

TURN-Lite: A Lightweight TURN Architecture and Specification

[\(draft-wang-tram-turnlite-02\)](#)

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Why we proposed a new architecture

- We've been exploring:
 - Service Providers might provide TURN relay service to their customers (mostly ICPs, Application Providers)
 - Utilize the already deployed CGN/CDN devices as TURN servers
- But we found it was complex
 - Every CGN (TURN server) needs reserve and plan Address/Port, which is a big burden for SPs, especially there are many CGN devices deployed in a distributed manner
 - Signaling is complex: ICE-based interaction; different processing for UDP, TCP and v4-v6 communication
 - So many CGN devices can hardly directly open to customers (interface issue)

TURN-Lite Architecture (Updated since last meeting)

■ Architecture

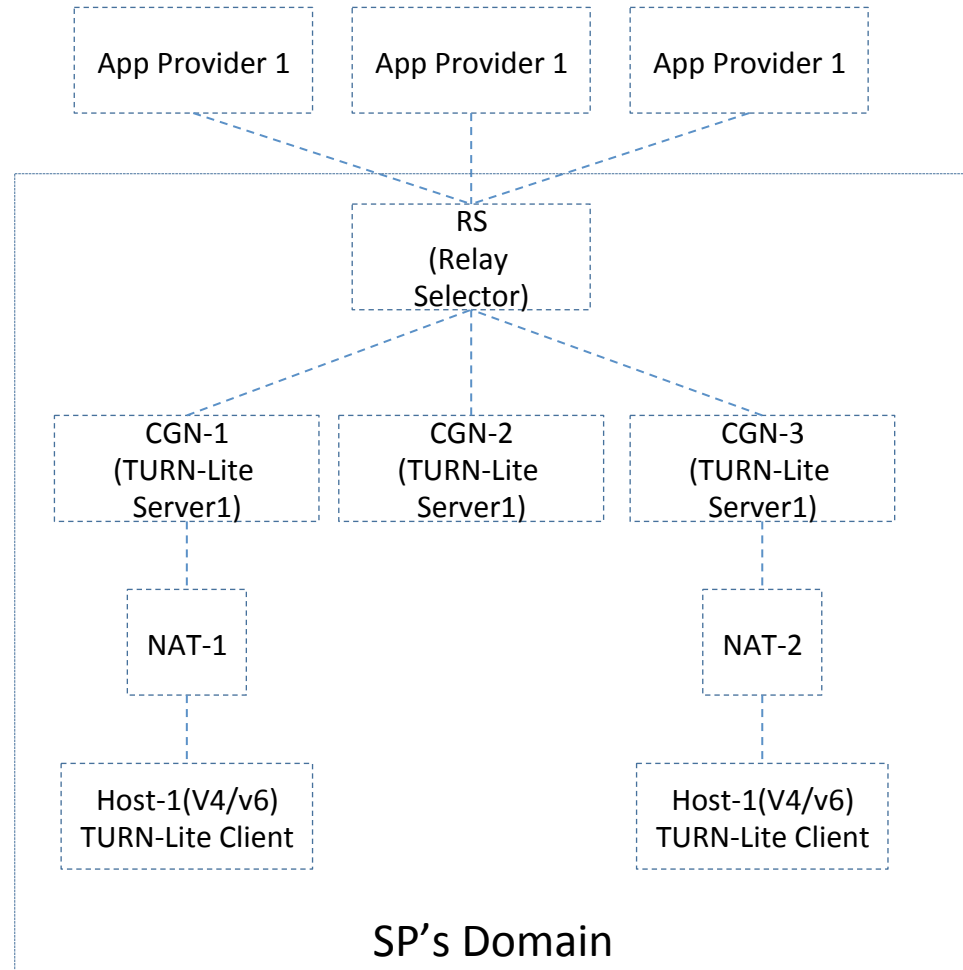
- RS—Relay Selection
- CGN—Data Relay
- Client—Connection Initial

■ Reduce the complexity

- each relay needs only one transport address/port
- signaling procedures are significantly simplified
- a single RS interface is much easier for opening to customers

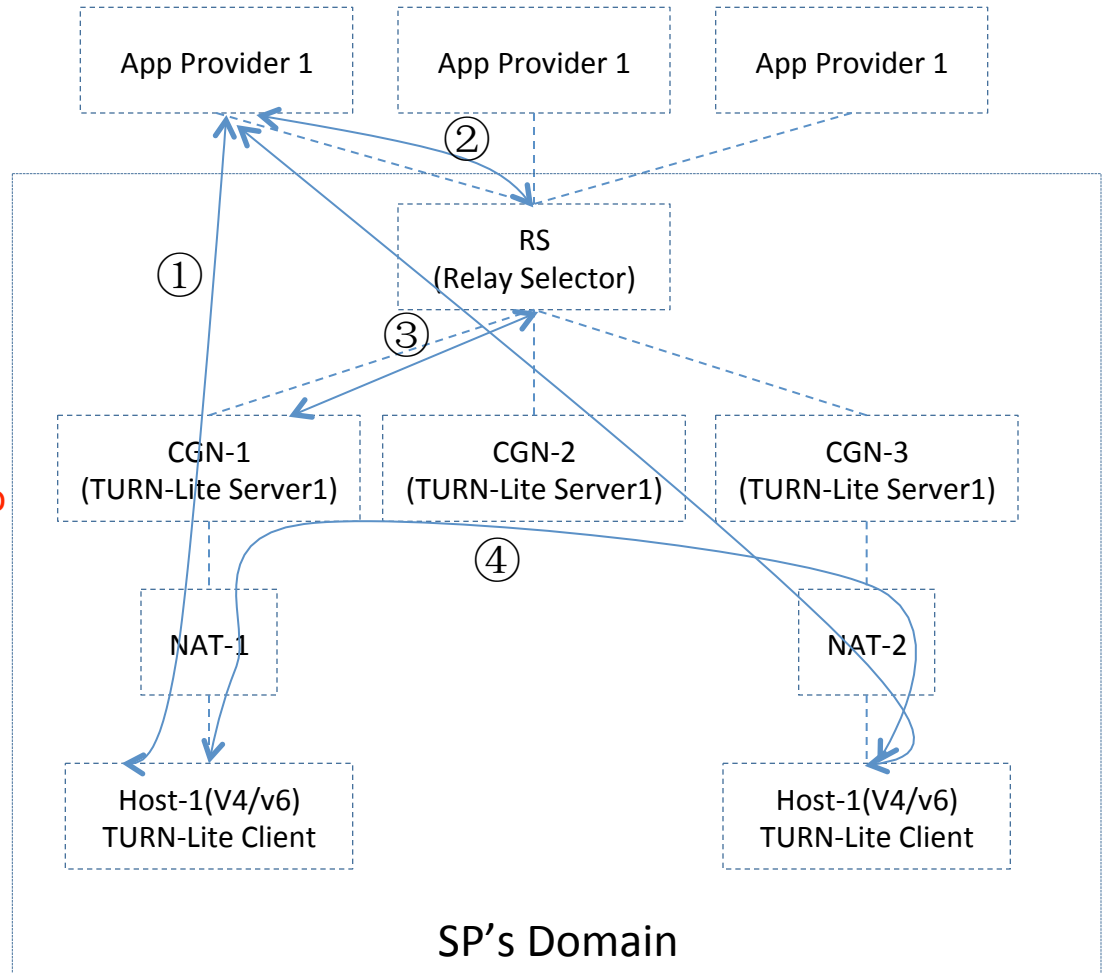
■ So that

- SPs can easily integrate the relay functions into distributed devices such as CGNs.
- SPs can easily provides data relay service to ICP/App Provider via RESTful Interfaces



Communication Procedures

1. Clients register to their App server, and gets the RS address, get their reflective addresses to RS(REFLX_RS) and report them to App server
2. App server sends REFLX_RS pair to RS, let RS select one optimal relay device to relay data.
3. Clients get their reflective addresses to Relay (REFLX_Relay) and report them to RS, RS form COUPLE packet and send it to the selected CGN devices.
4. Clients send TCP/UDP packet via the selected CGN device, CGN device relay the data based on the table built by COUPLE command.



Relationship with TURN

- TURN-Lite is NOT intended to be a full alternative of TURN
- We consider it as a complementary solution for SP-Public-Relay-Service (e.g. for network operators or CDN providers .etc)

Next Steps

- Feedbacks are welcomed
 - Especially from ICP perspective
 - Also from ISP/CDN provider perspective
- A useful work? Possibly added to the charter?

Comments?

Thank you!

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