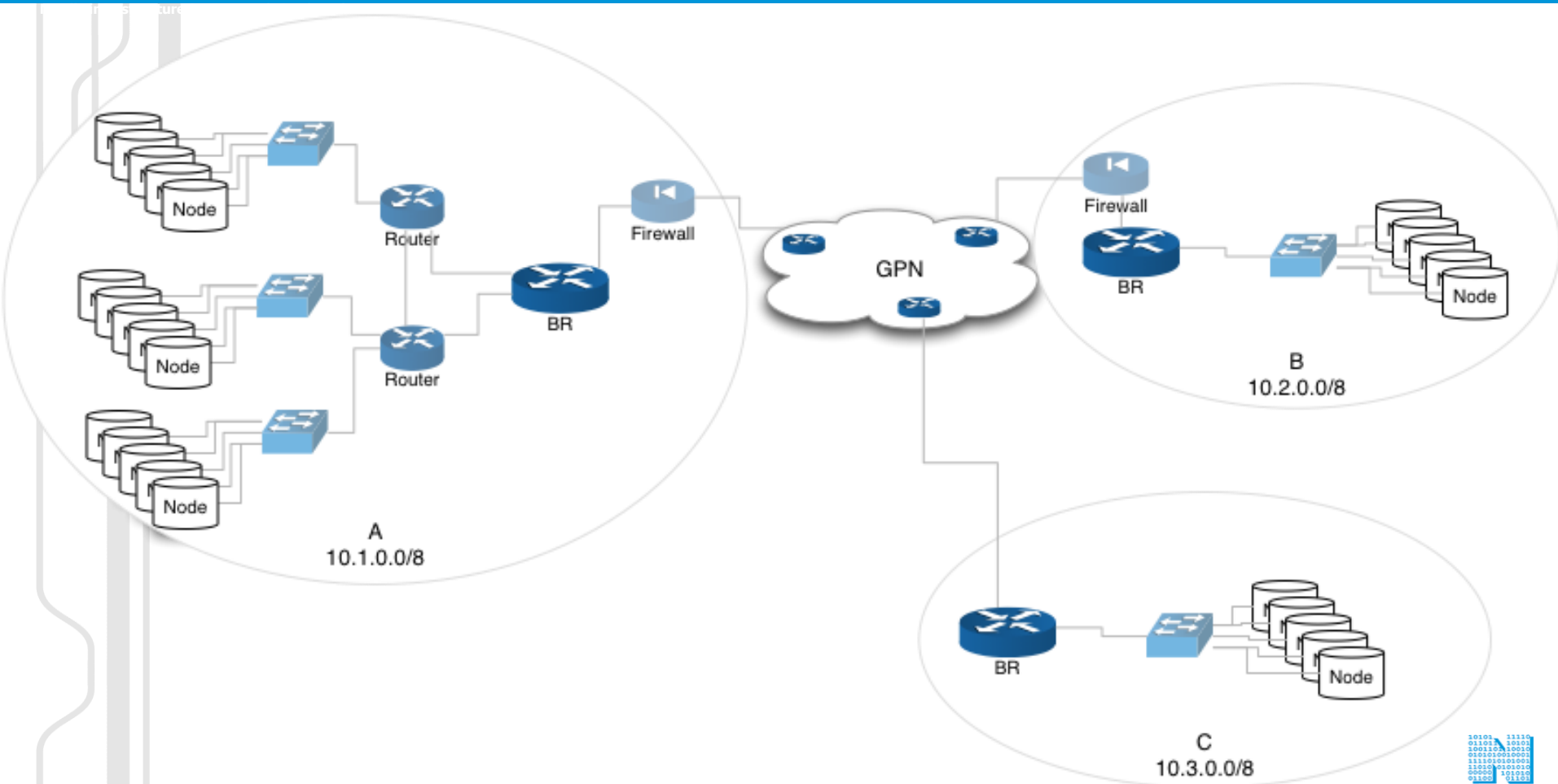
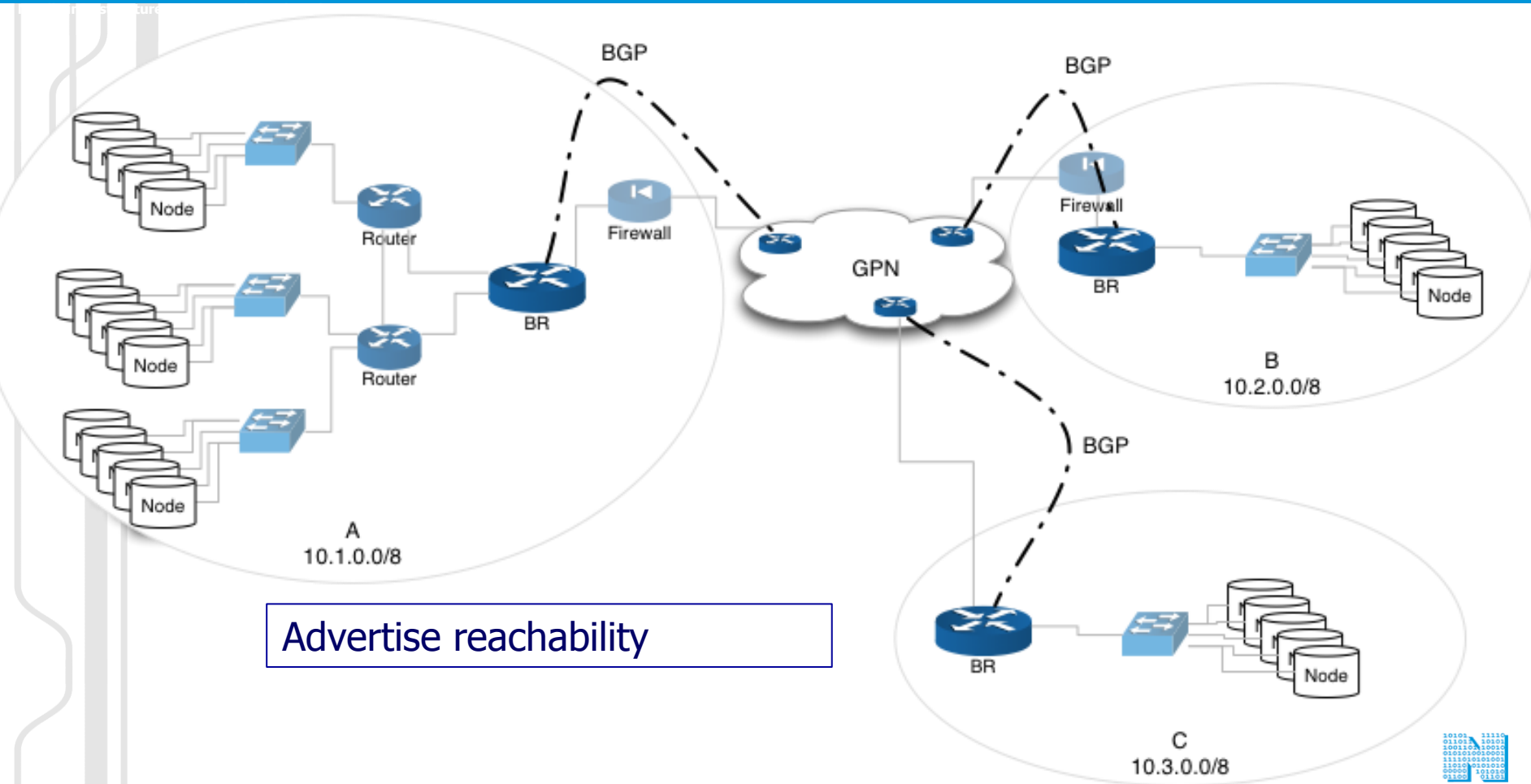


LHCone P2P routing without dynamic router configuration

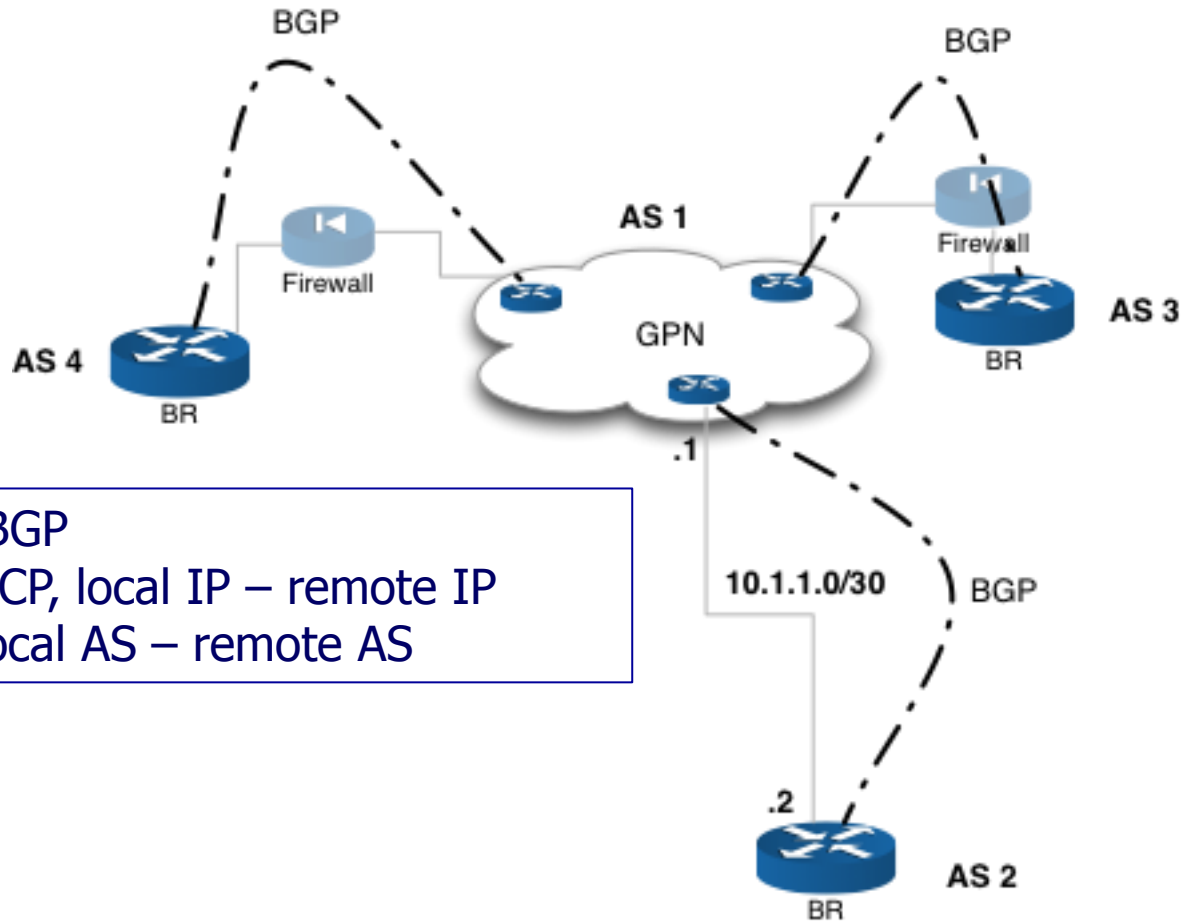
Magnus Bergroth





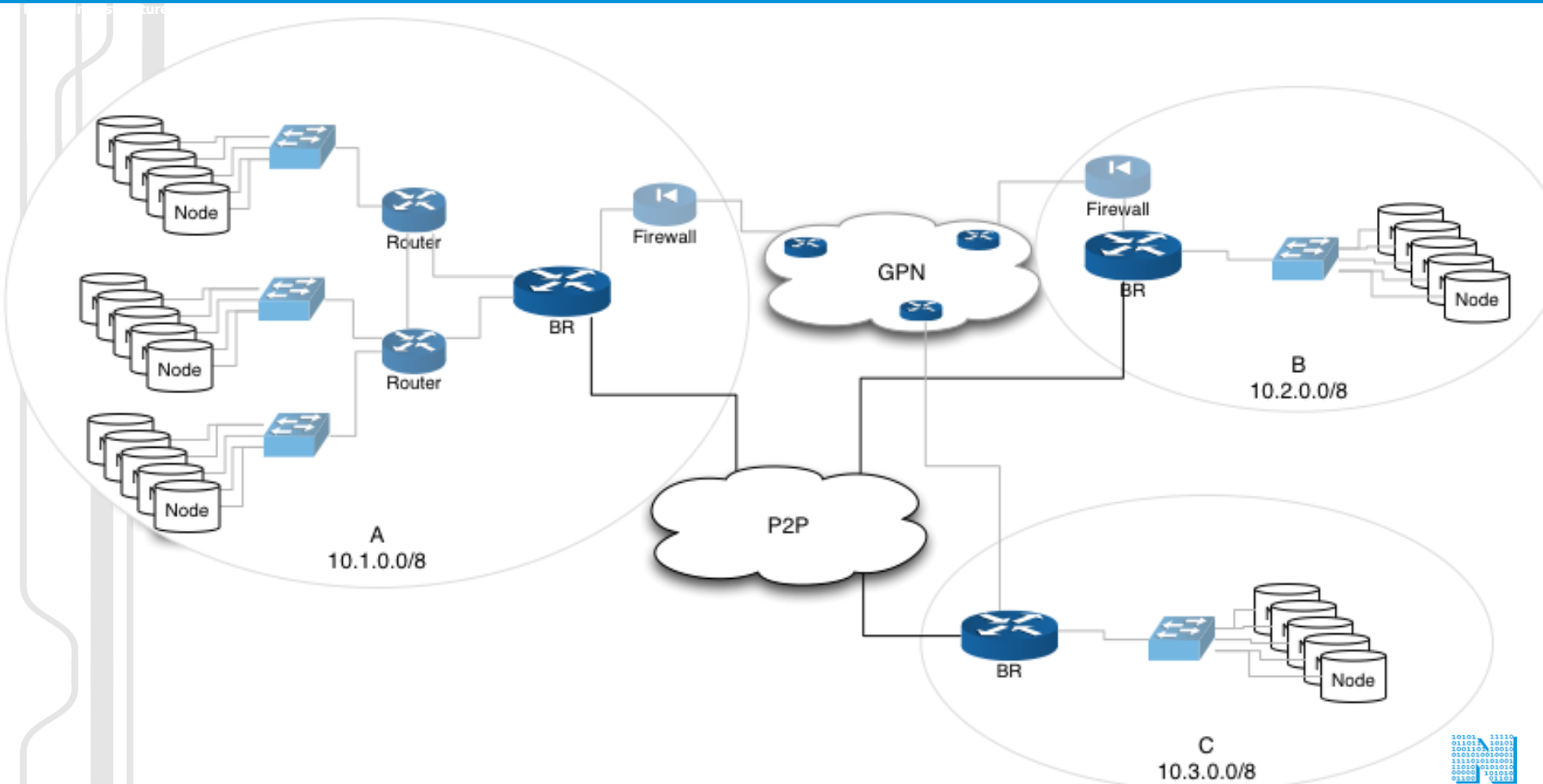
Advertise reachability



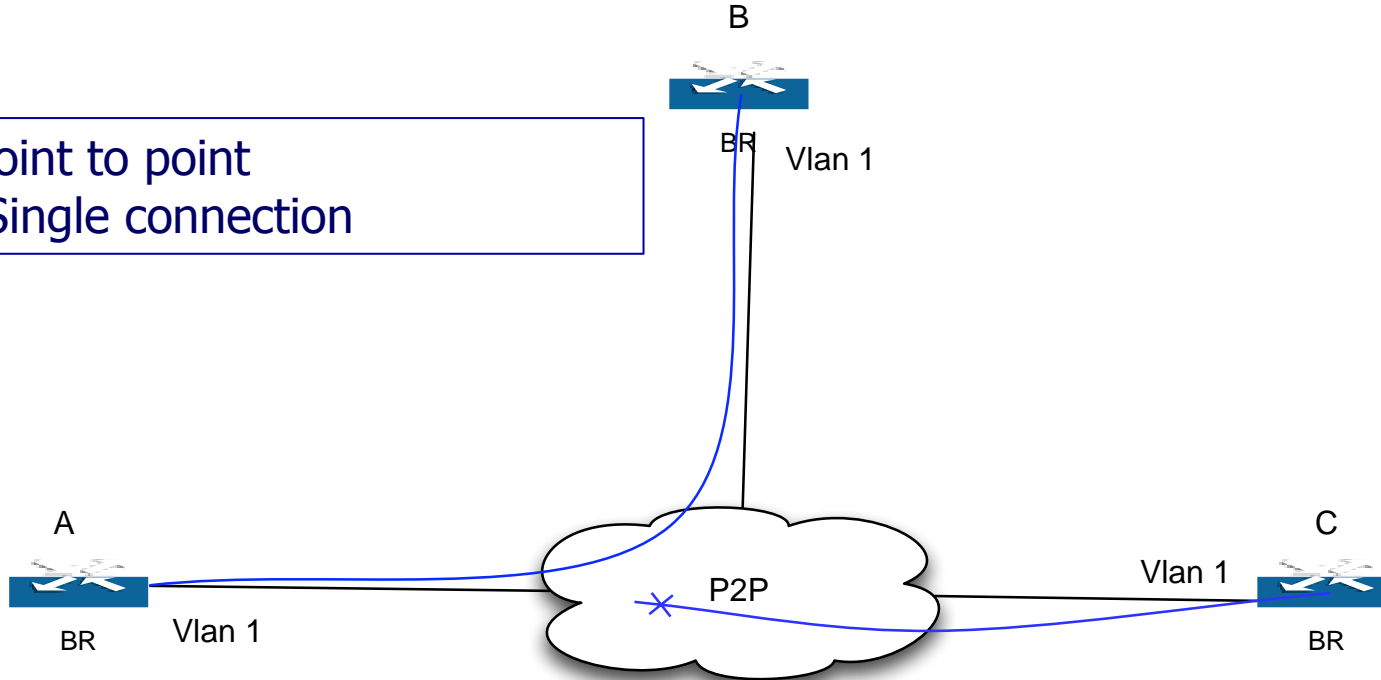


eBGP

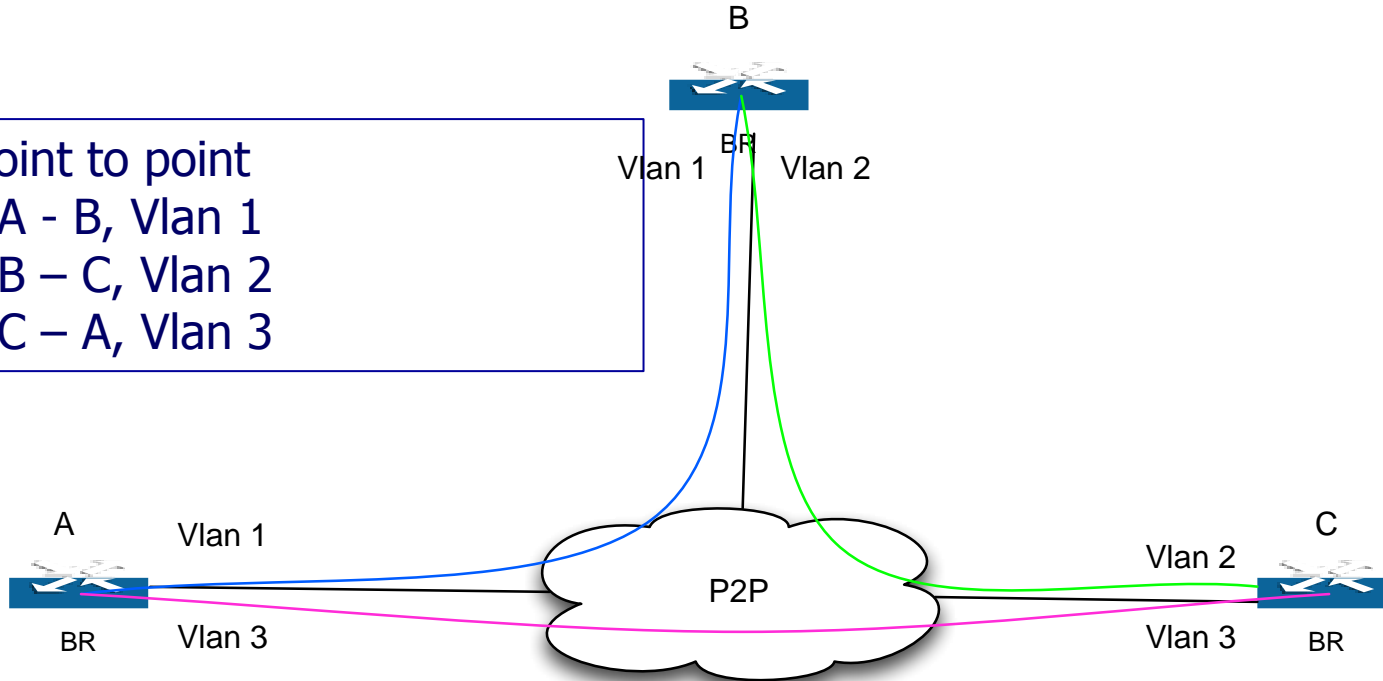
TCP, local IP – remote IP
local AS – remote AS



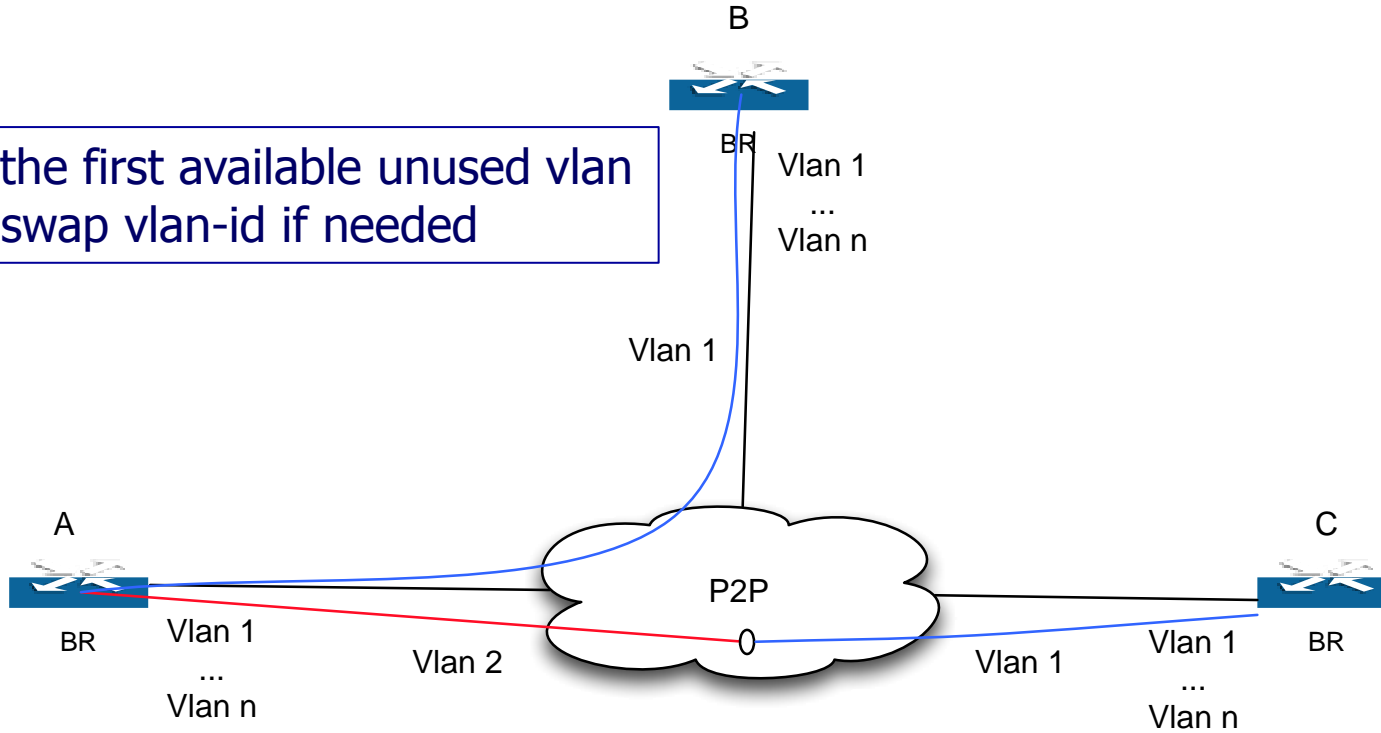
Point to point
Single connection



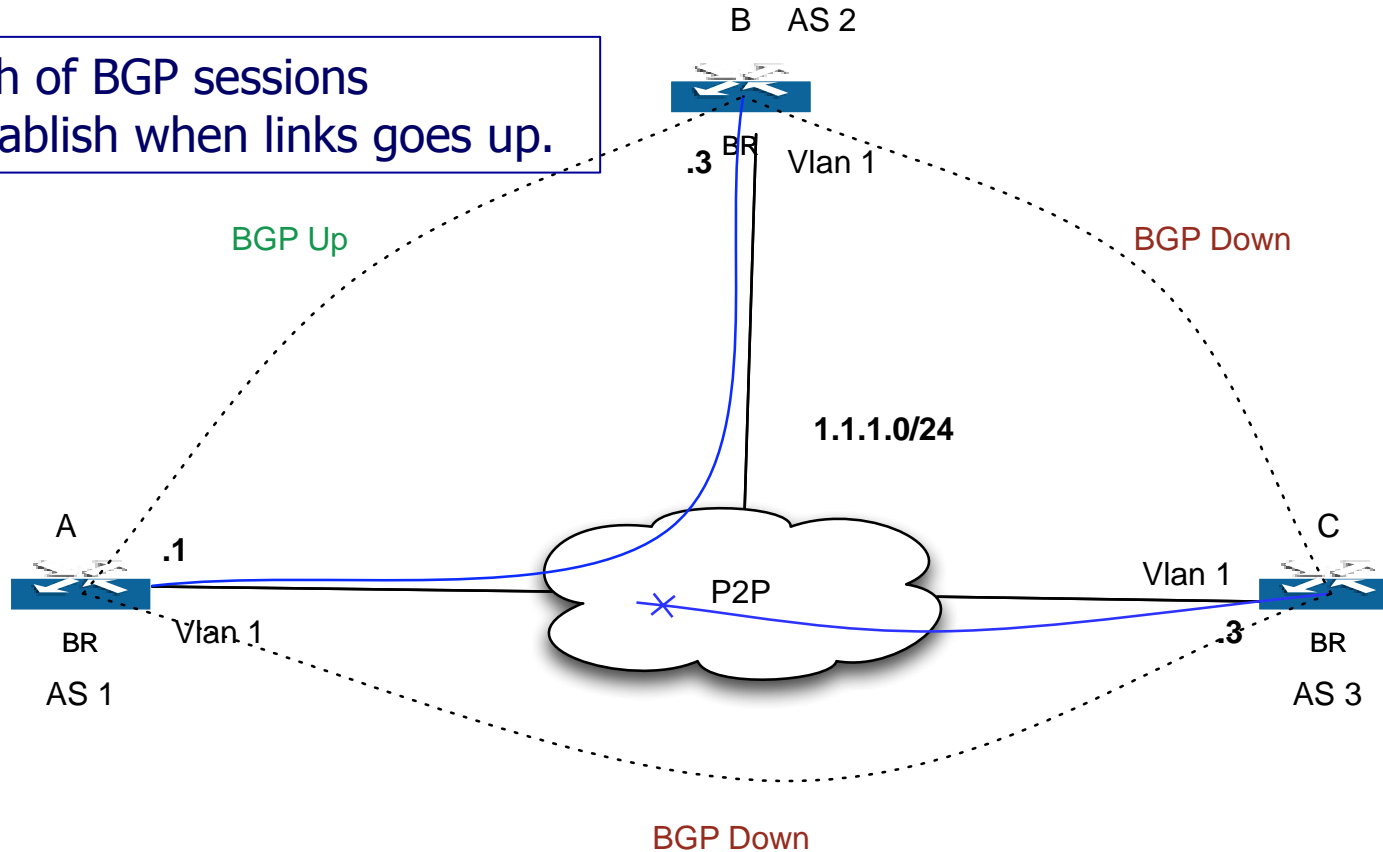
Point to point
A - B, Vlan 1
B - C, Vlan 2
C - A, Vlan 3



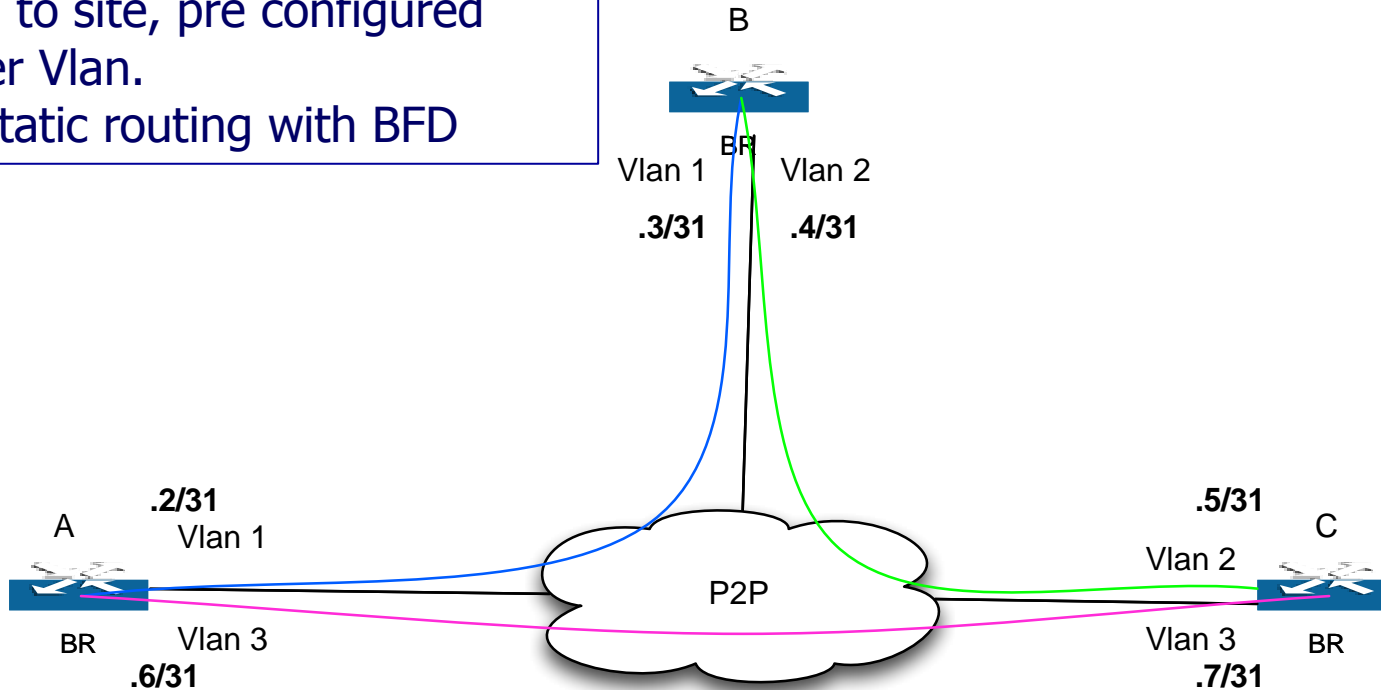
Use the first available unused vlan
P2P swap vlan-id if needed



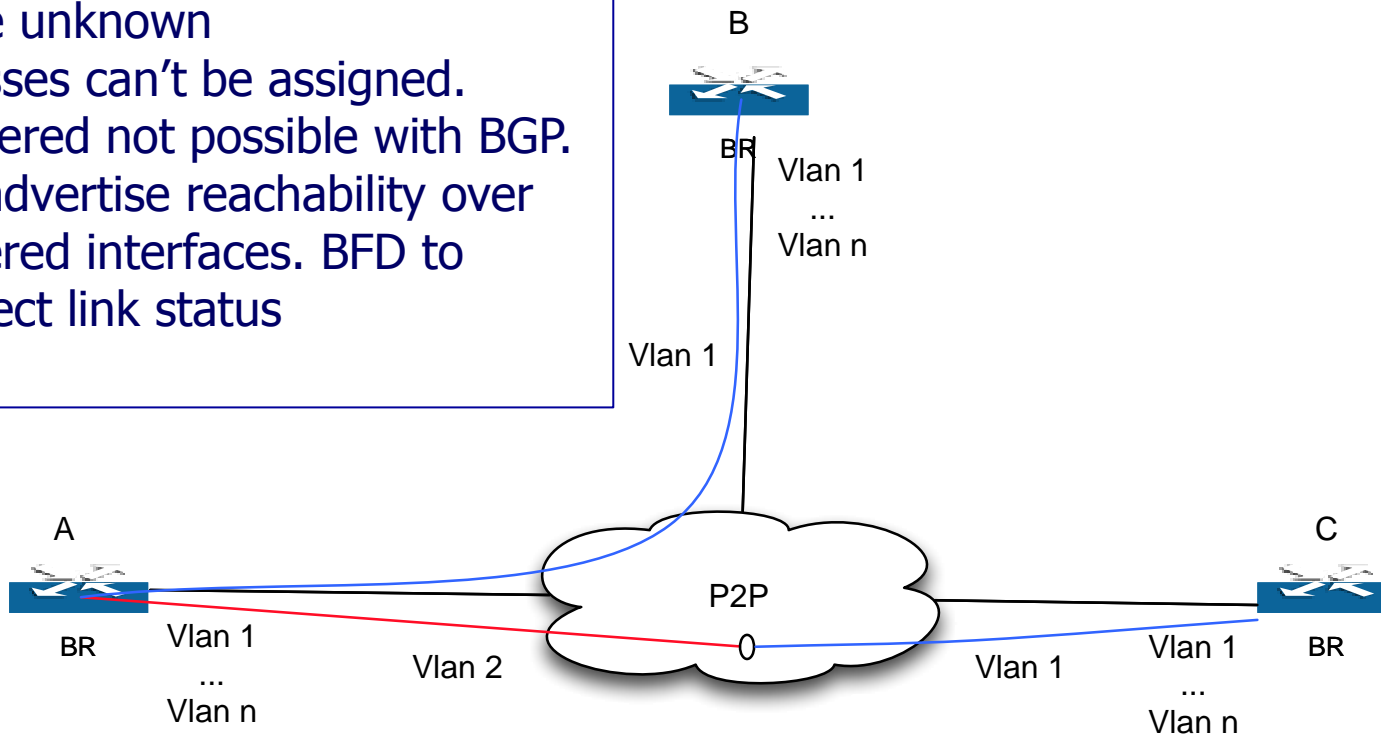
Full mesh of BGP sessions
BGP establish when links goes up.



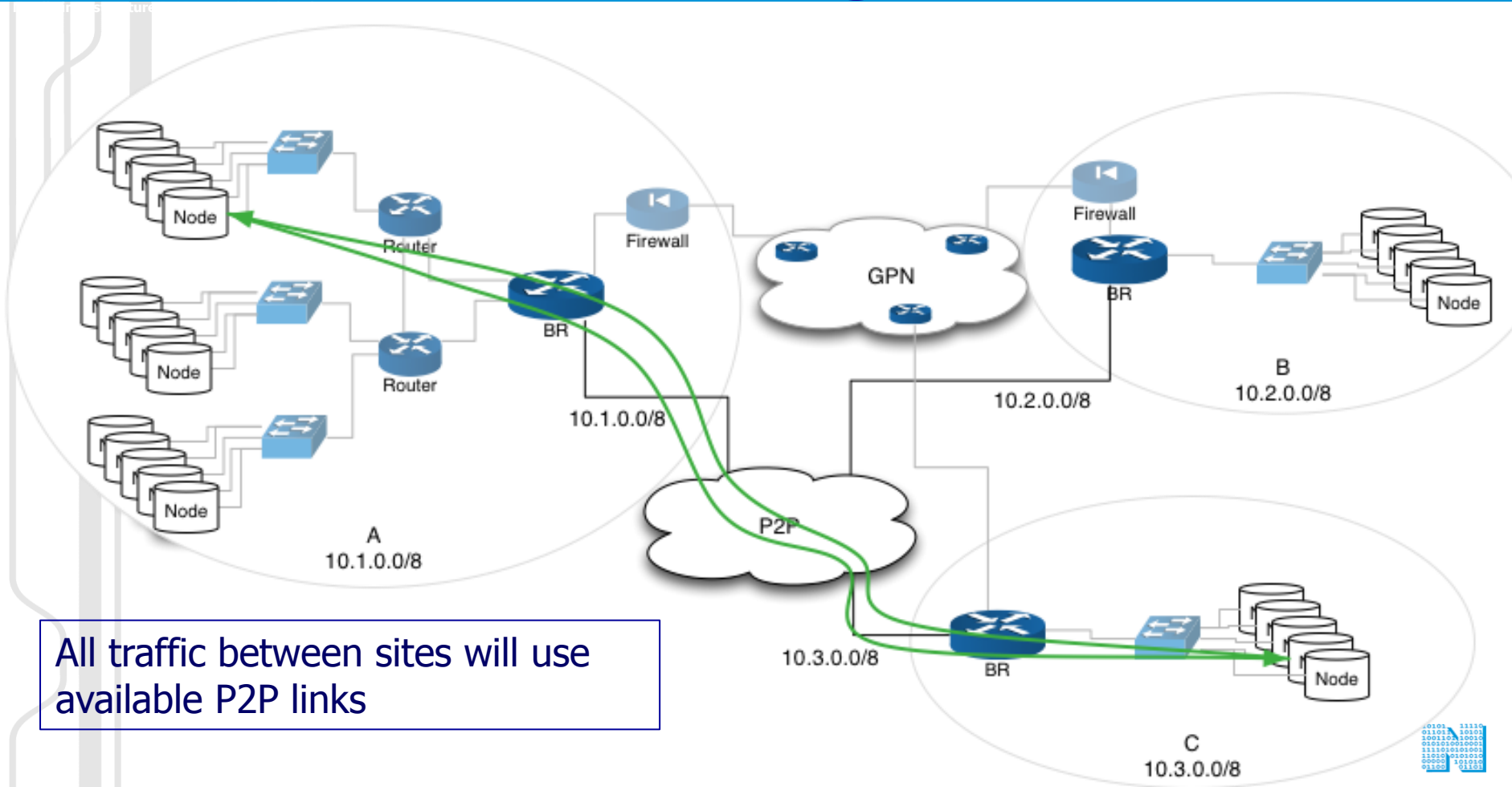
Vlan tied to site, pre configured
ip /31 per Vlan.
BGP or static routing with BFD



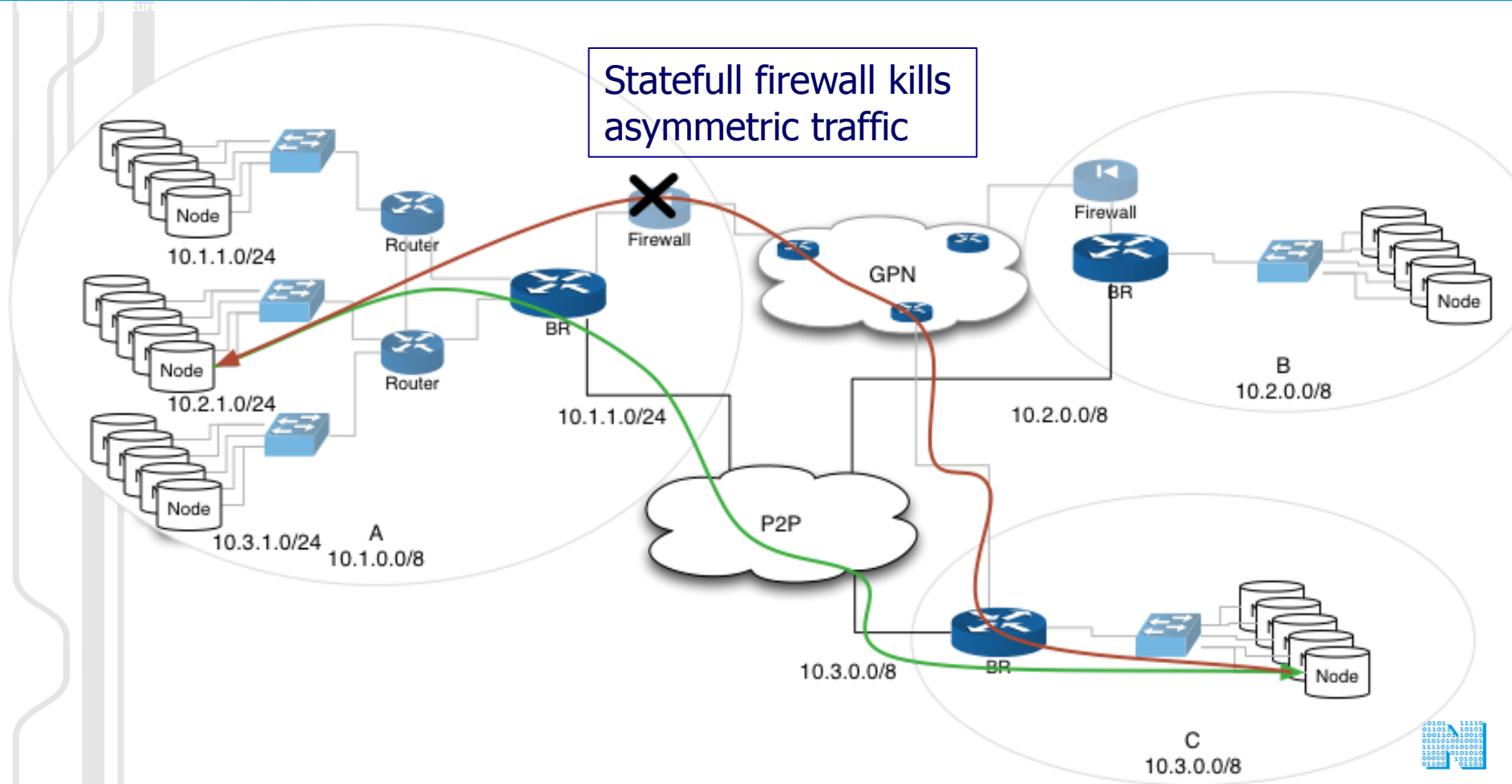
Other side unknown
IP addresses can't be assigned.
Un-numbered not possible with BGP.
RIP can advertise reachability over
un-numbered interfaces. BFD to
faster detect link status

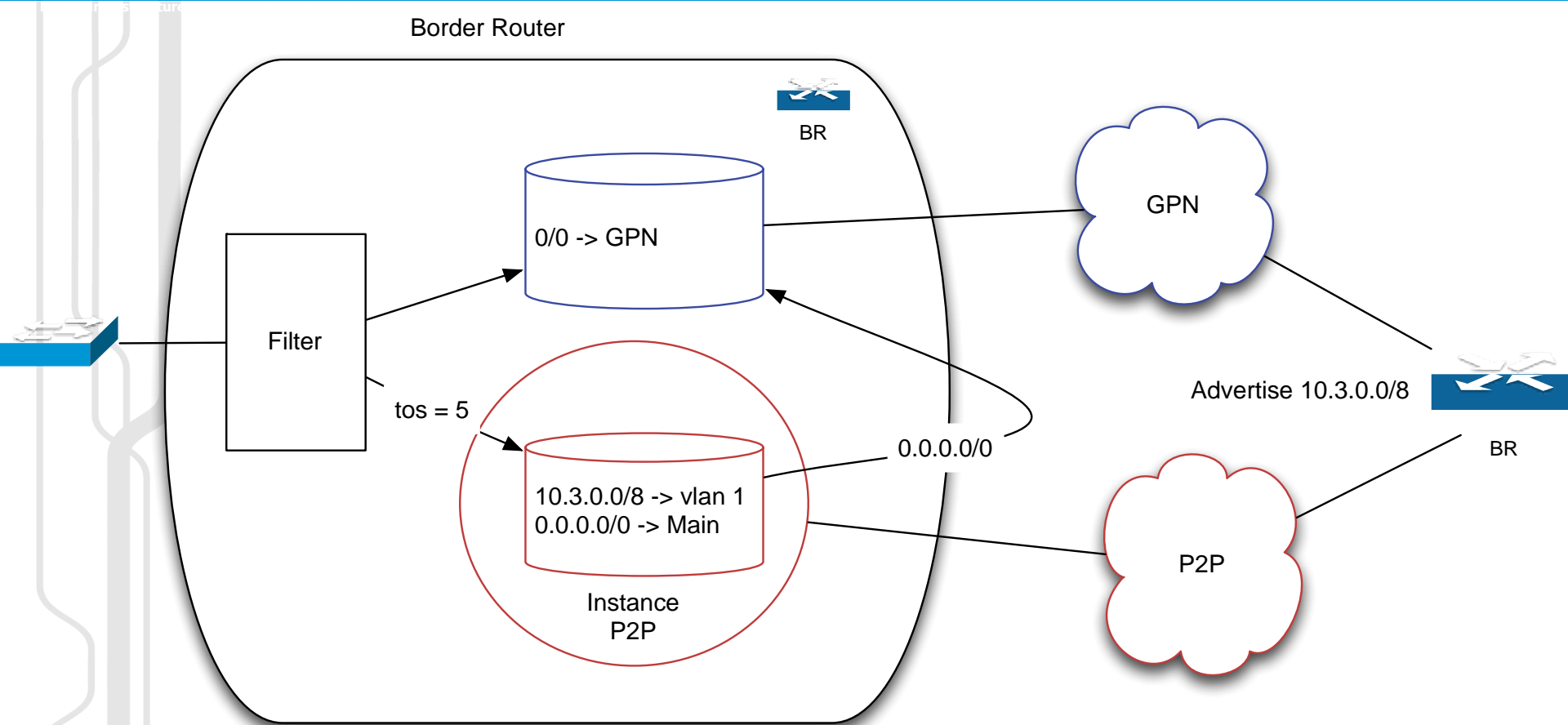


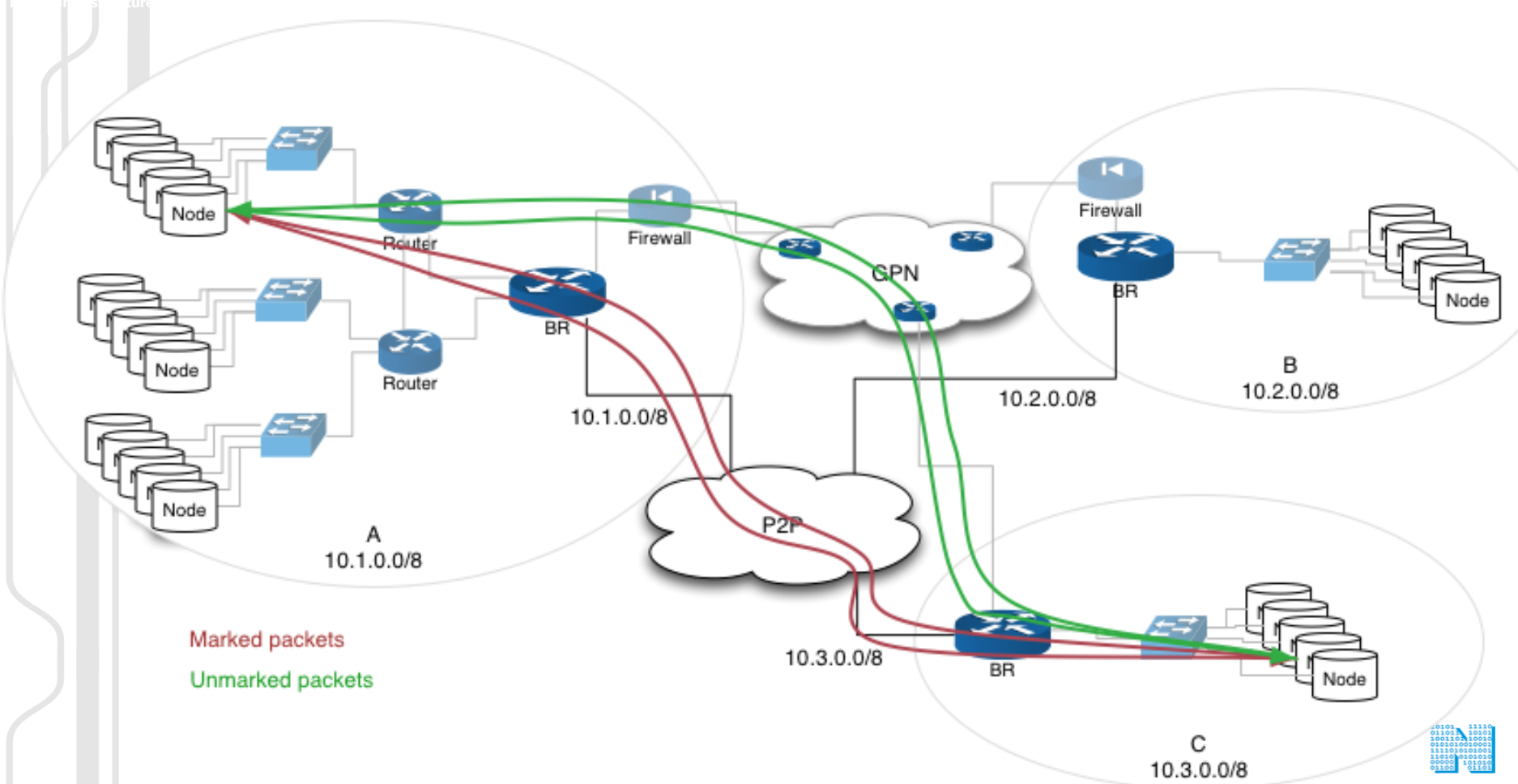
	Single Vlan	Mesh Vlans	n x Vlans
Connectivity	One site at the time	Any to any	n sites at the time
IP addressing	Shared IP space	IP peer vlan	Un-numbered
Routing	BGP	BGP, Static with BFD	RIP with BFD



All traffic between sites will use available P2P links







Have software that controls the Border Routers and inserts Policy/Filter based rules.

Source IP + port, Destination IP + port pointing to P2P vlan.

Last slide, out of ideas