draft-lowekamp-mmusic-ice-tcp-framework-00

Adam Roach
Bruce Lowekamp

11/17/2008

Why a framework?

- Lack of OS support for TCP simultaneous and NATs supporting endpoint-independent filtering are both producing low direct connection rates for ice-tcp

But

- Other solutions are deployed today that provide a higher success rate and more are being developed for the future.

Goal:

Incorporating new technologies in an ice-tcp implementation and encoding them in the offer list should be easy.

Candidate Gathering Technologies

Non-relayed

NAT-Assisted

- UPnP-IGD
- MIDCOM SNMP
- SOCKS
- RSIP
- SIMCO
- NAT-PMP

UDP Tunneled

- Teredo
- TCP over UDP

Non-NAT Assisted

- STUN server reflexive

Relayed

- SOCKS
- SOCKS IPv4-IPv6 Gateway
- SSH Tunnels
- TURN TCP

Already Available

Several are already standardized and widely deployed:

- UPnP IGD
- SOCKS
- NAT-PMP
- Teredo
- ssh tunnels

All of these require support only on one side. They appear in the sdp as a regular ip+port candidate.

Proposal

Slight changes in existing ice-tcp document

- ice-tcp should specify process, but not list all candidate-gathering technologies
- additions and slight changes to prioritization
- may require new sdp encoding for techniques requiring a tunneling protocol

Incorporate currently available technologies into ice-tcp or as new wg document.

Put techniques requiring more work into future drafts

- TCP over UDP