Packet Tracer - Configure Named Standard IPv4 ACLs

# Addressing Table

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Device | Interface | IP Address | Subnet Mask | Default Gateway |
| R1 | F0/0 | 192.168.100.1 | 255.255.255.0 | N/A |
| *R1* | F0/1 | 192.168.200.1 | 255.255.255.0 | N/A |
| *R1* | E0/0/0 | 192.168.10.1 | 255.255.255.0 | N/A |
| *R1* | E0/1/0 | 192.168.20.1 | 255.255.255.0 | N/A |
| File Server | NIC | 192.168.200.100 | 255.255.255.0 | 192.168.200.1 |
| Web Server | NIC | 192.168.100.100 | 255.255.255.0 | 192.168.100.1 |
| PC0 | NIC | 192.168.20.3 | 255.255.255.0 | 192.168.20.1 |
| PC1 | NIC | 192.168.20.4 | 255.255.255.0 | 192.168.20.1 |
| PC2 | NIC | 192.168.10.3 | 255.255.255.0 | 192.168.10.1 |

# Objectives

Part 1: Configure and Apply a Named Standard ACL

Part 2: Verify the ACL Implementation

# Background / Scenario

The senior network administrator has asked you to create a standard named ACL to prevent access to a file server. The file server contains the data base for the web applications. Only the Web Manager workstation PC1 and the Web Server need to access the File Server. All other traffic to the File Server should be denied.

# Instructions

## Configure and Apply a Named Standard ACL

### Verify connectivity before the ACL is configured and applied.

All three workstations should be able to ping both the **Web** **Server** and **File Server**.

### Configure a named standard ACL.

Open configuration window

* + - 1. Configure the following named ACL on **R1**.

R1(config)# **ip access-list standard File\_Server\_Restrictions**

R1(config-std-nacl)# **permit host 192.168.20.4**

R1(config-std-nacl)# **permit host 192.168.100.100**

R1(config-std-nacl)# **deny any**

**Note**: For scoring purposes, the ACL name is case-sensitive, and the statements must be in the same order as shown.

* + - 1. Use the **show access-lists** command to verify the contents of the access list before applying it to an interface. Make sure you have not mistyped any IP addresses and that the statements are in the correct order.

R1# **show access-lists**

Standard IP access list File\_Server\_Restrictions

10 permit host 192.168.20.4

20 permit host 192.168.100.100

30 deny any

### Apply the named ACL.

* + - 1. Apply the ACL outbound on the Fast Ethernet 0/1 interface.

**Note**: In an actual operational network, applying an access list to an active interface is not a good practice and should be avoided if possible.

R1(config-if)# **ip access-group File\_Server\_Restrictions out**

* + - 1. Save the configuration.

Close configuration window

## Verify the ACL Implementation

### Verify the ACL configuration and application to the interface.

Open configuration window

Use the **show access-lists** command to verify the ACL configuration. Use the **show run** or **show ip interface fastethernet 0/1** command to verify that the ACL is applied correctly to the interface.

### Verify that the ACL is working properly.

All three workstations should be able to ping the **Web Server**, but only **PC1** and the **Web Server** should be able to ping the **File Server**. Repeat the **show access-lists** command to see the number of packets that matched each statement.

Close configuration window

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