draft-gu-ppsp-tracker-protocol-03

Presenter : Haibin Song

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Overview of Proposal

- Protocol for exchanging information between tracker and peers, supporting mechanisms for the following:
  - Connect/Disconnect from a system
  - Join/Leave a swarm or channel
  - Find peers participating in a swarm or channel
  - Query or report statistics among tracker and peers
  - Keep alive message
- Intended for centralized tracker, but protocol could easily be used among peers in a cooperative, DHT-based approach

Two major Open Issues -- rough consensus

- Text or Binary encoding
  - Discussion from IETF 79: text-based is preferred
  - Discussion from mail list after IETF 79: text-based is preferred
- NAT Traversal
  - Discussion from mail list after IETF 79: NAT Traversal is out of scope of Protocol definition, however Protocol definition should make NAT Traversal feasible and flexible.
  - May carry both Peer ID and Peer IP Add in peer list.
  - Tracker can naturally know the IP Add of peer from IP packet

Open Issues/Considerations

- STAT_QUERY
  - How often should Tracker make STAT_QUERY?
- STAT_REPORT
  - When should Peer STAT_REPORT status? Periodically or event-trigger?
- KEEPALIVE, how often?
- Do we support specification of Peer property in message? (mobile or fixed, etc...)

Open Issues/Considerations

- Where to put the Peer Status information?
  - PPSP Peer itself: Status information is stored in peer itself without involving Tracker. Reduces storage and signaling cost of Tracker, but optimized peer selection is done among PPSP peers.
  - Static status info only on Tracker: Store static info for peers w/swarm list, but need to contact peers to get ephemeral data
  - All status info on Tracker: Store all info for peers w/swarm list. This could be very expensive to store and update.

Need consensus to move forward

- The authors propose to accept Tracker protocol as an WG item.
  - The essential Open Issues have gotten rough consensus.
  - The basic messages have been described.
- Some decisions to the Tracker protocol Open Issues influence Peer Protocol design.
  - We need to make rough consensus in the face-to-face meeting, if we want to move both protocols move further.