

Source Address Selection Policy Distribution for Multihoming

draft-arifumi-multi6-sas-policy-dist-00
draft-arifumi-ipv6-nd-source-address-selection-opt-01
draft-hirota-dhc-source-address-selection-opt-00

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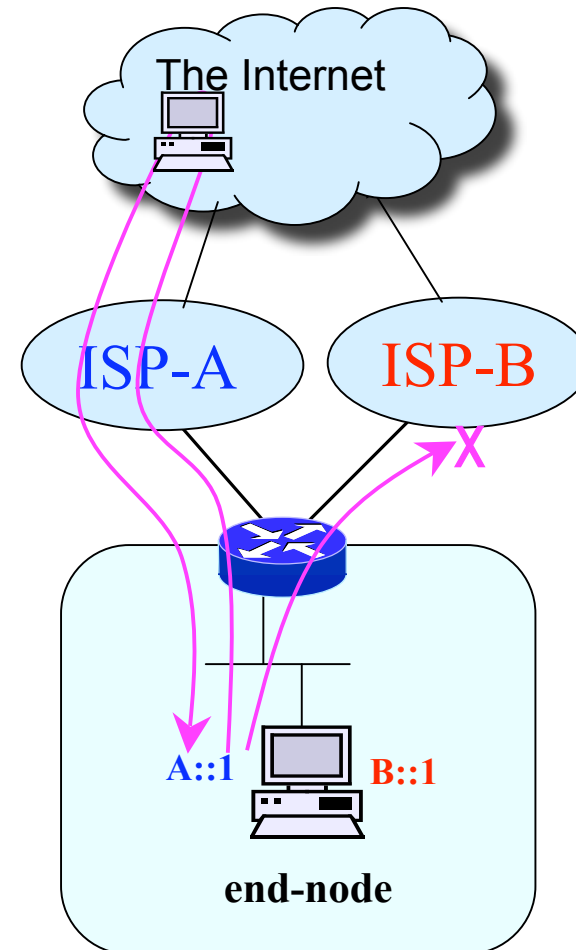
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Source Address Selection Problem

-Case 1-

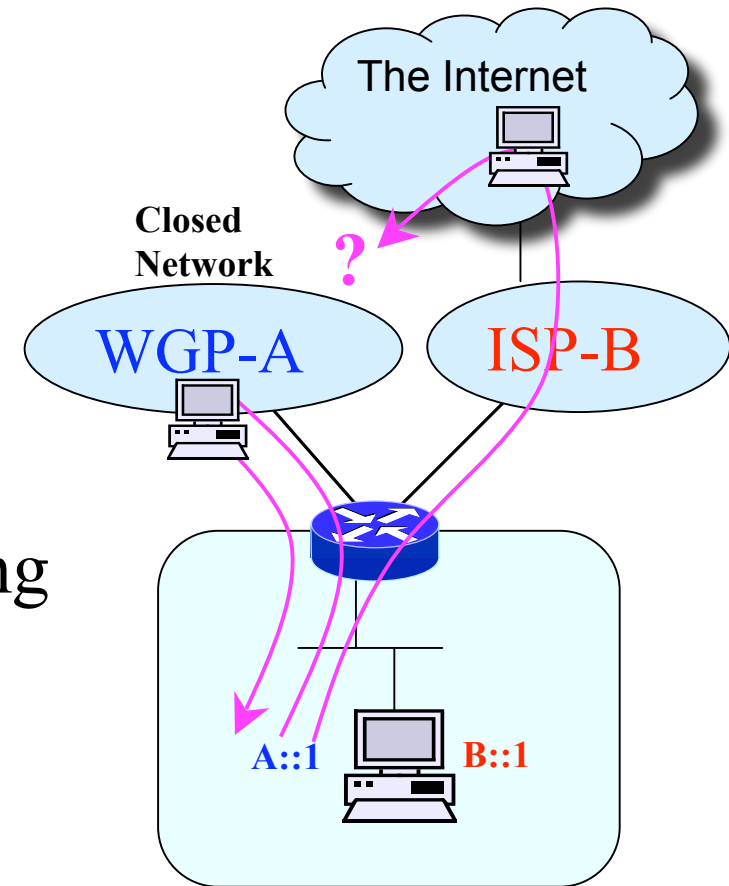
- Two or more Internet connectivity
 - When src and next-hop doesn't match, packets will be dropped by ISP's Ingress Filtering
 - End node never knows which src should be used for which dst.
 - RFC 3484 longest match doesn't solve this problem.



Source Address Selection Problem

-Case 2-

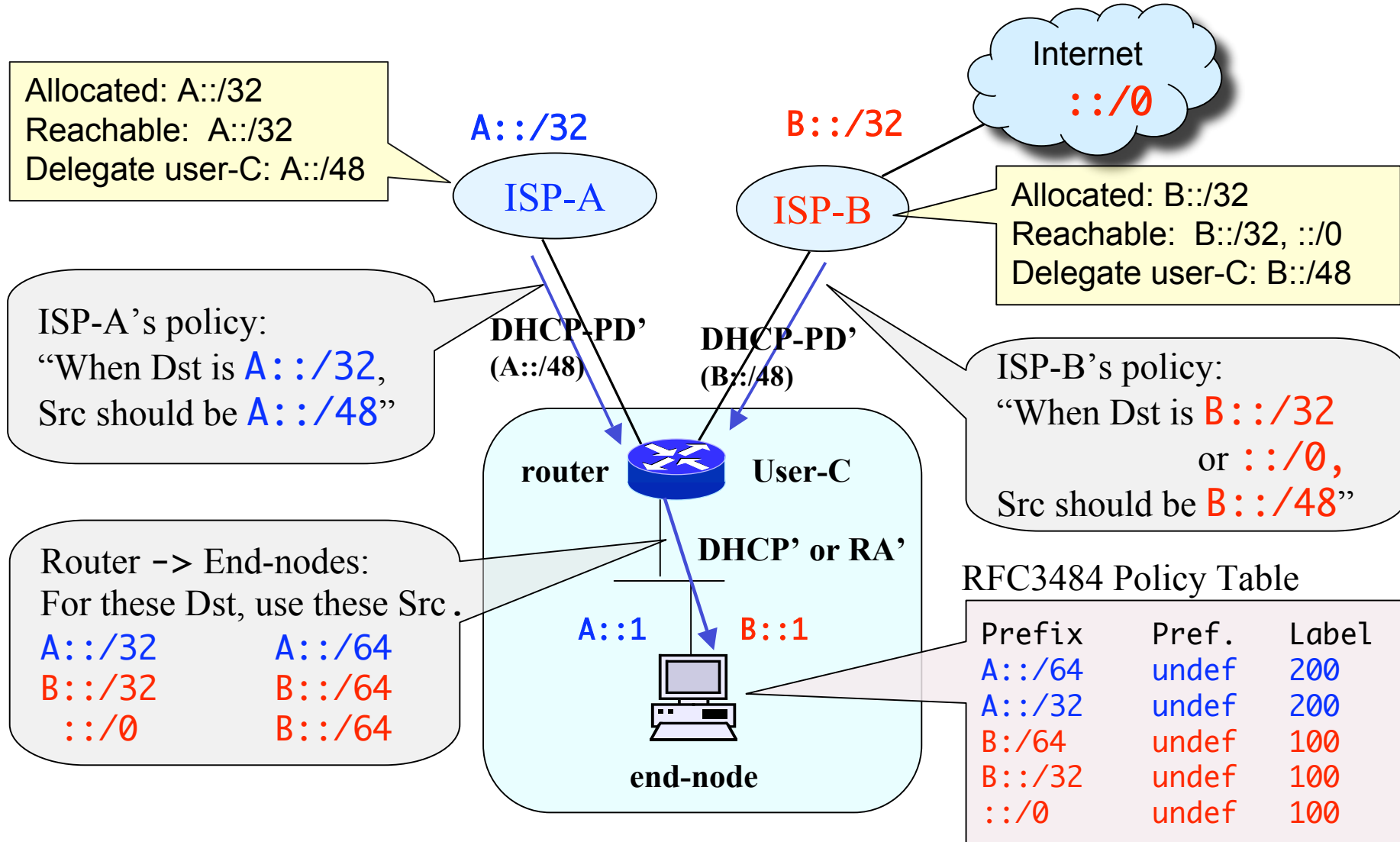
- Global-closed mixed connectivity has serious problem.
 - A packet with a wrong src address never returns, regardless of Ingress Filtering
 - It's closed because of ...
 - Security (VPN)
 - Service separation for better control (Multicast, QoS)



Our Approach: **Distribute Source Address Selection Policy**

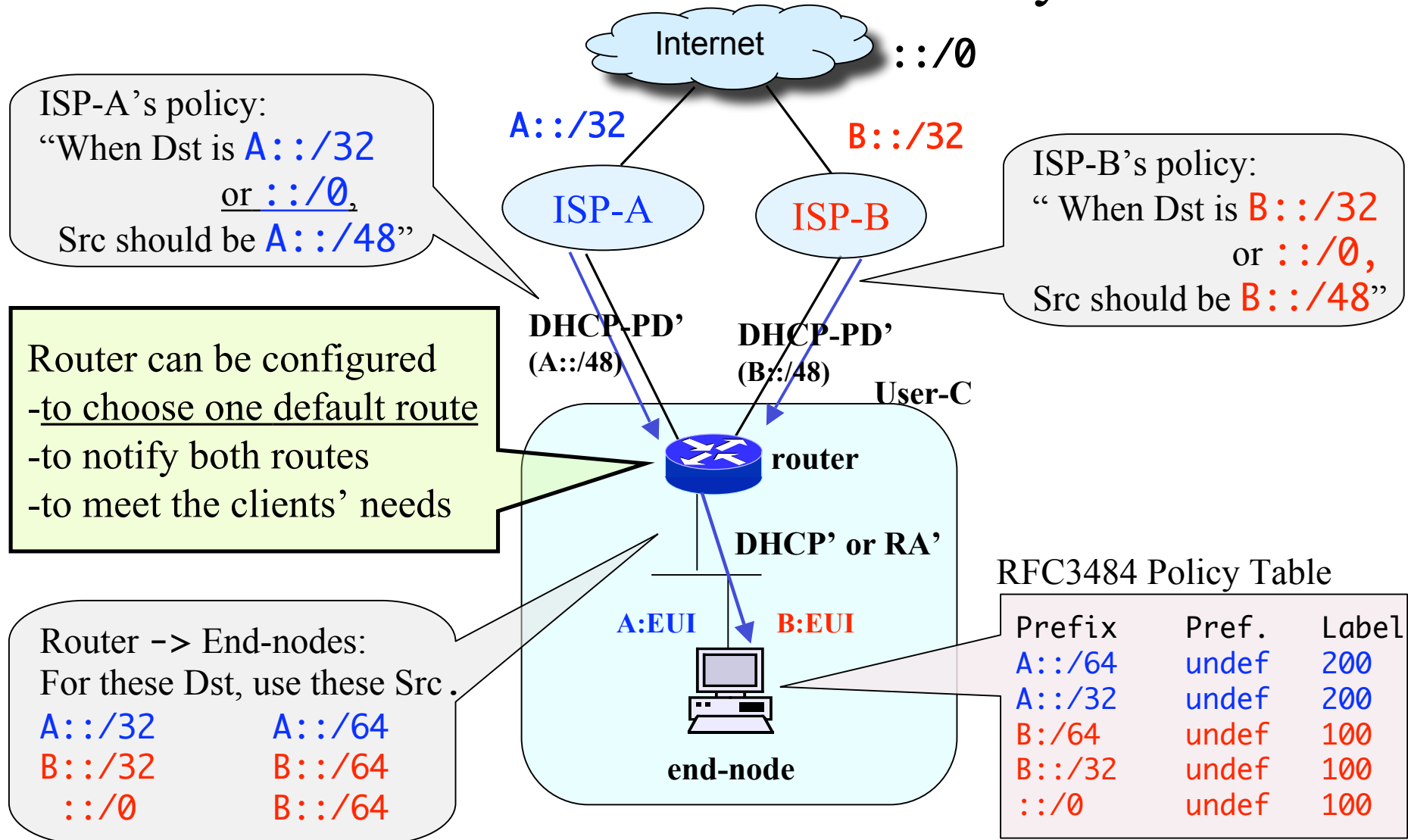
- RFC3484 defines an address selection method
 - Each IPv6 node has Policy Table for address selection
 - Good policy enables an IPv6 node to select an appropriate src address for a given dst prefix
- But, no protocol to distribute the policy
 - Need a mechanism for policy distribution
 - Esp. automatic policy distribution will be important in un-managed networks (residential or SOHO network)

Distribution of Source Address Selection Policy - Global-closed Mixed -



Distribution of Source Address Selection Policy

- Two Global Connectivity -



Discussions

- Why DHCP-PD, instead of RIPng or OSPF ?
 - The info. itself is same, the usage is different.
 - SAS policy should be more stable than routing info.
 - Routing protocol impl. cannot be adopted as is.
- RA or DHCP ?
 - DHCP is preferable in data length.
 - RA is lightweight and simple.

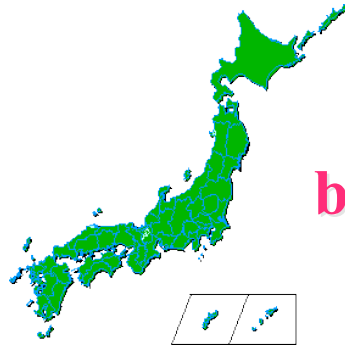
Summary

- We proposed a method to distribute SAS Policy from ISPs to end-nodes
- Make use of RFC 3484 Policy Table for appropriate Source Address Selection

Questions or Comments ?

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In a country...



**18,000,000
broad-band users !**

- Half of the broad-band users fall into the global-closed mixed case.
- Closed network services are:
 - TV streaming, TV-Phone, File Sharing...
 - **on IPv6 already!**
- This country is gonna be facing a great difficulty because of source address selection problem.

