# **Step 4:**

**Configure the Basic Configuration to the device**

Let’s begin with first floor switches

For all switches in every department the configuration below will same

en

conf t

hostname IT-DEPT

line console 0

password cisco

login

exec-timeout 3 0

logging synchronous

exit

line vty 0 4

password cisco

login

exec-timeout 3 0

logging synchronous

exit

banner motd #Welcome to IT Department L2-Switch#

no ip domain lookup

do wr

# **Step 5:**

**Use VTP to create VLANs at every Department**

Let’s assign the IT Department L2 Switch as a VTP server and rest of the switch will VTP client

Do the configuration below to the IT Switch

vtp domain ashraful.com

vtp mode server

vlan 10

name IT

vlan 20

name Research

vlan 30

name Electrical

vlan 40

name Marketing

vlan 50

name Accounting

vlan 60

name Finance

vlan 70

name Logistics

vlan 80

name C-Care

do wr

\*\* Now we have to configure remaining switch as VTP Client

vtp domain ashraful.com

vtp mode client

do wr

Till now we managed to configure vtp mode in all the switches. To configure VTP, we have to enable the trunk interfaces so that the vtp server can forward the vlan to the vtp client properly.

So we should enable the trunk interfaces for both L2 and L3 switches

Lets begin with IT Dept switch

int range g0/1-2

switchport mode trunk

do wr

Do the same with the remaining L2 switches

\*\* Let’s move on to the L3 Switches and enable the trunk interfaces except the interfaces that connected to the core layer or with the Core Router.

int range g1/0/2-11

switchport mode trunk

do wr

For the Second Switch

int range f0/2-11

switchport mode trunk

do wr

\*\* Use VTP Pruning

Vtp pruning is a protocol that is used to deny and allow certain vlan through the trunk interface. This is one of the layer 2 security implementation. We have vtp pruning implementation any unwanted vlan or traffic will not pass through the trunk interface.

Lets move on the IT Dept switches first and configure the vlan pruning.

To configure vtp pruning we must have to access the trunk interfaces

int range g0/1-2

switchport trunk allowed vlan 1, 10,20,30,40,50,60,70,80

exit

do wr

\*\* Do the same for the rest

# **Step 6**

**Configure the EtherChannel between switches**

As we know EtherChannel is a technology that is used to combined two or more physical links into a logical channel

We have PaGP snf LACP protocol to implement this . For this project we are going to use the LACP protocol to implement EtherChannel.

According to the RFQ we have been told to configure EtherChannel in Access Layer Switches.

So lets begin with IT Dept Switch

int range f0/4-5

switchport mode trunk

channel-group 1 mode active

exit

int port-channel 1

switchport mode trunk

do wr

Next Research Dept

int range f0/4-5

switchport mode trunk

channel-group 1 mode active

exit

int port-channel 1

switchport mode trunk

do wr

# **Step: 9**

**Configure Port Security**

int range f0/1-3

switchport mode access

switchport port-security

switchport port-security maximum 1

switchport port-security mac-address sticky

switchport port-security violation shutdown

do wr