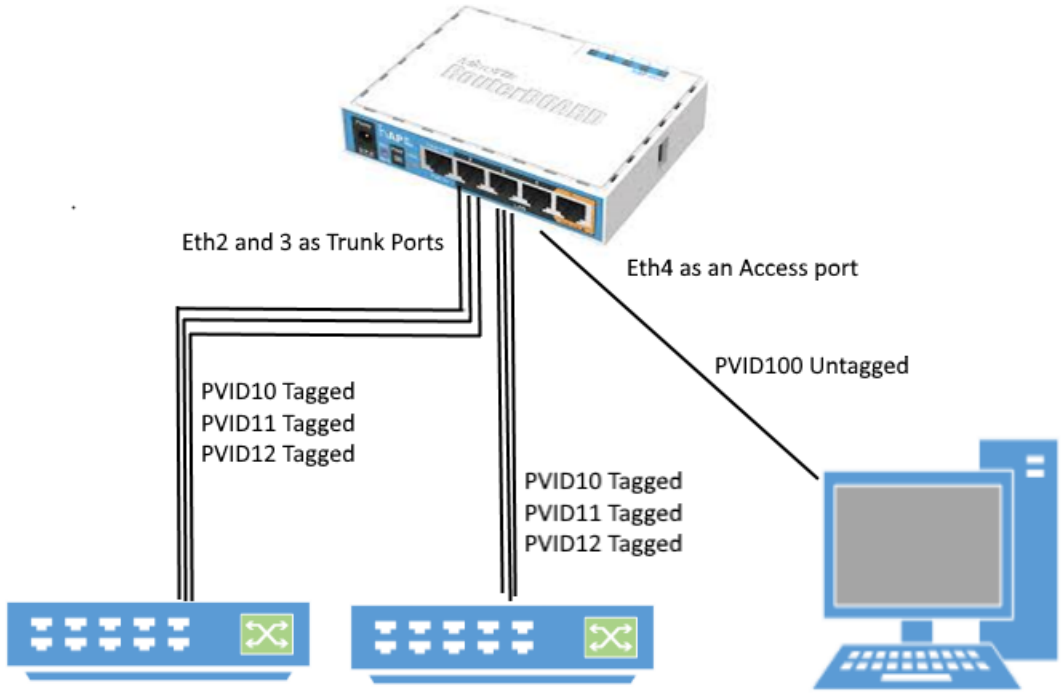
VLANs on Mikrotik Routers post 6.41 firmware

- Post firmware v6.41 VLAN configuration has changed on a Mikrotik.
- Previously you would add a VLAN interface to each physical interface and then bridge each VLAN across ports.
- Now you will create a single bridge and then decide which ports are tagged or untagged.

- Here's a sample config with DHCP running on each VLAN.

- We will configure:
  Eth1 with no VLAN configuration.
  Eth2 with VLAN10, 11, 12 tagged. This will act as a trunk port.
  Eth3 with VLAN10, 11, 12 tagged. This will act as a trunk port.
  Eth4 with VLAN10 untagged and a PVID of 10. This will act as an access point for PCs to connect to.

- DHCP will hand out addresses on:
  192.168.10.0/24 on VLAN10
  192.168.10.0/24 on VLAN11
  192.168.10.0/24 on VLAN12


Eth2 and 3 as Trunk Ports
Eth4 as an Access port
PVID100 Untagged
PVID10 Tagged
PVID11 Tagged
PVID12 Tagged
PVID10 Tagged
PVID11 Tagged
PVID12 Tagged

STEP 1 Make DHCP Work on each VLAN

1. **Add a bridge**
   /interface bridge
   add fast-forward=no name=bridge1 vlan-filtering=no

2. **Add a VLAN interface to the bridge (this will hold the IP address and the DHCP server.**
   /interface vlan
   add interface=bridge1 name=VLAN10 vlan-id=10
   add interface=bridge1 name=VLAN11 vlan-id=11
   add interface=bridge1 name=VLAN12 vlan-id=12

3. **Add the DHCP server config and IP address to each VLAN interface**
   /ip pool
   add name=VLAN10 ranges=192.168.10.1-192.168.10.50
   add name=VLAN11 ranges=192.168.11.1-192.168.11.50
   add name=VLAN12 ranges=192.168.12.1-192.168.12.50
   /ip address
   add address=192.168.10.254/24 interface=VLAN10 network=192.168.10.0
   add address=192.168.11.254/24 interface=VLAN11 network=192.168.11.0
   add address=192.168.12.254/24 interface=VLAN12 network=192.168.12.0
   /ip dhcp-server network
   add address=192.168.10.0/24 dns-server=192.168.10.254 gateway=192.168.10.254
   add address=192.168.11.0/24 dns-server=192.168.11.254 gateway=192.168.11.254
   add address=192.168.12.0/24 dns-server=192.168.12.254 gateway=192.168.12.254
   /ip dhcp-server
   add address-pool=VLAN10 disabled=no interface=VLAN10 name=VLAN10
   add address-pool=VLAN11 disabled=no interface=VLAN11 name=VLAN11
   add address-pool=VLAN12 disabled=no interface=VLAN12 name=VLAN12

STEP 2 Add the physical ports to the bridge and tag traffic.

1. **Add ports to the bridge**

```
/interface bridge port
add bridge=bridge1 hw=no interface=ether3
add bridge=bridge1 hw=no interface=ether2
add bridge=bridge1 interface=ether4 pvid=10
```

The PVID allows no VLAN aware devices such as PCs to "inherit" the PVID of the port

2. ***Tag the traffic***

```
/interface bridge vlan
add bridge=bridge1 tagged=bridge1,ether2,ether3,VLAN10 untagged=ether4 vlan-ids=10
add bridge=bridge1 tagged=bridge1,ether2,ether3,VLAN11 vlan-ids=11
add bridge=bridge1 tagged=bridge1,ether2,ether3,VLAN12 vlan-ids=12
```

Eth4 is untagged on VLAN10

Don't forget to add the bridge itself into the tagged interfaces on every VLAN otherwise traffic wont flow! If you don't do this then you wont get DHCP addresses.

NOTICE that HW offload is disabled because of the Tik were using. Make sure its on to avoid high CPU

3. **Turn on VLAN filtering on the bridge (We left this off earlier so that we didn't lose access.**

```
/interface bridge
set vlan-filtering=yes [find name=my-bridge]
```

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We provide Mikrotik consultancy world wide with specialisms in Router and Wireless technologies.

Our projects include working closely with business owners to ensure that their IT is supporting their plans, working alongside other IT providers so help them implement Mikrotik routers and wireless, and also building our own hosting environment in Leeds where we provide Office 365, Private hosted Exchange, web / email hosting and VoIP systems.

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