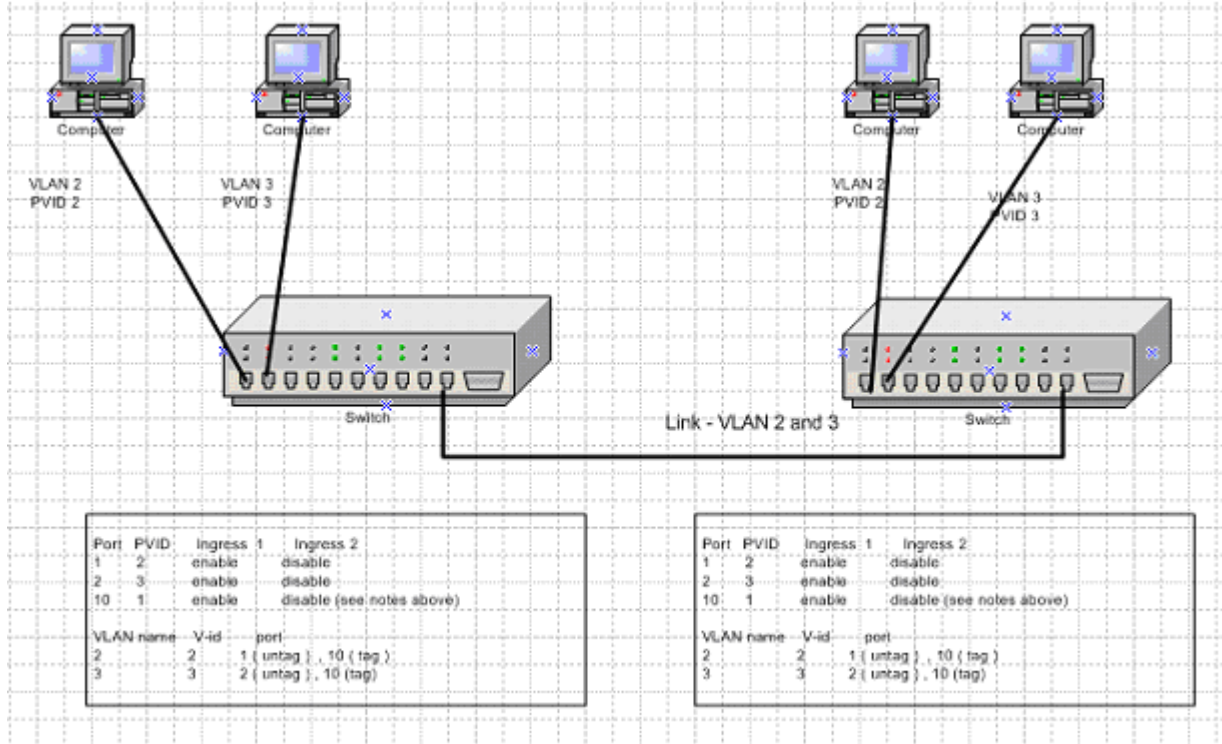


Topic / Issue: Configuring 802.1q VLAN's- ESM-24T02M / EF-24M02G

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Please note that all screen shots in the following document are from the ESM-24T02M Managed Switch.
The configuration is virtually the same on both the ESM-24T02M and the EF-24M02G (some screen shots may differ slightly).

Below you will find a basic network diagram of our example VLAN configuration:



The example is based on the PC system using Network Cards that don't support VLAN tagging directly on the card.

The Tag insertion and removal for the PC's is done by the switch.

1. Click on **Administrator** and select **VLAN Configuration**.
2. Select 802.1q from the list of available VLAN options.
3. Select the **Default VLAN** and click on **Edit**.
4. Now select each port that will be used in each VLAN and remove them from the default VLAN.
The switch by default places all ports into VLAN 1. To correctly apply a Tagged VLAN network, you will need to remove ports that will be Tagged from the default VLAN.

Basic		Port VID
VLAN Name:	DEFAULT	
VID:	1	
Protocol Vlan:	NONE	
PORT1 PORT2 PORT10	Add >> << Remove	PORT3 PORT4 PORT5 PORT6 PORT7 PORT8 PORT9 PORT11 PORT12 PORT13 PORT14 PORT15

5. You will now need to create a new VLAN and add the member ports.
 After you have added all necessary ports into your VLAN click next.
 You will then need to specify whether the ports need to be Tagged or Untagged.
 If the port is connecting to a 802.1q aware device such as a managed switch or intelligent NIC, then you would select the port to be "TAG"
 If the port is connecting to a device that doesn't support 802.1q then you would select "Untag"
 Note: Ensure any ports that will support more than one VLAN do not have any Conflicting Tag/Untag settings.
 ie. Port 10 exists in 2 VLAN's both MUST have TAG enabled, and any other VLAN's which port 10 belongs to must also have it selected as Tagged.

Basic		Port VID
VLAN Name:	VLAN1	
VID:	2	
Protocol Vlan:	NONE	
PORT2 PORT3 PORT4 PORT5 PORT6 PORT7 PORT8 PORT9 PORT11 PORT12 PORT13 PORT14	Add >> << Remove	PORT1 PORT10

VLAN Name:	VLAN1	
VLAN ID:	2	
UnTag Member		
PORT1	Untag	PORT10 Tag
Apply		

6. Repeat step 5 to configure the second new VLAN and any subsequent VLANs.
 The second VLAN will have ports 2 and 10 as members. (2 as Untagged, 10 as Tagged)

VLAN Information	
DEFAULT	1
VLAN1	2
VLAN2	3

- You now need to add a PVID to each Untagged Port. This will tell the switch to add a VLAN Tag to the untagged packets on that port. This is a special VLAN tag called a PVID. The PVID once assigned, is treated the same as a normal VID from a Tagged Packet. Only one PVID can be assigned to untagged packets on any one port.
- Highlight the port you wish to modify, and change the PVID to the appropriate value and select **apply**.

Ingress Filtering Rule 1 (Forward only packets with VID matching this port's configured VID)			
Ingress Filtering Rule 2 (Drop Untagged Frame)			
NO	PVID	Ingress Filtering 1	Ingress Filtering 2
<input type="button" value="▲"/> PORT1 PORT2 PORT3 <input type="button" value="▼"/> PORT4	2	Enable <input type="button" value="▼"/>	Disable <input type="button" value="▼"/>

- If you now select the port you modified, the current settings will be displayed at the bottom.

Ingress Filtering Rule 1 (Forward only packets with VID matching this port's configured VID)			
Ingress Filtering Rule 2 (Drop Untagged Frame)			
NO	PVID	Ingress Filtering 1	Ingress Filtering 2
<input type="button" value="▲"/> PORT1 PORT2 PORT3 <input type="button" value="▼"/> PORT4	1	Enable <input type="button" value="▼"/>	Disable <input type="button" value="▼"/>

NO	PVID	Ingress Filtering 1	Ingress Filtering 2
PORT1	2	ENABLE	DISABLE

Note: The default Ingress filtering rules should be ok for most configurations.

- Configuration of your VLAN's is now complete.

Summary:
(If required)