Configuring VLANS on 6K/10K Garrettcom Switches

Configuring VLANS through the Graphical User Interface (GUI) is not very intuitive and many folks end up in trouble quickly, so this guide is trying to make the process simple and error free.

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Magnum 6K/10K VLAN CONFIGURATION using GUI interface

VLAN Example

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■ SCADA VLAN ID=10
■ VOIP   VLAN ID=42
■ VIDEO VLAN ID=77

1 2 3   1 2 3   1 2 3

6KL(A)   6KL(B)   6KL(C)

5   6
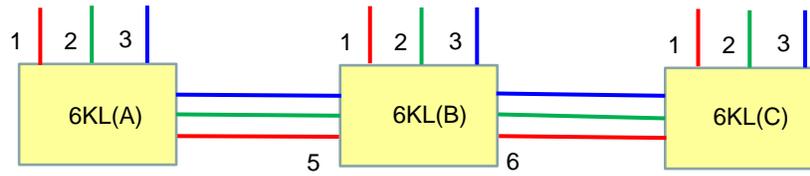
3 Switches connected with Trunk Ports
3 VLANS
Ports 1,2 3 are Access ports
Ports 5,6 are Trunk ports

10

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Configuring VLAN's:

STEP 1:   Enable VLANS

STEP 2:   Define VLAN's, for each VLAN ID, define ALL PORTS in this group, optional name for VLAN group

STEP 3:   For each VLAN defined, define which ports within the group are trunk ports, set TAGGING option=TAGGED for these ports.

STEP 4:   For each VLAN defined, change the default VLAN ID for each ACCESS port to match the VLAN ID number. (This marks incoming untagged frames with the right VLAN ID.)

STEP 5:   Modify VLAN ID=1 port range to include just TRUNK ports (needed for Mngmt & RSTP)

STEP 6:   Start VLANS START VLAN=All <optional VLAN ID or VLAN ID range>

Options:

"nomgmt" -   disables Management traffic on the VLAN.

Filter status -   allow/disallow incoming Tagged frames that don't match the VLAN ID for this port.

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STEP 1: Enable the Global VLAN status, on the drop down menu VLAN Status, select Enable.
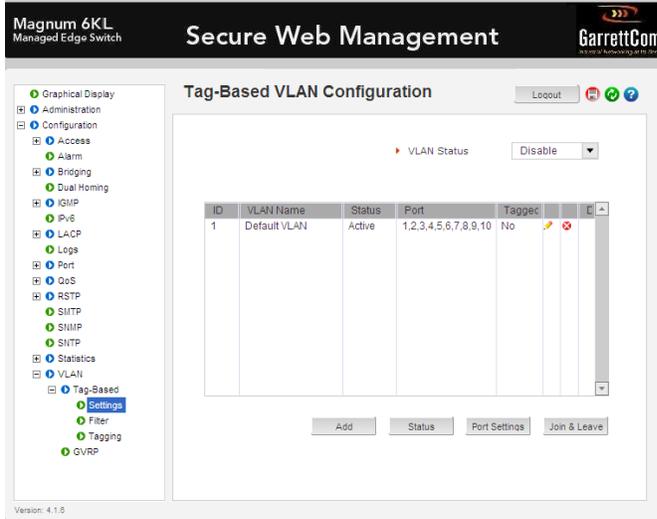
The screen will also show all available ports and all defined for VLAN=1, the default VLAN.

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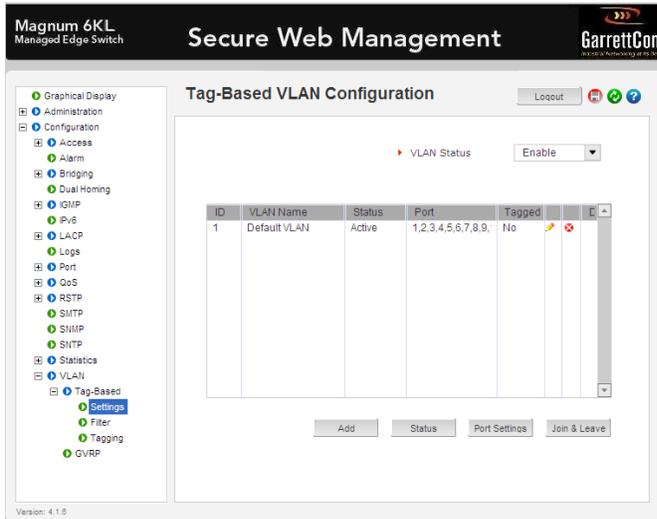
STEP2: Defining the VLANS.

Now define all the VLAN groups, using the SETTINGS <ADD> dialog box, for each VLAN group, define the VLAN number, optional VLAN name and then click on all ports that will be in this group, in this example VLAN 10, name SCADA, ports 1,5,6. Note you add all ports at this step, both access and trunk ports.
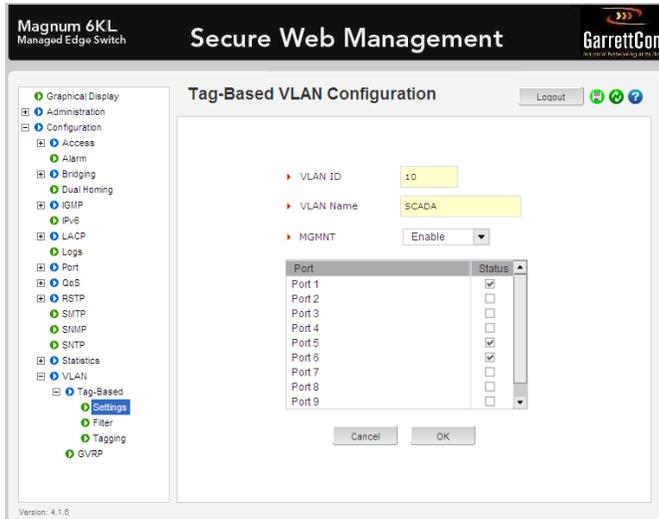

In tis example, we add three new groups, SCADA, VOIP and VIDEO. Resulting screen should look like this. If you need to add, modify the ports in each group, simply double click on the YELLOW pencil, and modify the ports, hitting the RED "X" will delete the VLAN group.

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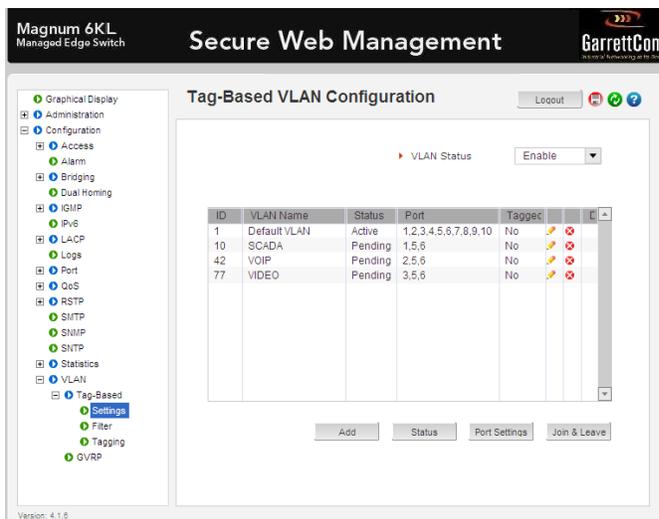
STEP 3: Setting up the TRUNK ports.

In this step, for each VLAN we added, we further define which ports out of the total number of ports in a VLAN group are TRUNK ports, and are therefore defined as TAGGED ports. (TRUNK ports always have TAGGING enabled, the default VLAN would be an exception to this rule).

So for this example, click on the first VLAN entry in the table, this will highlight the one we want to change, then select SETTINGS <PORT SETTINGS>, adjust the ports to the TRUNK ports 5 and 6 (in this case), and in the TAGGING CONTROL box, select the correct VLAN ID from the drop down menu, and further select TAGGED in the second drop down menu. Select OK to process, repeat for each additional VLAN 42 and 77 (in this case).

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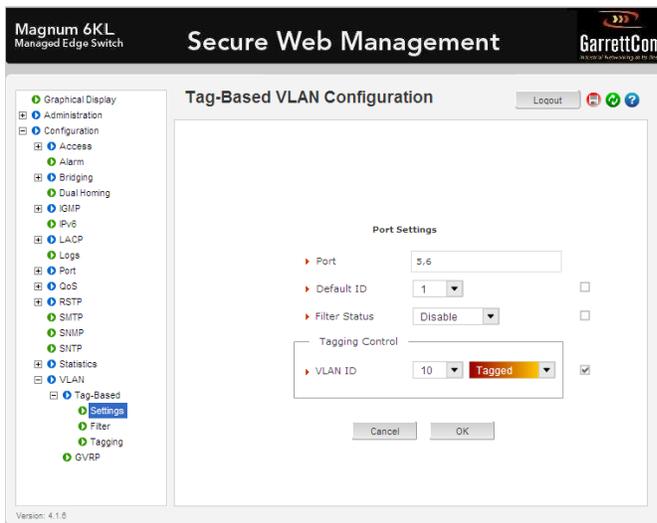
**STEP 4: Setting up the default ID for ACCESS ports.**

In this step, for each VLAN we added, we now modify the default ID for each of the ACCESS ports, so that untagged frames arriving on these ports get the correct VLAN ID assignment. So in a similar exercise to Step 3, we again use the SETTINGS <PORT SETTINGS>, modify the port range to include just the access ports (port 1 for the first VLAN group) and using the drop down dialogue box, adjust the DEAFULT ID to the desired value, 10 for the first VLAN in this example. Select OK to process, repeat for each additional VLAN 42 (Port 2) and 77 (Port 3) in this example.
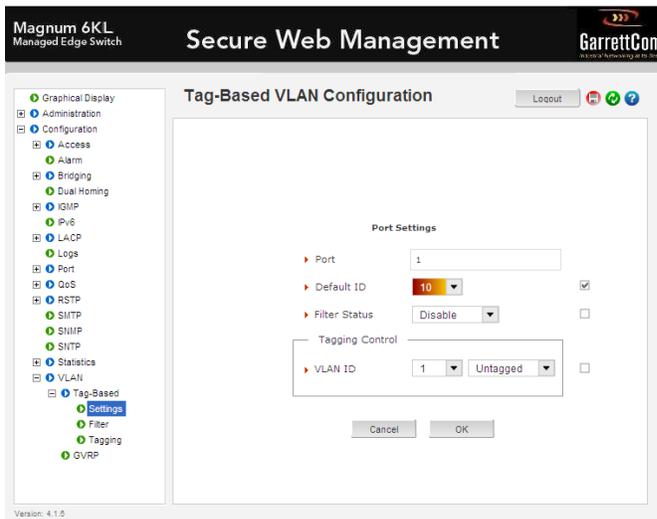
**STEP 5: Adjust VLAN 1 port membership as required.**

You can then edit the Default VLAN to minimize which ports support this, click on the yellow PENCIL to update the list to just the trunk ports. I left in port 10 also in this example as this is the port I am using to develop these slides. If I did not include the access port I am using to get to the GUI, I would lose contact with the unit. I could optionally move my access point to one of the ACCESS ports. We must have a UNTAGGED default VLAN on TRUNK ports if we plan on using RSTP or other MAGNUM management features.

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So at this point the configuration is complete but you can see the status of the VLANS is PENDING,
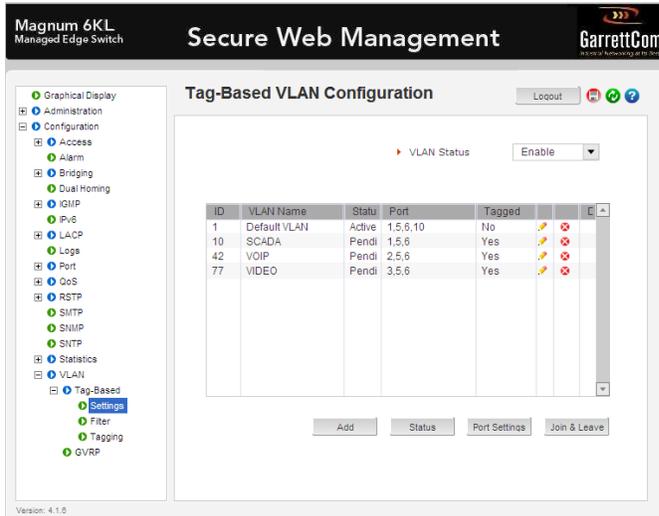
STEP 6: Start VLANS

Under the TAGGGED based VLAN status menu you can select a single VLAN ID or select ALL and then in the VLAN status drop down menu select START

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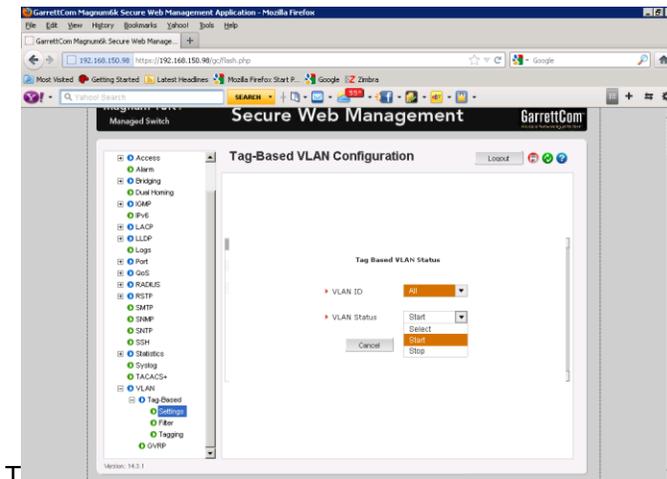
Final view of VLANS configured and all VLANS active

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