BGP Terminology

- Autonomous System/ASN
- RIR
- LIR
- Peering
- Transit

Autonomous System/ASN

What is a ASN/Autonomous System?

The internet, being the thing you are using to read this page right now is made up of several smaller networks, that work together under one globally agreed upon routing policy, hence the the name InterNet (interconnected networks) These networks that make up the internet managed by a single organization are called Autonomous systems.

A way to think of an Autonomous system is similar to that of a country or mail, mail traverses the postal network until it reaches the local branch for your town, which would be the AS in this context, similarly you travel through other countries until you reach your own, being your AS

RIR

A RIR is a regional internet registry, they generally service a continent or large regional body of land, and are typically used by very large ISPs or groups that have a specific need for direct IP assignment from the top. Generally you would go to a RIR when you need a large volume of IP addresses or have very specific routing policies that require several ASNs or other resources. RIRs also cost more than LIRs, however.

The major RIRs are ARIN, RIPE, APNIC, AFRINIC and LACNIC

LIR

A LIR, in contrast to a RIR is a Local internet Registry, these are people who have accounts with

RIRs, and downsell and assign resources to smaller groups of people, generally users of a specific ISP, or a small group of people. LIRs are effectively always cheaper than going to a RIR for the majority of people who don't need vast swaths of resources assigned to them. LIRs can issue ASNs and IP Resources and generally also sell other things you may need to utilize them, like BGP sessions and virtual servers (VPSes).

Some reputable LIRs are Cloudie Networks and iFog

Peering

Peering, generally speaking when referring to BGP, regards the act of two networks agreeing to interconnect with each other, generally at no cost to either, to exchange traffic between the two networks. This is different than Transit in that they won't carry traffic bound for other networks, and as a result, assuming both sides see it as beneficial, there will be no cost in peering with another network.

Transit

Transit is when you (generally speaking) pay a network for access to there network and there customers, this is generally done to T1s, who provide you with access to the rest of the internet for a fee, usually charged per mbps, per month. Transit capacity, especially for smaller networks tends to reflect how much traffic you can push to the "internet".