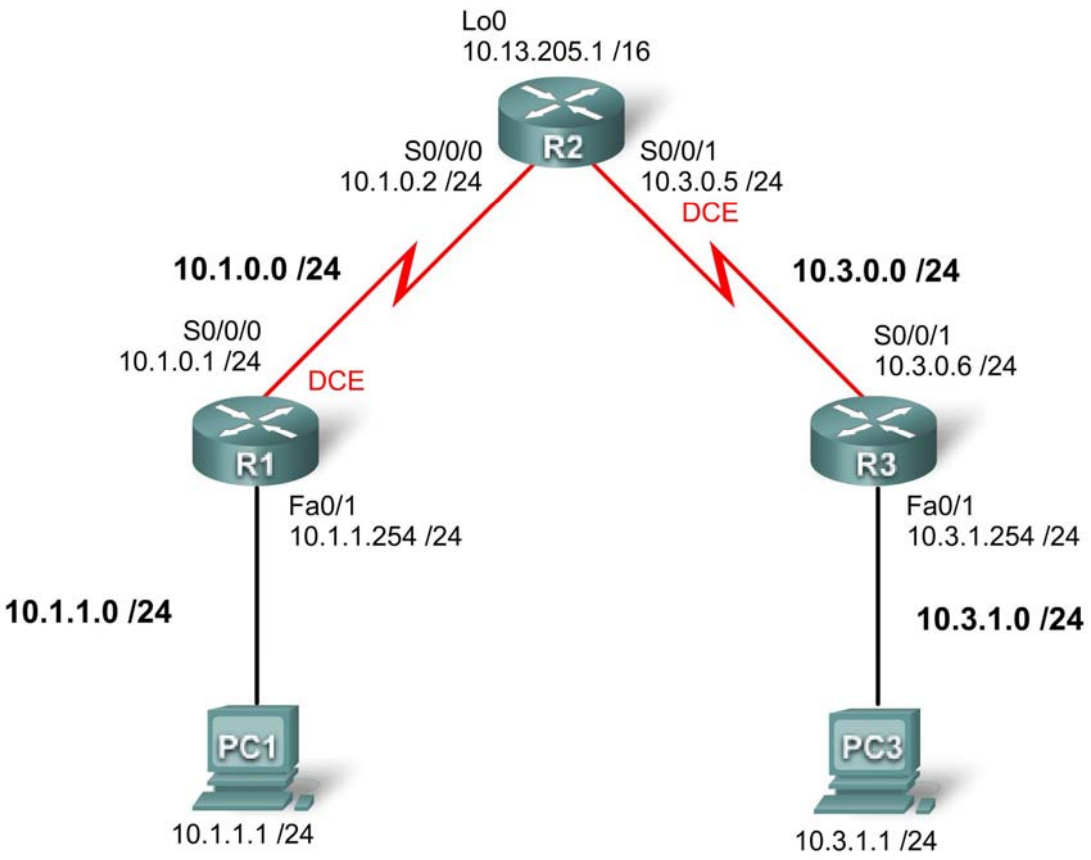
Lab 5.5.3: Troubleshooting Access Control Lists

Topology Diagram



Addressing Table

Device	Interface	IP Address	Subnet Mask	Default Gateway
R1	**S0/0/0**	10.1.0.1	255.255.255.0	
	Fa0/1	10.1.1.254	255.255.255.0	
R2	**S0/0/0**	10.1.0.2	255.255.255.0	
	S0/0/1	10.3.0.5	255.255.255.0	
	Lo 0	10.13.205.1	255.255.0.0	
R3	**S0/0/1**	10.3.0.6	255.255.255.0	
	Fa0/1	10.3.1.254	255.255.255.0	

PC 1	**NIC**	10.1.1.1	255.255.255.0	10.1.1.254
PC 3	**NIC**	10.3.1.1	255.255.255.0	10.3.1.254

Learning Objectives

To complete this lab:

- Cable a network according to the topology diagram
- Erase the startup configuration and reload a router to the default state
- Load routers with scripts
- Find and correct network errors
- Document the corrected network

Scenario

You work for a regional service provider that has customers who have recently experienced several security breaches. Some security policies have been implemented that haven't addressed the specific needs of the customers. Your department has been asked to examine the configuration, conduct tests and change the configuration as necessary to secure the customer routers.

Ensure that your final configurations implement the following security policies:

- R1 and R3 customers request that only local PCs are able to access VTY lines. Log any attempts by other devices to access the VTY lines.
- R1 and R3 directly connected networks should not be allowed to send or receive traffic to each other. All other traffic should be allowed to and from R1 and R3.

A minimum of ACL statements should be used and applied inbound on the R2 serial interfaces. OSPF is used to distribute routing information. All passwords, except the enable secret password, are set to cisco. The enable secret password is set to **class**.

Task 1: Load Routers with the Supplied Scripts

Your instructor will either load the devices prior to this lab, or provide you with the configs.

Task 2: Find and Correct Network Errors

Find and correct all errors in the configuration. Document the steps you used to troubleshoot the network and note each error found.

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Task 3: Document the Corrected Network

Now that you have corrected all errors and tested connectivity throughout the network, document the final configuration for each device.

Task 4: Clean Up

Erase the configurations and reload the routers. Disconnect and store the cabling. For PC hosts that are normally connected to other networks, such as the school LAN or the Internet, reconnect the appropriate cabling and restore the TCP/IP settings.

