

## **Universidad Veracruzana**

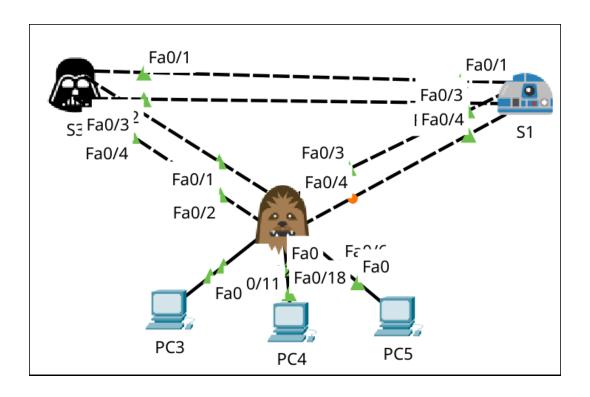
FACULTAD DE INGENIERÍA ELÉCTRICA Y ELECTRÓNICA

# REDES DE COMPUTADORAS

E12 - STP 2
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TOPOLOGÍA DE RED

## 1 Topología de Red



#### 2 Información de las VLANs

#### 2.1 show spanning-tree

```
S1#show spanning-tree vlan 99
VLAN0099
  Spanning tree enabled protocol ieee
              Priority
  Root ID
                            4195
              Address
                            0007.EC1D.ED56
              Cost
                            1(FastEthernet0/1)
              Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec
                            32867 (priority 32768 sys-id-ext 99) 0001.C947.24E6
  Bridge ID Priority
              Address
              Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec
Aging Time 20
Interface
                   Role Sts Cost
                                        Prio.Nbr Type
                  Desg FWD 19
Root FWD 19
Desg FWD 19
Altn BLK 19
                                        128.4
Fa0/4
                                                   P2p
                                                   P2p
P2p
P2p
Fa0/1
                                        128.1
Fa0/3
                                         128.3
Fa0/2
                                         128.2
```

```
S3#show spanning-tree vlan 99
  Spanning tree enabled protocol ieee
  Root ID
              Priority 4195
                           0007.EC1D.ED56
              Address
              This bridge is the root
              Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec
 Bridge ID Priority
                           4195 (priority 4096 sys-id-ext 99)
0007.EC1D.ED56
              Address 0007.EC1D.ED56
Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec
Aging Time 20
Interface
                  Role Sts Cost
                                        Prio.Nbr Type
           Desg FWD 19
Desg FWD 19
Desg FWD 19
Fa0/1
                                        128.1
                                                  P2p
Fa0/2
                                        128.2
                                                   P2p
Fa0/3
                                        128.3
                                                   P2p
                                                  P2p
                  Desg FWD 19
Fa0/4
                                        128.4
```

```
S2#show spanning-tree vlan 99
VLAN0099
  Spanning tree enabled protocol ieee
               Priority
  Root ID
                             4195
               Address
                              0007.EC1D.ED56
               Cost
                              19
               Port 1(FastEthernet0/1)
Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec
               Priority 32867 (priority 32768 sys-id-ext 99)
Address 0090.0CE3.9614
Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec
  Bridge ID Priority
               Aging Time 20
                    Role Sts Cost
Interface
                                           Prio.Nbr Type
                                           128.1
                    Root FWD 19
Fa0/1
                                                      P2p
Fa0/2
                    Altn BLK 19
                                           128.2
                                                       P2p
Fa0/3
                    Altn BLK 19
                                           128.3
                                                       P2p
Fa0/4
                    Altn BLK 19
                                            128.4
                                                       P2p
```

2.2 show vlan brief 3

### 2.2 show vlan brief

S1#show vlan brief		
VLAN Name	Status	Ports
1 default	active	Fa0/5, Fa0/6, Fa0/7,
Fa0/8		Fa0/9, Fa0/10, Fa0/11,
Fa0/12		. 40, 5, . 40, 20, . 40, 22,
Fa0/16		Fa0/13, Fa0/14, Fa0/15,
Pa0/10		Fa0/17, Fa0/18, Fa0/19,
Fa0/20		Fa0/21, Fa0/22, Fa0/23,
Fa0/24		Fa0/21, Fa0/22, Fa0/23,
		Gig0/1, Gig0/2
10 faculty-staff	active	
20 students 30 guest	active active	
99 management	active	
1002 fddi-default	active	
1003 token-ring-default	active	
1004 fddinet-default	active	
1005 trnet-default	active	

S2#show vlan brief		
VLAN Name	Status	Ports
1 default 10 faculty-staff Fa0/14	active active	Gig0/1, Gig0/2 Fa0/11, Fa0/12, Fa0/13,
20 students Fa0/21	active	Fa0/15, Fa0/16, Fa0/17 Fa0/18, Fa0/19, Fa0/20,
30 guest Fa0/8	active	Fa0/22, Fa0/23, Fa0/24 Fa0/5, Fa0/6, Fa0/7,
99 management 1002 fddi-default 1003 token-ring-default 1004 fddinet-default 1005 trnet-default	active active active active active	Fa0/9, Fa0/10

S3#sl	how vlan brief		
VLAN	Name	Status	Ports
1	default	active	Fa0/5, Fa0/6, Fa0/7,
Fa0/8	8		Fa0/9, Fa0/10, Fa0/11,
Fa0/:	12		Fa0/9, Fa0/10, Fa0/11,
			Fa0/13, Fa0/14, Fa0/15,
Fa0/:	16		Fa0/17, Fa0/18, Fa0/19,
Fa0/:	20		Fa0/17, Fa0/18, Fa0/19,
			Fa0/21, Fa0/22, Fa0/23,
Fa0/:	24		Gig0/1, Gig0/2
10	faculty-staff	active	G1g0/1, G1g0/2
20	students	active	
30	guest	active	
99	management	active	
	fddi-default	active	
	token-ring-default	active	
	fddinet-default	active	
1005	trnet-default	active	

#### 2.3 show interface trunk

```
S1#show interface trunk
Port
Fa0/1
               Mode
                                Encapsulation
                                                  Status
                                                                    Native vlan
                                                  trunking
                                                                    99
               on
                               802.1q
Fa0/2
                                                   trunking
               on
                               802.1q
                                                                    99
Fa0/3
               on
                               802.1a
                                                   trunking
                                                                    99
Fa0/4
                                                   trunking
                                                                    99
                               802.1q
               on
               Vlans allowed on trunk
Port
Fa0/1
Fa0/2
               1-1005
               1-1005
               1-1005
Fa0/3
Fa0/4
               1-1005
Port
               Vlans allowed and active in management domain
               1,10,20,30,99
1,10,20,30,99
1,10,20,30,99
1,10,20,30,99
Fa0/1
Fa0/2
Fa0/3
Fa0/4
Port
               Vlans in spanning tree forwarding state and not pruned
               1,10,20,30,99
1,10,20,30
1,10,20,30,99
1,10,20,30,99
Fa0/1
Fa0/2
Fa0/3
Fa0/4
```

```
52#snow interrace trunk
Port
              Mode
                              Encapsulation
                                                Status
                                                                 Native vlan
Fa0/1
                              802.1q
              on
                                                trunking
                                                                 99
                              802.1q
802.1q
Fa0/2
                                                trunking
                                                                 99
              on
Fa0/3
                                                                 99
              on
                                                trunking
Fa0/4
                              802.1q
                                                trunking
                                                                 99
              on
              Vlans allowed on trunk
Port
Fa0/1
              1-1005
Fa0/2
              1-1005
Fa0/3
              1-1005
Fa0/4
Port
              Vlans allowed and active in management domain
              1,10,20,30,99
1,10,20,30,99
1,10,20,30,99
1,10,20,30,99
Fa0/1
Fa0/2
Fa0/3
Fa0/4
Port
              Vlans in spanning tree forwarding state and not pruned
              1,10,20,30,99
1,10,20,30
Fa0/1
Fa0/2
              1,10,20,30
none
Fa0/3
Fa0/4
```

```
S3#show interface trunk
                             Encapsulation
Port
              Mode
                                                                Native vlan
                                              Status
Fa0/1
                             802.1q
802.1q
802.1q
                                               trunking
                                                                99
Fa0/2
              on
                                               trunking
                                                                99
Fa0/3
              on
                                               trunking
                                                                99
Fa0/4
                             802.1q
                                               trunking
                                                                99
              on
Port
              Vlans allowed on trunk
Fa0/1
              1-1005
Fa0/2
              1-1005
Fa0/3
              1-1005
Fa0/4
              1-1005
Port
              Vlans allowed and active in management domain
              1,10,20,30,99
1,10,20,30,99
1,10,20,30,99
1,10,20,30,99
Fa0/1
Fa0/2
Fa0/3
Fa0/4
Port
              Vlans in spanning tree forwarding state and not pruned
              1,10,20,30,99
99
Fa0/1
Fa0/2
Fa0/3
              99
Fa0/4
              99
```

#### 2.4 show vtp status

```
S1#show vtp status
VTP Version capable
VTP version running
                                            : 1 to 2
VTP Version Family
VTP Domain Name
VTP Pruning Mode
VTP Traps Generation
                                            : Lab5
                                            : Disabled
                                            : Disabled
Device ID : 0030.F2B5.2600
Configuration last modified by 0.0.0.0 at 3-1-93 01:01:33
Local updater ID is 172.17.99.11 on interface Vl99 (lowest numbered VLAN interface found)
Feature VLAN :
VTP Operating Mode
Maximum VLANs supported locally
Number of existing VLANs
                                              : Server
                                              : 255
                                              : 9
Configuration Revision
                                              : 8
MD5 digest
                                              : 0x3E 0x45 0xC5 0xD5 0x13 0x78 0xFC
0x0D
                                                 0x99 0x15 0x8E 0x0E 0x95 0x97 0xC3
0x30
S2#show vtp status
VTP Version capable
                                            : 1 to 2
VTP version running
                                            : 1
VTP Domain Name
                                            : Lab5
VTP Pruning Mode
VTP Traps Generation
                                            : Disabled
                                            : Disabled
Device ID : 0060.3E99.4100
Configuration last modified by 0.0.0.0 at 3-1-93 01:01:33
Feature VLAN :
VTP Operating Mode
Maximum VLANs supported locally
Number of existing VLANs
Configuration Revision
                                               : Client
                                              : 255
                                               : 9
MD5 digest
                                               : 0x3E 0x45 0xC5 0xD5 0x13 0x78 0xFC
0x0D
                                                 0x99 0x15 0x8E 0x0E 0x95 0x97 0xC3
 VTP Version capable
                                               1 to 2
 VTP version running
 VTP Domain Name
                                               stpdemo
 VTP Pruning Mode
                                               Disabled
 VTP Traps Generation
                                               Disabled
 Device ID : 0002.16C9.7B00
Configuration last modified by 0.0.0.0 at 0-0-00 00:00:00
 Feature VLAN :
 VTP Operating Mode
                                               : Client
                                               : 255
: 5
 Maximum VLANs supported locally
 Number of existing VLANs
 Configuration Revision
 MD5 digest
                                               : 0x3D 0x06 0x80 0x63 0xEF 0xD6 0xA4
 0x6F
                                                  0x50 0x21 0x05 0x3B 0xF2 0xA7 0x34
```

## 2.5 Asignaciones - Tablas

#### 2.5.1 SWITCH S1

VLAN	ROL	ESTADO	COSTO PUERTOS	RAIZ
01	Desg	FWD	19	Si
10	Desg	FWD	19	Si
20	Desg	FWD	19	Si
30	Desg	FWD	19	Si
99	Desg, Altn	BLK, FWD	19	No

#### 2.5.2 SWITCH S2

VLAN	ROL	ESTADO	COSTO PUERTOS	RAIZ
01	Desg, Root, Altn	FWD, BLK	19	No
10	Desg, Root, Altn	FWD, BLK	19	No
20	Desg, Root, Altn	FWD, BLK	19	No
30	Desg, Root, Altn	FWD, BLK	19	No
99	Root, Altn	BLK, FWD	19	No

#### 2.5.3 SWITCH S3

VLAN	ROL	ESTADO	COSTO PUERTOS	RAIZ
01	Root, Altn	FWD, BLK	19	No
10	Root, Altn	FWD, BLK	19	No
20	Root, Altn	FWD, BLK	19	No
30	Root, Altn	FWD, BLK	19	No
99	Desg	FWD	19	Si