Ghulam Ishaq Khan Institute of Engineering Sciences & Technology

Faculty of Computer Science & Engineering

Course Code: CE313L

Course Title: Computer Communication and Networks Lab

Lab-09 Tasks

The goal is practicing with the basic commands of OSPF and standard ACLs. You must do the next configurations:

1. - Configure the IP addresses as:

- Host A: 10.1.1.1/24. Gateway: 10.1.1.3
- Host B: 10.1.1.2/24. Gateway: 10.1.1.3
- R1´s G0/0: 10.1.1.3/24
- Host C: 10.3.3.3/25. Gateway: 10.3.3.1
- R1´s G0/1: 10.3.3.1/25
- S1: 10.2.2.1/24. Gateway: 10.2.2.3
- S2: 10.2.2.2/24. Gateway: 10.2.2.3
- R2´s G0/0: 10.2.2.3/24
- R1´s S0/3/0: 10.4.4.1/30
- R2´s S0/3/0: 10.4.4.2/30

Check that you can ping between hosts in the same subnet:

- From Host A to Host B.
- From Host C to R1´s G0/1 interface.
- From S1 to S2.
- From R1´s S0/3/0 interface to R2´s S0/3/0 interface.

Note that you can´t ping between hosts in different subnets because the routers don´t have any entry in their routing table.

2. – Enable OSPF in all interfaces both R1 and R2 (area 0) with only one subcommand in the OSPF configuration.

Check that the neighboring relationships have been created between R1 and R2.

Check that, after configuring OSPF, you can ping between hosts in different subnets.

- From Host A to Host C.
- From Host C to S1.
- From Host A to S1.

2. – Configure ACL on the right routers, interfaces and directions based on these requirements:

- Permit packets from S1 going to subnet of hosts A and B.
- Deny packets from S2 going to subnet of host A and B.
- Permit packets from S2 going to subnet of host C.
- Deny packets from S1 going to subnet of host C.

After configuring ACL, check that:

- You can ping from S1 to host A and B, but not to host C.
- You can ping from S2 to host C, but not to hosts A and B.