

Trickle ICE

Open Issues

Emil Ivov, Eric Rescorla,
Justin Uberti, Peter Saint-Andre
ICE WG
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When to Start Checks

- In vanilla ICE, an agent activates a checklist and validates at least one pair in each component; only then does it unfreeze another checklist
- In trickle ICE, this is suboptimal because candidates can arrive at any time
- Would it be OK to unfreeze all checklists based on foundation only?

Candidate Redundancy

- In vanilla ICE, an agent can definitely decide if any candidates are redundant because all candidates are known when redundancy checks are made
- In trickle ICE, candidates can arrive at any time; does this imply that we need a different procedure for checking candidate redundancy in trickle ICE?

Waiting-for-Candidates State

- If the checklist is empty and no candidate pairs have been sent or received yet, what is the state of the checklist?
- Do we need a “waiting-for-candidates” state to handle this?

Unfreezing Algorithm

- The unfreezing algorithm doesn't work correctly in distributed media scenarios or if TURN allocation fails (i.e., if a component doesn't have a candidate with a given foundation)
- Do we need a way to indicate that “no candidate will be forthcoming on this component”? This could be sent at the start (for distributed media) or trickled later on (if gathering fails)

ICE Restarts

- In vanilla ICE, an ICE restart might necessitate a new offer/answer exchange
- However, ICE is used by signaling protocols that (1) aren't tied to offer/answer or (2) might not require an offer/answer exchange to restart ICE negotiation (e.g., if the media description doesn't change)
- Would it be sufficient to modify the ufrag & pwd?
- Is this a topic for trickle ICE or ICEbis?

SDP Syntax Mappings

- It's been suggested that we remove any necessary syntax binding to SDP,
- This would be consistent with ICEbis

Binding of Candidates to Streams

- The trickle ICE spec currently recommends that candidates should be bound to streams
- However, it doesn't define the syntax for doing so (e.g., using a stream index or MID in SDP)
- Should we define this syntax?
- (The question is moot if we decouple trickle ICE from SDP...)

Continuous Nomination & Passive Nomination

- What is the relationship between trickle ICE and continuous nomination / passive nomination?
- Specifically, is address mobility a goal for trickle ICE?