

Some Thoughts on HIP Rendezvous

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March 1, 2004

If only one end of a HIP association has moved (changed its locator), then that endpoint can take responsibility to inform the other end of its new locator(s). No rendezvous server, home agent, etc, is needed.

If both endpoints have moved, leaving each endpoint with only stale (and non functional) locators for the other endpoint, then some sort of rendezvous mechanism is needed.

Observe that any HIP-enabled server with which either of the moved endpoints has maintained its HIP association could easily serve as the relay point to reestablish the association.

It would already be holding all the state needed to serve as a forwarder to the endpoint with which it has an association.

(The state is a mapping of HIT to a reachable locator).

So a HIP rendezvous server need not be anything special. Any correspondent HIP-enabled server would already be holding all of the state needed to enable it to serve as a forwarder of packets which included the HIP (Host Identity Payload) header.

The mobile node just needs to include the locators of some server with which it intends to maintain an association in the list of locators at which it can be reached.

Mechanisms needed:

- The locators need to be marked as care-of addresses, so that correspondents know that the HIP header cannot be omitted (or perhaps that only I1 and/or REA packets can be sent to it).
- HIP protocol needs to have a mechanism to allow an endpoint to indicate its willingness to serve as a point of contact.
- HIP implementations would need to attempt to forward HIP packets which are not to one of its own HITs but which are to a HIT with which it has an association.

To think about:

- Why not have every HIP implementation have this forwarding mechanism enabled by default?
- What denial of service attacks are there in this scenario? What defenses should be included?
- Pekka Nikander's observation: This is starting to look like some sort of an overlay network