

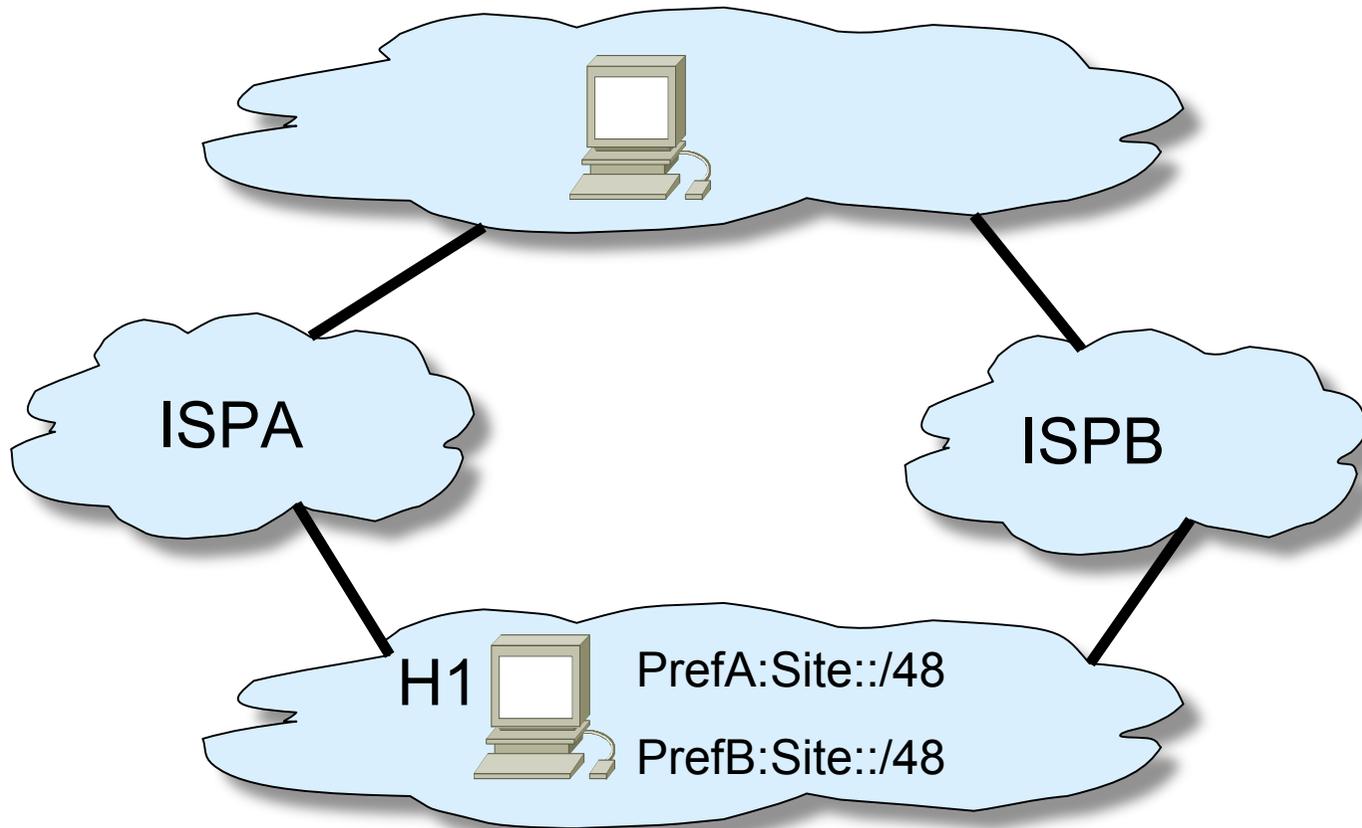
Updating RFC 3484

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INT AREA meeting
IETF 66 -Montreal

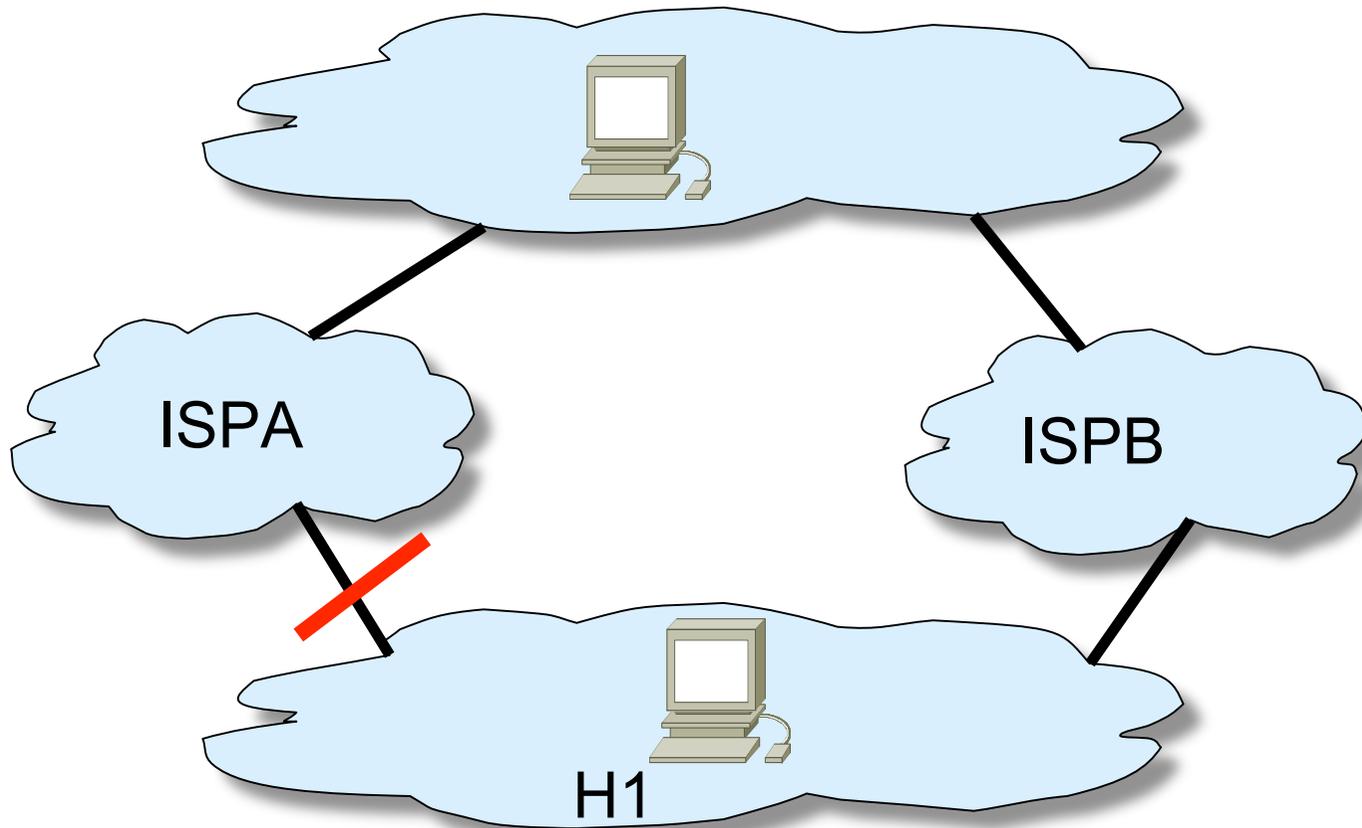
Identified issues

- Remove site-locals
- Include ULAs
 - Issues with ULAs: how to decide when to use an ULAs? When to prefer ULAs over private IPv4 addresses?
- Additional tools for policy table handling?
- Handling unreachable source addresses
 - Needed for multi-addressed nodes/sites
 - Can help with ULA case

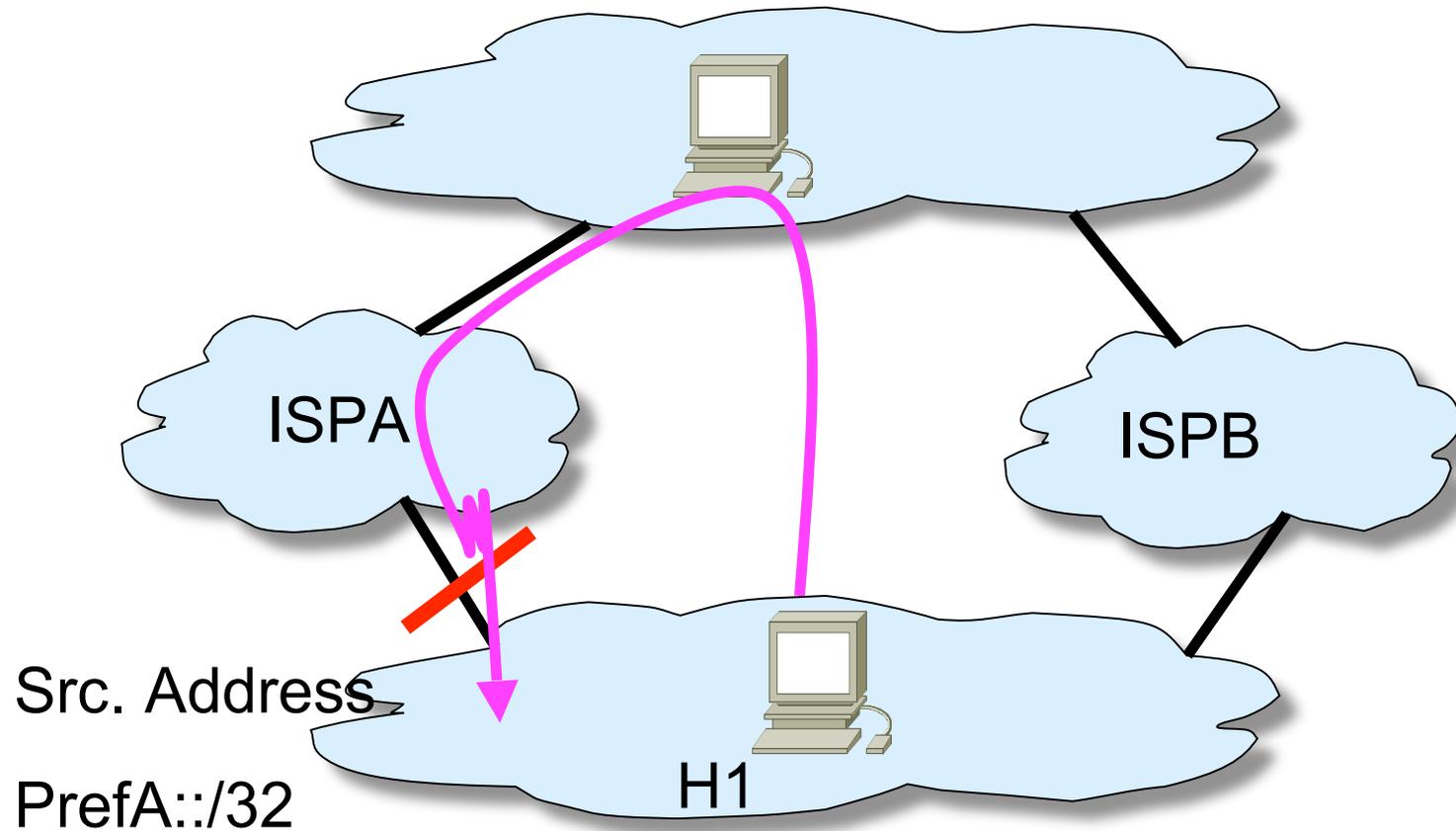
Scenario



Limitations of RFC3484



Limitations of RFC3484



About RFC 3484

- What RFC3484 does?
 - It provides an ordered list of dst addr to the app, so that the app can iterate through
 - If the app doesn't select the src add, it picks the "best" one
- What RFC3484 does not?
 - Does not provides any guidance to the apps that select the src add, nor recommends that they should cycle through
 - When selecting the src add, it does not take into account that different src add may result in different reachability

Proposed changes

- A set of rules that provide guidance to the application when it selects the src add, similar to the available for dst add selection
- A modification to the src add selection of the IP layer, so that unreachable source and destination address pairs are detected and alternative address pairs are tried

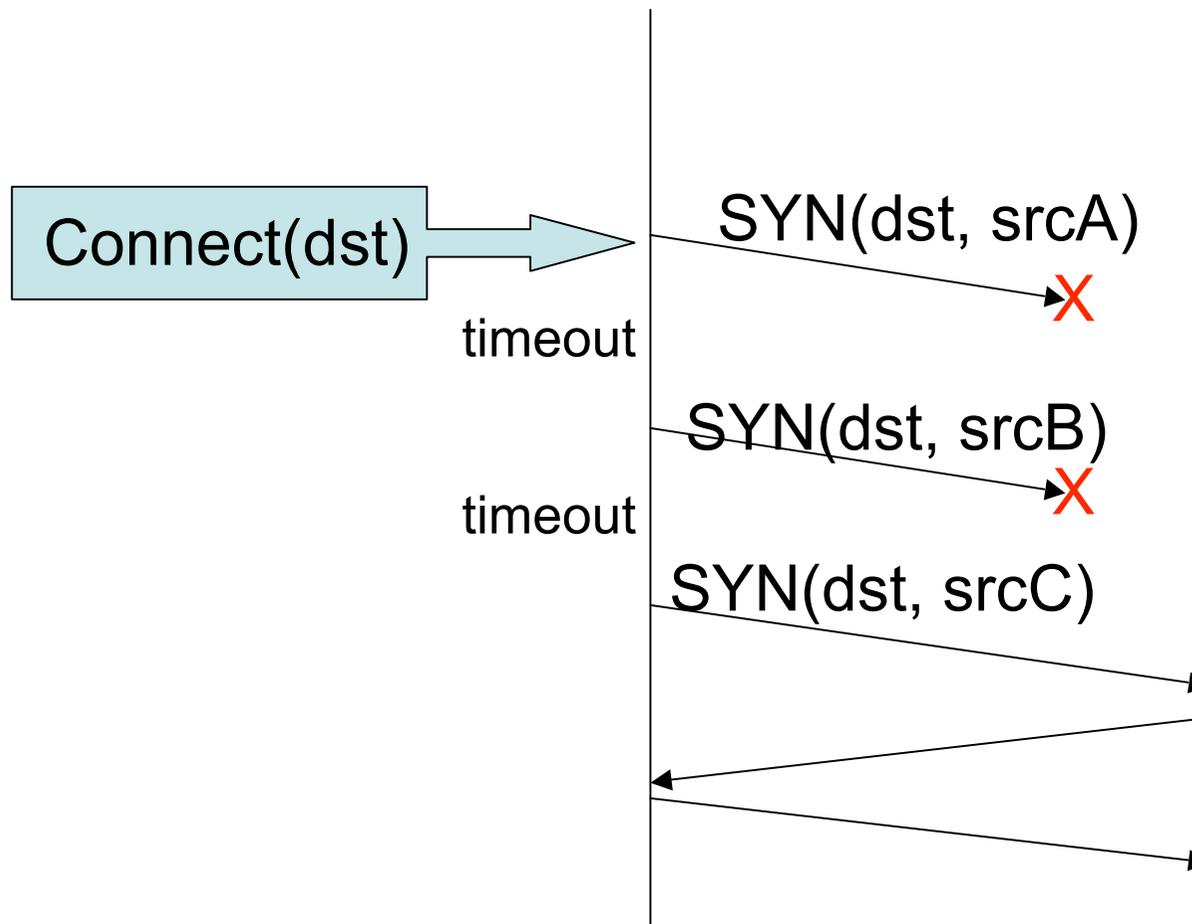
Guidance to the apps

- Scenario: the app selects the src add
- Proposed changes
 - Recommend that the app iterate through the available src add until a working one
 - That the IP layer returns an ordered list of src addresses
 - An ordered list of src add irrespective of the dst
 - An ordered list of src add for a given dst add
 - An ordered list of src,dst address pairs

Selecting the source address

- Scenario: the app is communicating with a dst but the src add is unspecified
- The IP layer is to select the src add
 - For TCP when `connect()`
 - For UDP when sending the packets

Selecting the source add: TCP



Selecting the src add: UDP

- Difficulty: how to determine that an address pair is working
- Proposal: keep track of hints that indicate that src address is working for a given dst
 - Incoming packets