# Labo 2 raspberry pi router

## Raspberry pi config

Flash the OS on the raspberry pi and set static hostname and username/password.

Connect both laptop and pi to the switch.

You can connect through the host name.

Now set a static IP on the interface.

Also set a static IP on the connected PC

Install the vlan package:

sudo apt install vlan

Configure new vlan interfaces in /etc/network/interfaces.d/vlans

A screen shot of a computer

Description automatically generated

Configure the static ips of the vlans in dhcpcd.d:

A screenshot of a computer

Description automatically generated

### Configurating routing on pi:

Change 1 line in the /etc/sysctl.conf file:

A close-up of a black background

Description automatically generated

## Configuration switch:

Configure the switchport trunk on the port with the Pi:

**interface range fastEthernet 0/1 – 2**

**switchport mode trunk**

**this allows vlan 10 on these ports:**

**interface range fastEthernet 0/3 – 6**

**switchport mode access**

**switchport access vlan 10**

**this allows vlan 20 on these ports:**

**interface range fastEthernet 0/7 – 10**

**switchport mode access**

**switchport access vlan 20**

**this allows vlan 30 on these ports:**

**interface range fastEthernet 0/11 – 14**

**switchport mode access**

**switchport access vlan 30**

**this allows vlan 40 on these ports:**

**interface range fastEthernet 0/15 – 18**

**switchport mode access**

**switchport access vlan 40**

### DHCP setup on cisco switch

## Ip addresses:

Raspberry pi: 20.0.0.1

Windows pc: 20.0.0.2

**vlans**

|  |  |
| --- | --- |
| Name | Ip address |
| 10 | 10.10.10.0/24 |
| 20 | 10.10.20.0/24 |
| 30 | 10.10.30.0/24 |
| 40 | 10.10.40.0/24 |

Sources:

Configure vlans on pi:

<https://help.domotz.com/tips-tricks/configure-vlans-on-raspberry-pi/>

Configure switch:

<https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst2960x/software/15-2_2_e/vlan/configuration_guide/b_vlan_1522e_2960x_cg/b_vlan_152ex_2960-x_cg_chapter_0100.html>

Configure raspberry pi: <https://www.packetswitch.co.uk/raspberry/#:~:text=Routing%20can%20be%20enabled%20by%20editing%20the%20sysctl.&text=INPUT%20%2D%20All%20packets%20destined%20for,(routed%20by)%20the%20Pi>