EIGRP Packet Types:

EIGRP uses five packet types in communication with its neighbors. The packet types are below.

Packet	Description
Hello	Used to identify neighbors. They are sent as periodic multicasts.
Update	Used to advertise routes, only sent as multicasts when something is changed.
Ack	Acknowledges receipt of an update.
Query	Used to find alternate paths when all paths to a destination have failed.
Reply	Used to response to query packets about routing information.

```
R1#show ip eigrp traffic
EIGRP-IPv4 Traffic Statistics for AS(1)
  Hellos sent/received: 453/453
  Updates sent/received: 9/5
  Queries sent/received: 0/1
  Replies sent/received: 1/0
  Acks sent/received: 5/5
  SIA-Queries sent/received: 0/0
  SIA-Replies sent/received: 0/0
  Hello Process ID: 209
  PDM Process ID: 207
```

Hello:

Hello packets are used for neighbor discovery. As soon as the hello packets send and receive EIGRP routers will try to form the neighbor adjacency. They are multicast to 224.0.0.10. By default, EIGRP sends hello packets every 5 seconds.

Update:

Update packets contain routing information for destinations. EIGRP unicasts update packets to newly discovered neighbors; otherwise, it multicasts update packets to 224.0.0.10 when a link or metric changes. Update packets are acknowledged to ensure reliable transmission.

Query:

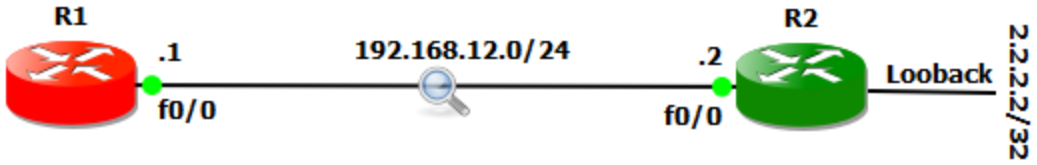
EIGRP sends query packets used to find alternate paths when all paths to a destination have failed. Query packets are always multicast.

Reply:

EIGRP sends reply packets to respond to query packets. Reply packets provide a feasible successor to the sender of the query. Reply packets are unicast to the sender of the query packet.

ACK:

ACK packets are used to acknowledge the receipt of update, query and replay packets. ACK packets are sent by using unicast.



To check on the Wireshark to capture the packets between R1 and R2 interface f0/0.

21	37.136768	192.168.12.2	224.0.0.10	EIGRP	74 Hello
22	37.306364	192.168.12.2	224.0.0.10	EIGRP	97 Query
23	37.322138	192.168.12.1	192.168.12.2	EIGRP	60 Hello (Ack)
24	37.322138	192.168.12.1	192.168.12.2	EIGRP	97 Reply
25	37.444884	192.168.12.2	192.168.12.1	EIGRP	60 Hello (Ack)
26	38.623527	192.168.12.1	224.0.0.10	EIGRP	74 Hello
27	43.089400	192.168.12.2	224.0.0.10	EIGRP	74 Hello
29	45.184590	192.168.12.1	224.0.0.10	EIGRP	74 Hello
32	50.324254	192.168.12.2	224.0.0.10	EIGRP	97 Update
33	50.342151	192.168.12.1	192.168.12.2	EIGRP	60 Hello (Ack)
34	50.342403	192.168.12.1	224.0.0.10	EIGRP	97 Update
35	50.378115	192.168.12.2	192.168.12.1	EIGRP	60 Hello (Ack)

After hearing “Hello” from R1, R2 will respond with another “Hello” packet. R2 will also send its routing table to R1 by “Update” packets. Remember that R2 will send its complete routing table for the first time. R1 confirms it has received the Update packet by an “ACK” message. R1 will also send to R2 its entire routing table for the first time R2 sends a message saying it has received R1’s routing table. Now both R1 & R2 learn all the paths of the neighbor and the network is converged.