Rebecca Dias
19/182027
BE CMPN A

MCC IAT-2

Q2] b) Explain HAWAII in detail.

① HAWAII (Handoff-Aware wireless Access Internet Infrastructure) trice to keep micro-mobility support as transparent as possible for both home agent and MN

② Working

i) On entering an HAWAII domain, a mobile node obtains a co-located CDA

ii) MN registers with the HA

iii) When MN moving another cell inside the foreign domain, the MN sends a registration request to the new base station as to foreign agent.

iv) The base station interprets the registration request and sends out a handoff update message which reconfigures all routers on the path from the old and new base station to the crossover router. When the routing has been reconfigure successfully, the base station sends a registration reply to the MN again as if it were a foreign agent.
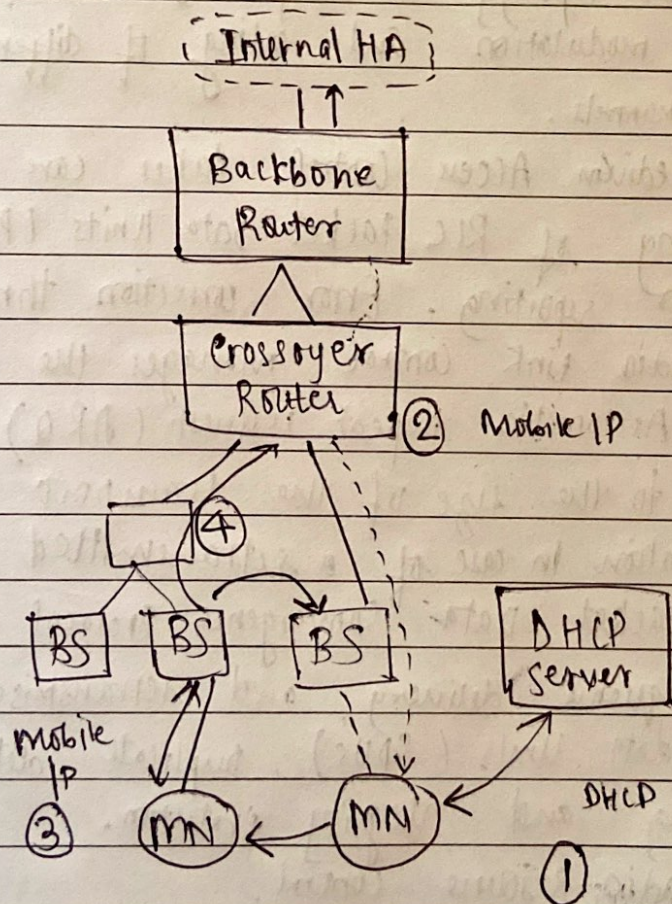
③ Advantages:
- Security: challenge response extensions are mandatory. In contrast to cellular IP, routing changes are always initialised by the foreign domains infrastructure.
- Transparency: HAWAII is mostly transparent to mobile nodes.

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Disadvantages:—
— co-located COA raises DHCP security issues (DHCP has no strong authentication)
— Decentralized security-critical functionality (Mobile IP registration processing during handover) in base stations.
— MN authentication requires PKI or AAA Infrastructure.
— There are no provisions regarding the setup of IPsec tunnels

Basic architecture of HAWAII.