

Stap 1: VLAN-configuratie op switches

Voorbeeld op Switch1:

1.
enable
configure terminal
2. vlan 15
name Docenten
exit
3. vlan 20
name Studenten
exit
4. vlan 35
name Administratie
exit
5. vlan 99
name Native
exit

Poorten instellen op access mode:

1.
interface fastEthernet 0/1
switchport mode access
switchport access vlan 15
exit
2. interface fastEthernet 0/2
switchport mode access
switchport access vlan 20
exit
3. interface fastEthernet 0/3
switchport mode access
switchport access vlan 35
exit

Trunk poort instellen (bijvoorbeeld tussen switches):

- interface fastEthernet 0/24
switchport trunk encapsulation dot1q
switchport mode trunk
switchport trunk native vlan 99
exit

Stap 2: Inter-VLAN Routing via Layer 3 Switch

Voorbeeldconfiguratie op Layer 3 Switch:

1.
enable
configure terminal
2. interface vlan 15
ip address 192.168.15.1 255.255.255.0
no shutdown
exit
3. interface vlan 20
ip address 192.168.20.1 255.255.255.0
no shutdown
exit
4. interface vlan 35
ip address 192.168.35.1 255.255.255.0
no shutdown
exit
5. interface vlan 99
ip address 192.168.99.1 255.255.255.0
no shutdown
exit
ip routing

Stap 3: IP-adressen voor de PC's

1.
PC1 (Docenten – VLAN 15)
IP: 192.168.15.10
Subnet: 255.255.255.0
Gateway: 192.168.15.1
2. PC2 (Studenten – VLAN 20)
IP: 192.168.20.10
Subnet: 255.255.255.0
Gateway: 192.168.20.1
3. PC3 (Docenten – VLAN 15)
IP: 192.168.15.11
Subnet: 255.255.255.0
Gateway: 192.168.15.1
4. PC4 (Administratie – VLAN 35)
IP: 192.168.35.10
Subnet: 255.255.255.0
Gateway: 192.168.35.1
5. PC5 (Extern subnet)
IP: 172.17.0.1
Subnet: 255.255.0.0
Gateway: 172.17.255.254

Stap 4: Extra interface voor extern netwerk

- interface gig0/1
ip address 172.17.255.254 255.255.0.0
no shutdown

Stap 5: Statische route toevoegen

Op de L3 Switch:

- ip route 172.17.0.0 255.255.0.0 172.17.255.254

Stap 6: Verbindingen testen

- Gebruik het commando 'ping' op de PC CLI in Packet Tracer om te testen of alles werkt:
 - Van PC1 naar PC3 (zelfde VLAN)
 - Van PC2 naar PC1 (inter-VLAN)
 - Van PC4 naar PC5 (statische route)

Netwerkoverzicht – IP-adres indeling

VLAN	Naam	netwerk	Gateway	Hosts
15	Docenten	192.168.15.0/24	192.168.15.1	PC1,PC3
20	Studenten	192.168.20.0/24	192.168.20.1	PC2
35	Administratie	192.168.35.0/24	192.168.35.1	PC4
99	Native Vlan	192.168.99.0/24	192.169.99.1	--
----	Extern netwerk	172.17.0.0/16	172.17.255.254	PC5