CONFIGURING SVI LAYER 3 SWITCHING AND INTER-VLAN ROUTING

This SVI INTER-VLAN is configured using a 3560 layer 3 switch which works as a switch, router and also a DHCP server which means it is capable of multitasking and such can be perfect for small or a medium size business who wants to save cost and still keep an active and modern device for their network environment. It has a layer 2 switch which can also convert into a layer 3 interface to serve purpose of routing. 5 VLANs will be created in this Lab which will consist of a server VLAN and four departments which consist of two computer.

Starting the configuration by creating VLANs

en

conf t

ip routing

vlan2

name Sales

vlan3

name ICT

vlan 4

name Server

vlan 5

name Marketing

vlan 6

name Finance

End

wr

sh vlan

Assigning each computers to their dep/vlan and assigning them an access port

conf t

int rangef0/1-2

Switchport mode access

Switchport access vlan 2

#exit

int rangef0/3-4

Switchport mode access

switchport access vlan 3

exit

int f0/5

Switchport mode access

Switchport access vlan 4

exit

int range f0/6-7

Switchport mode access

Switchport access vlan 5

exit

int range f0/8-9

Switchport mode access

Switchport access vlan 6

end

wr

sh vlan

conf t

hostname LAYER3-SWITCH

end

wr

sh vlan

ip routing

conf t

ip routing

router ospf

router ospf 10

exit

int vlan 2

ip address 192.168.2.1 255.255.255.0

int vlan 3

ip address 192.168.3.1 255.255.255.0

int vlan 4

ip address 192.168.4.1 255.255.255.0

int vlan 5

ip address 192.168.5.1 255.255.255.0

int vlan 6

ip address 192.168.6.1 255.255.255.0

exit

ip dhcp pool vlan2

network 192.168.2.0 255.255.255.0

default-router 192.168.2.1

dns-server 8.8.8.8

exit

ip dhcp excluded-address 192.168.2.1 192.168.2.100

ip dhcp pool vlan3

network 192.168.3.0 255.255.255.0

default-router 192.168.3.1

dns-server 8.8.8.8

exit

ip dhcp excluded-address 192.168.3.1 192.168.3.100

ip dhcp pool vlan4

network 192.168.4.0 255.255.255.0

default-router 192.168.4.1

dns-server 8.8.8.8

exit

ip dhcp excluded-address 192.168.4.1 192.168.4.100

ip dhcp pool vlan5

network 192.168.5.0 255.255.255.0

default-router 192.168.5.1

dns-server 8.8.8.8

exit

ip dhcp excluded-address 192.168.5.1 192.168.5.100

ip dhcp pool vlan6

network 192.168.6.0 255.255.255.0

default-router 192.168.6.1

dns-server 8.8.8.8

exit

ip dhcp excluded-address 192.168.6.1 192.168.6.100

end

wr

That is the end of the configuration

You have to put all device on all department to auto get IP in order for DHCP server to assign IP to them all. Ping from each devices to see if they will communication with each other as it is important to check if all process are working fine. The fact that layer 3 switch have the ability to route with possibility of directing traffic between VLAN or network within IP address base, makes its cost efficient for organizations and not to make use of separate router.