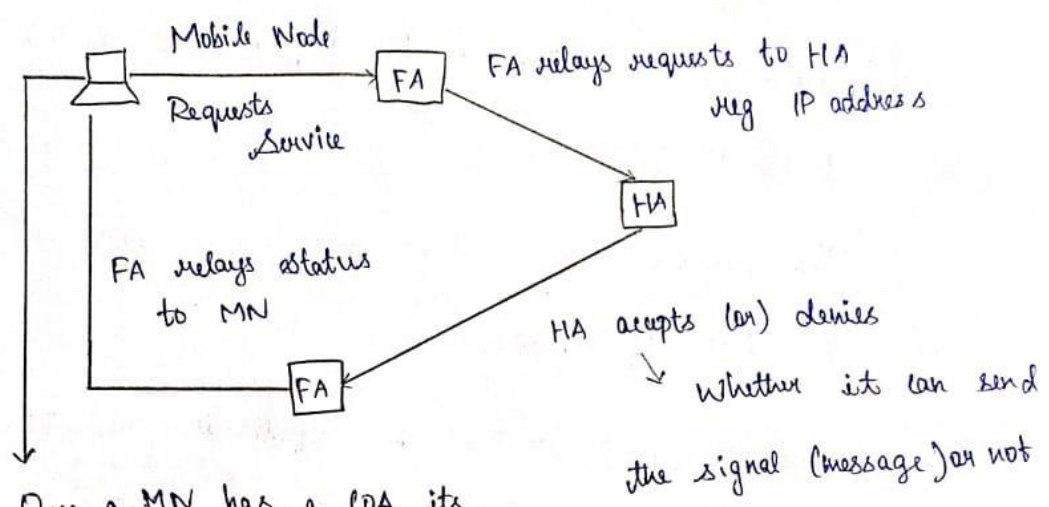


8) Registration

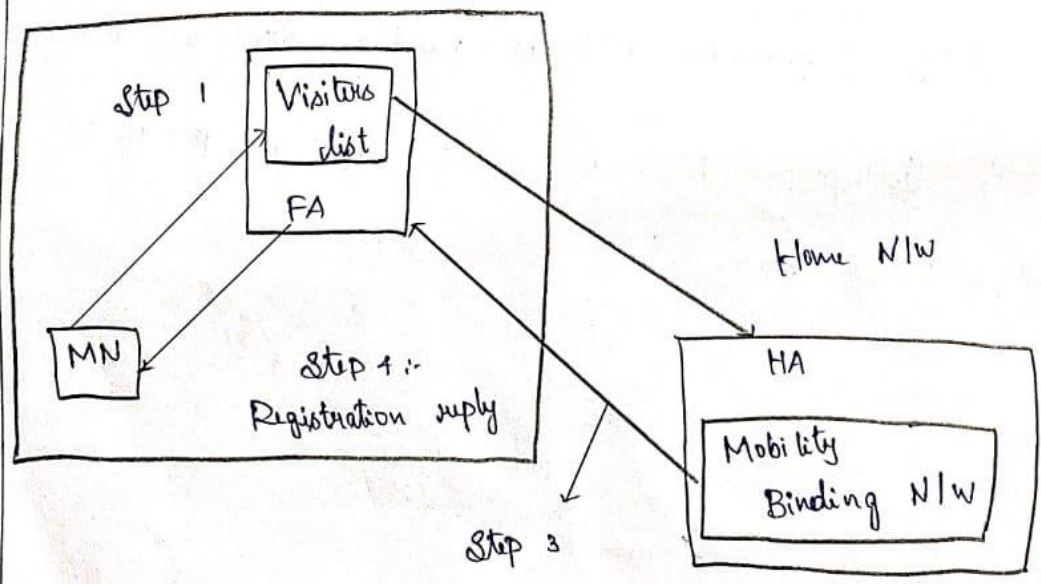
FA → FA advertises services



Once a MN has a CoA its home agent must find out about it.

Foreign N/w

Mobility Binding Network → It contains mobile node's home IP address and current CoA.



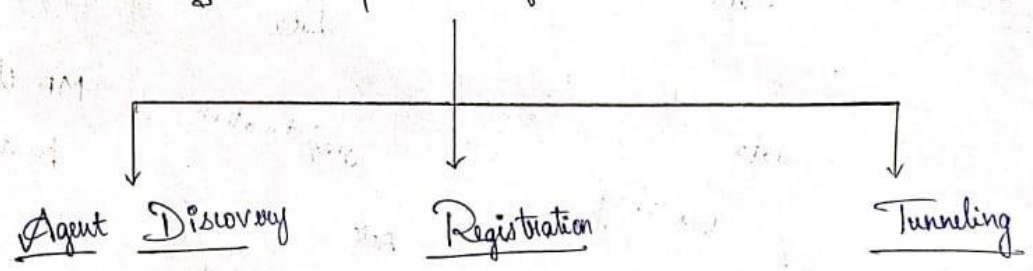
Step 1 :-

→ Mobile Node - Registration request is send to the Foreign Network through FA.

Step 2 :-

Registration request is send to home network.

3 main phases of IP



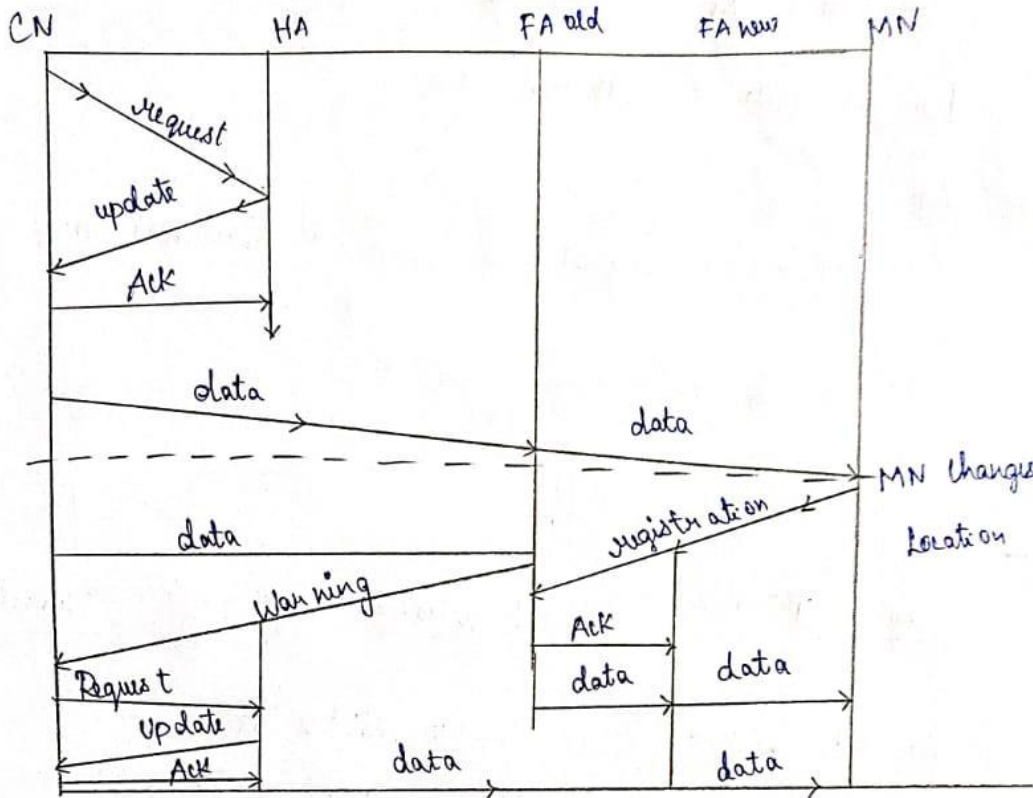
The MN discover its FA and HA during this.

The MN registers its current location with FA and HA.

9) Optimization in Mobile IP

Basic four concepts are,

- Binding Request
- Binding Update
- Binding Acknowledgement
- Binding Warning



**Binding Request :-**

- \*1) When correspondent node updates itself about the location of Mobile Node at that time it sends a request to the Home Agent for location information of MN.
- \*2) This request is called Binding request. It can be sent through Care of Address.

**Binding Update :-**

When Mobile Node change its location then it send the information regarding above.



## Binding Acknowledgement

When any network (Home / Foreign) reply to Mobile node (M) Correspondent Node. It is called Binding Acknowledge

## Binding Warning

If there will be a missing of any one. from above three then warning message has sent from network to node.

## Diagram Explanation

\* Top says the existence of the link previously.

\* Similarly bottom part says the establishment of new link after Mobile Node changes its location.

## Steps

1) Initially there will be a dedicated link in b/w Correspondent Node and Foreign Agent Old, FA old and Mobile node.

2) In the mean time, Mobile Node changes its position from FA old to FA new and there will be no updation information at Correspondent Node.

- 3) Before establishment of new link in between correspondent Node & FA new, Mobile Node should register itself under FA new.
- 4) For this registration MN sends a binding request to FA new for getting a link.
- 5) Similarly FA new sends a binding request to FA old regarding the position change of Mobile Node.
- 6) The FA old update itself and sends a binding reply to FA new & FA old sends a reply to Mobile Node.
- 7) Now the position of Mobile Node under FA new is updated.
- 8) During this time correspondent Node sends a binding request for location information of Mobile Node to Home Agent.
- 9) Home Agent updates itself regarding the location changes of the Mobile Node.
- 10) Home Agent sends reply regarding new location of Mobile Node.

- 11) Now CN update itself regarding the new location of MN.
- 12) If CN will not update itself then the home network sends a warning to CN for updation.
- 13) If updation completion at each node and networks, then a dedicated link will establish in between CN-FA new - MN.

## 10) Agent Discovery

\* A mobile node has to find a foreign agent, when it moves away from its home network.

\* It describes two methods

i) Agent advertisement

ii) Agent solicitation

### Agent Advertisement

\* For this method, foreign agent and home agents advertise their presence periodically using special agent advertisement messages which are broadcast into the subnet.

\* Mobile IP does not use a new type for agent advertisement; it uses the router advertisement packet of ICMP and appends an agent advertisement message.