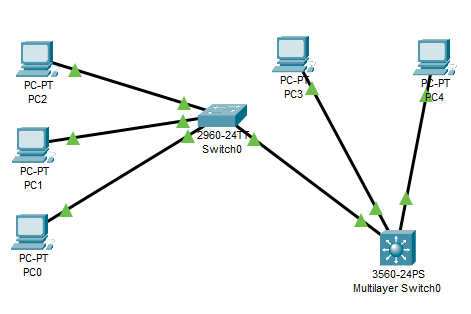
**CSCE 4535 Lab 5-6 DHCP & VOIP Lab**

**Final Grade 5%**

**Lab 5: How to Perform basic DHCP Configuration Using the Cisco IOS CLI**



**Lab 5 includes the following procedures:**

1. **Configuring MLS0 Switch to support DHCP (First apply Security Script to each device)**

!

ip dhcp pool Student

network 192.168.1.0 255.255.255.0

default-router 192.168.1.1

dns-server 192.168.1.1

!

interface Vlan1

ip address 192.168.1.1 255.255.255.0

1. **Connect a L2 switch 2960-24TT Fa0/24 to MLS0 port Fa0/1 and attach 3 PC’s PC0-2 to L2 switch (any port). Use vlan 1 so no configuration needed.**

!

interface Vlan1

ip address dhcp

1. **Connect 2 more PC’s PC3-4 to MLS0 (any port).**

**Use vlan 1 so no configuration needed.**

1. **Go to PC0 ip configuration and select DHCP.**
2. **Verify that the PC gets an IP address using dhcp, Repeat for each PC.**
3. **For grading Label** **the Network diagram with IP address and include it in your submission for this lab. Also include both switch configuration items and show vlan.**

Network Diagram

Diagram

Description automatically generated

Switch0 Config

service password-encryption

!

hostname Switch0

!

enable secret 5 $1$mERr$hx5rVt7rPNoS4wqbXKX7m0

!

interface Vlan1

ip address dhcp

!

banner motd ^CNo unauthorized access allowed!^C

!

!

!

line con 0

password 7 0822455D0A16

login

exec-timeout 5 0

!

line vty 0 4

password 7 0822455D0A16

login

transport input telnet

line vty 5 15

login

!

!

!

!

end

MSL0 Config

service password-encryption

!

hostname MLS0

!

!

enable secret 5 $1$mERr$hx5rVt7rPNoS4wqbXKX7m0

!

!

!

ip dhcp pool Student

network 192.168.1.0 255.255.255.0

default-router 192.168.1.1

dns-server 192.168.1.1

!

interface Vlan1

ip address 192.168.1.1 255.255.255.0

!

banner motd ^CNo unauthorized access allowed!^C

!

!

!

!

!

line con 0

exec-timeout 5 0

password 7 0822455D0A16

login

!

line aux 0

!

line vty 0 4

password 7 0822455D0A16

login

transport input telnet

!

!

!

!

End

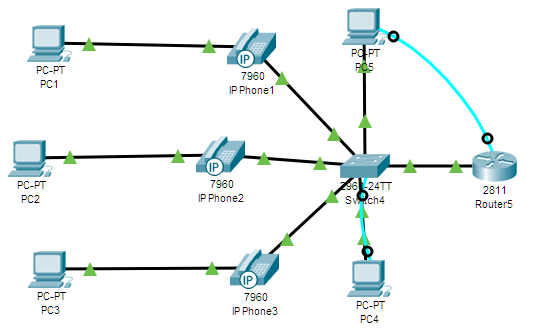
Show VLAN:

Table

Description automatically generated

**Lab6: Cisco IOS Telephony Service (ITS) Configuration and Troubleshooting**

<https://www.cisco.com/c/en/us/support/docs/voice/h323/25100-config-troubleshoot-its.html>





This lab covers DHCP configuration as well as VOIP. We have 5 PC’s, 3 VOIP Phones, one switch and one Router. PC4 & PC5 provide console connectivity to switch4 and Router 5 respectively for configuration. PC 1-3 connects to Phones 1-3 PC port. The switch port on the phones connects to Switch4 ports 1-3. PC 4-5 connects to Switch port 4-5. Switch port 24 trunks to Router 5 port 0 as shown in the table. First apply security Script to each device.

1. **Switch Interface configuratons**:

*Example data+voice port*

interface FastEthernet0/1

description data+voice port

switchport access vlan 10

switchport mode access

switchport voice vlan 20

!

*Example: data port*

interface FastEthernet0/4

switchport access vlan 10

switchport mode access

!

*Example: Trunk port*

interface FastEthernet0/24

description Trunk port to Router

switchport trunk allowed vlan 1,10,20

switchport mode trunk

!

*Example: Vlan Interfaces*

interface Vlan1

description Management Vlan

ip address 192.168.1.2 255.255.255.0

!

ip default-gateway 192.168.10.1

!

1. **Router Interface configurations**

*Example: sub-Interface configuration*

interface FastEthernet0/0

description Trunk to Switch

no ip address

duplex auto

speed auto

!

interface FastEthernet0/0.1

description Management vlan

encapsulation dot1Q 1 native

ip address 192.168.1.1 255.255.255.0

!

1. **Router DHCP Lab Configuraton:**

ip dhcp excluded-address 192.168.10.1 192.168.10.5

ip dhcp excluded-address 192.168.20.1 192.168.20.5

!

ip dhcp pool DataVlan10

network 192.168.10.0 255.255.255.0

default-router 192.168.10.1

dns-server 192.168.10.1

ip dhcp pool VoiceVlan20

network 192.168.20.0 255.255.255.0

default-router 192.168.20.1

option 150 ip 192.168.20.1

!

1. **Router VOIP Lab Configuration: (**highlighted commands may not need to be entered)

telephony-service

max-ephones 3

max-dn 3

ip source-address 192.168.20.1 port 2000

!

ephone-dn 1

number 2010

!

ephone-dn 2

number 2020

!

ephone-dn 3

number 2030

!

ephone 1

device-security-mode none

mac-address <ephone1 MAC>

type 7960

button 1:1

!

ephone 2

device-security-mode none

mac-address <ephone2 MAC>

type 7960

button 1:2

!

ephone 3

device-security-mode none

mac-address <ephone3 MAC>

type 7960

button 1:3

!

**Testing Functionality**: **Submit the following for grading:**

1. **Testing DHCP:** 
   1. Go to PC 4 -5 and select DHCP configuration. Verify that the PC’s are able to obtain DHCP addresses on vlan 10.
   2. Go to PC 1 – 3 and select DHCP configuration. Verify that the PC’s are able to obtain DHCP addresses no vlan 10.
   3. Go to Phones 1 – 3 and verify that the Phones are able to obtain DHCP addresses no vlan 20.
   4. Record IP address in the table below:

|  |  |  |
| --- | --- | --- |
| # PC/ Phone | PC - IP address | Phone - IP Address |
| 1 | 192.168.10.7 | 192.168.20.6 |
| 2 | 192.168.10.8 | 192.168.20.7 |
| 3 | 192.168.10.9 | 192.168.20.8 |
| 4 | 192.168.10.10 |  |
| 5 | 192.168.10.11 |  |

1. **Ping Test:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Phone 1 | Phone2 | Phone 3 | Switch 4 | Router 5 |
| PC1 | C:\>ping 192.168.20.6  Pinging 192.168.20.6 with 32 bytes of data:  Reply from 192.168.20.6: bytes=32 time=12ms TTL=254  Reply from 192.168.20.6: bytes=32 time=10ms TTL=254  Reply from 192.168.20.6: bytes=32 time=10ms TTL=254  Reply from 192.168.20.6: bytes=32 time=21ms TTL=254  Ping statistics for 192.168.20.6:  Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),  Approximate round trip times in milli-seconds:  Minimum = 10ms, Maximum = 21ms, Average = 13ms | C:\>ping 192.168.20.7  Pinging 192.168.20.7 with 32 bytes of data:  Reply from 192.168.20.7: bytes=32 time=24ms TTL=254  Reply from 192.168.20.7: bytes=32 time=15ms TTL=254  Reply from 192.168.20.7: bytes=32 time=12ms TTL=254  Reply from 192.168.20.7: bytes=32 time<1ms TTL=254  Ping statistics for 192.168.20.7:  Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),  Approximate round trip times in milli-seconds:  Minimum = 0ms, Maximum = 24ms, Average = 12ms | C:\>ping 192.168.20.8  Pinging 192.168.20.8 with 32 bytes of data:  Reply from 192.168.20.8: bytes=32 time=1ms TTL=254  Reply from 192.168.20.8: bytes=32 time=11ms TTL=254  Reply from 192.168.20.8: bytes=32 time=2ms TTL=254  Reply from 192.168.20.8: bytes=32 time=11ms TTL=254  Ping statistics for 192.168.20.8:  Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),  Approximate round trip times in milli-seconds:  Minimum = 1ms, Maximum = 11ms, Average = 6ms | C:\>ping 192.168.10.2  Pinging 192.168.10.2 with 32 bytes of data:  Reply from 192.168.10.2: bytes=32 time<1ms TTL=255  Reply from 192.168.10.2: bytes=32 time<1ms TTL=255  Reply from 192.168.10.2: bytes=32 time<1ms TTL=255  Reply from 192.168.10.2: bytes=32 time<1ms TTL=255  Ping statistics for 192.168.10.2:  Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),  Approximate round trip times in milli-seconds:  Minimum = 0ms, Maximum = 0ms, Average = 0ms | C:\>ping 192.168.10.1  Pinging 192.168.10.1 with 32 bytes of data:  Reply from 192.168.10.1: bytes=32 time<1ms TTL=255  Reply from 192.168.10.1: bytes=32 time<1ms TTL=255  Reply from 192.168.10.1: bytes=32 time<1ms TTL=255  Reply from 192.168.10.1: bytes=32 time<1ms TTL=255  Ping statistics for 192.168.10.1:  Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),  Approximate round trip times in milli-seconds:  Minimum = 0ms, Maximum = 0ms, Average = 0ms |
| PC2 | C:\>ping 192.168.20.6  Pinging 192.168.20.6 with 32 bytes of data:  Reply from 192.168.20.6: bytes=32 time<1ms TTL=254  Reply from 192.168.20.6: bytes=32 time<1ms TTL=254  Reply from 192.168.20.6: bytes=32 time=12ms TTL=254  Reply from 192.168.20.6: bytes=32 time<1ms TTL=254  Ping statistics for 192.168.20.6:  Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),  Approximate round trip times in milli-seconds:  Minimum = 0ms, Maximum = 12ms, Average = 3ms | C:\>ping 192.168.20.7  Pinging 192.168.20.7 with 32 bytes of data:  Reply from 192.168.20.7: bytes=32 time<1ms TTL=254  Reply from 192.168.20.7: bytes=32 time<1ms TTL=254  Reply from 192.168.20.7: bytes=32 time<1ms TTL=254  Reply from 192.168.20.7: bytes=32 time=16ms TTL=254  Ping statistics for 192.168.20.7:  Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),  Approximate round trip times in milli-seconds:  Minimum = 0ms, Maximum = 16ms, Average = 4ms | C:\>ping 192.168.20.8  Pinging 192.168.20.8 with 32 bytes of data:  Reply from 192.168.20.8: bytes=32 time<1ms TTL=254  Reply from 192.168.20.8: bytes=32 time<1ms TTL=254  Reply from 192.168.20.8: bytes=32 time<1ms TTL=254  Reply from 192.168.20.8: bytes=32 time=12ms TTL=254  Ping statistics for 192.168.20.8:  Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),  Approximate round trip times in milli-seconds:  Minimum = 0ms, Maximum = 12ms, Average = 3ms | C:\>ping 192.168.10.2  Pinging 192.168.10.2 with 32 bytes of data:  Reply from 192.168.10.2: bytes=32 time<1ms TTL=255  Reply from 192.168.10.2: bytes=32 time<1ms TTL=255  Reply from 192.168.10.2: bytes=32 time<1ms TTL=255  Reply from 192.168.10.2: bytes=32 time<1ms TTL=255  Ping statistics for 192.168.10.2:  Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),  Approximate round trip times in milli-seconds:  Minimum = 0ms, Maximum = 0ms, Average = 0ms | C:\>ping 192.168.10.1  Pinging 192.168.10.1 with 32 bytes of data:  Reply from 192.168.10.1: bytes=32 time<1ms TTL=255  Reply from 192.168.10.1: bytes=32 time<1ms TTL=255  Reply from 192.168.10.1: bytes=32 time<1ms TTL=255  Reply from 192.168.10.1: bytes=32 time<1ms TTL=255  Ping statistics for 192.168.10.1:  Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),  Approximate round trip times in milli-seconds:  Minimum = 0ms, Maximum = 0ms, Average = 0ms |
| PC3 | C:\>ping 192.168.20.6  Pinging 192.168.20.6 with 32 bytes of data:  Reply from 192.168.20.6: bytes=32 time=10ms TTL=254  Reply from 192.168.20.6: bytes=32 time<1ms TTL=254  Reply from 192.168.20.6: bytes=32 time<1ms TTL=254  Reply from 192.168.20.6: bytes=32 time<1ms TTL=254  Ping statistics for 192.168.20.6:  Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),  Approximate round trip times in milli-seconds:  Minimum = 0ms, Maximum = 10ms, Average = 2ms | C:\>ping 192.168.20.7  Pinging 192.168.20.7 with 32 bytes of data:  Reply from 192.168.20.7: bytes=32 time<1ms TTL=254  Reply from 192.168.20.7: bytes=32 time<1ms TTL=254  Reply from 192.168.20.7: bytes=32 time<1ms TTL=254  Reply from 192.168.20.7: bytes=32 time<1ms TTL=254  Ping statistics for 192.168.20.7:  Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),  Approximate round trip times in milli-seconds:  Minimum = 0ms, Maximum = 0ms, Average = 0ms | C:\>ping 192.168.20.8  Pinging 192.168.20.8 with 32 bytes of data:  Reply from 192.168.20.8: bytes=32 time<1ms TTL=254  Reply from 192.168.20.8: bytes=32 time<1ms TTL=254  Reply from 192.168.20.8: bytes=32 time<1ms TTL=254  Reply from 192.168.20.8: bytes=32 time<1ms TTL=254  Ping statistics for 192.168.20.8:  Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),  Approximate round trip times in milli-seconds:  Minimum = 0ms, Maximum = 0ms, Average = 0ms | C:\>ping 192.168.10.2  Pinging 192.168.10.2 with 32 bytes of data:  Reply from 192.168.10.2: bytes=32 time<1ms TTL=255  Reply from 192.168.10.2: bytes=32 time=12ms TTL=255  Reply from 192.168.10.2: bytes=32 time<1ms TTL=255  Reply from 192.168.10.2: bytes=32 time<1ms TTL=255  Ping statistics for 192.168.10.2:  Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),  Approximate round trip times in milli-seconds:  Minimum = 0ms, Maximum = 12ms, Average = 3ms | C:\>ping 192.168.10.1  Pinging 192.168.10.1 with 32 bytes of data:  Reply from 192.168.10.1: bytes=32 time<1ms TTL=255  Reply from 192.168.10.1: bytes=32 time<1ms TTL=255  Reply from 192.168.10.1: bytes=32 time=1ms TTL=255  Reply from 192.168.10.1: bytes=32 time<1ms TTL=255  Ping statistics for 192.168.10.1:  Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),  Approximate round trip times in milli-seconds:  Minimum = 0ms, Maximum = 1ms, Average = 0ms |
| PC4 | C:\>ping 192.168.20.6  Pinging 192.168.20.6 with 32 bytes of data:  Reply from 192.168.20.6: bytes=32 time<1ms TTL=254  Reply from 192.168.20.6: bytes=32 time<1ms TTL=254  Reply from 192.168.20.6: bytes=32 time<1ms TTL=254  Reply from 192.168.20.6: bytes=32 time<1ms TTL=254  Ping statistics for 192.168.20.6:  Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),  Approximate round trip times in milli-seconds:  Minimum = 0ms, Maximum = 0ms, Average = 0ms | C:\>ping 192.168.20.7  Pinging 192.168.20.7 with 32 bytes of data:  Reply from 192.168.20.7: bytes=32 time<1ms TTL=254  Reply from 192.168.20.7: bytes=32 time<1ms TTL=254  Reply from 192.168.20.7: bytes=32 time=1ms TTL=254  Reply from 192.168.20.7: bytes=32 time<1ms TTL=254  Ping statistics for 192.168.20.7:  Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),  Approximate round trip times in milli-seconds:  Minimum = 0ms, Maximum = 1ms, Average = 0ms | C:\>ping 192.168.20.8  Pinging 192.168.20.8 with 32 bytes of data:  Reply from 192.168.20.8: bytes=32 time<1ms TTL=254  Reply from 192.168.20.8: bytes=32 time<1ms TTL=254  Reply from 192.168.20.8: bytes=32 time<1ms TTL=254  Reply from 192.168.20.8: bytes=32 time=14ms TTL=254  Ping statistics for 192.168.20.8:  Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),  Approximate round trip times in milli-seconds:  Minimum = 0ms, Maximum = 14ms, Average = 3ms | C:\>ping 192.168.10.2  Pinging 192.168.10.2 with 32 bytes of data:  Reply from 192.168.10.2: bytes=32 time<1ms TTL=255  Reply from 192.168.10.2: bytes=32 time<1ms TTL=255  Reply from 192.168.10.2: bytes=32 time<1ms TTL=255  Reply from 192.168.10.2: bytes=32 time<1ms TTL=255  Ping statistics for 192.168.10.2:  Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),  Approximate round trip times in milli-seconds:  Minimum = 0ms, Maximum = 0ms, Average = 0ms | C:\>ping 192.168.10.1  Pinging 192.168.10.1 with 32 bytes of data:  Reply from 192.168.10.1: bytes=32 time<1ms TTL=255  Reply from 192.168.10.1: bytes=32 time<1ms TTL=255  Reply from 192.168.10.1: bytes=32 time<1ms TTL=255  Reply from 192.168.10.1: bytes=32 time<1ms TTL=255  Ping statistics for 192.168.10.1:  Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),  Approximate round trip times in milli-seconds:  Minimum = 0ms, Maximum = 0ms, Average = 0ms |
| PC5 | C:\>ping 192.168.20.6  Pinging 192.168.20.6 with 32 bytes of data:  Reply from 192.168.20.6: bytes=32 time<1ms TTL=254  Reply from 192.168.20.6: bytes=32 time<1ms TTL=254  Reply from 192.168.20.6: bytes=32 time<1ms TTL=254  Reply from 192.168.20.6: bytes=32 time<1ms TTL=254  Ping statistics for 192.168.20.6:  Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),  Approximate round trip times in milli-seconds:  Minimum = 0ms, Maximum = 0ms, Average = 0ms | C:\>ping 192.168.20.7  Pinging 192.168.20.7 with 32 bytes of data:  Reply from 192.168.20.7: bytes=32 time<1ms TTL=254  Reply from 192.168.20.7: bytes=32 time<1ms TTL=254  Reply from 192.168.20.7: bytes=32 time=1ms TTL=254  Reply from 192.168.20.7: bytes=32 time=13ms TTL=254  Ping statistics for 192.168.20.7:  Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),  Approximate round trip times in milli-seconds:  Minimum = 0ms, Maximum = 13ms, Average = 3ms | C:\>ping 192.168.20.8  Pinging 192.168.20.8 with 32 bytes of data:  Reply from 192.168.20.8: bytes=32 time<1ms TTL=254  Reply from 192.168.20.8: bytes=32 time<1ms TTL=254  Reply from 192.168.20.8: bytes=32 time<1ms TTL=254  Reply from 192.168.20.8: bytes=32 time<1ms TTL=254  Ping statistics for 192.168.20.8:  Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),  Approximate round trip times in milli-seconds:  Minimum = 0ms, Maximum = 0ms, Average = 0ms | C:\>ping 192.168.10.2  Pinging 192.168.10.2 with 32 bytes of data:  Reply from 192.168.10.2: bytes=32 time<1ms TTL=255  Reply from 192.168.10.2: bytes=32 time<1ms TTL=255  Reply from 192.168.10.2: bytes=32 time<1ms TTL=255  Reply from 192.168.10.2: bytes=32 time<1ms TTL=255  Ping statistics for 192.168.10.2:  Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),  Approximate round trip times in milli-seconds:  Minimum = 0ms, Maximum = 0ms, Average = 0ms | C:\>ping 192.168.10.1  Pinging 192.168.10.1 with 32 bytes of data:  Reply from 192.168.10.1: bytes=32 time<1ms TTL=255  Reply from 192.168.10.1: bytes=32 time<1ms TTL=255  Reply from 192.168.10.1: bytes=32 time<1ms TTL=255  Reply from 192.168.10.1: bytes=32 time<1ms TTL=255  Ping statistics for 192.168.10.1:  Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),  Approximate round trip times in milli-seconds:  Minimum = 0ms, Maximum = 0ms, Average = 0ms |

1. **Phone Connectivity Test:**

Dial connections from one phone to another and verify destination phone ringing.

**(Answers to the below table are provided as screenshots)**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Phone 1 | Phone2 | Phone 3 |
| Phone 1 | ============= | Verified | Verified |
| Phone 2 | Verified | ============= | Verified |
| Phone 3 | Verified | Verified | ============= |

Phone 1 calling 2:

Graphical user interface, application

Description automatically generated

Phone 1 calling 3:

Graphical user interface, application

Description automatically generated

Phone 2 calling 1:

Graphical user interface, application

Description automatically generated

Phone 2 calling 3:

Graphical user interface, application

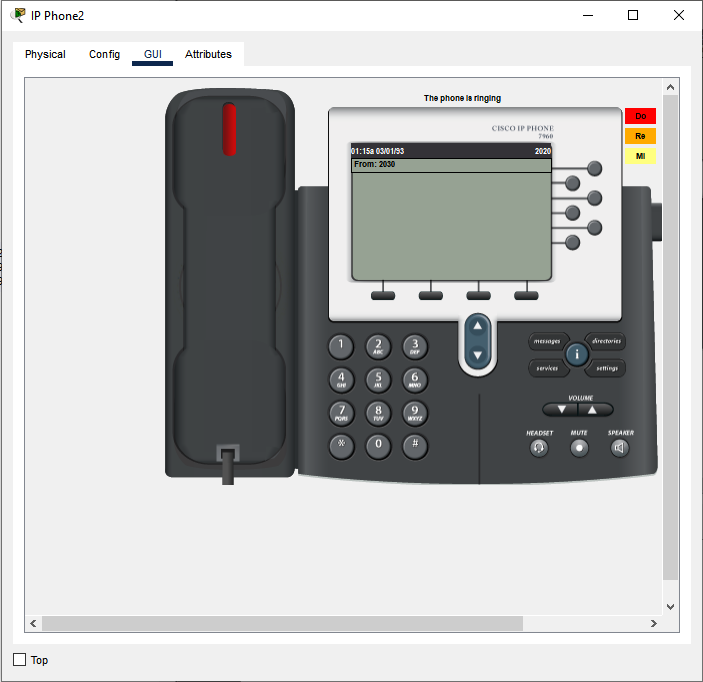
Description automatically generated

Phone 3 calling 1:

Graphical user interface, application

Description automatically generated

Phone 3 calling 2:



1. **Save Configurations and Packet Tracer Activity**
2. **Submit your network diagrams and switch and router configuration items and show vlan for lab6 and your console output for the test “1,2,3 above” in a word file for grading.**

**Network Diagram:**

**Diagram

Description automatically generated**

**Switch4 Configuration:**

service password-encryption

!

hostname Switch4

!

enable secret 5 $1$mERr$hx5rVt7rPNoS4wqbXKX7m0

!

interface FastEthernet0/1

description data+voice port

switchport access vlan 10

switchport mode access

switchport voice vlan 20

!

interface FastEthernet0/2

description data+voice port

switchport access vlan 10

switchport mode access

switchport voice vlan 20

!

interface FastEthernet0/3

description data+voice port

switchport access vlan 10

switchport mode access

switchport voice vlan 20

!

interface FastEthernet0/4

description data port

switchport access vlan 10

switchport mode access

!

interface FastEthernet0/5

description data port

switchport access vlan 10

switchport mode access

!

interface FastEthernet0/24

description Trunk port to Router

switchport trunk allowed vlan 1,10,20

switchport mode trunk

!

interface Vlan1

description Management Vlan

ip address 192.168.1.2 255.255.255.0

shutdown

!

interface Vlan10

description PC VLAN

ip address 192.168.10.2 255.255.255.0

!

interface Vlan20

description IP Phone VLAN

ip address 192.168.20.2 255.255.255.0

!

banner motd ^CNo unauthorized access allowed!^C

!

line con 0

password 7 0822455D0A16

login

exec-timeout 5 0

!

line vty 0 4

password 7 0822455D0A16

login

transport input telnet

line vty 5 15

login

!

end

**Router5 Configuration:**

service password-encryption

!

hostname Router5

!

enable secret 5 $1$mERr$hx5rVt7rPNoS4wqbXKX7m0

!

ip dhcp excluded-address 192.168.10.1 192.168.10.5

ip dhcp excluded-address 192.168.20.1 192.168.20.5

!

ip dhcp pool DataVlan10

network 192.168.10.0 255.255.255.0

default-router 192.168.10.1

dns-server 192.168.10.1

ip dhcp pool VoiceVlan20

network 192.168.20.0 255.255.255.0

default-router 192.168.20.1

option 150 ip 192.168.20.1

!

interface FastEthernet0/0

description Trunk to Switch

no ip address

duplex auto

speed auto

!

interface FastEthernet0/0.1

description Management vlan

encapsulation dot1Q 1 native

ip address 192.168.1.1 255.255.255.0

!

interface FastEthernet0/0.10

encapsulation dot1Q 10

ip address 192.168.10.1 255.255.255.0

!

interface FastEthernet0/0.20

encapsulation dot1Q 20

ip address 192.168.20.1 255.255.255.0

!

interface Vlan1

no ip address

shutdown

!

banner motd ^CNo unauthorized access allowed!^C

!

telephony-service

max-ephones 3

max-dn 3

ip source-address 192.168.20.1 port 2000

!

ephone-dn 1

number 2010

!

ephone-dn 2

number 2020

!

ephone-dn 3

number 2030

!

ephone 1

device-security-mode none

mac-address 0060.3EAC.05DA

type 7960

button 1:1

!

ephone 2

device-security-mode none

mac-address 000A.4181.3975

type 7960

button 1:2

!

ephone 3

device-security-mode none

mac-address 0010.11D7.19C1

type 7960

button 1:3

!

line con 0

exec-timeout 5 0

password 7 0822455D0A16

login

!

line aux 0

!

line vty 0 4

password 7 0822455D0A16

login

transport input telnet

!

end

**Show VLAN:**

**Table

Description automatically generated with medium confidence**

**Please note that the grading for Homeworks and Labs require that you configure correct vlans on the switch and trunk based on the design. Configuring access vlans or configuring all vlans on trunk is a very bad idea. I have seen many networks destroyed by this bad practice. I want to make sure that you do not learn to do that. You will not get full credit for work if you use this bad practice for homeworks and Labs.**