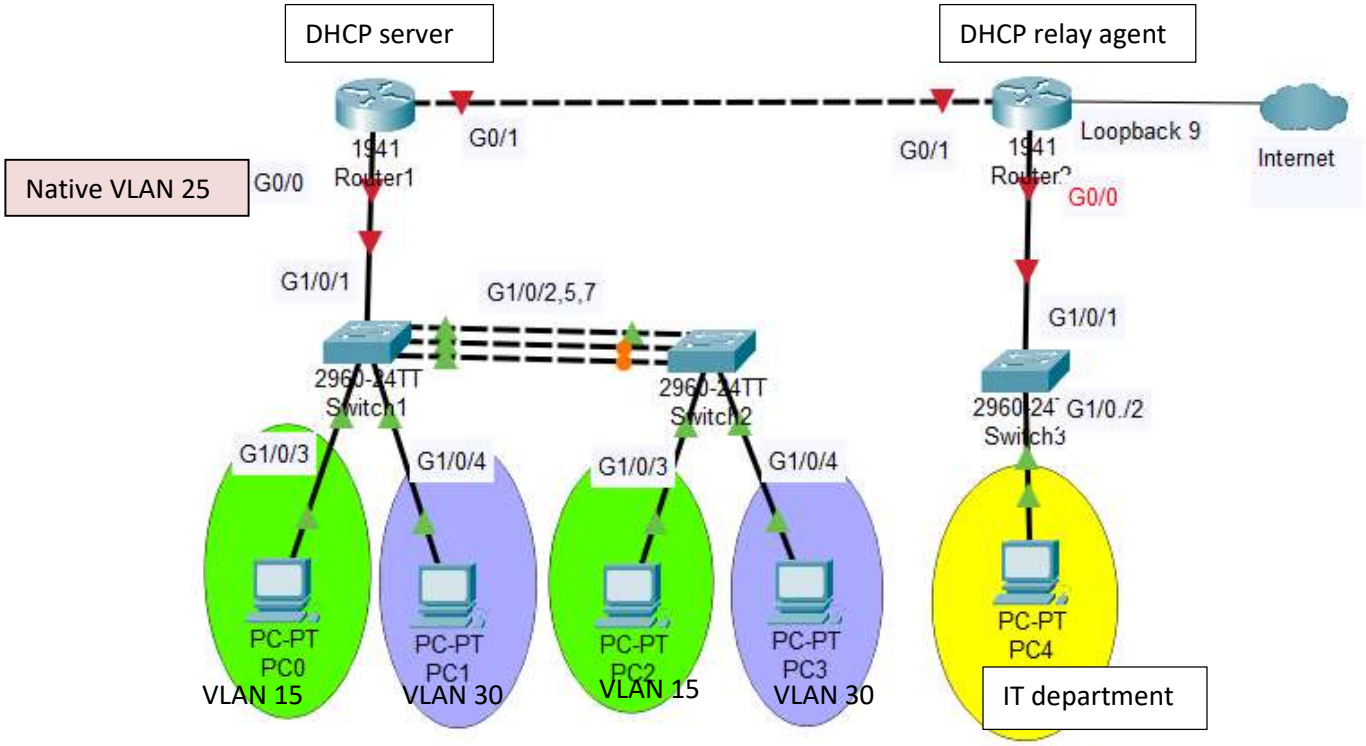
Final Review DCOM2 - 1205

Topology:



VLAN Table:

Device	Interfaces	VLAN #	Name
Switch 1	G1/0/3	15	Sales
	G1/0/4	30	Finance
	Native LAN	25	Native
	Management VLAN	45	Management
	G1/0/1 – 2,5,7	Trunk	
Switch 2	G1/0/3	15	Sales
	G1/0/4	30	Finance
	Native LAN	25	Native
	G1/0/2,5,7	Trunk	
	Management VLAN	45	Management

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Addressing Table:

Devices	Interfaces	IP address	Default Gateway
Router 1	G0/0.15	10.0.0.100/24	NA
		2001:1:1:1::100/64	FE80::1 Link local
	G0/0.25	10.0.1.100/24	NA
		2001:2:2:2::100/64	FE80::1 Link local
	G0/0.45	10.0.2.100/24	NA
	G0/1	10.0.3.1/30	NA
		2001:3:3:3::1/64	
Router 2	G0/1	10.0.3.2/30	NA
	G0/0	10.0.4.100/24	NA
		2001:3:3:3::2/64	
	Loopback 9	9.0.0.100/24	NA
		2001:9:9:9::100/64	
Switch 1	VLAN 45	10.0.2.101/24	Router G0/0.45
Switch 2	VLAN 45	10.0.2.102/24	Router G0/0.45
PC 0	Fa 0	DHCP assigned	DHCP assigned
		SLAAC	
PC 1	Fa 0	DHCP assigned	DHCP assigned
		SLAAC	
PC 2	Fa 0	DHCP assigned	DHCP assigned
		SLAAC	
PC 3	Fa 0	DHCP assigned	DHCP assigned
		SLAAC	

Tasks:

1. **Configure Basic settings on the Routers and Switches**
2. **Configure IPv4 and IPv6 addressing as per the addressing table**
3. **Configure VLAN assignment as per the VLAN table and Topology diagram**
4. **Configure Intervlan routing**
5. **Configure Etherchannel for redundancy**
6. **Configure DHCPv4 and v6**
7. **Configure static routing**
8. **Configure port security**

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Task 1: Configure Basic settings on the Routers and Switches

1. Assign a device name to the routers and switches.
2. Disable DNS lookup to prevent the router from attempting to translate incorrectly entered commands as though they were host names.
3. Assign class as the privileged EXEC encrypted password.
4. Assign cisco as the console password and enable login.
5. Assign cisco as the VTY password and enable login.
6. Encrypt the plaintext passwords.
7. Create a banner that warns anyone accessing the device that unauthorized access is prohibited.
8. Set the clock on the routers
9. Configure SSH version 2 with 1024-bit key size and Username Admin Password Cisco12345

Task 2: Configure IPv4 and IPv6 addressing as per the addressing table

1. Configure and verify IPv4 and IPv6 addressing as per the addressing table

Task 3: Configure VLAN assignment as per the VLAN table and Topology diagram

1. Configure and verify VLAN assignment as per the VLAN table and Topology diagram

Task 4: Configure intervlan routing

1. Configure and verify intervlan routing on Router1 with sub-interfaces with proper encapsulation. Use addressing table for reference

Task 5: Configure Etherchannel on the switches

1. Before beginning the link aggregation between switches, verify the existing configuration of the ports that connect the switches to ensure that the ports will successfully join the Etherchannel
2. Configure and verify LACP link aggregation between the switches

Task 6: Configure DHCP v4 and v6

1. Configure 3 DHCPv4 pools for both Sales, Finance and IT department including DNS server address as 4.4.4.4 and Domain name as Review.com on Router1

2. Router2 should act as a relay agent to get the DHCPv4 address from Router1
3. Verify on PCs for DHCPv4 assigned addresses
    a. IT department PC will receive IP address only after configuring static routing
4. Configure SLAAC on R1 for Sales and Finance department as per the addressing table
5. Verify on PCs for SLAAC addresses

Task 7: Configure static routing

1. Configure default static route on Router1(using next hop address) & Router2(using exit interface) for the internet
2. Configure specific static route to IT department on Router1 using next hop address
3. Configure specific static route to Sales and Finance department on Router2 using next hop address.
4. Verify the configuration by checking the routing table

Task 8: Configure port security

1. Shutdown all unused ports on both the switches
2. Configure port security on the access ports with maximum mac address 3 and protect the ports if violated
3. Configure DHCP snooping on the trusted ports and VLANs including DAI
4. Limit the DHCP packets to 5 on the non trusted ports
5. Configure BPDU guard and Port fast on all accessports
6. Protect the trunk to stop auto negotiations

Verification:

1. **Verify Basic settings on the Routers and Switches**
2. **Verify IPv4 and IPv6 addressing as per the addressing table by checking all the PCs, Routers and Switches**
3. **Verify VLAN assignment as per the VLAN table and Topology diagram by checking the vlan table and trunking on the switches**
4. **Verify Intervlan routing by checking the routing table**
5. **Configure Etherchannel for redundancy by checking the summary table**
6. **Configure DHCPv4 and v6 by checking the pools on the Router1 as well as the PCs addresses**
7. **Configure static routing by checking the routing table on both the Routers**
8. **Configure port security on both the switches for interface status, DHCP snooping, DAI, BPDU and port fast enabled, Trunk ports and port security on all access ports**

In your final exam you will be asked to take screenshot proofs for the above verification outputs for marking.