ICE-TCP

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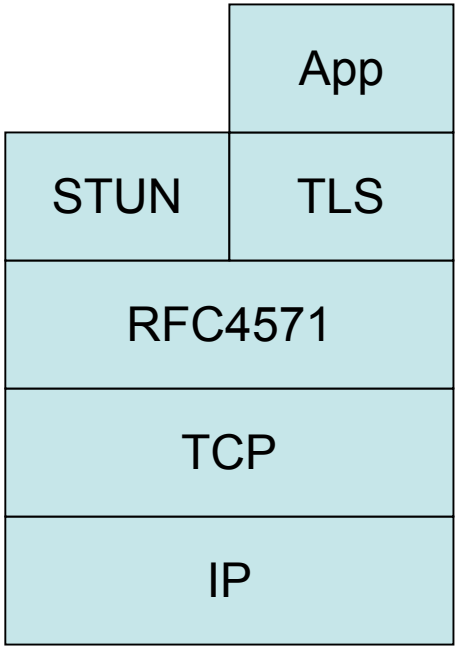
Changes

- STUN-then-TLS
  - Reports on APIs indicated it was implementable
  - Unify with UDP
  - Better performance/speed
- Connection mngmt to STUN/TURN servers
- Terminology and pacing alignment with ICE



Changes

- After disconnection, need to redo ICE checks
  - Re-bind connection to media stream
  - Security
- Secure media with UDP and TCP candidates
  - DTLS-SRTP over TCP or UDP for mixed candidates
  - TLS-RTP for TCP only
- Setup parameter rules
  - When TLS is used, refers to TLS directionality only
- Appendix with ‘pseudocode’ on how to implement this
  - Remí Denis-Courmont contributed real code for next revision

Open Issue #1: DTLS-SRTP

- If you have a mix of UDP and TCP candidates, it is really, really, really good for everything above transport to not change based on choice
- Would like to be able to use DTLS-SRTP even if ICE selects a TCP candidate
- Raised issue in AVT WG, Ekr indicates it should just work especially with shim framing

Open Issue #2: S-O from TURN

- ICE-tcp asks client to gather an S-O candidate from TURN server
- Only useful if TURN server itself is behind NAT
- Adds complexity
- Proposal: remove
  - Would mean that TURN server won't work if behind NAT

Open Issue #3: TURN vs. RFC4571 shim

- ICE-tcp is using RTP shim (RFC4571)
  - Length
- TURN defines its own shim
  - Length + type value
- We could use TURN shim
  - only one shim defined
  - Deterministic demux
- ICE-tcp through TURN-tcp is ugly no matter what