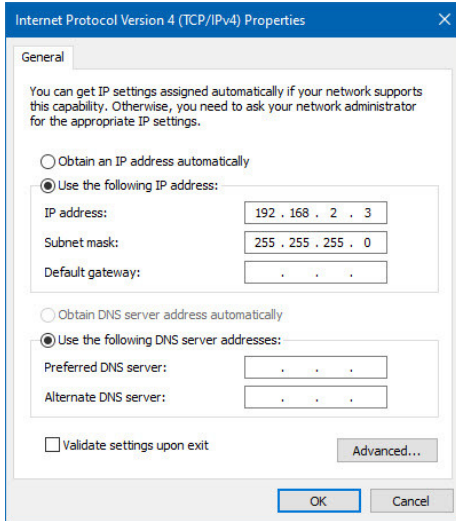


Items Covered:

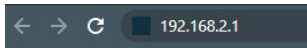
- QOS
- VLAN
- Link Aggregation
- Multicast
- DHCP Server

### 1. Assign Static IP Address to your Network Card



Assign static IP address to your network card.  
The IP address of your computer must belong to the same subnet as the switch, i.e 192.168.2.x with a mask of 255.255.255.0

### 2. Connect to the Switch Via Its default IP



### 3. Log in with

Username: admin  
Password: admin

### 4. Switch Information

To be able to differentiate between your switches, edit the system information

**Configuration**

- System
  - Information**
  - IP
  - NTP
  - Time
  - Log
- Green Ethernet
- Ports
- DHCPv4

#### System Information Configuration

System Contact	AV Department
System Name	DantePrimary
System Location	CustomerSite

Second switch could be **DanteSecondary**  
Third switch could be **DanteControl**

### 5. Switch IP Configuration

Click on Configuration>System>IP

**Configuration**

- System
  - Information
  - IP**
  - NTP
  - Time
  - Log

#### IP Configuration

Mode	Router
DNS Server	No DNS server
DNS Proxy	<input type="checkbox"/>

Set the Switch mode to **Router**  
If the Switch is not connected to the outside world, then set DNS Server to **No DNS Server**

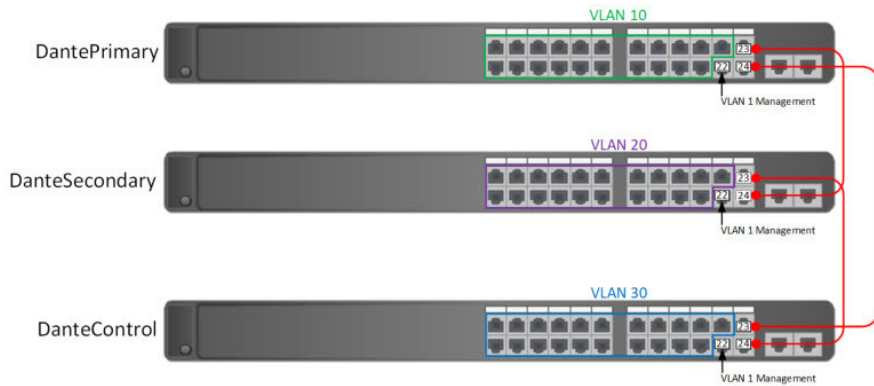
5. Switch IP Configuration (Continued)

By default each switch is set to the same IP of 192.168.2.1/24 on VLAN 1. To avoid a network conflict, each switch should be set to a unique IP. It's also good practice to leave VLAN 1 as a backup management VLAN and dedicate 1 switch port for it. Another good practice is to match the 3rd Octet to the VLAN ID

Example for a 3 switches Dante System;

Switch	IP Address	System Name	VLAN ID	Port
1	192.168.1.252	DantePrimary	1	22
2	192.168.1.253	DanteSecondary	1	22
3	192.168.1.254	DanteControl	1	22

6. Switch Connection



7. Aggregation

Go to **Configuration>Aggregation>Groups** for each switch

On Group ID 1, check Port 23 & 24

- Configuration
  - System
  - Green Ethernet
  - Ports
  - DHCPv4
  - DHCPv6
  - Security
  - Aggregation
    - Common
    - Groups**
    - LACP
  - Loop Protection
  - Spanning Tree
  - IPMC Profile
  - MVR
  - IPMC
  - LLDP
  - PoE
  - MAC Table
  - VLANs
  - VLAN Translation
  - Private VLANs
  - VCL
  - Voice VLAN
  - QoS
  - Mirroring

### Aggregation Group Configuration

Group ID	Port Members																										Group Configuration						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	Mode	Revertive	Max Bundle				
Normal	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	LACP (Active)	<input checked="" type="checkbox"/>	16
1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Disabled	<input checked="" type="checkbox"/>	16	
2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Disabled	<input checked="" type="checkbox"/>	16	
3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Disabled	<input checked="" type="checkbox"/>	16	
4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Disabled	<input checked="" type="checkbox"/>	16	
5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Disabled	<input checked="" type="checkbox"/>	16	
6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Disabled	<input checked="" type="checkbox"/>	16	
7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Disabled	<input checked="" type="checkbox"/>	16	
8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Disabled	<input checked="" type="checkbox"/>	16	
9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Disabled	<input checked="" type="checkbox"/>	16	
10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Disabled	<input checked="" type="checkbox"/>	16	
11	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Disabled	<input checked="" type="checkbox"/>	16	
12	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Disabled	<input checked="" type="checkbox"/>	16	
13	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Disabled	<input checked="" type="checkbox"/>	16	

22	No	Fast	32768
23	Yes	Fast	32768
24	Yes	Fast	32768
25	No	Fast	32768
26	No	Fast	32768

To verify that Link Aggregation has been turned on for port 23 & 24

Go to **Configuration>Aggregation>LACP**

### 8. VLAN Configuration

On each switch, go to **Configuration>VLANs**

Under **Allowed Access VLANs**, simply type in the VLAN you would like to add after the comma

Under **\* Port VLAN**, enter 10 and click on any other part of the screen. Each port should be set to 10

Under port 22, change the VLAN ID to 1

Change Port 23 & 24 mode to Trunk and set **Egress Tagging** to **Tag All**

#### Global VLAN Configuration

Allowed Access VLANs	1,10
Ethertype for Custom S-ports	88A8

#### Port VLAN Configuration

Port	Mode	Port VLAN	Port Type	Ingress Filtering	Ingress Acceptance	Egress Tagging	Allowed VLANs	Forbidden VLANs
*	<>	10	<>	<input checked="" type="checkbox"/>	<>	<>	2	
1	Access	10	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	2	
2	Access	10	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	2	
3	Access	10	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	2	
4	Access	10	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	2	
5	Access	10	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	2	
6	Access	10	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	2	
7	Access	10	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	2	
8	Access	10	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	2	
9	Access	10	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	2	
10	Access	10	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	2	
11	Access	10	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	2	
12	Access	10	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	2	
13	Access	10	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	2	
14	Access	10	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	2	
15	Access	10	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	2	
16	Access	10	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	2	
17	Access	10	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	2	
18	Access	10	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	2	
19	Access	10	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	2	
20	Access	10	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	2	
21	Access	10	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	2	
22	Access	1	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	1	
23	Trunk	1	C-Port	<input checked="" type="checkbox"/>	Tagged Only	Tag All	1-4095	
24	Trunk	1	C-Port	<input checked="" type="checkbox"/>	Tagged Only	Tag All	1-4095	
25	Access	1	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	1	
26	Access	1	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	1	

Save Reset

### 9. Add Interfaces for new VLANs

Taking the primary switch as an example (DantePrimary) which serves VLAN 10, let's add an IP Interface to it.

Go to **Configuration>IP**

-Under IP Interfaces, click on Add Interface

-Change VLAN ID to 10

-Under IPv4, enter 192.168.10.1. Enter 24 for Mask length

- Click Save

Follow the same steps and add VLAN 20 on the DanteSecondary switch & VLAN 30 on the DanteControl switch.

Port 23 & 24 on each switch need to be in Trunk mode while ports 22 need to be on VLAN 1.

### 9. Add Interfaces for new VLANs Continued

After you are done adding the interfaces, your screen should look like this

#### IP Interfaces

Delete	VLAN	IPv4 DHCP			IPv4		IPv6	
		Enable	Fallback	Current Lease	Address	Mask Length	Address	Mask Length
<input type="checkbox"/>	1	<input type="checkbox"/>	0		192.168.1.253	24		
<input type="checkbox"/>	10	<input type="checkbox"/>	0		192.168.10.1	24		
<input type="checkbox"/>	20	<input type="checkbox"/>	0		192.168.20.1	24		
<input type="checkbox"/>	30	<input type="checkbox"/>	0		192.168.30.1	24		

[Add Interface](#)

For the DanteSecondary switch, set VLAN 1 IPv4 to 192.168.1.253

For the DanteControl switch, set VLAN 1 IPv4 to 192.168.1.254

All 3 switches should have the same interfaces for VLAN 10, 20 & 30

### 10. Go to Configuration>Ports. In the row **Port\*** of the **Port Configuration** table, select **Flow Control>Configured** and enter **1518** at **Maximum Frame Size**

This should automatically select **Configured** and enter 1518 at the **Maximum Frame Size** on all the ports. Click **Save**

**Configuration**

- System
  - Information
  - IP
  - NTP
  - Time
  - Log
  - Virtual Stacking
- Green Ethernet
  - Port Power Savings
- Ports**
- DHCP
- Security
- Aggregation
- Loop Protection
- Spanning Tree
- IPMC Profile
- MVR
- IPMC
- LLDP
- PoE
- MAC Table
- VLANs
  - Private VLANs
  - VCL
  - Voice VLAN
- QoS
- Mirroring
- UPnP
- GVRP
- sFlow
- Monitor
  - System
    - Information

#### Port Configuration

Port	Link	Current	Speed		Flow Control			Maximum Frame Size	Excessive Collision Mode
			Configured	Current Rx	Current Tx	Configured			
*			<>				1508	<>	
1	●	Down	Auto	×	×	☑	1508	Discard	
2	●	Down	Auto	×	×	☑	1508	Discard	
3	●	Down	Auto	×	×	☑	1508	Discard	
4	●	Down	Auto	×	×	☑	1508	Discard	
5	●	1Gfdx	Auto	×	×	☑	1508	Discard	
6	●	Down	Auto	×	×	☑	1508	Discard	
7	●	Down	Auto	×	×	☑	1508	Discard	
8	●	Down	Auto	×	×	☑	1508	Discard	
9	●	Down	Auto	×	×	☑	1508	Discard	
10	●	Down	Auto	×	×	☑	1508	Discard	
11	●	Down	Auto	×	×	☑	1508	Discard	
12	●	Down	Auto	×	×	☑	1508	Discard	
13	●	Down	Auto	×	×	☑	1508	Discard	
14	●	Down	Auto	×	×	☑	1508	Discard	
15	●	Down	Auto	×	×	☑	1508	Discard	
16	●	Down	Auto	×	×	☑	1508	Discard	
17	●	Down	Auto	×	×	☑	1508	Discard	
18	●	Down	Auto	×	×	☑	1508	Discard	

[Save](#) [Reset](#)

11. Go to **Configuration>Spanning Tree>CIST Ports**

In the **CIST Aggregated Port Configuration** table, clear the **STP Enabled** check box.

**STP CIST Port Configuration**

CIST Aggregated Port Configuration										
Port	STP Enabled	Path Cost	Priority	Admin Edge	Auto Edge	Restricted		BPDU Guard	Point-to-point	
						Role	TCN			
-	<input checked="" type="checkbox"/>	Auto	128	Non-Edge	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Forced True	

In the **CIST Normal Port Configuration** table, clear the STP Enabled check box at the **Port\***. The check box should automatically clear on all the ports in the table.

Click **Save**.

CIST Normal Port Configuration										
Port	STP Enabled	Path Cost	Priority	Admin Edge	Auto Edge	Restricted		BPDU Guard	Point-to-point	
						Role	TCN			
*	<input checked="" type="checkbox"/>	<>	<>	<>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<>	
1	<input type="checkbox"/>	Auto	128	Non-Edge	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Auto	
2	<input type="checkbox"/>	Auto	128	Non-Edge	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Auto	
3	<input type="checkbox"/>	Auto	128	Non-Edge	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Auto	
4	<input type="checkbox"/>	Auto	128	Non-Edge	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Auto	
5	<input type="checkbox"/>	Auto	128	Non-Edge	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Auto	
6	<input type="checkbox"/>	Auto	128	Non-Edge	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Auto	
7	<input type="checkbox"/>	Auto	128	Non-Edge	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Auto	
8	<input type="checkbox"/>	Auto	128	Non-Edge	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Auto	
9	<input type="checkbox"/>	Auto	128	Non-Edge	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Auto	
10	<input type="checkbox"/>	Auto	128	Non-Edge	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Auto	
11	<input type="checkbox"/>	Auto	128	Non-Edge	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Auto	
12	<input type="checkbox"/>	Auto	128	Non-Edge	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Auto	
13	<input type="checkbox"/>	Auto	128	Non-Edge	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Auto	
14	<input type="checkbox"/>	Auto	128	Non-Edge	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Auto	
15	<input type="checkbox"/>	Auto	128	Non-Edge	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Auto	
16	<input type="checkbox"/>	Auto	128	Non-Edge	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Auto	
17	<input type="checkbox"/>	Auto	128	Non-Edge	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Auto	
18	<input type="checkbox"/>	Auto	128	Non-Edge	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Auto	

12. Go to **Configuration>QOS>Port Classification**. At the **Port\*** row in the **QOS Ingress Port Classification** table, select **DSCP Based**.

This should automatically select DSCP based on all the ports in the table.

### QoS Ingress Port Classification

Port	CoS	DPL	PCP	DEI	Tag Class.	DSCP Based	Address Mode
*	<> ▾	<> ▾	<> ▾	<> ▾		<input checked="" type="checkbox"/>	<> ▾
1	0 ▾	0 ▾	0 ▾	0 ▾	Disabled	<input checked="" type="checkbox"/>	Source ▾
2	0 ▾	0 ▾	0 ▾	0 ▾	Disabled	<input checked="" type="checkbox"/>	Source ▾
3	0 ▾	0 ▾	0 ▾	0 ▾	Disabled	<input checked="" type="checkbox"/>	Source ▾
4	0 ▾	0 ▾	0 ▾	0 ▾	Disabled	<input checked="" type="checkbox"/>	Source ▾
5	0 ▾	0 ▾	0 ▾	0 ▾	Disabled	<input checked="" type="checkbox"/>	Source ▾
6	0 ▾	0 ▾	0 ▾	0 ▾	Disabled	<input checked="" type="checkbox"/>	Source ▾
7	0 ▾	0 ▾	0 ▾	0 ▾	Disabled	<input checked="" type="checkbox"/>	Source ▾
8	0 ▾	0 ▾	0 ▾	0 ▾	Disabled	<input checked="" type="checkbox"/>	Source ▾
9	0 ▾	0 ▾	0 ▾	0 ▾	Disabled	<input checked="" type="checkbox"/>	Source ▾
10	0 ▾	0 ▾	0 ▾	0 ▾	Disabled	<input checked="" type="checkbox"/>	Source ▾
11	0 ▾	0 ▾	0 ▾	0 ▾	Disabled	<input checked="" type="checkbox"/>	Source ▾
12	0 ▾	0 ▾	0 ▾	0 ▾	Disabled	<input checked="" type="checkbox"/>	Source ▾
13	0 ▾	0 ▾	0 ▾	0 ▾	Disabled	<input checked="" type="checkbox"/>	Source ▾
14	0 ▾	0 ▾	0 ▾	0 ▾	Disabled	<input checked="" type="checkbox"/>	Source ▾
15	0 ▾	0 ▾	0 ▾	0 ▾	Disabled	<input checked="" type="checkbox"/>	Source ▾
16	0 ▾	0 ▾	0 ▾	0 ▾	Disabled	<input checked="" type="checkbox"/>	Source ▾
17	0 ▾	0 ▾	0 ▾	0 ▾	Disabled	<input checked="" type="checkbox"/>	Source ▾
18	0 ▾	0 ▾	0 ▾	0 ▾	Disabled	<input checked="" type="checkbox"/>	Source ▾

Save Reset

### 13. Go to Configuration>QOS>DSCP Based QOS

At the **Port\*** row of the **DSCP-Based QoS Ingress Classification** table, select **Trust**

At DSCO **8 (CS1)**, select QoS Class **5**

At DSCO **26 (AF31)**, select QoS Class **5**

At DSCO **46 (EF)**, select QoS Class **6**

At DSCO **56 (CS7)**, select QoS Class **7**

All other QoS class values should be **0**.

Click **Save**.

#### DSCP-Based QoS Ingress Classification

DSCP	Trust	QoS Class	DPL
*	<input checked="" type="checkbox"/>	<> v	<> v
0 (BE)	<input checked="" type="checkbox"/>	0 v	0 v
1	<input checked="" type="checkbox"/>	0 v	0 v
2	<input checked="" type="checkbox"/>	0 v	0 v
3	<input checked="" type="checkbox"/>	0 v	0 v
4	<input checked="" type="checkbox"/>	0 v	0 v
5	<input checked="" type="checkbox"/>	0 v	0 v
6	<input checked="" type="checkbox"/>	0 v	0 v
7	<input checked="" type="checkbox"/>	0 v	0 v
8 (CS1)	<input checked="" type="checkbox"/>	5 v	0 v
9	<input checked="" type="checkbox"/>	0 v	0 v
10 (AF11)	<input checked="" type="checkbox"/>	0 v	0 v
11	<input checked="" type="checkbox"/>	0 v	0 v
12 (AF12)	<input checked="" type="checkbox"/>	0 v	0 v
13	<input checked="" type="checkbox"/>	0 v	0 v
14 (AF13)	<input checked="" type="checkbox"/>	0 v	0 v
15	<input checked="" type="checkbox"/>	0 v	0 v
16 (CS2)	<input checked="" type="checkbox"/>	0 v	0 v
17	<input checked="" type="checkbox"/>	0 v	0 v
18 (AF21)	<input checked="" type="checkbox"/>	0 v	0 v
19	<input checked="" type="checkbox"/>	0 v	0 v
20 (AF22)	<input checked="" type="checkbox"/>	0 v	0 v
21	<input checked="" type="checkbox"/>	0 v	0 v
22 (AF23)	<input checked="" type="checkbox"/>	0 v	0 v
23	<input checked="" type="checkbox"/>	0 v	0 v
24 (CS3)	<input checked="" type="checkbox"/>	0 v	0 v
25	<input checked="" type="checkbox"/>	0 v	0 v
26 (AF31)	<input checked="" type="checkbox"/>	5 v	0 v
27	<input checked="" type="checkbox"/>	0 v	0 v
28 (AF32)	<input checked="" type="checkbox"/>	0 v	0 v
29	<input checked="" type="checkbox"/>	0 v	0 v
30 (AF33)	<input checked="" type="checkbox"/>	0 v	0 v
31	<input checked="" type="checkbox"/>	0 v	0 v
32 (CS4)	<input checked="" type="checkbox"/>	0 v	0 v
33	<input checked="" type="checkbox"/>	0 v	0 v
32 (CS4)	<input checked="" type="checkbox"/>	0 v	0 v
33	<input checked="" type="checkbox"/>	0 v	0 v
34 (AF41)	<input checked="" type="checkbox"/>	0 v	0 v
35	<input checked="" type="checkbox"/>	0 v	0 v
36 (AF42)	<input checked="" type="checkbox"/>	0 v	0 v
37	<input checked="" type="checkbox"/>	0 v	0 v
38 (AF43)	<input checked="" type="checkbox"/>	0 v	0 v
39	<input checked="" type="checkbox"/>	0 v	0 v
40 (CS5)	<input checked="" type="checkbox"/>	0 v	0 v
41	<input checked="" type="checkbox"/>	0 v	0 v
42	<input checked="" type="checkbox"/>	0 v	0 v
43	<input checked="" type="checkbox"/>	0 v	0 v
44	<input checked="" type="checkbox"/>	0 v	0 v
45	<input checked="" type="checkbox"/>	0 v	0 v
46 (EF)	<input checked="" type="checkbox"/>	6 v	0 v
47	<input checked="" type="checkbox"/>	0 v	0 v
48 (CS6)	<input checked="" type="checkbox"/>	0 v	0 v
49	<input checked="" type="checkbox"/>	0 v	0 v
50	<input checked="" type="checkbox"/>	0 v	0 v
51	<input checked="" type="checkbox"/>	0 v	0 v
52	<input checked="" type="checkbox"/>	0 v	0 v
53	<input checked="" type="checkbox"/>	0 v	0 v
54	<input checked="" type="checkbox"/>	0 v	0 v
55	<input checked="" type="checkbox"/>	0 v	0 v
56 (CS7)	<input checked="" type="checkbox"/>	7 v	0 v
57	<input checked="" type="checkbox"/>	0 v	0 v
58	<input checked="" type="checkbox"/>	0 v	0 v
59	<input checked="" type="checkbox"/>	0 v	0 v
60	<input checked="" type="checkbox"/>	0 v	0 v
61	<input checked="" type="checkbox"/>	0 v	0 v
62	<input checked="" type="checkbox"/>	0 v	0 v
63	<input checked="" type="checkbox"/>	0 v	0 v

## 12. DHCP Server Configuration

Each switch can be turned into a DHCP server. Switch 1 can serve VLAN10 and provide IP addresses 192.168.10.X

Switch 2 can serve VLAN20 and provide IP addresses 192.168.20.X. Switch 3 can serve VLAN30 and provide IP addresses 192.168.30.X

Go to **Configuration>DHCP>Mode**

Turn **Mode** to Enabled

Click on Add VLAN Range and enter 10. Enter 20 for switch 2 and 30 for switch 3.

**DHCP Server Mode Configuration**

**Global Mode**

Mode: Enabled

**VLAN Mode**

Delete	VLAN Range	Mode
	10	Enabled

Add VLAN Range

Save Reset

Go to **Excluded IP**

Since this is for switch 1 VLAN10, we can exclude IP 192.168.10.1 to 192.168.10.49.

Click on Add IP Range to enter the above range.

Everything else will be reserved for the DHCP pool

Click **Save**

### DHCP Server Excluded IP Configuration

**Excluded IP Address**

Delete	IP Range
<input type="checkbox"/>	192.168.20.1 - 192.168.20.49

Add IP Range

Save Reset



Click on **DHCP>Pool**

Click on **Add New Pool**

Enter VLAN10 for the name

Over over VLAN10 and click to edit

### DHCP Server Pool Configuration

#### Pool Setting

Delete	Name	Type	IP	Subnet Mask	Lease Time
<input type="checkbox"/>	VLAN10	Network	192.168.10.50	255.255.255.0	1 days 0 hours 0 minutes

Add New Pool

Save Reset

Change **Type** to Network

Change IP to 192.168.1.50. This is where your DHCP pool starts

Enter 255.255.255.0 for the Subnet Mask

Enter 192.168.10.1 for the Default Router

You don't need to enter a DNS server if the switch is isolated

### DHCP Pool Configuration

#### Pool

Name | VLAN10 v

#### Setting

Pool Name	VLAN10
Type	Network v
IP	192.168.10.50 ←
Subnet Mask	255.255.255.0 ←
Lease Time	1 days (0-365)
	0 hours (0-23)
	0 minutes (0-59)
Domain Name	
Broadcast Address	
Default Router	192.168.10.1 ←
DNS Server	8.8.4.4
NTP Server	
NetBIOS Node Type	None v
NetBIOS Scope	
NetBIOS Name Server	
NIS Domain Name	

### 13. IGMP Settings

Go to **Configuration>IPMC>IGMP Snooping>Basic Configuration**

In the **IGMP Snooping Configuration** table, select **Snooping Enabled**. Also select **Unregistered IP-MCv4 Flooding Enabled**, **Leave Proxy Enabled**, and **Proxy Enabled**

In the **Port \*** row of the **Port Related Configuration** table, select **Router Port**. This should automatically select **Router Port** on all ports in the table.

Click **Save**.

Go to **Configuration>IPMC>IGMP Snooping>VLAN Configuration**

Click **Add New IGMP VLAN**. A new row for VLAN 1 will appear in the **IGMP Snooping VLAN Configuration** table. For VLAN1 select **Snooping Enabled** and **IGMP Querier**.

IGMP Snooping VLAN 20 for switch 2 will look like this

IGMP Snooping for switch 3 VLAN 30 will look like this;

**IGMP Snooping VLAN Configuration**

Start from VLAN  with  entries per page.

Delete	VLAN ID	Snooping Enabled	Querier Election	Querier Address	Compatibility	PRI	RV	QI (sec)	QRI (0.1 sec)	LLQI (0.1 sec)	URI (sec)
Delete	30	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.0.0.0	Forced IGMPv2	0	2	125	100	10	1

Add New IGMP VLAN

Save Reset

You only need to check Querier Election for 1 switch. In this case we have switch 1 as the main Querier

14. The Switch configuration is ready to be saved. Go to **Maintenance>Configuration>Save**

Click on **Save Startup Config>Save Configuration**. The switch is now ready for use in the network.

Do the same for the 2nd and 3rd switch.