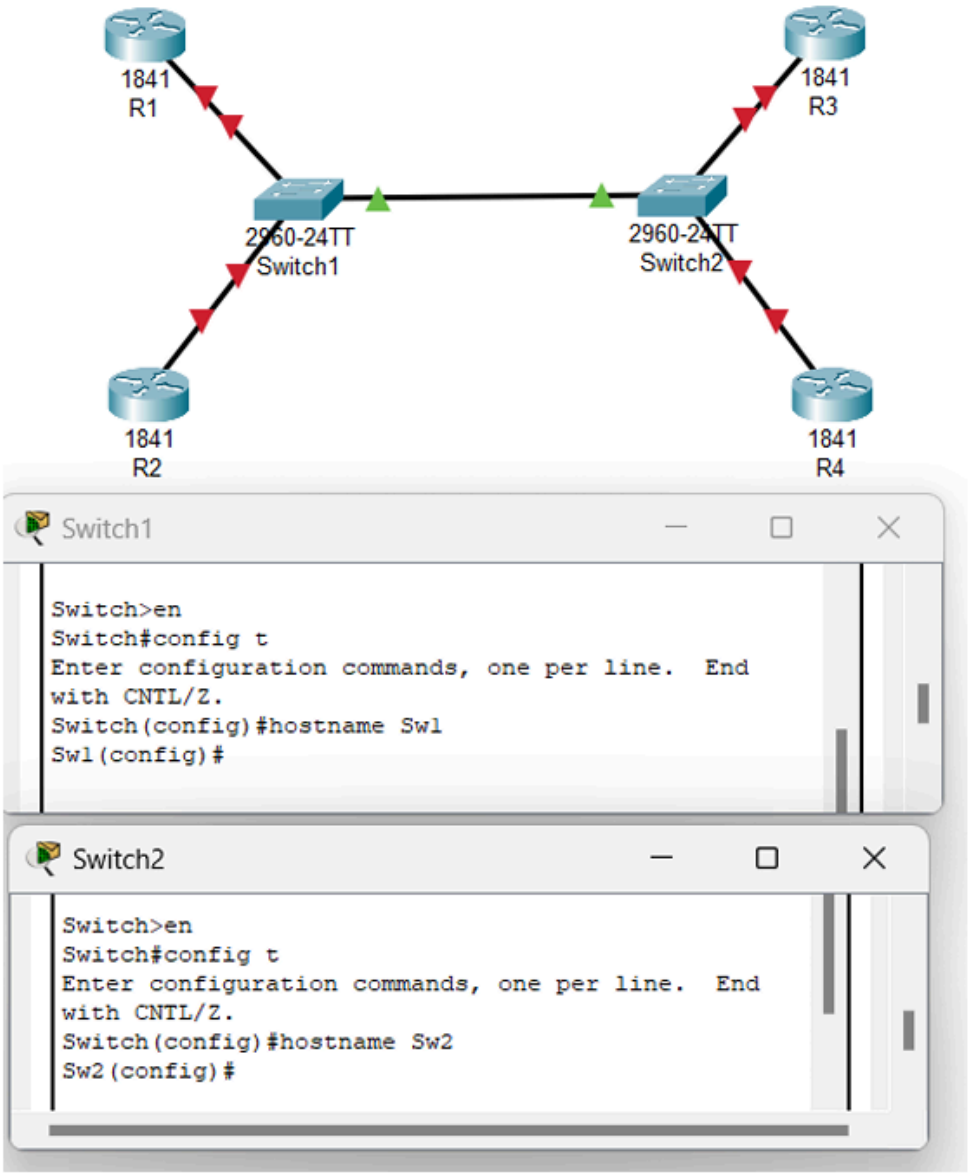
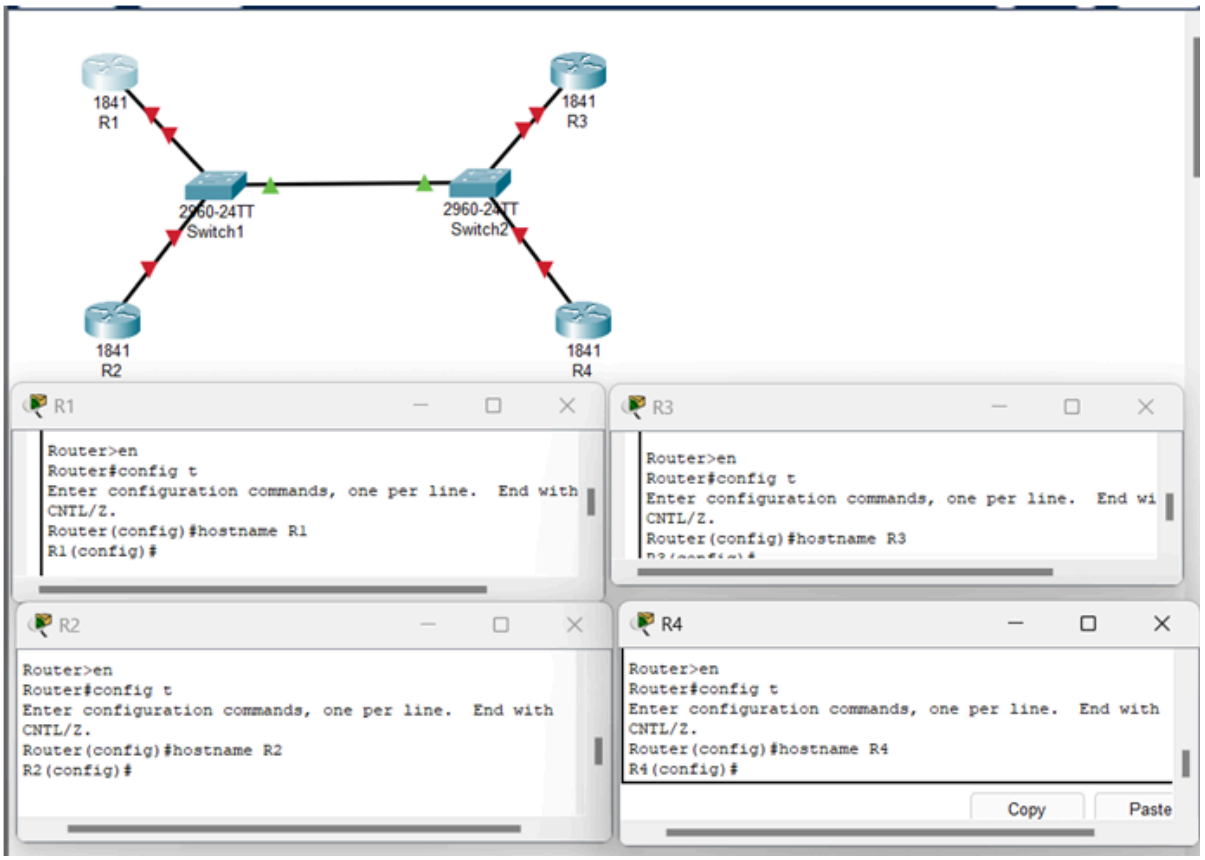
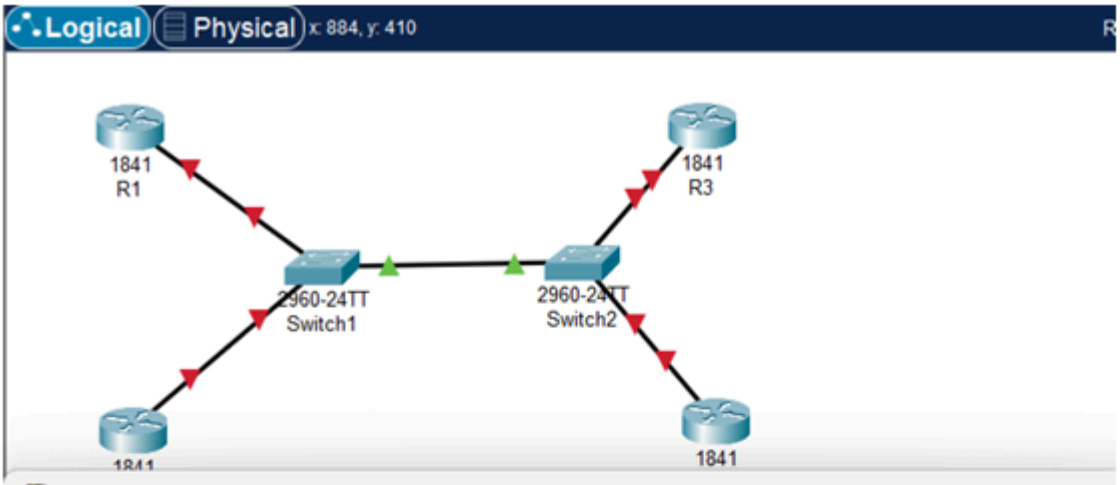
Day2extend - Lab6 - 2212548

Task 1 Configure a hostname on switches 1 and 2 and routers 1 through 4 as illustrated in the topology above.



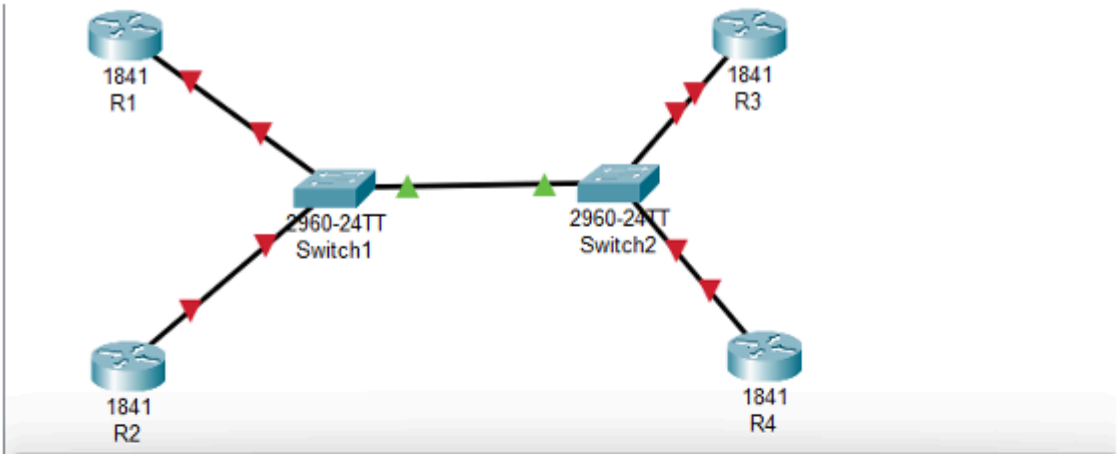

1841
R1
1841
R3
2960-24TT
Switch1
2960-24TT
Switch2
1841
R2
1841
R4
R1
Router>en
Router#config t
Enter configuration commands, one per line. End with
CNTL/Z.
Router(config)#hostname R1
R1(config)#
R3
Router>en
Router#config t
Enter configuration commands, one per line. End wi
CNTL/Z.
Router(config)#hostname R3
R2
Router>en
Router#config t
Enter configuration commands, one per line. End with
CNTL/Z.
Router(config)#hostname R2
R2(config)#
R4
Router>en
Router#config t
Enter configuration commands, one per line. End with
CNTL/Z.
Router(config)#hostname R4
R4(config)#
Copy
Paste

Task 2 Configure and verify Sw1 and Sw2 as VTP Transparent switches. Both switches should be in the VTP domain named CISCO. Secure VTP messages with the pass-word CISCO.



Switch1

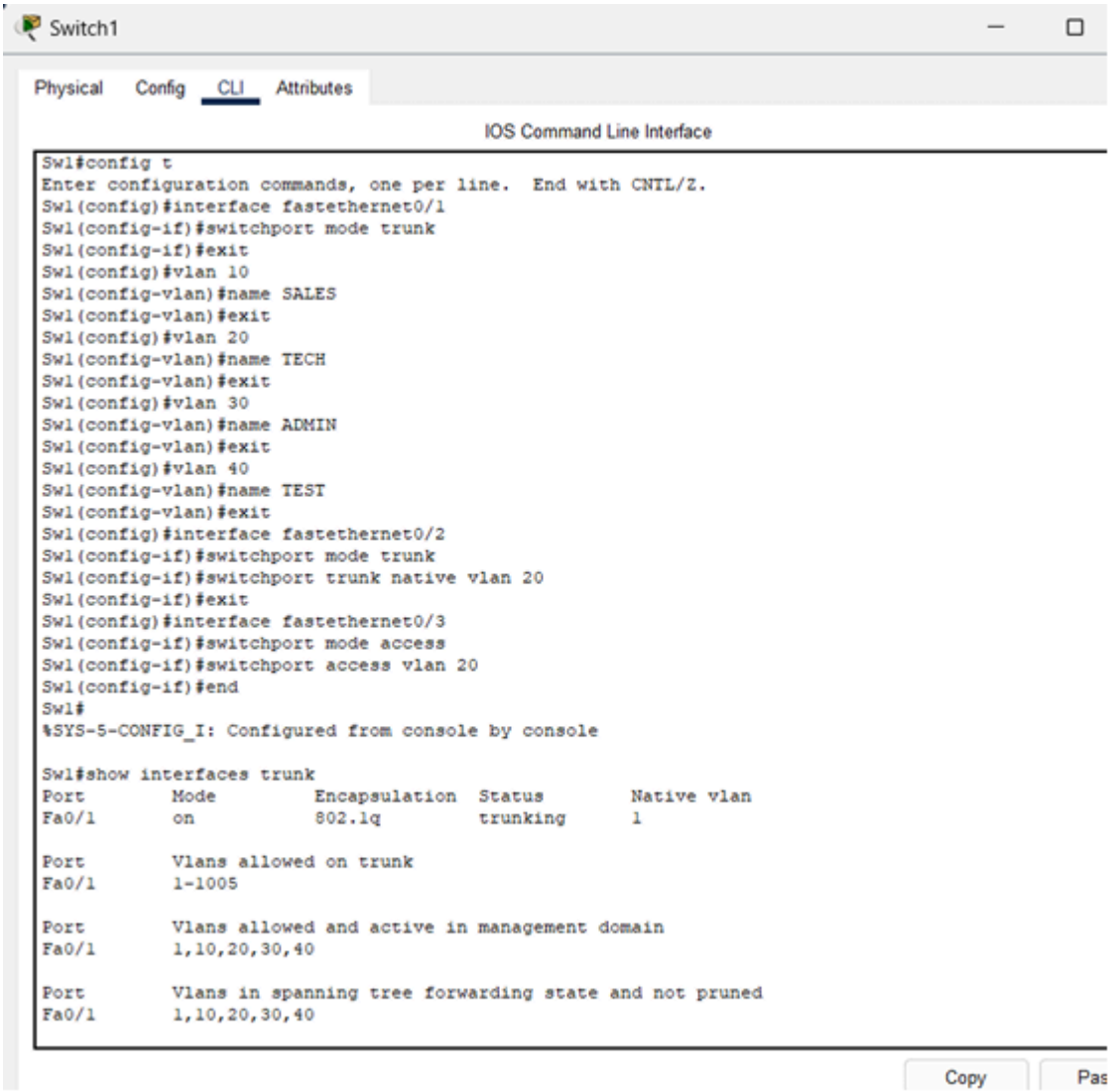
```
Sw1#config t
Enter configuration commands, one per line.  End with CNTL/Z.
Sw1(config)#vtp mode transparent
Setting device to VTP TRANSPARENT mode.
Sw1(config)#vtp domain CISCO
Changing VTP domain name from NULL to CISCO
Sw1(config)#vtp password CISCO
Setting device VLAN database password to CISCO
Sw1(config)#end
Sw1#
%SYS-5-CONFIG_I: Configured from console by console

Sw1#show vtp status
VTP Version capable             : 1 to 2
VTP version running             : 1
VTP Domain Name                 : CISCO
VTP Pruning Mode                : Disabled
VTP Traps Generation            : Disabled
Device ID                       : 0001.648C.3300
Configuration last modified by 0.0.0.0 at 0-0-00 00:00:00

Feature VLAN :
--------------
VTP Operating Mode                : Transparent
Maximum VLANs supported locally   : 255
Number of existing VLANs          : 5
Configuration Revision            : 0
MD5 digest                        : 0xBD 0x05 0xF5 0x71 0x93 0xD7 0x12 0x75
                                    0x8D 0x44 0x24 0xD5 0x26 0x62 0x9B 0x18

Sw1#
```

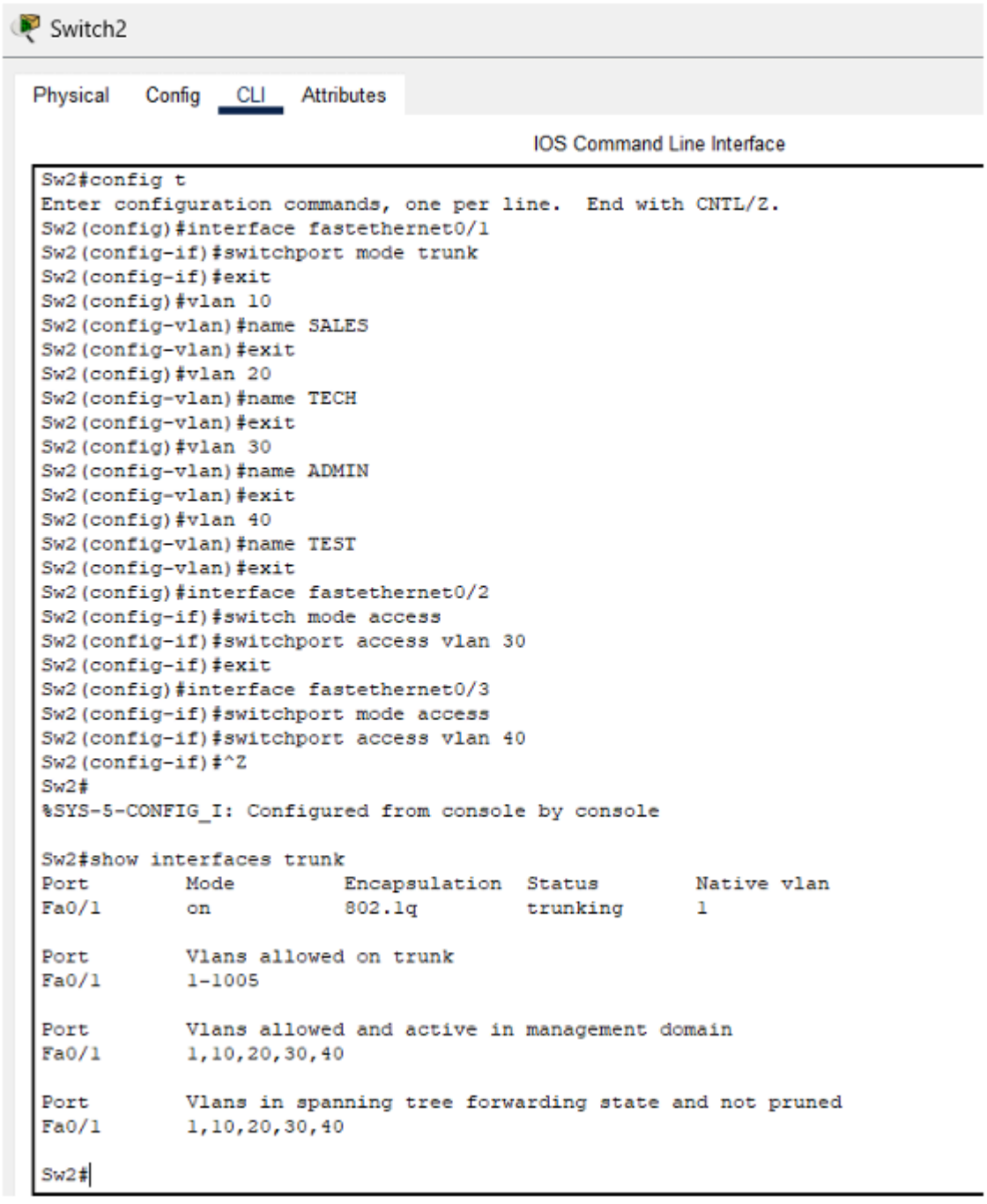


Switch2

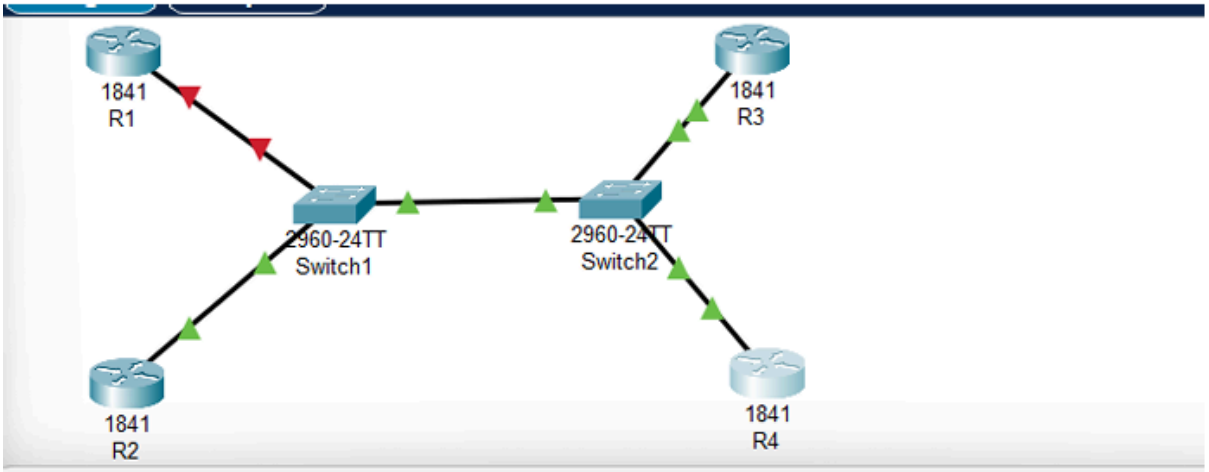
```
Sw2#config t
Enter configuration commands, one per line.  End with CNTL/Z.
Sw2(config)#vtp mode transparent
Setting device to VTP TRANSPARENT mode.
Sw2(config)#vtp domain CISCO
Changing VTP domain name from NULL to CISCO
Sw2(config)#vtp password CISCO
Setting device VLAN database password to CISCO
Sw2(config)#end
Sw2#
%SYS-5-CONFIG_I: Configured from console by console

Sw2#show vtp status
VTP Version capable             : 1 to 2
VTP version running             : 1
VTP Domain Name                 : CISCO
VTP Pruning Mode                : Disabled
VTP Traps Generation            : Disabled
Device ID                       : 0001.4226.5900
Configuration last modified by 0.0.0.0 at 0-0-00 00:00:00

Feature VLAN :
--------------
VTP Operating Mode                : Transparent
Maximum VLANs supported locally   : 255
Number of existing VLANs          : 5
Configuration Revision            : 0
MD5 digest                        : 0xBD 0x05 0xF5 0x71 0x93 0xD7 0x12
0x75
                                    0x8D 0x44 0x24 0xD5 0x26 0x62 0x9B
0x18
Sw2#
```

Task 3 Configure and verify FastEthernet0/1 between Sw1 and Sw2 as an 802.1q trunk and configure VLANs as depicted in the topology above. Assign ports to depicted VLANs and configure Sw1 FastEthernet0/2 as a trunk. VLAN 20 should have un-tagged Ethernet Frames. Remember that on 802.1q trunks, only the native VLAN is untagged.



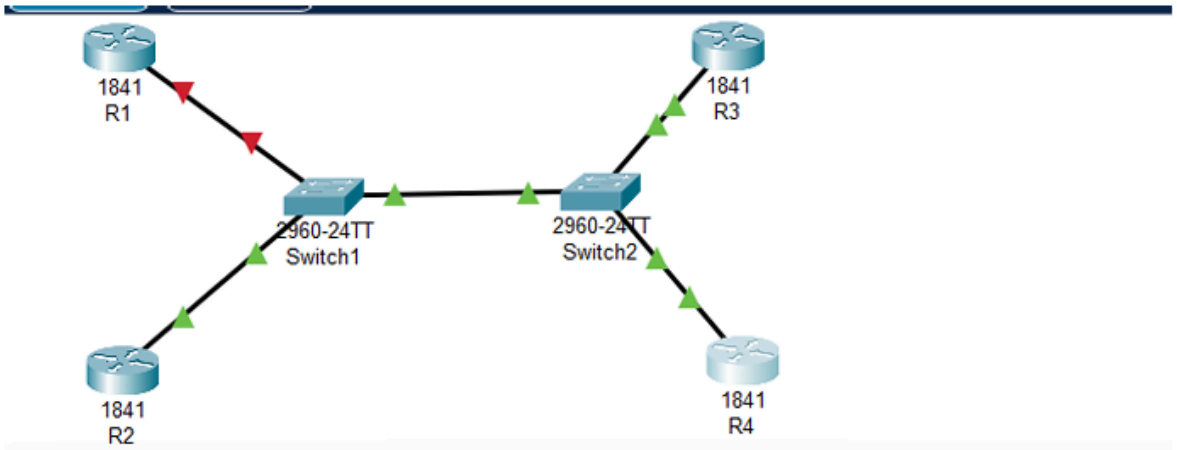

Switch2
Physical
Config
CLI
Attributes
IOS Command Line Interface
Sw2#config t
Enter configuration commands, one per line. End with CNTL/Z.
Sw2(config)#interface fastethernet0/1
Sw2(config-if)#switchport mode trunk
Sw2(config-if)#exit
Sw2(config)#vlan 10
Sw2(config-vlan)#name SALES
Sw2(config-vlan)#exit
Sw2(config)#vlan 20
Sw2(config-vlan)#name TECH
Sw2(config-vlan)#exit
Sw2(config)#vlan 30
Sw2(config-vlan)#name ADMIN
Sw2(config-vlan)#exit
Sw2(config)#vlan 40
Sw2(config-vlan)#name TEST
Sw2(config-vlan)#exit
Sw2(config)#interface fastethernet0/2
Sw2(config-if)#switch mode access
Sw2(config-if)#switchport access vlan 30
Sw2(config-if)#exit
Sw2(config)#interface fastethernet0/3
Sw2(config-if)#switchport mode access
Sw2(config-if)#switchport access vlan 40
Sw2(config-if)#^Z
Sw2#
%SYS-5-CONFIG_I: Configured from console by console
Sw2#show interfaces trunk
Port   Mode   Encapsulation Status   Native vlan
Fa0/1   on   802.1q   trunking   1
Port   Vlans allowed on trunk
Fa0/1   1-1005
Port   Vlans allowed and active in management domain
Fa0/1   1,10,20,30,40
Port   Vlans in spanning tree forwarding state and not pruned
Fa0/1   1,10,20,30,40
Sw2#

Task 4 Configure IP addresses on routers R2, R3, and R4 as illustrated in the diagram.



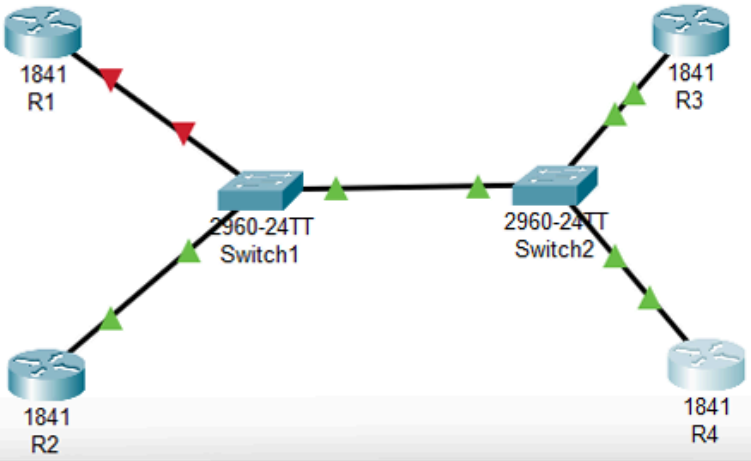
R2

```
R2#config t
Enter configuration commands, one per line.  End with CNTL/Z.
R2(config)#interface fastethernet0/0
R2(config-if)#ip address 10.0.20.2 255.255.255.128
R2(config-if)#no shutdown

R2(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

R2(config-if)#end
R2#
%SYS-5-CONFIG_I: Configured from console by console

R2#show ip interface brief
Interface              IP-Address      OK? Method Status                Protocol
FastEthernet0/0        10.0.20.2       YES manual up                    up
FastEthernet0/1        unassigned      YES unset  administratively down down
Vlan1                  unassigned      YES unset  administratively down down
R2#
```



R3

```
R3>en
R3#config t
Enter configuration commands, one per line.  End with CNTL/Z.
R3(config)#interface fastethernet0/0
R3(config-if)#ip address 10.0.30.3 255.255.255.248
R3(config-if)#no shutdown

R3(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to
up

R3(config-if)#end
R3#
%SYS-5-CONFIG_I: Configured from console by console

R3#show ip interface brief
Interface              IP-Address      OK? Method Status                Protocol
FastEthernet0/0        10.0.30.3       YES manual up                    up
FastEthernet0/1        unassigned      YES unset  administratively down down
Vlan1                  unassigned      YES unset  administratively down down
```



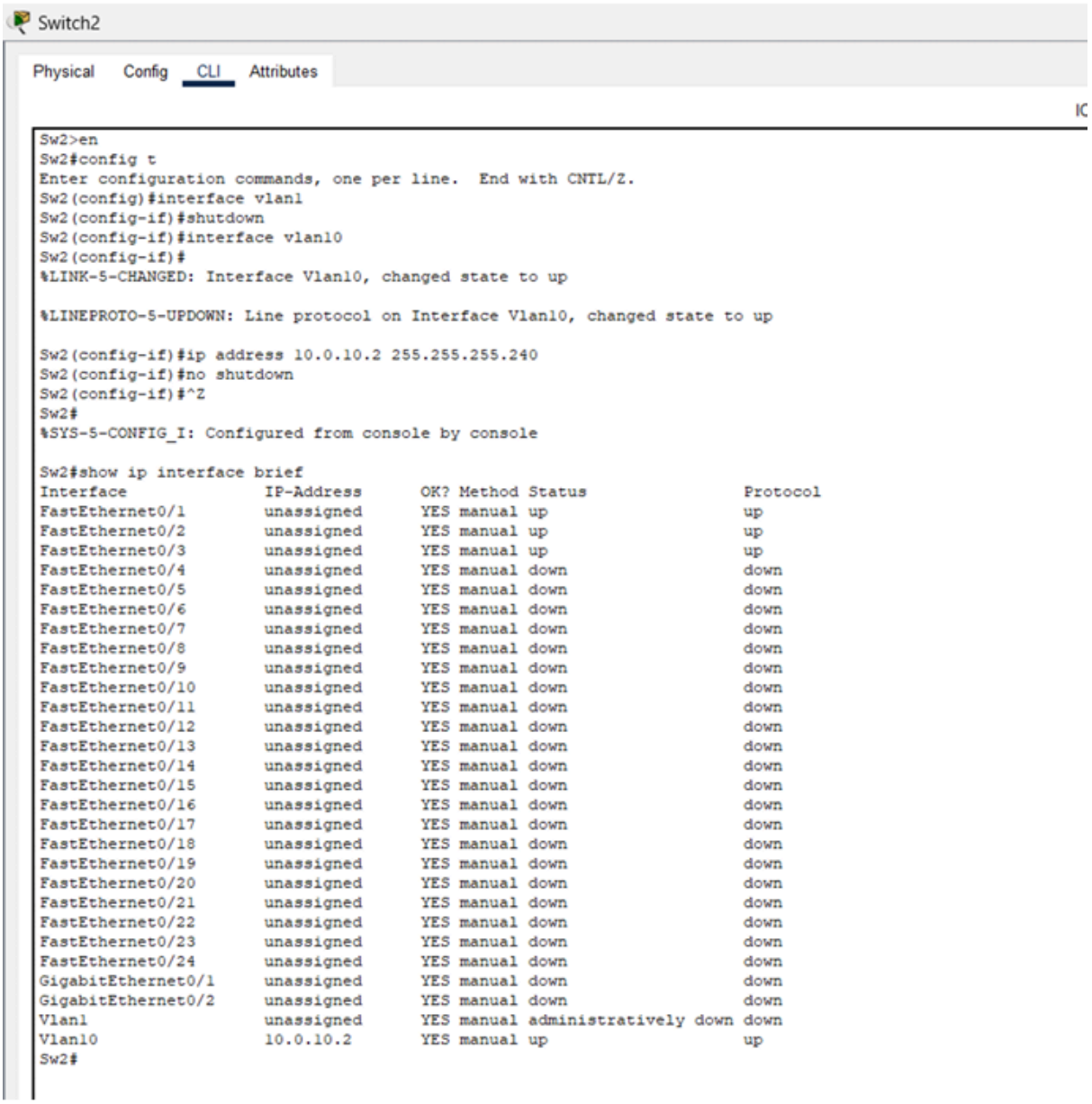
R4

Physical Config CLI Attributes

IOS Command Line Interface

```
R4#config t
Enter configuration commands, one per line.  End with CNTL/Z.
R4(config)#interface fastethernet0/0
R4(config-if)#ip address 10.0.10.1 255.255.255.224
R4(config-if)#no shutdown

R4(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed
state to up

R4(config-if)#end
R4#
%SYS-5-CONFIG_I: Configured from console by console

R4#show ip interface brief
Interface              IP-Address      OK? Method Status
Protocol
FastEthernet0/0        10.0.10.1       YES manual up
up
FastEthernet0/1        unassigned      YES unset  administratively down
down
Vlan1                  unassigned      YES unset  administratively down
down
```

Task 5 Configure subinterfaces off FastEthernet0/0 in the corresponding VLANs on the dia-gram. Also configure interface VLAN 10 on switch Sw2 with the IP address 10.0.10.2/28.


Switch2
Physical
Config
CLI
Attributes
Sw2>en
Sw2#config t
Enter configuration commands, one per line. End with CNTL/Z.
Sw2(config)#interface vlan1
Sw2(config-if)#shutdown
Sw2(config-if)#interface vlan10
Sw2(config-if)#
%LINK-5-CHANGED: Interface Vlan10, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan10, changed state to up
Sw2(config-if)#ip address 10.0.10.2 255.255.255.240
Sw2(config-if)#no shutdown
Sw2(config-if)#^Z
Sw2#
%SYS-5-CONFIG_I: Configured from console by console
Sw2#show ip interface brief
Interface   IP-Address   OK? Method Status   Protocol
FastEthernet0/1   unassigned   YES manual up   up
FastEthernet0/2   unassigned   YES manual up   up
FastEthernet0/3   unassigned   YES manual up   up
FastEthernet0/4   unassigned   YES manual down   down
FastEthernet0/5   unassigned   YES manual down   down
FastEthernet0/6   unassigned   YES manual down   down
FastEthernet0/7   unassigned   YES manual down   down
FastEthernet0/8   unassigned   YES manual down   down
FastEthernet0/9   unassigned   YES manual down   down
FastEthernet0/10   unassigned   YES manual down   down
FastEthernet0/11   unassigned   YES manual down   down
FastEthernet0/12   unassigned   YES manual down   down
FastEthernet0/13   unassigned   YES manual down   down
FastEthernet0/14   unassigned   YES manual down   down
FastEthernet0/15   unassigned   YES manual down   down
FastEthernet0/16   unassigned   YES manual down   down
FastEthernet0/17   unassigned   YES manual down   down
FastEthernet0/18   unassigned   YES manual down   down
FastEthernet0/19   unassigned   YES manual down   down
FastEthernet0/20   unassigned   YES manual down   down
FastEthernet0/21   unassigned   YES manual down   down
FastEthernet0/22   unassigned   YES manual down   down
FastEthernet0/23   unassigned   YES manual down   down
FastEthernet0/24   unassigned   YES manual down   down
GigabitEthernet0/1   unassigned   YES manual down   down
GigabitEthernet0/2   unassigned   YES manual down   down
Vlan1   unassigned   YES manual administratively down down
Vlan10   10.0.10.2   YES manual up   up
Sw2#

Task 6 Test network connectivity by pinging from R1 to routers R2, R3, and R4.

```
R1#ping 10.0.10.2

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.0.10.2, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 0/0/1 ms

R1#ping 10.0.20.2

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.0.20.2, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 0/0/1 ms

R1#ping 10.0.30.3

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.0.30.3, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)

R1#ping 10.0.40.4

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.0.40.4, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
```