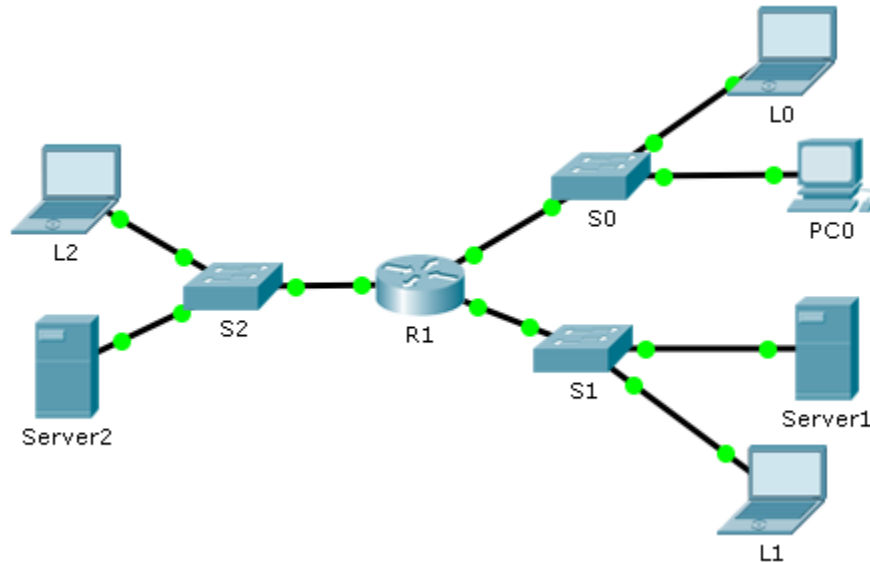


Packet Tracer – Troubleshooting IPv6 ACLs

Topology



Addressing Table

Device	Interface	IPv6 Address / Prefix	Default Gateway
R1	G0/0	2001:DB8:CAFE::1/64	N/A
	G0/1	2001:DB8:CAFE:1::1/64	N/A
	G0/2	2001:DB8:CAFE:2::1/64	N/A
PC0	NIC	2001:DB8:CAFE::2/64	FE80::1
Server1	NIC	2001:DB8:CAFE:1::2/64	FE80::1
Server2	NIC	2001:DB8:CAFE:2::2/64	FE80::1
L0	NIC	2001:DB8:CAFE::3/64	FE80::1
L1	NIC	2001:DB8:CAFE:1::3/64	FE80::1
L2	NIC	2001:DB8:CAFE:2::3/64	FE80::1

Objectives

Part 1: Troubleshoot HTTP Access

Part 2: Troubleshoot FTP Access

Part 3: Troubleshoot SSH Access

Scenario

The following three policies have been implemented on the network:

- Hosts from the 2001:DB8:CAFÉ::/64 network do not have HTTP access to the other networks.
- Hosts from the 2001:DB8:CAFÉ:1::/64 network are prevented from access to the FTP service on Server2.
- Hosts from the 2001:DB8:CAFÉ:1::/64 and 2001:DB8:CAFÉ:2::/64 networks are prevented from accessing R1 via SSH.

No other restrictions should be in place. Unfortunately, the rules that have been implemented are not working correctly. Your task is to find and fix the errors related to the access lists on R1.

Note: To access R1 and the FTP servers, use the username **user01** and password **user01pass**.

Part 1: Troubleshoot HTTP Access

Hosts from the 2001:DB8:CAFÉ::/64 network are intentionally unable to access the HTTP service, but should not be otherwise restricted.

Step 1: Determine the ACL problem.

As you perform the following tasks, compare the results to what you would expect from the ACL.

- Using L0, L1, and L2, attempt to access HTTP services of **Server1** and **Server2**.
- Using L0, ping **Server1** and **Server2**.
- Using PC0, access the HTTPS services of **Server1** and **Server2**.
- View the running configuration on R1. Examine access list **G0-ACCESS** and its placement on the interfaces. Is the access list placed on the correct interface and in the correct direction? Is there any statement in the list that permits or denies traffic to other networks? Are the statements in the correct order?
- Run other tests as necessary.

Step 2: Implement a solution.

Make adjustments to access lists to fix the problem.

Step 3: Verify the problem is resolved and document the solution.

If the problem is resolved, document the solution; otherwise return to Step 1.

Part 2: Troubleshoot FTP Access

Hosts from the 2001:DB8:CAFÉ:1::/64 network are prevented from accessing the FTP service of **Server2**, but no other restriction should be in place.

Step 1: Determine the ACL problem.

As you perform the following tasks, compare the results to the expectations of the ACL.

- Using L0, L1, and L2, attempt to access FTP service of **Server2**.

```
PC> ftp 2001:db8:cafe:2::2
```
- View the running configuration on R1. Examine access list **G1-ACCESS** and its placement on the interfaces. Is the access list placed on the correct port in the correct direction? Is there any statement in the list that permits or denies traffic to other networks? Are the statements in the correct order?
- Run other tests as necessary.

Step 2: Implement a solution.

Make adjustments to access lists to fix the problem.

Step 3: Verify the problem is resolved and document the solution.

If the problem is resolved, document the solution; otherwise return to Step 1.

Part 3: Troubleshoot SSH Access

Only the hosts from 2001:DB8:CAFE::/64 network are permitted remote access to **R1** via SSH.

Step 1: Determine the ACL problem.

As you perform the following tasks, compare the results to what you would expect from the ACL.

- From **L0** or **PC0**, verify SSH access to **R1**.
- Using **L1** and **L2**, attempt to access **R1** via SSH.
- View the running configuration on **R1**. Examine access lists and their placements on the interfaces. Is the access list placed on the correct interface and in the correct direction? Is there any statement in the list that permits or denies traffic to other networks? Are the statements in the correct order?
- Perform other tests, as necessary.

Step 2: Implement a solution.

Make adjustments to access lists to fix the problem.

Step 3: Verify that the problem is resolved and document the solution.

If the problem is resolved, document the solution; otherwise return to Step 1.

Suggested Scoring Rubric

Question Location	Possible Points	Earned Points
Documentation Score	10	
Packet Tracer Score	90	
Total Score	100	