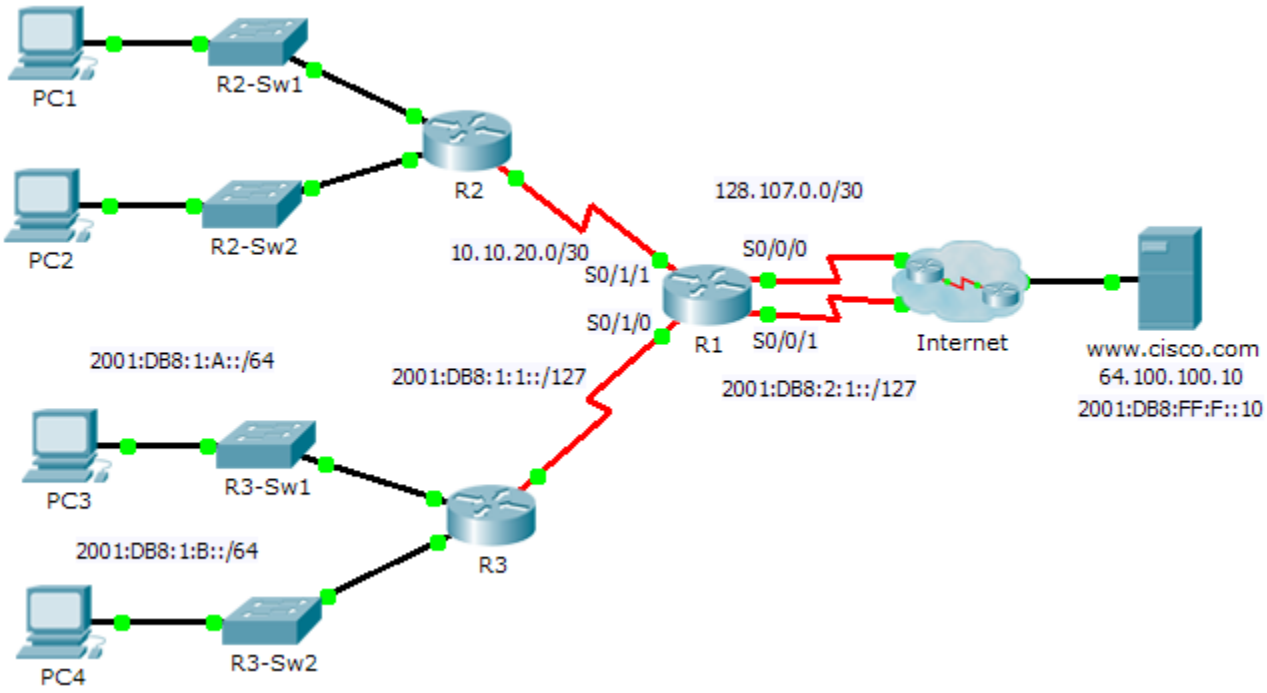
Packet Tracer - Skills Integration Challenge

Topology



Addressing Table

Device	Interface	IPv4 Address	Subnet Mask	Default Gateway
		IPv6 Address/Prefix		
R1	S0/0/0	128.107.0.254	255.255.255.252	N/A
	S0/0/1	2001:DB8:2:1::0/127		N/A
	S0/1/0	2001:DB8:1:1::6/127		N/A
	S0/1/1	10.10.20.1	255.255.255.252	N/A
R2	G0/0			N/A
	G0/1			N/A
	S0/0/0	10.10.20.2	255.255.255.252	N/A
R3	G0/0	2001:DB8:1:A::1/64		N/A
	G0/1	2001:DB8:1:B::1/64		N/A
	S0/0/0	2001:DB8:1:1::7/127		N/A
PC1	NIC			
PC2	NIC			
PC3	NIC	2001:DB8:1:A::F/64		2001:DB8:1:A::1
PC4	NIC	2001:DB8:1:B::F/64		2001:DB8:1:B::1

Scenario

The network administrator asked you to implement IPv4 and IPv6 static and default routing in the test environment shown in the topology. Configure each static and default route as directly attached.

Requirements

- Use the address space 10.10.16.0/23 to design an addressing scheme for 2 LANs of equal size on R2.
  - Assign the first subnet to PC1 LAN.
  - Assign the second subnet to PC2 LAN.
- For each subnet, assign the first usable IP address to R2 and the last usable IP address to the PCs.
  - Configure an IPv4 default route on R2.
  - Configure an IPv6 default route on R3.
  - Configure an IPv4 default route on R1 using Serial 0/0/0 as the exit interface.
  - Configure an IPv6 default route on R1 using Serial 0/0/1 as the exit interface.
  - Configure an IPv4 summary route on R1 to reach R2 LANs.
  - Configure an IPv6 summary route on R1 to reach R3 LANs.

- Configure an IPv4 floating static route on R1 to the 64.100.100.0/24 network using the Serial 0/0/1 as the exit interface. Increment the default administrative distance by 1.