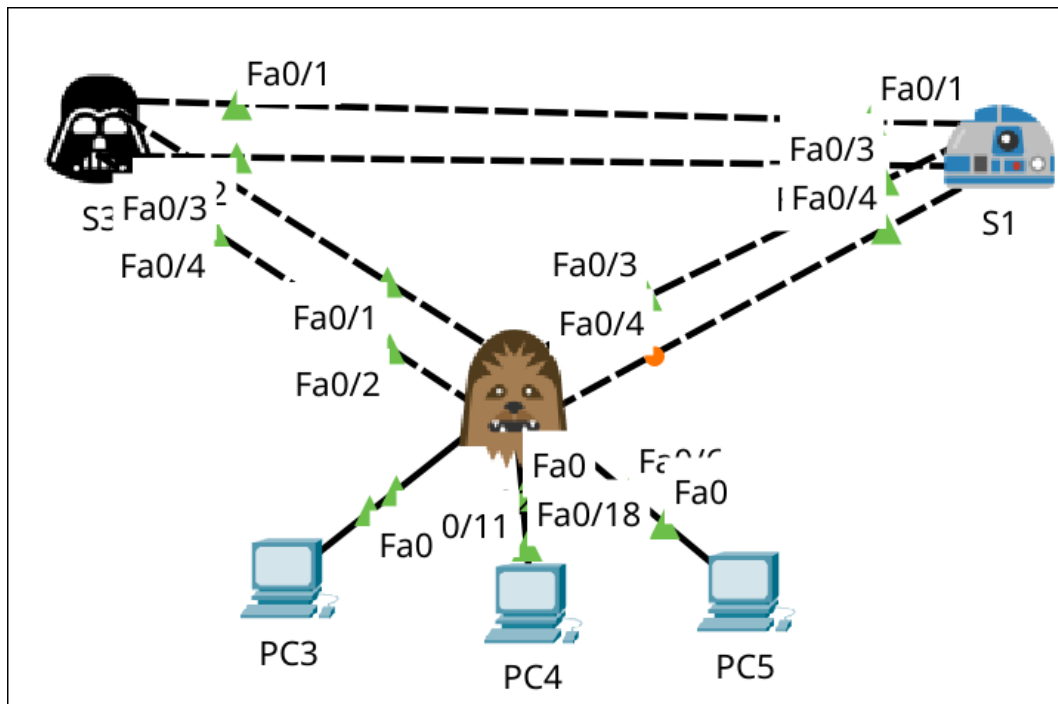**Universidad Veracruzana**
Facultad de Ingeniería Eléctrica y Electrónica

REDES DE
COMPUTADORAS

E12 - STP 2
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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
  Root ID    Priority    4195
             Address     0007.EC1D.ED56
             Cost        19
             Port        1(FastEthernet0/1)
             Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec

  Bridge ID  Priority    32867  (priority 32768 sys-id-ext 99)
             Address     0001.C947.24E6
             Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec
             Aging Time  20

Interface        Role Sts Cost      Prio.Nbr Type
---------------- ---- --- --------- --------
-------------------------------
Fa0/4            Desg FWD 19        128.4    P2p
Fa0/1            Root FWD 19        128.1    P2p
Fa0/3            Desg FWD 19        128.3    P2p
Fa0/2            Altn BLK 19        128.2    P2p
```

```
S3#show spanning-tree vlan 99
VLAN0099
  Spanning tree enabled protocol ieee
  Root ID    Priority    4195
             Address     0007.EC1D.ED56
             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)
             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
---------------- ---- --- --------- --------
-------------------------------
Fa0/1            Desg FWD 19        128.1    P2p
Fa0/2            Desg FWD 19        128.2    P2p
Fa0/3            Desg FWD 19        128.3    P2p
Fa0/4            Desg FWD 19        128.4    P2p

S3#
```

```
S2#show spanning-tree vlan 99
VLAN0099
  Spanning tree enabled protocol ieee
  Root ID    Priority    4195
             Address     0007.EC1D.ED56
             Cost        19
             Port        1(FastEthernet0/1)
             Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec

  Bridge ID  Priority    32867  (priority 32768 sys-id-ext 99)
             Address     0090.0CE3.9614
             Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec
             Aging Time  20

Interface        Role Sts Cost      Prio.Nbr Type
---------------- ---- --- --------- --------
-------------------------------
Fa0/1            Root FWD 19        128.1    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

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

```
S3#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
                                            Fa0/13, Fa0/14, Fa0/15,
Fa0/16
                                            Fa0/17, Fa0/18, Fa0/19,
Fa0/20
                                            Fa0/21, Fa0/22, Fa0/23,
Fa0/24
                                            Gig0/1, Gig0/2
10   faculty-staff                active
20   students                     active
30   guest                        active
99   management                   active
1002 fddi-default                 active
1003 token-ring-default           active
1004 fddinet-default              active
1005 trnet-default                active
```

2.3   show interface trunk

```
S1#show interface trunk
Port        Mode        Encapsulation  Status       Native vlan
Fa0/1       on          802.1q         trunking     99
Fa0/2       on          802.1q         trunking     99
Fa0/3       on          802.1q         trunking     99
Fa0/4       on          802.1q         trunking     99

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
Fa0/1       1,10,20,30,99
Fa0/2       1,10,20,30,99
Fa0/3       1,10,20,30,99
Fa0/4       1,10,20,30,99

Port        Vlans in spanning tree forwarding state and not pruned
Fa0/1       1,10,20,30,99
Fa0/2       1,10,20,30
Fa0/3       1,10,20,30,99
Fa0/4       1,10,20,30,99
```

```
S2#show interface trunk
Port        Mode        Encapsulation  Status       Native vlan
Fa0/1       on          802.1q         trunking     99
Fa0/2       on          802.1q         trunking     99
Fa0/3       on          802.1q         trunking     99
Fa0/4       on          802.1q         trunking     99

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
Fa0/1       1,10,20,30,99
Fa0/2       1,10,20,30,99
Fa0/3       1,10,20,30,99
Fa0/4       1,10,20,30,99

Port        Vlans in spanning tree forwarding state and not pruned
Fa0/1       1,10,20,30,99
Fa0/2       1,10,20,30
Fa0/3       1,10,20,30
Fa0/4       none
```

```
S3#show interface trunk
Port        Mode        Encapsulation  Status       Native vlan
Fa0/1       on          802.1q         trunking     99
Fa0/2       on          802.1q         trunking     99
Fa0/3       on          802.1q         trunking     99
Fa0/4       on          802.1q         trunking     99

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
Fa0/1       1,10,20,30,99
Fa0/2       1,10,20,30,99
Fa0/3       1,10,20,30,99
Fa0/4       1,10,20,30,99

Port        Vlans in spanning tree forwarding state and not pruned
Fa0/1       1,10,20,30,99
Fa0/2       99
Fa0/3       99
Fa0/4       99
```

2.4   show vtp status

```
S1#show vtp status
VTP Version capable             : 1 to 2
VTP version running             : 1
VTP Domain Name                 : Lab5
VTP Pruning Mode                : Disabled
VTP Traps Generation            : 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              : Server
Maximum VLANs supported locally : 255
Number of existing VLANs        : 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                : Disabled
VTP Traps Generation            : 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              : Client
Maximum VLANs supported locally : 255
Number of existing VLANs        : 9
Configuration Revision          : 8
MD5 digest                      : 0x3E 0x45 0xC5 0xD5 0x13 0x78 0xFC
0x0D
                                  0x99 0x15 0x8E 0x0E 0x95 0x97 0xC3
```

```
Distribution2#show vtp status
VTP Version capable             : 1 to 2
VTP version running             : 1
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
Maximum VLANs supported locally : 255
Number of existing VLANs        : 5
Configuration Revision          : 0
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