

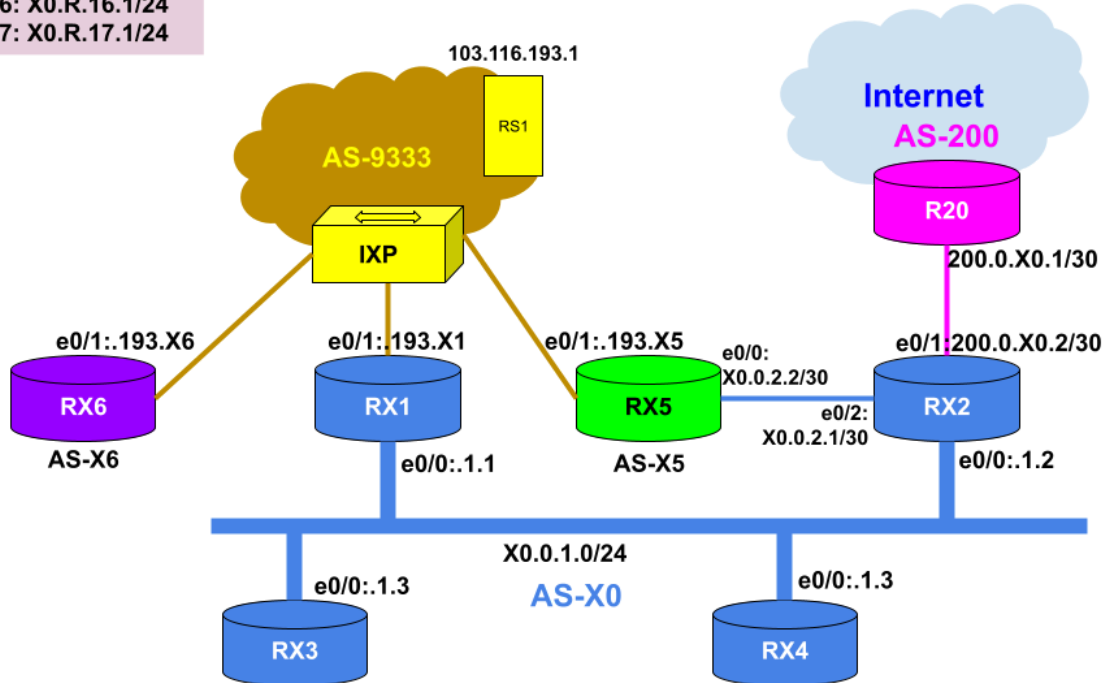
LAB - BGP - Peering

This doc belongs to MMNOG. Do not use this material for commercials.

BGP Peering Concept.

X = Group ID,1,2,3,
R = Router ID,1,2,3,

Lo0: X0.0.0.R/32
Lo16: X0.R.16.1/24
Lo17: X0.R.17.1/24



For your exercise, please refer to the above diagram.

Topology:

Rx1 of Blue ISP is connected to an IXP (MMIX).

Rx2 of Blue ISP is connected to upstream provider AS200.

Rx5 of Green ISP is connected to MMIX and its upstream Rx5 of Blue ISP.

Rx6 of Purple ISP is connected to only MMIX.

All routers already configured necessary IGP and basic BGP, including route announcement.

In every router, Lo16 and Lo17 are supposed to be Clients' Prefixes.

Note: Access to R10 & R20 are allowed but just user level. So, you can check routing tables.

MMIX-MDY is supporting the following BGP Community values

0:9333 - Block announcement of prefixes to all Peers.

0:<peer-as> - Block announcement of prefixes to certain peer.

9333:9333 - Advertise to all peers.

9333:<peer-as> - Advertise to certain peer.

Exercise

Check the preconfigure setting.

Please note that, better recommend analysis routing tables before and after changes.

1. Check configuration and ping test link IP addresses. Check also OSPF routes, BGP sessions and BGP routes.
2. At RX1 and RX6, setup bgp session with RS1 of the IXP. Learn routing tables
3. At RX5, setup bgp peer session with RS1 of MMIX. Learn routing tables.
4. At Rx2 setup bgp session with its upstream AS200.
5. Higher preference for peering traffic.
6. At Rx2 adjust the downstream path to Rx5 to go via private peer link.
7. Control peer partner using BGP communities. Rx5 does not like to peer with Rx1. From RX5, do not announce owned prefixes to RX5 using BGP Community supported by MMIX. Do not accept prefixes of RX1, also.
8. Setup Peering partner. Rx5 likes to peer with Rx6. At Rx5 advertise all prefixes using bgp community value support by MMIX, so Rx5 prefixes shall be announced to Rx6.