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PRODUCT LINE: COMNET   **DATE:** 14.08.2023

PRODUCT: RLXE4GE24MODMS   Version: 01
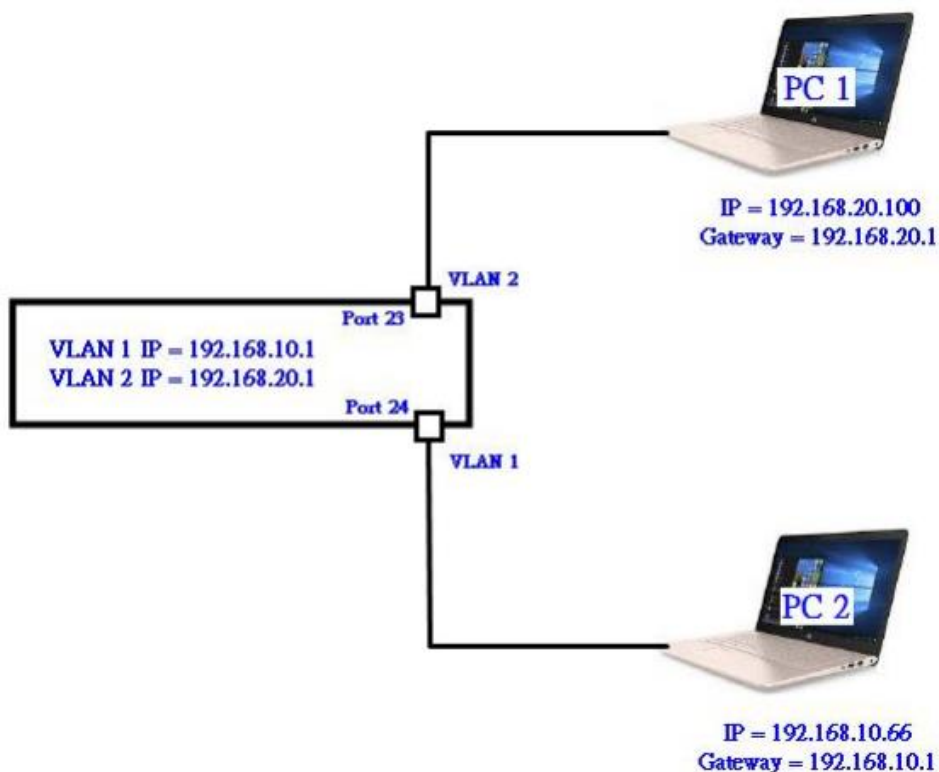
VLAN Routing using RLXE4GE24MODMS Series switch

This tech note serves as a guide to implement inter VLAN Routing, specifically using RLXE4GE24MODMS Series switch. This guides includes a simple environment to create and use for testing, which can be expanded upon with more routes and VLANS as per requirements of intended use cases. At the end of the guide there are some example screenshots of how this can be implemented with more VLAN's.
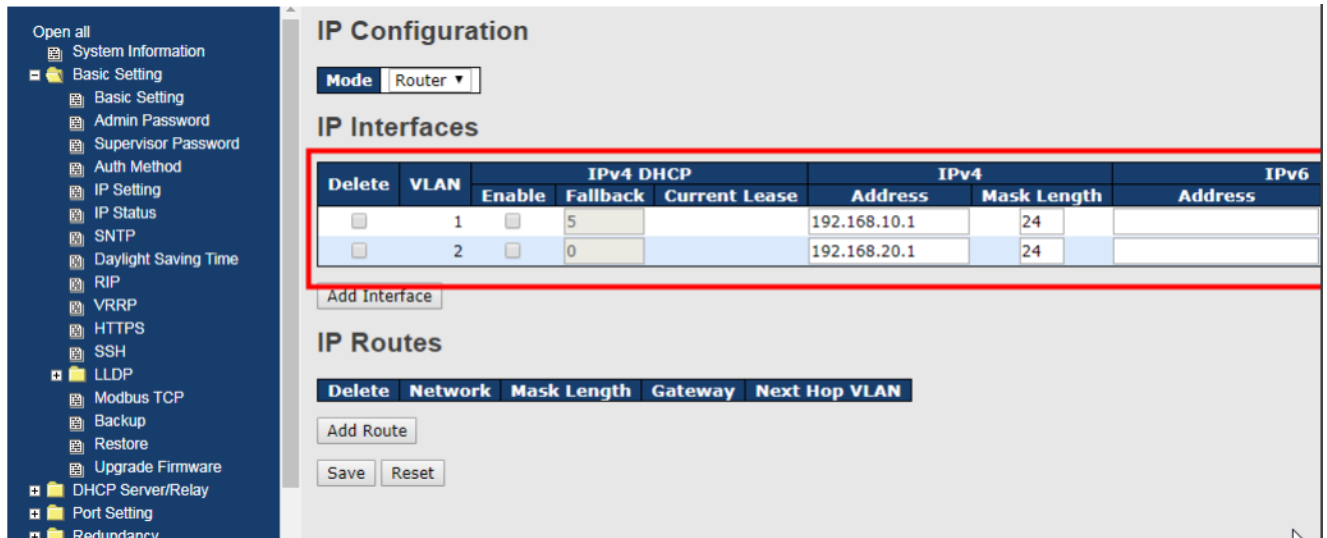
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1. Test Environment
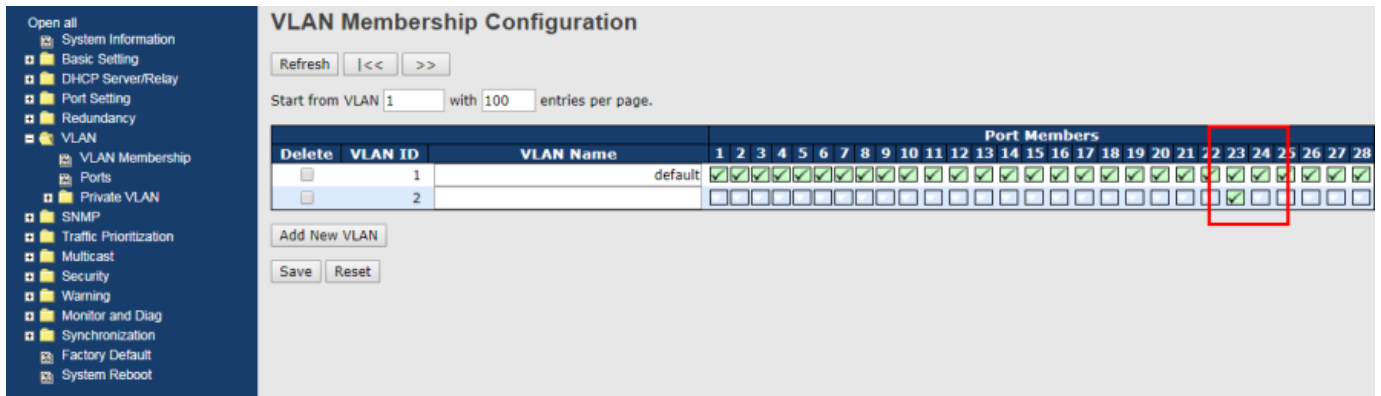

2. Interface Routing and Static Route setup Steps

1- Create VLAN1: port all, PVID=1 ; VLAN2: port23, PVID=2
2- Locate **IP Configuration** interface, This can be found by locating **"Basic Settings"** Folder and **"IP Setting"** Utility.
   Create new VLAN's within the **"IP interfaces"** section of the IP Configuration Utility, in our example VLAN assignments are as follows two IP Addresses in different networks 10.X network and 20.X network.
   VLAN 1 = 192.168.10.1
   VLAN 2 = 192.168.20.1

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IP Configuration

Mode [Router ▼]

IP Interfaces

Delete	VLAN	IPv4 DHCP			IPv4		IPv6
		Enable	Fallback	Current Lease	Address	Mask Length	Address
☐	1	☐	5		192.168.10.1	24	
☐	2	☐	0		192.168.20.1	24	

Add Interface

IP Routes

Delete	Network	Mask Length	Gateway	Next Hop VLAN

Add Route

Save Reset

3- Locate **"VLAN"** Folder and **"Membership Status"** utility. This allows assignment of VLAN's created in step 2 to be members of selected ports on the switch. Any interface you want to be able to access a VLAN needs to be members of both VLAN's. In the next step we will assign particular ports to their correct VLAN.
VLAN 1 = 24
VLAN 2 = 23

VLAN Membership Configuration

Refresh |<< >>

Start from VLAN 1 with 100 entries per page.

Delete	VLAN ID	VLAN Name	Port Members
☐	1	default	...
☐	2		...

Add New VLAN

Save Reset

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4- Configure PORT VLAN ID.
Locate **"VLAN"** Folder and **"VLAN Membership"** utility.
Configure pots 23 and 24 with their VLAN assignments as **"Port VLAN - ID."**
Port 23 = 2
Port 24 = 1

5-
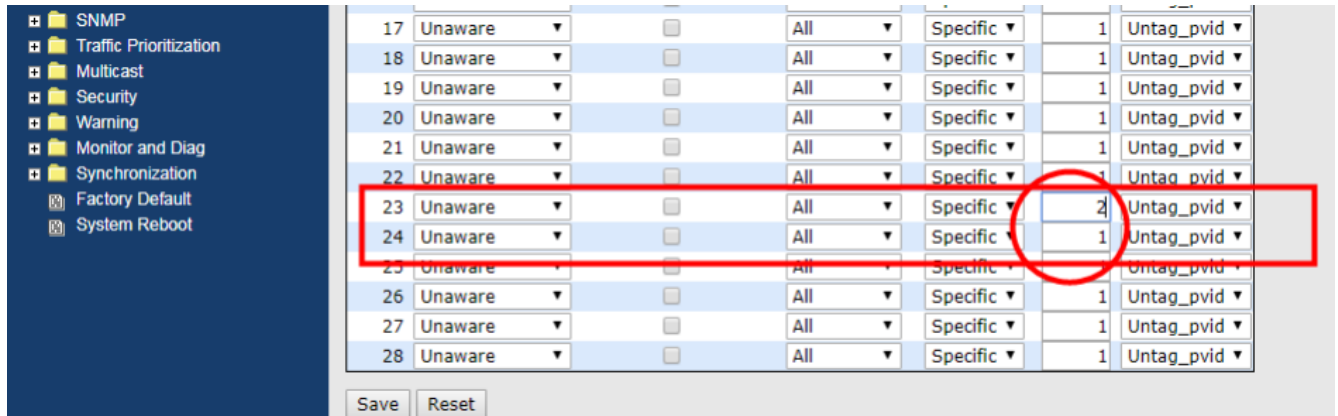
6- PC Configuration assigning IP addresses to the machine to communicate within their
VLAN IP Ranges.
Setting PC 1 NIC
IP Address : 192.168.20.100
Mask : 255.255.255.0
Gateway : 192.168.20.1

Setting PC 2 NIC
IP Address : 192.168.10.66
Mask : 255.255.255.0
Gateway : 192.168.10.1

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3.   Test result

For testing, recommended to make some changes to computers to be sure inter- VLAN is working, then correct these features after testing.

1. Disable PC Firewall
2. Disable unused NIC . This makes sure the PC only has one Gateway for testing. This may become the operational normal for this machine.

PC1 and PC2 are assigned to different networks and their associated VLANS. By means of switch routing PC1 and PC2 can communicate with each other.
To test a simple ping can be used. On both computers open command from and use following ping commands:
> PC1 to PC2: **ping 192.168.10.66**
> PC2 to PC1: **ping 192.168.20.100**

You can also ping both the VLAN networks from either PC1 or PC2:
> **Ping 192.168.10.1**
> **Ping 192.168.20.1**

This should give you successful test pings:
PC1 or 2 ping 192.168.10.1 (VLAN 1 Interface Routing Address) Success
PC1 or 2 ping 192.168.20.1 (VLAN 2 Interface Routing Address) Success
PC ping PC2 from PC1 (192.168.10.66) Success
PC ping PC1 from PC2 (192.168.20.100) Success

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4. Something More complicated

Here is an example of a more complicated environment with multiple VLAN's with many different port memberships.

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VLAN Membership Configuration

Refresh | |<< | >>

Start from VLAN 1 with 20 entries per page.

Delete	VLAN ID	VLAN Name	Port Members (1-28)
☐	1		
☐	2	GTB	
☐	3	SSI	
☐	4	ASC	
☐	5	CCTV	
☐	6	CA	
☐	7	INTERPH	

Add New VLAN

Save | Reset

IP Configuration

Mode: Router

IP Interfaces

Delete	VLAN	IPv4 DHCP Enable	Fallback	Current Lease	IPv4 Address	Mask Length	IPv6 Address	Mask Length
☐	1	☐	5		172.16.10.254	24		
☐	2	☐	0		172.16.125.254	19		
☐	3	☐	0		172.16.130.254	24		
☐	4	☐	0		172.16.140.254	24		
☐	5	☐	0		172.16.150.254	24		
☐	6	☐	0		172.16.160.254	24		
☐	7	☐	0		172.16.170.254	24		

Add Interface

IP Routes

Delete	Network	Mask Length	Gateway	Next Hop VLAN

Add Route

Save | Reset

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If you have any questions, please contact our Technical Competence Centre.

Contact details can be found on our website.

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