

EE4221 Lecture 4 Questions

VDC Networking - Advanced Ethernet Switching

Question 1.

An 8-port Ethernet switch has the following CAM table:

Ethernet Address	VLAN	1	2	3	4	5	6	7	8
1111.1111.1111	1				X				
2222.2222.2222	2						X		
3333.3333.3333	2			X					
4444.4444.4444	2	X							
5555.5555.5555	1	X							
5555.5555.5555	2	X							
4444.4444.4444	3	X							

~ one single port can have multiple MAC add.
~ one MAC address can appear in multi ports.

a.b.
if $i=1$, use port 4/8.
if $i \neq 1$, use port 5/7.

a) If an Ethernet frame with source Ethernet address 5555.5555.5555 and destination address 0000.aaaa.aaaa is received by port 1 of the switch, which of the port(s) will be used for sending out the frame?

1, 5, 7. default vlan is 1 if

b) Discuss how the contents the forwarding table change when the frame discussed in a) is received.

5555.5555.5555 will change to port 1

c) Repeat a)&b) if an Ethernet frame with source Ethernet address 4444.4444.4444 and destination address 3333.3333.3333 is received by port 1 of the switch. If port 1 vlan is 2, it will send to port 3 directly. Then 4444... will change to port 1

d) Repeat a)&b) if an Ethernet frame with source Ethernet address 4444.4444.4444 and destination address ffff.ffff.ffff is received by port 1 of the switch after c).

(c) if port 1 belong VLAN 2, send to port 3, it will send to all port except port 1 and new entry will be added.

(d) All sent VLAN; except port 1.