



# EIGRP Deep Dive

Troubleshooting EIGRP Adjacencies - Part 1



# EIGRP Problem Statement

- + R4 and R5 are unable to exchange EIGRP updates over the DMVPN network. Find the problem and modify the network so that R4 and R5 have reachability to each others' Loopback0 interfaces.





# EIGRP Deep Dive

Troubleshooting EIGRP Adjacencies - Part 2



# EIGRP Problem Statement

- + R1 and R5 are unable to exchange EIGRP updates over the DMVPN.  
Find the problem and modify the network so that R1 and R5 have reachability to each other's Loopback0 interfaces.





# EIGRP Deep Dive

Troubleshooting EIGRP Adjacencies - Part 3



# EIGRP Problem Statement

- + R2 and R5 are unable to exchange EIGRP updates. Find the problem and modify the network so that R2 and R5 have reachability to each other's Loopback0 interfaces.

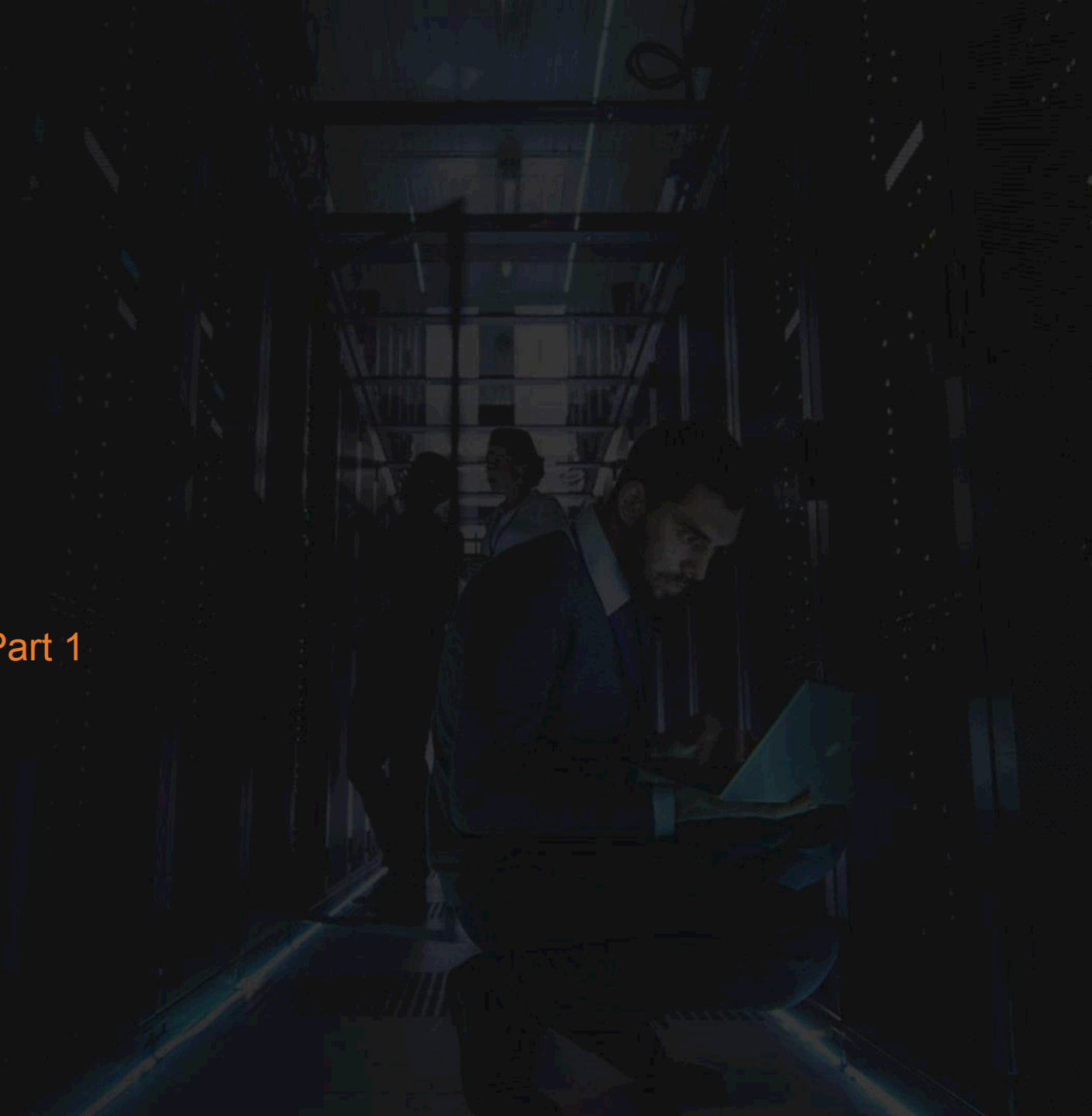






# EIGRP Deep Dive

Troubleshooting EIGRP Advertisements - Part 1



# EIGRP Problem Statement

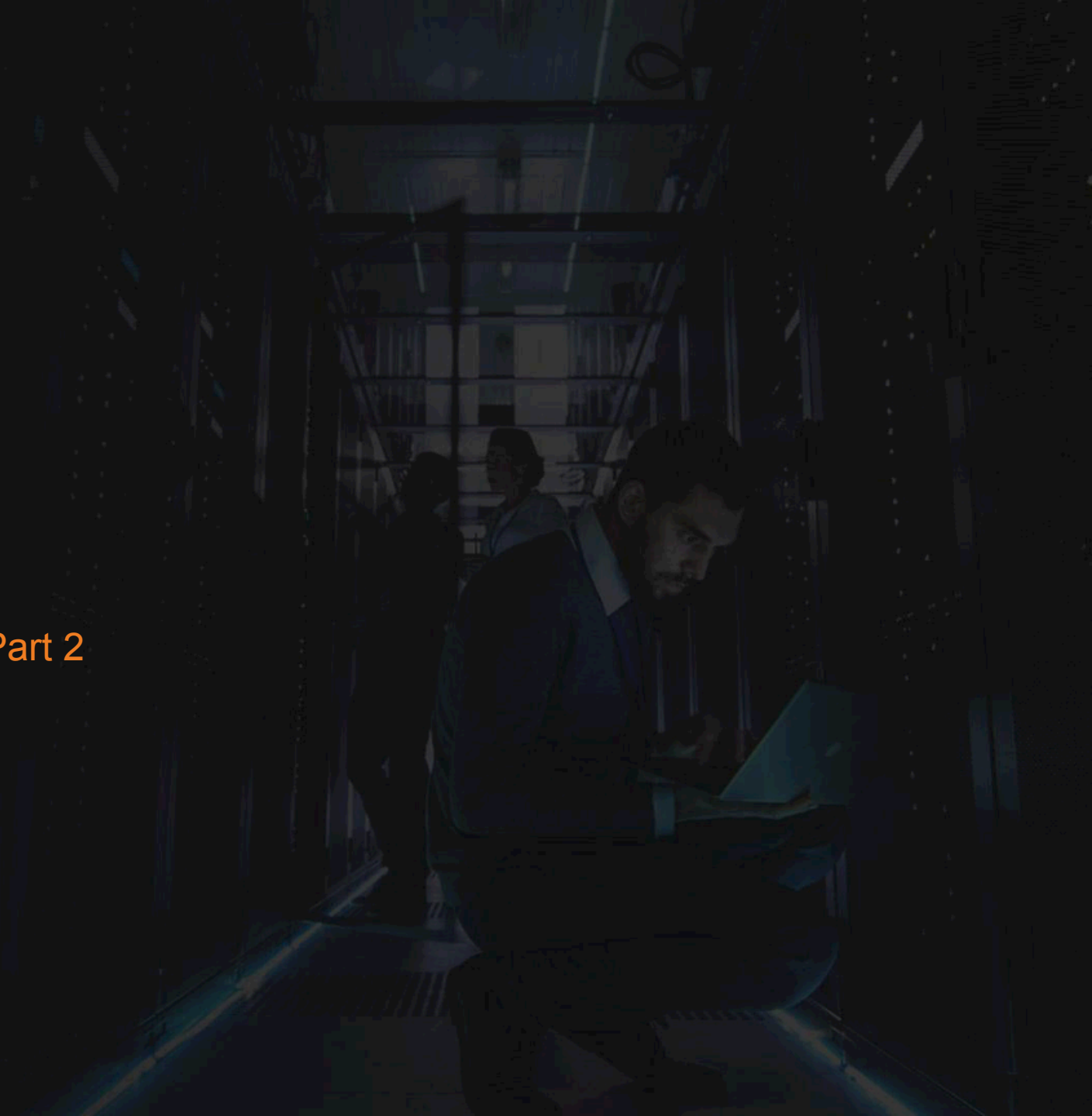
- + R9 and R10 are unable to reach each others Loopback0 networks. Find the problem and modify the network so that R9 and R10 are able to reach each others Loopback0 interfaces.





# EIGRP Deep Dive

Troubleshooting EIGRP Advertisements - Part 2



# EIGRP Problem Statement

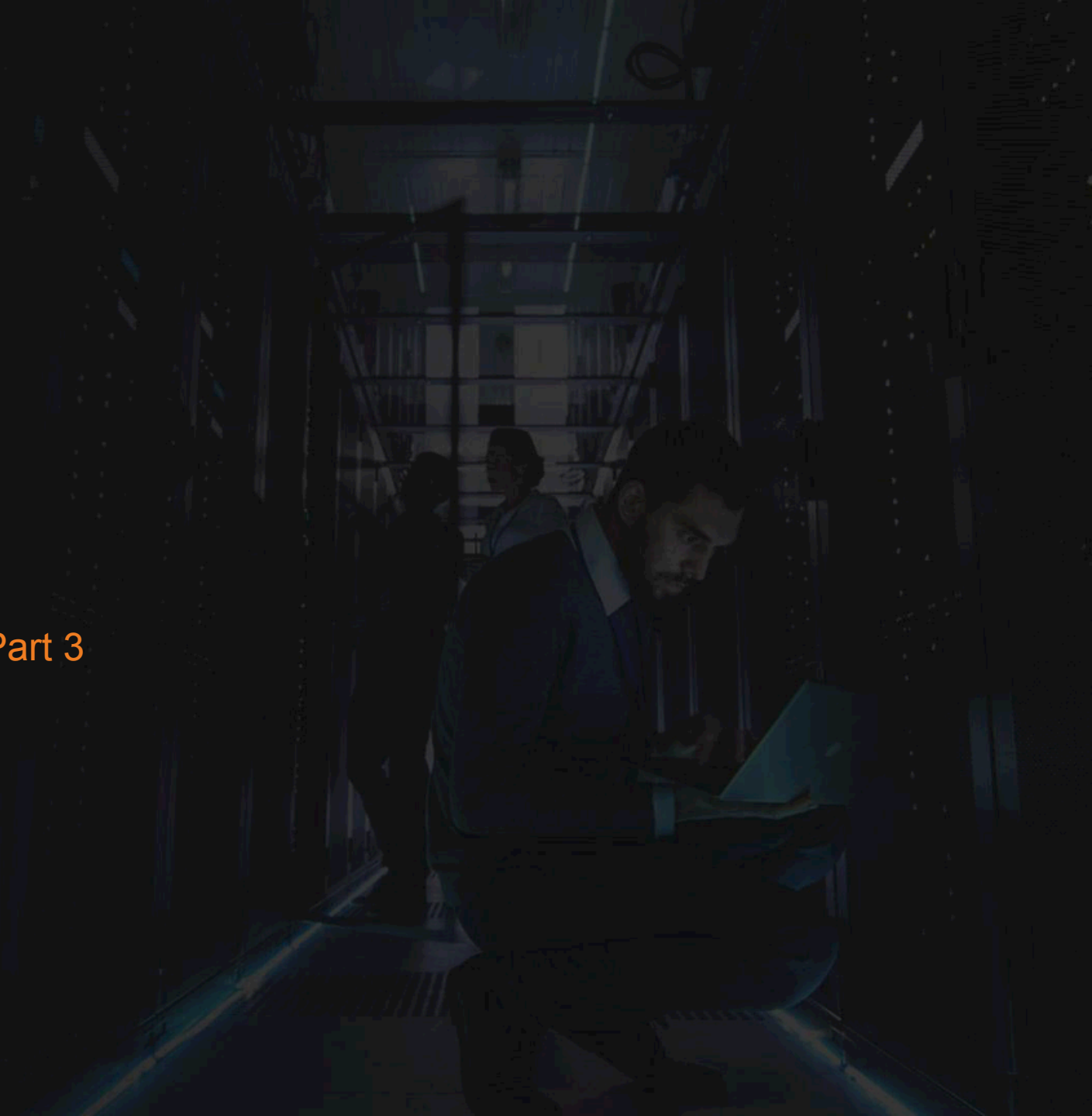
- + R1 is unable to load balance to the shared segment between R2 and R3. Find the problem and modify the network so that R1 is able to load balance traffic to both R2 and R3 for this particular network.





# EIGRP Deep Dive

Troubleshooting EIGRP Advertisements - Part 3





# EIGRP Problem Statement

- + R4 and R5 are dual connected via a dedicated link and the DMVPN, but are unable to load balance traffic across both circuits. Find the problem and modify the network so that traffic from R4 to R5's Loopback0 is load balanced in a ratio of roughly 2:1 with the dedicated link being preferred over the DMVPN.

# EIGRP Feasibility Condition Review

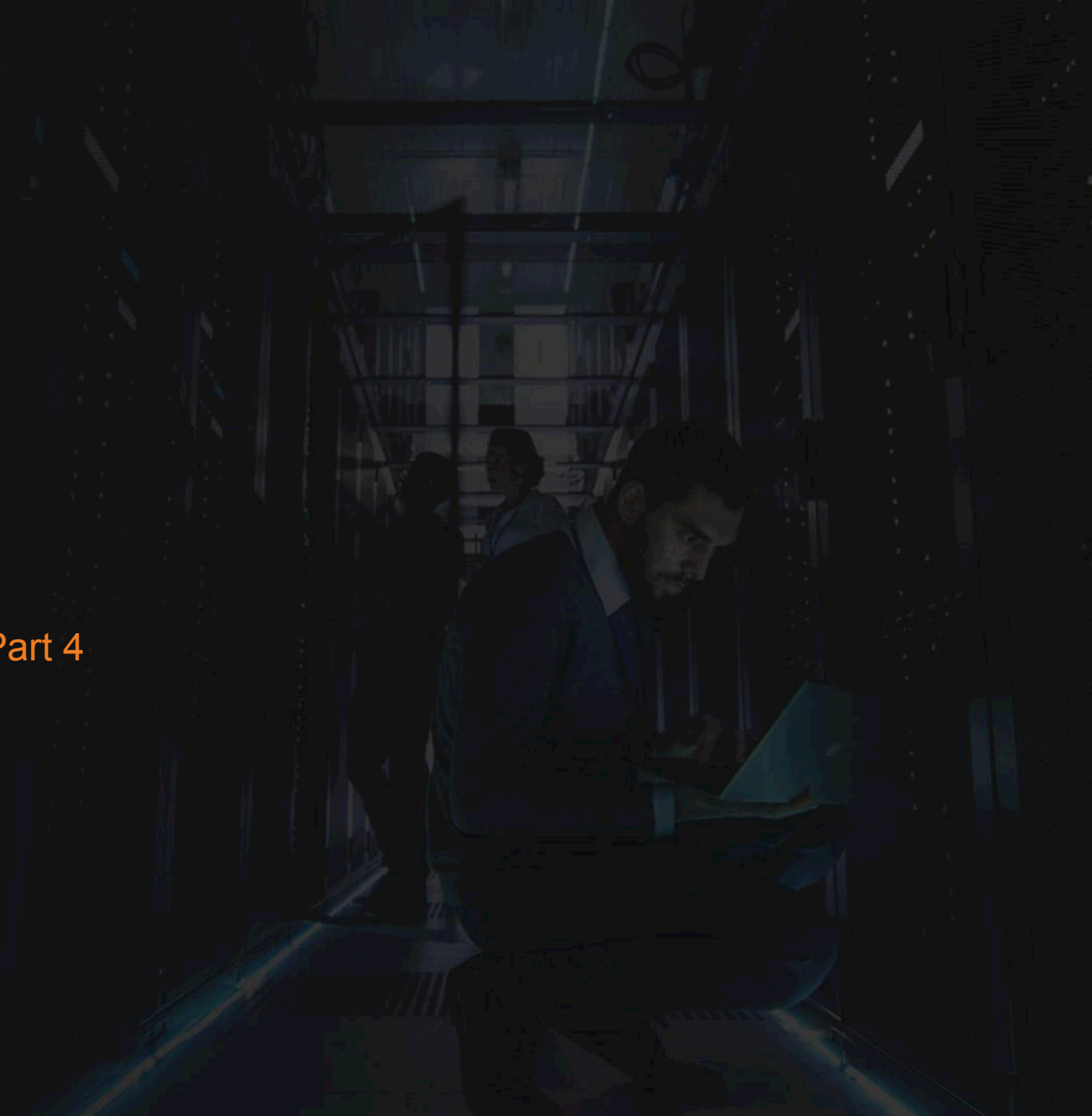
- + Once best path is chosen, additional paths are examined for backup routes
- + Feasibility Condition finds loop-free backup routes via logic...
  - + If Reported Distance < Feasible Distance, path is loop-free and viable backup
  - + e.g. if your metric is lower than mine, you are closer to the destination and loop-free
- + Paths that meet Feasibility Condition are Feasible Successors (FS)
  - + Only Feasible Successors can be used for unequal cost load balancing





# EIGRP Deep Dive

Troubleshooting EIGRP Advertisements - Part 4



# EIGRP Problem Statement

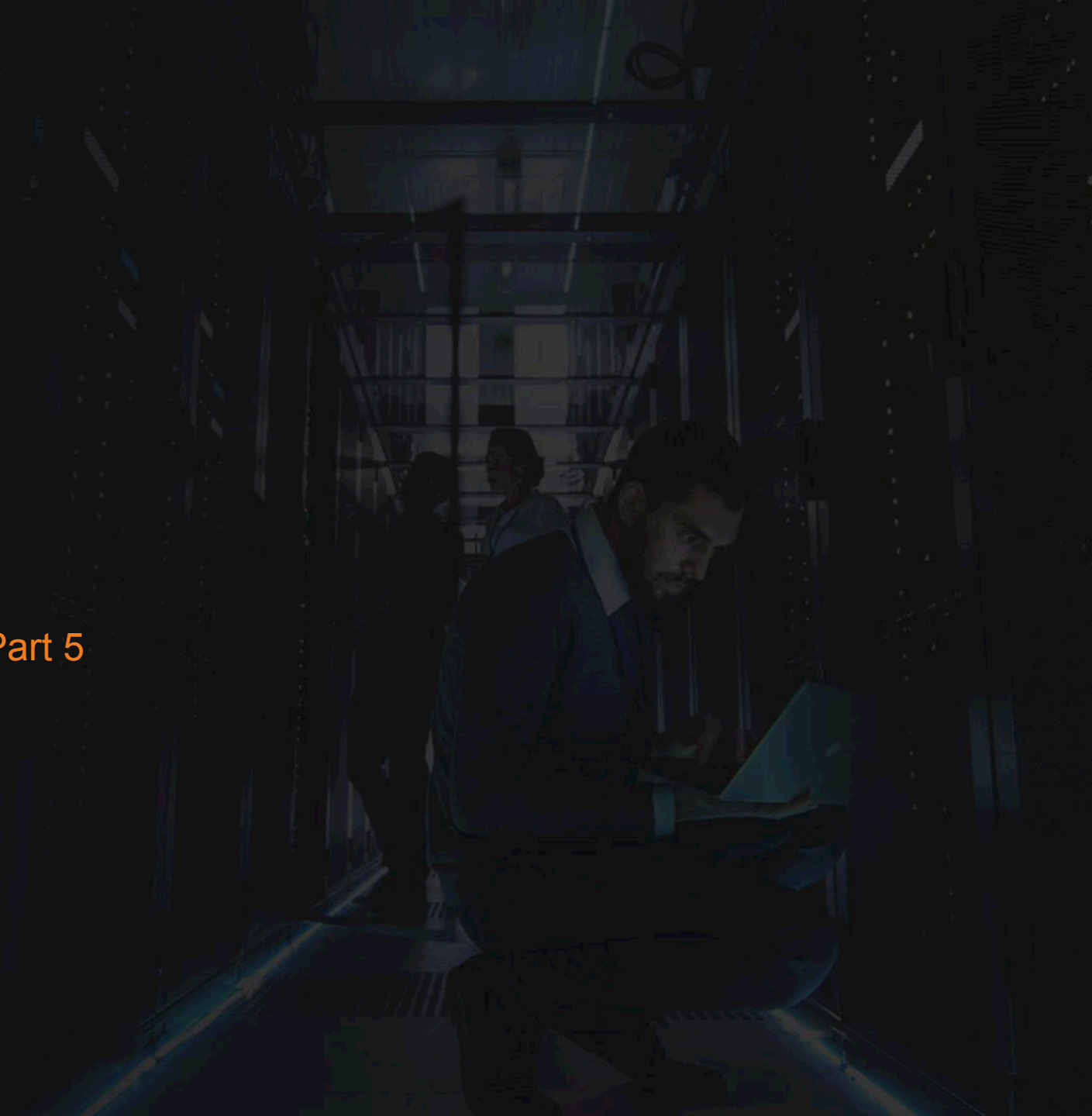
- + R9 is unable to reach R10. Find the problem and modify the network so that R9 is able to reach the Loopback0 network of R10.





# EIGRP Deep Dive

Troubleshooting EIGRP Advertisements - Part 5



# EIGRP Deep Dive

- + R9 is unable to reach R10. Find the problem and modify the network so that R9 is able to reach the Loopback0 network of R10.



