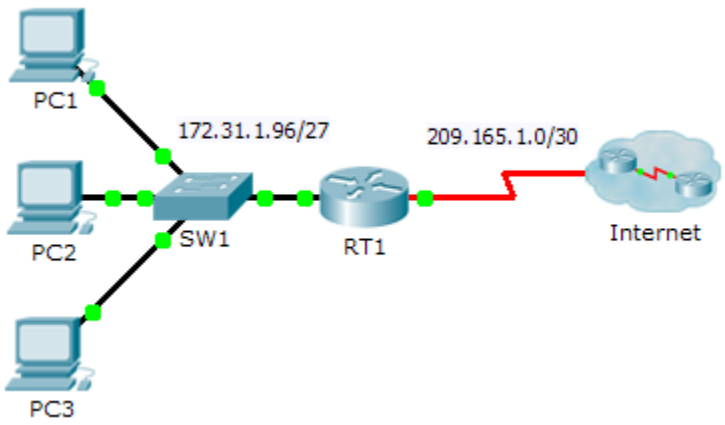
Packet Tracer - Configuring Extended ACLs - Scenario 3

Topology



Addressing Table

Device	Interface	IP Address	Subnet Mask	Default Gateway
RT1	G0/0	172.31.1.126	255.255.255.224	N/A
	S0/0/0	209.165.1.2	255.255.255.252	N/A
PC1	NIC	172.31.1.101	255.255.255.224	172.31.1.126
PC2	NIC	172.31.1.102	255.255.255.224	172.31.1.126
PC3	NIC	172.31.1.103	255.255.255.224	172.31.1.126
Server1	NIC	64.101.255.254		
Server2	NIC	64.103.255.254		

Objectives

Part 1: Configure a Named Extended ACL

Part 2: Apply and Verify the Extended ACL

Background / Scenario

In this scenario, specific devices on the LAN are allowed to various services on servers located on the Internet.

Part 1: Configure a Named Extended ACL

Use one named ACL to implement the following policy:

- Block HTTP and HTTPS access from **PC1** to **Server1** and **Server2.** The servers are inside the cloud and you only know their IP addresses.
- Block FTP access from **PC2** to **Server1** and **Server2**.

- Block ICMP access from **PC3** to **Server1** and **Server2**.

Note: For scoring purposes, you must configure the statements in the order specified in the following steps.

Step 1: Deny PC1 to access HTTP and HTTPS services on Server1 and Server2.

a. Create an extended IP access list named ACL which will deny **PC1** access to the HTTP and HTTPS services of **Server1** and **Server2**. Because it is impossible to directly observe the subnet of servers on the Internet, four rules are required.

What is the command to begin the named ACL?

b. Record the statement that denies access from **PC1** to **Server1**, only for HTTP (port 80).

c. Record the statement that denies access from **PC1** to **Server1**, only for HTTPS (port 443).

d. Record the statement that denies access from **PC1** to **Server2**, only for HTTP.

e. Record the statement that denies access from **PC1** to **Server2**, only for HTTPS.

Step 2: Deny PC2 to access FTP services on Server1 and Server2.

a. Record the statement that denies access from **PC2** to **Server1**, only for FTP (port 21 only).

b. Record the statement that denies access from **PC2** to **Server2**, only for FTP (port 21 only).

Step 3: Deny PC3 to ping Server1 and Server2.

a. Record the statement that denies ICMP access from **PC3** to **Server1**.

b. Record the statement that denies ICMP access from **PC3** to **Server2**.

Step 4: Permit all other IP traffic.

By default, an access list denies all traffic that does not match any rule in the list. What command permits all other traffic?

Part 2: Apply and Verify the Extended ACL

The traffic to be filtered is coming from the 172.31.1.96/27 network and is destined for remote networks. Appropriate ACL placement also depends on the relationship of the traffic with respect to **RT1**.

Step 1: Apply the ACL to the correct interface and in the correct direction.

a. What are the commands you need to apply the ACL to the correct interface and in the correct direction?

Step 2: Test access for each PC.

a. Access the websites of **Server1** and **Server2** using the Web Browser of **PC1** and using both HTTP and HTTPS protocols.

b. Access FTP of **Server1** and **Server2** using **PC1**. The username and password is "**cisco**".

c. Ping **Server1** and **Server2** from **PC1**.

d. Repeat Step 2a to Step 2c with **PC2** and **PC3** to verify proper access list operation.