NSIS Mobility discussion

Authors:
Jongho Bang, Roland Bless, Xiaoming Fu, Robert Hancock, Jin Pyo Hong, Seong-Ho Jeong, Cornelia Kappler, Byoung-Joon Lee, Sung-Hyuck Lee, Jukka Manner, Paulo Mendes, Andrew McDonald, Henning Schulzrinne, Charles Shen, Hannes Tschofenig

Non-goals

- Not designing a mobility protocol
- Not designing a separate NSIS mobility protocol
- Not repeating work already done in IETF mobility-related WGs
- Not integrate NSIS and existing mobility protocols
- Not a long term research activity
  - Provide input to protocol design over the coming months
  - Don't expect the design work to wait

Motivation

- Avoid initial design mistakes that break the protocols in mobile environments, e.g.
  - Tie signaling application states with IP addresses
  - Tie routing state to session identifier
  - Probably more similar issues exist, a detailed analysis of the problem area is needed (much done already, still uncoordinated)
- Mobility problems are very hard to patch after initial design and deployment
  - Because they have interactions spread across the network

Main Issues in Scope

- Differences between the general route change and mobility-caused route change
- Discovery of crossover router and dead peers
- How to set up states on the new path and tear down old states on the obsolete path? When?
- State update on the common path after handover
- Interactions with mobility protocols, using MIP, LMM, SIP, CT and CARD as examples
- Dependencies between the NTLP and NSLP and split of functionality between layers
- Security issues, e.g. the authorization model

Out of Scope Issues

- Specific implementation details (generic guidelines would be in scope)
- Mobility (routing) management
- Handover management: requirements for NTLP/NSLP state management in scope
- Movement detection of end hosts and finding candidate access routers
- Multicast without limits, “SSM could be tbd”

How to Proceed?

- Do we need a single document? Yes.
- Does the document need to be accepted by the WG?
- Does it therefore need to be a WG document?
- Does it need to be a charter item? No?
- Document status in the short and long term:
  - Give input/validation for the current protocol design, complete basic issues by Spring -04
  - Gather guidelines for designers of future NSLP protocols
  - Give guidelines for implementors of signaling applications