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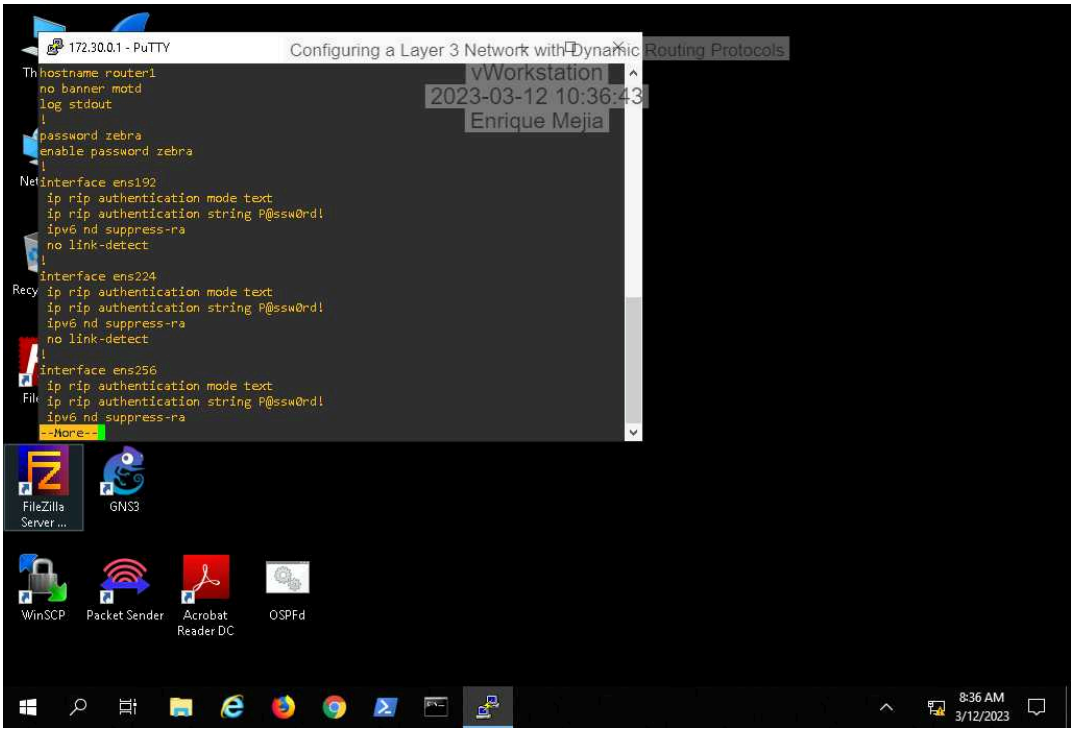
Time on Task:	Progress:
1 hour, 45 minutes	100%

Report Generated: Sunday, March 12, 2023 at 1:10 PM

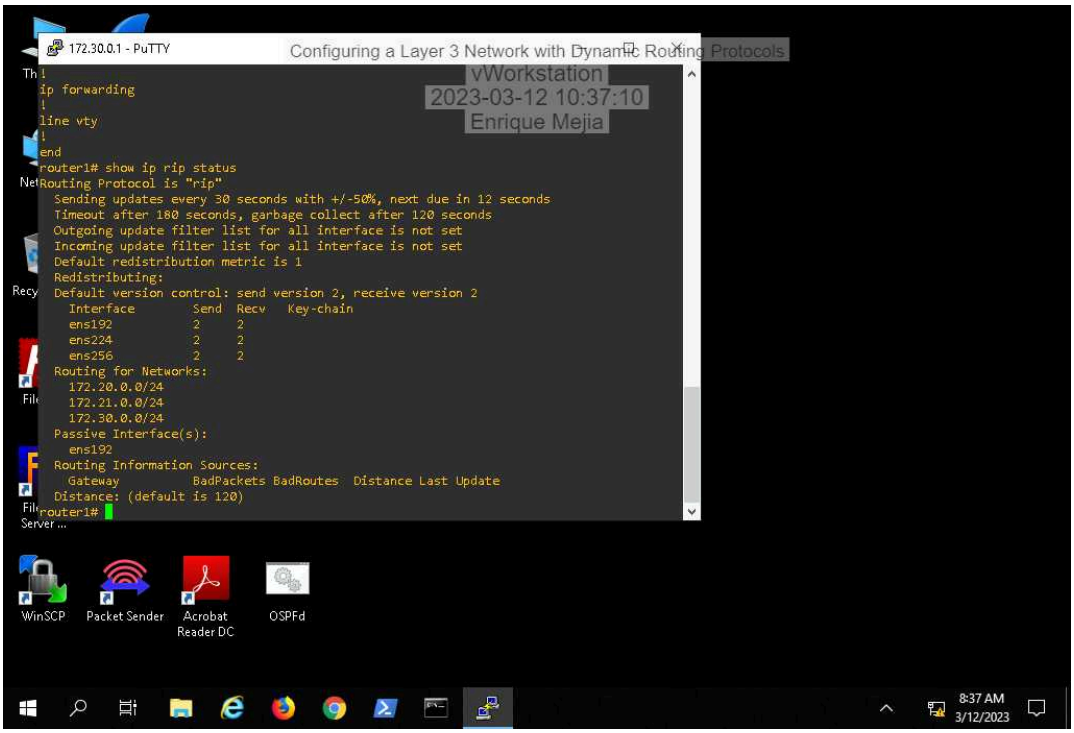
Section 1: Hands-On Demonstration

Part 1: Configure RIPv2 on the Routers

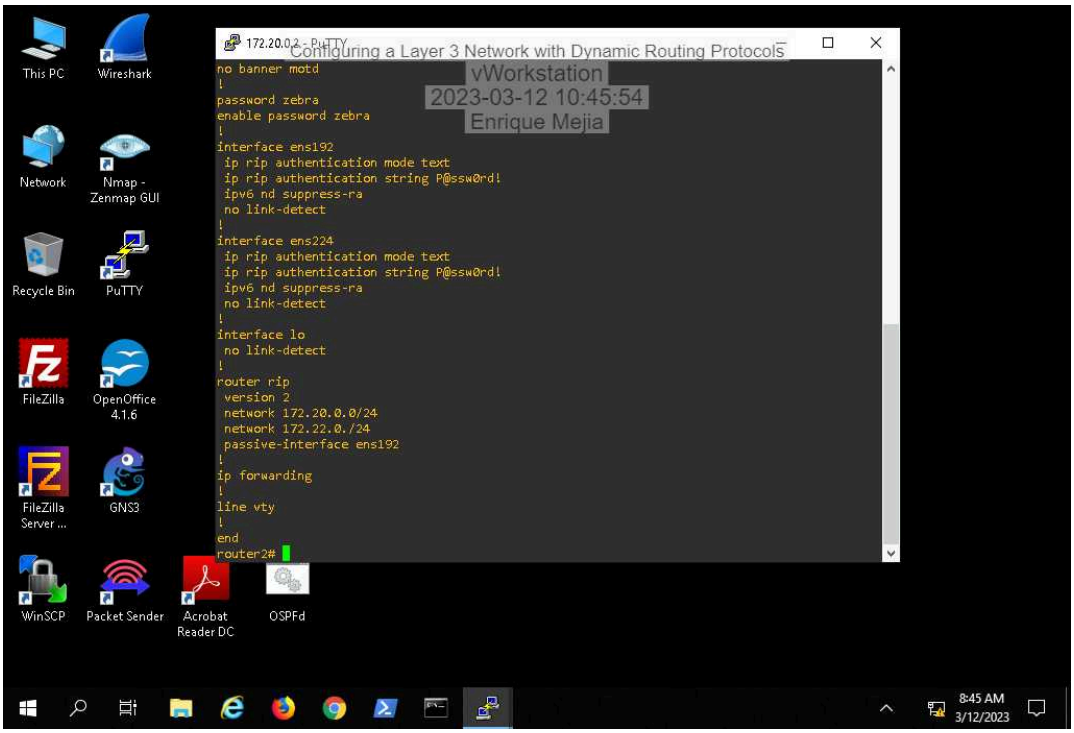
22. **Make a screen capture** showing the **currently running RIP configuration on router1**.



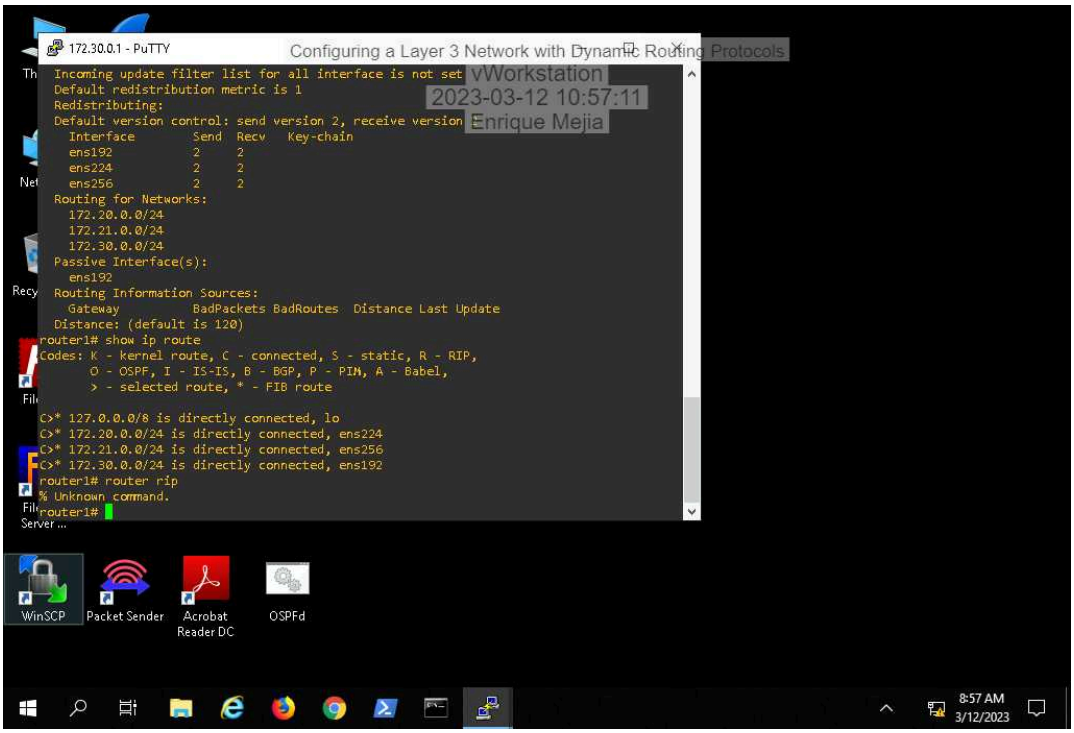
24. **Make a screen capture** showing the **output of the show ip rip status command**.



30. **Make a screen capture** showing the **currently running RIP configuration on router2**.

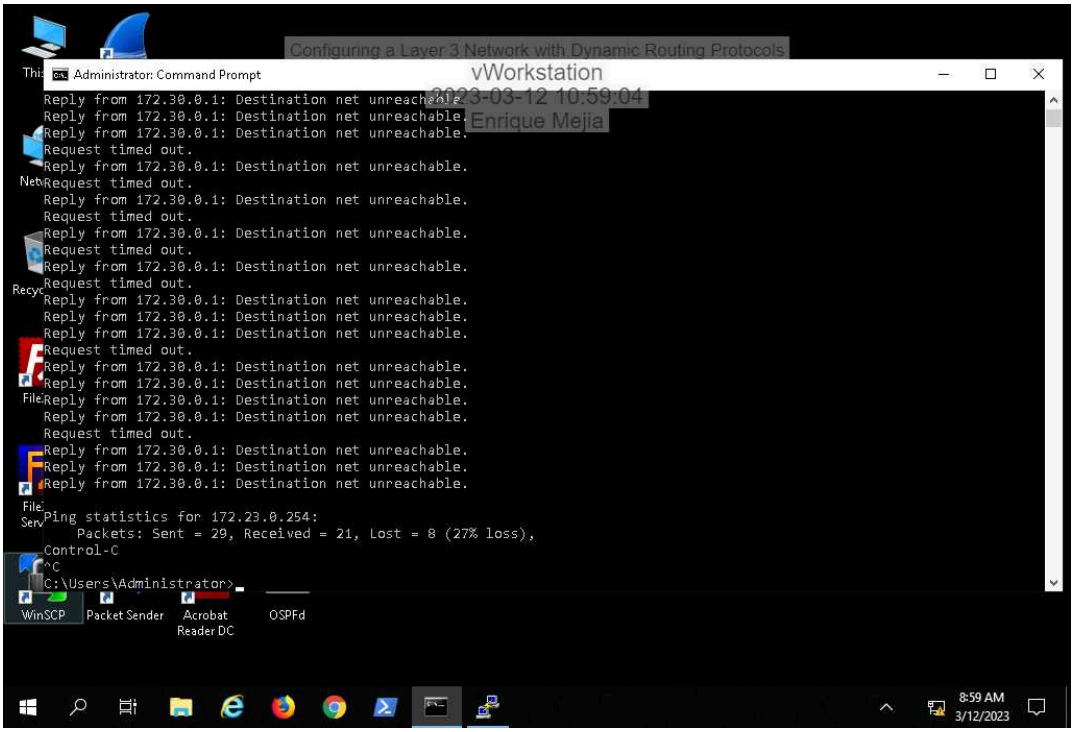


41. **Make a screen capture** showing the **routes known by router3**.

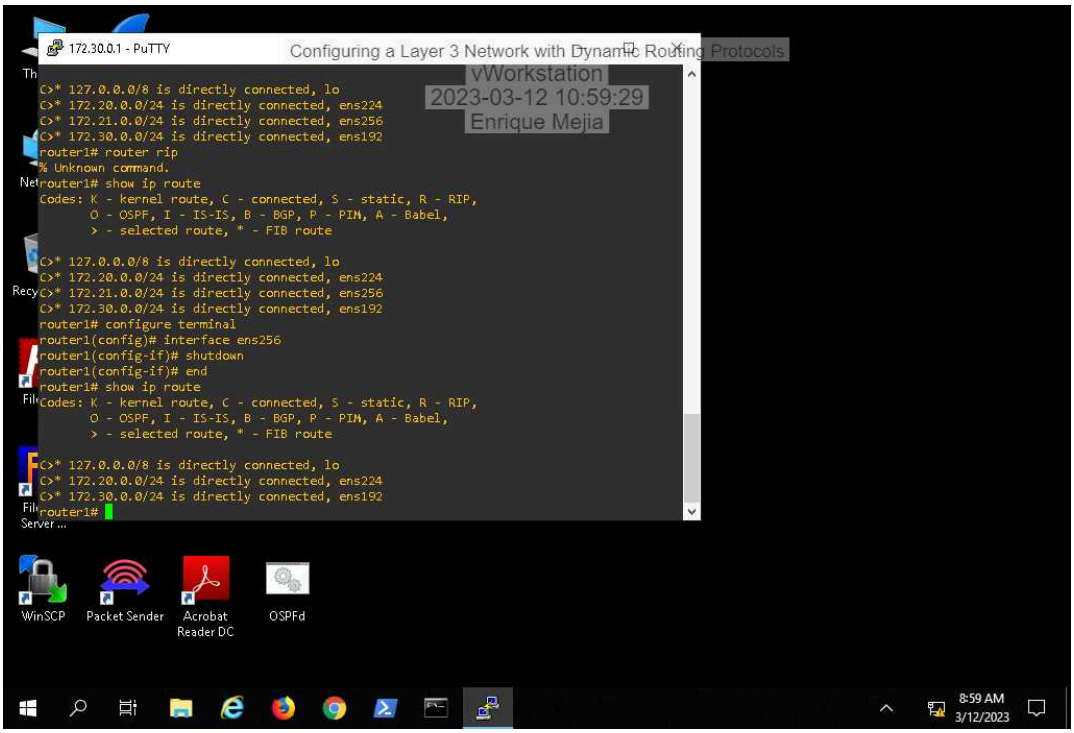


Part 2: Test the RIPv2 Configuration

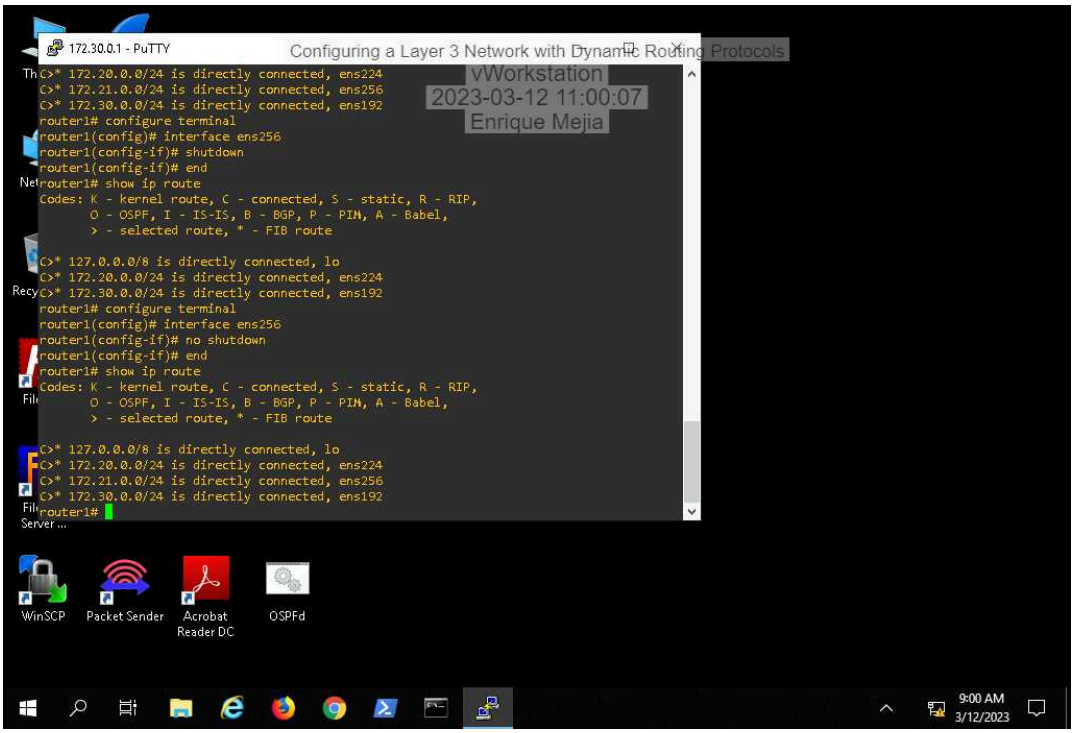
15. **Make a screen capture** showing the **"Destination net unreachable" messages, including the successful responses that preceded and succeeded them**.



20. **Make a screen capture** showing the **new routing table on router1 that resulted from the ens256 link removal**.



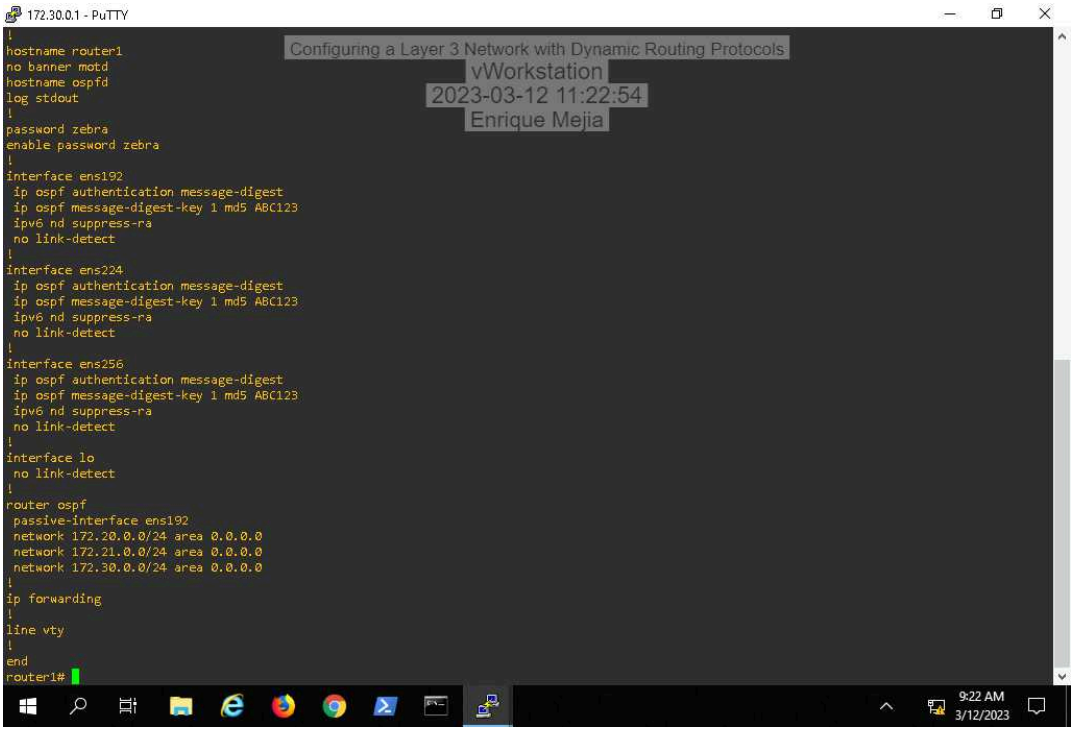
26. **Make a screen capture** showing the **updated routing table on router1**.



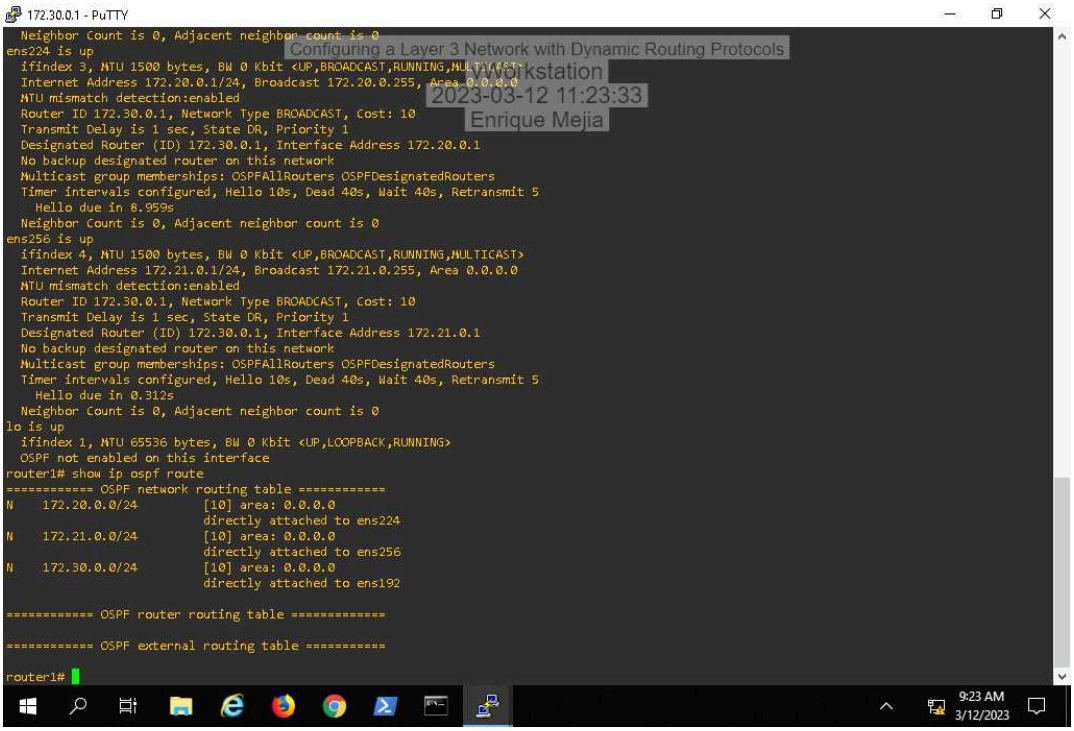
Section 2: Applied Learning

Part 1: Configure OSPFv2 on the Routers

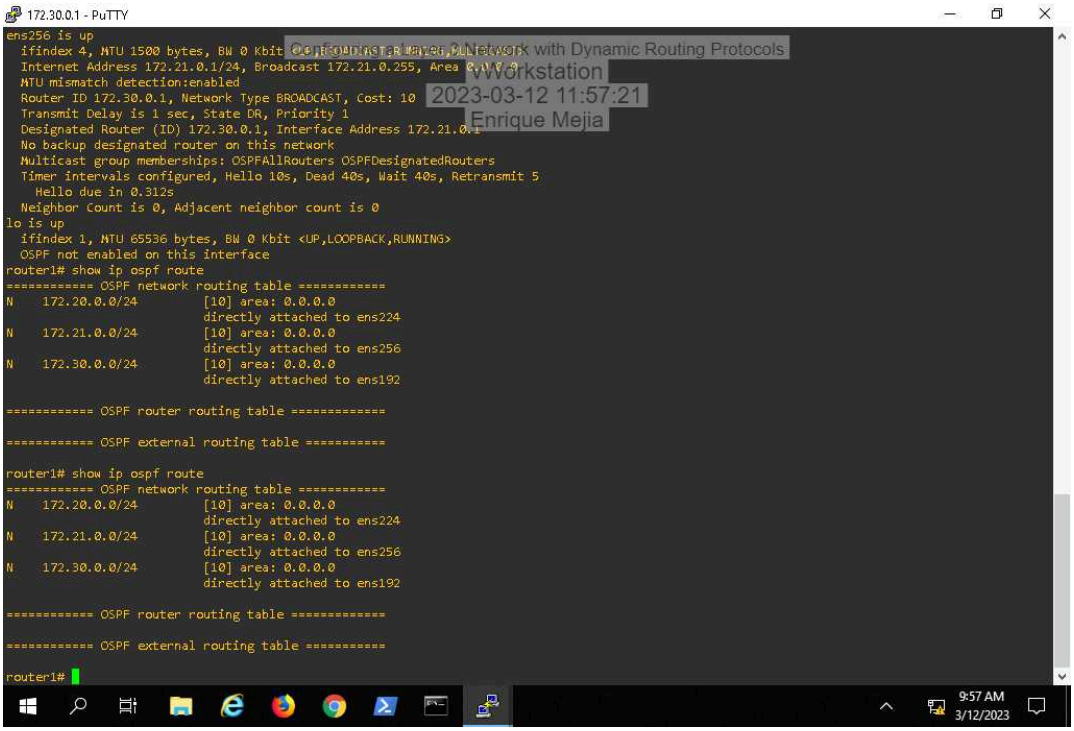
17. **Make a screen capture** showing the **running OSPF configuration on router1**.



20. **Make a screen capture** showing the **current OSPF routing table on router1**.

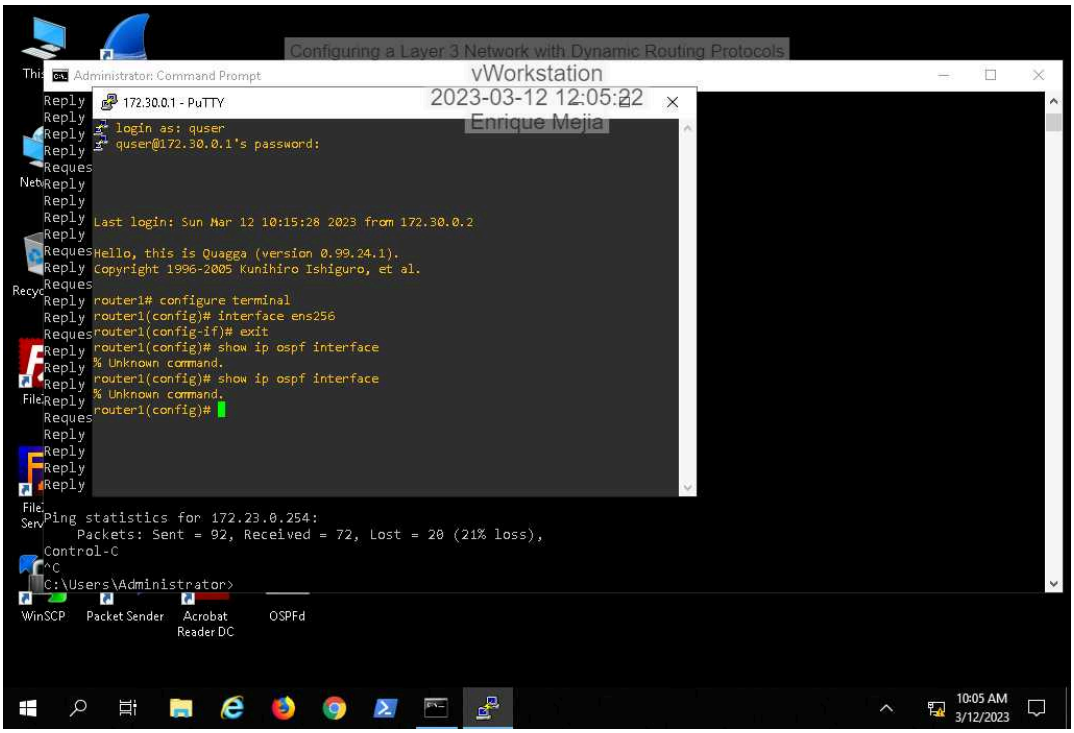


26. **Make a screen capture** showing the **updated OSPF routing table on router1**.

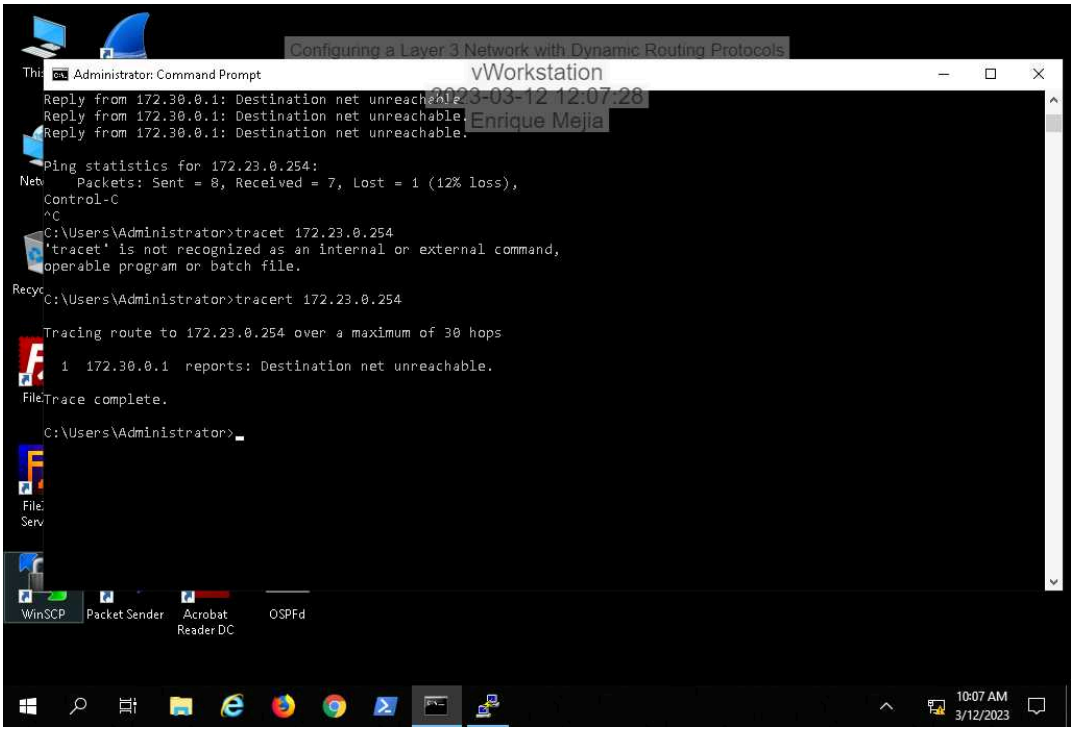


Part 2: Test the OSPFv2 Configuration

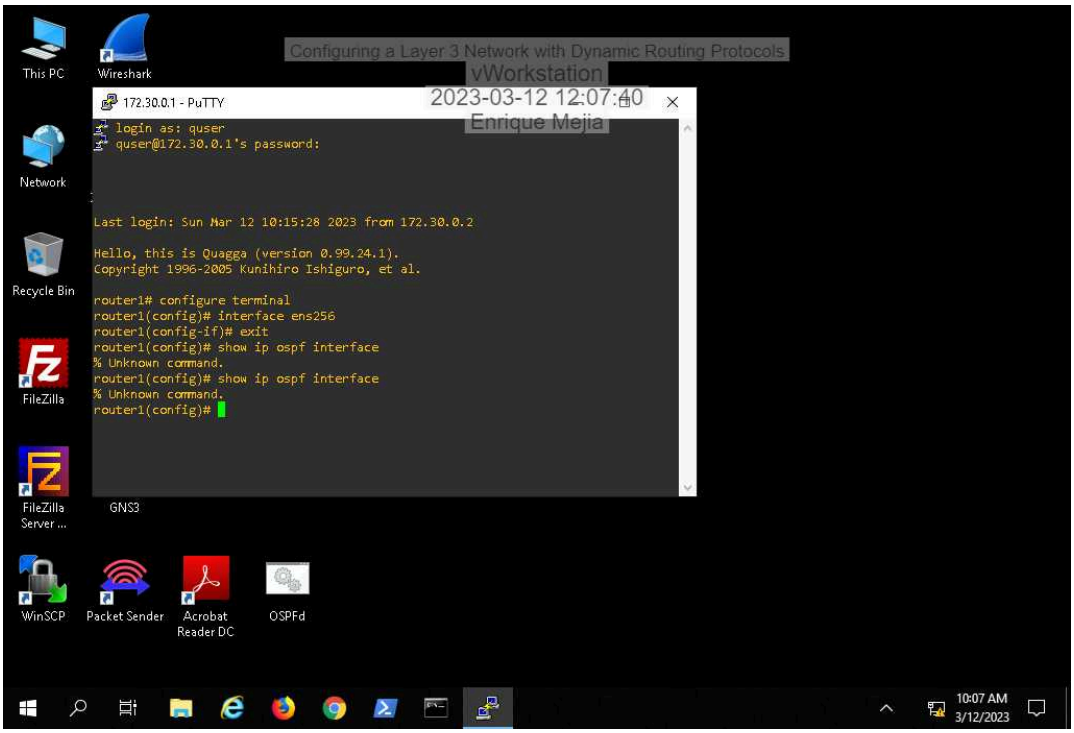
13. **Make a screen capture** showing that **ens256 is down per the OSPF interface output**.



16. **Make a screen capture** showing the **traceroute path through router2**.



23. **Make a screen capture** showing the **full routing table on router1**.



Section 3: Challenge and Analysis

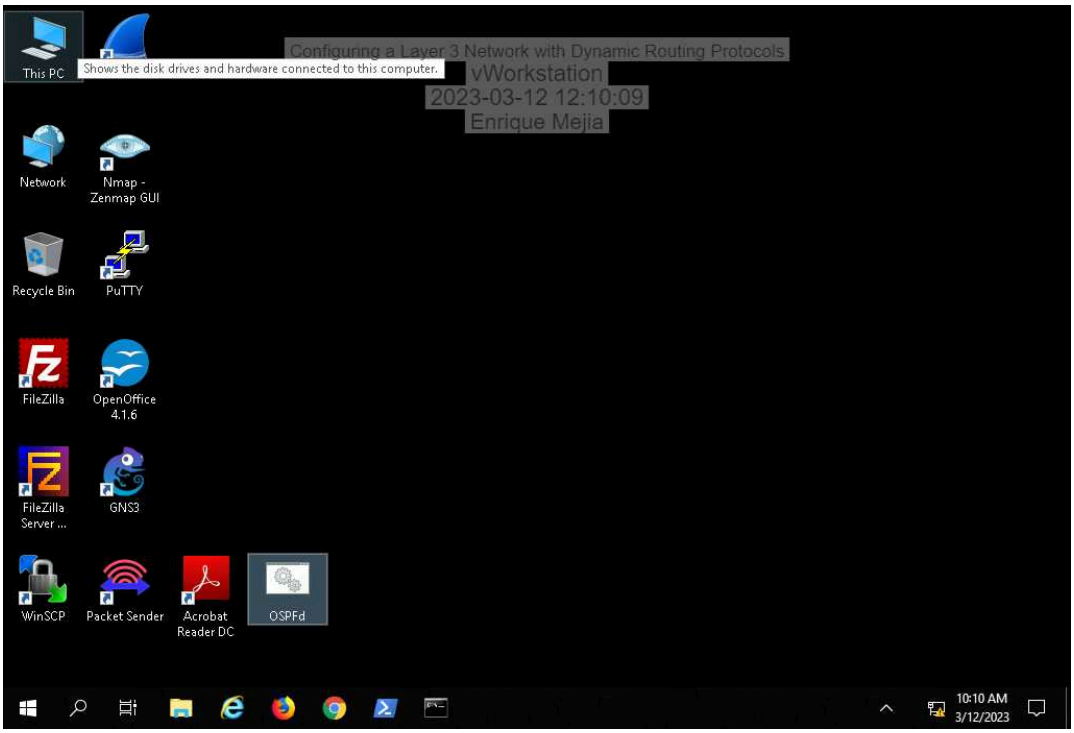
Part 1: Calculate the OSPF Cost to Force a New Path Preference

Record the minimum OSPF cost needed for the router1 > router3 link to convince OSPF that this path is less efficient than the router1 > router2 > router3 path. **Explain** how you calculated this value.

To calculate the minimum OSPF cost needed for the Router1 > Router3 link to be less efficient than the Router1 > Router2 > Router3 path, we need to make the cost of the Router1 > Router3 path greater than the cost of the Router1 > Router2 > Router3 path. The current cost of the Router1 > Router2 > Router3 path is 30 (three links, each with a cost of 10). Therefore, we need to increase the cost of the Router1 > Router3 link to a value greater than 30 - 20 = 10. Since we want to make the Router1 > Router3 path less efficient than the Router1 > Router2 > Router3 path, we can set the OSPF cost of the Router1 > Router3 link to 11 or higher. This will result in a total cost of 31 or higher for the Router1 > Router3 > pfSense path, making it less efficient than the Router1 > Router2 > Router3 > pfSense path.

Part 2: Manually Set the OSPF Cost to Force a New Path Preference

Make a screen capture showing the **new cost assignments on router1's OSPF routes**.



Part 3: Test Your Cost Changes

Make a screen capture showing the **new path taken to reach the pfSense appliance**.