Thin(g) ICE

Ari Keränen
ari.keranen@ericsson.com

T2TRG/OCF meeting
Amsterdam 10th March 2017

NAT Traversal

- How to get connectivity through Network Address Translators (NATs) — and other middle boxes
- IETF protocol for NAT traversal: ICE (RFC 5245)
  - Using STUN & TURN protocols
  - ICE WG: updated version of ICE

ICE Basics

- Gather candidates (IP address & port candidates where the agent/endpoint might be reachable)
  - Host, server reflexive, relayed, etc.
    - Using STUN & TURN servers in Internet
- Exchange candidates (out of band signalling)
- Connectivity checks of candidate pairs
  - Try everything (no assumptions). Prioritised pair order.

Thin ICE

- How can we do ICE on constrained (class 1) devices?

- Re-using CoAP, Resource Directory, pub/sub broker, CBOR, and other infra we have

- RD instead of STUN server

- pub/sub broker as rendezvous layer

- CBOR for encoding candidate pairs