

ASPA-based AS_PATH Verification for BGP Export

draft-zhang-sidrops-aspa-egress-00

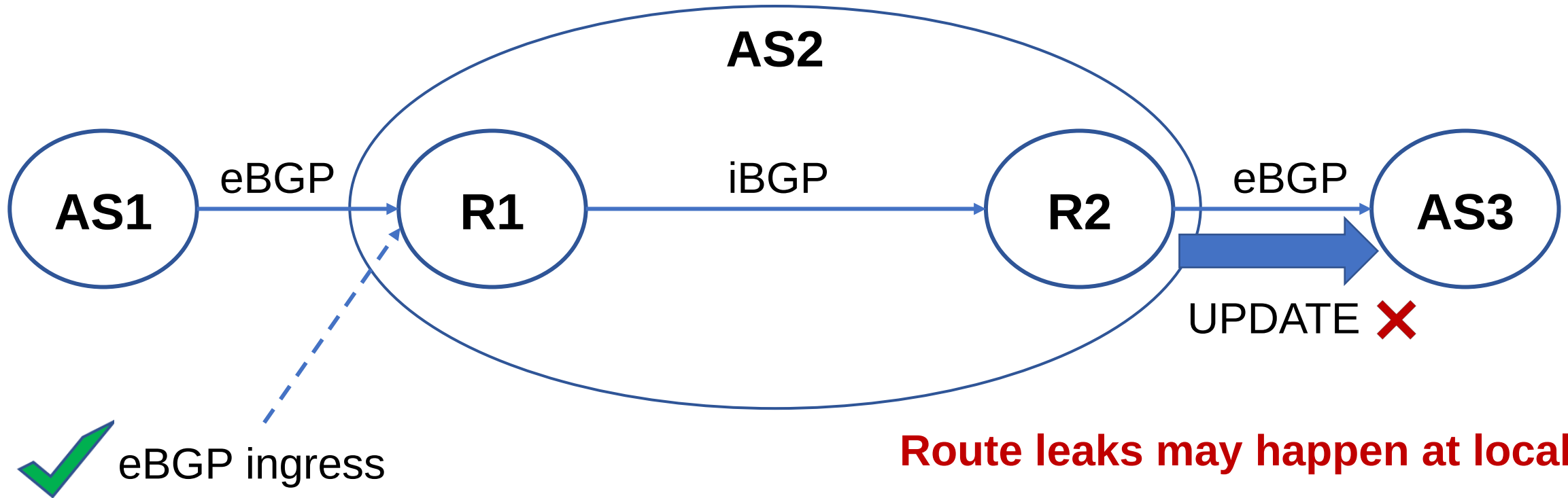
Jia Zhang

SIDROPS WG Meeting

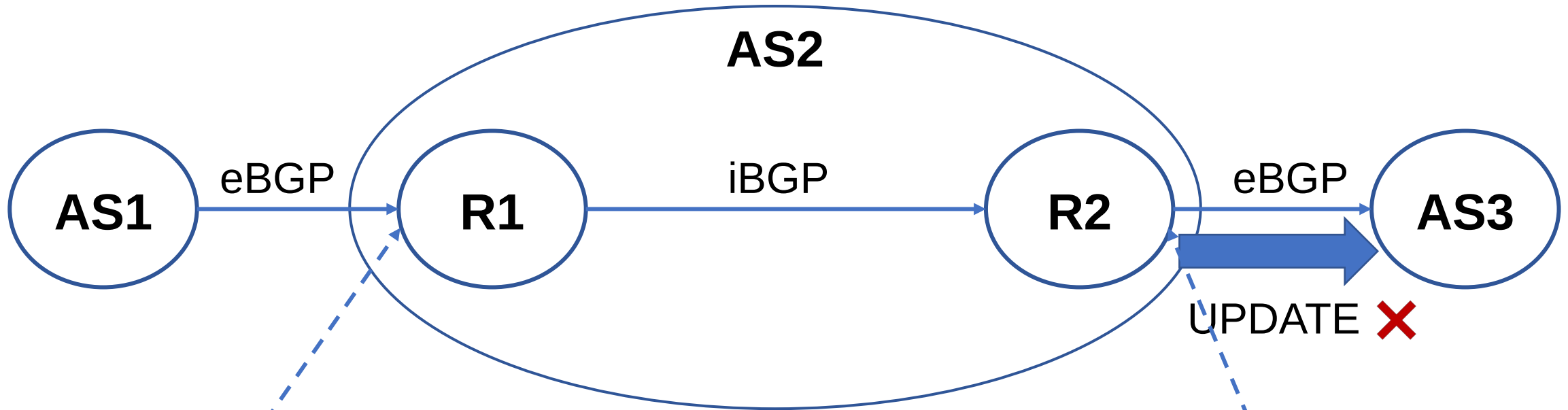
IETF 121

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Current Verification



Current Verification



Route leaks may happen at local AS!

eBGP egress

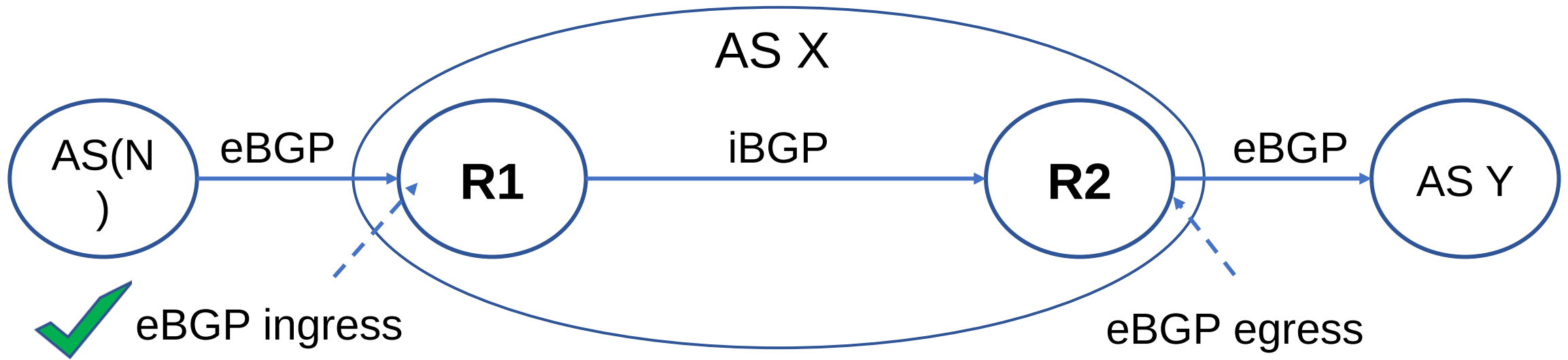
- No verification
- OTC (RFC9234)

ASPA-based AS_PATH Verification for BGP Export is Necessary

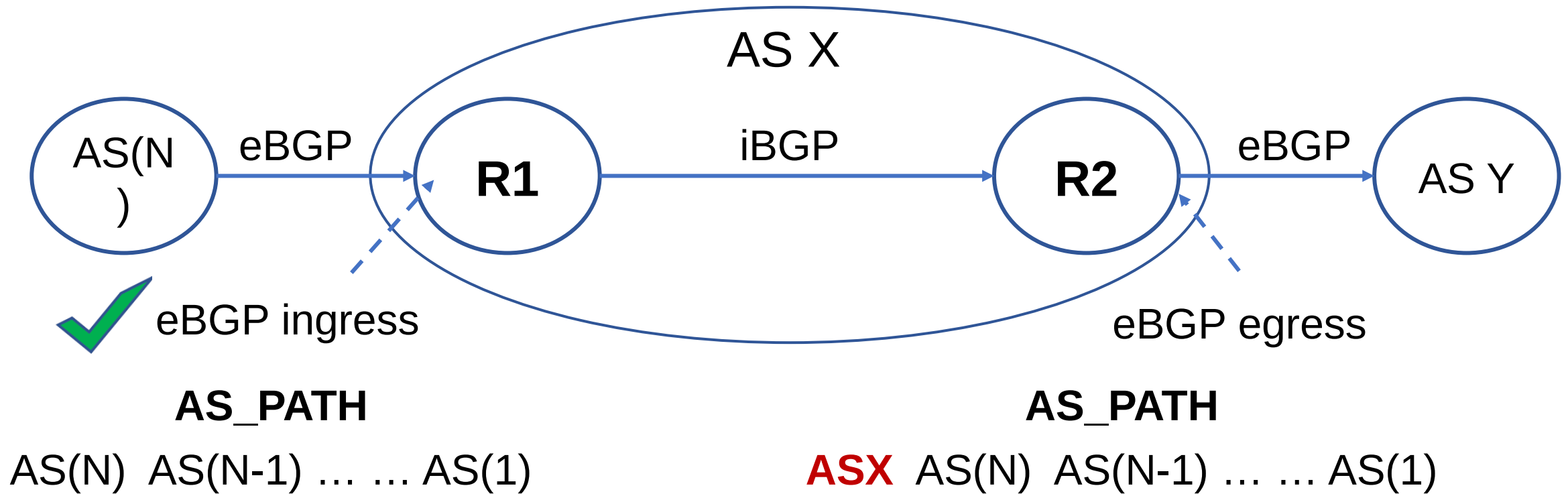
Prevent route leaks from local AS.

Routers could deploy ASPA alone.

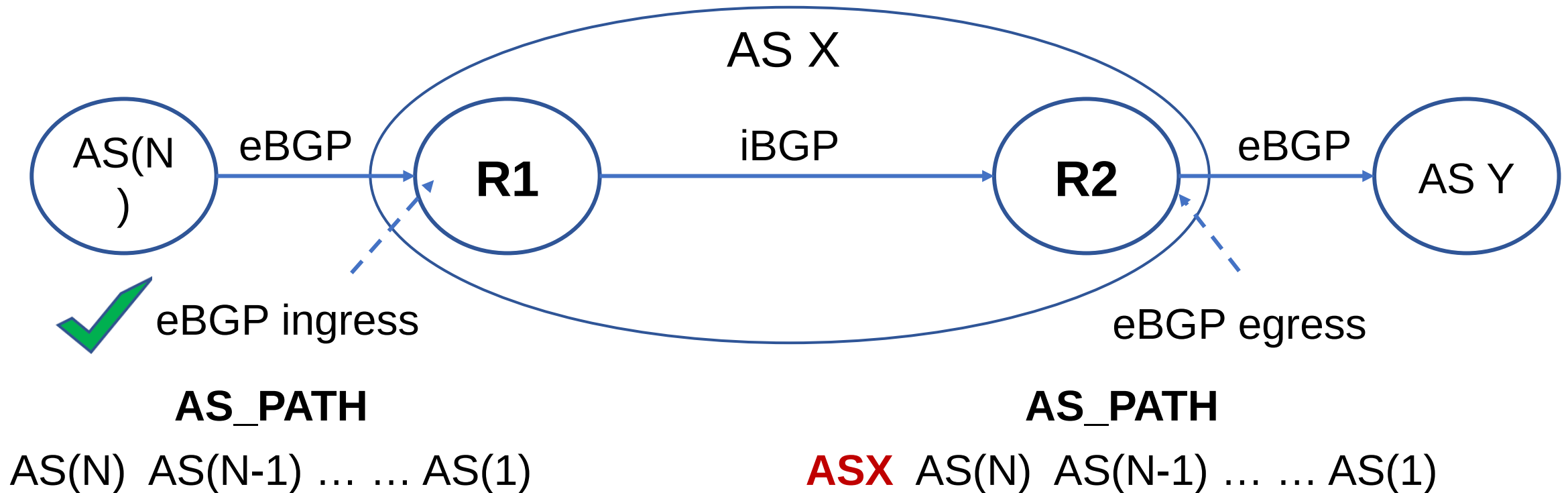
Verification Procedure



Verification Procedure



Verification Procedure



Role of ASX to ASY

Customer, Peer,
RS-client of RS

Provider

Upstream

Downstream

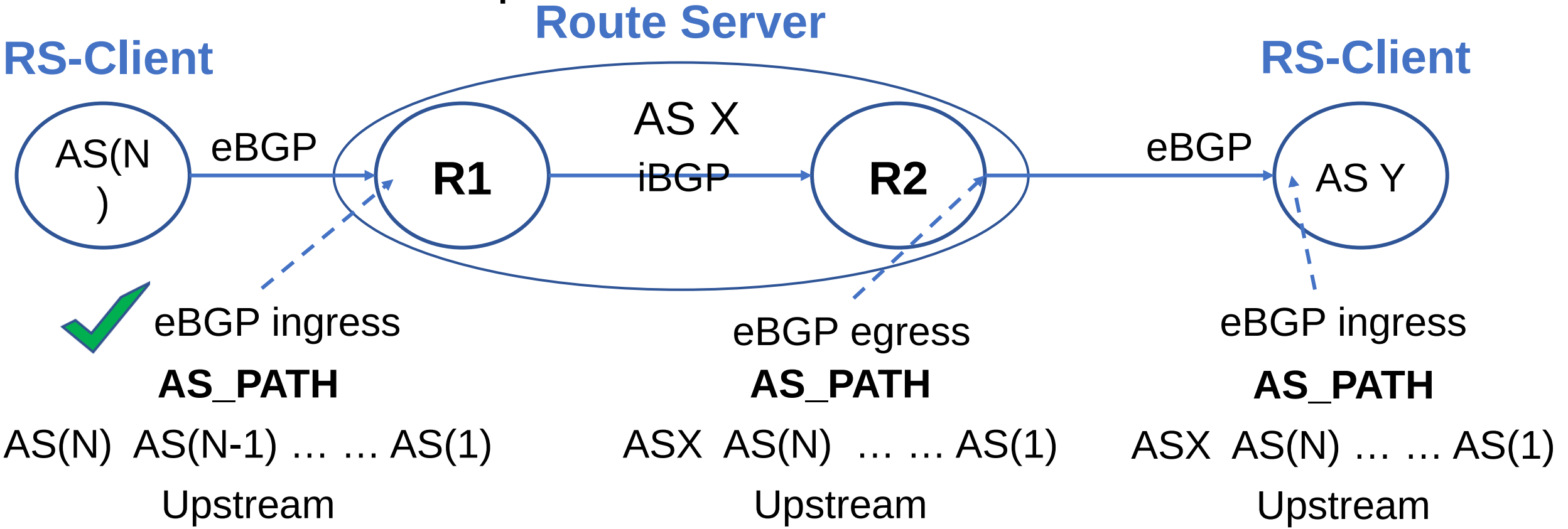
How to get the relations with ASY

Peering relations between local AS and external neighbor AS

- Use local configuration.
- Use the BGP Role Capabilities exchanged in BGP OPEN.
- Use ASPA objects.

Scenarios not require egress verification

- Mutual-transit
- Route Server exports to RS-client



Takeaway

- Performing ASPA-based AS_PATH verification at the egress
 - Prevent local AS route leaks.
 - Routers need to implement ASPA alone.
- Verification Procedure
 - Add Local AS to the received AS_PATH.
 - Verification based on the BGP Role of local AS to next-hop neighboring AS.
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- Questions, criticisms, and applause are welcome.

Thank you !

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Current Verification

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