

1. Hardware and network connection

preparation :

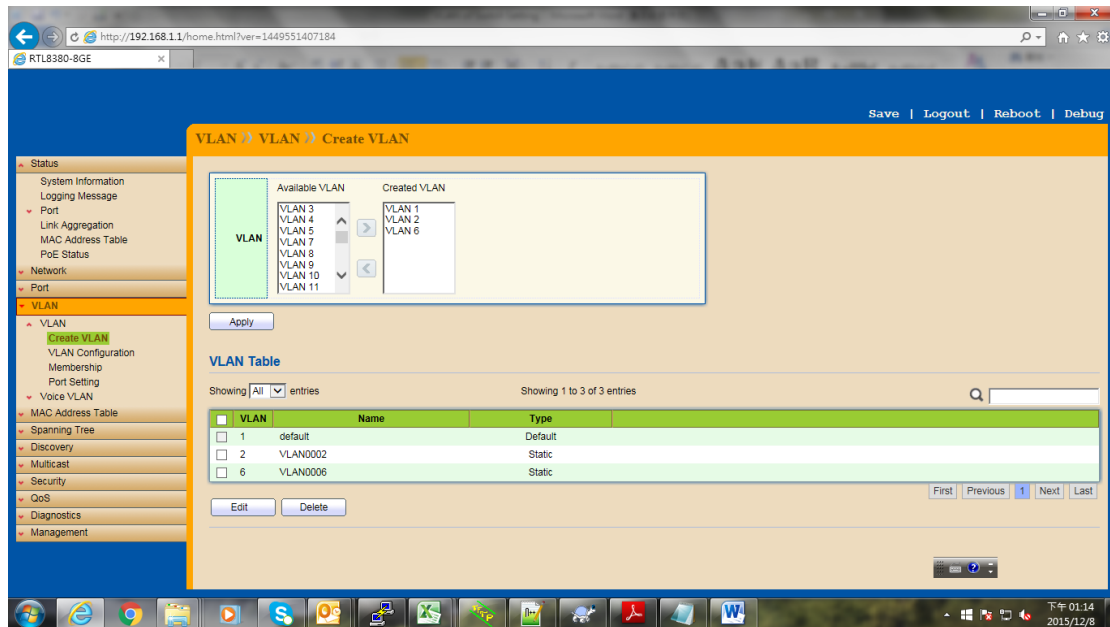
- i. Switch reboot to 'factory default' first. It means there is not any VLAN, all use default (PVID = 1) VLAN – VLAN1.
- ii. Router which include DHCP server, assumes network segment is '172.16.xxx.xxx' connects to switch port 1 for overlapping test.
- iii. PC1(Win7-DHCP) to switch port 2, PC2(Win7-DHCP) to switch port 3, NB1(Win7-DHCP) to switch port 6, NB2(Win7-DHCP) to switch port 7. **Both PCs and NBs Win7 Firewall should be disabled for ping test.** PC1 and PC2 in VLAN2 group. NB1 and NB2 in VLAN6 group.

2. VLAN requirements

Vlan 2 has no access to Vlan 6 and Vlan 6 not to access Vlan 2.
Vlan 2 works in a group and has access to the Router (Gateway)
Vlan 6 works in a group and has access to the Router (Gateway).

3. Step 1 : Create VLAN2 and VLAN6

(Click [Apply], wait about 3 seconds)



4. Step 2 : Switch set all ports to 'Hybrid' and PVID = 1:



5. Step 3.1 : set switch VLAN default port setting

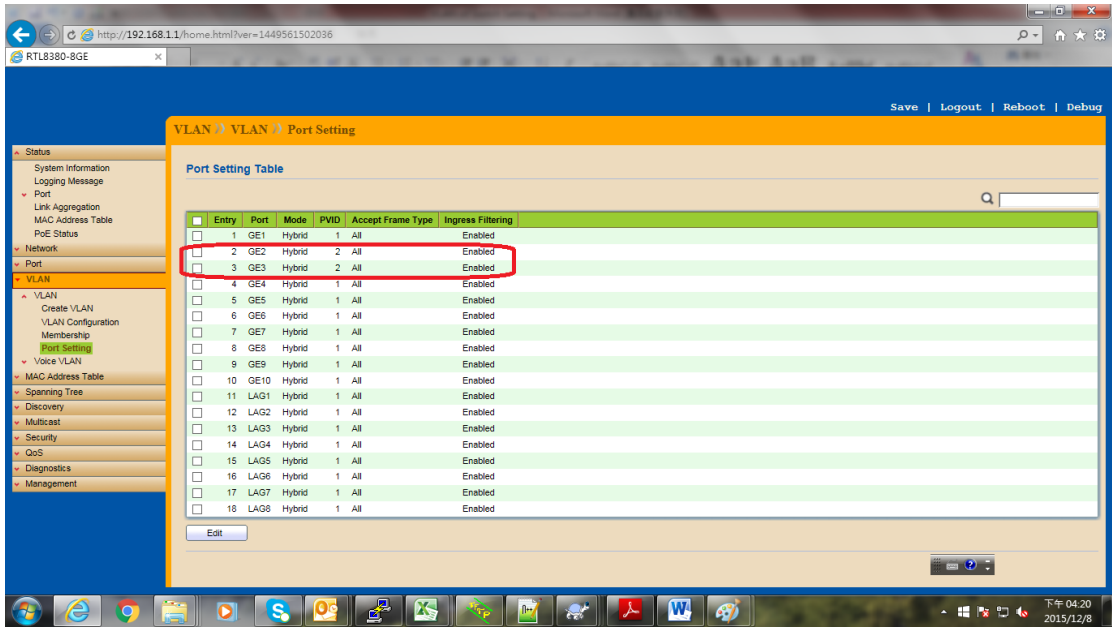
The screenshot shows the 'VLAN Configuration Table' for the default VLAN. The table lists 18 entries, each representing a port configuration. The 'Membership' column shows that all ports are configured as 'Untagged'.

Entry	Port	Mode	Excluded	Forbidden	Tagged	Untagged	PVID
1	GE1	Hybrid	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
2	GE2	Hybrid	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
3	GE3	Hybrid	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
4	GE4	Hybrid	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
5	GE5	Hybrid	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
6	GE6	Hybrid	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
7	GE7	Hybrid	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
8	GE8	Hybrid	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
9	GE9	Hybrid	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
10	GE10	Hybrid	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
11	LAG1	Hybrid	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
12	LAG2	Hybrid	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
13	LAG3	Hybrid	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
14	LAG4	Hybrid	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
15	LAG5	Hybrid	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
16	LAG6	Hybrid	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
17	LAG7	Hybrid	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
18	LAG8	Hybrid	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>

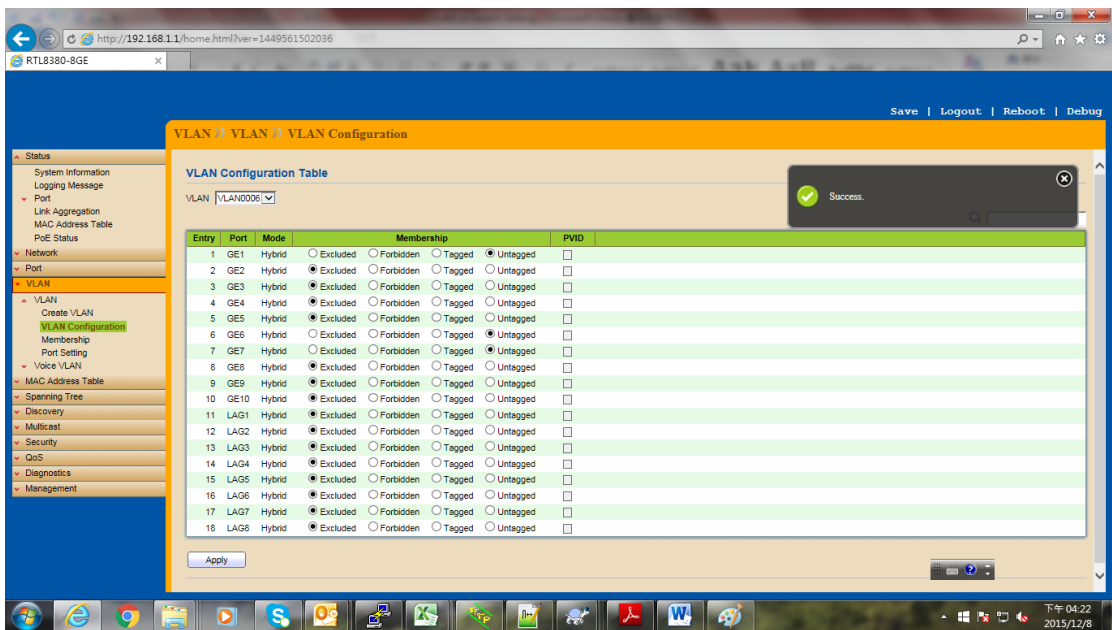
6. Step 3.2: set VLAN2 port setting

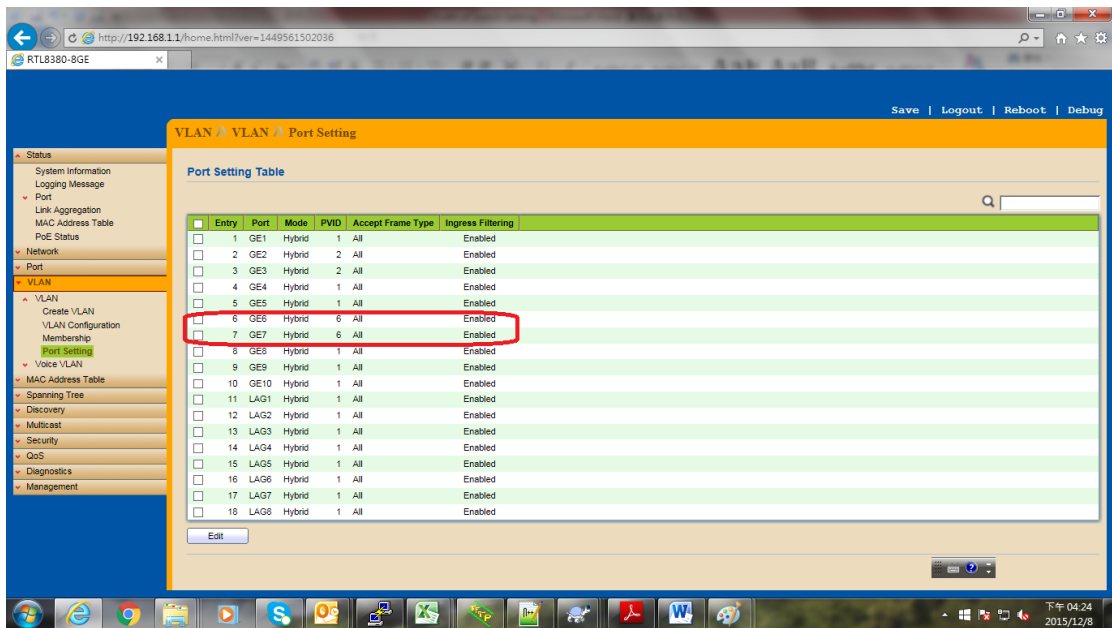
The screenshot shows the 'VLAN Configuration Table' for VLAN2. The table lists 18 entries, each representing a port configuration. The 'Membership' column shows that all ports are configured as 'Untagged'.

Entry	Port	Mode	Excluded	Forbidden	Tagged	Untagged	PVID
1	GE1	Hybrid	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="checkbox"/>
2	GE2	Hybrid	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
3	GE3	Hybrid	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
4	GE4	Hybrid	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
5	GE5	Hybrid	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
6	GE6	Hybrid	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
7	GE7	Hybrid	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
8	GE8	Hybrid	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
9	GE9	Hybrid	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
10	GE10	Hybrid	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
11	LAG1	Hybrid	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
12	LAG2	Hybrid	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
13	LAG3	Hybrid	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
14	LAG4	Hybrid	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
15	LAG5	Hybrid	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
16	LAG6	Hybrid	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
17	LAG7	Hybrid	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
18	LAG8	Hybrid	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>

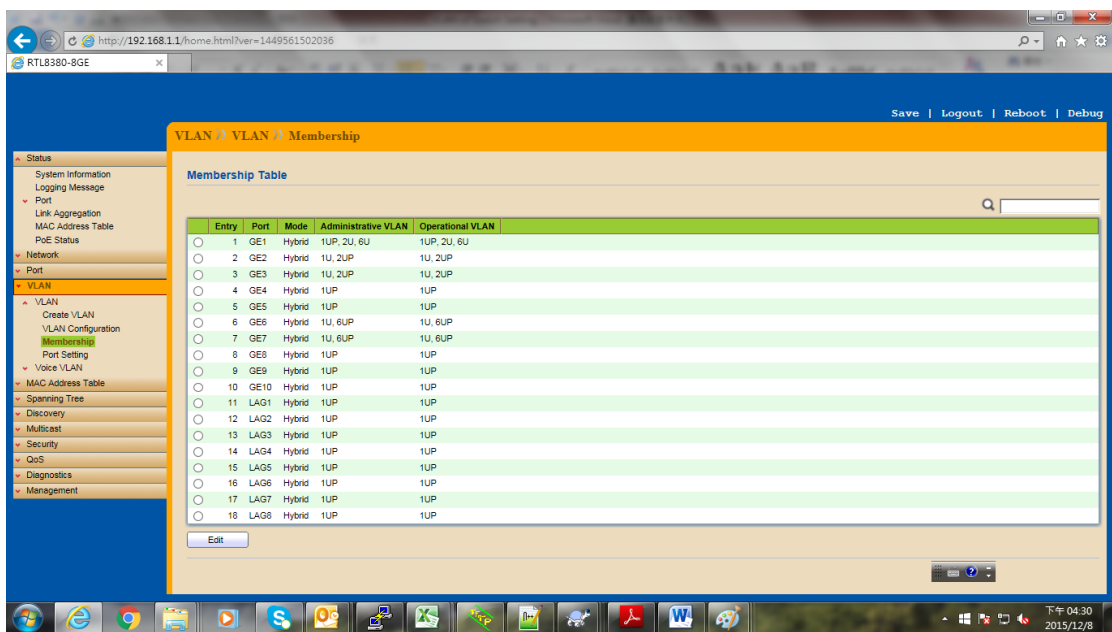


7. Step 3.3 : set VLAN6 port setting





8. Check with membership



9. [save] [Save Configuration][Apply].

10. Test of 'Vlan 2 has no access to Vlan 6 and Vlan 6 not to Vlan 2'.

- i. Switch PC1 ping Switch NB1 should be fail!
- ii. Switch PC1 ping Switch NB2 should be fail!
- iii. Switch PC2 ping Switch NB1 should be fail!
- iv. Switch PC2 ping Switch NB2 should be fail!
- v. Switch NB1 ping Switch PC1 should be fail
- vi. Switch NB1 ping Switch PC2 should be fail
- vii. Switch NB2 ping Switch PC1 should be fail!
- viii. Switch NB2 ping Switch PC2 should be fail!

11. Test 'Vlan 2 works in a group and have access to the Router Gateway)'

- i. Switch PC1 ping Switch PC2 should be pass.
- ii. Switch PC2 ping Switch PC1 should be pass.
- iii. Switch PC1 ping Gateway 172.16.0.1 should be pass and visit internet pass.
- iv. Switch PC2 ping Gateway 172.16.0.1 should be pass and visit internet pass.

12. Test of 'Vlan 6 works in a group and have access to the Router'

- i. Switch NB1 ping Switch NB2 should be pass.
- ii. Switch NB2 ping Switch NB1 should be pass
- iii. Switch NB1 ping Gateway 172.16.0.1 should be pass.
- iv. Switch NB2 ping Gateway 172.16.0.1 should be pass

13. Finished. Remember to enable Win7 Firewall.