1.4 – SRWE – Training - PacketKnows – Configuring Basic OSPFv3 in a Single Area

Addressing Table

Device	Interface	IPv4 Address	Default Gateway
R1	Fa0/0	2001:db8:cafe:1::1/64	N/A
	S0/0	2001:db8:cafe:a001::1/64	N/A
	S0/1	2001:db8:cafe:a003::1/64	N/A
R2	Fa0/0	2001:db8:cafe:2::1/64	N/A
	S0/0	2001:db8:cafe:a001::2/64	N/A
	S0/1	2001:db8:cafe:a002::1/64	N/A
R3	Fa0/0	2001:db8:cafe:3::1/64	N/A
	S0/0	2001:db8:cafe:a003::2/64	N/A
	S0/1	2001:db8:cafe:a002::2/64	N/A
PC1	E0	2001:db8:cafe:1::10/64	Fe80::1
PC2	E0	2001:db8:cafe:2::10/64	Fe80::2
PC3	E0	2001:db8:cafe:3::10/64	Fe80::3

NOTE

- **Power all the devices first by clicking the triangle button on the upper navbar.**
- **Right click the device then click the web console first to configure on the device**
- **Always type "save" when configuring IP addresses of PC's**

Objectives

Part 1: Configure OSPFv3 Routing

Part 2: Verify Connectivity

Background

In this activity, the IPv6 addressing is already configured. You are responsible for configuring the three router topology with basic single area OSPFv3 and then verifying connectivity between end devices.

Note: The topology is the same one used in the chapter examples. In addition, the student practiced the configuration of this topology in the Syntax Checker activities. Therefore, the student should be able to complete this activity with minimal assistance.

Part 1: Configure OSPFv3 Routing

Step 1: Configure OSPFv3 on R1, R2 and R3.

Use the following requirements to configure OSPF routing on all three routers:

– Enable IPv6 routing
– Process ID 10
– Router ID for each router: R1 = 1.1.1.1; R2 = 2.2.2.2; R3 = 3.3.3.3
– Enable OSPFv3 on each interface

Note: Packet Trace version 6.0.1 does not support the **auto-cost reference-bandwidth** command, so you will not be adjust bandwidth costs in this activity.

Step 2: Verify OSPF routing is operational.

Verify each router has established adjacency with the other two routers. Verify the routing table has a route to every network in the topology.

```
R1

R1#conf t

R1(Config)#ipv6 unicast-routing

R1(Config)#ipv6 router ospf 10

R1(Config)#router-id 1.1.1.1

R1(Config)#passive-interface fa0/0

R1(Config-if)#exit

interface fa0/0

 ipv6 ospf 10 area 0


interface Serial0/0

 ipv6 ospf 10 area 0


interface Serial0/1

 ipv6 ospf 10 area 0

end


R2

conf t

ipv6 unicast-routing

ipv6 router ospf 10

router-id 2.2.2.2

passive-interface fa0/0

exit
```

```
interface fa0/0
 ipv6 ospf 10 area 0


interface Serial0/0
 ipv6 ospf 10 area 0


interface Serial0/1
 ipv6 ospf 10 area 0
end


R3
conf t
ipv6 unicast-routing
ipv6 router ospf 10
router-id 3.3.3.3
passive-interface fa0/0
exit
interface fa0/0
 ipv6 ospf 10 area 0


interface Serial0/0
 ipv6 ospf 10 area 0


interface Serial0/1
```

```
 ipv6 ospf 10 area 0
end
```