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**Welcome
To
Network for you
EIGRP Stuck in Active**



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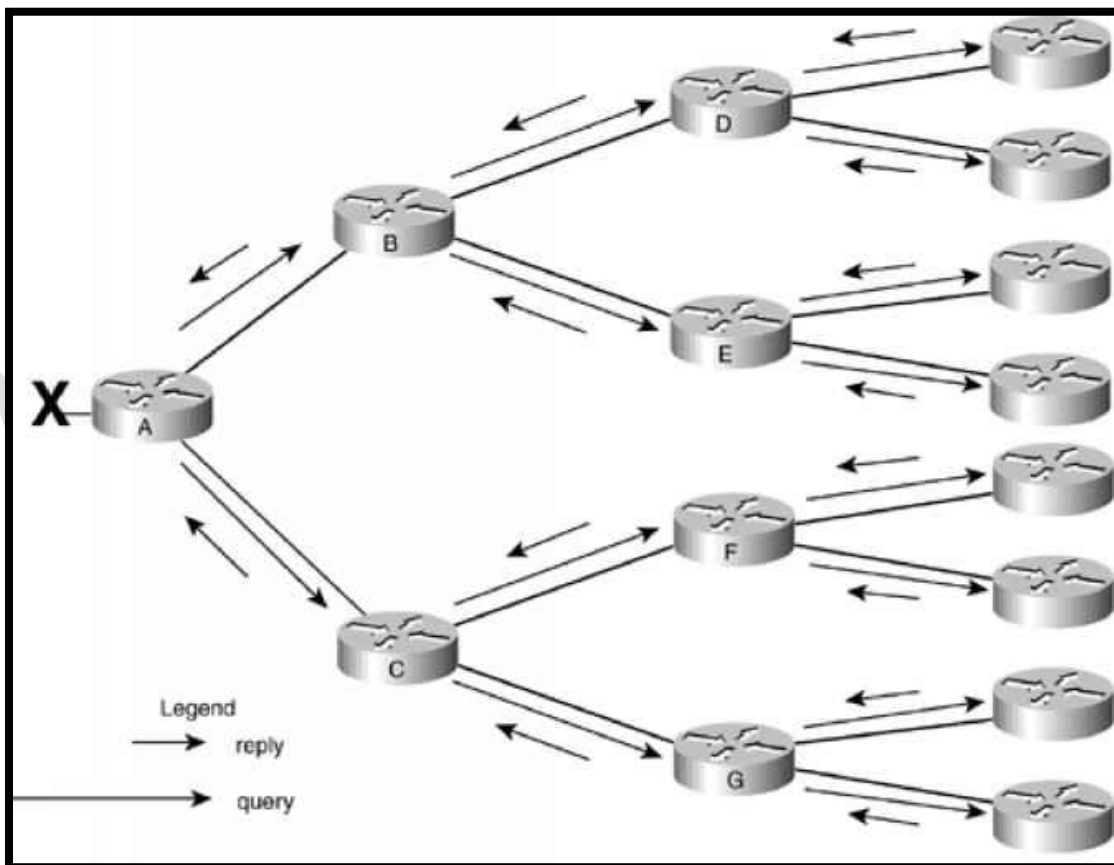
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EIGRP Stuck-In-Active:

When EIGRP first queries its neighbor, a stuck in active timer starts. By default, the timer is three minutes. If, in three minutes, EIGRP doesn't receive the query response from all its neighbors, EIGRP declares that the route is stuck in active state and resets the neighbor that has not responded to the query



- A route is considered passive when a router is not recomputing a new route.
- With EIGRP, if a router loses a route and it does not have an FS in the topology table, it sends out queries to neighboring routers to recompute a new route.
- This process puts the route in what is termed active state.
- To recompute a new route, the router sends out queries to all neighbors on interfaces other than the one used to reach the previous successor.
- The query inquires the other routers whether they have a route to a given destination.

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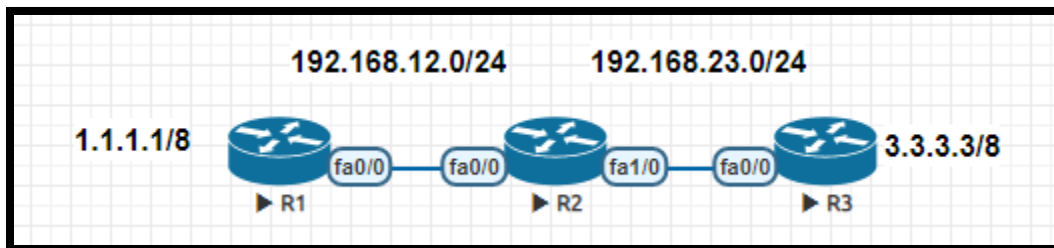
- If the receiving router has an alternative route, it replies back to the sending router letting it know about the alternative route and the query ends there.
- If the receiving neighbor does not have a route, it queries all of its own neighbors asking for an alternative route.
- The queries propagate through the network creating an expanding tree of queries.
- When a router responds to the query, it stops propagating on that portion of the network.
- However, the query can still propagate in other portions of the network as the other routers attempt to find alternative paths.
- When a route goes active, a reply must be received for every generated query, otherwise it stays active the whole time.

Stuck-in-Active:

- If the router does not receive a reply to all outstanding queries within 3 minutes (default setting), the route goes on stuck-in-active (SIA) state.
- When a route goes on SIA state, the neighbor relationship between the router and the neighbors that failed to reply resets.
- This action causes a re-computation of all routes known from that neighbor and to re-advertise all the routes it knows about to that neighbor.
- Router has high CPU usage or memory problems that results in the router being too busy to respond or unable to allocate enough memory to process the query or build the reply packet.
- Bad link between the router routers, which allows the two routers just enough to keep the route connected and receiving packets, but not enough that some packets or lost therefore some queries and replies are lost.
- Unidirectional link, which results with traffic only flowing in one direction.

Let do Lab:

Stuck in Active:



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R1 Configuration	R2 Configuration	R3 Configuration
<pre>en config t hostname R1 int f0/0 ip add 192.168.12.1 255.255.255.0 no sh int lo 0 ip add 1.1.1.1 255.0.0.0 router eigrp 1 network 192.168.12.0 network 1.0.0.0 no auto-summary ----- int f0/0 ip hold-time eigrp 1 6000</pre>	<pre>en config t hostname R2 int f0/0 ip add 192.168.12.2 255.255.255.0 no sh int f1/0 ip add 192.168.23.2 255.255.255.0 no sh router eigrp 1 network 192.168.12.0 network 192.168.23.0 no auto-summary ----- access-list 10 deny host 192.168.12.1 int f0/0 ip hold-time eigrp 1 6000 ip access-group 10 in we can check sh ip eigrp topology sh ip eigrp topology 3.0.0.0/8</pre>	<pre>en config t hostname R3 int f0/0 ip add 192.168.23.3 255.255.255.0 no sh int lo 0 ip add 3.3.3.3 255.0.0.0 router eigrp 1 network 3.0.0.0 network 192.168.23.0 no auto-summary then make lo 0 down and check sh ip eigrp topology</pre>

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```
R2#sh ip eigrp topology
EIGRP-IPv4 Topology Table for AS(1)/ID(192.168.23.2)
Codes: P - Passive, A - Active, U - Update, Q - Query, R - Reply,
       r - reply Status, s - sia Status

P 192.168.23.0/24, 1 successors, FD is 28160
   via Connected, FastEthernet1/0
P 192.168.12.0/24, 1 successors, FD is 28160
   via Connected, FastEthernet0/0
A 3.0.0.0/8, 1 successors, FD is Infinity, Qqr
  1 replies, active 00:02:26, query-origin: Successor Origin, retries(1)
  Remaining replies:
    via 192.168.12.1, r, FastEthernet0/0
  SIA-Stuck: 1 peers
  Peers:
    via 192.168.12.1, s, FastEthernet0/0
P 1.0.0.0/8, 1 successors, FD is 156160
   via 192.168.12.1 (156160/128256), FastEthernet0/0
```

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