

Application of
draft-varlashkin-nh-cost
to
draft-ietf-idr-best-path-selection

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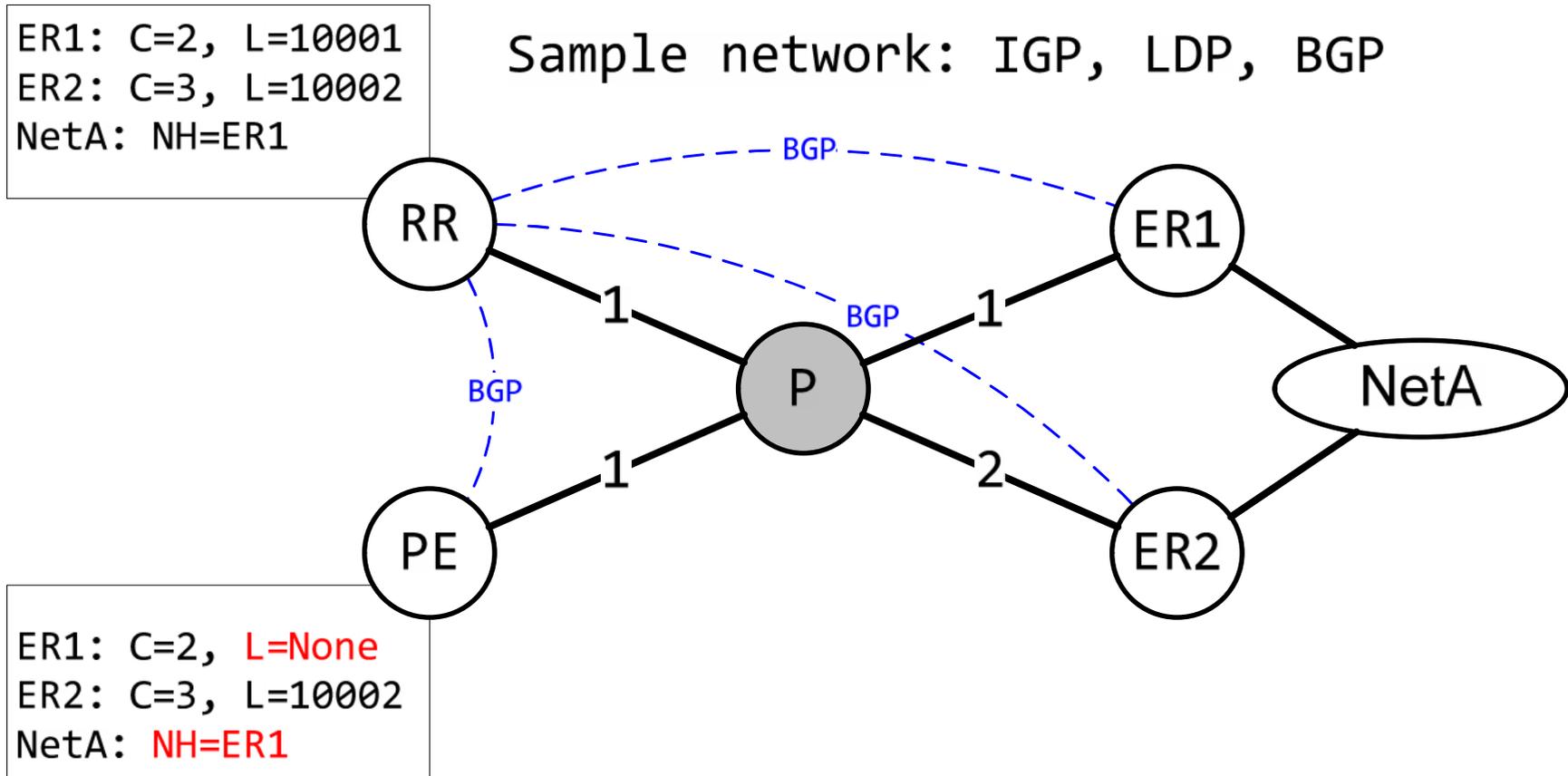
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Overview

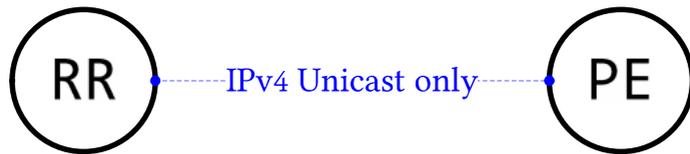
- Next-hop reachability is not transitive
 - e.g. sender can reach NH, receiver cannot
- Receiver should not install routes with unreachable NH
 - but receiver may have no other routes
 - sender has no way of knowing
- Next-Hop SAFI provides possible solution
 - Receiver can inform sender that NH is unreachable
 - Sender does best path selection from receiver's PoV
 - Receiver gets only feasible routes

The Issue Illustrated



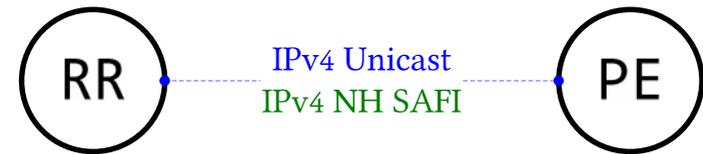
BGP Exchange Example

Without NH SAFI



NetA: Next-Hop ER1 →

With NH SAFI



What's your cost to ER1, ER2? →

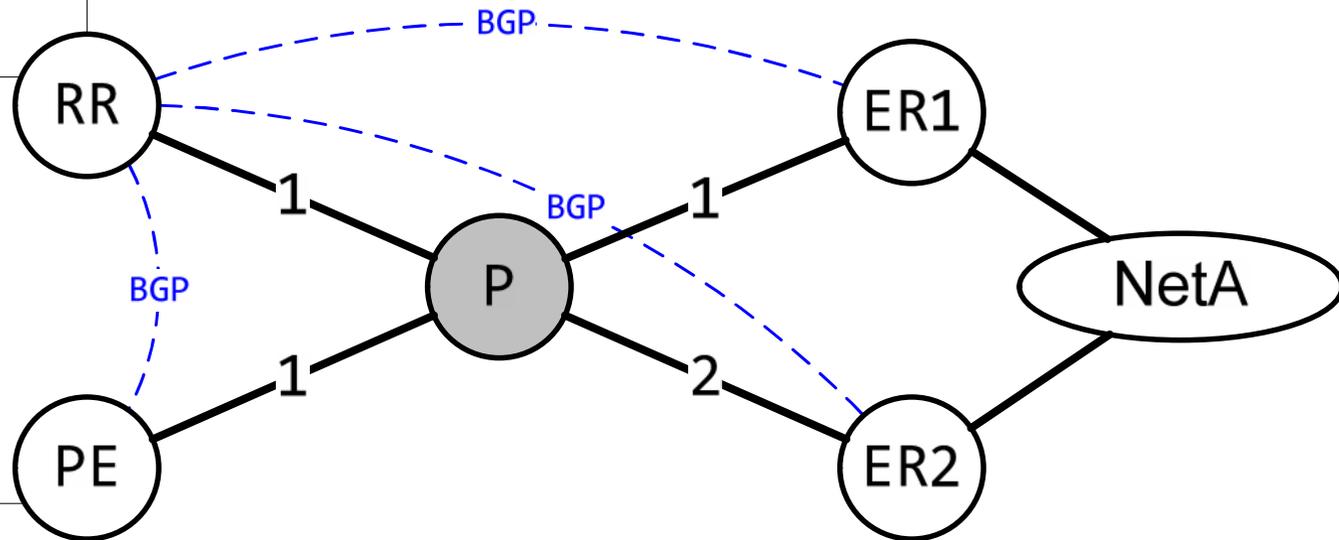
← ER1=Unreachable, ER2=3

NetA: Next-Hop ER2 →

Solution Illustrated

ER1: C=2, L=10001
ER2: C=3, L=10002
NetA: NH=ER1

Sample network: IGP, LDP, BGP



ER1: C=2, L=None
ER2: C=3, L=10002
NetA: NH=ER2

Last Slide

- No changes required in either draft
 - solution is intrinsic property of NH SAFI
- WG interest?
- Adopt draft-varlashkin-nh-cost as WG item?