TURN URI and Resolution Mechanism

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draft-petithuguenin-behave-turn-uri
TURN URI

• Syntax inspired by DNS URI:
  - turn://example.org
  - turns://example.org
  - turn://example.org:3178
  - turn://192.0.2.1:3178
  - turn://example.org?transport=UDP
Resolution Mechanism

- Inspired by RFC 3263 but adapted to use RFC 3958 (S-NAPTR)

- Domain administrator can order the TURN protocols by preference.

- Can be used for remote hosting.
Example

- example.com
  IN NAPTR 100 10 "" "RELAY:turn.udp" "" datagram.example.com.
  IN NAPTR 200 10 "" "RELAY:turn.tcp:turn.tls" "" stream.example.com.

- datagram.example.com.
  IN NAPTR 100 10 "S" "RELAY:turn.udp" "" _udp._turn.example.com.

- stream.example.com.
  IN NAPTR 100 10 "A" "RELAY:turn.tls" "" a.example.com.
  IN NAPTR 200 10 "S" "RELAY:turn.tcp" "" _tcp._turn.example.com.

- _udp._turn.example.com.
  IN SRV 0 0 5000 a.example.com.

- _tcp._turn.example.com.
  IN SRV 0 0 5000 a.example.com.

- a.example.com.
  IN A 192.0.2.1
URI extensibility?

- The only component that is currently extensible in a TURN URI is the transport parameter. No other parameter can be added.

- The problem of permitting additional parameters is the behavior for resolvers that does not understand them.
Additional ways to select the servers?

- Optional capabilities for TURN servers:
  - IPv6 allocation
  - Preserve bit
  - Allocate even port bit
  - Allocate next port bit

- Instead of trying all servers returned by SRV RR until one supports the capabilities requested, the server capabilities can be provisioned in the NAPTR RR.
Next steps

● WG item?