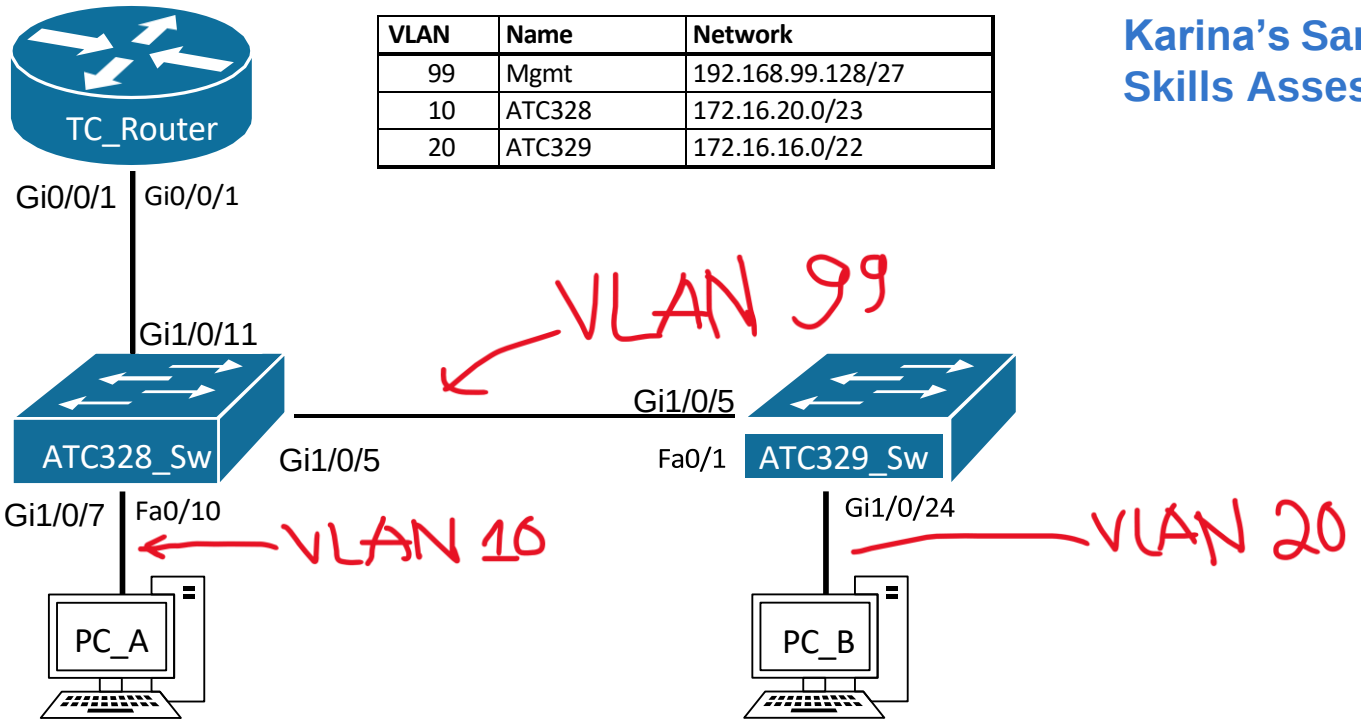

VLAN	Name	Network
99	Mgmt	192.168.99.128/27
10	ATC328	172.16.20.0/23
20	ATC329	172.16.16.0/22

Karina's Sample Mid-Sem Skills Assessment V1.4

Note: when running this sample assessment on ATC equipment, use **Switch 3** for ATC328_Sw, **Switch 4** for ATC329_Sw, **Router 1** for ATC_Router. If on-campus, use Ethernet PC for PC_A and the VAN PC for PC_B.

1. Hostnames on all switches and routers
2. MOTD on all devices (include your student ID)
3. Configure SSH access on both switches (inc user/pwd)
4. Description on all router interfaces
5. Place PC_A on VLAN 10 and PC_B on VLAN 20
6. Configure ATC_Router as router-on-a-stick
7. Configure Loopback 0 on the ATC router: 203.122.111.3/28
8. Configure the PCs with the last usable IP in their network
9. Configure ATC329_Sw with the 3rd usable IP in its network (From Router)
10. Configure ATC328_Sw with the 4th usable IP in its network ((From Router)
11. Configure all router sub-interfaces with the 1st usable IP (From Router)
12. Configure ports on VLAN 10 with port-security (ATC328)
    a. Sticky mode
    b. Max. 2 MAC addresses

Note: when using Cisco3650 switches older Packet Tracer or in ATC330 via SmartRack, you are required to use an additional switchport command for a successful trunking configuration:

Switch(config-if)# switchport trunk encapsulation dot1q
Switch(config-if)# switchport mode trunk

1.Hostnames on all switches and routers

```
Switch> ena
Switch# config t
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)# hostname ATC328_Sw
ATC328_Sw(config)# exit
ATC328_Sw#
%SYS-5-CONFIG_I: Configured from console by console
```

```
Switch> ena
Switch# config t
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)# hostname ATC329_Sw
ATC329_Sw(config)# exit
ATC329_Sw#
%SYS-5-CONFIG_I: Configured from console by console

ATC329_Sw#
```

```
Router> ena
Router# config t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)# hostname ATC_Router
ATC_Router(config)# exit
ATC_Router#
%SYS-5-CONFIG_I: Configured from console by console

ATC_Router#
```

2. MOTD on all devices (include your student ID)

```
ATC_Router> ena
ATC_Router# config t
Enter configuration commands, one per line.  End with CNTL/Z.
ATC_Router(config)# banner motd +*********************
Enter TEXT message.  End with the character '+'.
*********************
******SWS01217******
*********************+

ATC_Router(config)#
```

```
ATC328_Sw> ENA
ATC328_Sw# config t
Enter configuration commands, one per line.  End with CNTL/Z.
ATC328_Sw(config)# banner motd +*********************
Enter TEXT message.  End with the character '+'.
*********************
******SWS01217******
*********************+

ATC328_Sw(config)#
```

```
ATC329_Sw> ena
ATC329_Sw# config t
Enter configuration commands, one per line.  End with CNTL/Z.
ATC329_Sw(config)# banner mootd +*********************
                            ^
% Invalid input detected at '^' marker.

ATC329_Sw(config)# benner motd +*********************
                  ^
% Invalid input detected at '^' marker.

ATC329_Sw(config)# banner motd +*********************
Enter TEXT message.  End with the character '+'.
*********************
******SWS01217******
*********************+

ATC329_Sw(config)#
```

3. Configure SSH access on both switches (inc user/pwd)

```
ATC328_Sw> ena
ATC328_Sw# config t
Enter configuration commands, one per line.  End with CNTL/Z.
ATC328_Sw(config)# ip domain-name ccna.lab
ATC328_Sw(config)# crypto ket generate rsa general-keys modulus 1024
                           ^
% Invalid input detected at '^' marker.

ATC328_Sw(config)# crypto key generate rsa general-keys modulus 1024
The name for the keys will be: ATC328_Sw.ccna.lab

% The key modulus size is 1024 bits
% Generating 1024 bit RSA keys, keys will be non-exportable...[OK]
*Mar 1 0:47:50.778: %SSH-5-ENABLED: SSH 1.99 has been enabled
ATC328_Sw(config)# username hieuthuba privilege 15 secret giahieu090806
ATC328_Sw(config)# line vty 0 15
ATC328_Sw(config-line)# transport input ssh
ATC328_Sw(config-line)# login local
ATC328_Sw(config-line)# end
ATC328_Sw#
%SYS-5-CONFIG_I: Configured from console by console

ATC328_Sw#
```

```
ATC329_Sw> ena
ATC329_Sw# config t
Enter configuration commands, one per line.  End with CNTL/Z.
ATC329_Sw(config)# ip domain-name ccna.lab
ATC329_Sw(config)# crypto key generate rsa general-keys modulus 1024
The name for the keys will be: ATC329_Sw.ccna.lab

% The key modulus size is 1024 bits
% Generating 1024 bit RSA keys, keys will be non-exportable...[OK]
*Mar 1 0:55:14.432: %SSH-5-ENABLED: SSH 1.99 has been enabled
ATC329_Sw(config)# username hieuthuba privilege 15 secret giahieu090806
ATC329_Sw(config)# line vty 0 15
ATC329_Sw(config-line)# transport ssh input
                              ^
% Invalid input detected at '^' marker.

ATC329_Sw(config-line)# transport input ssh
ATC329_Sw(config-line)# login local
ATC329_Sw(config-line)# end
ATC329_Sw#
%SYS-5-CONFIG_I: Configured from console by console

ATC329_Sw#
```

4. Description on all router interfaces

5. Place PC_A on VLAN 10 and PC_B on VLAN 20

```
ATC328_Sw# show vlan brief

VLAN Name                             Status    Ports
---- -------------------------------- --------- -------------------------------
1    default                          active    Gig1/0/1, Gig1/0/2, Gig1/0/3, Gig1/0/4
                                                Gig1/0/5, Gig1/0/6, Gig1/0/8, Gig1/0/9
                                                Gig1/0/10, Gig1/0/11, Gig1/0/12, Gig1/0/13
                                                Gig1/0/14, Gig1/0/15, Gig1/0/16, Gig1/0/17
                                                Gig1/0/18, Gig1/0/19, Gig1/0/20, Gig1/0/21
                                                Gig1/0/22, Gig1/0/23, Gig1/0/24, Gig1/1/1
                                                Gig1/1/2, Gig1/1/3, Gig1/1/4
10   ATC328                           active    Gig1/0/7
1002 fddi-default                     active
1003 token-ring-default               active
1004 fddinet-default                  active
1005 trnet-default                    active
ATC328_Sw#
```

```
ATC329_Sw# show vlan brief

VLAN Name                             Status    Ports
---- -------------------------------- --------- -------------------------------
1    default                          active    Gig1/0/1, Gig1/0/2, Gig1/0/3, Gig1/0/4
                                                Gig1/0/5, Gig1/0/6, Gig1/0/7, Gig1/0/8
                                                Gig1/0/9, Gig1/0/10, Gig1/0/11, Gig1/0/12
                                                Gig1/0/13, Gig1/0/14, Gig1/0/15, Gig1/0/16
                                                Gig1/0/17, Gig1/0/18, Gig1/0/19, Gig1/0/20
                                                Gig1/0/21, Gig1/0/22, Gig1/0/23, Gig1/1/1
                                                Gig1/1/2, Gig1/1/3, Gig1/1/4
20   ATC329                           active    Gig1/0/24
30   VLAN0030                         active
1002 fddi-default                     active
1003 token-ring-default               active
1004 fddinet-default                  active
1005 trnet-default                    active
ATC329_Sw#
```

6. Configure ATC_Router as router-on-a-stick
7. Configure Loopback 0 on the ATC router: 203.122.111.3/28

```
ATC_Router> ena
ATC_Router# config t
Enter configuration commands, one per line.  End with CNTL/Z.
ATC_Router(config)# int g0/0/1
ATC_Router(config-if)# no shutdown
ATC_Router(config-if)# exit
ATC_Router(config)# int g0/0/1.10
ATC_Router(config-subif)# description connection between ATC328 and PC-A
ATC_Router(config-subif)# encapsulation dot1q 10
ATC_Router(config-subif)# ip address 172.16.20.1 255
                                                 ^
% Invalid input detected at '^' marker.

ATC_Router(config-subif)# ip address 172.16.20.1 255.255.254.0
ATC_Router(config-subif)# exit
ATC_Router(config)# int g0/0/1.20
ATC_Router(config-subif)# description connection between ATC329 and PC-B
ATC_Router(config-subif)# encapsulation dot1q 20
ATC_Router(config-subif)# ip address 172.16.16.1 255.255.252.0
ATC_Router(config-subif)# exit
ATC_Router(config)# int lo0
ATC_Router(config-if)# ip address  203.122.111.3 255.255.255.240
ATC_Router(config-if)# exit
ATC_Router(config)# exit
ATC_Router#
%SYS-5-CONFIG_I: Configured from console by console

ATC_Router#
```

9. Configure ATC329_Sw with the 3rd usable IP in its network

```
ATC329_Sw# config t
Enter configuration commands, one per line.  End with CNTL/Z.
ATC329_Sw(config)# interface vlan 20
ATC329_Sw(config-if)#
%LINK-5-CHANGED: Interface Vlan20, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan20, changed state to up

ATC329_Sw(config-if)# ip address 172.16.16.3 255.255.252.0
ATC329_Sw(config-if)# no shutdown
ATC329_Sw(config-if)# end
ATC329_Sw#
%SYS-5-CONFIG_I: Configured from console by console

ATC329_Sw# write memory
Building configuration...
Compressed configuration from 7383 bytes to 3601 bytes[OK]
[OK]
ATC329_Sw#
```

10. Configure ATC328_Sw with the 4th usable IP in its network (From Router)

```
ATC328_Sw> ena
ATC328_Sw# config t
Enter configuration commands, one per line.  End with CNTL/Z.
ATC328_Sw(config)# interface vlan 10
ATC328_Sw(config-if)#
%LINK-5-CHANGED: Interface Vlan10, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan10, changed state to up

ATC328_Sw(config-if)# ip address 172.16.20.4 255.255.254.0
ATC328_Sw(config-if)# no shutdown
ATC328_Sw(config-if)# end
ATC328_Sw#
%SYS-5-CONFIG_I: Configured from console by console

ATC328_Sw# write memory
Building configuration...
Compressed configuration from 7383 bytes to 3601 bytes[OK]
[OK]
ATC328_Sw#
```

11. Configure all router sub-interfaces with the 1st usable IP (From Router)

```
ATC_Router> ena
ATC_Router# config t
Enter configuration commands, one per line.  End with CNTL/Z.
ATC_Router(config)# interface g0/0/1.10
ATC_Router(config-subif)# encapsulation dot1q 10
ATC_Router(config-subif)# ip address 172.16.20.1 255.255.254.0
ATC_Router(config-subif)# no shutdown
ATC_Router(config-subif)# exir
                          ^
% Invalid input detected at '^' marker.

ATC_Router(config-subif)# exit
ATC_Router(config)# interface Gi0/0/1.20
ATC_Router(config-subif)# encapsulation dot1q 20
ATC_Router(config-subif)# ip address 172.16.16.1 255.255.252.0
ATC_Router(config-subif)# no shutdown
ATC_Router(config-subif)# exit
ATC_Router(config)# interface gi0/0/1.99
ATC_Router(config-subif)# encapsulation dot1q 99
ATC_Router(config-subif)# ip address 192.168.99.129 255.255.224.0
ATC_Router(config-subif)# no shutdown
ATC_Router(config-subif)# exit
```

12. Configure ports on VLAN 10 with port-security (ATC328)
    c. Sticky mode
    d. Max. 2 MAC addresses

```
ATC328_Sw# config t
Enter configuration commands, one per line.  End with CNTL/Z.
ATC328_Sw(config)# int gi1/0/7
ATC328_Sw(config-if)# switchport port-security
ATC328_Sw(config-if)# switchport port-security maximum 2
ATC328_Sw(config-if)# switchport port-security mac-address sticky
ATC328_Sw(config-if)# end
ATC328_Sw#
%SYS-5-CONFIG_I: Configured from console by console

ATC328_Sw#
```