

TRAM

**Single SockeT Dual Allocation with TURN
(SSODA)**

draft-martinsen-tram-ssoda-00

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History

- Started as a technical discussion on the TRAM list
- Draft was written to capture the ideas
- -00 version with good comments from list
 - Solution a little to brittle. Adding new STUN attributes to make it simpler to “do the right thing”
 - Dealing with partial success seems to be the biggest problem
- Two separate implementations are planning to implement the draft.

Overview

- Allocate one IPv4 and one IPv6 relay address using one Allocate Request message.
- Only one host port will be used.
- None of the TURN RFCs allows for multiple Relay address type allocation within the same request or from the same host port.

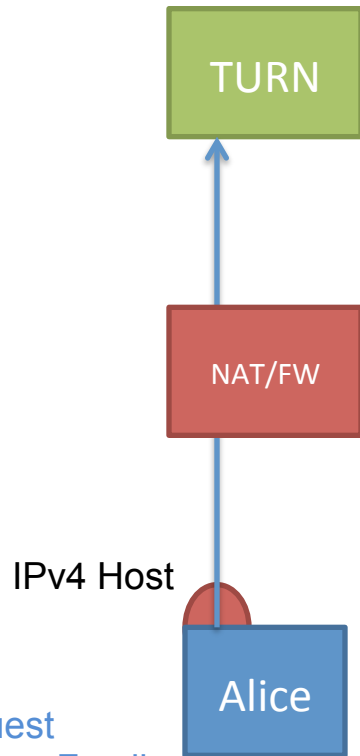
Operation

TURN

NAT/FW

Alice

Operation

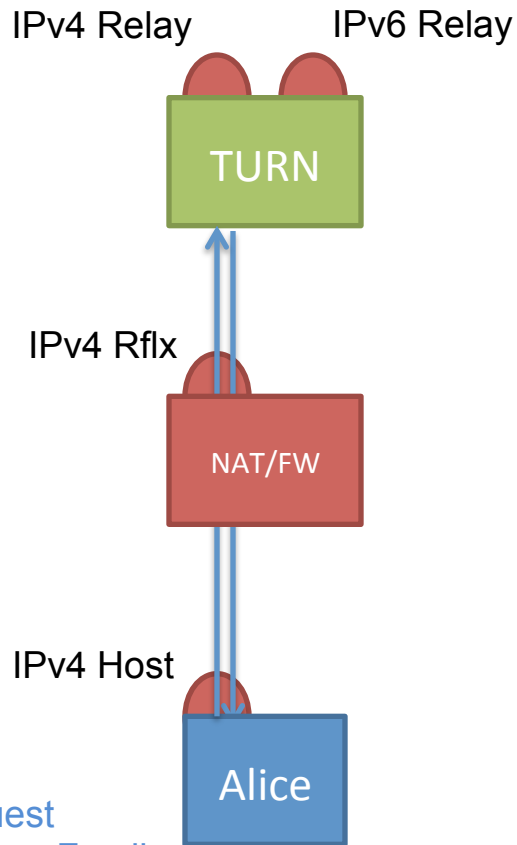


IPv4 Host

TURN Allocate Request

- Requested Address Family
- Additional Requested Address Family

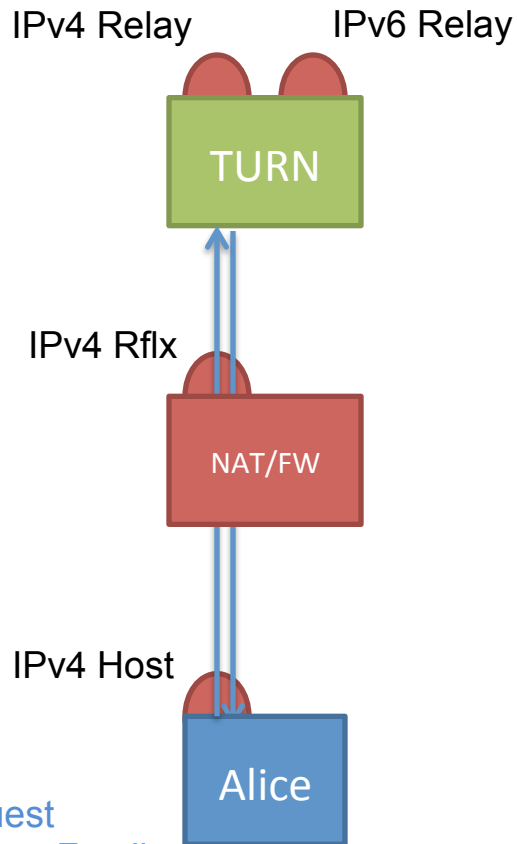
Operation



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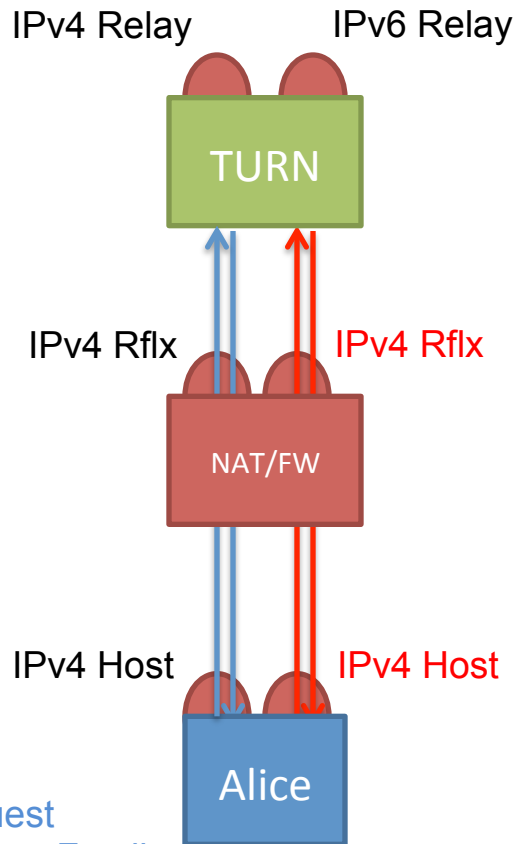


- Saves ports and processing on the TURN server.
- Saves chatter as client do not need to authenticate two allocate messages.
- Enables Trickle ICE to get more candidates trickled quicker.

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TURN Allocate Request

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- Saves ports and processing on the TURN server.
- Saves chatter as client do not need to authenticate two allocate messages.
- Enables Trickle ICE to get more candidates trickled quicker.
- Saves additional Allocate Request and a Host port.

Worthwhile?

- Simple
- Backward compatible
- Increased Scalability
 - only a single port is used between client and TURN server
- IPv4+IPv6 relay candidates can be obtained in 4 total messages (instead of 8), reducing traffic and startup latency
- Reducing number of potential ICE candidates
 - only a single v4 local and v4 srflx candidate is generated, reducing the number of candidates (6->4) and ICE checks (16->7)
- Missing address type srflx candidates can be obtained by a simple STUN Binding Request