

Design Aspects of HIP Rendezvous Mechanisms

draft-eggert-hip-rendezvous-01

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History

- ▶ -00 version presented to HIP WG and RG in Seoul, Korea
 - ▶ decision to split the draft
- ▶ **WG draft** to focus on immediate HIP-to-HIP rendezvous protocol
 - ▶ draft-eggert-hip-rvs-00
 - ▶ with Julien Laganier from Sun
 - ▶ adopted as WG document on Wednesday
- ▶ **RG draft** to discuss general ideas for HIP rendezvous mechanisms

Focus and Changes

- ▶ focus: **discussion of possibilities** for HIP rendezvous mechanisms
 - ▶ we're not pushing a solution here
 - ▶ (and this would be the wrong venue anyway)
- ▶ existing text more or less unchanged, modulo bug fixes
- ▶ **new sections by Marco Liebsch** on HIP location privacy
 - ▶ focus on rendezvous
 - ▶ initial ideas, not a complete discussion

Location Privacy

- ▶ **communicate via HIP without exposing your endpoint addresses to your peers**
 - ▶ “location” in the topological sense
- ▶ who cares?
 - ▶ some operators do
 - ▶ concern of exposing network details
 - ▶ (not sure I agree with them)
 - ▶ according to some MobileIP people, this is why MobileIP is experiencing slow deployment

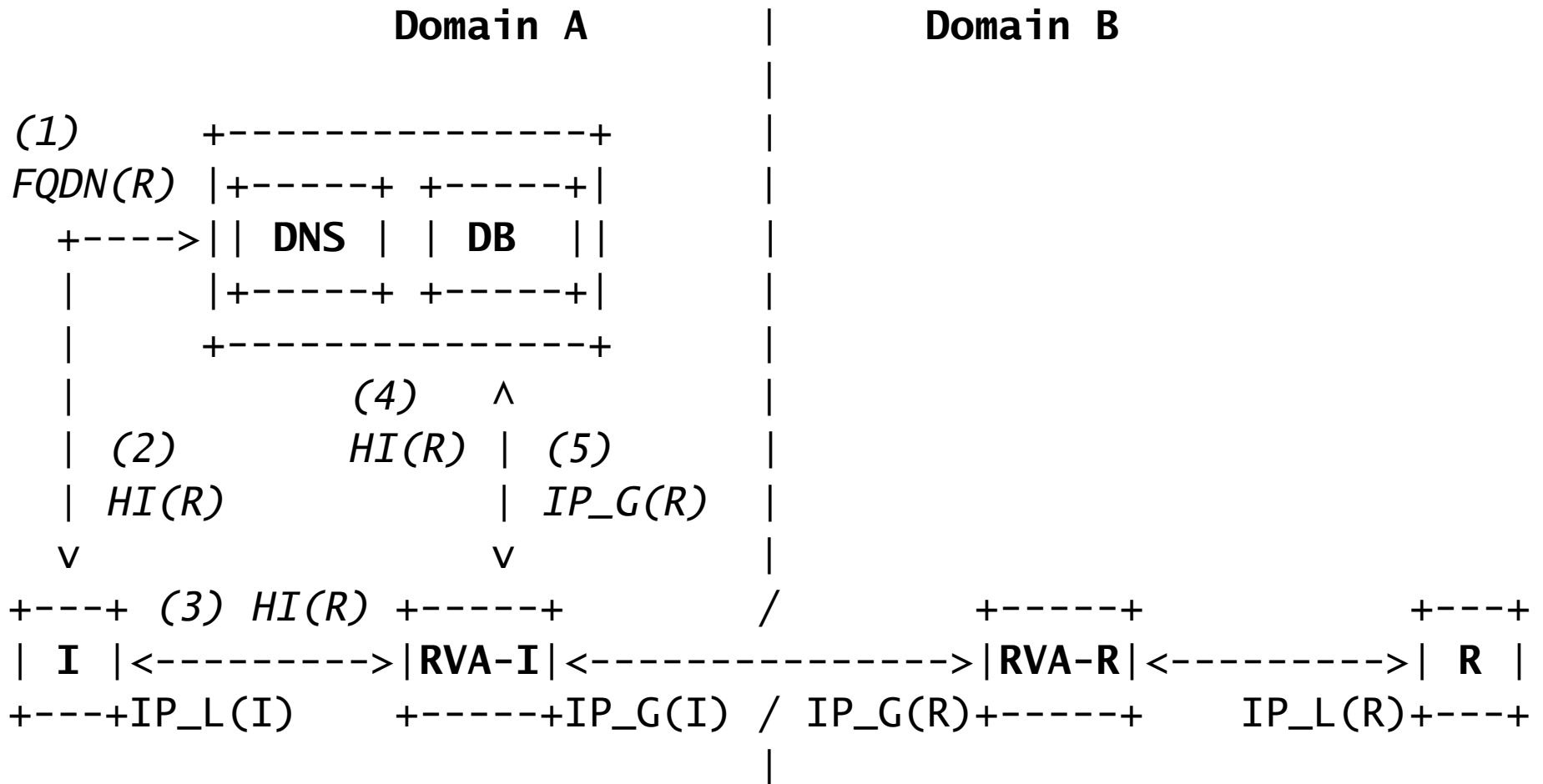
Strawman

- ▶ relay all communication through rendezvous servers
- ▶ high load on rendezvous servers
- ▶ inefficient routing
- ▶ still reveals the peers' global addresses

Thought Experiment

- ▶ **push the HI→IP lookup into the network**
 - ▶ hosts send all traffic to rendezvous “agents” (RVA)
 - ▶ initiator RVA performs HIP lookup, then forwards
 - ▶ destination RVA similarly
- ▶ host addresses only known to their local RVA
 - ▶ remote RVA sees local RVA’s address

HIP Lookup at RVA



RVA Thought Experiment

- ▶ assumptions
 - ▶ you trust your local RVA
 - ▶ your RVA trusts the remote RVA more than the remote host
 - ▶ (operator view, not sure this holds)
- ▶ drawbacks
 - ▶ loss of end-to-end semantics, etc.
- ▶ related ideas
 - ▶ i3 (SIGCOMM 2002)
 - ▶ hi3 (draft-nikander-hiprg-hi3-00)
 - ▶ DataRouter (IWAN 2003)

HIP RVS Concealment

- ▶ concealment control fields
 - ▶ Julien's idea for HIP-to-HIP case
 - ▶ draft-eggert-hip-rvs-00
- ▶ WG feedback indicated that this would belong into the RG
 - ▶ we agree, remove from WG draft
- ▶ merge into future revision of the RG draft?

Questions to the RG

- ▶ location privacy interesting in general?
 - ▶ this is preliminary and needs refinement
- ▶ comments on draft specifics?
- ▶ organization of the rendezvous work?
 - ▶ draft is becoming large
 - ▶ is that OK? overview + split by topic? other ideas?

Questions

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