# Ufrag Permissions for TURN

draft-williams-tram-ufrag-permission-00
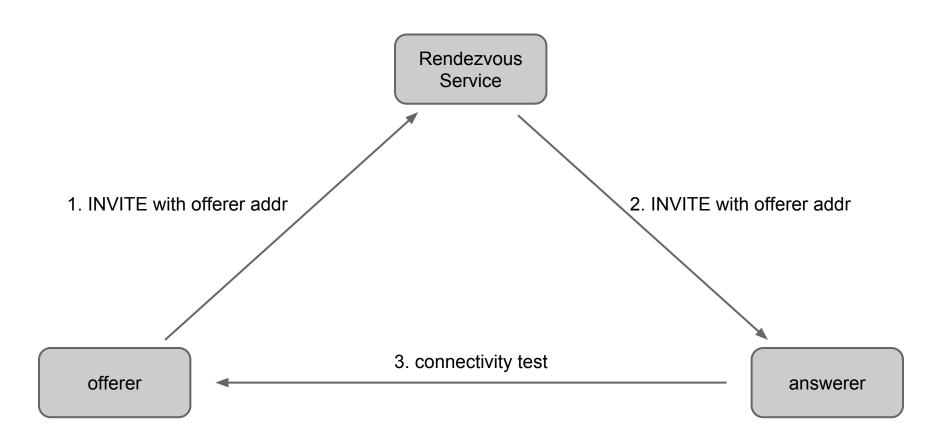
Authors: B. Williams, J. Uberti
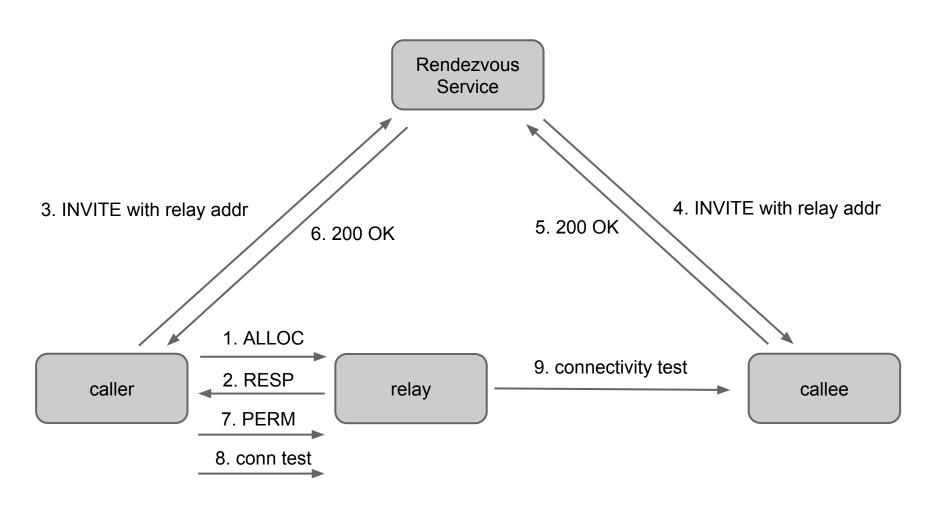Presenter: Brandon Williams

# Problem Statement

- Signaling requirements for TURN permissions can delay ICE checks.

- ICE checks on host and reflexive candidates can start when answerer receives the offer.

- ICE checks on relay candidates require the offerer to receive the answer so it can send its Permission request.

# ICE With Host/Reflexive Candidate

Rendezvous Service

offerer

answerer

1. INVITE with offerer addr

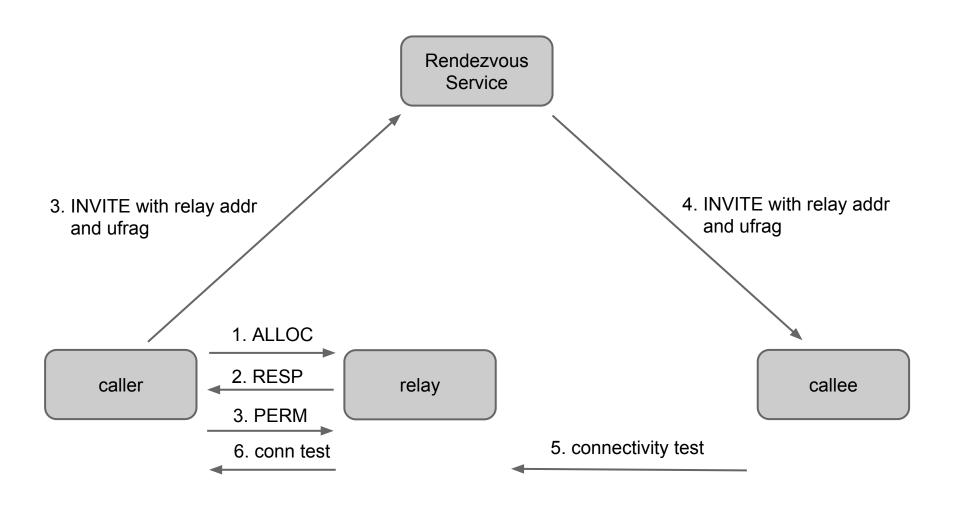2. INVITE with offerer addr

3. connectivity test

# ICE With Relayed Candidate

# Solution Summary

- Allow CreatePermission request to accept any ICE check with the correct RFRAG.

- Define LOCAL-UFRAG attribute used to specify the TURN client's UFRAG.

- Message received on relay address/port with no address-based permission
  - If message is ICE connectivity check
  - and RFRAG in username matches LOCAL-UFRAG
  - deliver the message to TURN client

# ICE With Ufrag Permission



Rendezvous Service

3. INVITE with relay addr and ufrag

4. INVITE with relay addr and ufrag

caller

relay

callee

1. ALLOC

2. RESP

3. PERM

6. conn test

5. connectivity test

# Backward Compatibility

- If no LOCAL-UFRAG support, server sends error 420 (Unrecognized Attribute).

- Client receiving 420 error falls back to standard address-based permissions.

# Outstanding Issues

- ICE Interactions
  - The draft should provide guidance for ICE implementers.
  - Is signalling of ufrag permission required in order to drive answerer to send early connectivity checks?
  - If/how to support TURN-TCP?

- Security Considerations
  - Client could abuse the mechanism to provide an unauthorized service.
  - Similar issue for firewall management draft; hope to devise common mitigation.

# Questions?