

Multiple Care-of Address Support for Mobile IPv4

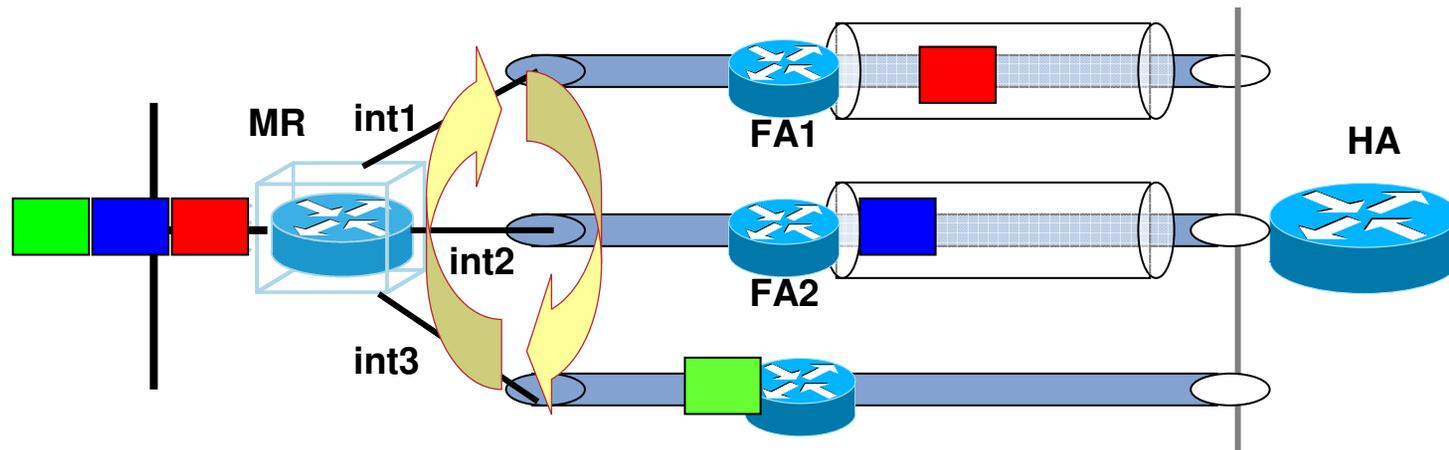
draft-gundavelli-mip4-multiple-tunnel-support-00.txt

Multiple Tunnel Support

- Provides the ability to use multiple access interfaces on the mobile router for reaching the home.
- Some form of link bundling, and is desirable when the access links have low bandwidth. This is requirement for Mobile Router deployments.
- Gives us the ability to classify and route traffic over different tunnels. All voice 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.
- Cisco has this implemented over 3 years and has many deployments in Public Safety and Transportation markets.

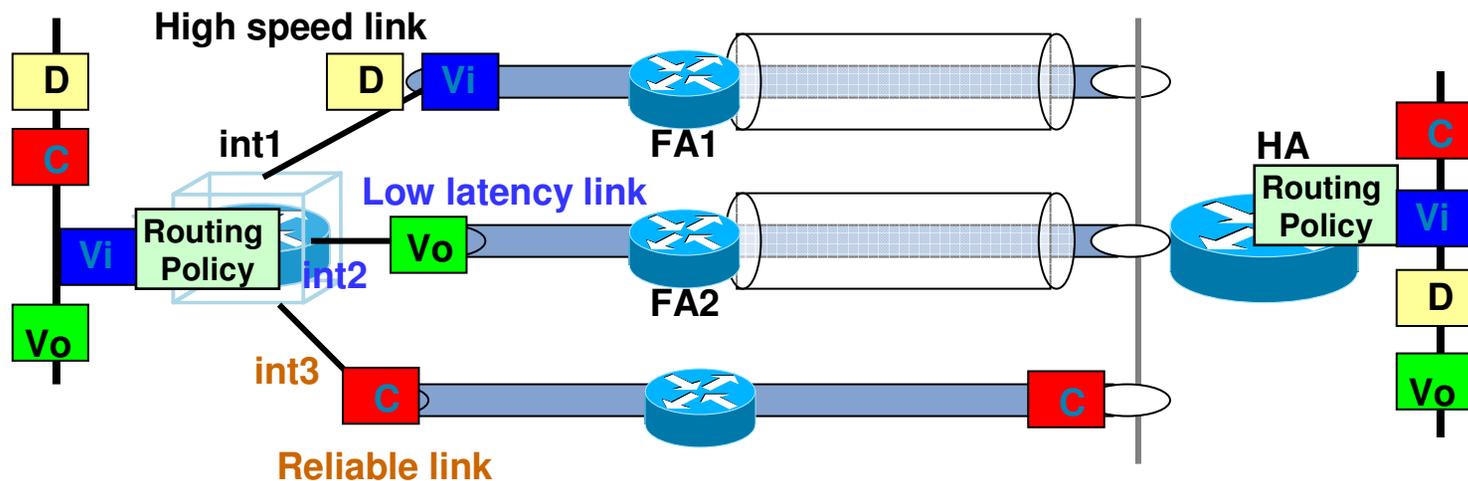
Traffic Flow within Multiple Tunnels (MIPv4)

- Multiple tunnels between the mobile router and the home agent
- Traffic is load balanced among the available tunnels
- The default Load balancing schemes of Per-Packet load balancing or Per-Destination load balancing

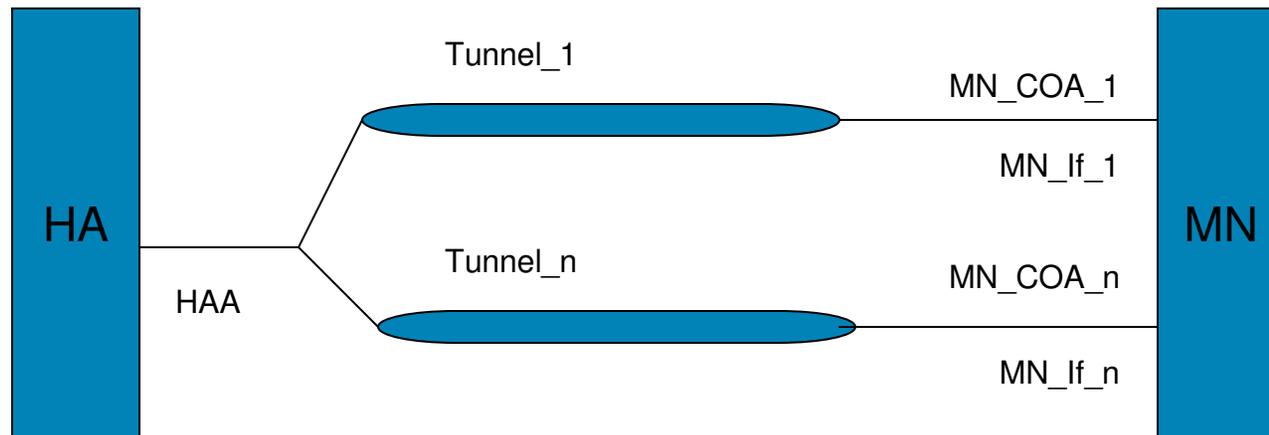


Policy Routing with Multiple Tunnels

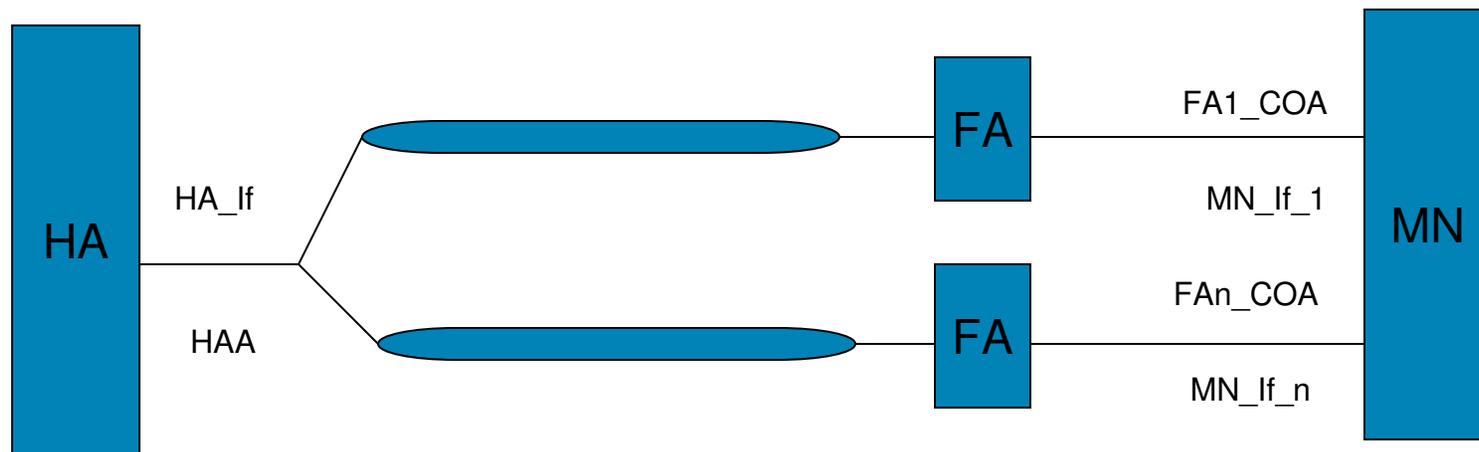
- Route traffic to a specific tunnel based on a defined policy
- Traffic classification can be based on applications type, protocol, port number, DSCP value, etc.
- Path/link selection based on link bandwidth, end-to-end conditions – connectivity, latency, reliability, etc.



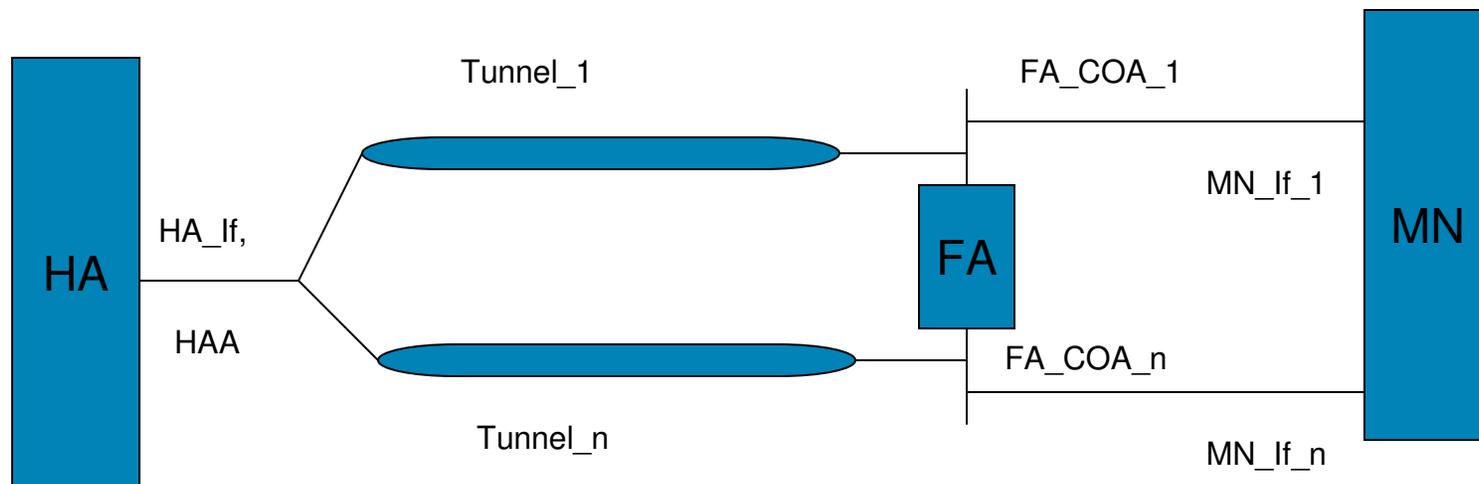
Case-1: Mobile Node Registering Directly (No foreign agents)



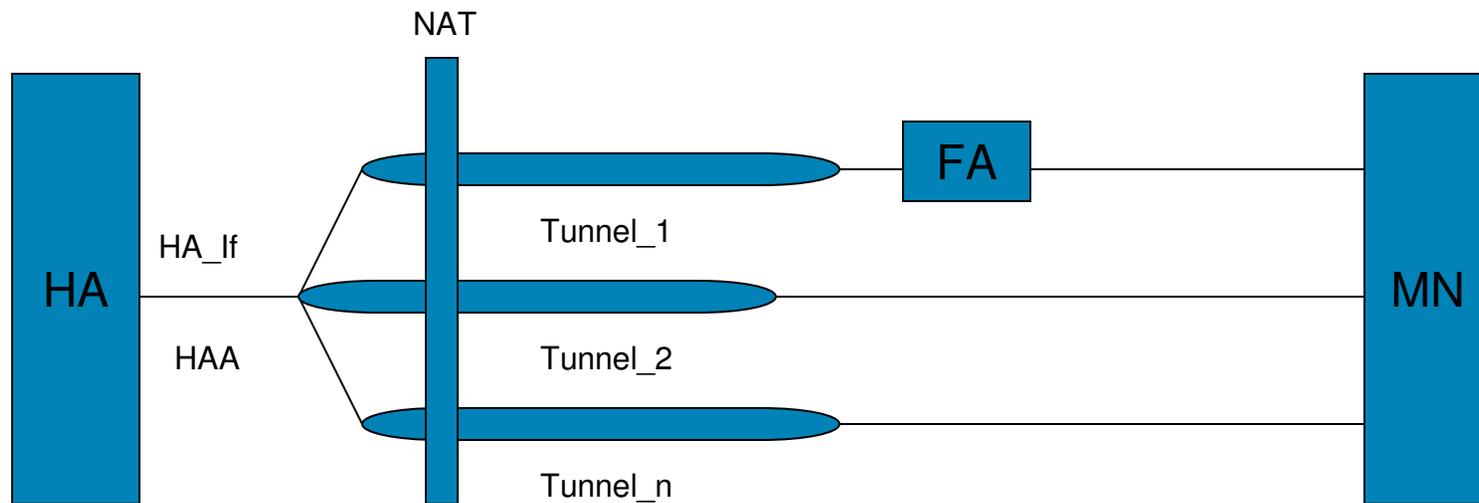
Case-2: Mobile Node Registering through multiple foreign agents



Case-3: Mobile Node Registering through the same FA with each interface connected to a different FA interface



Case-4: Mobile Node behind a NAT



Thank You

