Multiple Care-of Address Support for Mobile IPv4
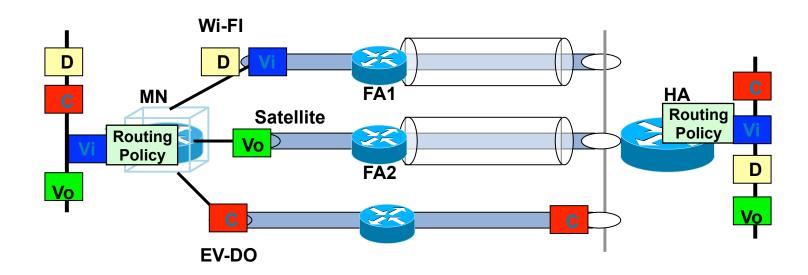
draft-gundavelli-mip4-multiple-tunnel-support-02.txt

Draft Status

- The -00 version of this draft covered the multiple tunnel support between the mobile node and the home agent. It defined the extensions on the home agent, foreign agent and the mobile node for supporting this capability. It had support for only static flow policies.

- In IETF-74, the working group suggested we take the flow policy work from draft-tsirtsis and include in this draft.

- The updated draft -03 version will have the complete support for both static and dynamic flow policy management across multiple tunnel paths between the mobile node and the home agent. It has the needed semantics for defining a flow and binding it with a given care-of address. New Mobile IP options are defined for supporting this capability.

Policy Routing with Multiple Tunnels

- The mobile node can register multiple care-of addresses with the home agent. A tunnel path is established for each of the registered care-of addresses.

- The mobility entities will exchange the flow information and associate them with a given care-of address.

Operational Benefits

- Provides the ability to use multiple access interfaces on the mobile router for reaching the home network.

- Some form of link bundling, and is desirable when the access links have low bandwidth. This is important for Mobile Router deployments.

- Gives us the ability to classify and route traffic over different tunnels. All HTTP traffic may take one tunnel route. More intelligent traffic policies can be applied.

- Allows the home agent and mobile router to perform traffic engineering by leveraging these multiple available links.

- This work around Mobile IPv4 is still relevant.

New Options & Next Steps

- The following new Mobile IP options are defined for supporting this feature. These options allow the the mobility entities for:

    - Registering the CoA Address / Binding Identifier

    - Flow Identification and Association with a CoA.

- To most part this work is completely leveraged from the MEXT efforts.

- New Processing rules and considerations are specified for all the mobility entities.

- The next steps are to publish this document as a working group document.

Thank You