Router (config)#hostname R1

R1 (config)#ipv6 unicast-routing

R1 (config)#int g0/0

R1 (config-if)#no ip address

R1 (config-if)#duplex auto

R1 (config-if)#speed auto

R1 (config-if)#ipv6 address 2001:db8:1:10::1/64

R1 (config-if)#no shut

R1 (config-if)#ipv6 address FE80::1 link-local

R1 (config-if)#no shut

R1 (config-if)#ipv6 rip ripng enable

R1 (config-if)#exit

R1 (config-if)#do sh ipv6 int g0/0

R1 (config)#int g0/1

R1 (config-if)#no ip address

R1 (config-if)#duplex auto

R1 (config-if)#Speed auto

R1 (config-if)#ipv6 address 2001:DB8:1:11::1/64

R1 (config-if)#No shut

R1 (config-if)#Ipv6 address FE80::1 link-local

R1 (config-if)#No shut

R1 (config-if)#ipv6 rip ripng enable

R1 (config-if)#Exit

R1 (config)#Int s 0/0/0

R1 (config-if)#No ip address

R1 (config-if)#Ipv6 address 2001:DB8:1:1::1/64

R1 (config-if)#No shut

R1 (config-if)#Ipv6 rip ripng enable

Router (config)#hostname R2

R2 (config-if)#ipv6 ubicast-routing

R2 (config-if)#int s0/0/0

R2 (config-if)#no ip address

R2 (config-if)#ipv6 address 2001:DB8:1:1::2/64

R2 (config-if)#no shut

R2 (config-if)#ipv6 rip ripng enable

R2 (config-if)#exit

R2 (config)#int s 0/0/1

R2 (config-if)#no ip address

R2 (config-if)#ipv6 address 2001:db8:1:2::2/64

R2 (config-if)#no shut

R2 (config-if)#ipv6 rip ripng enable

R2 (config-if)#exit

Router (config)#hostname R3

R3 (config)#ipv6 unicast-routing

R3 (config)#int g0/0

R3 (config-if)#no ip address

R3 (config-if)#duplex auto

R3 (config-if)#speed auto

R3 (config-if)#ipv6 address 2001:DB8:30:2::1/64

R3 (config-if)#no shut

R3 (config-if)#Ipv6 address FE80::3 link-local

R3 (config-if)#no shut

R3 (config-if)#ipv6 rip ripng enable

R3 (config-if)#exit

R3 (config)#int s0/0/1

R3 (config-if)#no ip address

R3 (config-if)#duplex auto

R3 (config-if)#speed auto

R3 (config-if)#ipv6 address 2001:DB8:1:2::1/64

R3 (config-if)#no shut

R3 (config-if)#ipv6 rip ripng enable

**Add table for ip address of Pcs and server**

**Part 1: Configure, Apply, and Verify an IPv6 ACL**

**Step 1: Configure an ACL that will block HTTP and HTTPS access.**

a. Block HTTP and HTTPS traffic from reaching **Server3**.

R1(config)# **deny tcp any host 2001:DB8:1:30::30 eq www**

R1(config)# **deny tcp any host 2001:DB8:1:30::30 eq 443**

b. Allow all other IPv6 traffic to pass.

R1(config)# **permit ipv6 any any**

**Step 2: Apply the ACL to the correct interface.** Apply the ACL on the

R1(config)# **interface GigabitEthernet0/1**

R1(config-if)# **ipv6 traffic-filter BLOCK\_HTTP in**

**Step 3: Verify the ACL implementation.**

Verify that the ACL is operating as intended by conducting the following tests:

• Open the **web browser** of **PC1** to http://2001:DB8:1:30::30 or https://2001:DB8:1:30::30. The website should appear.

• Open the **web browser** of **PC2** to http://2001:DB8:1:30::30 or https://2001:DB8:1:30::30. The website should be blocked.

• Ping from **PC2** to 2001:DB8:1:30::30. The ping should be successful.

**Part 2: Configure, Apply, and Verify a Second IPv6 ACL**

**Step 1: Create an access list to block ICMP.**

a. Block all ICMP traffic from any hosts to any destination.

R3(config)# **deny icmp any any**

b. Allow all other IPv6 traffic to pass.

R3(config)# **permit ipv6 any any**

**Step 2: Apply the ACL to the correct interface.**

R3(config)# **interface GigabitEthernet0/0**

R3(config-if)# **ipv6 traffic-filter BLOCK\_ICMP out**

**Step 3: Verify that the proper access list functions.**

1. a. Ping from **PC2** to 2001:DB8:1:30::30. The ping should fail.
2. b. Ping from **PC1** to 2001:DB8:1:30::30. The ping should fail.

Open the **web browser** of **PC1** to http://2001:DB8:1:30::30 or https://2001:DB8:1:30::30. The website should display.