

Methods for Prevention, Detection and Mitigation of BGP Route Leaks

ietf-idr-route-leak-detection-mitigation-06

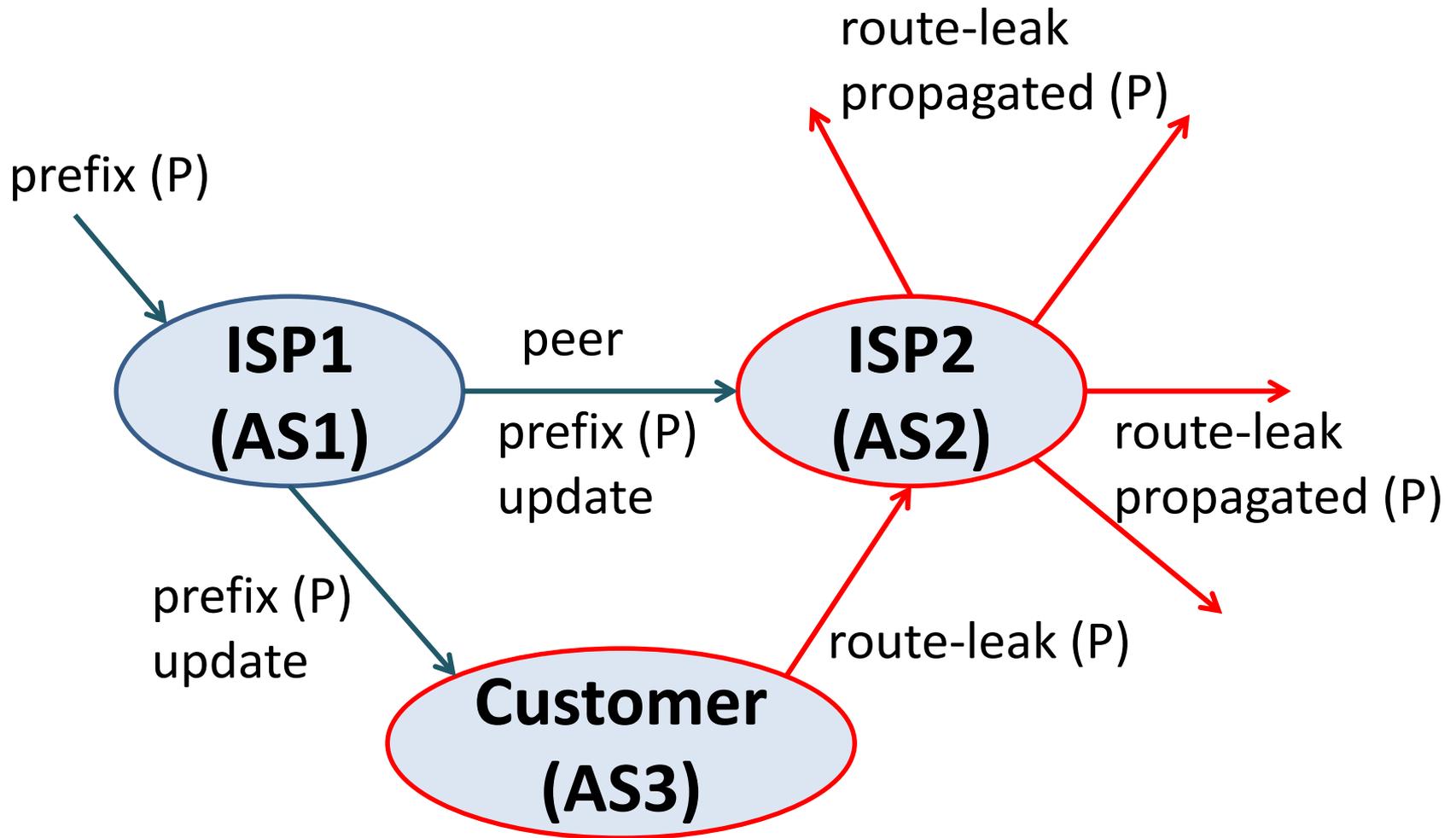
(Route leak definition: RFC 7908)

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Route Leak: The Tale of Two Culprits



- Intra-AS and Inter-AS solutions are necessary.

Building Blocks

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Intra-AS route leak prevention (iBGP messaging)

- COMMUNITY, or
- Attribute

Inter-AS route leak detection/mitigation

- Optional transitive attribute

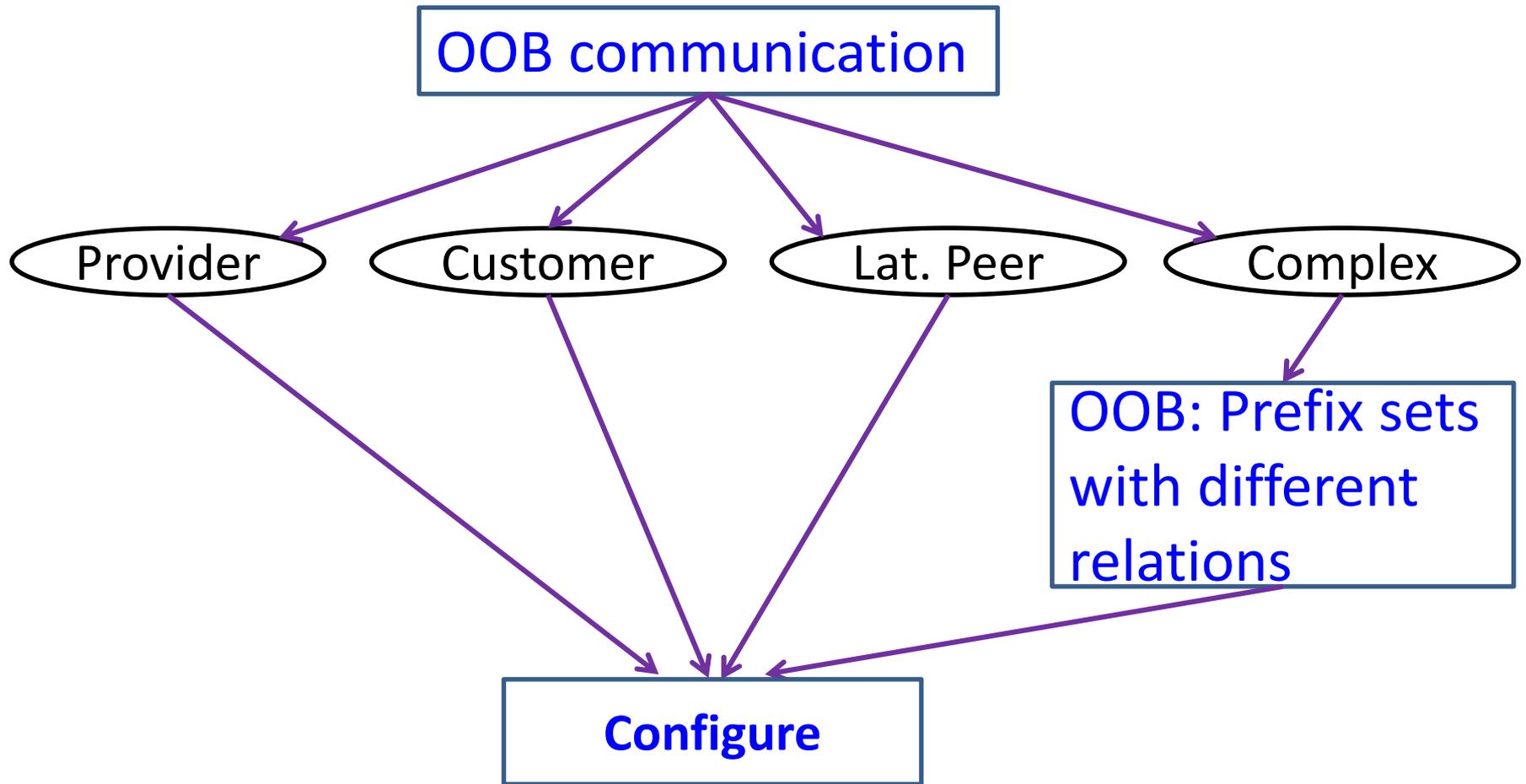
Configure peering relation for each peer (per prefix)

OOB communication between operators:

Peering relation, ASN, interface IP

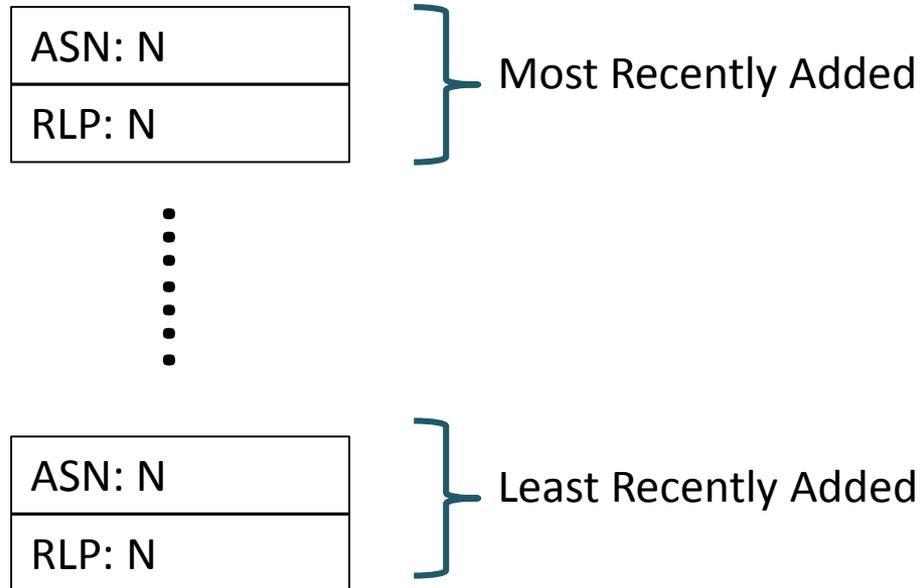
OOB = Out of Band

Configuration Process Flow

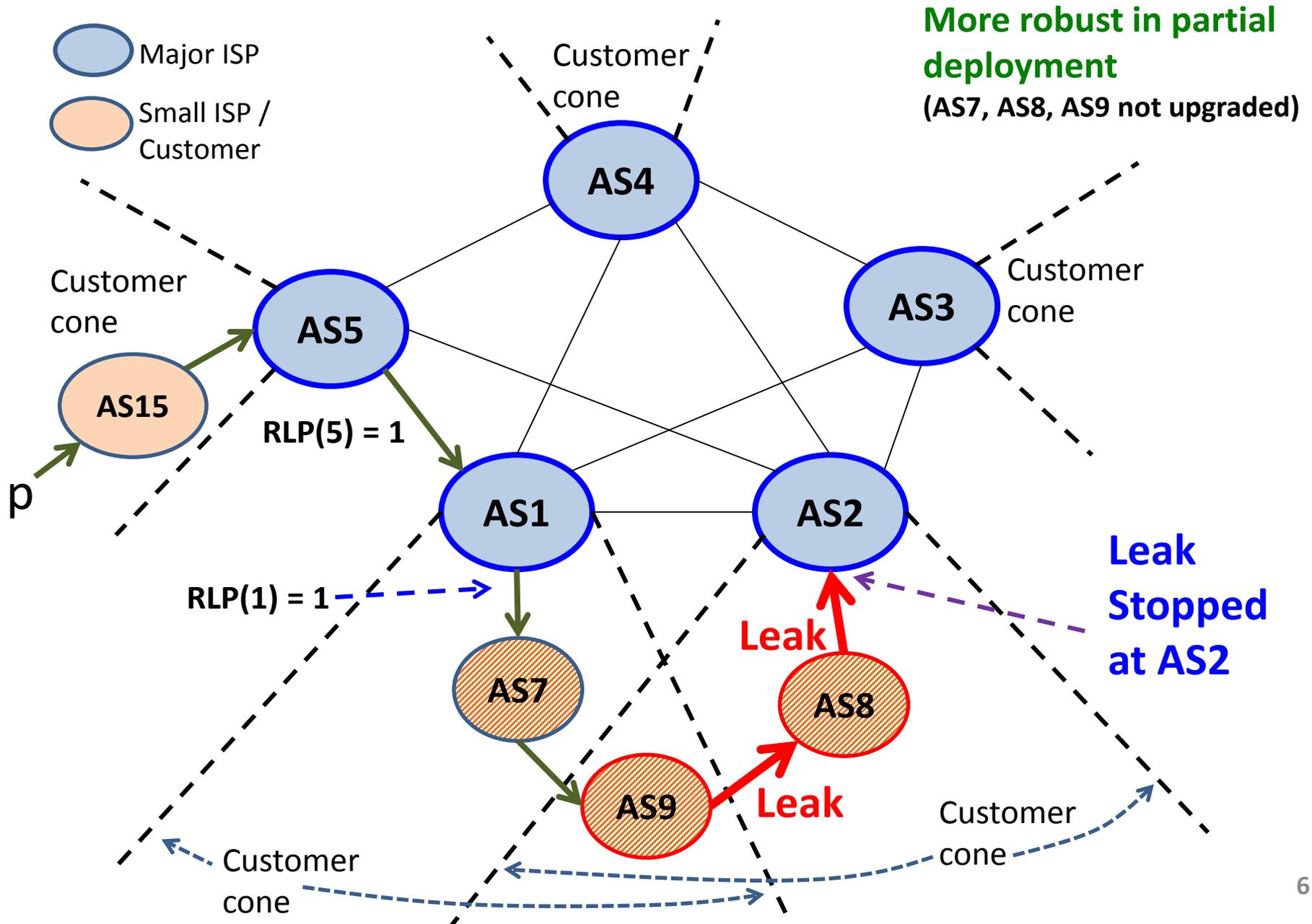


Inter-AS Solution: RLP Attribute

Optional Transitive Attribute



No Single Point of Failure & Large ISPs' Ring of Security



Building Blocks (with BGP Role negotiation)

Intra-AS route leak prevention (iBGP messaging)

- COMMUNITY, or
- Attribute

Inter-AS route leak detection/mitigation

- Optional transitive attribute

Configure peering relation for each peer (per prefix)

BGP OPEN / BGP Role Capability negotiations – re-confirming the role stated in OOB communication

OOB communication between operators:
Peering relation, ASN, interface IP

ymbk-idr-bgp-open-policy

Configuration Process Flow (with BGP Role negotiation)

