**Net 1061 Switching, Routing, and Wireless Essentials**

**Name: Andrew Koenig**

**Lab: #**

**Follow the instructions down below for the lab itself. For this lab, all answers need to be in blue font. For the questions right below, answer in complete sentences. If this is a self-grading packet tracer. Ensure you paste the screen shot of your score page at the bottom of the document. You will upload both this document and the pkt file regardless if it is self-grading or not. Let the instructor know if you have any questions.**

***Lab Analysis Report***

1. Using complete sentences summarize work you completed during the lab.

I further practiced with static ip routes

2. Using complete sentences describe what you learned from the lab. Hint; look at the lab objectives listed at the top of the lab section.

I further practiced with static ip routes

***Problems Encountered***

1. Using complete sentences describe any problem(s) experienced during lab.

No problems

2. Using complete sentences describe how you solved your problem(s).

No problems

3. Using complete sentences explain if you needed any assistance with the lab; then list what you learned from that assistance. No problems

Packet Tracer - Troubleshoot Static and Default Routes

# Addressing Table

| Device | Interface | IP Addresses |
| --- | --- | --- |
| R1 | G0/0 | 172.31.1.1/25 |
| R1 | G0/0 | 2001:DB8:1::1/64 |
| R1 | S0/0/0 | 172.31.1.194/30 |
| R1 | S0/0/0 | 2001:DB8:2::194/64 |
| R2 | G0/0 | 172.31.0.1/24 |
| R2 | G0/0 | 2001:DB8:3::1/64 |
| R2 | S0/0/0 | 172.31.1.193/30 |
| R2 | S0/0/0 | 2001:DB8:2::193/64 |
| R2 | S0/0/1 | 172.31.1.197/30 |
| R2 | S0/0/1 | 2001:DB8:4::197/64 |
| R3 | G0/0 | 172.31.1.129/26 |
| R3 | G0/0 | 2001:DB8:5::1/64 |
| R3 | S0/0/1 | 172.31.1.198/30 |
| R3 | S0/0/1 | 2001:DB8:4::198/64 |
| PC1 | NIC | 172.31.1.126/25 |
| PC1 | NIC | 2001:DB8:1::126/64 |
| PC2 | NIC | 172.31.0.254/24 |
| PC2 | NIC | 2001:DB8:3::254/64 |
| Server | NIC | 172.31.1.190/26 |
| Server | NIC | 2001:DB8:5::190/64 |

# Objectives

In this activity you will troubleshoot static and default routes and repair any errors that you find.

* Troubleshoot IPv4 static routes.
* Troubleshoot IPv4 default routes.
* Troubleshoot IPv6 static routes.
* Configure IPv4 static routes.
* Configure IPv4 default routes.
* Configure IPv6 static routes.

# Background / Scenario

A newly hired network technician is attempting to preconfigure a simple topology that will be delivered to a customer. The technician has not been able to establish connectivity between the three LANs. You have been asked to troubleshoot the topology and verify connectivity between the hosts on the three LANs over IPv4 and IPv6.

# Instructions

## Locate and document the problems.

Record your findings in a table like the one below.

| Location | Problem | Solution |
| --- | --- | --- |
| R1 | Ip next hop address is wrong | Changed next hop to 172.31.1.193 |
| R2 | Ipv6 route to LAN1 has wrong network destination | Changed destination address to 2001:db8:1::/64 |
| R2 | Next hop addresses are reversed | Corrected addresses |
| R3 | Ipv6 route to lan1 missing | Configured static route to lan1 |
| R3 | Ipv4 route to lan1 has the wrong mask | Changed the mask to correct one |

## Repair the problems.

Configure the devices so that full connectivity exists between the hosts on the LANs over IPv4 and IPv6.

**Note:** Your task is to establish connectivity using the existing static route design. Changing the types of static routes used will result in a loss of points.

End of document Graphical user interface, text, application

Description automatically generated