

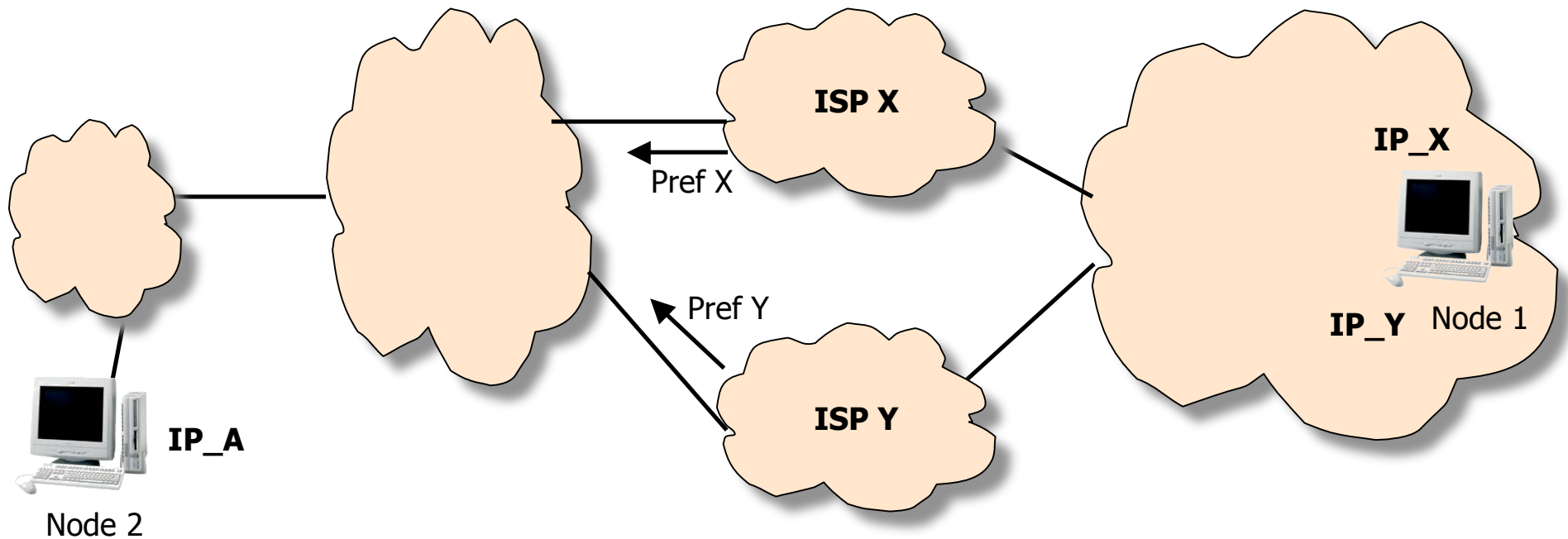
Multihoming in HIP

draft-oliva-hiprg-reap4hip-00

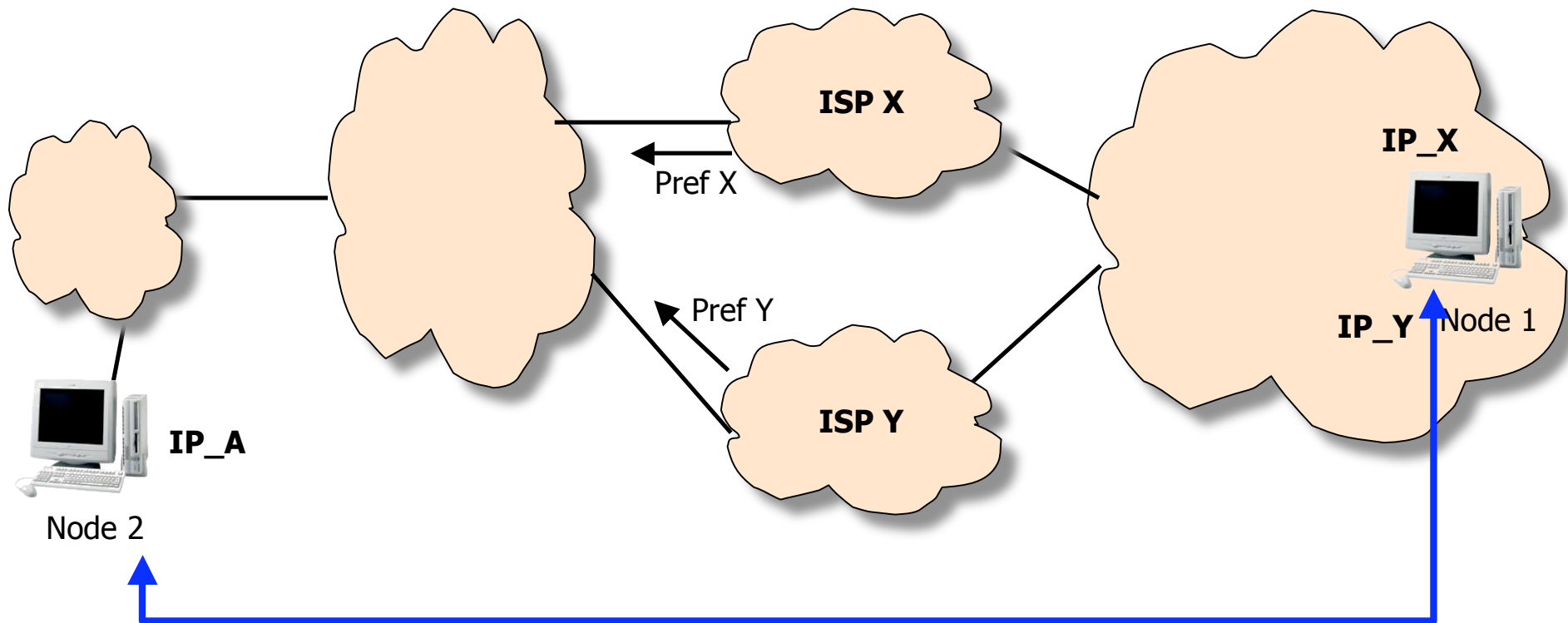
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IETF69 - Chicago

Use Case 1: Site multihoming with public addressing

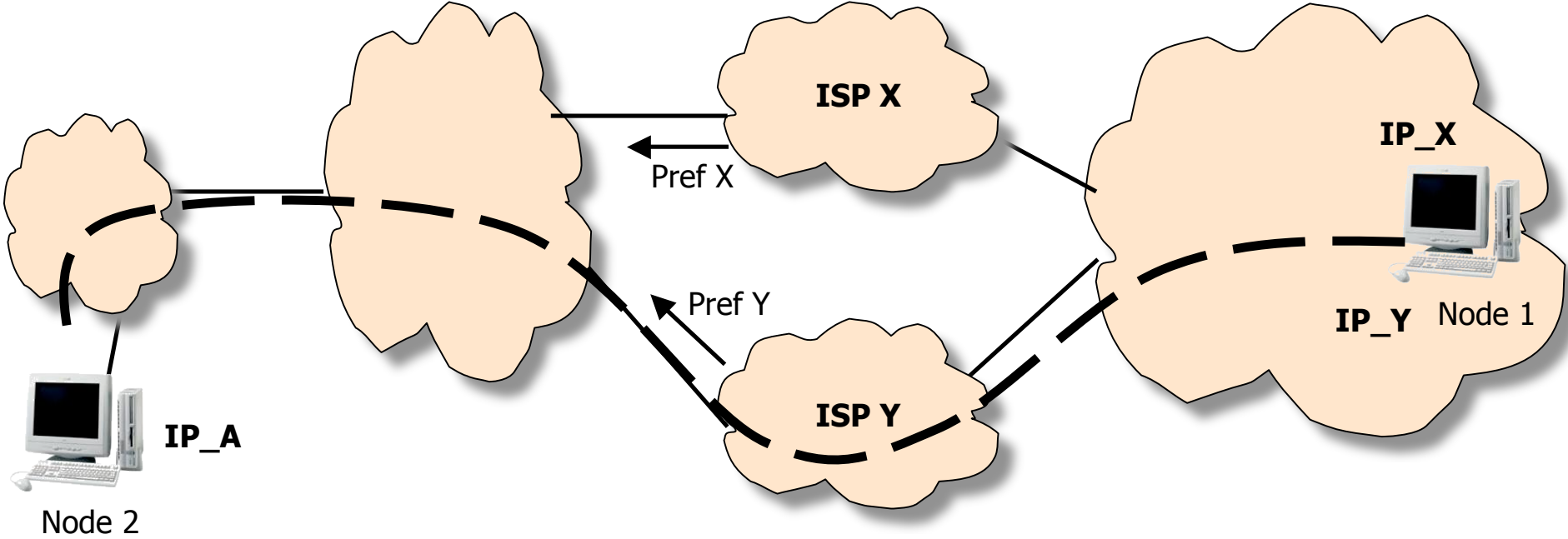


Use Case 1: Site multihoming with public addressing



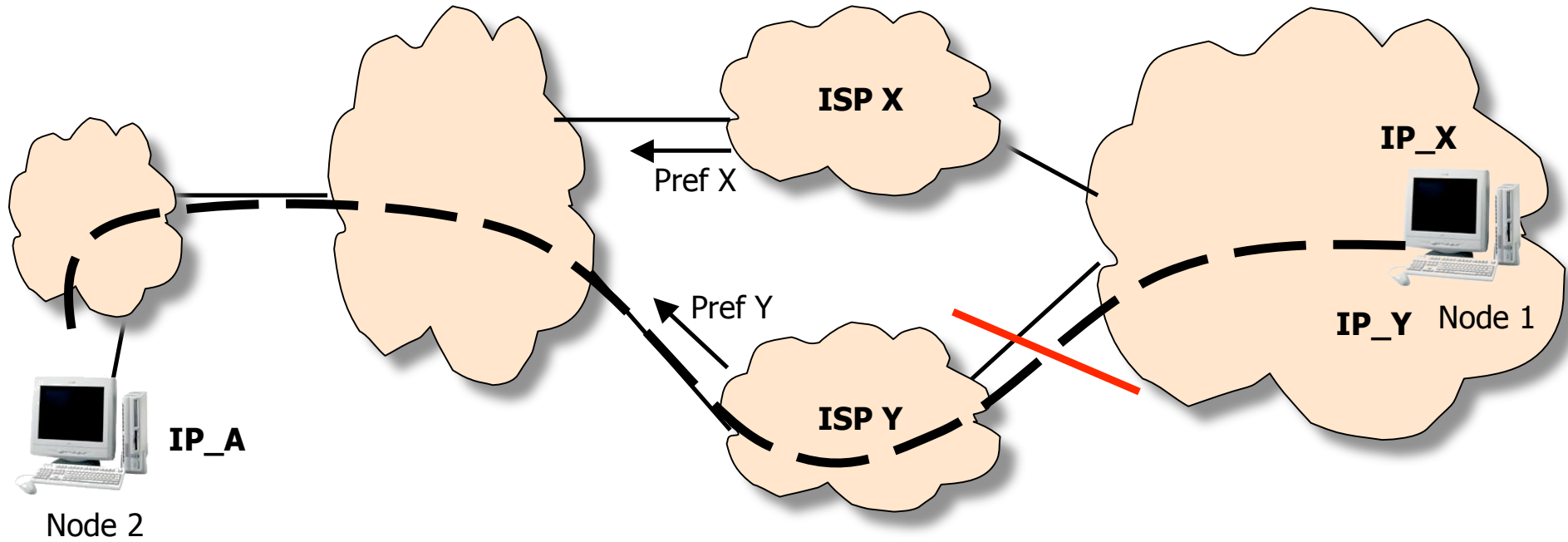
Exchange Locator sets:
UPDATE + LOCATOR msg

Fault Tolerance



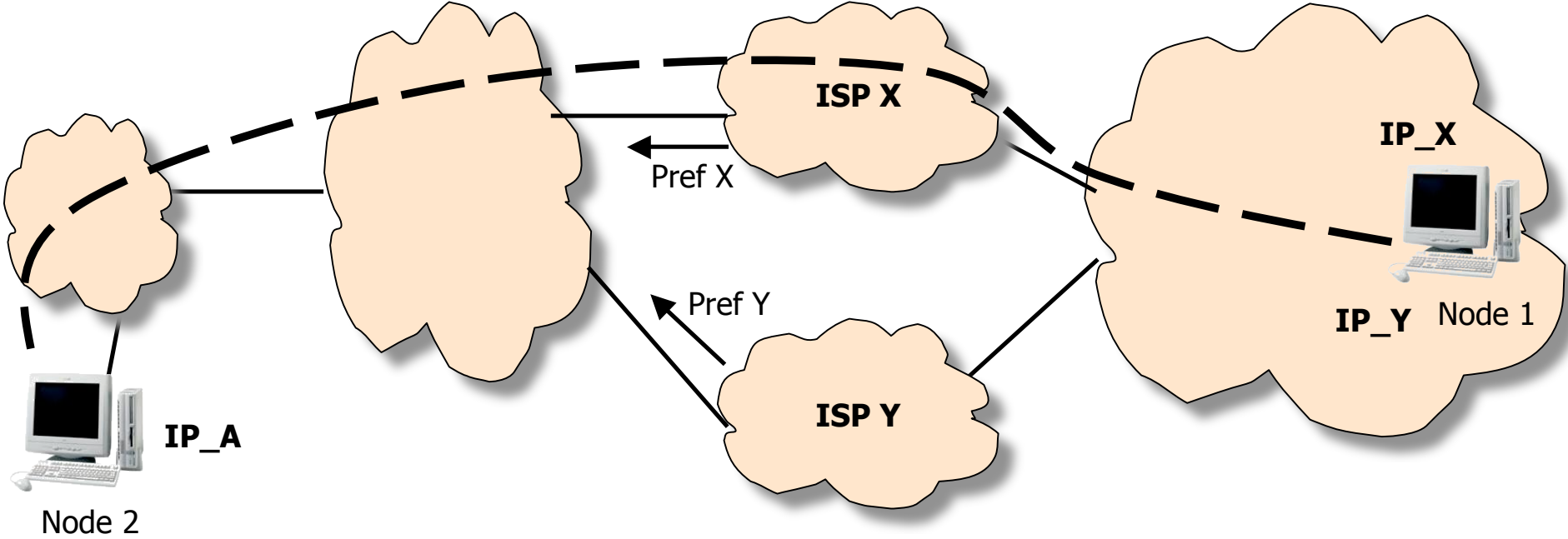
Communication using IP_Y and IP_A

Fault Tolerance



Communication using IP_Y and IP_A

Fault Tolerance



Communication using IP_X and IP_A

Features needed for this scenario (I)

- Simplify behaviour defined in draft-ietf-hip-mm
 - No mayor problems with anti-replay window protection
 - No need for $m*n$ SPI and SAs
 - No need for $m+n$ UPDATE messges
 - Eentially sequential usage of locator

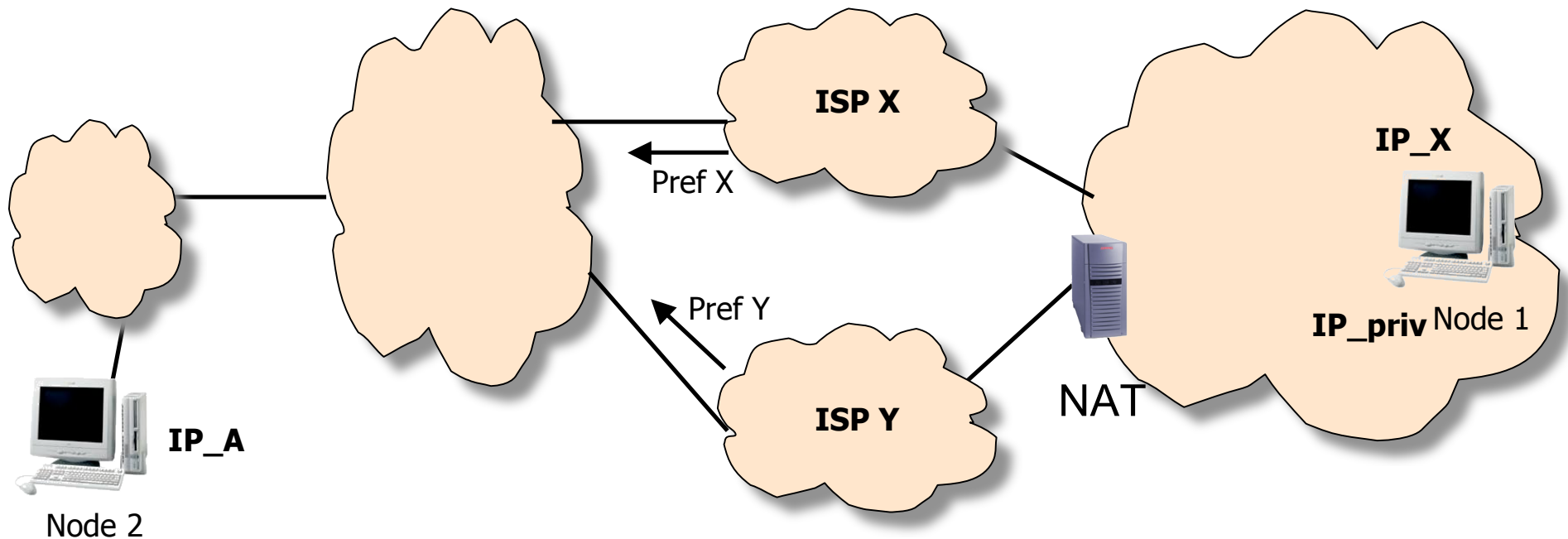
Features needed for this scenario (II)

- Mechanism for detecting failures and exploring alternatives paths
 - REAP protocol is proposed for this
 - Defined in draft-ietf-shim6-failure-detection
 - Basic ideas:
 - Guarantees a minimum frequency of packets in each direction when there is data traffic:
 - Extremely efficient: No packets exchanged when there is no data traffic
 - Capable of detecting unidirectional connectivity
 - Very useful in case of the presence of ingress filtering
 - Extremely easy to adapt for HIP
 - See draft-oliva-hiprg-reap4hip

What about multihoming in NATed scenarios?

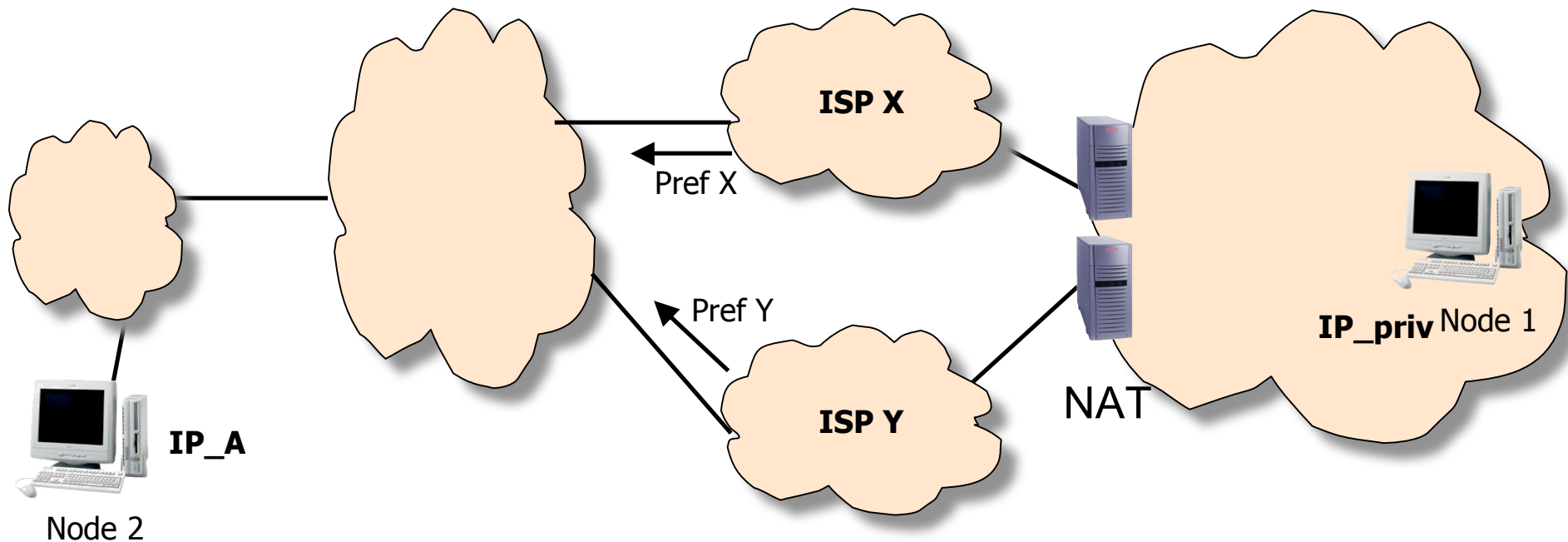
Not covered in draft-oliva-hiprg-
reap4hip

Use Case 2: Site multihoming with public and private addressing (e.g. IPv4+IPv6)



- Node is multiaddressed: address selection => path selection
- Still needs something like REAP (but probably modified for corner cases)
- But also needs to discover public address: When?

Use Case 3: Site multihoming with private addressing



- Node has a single address: path selection is done by routing
- Need REAP?
- Needs to discover public addresses: When?

Questions?