Service Discovery Usage for RELOAD

draft-maenpaa-p2psip-service-discovery-00

Jouni Mäenpää
Gonzalo Camarillo
Background

- Peers in an overlay provide services to each other.
- Use of well-known keys does not scale.
- RELOAD base does not define a generic service discovery mechanism.
  - The base draft states that a generic mechanism can be implemented as an extension to RELOAD.
  - Recursive Distributed Rendezvous (ReDiR) is given as an example.
- This draft defines a service discovery extension that uses ReDiR.
Overview - ReDiR

- Used in OpenDHT
- Interacts with the overlay through a put/get API
- Builds a tree structure of nodes providing a service
  - Each tree node contains a list of service providers
  - Providers are assigned to tree nodes based on their Node-IDs
- Embeds the tree into RELOAD overlay
- To find a service provider, a peer fetches tree nodes one-by-one from the overlay
  - ReDiR defines a way to calculate the key of any tree node
  - The service provider to use is determined based on the Node-ID
Benefits

- Finds a service provider using a constant number of Fetch operations
- Only Store and Fetch operations used - no new functionality required from RELOAD
- Distributes the load
- Has been validated in OpenDHT
Next steps

- Questions?
- Next steps?