Generic IP System Setup Guide

IP-7000TX/RX Systems with IP-CS7 Controller

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SAFETY PRECAUTIONS

Please read all instructions before attempting to unpack, install or operate this equipment and before connecting the power supply.

Please keep the following in mind as you unpack and install this equipment:

- Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Never spill liquid of any kind on or into this product.
- Never push an object of any kind into this product through any openings or empty slots in the unit, as you may damage parts inside the unit.
- Do not attach the power supply cabling to building surfaces.
- Use only the supplied power supply unit (PSU). Do not use the PSU if it is damaged.
- Do not allow anything to rest on the power cabling or allow any weight to be placed upon it or any person walk on it.
- To protect the unit from overheating, do not block any vents or openings in the unit housing that provide ventilation and allow for sufficient space for air to circulate around the unit.

REVISION HISTORY

VERSION NO.	DATE	SUMMARY OF CHANGE
v1.00	08/03/2018	First release

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1. INTRODUCTION

The CYP IP product portfolio requires a managed network switch in order to build complex systems. This guide sets out how to configure a generic network switch based on a CISCO SG series network switch.

These basic principles can be applied to any managed switch.

2. NETWORK SWITCH FEATURES

To configure your switch you must enable the following features:

- Layer 3 mode: an advanced mode for IT switches which acts like a high-speed router without the WAN connectivity.
- Jumbo Frames: allows larger packets (bytes) of data to be transmitted through the switch.
- Multicast: IP multicast is a bandwidth-conserving technology that reduces traffic by simultaneously delivering a single stream of information to multiple receivers.
- IGMP Snooping: a communication (listening) method for network traffic.

3. SWITCH WEBGUI

In this example we are using a Cisco network switch, read the supplied documentation for your switch to discover the base setting for accessing its webGUI.

For the Cisco the default settings are:

- **IP address:** 192.168.1.254
- **Username:** cisco
- **Password:** cisco

For Zyxel the default settings are:

- **IP address:** 192.168.1.1
- **Username:** admin
- **Password:** 1234

For Luxul the default settings are:

- **IP address:** 192.168.0.4
- **Username:** admin
- **Password:** admin

To ensure you can access the webGUI you may need to change your PC's IP address to the same range as the switch.

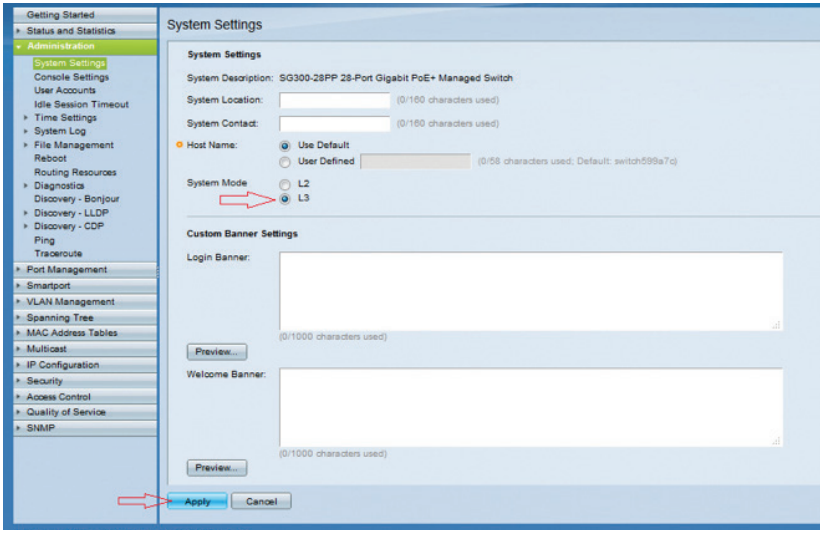
1. Open Network and Sharing Centre
2. Select your wired network – Local Area Network
3. Select Properties
4. Select Internet Protocol Version 4 and hit Properties
5. Change the settings of: Use the following IP address
6. IP address = 192.168.1.??? – Any final address should work. 192.168.1.101 for example.
7. Subnet Mask = 255.255.255.0
8. Default Gateway = 192.168.1.254
9. OK your setting and your ready to access the switch's webGUI

4. LAYER 3 MODE

Once you're logged in to the Cisco webGUI open the Administration tab and select System Settings.

This shows you the base setting of the switch. Within this page you now need to change the System Mode from L2 to L3 and hit Apply.

Applying this setting will completely reboot the switch and you will need to log back in once it reboots, which usually takes a couple of minutes.

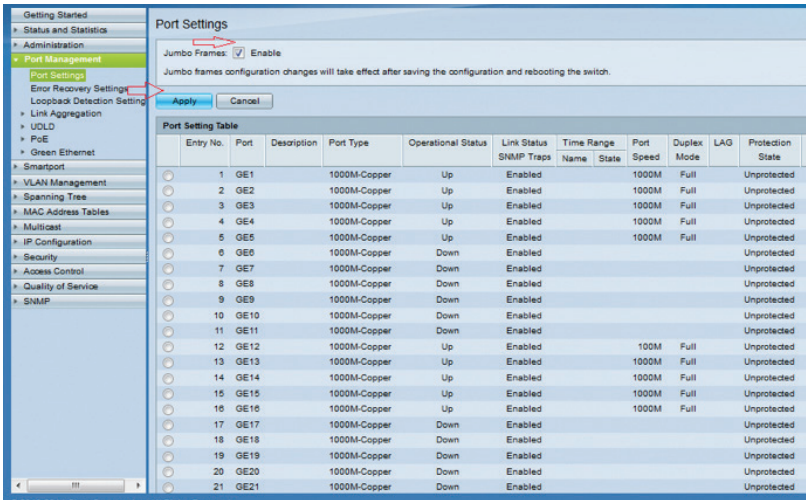


On most Zyxel switches this features is already enabled as default.

5. JUMBO FRAMES

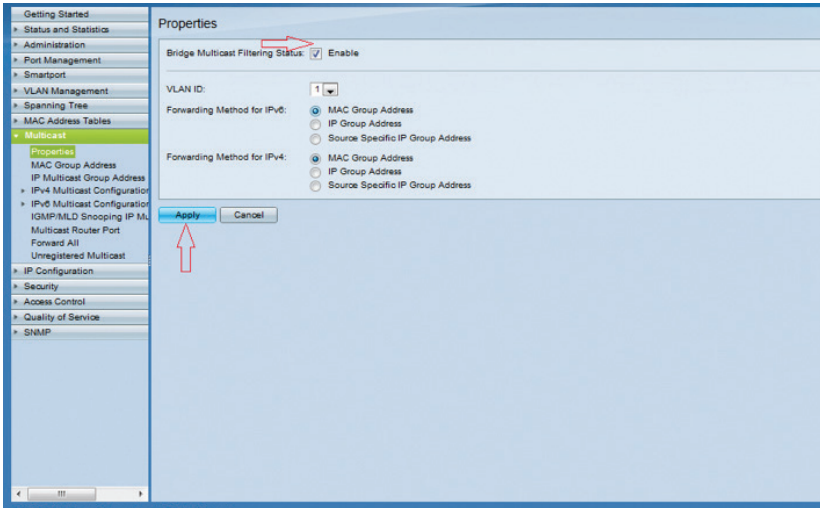
Once you're logged back into the switch navigate to the Port Management tab and select Port Settings.

Now simply tick the Jumbo Frames Ena e box and hit the Apply button.



On most Zyxel switches this features is already enabled as default.

6. MULTICAST



Navigate to the Multicast tab and select Properties.

Now simply tick the Bridge Multicast Filtering Status box and hit the Apply button.

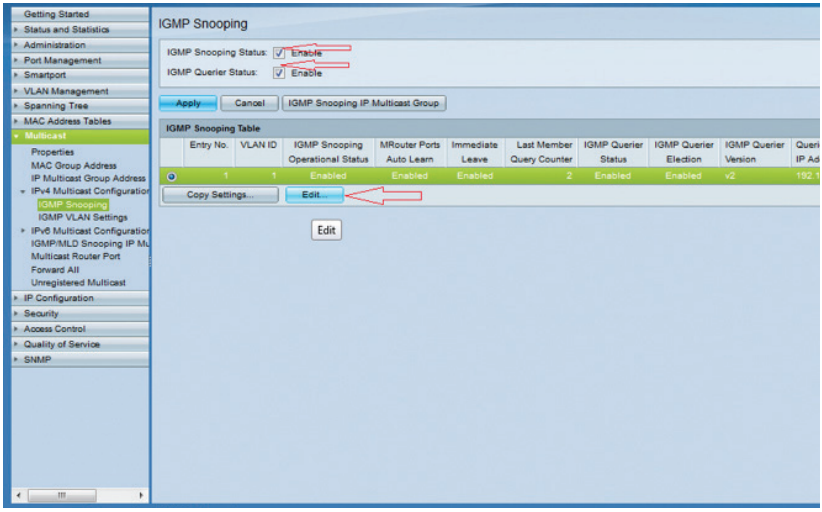
7. IGMP SNOOPING

Navigate to the Multicast tab and open the IPv4 Multicast Configuration tab then select IGMP Snooping.

IGMP Snooping Status: *enabled*

IGMP Querier Status: *enabled*

Now select the first (and only) entry in the IGMP Snooping Table list, and then click Edit.



A new window will open, please ensure all settings are as below:

VLAN ID: 1

IGMP Snooping Status: *enabled*

MRouter Ports Auto Learn: *enabled*

Immediate Leave: *enabled*

Last Member Query Counter: *select Use Query Robustness (2)*

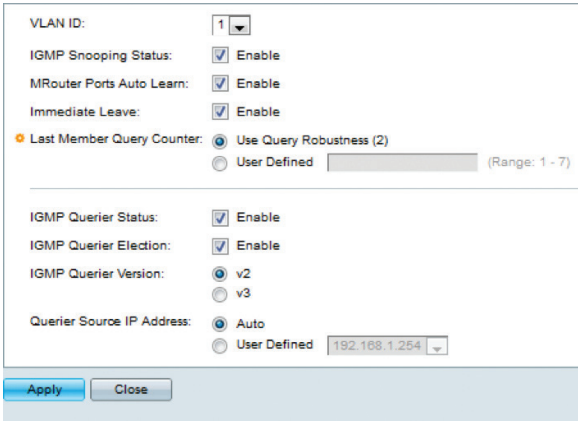
IGMP Querier Status: *enabled*

IGMP Querier Election: *enabled*

IGMP Querier Version: *select v2*

Querier Source IP Address: *select Auto*

Once complete click Apply.



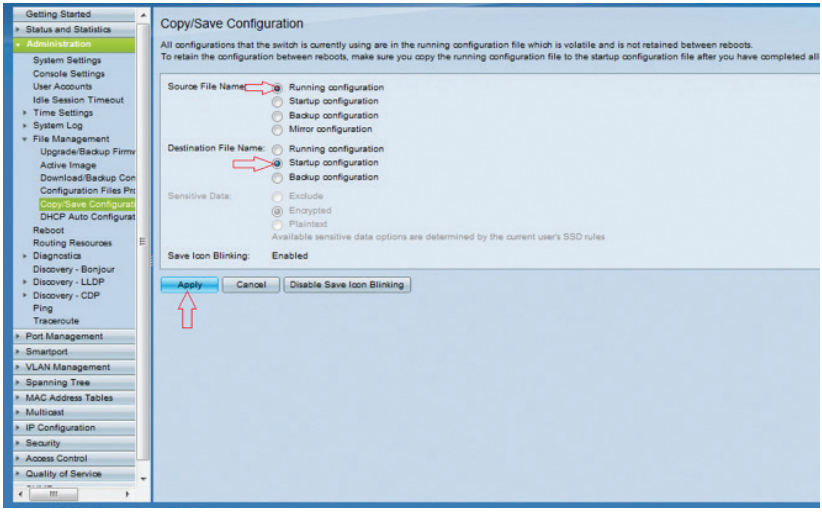
8. SAVING SETTINGS

Finally you must save the settings of the switch and reboot. Navigate to the Administration tab and select File Management then navigate to Copy/Save Configuration window.

Source File Name: *select Running configuration*

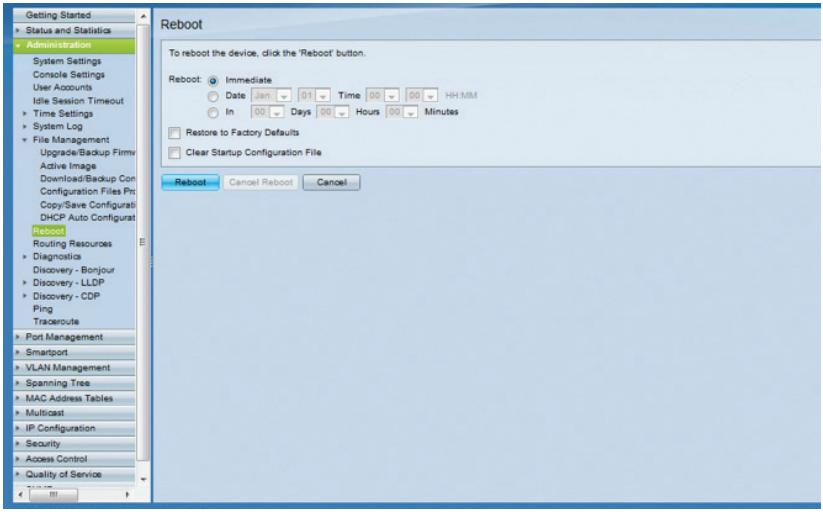
Destination File Name: *select Startup configuration*

Now click Apply to save the setting.



Again under Administration tab, select File Management then navigate to Reboot window.

Reboot: *select Immediate and click Reboot.*



The switch will now reboot which will take a couple of minutes.

Once rebooted you are ready to start your CYP IP system installation.

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