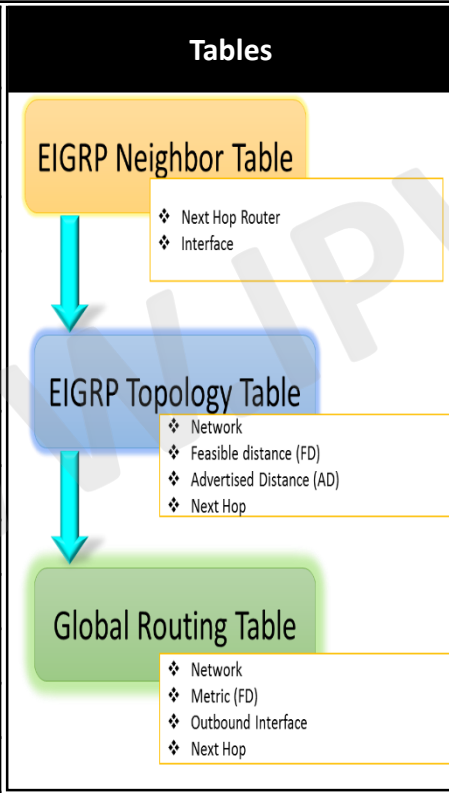


Character	Characteristics	Description	Default Value
K1	Bandwidth	Smallest Bandwidth across Source and Destination	1
K2	Load	Interface Load	0
K3	Delay	Combined Delay on all interfaces	1
K4	Reliability	Outgoing interface keepalive stats	0
K5	MTU	Smallest MTU of Interface	0

$$\text{Metric} = 256 \times \left(K1 \times BW + \frac{K2 \times BW}{256 - \text{Load}} + K3 \times DLY \right) \times \frac{K5}{\text{Rel} + K4}$$

Key features
Advance Distance Vector protocol
Diffusing Update Algorithm (DUAL)
Open Standard
Administrative distance – 1 – Internal = 90 (Network Command) 2 – External = 170 (Redistribution) 3 – Summary = 5 (Route Summarization)
Composite Metric
Protocol Number = 88
MD5 Authentication
VLSM Support
Route Summarization
Very fast Convergence
Hello & Hold Timers = 5/60 & 15/180



Dual Terms	
Feasible Distance (FD)	Metric on local router to destination
Reported Distance (RD)	Metric on neighbour to the destination
Successor	Lowest FD to the destination
Feasible Successor	2 nd best to destination if feasibility condition is met
Feasibility Condition	Is met if RD to a network learned from neighbour is less than local routers FD.

Packet Types	
Hello	Neighbor discover , use multicast and unreliable
ACK	Always unicast & use unreliable delivery.
Update	Convey route info. can be unicast or multicast and reliable
Query/Reply	Can be unicast or multicast and reliable
Request	Multicast or Unicast and unreliable

Stub Options	
Connected	Advertise connected routes matching network command
Summary	Advertise summary Routes
Redistributed	Advertise redistributed routes
Receive-Only	No Routes are advertised
Static	Advertise static routes used with “redistribute static” command

Basic Configuration commands
Router eigrp <AS No>
Network <network > <Wildcard mask>
no auto-summary
neighbor x.x.x.x
clear ip eigrp x.x.x.x
IP summary-address <network> <subnet mask>

Route/Interface States	
Passive	Route is reachable
Active	Unreachable, no FS exists
SIA (Stuck in Active)	The condition when a route becomes unreachable and queries are not answered
Passive Interface	interface which does not participate in EIGRP but whose network is advertised

Status & Troubleshooting
show ip eigrp interfaces
show ip eigrp neighbors
show ip eigrp topology
debug ip eigrp
debug ip eigrp packet
debug ip eigrp neighbors