]”*).
- Paid peering:
 - Is similar to Transit where one network pays another for access to its backbone, but here, the network being paid provides connectivity only to its customers, and not the whole Internet.
- Peer:
 - A network with whom you exchange traffic.
- Peering:
 - The act of exchanging traffic with a peer.

Peering & Related Jargon

- Peering co-ordinator:
 - An individual within an organization that handles all peering-related matters for that network.
- Peering policy:
 - A set of guidelines by which network operators will peer with external networks.
- Pol (Point of Interconnect):
 - A location, mutually agreed on by peering parties, where peering will occur.
- Private peering:
 - Peering that does not typically involve any public exchange points, i.e., back-to-back agreements (see *“Public peering”*).

Peering & Related Jargon

- Public peering:

- Peering typically done across a public exchange point (*see “Private Peering”*).

- Restrictive (peering policy):

- A network implementing this general policy is normally not interested in peering with any other networks (*see “No, Open, Selective [peering policies]”*).

- Route registry:

- A centralized database that contains routing information, e.g., prefixes, AS_PATH's, ASN's, e.t.c.

Peering & Related Jargon

- Route server:
 - A centralized router at a public peering exchange point that is able to serve all member routes via a multi-lateral peering strategy.
- Selective (peering policy):
 - A network implementing this general policy is normally happy to peer provided a minimum set of criteria are met (*see “No, Open, Restrictive [peering policies]”*).
- Settlement-free peering (a.k.a SFI):
 - Neither party pays the other for the exchange of traffic.
- Settlement-based peering:
 - One of the networks pays the other for the exchange of traffic (*see “Transit”*).

Peering & Related Jargon

- Traffic ratio:
 - The balance between how much traffic a network sends to its peers vs. what it receives from them.
- Transit:
 - A service where a network pays another for access to the global Internet.
- Transit-free:
 - A situation where a network does not purchase any Transit from any other network, and yet “usually” has a full view of the global Internet.
- Upstreams:
 - Typically networks to whom you hand-off traffic and pay a fee, e.g., Transit providers (*see “Downstreams”*).

END

