Computer Network Design and Management

261434

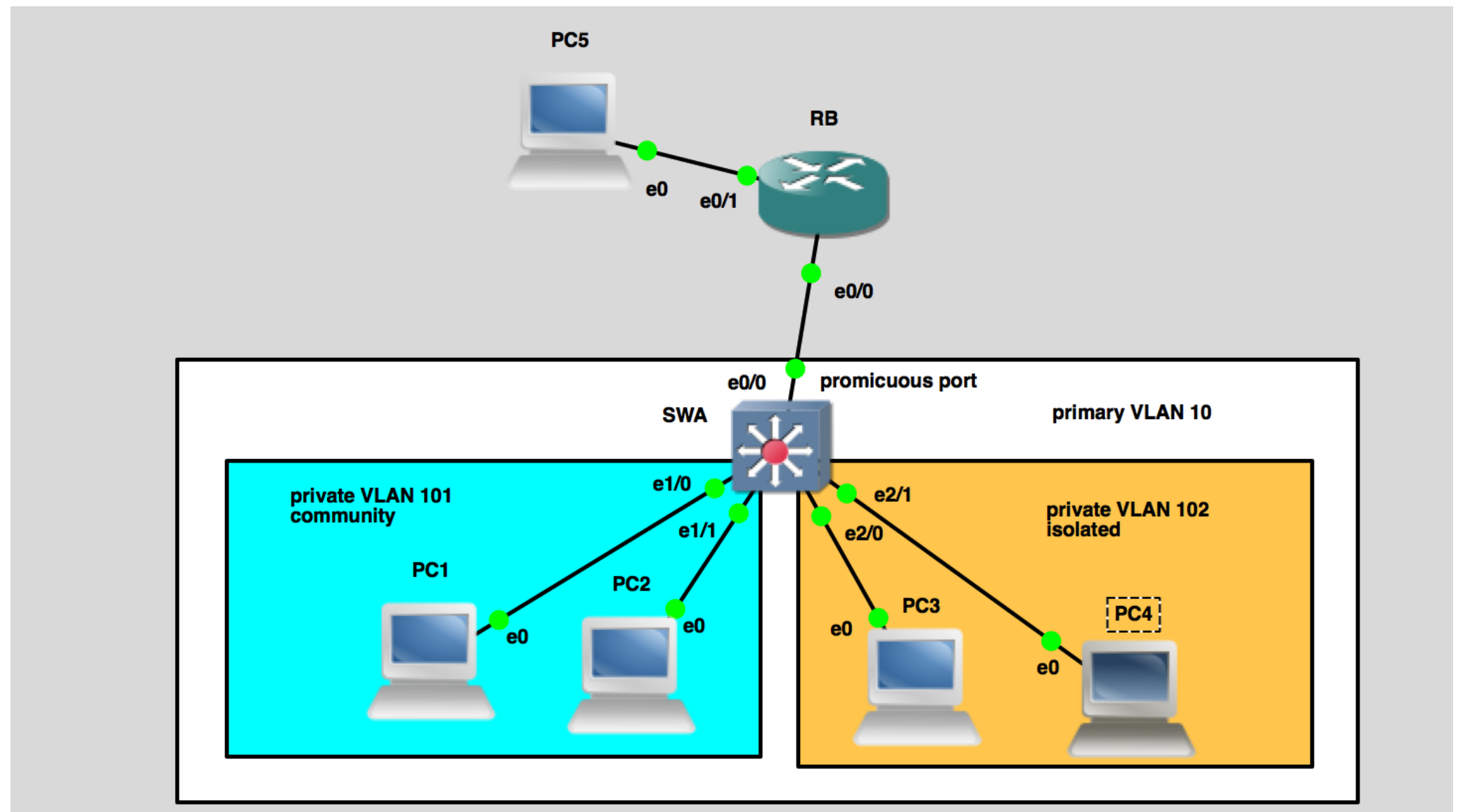Lab 07

Private VLAN

Objective

- To be able to configure private VLAN
- To be able to verify the private VLAN
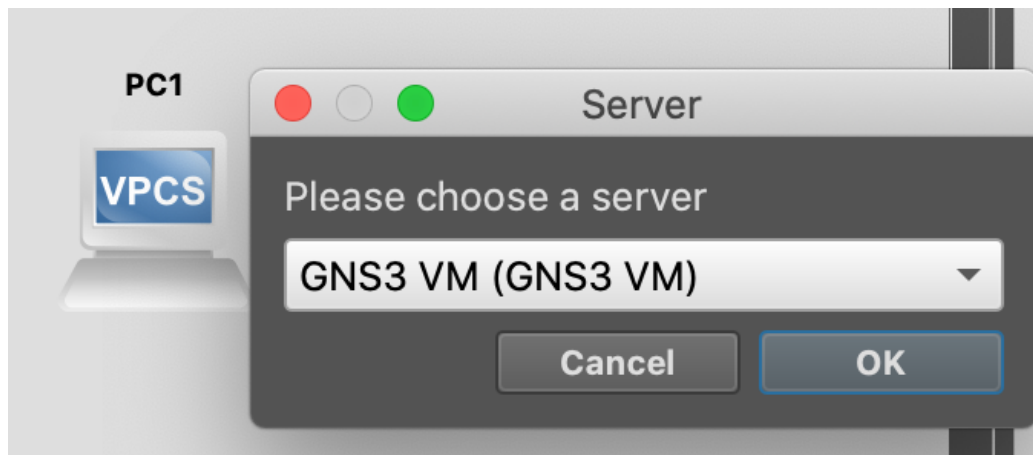
Topology

This lab, GNS3 is used.

- L2 : **i86bi_linux_l2-advipservicesk9-ms.nov3_2015_high_iron**
- L3 : **i86bi-linux-l3-adventerprisek9-15.4.1T**

- In GNS3, use VPCS as the host. You can add it and choose to run it from VM as shown in figure.

- To configure IP address and default gateway in VPCS, use command

ip *IPAddress SubnetMask IPAddressofDefaultGW*

- To verify IP address, use command.

show ip

Instructions

1. Configure the IP addresses of PCs as follows.

  PC1: 200.1.1.11/24 gateway 200.1.1.1

  PC2: 200.1.1.12/24 gateway 200.1.1.1

  PC3: 200.1.1.21/24 gateway 200.1.1.1

  PC4: 200.1.1.22/24 gateway 200.1.1.1

  PC5: 195.1.1.201/24 gateway 195.1.1.1

  2. Configure the IP addresses of the router RB's interfaces corresponding to the **IP addresses of the default gateways in step 1**.

  3. Configure the switch to use transparent VTP mode.

  4. Create a secondary community Private VLAN 101 on the switch SWA.

  5. Create a secondary isolated Private VLAN 102 on the switch SWA.

Instructions

6. Create the primary VLAN 10 which is the primary of VLAN 101 and 102 on the switch SWA

7. Assign Ethernet 0/0 port of SWA to promiscuous mode.

-You do not need to change interface of switch to trunk mode as the switch is connecting to the router by only one primary VLAN.

-The router does not need subinterface as it is connected to only 1 primary VLAN of switch)

8. Assign Ethernet 1/0-1 ports of SWA to use VLAN 101.

9. Assign Ethernet 2/0-1 ports of SWA to use VLAN 102.

(*Note: after finishing configuring, you should save all devices and and reopen the project again in case of program bugs*)

10. Check whether all PC1-4 can ping PC5, and vice versa.

11. Check whether PC1 can ping PC2 and vice versa.

12. Check whether PC3 can ping PC4 and vice versa.

13. Check whether PC1-4 can ping PC5 and vice versa.

Instructions

14. Do not forget to save the running configuration file to startup configuration file by command.

```
copy running-config startup-config
```

or

```
write
```

In VPCS, use command

```
save
```