

BGP Multipath in Inter-AS Option-B

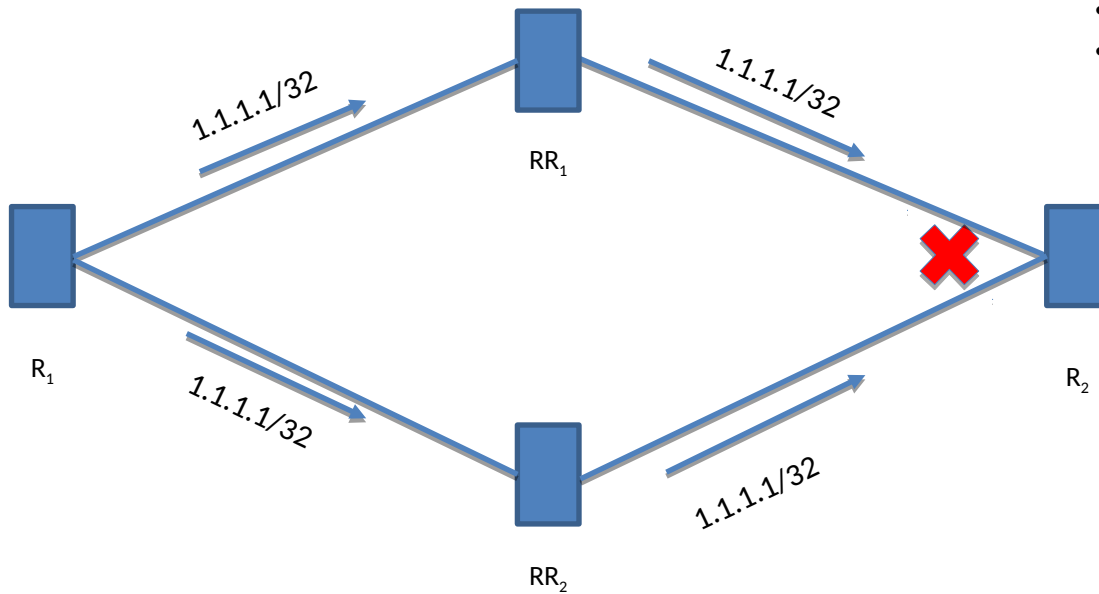
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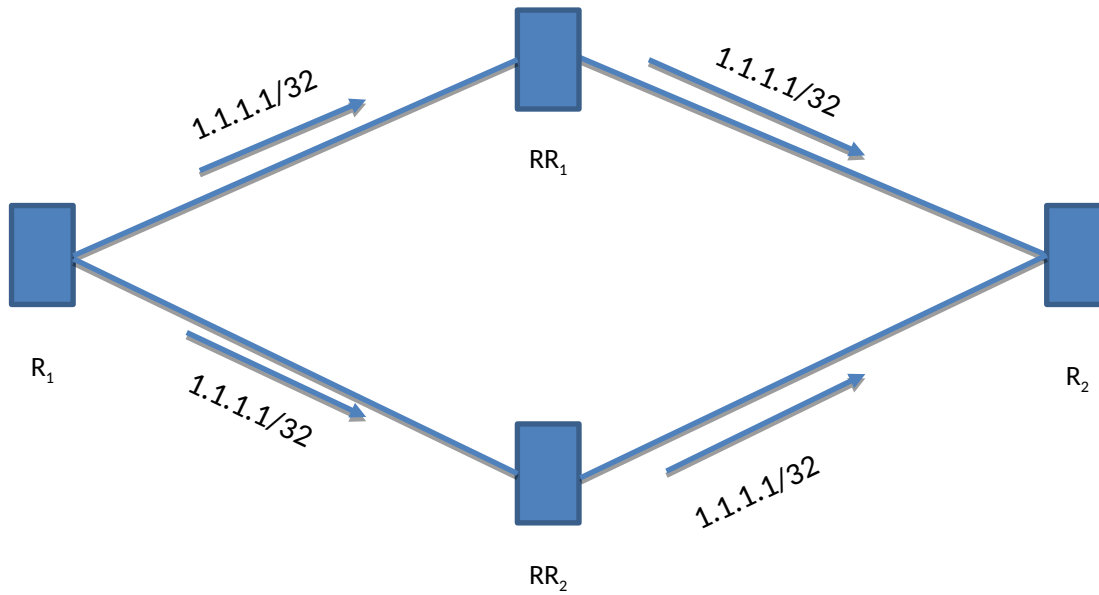
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Introduction

- BGP Multipath: More than one path to the destination in the forwarding
- *Standard* Concept, All vendors support it. But no ***standardization*** has been done.
- Implementations take into account the *uniqueness* of the *next-hop*.
- No *label* taken into consideration



- 1.1.1.1/32 advertised from R₁
- Route-reflectors do not set the next-hop to themselves
- At R₂, path received from RR₂ is discarded as a multi-path, as path from RR₁ has the same next-hop

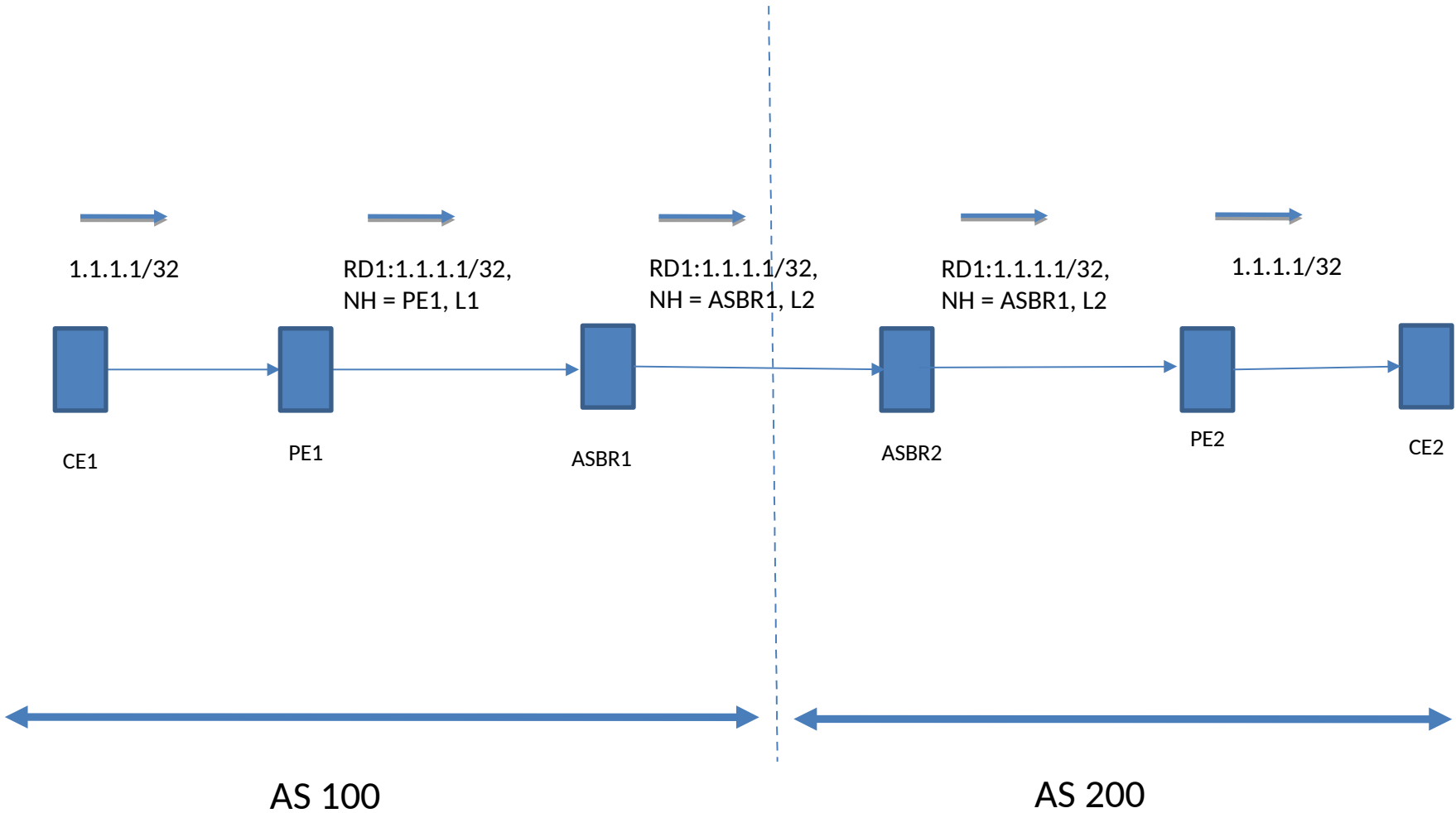


- 1.1.1.1/32 advertised from R₁
- Route-reflectors set the next-hop to themselves
- At R₂, path received from RR₂ is accepted as a multi-path, as path from RR₁ has a different next-hop

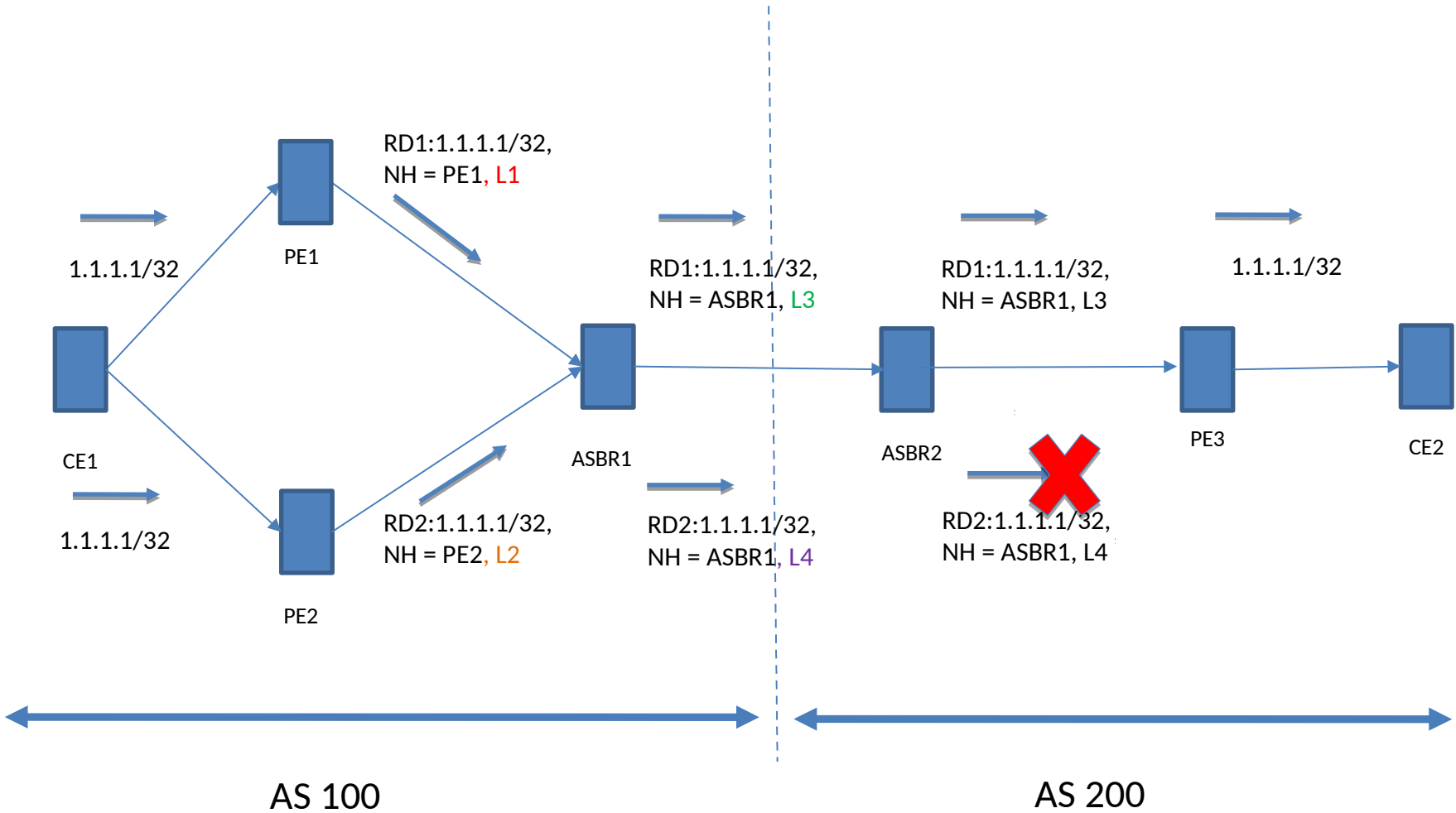
Inter-as Option B

- Defined in RFC 2547
- Control and Forwarding over the Autonomous System Boundary Router (ASBR)
- Next-hop Reset at the advertising ASBR

Option B Inter-AS Topology



Option B Inter-AS Topology



Proposed Solutions

- Use a different next-hop via policy at the ASBR. But this next-hop has to be injected into the receiving AS. Also Configuration overhead
- Use the tuple (next-hop, label) when determining the multi-path at the receiving PE

Option B Inter-AS Topology

