Mobility and Multicast Support for Nimrod

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Mobility Support : Summary

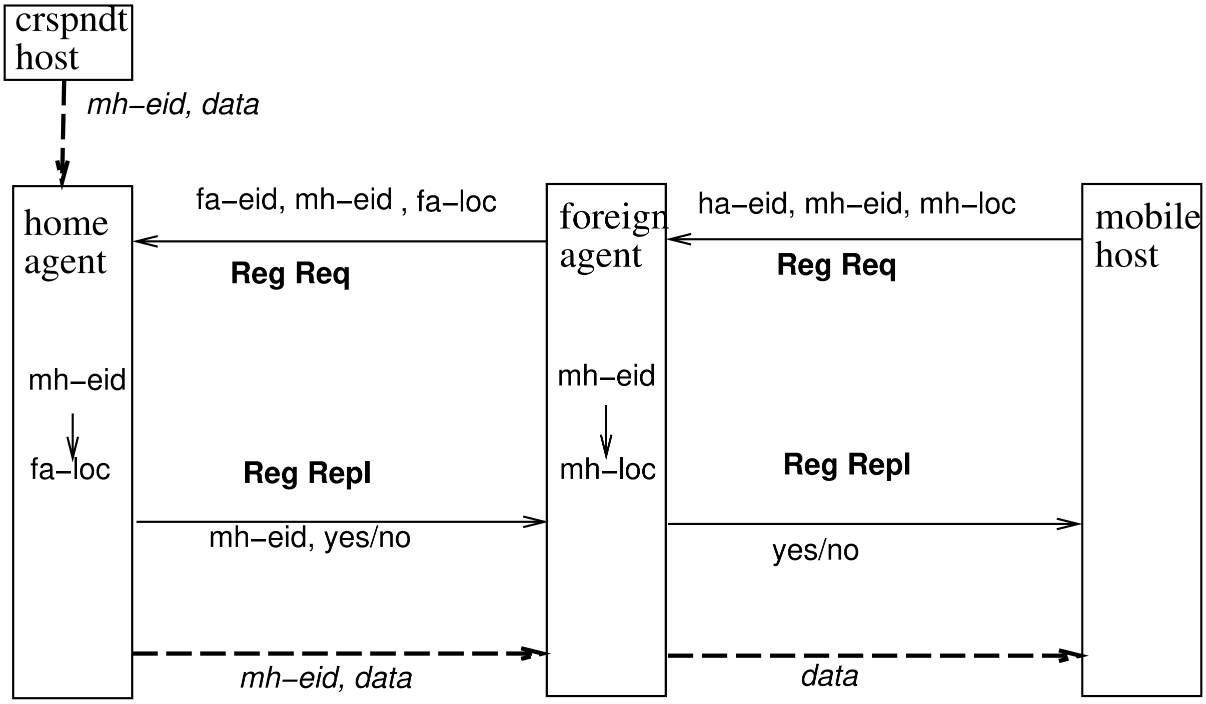
- Nimrod does not specify a particular solution for mobility
  - Requirements not well understood yet
  - Other groups working on it (Mobile-IP)
- The endpoint and locator space are separated
- Mobility in Nimrod $\equiv$ Dynamism in Endpoint-Locator Association.
- Two kinds of mobility
  - Endpoint Mobility : no topological change
  - Network Mobility : topological change
- Mobility solution must be scalable and secure
- First-cut solution : Mobile-IP adapted to Nimrod

An Example : IETF Mobile IP

Encapsulation :

IPng header	MIPP header	Data
S–EID, D–EID S–LOC, D–LOC	Home Agent, Home Address, Foreign Agent etc. (Mobile IP WG Spec.)	

REGISTRATION:



Multicast Support : Summary

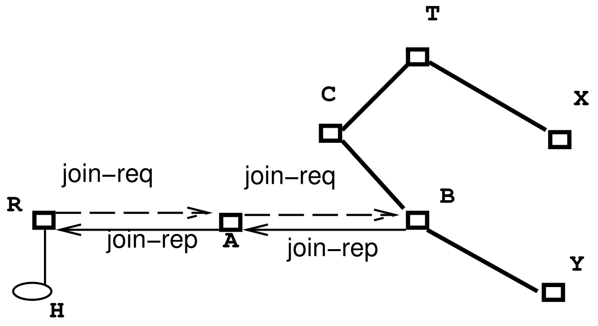
- Nimrod does not specify a particular multicast solution
  - Non-trivial problem with variety of solution approaches
  - Other groups working on it (e.g., IDMR)
- Nimrod can accommodate diverse multicast techniques (e.g., CBT, PIM, Source Specified Multicast a la IDPR etc.) Example in document : PIM.
- A multicast solution should be capable of
  - Scaling to large networks, large numbers of multicast groups and large groups.
  - Supporting policy, including QOS and access restrictions
  - Resource sharing
- Interoperability issues
  - a "language" for state specification
  - does not matter *who* sets up the state (sender, receiver) or *how* it is set up (CBT, PIM)

Internet Drafts

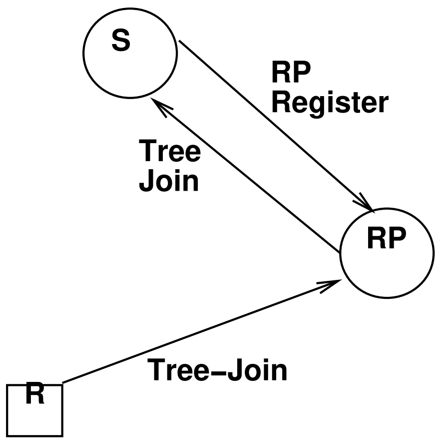
- Mobility Support for Nimrod : Requirements and Solution Approaches. (filename: draft-ramanathan-mobility-00.ps, draft-ramanathan-mobility-00.txt).
- Multicast Support for Nimrod : Requirements and Solution Approaches. (filename: draft-ramanathan-multicast-00.ps, draft-ramanathan-multicast-00.txt).

An Example : PIM

Basic Building Block : Tree–Join



SHARED–TREE



SOURCE–TREE