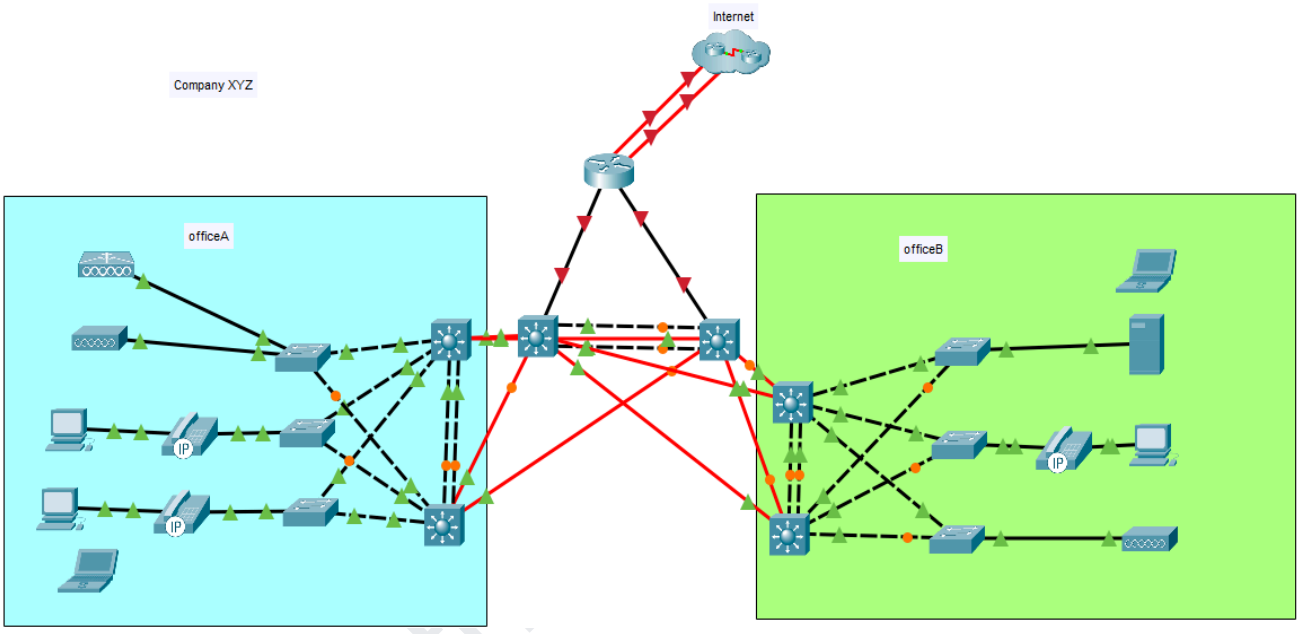
Packet Tracer Mega Lab

This lab will emulate a fictitious company (company xyz), Many protocols, configurations and management will be showcased to create a real life networking scenario of a company.

Network Topology



PART 1 - Configuration

1. Hostname on each router/switch.
2. Enable secret (cisco87878) on each router and switch - type 9 hashing or type 5.
3. User account - cisco secret cisco111 on each router/switch.
4. Enable synchronous logging (synchronize unsolicited messages, log messages, and debug output with the solicited user input and prompts), 30 minute activity timeout and security with console line requiring login with local user account (Direct connection to network device via a console cable). All routers and switches.

Part1 - EXAMPLE

CS1 - Core Switch 1
Enable
Configure Terminal
Hostname CS1
Enable algorithm-type scrypt secret cisco87878 (type 9 hashing)
Username cisco secret cisco111 (type 5 hashing)
Line console 0
Login local
Exec-timeout 30
Logging synchronous
Do write
Exit (global config mode)

Part 2 - VLAN, EtherChannel layer 2. (etherchannel is bundle physical interfaces together improves bandwidth, redundancy and load balancing)

1. Create EtherChannel layer 2 - Open standard protocol IEEE 802.3ad LACP Between switches DS1 and DS2, followed by DS3 and DS4.
2. Configure all links between Access and Distribution including EtherChannel links as TRUNK links. (disable DTP on all ports) Set each Trunks Native VLAN as 1000(unused). Office A - allow VLANs 10,20,40 and 99 on all trunks. Office B - Allow VLANs 10,20,30 and 99 on all trunks.
3. Configure one Distribution switch in each office as a VTPv2 Server. Domain name -SP, Configure all access switches as VTP clients.
4. Create and name the following VLANs on Distribution switch in Office A, ensure propagation. Vlan 10 = Pcs, Vlan 20 = Phones, Vlan 40 = WiFi, Vlan 99 = Management

5. Create and name the following VLANs on Distribution switch in Office B, ensure propagation. Vlan 10 = Pcs, Vlan 20 = Phones, Vlan 30 = Servers, Vlan 99 = Management
6. Configure access switches switchport, LWAPS will not use flexconnect. Configure access mode and disable DTP.
7. Configure WLC1 connection to access switch - support Wi-Fi and management VLAN (untagged). Disable DTP.
8. Disable all unused ports on Access and Distribution Switches.

Part 2 Example - DS1
Enable
Configure terminal
Do show cdp neighbor
Int range gif1/0/4-5
Channel-group 1 mode active
Do wr
Int range gig1/0/1-3
Sw mode trunk
Sw nonegotiate
Sw trunk native vlan 1000
Sw trunk allowed vlan 10,20,40,99
Int po1
Sw mode trunk
Sw nonegotiate
Sw trunk native vlan 1000
Sw trunk allowed vlan 10,20,40,99
Exit
Do show vtp status
Vtp domain SP
Vtp version 2
Vlan 10
Name PCs

vlan 20
Name Phones
Vlan 40
Name wi-fi
Vlan 99
Name Management
Do show vlan br
Do show int status
Int range g1/0/6-24,g1/1/3-4
Shutdown
exit