**Data Communication and Computer Networks**

**EEE314**

Lab # 11



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| --- | --- |
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**Lab #11 DHCP Configuration**

**In-Lab Task**

**Packet Switches**

**Table

Description automatically generated**

**Packet from VLAN10 to others**

**Chart, funnel chart

Description automatically generated**

**Packet from VLAN20 to others**

Chart, waterfall chart

Description automatically generated

**Packet from VLAN20 to VLAN10**

**Chart, waterfall chart

Description automatically generated**

**Home Task**

* **Switch 1:**

**show running-config:**

S1# show running-config

Building configuration...

Current configuration : 1738 bytes

!

version 12.2

no service timestamps log datetime msec

no service timestamps debug datetime msec

no service password-encryption

!

hostname S1

!

enable secret 5 $1$mERr$lnG42Uzc.xuw88Y9qr3Qv0

!

!

!

!

!

spanning-tree mode pvst

spanning-tree extend system-id

!

interface FastEthernet0/1

switchport trunk native vlan 99

switchport mode trunk

!

interface FastEthernet0/2

switchport trunk native vlan 99

switchport mode trunk

!

interface FastEthernet0/3

switchport trunk native vlan 99

switchport mode trunk

!

interface FastEthernet0/4

switchport trunk native vlan 99

switchport mode trunk

!

interface FastEthernet0/5

switchport trunk native vlan 99

switchport mode trunk

!

interface FastEthernet0/6

shutdown

!

interface FastEthernet0/7

shutdown

!

interface FastEthernet0/8

shutdown

!

interface FastEthernet0/9

shutdown

!

interface FastEthernet0/10

shutdown

!

interface FastEthernet0/11

shutdown

!

interface FastEthernet0/12

shutdown

!

interface FastEthernet0/13

shutdown

!

interface FastEthernet0/14

shutdown

!

interface FastEthernet0/15

shutdown

!

interface FastEthernet0/16

shutdown

!

interface FastEthernet0/17

shutdown

!

interface FastEthernet0/18

shutdown

!

interface FastEthernet0/19

shutdown

!

interface FastEthernet0/20

shutdown

!

interface FastEthernet0/21

shutdown

!

interface FastEthernet0/22

shutdown

!

interface FastEthernet0/23

shutdown

!

interface FastEthernet0/24

shutdown

!

interface GigabitEthernet0/1

shutdown

!

interface GigabitEthernet0/2

shutdown

!

interface Vlan1

no ip address

shutdown

!

interface Vlan99

mac-address 000c.8559.4201

ip address 172.17.99.11 255.255.255.0

!

!

!

!

line con 0

login

!

line vty 0 4

password cisco

login

line vty 5 15

password cisco

login

!

!

!

!

End

**Show vtp status:**

S3#show vtp status

VTP Version : 2

Configuration Revision : 0

Maximum VLANs supported locally : 255

Number of existing VLANs : 9

VTP Operating Mode : Transparent

VTP Domain Name : Lab4

VTP Pruning Mode : Disabled

VTP V2 Mode : Disabled

VTP Traps Generation : Disabled

MD5 digest : 0x57 0xF8 0xD2 0x5C 0x01 0x86 0xE7 0x6A

Configuration last modified by 0.0.0.0 at 3-1-93 00:13:12

* **Switch 2:**

**show running-config:**

S2#show running-config

Building configuration...

Current configuration : 2705 bytes

!

version 12.2

no service timestamps log datetime msec

no service timestamps debug datetime msec

no service password-encryption

!

hostname S2

!

enable secret 5 $1$mERr$y7z3zUygcvSzhHhTqWR3K1

!

!

!

!

!

spanning-tree mode pvst

spanning-tree extend system-id

!

interface FastEthernet0/1

switchport trunk native vlan 99

switchport mode trunk

!

interface FastEthernet0/2

switchport trunk native vlan 99

switchport mode trunk

!

interface FastEthernet0/3

switchport trunk native vlan 99

switchport mode trunk

!

interface FastEthernet0/4

switchport trunk native vlan 99

switchport mode trunk

!

interface FastEthernet0/5

switchport trunk native vlan 99

switchport mode trunk

!

interface FastEthernet0/6

switchport access vlan 30

switchport mode access

switchport port-security

switchport port-security mac-address sticky

switchport port-security mac-address sticky 0060.47C1.AD9E

!

interface FastEthernet0/7

switchport access vlan 30

shutdown

!

interface FastEthernet0/8

switchport access vlan 30

shutdown

!

interface FastEthernet0/9

switchport access vlan 30

shutdown

!

interface FastEthernet0/10

switchport access vlan 30

shutdown

!

interface FastEthernet0/11

switchport access vlan 10

switchport mode access

switchport port-security

switchport port-security mac-address sticky

switchport port-security mac-address sticky 0009.7C30.BEC8

!

interface FastEthernet0/12

switchport access vlan 10

shutdown

!

interface FastEthernet0/13

switchport access vlan 10

shutdown

!

interface FastEthernet0/14

switchport access vlan 10

shutdown

!

interface FastEthernet0/15

switchport access vlan 10

shutdown

!

interface FastEthernet0/16

switchport access vlan 10

shutdown

!

interface FastEthernet0/17

switchport access vlan 10

shutdown

!

interface FastEthernet0/18

switchport access vlan 20

switchport mode access

switchport port-security

switchport port-security mac-address sticky

switchport port-security mac-address sticky 0090.0C6C.14D3

!

interface FastEthernet0/19

switchport access vlan 20

shutdown

!

interface FastEthernet0/20

switchport access vlan 20

shutdown

!

interface FastEthernet0/21

switchport access vlan 20

shutdown

!

interface FastEthernet0/22

switchport access vlan 20

shutdown

!

interface FastEthernet0/23

switchport access vlan 20

shutdown

!

interface FastEthernet0/24

switchport access vlan 20

shutdown

!

interface GigabitEthernet0/1

shutdown

!

interface GigabitEthernet0/2

shutdown

!

interface Vlan1

no ip address

shutdown

!

interface Vlan99

mac-address 0007.ece1.0b01

ip address 172.17.99.12 255.255.255.0

!

!

!

!

line con 0

password cisco

login

!

line vty 0 4

password cisco

login

line vty 5 15

password cisco

login

!

!

!

!

end

**Show vtp status:**

S3#show vtp status

VTP Version : 2

Configuration Revision : 0

Maximum VLANs supported locally : 255

Number of existing VLANs : 9

VTP Operating Mode : Transparent

VTP Domain Name : Lab4

VTP Pruning Mode : Disabled

VTP V2 Mode : Disabled

VTP Traps Generation : Disabled

MD5 digest : 0x57 0xF8 0xD2 0x5C 0x01 0x86 0xE7 0x6A

Configuration last modified by 0.0.0.0 at 3-1-93 00:13:12

* **Switch 3:**

**Show running-config:**

S3#show running-config

Building configuration...

Current configuration : 2842 bytes

!

version 12.2

no service timestamps log datetime msec

no service timestamps debug datetime msec

no service password-encryption

!

hostname S3

!

enable secret 5 cisco

!

!

!

!

vtp domain Lab4

vtp mode transparent

vtp password cisco

!

!

spanning-tree mode pvst

spanning-tree extend system-id

!

vlan 10

name faculty/staff

!

vlan 20

name students

!

vlan 30

name guest

!

vlan 99

name management

!

interface FastEthernet0/1

switchport trunk native vlan 99

switchport mode trunk

!

interface FastEthernet0/2

switchport trunk native vlan 99

switchport mode trunk

!

interface FastEthernet0/3

switchport trunk native vlan 99

switchport mode trunk

!

interface FastEthernet0/4

switchport trunk native vlan 99

switchport mode trunk

!

interface FastEthernet0/5

switchport trunk native vlan 99

switchport mode trunk

!

interface FastEthernet0/6

switchport access vlan 30

switchport mode access

switchport port-security

switchport port-security mac-address sticky

switchport port-security mac-address sticky 00E0.F94E.DD5D

!

interface FastEthernet0/7

switchport access vlan 30

shutdown

!

interface FastEthernet0/8

switchport access vlan 30

shutdown

!

interface FastEthernet0/9

switchport access vlan 30

shutdown

!

interface FastEthernet0/10

switchport access vlan 30

shutdown

!

interface FastEthernet0/11

switchport access vlan 10

switchport mode access

switchport port-security

switchport port-security mac-address sticky

switchport port-security mac-address sticky 0002.4A56.5D93

!

interface FastEthernet0/12

switchport access vlan 10

shutdown

!

interface FastEthernet0/13

switchport access vlan 10

shutdown

!

interface FastEthernet0/14

switchport access vlan 10

shutdown

!

interface FastEthernet0/15

switchport access vlan 10

shutdown

!

interface FastEthernet0/16

switchport access vlan 10

shutdown

!

interface FastEthernet0/17

switchport access vlan 10

shutdown

!

interface FastEthernet0/18

switchport access vlan 20

switchport mode access

switchport port-security

switchport port-security mac-address sticky

switchport port-security mac-address sticky 00D0.BA65.64D5

!

interface FastEthernet0/19

switchport access vlan 20

shutdown

!

interface FastEthernet0/20

switchport access vlan 20

shutdown

!

interface FastEthernet0/21

switchport access vlan 20

shutdown

!

interface FastEthernet0/22

switchport access vlan 20

shutdown

!

interface FastEthernet0/23

switchport access vlan 20

shutdown

!

interface FastEthernet0/24

switchport access vlan 20

shutdown

!

interface GigabitEthernet0/1

shutdown

!

interface GigabitEthernet0/2

shutdown

!

interface Vlan1

no ip address

shutdown

!

interface Vlan99

mac-address 000b.bea6.d701

ip address 172.17.99.13 255.255.255.0

!

!

!

!

line con 0

password cisco

login

!

line vty 0 4

password cisco

login

line vty 5 15

password cisco

login

!

!

!

!

end

**Show vtp status:**

S3#show vtp status

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Configuration Revision : 0

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VTP Operating Mode : Transparent

VTP Domain Name : Lab4

VTP Pruning Mode : Disabled

VTP V2 Mode : Disabled

VTP Traps Generation : Disabled

MD5 digest : 0x57 0xF8 0xD2 0x5C 0x01 0x86 0xE7 0x6A

Configuration last modified by 0.0.0.0 at 3-1-93 00:13:12

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## Critical Analysis / Conclusion

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| --- |
| In this lab we learnt about VLAN Trunking Protocol (VTP) configuration. It is a protocol used to share VLAN configuration across the network, the main goal of this configuration is to managae all configured VLANs across the network.  Moreover, we implemented this on a topology given to us and successfully sent Packet between PC’s connected to same VLAN’s and we were unable to send packets between PC’s connected to different VLAN’s |

|  |  |  |
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| **Lab Assessment** | | |
| **Pre Lab** | **/5** | **/25** |
| **Performance** | **/5** |
| **Results** | **/5** |
| **Viva** | **/5** |
| **Critical Analysis** | **/5** |
| **Instructor Signature and Comments** | | |