

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?