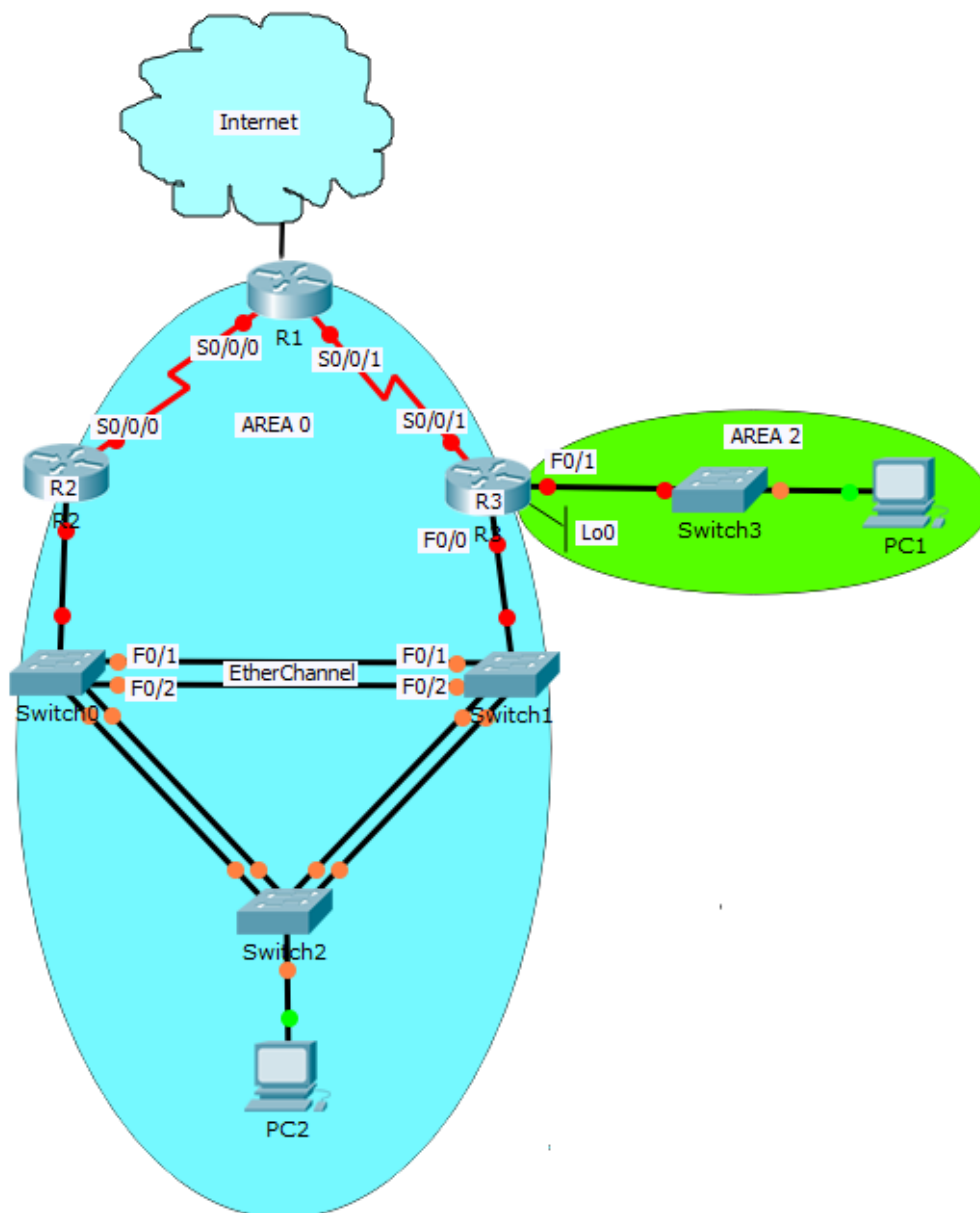


CCNA: Scaling Networks

Final Assessment

Topology



Addressing Table 1

Device	Interface	IP Address	Subnet Mask	Default Gateway
R1	S0/0/0	10.10.10.1	255.255.255.252	N/A
	S0/0/1	10.10.10.5	255.255.255.252	N/A
	Lo0	150.50.50.50	255.255.255.0	N/A
R2	S0/0/0	10.10.10.2	255.255.255.252	N/A
	F0/0	192.168.0.1	255.255.255.0	N/A
R3	F0/0	192.168.0.2	255.255.255.0	N/A
	F0/1	192.169.0.1	255.255.252.0	N/A
	S0/0/1	10.10.10.6	255.255.255.252	N/A
	Lo0	192.169.4.1	255.255.252.0	N/A
PC-1	NIC	192.169.0.2	255.255.252.0	192.169.0.1
PC-2	NIC	192.168.0.3	255.255.255.0	192.168.0.254

Assessment Objectives

- Configure Device Basic Settings
- Configure Link Aggregation
- Configure OSPFv2 Dynamic Routing Protocol
- Verify Network Connectivity and HSRP Configuration

Scenario

In this Final Assessment, you will create a small network. You must connect the network devices, and configure those devices to support IPv4 connectivity and link aggregation. You will then configure OSPFv2 and HSRP on the network and verify connectivity.

*Please observe that the **PC-1** and **PC-2** is preconfigured.*

*Set the clock of the **DCE** to **64000**.*

Part 1: Configure Device Basic Settings

Step 1: Start the final assessment by using the PT-file downloaded from KTH Canvas.
Don't forget to save you work regularly in case of computer/network failure.

Step 2: Configure R1.

- Configure the correct interface address for **S0/0/0**, **S0/0/1** and **Lo0** (Simulated Internet connection) according to Table 1.
- Set the clock rate to 64000 on both serial interfaces.
- Configure a static default route out Lo0.
- Verify the configurations.

Step 3: Configure R2.

- a) Configure the correct interface address for **F0/0** and **S0/0/0** according to Table 1.
- b) Verify the configurations.

Step 4: Configure R3.

- a) Configure the correct interface address for **F0/0**, **F0/1**, **S0/0/1** and **Lo0** according to Table 1.
- b) Verify the configurations.

Step 5: Verify network connectivity.

Use the **ping** command to test connectivity between network devices.

Use the following table to methodically verify connectivity with each network device. Take corrective action to establish connectivity if a test fails:

From	To	Ping Results
R1	R2, S0/0/0	
R1	R3, S0/0/1	

Part 2: Configure LAN Redundancy and Link Aggregation**Step 1: Configure HSRP on R2.**

Configure the HSRP virtual IP address on interface F0/0. Use the following specification:

- Group: 1
- Virtual IP address: 192.168.0.254
- Make this the primary HSRP router (use the value 150).
- Configure so this router becomes the primary HSRP router on a reboot.

Step 2: Configure HSRP on R3.

Configure the HSRP virtual IP address on interface F0/0. Use the following specification:

- Group: 1
- Virtual IP address: 192.168.0.254

Step 3: Configure an PAgP EtherChannel between S0 and S1.

- a) Configure an PAgP EtherChannel on interfaces connected to S0.

Use the following specification:

- Group 1
- Enable desirable mode

- b) Configure an PAgP EtherChannel on interfaces connected to S1.

Use the following specification:

- Group 1
- Enable auto mode

Part 3: Configure OSPFv2 Dynamic Routing Protocol

Step 1: Configure OSPF on each router (R1, R2 and R3)

- a) Use **Process ID 1** and advertise all directly connected networks of R1, R2 and R3 (do not advertise the Lo0 network on the R1 router) in **the correct area** with correct wildcard. The wildcard must correspond to the interface's subnetmask.
- b) Advertise a default route from the R1 router to the other routers (R2 and R3) in the network using OSPF.
- c) Verify that you have received OSPF routes from the other routers.

Part 4: Verifying the network

- a) Check the PDU list window for the status of the test packets. Click on the button "Toggle PDU List Window" at the bottom to see the whole PDU test list.
 - ✓ All the test packets should be successful.
- b) The completion score on the PT Activity window should be 100%

Part 5: Change the LAN Link Aggregation

- a) Use LACP instead of PAgP between S0 and S1 and verify its functionality by using ping and shutting down interfaces. Let S0 be in active mode.