SEDINTA 2

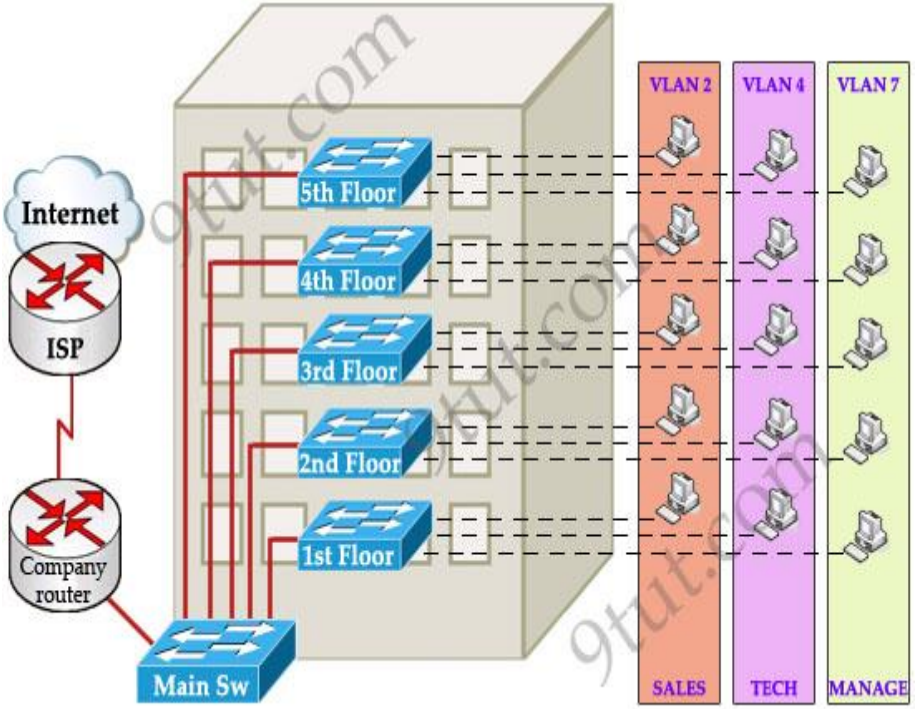
Configurare VTP – propagarea VLANrilor in cadrul retelei interne

VTP = VLAN Trunking Protocol

- allows for the propagation of VLAN's from a single switch to multiple switches (Server-Client architecture) in the same **VTP Domain** (domain = share the same VLANs)

VTP Server switch - centralized point of management in the network for VLAN definition and propagation. *Define all VLANs on the server.*
VTP Client switch - learns its VLAN information from the VTP Server in its specified VTP Domain.
VTP Transparent switch - does not participate in VTP. A VTP transparent switch does not advertise its VLAN configuration and does not synchronize its VLAN configuration based on received advertisements, but transparent switches do forward VTP advertisements that they receive out their trunk ports in VTP Version 2.

a) On the Server switch define the VLANs to be propagated using VTP.
b) Set the other switches in Client mode, to synchronize with the Server.
c) Check VTP status on all switches.



Creare VLANs doar pe switch-ul principal: VTP server Main Sw(config)#*vlan 10* Main Sw(config)#*vlan 20* Configurare VTP pe switch-ul principal**: VTP server** Main Sw(config)#*vtp version 2* Main Sw(config)#*vtp domain 9tut* Main Sw(config)#*vtp mode server* Main Sw(config)#*vtp password keepitsecret* Verificate VTP Sw#*show vtp status*	Configurare VTP pe switch-urile client: **VTP client** Client(config)#*vtp version 2* Client(config)#*vtp domain 9tut* Client(config)#*vtp password keepitsecret* Client(config)#*vtp mode client*

Legaturile dintre switch-urile de layer 2: **linii de trunk**

Client(config)#*interface fa0/1*
Client(config-if)#*switchport mode trunk*

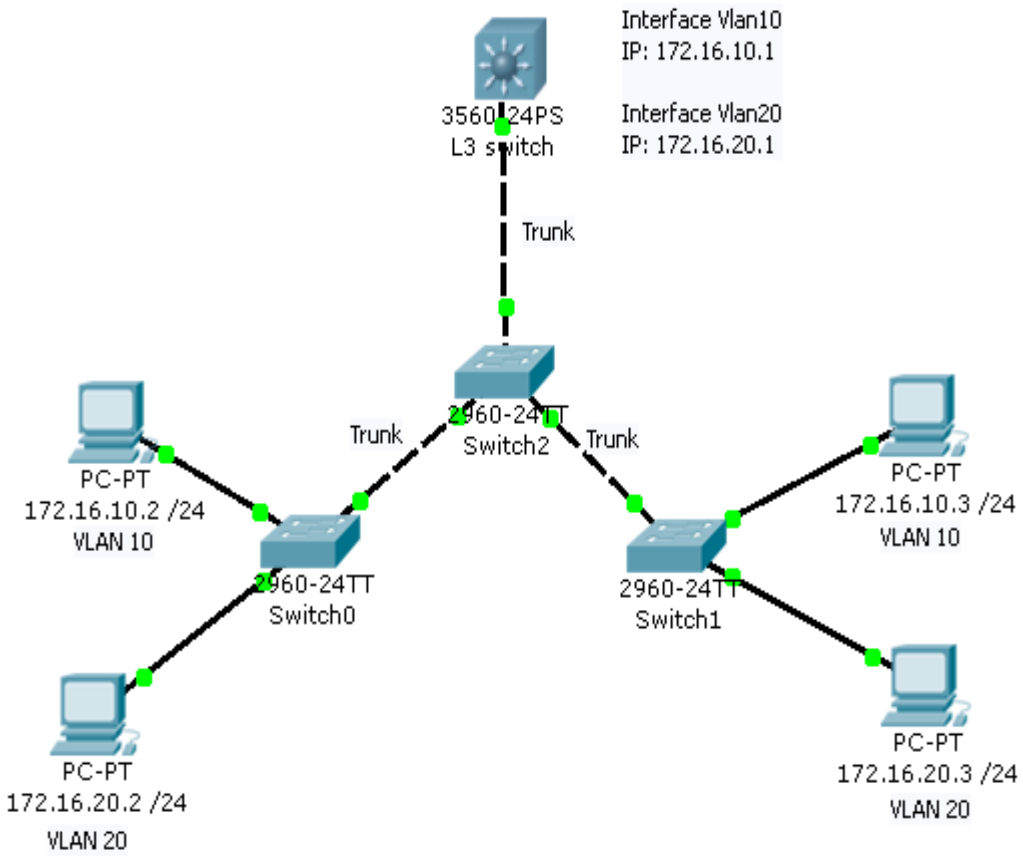
Dupa configurarea VTP si a liniilor de trunk, se vor seta interfetele catre end-devices in VLANul corespunzator.

Exemplu: Setarea unei interfete pentru a apartine VLANului 10:

Client(config)#*interface fa0/1*
Client(config-if)#*switchport mode access*
Client(config-if)#*switchport access VLAN 10*

VARIANTA A: Inter-Vlan routing using a L3 Switch using IP addresses on the virtual interfaces:

Laboratory test configuration:



Commands Used:

SwitchL3(config)#ip routing
Description: Enable routing on the switch

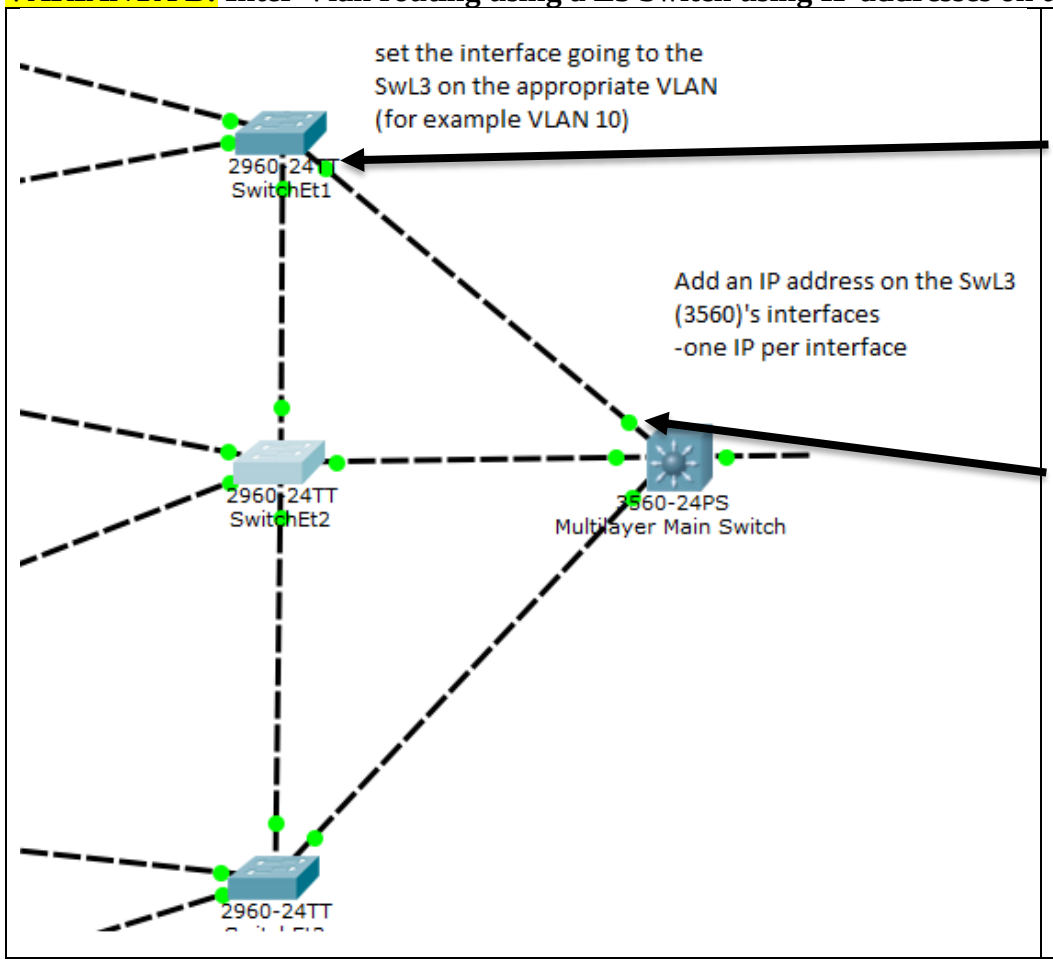
SwitchL3(config)#interface fa 0/1
SwitchL3(config-if)#switchport trunk encapsulation dot1q
SwitchL3(config-if)#switchport mode trunk
Description: Set an interface in mode trunk on Layer3 Switch

Create VLANs 10 and 20
Assign IP address to VLAN interfaces

SwitchL3(config)#interface Vlan10
SwitchL3(config-if)#ip address 172.16.10.1 255.255.255.0
SwitchL3(config-if)#no shutdown
Description: Configure the VLAN interfaces with the IP addresses

SwitchL3#show ip route
Description: Visualize the routing table

VARIANTA B: Inter-Vlan routing using a L3 Switch using IP addresses on the physical interfaces



Commands Used:

Client(config)#*interface fa0/1*
Client(config-if)#*switchport mode access*
Client(config-if)#*switchport access VLAN 10*

Switch(config)#ip routing
Description: Enable routing on the switch

Switch(config)#interface fa 0/1
Switch(config-if)#no switchport
Switch(config-if)#ip address 172.16.10.1 255.255.255.0
Switch(config-if)#no shutdown
Description: set an IP address on a L3 switch port

SwitchL3#show ip route
Description: Visualize the routing table

Dynamic Routing (RIPv2 / OSPF)

Step1: Assign static IPv4 addresses to router interfaces and computers

Steps for configuring RIP:

Router3(config)#router rip
Description: Enabling RIP routing protocol on the router

Router3(config-router)#version 2
Description: Specifying the RIP version to run

Router3(config-router)#network 172.30.0.0
Router3(config-router)#network 172.31.0.0
Router3(config-router)#network 172.32.0.0
Description: Configuring the network addresses to be included in routing updates

Router3(config-router)#no auto-summary
Description: Configuring the network addresses to be included in routing updates

Optional: *Set static routes*
RouterC(config)#router rip
Router3(config-router)#passive-interface Fa0/1
Description: stop RIP messages from being broadcasted out a specific interface

Steps for verifying RIP:

Router3 #show ip route
Description: Visualize the routing table

Router3 #show ip protocols
Description: routing status