

CNT Assignment 4

* Aim : Using a network simulator , configure :

- i) EIGRP
- ii) RIPv2 and EIGRP on same network
- iii) WLAN with static IP Addressing DHCP with MAC security & Filters

* Theory :

① EIGRP (Enhanced Interior Gateway Routing Protocol)

- It is an advanced distance vector routing protocol . Its an evolution of IGRP now obsolete . Supports classless routing & VLSM , route summarization , load balancing & many other useful features .

EIGRP characteristics include :

- - i) Fast convergence
 - ii) Loop free topology
 - iii) VLSM & route summarization
 - iv) routes for multiple routed protocols

- EIGRP Advantages :

- i) Easy transition to IPv6 with multiaddress family support for both IPv4 & IPv6 .

ii) Very fast rapid convergence for changes in network topology

iii) Superior scaling of IGP for dynamic multipoint deployments.

- Disadvantages of EIGRP

i) It's still distance vector routing protocol & relies on routes provided by directly connected neighbours.

ii) It's not extensible & doesn't support future application through opaque LSA.

② RIPv2

- Developed in 1993 due to deficiencies in IPv1. Supports classless interdomain routing (CIDR) & carries subnet information.

- Supports authentication & does subnetting & multicasting. Auto summary can be done on every router.

③ WLAN

- A Wireless Local Area Network is a group of colocated computers or other devices that form a network based on radio transmissions
- A WiFi network is a type of WLAN. A WLAN transmits information over radio waves. Data is sent in packets.
- Packets contain layers with labels & instructions along with unique MAC addresses assigned to end points.

* Conclusion : Thus we have configured EIGRP, RIPv2 & WLAN.